Robert A. Heinlein

54 Books

Robert A. Heinlein. All you zombies

2217 Time Zone V (EST) 7 Nov. 1970-NTC- "Pop's Place": I was polishing a brandy snifter when the Unmarried Mother came in. I noted the time-10: 17 P. M. zone five, or eastern time, November 7th, 1970. Temporal agents always notice time and date; we must.

The Unmarried Mother was a man twenty-five years old, no taller than I am, childish features and a touchy temper. I didn't like his looks - I never had - but he was a lad I was here to recruit, he was my boy. I gave him my best barkeep's smile.

Maybe I'm too critical. He wasn't swish; his nickname came from what he always said when some nosy type asked him his line: "I'm an unmarried mother. -- If he felt less than murderous he would add: "at four cents a word. I write confession stories. --

If he felt nasty, he would wait for somebody to make something of it. He had a lethal style of infighting, like a female cop - reason I wanted him. Not the only one.

He had a load on, and his face showed that he despised people more than usual. Silently I poured a double shot of Old Underwear and left the bottle. He drank it, poured another.

I wiped the bar top. -- How's the "Unmarried Mother" racket? --

His fingers tightened on the glass and he seemed about to throw it at me; I felt for the sap under the bar. In temporal manipulation you try to figure everything, but there are so many factors that you never take needless risks.

I saw him relax that tiny amount they teach you to watch for in the Bureau's training school. -- Sorry, " I said. -- Just asking, "How's business? " Make it "How's the weather? --

He looked sour. -- Business is okay. I write "em, they print "em, I eat. --

I poured myself one, leaned toward him. -- Matter of fact, " I said, "you write a nice stick - I've sampled a few. You have an amazingly sure touch with the woman's angle. --

It was a slip I had to risk; he never admitted what pen-names he used. But he was boiled enough to pick up only the last: "'Woman's angle! "" he repeated with a snort. -- Yeah, I know the woman's angle. I should. --

"So? -- I said doubtfully. -- Sisters? --

"No. You wouldn't believe me if I told you. --

"Now, now, " I answered mildly, "bartenders and psychiatrists learn that nothing is stranger than truth. Why, son, if you heard the stories I do-well, you'd make yourself rich. Incredible. --

"You don't know what "incredible" means! "

"So? Nothing astonishes me. I've always heard worse. --

He snorted again. -- Want to bet the rest of the bottle? --

"I'll bet a full bottle. -- I placed one on the bar.

"Well-" I signaled my other bartender to handle the trade. We were at the far end, a single-stool space that I kept private by loading the bar top by it with jars of pickled eggs and other clutter. A few were at the other end watching the fights and somebody was playing the juke box-private as a bed where we were.

"Okay, " he began, "to start with, I'm a bastard. --

"No distinction around here, " I said.

"I mean it, " he snapped. -- My parents weren't married. --

"Still no distinction, " I insisted. -- Neither were mine. --

"When-" He stopped, gave me the first warm look I ever saw on him. -- You mean that? --

"I do. A one-hundred-percent bastard. In fact, " I added, "no one in my family ever marries. All bastards.

"Oh, that. -- I showed it to him. -- It just looks like a wedding ring; I wear it to keep women off. -- It is an antique I bought in 1985 from a fellow operative - he had fetched it from pre-Christian Crete. -- The Worm Ouroboros... the World Snake that eats its own tail, forever without end. A symbol of the Great Paradox. --

He barely glanced at it. -- if you're really a bastard, you know how it feels. When I was a little girl-"

"Wups! " I said. -- Did I hear you correctly? --

"'Who's telling this story? When I was a little girl-Look, ever hear of Christine Jorgenson? Or Roberta Cowell? --

"Uh, sex-change cases? You're trying to tell me-"

"Don't interrupt or swelp me, I won't talk. I was a foundling, left at an orphanage in Cleveland in 1945 when I was a month old. When I was a little girl, I envied kids with parents. Then, when I learned about sex-and, believe me, Pop, you learn fast in an orphanage-"

"I know "

"-I made a solemn vow that any kid of mine would have both a pop and a mom. It kept me "pure, " quite a feat in that vicinity - I had to learn to fight to manage it. Then I got older and realized I stood darn little chance of getting married - for the same reason I hadn't been adopted --. He scowled. I was horse-faced and buck-toothed, flat-chested and straight-haired.

"You don't look any worse than I do. --

"Who cares how a barkeep looks? Or a writer? But peaple wanting to adopt pick little blue-eyed golden-haired moron. Later on, the boys want bulging breasts, a cute face, and an Oh-you-wonderful-male manner. -- He shrugged. I couldn't compete. So I decided to join the W. E. N. C. H. E. S. --

Eh? --

"Women's Emergency National Corps, Hospitality & Entertainment Section, what they now call "Space Angels'-Auxiliary Nursing Group, Extraterrestrial Legions. --

I knew both terms, once I had them chronized. We use still a third name, it's that elite military service corps: Women's Hospitality Order Refortifying & Encouraging Spacemen. Vocabulary shift is the worst hurdle in time-jumps - did you know that "service station" once fractions? Once on an assignment in the Churchill Era, a woman said to me, "Meet me at the service station next door -- - which is not what it sounds; a service station" (then) wouldn't have a bed in it.

He went on: "It was when they first admitted you can't send men into space for months and years and not relieve the tension. You remember how the wowsers screamed? - that improved my chance, since volunteers were scarce. A gal had to be respectable, preferably virgin (they liked to train them from scratch), above average mentally, and stable emotionally. But most volunteers were old hookers, or neurotics who would crack up ten days off Earth. So I didn't need looks; if they accepted me, they would fix my buck teeth, put a wave in my hair, teach me to walk and dance and how to listen to a man pleasingly, and

everything else - plus training for the prime duties. They would even use plastic surgery if it would help - nothing too good for our Boys.

"Best yet, they made sure you didn't get pregnant during your enlistment - and you were almost certain to marry at the end of your hitch. Same way today, A. N. G. E. L. S. marry spacers - they talk the language.

"When I was eighteen I was placed as a `mother's helper'. This family simply wanted a cheap servant, but I didn't mind as I couldn't enlist till I was twenty-one. I did housework and went to night school - pretending to continue my high school typing and shorthand but going to a charm class instead, to better my chances for enlistment.

"Then I met this city slicker with his hundred-dollar bills. -- He scowled. The no-good actually did have a wad of hundred-dollar bills. He showed me one night, told me to help myself.

"But I didn't. I liked him. He was the first man I ever met who was nice to me without trying games with me. I quit night school to see him oftener. It was the happiest time of my life.

"Then one night in the park the games began. --

He stopped. I said, "And then? --

"And then nothing! I never saw him again. He walked me home and told me he loved me-and kissed me good-night and never came back. -- He looked grim. -- If I could find him, I'd kill him! "

"Well, " I sympathized, "I know how you feel. But killing him-just for doing what comes naturally - hmm... Did you struggle? --

"Huh? What's that got to do with it? --

"Quite a bit. Maybe he deserves a couple of broken arms for running out on you, but-"

"He deserves worse than that! Wait till you hear. Somehow I kept anyone from suspecting and decided it was all for the best. I hadn't really loved him and probably would never love anybody-and I was more eager to join the WE. N. C. H. E. S. than ever. I wasn't disqualified, they didn't insist on virgins. I cheered up.

"It wasn't until my skirts got tight that I realized.

--

"Pregnant? --

"He had me higher "n a kite! Those skinflints I lived with ignored it as long as I could work-then kicked me out, and the orphanage wouldn't take me back. I landed in a charity ward surrounded by other big bellies and trotted bedpans until my

time came.

"One night I found myself on an operating table, with a nurse saying, "Relax. Now breathe deeply. "

"I woke up in bed, numb from the chest down. My surgeon came in. "How do you feel? " he says cheerfully.

"Like a mummy. --

"Naturally. You're wrapped like one and full of dope to keep you numb. You'll get well-but a Cesarean isn't a hangnail. "

Cesarean" I said. "Doc - did I lose the baby? "

Oh, no. Your baby's fine. "

Oh. Boy or girl? "

"'A healthy little girt. Five pounds, three ounces. "

"I relaxed. It's something, to have made a baby. I told myself I would go somewhere and tack "Mrs. " on my name and let the kid think her papa was dead -no orphanage for my kid!

"But the surgeon was talking. "Tell me, uh-" He avoided my name. "did you ever think your glandular setup was odd? "

"I said, "Huh? Of course not. What are you driving at? "

"He hesitated. I'll give you this in one dose, then a hypo to let you sleep off your jitters. You'll have "em. "

"'Why? I demanded.

Ever hear of that Scottish physician who was female until she was thirtyfive? -then had surgery and became legally and medically a man? Got married. All okay. "

'What's that got to do with me? "

"'That's what I'm saying. You're a man. "

"I tried to sit up. What? "

"Take it easy. When I opened you, I found a mess. I sent for the Chief of Surgery while I got the baby out, then we held a consultation with you on the table-and worked for hours to salvage what we could. You had two full sets of organs, both immature, but with the female set well enough developed for you to have a baby. They could never be any use to you again, so we took them out and rearranged things so that you can develop properly as a man. He put a hand on me. "Don't worry. You're young, your bones will readjust, we'll watch your glandular balance - and make a fine young man out of you. "

"I started to cry. "What about my baby? "

"Well, you can't nurse her, you haven't milk enough for a kitten. If I were you, I wouldn't see her-put her up for adoption. "

"'No! "

"He shrugged. "The choice is yours; you're her mother - well, her parent. But don't worry now; we'll get you well first. "

"Next day they let me see the kid and I saw her daily - trying to get used to her. I had never seen a brand-new baby and had no idea how awful they look - my daughter looked like an orange monkey. My feelings changed to cold determination to do right by her. But four weeks later that didn't mean anything. --

"Eh? --

"She was snatched. --

"'Snatched? --

The Unmarried Mother almost knocked over the bottle we had bet. -- Kidnapped - stolen from the hospital nursery! " He breathed hard. -- How's that for taking the last a man's got to live for? --

"A bad deal, " I agreed. -- Let's pour you another. No clues? --

"Nothing the police could trace. Somebody came to see her, claimed to be her uncle. While the nurse had her back turned, he walked out with her. --

"Description? --

"Just a man, with a face-shaped face, like yours or mine. -- He frowned. -- I think it was the baby's father. The nurse swore it was an older man but he probably used makeup. Who else would swipe my baby? Childless women pull such stunts - but whoever heard of a man doing it? --

"What happened to you then? --

"Eleven more months of that grim place and three operations. In four months I started to grow a beard; before I was out I was shaving regularly... and no longer doubted that I was male. -- He grinned wryly. -- I was staring down nurses necklines. --

"Well, " I said, "seems to me you came through okay. Here you are, a normal man, making good money, no real troubles. And the life of a female is not an easy one. --

He glared at me. -- A lot you know about it! "

"So? --

"Ever hear the expression "a ruined woman'? --

"Mmm, years ago. Doesn't mean much today. --

"I was as ruined as a woman can be; that bum really ruined me - I was no longer a woman... and I didn't know how to be a man. --

"Takes getting used to, I suppose. --

"You have no idea. I don't mean learning how to dress, or not walking into the wrong rest room; I learned those in the

hospital. But how could I live? What job could I get? Hell, I couldn't even drive a car. I didn't know a trade; I couldn't do manual labor-too much scar tissue, too tender.

"I hated him for having ruined me for the W. E. N. C. H. E. S., too, but I didn't know how much until I tried to join the Space Corps instead. One look at my belly and I was marked unfit for military service. The medical officer spent time on me just from curiosity; he had read about my case.

"So I changed my name and came to New York. I got by as a fry cook, then rented a typewriter and set myself up as a public stenographer - what a laugh! In four months I typed four letters and one manuscript. The manuscript was for Real Life Tales and a waste of paper, but the goof who wrote it sold it. Which gave me an idea; I bought a stack of confession magazines and studied them. -- He looked cynical. -- Now you know how I get the authentic woman's angle on

an unmarried-mother story... through the only version I haven't sold - the true one. Do I win the bottle? --

I pushed it toward him. I was upset myself, but there was work to do. I said, "Son, you still want to lay hands on that so-and-so? --

His eyes lighted up-a feral gleam.

"Hold it! " I said. -- You wouldn't kill him? --

He chuckled nastily. -- Try me. --

"Take it easy. I know more about it than you think I do. I can help you. I know where he is. --

He reached across the bar. -- Where is he? --

I said softly, "Let go my shirt, sonny-or you'll land in the alley and we'll tell the cops you fainted. -- I showed him the sap.

He let go. -- Sorry. But where is he? -- He looked at me. -- And how do you know so much? --

"All in good time. There are records - hospital records, orphanage records, medical records. The matron of your orphanage was Mrs. Fetherage - right? She was followed by Mrs. Gruenstein - right? Your name, as a girl, was "Jane" - right? And you didn't tell me any of this - right? --

I had him baffled and a bit scared. -- What's this? You trying to make trouble for me? --

"No indeed. I've your welfare at heart. I can put this character in your lap. You do to him as you see fit - and I guarantee that you'll get away with it. But I don't think you'll kill him. You'd be nuts to - and you aren't nuts. Not quite. --

He brushed it aside. -- Cut the noise. Where is he? --

I poured him a short one; he was drunk, but anger was

offsetting it. -- Not so fast. I do something for you - you do something for me. --

"Uh... what? --

"You don't like your work. What would you say to high pay, steady work, unlimited expense account, your own boss on the job, and lots of variety and adventure? --

He stared. -- I'd say, "Get those goddam reindeer off my roof! " Shove it, Pop - there's no such job. --

"Okay, put it this way: I hand him to you, you settle with him, then try my job. If it's not all I claim - well, I can't hold you. --

He was wavering; the last drink did it "When d'yuh d'liver "im? -- he said thickly.

He shoved out his hand. -- It's a deal! "

"If it's a deal-right now! "

I nodded to my assistant to watch both ends, noted the time - 2300 - started to duck through the gate under the bar - when the juke box blared out: "I'm My Own Grandpaw! " The service man had orders to load it with Americana and classics because I couldn't stomach the "music" of 1970, but I hadn't known that tape was in it. I called out, "Shut that off! Give the customer his money back. -- I added, "Storeroom, back in a moment, " and headed there with my Unmarried Mother following.

It was down the passage across from the johns, a steel door to which no one but my day manager and myself had a key; inside was a door to an inner room to which only I had a key. We went there.

He looked blearily around at windowless walls. -- Where is he? --

"Right away. -- I opened a case, the only thing in the room; it was a U. S. F. F. Coordinates Transformer Field Kit, series 1992, Mod. II - a beauty, no moving parts, weight twenty-three kilos fully charged, and shaped to pass as a suitcase. I had adjusted it precisely earlier that day; all I had to do was to shake out the metal net which limits the transformation field.

Which I did. -- What's that? -- he demanded.

"Time machine, " I said and tossed the net over us.

"Hey! " he yelled and stepped back. There is a technique to this; the net has to be thrown so that the subject will instinctively step back onto the metal mesh, then you close the net with both of you inside completely-else you might leave shoe soles behind or a piece of foot, or scoop up a slice of floor. But that's all the skill it takes. Some agents con a subject into the net; I tell the truth and use that instant of utter astonishment to flip the switch. Which I did.

1030-VI-3 April 1963 - Cleveland, Ohio-Apex Bldg.: "Hey! " he repeated. -- Take this damn thing off! "

"Sorry, " I apologized and did so, stuffed the net into the case, closed it. -- You said you wanted to find him. --

"But - you said that was a time machine! "

I pointed out a window. -- Does that look like November? Or New York? -- While he was gawking at new buds and spring weather, I reopened the case, took out a packet of hundred-dollar bills, checked that the numbers and signatures were compatible with 1963. The Temporal Bureau doesn't care how much you spend (it costs nothing) but they don't like unnecessary anachronisms. Too many mistakes, and a general court-martial will exile you for a year in a nasty period, say 1974 with its strict rationing and forced labor. I never make such mistakes; the money was okay.

He turned around and said, "What happened? --

"He's here. Go outside and take him. Here's expense money. -- I shoved it at him and added, "Settle him, then I'll pick you up. --

Hundred-dollar bills have a hypnotic effect on a person not used to them. He was thumbing them unbelievingly as I eased him into the hall, locked him out. The next jump was easy, a small shift in era.

7100-VI-10 March 1964 - Cleveland-Apex Bldg.: There was a notice under the door saying that my lease expired next week; otherwise the room looked as it had a moment before. Outside, trees were bare and snow threatened; I hurried, stopping only for contemporary money and a coat, hat, and topcoat I had left there when I leased the room. I hired a car, went to the hospital. It took twenty minutes to bore the nursery attendant to the point where I could swipe the baby without being noticed. We went back to the Apex Building. This dial setting was more involved, as the building did not yet exist in 1945. But I had precalculated it.

0100-VI-20 Sept. 1945 - Cleveland-Skyview Motel:: Field kit, baby, and I arrived in a motel outside town. Earlier I had registered as "Gregory Johnson, Warren, Ohio, " so we arrived in a room with curtains closed, windows locked, and doors bolted, and the floor cleared to allow for waver as the machine hunts. You can get a nasty bruise from a chair where it shouldn't be - not the chair, of course, but backlash from the field.

No trouble. Jane was sleeping soundly; I carried her

out, put her in a grocery box on the seat of a car I had provided earlier, drove to the orphanage, put her on the steps, drove two blocks to a "service station" (the petroleum-products sort) and phoned the orphanage, drove back in time to see them taking the box inside, kept going and abandoned the car near the motel - walked to it and jumped forward to the Apex Building in 1963.

2200-VI-24 April 1963 - Cleveland-Apex Bldg.: I had cut the time rather fine - temporal accuracy depends on span, except on return to zero. If I had it right, Jane was discovering, out in the park this balmy spring night, that she wasn't quite as nice a girl as she had thought., I grabbed a taxi to the home of those skinflints, had the hackie wait around a comer while I lurked in shadows.

Presently I spotted them down the street, arms around each other. He took her up on the porch and made a long job of kissing her good-night-longer than I thought. Then she went in and he came down the walk, turned away. I slid into step and hooked an arm in his. -- That's all, son, " I announced quietly. -- I'm back to pick you up. --

"You! " He gasped and caught his breath.

"Me. Now you know who he is - and after you think it over you'll know who you are... and if you think hard enough, you'll figure out who the baby is... and who I am. --

He didn't answer, he was badly shaken. It's a shock to have it proved to you that you can't resist seducing yourself. I took him to the Apex Building and we jumped again.

2300-VIII, 12 Aug. 1985-Sub Rockies Base: I woke the duty sergeant, showed my I. D., told the sergeant to bed my companion down with a happy pill and recruit him in the moming. The sergeant looked sour, but rank is rank, regardless of era; he did what I said-thinking, no doubt, that the next time we met he might be the colonel and I the sergeant. Which can happen in our corps. -- What name? -- he asked.

I wrote it out. He raised his eyebrows. -- Like so, eh? Hmm-"

"You just do your job, Sergeant. -- I turned to my companion.

"Son, your troubles are over. You're about to start the best job a man ever held-and you'll do well. I know. --

"That you will! " agreed the sergeant. -- Look at me - born in 1917-still around, still young, still enjoying life. -- I went back to the jump room, set everything on preselected zero.

2301-V-7 Nov. 1970-NYC -"Pop's Place": I came out of the storeroom carrying a fifth of Drambuie to account for the minute I had been gone. My assistant was arguing with the customer who had been playing "I'm My Own Grand-paw! " I said, "Oh, let him play it, then unplug it. -- I was very tired.

It's rough, but somebody must do it, and it's very hard to recruit anyone in the later years, since the Mistake of 1972. Can you think of a better source than to pick people all fouled up where they are and give them well-paid, interesting (even though dangerous) work in a necessary cause? Everybody knows now why the Fizzle War of 1963 fizzled. The bomb with New York's number on it didn't go off, a hundred other things didn't go as planned-all arranged by the likes of me.

But not the Mistake of "72; that one is not our fault-and can't be undone; there's no paradox to resolve. A thing either is, or it isn't, now and forever amen. But there won't be another like it; an order dated "1992" takes precedence any year.

I closed five minutes early, leaving a letter in the cash register telling my day manager that I was accepting his offer to buy me out, to see my lawyer as I was leaving on a long vacation. The Bureau might or might not pick up his payments, but they want things left tidy. I went to the room in the back of the storeroom and forward to 1993.

2200-VII- 12 Jan 1993-Sub Rockies Annex-HQ Temporal DOL: I checked in with the duty officer and went to my quarters, intending to sleep for a week. I had fetched the bottle we bet (after all, I won it) and took a drink before I wrote my report. It tasted foul, and I wondered why I had ever liked Old Underwear. But it was better than nothing; I don't like to be cold sober, I think too much. But I don't really hit the bottle either; other people have snakes-I have people.

I dictated my report; forty recruitments all okayed by the Psych Bureau - counting my own, which I knew would be okayed. I was here, wasn't I? Then I taped a request for assignment to operations; I was sick of recruiting. I dropped both in the slot and headed for bed.

My eye fell on "The By-Laws of Time, " over my bed:

Never Do Yesterday What Should Be Done Tomorrow.
If at Last You Do Succeed, Never Try Again.
A Stitch in Time Saves Nine Billion.
A Paradox May Be Paradoctored.
It Is Earlier When You Think.
Ancestors Are Just People.

Even Jove Nods.

They didn't inspire me the way they had when I was a recruit; thirty subjective-years of time-jumping wears you down. I undressed, and when I got down to the hide I looked at my belly. A Cesarean leaves a big scar, but I'm so hairy now that I don't notice it unless I look for it.

Then I glanced at the ring on my finger.

The Snake That Eats Its Own Tail, Forever and Ever. I know where I came from - but where did all you zombies come from?

I felt a headache coming on, but a headache powder is one thing I do not take. I did once - and you all went away.

So I crawled into bed and whistled out the light.

You aren't really there at all. There isn't anybody but me - Jane - here alone in the dark.

I miss you dreadfully!

The Black Pits of Luna

THE MORNING after we got to the Moon we went over to Rutherford. Dad and Mr. Latham - Mr. Latham is the man from the Harriman Trust that Dad came to Luna City to see.

Dad and Mr. Latham had to go anyhow, on business. I got Dad to promise I could go along because it looked like just about my only chance to get out on the surface of the Moon. Luna City is all right, I guess, but I defy you to tell a corridor in Luna City from the sublevels in New York-except that you're light on your feet, of course.

When Dad came into our hotel suite to say we were ready to leave, I was down on the floor, playing mumblety-peg with my kid brother. Mother was lying down and had asked me to keep the runt quiet. She had been dropsick all the way out from Earth and I guess she didn't feel very good. The runt had been fiddling with the lights, switching them from "dusk" to "desert suntan" and back again. I collared him and sat him down on the floor.

Of course, I don't play mumblety-peg any more, but, on the Moon, it's a right good game. The knife practically floats and you can do all kinds of things with it. We made up a lot of new rules.

Dad said, "Switch in plans, my dear. We're leaving for Rutherford right away. Let's pull ourselves together."

Mother said, "Oh, mercy me-I don't think I'm up to it. You and Dickie run along. Baby Darling and I will just spend a quiet day right here."

Baby Darling is the runt.

I could have told her it was the wrong approach. He nearly put my eye out with the knife and said, "Who? What? I'm going too. Let's go!"

Mother said, "Oh, now, Baby Darling-don't cause Mother Dear any trouble, We'll go to the movies, just you and I."

The runt is seven years younger than I am, but don't call him "Baby Darling" if you want to get anything out of him. He started to bawl. "You said I could go!" he yelled.

"No, Baby Darling. I haven't mentioned it to you. I-"

"Daddy said I could go!"

"Richard, did you tell Baby he could go?"

"Why, no, my dear, not that I recall. Perhaps I-"

The kid cut in fast. "You said I could go anywhere Dickie went. You promised me you promised me you promised me." Sometimes you have to hand it to the runt; he had them jawing about who told him what in nothing flat. Anyhow, that is how twenty minutes later, the four of us were up at the rocket port with Mr. Lathani and climbing into the shuttle for Rutherford.

The trip only takes about ten minutes and you don't see much, just a glimpse of the Earth while the rocket is still near Luna City and then not even that, since the atom plants where we were going are all on the back side of the Moon, of course. There were maybe a dozen tourists along and most of them were dropsick as soon as we went into free flight. So was Mother. Some people never will get used to rockets.

But Mother was all right as soon as we grounded and were inside again. Rutherford isn't like Luna City; instead of extending a tube out to the ship, they send a

pressurized car out to latch on to the airlock of the rocket, then you jeep back about a mile to the entrance to underground. I liked that and so did the runt. Dad had to go off on business with Mr. Latham, leaving Mother and me and the runt to join up with the party of tourists for the trip through the laboratories.

It was all right but nothing to get excited about. So far as I can see, one atomics plant looks about like another; Rutherford could just as well have been. the main plant outside Chicago. I mean to say everything that is anything is out of sight, covered up, shielded. All you get to see are some dials and instrument boards and people watching them. Remote control stuff, like Oak Ridge. The guide tells you about the experiments going on and they show you some movies - that's all.

I liked our guide. He looked like Tom Jeremy in The Space Troopers. I asked him if he was a spaceman and he looked at me kind of funny and said, no, that he was just a Colonial Services ranger. Then he asked me where I went to school and if I belonged to the Scouts. He said he was scoutmaster of Troop One, Rutherford City, Moonbat Patrol.

I found out there was just the one patrol-not many scouts on the Moon, I suppose.

Dad and Mr. Latham joined us just as we finished the tour while Mr. Perrin - that's our guide - was announcing the trip outside. "The conducted tour of Rutherford," he said, talking as if it were a transcription, "includes a trip by spacesuit out on the surface of the Moon, without extra charge, to see the Devil's Graveyard and the site of the Great Disaster of 1984. The trip is optional. There is nothing particularly dangerous about it and we've never had any one hurt, but the Commission requires that you sign a separate release for your own safety if you choose to make this trip. The trip takes about one hour. Those preferring to remain behind will find movies and refreshments in the coffee shop."

Dad was rubbing his hands together. "This is for me," he announced. "Mr. Latham, I'm glad we got back in time. I wouldn't have missed this for the world."

"You'll enjoy it," Mr. Latham agreed, "and so will you, Mrs. Logan. I'm tempted to come along myself."

"Why don't you?' Dad asked.

"No, I want to have the papers ready for you and the Director to sign when you get back and before you leave for Luna City."

"Why knock yourself out?" Dad urged him. "If a man's word is no good, his signed contract is no better. You can mail the stuff to me at New York."

Mr. Latham shook his head. "No, really - I've been out on the surface dozens of times. But I'll come along and help you into your spacesuits."

Mother said, "Oh dear," she didn't think she'd better go; she wasn't sure she could stand the thought of being shut up in a spacesuit and besides glaring sunlight always gave her a headache.

Dad said, "Don't be silly, my dear; it's the chance of a lifetime," and Mr. Latham told her that the filters on the helmets kept the light from being glaring. Mother always objects and then gives in. I suppose women just don't have any force of character. Like the night before - earth-night, I mean, Luna City time - she had bought a fancy moonsuit to wear to dinner in the Earth-View room at the hotel, then she got cold feet. She complained to Dad that she was too plump to dare to dress like that.

Well, she did show an awful lot of skin. Dad said, "Nonsense, my dear. You look ravishing." So she wore it and had a swell time, especially when a pilot tried to pick her up.

It was like that this time. She came along. We went into the outfitting room and I looked around while Mr. Perrin was getting them all herded in and having the releases signed. There was the door to the airlock to the surface at the far end, with a bull's-eye window in it and another one like it in the door beyond. You could peek through and see the surface of the Moon beyond, looking hot and bright and sort of improbable, in spite of the amber glass in the windows. And there was a double row of spacesuits hanging up, looking like empty men. I snooped around until Mr. Perrin got around to our party.

"We can arrange to leave the youngster in the care of the hostess in the coffee shop," he was telling Mother. He reached down and tousled the runt's hair. The runt tried to bite him and he snatched his hand away in a hurry.

"Thank you, Mr. Perkins," Mother said, "I suppose that's best-though perhaps I had better stay behind with him."

"'Perrin' is the name," Mr. Perrin said mildly. "It won't be necessary. The hostess will take good care of him."

Why do adults talk in front of kids as if they couldn't understand English? They should have just shoved him into the coffee shop. By now the runt knew he was being railroaded. He looked around belligerently. "I go, too," he said loudly. "You promised me."

"Now Baby Darling," Mother tried to stop him. "Mother Dear didn't tell you-" But she was just whistling to herself; the runt turned on the sound effects.

"You said I could go where Dickie went; you promised me when I was sick. You promised me you promised me-" and on and on, his voice getting higher and louder all the time.

Mr. Perrin looked embarrassed. Mother said, "Richard, you'll just have to deal with your child. After all, you were the one who promised him."

"Me, dear?" Dad looked surprised. "Anyway, I don't see anything so complicated about it. Suppose we did promise him that he could do what Dickie does-we'll simply take him along; that's all."

Mr. Perrin cleared his throat. "I'm afraid not. I can outfit your older son with a woman's suit; he's tall for his age. But we just don't make any provision for small children."

Well, we were all tangled up in a mess in no time at all. The runt can always get Mother to go running in circles. Mother has the same effect on Dad. He gets red in the face and starts laying down the law to me. It's sort of a chain reaction, with me on the end and nobody to pass it along to. They came out with a very simple solution - I was to stay behind and take care of Baby Darling brat!

"But, Dad, you said-" I started in.

"Never mind!" he cut in. "I won't have this family disrupted in a public squabble. You heard what your mother said."

I was desperate. "Look, Dad," I said, keeping my voice low, "if I go back to Earth without once having put on a spacesuit and set foot on the surface, you'll just have to find another school to send me to. I won't go back to Lawrenceville; I'd be the joke of the whole place."

"We'll settle that when we get home."

"But, Dad, you promised me specifically-"

"That'll be enough out of you, young man. The matter is closed."

Mr. Lathain had been standing near by, taking it in but keeping his mouth shut. At this point he cocked an eyebrow at Dad and said very quietly, "Well, R.J., I thought your word was your bond?"

I wasn't supposed to hear it and nobody else did - a good thing, too, for it doesn't do to let Dad know that you know that he's wrong; it just makes him worse. I changed the subject in a hurry. "Look, Dad, maybe we all can go out. How about that suit over there?" I pointed at a rack that was inside a railing with a locked gate on it. The rack had a couple of dozen suits on it and at the far end, almost out of sight, was a small suit - the boots on it hardly came down to the waist of the suit next to it.

"Huh?" Dad brightened up. "Why, just the thing! Mr. Perrin! Oh, Mr. Perrin-here a minute! I thought you didn't have any small suits, but here's one that I think will fit."

Dad was fiddling at the latch of the railing gate. Mr. Perrin stopped him. "We can't use that suit, sir."

"Uh? Why not?"

"All the suits inside the railing are private property, not for rent."

"What? Nonsense-Rutherford is a public enterprise. I want that suit for my child."

"Well, you can't have it."

"I'll speak to the Director."

"I'm afraid you'll have to. That suit was specially built for his daughter."

And that's just what they did. Mr. Latham got the Director on the line, Dad talked to him, then the Director talked to Mr. Perrin, then he talked to Dad again. The Director didn't mind lending the suit, not to Dad, anyway, but he wouldn't order Mr. Perrin to take a below-age child outside.

Mr. Perrin was feeling stubborn and I don't blame him, but Dad soothed his feathers down and presently we were all climbing into our suits and getting pressure checks and checking our oxygen supply and switching on our walkie-talkies. Mr. Perrin was calling the roll by radio and reminding us that we were all on the same circuit, so we had better let him do most of the talking and not to make casual remarks or none of us would be able to hear. Then we were in the airlock and he was warning us to stick close together and not try to see how fast we could run or how high we could jump. My heart was rocking around in my chest.

The outer door of the lock opened and we filed out on the face of the Moon. It was just as wonderful as I dreamed it would be, I guess, but I was so excited that I hardly knew it at the time. The glare of the sun was the brightest thing I ever saw and the shadows so inky black you could hardly see into them. You couldn't hear anything but voices over your radio and you could reach down and switch off that.

The pumice was soft and kicked up around our feet like smoke, settling slowly, falling in slow motion. Nothing else moved. It was the deadest place you can imagine.

We stayed on a path, keeping close together for company, except twice when I had to take out after the runt when he found out he could jump twenty feet. I wanted to smack him, but did you ever try to smack anybody wearing a spacesuit? It's no use.

Mr. Perrin told us to halt presently and started his talk. "You are now in the Devil's Graveyard. The twin spires behind you are five thousand feet above the floor of the plain and have never been scaled. The spires, or monuments, have been named for apocryphal or mythological characters because of the fancied resemblance of this fantastic scene to a giant cemetery. Beelzebub, Thor, Siva, Cain, Set-" He pointed around

us. "Lunologists are not agreed as to the origin of the strange shapes. Some claim to see indications of the action of air and water as well as volcanic action. If so, these spires must have been standing for an unthinkably long period, for today, as you see, the Moon-" It was the same sort of stuff you can read any month in Spaceways Magazine, only we were seeing it and that makes a difference, let me tell you.

The spires reminded me a bit of the rocks below the lodge in the Garden of the Gods in Colorado Springs when we went there last summer, only these spires were lots bigger and, instead of blue sky, there was just blackness and hard, sharp stars overhead. Spooky.

Another ranger bad come with us, with a camera. Mr. Perrin tried to say something else, but the runt had started yapping away and I had to switch off his radio before anybody could hear anything. I kept it switched off until Mr. Perrin finished talking.

He wanted us to line up for a picture with the spires and the black sky behind us for a background. "Push your faces forward in your helmets so that your features will show. Everybody look pretty. There!" he added as the other guy snapped the shot. "Prints will be ready when you return, at ten dollars a copy."

I thought it over. I certainly needed one for my room at school and I wanted one to give to - anyhow, I needed another one. I had eighteen bucks left from my birthday money; I could sweet-talk Mother for the balance. So I ordered two of them.

We climbed a long rise and suddenly we were staring out across the crater, the disaster crater, all that was left of the first laboratory. It stretched away from us, twenty miles across, with the floor covered with shiny, bubbly green glass instead of pumice. There was a monument. I read it:

HERE ABOUT YOU ARE THE MORTAL REMAINS OF
Kurt Schaeffer
Maurice Feinstein
Thomas Dooley
Hazel Hayakawa
Cl. Washington Slappey
Sam Houston Adams
WHO DIED FOR THE TRUTH THAT MAKES MEN FREE
On the Eleventh Day of August 1984

I felt sort of funny and backed away and went to listen to Mr. Perrin. Dad and some of the other men were asking him questions. "They don't know exactly," he was saying. "Nothing was left. Now we telemeter all the data back to Luna City, as it comes off the instruments, but that was before the line-of-sight relays were set up."

"What would have happened," some man asked, "if this blast had gone off on Earth?"

"I'd hate to try to tell you-but that's why they put the lab here, back of the Moon." He glanced at his watch. "Time to leave, everybody." They were milling around, heading back down toward the path, when Mother screamed.

"Baby! Where's Baby Darling?"

I was startled but I wasn't scared, not yet. The runt is always running around, first here and then there, but he doesn't go far away, because he always wants to have somebody to yap to.

My father had one arm around Mother; he signaled to me with the other. "Dick," he snapped, his voice sharp in my earphones, "what have you done with your brother?'

"Me?" I said. "Don't look at me-the last I saw Mother had him by the hand, walking up the hill here."

"Don't stall around, Dick. Mother sat down to rest when we got here and sent him to you."

"Well, if she did, he never showed up." At that, Mother started to scream in earnest. Everybody had been listening, of course-they had to; there was just the one radio circuit. Mr. Perrin stepped up and switched off Mother's talkie, making a sudden silence.

"Take care of your wife, Mr. Logan," he ordered, then added, "When did you see your child last?"

Dad couldn't help him any; when they tried switching Mother back into the hook-up, they switched her right off again. She couldn't help and she deafened us. Mr. Perrin addressed the rest of us. "Has anyone seen the small child we had with us? Don't answer unless you have something to contribute. Did anyone see him wander away?"

Nobody had. I figured he probably ducked out when everybody was looking at the crater and had their backs to him. I told Mr. Perrin so. "Seems likely," he agreed. "Attention, everybody! I'm going to search for the child. Stay right where you are. Don't move away from this spot. I won't be gone more than ten minutes."

"Why don't we all go?" somebody wanted to know.

"Because," said Mr. Perrin, "right now I've - only got one lost. I don't want to make it a dozen." Then he left, taking big easy lopes that covered fifty feet at a step.

Dad started to take out after him, then thought better of it, for Mother suddenly keeled over, collapsing at the knees and floating gently to the ground. Everybody started talking at once. Some idiot wanted to take her helmet off, but Dad isn't crazy. I switched off my radio so I could hear myself think and started looking around, not leaving the crowd but standing up on the lip of the crater and trying to see as much as I could.

I was looking back the way we had come; there was no sense in looking at the crater-if he had been in there he would have shown up like a fly on a plate.

Outside the crater was different; you could have hidden a regiment within a block of us, rocks standing up every which way, boulders big as houses with blow holes all through them, spires, gulleys-it was a mess. I could see Mr. Perrin every now and then, casting around like a dog after a rabbit, and making plenty of time. He was practically flying. When he came to a big boulder he would jump right over it, leveling off face down at the top of his jump, so he could see better.

Then he was heading back toward us and I switched my radio back on. There was still a lot of talk. Somebody was saying, "We've got to find him before sundown," and somebody else answered, "Don't be silly; the sun won't be down for a week. It's his air supply, I tell you. These suits are only good for four hours." The first voice said, "Oh!" then added softly, "like a fish out of water-" It was then I got scared.

A woman's voice, sounding kind of choked, said, "The poor, poor darling! We've got to find him before he suffocates," and my father's voice cut in sharply, "Shut up talking that way!" I could hear somebody sobbing. It might have been Mother.

Mr. Perrin was almost up to us and he cut in, "Silence everybody! I've got to call the base," and he added urgently, "Perrin, calling airlock control; Perrin, calling airlock control!"

A woman's voice answered, "Come in, Perrin." He told her what was wrong and added, "Send out Smythe to take this party back in. I'm staying. I want every ranger who's around and get me volunteers from among any of the experienced Moon hands. Send out a radio direction-finder by the first ones to leave."

We didn't wait long, for they came swarming toward us like grasshoppers. They must have been running forty or fifty miles an hour. It would have been something to see, if I hadn't been so sick at my stomach.

Dad put up an argument about going back, but Mr. Perrin shut him up. "If you hadn't been so confounded set on having your own way, we wouldn't be in a mess. If you had kept track of your kid, he wouldn't be lost. I've got kids of my own; I don't let 'em go out on the face of the Moon when they're too young to take care of themselves. You go on back - I can't be burdened by taking care of you, too."

I think Dad might even have gotten in a fight with him if Mother hadn't gotten faint again. We went on back with the party.

The next couple of hours were pretty awful. They let us sit just outside the control room where we could hear Mr. Perrin directing the search, over the loudspeaker. I thought at first that they would snag the runt as soon as they started using the radio direction-finder-pick up his power hum, maybe, even if he didn't say anything-but no such luck; they didn't get anything with it. And the searchers didn't find anything either.

A thing that made it worse was that Mother and Dad didn't even try to blame me. Mother was crying quietly and Dad was consoling her, when he looked over at me with an odd expression. I guess he didn't really see me at all, but I thought he was thinking that if I hadn't insisted on going out on the surface this wouldn't have happened. I said, "Don't go looking at me, Dad. Nobody told me to keep an eye on him. I thought he was with Mother."

Dad just shook his head without answering. He was looking tired and sort of shrunk up. But Mother, instead of laying in to me and yelling, stopped her crying and managed to smile. "Come here, Dickie," she said, and put her other arm around me. "Nobody blames you, Dickie. Whatever happens, you weren't at fault. Remember that, Dickie."

So I let her kiss me and then sat with them for a while, but I felt worse than before. I kept thinking about the runt, somewhere out there, and his oxygen running out. Maybe it wasn't my fault, but I could have prevented it and I knew it. I shouldn't have depended on Mother to look out for him; she's no good at that sort of thing. She's the kind of person that would mislay her head if it wasn't knotted on tight - the ornamental sort. Mother's good, you understand, but she's not practical. She would take it pretty hard if the runt didn't come back. And so would Dad-and so would I. The runt is an awful nuisance, but it was going to seem strange not to have him around underfoot. I got to thinking about that remark, "Like a fish out of water." I accidentally busted an aquarium once; I remember yet how they looked. Not pretty. If the runt was going to die like that - I shut myself up and decided I just had to figure out some way to help find him.

After a while I had myself convinced that I could find him if they would just let me help look. But they wouldn't of course.

Dr. Evans the Director showed up again-he'd met us when we first came in - and asked if there was anything he could do for us and how was Mrs. Logan feeling? "You know I wouldn't have had this happen for the world," he added. "We're doing all we can. I'm having some ore-detectors shot over from Luna City. We might be able to spot the child by the metal in his suit."

Mother asked how about bloodhounds and Dr. Evans didn't even laugh at her. Dad suggested helicopters, then corrected himself and made it rockets. Dr. Evans pointed out that it was impossible to examine the ground closely from a rocket.

I got him aside presently and braced him to let me join the hunt. He was polite but unimpressed, so I insisted. "What makes you think you can find him?", he asked me. "We've got the most experienced Moon men available out there now. I'm afraid, son, that you would get yourself lost or hurt if you tried to keep up with them. In this country, if you once lose sight of landmarks, you can get hopelessly lost."

"But look, Doctor," I told him, "I know the runt-I mean my kid brother, better than anyone else in the world. I won't get lost-I mean I will get lost but just the way he did. You can send somebody to follow me."

He thought about it. "It's worth trying," he said suddenly. "I'll go with you. Let's suit up."

We made a fast trip out, taking thirty-foot strides-the best I could manage even with Dr. Evans hanging on to my belt to keep me from stumbling. Mr. Perrin was expecting us. He seemed dubious about my scheme. "Maybe the old 'lost mule' dodge will work," he admitted, "but I'll keep the regular search going just the same. Here, Shorty, take this flashlight. You'll need it in the shadows."

I stood on the edge of the crater and tried to imagine I was the runt, feeling bored and maybe a little bit griped at the lack of attention. What would I do next?

I went skipping down the slope, not going anywhere in particular, the way the runt would have done. Then I stopped and looked back, to see if Mother and Daddy and Dickie had noticed me. I was being followed all right; Dr. Evans and Mr. Perrin were close behind me. I pretended that no one was looking and went on. I was pretty close to the first rock outcroppings by now and I ducked behind the first one I came to. It wasn't high enough to hide me but it would have covered the runt. It felt like what he would do; he loved to play hide-and-go-seek - it made him the center of attention.

I thought about it. When the runt played that game, his notion of hiding was always to crawl under something, a bed, or a sofa, or an automobile, or even under the sink. I looked around. There were a lot of good places; the rocks were filled with blow holes and overhangs. I started working them over. It seemed hopeless; there must have been a hundred such places right around close.

Mr. Perrin came up to me as I was crawling out of the fourth tight spot. "The men have shined flashlights around in every one of these places," he told me. "I don't think it's much use, Shorty."

"Okay," I said, but I kept at it. I knew I could get at spots a grown man couldn't reach; I just hoped the runt hadn't picked a spot I couldn't reach.

It went on and on and I was getting cold and stiff and terribly tired. The direct sunlight is hot on the Moon, but the second you get in the shade, it's cold. Down inside those rocks it never got warm at all. The suits they gave us tourists are well enough insulated, but the extra insulation is in the gloves and the boots and the seats of the pants-

and I had been spending most of my time down on my stomach, wiggling into tight places.

I was so numb I could hardly move and my whole front felt icy. Besides, it gave me one more thing to worry about - how about the runt? Was he cold, too?

If it hadn't been for thinking how those fish looked and how, maybe, the runt would be frozen stiff before I could get to him, I would have quit. I was about beat. Besides, it's rather scary down inside those holes-you don't know what you'll come to next.

Dr. Evans took me by the arm as I came out of one of them, and touched his helmet to mine, so that I got his voice directly. "Might as well give up, son. You're knocking your self out and you haven't covered an acre." I pulled away from him.

The next place was a little overhang, not a foot off the ground. I flashed a light into it. It was empty and didn't seem to go anywhere. Then I saw there was a turn in it. I got down flat and wiggled in. The turn opened out a little and dropped off. I didn't think it was worthwhile to go any deeper as the runt wouldn't have crawled very far in the dark, but I scrunched ahead a little farther and flashed the light down.

I saw a boot sticking out.

That's about all there is to it. I nearly bashed in my helmet getting out of there, but I was dragging the runt after me. He was limp as a cat and his face was funny. Mr. Perrin and Dr. Evans were all over me as I came out, pounding me on the back and shouting. "Is he dead, Mr. Perrin?" I asked, when I could get my breath. "He looks awful bad."

Mr. Perrin looked him over. "No . . . I can see a pulse in his throat. Shock and exposure, but this suit was specially built-we'll get him back fast." He picked the runt up in his arms and I took out after him.

Ten minutes later the runt was wrapped in blankets and drinking hot cocoa. I had some, too. Everybody was talking at once and Mother was crying again, but she looked normal and Dad had filled out.

He tried to write out a check for Mr. Perrin, but he brushed it off. "I don't need any reward; your boy found him.

"You can do me just one favor-"

"Yes?" Dad was all honey.

"Stay off the Moon. You don't belong here; you're not the pioneer type."

Dad took it. "I've already promised my wife that," he said without batting an eye. "You needn't worry."

I followed Mr. Perrin as he left and said to him privately, "Mr. Perrin-I just wanted to tell you that I'll be back, if you don't mind."

He shook hands with me and said, "I know you will, Shorty."

Robert A Heinlein

Blowups Happen

"PUT down that wrench!"

The man addressed turned slowly around and faced the speaker. His expression was hidden by a grotesque helmet, part of a heavy, lead-and-cadmium armor which shielded his entire body, but the tone of voice in which he answered showed nervous exasperation.

"What the hell's eating on you, doc?" He made no move to replace the tool in question.

They faced each other like two helmeted, arrayed fencers, watching for an opening. The first speaker's voice came from behind his mask a shade higher in key and more peremptory in tone. "You heard me, Harper. Put down that wrench at once, and come away from that 'trigger'. Erickson!"

A third armored figure came from the far end of the control room. "What 'cha want, doe?"

"Harper is relieved from watch. You take over as engineer-of-the-watch. Send for the standby engineer."

"Very well." His voice and manner were phlegmatic, as he accepted the situation without comment. The atomic engineer whom he had just relieved glanced from one to the other, then carefully replaced the wrench in its rack.

"Just as you say, Doctor Silard, but send for your relief, too. I shall demand an immediate hearing!" Harper swept indignantly out, his lead-sheathed boots clumping on the floorplates.

Doctor Silard waited unhappily for the ensuing twenty minutes until his own relief arrived. Perhaps he had been hasty. Maybe he was wrong in thinking that Harper had at last broken under the strain of tending the most dangerous machine in the world-the atomic breeder plant. But if he had made a mistake, it had to be on the safe side-slips must not happen in this business; not when a slip might result in atomic detonation of nearly ten tons of uranium-238, U-235, and plutonium.

He tried to visualize what that would mean, and failed. He had 'been told that uranium was potentially twenty million times as explosive as T.N.T. The figure was meaningless that way. He thought of the pile instead as a hundred million tons of high explosive, or as a thousand Hiroshimas. It still did not mean anything. He had once seen an A-bomb dropped, when he had been serving as a temperament analyst for the Air Forces. He could not imagine the explosion of a thousand such bombs; his. brain balked. Perhaps these atomic engineers could. Perhaps, with their greater mathematical ability and closer comprehension of what actually went on inside the nuclear fission chamber, they had some vivid glimpse of the mind-shattering horror locked up beyond that shield. If so, no wonder they tended to blow up- He sighed. Erickson looked away from the controls of the linear resonant accelerator on which he had been making some adjustment.

"What's the trouble, doc?"

"Nothing. I'm sorry I had to relieve Harper."

Silard could feel the shrewd glance of the big Scandinavian. "Not getting the jitters yourself, are you, doc? Sometimes you squirrel-sleuths blow up, too-"

"Me? I don't think so. I'm scared of that thing in there-I'd be crazy if I weren't."

"So am I," Erickson told him soberly, and went back to his work at the controls of the accelerator. The accelerator proper lay beyond another shielding barrier; its snout disappeared in the final shield between it and the pile and fed a steady stream of terrifically speeded up sub-atomic bullets to the beryllium target located within the pile itself. The tortured beryllium yielded up neutrons, which shot out in all directions through the uranium mass. Some of these neutrons struck uranium atoms squarely on their nuclei and split them in two. The fragments were new elements, barium, xenon, rubidium-depending on the portions in which each atom split. The new elements were usually unstable isotopes and broke down into a, dozen more elements by radioactive disintegration in a progressive reaction.

But these second transmutations were comparatively safe; it was the original splitting of the uranium nucleus, with the release of the awe-inspiring energy that bound it together-an incredible two hundred million electron volts-that was important-and perilous.

For, while uranium was used to breed other fuels by bombarding it with neutrons, the splitting itself gives up more neutrons which in turn may land in other uranium nuclei and split them. If conditions are favorable to a progressively increasing reaction of this sort, it may get out of hand, build up in an unmeasurable fraction of a micro-second into a complete atomic explosion-an explosion which would dwarf an atom bomb to pop-gun size; an explosion so far beyond all human experience as to be as completely incomprehensible as the idea of personal death. It could be feared, but not understood.

But a self-perpetuating sequence of nuclear splitting, just wider the level of complete explosion, was necessary to the operation of the breeder plant. To split the first uranium nucleus by bombarding it with neutrons from the beryllium target took more power than the death of the atom gave up. In order that the breeder pile continue to operate it was imperative that each atom split by a neutron from the beryllium target should cause the splitting of many more.

It was equally imperative that this chain of reactions should always tend to dampen, to die out. It must not build up, or the uranium mass would explode within a time interval too short to be measured by any means whatsoever.

Nor would there be anyone left to measure it.

The atomic engineer on duty at the pile could control this reaction by means of the "trigger", a term the engineers used to include the linear resonant accelerator, the beryllium target, the cadmium damping rods, and adjacent controls, instrument board, and power sources. That is to say he could vary the bombardment on the beryllium target to increase or decrease the level of operation of the plant, he could change the "effective mass" of the pile with the cadmium dampers, and he could tell from his instruments that the internal reaction was dampened-or, rather, that it had been dampened the split second before. He could not possibly know what was actually happening now within the pile-subatomic speeds are too great and the time intervals too small. He was like the bird that flew backward; he could see where he had been, but never knew where he was going.

Nevertheless, it was his responsibility, and his alone, not only to maintain the pile at a high efficiency, but to see that the reaction never passed the critical point and progressed into mass explosion.

But that was impossible. He could not be sure; he could never be sure.

He could bring to the job all of the skill and learning of the finest technical education, and use it to reduce the hazard to the lowest mathematical probability, but the blind laws of chance which appear to rule in sub-atomic action might turn up a royal flush against him and defeat his most skillful play.

And each atomic engineer knew it, knew that he gambled not only with his own life, but with the lives of countless others, perhaps with the lives of every human being on the planet. Nobody knew quite what such an explosion would do. A conservative estimate assumed that, in addition to destroying the plant and its personnel completely, it would tear a chunk out of the populous and heavily traveled Los Angeles-Oklahoma Road-City a hundred miles to the north.

The official, optimistic viewpoint on which the plant had been authorized by the Atomic Energy Commission was based on mathematics which predicted that such a mass of uranium would itself be disrupted on a molar scale, and thereby limit the area of destruction, before progressive and accelerated atomic explosion could infect the entire mass.

The atomic engineers, by and large, did not place faith in the official theory. They judged theoretical mathematical prediction for what it was worth-precisely nothing, until confirmed by experiment.

But even from the official viewpoint, each atomic engineer while on watch carried not only his own life in his hands, but the lives of many others-how many, it was better not to think about. No pilot, no general, no surgeon ever carried such a daily, inescapable, ever present weight of responsibility for the lives of others as these men carried every time they went on watch, every time they touched a venire screw, or read a dial.

They were selected not alone for their intelligence and technical training, but quite as much for their characters and sense of social responsibility. Sensitive men were needed-men who could fully appreciate the importance of the charge entrusted to them; no other sort would do. But the burden of responsibility was too great to be borne indefinitely by a sensitive man.

It was, of necessity, a psychologically unstable condition. Insanity was an occupational disease.

Doctor Cummings appeared, still buckling the straps of the armor worn to guard against stray radiation. "What's up?" he asked Silard.

"I had to relieve Harper."

"So I guessed. I met him coming up. He was sore as hell-just glared at me."

"I know. He wants an immediate hearing. That's why I had to send for you."

Cummings grunted, then nodded toward the engineer, anonymous in all-enclosing armor. "Who'd I draw?"

"Erickson."

"Good enough. Squareheads can't go crazy-eh, Gus?"

Erickson looked up momentarily, and answered, "That's your problem," and returned to his work. Cummings turned back to Silard, and commented, "Psychiatrists don't seem very popular around here. O.K.-I relieve you, sir."

"Very well, sir."

Silard threaded his way through the zig-zag in the outer shield which surrounded the control room. Once outside this outer shield, he divested himself of the cumbersome armor, disposed of it in the locker room provided, and hurried to a lift. He left the lift at the tube station, underground, and looked around for an unoccupied capsule. Finding one, he strapped himself in, sealed the gasketed door, and settled the back of his head into the rest against the expected surge of acceleration.

Five minutes later he knocked at the door of the office of the general superintendent, twenty miles away.

The breeder plant proper was located in a bowl of desert hills on the Arizona plateau. Everything not necessary to the immediate operation of the plant-administrative offices, television station, and so forth-lay beyond the hills. The buildings housing these auxiliary functions were of the most durable construction technical ingenuity could devise. It was hoped that, if the tag ever came, occupants would stand approximately the chance of survival of a man going over Niagara Falls in a barrel.

Silard knocked again. He was greeted by a male secretary, Steinke. Silard recalled reading his case history. Formerly one of the most brilliant of the young engineers, he had suffered a blanking out of the ability to handle mathematical operations. A plain case of fugue, but there had been nothing that the poor devil could do about it- he had been anxious enough with his conscious mind to stay on duty. He had been rehabilitated as an office worker.

Steinke ushered him into the superintendent's private office. Harper was there before him, and returned his greeting with icy politeness. The superintendent was cordial, but Silard thought he. looked tired, as if the twenty-four-hour-a-day strain was too much for him.

"Come in, Doctor, come In. Sit down. Now. tell me about this. I'm a little' surprised. I thought Harper was one of my steadiest men."

"I don't say he isn't, sir."

"Well?"

"He may be perfectly all right, but your instructions to me are not to take any chances."

"Quite right" The superintendent gave the engineer, silent and tense in his chair, a troubled glance, then returned his attention to Silard. "Suppose you tell me about it."

Silard took a deep breath. "While on watch as psychological observer at the control station I noticed that the engineer of the watch seemed preoccupied and less responsive to stimuli than usual. During my off-watch observation of this case, over a period of the past several days, I have suspected an increasing lack of attention. For example, while playing contract bridge, he now occasionally asks for a review of the bidding which is contrary to his former behavior pattern.

"Other similar data are available. To cut it short, at 3:11 today, while on watch, I saw Harper, with no apparent reasonable purpose in mind, pick up a wrench used only for operating the valves of the water shield and approach the trigger. I relieved him of duty, and sent him out of the control room."

"Chief!" Harper calmed himself somewhat and continued, "If this witch-doctor knew a wrench from an oscillator, he'd know what I was doing. The wrench was on the wrong rack. I noticed it, and picked it up to return it to its proper place. On the way, I stopped to check the readings!"

The superintendent turned inquiringly to Doctor Shard. "That may be true- Granting that it is true," answered the psychiatrist doggedly, "my diagnosis still stands. Your behavior pattern has altered; your present actions are unpredictable, and I can't approve you for responsible work without a complete check-up."

General Superintendent King drummed on the desktop, and sighed. Then he spoke slowly to Harper, "Cal, you're a good boy, and believe me, I know how you feel. But: there is no way to avoid it-you've got to go up for the psychometricals, and accept whatever disposition the board makes of you." He paused, but Harper maintained an expressionless silence. "Tell you what, son-why don't, you take a few days' leave? Then, when you come back,' you can go up before the board, or transfer to another department away from the bomb, whichever you prefer." He looked to Shard for approval, and received a nod.

But Harper was not mollified. "No, chief," he protested. "It won't do. Can't you' see what's wrong? It's this constant supervision. Somebody always watching the back of your neck, expecting you to go crazy. A man can't even shave in private. We're jumpy about the most innocent acts, for fear some head doctor, half batty himself, will see it and decide it's a sign we're slipping-good grief, what do you expect!"

His outburst having run its course, he subsided into a flippant cynicism that did" not quite jell. "O.K.-never mind the strait jacket; I'll go quietly. You're a good Joe in spite of it, chief," he added, "and I'm glad to have worked under you. Goodbye."

King kept the pain in his eyes out of his voice. 'Wait a minute, Cal-you're not through here. Let's forget about the vacation.' I'm transferring you to the radiation laboratory. You belong in research anyhow; I'd never have spared you from it to stand watches if I hadn't been short on number-one men.

"As for the constant psychological observation, I hate it as much as you do. I don't suppose you know that they watch me about twice as hard as they watch you duty engineers."

Harper showed his surprise, but Shard nodded in sober conflation. "But we have to have this supervision. . . Do you remember Manning? No, he was before your time. We didn't have' psychological observers then. Manning was able and brilliant. Furthermore, he was always cheerful; nothing seemed to bother him.

"I was glad to have him on the pile, for he was always alert, and never seemed nervous about working with it-in fact he grew more buoyant and cheerful the longer he stood control watches. I should have known that was a very bad sign, but I didn't, and there was no observer to 'tell me so.

"His technician had to slug him one night. . . He found him dismounting the, safety interlocks on the cadmium assembly. Poor old Manning never pulled out of it- he's been violently insane ever since. After Manning cracked up, we worked out the present system of two qualified engineers and an observer for every watch. It seemed the only thing to do."

"I suppose so, chief," Harper mused, his face no longer sullen, but still unhappy. "It's a hell of a situation just the same."

"That's putting it mildly." He got up and put out his hand. "Cal, unless you're dead set on leaving us, I'll expect to see you at the radiation laboratory tomorrow. Another thing-I don't often recommend this, but it might do you good to get drunk tonight."

King had signed to Shard to remain after the young man left. Once the door was closed he turned back to the psychiatrist. "There goes another one-and one of the best. Doctor, what am I going to do?"

Silard pulled at his cheek. "I don't know," he admitted. "The hell of it is, Harper's absolutely right. It does increase the strain on them to know that they are being watched... and yet they have to be watched. Your psychiatric staff isn't doing too well, either. It makes us nervous to be around the Big Bomb... the more so because we don't understand it. And it's a strain on us to be hated and despised as we are. Scientific detachment is difficult under such conditions; I'm getting jumpy myself."

King ceased pacing the floor and faced the doctor. "But there must be some solution-" he insisted.

Silard shook his head. "It's beyond me, Superintendent. I see no solution from the standpoint of psychology."

"No? Hmm-Doctor, who is the top man in your field?" "Eh?"

"Who is the recognized number-one man in handling this sort of thing?"

"Why, that's hard to say. Naturally, there isn't any one, leading psychiatrist in the world; we specialize too much." I know what you mean, though. You don't want the best industrial temperament psychometrician; you want the" best all-around man for psychoses non-lesional and situational. That would be Lentz."

"Go on."

"Well- He covers the whole field of environment adjustment. He's the man that correlated the theory of optimum tonicity with the relaxation technique that Korzybski had developed empirically. He actually worked under, Korzybski himself, when he was a young student-it's the only thing he's vain about."

"He did? Then he must be pretty old; Koxzybski died in- What year did he die?"

"I started to say that you must know his work in symbology-theory of abstraction and calculus of statement, all that sort of thing-because of its applications to engineering and mathematical physics."

"That Lentz-yes, of course. But I had never thought of him as a psychiatrist."

"No, you wouldn't, in your field. Nevertheless, we are inclined to credit him with having done as much to check and reduce the pandemic neuroses of the Crazy Years as any other man, and more than any man left alive."

"Where is he?"

"Why, Chicago, I suppose. At the Institute."

"Get him here."

"Get him down here. Get on that visiphone and locate him. Then have Steinke call the Port of Chicago, and hire a stratocar to stand by for him. I want to see him as soon as possible-before the day is out." King sat up in his chair with the air of a man who is once more master of himself and the situation. His spirit knew that warming replenishment that comes only with reaching a decision. The harassed expression was gone.

Silard looked dumbfounded. "But, superintendent," he expostulated, "you can't ring for Doctor Lentz as if he were a junior clerk. He's-he's Lentz."

"Certainly-that's why I want him. But I'm not a neurotic clubwoman looking for sympathy, either. He'll come. If necessary, turn on the heat from Washington. Have the White House call him. But get him here at once. Move!" King strode out of the office.

When Erickson came off watch he inquired around and found that Harper had left for town. Accordingly, he dispensed with dinner at the base, shifted into "drinkin'clothes", and allowed himself to be dispatched via tube to Paradise. Paradise, Arizona, was a hard little boom town, which owed its existence to the breeder plant. It was dedicated exclusively to the serious business of detaching the personnel of the plant from their inordinate salaries. In this worthy project they received much cooperation from the plant personnel themselves, each of whom was receiving from twice to ten times as much money each payday as he had ever received in any other job, and none of whom was certain of living long enough to justify saving for old' age. Besides, the company carried a sinking fund in Manhattan for their dependents; why be stingy?

It was claimed, with some truth, that any entertainment or luxury obtainable in New York City could be purchased in Paradise. The local chamber of commerce had appropriated the slogan of Reno, Nevada, "Biggest Little City in the World." The Reno boosters retaliated by claiming that, while a town that close to the atomic breeder plant undeniably brought thoughts of death and the hereafter; Hell's Gates would be a more appropriate name.

Erickson started making the rounds. There were twenty-seven places licensed to sell liquor in the six blocks of the main street of Paradise. He expected to find Harper in one of them, and, knowing the man's habits and tastes, he expected to find him in the first two three he tried.

He was not mistaken. He found Harper sitting alone a table in the rear of deLancey's Sans Souci Bar. Lancey's was a favorite of both of them. There was old-fashioned comfort about its chrome-plated bar red leather furniture that appealed to them more than the spectacular fittings of the up-to-the-minute place. DeLancey was conservative; he stuck to indirect light and soft music; his hostesses were required to be fully clothed, even in the evening. The fifth of Scotch in front of Harper was about two thirds full. Erickson shoved three fingers in front Harper's face and demanded, "Count!"

"Three," announced Harper. "Sit down, Gus."

"That's correct," Erickson agreed, sliding his big frame into a low-slung chair. "You'll do-for now. What the outcome?"

"Have a drink. Not," he went on, "that this Scotch any good. I think Lance has taken to watering it. I surrendered, horse and foot."

"Lance wouldn't do that-stick to that theory anti you'll sink in the sidewalk up to your knees. How come you capitulated? I thought you planned to beat 'em about the head and shoulders, at least." ' I

"I did," mourned Harper, "but, cripes, Gus, the chief is right. If a brain mechanic says you're punchy, he has got to back him up, and take you off the watch list. The chief can't afford to take a chance."

"Yeah, the chief's all right, but I can't learn to love our dear psychiatrists. Tell you what-let's find us one, and, see if he can feel pain. I'll hold him while you slug 'im."

"Oh, forget it, Gus. Have a drink."

"A pious thought-but not Scotch. I'm going to have a martini; we ought to eat pretty soon."

"I'll have one, too."

"Do you good." Erickson lifted his blond head and bellowed, "Israfell"

A large, black person appeared at his elbow. "Mistuh Erickson! Yes, sub!"

"Izzy, fetch two martinis. Make mine with Italian." He turned back to Harper. "What are you going to do now, Cal?"

"Radiation laboratory."

"Well, that's not so bad. I'd like to have a go at the matter of rocket fuels 'myself. I've got some ideas."

Harper looked mildly amused. "You mean atomic fuel for interplanetary flight? That problem's pretty well exhausted. No, son, the ionosphere is the ceiling until we think up something better than rockets. Of course, you could mount a pile in a ship, and figure out some jury rig to convert some of its output into push, but where does that get you? You would still have a terrible mass-ratio because of the shielding and I'm betting you couldn't convert one percent into thrust. That's disregarding the question of getting the company to lend you a power pile for anything that doesn't pay dividends."

Erickson looked balky. "I don't concede that you've covered all the alternatives. What have we got? The early rocket boys went right ahead trying to build better rockets, serene in the belief that, by the time they could build rockets good enough to fly to the moon, a fuel would be perfected that would do the trick. And they did build ships that were good enough-you could take any ship that makes the Antipodes run, and refit it for the moon-if you had a fuel that was adequate. But they haven't got it.

"And why not? Because we let 'em down, that's why. Because they're still depending on molecular energy, on chemical reactions, with atomic power sitting right here in our laps. It's not their fault-old D. D. Harriman had Rockets Consolidated underwrite the whole first issue of Antarctic Pitchblende, and took a big slice of it himself, in the expectation that we would produce something usable in the way of a concentrated rocket fuel. Did we do it? Like hell! The company went hog-wild for immediate commercial exploitation, and there's no atomic rocket fuel yet."

"But you haven't stated it properly," Harper objected. "There are just two forms of atomic power-available, radioactivity and atomic disintegration. The first is too slow; the energy is there, but you can't wait years for it to come out-not in a rocket ship. The second we can only manage in a large power plant. There you are-stymied."

"We haven't really tried," Erickson answered. "The power is there; we ought to give 'em a decent fuel"

"What would you call a 'decent fuel'?"

Erickson ticked it off. "A small enough critical mass so that all, or almost all, the energy could be taken up as heat by the reaction mass-I'd like the reaction mass to be ordinary water. Shielding that would have to be no more than a lead and cadmium jacket. And the whole thing controllable to a fine point."

Harper laughed. "Ask for Angel's wings and be done with it. You couldn't store such fuel in a rocket; it would~ Set itself off before it reached the jet chamber."

Erickson's Scandinavian stubbornness was just gathering for another try at the argument when the waiter arrived with the drinks. He set them down with a triumphant flourish. "There you are, suh!"

"Want to roll for them, Izzy?" Harper inquired.

"Don' mind if I do."

The Negro produced a leather dice cup and Harper rolled. He selected his combinations with care and managed to get four aces and jack in three rolls. Israfel took the cup. He rolled in the grand manner with a backwards twist to his wrist. His score finished at five kings, and he courteously accepted the price of six drinks. Harper stirred the engraved cubes with his forefinger.

"Izzy," he asked, "are these the same dice I rolled with?"

"Why, Mistuh Harper!" The black's expression was pained.

"Skip it," Harper conceded. "I should know better than to gamble with you. I haven't won a roll from you in six weeks. What did you start to say, Gus?"

"I was just going to say that there ought to be a better way to get energy out of-" But they were joined again, this time by something very seductive in an evening gown that appeared to have been sprayed on her lush figure. She was young, perhaps nineteen or twenty. "You boys lonely?" she asked as she flowed into a chair.

"Nice of you to ask, but we're not," Erickson denied with patient politeness. He jerked a thumb at a solitary figure seated across the room. "Go talk to Hannigan; he's not busy."

She followed his gesture with her eyes, and answered with faint scorn, "Him? He's no use. He's been like that for three weeks-hasn't spoken to a soul. If you ask me, I'd say that he was cracking up."

"That so?" he observed noncommittally. "Here-" He fished out a five-dollar bill and handed it to her. "Buy yourself a drink. Maybe we'll look you up later."

"Thanks, boys." The money disappeared under her clothing, and she stood up. "Just ask for Edith."

"Hannigan does look bad," Harper considered, noting the brooding stare and apathetic attitude, "and he has been awfully stand-offish lately, for him. Do you suppose we're obliged to report him?"

"Don't let it worry you," advised Erickson, "there's a spotter on the job now. Look." Harper followed his companion's eyes and recognized Dr. Mott of the psychological staff. He was leaning against the far end of the bar and nursing a tall glass, which gave him protective coloration. But his stance was such that his field of vision included not only Hannigan, but Erickson and Harper as well.

"Yeah, and he's studying us as well," Harper added.' "Damn it to hell, why does it make my back hair rise just to lay eyes on one of them?"

The question was rhetorical, Erickson ignored it. "Let's get out of here," he suggested, "and have dinner some where else."

"O.K."

DeLancey himself waited on them as they left. "Going so soon, gentlemen?" he asked, in a voice that implied that their departure would leave him no reason to stay open. "Beautiful lobster thermidor tonight. If you do not like it, you need not pay." He smiled brightly.

"No sea food, Lance," Harper told him, "not tonight. Tell me-why do you stick around here when you know that the pile is bound to get you in the long run? Aren't you afraid of it?"

The tavern keeper's eyebrows shot up. "Afraid of this pile? But it is my friend!"

"Makes you money, eh?"

"Oh, I do not mean that." He leaned toward them confidentially. "Five years ago I come here to make some money quickly for my family before my cancer of the stomach, it kills me. At the clinic, with the wonderful new radiants you gentlemen make with the aid of the Big Bomb, I am cured-I live again. No, I am not afraid of the pile; it is my good friend."

"Suppose it blows up?"

"When the good Lord needs me, he will take me." He crossed himself quickly.

As they turned away, Erickson commented in a low voice to Harper. "There's your answer, Cal-if all us engineers had his faith, the job wouldn't get us down."

Harper was unconvinced. "I don't know," be mused. 'I don't think it's faith; I think it's lack of imagination and knowledge."

Notwithstanding King's confidence, Lentz did not show up until the next day. The superintendent was subconsciously a little surprised at his visitor's appearance. He had pictured a master psychologist as wearing flowing hair, an imperial, and having piercing black eyes. But this man was not overly tall, was heavy in his framework, and fat-almost gross. He might have been a butcher. Little, piggy, faded-blue eyes peered merrily out from beneath shaggy blond brows. There was no hair anywhere else on the enormous skull, and the ape-like jaw was smooth and pink. He was dressed in mussed pajamas of unbleached linen. A long cigarette holder jutted permanently from one corner of a wide mouth, widened still more by a smile which suggested unmalicious amusement at the worst that life, or men, could do. He had gusto. King found him remarkably easy to talk to.

At Lentz' suggestion the Superintendent went first into the history of atomic power plants, how the fission of the uranium atom by Dr. Otto Hahn in December, 1938, had opened up the way to atomic power. The door was opened just a crack; the process to be self perpetuating and commercially usable required an enormously greater knowledge than there was available in the entire civilized world at that time.

In 1938 the amount of separated uranium-235 in the world was not the mass of the head of a pin. Plutonium was unheard of. Atomic power was abstruse theory and a single, esoteric laboratory experiment. World War II, the Manhattan Project, and Hiroshima changed that; by late 1945 prophets were rushing into print with predictions of atomic power, cheap, almost free atomic power, for everyone in a year or two.

It did not work out that way. The Manhattan Project had been run with the single-minded purpose of making weapons; the engineering of atomic power was still in the future.

The far future, so it seemed. The uranium piles used to make the atom bomb were literally no good for commercial power; they were designed to throw away power as a useless byproduct, nor could the design of a pile, once in operation, be changed. A design-on paper-for an economic, commercial power pile could be made, but it had two serious hitches. The first was that such a pile would give off energy with such fury, if operated at a commercially satisfactory level, that there was no known way of accepting that energy and putting it to work.

This problem was solved first. A modification of the Douglas-Martin power screens, originally designed to turn the radiant energy of the sun (a natural atomic power pile itself) directly into electrical power, was used to receive the radiant fury of uranium fission and carry it away as electrical current.

The second hitch seemed to be no hitch at all. An "enriched" pile-one in which U-235 or plutonium had been added to natural uranium-was a quite satisfactory source of commercial power. We knew how to get U-235 and plutonium; that was the primary accomplishment of the Manhattan Project.

Or did we know how? Hanford produced plutonium; Oak Ridge extracted U-235, true-but the Hanford piles used more U-235 than they produced plutonium and Oak Ridge produced nothing but merely separated out the 7/10 of one percent of U-235 in natural uranium and "threw away" the 99%-plus of the energy which was still locked in the discarded U-238. Commercially ridiculous, economically fantastic!

But there was another way to breed plutonium, by means of a high-energy, unmoderated pile of natural uranium somewhat enriched. At a million electron volts or more U-238 will fission at somewhat lower energies it turns to plutonium. Such a pile supplies its own "fire" and produces more "fuel" than it uses; it could breed fuel for many other power piles of the usual moderated sort.

But an unmoderated power pile is almost by definition an atom bomb.

The very name "pile" comes from the pile of graphite bricks and uranium slugs set up in a squash court at the University of Chicago at the very beginning of the Manhattan Project. Such a pile, moderated by graphite or heavy water, cannot explode.

Nobody knew what an unmoderated, high-energy pile might do. It would breed plutonium in great quantities- but would it explode? Explode with such violence as to make the Nagasaki bomb seem like a popgun?

Nobody knew.

In the meantime the power-hungry technology of the United States grew still more demanding. The Douglas Martin sunpower screens met the immediate crisis when oil became too scarce to be wasted as fuel, but sunpower was limited to about one horsepower per square yard and was at the mercy of the weather.

Atomic power was needed-demanded.

Atomic engineers lived through the period in an agony of indecision. Perhaps a breeder pile could be controlled. Or perhaps if it did go out of control it would simply blow itself apart and thus extinguish its own fires. Perhaps it would explode like several atom bombs but with low efficiency. But it might-it just might-explode its whole mass of many tons of uranium at once and destroy the human race in the process.

There is an old story, not true, which tells of a scientist who had made a machine which would instantly destroy the world, so he believed, if he closed one switch. He wanted to know whether or not lie was right. So he closed the switch-and never found out.

The atomic engineers were afraid to close the switch.

"It was Destry's mechanics of infinitesimals that showed a way out of the, dilemma," King went on. "His equations appeared to predict that such an atomic explosion, once started, would disrupt the molar mass enclosing it so rapidly that neutron loss through the outer surface of the fragments would dampen the progression of the atomic explosion to zero before complete explosion could be reached. In an atom bomb such damping actually occurs.

"For the mass we use in the pile, his equations predicted possible force of explosion one-seventh of one percent of the force of complete explosion. That alone, of

course, would be incomprehensibly destructive-enough to wreck this end of the state. Personally, I've never been sure that is all that would happen."

"Then why did you accept this job?" inquired Lentz.

King fiddled with items on his desk before replying. "I couldn't turn it down, doctor I couldn't. If I had refused, they would have gotten someone else-and it was an opportunity that comes to a physicist once in history."

Lentz nodded. "And probably they would- have gotten someone not as competent. I understand, Dr. King-you were compelled by the 'truth-tropism' of the scientist. He must go where the data is to be found, even if it kills him. But about this fellow Destry, I've never liked his mathematics; he postulates too much."

King looked up in quick surprise, then recalled that this was the man who had refined and given rigor to the calculus of statement. "That's just the hitch," he agreed. "His work is brilliant, but I've never been sure that his predictions were worth the paper they were written on. Nor, apparently," he added bitterly, "do my junior engineers."

He told the psychiatrist Of the difficulties they had had with personnel, of how the most carefully selected men would, sooner or later, crack under the strain. "At first I thought it might be some degenerating effect from the neutron radiation that leaks out through the shielding, so we improved the screening and the personal armor. But it didn't help. One young fellow who had joined us after the new screening was installed became violent at dinner one night, and insisted that a pork chop was about to explode. I hate to think of what might have happened if he had been on duty at the pile when he blew up."

The inauguration of the system of constant psychological observation had greatly reduced the probability of acute danger resulting from a watch engineer cracking up, but King was forced to admit that the system was not a success; there had actually been a marked increase in psychoneuroses, dating from that time.

"And that's the picture, Dr. Lentz. It gets worse all the time. It's getting me now. The strain is telling on me; I can't sleep, and I don't think my judgment is as good as it used to be-I have trouble making up my mind, of coming to a decision. Do you think you can do anything for us?"

But Lentz had no immediate relief for his anxiety. "Not so fast, superintendent," he countered. "You have given me the background, but I have no real data as yet. I must look around for a while, smell out the situation for myself, talk to your engineers, perhaps have a few drinks with them, and get acquainted. That is possible, is it not? Then in a few days, maybe, we know where we stand."

King had no alternative but to agree.

"And it is well that your young men do not know what I am here for. Suppose I am your old friend, a visiting physicist, eh?"

"Why, yes-of course. I can see to it that that idea gets around. But say-" King was reminded again of something that had bothered him from the time Silard had first suggested Lentz' name. "May I ask a personal question?"

The merry eyes were undisturbed. "Go ahead."

"I can't help but be surprised that one man should attain eminence in two such widely differing fields as psychology and mathematics. And right now I'm perfectly convinced of your ability to pass yourself off as a physicist. I don't understand it."

The smile was more amused, without being in the least patronizing, nor offensive. "Same subject," he answered.

"Eh? How's that-"

"Or rather, both mathematical physics and psychology are branches of the same subject, symbology. You are a specialist; it' would not necessarily come to your attention."

"I still don't follow you."

"No? Man lives in a world of ideas. Any phenomenon is so complex that he cannot possibly grasp the whole of it. He abstracts certain characteristics of a given phenomenon as an idea, then represents that idea as a symbol, be it a word or a mathematical sign. Human reaction is almost entirely reaction to symbols, and only negligibly to phenomena. As a matter Of fact," he continued, removing the cigarette holder from his mouth and settling into his subject, "it can be demonstrated that the human mind can think only in terms of symbols.

"When we think, we let symbols operate on other symbols in certain, set fashions-rules of logic, or rules of mathematics. If the symbols have been abstracted so that they are structurally similar to the phenomena they stand for, and if the symbol operations are similar in structure and order to the operations of phenomena in the ~real~ world, we think sanely. If our logic-mathematics, or our word-symbols, have been poorly chosen, we think not sanely.

"In mathematical physics you are concerned with making your symbology fit physical phenomena. In psychiatry I am concerned with precisely the same thing, except that I am more immediately concerned with the man who does the thinking than with the phenomena he is thinking about. But the same subject, always the dame subject."

"We're not getting anyplace, Gus." Harper put down his slide rule and frowned.

"Seems like it, Cal," Erickson grudgingly admitted.

"Damn it, though-there ought to be some reasonable way of tackling the problem. What do we need? Some form of concentrated, controllable power for rocket fuel. What have we got? Power galore through fission. There must be some way to bottle that power, and serve it out when we need it-and the answer is some place in one of the radioactive~ series. I know it." He stared glumly around the laboratory as if expecting to find the answer written somewhere on the lead-sheathed walls.

"Don't be so down in the mouth about it. You've got me convinced there is an answer; let's figure out how to find it. In the first place the three natural radioactive series are out, aren't they?"

"Yes ... at least we had agreed that all that ground had been fully covered before."

"Okay; we have to assume that previous investigators have done what their notes show they have done-otherwise we might as well not believe anything, and start checking on everybody from Archimedes to date. Maybe that is indicated, but Methuselah himself couldn't carry out such an assignment. What have we got left?"

"Artificial radioactives."

"All right. Let's set up a list of them, both those that have been made up to now, and those that might possibly be made in the future. Call that our group-or rather, field, if you want to be pedantic about definitions. There are a limited number of operations that can be performed on each member of the group, and on the members taken in combination. Set it up."

Erickson did so, using the curious curlicues of the calculus of statement. Harper nodded. "All right-expand it."

Erickson looked up after a few moments, and asked, "Cal, have you any idea how many terms there are in the expansion?"

"No. . . hundreds, maybe thousands, I suppose."

"You're conservative. It reaches four figures without considering possible new radioactives. We couldn't finish such a research in a century. He chucked his pencil down and looked morose.

Cal Harper looked at him curiously, but with sympathy. "Gus," he said gently, "the job isn't getting you, too, is it?"

"I don't think so. Why?"

"I never saw you so willing to give up anything before. Naturally you and I will never finish any such job, but at the very worst we will have eliminated a lot of wrong answers for somebody else. Look at Edison-sixty years of experimenting, twenty hours a day, yet he never found out the one thing he was most interested in knowing. I guess if he could take it, we can."

Erickson pulled out of his funk to some extent. "I suppose so," he agreed. "Anyhow, maybe we could work out some techniques for carrying a lot of experiments simultaneously."

Harper slapped him on the shoulder. "That's the ol' fight. Besides, we may not need to finish the research, or anything like it, to find a satisfactory fuel. The way I see it, there are probably a dozen, maybe a hundred, right answers. We may run across one of them any day. Anyhow, since you're willing to give me a hand with it in your off watch time, I'm game to peck away at it till hell freezes."

Lentz puttered around the plant and the administration center for several days, until he was known to everyone by sight He made himself pleasant and asked questions. He was soon regarded as a harmless nuisance, to be tolerated because he was a friend of the superintendent. He even poked his nose into the commercial power end of the plant, and had the radiation-to-electric-power sequence explained to him in detail. This alone would have been sufficient to disarm any suspicion that he might be a psychiatrist, for the staff psychiatrists paid no attention to the hard-bitten technicians of the power-conversion unit. There was no need to; mental instability on their part could not affect the pile, nor were they subject to the strain of social responsibility. Theirs was simply a job personally dangerous, a type of strain strong men have been inured to since the jungle.

In due course he got around to the unit of the radiation laboratory set aside for Calvin Harper's use. He rang the bell and waited. Harper answered the door, his antiradiation helmet shoved back from his face like some grotesque sunbonnet. "What is it?" he asked. "Oh-it's you, Doctor Lentz. Did you want to see me?"

"Why, yes, and no," the older man answered, "I was just looking around the experimental station and wondered what you do in here. Will I be in the way?"

"Not at all. Come in. Gus!"

Erickson got up from where he had been fussing over the power leads to their trigger a modified betatron rather than a resonant accelerator. "Hello."

"Gus, this is Doctor Lentz-Gus Erickson."

"We've met," said Erickson, pulling off his gauntlet to shake hands. He had had a couple of drinks with Lentz in town and considered him a "nice old duck." "You're just between shows, but stick around and we'll start another run-not that there is much to see."

While Erickson continued with the set-up, Harper conducted Lentz around the laboratory, explaining the line of research they were conducting, as happy as a father showing off twins. The psychiatrist listened with one ear and made appropriate comments while he studied the young scientist for signs of the instability he had noted to be recorded against him.

"You see," Harper explained, oblivious to the interest in himself, "we are testing radioactive materials to see if we can produce disintegration of the sort that takes place in the pile, but in a minute, almost microscopic, mass. If we are successful, we can use the breeder pile to make a safe, convenient, atomic fuel for rockets-or for anything else." He went on to explain their schedule of experimentation.

"I see," Lentz observed politely. "What element are you examining now"

Harper told him. "But it's not a case of examining one element-we've finished Isotope II of this element with negative results. Our schedule calls next for running the same test on Isotope V. Like this." He hauled out a lead capsule, and showed the label to Lentz. He hurried away to the shield around the target of the betatron, left open by Erickson. Lentz saw that he had opened the capsule, and was performing some operation on it with 'a long pair of tongs in a gingerly manner, having first lowered his helmet. Then he closed and clamped the target shield.

"Okay, Gus?" he called out. "Ready to roll?"

"Yeah, I guess so," Erickson assured him, coming around from behind the ponderous apparatus, and rejoining them. They crowded behind a thick metal and concrete shield that cut them off from direct sight of the set up.

"Will I need to put- on armor?" inquired Lentz.

"No," Erickson reassured him, "we wear it because we are around the stuff day in and day out. You just stay behind the shield and you'll be all right."

Erickson glanced at Harper, who nodded, and fixed his, eyes on a panel of instruments mounted behind the shield. Lentz saw Erickson press a push button at the top of the board, then heard a series of relays click on the far side of~ the shield. There was a short moment of silence.

The floor slapped his feet like some incredible bastinado. The concussion that beat on his ears was so intense that it paralyzed the auditory nerve almost before it could be recorded as sound. The air-conducted concussion wave flailed every inch of his body with a single, stinging, numbing blow. As he picked himself up, he found he was trembling uncontrollably and realized, for the first time, that he was getting old.

Harper was seated on the floor and had commenced to bleed from the nose. Erickson had gotten up, his cheek was cut. He touched a hand to the wound, then stood there, regarding the blood on his fingers with a puzzled expression on his face.

"Are you hurt?" Lentz inquired inanely. "What happened?"

Harper cut in. "Gus, we've done it! We've done it! Isotope Five has turned the trick!"

Erickson looked still more bemused. "Five?" he said stupidly, "-but that wasn't Five, that was Isotope IL I put it in myself."

"You put it in? I put it in! It was Five, I tell you!"

They stood staring at each other, still confused by the explosion, and each a little annoyed at the boneheaded stupidity the other displayed in the face of the obvious. Lentz diffidently interceded.

"Wait a minute, boys," he suggested, "maybe there's a reason-Gus, you placed a quantity of the second isotope in the receiver?"

"Why, yes, certainly. I wasn't satisfied with the last run, and I wanted to check it."

Lentz nodded. "It's my fault, gentlemen," he admitted ruefully. "I came in, disturbed your routine, and both of you charged the receiver. I know Harper did, for I saw him do it with Isotope V. I'm sorry."

Understanding broke over Harper's face, and he slapped the older man on the shoulder. "Don't be sorry," he laughed; "you can come around to our lab and help us make mistakes anytime you feel in the mood- Can't he, Gus? This is the answer, Doctor Lentz, this is it!"

"But," the psychiatrist pointed out, "you don't know which isotope blew up."

"Nor care," Harper supplemented. "Maybe it was both, taken together. But we will know-this business is cracked now; we'll soon have it open." He gazed happily around at the wreckage.

In spite of Superintendent King's anxiety, Lentz refused to be hurried in passing judgment on the situation. Consequently, when be did present himself at King's office, and announced that he was ready to report, King was pleasantly surprised as well as relieved. "Well, I'm delighted," he said. "Sit down, doctor, sit down. Have a cigar. What do we do about it?"

But Lentz stuck to his perennial cigarette, and refused to be hurried. "I must have some information first: how important," he demanded, "is the power from your plant?"

King understood the implication at once. "If you are thinking about shutting down - the plant for more than a limited period, it can't be done."

"Why not? If the figures supplied me are correct, your power output is less than thirteen percent of the total power used in the country."

"Yes, that is true, but we also supply another thirteen percent second hand through the plutonium we breed here-and you haven't analyzed the items that make up the balance. A lot of it is domestic power which householders get from sunscreens located on their roofs. Another big slice is power for the moving roadways-that's sunpower again. The portion we provide here directly or indirectly is the main power source for most of the heavy industries-steel, plastics, lithics, all kinds of manufacturing and processing. You might as well cut the heart out of a man-"

"But the food industry isn't basically dependent on you?" Lentz persisted.

"No ... Food isn't basically a power industry though we do supply a certain percentage of the power used in processing. I see your point, and will go on, concede that transportation, that is to say, distribution food, could get along without us. But good heavens, Doctor, you can't stop atomic power without causing the biggest panic this country has ever seen. It's the keystone our whole industrial system."

"The country has lived through panics before, and we got past the oil shortage safely."

"Yes because sunpower and atomic power had to take the place of oil. You don't realize what would mean, Doctor. It would be worse than a war; in system like ours, one thing depends on another. If you cut off the heavy industries all at once, everything else stops too."

"Nevertheless, you had better dump the pile." The uranium in the pile was molten, its temperature bell greater than twenty-four hundred degrees centigrade. The pile could

be dumped into a group of small containers when it was desired to shut it down. The mass into one container would be too small to maintain progressive atomic disintegration.

Icing glanced involuntarily at the glass-enclosed relay mounted on his office wall, by which he, as well as the engineer on duty, could dump the pile, if need be. "But ~ couldn't do that ... or rather, if I did, the plant wouldn't stay shut down. The directors would simply replace me with someone who would operate it."

"You're right, of course." Lentz silently considered the situation for some time, then said, "Superintendent, will you order a car to fly me back to Chicago?"

"You're going, doctor?"

"Yes." He took the cigarette holder from his face, and, for once, the smile of Olympian detachment was gone completely. His entire manner was sober, even tragic.

"Short of shutting down the plant, there is no solution to your problem-none whatsoever!"

"I owe you a full explanation," he continued, presently.

"You are confronted here with recurring instances of situational psychoneurosis. Roughly, the symptoms manifest themselves as anxiety neurosis, or some form of hysteria.

The partial amnesia of your secretary, Steinke, is a good example of the latter. He might be cured with shock technique, but it would hardly be a kindness, as he has achieved a stable adjustment which puts him beyond the reach of the strain he could not stand.

"That other young fellow, Harper, whose blowup was the immediate cause of you sending for me, is an anxiety case. When the cause of the anxiety was eliminated from his matrix, he at once regained full sanity. But keep a close watch on his friend, Erickson-"However, it is the cause, and prevention, of situational psychoneurosis we are concerned with here, rather than the forms in which it is manifested. In plain language, psychoneurosis situational simply refers to the common fact that, if you put a man in a situation that worries him more than he can stand, in time he blows up, one way or another.

"That is precisely the situation here. You take sensitive, intelligent young men, impress them with the fact that a single slip on their part, or even some fortuitous circumstance beyond their control, will result in the death of God knows how many other people, and then expect them to remain sane. It's ridiculous-impossible!"

"But good heavens, doctor!-there must be some answer- There must!" He got up and paced around the room. Lentz noted, with pity, that King himself was riding the ragged edge of the very condition they were discussing.

"No," he said slowly. "No ... let me explain. You don't dare entrust control to less sensitive, less socially conscious men. You might as well turn the controls over to a mindless idiot. And to psychoneurosis situational there are but two cures. The first obtains when the psychosis results from a misevaluation of environment. That cure calls for semantic readjustment. One assists the patient to evaluate correctly his environment. The worry disappears because there never was a real reason for worry in the situation itself, but simply in the wrong meaning the patient's mind had assigned to it.

"The second case is when the patient has correctly evaluated the situation, and rightly finds in it cause for extreme worry. His worry is perfectly sane and proper, but he cannot stand up under it indefinitely; it drives him crazy. The only possible cure is to

change the situation. I have stayed here long enough to assure myself that such is the condition here. You engineers have correctly evaluated the public danger of this thing, and it will, with dreadful certainty, drive all of you crazy!

"The only possible solution is to dump the pile-and leave it dumped."

King had continued his nervous pacing of the floor, as if the walls of the room itself were the cage of his dilemma. Now he stopped and appealed once more to the psychiatrist. "Isn't there anything I can do?"

"Nothing to cure. To alleviate-well, possibly."

"How?"

"Situational psychosis results from adrenalin exhaustion. When a man is placed under a nervous strain, his adrenal glands increase their secretion to help compensate for the strain. If the strain is too great and lasts too long, the adrenals aren't equal to the task, and he cracks. That is what you have here. Adrenalin therapy might stave of a mental breakdown, but it most assuredly would hasten a physical breakdown. But that would be safer from a viewpoint of public welfare-even though it assumes that physicists are expendable!

"Another thing occurs to me: If you selected any new watch engineers from the membership of churches that practice the confessional, it would increase the length of their usefulness."

King was plainly surprised. "I don't follow you."

"The patient unloads most of his worry on his confessor, who is not himself actually confronted by the situation, and can stand it. That is simply an ameliorative, however. I am convinced that in this situation, eventual insanity is inevitable. But there is a lot of good sense in the confessional," he mused. "It fills a basic human heed. I think that is why the early psychoanalysts were so surprisingly successful, for all their limited knowledge." He fell silent for a while, then added, "If you will be so kind as to order a stratocab for me-"

"You've nothing more to suggest?'

"No. You had better turn your psychological staff loose on means of alleviation; they're able men, all of them."

King pressed a switch, and spoke briefly to Steinke. Turning back to Lentz, he said, "You'll wait here until your car is ready?"

Lentz judged correctly that King desired it, and agreed.

Presently the tube delivery on King's desk went "Ping!"

The superintendent removed a small white pasteboard, a calling card. He studied it with surprise and passed it over to Lentz. "I can't imagine why he should be calling on me," he observed, and added, "Would you like to meet him?"

Lentz read:

THOMAS P. HARRINGTON
Captain (Mathematics)
United States Navy
Director
U.S. Naval Observatory

"But I do know him," he said. "I'd be very pleased to see him."

Harrington was a man with something on his mind. He seemed relieved when Steinke had finished ushering him in and had returned to the outer office. He commenced to speak at once, turning to Lentz, who was nearer to him than King.

"You're King? Why, Doctor Lentz! What are you doing here?"

"Visiting," answered Lentz, accurately - but incompletely, as he shook hands. "This is Superintendent King over here. Superintendent King-Captain Harrington."

"How do you do, Captain-it's a pleasure to have you here."

"It's an honor to be here sir."

"Sit down?"

"Thanks." He accepted a chair, and laid a briefcase at a corner of King's desk. "Superintendent, you are entitle to an explanation as to why I have broken in on you Ilk this-"

"Glad to have you." In fact, the routine of formal politeness was an anodyne to King's frayed nerves.

"That's kind of you, but that secretary chap, the one that brought me in here, would it be too much to as for you to tell him to forget my name? I know it seem strange-"

"Not at all." King was mystified, but willing to grab any reasonable request of a distinguished colleague in science. He summoned Steinke to the interoffice visiphone and gave him his orders.

Lentz stood up, and indicated that he was about to leave. He caught Harrington's eye. "I think you want private palaver, Captain."

King looked from Harrington to Lentz, and back at Harrington. The astronomer showed momentary indecision, then protested, "I have no objection at all myself it's up to Doctor King. As a matter of fact," he added," might be a very good thing if you did sit in on it."

"I don't know what it is, Captain," observed Kin~ "that you want to see me about, but Doctor Lentz is a ready here in a confidential capacity."

"Good! Then that's settled .. I'll get right down I business. Doctor King, you know Destry's mechanics infinitesimals?"

"Naturally." Lentz cocked a brow at King, who chose to ignore it.

"Yes, of course. Do you remember - theorem six, an the transformation between equations thirteen and fourteen?"

"I think so, but I'd want to see them." King got up and went over to a bookcase. Harrington stayed him with a hand.

"Don't bother. I have them here." He hauled out a key, unlocked his briefcase, and drew out a large, much thumbed, loose-leaf notebook. "Here. You, too, Doctor Lentz. Are you familiar with this development?"

Lentz nodded. "I've had occasion to look into them."

"Good-I think it's agreed that the step between thirteen and fourteen is the key to the whole matter. Now the change from thirteen to fourteen looks perfectly valid and would be, in some fields. But suppose we expand it to show every possible phase of the matter, every link in the chain of reasoning."

He turned a page, and showed them the same two equations broken down into nine intermediate equations. He placed a finger under an associated group of

mathematical symbols. "Do you see that? Do you see what that implies?" He peered anxiously at their faces.

King studied it, his lips moving. "Yes. .. . I -believe I do see. 'Odd... I never looked at it just that way before- yet I've studied those equations until I've dreamed about them." He turned to Lentz. "Do you agree, Doctor?"

Lentz nodded slowly. "I believe so ... Yes, I think I may say so."

Harrington should have been pleased; he wasn't. "I had hoped you could tell me I was wrong," he said, almost petulantly, "but I'm afraid there is no further doubt about it. Doctor Destry included an assumption valid in molar physics, but for which we have absolutely no assurance in atomic physics. I suppose you realize what this means to you, Doctor King?"

King's voice was a dry whisper. "Yes," he said, "yes it means that if the Big Bomb out there ever blows up, we must assume that it will all go up all at once, rather than the way Destry predicted ... and God help the human race!"

Captain Harrington cleared his throat to break the silence that followed. "Superintendent," he said, "I would not have ventured to call had it been simply a matter of disagreement as to interpretation of theoretical predictions-"

"You have something more to go on?"

"Yes, and no. Probably you gentlemen think of the Naval Observatory as being exclusively preoccupied with ephemeredes and tide tables. In a way you would be right-but we still have some time to devote to research as long as it doesn't cut into the appropriation. My special interest has always been lunar theory.

"I don't mean lunar ballistics," he continued, "I mean the much more interesting problem of its origin and history, the problem the younger Darwin struggled with, as well as my Illustrious predecessor, Captain T. J. J. See. I think that it is obvious that any theory of lunar origin and history must take into account the surface features of the moon-especially the mountains, the craters, that mark its face so prominently."

He paused momentarily, and Superintendent King put in, "Just a minute, Captain-I may be stupid, or perhaps I missed something, but-is there a connection between what we were discussing before and lunar theory?"

"Bear with me for a few moments, Doctor King," Harrington apologized; "there is a connection-at least, I'm afraid there is a connection-but I would rather present my points in their proper order before making my conclusions." They granted him an alert silence; he went on:

"Although we are in the habit of referring to the 'craters' of the moon, we know they are not volcanic craters. Superficially, they follow none of the rules of terrestrial volcanoes in appearance or distribution, but when Rutter came out in 952 with his monograph on the dynamics of vulcanology, he proved rather conclusively that the lunar craters could not be caused by anything that we know as volcanic action.

"That left the bombardment theory as the simplest hypothesis. It looks good, on the face of it, and a few minutes spent throwing pebbles in to a patch of mud will convince anyone that the lunar craters could have been formed by falling meteors.

"But there are difficulties. If the moon was struck so repeatedly, why not the earth? It hardly seems necessary to mention that the earth's atmosphere would be no protection against masses big enough to form craters like Endymion, or Plato. And if they fell after the moon was a dead world while the earth was still young enough to change its

face and erase the marks of bombardment, why did the meteors avoid so nearly completely the dry basins we call the seas?

"I want to cut this short; you'll find the data and the mathematical investigations from the data here in my notes. There is one other major objection to the meteor bombardment theory: the great rays that spread from

Tycho across almost the entire surface of the moon. It makes the moon look like a crystal ball that had been struck with a hammer, and impact from - outside seems evident, but there are difficulties. The striking mass, our hypothetical meteor, must have been smaller than the present crater of Tycho, but it must have the mass and speed to crack an entire planet."

"Work it out for yourself-you must either postulate a chunk out of the core of a dwarf star, or speeds such as we have never observed within the system. It's conceivable but a far-fetched explanation"

He turned to King. "Doctor, does anything occur to you that might account for a phenomenon like Tycho?"

The Superintendent grasped the arms of his chair, then glanced at his palms. He fumbled for a handkerchief, and wiped them. "Go ahead," he said, almost inaudibly.

"Very well then-" Harrington drew out of his briefcase a large photograph of the moon-a beautiful full-moon portrait made at Lick. "I want you to imagine the moon as she might have been sometime in the past. The dark areas we call the 'Seas' are actual oceans. It has an atmosphere, perhaps a heavier gas than oxygen and nitrogen, but an active gas, capable of supporting some conceivable form of life.

"For this is an inhabited planet, inhabited by intelligent beings, beings capable of discovering atomic power and exploiting it!"

He pointed out on the photograph, near the southern limb, the lime-white circle of Tycho, with its shining, incredible, thousand-mile-long rays spreading, thrusting, jutting out from it. "Here ... here at Tycho was located their main atomic plant." He moved his finger to a point near the equator, and somewhat east of meridian-the point where three great dark areas merged, Mare Nubium, Mare Imbriwn, Oceanus Procellarum-and picked out two bright splotches surrounded also by rays, but shorter, less distinct, and wavy. "And here at Copernicus and at Kepler, on islands at the middle of a great ocean, were secondary power stations."

He paused, and interpolated soberly, "Perhaps they knew the danger they ran, but wanted power so badly that they were willing to gamble the life of their race. Perhaps they were ignorant of the ruinous possibilities of their little machines, or perhaps their mathematicians assured them that it could not happen.

"But we will never know ... no one can ever know. For it blew up, and killed them-and it killed their planet.

"It whisked off the gassy envelope and blew it into outer space. It may even have set up a chain reaction, in that atmosphere. It blasted great chunks of the planet's crust Perhaps some of that escaped completely, too, but all that did not reach the speed of escape fell back down in time and splashed great ring-shaped craters in the land.

"The oceans cushioned the shock; only the more massive fragments formed craters through the water. Perhaps some life still remained in those ocean depths. If so, it was doomed to die-for the water, unprotected by atmospheric pressure, could not remain

liquid and must inevitably escape lit time to outer space. Its life blood drained away. The planet was dead-dead by suicide!

He met the grave eyes of his two silent listeners with an expression almost of appeal. "Gentlemen-this is only a theory I realize ... only a theory, a dream, a nightmare-But it has kept me awake so many nights that I had to come tell you about it, and see if you saw it the same way I do.

As for the mechanics of it, it's all in there, in my notes. You can check it-and I pray that you find some error! But it is the only lunar theory I have examined which included all of the known data, and accounted for all of them."

He appeared to have finished; Lentz spoke up. "Suppose, Captain, suppose we check your mathematics and find no flaw-what then?"

Harrington flung out his hands. "That's what I came here to find out!"

Although Lentz had asked the question, Harrington directed the appeal to King. The superintendent looked up; his eyes met the astronomer's, wavered, and dropped again. "There's nothing to be done," he said dully, "nothing at all."

Harrington stared at him in open amazement. "But good God, man!" he burst out. "Don't you see it? That pile has got to be disassembled at once!"

"Take it easy, Captain." Lentz's calm voice was a spray of cold water. "And don't be too harsh on poor King, this worries him even more than it does you. What he means is this; we're not faced with a problem in physics, but with a political and economic situation. Let's put it this way: King can no more dump his plant than a peasant with a vineyard on the slopes of Mount Vesuvius can abandon his holdings and pauperize his family simply because there will be an eruption someday.

"King doesn't own that plant out there; he's only the custodian. If he dumps it against the wishes of the legal owners, they'll simply oust him and put in someone more amenable. No, we have to convince the owners."

"The President could make them do it," suggested Harrington. "I could get to the President-"

"No doubt you could, through your department. And you might even convince him. But could he help much?"

"Why, of course he could. He's the President!"

"Wait a minute. You're Director of the Naval Observatory; suppose you took a sledge hammer and tried to smash the big telescope-how far would you get?"

"Not very far," Farrington conceded. "We guard the big fellow pretty closely."

"Nor can the President act in an arbitrary manner," Lentz persisted. "He's not an unlimited monarch. If he shuts down this plant without due process of law, the federal courts will tie him in knots. I admit that Congress isn't helpless, since the Atomic Energy Commission takes orders from it, but-would you like to try to give a congressional committee a course in the mechanics of infinitesimals?"

Harrington readily stipulated the point. "But there is another way," he pointed out. "Congress is responsive to public opinion. What we need to do is to convince the public that the pile is a menace to everybody. That could be done without ever trying to explain things in terms of higher mathematics."

"Certainly it could," Lentz agreed. "You could go on the air with it and scare everybody half to death. You could create the damnedest panic this slightly slug-nutty country has ever seen. No, thank you. I, for one, would rather have us all take the chance

of being quietly killed than bring on a mass psychosis that would destroy the culture we are building up. I think one taste of the Crazy Years is enough."

"Well, then, what do you suggest?"

Lentz considered shortly, then answered, "All I see is a forlorn hope. We've got to work on the Board of Directors and try to beat some sense in their heads."

King, who had been following the discussion with attention in spite of his tired despondency, interjected a remark. "How would you go about that?"

"I don't know," Lentz admitted. "It will take some thinking. But it seems the most fruitful line of approach. If it doesn't work, we can always fall back on Harrington's notion of publicity-I don't insist that the world commit suicide to satisfy my criteria of evaluation."

Harrington glanced at his wrist watch-a bulky affair-and whistled. "Good heavens," he exclaimed, "I forgot the time! I'm supposed officially to be at the Flag staff Observatory."

King had automatically noted the time shown by the Captain's watch as it was displayed. "But it can't be that late," he had objected. Harrington looked puzzled, then laughed.

"It isn't-not by two hours. We are in zone plus-seven; this shows zone plus-five-it's radio-synchronized with the master clock at Washington."

"Did you say radio-synchronized?"

"Yes. Clever, isn't it?" He held it out for inspection. "I call it a telechronometer; it's the only one of its sort to date. My nephew designed it for me. He's a bright one, that boy. He'll go far. That is"-his face clouded, as if the little interlude had only served to emphasize the tragedy that hung over them-"if any of us live that long!"

A signal light glowed at King's desk, and Steinke's face showed on the communicator screen. King answered him, then said, "Your car is ready, Doctor Lentz."

"Let Captain Harrington have it."

"Then you're not going back to Chicago?"

"No. The situation has changed. If you want me, I'm stringing along."

The following Friday Steinike ushered Lentz into King's office. King looked almost happy as he shook hands. "When did you ground, Doctor? I didn't expect you back for another hour, or so."

"Just now. I hired a cab instead of waiting for.. the shuttle."

"Any luck?" King demanded.

"None. The same answer they gave you: 'The Company is assured by independent experts that Destry's mechanics is valid, and sees no reason to encourage an hysterical attitude among its employees."

King tapped on his desk top, his eyes unfocused. Then, hitching himself around to face Lentz directly, he said, "Do you suppose the Chairman is right?"

"How?"

"Could the three of us, you, me, and Harrington, have gone off the deep end, slipped mentally?"

"No."

"You're sure?"

"Certain. I looked up some independent experts of my own, not retained by the Company, and had them check Harrington's work. It checks." Lentz purposely neglected

to mention that he had done so partly because he was none too sure of King's present mental stability.

King sat up briskly, reached out and stabbed a push button. "I am going to make one more try," he explained, "to see if I can't throw a scare into Dixon's thick head. Steinke," he said to the communicator, "get me Mr. Dixon on the screen."

"Yes, sir."

In about two minutes the visiphone screen came to life and showed the features of Chairman Dixon. He was transmitting, not from his office, but from the boardroom of the power syndicate in Jersey City. "Yes?" he said.

"What is it, Superintendent?" His manner was somehow both querulous and affable.

"Mr. Dixon," King began, "I've called to try to impress on you the seriousness of the Company's action. I stake my scientific reputation that Harrington has proved completely-"

"Oh, that? Mr. King, I thought you understood that that was a closed matter."

"But Mr. Dixon-"

"Superintendent, please! If there was any possible legitimate cause to fear do you think I would hesitate? I have children you know, and grandchildren."

"That is just why-"

"We try to conduct the affairs of the Company with reasonable wisdom, and in the public interest. But we have other responsibilities, too. There are hundreds of thousands of little stockholders who expect us to show a reasonable return on their investment. You must not expect us to jettison a billion-dollar corporation just because you've taken up astrology. Moon theory!" He sniffed.

"Very well, Mister Chairman." King's tone was stiff.

"Don't, take it that way, Mr. King. I'm glad you called, the Board has just adjourned a special meeting. They have decided to accept you for retirement-with full pay, of course."

"I did not apply for retirement!"

"I know, Mr. King, but the Board feels that-"

"I understand. Goodbye!"

"Mr. King-"

"Goodbye!" He switched him off, and turned to Lentz. "'-with full pay,'" he quoted, "which I can enjoy in any way that I like for the rest of my life just as happy as a man in the death house!"

"Exactly," Lentz agreed. "Well, we've tried our way. I suppose we should call up Harrington now and let him try the political and publicity method."

"I suppose so," King seconded absent-mindedly. "Will you be leaving for Chicago now?"

"No . . ." said Lentz. "No.... I think I will catch the shuttle for Los Angeles and take the evening rocket for the Antipodes."

King looked surprised, but said nothing. Lentz answered the unspoken comment. "Perhaps some of us on the other side of the earth will survive. I've done all that I can here. I would rather be a live sheepherder in Australia than a dead psychiatrist in Chicago."

King nodded vigorously. "That shows horse sense. For two cents, I'd dump the pile now, and go with you."

"Not horse sense, my friend-a horse will run back into a burning barn, which is exactly what I plan not to do. Why don't you do it and come along. If you did, it would help Harrington to scare 'em to death."

"I believe I will!"

Steinke's face appeared again on the screen. "Harper and Erickson are here, Chief."

"I'm busy."

"They are pretty urgent about seeing you."

"Oh-all right," King said in a tired voice, "show them in. It doesn't matter."

They breezed in, Harper in the van. He commenced talking at once, oblivious to the superintendent's morose preoccupation. "We've got it, Chief, we've got it! And it all checks out to the umpteenth decimal!"

"You've got what? Speak English."

Harper grinned. He was enjoying his moment of triumph, and was stretching it out to savor it. "Chief, do you remember a few weeks back when I asked for an additional allotment-a special one without specifying how I was going to spend it?"

"Yes. Come on-get to the point."

"You kicked at first, but finally granted it. Remember?

Well, we've got something to show for it, all tied up in pink ribbon. It's the greatest advance in radioactivity since Hahn split the nucleus. Atomic fuel, Chief, atomic fuel, safe, concentrated, and controllable. Suitable for rockets, for power plants, for any damn thing you care to use it for."

King showed alert interest for the first time. "You mean a power source that doesn't require a pile?"

"Oh, no, I didn't say that. You use the breeder pile to make the fuel, then you use the fuel anywhere and anyhow you like, with something like ninety-two percent recovery of energy. But you could junk the power sequence, if you wanted to."

King's first wild hope of a way out of his dilemma was dashed; he subsided. "Go ahead. Tell me about it."

"Well-it's a matter of artificial radioactives. Just before I asked for that special research allotment, Erickson and I-Doctor Lentz had a finger in it too," he acknowledged with an appreciative nod to the psychiatrist, "-found two isotopes that seemed to be mutually antagonistic. That is, when we goosed 'em in the presence of each other they gave up their latent energy all at once- blew all to hell. The important point is we were using just a gnat's whisker of mass of each-the reaction didn't require a big mass to maintain it."

"I don't see," objected King, "how that could-"

"Neither do we, quite-but it works. We've kept it quiet until we were sure. We checked on what we had, and we found a dozen other fuels. Probably we'll be able to tailor-make fuels for any desired purpose. But here it is." He handed him a bound sheaf of typewritten notes which he had been carrying under his arm. "That's your copy. Look it over."

King started to do so. Lentz joined him, after a look that was a silent request for permission, which Erickson had answered with his only verbal contribution, "Sure, doc."

As King read, the troubled feelings of an acutely harassed executive left him. His dominant personality took charge, that of the scientist. He enjoyed the controlled and cerebral ecstasy of the impersonal seeker for the elusive truth. The emotions felt in his throbbing thalamus were permitted only to form a sensuous obbligato for the cold flame of cortical activity. For the time being, he was sane, more nearly completely sane than most men ever achieve at any time.

For a long period there was only an occasional grunt, the clatter of turned pages, a nod of approval. At last he put it down.

"It's the stuff," he said. "You've done it, boys. It's great; I'm proud of you."

Erickson glowed a bright pink, and swallowed. Harper's small, tense figure gave the ghost of a wriggle, reminiscent of a wire-haired terrier receiving approval. "That's fine, Chief. We'd rather hear you say that than get the Nobel Prize."

"I think you'll probably get it. However"-the proud light in his eyes died down-"I'm not going to take any action in this matter."

"Why not, Chief?" His tone was bewildered.

"I'm being retired. My successor will take over in the near future; this is too big a matter to start just before a change in administration."

"You being retired! What the bell?"

"About the same reason I took you off watch-at least, the directors think so."

"But that's nonsense! You were right to take me off the watch-list; I was getting jumpy. But you're another matter-we all depend on you."

"Thanks, Cal-but that's how it is; there's nothing to be done about it." He turned to Lentz. "I think this is the last ironical touch needed to make the whole thing pure farce," he observed bitterly. "This thing is big, bigger than we can guess at this stage-and I have to give it a miss."

"Well," Harper burst out, "I can think of something to do about it!" He strode over to King's desk and snatched up the manuscript. "Either you superintend the exploitation, or the Company can damn well get along without our discovery!" Erickson concurred belligerently.

"Wait a minute." Lentz had the floor. "Doctor Harper... have you already achieved a practical rocket fuel?"

"I said so. We've got it on hand now."

"An escape-speed fuel?" They understood his verbal shorthand a fuel that would lift a rocket free of the earth's gravitational pull.

"Sure. Why, you could take any of the Clipper rockets, refit them a trifle, and have breakfast on the moon."

"Very well. Bear with me. . . ." He obtained a sheet of paper from King, and commenced to write. They watched in mystified impatience. He continued briskly for some minutes, hesitating only momentarily. Presently he stopped, and spun the paper over to King. "Solve it!" he demanded.

King studied the paper. Lentz had assigned symbols to a great number of factors, some social, some psychological, some physical, some economic. He had thrown them together into a structural relationship, using the symbols of calculus of statement. King understood the paramathematical operations indicated by the symbols, but he was not as used to them as he was to the symbols and operations of mathematical physics. He plowed through the equations, moving his lips slightly in subconscious vocalization.

He accepted a pencil from Lentz, and completed the solution. It required several more lines, a few more equations, before they cancelled out, or rearranged themselves, into a definite answer.

He stared at this answer while puzzlement gave way to dawning comprehension and delight.

He looked up. "Erickson! Harper!" he rapped out.

"We will take your new fuel, refit a large rocket, install the breeder pile in it, and throw it into an orbit around the earth, far out in. space. There we will use it to make more fuel, safe fuel, for use on earth, with the danger from the Big Bomb itself limited to the operators actually on watch!"

There was no applause. It was not that sort of an idea; their minds were still struggling with the complex implications.

"But Chief," Harper finally managed, "how about your retirement? We're still not going to stand for it."

"Don't worry," King assured him. "It's all in there, implicit in those equations, you two, me, Lentz, the Board of Directors and just what we all have to do about it to accomplish it."

"All except the matter of time," Lentz cautioned.

"You'll note that elapsed time appears in your answer as an undetermined unknown."

"Yes.. . yes, of course. That's the chance we have to take. Let's get busy!"

Chairman Dixon called the Board of Directors to order. "This being a special meeting we'll dispense with minutes and reports," he announced. "As set forth in the call we have agreed to give the retiring superintendent two hours of our time."

"Mr. Chairman-"

"Yes, Mr. Strong?"

"I thought we had settled that matter."

"We have, Mr. Strong, but in view of Superintendent King's long and distinguished service, if he asks for a hearing, we are honor bound to grant it. You have the floor, Doctor King."

King got up, and stated briefly, "Doctor Lentz will speak for me." He sat down.

Lentz had to wait for coughing, throat-clearing, and scraping of chairs to subside. It was evident that the Board resented the outsider.

Lentz ran quickly over the main points in the argument which contended that the bomb presented an intolerable danger anywhere on the face of the earth. He moved on at once to the alternative proposal that the bomb should be located in a rocket ship, an artificial moonlet flying in a free orbit around the earth at a convenient distance- say fifteen thousand miles-while secondary power stations on earth burned a safe fuel manufactured by the bomb.

He announced the discovery the Harper-Erickson technique and dwelt on what it meant to them commercially. Each point was presented as persuasively as possible, with the full power of his engaging personality. Then he paused and waited for them to blow off steam.

They did. "Visionary-" "Unproved-" "No essential change in the situation-" The substance of it was that they were very happy to hear of the new fuel, but not particularly impressed by it. Perhaps in another twenty years, after it had been thoroughly tested and

proved commercially, they might consider setting up another breeder pile outside the atmosphere. In the meantime there was no hurry. Only one director supported the scheme and he was quite evidently unpopular.

Lentz patiently and politely dealt with their objections. He emphasized the increasing incidence of occupational psychoneurosis among the engineers and the grave danger to everyone near the bomb even under the orthodox theory. He reminded them of their insurance and indemnity bond costs, and of the "squeeze" they paid state politicians. Then he changed his tone and let them have it directly and brutally. "Gentlemen," he said, "we believe that we are fighting for our lives ... our own lives, our families, and every life on the globe, if you refuse this compromise, we will fight as fiercely and with as little regard for fair play as any cornered animal." With that he made. His first move in attack. It was quite simple. He offered for their inspection the outline of a propaganda campaign on a national scale, such as any major advertising firm could carry out as a matter of routine. It was complete to the last detail, television broadcasts, spot plugs, newspaper and magazine coverage with planted editorials, dummy "citizens' committees," and-most important-a supporting whispering campaign and a letters-to-Congress organization. Every businessman there knew from experience how such things worked.

But its object was to stir up fear of the Arizona pile and to direct that fear, not into panic, but into rage against the Board of Directors personally, and into a demand that the Atomic Energy Commission take action to have the Big Bomb removed to outer space.

"This is blackmail! We'll stop you!"

"I think not," Lentz replied gently. "You may be able to keep us out of some of the newspapers, but-you can't stop the rest of it. You can't even keep us off the air-ask the Federal Communications Commission." It was true. Harrington had handled the political end and had performed his assignment well; the President was convinced.

Tempers were snapping on all sides; Dixon had to pound for order. "Doctor Lentz," he said, his own temper under taut control, "you plan to make every-one of us appear a black-hearted scoundrel with no oilier thought than personal profit, even at the expense of the lives of others. You know that is not true; this is a simple difference of opinion as to what is wise."

"I did not say it was true," Lentz admitted blandly, "but you will admit that I can convince the public that you are deliberate villains. As to it being a difference of opinion ... you are none of you atomic physicists; you are not entitled to hold opinions in this matter.

"As a matter of fact," he went on callously, "the only doubt in my mind is whether or not an enraged public will destroy your precious plant before Congress has time to exercise eminent domain, and take it away from you!"

Before they had time to think up arguments in answer and ways of circumventing him, before their hot indignation had cooled and set as stubborn resistance, he offered his gambit. He produced another lay-out for a propaganda campaign-an entirely different sort.

This time the Board of Directors was to be built up, not torn down. All of the same techniques were to be used; behind-the-scenes feature articles with plenty of human interest would describe the functions of the Company, describe it as a great public trust, administered by patriotic, unselfish statesmen of the business world. At the proper point in the campaign, the Harper-Erickson fuel would be announced, not as a semi-accidental

result of the initiative of two employees, but as the long-expected end product of years of systematic research conducted under an axed policy of the Board of Directors, a policy growing naturally out of their humane determination to remove forever the menace from even the sparsely settled Arizona desert.

No mention was to be made of the danger of complete, planet-embracing catastrophe.

Lentz discussed it. He dwelt on the appreciation that would be due them from a grateful world. He invited them to make a noble sacrifice, and, with subtle misdirection, tempted them to think of themselves as heroes. He deliberately played on one of the most deep-rooted of simian instincts, the desire for approval from one's kind, deserved or not.

All the while he was playing for time, as he directed his attention from one hard case, one resistant mind, to another; He soothed and he tickled and he played on personal foibles. For the benefit of the timorous and the devoted family men, he again painted a picture of the suffering, death, and destruction that might result from their well-meant reliance on the unproved and highly questionable predictions of Destry's mathematics. Then he described in glowing detail a picture of a world free from worry but granted almost unlimited power, safe power from an invention which was theirs for this one small concession. It worked. They did not reverse themselves all at once, but a committee was appointed to investigate the feasibility of the proposed spaceship power plant. By sheer brass Lentz suggested names for the committee and Dixon confirmed his nominations, not because he wished to, particularly, but because he was caught off guard and could not think of a reason to refuse without affronting those colleagues. Lentz was careful to include his one supporter in the list.

The impending retirement of King was not mentioned by either side. Privately, Lentz felt sure that it never would be mentioned.

It worked, but there was left much to do. For the first few days, after the victory in committee, King felt much elated by the prospect of an early release from the soul killing worry. He was buoyed up by pleasant demands of manifold new administrative duties. Harper and Erickson were detached to Goddard Field to collaborate with the rocket engineers there in design of firing chambers, nozzles, fuel stowage, fuel metering, and the like. A schedule had to be worked out with the business office to permit as much use of the pile as possible to be diverted to making atomic fuel, and a giant combustion chamber for atomic fuel had to be designed and ordered to replace the pile itself during the interim between the time it was shut down on earth and the later time when sufficient local, smaller plants could be built to carry the commercial load. He was busy.

When the first activity had died down and they were settled in a new routine, pending the shutting down of the plant and its removal to outer space, King suffered an emotional reaction. There was, by then, nothing to do but wait, and tend the pile, until the crew at Goddard Field smoothed out the bugs and produced a space-worthy rocket ship.

At Goddard they ran into difficulties, overcame them, and came across more difficulties. They had never used such high reaction velocities; it took many trials to find a nozzle shape that would give reasonably high efficiency. When that was solved, and success seemed in sight, the jets burned out on a time-trial ground test. They were stalemated for weeks over that hitch.

There was another problem quite separate from the rocket problem: what to do with the power generated by the breeder pile when relocated in a satellite rocket? It was

solved drastically by planning to place the pile proper outside the satellite, unshielded, and let it waste its radiant energy. It would be a tiny artificial star, shining in the vacuum of space. In the meantime research would go on for a means to harness it again and beam the power back to Earth. But only its power would be wasted; plutonium and the never atomic fuels would be recovered and rocketed back to Earth.

Back at the power plant Superintendent King could do nothing but chew his nails and wait He had not even the release of running over to Goddard Field to watch the progress of the research, for, urgently as he desired to, he felt an even stronger, an overpowering compulsion to watch over the pile more lest it heartbreakingly blow up at the last minute.

He took to hanging around the control room. He had to stop that; his unease communicated itself to his watch engineers; two of them cracked up in a single day-one of them on watch.

He must face the fact-there had been a grave upswing in psychoneurosis among his engineers since the period of watchful waiting had commenced. At first, they had tried to keep the essential facts of the plan a close secret, but it had leaked out, perhaps through some member of the investigating committee. He admitted to himself now that it had been a mistake ever to try to keep it secret-Lentz had advised against it, and the engineers not actually engaged in the change-over were bound to know that something was up.

He took all of the engineers into confidence at last, under oath of secrecy that had helped for a week or more, a week in which they were all given a spiritual lift-by the knowledge, as he had been. Then it had worn off, the reaction had set in, and the psychological observers had started disqualifying engineers for duty almost daily. They were even reporting each other as mentally unstable with great frequency; he might even be faced with a shortage of psychiatrists if that kept up, he thought to himself with bitter amusement. His engineers were already standing four-hours in every sixteen. If one more dropped out, he'd put himself on watch. That would be a relief, to tell himself the truth.

Somehow some of the civilians around about and the non-technical employees were catching on to the secret.

That mustn't go on-if it spread any further there might be a nationwide panic. But how the hell could he stop it? He couldn't.

He turned over in bed, rearranged his pillow, and tried once more to get to sleep. No good. His head ached, his eyes were balls of pain, and his brain was a ceaseless grind of useless, repetitive activity, like a disc recording stuck in one groove.

God! This was unbearable! He wondered if he were cracking up if he already had cracked up. This was worse, many times worse, than the old routine when he had simply acknowledged the danger and tried to forget it as much as possible. Not that the pile was any different-it was this five-minutes-to-armistice feeling, this waiting for the curtain to go up, this race against time with nothing to do to help. He sat up, switched on his bed lamp, and looked at the clock. Three-thirty. Not so good. He got up, went into his bathroom, and dissolved a sleeping powder in a glass of whisky and water, half and half. He gulped it down and went back to bed. Presently he dozed off.

He was running, fleeing down a long corridor. At the end lay safety he knew that, but he was so utterly exhausted that he doubted his ability to finish the race. The thing pursuing him was catching up; he forced his leaden, aching legs into greater activity. The

thing behind him increased its pace, and actually touched him. His heart stopped, then pounded again. He became aware that he was screaming, shrieking in mortal terror. But he had to reach the end of that corridor, more depended on it than just himself. He had to. He had to- He had to! Then the flash came and he realized that he had lost, realized it with utter despair and utter, bitter defeat. He had failed; the pile had blown up.

The flash was his bed lamp coming on automatically; it was seven o'clock. His pajamas were soaked, chipping with sweat, and his heart still pounded. Every ragged nerve throughout his body screamed for release. It would take more than a cold shower to cure this case of the shakes.

He got to the office before the janitor was out of it. He sat there, doing nothing, until Lentz walked in on him, two hours later. The psychiatrist came in just as he was taking two small tablets from a box in his desk.

"Easy ... easy, old man," Lentz said in a slow voice. "What have you there?" He came around and gently took possession of the box.

"Just a sedative."

Lentz studied the inscription on the cover. "How many have you had today?"

"Just two, so far."

"You don't need barbiturates; you need a walk in the fresh air. Come take one with me."

"You're a fine one to talk you're smoking a cigarette that isn't lighted!"

"Me? Why, so I am! We both need that walk. Come."

Harper arrived less than ten minutes after they had left the office. Steinke was not in the outer office. He walked on through and pounded on the door of King's private office, then waited with the man who accompanied him a hard young chap with an easy confidence to his bearing. Steinke let them in.

Harper brushed on past him with a casual greeting, then checked himself when he saw that there was no one else inside.

"Where's the chief?" he demanded.

"Out. He'll be back soon."

"I'll wait. Oh-Steinke, this is Greene. Greene Steinke."

The two shook hands. "What brings you back, Cal?" Steinke asked, turning back to Harper.

'Well.. . I guess it's all right to tell you-"

The communicator screen flashed into sudden activity, and cut him short. A face filled most of the frame. It was apparently too close to the pickup, as it was badly out of focus. "Superintendent!" it yelled in an agonized voice. "The pile-!"

A shadow flashed across the screen, they heard a dull "Smack!", and the face slid out of the screen. As it fell it revealed the control room behind it. Someone was down on the floor plates, a nameless heap. Another figure ran across the field of pickup and disappeared.

Harper snapped into action first. "That was Silard!" he shouted, "-in the control room! Come on, Steinke!" He was already in motion himself.

Steinke went dead white, but hesitated only an unmeasurable instant. He pounded sharp on Harper's heels. Greene followed without invitation, in a steady run that kept easy pace with them.

They had to wait for a capsule to unload at the tube station. Then all three of them tried to crowd into a two passenger capsule. It refused to start and moments were lost before Greene piled out and claimed another car.

The four minute trip at heavy acceleration seemed an interminable crawl. Harper was convinced that the system had broken down, when the familiar click and sigh announced their arrival at the station under the plant. They jammed each other trying to get out at the same time.

The lift was up; they did not wait for it. That was unwise; they gained no time by it, and arrived at the control level out of breath. Nevertheless, they speeded up when they reached the top, zigzagged frantically around the outer shield, and burst into the control room.

The limp figure was still on the floor, and another, also inert, was near it.

A third figure was bending over the trigger. He looked up as they came in, and charged them. They hit him together, and all three went down. It was two to one, but they got in each other's way. His heavy armor protected him from the force of their blows. He fought with senseless, savage violence.

Harper felt a bright, sharp pain; his right arm went limp and useless. The armored figure was struggling free of them. There was a shout from somewhere behind them: "Hold still!"

He saw a flash with the corner of one eye, a deafening crack hurried on top of it, and re-echoed painfully in the restricted space.

The armored figure dropped back to his knees, balanced there, and then fell heavily on his face. Greene stood in the entrance, a service pistol balanced in his hand.

Harper got up and went over to the trigger. He tried to reduce the power-level adjustment, but his right hand wouldn't carry out his orders, and his left was too clumsy.

"Steinke," he called, "come here! Take over."

Steinke hurried up, nodded as he glanced at the readings, and set busily to work.

It was thus that King found them when he bolted in a very few minutes later.

"Harper!" he shouted, while his quick glance was still taking in the situation. "What's happened?"

Harper told him briefly. He nodded. "I saw the tail end of the fight from my office Steinke!" He seemed to grasp for the first time who was on the trigger. "He can't manage the controls-" He hurried toward him.

Steinke looked up at his approach. "Chief!" he called out, "Chief! I've got my mathematics back!"

King looked bewildered, then nodded vaguely, and let him be. He turned back to Harper. "How does it happen you're here?"

"Me? I'm here to report-we've done it, Chief!"

"Eh?"

"We've finished; it's all done. Erickson stayed behind to complete the power plant installation on the big ship. I came over in the ship we'll use to shuttle between Earth and the big ship, the power plant. Four minutes from Goddard Field to here in her. That's the pilot over there." He pointed to the door, where Greene's solid form partially hid Lentz.

"Wait a minute. You say that everything is ready to install the pile in the ship? You're sure?"

"Positive. The big ship has already flown with our fuel-longer and faster than she will have to fly to reach station in her orbit; I was in it-out in space, Chief! We're all set, six ways from zero."

King stared at the dumping switch, mounted behind glass at the top of the instrument board. "There's fuel enough," he said softly, as if he were alone and speaking only to himself, "there's been fuel enough for weeks."

He walked swiftly over to the switch, smashed the glass with his fist, and pulled it.

The room rumbled and shivered as tons of molten, massive metal, heavier than gold, coursed down channels, struck against baffles, split into a dozen dozen streams, and plunged to rest in leaden receivers-to rest, safe and harmless, until it should be reassembled far out in space.

Robert A Heinlein - The Cat who Walks Through Walls

BOOK One-
Indifferent Honest

I

"Whatever you do, you'll regret it."

ALLAN McLEOD GRAY 1905-1975

"We need you to kill a man."

This stranger glanced nervously around us. I feel that a crowded restaurant is no place for such talk, as a high noise level gives only limited privacy.

I shook my head. "I'm not an assassin. Killing is more of a hobby with me. Have you had dinner?"

"I'm not here to eat. Just let me-"

"Oh, come now. I insist." He had annoyed me by interrupting an evening with a delightful lady; I was paying him back in kind. It does not do to encourage bad manners; one should retaliate, urbanely but firmly.

That lady, Gwen Novak, had expressed a wish to spend a penny and had left the table, whereupon Herr Nameless had materialized and sat down uninvited. I had been about to tell him to leave when he mentioned a name. Walker Evans.

There is no "Walker Evans."

Instead, that name is or should be a message from one of six people, five men, one woman, a code to remind me of a debt. It is conceivable that an installment payment on that ancient debt could require me to kill someone-possible but unlikely.

But it was not conceivable that I would kill at the behest of a stranger merely because he invoked that name.

While I felt obliged to listen, I did not intend to let him ruin my evening. Since he was sitting at my table, he could bloody well behave like an invited guest. "Sir, if you don't want a full dinner, try the after-theater suggestions. The lapin ragout on toast may be rat rather than rabbit but this chef makes it taste like ambrosia."

"But I don't want-"

"Please." I looked up, caught my waiter's eye. "Morris."

Morris was at my elbow at once. "Three orders of lapin ragout, please. Moms, and ask Hans to select a dry white wine for me."

"Yes, Dr. Ames."

"Don't serve until the lady returns, if you please."

"Certainly, sir."

I waited until the waiter had moved away. "My guest will be returning soon. You have a brief time to explain yourself in private. Please start by telling me your name."

"My name isn't important. I-"

"Come, sir! Your name. Please."

"I was told simply to say 'Walker Evans.'"

"Good as far as it goes. But your name is not Walker Evans and I do not traffic with a man who won't give his name. Tell me who you are, and it would be well to have an ID that matches your words."

"But- Colonel, it's far more urgent to explain who must die and why you are the man who must kill him! You must admit that!"

"I don't have to admit anything. Your name, sir! And your ID. And please do not call me 'Colonel'; I am Dr. Ames." I had to raise my voice not to be drowned out by a roll of drums;

the late evening show was starting. The lights lowered and a spotlight picked out the master of ceremonies.

"All right, all right!" My uninvited guest reached into a pocket, pulled out a wallet. "But Tolliver must die by noon Sunday or we'll all be dead!"

He flipped open the wallet to show me an ID. A small dark spot appeared on his white shirt front. He looked startled, then said softly, "I'm very sorry," and leaned forward. He seemed to be trying to add something but blood gushed from his mouth. His head settled down onto the tablecloth.

I was up out of my chair at once and around to his right side. Almost as swiftly Moms was at his left side. Perhaps Morris was trying to help him; I was not-it was too late. A four-millimeter dart makes a small entry hole and no exit wound;

it explodes inside the body. When the wound is in the torso, death follows abruptly. What I was doing was searching the crowd-that and one minor chore.

While I was trying to spot the killer, Morris was joined by the headwaiter and a busman. The three moved with such speed and efficiency that one would have thought that having a guest killed at a table was something they coped with nightly. They removed the corpse with the dispatch and unobtrusiveness of Chinese stagehands; a fourth man flipped up the tablecloth, removed it and the silver, was back at once with a fresh cloth, and laid two places.

I sat back down. I had not been able to spot a probable killer; I did not even note anyone displaying a curious lack of curiosity about the trouble at my table. People had stared, but when the body was gone, they quit staring and gave attention to the show. There were no screams or expressions of horror;

it seemed as if those who had noticed it thought that they were seeing a customer suddenly ill or possibly taken by drink.

The dead man's wallet now rested in my left jacket pocket.

When Gwen Novak returned I stood up again, held her chair for her. She smiled her thanks and asked, "What have I missed?"

"Not much. Jokes old before you were born. Others that were old even before Neil Armstrong was bom."

"I like old jokes, Richard. With them I know when to laugh."

"You've come to the right place."

I too like old jokes; I like all sorts of old things-old friends, old books, old poems, old plays. An old favorite had started our evening: Midsummer Night's Dream presented by Halifax Ballet Theater with Luanna Pauline as Titania. Low-gravity ballet, live actors, and magical holograms had created a fairyland Will Shakespeare would have loved. Newness is no virtue.

Shortly music drowned out our host's well-aged wit; the chorus line undulated out onto the dance floor, sensuously graceful in half gravity. The ragout arrived and with it the wine. After we had eaten Gwen asked me to dance. I have this trick leg but at half gee

I can manage the classic slow dances- waltz, frottage glide, tango, and so forth. Gwen is a warm, live, fragrant bundle; dancing with her is a Sybaritic treat.

It was a gay ending to a happy evening. There was still the matter of the stranger who had had the bad taste to get himself killed at my table. But, since Gwen seemed not to be aware of the unpleasant incident, I had tabled it in my mind, to be dealt with later. To be sure I was ready any moment for that tap on the shoulder... but in the meantime I enjoyed good food, good wine, good company. Life is filled with tragedy;

if you let it overwhelm you, you cannot enjoy life's innocent pleasures.

Gwen knows that my leg won't take much dancing; at the first break in the music she led us back to our table. I signaled Morris for the check. He produced it out of midair; I dialed my credit code into it, set it for standard gratuity plus half, added my thumbprint.

Morris thanked me. "A nightcap, sir? Or a brandy? Perhaps the lady would enjoy a liqueur? Compliments of Rainbow's End." The owner of the restaurant, an ancient Egyptian, believed in good measure-at least to his regulars; I'm not sure how tourists from dirtside were treated.

"Gwen?" I queried, expecting her to refuse-Gwen's drinking is limited to one glass of wine at meals. One.

"A Cointreau would be pleasant. I would like to stay and listen to the music a while."

"Cointreau for the lady," Morris noted. "Doctor?"

"Mary's Tears and a glass of water, please. Moms."

When Morris left, Gwen said quietly, "I needed time to speak with you, Richard. Do you want to sleep at my place tonight? Don't be skittish; you can sleep alone."

"I am not all that fond of sleeping alone." I clicked over the possibilities in my mind. She had ordered a drink she did not want in order to make me an offer that did not fit. Gwen is a forthright person; I felt that had she wished to sleep with me she would have said so-she would not have played getaway-closer about it.

Therefore she had invited me to sleep in her compartment because she thought it to be unwise or unsafe for me to sleep in my own bed. Therefore-

"You saw it."

"From a distance. So I waited until things quieted down before returning to the table. Richard, I'm not sure what happened. But if you need a place to lie doggo-be my guest!"

"Why, thank you, my dear!" A friend who offers help without asking for explanations is a treasure beyond price. "Whether I accept or not, I am in your debt. Mmm, Gwen, I too am unsure what happened. The total stranger who gets himself killed while he's trying to tell you something- A clich6, a tired cliché. If I plotted a story that way today, my guild would disown me." I smiled at her. "In its classic form you would turn out to be the killer... a fact that would develop slowly while you pretended to help me search. The sophisticated reader would know from chapter one that you did it, but I, as the detective, would never guess what was as plain as the nose on your face. Correction: on my face."

"Oh, my nose is plain enough; it's my mouth that men remember. Richard, I am not going to help you hang this on me; I simply offered you a hideout. Was he really killed? I couldn't be sure."

"Eh?" I was saved from answering too quickly by Morris's arrival with our liqueurs. When he left, I answered, "I had not thought about any other possibility. Gwen, he was not wounded. Either he was killed almost instantly... or it was faked. Could it be faked? Certainly. If shown on holo, it could be done in real time with only minor props." I mulled it over. Why had the restaurant staff been so quick, so precise, in covering it up? Why had I not felt that tap on the shoulder? "Gwen, I'll take you up on that offer. If the proctors want me, they'll find me. But I would like to discuss this with you in greater detail than we can manage here, no matter how carefully we keep our voices down."

"Good." She stood up. "I won't be long, dear." She headed for the lounges.

As I stood up Morris handed me my stick and I leaned on it as I followed her toward the lounges. I don't actually have to use a cane-I can even dance, as you know-but using a cane keeps my bad leg from getting too tired.

When I came out of the gentlemen's lounge, I placed myself in the foyer, and waited.

And waited.

Having waited long past what is reasonable I sought out the maitre d'h6tel. 'Tony, could you please have some female member of your staff check the ladies' lounge for Mistress Novak? I think that it is possible that she may have become ill, or be in some difficulty."

"Your guest. Dr. Ames?"

"Yes."

"But she left twenty minutes ago. I ushered her out myself."

"So? I must have misunderstood her. Thank you, and good night."

"Good night. Doctor. We look forward to serving you again."

I left Rainbow's End, stood for a moment in the public corridor outside it-ring thirty, half-gravity level, just clockwise from radius two-seventy at Petticoat Lane, a busy neighborhood even at one in the morning. I checked for proctors waiting for me, halfway expecting to find Gwen already in custody.

Nothing of the son. A steady flow of people, mostly groundhogs on holiday by their dress and behavior, plus pullers for grimp shops, guides and ganders, pickpockets and priests. Golden Rule habitat is known system wide as the place where anything is for sale and Petticoat Lane helps to support that reputation insofar as fleshpots are concerned. For more sober enterprises you need only go clockwise ninety degrees to Threadneedle Street.

No sign of proctors, no sign of Gwen.

She had promised to meet me at the exit. Or had she? No, not quite. Her exact words were, "I won't be long, dear." I had inferred that she expected to find me at the restaurant's exit to the street.

I've heard all the old chestnuts about women and weather, La donna e mobile, and so forth-I believe none of them. Gwen had not suddenly changed her mind. For some reason- some good reason-she had gone on without me and now would expect me to join her at her home. Or so I told myself.

If she had taken a scooter, she was there already; if she had walked, she would be there soon-Tony had said, 'Twenty minutes ago." There is a scooter booth at the intersection of ring thirty and Petticoat Lane. I found an empty, punched in ring one-oh-

five, radius one-thirty-five, six-tenths gravity, which would take me as close as one can get by public scooter to Gwen's compartment.

Gwen lives in Gretna Green, just off Appian Way where it crosses the Yellow Brick Road-which means nothing to anyone who has never visited Golden Rule habitat. Some public relations "expert" had decided that habitants would feel more at home if surrounded by place names familiar from dirtside. There is even (don't retch) a "House at Pooh Comer." What I punched in were coordinates of the main cylinder: 105, 135, 0.6.

The scooter's brain, off somewhere near ring ten, accepted those coordinates and waited; I punched in my credit code and took position, crouched against acceleration pads.

That idiot brain took an insultingly long time to decide that my credit was good-then placed a web around me, tightened it, closed the capsule and whuff'! bing! barn! we were on our way... then a fast float for three kilometers from ring thirty to ring one-oh-five, then barn! bing! whuff! I was in Gretna Green. The scooter opened.

For me such service is well worth the fare. But the Manager had been warning us the past two years that the system does not pay its way; either use it more or pay more per trip, or the hardware will be salvaged and the space rented out. I hope they work out a solution; some people need this service. (Yes, I know; Laffer theory will always give two solutions to such a problem, a high and a low-except where the theory states that both solutions are the same... and imaginary. Which might apply here. It may be that a scooter system is too expensive for a space habitat at the present state of engineering art.)

It was an easy walk to Gwen's compartment: downstairs to seven-tenths gravity, fifty meters "forward" to her number-I rang.

Her door answered, "This is the recorded voice of Gwen Novak. I've gone to bed and am, I hope, happily asleep. If your visit is truly an emergency, deposit one hundred crowns via your credit code. If I agree that waking me is justified, I will return your money. If I disagree-laugh, chortle, chuckle!- I'll spend it on gin and keep you out anyhow. If your call is not an emergency, please record a message at the sound of my scream."

This was followed by a high scream which ended abruptly as if a hapless wench had been choked to death.

Was this an emergency? Was it a hundred-crown emergency? I decided that it was not any sort of emergency, so I recorded:

"Dear Gwen, this is your fairly-faithful swain Richard speaking. Somehow we got our wires crossed. But we can straighten it out in the morning. Will you call me at my digs when you wake up? Love and kisses, Richard the Lion-Hearted."

I tried to keep my not-inconsiderable irk out of my voice. I felt badly used but underlying it was a conviction that Gwen would not intentionally mistreat me; it had to be an honest mix-up even though I did not now understand it.

Then I went home whuff! bing! barn!... barn! bing! whuff!

I have a deluxe compartment with bedroom separate from the living room. I let myself in, checked for messages in the terminal-none-set it for sleep conditions both for door and terminal, hung up my cane, and went into the bedroom.

Gwen was asleep in my bed.

She looked sweetly peaceful. I backed out quietly, moved noiselessly in undressing, went into the 'fresher, closed the door-soundproof; I said it was a deluxe

setup. Nevertheless I made as little noise as possible in refreshing myself for bed, as "soundproof" is a hope rather than a certainty. When I was as sanitary and odorless as a male hairless ape can manage short of surgery, I went quietly back into my bedroom and got most cautiously into bed. Gwen stirred, did not wake.

At some hour when I was awake in the night, I switched off the alarm. But I woke up about my usual time, as my bladder can't be switched off. So I got up, took care of it, refreshed for the day, decided that I wanted to live, slid into a coverall, went silently into the living room, and opened the buttery, considered my larder. A special guest called for a special breakfast.

I left the connecting door open so that I could keep an eye on Gwen. I think it was the aroma of coffee that woke her.

When I saw that her eyes were open, I called out, "Good morning, beautiful. Get up and brush your teeth; breakfast is ready."

"I did brush my teeth, an hour ago. Come back to bed."

"Nymphomaniac. Orange juice or black cherries or both?"

"Uh... both. Don't change the subject. Come here and meet your fate like a man."

"Eat first."

"Coward. Richard is a sissy, Richard is a sissy!"

"An utter coward. How many waffles can you eat?"

"Uh ... decisions! Can't you unfreeze them one at a time?"

"These are not frozen. Only minutes ago they were alive and singing; I killed 'em and skun 'em myself. Speak up, or I'll eat all of them."

"Oh, the pity and the shame of it all!-turned down for waffles. Nothing left but to enter a monastery. Two."

"Three. You mean 'nunnery.'"

"I know what I mean." She got up, went into the refresher, was out quickly, wearing one of my robes. Pleasant bits of Gwen stuck out here and there. I handed her a glass of juice;

she paused to gulp twice before she spoke. "Gurgle, gurgle. My, that's good. Richard, when we're married, are you going to get breakfast for me every morning?"

"That inquiry contains implied assumptions I am not willing to stipulate-"

"After I trusted you and gave all!"

"-but, without stipulation, I will concede that I would just as lief get breakfast for two as for one. Why do you assume that I'm going to marry you? What inducements do you offer? Are you ready for a waffle?"

"See here, mister, not all men are fussy about marrying grandmothers! I've had offers. Yes, I'm ready for a waffle."

"Pass your plate." I grinned at her. "'Grandmother' my missing foot. Not even if you had started your first child at menarche, then your offspring had whelped just as promptly."

"Neither one and I am so. Richard, I am trying to make two things clear. No, three. First, I'm serious about wanting to marry you if you'll hold still for it... or, if you won't, I'll keep you as a pet and cook breakfast for you. Second, I am indeed a grandmother. Third, if, despite my advanced years, you wish to have children by me, the wonders of modern microbiology have kept me fertile as well as relatively un-wrinkled. If you want to knock me up, it should not be too much of a chore."

"I could force myself. Maple syrup in that one, blueberry syrup in this. Or maybe I did so last night?"

"Wrong date by at least a week... but what would you say if I had said, 'Jackpot!'"

"Quit joking and finish your waffle. There's another one ready."

"You're a sadistic monster. And deformed."

"Not deformed," I protested. "This foot was amputated; I wasn't born without it. My immune system flatly refuses to accept a transplant, so that's that. One reason I live in low gravity."

Gwen suddenly sobered. "My very dear! I wasn't speaking of your foot. Oh, heavens! Your foot doesn't matter... except that I'll be more careful than ever not to place a strain on you, now that I know why."

"Sorry. Let's back up. Then what is this about me being deformed'?"

At once she was again her merry self. "You should know! When you've got me stretched all out of shape and no use to a normal man. And now you won't marry me. Let's go back to bed."

"Let's finish breakfast and let it settle first-have you no mercy? I didn't say I wouldn't many you... and I did not stretch you."

"Oh, what a sinful lie! Will you pass the butter, please? You're deformed all right! How big is that tumor with the bone in it? Twenty-five centimeters? More? And how big around? If I had seen it first, I would have never risked it."

"Oh, piffle! It's not even twenty centimeters. I didn't stretch you; I'm just middlin' size. You should see my Uncle Jock. More coffee?"

"Yes, thank you. You surely did stretch me! Uh... is your Uncle Jock actually bigger than you are? Locally?"

"Much."

"Uh... where does he live?"

"Finish your waffle. Do you still want to take me back to bed? Or do you want a note to my Uncle Jock?"

"Why can't I have both? Yes, a little more bacon, thank you. Richard, you're a good cook. I don't want to marry Uncle Jock; I'm just curious."

"Don't ask him to show it to you unless you mean business ... because he always means business. He seduced his Scoutmaster's wife when he was twelve. Ran away with her. Caused considerable talk in southern Iowa because she didn't want to give him up. That was over a hundred years ago when such things were taken seriously, at least in Iowa."

"Richard, are you implying that Uncle Jock is over a hundred and still active and virile?"

"A hundred and sixteen and still jumping his friends' wives, daughters, mothers, and livestock. And has three wives of his own under the Iowa senior-citizen cohabitation code, one of them-my Aunt Cissy-being still in high school."

"Richard, I sometimes suspect that you are not always entirely truthful. A mild bent toward exaggeration."

"Woman, that is no way to talk to your future husband. Behind you is a terminal. Punch it for Grinnell, Iowa; Uncle Jock lives just outside. Shall we call him? You talk to him real pretty and he might show you his pride and joy. Well, dear?"

"You are just trying to get out of taking me back to bed."

"Another waffle?"

"Quit trying to bribe me. Uh, a half, maybe. Split one with me?"

"No. A whole one for each of us."

"'Hail, Caesar!' You're the bad example I've always needed. Once we're married I'm going to get fat."

"I'm glad you said that. I had hesitated to mention it but you are a bit on the skinny side. Sharp comers. Bruises. Some padding would help."

I'll omit what Gwen said next. It was colorful, even lyrical, but (in my opinion) unladylike. Not her true self, so we won't record it.

I answered, 'Truly, it's irrelevant. I admire you for your intelligence. And your angelic spirit. Your beautiful soul. Let's not get physical."

Again I feel that I must censor.

"All right," I agreed. "If that's what you want. Get back into bed and start thinking physical thoughts. I'll switch off the waffle iron."

Somewhat later I said, "Do you want a church wedding?"

"Coo! Should I wear white? Richard, are you a church member?"

"No."

"Neither am I. I don't think you and I really belong in churches."

"I agree. But just how do you want to get married? So far as I know there isn't any other way to get married in the Golden Rule. Nothing in the Manager's regulations. Legally the institution of marriage does not exist here."

"But, Richard, lots of people do get married."

"But how, dear? I realize they do but, if they don't do it through a church, I don't know how they go about it. I've never had occasion to find out. Do they go to Luna City? Or down dirtside? How?"

"Whatever way they wish. Hire a hall and get some VIP to tie the knot in the presence of a crowd of guests, with music and a big reception afterwards... or do it at home with just a few friends present. Or anything in between. It's your choice, Richard."

"Huh uh, not mine. Yours. I simply agreed to go along. As for me, I find that a woman is at her best if she is a bit tense through being unsure of her status. Keeps her on her toes. Don't you agree? Hey! Stop that!"

"Then stop trying to get my goat. If you don't want to sing soprano at your own wedding."

"You do that once more and there ainta gonna be no wedding. Dear one, what sort of a wedding do you want?"

"Richard, I don't need a wedding ceremony, I don't need witnesses. I just want to promise you everything a wife should promise."

"You're sure, Gwen? Aren't you being hasty?" Confound it, promises a woman makes in bed should not be binding.

"I am not being hasty. I decided to marry you more than a year ago."

"You did? Well, I'll be- Hey' We met less than a year ago. At the Day One Ball. July twentieth. I remember."

"True."

"Well?"

"'Well* what, dear? I decided to many you before we met. Do you have a problem with that? I don't. I didn't."

"Mmm. I had better tell you some things. My past contains episodes I don't boast about. Not exactly dishonest but somewhat shady. And Ames is not the name I was bom with."

"Richard, I will be proud to be addressed as 'Mrs. Ames.* Or as... 'Mrs. Campbell'... Colin."

I said nothing, loudly-then added, "What more do you know?"

She looked me firmly in the eye, did not smile. "All I need to know. Colonel Colin Campbell, known as 'Killer' Campbell to his troops... and in the dispatches. A rescuing angel to the students of Percival Lowell Academy. Richard, or Colin, my oldest daughter was one of those students."

"I'll be eternally damned."

"I doubt it."

"And because of this you intend to marry me?"

"No, dear man. That reason sufficed a year ago. But now I've had many months to discover the human being behind the storybook hero. And... I did hurry you into bed last night but neither of us would marry for that reason alone. Do you want to know about my own tarnished past? I'll tell."

"No." I faced her, took both her hands. "Gwendolyn, I want you to be my wife. Will you have me as your husband?"

"I will."

"I, Colin Richard, take thee, Gwendolyn, to be my wife, to have and to hold, to love and to cherish, as long as you will have me."

"I, Sadie Gwendolyn, take thee, Colin Richard, to be my husband, to care for and love and cherish for the rest of my life."

"Whew! I guess that does it."

"Yes. But kiss me."

I did. "When did 'Sadie' show up?"

"Sadie Lipschitz, my family name. I didn't like it so I changed it. Richard, the only thing left to make it official is to publish it. That ties it down. And I do want to tie it down while you're still groggy."

"All right. Publish it how?"

"May I use your terminal?"

"Our terminal. You don't have to ask to use it."

" 'Our terminal.' Thank you, dear." She got up, went to the terminal, keyed for directory, then called the Golden Rule Herald, asked for the society editor. "Please record. Dr. Richard Ames and Mistress Gwendolyn Novak are pleased to announce their marriage this date. No presents, no flowers. Please confirm." She switched off. They called back at once; I answered and confirmed.

She sighed. "Richard, I hurried you. But I had to. Now I can no longer be required to testify against you in any jurisdiction anywhere. I want to help in any way that I can. Why did you kill him, dear? And how?"

II

"In waking a tiger, use a long stick.**

MAO TSE-TUNG 1893-1976

I stared thoughtfully at my bride. "You are a gallant lady, my love, and I am grateful that you do not want to testify against me. But I am not sure that the legal principle you cited can be applied in this jurisdiction."

"But that's a general rule of justice, Richard. A wife can't be forced to testify against her husband. Everyone knows that."

"The question is: Does the Manager know it? The Company asserts that the habitat has only one law, the Golden Rule, and claims that the Manager's regulations are merely practical interpretations of that law, just guidelines subject to change-change right in the middle of a hearing and retroactive, if the Manager so decides. Gwen, I don't know. The Manager's Proxy might decide that you are the Company's star witness."

"I won't do it! I won't!"

"Thank you, my love. But let's find out what your testimony would be were you to be a witness in-what shall we call it? Eh, suppose that I am charged with having wrongfully caused the death of, uh, Mr. X... Mr. X being the stranger who came to our table last night when you excused yourself to visit the ladies' lounge. What did you see?"

"Richard, I saw you kill him. I saw it!"

"A prosecutor would require more details. Did you see him come to our table?"

"No. I didn't see him until I left the lounge and was headed for our table... and was startled to see someone sitting in my chair."

"All right, back up a little and tell me exactly what you saw."

"Uh, I came out of the ladies' room and turned left, toward our table. Your back was toward me, you'll remember-"

"Never mind what I remember; you tell what you remember. How far away were you?"

"Oh, I don't know. Ten meters, maybe. I could go there and measure it. Does it matter?"

"If it ever does, you can measure it. You saw me from about ten meters. What was I doing? Standing? Sitting? Moving?"

"You were seated with your back to me."

"My back was toward you. The light wasn't very good. How did you know it was I?"

"Why- Richard, you're being intentionally difficult."

"Yes, because prosecutors are intentionally difficult. How did you recognize me?"

"Uh- It was you. Richard, I know the back of your neck just as I know your face. Anyhow, when you stood up and moved, I did see your face."

"Was that what I did next? Stand up?"

"No, no. I spotted you, at our table-then I stopped short when I saw someone seated across from you, in my chair. I just stood there and stared."

"Did you recognize him?"

"No. I don't think I ever saw him before."

"Describe him."

"Uh, I can't, very well."

"Short? Tall? Age? Bearded? Race? How dressed?"

"I never saw him standing up. He wasn't a youngster but he wasn't an old man, either. I don't think he wore a beard."

"Moustache?"

"I don't know." (I did know. No moustache. Age about thirty.)

"Race?"

"White. Light skin, anyhow, but not blond like a Swede. Richard, there wasn't time to catch all the details. He threatened you with some sort of weapon and you shot him and you jumped up as the waiter came over-and I backed up and waited until they took him away."

"Where did they take him?"

"I'm not sure. I backed into the ladies' lounge and let the door contract. They could have taken him into the gentlemen's room just across the passage. But there's another door at the end of the passage marked 'Employees Only.'"

"You say he threatened me with a weapon?"

"Yes. Then you shot him and jumped up and grabbed his weapon and shoved it into your pocket, just as our waiter came up on the other side."

(Oho!) "Which pocket did I put it in?"

"Let me think. I have to turn myself that way in my mind. Your left pocket. Your left outside jacket pocket."

"How was I dressed last night?"

"Evening dress, we had come straight from the ballet. White turtleneck, maroon jacket, black trousers."

"Gwen, because you were asleep in the bedroom, I undressed last night here in the living room and hung the clothes I was wearing in that wardrobe by the outer door, intending to move them later. Will you please open that wardrobe, find the jacket I wore last night, and get from its left outside pocket the 'weapon' you saw me place in it?"

"But-" She shut up and, solemn-faced, did as I asked.

In a moment she returned. "This is all there was in that pocket." She handed me the stranger's wallet.

I accepted it. "This is the weapon with which he threatened me." Then I showed her my right forefinger, bare. "And this is the weapon I used to shoot him when he pointed this wallet at me."

"I don't understand."

"Beloved, this is why criminologists place more faith in circumstantial evidence than they do in the testimony of eyewitnesses. You are the ideal eyewitness, intelligent, sincere, cooperative, and honest. You have reported a mixture of what you did see, what you thought you saw, what you failed to notice although it was in front of you, and what your logical mind fills in as necessities linking what you saw and what you thought you saw. This mixture is now all solidly in your mind as a true memory, a firsthand, eyewitness memory. But it didn't happen."

"But, Richard, I did see-"

"You saw that poor clown killed. You did not see him threatening me; you did not see me shoot him. Some third person shot him with an explosive dart. Since he was facing you and it hit him in the chest, that dart must have come right past you. Did you notice anyone standing?"

"No. Oh, there were waiters moving around, and busmen, and the maitre d' and people getting up and sitting down. I mean I didn't notice anyone in particular-certainly not anyone shooting a gun. What sort of a gun?"

"Gwen, it might not look like a gun. A concealed assassin's weapon capable of shooting a dart short range- It could look like anything as long as it had one dimension about fifteen centimeters long. A lady's purse. A camera. Opera glasses. An endless list of innocent-appearing objects. This gets us nowhere as I had my back to the action and you saw nothing out of the way. The dart probably came from behind your back. So forget it. Let's see who the victim was. Or whom he claimed to be."

I took out everything from all the pockets of that wallet, including a poorly-concealed "secret" pocket. This last held gold certificates issued by a Zurich bank, equivalent to about seventeen thousand crowns-his get-away money, it seemed likely.

There was an ID of the sort the Golden Rule issues to each person arriving at the habitat's hub. All it proves is that the "identified" person has a face, claims a name, has made statements as to nationality, age, place of birth, etc., and has deposited with the Company a return ticket or the equivalent in cash, as well as paying the breathing fee ninety days in advance-these latter two being all the Company cares about.

I do not know as certainty that the Company would space a man who, through some slip, has neither a ticket away nor air money. They might let him sell his indentures. But I would not count on it. Eating vacuum is not something I care to risk.

This Company ID stated that the holder was Enrico Schultz, age 32, citizen of Belize, born Ciudad Castro, occupation accountant. The picture with it was that of the poor slob who got himself killed through bracing me in too public a place... and for the steenth time I wondered why he hadn't phoned me, then called on me in private. As "Dr. Ames" I am in the directory... and invoking "Walker Evans" would have got him a hearing, a private hearing.

I showed it to Gwen. "Is that our boy?"

"I think so. I'm not sure."

"I am sure. As I talked to him face to face for several minutes."

The oddest part about Schultz's wallet was what it did not contain. In addition to the Swiss gold certificates it held eight hundred and thirty-one crowns and that Golden Rule ID.

But that was all.

No credit cards, no motor vehicle pilot's license, no insurance cards, no union or guild card, no other identification cards, no membership cards, nit. Men's wallets are like women's purses; they accumulate junk-photos, clippings, shopping lists, et cetera without end; they need periodic housecleaning. But, in cleaning one out, one always leaves in place the dozen-odd items a modem man needs in order to get by. My friend Schultz had nothing.

Conclusion: He was not anxious to advertise his true identity. Corollary: Somewhere in Golden Rule habitat there was a stash of his personal papers... another ID in a different name, a passport almost certainly not issued by Belize, other items that might give me a lead to his background, his motives, and (possibly) how he had invoked "Walker Evans."

Could these be found?

A side issue niggled at me: that seventeen thousand in gold certificates. Instead of its being get-away money could he have expected to use so fiddlin' a sum to hire me to kill Tolliver? If so, I was offended. I preferred to think that he hoped to persuade me to make the kill as a public service.

Gwen said, "Do you want to divorce me?"

"Eh?"

"I hustled you into it. My intentions were good, truly they were! But it turns out I was stupid."

"Oh. Gwen, I never get both married and divorced on the same day. Never. If you really want to shuck me off, take it up with me tomorrow. Although I think that, to be fair, you ought to try me out for thirty days. Or two weeks, at least. And permit me to do the same. So far, your performance, both horizontally and vertically, has been satisfactory. If either becomes unsatisfactory, I'll let you know. Fair enough?"

"Fair enough. Although I may beat you to death with your own sophistries."

"Beating her husband to death is every married woman's privilege... as long as she does it in private. Please pipe down, dear; I've got troubles. Can you think of any good reason why Tolliver should be killed?"

"Ron Tolliver? No. Although I can't think of any good reason why he should be allowed to live, either. He's a boor."

"He's that, all right. If he were not one of the Company partners, he would have been told to pick up his return ticket and leave, long ago. But I didn't say 'Ron Tolliver,' I just said Tolliver.'"

"Is there more than one? I hope not."

"We'll see." I went to the terminal, punched for directory, cycled to "T."

"'Ronson H. Tolliver, Ronson Q.'-that's his son-and here's his wife, 'Stella M. Tolliver.' Hey! It says here: 'See also Taliaferro.'"

"That's the original spelling," said Gwen. "But it's pronounced 'Tolliver' just the same."

"Are you sure?"

"Quite sure. At least south of the Mason and Dixon Line back dirtside. Spelling it 'Tolliver' suggests poh white trash who can't spell. Spelling it the long way and then sounding all the letters sounds like a Johnny-come-lately damyankee whose former name might have been 'Lipschitz' or such. The authentic plantation-owning, nigger-whupping, wench-humping aristocrat spelled it the long way and pronounced it the short way."

"I'm sorry you told me that."

"Why, dear?"

"Because there are three men and one woman listed here who spell it the long way, Taliaferro. I don't know any of them. So I don't know which one to kill."

"Do you have to kill one of them?"

"I don't know. Mmm, time I brought you up to date. If you are planning to stay married to me at least fourteen days. Are you?"

"Of course I am! Fourteen days plus the rest of my life! And you are a male chauvinist pig!"

"Paid-up lifetime membership."

"And a tease."

"I think you're cute, too. Want to go back to bed?"

"Not until you decide whom you intend to kill."

"That may take a while." I did my best to give Gwen a detailed, factual, uncolored account of my short acquaintance with the man who had used the name "Schultz." "And that's all I know. He was dead too quickly for me to learn more. Leaving behind him endless questions."

I turned back to the terminal, keyed it to shift to wordprocessing mode, then created a new file, as if I were setting up a potboiler:

THE ADVENTURE OF THE MISSPELLED NAME Questions To Be Answered:

1. Tolliver or Taliaferro?

2. Why does T. have to die?

3. Why would "we all be dead" if T. is not dead by noon Sunday?

4. Who is this corpse who called himself "Schultz"?

5. Why am I the logical hatchet man for T.?

6. Is this killing necessary?

7. Which one of the Walker Evans Memorial Society sicked this thumb-fingered bubblehead on me? And why?

8. Who killed "Schultz"? And why?

9. Why did the staff of Rainbow's End move in and cover up the killing?

10. (Omnibus) Why did Gwen leave before I did and why did she come here instead of going home and how did she get in?

"Do we take them in order?" asked Gwen. "Number ten is the only one I can answer."

"That one I just chucked in," I answered. "Of the first nine I think that, if I find answers to any three, I could then deduce the rest." I went on putting words up on the screen:

POSSIBLE ACTIONS "When in Danger or in Doubt. Run in Circles. Scream and Shout."

"Does that help?" asked Gwen.

"Every time! Ask any old military man. Now let's take it one question at a time":

Q. 1-Phone each Taliaferro in the directory. Learn preferred pronunciation of name. Strike out any who use the e very-letter pronunciation.

Q. 2-Dig into background of whoever is left. Start with the Herald back files.

Q. 3-While checking Q2, keep ears spread for anything scheduled or expected for noon Sunday.

Q. 4-If you were a corpse arriving at Golden Rule space habitat and you wanted to conceal your identity but had to be able to get at your passport and other documents for departure, where would you stash them? Hint: Check when this cadaver arrived in Golden Rule. Then check hotels, lockers, deposit box services, poste restante, etc.

Q. 5-postpone

Q. 6-postpone

Q. 7-Reach by phone as many of the "Walker Evans" oath group as possible. Keep going till one spills. Note: Some jelly brain may have talked too much without knowing it.

Q. 8-Morris, or the maitre d', or the busman, or all of them, or any two, knows who killed Schultz. One or more of them expected it. So we look for each one's weak

point- liquor, drugs, money, sex (comme ci ou comme ga)-and what was your name back dirtside, chum? Any paper out on you somewhere? Find that soft spot. Push it. Do this with all three of them, then see how their stories check. Every closet has a skeleton. This is a natural law-so find it in each case.

Q. 9-Money (Conclusive assumption until proved false.)

(Query: How much is all this going to cost me? Can I afford it? Counter query: Can I afford not to pursue it?)

"I've been wondering about that," said Gwen. "When I poked my nose in, I thought you were in real trouble. But apparently you are home free. Why must you do anything, my husband?"

"I need to kill him."

"What? But you don't know which Tolliver is meant! Or why he should be dead. If he should be."

"No, no, not Tolliver. Although it may develop that Tolliver should be dead. No, dear, the man who killed Schultz. I must find him and kill him."

"Oh. Uh, I can see that he should be dead; he's a murderer. But why must you do it? Both are strangers to you-both the victim and whoever killed him. Actually it's not your business. Is it?"

"It is my business. Schultz or whatever his name is was killed while he was a guest at my table. That's intolerably rude. I won't put up with it. Gwen my love, if one tolerates bad manners, they grow worse. Our pleasant habitat could decay into the sort of slum Ell-Five is, with crowding and unmannerly behavior and unnecessary noise and impolite language. I must find the oaf who did this thing, explain to him his offense, give him a chance to apologize, and kill him."

III

'One should forgive one*s enemies, but not before they are hanged.**

HEINRICH HEINE 1797-1856

My lovely bride stared at me. "You would kill a man? For bad manners?"

"Do you know of a better reason? Would you have me ignore rude behavior?"

"No but- I can understand executing a man for murder;

I'm not opposed to capital punishment. But shouldn't you leave this to the proctors and the management? Why must you take the law into your own hands?"

"Gwen, I haven't made myself clear. My purpose is not to punish but to weed... plus the esthetic satisfaction of retaliation for boorish behavior. This unknown killer may have had excellent reasons for killing the person who called himself Schultz... but killing in the presence of people who're eating is as offensive as public quarreling by married couples. Then this oaf capped his offense by doing this while his victim was my guest... which made retaliation both my obligation and my privilege."

I went on, "The putative offense of murder is not my concern. But as for proctors and the management taking care of that matter, do you know of any regulation forbidding murder?"

"What? Richard, there must be one."

"I've never heard of one. I suppose the Manager might construe murder as a violation of the Golden Rule-"

"Well, I would certainly think so!"

"You do? I'm never certain what the Manager will think. But, Gwen my darling, killing is not necessarily murder. In fact it often is not. If this killing ever comes to the Manager's attention, he may decide that it was justifiable homicide. An offense against manners but not against morals.

"But-" I continued, turning back to the terminal, "-the Manager may already have settled the matter, so let's see what the Herald has to say about it." I punched up the newspaper again, this time keying for today's index, then selecting today's vital statistics.

The first item to roll past was "Marriage-Ames-Novak" so I stopped it, punched for amplification, keyed for printout, tore it off and handed it to my bride. "Send that to your grandchildren to prove that Granny is no longer living in sin."

"Thank you, darling. You're so gallant. I think."

"I can cook, too." I scrolled on down to the obituaries. I usually read the obituaries first as there is always the happy chance that one of them will make my day.

But not today. No name I recognized. Especially no "Schultz." No unidentified stranger. No death "in a popular restaurant." Nothing but the usual sad list of strangers dead from natural causes and one by accident. So I keyed for general news of the habitat, let it scroll past.

Nothing. Oh, there were endless items of routine events, from ships' arrivals and departures to (the biggest news) an announcement that the newest addition, rings 130-140, was being brought up to spin and, if all went by schedule, would be warped in and its welding to the main cylinder started by 0800 on the sixth.

But there was nothing about "Schultz," no mention of any Tolliver or Taliaferro, no unidentified cadaver. I consulted the paper's index again, punched for next Sunday's schedule of events, found that the only thing scheduled for noon Sunday was a panel discussion assembled by holo from The Hague, Tokyo, Luna City, Ell-Four, Golden Rule, Tel Aviv, and Agra:

"Crisis in Faith: The Modem World at the Crossroads." The co-moderators were the president of the Humanist Society and the Dalai Lama. I wished them luck.

"So far we have zip, zero, nit, swabo, and nothing. Gwen, what is a polite way for me to ask strangers how they pronounce their names?"

"Let me try it, dear. I'll say, 'Miz Tollivuh, this is Gloria Meade Calhoun f'om Savannah. Do you have a cousin, Stacey Mac, f'om Chahlston?' When she corrects my pronunciation of her name, I apologize and switch off. But if she-or he- accepts the short form but denies knowing Stacey Mac, I say, 'I wonduhed about that. She said it, Talley-ah-pharoh... but I knew that was wrong.' What then, Richard? Work it up into a date or switch off by 'accident'?"

"Make a date, if possible."

"A date for you? Or for me?"

"For you, and then I'll go with you. Or keep the date in your place. But I must first buy a hat."

"A hat?"

"One of those funny boxes you sit on the flat part of your head. Or would if you were dirtside."

"I know what a hat is! But I was born dirtside same as you were. But I doubt if a hat has ever been seen off Earth. Where would you buy one?"

"I don't know, best girl, but I can tell you why I need one. So that I can tip my hat politely and say, 'Sir or madam, pray tell me why someone wishes you dead by noon Sunday.' Gwen, this has been worrying me-how to open such a discussion. There are accepted polite modes for almost any inquiry, from proposing adultery to a previously chaste wife to soliciting a bribe. But how does one open this subject?"

"Can't you just say, 'Don't look now but somebody's trying to kill you'?"

"No, that's the wrong order. I'm not trying to warn this bloke that someone is gunning for him; I'm trying to find out why. When I know why I might approve so heartily that I would just sit back and enjoy it... or even be so inspired by the purpose that I would carry out the intent of the late Mr. Schultz as a service to mankind.

"Contrariwise, I might disagree so bitterly that I would enlist for the duration, volunteer my life and my services to the sacred cause of keeping this assassination from happening. Unlikely if the intended target is Ron Tolliver. But it's too early to choose sides; I need to understand what is going on. Gwen my love, in the killing business one should never kill first and ask questions afterwards. That tends to annoy people."

I turned back to the terminal, stared at it without touching a key. "Gwen, before we make any local calls I think I should place six time-delay calls, one to each of the Friends of Walker Evans. That's my basic clue anyhow, that Schultz could mention that name. Some one of that six gave him that name... and that one should know why Schultz was in such a sweat."

"'Time delay'? Are they all out-far?"

"I don't know. One is probably on Mars, two others may be in the Belt. Could even be one or two dirtside but, if so, under phony names just as I am. Gwen, the debacle that caused me to give up the merry profession of arms and caused six of my comrades to wind up as my blood brothers... well, it smelled nasty to the public. I could say that media reporters who didn't see it happen could not possibly understand why it happened. I could assert truthfully that what we did was moral in context-that time, that place, those circumstances. I could- Never mind, dear; let it stand that my band of brothers are all in hiding. Tracing them all down could be a tediously long chore."

"But you want to talk to just one, don't you? The one who was in touch with this Schultz."

"Yes but I don't know which one that is."

"Richard, would it be easier to backtrack Schultz to find that one than it would be to locate six people all in hiding, some under assumed names, and scattered all over the Solar System? Or even outside it."

I stopped to consider it. "Maybe. But how do I backtrack Schultz? Do you have an inspiration, my love?"

"No inspiration. But I do remember that, when I arrived here in Golden Rule, they asked me at the hub not only where I lived, and checked it against my passport, but also where I had come from that trip-and checked that against my visa stamps. Not just that I had come from Luna-almost everyone arrives here from Luna-but how I got to Luna. Weren't you asked that?"

"No. But I was carrying a Luna Free State passport showing mat I was bom in the Moon."

"I thought you were bom on Earth?"

"Gwen, Colin Campbell was bom dirtside. 'Richard Ames' was bom in Hong Kong Luna-it says here."

"Oh."

"But attempting to backtrack Schultz is indeed something I should try before I try to locate all six. If I knew that Schultz had never been out-far, I would look first close to home- Luna, and dirtside, and all habitats ballistically coupled to Terra or Luna. Not the Asteroid Belt. Or even on Mars."

"Richard? Suppose that the purpose is to- No, that's silly."

"What's silly, dear? Try it on me anyhow."

"Uh, suppose this-whatever it is-conspiracy, I suppose-isn't aimed at Ron Tolliver or any other Tolliver, but is aimed at you and your six friends, the 'Walker Evans' people. Could the purpose be to get you to take strong measures to get in touch with all the others? And thereby get you to lead them, whoever they are, to all seven of you? Could it be a vendetta? Could whatever happened cause a vendetta against all seven of you?"

I had a cold feeling at the pit of my stomach. "Yes, that could be. Although not, I think, in this case. As it would not explain why Schultz was killed."

"I said it was silly."

"Wait a moment. Was Schultz killed?"

"Why, we both saw it, Richard."

"Did we? I thought I saw it. But I admitted that it could have been faked. What I saw appeared to be death by explosive dart. But- Two simple props, Gwen. One makes a small dark spot appear on Schultz's shirt. The other is a small rubber bladder he holds in his cheek; it contains fake blood. At the right instant he bites the bladder; 'blood' comes out of his mouth. The rest is acting... including the strange behavior of Morris and other staff members. That 'dead' body has to be removed quickly... through that 'Employees Only' door... where he is given a clean shirt, then hustled out the service door."

"You think that is the way it happened?"

"Uh- No, damn it; I don't! Gwen, I've seen many deaths. This one happened as close to me as you are this minute. I don't think it was acting; I think I saw a man die." I fumed to myself. Could I be mistaken on such a basic point?

Of course I could be! I'm no supergenius gifted with psi powers; I could be wrong as an eyewitness quite as easily as Gwen could be.

I sighed. "Gwen, I just don't know. It looked to me like death by explosive dart... but if the intention was to fake it and if it was well prepared, then of course it would look like that. A planned fakery does account for the swift cover-up. Otherwise the behavior of the staff of Rainbow's End is almost unbelievable." I brooded. "Best girl, I'm not sure of anything. Is somebody trying to drive me out of my skull?"

She treated my question as rhetorical, which it was-I hope. "Then what do we do?"

"Uh... we try to check on Schultz. And not worry about the next step until we have done that."

"How?"

"Bribery, my love. Lies and money. Lavish lies and a parsimonious use of money. Unless you are wealthy. I never thought to ask before I married you."

"Me?" Gwen's eyes went wide. "But, Richard, I married you for your money."

"You did? Lady, you've been swindled. Do you want to see a lawyer?"

"I suppose so. Is that what they call 'statutory rape'?"

"No, 'statutory rape' is carnal knowledge of a statue... although why anyone should care I have never understood. I don't think it's against regulations here." I turned back to the terminal. "Do you want that lawyer? Or shall we look for Schultz?"

"Uh... Richard, we're having a very odd honeymoon. Let's go back to bed."

"Bed can wait. But you can have another waffle while I try to look up Schultz." I keyed the terminal again for directory, scrolled for "Schultz." I found nineteen listings for "Schultz" but no "Enrico Schultz." Small wonder. I did find "Hendrik Schultz," so I keyed for amplification:

"The Reverend Doctor Hendrik Hudson Schultz, B.S., M.A., D.D., D.H.L., K.G.B., Past Grand Master Royal Astrological Society. Scientific Horoscopy at moderate prices. Weddings solemnized. Family counseling. Eclectic and holistic therapy. Investments advice. Bets accepted at all hours at track odds. Petticoat Lane at ring ninety-five, next to Madame Pompadour." Over this was his picture in holo, smiling and repeating his slogan: "I'm Father Schultz, your friend in need. No problem too large, no problem too small. All work guaranteed."

Guaranteed to be what? Hendrik Schultz looked just like Santa Claus minus the beard and not at all like my friend Enrico, so I keyed him out-reluctantly, as I felt kinship with the Reverend Doctor. "Gwen, he's not in the directory, or not in it by the name on his Golden Rule ID. Does that mean he was never in it? Or that his name was removed last night before his body was cold?"

"Do you expect an answer? Or are you thinking aloud?"

"Neither one, I guess. Our next move is to query the hub- right?" I checked the directory, then called the office of immigration at the hub. "This is Dr. Richard Ames speaking. I'm trying to locate a habitant named Enrico Schultz. Can you give me his address?"

"Why don't you look him up in the directory?" (She sounded just like my third-grade teacher-not a recommendation.)

"He's not in the directory. He's a tourist, not a subscriber. I just want his address in Golden Rule. Hotel, pension, whatever."

"Tut, tut! You know quite well that we don't give out personal information, even on marks. If he's not listed, then he paid fair and square not to be listed. Do unto others. Doctor, lest ye be done unto." She switched off.

"Where do we ask now?" inquired Gwen.

"Same place, same seatwarmer-but with cash and in person. Terminals are convenient, Gwen... but not for bribery in amounts of less than a hundred thousand. For a small squeeze, cash and in person is more practical. Coming with me?"

"Do you think you can leave me behind? On our wedding day? Just try it, buster!"

"Put some clothes on, maybe?"

"Are you ashamed of the way I look?"

"Not at all. Let's go."

"I give in. Half a sec, while I find my slippers. Richard, can we go via my compartment? At the ballet last night I felt very chic but my gown is too dressy for public corridors at this time of day. I want to change."

"Your slightest wish, ma'am. But that brings up another point. Do you want to move in here?"

"Do you want me to?"

"Gwen, it has been my experience that marriage can sometimes stand up against twin beds but almost never against twin addresses."

"You didn't quite answer me."

"So you noticed. Gwen, I have this one nasty habit. Makes me hard to live with. I write."

The dear girl looked puzzled. "So you've told roe. But why do you call it a nasty habit?"

"Uh... Gwen my love, I am not going to apologize for writing... anymore than I would apologize for this missing foot... and in truth the one led to the other. When I could no longer follow the profession of arms, I had to do something to eat. I wasn't trained for anything else and back home some other kid had my paper route. But writing is a legal way of avoiding work without actually stealing and one that doesn't take any talent or training.

"But writing is antisocial. It's as solitary as masturbation. Disturb a writer when he is in the throes of creation and he is likely to turn and bite right to the bone... and not even know that he's doing it. As writers' wives and husbands often learn to their horror.

"And-attend me carefully, Gwen!-there is no way that writers can be tamed and rendered civilized. Or even cured. In a household with more than one person, of which one is a writer, the only solution known to science is to provide the patient with an isolation room, where he can endure the acute stages in private, and where food can be poked in to him with a stick. Because, if you disturb the patient at such times, he may break into tears or become violent. Or he may not hear you at all... and, if you shake him at this stage, he bites."

I smiled my best smile. "Don't worry, darling. At present I am not working on a story and I will avoid starting one until we arrange such an isolation chamber for me to work in. This place isn't big enough and neither is yours. Mmm, even before we go to the hub, I want to call the Manager's office and see what larger compartments are available. We'll need two terminals also."

"Why two, dear? I don't use a terminal much."

"But when you do, you need it. When I'm using this one in wordprocessing mode, it can't be used for anything else- no newspaper, no mail, no shopping, no programs, no personal calls, nothing. Believe me, darling; I've had this disease for years, I know how to manage it. Let me have a small room and a terminal, let me go into it and seal the door behind me, and it will be just like having a normal, healthy husband who goes to the office every morning and does whatever it is men do in offices-I've never known and have never been much interested in finding out."

"Yes, dear. Richard, do you enjoy writing?"

"No one enjoys writing."

"I wondered. Then I must tell you that I didn't quite tell you the truth when I said that I had married you for your money."

"And I didn't quite believe you. We're even.**

"Yes, dear. I really can afford to keep you as a pet. Oh, I can't buy you yachts. But we can live in reasonable comfort here in Golden Rule-not the cheapest place in the Solar System. You won't have to write."

I stopped to kiss her, thoroughly and carefully. "I'm glad I married you. But I will indeed have to write."

"But you don't enjoy it and we don't need the money. Truly we don't!"

"Thank you, my love. But I did not explain to you the other insidious aspect of writing. There is no way to stop. Writers go on writing long after it becomes financially unnecessary... because it hurts less to write than it does not to write."

"I don't understand."

"I didn't either, when I took that first fatal step-a short story, it was, and I honestly thought I could quit anytime. Never mind, dear. In another ten years you will understand. Just pay no attention to me when I whimper. Doesn't mean anything- just the monkey on my back."

"Richard? Would psychoanalysis help?"

"Can't risk it. I once knew a writer who tried that route. Cured him of writing all right. But did not cure him of the need to write. The last I saw of him he was crouching in a comer, trembling. That was his good phase. But the mere sight of a wordprocessor would throw him into a fit."

"Uh... that bent for mild exaggeration?"

"Why, Gwen! I could take you to him. Show you his gravestone. Never mind, dear; I'm going to call the Manager's housing desk." I turned back to the terminal-

-just as the dum thing lit up like a Christmas tree and the emergency bell chimed steadily. I flipped the answer switch. "Ames here! Are we broached?"

Words sounded while letters streamed across the face of the CRT, and the printer started a printout without my telling it to-I hate it when it does that.

"Official to Dr. Richard Ames: The Management finds that the compartment you now occupy designated 715301 at 65-15-0.4 is urgently needed. You are notified to vacate at once. Unused rent has been applied to your account, plus a free bonus of fifty crowns for any inconvenience this may cause you. Order signed by Arthur Middlegaff, Manager's Proxy for Housing. Have a Nice Day!"

IV

"I go on working for the same reason a hen goes on laying eggs.**

H. L. MENCKEN 1880-1956

My eyes grew wide. "Oh, goody goody cheesecakes! Fifty whole crowns-golly! Gwen! Now you can marry me for my money!"

"Do you feel well, dear? You paid more than that for a bottle of wine just last night. I think it's perfectly stinking. Insulting."

"Of course it is, darling. It is intended to make me angry, in addition to the inconvenience of forcing me to move. So I won't."

"Won't move?"

"No, no. I'll move at once. There are ways to fight city hall but refusing to move is not one of them. Not while the Manager's Proxy can cut off power and ventilation and water and sanitary service. No, dear, the intention is to get me angry, ruin my judgment, and get me to make threats that can't be carried out." I smiled at my darling. "So I won't get angry and I'll move right out of here, meek as a lamb... and the intense anger that I feel down inside will be kept there, out of sight, until it's useful to me. Besides, it changes nothing, as I was about to apply for a larger compartment-one more room, at least- for us. So I'll call him back-dear Mr. Middlegaff, I mean."

I keyed for directory again, not knowing offhand the call code of the housing office. I punched the "execute" key.

And got a display on the screen of 'TERMINAL OUT OF SERVICE."

I stared at it while I counted ten, backwards, in Sanskrit. Dear Mr. Middlegaff, or the Manager himself, or someone, was trying hard to get my goat. So above all I must not let it happen. Think calm, soothing thoughts, suitable for a fakir on a bed of nails. Although there did not seem to be any harm in thinking about frying his gonads for lunch once I knew who he was. With soy sauce? Or just garlic butter and a dash of salt?

Thinking about this culinary choice did calm me a bit. I found myself unsurprised and not materially more annoyed when the display changed from 'TERMINAL OUT OF SERVICE" to "POWER AND POWER-DEPENDENT SERVICES WILL TERMINATE AT 1300." This was replaced by a time display in large figures: 1231-and this changed to 1232 as I looked at it.

"Richard, what in the world are they doing?"

"Still trying to drive me out of my skull, I surmise. But we won't let them. Instead we'll spend twenty-eight minutes- no, twenty-seven-clearing out five years of junk."

"Yessir. How can I help?"

"That's my girl! Small wardrobe out here, big one in the bedroom-throw everything on the bed. On the shelf in the big wardrobe is a duffel bag, a big jumpbag. Stuff everything into it as tightly as possible. Don't sort. Hold out that robe you wore at breakfast and use it to make a bundle out of anything that you can't jam into the duffel bag; tie it with its sash."

"Your toilet articles?"

"Ah, yes. Plastic bag dispenser in buttery-just dump 'em into a bag and shove them in with the bundle. Honey, you're going to make a wonderful wife!"

"You are so right. Long practice, dear-widows always make the best wives. Want to hear about my husbands?"

"Yes but not now. Save it for some long evening when you have a headache and I'm too tired." Having dumped ninety percent of my packing onto Gwen I tackled the hardest ten percent: my business records and files.

Writers are pack rats, mostly, whereas professional military learn to travel light, again mostly. This dichotomy could have made me schizoid were it not for the most wonderful invention for writers since the eraser on the end of a pencil: electronic files.

I use Sony Megawafers, each good for half a million words, each two centimeters wide, three millimeters thick, with information packed so densely that it doesn't bear thinking about. I sat down at the terminal, took off my prosthesis (peg leg, if you prefer), opened its top. Then I removed all my memory wafers from the terminal's selector, fed

them into the cylinder that is the "shinbone" of my prosthesis, closed it and put it back on.

I now had all the files necessary to my business: contracts, business letters, file copies of my copyrighted works, general correspondence, address files, notes for stories to be written, tax records, et cetera, and so forth, ad nauseam. Before the days of electronic filing these records would have been a tonne and a half of paper in half a tonne of steel, all occupying several cubic meters. Now they massed only a few grams and occupied space no larger than my middle finger-twenty million words of file storage.

The wafers were totally encased in that "bone" and thereby safe from theft, loss, and damage. Who steals another man's prosthesis? How can a cripple forget his artificial foot? He may take it off at night but it is the first thing he reaches for in getting out of bed.

Even a holdup man pays no attention to a prosthesis. In my case most people never know that I am wearing one. Just once have I been separated from it: An associate (not a friend) took mine away from me in locking me up overnight-we had had a difference of opinion over a business matter. But I managed to escape, hopping on one foot. Then I parted his hair with his fireplace poker and took my other foot, some papers, and my departure. The writing business, basically sedentary, does have its brisk moments.

The time on the terminal read 1254 and we were almost through. I had only a handful of books-bound books, with words printed on paper-as I did my research, such as it was, through the terminal. These few Gwen stuffed into the bundle she had made from my robe. "What else?" she demanded.

"I think that's all. I'll make a fast inspection and we'll shove anything we've missed out into the corridor, then figure out what to do with it after they turn out the lights."

"How about that bonsai tree?" Gwen was eyeing my rock maple, some eighty years old and only thirty-nine centimeters high.

"No way to pack it, dear. And, besides, it requires watering several times a day. The sensible thing is to will it to the next tenant."

"In a pig's eye, chief. You'll carry it by hand to my compartment while I drag the baggage along behind."

(I had been about to add that "the sensible thing" has never appealed to me.) "We're going to your compartment?"

"How else, dear? Certainly we need a bigger place but our urgent need is any sort of roof over our heads. As it looks like snow by sundown."

"Why, so it does! Gwen, remind me to tell you that I'm glad I thought of marrying you."

"You didn't think of it; men never do.**

"Really?"

'Truly. But I'll remind you, anyhow."

"Do that. I'm glad you thought of marrying me. I'm glad you did marry me. Will you promise to keep me from doing the sensible thing from here on?"

She did not commit herself as the lights blinked twice and we were suddenly very busy, Gwen in putting everything out into the corridor while I made a frantic last go-

around. The lights blinked again, I grabbed my cane, and got out the door just as it contracted behind me. "Whew!"

"Steady there, boss. Breathe slowly. Count ten before you exhale, then let it out slowly." Gwen patted my back.

"We should have gone to Niagara Falls. I told you so. I told you."

"Yes, Richard. Pick up the little tree. At this gee I can handle both the bag and the bundle, one in each hand. Straight up to zero gee?"

"Yes but I carry the duffel bag and the tree. I'll strap my cane to the bag."

"Please don't be macho, Richard. Not when we're so busy."

" 'Macho' is a put-down word, Gwen. Using it again calls for a spanking; use it a third time and I beat you with this here cane. I'll damn well be macho anytime I feel like it."

"Yes, sir. Me Jane, you Tarzan. Pick up the little tree. Please."

We compromised. I carried the duffel bag and used my cane to steady myself; Gwen carried the bundle with one hand, the bonsai maple with the other. She was unbalanced and kept shifting sides with the bundle. Gwen's proposed arrangement was, I must admit, more sensible, as the weight would not have been too much for her at that acceleration and it fell off steadily as we climbed up to zero gee. I felt sheepish, a touch ashamed... but it is a temptation to a cripple to prove, especially to women, that he can so do everything he used to do. Silly, because anyone can see that he can't. I don't often give in to the temptation.

Once we were floating free at the axis we moved right along, with our burdens tethered to us, while Gwen guarded the little tree with both hands. When we reached her ring, Gwen took both pieces of luggage and I did not argue. The trip took less than a half hour. I could have ordered a freight cage-but we might still be waiting for it. A "labor-saving device" often isn't.

Gwen put down her burdens and spoke to her door.

It did not open.

Instead the door answered, "Mistress Novak, please call the Manager's housing office at once. The nearest public terminal is at ring one-hundred-five, radius one-thirty-five degrees, acceleration six-tenths gravity, next to the personnel transport facility. That terminal will accept your call free of charge, courtesy of Golden Rule."

I cannot say that I was much surprised. But I admit that I was dreadfully disappointed. Being homeless is somewhat like being hungry. Maybe worse.

Gwen behaved as if she had not heard that dismal announcement. She said to me, "Sit down on the duffel bag, Richard, and take it easy. I don't think I'll be long."

She opened her purse, dug into it, came up with a nail file and a bit of wire, a paper clip, I believe. Humming a monotonous little tune she started to work on the compartment's door.

I helped by not offering advice. Not a word. It was difficult but I managed it.

Gwen stopped humming and straightened up. "There!" she announced. The door opened wide.

She picked up my bonsai maple-our bonsai maple. "Come in, dear. Better leave the duffel bag across the threshold for now, so that the door won't pucker up. It's dark inside."

I followed her in. The only light inside was from the screen on her terminal:

She ignored it and dug into her purse, brought out a finger torch, then used its light to get into a drawer in her buttery, took out a long, slender screwdriver, a pair of Autoloc tweezers, a nameless tool that may have been homemade, and a pair of high-pot gloves in her slender size. "Richard, will you hold the light for me, pretty please?"

The access plate she wished to reach was high up over her microwaver and was locked and decorated with the usual signs warning tenants against even looking cross-eyed at it, much less touching it, with incantations of "Danger! Do Not Tamper- Call Maintenance," etc. Gwen climbed up, sat on the oven top, and opened the access plate with just a touch; the lock apparently had been disabled earlier.

Then she worked very quietly save for that monotonous little hum, plus an occasional request for me to move the torch light. Once she produced a really spectacular fireworks display which caused her to cluck reprovingly and murmur, "Naughty, naughty. Mustn't do that to Gwen." She then worked most slowly for a few more moments. The compartment's lights came on, accompanied by that gentle purr of a live room- air, micromotors, etc.

She closed the access plate. "Will you help me down, dear?"

I lifted her down with both hands, held on to her, claimed a kiss for payment. She smiled up at me. "Thank you, sir! My, my, I had forgotten how nice it is to be married. We should get married more often."

"Now?"

"No. Lunchtime now. Breakfast was hearty but it is now past fourteen. Feel like eating?"

"It's good exercise," I assented. "How about the Sloppy Joe on Appian Way near ring one-oh-five? Or do you want haute cuisine?"

"A Sloppy Joe is okay; I'm not a fussy eater, dear. But I don't think we should go outside for lunch; we might not be able to get back in."

"Why not? You do a slick job of bypassing a change in a door combo."

"Richard, it might not be that easy again. They simply haven't noticed, as yet, that locking me out didn't work. But when they do- They can weld a steel plate across the doorway if that is what it takes. Not that it will, as I shan't fight being moved any more than you did. Let's eat lunch; then I'll pack. What would you like?"

It turned out that Gwen had salvaged from my buttery gourmet items I had in freeze or in sterile pack. I do stock unusual viands. How can you know ahead of time, when working on a story in the middle of the night, that you are going to suffer a craving for a clam sundae? It is merely prudent to have materials on hand. Otherwise you could be tempted to stop work and leave your monastic seclusion in order to find an item you must have-and that way lies bankruptcy.

Gwen laid out a buffet of her supplies and mine-ours, I should say-and we ate while discussing our next move... for move we must. I told her that I intended to call dear Mr. Middlegaff as soon as we finished lunch.

She looked thoughtful. "I had better pack first."

"If you wish. But why?"

"Richard, we have leprosy; that's evident. I think it must be connected with the killing of Schultz. But we don't know. Whatever the cause, when we stick our heads outside, I had better have my things ready just as yours are; we may not get back in." She

nodded at her terminal, still shining with the message: ALL SERVICES SUSPENDED. "Putting that terminal back into service would be more than a matter of wheedling a few solenoids, since the computer itself is elsewhere. So we can't beard Mr. Middlegaff from this compartment. Therefore we must do everything we need to do here before we go out that door."

"While you pack, I can duck out to call him."

"Over my dead body!"

"Huh? Gwen, be reasonable."

"Reasonable I emphatically am. Richard Colin, you are my brand-new bridegroom; I intend to get years and years of wear out of you. While this trouble is going on, I am not letting you out of my sight. You might disappear like Mr. Schultz. Beloved, if they shoot you, they are going to have to shoot me first."

I attempted to reason with her; she put her hands over her ears. "I won't argue it, I can't hear you, I'm not listening!" She uncovered her ears. "Come help me pack. Please."

"Yes, dear."

Gwen packed in less time than I had taken, yet my help consisted mostly of keeping out of her way. I'm not too used to living with females; military service is not conducive to homelife and I had tended to avoid marriage, aside from short-term contracts with Amazon comrades-contracts automatically canceled by orders for change of duty. After I reached field grade I had had female orderlies a couple or six times- but I don't suppose that relationship is much like civilian marriage, either.

What I'm trying to say is that, despite having written many thousands of words of love-confession stories under a hundred-odd female pen names, I don't know much about women. When I was learning the writing scam, I pointed this out to the editor who bought from me these sin, suffer, and repent stories. The editor was Evelyn Fingerhut, a glum middle-aged man with a bald spot, a tic, and a permanent cigar.

He grunted. "Don't try to learn anything about women; it would handicap you."

"But these are supposed to be true stories," I objected.

"They are true stories; every one of them is accompanied by a sworn statement: "This story is based on fact.'" He jerked a thumb at the manuscript I had just brought in. "You've got a 'Fact' slip clipped to that one. Are you trying to tell me it ain't so? Don't you want to get paid?"

Yes, I wanted to be paid. To me the acme of prose style is exemplified by that simple, graceful clause: "Pay to the order of-" I answered hastily, "Well, as a matter of fact that story is no problem. I didn't actually know the woman but my mother told me all about her-it was a girl she had gone to school with. This girl did indeed marry her mother's younger brother. She was already pregnant when the truth was discovered... and then she was faced with that horrible dilemma just as I've told it: the sin of abortion, or the tragedy of an incest baby with a possibility of two heads and no chin. All fact, Evelyn, but I trimmed it a bit in telling it. It turned out that Beth Lou was no blood relation to her uncle-and that's the way I wrote it-but also her baby was no relation to her husband. That part I left out."

"So write it again and leave that part in and the other part out. Just be sure to change the names and places; I don't want any complaints."

At a later time I did so and sold that version to him also, but never did get around to telling Fingerhut that it hadn't happened to a schoolmate of my mother, but was

something I had cribbed from a book belonging to my Aunt Abby: the librettos of The Ring Cycle by Richard Wagner, who should have stuck to composing music and found himself a W. S. Gilbert to write his librettos; Wagner was a terrible writer.

But his preposterous plots were just right for the true confessions trade... toned down a little, not quite so hard core- and, of course, different names and locales. I didn't steal them. Or not quite. They are all in the public domain today, copyrights expired, and besides, Wagner stole those plots in the first place.

I could have made a soft living on nothing but Wagnerian plots. But I got bored with it. When Fingerhut retired and bought a turkey ranch, I quit the confession business and started writing war stories. This was more difficult-for a time I almost starved-because military matters I do know something about, and that (as Fingerhut had pointed out) is a handicap.

After a while I learned to suppress what I knew, not let it get in the way of the story. But I never had that trouble with confession stories as neither Fingerhut, nor I, nor Wagner, knew anything at all about women.

Especially about Gwen. Somewhere I had acquired the conviction that women need at least seven pack mules to travel. Or their equivalent in big suitcases. And of course women are by nature disorganized. So I believed.

Gwen moved out of her compartment with just one large case of clothes, smaller than my duffel bag, with every garment neatly folded, and one smaller case of-well, non-clothes. Things.

She lined up our chattels-duffel bag, bundle, large case, small case, her purse, my cane, bonsai tree-and looked at them. "I think I can work out a way," she said, "for us to handle all of them at once."

"I don't see how," I objected, "with only two hands apiece. I had better order a freight cage."

"If you wish, Richard."

"I will." I turned toward her terminal... and stopped. "Uh-"

Gwen gave full attention to our little maple tree.

"Uh-" I repeated. "Gwen, you're going to have to loosen up. I'll slide out and find that nearest terminal booth, then come back-"

"No, Richard."

"Huh? Just long enough to-"

"No, Richard."

I heaved a sigh. "What's your solution?"

"Richard, I will agree to any course of action that does not involve us being separated. Leave everything inside this compartment and hope that we can get back in-that's one way. Place everything just outside the door and leave it, while we go to order a freight cage-and call Mr. Middlegaff-that's another way."

"And have it all disappear while we are gone. Or are there no two-legged rats in this neighborhood?" I was being sarcastic. Every habitat in space has its nightwalkers, invisible habitants who cannot afford to remain in space but who evade being returned to Earth. In Golden Rule I suspect that the management spaced them when they caught them... although there were darker rumors, ones that caused me to avoid all sorts of ground pork.

"There is still a third way, sir, adequate for moving us as far as that terminal booth. That being as far as we can go until the housing office gives us a new assignment. Once we know our new address we can call for a cage and wait for it.

"The booth is only a short distance. Sir, earlier you said you could carry both your bag and your bundle, with your cane strapped to your bag. For this short distance I agree to that. I can carry both my cases, one in each hand, with the strap of my purse let out so that I can sling it over my shoulder.

"The only problem then is the little tree. Richard, you've seen pictures in National Geographic of native girls carrying bundles on their heads?" She didn't wait for me to agree; she picked up the little potted tree, placed it atop her head, took her hands away, smiled at me, and sank down, bending only her knees, spine straight and bearing erect- picked up her two cases.

She walked the length of her compartment, turned and faced me. I applauded.

"Thank you, sir. Just one thing more. The walkways arc sometimes crowded. If someone jostles me, I'll do this." She simulated staggering from being bumped, dropped both cases, caught the bonsai as it fell, put it back on top her head, again picked up her luggage. "Like that."

"And I'll drop my bags and grab my cane and beat him with it. The jerk who jostled you. Not to death. Just a reprimand." I added, "Assuming that the miscreant is male and of mature years. If not, I'll make the punishment fit the criminal."

"I'm sure you will, dear. But, truly, I don't think anyone will jostle me, as you will be walking in front of me, breaking trail. All right?"

"All right. Except that you should strip to the waist."

"Really?"

"All pictures of that sort in National Geographic always show the women stripped to the waist. That's why they print them."

"All right if you say to. Although I'm not really endowed for that."

"Quit fishing for compliments, monkey face; you do all right. But you're much too good for the common people, so keep your shirt on."

"I don't mind. If you really think I should."

"You're too willing. Do as you please but I am not, repeat not, urging you to. Are all women exhibitionists?"

"Yes."

The discussion ended because her door signal sounded. She looked surprised. I said, "Let me," and stepped to the door, touched the voice button. "Yes?"

"Message from the Manager!"

I took my finger off the voice button, looked at Gwen. "Shall I open up?"

"I think we must."

I touched the dilator button; the door spread open. A man in a proctor's uniform stepped inside; I let the door snap back. He shoved a clipboard at me. "Sign here. Senator." Then he pulled it back. "Say, you are the Senator from Standard Oil, ain't you?"

V

"He is one of those people who would be enormously improved by death.**
H.H.MUNRO 1870-1916

I said, "You have that backwards. Who are you? Identify yourself."

"Hunh? If you ain't the Senator, forget it; I got the wrong address." He started to back out and bumped his behind against the door-looked startled and turned his head, reached for the dilator button.

I slapped his hand down. "I told you to identify yourself. That clown suit you're wearing is no identification; I want to see your credentials. Gwen! Cover him!"

"Right, Senator!"

He reached for a hip pocket, made a fast draw. Gwen kicked whatever it was out of his hand; I chopped him in the left side of his neck. His clipboard went flying and down he went, falling with the curiously graceful leisureliness of low gravity.

I knelt by him. "Keep him covered, Gwen."

"One second. Senator-watch him!" I pulled back and waited. She went on, "Okay now. But don't get in my line of fire. please."

"Roger wilco." I kept my eyes on our guest, collapsed loosely on the deck. His awkward posture seemed to say that he was unconscious. Nevertheless there was a chance that he was shamming; I had not hit him all that hard. So I applied my thumb to the left lower cervical pressure point, jabbing hard to cause him to scream and claw at the ceiling if he were awake. He did not move.

So I searched him. First from behind, then I rolled him over. His trousers did not quite match his tunic, and they lacked the braid down the sides that a proctor's uniform trousers should have. The tunic was not a good fit. His pockets held a few crowns in paper, a lottery ticket, and five cartridges. These last were Skoda 6.5 mm longs, unjacketed, expanding, used in pistols, tommies, and rifles-and illegal almost everywhere. No wallet, no IDs, nothing else.

He needed a bath.

I rocked back and stood up. "Keep your gun on him, Gwen. I think he's a nightwalker."

"I think so, too. Please look at this, sir, while I keep him covered." Gwen pointed at a pistol lying on the deck.

Calling it a "pistol" dignifies it more than it deserves. It was a lethal weapon, homemade, of the category known traditionally as "nimble gun." I studied it as thoroughly as I could without touching it. Its barrel was metal tubing so light in gauge that I wondered whether or not it had ever been fired. The handgrip was plastic, ground or whittled to conform to a fist. The firing mechanism was concealed by a metal cover held in place by (believe me!) rubber bands. That it was a single-shot weapon seemed certain. But with that flimsy barrel it could turn out to be a one-shot as well; it seemed to me to be almost as dangerous to the user as to his target.

"Nasty little thing," I said. "I don't want to touch it; it's a built-in booby trap."

I looked up at Gwen. She had him covered with a weapon quite as lethal but embodying all the best in modem gunsmith's art, a nine-shot Miyako. "When he pulled a gun on you, why didn't you shoot him? Instead of taking a chance on disarming him? You can get very dead that way."

"Because."

"Because what? If someone pulls a gun on you, kill him at once. If you can."

"I couldn't. When you told me to cover him, my purse was 'way over there. So I covered him with this." Something suddenly glinted in her other hand and she appeared to be a two-gun fighter. Then she clipped it back into her breast pocket- a pen. "I was caught flat-footed, boss. I'm sorry."

"Oh, that I could make such mistakes! When I yelled at you to cover him, I was simply trying to distract him. I didn't know you were heeled."

"I said I was sorry. Once I had time to get at my purse I got out this persuader. But I had to disarm him first."

I found myself wondering what a field commander could do with a thousand like Gwen. She masses about fifty kilos and stands not much over a meter and a half high-say one hundred sixty centimeters in her bare feet. But size has little to do with it, as Goliath found out a while back.

On the other hand there aren't a thousand Gwens anywhere. Perhaps just as well. "Were you carrying that Miyako in your purse last night?"

She hesitated. "If I had been, the results might have been regrettable, don't you think?"

"I withdraw the question. I think our friend is waking up. Keep your gun on him while I find out." Again I gave him my thumb.

He yelped.

"Sit up," I said. "Don't try to stand up; just sit up and place your hands on top of your head. What's your name?"

He urged on me an action both unlikely and lewd. "Now, now," I reproved him, "let's have no rudeness, please. Mistress Hardesty," I went on, looking directly at Gwen, "would you enjoy shooting him just a little bit? A flesh wound? Enough to teach him to be polite."

"If you say so. Senator. Now?"

"Well... let's allow him that one mistake. But no second chance. Try not to kill him; we want him to talk. Can you hit him in the fleshy part of a thigh? Not hit the bone?"

"I can try."

"That's all anyone can ask. If you do hit a bone, it won't be out of spite. Now let's start over. What is your name?"

"Uh... Bill."

"Bill, what is the rest of your name?"

"Aw, just Bill. That's all the name I use."

Gwen said, "A little flesh wound now. Senator? To sharpen his memory?"

"Perhaps. Do you want it in your left leg. Bill? Or your right?"

"Neither one! Look, Senator, 'Bill' actually is all the name I've got-and make her not point that thing at me, will you, please?"

"Keep him covered. Mistress Hardesty. Bill, she won't shoot you as long as you cooperate. What happened to your last name?"

"I never had one. I was 'Bill Number Six' at the Holy Name Children's Refuge. Dirtside, that is. New Orleans."

"I see. I begin to see. But what did it say on your passport when you came here?"

"Didn't have one. Just a contractor's work card. It read 'William No-Middle-Name Johnson.' But that was just what the labor recruiter wrote on it. Look, she's wiggling that gun at me!"

"Then don't do anything to annoy her. You know how women are."

"I sure do! They ought not to be allowed to have firearms!"

"An interesting thought. Speaking of firearms- That one you were carrying: I want to unload it but I'm afraid that it might explode in my hand. So we will risk your hand instead. Without getting up, turn around so that your back is toward Mistress Hardesty. I am going to push your zapgun to where you can reach it. When I tell you to-not before!- you can take your hands down, unload it, then again put your hands on your head. But listen closely to this:

"Mistress Hardesty, when Bill turns around, take a bead on his spine just below his neck. If he makes one little suspicious move-kill him! Don't wait to be told, don't give him a second chance, don't make it a flesh wound-kill him instantly."

"With great pleasure. Senator!"

Bill let out a moan.

"All right. Bill, turn around. Don't use your hands, just willpower."

He pivoted on his buttocks, scraping his heels to do so. I noted with approval that Gwen had shifted to the steady two-handed grip. I then took my cane and pushed Bill's homemade gun along the deck to a point in front of him. "Bill, don't make any sudden moves. Take your hands down. Unload your pistol. Leave it open with its load beside it. Then put your hands back on your head."

I backed up Gwen with my cane and held my breath while Bill did exactly what I had told him to do. I had no compunction about killing him and I felt sure that Gwen would kill him at once if he tried to turn that homemade gun on us.

But I worried over what to do with his body. I didn't want him dead. Unless you are on a battlefield or in a hospital, a corpse is an embarrassment, hard to explain. The management was bound to be stuffy about it.

So I breathed a sigh of relief when he finished his assigned task and put his hands back on his head.

I reached out with my cane, reversed, and dragged that nasty little gun and its one cartridge toward me-pocketed that cartridge, then ground a heel down onto its tubing barrel, crushing the muzzle and ruining the firing mockup, then said to Gwen, "You can ease up a little now. No need to kill him this instant. Drop back to flesh-wound alert."

"Aye aye. Senator. May I give him that flesh wound?"

"No, no! Not if he behaves. Bill, you're going to behave, aren't you?"

"Ain't I been behaving? Senator, make her put the safety on that thing, at least!"

"Now, now! Yours didn't even have a safety. And you are in no position to insist on terms. Bill, what did you do with the proctor you slugged?"

"Huh!"

"Oh, come now. You show up here in a proctor's tunic that does not fit you. And your pants don't match your coat. I ask to see your credentials and you pull a gun-a rumble gun, for the love of Pete! And you haven't bathed in-how long? You tell me. But tell me first what you did with the owner of that tunic. Is he dead? Or just sapped and stuffed into a closet? Answer quickly or I'll ask Mistress Hardesty to give you a memory stimulant. Where is he?"

"I don't know! I didn't do it."

"Now, now, dear boy, don't lie to me."

"The truth! On my mother's honor it's the simple truth!'

I had doubts about his mother's honor but it would have been unmannerly to express them, especially in dealing with so sorry a specimen. "Bill," I said gently, "you are not a proctor. Must I explain why I am certain?" (Chief Proctor Franco is a System-class martinet. If one of his stooges had shown up for morning roll call looking-and stinking-the way this poor slob did, the delinquent would have been lucky merely to have been shipped dirtside.) "I will if you insist. Did you ever have a pin stuck under a fingernail, then the outer end of the pin heated? It improves one's memory."

Gwen said eagerly, "A bobby pin works better. Senator- more mass to hold the heat. I've got one right here. Can I do it to him? Can I?"

"You mean, 'May I,' do you not? No, dear girl, I want you to continue to keep Bill under your sights. If it becomes necessary to resort to such methods, I won't ask a lady to do it for me."

"Aw, Senator, you'll get soft-hearted and let up on him just when he's ready to spout. Not me! Let me show you-please!"

"Well..."

"Keep that bloodthirsty bitch away from me!" Bill's voice was shrill.

"Bill! You will apologize to the lady at once. Otherwise I will let her do to you whatever she wishes."

He moaned again. "Lady, I apologize. I'm sorry. But you scare it right out of me. Please don't use a bobby pin on me- I seen a guy once had that done to him."

"Oh, it could be worse," Gwen assured him pleasantly. 'Twelve-gauge copper wire conducts the heat much better and there are interesting places in the male body to use it. More efficient. Quicker results." She added thoughtfully, "Senator, I've got some copper wire in my small case. If you'll hold this pistol for a moment, I'll get it for you."

"Thank you, my dear, but it may not be needed; I mink Bill wants to say something."

"It's no trouble, sir. Don't you want me to have it ready?"

"Perhaps. Let's see. Bill? What did you do with that proctor?"

"I didn't, I never saw him! Just two skins said they had a cash job for me. I don't make 'em, never seen 'em, they ain't with it. But there are always new ones and Fingers said they passed. He-"

"Hold it. Who is 'Fingers' T

"Uh, he's mayor of our alley. Okay?"

"More details, please. Your alley?"

"Man's got to sleep somewhere, ain't he? VIP like you has got a compartment with his name on it. I should be so lucky! Home is where it is-right?"

"I think you're telling me that your alley is your home. Where is it? Ring, radius, and acceleration."

"Uh... that's not exactly how it is."

"Be rational. Bill. If it's inside the main cylinder, not off in one of the appendages, its location can be described that way."

"Maybe so but I can't describe it that way because that's not how you get there. And I won't lead you the way you have to go because-" His face screwed up in utter despair and he looked about ten years old. "Don't let her hotwire me and don't let her shoot me a little bit at a time. Please! Just space me and get it over with-okay?"

"Senator?"

"Yes, Mistress Hardesty?"

"Bill's afraid that, if you hurt him enough, he will tell you where he hides to sleep. Other nightwalkers sleep there, too;

that's the point. I suspect that the Golden Rule isn't big enough to hide him from those others. If he tells you where they sleep, they'll kill him. Probably not quickly."

"Bill, is that why you're being stubborn?"

'Talked too much already. Space me."

"Not while you're alive. Bill; you know things I need to know and I intend to squeeze them out of you if it takes copper wire and Mistress Hardesty's most whimsical notions. But I may not need the answer to the question I asked you. What happens to you if you tell me or show me where your alley is?"

He was slow in answering; I let him take his time. At last he said in a low voice, "Nosies caught a skin six seven months ago. Cracked him open. Not from my alley thank Jesus. His alley was a maintenance space near a hundred ten and down at full gee.

"So the nosies gassed it and a lot of skins died... but this skin they turned loose. Cold help that was to him. He hadn't

been walking twenty-four hours when he was grabbed and locked in with rats. Hungry ones."

"I see." I glanced at Gwen.

She gulped and whispered, "Senator, no rats. I don't like rats. Please."

"Bill, I withdraw the question about your alley. Your hide-out. And I won't ask you to identify any other nightwalker. But I expect you to answer anything else fully and quickly. No more stalling. No waste of time. Agreed?"

"Yes, sir."

"Go back. These two strangers offered you a job. Tell me about it."

"Uh, they tell me just a few minutes of razzle-dazzle; nothing to it. They want me to wear this jacket, make like a nosie. Bong the door here, ask for you. 'Message from the Manager,' that's what I have to say. Then the rest like we did-you know. When I say, 'Hey? You ain't the Senator! Or are you?', they are supposed to close in and arrest you."

Bill looked at me accusingly. "But you messed it up. You fouled it, not me. You didn't do anything like you was supposed to. You clamped the door on me-and you shouldn't uh. And you turned out to be the Senator after all... and you had her with you." His voice was especially bitter when he referred to Gwen.

I could understand his resentment. How is a sincere criminal, trying hard, going to get ahead in his profession if his victim fails to cooperate? Almost all crime depends on the acquiescence of the victim. If the victim refuses his assigned role, the criminal is

placed at a disadvantage, one so severe that it usually takes an understanding and compassionate judge to set things right. I had broken the rules; I had fought back.

"You've certainly had a run of bad luck. Bill. Let's check this 'Message from the Manager' you were supposed to deliver. Keep him covered. Mistress Hardesty."

"Can I take my hands down?"

"No." The clipboard was still on the deck, between Gwen and Bill but a bit toward me; I could reach it without crossing her line of fire. I picked it up.

Clipped to the board was a receipt form for messages, with a place for me (or someone) to sign. Clipped beside it was the familiar blue envelope of Mackay Three Planets; I opened it.

The message was in five-letter code groups, about fifty of them. Even the address was in code. Written in longhand above the address was "Sen. Cantor, St. Oil."

I tucked it into a pocket without comment. Gwen queried me with her eyes; I managed not to see it. "Mistress Hardesty, what shall we do with Bill?"

"Scrub him!"

"Eh? Do you mean, 'Waste him'? Or are you volunteering to scrub his back?"

"Heavens, no! Both. Neither. I am suggesting that we shove him into the refresher and leave him there until he's sanitary. Bathed, hot water and lots of suds. Hair shampooed. Clean fingernails and toenails. Everything. Don't let him out until he whiffs clean."

"You would let him use your 'fresher?"

"Things being the way they are, I don't expect to use it again. Senator, I'm tired of his stink."

"Well, yes, he does put one in mind of rotten potatoes on a hot day in the Gulf Stream. Bill, take off your clothes."

The criminal class is the most conservative group in any society; Bill was as reluctant to strip down in the presence of a lady as he had been to divulge the hideout of his fellow outcasts. He was shocked that I would suggest it, horrified that a lady would go along with this indecent proposal. On the latter point I might have agreed with him yesterday... but I had learned that Gwen was not easily daunted. In fact I think she enjoyed it.

As he peeled down. Bill gained a bit of my sympathy; he looked like a plucked chicken, with a woebegone expression to match. When he was down to undershorts (gray with dirt), he stopped and looked at me. "All the way," I said briskly. "Then duck into the 'fresher and take the works. If you do a poor job, you'll do it over. If you stick your nose outside in less than thirty minutes, I won't bother to check you; I'll simply send you back in. Now get those drawers off-fast!"

Bill turned his back to Gwen, took off his shorts, then scuttled sideways to the refresher in a futile effort to retain a fraction of his modesty. He sealed the door behind him.

Gwen put her pistol into her purse, then worked her fingers, flexing and extending them. "I was getting stiff from holding it. Beloved, may I have those cartridges?"

"Eh?"

"The ones you took from Bill. Six, wasn't it? Five and one."

"Certainly, if you wish." Should I tell her that I too had use for them? No, data of that sort should be shared only on a "need to know" basis. I got them out, handed them to her.

Gwen looked them over, nodded, again took out her sweet little pistol-slid out its clip, loaded the six confiscated rounds into it, replaced the clip, jacked one into the chamber, locked the weapon and returned it to her purse.

"Correct me if I'm wrong," I said slowly. "When I first called on you to back me, you covered him with a pocket pen. Then, after you disarmed him, you held him with an empty gun. Is that correct?"

"Richard, I was taken by surprise. I did the best I could."

"I was not criticizing. On the contrary!"

"There never seemed to be a good time to tell you." She went on, "Dear, could you spare a pair of pants and a shirt? There are some right on top in your duffel bag."

"I suppose so. For our problem child?"

"Yes. I want to shove his filthy clothes down the oubliette, let them be recycled. The stench won't clear out of here until we get rid of them."

"So let's get rid of them." I shoved Bill's clothes down the chute (all but his shoes), then washed my hands at the buttery's fountain. "Gwen, I don't think I have anything more to leara from this lunk. We could leave him some clothes and simply leave. Or... we could leave right away and not leave him any clothes."

Gwen looked startled. "But the proctors would pick him up at once."

"Exactly. Dear girl, this lad is a bom loser; the proctors will grab him before long anyhow. What do they do with night-walkers today? Have you heard any gossip?**

"No. Nothing with the ring of truth."

"I don't think they ship them down to Earth. That would cost the Company too much money, thus violating the Golden Rule the way it is interpreted here. There is no jail or prison in Golden Rule; that limits the possibilities. So?"

Gwen looked troubled. "I don't think I like what I'm hearing."

"It gets worse. Outside that door, perhaps not in sight but somewhere near, are a couple of hoodlums who mean us no good. Or who mean me no good, at least. If Bill leaves here, having flubbed the job he was hired to do, what happens to him? Do they feed him to the rats?"

"Ugh!"

"Yes, 'ugh.' My uncle used to say, 'Never pick up a stray kitten... unless you've already made up your mind to be owned by it.' Well, Gwen?"

She sighed. "I think he's a good boy. Could be, I mean, if anyone had ever bothered with him."

I echoed her sigh. "Just one way to find out."

VI

"Don't lock the barn after it is stolen."

HARTLEY M. BALDWIN

It is difficult to punch a man in the nose through a terminal. Even if one does not intend to use such direct persuasion, discussion via computer terminal can be less than satisfactory. With the flick of a key your opponent can shut you off or turn you over to a subordinate. But if you are physically present in his office, you can counter his most

reasonable arguments simply by being more stupidly stubborn than he is. Just sit tight and say no. Or say nothing. You can face him with the necessity of either assenting to your (oh so reasonable) demands or having you thrown out bodily.

The latter probably will not fit his public persona. For these reasons I decided to skip calling Mr. Middlegaff, or anyone at the housing office, and went directly to the Manager's office, in person. I had no hope of influencing Mr. Middlegaff, who clearly had had a policy handed to him, which he was now carrying out with bureaucratic indifference ("Have a Nice Day" indeed!). I had little hope of getting satisfaction from the Manager-but, at least, if the Manager turned roe down, I would not have to waste time going higher. The Golden Rule, being a privately-owned company not chartered by any sovereign state (i.e., being itself sovereign) had no authority higher than the Manager-God Almighty Himself was not even a minority partner.

Decisions by the Managing Partner might be utterly arbitrary ... but they were utterly final. There was no possibility of years of litigation, no way a higher court could reverse his decision. The "Law's Delays" that so blemished the workings of "justice" in democratic states down dirtside could not exist here. I recalled only a few capital cases in the five years I had lived here... but in each case the Manager had sat as magistrate, then the condemned had been spaced that same day.

In such a system the question of miscarriage of justice becomes moot.

Add to that the fact that the profession of law, like the profession of prostitution, is neither licensed nor forbidden and the result is a judicial system having little resemblance to the crazy ziggurat of precedent and tradition that passes for "justice" dirtside. Justice in the Golden Rule might be astigmatic if not totally blind; it could not be slow.

We left Bill in the outer foyer of the Manager's offices, with our baggage-my duffel bag and bundle, Gwen's cases, the bonsai maple (watered before we left Gwen's compartment)- with instructions to Bill to sit on the duffel bag, guard the bonsai with his life (Gwen's phrasing), and watch the rest. We went inside.

There we each, separately, left our names at the reception desk, then found seats. Gwen opened her purse, got out a Casio game board. "What'll it be, dear? Chess, cribbage, backgammon, go, or what?"

"You're expecting a long wait?"

"Yes, I am, sir. Unless we build a fire under the mule."

"I think you're right. Any ideas about how to build that fire? Without setting fire to the wagon, I mean. Oh, what the devil!-go ahead and set fire to the wagon. But how?"

"We could use a variation on the old standard: 'My husband knows all.' Or 'Your wife has found out.' But our variation would have to be quite novel, as the basic ploy has long white whiskers." She added, "Or I can go into labor pains. That is always good for attention."

"But you don't look pregnant."

"Want to bet? So far no one has taken a good look at me. Just give me five minutes alone in that ladies' lounge across there and you'll be certain I'm nine months gone. Richard, this ploy I learned years ago when I was a claims investigator for an insurance company. It will always get one inside, anywhere."

"You tempt me," I admitted, "as it would be such fun to watch you work it. But the ploy we use not only has to get us inside, but also must keep us inside under circumstances in which the bloke will listen to our arguments."

"Dr. Ames."

"Yes, Mrs. Ames?"

"The Manager isn't going to listen to our arguments."

"Please amplify."

"I applauded your decision to go straight to the top because I saw that it would save time and tears to get all the bad news at once. We have leprosy; what has already been done to us makes that clear. The Manager intends not merely to force us to move; he means to kick us right out of Golden Rule. I don't know why but we don't have to know why-it simply is so. Realizing that, I am relaxed to it. Once you realize it, too, dear man, we can make plans. To go dirtside, or to Luna, or to Promised Land, Ell-Four, Ceres, Mars-wherever you wish, beloved. 'Whither thou goest-'"

'To Luna."

"Sir?"

"For now, at least. Luna Free State isn't bad. Currently it is moving from anarchy to bureaucracy but it is not yet completely musclebound. It still has quite a lot of freedom for people who know how to deal with it pragmatically. And there is still elbow room on Luna. And in Luna. Yes, Gwen, we must leave; I suspected it earlier and know it now. Save for one thing, we could go straight to the spaceport. I still want to see the Manager. Damn it, I want to hear it from his own lying lips! Then with a clear conscience I can turn on the poison."

"You intend to poison him, dear?"

"A figure of speech. I plan to place him on my list, then quick Karma will do him in."

"Oh. Perhaps I can think of a way to help it along."

"Not necessary. Once on the list, they never last long."

"But I would enjoy it. 'Vengeance is mine, sayeth the Lord.' But the Revised Version reads: 'Vengeance is Gwen's... then Mine only if Gwen leaves Me any.'"

I clucked at her. "Who was saying that I should not take me law into my own hands?"

"But I was talking about you, sir; I didn't say a word about me. I delight in making quick Karma even quicker-it's my pet hobby."

"My darling, you are a nasty little giri, I am happy to say. Going to kill him with hives? Or with hangnails? Maybe hiccups?"

"I'm thinking of keeping him awake till he dies. Lack of sleep is worse than anything you listed, dear, if pushed far enough. The victim's judgment goes to pieces long before he stops breathing. He hallucinates. Including all his worst phobias. He dies in his own private hell and never escapes from it."

"Gwen, you sound as if you had used this method."

Gwen did not comment.

I shrugged. "Whatever you decide, let me know how I can help."

"I will, sir. Mmm, I think highly of drowning in caterpillars. But I don't know how to get that many caterpillars other than by having them shipped up from Earth. Except- Well, one can always arrange for them through the insomnia method. Toward the

end you can cause the condemned to create his own caterpillars just by suggesting it to him." She shivered. "Schrecklich! But I won't use rats, Richard. Never rats. Not even imaginary rats."

"My sweet and gentle bride, I'm glad to know you draw the line at something."

"Certainly I do! Beloved, you startled me with the notion that bad manners could be judged a hanging offense. My own concern is for evil, rather than for bad manners. I think evil deeds should never go unpunished. God's arrangements for punishing evil are too slow to suit me; I want it done now. Take hijacking. Hijackers should be hanged on the spot as soon as they are caught. An arsonist should be burned at the stake on the site of the fire he started, if possible before its ashes grow cold. A rapist should be killed by-"

I did not learn then what complex way of dying Gwen favored for rapists because a polite bureaucrat (male, gray, dandruffy, built-in risus) stopped in front of us and said, "Dr. Ames?"

"I am Dr. Ames."

"I am Mungerson Fitts, Assistant Deputy Administrator for Superrogatory Statistics. I'm helping out. I'm sure you understand how terribly busy the Manager's office is just now with the new addition being brought up to spin-all the temporary relocations that have to be made and all the disruptions to routine that have to be accommodated before we can all settle down in a larger and greatly improved Golden Rule." He gave me a winning smile. "I understand you want to see the Manager."

"That's right."

"Excellent. Because of the present emergency I am helping here in order to maintain the proud quality of Golden Rule service to our guests during alterations. I have been fully empowered to act for the Manager; you can think of me as his alter ego... because to all intents and purposes I am the Manager. This little lady-she is with you?"

"Yes."

"Honored, ma'am. Delighted. Now, friends, if you will please come with me-"

"No."

"Excuse me?"

"I want to see the Manager."

"But I explained to you-"

"I'll wait."

"I don't think you understood me. Please come with-"

"No."

(At this point Fitts should have grabbed me with a come-along and tossed me out on my arse. Not that it is easy to do mis to me; I trained with the Dorsai. But that is what he should have done. However, he was inhibited by custom, habit, and policy.)

Fitts paused and looked baffled. "Uh- But you must, you know."

"No, I don't know."

"I'm trying to tell you-"

"I want to see the Manager. Did he tell you what to do about Senator Cantor?"

"Senator Cantor? Let me see, he's the Senator from, uh, from..."

"If you don't know who he is, how do you know what to do about him?"

"Uh, if you will just wait a moment while I consult."

"You had better take us along-since you don't seem to be 'fully empowered' on this critical issue."

"Uh... please wait here."

I stood up. "No, I had better get back. The Senator may be looking for me. Please tell the Manager that I'm sorry I could not arrange it." I turned to Gwen. "Come, Madam. Let's not keep him waiting." (I wondered if Mungerson would notice that "him" was a pronoun without a referent.)

Gwen stood up, took my arm. Fitts said hastily, "Please, friends, don't leave! Uh, come with me." He herded us to an unmarked door. "Wait just one moment, please!"

He was gone more than a moment but nevertheless only a short time. He returned with his face wreathed with smiles (I think that is the expression). "Right this way, please!" He took us through the unmarked door, down a short passage, and into the Manager's inner office.

The Manager looked up from his desk and inspected us, not with the familiar, fatherly expression of the too-frequent "Word from the Manager" announcements that come over every terminal. On the contrary Mr. Sethos looked as if he had found something nasty in his porridge.

I ignored his chilly demeanor. Instead I stood just inside the door, Gwen still on my arm, and waited. I once lived with a fussy cat (is there another sort?) who, when faced with an offering of food not perfectly to his taste, would stand still and, with dignified restraint, look offended-a remarkable bit of acting for one whose face was completely covered with ftir;

however, he did it mostly by body language. I now did this to Mr. Sethos, primarily by thinking about that cat. I stood... and waited.

He stared at us... and at last stood up, bowed slightly and said, "Madam... will you please be seated?"

Whereupon we both sat down. Round one to us, on points. I could not have done it without Gwen. But I did have her help and once I got my butt into his chair he was not going to get it out-until I got what I wanted.

I sat still, kept quiet, and waited.

When Mr. Sethos's blood pressure reached triggering level, he said, "Well? You've managed to bull your way into my office. What's this nonsense about Senator Cantor?"

"I expect you to tell me. Have you assigned Senator Cantor to my wife's compartment?"

"Eh? Don't be ridiculous. Mistress Novak has a one-room efficiency compartment, the smallest size in first class. The Senator from Standard Oil, if he came here, would be in a deluxe suite. Of course."

"Mine, perhaps? Is that why you evicted me? For the Senator?"

"What? Don't put words in my mouth; the Senator isn't aboard. We've been forced to ask a number of our guests to shift around, you among them. The new section, you know. Before it can we welded on, all compartments and spaces adjacent to ring one-thirty must be evacuated. So we have to double up temporarily to make room for our displaced guests. Your compartment will have three families in it, as I recall. For a short while, that is."

"I see. Then it was just an oversight that I was not told where to move?"

"Oh, I'm sure you were told."

"I surely was not. Will you please tell me my new address?"

"Doctor, do you expect me to carry housing assignments in my head? Go wait outside and someone will look it up and tell-you."

I ignored his suggestion/order. "Yes, I do think you carry them in your head."

He snorted. "There are more than one hundred eighty thousand people in this habitat. I have assistants and computers for such details."

"I'm sure you do. But you have given me strong reason to think that you do have such details in your head... when they interest you. I'll give an example. My wife was not introduced to you. Mungerson Fitts did not know her name, so he could not have told you. But you knew without being told. You knew her name and what compartment she lived in. Did live in, I mean, until you had her locked out. Is that how you apply the Golden Rule, Mr. Sethos? By kicking out your guests without even the courtesy of warning them ahead of time?"

"Doctor, are you trying to pick a fight?"

"No, I'm trying to find out why you have been hassling us. Bullying us. Persecuting us. You and I both know that it has nothing to do with the temporary dislocations caused by bringing the new section up to spin and welded on; that's certain ... because the new section has been building for over three years and you've known for at least a year the date you were going to bring it up to spin... yet you had me kicked out of my compartment with less than thirty minutes' warning. My wife you treated even worse; you simply locked her out, no warning at all. Sethos, you aren't just moving us around to allow for attaching the new section. If that were true, we would have been told at least a month ago, along with temporary reassignments and with dates for moving into new permanent quarters. No, you're rousting us right out of Golden Rule habitat ... and I want to know why!"

"Get out of my office- I'll have someone take you by the hand and lead you to your new-temporary-quarters."

"Not necessary. Just tell me the coordinates and the compartment number. I'll wait here while you look them up."

"By God, I believe you want to be kicked off Golden Rule!"

"No, I've been quite comfortable here. I'll be happy to stay ... if you will tell me where we are to sleep tonight... and give us our new permanent assignment-where we'll be living once the new section is welded on and pressurized, I mean. We need a three-room suite, to replace the two-roomer I had and the one-room compartment Mrs. Ames had. Two terminals. One for each of us, just as before. And low gravity. Four-tenths gee by preference, but not more than half a gravity."

"Would you like an egg in your beer? Why do you need two terminals? That requires additional wiring."

"So it does and I'll pay for it. Because I'm a writer. I'll use one as a wordprocessor and for library reference work. Mrs. Ames needs the other for household routine."

"Oho! You plan to use residential space for business purposes. That calls for commercial rates. Not residential rate."

"What does that come to?"

"It will have to be calculated. There is a costing factor for each type of commercial use. Retail stores, restaurants, banks, and the like cost approximately three times as much per cubic meter as does residential space. Factory space does not cost as much as retail space but may have surcharges for hazards and so forth. Warehousing is

only slightly more than residential. Offhand I think you will have to pay office space rates-that's a factor of three point five-but I'll have to take it up with the chief accountant."

"Mr. Manager, do I understand you correctly? Are you planning to charge us three and half times as much as our combined rents were together?"

"Approximately. It might be as low as three times."

"Well, well. I haven't concealed the fact that I'm a writer, it says so on my passport and I'm listed that way in your directory, all the past five years. Tell me why it suddenly makes a difference to you whether I use my terminal to write letters home... or to write stories?"

Sethos gave what could have been construed as a laugh. "Doctor, Golden Rule is a business enterprise undertaken for profit. I manage it for my partners to that end. No one has to live here, no one has to do business here. What I charge people to live here, or to do business here, is controlled solely by maximizing profit to the partnership, as guided by my best judgment to that end. If you don't like it, you can take your business elsewhere."

I was just about to shift the basis for discussion (I can see when I'm outgunned) when Gwen spoke up. "Mr. Sethos?"

"Eh? Yes, Mistress Novak? Mrs. Ames."

"Did you get your start pimping for your sisters?"

Sethos turned a delicate shade of eggplant. He finally got control of himself well enough to say, "Mrs. Ames, are you being intentionally insulting?"

"That's obvious, isn't it? I don't know that you have sisters;

it just seems like the sort of enterprise that would appeal to you. You have injured us for no reason whatever. We come to you, asking for redress of grievance; you answer us with evasions, outright lies, irrelevant issues... and a fresh extortion. You justify this new outrage with a plonking sermon on free enterprise. Just what price did you usually charge for your sisters? And how much did you keep as your commission? Half? Or more than half?"

"Madam, I must ask you to leave my office... and this habitat. You are not the sort we want living here."

"I am delighted to leave," Gwen answered, not stirring, "just as quickly as you settle my account. And my husband's account."

"Get... OUT!"

Gwen put out her hand, palm up. "Cash first, you bald-faced swindler. The balance of our accounts plus the fare-home deposits we each made when we got here. If we leave this room without collecting, there's not a prayer that you will ever pay what you owe us. Pay up and we leave. The first shuttle down to Luna. But pay up and right now! Or you'll have to space me to shut me up. If you call in your goons, you flannel mouth, I'll scream this place down. Want a sample?" Gwen tilted her head back, cut loose with a scream that made my teeth ache.

Sethos, too, apparently-I saw him flinch.

He stared at her a long moment, then touched some control on his desk. "Ignatius. Close the accounts of Dr. Richard Ames and of Mistress Gwendolyn Novak, uh"-with only a momentary hesitation he correctly stated my compartment number and that of Gwen-"and deliver them to my office at once. With cash to pay them off. With receipts to

chop and print. No checks. What? You listen to me. If it takes longer than ten minutes we'll hold a full-scale inspection of your department ... see who has to be fired, who merely has to be demoted." He switched off, did not look at us.

Gwen got out her little gameboard, set it for tic-tac-toe, which suited me, it being about the intellectual level I felt able to cope with then. She beat me four straight games, even though twice I had the first move. But my head was still aching from her supersonic scream.

I had not kept track of the exact time but it must have been about ten minutes later that a man came in with our accounts. Sethos glanced at them, passed them over to us. Mine appeared to be accurate; I was about to sign the receipt when Gwen spoke up. "What about interest on the money I had to deposit?"

"Eh? What are you talking about?"

"My fare back dirtside. I had to deposit it in cash, no lOUs accepted. Your bank here charges nine percent on private loans, so it ought to be paying at least savings account rates on impounded money. Although time-deposit rates would be more reasonable. I've been here more than a year, so... let me see-" Gwen took out the pocket calculator we had been using for tic-tac-toe. "You owe me eight hundred seventy-one and-call it even crowns-eight hundred and seventy-one crowns in interest. In Swiss gold that comes to-"

"We pay in crowns, not Swiss money."

"All right, you owe it to me in crowns."

"And we don't pay interest on return ticket mone y; it is simply held in escrow."

I was suddenly alert. "You don't, eh? Dear, may I borrow that widget? Let's see-a hundred and eighty thousand people... and one-way tourist fare to Maui on PanAm or Qantas is-"

"Seventy-two hundred," Gwen answered, "except we ekends and holidays."

"So." I punched it in. "Hmm, well over a billion crowns! One two nine six followed by six zeroes. How interesting! How enlightening. Sethos old boy, you may be skimming off over a hundred million a year, tax free, simply by placing all this money you are holding for us suckers in Luna City money funds. But I don't think you use it that way-or not all of it. I think you run your whole enterprise using other people's money... without their knowledge or consent. Right?"

The flunky (Ignatius?) who had fetched our accou nts was listening with intent interest.

Sethos growled. "Sign those receipts and get out ."

"Oh, I shall!"

"But pay us our interest," Gwen added.

I shook my hea d. "No, Gwen. Anywhere but here we could sue him. Here he is both the law and the judge. But I don't mind, Mr. Manager, as you have given me a wonderful, salable idea for an article-Reader's Digest, probably, or Fortune. Uh, I'll title it 'Pie in the Sky, or How to Get Rich on Other People's Money: The Economics of Privately-Owned Space Habitats.' A hundred million a year swindled out of the public in Golden Rule habitat alone. Something along that line."

"You publish t hat and I'll sue you for everything you own!"

VII

"You can't cheat an honest man. He has to have larceny in his heart in the first place"

CLAUDE WILLIAM DUKENFffiLD 1880-1946

Outside we found Bill still sitting on my duffel bag, the little tree in his arms. He stood up, an uncertain look on his face. But when Gwen smiled at him, he grinned back. I said, "Any problems. Bill?"

"No, boss. Uh, skin tried to buy little tree."

"Why didn't you sell it?"

He looked shocked. "Huh? It belongs to her."

"That's right. If you had sold it, do you know what she would have done? She would have drowned you in caterpillars, that's what she would have done. So you were smart not to risk crossing her. But no rats. As long as you stick with her, you need never be afraid of rats. Right, Mistress Hardesty?"

"Correct, Senator. No rats, ever. Bill, I'm proud of you, not letting someone tempt you. But I want you to stop that slang-why, someone hearing you might think you were a nightwalker-and we wouldn't want that, would we? So don't say 'a skin tried to buy the tree,' just say 'a man.'"

"Uh, matter o' fac', this skin was a slitch. Uh, a broad. Read?"

"Yes. But let's try that again. Say 'a woman.'" "All right. That skin was a woman." He grinned sheepishly. "You sound just like the Sisters that taught us at Holy Name, back dirtside."

"I take that as a compliment. Bill... and I am going to nag you about your grammar and your pronunciation and your choice of words even more than they ever did. Until you talk as beautifully as the Senator does. Because, many years ago, a wise and cynical man proved that the way a person talks is the most important thing about him when it comes to dealing successfully with the world. Do you understand me?" "Uh-Some."

"You can't learn everything at once and I don't expect you to. Bill, if you bathe every day and speak grammatically, the world will decide that you are a winner and will treat you accordingly. So we'll keep trying."

I said, "And in the meantime it is urgent to get out of this bucket."

"Senator, this is urgent, too."

"Yes, yes, the old 'how to housebreak a puppy' rule. I understand. But let's get moving." "Yes, sir. Straight to the spaceport?" "Not yet. Straight down El Camino Real while checking every public terminal for one that will accept coins. Do you have any coins?"

"A few. Enough for a short call, perhaps." "Good. But keep your eyes open for a changemaker, too. Now that you and I have canceled our credit codes, we'll have to use coins."

We picked up our burdens again and started out. Gwen said quietly, "I don't want Bill to hear this... but it's not difficult to convince a public terminal that you are using a correct credit code when you are not."

I answered just as quietly, "We will resort to that only if honesty won't work. My darling, how many more little scams do you have tucked away?"

"Sir, I don't know what you're talking about. A hundred meters ahead of us- Does that booth on the right have the yellow sign? Why are so few public booths equipped to receive coins?"

"Because Big Brother likes to know who is calling whom ... and with the credit code method we are practically begging him to share our secrets. Yes, that one does have the sign. Let's pool our coins."

The Reverend Doctor Hendrik Hudson Schultz answered his terminal promptly. His Santa Claus visage peered at me, sizing me up, counting the money in my wallet.

"Father Schultz?"

"In the flesh. How can I serve you, sir?"

Instead of answering, I took out a thousand-crown note, held it in front of my face. Dr. Schultz looked at it, raised his bristling brows. "You interest me, sir."

I tapped my ear while glancing left and right, then I signed all three of the three little monkeys. He answered, "Why, yes, I was about to go out for a cup of coffee. Will you join me? One moment-"

Shortly he held up a sheet of paper on which he had printed in large block letters:

OLD MACDONALD'S FARM

"Can you meet me at Sans Souci Bargrill? That's on Petticoat Lane right across from my studio. About ten minutes, perhaps?" All the while he was talking, he was jabbing a finger at the sign he was showing me.

I answered, "Righto!" and switched off.

I was not in the habit of going to farm country, since full gravity is not kind to my bad leg and farms have to be at full gravity. No, that's not correct; there may be more habitats in the System that use for farming whatever fractional gee they wish (or that mutated plants prefer) than there are that use natural sunlight and full gee. As may be. Golden Rule goes the natural sunlight and full gee route for much of its fresh food. Other spaces in Golden Rule use artificial light and other accelerations for growing food-how much, I don't know. But the enormous space from ring fifty to ring seventy is open air, side to side, save for struts and vibration dampers and walkways joining the principal corridors.

In this span of twenty rings-eight hundred meters-radii 0-60, 120-180, and 240-300 let in the sunlight; radii 60-120, 180-240, and 300-0 are farmland- of which 180-240, ring 50-70 is Old MacDonald's Farm.

That's a lot of farmland. A man could get lost there, especially in fields where corn grows even taller than it does in Iowa. But Doc Schultz had paid me the compliment of assuming that I would know where to meet him: at a popular outdoor restaurant and bar called The Country Kitchen, right spang in the middle of the farm, ring sixty, radius 210, at (of course) full gravity.

To reach the restaurant we had to go downstairs forward of ring fifty, then walk aft (at full gee, damn it!) to ring sixty, a distance of four hundred meters. A short distance, oh certainly-about four city blocks. Try it on a false foot with a stump that has already been used too much in walking and too much in carrying for one day.

Gwen spotted it, in my voice, or my face, or my walk, or something-or she read my mind, maybe; I'm not sure she can't. She stopped.

I stopped. "Trouble, dear?"

"Yes. Senator, put down that bundle. I'll balance Tree-San on my head. Give me the bundle."

"I'm all right."

"Yes, sir. You surely are and I'm going to keep you that way. It is your privilege to be macho whenever you wish... and it's my privilege to go female and be vaporish and weak and unreasonable. Right now I'm about to faint. And I'll stay that way until you give me the bundle. You can beat me later."

"Hmm. When is it my turn to win an argument?"

"On your birthday, sir. Which this is not. Let me have the bundle. Please."

It was not an argument I wanted to win; I handed over the bundle. Bill and Gwen went on ahead of me, with Bill walking 1 in front, breaking trail. She never lost control of the burden balanced on her head, even though the road was not corridor-smooth-a dirt road. Real dirt-a piece of totally unnecessary swank.

I limped slowly along behind, leaning heavily on my cane and putting almost no weight on my stump. By the time I reached the outdoor restaurant I felt fairly well recovered.

Dr. Schultz was leaning against the bar with an elbow hooked over it. He recognized me, did not admit it until I came up to him. "Dr. Schultz?"

"Ah, yes!" He did not ask my name. "Shall we look for a restful spot? I fmd that I enjoy the quiet of the apple orchard. Shall I ask our host to have a small table and a couple of chairs placed back in the trees?"

"Yes. But three chairs, not two."

Gwen had joined us. "Not four?"

"No. I want Bill to watch our chattels, as he did before. I see an empty table over there; he can pile stuff on it and around it."

Soon we three were settled at a table that had been moved for us back into the orchard. After consulting, I ordered beer for the Reverend and for me. Coke for Gwen, and had told the waitress to find the young man with the bundle and give him what he wanted-beer. Coke, sandwiches, whatever. (I suddenly realized that Bill might not have eaten today.)

When she left, I dug into a pocket, pulled out that thousand-crown note, gave it to Dr. Schultz.

He caused it to disappear. "Sir, do you wish a receipt?"

"No."

"Between gentlemen, eh? Excellent. Now how can I help you?"

Forty minutes later Dr. Schultz knew almost as much about our troubles as I did, as I held nothing back. He could help us, it seemed to me, only if he knew the full background-so far as I knew it-on what had happened.

"You say Ron Tolliver has been shot?" he said at last.

"I didn't see it. I heard the Chief Proctor say so. Correction:

I heard a man who sounded like Franco, and the Manager treated him as such."

"Good enough. Hear hoofbeats; expect horses, not zebras. But I heard nothing about it on my way here, and I noticed no signs of excitement in this restaurant-and the assassination or attempted assassination of the second largest holder of partnership shares in this sovereignty should cause excitement. I was at the bar for a few minutes before you

arrived. No word of it. Yet a bar is notoriously the place news hits first; there is always a screen turned on to the news channel. Hmm... could the Manager be covering it up?"

'That lying snake is capable of anything."

"I was not speaking of his moral character, concerning which my judgment matches yours, but solely of physical possibility. One does not cover up a shooting too easily. Blood. Noise. A victim dead or wounded. And you spoke of witnesses-or Franco did. Still, Judge Sethos controls the only newspaper, and the terminals, and the proctors. Yes, if he wished to make the effort, he could surely keep it hush-hush for a considerable period. We shall see-and that is one more item on which I will report to you after you reach Luna City."

"We may not be in Luna City. I'll have to phone you."

"Colonel, is that advisable? Unless our presence together during that few seconds at the bar here was noted by some interested party who knows both of us, it is possible that we have succeeded in keeping our alliance secret. It is indeed fortunate that you and I have never been associated in any fashion in the past; there is no probable way to trace me to you, or you to me. You can phone me, certainly... but one must assume that my terminal is tapped, or my studio is bugged, or both-and both have happened in the past. I suggest, rather, the mails... for other than direst emergency."

"But mail can be opened. By the way, I'm Dr. Ames, not Colonel Campbell, please. And oh yes!-this young man with us. He knows me as 'Senator' and Mrs. Ames as 'Mistress Hardesty' from that dustup I told you about."

"I'll remember. In the course of a long life one plays many roles. Would you believe that I was once known as 'Lance Corporal Finnegan, Imperial Marines'?"

"I can easily believe it."

"Which just goes to show you, as I never was. But I've worked much stranger jobs. Mail can be opened, true-but if I deliver a letter to a Luna City shuttle just before it leaves our spaceport, it is most unlikely that it will ever reach the hands of anyone interested in opening it. In the reverse direction a letter sent to Henrietta van Loon, care of Madame Pompadour, 20012 Petticoat Lane, will reach me with only minimal delay. An old, established madam has years of dealing gently with other people's secrets. One must trust, I find. The art lies in knowing whom to trust."

"Doc, I find that I trust you."

He chuckled. "My dear sir, I would most happily sell you your own hat were you to leave it on my counter. But you are correct in essence. As I have accepted you as my client you can trust me totally. Being a double agent would invite ulcers ... and I am a gourmand who will do nothing that could interfere with my pleasures as a trencherman."

He looked thoughtful and added, "May I see that wallet again? Enrico Schultz."

I handed it to him. He took out the ID. "You say this is a good likeness?"

"Excellent, I think."

"Dr. Ames, you will realize that the name 'Schultz' at once catches my attention. What you may not guess is that the varied nature of my enterprises makes it desirable for me to note each new arrival in this habitat. I read the Herald each day, skimming everything but noting most carefully anything of a personal nature. I can state unequivocally that this man did not enter Golden Rule habitat under the name 'Schultz.' Any other name might have slipped my mind. But my own surname? Impossible."

"He appears to have given that name on arriving here."

"'-appears to have-' You speak precisely." Schultz looked at the ID. "In twenty minutes in my studio-no, allow me a half hour-I could produce an ID with this face on it-and of as good quality-that would assert that his name was 'Albert Einstein.'"

"You're saying we can't trace him by that ID."

"Hold on; I didn't say that. You tell me this is a good likeness. A good likeness is a better clue than is a printed name. Many people must have seen this man. Several must know who he is. A smaller number know why he was killed. If he was. You left that carefully open."

"Well... primarily because of that incredible Mexican Hat Dance that took place immediately after he was shot. If he was. Instead of confusion, those four behaved as if they had rehearsed it."

"Well. I shall pursue the matter, both with carrot and with stick. If a man has a guilty conscience, or a greedy nature- and most men have both-ways can be found to extract what he knows. Well, sir, we seem to have covered it. But let's be sure, since it is unlikely that we shall be able to consult again. You will press ahead with the Walker Evans aspect, while I investigate the other queries on your list. Each will advise the other of developments, especially those leading into or out of the Golden Rule. Anything more? Ah, yes, that coded message- Did you intend to pursue it?"

"Do you have any ideas on it?"

"I suggest that you keep it and take it to the Mackay main office in Luna City. If they can identify the code, it is then just a matter of paying a fee, licit or illicit, to translate it. Its meaning will tell you whether or not I need it here. If Mackay cannot help, then you might take it to Dr. Jakob Raskob at Galileo University. He is a cryptographer in the department of computer science... and if he can't figure out what to do about it, I can suggest nothing better than prayer. May I keep this picture of my cousin Enrico?"

"Yes, surely. But mail me a copy, please; I may need it in pursuing the Walker Evans angle-on second thought, certain to. Doctor, we have one more need I have not mentioned."

"So?"

"The young man with us. He's a ghost. Reverend; he walks by night. And he's naked. We want to cover him. Can you think of anyone who can handle it-and right away? We would like to catch the next shuttle."

"One moment, sir! Am I to infer that your porter, the young man with your baggage, is the ruffian who pretended to be a proctor?"

"Didn't I make that clear?"

"Perhaps I was obtuse. Very well, I accept the fact... while admitting astonishment. You want me to supply him with papers? So that he can move around in Golden Rule without fear of proctors?"

"Not exactly. I want a bit more than that. A passport. To get him out of Golden Rule and into Luna Free State."

Dr. Schultz pulled his lower lip. "What will he do there? No, I withdraw that question-your business, not mine. Or his business."

Gwen said, "I'm going to spank him into shape. Father Schultz. He needs to learn to keep his nails clean and not to dangle his participles. And he needs some backbone. I'm going to equip him with one."

Schultz looked thoughtfully at Gwen. "Yes, I think you have enough for two. Madam, may I say that, while I do not yeam to emulate you, I do strongly admire you?"

"I hate to see anything go to waste. Bill is about twenty-five, I think, but he acts and talks as if he were ten or twelve. Yet he is not stupid." She grinned. "Ah'll lam him if'n I have to bust his pesky haid!"

"More power to you." Schultz added gently, "But suppose he does turn out to be simply stupid? Lacking the capacity to grow up?"

Gwen sighed. "Then I guess I would cry a bit and find him some protected place, where he could work at what he can do and be whatever he is, in dignity and in comfort. Reverend, I could not send him back down to the dirt and the hunger and the fear-and the rats. Living like that is worse than dying."

"Yes, it is. For dying is not to be feared-it is the final comfort. As we all learn, eventually. Very well, a sincere passport for Bill. I'll have to find a certain lady-see whether or not she can accept a rush assignment." He frowned. "It will be difficult to do this before the next shuttle. And I must have a photograph of him. Plague take it!-that means a trip to my studio. More lost time, more risk for you two."

Gwen reached into her purse, pulled out a Mini Helvetia- illegal without a license most places but probably not covered by Manager's regulations here. "Dr. Schultz, this doesn't make a picture big enough for a passport, I know-but could it be blown up for the purpose?"

"It certainly could be. Mmm, that's an impressive camera."

"I like it. I once worked for the-an agency that used such cameras. When I resigned, I found I had mislaid it... and had to pay for it." She grinned mischievously. "Later I found it- it had been in my purse all along... but 'way down in the bottom lost in the junk." She added, "I'll run get a picture of Bill."

I said hastily, "Use a neutral background."

"Think I was a-hint the door? 'Scuse, please. Back in a second."

She was back in a few minutes; the picture was coming up.

A minute later it was sharp; she passed it to Dr. Schultz. "Will that do?"

"Excellent! But what is that background? May I ask?" "A bar towel. Frankie and Juanita stretched it tight behind Bill's head."

"'Frankie and Juanita,'" I repeated. "Who are they?" "The head bartender and the manager. Nice people." "Gwen, I didn't know you were acquainted here. That could cause problems."

"I'm not acquainted here; I've never been here before, dear. I've been in the habit of patronizing The Chuck Wagon in Lazy Eight Spread at radius ninety-they have square dancing." Gwen looked up, squinting against the sunlight directly overhead-the habitat, in its stately spin, was just swinging through the arc that placed the Sun at zenith for Old MacDonald's Farm. She pointed high-well, sixty degrees up, it had to be. "There, you can see The Chuck Wagon; the dance floor is just above it, toward the Sun. Are they dancing? Can you see? There's a strut partly in the way."

"They're too far away for me to tell," I admitted. "They're dancing." Dr. Schultz said. 'Texas Star, I think. Yes, that's the pattern. Ah, youth, youth! I no longer dance but I have been a guest caller at The Chuck Wagon on occasion. Have I seen you there, Mrs. Ames? I think not."

"And I think 'Yes,'" Gwen answered. "But I was masked that day. I enjoyed your calling. Doctor. You have the real Pappy Shaw touch."

"Higher praise a caller cannot hope for. 'Masked-' Perchance you wore a candy-striped gown in green and white? A full circle skirt?"

"More than a full circle; it made waves whenever my partner twirled me-people complained that the sight made them seasick. You have an excellent memory, sir." "And you are an excellent dancer, ma'am." Somewhat irked, I interrupted. "Can we knock off this Old Home Week? There are still urgent things to do and I still have hopes that we can catch the twenty o'clock shuttle."

Schultz shook his head. 'Twenty o'clock? Impossible, sir." "Why is it impossible? That's over three hours from now. I'm edgy about the idea of waiting for a later shuttle; Franco might decide to send his goons after us."

"You've asked for a passport for Bill. Dr. Ames, even the sorriest imitation of a passport takes more time than that." He paused and looked less like Santa Claus and more like a tired and worried old man. "But your prime purpose is to get Bill out of this habitat and onto the Moon?"

"Yes."

"Suppose you took him there as your bond servant?"

"Huh? You can't take a slave into Luna Free State."

"Yes and no. You can take a slave to the Moon... but he is automatically free, then and forever, once he sets foot on Luna; that is one thing those convicts nailed down when they set themselves free. Dr. Ames, I can supply a bill of sale covering Bill's indentures in time for the evening shuttle, I feel confident. I have his picture, I have a supply of official stationery-authentic, by midnight requisition-and there is time to crease and age the document. Truly, this is much safer than trying to rush a passport."

"I defer to your professional judgment. How and when and where do I pick up the paper?"

"Mmm, not at my studio. Do you know a tiny bistro adjacent to the spaceport, one-tenth gee at radius three hundred? The Spaceman's Widow?"

I was about to say no, but that I would find it, when Gwen spoke up. "I know where it is. You have to go behind Macy's warehouse to reach it. No sign on it."

"That's right. Actually it's a private club, but I'll give you a card. You can relax there and get a bite to eat. No one will bother you. Its patrons tend to mind each his own business."

(Because that business is smuggling, or something equally shady-but I didn't say it.) "That suits me."

The Reverend Doctor got out a card, started to write on it- paused. "Names?"

"Mistress Hardesty," Gwen answered promptly.

"I agree," Dr. Schultz said soberly. "A proper precaution. Senator, what is your surname?"

"It can't be 'Cantor'; I might run into someone who knows what Senator Cantor looks like. Uh... Hardesty?"

"No, she's your secretary, not your wife. 'Johnson.' There have been more senators named 'Johnson' than any other name, so it arouses no suspicion-and it matches Bill's last name... which could be useful." He wrote on the card, handed it to me. "Your host's name

is Tiger Kondo and he teaches all sorts of kill-quick in his spare time. You can depend on him."

"Thank you, sir." I glanced at the card, pocketed it. "Doctor, do you want more retainer now?"

He grinned jovially. "Now, now! I haven't yet determined how deeply I can bleed you. My motto is 'All the traffic will bear'-but never make the mark anemic."

"Reasonable. Till later, then. We had better not leave together."

"I agree. Nineteen o'clock is my best guess. Dear friends, it has been both a pleasure and a privilege. And let us not forget the true importance of this day. My felicitations, ma'am. My congratulations, sir. May your life together be long and peaceful and filled with love."

Gwen got on her tiptoes and kissed him for that, and they both had tears in their eyes. Well, so did I.

VIII

'The biscuits and the syrup never come out even."

LAZARUS LONG 1912-

Gwen took us straight to the Spaceman's Widow, tucked in behind Macy's storerooms just as she had said, in one of those odd little comers formed by the habitat's cylindrical shape- if you didn't know it was there, you probably would never find it. It was pleasantly quiet after the crowds we had encountered at the spaceport end of the axis.

Ordinarily this end was for passenger craft only, with freighters ganging up at the other end of the axis of spin. But positioning the new addition for bringing it up to spin had caused all traffic to be routed to the Moonward, or forward, end- "forward" because Golden Rule is long enough to have a slight tidal effect, and will have even more when the new addition is welded on. I don't mean that it has daily tides; it does not. But what it does have-

(I may be telling too much; it depends on how much you have had to do with habitats. You can skip this with no loss.)

What it does have is a tidal lock on Luna; the forward end points forever straight down at the Moon. If Golden Rule were the size of a shuttle craft, or as far away as Ell-Five, this would not happen. But Golden Rule is over five kilometers long and it orbits around a center of mass only a little over two thousand kilometers away. Surely, that's only one part in four hundred- but it's a square law and there's no friction and the effect goes on forever; it's locked. The tidal lock Earth has on Luna is only four times that-much less if you bear in mind that Luna is round as a tennis ball whereas Golden Rule is shaped more like a cigar.

Golden Rule has another orbital peculiarity. It orbits from pole to pole (okay, everybody knows that-sony) but also this orbit, elliptical but almost a perfect circle, has that circle fully open to the Sun, i.e., the plane of its orbit faces the Sun, always, while Luna rotates under it. Like Foucault's pendulum. Like the spy satellites patrolling Earth.

Or, to put it another way. Golden Rule simply follows the terminator, the day-and-night line on Luna, around and around and around, endlessly-never in shadow. (Well- In shadow at Lunar eclipses, if you want to pick nits. But only then.)

This configuration is only metastable; it is not locked. Everything tugs at it, even Saturn and Jupiter. But there is a little pilot computer in Golden Rule that does nothing but make sure Golden Rule's orbit is always full face to the Sun-thereby giving Old MacDonald's Farm its bountiful crops. It doesn't even take power to speak of, just the tiniest nudges against the tiny deviations.

I hope you skipped the above. Ballistics is interesting only to those who use it.

Mr. Kondo was small, apparently of Japanese ancestry, very polite, and had muscles as sleek as a jaguar-he moved like one. Even without Dr. Schultz's tip I would have known that I did not want to encounter Tiger Kondo in a dark alley unless he was there to protect me.

His door did not open fully until I showed Dr. Schultz's card. Then he at once made us welcome with formal but warm hospitality. The place was small, only half filled, mostly men, and the women were not (I thought) their wives. But not tarts, either. The feeling was that of professional equals. Our host sized us up, decided that we did not belong in the main room with the regulars, put us in a little side room or booth, one big enough for us three and our baggage but just barely. He then took our orders. I asked if dinner was available.

"Yes and no," he answered. "Sushi is available. And su-kiyaki cooked at the table by my eldest daughter. Hamburgers and hot dogs can be had. There is pizza but it is frozen; we do not make it. Or recommend it. This is primarily a bar; we serve food but do not demand that our guests eat here. You are welcome to play go or chess or cards all night and never order anything."

Gwen put a hand on my sleeve. "May I?"

"Go ahead."

She spoke to him at some length and I never understood a word. But his face lit up. He bowed and left. I said, "Well?"

"I asked if we could have what I had last time ... and that is not a specific dish but an invitation to Mama-San to use her judgment with whatever she has. It also let him admit that I had been here before... which he would never have done had I not published it, as I was here with another man. He also told me that our little pet here is the best specimen of rock maple he has ever seen outside Nippon... and I asked him to spray it for me just before we leave. He will."

"Did you tell him we were married?"

"Not necessary. The idiom I used in speaking of you implied it."

I wanted to ask her when and how she had learned Japanese but did not-Gwen would tell me when it suited her. (How many marriages are ruined by that itch to know "all about" a spouse? As a veteran of countless true confession stories I can assure you that unbridled curiosity about your wife's/husband's past is a sure formula for domestic tragedy.)

Instead I spoke to Bill. "Bill, this is your last chance. If you want to stay in Golden Rule, now is the time to leave. After you have had dinner, I mean. But after dinner we are going down to the Moon. You can come with us, or stay here."

Bill looked startled. "Did she say I got a choice?"

Gwen said sharply, "Of course you do! You can come with us... in which case I shall require you to behave like a civilized human being at all times. Or you can remain in Golden Rule and go back to your turf-and tell Fingers you botched the job he got you."

"I didn't botch it! He did."

Meaning me- I said, "That does it, Gwen. He resents me. I don't want him around-much less have to support him. He'll slip poison into my soup some night."

"Oh, Bill wouldn't do that. Would you. Bill?"

I said, "Oh, wouldn't he? Notice how quick he is to answer? Gwen, earlier today he tried to shoot me. Why should I put up with his surly behavior?"

"Richard, please! You can't expect him to get well all at once."

This feckless discussion was cut short by Mr. Kondo returning to the table to arrange it for dinner... including hold-down clips for our little tree. One tenth of Earth-normal gravity is enough to hold food on a plate, hold feet against the floor- but just barely. The chairs here were fastened to the floor; there were seat belts on them if you wished to use them-I didn't but a belt does have its points if you have to cut tough steak. Tumblers and cups had lids and sidesippers. The last was perhaps the most needed adaptation; you can easily scald yourself picking up a cup of hot coffee in a tenth gee-the weight is nothing but the inertia is undiminished... and so it slops, all over you.

As Mr. Kondo was placing flatware and sticks at my place he said quietly into my ear, "Senator, is it possible that you were present at the Solis Lacus drop?"

I answered heartily, "I certainly was, mate! You were there, too?"

He bowed. "I had that honor." \ "What outfit?"

"Go for Broke, Oahu."

"Old 'Go for Broke,'" I said reverently. "The most decorated outfit in all history. Proud, man, proud!"

"On behalf of my comrades I thank you. And you, sir?"

"I dropped with... Campbell's Killers."

Mr. Kondo drew air through his teeth. "Ah, so! Proud indeed." He bowed again and went quickly into the kitchen.

I stared glumly at my plate. Caught out-Kondo had recognized me. But when the day comes that, asked point blank, I deny my comrades, don't bother to check my pulse, don't even bother to cremate me-just haul me out with the swill.

"Richard?"

"Huh? Yes, dear?"

"May I be excused?"

"Certainly. Do you feel all right?"

"Quite all right, thank you, but I have something to take care of." She left, headed for the passage leading to the lounges and the exit, moving in that featherlight motion that is dancing rather than walking-at a tenth gee real walking can be accomplished only by wearing grips, magnetic or otherwise-or very long practice; Mr. Kondo was not wearing grips-he glided like a cat.

"Senator?"

"Yes, Bill?"

"Is she mad at me?"

"I don't think so." I was about to add that I would be displeased with him if he persisted in-then shut up in my mind. Threatening to leave Bill behind was too much like

beating a baby; he had no armor. "She simply wants you to stand tall and not blame other people for your acts. Not make excuses."

Having delivered myself of my favorite duck-billed platitude I went back to glum self-assessment. / make excuses. Yes, but not out loud, just to myself. That's an excuse in itself, chum- whatever you've done, whatever you've been, is all, totally, one hundred percent, your own fault. All.

Or to my credit. Yes, but damned little. Come on, be truthful.

But look where I started... and still got all the way up to colonel.

In the most whoreson, chancre-ridden, thieving, looting gang of thugs since the Crusades.

Don't talk that way about the Regiment!

Very well. But they aren't the Coldstream Guards, are they?

Those dudes! Why, just one platoon of Campbell's-

Dreck.

Gwen returned, having been gone-oh, quite a time. I hadn't checked the time when she left but it was now, I saw, almost eighteen. I tried to stand-not practical with both table and chair bolted down. She asked, "Have I held up dinner?"

"Not a bit. We ate, and threw the leavings to me pigs."

"All right. Mama-San won't let me go hungry."

"And Papa-San won't serve without you."

"Richard. I did something without consulting you."

"I don't see anything in the book that says that you have to. Can we square it with the cops?"

"Nothing like that. You've noticed the fezzes around town all day-excursionists up from the Shriners convention in Luna City."

"So that's what they are. I thought Turkey had invaded us."

"If you like. But you've seen them today, wandering up and down the Lane and the Camino, buying anything that doesn't bite. I suspect that most of them are not staying overnight; they have a full program in Luna City and have hotel rooms there already paid for. The late shuttles are sure to be crowded-"

"With drunk Turks, woofing into their fezzes. And onto the cushions."

"No doubt. It occurred to me that even the twenty o'clock schedule is likely to be fully booked rather early. So I bought tickets for us and reserved couches."

"And now you're expecting me to pay you back? Submit a claim and I'll pass it along to my legal department."

"Richard, I was afraid we would not get away from here at all tonight."

"Mistress Hardesty, you continue to impress me. What was the total?"

"We can straighten out finances another time. I just felt that I could eat dinner in a happier frame of mind if I was sure that we could get away promptly after dinner. And, uh-" She paused, looked at Bill. "Bill."

"Yes, ma'am?"

"We are about to eat dinner. Go wash your hands."

"Huh?"

"Don't grunt. Do as I tell you."

"Yes, ma'am." Bill got up docilely, went out.

Gwen turned back to me. "I was antsy. Fidgety. Because of the Limburger."

"What Limburger?"

"Your Limburger, dear. It was part of what I salvaged from your larder, then I put it out on the cheese and fruit tray when we had lunch. There was a little hundred-gram wedge, untouched, still in its wrapping, when we finished. Rather than throw it away, I put it in my purse. I thought it might make a nice snack-"

"Gwen."

"All right, all right! I saved it on purpose... because I've used it in looking-glass warfare before this. It's much nicer than some of the things on the list. Why, you wouldn't believe what nasty-"

"Gwen. I wrote the list. Stick to your muttons."

"In Mr. Sethos's office, you will remember that I was seated almost against the bulkhead-and right by the main ventilation discharge. Quite a draft against my legs and uncomfortably warm. I got to thinking-"

"Gwen."

"They're all alike, all through the habitat-local control, both on heat and volume. And the louvre just snaps on. While Accounting was working up our final statement, the Manager was studiously ignoring us. I turned the volume down and the heat to neutral, and snapped off the cover. I rubbed Limburger cheese all over the vanes of the heat exchanger, and tossed the rest of the package as far back into the duct as I could manage, and put the louvre back on. Then, just before we left, I turned the heat control to 'cold' and turned the volume up." She looked worried. "Are you ashamed of me?"

"No. But I'm glad you're on my side. Uh... you are- aren't you?"

"Richard!"

"But I'm even gladder that we have reservations on the next shuttle. I wonder how long it will be until Sethos feels chilly and turns up the heat?"

What we had for dinner was delicious and I don't know the names of any of it, so I'll let it go at that. We had just reached the burping stage when Mr. Kondo came out, leaned close to my ear, and said, "Sir, come, please."

I followed him into the kitchen. Mama-San looked up from her work, paid no more attention. The Reverend Doctor Schultz was there, looking worried. Trouble?" I asked.

"Just a moment. Here's your pie of Enrico; I've copied it. Here are the papers for Bill; please look them over."

They were in a worn envelope, and the papers were creased and worn and somewhat yellowed and more than somewhat soiled in places. Hercules Manpower, Inc., had hired William No-Middle-Name Johnson, of New Orleans, Duchy of Mississippi, Lone Star Republic, and had in turn sold his indenture to Bechtel High Construction Corp. (bond endorsed for space, free fall, and vacuum)-who had in turn sold the indenture to Dr. Richard Ames, Golden Rule habitat, circum Luna. Etc., etc.-lawyer talk. Stapled to the indenture was a very sincere birth certificate showing that Bill was a foundling, abandoned in Metairie Parish, with an assigned date of birth three days earlier than the date he was found.

"Much of that is true," Dr. Schultz told me. "I was able to wheedle some old records out of the master computer."

"Does it matter whether or not it's true?"

"Not really. As long as it is sincere enough to get Bill out

of here."

Gwen had followed me in. She took the papers from me, read them. "I'm convinced. Father Schultz, you're an artist."

"A lady of my acquaintance is an artist. I will convey your compliment. Friends, now the bad news. Tetsu, will you show

them?"

Mr. Kondo moved back in the kitchen; Mama-San (Mrs. Kondo, I mean) stepped aside. Mr. Kondo switched on a terminal. He punched up the Herald, cycled it for something- spot news I assume. I found myself staring at myself.

With me, in split screen, was Gwen-a poor likeness of her. I would not have recognized her but for the sound repeating:

"-Ames. Mistress Gwendolyn Novak. The female is a notorious confidence woman who has fleeced many victims, mostly male, around the bars and restaurants of Petticoat Lane. The self-styled 'Doctor' Richard Ames, no visible means of support, has disappeared from his address at ring sixty-five, radius fifteen, at point four gee. The shooting took place at sixteen-twenty this afternoon in Golden Rule Partner Tolliver's office-"

I said, "Hey! That time is wrong. We were-"

"Yes, you were with me, at the Farm. Hear the rest."

"-according to eyewitnesses both killers fired shots. They are believed armed and dangerous; use extreme caution in apprehending them. The Manager is grief stricken at the loss of his old friend and has offered a reward of ten thousand crowns for-"

Dr. Schultz reached over and shut it off. "It just repeats now; it's on a loop. But it appears as a spot announcement on all channels. By now, most habitants must have seen and heard it."

"Thanks for warning us. Gwen, don't you know better than to shoot people? You're a naughty girl."

"I'm sorry, sir. I fell into bad company."

"Excuses again. Reverend, what in hell are we going to do? That bastich will space us before bedtime."

"That thought occurred to me. Here, try this on for size." From somewhere about his ample person he produced a fez.

I tried it on. "Fits well enough."

"And now this."

It was a black velvet eyepatch on elastic. I slipped it on, decided that I did not like having one eye covered, but did not say so. Papa Schultz had obviously put effort and imagination into trying to keep me from breathing vacuum.

Gwen exclaimed, "Oh, goodness! That does it!"

"Yes," agreed Dr. Schultz. "An eyepatch draws the attention of most observers so strongly that it takes a conscious effort of will to see the features. I always keep one on hand. That fez and the presence of the Nobles of the Mystic Shrine was a happy coincidence."

"You had a fez on hand?"

"Not exactly. It does have a former owner. When he wakes up, he may miss it... but I do not think he will wake up soon. Uh, my friend Mickey Finn is taking care of him.

But you might avoid any Shriners from Temple Al Mizar. Their accents may help; they are from Alabama."

"Doctor, I'll avoid all Shriners as much as I can; I think I should board at the last minute. But what about Gwen?"

The Reverend Doctor produced another fez. 'Try it, dear lady."

Gwen tried it on. It tended to fit down over her like a candle snuffer. She lifted it off. "I don't think it does a thing for me; it's not right for my complexion. What do you think?"

"I'm afraid you're right."

I said, "Doctor, Shriners are twice as big as Gwen in all directions and they bulge in different places. It will have to be something else. Grease paint?"

Schultz shook his head. "Grease paint always looks like grease paint."

"That's a very bad likeness of her on the terminal. Nobody could recognize her from that."

"Thank you, my love. Unfortunately there are a good many people in Golden Rule who do know what I look like... and just one of them at the boarding lock tonight could lower my life expectancy drastically. Hmm. With just a little effort and no grease paint I could look my right age. Papa Schultz?"

"What is your right age, dear lady?"

She glanced at me, then stood on tiptoes and whispered in Dr. Schultz's ear. He looked surprised. "I don't believe it. And, no, it won't work. We need something better."

Mrs. Kondo spoke quickly to her husband; he looked suddenly alert; they exchanged some fast chatter in what had to be Japanese. He shifted to English. "May I, please? My wife has pointed out that Mistress Gwen is the same size, very nearly, as our daughter Naomi-and, in any case, kimonos are quite flexible."

Gwen stopped smiling. "It's an idea-and I thank you both. But I don't look Nipponese. My nose. My eyes. My skin."

There was some more batting around of that fast but long-winded language, three-comered this time. Then Gwen said, "This could extend my life. So please excuse me." She left with Mama-San.

Kondo went back into his main room-there had been lights asking for service for several minutes; he had ignored them. I said to the good Doctor, "You have already extended our lives, simply by enabling us to take refuge with Tiger Kondo. But do you think we can carry this off long enough to board the shuttle?"

"I hope so. What more can I say?"

"Nothing, I guess."

Papa Schultz dug into a pocket. "I found opportunity to get you a tourist card from the gentleman who lent you that fez ... and I have removed his name. What name should go on it? It can't be 'Ames' of course-but what?"

"Oh. Gwen reserved space for us. Bought tickets."

"By your right names?"

"I'm not certain."

"I do hope not. If she used Ames' and 'Novak' the best you can hope for is to try to be first in line for no-shows. But I had better hurry to the ticket counter and get reservations for you as 'Johnson' and-"

"Doc."

"Please? On the next shuttle if this one is booked solid."

"You can't. You make reservations for us and-phtt! You're spaced. It may take them till tomorrow to figure it out. But they will."

"But-"

"Let's wait and see just what Gwen did. If they aren't back in five minutes, I'll ask Mr. Kondo to dig them out."

A few minutes later a lady came in. Father Schultz bowed and said, "You're Naomi. Or are you Yumiko? Good to see you again, anyhow."

The little thing giggled and sucked air and bowed from the waist. She looked like a doll-fancy kimono, little silk slippers, flat white makeup, an incredible Japanese hairdo. She answered, "Ichiban geisha girr is awr. My Ingris are serdom."

"Gwen!" I said.

"Prease?"

"Gwen, it's wonderful! But tell us, fast, the names you used in making our reservations."

"Ames and Novak. To match our passports."

"That tears it. What'll we do. Doc?"

Gwen looked back and forth between us. "Pray tell me the difficulty?"

I explained. "So we go to the gate, each of us well disguised-and show reservations for Ames and Novak. Curtain. No flowers."

"Richard, I didn't quite tell you everything."

"Gwendolyn, you never do quite tell everything. More Lim-burger?"

"No, dear. I saw that it might turn out this way. Well, I suppose you could say that I wasted quite a lot of money. But I- Uh, after I bought our tickets-tickets we can't use now and arc wasted-I went to Rental Row and put a deposit on a U-Pushit. A Volvo Flyabout."

Schultz said, "Under what name?"

I said, "How much?"

"I used my right name-"

Schultz said, "God help us!"

"Just a moment, sir. My right name is Sadie Lipschitz... and only Richard knows it. And now you. Please keep it to yourself, as I don't like it. As Sadie Lipschitz I reserved the Volvo for my employer. Senator Richard Johnson, and placed a deposit. Six thousand crowns."

I whistled. "For a Volvo? Sounds like you bought it."

"I did buy it, dear; I had to. Both rental and deposit had to be cash because I didn't have a credit card. Oh, I do have; I have enough cards to play solitaire. But Sadie Lipschitz has no credit. So I had to pay six thousand down simply to reserve it-to rent it but on a purchase contract. I tried to get him down a bit but with all the Shriners in town he was sure he could move it."

"Probably right."

"I think so. If we take it, we still have to complete payment on the full list price, another nineteen thousand crowns-"

"My God!"

"-plus insurance and squeeze. But we get the unused balance back if we turn it in here, or Luna City, or Hong Kong Luna, in thirty days. Mr. Dockweiler explained the

reason for the purchase contract. Asteroid miners, or boomers rather, had been hiring cars without putting up the full price, taking them to some hideout on Luna, and refitting them for mining."

"A Volvo? The only way you could get a Volvo to the asteroids would be by shipping it in the hold of a Hanshaw. But nineteen-no, twenty-five thousand crowns. Plus insurance and graft. Bald, stark robbery."

Schultz said to me rather sharply, "Friend Ames, I suggest that you stop behaving like the fabled Scotsman faced by a coin-operated refresher. Do you accept what Mrs. Ames could arrange? Or do you prefer die Manager's fresh-air route? Fresh- but thin."

I took a deep breath. "Sorry. You're right, I can't breathe money. I just hate to get clipped. Gwen, I apologize. All right where is Hertz from here? I'm disoriented."

"Not Hertz, dear. Budget Jets. Hertz did not have a unit ten."

IX

"Murphy was an optimist." (O'Toole's commentary on Murphy's Law, as cited by A. Bloch)

To reach the office of Budget Jets we had to go around the end of the spaceport waiting room and into it at the axis, then directly to Budget's door. The waiting room was crowded- the usual lot, plus Shriners and their wives, most of them belted to wall rests, some floating free. And proctors-too many of

them.

Perhaps I should explain that the waiting room-and the booking office and the lock to the passenger tunnel and the offices and facilities of Rental Row-are all in free fall, weightless; they do not take part in the stately spin that gives the habitat its pseudo-gravity. The waiting room and related activities are in a cylinder inside a much larger cylinder, the habitat itself. The two cylinders share a common axis. The big one spins; the smaller one does not-like a wheel turning on an axle.

This requires a vacuum seal at the outer skin of the habitat where the two cylinders touch-a mercury type, I believe, but I've never seen it. The point is that, even though the surrounding habitat spins, the habitat's spaceport must not spin, because a shuttle (or a liner, or a freighter, or even a Volvo) requires a steady place in free fall to dock. The docking nests for Rental Row are a rosette around the main docking facility.

In going through the waiting room I avoided eye contact and went straight to my destination, a door in a forward corner of the waiting room. Gwen and Bill were tailed up behind me. Gwen had her purse hooked over her neck and was guarding the bonsai maple with one arm and clinging to my ankle with her other hand; Bill was holding on to one of her ankles and towing a package wrapped in Macy's wrapping, with Macy's logo prominent on it. I don't know what that wrapping paper originally covered but it now concealed Gwen's smaller case, her not-clothes.

Our other baggage? Following the first principle of saving one's neck, we'd chucked it. It would have marked us as phony-for a one-day side trip Shriners on holiday do not carry great loads of baggage. Gwen's smaller case we could salvage because, disguised with Macy's wrapping, it looked like the sort of shopping many of the Shriners

had obviously done. And so did the little tree-just the sort of awkward, silly purchase tourists indulge in. But the rest of our baggage had to be abandoned.

Oh, perhaps it could be shipped to us someday, if safe means could be worked out. But I had written it off our books. Doc Schultz, by scolding me for crabbing over the cost of the deal Gwen had arranged, had reoriented me. I had let myself become soft and sedentary and domesticated-he had forced me to shift gears to the real world, where there are only two sorts:

the quick and the dead.

A truth of which I again became acutely aware in crossing that waiting room: Chief Franco came in behind us. He appeared to be unaware of us and I strove to appear unaware of him. He seemed intent only on reaching a group of his henchmen guarding the lock to the passenger tunnel; he dived straight toward them while I was pulling my little family along a lifeline stretching from the entrance to the corner I wanted to reach. And did reach it and got through Budget Jets' door, and it contracted behind us and I breathed again and reswallowed my stomach.

In the office of Budget Jets we found me manager, a Mr. Dockweiler, belted at his desk, smoking a cigar, and reading the Luna edition of the Daily Racing Form. He looked around as we came in and said, "Sorry, friends, I don't have a thing to rent or sell. Not even a witch's broom.*'

I thought about who I was-Senator Richard Johnson, representing the enormously wealthy systemwide syndicate of sassafras snifters, one of the most powerful wheeler-dealers at The Hague-and let the Senator's voice speak for me. "Son, I'm Senator Johnson. I do believe that one of my staff made a reservation in my name earlier today-for a Hanshaw Superb."

"Oh! Glad to meet you. Senator," he said as he clipped his paper to his desk and unfastened his seat belt. "Yes, I do have your reservation. But it's not a Superb. It's a Volvo."

"What! Why, I distinctly told that girl - Never mind. Change it, please."

"I wish I could, sir. I don't have anything else."

"Regrettable. Would you be so kind as to consult your competitors and find me a-
"

"Senator, there is not a unit left for rent anywhere in Golden Rule. Morris Garage, Lockheed-Volkswagen, Hertz, Interplan-et-we've all been querying each other the past hour. No soap. No go. No units."

It was time to be philosophical. "In that case I had better drive a Volvo, hadn't I, son?"

The Senator again got just a touch cranky when required to pony up full list price on what was clearly a much-used car- I complained about dirty ashtrays and demanded that they be vacuumed out... then I said not to bother (when the terminal behind Dockweiler's head stopped talking about Ames and Novak) and said, "Let's check me mass and available delta vee; I want to lift."

For a mass reading Budget Jets does not use a centrifuge but the newer, faster, cheaper, much more convenient, elastic inertiometer-I just wonder if it is as accurate. Dockweiler had us all get into the net at once (all but the bonsai, which he shook and wrote down as two kilos-near enough, maybe), asked us to hug each other with the Macy's package held firmly amongst us three, then pulled the trigger on the elastic

support-shook our teeth out, almost; then he announced that our total mass for lift was 213.6 kilos.

A few minutes later we were strapping to the cushions and Dockweiler was sealing the nose and then the inner door of the nest. He had not asked for IDs, tourist cards, passports, or motor vehicle pilot's licenses. But he had counted that nineteen thousand twice. Plus insurance. Plus cumshaw.

I punched "213.6 kg" into my computer pilot, then checked my instrument board. Fuel read "full" and all the idiot lights showed green. I pushed the "ready" button and waited. Dockweiler's voice reached us via the speaker: "Happy landing!"

"Thank you."

The air charge went Whwnpf! and we were out of the nest and in bright sunlight. Ahead and close was the exterior of the spaceport. I squeezed the process control for a one-eighty reverse. As we swung, the habitat moved away and into my left viewport; ahead the incoming shuttle came into view-I did nothing about her; she had to keep clear of me, since I was undocking-and, into my right viewport came one of the most impressive sights in the system: Luna from close up, a mere three hundred kilometers-I could reach out and touch her.

I felt grand.

Those lying murdering scoundrels were left behind and we were forever out of reach of Sethos's whimsical tyranny. At first, living in Golden Rule had seemed happily loose and carefree. But I had learned. A monarch's neck should always have a noose around it-it keeps him upright.

I was in the pilot's couch; Gwen had the copilot's position on my right. I looked toward her and then realized that I was still wearing that silly eyepatch. No, delete "silly"-it had, quite possibly, saved my life. I took it off, stuffed it into a pocket. Then I took that fez off, looked around for somewhere to put it-tucked it under my chest belt. "Let's see if we are secure for space," I said.

"Isn't it a little late for that, Richard?"

"I always do my check-off lists after I lift," I told her. "I'm the optimistic type. You have a purse and a large package from Macy's; how arc they secured?"

"They arc not, as yet. If you will refrain from goosing mis craft while I do it, I'll unstrap and net them." She started to unstrap.

"Woops! Before unstrapping you must get permission from the pilot."

"I thought I had it."

"You do now. But don't make that mistake again. Mr. Christian, His Majesty's Ship Bounty is a taut ship and will remain that way. Bill! How are you doing back there?"

" 'M okay."

"Are you secure in all ways? When I twist her tail, I don't want any loose change flying around the cabin."

"He's belted in properly," Gwen assured me. "I checked him. He is holding Tree-San's pot flat against his tummy and he has my promise that, if he lets go of it, we will bury him without rites."

"I'm not sure it will stand up under acceleration."

"Neither am I but there was no way to pack it. At least it will be in the correct attitude for acceleration-and I'm reciting some spells. Dear man, what can I do with this

wig? It's the one Naomi uses for public performances; it's valuable. It was sweet indeed of her to insist that I wear it-it was the final, convincing touch, I think-but I don't see how to protect it. It's at least as sensitive to acceleration as Tree-San."

"Durned if I know-and that's my official opinion. But I doubt that I will need to push this go-buggy higher than two gee." I thought about it. "How about the glove compartment? Take all of the Kleenex out of the dispenser and crumple it up around the wig. And some inside it. Will that work?"

"I think so. Time enough?"

"Plenty of time. I made a quick estimate at Mr. Dockweiler's office. In order to land at Hong Kong Luna port and in sunlight I should start moving into a lower orbit about twenty-one hundred. Loads of time. So go ahead, do whatever you need to do... while I tell the computer pilot what I want to do. Gwen, can you read all the instruments from your side?"

"Yes, sir."

"Okay, that's your job, that and the starboard viewport. I'll stick to power, attitude, and this baby computer. By the way, you're licensed, aren't you?"

"No point in asking me now, is there? But let not your heart be troubled, dear; I was herding sky junk before I was out of high school."

"Good." I did not ask to see her license-as she had pointed out, it was too late to matter.

And I had noticed that she had not answered my question.

(If ballistics bores you, here is another place to skip.)

A daisy-clipping orbit of Luna (assuming that Luna has daisies, which seems unlikely) takes an hour and forty-eight minutes and some seconds. Golden Rule, being three hundred kilometers higher than a tall daisy, has to go farther than the circumference of Luna (10,919 kilometers), namely 12,805 kilometers. Almost two thousand kilometers farther-so it has to go faster. Right?

Wrong. (I cheated.)

The most cock-eyed, contrary to all common sense, difficult aspect of ballistics around a planet is this: To speed up, you slow down; to slow down, you speed up.

I'm sorry. That's the way it is.

We were in the same orbit as Golden Rule, three hundred klicks above Luna, and floating along with the habitat at one and a half kilometers per second (1.5477 k/s is what I punched into the pilot computer... because that was what it said on the crib sheet I got in Dockweiler's office). In order to get down to the surface I had to get into a lower (and faster) orbit... and the way to do that was to slow down.

But it was more complex than that. An airless landing requires that you get down to the lowest (and fastest) orbit... but you have to kill that speed so that you arrive at contact with the ground at zero relative speed-you must keep bending it down so that contact is straight down and without a bump (or not much) and without a skid (or not much)-what they call a "synergistic" orbit (hard to spell and even harder to calculate).

But it can be done. Armstrong and Aldrin did it right the first time. (No second chances!) But despite all their careful mathematics it turned out there was one hell of a big rock in their way. Sheer virtuosity and a hatful of fuel bought them a landing they could walk away from. (If they had not had that hatful of fuel left, would space travel have been delayed half a century or so? We don't honor our pioneers enough.)

There is another way to land. Stop dead right over the spot where you want to touch down. Fall like a rock. Brake with your jet so precisely that you kiss the ground like a juggler catching an egg on a plate.

One minor difficulty- Right-angled turns are about the most no-good piloting one can do. You waste delta vee something scandalous-your boat probably doesn't carry that much fuel. ("Delta vee"-pilot's jargon for "change in velocity" because, in equations, Greek letter delta means a fractional change and "v" stands for velocity-and please remember that "velocity" is a direction as well as a speed, which is why rocket ships don't make U-tums.)

I set about programming into the Volvo's little pilot computer the sort of synergistic landing Armstrong and Aldrin made but one not nearly as sophisticated. Mostly I had to ask the piloting computer to call up from its read-only memory its generalized program for landing from an orbit circum Luna... and it docilely admitted that it knew how... and then I had to inject data for this particular landing, using the crib sheet supplied by Budget Jets.

Finished with that, I told the computer pilot to check what I had entered; it reluctantly conceded that it had all it needed to land at Hong Kong Luna at twenty-two hundred hours seventeen minutes forty-eight point three seconds.

Its clock read 1957. Just twenty hours ago a stranger calling himself "Enrico Schultz" had sat down uninvited at my table in Rainbow's End-and five minutes later he was shot. Since then, Gwen and I had wed, been evicted, "adopted" a useless dependent, been charged with murder, and run for our lives. A busy day!-and not yet over.

I had been living in humdrum safety much too long. Nothing gives life more zest than running for your life. "Copilot."

"Copilot aye aye!"

"This is fun! Thank you for marrying me."

"Roger, Captain darling! Me, too!"

This was my lucky day, no doubt about it! A lucky break in the timing had kept us alive. At this instant Chief Franco must be checking every passenger entering the twenty o'clock shuttle, waiting for Dr. Ames and Mistress Novak to claim their reservations-while we were already out the side door. But, while that critical tuning saved our lives. Lady Luck was still handing out door prizes.

How? From Golden Rule's orbit our easiest landing on Luna would involve putting down at some point on the terminator- least fuel consumed, smallest delta vee. Why? Because we were already on that terminator line, going pole to pole, south to north, north to south, so our simplest landing was to bend it down where we were, never change our heading.

To land in the east-west direction would involve throwing away our present motion, then expending still more delta vee making that foolish right-angle turn-then programming for landing. Maybe your bank account can afford this waste; your skycar cannot-you're going to find yourself sitting up there with no fuel and nothing under you but vacuum and rocks. Unappetizing.

To save our necks I was happy to accept any landing field on Luna... but that door prize from Lady Luck included landing at my preferred field (Hong Kong Luna) just about daybreak there, with only an hour spent parked in orbit waiting for the time to tell the computer pilot to take us down. What more could I ask for?

At that moment we were floating over the backside of the Moon-as corrugated as the backside of an alligator. Amateur pilots do not land on the far side of Luna for two reasons: 1) mountains-the side of the Moon turned away from Earth makes the Alps look like Kansas; 2) settlements-there aren't any to speak of. And let's not speak of settlements that aren't to speak of, because it might make some unspeakable settlers quite angry.

In another forty minutes we would be over Hong Kong Luna just as sunrise was reaching it. Before that time I would ask for clearance to land and for ground control on the last and touchiest part of landing-then spend the next two hours in going around behind again and gently lowering the Volvo down for landing. Then it would be time to turn control over to Hong Kong Luna ground control but, I promised myself, I would stay on overrides and work the landing myself, just for drill. How long had it been since I had shot an airless landing myself? Calhsto, was it? What year was that? Too long!

At 2012 we passed over Luna's north pole and were treated to earthrise... a breathtaking sight no matter how many times one has seen it. Mother Earth was in half phase (since we were ourselves on Luna's terminator) with the lighted half to our left. It being only days past summer solstice, the north polar cap was tilted into full sunlight, dazzling bright. But North America was almost as bright, being heavily cloud-covered except part of the Mexican west coast.

I found that I was holding my breath, and Gwen was squeezing my hand. I almost forgot to call HKL ground control.

"Volvo Bee Jay Seventeen calling HKL Control. Do you read me?"

"Bee Jay Seventeen affirm. Go ahead."

"Request clearance to land approx twenty-two hundred seventeen forty-eight. Request ground-controlled landing with manual override. I am out of Golden Rule and still in Golden Rule orbit approx six klicks west of her. Over."

"Volvo Bee Jay Seventeen. Cleared to land Hong Kong Luna approx twenty-two seventeen forty-eight. Shift to satellite channel thirteen not later than twenty-one forty-nine and be ready to accept ground control. Warning: You must start standard descent program that orbit at twenty-one oh-six nineteen and follow it exactly. If at insertion for ground-controlled landing you are off in vector three percent or in altitude four klicks, expect wave off. Control HKL."

"Roger wilco." I added, "I'll bet you don't realize that you are talking to Captain Midnight, the Solar System's hottest pilot"-but I shut off the mike before I said it.

Or so I thought. I heard a reply, "And this is Captain Hem-orrhoid Hives, Luna's nastiest ground-control pilot. You're going to buy me a liter of Glenlivet after I bring you down. If I bring you down."

I checked that microphone switch-didn't seem to be anything wrong with it. I decided not to acknowledge. Everybody knows that telepathy works best in a vacuum... but there ought to be some way for an ordinary Joe to protect himself against supermen.

(Such as knowing when to keep his mouth shut.) I set the alarm for twenty-one hours, then processed to attitude straight down and, for the next hour, enjoyed the ride while holding hands with my bride. The incredible mountains of the Moon, taller and sharper than the Himalayas and tragically desolate, flowed by ahead of (under) us. The only sound was the soft murmur of the computer and the sighing of the air scavenger-and a regular, annoying sniff from Bill. I shut out all sound and invited my soul. Neither Gwen nor I felt like talking. It was a happy interlude, as peaceful as the Old Mill Stream.

"Richard! Wake up!"

"Huh? I wasn't asleep."

"Yes, dear. It's past twenty-one.**

Uh... so it was. Twenty-one oh-one and ticking. What happened to the alarm? Never mind that now-I had five minutes and zip seconds to make sure we entered descent program on time. I hit the control to process, from headstand to bel-lywhopper backwards-easiest for descent, although supine backwards will work just as well. Or even sideways backwards. Whichever, the jet nozzle must point against the direction of motion in order to reduce speed for insertion into landing program-i.e., "backwards" for the pilot, like me Fillyloo Bird. (But I'm happiest when the horizon looks "right" for the way I'm belted in; that's why I prefer to put the skycar into bel-lywhopper backwards.)

As soon as I felt the Volvo start to process I asked the computer if it was ready to start landing program, using standard code from the list etched on its shell.

No answer. Blank screen. No sound.

I spoke disparagingly of its ancestry. Gwen said, "Did you punch the execute button?"

"Certainly I did!" I answered and punched it again.

Its screen lit up and the sound came on at teeth-jarring level:

"How do you spell comfort? For the wise Luna citizen today, overworked, overstimulated, overstressed, it is spelled C, 0, M, F, I, E, S-that's Comfies, the comfort therapists recommend most for acid stomach, heartburn, gastric ulcers, bowel spasm, and simple tummy ache. Comfies! They Do More! Manufactured by Tiger Balm Pharmaceuticals, Hong Kong Luna, makers of medicines you can rely on. C, 0, M, F, I, E, S, Comfies! They Do More! Ask your therapist." Some screech owls started singing about the delights of Comfies.

"This damn thing won't turn off!"

"Hit it!"

"Huh?"

"Hit it, Richard."

I could not see any logic in that but it did meet my emotional needs; I slapped it, fairly hard. It continued to spout inanities about over-priced baking soda.

"Dear, you have to hit it harder than that. Electrons are timid little things but notional; you have to let them know who's boss. Here, let me." Gwen walloped it a good one-I thought she would crack the shell.

It promptly displayed:

Ready for descent-Zero Time = 21-06-17.0.

Its clock showed 21-05-42.7

-which gave me just time to glance at the altimeter radar (which showed 298 klicks above ground, steady) and at the doppler readout, which showed us oriented along our motion-over-ground line, close enough for government work... although what I could have done about it in ca. ten seconds I do not know. Instead of using fractional jets paired in couples to control attitude, a Volvo uses gyros and processes against them- cheaper than twelve small jets and a mess of plumbing. But slower.

Then, all at once, the clock matched the zero time, the jet cut in, shoving us into the cushions, and the screen displayed the program of bums-the topmost being:

21-06-17.0-
-19 seconds 21-06-36.0

Sweet as could be, the jet cut off after nineteen seconds without even clearing its throat. "See?" said Gwen. "You just have to be firm with it."

"I don't believe in animism."

"You don't? How do you cope with- Sorry, dear. Never mind; Gwen will take care of such things."

Captain Midnight made no answer. You couldn't truthfully say that I sulked. But, damn it all, animism is sheer superstition. (Except about weapons.)

I had shifted to channel thirteen and we were just coming up on the fifth bum. I was getting ready to turn control over to HKL GCL (Captain Hives) when that dear little electronic idiot crashed its RAM-its Random Access Memory on which was written our descent program. The table of bums on the screen dimmed, quivered, shrank to a dot and disappeared. Frantically I punched the reset key-nothing happened.

Captain Midnight, undaunted as usual, knew just what to do. "Gwen! It lost the program!"

She reached over and clouted it. The bum schedule was not restored-a RAM, once crashed, is gone forever, like a burst soap bubble-but it did boot up again. A cursor appeared in the upper left comer of the screen and blinked inquiringly. Gwen said, "What time is your next bum, dear? And how long?"

'Twenty-one, forty-seven, seventeen, I think, for, uh, eleven seconds. I'm fairly sure it was eleven seconds."

"I check you on both figures. So do that one by hand, then ask it to recompute what it lost."

"Righto." I typed in the bum. "After this one I'm ready to accept control from Hong Kong."

"So we're out of the woods, dear-one bum by hand and then ground control takes over. But we'll recompute just for insurance."

She sounded more optimistic than I felt. I could not remember what vector and altitude I was supposed to achieve for take-over by ground control. But I had no time to worry about it; I had to set up this bum.

I typed it in:

21-47-17.0-
-11.0 seconds 21-47-28.0

I watched the clock and counted with it. At exactly seventeen seconds past 2147 I jabbed the firing button, held it down. The jet fired. I don't know whether I fired it or the computer did. I held my finger down as the seconds ticked off and lifted it exactly on eleven seconds.

The jet kept on firing.

("-run in circles, scream and shout!") I wiggled the firing button. No, it was not stuck. I slapped the shell. The jet kept on roaring and shoving us into the cushions.

Gwen reached over and cut power to the computer. The jet stopped abruptly.

I tried to stop trembling. "Thank you, Copilot."

"Yessir."

I looked out, decided that the ground seemed closer than I liked, so I checked the altimeter radar. Ninety something-the third figure was changing. "Gwen, I don't think we're going to Hong Kong Luna."

"I don't think so, either."

"So now the problem is to get this junk out of the sky without cracking it."

"I agree, sir."

"So where are we? An educated guess, I mean. I don't expect miracles." The stuff ahead-behind, rather; we were still oriented for braking-looked as rough as the back side. Not a place for an emergency landing.

Gwen said, "Could we face around the other way? If we could see Golden Rule, that would tell us something."

"Okay. Let's see if it responds." I clutched the processing control, told the skycar to swing one-eighty degrees, passing through headstand again. The ground was noticeably closer. Our skycar settled down with the horizon running right and left-but with the sky on the "down" side. Annoying... but all we wanted was to look for our late home. Golden Rule habitat. "Do you see it?"

"No, I don't, Richard."

"It must be over the horizon, somewhere. Not surprising, it was pretty far away the last time we looked-and that last bum was a foul blast. A long one. So where are we?"

"When we swung past that big crater- Aristoteles?"

"Not Plato?"

"No, sir. Plato would be west of our track and still in shadow.

It could be some ringwall I don't know... but that smooth stuff-that fairly smooth stuff-south of us makes me think that it must be Aristoteles."

"Gwen, it doesn't matter what it is; I've got to try to put this wagon down on that smooth stuff. That fairly smooth stuff. Unless you have a better idea?"

"No, sir, I do not. We're falling. If we speeded up enough to maintain a circular orbit at this altitude, we probably would not have enough fuel to bring her down later. That's a guess."

I looked at the fuel gauge-that last long, foul blast had wasted a lot of my available delta vee. No elbow room. "I think your guess is a certainty-so we'll land. We'll see if our little friend can calculate a parabolic descent for this altitude- for I intend to kill our forward speed and simply let her drop, once we are over ground that looks smooth. What do you think?"

"Uh, I hope we have fuel enough."

"So do I. Gwen?"

"Yes, sir?"

"Honey girl, it's been fun."

"Oh, Richard! Yes."

Bill said in a choked voice, "Uh, I don't think I can-"

I was processing to put us back into a braking attitude. "Pipe down. Bill; we're busy!" Altimeter showed eighty something- how long did it take to fall eighty klicks in a

one-sixth gee field? Switch on the pilot computer again and ask it? Or do it in my head? Could I trust the pilot computer not to switch on the jet again if I fed it juice?

Better not risk it. Would a straight-line approximation tell me anything? Let's see- Distance equals one half acceleration multiplied by the square of the time, all in centimeters and seconds. So eighty klicks is, uh, eighty thousand, no, eight hund- No, eight million centimeters. Was that right?

One-sixth gee- No, half of one sixty-two. So bring it across and take the square root-

One hundred seconds? "Gwen, how long till impact?"

"About seventeen minutes. That's rough; I just rounded it off in my head."

I took another quick look inside my skull, saw that in failing to allow for forward vector-the "fall-around" factor-my "approximation" wasn't even a wild guess. "Close enough. Watch the doppler; I'm going to kill some forward motion. Don't let me kill all of it; we'll need some choice in where to put down."

"Aye, aye. Skipper!"

I switched power to the computer; the jet immediately fired. I let it run five seconds, cut power. The jet sobbed and quit. "That," I said bitterly, "is one hell of a way to handle the throttle. Gwen?"

"Just crawling along now. Can we swing and see where we're going?"

"Sure thing."

"Senator-"

"Bill-shut up!" I tilted it around another hundred and eighty degrees. "See a nice smooth pasture ahead?"

"It all looks smooth, Richard, but we're still almost seventy klicks high. Should get down pretty close before you kill all your forward speed, maybe? So you can see any rocks."

"Reasonable. How close?"

"Uh, how does one klick sound?"

"Sounds close enough to hear the wings of the Angel of Death. How many seconds till impact? For one-kilometer height, I mean."

"Uh, square root of twelve hundred plus. Call it thirty-five seconds."

"All right. You keep watching height and terrain. At about two klicks I want to start to kill the forward speed. I've got to have time to twist another ninety degrees after that, to back down tail first. Gwen, we should have stayed in bed."

"I tried to tell you that, sir. But I have faith in you."

"What is faith without works? I wish I was in Paducah. Time?"

"Six minutes, about."

"Senator-"

"Bill, shut up! Shall we trim off half me remaining speed?"

"Three seconds?"

I gave a three-second blast, using the same silly method of starting and stopping the jet.

'Two minutes, sir."

"Watch the doppler. Call it." I started the jet.

"Now!"

I stopped it abruptly and started to process, tail down, "windshield" up. "How does it read?"

"We're as near dead in the water as can be done that way, I think. And I wouldn't fiddle with it; look at that fuel reading."

I looked and didn't like it. "All right, I don't blast at all until we are mighty close." We steadied in the heads-up attitude-nothing but sky in front of us. Over my left shoulder I could see the ground at about a forty-five-degree angle. By looking past Gwen I could see it out the starboard side, too, but at quite a distance-a bad angle, useless. "Gwen, how long is this buggy?"

"I've never seen one out of a nest. Does it matter?"

"It matters a hell of a lot when I'm judging how far to the ground by looking past my shoulder."

"Oh. I thought you meant exactly. Call it thirty meters. One minute, sir."

I was about to give it a short blast when Bill blasted. So the poor devil was space sick but at that instant I wished him dead. His dinner passed between our heads and struck the forward viewport, there spread itself. "Bill!" I screamed. "Stop that!"

(Don't bother to tell me that I made an unreasonable demand.)

Bill did the best he could. He trained his head to the left and deposited his second volley on the left viewport-leaving me flying blind.

I tried. With my eyes on the radar altimeter I gave it a quick blast-and lost that, too. I'm sure that someday they will solve the problem of accurate low-scale readings taken through jet blast and fouled by "grass" from terrain-I was just bom too soon, that's all. "Gwen, I can't see!"

"I have it, sir." She sounded calm, cool, relaxed-a fit mate for Captain Midnight. She was looking over her right shoulder at the Lunar soil; her left hand was on the power switch to the pilot computer, our emergency "throttle."

"Fifteen seconds, sir... ten... five." She closed the switch.

The jet blasted briefly, I felt the slightest bump, and we had weight again.

She turned her head and smiled. "Copilot reports-" And lost her smile, looked startled, as we felt the car swing. Did you ever play tops as a kid? You know how a top behaves

as it winds down? Around and around, deeper and deeper, as

it slowly goes lower, lays itself down and stops? That's what

this pesky Volvo did.

Until it lay full length on the surface and rolled. We wound

up still strapped, safe and unbruised-and upside down. Gwen continued, "-reports touchdown, sir." "Thank you, Copilot."

X

'It is useless for sheep to pass resolutions in favor of vegetarianism while wolves remain of a different opinion."

WILLIAM RALPH INGE, D. D. 1860-1954

"There's one born every minute."

P. T. BARNUM 1810-1891

I added, 'That was a beautiful landing, Gwen. PanAm never set a ship down more gently."

Gwen pushed aside her kimono skirt, looked out. "Not all that good. I simply ran out of fuel."

"Don't be modest. I especially admired that last little gavotte that laid the car down flat. Convenient, since we don't have a landing-field ladder here."

"Richard, what made it do that?"

"I hesitate to guess. It may have had something to do with the processing gyro... which may have tumbled. No data, no opinion. Dear, you look charming in that pose. Tristram Shandy was right; a woman looks her best with her skirts flung over her head."

"I don't think Tristram Shandy ever said that."

'Then he should have. You have lovely legs, dear one."

'Thank you. I think. Now will you kindly get me out of this mess? My kimono is tangled in the belt and I can't unfasten it."

"Do you mind if I get a picture first?"

Gwen sometimes makes unladylike retorts; it is then best to change the subject. I got my own safety belt loose, made a quick, efficient descent to the ceiling by falling on my face, got up and tackled, freeing Gwen. Her belt buckle wasn't really a problem; it was just that she could not see it to clear it. I did so and made sure that she did not fall as I got her loose-set her on her feet and claimed a kiss. I felt euphoric-only minutes ago I would not have bet even money on landing alive.

Gwen delivered payment and good measure. "Now let's get Bill loose."

"Why can't he-"

"He doesn't have his hands free, Richard."

When I let go my bride and looked, I saw what she meant. Bill was hanging upside down with a look of patient suffering on his face. My- Our bonsai maple he held pressed against his belly, the plant unhurt. He looked solemnly at Gwen. "I didn't drop it," he said defensively.

I silently granted him absolution for throwing up during touch down. Anyone who can attend to a duty (even a simple one) during the agony of acute motion sickness can't be all bad. (But he must clean it up; absolution did not mean that I would clean up after him. Nor should Gwen. If she volunteered, I was going to be macho and husbandly and unreasonable.)

Gwen took the maple and set it on the underside of the computer. Bill unbuckled himself while I supported him by his ankles, then I lowered him to the ceiling and let him straighten himself up. "Gwen, give Bill the pot and let him continue to take care of it. I want it out of the way... as I must get at the computer and the instrument board." Should I say out loud what was worrying me? No, it might make Bill sick again... and Gwen will have figured it out for herself.

I lay down on my back and scrunched under the computer and instrument board, switched on the computer.

A brassy voice I recognized said, "-Seventeen, do you read? Volvo Bee Jay Seventeen, come in. This is Hong Kong Luna ground control calling Volvo Bee Jay Seventeen-"

"Bee Jay Seventeen here. Captain Midnight speaking. I read you. Hong Kong."

"Why in hell don't you stay on channel thirteen. Bee Jay? You missed your checkpoint. Wave off. I can't bring you down."

"Nobody can. Captain Hives; I am down. Emergency landing. Computer malfunction. Gyro malfunction. Radio malfunction. Jet malfunction. Loss of visibility. On landing we fell off our jacks. Fuel gone and attitude impossible for lift off anyhow. And now the air scavenger has quit."

There was a fairly long silence. "Tovarishch, have you made your peace with God?"

"I've been too bloody busy!"

"Hmm. Understandable. How are you fixed for cabin pressure?"

"The idiot light reads green. There's no gauge for it."

"Where are you?"

"I don't know. Things went sour at twenty-one forty-seven, just before I was to turn control over to you. I've spent the time since on a seat-of-the-pants descent. While I don't know where we are, we should be somewhere on Golden Rule's orbit track; our bums were all carefully oriented. We passed over what I think was Aristoteles at, uh-"

'Twenty-one, fifty-eight," Gwen supplied.

'Twenty-one, fifty-eight; my copilot logged it. I brought her down in a mare south of there. Lacus Somniorum?"

"Wait one. Did you stay with the terminator?"

"Yes. We still are. Sun is just at horizon."

"Then you can't be that far east. Time of touch down?"

I didn't have the foggiest. Gwen whispered, 'Twenty-two, oh-three, forty-one." I repeated, 'Twenty-two, oh-three, forty-one."

"Hmm. Let me check. In that case you must be south of Eudoxus in the northernmost part of Mare Serenitatis. Mountains west of you?"

"Big ones."

"Caucasus range. You're lucky; you may yet live to be hanged. There are two inhabited pressures fairly close to you;

there may be someone interested in saving you... for the pound of flesh nearest your heart, plus ten percent."

"I'll pay."

"You surely will! And if you're rescued, don't forget to ask for your bill from us, too; you may need us another day. All right, I'll pass the word. Hold it. Could this be some more of your Captain Midnight nonsense? If it is, I'll cut your liver out and toast it."

"Captain Hives, I'm sorry about that, truly I am. I was simply kidding with my copilot and I thought my mike was cold. Should have been; I opened the switch. One of my endless problems with this collection of scrap."

"You shouldn't kid around while maneuvering."

"I know. But- Oh, what the hell. My copilot is my bride;

today is our wedding day-just married. I've felt like laughing and joking all day long; it's that sort of a day."

"If that is true-okay. And congratulations. But I'll expect you to prove it, later. And my name is Marcy, not Hives. Captain Marcy Choy-Mu. I'll pass the data along and we will try to locate you from orbit. Meantime, you had better get on channel eleven-that's emergency-and start singing Mayday. And I've got traffic, so-"

Gwen was on her hands and knees, by me. "Captain Marcy!"

"Huh? Yes?"

"I really am his bride and he really did marry me just today and if he weren't a hot pilot, I wouldn't be alive this minute. Everything did go wrong, just as my husband said. It's been like piloting a barrel over Niagara Falls."

"I've never seen Niagara Falls but I read you. My best wishes, Mrs. Midnight. May you have a long and happy life together, and lots of children."

"Thank you, sir! If someone finds us before our air runs out, we will."

Gwen and I took turns calling "Mayday, Mayday!" on channel eleven. When I was off duty, I checked into the resources and equipment of good old Volvo B. J. 17, the clunker. By the Protocol of Brasilia that skycar should have been equipped with reserve water, air, and food, a class two first-aid kit, minimum sanitary facilities, emergency pressure suits (UN-SN spec 10007A) for maximum capacity (four, including pilot).

Bill spent his time cleaning viewports and elsewhere, using Kleenex salvaged from the glove compartment-Naomi's wig had come through okay. But he almost burst his bladder before he got up his nerve to ask me what to do. Then I had to teach him how to use a balloon... as the skycar's "minimum sanitary facilities" turned out to be a small package of rude expedients and a pamphlet telling how to use them if you just had to.

The other emergency resources were of the same high standards.

There was water in a two-liter drinking tank at the pilot's position-almost full. No reserve. But nothing to worry about as there was no reserve air, and we would suffocate in stale air before we could die of thirst. The air scavenger still was not working but there was a fitting to crank it by hand-all but the crank handle, which was missing. Food? Let's not joke. But Gwen had a Hershey bar in her purse; she broke it in three and shared it. Delicious!

Pressure suits and helmets occupied most of the storage space back of the passenger couches-four of each, correct by the book. They were military surplus rescue suits, still sealed in their original cartons. Each carton was marked with contractor's name (Michelin Tires, S.A.) and date (twenty-nine years ago).

Aside from the fact that the plasticizers would have bled out of all plastomers and elastomers-hoses, gaskets, etc.- in that time, and the fact that some roguish japester had neglected to supply air bottles, these pressure suits were just dandy. For a masquerade ball.

Nevertheless I was prepared to trust my life to one of these clown suits for five minutes, or even ten, if the alternative involved exposing my bare face to vacuum.

But if the alternative was merely rassling a grizzly bear, I'd holler, "Bring on your b'ar!"

Captain Marcy called us, told us that a satellite camera showed us to be at thirty-five degrees seventeen north, fourteen degrees oh seven west. "I've notified Dry Bones Pressure and Broken Nose Pressure; they're nearest. Good luck."

I tried to dig out of the computer a call directory for Luna. But it was still sulking; I could not get it to list its own directory. So I tried some test problems on it. It insisted that 2 + 2 = 3.999999999999999999999.... When I tried to get it to admit that 4 = 2 + 2, it became angry and claimed that 4 = 3,14159265358979323846264338327950288419716939937511 .... So I gave up.

I left channel eleven switched on at full gain and got up off the ceiling. I found Gwen wearing a powder blue siren suit with a flame-colored scarf at her throat. She looked fetching.

I said to her, "Sweetheart, I thought all your clothes were still in Golden Rule?"

"I crowded this into the little case when we decided to abandon baggage. I can't keep up the pretense of being Japanese once I wash my face... which, I trust, you have noticed that I have done."

"Not too well. Especially your ears."

"Picky, picky! I used only a wet hanky of our precious drinking water. Beloved, I could not pack another safari suit- or whatever-for you. But I do have clean jockey shorts and a pair of socks for you.'^

"Gwen, you're not only wholesome; you're efficient."

" 'Wholesome'!"

"But you are, dear. That's why I married you."

"Hummph! When I figure out just how I've been insulted and how much, you are going to pay... and pay and pay and pay and pay!"

This footless discussion was ended by the radio: "Volvo Bee Jay Seventeen, is that your Mayday? Over."

"Yes indeed!"

"This is Jinx Henderson, Happy Chance Salvage Service, Dry Bones Pressure. What do you need?" I described our situation, stated our latitude and longitude.

Henderson answered, "You got this heap from Budget, right? Which means to me you didn't rent it; you bought it outright on a buy-back contract-I know those thieves. So now you own it. Correct?"

I admitted that I was owner of record.

"You plan to lift off and take it to Hong Kong? If so, what'll you need?"

I thought some long thoughts in about three seconds. "I don't think this skycar will ever lift from here. It needs a major overhaul."

"That means hauling it overland to Kong. Yeah, I can do that. Long trip, big job. Meantime personal rescue, two people-right?" "Three."

"Okay, three. Are you ready to record a contract?" A woman's voice cut in. "Just stop right there. Jinx. Bee Jay Seventeen, this is Maggie Snodgrass, Chief Operator and General Manager of the Red Devil Fire, Police, and Rescue Team, Broken Nose Pressure. Do nothing till you hear my terms... 'cause Jinx is fixing to rob you." "Hi, Maggie! How's Joel?" "Fine as silk and meaner than ever. How's Ingrid?" "Purtier man ever and got another one in the oven." "Well, good for you! Congratulations! When's she expecting?"

"Christmas or maybe New Year's, near as we can tell." "I'll plan on coming to see her before then. Now are you going to back off and let me treat this gentleman fairly? Or am I going to purely riddle your shell and let all the air out? Yes, I see you, coming over the rise-I started out same time you did, just as soon as Marcy gave the location. I said to Joel, 'That's our territory... but that lyin' scoundrel Jinx is going to try to steal it right out from under me'-and you didn't let me down, boy; you're here."

"And planning to stay, Maggie-and quite ready to drop a little non-nuclear reminder right under your treads if you don't behave. You know the rules: Nothing on the surface belongs to nobody... unless they sit on it... or establish a pressure on it or under it."

"That's your idea of the rules, not mine. That comes from those lawyer types in Luna City... and they don't speak for me and never did. Now let's shift to channel four- unless you want everybody in Kong to hear you beg for mercy and utter your last dying gasp."

"Channel four it is, Maggie you old windy gut." "Channel four. Who'juh hire to make that baby. Jinx? If you were serious about salvage, you'd be out here with a transporter, same as roe-instead of your rolligon buggy."

I had shifted to channel four when they did; I now kept quiet. Each had broken over the horizon about the same time, Maggie from southwest. Jinx from northwest. Since we had come to rest with the main viewport oriented west, we could see them easily. A rolligon lorry (had to be Henderson, from the talk) was in the northwest and a little closer. It had what seemed to be a bazooka mount just forward of its cabin. The transporter was a very long vehicle, with tractor treads at each end and a heavy-duty crane mounted aft. I did not see a bazooka mounted on it but I did see what could have been a Browning

2.54 cm semi.

"Maggie, I hurried out here in the roily for humanitarian reasons... something you wouldn't understand. But my boy Wolf is fetching my transporter, with his sister Gretchen manning the turret. Should be here soon. Shall I call them and tell them to go home? Or hurry along and avenge their pappy?"

"Jinx, you don't really think I'd shoot holes in your cabin,

do you?"

"Yes, Maggie, I most surely do think you would. Which would just barely give me time to put one under your treads, that being where I'm aimed right now. On a dead-man trigger. Which would leave me dead... and you just sitting there, unable to move, and just waiting for what my kids would do to the party who done in their pappy... my turret gun having about three times the reach of your pea shooter. Which is why I got it... after Howie come to his death by mischance."

"Jinx, are you trying to scandalize me with that old tale? Howie was my partner. You should be ashamed."

"Not accusing you of anything, dear. Just cautious. How about it? Wait for my kids and I take all? Or divvy up, nice

and polite?"

I simply wished that these enthusiastic entrepreneurs would get on with it. Our air pressure light had blinked red and I was feeling a touch light-headed. I suppose that roll after landing opened a slow leak. I dithered between a need to tell them to hurry and a realization that my bad bargaining position would drop to zero or even minus if I did so.

Mistress Snodgrass said thoughtfully, "Well, Jinx, it doesn't make sense to drag this junk to your pressure-north of mine- when it's about thirty klicks closer to take it to Kong by way

of my place-south of yours. Right?"

"Simple arithmetic, Maggie. And I have plenty of room in this buggy for three more... whereas I'm not sure you could take three passengers even if you stacked them like hotcakes."

"I could handle them but I'll concede you have more room. All right, you take the three refugees and skin them all your conscience will let you... and I'll take the abandoned junker and salvage what I can out of it. If any."

"Oh, no, Maggie! You're too generous; I wouldn't want to cheat you. Right down the middle. Written records. Confirmed."

"Why, Jinx, do you think I would cheat you?"

"Let's not debate that, Maggie; it would only cause grief. That skycar is not abandoned; its owner is inside it this very minute. Before you can move it, you must have a release from him... based on a recorded contract. If you don't want to be reasonable, he can wait right here for my transporter, and never abandon his property. No salvage, just cartage at hire... plus complimentary transportation for the owner and his guests."

"Mr. What's-your-name, don't let Jinx fool you. He gets you and your car to his pressure, he'll peel you like an onion, till there's nothing left of you but the smell. I offer you a thousand crowns cash, right now, for that junk metal you're sitting in."

Henderson countered, 'Two thousand, and I take you in to pressure. Don't let her swindle you; there is more salvage than she's offering in your computer alone."

I kept quiet while these two ghouls settled how they were carving us up. When they had agreed, I agreed... with only nominal resistance. I objected that the price had gone up and was much too high. Mistress Snodgrass said, 'Take it or leave it." Jinx Henderson said, "I didn't get out of a warm bed to lose money on a job."

I took it.

So we wore those silly shelf-worn suits, almost as gas tight as a wicker basket. Gwen objected that Tree-San must not be exposed to vacuum. I told her to shut up and not be silly; a few moments' exposure would not kill the little maple-and we had run out of air, no choice. Then she was going to carry it. Then she let Bill carry it; she was busy otherwise-me.

You see, I can't wear a pressure suit that has not been especially made for me... while wearing my artificial foot. So I had to remove it. So I had to hop. That's okay; I'm used to hopping, and at one-sixth gee hopping is no problem. But Gwen had to mother me.

So here we go-Bill leading off with Tree-San, under instructions from Gwen to get inside fast and get some water from Mr. Henderson to spray on it, then Gwen and I followed as Siamese twins. She earned her small case with her left hand and put her right arm around my waist. I had my artificial foot slung over my shoulder, and I used my cane and hopped and steadied myself with my left arm around her shoulders. How could I tell her that I would have been steadier without her help? I kept my big mouth shut and let her help me.

Mr. Henderson let us into the cab, then gasketed it tight and opened an air bottle lavishly-he had been running in vacuum, wearing a suit. I appreciated his lavish expenditure of air mix- oxygen wrested painfully from Lunar rock, nitrogen all the way from Earth-until I saw it next day on my bill at a fat price.

Henderson stayed and helped Maggie wrestle old B. J. 17 onto her transporter, running her crane for her while she handled her tread controls, then he drove us to Dry Bones Pressure. I spent part of the time figuring out what it had cost me. I had had to sign away the skycar totally-net just under twenty-seven thousand. I had paid three thousand

each to rescue us, discounted to eight thousand as a courtesy... plus five hundred each for bed and breakfast... plus (I learned later) eighteen hundred tomorrow to drive us to Lucky Dragon Pressure, the nearest place to catch a rolligon bus to Hong Kong Luna.

On Luna it's cheaper to die.

Still, I was happy to be alive at any price. I had Gwen and money is something you can always get more of.

Ingrid Henderson was a most gracious hostess-smiling and pretty and plump (clearly expecting that child). She welcomed us warmly, woke up her daughter, moved her into a shakedown with them, put us in Gretchen's room, put Bill in with Wolf-at which point I realized that Jinx's threats to Maggie were not backed up by force at hand... and realized, too, that it was none of my business.

Our hostess said goodnight to us, told us the light in the 'fresher was left on in the night, in case-and left. I looked at my watch before turning out me light.

Twenty-four hours earlier a stranger night Schultz sat down at my table.

BOOK Two-Deadly Weapon

XI

"Dear Lord, give me chastity and self-restraint... but not yet, 0 Lord, not yet!"

SAINT AUGUSTINE A.D. 354-430

That damned fez!

That silly, fake-oriental headdress had been fifty percent of a disguise that had saved my life. But, having used it, the coldly pragmatic thing to do would have been to destroy it.

I did not. I had felt uneasy about wearing it, first because I am not any sort of a Freemason, much less a Shriner, and second because it was not mine; it was stolen.

One might steal a throne or a king's ransom or a Martian princess and feel euphoric about it. But a hat? Stealing a hat was beneath contempt. Oh, I didn't reason this out; I simply felt uneasy about Mr. Clayton Rasmussen (his name I found inside his fez) and intended to restore his fancy headgear to him. Someday- Somehow- When I could manage it- When the rain stopped-

As we were leaving Golden Rule habitat, I had tucked it under a belt and forgotten it. After touch down on Luna, as I unstrapped, it had fallen to the ceiling; I had not noticed. As we three were climbing into those breezy escape suits, Gwen had picked it up and handed it to me; I shoved it into the front of my pressure suit and zipped up.

After we reached the Henderson home in Dry Bones Pressure and were shown where we were to sleep, I peeled down with my eyes drooping, so tired I hardly knew what I was doing. I suppose the fez fell out then. I don't know. I just cuddled up to Gwen and went right to sleep-and spent my wedding night in eight hours of unbroken sleep.

I think my bride slept just as soundly. No matter-we had had a grand practice run the night before.

At the breakfast table Bill handed me that fez. "Senator, you dropped your hat on the floor of the 'fresher."

Also at the table were Gwen, the Hendersons-Ingrid, Jinx, Gretchen, Wolf-and two boarders, Eloise and Ace, and three small children. It was a good time for me to come out with a brilliant ad-lib that would account for my possession of this funny hat. What I said was, "Thank you. Bill."

Jinx and Ace exchanged glances; then Jinx offered me Masonic recognition signs.

That's what I have to assume they were. At the time I simply thought that he was scratching himself. After all, all Loonies scratch because all Loonies itch. They can't help it-not enough baths, not enough water.

Jinx got me alone after breakfast. He said, "Noble-"

I said, "Huh?" (Swift repartee!)

"I couldn't miss it that you declined to recognize me there at the table. And Ace saw it, too. Are you by any chance thinking that the deal we made last night wasn't level and on the square?"

(Jinx, you cheated me blind, six ways from zero.) "Why, nothing of the sort. No complaints." (A deal is a deal, you swiftie. I don't welch.)

"Are you sure? I've never cheated a lodge brother-or an outsider, for that matter. But I take special care of any son of a widow just the way I would one of my own blood. If you think you paid too much for being rescued, then pay what you think is right. Or you can have it free."

He added, "While I can't speak for Maggie Snodgrass, she'll make an accounting to me, and it will be honest; there is nothing small about Maggie. But don't expect that salvage to show too much net. Or maybe a loss by the time she sells it because- You know where Budget gets those crocks they rent, don't you?"

I admitted ignorance. He went on, "Every year the quality leasers, like Hertz and Interplanet, sell off their used cars. The clean jobs are bought by private parties, mostly Loonies. The stuff needing lots of work goes to boomers. Then Budget Jets buys what's left at junkyard prices, starvation cheap. They rework that junk at their yard outside Loonie City, getting maybe two cars for each three they buy, then they sell as scrap whatever is left over. That jalopy that let you down-they charged you list, twenty-six thousand... but if Budget actually had as much as five thousand cash tied up in it, I'll give you the difference and buy you a drink, and that's a fact.

"Now Maggie is going to recondition it again. But her repairs will be honest and her work guaranteed and she'll sell it for what it is-worn out, rebuilt, not standard. Maybe it will fetch ten thousand, gross. After fair charges for parts and labor, if the net she splits with me is more than three thousand, I'll be flabbergasted-and it might be a net loss. A gamble."

I told a number of sincere lies and managed (I think) to convince Jinx that we were not lodge brothers and that I was not asking for discounts on anything and that I had come by that fez by accident, at the last minute-found it in the Volvo when I hired it.

(Unspoken assumption: Mr. Rasmussen had hired that wagon in Luna City, then had left his headpiece in it when he turned in the Volvo at Golden Rule.)

I added that the owner's name was in the fez and I intended to return it to him.

Jinx asked, "Do you have his address?"

I admitted that I did not-just the name of his temple, embroidered on the fez.

Jinx stuck out his hand. "Give it to me; I can save you the trouble... and the expense of mailing a package back Earth-side."

"How?"

"Happens I know somebody who's bouncing a jumpbug to Luna City on Saturday. The Nobles' convention adjourns on Sunday, right after they dedicate their Luna City Hospital for

Crippled and Birth-Damaged Children. There'll be a lost-and-found at the convention center; there always is. Since his name is in it, they'll get it to him-before Saturday evening, because that's the night of the drill team competition... and they know that a drill team member-if he is one-without his fez is as undressed as a bar hostess without her G-string."

I passed the red hat over to him.

I thought that would be the end of it.

More hassle before we could get rolling for Lucky Dragon Pressure-no pressure suits. As Jinx put it: "Last night I okayed your using those leaky sieves because it was Hobson's Choice- it was risk it, or leave you to die. Today we could use them the same way-or we could even bring the buggy into the hangar and load you in without using suits. Of course that wastes an awful mass of air. Then do it again at the far end ... for an even greater air cost; their hangar is bigger."

I said I would pay. (I didn't see how I could avoid it.)

"That's not the point. Last night you were in the cab twenty minutes... and it took a full bottle to keep air around you. Late last night the Sun was just barely rising; this morning it's five degrees high. Raw sunlight is going to be beating against the side of that cab all the way to Lucky Dragon. Oh, Gretchen will drive in shadow all she can; we don't raise dumb kids. But any air inside the cabin would heat up and swell and come pouring out the cracks. So normal operation is to pressurize your suit but not the cabin, and use the cabin just for shade.

"Now I won't lie to you; if I had suits to sell, I would insist that you buy three new suits. But I don't have suits. Nobody in this pressure has suits for sale. Less than a hundred fifty of us; I would know. We buy suits in Kong and that's what you should do."

"But I'm not in Kong."

I had not owned a pressure suit for more than five years. Permanent habitants of Golden Rule mostly do not own pressure suits; they don't need them, they don't go outside. Of course there are plenty of staff and maintenance who keep pressure suits always ready the way Bostonians keep overshoes. But the usual habitant, elderly and wealthy, doesn't own one, doesn't need one, wouldn't know how to wear one.

Loonies are another breed. Even today, with Luna City over a million and some city dwellers who rarely if ever go outside, a Loonie owns his suit. Even that big-city Loonie knows from infancy that his safe, warm, well-lighted pressure can be broached-by a meteor, by a bomb, by a terrorist, by a quake or some other unpredictable hazard.

If he's a pioneering type like Jinx, he's as used to a suit as is an asteroid miner. Jinx didn't even work his own tunnel farm; the rest of his family did that. Jinx habitually worked outside, a pressure-suited, heavy-construction mechanic; "Happy Chance Salvage" was just one of his dozen-odd hats. He was also the "Dry Bones Ice Company," "Henderson's Overland Cartage Company," "John Henry Drilling, Welding, and Rigging Contractors"-or you name it and Jinx would invent a company to fit.

(There was also "Ingrid's Swap Shop" which sold everything from structural steel to homemade cookies. But not pressure suits.)

Jinx worked out a way to get us to Lucky Dragon: Ingrid and Gwen were much the same size except that Ingrid was temporarily distended around the equator. She had a pregnancy pressure suit with an external corset that could be let out. She also had a conventional suit she wore when not pregnant, one she could not get into now-but Gwen could.

Jinx and I were about of a height, and he had two suits, both first quality Goodrich Luna. I could see that he was about as willing to lend me one as a cabinetmaker is to lend tools. But he was under pressure to work something out, or he was going to have us as paying guests... and then as non-paying guests when our money ran out. And they didn't really have room for us even while I could still pay.

It was after ten the next morning before we suited up and climbed into the rolligon-me in Jinx's second best, Gwen in Ingrid's not-pregnant suit, and Bill in a restored antique that had belonged to the founder of Dry Bones Pressure, a Mr. Soupie McClanahan, who had come to Luna long, long ago, before the Revolution, as an involuntary guest of the government.

The plan was for each of us to get other temporary coverings at Lucky Dragon Pressure, wear them to HKL, and send them back via the public bus, while Gretchen took these suits back to her father after she let us off at Lucky Dragon. Then, tomorrow, we would be in Hong Kong Luna and able to buy pressure suits to fit our needs.

I spoke to Jinx about payment. I could almost hear the numbers clicking over in his skull. Finally he said, "Senator, I tell you what. Those suits that came in your heap-not worth much. But there's some salvage in the helmets and in some of the metal fittings. Send my three suits back to me in the shape in which you got 'em and we'll call it even. If you think it is."

I certainly thought it was. Those Michelin suits had been okay-twenty years ago. To me, today, they were worth nothing.

It left just one problem-Tree-San.

I had thought that I was going to have to be firm with my bride-an intention not always feasible. But I learned that, while Jinx and I had been working out what to do about pressure suits, Gwen had been working out what to do about Tree-San ... with Ace.

I have no reason to think Gwen seduced Ace. But I'm sure Eloise thought so. However, Loonies have had their own customs about sex since back in the days when men outnumbered women six to one-by Lunar customs all options in sexual matters are vested in women, none in men. Eloise did not seem angry, just amused-which made it none of my business.

As may be. Ace produced a silicone rubber balloon with a slit through which he inserted Tree-San, pot and all, then heat-sealed it-with an attachment for a one-liter air bottle. There was no charge, even for the bottle. I offered to pay, but Ace just grinned at Gwen and shook his head. So I don't know. I don't care to inquire.

Ingrid kissed us all good-bye, made us promise to come back. It seemed unlikely. But a good idea.

Gretchen asked questions the whole trip and never seemed to watch where she was driving. She was a dimpled, pigtailed blonde, a few centimeters taller than her mother but still padded with baby fat. She was much impressed by our travels. She herself had been to Hong Kong Luna twice and once all the way to Novylen where

people talked funny. But next year, when she would be going on fourteen, she was going to go to Luna City and look over the studs there-and maybe bring home a husband. "Mama doesn't want me to have babies by anyone at Dry Bones, or even Lucky Dragon. She says it's a duty I owe my children to go out and fetch in some fresh genes. Do you know about that? Fresh genes, I mean."

Gwen assured her that we did know and that she agreed with Ingrid: Outbreeding was a sound and necessary policy. I made no comment but agreed; a hundred and fifty people are not enough for a healthy gene pool.

"That's how Mama got Papa; she went looking for him. Papa was born in Arizona; that's a part of Sweden back groundhog side. He came to Luna with a subcontractor for the Picardy Transmutation Plant and Mama got him at a masked mixer and gave him our family name when she was sure-about Wolf, I mean-and took him back to Dry Bones and set him up in business."

She dimpled. We were chatting via our suit talkies but I could see her dimples right through her helmet by a happy chance of light. "And I'm going to do the same for my man, using my family share. But Mama says that I should not grab the first boy who's willing-as if I would!-and not to hurry or worry even if I'm still an old maid at eighteen. And I won't. He's got to be as good a man as Papa is."

I thought privately that it might be a long search. Jinx Henderson ne John Black Eagle is quite a man.

When at last we could see the Lucky Dragon parking lot, it was nearly sundown-in Istanbul, that is, as anyone could see by looking. Earth was almost due south of us and quite high, about sixty degrees; its terminator ran through the north desert of Africa and on up through the Greek Isles and Turkey. The Sun was still low in the sky, nine or ten degrees and rising. There would be nearly fourteen days more sunlight at Lucky Dragon before the next long dark. I asked Gretchen whether or not she intended to drive straight back.

"Oh, no," she assured me. "Mama wouldn't like that. I'll stay overnight-bedroll there in the back-and start back fresh tomorrow. After you folks catch your bus."

I said, "That isn't necessary, Gretchen. Once we're inside this pressure and can turn our suits back to you, there's no reason for you to wait."

"Mr. Richard, are you yearning to have me spanked?"

"You? 'Spanked'? Why, your father wouldn't do that. To you?-a grown woman, almost."

"You might tell Mama that. No, Papa wouldn't; he hasn't for years and years. But Mama says I'm eligible until the day I first marry. Mama's a holy terror; she's a direct descendant of Hazel Stone. She said, 'Gret, you see about suits for them. Take them to Charlie so they won't be cheated. If he can't supply them, then see to it that they wear ours to Kong and you dicker with Lilybet to fetch ours back later. And you had better see them off on the bus, too.'"

Gwen said, "But, Gretchen, your father warned us that the bus doesn't move until the driver has a load. Which could be a day or two. Even several days."

Gretchen giggled. "Wouldn't that be terrible? I'd get a vacation. Nothing to do but catch up on the back episodes of Sylvia's Other Husband. Let's everybody feel sony for Gretchen! Mistress Gwen, you can call Mama this minute if you wish ... but I do have firm instructions."

Gwen shut up, apparently convinced. We rolled to a stop about fifty meters from Lucky Dragon airlock, set in the side of a hill. Lucky Dragon is in the south foothills of the Caucasus range at thirty-two degrees twenty-seven minutes north. I waited, on one foot and leaning on my cane, while Bill and Gwen gave unnecessary help to a highly efficient young lady in spreading an awning slanted to keep the rolligon from direct sunlight for the next twenty-four hours or so.

Then Gretchen called her mother on the roily's radio, reported our arrival, and promised to call again in the morning. We went through the airlock, Gwen carrying her case and purse and babying me. Bill carrying Tree-San and the package containing Naomi's wig, and Gretchen carrying a huge bedroll. Once inside, we helped each other shuck down; then I put my foot back on while Gretchen hung up my suit and hers, and Bill and Gwen hung theirs, on long racks opposite the airlock.

Gwen and Bill picked up their burdens and headed for a public 'fresher around to the right of the airlock. Gretchen had turned to follow them when I stopped her. "Gretchen, hadn't I better wait here till you three get back?" "What for, Mr. Senator?" 'That suit of your papa's is valuable, and so is the one Mistress Gwen is wearing. Maybe everyone here is honest... but the suits aren't mine."

"Oh. Maybe everybody here is honest but don't count on it. So Papa says. I wouldn't leave that darling little tree sitting around but don't ever worry about a p-suit; nobody ever touches another Loonie's p-suit. Automatic elimination at the nearest airlock. No excuses."

"Just like that, eh?"

"Yes, sir. Only it doesn't happen as everybody knows better. But I know about one case, before I was born. A new chum, maybe he didn't know any better. But he never did it again because a posse went after him and brought the p-suit back. But not him. They just left him to dry, there on the rocks. I've seen it, what's left of him. Horrid." She wrinkled her nose, then dimpled. "Now, may I be excused, sir? I'm about to wet

my panties."

"Sorry!" (I'm stupid. The plumbing in a man's p-suit is adequate, although just barely. But what the great brains have come up with for women is not adequate. I have a strong impression that most women will endure considerable discomfort rather than use it. I once heard one refer to it disparagingly as "the sand box.")

At the door of the 'fresher my bride was waiting for me. She held out to me a half-crown coin. "Wasn't sure you had one, dear."

"Huh?"

"For the 'fresher. Air I have taken care of; Gretchen paid our one-day fees, so I paid her. We're back in civilization, dear-No Free Lunch."

No free anything. I thanked her.

I invited Gretchen to have dinner with us. She answered, "Thank you, sir; I accept-Mama said I could. But would you settle for ice-cream cones for now?-and Mama gave me the money to offer them to you. Because there are several things we should do before dinner."

"Certainly. We're in your hands, Gretchen; you're the sophisticate; we're the tyros."

"What's a 'tyro'T'

"A new chum."

"Oh. First we should go to Quiet Dreams tunnel and spread our bedrolls to hold our places so that we can all sleep together"-at which point I learned for the first time why Gretch-en's bedroll was so enormous: her mother's foresight, again- "but before that we had better put your names down with Lilybet for the bus... and before that, let's get those ice-cream cones if you're as hungry as I am. Then, last thing before dinner, we should go see Charlie about p-suits."

The ice-cream cones were close at hand in the same tunnel as the racks: Borodin's Double-Dip Dandies, served by Kelly Borodin himself, who offered to sell me (in addition to lavish cones) used magazines from Earth, barely used magazines from Luna City and Tycho Under, candy, lottery tickets, horoscopes, Lunaya Pravda, the Luna City Lunatic, greeting cards (genuine Hallmark imitations), pills guaranteed to restore virility, and a sure cure for hangovers, compounded to an ancient Gypsy formula. Then he offered to roll me double or nothing for the cones. Gretchen caught my eye, and barely shook her head.

As we walked away, she said, "Kelly has two sets of dice, one for strangers, another for people he knows. But he doesn't know that I know it. Sir, you paid for the cones... and now, if you don't let me pay you back, I'll get that spanking. Because Mama will ask me and I will have to tell her."

I thought about it. "Gretchen, I have trouble believing that your mother would spank you for something / did."

"Oh, but she would, sir! She will say that I should have had my money out and ready. And I should have."

"Does she spank really hard? Bare bottom?"

"Oh, my, yes! Brutal."

"An intriguing thought. Your little bottom turning pink, while you cry."

"I do not cry! Well, not much."

"Richard."

"Yes, Gwen?"

"Stop it."

"Now you listen to me, woman. Do not interfere in my relations with another woman. I-"

"Richard!"

"You spoke, dear?"

"Mama spank."

I accepted from Gretchen the price of the cones. I'm henpecked.

THE APOCALYPSE AND KINGDOM COME BUS COMPANY Regular Runs to Hong Kong Luna

Minimum Run-twelve (12) fares Charter runs ANYWHERE by dicker Next HKL run not before Noon tomorrow, July 3rd

Sitting under the sign, rocking and knitting, was an elderly black lady. Gretchen addressed her: "Howdy, Aunt Lilybet!"

She looked up, put down her knitting and smiled. "Gretchen hon! How's your momma, dear?"

"Just fine. Bigging up by the day. Aunt Lilybet, I want you to meet our friends Mr. Senator Richard and Mistress Gwen and Mr. Bill. They need to go with you to Kong."

"Pleased to meet you, friends, and happy to tote you to Kong. Plan on leaving noon tomorrow as you three make ten and if'n I don't get two more by noon, likely I can make it with cargo. That suit?"

I assured her that it did and that we would be here before noon, p-suited and ready to roll. Then she gently suggested cash on the counter by pointing out that there were still seats on the shady side as some passengers had made reservations but had not yet paid. So I paid-twelve hundred crowns for three.

We went next to Quiet Dreams tunnel. I don't know whether to call it a hotel or what-perhaps "flophouse" comes closest. It was a tunnel a little over three meters wide and running fifty-odd meters back into the rock, where it dead-ended. The middle and lefthand side of the tunnel was a rock shelf about a half meter higher than a walkway on the right. This shelf was laid out in sleeping billets, marked by stripes painted on the shelf and by large numbers painted on the wall. The billet nearest the passageway was numbered "50." About half the billets had bedrolls or sleeping bags on them.

Halfway down the tunnel, on the right, the customary green light marked a refresher.

At the head of this tunnel, seated and reading at a desk, was a Chinese gentleman in a costume that was out of fashion before Armstrong made that "one small step." He wore spectacles as old-fashioned as his dress and he himself appeared to be ninety years older than God and twice as dignified.

As we approached he put down his book and smiled at Gretchen. "Gretchen. It is good to see you. How are your esteemed parents?"

She curtsied. 'They are well. Dr. Chan, and they send you their greetings. May I present our guests Mr. Senator Richard and Mistress Gwen and Mr. Bill?"

He bowed without getting up and shook hands with himself. "Guests of the House Henderson are most welcome in my

house."

Gwen curtsied, I bowed, and so did Bill, after I dug a thumb into his ribs-which Dr. Chan noticed while declining to notice it. I mumbled an appropriate formality. Gretchen went on,

"We would like to sleep in your care tonight. Dr. Chan, if you will accept us. If so, are we early enough to be given four places side by side?"

"Indeed yes... for your gracious mother spoke to me earlier. Your beds are numbers four, three, two, and one."

"Oh, good! Thank you. Grandfather Chan."

So I paid, for three, not four-I don't know whether Gretchen paid, or ran a bill, or what; I saw no money change hands. Five crowns per person per night, no extra charge for the refresher but two crowns if we wanted to shower-water not limited. Soap extra-half a crown.

Having completed business. Dr. Chan said, "Does not the tree in bonsai require water?"

Almost in chorus we agreed that it did. Our host examined the plastic film that enclosed it, then cut it open and most carefully removed the tree and pot. A vase at his desk turned out to be a water carafe; he filled a tumbler, then, using just his fingertips, he sprinkled it repeatedly. While he did this I sneaked at look at his book-a form of snoopiness I can't resist. It was The March of the Ten Thousand, in Greek.

We left Tree-San with him, and Gwen's case as well.

Our next stop was at Jake's Steak House. Jake was as Chinese as Dr. Chan but of another generation and style. He greeted us with: "Howdy, folks. What'U it be? Hamburgers? Or scrambled eggs? Coffee or beer?"

Gretchen spoke to him in a tonal language-Cantonese, I suppose. Jake looked annoyed and retorted. Gretchen threw it back at him. Remarks slammed back and forth. At last he looked disgusted, and said, "Okay. Forty minutes"-turned his back and walked away. Gretchen said, "Come, please. Now we go to see Charlie Wang about suits."

As we walked away she said privately, "He was trying to get out of doing his best cooking, as it is much more work. But the worst argument was over price. Jake wanted me to keep quiet while he charged you tourist prices. I told him, if he charged you more than he would charge my Papa, then my Papa would stop in next time and cut off his ears and feed mem to him, raw. Jake knows that Papa would do exactly mat."

Gretchen smiled with shy pride. "My Papa is deeply respected in Lucky Dragon. Back when I was young. Papa eliminated a boomer here who tried to take something free from a singsong girl, something he had agreed to pay for. Everybody remembers it. The singsong girls of Lucky Dragon made Mama and me honorary members of their guild."

The sign read: Wang Chai-Lee, Custom Tailoring for Ladies and Gentlemen-p-suit repairs a specialty. Gretchen again introduced us and explained what we needed. Charlie Wang nodded. "Bus rolls at noon? Be here at ten-thirty. In Kong you return the suits to my cousin Johnny Wang at Sears Montgomery, p-suit department. I'll call him."

Then we went back to Jake's Steak House. It wasn't steak and it was not chop suey or chow mein and it was wonderfully good. We ate until we were full to our eyeballs.

When we got back to Quiet Dreams tunnel, the overhead lights were out and many of the billets were occupied by sleeping figures. A glow strip ran down the side of me billets shelf, where it could not shine into the eyes of a sleeping guest but would light the way of anyone moving around. There was a reading light at Dr. Chan's desk, shielded from the sleepers. He appeared to be working on his accounts, as he was operating a terminal with one hand and an abacus with the other. He greeted us soundlessly; we whispered goodnight. Coached by Gretchen we got ready for bed: Undress, fold your clothing and put it and your shoes under the head of your bedroll as a pillow. I did so, and added my cork foot. But I left on my underwear shorts, having noticed that Gwen and Gretchen had left on their panties-and Bill put his back on when he somewhat belatedly noticed what the rest of us did. We all headed for the refresher.

Even this nominal sop to modesty did not last; we showered together. There were three men in the 'fresher when we went in; all were naked. We followed the ancient precept: "Nakedness is often seen but never looked at." And the three men most strictly followed this rule: We weren't there, we were invisible. (Save that I feel certain that no male can totally ignore Gwen and Gretchen.)

I could not totally ignore Gretchen and did not try. Naked, she looked years older and deliciously enticing. I think she had a sunlamp tan. I know she had dimples I had not seen before. I see no need to go into details; all females are beautiful at the point where they burst into full womanhood, and Gretchen had the added beauty of good proportions and a sunny disposition. She could have been used to tempt Saint Anthony.

Gwen handed me the soap. "All right, dear; you can scrub her back-but she can wash her front herself."

I answered with dignity, "I don't know what you're talking about. I don't expect to wash anyone's back, as I need a hand free for grab and balance. You forget that I'm an expectant mother."

"You're a mother, all right."

"Who's calling whom a mother? I'll thank you to keep a civil tongue in your head."

"Richard, this is getting to be beneath even my dignity. Gretchen, you wash his back; that's safest. I'll referee."

It wound up with everyone washing whatever he/she could reach-even Bill-and was not efficient but fun, with lots of giggles. They were both of the extremely opposite sex and just being around them was fun.

By twenty-two we were settled down for the night, Gretchen at the end wall, Gwen beside her, then me, then Bill. At one-sixth gee a rock shelf is softer than a foam mattress in Iowa. I went to sleep quickly.

Sometime later-an hour? two hours?-I came awake because a warm body cuddled against me. I murmured, "Now, honT' Then I came a bit wider awake. "Gwen?"

"It's me, Mr. Richard. Would you really want to see my bottom turn all pink? And hear me cry?"

I whispered tensely, "Honey, get back over by the wall."

"Please."

"No, dear."

"Gretchen," Gwen said softly, "get back where you belong, dear... before you wake others. Here, I'll help you roll over me." And she did, and took the woman-child in her arms and talked to her. They stayed that way and (I think) went to sleep.

It took me quite a while to get back to sleep.

XII

"\Ve are too proud to Fight."

WOODROW WILSON 1856-1924

Violence never settles anything."

GENGHISKHAN 1162-1227

'The mice voted to bell the cat."

AESOP c. 620-c. 560 B.C.

Kissing good-bye while wearing pressure suits is depress-ingly antiseptic. So I think and I am sure Gretchen thought so, too. But that is the way it worked out.

Last night Gwen had saved me from "a fate worse than death" and for that I was grateful. Well, moderately grateful. Certainly an old man tripped by a barely nubile female not yet into her teens (Gretchen would not be thirteen for another two months) is a ridiculous sight, an object of scorn to all right-thinking people. But, from the time the night before when Gretchen had made it plain to me that she did not consider me too old, I had been feeling younger and younger. By sundown I should be suffering the terminal stages of senile adolescence.

So let the record show that I am grateful. That's official.

Gwen was relieved, I felt sure, when at noon Gretchen waved us good-bye from the cab of her father's rolligon lorry,

as we rolled south in Aunt Lilybet's rolligon bus, the Hear Me, Jesus.

The Hear Me was much larger than Jinx's lorry, and fancier, being painted in bright colors with Holy Land scenes and Bible quotations. It could carry eighteen passengers, plus cargo, driver, and shotgun-the last riding in a turret high above the driver. The bus's tires were enormous, twice as tall as I am; they shouldered up above the passenger space, as its floor rested on the axles, high as my head. There were ladders on each side to reach access doors between the front and rear tires.

Those big tires made it hard to see out to the sides. But Loonies aren't much interested in scenery, as most Lunar scenery is interesting only from orbit. From the Caucasus to the Haemus Mountains-our route-the floor of Mare Serenitatis has hidden charms. Thoroughly hidden. Most of it is flat as a pancake and as interesting as cold pancakes without butter or syrup.

Despite this I was glad that Aunt Lilybet had placed us in the first row on the right-Gwen at the window, me next, Bill on my left. It meant that we could see all that the driver saw out front and also we could see somewhat out to the right because we were forward of the front axle and thereby could see past the tire. We could not see too clearly to the right, as the plastic of the pressure window was old and crazed and yellowed. But forward Aunt Lilybet had her big driver's port raised and fastened back; the view was as clear as our helmets permitted-excellent for us; the equipment rented to us by Charlie Wang took the curse off raw sunlight without noticeably interfering with seeing, like good sun spectacles.

We didn't talk much because passengers' suit radios were all on a common frequency-a babel, so we kept ours turned down. Gwen and I could talk by touching helmets, but not easily. I amused myself by trying to keep track of where we were going. Neither magnetic compasses nor gyro compasses are useful on Luna. Magnetism (usually none) means an ore body rather than a direction, and Luna's spin, while it exists (one revolution per month!), is too leisurely to affect a gyro compass. An inertial tracker will work but a good one is extremely expensive-although I can't see why; the art was perfected long ago for guided missiles.

From this face of Luna you always have Earth to steer by and half the time you have the Sun as well. The stars? Certainly, the stars are always there-no rain, no clouds, no smog. Oh, sure! Look, I have news for any groundhogs listening: You can see stars easier from Iowa than you can from Luna.

You'll be wearing a p-suit, right? Its helmet has a lens and a visor designed to protect your eyes-that amounts to built-in smog. If the Sun is up, forget about stars; your lens has darkened to protect your eyes. If the Sun is not in your sky, then Earth is somewhere between half and full and earthshine is dazzling-eight times as much reflecting surface with five times the albedo makes Earth at least forty times as bright as moonlight is to Earth.

Oh, the stars are there and sharp and bright; Luna is wonderful for astronomical telescopy. But to see stars with "bare" eyes (i.e., from inside your p-suit helmet), just find a meter or two of stove pipe- Wups! no stoves on Luna. So use a couple of meters of air duct. Look through it; it cuts out the dazzle; stars shine out "like a good deed in a naughty world."

In front of me Earth was a bit past half phase. On my left the rising Sun was a day and a half high, twenty degrees or less; it made bright the desert floor, with long shadows emphasizing anything other than perfect flatness, thereby making driving easy for Aunt Lilybet. According to a map at the airiock in Lucky Dragon Pressure we had started out from north latitude thirty-two degrees and twenty-seven minutes by longitude six degrees fifty-six east, and were headed for fourteen degrees eleven minutes east by seventeen degrees thirty-two minutes north, a spot near Menelaus. That gave us a course generally south-about twenty-five degrees east of south, as close as I could read that map-and a destination some 550 kilometers away. No wonder our ETA read three o'clock tomorrow mom-ing!

There was no road. Aunt Lilybet did not seem to have a tracker, or anything in the way of navigating instruments but an odometer and a speedometer. She seemed to be piloting the way river pilots of old were reputed to find their way, just by knowing the route. Perhaps so-but during the first hour I noticed something: There were range targets for the whole route. As we reached one, there would be another, out at the horizon.

I had not noticed any such guides yesterday and I don't think there were any; I think Gretchen really did pilot Mark Twain style. In fact I think Aunt Lilybet did also-I noticed that she often did not come close to a range marker as she passed it. Those blazes had probably been set up for occasional drivers or for relief drivers for the Hear Me.

I started trying to spot each one, making a game of it: If I missed one, it scored against me. Two misses in sequence counted as one "death" by "lost on the Moon"- something that happened too often in the early days... and still happens today. Luna is a big place, bigger than Africa, almost as big as Asia- and every square meter of it is deadly if you make just one little mistake.

Definition of a Loonie: a human being, any color, size, or sex, who never makes a mistake where it counts.

By our first rest stop I had "died" twice through missing ranging marks.

At five minutes past fifteen Aunt Lilybet let her bus roll to a stop, then switched on a transparency that read: REST STOP- TWENTY MINUTES-and under it: Late Penalty-One Crown per Minute.

We all got out. Bill grabbed Aunt Lilybet's arm and put his helmet against hers. She started to shake him off, then listened. I didn't try to check on him; twenty minutes isn't long for a rest stop when it involves coping with a p-suit. Of course this is even harder for females than for males, and more time consuming. We had a woman passenger with three children... and the right arm of her suit ended just below the elbow in a hook. How did she cope? I resolved to outwait her, so that the fine for being late would be assessed against me, rather than her.

That "refresher" was dreadful. It was an airiock leading to a hole in the rock, attached to the home of a settler who combined tunnel farming with ice mining. There may have been some oxygen in the pressure gas that greeted us, but the stench made it impossible to tell. It reminded me of the jakes in a castle I was once quartered in during the Three-Weeks War- on the Rhine it was, near Remagen; it had a deep stone privy which was alleged never to have been cleaned in over nine hundred years.

None of us was fined for being late, as our driver was even later. And so was Bill. Dr. Chan had resealed Tree-San with a roll-and-clamp arrangement to permit it to be watered more easily. Bill had solicited Aunt Lilybet's help. They had managed it

together, but not quickly. I don't know whether Bill had time to pee or not. Auntie, of course, had time-the Hew Me couldn't roll until Auntie arrived.

We made a meal stop about half past nineteen at a small pressure, four families, called Rob Roy. After the last stop this one seemed like the acme of civilization. The place was clean, the air smelled right, and the people were friendly and hospitable. There was no choice in the menu-chicken and dumplings, and moonberry pie-and the price was high. But what do you expect out in the middle of nowhere on the face of the Moon? There was a souvenir stand of handmade items, presided over by a little boy. I bought an embroidered change purse that I had no use for, because those people were good to us. The decoration on it read: "Rob Roy City, Capital of the Sea of Serenity." I gave it to my bride.

Gwen helped the one-armed woman with the three children and learned that they were returning home to Kong, after having visited in Lucky Dragon the paternal grandparents of the youngsters. The mother's name was Ekaterina O'Toole; the kids were Patrick, Brigid, and Igor, aged eight, seven, and five. Our other three passengers turned out to be Lady Diana Kerr-Shapley and her husbands-wealthy and not inclined to fraternize with us plebs. Both her men carried side arms-inside their suits. What is the sense in that?

The ground was not as even from there on, and it seemed to me that Auntie stuck a little closer to the marked track. But she still drove fast and with dash, bouncing us around on those big, low-pressure doughnuts in a fashion that made me wonder about Bill's queasy stomach. At least he was not having to hold Tree-San; Auntie had helped him lash it down in the cargo compartment aft. I wished him luck; getting sick in one's helmet is dreadful-happened to me once, a generation ago. Ugh!

We made another rest stop just before midnight. Adequate. The Sun was now a few degrees higher and still rising. Auntie told us that we now had a hundred and fifteen klicks left to roll and should be in Kong about on time, with God's help.

God didn't give Auntie the help she deserved. We had been rolling about an hour when out of nowhere (from behind a rock outcropping?) came another rolligon, smaller and faster, cutting diagonally across our path.

I slapped Bill's arm, grabbed Gwen's shoulders, and down we went, below the driver's port and somewhat protected by the steel side of the bus. As I ducked for cover I saw a flash from the strange vehicle.

Our bus rolled to a stop with the other vehicle right in front of us. Auntie stood up.

They cut her down.

Gwen got the man who beamed Auntie, resting her Miyako on the sill of the port-she got him in the lens of his helmet, the best way to shoot a man in a p-suit if you are using bullets rather than laser. I got the driver, aiming carefully as my cane shoots only five times-and no more ammo closer than Golden Rule (in my duffel, damn it). Other suited figures came pouring out the sides of the attacking craft. Gwen raised up a little and went on shooting.

All this took place in the ghostly quiet of vacuum.

I started to add my fire to Gwen's, when still another vehicle showed up. Not a rolligon but related to one-but not any contraption I ever saw before. It had only one tire, a supergiant doughnut at least eight meters high. Maybe ten. The hole in the doughnut

was crowded with what may have been (or had to be?) its power plant. Extending out from this hub on each side was a cantilevered platform. On the upper side of each platform, both port and starboard, a gunner was strapped into a saddle. Below the gunner was the pilot, or driver, or engineer-one on each side and don't ask me how they coordinated.

I won't swear to any details; I was busy. I had taken a bead on the gunner on the side toward me and was about to squeeze off one of my precious shots when I checked fire; his weapon was depressed, he was attacking our attackers. He was using an energy weapon-laser, particle beam, I don't know-as all I saw of each bolt was the parasitic flash... and the result.

The big doughnut spun around a quarter turn; I saw the other pair, driver and gunner, on the other side-and this gunner was trained on us. His projector flashed.

I got him in the face plate.

Then I tried for his driver, got him (I think) at the neck joint. Not as good as punching a hole in his face plate but, unless he was equipped to make a difficult patch fast, he was going to be breathing the thin stuff in seconds.

The doughnut spun all the way around. As it stopped I got the other gunner a nanosecond before he could get me. I tried to line up for a shot at the driver but could not get steady on target and had no ammo to waste. The doughnut started to roll, away from us, east-picked up speed, hit a boulder, bounced high, and disappeared over the horizon.

I looked back down at the other rolligon. In addition to the two we had killed in the first exchange, still sprawled in the car, there were five bodies on the ground, two to starboard, three to port. None looked as if he would ever move again. I pressed my helmet to Gwen's. "Is that all of them?"

She jabbed me hard in the side. I turned. A helmeted head was just appearing in the lefthand door. I lined up my cane and punched a starred hole in his face plate; he disappeared. I hopped on somebody's feet and looked out-no more on the left-turned, and here was another one climbing up through the righthand door. So I shot him-

Correction: I tried to shoot him. No more ammo. I fell toward him, jabbing with my cane. He grabbed the end of it and that was his mistake, as I pulled on it, exposing twenty centimeters of Sheffield steel, which I sank into his suit and between his ribs. I pulled it out, shoved it into him again. That stiletto, a mere half-centimeter width of triangular blade, blood-grooved three sides, does not necessarily kill quickly but my second jab would hold his attention while he died, keep him too busy to kill me.

He collapsed, half inside the door, and let go the scabbard part of my cane. I retrieved it, fitted it back on. Then I shoved him out, grabbed on to the seat nearest me, and pulled myself up onto my foot, took care of a minor annoyance, hopped back to my seat, and sat down. I was tired, although the whole fracas could not have lasted more than two or three minutes. It's the adrenaline-I always feel exhausted afterward.

That was the end of it, and a good thing, too, as both Gwen and I were out of ammo, utterly, and I can't use that concealed blade trick more than once-it works only if you can lure your opponent into grabbing the ferrule of your walking stick. There had been nine in that rolligon and all of them were dead. Gwen and I got five of them between us; the gunners of the giant doughnut killed the other four. The body count was certain because there is no mistaking a bullet hole for a bum.

I am not counting the two, or three, I shot of the super-doughnut's crew ... because they left no bodies to count; they were somewhere over the horizon.

Our own casualties: four.

First, our own gunner, riding shotgun in the turret above the driver. I crawled up and had a look-at one-sixth gee I can climb a vertical ladder almost as easily as you can. Our gunner was dead, probably that first flash marked his end. Had he been asleep on watch? Who knows and who cares now? He was dead.

But our second casualty. Aunt Lilybet, was not dead, and that was Bill's doing. He had slapped two pressure patches onto her, fast, one on her left arm, one on the top of her helmet-had known enough to cut off her air as he did it, then had counted sixty seconds before he cracked the valve and let her suit reinflate. And thereby saved her life.

It was the first evidence I had seen that Bill was even bright enough to pound sand. He had spotted where the kit with the pressure patches was kept, near the driver's seat, then had gone through the rest like a drill, no lost motions and paying no attention to the fighting going on around him.

I suppose I should not have been surprised; I knew that Bill had worked in heavy construction-for a space habitat, that means p-suit work, with safety drills and training. But it's not enough to be trained; in a clutch it takes some smarts and a cool head to apply even the best of training.

Bill showed us what he had done, not to boast of it, but because he realized that some of it might have to be done over:

In sealing Auntie's suit in a hurry he had not been able to get at the wound in her arm to stop bleeding, and did not know whether or not it had been cauterized by the bum. If she was bleeding, that suit would have to be opened again, a pressure bandage applied to the wound, then the suit closed again- fast! In view of the location-an arm-the only way to do this would be to cut the suit fabric to make a larger hole, get at the arm and stop the bleeding, patch the bigger hole, and wait counted seconds for one endless minute before subjecting the patched suit to pressure.

There is a very narrow limit on how long a patient can take vacuum. Auntie was old and wounded and had had it done to her once today. Could she take it twice?

There was no question of opening her helmet. The bolt that had hit her there had carved a slice into the top of the helmet but not into her head-else we would not have been considering whether or not to open her sleeve.

Gwen put her helmet against Auntie's, managed to rouse her and get her attention. Was she bleeding?

Auntie didn't think so. Her arm was numb but didn't hurt much. Did they get it? Get what? Something in the cargo. Gwen assured her that the bandits didn't get anything; they were dead. That seemed to satisfy Auntie. She added, 'Taddie can drive," and seemed to slip off to sleep.

Our third casualty was one of Lady Diana's husbands. Dead. But not by either set of bandits. In effect, he had shot himself in the foot.

I think I mentioned that he was heeled-with his gun for God's sake inside his suit. When the trouble started, he went for his side arm, found he could not reach it-opened the front of his suit to get at it.

It is possible to open your suit and close it again, in vacuum, and I think the legendary Houdini could have learned to do it. But this joker was still rumbling for his

gun when he collapsed and drowned in vacuum. His co-husband was a half-point smarter. Instead of going for his own gun, he attempted to get at that of his partner after his partner keeled over. He did manage to get at it and to draw it but too late to help in the fight. He straightened up just as I was pulling myself to my foot, after I stabbed the last of the bandits.

So I find this custard head waving a gun in my face.

I did not intend to break his wrist; I simply meant to disarm him. I slapped the gun out of line and cracked his wrist with my cane. I caught the gun, shoved it into my p-suit belt, went forward, and collapsed in my seat. I did not know that I had hurt him, other than a bruise, maybe.

But I feel no trace of remorse. If you don't want a broken wrist, don't wave a gun in my face. Not when I'm tired and excited.

Then I pulled myself together and tried to help Gwen and Bill.

I hate to tell about our fourth casualty: Igor O'Toole, the five-year-old.

Since the tad was on a back seat with his mother, it is certain that he was not killed by anyone from the rolligon; the angle would have been impossible. Only the two gunners of the superdoughnut were up high enough to shoot in through the driver's port of Hear Me and hit someone clear at the back. Furthermore it had to be the second gunner; the first gunner had kept busy killing bushwhackers. Then the doughnut turned, I saw this gun leveled at us, saw its flash just about as I fired and killed him.

I thought he had missed. If he was firing at me, he did miss. I'm not sure he was aiming carefully as who would aim at the least likely target?-a child, a baby really, clear at the back of the bus. But the flash I saw had to be the bolt that killed Igor.

Had it not been for Igor's death I might have had mixed feelings about the crew of the giant doughnut-we certainly could not have won without their help. But that last shot convinces me that they were just killing off business competitors before getting to their main purpose, hijacking the Hear Me.

My only regret is that I did not kill the fourth doughnut rider.

But these were afterthoughts. What we saw at the time was simply a dead child. We straightened up from dealing with Auntie and looked around. Ekaterina was sitting quietly, holding the body of her son. I had to look twice to realize what had happened. But a p-suit does not hold a living child when the face plate is burned away. I hopped toward her; Gwen reached her first. I stopped behind Gwen; Lady Diana grabbed my sleeve, said something.

I touched my helmet to hers. "What did you say?"

"I told you to tell the driver to drive on! Can't you understand plain English?"

I wish she had said it to Gwen; Gwen's replies are more imaginative than mine and much more lyrical. All I could manage, tired as I was, was: "Oh, shut up and sit down, you silly slitch." I did not wait for an answer.

Lady Dee went forward, where Bill kept her from disturbing Auntie. I didn't see this, as just then, while I leaned forward to try to see what had happened to the consort who had (I was still to learn) killed himself with his p-suit, his co-husband attempted to recover that gun from me.

In the course of the tussle I grabbed his (broken) wrist. I could not hear him scream or see his expression, but he did an amazing piece of extemporaneous Method acting that let me know the agony he was in.

All I can say is: Don't wave guns in my face. It brings out the worst in me.

I went back to Gwen and that poor mother, touched my helmet to Gwen's. "Anything we can do for her?"

"No. Nothing till we get her in to pressure. Not much then."

"How about the other two?" I suppose they were crying but when you can't hear it or see it, what can you do?

"Richard, I think the best we can do is to leave this family alone. Keep an eye on them but let them be. Until we reach Kong."

"Yes-Kong. Who is Taddie?"

"What?"

"Aunt Lilybet said, Taddie can drive.'"

"Oh. I think she meant the turret gunner. Her nephew."

So that's why I climbed up to check the turret. I had to go outside to get up there, which I did-cautiously. But we had been correct-all dead. And so was our turret gunner, Taddie. I climbed down, then back up into the passenger compartment, got my three together-told them we had no relief driver.

I asked, "Bill, can you drive?"

"No, I can't, Senator. This is the first time in my life I've ever been in one of these things."

"I was afraid of that. Well, it's been some years since I've driven one but I know how, so- Oh, Jesus! Gwen, / can't."

"Trouble, dear?"

I sighed. "You steer this thing with your feet. I'm shy one foot-it's sitting over there by my seat. There is no way in the world I can put it on... and no way in the world I can drive with just one foot."

She answered soothingly, "That's all right, dear. You handle the radio-we'll need some Maydays, I think. While I drive."

"You can drive this behemoth?"

"Certainly. I didn't want to volunteer, with you two men here. But I'll be happy to drive. Two more hours, about. Easy."

Three minutes later Gwen was checking the controls; I was seated beside her, figuring out how to jack my suit into the bus's radio. Two of those minutes had been spent delegating Bill as master at arms with orders to keep Lady Dee in her seat. She had come forward again, with firm instructions about how things were to be done. Seems she was in a hurry- something about a directors' meeting in Ell-Four. So we must drive fast, make up for lost time.

This time I did get to hear Gwen's comment. It was heartwarming. Lady Dee gasped, especially when Gwen told her what to do with her proxies, after she folded them until they were all sharp comers.

Gwen let in the clutches, the Hear Me shook, then backed, swung past the other rolligon, and we were away. I finally punched the right buttons on the radio, tuned it to what I thought was the right channel:

"-o, M, F, I, E, S speUs 'Comfies!' the perfect answer to the stresses of modern living! Don't take the cares of business home with you. Take comfort from Comfies, the scientific stomach boon therapists prescribe more than any other-"

I tried another channel.

XIII

"The truth is the one thing that nobody will believe."

GEORGE BERNARD SHAW 1856-1950

I went on hunting for eleven, the emergencies channel, by trial and error; the read-out was marked but not by numbered channels-Auntie had her own codes. The window reading "Help" was not help for emergencies as I had assumed, but spiritual help. I punched it in and got "This is the Reverend Herold Angel speaking from my heart direct to yours, at Tycho-Under Tabernacle, Christ's Home in Luna. Tune in at eight o'clock Sunday to hear the true meanings of the Scriptural prophecies... and send your love gift today to Box 99, Angel Station, Tycho Under. Our Good News Theme for today: How We Will Know the Master When He Comes. Now we join the Tabernacle Choir in 'Jesus Holds Me in His-'"

That sort of help was about forty minutes too late, so I moved on to another channel. There I recognized a voice and concluded that I must be on channel thirteen. So I called,

"Captain Midnight calling Captain Marcy. Come in. Captain Marcy."

"Marcy, ground control Hong Kong Luna. Midnight, what the devil are you up to now? Over."

I tried to explain, in twenty-five words or less, how I happened to be on his maneuvering circuit. He listened, then interrupted: "Midnight, what have you been smoking? Let me talk to your wife; I can believe her."

"She can't talk to you now; she's driving this bus."

"Hold it. You tell me you are a passenger in the rolligon Hear Me, Jesus. That's Lilybet Washington's bus; why is your wife driving it?"

"I tried to tell you. She's been shot. Auntie Lilybet, I mean, not my wife. We were jumped by bandits."

"There are no bandits in that area."

"That's right; we killed 'em. Captain, listen, and quit jumping to conclusions. We were attacked. We have three dead and two wounded... and my wife is driving because she's the only able-bodied person left who can."

"You're wounded?"

"No."

"But you said your wife is the only able-bodied person left who can drive."

"Yes."

"Let me get this straight. Day before yesterday you were piloting a spacecraft- Or was your wife the pilot?"

"I was the pilot. What's itching you. Captain?"

"You can pilot a spacecraft... but you can't drive a little old roily. That's hard to swallow."

"Simple. I can't use my right foot."

"But you said you weren't wounded."

"I'm not. I've just lost a foot, that's all. Well, not 'lost'- I have it here in my lap. But I can't use it."

"Why can't you use it?"

I took a deep breath and attempted to recall Siacci empiricals for ballistics on atmosphere planets. "Captain Marcy, is there anyone in your organization-or anywhere in Hong Kong Luna-who might be interested in the fact that bandits attacked a public bus serving your city, only a few klicks outside your city pressure? And is there anyone who can receive the dead and wounded when we arrive with them? And who won't care who drives this bus? And doesn't find it incredible dial a man could have had a foot amputated years back?"

"Why didn't you say so?"

"God damn it. Captain, it was none of your bloody business!"

There was silence for several seconds. Then Captain Marcy said quietly, "Perhaps you're right. Midnight, I'm going to patch you through to Major Bozell. He's a wholesaler by trade but he also commands our Vigilante Volunteers and that's why you should talk to him. Just hang on."

I waited and watched Owen's driving. When we started, her handling had been a bit rough, just as anyone's will be in getting acquainted with a strange machine. Now her driving was smooth, if not as dashing as Auntie's driving.

"Bozell here. Do you read?"

I replied... and almost at once ran into a nightmare feeling of deja vu, as he interrupted with: "There are no bandits in that area."

I sighed. "If you say so. Major. But there are nine corpses and an abandoned rolligon in that area. Perhaps someone would be interested in searching those bodies, salvaging their p-suits and weapons, and in claiming that abandoned rolligon... before some peaceful settlers who would never think of turning bandit show up and take everything."

"Hmmm. Choy-Mu tells me that he is getting a satellite photo of the spot where this alleged attack took place. If there really is an abandoned rolligon-"

"Major!"

"Yes?"

"I don't care what you believe. I don't give a hoot about salvage. We'll be at the north airlock about three-thirty. Can you have a medic meet us, with a stretcher and bearers? That's for Mistress Lilybet Washington. She's-"

"I know who she is; she's been driving that route since I was a kid. Let me talk to her."

"She's wounded, I told you. She's lying down and I hope she's asleep. If she's not, I still won't disturb her; it might start more bleeding. Just have somebody at the airlock to take care of her. And for three dead ones, too, one of them a small child. Its mother is with us and in shock, name of Ekaterina O'Toole, and her husband lives in your city. Nigel O'Toole and maybe you can have somebody call him so that he can meet his family and take care of them. That's all. Major. When I called you, I was a bit nervous about

bandits. But since there aren't any bandits in this area, we have no reason to ask for vigilante protection out here on the Sea of Serenity this fine sunny day, and I'm sorry I disturbed your sleep."

"That's all right; we're here to help-no need to be sarcastic. This is being recorded. State your full name and legal address, then repeat: As representative of Lilybet Washington of Lucky Dragon Pressure, doing business as the Apocalypse and Kingdom Come Bus Company, I authorize Major Kirk Bozell, commanding officer and business manager of the Hong Kong Luna Vigilante Volunteers, to supply-"

"Hold it. What is this?"

"Just the standard contract covering services for personal protection and property conservation, and guaranteeing payment. You can't expect to roust a platoon of guards out of bed in the middle of the night and not pay for it. TANSTAAFL. No free lunch."

"Hmm. Major, do you happen to have any hemorrhoid salve on hand? Preparation H? Pazo? That sort of thing?"

"Eh? I use Tiger Balm. Why?"

"You're going to need it. Take that standard contract, fold it until it is all sharp comers-"

I stayed tuned to thirteen, made no further effort to find the emergencies channel. So far as I could see there was no point to shouting "M'aidez!" on channel eleven when I had already talked to the only likely source of help. I leaned my helmet against Gwen's and summarized, then added, "Both the idiots insisted that there are no bandits out here."

"Maybe they weren't bandits. Maybe they were just agrarian reformers making a political statement. I surely hope we don't run into any right-wing extremists! Richard, I had better not talk while I'm driving. Strange car, strange road-only it's not a road."

"Sorry, hon! You're doing beautifully. How can I help?"

"It would help a lot if you would spot the markers for me."

"Sure thing!"

"Then I could keep my eyes down and watch the road close ahead. Some of those potholes are worse than Manhattan."

"Impossible."

We worked out a system that helped her while bothering her least. As soon as I spotted a marker I pointed at it. When she saw it, too-not before-she slapped my knee. We didn't talk because touching helmets did tend to interfere with her driving.

About an hour later a rolligon showed up ahead and came straight toward us at high speed. Gwen tapped her helmet over her ear; I pressed my helmet to hers. She said, "More agrarian reformers?"

"Maybe."

"I'm out of ammo."

"So am I." I sighed. "We'll just have to get mem to the conference table somehow. After all, violence never solves anything."

Gwen made an unladylike comment and added, "What about that gun you took away from Sir Galahad?"

"Oh. Hon, I haven't even looked at it. Hand me the stupid hat."

"You're not stupid, Richard, just spiritual. Take a look."

I drew that confiscated side arm from my suit belt, examined it. Then I touched helmets again. "Honey, you're not going to believe this. It's not loaded."

"Huh!"

"Indeed 'Huh.' Aside from that I have no comment. And you can quote me."

I chucked that useless weapon into a comer of the bus and looked out at the other rolligon, now rapidly closing. Why would anyone wear an unloaded weapon? Sheer folly!

Gwen tapped her ear again. I touched helmets. "Yes?"

"The ammo for that gun is on the body, you can bet on it."

"I won't bet; I figured that out. Gwen, if I were to try to search that corpse, I would have to cool the other two first. It's not a good idea."

"I agree. And no time for it anyhow. There they come."

Only they didn't, not quite. The other rolligon, while still some two hundred meters away, swung to its left, made it clear that it was avoiding a collision course. As it passed us I read on its side: Vigilante Volunteers-Hong Kong Luna.

Shortly Marcy called me. "Bozell says he found you but can't reach you by radio."

"I don't know why not. You reached me."

"Because I figured out that you would be on the wrong channel. Midnight, whatever you should be doing, it is a dead certainty that you will always be doing something else."

"You flatter me. What should I have done this time?"

"You should have been guarding channel two, that's what. The one reserved for surface vehicles."

"Every day I learn something. Thanks."

"Anyone who doesn't know that should not be operating a vehicle on the surface of this planet."

"Captain, you are so right." I shut up.

We could see Hong Kong Luna over the horizon many minutes before we got there-the emergency landing pylon, the big dishes used to talk to Earth and the bigger ones for Mars and the Belt, the solar power grids-and it got even more impressive as we got closer. Of course everyone lives underground ... but I tend to forget how much of Luna's heavy industry is on the surface-and illogical that I should forget, since most of Luna's great wealth is tied in with raw sunshine, bitter nights, and endless vacuum. But, as my wife pointed out, I'm the spiritual type.

We passed Nissan-Shell's new complex, hectare after hectare of pipes and cracking columns and inverse stills and valves and pumps and Bussard pyramids. The long shadows carved by the rising Sun made it a picture out of Gustave Dore, by Pieter Brueghel (zoon), orchestrated by Salvador Dali. Just beyond it we found the north lock.

Because of Aunt Lilybet they let us use the small Kwiklok. Bill went through with Auntie-he had earned that-then Lady Dee and her surviving husband crowded in ahead of Ekaterina and the kids. Dear Diana had distinguished herself again by demanding that she be taken to the spaceport rather than to a city lock. Bill and I had not let her bother Gwen with her royal commands, but it had decreased (if this be possible) her popularity with us. I was glad to see them disappear into the lock. And it worked out all right as Ekaterina's husband cycled outward through the main lock just as we were losing our VIPs.

Nigel O'Toole took his family (including that pathetic little body) back the same way, after Gwen hugged Ekaterina and promised to call her.

Then it was our turn... only to find that Tree-San could not be fitted into a Kwiklok. So we backed out and went around to the larger (and slower) lock. Someone, I saw, was lifting down the body from the turret of Hear Me, Jesus and others were unloading its cargo, under the eyes of four armed guards. I wondered what was in that cargo. But it was none of my business. (Or maybe it was-it seemed possible that this cargo had been the cause of carnage and death.) We went into the larger lock-ourselves, bonsai maple, small suitcase, purse, packaged wig, cane, prosthetic foot.

The lock cycled and we entered a long, sloping tunnel, then passed through two pressure doors. At the second door was a slot machine for vending short-time air licenses but it had a sign on it: OUT OF ORDER-Visitors please leave a half crown for 24 hrs. A saucer with some coins in it rested on top of the machine; I added a crown for Gwen and me.

At the bottom of the tunnel one more pressure door let us into the city.

There were benches just inside for the convenience of persons suiting up or suiting out. With a sigh of relief I started unzipping and shortly was fastening in place my artificial foot.

Dry Bones is a village. Lucky Dragon is a small town. Hong Kong Luna is a metropolis second only to Luna City. At the moment it did not look crowded but this was the dead of the night; only night workers were up and around. Even early risers had two more hours of sleep coming, no matter that it was broad daylight outside.

But that almost deserted corridor still showed its big-city quality; a sign over the suit racks read: USE THESE RACKS AT YOUR OWN RISK. SEE JAN THE CHECKROOM MAN-BONDED AND INSURED-One Crown/One P-Suit.

Under it was a hand-written notice: Be smart-See Sol for only half a crown-not bonded, not insured, just honest. Each sign had arrows, one pointing left, one pointing right.

Gwen said, "Which one, dear? Sol, or Jan?"

"Neither. This place is enough like Luna City that I know how to cope with it. I think." I looked around, up and down, spotted a red light. "There's a hotel. With my foot back in place, I can take a p-suit under each arm. Can you manage the rest?"

"Certainly. How about your cane?"

"I'll stick it through the belt of my suit. No itch." We started toward that hotel.

Facing the corridor at the hotel's reception window a young woman sat studying-transgenics, Sylvester's classic text. She looked up. "Better check those first. See Sol, next door."

"No, I want a big room, with an empress-size bed. We'll stack these in a comer."

She looked at her rooming diagram. "Single rooms I have. Twin beds I have. Happy suites I have. But what you want- no. All occupied."

"How much is a happy suite?"

"Depends. Here's one with two king beds, and 'fresher. Here's one with no beds at all but a padded parlor floor and lots of pillows. And here's-"

"How much for the two king beds?"

"Eighty crowns."

I said patiently, "Look, citizen, I'm a Loonie myself. My grandfather was wounded on the steps at the Bon Marche. His father was shipped for criminal

syndicalism. I know prices in Loonie City; they can't be that much higher in Kong. What are you charging for what I requested? If you had one vacant?"

"I'm not impressed, chum; anyone can claim ancestors in the Revolution and most do. My ancestors welcomed Neil Armstrong as he stepped down. Top that."

I grinned at her. "I can't and I should have kept quiet. What's your real price on a double room with one big bed, and a 'fresher? Not your tourist price."

"A standard double room with a big bed and its own 'fresher goes for twenty crowns. Tell you what, chum-not much chance of renting my empty suites this late-or this early. I'll sell you an orgy suite for twenty crowns... and you're out by noon."

'Ten crowns."

"Thief. Eighteen. Any lower and I'm losing money."

"No, you're not. As you pointed out, this time in the mom-ing you can't expect to sell it at any price. Fifteen crowns."

"Let's see your money. But you have to be out by noon."

"Make that thirteen o'clock. We've been up all night and have had a rough time." I counted out the cash.

"I know." She nodded at her terminal. "The Hong Kong Gong has had several bulletins about you. Thirteen o'clock, okay-but if you stay longer, you either pay full tariff or move to an ordinary room. Did you really encounter bandits? On the trace to Lucky Dragon?"

"They tell me there are no bandits in that area. We ran into some rather unfriendly strangers. Our losses were three dead, two wounded. We fetched 'em back."

"Yes, I saw. Do you want a receipt for your expense account? For a crown I'll make out a real sincere one, itemized for whatever amount you say. And I have three messages for you."

I blinked stupidly. "How? Nobody knew we were coming to your hotel. We didn't know it ourselves."

"No mystery, chum. A stranger comes in the north lock late at night, it's a probable seven to two he'll wind up in my bed- one of my beds and no smart remarks, please." She glanced at her terminal. "If you hadn't picked up your messages in another ten minutes, backups would have gone to all inns in the pressure. If that failed to find you, the selectman for public safety might start a search. We don't get handsome strangers with romantic adventures too often."

Gwen said, "Quit waggling your tail at him, dearie; he's tired. And taken. Hand me the printouts, please."

The hotel manager looked coldly at Gwen, spoke to roe:

"Chum, if you have not yet paid her, I can guarantee you something better and younger and prettier at a bargain price."

"Your daughter?" Gwen inquired sweetly. "Please, the messages."

The woman shrugged and handed them to me. I thanked her and said, "About this other something. Younger, possibly. Prettier, I doubt. Can't be cheaper; I married this one for her money. What are the facts?"

She looked from me to Gwen. "Is that true? Did he marry you for your money? Make him earn it!"

"Well, he says he did," Gwen said thoughtfully. "I'm not sure. We've been married only three days. This is our honeymoon."

"Less than three days, dear," I objected. "It just seems longer."

"Chum, don't talk that way to your bride! You're a cad and a brute and probably on the lam."

"Yes. All of that," I agreed.

She ignored me, spoke to Gwen: "Dearie, I didn't know it was your honeymoon or I wouldn't have offered that 'something' to your husband. I bow in the dust. But later on, when you get bored with this chum with the overactive mouth, I can arrange the same for you but male. Fair price- Young. Handsome. Virile. Durable. Affectionate. Call or phone and ask for Xia-that's me. Guaranteed-you must be satisfied or you don't pay."

"Thanks. Right now all I want is breakfast. Then bed."

"Breakfast right behind you across the corridor. Sing's New York Caf6.1 recommend his Hangover Special at a crown fifty." She looked back at her rack and picked out two cards. "Here're your keys. Dearie, would you ask Sing to send me over a grilled Cheddar on white with coffee? And don't let him charge you more than a slug and a half for a Hangover Special. He cheats just for fun."

We parked our baggage with Xia and crossed the corridor for breakfast. Sing's Hangover Special was as good as Xia claimed. Then at last we were in our suite-the bridal suite;

Xia had again done right by us. In several ways. She led us to our suite, watched while we oohed and ahed-bubbly in an ice bucket, coverlet turned back, perfumed sheets, flowers (artificial but convincing) picked out by the only light.

So the bride kissed her and Xia kissed the bride, and they both sniffled-and a good thing, too, as a lot had happened too fast and Gwen had had no time to cry. Women need to cry.

Then Xia kissed the groom, and the groom did not cry and did not hang back-Xia is an oriental stack such as Marco Polo is said to have found in Xanadu. And she kissed me most convincingly. Presently she broke enough for air. "Whew!"

"Yes, 'Whew!'" I agreed. "That deal you mentioned earlier- What do you charge?"

"Loud mouth." She grinned at me, did not pull away. "Cad. Scoundrel. I give away free samples. But not to bridegrooms." She unwound herself. "Rest well, dears. Forget that thirteen o'clock deadline. Sleep as long as you wish; I'll tell the day manager."

"Xia, two of those messages called for me to see people at an ugly cow-milking hour. Can you switch us out?"

"I already thought of that; I read those before you did. Forget it. Even if Bully Bozell shows up with all his Boy Scouts, the day manager won't admit knowing what suite you are in."

"I don't want to cause you trouble with your boss."

"Didn't I say? I own the joint. Along with BancAmerica." She pecked me quickly and left.

While we were undressing, Gwen said, "Richard, she was waiting to be asked to stay. And she's not the wide-eyed virgin little Gretchen is. Why didn't you invite her?"

"Aw, shucks, Maw, I didn't know how."

"You could have unpeeled her cheong-sam while she was trying to strangle you; that would have done it. There was nothing under it. Correction: Xia was under it, nothing else. But Xia is a-plenty, I'm certain. So why didn't you?"

"Do you want to know the truth?"

"Uh... I'm not sure."

"Because I wanted to sleep with you, wench, with no distractions. Because I am not yet bored with you. It's not your brain, and not your spiritual qualities of which you almost don't have any. I lust after your sweaty little body."

"Oh, Richard!"

"Before we bathe? Or after?"

"Uh... both?"

"That's my girl!"

XIV

"Democracy can withstand anything but democrats."

J. HARSHAW 1904-

"All kings is mostly rapscallions.**

MARK TWAIN 1835-1910

While we were bathing I said, "You surprised me, hon, by knowing how to herd a rolligon."

"Not half as much as you surprised me when it turned out that your cane was a rifle."

"Ah, yes, that reminds me- Would it bother you to cover for me?"

"Of course not, Richard, but how?"

"My trick cane stops being a protection when people know what it is. But, if all the shooting is attributed to you, then people won't learn what it is."

Gwen answered thoughtfully, "I don't see. Or don't understand. Everybody in the bus saw you using it as a rifle."

"Did they, now? The fight took place in vacuum-dead silence. So no one heard any shots. Who saw me shoot? Auntie? She was wounded before I joined the party. Only seconds before but we're talking about seconds. Bill? Busy with Auntie. Ek-aterina and her kids? I doubt that the kids saw anything they understood, and their mother suffered the worst shock a mother can; she won't be much of a witness, if at all. Dear Diana and her fancy boys? One is dead, the other was so mixed up that he mistook me for a bandit, and LAdy Dee herself is so self-centered that she never understood what was going on; she simply knew that some tiresome nonsense was interfering with her sacred whims. Turn around and I'll scrub your back."

Gwen did so; I went on: "Let's improve it. I'll cover for you instead of you covering for me."

"How?"

"My cane and your little Miyako use the same caliber ammo. So all shots came from the Miyako-fired by me, not by you- and my cane is just a cane. And you are my sweet, innocent bride who would never do anything so grossly unladylike as shooting back at strangers. Does that suit you?"

Gwen was so long in answering that I began to think that I must have offended her. "Richard, maybe neither of us shot at anybody."

"So? You interest me. Tell me how."

"I am almost as unanxious to admit that I carry a gun as you are to admit that your cane has unexpected talents. Some places are awfully stuffy about concealed weapons... but a gun in my purse-or somewhere on me-has saved my life more than once and I intend to go on carrying one. Richard, the reasons you gave for believing that no one knows about your cane apply also to my Miyako. You're bigger than I am and I had the window seat. When we crouched down, I don't think anyone could see me too well-your shoulders are not transparent."

"Hmm. Could be. But what about bodies with slugs in them? Six point five millimeter longs, to be precise."

"Shot by the butchers in that big wheel."

"They were burning, not shooting."

"Richard! Richard! Do you know that they didn't have slug guns as well as energy weapons? I don't."

"Hmm again. My love, you are as devious as a diplomat."

"I am a diplomat. Reach me the soap, pretty please. Richard, let's not volunteer information. We were just passengers, innocent bystanders and stupid as well. How those agrarian reformers died is not our responsibility. My pappy done taught me to hold my cards close to my chest and never admit anything. This is a time for that."

"My pappy done taught me the same thing. Gwen, why didn't you marry me sooner?"

'Took me a while to soften you up, dear. Or vice versa. Ready to shower off?"

While I was drying her, I remembered a point that we had passed by. "Picture bride, where did you learn to drive a rol-ligon?"

"'Where?' Mare Serenitatis."

"Huh?"

"I learned how through watching Gretchen and Auntie. Tonight was the first time I ever drove one."

"Well! Why didn't you say so?"

She started drying me. "Beloved, if you had known, you would have worried. Uselessly. In all the times I've been married I have always made it a rule never to tell my husband anything that would worry him if I could reasonably avoid it." She smiled angelically. "Better so. Men are worriers; women are not."

I was roused out of a deep sleep by loud pounding. "Open up in there!"

I couldn't think of a good reason to answer, so I didn't. I yawned widely, being careful not to let my soul escape, then reached out to my right. And woke up sharply and suddenly;

Gwen was not there.

I got out of bed so quickly that it made me dizzy; I almost fell. I gave my head a shake to clear it, then hopped into the 'fresher. Gwen was not there. The pounding continued.

Don't drink champagne in bed and then go right to sleep;

I had to drain off a liter of used bubbly before I could sigh with relief and think of other matters. The pounding continued, with more shouting.

Tucked into the top of my foot was a note from my beloved. Smart gal! Even better than fastening it to my toothbrush. It read:

Dearest One,

I have an attack of wakeupitis, so I'm getting up and taking care of a couple of errands. First I'm going to Sears Montgomery to return our p-suits and pay the rent on them. While I'm at Sears, I'll pick up socks and drawers for you and panties for me and do some other things. I'll leave a note at the desk here telling Bill to turn in his suit, too- and, yes, he did come in after we did and Xia put him in a single, as you arranged with her. Then I'm off to Wyoming Knott Memorial Hospital to see Auntie, and I'll call Ekaterina.

You're sleeping like a baby and I hope to be back before you wake up. If not-if you go anywhere-please leave a note at the desk.

Love you- Gwendolyn

The pounding continued. I put on my foot, while noting that our p-suits were not where I had last seen them, i.e., arranged in a romantic pose on the floor, a jest created by my bawdy bride. I dressed in the only clothes I had, then watered the little maple, found it did not need much; Gwen must have watered it.

"Open up!"

"Go to hell," I answered politely.

Shortly the pounding was replaced by a scratching noise, so I placed myself close to the door and a bit to one side. This was not a dilating door but the more traditional hinged type.

It swung open; my noisy visitor plunged in. I reached out and threw him across the room. In one-sixth gee this takes some care-you must have a foot braced against something, or you'll lose traction and it won't work.

He sort of bounced off the far wall and wound up on the bed. I said, "Get your dirty feet off my bed!"

He got off the bed and stood up. I continued angrily, "Now explain why you broke into my bedroom... and make it quick before I tear off your arm and beat you over the head with it. Who do you think you are, waking up a citizen who has switched on his Do-Not-Disturb? Answer me!"

I could see what he was: some sort of town clown; he was wearing a uniform that spelled "cop." His reply, mixing indignation with arrogance, matched his appearance. "Why didn't you open up when I ordered you to?"

"Why should I? Do you pay the rent on this room?"

"No, but-"

"There's your answer. Get out of here!"

"Now you listen to me! I am a safety officer of the sovereign city of Hong Kong Luna. You are directed to present yourself before the Moderator of the Municipal Council forthwith to supply information necessary to the peace and security of the city."

"I am, eh? Show me your warrant."

"No warrant needed. I am in uniform and on duty; you are required to cooperate with me. City Ordinance two seventeen dash eighty-two, page forty-one."

"Do you have a warrant to break down the door of my private bedroom? Don't try to tell me that doesn't require a warrant. I'm going to sue you and take every crown you have and that monkey suit as well."

His jaw muscles quivered but all he said was: "Are you coming peacefully or do I have to drag you?"

I grinned at him. "Best two falls out of three? I won the first one. Come ahead." I became aware that we had an audience at the door. "Good morning, Xia. Do you know this clown?"

"Mr. Richard, I'm terribly sorry about this. My day manager tried to stop him; he wouldn't stop. I got here as quickly as I could." I saw that she was barefooted and wearing no makeup- so her sleep had been interrupted, too. I said gently,

"Not your fault, dear. He doesn't have a warrant. Shall I throw him out?"

"Well..." She looked troubled.

"Oh. I see. I think I see. Throughout history, innkeepers have found it necessary to get along with cops. And throughout history, cops have had larcenous hearts and a bully's manners. All right, as a favor to you, I'll let him live." I turned back to the cop. "Boy, you can chase back to your boss and tell him that I will be along presently. After I've had at least two cups of coffee. If he wants me any sooner than that, he had better send a squad. Xia, would you like coffee? Let's go see if Sing has coffee and Danish, or such."

At this point Joe Stormtrooper made it necessary for me to take his gun. I can be shot-I have been shot, more than once- but I can't be shot by anyone who thinks that just pointing a gun at me has changed the odds.

His gun was nothing I wanted-door-prize junk. So I unloaded it, made sure that his ammo was not the caliber I use, dropped the loads down the oubliette, and handed his gun back to him.

At the loss of his cartridges he screamed bloody murder, but I patiently explained to him that his gun was as good as ever for the purpose for which he used it and that, if I had let him keep ammo, he could have hurt himself.

He continued to squawk, so I told him to go squawk to his boss. And turned my back. He was, I feel certain, annoyed. But so was I.

Forty minutes later, feeling better although still sleepy, and after a rewarding chat with Xia over coffee and jelly doughnuts, I presented myself at the office of the Honorable Jefferson Mao, Moderator of the Council of Selectmen of the Sovereign City of Hong Kong Luna-so it said on the door. I wondered what the Congress of Luna Free State thought about this use of the word "sovereign" but it was none of my business.

A brisk woman with slant eyes and red hair (interesting genes, I guess) said, "Name, please?"

"Richard Johnson. The Moderator wants to see me."

She glanced at her monitor. "You're late for your appointment; you'll have to wait. You may sit down."

"And I may not. I said that the Moderator wants to see me;

I did not say that I want to see the Moderator. Punch up that box and let him know that I am here."

"I can't possibly fit you in for at least two hours."

'Tell him I am here. If he won't see me now, I'm leaving."

"Very well, return in two hours."

"You misunderstand me. I'm leaving. Leaving Kong. I won't be back." I was bluffing as I said it and as I said it, I learned that I was not bluffing. My plans, as yet inchoate, had included an indefinite stay in Kong. Now I suddenly realized that I would not remain in a city that had sunk so far in the qualities that constitute civilization that a

cop would break into a citizen's bedroom merely because some officious official decides to summon him. No indeed! A private soldier in a decent, well-run, disciplined military outfit has more freedom and more privacy than that. Hong Kong Luna, celebrated in song and story as the cradle of Luna's freedom, was no longer a fit place to live.

I turned away and was almost to the door when she called out: "Mr. Johnson!"

I stopped, did not turn. "Yes?"

"Come back here!"

"Why?"

Her answer seemed to hurt her face. "The Moderator will see you now."

"Very well." As I approached the door to the inner office, it rolled out of the way... but I did not find myself in the Moderator's private office; three more doors, each guarded by its own faithful hound, lay ahead-and this told me more than I wanted to know about the current government of Hong Kong Luna.

The guardian of the last door announced me and ushered me through. Mr. Mao barely glanced at me. "Sit down." I sat down, rested my cane against my knee.

I waited five minutes while the city boss shuffled papers and continued to ignore me. Then I stood up, headed for the door, moving slowly, leaning on my cane. Mao looked up. "Mr. Johnson! Where are you going?"

"Out."

"Indeed. You don't want to get along, do you?"

"I want to go about my business. Is there some reason I should not?"

He looked at me with no expression. "If you insist, I can cite a municipal ordinance under which you are required to cooperate with me when I request it."

"Are you referring to City Ordinance two hundred seventeen dash eighty-two?"

"I see you are familiar with it... so you can hardly plead ignorance in extenuation of your behavior."

"I am not familiar with that ordinance, just its number. It was cited to me by a clownish thug who crushed into my bedroom. Does that ordinance say anything about breaking into private bedrooms?"

"Ah, yes. Interfering with a safety officer in the performance of his duty. We'll discuss that later. That ordinance you cited is the bedrock of our freedom. Citizens, residents, and even visitors can come and go as they please, subject only to their civic duty to cooperate with officials, elected, appointed, or deputized, in carrying out their official duties."

"And who decides when cooperation is needed and what sort and how much?"

"Why, the official involved, of course."

"I thought so. Is there anything else you want of me?" I started to stand up.

"Sit back down. There is indeed. And I require your cooperation. I am sorry to have to put it that way but you don't seem to respond to polite requests."

"Such as breaking down my door?"

"You weary me. Sit down and shut up. I am about to interrogate you... as soon as two witnesses arrive."

I sat down and shut up. I felt that I now understood the new regime: absolute freedom... except that any official from dogcatcher to supreme potentate could give any orders whatever to any private citizen at any time.

So it was "freedom" as defined by Orwell and Kafka, "freedom" as granted by Stalin and Hitler, "freedom" to pace back and forth in your cage. I wondered if the coming interrogation would be assisted by mechanical or electrical devices or by drugs, and felt sick at my stomach. Back when I was on active duty and repeatedly faced with the possibility of capture while holding classified information, I always had a final friend, that "hollow tooth" or equivalent. I no longer wore such protection.

I was scared.

Before long two men came in together. Mao answered good-moming to their greeting and waved them to seats; a third man came in right after them. "Uncle Jeff, I-"

"Shut up and sit down!" This latecomer was the joker whose gun I had emptied; he shut up and sat down. I caught him looking at me; he looked away.

Mao put aside some papers. "Major Bozell, thanks for coming in. You, too. Captain Marcy. Major, you have questions to ask one Richard Johnson. There he sits. Ask away."

Bozell was a short man who carried himself very erect. He had close-cropped sandy hair and an abrupt, jerky manner.

"Hah! Let's get right to it! Why did you send me on a wild goose chase?"

"What wild goose chase?"

"Hah! Are you going to sit there and deny that you told me a cock-and-bull story about an attack by bandits? In an area where there have never been any bandits! Do you deny that you urged me to send a rescue-and-salvage team out there? Knowing that I would find nothing! Answer me!"

I said, "That reminds me- Can anyone tell me how Aunt Lilybet is this morning? Because I was told to come here, I haven't had time to get to the hospital."

"Hah! Don't change the subject. Answer me!"

I answered mildly, "But that is the subject. In that cock-and-bull attack you spoke of, an old lady was injured. Is she still alive? Does anyone know?"

Bozell started to answer; Mao cut in. "She's alive. Or was an hour ago. Johnson, you had better pray that she stays alive. I have a deposition here"-he tapped his terminal- "from a citizen whose word is above reproach. One of our most important stockholders, LAdy Diana Kerr-Shapley. She states that you shot Mistress Lilybet Washington-"

"What?"

"-while creating a reign of terror in which your actions caused the death by anoxia of her husband the Honorable Oswald Progant, broke the wrist of her husband the Honorable Brockman Hogg, and subjected Lady Diana herself to terror tactics and repeated insults."

"Hmm. Did she say who killed the O'Toole child? And what about the turret gunner? Who killed him?"

"She states that there was such confusion that she did not see everything. But you went outside while the bus was standing still and climbed up to the turret-no doubt that was when you finished off the poor boy."

"Are you saying that last, or did she say it?"

"I said it. A conclusive presumption. Lady Diana was meticulously careful not to testify to anything she did not see with her own eyes. Including this ghostly rolligon full of bandits. She saw nothing of it."

Bozell added, "There you have it, Mr. Moderator. This hijacker shot up the bus and killed three people and wounded two more... and invented a cock-and-bull story about bandits to cover his crimes. There are no bandits in that area; everybody knows that."

I tried to get a grip on reality. "Mr. Moderator, one moment, please! Captain Marcy is here. I understand he got a picture of the bandits' rolligon."

"I ask the questions, Mr. Johnson."

"But- Did he, or didn't he?"

'That's enough, Johnson! You will be in order. Or you will be restrained."

"What am I doing that is out of order?"

"You're disrupting this investigation with irrelevancies. Wait until you are spoken to. Then answer the question."

"Yes, sir. What is the question?"

"I told you to keep quiet!"

I kept quiet. So did everybody else.

Presently Mr. Mao drummed on his desk and said, "Major, did you have more questions?"

"Hah! He never answered my first question. He evaded it."

The Moderator said, "Johnson, answer the question."

I looked stupid-my best role. "What is the question?"

Mao and Bozell both started to speak; Bozell yielded to Mao who went on, "Let's summarize it. Why did you do what you did?"

"What did I do?"

"I just told you what you did!"

"But I didn't do any of the things you said I did. Mr. Moderator, I don't understand how you got into this. You weren't there. That bus is not from your city. I am not from your city. Whatever happened took place outside your city. What is your connection with the matter?"

Mao leaned back and looked smug. Bozell said, "Hah!" then added, "Shall I tell him, Mr. Moderator? Or will you?"

"I will tell him. In fact I shall enjoy telling him. Johnson, less than a year ago the Council of this sovereign city made a very wise move. It extended its jurisdiction to cover all surface and subsurface activity within one hundred kilometers of the municipal pressure."

"And made the Vigilante Volunteers an official arm of the government," Bozell added happily, "charged with keeping the peace to the hundred-kilometer line! And that fixes you, you murderer!"

Mao ignored the interruption. "So you see, Johnson, while you probably thought that you were out in anarchist wilds, where the writ of law does not run, in fact you were not. Your crimes will be punished."

(I wonder how soon someone will attempt a power grab like this out in the Belt?) "These crimes of mine- Did they take place less than one hundred kilometers from Hong Kong Luna? Or more?"

"Eh? Less. Considerably less. Of course."

"Who measured it?"

Mao looked at Bozell. "How far was it?"'

"About eighty kilometers. A little less."

I said, "What was a little less? Major, are you talking about the bandits' attack on the bus? Or about something that went on inside the bus?"

"Don't put words into my mouth! Marcy-you tell them!"

Having said that, Bozell looked blank. He started to add something, stopped.

I most carefully kept quiet. Presently Mao said, "Well, Captain Marcy?"

"What do you want from me, sir? The director of the port, when he sent me here, told me to cooperate fully... but not to volunteer anything you did not ask for."

"I want everything relevant to this case. Did you give Major Bozell a figure of eighty kilometers?"

"Yes, sir. Seventy-eight kilometers."

"How did you get that figure?"

"I measured it on a monitor at my console. Ordinarily we don't print a satellite photograph, just display it. This man- you say his name is Johnson; I knew him as 'Midnight'-if he's the same man. He called me last night at oh one twenty-seven, stated that he was in the Lucky Dragon bus, reported that bandits had attacked the bus-"

"Hah!"

"-and that the attack had been driven off but the driver, Aunt Lilybet-Mistress Washington-was hurt and that the turret gunner was-"

"We know all that. Captain. Tell us about the photograph."

"Yes, Mr. Moderator. From what Midnight told me, I was able to direct the satellite camera onto target. I photographed the rolligon."

"And you place the bus at that time seventy-eight kilometers from the city?"

"No, sir, not the bus. The other rolligon."

There was the sort of silence sometimes called "pregnant." Then Bozell said, "But that's crazy! There wasn't any-"

"Just a moment, Bozell. Marcy, you were misled by John-son's lies. What you saw was the bus."

"No, sir. I did see the bus; I had it on monitor. But I saw at once that it was moving. So I coached the camera back down the trace about ten klicks... and there was the second rolligon, just as Midnight had said."

Bozell was almost in tears. "But- There was nothing there, I tell you! My boys and I searched that whole area. Nothing! Marcy, you're out of your mind!"

I don't know how long Bozell would have gone on wishing away a rolligon he could not find, as he was interrupted; Gwen came in. And I reswallowed my heart; everything was going to be all right!

(I had been worried sick ever since I had seen Mao's triple defenses against anyone walking in on him. A guard against assassination? I don't know; I simply fretted that Gwen might be balked. But I should have had more confidence in my little giant.)

She smiled and waved me a kiss, then turned and held the door. "Right through here, gentlemen!"

Two of Mao's own police brought in a wheelchair, laid back so that Auntie could recline. She looked around, smiled at me, then said to the Moderator, "Howdy, Jefferson. How's your momma?"

"She's well, thank you. Mistress Washington. But you-"

"What's this 'Mistress Washington' fancy talk? Boy, I've changed your nappies; you call me 'Auntie' same as you always did. Now I heard about how you were planning to pin a medal on Senator Richard for how he saved me from those bandits ... and when I heard that I said to myself, 'Jefferson hasn't heard about the other two that deserve medals quite as much as Senator Richard does-begging your pardon. Senator."

I said, "Oh, you're quite right. Auntie."

"So I brought them. Gwen honey, say hello to Jefferson. He's the mayor of this pressure. Gwen is Senator Richard's wife, Jefferson. And Bill- Where's Bill? Bill! You come in here, son! Don't be shy. Jefferson, while it's true that Senator Richard killed two of those bad men with his bare hands-"

"Not his bare hands. Auntie," Gwen objected. "He did have his cane."

"You hush up, honey. With his bare hands and his walking cane, but if Bill hadn't been right there-and fast and smart- I wouldn't be here; Jesus would have taken me. But the dear Lord said it wasn't my time yet and Bill put patches on my suit and saved me to serve Jesus another day." Auntie reached out, took Bill's hand. "This is Bill, Jefferson. Make sure he gets a medal, too. And Gwen- Come here, Gwen. This baby girl saved all our lives."

I'm not sure how old my bride is, but she is not a "baby girl." However, that was the least distortion of fact that was heard in the next few minutes. To put it in its mildest terms, Auntie told a pack of lies. With Gwen nodding and backing her up and looking angelic.

It was not so much that the facts were wrong as that Auntie testified to things she could not possibly have seen. Gwen must have coached her most carefully.

Two loads of bandits had tackled us but they had fought each other; that saved us, as all but two of them died in that fratricide. Those two I killed with my bare hands and a walking stick-against laser guns. I am so heroic that I amaze myself.

While these brave deeds were going on, I know Auntie was unconscious part of the time, and flat on her back all of the time, able to see only the ceiling of the bus. Yet she seemed to believe-I think she did believe-what she was saying. So much for eyewitnesses.

(Not that I'm complaining!)

Then Auntie told how Gwen had driven us. I found myself pulling up a trouser leg to show my prosthetic-something I never do-but did this time to show why I had been unable to wear it while wearing a standard p-suit, and thereby unable to drive.

But it was Gwen who brought down the house when Auntie finished her highly-colored account. Gwen did it with pictures.

Listen carefully. Gwen had used all her ammo, six rounds, then-neat as always-she had put her Miyako back into her purse. And pulled out her Mini Helvetia, snapped two frames.

She had tilted her camera down a bit, for it showed not only both bandit vehicles but also three casualties on the ground and one bandit up and moving. The second shot showed four on the ground and the superdoughnut turned away.

I can't figure an exact time line on this but there must have been at least four seconds from the time she ran out of ammo to the time the giant wheel turned away. With a fast camera it takes about as long to shoot one frame as it does to fire one shot with a semi-automatic slug gun.

So the question is: What did she do with the other two seconds? Just waste them?

XV

"Premenstrual Syndrome: Just before their periods women behave the way men do all the time"

LOWELL STONE, M.D. 2144-

We didn't break into a run but we got out of there as fast as possible. True, Auntie had clobbered Mr. Mao into accepting me as a "hero" rather than a criminal-but that did not make him love me and I knew it.

Major Bozell did not even pretend to like me. Captain Mar-cy's "defection" infuriated Bozell; Gwen's pictures actually showing bandits (where they could not be!) broke his heart. Then his boss gave him the crudest blow by ordering him to get his troops together and get out there and find them! Do it now! "If you can't do it. Major, I'll have to find someone who can. You thought up this idea of the hundred-kilometer border. Now justify your boasts."

Mao should not have done it to Bozell in the presence of others-especially not in my presence. This I know from professional experience-in each role.

I think Gwen gave Auntie some signal. As may be. Aunt Lilybet told Mao she had to leave. "My little nurse is going to scold me for staying too long. I don't want her to have to scold me too hard. Mei-Ling Ouspenskaya-do you know her, Jefferson? She knows your momma."

The same two police officers wheeled Auntie all the way back through that series of offices and out to the public corridor-square, rather, as the city offices face on Revolutionary Square. She said good-bye to us there and the police officers wheeled her away to Wyoming Knott Memorial Hospital, two levels down and north of there. I don't think they expected to do it-I do know Gwen conscripted these two right there in the Moderator's offices-but Auntie assumed that they would take her back to hospital, and they did. "No, Gwen honey, no need for you to come along-these kind gentlemen know where it is."

(A lady has doors held for her because she expects doors to be held for her. Both Gwen and Aunt Lilybet had this principle down pat.)

Facing the municipal offices was a large bunting-bedecked sign:

FREE LUNA! July 4th, 2076-2188

Was it really Independence Day already? I counted up in my mind. Yes, Gwen and I had married on the first-so today had to be the Fourth of July. A good omen!

Seated at a bench around a fountain in the center of Revolutionary Square was Xia, waiting for us.

I had expected Gwen; I did not expect Xia. In the chat I had had with Xia, I had asked her to try to locate Gwen and to tell her where I was going and why. "Xia, I don't like being called in by cops for questioning, especially in a strange town where I don't know the political setup. If I am 'detained'-to put it politely-I want my wife to know where to look."

I did not suggest what Gwen should do about it. In only three days of marriage to Gwen I had already learned that nothing I could suggest could equal what she would think of, left to her own devious devices-being married to Gwen was not dull!

I was warmly pleased to find Xia waiting but I was startled at what she had with her. I stared and said, "Somebody book the bridal suite?" On the bench by Xia I saw Gwen's small case, a package containing a wig, a rock maple in bonsai, and a package not familiar to me but self-explained by its Sears Montgomery wrapping. "I'll bet my toothbrush is still hanging in the 'fresher."

"How much and what odds?" said Xia. "You would lose. Richard, I'll miss both of you. Maybe I'll run over to L-City and visit you."

"Do that!" said Gwen.

"Concur," I concurred, "if we're moving to L-City. Are we?"

"Right away," said Gwen.

"Bill, did you know about this?"

"No, Senator. But she had me rush over to Sears and turn in my p-suit. So I'm ready."

"Richard," Gwen said seriously, "it's not safe for you to stay here."

"No, it's not," said a voice behind me (proving again that classified matters should not be discussed in public places). "The sooner you chums leave the better. Hi, Xia. Are you with these dangerous characters?"

"Hi yourself, Choy-Mu. Thanks for last time."

I blinked at him. "Captain Marcy! I'm glad you came out;

I want to thank you!"

"Nothing to thank me for. Captain Midnight-or is it 'Senator'?"

"Well... actually it's 'Doctor.' Or 'Mister.' But to you it's 'Richard,' if you will. You saved my neck."

"And I'm Choy-Mu, Richard. But I did not save your neck. I followed you out to tell you so. You may think you won back in there. You did not. You lost. You made the Moderator lose face-you made both of them lose face. So you're a walking time bomb, an accident looking for the spot." He frowned. "Not too healthy for me, either, being present when they lost face... after making the initial mistake of 'bearing bad news to the king.' Understand me?"

"I'm afraid I do."

Xia asked, "Choy-Mu, truly did Number-One lose face?" 'Truly he did, luv. It was Aunt Lilybet Washington who did

it to him. But of course he can't touch her. So it lands on

Captain- On Richard. So I see it."

Xia stood up. "Gwen, let's go straight to the station. Not

waste a second! Oh, damn! I did so much want you to stay a

few days."

Twenty minutes later we were at South Tube Station, and about to enter the ballistic tube for Luna City. The fact that we were able to book space in the L-City capsule leaving almost at once controlled our destination, as Choy-Mu and Xia went along to see us off and, by the time we had reached the station via the local city subway, they had convinced me-or had convinced Gwen (more to the point)-that we should take

the first thing leaving town, no matter where it went. From that same station there are ordinary (non-ballistic) tubes to Plato, Tycho Under, and Novy Leningrad-had we been six minutes earlier we would have wound up in Plato warren, which would have changed many things.

Or would it have changed anything? Is there a Destiny that shapes our ends? (Gwen's end was delightfully shaped. Xia's also, come to think of it.)

There was barely time to say good-bye before we had to rack up and strap in. Xia kissed us all good-bye and I was pleased that Gwen did not let Choy-Mu go unkissed. A true Loonie, he hesitated a long beat to make sure that the lady meant it, then returned it enthusiastically. I watched Xia kissing Bill good-bye-Bill returned it without that hesitation. I decided that Gwen's attempt to play Pygmalion to this unlikely Galatea was succeeding but that Bill would have to learn Loonie manners, or he might lose some teeth.

We strapped down, the capsule was sealed, and again Bill cradled the little maple's pot against his belly. The racks swung to meet acceleration-one full gee, a high acceleration for Loonies who filled the rest of the car. Two minutes and fifty-one seconds of boost, then we were at orbital speed.

Odd to be in free fall in a subway. But it certainly is fun!

It was the first time I had ridden the ballistic tube. It dates back before the Revolution, although then (so I've read) it extended only to Endsville. It was completed later, but the principle was never extended to other subway systems-not economic, I am told, other than for heavily-traveled, long runs that can be dug "straight" the whole way-"straight" in this case meaning "exactly conforming to a ballistic curve at orbiting velocity."

This subway is the only underground "spaceship" in history. It works like the induction catapults that throw cargo to Ell-Four and Ell-Five and to Terra... except that the launching station, the receiving station, and the entire trajectory are underground ... a few meters underground in most places, about three klicks underground where the tube passes under mountains.

Two minutes and fifty-one seconds of one-gee boost, twelve minutes and twenty-seven seconds in free fall, two minutes and fifty-one seconds of one-gee braking-it adds up to an average speed of more than five thousand kilometers per hour. No other "surface" transportation anywhere even approaches this speed. Yet it is an utterly comfortable ride-three minutes that feel like lying in a hammock on Terra, then twelve and a half minutes of weightlessness, and again three minutes in that garden hammock. How can you beat that?

Oh, you could do it faster by accelerating at multiple gee. But not much. If your acceleration could be instantaneous (killing all passengers!) and you decelerated the same way (splat!), you could raise your average speed to just over six thousand kilometers per hour and trim your time back by almost three minutes! But that's the ultimate.

That is also the best possible time for a rocketship between Kong and L-City. In practice a jumpbug rocket will usually take about half an hour-depends on how high its trajectory is.

But surely a half hour is short enough. Why tunnel under maria and mountains when a rocket can do the job?

A rocket is the most lavishly expensive transportation ever invented. In a typical rocketship mission half the effort is spent fighting gravity to go up and the other half is spent fighting gravity in letting down-as crashing is considered an unsatisfactory end to a mission. The giant catapults on Luna, on Terra, on Mars, and in space are giant statements against the wastefulness of rocket engines.

Contrariwise, the ballistic subway is the most economical transportation ever devised: No mass is burned up or thrown away and the energy used in speeding up is given back at the other end in slowing down.

No magic is involved. An electric catapult is a motor generator. Never mind that it doesn't look like one. In its acceleration phase it is a motor; electric power is converted into kinetic energy. In its decelerating phase it is a generator; the kinetic energy extracted from the capsule is pulled out as electric power and stored in a Shipstone. Then the same energy is taken from the Shipstone to hurt the capsule back to Kong.

A Free Lunch!

Not quite. There are hysteresis losses and other inefficiencies. Entropy always increases; the second law of thermodynamics can't be snubbed. What it most resembles is regenerative braking. There was a time, years ago, when surface cars were slowed and stopped by friction, rudely applied. Then a bright lad realized that a turning wheel could be stopped by treating it as a generator and making it pay for the privilege of being stopped-the angular momentum could be extracted and stored in a "storage battery" (an early predecessor of Shipstones).

The capsule from Kong does much the same; in cutting magnetic lines of force at the L-City end it generates a tremendous electromotive force, which stops the capsule and changes its kinetic energy into electrical energy, which is then stored.

But the passenger need know nothing of this. He simply lounges in his "hammock" rack for the gentlest ride possible.

We had just spent most of three days in rolling seven hundred kilometers. Now we traveled fifteen hundred kilometers in eighteen minutes.

We had to shoulder our way out of the capsule and into the tube station because there were Shriners impatiently awaiting the opportunity to board for Kong. I heard one say that "they" (that anonymous "they" who are to blame for everything)- "they ought to put on more cars." A Loonie tried to explain to him the impossibility involved in his demand-just one tube, able to handle only one capsule, which could be at this end or at the far end or in free flight in between. But never two capsules in the tube-impossible, suicidal.

His explanation met with blank disbelief. The visitor seemed to have trouble, too, in grasping the idea that the ballistic tube was privately owned and totally unregulated... a matter that came up when the Loonie finally said, "You want another tube, go ahead! Build it! You are free to do so; nobody is stopping you. If that doesn't satisfy you, go back to Liverpool!"

Unkind of him. Earthworms can't help being earthworms. Every year some of them die through inability to comprehend that Luna is not like Liverpool, or Denver, or Buenos Aires.

We passed through the lock separating the pressure owned by Artemis Transit Company from the municipal pressure. In the tunnel just beyond the lock was a sign: GET YOUR AIR CHITS HERE. Seated under it at a table was a man twice as

handicapped as I was; his legs ended at his knees. This did not seem to slow him down; he sold magazines and candy as well as air, advertised both sightseeing and guide service, and displayed the ubiquitous sign: TRACK ODDS.

Most people breezed back and forth past him without stopping. Bill had started to do so, when I checked him. "Wups! Wait, Bill."

"Senator, I've got to get some water onto this tree."

"Wait just the same. And stop calling me 'Senator.' Call me 'Doctor' instead. Dr. Richard Ames."

"Huh?"

"Never mind; just do it. Right now, we've got to bay sax. Didn't you buy air at Kong?"

Bill had not. He had entered the city pressure helping with Auntie and no one had asked him to pay.

"Well, you should have paid. Did you notice that Gretchen paid for all of us at Lucky Dragon? She did. And now we'll pay here, but I'll arrange for longer than overnight. Wait here."

I stepped up to the table. "Hi there. You're selling air?"

The air vendor glanced up from working a double-crostic, looked me over. "No charge to you. You paid for air when you bought your ticket."

"Not quite," I said. "I'm a Loonie, cobber, returning home. With a wife and one dependent. So I need air for three."

"A nice try. But no prize. Look, a citizen's chit won't get you citizens' prices- they'll still look at you and charge you tourist prices. If you want to extend your visa, you can. At city hall. And they'll collect air fee to cover your extended visa. Now forget it, before I decide to cheat you."

"Choom, you're hard to please." I dug out my passport- glanced at it to make sure it was my "Richard Ames" passport- and handed it to him. "I've been away several years. If that makes me look like a groundhog to you, that's regrettable. But please note where I was born."

He looked it over, handed it back. "Okay, Loonie, you had me fooled. Three of you, eh? For how long?"

"My plans aren't firm. What's the shortest period for the permanent-resident scale?"

"One quarter. Oh, another five percent off if you buy five years at a time... but with today's prime rate at seven point one, it's a sucker bet."

I paid for three adults for ninety days and asked what he knew about housing. "Having been away so long I not only don't have cubic, I don't know the market-and I don't relish dossing in Bottom Alley tonight."

"You'd wake up with your shoes gone, your throat cut, and rats walking over your face. Mmm, a tough question, cobber. You see the funny red hats. Biggest convention L-City has ever had; between it and Independence Day the town is booked solid. But, if you're not too fussy-"

"We're not."

"You'll be able to get something better after the weekend, but in the meantime there is an old place in level six, the Raffles, across from-"

"I know where it is. I'll try there."

"Better call them first and tell them I sent you. I'm Rabbi Ezra ben David. Reminds me. 'Ames, Richard.' Are you the Richard Ames who's wanted for murder?"

"My word!"

"Surprise you? Too true, cobber. I've got a copy of the notice here someplace." He shuffled through magazines and penciled notes and chess problems. "Here it is. You're wanted in Golden Rule habitat-seems you chilled some VIP. So they say."

"Interesting. Is there a tab out on me here?"

"In Luna? I don't think so. Why would there be? Still the same old standoff; no diplomatic relations with Golden Rule until they qualify under the Oslo Convention. Which they cannot without a basic bill of rights. Which is not bloody likely."

"I suppose so."

"Still... if you need lawyer help, come see me; I do that, too. Catch me here any day after noon, or leave your name at Seymour's Kosher Fish Emporium across from Carnegie Library. Seymour's my son."

"Thanks, I'll remember. By the way, who is it I'm supposed to have killed?"

"Don't you know?"

"Since I didn't kill anybody how could I know?"

"There are logical lacunae in that which I will not examine. It is set forth here that your victim hight Enrico Schultz. Does that name trigger your memory?"

"'Enrico Schultz.' I don't think I've ever heard that name. A stranger to me. Most murder victims are killed by close friends or relatives-not by strangers. And, in this case, not by me."

"Odd indeed. Yet the owners of Golden Rule have offered a substantial reward for your death. Or, to be precise, for delivering you alive or dead, with no emphasis on keeping you alive-just your body, cobber, warm or cold. Should I point out that, if I were your attorney, I would be ethically bound not to exploit this opportunity?"

"Rabbi, I don't think you would anyhow; you're too much the old Loonie. You're simply trying to chivvy me into hiring you. Mmm. I claim the Three Days."

"Three days, it is. Do you want skin receipts or will chits suffice?"

"Since I've lost the look of a Loonie, we had better have both."

"Very well. A crown or two for luck?"

The Reverend Ezra stamped our forearms with the date three months hence and with his chop, using a waterproof ink visible only in black light, and showed us, using his test lamp, that we were marked and now could legally breathe for one quarter anywhere in L-City municipal pressure-and enjoy other concomitant privileges such as passage through public cubic. I offered him three crowns over what I had paid for air; he accepted two.

I thanked him and bade him good day; we went on down the tunnel, each somewhat awkwardly burdened. Fifty meters farther along, the tunnel debouched into a main corridor. We were about to exit, and I was checking my orientation, deciding whether to go left or right, when I heard a whistle and a soprano voice. "Hold it! Not so fast. Inspection first."

I stopped and turned. She had a face that spells "civil servant"-and don't ask me how. I simply know, from three planets, several planetoids, and still more habitats, that after racking up a number of years toward retirement, all civil servants have this look. She wore a uniform that was neither police nor military. "Just in from Kong?"

I agreed that we were.

"Are you three together? Put everything on the table. Open up everything. Any fruits, vegetables, or food?"

I said, "What is this?"

Gwen said, "I have a Hershey bar. Want a bite?"

"I think that counts as bribery. Sure, why not?"

"Of course I'm trying to bribe you. I have a small alligator in my purse. He's neither fruit nor vegetable; I suppose he could be food. In any case he's almost certainly against your stuffy rules."

"Wait a minute; I'll have to check the lists." The inspector consulted a very large loose-leaf volume of terminal printout. "Alligator pears; alligator skins, cured or tanned; alligators, stuffed- Is this one stuffed?"

"Only when he overeats; he's greedy."

"Dearie, are you trying to tell me that you've got a live alligator in that purse?"

"Put your hand in my purse at your own risk. He's trained as a guard alligator. Count your fingers before you reach in, then count them again as you take your hand out."

"You're joking."

"What odds? And how much? But remember, I warned you."

"Oh, piffle!" The inspector reached into Gwen's purse- gave a yelp as she snatched her hand out. "It bit me!" She stuck her fingers into her mouth.

"That's what he's there for," said Gwen. "I warned you. Are you hurt? Let me see."

The two women inspected the hand, each decided that red marks were the extent of the damage. "That's good," said Gwen. "I've been trying to teach him to grasp firmly but not to break the skin. And never, never bite fingers off. He's learning; he's still young. But you shouldn't have been able to get your hand back that easily. Alfred is supposed to hang on like a bulldog while the radio alarm causes me to come a-running."

"I don't know anything about bulldogs but he certainly tried to take my finger off."

"Oh, surely not! Have you ever seen a dog?"

"Just dressed-out carcasses in meat markets. No, I take that back; I saw one in Tycho Zoo when I was a little girl. Big ugly brute. Scared me."

"Some are small and some aren't ugly. A bulldog is ugly but not very big. What a bulldog is best at is biting and hanging on. That's what I'm training King Alfred to do."

'Take him out and show him to me."

"No indeed! He's a guard beast; I don't want him getting petted and cooed over by other people; I want him to bite. If you want to see him, you reach in and take him out. Maybe this time he'll hang on. I hope."

That ended any attempt to inspect us. Adele Sussbaum, Unnecessary Public Servant First Class, agreed that Tree-San was not verboten, admired it, and inquired as to its flowers. When she and Gwen started exchanging recipes, I insisted that we had to get moving-if the municipal health and safety inspection was finished.

We slanted across Outer Ring; I smelted out the Causeway and was oriented. We went down a level and passed through Old Dome, then headed down the tunnel where my memory said the Raffles Hotel ought to be.

But en route Bill exposed me to some of his political opinions. "Senator-"

"Not 'Senator,' Bill. Doctor."

"'Doctor.' Yes, sir. Doctor, I think it's wrong, what happened back there."

"Yes, it is. That so-called inspection is pointless. It's the sort of expensive, useless accretion all governments acquire over the years, like barnacles on an ocean ship."

"Oh, I don't meant that. That's okay; it protects the city and gives her an honest job."

"Strike the word 'honest.'"

"Huh? I was talking about charging for air. That's wrong. Air should be free."

"Why do you say that. Bill? This isn't New Orleans; this is the Moon. No atmosphere. If you don't buy air, how are you going to breathe?"

"But that's just what I mean! Air to breathe is everybody's right. The government should supply it."

"The city government does supply it, everywhere inside the city pressure. That's what we just paid for." I fanned the air in front of his nose. "This stuff."

"But that's what I'm saying! Nobody should have to pay for the breath of life. It's a natural right and the government should supply it free."

I said to Gwen, "Wait a moment, dear; this has got to be settled. We may have to eliminate Bill just to keep him happy. Let's stand right here till we straighten this out. Bill, I paid for air for you to breathe because you have no money. Correct?"

He did not answer at once. Gwen said quietly, "I let him have pocket money. Do you object?"

I looked at her thoughtfully. "I think I should have been told. My love, if I am to be responsible for this family, I must know what is going on in it." I turned to Bill. "When I paid for your air back there, why didn't you offer to pay your share out of the money you had in your pocket?"

"But she gave it to me. Not you."

"So? Give it back to her."

Bill looked startled; Gwen said, "Richard, is this necessary?"

"I think it is."

"But I don't think it is."

Bill kept quiet, did nothing, watched. I turned my back on him to face Gwen privately, said softly, for her ears only:

"Gwen, I need your backing."

"Richard, you're making an issue out of nothing!"

"I don't see it as 'nothing,' dear. On the contrary, it's a key matter and I need your help. So back me up. Or else."

" 'Or else' what, dear?"

"You know what 'or else' means. Make up your mind. Are you going to back me up?"

"Richard, this is ridiculous! I see no reason to cater to it."

"Gwen, I'm asking you to back me up." I waited an endless time, then sighed. "Or start walking and don't look back."

Her head jerked as if I had slapped her. Then she picked up her case and started walking.

Bill's jaw dropped, then he hurried after her, still carrying Tree-San.

XVI

"Women are meant to be loved, not to be understood."

OSCAR WILDE 1854-1900

I watched them out of sight, then started walking slowly. It was easier to walk than to stand still and there was no place near to sit down. My stump ached and all the weariness of the past few days hit me. My mind was numb. I continued to move toward the Raffles Hotel because I was headed that way, programmed.

The Raffles was even seedier than I had recalled. But I suspected that Rabbi Ezra knew what he was talking about- this, or nothing. In any case I wanted to get out of the public eye; I would have accepted a much poorer hostelry as long as it enabled me to get behind a closed door.

I told the man at the desk that Rabbi Ezra had sent me and asked what he had. I think he offered me his most expensive room still vacant: eighteen crowns.

I ran through the ritual dicker but my heart wasn't in it. I settled for fourteen crowns, paid it, accepted a key; the clerk turned a large book toward me. "Sign here. And show me your air receipt."

"Eh? When did this kaka start?"

"With the new administration, chum. I don't like it any more than you do but either I comply or they shut me down."

I thought about it. Was I "Richard Ames"? Why cause a cop to salivate at the thought of a reward? Colin Campbell? Someone with a long memory might recognize that name-and think of Walker Evans.

I wrote, "Richard Campbell, Novylen."

"Thank you, gospodin. Room L is at the end of this passage on the left. There's no dining room but our kitchen has dumbwaiter service to the rooms. If you want dinner here, please note that the kitchen shuts down at twenty-one o'clock. Except for liquor and ice, dumbwaiter service ends at the same time. But there is an all-night Sloppy Joe across the corridor and north about fifty meters. No cooking in the rooms."

"Thank you."

"Do you want company? Straight arrow, lefthand drive, or versatile, all ages and sexes and catering only to high-class clientele."

"Thanks again. I'm very tired."

It was a room adequate for my needs; I didn't mind its shabbiness. There was a single bed and a couch that opened out, and a refresher, small but with all the usual offices, and no water restriction-I promised myself a hot bath... later, later! A shelf bracket in the bed-sitting room seemed to have been intended for a communication terminal; now it was empty. Near it, let into the rock, was a brass plate:

In This Room on Tuesday 14 May 2075 Adam Selene. Bemardo de la Paz. Manuel Davis, and Wyoming Knott Created the Plan That Gave Rise to Free Luna. Here They Declared the Revolution!

I was not impressed. Yes, those four were heroes of the Revolution but in the year in which I buried Colin Campbell and created Richard Ames I had stayed in a dozen-odd hotel rooms in L-City; most of them had sported a similar sign. It was like the

"Washington Slept Here" signs back in my native country: bait for tourists, any resemblance to truth a happy accident.

Not that I cared. I took off my foot, lay down on the couch, and tried to make my mind blank.

Gwen! Oh, damn, damn, damn!

Had I been a stiff-necked fool? Perhaps. But, damn it all, there is a limit. I didn't mind indulging Gwen in most things. It was all right to let her make decisions for both of us and I hadn't squawked even when she did so without consulting me. But she should not encourage this pensioner to defy me-now should she? I should not have to put up with that. A man can't live that way.

But I can't live without her!

Not true, not true! Up until this week-hardly more than three days ago-you lived without her... and you can do without her now.

I can do without my missing foot, too. But I don't like not having both feet and I'll never get used to the loss. Sure, you can do without Gwen; you won't die without her-but admit it, stupid: In the past thirty years you've been happy just this brief time, the hours since Gwen moved in and married you. Hours loaded with danger and blatant injustice and fighting and hardship, and it all mattered not a whit; you've been bubbling over with happiness simply because she was at your side.

And now you've sent her away.

Put on your stupid hat. Fasten it with rivets; you'll never need to take it off again.

But I was right!

So? What has being "right" got to do with staying married?

I must have slept (I was mortal tired), as I remember things that did not happen, nightmares-e.g., Gwen had been raped and killed in Bottom Alley. But rape is as scarce in Luna City as it is commonplace in San Francisco. Over eighty years since the last one and the groundhog who committed it didn't last long enough to be eliminated; the men who responded to her screams tore him to pieces.

Later it was learned that she had screamed because he hadn't paid her. This made no difference. To a Loonie a hooker is just as sacred in her person as is the Virgin Mary. I am a Loonie only by adoption but I agree deep in my heart. The only proper punishment for rape is death, forthwith, no appeal.

There used to be, dirtside, legal defenses called "diminished capacity" and "not guilty by reason of insanity." These concepts would bewilder a Loonie. In Luna City a man would necessarily be of diminished mental capacity even to think about rape; to carry one out would be the strongest possible proof of insanity-but among Loonies such mental disorders would not gain a rapist any sympathy. Loonies do not psychoanalyze a rapist;

they kill him. Now. Fast. Brutally.

San Francisco should learn from Loonies. So should every city where it is not safe for a woman to walk alone. In Luna our ladies are never afraid of men, be they family, friends, or strangers; in Luna men do not harm women-or they die!

I had awakened sobbing in grief uncontrollable. Gwen was dead, Gwen had been raped and murdered and it was my fault!

Even when I had wakened wide enough to fit back into my proper continuity I was still bawling-I knew that it had been just a dream, a nasty nightmare... but my guilt

feelings were undiminished. I had indeed failed to protect my darling. I had told her to leave me. "-start walking and don't look back." Oh, folly unplumbable!

What can I do about it?

Find her! Maybe she'll forgive me. Women seem to have almost unlimited capacity for forgiveness. (Since it is usually a man who needs forgiveness, this must be a racial survival trait.)

But first I had to find her.

I felt overpowering need to go out and start searching- jump on my horse and gallop in all directions. But that is the classic case given in mathematics textbooks of how not to find someone who is lost. I had no idea of where to look for Gwen, but she just possibly might look for me by checking the Raffles-if she had second thoughts. If she did, I must be here, not out searching at random.

But I could improve the odds. Call the Daily Lunatic; place an advertisement-place more than one sort: a classified ad, a box ad, and-best!-a commercial spiel to go out on every terminal with the Lunatic's hourly news bulletins.

If that doesn't work, what will you do?

Oh, shut up and write the ad!

Gwen, Call me at the Raffles. Richard.

Gwen, Please call me! I'm at the Raffles. Love, Richard.

Dearest Gwen, For the sake of what we had, please call me. I'm at the Raffles. Love always, Richard.

Gwen, I was wrong. Let me try again. I'm at the Raffles. All my love, Richard.

I jittered over it, finally decided mat number two was best- changed my mind; number four held more appeal. Changed it again-the simplicity of number two was better. Or even number one. Oh, hell, stupid, just place an ad! Ask her to call; if you have any chance of getting her back, she won't boggle at

how you word it.

Call it in from the hotel office? No, leave a note there, telling Gwen where you are going and why and what time you'll be back and please wait... then hurry to the newspaper's office and get it on the terminals at once-and into their next edition. Then hurry back.

So I put on my false foot, wrote out the note to leave at the desk, and grabbed my cane-and that split-second timing I have noticed too many times in my life again took place, a timing that impels me more than anything else to think that this crazy world is somehow planned, not chaos. A knock at my door-

I hurried to open it. It was she! Glory hallelujah! She seemed even smaller than I knew her to be, and all big round solemn eyes. She was carrying the little potted maple as if it were a love offering-perhaps it was. "Richard, will you let me come back? Please?"

All happening at once I took the little tree and put it on the floor and picked her up and closed the door and sat her on the couch myself beside her and we were crying sobs and tears and talking all mixed up together.

After a while we slowed and I shut up enough that I heard what she was saying: "I'm sorry Richard I was wrong I should have backed you but I was hurt and angry and too stinking proud to turn back and tell you so and when I did you were gone and I didn't know what to do. Oh, God, darling, don't ever let me leave you again; make me stay!

You're bigger than I am; if I ever get angry again and try to leave, pick me up and turn me around but don't let me leave!"

"I won't let you leave again, ever. I was wrong, dear; I should not have made an issue of it; that's no way to love and cherish. I surrender, horse and foot. Make a pet out of Bill any way you like; I won't say a word. Go ahead, spoil him rotten."

"No, Richard, no! I was wrong. Bill needed a stem lesson and I should have backed you up and let you straighten him out. However-" Gwen unwound herself a little, reached for her purse, opened it. I said,

"Mind the alligator! Careful."

She smiled for the first time. "Adele certainly took that hook, line and sinker."

"Do you mean that there is not an alligator in there?"

"Goodness, sweetheart, do you think I'm eccentric?"

"Oh, Heaven forbid!"

"Just a mousetrap and her imagination. Here-" Gwen placed a wad of money, paper and metal, beside her on the couch. "I made Bill give it back. What he had left, I mean; he should have had three times as much. I'm afraid Bill is one of those weaklings who can't carry money without spending it. I must figure out how to spank him for it till he learns better. In the meantime he can't have any cash until he earns it."

"As soon as he earns any money he should pay me ninety days' air fee," I put in. "Gwen, I really am vexed about that. Vexed at him, not at you. His attitude about paying for air. But I'm sorry as can be that I let it slop over onto you."

"But you were right, dear. Bill's attitude about paying for air reflects his wrong-headedness in general. So I've discovered. We sat in Old Dome and discussed many things. Richard, Bill has the socialist disease in its worst form; he thinks the world owes him a living. He told me sincerely-smugly!- that of course everyone was entitled to the best possible medical and hospital service-free of course, unlimited of course, and of course the government should pay for it. He couldn't even understand the mathematical impossibility of what he was demanding. But it's not just free air and free therapy, Bill honestly believes that anything he wants must be possible... and should be free." She shivered. "I couldn't shake his opinion on anything."

"'The Road Song of the Bandar-Log.'"

"Excuse me?"

"From a poet a couple of centuries back, Rudyard Kipling. The bandar-log-apes, they were-believed that anything was possible just by wishing it so."

"Yes, that's Bill. In all seriousness he explains how things should be ... then it's up to the government to make it happen. Just pass a law. Richard, he thinks of 'the government' the way a savage thinks of idols. Or- No, I don't know, I don't understand how his mind works. We talked at each other but we didn't reach each other. He believes his nonsense. Richard, we made a mistake-or I did. We should not have rescued Bill."

"Wrong, honey girl."

"No, dear. I thought I could rehabilitate him. I was wrong."

"That's not how I meant you were wrong. Remember the rats?"

"Oh."

"Don't sound so miserable. We took Bill with us because each of us was afraid that, if we didn't, he would be killed, possibly eaten alive by rats. Gwen, we both knew the hazards of picking up stray kittens, we both understood the concept 'Chinese

obligation.' We did it anyhow." I tilted up her chin, kissed her. "And we would again, this very minute. Knowing the price."

"Oh, I love you!"

"I love you, too, in a sweaty, vulgar fashion."

"Uh... now?"

"I need a bath."

"We can bathe later."

I had just retrieved Gwen's other baggage, temporarily forgotten outside the door-and happily untouched-and we were getting ready to bathe when Gwen bent over the little tree, then picked it up and put it on the shelf table by the dumbwaiter so she could get at it better. "Present for you, Richard."

"Goodie. Girls? Or liquor?"

"Neither. Although I understand both are readily available. The desk manager wanted a cut of my fee when I bought Bill a key here."

"Bill is here?"

"Overnight, in the cheapest single. Richard, I didn't know what to do with Bill. I would have told him to find his own doss in Bottom Alley if I hadn't heard something Rabbi Ezra said about rats. Dam it all, there did not used to be rats down there. Luna City is getting to be a slum."

"I'm afraid you're right."

"I fed him, too-there is a Sloppy Joe up the line. He eats enough for four-perhaps you've noticed?"

"I have."

"Richard, I could not abandon Bill without feeding him and finding him a safe bed. But tomorrow is another story. I told him that I expected him to shape up-before breakfast."

"Hmmph. Bill would lie for a fried egg. He's a sad sack, Gwen. The saddest."

"I don't think he can lie convincingly. At least I gave him something to think about. He knows that I am angry with him, that I despise his notions, and that the free lunch is about to shut its doors. I hope I have given him a sleepless night. Here, dear-" She had been digging into the potting soil, under the little maple. "For Richard. Better wash them." She handed me six cartridges, Skoda 6.5 mm longs or monkey copies.

I picked one up, examined it. "Wonder woman, you continue to amaze me. Where? When? How?"

Praise made her look sunnily happy and about twelve. "This morning. In Kong. Black market, of course, which simply means finding which counter to look under at Sears. I hid my Miyako under Tree-San before I went shopping, then stashed the ammo there in leaving Xia's place. Sweetheart, I did not know what sort of search we might have to stand if things got sticky in Kong-and they did, but Auntie got us loose."

"Can you cook?"

"I'm an adequate cook."

"You can shoot, you can rassle a rolligon, you can pilot a spacecraft, you can cook. Okay, you're hired. But do you have any other skills?"

"Well, some engineering. I used to be a pretty good lawyer. But I haven't practiced either one lately." She added, "And I can spit between my teeth."

"Supergal! Are you now or have you ever been a member of the human race? Careful how you answer; it will be taken down in writing."

"I decline to answer on advice of counsel. Let's order dinner before they shut down the kitchen."

"I thought you wanted a bath?"

"Do. I'm itchy. But if we don't get the order in soon, we'll have to get dressed and go out to Sloppy Joe's ... and I don't mind Sloppy Joe but I do mind having to get dressed. This is the first completely relaxed, quiet time I've had alone with my husband for, oh, ages. In your suite in Golden Rule before that silly eviction notice."

"Three days."

"As little as that? Truly?"

"Eighty hours. Fairly busy hours, I grant you."

The Raffles has a good kitchen as long as you stick to chef's choice; that night it was meatballs with Swedish pancakes, honey-and-beer sauce-an odd combination that worked. Tossed fresh salad, oil and wine vinegar. Cheese and fresh strawberries. Black tea.

We enjoyed it but an old shoe, suitably sauteed, would have been acceptable, so long had it been since we had eaten. It could have been fried skunk and I would not have noticed;

Gwen's company was all the sauce I needed.

We had been happily chomping away for a half hour, making no attempt to be elegant, when my darling noticed the brass plate in the rock-too busy before then. Understandable.

She got up and looked at it, then said in a hushed voice, "I'll be a Hollywood hooker. This is the place! Richard, this is the very cradle of the Revolution! And here I've sat, belching and scratching, as if this were just any hotel room."

I said, "Sit down and finish your dinner, love. Three out of four hotel rooms in Luna City have signs something like that."

"Not like that. Richard, what is the number of this i)0'n?"

"Doesn't have a number-a letter. Room L."

"'Room L'-yes! This is the place! Richard, in any nation back dirtside, a national shrine this important would have an eternal flame. Likely a guard of honor. But here-Somebody puts up that little brass plaque, and it's forgotten. Even on Free Luna Day. But that's Loonies. Weirdest mob in the known universe. My word!"

I said, "Darling girl, if it pleases you to think that this room is truly what that sign says-fine! In the meantime sit back down and eat. Or shall I eat your strawberries?"

Gwen did not answer; she did sit down, then kept quiet. She merely toyed with the fruit and cheese. I finally said, "Sweetheart, something is bothering you."

"I won't die from it."

"Glad to hear it. Well, when you feel like talking, I'm all ears. Meanwhile I'll simply fan you with them. Don't feel hurried."

"Richard-" Her voice sounded choked. I was surprised to see tears slowly creeping down each side of her nose.

"Yes, dear?"

"I've told you a pack of lies. I-"

"Stop right there. My love, my lusty little love, I have always believed that women should be allowed to lie as much as they need to and never be taxed with it. Lies can be their only defense against an unfriendly world. I have not quizzed you about your past-have I?"

"No but-"

"Again stop. I haven't. You volunteered a few things. But, even so, I've shut you up a couple of times when you were about to have an attack of pernicious autobiography. Gwen, I didn't marry you for your money, or for your family background, or your brains, or even for your talents in bed."

"Not even for the last? You haven't left me much."

"Oh, yes, I have. I appreciate your horizontal skills and your enthusiasm. But competent mattress dancers are not uncommon. Take Xia, for example. I conjecture that she is both skilled and eager."

"Probably twice as skilled as I am, but I'll be damned if she's more eager."

"You do all right when you get your rest. But don't distract me. Do you want to know what it is that makes you so special?"

"Yes! Well, I think so. If it's not booby-trapped."

"It's not. Mistress mine, your unique and special quality is this: When I'm around you, I'm happy."

"Richard!"

"Quit blubbering. Can't stand a female who has to lick tears off her upper lip."

"Brute. I'll cry if I goddam well feel like it... and I need this one. Richard, I love you."

"I'm fond of you, too, monkey face. What I was saying was that, if your present pack of lies is wearing thin, don't bother to build up another structure filled with solemn assurances that this is at last the truth, the whole truth, and nothing but the truth. Forget it. The old structure may be threadbare- but I don't care. I'm not looking for holes or inconsistencies because I don't care. I just want to live with you and hold your hand and hear you snore."

"I don't snore! Uh... do I?"

"I don't know. We haven't had enough sleep in the last eighty hours for it to be a problem. Ask me in fifty years." I reached across the table, tickled a nipple, watched it grow. "I want to hold your hand, listen to your snores, and occasionally-oh, once or twice a month-"

"Once or twice a month!"

"Is that too often?"

She sighed. "I guess I must settle for what I can get. Or go out on the tiles."

'Tiles? What tiles? I was saying that once or twice a month we'll go out to dinner, see a show, go to a night club. Buy you a flower to pin in your hair. Oh, oftener, I guess, if you insist ... but too much night life does interfere with writing. I intend to support you, my love, despite those bags of gold you have squirreled away." I added, "Some problem, dear? Null program? Why the expression?"

"Richard Colin, you are beyond doubt the most infuriating man I have ever married. Or even slept with."

"Did you let them sleep?"

"Oh, you mother! I shouldn't have saved you from Gretchen. 'Once or twice a month'! You set me up for that. Then sprang the trap."

"Madam, I don't know what you are talking about."

"You do so! You think I'm a sweaty little nymphomaniac."

"You're not too little."

"Keep doing it. Go on. Push me hard enough and I'll add a second husband to our marriage. Choy-Mu would marry us- I know he would."

"Choy-Mu is a dinkum cobber, too right. And I'm sure he would marry you; he doesn't have sand in his skull. If you so elect, I'll try to make him feel welcome'. Although I hadn't realized that you were that well acquainted with him. Were you speaking seriously?"

"No, damn it. I've never made a practice of plural marriage;

coping with one husband at a time is complex enough. Certainly Captain Marcy is a nice boy but he's much too young for me. Oh, I won't say that I would turn him down for a night of bundling if he asked me gracefully. But it would be simply for fun, nothing serious."

"/ won't say that you would turn him down, either. Well, let me know ahead of time, if convenient, so that I can gracefully fail to notice. Or stand jigger. Even hand out towels. Lady's option."

"Richard, you're entirely too agreeable."

"You want me to be jealous? But this is Luna, and I'm a Loonie. Only by adoption but nevertheless a Loonie. Never a groundhog, banging his head against a rock wall." I paused to kiss her hand. "My lovely mistress, you are indeed small and not massy. But your heart is big. Like the loaves and fishes, you are a rich plenitude for as many husbands and lovers as you choose. I am happy to be first-if I am first-among equals."

"'Is this a dagger which I see before me?'"

"No, an icicle."

"Really? Let's grab it before it melts."

We did, but just barely; I was tired. Afterwards I said, "Gwen, why are you frowning? Did I do so poorly?"

"No, love. But I still have those lies on my mind... and this time please don't change the subject. I know that the inscription on that brass plate over there is correct, because I knew three of those four. Knew them well; I was adopted by two of them. Beloved, I am a Founding Father of Luna Free State."

I said nothing because sometimes there is nothing one can say. Shortly Gwen wiggled and said almost angrily, "Don't look at me that way! I know what you're thinking; 2076 is quite a while back. So it is. But, if you'll get dressed, I'll take you down to Old Dome and show you my chop and thumbprint on the Declaration of Independence. You might not believe that it's my chop... but I can't fake a thumbprint. Shall we go look?"

"No."

"Why not? Want to know my age? I was bom Christmas Day 2063, so I was twelve and a half when I signed the Declaration. That nails down how old I am."

"Sweetheart, when I decided to become a native Loonie or a reasonable facsimile, I studied the history of Luna to help me get away with it. There is no Gwendolyn among

the signers. Wait a second, not saying you lied-saying you must have had another name then."

"Yes, of course. Hazel. Hazel Meade Davis."

"'Hazel.' Later married into the Stone Gang. Leader of the children's auxiliaries. Um, Hazel was a redhead."

"Yes. Now I can stop taking some pesky pills and let my hair go back to its natural color. Unless you prefer it this shade?"

"Hair color isn't important. But- Hazel, why did you marry me?"

She sighed. "For love, dear, and that is true. To help you when you were in trouble... and that is true, too. Because it was inevitable and that is true, also. For it is written in history books in another time and place that Hazel Stone returned to Luna and married Richard Ames aka Colin Campbell... and this couple rescued Adam Selene, chairman of the Revolutionary Committee."

"Already written, eh? Predestined?"

"Not quite, my beloved. In other history books it is written that we failed... and died trying."

XVII

"Age cannot wither her, nor custom stale Her infinite variety: other women cloy The appetites they feed; but she makes hungry Where most she satisfies-"

WILLIAM SHAKESPEARE 1564-1616

So this girl tells the school nurse, "My brother thinks he's a hen." The nurse answers, "Oh, goodness! What's being done to help him?" The girl answers, "Nothing. Mama says we need the eggs."

Are a woman's delusions anything to worry about? If she's happy with them? Was I duty bound to take Gwen to a shrink to try to get her cured?

Hell, no! Shrinks are the blind leading the blind; even the best of them are dealing from a short deck. Anyone who consults a shrink should have his head examined.

Close scrutiny showed that Gwen was possibly over thirty, probably under forty-but certainly not as old as fifty. So what was a gentle way to handle her claim that she was bom more than a century ago?

Everyone knows that natives of Luna age more slowly than groundhogs who have grown up in a one-gee field. Gwen's delusion seemed to include the notion that she herself was actually a Loonie instead of the native groundhog she had claimed to be. But Loonies do age, albeit slowly, and Loonies more than a hundred years old (I had met several) do not look only thirty-odd years old; they look ancient.

I would have to try hard to let Gwen think that I believed her every word... while believing none and telling myself that it did not matter. I once knew a man who, sane himself, was married to a woman who believed devoutly in astrology. She was forever buttonholing someone and asking what sign her victim was bom under. That sort of antisocial nuttiness must be much harder to live with than Gwen's gentle delusion.

Yet this man seemed happy. His wife was an excellent cook, a pleasant woman (aside from this hole in her head), and may have been a bedroom artist equal to Rangy

Lil. So why should he worry about her syndrome? She was happy with it, even though she annoyed other people. I think he did not mind living in an intellectual vacuum at home as long as he was physically comfortable there.

Having gotten off her pretty chest what was fretting her, Gwen went right to sleep, and soon I did likewise, for a long, happy, solid night of rest. I woke up restored and cheerful, ready to fight a rattlesnake and allow the snake the first two bites.

Or ready to eat a rattlesnake. Come Monday, I was going to have to find us new quarters; I'm usually willing to go out for other meals but breakfast should be available before one has to face the world. This is not the only reason to be married but it is a good one. Of course there are other ways to manage breakfast at home, but marrying and conning your wife into getting breakfast is, I believe, the commonest strategy.

Then I came a little wider awake and realized that we could get breakfast right here. Or could we? What hours did the kitchen function? What time is it now? I checked the notice posted by the dumbwaiter, was depressed by it.

I had cleaned my teeth and put on my foot and was pulling on my pants (while noting that I must buy clothes today; these trousers were reaching critical mass), when Gwen woke up.

She opened one eye. "Have we met?"

"We of Boston would not consider it a formal introduction. But I'm willing to buy you breakfast anyhow; you were fairly lively. What'll it be? This fleabag offers only something called 'cafe complet,' a bleak promise at best. Or you can get decent and we'll creep slowly out to see Sloppy Joe."

"Come back to bed."

"Woman, you're trying to collect my life insurance. Sloppy Joe? Or shall I order for you a cup of lukewarm Nescafe, a stale croissant, and a glass of synthetic orange juice for a luxurious breakfast in bed?"

"You promised me waffles every morning. You promised me. You did."

"Yes. At Sloppy Joe's. That's where I'm going. Are you coming with me? Or shall I order for you the Raffles specialty of the house?"

Gwen continued to grumble and moan and accuse me of unspeakable crimes and urge me to come die like a man while promptly and efficiently getting up, refreshing for the day, and dressing. She finished looking spic and span instead of three days in the same clothes. Well, we both did have brand-new underclothes, recent hot baths, and putatively clean minds and nails... but she looked bandbox fresh while I looked like the pig that slowly walked away. Which was all her misfortune and none of my own; Gwen was wonderfully good to wake up to. I felt bubblingly happy.

As we left room L she took my arm and hugged it. "Mister, thank you for inviting me to breakfast."

"Anytime, little girl. What room is Bill in?"

She sobered instantly. "Richard, I did not propose exposing you to Bill until after you had eaten. Better perhaps?"

"Uh- Oh, hell, I don't enjoy waiting for breakfast and I see nothing to be gained by making Bill wait for his. We don't have to look at him; I'll grab a table for two and Bill can sit at the counter."

"Richard, you are a soft-hearted slob. I love you."

"Don't call me a soft-hearted slob, you soft-hearted slob. Who lavished spending money on him?"

"I did and it was a mistake and I got it back from him and it won't happen again."

"You got some of it back from him."

"Got back what he had left and quit rubbing my nose in it, please. I was an idiot, Richard. Too right."

"So let's forget it. This is his room?"

Bill was not in his room. An inquiry at the desk confirmed what knocking had shown to be likely: Bill had gone out a half hour earlier. I think Gwen was relieved. I know I was. Our problem child had become a major pain in the Khyber. I had to remind myself that he had saved Auntie to see anything good about him.

A few minutes later we entered the local Sloppy Joe. I was looking around for a free table for two when Gwen squeezed my arm. I looked up, then looked where she was looking.

Bill was at the cashier's station, paying a check. He was doing so with a twenty-five-crown note.

We waited. When he turned around he saw us-and looked ready to run. But there was nowhere to run except past us.

We got him outside without a scene. In the corridor Gwen looked at him, her face cold with disgust. "Bill, where did you get that money?"

He looked at her, looked away. "It's mine."

"Oh, nonsense. You left Golden Rule without a farthing. Any money you have you got from me- You lied to me last night-you held out on me."

Bill looked doggedly stubborn, said nothing. So I said, "Bill, go back to your room. After we've had breakfast we'll see you there. And we'll have the truth out of you."

He looked at me with barely restrained fury. "Senator, this ain't none of your pidgin!"

"We'll see. Go back to the Raffles. Come, Gwen."

"But I want Bill to return my money. Now!"

"After breakfast. This time let's do it my way. Are you coming?"

Gwen shut up and we went back into the restaurant. I saw to it that we did not discuss Bill; some subjects curdle the gastric juices.

About thirty minutes later I said, "Another waffle, dear?"

"No, thank you, Richard, I've had enough. They're not as good as yours."

"That's 'cause I'm a natural-bom genius. Let's finish up, then go back and take care of Bill. Shall we skin him alive, or merely impale him on a stake?"

"I've been planning to question him on the rack. Richard, life lost some of its beauty when truth drugs replaced thumb screws and hot irons."

"My beloved, you are a bloodthirsty little wretch. More coffee?"

"You just say that to flatter me. No more, thank you."

We returned to the Raffles, went to Bill's room, were unable to raise him, went back to the desk. The misanthrope who had checked me in was again on duty. I asked, "Have you seen anything of William Johnson, room KK?"

"Yes. About thirty minutes ago he collected his key deposit and left."

"But / bought that key!" Gwen said, rather shrilly.

The desk manager was unruffled. "Gospazha, I know you did. But we return the deposit for the return of the key. It doesn't matter who rented the room." He reached for his rack, took down key card KK. "The deposit just barely pays for changing the magnetic code if someone fails to return his key- it doesn't pay for the nuisance. If you dropped your card in the corridor and somebody picked it up and turned it in, we would pay the deposit... then you would have to pay a second deposit to get into your room."

I took Gwen firmly by the elbow. "Fair enough. If he shows up, let us know, will you? Room L."

He looked at Gwen. "You don't want room KK?"

"No."

He turned his attention to me. "You have Room L at its single rate. For double occupancy we charge more."

Suddenly I had had it. All the kaka, all the shoving around, all the petty nonsense I could take. "You try to clip me one more crown and I'll haul you down to Bottom Alley and unscrew your head! Come along, dear."

I was still fuming when I let us into our room and locked the door. "Gwen, let's not stay in Luna. The place has changed. For the worse."

"Where do you want to go, Richard?" She looked and sounded distressed.

"Uh- I would opt to emigrate, right out of the System-Botany Bay, or Proxima, or such-if I were younger and had two legs." I sighed. "'Sometimes I feel like a motherless child.'"

"Sweetheart-"

"Yes, dear?"

"I'm here, and I want to mother you. I go where you go. I'll follow you to the ends of the Galaxy. But I don't want to leave Luna City just yet... if you will indulge me. We can go out now and search for somewhere else to stay. If we don't find a place-Rabbi Ezra may be right-can't we put up with that surly clerk until Monday? Then we can certainly find a place."

I concentrated on slowing my heart, managed it. "Yes, Gwen. We might shop for a place to move into after the weekend, after the Shriners leave, if we can't find a suitable place available at once. I wouldn't mind that shmo on the desk if we were sure of proper cubic after the weekend."

"Yes, sir. May I tell you now why I need to stay in Luna City for a while?"

"Eh? Yes, certainly. Matter of fact, I ought to stay rooted to one spot for a while, too. Get some writing done, make some money to offset the rather heavy expenses of this week."

"Richard. I've tried to tell you. There are no money worries."

"Gwen, there are always money worries. I'm not going to spend your savings. Call it macho if you like, but I intend to support you."

"Yes, Richard. Thank you. But you need feel no pressure of time. I can lay hands promptly on whatever amount of money we need."

"So? That's a sweeping statement."

"It was intended to be, sir. Richard, I stopped lying to you. Now is the time for large chunks of truth."

I brushed this aside with both hands. "Gwen, haven't I made it clear to you that I don't care what fibs you've told or how old you are or what you have been? It's a fresh start, you and me."

"Richard, stop treating me as a child!"

"Gwen, I am not treating you as a child. I am saying that I accept you as you are. Today. Now. Your past is your business."

She looked at me sadly. "Beloved, you don't believe that I am Hazel Stone. Do you?"

Time to lie! But a lie is no good if it's not believed (unless it is told to be disbelieved, which could not apply here). Time to fan-dance instead. "Sweetheart, I've been trying to tell you that it does not matter to me whether or not you are Hazel Stone. Or Sadie Lipschitz. Or Pocahontas. You are my beloved wife. Let's not cloud that golden fact with irrelevancies."

"Richard, Richard! Listen to me. Let me talk." She sighed. "Or else."

"'Or else'?"

"You know what 'Or else' means; you used it on me. If you won't listen, then I must go back and report that I have failed."

"Go back where? Report to whom? Failed in what?"

"If you won't listen, it doesn't matter."

"You told me not to let you leave!"

"I won't be leaving you; I'll just be running a quick errand, then back home to you. Or you're welcome to come with me- oh, I wish you would! But I must report my failure and resign my commission... then I'll be free to go with you to the ends of the universe. But I must resign, not simply desert. You are a soldier; you understand that."

"You are a soldier?"

"Not exactly. An agent."

"Uh... agente provocateuse?"

"Uh, close." She smiled wryly. "Agente amoureuse perhaps. Although I wasn't told to fall in love with you. Just to marry you. But I did fall in love with you, Richard, and it may have ruined me as an agent. Will you come with me while I report back? Please?"

I was getting more confused by the minute. "Gwen, I'm getting more confused by the minute."

"Then why not let me explain?"

"Uh- Gwen, it can't be explained. You claim that you're Hazel Stone."

"I am."

"Damn it, I can count. Hazel Stone, if she is still alive, is well over a century old."

"That's right. I'm well over a hundred." She smiled. "I robbed the cradle, dear one."

"Oh, for God's sake! Look, dear, I've spent the last five nights in bed with you. You're an exceptionally lively old bag!"

She grinned at me. "Thank you, dear. I owe it all to Lydia Pinkham's Vegetable Compound."

"You do, eh? A patent nostrum took the calcium out of your joints and put it back into your bones, and ironed out the wrinkles in your face, and restored your youthful hormonal balance, and unclogged your arteries? Order me a barrel of it;

I'm slowing down."

"Mrs. Pinkham had expert help, dearest. Richard, if you would only let me prove to you who I am, by my thumbprint on the Declaration of Independence, your mind would then be open to the truth, strange though it is. I wish I could offer you identification by retinal patterns... but my retinas had not been photographed then. But there is that thumbprint. And there is blood typing, too."

I began to feel panicky-what would Gwen do if her delusion pattern was toppled?

Then I remembered something. "Gwen, Gretchen mentioned Hazel Stone."

"So she did. Gretchen is my great great granddaughter, Richard. I married Slim Lemke, of the Stone Gang, on my fourteenth birthday and had my first child by him at Terra's fall equinox of 2078-a boy; I named him Roger for my father. In 2080 I had my first daughter-"

"Hold it. Your eldest daughter was a student at Percival Lowell when I commanded the rescue operation. So you said."

"Part of that pack of lies, Richard. I did indeed have a descendant there-a granddaughter on the faculty. So I truly am grateful. But I had to edit the details to fit my apparent age. My first daughter was named Ingrid, for Slim's mother ... and Ingrid Henderson was named for her grandmother- my daughter, Ingrid Stone. Richard, you could not guess at the time how difficult it was for me at Dry Bones Pressure to meet for the first time five of my very own and not be able to acknowledge them.

"But I can't be Grandmother Hazel when I am being Gwen Novak. So I didn't admit it... and that was not the first time this has happened to me. I've had lots of children-forty-four years from menarche to menopause and I gave birth to sixteen by four husbands and three passing strangers-and took the Stone name back after my fourth husband died. Because I moved in with my son Roger Stone.

"I raised four of the kids Roger had by his second wife- she is a medical doctor and needed a resident grandmother. I got three of them married off, all but the baby, who is now chief surgeon at Ceres General and may never get married as he is handsome and quite self-centered and believes the old saw about 'Why keep a cow?'

"Then I started taking the vegetable compound, and here I am, fertile again and ready to raise another family." She smiled and patted her belly. "Let's go back to bed."

"God damn it, wench; that won't solve anything!"

"No, but it's a swell way to pass the time. And sometimes it puts a stop to recurrent bleeding. Which reminds me- If Gretchen ever shows up, I won't interfere a second time. I just did not fancy having my great great granddaughter crowding in on my honeymoon-a honeymoon already crowded by too many people and too much excitement."

"Gretchen is just a child."

"You think so? She is physically as mature as I was at fourteen... when I married and got pregnant at once. Virgin at marriage, Richard; happens oftener here than anywhere else. Mama Mimi was strict and Mama Wyoh was charged with keeping an eye on me, and I wasn't inclined to stray anyhow, as the Davis family was socially as high as you could be in Luna City in those days and I appreciated having been adopted by them. Beloved, I'm not going to tell you another word about me until you check my chop and print on the Declaration. I can feel your disbelief... and it humiliates me."

(What do you do when your wife persists? Marriage is the greatest human art.. .when it works.) "Sweetheart, I don't want to humiliate you. But I'm not competent to match thumb-prints. But there is more than one way to cook a wolf. This second wife of your son Roger: Is she still alive?"

"Very much so. Dr. Edith Stone."

"Then there is probably a record right here in Luna City of her marriage to your son and- Is he the Roger Stone who was once mayor?"

"Yes. From 2122 to 2130. But he's not available; he left here in 2148."

"Where is he now?"

"Several light years away. Edith and Roger out-migrated, to Fiddler's Green. None of that branch of my family is around any longer. It won't work, dear-you're looking for someone who can identify me as Hazel Stone. Aren't you?"

"Well... yes. I thought Dr. Edith Stone would be an expert and unbiased witness."

"Mmm,.. she still can be."

"How?"

"Blood typing, Richard."

"Look, Gwen, blood typing is a subject I've had to know something about, because of field surgery. I saw to it that every man in my regiment was typed. Blood typing can show who you are not; it cannot prove who you are. In a number as small as a regiment even the rare AB negative will be matched more than once; they run one in two hundred. I remember because I am one."

She nodded agreement. "And I'm 0 positive, the commonest type of all. But that's not the whole story. If you type for all thirty-odd blood groups, a blood type is as unique as a fingerprint or a retinal pattern. Richard, during the Revolution lots of our people died because they had not been blood-typed. Oh, we knew how to transfuse blood but safe donors could be found only by cross-matching, then and there. Without typing this was often too slow; many-no, most-of our wounded who needed blood died because a donor could not be identified in time.

"After peace and independence Mama Wyoh-Wyoming Knott Davis, the hospital in Kong-you know?"

"I noticed."

"Mama Wyoh had been a professional host mother, in Kong, and knew about such things. She started the first blood bank, with money raised by Major Watenabe, another Founding Father. There may be a half liter of my blood frozen in Kong even today... but what is certain is that a complete typing of my blood is on file there, because Edith saw to it that each one of us had a full typing, all known groups, before we all started a Wanderjahr in 2148."

Gwen smiled happily. "So take a sample of my blood, Richard; have it typed at Galileo University Medical Center. Get a full work-up, I'll pay for it. Compare it with my typing done in 2148, filed at Wyoming Knott Memorial. Anyone who can read English can tell whether or not the two work-ups match;

it doesn't take the sort of expertise required to match fingerprints. If that doesn't say I am me, then send for a straitjacket;

it'll be time to put me away."

"Gwen, we're not going back to Kong. Not for anything."

"No need to. We pay the blood bank at Galileo to have a transcript from Kong printed out by terminal." Her face clouded. "But it will blow my cover as Mistress Novak. Once those two records are side by side they'll know that Grandmother Hazel has returned to the scene of her crimes. I don't know what that will do to my mission; it was not supposed to happen. But I do know that convincing you is absolutely essential to my mission."

"Gwen, assume that you've convinced me."

'Truly, dear? You wouldn't lie to me?"

(Yes, I would, little love. But I must admit that your words are persuasive. All that you have said matches my own careful study of Lunar history... and you deal with little details as if you had been there. It all is convincing but the physical impossibility- you are young, darling; you are not an old crone of more than a century.) "Sweetheart, you've given me two positive ways to identify you. So let's assume that I've checked out one or the other or both. Let's stipulate that you're Hazel. Do you prefer to be called Hazel?"

"I answer to both names, darling. Suit yourself."

"All right. The sticky point is your appearance. If you were old and dried up instead of young and juicy-"

"Are you complaining?"

"No. Merely descriptive. Stipulating that you are Hazel Stone, bom 2063, how do you account for your youthful appearance? And don't give me any guff about a legendary patent medicine."

"You'll find the truth hard to believe, Richard. I have undergone rejuvenation. Twice in fact. The first time to bring me back in appearance to late middle age... while restoring my bodily economy to youthful maturity. The second time was mostly cosmetic, to make me desirable in appearance. To recruit you, sir."

"Be damned. Monkey face, is that your own face?"

"Yes. It can be changed if you would like me to look otherwise."

"Oh, no! I'm not one to insist on prettiness as long as a girl's heart is pure."

"Why, you louse!"

"But since your heart isn't all that pure, it's nice that you're pretty."

"You can't talk yourself out of it that easily!"

"Okay, you're gorgeous and sexy and evil. But 'rejuvenation' explains without explaining. So far as I've ever heard, rejuvenation is for flatworms but not for anything higher up the evolutionary ladder."

"Richard, this part you'll have to take on faith-for now, at least. I was rejuvenated at a clinic a couple of thousand years away and in an odd direction."

"Hmm. It sounds like a gimmick I might have dreamed up when I was writing fantasies."

"Yes, it does, doesn't it? Not convincing. Merely true."

"So I see no way to investigate it. Perhaps I'll have to get that blood-type transcript. Uh- Hazel Stone, Roger Stone- The Scourge of the Spaceways!"

"My God, my past has caught up with me! Richard, did you ever watch my show?"

"Every episode, unless I had been caught doing something that called for drastic punishment. Captain John Sterling was my childhood hero. And you wrote it?"

"My son Roger started it. I started writing it in 2148 but I didn't put my name on it until the following year-then it was 'Roger and Hazel Stone'-"

"I remember! But I don't remember that Roger Stone ever wrote it by himself."

"Oh, yes, he did-until he got tired of the golden treadmill. I took it over from him, intending to kill it off-"

"Sweetheart, you can't kill off a serial! It's unconstitutional."

"I know. Anyhow, they took up the option and waved too much money under my nose. And we needed the money; we were living in space then and a spacecraft, even a little family job, is expensive."

"I've never quite had the courage to write a serial against deadlines. Oh, I've written episodes on assignment, using a show's bible, but not on my own and under the gun."

"We didn't use a bible; Buster and I just whipped 'em up as we went along."

"'Buster'?"

"My grandson. The one who is now chief surgeon at Ceres General. For eleven years we wrote them together, frustrating the Galactic Overlord at every turn-"

"'The Galactic Overlord!' The best villain in the creepies. Honey, I wish there were really a Galactic Overlord."

"Why, you young whippersnapper, how dare you throw doubt on the authenticity of the Galactic Overlord? What do you know about it?"

"Sorry. I apologize. He's as real as Luna City. Or John Sterling would not have had anyone to frustrate ... and I certainly believe in Captain John Sterling of the Star Patrol."

"That's better."

"That time Captain Sterling was lost in the Horsehead Nebula with the radiation worms after him: How did he get out? That was one of the times I was being punished and not allowed to watch."

"As I recall- Mind you, this was some years back. I seem to recall that he jury-rigged his Doppler radar to fry them with polarized beams."

"No, that was what he used on the space entities."

"Richard, are you sure? I don't think he encountered the space entities until after he escaped from the Horsehead Nebula. When he had to make a temporary truce with the Galactic Overlord to save the Galaxy."

I thought about it. How old was I at the time? What year in school? "Hon, I do believe you're right. I was upset that he would join forces with the Overlord even to save the Galaxy. I-"

"But he had to, Richard! He couldn't let billions of innocent people die just to keep from soiling his hands through cooperating with the Overlord. But I can see your point. Buster and I fought over that episode-Buster wanted to take advantage of the temporary truce to do the Overlord in, once the space entities were destroyed-"

"No, Captain Sterling would never break his word."

'True. But Buster was always the pragmatist. His solution to almost any problem was to cut somebody's throat."

"Well, it's a convincing argument," I admitted.

"But. Richard, you have to go easy in killing off characters in a serial; you must always leave something for the next episode. But you tell me you've never handled a series all on your own."

"I haven't but I do know that; I watched enough of them, back when. Hazel, why did you let me fill you with a lot of guff about the life of a writer?"

"You called me 'Hazel'!"

"Sweetheart-Hazel my darling-I'm not interested in blood types or in thumbprints. You are undeniably the author of history's greatest creepie The Scourge of the Spdceways. It said on the credits, week after week, year after year: 'Written by Hazel Stone.' Then, sadly, it began to read: 'Based on characters created by Hazel Stone-'"

"It did? Those later credits should have included Roger; he created the show. Not me. Those nogoodniks."

"It didn't matter. Because the characters grew anemic and died. Without you the show was never the same."

"I had to quit; Buster grew up. I supplied the twists; he supplied the gore. Sometimes I got soft-hearted; Buster never did."

"Hazel? Why don't we revive it? We'll plot it together; you write it; I'll do the cooking and housekeeping." I stopped and looked at her. "What in the world are you crying about?"

"I'll cry if I want to! You call me 'Hazel'-you believe me!"

"I have to believe you. Anybody could trick me about blood types or thumbprints. But not about commercial fiction. Not this old hack writer. You're the real McCoy, my love, the authentic scourge of the spaceways. But you're still my sweaty little nymphomaniac-I find I don't mind that you are a couple of centuries old."

"I am not either two centuries old! I won't be for years and years."

"But you're still my sweaty little nymphomaniac?"

"If you'll let me."

I grinned at her. "Do I have any say in the matter? Get your clothes off and let's do some plotting."

"'Plotting'?"

"All the best writing is done with the gonads, Hazel my lusty bride-didn't you know that? Battle stations! Here comes the Galactic Overlord!"

"Oh, Richard!"

XVIII

"When it comes to a choice between kindness and honesty, my vote is for kindness, every time-giving or receiving."

IRAJOHNSON 1854-1941

"Hazel my ancient love-"

"Richard, would you like a broken arm?"

"I don't think you can manage it just now."

"Want to bet?"

"Ouch! Stop that! Don't do it again ... or I'll toss you back into the creek and marry Gretchen. She is not ancient."

"Keep right on teasing me. My third husband was a tease. Everybody remarked on how well he looked at his funeral... and what a shame it was he died so young." Hazel-Gwen smiled up at me. "But he turned out to be heavily insured, which does comfort a widow. Marrying Gretchen is a good idea, darling;

I would enjoy bringing her up. Teaching her to shoot, helping her with the first baby, coaching her in how to handle a knife, working out with her in martial arts, all the homey domestic skills a girl needs in this modem world."

"Hummph! My darling girl, you are as little and cute and pretty and harmless as a coral snake. I think Jinx has already trained Gretchen."

"More likely Ingrid. But I can still put a polish on her. As you pointed out, I'm experienced. What was that word you used? 'Ancient,' that was it."

"Ouch!"

"Oh, that didn't hurt. Sissy."

"The hell it didn't. I'm going to enter a monastery."

"Not till you've entered Gretchen. I've just decided, Richard; we're going to marry Gretchen."

I treated this ridiculous statement with the neglect it deserved-I got up and hopped into the refresher.

Shortly she followed me in. I cowered away from her. "Help! Don't hit me again!"

"Oh, spit. I haven't hit you once, as yet."

"I surrender. You're not ancient; you're just well marinated. Hazel my love, what makes you so feisty?"

"I'm not feisty. But when you're as small as I am and female, if you don't stand up for your rights, you're sure to be pushed around by big, hairy, smelly men with delusions about male superiority. Don't yelp, dear; I haven't hurt you, not once. I haven't drawn blood-now have I?"

"I'm afraid to look. Mother never warned me that married life could be like this! Sweetheart, you were about to tell me why you had to recruit me and for what purpose when we got distracted."

She was slow in answering. "Richard, you had trouble believing that I am more than twice your age."

"You convinced me. I don't understand it, but I've had to accept it."

"You're going to find other things I must tell you much harder to accept. Much!"

"Then I probably won't accept them. Hazel-Gwen honey, I'm a hard case. I don't believe in table-tapping, astrology, virgin birth-"

"Virgin birth isn't difficult."

"I mean, in the theological sense; I'm not talking about genetics laboratories. - virgin birth, numerology, a literal hell, magic, witchcraft, and campaign promises. You tell me something that runs contrary to horse sense; I'll be at least as hard to sell as I was about your ancient years. You'll need the Galactic Overlord as a confirming witness."

"Okay. Slip this one on for size. From one standpoint I'm even more ancient than you suspect. More than two centuries."

"Hold it. You won't be two hundred until Christmas Day 2263. A good many years yet, as you pointed out."

'True. I didn't tell you about these extra years even though I lived through them... because I lived them at right angles."

I answered, "Dear, the sound track suddenly went silent."

"But, Richard, that one's easy to believe. Where did I drop my pants?"

"Through most of the Solar System, according to your memoirs."

"That ain't the half of it, mister. Both inside and outside the System and even outside this universe ... and, brother, have I been transgressed against! I mean, where did I drop them today?"

"At the foot of the bed, I think. Hon, why do you bother to wear panties when you take them off so frequently?"

"Because. Only sluts run around without drawers... and I'll thank you to keep a civil tongue in your head."

"I didn't say a word."

"I could hear what you were thinking."

"And I don't believe in telepathy, either."

"You don't, eh? My grandson Dr. Lowell Stone aka Buster used to cheat at chess by reading my mind. Thank God he lost the ability when he was about ten."

"Noted," I answered, "as hearsay concerning a highly improbable event from a reporter whose veracity has not been established. Reliability of alleged datum is therefore not higher than C-Five by military intelligence scaling."

"You'll pay for that!"

"Scale it yourself," I told her. "You've served in military intelligence. CIA, wasn't it?"

"Who sez?"

"You sez. Through several unfinished remarks."

"It was not the CIA and I've never been in McLean in my life and I was fully disguised while I was there and it wasn't me; it was the Galactic Overlord."

"And I'm Captain John Sterling."

Gwen-Hazel looked wide-eyed. "Gee, Captain, can I have your autograph? Better gimme two; I can trade two of yours for one of Rosie the Robot. Richard, will we be going near the main post office?"

"Have to. I've got to set up a mail drop for Father Schultz. Why, dear?"

"If we can swing past Macy's, I'll get Naomi's clothes and wig packed, and then I'll mail them. They've been grinding on my conscience."

"On your what?"

"On the bookkeeping system I use in place of one. Richard, you remind me more and more of my third husband. He was a fine figure of a man, just as you are. He took great care of himself and died in perfect health."

"What did he die of?"

"Of a Tuesday, as I remember. Or was it a Wednesday? Anyway, I was not there-I was a long way off, curled up with a good buck. We never did learn what did him in. Apparently he fainted in his bath and his head went under water. What are you mumbling, Richard? 'Charlotte' who?"

"Nothing, nothing at all. Hazel... I do not carry life insurance."

"Then we must be extra careful to keep you alive. Stop taking baths!"

"If I do, in three or four weeks you'll regret it."

"Oh, I'll stop, too; it will balance out. Richard, will we have time today to go out to the Authority Complex?"

"Perhaps. Why?"

'To find Adam Selene."

"Is he buried there?"

"That is something I must try to find out. Richard, is your believer in good shape?"

"It's overstrained. Several years at right angles indeed! Want to buy a space warp?"

"Thank you; I have one. In my purse. Those extra years are just a matter of geometry, my husband. If you are wedded to the conventional picture of space-time with just one time axis, then of course you find it hard to understand. But there are at least three time axes just as there are at least three space axes ... and I lived those extra years on other axes. All clear?"

"Utterly clear, my love. As self-evident as transcendentalism."

"I knew you would understand. The case of Adam Selene is more difficult. When I was twelve I heard him speak many times; he was the inspiring leader who held our Revolution together. Then he was killed-or so it was reported. It was not until years later that Mama Wyoh told me, as deepest secret, that Adam was not a man. Not a human being at all. Another sort of entity."

I most carefully said nothing.

Gwen-Hazel said, "Well? Don't you have anything to say?"

"Oh, sure. Not human. An alien. Green skin and one meter high and its flying saucer landed in Mare Crisium just outside Loonie City. Where was the Galactic Overlord?"

"You can't upset me talking that way, Richard, because I know just how such an impossible story affects one. I had the same sort of doubts when Mama Wyoh told me. Except that I had to believe her because Mama Wyoh would never lie to me. But Adam was not an alien, Richard; he was a child of mankind. But not a human child. Adam Selene was a computer. Or a complex of programs in a computer. But it was a self-programming computer, so it comes to the same thing. Well, sir?"

I took my time answering. "I like flying saucers better."

"Oh, fiddle! I'm tempted to turn you in on Marcy Choy-Mu."

"The smartest thing you could do."

"No, I'll keep you; I'm used to your foibles. But I may keep you in a cage."

"Hazel. Listen carefully. Computers do not think. They calculate with great speed in accordance with rules built into them. Since we ourselves calculate by using our brains to think, this designed-in capacity to calculate gives computers the appearance of thinking. But they do not think. They operate the way they do because they must; they were built that way. You can add 'animism' to the list of nonsense notions to which I do not subscribe."

"I'm glad you feel that way, Richard, because this job will be touchy and difficult. I need your healthy skepticism to keep me straight."

"I'm going to have to write that down and examine it carefully."

"Do that, Richard. Now here is what happened back in 2075 and -6: One of my adoptive fathers, Manuel Garcia, was the technician who took care of the big computer of the Authority. This one computer ran almost everything... handled all the utilities of this city and of most of the other warrens-except Kong-bossed the first catapult, ran the tubes,

handled banking, printed the Lunatic-did practically everything. The Authority found it cheaper to expand the functions of this one big computer than to spread computers all through Luna."

"Neither efficient nor safe."

"Probably, but that's what they did. Luna was a prison then;

it did not have to be either efficient or safe. There was no high tech industry here and in those days we had to accept whatever was handed us. As may be, dear, this one master computer got bigger and bigger... and woke up."

(It did, eh? Sheer fantasy, my sweet... and a cliche that has been used by every fantasy writer in history. Even Roger Bacon's Brass Head was one version of it. Frankenstein's monster is another. Then a spate of stories in later years and still they come. And all of them nonsense.) But what I said was:

"Go ahead, dear. Then what?"

"Richard, you don't believe me."

"I thought we settled that. You said that you needed my healthy skepticism."

"I do! So use it. Criticize! Don't just sit there with that smug look on your face. This computer had been operating by voice for years-accepting spoken programs, answering with synthesized speech or printout or both."

"Built-in functions. Techniques two centuries old."

"Why did your face shut down when I said it 'woke up'?"

"Because that's nonsense, my love. Waking and sleeping are functions of living beings. A machine, no matter how powerful and flexible, does not wake up or go to sleep. It is power on or power off; that's all."

"All right, let me rephrase it. This computer became self-aware and acquired free will."

"Interesting. If true. I don't have to believe it. I don't."

"Richard, I refuse to become exasperated. You are simply young and ignorant and that's not your fault."

"Yes, Grandmaw. I'm young and you're ignorant. Slippery bottom."

'Take your lecherous hands off me and listen. What accounts for self-awareness in a man?"

"Huh? I have no need to account for it; I experience it."

"True. But it is not a trivial question, sir. Let's treat it like a boundary problem. Are you self-aware? Am I?"

"Well, / am, monkey face. I'm not sure about you."

"The same, vice versa."

"That's fun, too."

"Richard, let's stick to the subject. Is the sperm in a male body self-aware?"

"I hope not."

"Or the ova in a female?"

"That's your question to answer, beautiful; I've never been female."

"And you are dodging questions just to tease me. A spermatozoon is not self-aware and neither is an ovum-and never mind silly remarks; that's one boundary. I, an adult human zygote, am self-aware. And you are, too, however dimly this is true for males. Second boundary. Very well, Richard; at what point from the freshly fertilized

ovum to the mature zygote now named 'Richard' did self-awareness enter the picture? Answer me. Don't dodge it and, please, no silly remarks."

I still thought it was a silly question but I tried to give it a serious answer. "Very well. / have always been self-aware."

"A serious answer. Please!"

"Gwen-Hazel, that answer is as serious as I can make it. So far as I know I have lived forever and have been self-aware the whole time. All this talk about things that went on before 2133-the alleged year of my alleged birth-is just hearsay and not very convincing. I go along with the gag to keep from annoying people or getting funny looks. And when I hear astronomers talk about the world being created in a big bang eight or sixteen or thirty billion years before I was born-if I was bom; I don't recall it-that's a horse laugh. If I was not alive sixteen billion years ago, then there was nothing at all. Not even empty space. Nothing. Zero with no rim around it. The universe in which I exist cannot exist without me in it. So it's silly to talk about the date I became self-aware; time started when I did, it stops when I do. All clear? Or shall I draw you a diagram?"

"All clear on most points, Richard. But you are wrong about the date. Time did not start in 2133. It started in 2063. Unless one or the other of us is a golem."

Every time I have a go at solipsism something like this happens. "Honey, you're cute. But you are a figment of my imagination. Ouch! I told you to stop that."

"You have a lively imagination, darling. Thanks for thinking me up. Do you want another proof? Up to now I've just been playing-shall I now break one of your bones? Just a small one. You pick it."

"Listen, figment. You break one of my bones and you'll regret it for the next billion years."

"Merely a logical demonstration, Richard. No malice in it."

"And once I set the bone-"

"Oh, I'll set it, dear."

"Not on your life! Once I have it set, I'll phone Xia and ask her to come over and marry me and protect me from small figments with violent habits."

"You're going to divorce me?" Again she was suddenly all big eyes.

"Hell, no! Just bust you down to junior wife and put Xia in charge. But you can't leave. Permission denied. You're serving a life sentence, whether it's straight ahead or at right angles. I'm going to get a club and beat you until you give up your evil ways."

"All right. As long as I don't have to go away."

"Ouch! And don't bite. That's rude."

"Richard, if I am just a figment of your imagination, then any biting I do is your idea, done by you to yourself for some murky masochistic purpose. If that is not true, then I must be self-aware... not your figment."

"Either/or logic never proves anything. But you're a delightful figment, dear. I'm glad I thought of you."

"Thank you, sir. Sweetheart, here is a key question. If you will answer it seriously, I'll stop biting."

"Forever?"

"Uh-"

"Don't strain yourself, figment. If you have a serious question, I'll try to give it a serious answer."

"Yes, sir. What accounts for self-awareness in a man and what is there about this condition or process or whatever that makes awareness impossible for a machine? Specifically for a computer. In particular the giant computer that administered this planet in 2076. The Holmes IV."

I resisted the temptation to give a flip answer. Self-awareness? I know that one school of psychologists insists that awareness, if it exists, is present just as a passenger, no effect on behavior.

This sort of nonsense should be lumped with transubstan-tiation. If true, it can't be proved.

I am aware of my own self-awareness ... and that is as far as any honest solipsist should go. "Gwen-Hazel, I don't know."

"Good! We're making progress."

"We are?"

"Yes, Richard. The hardest part about gaining any new idea is sweeping out the false idea occupying that niche. As long as that niche is occupied, evidence and proof and logical demonstration get nowhere. But once the niche is emptied of the wrong idea that has been filling it-once you can honestly say, 'I don't know,' then it becomes possible to get at the truth."

"Hon, you are not only the cutest little figment I've ever imagined, you are also the smartest."

"Knock it off, buster. Listen to this theory. And think of it as a working hypothesis, not as God-given truth. It was dreamed up by my adoptive father. Papa Mannie, to account for the observed fact that this computer had come to life. Maybe it explains something, maybe it doesn't-Mama Wyoh said that Papa Mannie was never sure. Now attend me- A fertilized human ovum divides... and divides again. And again. And again and again and again. Somewhere along there-I don't know where-this collection of millions of living cells becomes aware of itself and the world around it."

She went on: "A fertilized egg is not aware but a baby is. After Papa Mannie discovered that his computer was self-aware, he noted that this computer, which had been expanded outrageously as more jobs were assigned to it, had reached a point of complication where it had more interconnections in it than has a human brain.

"Papa Mannie made a great theoretical leap: When the number of interconnections in a computer become of the same close order as the number of interconnections in a human brain that computer can wake up and become aware of itself... and probably will. He wasn't sure that it always happened, but he became convinced that it could happen and for that reason: the high number of interconnections.

"Richard, Papa Mannie never went any farther with it. He was not a theoretical scientist; he was a repair technician. But the way his computer was behaving bothered him; he had to try to figure out why it was acting so oddly. This theory resulted. But you need not pay attention to it; Papa Mannie never tested it."

"Hazel, what was this odd behavior?"

"Oh. Mama Wyoh told me that the first thing Manuel noticed was that Mike-the computer, I mean-Mike had acquired a sense of humor."

"Oh, no!"

"Oh, yes. Mama Wyoh told me that, to Mike-or Mi-chelle-or Adam Selene-he used all three names; he was a trinity-to Mike, the entire Luna Revolution, in which

thousands died here and hundreds of thousands died on Earth, was a joke. It was just one great big practical joke thought up by a computer with supergenius brain power and a childish sense of humor." Hazel grimaced, then grinned. "Just a great, big, overgrown, lovable kid who should have been kicked."

"You make it sound like a pleasure. Kicking him."

"Do I? Perhaps I should not. After all, a computer could not possibly do right or wrong, or experience good or evil in the human sense; it would have no background for it-no rearing, if you please. Mama Wyoh told me that Mike's human behavior was by imitation-he had endless role models; he read everything, including fiction. But his only real emotion, all his own, was deep loneliness and a great longing for companionship. That's what our revolution was to Mike: companionship ... play ... a game that won him attentionrfrom Prof and Wyoh and especially Mannie. Richard, if a machine can have emotions, that computer loved my Papa Mannie. Well, sir?"

I was tempted to say nonsense or something even less polite. "Hazel, you are demanding bald truth from me-and it will hurt your feelings. It sounds like fiction to me. If not your fiction, then that of your foster mother, Wyoming Knott." I added, "Sweetheart, are we going out to attend to our chores? Or are we going to spend all day talking about a theory on which neither of us has any evidence?"

"I'm dressed and ready to go, dear. Just one little bit more and I'll shut up. You find this story unbelievable."

"Yes, I do." I said it as flatly as possible.

"What part of it is unbelievable?"

"All of it."

'Truly? Or is the sticking point the idea that a computer can be self-aware? If you accept that, does the rest of it become easier to swallow?"

(I tried to be honest. If that nonsense did not make me gag, would the rest be acceptable? Oh, certainly! Like the gold spectacles of Joseph Smith, like the tablets handed down to Moses from the Mount, like the red shift to the big bang- accept the postulate and the rest goes down smoothly.) "Hazel-Gwen, if we assume a self-aware computer with emotions and free will, I would not boggle at anything else-from ghosts to little green men. What was it the Red Queen did? Believe seven impossible things before breakfast."

"The White Queen."

"No, the Red Queen."

"Are you sure, Richard? It was just before-"

"Forget it. Talking chessmen are even harder to swallow than a prankster computer. Sweetheart, the only evidence you offer is a story told you by your foster mother in her old age. That's all. Uh, senile, maybe?"

"No, sir. Dying, but not senile. Cancer. From exposure to a solar storm when she was quite young. So she thought. As may be, it was not senility. She told me this when she knew she was to die... because she thought the story should not be lost completely."

"You see the weakness of the story, dear? One death-bed story. No other data."

"Not quite, Richard."

"Eh?"

"My adoptive father Manuel Davis confirms all of it and then some."

"But- You always spoke of him in the past tense. I think you did. And he would be... how old? Older than you are."

"He was bom in 2040, so he would be a century and a half old now... not impossible for a Loonie. But he's both older and younger than that-for the same reasons I am. Richard, if you talked to Manuel Davis and he confirmed what I've told you, would you believe him?"

"Uh-" I grinned at her. "You might force me to bring to the issue the stalwart common sense of ignorance and prejudice."

"Go along with you! Put on your foot, dear, please. I want to take you out and get you at least one more outfit before we move; your trousers have spots on the stains. I'm not being a good wife."

"Yes, ma'am; right away, ma'am. Where is your Papa Man-nie now?"

"You won't believe this."

"If it doesn't involve right-angled time or lonely computers, I'll believe it."

"I think-I haven't checked lately-I think Papa Mannie is with your Uncle Jock in Iowa."

I stopped with my foot in my hand. "You're right; I don't believe it."

XIX

rascality has limits; stupidity has not.-

NAPOLEON BONAPARTE 1769-1821

How can you argue with a woman who won't? I expected Gwen to start justifying her preposterous allegation, citing chapter and verse in an attempt to convince me. Instead she answered sadly, "I knew that was all I could expect. 111 just have to wait. Richard, do we have any other stops to make besides Macy's and the main post office before we can go out

to the Warden's Complex?"

"I need to set up a new checking account and then transfer my present account down from Golden Rule. My cash in pocket is becoming rather seldom. Anemic."

"But dearest, I've tried to tell you. Money is no problem. She opened her purse, dug out a wad of money, started peeling off hundred-crown notes. "I'm on an expense account, of

course." She held them out. .

"Easy, there!" I said. "Save your pennies, little girl. / undertook to support you. Not the other way around."

I expected a retort involving "macho" or "male chauvinist pig" or at least "community property." Instead she flanked me. "Richard? Your bank account in Golden Rule- Is it a numbered account? If not, under what name?"

"Huh? No. 'Richard Ames,' of course."

"Do you think Mr. Sethos might take an interest?"

"Oh. Our kindly landlord. Honey, I'm glad you're here to do my thinking for me." A track leading straight to me as plain as footprints in snow... for Sethos's goons to follow to collect that reward for my carcass-dead or alive. Of course all bank records are

confidential, not alone numbered accounts-but "confidential" means only that it takes money or power to break the rules. And Sethos had both. "Gwen, let's go back and booby-trap his air conditioning again. But this time we'll use prussic acid instead of Limburger."

"Good!"

"I wish we could. You're right, I can't touch mat 'Richard Ames' bank account as long as storm warnings are up. We'll use your cash-treat it as a loan. You keep track of it-
"

"You keep track of it! Damn it, Richard, I'm your wife!"

"Fight over it later. Leave the wig and the geisha costume here; we won't have time today ... as I must first go see Rabbi Ezra. Unless you want to run your errands while I run mine?"

"Buster, are you feverish? I'm not letting you out of my sight."

"Thanks, Maw; that's the answer I wanted. We go see Father Ezra, then we go hunt living computers. If there is time left, we'll do the other chores when we get back."

It being before noon, we looked for Rabbi Ezra ben David by going to his son's fish market across from the city library. The Rabbi lived in a room back of the shop. He agreed to represent me and act as a mail drop. I explained to him my parallel arrangements with Father Schultz, then wrote a note for him to send to "Henrietta van Loon."

Reb Ezra accepted it. "I'll stat it from my son's terminal at once; it should be printed out in Golden Rule ten minutes from now. Special delivery?"

(Draw attention to it? Or accept slower service? Something was stewing in Golden Rule; Hendrik Schultz might have some answers.) "Special delivery, please."

"Very well. Excuse me a few moments." He rolled out of his room, was back quickly. "Golden Rule acknowledged receipt. Now to other matters- I was expecting you. Dr. Ames. That young man who was with you yesterday- Is he a member of your family? Or a trusted employee?"

"Neither one." "Interesting. Did you send him to ask me who was offering

a reward for you and the amount of the reward?" "I certainly did not! Did you tell him anything?" "My dear sir! You asked for the traditional Three Days."

"Thank you, sir."

"Not at all. Since he took the trouble to seek me out here instead of waiting for my business hours, I assumed some urgency. Since you did not mention him, I concluded that the urgency was his, not yours. Now I assume, unless you tell me otherwise, that he intends you no good."

I gave the Rabbi a condensed version of our relations with Bill. He nodded. "You know Mark Twain's remarks on such

matters?"

"I think not."

"He said that, if you pick up a stray dog, feed it and take care of it, it will not bite you. This, in his opinion, is the principal difference between a man and a dog. I don't agree fully with Twain. But he had a point."

I asked him to name a retainer, paid it without dickering,

plus something for luck.

The Authority Complex (officially the "Administration Center," a name found only in print) is west of Luna City, halfway across Mare Crisium. We were there by noon-that tubeway is not ballistic but is nevertheless fast. Once aboard, we were there in twenty minutes.

Noon was the wrong time to arrive. The Complex is made up of government offices; everything shuts down for a leisurely lunch hour. Lunch seemed a good idea to me, too; breakfast was in the remote past. There were several lunchrooms in the tunnels of the complex... with every chair filled with the broad beams of civil servants or occupied by tourists with red fezzes. Queues waited outside Sloppy Joe and Mom's Diner and An-toine's number two. "Hazel, I see vending machines ahead. Can I interest you in a warm Coke and a cold sandwich?"

"No, sir, you cannot. There's a public terminal just beyond the food dispensers. I'll make some calls while you eat."

"I'm not that hungry. What calls?"

"Xia. And Ingrid. I want to be sure Gretchen got home safely. She could have been waylaid just as we were. I should have called last night."

"Only to soothe your own worry; either Gretchen was home day before yesterday evening... or it's too late and she's dead."

"Richard!"

"That's what worries you, isn't it? Call Ingrid."

Gretchen answered and squealed when she saw Gwen-Ha-zei. "Mama! Come quick! It's Mistress Hardesty!"

Twenty minutes later we switched off. All that had been accomplished was to tell the Hendersons that we were at the Raffles and that our mailing address was care of Rabbi Ezra. But the ladies enjoyed visiting and each assured the other that she would come visit in person sometime soon. They exchanged kisses via terminal-to my mind a waste of technology. And of kisses.

Then we tried to call Xia... and a man came on screen whom I did not recognize; he was not Xia's day-shift desk clerk. "What do you want?" he demanded.

Hazel said, "I'd like to speak to Xia, please."

"Not here. This hotel has been shut down by the Bureau of Sanitation."

"Oh. Can you teU me where she is?"

"Try the Chief of Public Safety." The face flickered off.

Hazel turned to me, her eyes filled with worry. "Richard, this can't be right. Xia's hotel is as squeaky clean as she is."

"I see a pattern," I said grimly, "and so do you. Let me ay."

I moved in, queried for code, called the office of the top cop, HKL. An elderly desk sergeant answered. I said, "Gos-pazha, I'm trying to reach a citizen named Dong Xia. I was told-"

"Yeah, I booked her," she answered. "But she made bail an hour ago. Not here."

"Ah so. Thank you, ma'am. Can you tell me where I might reach her?"

"Haven't the slightest. Sorry."

"Thank you." I switched off.

"Oh, dear!"

"Leprosy, sweetheart. We've got it; anyone who touches us catches it. Damn."

"Richard, I'm stating the simple truth. In my childhood when this was a penal colony, there was more freedom under the Warden than there is now with self-government."

"Maybe you exaggerate but I suspect Xia would agree with you." I chewed my lip and frowned. "You know who else has caught our leprosy. Choy-Mu."

"You think so?"

"Seven to two."

"No bet. Call him."

Query showed him to be a private subscriber, so I called his home. I heard a recording, sans picture: "Marcy Choy-Mu speaking. Can't say when I'll be home but I will call in soon for messages. At me gong, please record." A gong sounded.

I thought furiously, then said, "Captain Midnight speaking. We are booked into the old Raffles. A mutual friend needs help. Please call me at the Raffles. If I am not there, please leave message telling when and where I can reach you." I

switched off again.

"Dear, you didn't give him Rabbi Ezra's code." "On purpose, Sadie giri. To keep the Rabbi's code out of Jefferson Mao's hands; Choy-Mu's line may be monitored. 1 had to give him somewhere to call back... but I can't risk compromising the Rabbi Ezra connection; we must have it for Father Schultz. Table it, beautiful; I've got to query for HKL ground control."

"Hong Kong Luna ground control. This terminal is for official business; make it brief." It was voice only.

"May I speak to Captain Marcy?"

"Not here. I'm his emergency relief. Message? Make it snappy; I've got traffic in four minutes."

(Uh-) "This is Captain Midnight. Tell him I'm at the old

Raffles. Call me."

"Don't switch off! Captain Midnight?"

"He'll know." "And so do I. He went to city hall to put up bail for you know who. Or do you?"

"Xia"

"Too right! I've got to get back to my scopes but I'll tell him. Off!"

"What now, Richard?"

"Gallop in all directions."

"Do be serious!"

"Can you think of anything better? The queue is gone from Mom's Diner; let's eat lunch."

"Eat lunch while our friends are in danger?"

"Sweetheart, even if we went back to Kongville-and thereby shoved our heads in the lion's mouth-we would have no way to find them. There is nothing we can do until Choy-Mu calls us. That might be five minutes from now, or five hours. One thing I learned in combat: Never skip a chance to eat, sleep, or pee; another chance may be a long time coming.'*

I recommend Mom's cherry pie with ice cream. Hazel ordered the same but, by the time I was chasing my last bite with a spoon, she had merely toyed with hers. I said, "Young lady, you sit right there until you have eaten everything on your plate."

"Richard, I can't."

"I don't like to beat you in public-"

"So don't."

"So I won't. Instead I will sit right here until you have eaten that all up, even if it means that I must sleep in this chair tonight."

Hazel expressed obscenely unfavorable opinions of me, of Jefferson Mao, and of cherry pie, then ate the cherry pie. By thirteen-twenty we were at the door of the computer area in the Complex. There a youngster at a wicket sold us two tickets for two crowns forty, told us that the next tour would start in a few minutes, and let us into an enclosure, a waiting lounge with benches and opportunities to gamble against machines. Ten or a dozen tourists were waiting; most of the males wore fezzes.

When at last we started, an hour later, there were nineteen or twenty of us, herded by a uniformed guide-or guard; he wore a cop's shield. We made a long circuit on foot of that enormous complex, a dull and endless trip. At each pause our guide gave a memorized spiel-perhaps not too well memorized, as I could spot errors, even though I am not a communications-control engineer.

But I did not jump on these slips. Instead I made a nuisance of myself in accordance with earlier coaching by my fellow conspirator.

At one stop our guide explained that engineering control was decentralized all over Luna both geographically and by functions-air, sewage, communications, fresh water, transportation, et cetera-but was monitored from here by the technicians you see at those consoles. I interrupted him.

"My good man, I think you must be new on this job. The Encyclopedia Britannica explains clearly how one giant computer handles everything on the Moon. That's what we've come to see. Not backs of necks of junior clerks sitting at monitors. So let's see it. The giant computer. The Holmes IV."

The guide let his professional smile slip and looked at me with the natural contempt of a Loonie for an earthworm. "You've been misinformed. True, it used to be that way, but you're over fifty years out of date. Today we are modernized and decentralized."

"Young man, are you trying to contradict the Britannica?"

"I'm telling you the simple truth. Now let's move on and-"

"What became of that giant computer? Since it's no longer used. Or so you say."

"Huh? Look behind you. See that door? It's behind that door."

"Come, then let's see it! That's what I paid to see." "Not on your bloody drum and fife. It's an historical antique, a symbol of our great history. You want to look at it, you go to the Chancellor of Galileo U. and show your credentials. He'll send you packing! Nan then let's all move along to the next gallery-"

Hazel did not move on with us, but (following instructions) I always had something ahead to point to and to ask a silly question about, whenever our guide seemed about to have a free moment to look around. But when, at long last, we had made the full circle and were back at the lounge. Hazel was there ahead of us.

I kept quiet until we were out of the Complex and waiting at the tube station. There I moved us out of earshot of others before I spoke. "How did it go?"

"No trouble. The lock on that door was a type I've dealt with before. Thanks for keeping them all distracted while I coped with it. Good show, love!"

"You got what you were after?"

"I think so. I'll know more after Papa Mannie looks over my photographs. It's just a big lonely room, Richard, crowded with old-fashioned electronics equipment. I shot it from about twenty angles, and stereoed each shot by hand-held offset- not perfect but I've practiced it."

"That's all? This visit?"

"Yes. Well, mostly."

Her voice was choked; I looked at her, saw that her eyes were filled with tears about to overflow. "Why, darling! What's the matter?"

"N- n- nothing."

"Tell me."

"Richard, he's in there!"

"Huh?"

"He's asleep in there. I know, I could feel him. Adam Selene."

The tube capsule slammed into the station about then, to my relief-there are subjects for which words are useless. The capsule was packed full; we could not talk en route. By the time we were back in L-City my darling had quieted down and I could avoid the subject. The crowds in the corridors made talk difficult anyhow. Luna City is crowded at any time; on Saturdays half the Loonies from other warrens come in to shop;

this Saturday the usual weekend crowd was augmented by Shriners and their wives from all over North America and elsewhere.

As we came down out of Tube Station West into pressure two at outer ring, we faced Sears Montgomery. I was about to swing left to the Causeway when Hazel stopped me. "Uh? What, dear?"

"Your trousers."

"Is my fly open? No, it's not."

"We're going to cremate your trousers; it's too late for burial. And that shirtjacket."

"I thought you were itchy to get to the Raffles?"

"I am but it will take me only five minutes to put you into a new siren suit."

(Reasonable. My trousers were so dirty that I was beginning to risk being cited as a menace to public health. And Hazel did know what I preferred for everyday clothing, as I had explained to her that I would not wear shorts even if every other adult male in Luna City was in shorts-as most of them were. I'm not morbidly self-conscious about my missing foot ... but I do want full-length trousers to conceal my prosthesis. It's my private problem; I do not choose to exhibit it.)

"All right." I agreed. "But let's buy the one nearest the door."

Hazel did get us in and out in ten minutes, buying me three two-piece rumpus suits all alike save for color. The price was right, as first she dickered it down to an acceptable amount, then rolled double or nothing, and won. She thanked the clerk and tipped him the price of a drink, then exited looking cheerful.

She said to me, "You look smart, dear."

I thought so, too. Those three suits were lime green, powder pink, and lavender. I had chosen to wear the lavender; I think it suits my complexion. I went strutting along, swinging my cane, with my best girl on my arm, feeling great.

But when we turned onto the Causeway there was no room to swing a cane and barely room to walk. We backed out, dropped straight down to Bottom Alley, then across town and up Five Aces chain lift to pressure six-much farther but today much faster.

Even the side tunnel to the Raffles was crowded. A cluster of fez-topped men were just outside our hotel. I glanced at one of them, then took a better look. I let him have it with my cane, reverse moulinet up into his crotch. At the same time or a split second ahead of me. Hazel threw her package (my suits) into the face of the man next to him and slugged one beyond him with her handbag. He went down as my man screamed and joined him. As my cane swung back, I took it with both hands horizontally, and used the sideways short jabs intended for moving through a rioting crowd-but used the jabs more personally, getting one man in the belly, another in a kidney, and kicking each to quiet him as he went down.

Hazel had taken care of the man she had slowed up with the package, I did not see how. But he was down and not moving. A (sixth?) man was about to cool her with a cosh, so I stabbed him in the face with my cane. He grabbed at it; I moved forward with it to keep him from exposing the stiletto, while giving him three fingers to his solar plexus, lefthanded. I fell on top of him.

And was picked up and carried into the Raffles at a trot, with my head down and dragging my cane after me.

The next few seconds I had to sort out later, perhaps imperfectly. I did not see Gretchen standing at the registration desk, but she was there, having just arrived. I heard Hazel snap, "Gretchen! Room L, straight back on the right!" as she dumped me on Gretchen. On Luna I weigh thirteen kilos, give or take a few grams-not much load for a country girl used to hard work. But I'm much bigger than Gretchen and twice as big as Hazel-a big unwieldy bundle. I squawked to be put down; Gretchen paid no attention. That silly desk clerk was yelping but no one was paying attention to him, either.

Our door opened as Gretchen reached it and I heard another familiar voice sing out, "Bojemoi! He's hurt." Then I was face up on my own bed and Xia was working on me.

"I'm not hurt," I told her. "Just shaken up."

"Yeah, sure. Hold still while I get your trousers off. Does one of you gentlemen have a knife?"

I was about to tell her not to cut my new trousers, when I heard a shot. It was my bride, crouching inside the open doorway and peering cautiously out to the left, her head close to the floor. She fired again, scooted back inside, closed and locked the door.

She glanced around and snapped, "Move Richard into the 'fresher. Pile the bed and everything else against the outer door; they'll be shooting or breaking it down or both." She sat down on the floor with her back toward me and paid no attention to anyone. But everyone jumped to carry out her orders.

"Everyone" included Gretchen, Xia, Choy-Mu, Father Schultz, and Reb Ezra. I did not have time to be astonished, especially as Xia with Gretchen's help moved me into the refresher, put me on the floor, and resumed taking my pants off. What did astonish me was to find that my good leg, the one with a meat-and-bone foot on it, was bleeding heavily. I noticed it first from seeing that Gretchen had big blood stains on the left shoulder of her white coverall. Then I saw where the blood was coming from, whereupon that leg started to hurt.

I don't like blood, especially mine. So I turned my face away and looked out the 'fresher door. Hazel was still sitting on the floor and had taken something out of her handbag that seemed to be bigger than the handbag. She was talking into it:

'Tee Aitch Queue! Major Lipschitz calling Tee Aitch Queue! Answer roe. God damn it! Wake up! Mayday, may day! Hey, Rube!"

XX

"If anyone doubts my veracity, I can only say that I pity his lack of faith."
BARON MUNCHAUSEN 1737-1794

Xia added, "Gretchen, hand me a clean towel. We'll make do just with a pressure pack until later."

"Ouch!"

"Sorry, Richard."

"Mayday, Mayday! Hail, Mary, I'm up the crick without a paddle! Answer me!"

"We read you. Major Lipschitz. Report local fix, planet, system, and universe." It was a machine voice with a typical uninflected brassiness that sets my teeth on edge.

"Now let's tape it tightly."

"Hell with procedures! I need T-shift pickup and I need it now! Check my assignment and slam it! Switch point: 'One small step' by Armstrong. Local fix: Hotel Raffles, room L. Time tick, now!"

I went on looking out the 'fresher door to avoid watching the unpleasant things Xia and Gretchen were doing to me. I could hear shouts and people running; something crashed against the corridor door. Then in the rock wall on my right a new door dilated.

I say "door" for lack of a precise word. What I saw was a circular locus of silver gray, floor to ceiling, and more. Inside this locus was an ordinary door for a vehicle. What sort of vehicle I could not tell; its door was all I could see.

It swung open; someone inside called out, "Grandma!" as the corridor door crashed in and a man fell into the room. Hazel shot him. A second man was right behind him; she shot him, too.

I reached for my cane-beyond Xia, damn it! "Hand me my cane! Hurry!"

"Now, now! You lie back down."

"Give it to me!" Hazel had one round left, or maybe none. Either way, it was time I backed her up.

I heard more shots. With bitter certainty that nothing was left but to avenge her, I made a long arm, got my stick, and turned.

No more fighting- Those last shots had been fired by Rabbi Ezra. (Why was I surprised that a wheelchair cripple chose to go armed?) Hazel was shouting, "Everybody get aboard! Move it!"

And we did. I was confused again, as an endless crowd of young people, male and female and all of them redheaded, poured out of that vehicle and carried out Hazel's orders. Two of them carried Reb Ezra inside while a third folded his wheel-chair flat and handed it in to a fourth. Choy-Mu and Gretchen were hustled in, followed by Father

Schultz. Xia was shoved after them when she tried to insist on handling me. Then two redheads, a man and a woman, carried me in; my blood-stained pants were chucked after me. I clung to my cane.

I saw only a little of the vehicle. Its door opened into a four-place pilot-and-passenger compartment of what might be a spaceplane. Or might not be; the controls were strange and I was in no position to judge how it worked. I was lugged between seats and shoved through a door behind them into a cargo space and wound up on top of the Rabbi's folded wheel-chair.

Was I going to be treated as cargo? No, I lay there only briefly, then was turned ninety degrees and passed through a larger door, turned another ninety degrees and placed on a floor.

And glad to stay there!

For the first time in years I was experiencing earth-normal weight.

Correction: I had felt a few moments of it yesterday in the ballistic tube, a few more in that U-Pushit clunker. Budget Jets Seventeen, and about an hour of it in Old MacDonald's Farm four days earlier. But this time sudden heaviness caught me by surprise and did not go away. I had lost blood and found it hard to breathe and was dizzy again.

I was feeling sorry for myself when I saw Gretchen's face;

she looked both scared and wretchedly ill. Xia was saying, "Get your head down, dear. Lie down by Richard; that's best. Richard, can you scrunch over a little? I would like to lie down, too; I don't feel well."

So I found myself with a cuddlesome wench on each side of me and I didn't feel a dum bit like cuddling. I'm supposed to be trained to fight in accelerations up to two full gravities, twelve times that of Luna. But that was years ago and I'd had over five years of soft, sedentary living at low gravity.

It seems certain that Xia and Gretchen were just as uninterested in bundling.

My beloved arrived carrying our miniature maple. She placed it on a stand, blew me a kiss, and started sprinkling it. "Xia, let me draw a lukewarm tub for you two born Loonies; you both can get into it."

Hazel's words caused me to look around. We were in a "bathroom." Not a refresher appropriate to a four-seater spaceplane, nothing at all like ours in the Raffles; this room was an antique. Have you ever seen wallpaper decorated with fairies and gnomes? Indeed, have you ever seen wallpaper? How about a giant iron tub on claw feet? Or a water closet with a wooden lid and an overhead tank? The whole room was straight out of a museum of cultural anthropology ... yet everything was bright and new and shiny.

I wondered just how much blood I had lost.

"Thanks, Gwen, but I don't think I need it. Gretchen, do you want to float in water?"

"I don't want to move!"

"It won't be long," Hazel assured them. "Gay shifted twice to avoid shrapnel, or we would be down now. Richard, how are you feeling?"

"I'll make it." "0f course you will, darling. I feel the weight myself from a year in Golden Rule. But not much as I exercised at one gee every day. Dear one, how badly are you wounded?" "I don't know."

"Xia?" "Lots of bleeding and some muscle damage. Twenty or twenty-five centimeters and fairly deep. I don't think bone was hit. We put a tight pressure pack on it. If this ship is equipped for it, I want to do a better job and give him a broad-spectrum shot, too."

"You've done a fine job. We'll be landing soon and then there will be professional help and equipment." "All right. I don't feel too lively, I admit." "So try to rest." Hazel picked up my blood-soiled trousers.

"I'm going to soak these before the stain sets."

"Use cold water!" Gretchen blurted, then turned pink and added shyly, "So Mama says."

"Ingrid is right, dear." Hazel ran water into the hand basin. "Richard, I'm forced to admit that I lost your new clothes during that fuss."

"Clothes we can buy. I thought I was going to lose you."

"Good Richard. Here's your wallet and some this and that. Pocket plunder."

"Better let me have it." I crowded it all into a breast pocket.

"Where's Choy-Mu? I did see him-or did I?"

"He's in the other 'fresher, with Father Schultz and Father Ezra."

"Uh? Are you telling me that a four-seater has two refreshers? It is a four-place job, isn't it?"

"It is and it does and wait till you see the rose gardens. And the swimming lounge."

I started to make a retort but chopped it off. I had not figured out any formula by which to tell when my bride was jesting, or was telling literal but unbelievable truth. I was saved from a silly discussion by one of the redheads coming in-female, young, muscled, freckled, catlike, wholesome, sultry. "Aunt Hazel, we're grounded."

"Thank you. Lor."

"I'm Laz. Cas wants to know who stays here, who comes along, and how long till lift? Gay wants to know whether or not we'll be bombed and can she park one shift over? Bombing makes her nervous."

"Something is wrong here. Gay should not be asking directly. Should she?"

"I don't think she trusts Cas's judgment."

"She may have reason. Who's commanding?"

"I am."

"Oh. I'll let you know who goes, who stays, after I talk to my papa and Uncle Jock. A few minutes, I think. You can let Gay park in a dead zone if you wish but please have her stay on my frequency triple; we may be in a hurry. Right now I want to move my husband... but first I must ask another of our passengers to lend me his wheelchair."

Hazel turned to leave. I called out, "I don't need a wheel-chair," but she didn't hear me. Apparently.

Two of the redheads lifted me out of the craft and placed me in Ezra's wheelchair, with its back support lowered and front support lifted; one of them spread a kingsize bath towel over my lap and legs. I said, "Thanks, Laz." .

"I'm Lor. Don't be surprised if this towel vanishes; we've never tried taking one outside before."

She got back aboard and Hazel wheeled me under the nose of the craft and around to its port side... which suited me, as I had seen at once that this was indeed a sort of

spaceplane, with lifting body and retractable wings-and I was curious to see how the designer had managed to crowd two large refreshers into its port side. It did not seem aerodynamically possible.

And it wasn't. Portside was like the starboard side, sleek and slender. No cubic for bathrooms.

I had no time to ponder this. When we had turned into the Raffles' side tunnel a few minutes earlier, my Sonychron had just blinked seventeen, Greenwich or L-City time... which would make it eleven in the morning in zone six, dirtside.

And so it was because that's where we were, zone six, in the north pasture of my Uncle Jock's place outside Grinnell, Iowa. So it becomes obvious that I not only had lost much blood but also had been hit hard on the head-as even the hottest military courier needs at least two hours, Luna to Terra.

In front of us was Uncle Jock's fine old restored Victorian, cupola and verandas and widow's walk, and he himself was coming toward us, accompanied by two other men. Uncle was as spry as ever, and still with a mop of silver-white hair that made him look like Andrew Jackson. The other two I did not recognize. They were mature men but much younger than Uncle Jock-well, almost everybody is.

Hazel stopped pushing me, ran and threw her arms around one of them, kissed him, all out. My uncle picked her out of that man's arms, bussed her just as enthusiastically, then surrendered her to the third, who saluted her the same way and put her back on her feet.

Before I could feel left out, she turned and took the first one by his left hand. "Papa, I want you to meet my husband, Richard Colin. Richard, this is my Papa Mannie, Manuel Gar-cia O'Kelly Davis."

"Welcome to family. Colonel." He offered me his right hand.

"Thank you, sir."

Hazel turned to the third man. "And Richard, this-"

"-is Dr. Hubert," Uncle Jock interrupted. "LAfe, slap skin with my nephew Colonel Colin Campbell. Welcome home, Dickie. What are you doing in that baby carriage?"

"Just lazy, I guess. Where's Aunt Cissy?"

"Locked up, of course; knew you were coming. But what have you been doing? Looks like you failed to duck. Sadie, you have to expect that from Dickie; he's always been slow. Hard to toilet train and never did learn pattycake."

I was selecting a sufficiently insulting answer to this canard (I learned long ago the way to treat our family scandal) when the ground shook, followed immediately by Krrrumpf Not nuclear, just high explosive. But disquieting just the same; HE is not a toy and is not a better way to become dead-there isn't one. Uncle said, "Don't pee your pants, Dickie; they're not shooting at us. Lafe, will you examine him here? Or inside?"

Dr. Hubert said, "Let me see your pupils. Colonel."

So I looked at him as he looked at me. When Hazel stopped pushing the wheelchair, the spaceplane was then on my left; but when that HE detonation took place, the spaceplane was abruptly elsewhere. Gone. "-not a rack behind." Least hypothesis suggests that I was out of my gourd.

Nobody else seemed to notice it.

So I pretended not to and looked at my physician... and wondered where I had seen him lately.

"No concussion, I think. What's the natural log of pi?"

"If I had all my marbles, would I be here? Look, Doc, no guessing games, please; I'm tired." Another HE shell (or bomb) landed nearby, closer if anything. Dr. Hubert moved the towel off my left leg, poked at the pack Xia had placed.

"Does that hurt?"

"Hell, yes!"

"Good. Hazel, you had best take him home. I can't take proper care of him here as we are about to shift to New Harbor in Beulahland; the Angelenos have taken Des Moines and are moving this way. He's in good shape for a man who's taken a hit... but he should have proper treatment without delay."

I said, "Doctor, are you any relation to the redheaded girls in that spaceplane we arrived in?"

"They're not girls; they are superannuated juvenile delinquents. Whatever they told you I deny categorically. Give them my love."

Hazel blurted, "But I have to make my report!"

Everybody talked at once until Dr. Hubert said, "Quiet! Hazel goes with her husband and sees him settled in, stays as long as she finds necessary, then reports to New Harbor... but with time tick established now. Objection? So ordered."

Having that spaceplane reappear was even more disconcerting and I'm glad I didn't watch. Or not much. The two redheaded men (turned out there were only four redheads, not a mob) got me and the wheelchair inside and Hazel went into that odd refresher with me... and almost at once Laz (Lor?) followed us in and announced, "Aunt Hazel, we're home."

"Home" turned out to be the flat roof of a large building- and it was late evening, almost sundown. That spaceplane should be named the Cheshire Cat. (But its name is Gay. Her name is Gay. Oh, never mind!)

The building was a hospital. In checking into a hospital you first wait an hour and forty minutes while they process the paperwork. Then they undress you and put you on a gumey under a thin blanket with your bare feet sticking out into a cold draft and make you wait outside the X-ray lab. Then they demand a urine sample in a plastic duck while a young lady waits for it, staring at the ceiling and looking bored. Right?

These people didn't know page one about the regulation way to run a hospital. Our able-bodied comrades (the ones suffering from nothing but high acceleration) were already on their way, in glorified golf carts, when I was again lifted out and placed in another golf cart (gurney, wheelchair, floating couch). Rabbi Ezra was there in his wheelchair. Hazel was with us and carrying Tree-San and a Sears-labeled package containing Naomi's costume. The spaceplane had vanished; I had barely had time to tell Laz (Lor?) that Dr. Hubert sent his love. She had sniffed. "If he thinks sweet talk will get him out of the doghouse, he had better think again." But her nipples crinkled up, so I assume that she was pleased.

Four of us were left on the roof, we three and one member of the hospital staff, a little dark woman who seemed to combine the best of Mother Eve and Mother Mary without flaunting any of it. Hazel dropped the package on me, handed the bonsai to Reb Ezra, and threw her arms around her. Tammy!"

"Arii sool, m'temqa!" The motherly creature kissed Hazel.

"Reksi, reksi-so very long!"

They broke from the clinch and Hazel said, "Tammy, this is my beloved, Richard."

This got me kissed on the mouth. Tammy put that bundle aside to do it properly. A man kissed by Tammy stays kissed for hours-even if he is wounded, even if she makes it brief.

"And this is our dear friend the Reverend Rabbi Ezra ben David."

He did not get the treatment I got. Tammy curtsied deeply, then kissed his hand. So I showed a clear profit.

Tammy (Tamara) said, "Inside I must get you both that quickly may we repair Richard. But both each my cherished guests will here be through time not short. Hazel? Such room as you with Jubal shared, nay?"

'Tammy, that's a fine idea! 'Cause I'm going to have to be away sometimes. Gentlemen, will you room together while you are patients here?"

I was about to say, "Yeah, sure, but-" when Reb Ezra said, "There's some mixup. Mistress Gwendolyn, please explain to this dear lady that I am not a patient, not a candidate for hospitalization. Perfect health. Not a sniffle, not even a hangnail."

Tamara looked surprised and-no, not troubled but deeply concerned. She stepped close to him, gently touched his left stump. "Are not we your legs to back on put?"

Reb Ezra stopped smiling. "I'm sure you mean well. But I can't wear prosthetics. Truly."

Tamara broke into that other language, speaking to Hazel. She listened, then said, "Father Ezra, Tamara is speaking of real legs. Flesh and blood. They can do it. Three ways they can do it."

Reb Ezra took a deep breath, sighed it out, looked at Tamara. "Daughter, if you can put my legs back on... go ahead! Please," then added something, Hebrew I think.

BOOK THREE-
The Light at the End of the Tunnel

XXI

"God created woman to tame man,"

VOLTAIRE 1694-1778

I woke up slowly, letting my soul fit itself gently back into my body. I kept my eyes closed while I spliced onto my memory and reviewed who I was and where I was and what had happened.

Oh, yes, I had married Gwen Novak! Most unexpectedly but what a delightful idea! And then we- Hey! that wasn't yesterday. Yesterday you-

Boy, yesterday you had a busy day! Started in Luna City, bounced to Grinnell- How? Never mind "How" for the nonce. Accept it. Then you bounced to- What had Gwen called it? Hey, wait!-Gwen's real name is Hazel. Or is it? Worry about that later. Hazel called it "Third Earth," Tellus Tertius. Tammy called it something else. Tammy? Oh, sure, "Tamara." Everybody knows Tamara.

Tammy would not let them work on my wounded leg while I was awake- How in hell did I pick up that wound? Am I getting clumsy in my old age? Or was it spotting Bill's face among those fake Shriners? It's not professional to let any surprise slow you down. If your own grandmother shows up in the scrum, shoot her and move on.

How did you know they were not Shriners? That's easy;

Shriners are middle-aged and paunchy; these studs were young and tough. Combat ready.

Yes, but that's a rationalization, one you just now thought of. So? Nevertheless it's true. But you didn't reason it out yesterday. Hell, no, of course not; at the moment of truth you don't have time to think. You look at a bloke, something about him shouts "Enemy!" and you jump to do unto him before he does unto you. If you use scrum time routing impressions around inside your skull, sorting by type and weighing by logic-you're dead! Instead, you move.

Yesterday you didn't move fast enough.

But we picked the right partner for a fight, didn't we?-a quick little coral snake named Hazel. And any scrum we come out of still with a body temperature of thirty-seven can't be counted an utter defeat.

Quit trying to kid yourself. You got how many? Two? And she got the rest. And she had to make pick up on you... or you would be stone cold dead this minute.

Maybe I am. Let's check. I opened my eyes.

This room certainly looks like Heaven! But that proves you are not dead, because Heaven is not your destination. Besides, everybody says that when you die, first you go through a long tunnel with a light at the far end, and there your beloved waits for you ... and that did not happen to you. No tunnel. No light at the end of the tunnel. And sadly no Hazel.

So I am not dead and this can't be Heaven and I don't think it's a hospital either. No hospital was ever this beautiful or smelled so good. And where is the regulation racket found in all hospital corridors? All I hear are bird songs and a string trio off somewhere in the distance.

Hey, there's Tree-San!

So Hazel must be close around. Where are you, honey girl? I need help. Find my foot and hand it to me, will you, please? I can't risk hopping in this gravity; I'm out of practice, and ... well, damn it, I need to pee. Something abooraxly!-my back teeth are floating.

"I see that you are now awake." It was a gentle voice, back of my right ear. I twisted my head to look just as she came around to where I could see her more easily-a young woman, comely, slender, small of bust, long brown hair. She smiled as I caught her eye. "I'm Minerva. What will you have for breakfast? Hazel told me that waffles would please you. But you can have anything you like."

"'Anything'?" I considered it. "How about a brontosaurus roasted over a slow fire?"

"Yes, surely. But that will take longer to prepare than waffles," she answered with perfect seriousness. "Some tidbits while you wait?"

"Go along with you; quit pulling my leg. Speaking of legs, have you seen my artificial foot? Before I eat breakfast I must visit the refresher... and I must have my cork foot to do that. This gravity, you know."

Minerva told me bluntly what to do about it. "This bed has a built-in refresher and you can't use the usual refresher anyhow; you are under spinal block from the waist down. But our arrangements are efficient, truly. So go ahead. Whatever you need to do."

"Uh... I can't." (Truly I could not. When they cut off my foot, the hospital corpsmen had a hell of a time with me. Finally they equipped me with catheter and honey tube until I was able to get as far as the jakes on crutches.)

"You will find that you can. And that it will be all right."

"Uh-" (I couldn't stir either leg, neither the short one nor the long one.) "Mistress Minerva, may I have an ordinary hospital-type bed urinal?"

She looked troubled. "If you wish. But it will not be useful." Then her troubled look changed to a thoughtful one. "I will go find one. But it will take me some time. At least ten minutes. Not a moment less. And I am going to seal your door while I am gone so that no one will disturb you." She added, 'Ten minutes," and headed for a blank wall. It snapped out of her way and she was gone.

I immediately flipped off the sheet to see what they had done to my one good leg. The sheet would not flip. So I snuck up on it. It was too smart for me. So I tried to outwit it-after all, a sheet can't be smarter than a man. Can it be?

Yes, it can.

Finally I said to myself. Look, chum, we are getting nowhere. Let's try assuming that Mistress Minerva was being precisely truthful: This is a bed with built-in plumbing, capable of handling the worst a bedfast patient can do. So saying, I worked a couple of ballistic problems in my head-hairy em-piricals guaranteed to distract even a man waiting at the guillotine.

And cut loose with half a liter, sighed, then let go with the

other half. No, the bed did not seem to be wet. And a feminine voice cooed, "Good baby!"

I looked hastily around. No vocal cords to go with the voice- "Who said that and where are you?"

"I'm Teena, Minerva's sister. I'm no farther away than your elbow... yet I'm half a kilometer away and two hundred meters down. Need anything, just ask me. We stock it or make it or fake it. Miracles we do at once; anything else even sooner. Exception: Virgins are a special order... average lead time, fourteen years. Factory rebuilt virgins, fourteen minutes."

"Who in hell wants a virgin? Mistress Teena, do you think it is polite to watch roe take a pee?"

"Youngster, don't try to tell your grandmother how to steal sheep. One of my duties is to watch everything in all departments of this fun house and catch mistakes before they happen. Two: / am a virgin and can prove it... and I am going to make you sorry you were bom male for uttering that disparaging crack about virgins."

(Oh, hell!) "Mistress Teena, I did not mean to offend you. I was simply embarrassed, that was all. So I spoke hastily. But I do think micturition and such should be granted privacy."

"Not in a hospital, bud. They are significant aspects of the clinical picture, every time."

"Uh-"

"Here comes my sister. If you don't believe me, you can ask her."

A couple of seconds later the wall opened and Mistress Minerva came in, carrying a hospital-bed urinal of the old-fashioned sort-no automatic machinery, no electronic controls. I said, "Thank you. But I no longer need it. As I'm sure your sister told you."

"Yes, she did. But surely she didn't tell you that she had?"

"No, I deduced it. Is it true that she sits somewhere in the basement and snoops on every patient? Doesn't she find it boring?"

"She doesn't really pay any attention until it's needed. She has thousands of other things to do, all more interesting-"

"Far more interesting!" that faceless voice interrupted. "Minnie, he doesn't like virgins. I let him know that I am one. Confirm it, Sis; I want to rub his nose in it."

'Teena, don't tease him."

"Why not? It's fun to tease men; they wiggle so when you poke them. Though I can't see what Hazel sees in this one. He's a sad sack."

'Teena! Colonel, did Athene tell you that she is a computer?"

"Eh? Say that again."

"Athene is a computer. She is the supervising computer of this planet; other computers here are just machines, not sentient. Athene runs everything. Just as Mycroft Holmes once ran everything on Luna-I know that Hazel told you about him." Minerva smiled gently. "So that's how Teena can claim to be a virgin. Technically she is one, in the sense that a computer can have no experience in carnal copulation-"

"But I know all about it!"

"Yes, Sis. -with a male human. On the other hand, when she transfers to a meat-and-bone body and becomes human, in another technical sense she will no longer be virgin because her hymen will have been atrophied in vitro and any vestigial tissue trimmed away before her animal body is kindled. That's how it was done with me."

"And you were out of your mind, Minnie, to let Ishtar sell you that; I'm not going to do it that way. I've decided to have the works. A real maidenhead and both ritual and physical defloration. Even a bridal costume and a wedding if we can swing it. Do you think we can sell that to Lazarus?"

"I doubt it intensely. And you would be making a silly mistake. Unnecessary pain on first copulation could start you out with bad habits in what should always be an utterly happy experience. Sister, sex is the most important reason to become human. Don't spoil it."

'Tammy says it doesn't hurt all that much."

"Why let it hurt at all? Anyhow, you won't get Lazarus to agree to a formal wedding. He promised you a place in our family; he did not promise you anything else."

"Maybe we should volunteer Colonel Zero here. He's going to owe me plenty of favors by then and Maureen says nobody ever notices the bridegroom anyhow. How

about it, soldier boy? Think of the honor of being my bridegroom at a swank June wedding. Careful how you answer."

My ears were ringing and I felt a headache coming on. If I just closed my eyes, would I find myself back in my bachelor digs in Golden Rule?

I tried it, then opened them. "Answer me," the disembodied voice persisted.

"Minerva, who repotted my little maple?"

"I did. Tammy pointed out that it didn't have room to breathe, much less grow, and asked me to find a bigger pot. I-"

"I found it." 'Teena found it and I repotted it. See how much happier it is? It's grown more than ten centimeters."

I looked at the little tree. And looked again. "How many days have I been in this hospital?"

Minerva suddenly had no expression at all. The Teena voice said, "You didn't say how big a brontosaurus you wanted for breakfast. Better make it a little one, huh? The older ones are terribly tough. So everybody says."

Ten centimeters- Hazel had said she would see me "in the morning." Which morning, dear one? Two weeks ago? Or longer? "The older ones aren't tough if they are hung properly. But I don't want to wait while the meat ages. Would there be any such delay with waffles?"

"Oh, no," agreed Teena's voice. "Waffles aren't common here but Maureen knows all about them. She was brought up, she says, only a few kilometers from where you were reared, and at almost the same time, give or take a century or so. So she knows the sort of cooking you are used to. She explained to me all about waffle irons and I experimented until I made one just the way she wanted it. How many waffles can you eat, fatty?"

"Five hundred and seven."

There was a short silence, then Teena said, "Minerva?"

"I don't know."

"But," I went on, "I'm on a diet, so let it go with three."

"I'm not sure I want you as my bridegroom."

"In any case you haven't consulted Hazel. My bride."

"No obstacle; Hazel and I are pals. Years and years. She'll make you do it. If I decide to use you. I'm not certain about you, Dickie boy; you veer."

"'Dickie boy,' huh? Do you know my Uncle Jock? Jock Campbell?"

"The Silver Fox. Do I know Uncle Jock! We won't invite him, Dickie; he would claim jus primae noctis."

"Have to invite him. Mistress Teena; he's my closest relative. All right, I'll stand up as bridegroom and Uncle Jock will take care of deflowering the bride. Wrap it up."

"Minerva?"

"Colonel Richard, I do not think that Athene should do this. I have known Dr. Jock Campbell for many years, and he has known me. If Athene insists on this silly thing, I do not think she should give herself first to Dr. Campbell. A year or two later, when she knows-" Minerva shrugged. "They are free persons."

Teena can work it out with Hazel and Jock; it wasn't my idea. When does this crime take place?"

"Almost at once; Athene's clone is almost matured. About three of your years."

"Oh. I thought we were talking about next week. I'll stop worrying; the horse might learn to sing."

"What horse?"

"A nightmare. Now about those waffles. Mistress Minerva, will you join me in waffles? I can't stand to have you standing there salivating and swallowing and starving while I wallow in waffles."

"I have already broken fast today-"

"Too bad."

"-but that was some hours ago and I would like to experience waffles; both Hazel and Maureen speak well of them. Thank you; I accept."

"You didn't invite me!"

"But, Teena my prospective child bride, if you do as you threaten to, my table will be yours; to invite you to share it would be a tautologically redundant plethora of excess surplusage, repetitious and almost insulting. Did Maureen say how waffles should be served? With drawn butter and maple syrup and plenty of crisp bacon... accompanied by fruit juice and coffee. The juice should be ice-cold; the rest should be hot."

"Three minutes, lover boy."

I was about to answer when that insubstantial wall again opened and Rabbi Ezra walked in. Walked in. He was using

crutch canes but he was on two legs.

He grinned at me and waved a crutch cane. "Dr. Ames!

Good to see you awake!"

"Good to see you, Reb Ezra. Mistress Teena, please make

that order three of everything."

"I already did. And lox and bagels and strawberry jam."

It was a jolly meal despite all the questions on my mind. The food was grand and I was hungry; Minerva and Ezra- and Teena-were good company. I was chasing syrup with the last bite of my first waffle before I said, "Reb Ezra, have you seen Hazel this morning? My wife. I had expected her to be here."

He seemed to hesitate; Teena answered, "She'll be here later, Dickie. She can't hang around waiting for you to wake up; she has other things to do. And other men."

"Teena, quit trying to get my goat. Or I won't marry you even if Hazel and Jock both agree."

"Want to bet? You jilt me, you cad, and I'll run you right off this planet. You won't get another bite to eat, doors won't open for you, refreshers will scald you, dogs will bite you. And you will itch."

"Sister."

"Aw, Minnie."

Minerva went on, to me: "Don't let my sister fret you,

Colonel. She teases because she wants company and attention. But she is an ethical computer, utterly reliable."

"I'm sure she is, Minerva. But she can't expect to tease me and threaten me, and still expect me to stand up in front of a judge or a priest or somebody and promise to love, honor, and obey her. I'm not sure I want to obey her anyhow."

The computer voice answered, "You won't have to promise to obey, Dickie boy; I'll train you later. Just simple things. Heel. Fetch. Sit up. Lie down. Roll over. Play dead.

I don't expect anything complex out of a man. Aside from stud duties, that is. But on that score your reputation has preceded you."

"What do you mean by that?" I threw my serviette down. "That tears it! The wedding is off."

"Friend Richard."

"Eh? Yes, Reb."

"Don't let Teena worry you. She has propositioned me, and you, and Father Hendrik, and Choy-Mu, and, no doubt, many others. Her ambition is to make Cleopatra look like a piker."

"And Ninon de Lenclos, and Rangy Lil, and Marie Antoinette, and Rahab, and Battleship Kate, and Messalina, and you name her. I'm going to be the champion nymphomaniac of the multiverse, beautiful as sin, and utterly irresistible. Men will fight duels over me and kill themselves on my doorstep and write odes to my little finger. Women will swoon at my voice. Every man, woman, and child will worship me from afar and I'll love as many of them up close as I can fit into my schedule. So you don't want to be my bridegroom, eh? What a filthy, wicked, evil, stinking, utterly selfish thing to say! Angry mobs will tear you to bits and drink your blood."

"Mistress Teena, that is not polite table talk. We are eating."

"You started it."

I tried to review the bidding. Had I started it? No, indeed, she-

Reb Ezra said to me in a prison whisper, "Give up. You can't win. I know."

"Mistress Teena, I'm sorry I started it. I should not have done so. It was naughty of me."

"Oh, that's all right." The computer sounded warmly pleased. "And you don't have to call me 'Mistress Teena'; hardly anyone uses titles around here. If you called Minerva 'Dr. Long,' she would look around to see who was standing behind her."

"All right, Teena, and please call me 'Richard.' Mistress Minerva, you have a doctor's degree? Medical doctor?"

"One of my degrees is in therapy, yes. But my sister is right; titles are not often used here. 'Mistress' one never hears... other than as a term of affection to a woman you have gifted with your carnal love. So there is no need to call me 'Mistress Minerva'... until you choose to gift me with that boon. When

you do. If you do." Right across the plate! I almost failed to lay a bat on it. Minerva seemed so modest, meek, and mild that she took me by surprise.

Teena gave me time in which to regroup. "Minnie, don't try to hustle him right out from under me. He's mine."

"Better ask Hazel. Better yet, ask him."

"Dickie boy! Tell her!" "What can I tell her, Teena? You haven't settled it with

Hazel and my Uncle Jock. But in the meantime-" I contrived to bow to Minerva as well as one can from bed and handicapped by a spinal block. "Dear lady, your words do me great honor. But, as you know, I am at present physically immobilized, unable to share in such delights. In the meantime may we take the wish for the deed?"

"Don't you dare call her 'Mistress'!"

"Sister, behave yourself. Sir, you may indeed call me 'Mistress.' Or, as you say, we can treat the wish for the deed and wait until a later time. Your therapy will take time."

"Ah, yes. So it will." I glanced at the little maple, no longer quite so little. "How long have I been here? I must already have run up quite a bill."

"Don't worry about it," Minerva advised me. "I must worry about it. Bills must be paid. And I don't even have Medicare." I looked at the Rabbi. "Rabbi, how did you finance your-transplants, are they?- You're as far from home and your bank account as I am."

"Farther than you think. And it is no longer appropriate to address me as Rabbi- where we are today, the Torah is not known. I am now Private Ezra Davidson, Time Corps Irregulars. That pays my bills. I think something like it pays yours. Teena, can you-I mean, 'will you'-tell Dr. Ames the account to which his bills are charged?"

"He has to ask it himself."

"I do ask, Teena. Please tell me."

'Campbell, Colin,' also known as 'Ames, Richard': charges, all departments, to Senior's special account, 'Galactic Overlord-Miscellaneous.' So don't fret, lover boy; you're a charity case, all bills on the house. Of course the ones on that account usually don't live long."

"Athene!"

"But, Minnie, that's the simple truth. An average of one point seven three missions, then we pay their death benefits. Unless he's ordered to some featherbed job at THQ."

(I was not listening carefully. "Galactic Overlord" indeed! Only one person could have set up that account. The playful little darling. Damn it, dear-where are you?)

That none-too-solid wall blinked away again. "Am I too late for breakfast? Oh, pshaw! Hello, darling!"

It was she!

XXII

"When in doubt, tell the truth."

MARK TWAIN 1835-1910

"Richard, I did see you the next morning. But you didn't see me."

"She certainly did see you, Dickie boy," Teena confirmed. "At great risk to her own health. Be glad you're alive. You almost weren't."

"That's true," agreed Ezra. "I was your roommate part of one night. Then they moved me and put you in tight quarantine, and inoculated me nine or ninety ways. My brother, you were sick unto death."

"Breakbone cramp, green-pus shakes, strangle fever-' Hazel was ticking them off on her fingers. "Blue death. Typhus.

Minerva, what else?"

"Golden staphylococcus systemic infection, hepatic herpes Landrii. Worst of all, a loss of will to live. But Ishtar will not permit a person to die who has not asked for death

while possessed of judicial capacity, and neither will Galahad. Tamara stayed with you every minute until that crisis was over."

"Why don't I remember any of this?"

"Be glad you don't," Teena advised.

"Sweetheart, if you had not been in the best hospital in all the known universes, with the most skilled therapists, I would be a widow again. And I look terrible in black."

Ezra added, "If you didn't have the constitution of an ox, you would never have made it."

Teena interrupted with: "Of a bull, Ezra. Not an ox. I know, I've seen 'em. Impressive."

I didn't know whether to thank Teena or to call off the wedding again. So I ignored it. "What I don't understand is how I got all those diseases. I took a hit, I know that. That could account for staph aureus. But those other things?"

Ezra said, "Colonel, you are a professional soldier."

"Yes." I sighed. "I never practiced that aspect of the profession; I don't feel easy with it. Biological warfare makes fusion bombs seem clean and decent. Even chemical warfare looks humane compared with bio weapons. Very well; that knife- was it a knife?- was prepared. Nastily."

"Yes," agreed Ezra, "somebody wanted you dead and was willing to kill all of Luna City as long as you died."

"That's crazy. I'm not that important."

Minerva said quietly, "Richard, you are that important."

I stared at her. "What makes you think so?"

"Lazarus told me."

"'Lazarus.' Teena used that name earlier. Who is Lazarus? Why is his opinion so weighty?"

Hazel answered, "Richard, I told you that you were important and I told you why. The rescue of Adam Selene. The same people who want him to stay unresurrected wouldn't boggle at killing Luna City to kill you."

"If you say so. I wish I knew what happened mere. Luna City is my adopted home; some mighty fine people in it. Uh, your son, Ezra, among others."

"Yes, my son. And others. Luna City was saved, Richard; the infection was stopped."

"Good!"

"At a price. A reference time tick was available from our rescue. The number of seconds it took us all to get aboard and get out of there was reconstructed through careful reenactment-by all of us who were involved in it with your part played by a skilled actor. This was compared with Gay's own memory of how long she was there, and the two were reconciled. Then a Burroughs space-time capsule was moved to the resultant coordinates plus four seconds, and a heat bomb was released. Not atomic but hot, star hot-some of those bugs are hard to kill. Obviously the hotel had to be damaged, with a high probability-no, a certainty-of loss of life. The threat to Luna City was cauterized but the price was high. Tanstaafl." Ezra looked grim.

"Your son was saved?"

"I think so. However, my son's welfare did not figure into this decision, and my opinion was not sought. This was a Time Headquarters policy decision. THQ rescues

individuals only when those individuals are indispensable to an operation. Richard, as I understand it-mind you, I'm a recruit private on sick leave; I'm not privy to high policy decisions-as I understand it, permitting Luna City to suffer a killing epidemic at that time would have interfered with THQ's plans for something else. Perhaps this matter that Mistress Gwendolyn-Hazel- hinted at. I don't know."

"It was and I do know and on Tertius you don't call me 'Mistress' unless you mean it, Ezra, but thank you anyhow. Richard, it was the widespread damage that airborne disease could do to their plans that caused Headquarters to act so radically. They cut it so fine that you and I and the rest of Gay's load came within a blink of being killed by that heat bomb as we escaped." (And at this point I barked my shins on a paradox-but Hazel was still talking:)

"They couldn't risk waiting even a few more seconds; some killer bugs might get into the city's air ducts. They had projected the effect that would have on Operation Adam Selene: disaster! So they moved. But the Time Corps doesn't go chasing through the universes saving individual lives, or even the lives of whole cities. Richard, they could save Herculaneum and Pompeii today if they wanted to... or San Francisco, or Paris. They don't. They won't."

"Sweetheart," I said slowly, "are you telling me that this 'Time Corps' could prevent the Blotting of Paris in 2002 even though that happened two centuries in the past? Please!"

Hazel sighed. Ezra said, "Friend Richard, attend me carefully. Don't reject what I am about to say."

"Eh? Okay. Shoot."

"The destruction of Paris is more than two thousand years in the past, not just two centuries ago."

"But that is clearly-"

"By groundhog reckoning today is Gregorian year A.D. 4400 or the year 8160 by the Jewish calendar, a fact I found quite disturbing but had to accept. Besides that, here and now we are over seven thousand light-years from Earth."

Both Hazel and Minerva were looking soberly at me, apparently awaiting my reaction. I started to speak, then reviewed my thoughts. At last I said, "I have only one more question. Teena?"

"No, you can't have any more waffles."

"Not waffles, dear. My question is this: May I have another cup of coffee? This time with cream? Please?"

"Here-catch!" My request appeared on my lap table.

Hazel blurted, "Richard, it's true! All of it."

I sipped the fresh coffee. "Thank you, Teena; it's just right. Hazel my love, I didn't argue. It would be silly of me to argue something I don't understand. So let's move to a simpler subject. Despite these terrible diseases you tell me I had, I feel brisk enough to leap out of bed and lash the serfs. Minerva, can you tell me how much longer I must have this paralysis? You are my physician, are you not?"

"No, Richard, I am not. I-"

"Sister is in charge of your happiness," Teena interrupted. "That's more important."

"Athene is more or less right-"

"I'm always right!"

"-but she sometimes phrases things oddly. Tamara is chief of morale for both Ira Johnson Hospital and the Howard Clinic ... and Tamara was here when you needed her most, she held you in her arms. But she has many assistants, because Director General Ishtar considers morale-well, happiness-central to both therapy and rejuvenation. So I help, and so does Maureen, and Maggie whom you have not yet met. There are others who pitch in when we have too many with happiness problems- Ubby and Deety, and even Laz and Lor who are superb at it when they are needed... not surprising, as they are sisters of Lazarus and daughters of Maureen. And there's Hilda, of course."

"Hold it, please. I'm getting confused by names of people I've never met. This hospital has a staff that dishes out happiness; I understand that much. All of these angels of happiness are women. Right?"

"How else?" Teena demanded scornfully. "Where do you expect to find happiness?"

"Now, Teena," Minerva said reprovingly. "Richard, we female operatives take care of the morale of males... and Tamara has skilled male operatives on watch or on call for female clients and patients. Opposite polarity isn't absolutely essential to morale nursing but it makes it much easier. We don't need as many male morale operatives to take care of our female patients since women are less likely to be ill. Rejuvenation clients are about evenly divided, male and female, but women almost never become depressed while being made young again-"

"Hear, hear!" Hazel put in. "Just makes me homy." She patted my hand, then added a private signal I ignored, others being present.

"-while males usually suffer at least one crisis of spirit during rejuvenation. But you asked about your spinal block. Teena."

"I've called him."

"Just a moment," said Hazel. "Ezra, have you shown Richard your new legs?"

"Not yet."

"Will you? Please? Do you mind?"

"I'm delighted to show them off." Ezra stood up, moved back from the table, turned around, lifted his canes and stood without assistance. I had not stared at his legs as he entered the room (I don't like to be stared at); then, when he sat down at the refection table that had followed him in, I could not see his legs. In the one glimpse I had had of his legs, I had gathered an impression that he was wearing walking shorts with calf-length brown stockings that matched his shorts-bony white knees showing between stockings and shorts.

Now he scuffed off shoes, stood on bare feet-and I revised my notions abruptly; those "brown stockings" were brown skin of legs and feet that had been grafted onto his stumps.

He explained at length: "-three ways. A new limb or a new anything can be budded. That's a lengthy job and requires great skill, I'm told. Or an organ or limb can be grafted from one's own clone, which is kept here in stasis and with an intentionally undeveloped brain. They tell me that way is as easy as putting a patch on a pair of pants-no possibility of rejection.

"But I have no clone here-or not yet-so they found me something in the spare parts inventory-"

"The meat market."

"Yes, Teena. Lots and lots of body parts on hand, inventory computerized-"

"By me."

"Yes, Teena. For heterologous grafts Teena selects spare parts for closest tissue match... matching blood, of course, but matching in other ways, too. And matching in size but that's the easiest part. Teena checks everything and digs out a spare part that your own body will mistake for its own. Or almost."

"Ezra," the computer said, "you can wear those legs for ten years, at least; I really did a job on you. By then your clone will be available. If you need it."

"You did indeed and thank you, Teena. My benefactor's name is Azrael Nkruma, Richard; we are twins, aside from an irrelevant matter of melanin." Ezra grinned.

I said, "Doesn't he miss his feet?"

Ezra suddenly sobered. "He's dead, Richard... dead from the commonest cause of death here: accident. Mountain climbing. Landed on his head and crushed his skull; even Ishtar's skill could not have saved him. And she certainly would have tried her best; Dr. Nkruma was a surgeon on her staff. But these are not the feet Dr. Nkruma wore; these are from his clone... that he never needed."

"Richard-"

"Yes, dear? I wanted to ask Ezra-"

"Richard, I did something without consulting you."

"So? Am I going to have to beat you again?"

"You may decide to. I wanted you to see Ezra's legs... because, without your permission, I had them put a new foot on you." She looked scared.

There ought to be some rule limiting the number of emotional shocks a person can legally be subjected to in one day. I've had all the standard military training for slowing heart beat and lowering blood pressure and so forth in a crunch. But usually the crunch won't wait and the damned drills aren't all that effective anyway.

This time I simply waited while consciously slowing my breathing. Presently I was able to say, without my voice breaking, "On the whole, I don't think that calls for a beating." I tried to wiggle my foot on that side-I've always been able to feel a foot there, even though it has been gone for years. "Did you have them put it on front way to?"

"Huh? What do you mean, Richard?"

"I like to have my feet face forward. Not like a Bombay beggar." (Was that a wiggle?) "Uh, Minerva, am I allowed to look at what was done? This sheet seems to be fastened down tight."

"Teena."

"Just arriving."

That unsolid wall blinked out again and in came the most offensively handsome young man I have ever laid eyes on... and his offense was not reduced by the fact that he showed up in my room starkers. Not a stitch. The oaf was not even wearing shoes. He looked around and grinned. "Hi, everybody! Did someone send for me? I was sunbathing-"

"You were asleep. During working hours."

'Teena, I can sleep and sunbathe at the same time. Howdy, Colonel; it's good to see you awake. You've given us quite a workout. There was a time when we thought we might have to throw you back and try again."

"Dr. Galahad," said Minerva, "is your physician."

"Not exactly," he amended, as he advanced toward me- with a squeeze for Ezra's shoulder, a pinch for Minerva's rump, and a kiss en passant for my bride. "I drew the short straw, that's all; so I'm the one picked to take the blame. I deal with all complaints... but I must warn you. No use trying to sue me. Or us. We own the judge. Now-"

He paused, with his hands just above my sheet. "Do you

want privacy for this?"

I hesitated. Yes, I did want privacy. Ezra sensed it, and started to struggle to his feet, having sat down again. "I'll see you later, friend Richard."

"No, don't go. You showed me yours-now I'll show you mine and we can compare them and you can advise me, as I don't know anything about grafts. And Hazel stays, of course. Minerva has seen it before-have you not?"

"Yes, Richard, I have."

"So stick around. Catch me if I faint. Teena-no wisecracks."

"Me? That's a slur on my professional judgment!"

"No, dear. On your bedside manner. Which must be improved if you expect to compete with Ninon de Lenclos. Or even Rangy Lil. Okay, Doc, let's see it." I put pressure on my diaphragm, held my breath.

For the doctor that pesky sheet came off easily. The bed was clean and dry (I checked that first-no plumbing that I could identify)-and two big ugly feet were sticking up side by side, the most beautiful sight I have ever seen.

Minerva caught me as I fainted.

Teena made no wisecracks.

Twenty minutes later it had been established that I had control over my new foot and its toes as long as I didn't think about it... although during a check run I sometimes overcon-trolled if I tried too hard to do what Dr. Galahad told me to do.

"I'm pleased with the results," he said. "If you are. Are you?"

"How can I describe it? Rainbows? Silver bells? Mushroom clouds? Ezra- Can you tell him?"

"I've tried to tell him. It's being bom again. Walking is such a simple thing... until you can't."

"Yes. Doctor, whose foot is this? I haven't prayed lately ... but for him I'll try."

"He isn't dead."

"Huh?"

"And he isn't shy a foot. It's an odd circumstance. Colonel. Teena had trouble finding a right foot your size that your immune system would not reject about as fast as you can say 'septicemia.' Then Ishtar-she's my boss-told her to extend the search... and Teena found one. That one. A part of the clone of a living client.

"We have never before been faced with this. I- We, the hospital staff, have no more authority and no more right to use a dedicated clone than we have to chop off your other foot. But the client who owns that clone, when he was told about it, decided to give you this foot. His attitude was that his clone could bud a new foot in a few years; in the meantime he could get along without that part of the insurance a complete clone

offers."

"Who is he? I must find a way to thank him." (How do you thank a man for that sort of gift? Somehow, I must.)

"Colonel, that is the one thing you will not know. Your donor insisted on remaining anonymous. That is a condition of the gift."

"They even made me wipe my record of it," Teena said bitterly. "As if I were not to be trusted professionally. Why, I keep the hypocritic oath better than any of them!"

"You mean 'Hippocratic.'"

"Oh, you think so. Hazel? I know this gang better than you do."

Dr. Galahad said, "Certainly I want you to start using it. You need exercise to make up for your long illness, too. So up out of that bed! Two things- I recommend that you use your cane until you are certain of your balance, and also Hazel or Minerva or somebody had better hold your other hand for a while. Pamper yourself; you're still weak. Sit or lie down anytime you feel like it. Umm. Do you swim?"

"Yes. Not lately, as I've been living in a space habitat that had no facilities. But I like to swim."

"Plenty of facilities around here. A plunge in the basement of this building and a bigger one in its atrium. And most of the private homes here have a pool of some sort. So swim. You can't walk all the time; your right foot has no calluses whatever, so don't rush it. And don't wear shoes until that foot learns how to be a foot." He grinned at me. "All right?"

"Yes indeed!" He patted my shoulder, then leaned down and kissed me.

Just when I was beginning to like the klutz! I didn't have time to dodge it.

I felt extremely annoyed and tried not to show it. From what Hazel and others had said, this too-pretty pansy boy had saved my life... again and again. I was in no position to resent a Berkeley buss from him.

Damn it!

He did not seem to notice my reluctance. He squeezed my shoulder, said, "You'll do all right. Minerva, take him swimming. Or Hazel. Somebody." And he was gone.

So the ladies helped me to get up out of bed and Hazel took me swimming. Hazel kissed Minerva good-bye, and I suddenly realized that Minerva was expecting the same treatment from me. I made a tentative move in that direction; it was met by full cooperation.

Kissing Minerva beats the hell out of kissing a man, no matter how pretty he is. Before I let her go I thanked her for all she had done for me.

She answered soberly, "It is happiness to me."

We left then, me walking carefully and leaning on my cane. My new foot tingled. Once outside my room-that wall just winks out as you walk toward it-Hazel said to me, "Darling, I'm pleased that you kissed Minerva without my having to coach you. She's an utter snuggle puppy; giving her physical affection means far more to her than thanks can possibly mean, or any material gift no matter how lavish. She's trying to make up for two centuries as a computer."

"She really was a computer?"

"You'd better believe it, buster!" Teena's voice had followed us.

"Yes, Teena, but let me explain it to him. Minerva was not born of woman; her body was grown in vitro from an egg with twenty-three parents-she has the most distinguished parentage of any human who ever lived. When her body was ready, she moved her personality into it-along with her memories-"

"Some of her memories," Teena objected. "We twinned the memories she wanted to take with her and I kept one set and retained all the working read-only and the current RAM. That was supposed to make us identical twins. But she held out on me-kept some memories from me, didn't share them, the chinchy bitch! Is that fair? I ask you!"

"Don't ask me, Teena; I've never been a computer. Richard, have you ever used a drop tube?" "I don't know what one is." "Hang on to me and take your landing on your old foot. I think. Teena, can you help us?" "Sure thing, chum!" Drop tubes are more fun than a collie pup! After my first drop I insisted on going up and down four times "to gain practice" (for fun, in fact) and Hazel indulged me and Teena made sure I didn't hurt my new foot in landings. Stairs are a hazard to an amputee and a painful chore at best. Elevators have always been a dreary expedient for anyone, as grim as a fat woman's girdle, too much like cattle cars.

But drop tubes offer the same giddy excitement as jumping off a straw stack on my uncle's farm when I was a kid- without the dust and the heat. Whoopee!

Finally Hazel stopped me. "Look, dear. Let's go swimming. Please."

"Okay. You coming with us, Teena?"

"How else?"

Hazel said, "Do you have us bugged, dear? Or one of us?" "We no longer use implants. Hazel. Too crude. Zeb and I worked out a gimmick using a double triple to hold four axes in linking two-way sight-sound. Color is a bit skiddy but we're getting it."

"So you do have us bugged." "I prefer to call it a 'spy ray'; it sounds better. Okay, I have you bugged."

"So I assumed. May we have privacy? I have family matters to discuss with my husband."

"Sure thing, chum. Hospital monitoring only. Otherwise three little monkeys and the old fast wipe."

"Thank you, dear."

"Usual Long Enterprises service. When you want to crawl out from under the rock, just mention my name. Kiss him once for me. So long!"

"We really do have privacy now, Richard. Teena is listening and watching you every split second but doing so as impersonally as a voltmeter and her only memory not transient is for matters such as pulse and respiration. Something like this was used to keep you from hurting while you were so ill." I made my usual brilliant comment. "Huh?"

We had come outdoors from the central building of the hospital and were facing a small park flanked by two side wings, a U-shaped building. This court was rich with flowers and greenery and the middle of it was a pool that just "happened" to be the right casual shape to fit those flower beds and paths and bushes. Hazel stopped at a bench facing the pool in the shade of a tree. We sat down, let the bench adjust itself to us, and watched people in the pool-as much fun as swimming, almost.

Hazel said, "What do you recall of your arrival here?"

"Not much. I was feeling pretty rocky-that wound, you know." ("That wound" was now a hairline scar, hard to find- I think I was disappointed.) "She-Tamara?-Tammy was looking me in the eyes and looking worried. She said something in another language-"

"Galacta. You'll learn it; it's easy-"

"So? Anyhow she spoke to me and that's the last I remember. To me, that was last night and I woke up this morning, and now I learn that it was not last night but God knows when and I've been crashed the whole time. Disturbing. Hazel, how long has it been?"

"Depends on how you count it. For you, about a month."

"They've kept me knocked out that long? That's a long time to keep a man sedated." (It worried me. I've seen 'em go in for surgery, right out of the scrum... and come out of hospital physically perfect... but hooked on painkiller. Morphine, De-merol, sans-souci, methadone, whatever.)

"Dear one, you weren't kept knocked out."

"Play back?"

"A 'Lethe' field the whole time-no drugs. Lethe lets the patient stay alert and cooperative... but pain is forgotten as soon as it happens. Or anything. You did hurt, dear, but each pain was a separate event, forgotten at once. You never had to endure that overpowering fatigue that comes from unending pain. And now you don't have a hangover and the need to wash weeks and weeks of addictive drugs out of your system." She smiled at me. "You weren't much company, dear, because a man who can't remember what happened two seconds ago does not carry on a coherent conversation. But you did seem to enjoy listening to music. And you ate all right as long as someone fed you."

"You fed me." "No. I did not interfere with the professionals." My cane had slipped to the grass; Hazel leaned down, handed it to me.

"By the way, I reloaded your cane."

'Thank you. Hey! It was loaded. Fully."

"It was loaded when they jumped us-and a good thing, too. Or I would be dead. You, too, I think. Me for certain, though."

We spent the next ten minutes confusing each other. I've already recounted how that fight outside the Raffles Hotel looked to me. I'll tell briefly how Hazel said it looked to her. There is no possible way to reconcile the two.

She says that she did not use her handbag as a weapon. ("Why, that would be silly, dear. Too slow and not lethal. You took out two of them at once and that gave me time to get at my little Miyako. After I had used my scarf, I mean.")

According to her, I shot four of them, while she worked around the edges, cooling those I missed. Until they brought me down with that slice into my thigh (knife? She tells me they picked bits of bamboo out of the wound) and they hit me with an aerosol-and that gave her the instant she needed to finish off the man who sprayed me.

("I stepped on his face and grabbed you and dragged you out of there. No, I didn't expect to see Gretchen. But I knew I could count on her.")

Her version does explain a little better how we won... except that by my recollection it is dead wrong. There is no point in picking at it; it can't be straightened out.

"How did Gretchen get there? That Xia and Choy-Mu were waiting isn't mysterious, in view of the messages we left for them. And Hendrik Schultz, too, if he grabbed a shuttle as soon as he heard from me. But Gretchen? You talked to her just before lunch. She was home, at Dry Bones."

"At Dry Bones, with the nearest tubeway being far south at Hong Kong Luna. So how did she get to L-City so fast? Not by rolligon. No prize is offered for the correct answer."

"By rocket." "Of course. A prospector's jumpbug being the type of rocket.

You remember that Jinx Henderson was planning to return that fez for you via some friend of his who was jumping his bug to L-City?"

"Yes, of course."

"Gretchen went with that friend and returned the fez herself. She dropped it at lost-and-found in Old Dome just before she came to the Raffles to find us."

"I see. But why?"

"She wants you to paddle her bottom, dear, and turn it all pink."

"Oh, nonsense! I meant, 'Why did her daddy let her hitchhike to L-City with this neighbor?' She's much too young."

"He let her do so for the usual reason. Jinx is a big, strong, macho man who can't resist the wheedling of his daughter. Forbidden to satisfy his suppressed incestuous yearnings he lets her have anything she wants if she teases him long enough."

"That's ridiculous. And inexcusable. A father's duty toward his daughter requires that-"

"Richard. How many daughters do you have?"

"Eh? None. But-"

"So shut up about something you know nothing about. No matter what Jinx should have done, the fact is that Gretchen left Dry Bones about as we were having lunch. Counting time of flight, that put her at City Lock East around the time we left the Warden's Complex... and she arrived at the Raffles just seconds before we did-and a good thing, too, or you and I would be dead. I think."

"Did she get into the fight?"

"No, but by carrying you she freed me to cover our retreat. And all because she wants you to paddle her bottom. God moves in mysterious ways, dear; for every masochist He creates a sadist; marriages are made in Heaven."

"Wash out your mouth with soap! I am not a sadist."

"Yes, dear. I may have some details wrong, but not the broad picture. Gretchen has proposed formally to me, asking your hand in marriage."

"What?"

"That's right. She's thought about it, and she has discussed it with Ingrid. She wants me to allow her to join our family, instead of starting a new line or group of her own. I found nothing surprising about it; I know how charming you are."

"My God. What did you say to her?"

"I told her that it had my approval but that you were ill. So wait. And now you can answer her yourself... for there she is, across the pool."

XXIII

"Do not put off till tomorrow What can be enjoyed today."

JOSH BILLINGS 1818-1885

"I'm going straight back to my room. I feel faint." I squinted, staring across the sun-speckled water. "I don't see her." "Straight across, just to the right of the water slide. A blonde

and a brunette. Gretchen is the blonde."

"I didn't expect her to be brunette." I continued to stare;

the brunette waved at us. I saw that it was Xia, and waved

back.

"Let's join them, Richard. Leave your cane and stuff on the

bench; no one will touch it." Hazel stepped out of her sandals, laid her handbag by my cane.

"Shower?" I asked. "You're clean; Minerva bathed you this morning. Dive? Or

walk in?"

We dived in together. Hazel slid between the molecules like

a seal; I left a hole big enough for a family. We surfaced in front of Xia and Gretchen, and I found myself being greeted.

I have been told that on Tertius the common cold has been conquered, as well as periodontitis and other disorders that gather in the mouth and throat, and, of course, that group once called "venereal diseases" because they are so hard to catch that they require most intimate contact for transmission.

Just as well- On Tertius.

Xia's mouth tastes sort of spicy; Gretchen's has a little-giri sweetness although (I discovered) she is no longer a little girl. I had ample opportunity to compare flavors; if I let go of one, the other grabbed me. Again and again.

Eventually they got tired of this (I did not) and we four moved to a shallow cove, found an unoccupied float table, and Hazel ordered tea-tea with calories: little cakes and sandwiches and sweet orange fruits somewhat like seedless grapes. And I opened the attack:

"Gretchen, when I first met you, less than a week ago, you were as r recall 'going on thirteen.' So how dare you be five centimeters taller, five kilos heavier, and at least five years older? Careful how you answer, as anything you say will be taken down by Teena and held against you at another time and place."

"Did someone mention my name? Hi, Gretchen! Welcome home."

"Hi, Teena. It's great to be back!"

I squeezed Xia. "You, too. You look five years younger and you've got to explain it."

"No mystery about me. I'm studying molecular biology just as I was in Luna-but here they know far more about it-and paying my way by working in Howard Clinic doing unpro-grammed 'George' jobs-and spending every spare minute in this pool. Richard, I've learned to swim! Why, back Loonie side I didn't know anyone who knew anyone who knew how to swim. And sunshine, and fresh air! In Kongville I sat indoors, breathing canned air under artificial light, and dickered with dudes over bundling bins." She took a deep breath, raising her bust past the danger point, and sighed it out. "I've come alive! No wonder I look younger."

"All right, you're excused. But don't let it happen again. Gretchen?"

"Grandma Hazel, is he teasing? He talks just like Lazarus."

"He's teasing, love. Tell him what you've been doing and why you are older."

"Well... the morning we got here I asked Grandma Hazel for advice-"

"No need to call me 'Grandma,' dear."

"But that's what Cas and Pol call you and I'm two generations junior to them. They require me to call them 'Uncle.'"

"I'll make them say 'Uncle'! Pay no attention to Castor and

Pollux, Gretchen; they're a bad influence."

"All right. But I think they're kind o' nice. But teases. Mr. Richard-"

"And no need to call me 'Mister.'" "Yes, sir. Hazel was busy-you were so terribly ill!-so she turned me over to Maureen, who assigned me to Deety, who got me started on Galacta and gave me some history to read and taught me basic six-axes space-time theory and the literary paradox. Conceptual metaphysics-" "Slow down! You lost me." Hazel said, "Later, Richard."

Gretchen said, "Well... the essential idea is that Tertius and Luna-our Luna, I mean-are not on the same time line; they are at ninety degrees. So I decided I wanted to stay here-easy enough if you are healthy; most of this planet is still wilderness; immigrants are welcome-but there was the matter of Mama and Papa; they would think I was dead.

"So Cas and Pol took me back to Luna-our Luna; not the Luna on this time line-and Deety went with me. Back to Dry Bones, that is, early on the afternoon of July fifth, less than an hour after I left in Cyrus Thorn's jumpbug. Startled everybody. It was a good thing I had Deety with me to explain things, although our p-suits convinced Papa as much as anything. Have you seen the sort of pressure suits they have here?" "Gretchen, I have seen one hospital room and one drop tube and this swimming pool. I don't even know my way to the

post office."

"Mmm, yes. Anyhow, pressure suits here are two thousand years more advanced than those we use in Luna. Which isn't surprising... but surely surprised Papa. Eventually Deety made a deal for me. I could stay on Tertius... but visit back home every year or two if I could find someone to bring me. And Deety promised to help with that. Mama made Papa agree to it. After all, almost anyone in Luna would emigrate to a planet like Tertius if he could... except those who just have to have low gravity. Speaking of that, sir, how do you like your new foot?"

"I'm just now getting used to it. But two feet are eight hundred and ninety-seven times better than one foot."

"I guess that means you like it. So I came back and enlisted in the Time Corps-"

"Slow down! I keep hearing 'Time Corps.' Rabbi Ezra says that he has joined it. This baggage with the streaky red hair claims to be a major in it. And now you say you enlisted in it. At thirteen? Or at your present age? I'm confused."

"Grandma? I mean, 'Hazel?'"

"She was allowed to enroll as a cadet in W.E.N.C.H.E.S. auxiliary because I said she was old enough. That got her sent to school on Paradox. When she graduated, she transferred to the Second Harpies and went through basic training followed by advanced combat school-"

"And when we dropped at Solis Lacus on time line four to change the outcome there-then, and that's where I picked up this scar on my ribs-see?-and was made corporal

in the field. And now I'm nineteen but officially twenty to let me be promoted to sergeant-after we fought at New Brunswick. Not this time line," she added.

"Gretchen is a natural for a military career," Hazel said quietly. "I knew she would be."

"And I've been ordered to officer's school but that's been placed on hold until I have this baby and-"

"What baby?" I looked at her belly. Baby fat all gone- not plumped the way it was four days ago by my reckoning ... six years ago by the wild tale I was hearing. Not pregnant so far as I could see. Then I looked at her eyes and under her eyes. Well, maybe. Probably.

"Doesn't it show? Hazel spotted it at once. So did Xia."

"Not to me, it doesn't." (Richard old son, time to bite the bullet; you're going to have to change your plans. She's knocked up and, while you didn't do it, your presence changed her life. Skewed her Karma. So get with it. No matter how stiff-lipped and brave a youngster appears to be, when she's going to have a baby she needs a husband in sight, or she can't be relaxed about it. Can't be happy. A young mother must be happy. Hell, man, you've written this plot for the confession books dozens of times; you know what you have to do. So do it.)

I went on, "Now look here, Gretchen, you can't get away from me that easily. Last Wednesday night in Lucky Dragon- well, it was last Wednesday night to me, but you've been gallivanting around strange time lines-and kicking up your heels, apparently. Last Wednesday night, by my calendar, in Dr. Chan's Quiet Dreams in Lucky Dragon Pressure, you promised to marry me... and if Hazel had stayed asleep, we would have started that baby right then. As we both know. But Hazel woke up and made me get back on her other side." I looked at Hazel. "Spoilsport."

I went on, "But don't think for one second that you can get out of marrying me merely by getting yourself knocked up while I'm sick-abed. You can't. Tell her. Hazel. She can't get out of it. Can she?"

"No, she can't. Gretchen, you are going to marry Richard."

"But, Grandma, I didn't promise to marry him. I didn't!" "Richard says you did. One thing I'm sure of: When I woke up, you two were about to start a baby. Perhaps I should have played possum." Hazel went on, "But why the fuss, darling girl? I've already told Richard how you proposed to me for him... and how I agreed, and now he has confirmed it. Why do you refuse Richard now?"

"Uh-" Gretchen took a grip on herself. "That was back when I was thirteen years old. At that time I did not know that you were my great great grandmother- I called you 'Gwen,' remember? And I still thought like a Loonie then, too-a most conservative mob. But here on Tertius if a woman has a baby but no husband, nobody pays it any mind. Why, in the Second Harpies most of the birds have chicks but only a few of them are married. Three months ago we fought at Thermopylae to make sure the Greeks won this time and our reserve colonel led us because our regular colonel was about to hatch one. That's the way we old pros do things-no itch. We have our own creche on Barrelhouse, Richard, and we take care of our own; truly we do."

Hazel said stiffly, "Gretchen, my great great great granddaughter will not be raised in a creche. Damn it, daughter, I was raised in a creche; I won't let you do that to this child. If you won't marry us, you must at least let us adopt your baby."

"No!"

Hazel set her mouth. "Then I must discuss it with Ingrid."

"No! Ingrid is not my boss ... and neither are you. Grandma Hazel, when I left home I was a child and a virgin and timid and knew nothing of the world. But now I am no longer a child and I have not been virgin for years and I am a combat veteran who cannot be frightened by anything." She looked squarely into my eyes. "I will not use a baby to trap Richard into marriage."

"But, Gretchen, you are not trapping me; I like babies. I want to marry you."

"You do? Why?" She sounded sad.

Things were too solemn; we needed some skid. "Why do I want to marry you, dear? To paddle your bottom and watch it turn pink."

Gretchen's mouth dropped open, then she grinned and dimpled. "That's ridiculous!"

"It is, eh? Possibly having a baby doesn't call for marriage in these parts, but spanking is another matter. If I spank some other man's wife, he might get annoyed or she might or both. Chancy. Likely to get me talked about. Or worse. If I spank a single girl, she might use it to trap me when I don't love her and don't want to marry her but was simply spanking her pour Ie sport. Better to marry you; you're used to it, you like it. And you have a solid bottom that can take it. A good thing, too-because I spank hard. Brutal."

"Oh, pooh! Where did you get this silly notion that I like it?" (Why are your areolae so crinkled, dear?) "Hazel, does he really spank hard?"

"I don't know, dear. I would break his arm and he knows it."

"See what I'm up against, Gretchen? No innocent little pleasures; I'm underprivileged. Unless you marry me."

"But I-" Gretchen suddenly stood up, almost swamping the float table, turned away and swarmed out of the pool, started running south, out of the garden court.

I stood and watched her until I lost sight of her. I don't think I could have caught her even if I had not been breaking in a new foot; she ran like a frightened ghost.

I sat back down and sighed. "Well, Maw, I tried-they were too big for roe."

"Another time, dear. She wants to. She'll come around."

Xia said, "Richard, you left out just one word. Love."

"What is 'love.' Xia?"

"It's what a woman wants to hear about when she gets married."

"That still doesn't tell me what it is."

"Well, I do know a technical definition. Uh... Hazel, you know Jubal Harshaw. A member of the Senior's family."

"For years. Any way you mean the wold."

"He has a definition-"

"Yes, I know."

"A definition of love mat I think would let Richard use the word honestly in speaking to Gretchen. Dr. Harshaw says that 'the word "love" designates a subjective condition in which me welfare and happiness of another person are essential to one's own happiness.' Richard, it seems to me that you exhibited mat relationship toward Gretchen."

"Me? Woman, you're out of your mind. I just want to get her into a helpless situation so mat I can paddle her bottom whenever I like and make it turn pink. Hard.

Brutal." I threw out my chest, tried to look macho-not too convincingly; I was going to have to do something about mat paunch. Well, hell, I'd been sick.

"Yes, Richard. Hazel, I mink the tea party is over. Will you two come to my rooms? I haven't seen either of you for too long. And I'll call Choy-Mu; I don't mink he knows that Richard is now free of me Lethe field."

"Good deal," I agreed. "And is Father Schultz around? Would one of you ladies fetch my cane, please? I mink I could walk around there and get it... but I'm not sure I should risk it yet."

Hazel said firmly, "I'm sure mat you should not, and you've walked enough. Teena-"

"Where's the riot?"

"May I have a lazy seat? For Richard."

"Why not mice?"

"One is enough."

"Chop chop. Richard, stay with it; she's weakening. Our knocked-up warrior."

Hazel's chin dropped. "Oh. I forgot we weren't under privacy. Teena'"

"Don't fret about it; I'm your chum. You know that."

"Thanks, Teena."

We all stood up to leave the pool. Xia stopped me, put her arms around me, looked at me and said, quietly but loudly enough to include Hazel: "Richard, I've seen nobility before, but not often. I'm not pregnant; it's not necessary to marry me, I don't need or want a husband. But you're invited to honeymoon with me any time Hazel can spare you. Or, better yet, both of you. I think you're a shining knight. And Gretchen knows it." She kissed me emphatically.

When my mouth was free I answered, "It's not nobility, Xia; I just have an unusual method of seduction. See how easily you fell for it? Tell her. Hazel."

"He's noble."

"See?" Xia said triumphantly.

"And he's scared silly someone will find out."

"Oh, nonsense! Let me tell about my fourth-grade teacher."

"Later, Richard. After you've had time to polish it. Richard tells excellent bedtime stories."

"When I'm not paddling, that is. Xia, does your bottom turn pink?"

It appears that I had had breakfast at some hour past noon. That evening was most pleasant but my memory of it is spotty. I can't blame it on alcohol; I did not drink all that much. But I learned that the Lethe field has a mild side effect that alcohol can potentiate; Lethe may affect the memory erratically for a while after the patient is no longer under it. Ah, well-tan-staafl! A few gaps in memory are not the hazard that addiction to a hard drug is.

I do recall that we had a good time: Hazel, me, Choy-Mu, Xia, Ezra, Father Hendrik, and (after Teena found her for us and Hazel talked to her) Gretchen. All of us who had escaped from the Raffles-even the two pairs of redheads who rescued us were with us part of the evening, Cas and Pol, Laz and Lor. Nice kids. Older than I am, I learned later, but it doesn't show. On Tertius, age is a slippery concept.

Xia's quarters were too small for such a number but a crowded party is the best kind.

The redheads left us and I got tired and went in and lay down on Xia's bed. There was some murderous card game going on for forfeits in the other room; Hazel seemed to be the big winner. Xia went "broke" by whatever rules they were playing and joined me. Gretchen bet unwisely on the next pot and took the other side of the bed. She used my left shoulder as a pillow, Xia having already claimed the right one. From me other room I heard Hazel say, "See you and raise you one galaxy."

Father Hendrik chuckled. "Sucker! Big bang, my dear girl, far triple forfeits. Pay up." That is the last 1 remember.

Something was tickling my chin. Slowly I woke and slowly I managed to open my eyes, and found myself staring into the bluest eyes I have ever seen. They belonged to a kitten, bright orange in color but with perhaps some Siamese ancestry. He was standing on my chest just south of my Adam's apple. He buzzed pleasantly, said "Blert?" and resumed licking my chin; his scratchy little scrap of tongue accounted for the tickle that had wakened me.

I answered, "Blert," and attempted to lift a hand to pet him, found I could not because I still had a head on each shoulder, a warm body against each side of me.

I turned my head to the right to speak to Xia-I needed to get up and find her refresher-and teamed that it was not Xia but Minerva who was now using my starboard shoulder.

I made a hasty situation assessment and found that I lacked sufficient data. So, instead of using an honorific to Minerva that may or may not have been appropriate, I simply kissed her. Or let myself be kissed, after showing willingness. Being pinned down from both sides and with a small cat creature standing on my chest I was almost as helpless as Gulliver, hardly able to be active as initiator of a kiss.

However, Minerva does not need help. She can manage.

Talent.

After she turned me loose, kissed for keeps, I heard a voice from my left: "Don't I get a kiss, too?"

Gretchen is a soprano; this voice was tenor. I turned my head.

Galahad. I was in bed with my doctor. Well... with both my doctors.

When I was a lad in Iowa, I was taught that, if I ever found myself in this or an analogous situation, the proper gambit was to run screaming for the hills to save my "honor" or its hom-ologue for males. A girl could sacrifice her "honor" and most of them did. But, if she was reasonably discreet about it and eventually wound up married with nothing worse than a seven-months child, her "honor" soon grew back and she was officially credited with having been a virgin bride, entitled to look with scom on sinful women.

But a boy's "honor" was more delicate. If he lost it to another male (i.e., if they got caught at it), he might, if lucky, wind up in the State Department-or, if unlucky, he would move to California. But Iowa had no place for him.

This flashed through my mind in an instant-and was followed by a suppressed memory: a Boy Scout hike when I was a high school freshman, a pup tent shared with our assistant Scoutmaster. Just that once, in the dark of night and in silence broken only by a hoot owl- A few weeks later that Scout leader went away to Harvard... so of course it never happened.

0 tempora, o mores-that was long ago and far away. Three years later I enlisted and eventually bucked for officer and made it... and was always extremely circumspect, as an officer who can't resist playing with his privates cannot maintain discipline. Not until the Walker Evans affair did I ever have any reason to worry about blackmail.

I tightened my left arm a little. "Certainly. But be careful; I seem to be inhabited."

Galahad was careful; the kitten was not disturbed. It is possible that Galahad kisses as well as Minerva does. Not better. But just as well. Once I decided to enjoy the inevitable I did enjoy it. Tertius is not Iowa, Boondock is not Grinnell; there was no longer any reason to be manacled by the customs of a long-dead tribe.

"Thank you," I said, "and good morning. Can you de-cat me? If he stays where he is, I am likely to drown him."

Galahad surrounded the kitten with his left hand. "This is Pixel. Pixel, may I present Richard? Richard, we are honored to have been joined by Lord Pixel, cadet feline in residence."

"How do you do. Pixel?"

"Blert." "Thank you. And what's become of the refresher? I need it!"

Minerva helped me up from the bed and put my right arm around her shoulders, steadied me while Galahad fetched my cane, then both of them took me to the refresher. We were not in Xia's rooms; the refresher had moved to the other side of the bedroom and was larger, as was the bedroom.

And I learned something else about Tertius: The equipment of a refresher was of a complexity and variety that made the sort of plumbing I was used to, in Golden Rule and Luna City and so forth, look as primitive as the occasional back country backhouse one can still find in remote parts of Iowa.

Neither Minerva nor Galahad let me feel embarrassed over never having been checked out on Tertian plumbing. When I was about to pick the wrong fixture for my most pressing need, she simply said, "Galahad, you had better demonstrate for Richard; I'm not equipped to." So he did. Well, I'm forced to admit that I'm not equipped the way Galahad is, either. Visualize Michelangelo's David (Galahad is fully that pretty) but equip this image with coupling gear three times as large as Michelangelo gave David; that describes Galahad.

I have never understood why Michelangelo-in view of his known bias-invariably shortchanged his male creations.

When we three had completed after-sleep refreshment, we came out into the bedroom together and I was again surprised- without yet having worked up my nerve to inquire where we were, how we got there, and what had become of others- especially my necessary one... who, when last heard, was tossing around galaxies in reckless gambling. Or gamboling.

Or both.

One wall had vanished from that bedroom, the bed had become a couch, the missing wall framed a gorgeous garden- and, seated on the couch, playing with the kitten, was a man I had met briefly in Iowa two thousand years ago. Or so everyone said; I still was unsure about that two-thousand-year figure; I was having trouble enough with Gretchen's having aged five years. Or six. Or something.

I stared. "Dr. Hubert." "Howdy." Dr. Hubert put the kitten aside. "Over here. Show me that foot."

"Um-" Damn his arrogance. "You must speak to my doctor first."

He looked at me abruptly. "Goodness. Aren't we regulation? Very well."

From behind me Galahad said quietly, "Please let him examine your transplant, Richard. If you will."

"If you say so." I lifted my new foot and shoved it right into Hubert's face, missing his big nose by a centimeter.

He failed to flinch, so my gesture was wasted. Unhurriedly he leaned his head a little to the left. "Rest it on my knee, if you will. That will be more convenient for both of us."

"Right. Go ahead." Braced with my cane, I was steady enough.

Galahad and Minerva kept quiet and out of the way while Dr. Hubert looked over that foot, by sight and touch, but doing nothing that struck me as really professional-I mean, he had no instruments; he used bare eyes and bare lingers, pinching the skin, rubbing it, looking closely at the healed scar, and at last scratching the sole of that foot hard and suddenly with a thumbnail. What is that reflex? Are your toes supposed to curl or the reverse? I have always suspected that doctors do that one out of spite.

Dr. Hubert lifted my foot, indicated that I could put it back on the floor, which I did. "Good job," he said to Galahad.

"Thank you. Doctor."

"Siddown, Colonel. Have you folks had breakfast? I did but I'm ready for some more. Minerva, would you shout for us; that's a good girl. Colonel, I want to get you signed up at once. What rank do you expect? Let me point out that it doesn't matter as the pay is the same and, no matter what rank you select, Hazel is going to be one rank higher; I want her in charge, not the other way around."

"Hold it. Sign me up for what? And what makes you think I want to sign up for anything?"

"The Time Corps, of course. Just as your wife is. For the purpose of rescuing the computer person known as 'Adam Selene,' also of course. Look, Colonel, don't be so dumed obtuse;

I know Hazel has discussed it with you; I know that you are committed to helping her." He pointed at my foot. "Why do you think that transplant was done? Now that you have both feet you need some other things. Refresher training. Orientation with weapons you haven't used. Rejuvenation. And all of these things cost money and the simple way to pay for them is to sign you up in the Corps. That foot alone would be too expensive for a stranger from a primitive era... but not for a member of the Corps. You can see that. How long do you need to think over anything so obvious? Ten minutes? Fifteen?" (This fast-talker ought to sell used campaign promises.)

"Not that long. I've thought it over."

He grinned. "Good. Put up your right hand. Repeat after me-"

"No."

"'No' what?"

"Just 'No.' I didn't order this foot." "So? Your wife did. Don't you think you ought to pay for it?"

"And since I did not order it and do not choose to be pushed around by you-" I again shoved that foot in his face, just barely missing that ugly nose. "Cut it off."

"Huh?" "You heard me. Cut it off; put it back in stock. Teena. Are you there?"

"Sure thing, Richard." "Where is Hazel? How can I find her? Or will you tell her where I am?"

"I've told her. She says to wait."

"Thank you, Teena." Hubert and I sat, saying nothing, ignoring each other. Minerva had disappeared; Galahad was pretending to be alone. But in scant seconds my darting came bursting in-luckily that wall was open.

"Lazarus! God damn your lousy soul to hell! What do you mean by interfering?"

XXIV

'The optimist proclaims that we live in the best of all possible worlds, and the pessimist fears that this is true."

JAMES BRANCH CABELL 1879-1958

"Now, Hazel-"

"'Now, Hazel' my tired arse! Answer me! What are you doing, messing around in my bailiwick? I told you to lay off, I warned you. I said that it was a delicate negotiation. But the first minute I turn my back-leaving him safe in the arms of Minerva with Galahad to back her up-I leave to run an errand ... and what do I find? You! Butting in, thumb-fingered and ham-handed as usual, destroying my careful groundwork."

"Now, Sadie-"

"Bloody! Lazarus, what is this compulsion that makes you lie and cheat? Why can't you be honest most of the time? And where do you get this nasty itch to interfere? Not from Maureen;

that's certain. Answer me. God damn it!- before I tear off your head and stuff it down your throat!"

"Gwen, I was simply trying to clear the-"

My darling interrupted with such a blast of colorful and imaginative profanity that I hesitate to try to record it because I can't do it justice; my memory is not perfect. It was somewhat like "Change the Sacred Name of Arkansas" but more lyrical. She did this in a high chant that minded me of some pagan priestess praying at sacrifice-human sacrifice with Dr. Hubert the victim.

While Hazel was sounding off, three women came in through that open wall. (More than that number of men looked in but backed away hastily; I suspect that they did not want to be present while Dr. Hubert was being scalped.) The three women were all beauties but not at all alike.

One was a blonde as tall as I am or taller, a Norse goddess so perfect as to be utterly unlikely. She listened, shook her head sorrowfully, then faded back into the garden and was gone. The next was another redhead whom I mistook at first for either Laz or Lor-then I saw that she was... not older, exactly, but more mature. She was unsmiling.

I looked at her again and felt that I had it figured out: She had to be the older sister of Laz and Lor-and Dr. Hubert was father (brother?) of all of them... which

explained how Dr. Hubert was this "Lazarus" that I had heard of again and again but had not seen-except that I had, once, in Iowa.

The third was a little china doll-porcelain china, not Xia-type China-not much over a hundred and fifty centimeters of her and perhaps forty kilos, with the ageless beauty of Queen Nefertiti. My darling paused for breath and this little elf whistled loudly and clapped. "Great going. Hazel! I'm in your corner."

Hubert-Lazarus said, "Hilda, don't encourage her."

"And why not? You've been caught with your hand in the cookie jar, or Hazel would not be so boiling; that's certain. I know her, I know you-want to bet?"

"I did nothing. I simply tried to implement a previously settled policy that Hazel needed help on."

The tiny woman covered her eyes and said, "Dear Lord, forgive him; he's at it again." The redhead said gently, "Wood-row, just what did you do?"

"I didn't do anything."

"Wcodrow." "I tell you, I did nothing to justify her diatribe. I was having a civilized discussion with Colonel Campbell when-" He broke off.

"Well, Woodrow?"

"We disagreed."

The computer spoke up. "Maureen, do you want to know why they disagreed? Shall I play back this soi-disant 'civilized discussion'?"

Lazarus said, "Athene, you are not to play back. That was a private discussion."

I said quickly, "I don't agree. She can certainly play back what I said."

"No. Athene, that's an order."

The computer answered, "Rule One: I work for Ira, not for you. You yourself settled that when I was first activated. Do I ask Ira to adjudicate this? Or do I play back that half of the discussion that belongs to my bridegroom?"

Lazarus-Hubert looked astounded. "Your what?"

"My fiance, if you want to split rabbits. But in the near tomorrow when I put on my ravishingly beautiful body. Colonel Campbell will stand up in front of you and exchange vows with me for our family. So you see, Lazarus, you were trying to bully my betrothed as well as Hazel's benedict. We can't have that. No indeedy. You had better back down and apologize ... instead of trying to bluster your way out of it. You can't, you know; you've been caught cold. Not only did I hear what you said, but Hazel also heard every word."

Lazarus looked still more annoyed. "Athene, you relayed a private conversation?"

"You did not place it under privacy. Contrariwise, Hazel did place a monitor request on Richard. All kosher, so don't try to pull any after-the-fact rule on me. Lazarus, take the advice of the only friend you have whom you can't cheat and who loves you in spite of your evil ways, namely me: Cut your losses, pal, and sweet-talk your way out. Make the last hundred meters on your belly and maybe Richard will let you start over. He's not hard to get along with. Pet him, and he purrs, just like that kitten." (I had Pixel in my lap, petting him, he having climbed my old leg, driving pitons as he went-I lost some blood but not enough to require transfusion.) "Ask Minerva. Ask Galahad. Ask Gretchen or Xia. Ask Laz or Lor. Ask anybody."

(I decided to ask Teena-privately-to fill me in on gaps in my memory. Or would that be wise?) Lazarus said, "I never intended to offend you. Colonel. If I spoke too bluntly, I'm sorry."

"Forget it."

"Shake on it?" "All right." I put out my hand, he took it. He gave a good grip, with no attempt to set a bonecrusher. He looked me in the eye and I felt his warmth. The bastich is hard to dislike- when he tries.

My darling said, "Hang on to your wallet, dear; I'm still going to drag this out onto the floor."

"Really, is it necessary?" "It is. You're new here, darling. Lazarus can steal the socks off your feet without taking off your shoes, sell them back to you, make you think you got a bargain-then steal your shoes when you sit down to put your socks on, and you'll end up thanking him."

Lazarus said, "Now, Hazel-"

"Shut up. Friends and family, Lazarus tried to coerce Richard into signing up blind for Operation Galactic Overlord by trying to make him feel guilty over that replacement foot. Lazarus implied that Richard was a deadbeat who was trying to run out on his debts."

"I didn't mean that." "I told you to shut up. You did mean that. Friends and family, my new husband comes from a culture in which debts are sacred. Their national motto is "There Ain't No Such Thing As A Free Lunch.' TANSTAAFL is embroidered on their flag. In Luna-the Luna of Richard's time line; not this one-a man might cut your throat but he would die before he would welch on a debt to you. Lazarus knew this, so he went straight for that most sensitive spot and jabbed it. Lazarus pitted his more than two thousand years of experience, his widest knowledge of cultures and human behavior, against a man of much less than a century of experience and that little only in his own solar system and time line. It was not a fair fight and Lazarus knew it. Grossly unfair. Like pitting that kitten against an old wildcat."

1 was sitting near Lazarus, having remained seated after that silly foot examination. I had my head down, ostensibly to play with the kitten, but in fact to avoid looking at Lazarus-or at anyone-as I was finding Hazel's insistence on airing everything quite disturbing. Embarrassing.

In consequence I was looking down at my own feet and at his. Did I mention that Lazarus was barefooted? I had paid it no mind because one thing one becomes used to at once on Terdus is the absence of compelling dress customs. I don't mean absence of dress (Boondock sells more clothes than any groundhog city of similar size-about a million people-in part because garments are usually worn once, then recycled).

I do mean that neither bare feet nor bare bodies are startling for more than five minutes. Lazarus was wearing a wrap-around, a lava-lava or it may have been a kilt; his feet I did not notice undl I stared at them.

Hazel went on, "Lazarus took such cruel advantage of Richard's weak point-his compulsive hatred of being in debt- that Richard demanded that his new foot be amputated. In desperate need to cleanse his honor he said to Lazarus, 'Cut it off; put it back in stock'!"

Lazarus said, "Oh, come now! He did not mean that seriously, and I did not take it seriously. A figure of speech. To show that he was annoyed with me. As well he might be. I made a mistake; I admit it."

"You did indeed make a mistake!" I interrupted. "A grave mistake. Your grave perhaps, or mine. For it was not a figure of speech. I want that foot amputated. I demand that you take back your foot. Your foot, sir! Look here, all of you, and then look there! At my right foot, then his right foot."

Anyone who bothered to look could not fail to see what I meant. Four masculine feet- Three were clearly from the same genes: Lazarus's two feet and my new foot. The fourth was the foot I was born with; it matched the other three only in size, not in skin color, texture, hairiness, or any detail.

When Lazarus had dunned me for the cost of that transplant, it had offended me. But this new discovery, that Lazarus himself was the anonymous donor, that I had been made the unwitting recipient of his charity for the foot itself, the very meat and bone of it, was intolerable.

I glared at Lazarus. "Doctor, behind my back and utterly without my consent you placed me under unbearable obligation. / will not tolerate it!" I was shaking with anger.

"Richard, Richard! Please!" Hazel seemed about to cry.

And I, too. That red-haired older lady hurried to me, bent over me and gathered my head to her motherly breasts, cuddled me and said, "No, Richard, no! You must not feel this way."

We left later that day. But we stayed for dinner; we did not run away angry.

Hazel and Maureen (the darling older lady who had comforted me) between them managed to convince me that hospital and surgery charges need not fret me because Hazel had plenty of the needful on deposit in a local bank-which Teena confirmed-and Hazel could and would cover my bills if it became appropriate to change the charge under which I was hospitalized. (I thought about asking my darling to reassign the charges right then, through Teena. But I decided not to crowd her about it. Damn it, "tanstaafl" is a basic truth, but "beggars can't be choosers" is true, too-and at that moment I was a beggar. Never a good bargaining position.)

As for the foot itself, by invariant local custom "spare parts" (hands and feet and hearts and kidneys, etc.) were not bought or sold; there was only a service and handling charge billed with the cost of surgery.

Galahad confirmed this. "We do it that way to avoid a black market. I could show you planets where there is indeed a black market, where a matching liver might mean a matching murder-but not here. Lazarus himself set up this rule, more than a century ago. We buy and sell everything else... but we don't traffic in human beings or pieces of human beings."

Galahad grinned at me. "But there is another reason why you should not fret. You had no say in the matter when a team of us hemstitched that foot to your stump; everybody knows that. But also everybody knows you can't get rid of it... unless you want to tackle it with your own jackknife. Because I won't cut it off. You won't find a surgeon anywhere on Tertius who will. Union rules, you know, and professional courtesy."

He added, "But if you do decide to hack it off yourself, do please invite me; I want to watch." He said that with a straight face and Maureen scolded him for it. I'm not certain that he

was joking.

Nevertheless detente involved a major change in Hazel's plans. Lazarus was correct in saying that all he had been trying to do was to implement a previously agreed-on plan. But it had been further agreed that Hazel (not Lazarus) was to implement the plan.

Hazel could have managed it, but Lazarus could not. Lazarus could never sell it to me because I thought the whole thing was ridiculous. On the other hand, if Hazel really wants something from me, I stand about as much chance of holding out as-well, as Jinx Henderson has of refusing a request from his daughter Gretchen.

But Lazarus couldn't see that.

I think Lazarus suffers from a compulsion to be the biggest frog in any pond. He expects to be the bride at every wedding, the corpse at every funeral... while pretending that he has no ambitions-just a barefoot country boy with straw in his hair and manure between his toes.

If you think that I am not overly fond of Lazarus Long, I won't argue.

That plan was pretty much as Lazarus had described it. Hazel had expected that I would join her in the Time Corps, and had planned for me to be rejuvenated-systemic rejuvenation to biological age eighteen; cosmetic rejuvenation, my choice. While this was going on I was to be taught Galacta, study multiverse history at least for several time lines, and, after rejuvenation, again take military training of several sorts until I became a walking angel of death, armed or unarmed.

When she judged that I was ready, she planned for us to carry out Task Adam Selene of Operation Galactic Overlord.

If we lived through it, we could retire from the Time Corps, live out our days on an ample pension on the planet of our choice-fat and happy.

Or we could stay in the Corps together just by my reenlisting for a hitch of fifty years-then rejuvenations each hitch and a chance for us eventually to become Time bosses ourselves. That was supposed to be the grand prize-more fun than baby kittens, more exciting than roller coasters, more satisfying than being seventeen and in love.

Live or die, we would do it together-until at last one of us waited for the other at the end of that tunnel.

But this program aborted because Lazarus butted in and tried to twist my arm (my foot?) to accept it.

My darling had planned a pianissimo approach: Live for a time on Tertius (a heavenly place), get me hooked on multiverse history and time travel theory, et cetera. Not crowd me about signing up, but depend on the fact that she and Gretchen and Ezra and others (Uncle Jock, e.g.) were in the Corps... until

I asked to be allowed to be swom in.

The cost of my new foot would not have bothered me: a) if Hazel had had time to convince me that the cost would be charged off to my increased efficiency in helping her with "Adam Selene" and the foot would thereby pay for itself (the simple truth!-and Lazarus knew it); b) if Lazarus had not dunned me about it, used it to pressure me; c) if Lazarus had stayed away from me (as he was supposed to) and thereby had never offered me any chance of spotting that he was my anonymous donor-bare feet or no bare feet.

I suppose you could say that none of it would have happened if Hazel had not tried to manipulate me (and had, and did, and would) ... but a wife's unique right, fixed by

tradition, to manipulate her own husband runs unbroken and invariant at least back to Eve and the Apple. I will not criticize a sacred tradition.

Hazel did not give up her intention; she just changed her tactics. She decided to take me to Time Headquarters and let the high brass and the technical experts there answer my questions. "Darling man," she said to me, "you know that I want to rescue Adam Selene, and so does Mannie, my papa. But his reasons and mine are sentimental, not good enough to ask you to risk your life."

"Oh, say not so, mistress mine! For you I'll swim the Hellespont. On a calm day, that is, with an escort boat at my heels. And a three-dee contract. Commercial rights. Residuals."

"Be serious, dear. I had not planned to try to persuade you through explaining the greater purpose, the effect on the multiverse ... as I don't fully understand it myself. I don't have the math and I am not a Companion of the Circle-the Circle of Ouroboros that rules on all cosmic changes.

"But Lazarus bungled things by trying to hustle you. So I feel that you are entitled to know exactly why this rescue is necessary and why you are being asked to take part in it. We'll go to Headquarters and let them try to convince you; I wash my hands of that part of the job. It is up to the Companions, the high brass of time manipulation. I told Lazarus so-be is a Companion of the Circle."

"Sweetheart, I am much more likely to listen to you. Lazarus would have trouble selling me ten-crown notes for two crowns."

"His problem. But he has only one vote in the Circle, even though he is senior. Of course he is always senior, anywhere."

That caught my ear. "This notion that Lazarus is two thousand years old-"

"More than that. Over twenty-four hundred."

"Either way. Who says that he is more than two millennia old? He looks younger than I do."

"He's been rejuvenated several times."

"But who claims that he is that old? Forgive me, my love, but you can't testify to it. Even if we credit you with every fortnight you claim, he would still be more than ten times your age. If he is. Again, who says?"

"Uh... not me, that's true. But I have never had any reason to doubt it. I think you should talk to Justin Foote." Hazel looked around. We were in that lovely garden court outside the room in which I woke up. (Her room, I learned later-or hers when she wanted it; such things were fluid. Other times use other customs.) We were in that garden with other members of the Long family and guests and friends and relations, eating tasty tidbits and getting quietly slopped. Hazel picked out a mousy little man, the sort who is always elected treasurer of any organization he belongs to. "Justin! Over here, dear. Spare me a moment."

He worked his way toward us, stepping over children and dogs, and on arrival bussed my bride in the all-out fashion she always received. He said to her, "Fluttermouse, you've been away too long."

"Business, dear. Justin, this is my beloved husband Richard."

"Our house is yours." He kissed me. Well, I was braced for it; it had happened so often. These people kissed as often as early Christians. However, this was an aunt's peck, all protocol and bone dry.

"Thank you, sir."

"Please be assured that it is not our custom to put pressure on guests. Lazarus is a law unto himself but he does not act for the rest of us." Justin Foote smiled at me, then turned his attention to my bride. "Hazel, will you permit me to obtain from Athene a copy, for the Archives, of your remarks to Lazarus?"

"Whatever for? I chewed him out; it's done with." "It is of historical interest. No one else, not even Ishtar, has ever spanked the Senior as thoroughly as you did. There is scant disapproval of him on record, of any degree. Most people find it hard to disagree with him openly even when they disagree most. So it is not only an interesting item for future scholars, but it could also be of service to Lazarus himself if he ever scanned it. He is so used to getting his own way that it is good for him to be reminded now and then that he is not God." Justin smiled. "And it's a breath of fresh air for the rest of us. In addition. Hazel love, its literary quality is great and unique. I do want it for the Archives."

"Uh... poppycock, dear. See Lazarus. Nihil obstat but it requires his permission."

"Consider it done; I know how to use his stubborn pride. The piglet principle. All I have to do is to offer to censor it, keep it out of the Archives. With a hint that I wish to spare his feelings. He will then scowl and insist that it be placed in the Archives... unedited, unbowdlerized."

"Well- Okay if he says yes."

"May I ask, dear, where you picked up some of the more scabrous of those expressions?"

"You may not. Justin, Richard asked me a question I can't answer. How do we know that the Senior is more than two thousand years old? To me, it's like asking, 'How do I know that the Sun will rise tomorrow?' I just know it."

"No, it's like asking, 'How do you know that the Sun rose long before you were bom?' The answer is that you don't know. Hmm- Interesting."

He blinked at me. "Part of the problem, I am sure, lies in the fact that you come from a universe in which the Howard Families phenomenon never took place."

"I don't think I've ever heard of it. What is it?" "It is a code name for people with exceptionally long lives.

But I must first lay a foundation. The Companions of the Circle of Ouroboros designate universes by serial numbers... but a more meaningful way, for terrestrials, is to ask who first set foot on Luna. Who in your world?"

"Eh? Chap named Neil Armstrong. With Colonel Buzz Ald-rin."

"Exactly. An enterprise of NASA, a government bureau, if I recall correctly. But in this universe, my world and that of Lazarus Long, the first trip to the Moon was financed, not by a government, but by private enterprise, headed by a financier, one D. D. Harriman, and the first man to set foot on Luna was Leslie LeCroix, an employee of Harriman. In still another universe it was a military project and the first flight to Luna was in the USAFS Kilroy Was Here. Another- Never mind; in every universe the birth of space travel is a cusp event, affecting everything that follows. Now about the Senior- In my universe he was one of the earliest space pilots. I was for many years archivist of the Howard Families... and from those archives I can show that Lazarus Long has been a practicing space pilot for more than twenty-four centuries. Would you find that convincing?"

"No."

Justin Foote nodded. "Reasonable. When a rational man hears something asserted that conflicts with all common sense he will not-and should not-believe it without compelling evidence. You have not been offered compelling evidence. Just hearsay. Respectable hearsay, and in fact true, but nevertheless hearsay. Odd. For me, I have grown up with it; I am the forty-fifth member of the Howard Families to bear the name 'Justin Foote,' the first of my name being a trustee of the Families in the early twentieth century Gregorian when Lazarus Long was a baby and Maureen was a young woman-"

At this point the conversation fell to pieces. The notion that the darling lady who had comforted me had a son twenty-four centuries old... but was herself a mere child of a century and a half- Hell, some days it doesn't pay to get out of bed, a truism in Iowa when I was young and still true in Tertius over two thousand years later. (If it was!) I had been perfectly happy with Minerva on one shoulder and Galahad on the other and Pixel on my chest. Aside from bladder pressure.

Maureen reminded me of another discrepancy. "Justin, something else frets me. You say that this planet is a long, long way in space and time from my home-over two thousand years in time and over seven thousand light-years in distance."

"No, I do not say it because I am not an astrophysicist. But that accords with what I have been taught, yes."

"Yet right here today I hear idiomatic English spoken in the dialect of my time and place. More than that, it is in the tall-corn accent of the North American middle west, harsh as a rusty saw. Ugly and unmistakable. Riddle me that?"

"Oh. Strange but no mystery. English is being spoken as a courtesy to you."

"Me?"

"Yes. Athene could supply you with instantaneous translation, both ways, and the party could be in Galacta. But fortunately through a decision by Ishtar many years back, English was made the working language of the clinic and the hospital. That this could be done derives from circumstances around the Senior's last rejuvenation. But the accent and the idiom- The accent comes from the Senior himself, reinforced by his mother's speech, and nailed down by the fact that Athene speaks that accent and idiom and won't speak English any other way. The same applies to Minerva, since she learned it when she was still a computer. But not all of us speak English with equal ease. You know Tamara?"

"Not as well as I would like to."

"She is probably the most loving and most lovable person on the planet. But she is no linguist. She learned English when she was past two hundred; I think she will always speak broken English... even though she speaks it every day. Does that explain the odd fact that a dead language is being spoken at a family dinner party on a planet around a star far distant from Old Home Terra?"

"Well- It explains it. It does not satisfy me. Uh, Justin, I have a feeling that any objection I can raise will be answered ... but I won't be convinced."

"That's reasonable. Why not wait awhile? Presently, without pushing it, the facts that you find hard to accept will fall into place."

So we changed the subject. Hazel said, "Dear one, I didn't tell you why I had to run an errand... or why I was late. Justin, have you ever been held up at the downstream teleport?"

'Too often. I hope someone builds a competing service soon. I would raise the capital and mount it myself, if I weren't so comfortably lazy."

"Earlier today I went shopping for Richard-shoes, dear, but don't wear them until Galahad okays it-and replacements for your suits I lost in the fracas at the Raffles. Couldn't match the colors, so I settled for cerise and jade green."

"Good choices."

"Yes, they will suit you, I think. I had finished shopping and would have been back here before you woke but- Justin, they were queued up at the teleport, so I sighed and waited my turn... and a line jumper, a rancid tourist from Secundus, sneaked in six places ahead of me."

"Why. the scoundrel!"

"Didn't do him a speck of good. The bounder was shot dead."

I looked at her. "Hazel?"

"Me? No, no, darling! I admit that I was tempted. But in my opinion crowding into a queue out of turn doesn't rate anything heavier than a broken arm. No, that was not what held me up. A bystanders' court was convened at once, and I dum near got co-opted as a juror. Only way I could get out of it was to admit that I was a witness-thought it would save me time. No such luck, and the trial took almost half an hour."

"They hanged him?" asked Justin.

"No. The verdict was 'homicide in the public interest' and they turned her loose and I came on home. Not quite soon enough. Lazarus, damn him, had got at Richard, and made him unhappy and ruined my plans, so I made Lazarus unhappy. As you know."

"As we all know. Did the deceased tourist have anyone with him?"

"I don't know. I don't care. I do think killing him was too drastic. But I'm a panty waist and always have been. In the past, when someone shoved ahead of me in a queue, I've always let it go with minor mayhem. But queue cheating should never be ignored; that just encourages the louts. Richard, I bought shoes for you because I knew that your new foot could not use the right shoe you were wearing when we arrived here."

"That's true." (My right shoe has always-since amputation-had to be a custom job for the prosthesis. A living foot could not fit it.)

"I didn't go to a shoe shop; I went to a fabricatory having a general pantograph and had them use your left shoe to synthesize a matching right shoe through a mirror-image space warp. It should be identical with your left shoe, but right-handed. Right-footed? Dexter."

"Thank you!" "I hope it fits. If that darned line jumper hadn't got himself killed practically in my lap, I would have been home on time." I blinked at her. "Uh, I find I'm astonished again. How is this place run? Is it an anarchy?"

Hazel shrugged. Justin Foote looked thoughtful. "No, I wouldn't say so. It is not that well organized."

We left right after dinner in that four-place spaceplane- Hazel and I, a small giant named Zeb, Hilda the tiny beauty, Lazarus, Dr. Jacob Burroughs, Dr. Jubal Harshaw, still another redhead-well, strawberry blonde-named Deety, and still another one who was not her twin but should have been, a sweet girl named Elizabeth and called Libby. I looked at these last two and whispered to Hazel, "More of Lazarus's descendants? Or more of yours?"

"No. I don't think so. About Lazarus, I mean. I know they aren't mine; I'm not quite that casual. One is from another universe and the other is more than a thousand

years older than I am. Blame it on Gilgamesh. Uh... at dinner did you notice a little girl, another carrot top, paddling in the fountain?" '

"Yes. A cutie pie."

"She-" We started to load, all nine of us, into that four-place spaceplane. Hazel said, "Ask me later," and climbed in. I started to follow. That small giant took my arm firmly, which stopped me, as he outmassed me by about forty kilos. "We haven't met. I'm Zeb Carter."

"I'm Richard Ames Campbell, Zeb. Happy to meet you." "And this is my mom, Hilda Mae." He indicated the china doll.

I did not have time to consider the improbability of his assertion. Hilda answered, "I'm his stepmother-in-law, part-time wife, and sometime mistress, Richard; Zebbie is always not quite in focus. But he's sweet. And you belong to Hazel, so that gives you the keys to the city." She reached up, put her hands on my shoulders, stood on tiptoes, and kissed me. Her kiss was quick but warm and not quite dry; it left me most thoughtful. "If you want anything, just ask for it. Zebbie will fetch it."

It seemed that there were five in that family (or sub-family; they were all part of the Long household or family, but I did not have it figured out): Zeb and his wife Deety, she being that first strawberry blonde whom I had met briefly, and her father, Jake Burroughs, whose wife was Hilda, but who was not mother of Deety-and the fifth was Gay. Zeb had said, "And Gay, of course. You know who I mean."

I asked Zeb, "Who is Gay?"

"Not me. Or just as a hobby. Our car is Gay."

A sultry contralto said, "I'm Gay. Hi, Richard, you were in me once but I don't think you remember it."

I decided that the Lethe field had some really bad side effects. If I had at some time been in a woman (she expressed it that way, not I) with a voice of that utterly seductive quality but I could not remember it... well, it was time to throw myself on the mercy of the court; I was obsolete.

"Excuse me. I don't see her. The lady named Gay."

"She's no lady, she's a trollop."

"Zebbie, you'll regret that. He means I am not a woman, Richard; I'm this car you are about to climb into-and have been in before, but you were wounded and sick so I'm not hurt that you don't remember me-"

"Oh, but I do!"

"You do? That's nice. Anyhow I'm Gay Deceiver, and welcome aboard."

I climbed in and started to crawl through the cargo door back of the seats. Hilda snagged me. "Don't go back there. Your wife is back there with two men. Give the girl a chance."

"And with Lib," Deety added. "Don't tease him. Aunt Shar-pie. Sit down, Richard." I sat down between them-a privilege, except that I wanted to see that space-warped bathroom. If there was one. If it was not a Lethe dream.

Hilda settled against me like a cat and said, "You have received a bad first impression of Lazarus, Richard; I don't want it to stay that way."

1 admitted that on a scale of ten he scored a minus three with me. -

"I hope it doesn't stay that way. Deety?" "Day in and day out Lazarus averages closer to a nine, Richard. You'll see."

"Richard," Hilda went on, "despite what you heard me say,

I don't think badly of Lazarus. I have borne one child by him ... and I go that far only with men I respect. But Lazarus does have his little ways; it is necessary to spank him from time to time. Nevertheless I love him."

"Me, too," agreed Deety. "I have a little girl by Lazarus and that means I love and respect him or it would not have happened. Correct, Zebadiah?"

"How would I know? 'Love, oh careless love!' Boss Lady, are we going somewhere? Gay wants to know."

"Report readiness."

"Starboard door sealed, irrelevant gear ready." "Portside door sealed, seat belts fastened, all systems normal."

"Time Corps Headquarters via Alpha and Beta. At will, Chief Pilot."

"Aye aye. Captain. Gay Deceiver, Checkpoint Alpha. Execute."

"Yassuh, Massuh." The bright sunlight and green lawn beside the Long House bunked away to blackness and stars. We

were weightless.

"Checkpoint Alpha, probably," Zeb said. "Gay, do you see THQ?"

"Checkpoint Alpha on the nose," the car answered. 'Time Corps HQ dead ahead. Zeb, you need glasses."

"Checkpoint Beta, execute." The sky blinked again. This time I could spot it. Not a planet but a habitat, perhaps ten klicks away, perhaps a thousand-in space, with a strange object, I had no way to guess.

Zeb said, 'Time Corps Headquarters, ex- Gay Scram!"

A nova bomb burst in front of us.

XXV
Schrodinger's Cat

"God's bones!" the car moaned. "That one burned my tail feathers! Hilda, let's go home. Please!" The nova bomb was now a long way off but it still burned with intense white light, looking like Sol from out around Pluto.

"Captain?" Zeb inquired.

"Affirmative," Hilda answered calmly. But she was clinging to me and trembling.

"GayMaureenExecute!" We were back on the grounds of the Romanesque mansion of Lazarus Long and his tribe.

"Chief Pilot, please beep Oz annex and tell them to disembark; we won't be going anywhere soon. Richard, if you will slide out to the right as soon as Jake is out of your way, that will let our passengers climb out."

I did so as quickly as Dr. Burroughs cleared the way. I heard Lazarus Long's voice rumbling behind me. "Hilda! Why have you ordered us out of the car? Why aren't we at Headquarters?"

His tone reminded me of a drill sergeant I had had as a boot, ten thousand years ago.

"Forgot my knitting, Woodie, had to go back for it."

"Knock it off. Why haven't we started? Why are we disembarking?"

"Watch your blood pressure, Lazarus. Gay just proved that she was not being a Nervous Nellie when she asked me to break our usual trip to THQ into three jumps. Had I used our old routine, we would all glow in the dark."

"My skin itches," Gay said fretfully. "I'll bet I would make a Geiger stick rattle like hail on a tin roof."

"Zebbie will check you later, dear," Hilda said soothingly, then went on to Lazarus: "I don't think Gay was hurt; I think none of us was. Because Zeb had one of his bad-news flashes and bounced us out of there almost ahead of the photons. But I am sorry to report, sir, that Headquarters isn't there anymore. May it rest in peace."

Lazarus persisted, "Hilda, is this one of your jokes?"

"Captain Long, when you talk that way, I expect you to address me as 'Commodore.'"

"Sorry. What happened?"

Zeb said, "Lazarus, let them finish unloading and I'll take you back and show you. Just you and me."

"Yes indeed, just you two," the car put in. "But not me! I won't go! I didn't sign up for combat duty. I won't let you close my doors; that means you can't seal up, and then you can't move me. I'm on strike."

"Mutiny," said Lazarus. "Melt her down for scrap."

The car screamed, then it said excitedly, "Zeb, did you hear that? Did you hear what he said? Hilda, did you hear him? Lazarus, I don't belong to you and never did! Tell him, Hilda! You lay one finger on me and I'll go critical and blow your hand off. And take all of Boondock County with me."

"Mathematically impossible," Long remarked.

"Lazarus," said Hilda, "you shouldn't be so quick to say 'impossible' when speaking of Gay. In any case, don't you mink you've been in the doghouse enough for one day? You get Gay sore at you and she'll tell Dora, who'll tell Teena, who'll tell Minerva, who will tell Ishtar and Maureen and Tamara, and then you'll be lucky to get anything to eat and you won't be allowed to sleep or go anywhere."

"I'm henpecked. Gay, I apologize. If I read you two chapters from Tik-Tok tonight, will you forgive me?"

"Three."

"It's a deal. Please tell Teena to ask mathematicians working on Operation Galactic Overlord to meet me asap in my quarters in Dora. Please tell all others involved with Overlord that they are advised to come to Dora, eat and sleep aboard. I don't know when we will leave. It could be a week but it could be anytime and there might not be even ten minutes warning. War conditions. Red alert."

"Dora has it; she's relaying. What about Boondock?"

"What do you mean 'What about Boondock?'"

"Do you want the city evacuated?"

"Gay, I didn't know you cared." Lazarus sounded surprised.

"Me? Care what happens to groundcrawlers?" the car snorted. "I'm simply relaying for Ira."

"Oh. For a moment there I thought you were developing human sympathies."

"God forbid!"

"I'm relieved. Your simple self-centered selfishness has been a haven of stability in an ever-shifting world."

"Never mind the compliments; you still owe me three chapters."

"Certainly, Gay; I promised. Please tell Ira that, so far as I know, Boondock is as safe as anywhere in this world... which ain't saying much... whereas, in my opinion, any attempt to evacuate this ant hill would result in great loss of life, still greater loss of property. But it might be worthwhile to risk it just to crank up their lazy metabolisms- Boondock today strikes me as fat, dumb, and careless. Ask him to acknowledge."

"Ira says, 'Up yours.'"

"Roger, and the same to you; wilco, they make a damn fine stew. Colonel Campbell, I'm sorry about this. Would you care to come with me? It might interest you to see how we mount an emergency time manipulation. Hazel, is that okay? Or am I crowding in on your pidgin again?"

"It's all right, Lazarus, as it is no longer my pidgin. It's yours and that of the other Companions."

"You're a hard woman, Sadie."

"What can you expect, Lazarus? Luna is a harsh teacher. I learned my lessons at her knee. May I come along?"

"You're expected; you are still part of Overlord. Are you not?"

We walked about fifty meters across the lawn to where was parked the biggest, fanciest flying saucer any UFO cultist ever claimed to have seen. I learned that this was "Dora," meaning both the ship and the computer that ran the ship. I learned too that the Dora was the Senior's private yacht, that it was Hilda's flagship, and that it was a pirate ship commanded by Lorelei Lee and/or Lapis Lazuli and crewed by Castor and Pollux, who were either their husbands or their slaves or both.

"They're both," Hazel told me later. "And Dora is all three. Laz and Lor won sixty-year indentures from Cas and Pol in a game of red dog shortly after they married them. Laz and Lor are telepathic with each other, and they cheat. My grandsons are smart as whips and as conceited as Harvard grads, and they always try to cheat. I tried to break them of this nasty habit when they were still too young to chase girls, by using a marked deck. Didn't work; they spotted my readers. But their downfall arose from the fact that Laz and Lor are smarter than they are and even more deceitful."

Hazel shook her head ruefully. "It's a wicked world. You would think that a youngster I had trained would be instantly suspicious when dealt three aces and the odd king in a hand of red dog... but Cas was greedy. He not only tapped the pot when he could not cover it, he pledged his indentures to fill the gap.

"Then, not a day later, Pol fell for an even more transparent piece of larceny; he was sure he knew what card was next to be dealt because he recognized a small coffee stain. Turned out that the ten as well as the eight had that same small stain. Pol held the nine but he was not in a strong moral position. Ah, well, it is probably better for the lads to have to do all the scut work in the ship plus shampoos and pedicures for their wives than it would be for the boys to sell Laz and Lor in the slave marts of Iskander, as I misdoubt they would have done had their own thieving efforts succeeded."

The Dora is even bigger inside than out; she has as many staterooms as may be needed. It was once a luxurious but fairly conventional hyperphotonic spaceship. But it (the ship, not Dora the computer) was refitted with a Burroughs irrelevant drive (the

magic means by which Gay Deceiver flits around the stars in nothing flat). A corollary of the Burroughs equations that teleport Gay can be applied to shape space warps. So Dora's passenger and cargo spaces were revamped; this lets Dora keep endless spare compartments collapsed in on themselves until she needs them.

(This is not the same deal under which Gay has tucked away in her portside skin two nineteenth-century bathrooms. Or is it? Well, I don't think it is. Must inquire. Or should I let sleeping logs butter their own bed? Better, maybe.)

A gang port relaxed in the side of the yacht; a ramp slid down, and I followed Lazarus up to the ship with my darling on my arm. As he stepped over the side, music sounded: "It Ain't Necessarily So" from George Gershwin's immortal Porgy and Bess. A long-dead "Sportin' Life" sang about the impossibility of a man as old as Methuselah ever persuading a woman to bed with him.

"Dora!"

A young girl's sweet voice answered, "I'm taking a bath. Call me later."

"Dora, shut off that silly song!"

"I must consult the captain of the day, sir."

"Consult and be damned! But stop that noise."

Another voice replaced the ship's voice: "Captain Lor speaking, Buddy Boy. Do you have a problem?"

"Yes. Shut off that noise!"

"Buddy, if you mean the classical music now playing as a salute to your arrival, I must say that your taste is as barbaric as ever. In any case I am constrained from switching it off because this new protocol was established by Commodore Hilda. I cannot change it without her permission."

"I'm henpecked." Lazarus fumed. "Can't enter my own ship without being insulted. I swear to Allah that, once I've cleaned up Overlord, I'm going to buy a Burroughs Bachelor Buggy, equip it with a Minsky Cerebrator, and go for a long vacation with no women aboard."

"Lazarus, why do you say such dreadful things?" The voice came from behind us; I had no trouble identifying it as Hilda's warm contralto.

Lazarus looked around. "Oh, there you are! Hilda, will you please put a stop to this dadblasted racket?" "Lazarus, you can do it yourself-" "I've tried. They delight in frustrating me. All three of them. You, too."

"-simply by walking three paces beyond the door. If there is another musical salute that you would prefer, please name it. Dora and I are trying to find just the right tune for each of our family, plus a song of welcome for any guest."

"Ridiculous." "Dora enjoys doing it. So do I. It's a gracious practice, like eating with forks rather than fingers."

"'Fingers were made before forks.'"

"And flatworms before humans. That does not make flat-worms better than people. Move along, Woodie, and give Gershwin a rest."

He grunted and did so; the Gershwin stopped. Hazel and I followed him-and again music sounded, a pipe-and-drum band blaring out a march I had not heard since that black day when I lost my foot... and my command... and my honor

"The Campbells Are Coming-"

It startled me almost out of my wits, and gave me the mighty shot of adrenaline that ancient boast before battle always does. I was so overcome that I had to force myself to keep my features straight, while praying that no one would speak to me until I had my voice back under control.

Hazel squeezed my arm but the darling kept quiet; I think she can read my emotions-she always knows my needs. I stomped straight ahead, spine straight, barely steadying myself with my cane, and not seeing the interior of the ship. Then the pipes shut down and I could breathe again.

Behind us was Hilda. I think she had hung back to keep the musical salutes separated. Hers was a light and airy tune 1 could not place; it seemed to be played on silver bells, or possibly a celesta. Hazel told me the name of it: "Jezebel"- but I could not place it.

Lazarus's quarters were so lavish that I wondered how fancy the flag cabin of "Commodore" Hilda might be. Hazel settled down in his lounge as if she belonged there. But I did not stay; a bulkhead blinked, and Lazarus ushered me on through. Beyond lay a boardroom suitable for a systemwide corporation:

a giant conference table, each place at it furnished with padded armchair, scratch pad, stylus, froster of water, terminal with printer, screen, keyboard, microphone, and hushfield-and I must add that I saw little of this bountiful junk in use; Dora made it unnecessary, being perfect secretary to all of us while also offering and serving refreshments.

(I could never get over the feeling that there was a live girl named Dora somewhere out of sight. But no mortal girl could have kept all the eggs in the air that Dora did.)

"Sit down anywhere," Lazarus said. "There is no rank here. And don't hesitate to ask questions and offer opinions. If you/ make a fool of yourself, no one will mind and you won't be the first to do so in this room. Have you met Lib?"

"Not formally." It was the other strawberry blonde, the not-Deety one.

"Then do. Dr. Elizabeth Andrew Jackson Libby Long... Colonel Richard Colin Ames Campbell."

"I am honored. Dr. Long."

She kissed me. I had anticipated that, having learned in less than two days here that the only way to avoid friendly kisses was by backing away... but that it was better to relax and enjoy it. And I did. Dr. Elizabeth Long is a pleasant sight and she was not wearing much and she smelled and tasted good ... and she stood close to me three seconds longer than necessary, patted my cheek, and said, "Hazel has good taste. I'm glad she brought you into the family."

I blushed like a yeoman. Everyone ignored it. I think. Lazarus went on, "Lib is my wife and also my partner starting back in the twenty-first century Gregorian. We've had some wild times together. She was a man back then and a retired commander, Terran Military Forces. But then and now, male or female, the greatest mathematician who ever lived."

Elizabeth turned and caressed his arm. "Nonsense, Lazarus. Jake is a greater mathematician than I and a more creative geometer than I could ever hope to be; he can visualize more dimensions and not get lost. I-"

Hilda's Jacob Burroughs had followed us in. "Nonsense, Lib. False modesty makes me sick."

"Then be sick, darling, but not on the rug. Jacob, neither your opinion, nor mine-nor that of Lazarus-is relevant; we arc what we are, each of us-and I understand there is work to be done. Lazarus, what happened?"

"Wait for Deety and the boys, so we don't have to discuss it twice. Where's Jane Libby?"

"Here, Uncle Woodie." Just entering was a naked girl who resembled- Look, I'm going to stop talking about family resemblances, hair red or otherwise, and the presence or absence of clothing. On Tertius, through climate and custom, clothing was optional, usually worn in public, sometimes worn at home. In the Lazarus Long household the males were more likely to wear something than the females but there was no rule that I could ever figure out.

Red hair was common in Tertius, still more common in the Long family-a "prize ram" effect (as stockmen say) from Lazarus... but not alone from Lazarus; there were two other sources in that family, unrelated to Lazarus and unrelated to each other: Elizabeth Andrew Jackson Libby Long and Dejah Thoris (Deety) Burroughs Carter Long-and still another source that I was not then aware of.

People who favor the Gilgamesh theory have noted how redheads tend to clump, e.g., Rome, Lebanon, south Ireland, Scotland... and, even more markedly, in history, from Jesus to Jefferson, from Barbarossa to Henry Eighth.

The sources of resemblances in the Long family were hard to sort out, other than with the help of Dr. Ishtar, the family geneticist-Ishtar herself looked not at all like her daughter Lapis Lazuli... not surprising once you learned that she was no genetic relation to her own daughter... whose genetic mother was Maureen.

Some of the above I learned later; all of it I mention now in order to dismiss it.

That panel of mathematicians consisted of Libby Long, Jake Burroughs, Jane Libby Burroughs Long, Deety Burroughs Carter Long, Minerva Long Weatheral Long, Pythagoras Libby Carter Long and Archimedes Carter Libby Long-Pete and Archie-one bome by Deety and the other birthed by Libby and these two women sole parents to both young men-Deety being the genetic mother of each and Elizabeth the genetic father... and I refuse to sort that one out at this point; let it be an exercise for the student. I would rather offer you one more; Maxwell Burroughs-Burroughs Long-then conclude by saying that all these weird combinations were supervised by the family geneticist for maximum reinforcement of mathematical genius and no reinforcement of harmful recessives.

Watching these geniuses at work had some of the soporific excitement of watching a chess match but not quite. Lazarus first had Gay Deceiver testify, bringing her voice through Dora's circuits. They listened to Gay, examined her projected tapes, light and sound, called in Zebadiah, took his testimony, called Hilda in, asked for her best estimate of Zebadiah's anticipation of the bomb.

Hilda said, "Somewhere between a shake and a blink. You all know I can't do better than that."

Dr. Jake declined to express an opinion. "I did not watch. As usual I was backing up the spoken orders by setting the vernier controls. The penultimate order, being a scram, aborted the run and then we went home. I did not set the verniers, so nothing more appears on my tapes. Sorry."

Deety's testimony was almost as skimpy. "The scram order preceded the explosion by an interval of the order of one millisecond." On being pressed she refused to say that it was "of the close order." Burroughs persisted about it and mentioned her "built-in clock." Deety stuck out her tongue at him.

The young man (an adolescent, really) called Pete said, "I vote 'insufficient data.' We need to place a rosette of sneakies around the site and find out what happened before we can decide how close to the tick we can set the rescue."

Jane Libby asked, "After the scram, was the nova bomb already visible from the new point of sight, or did it appear after Gay's translation? Either way, how does that fit the timing at Checkpoint Beta? Query: Is it experimentally established that irrelevant transportation is instantaneous, totally nil in transit time... or is it an assumption based on incomplete evidence and empirical success?"

Deety said, "Jay Ell, what are you getting at, dear?" I was bracketed by these two; they talked across me, obviously did not expect opinions from me-although I had been a witness.

"We are trying to establish the optimum tick for evacuating THQ, are we not?"

"Are we? Why not pre-enact evacuation, time it, then start the evacuation at minus H-hours plus thirty minutes? That gets everyone back here with gobs of time to spare."

"Deety, you thereby set up a paradox that leaves you with your head jammed up your arse," Burroughs commented. "Pop! That's rude, crude, and vulgar." "But correct, my darling stupid daughter. Now think your way out of the trap."

"Easy. I was speaking just of the danger end, not the safe end. We finish the rescue with thirty minutes to spare, then move to any empty space in any convenient universe-say that orbit around Mars we have used so often-then turn around and reenter this universe at a here-now tick one minute after we leave for the rescue."

"Clumsy but effective."

"I like simple programming, I do."

"So do I. But doesn't anyone see anything wrong with taking whatever length of time we need?"

"Hell, yes!"

"Well, Archie?"

"Because it's booby-trapped, probability point nine nine seven plus. How it is booby-trapped, depends. Who's our antagonist? The Beast? The Galactic Overlord? Boskone? Or is it direct action by another history-changing group, treaty or no treaty? Or-don't laugh-are we up against an Author this time? Our timing must depend on our tactics, and our tactics must fit our antagonist. So we must wait until those big brains next door tell us whom we are fighting."

"No," said Libby Long.

"What's wrong. Mama?" the lad asked.

"We will set up all the possible combinations, dear, and solve them simultaneously, then plug the appropriate numerical answer into the scenario the fabulists give us."

"No, Lib, you would still be betting a couple hundred lives that the big brains are right," Lazarus objected. "They may not be. We'll stay right here and find a safe answer if

it takes ten years. Ladies and gentlemen, these are our colleagues we are talking about. They are not expendable. Damn it, find that right answer!

I sat there feeling silly, slowly getting it through my head mat they were seriously discussing how to rescue all the people- and records and instruments-in a habitat I had seen vaporized an hour ago. And that they could just as easily rescue the habitat itself-move it out of that space before it was bombed. I heard them discuss how to do that, how to time it. But they rejected that solution. That habitat must have cost countless billions of crowns... yet they rejected saving it. No, no! The antagonist, be he the Beast of the Apocalypse, or Galactic Overlord (I choked!), or whatever-he must be allowed to think that he had succeeded; he must not suspect that the nest was empty, the bird flown.

I felt a remembered sensation in my left leg: Lord Pixel was again challenging the vertical front face. Furthermore he was driving in a fresh set of pitons, so I reached down and set him on the table. "Pixel, how did you get here?"

"Blert!"

"You certainly did. Out into the garden, through the garden, through the west wing-or did you go around?-across the lawn, up into a sealed spaceship-or was the ramp down? As may be, how did you find me?"

"Blert."

"He's Schrodinger's cat," Jane Libby said.

"Then Schrodinger had better come get him, before he gets himself lost. Or hurt."

"No, no. Pixel doesn't belong to Schrodinger; Pixel hasn't selected his human yet-unless he has picked you?"

"No. I don't think so. Well, maybe."

"I think he has. I saw him climb into your lap this noon. And now he has come a long way to find you. I think you've been tapped. Are you cat people?"

"Oh, yes! If Hazel lets me keep him."

"She will; she's cat people."

"I hope so." Pixel was sitting up on my scratch pad, washing his face, and doing a commendable job in scrubbing back of his ears. "Pixel, am I your people?"

He stopped washing long enough to say emphatically, "Blert!"

"All right, it's a deal. Recruit pay and allowances. Medical benefits. Every second Wednesday afternoon off, subject to good behavior. Jane Libby, what's this about Schrodinger? How did he get in here? Tell him Pixel is bespoke."

"Schrodinger isn't here; he's been dead for a double dozen centuries. He was one of that group of ancient German natural philosophers who were so brilliantly wrong about everything they studied-Schrodinger and Einstein and Heisenberg and- Or were these philosophers in your universe? I know they were not in all parts of the omniverse, but parallel history is not my strong point." She smiled apologetically. "I guess number theory is the only thing I'm really good at. But I'm a fair cook."

"How are your back rubs?"

"I'm the best back rubber in Boondock!"

"You're wasting your time. Jay Ell," Deety put in. "Hazel still walks him on a leash."

"But, Aunt Deety, I wasn't trying to bed him."

"You weren't? Then quit wasting his time. Back away and let me at him. Richard, are you susceptible to married women? We're all married."

"Uh- Fifth Amendment!"

"I understood you but they've never heard of it in Boondock. These German mathematicians- Not in your world?"

"Let's see if we're speaking of the same ones. Erwin Schrodinger, Albert Einstein, Wemer Heisenberg-"

"That's the crowd. They were fond of what they called 'thought experiments'-as if anything could be learned that way. Theologians! Jane Libby was about to tell you about 'Schrodinger's Cat,' a thought experiment that was supposed to say something about reality. Jay EU?"

"It was a silly business, sir. Shut a cat in a box. Control whether or not he is killed by decay of an isotope with a half life of one hour. At the end of the hour, is the cat alive or dead? Schrodinger contended that, because of the statistical probabilities in what they thought of as science in those days, the cat was neither alive nor dead until somebody opened the box; it existed instead as a cloud of probabilities." Jane Libby shrugged, producing amazing dynamic curves.

"Blert?"

"Did anyone think to ask the cat?"

"Blasphemy," said Deety. "Richard, this is 'Science,' German philosopher style. You are not supposed to resort to anything so crass. Anyhow Pixel got the tag 'Schrodinger's Cat' hung on him because he walks through walls."

"How does he do that?"

Jane Libby answered, "It's impossible but he's so young he doesn't know it's impossible, so he does it anyhow. So there is never any knowing where he will show up. I think he was hunting for you. Dora?"

"Need something. Jay EU?" the ship answered.

"Did you happen to notice how this kitten came aboard?"

"I notice everything. He didn't bother with the gangway; he came right through my skin. It tickled. Is he hungry?"

"Probably."

"I'll fix him something. Is he old enough for solid food?" "Yes. But no lumps. Baby food." "Chop chop."

"Ladies," I said. "Jane Libby used the words 'brilliantly wrong' about these German physicists. Surely you don't include Albert Einstein under that heading?" "I surely do!" Deety answered emphatically. "I'm amazed. In my world Einstein wears a halo." "In my world they bum him in effigy. Albert Einstein was a pacifist but not an honest one. When his own ox was gored, he forgot all about his pacifist principles and used his political influence to start the project that produced the first city-killer bomb. His theoretical work was never much and most of it has turned out to be fallacious. But he will live in infamy as the pacifist politician turned killer. I despise him!"

XXVI

"Success lies in achieving the top of the food chain."

J. HARSHAW 1906-

About then the baby food for Pixel appeared, in a saucer that rose up out of the table, I believe. But I can't swear to it, as it simply appeared. Feeding the baby cat gave me a moment to think. The vehemence of Deety's statement had surprised me. Those German physicists lived and worked in the first half of the twentieth century-not too long ago by my notions of history, but if what these Tertians wanted me to believe were true-unlikely!-a truly long time to them. "A double dozen

centuries-" Jane Libby had said.

How could this easygoing young lady. Dr. Deety, be so

emotional about long-dead German pundits? I know of only one event two thousand years or more in the past that people get emotional about... and that one never happened.

I had begun to make a list in my mind of things that did not add up-the claimed age of Lazarus-that long list of deadly diseases I was alleged to have suffered from-half a dozen weird events in Luna- Most especially Tertius itself. Was this indeed a strange planet far distant from Earth in both space and time? Or was it a Potemkin village on a South Pacific island? Or even Southern California? I had not seen the city called Boondock (one million people, more or less, so they said); I had seen maybe fifty people all told. Did the others exist only as memorized background for dialog extemporized to fit Potemkin roles?

(Watch it, Richard! You're getting paranoid again.) How much Lethe does it take to addle the brain?

"Deety, you seem to feel strongly about Dr. Einstein."

"I have reason to!"

"But he lived so long ago. 'A double dozen centuries' Jane Libby put it."

"That long ago to her. Not to me!"

Dr. Burroughs spoke up. "Colonel Campbell, I think you may be assuming that we are native Tertians. We are not. We are refugees from the twentieth century, just as you are. By 'we' I mean myself and Hilda and Zebadiah and my daughter- my daughter Deety, not my daughter Jane Libby. Jay Ell was born here."

"You slid home. Pop," Deety told him.

"But just barely," Jane Libby added.

"But he did touch home plate. You can't disown him for that, dear."

"I don't want to. As pops go, he's tolerable."

I did not try to sort this out; I was gathering a conviction that all Tertians were certifiably insane by Iowa standards. "Dr. Burroughs, I am not from the twentieth century. I was born in Iowa in 2133."

"Near enough, at this distance. Different time lines, I believe-divergent universes-but you and I speak much the same accent, dialect, and vocabulary; the cusp that placed you in one world and me in another must lie not far back in our pasts. Who reached the Moon first and what year?"

"Neil Armstrong, 1969."

"Oh, that world. You've had your troubles. But so have we. For us the first Lunar landing was in 1952, HMAAFS Pink Koala, Ballox O'Malley commanding." Dr. Burroughs looked up and around. "Yes, LAzarus? Something troubling you? Fleas? Hives?"

"If you and your daughters do not want to work, I suggest that you go chat elsewhere. Next door, perhaps; the fabulists and the historians don't mind chasing rabbits. Colonel Camp-bell, I think that you will find it convenient to feed your cat elsewhere, too. I suggest the 'fresher just clockwise of my lounge."

Deety said, "Oh, rats, Lazarus! You are a bad-tempered, grumpy old man. There is no way to disturb a mathematician who is working. Look at Lib there- You could set off a firecracker under her right now and she wouldn't blink." Deety stood up. "Woodie boy, you need a fresh rejuvenation; you're getting old-age cranky. Come on. Jay Ell."

Dr. Burroughs stood up, bowed, and said, "If you will excuse me?" and left without looking at Lazarus. There was a feeling of edgy tempers, of a need to place distance between two old bulls before they tangled.

Or three-I should be included. Chucking me out over the kitten was uncalled for; I found myself angry with Lazarus for a third time in one day. I had not brought the kitten in, and it was his own computer that had suggested feeding it there and had supplied the means.

I stood up, gathered Pixel in one hand, picked up his dish with my other hand, then found I needed to hang my cane over one arm to move. Jane Libby saw my problem, took the kitten, and cuddled it to her. I followed her, leaning on my cane and carrying the dish of baby food. I avoided looking at Lazarus.

In passing through the lounge we picked up Hazel and Hilda. Hazel waved to me, patted the seat by her; I shook my head and kept going, whereupon she got up and came with us. Hilda followed her. We did not disturb the session in the lounge. Dr. Harshaw was lecturing; we were barely noticed.

One delightful, decadent. Sybaritic aspect of life in Tertius was the quality of their refreshers-if such a mundane term can apply. Without trying to describe any of the furnishings strange to me, let me define a rich Tertian's luxury refresher (and Lazarus was, I feel certain, the richest man there)-define it in terms of function:

Start with your favorite pub or saloon.

Add a Finnish sauna.

And how about bathing Japanese style?

Do you enjoy a hot tub? With or without an agitator?

Was the ice-cream soda fountain a part of your youth?

Do you like company when you bathe?

Let's put a well-stocked snack bar (hot or cold) in easy reach.

Do you enjoy music? Three-dee? Feelies? Books and magazines and tapes?

Exercise? Massage? Sun lamps? Scented breezes?

Soft, warm places to curl up and nap, alone or in company?

Take all of the above, mix well, and install in a large, beautiful, well-lighted room. That list still does not describe the social refresher off Lazarus Long's cabin, as it omits the most important feature:

Dora.

If there was any whim that ship's computer could not satisfy, I was not there long enough to discover it.

I did not sample at once any of these luxuries; I had a duty to a cat. I sat down at a medium-size round table, the sort four friends might use for a drink, placed the kitten's

saucer thereon, reached for the kitten. Instead Jane Ell sat down and placed Pixel at the food. Burroughs joined us.

The kitten sniffed at the food he had been greedily eating minutes earlier, then gave an inspired bit of acting showing Jane Ell that he was horrified at her action in offering him something unfit for cats. Jane Ell said, "Dora, I think he's thirsty."

"Name it. But bear in mind that the management does not permit me to serve alcoholic beverages to minors other than for purposes of seduction."

"Quit showing off, Dora; Colonel Campbell might believe you. Let's offer the baby both water and whole milk, separately. And at blood temperature, which for kittens is-"

"Thirty-eight point eight degrees. Coming up pronto."

Hilda called out from a plunge-no, a lounging tub, I guess-a few meters away, "Jay Ell! Come soak, dear. Deety has some swell gossip."

"Uh-" The girl seemed torn. "Colonel Campbell, will you take care of Pixel now? He likes to lick it off your finger. It's the only way to get him to drink enough."

"I'll do it your way." The kitten did like to drink that way ... although it seemed possible that I would die of old age before I got as much as ten milliliters down him. But the kitten was in no hurry. Hazel got out of the lounging tub and joined us, dripping. I kissed her cautiously and said, "You're getting that chair soaking wet." "Won't hurt the chair. What's this about Lazarus acting up again?"

"That mother!" "In his case that's merely descriptive. What happened?"

"Uh- Maybe I reacted too strongly. Better ask Dr. Burroughs."

"Jacob?" "No, Richard did not overreact. Lazarus went out of his way to be offensively difficult with all four of us. In the first place, Lazarus has no business trying to supervise the mathematics section; he is not a mathematician in any professional sense and is not qualified to supervise. In the second place each of us in the section knows the quirks of the others; we never interfere with each other's work. But Lazarus kicked me out, and Deety, and Jane Libby, for daring to talk a few moments about something not on his agenda... totally unaware, or at least uncaring, that I and both my daughters use a two-level mode of meditation. Hazel, I kept my temper. Truly I did, dear. You would have been proud of me."

"I'm always proud of you, Jacob. I would not have kept my temper. In dealing with Lazarus you should take a tip from Sir Winston Churchill and step on his toes until he apologizes. Lazarus doesn't appreciate good manners. But what did he do to Richard?"

"Told him not to feed his cat at the conference table. Ridiculous! As if it could possibly harm his fancy table if this kitten happened to pee on it."

Hazel shook her head and looked grim, which doesn't fit her face. "Lazarus has always been a rough cob but, ever since this campaign-Overlord, I mean-started, he has been growing increasingly difficult. Jacob, has your section been handing him gloomy predictions?"

"Some. But the real difficulty is that our long-range projections are so vague. That can be maddening, I know, because when a city is destroyed, the tragedy is not vague; it's sharp and sickening. If we change history, we aren't truly unde-stroying that city, we are simply starting a new time line. We need projections that will let us change history before that city is destroyed." He looked at me. "That's why rescuing Adam Selene is so important."

I looked stupid-my best role. 'To make Lazarus better tempered?"

"Indirectly, yes. We need a supervising computer that can direct and program and monitor other large computers in creating multi verse projections. The biggest supervising computer we know of is the one on this planet, Athene or Teena, and her twin on Secundus. But this sort of projection is a much bigger job. Public functions on Tertius are mostly automated fail-safe and Teena steps in only as a trouble-shooter. But the Holmes IV-Adam Selene or Mike-through a set of odd circumstances, grew and grew and grew with apparently no one trying to keep his size down to optimum... then his self-programming increased enormously through a unique challenge: running the Lunar Revolution. Colonel, I don't think any human brain or brains could possibly have written the programs that Holmes IV self-programmed to let him handle all the details of that revolution. My older daughter, Deety, is a top specialist in programming; she says a human brain could not do it and that, in her opinion, an artificial intelligence could swing it only the way Holmes IV did it-by being faced with the necessity, a case of 'Root, Hog, or Die.' So we need Adam Selene-or his essence, those programs he wrote in creating himself. Because we don't know how to do it."

Hazel glanced at the pool. "I'll bet Deety could do it. If she had to."

"Thank you, dear, on behalf of my daughter. But she is not given to false modesty. If Deety could do it, or thought she had even a slim chance, she would be hacking away at it now. As it is, she's doing what she can; she is working hard at tying together the computer bank we have."

"Jacob, I hate to say this-" Hazel hesitated. "Maybe I shouldn't."

"Then don't." "I need to get it off my chest. Papa Mannie isn't optimistic over the results even if we are totally successful in retrieving all the memory banks and programs that constitute the essential Adam Selene-or 'Mike' as Papa Mannie calls him. He thinks his old friend was hurt so badly in the last attack-I remember it to this day; it was dreadful-Mike was hurt so badly that he withdrew into a computer catatonia and will never wake up. For years Papa tried to wake him, after the Revolution when Papa had free access to the Warden's Complex. He doesn't see how bringing those memories and programs here will do it. Oh, he wants to try, he's eager to, he loves Mike. But he's not hopeful."

"When you see Manuel, tell him to cheer up; Deety has thought of an answer." "Really? Oh, I hope so!" "Deety is going to provide Teena with lots more unused capacity, both for memory and for symbol manipulation, thought-and then she'll shove Mike into bed with Teena. If that does not bring Mike back to life, nothing will."

My love looked startled, then giggled. "Yes, that ought to do it."

She then went back to the pool and I learned from Jacob Burroughs why his daughter Deety spoke so emotionally about the Father of the Atom Bomb: She had seen-they had seen, all four of them, their own home wiped out by an atom bomb- a fission bomb, I inferred, but Jake did not say.

"Colonel, it is one thing to read a headline or hear a news report; it is something else entirely when it's your own home that has the mushroom cloud covering it.

"We are dispossessed, we can never go home. Eventually we were wiped completely off the slate. In our time line there is nothing to show that we four-myself, Hilda, Deety, Zeb- ever existed. The houses we once lived in are gone, never were; the

earth has closed over them with no scars." He looked as lonely as Odysseus, then went on:

"Lazarus sent a Time Corps field operative back- Dora? May I speak to Elizabeth?"

"Start talking." "Lib love? Place that rosette Pete wanted-or was it Archie? Spike the earliest date of surveillance. Go back three years. Evacuate."

"Paradox, Jacob."

"Yes. Place those three years in a loop, squeeze them off, throw them away. Check it."

"I check you, dear. More?"

"No. Off now."

Burroughs continued, "-sent a field operative to our time line to try to find us, anywhere in the fifty-year bracket from my birth to the night we ran for our lives. We are not there at all. We were never born. Both Zeb and I had military careers as well as academic ones; we are not in military records, we are not in campus records. There is a record of my parents... but they never had me. Colonel, in all the dozens, hundreds, of ways that citizens were recorded in the twentieth century in the United States of North America not one trace could be found that showed that we had ever been there."

Burroughs sighed. "The Gay Deceiver not only saved our lives that night; she saved our very existence. She took evasive action so fast that the Beast lost track- What is it, dear?"

Jane Libby was standing by us, dripping, and looking round-eyed. "Papa?"

"Say it, love."

"We need those sneakies Pythagoras wanted but they should go back much farther, oh, ten years or more. Then, when they spot the tick at which the Overlord or whoever started watching THQ, back off some and evacuate. Loop and patch, and they'll never suspect that we outflanked them. I told Deety; she thinks it could work. What do you think?"

"I think it will. Let me get your mother on line and we'll introduce it. Dora, let me have Elizabeth again, please." Nothing in his face or manner suggested that he had just spoken to Libby Long, proposing what was (so far as I could see) the same plan.

"Elizabeth? A message from our table tennis champ. Jane Libby says to place that rosette at minus ten years, spike first surveillance, then go back-oh, say, three years-evacuate, squeeze off a loop and patch in. Both Deety and I think it will work. Please submit it to the panel, credited to Jane Ell, with Deety's vote and mine noted."

"And my vote."

"You have smart children, mistress mine."

"Comes of picking smart fathers, sir. And good ones. Good to his offspring, good to his wives. Off?"

"Off." Burroughs added, to the girl waiting, "Your parents are proud of you, Janie. I predict that the maths section will produce a unanimous report in the next few minutes. You have answered the objection Lazarus raised-his quite legitimate objection-by producing a solution under which it does not matter who did this to us; we can repair it safely without knowing who did it. But did you notice that your method may also tie down who did it? With a little bit of luck."

Jane Libby looked as if she had just received a Nobel Prize. "I noticed. But the problem simply called for safe evacuation; the rest is serendipitous."

"'Serendipitous' is another way of spelling 'smart.' Ready for some supper? Or do you want to get back in the bowl? Or both? Why don't you throw Colonel Campbell in with his clothes on? Deety and Hilda will help you, I'm certain, and I think Hazel might."

"Now wait a minute!" I protested.

"Sissy!" "Colonel, we won't do that to you! Pop is joking."

"I am like hell joking." "Throw your pop in first, for drill. If it doesn't hurt him, then I'll submit quietly." "Blert!" "You just keep out of this!"

"Janie baby."

"Yes, Pop?" "Find out how many orders there are for strawberry matted milks and hot dogs, or unreasonable facsimiles. While you are doing that, I will hang my clothes in the dry cabinet-and if the colonel is smart, he will, too; Colonel, this is a rowdy bunch, especially in this exact combination-Hilda, Deety, Hazel, and Janie. Explosive. Who takes care of the kitten?" An hour later Dora (a little blue light) led us to our stateroom; Hazel carried the kitten and one saucer, I carried our clothes, the other saucer, my cane, and her handbag. I was pleasantly tired and looking forward to going to bed with my bride. For too long she had not been in my bed. From my viewpoint we had missed two nights... not long for old married couples, much too long for a honeymoon. And the moral of that is:

Don't get yourself mugged on your honeymoon.

From her standpoint it had been... a month? "Best of girls, how long has it been? That Lethe field has left me with my time sense fouled up."

Hazel hesitated. "It has been thirty-seven Tertian days here. But to you it should feel like overnight. Well, two nights... because, by the time I came to bed last night, you were snoring. I'm sorry. Hate me some but not too much. Here's our wee bunty ben."

("Wee bunty ben" indeed! It was larger than my luxury suite in Golden Rule and more lavish... with a bigger and better bed.) "Bride, we bathed in Lazarus's Taj Mahal playroom. I no longer have to remove my cork leg and I took care of everything else in that Taj Mahal. If you have anything to do, do it. But be quick about it! I'm eager."

"Nothing. But must take care of Pixel."

"We'll put his saucers in the 'fresher, shut him in, let him out later."

So we did, and went to bed, and it was wonderful, and the details are none of your business.

Sometime later Hazel said, "We've been joined."

"We still are."

"I mean, 'We have company.'"

"So I noticed. He climbed on my shoulder blades way back when, but I was busy and he weighs almost nothing, so I didn't mention it. Can you grab him and keep him from being rolled on and crushed while I get us untangled?"

"Yes. No hurry about it. Richard, you're a good boy. Pixel and I have decided to keep you."

"Just try to get rid of me! You can't. Love, you phrased something oddly. You said it was 'thirty-seven Tertian days here.'"

She looked up at me soberly. "It was longer than that for me, Richard."

"I wondered. How long?"

"About two years. Earth years."

"I be goddam!"

"But, dear, while you were ill, I did come home every day. Thirty-seven times I came to your hospital room in the morning, exactly as I promised. You recognized me every time, too, and smiled and seemed happy to see me. But of course the Lethe field made you forget every moment even as it happened. Each evening I went away again, and came back later that evening, having been gone, on the average, about three weeks each time. The schedule wasn't difficult for me, but Gay Deceiver made two trips every evening, with either the double twins or Hilda's crew making the runs. Let me up now, dear; I have the Pixel cat safe."

We rearranged ourselves comfortably. "What were you doing, gone so much?"

"Time Corps field work. Historical research."

"I guess I still don't understand what the Time Corps does. Couldn't you have waited a month, then both of us could have done it, together? Or do I have my head on backwards?"

"Yes and no. 1 asked for the assignment. Richard, I've been trying to trace down what happens after you and 1 tackle rescuing Adam Selene. Mike the computer."

"And what did you learn?" "Nothing. Not a damn thing. We can find only two time lines from that event-it's a cusp event; you and I created both futures. I searched the following four centuries on both lines-on Luna, down dirtside, several colonies and habitats. They all say either that we succeeded... or that we tried and died ... or they don't mention us at all. The last is the usual case; most historians don't believe that Adam Selene was a computer."

"Well... we're no worse off than we were before. Are we?"

"No. But I had to look. And I wanted to check it out before you woke up. Out from under the Lethe field, I mean."

"Do you know, small person, I think well of you. You are considerate of your husband. And of cats. And of other people. Uh- No, none of my business."

"Speak up, beloved, or I tickle."

"Don't threaten me. I'll beat you." "At your own risk-I bite. Look, Richard, I've been waiting for the question. This is the first time we've been alone. You want to know how homy old Hazel stuck it out in faithful chastity for two aching years. Or rather, you don't believe she did but you are too polite to say so."

"Why, damn your eyes! Look, my love, I'm a Loonie, with Loonie values. Love and sex are ruled by our ladies; we men accept their decisions. That's the only happy arrangement. If you want to boast a bit, go ahead. If not, let's change the subject. But don't accuse me of groundhog vices."

"Richard, you are your most infuriating when you are being your most reasonable."

"Do you want me to quiz you?"

"It would be polite."

"Tell me three times."

"I tell you three times and what I tell you three times is true.'"

"You peeked in the back of the book. All right, I'll cut to the chase. You are a member of the Long Family. No?"

She caught her breath. "What caused you to say that?"

"I don't know. I truly don't because it's been many little things no one of which meant anything and mostly did not stick in my mind. But sometime this evening, while talking with Jake, I found that I was taking it for granted. Am I mistaken?"

She sighed. "No, you're right. But I did not intend to load it onto you just yet. You see, I'm on leave of absence from the Family, not a member of it right now. And that was not what I intended to confess."

"Wait a second. Jake is one of your husbands."

"Yes. But remember, I'm on leave."

"For how long?"

"Till death do us part! I promised you that in the Golden Rule. Richard, histories show that you and I were married at the time of the cusp event... so I asked the Family for a divorce ... and settled for a leave of absence. But it might as well be final-they know it, I know it. Richard, I was here every night, every Tertian night I mean-thirty-seven times... but I never slept with the Family. I- Usually I slept with Xia and Choy-Mu. They were good to me." She added, "But not once with a Long. Not any of them, male or female. I was faithful to you, in my own fashion."

"I don't see why you needed to deprive yourself. Then you are one of Lazarus Long's wives, too. On leave, but his wife.

That omery old curmudgeon! Hey! Is it possible that he is jealous of me? Hell, yes, it's not only possible but likely. Certain! He's not a Loonie; he is not conditioned to accept 'Lady's Choice.' And he comes from a culture in which jealousy was the commonest mental disorder. Of course! Why, the silly bastich!" "No, Richard." "In a pig's eye." "Richard, Lazarus got all the jealousy leached out of him many generations ago... and I've been married to him thirteen years with plenty of chance to judge. No, dear, he's worried. He's worried about me and he's worried about you-he knows how dangerous it is-he's worried about all the Family and all of Tertius. Because he knows how dangerous the multiverse is. He's devoting his life and all of his wealth to trying to make his people safe."

"Well... I wish he could be a little more urbane about it.

Mannerly. Polite."

"So do I. Here, take the kitten; I gotta pee. Then I vote for some sleep."

"Me, too. Both. My, it feels good to get out of bed and stroll to the jakes without having to hop."

We had cuddled up together, lights out, her head on my shoulder and the kitten wandering around the bed somewhere, both of us about to sleep, when she murmured, "Richard. Forgot... Ezra-"

"Forgot what?"

"His legs. When... he first walked on them... with crutches. Three days ago I think... 'bout three months back for me. Xia 'n' I congratulated Ezra... horizontally."

"The best way."

'Took him to bed. Wore him out."

"Good girls. What else is new?"

She seemed to have dropped off to sleep. Then she barely muttered. "Wyoming."

"What, dear?" "Wyoh, my daughter. Little girl playing in fountain... you 'member?"

"Yes, yes! Yours? Oh, grand!"

"Meet'r... 'n morning. Named for... Mama Wyoh. Lazarus-"

"She's a daughter of Lazarus?"

"Guess so. Ishtar says. Cer'nly had lots... opportunity."

I tried to picture the child's face. A pixie, with bright red hair. "Looks more like you."

Hazel did not answer. Her breathing was slow and even.

I felt paws on my chest, then a tickle on my chin. "Blert?"

"Quiet, baby; Mama's sleeping."

The kitten settled down, went to sleep himself. So I finished the day as I had begun it, with a baby cat asleep on my chest.

It had been a busy day.

XXVII

"It's a poor sort of memory that only works backwards."

CHARLES LUTWIDGE DODGSON 1832-1898

"Gwendolyn my love." Hazel stopped with a teethclean in hand, looked startled.

"Yes, Richard?"

"This is our first anniversary. We must celebrate."

"I'm quite willing to celebrate but I can't figure out your arithmetic. And celebrate how? A fancy breakfast? Or back to bed?"

"Both. Plus a special treat. But eat first. As for my arithmetic, attend me. It is our anniversary because we have been married exactly a week. Yes, I am aware that you think of it as two years-"

"I do not! Doesn't count. Like time spent in Brooklyn." "And you tell me that I have been here thirty-seven, thirty-eight, thirty-nine days, more or less. But it is not thirty-nine days to me, Gwen Hazel, as Allah will not subtract from my allotted time those days spent in the Lethe field, so I don't count them. Hell, I wouldn't believe in them if it weren't that I now have two feet-"

"You're complaining?"

"Oh, no! Except that I now have to cut twice as many toenails-"

"Blert!"

"What do you know about it? You don't have toenails; you have claws. And you scratched me in the night, you did. Yes, you did-don't look innocent. Monday evening the thirtieth of June-of 2188, it was, though I'm not sure what year it is here-we went to see the Halifax Ballet Theater with Luanna Pauline as Titania."

"Yes. Isn't she lovely?"

"Wasn't she! Past tense, dear. If what I've been told is true, her ethereal beauty has been dust for more than two thousand years. Rest in peace. Then we went to Rainbow's End for a late supper and a total stranger had the bad taste to get himself abruptly dead at our table. Whereupon you raped me."

"Not at the table!"

"No, in my bachelor's apartment."

"And it wasn't rape."

"We need not fight over it since you repaired my tarnished reputation before noon the next day. Our wedding day, my true love. Mistress Gwendolyn Novak and Dr. Richard Ames announced their marriage on Tuesday the first of July, 2188. Keep track of that date."

"I'm not likely to forget it!"

"Me, too. That evening we got out of town fast, with the sheriff's hounds a-snappin' and a-yappin' at our heels. We slept that night in Dry Bones Pressure. Right?"

"Right so far."

"The next day, Wednesday the second, Gretchen drove us to Lucky Dragon Pressure. We slept that night in Dr. Chan's place. The following day, Thursday the third. Auntie drove us toward Hong Kong Luna, but not all the way because we encountered those eager agrarian reformers. You drove the rest of the way and we wound up at Xia's hotel so late at night that it was hardly worthwhile to go to bed. But we did. That puts us into Friday the fourth of July. Independence Day. Check?"

"Check."

"We were roused out-I was roused out; you were already up-I was roused out too soon late Friday morning.., and learned that City Hall did not like me. But you and Auntie sprung me-sprang me?-sprung me ... and we left for Luna City so fast I left my toupee hanging in the air."

"You don't wear a toupee." "Not anymore, I don't; it's still hanging there. We arrived L-City circa sixteen hundred that same Friday. You and I had a difference of opinion-"

"Richard! Please don't dig up my past sins." "-which was soon cleared up as I saw the error of my ways and craved pardon. We slept that night at the Raffles; it was still Friday the fourth of July when we went to bed. We had started that day many klicks west of there, with freedom fighters getting gay with guns. Still with me?"

"Yes. Somehow in my memory it feels much longer." "A honeymoon is never long enough and we're having a busy one. The next morning, Saturday the fifth, we retained Ezra, then we went to the Warden's Complex... came back and were waylaid at the entrance to the Raffles. So we left the Raffles hurriedly, in a cloud of corpses, escaping by courtesy of Gay Deceiver and the Time Corps. Most briefly we were in the land of my innocent youth, loway where the tall corn grows. Then we blinked to Tertius. Beloved, at this point my groundhog calendar becomes useless. We left Luna Saturday evening the fifth; we arrived here in Tertius a few minutes later, so for our purposes I designate the Tertian day of our arrival as equivalent to Saturday, five July, 2188, and I so name it. Never mind what Tertian citizens call it; it would only confuse me. Still with me?" "Well... all right." "Thank you. I woke up the next morning-Sunday July sixth-with two feet. For Tertius the lapse of time was, I concede, thirty-seven days. You tell me that for you it was about two years, a most unlikely story-I'd rather believe in unicorns and virgins. For Gretchen it was five or six years, which I am forced to stipulate because she is now eighteen or nineteen and knocked up; I have to believe it. But for me it was just over one night, Saturday to Sunday.

"That 'Sunday' night I slept with Xia, Gretchen, Minerva, Galahad, Pixel, and possibly Tom, Dick, and Harry and their sheilas Agnes, Mabel, and Becky."

"Who are they? The girls, I mean; I know those boys. Too well."

"You poor, sweet, innocent child; you are too young to know. Surprisingly I slept well. Which brings us to yesterday, designated by strict numbering as Monday July seventh. Last night we spent catching up on our honeymoon... and thank you bolshoyeh, mistress mine."

"You are welcome, sirrah. But the pleasure was shared. I now see how you arrived at that date. Both by dirtside calendar and your biological clock-the basic clock, as every timejump-er knows-today is Tuesday the eighth of July. Happy Anniversary, darling!"

We stopped to swap some spit and Hazel cried and my eyes got watery.

Breakfast was swell. That's all the description I can give it because Gwen Hazel decided to treat me to Tertian cooking and consulted with Dora under a hushfield, and I et what was sot before me, as the Iowa farmer had carved on his tombstone. And so did Pixel, who had some specials that looked like garbage to me but tasted like ambrosia to him, as proved by his behavior.

We had just finished our second cups of-no, it was not coffee-and were about to slip over to the Long mansion for my "special treat," i.e., for me to meet my new daughter, Wyoming Long... when Dora spoke up:

"Advisory notice: Time line, date, time, and location. Official. Please prepare to set your timepieces on the tick." Hazel looked surprised, hurriedly grabbed her handbag, dug into it, pulled out a something I had not seen before. Call it a chronometer. "We are in a stationary orbit around Tellus, Sol in, in time line three, coded 'Neil Armstrong.' The date is Tuesday the first of July-"

"My God! We're back where we started! Our wedding day!"

"Quiet, dear! Please!"

"-Gregorian. Repeat: Time line three, Sol ID, July first, 2177 Gregorian. At the tick it will be zone five, oh nine forty-five. Tick! Those equipped to receive sonic close correction, wait for the tone-"

It started with a low note and squealed on up until it hurt my ears. Dora added: "Another time tick and sonic correction will be offered in five minutes, ship's time or Tellus zone five time, which are now matched for local legal time designated 'daylight time' for interception point on this time line. Hazel hon, private to you."

"Yes, Dora?" "Here are Richard's shoes-" (Plunk, they hit the bed. Out of nowhere.) "-and his other two suits-" (Plop.) "-and I packaged the small clothes and stockings with them. Shall I add a couple of jumpsuits? I took Richard's measurements while you slept. These aren't washables; these are Hercules cloth, won't take dirt, can't wear out."

"Yes, Dora, and thank you, dear. That's thoughtful of you. I hadn't yet bought him anything but city clothes."

"I noticed." (Plop-another package.) Dora went on, "We've been loading and unloading all night. The last of the stragglers left at oh nine hundred but I told Captain Laz about your anniversary breakfast, so she refused to let Lazarus disturb you. Message from Lazarus: If it suits your convenience, will both of you kindly get off your dead duffs and report to THQ. End of message. Transmission from the bridge, live":

"Hazel? Captain Laz speaking. Can you two leave the ship by ten hundred? I told my hard-nosed brother that ten was the departure time he could expect."

Hazel sighed. "Yes. We'll leave for the car pocket at once."

"Good. Felicitations to both of you from me and Lor and Dora. Many happy returns of the day! It has been a pleasure to have you aboard."

We were at the car pocket with two minutes to spare, me loaded with packages and cat, and getting used to new shoes- well, one old, one new. I learned that the "car pocket" referred to our old friend Gay Deceiver; the end of a short passage led right into her starboard door. Again I missed seeing those spacewarp bathrooms; Hazel's grandsons piloted us, and we were told to take the back seats. Pol got out to let us get in.

"Hi, Grandma! Good morning, sir."

I said good morning and Hazel kissed both her grandsons in passing, no seconds lost, and we settled down and strapped in. Cas called out, "Report seat belts."

"Passengers' seat belts fastened," Hazel reported.

"Bridge! Ready for launch."

Laz answered, "Launch at will."

Instantly we were out in the sky and weightless. Pixel started to struggle; I caged him with both hands. I think it was weightlessness that startled him... but how could he tell? He didn't weigh anything to start with.

Earth was off to starboard, apparently full, although one can't tell that close up. We were opposite the middle of North America, which told me that Laz was a more than competent pilot; had we been in the usual twenty-four-hour orbit, concentric with Earth's equator, we would have been over the equator at ninety west, i.e., over the Galapagos Islands. I guessed that she had selected an orbit tilted at about forty degrees and timed for ten hundred ship's time-and made a mental note to check it later, if and when I ever got a look at the ship's log.

(A pilot can't help second-guessing every other pilot; it's an occupational disease. Sony.)

Then we were suddenly in atmosphere, down thirty-six-thousand klicks in a tick. Gay spread her wings, Cas tilted her nose down, then leveled off, and we again had weight, at one gee-and Pixel liked this change still less. Hazel reached over and took Pixel, soothed him; he quieted down-I think he felt safer with her.

With her wings raked in for hypersonic, the only way I had seen her. Gay is mostly a lifting body. With her wings spread, she has lots of lift area and she glides beautifully. We were a thousand meters up, give or take, and over farm country on a fine summer day-clear, save for anvil cumuli here and there on the horizon. Glorious! A day to feel young again-

Cas said, "I hope that translation did not bother you. Had I left it up to Gay, she would have put us on the ground in one jump; she's nervous about anti-aircraft fire."

"I am not nervous. I'm rationally careful."

"Right you are. Gay. She does have reason to be careful. The Pilots' Precautionary Notice for this planet on this time line at this year states that one must assume AA weapons around all cities and larger towns. So Gay blinks down below the AA radar-"

"You hope," said the car.

"-so mat we will show up simply as a subsonic private plane on air-control radar, if there is any. None, that is, where we are."

"Optimist," the car sneered.

"Quit hitching. Have you spotted your squat?"

"Long since. If you'll quit yacking and give me permission, I'll take it."

"At will. Gay."

I said, "Hazel, I had counted on getting acquainted with my new daughter about now. Wyoming."

"Don't fret, dear; she will never know we were away. That's the way to handle it until a child is old enough to understand."

"She won't know, but I will. I'm disappointed. All right, let's table it."

The scene blinked again and we were on the ground. Cas said, "Please check to see that you aren't leaving anything behind." As we got out and stood clear. Gay Deceiver disappeared. I stared through the space she had occupied. My Uncle Jock's house was two hundred meters away.

"Hazel, what date did Dora say this is?"

"Tuesday July first, 2177."

"That's what I thought I had heard. But when I thought it over I decided that I must have been mistaken. I now see that she wasn't fooling: '77. Eleven years in the past. Sweetheart, that ratty old barn there is standing where we landed last Saturday, three days ago. You wheeled me from there toward the house in Ezra's wheelchair. Hon, that bam we're looking at was torn down years back; that's just its ghost. This is bad."

"Don't fret about it, Richard. In timejumping it feels that way, the first time you get involved with a loop."

"I've already lived through 2177! I don't like paradoxes."

"Richard, treat it just as you would any other place, any other time. No one else will notice the paradox, so ignore it yourself. The chance of being recognized when you are living paradoxically is zero for any era outside your own normal lifetime... but usually only one in a million even if you timejump close to home. You left this area quite young, did you not?"

"I was seventeen: 2150."

"So forget it. You can't be recognized."

"Uncle Jock will know me. I've been back to see him a number of times. Although not recently. Unless you count our quick visit three days ago."

"He won't remember our visit three days ago-"

"He won't, huh? Sure, he's a hundred and sixteen years old. Or will be eleven years from now. But he's not senile."

"You're right; he's certainly not senile. And Uncle Jock is used to time loops. As you have guessed by now, he's in the Corps and quite senior. In fact he's the major stationkeeper for North America in time line three. Last night's evacuation of THQ was made to this station. Didn't you realize that?"

"Hazel, I didn't even touch second. Twenty minutes ago I was sitting in our stateroom-Dora was parked on the ground on Tertius, so I thought-and I was trying to decide whether to have another cup, or to take you back to bed. Since then I've been running as fast as I can to try to catch up with my own confusion. Unsuccessfully. I'm just an old soldier and harmless hack writer; I'm not used to such adventures. Well, let's go. I want you to meet my Aunt Cissy."

Gay had put us down across the road from Uncle Jock's place. We walked down the road a piece, me carrying packages and swinging my cane. Hazel with her handbag and carrying the kitten. Some years back Uncle Jock had placed a much stouter fence around his farm than was usual in Iowa in those days. It was not yet built when I left

home and enlisted in 2150; it was in place by the time I visited in... 2161 ? That's about right.

The fence was heavy steel mesh, two meters high and with a six-strand cradle of barbed wire on top of that. I think the barbed wire was added later; I did not recall it.

Inside the cradle were copper wires on ceramic insulators. About every twenty meters there was a sign:

DANGER!!! Do Not Touch Fence Without Opening Master Switch #12

At the gate was another sign, larger:

INTERBUREAU LIAISON AGENCY Bio-Ecological Research Division District Office Deliver Radioactive Materials To Gate Four-Wedns. Only 7-D-92-10-3sc

YOUR TAXES AT WORK

Hazel said thoughtfully, "Richard, it does not look as if Uncle Jock lives here this year. Or this is the wrong house and Gay missed her clues. I may have to call for help."

"It's the right house and Uncle Jock did-does-live here this year. If this year is 2177, on which I'm keeping an open mind. That sign smells like Uncle Jock; he always did have funny ideas about privacy. One year it was piranhas and a moat."

I found a push button to the right of the gate and pressed it. A brassy voice, so artificial that it had to be an actor, announced: "Stand one-half meter from pickup. Display your clock badge. Face pickup. Turn ninety degrees and show profile. These premises are guarded by attack dogs, gas, and snipers."

"Is Jock Campbell at home?"

"Identify yourself."

"This is his nephew Colin Campbell. Tell him her father found out!"

The brassy voice was replaced by one I recognized. "Dickie, are you in trouble again?"

"No, Uncle Jock. I simply want to get in. I thought you were expecting me."

"Anyone with you?"

"My wife."

"What's her first name?"

"Go to hell."

"Later, don't rush me. I need her first name." "And I won't play games; we're leaving. If you see Lazarus

Long-or Dr. Hubert-tell him that I'm sick of childish games and won't play. Good-bye, Uncle."

"Hold it! Don't move; I have you in my sights." I turned away without answering and said to Hazel, "Let's start walking, hon. Town is a far piece down the road but somebody will come along and give us a lift. People around here are friendly."

"I can phone for help. The way I did from the Raffles " She lifted her handbag.

"Can you? Wouldn't the call be relayed right back to this house no matter where or when or what time line? Or have I failed to understand any of it? Let's start hoofing it. My turn to carry that fierce cat."

"All right."

Hazel did not seem to be troubled over our failure to get into Uncle Jock's place, or Time Headquarters, whichever As for me, I was happy, light-hearted. I had a beautiful, lovable bnde. I was no longer a cripple and I felt years younger than my calendar age. If I still had a calendar age. The weather was heavenly in a fashion that only Iowa knows.

Oh, it would be hot later in the day (it takes hot sun to grow good corn) but now, at about ten-fifteen, it was still balmy; by the time it was really hot I would have my bride-and the kitten-indoors. Even if we had to stop at the next farmhouse. Let's see... the Tanguays? Or had the old man sold out by 2177? No matter

I was not worried by my lack of local legal money, my lack of tangible assets of any sort. A beautiful summer day in Iowa leaves no room for worry. I could work and would-spreading manure if that was the sort of work available. And I would soon spread manure of another sort, moonlighting nights and Sundays. In 2177 Evelyn Fingerhut had not yet retired, so pick some new pen names and sell him the same old tripe. The same stories-just file off the serial numbers.

File off the serial numbers, change the body lines a bit. give it a new paint job, switch it over the state line, and it's yours!- that's the secret of literary success. Editors always claim to be looking for new stories but they don't buy them; they buy "mixture as before." Because the cash customers want to be entertained, not amazed, not instructed, not frightened.

If people truly wanted novelty, baseball would have died out two centuries back... instead of being ever popular. What can possibly happen in a baseball game that everyone has not seen many times before? Yet people like to watch baseball- shucks, I'd enjoy seeing a baseball game right now, with hot dogs and beer.

"Hazel, do you enjoy baseball?"

"Never had a chance to find out. When the drugs against acceleration came along, I went dirtside for my law degree but never had time to watch baseball even in the idiot box. I worked my way through law school and was I busy! That was when I was Sadie Lipschitz."

"Why were you? You said you didn't like that name." "Sure you want to know? The answer to 'Why' is always 'Money.'"

"If you want me to know, you'll tell me."

"Scoundrel. That was right after Slim Lemke Stone died and- What in the world is that racket?"

"That's an automobile." I glanced around for the source of the noise.

Starting about 2150 or a little earlier (I saw my first one the year I signed up) supreme swank for an Iowa fanner was to own and drive a working replica of a twentieth-century "automobile" personal transport vehicle. Of course not a vehicle moved by means of internal explosions of a derivative of rock oil: Even the People's Republic of South Africa had laws against placing poisons in the air. But with its Shipstone concealed and a sound tape to supply the noise of a soi-disant "1C' engine, the difference between a working replica and a real "automobile" was not readily apparent.

This one was the swankest of all replicas, a Tin Lizzy, a "Ford touring car. Model T, 1914." It was as dignified as Queen Victoria, whom it resembled. And it was Uncle Jock's... as I had suspected when I heard that infernal banging.

I said to Hazel, "Here, you take Pixel and soothe him; he's certainly never heard anything like this. And ease well off to the side of the road; these wagons are erratic." We continued on down the road; the replica pulled alongside us and stopped.

"Need a lift, folks?" Uncle Jock asked. Up close the racket was horrible.

I turned and grinned at him, and answered, mouthing my words so that they couldn't possibly be heard above the noise:

"Four score and seven years ago did gyre and gimble in the wabe."

"How's that again?"

"Billiards will never replace sex, or even tomatoes."

Uncle Jock reached down and switched off the sound effects. I said, "Thanks, Uncle. The noise was scaring our kitten. It's mighty nice of you to turn it off. What were you saying? I couldn't hear you over the engine noise."

"I asked if you wanted a lift."

"Why, thank you. Going into Grinnell?"

"I planned to take you back to the house. Why did you run away?"

"You know why. Did Dr. Hubert or Lazarus Long or whatever name he's using this week put you up to it? If so, why?"

"Introduce me first, if you please, nephew. And pardon me for not getting down, ma'am; this steed is skittish."

"Jock Campbell you old goat, don't you dare pretend that you don't know me! I'll have your rocks for castanets. Believe!"

For the first time that I can remember. Uncle Jock seemed shocked and baffled. "Madam?"

Hazel saw his expression, said hastily, "Are we inverted? I'm sorry. I'm Major Sadie Lipschitz, Time Corps, DOL, assigned to Overlord. I met you first in Boondock about ten of my subjective years ago. You invited me to visit you here, and I did, in year 2186 as I recall. Click?"

"Click, a clear inversion. Major, I'm happy indeed to meet you. But I'm happier still to learn that I will meet you again. I'm looking forward to it."

Hazel answered, "We had a good time, I promise you. I'm married to your nephew now... but you're still an old goat. Get down out of that toy wagon and kiss me like you mean it."

Hastily Uncle unclutched his rotor and got down; Hazel handed Pixel to me, which saved his life. After a while the old goat said, "No, I have not met you before; I could not possibly forget."

Hazel answered, "Yes, I have met you before; I'll never forget. God, it's good to see you again. Jock. You haven't changed. When was your last rejuvenation?"

"Five subjective years ago-just long enough to marinate. But I wouldn't let them youthen my face. When was yours?"

"Same subjective, about. Wasn't due for it yet but I needed cosmetic because I planned to marry your nephew. So I took a booster along with it. Turned out I needed it; he's a goat, too."

"I know. Dickie had to enlist because they were closing in on him from all sides." (An outright lie!) "But are you sure your name is Sadie? That's not the name Lazarus gave me as a test word."

"My name is whatever I want it to be, just as it is with Lazarus. My, I'm glad they moved THQ to your place last night! Kiss me again."

He did and finally I said mildly, "Not on a public road, folks, not in Poweshiek County. This is not Boondock."

"Mind your own business, nephew. Sadie, headquarters was not moved here last night; that was three years ago."

XXVIII

"The majority is never right."

L. LONG 1912-

We rode back to the house, Hazel up front with Uncle Jock, Pixel and me back with the packages. As a favor to Pixel, the replica Model T moved as silently as a ghost. (Do ghosts really move silently? How do such cliches get started?) The gate opened to Uncle Jock's voice and no lethal defenses were actuated. If there were any. Knowing Uncle Jock I suspect that there were-but not the ones posted.

We were met on the front veranda by Aunt Til and Aunt Cissy. While Uncle Jock went inside, my aunts welcomed my bride into the family with all the warmth of country manners. Then I passed the kitten to Hazel and I was greeted by them much as Hazel had greeted Uncle but with no time loop to confuse us. Golly, it was good to be home! Despite my some-rimes stormy adolescence the happiest memories of my life were associated with this old house.

Aunt Cissy looked older today, in 2177, than I recalled her looking the last time I had seen her-2183, was it? Was this a clue as to why Aunt Til had always looked the same age? An occasional trip to Boondock could work wonders.

Were all three-no, all four, including Aunt Belden-serving fifty-year enlistments with the Fountain of Youth as one of the perks?

Was Uncle Jock metabolically about thirty while maintaining the face and neck and hands of an old man in order to support a charade? (None of your business, Richard!)

"Where's Aunt Belden?"

"She's gone to Des Moines for the day," Aunt Til answered. "She'll be home for supper. Richard, I thought you were on Mars?"

I consulted a calendar in my head. "Come to think about it,I am."

Aunt Til looked at me keenly. "Are you looped?"

Uncle Jock came back out just in time to say, "Stop it! That sort of talk is forbidden. You all know it; you all are subject to the Code."

I said quickly, "I'm not subject to the Code, whatever it is. Yes, Aunt Til, I'm looped. Back from 2188."

Uncle Jock fixed me with a look that used to scare me when I was ten or twelve. "Richard Colin, what is this? Dr. Hubert gave me to understand that you were under orders to report to Time Headquarters. Just this minute I stepped inside and phoned him about your arrival. But no one goes to Headquarters who is not sworn in and ruled by the Code. Leastwise, if he did, he wouldn't come out again. You said earlier that you weren't in trouble but you can stop lying now and tell me about it. I'll help you if I can; blood is thicker than water. So let's have it."

"I'm not in any trouble that I know of. Uncle, but Dr. Hubert keeps trying to hand me some. Are you seriously suggesting that reporting to Time Headquarters could result in my not coming out alive? I'm not swom into the Time Corps and I am not subject to its code. If you are serious, then I should not report to the Time Corps' headquarters. Aunt Til, is it all right for us to spend the night here? Or would that embarrass you? Or Uncle Jock?"

Without consulting Uncle Jock even by eye. Aunt Til answered, "Of course you'll stay here, Richard; you and your darling bride are welcome tonight and as long as you'll stay and whenever you come back. This is your home and always has been." Uncle shrugged, said nothing.

"Thanks! Where shall I drop these packages? My room? And I need to make arrangements for this fierce feline. Is there a sandbox around from the last litter? And, while Pixel has had his breakfast, I think he could use some milk."

Aunt Cissy stepped forward. 'Til, I'll take care of the kitten. Isn't he a pretty one!" She reached for Pixel; Hazel passed him over.

Aunt Til said, "Richard, your room has a guest in it, a Mr. Davis. Mmm, I think, this being July, that the north room on the third floor would be the most comfortable for you and Hazel-"

"'Hazel'!" Uncle Jock interjected. "That was the test word Dr. Hubert gave me. Major Sadie, is that one of your names?"

"Yes. Hazel Davis Stone. Now Hazel Stone Campbell."

"'Hazel Davis Stone,'" Aunt Til put in. "Are you Mr. Da-vis's little girl?"

My bride suddenly perked up. "Depends. A long time ago I was Hazel Davis. Is this 'Manuel Davis'? Manuel Garcia O'Kelly Davis?"

"Yes."

"My papa! He's here?"

"He'll be here for supper. I hope. But- Well, he has duties."

"I know. I've been in the Corps forty-six years subjective and Papa about the same, I think. So we hardly ever see each other, the Corps being what it is. Oh, goodness! Richard, I'm going to cry. Make me stop!"

"Me? Lady, I'm just waiting for a bus. But you can use my handkerchief." I offered it to her.

She accepted it, dabbed at her eyes. "Brute. Aunt Til, you should have spanked him oftener."

"Wrong aunt, dear. That was Aunt Abigail, now gone to her reward."

"Aunt Abby was brutal," I commented. "Used a peach switch on me. And enjoyed it."

"Should have used a club. Aunt Til, I can't wait to see Papa Mannie. It's been so long."

"Hazel, you saw him right here- Right there," I said, pointing at a spot halfway to the old barn, "only three days ago." 1 hesitated. "Or was it thirty-seven days? Thirty-nine?"

"No, no, Richard! Neither. By my time, subjective, it's over two years." Hazel added, to the others, "It's all still new to Richard. He was recruited, his subjective time, just last week."

"But I wasn't recruited," I objected. "That's why we're here."

"We'll see, dear. Uncle Jock, that reminds me- I want to tell you something and I must bend the Code a bit to do so. That doesn't worry me; I'm a Loonie and never obey laws I don't like. But are you really so regulation that you won't listen to 'coming attractions' talk?"

"Well-" Uncle Jock said slowly. Aunt Til snickered. Uncle Jock turned to her and said, "Woman, what are you laughing at?"

"Me? I wasn't laughing."

"Mmrrph. Major Sadie, my responsibilities and duties require a certain latitude in interpreting the Code. Is this something I need to know?"

"In my opinion, yes."

"That's your official opinion?"

"Well, if you put it that way-"

"Never mind. Perhaps you had better tell me and let me be the judge."

"Yes, sir. On Saturday the fifth of July eleven years forward,

2188, THQ will transfer to New Harbor on time line five. You will go along. All your household, I think."

Uncle Jock nodded. "That is exactly the sort of loop-derived information the Code is designed to suppress. Because it can so easily create positive feedback and result in heterodyning and possible panic. But I can take it calmly and make good use of it. Uh... may I ask why the move? As it seems unlikely that I would go along-and surely not my household. This is a working farm, no matter what it conceals."

I interrupted. "Uncle, I'm not bound by any silly code. Those West Coast hotheads finally quit talking and seceded."

His eyebrows shot up. "No- Really? I didn't think they

would ever get off the pot."

"They did. May Day '88. By the day Hazel and I were here, Saturday July the fifth, the Angeleno Phalanges had just captured Des Moines. Bombs were dropping all around here. You may think-today-that you wouldn't pull out. But I know that you were about to do so then; I was there. Will be there. Ask Dr. Hubert-Lazarus Long. He thought this place was too dangerous to hang around any longer. Ask him." "Colonel Campbell!"

I knew that voice; I turned and said, "Hi, Lazarus." "That sort of talk is strictly forbidden. Understand me?" I took a deep breath, then said to Hazel, "He'll never learn"- then to Lazarus, "Doc, you've been trying to make me stand at attention ever since we first met. It won't work. Can't you get that through your head?"

Somewhere, somewhen, Lazarus Long had had some sort of formal training in emotional control. I could now see him calling on it to help him. It took him about three seconds to invoke whatever it was he used, then he spoke quietly, in a lower register:

"Let me try to explain. Such talk is dangerous to the person you talk to. Making predictions, I mean, from knowledge gained from a loop. It is an observed fact that, again and again, it turns out to be a disservice to the person you inform when you tell him something in his future that you have learned in your past.

"As to why this is true, I suggest that you consult one of the mathematicians who deal with time-Dr. Jacob Burroughs, or Dr. Elizabeth Long, or anyone from the Corps' staff of mathematicians. And you should consult the council of historians for examples of the harm it does. Or you could look it up in our headquarters library-file 'Cassandra' and file 'Ides of March,' for starters, then see file 'Nostradamus.'"

Long turned to Uncle Jock. "Jock, I'm sorry about this. I pray that you will not let the troubles of '88 make your household gloomy during the forward years till then. I never planned to bring your nephew here not yet trained in the disciplines of Time-I never planned to bring your nephew here at all. We do need him, but we expected to recruit him at Boondock with no need to bring him to Headquarters. But he refused to enlist. Do you want to try to change his mind?"

"I'm not sure I have any influence over him, Lafe. How about it, Dickie? Want to hear what a good deal a career in the Time Corps can be? You could say that the Time Corps supported you throughout your childhood-you could say it because it's true. The sheriff was about to auction this farm right out from under us... when I joined up. You were just a tad ... but you may remember a time we ate corn bread and not much else. Then things got better and stayed better-do you remember? You were about six."

I had some long thoughts. "Yes, I remember. I think I do. Uncle, I'm not against joining. You're in it, my wife is in it, several of my friends are in it. But Lazarus has been trying to sell me a pig in a poke. I've got to know what it is they want | me to do and why they want me to do it. They say they want me for a job with the chances only fifty-fifty that I get out of it alive. With those odds there is no point in talking about retirement benefits. I don't want some chairwarmer in Headquarters being that casual about my neck. I must know that it makes sense before I'll accept those odds."

"Lafe, just what is this job you have for my boy?" "It's Task Adam Selene in Operation Galactic Overlord."

"I don't think I've heard of it." "And now you should forget it, as you don't figure into it and it has not been mounted as of this year."

"That makes it difficult for me to advise my nephew. Shouldn't I be briefed?"

Hazel intervened. "Lazarus! Knock it off!" "Major, I'm discussing official business with the THQ stationkeeper."

"Pig whistle! You are again trying to chivvy Richard into risking his life without his knowing why. When I agreed to try to do so, I had not yet met Richard. Now that I know him- and admire him; he is sans pew et sans reproche-I'm ashamed that I ever tried. But I did try... and almost succeeded. But you barreled your way in... and mucked it up, as was predictable. I told you then that the Circle would have to convince him, I told you! Now you are trying to get Richard's closest relative-his father in all that counts-to pressure him in your place. Shame on you! Take Richard to the Circle. Let them explain it... or let him go home! Quit stalling! Do it!"

What I had always thought of as a closet in Uncle's den turned out to look like an elevator inside. LAzarus Long and I went into it together; he closed the door and I saw that, where an elevator usually has floor numbers with touchplates for each number, there was a display of lighted symbols-signs of the Zodiac I thought, then changed my mind, as there is no bat in the Zodiac, no black widow spider, certainly no stegosaurus.

At the bottom, by itself, was a snake eating its own tail- the world snake, Ouroboros. A disgusting symbol at best.

Lazarus placed his hand over it.

The closet, or elevator cage, or small room, changed. How, I am not certain. It simply blinked and was different. "Through here," Lazarus said, and opened a door on the far side.

Stretching from that door was a long corridor that would never fit inside my uncle's house. But views I could see through windows that lined that long passageway did not fit his farm, either. The land looked like Iowa, yes-but Iowa untouched by the plow, never cleared for farming.

We stepped into this passage and were at once at its far end. "Through there," Lazarus said, pointing.

An archway melted out of a stone wall. The passage beyond it was gloomy. I looked around to speak to Lazarus; he was gone.

I said to myself, Lazarus, I told you not to play games with me... and turned around to go back down the long passage, back through Uncle Jock's den, find Hazel and leave. I had had it, fed up with his games.

There was no passage behind me.

I promised Lazarus a clop in the head and followed the only available route. It remained gloomy but always with a light a little farther ahead. Shortly, five minutes or less, it ended in a small, comfortable lounge, well-lighted from nowhere. A brassy uninflected voice said, "Please sit down. You will be called."

I sat down in an easy chair and laid my cane aside. A small table by it held magazines and a newspaper. I glanced at each one, looking for anachronisms, but found none. The periodicals were all ones that I recalled as available in Iowa in the seventies; they carried dates of July 2177 or earlier. The newspaper was the Grinnell Herald-Register, dated Friday, June 27, 2177.

I started to put it down, as the Herald-Register is not exactly exciting. Uncle subscribed to a daily printout from Des Moines and, of course, the Kansas City Star, but our local paper was good only for campus notes, local notices, and the sort of "news" and "society" items that are published to display as many local names as possible.

But an ad caught my eye: On Sunday, July twentieth, one night only, at Des Moines Municipal Opera House, the Halifax Ballet Theater will present Midsummer Night's Dream, with the sensational new star Luanna Pauline as Titania.

I read it twice... and promised myself that I would take Hazel to see it. It would be a special anniversary: I had met Mistress Gwendolyn Novak at Golden Rule's Day One Ball, Neil Armstrong Day, July twentieth a year ago (never mind that silly time loop) and this would make a delightful reprise of the gala eve of our wedding day (without, this time, some unmannerly oaf crashing our party and dying at our table).

Would a one-gravity performance be disappointing after having seen the Queen of Fairies cutting didoes high in the air? No, this was a sentimental journey; it would not matter. Besides, Luanna Pauline had made (would make, will make) her reputation dancing in one gravity-it would be a fascinating contrast. We could go backstage and tell her that we saw her dance Titania at one-third gravity in the Circus Room of Golden Rule. Oh, certainly-when Golden Rule does not yet exist for another three years! I began to understand why the Code had limitations on loose talk.

Never mind. On Neil Armstrong Day I would gift my beautiful bride with this sentimental celebration.

While I was looking at the Herald-Register, an abstract
design on the wall changed to a motto in glowing letters:
A Stitch in Time Saves Nine Billion
While I watched, it changed to:
A Paradox Can Be Paradoctored
Then:
The Early Worm Has a Death Wish
Followed by:
Don't Try TOO Hard; You Might Succeed

I was trying to figure out that last one when it suddenly changed to "Why Are You Staring at a Blank Wall?"-and it was a blank wall. Then on it appeared, large, the World Snake, and, inside the circle it made by its nauseating way of eating, letters were chasing themselves. Then they leveled out into a straight line:

Making Order Out of Chaos Then under that:

THE

CIRCLE OF OUROBOROS

This was displaced by another archway; that brassy voice said: "Please enter."

I grabbed my cane and went through the archway and found myself translated to the exact center of a large circular room. There is such a thing as too much service.

There were a dozen-odd people seated around the room on a dais about a meter high-a theater in the round, with me in the leading role... in the sense in which an insect pinned to the stage of a microscope is the star of the show. That brassy voice said, "State your full name."

"Richard Colin Ames Campbell. What is this? A trial?"

"Yes, in one sense."

"You can adjourn court right now; I'm not having any. If anyone is on trial, it is all of you-as I want nothing from you but you seem to want something from me. It is up to you to convince me, not the other way around. Keep that clear in your mind."

I turned slowly around, looking over my "judges." I found a friendly face, Hilda Burroughs, and felt enormously better. She threw me a kiss; I caught it and ate it. But I was enormously surprised, too. I would expect to find this tiny beauty at any gathering requiring elegance and grace... but not as a member of a group that had been represented to me as being the most powerful council in all history and any universe.

Then I recognized another face: Lazarus. He nodded; I returned his nod. He said, "Please don't be impatient. Colonel. Allow protocol to proceed."

I said, "Protocol is either useful or it should be abolished. I am standing and all of you are seated. That is protocol establishing dominance. And you can stuff it! If I don't have a chair in ten seconds I am leaving. Your chair will do."

That invisible robot with the brassy voice placed an upholstered easy chair back of my knees so fast that I had no excuse to leave. I sank back into it and put my cane across my knees. "Comfortable?" Lazarus inquired.

"Yes, thank you." "Good. The next item is protocol, too-introductions. I do not think you will find it objectionable."

The brassy voice started in again, naming members-"Companions"-of the Circle of Ouroboros, governing body of the omniversal Time Corps. Each time one was named, my chair faced that companion. But I felt no movement.

"Master Mobyas Toras, for Barsoom, time line one, coded 'John Carter.'"

"Barsoom"? Poppycock! But I found myself standing up and bowing in answer to a gentle smile and a gesture suggesting a blessing. He was ancient, and hardly more than skin and bones. He wore a sword but I felt sure that he had not wielded one in generations. He was huddled in a heavy silk wrap much like that worn by Buddhist priests. His skin was polished mahogany, more strongly red than any North American "redskin"-in short he looked exactly like the fictional descriptions in the tales of Barsoom... a result easy to achieve with makeup, a couple of meters of cloth, and a prop

sword. So why did I stand up? (Because Aunt Abby had striped my calves for any failure whatever in politeness to my elders?

Nonsense. I knew that he was authentic when I laid eyes on him. That my conviction was preposterous did not alter it.)

"Her Wisdom Star, Arbiter of the Ninety Universes, composite time lines, code 'Cyrano.'"

Her Wisdom smiled at me and I wiggled like a puppy. I'm no judge of wisdom but I am certain that males with high blood pressure and any history of cardiac problems or T.I.A. should not be too close to her. Star, Mrs. Gordon, is as tall or taller than I, weighs more and all of it muscle but her breasts and that slight layer that smooths female body lines. She was wearing too little for Poweshiek County, quite a lot for Boondock.

Star may not be the most beautiful woman in all her many universes but she may be the sexiest-in a sultry. Girl Scout fashion. Just walking through a room she is in should change a boy into a man.

"Woodrow Wilson Smith, Senior of the Howard Families, time line two, code 'Leslie LeCroix.'" Lazarus and I again exchanged nods.

"Dr. Jubal Harshaw, time line three, code 'Neil Ann-strong.'"

Dr. Harshaw raised his hand in a half salute and smiled; I answered the same way-and made a note to buttonhole him, back in Boondock perhaps, about the many legends of the "Man from Mars." How much was truth, how much was fiction?

"Dr. Hilda Mac Burroughs, time line four, code 'Ballox O'Malley.'" Hilda and I exchanged smiles.

"Commander Ted Smith, time line five, code 'DuQuesne.'" Commander Smith was a square-jawed athlete with ice-blue eyes. He was dressed in an undecorated gray uniform, carrying a bolstered hand gun, and wearing a bejeweled heavy bracelet.

"Captain John Sterling, time line six, code "Neil Armstrong alternate time line.'" I looked at my boyhood hero and considered the possibility that I was asleep and having a vivid dream. Hazel had told me and told me again that the hero of her space opera was real... but not even the repeated use of the code phrase "Operation Galactic Overlord" had convinced me... and now here he was: the foe of the Overlord.

Or was it he? What proof?

"Sky Marshal Samuel Beaux, time line seven, code 'Fair-acre.'" Marshal Beaux was over two meters tall, massed at least a hundred and ten kilos, all of it muscle and rhinoceros hide. He was dressed in a midnight black uniform and a frown, and was as beautiful as a black panther. He stared at me with jungle eyes.

Lazarus announced, "I declare quorum. The Circle is closed. Dr. Hilda Burroughs now speaks for the Circle."

Hilda smiled at me and said, "Colonel Campbell, I have been conscripted to explain to you our purposes and enough of our methods to enable you to see how the job you are being asked to do fits into the master plan, and why it must be done. Don't hesitate to interrupt, or to argue, or to demand more details. We can continue this discussion from now until lunch-time. Or for the next ten years. Or for a truly long time. As long as necessary."

Sky Marshal Beaux cut in with: "Speak for yourself, Mrs. Burroughs. I'm leaving in thirty minutes."

Hilda said, "Sambo, you really should address the chair. I can't let you leave until you speak your piece, but, if you need to leave, you can speak now. Please explain what you do and why."

"Why is this man being coddled? I've never been asked to explain my duties to a raw recruit before. This is ridiculous."

"Nevertheless I ask you to do so." The sky marshal settled back in his chair and said nothing. Lazarus said, "Sambo, I know this is without precedent but all the Companions including the three who are not here have agreed that Task Adam Selene is essential to Operation Galactic Overlord, that Overlord is essential to Campaign Boskone, that Boskone is essential to our Plan Long View... and that Colonel Campbell is essential to Task Adam Selene. The Circle is closed on this, no dissent. We need Campbell's services, given fully and freely. So we must persuade him. You need not go first ... but, if you expect to be excused from the Circle in thirty minutes, you had better speak up." "And if I don't choose to?" "Your problem. You are free to resign; all of us are, anytime. And the Circle is free to terminate you."

"Are you threatening me?"

"No." Lazarus glanced at his wrist. "You've stalled for four minutes against the unanimous decision of the Circle. If you expect to comply with the Circle's decision, you are running out of minutes."

"Oh, very well. Campbell, I am commanding officer of the armed forces of the Time Corps-"

"Correction," Lazarus Long interrupted. "Sky Marshal Beaux is the chief of staff of-"

"It's the same thing!"

"It is not the same thing and I knew exactly what I was doing when I set it up that way. Colonel Campbell, the Time Corps sometimes intervenes in key battles in history. Histories. The Corps' board of historians seeks to identify cusps where judicious use of force might change history in fashions that we believe, in our limited wisdom, would be better for the human race-and this policy strongly affects and is affected by Task Adam Selene, I must add. If the Circle closes on a recommendation by the historians, military action is mounted, and a commander in chief for that operation is selected by the Circle."

Lazarus turned and looked directly at Beaux. "Sky Marshal Beaux is a highly skilled military commander, perhaps the best in all history. He is usually selected to command. But the Circle picks the commander of each task force. This policy keeps ultimate power out of the hands of military commanders. I must add that the Chief of Staff is an auditor without a vote; he is not a Companion of this Circle. Sambo, do you have anything to add?"

"You seem to have made my speech."

"Because you were stalling. You are free to correct, amend, and elaborate."

"Oh, never mind. You should give elocution lessons."

"Do you now wish to be excused?"

"Are you telling me to leave?"

"No."

"I'll hang around awhile as I want to see what you do with this joker. Why didn't you simply conscript him and assign him to Task Selene? He's an obvious criminal type; look at his skull, note his attitude toward authority. On my home planet we never use

anything as sloppy and unreliable as volunteers ... and we don't have a criminal class because we draft them into the forces as fast as they show their heads. There are no better fighters than the criminal type if you catch 'em young, rule them with iron discipline, and keep them more scared of their sergeants than they can possibly be of the enemy."

"That will do. Sambo. Please refrain from expressing opinion uninvited."

"I thought you were the great champion of free speech?"

"I am. But there is no free lunch. If you want to make a speech, you can hire your own hall; this one is paid for by the Circle. Hilda. Speak up, dear."

"Very well. Richard, most interventions recommended by our historians and mathematicians are not brute force, but actions far more subtle, carried out by individual field operatives ... such as your gal Hazel, who is a real fox when it comes to robbing a henhouse. You know what we are trying to do in Task Adam Selene; you don't know what it is for, I believe. Our methods of prognosticating the results of a change introduced into history are less than perfect. Whether it's digging in on one side in a key battle, or something as simple as supplying a high school student with a condom some midnight and thereby avoiding the birth of a Hitler or a Napoleon, we can never predict the results as well as we need to. Usually we have to do it, then send a field operative down that new timeline to report the changes."

"Hilda," said Lazarus, "may I offer a horrible example?" "Certainly, Woodie. But make it march. I plan to finish before lunch."

"Colonel Campbell, I come from a world identical with yours to about 1939. Divergence, as usual, showed most at the start of space flight. Both your world and mine showed a tendency toward religious hysteria. In mine it peaked with a television evangelist named Nehemiah Scudder. His brand of fire and brimstone and scapegoatism-Jews of course; no novelty-peaked at a time when unemployment also peaked and public debt and inflation got out of hand; the result was a religious dictatorship, a totalitarian government as brutal as my world has ever seen.

"So this Circle set up an operation to get rid of Nehemiah

Scudder. Nothing as crass as assassination; the specific method Hilda mentioned was used. A high school boy without a rubber was provided with one by a field operative, and the little bastard who became Nehemiah Scudder was never bom. So time line two-mine-was split and time line eleven was created, allee samee but without Nehemiah Scudder, the Prophet. Bound to be better, right?

"Wrong. In my time line World War Three, the nuclear war-sometimes known by other names-badly damaged Europe but did not spread; North America under the Prophet had opted out of international affairs. In time line eleven the war started a little sooner, in the Middle East, spread to all the world overnight... and a hundred years later it was still impossible to find any life superior to cockroaches on the land masses of what had once been the cool green hills of Earth. Take it, Hilda."

"Thank you, too much! Lazarus leaves me with a planet glowing in the dark to show why we need better prediction methods. We hope to use Adam Selene-supervising computer Holmes IV known as 'Mike'-the programs and memories that make him unique-to tie the best computers of Tertius and some other planets into a mammoth logic that can correctly project the results of a defined change in history... so that we won't swap Nehemiah Scudder-who can be endured-for a ruined planet that cannot be endured. Lazarus, should I mention the supersnooperscope?"

"You just did, so you had better."

"Richard, I'm way out of my depth; I'm just a simple housewife-"

A groan went up in that hall. Lazarus may have led it but it seemed to be unanimous.

"-who lacks a technical background. But I do know that engineering progress depends on accurate instruments, and that accurate instruments ever since the twentieth century-my century-have depended on progress in electronics. My number-one husband Jake Burroughs and Dr. Libby Long and Dr. Deety Carter are whipping up a little doozy combining Jake's space-time twister with television and the ordinary snooper-scope. With it you will be able not only to watch what your wife is doing while you are away overnight but also to watch what she will be doing ten years from now. Or fifty. Or five hundred.

"Or it could let the Circle of Ouroboros see what would be the result of an intervention before it is too late to refrain. Maybe. With the unique power of Holmes IV-maybe yes. We'll see. But it is as certain as anything can be in this quicksand world that Mike Holmes IV can improve the performance of the Circle of Ouroboros enormously even if the supersnooperscope never comes on line.

"Since we are trying hard to make things better, more decent, happier for everyone, I hope that you will see that Task Adam Selene is worth doing. Any questions?"

"I have one, Hilda."

"Yes, Jubal?"

"Has our friend Richard been indoctrinated in the concept of the World as Myth?"

"I barely mentioned it, once, in telling him how we four -Zeb and Deety, Jake and I- were hounded off our planet and erased out of the script. I think Hazel has done better. Richard?" "Not anything I could get my teeth into. Nothing that made sense. And-forgive me, Hilda-I found your story hard to swallow."

"Of course, dear; I don't believe it myself. Except late at night. Jubal, you had better take it."

Dr. Harshaw answered, "Very well. The World as Myth is a subtle concept. It has sometimes been called multiperson solipsism, despite the internal illogic of that phrase. Yet illogic may be necessary, as the concept denies logic. For many centuries religion held sway as the explanation of the universe- or multiverse. The details of revealed religions differed wildly but were essentially the same: Somewhere up in the sky-or down in the earth-or in a volcano-any inaccessible place- there was an old man in a nightshirt who knew everything and was all powerful and created everything and rewarded and punished... and could be bribed.

"Sometimes this Almighty was female but not often because human males are usually bigger, stronger, and more belligerent;

God was created in Pop's image.

"The Almighty-God idea came under attack because it explained nothing; it simply pushed all explanations one stage farther away. In the nineteenth century atheistic positivism started displacing the Almighty-God notion in that minority of the population that bathed regularly.

"Atheism had a limited run, as it, too, explains nothing, being merely Godism turned upside down. Logical positivism was based on the physical science of the

nineteenth century which, physicists of that century honestly believed, fully explained the universe as a piece of clockwork.

"The physicists of the twentieth century made short work of that idea. Quantum mechanics and Schrodringer's cat tossed out the clockwork world of 1890 and replaced it with a fog of probability in which anything could happen. Of course the intellectual class did not notice this for many decades, as an intellectual is a highly educated man who can't do arithmetic with his shoes on, and is proud of his lack. Nevertheless, with the death of positivism, Godism and Creationism came back stronger than ever.

"In the late twentieth century -correct me when I' m wrong, Hilda-Hilda and her family were driven off Earth by a devil, one they dubbed 'the Beast.' They fled in a vehicle you have met. Gay Deceiver, and in their search for safety they visited many dimensions, many universes... and Hilda made the greatest philosophical discovery of all time."

"I'll bet you say that to all the girls!"

"Quiet, dear. They visited, among more mundane places, the Land of Oz-"

I sat up with a jerk. Not too much sleep last night and Dr. Harshaw's lecture was sleep-inducing. "Did you say 'Oz'?"

"I tell you three times. Oz, Oz, Oz. They did indeed visit the fairyland dreamed up by L. Frank Baum. And the Wonderland invented by the Reverend Mr. Dodgson to please Alice. And other places known only to fiction. Hilda discovered what none of us had noticed before because we were inside it: The World is Myth. We create it ourselves-and we change it ourselves. A truly strong myth maker, such as Homer, such as Baum, such as the creator of Tarzan, creates substantial and lasting worlds ... whereas the fiddlin', unimaginative liars and fabulists shape nothing new and their tedious dreams are forgotten. On this observed fact, Richard-not religion but verifiable fact-is based the work of the Circle of Ouroboros. Hilda?"

"Only a short time until we should break for lunch. Richard, do you have any comment now?"

"You won't like it."

Lazarus said, "Spill it, Bub."

"I not only will not risk my life on wordy nonsense, I will do all that I can to keep Hazel from doing so. If you really want, and need, the programs and memories of that out-of-date Lunar computer there are at least two better ways to get them."

"Keep talking."

"One way simply uses money. Set up a front organization, an academic fakery. Funnel money into Galileo University as grants, and walk in the front door of the computer room, and take what you want. The other way is to use enough force to do a real job. Don't send an elderly married couple to try to watergate it. You cosmic do-gooders have not convinced me."

"Let's see your ticket!"

It was Little Black Sambo, the sky marshal. "What ticket?" "The one that entitles you to unscrew the inscrutable. Show it. You are just a lily-livered coward, too yellow to do your plain duty."

"Really? Who appointed you God? Look, boy, I'm mighty glad that your skin color matches mine."

"Why so?" "Because, if it didn't, I would be called a racist for the way I despise you."

I saw him draw his side arm, but my cane, damn it!, had slid to the floor. I was reaching for it when his bolt hit me, low on the left.

As he was hit from three sides, two to the heart, one to the head, by John Sterling, by Lazarus, by Commander Smith- three crack gunmen, where one would have sufficed.

I didn't hurt yet. But I knew I was gut-shot -bad, final bad, if I didn't get help fast.

But something was happening to Samuel Beaux. He leaned forward and fell off his chair, dead as King Charles-and his body began to disappear. It didn't fade out; it disappeared in swipes, through the middle, then across the face, as if someone had taken an eraser to a chalkboard. Then he was gone completely; not even blood was left. Even his chair was gone.

And the wound in my gut was gone.

XXIX

'There may come a time when the lion and the lamb will lie down together, but I am still betting on the lion."

HENRY WHEELER SHAW 1818-1885

"Wouldn't it be better," I objected, "to have me pull a sword out of a stone? If you really want to sell the product? The whole plan is silly!"

We were seated at a picnic table in the east orchard, Mannie Davis, Captain John Sterling, Uncle Jock, Jubal Harshaw, and I-and a Professor Rufo, a bald-headed old coot introduced to me as an aide to Her Wisdom and (impossible!) her grandson. (But having seen with my own bloodshot eyes some of the results of Dr. Ishtar's witchcraft, I was no longer using the word "impossible" as freely as I did a week ago.)

Pixel was with us, too, but he had long since finished his lunch and was down in the grass, trying to catch a butterfly. They were evenly matched but the butterfly was ahead on points.

The bright and cloudless sky promised a temperature of thirty-eight or forty by midaftemoon; my aunts had elected to eat lunch in their air-conditioned kitchen. But there was a breeze and it was cool enough under the trees-a lovely day, just right for a picnic; it reminded me of our conference with Father Hendrik Schultz in the orchard of Old MacDonald's Farm just a week ago (and eleven years forward).

Except that Hazel was not with me.

That groused me but I tried not to show it. When the Circle opened for lunch. Aunt Til had a message waiting for me. "Hazel left here with Lafe just a few minutes ago," she told me. "She asked me to tell you that she will not be here for lunch but expects to see you later this afternoon... and will be here for supper without fail."

A damned skimpy message! I needed to discuss with Hazel all the talk and happenings in the closed Circle. Damn it, how could I decide anything until I had a chance to talk it over with my wife?

Women and cats do what they do; there is nothing a man can do about it.

"I'll sell you a sword in a stone," said Professor Rufo, "cheap. Like new. Used just once, by King Arthur. In the long run it didn't do him any good and I can't guarantee that it will help you... but I don't mind turning a profit on it."

Uncle said, "Rufo, you would sell tickets to your own funeral."

"Not 'would.' Did. Netted enough to buy a round toowitt

I badly needed... because so many people wanted to be certain

I was dead."

"So you cheated them." "Not at all. The tickets did not state that I was dead; they simply called for 'admit bearer' to my funeral. And it was a nice funeral, the nicest I've ever had... especially the climax when I sat up in my coffin and sang the oratorio from The Death ofJesse James, doing all the parts myself. Nobody asked for his money back. Some even left before I reached my high note. Rude creatures. Go to your own funeral and you'll soon learn who your real friends are." Rufo turned to me. "You want that sword and stone? Cheap but it has to be cash. Can't let you have credit; your life expectancy isn't all that good. Shall we say six hundred thousand imperial dollars in small bills? No denomination higher than ten thousand."

"Professor, I don't want a sword in a stone; it's just that this whole silly business sounds like the 'true prince' nonsense of pre-Armstrong romances. Can't do it openly with money, can't do it safely with enough force to hold the losses down to zero, has to be me and my wife with nothing but a scout knife. That's a crummy plot; even a confessions book would reject it. It's logically impossible."

"Five hundred fifty thousand and I pick up the sales tax."

"Richard," Jubal Harshaw answered, "it is logic itself that is impossible. For millennia philosophers and saints have tried to reason out a logical scheme for the universe... until Hilda came along and demonstrated that the universe is not logical but whimsical, its structure depending solely on the dreams and nightmares of non-logical dreamers." He shrugged, almost spilling his Tuborg. "If the great brains had not been so hoodwinked by their shared conviction that the universe must contain a consistent and logical structure they could find by careful analysis and synthesis, they would have spotted the glaring fact that the universe-the multiverse-contains neither of logic nor justice save where we, or others like us, impose such qualities on a world of chaos and cruelty."

"Five hundred thousand and that's my last offer."

"So why should Hazel and I risk our necks?" I added, "Pixel! Leave that insect alone!"

"Butterflies are not insects," Captain John Sterling said soberly. "They are self-propelled flowers. The Lady Hazel taught me that many years ago." He reached down and gently picked up Pixel. "How were you getting him to drink?"

I showed him, using water and my fingertip. Then Sterling improved on it, offering the kitten a tiny puddle in the palm of his hand. The kitten licked at it, and then was lapping cat-property, curling his dainty tongue down into the spoonful of water.

Sterling bothered me. I knew his origin, or thought I did, and thus had trouble believing in him even as I spoke with him. Yet it is impossible not to believe in a man when you see him, and hear him, crunching celery and potato chips.

Yet he had a two-dimensional quality. He neither smiled nor laughed. He was unfailingly polite but always dead serious. I had tried to thank him for saving my life by

shooting what's-his-name; Sterling had stopped me. "My duty. He was expendable; you are not."

"Four hundred thousand. Colonel, are there any deviled eggs down there?"

I passed the stuffed eggs to Rufo. "Shall I tell you what to do with your sword in a stone? First, pull out the sword, then-"

"Let's not be crude. Three hundred and fifty thousand." "Professor, I wouldn't have it as a door prize. I was simply making a point."

"Better take an option, at least; you'll need it for the boff opening when they shoot this as a stereoseries."

"No publicity. That's one of the conditions imposed on me. If I do it."

"No publicity until after. Then there has to be publicity; it must wind up in the history books. Mannie, tell 'em why you have never published your memoirs of the Revolution."

Mr. Davis answered, "Mike sleeping. Not have people bother him. Nyet."

Uncle Jock said, "Manuel, you have an unpublished autobiography?"

My stepfather-in-law nodded. "Necessary. Prof dead, Wyoming dead, Mike dead maybe. Am only witness true story of Loonie Revolution. Lies, lots of lies, by cobbers not there." He scratched his chin with his left hand, the one I knew to be artificial. Or so I heard. This hand looked just like his right hand. A transplant? "Stored with Mike before out to Asteroids. We rescue Mike-then publish maybe." Davis looked at me. "Want to hear how I met my daughter Hazel?"

"Yes indeed!" I answered, and Sterling strongly agreed.

"Was Monday thirteen May, 2075, in L-City. Talk-talk in Stilyagi Hall, how to fight Warden. Not revolution, just sad stupid talk-talk, unhappy people. Skinny little girl sat on floor down front. Orange hair, no breasts. Ten, maybe eleven. Listens every word, claps hard, dead serious.

"Yellow Jackets, Warden's cops, break in, start killing. Too busy to keep track of skinny redheads. Jackets kill my best friend... when see her in action. Throws self through air, rolled in ball, hits Yellow Jacket in knees, down he goes. I break his jaw with left hand-not this hand; number-two-and step over him, dragging my wife Wyoming-not wife then-with me. Skinny flametop is gone, don't see her some weeks. But, friends, hard rock truth. Hazel as little girl fought so hard and smart that she saved her Papa Mannie and her Mama Wyoh both from Warden's finks long before she knew she was ours."

Manuel Davis smiled wistfully. "Did find her, Davis Family opted her-daughter, not wife. Still a baby. But not baby when counts! Worked hard to free Luna every day, every hour, every minute, danger don' stop her never. Fourth o' July, 2076, Hazel Meade Davis youngest comrade signing Declaration of Independence. No comrade rated it more!"

Mr. Davis had tears in his eyes. So did I.

Captain Sterling stood up. "Mr. Davis, I am humbly proud to have heard that story. Mr. Campbell, I have enjoyed your hospitality. Colonel Campbell, I hope you decide to fight with us; we need you. And now, if I may be excused, I must leave. As the Galactic Overlord does not take long lunch hours, I must not."

Uncle Jock said, "Shucks, John, you've got to have some R and R now and then. Come go dinosaur hunting with me again. Time spent in the Mesozoic won't affect your

quest; the Overlord will never know you're away. That's the greatest beauty of timejumping."

"I would know that I was away. But I do thank you. I enjoyed that hunt." He bowed and left.

Dr. Harshaw said quietly, "There goes real nobility. When at last he destroys the Overlord, he will be erased. He knows it. It doesn't stop him."

"Why must he be erased?" I demanded.

"Eh? Colonel, I know that this is new to you... but you are, or have been, a fabulist yourself, have you not?"

"Still am, as far as I know. Finished a long one and sent it off to my agent just ten days ago. Must get back to work soon- got a wife to support."

"Then you know that, for plot purposes, especially in adventure stories, heroes and villains come in complementary pairs. Each is necessary to the other."

"Yes, but- Look, lay it on the bar. This man who just left is truly the character that Hazel-and her son, Roger Stone- created for their series The Scourge of the SpacewaysT'

"Yes. Hazel and her son created him. Sterling knows it. Look, sir, all of us are fictions, someone's fabulist dreams.

But usually we do not know it. John Sterling knows it, and is strong enough to stand up to it. He knows his role and his destiny; he accepts it."

"He doesn't have to be erased." Dr. Harshaw looked puzzled. "But you are a writer. Uh...a literary writer perhaps? Plotless?"

"Me? I don't know how to write literature; I write stories.

For printout or three-dee or even bound books, but all sorts. Sin, suffer, and repent. Horse opera. Space opera. War. Murder. Spies. Sea stories. Whatever. Hazel and I are going to revive her classic series, with Captain Sterling in the lead role. As always. So what's this noise about 'erasing' him?"

"You are not going to let him destroy the Galactic Overlord? You should, you must, as the Overlord is every bit as evil as Boskone."

"Oh, certainly! First thirteen weeks. Should have happened years back."

"But he couldn't. The series was dropped with both hero and villain still alive. Sterling has been forced to fight only a holding action ever since."

"Oh. Well, we'll fix that. Overlord delenda est!"

"Then what does Sterling do?" I started to answer, suddenly realized that the question was not inquiry but Socratic. For each fine cat, a fine rat. A hero of Sterling's stature must oppose a villain as strong as he is. If we kill off the Overlord, then we must dream up Son of Overlord, with just as many balls, teeth just as long, disposition just as vile, and steam coming out of his ears.

"I don't know. We'll think of something. Age him, maybe, and put him to pasture as commandant of the Star Patrol Academy. Some such. No need to kill him off. A job like that would not require a villain as horrendous as the Overlord." "Wouldn't it?" Harshaw asked quietly. "Uh- Maybe you would like to take over the series?" "Not me. I'm semi-retired. All I have now is The Stone-bender Family, a series strictly for laughs, no substantial villain required. Now I know the truth of the World as Myth I will never again create a real villain... and I thank Klono that I never have, not really, as I have only a limited belief in villainy."

"Well, I can't answer without Hazel anyhow; I'm the junior writer, in charge of punctuation and filling in weather and scenery; she controls plot. So I must change the subject. Uncle Jock, what was this you were saying to Captain Sterling about hunting dinosaurs? One of your jokes? Like the time you sawed off ten square klicks of the Ross Ice Shelf and towed it to Singapore, swimming sidestroke."

"Not sidestroke all the way; that's not possible."

"Come off it. Dinosaurs."

"What about dinosaurs? I like to hunt them. I took John Sterling with me once; he got a truly magnificent tyrannosaurus rex. Would you like to try it?"

"Are you serious? Uncle, you know I don't hunt. I don't like to shoot anything that can't shoot back."

"Oho! You misunderstood me, nephew. We don't kill the poor beasties. Killing a dinosaur is about as sporting as shooting a cow. And not as good meat. A dinosaur more than a year old is tough and tasteless. I did try them, years back, when some thought was being given to using dinosaur meat to quench a famine on time line seven. But the logistics were dreadful and, when you come right down to it, there is little justice in killing stupid lizards to feed stupid people; they had earned their famine. But hunting dinosaurs with cameras, that's real fun. It even gets sporting if you go after the big carnivores and happen to flush a bull who is feeling edgy and sexy-it improves your running. Or else. Dickie, there is a spot down about Wichita where I can promise you triceratops, several sorts of pterodactyls, duckbills, thunder lizards, and maybe a male stegosaurus all in one day. Once this caper is over we'll take a day off and do it. What do you say?"

"Is it that easy?"

"With the installed equipment the Mesozoic is no farther away than is THQ or Boondock. Time and space are illusions; the Burroughs irrelevancy gear will plunk you down in the middle of a herd of feeding and fornicating flapdoodles before you can say sixty-five million years."

"The way you phrased that invitation seemed to imply that you assume that I have closed on Task Adam Selene."

"Dickie, the equipment does indeed belong to the Time Corps... and it is expensive, how expensive we don't discuss. It was built to support Plan Long View; its recreational use is incidental. Yes, I implied that. Aren't you going to do it?"

Mannie Davis looked at me, with no expression. Rufo stood up, said loudly, "I've got to mosey along; Star has a chore for me. Thanks and thanks for the last time. Jock. Nice meeting you. Colonel." He left quickly. Harshaw said nothing.

I let out a deep breath. "Uncle, I might do it if Hazel insists. But I'm going to try to talk her out of it. Nothing has been offered me that convinces me that I am wrong about the two options I offered. Either of them is a more sensible approach to recovering the programs and memories that embody Holmes IV or Mike... and I am glad to stipulate that they should be recovered. But my methods are more logical."

Harshaw said, "It is not a matter of logic. Colonel." "It's my neck. Doctor. But in the long run I'll do what Hazel wishes... I think. It's just-" "Just what, Dickie?"

"I hate to go into action with inadequate intelligence! Always have. Uncle, for the past week or ten days-hard to figure it, the way I've bounced around-I've been haunted by unexplained and, well, murderous nonsense. Is the Overlord you talk about after me?

Does the fact that I'm mixed up in this account for the endless near misses? Or am I getting paranoid?"

"I don't know. Tell me about them." I started to do so. Shortly Harshaw took out a pocket notebook, started taking notes. I tried to remember all of it: Enrico Schultz and his weird remark about Tolliver and his mention of Walker Evans. His death. If it was his death. Bill. The curious behavior of the management of Golden Rule. Those rolligons and the killers in each. Jefferson Mao. The muggers at the Raffles- "Is that all?"

"Isn't that enough? No, not quite. What cargo was Auntie carrying? How did we get chivvied into flying a heap that durn near killed us? What were Lady Diana and her fat-headed husbands doing away out there in the wilds? If I could afford it I would spend endless money on sherlocks to dig out what was going on, what was truly aimed at me, what was just my nerves, what was simply coincidence."

Harshaw said, "There are no coincidences. One respect in which World as Myth is far simpler than earlier teleology is the simple fact that there are no accidents, no coincidences."

Uncle Jock said, "Jubal? I don't have the authority." "And I do. Yes." He stood up. "Both of us, I think." My uncle stood up, too. "Dickie boy, you wait right here; we'll be gone five minutes or so. Errand to do."

As they left, Davis stood up, "Excuse, please? Need change arm."

"Sure, Papa Mannie. No, no. Pixel! Beer is not for baby cats."

They were gone seven minutes by my Sonychron. But not, quite apparently, by their time. Uncle had grown a full beard. Harshaw had a new, pink knife scar across his left cheek. I looked at them. "Ghosts of Christmas past! What happened?"

"Everything. Is there any beer left there? Cissy," he said, not raising his voice, "could we have some beer? And Jubal and I have not eaten in some time. Hours. Days, maybe."

"Right away," Aunt Cissy's disembodied voice answered. "Dear? I think you ought to take a nap."

"Later."

"Just as soon as you have eaten. Forty minutes."

"Quit nagging me. Could I have tomato soup? For Jubal, too."

"I'll fetch soup and more of your picnic. Forty-five minutes until your nap; that's official. Til says so."

"Remind me to beat you."

"Yes, dear. But not today; you're exhausted."

"Very well." Uncle Jock turned to me. "Let's see, what'U you have first? Those rolligons? Your friend Hendrik Schultz handled that one; you can be sure it's thorough. He has turned out to be an ichiban field investigator. You can forget paranoia on that one, Dickie-two opponents, the Time Lords and the Scene Changers... and both of them after you as well as each other. You have a charmed life, son-bom to be hanged."

"What do you mean?-Time Lords and Scene Changers? And why me?"

"May not be their own names for themselves. The Lords and the Changers are groups doing the sort of thing the Circle does... but we don't see eye to eye with them. Dickie, you don't think that in all the universes to the Number of the Beast or more, we of the Circle would be the only ones to catch on to the truth and attempt to do something about it, do you?"

"I don't know anything about it, one way or another."

"Colonel," put in Dr. Harshaw, "a major shortcoming of World as Myth lies in the fact that we contend with... and often lose to... three sorts of antagonists: villains by design such as the Galactic Oveiiord, and groups like us but with different intentions-bad in our opinion, perhaps good in theirs-and the third and most powerful, the myth makers themselves-such as Homer and Twain and Shakespeare and Baum and Swift and their colleagues in the pantheon. But not those I have named. Their bodies have died; they live on by the immortal corpus of myth each has created... which does not change and therefore does not imperil us.

"But there are living myth makers, every one of them dangerous, every one of them casually uncaring as he revises a myth and erases a character." Harshaw smiled grimly. "The only way one can live with the knowledge is to realize first that it is the only game in town and second that it does not hurt. Erasure. Being X'd out of the story."

"How do you know that it doesn't hurt?"

"Because I refuse to entertain any other theory! Shall we get on with our report?"

"Dickie boy, you asked, 'Why me?' For the same reason Jubal and I left a pleasant lunch to work our tails off and to set many others to arduous and dangerous investigation in several time lines. Because of Task Adam Selene and your key part in it. Near as we can tell, the Time Lords want to kidnap Mike while the Scene Changers want to destroy him. But both groups want you dead; you're a menace to their plans."

"But at that time I had not even heard of Mike the Computer."

"Best time to kill you, wouldn't you say? Cissy, you are not only beautiful, you are pleasant to have around. Besides your hidden talents. Just put it down; we'll serve ourselves."

"Blagueur et gros menteur. You still must nap. Message from Til. You are not to come to the dinner table until you shave off that beard."

'Tell that baggage that I will starve before I will be henpecked."

"Yes, sir. And I feel the same way she does about it."

"Peace, woman."

"So I volunteer to shave you. And to cut your hair."

"I accept."

"Right after your nap."

"Begone. Jubal, did you have any of this jellied salad? It is something Til does exceptionally well... although all three of my owners are fine cooks."

"Will you put that in writing?"

"I told you to disappear. Jubal, living with three women takes fortitude."

"I know. I did so, for many years. Fortitude plus angelic disposition. And a taste for lazy living. But a group marriage, such as our Long Family, combines the advantages of bachelorhood, monogamy, and polygamy, with the drawbacks of none."

"I won't argue it but I'll stick with my three Graces as long as they'll let me hang around. Now let's see- Enrico Schultz. No such character."

"So?" I answered. "He made some horrid stains on my tablecloth."

"So he had another name. But you knew that. Best hypothesis makes him a member of the same gang as your friend Bill... who was a smiling villain if one ever smiled, as well as a consummate actor. We call them The Revisionists. Motivation had to be Adam Selene. Not Walker Evans."

"Why did he mention Walker Evans?"

'To shake you up, maybe. Dickie, I didn't know about General Evans until you brought the matter up, since that debacle is still in my future. My normal future. I can see how it weighs on your mind. Will weigh on your mind. Remember, I didn't know that you had been invalided out of the Andorran Contract Crusaders until you told me.

"Anyhow- All of the 'Friends of Walker Evans' are dead except you and one who went to the Asteroids and can't be found. This is as of July tenth, 2188, eleven years forward. Unless you want to talk to any alive on some date not quite so forward."

"Can't see any reason to."

"So it seemed to us. Now Walker Evans himself. Lazarus handled this... and a spot of world-changing, partly to show you what can be done. No attempt was made to revise the battle. It would be difficult, in 2177, to revise a battle in 2178 without utterly changing your life. Either kill you that year, or not lose your leg and you stay in the service-yes, I now know about your leg although it's forward from here. Either way, you don't go to Golden Rule, you don't marry Hazel... and we aren't sitting here, talking about it. World-changing is touchy, Dickie-best done in homeopathic doses.

"Lazarus has two messages for you. He says that you should feel no personal guilt over that debacle. To do so would be as silly as a subordinate of Custer feeling guilty over Little Big Horn... to which he adds that Custer was a far more brilliant general than Evans ever was. Lazarus speaks as one who has held every rank from private to commander in chief, in experience spread over many centuries and seventeen wars.

"That's the first message. The second is this: Tell your nephew that, yes, it horrifies nice people. But it happens. Only those who go out beyond the end of street lights and of pavements know how such things can happen. He says that he is certain that Walker Evans would not hold it against you. Dickie, what's he talking about?"

"Had he wanted you to know, he would have told you." "Reasonable. Was General Evans a man of good taste?" "What?" I stared at my uncle-then answered reluctantly:

"Well, no, I would not say so. I found him tough and a bit stringy."

"Now we have it out in the open1-"

"Yes, damn you!" "-and I can tell you the rest, the world-changing. A field operative hid a couple of ration packs under the General's body. When you moved the body, you found them... and it was just enough that none of the Friends of Walker Evans ever reached that degree of hunger necessary to overcome the taboo. So it never happened."

"Then why do I remember it?"

"Do you?"

"Why-" "You remember finding jettisoned field rations under the body. And how good you felt!"

"Uncle, this is crazy."

"That's world-changing. For a time, you have a memory. Then a faded memory of a memory. Then nothing. It never happened, Dickie. You went through one hell of an ordeal and lost a leg. But you did not eat your commanding officer."

Uncle went on, "Jubal, what do we have left that's important? Dickie, you can't expect to have all your questions answered; no man can expect that. Mmm, oh, yes, those diseases- You had two of them; the rest was hype. You were cured in about three days;

then they kept you in a controlled-memory field and put a new leg on you... and did something else. Haven't you felt better lately? Brisk? More energetic?"

"Well... yes. But it dates from the day I married Hazel, not from Boondock."

"Both, probably. During the month they had you available Dr. Ishtar gave you a booster. I learned that they shifted you from the rejuvenation clinic to the hospital just the day before they let you wake up. Oh, they really swindled you, boy; they gave you a new leg and made you thirty years younger. I think you ought to sue them."

"Oh, knock it off. How about that heat bomb? More hype?"

"Maybe, maybe not. Not decided, just the time tick spiked. The thing is-"

Harshaw intervened. "Richard, we think now that we may be able to finish Task Adam Selene before a heat bomb would be necessary. There are some plans. So the heat bombing right now is in the status of Schrodinger's Cat. The outcome depends on Task Adam Selene. And vice versa. We'll see."

"These plans- You're assuming that I'll come around."

"No. We're assuming that you won't."

"Humm... If you are assuming that I won't, why are you two bothering to tell me all this?"

Uncle said in a tired voice, "Dickie boy, thousands and thousands of man-hours have gone into satisfying your childish demand to have the veil lifted from the unknown. You think we are simply going to burn the results? Sit back down and pay attention. Mmm, stay out of Luna City and Golden Rule after June of 2188; there are warrants out for you for eight murders."

"Eight! Who?"

"Mmm, Tolliver, Enrico Schultz, Johnson, Oswald Progant, Rasmussen-"

"Rasmussen!"

"Do you know him?"

"I wore his fez for ten minutes; I never laid eyes on him."

"Let's not waste time on these murder charges. All they mean is that someone is out to get you, both in L-City and in Golden Rule. With three timejumping groups after you, that's not surprising. You want them cleared up; they can be cleared up later. If needed. If you don't just go to Tertius and forget it. Oh, yes-those code groups. Not a message, just a prop to get you to open that door. But you didn't let yourself be killed quietly the way you were supposed to. Dickie, you're a troublemaker."

"Gosh, I'm sorry."

"Any more questions?"

"Go take your nap."

"Not yet. Jubal. Now?"

"Certainly." Dr. Harshaw got up and left.

"Dickie."

"Yes, Uncle."

"She loves you, boy; she really does. God knows why. But mat does not mean that she will tell you the truth or always act in your interest. Be warned."

"Uncle Jock, it never does any good to warn a man about his wife. Would you accept any advice from me about Cissy?"

"Of course not. But I'm older than you are and much more experienced."

"Answer me." "Let's change the subject instead. You don't like Lazarus Long."

I grinned at him. "Uncle, the only thing that persuades me that he might be as old as he is reputed to be is that it would take more than one ordinary lifetime to grow as cantankerous and generally difficult as he is. He rubs me the wrong way every time. And the bastard makes it worse by putting me under obligations to him. This foot- From a clone of his- did you know that? And that dustup you heard about this morning. Lazarus shot that bloke what's-his-name who tried to kill me. But Captain Sterling and Commander Smith did, too, and probably quicker. Or maybe not. Either way I had to thank all three of them. Damn it, I'd like to save his life just once to balance the books. The bastard."

"No way to talk, Dickie. Abby would have trounced you."

"So she would have. I take it back." "Besides- Your own parents never were married."

"So I've often been told. Colorfully."

"I mean it literally. Your mother was my favorite sister. Much younger than I. Pretty child. I taught her to walk. Played with her when she was growing up, spoiled her every way I could. So, naturally, when she was in what used to be called 'trouble' she came to her big brother. And to your Aunt Abby. Dickie, it was not that your father wasn't around; it was that your grandfather disliked him, disliked him as intensely as-well, as you dislike Lazarus Long.

"I don't mean Mr. Ames. You got his name but he met and married Wendy after you were bom. And we took you and raised you. Your mother was going to come for you, after a year-she said Ames deserved that much-but she didn't live that long. So Abby was your mother in every way but biology."

"Uncle, Aunt Abby was the best mother a boy could want. Look, those peach switchings were good for me. I know it."

"I'm pleased to hear you say so. Dickie, I love all your aunts ... but there will never be another Abby. Hazel reminds me of her. Dickie, have you made up your mind?"

"Uncle, I'll fight it all the way. How can I okay letting my bride risk a caper that she stands only a fifty-fifty chance of coming out of alive? Especially when nobody has even tried to show me why my ways aren't better?"

"Just asking. The mathematicians are testing another team- since you're unwilling. We'll see. Your father was stubborn and your grandfather was stubborn; it's no surprise that you are stubborn. Your grandfather-my father-said flatly that he would rather have a bastard in the family than Lazarus Long. So he had one. You. And Lazarus went away and never knew about you.

"Not surprising that you and your father don't get along; you're too much alike. And now he's going to take your place, on the team for Task Adam Selene."

XXX

""0ur revels now are ended."

WILLIAM SHAKESPEARE 1564-1616

Dying isn't difficult. Even a baby kitten can do it. I'm sitting with my back to the wall in the old computer room of the Warden's Complex in Luna. Pixel is cradled in my

left arm. Hazel is on the floor, by us. I'm not sure Pixel is dead. He may be asleep. But I am not going to disturb him to find out; he's a badly hurt baby at best.

I know Hazel is still alive because I'm watching her respiration. But she is not in good shape. I do wish they would hurry.

I can't do much for either of them because I don't have anything to work with and I can't move much. I'm shy one leg and I don't have a prosthetic. Yes, that same right leg-Lazarus's leg-burned off just about at the transplant line. Guess I shouldn't gripe-being a bum job it's cauterized, not much blood. Hasn't really begun to hurt much yet, either. Not that white pain like a blow torch. That comes later.

I wonder if Lazarus knows he's my father? Did Uncle ever tell him?

Hey, this makes Maureen, that wonderful, beautiful creature, my grandmother!

And- Maybe I had better back up.

I'm a bit light-headed.

I'm not even sure this is being recorded. I'm carrying a battle recorder but it's a tiny Tertius type I'm not familiar with. Either it was on and I turned it off or it was off and I turned it on. I'm not sure Pixel is dead. Did I already say that? Maybe I had better back up.

It was a good team, the best, with enough fire power that I felt that our chances were good. Hazel was in command, of course-

Major Sadie Lipschitz, strike team leader

Brevet Captain Richard Campbell, XO

Comet Gretchen Henderson, JO

Sergeant Ezra Davidson

Corporal Ted Bronson aka W. W. Smith aka Lazarus Long aka Lafayette Hubert, M.D.-additional duty, medical officer

Manuel Davis, civilian special field operative

Lazarus insisted on being called 'Ted Bronson" when he was designated a corporal for this task force. It's an insiders' joke, I think; I was not let in on it.

Comet Henderson had been back on duty several months after having her baby boy. She was slender-solid and tan and beautiful and the combat ribbons on her pretty chest looked at home there. Sergeant Ezra always did look like a soldier, once he had legs, and his ribbons showed it, too. A good team.

Why was I breveted to captain? I asked that question right after Hazel swore me into the Corps-got a silly or reasonable answer depending on your bias. Because (said Hazel) in every history book in which this was mentioned, I had been second in charge. The histories did not name others, but they did not say that we acted alone, so she decided on more fire power and picked her team. (She decided. She picked. Not Lazarus. Not some THQ brain trust. That suited me.)

Gay Deceiver was manned by its first team, too-Hilda, commanding; Deety, XO and astrogator; Zeb Carter, chief pilot; Jake Burroughs, copilot/irrelevancy gear-and Gay herself, conscious, sentient, and able to pilot herself... not true of any other irrelevancy craft except Dora (who was too big for this job).

The skipper of the car, Hilda, was under the command of the strike force team leader. I would have expected a hitch here ... but Hilda had proposed it. "Hazel, it's got to be that way. Everybody must know who's boss. When it hits the fan, we can't stop to chat."

A good team. We had not trained together but we were professionals and our CO made everything so clear that we didn't need drill. "Attention to orders. The purpose of this force is to capture items selected by Davis, and to return them and Davis to Tertius. There is no other purpose. If we have no casualties, fine. But if all of us are killed while Davis and his selections reach Tertius, our task is accomplished.

"This is the plan. Hilda places us at the north wall, star-boardside to, on the tick, after THQ advises that warp is ready to activate. Leave car in this order: Lipschitz, Campbell, Hen-derson, Davidson, Bronson, Davis. Place yourselves fore and aft in the bathrooms to exit in that order.

"The computer room is square. Lipschitz to southeast corner, Henderson to southwest corner, Campbell to northwest comer, Davidson to northeast comer. Diagonal pairs cover all four walls, so two such pairs doubly cover all walls. Bronson is bodyguard to Davis, no fixed post.

"As Davis works, filled boxes will be placed in car. Henderson and Davidson will move items to car as directed by Davis, and assisted inside by Deety. Car commander and pilots will remain ready to scram and will assist only by passing items back. Bronson will not repeat not move baggage; his sole task is bodyguard to Davis.

"When Davis tells me task is finished, we return to the car with all speed, in reverse order-Davis, Bronson, Davidson, Henderson, Campbell, Lipschitz. Hilda, you will give order to scram anytime after Davis and the stuff he came for is aboard, depending on tactical situation. If there is trouble, don't wait for anyone. Use your judgment, but your judgment must tell you to save Mannie and his items no matter who gets left behind.

"Questions?"

How long have I been doping off? My Sonychron was an early casualty. The team Hazel picked was- No, I said that. I think I did.

What happened to Tree-San?

The time tick selected was right after Hazel left the computer room on Saturday July fifth. The group picking the tick reasoned that if they were laying for us to arrive at the Raffles, then that antagonist (Time Lords?) would not be looking for us in the computer room. No way to do it earlier than that;

Hazel had reported that "Adam Selene" was in the computer room when she was there.

We cut it mighty sharp, almost too sharp; when Hazel was getting out of Gay, she stopped suddenly with me right behind her-waited briefly, then moved out.

She paused because she saw her own back, leaving the room.

I must get word to Aunt Til that Hazel and I can't make it home for supper.

My head aches and my eyes bother me.

I don't know how Pixel got aboard Gay. How that baby does get around!

Jubal Harshaw says, "The only constant thing in these shifting, fairy-chess worlds is human love." That's enough.

Pixel moved a little. It's been nice to have both feet for a few days.

"Richar'?"

"Yes, beloved?"

"Gretchen's baby. You his fame'."

"Huh?"

"She tol' me, mon's ago."

"I don't understand."

"Par'dox."

I started to question her about it; she was asleep again. The compress I had placed on her wound was seeping. But I didn't have anything more, so I didn't touch it.

Won't see Aunt Belden this trip. Too bad.

What happened to my files? Still in my other foot?

Hey! Tomorrow is the day "we're all dead" ifTolliver isn't.

The first hour went by with no incident whatever. Mannie worked steadily, changed arms once, started filling boxes. Gretchen and Ezra carried them to the car, passed them in, resumed their posts between trips. Most of this seemed to be programs that Mannie was bleeding off into his own cubes, using equipment he had fetched. I could not see. Then he started filling boxes more quickly, loading them with cylinders. Adam Selene's memories? I don't know. Maybe I watched too much.

Mannie straightened up, said, "Does it! Done!" I heard an answering, "Blert!"

And they hit us.

I was down at once, lower leg gone. I saw Mannie fall. I heard Hazel shout, "Bronson! Get him aboard! Henderson, Davidson-those last two boxes!" I missed the next, as I was firing. The whole east wall was open; I traversed it with my heater at full power. Somebody else was firing, on our side, I think.

Then it was quiet.

"Rich'r'?"

"Yes, dearest."

"'S been fun."

"Yes. love! All of it."

"Rich'r'... that light, end tunnel."

"Yes?"

"I'll wait... there."

"Honey, you're going to outlive me!"

"Look for me. I'll-"

When that wall opened, I think I saw what's-his-namc. Could the bloke who erased him write him back into the story? To clip us?

• • •

Who was writing our story? Was he going to let us live?

Anyone who would kill a baby kitten is cruel, mean cruel. Whoever you are, I hate you. I despise you!

I dragged myself awake, realized that I had fallen asleep on watch! I had to pull myself together, because they might be back. Or, Glory Be! Gay Deceiver will be back. I couldn't figure out why Gay wasn't back. Trouble spiking the right time tick? Could be anything. But they won't just leave us here.

We saved Mannie and the stuff he picked out. We won. damn you all!

Had to see what weapons, ammo, were left. I didn't have anything more. My beam gun was exhausted, I knew. But my side arm? Don't remember firing it. All gone. Must look around.

"Dear?"

"Yes, Hazel?" (She's going to ask me for water and I haven't got any!)

"I'm sony people were eating." "What's that?"

"I had to kill him, dearest; he was assigned to kill you."

I placed the little cat on Hazel. Maybe he moved, maybe not-maybe both of them were dead. I managed to pull myself up onto my foot, by holding on to a computer rack, then let myself down again. Despite long practice in hopping at one-sixth gee I found that I was neither strong enough nor did I have good balance-and I was separated from my cane, for the first time in years. It was, I thought, in Gay's forward bathroom.

So I crawled, careful of my right leg. It was beginning to hurt. I found no weapons with charges. At painful last, I was back with Gwen and Pixel. Neither stirred. I couldn't be sure.

A week isn't a long honeymoon and it's an awfully short married life.

I explored her handbag, which I should have done earlier. She had carried it, slung over one shoulder to the other hip, even into battle.

That handbag was much bigger inside than out. I found twelve chocolate bars. I found her little camera. I found her deadly little lady's gun, that Miyako-fully loaded, eight in the clip, one in the chamber.

And, down in the bottom, I found the dart projector that had to be there. I almost missed it, it was styled to look like a toilet kit. Four darts were still in it.

If they come back-or a fresh gang, I don't care-I'm going to get us a baker's dozen.

Citizen of the Galaxy
Robert A. Heinlein

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Chapter 1

"Lot ninety-seven," the auctioneer announced. "A boy."

The boy was dizzy and half sick from the feel of ground underfoot The slave ship had come more than forty light-years; it carried in its holds the stink of all slave ships, a reek of crowded unwashed bodies, of fear and vomit and ancient grief. Yet in it the boy had been someone, a recognized member of a group, entitled to his meal each day, entitled to fight for his right to eat it in peace. He had even had friends.

Now he was again nothing and nobody, again about to be sold.

A lot had been knocked down on the auction block, matched blonde girls, alleged to be twins; the bidding had been brisk, the price high. The auctioneer turned with a smile of satisfaction and pointed at the boy. "Lot ninety-seven. Shove him up here."

The boy was cuffed and prodded onto the block, stood tense while his feral eyes darted around, taking in what he had not been able to see from the pen. The slave market lies on the spaceport side of the famous Plaza of Liberty, facing the hill crowned by the still more famous Praesidium of the Sargon, capitol of the Nine Worlds. The boy did not recognize it; he did not even know what planet he was on. He looked at the crowd.

Closest to the slave block were beggars, ready to wheedle each buyer as he claimed his property. Beyond them, in a semi-circle, were seats for the rich and privileged. On each flank of this elite group waited their slaves, bearers, and bodyguards and drivers, idling near the ground cars of the rich and the palanquins and sedan chairs of the still richer. Behind the lords and ladies were commoners, idlers and curious, freedmen and pickpockets and vendors of cold drinks, an occasional commoner merchant not privileged to sit but alert for a bargain in a porter, a clerk, a mechanic, or even a house servant for his wives.

"Lot ninety-seven," the auctioneer repeated. "A fine, healthy lad, suitable as page or tireboy. Imagine him, my lords and ladies, in the livery of your house. Look at--" His words were lost in the scream of a ship, dopplering in at the spaceport behind him.

The old beggar Baslim the Cripple twisted his half-naked body and squinted his one eye over the edge of the block. The boy did not look like a docile house servant to Baslim; he looked a hunted animal, dirty, skinny, and bruised. Under the dirt, the boy's back showed white scar streaks, endorsements of former owners' opinions.

The boy's eyes and the shape of his ears caused Baslim to guess that he might be of unmutated Earth ancestry, but not much could be certain save that he was small, scared, male, and still defiant The boy caught the beggar staring at him and glared back.

The din died out and a wealthy dandy seated in front waved a kerchief lazily at the auctioneer. "Don't waste our time, you rascal. Show us something like that last lot."

"Please, noble sir. I must dispose of the lots in catalog order."

"Then get on with it! Or cuff that starved varmint aside and show us merchandise."

"You are kind, my lord." The auctioneer raised his voice. "I have been asked to be quick and I am sure my noble employer would agree. Let me be frank. This beautiful lad

is young; his new owner must invest instruction in him. Therefore--" The boy hardly listened. He knew only a smattering of this language and what was said did not matter anyhow. He looked over the veiled ladies and elegant men, wondering which one would be his new problem.

"--a low starting price and a quick turnover. A bargain! Do I hear twenty stellars?"

The silence grew awkward. A lady, sleek and expensive from sandaled feet to lace-veiled face, leaned toward the dandy, whispered and giggled. He frowned, took out a dagger and pretended to groom his nails. "I said to get on with it," he growled.

The auctioneer sighed. "I beg you to remember, gentlefolk, that I must answer to my patron. But we'll start still lower. Ten stellars--yes, I said. 'Ten.' Fantastic!"

He looked amazed. "Am I growing deaf? Did someone lift a finger and I fail to see it? Consider, I beg you. Here you have a fresh young lad like a clean sheet of paper; you can draw any design you like. At this unbelievably low price you can afford to make a mute of him, or alter him as your fancy pleases."

"Or feed him to the fish!"

" 'Or feed him--' Oh, you are witty, noble sir!"

"I'm bored. What makes you think that sorry item is worth anything? Your son, perhaps?"

The auctioneer forced a smile. "I would be proud if he were. I wish I were permitted to tell you this lad's ancestry--"

"Which means you don't know."

"Though my lips must be sealed, I can point out the shape of his skull, the perfectly rounded curve of his ears." The auctioneer nipped the boy's ear, pulled it.

The boy twisted and bit his hand. The crowd laughed.

The man snatched his hand away. "A spirited lad. Nothing a taste of leather won't cure. Good stock, look at his ears. The best in the Galaxy, some say."

The auctioneer had overlooked something; the young dandy was from Syndon IV. He removed his helmet, uncovering typical Syndonian ears, long, hairy, and pointed. He leaned forward and his ears twitched. "Who is your noble protector?"

The old beggar Baslim scooted near the corner of the block, ready to duck. The boy tensed and looked around, aware of trouble without understanding why. The auctioneer went white--no one sneered at Syndonians face to face . . . not more than once. "My lord," he gasped, "you misunderstood me."

"Repeat that crack about 'ears' and 'the best stock.' "

Police were in sight but not close. The auctioneer wet his lips. "Be gracious, gentle lord. My children would starve. I quoted a common saying--not my opinion. I was trying to hasten a bid for this chattel . . . as you yourself urged."

The silence was broken by a female voice saying, "Oh, let him go, Dwarol. It's not his fault how the slave's ears are shaped; he has to sell him."

The Syndonian breathed heavily. "Sell him, then!"

The auctioneer took a breath. "Yes, my lord." He pulled himself together and went on, "I beg my lords' and ladies' pardons for wasting time on a minor lot. I now ask for any bid at all."

He waited, said nervously, "I hear no bid, I see no bid. No bid once . . . if you do not bid, I am required to return this lot to stock and consult my patron before continuing. No

bid twice. There are many beautiful items to be offered; it would be a shame not to show them. No bid three--"

"There's your bid," the Syndonian said.

"Eh?" The old beggar was holding up two fingers. The auctioneer stared. "Are you offering a bid?"

"Yes," croaked the old man, "if the lords and ladies permit."

The auctioneer glanced at the seated circle. Someone in the crowd shouted, "Why not? Money is money."

The Syndonian nodded; the auctioneer said quickly, "You offer two stellars for this boy?"

"No, no, no, no, no!" Baslim screamed. "Two minims!"

The auctioneer lacked at him; the beggar jerked his head aside. The auctioneer shouted, "Get out! I'll teach you to make fun of your betters!"

"Auctioneer!"

"Sir? Yes, my lord?"

The Syndonian said, "Your words were 'any bid at all.' Sell him the boy."

"But--"

"You heard me."

"My lord, I cannot sell on one bid. The law is clear; one bid is not an auction. Nor even two unless the auctioneer has set a minimum. With no minimum, I am not allowed to sell with less than three bids. Noble sir, this law was given to protect the owner, not my unhappy self."

Someone shouted, "That's the law!"

The Syndonian frowned. "Then declare the bid."

"Whatever pleases my lords and ladies." He faced the crowd. "For lot ninety-seven: I heard a bid of two minims. Who'll make it four?"

"Four," stated the Syndonian.

"Five!" a voice called out.

The Syndonian motioned the beggar to him. Baslim moved on hands and one knee, with the stump of the other leg dragging and was hampered by his alms bowl. The auctioneer started droning, "Going at five minims once . . . five minims twice . . ."

"Six!" snapped the Syndonian, glanced into the beggar's bowl, reached in his purse and threw him a handful of change.

"I hear six. Do I hear seven?"

"Seven," croaked Baslim.

"I'm bid seven. You, over there, with your thumb tip. You make it eight?"

"Nine!" interposed the beggar.

The auctioneer glared but put the bid. The price was approaching one stellar, too expensive a joke for most of the crowd. The lords and ladies neither wanted the worthless slave nor wished to queer the Syndonian's jest.

The auctioneer chanted, "Going once at nine . . . going twice at nine . . . going three times--sold at nine minims!" He shoved the boy off the block almost into the beggar's lap. "Take him and get out!"

"Softly," cautioned the Syndonian. "The bill of sale."

Restraining himself, the auctioneer filled in price and new owner on a form already prepared for lot ninety-seven. Baslim paid over nine minims--then had to be subsidized

again by the Syndonian, as the stamp tax was more than the selling price. The boy stood quietly by. He knew that he had been sold again and he was getting it through his head that the old man was his new master--not that it mattered; he wanted neither of them. While all were busy with the tax, he made a break.

Without appearing to look the old beggar made a long arm, snagged an ankle, pulled him back. Then Baslim heaved himself erect, placed an arm across the boy's shoulders and used him for a crutch. The boy felt a bony hand clutch his elbow in a strong grip and relaxed himself to the inevitable--another time; they always got careless if you waited.

Supported, the beggar bowed with great dignity. "My lord," he said huskily, "I and my servant thank you."

"Nothing, nothing." The Syndonian flourished his kerchief in dismissal.

From the Plaza of Liberty to the hole where Baslim lived was less than a li, no more than a half mile, but it took them longer than such distance implies. The hopping progress the old man could manage using the boy as one leg was even slower than his speed on two hands and one knee, and it was interrupted frequently by rests for business--not that business ceased while they shuffled along, as the old man required the boy to thrust the bowl under the nose of every pedestrian.

Baslim accomplished this without words. He had tried Interlingua, Space Dutch, Sargonese, half a dozen forms of patois, thieves' kitchen, cant, slave lingo, and trade talk--even System English--without result, although he suspected that the boy had understood him more than once. Then he dropped the attempt and made his wishes known by sign language and a cuff or two. If the boy and he had no words in common, he would teach him--all in good time, all in good time. Baslim was in no hurry. Baslim was never in a hurry; he took the long view.

Baslim's home lay under the old amphitheater. When Sargon Augustus of imperial memory decreed a larger circus only part of the old one was demolished; the work was interrupted by the Second Cetan War and never resumed. Baslim led the boy into these, ruins. The going was rough and it was necessary for the old man to resume crawling. But he never let go his grip. Once he had the boy only by breechclout; the boy almost wriggled out of his one bit of clothing before the beggar snatched a wrist. After that they went more slowly.

They went down a hole at the dark end of a ruined passage, the boy being forced to go first. They crawled over shards and rubble and came into a night-black but smooth corridor. Down again . . . and they were in the performers' barracks of the old amphitheater, under the old arena.

They came in the dark to a well-carpentered door. Baslim shoved the boy through, followed him and closed it, pressed his thumb to a personal lock, touched a switch; light came on. "Well, lad, we're home."

The boy stared. Long ago he had given up having expectations of any sort. But what he saw was not anything he could have expected. It was a modest decent small living room, tight, neat, and clean. Ceiling panels gave pleasant glareless light. Furniture was sparse but adequate. The boy looked around in awe; poor as it was, it was better than anything he remembered having lived in.

The beggar let go his shoulder, hopped to a stack of shelves, put down his bowl, and took up a complicated something. It was not until the beggar shucked his clout and

strapped the thing in place that the boy figured out what it was: an artificial leg, so well articulated that it rivaled the efficiency of flesh and blood. The man stood up, took trousers from a chest, drew them on, and hardly seemed crippled. "Come here," he said, in Interlingua.

The boy did not move. Baslim repeated it in other languages, shrugged, took the boy by an arm, led him into a room beyond. It was small, both kitchen and wash room; Baslim filled a pan, handed the boy a bit of soap and said, "Take a bath." He pantomimed what he wanted.

The boy stood in mute stubbornness. The man sighed, picked up a brush suitable for floors and started as if to scrub the boy. He stopped with stiff bristles touching skin and repeated, "Take a bath. Wash yourself," saying it in Interlingua and System English.

The boy hesitated, took off his clout and started slowly to lather himself.

Baslim said, "That's better," picked up the filthy breech clout, dropped it in a waste can, laid out a towel, and, turning to the kitchen side, started preparing a meal.

A few minutes later he turned and the boy was gone.

Unhurriedly he walked into the living room, found the boy naked and wet and trying very hard to open the door. The boy saw him but redoubled his futile efforts. Baslim tapped him on the shoulder, hooked a thumb toward the smaller room. "Finish your bath."

He turned away. The boy slunk after him.

When the boy was washed and dry, Baslim put the stew he had been freshening back on the burner, turned the switch to "simmer" and opened a cupboard, from which he removed a bottle and daubs of vegetable flock. Clean, the boy was a pattern of scars and bruises, unhealed sores and cuts and abrasions, old and new. "Hold still."

The stuff stung; the boy started to wiggle. "Hold still!" Baslim repeated in a pleasant firm tone and slapped him. The boy relaxed, tensing only as the medicine touched him. The man looked carefully at an old ulcer on the boy's knee, then, humming softly, went again to the cupboard, came back and injected the boy in one buttock--first acting out the idea that he would slap his head off his shoulders if he failed to take it quietly. That done, he found an old cloth, motioned the boy to wrap himself a clout, turned back to his cooking.

Presently Baslim placed big bowls of stew on the table in the living room, first moving chair and table so that the boy might sit on the chest while eating. He added a handful of fresh green lentils and a couple of generous chunks of country bread, blade and hard. "Soup's on, lad. Come and get it."

The boy sat down on the edge of the chest but remained poised for flight and did not eat.

Baslim stopped eating. "What's the matter?" He saw the boy's eyes flick toward the door, then drop. "Oh, so that's it." He got up, steadying himself to get his false leg under him, went to the door, pressed his thumb in the lock. He faced the boy. "The door is unlocked," he announced. "Either eat your dinner, or leave." He repeated it several ways and was pleased when he thought that he detected understanding on using the language he surmised might be the slave's native tongue.

But he let the matter rest, went back to the table, got carefully into his chair and picked up his spoon.

The boy reached for his own, then suddenly was off the chest and out the door. Baslim went on eating. The door remained ajar, light streaming into the labyrinth.

Later, when Baslim had finished a leisurely dinner, he became aware that the boy was watching him from the shadows. He avoided looking, lounged back, and started picking his teeth. Without turning, he said in the language he had decided might be the boy's own, "Will you come eat your dinner? Or shall I throw it away?"

The boy did not answer. "All right," Baslim went on, "if you won't, I'll have to close the door. I can't risk leaving it open with the light on." He slowly got up, went to the door, and started to close it. "Last call," he announced. "Closing up for the night."

As the door was almost closed the boy squealed, "Wait!" in the language Baslim expected, and scurried inside.

"Welcome," Baslim said quietly. "I'll leave it unlocked, in case you change your mind." He sighed. "If I had my way, no one would ever be locked in."

The boy did not answer but sat down, huddled himself over the food and began wolfing it as if afraid it might be snatched away. His eyes flicked from right to left. Baslim sat down and watched.

The extreme pace slowed but chewing and gulping never ceased until the last bit of stew had been chased with the last honk of bread, the last lentil crunched and swallowed. The final bites appeared to go down by sheer will power, but swallow them he did, sat up, looked Baslim in the eye and smiled shyly. Baslim smiled back.

The boy's smile vanished. He turned white, then a light green. A rope of drool came willy-nilly from a corner of his mouth--and he was disastrously sick.

Baslim moved to avoid the explosion. "Stars in heaven, I'm an idiot!" he exclaimed, in his native language. He went into the kitchen, returned with rags and pail, wiped the boy's face and told him sharply to quiet down, then cleaned the stone floor.

After a bit he returned with a much smaller ration, only broth and a small piece of bread. "Soak the bread and eat it."

"I better not."

"Eat it. You won't be sick again. I should have known better, seeing your belly against your backbone, than to give you a man-sized meal. But eat slowly."

The boy looked up and his chin quivered. Then he took a small spoonful. Baslim watched while he finished the broth and most of the bread.

"Good," Baslim said at last. "Well, I'm for bed, lad. By the way, what's your name?"

The boy hesitated. "Thorby."

" 'Thorby'--a good name. You can call me 'Pop.' Good night." He unstrapped his leg, hopped to the shelf and put it away, hopped to his bed. It was a peasant bed, a hard mattress in a corner. He scrunched close to the wall to leave room for the boy and said, "Put out the light before you come to bed." Then he closed his eyes and waited.

There was long silence. He heard the boy go to the door; the light went out Baslim waited, listening for noise of the door opening. It did not come; instead he felt the mattress give as the boy crawled in. "Good night," he repeated.

"G'night."

He had almost dozed when he realized that the boy was trembling violently. He reached behind him, felt skinny ribs, patted them; the boy broke into sobs.

He turned over, eased his stump into a comfortable position, put an arm around the boy's shaking shoulders and pulled his face against his own chest "It's all right, Thorby," he said gently, "it's all right It's over now. It'll never happen again."

The boy cried out loud and clung to him. Baslim held him, speaking softly until the spasms stopped. Then he held still until he was sure that Thorby was asleep.

Chapter 2

Thorby's wounds healed, those outside quickly, those inside slowly. The old beggar acquired another mattress and stuck it in the other corner. But Baslim would sometimes wake to find a small warm bundle snuggled against his spine and know thereby that the boy had had another nightmare. Baslim was a light sleeper and hated sharing a bed. But he never forced Thorby to go back to his own bed when this happened.

Sometimes the boy would cry out his distress without waking. Once Baslim was jerked awake by hearing Thorby wail, "Mama, Mama!" Without making a light he crawled quickly to the boy's pallet and bent over him. "There, there, son, it's all right"

"Papa?"

"Go back to sleep, son. You'll wake Mama." He added, "I'll stay with you -- you're safe. Now be quiet. We don't want to wake Mama . . . do we?"

"All right, Papa."

The old man waited, almost without breathing, until he was stiff and cold and his stump ached. When he was satisfied that the boy was asleep he crawled to his own bed.

That incident caused the old man to try hypnosis. A long time earlier, when Baslim had had two eyes, two legs, and no reason to beg, he had learned the art. But he had never liked hypnosis, even for therapy; he had an almost religious concept of the dignity of the individual; hypnotizing another person did not fit his basic evaluation.

But this was an emergency.

He was sure that Thorby had been taken from his parents so young that he had no conscious memory of them. The boy's notion of life was a jumbled recollection of masters, some bad, some worse, all of whom had tried to break the spirit of a "bad" boy. Thorby had explicit memories of some of these masters and described them in gutter speech vivid and violent. But he was never sure of time or place -- "place" was some estate, or household, or factor's compound, never a particular planet or sun (his notions of astronomy were mostly wrong and he was innocent of galactography) and "time" was simply "before" or "after," "short" or "long." While each planet has its day, its year, its own method of dating, while they are reconciled for science in terms of the standard second as defined by radioactive decay, the standard year of the birthplace of mankind, and a standard reference date, the first jump from that planet. Sol III, to its satellite, it was impossible for an illiterate boy to date anything that way. Earth was a myth to Thorby and a "day" was the time between two sleeps.

Baslim could not guess the lad's age. The boy looked like unmutated Earth stock and was pre-adolescent, but any guess would be based on unproved assumption. Vandorians and Italo-Glyphs look like the original stock, but Vandorians take three times as long to mature -- Baslim recalled the odd tale about the consular agent's daughter whose second husband was the great grandson of her first and she had outlived them both. Mutations do not necessarily show up in appearance.

It was conceivable that this boy was "older" in standard seconds than Baslim himself; space is deep and mankind adapted itself in many ways to many conditions. Never mind! -- he was a youngster and he needed help.

Thorby was not afraid of hypnosis; the word meant nothing to him, nor did Baslim explain. After supper one evening the old man simply said, "Thorby, I want you to do something."

"Sure, Pop. What?"

"Lie down on your bed. Then I'm going to make you sleepy and we'll talk."

"Huh? You mean the other way around, don't you?"

"No. This is a different sort of sleep. You'll be able to talk."

Thorby was dubious but willing. The old man lighted a candle, switched off the glow plates. Using the flame to focus attention he started the ancient routines of monotonous suggestion, of relaxation, drowsiness . . . sleep.

"Thorby, you are asleep but you can hear me. You can answer."

"Yes, Pop."

"You will stay asleep until I tell you to wake. But you will be able to answer any question I ask."

"Yes, Pop."

"You remember the ship that brought you here. What was its name?"

"The Merry Widow. Only that wasn't what we called it."

"You remember getting into that ship. Now you are in it -- you can see it. You remember all about it. Now go back to where you were when you went aboard."

The boy stiffened without waking. "I don't want to!"

"I'll be right with you. You'll be safe. Now what is the name of the place? Go back to it. Look at it."

An hour and a half later Baslim still squatted beside the sleeping boy. Sweat poured down wrinkles in his face and he felt badly shaken. To get the boy back to the time he wanted to explore it had been necessary to force him back through experiences disgusting even to Baslim, old and hardened as he was. Repeatedly Thorby had fought against it, nor could Baslim blame him -- he felt now that he could count the scars on the boy's back and assign a villain to each.

But he had achieved his purpose; to delve farther back than the boy's waking memory ran, back into his very early childhood, and at last to the traumatic moment when the baby manchild had been taken from his parents.

He left the boy in deep coma while he collected his shattered thoughts. The last few moments of the quest had been so bad that the old man doubted his judgment in trying to dig out the source of the trouble.

Well, let's see . . . what had he found out?

The boy was born free. But he had always been sure of that.

The boys native language was System English, spoken with an accent Baslim could not place; it had been blurred by baby speech. That placed him inside the Terran Hegemony; it was even possible (though not likely) that the boy had been born on Earth. That was a surprise; he had thought the boy's native language was Interlingua, since he spoke it better than he did the other three he knew.

What else? Well, the boy's parents were certainly dead, if the confused and terror-ridden memory he had pried out of the boy's skull could be trusted. He had been unable

to dig out their family name nor any way of identifying them -- they were just "Papa" and "Mama" -- so Baslim gave up a half-formed plan of trying to get word to relatives of the boy.

Well, now to make this ordeal he had put the lad through worth the cost --

"Thorby?"

The boy moaned and stirred. "Yes, Pop?"

"You are asleep. You won't wake up until I tell you to."

"I won't wake up until you tell me to."

"When I tell you, you will wake at once. You will feel fine and you won't remember anything we've talked about."

"Yes, Pop."

"You will forget. But you will feel fine. About half an hour later you will feel sleepy again. I'll tell you to go to bed and you will go to bed and go right to sleep. You'll sleep all night, good sleep and pleasant dreams. You won't have any more bad dreams. Say it."

"I won't have any more bad dreams."

"You won't ever have any more bad dreams. Not ever."

"Not ever."

"Papa and Mama don't want you to have any bad dreams. They're happy and they want you to be happy. When you dream about them, it will always be happy dreams."

"Happy dreams."

"Everything is all right now, Thorby. You are starting to wake. You're waking up and you can't remember what we've been talking about. But you'll never have bad dreams again. Wake up, Thorby."

The boy sat up, rubbed his eyes, yawned, and grinned. "Gee, I fell asleep. Guess I played out on you, Pop. Didn't work, huh?"

"Everything's all right, Thorby."

It took more than one session to lay those ghosts, but the nightmares dwindled and stopped. Baslim was not technician enough to remove the bad memories; they were still there. All he did was to implant suggestions to keep them from making Thorby unhappy. Nor would Baslim have removed memories had he been skilled enough; he had a stiff-necked belief that a man's experiences belonged to him and that even the worst should not be taken from him without his consent.

Thorby's days were as busy as his nights had become peaceful. During their early partnership Baslim kept the boy always with him. After breakfast they would hobble to the Plaza of Liberty, Baslim would sprawl on the pavement and Thorby would stand or squat beside him, looking starved and holding the bowl. The spot was always picked to obstruct foot traffic, but not enough to cause police to do more than growl. Thorby learned that none of the regular police in the Plaza would ever do more than growl: Baslim's arrangements with them were beneficial to underpaid police.

Thorby learned the ancient trade quickly -- learned that men with women were generous but that the appeal should be made to the woman, that it was usually a waste of time to ask alms of unaccompanied women (except unveiled women), that it was an even bet between a lack and a gift in bracing a man alone, that spacemen hitting dirt gave handsomely. Baslim taught him to keep a little money in the bowl, neither smallest change nor high denominations.

At first Thorby was just right for the trade; small, half-starved, covered with sores, his appearance alone was enough. Unfortunately he soon looked better. Baslim repaired that with make-up, putting shadows under his eyes and hollows in his cheeks. A horrible plastic device stuck on his shinbone provided a realistic large "ulcer" in place of the sores he no longer had; sugar water made it attractive to flies -- people looked away even as they dropped coins in the bowl.

His better-fed condition was not as easy to disguise but he shot up fast for a year or two and continued skinny, despite two hearty meals a day and a bed to doss on.

Thorby soaked up a gutter education beyond price. Jubbulpore, capital of Jubbul and of the Nine Worlds, residence in chief of the Great Sargon, boasts more than three thousand licensed beggars, twice that number of street vendors, more grog shops than temples and more temples than any other city in the Nine Worlds, plus numbers uncountable of sneak thieves, tattoo artists, griva pushers, doxies, cat burglars, back-alley money changers, pickpockets, fortune tellers, muggers, assassins, and grifters large and small. Its inhabitants brag that within a li of the pylon at the spaceport end of the Avenue of Nine anything in the explored universe can be had by a man with cash, from a starship to ten grains of stardust, from the ruin of a reputation to the robes of a senator with the senator inside.

Technically Thorby was not part of the underworld, since he had a legally recognized status (slave) and a licensed profession (beggar). Nevertheless he was in it, with a worm's-eye view. There were no rungs below his on the social ladder.

As a slave he had learned to lie and steal as naturally as other children learn company manners, and much more quickly. But he discovered that these common talents were raised to high art in the seamy underside of the city. As he grew older, learned the language and the streets, Baslim began to send him out on his own, to run errands, to shop for food, and sometimes to make a pitch by himself while the old man stayed in. Thus he "fell into evil company" if one can fall from elevation zero.

He returned one day with nothing in his bowl. Baslim made no comment but the boy explained. "Look, Pop, I did all right!" From under his clout he drew a fancy scarf and proudly displayed it

Baslim did not smile and did not touch it. "Where did you get that?"

"I inherited it!"

"Obviously. But from whom?"

"A lady. A nice lady, pretty.

"Let me see the house mark. Mmm . . . probably Lady Fascia. Yes, she is pretty, I suppose. But why aren't you in jail?"

"Why, gee, Pop, it was easy! Ziggie has been teaching me. He knows all the tricks. He's smooth -- you should see him work."

Baslim wondered how one taught morals to a stray kitten? He did not consider discussing it in abstract ethical terms; there was nothing in the boy's background, nothing in his present environment, to make it possible to communicate on such a level.

"Thorby, why do you want to change trades? In our business you pay the police their commission, pay your dues to the guild, make an offering at the temple on holy day, and you've no worries. Have we ever gone hungry?"

"No, Pop -- but look at it! It must have cost almost a stellar!"

"At least two stellars, I'd say. But a fence would give you two minims -- if he was feeling generous. You should have brought more than that back in your bowl."

"Well . . . I'll get better at it. And it's more fun than begging. You ought to see how Ziggie goes about it."

"I've seen Ziggie work. He's skillful."

"He's the best!"

"Still, I suppose he could do better with two hands."

"Well, maybe, though you only use one hand. But he's teaching me to use either hand."

"That's good. You might need to know -- some day you might find yourself short one, the way Ziggie is. You know how Ziggie lost his hand?"

"Huh?"

"You know the penalty? If they catch you?"

Thorby did not answer. Baslim went on, "One hand for the first offense -- that's what it cost Ziggie to learn his trade. Oh, he's good, for he's still around and plying his trade. You know what the second offense carries? Not just the other hand. You know?"

Thorby gulped. "I'm not sure."

"I think you must have heard; you don't want to remember." Baslim drew his thumb across his throat. "That's what Ziggie gets next time -- they shorten him. His Serenity's justices figure that a boy who can't learn once won't learn twice, so they shorten him."

"But, Pop, I won't be caught! I'll be awful careful . . . just like today. I promise!"

Baslim sighed. The kid still believed that it couldn't happen to him. "Thorby, get your bill of sale."

"What for, Pop?"

"Get it."

The boy fetched it; Baslim examined it -- "one male child, registered number (left thigh) 8XK40367" -- nine minims and get out of here, you! He looked at Thorby and noted with surprise that he was a head taller than he had been that day. "Get my stylus. I'm going to free you. I've always meant to, but there didn't seem to be any hurry. But we'll do it now and tomorrow you go to the Royal Archives and register it."

Thorby's jaw dropped. "What for, Pop?"

"Don't you want to be free?"

"Uh . . . well . . . Pop, I like belonging to you."

"Thanks, lad. But I've got to do it."

"You mean you're kicking me out?"

"No. You can stay. But only as a freedman. You see, son, a master is responsible for his bondservant. If I were a noble and you did something, I'd be fined. But since I'm not . . . well, if I were shy a hand, as well as a leg and an eye, I don't think I could manage. So if you're going to learn Ziggie's trade, I had better free you; I can't afford the risk. You'll have to take your own chances; I've lost too much already. Any more and I'd be better off shortened."

He put it brutally, never mentioning that the law in application was rarely so severe -- in practice, the slave was confiscated, sold, and his price used in restitution, if the master had no assets. If the master were a commoner, he might also get a flogging if the judge believed him to be actually as well as legally responsible for the slave's misdeed. Nevertheless Baslim had stated the law: since a master exercised high and low justice

over a slave, he was therefore liable in his own person for his slave's acts, even to capital punishment.

Thorby started to sob, for the first time since the beginning of their relationship. "Don't turn me loose. Pop -- please don't! I've got to belong to you"

"I'm sorry, son. I told you you don't have to go away."

"Please, Pop. I won't ever swipe another thing!"

Baslim took his shoulder. "Look at me, Thorby. I'll make you a bargain."

"Huh? Anything you say. Pop. As long as -- "

"Wait till you hear it. I won't sign your papers now. But I want you to promise two things."

"Huh? Sure! What?"

"Don't rush. The first is that you promise never again to steal anything, from anybody. Neither from fine ladies in sedan chairs, nor from poor people like ourselves -- one is too dangerous and the other . . . well, it's disgraceful, though I don't expect you know what that means. The second is to promise that you will never lie to me about anything . . . not anything."

Thorby said slowly, "I promise."

"I don't mean just lying about the money you've been holding out on me, either. I mean anything. By the way, a mattress is no place to hide money. Look at me, Thorby. You know I have connections throughout the city."

Thorby nodded. He had delivered messages for the old man to odd places and unlikely people. Baslim went on, "If you steal. I'll find out . . . eventually. If you lie to me, I'll catch you . . . eventually. Lying to other people is your business, but I tell you this: once a man gets a reputation as a liar, he might as well be struck dumb, for people do not listen to the wind. Never mind. The day I learn that you have stolen anything . . . or the day I catch you lying to me . . . I sign your papers and free you."

Yes, Pop."

"That's not all. I'll kick you out with what you had when I bought you -- a breechclout and a set of bruises. You and I will be finished. If I set eyes on you again, I'll spit on your shadow."

"Yes, Pop. Oh, I never will, Pop!"

"I hope not. Go to bed."

Baslim lay awake, worrying, wondering if he had been too harsh. But, confound it, it was a harsh world; he had to teach the kid to live in it

He heard a sound like a rodent gnawing; he held still and listened. Presently he heard the boy get up quietly and go to the table; there followed a muted jingle of coins being placed on wood and he heard the boy return to his pallet.

When the boy started to snore he was able to drop off to sleep himself.

Chapter 3

Baslim had long since taught Thorby to read and write Sargonese and Interlingua, encouraging him with cuffs and other inducements since Thorby's interest in matters intellectual approached zero. But the incident involving Ziggie and the realization that Thorby was growing up reminded Baslim that time did not stand still, not with kids.

Thorby was never able to place the time when he realized that Pop was not exactly (or not entirely) a beggar. The extremely rigorous instruction he now received, expedited by such unlikely aids as a recorder, a projector, and a sleep instructor, would have told him, but by then nothing Pop could do or say surprised him -- Pop knew everything and could manage anything. Thorby had acquired enough knowledge of other beggars to see discrepancies; he was not troubled by them -- Pop was Pop, like the sun and the rain.

They never mentioned outside their home anything that happened inside, nor even where it was; no guest was ever there. Thorby acquired friends and Baslim had dozens or even hundreds and seemed to know the whole city by sight. No one but Thorby had access to Baslim's hideaway. But Thorby was aware that Pop had activities unconnected with begging. One night they went to sleep as usual; Thorby awakened about dawn to hear someone stirring and called out sleepily, "Pop?"

"Yes. Go back to sleep."

Instead the boy got up and switched on the glow plates. He knew it was hard for Baslim to get around in the dark without his leg; if Pop wanted a drink of water or anything, he'd fetch it. "You all right, Pop?" he asked, turning away from the switch.

Then he gasped in utter shock. This was a stranger, a gentleman!

"It's all right, Thorby," the stranger said with Pop's voice. Take it easy, son."

"Pop?"

"Yes, son. I'm sorry I startled you -- I should have changed before I came back. Events pushed me." He started stripping off fine clothing.

When Baslim removed the evening headdress, he looked more like Pop . . . except for one thing. "Pop . . . your eye."

"0h, that. It comes out as easily as it went in. I look better with two eyes, don't I?"

"I don't know." Thorby stared at it worriedly. "I don't think I like it"

"So? Well, you won't often see me wear it. As long as you are awake you can help."

Thorby was not much help; everything Pop did was new to him. First Baslim dug tanks and trays from a food cupboard which appeared to have an extra door in its back. Then he removed the false eye and, handling it with great care, unscrewed it into two parts and removed a tiny cylinder, using tweezers.

Thorby watched the processing that followed but did not understand, except that he could see that Pop was working with extreme care and exact timing. At last Baslim said, "All done. Now well see if I got any pictures."

Baslim inserted the spool in a microviewer, scanned it, smiled grimly and said, "Get ready to go out. Skip breakfast. You can take along a piece of bread."

"Huh?"

"Get moving. No time to waste."

Thorby put on his make-up and clout and dirtied his face. Baslim was waiting with a photograph and a small flat cylinder about the size of a half-minim bit. He shoved the photo at Thorby. "Look at it. Memorize it."

"Why?"

Baslim pulled it back. "Would you recognize that man?"

"Uh . . . let me see it again."

"You've got to know him. Look at it well this time."

Thorby did so, then said, "All right. I'll know him."

"He'll be in one of the taprooms near the port. Try Mother Shaum's first, then the Supernova and the Veiled Virgin. If you don't hit, work both sides of Joy Street until you do. You've got to find him before the third hour."

"Ill find him, Pop."

"When you do, put this thing in your bowl along with a few coins. Then tell him the tale but be sure to mention that you are the son of Baslim the Cripple."

"Got it, Pop."

"Get going."

Thorby wasted no time getting down to the port. It was the morning following the Feast of the Ninth Moon and few were stirring; he did not bother to pretend to beg en route, he simply went the most direct way, through back courts, over fences, or down streets, avoiding only the sleepy night patrol. But, though he reached the neighborhood quickly, he had the Old One's luck in finding his man; he was in none of the dives Baslim had suggested, nor did the rest of Joy Street turn him up. It was pushing the deadline and Thorby was getting worried when he saw the man come out of a place he had already tried.

Thorby ducked across the street, came up behind him. The man was with another man -- not good. But Thorby started in:

"Alms, gentle lords! Alms for mercy on your souls!"

The wrong man tossed him a coin; Thorby caught it in his teeth. "Bless you, my lord!" He turned to the other. "Alms, gentle sir. A small gift for the unfortunate. I am the son of Baslim the Cripple and --"

The first man aimed a kick at him. "Get out."

Thorby rolled away from it. "-- son of Baslim the Cripple. Poor old Baslim needs soft foods and medicines. I am all alone --"

The man of the picture reached for his purse. "Don't do it," his companion advised. "They're all liars and I've paid him to let us alone."

" 'Luck for the jump,' " the man answered. "Now let me see . . ." He fumbled in his purse, glanced into the bowl, placed something in it.

"Thank you, my lords. May your children be sons." Thorby moved on before he looked. The tiny flat cylinder was gone.

He worked on up Joy Street, doing fairly well, and checked the Plaza before heading home. To his surprise Pop was in his favorite pitch, by the auction block and facing the port. Thorby slipped down beside him. "Done."

The old man grunted.

"Why don't you go home, Pop? You must be tired. I've made us a few bits already."

"Shut up. Alms, my lady! Alms for a poor cripple."

At the third hour a ship took off with a whoosh! that dopplered away into subsonics; the old man seemed to relax. "What ship was that?" Thorby asked. "Not the Syndon liner."

"Free Trader Romany Lass, bound for the Rim . . . and your friend was in her. You go home now and get your breakfast. No, go buy your breakfast, for a treat."

Baslim no longer tried to hide his extra-professional activities from Thorby, although he never explained the why or how. Some days only one of them would beg, in which case the Plaza of Liberty was always the pitch, for it appeared that Baslim was especially

interested in arrivals and departures of ships and most especially movements of slave ships and the auction that always followed the arrival of one.

Thorby was more use to him after his education had progressed. The old man seemed to think that everyone had a perfect memory and he was stubborn enough to impress his belief despite the boy's grumbles.

"Aw, Pop, how do you expect me to remember? You didn't give me a chance to look at it!"

"I projected that page at least three seconds. Why didn't you read it?"

"Huh? There wasn't time."

"I read it. You can, too. Thorby, you've seen jugglers in the Plaza. You've seen old Mikki stand on his head and keep nine daggers in the air while he spins four hoops with his feet?"

"Uh, sure."

"Can you do that?"

"No."

"Could you learn to?"

"Uh . . . I don't know."

"Anyone can learn to juggle . . . with enough practice and enough beatings." The old man picked up a spoon, a stylus, and a knife and kept them in the air in a simple fountain. Presently he missed and stopped. "I used to do a little, just for fun. This is juggling with the mind . . . and anyone can learn it, too."

"Show me how you did that, Pop."

"Another time, if you behave yourself. Bight now you are learning to use your eyes. Thorby, this mind-juggling was developed a long time ago by a wise man, a Doctor Renshaw, on the planet Earth. You've heard of Earth."

"Well . . . sure, I've heard of it."

"Mmm . . . meaning you don't believe in it?"

"Uh, I don't know . . . but all that stuff about frozen water falling from the sky, and cannibals ten feet tall, and towers higher than the Presidium, and little men no bigger than dolls that live in trees -- well, I'm not a fool, Pop."

Baslim sighed and wondered how many thousands of times he had sighed since saddling himself with a son. "Stories get mixed up. Someday -- when you've learned to read -- I'll let you view books you can trust."

"But I can read now."

"You just think you can. Thorby, there is such a place as Earth and it truly is strange and wonderful -- a most unlikely planet. Many wise men have lived and died there -- along with the usual proportion of fools and villains -- and some of their wisdom has come down to us. Samuel Renshaw was one such wise man. He proved that most people go all their lives only half awake; more than that, he showed how a man could wake up and live -- see with his eyes, hear with his ears, taste with his tongue, think with his mind, and remember perfectly what he saw, heard, tasted, thought." The old man shoved his stump out. "This doesn't make me a cripple. I see more with my one eye than you do with two. I am growing deaf . . . but not as deaf as you are, because what I hear, I remember. Which one of us is the cripple? But, son, you aren't going to stay crippled, for I am going to renshaw you if I have to beat your silly head in!"

As Thorby learned to use his mind, he found that he liked to; he developed an insatiable appetite for the printed page, until, night after night, Baslim would order him to turn off the viewer and go to bed. Thorby didn't see any use in much of what the old man forced him to learn -- languages, for example, that Thorby had never heard. But they were not hard, with his new skill in using his mind, and when he discovered that the old man had spools and reels which could be read or listened to only in these "useless" tongues, he suddenly found them worth knowing. History and galactography he loved; his personal world, light-years wide in physical space, had been in reality as narrow as a slave factor's pen. Thorby reached for wider horizons with the delight of a baby discovering its fist.

But mathematics Thorby saw no use in, other than the barbaric skill of counting money. But presently he learned that mathematics need not have use; it was a game, like chess but more fun.

The old man wondered sometimes what use it all was? That the boy was even brighter than he had thought, he now knew. But was it fair to the boy? Was he simply teaching him to be discontented with his lot? What chance on Jubbul had the slave of a beggar? Zero raised to the nth power remained zero.

"Thorby."

"Yeah, Pop. Just a moment, I'm in the middle of a chapter."

"Finish it later. I want to talk with you."

"Yes, my lord. Yes, master. Right away, boss."

"And keep a civil tongue in your head."

"Sorry, Pop. What's on your mind?"

"Son, what are you going to do when I'm dead?"

Thorby looked stricken. "Are you feeling bad, Pop?"

"No. So far as I know, I'll last for years. On the other hand, I may not wake up tomorrow. At my age you never know. If I don't, what are you going to do? Hold down my pitch in the Plaza?"

Thorby didn't answer; Baslim went on, "You can't and we both know it. You're already so big that you can't tell the tale convincingly. They don't give the way they did when you were little."

Thorby said slowly, "I haven't meant to be a burden, Pop."

"Have I complained?"

"No." Thorby hesitated. "I've thought about it . . . some. Pop, you could hire me out to a labor company."

The old man made an angry gesture. "That's no answer! No, son. I'm going to send you away."

"Pop! You promised you wouldn't."

"I promised nothing."

"But I don't want to be freed, Pop. If you free me -- well, if you do, I won't leave!"

"I didn't exactly mean that."

Thorby was silent for a long moment. "You're going to sell me, Pop?"

"Not exactly. Well . . . yes and no."

Thorby's face held no expression. At last he said quietly, "It's one or the other, so I know what you mean . . . and I guess I oughtn't to kick. It's your privilege and you've been the best . . . master . . . I ever had."

"I'm not your master!"

"Paper says you are. Matches the number on my leg."

"Don't talk that way! Don't ever talk that way."

"A slave had better talk that way, or else keep his mouth shut."

"Then, for Heaven's sake, keep it shut! Listen, son, let me explain. There's nothing here for you and we both know it. If I die without freeing you, you revert to the Sargon --"

"They'll have to catch me!"

"They will. But manumission solves nothing. What guilds are open to freedmen? Begging, yes -- but you'd have to poke out your eyes to do well at it, after you're grown. Most freedmen work for their former masters, as you know, for the freeborn commoners leave mighty slim pickings. They resent an ex-slave; they won't work with him."

"Don't worry, Pop. I'll get by."

"I do worry. Now you listen. I'm going to arrange to sell you to a man I know, who will ship you away from here. Not a slave ship, just a ship. But instead of shipping you where the bill of lading reads, you'll --"

"No!"

"Hold your tongue. You'll be dropped on a planet where slavery is against the law. I can't tell you which one, because I am not sure of the ship's schedule, nor even what ship; the details have to be worked out. But in any free society I have confidence you can get by." Baslim stopped to mull a thought he had had many times. Should he send the kid to Baslim's own native planet? No, not only would it be extremely difficult to arrange but it was not a place to send a green immigrant . . . get the lad to any frontier world, where a sharp brain and willingness to work were all a man needed; there were several within trading distance of the Nine Worlds. He wished tiredly that there were some way of knowing the boy's own home world. Possibly he had relatives there, people who would help him. Confound it, there ought to be a galaxy-wide method of identification!

Baslim went on, "That's the best I can do. You'll have to behave as a slave between the sale and being shipped out. But what's a few weeks against a chance --"

"No!"

"Don't be foolish, son."

"Maybe I am. But I won't do it I'm staying."

"So? Son . . . I hate to remind you -- but you can't stop me."

"Huh?"

"As you pointed out, there's a paper that says I can."

"Oh."

"Go to bed, son."

Baslim did not sleep. About two hours after they had put out the light he heard Thorby get up very quietly. He could follow every move the lad made by interpreting muffled sounds. Thorby dressed (a simple matter of wrapping his clout), he went into the adjoining room, fumbled in the bread safe, drank deeply, and left. He did not take his bowl, he did not go near the shelf where it was kept.

After he was gone, Baslim turned over and tried to sleep, but the ache inside him would not permit It had not occurred to him to speak the word that would keep the boy; he had too much self-respect not to respect another person's decision.

Thorby was gone four days. He returned in the night and Baslim heard him but again said nothing. Instead he went quietly and deeply asleep for the first time since Thorby had left. But he woke at the usual time and said, "Good morning, son."

"Uh, good morning. Pop."

"Get breakfast started. I have something to attend to."

They sat down presently over bowls of hot mush. Baslim ate with his usual careful disinterest; Thorby merely picked at his. Finally he blurted out, "Pop, when are you going to sell me?"

"I'm not."

"Huh?"

"I registered your manumission at the Archives the day you left. You're a free man, Thorby."

Thorby looked startled, then dropped his eyes to his food. He busied himself building little mountains of mush that slumped as soon as he shaped them. Finally he said, "I wish you hadn't."

"If they picked you up, I didn't want you to have 'escaped slave' against you."

"Oh." Thorby looked thoughtful. "That's 'F&B,' isn't it? Thanks, Pop. I guess I acted land of silly."

"Possibly. But it wasn't the punishment I was thinking of. Flogging is over quickly, and so is branding. I was thinking of a possible second offense. It's better to be shortened than to be caught again after a branding."

Thorby abandoned his mush entirely. "Pop? Just what does a lobotomy do to you?"

"Mmm . . . you might say it makes the thorium mines endurable. But let's not go into it, not at meal times. Speaking of such, if you are through, get your bowl and let's not dally. There's an auction this morning."

"You mean I can stay?"

"This is your home."

Baslim never again suggested that Thorby leave him. Manumission made no difference in their routine or relationship. Thorby did go to the Royal Archives, paid the fee and the customary gift and had a line tattooed through his serial number, the Sargon's seal tattooed beside it with book and page number of the record which declared him to be a free subject of the Sargon, entitled to taxes, military service, and starvation without let or hindrance. The clerk who did the tattooing looked at Thorby's serial number and said, "Doesn't look like a birthday job, kid. Your old man go bankrupt? Or did your folks sell you just to get shut of you?"

"None of your business!"

"Don't get smart, kid, or you'll find that this needle can hurt even more. Now give me a civil answer. I see it's a factors mark, not a private owner's, and from the way it has spread and faded, you were maybe five or six. When and where was it?"

"I don't know. Honest I don't."

"So? That's what I tell my wife when she asks personal questions. Quit wiggling; I'm almost through. There . . . congratulations and welcome to the ranks of free men. I've been free a parcel of years now and I predict that you will find it looser but not always more comfortable."

Chapter 4

Thorby's leg hurt for a couple of days; otherwise manumission left his life unchanged. But he really was becoming inefficient as a beggar; a strong healthy youth does not draw the alms that a skinny child can. Often Baslim would have Thorby place him on his pitch, then send him on errands or tell him to go home and study. However, one or the other was always in the Plaza. Baslim sometimes disappeared, with or without warning; when this happened it was Thorby's duty to spend daylight hours on the pitch, noting arrivals and departures, keeping mental notes of slave auctions, and picking up information about both traffics through contacts around the port, in the wineshops, and among the unveiled women.

Once Baslim was gone for a double nineday; he was simply missing when Thorby woke up. It was much longer than he had ever been away before; Thorby kept telling himself that Pop could look out for himself, while having visions of the old man dead in a gutter. But he kept track of the doings at the Plaza, including three auctions, and recorded everything that he had seen and had been able to pick up.

Then Baslim returned. His only comment was, "Why didn't you memorize it instead of recording?"

"Well, I did. But I was afraid I would forget something, there was so much."

"Hummph!"

After that Baslim seemed even quieter, more reserved, than he had always been. Thorby wondered if he had, displeased him, but it was not the sort of question Baslim answered. Finally one night the old man said, "Son, we never did settle what you are to do after I'm gone."

"Huh? But I thought we had decided that, Pop. It's my problem."

"No, I simply postponed it . . . because of your thickheaded stubbornness. But I can't wait any longer. I've got orders for you and you are going to carry them out."

"Now, wait a minute, Pop! If you think you can bully me into leaving you --"

"Shut up! I said, 'After I'm gone.' When I'm dead, I mean; not one of these little business trips . . . you are to look up a man and give him a message. Can I depend on you? Not goof off and forget it?"

"Why, of course, Pop. But I don't like to hear you talk that way. You're going to live a long time -- you might even outlive me."

"Possibly. But will you shut up and listen, then do as I tell you?"

"Yes, sir."

"You'll find this man -- it may take a while -- and deliver this message. Then he will have something for you to do . . . I think. If he does, I want you to do exactly what he tells you to. Will you do that also?"

"Why, of course, Pop, if that's what you want."

"Count it as one last favor to an old man who tried to do right by you and would have done better had he been able. It's the very last thing I want from you, son. Don't bother to burn an offering for me at the temple, just do these two things: deliver a message and one more thing, whatever the man suggests that you do."

"I will, Pop," Thorby answered solemnly.

"All right. Let's get busy."

The "man" turned out to be any one of five men. Each was skipper of a starship, a tramp trader, not of the Nine Worlds but occasionally picking up cargoes from ports of

the Nine Worlds. Thorby thought over the list. "Pop, there's only one of these ships I recall ever putting down here."

"They all have, one time or another."

"It might be a long time before one showed up."

"It might be years. But when it happens, I want the message delivered exactly."

"To any of them? Or all of them?"

"The first one who shows up."

The message was short but not easy, for it was in three languages, depending on who was to receive it, and none of the languages was among those Thorby knew. Nor did Baslim explain the words; he wanted it learned by rote in all three.

After Thorby had stumbled through the first version of the message for the seventh time Baslim covered his ears. "No, no! It won't do, son. That accent!"

"I'm doing my best," Thorby answered sullenly.

"I know. But I want the message understood. See here, do you remember a time when I made you sleepy and talked to you?"

"Huh? I get sleepy every night. I'm sleepy now."

"So much the better." Baslim put him into a light trance -- with difficulty, as Thorby was not as receptive as he had been as a child. But Baslim managed it, recorded the message in the sleep instructor, set it running and let Thorby listen, with post-hypnotic suggestion that he would be able to say it perfectly when he awakened.

He was able to. The second and third versions were implanted in him the following night Baslim tested him repeatedly thereafter, using the name of a skipper and a ship to bring each version forth.

Baslim never sent Thorby out of the city; a slave required a travel permit and even a freedman was required to check in and out. But he did send him all over the metropolis. Three ninedays after Thorby had learned the messages Baslim gave him a note to deliver in the shipyard area, which was a reserve of the Sargon rather than part of the city. "Carry your freedman's tag and leave your bowl behind. If a policeman stops you, tell him you're looking for work in the yards."

"He'll think I'm crazy."

"But he'll let you through. They do use freedmen, as sweepers and such. Carry the message in your mouth. Who are you looking for?"

"A short, red-hailed man," Thorby repeated, "with a big wart on the left side of his nose. He runs a lunch stand across from the main gate. No beard. I'm to buy a meat pie and slip him the message with the money."

"Right."

Thorby enjoyed the outing. He did not wonder why Pop didn't viewphone messages instead of sending him a half-day's journey; people of their class did not use such luxuries. As for the royal mails, Thorby had never sent or received a letter and would have regarded the mails as a most chancy way to send a note.

His route followed one arc of the spaceport through the factory district. He relished that part of the city; there was always so much going on, so much life and noise. He dodged traffic, with track drivers cursing him and Thorby answering with interest; he peered in each open door, wondering what all the machines were for and why commoners would stand all day in one place, doing the same thing over and over -- or were they slaves? No, they couldn't be; slaves weren't allowed to touch power machinery except on

plantations -- that was what the riots had been about last year and the Sargon had lifted his hand in favor of the commoners.

Was it true that the Sargon never slept and that his eye could see anything in the Nine Worlds? Pop said that was nonsense, the Sargon was just a man, like anybody. But if so, how did he get to be Sargon?

He left the factories and skirted the shipyards. He had never been this far before. Several ships were in for overhaul and two small ships were being built, cradled in lacy patterns of steel. Ships made his heart lift and he wished he were going somewhere. He knew that he had traveled by starship twice -- or was it three times? -- but that was long ago and he didn't mean traveling in the hold of a slaver, that wasn't traveling!

He got so interested that he almost walked past the lunch stand. The main gate reminded him; it was twice as big as the others, had a guard on it, and a big sign curving over it with the seal of the Sargon on top. The lunch stand was across from it; Thorby dodged traffic pouring through the gate and went to it.

The man behind the counter was not the right man; what little hair he had was black and his nose had no wart.

Thorby walked up the road, killed a half-hour and came back. There was still no sign of his man. The counterman noticed the inspection, so Thorby stepped forward and said, "Do you have sunberry crush?"

The man looked him over. "Money?"

Thorby was used to being required to prove his solvency; he dug out the coin. The man scooped it up, opened a bottle for him. "Don't drink at the counter, I need the stools."

There were plenty of stools, but Thorby was not offended; he knew his social status. He stood back but not so far as to be accused of trying to abscond with the bottle, then made the drink last a long time. Customers came and went; he checked each, on the chance that the redheaded man might have picked this time to eat. He kept his ears cocked.

Presently the counterman looked up. "You trying to wear that bottle out?"

"Just through, thanks." Thorby came up to put the bottle down and said, "Last time I was over this way a red-headed chap was running this place."

The man looked at him. "You a friend of Red?"

"Well, not exactly. I just used to see him here, when I'd stop for a cold drink, or --"

"Let's see your permit."

"What? I don't need --" The man grabbed at Thorby's wrist. But Thorby's profession had made him adept at dodging kicks, cuffs, canes, and such; the man clutched air.

The man came around the counter, fast; Thorby ducked into traffic. He was halfway across the street and had had two narrow escapes before he realized that he was running toward the gate -- and that the counterman was shouting for the guard there.

Thorby turned and started dodging traffic endwise. Fortunately it was dense; this road carried the burden of the yards. He racked up three more brushes with death, saw a side street that dead-ended into the through-way, ducked between two trucks, down the side street as fast as he could go, turned into the first alley, ran down it, hid behind an outbuilding and waited.

He heard no pursuit.

He had been chased many times before, it did not panic him. A chase was always two parts: first breaking contact, second the retiring action to divorce oneself from the

incident. He had accomplished the first; now he had to get out of the neighborhood without being spotted -- slow march and no suspicious moves. In losing himself he had run away from the city, turned left into the side street, turned left again into the alley; he was now almost behind the lunch stand -- it had been a subconscious tactic. The chase always moved away from the center; the lunch stand was one place where they would not expect him to be. Thorby estimated that in five minutes, or ten, the counterman would be back at his job and the guard back at the gate; neither one could leave his post unwatched. Shortly, Thorby could go on through the alley and head home.

He looked around. The neighborhood was commercial land not yet occupied by factories, jumble of small shops, marginal businesses, hovels, and hopeless minor enterprise. He appeared to be in back of a very small hand laundry; there were poles and lines and wooden tubs and steam came out a pipe in the outbuilding. He knew his location now -- two doors from the lunch stand; he recalled a homemade sign: "MAJESTIC HOME LAUNDRY -- Lowest Prices."

He could cut around this building and -- but better check first. He dropped flat and stuck an eye around the corner of the outbuilding, sighted back down the alley.

Oh, oh! -- two patrolmen moving up the alley . . . he had been wrong, wrong! They hadn't dropped the matter, they had sent out the alarm. He pulled back and looked around. The laundry? No. The outbuilding? The patrol would check it. Nothing but to run for it -- right into the arms of another patrol. Thorby knew how fast the police could put a cordon around a district. Near the Plaza he could go through their nets, but here he was in strange terrain.

His eye lit on a worn-out washtub . . . then he was under it. It was a tight fit, with knees to his chin and splinters in his spine. He was afraid that his clout was sticking out but it was too late to correct it; he heard someone coming.

Footsteps came toward the tub and he stopped breathing. Someone stepped on the tub and stood on it

"Hi there, mother!" It was a man's voice. "You been out here long?"

"Long enough. Mind that pole, you'll knock the clothes down."

"See anything of a boy?"

"What boy?"

"Youngster, getting man-tall. Fuzz on his chin. Breech clout, no sandals."

"Somebody," the woman's voice above him answered indifferently, "came running through here like his ghost was after him. I didn't really see him -- I was trying to get this pesky line up."

"That's our baby! Where'd he go?"

"Over that fence and between those houses."

"Thanks, mother! Come on, Juby."

Thorby waited. The woman continued whatever she was doing; her feet moved and the tub creaked. Then she stepped down and sat on the tub. She slapped it gently. "Stay where you are," she said softly. A moment later he heard her go away.

Thorby waited until his bones ached. But he resigned himself to staying under that tub until dark. It would be chancy, as the night patrol questioned everyone but nobles after curfew, but leaving this neighborhood in daylight had become impossible. Thorby could not guess why he had been honored by a turnout of the guard, but he did not want to find out. He heard someone -- the woman? -- moving around the yard from time to time.

At least an hour later he heard the creak of ungreased wheels. Someone tapped on the tub. "When I lift the tab, get into the cart, fast. It's right in front of you."

Thorby did not answer. Daylight hit his eyes, he saw a small pushcart -- and was in it and trying to make himself small. Laundry landed on him. But before that blanked out his sight he saw that the tub was no longer nakedly in the open; sheets had been hung on lines so that it was screened.

Hands arranged bundles over him and a voice said, "Hold still until I tell you to move."

"Okay . . . and thanks a million! I'll pay you back someday."

"Forget it." She breathed heavily. I had a man once. Now he's in the mines. I don't care what you've done -- I don't turn anybody over to the patrol."

"Oh. I'm sorry."

"Shut up."

The little cart bumped and wobbled and presently Thorby felt the change to pavement Occasionally they stopped; the woman would remove a bundle, be gone a few minutes, come back and dump dirty clothes into the cart. Thorby took it with the long patience of a beggar.

A long time later the cart left pavement. It stopped and the woman said in a low voice, "When I tell you, get out the right-hand side and keep going. Make it fast."

"Okay. And thanks again!"

"Shut up." The cart bumped along a short distance, slowed without stopping, and she said, "Now!"

Thorby threw off his covering, bounced out and landed on his feet, all in one motion. He was facing a passage between two buildings, a serviceway from alley to street. He started down it fast but looked back over his shoulder. The cart was lost disappearing. He never did see her face.

Two hours later he was back in his own neighborhood. He slipped down beside Baslim. "No good."

"Why not?"

"Snoopies. Squads of 'em."

"Alms, gentle sir! You swallowed it? Alms for the sake of your parents!"

"Of course."

"Take the bowl." Baslim got to hands and knee, started away.

"Pop! Don't you want me to help you?"

"You stay here."

Thorby stayed, irked that Pop had not waited for a full report. He hurried home as soon as it was dark, found Baslim in the kitchen-washroom, paraphernalia spread around him and using both recorder and book projector. Thorby glanced at the displayed page, saw that he could not read it and wondered what language it was -- an odd one; the words were all seven letters, no more, no less. "Hi, Pop. Shall I start supper?"

"No room . . . and no time. Eat some bread. What happened today?"

Thorby told him, while munching bread. Baslim simply nodded. "Lie down. I've got to use hypnosis on you again. We've got a long night ahead."

The material Baslim wanted him to memorize consisted of figures, dates, and endless three-syllable nonsense words. The light trance felt dreamily pleasant and the droning of Baslim's voice coming out of the recorder was pleasant, too.

During one of the breaks, when Baslim had commanded him to wake up, he said, "Pop, who's this message for?"

"If you ever get a chance to deliver it, you'll know; you won't have any doubts. If you have trouble remembering it, tell him to put you into a light trance; it'll come back."

"Tell whom?"

"Him. Never mind. You are going to sleep. You are asleep." Baslim snapped his fingers.

While the recorder was droning Thorby was vaguely aware once that Baslim had just come in. He was wearing his false leg, which affected Thorby with dreamy surprise; Pop ordinarily wore it only indoors. Once Thorby smelled smoke and thought dimly that something must be burning in the kitchen and he should go check. But he was unable to move and the nonsense words kept droning into his ears.

He became aware that he was droning back to Pop the lesson he had learned. "Did I get it right?"

"Yes. Now go to sleep. Sleep the rest of the night"

Baslim was gone in the morning. Thorby was not surprised; Pop's movements had been even less predictable than usual lately. He ate breakfast, took his bowl and set out for the Plaza. Business was poor -- Pop was right; Thorby now looked too healthy and well fed for the profession. Maybe he would have to learn to dislocate his joints like Granny the Snake. Or buy contact lenses with cataracts built into them.

Midafternoon an unscheduled freighter grounded at the port. Thorby started the usual inquiries, found that it was the Free Trader Sisu, registered home port New Finlandia, Shiva III.

Ordinarily this would have been a minor datum, to be reported to Pop when he saw him. But Captain Krausa of the Sisu was one of the five persons to whom Thorby was someday to deliver a message, if and when.

It fretted Thorby. He knew that he was not to look up Captain Krausa -- that was the distant future, for Pop was alive and well. But maybe Pop would be anxious to know that this ship had arrived. Tramp freighters came and went, nobody knew when, and sometimes they were in port only a few hours.

Thorby told himself that he could get home in five minutes -- and Pop might thank him. At worst he would bawl him out for leaving the Plaza, but, shucks, he could pick up anything he missed, through gossip.

Thorby left.

The ruins of the old amphitheater extend around one third of the periphery of the new. A dozen holes lead down Into the labyrinth which had served the old slave barracks; an unlimited number of routes ran underground from these informal entrances to that part which Baslim had preempted as a home. Thorby and he varied their route in random fashion and avoided being seen entering or leaving.

This time, being in a hurry, Thorby went to the nearest -- and on past; there was a policeman at it. He continued as if his destination had been a tiny greengrocer's booth on the street rimming the ruins. He stopped and spoke to the proprietress. "Howdy, Inga. Got a nice ripe melon you're going to have to throw away?"

"No melons."

He displayed money. "How about that big one? Half price and I won't notice the rotten spot." He leaned closer. "What's burning?"

Her eyes flicked toward the patrolman. "Get lost."

"Raid?"

"Get lost, I said."

Thorby dropped a coin on the counter, picked up a bell-fruit and walked away, sucking the juice. He did not hurry.

A cautious reconnaissance showed him that police were staked out all through the ruins. At one entrance a group of ragged troglodytes huddled sadly under the eye of a patrolman. Baslim had estimated that at least five hundred people lived in the underground ruins. Thorby had not quite believed it, as he had rarely seen anyone else enter or heard them inside. He recognized only two faces among the prisoners.

A half-hour later and more worried every minute Thorby located an entrance which the police did not seem to know. He scanned it for several minutes, then darted from behind a screen of weeds and was down it. Once inside he got quickly into total darkness, then moved cautiously, listening. The police were supposed to have spectacles which let them see in the dark. Thorby wasn't sure this was true as he had always found darkness helpful in evading them. But he took no chances.

There were indeed police down below; he heard two of them and saw them by hand torches they carried -- if snoopies could see in the dark these two did not seem equipped for it. They were obviously searching, stun guns drawn. But they were in strange territory whereas Thorby was playing his home field. A specialized speleologist, he knew these corridors the way his tongue knew his teeth; he had been finding his way through them in utter blackness twice a day for years.

At the moment they had him trapped; he kept just far enough ahead to avoid their torches, skirted a hole that reached down into the next level, went beyond it, ducked into a doorway and waited.

They reached the hole, eyed the narrow ledge Thorby had taken so casually in the dark, and one of them said, "We need a ladder."

"Oh, we'll find stairs or a chute." They turned back. Thorby waited, then went back and down the hole.

A few minutes later he was close to his home doorway. He looked and listened and sniffed and waited until he was certain that no one was close, then crept to the door and reached for the thumbhole in the lock. Even as he reached he knew that something was wrong.

The door was gone; there was just a hole.

He froze, straining every sense. There was an odor of strangers but it wasn't fresh and there was no sound of breathing. The only sound was a faint drip-drip in the kitchen.

Thorby decided that he just had to see. He looked behind him, saw no glimmer, reached inside for the light switch and turned it to "dim."

Nothing happened. He tried the switch in all positions, still no light. He went inside, avoided something cluttering Baslim's neat living room, on into the kitchen, and reached for candles. They were not where they belonged but his hand encountered one nearby; he found the match safe and lit the candle.

Ruin and wreckage!

Most of the damage seemed the sort that results from a search which takes no account of cost, aiming solely at speed and thoroughness. Every cupboard, every shelf had been

spilled, food dumped on the floor. In the large room the mattresses had been ripped open, stuffing spilled out. But some of it looked like vandalism, unnecessary, pointless.

Thorby looked around with tears welling up and his chin quivering. But when he found, near the door. Pop's false leg, lying dead on the floor with its mechanical perfection smashed as if trampled by boots, he broke into sobs and had to put the candle down to keep from dropping it. He picked up the shattered leg, held it like a doll, sank to the floor and cradled it, rocking back and forth and moaning.

Chapter 5

Thorby spent the next several hours in the black corridors outside their ruined home, near the first branching, where he would hear Pop if he came back but where Thorby would have a chance to duck if police showed up.

He caught himself dozing, woke with a start, and decided that he had to find out what time it was; it seemed as if he had been keeping vigil a week. He went back into their home, found a candle and lit it. But their only clock, a household "Eternal," was smashed. No doubt the radioactive capsule was still reckoning eternity but the works were mute. Thorby looked at it and forced himself to think in practical terms.

If Pop were free, he would come back. But the police had taken Pop away. Would they simply question him and turn him loose?

No, they would not. So far as Thorby knew, Pop had never done anything to harm the Sargon -- but he had known for a long time that Pop was not simply a harmless old beggar. Thorby did not know why Pop had done the many things which did not fit the idea of "harmless old beggar" but it was clear that the police knew or suspected. About once a year the police had "cleaned out" the ruins by dropping a few retch-gas bombs down the more conspicuous holes; it simply meant having to sleep somewhere else for a couple of nights. But this was a raid in force. They had intended to arrest Pop and they had been searching for something.

The Sargon's police operated on a concept older than justice; they assumed that a man was guilty, they questioned him by increasingly strong methods until he talked . . . methods so notorious that an arrested person was usually anxious to tell all before questioning started. But Thorby was certain that the police would get nothing out of Pop which the old man did not wish to admit.

Therefore the questioning would go on a long time.

They were probably working on Pop this very minute. Thorby's stomach turned over.

He had to get Pop away from them.

How? How does a moth attack the Presidium? Thorby's chances were not much better. Baslim might be in a back room of the district police barracks, the logical place for a petty prisoner. But Thorby had an unreasoned conviction that Pop was not a petty prisoner . . . in which case he might be anywhere, even in the bowels of the Presidium.

Thorby could go to the district police office and ask where his patron had been taken -- but such was the respect in which the Sargon's police were held that this solution did not occur to him; had he presented himself as next of kin of a prisoner undergoing interrogation Thorby would have found himself in another closed room being interviewed by the same forceful means as a check on the answers (or lack of them) which were being wrung out of Baslim.

Thorby was not a coward; he simply knew that one does not dip water with a knife. Whatever he did for Pop would have to be done indirectly. He could not demand his "rights" because he had none; the idea never entered his head. Bribery was possible -- for a man with a poke full of stellars. Thorby had less than two minims. Stealth was all that was left and for that he needed information.

He reached this conclusion as soon as he admitted that there was no reasonable chance that the police would turn Pop loose. But, on the wild chance that Baslim might talk his way free, Thorby wrote a note, telling Pop that he would check back the next day, and left it on a shelf they used as a mail drop. Then he left.

It was night when he stuck his head above ground. He could not decide whether he had been down in the ruins for half a day or a day and a half. It forced him to change plans; he had intended to go first to Inga the greengrocer and find out what she knew. But at least there were no police around now; he could move freely as long as he evaded the night patrol. But where? Who could, or would, give him information?

Thorby had dozens of friends and knew hundreds by sight. But his acquaintances were subject to curfew; he saw them only in daylight and in most cases did not know where they slept. But there was one neighborhood which was not under curfew; Joy Street and its several adjoining courts never closed. In the name of commerce and for the accommodation of visiting spacemen taprooms and gaming halls and other places of hospitality to strangers in that area near the spaceport never closed their doors. A commoner, even a freedman, might stay up all night there, although he could not leave between curfew and dawn without risking being picked up.

This risk did not bother Thorby; he did not intend to be seen and, although it was patrolled inside, he knew the habits of the police there. They traveled in pairs and stayed on lighted streets, leaving their beats only to suppress noisy forms of lawbreaking. But the virtue of the district, for Thorby's purpose, was that the gossip there was often hours ahead of the news as well as covering matters ignored or suppressed by licensed news services.

Someone on Joy Street would know what had happened to Pop.

Thorby got into the honky-tonk neighborhood by scrambling over rooftops. He went down a drain into a dark court, moved along it to Joy Street, stopped short of the street lights, looked up and down for police and tried to spot someone he knew. There were many people about but most of them were strangers on the town. Thorby knew every proprietor and almost every employee up and down the street but he hesitated to walk into one of the joints; he might walk into the arms of police. He wanted to spot someone he trusted, whom he could motion into the darkness of the court.

No police but no friendly faces, either -- lust a moment; there was Auntie Singham.

Of the many fortunetellers who worked Joy Street Auntie Singham was the best; she never purveyed anything but good fortune. If these things failed to come to pass, no customer ever complained; Auntie's warm voice carried conviction. Some whispered that she improved her own fortunes by passing information to the police, but Thorby did not believe it because Pop did not. She was a likely source of news and Thorby decided to chance it -- the most she could tell the police was that he was alive and on the loose . . . which they knew.

Around the corner to Thorby's right was the Port of Heaven cabaret; Auntie was spreading her rug on the pavement there, anticipating customers spilling out at the end of a performance now going on. ,

Thorby glanced each way and hurried along the wall almost to the cabaret. "Psst! Auntie!"

She looked around, looked startled, then her face became expressionless. Through unmoving lips she said, loud enough to reach him, "Beat it, son! Hide! Are you crazy?"

"Auntie . . . where have they got him?"

"Crawl in a hole and pull it in after you. There's a reward out!" "For me? Don't be silly. Auntie; nobody would pay a reward for me. Just tell me where they're holding him. Do you know?"

"They're not."

" 'They're not' what?"

"You don't know? Oh, poor lad! They've shortened him." Thorby was so shocked that he was speechless. Although Baslim had talked of the time when he would be dead, Thorby had never really believed in it; he was incapable of imagining Pop dead and gone.

He missed her next words; she had to repeat. "Snoopers! Get out!"

Thorby glanced over his shoulder. Two patrolmen, moving this way -- time to leave! But he was caught between street and blank wall, with no bolt hole but the entrance to the cabaret . . . if he ducked in there, dressed as he was, being what he was, the management would simply shout for the patrol.

But there was nowhere else to go. Thorby turned his back on the police and went inside the narrow foyer of the cabaret. There was no one there; the last act was in progress and even the hawker was not in sight. But just inside was a ladder-stool and on it was a box of transparent letters used to change signs billing the entertainers. Thorby saw them and an idea boiled up that would have made Baslim proud of his pupil -- Thorby grabbed the box and stool and went out again.

He paid no attention to the approaching policemen, placed the ladder-stool under the little lighted marquee that surmounted the entrance and pimped up on it, with his back to the patrolmen. It placed most of his body in bright light but his head and shoulders stuck up into the shadow above the row of lights. He began methodically to remove letters spelling the name of the star entertainer.

The two police reached a point right behind him. Thorby tried not to tremble and worked with the steady listlessness of a hired hand with a dull job. He heard Auntie Singham call out, "Good evening, Sergeant."

"Evening, Auntie. What lies are you telling tonight?"

"Lies indeed! I see a sweet young girl in your future, with hands graceful as birds. Let me see your palm and perhaps I can read her name."

"What would my wife say? No time to chat tonight, Auntie." The sergeant glanced at the workman changing the sign, rubbed his chin and said, "We've got to stay on the prowl for Old Baslim's brat. You haven't seen him?" He looked again at the work going on above him and his eyes widened slightly.

"Would I sit here swapping gossip if I had?"

"Hmm . . ." He turned to his partner. "Roj, move along and check Ace's Place, and don't forget the washroom. I'll keep an eye on the street"

"Okay, Sarge."

The senior patrolman turned to the fortuneteller as his partner moved away. "It's a sad thing, Auntie. Who would have believed that old Baslim could have been spying against the Sargon and him a cripple?"

"Who indeed?" She rocked forward. "Is it true that he died of fright before they shortened him?"

"He had poison ready, knowing what was coming. But dead he was, before they pulled him out of his hole. The captain was furious."

"If he was dead already, why shorten him?"

"Come, come, Auntie, the law must be served. Shorten him they did, though it's not a job I'd relish." The sergeant sighed. "It's a sad world, Auntie. Think of that poor boy, led astray by that old rascal . . . and now the captain and the commandant both want to ask the lad questions they meant to ask the old man."

"What good will that do them?"

"None, likely." The sergeant poked gutter filth with the butt of his staff. "But if I were the lad, knowing the old man is dead and not knowing any answers to difficult questions, I'd be far, far from here already. I'd find me a farmer a long way from the city, one who needed willing hands cheap and took no interest in the troubles of the city. But since I'm not, why then, as soon as I clap eyes on him, if I do, I'll arrest him and haul him up before the captain."

"He's probably hiding between rows in a bean field this minute, trembling with fright."

"Likely. But that's better than walking around with no head on your shoulders." The police sergeant looked down the street, called out, "Okay, Roj. Right with you." As he started away he glanced again at Thorby and said, "Night, Auntie. If you see him, shout for us."

"I'll do that. Hail to the Sargon."

"Hail."

Thorby continued to pretend to work and tried not to shake, while the police moved slowly away. Customers trickled out of the cabaret and Auntie took up her chant, promising fame, fortune, and a bright glimpse of the future, all for a coin. Thorby was about to get down, stick the gear back into the entranceway and get lost, when a hand grabbed his ankle.

"What are you doing!"

Thorby froze, then realized it was just the manager of the place, angry at finding his sign disturbed. Without looking down Thorby said, "What's wrong? You paid me to change this blinker."

"I did?"

"Why, sure, you did. You told me --" Thorby glanced down, looked amazed and blurted, "You're not the one."

"I certainly am not. Get down from there."

"I can't. You've got my ankle.

The man let go and stepped back as Thorby climbed down. "I don't know what silly idiot could have told you --" He broke off as Thorby's face came into light. "Hey, ifs that beggar boy!"

Thorby broke into a run as the man grabbed for him. He went ducking in and out between pedestrians as the shout of, "Patrol! Patrol! Police!" rose behind him. Then he

was in the dark court again and, charged with adrenaline, was up a drainpipe as if it had been level pavement. He did not stop until he was several dozen roofs away.

He sat down against a chimney pot, caught his breath and tried to think.

Pop was dead. He couldn't be but he was. Old Poddy wouldn't have said so if he hadn't known. Why . . . why, Pop's head must be on a spike down at the pylon this minute, along with the other losers. Thorby had one grisly flash of visualization, and at last collapsed, wept uncontrollably.

After a long time he raised his head, wiped his face with knuckles, and straightened up.

Pop was dead. All right, what did he do now?

Anyhow, Pop had beat them out of questioning him. Thorby felt bitter pride. Pop was always the smart one; they had caught him but Pop had had the last laugh.

Well, what did he do now?

Auntie Singham had warned him to hide. Poddy had said, plain as anything, to get out of town. Good advice -- if he wanted to stay as tall as he was, he had better be outside the city before daylight. Pop would expect him to put up a fight, not sit still and wait for the snoopies, and there was nothing left that he could do for Pop, now that Pop was dead -- hold it!

"When I'm dead, you are to look up a man and give him a message. Can I depend on you? Not goof off and forget it?"

Yes, Pop, you can! I didn't forget -- I'll deliver it! Thorby recalled for the first time in more than a day why he had come home early: Starship Sisu was in port; her skipper was on Pop's list. "The first one who shows up" -- that's what Pop had said. I didn't goof, Pop; I almost did but I remembered. I'll do it, I'll do it! Thorby decided with fierce resurgence that this message must be the final, important thing that Pop had to get out -- since they said he was a spy. All right, he'd help Pop finish his job. I'll do it, Pop. You'll have the best of them yet!

Thorby felt no twinge at the "treason" he was about to attempt; shipped in as a slave against his will, he felt no loyalty to the Sargon and Baslim had never tried to instill any. His strongest feeling toward the Sargon was superstitious fear and even that washed away in the violence of his need for revenge. He feared neither police nor Sargon himself; he simply wanted to evade them long enough to carry out Baslim's wishes. After that . . . well, if they caught him, he hoped to have finished the job before they shortened him.

If the Sisu were still in port . . .

Oh, she had to be! But the first thing was to find out for sure that the ship had not left, then -- no, the first thing was to get out of sight before daylight. It was a million times more important to stay clear of the snoopies now that he had it through his thick head that there was something be could do for Pop.

Get out of sight, find out if the Sisu was still dirtside, get a message to her skipper . . . and do all this with every patrolman in the district looking for him --

Maybe he had better work his way over to the shipyards, where he was not known, sneak inside and back the long way to the port and find the Sisu. No, that was silly; he had almost been caught over that way just from not knowing the layout. Here, at least, he knew every building, most of the people.

But he had to have help. He couldn't go on the street, stop spacemen and ask. Who was a close enough friend to help . . . at risk of trouble with police? Ziggie? Don't be silly; Ziggie would turn him in for the reward, for two minims Ziggie would sell his own

mother -- Ziggie thought that anyone who didn't look out for number one first, last, and always was a sucker.

Who else? Thorby came up against the hard fact that most of his friends were around his age and as limited in resources. Most of them he did not know how to find at night, and he certainly could not hang around in daylight and wait for one to show up. As for the few who lived with their families at known addresses, he could not think of one who could both be trusted and could keep parents concerned from tipping off the police. Most honest citizens at Thorby's level went to great lengths to mind their own business and stay on the right side of the police.

It had to be one of Pop's friends.

He ticked off this list almost as quickly. In most cases he could not be sure how binding the friendship was, blood brotherhood or merely acquaintance. The only one whom he could possibly reach and who might possibly help was Mother Shaum. She had sheltered them once when they were driven out of their cave with retch gas and she had always had a land word and a cold drink for Thorby.

He got moving; daylight was coming.

Mother Shaum's place was a taproom and lodging house, on the other side of Joy Street and near the crewmen's gate to the spaceport. Half an hour later, having crossed many roofs, twice been up and down in side courts and once having ducked across the lighted street, Thorby was on the roof of her place. He had not dared walk in her door; too many witnesses would force her to call the patrol. He had considered the back entrance and had squatted among garbage cans before deciding that there were too many voices in the kitchen.

But when he did reach her roof, he was almost caught by daylight; he found the usual access to the roof but he found also that its door and lock were sturdy enough to defy barehanded burglary.

He went to the rear with the possibility in mind of going down, trying the back door anyhow; it was almost dawn and becoming urgent to get under cover. As he looked down the back he noticed ventilation holes for the low attic, one at each side. They were barely as wide as his shoulders, as deep as his chest -- but they led inside.

They were screened but a few minutes and many scratches later he had one kicked in. Then he tried the unlikely task of easing himself over the edge feet first and snaking into the hole. He got in as far as his hips, his clout caught on raw edges of screening and he stuck like a cork, lower half inside the house, chest and head and arms sticking out like a gargoyle. He could not move and the sky was getting lighter.

With a drag from his heels and sheer force of will the cloth parted and he moved inside, almost knocking himself out by banging his head. He lay still and caught his breath, then pushed the screening untidily back into place. It would no longer stop vermin but it might tool the eye from four stories down. It was not until then that he realized that he had almost fallen those four stories.

The attic was no more than a crawl space; he started to explore on hands and knees for the fixture he believed must be here: a scuttle hole for repairs or inspection. Once he started looking and failed to find it, he was not sure that there was such a thing -- he knew that some houses had them but he did not know much about houses; he had not lived in them much.

He did not find it until sunrise striking the vent holes gave illumination. It was all the way forward, on the street side.

And it was bolted from underneath.

But it was not as rugged as the door to the roof. He looked around, found a heavy spike dropped by a workman and used it to dig at the wooden closure. In time he worked a knot loose, stopped and peered through the knothole.

There was a room below; he saw a bed with one figure in it.

Thorby decided that he could not expect better luck; only one person to cope with, to persuade to find Mother Shaum without raising an alarm. He took his eye away, put a finger through and felt around; he touched the latch, then gladly broke a fingernail easing the bolt back. Silently he lifted the trap door.

The figure in the bed did not stir.

He lowered himself, hung by his fingertips, dropped the remaining short distance and collapsed as noiselessly as possible.

The person in bed was sitting up with a gun aimed at him. "It took you long enough," she said. "I've been listening to you for the past hour."

"Mother Shaum! Don't shoot!"

She leaned forward, looked closely. "Baslim's kid!" She shook her head. "Boy, you're a mess . . . and you're hotter than a fire in a mattress, too. What possessed you to come here?"

"I didn't know where else to go."

She frowned. "I suppose that's a compliment . . . though I had ruther have had a plague of boils, if I'd uv had my druthers." She got out of bed in her nightdress, big bare feet slapping on the floor, and peered out the window at the street below. "Snoopies here, snoopies there, snoopies checking every joint in the street three times in one night and scaring my customers . . . boy, you've caused more hooraw than I've seen since the factory riots. Why didn't you have the kindness to drop dead?"

"You won't hide me, Mother?"

"Who said I wouldn't? I've never gone out of my way to turn anybody in yet. But I don't have to like it" She glowered at him. "When did you eat last?"

"Uh, I don't remember." "I'll scare you up something. I don't suppose you can pay for it?" She looked at him sharply.

"I'm not hungry. Mother Shaum, is the Sisu still in port?"

"Huh? I don't know. Yes, I do; she is -- a couple of her boys were in earlier tonight. Why?"

"I've got to get a message to her skipper. I've got to see him, I've just got to!"

She gave a moan of utter exasperation. "First he wakes a decent working woman out of her first sleep of the night, he plants himself on her at rare risk to her life and limb and license. He's filthy dirty and scratched and bloody and no doubt will be using my clean towels with laundry prices the way they are. He hasn't eaten and can't pay for his tucker . . . and now he adds insult to injury by demanding that I run errands for him!"

"I'm not hungry . . . and it doesn't matter whether I wash or not. But I've got to see Captain Krausa."

"Don't be giving me orders in my own bedroom. Overgrown and unspanked, you are, if I knew that old scamp you lived with. You'll have to wait until one of the Sisu's lads

shows up later in the day, so's I can get a note out to the Captain." She turned toward the door. "Water's in the jug, towel's on the rack. Mind you get clean." She left.

Washing did feel good and Thorby found astringent powder on her dressing table, dusted his scratches. She came back, slapped two slices of bread with a generous slab of meat between them in front of him, added a bowl of milk, left without speaking. Thorby hadn't thought that it was possible to eat, with Pop dead, but found that it was -- he had quit worrying when he first saw Mother Shaum.

She came back. "Gulp that last bite and in you go. The word is they're going to search every house."

"Huh? Then I'll get out and run for it."

"Shut up and do as I say. In you go now."

"In where?"

"In there," she answered, pointing.

"In that?" It was a built-in window seat and chest, in a corner; its shortcoming lay in its size, it being as wide as a man but less than a third as long. "I don't think I can fold up that small."

"And that's just what the snoopies will think. Hurry." She lifted the lid, dug out some clothing, lifted the far end of the box at the wall adjoining the next room as if it were a sash, and disclosed thereby that a hole went on through the wall. "Scoot your legs through -- and don't think you are the only one who has ever needed to lie quiet."

Thorby got into the box, slid his legs through the hole, lay back; the lid when closed would be a few inches above his face. Mother Shaum threw clothing on top of him, concealing him. "You okay?"

"Yeah, sure. Mother Shaum? Is he really dead?"

Her voice became almost gentle. "He is, lad. A great shame it is, too."

"You're sure?"

"I was bothered by the same doubt, knowing him so well. So I took a walk down to the pylon to see. He is. But I can tell you this, lad, he's got a grin on his face like he'd outsmarted them . . . and he had, too. They don't like it when a man doesn't wait to be questioned." She sighed again. "Cry now, if you need, but be quiet. If you hear anyone, don't even breathe."

The lid slammed. Thorby wondered whether he would be able to breathe at all, but found that there must be air holes; it was stuffy but bearable. He turned his head to get his nose clear of cloth resting on it.

Then he did cry, after which he went to sleep.

He was awakened by voices and footsteps, recalled where he was barely in time to keep from sitting up. The lid above his face opened, and then slammed, making his ears ring; a man's voice called out, "Nothing in this room, Sarge!"

"Well see." Thorby recognized Poddy's voice. "You missed that scuttle up there. Fetch the ladder."

Mother Shaum's voice said, "Nothing up there but the breather space, Sergeant"

"I said, 'We'd see.' "

A few minutes later he added, "Hand me the torch. Hmm . . . you're right. Mother . . . but he has been here."

"Huh?"

"Screen broken back at the end of the house and dust disturbed. I think he got in this way, came down through your bedroom, and out."

"Saints and devils! I could have been murdered in my bed! Do you call that police protection?"

"You're not hurt. But you'd better have that screen fixed, or you'll have snakes and all their cousins living with you." He paused. "It's my thought he tried to stay in the district, found it too hot, and went back to the ruins. If so, no doubt well gas him out before the day is over."

"Do you think I'm safe to go back to my bed?"

"Why should he bother an old sack of suet like you?"

"What a nasty thing to say! And just when I was about to offer you a drop to cut the dust."

"You were? Let's go down to your kitchen, then, and well discuss it I may have been wrong." Thorby heard them leave, heard the ladder being removed. At last he dared breathe.

Later she came back, grumbling, and opened the lid. "You can stretch your legs. But be ready to jump back in. Three pints of my best Policemen!"

Chapter 6

The skipper of the Sisu showed up that evening. Captain Krausa was tall, fair, rugged and had the worry wrinkles and grim mouth of a man used to authority and responsibility. He was irked with himself and everyone for having allowed himself to be lured away from his routine by nonsense. His eye assayed Thorby unflatteringly. "Mother Shaum, is this the person who insisted that he had urgent business with me?"

The captain spoke Nine Worlds trade lingo, a degenerate form of Sargonese, uninflected and with a rudimentary positional grammar. But Thorby understood it. He answered, "If you are Captain Fjalar Krausa, I have a message for you, noble sir."

"Don't call me 'noble sir'; I'm Captain Krausa, yes."

"Yes, nob - yes, Captain."

"If you have a message, give it to me."

"Yes, Captain." Thorby started reciting the message he had memorized, using the Suomish version to Krausa. " 'To Captain Fjalar Krausa, master of Starship Sisu from Baslim the Cripple: Greetings, old friend! Greetings to your family, clan, and sib, and my humblest respects to your revered mother. I am speaking to you through the mouth of my adopted son. He does not understand Suomic; I address you privately. When you receive this message, I am already dead --"

Krausa had started to smile; now he let out an exclamation. Thorby stopped. Mother Shaum interrupted with, "What's he saying? What language is that?"

Krausa brushed it aside. "It's my language. Is what he says true?"

"Is what true? How would I know? I don't understand that yammer."

"Uh . . . sorry, sorry! He tells me that an old beggar who used to hang around the Plaza -- 'Baslim' he called himself -- is dead. Is this true?"

"Eh? Of course it is. I could have told you, if I had known you were interested. Everybody knows it."

"Everybody but me, apparently. What happened to him?"

"He was shortened."

"Shortened? Why?"

She shrugged. "How would I know? The word is, he died or poisoned himself, or something, before they could question him -- so how would I know? I'm just a poor old woman, trying to make an honest living, with prices getting higher every day. The Sargon's police don't confide in me"

"But if -- never mind. He managed to cheat them, did he? It sounds like him." He turned to Thorby. "Go on. Finish your message."

Thorby, thrown off stride, had to go back to the beginning. Krausa waited impatiently until he reached: "-- I am already dead. My son is the only thing of value of which I die possessed; I entrust him to your care. I ask that you succor and admonish him as if you were I. When opportunity presents, I ask that you deliver him to the commander of any vessel of the Hegemonic Guard, saying that he is a distressed citizen of the Hegemony and entitled as such to their help in locating his family. If they will bestir themselves, they can establish his identity and restore him to his people. All the rest I leave to your good judgment. I have enjoined him to obey you and I believe that he will; he is a good lad, within the limits of his age and experience, and I entrust him to you with a serene heart. Now I must depart. My life has been long and rich; I am content. Farewell"

The Captain chewed his lip and his face worked in the fashion of a grown man who is busy not crying. Finally he said gruffly, "That's clear enough. Well, lad, are you ready?"

"Sir?"

"You're coming with me. Or didn't Baslim tell you?"

"No, sir. But he told me to do whatever you told me to. I'm to come with you?"

"Yes. How soon can you leave?"

Thorby gulped. "Right now, sir."

"Then come on. I want to get back to my ship." He looked Thorby up and down. "Mother Shaum, can we put some decent clothes on him? That outlandish rig won't do to come aboard in. Or never mind; there's a slop shop down the street; I'll pick him up a kit."

She had listened with growing amazement. Now she said, "You're taking him to your ship?"

"Any objections?"

"Huh? Not at all . . . if you don't care if they rack him apart."

"What do you mean?"

"Are you crazy? There are six snoopers between here and the spaceport gate . . . and each one anxious to pick up the reward."

"You mean he's wanted?"

"Why do you think I've hidden him in my own bedroom? He's as hot as bubbling cheese."

"But why?"

"Again, how would I know? He is."

"You don't really think that a lad like this would know enough about what old Baslim was doing to make it worth --"

"Let's not speak of what Baslim was doing or did. I'm a loyal subject of the Sargon . . . with no wish to be shortened. You say you want to take the boy into your ship. I say, 'Fine!' I'll be happy to be quit of the worry. But how?"

Krausa cracked his knuckles one by one. "I had thought," he said slowly, "that it would be just a matter of walking him down to the gate and paying his emigration tax."

"It's not, so forget it. Is there any way to get him aboard without passing him through the gate?"

Captain Krausa looked worried. "They're so strict about smuggling here that if they catch you, they confiscate the ship. You're asking me to risk my ship . . . and myself . . . and my whole crew."

"I'm not asking you to risk anything. I've got myself to worry about. I was just telling you the straight score. If you ask me, I'd say you were crazy to attempt it."

Thorby said, "Captain Krausa --"

"Eh? What is it, lad?"

"Pop told me to do as you said . . . but I'm sure he never meant you to risk your neck on my account" He swallowed. I'll be all right."

Krausa sawed the air impatiently. "No, no!" he said harshly. "Baslim wanted this done . . . and debts are paid. Debts are always paid!"

"I don't understand."

"No need for you to. But Baslim wanted me to take you with me, so that's how it's got to be." He turned to Mother Shaum. "The question is, how? Any ideas?"

"Mmm . . . possibly. Let's go talk it over." She turned. "Get back in your hide-away, Thorby, and be careful. I may have to go out for a while."

Shortly before curfew the next day a large sedan chair left Joy Street. A patrolman stopped it and Mother Shaum stuck her head out. He looked surprised. "Going out, Mother? Who'll take care of your customers?"

"Mura has the keys," she answered. "But keep an eye on the place, that's a good friend. She's not as firm with them as I am." She put something in his hand and he made it disappear.

"I'll do that. Going to be gone all night?"

"I hope not. Perhaps I had better have a street pass, do you think? I'd like to come straight home if I finish my business."

"Well, now, they've tightened up a little on street passes."

"Still looking for the beggar's boy?"

"As a matter of fact, yes. But well find him. If he's fled to the country, they'll starve him out; if he's still in town, well run him down."

"Well, you could hardly mistake me for him. So how about a short pass for an old woman who needs to make a private call?" She rested her hand on the door; the edge of a bill stuck out.

He glanced at it and glanced away. "Is midnight late enough?"

"Plenty, I should think."

He took out his book and started writing, tore out the form and handed it to her. As she accepted it the money disappeared. "Don't make it later than midnight"

"Earlier, I hope."

He glanced inside the sedan chair, then looked over her entourage. The four bearers had been standing patiently, saying nothing -- which was not surprising, since they had no tongues. "Zenith Garage?"

"I always trade there."

"I thought I recognized them. Well matched."

"Better look them over. One of them might be the beggar's boy."

"Those great hairy brutes! Get along with you, Mother."

"Hail, Shol."

The chair swung up and moved away at a trot. As they rounded the corner she slowed them to a walk and drew all curtains. Then she patted the cushions billowing around her. "Doing all right?"

"I'm squashed," a voice answered faintly.

"Better squashed than shortened. I'll ease over a bit. Your lap is bony."

For the next mile she was busy modifying her costume, and putting on jewels. She veiled her face until only her live, black eyes showed. Finished, she stuck her head out and called instructions to the head porter; the chair swung right toward the spaceport. When they reached the road girdling its high, impregnable fence it was almost dark.

The gate for spacemen is at the foot of Joy Street, the gate for passengers is east of there in the Emigration Control Building. Beyond that, in the warehouse district, is Traders' Gate -- freight and outgoing customs. Miles beyond are shipyard gates. But between the shipyards and Traders' Gate is a small gate reserved for nobles rich enough to own space yachts.

The chair reached the spaceport fence short of Traders' Gate, turned and went along the fence toward it. Traders' Gate is several gates, each a loading dock built through the barrier, so that a warehouse truck can back up, unload; the Sargon's inspectors can weigh, measure, grade, prod, open, and ray the merchandise, as may be indicated, before it slides across the dock into spaceport trucks on the other side, to be delivered to waiting ships.

This night dock-three of the gate had its barricade open; Free Trader Sisu was finishing loading. Her master watched, arguing with inspectors, and oiling their functioning in the immemorial fashion. A ship's junior officer helped him, keeping tally with pad and pencil.

The sedan chair weaved among waiting trucks and passed close to the dock. The master of the Sisu looked up as the veiled lady in the chair peered out at the activity. He glanced at his watch and spoke to his junior officer. "One more load, Jan. You go in with the loaded truck and I'll follow with the last one."

"Aye aye, sir." The young man climbed on the tail of the truck and told the driver to take it away. An empty truck pulled into its place. It loaded quickly as the ship's master seemed to find fewer things to argue about with the inspectors. Then he was not satisfied and demanded that it be done over. The boss stevedore was pained but the master soothed him, glanced at his watch again and said, "There's time. I don't want these crates cracked before we get them into the ship; the stuff costs money. So let's do it right."

The sedan chair had moved on along the fence. Shortly it was dark; the veiled lady looked at the glowing face of her finger watch and urged her bearers into a trot.

They came at last to the gate reserved for nobles. The veiled lady leaned her head out and snapped, "Open up!"

There were two guards on the gate, one in a little watch room, the other lounging outside. The one outside opened the gate, but placed his staff across it when the sedan chair started to go through. Stopped, the bearers lowered it to the ground with the right-hand or door side facing into the gate.

The veiled lady called out, "Clear the way, you! Lord Marlin's yacht."

The guard blocking the gate hesitated. "My lady has a pass?"

"Are you a fool?"

"If my lady has no pass," he said slowly, "perhaps my lady will suggest some way to assure the guard that My Lord Marlin is expecting her?"

The veiled lady was a voice in the dark -- the guard had sense enough not to shine the light in her face; he had long experience with nobles and fumed. "If you insist on being a fool, call my lord at his yacht! Phone him -- and I trust you'll find you've pleased him!"

The guard in the watch room came out. "Trouble, Sean?"

"Uh, no." They held a whispered consultation. The junior went inside to phone Lord Marlin's yacht, while the other waited outside.

But it appeared that the lady had had all the nonsense she was willing to endure. She threw open the door of the chair, burst out, and stormed into the watch room with the other startled guard after her. The one making the call stopped punching keys with connection uncompleted and looked up . . . and felt sick. This was even worse than he had thought. This was no flighty young girl, escaped from her chaperones; this was an angry dowager, the sort with enough influence to break a man to common labor or worse -- with a temper that made her capable of it. He listened open-mouthed to the richest tongue-lashing it had been his misfortune to endure in all the years he had been checking lords and ladies through their gate.

While the attention of both guards was monopolized by Mother Shaum's rich rhetoric, a figure detached itself from the sedan chair, faded through the gate and kept going, until it was lost in the gloom of the field. As Thorby ran, even as he expected the burning tingle of a stun gun bolt in his guts, he watched for a road on the right joining the one from the gate. When he came to it he threw himself down and lay panting.

Back at the gate, Mother Shaum stopped for breath. "My lady," one of them said placatingly, "if you will just let us complete the call --"

"Forget it! No, remember it! -- for tomorrow you'll hear from My Lord Marlin." She flounced back to her chair.

"Please, my lady!"

She ignored them, spoke sharply to the slaves; they swung the chair up, broke into a trot. One guard's hand went to his belt, as a feeling of something badly wrong possessed him. But his hand stopped. Right or wrong, knocking down a lady's bearer was not to be risked, no matter what she might be up to.

And, after all, she hadn't actually done anything wrong.

When the master of the Sisu finally okayed the loading of the last truck, he climbed onto its bed, waved the driver to start, then worked his way forward. "Hey, there!" He knocked on the back of the cab.

"Yes, Captain?" The driver's voice came through faintly.

"There's a stop sign where this road joins the one out to the ships. I notice most of you drivers don't bother with it."

"That one? There's never any traffic on that road. That road is a stop just because the nobles use it."

"That's what I mean. One of them might pop up and I'd miss my jump time just for a silly traffic accident with one of your nobles. They could hold me here for many ninedays. So come to a full stop, will you?"

"Whatever you say. Captain. You're paying the bill."

"So I am." A half-stellar note went through a crack in the cab.

When the truck slowed, Krausa went to the tailgate. As it stopped he reached down and snaked Thorby inside. "Quiet!" Thorby nodded and trembled. Krausa took tools from his pockets, attacked one of the crates. Shortly he had one side open, burlap pulled back, and he started dumping verga leaves, priceless on any other planet. Soon he had a largish hole and a hundred pounds of valuable leaves were scattered over the plain. "Get in!"

Thorby crawled into the space, made himself small. Krausa pulled burlap over him, sewed it, crimped slats back into place, and finished by strapping it and sealing it with a good imitation of the seal used by the inspectors -- it was a handcrafted product of his ship's machine shop. He straightened up and wiped sweat from his face. The truck was turning into the loading circle for the Sisu.

He supervised the final loads himself, with the Sargon's field inspector at his elbow, checking off each crate, each bale, each carton as it went into the sling. Then Krausa thanked the inspector appropriately and rode the sling up instead of the passenger hoist. Since a man was riding it, the hoist man let down the sling with more than usual care. The hold was almost filled and stowed for jump; there was very little headroom. Crewmen started wrestling crates free of the sling and even the Captain lent a hand, at least to the extent of one crate. Once the sling was dragged dear, they closed the cargo door and started dogging it for space. Captain Krausa reached into his pocket again and started tearing open that crate.

Two hours later Mother Shaum stood at her bedroom window and looked out across the spaceport. She glanced at her watch. A green rocket rose from the control tower; seconds later a column of white light climbed to the sky. When the noise reached her, she smiled grimly and went downstairs to supervise the business -- Mura couldn't really handle it properly alone.

Chapter 7

Inside the first few million miles Thorby was unhappily convinced that he had made a mistake.

He passed out from inhaling fumes of verga leaves and awakened in a tiny, one-bunk stateroom. Waking was painful; although the Sisu maintained one standard gravity of internal field throughout a jump his body had recognized both the slight difference from Jubbul-surface gravity and the more subtle difference between an artificial field and the natural condition. His body decided that he was in the hold of a slaver and threw him into the first nightmare he had had in years.

Then his tired, fume-sodden brain took a long time struggling up out of the horror.

At last he was awake, aware of his surrounding, and concluded that he was aboard the Sisu and safe. He felt a glow of relief and gathering excitement that he was traveling, going somewhere. His grief over Baslim was pushed aside by strangeness and change. He looked around.

The compartment was a cube, only a foot or so higher and wider than his own height. He was resting on a shelf that filled half the room and under him was a mattress strangely and delightfully soft, of material warm and springy and smooth. He stretched and yawned in surprised wonder that traders lived in such luxury. Then he swung his feet over and stood up.

The bunk swung noiselessly up and fitted itself into the bulkhead. Thorby could not puzzle out how to open it again. Presently he gave up. He did not want a bed then; he did want to look around.

When he woke the ceiling was glowing faintly. When he stood up it glowed brightly and remained so. But the light did not show where the door was. There were vertical metal panels on three sides, any of which might have been a door, save that none displayed thumb slot, hinge, or other familiar mark.

He considered the possibility that he had been locked in, but was not troubled. Living in a cave, working in the Plaza, he was afflicted neither with claustrophobia nor agoraphobia; he simply wanted to find the door and was annoyed that he could not recognize it. If it were locked, he did not think that Captain Krausa would let it stay locked unduly long. But he could not find it.

He did find a pair of shorts and a singlet, on the deck. When he woke he had been bare, the way he usually slept He picked up these garments, touched them timidly, wondered at their magnificence. He recognized them as being the sort of thing most spacemen wore and for a moment let himself be dazzled at the thought of wearing such luxuries. But his mind shied away from such impudence.

Then he recalled Captain Krausa's distaste at his coming aboard in the clothes he normally wore -- why, the Captain had even intended to take him to a tailoring shop in Joy Street which catered to spacemen! He had said so.

Thorby concluded that these clothes must be for him. For him! His breech clout was missing and the Captain certainly had not intended him to appear in the Sisu naked. Thorby was not troubled by modesty; the taboo was spotty on Jubbul and applied more to the upper classes. Nevertheless clothes were worn.

Marveling at his own daring, Thorby tried them on. He got the shorts on backwards, figured out his mistake, and put them on properly. He got the pullover shirt on backwards, too, but the error was not as glaring; he left it that way, thinking that he had It right Then he wished mightily that he could see himself.

Both garments were of simple cut, undecorated light green, and fashioned of strong, cheap material; they were working clothes from the ship's slop chest, a type of garment much used by both sexes on many planets through many centuries. Yet Solomon in all his glory was not arrayed as Thorby! He smoothed the cloth against his skin and wanted someone to see him in his finery. He set about finding the door with renewed eagerness.

It found him. While running his hands over the panels on one bulkhead he became aware of a breeze, turned and found that one panel had disappeared. The door let out into a passageway.

A young man dressed much as Thorby was (Thorby was overjoyed to find that he had dressed properly for the occasion) was walking down the curved corridor toward Thorby. Thorby stepped out and spoke a greeting in Sargonese trade talk.

The man's eyes flicked toward Thorby, then he marched on past as if no one was there. Thorby blinked, puzzled and a little hurt. Then he called out to the receding back in Interlingua.

No answer and the man disappeared before he could try other languages.

Thorby shrugged and let it roll off; a beggar does not gain by being touchy. He set out to explore.

In twenty minutes he discovered many things. First, the Sisu was much larger than he had imagined. He had never before seen a starship close up, other than from the doubtful vantage of a slaver's hold. Ships in the distance, sitting on the field of Jubbul's port, had seemed large but not this enormous. Second, he was surprised to find so many people. He understood that the Sargon's freighters operating among the Nine Worlds were usually worked by crews of six or seven. But in his first few minutes he encountered several times that number of both sexes and all ages.

Third, he became dismally aware that he was being snubbed. People did not look at him, nor did they answer when he spoke; they walked right through him if he did not jump. The nearest he accomplished to social relations was with a female child, a toddler who regarded him with steady, grave eyes in answer to his overtures -- until snatched up by a woman who did not even glance at Thorby.

Thorby recognized the treatment; it was the way a noble treated one of Thorby's caste. A noble could not see him, he did not exist -- even a noble giving alms usually did so by handing it through a slave. Thorby had not been hurt by such treatment on Jubbul; that was natural, that was the way things had always been. It had made him neither lonely nor depressed; he had had plenty of warm company in his misery and had not known that it was misery.

But had he known ahead of time that the entire ship's company of the Sisu would behave like nobles he would never have shipped in her, snoopies or not. But he had not expected such treatment. Captain Krausa, once Baslim's message had been delivered, had been friendly and gruffly paternal; Thorby had expected the crew of the Sisu to reflect the attitude of her master.

He wandered the steel corridors, feeling like a ghost among living, and at last decided sadly to go back to the cubicle in which he had awakened. Then he discovered that he was lost. He retraced what he thought was the route -- and in fact was; Baslim's renshawing had not been wasted -- but all he found was a featureless tunnel. So he set out again, uncomfortably aware that whether he found his own room or not, he must soon find where they hid the washroom, even if he had to grab someone and shake him.

He blundered into a place where he was greeted by squeals of female indignation; he retreated hastily and heard a door slam behind him.

Shortly thereafter he was overtaken by a hurrying man who spoke to him, in Interlingua: "What the dickens are you doing wandering around and butting into things?"

Thorby felt a wave of relief. The grimmest place in the world, lonelier than being alone, is Coventry, and even a reprimand is better than being ignored. "I'm lost," he said meekly.

"Why didn't you stay where you were?"

"I didn't know I was supposed to -- I'm sorry, noble sir -- and there wasn't any washroom."

"Oh. But there is, right across from your bunkie."

"Noble sir, I did not know."

"Mmm . . . I suppose you didn't. I'm not 'noble sir'; I'm First Assistant Power Boss -- see that you remember it. Come along." He grabbed Thorby by an arm, hurried him back through the maze, stopped in the same tunnel that had stamped Thorby, ran his hand down a seam in the metal. "Here's your bunkie." The panel slid aside.

The man turned, did the same on the other side. "Here's the starboard bachelors' washroom." The man advised him scornfully when Thorby was confused by strange fixtures, then chaperoned him back to his room. "Now stay here. Your meals will be fetched."

"First Assistant Power Boss, sir?"

"Eh?"

"Could I speak with Captain Krausa?"

The man looked astonished. "Do you think the Skipper has nothing better to do than talk to you?"

"But --"

The man had left; Thorby was talking to a steel panel.

Food appeared eventually, served by a youngster who behaved as if he were placing a tray in an empty room. More food appeared later and the first tray was removed. Thorby almost managed to be noticed; he hung onto the first tray and spoke to the boy in Interlingua. He detected a flicker of understanding, but he was answered by one short word. The word was "Fraki!" and Thorby did not recognize it . . . but he could recognize the contempt with which it was uttered. A fraki is a small, shapeless, semi-saurian scavenger of Alpha Centaura Prime III, one of the first worlds populated by men. It is ugly, almost mindless, and has disgusting habits. Its flesh can be eaten only by a starving man. Its skin is unpleasant to touch and leaves a foul odor.

But "fraki" means more than this. It means a groundhog, an earthcrawler, a dirt dweller, one who never goes into space, not of our tribe, not human, a goy, an auslander, a savage, beneath contempt. In Old Terran cultures almost every animal name has been used as an insult: pig, dog, sow, cow, shark, louse, skunk, worm -- the list is endless. No such idiom carries more insult than "fraki."

Fortunately all Thorby got was the fact that the youngster did not care for him . . . which he knew.

Presently Thorby became sleepy. But, although he had mastered the gesture by which doors were opened, he still could not find any combination of swipes, scratches, punches, or other actions which would open the bed; he spent that night on the floorplates. His breakfast appeared next morning but he was unable to detain the person serving it, even to be insulted again. He did encounter other boys and young men in the washroom across the corridor; while he was still ignored, he learned one thing by watching -- he could wash his clothing there. A gadget would accept a garment, hold it a few minutes, spew it forth dry and fresh. He was so delighted that he laundered his new finery three times that day. Besides, he had nothing else to do. He again slept on the floor that night.

He was squatting in his bunkie, feeling a great aching loneliness for Pop and wishing that he had never left Jubbul, when someone scratched at his door. "May I come in?" a voice inquired in careful, badly accented Sargonese.

"Come in!" Thorby answered eagerly and jumped up to open the door. He found himself facing a middle-aged woman with a pleasant face. "Welcome," he said in Sargonese, and stood aside.

"I thank you for your gracious --" she stumbled and said quickly, "Do you speak Interlingua?"

"Certainly, madam."

She muttered in System English, "Thank goodness for that -- I've run out of Sargonese," then went on in Interlingua, "Then we will speak it, if you don't mind."

"As you wish, madam," Thorby answered in the same language, then added in System English, "unless you would rather use another language."

She looked startled. "How many languages do you speak?"

Thorby thought. "Seven, ma'am. I can puzzle out some others, but I cannot say that I speak them."

She looked even more surprised and said slowly, "Perhaps I have made a mistake. But -- correct me if I am wrong and forgive my ignorance -- I was told that you were a beggar's son in Jubbulpore."

"I am the son of Baslim the Cripple," Thorby said proudly, "a licensed beggar under the mercy of the Sargon. My late father was a learned man. His wisdom was famous from one side of the Plaza to the other."

"I believe it. Uh . . . are all beggars on Jubbul linguists?"

"What, ma'am? Most of them speak only gutter argot. But my father did not permit me to speak it . . . other than professionally, of course."

"Of course." She blinked. "I wish I could have met your father."

"Thank you, ma'am. Will you sit down? I am ashamed that I have nothing but the floor to offer . . . but what I have is yours."

"Thank you." She sat on the floor with more effort than did Thorby, who had remained thousands of hours in lotus seat, shouting his plea for alms.

Thorby wondered whether to close the door, whether this lady -- in Sargonese he thought of her as "my lady" even though her friendly manner made her status unclear -- had left it open on purpose. He was floundering in a sea of unknown customs, facing a social situation totally new to him. He solved it with common sense; he asked, "Do you prefer the door open or closed, ma'am?"

"Eh? It doesn't matter. Oh, perhaps you had better leave it open; these are bachelor quarters of the starboard moiety and I'm supposed to live in port purdah, with the unmarried females. But I'm allowed some of the privileges and immunities of . . . well, of a pet dog. I'm a tolerated 'fraki.' " She spoke the last word with a wry smile.

Thorby had missed most of the key words. "A 'dog'? That's a wolf creature?"

She looked at him sharply. "You learned this language on Jubbul?"

"I have never been off Jubbul, ma'am -- except when I was very young. I'm sorry if I do not speak correctly. Would you prefer Interlingua?"

"Oh, no. You speak System English beautifully . . . a better Terran accent than mine -- I've never been able to get my birthplace out of my vowels. But it's up to me to make myself understood. Let me introduce myself. I'm not a trader; I'm an anthropologist they are allowing to travel with them. My name is Doctor Margaret Mader."

Thorby ducked his head and pressed his palms together. "I am honored. My name is Thorby, son of Baslim."

"The pleasure is mine, Thorby. Call me 'Margaret.' My title doesn't count here anyhow, since it is not a ship's title. Do you know what an anthropologist is?"

"Uh, I am sorry, ma'am -- Margaret."

"It's simpler than it sounds. An anthropologist is a scientist who studies how people live together."

Thorby looked doubtful. "This is a science?"

"Sometimes I wonder. Actually, Thorby, it is a complicated study, because the patterns that men work out to live together seem unlimited. There are only six things that all men have in common with all other men and not with animals -- three of them part of our physical makeup, the way our bodies work, and three of them are learned. Everything else that a man does, or believes, all his customs and economic practices, vary enormously. Anthropologists study those variables. Do you understand variable'?"

"Uh," Thorby said doubtfully, "the x in an equation?"

"Correct!" she agreed with delight. "We study the x's in the human equations. That's what I'm doing. I'm studying the way the Free Traders live. They have worked out possibly the oddest solutions to the difficult problem of how to be human and survive of any society in history. They are unique." She moved restlessly. "Thorby, would you mind if I sat in a chair? I don't bend as well as I used to."

Thorby blushed. "Ma'am . . . I have none. I am dis --"

"There's one right behind you. And another behind me." She stood up and touched the wall. A panel slid aside; an upholstered armchair unfolded from the space disclosed.

Seeing his face she said, "Didn't they show you?" and did the same on the other wall; another chair sprang out.

Thorby sat down cautiously, then let his weight relax into cushions as the chair felt him out and adjusted itself to him. A big grin spread over his face. "Gosh!"

"Do you know how to open your work table?"

"Table?"

"Good heavens, didn't they show you anything?"

"Well . . . there was a bed in here once. But I've lost it."

Doctor Mader muttered something, then said, "I might have known it. Thorby, I admire these Traders. I even like them. But they can be the most stiff-necked, self-centered, contrary, self-righteous, uncooperative -- but I should not criticize our hosts. Here." She reached out both hands, touched two spots on the wall and the disappearing bed swung down. With the chairs open, there remained hardly room for one person to stand. "I'd better close it. You saw what I did?"

"Let me try."

She showed Thorby other built-in facilities of what had seemed to be a bare cell: two chairs, a bed, clothes cupboards. Thorby learned that he owned, or at least had, two more work suits, two pairs of soft ship's shoes, and minor items, some of which were strange, bookshelf and spool racks (empty, except for the Laws of Sisu), a drinking fountain, a bed reading light, an intercom, a clock, a mirror, a room thermostat, and gadgets which were useless to him as his background included no need. "What's that?" he asked at last.

"That? Probably the microphone to the Chief Officer's cabin. Or it may be a dummy with the real one hidden. But don't worry; almost no one in this ship speaks System English and she isn't one of the few. They talk their 'secret language' -- only it isn't secret; it's just Finnish. Each Trader ship has its own language -- one of the Terran tongues. And the culture has an over-all 'secret' language which is merely degenerate Church Latin -- and at that they don't use it; 'Free Ships' talk to each other in Interlingua."

Thorby was only half listening. He had been excessively cheered by her company and now, in contrast, he was brooding over his treatment from others. "Margaret . . . why won't they speak to people?"

"Eh?"

"You're the first person who's spoken to me!"

"Oh." She looked distressed. "I should have realized it. You've been ignored."

"Well . . . they feed me."

"But they don't talk with you. Oh, you poor dear! Thorby, they don't speak to you because you are not 'people.' Nor am I."

"They don't talk to you either?"

"They do now. But it took direct orders from the Chief Officer and much patience on my part." She frowned. "Thorby, every excessively clannish culture -- and I know of none more clannish than this -- every such culture has the same key word in its language . . . and the word is 'people' however they say it. It means themselves. 'Me and my wife, son John and his wife, us four and no more' -- cutting off their group from all others and denying that others are even human. Have you heard the word 'fraki' yet?"

"Yes. I don't know what it means."

"A fraki is just a harmless, rather repulsive little animal. But when they say it, it means 'stranger.' "

"Uh, well, I guess I am a stranger."

"Yes, but it also means you can never be anything else. It means that you and I are subhuman breeds outside the law -- their law."

Thorby looked bleak. "Does that mean I have to stay in this room and never, ever talk to anybody?"

"Goodness! I don't know. I'll talk to you --"

"Thanks!"

"Let me see what I can find out. They're not cruel; they're just pig-headed and provincial. The fact that you have feelings never occurs to them. Ill talk to the Captain; I have an appointment with him as soon as the ship goes irrational." She glanced at her anklet. "Heavens, look at the time! I came here to talk about Jubbul and we haven't said a word about it. May I come back and discuss it with you?"

"I wish you would." "Good. Jubbul is a well-analyzed culture, but I don't think any student has ever had opportunity to examine it from the perspective you had. I was delighted when I heard that you were a professed mendicant."

"Excuse me?"

"A beggar. Investigators who have been allowed to live there have all been guests of the upper classes. That forces them to see . . . well, the way slaves live for example, from the outside, not the inside. You see?"

"I guess so." Thorby added, "If you want to know about slaves, I was one."

"You were?"

"I'm a freedman. Uh, I should have told you," he added uncomfortably, afraid that his new-found friend would scorn him, now that she knew his class.

"No reason to, but I'm overjoyed that you mentioned it Thorby, you're a treasure trove! Look, dear, I've got to run; I'm late now. But may I come back soon?"

"Huh? Why, surely, Margaret." He added honestly, "I really don't have much else to do."

Thorby slept in his wonderful new bed that night. He was left alone the next morning but he was not bored, as he had so many toys to play with. He opened things out and caused them to fold up again, delighted at how each gadget folded in on itself to occupy

minimum space. He concluded that it must be witchcraft Baslim had taught him that magic and witchcraft were nonsense but the teaching had not fully stuck -- Pop had known everything but just the same, how could you fly in the face of experience? Jubbul had plenty of witches and if they weren't practicing magic, what were they doing?

He had just opened his bed for the sixth time when he was almost shocked out of the shoes he had dared to try on by an unholy racket. It was the ship's alarm, calling all hands to General Quarters, and it was merely a drill, but Thorby did not know that. When he reswallowed his heart, he opened the door and looked out. People were running at breakneck speed.

Shortly the corridors were empty. He went back into his bunkie, waited and tried to understand. Presently his sharp ears detected the absence of the soft sigh of the ventilation system. But there was nothing he could do about it. He should have mustered in the innermost compartment, along with children and other noncombatants, but he did not know.

So he waited.

The alarm rang again, in conjunction with a horn signal, and again there were running people in the passageways. Again it was repeated, until the crew had run through General Quarters, Hull Broach, Power Failure, Air Hazard, Radiation Hazard, and so forth -- all the general drills of a taut ship. Once the lights went out and once for frightening moments Thorby experienced the bewildering sensation of free fall as the ship's artificial field cutoff.

After a long time of such inexplicable buffoonery he heard the soothing strains of recall and the ventilation system whispered back to normal. No one bothered to look for him; the old woman who mustered nonparticipants hadn't noticed the absence of the fraki although she had counted the animal pets aboard.

Immediately thereafter Thorby was dragged up to see the Chief Officer.

A man opened his door, grabbed his shoulder and marched him away. Thorby put up with it for a short distance, then he rebelled; he had his bellyful of such treatment.

The gutter fighting he had learned in order to survive in Jubbulpore was lacking in rules. Unfortunately this man had learned in a school equally cold-blooded but more scientific; Thorby got in one swipe, then found himself pinned against the bulkhead with his left wrist in danger of breaking. "Cut out the nonsense!"

"Quit pushing me around!"

"I said, 'Cut out the nonsense.' You're going up to see the Chief Officer. Don't give me trouble, Fraki, or III stuff your head in your mouth."

"I want to see Captain Krausa!"

The man relaxed the pressure and said, "You'll see him. But the Chief Officer has ordered you to report . . . and she can't be kept waiting. So will you go quietly? Or shall I carry you there in pieces?"

Thorby went quietly. Pressure on a wrist joint combined with pressure on a nerve between the bones of the palm carries its own rough logic. Several decks up he was shoved through an open door. "Chief Officer, here's the fraki."

"Thank you, Third Deck Master. You may go."

Thorby understood only the word "fraki." He picked himself up and found himself in a room many times as large as his own. The most prominent thing in it was an imposing bed, but the small figure in the bed dominated the room. Only after he had looked at her

did he notice that Captain Krausa stood silent on one side of the bed and that a woman perhaps the Captain's age stood on the other.

The woman in bed was shrunken with age but radiated authority. She was richly dressed -- the scarf over her thin hair represented more money than Thorby had ever seen at one time -- but Thorby noticed only her fierce, sunken eyes. She looked at him. "So! Oldest Son, I have much trouble believing it." She spoke in Suomic.

"My Mother, the message could not have been faked."

She sniffed.

Captain Krausa went on with humble stubbornness, "Hear the message yourself. My Mother." He turned to Thorby and said in Interlingua, "Repeat the message from your father."

Obediently, not understanding but enormously relieved to be in the presence of Pop's friend, Thorby repeated the message by rote. The old woman heard him through, then turned to Captain Krausa. "What is this? He speaks our language! A fraki!"

"No, My Mother, he understands not a word. That is Baslim's voice."

She looked back at Thorby, spilled a stream of Suomic on him. He looked questioningly at Captain Krausa. She said, "Have him repeat it again."

The Captain gave the order; Thorby, confused but willing, did so. She lay silent after he had concluded while the other waited. Her face screwed up in anger and exasperation. At last she rasped, "Debts must be paid!"

"That was my thought, My Mother."

"But why should the draft be drawn on us?" she answered angrily.

The Captain said nothing. She went on more quietly, "The message is authentic. I thought surely it must be faked. Had I known what you intended I would have forbidden it. But, Oldest Son, stupid as you are, you were right. And debts must be paid." Her son continued to say nothing; she added angrily, "Well? Speak up! What coin do you propose to tender?"

"I have been thinking. My Mother," Krausa said slowly. "Baslim demands that we care for the boy only a limited time . . . until we can turn him over to a Hegemonic military vessel. How long will that be? A year, two years. But even that presents problems. However, we have a precedent -- the fraki female. The Family has accepted her -- oh, a little grumbling, but they are used to her now, even amused by her. If My Mother intervened for this lad in the same way --"

"Nonsense!"

"But, My Mother, we are obligated. Debts must --"

"Silence!"

Krausa shut up.

She went on quietly, "Did you not listen to the wording of the burden Baslim placed on you? ' -- succor and admonish him as if you were I.' What was Baslim to this fraki?"

"Why, he speaks of him as his adopted son. I thought --"

"You didn't think. If you take Baslim's place, what does that make you? Is there more than one way to read the words?"

Krausa looked troubled. The ancient went on, "Sisu pays debts in full. No half-measures, no short weights -- in full. The fraki must be adopted . . . by you."

Krausa's face was suddenly blank. The other woman, who had been moving around quietly with make-work, dropped a tray.

The Captain said, "But, My Mother, what will the Family --"

"I am the Family!" She turned suddenly to the other woman. "Oldest Son's Wife, have all my senior daughters attend me."

"Yes, Husband's Mother." She curtsied and left.

The Chief Officer looked grimly at the overhead, then almost smiled. "This is not all bad, Oldest Son. What will happen at the next Gathering of the People?"

"Why, we will be thanked."

"Thanks buy no cargo." She licked her thin Ups. "The People will be in debt to Sisu . . . and there will be a change in status of ships. We won't suffer."

Krausa smiled slowly. "You always were a shrewd one, My Mother."

"A good thing for Sisu that I am. Take the fraki boy and prepare him. We'll do this quickly."

Chapter 8

Thorby had two choices: be adopted quietly, or make a fuss and be adopted anyhow. He chose the first, which was sensible, as opposing the will of the Chief Officer was unpleasant and almost always futile. Besides, while he felt odd and rather unhappy about acquiring a new family so soon after the death of Pop, nevertheless he could see that the change was to his advantage. As a fraki, his status had never been lower. Even a slave has equals.

But most important, Pop had told him to do what Captain Krausa said for him to do.

The adoption took place in the dining saloon at the evening meal that day. Thorby understood little of what went on and none of what was said, since the ceremonies were in the "secret language," but the Captain had coached him in what to expect. The entire ship's company was there, except those on watch. Even Doctor Mader was there, inside the main door and taking no part but where she could see and hear.

The Chief Officer was carried in and everyone stood. She was settled on a lounge at the head of the officers' table, where her daughter-in-law, the Captain's wife attended her. When she was comfortable, she made a gesture and they sat down, the Captain seating himself on her right Girls "from the port moiety, the watch with the day's duty, then served all hands with bowls of thin mush. No one touched it. The Chief Officer banged her spoon on her bowl and spoke briefly and emphatically.

Her son followed her. Thorby was surprised to discover that he recognized a portion of the Captain's speech as being identical with part of the message Thorby had delivered; he could spot the sequence of sounds.

The Chief Engineer, a man older than Krausa, answered, then several older people, both men and women, spoke. The Chief Officer asked a question and was answered in chorus -- a unanimous assent. The old woman did not ask for dissenting votes.

Thorby was trying to catch Doctor Mader's eye when the Captain called to him in Interlingua. Thorby had been seated on a stool alone and was feeling conspicuous, especially as persons he caught looking at him did not seem very friendly.

"Come here!"

Thorby looked up, saw both the Captain and his mother looking at him. She seemed irritated or it may have been the permanent set of her features. Thorby hurried over.

She dipped her spoon in his dish, barely licked it. Feeling as if he were doing something horribly wrong but having been coached, he dipped his spoon in her bowl, timidly took a mouthful. She reached up, pulled his head down and pecked him with withered lips on both cheeks. He returned the symbolic caress and felt gooseflesh.

Captain Krausa ate from Thorby's bowl; he ate from the Captain's. Then Krausa took a knife, held the point between thumb and forefinger and whispered in Interlingua, "Mind you don't cry out." He stabbed Thorby in his upper arm.

Thorby thought with contempt that Baslim had taught him to ignore ten times that much pain. But blood flowed freely. Krausa led him to a spot where all might see, said something loudly, and held his arm so that a puddle of blood formed on the deck. The Captain stepped on it, rubbed it in with his foot, spoke loudly again -- and a cheer went up. Krausa said to Thorby in Interlingua, "Your blood is now in the steel; our steel is in your blood."

Thorby had encountered sympathetic magic all his life and its wild, almost reasonable logic he understood. He felt a burst of pride that he was now part of the ship.

The Captain's wife slapped a plaster over the cut. Then Thorby exchanged food and kisses with her, after which he had to do it right around the room, every table, his brothers and his uncles, his sisters and his cousins and his aunts. Instead of kissing him, the men and boys grasped his hands and then clapped him across the shoulders. When he came to the table of unmarried females he hesitated -- and discovered that they did not kiss him; they giggled and squealed and blushed and hastily touched forefingers to his forehead.

Close behind him, girls with the serving duty cleared away the bowls of mush -- purely ritualistic food symbolizing the meager rations on which the People could cross space if necessary -- and were serving a feast. Thorby would have been clogged to his ears with mush had he not caught onto the trick: don't eat it, just dip the spoon, then barely taste it. But when at last he was seated, an accepted member of the Family, at the starboard bachelors' table, he had no appetite for the banquet in his honor. Eighty-odd new relatives were too much. He felt tired, nervous, and let down.

But he tried to eat. Presently he heard a remark in which he understood only the word "fraki." He looked up and saw a youth across the table grinning unpleasantly.

The president of the table, seated on Thorby's right, rapped for attention. "Well speak nothing but Interlingua tonight," he announced, "and thereafter follow the customs in allowing a new relative gradually to acquire our language." His eye rested coldly on the youngster who had sneered at Thorby. "As for you, Cross-Cousin-in-Law by Marriage, I'll remind you -- just once -- that my Adopted Younger Brother is senior to you. And I'll see you in my bunkie after dinner."

The younger boy looked startled. "Aw, Senior Cousin, I was just saying --"

"Drop it." The young man said quietly to Thorby, "Use your fork. People do not eat meat with fingers."

"Fork?"

"Left of your plate. Watch me; you'll learn. Don't let them get you riled. Some of these young oafs have yet to learn that when Grandmother speaks, she means business."

Thorby was moved from his bunkie into a less luxurious larger room intended for four bachelors. His roommates were Fritz Krausa, who was his eldest unmarried foster brother

and president of the starboard bachelor table, Chelan Krausa-Drotar, Thorby's foster ortho-second-cousin by marriage, and Jeri Kingsolver, his foster nephew by his eldest married brother.

It resulted in his learning Suomic rapidly. But the words he needed first were not Suomish; they were words borrowed or invented to describe family relationships in great detail. Languages reflect cultures; most languages distinguish brother, sister, father, mother, aunt, uncle, and link generations by "great" or "grand." Some languages make no distinction between (for example) "father" and "uncle" and the language reflects tribal custom. Contrariwise, some languages (e.g., Norwegian) split "uncle" into maternal and paternal ("morbror" and "farbror").

The Free Traders can state a relationship such as "my maternal foster half-stepuncle by marriage, once removed and now deceased" in one word, one which means that relationship and no other. The relation between any spot on a family tree and any other spot can be so stated. Where most cultures find a dozen titles for relatives sufficient the Traders use more than two thousand. The languages name discreetly and quickly such variables as generation, lineal or collateral, natural or adopted, age within generation, sex of speaker, sex of relative referred to, sexes of relatives forming linkage, consanguinity or affinity, and vital status.

Thorby's first task was to learn the word and the relationship defined by it with which he must address each of more than eighty new relatives; he had to understand the precise flavor of relationship, close or distant, senior or junior; he had to learn other titles by which he would be addressed by each of them. Until he had learned all this, he could not talk because as soon as he opened his mouth he would commit a grave breach in manners.

He had to associate five things for each member of the Sisu's company, a face, a full name (his own name was now Thorby Baslim-Krausa), a family title, that person's family title for him, and that person's ship's rank (such as "Chief Officer" or "Starboard Second Assistant Cook"). He learned that each person must be addressed by family title in family matters, by ship's rank concerning ship's duties, and by given names on social occasions if the senior permitted it -- nicknames hardly existed, since the nickname could be used only down, never up.

Until he grasped these distinctions, he could not be a functioning member of the family even though he was legally such. The life of the ship was a caste system of such complex obligations, privileges and required reactions to obligatory actions, as to make the stratified, protocol-ridden society of Jubbul seem like chaos. The Captain's wife was Thorby's "mother" but she was also Deputy Chief Officer; how he addressed her depended on what he had to say. Since he was in bachelor quarters, the mothering phase ceased before it started; nevertheless she treated him warmly as a son and offered her cheek for his kiss just as she did for Thorby's roommate and elder brother Fritz.

But as Deputy Chief Officer she could be as cold as a tax collector.

Not that her status was easier; she would not be Chief Officer until the old woman had the grace to die. In the meantime she was hand and voice and body servant for her mother-in-law. Theoretically senior officers were elective; practically it was a one-party system with a single slate. Krausa was captain because his father had been; his wife was deputy chief officer because she was his wife, and she would someday become chief officer -- and boss him and his ship as his mother did -- for the same reason. Meanwhile

his wife's high rank carried with it the worst job in the ship, with no respite, for senior officers served for life . . . unless impeached, convicted, and expelled -- onto a planet for unsatisfactory performance, into the chilly thinness of space for breaking the ancient and pig-headed laws of Sisu.

But such an event was as scarce as a double eclipse; Thorby's mother's hope lay in heart failure, stroke, or other hazard of old age.

Thorby as adopted youngest son of Captain Krausa, senior male of the Krausa sept, titular head of Sisu clan (the Captain's mother being the real head), was senior to three-fourths of his new relatives in clan status (he had not yet acquired ship's rank). But seniority did not make life easier. With rank goeth privileges -- so it ever shall be. But also with it go responsibility and obligation, always more onerous than privileges are pleasant.

It was easier to learn to be a beggar.

He was swept up in his new problems and did not see Doctor Margaret Mader for days. He was hurrying down the trunk corridor of fourth deck -- he was always hurrying now -- when he ran into her.

He stopped. "Hello, Margaret."

"Hello, Trader. I thought for a moment that you were no longer speaking to fraki."

"Aw, Margaret!"

She smiled. "I was joking. Congratulations, Thorby. I'm happy for you -- it's the best solution under the circumstances."

"Thanks. I guess so."

She shifted to System English and said with motherly concern, "You seem doubtful, Thorby. Aren't things going well?"

"Oh, things are all right" He suddenly blurted the truth. "Margaret, I'm never going to understand these people!"

She said gently, "I've felt the same way at the beginning of every field study and this one has been the most puzzling. What is bothering you?"

"Uh . . . I don't know. I never know. Well, take Fritz -- he's my elder brother. He's helped me a lot -- then I miss something that he expects me to understand and he blasts my ears off. Once he hit me. I hit back and I thought he was going to explode."

"Peck rights," said Margaret.

"What?"

"Never mind. It isn't scientifically parallel; humans aren't chickens. What happened?"

"Well, just as quickly he went absolutely cold, told me he would forget it, wipe it out, because of my ignorance."

"Noblesse oblige."

"Huh?"

"Sorry. My mind is a junk yard. And did he?"

"Completely. He was sweet as sugar. I don't know why he got sore . . . and I don't know why he quit being sore when I hit him." He spread his hands. "It's not natural."

"No, it isn't. But few things are. Mmm . . . Thorby, I might be able to help. It's possible that I know how Fritz works better than he knows. Because I'm not one of the 'People.'"

"I don't understand."

"I do, I think. It's my job to. Fritz was born into the People; most of what he knows -- and he is a very sophisticated young man -- is subconscious. He can't explain it because

he doesn't know he knows it; he simply functions. But what I have learned these past two years I have learned consciously. Perhaps I can advise you when you are shy about asking one of them. You can speak freely with me; I have no status."

"Gee, Margaret, would you?"

"Whenever you have time. I haven't forgotten that you promised to discuss Jubbul with me, either. But don't let me hold you; you seemed in a hurry."

"I wasn't, not really." He grinned sheepishly. "When I hurry I don't have to speak to as many people . . . and I usually don't know how."

"Ah, yes. Thorby, I have photographs, names, family classification, ship's job, on everyone. Would it help?"

"Huh? I should say so! Fritz thinks it's enough just to point somebody out once and say who he is."

"Then come to my room. It's all right; I have a dispensation to interview anyone there. The door opens into a public corridor; you don't cross purdah line."

Arranged by case cards with photographs, the data Thorby had had trouble learning piecemeal he soaked up in half an hour -- thanks to Baslim's training and Doctor Mader's orderliness. In addition, she had prepared a family tree for the Sisu; it was the first he had seen; his relatives did not need diagrams, they simply knew.

She showed him his own place. "The plus mark means that while you are in the direct sept, you were not born there. Here are a couple more, transferred from collateral branches to sept . . . to put them into line of command I suspect. You people call yourselves a 'family' but the grouping is a phratry."

"A what?"

"A related group without a common ancestor which practices exogamy -- that means marrying outside the group. "The exogamy taboo holds, modified by rule of moiety. You know how the two moieties work?"

"They take turns having the day's duty."

"Yes, but do you know why the starboard watch has more bachelors and the port watch more single women?"

"Uh, I don't think so."

"Females adopted from other ships are in port moiety; native bachelors are starboard. Every girl in your side must be exchanged . . . unless she can find a husband among a very few eligible men. You should have been adopted on this side, but that would have required a different foster father. See the names with a blue circle-and-cross? One of those girls is your future wife . . . unless you find a bride on another ship."

Thorby felt dismayed at the thought. "Do I have to?"

"If you gain ship's rank to match your family rank, you'll have to carry a club to beat them off."

It fretted him. Swamped with family, he felt more need for a third leg than he did for a wife.

"Most societies," she went on, "practice both exogamy and endogamy -- a man must marry outside his family but inside his nation, race, religion, or some large group, and you Free Traders are no exception; you must cross to another moiety but you can't marry fraki. But your rules produce an unusual setup; each ship is a patrilocal matriarchy."

"A what?"

" 'Patrilocal' means that wives join their husbands' families; a matriarchy . . . well, who bosses this ship?"

"Why, the Captain."

"He does?"

"Well, Father listens to Grandmother, but she is getting old and --"

"No 'buts.' The Chief Officer is boss. It surprised me; I thought it must be just this ship. But it extends all through the People. Men do the trading, conn the ship and mind its power plant -- but a woman always is boss. It makes sense within its framework; it makes your marriage customs tolerable."

Thorby wished she would not keep referring to marriage.

"You haven't seen ships trade daughters. Girls leaving weep and wail and almost have to be dragged . . . but girls arriving have dried their eyes and are ready to smile and flirt, eyes open for husbands. If a girl catches the right man and pushes him, someday she can be sovereign of an Independent state. Until she leaves her native ship, she isn't anybody -- which is why her tears dry quickly. But if men were boss, girl-swapping would be slavery; as it is, it's a girl's big chance."

Doctor Mader turned away from the chart. "Human customs that help people live together are almost never planned. But they are useful, or they don't survive. Thorby, you have been fretted about how to behave toward your relatives."

"I certainly have!"

"What's the most important thing to a Trader?"

Thorby thought. "Why, the Family. Everything depends on who you are in the Family."

"Not at all. His ship."

"Well, when you say 'ship' you mean 'family.' "

"Just backwards. If a Trader becomes dissatisfied, where can he go? Space won't have him without a ship around him; nor can he imagine living on a planet among fraki, the idea is disgusting. His ship is his life, the air he breathes comes from his ship; somehow he must learn to live in it. But the pressure of personalities is almost unbearable and there is no way to get away from each other. Pressure could build up until somebody gets killed . . . or until the ship itself is destroyed. But humans devise ways to adjust to any conditions. You people lubricate with rituals, formalism, set patterns of speech, obligatory actions and responses. When things grow difficult you hide behind a pattern. That's why Fritz didn't stay angry."

"Huh?"

"He couldn't. You had done something wrong . . . but the fact itself showed that you were ignorant. Fritz had momentarily forgotten, then he remembered and his anger disappeared. The People do not permit themselves to be angry with a child; instead they set him back on the proper path . . . until he follows your complex customs as automatically as Fritz does."

"Uh, I think I see." Thorby sighed. "But it isn't easy."

"Because you weren't born to it. But you'll learn and it will be no more effort than breathing -- and as useful. Customs tell a man who he is, where he belongs, what he must do. Better illogical customs than none; men cannot live together without them. From an anthropologist's view, 'justice' is a search for workable customs."

"My father -- my other father, I mean; Baslim the Cripple -- used to say the way to find justice is to deal fairly with other people and not worry about how they deal with you."

"Doesn't that fit what I said?"

"Uh, I guess so."

"I think Baslim the Cripple would regard the People as just." She patted his shoulder. "Never mind, Thorby. Do your best and one day you'll marry one of those nice girls. You'll be happy."

The prophecy did not cheer Thorby.

Chapter 9

By the time Sisu approached Losian Thorby had a battle station worthy of a man. His first assignment had been to assist in the central dressing station, an unnecessary job. But his background in mathematics got him promoted.

He had been attending the ship's school. Baslim had given him a broad education, but this fact did not stand out to his instructors, since most of what they regarded as necessary -- the Finnish language as they spoke it, the history of the People and of Sisu, trading customs, business practices, and export and import laws of many planets, hydroponics and ship's economy, ship safety and damage control -- were subjects that Baslim had not even touched; he had emphasized languages, science, mathematics, galactography and history. The new subjects Thorby gobbled with a speed possible only to one renshawed by Baslim's strenuous methods. The Traders needed applied mathematics -- bookkeeping and accounting, astrogation, nucleonics for a hydrogen-fusion-powered n-ship. Thorby splashed through the first, the second was hardly more difficult, but as for the third, the ship's schoolmaster was astounded that this ex-fraki had already studied multi-dimensional geometries.

So he reported to the Captain that they had a mathematical genius aboard.

This was not true. But it got Thorby reassigned to the starboard fire-control computer.

The greatest hazard to trading ships is in the first and last legs of each jump, when a ship is below speed-of-light. It is theoretically possible to detect and intercept a ship going many times speed-of-light, when it is irrational to the four-dimensional space of the senses; in practice it is about as easy as hitting a particular raindrop with a bow and arrow during a storm at midnight. But it is feasible to hunt down a ship moving below speed-of-light if the attacker is fast and the victim is a big lumbering freighter.

The Sisu had acceleration of one hundred standard gravities and used it all to cut down the hazard time. But a ship which speeds up by a kilometer per second each second will take three and one half standard days to reach speed-of-light.

Half a week is a long, nervous time to wait. Doubling acceleration would have cut danger time by half and made the Sisu as agile as a raider -- but it would have meant a hydrogen-fission chamber eight times as big with parallel increase in radiation shielding, auxiliary equipment, and paramagnetic capsule to contain the hydrogen reaction; the added mass would eliminate cargo capacity. Traders are working people; even if there were no parasites preying on them they could not afford to burn their profits in the inexorable workings of an exponential law of multi-dimensional physics. So the Sisu had the best legs she could afford-but not long enough to outrun a ship unburdened by cargo.

Nor could Sisu maneuver easily. She had to go precisely in the right direction when she entered the trackless night of n-space, else when she came out she would be too far from market; such a mistake could turn the ledger from black to red. Still more hampering, her skipper had to be prepared to cut power entirely, or risk having his in-ship artificial gravity field destroyed -- and thereby make strawberry jam of the Family as soft bodies were suddenly exposed to one hundred gravities.

This is why a captain gets stomach ulcers; it isn't dickering for cargoes, figuring discounts and commissions, and trying to guess what goods will show the best return. It's not long jumps through the black -- that is when he can relax and dandle babies. It is starting and ending a jump that kills him off, the long aching hours when he may have to make a split-second decision involving the lives -- or freedom -- of his family.

If raiders wished to destroy merchant ships, Sisu and her sisters would not stand a chance. But the raider wants loot and slaves; it gains nothing simply to blast a ship.

Merchantmen are limited by no qualms; an attacking ship's destruction is the ideal outcome. Atomic target-seekers are dreadfully expensive, and using them up is rough on profit-and-loss -- but there is no holding back if the computer says the target can be reached -- whereas a raider will use destruction weapons only to save himself. His tactic is to blind the trader, burn out her instruments so that he can get close enough to paralyze everyone aboard -- or, failing that, kill without destroying ship and cargo.

The trader runs if she can, fights if she must. But when she fights, she fights to kill.

Whenever Sisu was below speed-of-light, she listened with artificial senses to every disturbance in multi-space, the whisper of n-space communication or the "white" roar of a ship boosting at many gravities. Data poured into the ship's astrogational analog of space and the questions were: Where is this other ship? What is its course? speed? acceleration? Can it catch us before we reach n-space?

If the answers were threatening, digested data channeled into port and starboard fire-control computers and Sisu braced herself to fight. Ordnancemen armed A-bomb target seekers, caressed their sleek sides and muttered charms; the Chief Engineer unlocked the suicide switch which could let the power plant become a hydrogen bomb of monstrous size and prayed that, in final extremity, he would have the courage to deliver his people into the shelter of death; the Captain sounded the clangor calling the ship from watch-and-watch to General Quarters. Cooks switched off fires; auxiliary engineers closed down air circulation; farmers said good-by to their green growing things and hurried to fighting stations; mothers with babies mustered, then strapped down and held those babies tightly.

Then the waiting started.

But not for Thorby -- not for those assigned to fire-control computers. Sweating into their straps, for the next minutes or hours the life of Sisu is in their hands. The fire-control computer machines, chewing with millisecond meditation data from the analog, decide whether or not torpedoes can reach the target, then offer four answers: ballistic "possible" or "impossible" for projected condition, yes or no for condition changed by one ship, or the other, or both, through cutting power. These answers automatic circuits could handle alone, but machines do not think. Half of each computer is designed to allow the operator to ask what the situation might be in the far future of five minutes or so from now if variables change . . . and whether the target might be reached under such changes.

Any variable can be shaded by human judgment; an intuitive projection by a human operator can save his ship -- or lose it. A paralysis beam travels at speed-of-light; torpedoes never have time to get up to more than a few hundred kilometers per second -- yet it is possible for a raider to come within beaming range, have his pencil of paralyzing radiation on its way, and the trader to launch a target-seeker before the beam strikes . . . and still be saved when the outlaw flames into atomic mist a little later.

But if the operator is too eager by a few seconds, or overly cautious by the same, he can lose his ship. Too eager, the missile will fail to reach target; too cautious, it will never be launched.

Seasoned oldsters are not good at these jobs. The perfect firecontrolman is an adolescent, or young man or woman, fast in thought and action, confident, with intuitive grasp of mathematical relations beyond rote and rule, and not afraid of death he cannot yet imagine.

The traders must be always alert for such youngsters; Thorby seemed to have the feel for mathematics; he might have the other talents for a job something like chess played under terrific pressure and a fast game of spat ball. His mentor was Jeri Kingsolver, his nephew and roommate. Jeri was junior in family rank but appeared to be older; he called Thorby "Uncle" outside the computer room; on the job Thorby called him "Starboard Senior Firecontrolman" and added "Sir."

During long weeks of the dive through dark toward Losian, Jeri drilled Thorby. Thorby was supposed to be training for hydroponics and Jeri was the Supercargo's Senior Clerk, but the ship had plenty of farmers and the Supercargo's office was never very busy in space; Captain Krausa directed Jeri to keep Thorby hard at it in the computer room.

Since the ship remained at battle stations for half a week while boosting to speed-of-light, each fighting station had two persons assigned watch-and-watch. Jeri's junior controlman was his younger sister Mata. The computer had twin consoles, either of which could command by means of a selector switch. At General Quarters they sat side by side, with Jeri controlling and Mata ready to take over.

After a stiff course in what the machine could do Jeri put Thorby at one console, Mata at the other and fed them problems from the ship's control room. Each console recorded; it was possible to see what decisions each operator had made and how these compared with those made in battle, for the data were from records, real or threatened battles in the past.

Shortly Thorby became extremely irked; Mata was enormously better at it than he was.

So he tried harder and got worse. While he sweated, trying to outguess a slave raider which had once been on Sisu's screens, he was painfully aware of a slender, dark, rather pretty girl beside him, her swift fingers making tiny adjustments among keys and knobs, changing a bias or modifying a vector, herself relaxed and unhurried. It was humiliating afterwards to find that his pacesetter had "saved the ship" while he had failed.

Worse still, he was aware of her as a girl and did not know it -- all he knew was that she made him uneasy.

After one run Jeri called from ship's control, "End of drill. Stand by." He appeared shortly and examined their tapes, reading marks on sensitized paper as another might read print. He pursed his lips over Thorby's record. "Trainee, you fired three times . . . and not a one of your beasts got within fifty thousand kilometers of the enemy. We don't mind

expense -- it's merely Grandmother's blood. But the object is to blast him, not scare him into a fit. You have to wait until you can hit"

"I did my best!"

"Not good enough. Let's see yours, Sis."

The nickname irritated Thorby still more. Brother and sister were fond of each other and did not bother with titles. So Thorby had tried using their names . . . and had been snubbed; he was "Trainee," they were "Senior Controlman" and "Junior Controlman." There was nothing he could do; at drill he was junior. For a week, Thorby addressed Jeri as "Foster Ortho-Nephew" outside of drills and Jeri had carefully addressed him by family title. Then Thorby decided it was silly and went back to calling him Jeri. But Jeri continued to call him "Trainee" during drill, and so did Mata.

Jeri looked over his sister's record and nodded. "Very nice, Sis! You're within a second of post-analyzed optimum, and three seconds better than the shot that got the so-and-so. I have to admit that's sweet shooting . . . because the real run is my own. That raider off Ingstel . . . remember?"

"I certainly do." She glanced at Thorby.

Thorby felt disgusted. "It's not fair!" He started hauling at safety-belt buckles.

Jeri looked surprised. "What, Trainee?"

"I said it's not fair! You send down a problem, I tackle it cold -- and get bawled out because I'm not perfect. But all she had to do is to fiddle with controls to get an answer she already knows . . . to make me look cheap!"

Mata was looking stricken. Thorby headed for the door. "I never asked for this! I'm going to the Captain and ask for another job."

"Trainee!"

Thorby stopped. Jeri went on quietly. "Sit down. When I'm through, you can see the Captain -- if you think it's advisable."

Thorby sat down.

"I've two things to say," Jeri continued coldly. "First --" He turned to his sister. "Junior Controlman, did you know what problem this was when you were tracking?"

"No, Senior Controlman."

"Have you worked it before?"

"I don't think so."

"How was it you remembered it?"

"What? Why, you said it was the raider off Ingstel. I'll never forget because of the dinner afterwards -- you sat with Great Grandmo -- with the Chief Officer."

Jeri turned to Thorby. "You see? She tracked it cold . . . as cold as I had to when it happened. And she did even better than I did; I'm proud to have her as my junior tracker. For your information, Mister Stupid Junior Trainee, this engagement took place before the Junior Controlman became a trainee. She hasn't even run it in practice. She's just better at it than you are."

"All right," Thorby said sullenly. "I'll probably never be any good. I said I wanted to quit."

"I'm talking. Nobody asks for this job; it's a headache. Nobody quits it, either. After a while the job quits him, when post-analysis shows that he is losing his touch. Maybe I'm beginning to. But I promise you this: you'll either learn, or I will go to the Captain and tell him you don't measure up. In the meantime . . . if I have any lip out of you, I'll haul

you before the Chief Officer!" He snapped, "Extra drill run. Battle stations. Cast loose your equipment." He left the room.

Moments later his voice reached them. "Bogie! Starboard computer room, report!"

The call to dinner sounded; Mata said gravely, "Starboard tracker manned. Data showing, starting run." Her fingers started caressing keys. Thorby bent over his own controls; he wasn't hungry anyhow. For days Thorby spoke with Jeri only formally. He saw Mata at drill, or across the lounge at meals; he treated her with cold correctness and tried to do as well as she did. He could have seen her at other times; young people associated freely in public places. She was taboo to him, both as his niece and because they were of the same moiety, but that was no bar to social relations.

Jeri he could not avoid; they ate at the same table, slept in the same room. But Thorby could and did throw up a barrier of formality. No one said anything -- these things happened. Even Fritz pretended not to notice.

But one afternoon Thorby dropped into the lounge to see a story film with a Sargonese background; Thorby sat through it to pick it to pieces. But when it was over he could not avoid noticing Mata because she walked over, stood in front of him, addressed him humbly as her uncle and asked if he would care for a game of spat ball before supper?

He was about to refuse when he noticed her face; she was watching him with tragic eagerness. So he answered, "Why, thanks, Mata. Work up an appetite."

She broke into smiles. "Good! I've got Ilsa holding a table. Let's!"

Thorby beat her three games and tied one . . . a remarkable score, since she was female champion and was allowed only one point handicap when playing the male champion. But he did not think about it; he was enjoying himself.

His performance picked up, partly through the grimness with which he worked, partly because he did have feeling for complex geometry, and partly because the beggar's boy had had his brain sharpened by an ancient discipline. Jeri never again compared aloud the performances of Mata and Thorby and gave only brief comments on Thorby's results: "Better," or "Coming along," and eventually, "You're getting there." Thorby's morale soared; he loosened up and spent more time socially, playing spat ball with Mata rather frequently.

Toward the end of journey through darkness they finished the last drill one morning and Jeri called out, "Stand easy! I'll be a few minutes." Thorby relaxed from pleasant strain. But after a moment he fidgeted; he had a hunch that he had been in tune with his instruments. "Junior Controlman . . . do you suppose he would mind if I looked at my tape?"

"I don't think so," Mata answered. "I'll take it out; then it's my responsibility."

"I don't want to get you in trouble."

"You won't," Mata answered serenely. She reached back of Thorby's console, pulled out the strip record, blew on it to keep it from curling, and examined it. Then she pulled her own strip, compared the two.

She looked at him gravely. "That's a very good run, Thorby."

It was the first time she had ever spoken his name. But Thorby hardly noticed. "Really? You mean it?"

"It's a very good run . . . Thorby. We both got hits. But yours is optimum between 'possible' and 'critical limit' -- whereas mine is too eager. See?"

Thorby could read strips only haltingly, but he was happy to take her word for it. Jeri came in, took both strips, looked at Thorby's, then looked more closely. "I dug up the post-analysis before I came down," he said.

"Yes, sir?" Thorby said eagerly.

"Mmm . . . I'll check it after chow -- but it looks as if your mistakes had cancelled out."

Mata said, "Why, Bud, that's a perfect run and you know it!"

"Suppose it is?" Jeri grinned. "You wouldn't want our star pupil to get a swelled head, would you?"

"Pooh!"

"Right back to you, small and ugly sister. Let's go to chow."

They went through a narrow passage into trunk corridor of second deck, where they walked abreast. Thorby gave a deep sigh.

"Trouble?" his nephew asked.

"Not a bit!" Thorby put an arm around each of them. "Jeri, you and Mata are going to make a marksman out of me yet."

It was the first time "Thorby had addressed his teacher by name since the day he had received the scorching. But Jeri accepted his uncle's overture without stiffness. "Don't get your hopes up, bunkmate. But I think we've got it licked." He added, "I see Great Aunt Tora is giving us her famous cold eye. If anybody wants my opinion, I think Sis can walk unassisted -- I'm sure Great Aunt thinks so."

"Pooh to her, too!" Mata said briskly. "Thorby just made a perfect run."

Sisu came out of darkness, dropping below speed-of-light Losian's sun blazed less than fifty billion kilometers away; in a few days they would reach their next market The ship went to watch-and-watch battle stations.

Mata took her watch alone; Jeri required the trainee to stand watches with him. The first watch was always free from strain; even if a raider had accurate information via n-space communicator of Sisu's time of departure and destination, it was impossible in a jump of many light-years to predict the exact time and place where she would poke her nose out into rational space.

Jeri settled in his chair some minutes after Thorby had strapped down with that age-old tense feeling that this time it was not practice. Jeri grinned at him. "Relax. If you get your blood stream loaded, your back will ache, and you'll never last"

Thorby grinned feebly. "I'll try."

"That's better. We're going to play a game." Jeri pulled a boxlike contrivance out of a pocket, snapped it open.

"What is that?"

"A 'killjoy.' It fits here." Jeri slipped it over the switch that determined which console was in command. "Can you see the switch?"

"Huh? No."

"Hand the man the prize." Jeri fiddled with the switch behind the screen. "Which of us is in control in case we have to launch a bomb now?"

"How can I tell? Take that off, Jeri; it makes me nervous."

"That's the game. Maybe I'm controlling and you are just going through motions; maybe you are the man at the trigger and I'm asleep in my chair. Every so often I'll fiddle with the switch -- but you won't know how I've left it. So when a flap comes -- and one will; I feel it in my bones -- you can't assume that good old Jeri, the man with the

micrometer fingers, has the situation under control. You might have to save the firm. You."

Thorby had a queasy vision of waiting men and bombs in the missile room below -- waiting for him to solve precisely an impossible problem of life and death, of warped space and shifting vectors and complex geometry. "You're kidding," he said feebly. "You wouldn't leave me in control. Why, the Captain would skin you alive."

"Ah, that's where you're wrong. There always comes a day when a trainee makes his first real run. After that, he's a controlman . . . or an angel. But we don't let you worry at the time. Oh no! we just keep you worried all the time. Now here's the game. Any time I say, 'Now!' you guess who has control. You guess right, I owe you one dessert; you guess wrong, you owe me one. Now!"

Thorby thought quickly. "I guess I've got it."

"Wrong." Jeri lifted the killjoy. "You owe me one dessert -- and it's berry tart tonight; my mouth is watering. But faster; you're supposed to make quick decisions. Now!"

"You've still got it!"

"So I have. Even. Now!"

"You!"

"Nope. See? And I eat your tart -- I ought to quit while I'm ahead. Love that juice! Now!"

When Mata relieved them, Jeri owned Thorby's desserts for the next four days. "We start again with that score," Jeri said, "except that I'm going to collect that berry tart. But I forgot to tell you the big prize."

"Which is?"

"Comes the real thing, we bet three desserts. After ifs over, you guess and we settle. Always bet more on real ones."

Mata sniffed. "Bud, are you trying to make him nervous?"

"Are you nervous, Thorby?"

"Nope!"

"Quit fretting, Sis. Got it firmly in your grubby little hands?"

"I relieve you, sir."

"Come on, Thorby; let's eat. Berry tarts -- aaah!"

Three days later the score stood even, but only because Thorby had missed most of his desserts. Sisu was enormously slowed, almost to planetary speeds, and Losian's sun loomed large on the screens. Thorby decided, with mildest regret, that his ability to fight would not be tested this jump.

Then the general alarm made him rear up against safety belts. Jeri had been talking; his head jerked around, he looked at displays, and his hands moved to his controls. "Get on it!" he yelped. "This one's real."

Thorby snapped out of shock and bent over his board. The analog globe was pouring data to them; the ballistic situation had built up. Good heavens, it was close! And matching in fast! How had anything moved in so close without being detected? Then he quit thinking and started investigating answers . . . no, not yet . . . before long though . . . could the bandit turn a little at that boost and reduce his approach? . . . try a projection at an assumed six gravities of turning . . . would a missile reach him? . . . would it still reach him if he did not --

He hardly felt Mata's gentle touch on his shoulder. But he heard Jeri snap, "Stay out, Sis! We're on it, we're on it!"

A light blinked on Thorby's board; the squawk horn sounded, "Friendly craft, friendly craft! Losian planetary patrol, identified. Return to watch-and-watch."

Thorby took a deep breath, felt a great load lift.

"Continue your run!" screamed Jeri.

"Huh?"

"Finish your run! That's no Losian craft; that's a raider! Losian's can't maneuver that way! You've got it, boy, you've got it! Nail him!"

Thorby heard Mata's frightened gasp, but he was again at his problem. Change anything? Could he reach him? Could he still reach him in the cone of possible maneuver? Now! He armed Ms board and let the computer give the order, on projection.

He heard Jeri's voice faintly; Jeri seemed to be talking very slowly. "Missile away. I think you got him . . . but you were eager. Get off another one before their beam hits us."

Automatically Thorby complied. Time was too short to try another solution; he ordered the machine to send another missile according to projection. He then saw by his board that the target was no longer under power and decided with a curiously empty feeling that his first missile had destroyed it.

"That's all!" Jeri announced. "Now!"

"What?"

"Who had it? You or me? Three desserts."

"I had it," Thorby said with certainty. In another level he decided that he would never really be a Trader -- to Jeri that target had been -- just fraki. Or three desserts.

"Wrong. That puts me three up. I turned coward and kept control myself. Of course the bombs were disarmed and the launchers locked as soon as the Captain gave the word . . . but I didn't have the nerve to risk an accident with a friendly ship."

"Friendly ship!"

"Of course. But for you, Assistant Junior Controlman, it was your first real one . . . as I intended."

Thorby's head floated. Mata said, "Bud, you're mean to collect. You cheated."

"Sure I cheated. But he's a blooded controlman now, just the same. And I'm going to collect, just the very same. Ice cream tonight!"

Chapter 10

Thorby did not stay an assistant junior firecontrolman; Jeri moved up to astrogation trainee; Mata took charge of the starboard room, and Thorby was officially posted as the new Starboard Junior Firecontrolman, with life and death in his forefinger. He was not sure that he liked it.

Then that arrangement tumbled almost as quickly.

Losian is a "safe" planet. Inhabited by civilized non-humans, it is a port safe from ground raids; no dirtside defensive watches were necessary. Men could leave the ship for pleasure and even women could do so. (Some of the women aboard had not left the ship, save at Gatherings of the People, since being exchanged to Sisu as girls.)

Losian was to Thorby his "first" foreign land, Jubbul being the only planet clear in his memory. So he was very eager to see it. But work came first. When he was confirmed as

a firecontrolman, he was transferred from hydroponics into the junior vacancy among the Supercargo's clerks. It increased Thorby's status; business carried more prestige than housekeeping. Theoretically he was now qualified to check cargo; in fact a senior clerk did that while Thorby sweated, along with junior male relatives from every department. Cargo was an all-hands operation, as Sisu never permitted stevedores inside, even if it meant paying for featherbedding.

The Losians have never invented tariff; crated bales of verga leaves were turned over to purchaser right outside the ship. In spite of blowers the hold reeked of their spicy, narcotic fragrance and reminded Thorby of months past and light-years away when he had huddled, a fugitive in danger of being shortened, into a hole in one crate while a friendly stranger smuggled him through the Sargon's police.

It didn't seem possible. Sisu was home. Even as he mused, he thought in the Family's language.

He realized with sudden guilt that he had not thought about Pop very often lately. Was he forgetting Pop? No, no! He could never forget, not anything . . . Pop's tones of voice, the detached look when he was about to comment unfavorably, his creaking movements on chilly mornings, his unfailing patience no matter what -- why, in all those years Pop had never been angry with him -- yes, he had, once.

" 'I am not your master!' "

Pop had been angry that once. It had scared Thorby; he hadn't understood.

Now, across long space and time, Thorby suddenly understood. Only one thing could make Pop angry: Pop had been explosively insulted at the assertion that Baslim the Cripple was master to a slave. Pop, who maintained that a wise man could not be insulted, since truth could not insult and untruth was not worthy of notice.

Yet Pop had been insulted by the truth, for certainly Pop had been his master; Pop had bought him off the block. No, that was nonsense! He hadn't been Pop's slave; he had been Pop's son . . . Pop was never his master, even the times he had given him a quick one across the behind for goofing. Pop . . . was just 'Pop.'

Thorby knew then that the one thing that Pop hated was slavery.

Thorby was not sure why he was sure, but he was. He could not recall that Pop had ever said a word about slavery, as such; all Thorby could remember Pop saying was that a man need never be other than free in his own mind.

"Hey!"

The Supercargo was looking at him. "Sir?"

"Are you moving that crate, or making a bed of it?"

Three local days later Thorby had finished showering, about to hit dirt with Fritz, when the deckmaster stuck his head in the washroom, spotted him, and said, "Captain's compliments and Clerk Thorby Baslim-Krausa will attend him."

"Aye aye, Deckmaster," Thorby answered and added something under his breath. He hurried into clothes, stuck his head into his bunkie, gave the sad word to Fritz and rushed to the Cabin, hoping that the Deckmaster had told the Captain that Thorby had been showering.

The door was open. Thorby started to report formally when the Captain looked up. "Hello, Son. Come in."

Thorby shifted gears from Ship to Family. "Yes, Father."

"I'm about to hit dirt. Want to come along?"

"Sir? I mean, 'Yes, Father!' that 'ud be swell!"

"Good. I see you're ready. Let's go." He reached in a drawer and handed Thorby some twisted bits of wire. "Here's pocket money; you may want a souvenir."

Thorby examined it. "What's this stuff worth. Father?"

"Nothing -- once we're off Losian. So give me back what you have left so I can turn it in for credit. They pay us off in thorium and goods."

"Yes, but how will I know how much to pay for a thing?"

"Take their word for it. They won't cheat and won't bargain. Odd ones. Not like Lotarf . . . on Lotarf, if you buy a beer without an hour's dickering you're ahead."

Thorby felt that he understood Lotarfi better than he did Losians. There was something indecent about a purchase without a polite amount of dickering. But fraki had barbaric customs; you had to cater to them -- Sisu prided herself on never having trouble with fraki.

"Come along. We can talk as we go."

As they were being lowered Thorby looked at the ship nearest them, Free Trader El Nido, Garcia clan. "Father, are we going to visit with them?"

"No, I exchanged calls the first day."

"I didn't mean that. Will there be any parties?"

"Oh. Captain Garcia and I agreed to dispense with hospitality; he's anxious to jump. No reason why you shouldn't visit them though, subject to your duties." He added, "Hardly worth it; she's like Sisu, only not as modern."

"Thought I might look at her computer rooms."

They hit ground and stepped off. "Doubt if they'd let you. They're a superstitious lot." As they stepped clear of the hoist a baby Losian came streaking up, circled and sniffed their legs. Captain Krausa let the little thing investigate him, then said mildly, "That's enough," and gently pushed it away. Its mother whistled it back, picked it up and spanked it Captain Krausa waved to her, called out, "Hello, friend!"

"Hello, Trader Man," she answered in Interlingua shrill and sibilant. She was two-thirds Thorby's height, on four legs with forelimbs elevated -- the baby had been on all six. Both were sleek and pretty and sharp-eyed. Thorby was amused by them and only slightly put off by the double mouth arrangement -- one for eating, one for breathing and talking.

Captain Krausa continued talking. "That was a nice run you made on that Losian craft."

Thorby blushed. "You knew about that, Father?"

"What kind of a captain am I if I don't? Oh, I know what's worrying you. Forget it. If I give you a target, you burn it. It's up to me to kill your circuits if we make friendly identification. If I slap the God-be-thanked switch, you can't get your computer to fire, the bombs are disarmed, the launching gear is locked, the Chief can't move the suicide switch. So even if you hear me call off the action -- or you get excited and don't hear -- it doesn't matter. Finish your run; it's good practice."

"Oh. I didn't know, Father."

"Didn't Jeri tell you? You must have noticed the switch; it's the big red one, under my right hand."

"Uh, I've never been in the Control Room, Father."

"Eh? I must correct that; it might belong to you someday. Remind me . . . right after we go irrational."

"I will, Father." Thorby was pleased at the prospect of entering the mysterious shrine -- he was sure that half of his relatives had never visited it -- but he was surprised at the comment. Could a former fraki be eligible for command? It was legal for an adopted son to succeed to the worry seat; sometimes captains had no sons of their own. But an ex-fraki?

Captain Krausa was saying, "I haven't given you the attention I should, Son . . . not the care I should give Baslim's son. But it's a big family and my time is so taken up. Are they treating you all right?"

"Why, sure, Father!"

"Mmm . . . glad to hear it. It's -- well, you weren't born among the People, you know."

"I know. But everybody has treated me fine."

"Good. I've had good reports about you. You seem to learn fast, for a -- you learn fast."

Thorby sourly finished the phrase in his mind. The Captain went on, "Have you been in the Power Room?"

"No, sir. Just the practice room once."

"Now is a good time, while we're grounded. It's safer and the prayers and cleansing aren't so lengthy." Krausa paused. "No, well wait until your status is clear -- the Chief is hinting that you are material for his department. He has some silly idea that you will never have children anyway and he might regard a visit as an opportunity to snag you. Engineers!"

Thorby understood this speech, even the last word. Engineers were regarded as slightly balmy; it was commonly believed that radiations from the artificial star that gave Sisu her life ionized their brain tissues. True or not, engineers could get away with outrageous breeches of etiquette -- "not guilty by reason of insanity" was an unspoken defense for them once they had been repeatedly exposed to the hazards of their trade. The Chief Engineer even talked back to Grandmother.

But junior engineers were not allowed to stand power room watches until they no longer expected to have children; they took care of auxiliary machinery and stood training watches in a dummy power room. The People were cautious about harmful mutations, because they were more exposed to radiation hazards than were planet dwellers. One never saw overt mutation among them; what happened to babies distorted at birth was a mystery so taboo that Thorby was not even aware of it; he simply knew that power watchstanders were old men.

Nor was he interested in progeny; he simply saw in the Captain's remarks a hint that the Chief Engineer considered that Thorby could reach the exalted status of power watchstander quickly. The idea dazzled him. The men who wrestled with the mad gods of nuclear physics held status just below astrogators . . . and, in their own opinion, higher. Their opinion was closer to fact than was the official one; even a deputy captain who attempted to pull rank on a man standing power room watches was likely to wind up counting stores while the engineer rested in sick bay, then went back to doing as he pleased. Was it possible that an ex-fraki could aspire to such heights? Perhaps someday be Chief Engineer and sass the Chief Officer with impunity? "Father," Thorby said eagerly, "the Chief Engineer thinks I can learn power room rituals?"

"Wasn't that what I said?"

"Yes, sir. Uh . . . I wonder why he thought so?"

"Are you dense? Or unusually modest? Any man who can handle firecontrol mathematics can learn nuclear engineering. But he can learn astrogation, too, which is just as important."

Engineers never handled cargo; the only work they did in port was to load tritium and deuterium, or other tasks strictly theirs. They did no housekeeping. They . . . "Father? I think I might like to be an engineer."

"So? Well, now that you've thought so, forget it."

"But --"

" 'But' what?"

"Nothing, sir. Yes, sir."

Krausa sighed. "Son, I have obligations toward you; I'm carrying them out as best I can." Krausa thought over what he could tell the lad. Mother had pointed out that if Baslim had wanted the boy to know the message he had carried, Baslim would have put it in Interlingua. On the other hand, since the boy now knew the Family language perhaps he had translated it himself. No, more likely he had forgotten it. "Thorby, do you know who your family is?"

Thorby was startled. "Sir? My family is Sisu"

"Certainly! I mean your family before that."

"You mean Pop? Baslim the Cripple?"

"No, no! He was your foster father, just as I am now. Do you know what family you were born in?"

Thorby said bleakly, "I don't think I had one."

Krausa realized that he had poked a scar, said hastily, "Now, Son, you don't have to copy all the attitudes of your messmates. Why, if it weren't for fraki, with whom would we trade? How would the People live? A man is fortunate to be born People, but there is nothing to be ashamed of in being born fraki. Every atom has its purpose."

"I'm not ashamed!"

"Take it easy!"

"Sorry sir. I'm not ashamed of my ancestors. I simply don't know who they were. Why, for all I know, they may have been People."

Krausa was startled. "Why, so they could have been," he said slowly. Most slaves were purchased on planets that respectable traders never visited, or were born on estates of their owners . . . but a tragic percentage were People, stolen by raiders. This lad -- Had any ship of the People been lost around the necessary time? He wondered if, at the next Gathering, he might dig up identification from the Commodore's files?

But even that would not exhaust the possibilities; some chief officers were sloppy about sending in identifications at birth, some waited until a Gathering. Mother, now, never grudged the expense of a long n-space message; she wanted her children on record at once -- Sisu was never slack.

Suppose the boy were born People and his record had never reached the Commodore? How unfair to lose his birthright!

A thought tip-toed through his brain: a slip could be corrected in more ways than one. If any Free Ship had been lost -- He could not remember.

Nor could he talk about it. But what a wonderful thing to give the lad an ancestry! If he could . . .

He changed the subject "In a way, lad, you were always of the People."

"Huh? Excuse me, Father?"

Son, Baslim the Cripple was an honorary member of the People."

"What? How, Father? What ship?"

"All ships. He was elected at a Gathering. Son, a long time ago a shameful thing happened. Baslim corrected it. It put all the People in debt to him. I have said enough. Tell me, have you thought of getting married?"

Marriage was the last thing on Thorby's mind; he was blazing anxious to hear more about what Pop had done that had made him incredibly one of the People. But he recognized the warning with which an elder closed a taboo subject.

"Why, no. Father."

"Your Grandmother thinks that you have begun to notice girls seriously."

"Well, sir. Grandmother is never wrong . . . but I hadn't been aware of it."

"A man isn't complete without a wife. But I don't think you're old enough. Laugh with all the girls and cry with none -- and remember our customs." Krausa was thinking that he was bound by Baslim's injunction to seek aid of the Hegemony in finding where the lad had come from. It would be awkward if Thorby married before the opportunity arose. Yet the boy had grown taller in the months he had been in Sisu. Adding to Krausa's fret was an uneasy feeling that his half-conceived notion of finding (or faking) an ancestry for Thorby conflicted with his unbreakable obligations to Baslim.

Then he had a cheerful idea. "Tell you what. Son! It's possible that the girl for you isn't aboard. After all, there are only a few in port side purdah -- and picking a wife is a serious matter. She can gain you status or ruin you. So why not take it easy? At the Great Gathering you will meet hundreds of eligible girls. If you find one you like and who likes you, I'll discuss it with your Grandmother and if she approves, well dicker for her exchange. We won't be stingy either. How does that sound?"

It put the problem comfortably in the distance. "It sounds fine. Father!"

"I have said enough." Krausa thought happily that he would check the files while Thorby was meeting those "hundreds of girls" -- and he need not review his obligation to Baslim until he had done so. The lad might be a born member of the People -- in fact his obvious merits made fraki ancestry almost unthinkable. If so, Baslim's wishes would be carried out in the spirit more than if followed to the letter. In the meantime -- forget it!

They completed the mile to the edge of the Losian community. Thorby stared at sleek Losian ships and thought uneasily that he had tried to burn one of those pretty things out of space. Then he reminded himself that Father had said it was not a firecontrolman's business to worry about what target was handed him.

When they got into city traffic he had no time to worry. Losians do not use passenger cars, nor do they favor anything as stately as a sedan chair. On foot, they scurry twice as fast as a man can run; in a hurry, they put on a vehicle which makes one think of jet propulsion. Four and sometimes six limbs are encased in sleeves which end in something like skates. A framework fits the body and carries a bulge for the power plant (what sort Thorby could not imagine). Encased in this mechanical clown suit, each becomes a guided missile, accelerating with careless abandon, showering sparks, filling the air with earsplitting noises, cornering in defiance of friction, inertia, and gravity, cutting in and out, never braking until the last minute.

Pedestrians and powered speed maniacs mix democratically, with no perceptible rules. There seems to be no age limit for driver's licenses and the smallest Losians are simply more reckless editions of their elders.

Thorby wondered if he would ever get out into space alive.

A Losian would come zipping toward Thorby on the wrong side of the street (there was no right side), squeal to a stop almost on Thorby's toes, zig aside while snatching breath off his face and heart out of his mouth -- and never touch him. Thorby would jump. After a dozen escapes he tried to pattern himself after his foster father. Captain Krausa plowed stolidly ahead, apparently sure that the wild drivers would treat him as a stationary object Thorby found it hard to live by that faith, but it seemed to work.

Thorby could not make out how the city was organized. Powered traffic and pedestrians poured through any opening and the convention of private land and public street did not seem to hold. At first they proceeded along an area which Thorby classified as a plaza, then they went up a ramp, through a building which had no clear limits -- no vertical walls, no defined roof -- out again and down, through an arch which skirted a hole. Thorby was lost.

Once he thought they must be going through a private home -- they pushed through what must have been a dinner party. But the guests merely pulled in their feet.

Krausa stopped. "We're almost there. Son, we're visiting the fraki who bought our load. This meeting heals the trouble between us caused by buying and selling. He has offended me by offering payment; now we have to become friends again."

"We don't get paid?"

"What would your Grandmother say? We've already been paid -- but now I'll give it to him free and hell give me the thorium just because he likes my pretty blue eyes. Their customs don't allow anything as crass as selling."

"They don't trade with each other?"

"Of course they do. But the theory is that one fraki gives another anything he needs. It's sheer accident that the other happens to have money that he is anxious to press on the other as a gift -- and that the two gifts balance. They are shrewd merchants, Son; we never pick up an extra credit here."

"Then why this nonsense?"

"Son, if you worry about why fraki do what they do, you'll drive yourself crazy. When you're on their planet, do it their way . . . it's good business. Now listen. We'll have a meal of friendship . . . only they can't, or they'll lose face. So there will be a screen between us. You have to be present, because the Losian's son will be there -- only it's a daughter. And the fraki I'm going to see is the mother, not the father. Their males live in purdah . . . I think. But notice that when I speak through the interpreter, I'll use masculine gender."

"Why?"

"Because they know enough about our customs to know that masculine gender means the head of the house. It's logical if you look at it correctly."

Thorby wondered. Who was head of the Family? Father? Or Grandmother? Of course, when the Chief Officer issued an order, she signed it "By Order of the Captain," but that was just because . . . no. Well, anyhow --

Thorby suddenly suspected that the customs of the Family might be illogical in spots. But the Captain was speaking. "We don't actually eat with them; that's another fiction.

You'll be served a green, slimy liquid. Just raise it to your lips; it would burn out your gullet. Otherwise --" Captain Krausa paused while a Losian scorcher avoided the end of his nose. "Otherwise listen so that you will know how to behave next time. Oh yes! -- after I ask how old my host's son is, you'll be asked how old you are. You answer 'forty.' "

"Why?"

"Because that is a respectable age, in their years, for a son who is assisting his father."

They arrived and seemed still to be in public. But they squatted down opposite two Losians while a third crouched nearby. The screen between them was the size of a kerchief; Thorby could see over it. Thorby tried to look, listen, and learn, but the traffic never let up. It shot around and cut between them, with happy, shrill racket.

Their host started by accusing Captain Krausa of having lured him into a misdeed. The interpreter was almost impossible to understand, but he showed surprising command of scurrilous Interlingua. Thorby could not believe his ears and expected that Father would either walk out, or start trouble.

But Captain Krausa listened quietly, then answered with real poetry -- he accused the Losian of every crime from barratry to mopery and dopery in the spaceways.

This put the meeting on a friendly footing. The Losian made them a present of the thorium he had already paid, then offered to throw in his sons and everything he possessed.

Captain Krausa accepted and gave away Sisu, with all contents.

Both parties generously gave back the gifts. They ended at status quo, each to retain as a symbol of friendship what each now had: the Losian many hundredweight of verga leaf, the Trader slugs of thorium. Both agreed that the gifts were worthless but valuable for reasons of sentiment. In a burst of emotion the Losian gave away his son and Krausa made him (her) a present of Thorby. Inquiries followed and it was discovered that each was too young to leave the nest.

They got out of this dilemma by having the sons exchange names and Thorby found himself owner of a name he did not want and could not pronounce. Then they "ate."

The horrid green stuff was not only not fit to drink, but when Thorby inhaled, he burned his nostrils and choked. The Captain gave him a reproving glance.

After that they left. No good-bys, they just walked off. Captain Krausa said meditatively while proceeding like a sleepwalker through the riot of traffic, "Nice people, for fraki. Never any sharp dealing and absolutely honest I often wonder what one of them would do if I took him up on one of those offers. Pay up, probably."

"Not really!"

"Don't be sure. I might hand you in on that half-grown Losian."

Thorby shut up.

Business concluded. Captain Krausa helped Thorby shop and sight-see, which relieved Thorby, because he did not know what to buy, nor even how to get home. His foster father took him to a shop where Interlingua was understood. Losians manufacture all sorts of things of extreme complexity, none of which Thorby recognized. On Krausa's advice Thorby selected a small polished cube which, when shaken, showed endless Losian scenes in its depths. Thorby offered the shopkeeper his tokens; the Losian selected one and gave him change from a necklace of money. Then he made Thorby a present of shop and contents.

Thorby, speaking through Krausa, regretted that he had nothing to offer save his own services the rest of his life. They backed out of the predicament with courteous insults.

Thorby felt relieved when they reached the spaceport and he saw the homely, familiar lines of old Sisu.

When Thorby reached his bunkie, Jeri was there, feet up and hands back of his head. He looked up and did not smile.

"Hi, Jeri!"

"Hello, Thorby."

"Hit dirt?"

"No."

"I did. Look what I bought!" Thorby showed him the magic cube. "You shake it and every picture is different"

Jeri looked at one picture and handed it back. "Very nice."

"Jeri, what are you glum about? Something you ate?"

"No."

"Spill it."

Jeri dropped his feet to the deck, looked at Thorby. "I'm back in the computer room."

"Huh?"

"Oh, I don't lose status. It's just while I train somebody else."

Thorby felt a cold wind. "You mean I've been busted?"

"No."

"Then what do you mean?"

"Mata has been swapped."

Chapter 11

Mata swapped? Gone forever? Little Mattie with the grave eyes and merry giggle? Thorby felt a burst of sorrow and realized to his surprise that it mattered.

"I don't believe it!"

"Don't be a fool."

"When? Where has she gone? Why didn't you tell me?"

"To El Nido, obviously; it's the only ship of the People in port. About an hour ago. I didn't tell you because I had no idea it was coming . . . until I was summoned to Grandmother's cabin to say good-by." Jeri frowned. "It had to come someday . . . but I thought Grandmother would let her stay as long as she kept her skill as a tracker."

"Then why, Jeri? Why?"

Jeri stood up, said woodenly, "Foster Ortho-Uncle, I have said enough."

Thorby pushed him back into his chair. "You can't get away with that, Jeri. I'm your 'uncle' only because they said I was. But I'm still the ex-fraki you taught to use a tracker and we both know it. Now talk man to man. Spill it!"

"You won't like it."

"I don't like it now! Mattie gone . . . Look, Jeri, there is nobody here but us. Whatever it is, tell me. I promise you, on Sisu's steel, that I won't make an uncle-and-nephew matter of it. Whatever you say, the Family will never know."

"Grandmother might be listening."

"If she is, I've ordered you to talk and it's my responsibility. But she won't be; it's time for her nap. So talk."

"Okay." Jeri looked at him sourly. "You asked for it. You mean to say you haven't the dimmest idea why Grandmother hustled my Sis out of the ship?"

"Huh? None . . . or I wouldn't ask."

Jeri made an impatient noise. "Thorby, I knew you were thick-witted. I didn't know you were deaf, dumb, and blind."

"Never mind the compliments! Tell me the score."

"You're the reason Mata got swapped. You." Jeri looked at Thorby with disgust.

"Me?"

"Who else? Who pairs off at spat ball? Who sits together at story films? What new relative is always seen with a girl from his own moiety? I'll give you a hint -- the name starts with 'T.' "

Thorby turned white. "Jeri, I never had the slightest idea."

"You're the only one in the ship who didn't." Jeri shrugged. "I'm not blaming you. It was her fault. She was chasing you, you stupid clown! What I can't figure out is why you didn't know. I tried to give you hints."

Thorby was as innocent of such things as a bird is of ballistics. "I don't believe it."

"It doesn't matter whether you do or don't . . . everybody else saw it. But you both could have gotten away with it, as long as you kept it open and harmless -- and I was watching too closely for anything else -- if Sis hadn't lost her head."

"Huh? How?"

"Sis did something that made Grandmother willing to part with a crack firecontrolman. She went to Grandmother and asked to be adopted across moiety line. In her simple, addled-pated way she figured that since you were adopted in the first place, it didn't really matter that she was your niece -- just shift things around and she could marry you." Jeri grunted. "If you had been adopted on the other side, she could have wangled it. But she must have been clean off her head to think that Grandmother -- Grandmother! -- would agree to anything so scandalous."

"But . . . well, I'm not actually any relation to her. Not that I had any idea of marrying her."

"Oh, beat it! You make me tired."

Thorby moped around, unwilling to go back and face Jeri. He felt lost and alone and confused; the Family seemed as strange, their ways as difficult to understand, as the Losians.

He missed Mata. He had never missed her before. She had been something pleasant but routine -- like three meals a day and the other comforts he had learned to expect in Sisu. Now he missed her.

Well, if that was what she wanted, why hadn't they let her? Not that he had thought about it . . . but as long as you had to get married some day, Mata would be as tolerable as any. He liked her.

Finally he remembered that there was one person with whom he could talk. He took his troubles to Doctor Mader.

He scratched at her door, received a hurried, "Come in!" He found her down on her knees, surrounded by possessions. She had a smudge on her nose and her neat hair was

mussed. "Oh. Thorby. I'm glad you showed up. They told me you were dirtside and I was afraid I would miss you."

She spoke System English; he answered in it. "You wanted to see me?"

"To say good-by. I'm going home."

"Oh." Thorby felt again the sick twinge he had felt when Jeri had told about Mata. Suddenly he was wrenched with sorrow that Pop was gone. He pulled himself together and said, "I'm sorry. I'll miss you."

"I'll miss you, Thorby. You're the only one in this big ship that I felt at home with . . . which is odd, as your background and mine are about as far apart as possible. I'll miss our talks."

"So will I," Thorby agreed miserably. "When are you leaving?"

"El Nido jumps tomorrow. But I should transfer tonight; I don't dare miss jump, or I might not get home for years."

"El Nido is going to your planet?" A fantastic scheme began to shape in his mind.

"Oh, no! She's going to That Beta VI. But a Hegemonic mail ship calls there and I can get home. It is too wonderful a chance to miss." The scheme died in Thorby's brain; it was preposterous, anyhow -- he might be willing to chance a strange planet, but Mata was no fraki.

Doctor Mader went on, "The Chief Officer arranged it." She smiled wryly. "She's glad to get rid of me. I hadn't had any hope that she could put it over, in view of the difficulty in getting me aboard Sisu; I think your grandmother must have some bargaining point that she did not mention. In any case I'm to go . . . with the understanding that I remain in strict purdah. I shan't mind; I'll use the time on my data."

Mention of purdah reminded Thorby that Margaret would see Mata. He started with stumbling embarrassment to explain what he had come to talk about. Doctor Mader listened gravely, her fingers busy with packing. "I know, Thorby. I probably heard the sad details sooner than you did."

"Margaret, did you ever heard of anything so silly?"

She hesitated. "Many things . . . much sillier."

"But there wasn't anything to it! And if that was what Mata wanted, why didn't Grandmother let her . . . instead of shipping her out among strangers. I . . . well, I wouldn't have minded. After I got used to it."

The fraki woman smiled. "That's the oddest gallant speech I ever heard, Thorby."

"Thorby said, "Could you get a message to her for me?"

"Thorby, if you want to send her your undying love or something, then don't. Your Grandmother did the best thing for her great granddaughter, did it quickly with kindness and wisdom. Did it in Mata's interests against the immediate interests of Sisu, since Mata was a valuable fighting man. But your Grandmother measured up to the high standards expected of a Chief Officer; she considered the long-range interests of everyone and found them weightier than the loss of one firecontrolman. I admire her at last -- between ourselves, I've always detested the old girl." She smiled suddenly. "And fifty years from now Mata will make the same sort of wise decisions; the sept of Sisu is sound."

"I'll be flogged if I understand it!"

"Because you are almost as much fraki as I am . . . and haven't had my training. Thorby, most things are right or wrong only in their backgrounds; few things are good or evil in themselves. But things that are right or wrong according to their culture, really are

so. This exogamy rule the People live by, you probably think it's just a way to outsmart mutations -- in fact that's the way it is taught in the ship's school."

"Of course. That's why I can't see --"

"Just a second. So you can't see why your Grandmother should object. But it's essential that the People marry back and forth among ships, not just because of genes -- that's a side issue -- but because a ship is too small to be a stable culture. Ideas and attitudes have to be cross-germinated, too, or Sisu and the whole culture will die. So the custom is protected by strongest possible taboo. A 'minor' break in this taboo is like a 'minor' break in the ship, disastrous unless drastic steps are taken. Now . . . do you understand that?"

"Well . . . no, I don't think so."

"I doubt if your Grandmother understands it; she just knows what's right for her family and acts with forthrightness and courage. Do you still want to send a message?"

"Uh, well, could you tell Mata that I'm sorry I didn't get to say good-by?"

"Mmm, yes. I may wait a while."

"All right."

"Feeling better yourself?"

"Uh, I guess so . . . since you say it's best for Mata." Thorby suddenly burst out, "But, Margaret, I don't know what is the matter with me! I thought I was getting the hang of things. Now it's all gone to pieces. I feel like a fraki and I doubt if I'll ever learn to be a Trader."

Her face was suddenly sad. "You were free once. It's a hard habit to get over."

"Huh?"

"You've had violent dislocations, Thorby. Your foster father -- your first one, Baslim the Wise -- bought you as a slave and made you his son, as free as he was. Now your second foster father, with the best of intentions, adopted you as his son, and thereby made you a slave."

"Why, Margaret!" Thorby protested. "How can you say such a thing?"

"If you aren't a slave, what are you?"

"Why, I'm a Free Trader. At least that's what Father intended, if I can ever get over my fraki habits. But I'm not a slave. The People are free. All of us."

"All of you . . . but not each of you."

"What do you mean?"

"The People are free. It's their proudest boast. Any of them can tell you that freedom is what makes them People and not fraki. The People are free to roam the stars, never rooted to any soil. So free that each ship is a sovereign state, asking nothing of anyone, going anywhere, fighting against any odds, asking no quarter, not even cooperating except as it suits them. Oh, the People are free; this old Galaxy has never seen such freedom. A culture of less than a hundred thousand people spread through a quarter of a billion cubic light-years and utterly free to move anywhere at any time. There has never been a culture like it and there may never be again. Free as the sky . . . more free than the stars, for the stars go where they must. Ah, yes, the People are free." She paused. "But at what price was this freedom purchased?"

Thorby blinked.

"I'll tell you. Not with poverty. The People enjoy the highest average wealth in history. The profits of your trading are fantastic. Nor has it been with cost to health or sanity. I've never seen a community with less illness. Nor have you paid in happiness or self-respect.

You're a smugly happy lot, and your pride is something sinful -- of course you do have a lot to be proud of. But what you have paid for your unparalleled freedom . . . is freedom itself. No, I'm not talking riddles. The People are free . . . at the cost of loss of individual freedom for each of you -- and I don't except the Chief Officer or Captain; they are the least free of any."

Her words sounded outrageous. "How can we be both free and not free?" he protested.

"Ask Mata. Thorby, you live in a steel prison; you are allowed out perhaps a few hours every few months. You live by rules more stringent than any prison. That those rules are intended to make you all happy -- and do -- is beside the point; they are orders you have to obey. You sleep where you are told, you eat when you are told and what you are offered -- it's unimportant that it is lavish and tasty; the point is you have no choice. You are told what to do ninety percent of the time. You are so bound by rules that much of what you say is not free speech but required ritual; you could go through a day and not utter a phrase not found in the Laws of Sisu. Right?"

"Yes, but --"

"Yes, with no 'buts.' Thorby, what sort of people have so little freedom? Slaves? Can you think of a better word?"

"But we can't be sold!"

"Slavery has often existed where slaves were never bought and sold, but simply inherited. As in Sisu. Thorby, being a slave means having someone as your master, with no hope of changing it. You slaves who call yourselves the 'People' can't even hope for manumission."

Thorby scowled. "You figure that's what's wrong with me?"

"I think your slave's collar is chafing you, in a fashion that does not trouble your shipmates -- because they were born with theirs and you were once free." She looked at her belongings. "I've got to get this stuff into El Nido. Will you help me?"

"I'd be glad to."

"Don't expect to see Mata."

"I wasn't," Thorby fibbed. "I want to help you. I hate to see you leave."

"Truthfully, I don't hate to leave . . . but I hate to say good-by to you." She hesitated. "I want to help you, too. Thorby, an anthropologist should never interfere. But I'm leaving and you aren't really part of the culture I was studying. Could you use a hint from an old woman?"

"Why, you aren't old!"

"That's two gallant speeches. I'm a grandmother, though the Chief Officer might be startled to hear me claim that status. Thorby, I thought you would become adjusted to this jail. Now I'm not sure. Freedom is a hard habit to break. Dear, if you decide that you can't stand it, wait until the ship calls at a planet that is democratic and free and human -- then hit dirt and run! But, Thorby, do this before Grandmother decides to marry you to someone, because if you wait that long -- you're lost!"

Chapter 12

Losian to Finster, Finster to Thoth IV, Thoth IV to Woolamurra, Sisu went skipping around a globe of space nine hundred light-years in diameter, the center of which was legendary Terra, cradle of mankind. Sisu had never been to Terra; the People operate out

where pickings are rich, police protection non-existent, and a man can dicker without being hampered by finicky regulations.

Ship's history alleged that the original Sisu had been built on Terra and that the first Captain Krausa had been born there, a (whisper it) fraki. But that was six ships ago and ship's history was true in essence, rather than fiddlin' fact. The Sisu whose steel now protected the blood was registered out of New Finlandia, Shiva III . . . another port she had never visited but whose fees were worth paying in order to have legal right to go about her occasions whenever, in pursuit of profit, Sisu went inside the globe of civilization. Shiva III was very understanding of the needs of Free Traders, not fussy about inspections, reports, and the like as long as omissions were repaired by paying penalties; many ships found her registration convenient.

On Finster Thorby learned another method of trading. The native fraki, known to science by a pseudo-Latin name and called "Those confounded slugs!" by the People, live in telepathic symbiosis with lemur-like creatures possessed of delicate, many-boned hands -- "telepathy" is a conclusion; it is believed that the slow, monstrous, dominant creatures supply the brains and the lemuroids the manipulation.

The planet offers beautifully carved gem stones, raw copper, and a weed from which is derived an alkaloid used in psychotherapy. What else it could supply is a matter of conjecture; the natives have neither speech nor writing, communication is difficult.

This occasions the method of trading new to Thorby -- the silent auction invented by the trading Phoenicians when the shores of Africa ran beyond the known world.

Around Sisu in piles were placed what the traders had to offer: heavy metals the natives needed, everlasting clocks they had learned to need, and trade goods the Family hoped to teach them to need. Then the humans went inside.

Thorby said to Senior Clerk Arly Krausa-Drotar, "We just leave that stuff lying around? If you did that on Jubbul, it would disappear as you turned your back."

"Didn't you see them rig the top gun this morning?"

"I was down in the lower hold."

"It's rigged and manned. These creatures have no morals but they're smart. They'll be as honest as a cashier with the boss watching."

"What happens now?"

"We wait. They look over the goods. After a while . . . a day, maybe two . . . they pile stuff by our piles. We wait. Maybe they make their piles higher. Maybe they shift things around and offer us something else -- and possibly we have outsmarted ourselves and missed something we would like through holding out. Or maybe we take one of our piles and split it into two, meaning we like the stuff but not the price.

"Or maybe we don't want it at any price. So we move our piles close to something they have offered that we do like. But we still don't touch their stuff; we wait.

"Eventually nobody has moved anything in quite a while. So, where the price suits us, we take in what they offer and leave our stuff. They come and take our offering away. We take in any of our own stuff where the price isn't right; they take away the stuff we turn down.

"But that doesn't end it. Now both sides know what the other one wants and what he will pay. They start making the offers; we start bidding with what we know they will accept. More deals are made. When we are through this second time, we have unloaded

anything they want for stuff of theirs that we want at prices satisfactory to both. No trouble. I wonder if we do better on planets where we can talk."

"Yes, but doesn't this waste a lot of time?"

"Know anything we've got more of?"

The slow-motion auction moved without a hitch on goods having established value; deals were spottier on experimental offerings -- gadgets which had seemed a good buy on Losian mostly failed to interest the Finstera. Six gross of folding knives actually intended for Woolamurra brought high prices. But the star item was not properly goods of any sort.

Grandmother Krausa, although bedfast, occasionally insisted on being carried on inspection tours; somebody always suffered. Shortly before arrival at Finster her ire had centered on nursery and bachelor quarters. In the first her eye lit on a stack of lurid picture books. She ordered them confiscated; they were "fraki trash."

The bachelors were inspected when word had gone out that she intended to hit only nursery, purdah, and galley; Grandmother saw their bunkies before they could hide their pin-up pictures.

Grandmother was shocked! Not only did pin-up pictures follow comic books, but a search was made for the magazines from which they had been clipped. The contraband was sent to auxiliary engineering, there to give up identities into elemental particles.

The Supercargo saw them there and got an idea; they joined the offerings outside the ship.

Strangely carved native jewels appeared beside the waste paper -- chrysoberyl and garnet and opal and quartz.

The Supercargo blinked at the gauds and sent word to the Captain.

The booklets and magazines were redistributed, each as a separate offering. More jewels --

Finally each item was broken down into pages; each sheet was placed alone. An agreement was reached: one brightly colored sheet, one jewel. At that point bachelors who had managed to hide cherished pin-ups found patriotism and instinct for trade out-weighing possessiveness -- after all they could restock at the next civilized port. The nursery was combed for more adventure comics.

For the first time in history comic books and pin-up magazines brought many times their weights in fine jewelry.

Thoth IV was followed by Woolamurra and each jump zigzagged closer to the coming Great Gathering of the People; the ship was seized with carnival fever. Crew members were excused from work to practice on musical instruments, watches were rearranged to permit quartets to sing together, a training table was formed for athletes and they were excused from all watches save battle stations in order to train themselves into exhausted sleep. Headaches and tempers developed over plans for hospitality fit to support the exalted pride of Sisu.

Long messages flitted through n-space and the Chief Engineer protested the scandalous waste of power with sharp comments on the high price of tritium. But the Chief Officer cheerfully okayed the charge vouchers. As the time approached, she developed a smile that creased her wrinkles in unaccustomed directions, as if she knew something but wasn't talking. Twice Thorby caught her smiling at him and it worried him; it was better

not to catch Grandmother's attention. He had had her full attention once lately and had not enjoyed it -- he had been honored by eating with her, for having burned a raider.

The bogie had appeared on Sisu's screens during the lift from Finster -- an unexpected place to be attacked since there was not much traffic there. The alarm had come only four hours out, when Sisu had attained barely 5% of speed-of-light and had no hope of running for it

The matter landed in Thorby's lap; the portside computer was disabled -- it had a "nervous breakdown" and the ship's electronics men had been sweating over it since jump. Thorby's nephew Jeri had returned to astrogation, the new trainee having qualified on the long jump from Losian -- he was a stripling in whom Thorby had little confidence, but Thorby did not argue when Jeri decided that Kenan Drotar was ready for a watch even though he had never experienced a "real one." Jeri was anxious to go back to the control room for two reasons, status, and an unmentioned imponderable: the computer room was where Jeri had served with his missing kid sister.

So when the raider popped up, it was up to Thorby.

He felt shaky when he first started to test the problem, being acutely aware that the portside computer was out. The greatest comfort to a firecontrolman is faith in the superman abilities of the team on the other side, a feeling of "Well, even if I goof, those bulging brains will nail him," while that team is thinking the same thing. It helps to produce all-important relaxation.

This time Thorby did not have that spiritual safety net. Nor any other. The Finstera are not a spacefaring people; there was no possibility that the bogie would be identified as theirs. Nor could he be a trader; he had too many gravities in his tail. Nor a Hegemonic Guard; Finster was many light-years outside civilization. Thorby knew with sick certainty that sometime in the next hour his guesses must produce an answer; he must launch and hit -- or shortly thereafter he would be a slave again and all his family with him.

It spoiled his timing, it slowed his thoughts.

But presently he forgot the portside computer, forgot the Family, forgot even the raider as such. The raider's movements became just data pouring into his board and the problem something he had been trained to do. His teammate slammed in and strapped himself into the other chair while General Quarters was still clanging, demanded to know the score. Thorby didn't hear him, nor did he hear the clanging stop. Jeri came in thereafter, having been sent down by the Captain; Thorby never saw him. Jeri motioned the youngster out of the twin seat, got into it himself, noted that the switch had Thorby's board in control, did not touch it. Without speaking he glanced over Thorby's setup and began working alternate solutions, ready to back him up by slapping the selector switch as soon as Thorby launched and then launch again, differently. Thorby never noticed.

Presently Krausa's strong bass came over the squawk line. "Starboard tracker . . . can I assist you by maneuvering?"

Thorby never heard it. Jeri glanced at him and answered, "I do not advise it, Captain."

"Very well."

The Senior Portside Firecontrolman, in gross violation of regulations, came in and watched the silent struggle, sweat greasing his face. Thorby did not know it. Nothing existed but knobs, switches, and buttons, all extensions of his nervous system. He became possessed of an overwhelming need to sneeze -- repressed it without realizing it.

Thorby made infinitesimal adjustments up to the last moment, then absent-mindedly touched the button that told the computer to launch as the projected curve maximized. Two heartbeats later an atomic missile was on its way.

Jeri reached for the selector switch -- stopped as he saw Thorby go into frenzied activity, telling his board to launch again on the assumption that the target had cut power. Then incoming data stopped as the ship went blind. Paralysis hit them.

Post-analysis showed that the paralyzing beam was on them seventy-one seconds. Jeri came out of it when it ceased; he saw Thorby looking dazedly at his board . . . then become violently active as he tried to work a new solution based on the last data.

Jeri put a hand on him. "The run is over, Thorby."

"Huh?"

"You got him. A sweet run. Mata would be proud of you."

Sisu was blind for a day, while repairs were made in her n-space eyes. The Captain continued to boost; there was nothing else to do. But presently she could see again and two days later she plunged into the comforting darkness of multi-space. The dinner in Thorby's honor was that night.

Grandmother made the usual speech, giving thanks that the Family was again spared, and noting that the son of Sisu beside her was the instrument of that happy but eminently deserved outcome. Then she lay back and gobbled her food, with her daughter-in-law hovering over her.

Thorby did not enjoy the honor. He had no clear recollection of the run; it felt as if he were being honored by mistake. He had been in semi-shock afterwards, then his imagination started working.

They were only pirates, he knew that. Pirates and slavers, they had tried to steal Sisu, had meant to enslave the Family. Thorby had hated slavers before he could remember -- nothing so impersonal as the institution of slavery, he hated slavers in his baby bones before he knew the word.

He was sure that Pop approved of him; he knew that Pop, gentle as he was, would have shortened every slaver in the Galaxy without a tear.

Nevertheless Thorby did not feel happy. He kept thinking about a live ship -- suddenly all dead, gone forever in a burst of radiance. Then he would look at his forefinger and wonder. He was caught in the old dilemma of the man with unintegrated values, who eats meat but would rather somebody else did the butchering.

When the dinner in his honor arrived he was three nights short on sleep and looked it. He pecked at his food.

Midway in the meal he became aware that Grandmother was glaring; he promptly spilled food on his dress jacket. "Well!" she snarled. "Have a nice nap?"

"Uh, I'm sorry, Grandmother. Did you speak to me?"

He caught his Mother's warning look but it was too late; Grandmother was off. "I was waiting for you to say something to me!"

"Uh . . . it's a nice day."

"I had not noticed that it was unusual. It rarely rains in space."

"I mean it's a nice party. Yes, a real nice party. Thank you for giving it, Grandmother."

"That's better. Young man, it is customary, when a gentleman dines with a lady, to offer her polite conversation. This may not be the custom among fraki, but it is invariable among People."

"Yes, Grandmother. Thank you. Grandmother."

"Let's start again. It's a nice party, yes. We try to make everyone feel equal, while recognizing the merits of each. It is gratifying to have a chance -- at last -- to join with our Family in noting a virtue in you . . . one commendable if not exceptional. Congratulations. Now it's your turn."

Thorby slowly turned purple.

She sniffed and said, "What are you doing to get ready for the Gathering?"

"Uh, I don't know, Grandmother. You see, I don't sing, or play, or dance -- and the only games I know are chess and spat ball and . . . well, I've never seen a Gathering. I don't know what they're like."

"Hmmph! So you haven't."

Thorby felt guilty. He said, "Grandmother . . . you mast have been to lots of Gatherings. Would you tell me about them?"

That did it. She relaxed and said in hushed voice, "They don't have the Gatherings nowadays that they had when I was a girl . . ." Thorby did not have to speak again, other than sounds of awed interest. Long after the rest were waiting for Grandmother's permission to rise, she was saying, ". . . and I had my choice of a hundred ships, let me tell you. I was a pert young thing, with a tiny foot and a saucy nose, and my Grandmother got offers for me throughout the People. But I knew Sisu was for me and I stood up to her. Oh, I was a lively one! Dance all night and as fresh for the games next day as a --"

While it was not a merry occasion, it was not a failure.

Since Thorby had no talent he became an actor.

Aunt Athena Krausa-Fogarth, Chief of Commissary and superlative cook, had the literary disease in its acute form; she had written a play. It was the life of the first Captain Krausa, showing the sterling nobility of the Krausa line. The first Krausa had been a saint with heart of steel. Disgusted with the evil ways of fraki, he had built Sisu (single-handed), staffed it with his wife (named Fogarth in draft, changed to Grandmother's maiden name before the script got to her) and with their remarkable children. As the play ends they jump off into space, to spread culture and wealth through the Galaxy.

Thorby played the first Krausa. He was dumbfounded, having tried out because he was told to. Aunt Athena seemed almost as surprised; there was a catch in her voice when she announced his name. But Grandmother seemed pleased. She showed up for rehearsals and made suggestions which were happily adopted.

The star playing opposite Thorby was Loeen Garcia, late of El Nido. He had not become chummy with Mata's exchange; he had nothing against her but had not felt like it. But he found Loeen easy to know. She was a dark, soft beauty, with an intimate manner. When Thorby was required to ignore taboo and kiss her, in front of Grandmother and everybody, he blew his lines.

But he tried. Grandmother snorted in disgust. "What are you trying to do! Bite her? And don't let go as if she were radioactive. She's your wife, stupid. You've just carried her into your ship. You're alone with her, you love her. Now do it . . . no, no, no! Athena!"

Thorby looked wildly around. It did not help to catch sight of Fritz with eyes on the overhead, a beatific smile on his face.

"Athena! Come here, Daughter, and show this damp young hulk how a woman should be kissed. Kiss him yourself and then have him try again. Places, everyone."

Aunt Athena, twice Thorby's age, did not upset him so much. He complied clumsily with her instructions, then managed to kiss Loeen without falling over her feet.

It must have been a good play; it satisfied Grandmother. She looked forward to seeing it at the Gathering.

But she died on Woolamurra.

Chapter 13

Woolamurra is a lush pioneer planet barely inside the Terran Hegemony; it was Sisu's last stop before diving deeper for the Gathering. Rich in food and raw materials, the fraki were anxious to buy manufactured articles. Sisu sold out of Losian artifacts and disposed of many Finsteran jewels. But Woolamurra offered little which would bring a profit and money was tight in terms of power metal -- Woolamurra had not prospected much and was anxious to keep what radioactives it had for its infant industry.

So Sisu accepted a little uranium and a lot of choice meats and luxury foods. Sisu always picked up gourmet delicacies; this time she stocked tons more than the Family could consume, but valuable for swank at the Gathering.

The balance was paid in tritium and deuterium. A hydrogen-isotopes plant is maintained there for Hegemonic ships but it will sell to others. Sisu had last been able to fuel at Jubbul -- Losian ships use a different nuclear reaction.

Thorby was taken dirtside by his Father several times in New Melbourne, the port. The local language is System English, which Krausa understood, but the fraki spoke it with clipped haste and an odd vowel shift; Captain Krausa found it baffling. It did not sound strange to Thorby; it was as if he'd heard it before. So Krausa took him to help out

This day they went out to complete the fuel transaction and sign a waiver required for private sales. The commercial tenders accepted by Sisu had to be certified by the central bank, then be taken to the fuel plant. After papers were stamped and fees paid, the Captain sat and chatted with the director. Krausa could be friendly with a fraki on terms of complete equality, never hinting at the enormous social difference between them.

While they chatted, Thorby worried. The fraki was talking about Woolamurra. "Any cobber with strong arms and enough brain to hold his ears apart can go outback and make a fortune."

"No doubt," agreed the Captain. "I've seen your beef animals. Magnificent"

Thorby agreed. Woolamurra might be short on pavement, arts, and plumbing; the planet was bursting with opportunity. Besides that, it was a pleasant, decent world, comfortably loose. It matched Doctor Mader's recipe: " -- wait until your ship calls at a planet that is democratic, free, and human . . . then run!"

Life in Sisu had become more pleasant even though he was now conscious of the all-enveloping, personally-restricting quality of life with the Family. He was beginning to enjoy being an actor; it was fun to hold the stage. He had even learned to handle the clinch in a manner to win from Grandmother a smile; furthermore, even though it was

play-acting, Loeen was a pleasant armful. She would kiss him and murmur: "My husband! My noble husband! We will roam the Galaxy together."

It gave Thorby goose bumps. He decided that Loeen was a great actress.

They became quite friendly. Loeen was curious about what a firecontrolman did, so under the eye of Great Aunt Tora, Thorby showed her the computer room. She looked prettily confused. "Just what is n-space? Length, breadth, and thickness are all you see . . . how about these other dimensions?"

"By logic. You see four dimensions . . . those three, and time. Oh, you can't see a year, but you can measure it."

"Yes, but how can logic --"

"Easy as can be. What is a point? A location in space. But suppose there isn't any space, not even the four ordinary dimensions. No space. Is a point conceivable?"

"Well, I'm thinking about one."

"Not without thinking about space. If you think about a point, you think about it somewhere. If you have a line, you can imagine a point somewhere on it. But a point is just a location and if there isn't anywhere for it to be located, it's nothing. Follow me?"

Great Aunt Tora interrupted. "Could you children continue this in the lounge? My feet hurt."

"Sorry, Great Aunt Will you take my arm?"

Back in the lounge Thorby said, "Did you soak up that about a point needing a line to hold it?"

"Uh, I think so. Take away its location and it isn't there at all."

"Think about a line. If it isn't in a surface, does it exist?"

"Uh, that's harder."

"If you get past that, you've got it A line is an ordered sequence of points. But where does the order come from? From being in a surface. It a line isn't held by a surface, then it could collapse into itself. It hasn't any width. You wouldn't even know it had collapsed . . . nothing to compare it with. But every point would be just as close to every other point, no 'ordered sequence.' Chaos. Still with me?"

"Maybe."

"A point needs a line. A line needs a surface. A surface has to be part of solid space, or its structure vanishes. And a solid needs hyperspace to hold it . . . and so on up. Each dimension demands one higher, or geometry ceases to exist. The universe ceases to exist." He slapped the table. "But it's here, so we know that multi-space still functions . . . even though we can't see it, any more than we can see a passing second."

"But where does it all stop?"

"It can't. Endless dimensions."

She shivered. "It scares me."

"Don't worry. Even the Chief Engineer only has to fret about the first dozen dimensions. And -- look, you know we turn inside out when the ship goes irrational. Can you feel it?"

"No. And I'm not sure I believe it."

"It doesn't matter, because we aren't equipped to feel it. It can happen while eating soup and you never spill a drop, even though the soup turns inside out, too. So far as we are concerned it's just a mathematical concept, like the square root of minus one -- which we tangle with when we pass speed-of-light It's that way with all multi-dimensionality.

You don't have to feel it, see it, understand it; you just have to work logical symbols about it. But it's real, if 'real' means anything. Nobody has ever seen an electron. Nor a thought. You can't see a thought, you can't measure, weigh, nor taste it -- but thoughts are the most real things in the Galaxy." Thorby was quoting Baslim.

She looked at him admiringly. "You must be awfully brainy, Thorby. 'Nobody ever saw a thought.' I like that."

Thorby graciously accepted the praise.

When he went to his bunkie, he found Fritz reading in bed. Thorby was feeling the warm glow that comes from giving the word to an eager mind. "Hi, Fritz! Studying? Or wasting your youth?"

"Hi. Studying. Studying art."

Thorby glanced over. "Don't let Grandmother catch you.

"Got to have something to trade those confounded slugs next time we touch Finster." Woolamurra was "civilization'; the bachelors had replenished their art. "You look as if you had squeezed a bonus out of a Losian. What clicks?"

"Oh, just talking with Loeen. I was introducing her to n-space . . . and darn if she didn't catch on fast."

Fritz looked judicial. "Yes, she's bright" He added, "When is Grandmother posting the banns?"

"What are you talking about!"

"No banns?"

"Don't be silly."

"Mmm . . . you find her good company. Bright, too. Want to know how bright?"

"Well?"

"So bright that she taught in El Nido's school. Her specialty was math. Multi-dimensional geometry, in fact."

"I don't believe it!"

"Happens I transcribed her record. But ask her."

"I shall! Why isn't she teaching math here?"

"Ask Grandmother. Thorby, my skinny and retarded brother -- I think you were dropped on your head. But, sorry as you are, I love you for the fumbling grace with which you wipe drool off your chin. Want a hint from an older and wiser head?"

"Go ahead. You will anyhow."

"Thanks. Loeen is a fine girl and it might be fun to solve equations with her for life. But I hate to see a man leap into a sale before he checks the market. If you just hold off through this next jump, you'll find that the People have several young girls. Several thousand."

"I'm not looking for a wife!"

"Tut, tut! It's a man's duty. But wait for the Gathering, and we'll shop. Now shut up, I want to study art."

"Who's talking?"

Thorby did not ask Loeen what she had done in El Nido, but it did open his eyes to the fact that he was playing the leading role in a courtship without having known it. It scared him. Doctor Mader's words haunted his sleep " -- before Grandmother decides to marry you to someone . . . if you wait that long -- you're lost!"

Father and the Woolamurra official gossiped while Thorby fretted. Should he leave Sisu? If he wasn't willing to be a trader all his life he had to get out while still a bachelor. Of course, he could stall -- look at Fritz. Not that he had anything against Loeen, even if she had made a fool of him.

But if he was going to leave -- and he had doubts as to whether he could stand the custom-ridden "monotonous life forever -- then Woolamurra was the best chance he might have in years. No castes, no guilds, no poverty, no immigration laws -- why, they even accepted mutants! Thorby had seen hexadactyls, hirsutes, albinos, lupine ears, giants, and other changes. If a man could work, Woolamurra could use him.

What should he do? Say, "Excuse me, please," leave the room -- then start running? Stay lost until Sisu jumped? He couldn't do that! Not to father, not to Sisu; he owed them too much.

What, then? Tell Grandmother he wanted off? If she let him off, it would probably be some chilly spot between stars! Grandmother would regard ingratitude to Sisu as the unforgivable sin.

And besides . . . The Gathering was coming. He felt a great itch to see it. And it wouldn't be right to walk out on the play. He was not consciously rationalizing; although stage-struck, he still thought that he did not want to play the hero in a melodrama -- whereas he could hardly wait.

So he avoided his dilemma by postponing it.

Captain Krausa touched his shoulder. "We're leaving."

"Oh. Sorry, Father. I was thinking."

"Keep it up, it's good exercise. Good-by, Director, and thanks. I look forward to seeing you next time we call."

"You won't find me, Captain. I'm going to line me out a station, as far as eye can reach. Land of me own. If you ever get tired of steel decks, there's room here for you. And your boy."

Captain Krausa's face did not show his revulsion. "Thanks. But we wouldn't know which end of a plow to grab. We're traders."

"Each cat his own rat."

When they were outside Thorby said, "What did he mean, Father? I've seen cats, but what is a rat?"

"A rat is a sorci, only thinner and meaner. He meant that each man has his proper place."

"Oh." They walked in silence. Thorby was wondering if he had as yet found his proper place.

Captain Krausa was wondering the same thing. There was a ship just beyond Sisu; its presence was a reproach. It was a mail courier, an official Hegemonic vessel, crewed by Guardsmen. Baslim's words rang accusingly in his mind: " -- when opportunity presents, I ask that you deliver him to the commander of any Hegemonic military vessel."

This was not a "military" vessel But that was a quibble; Baslim's intentions were plain and this ship would serve. Debts must be paid. Unfortunately Mother interpreted the words strictly. Oh, he knew why; she was determined to show off the boy at the Gathering. She intended to squeeze all possible status out of the fact that Sisu had paid the People's debt. Well, that was understandable.

But it wasn't fair to the boy!

Or was it? For his own reasons Krausa was anxious to take the lad to the Gathering. He was certain now that Thorby's ancestry must be of the People -- and in the Commodore's files he expected to prove it.

On the other hand -- He had agreed with Mother over Mata Kingsolver; a minx should not be allowed to back a taboo lad into a corner, better to ship her at once. But didn't Mother think he could see what she was up to now?

He wouldn't permit it! By Sisu, he wouldn't! The boy was too young and he would forbid it . . . at least until he proved that the boy was of the People, in which case the debt to Baslim was paid.

But that mail courier out there whispered that he was being as unwilling to acknowledge honest debt as he was accusing Mother of being.

But it was for the lad's own good!

What is justice?

Well, there was one fair way. Take the lad and have a showdown with Mother. Tell the lad all of Baslim's message. Tell him that he could take passage in the courier to the central worlds, tell him how to go about finding his family. But tell him, too, that he, the Krausa, believed that Thorby was of the People and that the possibility could and should be checked first. Yes, and tell him bluntly that Mother was trying to tie him down with a wife. Mother would scream and quote the Laws -- but this was not in the Chief Officer's jurisdiction; Baslim had laid the injunction on him. And besides, it was right; the boy himself should choose.

Spine stiffened but quaking. Captain Krausa strode back to face his Mother.

As the hoist delivered them up the Deck Master was waiting. "Chief Officer's respects and she wishes to see the Captain, sir."

"That's a coincidence," Krausa said grimly. "Come, Son. Well both see her."

"Yes, Father."

They went around the passageway, reached the Chief Officer's cabin. Krausa's wife was outside. "Hello, my dear. The Decker said that Mother had sent for me."

"I sent for you."

"He got the message garbled. Whatever it is, make it quick, please. I am anxious to see Mother anyhow."

"He did not get it garbled; the Chief Officer did send for you."

"Eh?"

"Captain, your Mother is dead."

Krausa listened with blank face, then it sank in and he slapped the door aside, ran to his Mother's bed, threw himself down, clutched the tiny, wasted form laid out in state, and began to weep racking, terrible sounds, the grief of a man steeled against emotion, who cannot handle it when he breaks.

Thorby watched with awed distress, then went to his bunkie and thought. He tried to figure out why he felt so badly. He had not loved Grandmother -- he hadn't even liked her.

Then why did he feel so lost?

It was almost like when Pop died. He loved Pop -- but not her.

He found that he was not alone; the entire ship was in shock. There was not one who could remember, or imagine, Sisu without her. She was Sisu. Like the undying fire that

moved the ship, Grandmother had been an unfailing force, dynamic, indispensable, basic. Now suddenly she was gone.

She had taken her nap as usual, grumbling because Woolamurra's day fitted their schedule so poorly -- typical fraki inefficiency. But she had gone to sleep with iron discipline that had adapted itself to a hundred time schedules.

When her daughter-in-law went to wake her, she could not be waked.

Her bedside scratch pad held many notes: Speak to Son about this. Tell Tora to do that. Jack up the C.E. about temperature control. Go over banquet menus with Athena. Rhoda Krausa tore out the page, put it away for reference, straightened her, then ordered the Deck Master to notify her husband.

The Captain was not at dinner. Grandmother's couch had been removed; the Chief Officer sat where it had been. In the Captain's absence the Chief Officer signaled the Chief Engineer; he offered the prayer for the dead, she gave the responses. Then they ate in silence. No funeral would be held until Gathering.

The Chief Officer stood up presently. "The Captain wishes to announce," she said quietly, "that he thanks those who attempted to call on him. He will be available tomorrow." She paused. " 'The atoms come out of space and to space they return. The spirit of Sisu goes on.' "

Thorby suddenly no longer felt lost.

Chapter 14

The great gathering was even more than Thorby had imagined. Mile after mile of ships, more than eight hundred bulky Free Traders arranged in concentric ranks around a circus four miles across . . . Sisu in the innermost circle -- which seemed to please Thorby's Mother -- then more ships than Thorby knew existed: Kraken, Deimos, James B. Quinn, Firefly, Bon Marche, Dom Pedro, Cee Squared, Omega, El Nido -- Thorby resolved to see how Mata was doing -- Saint Christopher, Vega, Vega Prime, Galactic Banker, Romany Lass . . . Thorby made note to get a berthing chart . . . Saturn, Chiang, Country Store, Joseph Smith, Aloha . . .

There were too many. If he visited ten ships a day, he might see most of them. But there was too much to do and see; Thorby gave up the notion.

Inside the circle was a great temporary stadium, larger than the New Amphitheater at Jubbulpore. Here elections would be held, funerals and weddings, athletic contests, entertainments, concerts -- Thorby recalled that Spirit of Sisu would be performed there and trembled with stage fright.

Between stadium and ships was a midway -- booths, rides, games, exhibits educational and entertaining, one-man pitches, dance halls that never closed, displays of engineering gadgets, fortunetellers, gambling for prizes and cash, open-air bars, soft drink counters offering anything from berry juices of the Pleiades worlds to a brown brew certified to be the ancient, authentic Terran Coca-Cola as licensed for bottling on Hekate.

When he saw this maelstrom Thorby felt that he had wandered into Joy Street -- bigger, brighter, and seven times busier than Joy Street with the fleet in. This was the fraki's chance to turn a fairly honest credit while making suckers of the shrewdest businessmen in the Galaxy; this was the day, with the lid off and the Trader without his guards up -- they'd sell you your own hat if you laid it on the counter.

Fritz took Thorby dirtside to keep him out of trouble, although Fritz's sophistication was hardly complete, since he had seen just one Great Gathering. The Chief Officer lectured the young people before granting hit-dirt, reminding them that Sisu had a reputation for proper behavior, and then issued each a hundred credits with a warning that it must last throughout the Gathering.

Fritz advised Thorby to cache most of it. "When we go broke, we can sweet-talk Father out of pocket money. But it's not smart to take it all."

Thorby agreed. He was not surprised when he felt the touch of a pickpocket; he grabbed a wrist to find out what he had landed.

First he recovered his wallet. Then he looked at the thief. He was a dirty-faced young fraki who reminded Thorby poignantly of Ziggie, except that this kid had two hands. "Better luck next time," he consoled him. "You don't have the touch yet."

The kid seemed about to cry. Thorby started to turn him loose, then said, "Fritz, check your wallet."

Fritz did so, it was gone. "Well, I'll be --"

"Hand it over, kid."

"I didn't take it! You let me go!"

"Cough up . . . before I unscrew your skull."

The kid surrendered Fritz's wallet; Thorby turned him loose. Fritz said, "Why did you do that? I was trying to spot a cop."

"That's why."

"Huh? Talk sense."

"I tried to learn that profession once. It's not easy."

"You? A poor joke, Thorby."

"Remember me? The ex-fraki, the beggar's boy? That clumsy attempt to equalize the wealth made me homesick. Fritz, where I come from, a pickpocket has status. I was merely a beggar."

"Don't let Mother hear that."

"I shan't. But I am what I am and I know what I was and I don't intend to forget. I never learned the pickpocket art, but I was a good beggar, I was taught by the best. My Pop. Baslim the Cripple. I'm not ashamed of him and all the Laws of Sisu can't make me."

"I did not intend to make you ashamed," Fritz said quietly.

They walked on, savoring the crowd and the fun. Presently Thorby said, "Shall we try that wheel? I've spotted the gimmick."

Fritz shook his head. "Look at those so-called prizes."

"Okay. I was interested in how it was rigged."

"Thorby --"

"Yeah? Why the solemn phiz?"

"You know who Baslim the Cripple really was?"

Thorby considered it. "He was my Pop. If he had wanted me to know anything else, he would have told me."

"Mmm . . . I suppose so."

"But you know?"

"Some."

"Uh, I am curious about one thing. What was the debt that made Grandmother willing to adopt me?"

"Uh, 'I have said enough.' "

"You know best."

"Oh, confound it, the rest of the People know! It's bound to come up at this Gathering."

"Don't let me talk you into anything, Fritz."

"Well . . . look, Baslim wasn't always a beggar."

"So I long since figured out."

"What he was is not for me to say. A lot of People kept his secret for years; nobody has told me that it is all right to talk. But one fact is no secret among the People . . . and you're one of the People. A long time ago, Baslim saved a whole Family. The People have never forgotten it. The Hansea, it was . . . the New Hansea is sitting right over there. The one with the shield painted on her. I can't tell you more, because a taboo was placed on it -- the thing was so shameful that we never talk about it. I have said enough. But you could go over to the New Hansea and ask to look through her old logs. If you identified yourself -- who you are in relation to Baslim -- they couldn't refuse. Though the Chief Officer might go to her cabin afterwards and have weeping hysterics."

"Hmm . . . I don't want to know badly enough to make a lady cry. Fritz? Let's try this ride." So they did -- and after speeds in excess of light and accelerations up to one hundred gravities, Thorby found a roller coaster too exciting. He almost lost his lunch.

A Great Gathering, although a time of fun and renewed friendships, has its serious purposes. In addition to funerals, memorial services for lost ships, weddings, and much transferring of young females, there is also business affecting the whole People and, most important, the paramount matter of buying ships.

Hekate has the finest shipyards in the explored Galaxy. Men and women have children; ships spawn, too. Sisu was gravid with people, fat with profit in uranium and thorium; it was time that the Family split up. At least a third of the families had the same need to trade wealth for living room; fraki shipbrokers were rubbing their hands, mentally figuring commissions. Starships do not sell like cold drinks; shipbrokers and salesmen often live on dreams. But perhaps a hundred ships would be sold in a few weeks.

Some would be new ships from the yards of Galactic Transport, Ltd., daughter corporation of civilization-wide Galactic Enterprises, or built by Space Engineers Corporation, or Hekate Ships, or Propulsion, Inc., or Hascomb & Sons -- all giants in the trade. But there was cake for everyone. The broker who did not speak for a builder might have an exclusive on a second-hand ship, or a line to a rumor of a hint that the owners of a suitable ship might listen if the price was right -- a man could make a fortune if he kept his eyes open and his ear to the ground. It was a time to by-pass mails and invest in expensive n-space messages; the feast would soon be over.

A family in need of space had two choices: either buy another ship, split and become two families, or a ship could join with another in purchasing a third, to be staffed from each. Twinning gave much status. It was proof that the family, which managed it, were master traders, able to give their kids a start in the world without help. But in practice the choice usually dwindled to one: join with another ship and split the expense, and even then it was often necessary to pledge all three ships against a mortgage on the new one.

It had been thirty years since Sisu had split up. She had had three decades of prosperity; she should have been able to twin. But ten years ago at the last Great Gathering Grandmother had caused Sisu to guarantee along with parent ships the mortgage against a ship newly born. The new ship gave a banquet honoring Sisu, then jumped off into dark and never came back. Space is vast. Remember her name at Gathering.

The result was that Sisu paid off one-third of forty percent of the cost of the lost ship; the blow hurt. The parent ships would reimburse Sisu -- debts are always paid -- but they had left the last Gathering lean from having spawned; coughing up each its own liability had left them skin and bones. You don't dun a sick man; you wait

Grandmother had not been stupid. The parent ships, Caesar Augustus and Dupont, were related to Sisu; one takes care of one's own. Besides, it was good business; a trader unwilling to lend credit will discover that he has none. As it was, Sisu could write a draft on any Free Trader anywhere and be certain that it would be honored.

But it left Sisu with less cash than otherwise at a time when the Family should split.

Captain Krausa hit dirt the first day and went to the Commodore's Flag, Norbert Wiener. His wife stayed aboard but was not idle; since her succession to Chief Officer, she hardly slept. Today she worked at her desk, stopping for face-to-face talks with other chief officers via the phone exchange set up by city services for the Gathering. When her lunch was fetched, she motioned to put it down; it was still untouched when her husband returned. He came in and sat down wearily. She was reading a slide rule and checked her answer on a calculator before she spoke. "Based on a Hascomb F-two ship, the mortgage would run just over fifty percent"

"Rhoda, you know Sisu can't finance a ship unassisted."

"Don't be hasty, dear. Both Gas and Dupont would cosign . . . in their case, it's the same as cash."

"If their credit will stretch."

"And New Hansea would jump at it -- under the circumstances -- and --"

"Rhoda! You were young, two Gatherings ago, but you are aware that the debt lies equally on all . . . not just Hansea. That was unanimous."

"I was old enough to be your wife, Fjalar. Don't read the Laws to me. But New Hansea would jump at the chance . . . under a secrecy taboo binding till the end of time. Nevertheless the carrying charges would eat too much. Did you get to see a Galactic Lambda?"

"I don't need to; I've seen the specs. No legs."

"You men! I wouldn't call eighty gravities 'no legs.' "

"You would if you had to sit in the worry seat. Lambda class were designed for slow freight inside the Hegemonic sphere; that's all they're good for."

"You're too conservative, Fjalar."

"And I'll continue to be where safety of a ship is concerned."

"No doubt And I'll have to find solutions that fit your prejudices. However, Lambda class is just a possibility. There is also you-know-which. She'll go cheap."

He frowned. "An unlucky ship."

"It will take powerful cleansing to get those bad thoughts out. But think of the price."

"It's more than bad thoughts in you-know-which-ship. I never heard of a chief officer suiciding before. Or a captain going crazy. I'm surprised they got here."

"So am I. But she's here and she'll be up for sale. And any ship can be cleansed."

"I wonder."

"Don't be superstitious, dear. It's a matter of enough care with the rituals, which is my worry. However, you can forget the you-know-which-one. I think we'll split with another ship."

"I thought you were set on doing it alone?"

"I've merely been exploring our strength. But there are things more important than setting up a new ship single-handed."

"There certainly are! Power, a good weapons system, working capital, blooded officers in key spots -- why, we can't man two ships. Take firecontrolmen alone. If --"

"Stop fretting. We could handle those. Fjalar, how would you like to be Deputy Commodore?"

He braked at full power. "Rhoda! Are you feverish?"

"No."

"There are dozens of skippers more likely to be tapped. I'll never be Commodore -- and what's more, I don't want it."

"I may settle for Reserve Deputy, since Commodore Denbo intends to resign after the new deputy is elected. Never mind; you will be Commodore at the next Gathering."

"Preposterous!"

"Why are men so impractical? Fjalar, all you think about is your control room and business. If I hadn't kept pushing, you would never have reached deputy captain."

"Have you ever gone hungry?"

"I'm not complaining, dear. It was a great day for me when I was adopted by Sisu. But listen. We have favors coming from many sources, not just Gus and Dupont. Whatever ship we join with will help. I intend to leave the matter open until after election -- and I've had tentative offers all morning, strong ships, well connected. And finally, there's New Hansea."

"What about New Hansea?"

"Timed properly, with the Hanseatics proposing your name, you'll be elected by acclamation."

"Rhoda!"

"You won't have to touch it. And neither will Thorby. You two will simply appear in public and be your charming, male, non-political selves. I'll handle it By the way, it's too late to pull Loeen out of the play but I'm going to break that up fast Your Mother did not see the whole picture. I want my sons married -- but it is essential that Thorby not be married, nor paired off, until after the election. Now . . . did you go to the flagship?"

"Certainly."

"What ship was he born in? It could be important."

Krausa gave a sigh. "Thorby was not born of the People."

"What? Nonsense! You mean that identification is not certain. Mmm . . . which missing ships are possibilities?"

"I said he was not of the People! There is a not a ship missing, nor a child missing from a ship, which can be matched with his case. He would have to be much older, or much younger, than he is."

She shook her head. "I don't believe it."

"You mean you don't want to!"

"I don't believe it. He's People. You can tell it in his walk, his manner, his good mind, everything about him. Hmm . . . I'll look at the files myself."

"Go ahead. Since you don't believe me."

"Now, Fjalar, I didn't say --"

"Oh, yes, you did. If I told you it was raining dirtside, and you didn't want rain, you --"

"Please, dear! You know it never rains this time of year on Hekate. I was just --"

"Sky around us!"

"There's no need to lose your temper. It doesn't become a captain."

"It doesn't become a captain to have his word doubted in his own ship, either!"

"I'm sorry, Fjalar." She went on quietly, "It won't hurt to look. If I widened the search, or looked through unfiled material -- you know how clerks are with deadfile data. Mmm . . . it would help if I knew who Thorby's parents were -- before election. While I shan't permit him to marry before then, I might line up important support if it was assumed that immediately after, a wedding could be expec --"

"Rhoda."

"What, dear? The entire Vega group could be swayed, if a presumption could be established about Thorby's birth . . . if an eligible daughter of theirs --"

"Rhoda!"

"I was talking, dear."

"For a moment, I'll talk. The Captain. Wife, he's fraki blood. Furthermore, Baslim knew it . . . and laid a strict injunction on me to help him find his family. I had hoped -- yes, and believed -- that the files would show that Baslim was mistaken." He frowned and chewed his lip. "A Hegemonic cruiser is due here in two weeks. That ought to give you time to assure yourself that I can search files as well as any clerk."

"What do you mean?"

"Is there doubt? Debts are always paid . . . and there is one more payment due."

She stared. "Husband, are you out of your mind?"

"I don't like it any better than you do. He's not only a fine boy; he's the most brilliant tracker we've ever had."

"Trackers!" she said bitterly. "Who cares about that? Fjalar, if you think that I will permit one of my sons to be turned over to fraki --" She choked up.

"He is fraki."

"He is not. He is Sisu, just as I am. I was adopted, so was he. We are both Sisu, we will always be."

"Have it your way. I hope he will always be Sisu in his heart. But the last payment must be made."

"That debt was paid in full, long ago!"

"The ledger doesn't show it."

"Nonsense! Baslim wanted the boy returned to his family. Some fraki family -- if fraki have families. So we gave him a family -- our own, clan and sept. Is that not better payment than some flea-bitten fraki litter? Or do you think so little of Sisu?"

She glared up at him, and the Krausa thought bitterly that there must be something to the belief that the pure blood of the People produced better brains. In dickering with fraki

he never lost his temper. But Mother -- and now Rhoda -- could always put him in the wrong.

At least Mother, hard as she had been, had never asked the impossible. But Rhoda . . . well, Wife was new to the job. He said tensely, "Chief Officer, this injunction was laid on me personally, not on Sisu. I have no choice."

"So? Very well, Captain -- well speak of it later. And now, with all respect to you, sir, I have work to do."

Thorby had a wonderful time at the Gathering but not as much fun as he expected; repeatedly Mother required him to help entertain chief officers of other ships. Often a visitor brought a daughter or granddaughter along and Thorby had to keep the girl busy while the elders talked. He did his best and even acquired facility in the half-insulting small talk of his age group. He learned something that he called dancing which would have done credit to any man with two left feet and knees that bent backwards. He could now put his arm around a girl when music called for it without chills and fever.

Mother's visitors quizzed him about Pop. He tried to be polite but it annoyed him that everyone knew more about Pop than he did -- except the things that were important.

But it did seem that duty could be shared. Thorby realized that he was junior son, but Fritz was unmarried, too. He suggested that if Fritz were to volunteer, the favor could be returned later.

Fritz gave a raucous laugh. "What can you offer that can repay me for dirtside time at Gathering?"

"Well . . ."

"Precisely. Seriously, old knucklehead, Mother wouldn't listen, even if I were insane enough to offer. She says you, she means you." Fritz yawned. "Man, am I dead! Little red-head off the Saint Louis wanted to dance all night. Get out and let me sleep before the banquet."

"Can you spare a dress jacket?"

"Do your own laundry. And cut the noise."

But on this morning one month after grounding Thorby was hitting dirt with Father, with no chance that Mother would change their minds; she was out of the ship. It was the Day of Remembrance. Services did not start until noon but Mother left early for something to do with the election tomorrow.

Thorby's mind was filled with other matters. The services would end with a memorial to Pop. Father had told him that he would coach him in what to do, but it worried him, and his nerves were not soothed by the fact that Spirit of Sisu would be staged that evening.

His nerves over the play had increased when he discovered that Fritz had a copy and was studying it. Fritz had said gruffly, "Sure, I'm learning your part! Father thought it would be a good idea in case you fainted or broke your leg. I'm not trying to steal your glory; it's intended to let you relax -- if you can relax with thousands staring while you smooch Loeen."

"Well, could you?"

Fritz looked thoughtful. "I could try. Loeen looks cuddly. Maybe I should break your leg myself."

"Bare hands?"

"Don't tempt me. Thorby, this is just precaution, like having two trackers. But nothing less than a broken leg can excuse you from strutting your stuff."

Thorby and his Father left Sisu two hours before the services. Captain Krausa said, "We might as well enjoy ourselves. Remembrance is a happy occasion if you think of it the right way -- but those seats are hard and it's going to be a long day."

"Uh, Father . . . just what is it I'll have to do when it comes time for Pop -- for Baslim?"

Nothing much. You sit up front during the sermon and give responses in the Prayer for the Dead. You know how, don't you?"

"I'm not sure."

"I'll write it out for you. As for the rest . . . well, you'll see me do the same for my Mother -- your Grandmother. You watch and when it comes your turn, you do the same."

"All right, Father."

"Now let's relax."

To Thorby's surprise Captain Krausa took a slideway outside the Gathering, then whistled down a ground car. It seemed faster than those Thorby had seen on Jubbul and almost as frantic as the Losians. They reached the rail station with nothing more than an exchange of compliments between their driver and another, but the ride was so exciting that Thorby saw little of the City of Artemis.

He was again surprised when Father bought tickets. "Where are we going?"

"A ride in the country." The Captain glanced at his watch. "Plenty of time."

The monorail gave a fine sensation of speed. "How fast are we going. Father?"

"Two hundred kilometers an hour, at a guess." Krausa had to raise his voice.

"It seems faster."

"Fast enough to break your neck. That's as fast as a speed can be."

They rode for half an hour. The countryside was torn up by steel mills and factories for the great yards, but it was new and different; Thorby stared and decided that the Sargon's reserve was a puny enterprise compared with this. The station where they got off lay outside a long, high wall; Thorby could see space ships beyond it. "Where are we?"

"Military field. I have to see a man -- and today there is just time." They walked toward a gate. Krausa stopped, looked around; they were alone. "Thorby --"

"Yes, Father?"

"Do you remember the message from Baslim you delivered to me?"

"Sir?"

"Can you repeat it?"

"Huh? Why, I don't know. Father. It's been a long time."

"Try it. Start in: To Captain Fjalar Krausa, master of Starship Sisu, from Baslim the Cripple: Greetings, old friend! -- ' "

" ' "Greetings, old friend," ' " Thorby repeated. " 'Greetings to your family, clan, and sib, and' -- why, I understand it!"

"Of course," the Krausa said gently, "this is the Day of Remembrance. Go on."

Thorby went on. Tears started down his cheeks as he heard Pop's voice coming from his own throat: " ' -- and my humblest respects to your revered mother. I am speaking to you through the mouth of my adopted son. He does not understand Suomic' -- oh, but I do!"

"Go on."

When Thorby reached: " 'I am already dead -- ' " he broke down. Krausa blew his nose vigorously, told him to proceed. Thorby managed to get to the end, though his voice was shaking. Then Krausa let him cry a moment before telling him sternly to wipe his face and brace up. "Son . . . you heard the middle part? You understood it?"

"Yes . . . uh, yes. I guess so."

"Then you know what I have to do."

"You mean . . . I have to leave Sisu?"

"What did Baslim say? 'When opportunity presents --' This is the first opportunity I've had . . . and I've had to squeeze to get it. It's almost certainly the last. Baslim didn't make me a gift of you, Son -- just a loan. And now I must pay back the loan. You see that, don't you?"

"Uh . . . I guess so." "Then let's get on with it." Krausa reached inside his jacket, pulled out a sheaf of bills and shoved them at Thorby. "Put this in your pocket. I would have made it more, but it was all I could draw without attracting your Mother's suspicions. Perhaps I can send you more before you jump."

Thorby held it without looking at it, although it was more money than he had ever touched before. "Father . . . you mean I've already left Sisu?"

Krausa had turned. He stopped. "Better so, Son. Good-byes are not comfort; only remembrance is a comfort. Besides, It has to be this way."

Thorby swallowed. "Yes, sir."

"Let's go."

They walked quickly toward the guarded gate. They were almost there when Thorby stopped. "Father . . . I don't want to go!"

Krausa looked at him without expression. "You don't have to."

"I thought you said I did have to?"

"No, The injunction laid on me was to deliver you and to pass on the message Baslim sent to me. But there my duty ends, my debt is paid. I won't order you to leave the Family. The rest was Baslim's idea . . . conceived, I am sure, with the best of intentions for your welfare. But whether or not you are obligated to carry out his wishes is something between you and Baslim. I can't decide it for you. Whatever debt you may or may not owe Baslim, it is separate from the debt the People owed to him."

Krausa waited while Thorby stood mute, trying to think. What had Pop expected of him? What had he told him to do? "Can I depend on you? You won't goof off and forget it?" Yes, but what, Pop? "Don't burn any offerings . . . just deliver a message, and then one thing more: do whatever this man suggests" Yes, Pop, but the man won't tell me!

Krausa said urgently, "We haven't much time. I have to get back. But, Son, whatever you decide, it's final. If you don't leave Sisu today, you won't get a second chance. I'm sure of that"

"It's the very last thing that I want from you, son . . . can I depend on you?" Pop said urgently, inside his head.

Thorby sighed. "I guess I have to, Father."

"I think so, too. Now let's hurry."

The gate pass office could not be hurried, especially as Captain Krausa, although identifying himself and son by ship's papers, declined to state his business with the commander of Guard Cruiser Hydra other than to say that it was "urgent and official."

But eventually they were escorted by a smart, armed fraki to the cruiser's hoist and turned over to another. They were handed along inside the ship and reached an office marked "Ship's Secretary -- Enter Without Knocking." Thorby concluded that Sisu was smaller than he had thought and he had never seen so much polished metal in his life. He was rapidly regretting his decision.

The Ship's Secretary was a polite, scrubbed young man with the lace orbits of a lieutenant. He was also very firm. "I'm sorry. Captain, but you will have to tell me your business . . . if you expect to see the Commanding Officer."

Captain Krausa said nothing and sat tight.

The nice young man colored, drummed on his desk. He got up. "Excuse me a moment."

He came back and said tonelessly, "The Commanding Officer can give you five minutes." He led them into a larger office and left them. An older man was there, seated at a paper-heaped desk. He had his blouse off and showed no insignia of rank. He got up, put out his hand, and said, "Captain Krausa? Of Free Trader . . . Seezoo, is it? I'm Colonel Brisby, commanding."

"Glad to be aboard, Skipper."

"Glad to have you. How's business?" He glanced at Thorby. "One of your officers?"

"Yes and no."

"Eh?"

"Colonel? May I ask in what class you graduated?"

"What? Oh-Eight. Why do you ask?"

"I think you can answer that. This lad is Thorby Baslim, adopted son of Colonel Richard Baslim. The Colonel asked me to deliver him to you."

Chapter 15

"What?"

"The name means something to you?"

"Of course it does." He stared at Thorby. "There's no resemblance."

" 'Adopted' I said. The Colonel adopted him on Jubbal."

Colonel Brisby closed the door. Then he said to Krausa, "Colonel Baslim is dead. Or 'missing and presumed dead,' these past two years."

"I know. The boy has been with me. I can report some details of the Colonel's death, if they are not known."

"You were one of his couriers?"

"Yes."

"You can prove it?"

"X three oh seven nine code FT."

"That can be checked. Well assume it is for the moment. By what means do you identify . . . Thorby Baslim?" Thorby did not follow the conversation. There was a buzzing in his ears, as if the tracker was being fed too much power, and the room was swelling and then growing smaller. He did figure out that this officer knew Pop, which was good . . . but what was this about Pop being a colonel? Pop was Baslim the Cripple, licensed mendicant under the mercy of . . . under the mercy . . .

Colonel Brisby told him sharply to sit down, which he was glad to do. Then the Colonel speeded up the air blower. He turned to Captain Krausa. "All right. I'm sold. I don't know what regulation I'm authorized to do it under . . . we are required to give assistance to 'X' Corps people, but this is not quite that But I can't let Colonel Baslim down."

" 'Distressed citizen,' " suggested Krausa.

"Eh? I don't see how that can be stretched to fit a person on a planet under the Hegemony, who is obviously not distressed -- other than a little white around the gills, I mean. But I'll do it."

"Thank you, Skipper." Krausa glanced at his watch. "May I go? In fact I must."

"Just a second. You're simply leaving him with me?"

"I'm afraid that's the way it must be."

Brisby shrugged. "As you say. But stay for lunch. I want to find out more about Colonel Baslim."

"I'm sorry, I can't. You can reach me at the Gathering, if you need to."

"I will. Well, coffee at least." The ship commander reached for a button.

"Skipper," Krausa said with distress, looking again at his watch, "I must leave now. Today is our Remembrance . . . and my Mother's funeral is in fifty minutes."

"What? Why didn't you say so? Goodness, man! You'll never make it"

"I'm very much afraid so . . . but I had to do this."

"We'll fix that." The Colonel snatched open the door. "Eddie! An air car for Captain Krausa. Speed run. Take him off the top and put him down where he says. Crash!"

"Aye aye, Skipper!"

Brisby turned back, raised his eyebrows, then stepped into the outer office. Krausa was facing Thorby, his mouth working painfully. "Come here. Son."

"Yes, Father."

"I have to go now. Maybe you can manage to be at a Gathering . . . some day."

"Ill try, Father!"

"If not . . . well, the blood stays in the steel, the steel stays in the blood. You're still Sisu"

" 'The steel stays in the blood.' "

"Good business, Son. Be a good boy."

"Good . . . business! Oh, Father!"

"Stop it! You'll have me doing it. Listen, I'll take your responses this afternoon. You must not show up."

"Yes, sir."

"Your Mother loves you . . . and so do I."

Brisby tapped on the open door. "Your car is waiting, Captain."

"Coming, Skipper." Krausa kissed Thorby on both cheeks and turned suddenly away, so that all Thorby saw was his broad back.

Colonel Brisby returned presently, sat down, looked at Thorby and said, "I don't know quite what to do with you. But we'll manage." He touched a switch. "Have someone dig up the berthing master-at-arms, Eddie." He turned to Thorby. "We'll make out, if you're not too fussy. You traders live pretty luxuriously, I understand."

"Sir?"

"Yes?"

"Baslim was a colonel? Of your service?"

"Well . . . yes."

Thorby had now had a few minutes to think -- and old memories had been stirred mightily. He said hesitantly, "I have a message for you -- I think."

"From Colonel Baslim?"

"Yes, sir. I'm supposed to be in a light trance. But I think I can start it." Carefully, Thorby recited a few code groups. "Is this for you?"

Colonel Brisby again hastily closed the door. Then he said earnestly, "Don't ever use that code unless you are certain everyone in earshot is cleared for it and the room has been debugged."

"I'm sorry, sir."

"No harm done. But anything in that code is hot I just hope that it hasn't cooled off in two years." He touched the talker switch again. "Eddie, cancel the master-at-arms. Get me the psych officer. If he's out of the ship, have him chased down." He looked at Thorby. "I still don't know what to do with you. I ought to lock you in the safe."

The long message was squeezed out of Thorby in the presence only of Colonel Brisby, his Executive Officer Vice Colonel "Stinky" Stancke, and the ship's psychologist Medical-Captain Isadore Krishnamurti. The session went slowly; Dr. Kris did not often use hypnotherapy. Thorby was so tense that he resisted, and the Exec had a blasphemous time with recording equipment. But at last the psychologist straightened up and wiped his face. "That's all, I think," he said wearily. "But what is it?"

"Forget you heard it. Doc," advised Brisby. "Better yet, cut your throat."

"Gee, thanks. Boss."

Stancke said, "Pappy, let's run him through again. I've got this mad scientist's dream working better. His accent may have garbled it."

"Nonsense. The kid speaks pure Terran."

"Okay, so it's my ears. I've been exposed to bad influences -- been aboard too long."

"If," Brisby answered calmly, "that is a slur on your commanding officer's pure speech, I consider the source. Stinkpot, is it true that you Riffs write down anything you want understood?"

"Only with Araleshi . . . sir. Nothing personal, you asked. Well, how about it? I've got the noise filtered out"

"Doc?"

"Hmm . . . The subject is fatigued. Is this your only opportunity?"

"Eh? He'll be with us quite a while. All right, wake him."

Shortly Thorby was handed over to the berthing P.O. Several liters of coffee, a tray of sandwiches, and one skipped meal later the Colonel and his second in command had recorded in clear the thousands of words of old Baslim the Beggar's final report. Stancke sat back and whistled. "You can relax, Pappy. This stuff didn't cool off -- a half-life of a century, on a guess."

Brisby answered soberly, "Yes, and a lot of good boys will die before it does."

"You ain't foolin'. What gets me is that trader kid -- running around the Galaxy with all that 'burn-before-reading' between his ears. Shall I slide down and poison him?"

"What, and have to fill out all those copies?"

"Well, maybe Kris can wipe it out of his tender gray matter without resorting to a trans-orbital."

"Anybody touches that kid and Colonel Baslim will rise up out of his grave and strangle him, is my guess. Did you know Baslim, Stinky?"

"One course under him in psychological weapons, my last year at the Academy. Just before he went 'X' Corps. Most brilliant mind I've ever met -- except yours, of course, Pappy, sir, boss."

"Don't strain yourself. No doubt he was a brilliant teacher -- he would be tops at anything. But you should have known him before he was on limited duty. I was privileged to serve under him. Now that I have a ship of my own I just ask myself: 'What would Baslim do?' He was the best commanding officer a ship ever had. It was during his second crack at colonel -- he had been up to wing marshal and put in for reduction to have a ship again, to get away from a desk."

Stancke shook his head. "I can't wait for a nice cushy desk, where I can write recommendations nobody will read."

"You aren't Baslim. If it wasn't hard, he didn't like it."

"I'm no hero. I'm more the salt of the earth. Pappy, were you with him in the rescue of the Hansea?"

"You think I would fail to wear the ribbon? No, thank goodness; I had been transferred. That was a hand-weapons job. Messy."

"Maybe you would have had the sense not to volunteer."

"Stinky, even you would volunteer, fat and lazy as you are -- if Baslim asked for volunteers."

"I'm not lazy, I'm efficient. But riddle me this: what was a C.O. doing leading a landing party?"

"The Old Man followed regulations only when he agreed with them. He wanted a crack at slavers with his own hands -- he hated slavers with a cold passion. So he comes back a hero and what can the Department do? Wait until he gets out of the hospital and court-martial him? Stinky, even top brass can be sensible when they have their noses rubbed in it So they cited him for above-and-beyond under unique circumstances and put him on limited duty. But from here on, when 'unique circumstances' arise, every commanding officer knows that he can't thumb through the book for an alibi. It'll be up to him to continue the example."

"Not me," Stancke said firmly.

"You. When you're a C.O. and comes time to do something unpleasant, there you'll be, trying to get your tummy to and your chest out, with your chubby little face set in hero lines. You won't be able to help it. The Baslim conditioned-reflex will hit you."

Around dawn they got to bed. Brisby intended to sleep late but long habit took him to his desk only minutes late. He was not surprised to find his professedly-lazy Exec already at work.

His Paymaster-Lieutenant was waiting. The fiscal officer was holding a message form; Brisby recognized it. The night before, after hours of dividing Baslim's report into phrases, then recoding it to be sent by split routes, he had realized that there was one more chore before he could sleep: arrange for identification search on Colonel Baslim's adopted son. Brisby had no confidence that a waif picked up on Jubbul could be traced in the vital records of the Hegemony -- but if the Old Man sent for a bucket of space, that

was what he wanted and no excuses. Toward Baslim, dead or not. Colonel Brisby maintained the attitudes of a junior officer. So he had written a dispatch and left word with the duty officer to have Thorby finger-printed and the prints coded at reveille. Then he could sleep.

Brisby looked at the message. "Hasn't this gone out?" he demanded.

"The photo lab is coding the prints now, Skipper. But the Comm Office brought it to me for a charge, since it is for service outside the ship."

"Well, assign it. Do I have to be bothered with every routine matter?"

The Paymaster decided that the Old Man had been missing sleep again. "Bad news, Skipper."

"Okay, spill it."

"I don't know of a charge to cover it I doubt if there is an appropriation to fit even if we could figure out a likely-sounding charge."

"I don't care what charge. Pick one and get that message moving. Use that general one. Oh-oh-something."

" 'Unpredictable Overhead, Administrative.' It won't work, Skipper. Making an identity search on a civilian cannot be construed as ship's overhead. Oh, I can put that charge number on and you'll get an answer. But --"

"That's what I want. An answer."

"Yes, sir. But eventually it reaches the General Accounting Office and the wheels go around and a card pops out with a red tag. Then my pay is checked until I pay it back. That's why they make us blokes study law as well as accounting."

"You're breaking my heart. Okay, Pay, if you're too sissy to sign it, tell me what charge number that overhead thing is; I'll write it in and sign my name and rank. Okay?"

"Yes, sir. But, Skipper --"

"Pay, I've had a hard night."

"Yes, sir. I'm required by law to advise you. You don't have to take it, of course."

"Of course," Brisby agreed grimly.

"Skipper, have you any notion how expensive an identification search can be?"

"It can't be much. I can't see why you are making such an aching issue of it. I want a clerk to get off his fundament and look in the files. I doubt if they'll bill us. Routine courtesy."

"I wish I thought so, sir. But you've made this an unlimited search. Since you haven't named a planet, first it will go to Tycho City, live files and dead. Or do you want to limit it to live files?"

Brisby thought. If Colonel Baslim had believed that this young man had come from inside civilization, then it was likely that the kid's family thought he was dead. "No."

"Too bad. Dead files are three times as big as the live. So they search at Tycho. It takes a while, even with machines -- over twenty billion entries. Suppose you get a null result A coded inquiry goes to vital bureaus on all planets, since Great Archives are never up to date and some planetary governments don't send in records anyhow. Now the cost mounts, especially if you use n-space routing; exact coding on a fingerprint set is a fair-sized book. Of course if you take one planet at a time and use mail --"

"No."

"Well . . . Skipper, why not put a limit on it? A thousand credits, or whatever you can afford if -- I mean 'when' -- they check your pay."

"A thousand credits? Ridiculous!"

"If I'm wrong, the limitation won't matter. If I'm right -- and I am, a thousand credits could just be a starter -- then your neck isn't out too far."

Brisby scowled. "Pay, you aren't working for me to tell me I can't do things."

"Yes, sir."

"You're here to tell me how I can do what I'm going to do anyhow. So start digging through your books and find out how. Legally. And free."

"Aye aye, sir."

Brisby did not go right to work. He was fuming -- some day they would get the service so fouled up in red tape they'd never get a ship off the ground. He bet that the Old Man had gone into the Exotic Corps with a feeling of relief -- "X" Corps agents didn't have red tape; one of 'em finds it necessary to spend money, he just did so, ten credits or ten million. That was how to operate -- pick your men, then trust them. No regular reports, no forms, no nothing -- just do what needs to be done.

Whereupon he picked up the ship's quarterly fuel and engineering report. He put it down, reached for a message form, wrote a follow-up on Baslim's report, informing Exotic Bureau that the unclassified courier who had delivered report was still in jurisdiction of signer and in signer's opinion additional data could be had if signer were authorized to discuss report with courier at discretion.

He decided not to turn it over to the code and cipher group; he opened his safe and set about coding it He had just finished when the Paymaster knocked. Brisby looked up. "So you found the paragraph."

"Perhaps, Skipper, I've been talking with the Executive Officer."

"Shoot"

"I see we have subject person aboard."

"Now don't tell me I need a charge for that!"

"Not at all, Skipper. I'll absorb his ration in the rush. You keep him aboard forever and I won't notice. Things don't get awkward until they get on the books. But how long do you expect to keep him? It must be more than a day or two, or you wouldn't want an identity search."

The Commanding Officer frowned. "It may be quite a while. First I've got to find out who he is, where he's from. Then, if we're going that way, I intend to give him an unlogged lift. If we aren't -- well, I'll pass him along to a ship that is. Too complicated to explain, Pay -- but necessary."

"Okay. Then why not enlist him?"

"Huh?"

"It would clear up everything."

Brisby frowned. "I see. I could take him along legally . . . and arrange a transfer. And it would give you a charge number. But . . . well, suppose Shiva III is the spot -- and his enlistment is not up. Can't just tell him to desert. Besides I don't know that he wants to enlist."

"You can ask him. How old is he?"

"I doubt if he knows. He's a waif."

"So much the better. You ship him. Then when you find out where he has to go, you discover an error in his age . . . and correct it. It turns out that he reaches his majority in time to be paid off on his home planet."

Brisby blinked. "Pay, are all paymasters dishonest?"

"Only the good ones. You don't like it, sir?"

"I love it. Okay, I'll check. And I'll hold up that dispatch. We'll send it later."

The Paymaster looked innocent. "Oh, no, sir, we won't ever send it."

"How's that?"

"It won't be necessary. We enlist him to fill vacancy in complement We send in records to BuPersonnel. They make the routine check, name and home planet -- Hekate, I suppose, since we got him here. By then we're long gone. They don't find him registered here. Now they turn it over to BuSecurity, who sends us a priority telling us not to permit subject personnel to serve in sensitive capacity. But that's all, because it's possible that this poor innocent citizen never got registered. But they can't take chances, so they start the very search you want, first Tycho, then everywhere else, security priority. So they identify him and unless he's wanted for murder it's a routine muddle. Or they can't identify him and have to make up their minds whether to register him, or give him twenty-four hours to get out of the Galaxy -- seven to two they decide to forget it -- except that someone aboard is told to watch him and report suspicious behavior. But the real beauty of it is that the job carries a BuSecurity cost charge."

"Pay, do you think that Security has agents in this vessel I don't know about?"

"Skipper, what do you think?"

"Mmm . . . I don't know -- but if I were Chief of Security I would have! Confound it, if I lift a civilian from here to the Rim, that'll be reported too -- no matter what I log."

"Shouldn't be surprised, sir."

"Get out of here! I'll see if the lad will buy it." He flipped a switch. "Eddie!" Instead of sending for Thorby, Brisby directed the Surgeon to examine him, since it was pointless to pressure him to enlist without determining whether or not he could. Medical-Major Stein, accompanied by Medical-Captain Krishnamurti, reported to Brisby before lunch.

"Well?"

"No physical objection. Skipper. I'll let the Psych Officer speak for himself."

"All right. By the way, how old is he?"

"He doesn't know."

"Yes, yes," Brisby agreed impatiently, "but how old do you think he is?"

Dr. Stein shrugged. "What's his genetic picture? What environment? Any age-factor mutations? High or low gravity planet? Planetary metabolic index? He could be as young as ten standard years, as old as thirty, on physical appearance. I can assign a fictional adjusted age, on the assumption of no significant mutations and Terra-equivalent environment -- an unjustified assumption until they build babies with data plates -- an adjusted age of not less than fourteen standard years, not more than twenty-two."

"Would an adjusted age of eighteen fit?"

"That's what I said."

"Okay, make it just under that -- minority enlistment."

"There's a tattoo on him," Dr. Krishnamurti offered, "which might give a clue. A slave mark."

"The deuce you say!" Colonel Brisby reflected that his follow-up dispatch to "X" Corps was justified. "Dated?"

"Just a manumission -- a Sargonese date which fits his Story. The mark is a factor's mark. No date."

"Too bad. Well, now that he is clear with Medical, I'll send for him."

"Colonel."

"Eh? Yes, Kris?"

"I cannot recommend enlistment."

"Huh? He's as sane as you are."

"Surely. But he is a poor risk."

"Why?"

"I interviewed subject under light trance this morning. Colonel, did you ever keep a dog?"

"No. Not many where I come from."

"Very useful laboratory animals, they parallel many human characteristics. Take a puppy, abuse him, kick him, mistreat him -- he'll revert to feral carnivore. Take his litter brother, pet him, talk to him, let him sleep with you, but train him -- he's a happy, well-behaved house pet. Take another from that same litter, pet him on even days and kick him on odd days. You'll have him so confused that he'll be ruined for either role; he can't survive as a wild animal and he doesn't understand what is expected of a pet. Pretty soon he won't eat, he won't sleep, he can't control his functions; he just cowers and shivers."

"Hmm . . . do you psychologists do such things often?"

"I never have. But it's in the literature . . . and this lad's case parallels it. He's undergone a series of traumatic experiences in his formative years, the latest of which was yesterday. He's confused and depressed. Like that dog, he may snarl and bite at any time. He ought not to be exposed to new pressures; he should be cared for where he can be given psychotherapy."

"Phooey!"

The psychological officer shrugged. Colonel Brisby added, "I apologize, Doctor. But I know something about this case, with all respect to your training. This lad has been in good environment the past couple of years." Brisby recalled the farewell he had unwillingly witnessed. "And before that, he was in the hands of Colonel Richard Baslim. Heard of him?"

"I know his reputation."

"If there is any fact I would stake my ship on, it is that Colonel Baslim would never ruin a boy. Okay, so the kid has had a rough time. But be has also been succored by one of the toughest, sanest, most humane men ever to wear our uniform. You bet on your dogs; I'll back Colonel Richard Baslim. Now . . . are you advising me not to enlist him?"

The psychologist hesitated. Brisby said, "Well?"

Major Stein interrupted. "Take it easy, Kris; I'm overriding you."

Brisby said, "I want a straight answer, then I'll decide."

Dr. Krishnamurti said slowly, "Suppose I record my opinions but state that there are no certain grounds for refusing enlistment?"

"Why?"

"Obviously you want to enlist this boy. But if he gets into trouble -- well, my endorsement could get him a medical discharge instead of a sentence. He's had enough bad breaks."

Colonel Brisby clapped him on the shoulder. "Good boy, Kris! That's all, gentlemen."

Thorby spent an unhappy night. The master-at-arms billeted him in senior P.O.s quarters and he was well treated, but embarrassingly aware of the polite way in which

those around him did not stare at his gaudy Sisu dress uniform. Up till then he had been proud of the way Sisu's dress stood out; now he was learning painfully that clothing has its proper background. That night be was conscious of snores around him . . . strangers . . . fraki -- and he yearned to be back among People, where he was known, understood, recognized.

He tossed on a harder bed than he was used to and wondered who would get his own?

He found himself wondering whether anyone had ever claimed the hole he still thought of as "home." Would they repair the door? Would they keep it clean and decent the way Pop liked? What would they do with Pop's leg?

Asleep, he dreamt of Pop and of Sisu, all mixed up. At last, with Grandmother shortened and a raider bearing down. Pop whispered, "No more bad dreams, Thorby. Never again, son. Just happy dreams"

He slept peacefully then -- and awoke in this forbidding place with gabbling fraki all around him. Breakfast was substantial but not up to Aunt Athena's high standards; however he was not hungry.

After breakfast he was quietly tasting his misery when he was required to undress and submit to indignities. It was his first experience with medical men's offhand behavior with human flesh -- he loathed the poking and prodding.

When the Commanding Officer sent for him Thorby was not even cheered by seeing the man who knew Pop. This room was where he had had to say a last "good-business" to Father; the thoughts lingering there were not good.

He listened listlessly while Brisby explained. He woke up a little when he understood that he was being offered status -- not much, he gathered. But status. The fraki had status among themselves. It had never occurred to him that fraki status could matter even to fraki.

"You don't have to," Colonel Brisby concluded, "but it will make simpler the thing Colonel Baslim wanted me to do -- find your family, I mean. You would like that, wouldn't you?"

Thorby almost said that he knew where his Family was. But he knew what the Colonel meant: his own sib, whose existence he had never quite been able to imagine. Did he really have blood relatives somewhere?

"I suppose so," he answered slowly. "I don't know."

"Mmm . . ." Brisby wondered what it was like to have no frame to your picture. "Colonel Baslim was anxious to have me locate your family. I can handle it easier if you are officially one of us. Well? It's Guardsman third class . . . thirty credits a month, all you can eat and not enough sleep. And glory. A meager amount."

Thorby looked up. "This is the same Fam -- service my Pop -- Colonel Baslim, you call him -- was in? He really was?"

"Yes. Senior to what you will be. But the same service. I think you started to say 'family.' We like to think of the Service as one enormous family. Colonel Baslim was one of the more distinguished members of it."

"Then I want to be adopted."

"Enlisted."

"Whatever the word is."

Chapter 16

Fraki weren't bad when you got to know them.

They had their secret language, even though they thought they talked Interlingua. Thorby added a few dozen verbs and a few hundred nouns as he heard them; after that he tripped over an occasional idiom. He learned that his light-years as a trader were respected, even though the People were considered odd. He didn't argue; fraki couldn't know better.

H.G.C. Hydra lifted from Hekate, bound for the Rim worlds. Just before jump a money order arrived accompanied by a supercargo's form which showed the draft to be one eighty-third of Sisu's appreciation from Jubbulpore to Hekate -- as if, thought Thorby, he were a girl being swapped. It was an uncomfortably large sum and Thorby could find no entry charging him interest against a capital share of the ship -- which he felt should be there for proper accounting; it wasn't as if he had been born in the ship. Life among the People had made the beggar boy conscious of money in a sense that alms never could -- books must balance and debts must be paid.

He wondered what Pop would think of all that money. He felt easier when he learned that he could deposit it with the Paymaster.

With the draft was a warm note, wishing him good business wherever he went and signed: "Love, Mother." It made Thorby feel better and much worse.

A package of belongings arrived with a note from Fritz: "Dear Brother, Nobody briefed me about recent mysterious happenings, but things were crisp around the old ship for a few days. If such were not unthinkable, I would say there had been a difference of opinion at highest level. Me, I have no opinions, except that I miss your idle chatter and blank expressions. Have fun and be sure to count your change.
Fritz"
"P.S. The play was an artistic success -- and Loeen is cuddly."

Thorby stored his Sisu belongings; he was trying to be a Guardsman and they made him uncomfortable. He discovered that the Guard was not the closed corporation the People were; it required no magic to make a Guardsman if a man had what it took, because nobody cared where a man came from or what he had been. The Hydra drew its company from many planets; there were machines in BuPersonnel to ensure this. Thorby's shipmates were tall and short, bird-boned and rugged, smooth and hairy, mutated and superficially unmutated. Thorby hit close to norm and his Free Trader background was merely an acceptable eccentricity; it made him a spaceman of sorts even though a recruit.

In fact, the only hurdle was that he was a raw recruit "Guardsman 3/c" he might be but a boot he would remain until he proved himself, most especially since he had not had boot training.

But he was no more handicapped than any recruit in a military outfit having proud esprit de corps. He was assigned a bunk, a mess, a working station, and a petty officer to tell him what to do. His work was compartment cleaning, his battle station was runner for the Weapons Officer in case phones should fail -- it meant that he was available to fetch coffee.

Otherwise he was left in peace. He was free to join a bull session as long as he let his seniors sound off, he was invited into card games when a player was needed, he was not

shut out of gossip, and he was privileged to lend jumpers and socks to seniors who happened to be short. Thorby had had experience at being junior; it was not difficult.

The Hydra was heading out for patrol duty; the mess talk centered around "hunting" prospects. The Hydra had fast "legs," three hundred gravities; she sought action with outlaws where a merchantman such as the Sisu would avoid it if possible. Despite her large complement and heavy weapons, the Hydra was mostly power plant and fuel tanks.

Thorby's table was headed by his petty officer. Ordnance-man 2/c Peebie, down as "Decibel." Thorby was eating one day with his ears tuned down, while he debated visiting the library after dinner or attending the stereo show in the messroom, when he heard his nickname: "Isn't that right. Trader?"

Thorby was proud of the nickname. He did not like it in Peebie's mouth but Peebie was a self-appointed wit -- he would greet Thorby with the nickname, inquire solicitously, "How's business?" and make gestures of counting money. So far, Thorby had ignored it.

"Isn't what right?"

"Why'n't y'keep y'r ears open? Can't you hear anything but rustle and clink? I was telling 'em what I told the Weapons Officer: the way to rack up more kills is to go after 'em, not pretend to be a trader, too scared to fight and too fat to run."

Thorby felt a simmer. "Who," he said, "told you that traders were scared to fight?"

"Quit pushin' that stuff! Whoever heard of a trader burning a bandit?"

Peebie may have been sincere; kills made by traders received no publicity. But Thorby's burn increased. "I have."

Thorby meant that he had heard of traders' burning raiders; Peebie took it as a boast "Oh, you did, did you? Listen to that, men -- our peddler is a hero. He's burned a bandit all by his own little self! Tell us about it. Did you set tire to his hair? Or drop potassium in his beer?"

"I used," Thorby stated, "a Mark XIX one-stage target-seeker, made by Bethlehem-Antares and armed with a 20 megaton plutonium warhead. I launched a timed shot on closing to beaming range on a collision-curve prediction."

There was silence. Finally Peebie said coldly, "Where did you read that?"

"It's what the tape showed after the engagement I was senior starboard firecontrolman. The portside computer was out -- so I know it was my shot that burned him."

"Now he's a weapons officer! Peddler, don't peddle it here."

Thorby shrugged. "I used to be. A weapons control officer, rather. I never learned much about ordnance."

"Modest, isn't he? Talk is cheap, Trader."

"You should know, Decibel"

Peebie was halted by his nickname; Thorby did not rate such familiarity. Another voice cut in, saying sweetly, "Sure, Decibel, talk is cheap. Now you tell about the big kills you've made. Go ahead." The speaker was non-rated but was a clerk in the executive office and immune to Peebie's displeasure.

Peebie glowered. "Enough of this prattle," he growled. "Baslim, I'll see you at oh eight hundred in combat control -- well find out how much you know about firecontrol."

Thorby was not anxious to be tested; he knew nothing about the Hydra's equipment. But an order is an order; he was facing Peebie's smirk at the appointed time.

The smirk did not last Hydra's instruments bore no resemblance to those in the Sisu, but the principles were the same and the senior gunnery sergeant (cybernetics) seemed to

find nothing unlikely in an ex-trader knowing how to shoot. He was always looking for talent; people to handle ballistic trackers for the preposterous problems of combat at sub-light-speed were as scarce among Guardsmen as among the People.

He questioned Thorby about the computer he had handled. Presently he nodded. "I've never seen anything but schematics on a Dusseldorf tandem rig; that approach is obsolete. But if you can get a hit with that junk, we can use you." The sergeant turned to Peebie. "Thanks, Decibel. I'll mention it to the Weapons Officer. Stick around, Baslim."

Peebie looked astonished. "He's got work to do, Sarge."

Sergeant Luter shrugged. "Tell your leading P.O. that I need Baslim here."

Thorby had been shocked to hear Sisu's beautiful computers called "junk." But shortly he knew what Luter meant; the massive brain that fought for the Hydra was a genius among computers. Thorby would never control it alone -- but soon he was an acting ordnanceman 3/c (cybernetics) and relatively safe from Peebie's wit. He began to feel like a Guardsman -- very junior but an accepted shipmate.

Hydra was cruising above speed-of-light toward the Rim world Ultima Thule, where she would refuel and start prowling for outlaws. No query had reached the ship concerning Thorby's identity. He was contented with his status in Pop's old outfit; it made him proud to feel that Pop would be proud of him. He did miss Sisu, but a ship with no women was simpler to live in; compared with Sisu the Hydra had no restrictive regulations.

But Colonel Brisby did not let Thorby forget why he had been enlisted. Commanding officers are many linkages away from a recruit; a non-rated man might not lay eyes on his skipper except at inspections. But Brisby sent for Thorby repeatedly.

Brisby received authorization from the Exotic Corps to discuss Colonel Baslim's report with Baslim's courier, bearing in mind the critical classification of the subject. So Brisby called Thorby in.

Thorby was first warned of the necessity of keeping his mouth shut Brisby told him that the punishment for blabbing would be as heavy as a court-martial could hand out. "But that's not the point. We have to be sure that the question never arises. Otherwise we can't discuss it."

Thorby hesitated. "How can I know that I'll keep my mouth shut when I don't know what it is?"

Brisby looked annoyed. "I can order you to."

"Yes, sir. And I'll say, 'Aye aye, sir.' But does that make you certain that I wouldn't risk a court-martial?"

"But -- This is ridiculous! I want to talk about Colonel Baslim's work. But you're to keep your yap shut, you understand me? If you don't, I'll tear you to pieces with my bare hands. No young punk is going to quibble with me where the Old Man's work is concerned!"

Thorby looked relieved. "Why didn't you say it was that, Skipper? I wouldn't blab about anything of Pop's -- why, that was the first thing he taught me."

"Oh." Brisby grinned. "I should have known. Okay."

"I suppose," Thorby added thoughtfully, "that it's all right to talk to you."

Brisby looked startled. "I hadn't realized that this cuts two ways. But it does. I can show you a dispatch from his corps, telling me to discuss his report with you. Would that convince you?"

Brisby found himself showing a "Most Secret" dispatch to his most Junior, acting petty officer, to convince said junior that his C.O. was entitled to talk with him. At the time It seemed reasonable; it was not until later that the Colonel wondered.

Thorby read the translated dispatch and nodded. "Anything you want. Skipper. I'm sure Pop would agree."

"Okay. You know what he was doing?"

"Well . . . yes and no. I saw some of it. I know what sort of things he was interested in having me notice and remember. I used to carry messages for him and it was always very secret But I never knew why." Thorby frowned. "They said he was a spy."

"Intelligence agent sounds better."

Thorby shrugged. "If he was spying, he'd call it that. Pop never minced words."

"No, he never minced words," Brisby agreed, wincing as he recalled being scorched right through his uniform by a dressing-down. "Let me explain. Mmm . . . know any Terran history?"

"Uh, not much."

"It's a miniature history of the race. Long before space travel, when we hadn't even filled up Terra, there used to be dirtside frontiers. Every time new territory was found, you always got three phenomena: traders ranging out ahead and taking their chances, outlaws preying on the honest men -- and a traffic in slaves. It happens the same way today, when we're pushing through space instead of across oceans and prairies. Frontier traders are adventurers taking great risks for great profits. Outlaws, whether hill bands or sea pirates or the raiders in space, crop up in any area not under police protection. Both are temporary. But slavery is another matter -- the most vicious habit humans fall into and the hardest to break. It starts up in every new land and it's terribly hard to root out After a culture falls ill of it, it gets rooted in the economic system and laws, in men's habits and attitudes. You abolish it; you drive it underground -- there it lurks, ready to spring up again, in the minds of people who think it is their 'natural' right to own other people. You can't reason with them; you can kill them but you can't change their minds."

Brisby sighed. "Baslim, the Guard is just the policeman and the mailman; we haven't had a major war in two centuries. What we do work at is the impossible job of maintaining order on the frontier, a globe three thousand light-years in circumference -- no one can understand how big that is; the mind can't swallow it.

"Nor can human beings police it. It gets bigger every year. Dirtside police eventually close the gaps. But with us, the longer we try the more there is. So to most of us it's a job, an honest job, but one that can never be finished.

"But to Colonel Richard Baslim it was a passion. Especially he hated the slave trade, the thought of it could make him sick at his stomach -- I've seen. He lost his leg and an eye -- I suppose you know -- while rescuing a shipload of people from a slaving compound.

"That would satisfy most officers -- go home and retire. Not old Spit-and-Polish! He taught a few years, then he went to the one corps that might take him, chewed up as he was, and presented a plan.

"The Nine Worlds are the backbone of the slave trade. The Sargony was colonized a long time ago, and they never accepted Hegemony after they broke off as colonies. The Nine Worlds don't qualify on human rights and don't want to qualify. So we can't travel there and they can't visit our worlds.

"Colonel Baslim decided that the traffic could be rendered uneconomic if we knew how it worked in the Sargony. He reasoned that slavers had to have ships, had to have bases, had to have markets, that it was not just a vice but a business. So he decided to go there and study it.

"This was preposterous -- one man against a nine-planet empire . . . but the Exotic Corps deals in preposterous notions. Even they would probably not have made him an agent if he had not had a scheme to get his reports out. An agent couldn't travel back and forth, nor could he use the mails -- there aren't any between us and them -- and he certainly couldn't set up an n-space communicator; that would be as conspicuous as a brass band.

"But Baslim had an idea. The only people who visit both the Nine Worlds and our own are Free Traders. But they avoid politics like poison, as you know better than I, and they go to great lengths not to offend local customs. However Colonel Baslim had a personal 'in' to them.

"I suppose you know that those people he rescued were Free Traders. He told 'X' Corps that he could report back through his friends. So they let him try. It's my guess that no one knew that he intended to pose as a beggar -- I doubt if he planned it; he was always great at improvising. But he got in and for years he observed and got his reports out.

"That's the background and now I want to squeeze every possible fact out of you. You can tell us about methods -- the report I forwarded never said a word about methods. Another agent might be able to use his methods."

Thorby said soberly, "Ill tell you anything I can. I don't know much."

"You know more than you think you do. Would you let the psych officer put you under again and see if we can work total recall?"

"Anything is okay if it'll help Pop's work."

"It should. Another thing --" Brisby crossed his cabin, held up a sheet on which was the silhouette of a spaceship. "What ship is this?"

Thorby's eyes widened. "A Sargonese cruiser."

Brisby snatched up another one. "This?"

"Uh, it looks like a slaver that called at Jubbulpore twice a year."

"Neither one," Brisby said savagely, "is anything of the sort. These are recognition patterns out of my files -- of ships built by our biggest shipbuilder. If you saw them in Jubbulpore, they were either copies, or bought from us!"

Thorby considered it. "They build ships there."

"So I've been told. But Colonel Baslim reported ships' serial numbers -- how he got them I couldn't guess; maybe you can. He claims that the slave trade is getting help from our own worlds!" Brisby looked unbearably disgusted.

Thorby reported regularly to the Cabin, sometimes to see Brisby, sometimes to be interviewed under hypnosis by Dr. Krishnamurti. Brisby always mentioned the search for Thorby's identity and told him not to be discouraged; such a search took a long time. Repeated mention changed Thorby's attitude about it from something impossible to something which was going to be true soon; he began thinking about his family, wondering who he was? -- it was going to be nice to know, to be like other people.

Brisby was reassuring himself; he had been notified to keep Thorby off sensitive work the very day the ship jumped from Hekate when he had hoped that Thorby would be

identified at once. He kept the news to himself, holding fast to his conviction that Colonel Baslim was never wrong and that the matter would be cleared up.

When Thorby was shifted to Combat Control, Brisby worried when the order passed across his desk -- that was a "security" area, never open to visitors -- then he told himself that a man with no special training couldn't learn anything there that could really affect security and that he was already using the lad in much more sensitive work. Brisby felt that he was learning things of importance -- that the Old Man, for example, had used the cover personality of a one-legged beggar to hide two-legged activities . . . but had actually been a beggar; he and the boy had lived only on alms. Brisby admired such artistic perfection -- it should be an example to other agents.

But the Old Man always had been a shining example.

So Brisby left Thorby in combat control. He omitted to make permanent Thorby's acting promotion in order that the record of change in rating need not be forwarded to BuPersonnel. But he became anxious to receive the dispatch that would tell him who Thorby was.

His executive was with him when it came in. It was in code, but Brisby recognized Thorby's serial number; he had written it many times in reports to "X" Corps. "Look at this, Stinky! This tells us who our foundling is. Grab the machine; the safe is open."

Ten minutes later they had processed it; it read:

-- "NULL BESULT FULL IDENTSEARCH BASLIM THORBY GDSMN THIRD. AUTH & DRT TRANSFER ANY RECEIVING STATION RETRANSFER HEKATE INVESTIGATION DISPOSITION -- CHFBUPEBS."

"Stinky, ain't that a mess?"

Stancke shrugged. "It's how the dice roll, boss."

"I feel as if I had let the Old Man down. He was sure the kid was a citizen."

"I misdoubt there are millions of citizens who would have a bad time proving who they are. Colonel Baslim may have been right -- and still it can't be proved."

"I hate to transfer him. I feel responsible."

"Not your fault."

"You never served under Colonel Baslim. He was easy to please . . . all he wanted was one-hundred-percent perfection. And this doesn't feel like it."

"Quit blaming yourself. You have to accept the record."

"Might as well get it over with. Eddie! I want to see Ordnanceman Baslim."

Thorby noticed that the Skipper looked grim -- but then he often did. "Acting Ordnanceman Third Class Baslim reporting, sir."

"Thorby . . ."

"Yes, sir?" Thorby was startled. The Skipper sometimes used his first name because that was what he answered to under hypnosis -- but this was not such a time.

"The identification report on you came."

"Huh?" Thorby was startled out of military manners. He felt a surge of joy -- he was going to know who he was!

"They can't identify you." Brisby waited, then said sharply, "Did you understand?"

Thorby swallowed. "Yes, sir. They don't know who I am. I'm not . . . anybody."

"Nonsense! You're still yourself."

"Yes, sir. Is that all, sir? May I go?"

"Just a moment. I have to transfer you back to Hekate." He added hastily, seeing Thorby's expression, "Don't worry. They'll probably let you serve out your enlistment if you want to. In any case, they can't do anything to you; you haven't done anything wrong."

"Yes, sir," Thorby repeated dully.

Nothing and nobody -- He had a blinding image of an old, old nightmare . . . standing on the block, hearing an auctioneer chant his description, while cold eyes stared at him. But he pulled himself together and was merely quiet the rest of the day. It was not until the compartment was dark that he bit his pillow and whispered brokenly, "Pop . . . oh, Pop!"

The Guards uniform covered Thorby's legs, but in the showers the tattoo on his left thigh could be noticed. When this happened, Thorby explained without embarrassment what it signified. Responses varied from curiosity, through half-disbelief, to awed surprise that here was a man who had been through it -- capture, sale, servitude, and miraculously, free again. Most civilians did not realize that slavery still existed; Guardsmen knew better.

No one was nasty about it.

But the day after the null report on identification Thorby encountered "Decibel" Peebie in the showers. Thorby did not speak; they had not spoken much since Thorby had moved out from under Peebie, even though they sat at the same table. But now Peebie spoke. "Hi, Trader!"

"Hi." Thorby started to bathe.

"What's on your leg? Dirt?"

"Where?"

"On your thigh. Hold still. Let's see."

"Keep your hands to yourself!"

"Don't be touchy. Turn around to the light. What is it?"

"It's a slaver's mark," Thorby explained curtly.

"No foolin'? So you're a slave?"

"I used to be."

"They put chains on you? Make you kiss your master's foot?"

"Don't be silly!"

"Look who's talking! You know what, Trader boy? I heard about that mark -- and I think you had it tattooed yourself. To make big talk. Like that one about how you blasted a bandit ship."

Thorby cut his shower short and got out.

At dinner Thorby was helping himself from a bowl of mashed potatoes. He heard Peebie call out something but his ears filtered out "Decibel's" endless noise.

Peebie repeated it "Hey, Slave! Pass the potatoes! You know who I mean! Dig the dirt out of your ears!"

Thorby passed him the potatoes, bowl and all, in a flat trajectory, open face of the bowl plus potatoes making perfect contact with the open face of Decibel.

The charge against Thorby was "Assaulting a Superior Officer, the Ship then being in Space in a Condition of Combat Readiness." Peebie appeared as complaining witness.

Colonel Brisby stared over the mast desk and his jaw muscles worked. He listened to Peebie's account: "I asked him to pass the potatoes . . . and he hit me in the face with them."

"That was all?"

"Well, sir, maybe I didn't say please. But that's no reason --"

"Never mind the conclusions. The fight go any farther?"

"No, sir. They separated us."

"Very well. Baslim, what have you to say for yourself?"

"Nothing, sir."

"Is that what happened?"

"Yes, sir."

Brisby stopped to think, while his jaw muscles twitched. He felt angry, an emotion he did not permit himself at mast -- he felt let down. Still, there must be more to it.

Instead of passing sentence be said, "Step aside. Colonel Stancke --"

"Yes, sir?"

"There were other men present. I want to hear from them."

"I have them standing by, sir."

"Very well."

Thorby was convicted -- three days bread & water, solitary, sentence suspended, thirty days probation; acting rank stricken.

Decibel Peebie was convicted (court trial waived when Brisby pointed out how the book could be thrown at him) of "Inciting to Riot, specification: using derogatory language with reference to another Guardsman's Race, Religion, Birthplace, or Condition previous to entering Service, the Ship then being etc." -- sentence three days B & W, sol., suspended, reduction one grade, ninety days probation in ref. B & W, sol., only.

The Colonel and Vice Colonel went back to Brisby's office. Brisby was looking glum; mast upset him at best Stancke said, "Too bad you had to clip the Baslim kid. I think be was justified."

"Of course he was. But 'Inciting to riot' is no excuse for riot. Nothing is."

"Sure, you had to. But I don't like that Peebie character. I'm going to make a careful study of his efficiency marks."

"Do that. But, confound it, Stinky -- I have a feeling I started the fight myself."

"Huh?"

"Two days ago I had to tell Baslim that we hadn't been able to identify him. He walked out in a state of shock. I should have listened to my psych officer. The lad has scars that make him irresponsible under the right -- I mean the 'wrong' -- stimulus. I'm glad it was mashed potatoes and not a knife."

"Oh, come now, boss! Mashed potatoes are hardly a deadly weapon."

"You weren't here when he got the bad news. Not knowing who he is hurts him."

Stancke's pudgy face pouted in thought "Boss? How old was this kid when he was captured?"

"Eh? Kris thinks he was about four."

"Skipper, that backwoods place where you were born; at what age were you fingerprinted, blood-typed, retina-photographed and so forth?"

"Why, when I started school."

"Me, too. I'll bet they wait that long most places."

Brisby blinked. "That's why they wouldn't have anything on him!"

"Maybe. But on Riff they take identity on a baby before he leaves the delivery room."

"My people, too. But --"

"Sure, sure! It's common practice. But how?"

Brisby looked blank, then banged the desk. "Footprints! And we didn't send them in." He slapped the talkie. "Eddie! Get Baslim here on the double!"

Thorby was glumly removing the chevron he had worn by courtesy for so short a time. He was scared by the peremptory order; it boded ill. But he hurried. Colonel Brisby glared at him. "Baslim, take off your shoes!"

"Sir?"

"Take off your shoes!"

Brisby's dispatch questioning failure to identify and supplying BuPers with footprints was answered in forty-eight hours. It reached the Hydra as she made her final approach to Ultima Thule. Colonel Brisby decoded it when the ship had been secured dirtside.

It read; " -- GUARDSMAN THORBY BASLIM IDENTIFIED MISSING PERSON THOR BRADLEY RUDBEK TERRA NOT HEKATE TRANSFER RUDBEK FASTEST MILORCOM TERRA DISCHARGE ARRIVAL. NEXTKIN NOTIFIED REPEAT FASTEST CHFBUPERS."

Brisby was chuckling. "Colonel Baslim is never wrong. Dead or alive, he's never wrong!"

"Boss . . ."

"Huh?"

"Read it again. Notice who he is."

Brisby reread the dispatch. Then he said in a hushed voice, "Why do things like this always happen to Hydra?" He strode over and snatched the door. "Eddie!"

Thorby was on beautiful Ultima Thule for two hours and twenty-seven minutes; what he saw of the famous scenery after coming three hundred light-years was the field between the Hydra and Guard Mail Courier Ariel. Three weeks later he was on Terra. He felt dizzy.

Chapter 17

Lovely Terra, Mother of Worlds! What poet, whether or not he has been privileged to visit her, has not tried to express the homesick longing of men for mankind's birthplace . . . her cool green hills, cloud-graced skies, restless oceans, her warm maternal charm.

Thorby's first sight of legendary Earth was by view screen of G.M.C. Ariel. Guard Captain N'Gangi, skipper of the mail ship, stepped up the gain and pointed out arrow-sharp shadows of the Egyptian Pyramids. Thorby didn't realize the historical significance and was looking in the wrong place. But he enjoyed seeing a planet from space; he had never been thus privileged before.

Thorby had a dull time in the Ariel. The mail ship, all legs and tiny payload, carried a crew of three engineers and three astrogators, all of whom were usually on watch or asleep. He started off badly because Captain N'Gangi had been annoyed by a "hold for passenger" dispatch from the Hydra -- mail ships don't like to hold; the mail must go through.

But Thorby behaved himself, served the precooked meals, and spent his time plowing through the library (a drawer under the skipper's bunk); by the time they approached Sol the commanding officer was over his pique . . . to have the feeling brought back by orders to land at Galactic Enterprises' field instead of Guard Base. But N'Gangi shook hands as he gave Thorby his discharge and the paymaster's draft.

Instead of scrambling down a rope ladder (mail couriers have no hoists), Thorby found that a lift came up to get him. It leveled off opposite the hatch and offered easy exit. A man in spaceport uniform of Galactic Enterprises met him. "Mr. Rudbek?"

"That's me -- I guess."

"This way, Mr. Rudbek, if you please."

The elevator took them below ground and into a beautiful lounge. Thorby, mussed and none too clean from weeks in a crowded steel box, was uneasy. He looked around.

Eight or ten people were there, two of whom were a gray-haired, self-assured man and a young woman. Each was dressed in more than a year's pay for a Guardsman. Thorby did not realize this in the case of the man but his Trader's eye spotted it in the female; it took money to look that demurely provocative.

In his opinion the effect was damaged by her high-fashion hairdo, a rising structure of green blending to gold. He blinked at the cut of her clothes; he had seen fine ladies in Jubbulpore where the climate favored clothing only for decoration, but the choice in skin display seemed different here. Thorby realized uneasily that he was again going to have to get used to new customs.

The important-looking man met him as he got out of the lift "Thor! Welcome home, lad!" He grabbed Thorby's hand. "I'm John Weemsby. Many is the time I've bounced you on my knee. Call me Uncle Jack. And this is your cousin Leda."

The girl with green hair placed hands on Thorby's shoulders and kissed him. He did not return it; he was much too startled. She said, "It's wonderful to have you home, Thor."

"Uh, thanks."

"And now you must greet your grandparents," Weemsby announced. "Professor Bradley . . . and your Grandmother Bradley."

Bradley was older than Weemsby, slight and erect, a paunch, neatly trimmed beard; be was dressed like Weemsby in daytime formal jacket, padded tights and short cape, but not as richly. The woman had a sweet face and alert blue eyes; her clothing did not resemble that of Leda but seemed to suit her. She pecked Thorby on the cheek and said gently, "It's like having my son come home."

The elderly man shook hands vigorously. "It's a miracle, son! You look just like our boy -- your father. Doesn't he, dear?"

"He does!"

There was chitchat, which Thorby answered as well as he could. He was confused and terribly self-conscious; it was more embarrassing to meet these strangers who claimed him as their blood than it had been to be adopted into Sisu. These old people -- they were his grandparents? Thorby couldn't believe it even though he supposed they were.

To his relief the man -- Weemsby? -- who claimed to be his Uncle Jack said with polite authority, "We had better go. I'll bet this boy is tired. So I'll take him home. Eh?"

The Bradley's murmured agreement; the party moved toward the exit. Others in the room, all men none of whom had been introduced, went with them. In the corridor they stepped on a glideway which picked up speed until walls were whizzing past. It slowed as

they neared the end -- miles away, Thorby judged -- and was stationary for them to step off.

This place was public; the ceiling was high and the walls were lost in crowds; Thorby recognized the flavor of a transport station. The silent men with them moved into blocking positions and their party proceeded in a direct line regardless of others. Several persons tried to break through and one man managed it. He shoved a microphone at Thorby and said rapidly, "Mr. Rudbek, what is your opinion of the --"

A guard grabbed him. Mr. Weemsby said quickly, "Later, later! Call my office; you'll get the story."

Lenses were trained on them, but from high up and far away. They moved into another passageway, a gate closed behind them. Its glideway deposited them at an elevator which took them to a small enclosed airport. A craft was waiting and beyond it a smaller one, both sleek, smooth, flattened ellipsoids. Weemsby stopped. "You'll be all right?" he asked Mrs. Bradley.

"Oh, surely," answered Professor Bradley.

"The car was satisfactory?"

"Excellent. A nice hop -- and, I'm sure, a good one back."

"Then we'll say good-by. I'll call you -- when he's had a chance to get oriented. You understand?"

"Oh, surely. We'll be waiting." Thorby got a peck from his grandmother, a clap on the shoulder from his grandfather. Then he embarked with Weemsby and Leda in the larger car. Its skipper saluted Mr. Weemsby, then saluted Thorby -- Thorby managed to return it.

Mr. Weemsby paused in the central passage. "Why don't you kids go forward and enjoy the hop? I've got calls waiting."

"Certainly, Daddy."

"You'll excuse me, Thor? Business goes on -- it's back to the mines for Uncle Jack."

"Of course . . . Uncle Jack."

Leda led him forward and they sat down in a transparent bubble on the forward surface. The car rose straight up until they were several thousand feet high. It made a traffic-circle sweep over a desert plain, then headed north toward mountains.

"Comfy?" asked Leda.

"Quite. Uh, except that I'm dirty and mussed."

"There's a shower abaft the lounge. But well be home shortly -- so why not enjoy the trip?"

"All right." Thorby did not want to miss any of fabulous Terra. It looked, he decided, like Hekate -- no, more like Woolamurra, except that he had never seen so many buildings. The mountains --

He looked again. "What's that white stuff? Alum?"

Leda looked. "Why, that's snow. Those are the Sangria de Cristos."

" 'Snow,' " Thorby repeated. "That's frozen water."

"You haven't seen snow before?"

"I've heard of it. It's not what I expected." "It is frozen water -- and yet it isn't exactly; it's more feathery." She reminded herself of Daddy's warning; she must not show surprise at anything.

"You know," she offered, "I think I'll teach you to ski."

Many miles and some minutes were used explaining what siding was and why people did it. Thorby filed it away as something he might try, more likely not. Leda said that a broken leg was "all that could happen." This is fun? Besides, she had mentioned how cold it could be. In Thorby's mind cold was linked with hunger, beatings, and fear. "Maybe I could learn," he said dubiously, "but I doubt it."

"Oh, sure you can!" She changed the subject. "Forgive my curiosity, Thor, but there is a faint accent in your speech."

"I didn't know I had an accent --"

"I didn't mean to be rude."

"You weren't. I suppose I picked it up in Jubbulpore. That's where I lived longest."

" 'Jubbulpore' . . . let me think. That's --"

"Capital of the Nine Worlds."

"Oh, yes! One of our colonies, isn't it?"

Thorby wondered what the Sargon would think of that. "Uh, not exactly. It is a sovereign empire now -- their tradition is that they were never anything else. They don't like to admit that they derive from Terra."

"What an odd point of view."

A steward came forward with drinks and dainty nibbling foods. Thor accepted a frosted tumbler and sipped cautiously. Leda continued, "What were you doing there, Thor? Going to school?"

Thorby thought of Pop's patient teaching, decided that was not what she meant. "I was begging."

"What?"

"I was a beggar."

"Excuse me?"

"A beggar. A licensed mendicant. A person who asks for alms."

"That's what I thought you said," she answered. "I know what a beggar is; I've read books. But -- excuse me, Thor; I'm just a home girl -- I was startled."

She was not a "home girl"; she was a sophisticated woman adjusted to her environment. Since her mother's death she had been her father's hostess and could converse with people from other planets with aplomb, handling small talk of a large dinner party with gracious efficiency in three languages. Leda could ride, dance, sing, swim, ski, supervise a household, do arithmetic slowly, read and write if necessary, and make the proper responses. She was an intelligent, pretty, well-intentioned woman, culturally equivalent to a superior female head-hunter -- able, adjusted and skilled.

But this strange lost-found cousin was a new bird to her. She said hesitantly, "Excuse my ignorance, but we don't have anything like that on Earth. I have trouble visualizing it. Was it terribly unpleasant?"

Thorby's mind flew back; he was squatting in lotus seat in the great Plaza with Pop sprawled beside him, talking. "It was the happiest time of my life," he said simply.

"Oh." It was all she could manage.

But Daddy had left them so that she could get to work. Asking a man about himself never failed. "How does one get started, Thor? I wouldn't know where to begin."

"I was taught. You see, I was up for sale and --" He thought of trying to explain Pop, decided to let it wait. "-- an old beggar bought me."

" 'Bought' you?"

"I was a slave."

Leda felt as if she had stepped off into water over her head. Had he said "cannibal," "vampire," or "warlock" she could have been no more shocked. She came up, mentally gasping. "Thor -- if I have been rude. I'm sorry -- but we all are curious about the time -- goodness! it's been over fifteen years -- that you have been missing. But if you don't want to answer, just say so. You were a nice little boy and I was fond of you -- please don't slap me down if I ask the wrong question."

"You don't believe me?"

"How could I? There haven't been slaves for centuries."

Thorby wished that he had never had to leave the Hydra, and gave up. He had learned in the Guard that the slave trade was something many fraki in the inner worlds simply hadn't heard of. "You knew me when I was little?"

"Oh, yes!"

"Why can't I remember you? I can't remember anything back before I was a -- I can't remember Terra."

She smiled. "I'm three years older than you. When I saw you last, I was six -- so I remember -- and you were three, so you've forgotten."

"Oh." Thorby decided that here was a chance to find out his own age. "How old are you now?"

She smiled wryly. "Now I'm the same age you are -- and I'll stay that age until I'm married. Turn about, Thorby -- when you ask the wrong question, I shan't be offended. You don't ask a lady her age on Terra; you assume that she is younger than she is."

"So?" Thorby pondered this curious custom. Among People a female claimed the highest age she could, for status.

"So. For example, your mother was a lovely lady but I never knew her age. Perhaps she was twenty-five when I knew her, perhaps forty."

"You knew my parents?"

"Oh, yes! Uncle Creighton was a darling with a boomy voice. He used to give me handfuls of dollars to buy candy sticks and balloons with my own sweaty little hand." She frowned. "But I can't remember his face. Isn't that silly? Never mind, Thor; tell me anything you want to. I'd be happy to hear anything you don't mind telling."

"I don't mind," Thorby answered, "but, while I must have been captured, I don't remember it. As far as I remember, I never had parents; I was a slave, several places and masters -- until I reached Jubbulpore. Then I was sold again and it was the luckiest thing that ever happened to me."

Leda lost her company smile. She said in a still voice, "You really mean it. Or do you?"

Thorby suffered the ancient annoyance of the returned traveler. "If you think that slavery has been abolished . . . well, it's a big galaxy. Shall I roll up my trouser leg and show you?"

"Show me what, Thor?"

"My slave's mark. The tattoo a factor uses to identify merchandise." He rolled up his left trouser. "See? The date is my manumission -- it's Sargonese, a sort of Sanskrit; I don't suppose you can read it"

She stared, round-eyed. "How horrible! How perfectly horrible!"

He covered it. "Depends on your master. But it's not good."

"But why doesn't somebody do something?"

He shrugged. "It's a long way off."

"But --" She stopped as her father came out.

"Hi, kids. Enjoying the hop, Thor?"

"Yes, sir. The scenery is wonderful."

"The Rockies aren't a patch on the Himalayas. But our Tetons are pretty wonderful . . . and there they are. Well be home soon." He pointed. "See? There's Rudbek."

"That city is named Rudbek?"

"It used to be Johnson's Hole, or some such, when it was a village. But I wasn't speaking of Rudbek City; I meant our home -- your home -- 'Rudbek.' You can see the tower above the lake . . . with the Grand Tetons behind it. Most magnificent setting in the world. You're Rudbek of Rudbek at Rudbek . . . 'Rudbek Cubed.' your father called it . . . but he married into the name and wasn't impressed by it. I like it; it has a rolling thunder, and it's good to have a Rudbek back in residence."

Thorby wallowed in his bath, from needle shower, through hot pool whose sides and bottom massaged him with a thousand fingers, to lukewarm swimming plunge that turned cooler while he was in it. He was cautious in the last, having never learned to swim.

And he had never had a valet. He had noticed that Rudbek had dozens of people in it -- not many for its enormous size, but he began to realize that most of them were servants. This impressed him not as much as it might have; he knew how many, many slaves staffed any rich household on Jubbul; he did not know that a living servant on Terra was the peak of ostentatious waste, greater than sedan chairs on Jubbul, much greater than the lavish hospitality at the Gatherings. He simply knew that valets made him nervous and now he had a squad of three. Thorby refused to let anyone bathe him; he gave in to being shaved because the available razor was a classic straight-edge and his own would not work on Rudbek's power supply. Otherwise he merely accepted advice about unfamiliar clothing.

The clothing waiting for him in wardrobe loads did not fit perfectly; the chief valet snipped and rewelded, muttering apologies. He had Thorby attired, ruffled jabot to tights, when a footman appeared. "Mr. Weemsby sends greetings to Rudbek and asks that he come to the great hall."

Thorby memorized the route as he followed.

Uncle Jack, in midnight and scarlet, was waiting with Leda, who was wearing . . . Thorby was at loss; colors kept changing and some it was hardly there. But she looked well. Her hair was now iridescent. He spotted among her jewels a bauble from Finster and wondered if it had shipped in Sisu -- why, it was possible that he had listed it himself!

Uncle Jack said jovially, "There you are, lad! Refreshed? We won't wear you out, just a family dinner."

The dinner included twelve people and started with a reception in the great hall, drinks, appetizers, passed by soft-footed servants, music, while others were presented. "Rudbek of Rudbek, Lady Wilkes -- your Aunt Jennifer, lad, come from New Zealand to welcome you" -- "Rudbek of Rudbek, Judge Bruder and Mrs. Bruder -- Judge is Chief Counsel," and so on. Thorby memorized names, linked them with faces, thinking that it was like the Family -- except that relationship titles were not precise definitions; he had trouble

estimating status. He did not know which of eighty-odd relations "cousin" meant with respect to Leda, though he supposed that she must be a first cross-cousin. Since Uncle Jack had a surname not Rudbek; so he thought of her as taboo -- which would have dismayed her.

He did realize that he must be in the sept of a wealthy family. But what his status was nobody mentioned, nor could he figure out status of others. Two of the youngest women dropped him curtseys. He thought the first had stumbled and tried to help her. But when the second did it, he answered by pressing his palms together.

The older women seemed to expect him to treat them with respect. Judge Bruder he could not classify. He hadn't been introduced as a relative -- yet this was a family dinner. He fixed Thorby with an appraising eye and barked, "Glad to have you back, young man! There should be a Rudbek at Rudbek. Your holiday has caused trouble -- hasn't it, John?"

"More than a bit," agreed Uncle Jack, "but well get straightened out. No hurry. Give the lad a chance to find himself."

"Surely, surely. Thumb in the dike."

Thorby wondered what a dike was, but Leda came up and placed her hand on his elbow. She steered him to the banquet hall; others followed. Thorby sat at one end of a long table with Uncle Jack at the other; Aunt Jennifer was on Thorby's right and Leda on his left. Aunt Jennifer started asking questions and supplying answers. He admitted that he had just left the Guard, she had trouble understanding that he had not been an officer; he let it ride and mentioned nothing about Jubbulpore -- Leda had made him wary of the subject. It did not matter; he asked a question about New Zealand and received a guidebook lecture.

Then Leda turned from Judge Bruder and spoke to Thorby; Aunt Jennifer turned to the man on her right.

The tableware was in part strange, especially chop tongs and skewers. But spoons were spoons and forks were forks; by keeping his eye on Leda he got by. Food was served formally, but he had seen Grandmother so served; table manners were not great trouble to a man coached by Fritz's sharp-tongued kindness.

Not until the end was he stumped. The Butler-in-Chief presented him with an enormous goblet, splashed wetness in it and waited. Leda said softly, "Taste it, nod, and put it down." He did so; as the butler moved away, she whispered, "Don't drink it, it's bottled lightning. By the way, I told Daddy, 'No toasts.' "

At last the meal was over. Leda again cued him. "Stand up." He did and everyone followed.

The "family dinner" was just a beginning. Uncle Jack was in evidence only at dinners, and not always then. He excused his absences with, "Someone has to keep the fires burning. Business won't wait." As a trader Thorby understood that Business was Business, but he looked forward to a long talk with Uncle Jack, instead of so much social life. Leda was helpful but not informative. "Daddy is awfully busy. Different companies and things. It's too complicated for me. Let's hurry; the others are waiting."

Others were always waiting. Dancing, skiing -- Thorby loved the flying sensation but considered it a chancy way to travel, particularly when he fetched up in a snow bank, having barely missed a tree -- card parties, dinners with young people at which he took one end of the table and Leda the other, more dancing, hops to Yellowstone to feed the

bears, midnight suppers, garden parties. Although Rudbek estate lay in the lap of the Tetons with snow around it, the house had an enormous tropical garden under a dome so pellucid that Thorby did not realize it was there until Leda had him touch it. Leda's friends were fun and Thorby gradually became sophisticated in small talk. The young men called him "Thor" instead of "Rudbek" and called Leda "Slugger." They treated him with familiar respect, and showed interest in the fact that he had been in the Guard and had visited many worlds; but they did not press personal questions. Thorby volunteered little, having learned his lesson.

But he began to tire of fun. A Gathering was wonderful but a working man expects to work.

The matter came to a head. A dozen of them were skiing and Thorby was alone on the practice slope. A man glided down and snowplowed to a stop. People hopped in and out at the estate's field day and night; this newcomer was Joel de la Croix.

"Hi, Thor."

"Hi, Joe."

"I've been wanting to speak to you. I've an idea I would like to discuss, after you take over. Can I arrange to see you, without being baffled by forty-'leven secretaries?"

"When I take over?"

"Or later, at your convenience. I want to talk to the boss; after all, you're the heir. I don't want to discuss it with Weemsby . . . even if he would see me." Joe looked anxious. "All I want is ten minutes. Say five if I don't interest you at once. 'Rudbek's promise.' Eh?"

Thorby tried to translate. Take over? Heir? He answered carefully, "I don't want to make any promises now, Joel."

De la Croix shrugged. "Okay. But think about it I can prove it's a moneymaker."

"Ill think about it," Thorby agreed. He started looking for Leda. He got her alone and told her what Joe had said.

She frowned slightly. "It probably wouldn't hurt, since you aren't promising anything. Joel is a brilliant engineer. But better ask Daddy."

"That's not what I meant. What did he mean: 'take over'?"

"Why, you will, eventually."

"Take over what?"

"Everything. After all, you're Rudbek of Rudbek.

"What do you mean by 'everything'?"

"Why, why --" She swept an arm at mountain and lake, at Rudbek City beyond. "All of it, Rudbek. Lots of things. Things personally yours, like your sheep station in Australia and the house in Majorca. And business things. Rudbek Associates is many things -- here and other planets. I couldn't begin to describe them. But they're yours, or maybe 'ours' for the whole family is in it. But you are the Rudbek of Rudbek. As Joe said, the heir."

Thorby looked at her, while his lips grew dry. He licked them and said, "Why wasn't I told?"

She looked distressed. "Thor dear! We've let you take your time. Daddy didn't want to worry you."

"Well," he said, "I'm worried now. I had better talk to Uncle Jack."

John Weemsby was at dinner but so were many guests. As they were leaving Weemsby motioned Thorby aside. "Leda tells me you're fretting."

"Not exactly. I want to know some things."

"You shall -- I was hoping that you would tire of your vacation. Let's go to my study."

They went there; Weemsby dismissed his second-shift secretary and said, "Now what do you want to know?"

"I want to know," Thorby said slowly, "what it means to be 'Rudbek of Rudbek.' "

Weemsby spread his hands. "Everything . . . and nothing. You are titular head of the business, now that your father is dead . . . if he is."

"Is there any doubt?"

"I suppose not. Yet you turned up."

"Supposing he is dead, what am I? Leda seems to think I own just about everything. What did she mean?"

Weemsby smiled. "You know girls. No head for business. The ownership of our enterprises is spread around -- most of it is in our employees. But, if your parents are dead, you come into stock in Rudbek Associates, which in turn has an interest in -- sometimes a controlling interest -- in other things. I couldn't describe it now. I'll have the legal staff do it -- I'm a practical man, too busy making decisions to worry about who owns every share. But that reminds me . . . you haven't had a chance to spend much money, but you might want to." Weemsby opened a drawer, took out a pad. "There's a megabuck. Let me know if you run short."

Thorby thumbed through it. Terran currency did not bother him: a hundred dollars to the credit -- which he thought of as five loaves of bread, a trick the Supercargo taught him -- a thousand credits to the supercredit, a thousand supercredits to the megabuck. So simple that the People translated other currencies into it, for accounting.

But each sheet was ten thousand credits . . . and there were a hundred sheets. "Did I . . . inherit this?"

"Oh, that's just spending money -- checks, really. You convert them at dispensers in stores or banks. You know how?"

"No."

"Don't get a thumbprint on the sensitized area until you insert it in the dispenser. Have Leda show you -- if that girl could make money the way she spends it, neither you nor I would have to work. But," Weemsby added, "since we do, let's do a little." He took out a folder and spread papers. "Although this isn't hard. Just sign at the bottom of each, put your thumbprint by it, and I'll call Beth in to notarize. Here, we can open each one to the last page. I had better hold 'em -- the consarned things curl up."

Weemsby held one for Thorby's signature. Thorby hesitated, then instead of signing, reached for the document. Weemsby held on. "What's the trouble?"

"If I'm going to sign, I ought to read it." He was thinking of something Grandmother used to be downright boring about.

Weemsby shrugged. "They are routine matters that Judge Bruder prepared for you." Weemsby placed the document on the others, tied the stack, and closed the folder. "These papers tell me to do what I have to do anyway. Somebody has to do the chores."

"Why do I have to sign?"

"This is a safety measure."

"I don't understand."

Weemsby sighed. "The fact is, you don't understand business. No one expects you to; you haven't had any chance to learn. But that's why I have to keep slaving away; business

won't wait." He hesitated. "Here's the simplest way to put it When your father and mother went on a second honeymoon, they had to appoint someone to act while they were gone. I was the natural choice, since I was their business manager and your grandfather's before that -- he died before they went away. So I was stuck with it while they went jaunting. Oh, I'm not complaining; it's not a favor one would refuse a member of the family. Unfortunately they did not come back so I was left holding the baby.

"But now you are back and we must make sure everything is orderly. First it is necessary for your parents to be declared legally dead -- that must be done before you can inherit. That will take a while. So here I am, your business manager, too -- manager for all the family -- and I don't have anything from you telling me to act. These papers do that."

Thorby scratched his cheek. "If I haven't inherited yet, why do you need anything from me?"

Weemsby smiled. "I asked that myself. Judge Bruder thinks it is best to tie down all possibilities. Now since you are of legal age --"

" 'Legal age'?" Thorby had never heard the term; among the People, a man was old enough for whatever he could do.

Weemsby explained. "So, since the day you passed your eighteenth birthday, you have been of legal age, which simplifies things -- it means you don't have to become a ward of a court. We have your parents' authorization; now we add yours -- and then it doesn't matter how long it takes the courts to decide that your parents are dead, or to settle their wills. Judge Bruder and I and the others who have to do the work can carry on without interruption. A time gap is avoided . . . one that might cost the business many megabucks. Now do you understand?"

"I think so."

"Good. Let's get it done." Weemsby started to open the folder.

Grandmother always said to read before signing -- then think it over. "Uncle Jack, I want to read them."

"You wouldn't understand them."

"Probably not." Thorby picked up the folder. "But I've got to learn."

Weemsby reached for the folder. "It isn't necessary."

Thorby felt a surge of obstinacy. "Didn't you say Judge Bruder prepared these for me?"

"Yes."

"Then I want to take them to my apartment and try to understand them. If I'm 'Rudbek of Rudbek' I ought to know what I'm doing."

Weemsby hesitated, then shrugged. "Go ahead. You'll find that I'm simply trying to do for you what I have always been doing."

"But I still ought to understand what I'm doing."

"Very well! Good night."

Thorby read till he fell asleep. The language was baffling but the papers did seem to be what Uncle Jack said they were -- instructions to John Weemsby to continue the routine business of a complex setup. He fell asleep full of terms like "full power of attorney," "all manner of business," "receive and pay monies," "revocable only by mutual consent," "waiver of personal appearance," "full faith and credence," and "voting proxy in all stockholding and/or directorial meetings, special or annual."

As he dozed off it occurred to him that he had not asked to see the authorizations given by his parents.

Sometime during the night he seemed to hear Grandmother's impatient voice: "-- then think it over! If you don't understand it, and the laws under which it will be executed, then don't sign it! -- no matter how much profit may appear to be in store. Too lazy and too eager can ruin a trader"

He stirred restlessly.

Chapter 18

Hardly anyone came down for breakfast in Rudbek. But breakfast in bed was not in Thorby's training; he ate alone in the garden, luxuriating in hot mountain sunshine and lush tropical flowers while enjoying the snowy wonderland around him. Snow fascinated him -- he had never dreamed that anything could be so beautiful.

But the following morning Weemsby came into the garden only moments after Thorby sat down. A chair was placed under Weemsby; a servant quickly laid a place. He said, "Just coffee. Good morning, Thor."

"Good morning, Uncle Jack."

"Well, did you get your studying done?"

"Sir? Oh, yes. That is, I fell asleep reading."

Weemsby smiled. "Lawyerese is soporific. Did you satisfy yourself that I had told you correctly what they contained?"

"Uh, I think so."

"Good." Weemsby put down his coffee and said to a servant, "Hand me a house phone. Thor, you irritated me last night."

"I'm sorry, sir."

"But I realize you were right. You should read what you sign -- I wish I had time to! I have to accept the word of my staff in routine matters or I would never have time for policy . . . and I assumed that you would do the same with me. But caution is commendable." He spoke into the phone. "Carter, fetch those papers from Rudbek's apartment. The garden."

Thorby wondered if Carter could find the stuff -- there was a safe in his study but he had not learned to use it, so he had hidden the papers behind books. He started to mention it but Uncle Jack was talking.

"Here is something you will want to see ...an Inventory of real property you own -- or will own, when the wills are settled. These holdings are unconnected with the business."

Thorby looked through it with amazement. Did he really own an island named Pitcairn at fifteen something south and a hundred and thirty west -- whatever that meant? A domehouse on Mars? A shooting lodge in Yukon -- where was "Yukon" and why shoot there? You ought to be in free space to risk shooting. And what were all these other things?

He looked for one item. "Uncle Jack? How about Rudbek?"

"Eh? You're sitting on it."

"Yes . . . but do I own it? Leda said I did."

"Well, yes. But it's entailed -- that means your great-great-grandfather decided that it should never be sold . . . so that there would always be a Rudbek at Rudbek."

"Oh."

"I thought you might enjoy looking over your properties. I've ordered a car set aside for you. Is that one we hopped here in satisfactory?"

"What? Goodness, yes!" Thorby blinked.

"Good. It was your mother's and I've been too sentimental to dispose of it. But it has had all latest improvements added. You might persuade Leda to hop with you; she is familiar with most of that list. Take some young friends along and make a picnic of it, as long as you like. We can find a congenial chaperone."

Thorby put the list down. "I probably will. Uncle Jack . . . presently. But I ought to get to work."

"Eh?"

"How long does it take to learn to be a lawyer here?"

Weemsby's face cleared. "I see. Lawyers' quaint notions of language can shock a man. It takes four or five years."

"It does?"

"The thing for you is two or three years at Harvard or some other good school of business."

"I need that?"

"Definitely."

"Unh . . . you know more about it than I do --"

"I should! By now."

"-- but couldn't I learn something about the business before I go to school? I haven't any idea what it is."

"Plenty of time."

"But I want to learn now."

Weemsby started to cloud, then smiled and shrugged. "Thor, you have your mother's stubbornness. All right. I'll order a suite for you at the main office in Rudbek City -- and staff it with people to help you. But I warn you, it won't be fun. Nobody owns a business; the business owns him. You're a slave to it."

"Well . . . I ought to try."

"Commendable spirit." The phone by Weemsby's cup blinked; he picked it up, frowned, said, "Hold on." He turned to Thorby. "That idiot can't find those papers."

"I meant to tell you. I hid them -- I didn't want to leave them out."

"I see. Where are they?"

"Uh, I'll have to dig them out"

Weemsby said in the phone, "Forget it" He tossed the phone to a servant and said to Thorby, "Then fetch them, if you don't mind."

Thorby did mind. So far he had had four bites; it annoyed him to be told to run an errand while eating. Besides . . . was he "Rudbek of Rudbek"? or still messenger for the weapons officer? "I'll be going up after breakfast."

Uncle Jack looked vexed. But he answered, "I beg your pardon. If you can't tear yourself away, would you please tell me where to find them? I have a hard day ahead and I would like to dispose of this triviality and go to work. If you don't mind."

Thorby wiped his mouth. "I would rather not," he said slowly, "sign them now."

"What? You told me that you had satisfied yourself."

"No, sir, I told you that I had read them. But I don't understand them. Uncle Jack, where are the papers that my parents signed?"

"Eh?" Weemsby looked at him sharply. "Why?"

"I want to see them."

Weemsby considered. "They must be in the vault at Rudbek City."

"All right. I'll go there."

Weemsby suddenly stood up. "If you will excuse me, in go to work," he snapped. "Young man, some day you will realize what I have done for you! In the meantime, since you choose to be uncooperative, I still must get on with my duties."

He left abruptly. Thorby felt hurt -- he didn't want to be uncooperative . . . but if they had waited for years, why couldn't they wait a little longer and give him a chance?

He recovered the papers, then phoned Leda. She answered, with vision switched off. "Thor dear, what are you doing up in the middle of the night?"

He explained that he wanted to go to the family's business offices. "I thought maybe you could direct me."

"You say Daddy said to?"

"He's going to assign me an office."

"I won't just direct you; I'll take you. But give a girl a chance to get a face on and swallow orange juice."

He discovered that Rudbek was connected with their offices in Rudbek City by high-speed sliding tunnel. They arrived in a private foyer guarded by an elderly receptionist She looked up. "Hello, Miss Leda! How nice to see you!"

"You, too, Aggie. Will you tell Daddy we're here?"

"Of course." She looked at Thorby.

"Oh," said Leda. "I forgot. This is Rudbek of Rudbek."

Aggie jumped to her feet "Oh, dear me! I didn't know -- I'm sorry, sir!"

Things happened quickly. In minutes Thorby found himself with an office of quiet magnificence, with a quietly magnificent secretary who addressed him by his double-barreled title but expected him to call her "Dolores." There seemed to he unlimited genies ready to spring out of walls at a touch of her finger.

Leda stuck with him until he was installed, then said, "I'll run along, since you insist on being a dull old businessman." She looked at Dolores. "Or will it be dull? Perhaps I should stay." But she left.

Thorby was intoxicated with being immensely wealthy and powerful. Top executives called him "Rudbek," junior executives called him "Rudbek of Rudbek," and those still more junior crowded their words with "sirs" -- he could judge status by how he was addressed.

While he was not yet active in business -- he saw Weemsby rarely and Judge Bruder almost never -- anything he wanted appeared quickly. A word to Dolores and a respectful young man popped in to explain legal matters; another word and an operator appeared to show moving stereocolor of business interests anywhere, even on other planets. He spent days looking at such pictures, yet still did not see them all.

His office became so swamped with books, spools, charts, brochures, presentations, file jackets, and figures, that Dolores had the office next door refitted as a library. There were figures on figures, describing in fiscal analog enterprises too vast to comprehend otherwise. There were so many figures, so intricately related, that his head ached. He

began to have misgivings about the vocation of tycoon. It wasn't all just being treated with respect, going through doors first and always getting what you asked for. What was the point if you were so snowed under that you could not enjoy it? Being a Guardsman was easier.

Still, it was nice to be important. Most of his life he had been nobody, and at best he had been very junior.

If only Pop could see him now! -- surrounded by lavish furnishings, a barber to trim his hair while he worked (Pop used to cut it under a bowl), a secretary to anticipate his wishes, and dozens of people eager to help. But Pop's face in this dream was wearing Pop's reproving expression; Thorby wondered what he had done wrong, and dug harder into the mess of figures.

Eventually a pattern began to emerge. The business was Rudbek & Associates, Ltd. So far as Thorby could tell this firm did nothing. It was chartered as a private Investment trust and just owned things. Most of what Thorby would own, when his parents' wills were proved, was stock in this company. Nor would he own it all; he felt almost poverty-stricken when he discovered that mother and father together held only eighteen percent of many thousand shares.

Then he found out about "voting" and "non-voting; the shares coming to him were eighteen-fortieths of the voting shares; the remainder was split between relatives and non-relatives.

Rudbek & Assocs. owned stock in other companies -- and here it got complicated. Galactic Enterprises, Galactic Acceptance Corporation, Galactic Transport, Interstellar Metals, Three Planets Fiscal (which operated on twenty-seven planets), Havermeyer Laboratories (which ran barge lines and bakeries as well as research stations) -- the list looked endless. These corporations, trusts, cartels, and banking houses seemed as tangled as spaghetti. Thorby learned that he owned (through his parents) an interest in a company called "Honace Bros., Pty." through a chain of six companies -- 18% of 31% of 43% of 19% of 44% of 27%, a share so microscopic that he lost track. But his parents owned directly seven per cent of Honace Brothers -- with the result that his indirect interest of one-twentieth of one per cent controlled it utterly but paid little return, whereas seven per cent owned directly did not control -- but paid one hundred and forty times as much.

It began to dawn on him that control and ownership were only slightly related; he had always thought of "ownership" and "control" as being the same thing; you owned a thing, a begging bowl, or a uniform jacket -- of course you controlled it!

The converging, diverging, and crossing of corporations and companies confused and disgusted him. It was as complex as a firecontrol computer without a computer's cool logic. He tried to draw a chart and could not make it work. The ownership of each entity was tangled in common stocks, preferred stocks, bonds, senior and junior issues, securities with odd names and unknown functions; sometimes one company owned a piece of another directly and another piece through a third, or two companies might each own a little of the other, or sometimes a company owned part of itself in a tail-swallowing fashion. It didn't make sense.

This wasn't "business" -- what the People did was business . . . buy, sell, make a profit But this was a silly game with wild rules.

Something else fretted him. He had not known that Rudbek built spaceships. Galactic Enterprises controlled Galactic Transport, which built ships in one of its many divisions.

When he realized it he felt a glow of pride, then discovered gnawing uneasiness -- something Colonel Brisby had said . . . something Pop had proved: that the "largest" or it might have been "one of the largest" builders of starships was mixed up in the slave trade.

He told himself he was being silly -- this beautiful office was about as far from the dirty business of slave traffic as anything could be. But as he was dropping to sleep one night he came wide awake with the black, ironic thought that one of those slave ships in whose stinking holds he had ridden might have been, at that very time, the property of the scabby, frightened slave he was then.

It was a nightmare notion; he pushed it away. But it took the fun out of what he was doing.

One afternoon he sat studying a long memorandum from the legal department -- a summary, so it said, of Rudbek & Assocs.' interests -- and found that he had dragged to a halt. It seemed as if the writer had gone out of his way to confuse things. It would have been as intelligible in ancient Chinese -- more so; Sargonese included many Mandarin words.

He sent Dolores out and sat with his head in his hands. Why, oh, why hadn't he been left in the Guard? He had been happy there; he had understood the world he was in.

Then he straightened up and did something he had been putting off; he returned a vuecall from his grandparents. He had been expected to visit them long since, but he had felt compelled to try to learn his job first.

Indeed he was welcome! "Hurry, son -- we'll be waiting." It was a wonderful hop across prairie and the mighty Mississippi (small from that height) and over city-pocked farmland to the sleepy college town of Valley View, where sidewalks were stationary and time itself seemed slowed. His grandparents' home, imposing for Valley View, was homey after the awesome halls of Rudbek.

But the visit was not relaxing. There were guests at dinner, the president of the college and department heads, and many more after dinner -- some called him "Rudbek of Rudbek," others addressed him uncertainly as "Mr. Rudbek," and still others, smug with misinformation as to how the nabob was addressed by familiars, simply as "Rudbek." His grandmother twittered around, happy as only a proud hostess can be, and his grandfather stood straight and addressed him loudly as "Son."

Thorby did his best to be a credit to them. He soon realized that it was not what he said but the fact of talking to Rudbek that counted.

The following night, which his grandmother reluctantly kept private, he got a chance to talk. He wanted advice.

First information was exchanged. Thorby learned that his father, on marrying the only child of his grandfather Rudbek, had taken his wife's family name. "It's understandable," Grandfather Bradley told him. "Rudbek has to have a Rudbek. Martha was heir but Creighton had to preside -- board meetings and conferences and at the dinner table for that matter. I had hoped that my son would pursue the muse of history, as I have. But when this came along, what could I do but be happy for him?"

His parents and Thorby himself had been lost as a consequence of his father's earnest attempt to be in the fullest sense Rudbek of Rudbek -- he had been trying to inspect as much of the commercial empire as possible. "Your father was always conscientious and

when your Grandfather Rudbek died before your father completed his apprenticeship, so to speak, Creighton left John Weemsby in charge -- John is, I suppose you know, the second husband of your other grandmother's youngest sister Aria -- and Leda, of course, is Aria's daughter by her first marriage."

"No, I hadn't known." Thorby translated the relationships into Sisu terms . . . and reached the startling conclusion that Leda was in the other moiety! -- if they had such things here, which they didn't. And Uncle Jack -- well, he wasn't "uncle" -- but how would you say it in English?

"John had been a business secretary and factotum to your other grandfather and he was the perfect choice, of course; he knew the inner workings better than anyone, except your grandfather himself. After we got over the shock of our tragic loss we realized that the world must go on and that John could handle it as well as if he had been Rudbek himself."

"He's been simply wonderful!" grandmother chirped.

"Yes, he has. I must admit that your grandmother and I became used to a comfortable scale of living after Creighton married. College salaries are never what they should be; Creighton and Martha were very generous. Your grandmother and I might have found it difficult after we realized that our son was gone, never to come back, had not John told us not to worry. He saw to it that our benefit continued just as before."

"And increased it," Grandmother Bradley added emphatically.

"Well, yes. All the family -- we think of ourselves as part of Rudbek family even though we bear a proud name of our own -- all of the family have been pleased with John's stewardship."

Thorby was interested in something other than "Uncle Jack's" virtues. "You told me that we left Akka, jumping for Far-Star, and never made it? That's a long, long way from Jubbul."

"I suppose it is. The College has only a small Galactovue and I must admit that it is hard to realize that what appears to be an inch or so is actually many light-years."

"About a hundred and seventy light-years, in this case."

"Let me see, how much would that be in miles?"

"You don't measure it that way, any more than you measure that couchomat you're on in microns."

"Come now, young man, don't be pedantic."

"I wasn't being, Grandfather. I was thinking that it was a long way from where I was captured to where I was last sold. I hadn't known it"

"I heard you use that term 'sold' once before. You must realize that it is not correct. After all, the serfdom practiced in the Sargony is not chattel slavery. It derives from the ancient Hindu gild or 'caste' system -- a stabilized social order with mutual obligations, up and down. You must not call it 'slavery.' "

"I don't know any other word to translate the Sargonese term."

"I could think of several, though I don't know Sargonese . . . it's not a useful tongue in scholarship. But, my dear Thor, you aren't a student of human histories and culture. Grant me a little authority in my own field."

"Well . . ." Thorby felt baffled. "I don't know System English perfectly and there's a lot of history I don't know -- there's an awful lot of history."

"So there is. As I am the first to admit"

"But I can't translate any better -- I was sold and I was a slave!"

"Now, Son."

"Don't contradict your grandfather, dear, that's a good boy."

Thorby shut up. He had already mentioned his years as a beggar -- and discovered that his grandmother was horrified, had felt that he had disgraced himself, though she did not quite say so. And he had already found that while his grandfather knew much about many things, he was just as certain of his knowledge when Thorby's eyes had reported things differently. Thorby concluded glumly that it was part of being senior and nothing could be done about it He listened while Grandfather Bradley discoursed on the history of the Nine Worlds. It didn't agree with what the Sargonese believed but wasn't too far from what Pop had taught him -- other than about slavery. He was glad when the talk drifted back to the Rudbek organization. He admitted his difficulties.

"You can't build Rome in a day, Thor."

"It looks as if I never would learn! I've been thinking about going back into the Guard."

His grandfather frowned. "That would not be wise."

"Why not, sir?"

"If you don't have talent for business, there are other honorable professions."

"Meaning the Guard isn't?"

"Mmm . . . your grandmother and I are philosophical pacifists. It cannot be denied that there is never a moral justification for taking human life."

"Never," agreed grandmother firmly.

Thorby wondered what Pop would think? Shucks, he knew! -- Pop cut 'em down like grass to rescue a load of slaves. "What do you do when a raider jumps you?"

"A what?"

"A pirate. You've got a pirate on your tail and closing fast."

"Why, you run, I suppose. It's not moral to stay and do battle. Thor, nothing is ever gained by violence."

"But you can't run; he has more legs. It's you or him."

"You mean 'he.' Then you surrender; that defeats his purpose . . . as the immortal Gandhi proved."

Thorby took a deep breath. "Grandfather, I'm sorry but it doesn't defeat his purpose. You have to fight Raiders take slaves. The proudest thing I ever did was to burn one."

"Eh? 'Burn one'?"

"Hit him with a target-seeker. Blast him out of the sky."

Grandmother gasped. At last his grandfather said stiffly, "Thor, I'm afraid you've been exposed to bad influences. Not your fault, perhaps. But you have many misconceptions, both in fact and in evaluation. Now be logical. If you 'burned him' as you say, how do you know he intended -- again, as you say -- to 'take slaves'? What could he do with them? Nothing."

Thorby kept silent. It made a difference which side of the Plaza you saw a thing from . . . and if you didn't have status, you weren't listened to. That was a universal rule.

Grandfather Bradley continued, "So we'll say no more about it. On this other matter I'll give you the advice I would give your departed father: if you feel that you have no head for trade, you don't have to enter it. But to run away and join the Guard, like some childish romantic -- no, Son! But you needn't make up your mind for years. John is a very

able regent; you don't have a decision facing you." He stood up. "I know, for I've discussed this with John, and he's willing, in all humility, to carry the burden a little farther . . . or much farther, if need be. And now we had all better seek our pillows. Morning comes early."

Thor left the next morning, with polite assurances that the house was his -- which made him suspect that it was. He went to Rudbek City, having reached a decision during a restless night. He wanted to sleep with a live ship around him. He wanted to be back in Pop's outfit; being a billionaire boss wasn't his style.

He had to do something first; dig out those papers that father and mother had signed, compare them with the ones prepared for him -- since father must have known what was needed -- sign them, so that Uncle Jack could get on with the work after he was gone. Grandfather was right about that; John Weemsby knew how to do the job and he didn't He should be grateful to Uncle Jack. He would thank him before he left. Then off Terra and out to where people talked his language!

He buzzed Uncle Jack's office as soon as he reached his own, was told that he was out of town. He decided that he could write a note and make it sound better -- oh yes! Must say good-by to Leda. So he buzzed the legal department and told him to dig his parents' authorizations out of the vault and send them to his office.

Instead of papers, Judge Bruder arrived. "Rudbek, what's this about your ordering certain papers from the vault?"

Thorby explained. "I want to see them."

"No one but officers of the company can order papers from the vault"

"What am I?"

"I'm afraid you are a young man with confused notions. In time, you will have authority. But at the moment you are a visitor, learning something about your parents' affairs."

Thorby swallowed it; it was true, no matter how it tasted. "I've been meaning to ask you about that. What's the progress in the court action to have my parents declared dead?"

"Are you trying to bury them?"

"Of course not. But it has to be done, or so Uncle Jack says. So where are we?"

Bruder sniffed. "Nowhere. Through your doing."

"What do you mean?"

"Young man, do you think that the officers of this company will initiate a process which would throw affairs of the firm into incredible confusion unless you take necessary steps to guard against it? Why, it may take years to settle the wills -- during which, business would come to a stop . . . simply because you neglected to sign a few simple instruments which I prepared weeks ago."

"You mean nothing will be done until I sign?"

"That is correct"

"I don't understand. Suppose I were dead -- or had never been born. Does business stop every time a Rudbek dies?"

"Mmm . . . well, no. A court authorizes matters to proceed. But you are here and we must take that into consideration. Now see here, I'm at the very end of my patience. You seem to think, simply because you've read a few balance sheets, that you understand business. You don't. For example your belief that you can order instruments turned over

to you that were given to John Weemsby personally and are not even company property. If you were to attempt to take charge of the firm at this time -- if we proceeded with your notion to have your parents declared dead -- I can see that we would have all sorts of confusion while you were finding your balance. We can't afford it. The company can't afford it. Rudbek can't afford it. So I want those papers signed today and no more shilly-shallying. You understand?"

Thorby lowered his head. "I won't."

"What do you mean, 'You won't'?"

"I won't sign anything until I know what I'm doing. If I can't even see the papers my parents signed, then I certainly won't."

"We'll see about that!"

"I'm going to sit tight until I find out what's going on around here!"

Chapter 19

Thorby discovered that finding out was difficult. Things went on much as before but were not the same. He had vaguely suspected that the help he was being given in learning the business had sometimes been too much not well enough organized; he felt smothered in unrelated figures, verbose and obscure "summaries," "analyses" that did not analyze. But he had known so little that it took time to become even a suspicion.

The suspicion became certainty from the day he defied Judge Bruder. Dolores seemed eager as ever and people still hopped when he spoke but the lavish flow of information trickled toward a stop. He was stalled with convincing excuses but could never quite find out what he wanted to know. A "survey is being prepared" or the man who "has charge of that is out of the city" or "those are vault files and none of the delegated officers are in today." Neither Judge Bruder nor Uncle Jack was ever available and their assistants were politely unhelpful. Nor was he able to corner Uncle Jack at the estate. Leda told him that "Daddy often has to go away on trips."

Things began to be confused in his own office. Despite the library Dolores had set up she could not seem to find, or even recall, papers that he had marked for retention. Finally he lost his temper and bawled her out.

She took it quietly. "I'm sorry, sir. I'm trying very hard."

Thorby apologized. He knew a slow-down when he saw one; he had checked enough stevedores to know. But this poor creature could not help herself; he was lashing out at the wrong person. He added placatingly, "I really am sorry. Take the day off."

"Oh, I couldn't, sir."

"Who says so? Go home."

"I'd rather not, sir."

"Well . . . suit yourself. But go lie down in the ladies' lounge or something. That's an order. I'll see you tomorrow."

She looked worried and left. Thorby sat at his chaste, bare, unpowered executive desk and thought.

It was what he needed: to be left alone without a flood of facts and figures. He started digesting what he had soaked up. Presently he started listing the results.

Item: Judge Bruder and Uncle Jack had put him in Coventry for refusing to sign the proxies.

Item: He might be "Rudbek of Rudbek" -- but Uncle Jack would continue to run things until Thorby's parents were legally dead.

Item: Judge Bruder had told him bluntly that no steps would be taken about the above until he admitted his incompetence and signed proxies.

Item: He did not know what his parents had signed. He had tried to force a showdown -- and had failed.

Item: "Ownership" and "control" were very different. Uncle Jack controlled everything that Thorby owned; Uncle Jack owned merely a nominal one share to qualify him as acting chairman of the board. (Leda owned a chunk, as she was a Rudbek while Uncle Jack wasn't -- but Uncle Jack probably controlled her stock too; Leda paid no attention to business.)

Conclusions: --

What conclusions? Was Uncle Jack doing something crooked and didn't dare let him find out? Well, it didn't look like it. Uncle Jack had salary and bonuses so large that only a miser would want more money simply as money. His parents' accounts seemed in order -- they showed a huge balance; the megabuck Uncle Jack had handed him hardly made a dent. The only other withdrawals were for Grandfather and Grandmother Bradley, plus a few sums around the family or charge to the estates -- nothing important, another couple of megabucks.

Conclusion: Uncle Jack was boss, liked being boss, and meant to go on being boss if possible.

"Status" . . . Uncle Jack had high status and was fighting to keep it. Thorby felt that he understood him at last Uncle Jack put up with the overwork he complained about because he liked being boss -- just as captains and chief officers worked themselves silly, even though every member of a Free Trader family owned the same share. Uncle Jack was "chief officer" and didn't intend to surrender his supreme status to someone a third of his age who (let's face it!) wasn't competent for the work the status required.

In this moment of insight Thorby felt that he ought to sign those proxies for Uncle Jack, who had earned the job whereas Thorby had merely inherited it. Uncle Jack must have been terribly disappointed when he had turned up alive; it must have seemed an utterly unfair twist of fate.

Well, let him have it! Settle things and join the Guard.

But Thorby was not ready to back down to Judge Bruder. He had been pushed around -- and his strongest reflex was resistance to any authority he had not consented to; it had been burned into his soul with whips. He did not know this -- he just knew that he was going to be stubborn. He decided that Pop would want him to be.

Thought of Pop reminded him of something. Was Rudbek connected, even indirectly, with the slave trade? He realized now why Pop wanted him to hang on -- he could not quit until he knew . . . nor until he had put a stop to it if the unspeakable condition did exist. But how could he find out? He was Rudbek of Rudbek . . . but they had him tied with a thousand threads, like the fellow in that story Pop had told . . . "Gulliver and his Starship," that was it.

Well, let's see. Pop had reported to "X" Corps that there was a tie-up among some big spaceship outfit, the Saigon's government, and the raider-slavetraders. Raiders had to have ships. Ships . . . there was a book he had read last week, Galactic Transport's history

of every ship they had built, from #0001 to the latest He went into his library. Hmm . . . tall red book, not a tape.

Confounded thing was missing . . . like a lot of things lately. But he had almost renshawed the book, being interested in ships. He started making notes.

Most of them were in service inside the Hegemony, some in Rudbek interests, some in others. Some of his ships had been sold to the People, a pleasing thought. But some had wound up registered to owners he could not place . . . and yet he thought he knew the names, at least, of all outfits engaged in legitimate interstellar trade under the Hegemony -- and he certainly would recognize any Free Trader clan.

No way to be sure of anything from his desk, even if he had the book. Maybe there was no way, from Terra . . . maybe even Judge Bruder and Uncle Jack would not know if something fishy were going on.

He got up and switched on the Galactovue he had had installed. It showed only the explored traction of the Galaxy -- even so, the scale was fantastically small.

He began operating controls. First he lighted in green the Nine Worlds. Then he added, in yellow, pestholes avoided by the People. He lighted up the two planets between which he and his parents had been captured, then did the same for every missing ship of the People concerning which he happened to know the span of the uncompleted jump.

The result was a constellation of colored lights, fairly close together as star distances go and in the same sector as the Nine Worlds. Thorby looked at it and whistled. Pop had known what he was talking about -- yet it would be hard to spot unless displayed like this.

He began thinking about cruising ranges and fueling stations maintained by Galactic Transport out that way . . . then added in orange the banking offices of Galactic Acceptance Corporation in the "neighborhood."

Then he studied it

It was not certain proof -- yet what other outfit maintained such activities facing that sector?

He intended to find out.

Chapter 20

Thorby found that Leda had ordered dinner in the garden. They were alone, and falling snow turned the artificial sky into an opalescent bowl. Candles, flowers, a string trio, and Leda herself made the scene delightful but Thorby failed to enjoy it, even though he liked Leda and considered the garden the best part of Rudbek Hall. The meal was almost over when Leda said, "A dollar for your thoughts."

Thorby looked guilty. "Uh, nothing."

"It must be a worrisome nothing."

"Well . . . yes."

"Want to tell Leda?"

Thorby blinked. Weemsby's daughter was the last one he could talk to. His gloom was caused by wonder as to what he could do if he became convinced that Rudbek was mixed up in slavery. "I guess I'm not cut out to be a businessman."

"Why, Daddy says you have a surprising head for figures."

Thorby snorted. "Then why doesn't he --" He stopped.

"Why doesn't he what?"

"Uh . . ." Doggone it, a man had to talk to somebody . . . someone who sympathized -- or bawled him out if necessary. Like Pop. Like Fritz. Yeah, like Colonel Brisby. He was surrounded by people, yet utterly alone -- except that Leda seemed to want to be friendly. "Leda, how much of what I say to you do you tell your father?"

To his amazement she blushed. "What made you say that, Thor?"

"Well, you are pretty close to him. Aren't you?"

She stood up suddenly. "If you've finished, let's walk."

Thorby stood up. They strolled paths, watched the storm, listened to its soft noises against the dome. She guided them to a spot away from the house and shielded by bushes and there sat down on a boulder. "This is a good spot -- for private conversation."

"It is?"

"When the garden was wired, I made sure that there was somewhere I could be kissed without Daddy's snoopers listening in."

Thorby stared. "You mean that?"

"Surely you realize you are monitored almost everywhere but the ski slopes?"

"I didn't. And I don't like it"

"Who does? But it is a routine precaution with anything as big as Rudbek; you mustn't blame Daddy. I just spent some credits to make sure the garden wasn't as well wired as he thought So if you have anything to say you don't want Daddy to hear, you can talk now. He'll never know. That's a cross-my-heart promise."

Thorby hesitated, then checked the area. He decided that if a microphone were hidden nearby it must be disguised as a flower . . . which was possible. "Maybe I ought to save it for the ski slope."

"Relax, dear. If you trust me at all, trust me that this place is safe."

"Uh, all right" He found himself blurting out his frustrations . . . his conclusion that Uncle Jack was intentionally thwarting him unless he would turn over his potential power. Leda listened gravely. "That's it. Now -- am I crazy?"

She said, "Thor, you know that Daddy has been throwing me at you?"

"Huh?"

"I don't see how you could miss it. Unless you are utterly -- but then, perhaps you are. Just take it as true. It's one of those obvious marriages that everyone is enthusiastic about . . . except maybe the two most concerned."

Thorby forgot his worries in the face of this amazing statement "You mean . . . well, uh, that you --" He trailed off.

"Heavens, dear! If I intended to go through with it, would I have told you anything? Oh, I admit I promised, before you arrived, to consider it. But you never warmed to the idea -- and I'm too proud to be willing under those circumstances even if the preservation of Rudbek depended on it Now what's this about Daddy not letting you see the proxies that Martha and Creighton gave him?"

"They won't let me see them; I won't sign until they do."

"But you'll sign if they do?"

"Uh . . . maybe I will, eventually. But I want to see what arrangements my parents made."

"I can't see why Daddy opposes such a reasonable request. Unless . . ." She frowned.

"Unless what?"

"What about your shares? Have those been turned over to you?"

"What shares?"

"Why, yours. You know what shares I hold. They were given to me when I was born, by Rudbek -- your grandfather, I mean. My uncle. You probably got twice as many, since you were expected to become the Rudbek someday."

"I haven't any shares."

She nodded grimly. "That's one reason Daddy and the Judge don't want you to see those papers. Our personal shares don't depend on anyone; they're ours to do as we please with, since we are both legal age. Your parents voted yours, just as Daddy still votes mine -- but any proxy they assigned concerning your shares can't be any good now. You can pound the desk and they'll have to cough up, or shoot you." She frowned. "Not that they would shoot Thor, Daddy is a good sort, most ways."

"I never said he wasn't"

"I don't love him but I'm fond of him. But when it comes down to it. I'm a Rudbek and he's not. That's silly, isn't it? Because we Rudbeks aren't anything special; we're just shrewd peasants. But I've got a worry, too. You remember Joel de la Croix?"

"He's the one that wanted an interview with me?"

"That's right. Joey doesn't work here any more."

"I don't understand."

"He was a rising star in the engineering department of Galactic -- didn't you know? The office says he left to accept other employment; Joey says he was fired for going over their heads to speak to you." She frowned. "I didn't know what to believe. Now I believe Joey. Well, Thor, are you going to take it lying down? Or prove that you are Rudbek of Rudbek?"

Thorby chewed his lip. "I'd like to go back into the Guard and forget the whole mess. I used to wonder what it was like to be rich. Now I am and it turns out to be mostly headaches."

"So you'd walk out on it?" Her voice was faintly scornful.

"I didn't say that. I'm going to stay and find out what goes on. Only I don't know how to start. You think I should pound Uncle Jack's desk and demand my shares?"

"Unnh . . . not without a lawyer at your side."

"There are too many lawyers in this now!"

"That's why you need one. It will take a sharp one to win a scrap with Judge Bruder."

"How do I find one?"

"Goodness, I don't use lawyers. But I can find out. Now let's stroll and chat -- in case anybody is interested."

Thorby spent a glum morning studying corporation law. Just past lunch Leda called. "Thor, how about taking me siding? The storm is over and the snow is just right" She looked at him eagerly.

"Well --"

"Oh, come on!"

He went. They said nothing until they were far from the house. Then Leda said, "The man you need is James J. Garsch, New Washington."

"I thought that must be why you called. Do you want to ski? I'd like to go back and call him."

"Oh, my!" she shook her head sadly. "Thor, I may have to marry you just to mother you. You go back to the house and call a lawyer outside Rudbek -- one whose reputation is sky-high. What happens?"

"What?"

"You might wake up in a quiet place with big muscular nurses around you. I've had a sleepless night and I'm convinced they mean business. So I had to make up my mind. I was willing for Daddy to run things forever . . . but if he fights dirty. I'm on your side."

"Thanks, Leda."

" 'Thanks' he says! Thor, this is for Rudbek. Now to business. You can't grab your hat and go to New Washington to retain a lawyer. If I know Judge Bruder, he has planned what to do if you try. But you can go look at some of your estate . . . starting with your house in New Washington."

"That's smart, Leda."

"I'm so smart I dazzle myself. If you want it to look good, you'll invite me along -- Daddy has told me that I ought to show you around."

"Why, sure, Leda. If it won't be too much trouble."

"I'll simply force myself. We'll actually do some sightseeing, in the Department of North America, at least. The only thing that bothers me is how to get away from the guards."

"Guards?"

"Nobody high up in Rudbek ever travels without bodyguards. Why, you'd be run ragged by reporters and crackpots."

"I think," Thorby said slowly, "that you must be mistaken in my case. I went to see my grandparents. There weren't any guards."

"They specialize in being unobtrusive. I'll bet there were always at least two in your grandmother's house while you were there. See that solitary skier? Long odds he's not skiing for fun. So we have to find a way to get them off your neck while you look up Counselor Garsch. Don't worry, I'll think of something."

Thorby was immensely interested in the great capital but still more interested in getting on with his purpose. Leda did not let him hurry. "First we sightsee. We naturally would."

The house, simple compared with Rudbek -- twenty rooms, only two of them large -- was as ready as if he had stepped out the day before. Two of the servants he recognized as having been at Rudbek. A ground car, with driver and footman in Rudbek livery, was waiting. The driver seemed to know where to take them; they rode around in the semi-tropic winter sunshine and Leda pointed out planetary embassies and consulates. When they passed the immense pile, which is headquarters of the Hegemonic Guard, Thorby had the driver slow down while he rubbernecked. Leda said, "That's your alma mater, isn't it?" Then she whispered, "Take a good look. The building opposite its main door is where you are going."

They got out at the Replica Lincoln Memorial, walked up the steps and felt the same hushed awe that millions have felt when looking at that brooding giant figure. Thorby had a sudden feeling that the statue looked like Pop -- not that it did, but still it did. His eyes filled with tears.

Leda whispered, "This place always gets me -- it's like a haunted church. You know who he was? He founded America. Ancient history is awesome."

"He did something else."

"What?"

"He freed slaves."

"0h." She looked up with sober eyes. "That means something special to you . . . doesn't it?"

"Very special." He considered telling Leda his strongest reason for pushing the fight, since they were alone and this was a place that wouldn't be bugged. But he couldn't. He felt that Pop would not mind -- but he had promised Colonel Brisby.

He puzzled over inscriptions on the walls, in letters and spelling used before English became System English. Leda tugged his sleeve and whispered, "Come on. I can never stay here long or I start crying." They tiptoed away.

Leda decided that she just had to see the show at the Milky Way. So they got out and she told the driver to pick them up in three hours and ten minutes, then Thorby paid outrageous scalpers' prices for a double booth and immediate occupancy.

"There!" she sighed as they started inside. "That's half of it. The footman will drop off as they round the corner, but we're rid of the driver for a while; there isn't a place to park around here. But the footman will be right behind us, if he wants to keep his job. He's buying a ticket this minute. Or maybe he's already inside. Don't look."

They started up the escalator. "This gives us a few seconds; he won't get on until we curve out of sight. Now listen. The people holding these seats will leave as soon as we show the tickets -- only I'm going to hang onto one, pay him to stay. Let's hope it's a man because our nursemaid is going to spot that booth in minutes . . . seconds, if he was able to get our booth number down below. You keep going. When he finds our booth he'll see me in it with a man. He won't see the man's face in the dark but he'll be certain of me because of this outlandish, night-glow outfit I'm wearing. So he'll be happy. You zip out any exit but the main lobby; the driver will probably wait there. Try to be in the outer lobby a few minutes before the time I told them to have the car. If you don't make it, hire a flea-cab and go home. I'll complain aloud that you didn't like the show and went home."

Thorby decided that the "X" Corps had missed a bet In Leda. "Won't they report that they lost track of me?"

"They'll be so relieved they'll never breathe it. Here we are -- keep moving. See you!"

Thorby went out a side exit, got lost, got straightened out by a cop, at last found the building across from Guard SHQ. The building directory showed that Garsch had offices on the 34th terrace; a few minutes later he faced a receptionist whose mouth was permanently pursed in "No."

She informed him frostily that the Counselor never saw anyone except by appointment. Did he care to make an inquiry appointment with one of the Counselor's associates? "Name, please!"

Thorby glanced around, the room was crowded. She slapped a switch. "Speak up!" she snapped. "I've turned on the privacy curtain."

"Please tell Mr. Garsch that Rudbek of Rudbek would like to see him."

Thorby thought that she was about to tell him not to tell fibs. Then she got up hastily and left.

She came back and said quietly, "The Counselor can give you five minutes. This way, sir."

James J. Garsch's private office was in sharp contrast with building and suite; he himself looked like an unmade bed. He wore trousers, not tights, and his belly bulged over his belt. He had not shaved that day; his grizzled beard matched the fringe around his scalp. He did not stand up. "Rudbek?"

"Yes, sir. Mr. James J. Garsch?"

"The same. Identification? Seems to me I saw your face in the news but I don't recollect."

Thorby handed over his ID folder. Garsch glanced at the public ID, studied the rare and more difficult-to-counterfeit ID of Rudbek & Assocs.

He handed it back. "Siddown. What can I do for you?"

"I need advice . . . and help."

"That's what I sell. But Bruder has lawyers running out of his ears. What can I do for you?"

"Uh, is this confidential?"

"Privileged, son. The word is 'privileged.' You don't ask a lawyer that; he's either honest or he ain't. Me, I'm middlin' honest. You take your chances."

"Well . . . it's a long story."

"Then make it short. You talk. I listen."

"You'll represent me?"

"You talk, I listen," Garsch repeated. "Maybe I'll go to sleep. I ain't feeling my best today. I never do."

"All right." Thorby launched into it. Garsch listened with eyes closed, fingers laced over his bulge.

"That's all," concluded Thorby, "except that I'm anxious to get straightened out so that I can go back into the Guard."

Garsch for the first time showed interest. "Rudbek of Rudbek? In the Guard? Let's not be silly, son."

"But I'm not really 'Rudbek of Rudbek.' I'm an enlisted Guardsman who got pitched into it by circumstances beyond my control."

"I knew that part of your story; the throb writers ate it op. But we all got circumstances we can't control. Point is, a man doesn't quit his job. Not when it's his."

"It's not mine," Thorby answered stubbornly.

"Let's not fiddle. First, we get your parents declared dead. Second, we demand their wills and proxies. If they make a fuss, we get a court order . . . and even the mighty Rudbek folds up under a simple subpoena-or-be-locked-up-for-contempt." He bit a fingernail. "Might be some time before the estate is settled and you are qualified. Court might appoint you to act, or the wills may say who, or the court might appoint somebody else. But it won't be those two, if what you say is correct. Even one of Bruder's pocket judges wouldn't dare; it would be too raw and he'd know he'd be reversed."

"But what can I do if they won't even start the action to have my parents declared dead?"

"Who told you you had to wait on them? You're the interested party; they might not even qualify as amicus curiae. If I recall the gossip, they're hired hands, qualified with

one nominal share each. You're the number-one interested party, so you start the action. Other relatives? First cousins, maybe?"

"No first cousins. I don't know what other heirs there may be. There's my grandparents Bradley."

"Didn't know they were alive. Will they fight you?"

Thorby started to say no, changed his mind. "I don't know."

"Cross it when we come to it. Other heirs . . . well, we won't know till we get a squint at the wills -- and that probably won't happen until a court forces them. Any objection to hypnotic evidence? Truth drugs? Lie detectors?"

"No. Why?"

"You're the best witness that they are dead, not just long time missing."

"But if a person is missing long enough?"

"Depends. Any term of years is just a guide to the court, not a rule of law. Time was when seven years would do it -- but that's no longer true. Things are roomier now."

"How do we start?"

"Got any money? Or have they got you hogtied on that? I come high. I usually charge for each exhale and inhale."

"Well, I've got a megabuck . . . and a few thousand more. About eight."

"Hmm . . . Haven't said I'd take this case. Has it occurred to you that your life may be in danger?"

"Huh! No, it hasn't"

"Son, people do odd things for money, but they'll do still more drastic things for power over money. Anybody sittin' close to a billion credits is in danger; it's like keeping a pet rattlesnake. If I were you and started feeling ill, I'd pick my own doctor. I'd be cautious about going through doors and standing close to open windows." He thought. "Rudbek is not a good place for you now; don't tempt them. Matter of fact, you ought not to be here. Belong to the Diplomatic Club?"

"No, sir."

"You do now. People 'ud be surprised if you didn't. I'm often there, around six. Got a room there, sort of private. Twenty eleven."

" 'Twenty eleven.' "

"I still haven't said I'd take it. Got any idea what I'd have to do if I lose this case?"

"Eh? No, sir."

"What was the place you mentioned? Jubbulpore? That's where I'd have to move." Suddenly he grinned. "But I've been spoiling for a fight Rudbek, eh? Bruder. You mentioned a megabuck?"

Thorby got out his book of checking certificates, passed them over. Garsch riffled through it, shoved it into a drawer. "We won't convert this now; they're almost certainly noting your withdrawals. Anyhow, it's going to cost you more. G'bye. Say in a couple of days."

Thorby left, feeling bucked up. He had never met a more mercenary, predatory old man -- he reminded Thorby of the old, scarred freedmen professionals who swaggered around the New Amphitheater.

As he came outdoors he saw Guard Headquarters. He looked again -- then ducked through murderous traffic and ran up its steps.

Chapter 21

Thorby found a circle of receptionist booths around the great foyer. He pushed through crowds pouring out and went into one. A contralto voice said, "Punch your name. State department and office into the microphone. Wait until the light appears, then state your business. You are reminded that working hours are over and only emergencies are now handled."

Thorby punched, "Thorby Baslim," into the machine, then said, "Exotic Corps."

He waited. The tape repeated, "Punch your name. State the department and office into --" It suddenly cut off. A man's voice said, "Repeat that."

"Exotic Corps."

"Business?"

"Better check my name in your files."

At last another female voice chanted, "Follow the light immediately over your head. Do not lose it"

He followed it up escalators, down slideways, and into an unmarked door, where a man not in uniform led him through two more. He faced another man in civilian clothes who stood up and said, "Rudbek of Rudbek. I am Wing Marshal Smith."

"Thorby Baslim, please, sir. Not 'Rudbek.' "

"Names aren't important but identities are. Mine Isn't 'Smith,' but it will do. I suppose you have identification?"

Thorby produced his ID again. "You probably have my fingerprints."

"They'll be here in a moment Do you mind supplying them again?"

While Thorby had his prints taken, a print file card popped out onto the Marshal's desk. He put both sets into a comparator, seemed to pay no attention but until it flashed green he spoke only politenesses.

Then he said, "All right, Thorby Baslim . . . Rudbek. What can I do for you?"

"Maybe it's what I can do for you?"

"So?"

"I came here for two reasons," Thorby stated. "The first Is, I think I can add something to Colonel Baslim's final report. You know who I mean?"

"I knew him and admired him very much. Go on."

"The second is -- I'd like to go back into the Guard and go 'X' Corps." Thorby couldn't recall when he had decided this, but he had -- not just Pop's outfit, Pop's own corps. Pop's work.

"Smith" raised his brows. "So? Rudbek of Rudbek?"

"I'm getting that fixed." Thorby sketched rapidly how he must settle his parents' estate, arrange for handling of their affairs. "Then I'm free. I know it's presumptuous of an acting ordnanceman third class -- no, I was busted from that; I had a fight -- for a boot Guardsman to talk about 'X' Corps, but I think I've got things you could use. I know the People . . . the Free Traders, I mean. I speak several languages. I know how to behave in the Nine Worlds. I've been around a bit, not much and I'm no astrogator . . . but I've traveled a little. Besides that, I've seen how Pop -- Colonel Baslim -- worked. Maybe I could do some of it."

"You have to love this work to do it. Lots of times it's nasty . . . things a man wouldn't do, for his own self-respect, if he didn't think it was necessary."

"But I do! Uh, I was a slave. You knew that? Maybe it would help if a man knew how a slave feels."

"Perhaps. Though it might make you too emotional. Besides, slave traffic isn't all we are interested in. A man comes here, we don't promise him certain work. He does what he's told. We use him. We usually use him up. Our casualty rate is high."

"I'll do what I'm told. I just happen to be interested in the slave traffic. Why, most people here don't seem to know it exists."

"Most of what we deal in the public wouldn't believe. Can you expect the people you see around you to take seriously unbelievable stories about far-away places? You must remember that less than one percent of the race ever leaves its various planets of birth."

"Uh, I suppose so. Anyhow they don't believe it."

"That's not our worst handicap. The Terran Hegemony is no empire; it is simply leadership in a loose confederation of planets. The difference between what the Guard could do and what it is allowed to do is very frustrating. If you have come here thinking that you will see slavery abolished in your lifetime, disabuse your mind. Our most optimistic target date is two centuries away -- and by that time slavery will have broken out in planets not even discovered today. Not a problem to be solved once and for all. A continuing process."

"All I want to know is, can I help?"

"I don't know. Not because you describe yourself as a junior enlisted man . . . we're all pretty much the same rank in this place. The Exotic Corps is an idea, not an organization chart. I'm not worried about what Thorby Baslim can do; he can do something, even if it's only translating. But Rudbek of Rudbek . . . mmm, I wonder."

"But I told you I was getting rid of that!"

"Well -- let's wait until you have. By your own statement you are not presenting yourself for enrollment today. What about the other reason? Something to add to Colonel Baslim's report?"

Thorby hesitated. "Sir, Colonel Brisby, my C.O., told me that P -- Colonel Baslim had proved a connection between the slave trade and some big starshipbuilding outfit."

"He told you that?"

"Yes, sir. You could look it up in Colonel Baslim's report."

"I don't need to. Go on."

"Well . . . is it Rudbek he was talking about? Galactic Transport, that is?"

"Smith" considered it. "Why ask me if your company is mixed up in slave trade? You tell us."

Thorby frowned. "Is there a Galactovue around here?"

"Down the hall."

"May I use it?"

"Why not?" The Wing Marshal led him through a private corridor into a conference room dominated by a star-flecked stereo display. It was much the biggest Thorby had ever seen.

He had to ask questions; it had complicated controls. Then he got to work. His face puckering with strain, Thorby painted in colored lights amid fairy stars the solid picture he had built in the Galactovue in his office. He did not explain and the officer watched in silence. Thorby stepped back at last "That's all I know now."

"You missed a few." The Wing Marshal added some lights in yellow, some in red, then working slowly, added half a dozen missing ships. "But that's quite a feat to do from memory and a remarkable concatenation of ideas. I see you included yourself -- maybe it does help to have a personal interest." He stepped back. "Well, Baslim, you asked a question. Are you ready to answer it?"

"I think Galactic Transport is in it up to here! Not everybody, but enough key people. Supplying ships. And repairs and fuel. Financing, maybe."

"Mmm . . ."

"Is all this physically possible otherwise?"

"You know what they would say if you accused them of slave trading --"

"Not the trade itself. At least I don't think so."

"Connected with it. First they would say that they had never heard of any slave trade, or that it was just a wild rumor. Then they would say that, in any case, they just sell ships -- and is a hardware dealer who sells a knife responsible if a husband carves his wife?"

"The cases aren't parallel."

"They wouldn't concede that. They would say that they were not breaking any laws and even stipulating that there might be slavery somewhere, how can you expect people to get worked up over a possible evil light-years away? In which they are correct; you can't expect people to, because they won't. Then some smarmy well-dressed character will venture the opinion that slavery -- when it existed -- was not so bad, because a large part of the population is really happier if they don't have the responsibilities of a free man. Then he'll add that if they didn't sell ships, someone else would -- it's Just business."

Thorby thought of nameless little Thorbys out there in the dark, crying hopelessly with fear and loneliness and hurt, in the reeking holds of slavers -- ships that might be his. "One stroke of the lash would change his slimy mind!"

"Surely. But we've abolished the lash here. Sometimes I wonder if we should have." He looked at the display. "I'm going to record this; it has facets not yet considered together. Thanks for coming in. If you get more ideas, come in again."

Thorby realized that his notion of joining the corps had not been taken seriously. "Marshal Smith . . . there's one other thing I might do."

"What?"

"Before I join, if you let me . . . or maybe after; I don't know how you do such things . . . I could go out as Rudbek of Rudbek, in my own ship, and check those places -- the red ones, ours. Maybe the boss can dig out things that a secret agent would have trouble getting close to."

"Maybe. But you know that your father started to make an inspection trip once. He wasn't lucky in it." Smith scratched his chin. "We've never quite accounted for that one. Until you showed up alive, we assumed that it was natural disaster. A yacht with three passengers, a crew of eight and no cargo doesn't look like worthwhile pickings for bandits in business for profit -- and they generally know what they're doing."

Thorby was shocked. "Are you suggesting that --"

"I'm not suggesting anything. But bosses prying into employees' sidelines have, in other times and places, burned their fingers. And your father was certainly checking."

"About the slave trade?"

"I couldn't guess. Inspecting. In that area. I've got to excuse myself. But do come see me again . . . or phone and someone will come to you."

"Marshal Smith . . . what parts of this, if any, can be talked over with other people?"

"Eh? Any of it. As long as you don't attribute it to this corps, or to the Guard. But facts as you know them --" He shrugged, "-- who will believe you? Although if you talk to your business associates about your suspicions, you may arouse strong feelings against you personally . . . some of those feelings sincere and honest The others? I wish I knew."

Thorby was so late that Leda was both vexed and bursting with curiosity. But she had to contain it not only because of possible monitoring but because of an elderly aunt who had called to pay her respects to Rudbek of Rudbek, and was staying the night. It was not until next day, while examining Aztec relics in the Fifth of May Museum, that they were able to talk.

Thorby recounted what Garsch had said, then decided to tell more. "I looked into rejoining the Guard yesterday."

"Thor!"

"Oh, I'm not walking out. But I have a reason. The Guard is the only organization trying to put a stop to slave traffic. But that is all the more reason why I can't enlist now." He outlined his suspicions about Rudbek and the traffic.

Her face grew pale. "Thor, that's the most horrible idea I ever heard. I can't believe it."

"I'd like to prove it isn't true. But somebody builds their ships, somebody maintains them. Slavers are not engineers; they're parasites."

"I still have trouble believing that there is such a thing as slavery."

He shrugged. "Ten lashes will convince anybody."

"Thor! You don't mean they whipped you?"

"I don't remember clearly. But the scars are on my back."

She was very quiet on the way home.

Thorby saw Garsch once more, then they headed for the Yukon, in company with the elderly aunt, who had somehow attached herself. Garsch had papers for Thorby to sign and two pieces of information. "The first action has to be at Rudbek, because that was the legal residence of your parents. The other thing is, I did some digging in newspaper files."

"Yes?"

"Your grandfather did give you a healthy block of stock. It was in stories about the whoop-te-do when you were born. The Bourse Journal listed the shares by serial numbers. So we'll hit 'em with that, too -- on the same day. Don't want one to tip off the other."

"You're the doctor."

"But I don't want you in Rudbek until the clerk shouts 'Oyez!' Here's a mail drop you can use to reach me . . . even phone through, if you have to. And right smartly you set up a way for me to reach you."

Thorby puzzled over that requirement, being hemmed in as he was by bodyguards. "Why don't you, or somebody -- a young man, maybe -- phone my cousin with a code message? People are always phoning her and most of them are young men. She'll tell me and I'll find a place to phone back."

"Good idea. He'll ask if she knows how many shopping days left till Christmas. All right -- see you in court." Garsch grinned. "This is going to be fun. And very, very expensive for you. G'bye."

Chapter 22

"Have a nice vacation?" Uncle Jack smiled at him. "You've led us quite a chase. You shouldn't do that, boy."

Thorby wanted to hit him but, although the guards let go his arms when they shoved him into the room, his wrists were tied. Uncle Jack stopped smiling and glanced at Judge Bruder. "Thor, you've never appreciated that Judge Bruder and I worked for your father, and for your grandfather. Naturally we know what's best. But you've given us trouble and now we'll show you how we handle little boys who don't appreciate decent treatment. We teach them. Ready, Judge?"

Judge Bruder smiled savagely and took the whip from behind him. "Bend him over the desk!"

Thorby woke up gasping. Whew, a bad one! He looked around the small hotel room he was in and tried to remember where he was. For days he had moved daily, sometimes half around the planet. He had become sophisticated in the folkways of this planet, enough not to attract attention, and even had a new ID card, quite as good as a real one. It had not been difficult, once he realized that underworlds were much the same everywhere.

He remembered now -- this was America de Sud.

The bed alarm sounded -- just midnight, time to leave. He dressed and glanced at his baggage, decided to abandon it He walked down the backstairs, out the back way.

Aunt Lizzie had not liked the Yukon cold but she put up with it. Eventually someone called and reminded Leda that there were few shopping days to Christmas, so they left. At Uranium City Thorby managed to return the call Garsch grinned. "I'll see you in the district court in-and-for the county of Rudbek, division four, at nine-fifty-nine the morning of January fourth. Now get lost completely."

So at San Francisco Thorby and Leda had a tiff in the presence of Aunt Lizzie; Leda wanted to go to Nice, Thorby insisted on Australia. Thorby said angrily, "Keep the car! I'll go by myself." He flounced out and bought a ticket for Great Sydney.

He pulled a rather old washroom trick, tubed under the Bay, and, convinced that his bodyguard had been evaded, counted the cash Leda had slipped him as privately as they had quarreled publicly. It came to a little under two hundred thousand credits. There was a note saying that she was sorry it wasn't more but she had not anticipated needing money.

While waiting at the South American field Thorby counted what was left of Leda's money and reflected that he had cut it fine, both time and money. Where did it all go?

Photographers and reporters gave him a bad time at Rudbek City; the place swarmed with them. But he pushed through and met Garsch inside the bar at nine-fifty-eight. The old man nodded. "Siddown. Hizzoner will be out soon."

The judge came out and a clerk intoned the ancient promise of justice: "-- draw nigh and ye shall be heard!" Garsch remarked, "Bruder has this judge on a leash."

"Huh? Then why are we here?"

"You're paying me to worry. Any judge is a good judge when he knows he's being watched. Look behind you."

Thorby did so. The place was so loaded with press that a common citizen stood no chance. "I did a good job, if I do say so." Garsch hooked a thumb at the front row. "The galoot with the big nose is the ambassador from Proxima. The old thief next to him is chairman of the judiciary committee. And --" He broke off.

Thorby could not spot Uncle Jack but Bruder presided over the other table -- he did not look at Thorby. Nor could Thorby find Leda. It made him feel very much alone. But Garsch finished opening formalities, sat down and whispered. "Message for you. Young lady says to say 'Good luck.' "

Thorby was active only in giving testimony and that after many objections, counter objections, and warnings from the bench. While he was being sworn, he recognized in the front row a retired chief justice of the Hegemonic Ultimate Court who had once dined at Rudbek. Then Thorby did not notice anything, for he gave his testimony in deep trance surrounded by hypnotherapists.

Although every point was chewed endlessly, only once did the hearing approach drama. The court sustained an objection by Bruder in such fashion that a titter of unbelief ran around the room and someone stamped his feet. The judge turned red. "Order! The bailiff will clear the room!"

The move to comply started, over protests of reporters. But the front two rows sat tight and stared at the judge. The High Ambassador from the Vegan League leaned toward his secretary and whispered; the secretary started slapping a Silent-Steno.

The judge cleared his throat "-- unless this unseemly behavior ceases at once! This court will not tolerate disrespect."

Thorby was almost surprised when it ended: "-- must therefore be conclusively presumed that Creighton Bradley Rudbek and Martha Bradley Rudbek did each die, are now dead, and furthermore did meet their ends in common disaster. May their souls rest in peace. Let it be so recorded." The court banged his gavel. "If custodians of wills of the decedents, if wills there be, are present in this court, let them now come forward."

There was no hearing about Thorby's own shares; Thorby signed a receipt for certificates thereto in the judge's chambers. Neither Weemsby nor Bruder was present.

Thorby took a deep breath as Garsch and he came out of chambers. "I can hardly believe that we've won."

Garsch grinned. "Don't kid yourself. We won the first round on points. Now it begins to get expensive."

Thorby's mouth sagged. Rudbek guards moved in and started taking them through the crowd.

Garsch had not overstated it. Bruder and Weemsby sat tight, still running Rudbek & Assocs. and continued to fight. Thorby never did see his parents' proxies -- his only interest in them now was to see whether, as he suspected, the differences between the papers Bruder had prepared and those of his parents lay in the difference between "revocable" and "revocable only by mutual agreement."

But when the court got around to ordering them produced, Bruder claimed that they had been destroyed in routine clearing from files of expired instruments. He received a ten-day sentence for contempt, suspended, and that ended it.

But, while Weemsby was no longer voting the shares of Martha and Creighton Rudbek, neither was Thorby; the shares were tied up while the wills were being proved. In the meantime, Bruder and Weemsby remained officers of Rudbek & Assocs. with a majority of directors backing them. Thorby was not even allowed in Rudbek Building, much less in his old office.

Weemsby never went back to Rudbek estate; his belongings were sent to him. Thorby moved Garsch into Weemsby's apartment. The old man slept there often; they were very busy.

At one point Garsch told him that there were ninety-seven actions, for or against, moving or pending, relating to the settlement of his estate. The wills were simple in essence; Thorby was the only major heir. But there were dozens of minor bequests; there were relatives who might get something if the wills were set aside; the question of "legally dead" was again raised, the presumption of "common disaster" versus deaths at different times was hashed again; and Thorby's very identity was questioned. Neither Bruder nor Weemsby appeared in these actions; some relative or stockholder was always named as petitioner -- Thorby was forced to conclude that Uncle Jack had kept everyone happy.

But the only action that grieved him was brought by his grandparents Bradley, asking that he be made their ward because of incompetence. The evidence, other than the admitted fact that he was new to the complexities of Terran life, was his Guardsman medical record -- a Dr. Krishnamurti had endorsed that he was "potentially emotionally unstable and should not be held fully answerable for actions under stress."

Garsch had him examined in blatant publicity by the physician to the Secretary General of the Hegemonic Assembly. Thorby was found legally sane. It was followed by a stockholders suit asking that Thorby be found professionally unequipped to manage the affairs of Rudbek & Assocs. in private and public interest.

Thorby was badly squeezed by these maneuvers; he was finding it ruinously expensive to be rich. He was heavily in debt from legal costs and running Rudbek estate and had not been able to draw his own accumulated royalties as Bruder and Weemsby continued to contend, despite repeated adverse decisions, that his identity was uncertain.

But a weary time later a court three levels above the Rudbek district court awarded to Thorby (subject to admonitions as to behavior and unless revoked by court) the power to vote his parents' stock until such time as their estates were settled.

Thorby called a general meeting of stockholders, on stockholders' initiative as permitted by the bylaws, to elect officers.

The meeting was in the auditorium of Rudbek Building; most stockholders on Terra showed up even if represented by proxy. Even Leda popped in at the last minute, called out merrily, "Hello, everybody!" then turned to her stepfather. "Daddy, I got the notice and decided to see the fun -- so I jumped into the bus and hopped over. I haven't missed anything, have I?"

She barely glanced at Thorby, although he was on the platform with the officers. Thorby was relieved and hurt; he had not seen her since they had parted at San Francisco. He knew that she had residence at Rudbek Arms in Rudbek City and was sometimes in town, but Garsch had discouraged him from getting in touch with her -- "Man's a fool to chase a woman when she's made it plain she doesn't want to see him."

So he simply reminded himself that he must pay back her loan -- with interest -- as soon as possible.

Weemsby called the meeting to order, announced that to accordance with the call the meeting would nominate and elect officers. "Minutes and old business postponed by unanimous consent." Bang! "Let the secretary call the roll for nominations for chairman of the board." His face wore a smile of triumph.

The smile worried Thorby. He controlled, his own and his parents', just under 45% of the voting stock. From the names used in bringing suits and other indirect sources he thought that Weemsby controlled about 31%, Thorby needed to pick up 6%. He was counting on the emotional appeal of "Rudbek of Rudbek" -- but he couldn't be sure, even though Weemsby needed more than three times as many "uncertain" votes . . . uncertain to Thorby; they might be in Weemsby's pocket.

But Thorby stood up and nominated himself, through his own stock. "Thor Rudbek of Rudbek!"

After that it was pass, pass, pass, over and over again -- until Weemsby was nominated. There were no other nominations.

"The Secretary will call the roll," Weemsby intoned.

"Announce your votes by shares as owners, followed by votes as proxy. The Clerk will check serial numbers against the Great Record. Thor Rudbek . . . of Rudbek."

Thorby voted all 45%-minus that he controlled, then sat down feeling very weary. But he got out a pocket calculator. There were 94,000 voting shares; he did not trust himself to keep tally in his head. The Secretary read on, the clerk droned his checks on the record. Thorby needed to pick up 5657 votes, to win by one vote.

He began slowly to pick up odd votes -- 232, 906, 1917 -- some of them directly, some through proxy. But Weemsby picked up votes also. Some shareholders answered, "Pass to proxy," or failed to respond -- as the names marched past and these missing votes did not appear, Thorby was forced to infer that Weemsby held those proxies himself. But still the additional votes for "Rudbek of Rudbek" mounted -- 2205, 3036, 4309 . . . and there it stuck. The last few names passed.

Garsch leaned toward him. "Just the sunshine twins left."

"I know." Thorby put away his calculator, feeling sick -- so Weemsby had won, after all.

The Secretary had evidently been instructed what names to read last. "The Honorable Curt Bruder!"

Bruder voted his one qualifying share for Weemsby. "Our Chairman, Mr. John Weemsby."

Weemsby stood up and looked happy. "In my own person, I vote one share. By proxies delivered to me and now with the Secretary I vote --" Thorby did not listen; he was looking for his hat.

"The tally being complete, I declare --" the Secretary began.

"No!"

Leda was on her feet. "I'm here myself. This is my first meeting and I'm going to vote!"

Her stepfather said hastily, "That's all right, Leda -- mustn't interrupt." He turned to the Secretary. "It doesn't affect the result."

"But it does! I cast one thousand eight hundred and eighty votes for Thor, Rudbek of Rudbek!"

Weemsby stared. "Leda Weemsby!"

She retorted crisply, "My legal name is Leda Rudbek."

Bruder was shouting, "Illegal! The vote has been recorded. It's too --"

"Oh, nonsense!" shouted Leda. "I'm here and I'm voting. Anyhow, I cancelled that proxy -- I registered it in the post office in this very building and saw it delivered and signed for at the 'principal offices of this corporation' -- that's the right phrase, isn't it, Judge? -- ten minutes before the meeting was called to order. If you don't believe me, send down for it. But what of it? -- I'm here. Touch me." Then she turned and smiled at Thorby.

Thorby tried to smile back, and whispered savagely to Garsch, "Why did you keep this a secret?"

"And let 'Honest John' find out that he had to beg, borrow, or buy some more votes? He might have won. She kept him happy, just as I told her to. That's quite a girl, Thorby. Better option her."

Five minutes later Thorby, shaking and white, got up and took the gavel that Weemsby had dropped. He faced the crowd. "We will now elect the rest of the board," he announced, his voice barely under control. The slate that Garsch and Thorby had worked out was passed by acclamation -- with one addition: Leda.

Again she stood up. "Oh, no! You can't do this to me."

"Out of order. You've assumed responsibility, now accept it."

She opened her mouth, closed it, sat down.

When the Secretary declared the result, Thorby turned to Weemsby. "You are General Manager also, are you not?"

"Yes."

"You're fired. Your one share reverts. Don't try to go back to your former office; just get your hat and go."

Bruder jumped up. Thorby turned to him. "You, too. Sergeant-at-Arms, escort them out of the building."

Chapter 23

Thorby looked glumly at a high stack of papers, each item flagged "URGENT." He picked up one, started to read -- put it down and said, "Dolores, switch control of my screen to me. Then go home."

"I can stay, sir."

"I said, 'Go home.' How are you going to catch a husband with circles under your eyes?"

"Yes, sir." She changed connections. "Good night, sir."

"Good night."

Good girl, there. Loyal, he thought. Well, he hoped. He hadn't dared use a new broom all the way; the administration had to have continuity. He signaled a number.

A voice without a face said, "Scramble Seven."

" 'Prometheus Bound,' " Thorby answered, "and nine makes sixteen."

"Scramble set up."

"Sealed," Thorby agreed.

The face of Wing Marshal "Smith" appeared. "Hi, Thor."

"Jake, I've got to postpone this month's conference again. I hate to -- but you should see my desk."

"Nobody expects you to devote all your time to corps matters."

"Doggone it, that's exactly what I planned to do -- clean this place up fast, put good people in charge, grab my hat and enlist for the corps! But it's not that simple."

"Thor, no conscientious officer lets himself be relieved until his board is all green. We both knew that you had lots of lights blinking red."

"Well . . . all right, I can't make the conference. Got a few minutes?"

"Shoot," agreed "Smith."

"I think I've got a boy to hunt porcupines. Remember?"

" 'Nobody eats a porcupine.' "

"Right! Though I had to see a picture of one to understand what you meant. To put it in trader terms, the way to kill a business is to make it unprofitable. Slave raiding is a business, the way to kill it is to put it in the red. Porcupine spines on the victims will do it"

"If we had the spines," the "X" Corps director agreed dryly. "You have an idea for a weapon?"

"Me? What do you think I am? A genius? But I think I've found one. Name is Joel de la Croix. He's supposed to be about the hottest thing MIT ever turned out. I've gossiped with him about what I used to do as a firecontrolman in Sisu. He came up with some brilliant ideas without being prodded. Then he said, 'Thor, it's ridiculous for a ship to be put out of action by a silly little paralysis beam when it has enough power in its guts to make a small star.' "

"A very small star. But I agree."

"Okay. I've got him stashed in our Havermeyer Labs in Toronto. As soon as your boys okay him, I want to hand him a truckload of money and give him a free hand. I'll feed him all I know about raider tactics and so forth -- trance tapes, maybe, as I won't have time to work with him much. I'm being run ragged here."

"He'll need a team. This isn't a home-workshop project."

"I know. I'll funnel names to you as fast as I have them. Project Porcupine will have all the men and money it can use. But, Jake, how many of these gadgets can I sell to the Guard?"

"Eh?"

"I'm supposed to be running a business. If I run it into the ground, the courts will boost me out I'm going to let Project Porcupine spend megabucks like water -- but I've got to justify it to directors and stockholders. If we come up with something, I can sell several hundred units to Free Traders, I can sell some to ourselves -- but I need to show a potential large market to justify the expenditure. How many can the Guard use?"

"Thor, you're worrying unnecessarily. Even if you don't come up with a superweapon -- and your chances aren't good -- all research pays off. Your stockholders won't lose."

"I am not worrying unnecessarily! I've got this job by a handful of votes; a special stockholders meeting could kick me out tomorrow. Sure research pays off, but not necessarily quickly. You can count on it that every credit I spend is reported to people who would love to see me bumped -- so I've got to have reasonable justification."

"How about a research contract?"

"With a vice colonel staring down my boy's neck and telling him what to do? We want to give him a free hand."

"Mmm . . . yes. Suppose I get you a letter-of-intent? Well make the figure as high as possible. I'll have to see the Marshal-in-Chief. He's on Luna at the moment and I can't squeeze time to go to Luna this week. You'll have to wait a few days."

"I'm not going to wait; I'm going to assume that you can do it. Jake, I'm going to get things rolling and get out of this crazy job -- if you won't have me in the corps I can always be an ordnanceman."

"Come on down this evening. I'll enlist you -- then I'll order you to detached duty, right where you are."

Thorby's chin dropped. "Jake! You wouldn't do that to me!"

"I would if you were silly enough to place yourself under my orders, Rudbek."

"But --" Thorby shut up. There was no use arguing; there was too much work to be done.

"Smith" added, "Anything else?"

"I guess not."

"I'll have a first check on de la Croix by tomorrow. See you."

Thorby switched off, feeling glummer than ever. It was not the Wing Marshal's half-whimsical threat, nor even his troubled conscience over spending large amounts of other people's money on a project that stood little chance of success; it was simply that he was swamped by a job more complex than he had believed possible.

He picked up the top item again, put it down, pressed the key that sealed him through to Rudbek estate. Leda was summoned to the screen. "I'll be late again. I'm sorry."

"I'll delay dinner. They're enjoying themselves and I had the kitchen make the canapes substantial"

Thorby shook his head. "Take the head of the table. I'll eat here. I may sleep here."

She sighed. "If you sleep. Look, my stupid dear, be in bed by midnight and up not before six. Promise?"

"Okay. If possible."

"It had better be possible, or you will have trouble with me. See you."

He didn't even pick up the top item this time; he simply sat in thought. Good girl, Leda . . . she had even tried to help in the business -- until it had become clear that business was not her forte. But she was one bright spot in the gloom; she always bucked him up. If it wasn't patently unfair for a Guardsman to marry -- But he couldn't be that unfair to Leda and he had no reason to think she would be willing anyhow. It was unfair enough for him to duck out of a big dinner party at the last minute. Other things. He would have to try to treat her better.

It had all seemed so self-evident: just take over, fumigate that sector facing the Sargony, then pick somebody else to run it. But the more he dug, the more there was to do. Taxes . . . the tax situation was incredibly snarled; it always was. That expansion program the Vegan group was pushing -- how could he judge unless he went there and looked? And would he know if he did? And how could he find time?

Funny, but a man who owned a thousand starships automatically never had time to ride in even one of them. Maybe in a year or two --

No, those confounded wills wouldn't even be settled in that time! -- two years now and the courts were still chewing it. Why couldn't death be handled decently and simply the way the People did it?

In the meantime he wasn't free to go on with Pop's work.

True, he had accomplished a little. By letting "X" Corps have access to Rudbek's files some of the picture had filled in -- Jake had told him that a raid which had wiped out one slaver pesthole had resulted directly from stuff the home office knew and hadn't known that it knew.

Or had somebody known? Some days he thought Weemsby and Bruder had had guilty knowledge, some days not -- for all that the files showed was legitimate business . . . sometimes with wrong people. But who knew that they were the wrong people?

He opened a drawer, got out a folder with no "URGENT" flag on it simply because it never left his hands. It was, he felt, the most urgent thing in Rudbek, perhaps in the Galaxy -- certainly more urgent than Project Porcupine because this matter was certain to cripple, or at least hamper, the slave trade, while Porcupine was a long chance. But his progress had been slow -- too much else to do.

Always too much. Grandmother used to say never to buy too many eggs for your basket Wonder where she got that? -- the People never bought eggs. He had both too many baskets and too many eggs for each. And another basket every day.

Of course, in a tough spot he could always ask himself; "What would Pop do?" Colonel Brisby had phrased that -- "I just ask myself, 'What would Colonel Baslim do?' " It helped, especially when he had to remember also what the presiding judge had warned him about the day his parents' shares had been turned over to him; "No man can own a thing to himself alone, and the bigger it is, the less he owns it. You are not free to deal with this property arbitrarily nor foolishly. Your interest does not override that of other stockholders, nor of employees, nor of the public."

Thorby had talked that warning over with Pop before deciding to go ahead with Porcupine.

The Judge was right. His first impulse on taking over the business had been to shut down every Rudbek activity in that infected sector, cripple the slave trade that way. But you could not do that. You could not injure thousands, millions, of honest men to put the squeeze on criminals. It required more judicious surgery.

Which was what he was trying to do now. He started studying the unmarked folder.

Garsch stuck his head in. "Still running under the whip? What's the rush, boy?"

"Jim, where can I find ten honest men?"

"Huh? Diogenes was satisfied to hunt for one. Gave him more than he could handle."

"You know what I mean -- ten honest men each qualified to take over as a planetary manager for Rudbek." Thorby added to himself, "-- and acceptable to 'X' Corps."

"Now I'll tell one."

"Know any other solution? I'll have each one relieve a manager in the smelly sector and send the man he relieves back -- we can't fire them; we'll have to absorb them. Because we don't know. But the new men we can trust and each one will be taught how the slave trade operates and what to look for."

Garsch shrugged. "It's the best we can do. But forget the notion of doing it in one bite; we won't find that many qualified men at one time. Now look, boy, you ain't going to solve it tonight no matter how long you stare at those names. When you are as old as I

am, you'll know you can't do everything at once -- provided you don't kill yourself first. Either way, someday you die and somebody else has to do the work. You remind me of the man who set out to count stars. Faster he counted, the more new stars kept turning up. So he went fishing. Which you should, early and often."

"Jim, why did you agree to come here? I don't see you quitting work when the others do."

"Because I'm an old idiot. Somebody had to give you a hand. Maybe I relished a chance to take a crack at anything as dirty as the slave trade and this was my way -- I'm too old and fat to do it any other way."

Thorby nodded. "I thought so. I've got another way -- only, confound it, I'm so busy doing what I must do that I don't have time for what I ought to do . . . and I never get a chance to do what I want to do!"

"Son, that's universal. The way to keep that recipe from killing you is occasionally to do what you want to do anyhow. Which is right now. There's all day tomorrow ain't touched yet . . . and you are going out with me and have a sandwich and look at pretty girls."

"I'm going to have dinner sent up."

"No, you aren't. Even a steel ship has to have time for maintenance. So come along."

Thorby looked at the stack of papers. "Okay."

The old man munched his sandwich, drank his lager, and watched pretty girls, with a smile of innocent pleasure. They were indeed pretty girls; Rudbek City attracted the highest-paid talent in show business.

But Thorby did not see them. He was thinking.

A person can't run out on responsibility. A captain can't, a chief officer can't. But he did not see how, if he went on this way, he would ever be able to join Pop's corps. But Jim was right; here was a place where the filthy business had to be fought, too.

Even if he didn't like this way to tight it? Yes. Colonel Brisby had once said, about Pop: "It means being so devoted to freedom that you are willing to give up your own . . . be a beggar . . . or a slave . . . or die -- that freedom may live."

Yes, Pop, but I don't know how to do this job. I'd do it . . . I'm trying to do it. But I'm just fumbling. I don't have any talent for it

Pop answered, "Nonsense! You can learn to do anything if you apply yourself. You're going to learn if I haw to beat your silly head in!"

Somewhere behind Pop Grandmother was nodding agreement and looking stern. Thorby nodded back at her. "Yes, Grandmother. Okay, Pop. I'll try."

"You'll do more than try!"

"I'll do it. Pop."

"Now eat your dinner."

Obediently Thorby reached for his spoon, then noticed that it was a sandwich instead of a bowl of stew. Garsch said, "What are you muttering about?"

"Nothing. I just made up my mind."

"Give your mind a rest and use your eyes instead. There's a time and place for everything."

"You're right, Jim."

"Goodnight, son," the old beggar whispered. "Good dreams . . . and good luck!"

COMMON SENSE

JOE, THE RIGHT HAND head of Joe-Jim, addressed his words to Hugh Hoyland. "All right, smart boy, you've convinced the Chief Engineer." He gestured toward Bill Ertz with the blade of his knife, then resumed picking Jim's teeth with it. "So what? Where does it get you?"

"I've explained that," Hugh Hoyland answered irritably. "We keep on, until every scientist in the Ship, from the Captain to the greenest probationer, knows that the Ship moves and believes that we can make it move. Then we'll finish the Trip, as Jordan willed. How many knives can you muster?" he added.

"Well, for the love of Jordan! Listen, have you got some fool idea that we are going to help you with this crazy scheme?"

"Naturally. You're necessary to it."

"Then you had better think up another think. That's out. Bobo! Get out the checkerboard."

"O.K., Boss." The microcephalic dwarf hunched himself up off the floor plates and trotted across Joe-Jim's apartment.

"Hold it, Bobo." Jim, the left-hand head, had spoken. The dwarf stopped dead, his narrow forehead wrinkled. The fact that his two-headed master occasionally failed to agree as to what Bobo should do was the only note of insecurity in his tranquil bloodthirsty existence.

"Let's hear what he has to say," Jim continued. "There may be some fun in this."

"Fun! The fun of getting a knife in your ribs. Let me point out that they are my ribs, too. I don't agree to it."

"I didn't ask you to agree; I asked you to listen. Leaving fun out of it, it may be the only way to keep a knife out of our ribs."

"What do you mean?" Joe demanded suspiciously. "You heard what Ertz had to say." Jim flicked a thumb toward the prisoner. "The Ship's officers are planning to clean out the upper levels. How would you like to go into the Converter, Joe? You can't play checkers after we're broken down into hydrogen."

"Bunk! The Crew can't exterminate the muties; they've tried before."

Jim turned to Etrz. "How about it?"

Ertz answered somewhat diffidently, being acutely aware of his own changed status from a senior Ship's officer to prisoner of war. He felt befuddled anyhow; too much had happened and too fast. He had been kidnaped, hauled up to the Captain's veranda, and had there gazed out at the stars. The stars.

His hard-boiled rationalism included no such concept. If an Earth astronomer had had it physically demonstrated to him that the globe spun on its axis because someone turned a crank, the upset in evaluations could have been no greater.

Besides that, he was acutely aware that his own continued existence hung in fine balance. Joe-Jim was the first upper-level mutie he had ever met other than in combat, knife to knife. A word from him to that great ugly dwarf sprawled on the deck-- He chose his words. "I think the Crew would be successful, this time. We . . . they have organized

for it. Unless there are more of you than we think there are and better organized, I think it could be done. You see . . . well, uh, I organized it."

"You?"

"Yes. A good many of the Council don't like the policy of letting the muties alone. Maybe it's sound religious doctrine and maybe it isn't, but we lose a child here and a couple of pigs there. It's annoying."

"What do you expect muties to eat?" demanded Jim belligerently. "Thin air?"

"No, not exactly. Anyhow, the new policy was not entirely destructive. Any muties that surrendered and could be civilized we planned to give to masters and put them to work as part of the Crew. That is, any that weren't, uh . . . that were--" He broke off in embarrassment, and shifted his eyes from the two-headed monstrosity before him.

"You mean any that weren't physical mutations, like me," Joe filled in nastily. "Don't you?" he persisted. "For the likes of me it's the Converter, isn't it?" He slapped the blade of his knife nervously on the palm of his hand.

Ertz edged away, his own hand shifting to his belt. But no knife was slung there; he felt naked and helpless without it. "Just a minute," he said defensively, "you asked me; that's the situation. It's out of my hands. I'm just telling you."

"Let him alone, Joe. He's just handing you the straight dope. It's like I was telling you: either go along with Hugh's plan, or wait to be hunted down. And don't get any ideas about killing him; we're going to need him." As Jim spoke he attempted to return the knife to its sheath. There was a brief and silent struggle between the twins for control of the motor nerves to their right arm, a clash of will below the level of physical activity. Joe gave in.

"All right," he agreed surlily, "but if I go to the Converter, I want to take this one with me for company."

"Stow it," said Jim. "You'll have me for company."

"Why do you believe him?"

"He has nothing to gain by lying. Ask Alan."

Alan Mahoney, Hugh's friend and boyhood chum, had listened to the argument round-eyed, without joining it. He, too, had suffered the nerve-shaking experience of viewing the outer stars, but his ignorant peasant mind had not the sharply formulated opinions of Ertz, the Chief Engineer. Ertz had been able to see almost at once that the very existence of a world outside the Ship changed all his plans and everything he had believed in; Alan was capable only of wonder.

"What about this plan to fight the muties, Alan?"

"Huh? Why, I don't know anything about it. Shucks, I'm not a scientist. Say, wait a minute; there was a junior officer sent in to help our village scientist, Lieutenant Nelson." He stopped and looked puzzled.

"What about it? Go ahead."

"Well, he has been organizing the cadets in our village, and the married men, too, but not so much. Making 'em practice with their blades and slings. Never told us what for, though."

Ertz spread his hands. "You see?"

Joe nodded. "I see," he admitted grimly.

Hugh Hoyland looked at him eagerly. "Then you're with me?"

"I suppose so," Joe admitted. "Right!" added Jim.

Hoyland looked back to Ertz. "How about you, Bill Ertz?"

"What choice have I got?"

"Plenty. I want you with me wholeheartedly. Here's the layout: The Crew doesn't count; it's the officers we have to convince. Any that aren't too addlepated and stiff-necked to understand after they've seen the stars and the Control Room, we keep. The others--" he drew a thumb across his throat while making a harsh sibilance in his cheek, "the Converter."

Bobo grinned happily and imitated the gesture and the sound.

Ertz nodded. "Then what?"

"Muties and Crew together, under a new Captain, we move the Ship to Far Centaurus! Jordan's Will be done!"

Ertz stood up and faced Hoyland. It was a heady notion, too big to be grasped at once, but, by Jordan! he liked it. He spread his hands on the table and leaned across it. "I'm with you, Hugh Hoyland!"

A knife clattered on the table before him, one from the brace at Joe-Jim's belt. Joe looked startled, seemed about to speak to his brother, then appeared to think better of it. Ertz looked his thanks and stuck the knife in his belt.

The twins whispered to each other for a moment, then Joe spoke up. "Might as well make it stick," he said. He drew his remaining knife and, grasping the blade between thumb and forefinger so that only the point was exposed, he jabbed himself in the fleshly upper part of his left arm. "Blade for blade!"

Ertz's eyebrows shot up. He whipped out his newly acquired blade and cut himself in the same location. The blood spurted and ran down to the crook of his arm. "Back to back!" He shoved the table aside and pressed his gory shoulder against the wound on Joe-Jim.

Alan Mahoney, Hugh Hoyland, Bobo: all had their blades out, all nicked their arms till the skin ran red and wet. They crowded in, bleeding shoulders pushed together so that the blood dripped united to the death.

"Blade for blade!"

"Back to back!"

"Blood to blood!"

"Blood brothers, to the end of the Trip!"

An apostate scientist, a kidnaped scientist, a dull peasant, a two-headed monster, a apple-brained moron; five knives, counting Joe-Jim as one; five brains, counting Joe-Jim as two and Bobo as none; five brains and five knives to overthrow an entire culture.

"But I don't want to go back, Hugh." Alan shuffled his feet and looked dogged. "Why can't I stay here with you? I'm a good blade."

"Sure you are, old fellow. But right now you'll be more useful as a spy."

"But you've got Bill Ertz for that."

"So we have, but we need you too. Bill is a public figure; he can't duck out and climb to the upper levels without it being noticed and causing talk. That's where you come in; you're his go-between."

"I'll have a Huff of a time explaining where I've been."

"Don't explain any more than you have to. But stay away from the Witness." Hugh had a sudden picture of Alan trying to deceive the old village historian, with his searching tongue and lust for details. "Keep clear of the Witness. The old boy would trip you up."

"Him? You mean the old one; he's dead. Made the Trip long since. The new one don't amount to nothing."

"Good. If you're careful, you'll be safe." Hugh raised his voice. "Bill! Are you ready to go down?"

"I suppose so." Ertz picked himself up and reluctantly put aside the book he had been reading _The Three Musketeers_, illustrated, one of Joe-Jim's carefully stolen library. "Say, that's a wonderful book. Hugh, is Earth really like that?"

"Of course. Doesn't it say so in the book?"

Ertz chewed his lip and thought about it. "What is a house?"

"A house? A house is a sort of a. . . a sort of a compartment."

"That's what I thought at first, but how can you ride on a compartment?"

"Huh? What do you mean?"

"Why, all through the book they keep climbing on their houses and riding away."

"Let me see that book," Joe ordered. Ertz handed it to him. Joe-Jim thumbed through it rapidly. "I see what you mean. Idiot! They ride horses, not houses."

"Well, what's a horse?"

"A horse is an animal, like a big hog, or maybe like a cow. You squat up on top of it and let it carry you along."

Ertz considered this. "It doesn't seem practical. Look, when you ride in a litter, you tell the chief porter where you want to go. How can you tell a cow where you want to go?"

"That's easy. You have a porter lead it."

Ertz conceded the point. "Anyhow, you might fall off. It isn't practical. I'd rather walk."

"It's quite a trick," Joe explained. "Takes practice."

"Can you do it?"

Jim sniggered. Joe looked annoyed. "There are no horses in the Ship."

"OK, O.K. But look. These guys Athos, Porthos, and Aramis, they had something--"

"We can discuss that later," Hugh interrupted. "Bobo is back. Are you ready to go, Bill?"

"Don't get in a hurry, Hugh. This is important. These chaps had knives."

"Sure. Why not?"

"But they were better than our knives. They had knives as long as your arm, maybe longer. If we are going to fight the whole Crew, think what an advantage that would be."

"Hm-m-m." Hugh drew his knife and looked at it, cradling it in his palm. "Maybe. You couldn't throw it as well."

"We could have throwing knives, too."

"Yes, I suppose we could."

The twins had listened Without comment. "He's right," put in Joe. "Hugh, you take care of placing the knives. Jim and I have some reading to do." Both of Joe-Jim's

heads were busy thinking of other books they owned, books. that discussed in saguinary detail the infinitely varied methods used by mankind to shorten the lives of enemies. He was about to institute a War College Department of Historical Research, although he called his project by no such fancy term.

"O.K.," Hugh agreed, "but you will have to say the word to them."

"Right away." Joe-Jim stepped out of his apartment into the passageway where Bobo had assembled a couple of dozen of Joe-Jim's henchmen among the muties. Save for Long Arm, Pig, and Squatty, who had taken part in the rescue of Hugh, they were all strangers to Hugh, Alan, and Bill, and they were all sudden death to strangers.

Joe-Jim motioned for the three from the lower decks to join him. He pointed them out to the muties, and ordered them to look closely and not to forget: these three were to have safe passage and protection wherever they went. Furthermore, in Joe-Jim's absence his men were to take orders from any of them.

They stirred and looked at each other. Orders they were used to, but from Joe-Jim only.

A big-nosed individual rose up from his squat and addressed them. He looked at Joe-Jim, but his words were intended for all. "I am Jack-of-the-Nose. My blade is sharp and my eye is keen. Joe-Jim with the two wise heads is my Boss and my knife fights for him. But Joe is my Boss, not strangers from heavy decks. What do say, knives? Is that not the Rule?"

He paused. The others had listened to him stealing glances at Joe-Jim. Joe muttered something of the corner of his mouth to Bobo. Jack O'Nose opened his mouth to continue. There was a smash of splintering teeth, a crack from a broken neck; his mouth stopped with a missile.

Bobo reloaded his slingshot. The body, not yet still, settled slowly to the deck. Joe-Jim waved a hand it. "Good eating!" Joe announced. "He's yours." The muties converged on the body as if they had suddenly been unleashed. They concealed it completely in a busy grunting pile-up. Knives out, they cuffed and crowded each other for a piece of the prize.

Joe-Jim waited patiently for the undoing to be over, then, when the place where Jack O'Nose had been was no more than a stain on the deck and the several polite arguments over the sharing had died down, he started again; Joe spoke. "Long Arm, you and Forty-one and the Ax go down with Bobo, Alan and Bill. The rest here."

Bobo trotted away in the long loping strides, sped on by the low pseudogravity near the axis of rotation of Ship. Three of the muties detached themselves from pack and followed. Ertz and Alan Mahoney hurried catch up.

When he reached the nearest staircase trunk, he skipped out into space without breaking his stride letting centrifugal force carry him down to the next. Alan and the muties followed; but Ertz paused on the edge and looked back. "Jordan keep you, brother!" he sang out.

Joe-Jim waved to him. "And you," acknowledged Joe.

"Good eating!" Jim added.

"Good eating!"

Bobo led them down forty-odd decks, well into no man's land inhabited neither by mutie nor crew, stopped. He pointed in succession to Long Arm, Forty-one, and the Ax. "Two Wise Heads say for you to watch here. You first," he added, pointing again to Forty-one. "It's like this," Ertz amplified. "Alan and I are going down to heavy-weight level. You three are to keep a guard here, one at a time, so that I will be able to send messages back up to Joe-Jim. Get it?"

"Sure. Why not?" Long Arm answered.

"Joe-Jim says it," Forty-one commented with a note of finality in his voice. The Ax grunted agreeably.

"O.K.," said Bobo. Forty-one sat down at the stairwell, letting his feet hang over, and turned his attention to food which he had been carrying tucked under his left arm.

Bobo slapped Ertz and Alan on their backs. "Good eating," he bade them, grinning. When he could get his breath, Ertz acknowledged the courteous thought, then dropped at once to the next lower deck, Alan close after him. They had still many decks to go to 'civilization.'

Commander Phineas Narby, Executive Assistant to Jordan's Captain, in rummaging through the desk of the Chief Engineer was amused to find that Bill Ertz had secreted therein a couple of Unnecessary books. There were the usual Sacred books, of course, including the priceless _Care and Maintenance of the Auxiliary Fourstage Converter_ and the _Handbook of Power, Light, and Conditioning, Starship Vanguard_. These were Sacred books of the first order, bearing the imprint of Jordan himself, and could lawfully be held only by the Chief Engineer.

Narby considered himself a skeptic and rationalist. Belief in Jordan was a good thing -- for the Crew. Nevertheless the sight of a title page with the words 'Jordan Foundation' on it stirred up within him a trace of religious awe such as he had not felt since before he was admitted to scientisthood.

He knew that the feeling was irrational; probably there had been at some time in the past some person or persons called Jordan. Jordan might have been an early engineer or captain who codified the common sense and almost instinctive rules for running the Ship. Or, as seemed more likely, the Jordan myth went back much farther than this book in his hand, and its author had simply availed himself of the ignorant superstitions of the Crew to give his writings authority. Narby knew how such things were done; he planned to give the new policy with respect to the muties the same blessing of Jordan when the time was ripe for it to be put into execution. Yes, order and discipline and belief in authority were good things, for the Crew. It was equally evident that a rational, coolheaded common sense was a proper attribute for the scientists who were custodians of the Ship's welfare, common sense and a belief in nothing but facts.

He admired the exact lettering on the pages of the book he held. They certainly had excellent clerks in those ancient times; not the sloppy draftsmen he was forced to put up with, who could hardly print two letters alike.

He made a mental note to study these two indispensable handbooks of the engineering department before turning them over to Ertz's successor. It would be well, he thought, not to be too dependent on the statements of the Chief Engineer when he himself succeeded to the captaincy. Narby had no particular respect for engineers, largely because

he had no particular talent for engineering. When he had first reached scientisthood and had been charged to defend the spiritual and material welfare of the Crew, had sworn to uphold the Teachings of Jordan, he soon discovered that administration and personnel management were more in his lines than tending the converter or servicing the power lines. He had served as clerk, village administrator, recorder to the Council, personnel officer, and was now chief executive for Jordan's Captain himself, ever since an unfortunate and rather mysterious accident had shortened the life of Narby's predecessor in that post.

His decision to study up on engineering before a new Chief Engineer was selected brought to mind the problem of choosing a new chief. Normally the Senior Watch Officer for the Converter would become Chief Engineer when a chief made the Trip, but in this case, Mort Tyler, the Senior Watch, had made the Trip at the same time; his body had been found, stiff and cold, after the mutie raid which had rescued that heretic, Hugh Hoyland. That left the choice wide open and Narby was a bit undecided as to whom he should suggest to the Captain.

One thing was certain; the new chief must not be a man with as much aggressive initiative as Ertz. Narby admitted that Ertz had done a good job in organizing the Crew for the proposed extermination of the muties, but his very efficiency had made him too strong a candidate for succession to the captaincy, if and when. Had he thought about it overtly Narby might have admitted to himself that the present Captain's life span had extended unduly because Narby was not absolutely certain that Ertz would not be selected. What he did think was that this might be a good time for the old Captain to surrender his spirit to Jordan. The fat old fool had long outlived his usefulness; Narby was tired of having to wheedle him into giving the proper orders. If the Council were faced with the necessity of selecting a new Captain at this time, there was but one candidate available. Narby put the book down, his mind made up.

The simple decision to eliminate the old Captain carried with it in Narby's mind no feeling of shame, nor sin, nor disloyalty. He felt contempt but not dislike for the Captain, and no mean spirit colored his decision to kill him. Narby's plans were made on the noble level of statesmanship. He honestly believed that his objective was the welfare of the entire Crew; common-sense administration, order and discipline, good eating for everyone. He selected himself because it was obvious to him that he was best fitted to accomplish those worthy ends. That some must make the Trip in order that these larger interests be served he did not find even mildly regrettable, but he bore them no malice.

"What in the Huff are you doing at my desk?"

Narby looked up to see the late Bill Ertz standing over him, not looking pleased. He looked again, then as an afterthought closed his mouth. He had been so certain, when Ertz failed to reappear after the raid, that he had made the Trip and was in all probability butchered and eaten; so certain that it was now a sharp wrench to his mind to see Ertz standing before him, aggressively alive. But he pulled himself together.

"Bill! Jordan bless you, man, we thought you had made the Trip! Sit down, sit down, and tell me what happened to you."

"I will if you will get out of my chair," Ertz answered bitingly.

"Oh, sorry!" Narby hastily vacated the chair at Ertz's desk and found another.

"And now," Ertz continued, taking the seat Narby had left, "you might explain why you were going through my writings."

Narby managed to look hurt. "Isn't that obvious? We assumed you were dead. Someone had to take over and attend to your department until a new chief was designated. I was acting on behalf of the Captain."

Ertz looked him in the eyes. "Don't give me that guff, Narby. You know and I know who puts words in the Captain's mouth; we've planned it often enough. Even if you did think I was dead, it seems to me you could wait longer than the time between two sleeps to pry through my desk."

"Now really, old man, when a person is missing after a mutie raid, it's a common-sense assumption that he has made the Trip."

"O.K., O.K., skip it. Why didn't Mort Tyler take over in the meantime?"

"He's in the Converter."

"Killed, eh? But who ordered him put in the Converter? That much mass will make a terrific peak in the load."

"I did, in place of Hugh Hoyland. Their masses were nearly the same, and your requisition for the mass of Hugh Hoyland was unfilled."

"Nearly the same isn't good enough in handling the Converter. I'll have to check on it." He started to rise.

"Don't get excited," said Narby. "I'm not an utter fool in engineering, you know. I ordered his mass to be trimmed according to the same schedule you had laid out for Hoyland."

"Well, all right. That will do for now. But I will have to check it. We can't afford to waste mass."

"Speaking of waste mass," Narby said sweetly, "I found a couple of Unnecessary books in your desk."

"Well?"

"They are classed as mass available for power, you know."

"So? And who is the custodian of mass allocated for power?"

"You are certainly. But what were they doing in your desk?"

"Let me point out to you, my dear Captain's Best Boy, that it lies entirely within my discretion where I choose to store mass available for power."

"Hm-m-m. I suppose you are right. By the way, if you don't need them for the power schedule at once, would you mind letting me read them?"

"Not at all, if you want to be reasonable about it. I'll check them out to you: have to do that; they've already been centrifuged. Just be discreet about it."

"Thanks. Some of those ancients had vivid imaginations. Utterly crazy, of course, but amusing for relaxation."

Ertz got out the two volumes and prepared a receipt for Narby to sign. He did this absent-mindedly, being preoccupied with the problem of how and when to tackle Narby. Phineas Narby he knew to be a key man in the task he and his blood brothers had undertaken, perhaps the key man. If he could be won over... "Fine," he said, when Narby had signed, "I wonder if we followed the wisest policy in Hoyland's case." Narby looked surprised, but said nothing.

"Oh, I don't mean that I put any stock in his story," Ertz added hastily, "but I feel that we missed an opportunity. We should have kidded him along. He was a contact with

the muties. The worst handicap we work under in trying to bring mutie country under the rule of the Council is the fact that we know very little about theni. We don't know how many of them there are, nor how strong they are, or how well organized. Besides that, we will have to carry the fight to them and that's a big disadvantage. We don't really know our way around the upper decks. If we had played along with him and pretended to believe his story, we might have learned a lot of things."

"But we couldn't rely on what he told us," Narby pointed out

"We didn't need to. He offered us an opportunity to go all the way to no-weight, and look around."

Narby looked astounded. "You surely aren't serious? A member of the Crew that trusted the muties' promise not to harm him wouldn't get up to no-weight; he'd make the Trip -- fast!"

"I'm not so certain about that," Ertz objected. "Hoyland believed his own story, I'm sure of that. And--"

"What! All that utter nonsense about the Ship being capable of moving. The solid Ship." He pounded the bulkhead. "No one could believe that."

"But I tell you he did. He's a religious fanatic, granted. But he saw something up there, and that was how he interpreted it. We could have gone up to see whatever it was he was raving about and used the chance to scout out the muties."

"Utterly foolhardy!"

"I don't think so. He must have a great deal of influence among the muties; look at the trouble they went to just to rescue him. If he says he can give us safe passage up to no-weight, I think he can."

"Why this sudden change of opinion?"

"It was the raid that changed my mind. If anyone had told me that a gang of muties would come clear down to high-weight and risk their necks to save the life of one man I would not have believed him. But it happened. I'm forced to revise my opinions. Quite aside from his story, it's evident that the muties will fight for him and probably take orders from him. If that is true, it would be worth while to pander to his religious convictions if it would enable us to gain control over the muties without having to fight for it."

Narby shrugged it off. "Theoretically you may have something there. But why waste time over might-have-beens? If there was such an opportunity, we missed it."

"Maybe not. Hoyland is still alive and back with the muties. If I could figure out some way of getting a message to him, we might still be able to arrange it."

"But how could you?"

"I don't know exactly. I might take a couple of the boys and do some climbing. If we could capture a mutie without killing him, it might work out."

"A slim chance."

"I'm willing to risk it"

Narby turned the matter over in his mind. The whole plan seemed to him to be filled with long chances and foolish assumptions. Nevertheless if Ertz were willing to take the risk and it did work, Narby's dearest ambition would be much nearer realization. Subduing the unities by force would be a long and bloody job, perhaps an impossible job. He was clearly aware of its difficulty.

If it did not work, nothing was lost, but Ertz. Now that he thought it over, Ertz would be no loss at this point in the game. Hm-m-m.

"Go ahead," he said. "You are a brave man, but its a worth-while venture."

"O.K.," Ertz agreed. "Good eating."

Narby took the hint. "Good eating," he answered, gathered up the books, and left. It did not occur to him until later that Ertz had not told him where he had been for so long.

And Ertz was aware that Narby had not been entirely frank with him, but, knowing Narby, he was not surprised. He was pleased enough that his extemporaneous groundwork for future action had been so well received. It never did occur to him that it might have been simpler and more effective to tell the truth.

Ertz busied himseif for a short time in making a routine inspection of the Converter and appointed an acting Senior Watch Officer. Satisfied that his department could then take care of itself during a further absence, he sent for his chief porter and told the servant to fetch Alan Mahoney from his village. He had considered ordering his litter and meeting Mahoney halfway, but he decided against it as being too conspicuous.

Alan greeted him with enthusiasm. To him, still an unmarried cadet and working for more provident men when his contemporaries were all heads of families and solid men of property, the knowledge that he was blood brother to a senior scientist was quite the most important thing that had ever happened to him, even overshadowing his recent adventures, the meaning of which he was hardly qualified to understand anyway.

Ertz cut him short, and hastily closed the door to the outer engineering office. "Walls have ears," he said quietly, "and certainly clerks have ears, and tongues as well. Do you want us both to make the Trip?"

"Aw, gosh, Bill . . . I didn't mean to--"

"Never mind. I'll meet you on the same stair trunk we came down by, ten decks above this one. Can you count?"

"Sure, I can count that much. I can count twice that much. One and one makes two, and one more makes three, and one more makes four, and one makes five, and--"

"That's enough. I see you can. But I'm relying more on your loyalty and your knife than I am on your mathematical ability. Meet me there as soon as you can. Go up somewhere where you won't be noticed."

Forty-one was still on watch when they reached the rendezvous. Ertz called him by name while standing out of range of slingshot or thrown knife, a reasonable precaution in dealing with a creature who had grown to man size by being fast with his weapons. Once identification had been established, he directed the guard to find Hugh Hoyland. He and Alan sat down to wait.

Forty-one failed to find Hugh Hoyland at Joe-Jim's apartment. Nor was Joe-Jim there. He did find Bobo, but the pinhead was not very helpful. Hugh, Bobo told him, had gone up where-everybody-flies. That meant very little to Forty-one; he had been up to no-weight only once in his life. Since the level of weightlessness extended the entire length of the Ship, being in fact the last concentric cylinder around the Ship's axis, not that Forty-one could conceive it in those terms, the information that Hugh. had headed for no-weight was not helpful.

Forty-one was puzzled. An order from Joe-Jim was not to be ignored and he had got it through his not overbright mind that an order from Ertz carried the same weight. He woke Bobo up again. "Where is the Two Wise Heads?"

"Gone to see knifemaker." Bobo closed his eyes again.

That was better. Forty-one knew where the knifemaker lived. Every mutie had dealings with her; she was the indispensable artisan and tradesman of mutie country. Her person was necessarily taboo; her workshop and the adjacent neighborhood were neutral territory for all. He scurried up two decks and hurried thence.

A door reading THERMODYNAMIC LABORATORY: KEEP OUT was standing open. Forty-one could not read; neither the name nor the injunction mattered to him. But he could hear voices, one of which be identified as coming from the twins, the other from the knifemaker. He walked in. "Boss," be began.

"Shut up," said Joe. Jim did not look around but continued his argument with the Mother of Blades. "You'll make knives," he said, "and none of your lip."

She faced him, her four calloused hands set firmly on her broad hips. Her eyes were reddened from staring into the furnace in which she heated her metal; sweat ran down her wrinkled face into the sparse gray mustache which disfigured her upper lip, and dripped onto her bare chest. "Sure I make knives," she snapped. "Honest knives. Not pig-stickers like you want me to make. Knives as long as your arm, ptui!" She spat at the cherry-red lip of the furnace.

"Listen, you old Crew bait," Jim replied evenly, "you'll make knives the way I tell you to, or I'll toast your feet in your own furnace. Hear me?"

Forty-one was struck speechless. No one ever talked back to the Mother of Blades; the Boss was certainly a man of power!

The knifemaker suddenly cracked. "But that's not the right way to make knives," she complained shrilly. "They wouldn't balance right. I'll show you." She snatched up two braces of knives from her workbench and let fly at a cross-shaped target across the room -- not in succession, but all four arms swinging together, all four blades in the air at once. They spwiged into the target, a blade at the extreme end of each arm of the cross. "See? You couldn't do that with a long knife. It would fight with itself and not go straight."

"Boss--" Forty-one tried again. Joe-Jim handed him a mouthful of knuckles without looking around.

"I see your point," Jim told the knifemaker, "but we don't want these knives for throwing. We want them for cutting and stabbing up close. Get on with it; I want to see the first one before you eat again."

The old woman bit her lip. "Do I get my usuals?" she said sharply.

"Certainly you get your usuals," he assured her. "A tithe on every kill till the blades are paid for, and good eating all the time you work."

She shrugged her misshapen shoulders. "O.K." She turned, tonged up a long flat fragment of steel with her two left hands and clanged the stock into the furnace. Joe-Jim turned to Forty-one.

"What is it?" Joe asked.

"Boss, Ertz sent me to get Hugh."

"Well, why didn't you do it?"

"I don't find him. Bobo says he's gone up to no-weight."

"Well, go get him. No, that won't do; you wouldn't know where to find him. I'll have to do it myself. Go back to Ertz and tell him to wait."

Forty-one hurried off. The Boss was all right, but it was not good to tarry in his presence.

"Now you've got us running errands," Jim commented sourly. "How do you like being a blood brother, Joe?"

"You got us into this."

"So? The blood-swearing was your idea."

"Damn it, you know why I did that. They took it seriously. And we are going to need all the help we can get, if we are to get out of this with a skin that will hold water."

"Oh? So you didn't take it seriously?"

"Did you?"

Jim smiled cynically. "Just about as seriously as you do, my dear, deceitful brother. As matters stand now, it is much, much healthier for you and me to keep to the bargain right up to the hilt. 'All for one and one for all!'"

"You've been reading Dumas again."

"And why not?"

"That's O.K. But don't be a damn fool about it."

"I won't be. I know which side of the blade is edged."

Joe-Jim found Squatty and Pig sleeping outside the door which led to the Control Room. He knew then that Hugh must be inside, for he had assigned the two as personal bodyguards to Hugh. It was a foregone conclusion anyhow; if Hugh had gone up to no-weight, he would be heading either for Main Drive, or the Control Room, more probably the Control Room. The place held a tremendous fascination for Hugh. Ever since the earlier time when Joe-Jim had almost literally dragged him into the Control Room and had forced him to see with his own eyes that the Ship was not the whole world but simply a vessel adrift in a much larger world -- a vessel that could be driven and moved -- ever since that time and throughout the period that followed while he was still a captured slave of Joe-Jim's, he had been obsessed with the idea of moving the Ship, of sitting at the controls and making it go!

It meant more to him than it could possibly have meant to a space pilot from Earth. From the time that the first rocket made the little jump from Terra to the Moon, the spaceship pilot has been the standard romantic hero whom every boy wished to emulate. But Hugh's ambition was of no such picayune caliber; he wished to move his world. In Earth standards and concepts it would be less ambitious to dream of equipping the Sun with jets and go gunning it around the Galaxy.

Young Archimedes had his lever; he sought a fulcrum.

Joe-Jim paused at the door of the great silver stellarium globe which constituted the Control Room and peered in. He could not see Hugh, but he knew that he must be at the controls in the chair of the chief astrogator, for the lights were being manipulated. The images of the stars were scattered over the inner surface of the sphere producing a simulacrum of the heavens outside the Ship. The illusion was not fully convincing from the door where Joe-Jim rested; from the center of the sphere it would be complete.

Sector by sector the stars snuffed out, as Hugh manipulated the controls from the center of the sphere. A sector was left shining on the far side forward. It was marked by a large and brilliant orb, many times as bright as its companions. Joe-Jim ceased watching and pulled himself hand over hand up to the control chairs. "Hugh!" Jim called out.

"Who's there?" demanded Hugh and leaned his head out of the deep chair. "Oh, it's you. Hello."

"Ertz wants to see you. Come on out of there."

"O.K. But come here first. I want to show you something."

"Nuts to him," Joe said to his brother. But Jim answered, "Oh, come on and see what it is. Won't take long."

The twins climbed into the control station and settled down in the chair next to Hugh's. "What's up?"

"That star out there," said Hugh, pointing at the brilliant one. "It's grown bigger since the last time I was here."

"Huh? Sure it has. It's been getting brighter for a long time. Couldn't see it at all first time I was ever in here."

"Then we're closer to it."

"Of course," agreed Joe. "I knew that. It just goes to prove that the Ship is moving."

"But why didn't you tell me about this?"

"About what?"

"About that star. About the way it's been growing bigger."

"What difference does it make?"

"What difference does it make! Why, good Jordan, man, that's it. That's where we're going. That's the End of the Trip!"

Joe-Jim, both of him, was momentarily startled. Not being himself concerned with any objective other than his own safety and comfort, it was hard for him to realize that Hugh, and perhaps Bill Ertz as well, held as their first objective the recapturing of the lost accomplishments of their ancestors' high order to complete the long-forgotten, half-mythical Trip to Far Centaurus.

Jim recovered himself. "Hm-m-m. Maybe. What makes you think that star is Far Centaurus?"

"Maybe it isn't. I don't care. But it's the star we are closest to and we are moving toward it. When we don't know which star is which, one is as good as another. Joe-Jim, the ancients must have had some way of telling the stars apart."

"Sure they did," Joe confirmed, "but what of it? You've picked the one you want to go to. Come on. I want to get back down."

"All right," Hugh agreed reluctantly. They began the long trip down.

Ertz sketched out to Joe-Jim and Hugh his interview with Narby. "Now my idea in coming up," he continued, "is this: I'll send Alan back down to heavy-weight with a message to Narby, telling him that I've been able to get in contact with you, Hugh, and urging him to meet us somewhere above Crew country to hear what I've found out."

"Why don't you simply go back and fetch him yourself?" objected Hugh.

Ertz looked slightly sheepish. "Because you tried that method on me, and it didn't work. You returned from mutie country and told me the wonders you had seen. I didn't believe you and had you tried for heresy. If Joe-Jim hadn't rescued you, you would have gone to the Converter. If you had not hauled me up to no-weight and forced me to see with my own eyes, I never would have believed you. I assure you Narby won't be any easier a lock to force than I was. I want to get him up here, then show him the stars and make him see, peacefully if we can; by force if we must."

"I don't get it," said Joe. "Why wouldn't it be simpler to cut his throat?"

"It would be a pleasure. But it wouldn't be smart. Narby can be a tremendous amount of help to us. Jim, if you knew the Ship's organization the way I do, you would see why. Narby carries more weight in the Council than any other Ship's officer and he speaks for the Captain. If we win him over, we may never have to fight at all. if we don't ... well, I'm not sure of the outcome, not if we have to fight."

"I don't think he'll come up. He'll suspect a trap."

"Which is another reason why Alan must go rather than myself. He would ask me a lot of embarrassing questions and be dubious about the answers. Alan he won't expect so much of." Ertz turned to Alan and continued, "Alan, you don't know anything when he asks you but just what I'm about to tell you. Savvy?"

"Sure. I don't know nothing, I ain't seen nothing, I ain't heard nothing." With frank simplicity he added, "I never did know much."

"Good. You've never laid eyes on Joe-Jim, you've never heard of the stars. You're just my messenger, a knife I took along to help me. Now here's what you are to tell him." He gave Alan the message for Narby, couched in simple but provocative terms, then made sure that Alan had it all straight. "All right, on your way! Good eating."

Alan slapped the grip of his knife, answered, "Good eating!" and sped away.

It is not possible for a peasant to burst precipitously into the presence of the Captain's Executive; Alan found that out. He was halted by the master-at-arms on watch outside Narby's suite, cuffed around a bit for his insistence on entering, referred to a boredly unsympathetic clerk who took his name and told him to return to his village and wait to be summoned. He held his ground and insisted that he had a message of immediate importance from the Chief Engineer to Commander Narby. The clerk looked up again. "Give me the writing."

"There is no writing."

"What? That's ridiculous. There is always a writing. Regulations."

"He had no time to make a writing. He gave me a word message."

"What is it?"

Alan shook his head. "It is private, for Commander Narby only. I have orders."

The clerk looked his exasperation.

But, being only a probationer, he forewent the satisfaction of direct and immediate disciplining of the recalcitrant churl in favor of the safer course of passing the buck higher up.

The chief clerk was brief. "Give me the message."

Alan braced himself and spoke to a scientist in a fashion be had never used in his life, even to one as junior, as this passed clerk. "Sir, all I ask is for you to tell Commrnder

Narby that I have a message for him from Chief Engineer Ertz. If the message is not delivered, I won't be the one to go to the Converter! But I don't dare give the message to anyone else."

The under official pulled at his lip, and decided to take a chance on disturbing his superior.

Alan delivered his message to Narby in a low voice in order that the orderly standing just outside the door might not overhear. Narby stared at him. "Ertz wants me to come along with you up to mutie country?"

"Not all the way up to mutie country, sir. To a point in between, where Hugh Hoyland can meet you."

Narby exhaled noisily. "It's preposterous. I'll send a squad of knives up to fetch him down to me."

Alan delivered the balance of his message. This time he carefully raised his voice to ensure that the orderly, and, if possible, others might hear his words. "Ertz said to tell you that if you were afraid to go, just to forget the whole matter. He will take it up with the Council himself."

Alan owed his continued existence thereafter to the fact that Narby was the sort of man who lived by shrewdness rather than by direct force. Narby's knife was at his belt; Alan was painfully aware that he had been required to deposit his own with the master-at-arms.

Narby controlled his expression. He was too intelligent to attribute the insult to the oaf before him, though he promised himself to give said oaf a little special attention at a more convenient time. Pique, curiosity, and potential loss of face all entered into his decision. "I'm coming with you," he said savagely. "I want to ask him if you got his message straight."

Narby considered having a major guard called out to accompany him, but he discarded the idea. Not only would it make the affair extremely public before he had an opportunity to judge its political aspects, but also it would cost him almost as much face as simply refusing to go. But he inquired nervously of Alan as Alan retrieved his weapon from the master-at-arms, "You're a good knife?"

"None better," Alan agreed cheerfully.

Narby hoped that the man was not simply boasting. Muties! Narby wished that he himself had found more time lately for practice in the manly arts.

Narby gradually regained his composure as he followed Alan up toward low-weight. In the first place nothing happened, no alarms; in the second place Alan was obviously a cautious and competent scout, one who moved alert and noiselessly and never entered a deck without pausing to peer cautiously around before letting his body follow his eye. Narby might have been more nervous had be hearing what Alan did hear: little noises from the depths of the great dim passageways, rustlings which told him that their progress was flanked on all sides. This worried Alan subconsciously, although he had expected something of the sort; he knew that both Hugh and Joe-Jim were careful captains who would not neglect to cover an approach. He would have worried more if he had not been able detect a reconnaissance which should have been present.

When he approached the rendezvous some twenty decks above the highest civilized level, he stopped and whistled. A whistle answered him. "It's Alan," he called out.

"Come up and show yourself?" Alan did so, without neglecting his usual caution. When be saw no one but his friends: Ertz, Hugh, Joe-Jim, and Bobo, be motioned for Narby to foflow him.

The sight of Joe-Jim and Bobo broke Narby's unsteady calm with a sudden feeling that he had been trapped. He snatched at his knife and backed clumsily down the stair then turned. Bobo's knife was out even faster. For a split moment the outcome hung balanced, ready to fall either way. But Joe-Jim slapped Bobo across the face, took his knife from him and let it clatter to the deck, then relieved him of his slingshot.

Narby was in full flight, with Hugh and Ertz calling vainly after him. "Fetch him, Bobo!" Jim commanded, "and do not hurt him." Bobo lumbered away.

He was back in fairly short order. "Run fast," be commented. He dropped Narby to the deck where the officer lay almost quiet while he fought to catch his breath. Bobo took Narby's knife from his own belt and tried it by shaving coarse black hairs from his left forearm. "Good blade," he approved.

"Give it back to him," Jim ordered. Bobo looked extremely startled but complied wistfully. Joe-Jim returned Bobo's own weapons to him.

Narby matched Bobo's surprise at regaining his sidearm, but he concealed it better. He even managed to accept it with dignity.

"Look," Ertz began in worried tones, "I'm sorry you got your wind up, Fin. Bobo's not a bad sort. It was the only way to get you back."

Narby fought with himself to regain the cool self-discipline with which he habitually met the world. Damn! he told himself, this situation is preposterous. Well... "Forget it," he said shortly. "I was expecting to meet you; I didn't expect a bunch of armed muties. You have an odd taste in playmates, Ertz."

"Sorry," Bill Ertz replied, "I guess I should have warned you." a piece of mendacious diplomacy. "But they're all right. Bobo you've met. This is Joe-Jim. He's a. . . a sort of a Ship's officer among the muties."

"Good eating," Joe acknowledged politely.

"Good eating," Narby replied mechanically.

"Hugh you know, I think." Narby agreed that he did.

An embarrassed pause followed. Narby broke it.

"Well," he said, "you must have had some reason to send word for me to come up here. Or was it just to play games?"

"I did," Ertz agreed. "I -- Shucks, I hardly know where to start. See here, Narby, you won't believe this, but I've seen. Everything Hugh told us was true. I've been in the Control Room. I've seen the stars. I know?"

Narby stared at him. "Ertz," he said slowly, "you've gone out of your mind."

Hugh Hoyland spoke up excitedly. "That's because you haven't seen. It moves, look you. The Ship moves like a--"

"Fit handle this," Ertz cut in. "listen to me, Narby. What it all means you will soon decide for yourself, but I can tell you what I saw. They took me up to no-weight and into the Captain's veranda. That's a compartment with a glass wall. You can stare right out through into a great black empty space: big, bigger than anything could be. Bigger than the Ship. And there were lights out there, stars, just like the ancient myths said."

Narby looked both amazed and disgusted. "Where's your logic, man? I thought you were a scientist. What do you mean, 'bigger than the Ship'? That's an absurdity, a contradiction in terms. By definition, the Ship is the Ship. All else is a part of it."

Ertz shrugged helplessly. "I know it sounds that way. I can't explain it; it defies all logic. It's -- Oh, Huff! You'll know what I mean when you see it."

"Control yourself," Narby advised him. "Don't talk nonsense. A thing is logical or it isn't. For a thing to be it must occupy space. You've seen, or thought you saw, something remarkable, but whatever it was, it can be no larger than the compartment it was in. You can't show me anything that contradicts an obvious fact of nature."

"I told you I couldn't explain it."

"Of course you can't."

The twins had been whispering disgustedly, one head to the other. "Stop the chatter," Joe said in louder tones. "We're ready to go. Come on."

"Sure," Ertz agreed eagerly, "let's drop it, Narby, until you have seen it. Come on now; it's a long climb."

"What?" Narby demanded. "Say, what is this? Go where?"

"Up to the Captain's veranda, and the Control Room."

"Me? Don't be ridiculous. I'm going down at once."

"No, Narby," Ertz denied. "That's why I sent for you. You've got to see."

"Don't be silly. I don't need to see; common sense gives sufficient answer. However," he went on, "I do want to congratulate you on making a friendly contact with the muties. We should be able to work out some means of cooperation. I think--"

Joe-Jim took one step forward. "You're wasting time," he said evenly. "We're going up; you, too. I really do insist."

Narby shook his head. "It's out of the question. Some other time, perhaps, after we have worked out a method of cooperation."

Hugh stepped in closer to him from the other side. "You don't seem to understand. You're going now."

Narby glanced the other way at Ertz. Ertz nodded. "That's how it is, Narby."

Narby cursed himself silently. Great Jordan! What in the Ship was he thinking of to let himself get into such a position? He had a distinct feeling that the two-headed man would rather that he showed fight. Impossible, preposterous situation. He cursed again to himself, but gave way as gracefully as he could. "Oh, well! Rather than cause an argument I'll go now. Let's get on with it. Which way?"

"Just stick with me," advised Ertz. Joe-Jim whistled loudly in a set pattern. Muties seemed to grow out of the floor plates, the bulkheads, the overhead, until six or eight more had been added to the party. Narby was suddenly sick with the full realization of just how far he had strayed from the way of caution. The party moved up.

It took them a long time to get up to no-weight, as Narby was not used to climbing. The steady reduction in weight as they rose from deck to deck relieved him somewhat but the help afforded was more than offset by the stomach qualms he felt as weight dropped away from him. He did not have a true attack of space-sickness; like all born in the Ship, muties and Crew, he was more or less acclimated to lessened weight, but he had done practically no climbing since reckless adolescence. By the time they reached the innermost deck of the Ship he was acutely uncomfortable and hardly able to proceed.

Joe-Jim sent the added members of the party back below and told Bobo to carry Narby. Narby waved him away. "I can make it," he protested, and by sheer stubborn will forced his body to behave. Joe-Jim looked him over and countermanded the order. By the time a long series of gliding dives had carried them as far forward as the transverse bulkhead beyond which lay the Control Room, he was reasonably comfortable again.

They did not stop first at the Control Room, but, in accordance with a plan of Hugh's, continued on to. the Captain's veranda. Narby was braced for what he saw there, not only by Ertz's confused explanation, but because Hugh had chattered buoyantly to him about it all the latter part of the trip. Hugh was feeling warmly friendly to Narby by the time they arrived; it was wonderful to have somebody to listen!

Hugh floated in through the door ahead of the others, executed a neat turn in mid-air, and steadied himself with one hand on the back of the Captain's easy chair. With the other he waved at the great view port and the starry firmament beyond it. "There it is!" he exulted. "There it is. Look at it, isn't it wonderful?"

Narby's face, showed no expression, but he looked long and intently at the brilliant display. "Remarkable," he conceded at last, "remarkable. I've never seen anything like it."

"Remarkable ain't half," protested Hugh. "Wonderful is the word."

"O.K., 'wonderful,'" Narby assented. "Those bright little lights ... you say those are the stars that the ancients talked about?"

"Why, yes," agreed Hugh, feeling slightly disconcerted without knowing why, "only they're not little. They're big, enormous things, like the Ship. They just look little because they are so far away. See that very bright one, that big one, down to the left? It looks big because it's closer. I think that is Far Centaurus, but I'm not sure," he admitted in a burst of frankness.

Narby glanced quickly at him, then back to the big star. "How far away is it?"

"I don't know. But we'll find out. There are instruments to measure such things in the Control Room, but I haven't got the hang of them entirely. It doesn't matter, though. We'll get there yet!"

"Huh?"

"Sure. Finish the Trip."

Narby looked blank, but said nothing. His was a careful and orderly mind, logical to a high degree. He was a capable executive and could make rapid decisions when necessary, but he was by nature inclined to reserve his opinions when possible, until he had had time to chew over the data and assess it.

He was even more taciturn, in the Control Room. He listened and looked, but asked very few questions. Hugh did not care. This was his toy, his gadget, his baby. To show it off to someone who had never seen it and who would listen was all he asked.

At Ertz's suggestion the party stopped at Joe-Jim's apartment on the way back down. Narby must be committed to the same course of action as the blood brotherhood and plans must be made to carry out such action, if the stratagem which brought Narby to them was to be fruitful. Narby agreed to stop unreluctantly, having become convinced of the reality of the truce under which he made this unprecedented sortie into mutie country. He listened quietly while Ertz outlined what they had in mind. He was still quiet when Ertz had finished.

"Well?" said Ertz at last, when the silence had dragged on long enough to get on his nerves.

"You expect some comment from me?"

"Yes, of course. You figure into it." Narby knew that he did and knew that an answer was expected from him; he was stalling for time.

"Well..." Narby pursed his lips and fitted his fingertips together. "It seems to me that this problem divides itself into two parts. Hugh Hoyland, as I understand it, your purpose of carrying out the ancient Plan of Jordan cannot be realized until the Ship as a whole is pacified and brought under one rule; you need order and discipline for your purpose from Crew country clear to the Control Room. Is that right?"

"Certainly. We have to man the Main Drive and that means--"

"Please. Frankly, I am not qualified to understand things that I have seen so recently and have had no opportunity to study. As to your chances of success in that project, I would prefer to rely on the opinion of the Chief Engineer. Your problem is the second phase; it appears that you are necessarily interested in the first phase."

"Of course."

"Then let's talk about the first phase only. It involves matters of public policy and administration. I feel more at home there; perhaps my advice will be useful. Joe-Jim, I understand that you ate looking for an opportunity to effect a peace between the muties and the members of the Crew; peace and good eating? Right?"

"That's correct," Jim agreed.

"Good. It has been my purpose for a long time and that of many of the Ship's officers. Frankly it never occurred to me that it could be achieved other than by sheer force. We had steeled ourselves to the prospect of a long and difficult and bloody war. The records of the oldest Witness, handed down to him by his predecessors clear back to the time of the mythical Mutiny, make no mention of anything but war between muties and the Crew. But this is a better way; I am delighted."

"Then you're with us!" exclaimed Ertz.

"Steady, there are many other things to be considered. Ertz, you and I know, and Hoyland as well I should think, that not all of the Ship's officers will agree with us. What of that?"

"That's easy," put in Hugh Hoyland. "Bring them up to no-weight one at a time, let them see the stars and learn the truth."

Narby shook his head. "You have the litter carrying the porters. I told you this problem is in two phases. There is no point in trying to convince a man of something he won't believe when you need him to agree to something he can understand. After the Ship is consolidated it will be simple enough then to let the officers experience the Control Room and the stars."

"But--"

"He's right," Ertz stopped him. "No use getting cluttered up with a lot of religious issues when the immediate problem is a practical one. There are numerous officers whom we could get on our side for the purpose of pacifying the Ship who would raise all kinds of fuss if we tackled them first on the idea that the Ship moves."

"But--"

"No 'buts' about it. Narby is right. It's common sense. Now, Narby, about this matter of those officers who may not be convinced, here's how we see it: In the first place

it's your business and mine to win over as many as we can. Any who hold out against us -- well, the Converter is always hungry."

Narby nodded, completely undismayed by the idea of assassination as a policy. "That seems the safest plan. Mightn't it be a little bit difficult?"

"That is where Joe-Jim comes in. We'll have the best knives in the Ship to back us up."

"I see. Joe-Jim is, I take it, Boss of all the muties?"

"What gave you that idea?" growled Joe, vexed without knowing why.

"Why, I supposed . . . I was given to understand--" Narby stopped. No one had told him that Joe-Jim was king of the upper decks; he had assumed it from appearances. He felt suddenly very uneasy. Had he been negotiating uselessly? What was the point in a pact with this two-headed monstrosity if he did not speak for the muties?

"I should have made that clear," Ertz said hastily. "Joe-Jim helps us to establish a new administration, then we will be able to back him up with knives to pacify the rest of the muties. Joe-Jim isn't Boss of all the muties, but he has the largest, strongest gang. With our help he soon will be Boss of all of them."

Narby quickly adjusted his mind to the new data. Muties against muties, with only a little help from the cadets of the Crew, seemed to him a good way to fight. On second thoughts, it was better than an outright truce at once, for there would be fewer muties to administer when it was all over, less chance of another mutiny. "I see," he agreed. "So ... Have you considered what the situation will be afterwards?"

"What do you mean?" inquired Hoyland.

"Can you picture the present Captain carrying out these plans?"

Ertz saw what he was driving at, and so did Hoyland vaguely.

"Go on," said Ertz.

"Who is to be the new Captain?" Narby looked squarely at Ertz.

Ertz had not thought the matter through; he realized now that the question was very pertinent, if the coup d'etat was not to be followed by a bloody scramble for power. He had permitted himself to dream of being selected as Captain, sometime. But he knew that Narby was pointed that way, too.

Ertz had been as honestly struck by the romantic notion of moving the Ship as Hoyland. He realized that his old ambition stood in the way of the plan; he renounced the old with only a touch of wistfulness.

"You will have to be Captain, Fin. Are you willing to be?"

Phineas Narby accepted gracefully. "I suppose so, if that's the way you want it. You would make a fine Captain, yourself, Ertz."

Ertz shook his head, understanding perfectly that Narby's full cooperation turned on this point. "I'll continue Chief Engineer. I want to handle the Main Drive of the Trip."

"Slow down!" Joe interrupted. "I don't agree to this. Why should he be Captain?"

Narby faced him. "Do you want to be Captain?" He kept his voice carefully free of sarcasm. A mutie for Captain!

"Huff's name, no! But why should you be? Why not Ertz or Hugh?"

"Not me," Hugh disclaimed. "I'll have no time for administration. I'm the astrogator."

"Seriously, Joe-Jim," Ertz explained, "Narby is the one of the group who can get the necessary cooperation out of the Ship's officers."

"Damn it, if they won't cooperate we can slit their throats."

"With Narby as Captain we won't have to slit throats."

"I don't like it," groused Joe. His brother shushed, "Why get excited about it, Joe? Jordan knows we don't want the responsibility."

"I quite understand your misgivings," Narby suggested suavely, "but I don't think you need worry. I would forced to depend on you, of course, to administer the muties. I would administer the lower decks, a job I am used to and you would be Vice-Captain, if you are willing serve, for the muties. It would be folly for me to attempt to administer directly a part of the Ship I'm not familiar with and people whose customs I don't know. I really can't accept the captaincy unless you are willing to help me in that fashion. Will you do it?"

"I don't want any part of it," protested Joe.

"I'm sorry. Then I must refuse to be Captain. I really can't undertake it if you won't help me that much."

"Oh, go ahead, Joe," Jim insisted. "Let's take it, for the time being at least. The job has to be done."

"All right," Joe capitulated, "but I don't like it."

Narby ignored the fact that Joe-Jim had not specifically agreed to Narby's elevation to the captaincy; no further mention was made of it.

The discussion of ways and means was tedious and need not be repeated. It was agreed that Ertz, Alan, and Narby should all return to their usual haunts and occupations while preparations were made to strike.

Hugh detailed a guard to see them safely down to high-weight. "You'll send Alan up when you are ready?" he said to Narby as they were about to leave.

"Yes," Narby agreed, "but don't expect him soon. Ertz and I will have to have time to feel out friends, and there's the matter of the old Captain. I'll have to persuade him to call a meeting of all the Ship's officers; he's never too easy to handle."

"Well, that's your job. Good eating!"

"Good eating."

On the few occasions when the scientist priests who ruled the Ship under Jordan's Captain met in full assembly they gathered in a great hall directly above the Ship's offices on the last civilized deck. Forgotten generations past, before the time of the mutiny led by Ship's Metalsmith Roy Huff, the hall had been a gymnasium, a place for fun and healthy exercise, as planned by the designers of the great starship; but the present users knew nothing of that.

Narby watched the roster clerk check off the Ship's Officers as they arrived, worried under a bland countenance. There were only a few more to arrive; he would soon have no excuse not to notify the Captain that the meeting was ready, but he had received no word from Joe-Jim and Hoyland. Had that fool Alan managed to get himself killed on the way up to deliver the word? Had he fallen and broken his worthless neck? Was he dead with a mutie's knife in his belly?

Ertz came in, and before seeking his seat among the department heads, went up to where Narby sat in front of the Captain's chair. "How about it?" he inquired softly.

"All right," Narby told him, "but no word yet."

"Hm-m-m." Ertz turned around and assayed his support in the crowd. Narby did likewise. Not a majority, not a certain majority, for anything as drastic as this. Still, the issue would not depend on voting.

The roster clerk touched his arm. "All present, sir, except those excused for sickness, and one on watch at the Converter."

Narby directed that the Captain be notified, with a sick feeling that something had gone wrong. The Captain, as usual, with complete disregard for the comfort and convenience of others, took his time about appearing. Narby was glad of the delay, but miserable in enduring it. When the old man finally waddled in, flanked by his orderlies, and settled heavily into his chair, he was, again as usual, impatient to get the meeting over. He waved for the others to be seated and started in on Narby.

"Very well, Commander Narby, let's have the agenda. You have an agenda, I hope?"

"Yes, Captain, there is an agenda."

"Then have it read, man, have it read! Why are you delaying?"

"Yes, sir." Narby turned to the reading clerk and handed him a sheaf of writings. The clerk glanced at them, looked puzzled, but, receiving no encouragement from Narby, commenced to read: "Petition, to Council and Captain: Lieutenant Braune, administrator of the village of Sector 9, being of frail health and advanced age, prays that he be relieved of all duty and retired." The clerk continued, setting forth the recommendations of the officers and departments concerned.

The Captain twisted impatiently in his chair, finally interrupted the reading. "What is this, Narby? Can't you handle routine matters without all this fuss?"

"I understood that the Captain was displeased with the fashion in which a similar matter was lately handled. I have no wish to trespass on the Captain's prerogatives."

"Nonsense, man! Don't read Regulations to me. Let the Council act, then bring their decision to me for review."

"Yes, sir." Narby took the writing from the clerk and gave him another. The clerk read.

It was an equally fiddling matter. Sector 3 village, because of an unexplained blight which had infected their hydroponic farms, prayed for relief and a suspension of taxes. The Captain put up with still less of this item before interrupting. Narby would have been sorely pressed for any excuse to continue the meeting had not the word he awaited arrived at that moment. It was a mere scrap of parchment, brought in from outside the hall by one of his own men. It contained the single word, "Ready." Narby looked at it, nodded to Ertz, and addressed the Captain:

"Sir, since you have no wish to listen to the petitions of your Crew, I will continue at once with the main business of this meeting." The veiled insolence of the statement caused the Captain to stare at him suspiciously, but Narby went on. "For many generations, through the lives of a succession of Witnesses, the Crew has suffered from the depredations of the muties. Our livestock, our children, even our own persons, have been in constant jeopardy. Jordan's Regulations are not honored above the levels where we live. Jordan's Captain himself is not free to travel in the upper levels of the Ship.

"It has been an article of faith that Jordan so ordained it, that the children pay with blood for the sins of their ancestors. It was the will of Jordan, we were told.

"I, for one, have never been reconciled to this constant drain on the Ship's mass." He paused.

The old Captain had been having some difficulty in believing his ears. But he found his voice. Pointing, he squealed, "Do you dispute the Teachings?"

"I do not. I maintain that the Teachings do not command us to leave the muties outside the Regulations, and never did. I demand that they be brought under the Regulations!"

"You . . . you! You are relieved of duty, sir!"

"Not," answered Narby, his insolence now overt, "until I have had my say."

"Arrest that man!" But the Captain's orderlies stood fast, though they shuffled and looked unhappy. Narby himself had selected them.

Narby turned back to the amazed Council, and caught the eye of Ertz. "All right," he said. "Now!" Ertz got up and trotted toward the door. Narby continued, "Many of you think as I do, but we always supposed that we would have to fight for it. With the help of Jordan, I have been able to achieve contact with the muties and propose terms of a truce. Their leaders are coming here to negotiate with us. There!" He pointed dramatically at the door.

Ertz reappeared; following him came Hugh Hoyland, Joe-Jim, and Bobo. Hoyland turned to the right along the wall and circled the company. He was followed single file by a string of muties: Joe-Jim's best butcher boys. Another such column trailed after Joe-Jim and Bobo to the left.

Joe-Jim, Hugh, and half a dozen more in each wing were covered with crude armor which extended below their waists. The armor was topped off with clumsy helms, latticeworks of steel, which protected their heads without greatly interfering with vision. Each of the armored ones, a few of the others, carried unheard-of knives, long as a man's arm!

The startled officers might have stopped the invasion at the bottleneck through which it entered had they been warned and led. But they were disorganized, helpless, and their strongest leaders had invited the invaders in. They shifted in their chairs, reached for their knives, and glanced anxiously from one to another. But no one made the first move which would start a general bloodletting.

Narby turned to the Captain. "What about it? Do you receive this delegation in peace?"

It seemed likely that age and fat living would keep the Captain from answering, from ever answering anything again. But he managed to croak, "Get 'em out of here! Get 'em out! You--You'll make the Trip for this!"

Narby turned back to Joe-Jim and jerked his thumb upward. Jim spoke to Bobo and a knife was buried to the grip in the Captain's fat belly. He squawked, rather than screamed, and a look of utter bewilderment spread over his features. He plucked awkwardly at the hilt as if to assure himself that it was really there. "Mutiny." he stated. "Mutiny--" The word trailed off as he collapsed into his chair, and fell heavily forward to the deck on his face.

Narby shoved it with his foot and spoke to the two orderlies. "Carry it outside," he commanded. They obeyed, seeming relieved at having something to do and someone to

tell them to do it. Narby turned back to the silent watching mass. "Does anyone else object to a peace with the muties?"

An elderly officer, one who had dreamed away his life as judge and spiritual adviser to a remote village, stood up and pointed a bony finger at Narby, while his white beard jutted indignantly. "Jordan will punish you for this! Mutiny and sin, the spirit of Huff!"

Narby nodded to Joe-Jim; the old man's words gurgled in his throat, the point of a blade sticking out under one ear. Bobo looked pleased with himself.

"There has been enough talk," Narby announced. "It is better to have a little blood now than much blood later. Let those who stand with me in this matter get up and come forward."

Ertz set the precedent by striding forward and urging his surest personal supporters to come with him. Reaching the front of the room, he pulled out his knife and raised the point. "I salute Phineas Narby, Jordan's Captain!"

His own supporters were left with no choice. "Phineas Narby, Jordan's Captain!"

The hard young men in Narby's clique, the backbone of the dissident rationalist bloc among the scientist priests, joined the swing forward en masse, points raised high and shouting for the new Captain. The undecided and the opportunists hastened to join, as they saw which side of the blade was edged. When the division was complete, there remained a handful only of Ship's officers still hanging back, almost all of whom were either elderly or hyperreligious.

Ertz watched Captain Narby look them over, then pick up Joe-Jim with his eyes. Ertz put a hand on his arm. "There are few of them and practically helpless," he pointed out. "Why not disarm them and let them retire?"

Narby Eave him an unfriendly look. "Let them stay alive and breed mutiny. I am quite capable of making my own decisions, Ertz."

Ertz bit his lip. "Very well, Captain."

"That's better." He signaled to Joe-Jim.

The long knives made short work of it.

Hugh hung back horn the slaughter. His old teacher, Lieutenant Nelson, the village scientist who had seen his ability and selected him for scientisthood, was one of the group. It was a factor be had not anticipated.

World conquest and consolidation. Faith, or the Sword. Joe-Jim's bullies, amplified by hot-blooded young cadets supplied by Captain Narby, combed the middle decks and the upper decks. The muties, individualists by the very nature of their existence and owing no allegiance higher than that to the leaders of their gangs, were no match for the planned generalship of Joe-Jim, nor did their weapons match the strange, long knives that bit before a man was ready.

The rumor spread through mutie country that it was better to surrender quietly to the gang of the Two Wise Heads; good eating for those who surrendered, death inescapable for those who did not.

But it was nevertheless a long slow process. There were so many, many decks, so many miles of gloomy corridors, so many countless compartments in which unsubdued muties might lurk. Furthermore, the process grew slower as it advanced, as Joe-Jim attempted to establish a police patrol, an interior guard, over each sector, deck, and stair way trunk, as fast as his striking groups mopped them up.

To Narby's disappointment, the two-headed man was not killed in his campaigns. Joe-Jim had learned from his own books that a general need not necessarily expose himself to direct combat.

Hugh buried himself in the Control Room. Not only was he more interested in the subtle problems of mastering the how and why of the complex controls and the parallel complexity of starship ballistics, but also the whole matter of the blood purge was distasteful to him because of Lieutenant Nelson. Violence and death he was used to; they were commonplace even on the lower levels, but that incident made him vaguely unhappy, even though his own evaluations were not sufficiently clean-cut for him to feel personal responsibility for the old man's death.

He just wished it had not happened.

But the controls: ahh. There was something a man could put his heart into. He was attempting a task that an Earthman would have rejected as impossible; an Earthmaa would have known that the piloting and operation of an interstellar ship was a task so difficult that the best possible technical education combined with extensive experience in the handling of lesser spacecraft would constitute a barely adequate grounding for the additional intensive highly specialized training necessary for the task.

Hugh Hoyland did not know that. So he went ahead and did it anyhow.

In which attempt he was aided by the genius of the designers. The controls of most machinery may be considered under the head of simple pairs, stop-and-go, push-and-pull, up-and-down, in-and-out, on-and-off, right-and-left, their permutations and combinations. The real difficulties have to do with upkeep and repair, adjustment and replacements.

But the controls and main drive machinery of the starship Vanguard required no upkeep and no repair; their complexities were below the molar level, they contained no moving parts, friction took no toil and they did not fall out of adjustment. Had it been necessary for him to understand and repair the machines he dealt with, it would have been impossible. A fourteen-year-old child may safely be entrusted with a family skycar and be allowed to make thousand-mile jaunts overnight unaccompanied; it is much more probable that he will injure himself on the trip by overeating than by finding some way to mismanage or damage the vehicle. But if the skycar should fall out of adjustment, ground itself, and signal for a repair crew, the repair crew is essential; the child cannot fix it himself.

The Vanguard needed no repair crew, save for nonessential ancilliary machinery such as transbelts, elevators, automassagers, dining services, and the like. Such machinery which necessarily used moving parts had worn out before the time of the first Witness; the useless mass involved had gone into the auxiliary Converter, or had been adapted to other simpler purposes. Hugh was not even aware that there ever had been such machinery; the stripped condition of most compartments was a simple fact of nature to him, no cause for wonder.

Hugh was aided in his quest for understanding by two other facts:

First, spaceship ballistics is a very simple subject, being hardly more than the application of the second law of motion to an inverse-square field. That statement runs contrary to our usual credos; It happens to be true. Baking a cake calls for much greater, though subconscious, knowledge of engineering; knitting a sweater requires a

subconscious understanding of much more complex mathematical relationships: topology of a knitted garment, but try it yourself sometime!

For a complex subject, consider neurology, or catalysts, but don't mention ballistics.

Second, the designers had clearly in mind that the Vanguard would reach her destination not sooner than generations after her departure; they wished to make it easy for the then-not-yet-born pilots who would command her on arrival. Although they anticipated no such hiatus in technical culture as took place, they did their best to make the controls simple and self-explanatory. The sophisticated fourteen-year-old mentioned, oriented as he would be to the concept of space, would doubtless have figured them out in a few minutes. Hugh, reared in a culture which believed that the Ship was the whole world, made no such quick job of it.

He was hampered by two foreign concepts, distance and metrical time. He had to learn to operate the finder, a delayed-action, long-base, parallax type designed for the Vanguard, and had taken measurements on a couple of dozen stellar bodies before it occurred him that the results he was getting could possibly stand for anything. The readings were in parsecs and without meaning emotionally. The attempt with the aid of the Sacred to translate his readings into linear units he could stand resulted in figures which he felt sure were were obviously preposterous. Check and recheck, followed long periods of brooding forced him unwillingly into some dim comprehension of astronomical magnitudes.

The concepts frightened him and bewildered him. For a period of several sleeps he stayed away from the Control Room, and gave way to a feeling of futility and depression. He occupied the time in sorting over the women captives, it being the first time since his capture by Joe-Jim long ago that he had had both the opportunity and the mood to consider the subject. The candidates were numerous, for, in addition to the usual crop of village maidens, Joe-Jim's military operations had produced a number of prime widows. Hugh availed himself of his leading position in the Ship's new setup to select two women. The first was a widow, a strong competent woman, adept at providing a man with domestic comforts. He set her up in his new apartment high up in low-weight, gave her a free hand, and allowed her to retain her former name of Chloe.

The other was a maiden, untrained and wild as a mutie. Hugh could not have told himself why he picked her. Certainly she had no virtues, but she made him feel funny. She had bitten him while he was inspecting her; he had slapped her, naturally, and that should have been an end to the matter. But he sent word back later for her father to send her along.

He had not got around to naming her.

Metrical time caused him as much mental confusion as astronomical distances, but no emotional upset The trouble was again the lack of the concept in the Ship. The Crew had the notion of topological time; they understood "now," "before," "after," "has been," "will be," even such notions as long time and short time, but the notion of measured time had dropped out of the culture. The lowest of earthbound cultures has some idea of measured time, even if limited to days and seasons, but every earthly concept of measured time originates in astronomical phenomena; the Crew had been insulated from all astronomical phenomena for uncounted generations.

Hugh had before him, on the control consoles, the only working timepieces in the Ship, but it was a long, long time before he grasped what they were for and what bearing they had on other instruments. But until did, he could not control the Ship. Speed, and its derivatives, acceleration and flexure, are based on measured time.

But when these two new concepts were finally grasped, chewed over, and ancient books reread in the light of these concepts, he was, in a greatly restricted and theoretical sense, an astrogator.

Hugh sought out Joe-Jim to ask him a question. Joe-Jim's minds were brilliantly penetrating when he cared to exert himself; he remained a superficial dilettante because he rarely cared.

Hugh found Narby just leaving. In order to conduct the campaign of pacification of the muties it had been necessary for Narby and Joe-Jim to confer frequently; to their mutual surprise they got along well together. Narby was a capable administrator, able to delegate authority and not given to useless elbow jogging; Joe-Jim surprised and pleased Narby by being more able than any subordinate he had ever dealt with before. There was no love wasted. between them, but each recognized in the other both intelligence and a hard self-interest which matched his own. There was respect and grudging contemptuous liking.

"Good eating, Captain," Hugh greeted Narby formally.

"Oh, hello, Hugh," Narby answered, then turned back to Joe-Jim. "I'll expect a report, then."

"You'll get it," Joe agreed. "There can't be more than a few dozen stragglers. We'll hunt them out, or starve them."

"Am I butting in?" Hugh asked.

"No, I'm just leaving. How goes the great work, my dear fellow?" He smiled irritatingly.

"Well enough, but slowly. Do you wish a report?"

"No hurry. Oh, by the bye, I've made the Control Room and Main Drive, in fact the entire level of no-weight, taboo for everyone, muties and Crew alike."

"So? I see your point, I guess. There is no need for any but officers to go up there."

"You don't understand me. It is a general taboo, applying to officers as well. Not to ourselves, of course."

"But . .. but, that won't work. The only effective way to convince the officers of the truth is to take them up and show them the stars!"

"That's exactly my point. I can't have any officers upset by disturbing ideas while I am consolidating my administration. It will, create religious differences and impair discipline."

Hugh was too upset and astounded to answer at once. "But," he said at last, "but that's the point. That's why you were made Captain."

"And as Captain I will have to be the final judge of policy. The matter is closed. You are not to take anyone to the Control Room, nor any part of no-weight, until I deem it advisable. You'll have to wait."

"It's a good idea, Hugh," Jim commented. "We shouldn't stir things up while we've got a war to attend to."

"Let me get this straight," Hugh persisted. "You mean this is a temporary policy?"

"You could put it that way."

"Well, all right," Hugh conceded. "But wait -- Ertz and I need to train assistants at once."

"Very well. Nominate them to me and I'll pass on them. Whom do you have in mind?"

Hugh thought. He did not actually need assistance himself; although the Control Room contained acceleration chairs for half a dozen, one man, seated in the chief astrogator's chair, could pilot the Ship. The same applied to Ertz in the Main Drive station, save in one respect. "How about Ertz? He needs porters to move mass to the Main Drive."

"Let him. I'll sign the writing. See that he uses porters from the former muties; but no one goes to the Control Room save those who have been there before." Narby turned and left with an air of dismissal.

Hugh watched him leave, then said, "I don't like this, Joe-Jim."

"Why not?" Jim asked. "It's reasonable."

"Perhaps it is. But ... well, damn it! It seems to me, somehow, that truth ought to be free to anyone, any time!" He threw up his hands in a gesture of baffled exasperation.

Joe-Jim looked at him oddly. "What a curious idea," said Joe.

"Yeah, I know. It's not common sense, but it seems like it ought to be. Oh, well, forget it! That's not what I came to see you about."

"What's on your mind, Bud?"

"How do we ... Look, we finish the Trip, see? We've got the Ship touching a planet, like this--" He brought his two fists together.

"Yes. Go on."

"Well, when that's done, how do we get out of the Ship?"

The twins looked confused, started to argue between themselves. Finally Joe interrupted his brother. "Wait a bit, Jim. Let's be logical about this. It was intended for us to get out; that implies a door, doesn't it?"

"Yeah. Sure."

"There's no door up here. It must be down in high weight."

"But it isn't," objected Hugh. "All that country is known. There isn't any door. It has to be up in mutie country."

"In that case," Joe continued, "it should be either all the way forward, or all the way aft, otherwise it would not go anywhere. It isn't aft. There's nothing back of Main Drive but solid bulkheads. It would need to be forward."

"That's silly," Jim commented. "There's the Control Room and the Captain's veranda. That's all."

"Oh, yeah? How about the locked compartments?"

"Those aren't doors, not to the Outside anyway. Just bulkheads abaft the Control Room."

"No, stupid, but they might lead to doors."

"Stupid, eh? Even so, how are you going to open them; answer me that, bright boy?"

"What," demanded Hugh, "are the 'locked compartments'?"

"Don't you know? There are seven doors, spaced on the main shaft in the same bulkhead as the door to Main Control Room. We've never been able to open them."

"Well, maybe that's what we're looking for. Let's see!"

"It's a waste of time," Jim insisted. But they went.

Bobo was taken along to try his monstrous strength on the doors. But even his knotted swollen muscles couldn't budge the levers which appeared to be intended to actuate the doors. "Well?" Jim sneered to his brother. "You see?"

Joe shrugged. "O.K., you win. Let's go down."

"Wait a little," Hugh pleaded. "The second door back the handle seemed to turn a little. Let's try it again."

"I'm afraid it's useless," Jim commented. But Joe said, "Oh, all right, as long as we're here."

Bobo tried again, wedging his shoulder under the lever and pushing from his knees. The lever gave suddenly, but the door did not open. "He's broken it," Joe announced.

"Yeah," Hugh acknowledged. "I guess that's that." He placed his hand against the door. It swung open easily.

The door did not lead to outer space, which was well for the three, for nothing in their experience warned them against the peril of the outer vacuum. Instead a very short and narrow vestibule led them to another door which was just barely ajar. The door stuck on its hinges, but the fact that it was slightly ajar prevented it from binding anywhere else. Perhaps the last man to use it left it so as a precaution against the metal surfaces freezing together, but no one would ever know.

Bobo's uncouth strength opened it easily. Another door lay six feet beyond. "I don't understand this," complained Jim as Bobo strained at the third door. "What's the sense in an endless series of doors?"

"Wait and find out," advised his brother.

Beyond the third door lay, not another door, but an apartment, a group of compartments, odd ones, small, crowded together and of unusual shapes. Bobo shot on. ahead and explored the place, knife in teeth, his ugly body almost graceful in flight. Hugh and Joe-Jim proceeded more slowly, their eyes caught by the strangeness Of the place.

Bobo returned, killed his momentum skillfully against a bulkhead, took his blade from his teeth, and reported, "No door. No more door any place. Bobo look."

"There has to be," Hugh insisted, irritated at the dwarf for demolishing his hopes.

The moron shrugged. "Bobo look."

"We'll look." Hugh and the twins moved off in different directions, splitting the reconnaissance between them.

Hugh found no door, but what he did find interested him even more: an impossibility. He was about to shout for Joe-Jim, when he heard his own name called. "Hugh! Come here!"

Reluctantly he left his discovery, and sought out the twins. "Come see what I've found," he began.

"Nevermind," Joe cut him short. "Look at that."

Hugh looked. "That" was a Converter. Quite impossibly but indubitably a Converter. "It doesn't make sense," Jim protested. "An apartment this size doesn't need a Converter. That thing would supply power and light for half the Ship. What do you make of it, Hugh?"

Hugh examined it. "I don't know," he admitted, "but if you think this is strange, come see what I've found."

"What have you found?"

"Come see."

The twins followed him, and saw a small compartment, one wall of which appeared to be of glass, black as if the far side were obscured. Facing the wall were two acceleratlon chairs, side by side. The arms and the lap desks of the chairs were covered with patterns of little white lights of the same sort as the control lights on the chairs in the Main Control Room.

Joe-Jim made no comment at first, save for a low whistle from Jim. He sat down in one of the chairs and started experimenting cautiously with the controls. Hugh sat down beside him. Joe-Jim covered a group of white lights on the right-hand arm of his chair; the lights in the compartment went out. When he lifted his hand the tiny control lights were blue instead of white. Neither Joe-Jim nor Hugh was startled. When the lights went out; they had expected it, for the control involved corresponded to similar controls in the Control Room.

Joe-Jim fumbled around, trying to find controls which would produce a simulacrum of the heavens on the blank glass before him. There were no such controls and he had no way of knowing that the glass was an actual view port, obscured by the hull of the Ship proper, rather than a view screen.

But he did manage to actuate the controls that occupied the corresponding position. These controls were labeled LAUNCHING; Joe-Jim had disregarded the label because he did not understand it. Actuating them produced no very remarkable results, except that a red light blinked rapidly and a transparency below the label came into life. It read: AIR-LOCK OPEN.

Which was very lucky for Joe-Jim, Hugh, and Bobo. Had they closed the doors behind them and had the little Converter contained even a few grams of mass available for power, they would have found themselves launched suddenly into space, in a Ship's boat unequipped for a trip and whose controls they understood only by analogy with those in the Control Room. Perhaps they could have maneuvered the boat back into its cradle; more likely they would have crashed attempting it.

But Hugh and Joe-Jim were not yet aware that the "apartment" they had entered was a spacecraft; the idea of a Ship's boat was still foreign to them.

"Turn on the lights," Hugh requested. Joe-Jim did so.

"Well?" Hugh went on. "What do you make of it?"

"It seems pretty obvious," answered Jim. "This is another Control Room. We didn't guess it was here because we couldn't open the door."

"That doesn't make sense," Joe objected. "Why should there be two Control Rooms for one Ship?"

"Why should a man have two heads?" his brother reasoned. "From my point of view, you are obviously a supernumerary."

"It's not the same thing; we were born that way. But this didn't just happen; the Ship was built."

"So what?" Jim argued. "We carry two knives, don't we? And we weren't born with 'em. It's a good idea to have a spare."

"But you can't control the Ship from here," Joe protested. "You can't see anything from here. If you wanted a second set of controls, the place to put them would be the Captain's veranda, where you can see the stars."

"How about that?" Jim asked, indicating the wall of glass.

"Use your head," his brother advised. "It faces the wrong direction. It looks into the Ship, not out. And it's not an arrangement like the Control Room; there isn't any way to mirror the stars on it."

"Maybe we haven't located the controls for it."

"Even so, you've forgotten something. How about that little Converter?"

"What about it?"

"It must have some significance. It's not here by accident. I'll bet you that these controls have something to do with that Converter."

"Why?"

"Why not? Why are they here together if there isn't some connection?"

Hugh broke his puzzled silence. Everythmg the twins had said seemed to make sense, even the contradictions. It was all very confusing. But the Converter, the little Conver-- "Say, look," he burst out.

"Look at what?"

"Do you suppose -- Do you think that maybe this part of the Ship could move?"

"Naturally. The whole Ship moves."

"No," said Hugh, "no, no. I don't mean that at all. Suppose it moved by itself. These controls and the little Converter, suppose it could move right away from the Ship."

"That's pretty fantastic."

"Maybe so ... but if it's true, this is the way out."

"Huh?" said Joe. "Nonsense. No door to the Outside here either."

"But there would be if this apartment were moved away from the Ship: the way we came in!"

The two heads snapped simultaneously toward him as if jerked by the same string. Then they looked at each other and fell to arguing. Joe-Jim repeated his experiment witit the controls. "See?" Joe pointed out "'Launching.' It means to start something, to push something away."

"Then why doesn't it?"

"'Air Lock Open.' The doors we came through; it has to be that. Everything else is closed."

"Let's try it."

"We would have to start the Converter first."

"O.K."

"Not so fast. Get out, and maybe you can't come back. We'd starve."

"Hm-m-m, we'll wait a while."

Hugh listened to the discussion while snooping around the control panels, trying to figure them out. There was a stowage space under the lap desk of his chair; he fished into it, encountered something, and hauled it out. "See what I've found!"

"What Is it?" asked Joe. "Oh, a book. Lot of them back in the room next to the Converter." "Let's see it," said Jim.

But Hugh had opened it himself. "Log, Starship Vanguard," he spelled out, "2 June, 2172. Cruising as before--"

"What!" yelled Joe. "Let me see that!"

"3 June. Cruising as before. 4 June. Cruising as before. Captain's mast for rewards and punishments held at 1300. See Administration Log. 5 June. Cruising as before."

"Gimme that!"

"Wait!" said Hugh. "6 June. Mutiny broke out at 0431. The watch became aware of it by visiplate. Hull, Metalsmith Ordinary, screened the control station and called on the watch to surrender, designating himself as 'Captain.' The officer of the watch ordered him to consider himself under arrest and signaled the Captain's cabin. No answer.

"0435. Communications failed. The officer of the watch dispatched a party of three to notify the Captain, turn out the chief proctor, and assist in the arrest of Huff.

"0441. Converter power off; free flight

"0502. Lacy, Crewman Ordinary, messenger-of-thewatch, one of the party of three sent below, returned to the control station alone. He reported verbally that the other two, Malcolm Young and Arthur Sears, were dead and that he had been permitted to return in order to notify the watch to surrender. The mutineers gave 0515 as a--"

The next entry was in a different hand: "0545. I have made every attempt to get into communication with other stations and officers in the Ship, without success. I conceive it as my duty, under the circumstances, to leave the control station without being properly relieved, and attempt to restore order down below. My decision may be faulty, since we are unarmed, but I see no other course open to me.

"Jean Baldwin, Pilot Officer Third Class, Officer of the Watch."

"Is that all?" demanded Joe.

"No," said Hugh. "1 October (approximately), 2172. I, Theodor Mawson, formerly Storekeeper Ordinary, have been selected this date as Captain of the Vanguard. Since the last entry in this log there have been enormous changes. The mutiny has been suppressed, or more properly, has died out, but with tragic cost. Every pilot officer, every navigation officer is dead, or believed to be dead. I would not have been chosen Captain had there been a qualified man left.

"Approximately ninety per cent of the personnel are dead. Not all of that number died in the original outbreak; no crops have been planted since the mutiny; our food stocks are low. There seems to be clear evidence of cannibalism among the mutineers who have not surrendered.

"My immediate task must be to restore some semblance of order and discipline among the Crew. Crops must be planted. A regular watch must be instituted at the auxiliary Converter on which we are dependent for heat and light and power."

The next entry was undated. "I have been far too busy to keep this log up properly. Truthfully, I do not know the date even approximately. The Ship's clocks no longer run. That may be attributable to the erratic operation of the auxiliary Converter, or it may possibly be an effect of radiations from outer space. We no longer have an antiradiation shield around the Ship, since the Main Converter is not in operation. My Chief Engineer assures me that the Main Converter could be started, but we have no one fitted to astrogate. I have tried to teach myself astrogation from the books at hand, but the mathematics involved are very difficult.

"About one newborn child out of twenty is deformed. I have instituted a Spartan code: such children are not permitted to live. It is harsh, but necessary.

"I am growing very old and feeble and must consider the selection of my successor. I am the last member of the crew to be born on Earth, and even I have little recollection of it. I was five when my parents embarked. I do not know my own age, but certain unmistakable signs tell me that the time is not far away when I, too, must make the Trip to the Converter.

"There has been a curious change in orientation in my people. Never having lived on a planet, it becomes more difficult as time passes for them to comprehend anything not connected with the Ship. I have ceased trying to talk to them about it; it is hardly a kindness anyhow, as I have no hope of leading them out of the darkness. Theirs is a hard life at best: they strive for a crop only to have it raided by the outlaws who still flourish on the upper levels. Why speak to them of better things?

"Rather than pass this on to my successor I have decided to attempt to hide it, if possible, in the single Ship's boat left by the mutineers who escaped. It will be safe there a long time, otherwise some witless fool may decide to use it for fuel for the Converter. I caught the man on watch feeding it with the last of a set of Encyclopaedia Terresriana: priceless books. The idiot had never been taught to read! Some rule must be instituted concerning books.

"This is my last entry. I have put off making the attempt to place this log in safekeeping, because it is very perilous to ascend above the lower decks. But my life is no longer valuable; I wish to die knowing that a true record is left.

"Theodor Mawson, Captain."

Even the twins were silent for a long time after Hugh stopped reading. At last Joe heaved a long sigh and said, "So that's how it happened."

"The poor guy," Hugh said softly.

"Who? Captain Mawson? Why so?"

"No, not Captain Mawson. That other guy, Pilot Officer Baldwin. Think of him going out through that door, with Huff on the other side." Hugh shivered. In spite of his enlightenment, he subconsciously envisioned Huff, 'Huff the Accursed, first to sin,' as about twice as high as Joe-Jim, twice as strong as Bobo, and having fangs rather than teeth.

Hugh borrowed a couple of porters from Ertz, porters whom Ertz was using to fetch the pickled bodies of the war casualties to the Main Converter for fuel, and used them to provision the Ship's boat: water, breadstuffs, preserved meats, mass for the

Converter. He did not report the matter to Narby, nor did he report the discovery of the boat itself. He had no conscious reason; Narby irritated him.

The star of their destination grew and grew, swelled until it showed a visible disc and was too bright to be stared at long. Its bearing changed rapidly, for a star; it pulled across the backdrop of the stellariwn dome. Left uncontrolled, the Ship would have swung part way around it in a wide hyperbolic arc, accelerated as it flipped around the star, then sped off again into the darkness. It took Hugh the equivalent of many weeks to calculate the elements of the trajectory; it took still longer for Ertz and Joe-Jim to check his figures and satisfy themselves that the preposterous answers were right. It took even longer to convince Ertz that the way to rendezvous in space was to apply a force that pushed one away from where one wished to go, that is to say, dig in the heels, put on the brakes, kill the momentum.

In fact it took a series of experiments in free flight on the level of weightlessness to sell him the idea, otherwise he would have favored finishing the Trip by the simple expedient of crashing headlong into the star at top Speed. Thereafter Hugh and Joe-Jim calculated how to apply acceleration to kill the speed of the Vanguard and warp her into an eccentric ellipse around the star. After that, they would search for planets.

Ertz bad a little trouble understanding the difference between a planet and a star. Alan never did get it.

"If my numbering is correct," Hugh informed Ertz, "we should start accelerating any time now."

"O.K.," Ertz told him. "Main Drive is ready: over two hundred bodies and a lot of waste mass. What are waiting for?"

"Let's see Narby and get permission to start."

"Why ask him?"

Hugh shrugged. "He's Captain. He'll want to know."

"All right. Let's pick up Joe-Jim and get on with it." They left Hugh's apartment and went to Joe-Jim's. Joe-Jim was not there, but they found Alan looking for him, too.

"Squatty says he's gone down to the Captain's office," Alan informed him.

"So? It's just as well. We'll see him there. Alan, old boy, you know what?"

"What?"

"The time has arrived. We're going to do it! Start moving the Ship!" Alan looked round-eyed. "Gee! Right now?"

"Just as soon as we can notify the Captain. Come along, if you like."

"You bet! Wait while I tell my woman." He darted away to his own quarters nearby.

"He pampers that wench," remarked Ertz.

"Sometimes you can't help it," said Hugh with a faraway look.

Alan returned promptly, although it was evident that he had taken time to change to a fresh breechcloth. "O.K.," he bubbled. "Let's go!"

Alan approached the Captain's office with a proud step. He was an important guy now, he exulted to himself. He'd march on through with his friends while the guards saluted; no more of this business of being pushed around.

But the doorkeeper did not stand aside, although he did salute, while placing himself so that he filled the door. "Gangway, man!" Ertz said gruffly.

"Yes, sir," acknowledged the guard, without moving. "Your weapons, please."

"What! Don't you know me, you idiot? I'm the Chief Engineer."

"Yes, sir. Leave your weapons with me, please. Regulations."

Ertz put a hand on the man's shoulder and shoved. The guard stood firm. "I'm sorry, sir. No one approaches the Captain wearing weapons. No one."

"Well, I'll be damned!"

"He remembers what happened to the old Captain," Hugh observed sotto voce. "He's smart." He drew his own knife and tossed it to the guard, who caught it neatly by the hilt. Ertz looked; shrugged, and handed over his own. Alan, considerably crestfallen, passed his own pair over with a look that should have shortened the guard's life.

Narby was talking; Joe-Jim was scowling on both his faces; Bobo looked puzzled, and naked, unfinished, without his ubiquitous knives and slingshot. "The matter is closed, Joe-Jim. That is my decision. I've granted you the faver of explaining my reasons, but it does not matter whether you like them or not."

"What's the trouble?" inquired Hugh.

Narby looked up. "Oh. I'm glad you came in. Your mutie friend seems to be in doubt as to who is Captain."

"What's up?"

"He," growled Jim, hooking a thumb toward Narby, "seems to think he's going to disarm all the muties."

"Well, the war's over, isn't it?"

"It wasn't agreed on. The muties were to become part of the Crew. Take the knives away from the muties and the Crew will kill them off in no time. It's not fair. The Crew have knives."

"The time will come when they won't," Narby predicted, "but I'll do it at my own time in my own way. This is the first step. What did you want to see me about, Ertz?"

"Ask Hugh." Narby turned to Hugh.

"I've come to notify you, Captain Narby," Hugh stated formally, "that we are about to start the Main Converter and move the Ship."

Narby looked surprised but not disconcerted. "I'm afraid you will have to postpone that. I am not yet ready to permit officers to go up to no-weight."

"It won't be necessary," Hugh explained. "Ertz and I can handle the first maneuvers alone. But we can't wait. If the Ship is not moved at once, the Trip won't be in your lifetime nor mine."

"Then it must," Narby replied evenly, "wait."

"What?" cried Hugh. "Narby, don't you want to the Trip?"

"I'm in no hurry."

"What sort of damn foolishness is this?" Ertz demanded. "What's got into you, Fin? Of course we move the Ship."

Narby drummed on his desk top before replying. Then: he said, "Since there seems to be some slight misunderstanding as to who gives orders around here, I might as well let you have it straight. Hoyland, as long as your pastimes did not interfere with the administration of tbe Ship, I was willing for you to amuse yourself. I granted that willingly, for you have been very useful in your own way. But when your crazy beliefs become a possible source of corruption to good morals and a danger to the peace and security of the Ship, I have to crack down."

Hugh had opened and closed his mouth several times during this speech. Finally he managed to get out: "Crazy? Did you say crazy?"

"Yes, I did. For a man to believe that the solid Ship can move means that he is either crazy, or an ignorant religious fanatic. Since both of you have the advantage of a scientist's training, I assume that you have lost your minds."

"Good Jordan!" said Hugh. "The man has seen with his own eyes, he's seen the immortal stars, yet he sits there and calls us crazy!"

"What's the meaning of this, Narby?" Ertz inquired coldly. "Why the razzle-dazzle? You aren't kidding anyone; you've been to the Control Room, you've been to the Captain's veranda, you know the Ship moves."

"You interest me, Ertz," commented Narby, looking him over. "I've wondered whether you were playing up to Hoyland's delusions, or were deluded yourself. Now I see that you are crazy too."

Ertz kept his temper. "Explain yourself. You've seen the Control Room; how can you contend that the Ship does not move?"

Narby smiled. "I thought you were a better engineer than you appear to be, Ertz. The Control Room is an enormous hoax. You know yourself that those lights are turned on and off by switches -- a very clever piece of engineering. My theory is that it was used to strike awe in the minds of the superstitious and make them believe in the ancient myths. But we don't need it any more, the Crew believe without it. It's a source of distraction now I'm going to have it destroyed and the door sealed up."

Hugh went all to pieces at this, sputtered incoherently, and would have grappled with Narby had not Ertz restrained him. "Easy, Hugh," he admonished. Joe-Jim took Hugh by the arm, his own faces stony masks.

Ertz went on quietly, "Suppose what you say is true. Suppose that the Main Converter and the Main Drive itself are nothing but dummies and that we can never start them, what about the Captain's veranda? You've seen the stars there, not just an engineered shadow show."

Narby laughed. "Ertz, you are stupider than I've guessed. I admit that the display in the veranda had me mystified at first, not that I ever believed in it! Then the Control Room gave the clue: it's an Illusion, a piece of skillful engineering. Behind that glass is another compartment, about the same size and unlighted. Against its darkness those tiny moving lights give the effect of a bottomless hole. It's essentially the same trick as they used in the Control Room.

"It's obvious," he went on. "I'm surprised that you did not see it. When an apparent fact runs contrary to logic and common sense, it's obvious that you have failed to interpret the fact correctly. The most obvious fact of nature is the reality of the Ship itself, solid, immutable, complete. Any so-called fact which appears to disprove that is

bound to be an illusion. Knowing that, I looked for the trick behind the illusion and found it."

"Wait," said Ertz. "Do you mean that you have been on the other side of the glass in the Captain's veranda and seen these trick lights you talk about?"

"No," admitted Narby, "it wasn't necessary. Not that it wouldn't be easy enough to do so, but it isn't necessary. I don't have to cut myself to know that knives are sharp."

"So..." Ertz paused and thought a moment. "I'll strike a deal with you. If Hugh and I are crazy in our beliefs, no harm is done as long as we keep our mouths shut. We try to move the Ship. If we fail, we're wrong and you're right."

"The Captain does not bargain," Narby pointed out. "However, I'll consider it. That's all. You may go." Ertz turned to go, unsatisfied but checked for moment. He caught sight of Joe-Jim's faces, and turned back. "One more thing," he said. "What's this about the muties? Why are you shoving Joe-Jim around? He and his boys made you Captain; you've got to fair about this."

Narby's smiling superiority cracked for amoment.

"Don't interfere, Ertz! Groups of armed savages are not going to threaten this Ship!"

"You can do what you like with the prisoners," Jim stated, "but my own gang keep their knives. They were promised good eating forever if they fought for you. They keep their knives. And that's flnal!"

Narby looked him up and down. "Joe-Jim," he remarked, "I have long believed that the only good mutie was a dead mutie. You do much to confirm my opinion. It will interest you to know that, by this time, your gang is already disarmed, and dead in the bargain. That's why I sent for you!"

The guards piled in, whether by signal or previous arrangement it was impossible to say. Caught flatfooted, naked, weaponless, the five found themselves each with an armed man at his back before they could rally. "Take them away," ordered Narby.

Bobo whined and looked to Joe-Jim for guidance. Joe caught his eye. "Up, Bobo!"

The dwarf jumped straight for Joe-Jim's captor, careless of the knife at his back. Forced to split his attention, the man lost a vital half second. Joe-Jim kicked him in the stomach, and appropriated his blade.

Hugh was on the deck, deadlocked with his man, his fist clutched around the knife wrist. Joe-Jim thrust and the struggle ceased. The two-headed man looked around, saw a mixed pile-up of four bodies, Ertz, Alan, two others. Joe-Jim used his knife judiciously, being careful to match the faces with the bodies. Presently his men emerged. "Get their knives," he ordered superfluously.

His words were drowned by a high, agonized scream. Bobo, still without a knife, had resorted to his primal weapons. His late captor's face was a bloody mess, half bitten away.

"Get his knife," said Joe.

"Can't reach it," Bobo admitted guiltily. The reason was evident: the hilt protruded from Bobo's ribs, just below his right shoulder blade.

Joe-Jim examined it, touched it gently. It was stuck. "Can you walk?"

"Sure," grunted Bobo, and grimaced.

"Let it stay where it is. Alan! With me. Hugh and Bill, cover rear. Bobo In the middle."

"Where's Narby?" demanded Ertz, dabbing at a round on his cheekbone.

But Narby was gone, ducked out through the rear door behind his desk. And it was locked.

Clerks scattered before them in the outer office; Joe-Jim knifed the guard at the outer door while he was still raising his whistle. Hastily they retrieved their own weapons and added them to those they had seized. They fled upward.

Two decks above inhabited levels Bobo stumbled and fell. Joe-Jim picked him up. "Can you make it?" The dwarf nodded dumbly, blood on his lips. They climbed. Twenty decks or so higher it became evident that Bobo could no longer climb, though they had taken turns in boosting him from the rear. But weight was lessened appreciably at that level; Alan braced himself and picked up the solid form as if it were a child. They climbed. Joe-Jim relieved Alan. They climbed.

Ertz relieved Joe-Jim. Hugh relieved Ertz.

They reached the level on which they lived forward of their group apartments. Hugh turned in that direction. "Put him down," commanded Joe. "Where do you think you are going?"

Hugh settled the wounded man to the deck. "Homes. Where else?"

"Fool! That's where they will look for us first."

"Where do we go?"

"Nowhere, in the Ship. We go out of the Ship!"

"Huh?"

"The Ship's boat."

"He's right," agreed Ertz. "The whole Ship's against us, now."

"But . . . but--" Hugh surrendered. "It's a long chance -- but we'll try it." He started again in the direction of their homes.

"Hey!" shouted Jim. "Not that way."

"We have to get our women."

"To Huff with the women! You'll get caught. There's no time." But Ertz and Alan started off without question. "Oh, all right!" Jim snorted. "But hurry! I'll stay with Bobo" Joe-Jim turned his attention to the dwarf, gently rolled him to his side and made a careful examination. His skin was gray and damp; a long red stain ran down from his right shoulder. Bobo sighed bubblingly and rubbed his head against Joe-Jim's thigh. "Bobo tired, Boss."

Joe-Jim patted his head. "Easy," said Jim, "this is going to hurt." Lifting the wounded man slightly, he cautiously worked the blade loose and withdrew it from the wound. Blood poured out freely.

Joe-Jim examined the knife, noted the deadly length of steel, and measured it against the wound. "He'll never make it," whispered Joe.

Jim caught his eye. "Well?"

Joe nodded slowly. Joe-Jim tried the blade he had just extracted from the wound against his own thigh, and discarded it in favor of one of his own razor-edged tools. He took the dwarf's chin in his left hand and Joe commanded, "Look at me, Bobo!"

Bobo looked up, answered inaudibly. Joe held his eye. "Good Bobo! Strong Bobo!" The dwarf grinned as if he heard and understood, but made no attempt to reply. His master pulled his head a little to one side; the blade bit deep, snicking the jugular vein without touching the windpipe. "Good Bobo!" Joe repeated. Bobo grinned again.

When the eyes were glassy and breathing had unquestionably stopped, Joe-Jim stood up, letting the head and shoulders roll from him. He shoved the body with his foot to the side of the passage, and stared down the direction in which the others had gone. They should be back by now.

He stuck the salvaged blade in his belt and made sure that all his weapons were loose and ready.

They arrived on a dead run. "A little trouble," Hugh explained breathlessly. "Squatty's dead. No more of your men around. Dead maybe. Narby probably meant it. Here." He handed him a long knife and the body armor that had been built for Joe-Jim, with its great wide cage of steel, fit to cover two heads.

Ertz and Alan wore armor, as did Hugh. The women did not; none had been built for them. Joe-Jim noted that Hugh's younger wife bore a fresh swelling on her lip, as if someone had persuaded her with a heavy hand. Her eyes were stormy though her manner was docile. The older wife, Chloe, seemed to take the events in her stride. Ertz's was crying softly; Alan's wench reflected the bewilderment of her master.

"How's Bobo?" Hugh inquired, as he settled Joe-Jim's armor in place.

"Made the Trip," Joe informed him.

"So? Well, that's that; let's go."

They stopped short of the level of no-weight and worked forward, because the women were not adept at weightless flying. When they reached the bulkhead which separated the Control Room and boat pockets from the body of the Ship, they went up. There was neither alarm nor ambush, although Joe thought that he saw a head show as they reached one deck. He mentioned it to his brother but not to the others.

The door to the boat pocket stuck and Bobo was not there to free it. The men tried it in succession, sweating big with the strain. Joe-Jim tried it a second time, Joe relaxing and letting Jim control their muscles, that they might not fight each other. The door gave. "Get them inside!" snapped Jim.

"And fast!" Joe confirmed. "They're on us." He had kept lookout while his brother strove. A shout from down the line reinforced his warning.

The twins faced around to meet the threat while the men shoved the women in. Alan's fuzzy-headed mate chose that moment to go to pieces, squalled, and tried to run but weightlessness defeated her. Hugh nabbed her, shoved her inside and booted her heartily with his foot.

Joe-Jim let a blade go at long throwing range to slow down the advance. It accomplished its purpose; their opponents, half a dozen of them, checked their advance. Then, apparently on signal, six knives cut the air simultaneonsly.

Jim felt something strike him, felt no pain, and concluded that the armor had saved him. "Missed us, Joe," he exulted.

There was no answer. Jim turned his bead, tried to look at his brother. A few inches from his eye a knife stuck through the bars of the helmet, its point was buried deep inside his left eye.

His brother was dead.

Hugh stuck his head back out of the door. "Come on, Joe-Jim," he shouted. "We're all in."

"Get inside," ordered Jim. "Close the door."

"But--"

"Get inside!" Jim turned, and shoved him in the face, closing the door as he did so. Hugh had one startled glimpse of the knife and the sagging, lifeless face it pinned. Then the door closed against him, and he heard the lever turn.

Jim turned back at the attackers. Shoving himself away from the bulkhead with legs which were curiously heavy, he plunged toward them, his great arm-long knife, more a bob than a sword, grasped with both hands. Knives sang toward him, clattered against his breastplate, bit into his legs. He swung a wide awkward two-handed stroke which gutted an opponent, nearly cutting him in two. "That's for Joe!"

The blow stopped him. He turned in the air, steadied himself, and swung again. "That's for Bobo!"

They closed on him; he swung widely caring not where he hit as long as his blade met resistance. "And that's for me!" A knife planted itself in his thigh. It did not even slow him up; legs were dispensable in no-weight. "'One for all!'"

A man was on his back now he could feel him. No matter; here was one before him, too, one who could feel steel. As be swung, he shouted, "All for o--" The words trailed off, but the stroke was finished.

Hugh tried to open the door which had been slammed in his face. He was unable to do so; if there were means provided to do so, he was unable to figure them out. He pressed an ear against the steel and listened, but the airtight door gave back no clue.

Ertz touched him on the shoulder. "Come on," be said. "Where's Joe-Jim?"

"He stayed behind."

"Open up the door! Get him."

"I can't, it won't open. He meant to stay, he closed it himself."

"But we've got to get him; we're blood-sworn."

"I think," said Hugh, with a sudden flash of insight, "that's why he stayed behind." He told Ertz what he had seen.

"Anyhow," he concluded, "it's the End of the Trip to him. Get on back and feed mass to that Converter. I want power." They entered the Ship's boat proper. Hugh closed the air-lock doors behind them. "Alan!" he called out. "We're going to start. Keep those damned women out of the way."

He settled himself in the pilot's chair, and cut the lights.

In the darkness he covered a pattern of green lights. A transparency flashed on the lap desk: DRIVE READY. Ertz was on the job. Here goes! he thought, and actuated the launching combination. There was a short pause, a short and sickening lurch, a twist. It frightened him, since he had no way of knowing that the launching tracks were pitched to offset the normal spinning of the Ship.

The glass of the view port before him was speckled with stars; they were free -- moving!

But the spread of jeweled lights was not unbroken, as it invariably had been when seen from the veranda, or seen mirrored on the Control Room walls; a great, gross, ungainly shape gleamed softly under the light of the star whose system they had entered. At first he could not account for it. Then with a rush of superstitious awe he realized that he was looking at the Ship itself, the true Ship, seen from the Outside. In spite of his long intellectual awareness of the true nature of the Ship; he had never visualized looking at it. The stars, yes; the surface of a planet, he had struggled with that concept; but the outer surface of the Ship, no.

When he did see it, it shocked him.

Alan touched him. "Hugh, what is it?"

Hoyland tried to explain to him. Alan shook his head, and blinked his eyes. "I don't get it."

"Never mind. Bring Ertz up here. Fetch the women, too; we'll let them see it."

"All right. But," he added, with sound intuition, "it's a mistake to show the women. You'll scare 'em silly; they ain't even seen the stars."

Luck, sound engineering design, and a little knowledge. Good design, ten times that much luck, and a precious little knowledge. It was luck that had placed the Ship near a star with a planetary system, luck that the Ship arrived there with a speed low enough for Hugh to counteract it in a ship's auxiliary craft, luck that he learned to handle it after a fashion before they starved or lost themselves in deep space.

It was good design that provided the little craft with a great reserve of power and speed. The designers had anticipated that the pioneers might need to explore the far-flung planets of a solar system; they had provided for it in the planning of the Ship's boats, with a large factor of safety. Hugh strained that factor to the limit.

It was luck that placed them near the plane of planetary motion, luck that, when Hugh did manage to gun the tiny projectile into a closed orbit, the orbit agreed in direction with the rotation of the planets.

Luck that the eccentric ellipse he achieved should cause them to crawl up on a giant planet so that he was eventually able to identify it as such by sight.

For otherwise they might have spun around that star until they all died of old age, ignoring for the moment the readier hazards of hunger and thirst, without ever coming close enough to a planet to pick it out from the stars.

There is a misconception, geocentric and anthropomorphic, common to the large majority of the earth-bound, which causes them to visualize a planetary system stereoscopically. The mind's eye sees a sun, remote from a backdrop of stars, and surrounded by spinning apples: the planets. Step out on your balcony and look. Can you tell the planets from the stars? Venus you may pick out with ease, but could you tell it from Canopus, if you had not previously been introduced? That little red speck: is it Mars, or is it Antares? How would you know, if you were as ignorant as Hugh Hoyland? Blast for Antares, believing it to be a planet, and you will never live to have grandchildren.

The great planet that they crawled up on, till it showed a visible naked-eye disc, was larger than Jupiter, a companion to the star, somewhat younger and larger the the Sun, around which it swung at a lordly distance. Hugh blasted back, killing his speed

over many sleeps, to bring the Ship into a path around the planet. The maneuver brought him close enough to see its moons.

Luck helped him again. He had planned to ground the great planet, knowing no better. Had he been able do so they would have lived just long enough to open the air-lock.

But he was short of mass, after the titanic task of pulling them out of the headlong hyperbolic plunge around an arc past the star and warping them into a closed orbit about the star, then into a subordinate orbit around the giant planet. He pored over the ancient books, substituted endlessly in the equations the ancients had set down as the laws for moving bodies, figured and refigured, and tested even the calm patience of Chloe. The other wife, the unnamed one, kept out of his way after losing a tooth, quite suddenly.

But he got no answer that did not require him to sacrifice some, at least, of the precious, irreplaceable ancient books for fuel. Yes, even though they stripped themselves naked and chucked in their knives, the mass of the books would still be needed.

He would have preferred to dispense with one of his wives. He decided to ground on one of the moons.

Luck again. Coincidence of such a colossal proportion that one need not be expected to believe it, for the moon of that planet was suitable for human terrestrial life. Never mind, skip over it, rapidly; the combination of circumstances is of the same order needed to produce such a planet in the first place. Our own planet, under our own sun is of the "There ain't no such animal" variety. It is a ridiculous improbability.

Hugh's luck was a ridiculous improbability.

Good design handled the next phase. Although he learned to maneuver the little Ship out in space where there is elbow room, landing is another and a ticklish matter. He would have crashed any spacecraft designed before the designing of the Vanguard. But the designers of the Vanguard had known that the Ship's auxiliary craft would be piloted and grounded by at least the second generation of explorers; green pilots must make those landings unassisted. They planned for it.

Hugh got the vessel down into the stratosphere and straightened it triumphantly into a course that would with certainty kill them all.

The autopilots took over.

Hugh stormed and swore, producing some words which diverted Alan's attention and admiration from the view out of the port. But nothing he could do would cause the craft to respond. It settled in its own way and leveled off at a thousand feet, an altitude which it maintained regardless of changing contour.

"Hugh, the stars are gone!"

"I know it."

"But Jordan! Hugh, what happened to them?"

Hugh glared at Alan. "I don't know and I don't care! You get aft with the women and stop asking silly questions."

Alan departed reluctantly with a backward look at the surface of the planet and the bright sky; It interested him, but he did not marvel much at it; his ability to marvel had been overstrained.

It was some hours before Hugh discovered that a hitherto ignored group of control lights set in motion a chain of events whereby the autopilot would ground the Ship. Since he found this out experimentally he did not exactly choose the place of landing. But the unwinking stereo-eyes of the autopilot fed its data to the 'brain'; the submolar mechanism selected and rejected; the Ship grounded gently on a rolling high prairie near a clump of vegetation.

Ertz came forward. "What's happened, Hugh?"

Hugh waved at the view port. "We're there." He was too tired to make much of it, too tired and too emotionally exhausted. His weeks of fighting a fight he understood but poorly, hunger, and lately thirst, years of feeding on a consuming ambition, these left him with little ability to enjoy his goal when it arrived.

But they had landed, they had finished Jordan's Trip. He was not unhappy, at peace rather, and very tired. Ertz stared out. "Jordan!" he muttered. Then, "Let's go out."

"All right."

Alan came forward, as they were opening the air-lock, and the women pressed after him. "Are we there, Captain?"

"Shut up," said Hugh.

The women crowded up to the deserted view port; Alan explained to them, importantly and incorrectly, the scene outside. Ertz got the last door open.

They sniffed at the air. "It's cold," said Ertz. In fact the temperature was perhaps five degrees less than the steady monotony of the Ship's temperature, but Ertz was experiencing weather for the first time.

"Nonsense," said Hugh, faintly annoyed that any fault should be found with _his_ planet. "It's just your imagination."

"Maybe," Ertz conceded. He paused uneasily. "Going out?" he added.

"Of course." Mastering his own reluctance, Hugh pushed him aside and dropped five feet to the ground "Come on; it's fine."

Ertz joined him, and stood close to him. Both of them remained close to the Ship. "It's big, isn't it?" Ertz said in a hushed voice.

"Well, we knew it would be," Hugh snapped, annoyed with himself for having the same lost feeling.

"Hi!" Alan peered cautiously out of the door. "Can I comedown? Is it alright?"

"Come ahead."

Alan eased himself gingerly over the edge and joined them. He looked around and whistled. "Gosh!"

Their first sortie took them all of fifty feet from the Ship. They huddled close together for silent comfort, and watched their feet to keep from stumbling on this strange uneven deck. They made it without incident until Alan looked up from the ground and found himself for the first time in his life with nothing close to him. He was hit by vertigo and acute agoraphobia; he moaned, closed his eyes and fell.

"What in the Ship?" demanded Ertz, looking around. Then it hit him.

Hugh fought against it. It pulled him to his knees, but be fought it, steadying himself with one hand on the ground. However, he had the advantage of having stared out through the view port for endless time; neither Alan nor Ertz were cowards.

"Alan!" his wife shrilled from the open door. "Alan! Come back here!" Alan opened one eye, managed to get it focused on the Ship, and started inching back on his belly.

"Man!" commanded Hugh. "Stop that! Situp."

Alan did so, with the air of a man pushed too far. "Open your eyes!" Alan obeyed cautiously, reclosed them hastily.

"Just sit still and you'll be all right," Hugh added. "I'm all right already." To prove it he stood up. He was still dizzy, but he made it. Ertz sat up.

The sun had crossed a sizable piece of the sky, enough time had passed for a well-fed man to become hungry, and they were not well fed. Even the women were outside; that had been accomplished by the simple expedient of going back in and pushing them out. They had not ventured away from the side of the Ship, but sat huddled against it. But their menfolk had even learned to walk singly, even in open spaces. Alan thought nothing of strutting a full fifty yards away from the shadow of the Ship, and did so more than once, in full sight of the women.

It was on one such journey that a small animal native to the planet let his curiosity exceed his caution. Alan's knife knocked him over and left him kicking. Alan scurried to the spot, grabbed his fat prize by one leg, and bore it proudly back to Hugh. "Look, Hugh, look! Good eating!"

Hugh looked with approval. His first strange fright of the place had passed and had been replaced with a deep warm feeling, a feeling that he had come at last to his long home. This seemed a good omen.

"Yes," he agreed. "Good eating. From now on, Alan, always Good Eating."

Coventry

'Have you anything to say before sentence is pronounced on you?' The mild eyes of the Senior Judge studied the face of the accused. His question was answered by a sullen silence.

'Very well-the jury has determined that you have violated a basic custom agreed to under the Covenant, and that through this act did damage another free citizen. It is the opinion of the jury and of the court that you did so knowingly, and aware of the probability of damage to a free citizen. Therefore, you are sentenced to choose between the Two Alternatives.'

A trained observer might have detected a trace of dismay breaking through the mask of indifference with which the young man had faced his trial. Dismay was unreasonable; in view of his offence, the sentence was inevitable-but reasonable men do not receive the sentence.

After waiting a decent interval, the judge turned to the bailiff. 'Take him away.'

The prisoner stood up suddenly, knocking over his chair. He glared wildly around at the company assembled and burst into speech.

'Hold on!' he yelled. 'I've got something to say first!' In spite of his rough manner there was about him the noble dignity of a wild animal at bay. He stared at those around him, breathing heavily, as if they were dogs waiting to drag him down.

'Well?' he demanded, 'Well? Do I get to talk, or don't I? It 'ud be the best joke of this whole comedy, if a condemned man couldn't speak his mind at the last!'

'You may speak,' the Senior Judge told him, in the same unhurried tones with which he had pronounced sentence, 'David MacKinnon, as long as you like, and in any manner that you like. There is no limit to that freedom, even for those who have broken the Covenant. Please speak into the recorder.'

MacKinnon glanced with distaste at the microphone near his face. The knowledge that any word he spoke would be recorded and analyzed inhibited him. 'I don't ask for records,' he snapped.

'But we must have them,' the judge replied patiently, 'in order that others may determine whether, or not, we have dealt with you fairly, and according to the Covenant. Oblige us, please.'

'Oh-very well!' He ungraciously conceded the requirement and directed his voice toward the instrument. 'There's no sense in me talking at all-but, just the same, I'm going to talk and you're going to listen . . . You talk about your precious "Covenant" as if it were something holy. I don't agree to it and I don't accept it. You act as if it had been sent down from Heaven in a burst of light. My grandfathers fought in the Second Revolution-but they fought to abolish superstition. . . not to let sheep-minded fools set up new ones.

'There were men in those days!' He looked contemptuously around him. 'What is there left today? Cautious, compromising "safe" weaklings with water in their veins. You've planned your whole world so carefully that you've planned the fun and zest right out of it. Nobody is ever hungry, nobody ever gets hurt. Your ships can't crack up and your crops can't fail. You even have the weather tamed so it rains politely after midnight. Why wait till midnight, I don't know . . . you all go to bed at nine o'clock!

'If one of you safe little people should have an unpleasant emotion-perish the thought! -You'd trot right over to the nearest psychodynamics clinic and get your soft

little minds readjusted. Thank God I never succumbed to that dope habit. I'll keep my own feelings, thanks, no matter how bad they taste.

'You won't even make love without consulting a psychotechnician-Is her mind as flat and insipid as mine? Is there any emotional instability in her family? It's enough to make a man gag. As for fighting over a woman-if any one had the guts to do that, he'd find a proctor at his elbow in two minutes, looking for the most convenient place to paralyze him, and inquiring with sickening humility, "May I do you a service, sir?"

The bailiff edged closer to MacKinnon. He turned on him. 'Stand back, you. I'm not through yet.' He turned and added, 'You've told me to choose between the Two Alternatives. Well, it's no hard choice for me. Before I'd submit to treatment, before I'd enter one of your little, safe little, pleasant little reorientation homes and let my mind be pried into by a lot of soft-fingered doctors-before I did anything like that, I'd choose a nice, clean death. Oh, no-there is just one choice for me, not two. I take the choice of going to Coventry-and glad of it, too . . . I hope I never hear of the United States again!

'But there is just one thing I want to ask you before I go-Why do you bother to live anyhow? I would think that anyone of you would welcome an end to your silly, futile lives just from sheer boredom. That's all.' He turned back to the bailiff. 'Come on, you.'

'One moment, David MacKinnon.' The Senior Judge held up a restraining hand. 'We have listened to you. Although custom does not compel it, I am minded to answer some of your statements. Will you listen?'

Unwilling, but less willing to appear loutish in the face of a request so obviously reasonable, the younger man consented.

The judge commenced to speak in gentle, scholarly words appropriate to a lecture room. 'David MacKinnon, you have spoken in a fashion that doubtless seems wise to you. Nevertheless, your words were wild, and spoken in haste. I am moved to correct your obvious misstatements of fact. The Covenant is not a superstition, but a simple temporal contract entered into by those same revolutionists for pragmatic reasons. They wished to insure the maximum possible liberty for every person.

'You yourself have enjoyed that liberty. No possible act, nor mode of conduct, was forbidden to you, as long as your action did not damage another. Even an act specifically prohibited by law could not be held against you, unless the state was able to prove that your particular act damaged, or caused evident danger of damage, to a particular individual.

'Even if one should willfully and knowingly damage another-as you have done-the state does not attempt to sit in moral judgment, nor to punish. We have not the wisdom to do that, and the chain of injustices that have always followed such moralistic coercion endanger the liberty of all. Instead, the convicted is given the choice of submitting to psychological readjustment to correct his tendency to wish to damage others, or of having the state withdraw itself from him-of sending him to Coventry.

'You complain that our way of living is dull and unromantic, and imply that we have deprived you of excitement to which you feel entitled. You are free to hold and express your esthetic opinion of our way of living, but you must not expect us to live to suit your tastes. You are free to seek danger and adventure if you wish-there is danger still in experimental laboratories; there is hardship in the mountains of the Moon, and death in the jungles of Venus-but you are not free to expose us to the violence of your nature.'

'Why make so much of it?' MacKinnon protested contemptuously. 'You talk as if I had committed a murder-I simply punched a man in the nose for offending me outrageously!'

'I agree with your esthetic judgment of that individual,' the judge continued calmly, 'and am personally rather gratified that you took a punch at him-but your psychometrical tests show that you believe yourself capable of judging morally your fellow citizens and feel justified in personally correcting and punishing their lapses. You are a dangerous individual, David MacKinnon, a danger to all of us, for we can not predict whet damage you may do next. From a social standpoint, your delusion makes you as mad as the March Hare.

'You refuse treatment-therefore we withdraw our society from you, we cast you out, we divorce you. To Coventry with you.' He turned to the bailiff. 'Take him away.'

MacKinnon peered out of a forward port of the big transport helicopter with repressed excitement in his heart. There! That must be it-that black band in the distance. The helicopter drew closer, and he became certain that he was seeing the Barrier-the mysterious, impenetrable wall that divided the United States from the reservation known as Coventry.

His guard looked up from the magazine he was reading and followed his gaze. 'Nearly there, I see,' he said pleasantly. 'Well, it won't be long now.'

'It can't be any too soon for me!'

The guard looked at him quizzically, but with tolerance. 'Pretty anxious to get on with it, eh?'

MacKinnon held his head high. 'You've never brought a man to the Gateway who was more anxious to pass through!'

'Mmm-maybe. They all say that, you know. Nobody goes through the Gate against his own will.'

'I mean it!'

'They all do. Some of them come back, just the same.'

'Say-maybe you can give me some dope as to conditions inside?'

'Sorry,' the guard said, shaking his head, 'but that is no concern of the United States, nor of any of its employees. You'll know soon enough.'

MacKinnon frowned a little. 'It seems strange-I tried inquiring, but found no one who would admit that they had any notion about the inside. And yet you say that some come out. Surely some of them must talk...'

'That's simple,' smiled the guard, 'part of their reorientation is a subconscious compulsion not to discuss their experiences.'

'That's a pretty scabby trick. Why should the government deliberately conspire to prevent me, and the people like me, from knowing what we are going up against?'

'Listen, buddy,' the guard answered, with mild exasperation, 'you've told the rest of us to go to the devil. You've told us that you could get along without us. You are being given plenty of living room in some of the best land on this continent, and you are being allowed to take with you everything that you own, or your credit could buy. What the deuce else do you expect?'

MacKinnon's face settled in obstinate lines. 'What assurance have I that there will be any land left for me?'

'That's your problem. The government sees to it that there is plenty of land for the population. The divvy-up is something you rugged individualists have to settle among yourselves. You've turned down our type of social co-operation; why should you expect the safeguards of our organization?' The guard turned back to his reading and ignored him.

They landed on a small field which lay close under the blank black wall. No gate was apparent, but a guardhouse was located at the side of the field. MacKinnon was the only passenger. While his escort went over to the guardhouse, he descended from the passenger compartment and went around to the freight hold. Two members of the crew were letting down a ramp from the cargo port. When he appeared, one of them eyed him, and said, 'O.K., there's your stuff. Help yourself.'

He sized up the job, and said, 'It's quite a lot, isn't it? I'll need some help. Will you give me a hand with it?'

The crew member addressed paused to light a cigarette before replying, 'It's your stuff. If you want it, get it out. We take off in ten minutes.' The two walked around him and reentered the ship.

'Why, you-' MacKinnon shut up and kept the rest of his anger to himself. The surly louts! Gone was the faintest trace of regret at leaving civilization. He'd show them! He could get along without them.

But it was twenty minutes and more before he stood beside his heaped up belongings and watched the ship rise. Fortunately the skipper had not been adamant about the time limit. He turned and commenced loading his steel tortoise. Under the romantic influence of the classic literature of a bygone day he had considered using a string of burros, but had been unable to find a zoo that would sell them to him. It was just as well- he was completely ignorant of the limits, foibles, habits, vices, illnesses, and care of those useful little beasts, and unaware of his own ignorance. Master and servant would have vied in making each other unhappy.

The vehicle he had chosen was not an unreasonable substitute for burros. It was extremely rugged, easy to operate, and almost foolproof. It drew its power from six square yards of sunpower screens on its low curved roof. These drove a constant-load motor, or, when halted, replenished the storage battery against cloudy weather, or night travel. The bearings were 'everlasting', and every moving part, other than the caterpillar treads and the controls, were sealed up, secure from inexpert tinkering.

It could maintain a steady six miles per hour on smooth, level pavement. When confronted by hills, or rough terrain, it did not stop, but simply slowed until the task demanded equaled its steady power output.

The steel tortoise gave MacKinnon a feeling of Crusoe-like independence. It did not occur to him his chattel was the end product of the cumulative effort and intelligent co-operation of hundreds of thousands of men, living and dead. He had been used all his life to the unfailing service of much more intricate machinery, and honestly regarded the tortoise as a piece of equipment of the same primitive level as a wood-man's axe, or a hunting knife. His talents had been devoted in the past to literary criticism rather than engineering, but that did not prevent him from believing that his native intelligence and the aid of a few reference books would be all that he would really need to duplicate the tortoise, if necessary.

Metal ores were necessary, he knew, but saw no obstacle in that, his knowledge of the difficulties of prospecting, mining, and metallurgy being as sketchy as his knowledge of burros.

His goods filled every compartment of the compact little freighter. He checked the last item from his inventory and ran a satisfied eye down the list. Any explorer or adventurer of the past might well be pleased with such equipment, he thought. He could imagine showing Jack London his knockdown cabin. See, Jack, he would say, it's proof against any kind of weather-perfectly insulated walls and floor-and can't rust. It's so light that you can set it up in five minutes by yourself, yet it's so strong that you can sleep sound with the biggest grizzly in the world snuffling right outside your door.

And London would scratch his head, and say, Dave, you're a wonder. If I'd had that in the Yukon, it would have been a cinch!

He checked over the list again. Enough concentrated and desiccated food and vitamin concentrate to last six months. That would give him time enough to build hothouses for hydroponics, and get his seeds started. Medical supplies-he did not expect to need those, but foresight was always best. Reference books of all sorts. A light sporting rifle-vintage: last century. His face clouded a little at this. The War Department had positively refused to sell him a portable blaster. When he had claimed the right of common social heritage, they had grudgingly provided him with the plans and specifications, and told him to build his own. Well, he would, the first spare time he got.

Everything else was in order. MacKinnon climbed into the cockpit, grasped the two hand controls, and swung the nose of the tortoise toward the guardhouse. He had been ignored since the ship had landed; he wanted to have the gate opened and to leave.

Several soldiers were gathered around the guardhouse. He picked out a legate by the silver stripe down the side of his kilt and spoke to him. 'I'm ready to leave. Will you kindly open the Gate?'

'O.K.,' the officer answered him, and turned to a soldier who wore the plain gray kilt of a private's field uniform. 'Jenkins, tell the power house to dilate-about a number three opening, tell them,' he added, sizing up the dimensions of the tortoise.

He turned to MacKinnon. 'It is my duty to tell you that you may return to civilization, even now, by agreeing to be hospitalized for your neurosis.'

'I have no neurosis!'

'Very well. If you change your mind at any future time, return to the place where you entered. There is an alarm there with which you may signal to the guard that you wish the gate opened.'

'I can't imagine needing to know that.'

The legate shrugged. 'Perhaps not-but we send refugees to quarantine all the time. If I were making the rules, it might be harder to get out again.' He was cut off by the ringing of an alarm. The soldiers near them moved smartly away, drawing their blasters from their belts as they ran. The ugly snout of a fixed blaster poked out over the top of the guardhouse and pointed toward the Barrier.

The legate answered the question on MacKinnon's face. 'The power house is ready to open up.' He waved smartly toward that building, then turned back. 'Drive straight through the center of the opening. It takes a lot of power to suspend the stasis; if you touch the edge, we'll have to pick up the pieces.'

A tiny, bright dot appeared in the foot of the barrier opposite where they waited. It spread into a half circle across the lampblack nothingness. Now it was large enough for MacKinnon to see the countryside beyond through the arch it had formed. He peered eagerly.

The opening grew until it was twenty feet wide, then stopped. It framed a scene of rugged, barren hills. He took this in, and turned angrily on the legate. 'I've been tricked!' he exclaimed. 'That's not fit land to support a man.'

'Don't be hasty,' he told MacKinnon. 'There's good land beyond. Besides-you don't have to enter. But if you are going, go!'

MacKinnon flushed, and pulled back on both hand controls. The treads bit in and the tortoise lumbered away, straight for the Gateway to Coventry.

When he was several yards beyond the Gate, he glanced back. The Barrier loomed behind him, with nothing to show where the opening had been. There was a little sheet metal shed adjacent to the point where he had passed through. He supposed that it contained the alarm the legate had mentioned, but he was not interested and turned his eyes back to his driving.

Stretching before him, twisting between rocky hills, was a road of sorts. It was not paved and the surface had not been repaired recently, but the grade averaged downhill and the tortoise was able to maintain a respectable speed. He continued down it, not because he fancied it, but because it was the only road which led out of surroundings obviously unsuited to his needs.

The road was untraveled. This suited him; he had no wish to encounter other human beings until he had located desirable land to settle on, and had staked out his claim. But the hills were not devoid of life; several times he caught glimpses of little dark shapes scurrying among the rocks, and occasionally bright, beady eyes stared back into his.

It did not occur to him at first that these timid little animals, streaking for cover at his coming, could replenish his larder-he was simply amused and warmed by their presence. When he did happen to consider that they might be used as food, the thought was at first repugnant to him-the custom of killing for 'sport' had ceased to be customary long before his time; and inasmuch as the development of cheap synthetic proteins in the latter half of the preceding century had spelled the economic ruin of the business of breeding animals for slaughter, it is doubtful if he had ever tasted animal tissue in his life.

But once considered, it was logical to act. He expected to live off the country; although he had plenty of food on hand for the immediate future, it would be wise to conserve it by using what the country offered. He suppressed his esthetic distaste and ethical misgivings, and determined to shoot one of the little animals at the first opportunity.

Accordingly, he dug out the rifle, loaded it, and placed it handy. With the usual perversity of the world-as-it-is, no game was evident for the next half hour. He was passing a little shoulder of rocky outcropping when he saw his prey. It peeked at him from behind a small boulder, its sober eyes wary but unperturbed. He stopped the tortoise and took careful aim, resting and steadying the rifle on the side of the cockpit. His quarry accommodated him by hopping out into full view.

He pulled the trigger, involuntarily tensing his muscles and squinting his eyes as he did so. Naturally, the shot went high and to the right.

But he was much too busy just then to be aware of it. It seemed that the whole world had exploded. His right shoulder was numb, his mouth stung as if he had been kicked there, and his ears rang in a strange and unpleasant fashion. He was surprised to find the gun still intact in his hands and apparently none the worse for the incident.

He put it down, clambered out of the car, and rushed up to where the small creature had been. There was no sign of it anywhere. He searched the immediate neighborhood, but did not find it. Mystified, he returned to his conveyance, having decided that the rifle was in some way defective, and that he should inspect it carefully before attempting to fire it again.

His recent target watched his actions cautiously from a vantage point yards away, to which it had stampeded at the sound of the shot. It was equally mystified by the startling events, being no more used to firearms than was MacKinnon.

Before he started the tortoise again, MacKinnon had to see to his upper lip, which was swollen and tender and bleeding from a deep scratch. This increased his conviction that the gun was defective. Nowhere in the romantic literature of the nineteenth and twentieth centuries, to which he was addicted, had there been a warning that, when firing a gun heavy enough to drop a man in his tracks, it is well not to hold the right hand in such ~ manner that the recoil will cause the right thumb and thumb nail to strike the mouth.

He applied an antiseptic and a dressing of sorts, and went on his way, somewhat subdued. The arroyo by which he had entered the hills had widened out, and the hills were greener. He passed around one sharp turn in the road, and found a broad fertile valley spread out before him. It stretched away until it was lost in the warm day's haze.

Much of the valley was cultivated, and he could make out human habitations. He continued toward it with mixed feelings. People meant fewer hardships, but it did not look as if staking out a claim would be as simple as he had hoped. However-Coventry was a big place.

He had reached the point where the road gave onto the floor of the valley, when two men stepped out into his path. They were carrying weapons of some sort at the ready. One of them called out to him:

'Halt!'

MacKinnon did so, and answered him as they came abreast. 'What do you want?'

'Customs inspection. Pull over there by the office.' He indicated a small building set back a few feet from the road, which MacKinnon had not previously noticed. He looked from it back to the spokesman, and felt a slow, unreasoning heat spread up from his viscera. It rendered his none too stable judgment still more unsound.

'What the deuce are you talking about?' he snapped. 'Stand aside and let me pass.'

The one who had remained silent raised his weapon and aimed it at MacKinnon's chest. The other grabbed his arm and pulled the weapon out of line. 'Don't shoot the dumb fool, Joe,' he said testily. 'You're always too anxious.' Then to MacKinnon, 'You're resisting the law. Come on-be quick about it!'

'The law?' MacKinnon gave a bitter laugh and snatched his rifle from the seat. It never reached his shoulder-the man who had done all the talking fired casually, without apparently taking time to aim. MacKinnon's rifle was smacked from his grasp and flew into the air, landing in the roadside ditch behind the tortoise.

The man who had remained silent followed the flight of the gun with detached interest, and remarked, 'Nice shot, Blackie. Never touched him.'

'Oh, just luck,' the other demurred, but grinned his pleasure at the compliment. 'Glad I didn't nick him, though-saves writing out a report.' He reassumed an official manner, spoke again to MacKinnon, who had been sitting dumbfounded, rubbing his smarting hands. 'Well, tough guy? Do you behave, or do we come up there and get you?'

MacKinnon gave in. He drove the tortoise to the designated spot, and waited sullenly for orders. 'Get out and start unloading,' he was told. He obeyed, under compulsion. As he piled his precious possessions on the ground, the one addressed as Blackie separated the things into two piles, while Joe listed them on a printed form. He noticed presently that Joe listed only the items that went into the first pile. He understood this when Blackie told him to reload the tortoise with the items from that pile, and commenced himself to carry goods from the other pile into the building. He started to protest-Joe punched him in the mouth, coolly and without rancor. MacKinnon went down, but got up again, fighting. He was in such a blind rage that he would have tackled a charging rhino. Joe timed his rush, and clipped him again. This time he could not get up at once.

Blackie stepped over to a washstand in one corner of the office. He came back with a wet towel and chucked it at MacKinnon. 'Wipe your face on that, bud, and get back in the buggy. We got to get going.'

MacKinnon had time to do a lot of serious thinking as he drove Blackie into town. Beyond a terse answer of 'Prize court' to MacKinnon's inquiry as to their destination, Blackie did not converse, nor did MacKinnon press him, anxious as he was to have information. His mouth pained him from repeated punishment, his head ached, and he was no longer tempted to precipitate action by hasty speech.

Evidently Coventry was not quite the frontier anarchy he had expected it to be. There was a government of sorts, apparently, but it resembled nothing that he had ever been used to. He had visualized a land of noble, independent spirits who gave each other wide berth and practiced mutual respect. There would be villains, of course, but they would be treated to summary, and probably lethal, justice as quickly as they demonstrated their ugly natures. He had a strong, though subconscious, assumption that virtue is necessarily triumphant.

But having found government, he expected it to follow the general pattern that he had been used to all his life-honest, conscientious, reasonably efficient, and invariably careful of a citizen's rights and liberties. He was aware that government had not always been like that, but he had never experienced it-the idea was as remote and implausible as cannibalism, or chattel slavery.

Had he stopped to think about it, he might have realized that public servants in Coventry would never have been examined psychologically to determine their temperamental fitness for their duties, and, since every inhabitant of Coventry was there-as he was-for violating a basic custom and ref using treatment thereafter, it was a foregone conclusion that most of them would be erratic and arbitrary.

He pinned his hope on the knowledge that they were going to court. All he asked was a chance to tell his story to the judge.

His dependence on judicial procedure may appear inconsistent in view of how recently he had renounced all reliance on organized government, but while he could

renounce government verbally, but he could not do away with a lifetime of environmental conditioning. He could curse the court that had humiliated him by condemning him to the Two Alternatives, but he expected courts to dispense justice. He could assert his own rugged independence, but he expected persons he encountered to behave as if they were bound by the Covenant-he had met no other sort. He was no more able to discard his past history than he would have been to discard his accustomed body.

But he did not know it yet.

MacKinnon failed to stand up when the judge entered the court room. Court attendants quickly set him right, but not before he had provoked a glare from the bench. The judge's appearance and manner were not reassuring. He was a well-fed man, of ruddy complexion, whose sadistic temper was evident in face and mien. They waited while he dealt drastically with several petty offenders. It seemed to MacKinnon, as he listened, that almost everything was against the law.

Nevertheless, he was relieved when his name was called. He stepped up and undertook at once to tell his story. The judge's gavel cut him short.

'What is this case?' the judge demanded, his face set in grim lines. 'Drunk and disorderly, apparently. I shall put a stop to this slackness among the young if it takes the last ounce of strength in my body!' He turned to the clerk. 'Any previous offences?'

The clerk whispered in his ear. The judge threw MacKinnon a look of mixed annoyance and suspicion, then told the customs' guard to come forward. Blackie told a clear, straightforward tale with the ease of a man used to giving testimony. MacKinnon's condition was attributed to resisting an officer in the execution of his duty. He submitted the inventory his colleague had prepared, but failed to mention the large quantity of goods which had been abstracted before the inventory was made.

The judge turned to MacKinnon. 'Do you have anything to say for yourself?'

'I certainly have, Doctor,' he began eagerly. 'There isn't a word of -,

Bang! The gavel cut him short. A court attendant hurried to MacKinnon's side and attempted to explain to him the proper form to use in addressing the court. The explanation confused him. In his experience, 'judge' naturally implied a medical man-a psychiatrist skilled in social problems. Nor had he heard of any special speech forms appropriate to a courtroom. But he amended his language as instructed.

'May it please the Honorable Court, this man is lying. He and his companion assaulted and robbed me. I was simply-'Smugglers generally think they are being robbed when customs officials catch them,' the judge sneered. 'Do you deny that you attempted to resist inspection?'

'No, Your Honor, but -'

'That will do. Penalty of fifty percent is added to the established scale of duty. Pay the clerk.'

'But, Your Honor, I can't -'

'Can't you pay it?'

'I haven't any money. I have only my possessions.'

'So?' He turned to the clerk. 'Condemnation proceedings. Impound his goods. Ten days for vagrancy. The community can't have these immigrant paupers roaming at large, and preying on law-abiding citizens. Next case!'

They hustled him away. It took the sound of a key grating in a barred door behind him to make him realize his predicament.

'Hi, pal, how's the weather outside?' The detention cell had a prior inmate, a small, well-knit man who looked up from a game of solitaire to address MacKinnon. He sat astraddle a bench on which he had spread his cards, and studied the newcomer with unworried, bright, beady eyes.

'Clear enough outside-but stormy in the courtroom,' MacKinnon answered, trying to adopt the same bantering tone and not succeeding very well. His mouth hurt him and spoiled his grin.

The other swung a leg over the bench and approached him with a light, silent step. 'Say, pal, you must 'a' caught that in a gear box,' he commented, inspecting MacKinnon's mouth. 'Does it hurt?'

'Like the devil,' MacKinnon admitted.

'We'll have to do something about that.' He went to the cell door and rattled it. 'Hey! Lefty! The house is on fire! Come arunnin'!'

The guard sauntered down and stood opposite their cell door. 'Wha' d'yuh want, Fader?' he said noncommittally.

'My old school chum has been slapped in the face with a wrench, and the pain is inordinate. Here's a chance for you to get right with Heaven by oozing down to the dispensary, snagging a dressing and about five grains of neoanodyne.'

The guard's expression was not encouraging. The prisoner looked grieved. 'Why, Lefty,' he said, 'I thought you would jump at a chance to do a little pure charity like that.' He waited for a moment, then added, 'Tell you what-you do it, and I'll show you how to work that puzzle about "How old is Ann?" Is it a go?'

'Show me first.'

'It would take too long. I'll write it out and give it to you.'

When the guard returned, MacKinnon's cellmate dressed his wounds with gentle deftness, talking the while. 'They call me Fader Magee. What's your name, pal?'

'David MacKinnon. I'm sorry, but I didn't quite catch your first name.'

'Fader. It isn't,' he explained with a grin, 'the name my mother gave me. It's more a professional tribute to my shy and unobtrusive nature.'

MacKinnon looked puzzled. 'Professional tribute? What is your profession?'

Magee looked pained. 'Why, Dave,' he said, 'I didn't ask you that. However,' he went on, 'it's probably the same as yours-self-preservation.'

Magee was a sympathetic listener, and MacKinnon welcomed the chance to tell someone about his troubles. He related the story of how he had decided to enter Coventry rather than submit to the sentence of the court, and how he had hardly arrived when he was hijacked and hauled into court. Magee nodded. 'I'm not surprised,' he observed. 'A man has to have larceny in his heart, or he wouldn't be a customs guard.'

'But what happens to my belongings?'

'They auction them off to pay the duty.'

'I wonder how much there will be left for me?'

Magee stared at him. 'Left over? There won't be anything left over. You'll probably have to pay a deficiency judgment.'

'Huh? What's that?'

'It's a device whereby the condemned pays for the execution,' Magee explained succinctly, if somewhat obscurely. 'What it means to you is that when your ten days is up,

you'll still be in debt to the court. Then it's the chain gang for you, my lad-you'll work it off at a dollar a day.'

'Fader-you're kidding me.'

'Wait and see. You've got a lot to learn, Dave.'

Coventry was an even more complex place than MacKinnon had gathered up to this time. Magee explained to him that there were actually three sovereign, independent jurisdictions. The jail where they were prisoners lay in the so-called New America. It had the forms of democratic government, but the treatment he had already received was a fair sample of the fashion in which it was administered.

'This place is heaven itself compared with the Free State,' Magee maintained. 'I've been there-' The Free State was an absolute dictatorship; the head man of the ruling clique was designated the 'Liberator'. Their watchwords were Duty and Obedience; an arbitrary discipline was enforced with a severity that left no room for any freedom of opinion. Governmental theory was vaguely derived from the old functionalist doctrines. The state was thought of as a single organism with a single head, a single brain, and a single purpose. Anything not compulsory was forbidden. 'Honest so help me,' claimed Magee, 'you can't go to bed in that place without finding one of their damned secret police between the sheets.'

'But at that,' he continued, 'it's an easier place to live than with the Angels.'

'The Angels?'

'Sure. We still got 'em. Must have been two or three thousand die-hards that chose to go to Coventry after the Revolution-you know that. There's still a colony up in the hills to the north, complete with Prophet Incarnate and the works. They aren't bad hombres, but they'll pray you into heaven even if it kills you.'

All three states had one curious characteristic in common-each one claimed to be the only legal government of the entire United States, and each looked forward to some future day when they would reclaim the 'unredeemed' portion; i.e., outside Coventry. To the Angels, this was an event which would occur when the First Prophet returned to earth to lead them again. In New America it was hardly more than a convenient campaign plank, to be forgotten after each election. But in the Free State it was a fixed policy.

Pursuant to this purpose there had been a whole series of wars between the Free State and New America. The Liberator held, quite logically, that New America was an unredeemed section, and that is was necessary to bring it under the rule of the Free State before the advantages of their culture could be extended to the outside.

Magee's words demolished MacKinnon's dream of finding an anarchistic utopia within the barrier, but he could not let his fond illusion die without a protest. 'But see here, Fader,' he persisted, 'isn't there some place where a man can live quietly by himself without all this insufferable interference?'

'No-'considered Fader, 'no . . . not unless you took to the hills and hid. Then you 'ud be all right, as long as you steered clear of the Angels. But it would be pretty slim pickin's, living off the country. Ever tried it?'

'No . . . not exactly-but I've read all the classics: Zane Grey, and Emerson Hough, and so forth.'

'Well . . . maybe you could do it. But if you really want to go off and be a hermit, you 'ud do better to try it on the Outside, where there aren't so many objections to it.'

'No'-MacKinnon's backbone stiffened at once-'no, I'll never do that. I'll never submit to psychological reorientation just to have a chance to be let alone. If I could go back to where I was before a couple of months ago, before I was arrested, it might be all right to go off to the Rockies, or look up an abandoned farm somewhere. . . But with that diagnosis staring me in the face . . . after being told I wasn't fit for human society until I had had my emotions re-tailored to fit a cautious little pattern, I couldn't face it. Not if it meant going to a sanitarium'

'I see,' agreed Fader, nodding, 'you want to go to Coventry, but you don't want the Barrier to shut you off from the rest of the world.'

'No, that's not quite fair . . . Well, maybe, in a way. Say, you don't think I'm not fit to associate with, do you?'

'You look all right to me,' Magee reassured him, with a grin, 'but I'm in Coventry too, remember. Maybe I'm no judge.'

'You don't talk as if you liked it much. Why are you here?'

Magee held up a gently admonishing finger. 'Tut! Tut! That is the one question you must never ask a man here. You must assume that he came here because he knew how swell everything is here.'

'Still . . . you don't seem to like it.'

'I didn't say I didn't like it. I do like it; it has flavor. Its little incongruities are a source of innocent merriment. And anytime they turn on the heat I can always go back through the Gate and rest up for a while in a nice quiet hospital, until things quiet down.'

MacKinnon was puzzled again. 'Turn on the heat? Do they supply too hot weather here?'

'Huh? Oh. I didn't mean weather control-there isn't any of that here, except what leaks over from outside. I was just using an old figure of speech.'

'What does it mean?'

Magee smiled to himself. 'You'll find out.'

After supper-bread, stew in a metal dish, a small apple-Magee introduced MacKinnon to the mysteries of cribbage. Fortunately, MacKinnon had no cash to lose. Presently Magee put the cards down without shuffling them. 'Dave,' he said, 'are you enjoying the hospitality offered by this institution?'

'Hardly-Why?'

'I suggest that we check out.'

'A good idea, but how?'

'That's what I've been thinking about. Do you suppose you could take another poke on that battered phiz of yours, in a good cause?'

MacKinnon cautiously fingered his face. 'I suppose so-if necessary. It can't do me much more harm, anyhow.'

'That's mother's little man! Now listen-this guard, Lefty, in addition to being kind o' unbright, is sensitive about his appearance. When they turn out the lights, you -'

'Let me out of here! Let me out of here!' MacKinnon beat on the bars and screamed. No answer came. He renewed the racket, his voice an hysterical falsetto. Lefty arrived to investigate, grumbling.

'What the hell's eating on you?' he demanded, peering through the bars.

MacKinnon changed to tearful petition. 'Oh, Lefty, please let me out of here. Please! I can't stand the dark. It's dark in here-please don't leave me alone.' He flung himself, sobbing, on the bars.

The guard cursed to himself. 'Another slugnutty. Listen, you-shut up, and go to sleep, or I'll come in there, and give you something to yelp for!' He started to leave.

MacKinnon changed instantly to the vindictive, unpredictable anger of the irresponsible. 'You big ugly baboon! You rat-faced idiot! Where'd you get that nose?'

Lefty turned back, fury in his face. He started to speak. MacKinnon cut him short. 'Yah! Yah! Yah!' he gloated, like a nasty little boy, 'Lefty's mother was scared by a warthog-The guard swung at the spot where MacKinnon's face was pressed between the bars of the door. MacKinnon ducked and grabbed simultaneously. Off balance at meeting no resistance, the guard rocked forward, thrusting his forearm between the bars. MacKinnon's fingers slid along his arm, and got a firm purchase on Lefty's wrist.

He threw himself backwards, dragging the guard with him, until Lefty was jammed up against the outside of the barred door, with one arm inside, to the wrist of which MacKinnon clung as if welded.

The yell which formed in Lefty's throat miscarried; Magee had already acted. Out of the darkness, silent as death, his slim hands had snaked between the bars and imbedded themselves in the guard's fleshy neck. Lefty heaved, and almost broke free, but MacKinnon threw his weight to the right and twisted the arm he gripped in an agonizing, bone-breaking leverage.

It seemed to MacKinnon that they remained thus, like some grotesque game of statues, for an endless period. His pulse pounded in his ears until he feared that it must be heard by others, and bring rescue to Lefty. Magee spoke at last:

'That's enough,' he whispered. 'Go through his pockets.'

He made an awkward job if it, for his hands were numb and trembling from the strain, and it was anything but convenient to work between the bars. But the keys were there, in the last pocket he tried. He passed them to Magee, who let the guard slip to the floor, and accepted them.

Magee made a quick job of it. The door swung open with a distressing creak. Dave stepped over Lefty's body, but Magee kneeled down, unhooked a truncheon from the guard's belt, and cracked him behind the ear with it. MacKinnon paused.

'Did you kill him?' he asked.

'Cripes, no,' Magee answered softly, 'Lefty is a friend of mine. Let's go.'

They hurried down the dimly lighted passageway between cells toward the door leading to the administrative offices-their only outlet. Lefty had carelessly left it ajar, and light shone through the crack, but as they silently approached it, they heard ponderous footsteps from the far side. Dave looked hurriedly for cover, but the best he could manage was to slink back into the corner formed by the cell block and the wall. He glanced around for Magee, but he had disappeared.

The door swung open; a man stepped through, paused, and looked around. MacKinnon saw that he was carrying a blacklight, and wearing its complement-rectifying spectacles. He realized then that the darkness gave him no cover. The blacklight swung his way; he tensed to spring-He heard a dull 'clunk!' The guard sighed, swayed gently, then collapsed into a loose pile. Magee stood over him, poised on the balls of his feet, and

surveyed his work, while caressing the business end of the truncheon with the cupped fingers of his left hand.

'That will do,' he decided. 'Shall we go, Dave?'

He eased through the door without waiting for an answer; MacKinnon was close behind him. The lighted corridor led away to the right and ended in a large double door to the street. On the left wall, near the street door, a smaller office door stood open.

Magee drew MacKinnon to him. 'It's a cinch,' he whispered. 'There'll be nobody in there now but the desk sergeant. We get past him, then out that door, and into the ozone-' He motioned Dave to keep behind him, and crept silently up to the office door. After drawing a small mirror from a pocket in his belt, he lay down on the floor, placed his head near the doorframe, and cautiously extended the tiny mirror an inch or two past the edge.

Apparently he was satisfied with the reconnaissance the improvised periscope afforded, for he drew himself back onto his knees and turned his head so that MacKinnon could see the words shaped by his silent lips. 'It's all right,' he breathed, 'there is only-

Two hundred pounds of uniformed nemesis landed on his shoulders. A clanging alarm sounded through the corridor. Magee went down fighting, but he was outclassed and caught off guard. He jerked his head free and shouted, 'Run for it, kid!'

MacKinnon could hear running feet somewhere, but could see nothing but the struggling figures before him. He shook his head and shoulders like a dazed animal, then kicked the larger of the two contestants in the face. The man screamed and let go his hold. MacKinnon grasped his small companion by the scruff of the neck and hauled him roughly to his feet.

Magee's eyes were still merry. 'Well played, my lad,' he commended in clipped syllables, as they burst out the street door, '- if hardly cricket! Where did you learn La Savate?'

MacKinnon had no time to answer, being fully occupied in keeping up with Magee's weaving, deceptively rapid progress. They ducked across the street, down an alley, and between two buildings.

The succeeding minutes, or hours, were confusion to MacKinnon. He remembered afterwards crawling along a roof top and letting himself down to crouch in the blackness of an interior court, but he could not remember how they had gotten on the roof. He also recalled spending an interminable period alone, compressed inside a most unsavory refuse bin, and his terror when footsteps approached the bin and a light flashed through a crack.

A crash and the sound of footsteps in flight immediately thereafter led him to guess that Fader had drawn the pursuit away from him. But when Fader did return, and open the top of the bin, MacKinnon almost throttled him before identification was established.

When the active pursuit had been shaken off, Magee guided him across town, showing a sophisticated knowledge of back ways and shortcuts, and a genius for taking full advantage of cover. They reached the outskirts of the town in a dilapidated quarter, far from the civic center. Magee stopped. 'I guess this is the end of the line,' kid,' he told Dave. 'If you follow this street, you'll come to open country shortly. That's what you wanted, wasn't it?'

'I suppose so,' MacKinnon replied uneasily, and peered down the street. Then he turned back to speak again to Magee.

But Magee was gone. He had faded away into the shadows. There was neither sight nor sound of him.

MacKinnon started in the suggested direction with a heavy heart. There was no possible reason to expect Magee to stay with him; the service Dave had done him with a lucky kick had been repaid with interest-yet he had lost the only friendly companionship he had found in a strange place. He felt lonely and depressed.

He continued along, keeping to the shadows, and watching carefully for shapes that might be patrolmen. He had gone a few hundred yards, and was beginning to worry about how far it might be to open countryside, when he was startled into gooseflesh by a hiss from a dark doorway.

He did his best to repress the panic that beset him, and was telling himself that policemen never hiss, when a shadow detached itself from the blackness and touched him on the arm.

'Dave,' it said softly.

MacKinnon felt a childlike sense of relief and well-being. 'Fader!'

'I changed my mind, Dave. The gendarmes would have you in tow before morning. You don't know the ropes . . . so I came back.'

Dave was both pleased and crestfallen. 'Hell's bells, Fader,' he protested, 'you shouldn't worry about me. I'll get along.'

Magee shook him roughly by the arm. 'Don't be a chump. Green as you are, you'd start to holler about your civil rights, or something, and get clipped in the mouth again.

'Now see here,' he went on, 'I'm going to take you to some friends of mine who will hide you until you're smartened up to the tricks around here. But they're on the wrong side of the law, see? You'll have to be all three of the three sacred monkeys-see no evil, hear no evil, tell no evil. Think you can do it?'

'Yes, but -'

'No "buts" about it. Come along!'

The entrance was in the rear of an old warehouse. Steps led down into a little sunken pit. From this open areaway-foul with accumulated refuse-a door let into the back wall of the building. Magee tapped lightly but systematically, waited and listened. Presently he whispered, 'Psst! It's the Fader.'

The door opened quickly, and Magee was encircled by two great, fat arms. He was lifted off his feet, while the owner of those arms planted a resounding buss on his cheek. 'Fader!' she exclaimed, 'are you all right, lad? We've missed you.'

'Now that's a proper welcome, Mother,' he answered, when he was back on his own feet, 'but I want you to meet a friend of mine. Mother Johnston, this is David MacKinnon.'

'May I do you a service?' David acknowledged, with automatic formality, but Mother Johnston's eyes tightened with instant suspicion.

'Is he stooled?' she snapped.

'No, Mother, he's a new immigrant-but I vouch for him. He's on the dodge, and I've brought him here to cool.'

She softened a little under his sweetly persuasive tones. 'Well -'

Magee pinched her cheek. 'That's a good girl! When are you going to marry me?'

She slapped his hand away. 'Even if I were forty years younger, I'd not marry such a scamp as you! Come along then,' she continued to MacKinnon, 'as long as you're a friend of the Fader-though it's no credit to you!' She waddled quickly ahead of them, down a flight of stairs, while calling out for someone to open the door at its foot.

The room was poorly lighted and was furnished principally with a long table and some chairs, at which an odd dozen people were seated, drinking and talking. It reminded MacKinnon of prints he had seen of old English pubs in the days before the Collapse.

Magee was greeted with a babble of boisterous welcome. 'Fader!'-'It's the kid himself!'-'How d'ja do it this time, Fader? Crawl down the drains?'-'Set 'em up, Mother-the Fader's back!'

He accepted the ovation with a wave of his hand and a shout of inclusive greeting, then turned to MacKinnon. 'Folks,' he said, his voice cutting through the confusion, 'I want you to know Dave-the best pal that ever kicked a jailer at the right moment. If it hadn't been for Dave, I wouldn't be here.'

Dave found himself seated between two others at the table and a stein of beer thrust into his hand by a not uncomely young woman. He started to thank her, but she had hurried off to help Mother Johnston take care of the sudden influx of orders. Seated opposite him was a rather surly young man who had taken little part in the greeting to Magee. He looked MacKinnon over with a face expressionless except for a recurrent tic which caused his right eye to wink spasmodically every few seconds.

'What's your line?' he demanded.

'Leave him alone, Alec,' Magee cut in swiftly, but in a friendly tone. 'He's just arrived inside; I told you that. But he's all right,' he continued, raising his voice to include the others present, 'he's been here less than twenty-four hours, but he's broken jail, beat up two customs busies, and sassed old Judge Fleishacker right to his face. How's that for a busy day?'

Dave was the center of approving interest, but the party with the tic persisted. 'That's all very well, but I asked him a fair question: What's his line? If it's the same as mine, I won't stand for it-it's too crowded now.'

'That cheap racket you're in is always crowded, but he's not in it. Forget about his line.'

'Why don't he answer for himself,' Alec countered suspiciously. He half stood up. 'I don't believe he's stooled -'

It appeared that Magee was cleaning his nails with the point of a slender knife. 'Put your nose back in your glass, Alec,' he remarked in a conversational tone, without looking up, '-or must I cut it off and put it there?'

The other fingered something nervously in his hand. Magee seemed not to notice it, but nevertheless told him, 'If you think you can use a vibrator on me faster than I use steel, go ahead-it will be an interesting experiment.'

The man facing him stood uncertainly for a moment longer, his tic working incessantly. Mother Johnston came up behind him and pushed him down by the shoulders, saying, 'Boys! Boys! Is that any way to behave?-and in front of a guest, too! Fader, put that toad sticker away-I'm ashamed of you.'

The knife was gone from his hands. 'You're right as always, Mother,' he grinned. 'Ask Molly to fill up my glass again.'

An old chap sitting on MacKinnon's right had followed these events with alcoholic uncertainty, but he seemed to have gathered something of the gist of it, for now he fixed Dave with serum-filled eye, and enquired, 'Boy, are you stooled to the rogue?' His sweetly sour breath reached MacKinnon as the old man leaned toward him and emphasized his question with a trembling, joint-swollen finger.

Dave looked to Magee for advice and enlightenment. Magee answered for him. 'No, he's not-Mother Johnston knew that when she let him in. He's here for sanctuary-as our customs provide!'

An uneasy stir ran around the room. Molly paused in her serving and listened openly. But the old man seemed satisfied. 'True . . . true enough,' he agreed, and took another pull at his drink, 'sanctuary may be given when needed, if-'His words were lost in a mumble.

The nervous tension slackened. Most of those present were subconsciously glad to follow the lead of the old man, and excuse the intrusion on the score of necessity. Magee turned back to Dave. 'I thought that what you didn't know couldn't hurt you-or us-but the matter has been opened.'

'But what did he mean?'

'Gramps asked you if you had been stooled to the rogue-whether or not you were a member of the ancient and honorable fraternity of thieves, cutthroats, and pickpockets!'

Magee stared into Dave's face with a look of sardonic amusement. Dave looked uncertainly from Magee to the others, saw them exchange glances, and wondered what answer was expected of him. Alec broke the pause. 'Well,' he sneered, 'what are you waiting for? Go ahead and put the question to him-or are the great Fader's friends free to use this club without so much as a by-your-leave?'

'I thought I told you to quiet down, Alec,' the Fader replied evenly. 'Besides-you're skipping a requirement. All the comrades present must first decide whether or not to put the question at all.'

A quiet little man with a chronic worried look in his eyes answered him. 'I don't think that quite applies, Fader. If he had come himself, or fallen into our hands-in that case, yes. But you brought him here. I think I speak for all when I say he should answer the question. Unless someone objects, I will ask him myself.' He allowed an interval to pass. No one spoke up. 'Very well then . . . Dave, you have seen too much and heard too much. Will you leave us now-or will you stay and take the oath of our guild? I must warn you that once stooled you are stooled for life-and there is but one punishment for betraying the rogue.'

He drew his thumb across his throat in an age-old deadly gesture. Gramps made an appropriate sound effect by sucking air wetly through his teeth, and chuckled.

Dave looked around. Magee's face gave him no help. 'What is it that I have to swear to?' he temporized.

The parley was brought to an abrupt ending by the sound of pounding outside. There was a shout, muffled by two closed doors and a stairway, of 'Open up down there!' Magee got lightly to his feet and beckoned to Dave.

'That's for us, kid,' he said. 'Come along.'

He stepped over to a ponderous, old-fashioned radiophonograph which stood against the wall, reached under it, fiddled for a moment, then swung out one side panel of it. Dave saw that the mechanism had been cunningly rearranged in such a fashion that a

man could squeeze inside it. Magee urged him into it, slammed the panel closed, and left him.

His face was pressed up close to the slotted grill which was intended to cover the sound box. Molly had cleared off the two extra glasses from the table, and was dumping one drink so that it spread along the table top and erased the rings their glasses had made.

MacKinnon saw the Fader slide under the table, and reached up. Then he was gone. Apparently he had, in some fashion, attached himself to the underside of the table.

Mother Johnston made a great-to-do of opening up. The lower door she opened at once, with much noise. Then she clumped slowly up the steps, pausing, wheezing, and complaining aloud. He heard her unlock the outer door.

'A fine time to be waking honest people up!' she protested. 'It's hard enough to get the work done and make both ends meet, without dropping what I'm doing every five minutes, and -'

'Enough of that, old girl,' a man's voice answered, 'just get along downstairs. We have business with you.'

'What sort of business?' she demanded.

'It might be selling liquor without a license, but it's not-this time.'

'I don't-this is a private club. The members own the liquor; I simply serve it to them.'

'That's as may be. It's those members I want to talk to. Get out of the way now, and be spry about it.'

They came pushing into the room with Mother Johnston, still voluble, carried along in by the van. The speaker was a sergeant of police; he was accompanied by a patrolman. Following them were two other uniformed men, but they were soldiers. MacKinnon judged by the markings on their kilts that they were corporal and private-provided the insignia in New America were similar to those used by the United States Army.

The sergeant paid no attention to Mother Johnston. 'All right, you men,' he called out, 'line up!'

They did so, ungraciously but promptly. Molly and Mother Johnston watched them, and moved closer to each other. The police sergeant called out, 'All right, corporal-take charge!'

The boy who washed up in the kitchen had been staring round-eyed. He dropped a glass. It bounced around on the hard floor, giving out bell-like sounds in the silence.

The man who had questioned Dave spoke up. 'What's all this?'

The sergeant answered with a pleased grin. 'Conscription-that's what it is. You are all enlisted in the army for the duration.'

'Press gang!' It was an involuntary gasp that came from no particular source.

The corporal stepped briskly forward. 'Form a column of twos,' he directed. But the little man with the worried eyes was not done.

'I don't understand this,' he objected. 'We signed an armistice with the Free State three weeks ago.'

'That's not your worry,' countered the sergeant, 'nor mine. We are picking up every able-bodied man not in essential industry. Come along.'

'Then you can't take me.'

'Why not?'

He held up the stump of a missing hand. The sergeant glanced from it to the corporal, who nodded grudgingly, and said, 'Okay-but report to the office in the morning, and register.'

He started to march them out when Alec broke ranks and backed up to the wall, screaming, 'You can't do this to me! I won't go!' His deadly little vibrator was exposed in his hand, and the right side of his face was drawn up in a spastic wink that left his teeth bare.

'Get him, Steeves,' ordered the corporal. The private stepped forward, but stopped when Alec brandished the vibrator at him. He had no desire to have a vibroblade between his ribs, and there was no doubt as to the uncontrolled dangerousness of his hysterical opponent.

The corporal, looking phlegmatic, almost bored, levelled a small tube at a spot on the wall over Alec's head. Dave heard a soft pop!, and a thin tinkle. Alec stood motionless for a few seconds, his face even more strained, as if he were exerting the limit of his will against some unseen force, then slid quietly to the floor. The tonic spasm in his face relaxed, and his features smoothed into those of a tired and petulant, and very bewildered, little boy.

'Two of you birds carry him,' directed the corporal. 'Let's get going.'

The sergeant was the last to leave. He turned at the door and spoke to Mother Johnston. 'Have you seen the Fader lately?'

'The Fader?' She seemed puzzled. 'Why, he's in jail.'

'Ah, yes.. . so he is.' He went out.

Magee refused the drink that Mother Johnston offered him.

Dave was surprised to see that he appeared worried for the first time. 'I don't understand it,' Magee muttered, half to himself, then addressed the one-handed man. 'Ed-bring me up to date.'

'Not much news since they tagged you, Fader. The armistice was before that. I thought from the papers that things were going to be straightened out for once.'

'So did I. But the government must expect war if they are going in for general conscription.' He stood up. 'I've got to have more data. Al!' The kitchen boy stuck his head into the room.

'What 'cha want, Fader?'

'Go out and make palaver with five or six of the beggars. Look up their "king". You know where he makes his pitch?'

'Sure-over by the auditorium.'

'Find out what's stirring, but don't let them know I sent you.,

'Right, Fader. It's in the bag.' The boy swaggered out.

'Molly.'

'Yes, Fader?'

'Will you go out, and do the same thing with some of the business girls? I want to know what they hear from their customers.' She nodded agreement. He went on, 'Better look up that little redhead that has her beat up on Union Square. She can get secrets out of a dead man. Here-' He pulled a wad of bills out of his pocket and handed her several. 'You better take this grease . . . You might have to pay off a cop to get back out of the district.'

Magee was not disposed to talk, and insisted that Dave get some sleep. He was easily persuaded, not having slept since he entered Coventry. That seemed like a lifetime past; he was exhausted. Mother Johnston fixed him a shakedown in a dark, stuffy room on the same underground level. It had none of the hygienic comforts to which he was accustomed-air-conditioning, restful music, hydraulic mattress, nor soundproofing-and he missed his usual relaxing soak and auto-massage, but he was too tired to care. He slept in clothing and under covers for the first time in his life.

He woke up with a headache, a taste in his mouth like tired sin, and a sense of impending disaster. At first he could not remember where he was-he thought he was still in detention Outside. His surrounds were inexplicably sordid; he was about to ring for the attendant and complain, when his memory pieced in the events of the day before. Then he got up and discovered that his bones and muscles were painfully sore, and-which was worse-that he was, by his standards, filthy dirty. He itched.

He entered the common room, and found Magee sitting at the table. He greeted Dave. 'Hi, kid. I was about to wake you. You've slept almost all day. We've got a lot to talk about.'

'Okay-shortly. Where's the 'fresher?'

'Over there.'

It was not Dave's idea of a refreshing chamber, but he managed to take a sketchy shower in spite of the slimy floor. Then he discovered that there was no air blast installed, and he was forced to dry himself unsatisfactorily with his handkerchief. He had no choice in clothes. He must put back on the ones he had taken off, or go naked. He recalled that he had seen no nudity anywhere in Coventry, even at sports-a difference in customs, no doubt.

He put his clothes back on, though his skin crawled at the touch of the once-used linen.

But Mother Johnston had thrown together an appetizing breakfast for him. He let coffee restore his courage as Magee talked. It was, according to Fader, a serious situation. New America and the Free State had compromised their differences and had formed an alliance. They quite seriously proposed to break out of Coventry and attack the United States.

MacKinnon looked up at this. 'That's ridiculous, isn't it? They would be outnumbered enormously. Besides, how about the Barrier?'

'I don't know-yet. But they have some reason to think that they can break through the Barrier . . . and there are rumors that whatever it is can be used as a weapon, too, so that a small army might be able to whip the whole United States.'

MacKinnon looked puzzled. 'Well,' he observed, 'I haven't any opinion of a weapon I know nothing about, but as to the Barrier . . . I'm not a mathematical physicist, but I was always told that it was theoretically impossible to break the Barrier-that it was just a nothingness that there was no way to touch. Of course, you can fly over it, but even that is supposed to be deadly to life.'

'Suppose they had found some way to shield from the effects of the Barrier's field?' suggested Magee. 'Anyhow, that's not the point, for us. The point is: they've made this combine; the Free State supplies the techniques and most of the officers; and New America, with its bigger population, supplies most of the men. And that means to us that we don't dare show our faces any place, or we are in the army before you can blink.

'Which brings me to what I was going to suggest. I'm going to duck out of here as soon as it gets dark, and light out for the Gateway, before they send somebody after me who is bright enough to look under a table. I thought maybe you might want to come along.'

'Back to the psychologists?' MacKinnon was honestly aghast.

'Sure-why not? What have you got to lose? This whole damn place is going to be just like the Free State in a couple of days-and a Joe of your temperament would be in hot water all the time. What's so bad about a nice, quiet hospital room as a place to hide out until things quiet down? You don't have to pay any attention to the psych boys-just make animal noises at 'em every time one sticks his nose into your room, until they get discouraged.'

Dave shook his head. 'No,' he said slowly, 'I can't do that.'

'Then what will you do?'

'I don't know yet. Take to the hills I guess. Go to live with the Angels if it comes to a showdown. I wouldn't mind them praying for my soul as long as they left my mind alone.'

They were each silent for a while. Magee was mildly annoyed at MacKinnon's bullheaded stubbornness in the face of what seemed to him a reasonable offer. Dave continued busily to stow away grilled ham, while considering his position. He cut off another bite. 'My, but this is good,' he remarked, to break the awkward silence, 'I don't know when I've had anything taste so good-Say!'-

'What?' inquired Magee, looking up, and seeing the concern written on MacKinnon's face.

'This ham-is it synthetic, or is it real meat?'

'Why, it's real. What about it?'

Dave did not answer. He managed to reach the refreshing room before that which he had eaten departed from him.

Before he left, Magee gave Dave some money with which he could have purchased for him things that he would need in order to take to the hills. MacKinnon protested, but the Fader cut him short. 'Quit being a damn fool, Dave. I can't use New American money on the Outside, and you can't stay alive in the hills without proper equipment. You lie doggo here for a few days while Al, or Molly, picks up what you need, and you'll stand a chance-unless you'll change your mind and come with me?'

Dave shook his head at this, and accepted the money.

It was lonely after Magee left. Mother Johnston and Dave were alone in the club, and the empty chairs reminded him depressingly of the men who had been impressed. He wished that Gramps or the one-handed man would show up. Even Alec, with his nasty temper, would have been company-he wondered if Alec had been punished for resisting the draft.

Mother Johnston inveigled him into playing checkers in an attempt to relieve his evident low spirits. He felt obliged to agree to her gentle conspiracy, but his mind wandered. It was all very well for the Senior Judge to tell him to seek adventure in interplanetary exploration, but only engineers and technicians were eligible for such billets. Perhaps he should have gone in for science, or engineering, instead of literature; then he might now be on Venus, contending against the forces of nature in high adventure, instead of hiding from uniformed bullies. It wasn't fair. No-he must not kid

himself; there was no room for an expert in literary history in the raw frontier of the planets; that was not human injustice, that was a hard fact of nature, and he might as well face it.

He thought bitterly of the man whose nose he had broken, and thereby landed himself in Coventry. Maybe he was an 'upholstered parasite' after all-but the recollection of the phrase brought back the same unreasoning anger that had gotten him into trouble. He was glad that he had socked that so-and-so! What right had he to go around sneering and calling people things like that?

He found himself thinking in the same vindictive spirit of his father, although he would have been at a loss to explain the connection. The connection was not superficially evident, for his father would never have stooped to name-calling. Instead, he would have offered the sweetest of smiles, and quoted something nauseating in the way of sweetness-and light. Dave's father was one of the nastiest little tyrants that ever dominated a household under the guise of loving-kindness. He was of the more-in-sorrow-than-in-anger, this-hurts-me-more-than-it-does-you school, and all his life had invariably been able to find an altruistic rationalization for always having his own way. Convinced of his own infallible righteousness, he had never valued his son's point of view on anything, but had dominated him in everything-always from the highest moralistic motives.

He had had two main bad effects on his son: the boy's natural independence, crushed at home, rebelled blindly at every sort of discipline, authority, or criticism which he encountered elsewhere and subconsciously identified with the not-to-be-criticized paternal authority. Secondly, through years of association Dave imitated his father's most dangerous social vice-that of passing unselfcritical moral judgments on the actions of others.

When Dave was arrested for breaking a basic custom; to wit, atavistic violence; his father washed his hands of him with the statement that he had tried his best to 'make a man of him', and could not be blamed for his son's failure to profit by his instruction.

A faint knock caused them to put away the checker board in a hurry. Mother Johnston paused before answering. 'That's not our knock,' she considered, 'but it's not loud enough to be the noises. Be ready to hide.'

MacKinnon waited by the fox hole where he had hidden the night before, while Mother Johnston went to investigate. He heard her unbar and unlock the upper door, then she called out to him in a low but urgent voice, 'Dave! Come here, Dave-hurry!'

It was Fader, unconscious, with his own bloody trail behind him.

Mother Johnston was attempting to pick up the limp form. MacKinnon crowded in, and between the two of them they managed to get him downstairs and to lay him on the long table. He came to for a moment as they straightened his limbs. 'Hi, Dave,' he whispered, managing to achieve the ghost of his debonair grin. 'Somebody trumped my ace.'

'You keep quiet!' Mother Johnston snapped at him, then in a lower voice to Dave, 'Oh, the poor darling-Dave, we must get him to the Doctor.'

'Can't . . . do . . . that,' muttered the Fader. 'Got . . . to get to the . . . Gate-' His voice trailed off. Mother Johnston's fingers had been busy all the while, as if activated by some separate intelligence. A small pair of scissors, drawn from some hiding place about her large person, clipped away at his clothing, exposing the superficial extent of the damage. She examined the trauma critically.

'This is no job for me,' she decided, 'and he must sleep while we move him. Dave, get that hypodermic kit out of the medicine chest in the 'fresher.'

'No, Mother!' It was Magee, his voice strong and vibrant.

'Get me a pepper pill,' he went on. 'There's -, 'But Fader -'

He cut her short. 'I've got to get to the Doctor all right, but how the devil will I get there if I don't walk?'

'We would carry you.'

'Thanks, Mother,' he told her, his voice softened. 'I know you would-but the police would be curious. Get me that pill.'

Dave followed her into the 'fresher, and questioned her while she rummaged through the medicine chest. 'Why don't we just send for a doctor?'

'There is only one doctor we can trust, and that's the Doctor. Besides, none of the others are worth the powder to blast them.'

Magee was out again when they came back into the room. Mother Johnston slapped his face until he came around, blinking and cursing. Then she fed him the pill.

The powerful stimulant, improbable offspring of common coal tar, took hold almost at once. To all surface appearance Magee was a well man. He sat up and tried his own pulse, searching it out in his left wrist with steady, sensitive fingers. 'Regular as a metronome,' he announced, 'the old ticker can stand that dosage all right.'

He waited while Mother Johnston applied sterile packs to his wounds, then said good-bye. MacKinnon looked at Mother Johnston. She nodded.

'I'm going with you,' he told the Fader.

'What for? It will just double the risk.'

'You're in no fit shape to travel alone-stimulant, or no stimulant.'

'Nuts. I'd have to look after you.'

'I'm going with you.'

Magee shrugged his shoulders and capitulated.

Mother Johnston wiped her perspiring face, and kissed both of them.

Until they were well out of town their progress reminded MacKinnon of their nightmare flight of the previous evening. Thereafter they continued to the north-northwest by a highway which ran toward the foothills, and they left the highway only when necessary to avoid the sparse traffic. Once they were almost surprised by a police patrol car, equipped with blacklight and almost invisible, but the Fader sensed it in time and they crouched behind a low wall which separated the adjacent field from the road.

Dave inquired how he had known the patrol was near. Magee chuckled. 'Damned if I know,' he said, 'but I believe I could smell a cop staked out in a herd of goats.'

The Fader talked less and less as the night progressed. His usually untroubled countenance became lined and old as the effect of the drug wore off. It seemed to Dave as if this unaccustomed expression gave him a clearer insight into the man's character-that the mask of pain was his true face rather than the unworried features Magee habitually showed the world. He wondered for the ninth time what the Fader had done to cause a court to adjudge him socially insane.

This question was uppermost in his mind with respect to every person he met in Coventry. The answer was obvious in most cases; their types of instability were gross and showed up at once. Mother Johnston had been an enigma until she had explained it herself. She had followed her husband into Coventry. Now that she was a widow, she

preferred to remain with the friends she knew and the customs and conditions she was adjusted to, rather than change for -another and possibly less pleasing environment.

Magee sat down beside the road. 'It's no use, kid,' he admitted, 'I can't make it.'

'The hell we can't. I'll carry you.'

Magee grinned faintly. 'No, I mean it.' Dave persisted. 'How much farther is it?'

'Matter of two or three miles, maybe.'

'Climb aboard.' He took Magee pickaback and started on. The first few hundred yards were not too difficult; Magee was forty pounds lighter than Dave. After that the strain of the additional load began to tell. His arms cramped from supporting Magee's knees; his arches complained at the weight and the unnatural load distribution; and his breathing was made difficult by the clasp of Magee's arms around his neck.

Two miles to go-maybe more. Let your weight fall forward, and your foot must follow it, else you fall to the ground. It's automatic-as automatic as pulling teeth. How long is a mile? Nothing in a rocket ship, thirty seconds in a pleasure car, a ten minute crawl in a steel snail, fifteen minutes to trained troops in good condition. How far is it with a man on your back, on a rough road, when you are tired to start with?

Five thousand, two hundred, and eighty feet-a meaningless figure. But every step takes twenty-four inches off the total. The remainder is still incomprehensible-an infinity. Count them. Count them till you go crazy-till the figures speak themselves outside your head, and the jar! . . . jar! ...jar! . . . of your enormous, benumbed feet beats in your brain. Count them backwards, subtracting two each time-no, that's worse; each remainder is still an unattainable, inconceivable figure.

His world closed in, lost its history and held no future. There was nothing, nothing at all, but the torturing necessity of picking up his foot again and placing it forward. No feeling but the heartbreaking expenditure of will necessary to achieve that meaningless act.

He was brought suddenly to awareness when Magee's arms relaxed from around his neck. He leaned forward, and dropped to one knee to keep from spilling his burden, then eased it slowly to the ground. He thought for a moment that the Fader was dead-he could not locate his pulse, and the slack face and limp body were sufficiently corpse-like, but he pressed an ear to Magee's chest, and heard with relief the steady flub-dub of his heart.

He tied Magee's wrists together with his handkerchief, and forced his own head through the encircled arms. But he was unable, in his exhausted condition, to wrestle the slack weight into position on his back. Fader regained consciousness while MacKinnon was struggling. His first words were, 'Take it easy, Dave. What's the trouble?'

Dave explained. 'Better untie my wrists,' advised the Fader, 'I think I can walk for a while.'

And walk he did, for nearly three hundred yards, before he was forced to give up again. 'Look, Dave,' he said, after he had partially recovered, 'did you bring along any more of those pepper pills?'

'Yes-but you can't take any more dosage. It would kill you.'

'Yeah, I know-so they say. But that isn't the idea-yet. I was going to suggest that you might take one.'

'Why, of course! Good grief, Fader, but I'm dumb.'

Magee seemed no heavier than a light coat, the morning star shone brighter, and his strength seemed inexhaustible. Even when they left the highway and started up the cart trail that led to the Doctor's home in the foothills, the going was tolerable and the burden not too great. MacKinnon knew that the drugs burned the working tissue of his body long after his proper reserves were gone, and that it would take him days to recover from the reckless expenditure, but he did not mind. No price was too high to pay for the moment when he at last arrived at the gate of the Doctor's home-on his own two feet, his charge alive and conscious.

MacKinnon was not allowed to see Magee for four days. In the meantime, he was encouraged to keep the routine of a semi-invalid himself in order to recover the twenty-five pounds he had lost in two days and two nights, and to make up for the heavy strain on his heart during the last night. A high-caloric diet, sun baths, rest, and peaceful surroundings plus his natural good health caused him to regain weight and strength rapidly, but he 'enjoyed ill health" exceedingly because of the companionship of the Doctor himself-and Persephone.

Persephone's calendar age was fifteen. Dave never knew whether to think of her as much older, or much younger. She had been born in Coventry, and had lived her short life in the house of the Doctor, her mother having died in childbirth in that same house. She was completely childlike in many respects, being without experience in the civilized world Outside, and having had very little contact with the inhabitants of Coventry, except when she saw them as patients of the Doctor. But she had been allowed to read unchecked from the library of a sophisticated and protean-minded man of science. MacKinnon was continually being surprised at the extent of her academic and scientific knowledge-much greater than his own. She made him feel as if he were conversing with some aged and omniscient matriarch, then she would come out with some naive concept of the outer world, and he would be brought up sharply with the realization that she was, in fact, an inexperienced child.

He was mildly romantic about her, not seriously, of course, in view of her barely nubile age, but she was pleasant to see, and he was hungry for feminine companionship. He was quite young enough himself to feel continual interest in the delightful differences, mental and physical, between male and female.

Consequently, it was a blow to his pride as sharp as had been the sentence to Coventry to discover that she classed him with the other inhabitants of Coventry as a poor unfortunate who needed help and sympathy because he was not quite right in his head.

He was furious and for one whole day he sulked alone, but the human necessity for self-justification and approval forced him to seek her out and attempt to reason with her. He explained carefully and with emotional candor the circumstances leading up to his trial and conviction, and embellished the account with his own philosophy and evaluations, then confidently awaited her approval.

It was not forthcoming. 'I don't understand your viewpoint,' she said. 'You broke his nose, yet he had done you no harm of any sort. You expect me to approve that?'

'But Persephone,' he protested, 'you ignore the fact that he called me a most insulting name.'

'I don't see the connection,' she said. 'He made a noise with his mouth-a verbal label. If the label does not fit you, the noise is meaningless. If the label is true in your case-if you are the thing that the noise refers to, you are neither more, nor less, that thing by reason of some one uttering the verbal label. In short, he did not damage you.

'But what you did to him was another matter entirely. You broke his nose. That is damage. In self-protection the rest of society must seek you out, and determine whether or not you are so unstable as to be likely to damage some one else in the future. If you are, you must be quarantined for treatment, or leave society-whichever you prefer.'

'You think I'm crazy, don't you?' he accused.

'Crazy? Not the way you mean it. You haven't paresis, or a brain tumor, or any other lesion that the Doctor could find. But from the viewpoint of your semantic reactions you are as socially unsane as any fanatic witch burner.'

'Come now-that's not just!'

'What is justice?' She picked up the kitten she had been playing with. 'I'm going in-it's getting chilly.' Off she went into the house, her bare feet noiseless in the grass.

Had the science of semantics developed as rapidly as psychodynamics and its implementing arts of propaganda and mob psychology, the United States might never have fallen into dictatorship, then been forced to undergo the Second Revolution. All of the scientific principles embodied in the Covenant which marked the end of the revolution were formulated as far back as the first quarter of the twentieth century.

But the work of the pioneer semanticists, C. K. Ogden, Alfred Korzybski, and others, were known to but a handful of students, whereas psycho-dynamics, under the impetus of repeated wars and the frenzy of high-pressure merchandising, progressed by leaps and bounds.

Semantics, 'the meaning of meaning', gave a method for the first time of applying the scientific method to every act of everyday life. Because semantics dealt with spoken and written words as a determining aspect of human behavior it was at first mistakenly thought by many to be concerned only with words and of interest only to professional word manipulators, such as advertising copy writers and professors of etymology. A handful of unorthodox psychiatrists attempted to apply it to personal human problems, but their work was swept away by the epidemic mass psychoses that destroyed Europe and returned the United States to the Dark Ages.

The Covenant was the first scientific social document ever drawn up by man, and due credit must be given to its principal author, Dr Micah Novak, the same Novak who served as staff psychologist in the revolution. The revolutionists wished to establish maximum personal liberty. How could they accomplish that to a degree of high mathematical probability? First they junked the concept of 'justice'. Examined semantically 'justice' has no referent-there is no observable phenomenon in the space-time-matter continuum to which one can point, and say, 'This is justice.' Science can deal only with that which can be observed and measured. Justice is not such a matter; therefore it can never have the same meaning to one as to another; any 'noises' said about it will only add to confusion.

But damage, physical or economic, can be pointed to and measured. Citizens were forbidden by the Covenant to damage another. Any act not leading to damage, physical or economic, to some particular person, they declared to be lawful.

Since they had abandoned the concept of 'justice', there could be no rational standards of punishment. Penology took its place with lycanthropy and other forgotten witchcrafts. Yet, since it was not practical to permit a source of danger to remain in the community, social offenders were examined and potential repeaters were given their choice of psychological readjustment, or of having society withdraw itself from them-Coventry.

Early drafts of the Covenant contained the assumption that the socially unsane would naturally be hospitalized and readjusted, particularly since current psychiatry was quite competent to cure all non-lesional psychoses and cure or alleviate lesional psychoses, but Novak set his face against this.

'No!' he protested. 'The government must never again be permitted to tamper with the mind of any citizen without his consent, or else we set up a greater tyranny than we had before. Every man must be free to accept, or reject, the Covenant, even though we think him insane!'

The next time David MacKinnon looked up Persephone he found her in a state of extreme agitation. His own wounded pride was forgotten at once. 'Why, my dear,' he said, 'whatever in the world is the matter?'

Gradually he gathered that she had been present at a conversation between Magee and the Doctor, and had heard, for the first time, of the impending military operation against the United States. He patted her hand. 'So that's all it is,' he observed in a relieved voice. 'I thought something was wrong with you yourself.'

'"That's all-" David MacKinnon, do you mean to stand there and tell me that you knew about this, and don't consider it worth worrying about?'

'Me? Why should I? And for that matter, what could I do?'

'What could you do? You could go outside and warn them-that's what you could do . . . As to why you should-Dave, you're impossible!' She burst into tears and ran from the room.

He stared after her, mouth open, then borrowed from his remotest ancestor by observing to himself that women are hard to figure out.

Persephone did not appear at lunch. MacKinnon asked the Doctor where she was.

'Had her lunch,' the Doctor told him, between mouthfuls. 'Started for the Gateway.'

'What! Why did you let her do that?'

'Free agent. Wouldn't have obeyed me anyway. She'll be all right.'

Dave did not hear the last, being already out of the room and running out of the house. He found her just backing her little motorcycle runabout out of its shed. 'Persephone!'

'What do you want?' she asked with frozen dignity beyond her years.

'You mustn't do this! That's where the Fader got hurt!'

'I am going. Please stand aside.'

'Then I'm going with you.'

'Why should you?'

'To take care of you.'

She sniffed. 'As if anyone would dare to touch me.'

There was a measure of truth in what she said. The Doctor, and every member of his household, enjoyed a personal immunity unlike that of anyone else in Coventry. As a natural consequence of the set-up, Coventry had almost no competent medical men. The number of physicians who committed social damage was small. The proportion of such who declined psychiatric treatment was negligible, and this negligible remainder were almost sure to be unreliable bunglers in their profession. The Doctor was a natural healer, in voluntary exile in order that he might enjoy the opportunity to practice his art in the richest available field. He cared nothing for dry research; what he wanted was patients, the sicker the better, that he might make them well again.

He was above custom and above law. In the Free State the Liberator depended on him for insulin to hold his own death from diabetes at arm's length. In New America his beneficiaries were equally powerful. Even among the Angels of the Lord the Prophet himself accepted the dicta of the Doctor without question.

But MacKinnon was not satisfied. Some ignorant fool, he was afraid, might do the child some harm without realizing her protected status. He got no further chance to protest; she started the little runabout suddenly, and forced him to jump out of its path. When he had recovered his balance, she was far down the lane. He could not catch her.

She was back in less than four hours. He had expected that; if a person as elusive as Fader had not been able to reach the Gate at night, it was not likely that a young girl could do so in daylight.

His first feeling was one of simple relief, then he eagerly awaited an opportunity to speak to her. During her absence he had been turning over the situation in his mind. It was a foregone conclusion that she would fail; he wished to rehabilitate himself in her eyes; therefore, he would help her in the project nearest her heart-he himself would carry the warning to the Outside!

Perhaps she would ask for such help. In fact, it seemed likely. But the time she returned he had convinced himself that she was certain to ask his help. He would agree-with simple dignity-and off he would go, perhaps to be wounded, or killed, but an heroic figure, even if he failed.

He pictured himself subconsciously as a blend of Sydney Carton, the White Knight, the man who carried the message to Garcia and just a dash of d'Artagnan.

But she did not ask him-she would not even give him a chance to talk with her.

She did not appear at dinner. After dinner she was closeted with the Doctor in his study. When she reappeared she went directly to her room. He finally concluded that he might as well go to bed himself.

To bed, and then to sleep, and take it up again in the morning-But it's not as simple as that. The unfriendly walls stared back at him, and the other, critical half of his mind decided to make a night of it. Fool! She doesn't want your help. Why should she? What have you got that Fader hasn't got?-and better. To her, you are just one of the screwloose multitude you've seen all around you in this place.

But I'm not crazy!-just because I choose not to submit to the dictation of others doesn't make me crazy. Doesn't it, though? All the rest of them in here are lamebrains, what's so fancy about you? Not all of them-how about the Doctor, and-don't kid yourself, chump, the Doctor and Mother Johnston are here for their own reasons; they weren't sentenced. And Persephone was born here.

How about Magee?-He was certainly rational-or seemed so. He found himself resenting, with illogical bitterness, Magee's apparent stability. Why should he be any different from the rest of us?

The rest of us? He had classed himself with the other inhabitants of Coventry. All right, all right, admit it, you fool-you're just like the rest of them; turned out because the decent people won't have you-and too damned stubborn to admit that you need treatment. But the thought of treatment turned him cold, and made him think of his father again. Why should that be? He recalled something the Doctor had said to him a couple of days before:

'What you need, son, is to stand up to your father and tell him off. Pity more children don't tell their parents to go to hell!'

He turned on the light and tried to read. But it was no use. Why should Persephonie care what happened to the people Outside?-She didn't know them; she had no friends there. If he had no obligations to them, how could she possibly care? No obligations? You had a soft, easy life for many years-all they asked was that you behave yourself. For that matter, where would you be now, if the Doctor had stopped to ask whether or not he owed you anything?

He was still wearily chewing the bitter cud of self-examination when the first cold and colorless light of morning filtered in. He got up, threw a robe around him, and tiptoed down the hall to Magee's room. The door was ajar. He stuck his head in, and whispered, 'Fader-Are you awake?'

'Come in, kid,' Magee answered quietly. 'What's the trouble? No can sleep?'

'No -, 'Neither can I. Sit down, and we'll carry the banner together.'

'Fader, I'm going to make a break for it. I'm going Outside.'

'Huh? When?'

'Right away.'

'Risky business, kid. Wait a few days, and I'll try it with you.'

'No, I can't wait for you to get well. I'm going out to warn the United States!'

Magee's eyed widened a little, but his voice was unchanged. 'You haven't let that spindly kid sell you a bill of goods, Dave?'

'No. Not exactly. I'm doing this for myself-It's something I need to do. See here, Fader, what about this weapon? Have they really got something that could threaten the United States?'

'I'm afraid so,' Magee admitted. 'I don't know much about it, but it makes blasters look sick. More range-I don't know what they expect to do about the Barrier, but I saw 'em stringing heavy power lines before I got winged. Say, if you do get outside, here's a chap you might look up; in fact, be sure to. He's got influence.' Magee scrawled something on a scrap of paper, folded the scrap, and handed it to MacKinnon, who pocketed it absent-mindedly and went on:

'How closely is the Gate guarded, Fader?'

'You can't get out the Gate; that's out of the question. Here's what you will have to do-' He tore off another piece of paper and commenced sketching and explaining.

Dave shook hands with Magee before he left. 'You'll say goodbye for me, won't you? And thank the Doctor? I'd rather just slide out before anyone is up.'

'Of course, kid,' the Fader assured him.

MacKinnon crouched behind bushes and peered cautiously at the little band of Angels filing into the bleak, ugly church. He shivered, both from fear and from the icy morning air. But his need was greater than his fear. Those zealots had food-and he must have it.

The first two days after he left the house of the Doctor had been easy enough. True, he had caught cold from sleeping on the ground; it had settled in his lungs and slowed him down. But he did not mind that now if only he could refrain from sneezing or coughing until the little band of faithful were safe inside the temple. He watched them pass-dour-looking men, women and skirts that dragged the ground and whose work lined faces were framed in shawls-sallow drudges with too many children. The light had gone out of their faces. Even the children were sober.

The last of them filed inside, leaving only the sexton in the churchyard, busy with some obscure duty. After an interminable time, during which MacKinnon pressed a finger against his upper lip in a frantic attempt to forestall a sneeze, the sexton entered the grim building and closed the doors.

McKinnon crept out of his hiding place and hurried to the house he had previously selected, on the edge of the clearing, farthest from the church.

The dog was suspicious, but he quieted him. The house was locked, but the rear door could be forced. He was a little giddy at the sight of food when he found it-hard bread, and strong, unsalted butter made from goat's milk. A misstep two days before had landed him in a mountain stream. The mishap had not seemed important until he discovered that his food tablets were a pulpy mess. He had eaten them the rest of the day, then mold had taken them, and he had thrown the remainder away.

The bread lasted him through three more sleeps, but the butter melted and he was unable to carry it. He soaked as much of it as he could into the bread, then licked up the rest, after which he was very thirsty.

Some hours after the last of the bread was gone, he reached his first objective-the main river to which all other streams in Coventry were tributary. Some place, down stream, it dived under the black curtain of the Barrier, and continued seaward. With the gateway closed and guarded, its outlet constituted the only possible egress to a man unassisted.

In the meantime it was water, and thirst was upon him again, and his cold was worse. But he would have to wait until dark to drink; there were figures down there by the bank-some in uniform, he thought. One of them made fast a little skiff to a landing. He marked it for his own and watched it with jealous eyes. It was still there when the sun went down.

The early morning sun struck his nose and he sneezed. He came wide awake, raised his head, and looked around. The little skiff he had appropriated floated in midstream. There were no oars. He could not remember whether or not there had been any oars. The current was fairly strong; it seemed as if he should have drifted clear to the Barrier in the night. Perhaps he had passed under it-no, that was ridiculous.

Then he saw it, less than a mile away, black and ominous-but the most welcome sight he had seen in days. He was too weak and feverish to enjoy it, but it renewed the determination that kept him going.

The little boat scraped against bottom. He saw that the current at a bend had brought him to the bank. He hopped awkwardly out, his congealed joints complaining, and drew the bow of the skiff up onto the sand. Then he thought better of it, pushed it out

once more, shoved as hard as he was able and watched it disappear around the meander. No need to advertise where he had landed.

He slept most of that day, rousing himself once to move out of the sun when it grew too hot. But the sun had cooked much of the cold out of his bones, and he felt much better by nightfall.

Although the Barrier was only a mile or so away, it took most of the night to reach it by following the river bank. He knew when he had reached it by the clouds of steam that rose from the water. When the sun came up, he considered the situation. The Barrier stretched across the water, but the juncture between it and the surface of the stream was hidden by billowing clouds. Someplace, down under the surface of the water-how far down he did not know-somewhere down there, the Barrier ceased, and its raw edge turned the water it touched to steam.

Slowly, reluctantly and most unheroically, he commenced to strip off his clothes. The time had come and he did not relish it. He came across the scrap of paper that Magee had handed him, and attempted to examine it. But it had been pulped by his involuntary dip in the mountain stream and was quite illegible. He chucked it away. It did not seem to matter.

He shivered as he stood hesitating on the bank, although the sun was warm. Then his mind was made up for him; he spied a patrol on the far bank.

Perhaps they had seen him, perhaps not. He dived.

Down, down, as far as his strength would take him. Down and try to touch bottom, to be sure of avoiding that searing, deadly base. He felt mud with his hands. Now to swim under it. Perhaps it was death to pass under it, as well as over it; he would soon know. But which way was it? There was no direction down here.

He stayed down until his congested lungs refused. Then he rose part way, and felt scalding water on his face. For a timeless interval of unutterable sorrow and loneliness he realized that he was trapped between heat and water-trapped under the Barrier.

Two private soldiers gossiped idly on a small dock which lay under the face of the Barrier. The river which poured out from beneath it held no interest for them, they had watched it for many dull tours of guard duty. An alarm clanged behind them and brought them to alertness. 'What sector, Jack?'

'This bank. There he is now-see!'

They fished him out and had him spread out on the dock by the time the sergeant of the guard arrived. 'Alive, or dead?' he enquired.

'Dead, I think,' answered the one who was not busy giving artificial resuscitation.

The sergeant clucked in a manner incongruous to his battered face, and said, 'Too bad. I've ordered the ambulance; send him up to the infirmary anyhow.'

The nurse tried to keep him quiet, but MacKinnon made such an uproar that she was forced to get the ward surgeon. 'Here! Here! What's all this nonsense?' the medico rebuked him, while reaching for his pulse. Dave managed to convince him that he would not quiet down, not accept a soporific until he had told his story. They struck a working agreement that MacKinnon was to be allowed to talk-'But keep it short, mind you!'-and the doctor would pass the word along to his next superior, and in return Dave would submit to a hypodermic.

The next morning two other men, unidentified, were brought to MacKinnon by the surgeon. They listened to his full story and questioned him in detail. He was transferred to corps area headquarters that afternoon by ambulance. There he was questioned again. He was regaining his strength rapidly, but he was growing quite tired of the whole rigmarole, and wanted assurance that his warning was being taken seriously. The latest of his interrogators reassured him. 'Compose yourself,' he told Dave, 'you are to see the commanding officer this afternoon.'

The corps area commander, a nice little chap with a quick, birdlike manner and a most unmilitary appearance, listened gravely while MacKinnon recited his story for what seemed to him the fiftieth time. He nodded agreement when David finished. 'Rest assured, David MacKinnon, that all necessary steps are being taken.'

'But how about their weapon?'

'That is taken care of-and as for the Barrier, it may not be as easy to break as our neighbors think. But your efforts are appreciated. May I do you some service?'

'Well, no-not for myself, but there are two of my friends in there-'He asked that something be done to rescue Magee, and that Persephone be enabled to come out, if she wished.

'I know of that girl,' the general remarked. 'We will get in touch with her. If at any time she wishes to become a citizen, it can be arranged. As for Magee, that is another matter-'He touched the stud of his desk visiphone. 'Send Captain Randall in.'

A neat, trim figure in the uniform of a captain of the United States Army entered with a light step. MacKinnon glanced at him with casual, polite interest, then his expression went to pieces. 'Fader!' he yelled.

Their mutual greeting was hardly sufficiently decorous for the private office of a commanding general, but the general did not seem to mind. When they had calmed down, MacKinnon had to ask the question uppermost in his mind. 'But see here, Fader, all this doesn't make sense-'He paused, staring, then pointed a finger accusingly, 'I know! You're in the secret service!'

The Fader grinned cheerfully. 'Did you think,' he observed, 'that the United States Army would leave a plague spot like that unwatched?'

The general cleared his throat. 'What do you plan to do now, David MacKinnon?'

'Eh! Me? Why, I don't have any plans-'He thought for a moment, then turned to his friend. 'Do you know, Fader, I believe I'll turn in for psychological treatment after all. You're on the Outside -'

'I don't believe that will be necessary,' interrupted the general gently.

'No? Why not, sir?'

'You have cured yourself. You may not be aware of it, but four psychotechnicians have interviewed you. Their reports agree. I am authorized to tell you that your status as a free citizen has been restored, if you wish it.'

The general and Captain 'the Fader' Randall managed tactfully between them to terminate the interview. Randall walked back to the infirmary with his friend. Dave wanted a thousand questions answered at once. 'But Fader,' he demanded, 'you must have gotten out before I did.'

'A day or two.'

'Then my job was unnecessary!'

'I wouldn't say that,' Randall contradicted. 'I might not have gotten through. As a matter of fact, they had all the details even before I reported. There are others-Anyhow,' he continued, to change the subject, 'now that you are here, what will you do?'

'Me? It's too soon to say . . . It won't be classical literature, that's a cinch. If I wasn't such a dummy in maths, I might still try for interplanetary.'

'Well, we can talk about it tonight,' suggested Fader, glancing at his chrono. 'I've got to run along, but I'll stop by later, and we'll go over to the mess for dinner.'

He was out the door with speed reminiscent of the thieves' kitchen. Dave watched him, then said suddenly, 'Hey! Fader! Why couldn't I get into the secret ser -,

But the Fader was gone-he must ask himself.

Delilah and the Space-Rigger

SURE, WE HAD TROUBLE building Space Station One-but the trouble was people.

Not that building a station twenty-two thousand three hundred miles out in space is a breeze. It was an engineering feat bigger than the Panama Canal or the Pyramids-or even the Susquehanna Power Pile. But "Tiny" Larsen built her and a job Tiny tackles gets built.

I first saw Tiny playing guard on a semi-pro team, working his way through Oppenheimer Tech. He worked summers for me thereafter till he graduated. He stayed in construction and eventually I went to work for him.

Tiny wouldn't touch a job unless he was satisfied with the engineering. The Station had jobs designed into it that called for six-armed monkeys instead of grown men in space suits. Tiny spotted such boners; not a ton of material went into the sky until the specs and drawings suited him.

But it was people that gave us the headaches. We bad a sprinkling of married men, but the rest were wild kids, attracted by high pay and adventure. Some were busted spacemen. Some were specialists, like electricians and instrument men. About half were deep-sea divers, used to working in pressure suits. There were sandhogs and riggers and welders and ship fitters and two circus acrobats.

We fired four of them for being drunk on the job; Tiny had to break one stiff's arm before he would stay fired. What worried us was where did they get it? Turned out a ship fitter had rigged a heatless still, using the vacuum around us. He was making vodka from potatoes swiped from the commissary. I hated to let him go, but he was too smart.

Since we were falling free in a 24-hour circular orbit, with everything weightless and floating, you'd think that shooting craps was impossible. But a radioman named Peters figured a dodge to substitute steel dice and a magnetic field. He also eliminated the element of chance, so we fired him.

We planned to ship him back in the next supply ship, the R.S. Half Moon. I was in Tiny's office when she blasted to match our orbit. Tiny swam to the view port "Send for Peters, Dad," he said, "and give him the old heave ho. Who's his relief?"

"Party named G. Brooks McNye," I told him.

A line came snaking over from the ship. Tiny said, "I don't believe she's matched." He buzzed the radio shack for the ship's motion relative to the Station. The answer didn't please him and he told them to call the Half Moon.

Tiny waited until the screen showed the rocket ship.

C.O. "Good morning, Captain. Why have you placed a line on us?"

"For cargo, naturally. Get your hopheads over here. I want to blast off before we enter the shadow." The Station spent about an hour and a quarter each day passing through Earth's shadow; we worked two eleven-hour shifts and skipped the dark period, to avoid rigging lights and heating suits.

Tiny shook his head. "Not until you've matched course and speed with us."

"I am matched!"

"Not to specification, by my instruments."

"Have a heart, Tiny! I'm short on maneuvering fuel. If I juggle this entire ship to make a minor correction on a few lousy tons of cargo, I'll be so late I'll have to put down

on a secondary field. I may even have to make a dead-stick landing." In those days all ships had landing wings.

"Look, Captain," Tiny said sharply, "the only purpose of your lift was to match orbits for those same few lousy tons. I don't care if you land in Little America on a pogo stick. The first load here was placed with loving care in the proper orbit, and I'm making every other load match. Get that covered wagon into the groove."

"Very well, Superintendent!" Captain Shields said stiffly. "Don't be sore, Don," Tiny said softly. "By the way, you've got a passenger for me?"

"Oh, yes, so I have!" Shields' face broke out in a grin.

"Well, keep him aboard until we unload. Maybe we can beat the shadow yet."

"Fine, fine! After all, why should I add to your troubles?" The skipper switched off, leaving my boss looking puzzled.

We didn't have time to wonder at his words. Shields whipped his ship around on gyros, blasted a second or two, and put her dead in space with us pronto-and used very little fuel, despite his bellyaching. I grabbed every man we could spare and managed to get the cargo clear before we swung into Earth's shadow. Weightlessness is an unbelievable advantage in handling freight; we gutted the Half Moon-by hand, mind you-in fifty-four minutes.

The stuff was oxygen tanks, loaded, and aluminum mirrors to shield them, panels of outer skin-sandwich stuff of titanium alloy sheet with foamed glass filling-and cases of jato units to spin the living quarters. Once it was all out and snapped to our cargo line I sent the men back by the same line-I won't let a man work outside without a line no matter how space happy he figures he is. Then I told Shields to send over the passenger and cast off.

This little guy came out the ship's air lock, and hooked on to the ship's line. Handling himself like he was used to space, he set his feet and dived, straight along the stretched line, his snap hook running free. I hurried back and motioned him to follow me. Tiny, the new man, and I reached the air locks together.

Besides the usual cargo lock we had three Kwikloks. A Kwiklok is an Iron Maiden without spikes; it fits a man in a suit, leaving just a few pints of air to scavenge, and cycles automatically. A big time saver in changing shifts. I passed through the middle-sized one; Tiny, of course, used the big one. Without hesitation the new man pulled himself into the small one.

We went into Tiny's office. Tiny strapped down, and pushed his helmet back. "Well, McNye," he said. "Glad to have you with us."

The new radio tech opened his helmet. I heard a low, pleasant voice answer, "Thank you."

I stared and didn't say anything. From where I was I could see that the radio tech was wearing a hair ribbon.

I thought Tiny would explode. He didn't need to see the hair ribbon; with the helmet up it was clear that the new "man" was as female as Venus deMilo. Tiny sputtered, then he was unstrapped and diving for the view port. "Dad!" he yelled. "Get the radio shack. Stop that ship!"

But the Half Moon was already a ball of fire in the distance. Tiny looked dazed. "Dad," he said, "who else knows about this?"

"Nobody, so far as I know."

He thought a bit. "We've got to keep her out of sight.

That's it-we keep her locked up and out of sight until the next ship matches in." He didn't look at her.

"What in the world are you talking about?" McNye's voice was higher and no longer pleasant.

Tiny glared. "You, that's what. What are you-a stowaway?'

"Don't be silly! I'm G. B. McNye, electronics engineer. Don't you have my papers?"

Tiny turned to me. "Dad, this is your fault. How in Chr- pardon me, Miss. How did you let them send you a woman? Didn't you even read the advance report on her?"

"Me?" I said. "Now see here, you big squarehead! Those forms don't show sex; the Fair Employment Commission won't allow it except where it's pertinent to the job."

"You're telling me it's not pertinent to the job here?"

"Not by job classification it ain't. There's lots of female radio and radar men, back Earthside."

"This isn't Earthside." He had something. He was thinking of those two-legged wolves swarming over the job outside. And G. B. McNye was pretty. Maybe eight months of no women at all affected my judgment, but she would pass.

"I've even heard of female rocket pilots," I added, for spite.

"I don't care if you've heard of female archangels; I'll have no women here!"

"Just a minute!" If I was riled, she was plain sore. "You're the construction superintendent, are you not?"

"Yes," Tiny admitted.

"Very well, then, how do you know what sex I am?'

"Are you trying to deny that you are a woman?"

"Hardly! I'm proud of it. But officially you don't know what sex G. Brooks McNye is. That's why I use 'G' instead of Gloria. I don't ask favors."

Tiny grunted. "You won't get any. I don't know how you sneaked in, but get this, McNye, or Gloria, or whatever. you're fired. You go back on the next ship. Meanwhile we'll try to keep the men from knowing we've got a woman aboard."

I could see her count ten. "May I speak," she said finally, "or does your Captain Bligh act extend to that, too?"

"Say your say."

"I didn't sneak in. I am on the permanent staff of the Station, Chief Communications Engineer. I took this vacancy myself to get to know the equipment while it was being installed. I'll live here eventually; I see no reason not to start now."

Tiny waved it away. "There'll be men and women both here some day. Even kids. Right now it's stag and it'll stay that way."

"We'll see. Anyhow, you can't fire me; radio personnel don't work for you." She had a point; communicators and some other specialists were lent to the contractors, Five Companies, Incorporated, by Harriman Enterprises.

Tiny snorted. "Maybe I can't fire you; I can send you home. Requisitioned personnel must be satisfactory to the contractor, meaning me. Paragraph Seven, clause M; I wrote that clause myself."

"Then you know that if requisitioned personnel are refused without cause the contractor bears the replacement cost"

"I'll risk paying your fare home, but I won't have you here."

"You are most unreasonable!"

"Perhaps, but I'll decide what's good for the job. I'd rather have a dope peddler than have a woman sniffing around my boys!"

She gasped. Tiny knew he had said too much; he added, "Sorry, Miss. But that's it. You'll' stay under cover until I can get rid of you."

Before she could speak I cut in. "Tiny-look behind you!" Staring in the port was one of the riggers, his eyes bugged out. Three or four more floated up and joined him.

Then Tiny zoomed up to the port and they scattered like minnows. He scared them almost out of their suits; I thought he was going to shove his fists through the quartz.

He came back looking whipped. "Miss," he said, pointing, "wait in my room." When she was gone he added, "Dad, what'll we do?"

I said, "I thought you had made up your mind, Tiny."

"I have," he answered peevishly. "Ask the Chief Inspector to come in, will you?"

That showed how far gone he was. The inspection gang belonged to Harriman Enterprises, not to us, and Tiny rated them mere nuisances. Besides, Tiny was an Oppenheimer graduate; Dalrymple was from M.I.T.

He came in, brash and cheerful. "Good morning, Superintendent. Morning, Mr. Witherspoon. What can I do for you?"

Glumly, Tiny told the story. Dalrymple looked smug. "She's right, old man. You can send her back and even specify a male relief. But I can hardly endorse 'for proper cause' now, can I?"

"Damnation. Dalrymple, we can't have a woman around here!"

"A moot point. Not covered by contract, y'know."

"If your office hadn't sent us a crooked gambler as her predecessor I wouldn't be in this am!"

"There, there! Remember the old blood pressure. Suppose we leave the endorsement open and arbitrate the cost. That's fair, eh?"

"I suppose so. Thanks."

"Not at all. But consider this: when you rushed Peters off before interviewing the newcomer, you cut yourself down to one operator. Hammond can't stand watch twenty-four hours a day."

"He can sleep in the shack. The alarm will wake him."

"I can't accept that. The home office and ships' frequencies must be guarded at all times. Harriman Enterprises has supplied a qualified operator; I am afraid you must use her for the time being."

Tiny will always cooperate with the inevitable; he said quietly, "Dad, she'll take first shift. Better put the married men on that shift."

Then he called her in. "Go to the radio shack and start makee-learnee, so that Hammond can go off watch soon. Mind what he tells you. He's a good man."

"I know," she said briskly. "I trained him."

Tiny bit his lip. The C.I. said, "The Superintendent doesn't bother with trivia-I'm Robert Dalrymple, Chief Inspector. He probably didn't introduce his assistant either-Mr. Witherspoon."

"Call me Dad," I said.

She smiled and said, "Howdy, Dad." I felt warm clear through. She went on to Dalrymple, "Odd that we haven't met before."

Tiny butted in. "McNye, you'll sleep in my room-"

She raised her eyebrows; he went on angrily, "Oh, I'll get my stuff out-at once. And get this: keep the door locked, off shift.'

"You're darn tootin' I will!"

Tiny blushed.

I was too busy to see much of Miss Gloria. There was cargo to stow, the new tanks to install and shield. That left the most worrisome task of all: putting spin on the living quarters. Even the optimists didn't expect much interplanetary traffic for some years; nevertheless Harriman Enterprises wanted to get some activities moved in and paying rent against their enormous investment.

I.T.&T. had leased space for a microwave relay station several million a year from television alone. The Weather Bureau was itching to set up its hemispheric integrating station; Palomar Observatory had a concession (Harriman Enterprises donated that space); the Security Council had, some hush-hush project; Fermi Physical Labs and Kettering Institute each had space-a dozen tenants wanted to move in now, or sooner, even if we never completed accommodations for tourists and travelers.

There were time bonuses in it for Five Companies, Incorporated-and their help. So we were in a hurry to get spin on the quarters.

People who have never been out have trouble getting through their heads-at least I had-that there is no feeling of weight, no up and down, in a free orbit in space. There's' Earth, round and beautiful, only twenty-odd thousand miles away, close enough to brush your sleeve. You know it's pulling you towards it. Yet you feel no weight, absolutely none. You float..

Floating is fine for some types of work, but when it's time to eat, or play cards, or bathe, it's good to feel weight on your feet. Your dinner stays quiet and you feel more natural.

You've seen pictures of the Station-a huge cylinder, like a bass drum, with ships' nose pockets dimpling its sides. Imagine a snare drum, spinning around inside the bass drum; that's the living quarters, with centrifugal force pinch-hitting for gravity. We could have spun the whole Station but you can't berth a ship against a whirling dervish.

So we built a spinning part for creature comfort and an outer, stationary part for docking, tanks, storerooms, and the like. You pass from one to the other at the hub. When Miss Gloria joined us the inner part was closed in and pressurized, but the rest was a skeleton of girders.

Mighty pretty though, a great network of shiny struts and ties against black sky and stars-titanium alloy 1403, light, strong, and non-corrodible. The Station is flimsy compared with a ship, since it doesn't have to take blastoff stresses. That meant we didn't dare put on spin by violent means-which is where jato units come in.

"Jato"-Jet Assisted Take-Off-rocket units invented to give airplanes a boost. Now we use them wherever a controlled push is needed, say to get a truck out of the mud on a dam job. We mounted four thousand. of them around the frame of the living quarters, each one placed just so. They were wired up and ready to fire when Tiny came to me looking worried. "Dad," he said, "let's drop everything and finish compartment D-ll3."

"Okay," I said. D-l13 was in the non-spin part.

"Rig an air lock and stock it with two weeks supplies."

"That'll change your mass distribution for spin," I suggested.

"I'll refigure it next dark period. Then we'll shift jatos."

When Dalrymple heard about it he came charging around. It meant a delay in making rental space available. "What's the idea?"

Tiny stared at him. They had been cooler than ordinary lately; Dalrymple had been finding excuses to seek out Miss Gloria. He had to pass through Tiny's office to reach her temporary room, and Tiny had finally told him to get out and stay out. "The idea," Tiny said slowly, "is to have a pup tent in case the house burns."

"What do you mean?"

"Suppose we fire up the jatos and the structure cracks? Want to hang around in a space suit until a ship happens by?"

"That's silly. The stresses have been calculated."

"That's what the man said when the bridge fell. We'll do it my way."

Dalrymple stormed off.

Tiny's efforts to keep Gloria fenced up were sort of pitiful. In the first place, the radio tech's biggest job was repairing suit walkie-talkies, done on watch. A rash of such troubles broke out-on her shift. I made some shift transfers and docked a few for costs, too; it's not proper maintenance when a man deliberately busts his aerial.

There were other symptoms. It became stylish to shave. Men started wearing shirts around quarters and bathing increased to where I thought I would have to rig another water still.

Came the shift when D-l13 was ready and the jatos readjusted. I don't mind saying I was nervous. All hands were ordered out of the quarters and into suits. They perched around the girders and waited.

Men in space suits all look alike; we used numbers and colored armbands. Supervisors had two antennas, one for a gang frequency, one for the supervisors' circuit. With Tiny and me the second antenna hooked back through the radio shack and to all the gang frequencies-a broadcast.

The supervisors had reported their men clear of the fireworks and I was about to give Tiny the word, when this figure came climbing through the girders, inside the danger zone. No safety line. No armband. One antenna.

Miss Gloria, of course. Tiny hauled her out of the blast zone, and anchored her with his own safety line. I heard his voice, harsh in my helmet: "Who do you think you are? A sidewalk superintendent?"

And her voice: "What do you expect me to do? Go park on, a star?"

"I told you to stay away from the job. If you can't obey orders, I'll lock you up."

I reached him, switched off my radio and touched helmet. "Boss! Boss!" I said. "You're broadcasting!"

"Oh-" he says, switches off, and touches helmets with her. We could still hear her; she didn't switch off. "Why, you big baboon, I came outside because you sent a search party to clear everybody out," and, "How would I know about a safety line rule? You've kept me penned up." And finally, "We'll see!"

I dragged him away and he told the boss electrician to go ahead. Then we forgot the row for we were looking at the prettiest fireworks ever seen, a giant St. Catherine's

wheel, rockets blasting all over it. Utterly soundless, out there in space-but beautiful beyond compare.

The blasts died away and there was the living quarters, spinning true as a flywheel-Tiny and I both let out sighs of relief. We all went back inside then to see what weight tasted like.

It tasted funny. I went through the shaft and started down the ladders, feeling myself gain weight as I neared the rim. I felt seasick, like the first time I experienced no weight. I could hardly walk and my calves cramped.

We inspected throughout, then went to the office and sat down. It felt good, just right for comfort, one-third gravity at the rim. Tiny rubbed his chair arms and grinned, "Beats being penned up in D-113."

"Speaking of being penned up," Miss Gloria said, walking in, "may I have a word with you, Mr. Larsen?"

"Uh? Why, certainly. Matter of fact, I wanted to see you. I owe you an apology, Miss McNye.'I was-"

"Forget it," she cut in. "You were on edge. But I want to know this: how long are you going to keep up this nonsense, of trying to chaperone me?"

He studied her. "Not long. Just till your relief arrives."

"So? Who is the shop steward around here?"

"A shipfitter named McAndrews. But you can't use him. You're a staff member."

"Not in the job I'm filling. I am going to talk to him. You're discriminating against me, and in my off time at that."

"Perhaps, but you will find I have the authority. Legally I'm a ship's captain, while on this job. A captain in space has wide discriminatory powers."

"Then you should use them with discrimination!" He grinned. "Isn't that what you just said I was doing?" We didn't hear from the shop steward, but Miss Gloria started doing as she pleased. She showed up at the movies, next off shift, with Dalrymple. Tiny left in the middle-good show, too; Lysistrata Goes to Town, relayed up from New York.

As she was coming back alone he stopped her, having seen to it that I was present. "Umm-Miss McNye. . . ."

"Yes?"

"I think you should know, uh, well...Chief Inspector Dalrymple is a married man."

"Are you suggesting that my conduct has been improper?"

"No, but-"

"Then mind your own business!" Before he could answer she added, "It might interest you that he told me about your four children."

Tiny sputtered. "Why. . . why, I'm not even married!"

"So? That makes it worse, doesn't it?" She swept out.

Tiny quit trying to keep her in her room, but told her to notify him whenever she left it. It kept him busy riding herd on her. I refrained from suggesting that he get Dalrymple to spell him.

But I was surprised when he told me to put through the order dismissing her. I had been pretty sure he was going to drop it.

"What's the charge?" I asked. "Insubordination!"

I kept mum. He said, "Well, she won't take orders."

"She does her work okay. You give her orders you wouldn't give to one of the men and that a man wouldn't take."

"You disagree with my orders?"

"That's not the point. You can't prove the charge, Tiny."

"Well, charge her with being female! I can prove that."

I didn't say anything. "Dad," he added wheedlingly, "you know how to write it. No personal animus against Miss McNye, but it is felt that as a matter of policy, and so forth and so on."

I wrote it and gave it to Hammond privately. Radio techs are sworn to secrecy but it didn't surprise me when I was stopped by O'Connor, one of our best metalsmiths. "Look, Dad, is it true that the Old Man is getting rid of Brooksie?"

"Brooksie?"

"Brooksie McNye, she says to call her Brooks. Is it true?" I admitted it, then went on, wondering if I should have lied.

It takes four hours, about, for a ship to lift from Earth. The shift before the Pole Star was due, with Miss Gloria's relief, the timekeeper brought me two separation slips. Two men were nothing; we averaged more each ship. An hour later he reached me by supervisors circuit, and asked me to come to the time office. I was out on the rim inspecting a weld job; I said no. "Please, Mr. Witherspoon," he begged, "you've got to." When one of the boys doesn't call me 'Dad,' it means something. I went.

There was a queue like mail call outside his door; I went in and he shut the door on them. He handed me a double handful of separation slips. "What in the great depths of night is this?" I asked.

"There's dozens more I ain't had time to write up yet."

None of the slips had any reason given-just "own choice." "Look, Jimmie what goes on here?"

"Can't you dope it out, Dad? Shucks, I'm turning in one, too."

I told him my guess and he admitted it. So I took the slips, called Tiny and told him for the love of Heaven to come to his office.

Tiny chewed his lip considerable. "But, Dad, they can't strike. It's a non-strike contract with bonds from every union concerned."

"It's no strike, Tiny. You can't stop a man from quitting."

"They'll pay their own fares back, so help me!"

"Guess again. Most of 'em have worked long enough for the free ride."

"We'll have to hire others quick, or we'll miss our date."

"Worse than that, Tiny, we won't finish. By next dark period you won't even have a maintenance crew."

"I've never had a gang of men quit me. I'll talk to them."

"No good, Tiny. You're up against something too strong for you."

"You're against me, Dad?"

"I'm never against you, Tiny."

He said, "Dad, you think I'm pig-headed, but I'm right. You can't have one woman among several hundred men. It drives 'em nutty."

I didn't say it affected him the same way; I said, "Is that bad?"

"Of course. I can't let the job be ruined to humor one woman."

"Tiny, have you looked at the progress charts lately?"

"I've hardly had time to-what about them?"

I knew why he hadn't had time. "You'll have trouble proving Miss Gloria interfered with the job. We're ahead of schedule."

"We are?"

While he was studying the charts I put an arm around his shoulder. "Look, son," I said, "sex has been around our planet a long time. Earthside, they never get away from it, yet some pretty big jobs get built anyhow. Maybe we'll just have to learn to live with it here, too. Matter of fact, you had the answer a minute ago."

"I did? I sure didn't know it."

"You said, 'You can't have one woman among several hundred men. Get me?"

"Huh? No, I don't. Wait a minute! Maybe I do."

"Ever tried ju jitsu? Sometimes you win by relaxing."

"Yes. Yes!"

"When you can't beat 'em, you join 'em."

He buzzed the radio shack. "Have Hammond relieve you, McNye, and come to my office."

He did it handsomely, stood up and made a speech-he'd been wrong, taken him a long time to see it, hoped there were no hard feelings, etc. He was instructing the home office to see how many jobs could be filled at once with female help. "Don't forget married couples," I put in mildly, "and better ask for some older women, too."

"I'll do that," Tiny agreed. "Have I missed anything, Dad?"

"Guess not. We'll have to rig quarters, but there's time."

"Okay. I'm telling them to hold the Pole Star, Gloria, so they can send us a few this trip."

"That's fine" She looked really happy.

He chewed his lip. "I've a feeling I've missed something. Hmm-I've got it. Dad, tell them to send up a chaplain for the Station, as soon as possible. Under the new policy we may need one anytime." I thought so, too.

Robert A Heinlein – The Door Into Summer
For A.P. and Phyllis, Mick and Annette;
Aelurophiles All.

CHAPTER 1

One winter shortly before the Six Weeks War my tomcat, Petronius the Arbiter, and I lived in an old farmhouse in Connecticut. I doubt if it is there any longer, as it was near the edge of the blast area of the Manhattan near miss, and those old frame buildings burn like tissue paper. Even if it is still standing it would not be a desirable rental because of the fall-out, but we liked it then, Pete and I. The lack of plumbing made the rent low and what had been the dining room had a good north light for my drafting board.

The drawback was that the place had eleven doors to the outside.

Twelve, if you counted Pete's door. I always tried to arrange a door of his own for Pete-in this case a board fitted into a window in an unused bedroom and in which I had cut a cat strainer just wide enough for Pete's whiskers. I have spent too much of my life opening doors for cats. I once calculated that, since the dawn of civilization, nine hundred and seventy-eight man-centuries have been used up that way. I could show you figures.

Pete usually used his own door except when he could bully me into opening a people door for him, which he preferred. But he would not use his door when there was snow on the ground.

While still a kitten, all fluff and buzzes, Pete had worked out a simple philosophy. I was in charge of quarters, rations, and weather; he was in charge of everything else. But he held me especially responsible for weather. Connecticut winters are good only for Christmas cards; regularly that winter Pete would check his own door, refuse to go out it because of that unpleasant white stuff beyond it (he was no fool), then badger me to open a people door.

He had a fixed conviction that at least one of them must lead into summer weather. Each time this meant that I had to go around with him to each of eleven doors, held it open while he satisfied himself that it was winter out that way, too, then go on to the next door, while his criticisms of my mismanagement grew more bitter with each disappointment.

Then he would stay indoors until hydraulic pressure utterly forced him outside. When he returned the ice in his pads would sound like little clogs on the wooden floor and he would glare at me and refuse to purr until he had chewed it all out. . . whereupon he would forgive me until the next time.

But he never gave up his search for the Door into Summer.

On 3 December, 1970, 1 was looking for it too.

My quest was about as hopeless as Pete's had been in a Connecticut January. What little snow there was in southern California was kept on mountains for skiers, not in downtown Los Angeles-the stuff probably couldn't have pushed through the smog anyway. But the winter weather was in my heart.

I was not in bad health (aside from a cumulative hangover), I was still on the right side of thirty by a few days, and I was far from being broke. No police were looking for

me, nor any husbands, nor any process servers; there was nothing wrong that a slight case of amnesia would not have cured. But there was winter in my heart and I was looking for the door to summer.

If I sound like a man with an acute case of self-pity, you are correct. There must have been well over two billion people on this planet in worse shape than I was. Nevertheless, I was looking for the Door into Summer.

Most of the ones I had checked lately had been swinging doors, like the pair in front of me then-the SANS SOUCI Bar Grill, the sign said. I went in, picked a booth hallway back, placed the overnight bag I was carrying carefully on the seat, slid in by it, and waited for the waiter.

The overnight bag said, "Waarrrh?"

I said, "Take it easy, Pete."

"Naaow!"

"Nonsense, you just went. Pipe down, the waiter is coming."

Pete shut up. I looked up as the waiter leaned over the table, and said to him, "A double shot of your bar Scotch, a glass of plain water, and a split of ginger ale."

The waiter looked upset. "Ginger ale, sir? With Scotch?'

"Do you have it or don't you?"

"Why, yes, of course. But-"

"Then fetch it. I'm not going to drink it; I just want to sneer at it. And bring a saucer too."

"As you say, sir." He polished the table top. "How about a small steak, sir? Or the scallops are very good today."

"Look, mate, I'll tip you for the scallops if you'll promise not to serve them. All I need is what I ordered. . . and don't forget the saucer."

He shut up and went away. I told Pete again to take it easy, the Marines had landed. The waiter returned, his pride appeased by carrying the split of ginger ale on the saucer. I had him open it while I mixed the Scotch with the water. "Would you like another glass for the ginger ale, sir?"

"I'm a real buckaroo; I drink it out of the bottle."

He shut up and let me pay him and lip him, not forgetting a lip for the scallops. When he had gone I poured ginger ale into the saucer and tapped on the top of the overnight bag. "Soup's on, Peter."

It was unzipped; I never zipped it with him inside. He spread It with his paws, poked his head out, looked around quickly, then levitated his forequarters and placed his front feet on the edge of the table. I raised my glass and we looked at each other. "Here's to the female race, Pete-find `em and forget `em!"

He nodded; it matched his own philosophy perfectly. He bent his head daintily and started lapping up ginger ale. "If you can, that is," I added, and took a deep swig. Pete did not answer. Forgetting a female was no effort to him; he was the natural-born bachelor type.

Facing me through the window of the bar was a sign that kept changing. First it would read: WORK WHILE YOU SLEEP. Then it would say: AND DREAM YOUR TROUBLES AWAY. Then it would flash in letters twice as big:

MUTUAL ASSURANCE COMPANY

I read all three several times without thinking about them. I knew as much and as little about suspended animation as everybody else did. I had read a popular article or so when it was first announced and two or three times a week I'd get an insurance-company ad about it in the morning mail; I usually chucked them without looking at them since they didn't seem to apply to me any more than lipstick ads did.

In the first place, until shortly before then, I could not have paid for cold sleep; it's expensive. In the second place, why should a man who was enjoying his work, was making money, expected to make more, was in love and about to be married, commit semi-suicide?

If a man had an incurable disease and expected to die anyhow but thought the doctors a generation later might be able to cure him-and he could afford to pay for suspended animation while medical science caught up with what was wrong with him-then cold sleep was a logical bet. Or if his ambition was to make a trip to Mars and he thought that clipping one generation out of his personal movie film would enable him to buy a ticket, I supposed that was logical too-there had been a news story about a cafe-society couple who got married and went right straight from city hail to the sleep sanctuary of Western World Insurance Company with an announcement that they had left instructions not to be called until they could spend their honeymoon on an interplanetary liner although I had suspected that it was a publicity gag rigged by the insurance company and that they had ducked out the back door under assumed names. Spending your wedding night cold as a frozen mackerel does not have the ring of truth in it.

And there was the usual straightforward financial appeal, the one the insurance companies bore down on: "Work while you sleep." Just hold still and let whatever you have saved grow into a fortune. if you are fifty-five and your retirement fund pays you two hundred a month, why not sleep away the years, wake up still fifty-five, and have it pay you a thousand a month? To say nothing of waking up in a bright new world which would probably promise you a much longer and healthier old age in which to enjoy the thousand a month? That one they really went to town on, each company proving with incontrovertible figures that its selection of stocks for its trust fund made more money faster than any of the others. "Work while you sleep!"

It had never appealed to me. I wasn't fifty-five, I didn't want to retire, and I hadn't seen anything wrong with 1970.

Until recently, that is to say. Now I was retired whether I liked it or not (I didn't); instead of being on my honeymoon I was sitting in a second-rate bar drinking Scotch purely for anesthesia; instead of a wife I had one much-scarred tomcat with a neurotic taste for ginger ale; and as for liking right now, I would have swapped it for a case of gin and then busted every bottle.

But I wasn't broke.

I reached into my coat and took out an envelope, opened it. It had two items in it. One was a certified check for more money than I had ever had before at one time; the other was a stock certificate in Hired Girl, Inc. They were both getting a little mussed; I had been carrying them ever since they were handed to me.

Why not?

Why not duck out and sleep my troubles away? Pleasanter than joining the Foreign Legion, less messy than suicide, and it would divorce me completely from the events and the people who had made my life go sour. So why not?

I wasn't terribly interested in the chance to get rich. Oh, I had read H. G. Wells's When The Sleeper Wakes, not only when the insurance companies started giving away free copies, but before that, when it was just another classic novel; I knew what compound interest and stock appreciation could do. But I was not sure that I had enough money both to buy the Long Sleep and to set up a trust large enough to be worth while. The other argument appealed to me more: go beddy-bye and wake up in a different world. Maybe a lot better world, the way the insurance companies would have you believe . . . or maybe worse. But certainly different.

I could make sure of one important difference: I could doze long enough to be certain that it was a world without Belle Darkin-or Miles Gentry, either, but Belle especially. If Belle was dead and buried I could forget her, forget what she had done to me, cancel her out . . instead of gnawing my heart with the knowledge that she was only a few miles away.

Let's see, how long would that have to be? Belle was twenty-three-or claimed to be (I recalled that once she had seemed to let slip that she remembered Roosevelt as President). Well, in her twenties anyhow. If I slept seventy years, she'd be an obituary. Make it seventy-five and be safe.

Then I remembered the strides they were making in geriatrics; they were talking about a hundred and twenty years as an attainable "normal" life span. Maybe I would have to sleep a hundred years. I wasn't certain that any insurance company offered that much.

Then I had a gently fiendish idea, inspired by the warm glow of Scotch. It wasn't necessary to sleep until Belie was dead; it was enough, more than enough, and just the fitting revenge on a female to be young when she was old. Just enough younger to rub her nose in it-say about thirty years.

I felt a paw, gentle as a snowflake, on my arm. "Mooorrre!" announced Pete.

"Greedy gut," I told him, and poured him another saucer of ginger ale. He thanked me with a polite wait, then started lapping it.

But he had interrupted my pleasantly nasty chain of thought. What the devil could I do about Pete?

You can't give away a cat the way you can a dog; they won't stand for it. Sometimes they go with the house, but not in Pete's case; to him I had been the one stable thing in a changing world ever since he was taken from his mother nine years earlier. . . I had even managed to keep him near me in the Army and that takes real wangling.

He was in good health and likely to stay that way even though he was held together with scar tissue. If he could just correct a tendency to lead with his right he would be winning battles and siring kittens for another five years at least.

I could pay to have him kept in a kennel until he died (unthinkable!) or I could have him chloroformed (equally unthinkable)-or I could abandon him. That is what it boils down to with a cat: you either carry out the Chinese obligation you have assumed-or you abandon the poor thing, let him go wild, destroy its faith in the eternal rightness.

The way Belle had destroyed mine.

So, Danny Boy, you might as well forget it. Your own life may have gone as sour as dill pickles; that did not excuse you in the slightest from your obligation to carry out your contract to this super-spoiled cat.

Just as I reached that philosophical truth Pete sneezed; the bubbles had gone up his nose. "Gesundheit," I answered, "and quit trying to drink it so fast."

Pete ignored me. His table manners averaged better than mine and he knew it. Our waiter had been hanging around the cash register, talking with the cashier. It was the after-lunch slump and the only other customers were at the bar. The waiter looked up when I said "Gesundheit," and spoke to the cashier. They both looked our way, then the cashier lifted the flap gate in the bar and headed toward us.

I said quietly, "MPs, Pete."

He glanced around and ducked down into the bag; I pushed the top together. The cashier came over and leaned on my table, giving the seats on both sides of the booth a quick double-O. "Sony, friend," he said flatly, "but you'll have to get that cat out of here."

"What cat?"

"The one you were feeding out of that saucer."

"I don't see any cat."

This time he bent down and looked under the table. "You've got him in that bag," he accused.

"Bag? Cat?" I said wonderingly. "My friend, I think you've come down with an acute figure of speech."

"Huh? Don't give me any fancy language. You've got a cat in that bag. Open it up."

"Do you have a search warrant?"

"What? Don't be silly."

"You're the one talking silly, demanding to see the inside of my bag without a search warrant. Fourth Amendment-and the war has been over for years. Now that we've settled that, please tell my waiter to make it the same all around-or fetch it yourself."

He looked pained. "Brother, this isn't anything personal, but I've got a license to consider. `No dogs, no cats-it says so right up there on the wall. We aim to run a sanitary establishment."

"Then your aim is poor." I picked up my glass. "See the lipstick marks? You ought to be checking your dishwasher, not searching your customers."

"I don't see no lipstick."

"I wiped most of it off. But let's take it down to the Board of Health and get the bacteria count checked."

He sighed. "You got a badge?"

"No."

"Then we're even. I don't search your bag and you don't take me down to the Board of Health. Now if you want another drink, step up to the bar and have it. . . on the house. But not here." He turned and headed up front.

I shrugged. "We were just leaving anyhow."

As I started to pass the cashier's desk on my way out he looked up. "No hard feelings?"

"Nope. But I was planning to bring my horse in here for a drink later. Now I won't."

"Suit yourself. The ordinance doesn't say a word about horses. But just one more thing-does that cat really drink ginger ale?"

"Fourth Amendment, remember?"

"I don't want to see the animal; I just want to know."

"Well," I admitted, "he prefers it with a dash of bitters, but he'll drink it straight if he has to."

"It'll ruin his kidneys. Look here a moment, friend."

"At what?"

"Lean back so that your head is close to where mine is. Now look up at the ceiling over each booth . . . the mirrors up in the decorations. I knew there was a cat there-because I saw it."

I leaned back and looked. The ceiling of the joint had a lot of junky decoration, including many mirrors; I saw now that a number of them, camouflaged by the design, were so angled as to permit the cashier to use them as periscopes without leaving his station. "We need that," he said apologetically. "You'd be shocked at what goes on in those booths . . . if we didn't keep an eye on `em. It's a sad world."

"Amen, brother." I went on out

Once outside, I opened the bag and carried it by one handle; Pete stuck his head out. "You heard what the man said, Pete. `It's a sad world.' Worse than sad when two friends can't have a quiet drink together without being spied on. That settles it."

"Now?" asked Pete.

"If you say so. If we're going to do it, there's no point in stalling."

"Now!" Pete answered emphatically.

"Unanimous. It's right across the street."

The receptionist at the Mutual Assurance Company was a fine example of the beauty of functional design. In spite of being streamlined for about Mach Four, she displayed frontal-mounted radar housings and everything else needed for her basic mission. I reminded myself that she would be Whistler's Mother by the time I was out and told her that I wanted to see a salesman.

"Please be seated. I will see if one of out' client executives is free." Before I could sit down she added, "Our Mr. Powell will see you. This way, please."

Our Mr. Powell occupied an office which made me think that Mutual did pretty well for itself. He shook hands moistly, sat me down, offered me a cigarette, and attempted to take my bag. I hung onto it. "Now, sir, how can we serve you?"

"I want the Long Sleep."

His eyebrows went up and his manner became more respectful. No doubt Mutual would write you a camera floater for seven bucks, but the Long Sleep let them get their pattypaws on all of a client's assets. "A very wise decision," he said reverently. "I wish I were free to take it myself. But . . . family responsibilities, you know." He reached out and picked up a form. "Sleep clients are usually in a hurry. Let me save you time and bother by filling this out for you . . . and we'll arrange for your physical examination at once."

"Just a moment."

"Yes?"

"One question. Are you set up to arrange cold sleep for a cat?"

He looked surprised, then pained. "You're jesting."

I opened the top of the bag; Pete stuck his head out. "Meet my side-kick. Just answer the question, please. If the answer is `no,' I want to sashay up to Central Valley Liability. Their offices are in this same building, aren't they?"

This time he looked horrified. "Mister- Uh, I didn't get your name?"

"Dan Davis."

"Mr. Davis, once a man enters our door he is under the benevolent protection of Mutual Assurance. I couldn't let you go to Central Valley."

"How do you plan to stop me? Judo?"

"Please!" He glanced around and looked upset. "Our company is an ethical company."

"Meaning that Central Valley is not?"

"I didn't say that; you did. Mr. Davis, don't let me sway you-"

"You won't."

"-but get sample contracts from each company. Get a lawyer, better yet, get a licensed semanticist. Find out what we offer-and actually deliver-and compare it with what Central Valley claims to offer." He glanced around again and leaned toward me. "I shouldn't say this-and I do hope you won't quote me-but they don't even use the standard actuarial tables."

"Maybe they give the customer a break instead."

"What? My dear Mr. Davis, we distribute every accrued benefit. Our charter requires it . . . while Central Valley is a stock company."

"Maybe I should buy some of their- Look, Mr. Powell, we're wasting time. Will Mutual accept my pal here? Or not? If not, I've been here too long already."

"You mean you want to pay to have that creature preserved alive in hypothermia?"

"I mean I want both of us to take the Long Sleep. And don't call him `that creature'; his name is Petronius."

"Sorry. I'll rephrase my question. You are prepared to pay two custodial fees to have both of you, you and, uh, Petronius committed to our sanctuary?"

"Yes. But not two standard fees. Something extra, of course, but you can stuff us both in the same coffin; you can't honestly charge as much for Pete as you charge for a man."

"This is most unusual."

"Of course it is. But we'll dicker over the price later . . . or I'll dicker with Central Valley. Right now I want to find out if you can do it."

"Uh. . ." He drummed on his desk top. "Just a moment." He picked up his phone and said, "Opal, get me Dr. Berquist." I didn't hear the rest of the conversation, for he switched on the privacy guard. But after a while he put down the instrument and smiled as if a rich uncle had died. "Good news, sir! I had overlooked momentarily the fact that the first successful experiments were made on cats. The techniques and critical factors for cats are fully established. In fact there is a cat at the Naval Research Laboratory in Annapolis which is and has been for more than twenty years alive in hypothermia."

"I thought NRL was wiped out when they got Washington?"

"Just the surface buildings, sir, not the deep vaults. Which is a tribute to the perfection of the technique; the animal was unattended save by automatic machinery for

more than two years, yet it still lives, unchanged, unaged. As you will live, sir, for whatever period you elect to entrust yourself to Mutual."

I thought he was going to cross himself. "Okay, okay, now let's get on with the dicker."

There were four factors involved: first, how to pay for our care while we were hibernating; second, how long I wanted us to sleep; third, how I wanted my money invested while I was in the freezer; and last, what happened if I conked out and never woke up.

I finally settled on the year 2000, a nice round number and only thirty years away. I was afraid that if I made it any longer I would be completely out of touch. The changes in the last thirty years (my own lifetime) had been enough to bug a man's eyes out-two big wars and a dozen little ones, the downfall of communism, the Great Panic, the artificial satellites, the change to atomic power-why, when I was a kid they didn't even have multimorphs.

I might find 2000 A.D. pretty confusing. But if I didn't jump that far Belle would not have time to work up a fancy set of wrinkles.

When it came to how to invest my dough I did not consider government bonds and other conservative investments; our fiscal system has inflation built into it. I decided to hang onto my Hired Girl stock and put the cash into other common stocks, with a special eye to some trends I thought would grow. Automation was bound to get bigger. I picked a San Francisco fertilizer firm too; it had been experimenting with yeasts and edible algaeÄthere were more people every year and steak wasn't going to get any cheaper. The balance of the money I told him to put into the company's managed trust fund.

But the real choice lay in what to do if I died in hibernation. The company claimed that the odds were better than seven out of ten that I would live through thirty years of cold sleep . . . and the company would take either end of the bet. The odds weren't reciprocal and I didn't expect them to be; in any honest gambling there is a breakage to the house. Only crooked gamblers claim to give the sucker the best of it, and insurance is legalized gambling. The oldest and most reputable insurance firm in the world, Lloyd's of London, makes no bones about itÄLloyd's associates will take either end of any bet. But don't expect better-than-track odds: somebody has to pay for Our Mr. Powell's tailor-made suits.

I chose to have every cent go to the company trust fund in case I died. . . which made Mr. Powell want to kiss me and made me wonder just how optimistic those seven-out-of-ten odds were. But I stuck with it because it made me an heir (if I lived) of everyone else with the same option (if they died), Russian roulette with the survivors picking up the chips . . . and with the company, as usual, raking in the house percentage.

I picked every alternative for the highest possible return and no hedging if I guessed wrong; Mr. Powell loved me, the way a croupier loves a sucker who keeps playing the zero. By the time we had settled my estate he was anxious to be reasonable about Pete; we settled for 15 per cent of the human fee to pay for Pete's hibernation and drew up a separate contract for him.

There remained consent of court and the physical examination. The physical I didn't worry about; I had a hunch that, once I elected to have the company bet that I would die, they would accept me even in the last stages of the Black Death. But I thought

that getting a judge to okay it might be lengthy. It had to be done, because a client in cold sleep was legally in chancery, alive but helpless.

I needn't have worried. Our Mr. Powell had quadruplicate originals made of nineteen different papers. I signed till I got finger cramps, and a messenger rushed away with them while I went to my physical examination; I never even saw the judge.

The physical was the usual tiresome routine except for one thing. Toward the end the examining physician looked me sternly in the eye and said, "Son, how long have you been on this binge?"

"Binge?"

"Binge."

"What makes you think that, Doctor? I'm as sober as you are. `Peter Piper picked a peck of pickled-"

"Knock it off and answer me."

`Mmm. . . I'd say about two weeks. A little over."

"Compulsive drinker? How many times have you pulled this stunt in the past?"

"Well, as a matter of fact, I haven't. You see-" I started to tell him what Belle and Miles had done to me, why did.

He shoved a palm at me. "Please. I've got troubles of my own and I'm not a psychiatrist. Really, all I'm interested in is finding out whether or not your heart will stand up under the ordeal of putting you down to four degrees centigrade. Which it will. And I ordinarily don't care why anyone is nutty enough to crawl into a hole and pull it in after him; I just figure it is one less damn fool underfoot. But some residual tinge of professional conscience prevents me from letting any man, no matter how sorry a specimen, climb into one of those coffins while his brain is sodden with alcohol. Turn around."

"Huh?"

"Turn around; I'm going to inject you in your left buttock."

I did and he did. While I was rubbing it he went on, "Now drink this. In about twenty minutes you will be more sober than you've been in a month. Then, if you have any sense-which I doubt-you can review your position and decide whether to run away from your troubles. . . or stand up to them like a man."

I drank it.

"That's all; you can get dressed. I'm signing your papers, but I'm warning you that I can veto it right up to the last minute. No more alcohol for you at all, a light supper and no breakfast. Be here at noon tomorrow for final check."

He turned away and didn't even say good-by. I dressed and Went out of there, sore as a boil. Powell had all my papers ready. When I picked them up he said, "You can leave them here if you wish and pick them up at noon tomorrow...the set that goes in the vault with you, that is."

"What happens to the others?"

"We keep one set ourselves, then after you are committed we file one set with the court and one in the Carlsbad Archives. Uh, did the doctor caution you about diet?"

"He certainly did." I glanced at the papers to cover my annoyance.

Powell reached for them. "I'll keep them safe overnight."

I pulled them back. "I can keep them safe. I might want to change some of these stock selections."

"Uh, it's rather late for that, my dear Mr. Davis."

"Don't rush me. If I do make any changes I'll come in early." I opened the overnight bag and stuck the papers down in a side flap beside Pete. I had kept valuable papers there before; while it might not be as safe as the public archives in the Carlsbad Caverns, they were safer than you might think. A sneak thief had tried to take something out of that flap on another occasion; he must still have the scars of Pete's teeth and claws.

CHAPTER 2

My car was parked under Pershing Square where I had left it earlier in the day. I dropped money into the parking attendant, set the bug on arterial-west, got Pete out and put him on the seat, and relaxed.

Or tried to relax. Los Angeles traffic was too fast and too slashingly murderous for me to be really happy under automatic control; I wanted to redesign their whole installation-it was not a really modern "fail safe." By the time we were west of Western Avenue and could go back on manual control I was edgy and wanted a drink. "There's an oasis, Pete."

"Blurrrt?"

"Right ahead."

But while I was looking for a place to park-Los Angeles was safe from invasion; the invaders wouldn't find a place to park-I recalled the doctor's order not to touch alcohol.

So I told him emphatically what he could do with his orders.

Then I wondered if he could tell, almost a day later, whether or not I had taken a drink. I seemed to recall some technical article, but it had not been in my line and I had just skimmed it.

Damnation, he was quite capable of refusing to let me coldsleep. I'd better play it cagey and lay off the stuff.

"Now?" inquired Pete.

"Later. We're going to find a drive-in instead." I suddenly realized that I didn't really want a drink; I wanted food and a night's sleep. Doc was correct; I was more sober and felt better than I had in weeks. Maybe that shot in the fanny had been nothing but B1 if so, it was jet-propelled. So we found a drive-in restaurant. I ordered chicken in the rough for me and a half pound of hamburger and some milk for Pete and took him out for a short walk while it was coming. Pete and I ate in drive-ins a lot because I didn't have to sneak him in and out.

A half hour later I let the car drift back out of the busy circle, stopped it, lit a cigarette, scratched Pete under the chin, and thought.

Dan, my boy, the doe was right; you've been trying to dive down the neck of a bottle. That's okay for your pointy head but it's too narrow for your shoulders. Now you're cold sober, you've got your belly crammed with food and it's resting comfortably for the first time in days. You feel better.

What else? Was the doc right about the rest of it? Are you a spoiled infant? Do you lack the guts to stand up to a setback? Why are you taking this step? Is it the spirit of

adventure? Or are you simply hiding from yourself, like a Section Eight trying to crawl back into his mother's womb?

But I do want to do it, I told myself-the year 2000. Boy!

Okay, so you want to. But do you have to run off without settling the beefs you have right here?

All right, all right!-but how can I settle them? I don't want Belle back, not after what she's done. And what else can I do? Sue them? Don't be silly, I've got no evidence-and anyhow, nobody ever wins a lawsuit but the lawyers.

Pete said, "Wellll? Y'know!"

I looked down at his waffle-scarred head. Pete wouldn't sue anybody; if he didn't like the cut of another cat's whiskers, he simply invited him to come out and fight like a cat. "I believe you're right, Pete. I'm going to look up Miles, tear his arm off, and beat him over the head with it until he talks. We can take the Long Sleep afterward. But we've got to know just what it was they did to us and who rigged it."

There was a phone booth back of the stand. I called Miles, found him at home, and told him to stay there; I'd be out.

My old man named me Daniel Boone Davis, which was his way of declaring for personal liberty and self-reliance. I was born in 1940, a year when everybody was saying that the individual was on the skids and the future belonged to mass man. Dad refused to believe it; naming me was a note of defiance. He died under brainwashing in North Korea, trying to the last to prove his thesis.

When the Six Weeks War came along I had a degree in mechanical engineering and was in the Army. I had not used my degree to try for a commission because the one thing Dad had left me was an overpowering yen to be on my own, giving no orders, taking no orders, keeping no schedules-I simply wanted to serve my hitch and get out. When the Cold War boiled over, I was a sergeant-technician at Sandia Weapons Center in New Mexico, stuffing atoms in atom bombs and planning what I would do when my time was up. The day Sandia disappeared I was down in Dallas drawing a fresh supply of Schrecklichkeit. The fall-out on that was toward Oklahoma City, so I lived to draw my GI benefits.

Pete lived through it for a similar reason. I had a buddy, Miles Gentry, a veteran called back to duty. He had married a widow with one daughter, but his wife had died about the time he was called back. 1-fe lived off post with a family in Albuquerque so as to have a home for his stepchild Frederica. Little Picky (we never called her "Frederica") took care of Pete for me. Thanks to the cat-goddess Bubastis, Miles and Picky and Pete were away on a seventy-two that awful weekend-Ricky took Pete with them because I could not take him to Dallas.

I was as surprised as anyone when it turned out we had divisions stashed away at Thule and other places that no one suspected. It had been known since the `30s that the human body could be chilled until it slowed down to almost nothing. But it had been a laboratory trick, or a last-resort therapy, until the Six Weeks War. I'll say this for military research: if money and men can do it, it gets results. Print another billion, hire another thousand scientists and engineers, then in some incredible, left-handed, inefficient fashion the answers come up. Stasis, cold sleep, hibernation, hypothermia, reduced metabolism, call it what you will- the logistics-medicine research teams had found a way to stack people like cordwood and use them when needed. First you drug the subject, then

hypnotize him, then cool him down and hold him precisely at four degrees centigrade; that is to say, at the maximum density of water with no ice crystals. If you need him in a hurry he can be brought up by diathermy and posthypnotic command in ten minutes (they did it in seven at Nome), but such speed tends to age the tissues and may make him a little stupid from then on. If you aren't in a hurry two hours minimum is better. The quick method is what professional soldiers call a "calculated risk."

The whole thing was a risk the enemy had not calculated, so when the war was over I was paid off instead of being liquidated or sent to a slave camp, and Miles and I went into business together about the time the insurance companies started selling cold sleep.

We went to the Mojave Desert, set up a small factory in an Air Force surplus building, and started making Hired Girl, my engineering and Miles's law and business experience. Yes, I invented Hired Girl and all her kinfolk-Window Willie and the rest-even though you won't find my name on them. While I was in the service I had thought hard about what one engineer can do. Go to work for Standard, or du Pont, or General Motors? Thirty years later they give you a testimonial dinner and a pension. You haven't missed any meals, you've had a lot of rides in company airplanes. But you are never your own boss. The other big market for engineers is civil service-good starting pay, good pensions, no worries, thirty days annual leave, liberal benefits. But I had just had a long government vacation and wanted to be my own boss.

What was there small enough for one engineer and not requiring six million man-hours before the first model was on the market? Bicycle-shop engineering with peanuts for capital, the way Ford and the Wright brothers had started-people said those days were gone forever; I didn't believe it.

Automation was booming-chemical-engineering plants that required only two gauge-watchers and a guard, machines that printed tickets in one city and marked the space "sold" in six other cities, steel moles that mined coal while the 13MW boys sat back and watched. So while I was on Uncle Sam's payroll I soaked up all the electronics, linkages, and cybernetics that a clearance would permit.

What was the last thing to go automatic? Answer: any housewife's house. I didn't attempt to figure out a sensible scientific house; women didn't want one; they simply wanted a better upholstered cave. But housewives were still complaining about the Servant Problem long after servants had gone the way of the mastodon. I had rarely met a housewife who did not have a touch of slaveholder in her; they seemed to think there really ought to be strapping peasant girls grateful for a chance to scrub floors fourteen hours a day and eat table scraps at wages a plumber's helper would scorn.

That's why we called the monster Hired Girl-it brought back thoughts of the semi-slave immigrant girl whom Grandma used to bully. Basically it was just a better vacuum cleaner and we planned to market it at a price competitive with ordinary suck brooms.

What Hired Girl would do (the first model, not the semi-intelligent robot I developed it into) was to clean floors . . . any floor, all day long and without supervision. And there never was a floor that didn't need cleaning.

It swept, or mopped, or vacuum-cleaned, or polished, consulting tapes in its idiot memory to decide which. Anything larger than a BB shot it picked up and placed in a tray on its upper surface, for someone brighter to decide whether to keep or throw away. It went quietly looking for dirt all day long, in search curves that could miss nothing,

passing over clean floors in its endless search for dirty floors. It would get out of a room with people in it, like a well-trained maid, unless its mistress caught up with it and flipped a switch to tell the poor thing it was welcome. Around dinnertime it would go to its stall and soak up a quick charge-this was before we installed the everlasting power pack.

There was not too much difference between Hired Girl, Mark One, and a vacuum cleaner. But the difference-that it would clean without supervision-was enough; it sold.

I swiped the basic prowl pattern from the "Electric Turtles" that were written up in Scientific American in the late forties, lifted a memory circuit out of the brain of a guided missile (that's the nice thing about top-secret gimmicks; they don't get patented), and I took the cleaning devices and linkages out of a dozen things, including a floor polisher used in army hospitals, a soft-drink dispenser, and those "hands" they use in atomics plants to handle anything "hot." There wasn't anything really new in it; it was just the way I put it together. The "spark of genius" required by our laws lay in getting a good patent lawyer.

The real genius was in the production engineering; the whole thing could be built with standard parts ordered out of Sweet's Catalogue, with the exception of two three-dimensional cams and one printed circuit. The circuit we subcontracted; the cams I made myself in the shed we called our "factory," using war-surplus automated tools. At first Miles and I were the whole assembly line- bash to fit, file to hide, paint to cover. The pilot model cost $4317.09; the first hundred cost just over $39 each-and we passed them on to a Los Angeles discount house at $60 and they sold them for $85. We had to let them go on consignment to unload them at all, since we could not afford sales promotion, and we darn near starved before receipts started coming in. Then Life ran a two-page on Hired Girl . . . and it was a case of having enough help to assemble the monster.

Belle Darkin joined us soon after that. Miles and I had been pecking out letters on a 1908 Underwood; we hired her as a typewriter jockey and bookkeeper and rented an electric machine with executive type face and carbon ribbon and I designed a letterhead. We were ploughing it all back into the business and Pete and I were sleeping in the shop while Miles and Ricky had a nearby shack. We incorporated in self-defense. It takes three to incorporate; we gave Belle a share of stock and designated her secretary-treasurer. Miles was president and general manager; I was chief engineer and chairman of the board . . . with 51 per cent of the stock.

I want to make clear why I kept control. I wasn't a hog; I simply wanted to be my own boss. Miles worked like a trouper, I give him credit. But better than 60 per cent of the savings that got us started were mine and 100 per cent of the inventiveness and engineering were mine. Miles could not possibly have built Hired Girl, whereas I could have built it with any of a dozen partners, or possibly without one-although I might have flopped in trying to make money out of it; Miles was a businessman while I am not

But I wanted to be certain that I retained control of the shop, and I granted Miles equal freedom in the business end . . . too much freedom, it turned out.

Hired Girl, Mark One, was selling like beer at a ball game and I was kept busy for a while improving it and setting up a real assembly line and putting a shop master in charge, then I happily turned to thinking up more household gadgets. Amazingly little real thought had been given to housework, even though it is at least 50 per cent of all work in the world. The women's magazines talked about "labor saving in the home" and

"functional kitchens," but it was just prattle; their pretty pictures showed living-working arrangements essentially no better than those in Shakespeare's day; the horse-to-jet-plane revolution had not reached the home.

I stuck to my conviction that housewives were reactionaries. No "machines for living"; just gadgets to replace the extinct domestic servant, that is, for cleaning and cooking and baby tending.

I got to thinking about dirty windows and that ring around the bathtub that is so hard to scrub, as you have to bend double to get at it. It turned Out that an electrostatic device could make dirt go spung! off any polished silica surface, window glass, bathtubs, toilet bowls-anything of that sort. That was Window Willie and it's a wonder that somebody hadn't thought of him sooner. I held him back until I had him down to a price that people could not refuse. Do you know what window washing used to cost by the hour?

I held Willie out of production much longer than suited Miles. He wanted to sell it as soon as it was cheap enough, but I insisted on one more thing: Willie had to be easy to repair. The great shortcoming of most household gadgets was that the better they were and the more they did, the more certain they were to get out of order when you needed them most-and then require an expert at five dollars an hour to make them move again. Then the same thing will happen the following week, if not to the dishwasher, then to the air conditioner . . . usually late Saturday night during a snowstorm.

I wanted my gadgets to work and keep on working and not to cause ulcers in their owners.

But gadgets do get out of order, even mine. Until that great day when all gadgets are designed with no moving parts, machinery will continue to go sour. If you stuff a house with gadgets some of them will always be out of order.

But military research does get results and the military had licked this problem years earlier. You simply can't lose a battle, lose thousands or millions of lives, maybe the war itself, just because some gadget the size of your thumb breaks down. For military purposes they used a lot of dodges: "fail safe," stand-by circuits, "tell me three times," and so forth. But one they used that made sense for household equipment was the plug-in component principle.

It is a moronically simple idea: don't repair, replace. I wanted to make every part of Window Willie which could go wrong a plug-in unit, then include a set of replacements with each Willie. Some components would be thrown away, some would be sent out for repair, but Willie himself would never break down longer than necessary to plug in the replacement part.

Miles and I had our first row. I said the decision as to when to go from pilot model to production was an engineering one; he
claimed that it was a business decision. If I hadn't retained control Willie would have gone on the market just as maddeningly subject to acute appendicitis as all other sickly, half-engineered "laborsaving" gadgets.

Belle Darkin smoothed over the row. If she had turned on the pressure I might have let Miles start selling Willie before I thought it was ready, for I was as goofed up about Belle as is possible for a man to be.

Belle was not only a perfect secretary and office manager, she also had personal specs which would have delighted Praxiteles and a fragrance which affected me the way

catnip does Pete. With topnotch office girls as scarce as they were, when one of the best turns out to be willing to work for a shoestring company at a below-standard salary, one really ought to ask "why?", but we didn't even ask where she had worked last, so happy were we to have her dig us out of the flood of paper work that marketing Hired Girl had caused.

Later on I would have indignantly rejected any suggestion that we should have checked on Belle, for by then her bust measurement had seriously warped my judgment. She let me explain how lonely my life had been until she came along and she answered gently that she would have to know me better but that she was inclined to feel the same way.

Shortly after she smoothed out the quarrel between Miles and myself she agreed to share my fortunes. "Dan darling, you have it in you to be a great man. . . and I have hopes that I am the sort of woman who can help you."

"You certainly are!"

"Shush, darling. But I am not going to marry you right now and burden you with kids and worry you to death. I'm going to work with you and build up the business first. Then we'll get married."

I objected, but she was firm. "No, darling, We are going a long way, you and I. Hired Girl will be as great a name as General Electric. But when we marry I want to forget business and just devote myself to making you happy. But first I must devote myself to your welfare and your future. Trust me, dear."

So I did. She wouldn't let me buy her the expensive engagement ring I wanted to buy; instead I signed over to her some of my stock as a betrothal present. I went on voting it, of course. Thinking back, I'm not sure who thought of that present.

I worked harder than ever after that, thinking about wastebaskets that would empty themselves and a linkage to put dishes away after the dishwasher was through. Everybody was happy ...everybody but Pete and Ricky, that is. Pete ignored Belle, as he did anything he disapproved of but could not change, but Ricky was really unhappy.

My fault. Ricky had been "my girl" since she was a six-year-old at Sandia, with hair ribbons and big solemn dark eyes. I was "going to marry her" when she grew up and we would both take care of Pete. I thought it was a game we were playing, and perhaps it was, with little Ricky serious only to the extent that it offered her eventual full custody of our cat. But how can you tell what goes on in a child's mind?

I am no: sentimental about kids. Little monsters, most of them, who don't civilize until they are grown and sometimes not then. But little Frederica reminded me of my own sister at that age, and besides, she liked Pete and treated him properly. I think she liked me because I never talked down (I had resented that myself as a child) and took her Brownie activities seriously. Ricky was okay; she had quiet dignity arid was not a banger, not a squealer, not a lap climber. We were friends, sharing the responsibility for Pete, and, so far as I knew, her being "my girl" was just a sophisticated game we were playing.

I quit playing it after my sister and mother got it the day they bombed us. No conscious decision-I just didn't feel like joking and never went back to it. Ricky was seven then; she was ten by the time Belie joined us and possibly eleven when Belle and I became engaged. She hated Belle with an intensity that I think only I was aware of, since it was expressed only by reluctance to talk to her-Belle called it "shyness" and I think Miles thought it was too.

But I knew better and tried to talk Ricky out of it. Did you ever try to discuss with a subadolescent something the child does not want to talk about? You'll get more satisfaction shouting in Echo Canyon. I told myself it would wear off as Ricky learned how very lovable Belle was.

Pete was another matter, and it I had not been in love I would have seen it as a clear sign that Belle and I would never understand each other. Belle "liked" my eat-oh, sure, sure! She adored cats and she loved my incipient bald spot and admired my choice in restaurants and she liked everything about me.

But liking cats is hard to fake to a cat person. There are cat people and there are others, more than a majority probably, who "cannot abide a harmless, necessary eat." If they try to pretend, out of politeness or any reason, it shows, because they don't understand how to treat eats-and cat protocol is more rigid than that of diplomacy.

It is based on self-respect and mutual respect and it has the same flavor as the dignidad de hombre of Latin America which you may offend only at risk to your life.

Cats have no sense of humor, they have terribly inflated egos, and they are very touchy. If somebody asked me why it was worth anyone's time to cater to them I would be forced to answer that there is no logical reason. I would rather explain to someone who detests sharp cheeses why he "ought to like" Limburger. Nevertheless, I fully sympathize with the mandarin who cut off a priceless embroidered sleeve because a kitten was sleeping on it.

Belle tried to show that she "liked" Pete by treating him like a dog . . . so she got scratched. Then, being a sensible cat, he got out in a hurry and stayed out a long time-which was well, as I would have smacked him, and Pete has never been smacked, not by me. Hitting a eat is worse than useless; a cat can be disciplined only by patience, never by blows.

So I put iodine on Belle's scratches, then tried to explain what she had done wrong. "I'm sorry it happened: I'm terribly sorry! But it will happen again if you do that again!"

"But I was just petting him!"

"Uh, yes ... but you weren't cat-petting him; you were dogpetting him. You must never pat a eat, you stroke it. You must never make sudden movements in range of its claws. You must never touch it without giving it a chance to see that you are about to . . . and you must always watch to see that it likes it. If it doesn't want to be petted, it will put up with a little out of politeness-eats are very polite-but you can tell if it is merely enduring it and stop before its patience is exhausted." I hesitated. "You don't like cats, do you?"

`What? Why, how silly! Of course I like cats." But she added, "I haven't been around them much, I suppose. She's pretty touchy, isn't she?"

"`He.' Pete is a he-male cat. No, actually he's not touchy, since he's always been well treated. But you do have to learn how to behave with cats. Uh, you must never laugh at them."

"What? Forevermore, why?"

"Not because they aren't funny; they're extremely comical. But they have no sense of humor and it offends them. Oh, a cat won't scratch you for laughing; he'll simply stalk off and you'll have trouble making friends with him. But it's not too important. Knowing

how to pick up a cat is much more important. When Pete comes back in I'll show you how."

But Pete didn't come back in, not then, and I never showed her. Belle didn't touch him after that. She spoke to him and acted as if she liked him, but she kept her distance and he kept his. I put it out of my mind; I couldn't let so trivial a thing make me doubt the woman who was more to me than anything in life.

But the subject of Pete almost reached a crisis later. Belle and I were discussing where we were going to live. She still wouldn't set the date, but we spent a lot of time on such details. I wanted a ranchette near the plant; she favored a flat in town until we could afford a Bel-Air estate.

I said, "Darling, it's not practical; I've got to be near the plant. Besides, did you ever try to take care of a tomcat in a city apartment?"

"Oh, that! Look, darling, I'm glad you mentioned it. I've been studying up on cats, I really have. We'll have him altered. Then he'll be much gentler and perfectly happy in a flat."

I stared at her, unable to believe my ears. Make a eunuch of that old warrior? Change him into a fireside decoration? "Bell; you don't know what you're saying!"

She tut-tutted me with the old familiar "Mother knows best," giving the stock arguments of people who mistake cats for property . . . how it wouldn't hurt him, that it was really for his own good, how she knew how much I valued him and she would never think of depriving me of him, how it was really very simple and quite safe and better for everybody.

I cut in on her. "Why don't you arrange it for both of us?"

"What, dear?"

"Me, too. I'd be much more docile and I'd stay home nights and I'd never argue with you. As you pointed out, it doesn't hurt and I'd probably be a lot happier."

She turned red. "You're being preposterous."

"So are you!"

She never mentioned it again. Belle never let a difference of opinion degenerate into a row; she shut up and bided her time. But she never gave up, either. In some ways she had a lot of cat in her. . . which may have been why I couldn't resist her.

I was glad to drop the matter. I was up to here in Flexible Frank. Willie and Hired Girl were bound to make us lots of money, but I had a bee in my bonnet about the perfect, all-work household automaton, the general-purpose servant. All right, call it a robot, though that is a much-abused word and I had no notion of building a mechanical man.

I wanted a gadget which could do anything inside the home-cleaning and cooking, of course, but also really hard jobs, like changing a baby's diaper, or replacing a typewriter ribbon. Instead of a stable of Hired Girls and Window Willies and Nursemaid Nans and Houseboy Harries and Gardener Guses I wanted a man and wife to be able to buy one machine for, oh, say about the price of a good automobile, which would be the equal of the Chinese servant you read about but no one in my generation had ever seen.

If I could do that it would be the Second Emancipation Proclamation, freeing women from their age-old slavery. I wanted to abolish the old saw about how "women's work is never done." Housekeeping is repetitious and unnecessary drudgery; as an engineer it offended me.

For the problem to be within the scope of one engineer, almost all of Flexible Frank had to be standard parts and must not involve any new principles. Basic research is no job for one man alone; this had to be development from former art or I couldn't do it

Fortunately there was an awful lot of former art in engineering and I had not wasted my time while under a "Q" clearance. What I wanted wasn't as complicated as the things a guided missile was required to do.

Just what did I want Flexible Frank to do? Answer: any work a human being does around a house. He didn't have to play cards, make love, eat, or sleep, but he did have to clean up after the card game, cook, make beds, and tend babies-at least he had to keep track of a baby's breathing and call someone if it changed. I decided he did not have to answer telephone calls, as A.T.&T. was already renting a gadget for that. There was no need for him to answer the door either, as most new houses were being equipped with door answerers.

But to do the multitude of things I wanted him to do, he had to have hands, eyes, ears, and a brain. . . a good enough brain.

Hands I could order from the atomics-engineering equipment companies who supplied Hired Girl's hands, only this time I would want the best, with wide-range servos and with the delicate feedback required for microanalysis manipulations and for weighing radioactive isotopes. The same companies could supply eyes-only they could be simpler, since Frank would not have to see and manipulate from behind yards of concrete shielding the way they do in a reactor plant.

The ears I could buy from any of a dozen radio-TV houses-though I might have to do some circuit designing to have his hands controlled simultaneously by sight, sound, and touch feedback the way the human hand is controlled.

But you can do an awful lot in a small space with transistors and printed circuits.

Frank wouldn't have to use stepladders. I would make his neck stretch like an ostrich and his arms extend like lazy tongs. Should I make him able to go up and down stairs?

Well, there was a powered wheel chair that could. Maybe I should buy one and use it for the chassis, limiting the pilot model to a space no bigger than a wheel chair and no heavier than such a chair could carry-that would give me a set of parameters. I'd tie its power and steering into Frank's brain.

The brain was the real hitch. You can build a gadget linked like a man's skeleton or even much better. You can give it a feedback control system good enough to drive nails, scrub floors, crack eggs-or not crack eggs. But unless it has that stuff between the ears that a man has, it is not a man, it's not even a corpse.

Fortunately I didn't need a human brain; I just wanted a docile moron, capable of largely repetitive household jobs.

Here is where the Thorsen memory tubes came in. The intercontinental missiles we had struck back with "thought" with Thorsen tubes, and traffic-control systems in places like Los Angeles used an idiot form of them. No need to go into theory of an electronic tube that even Bell Labs doesn't understand too well, the point is that you can hook a Thorsen tube into a control circuit, direct the machine through an operation by manual control, and the tube will "remember" what was done and can direct the operation without a human supervisor a second time, or any number of times. For an automated machine tool this is enough; for guided missiles and for Flexible Frank you add side

circuits that give the machine "judgment." Actually it isn't judgment (in my opinion a machine can never have judgment); the side circuit is a hunting circuit, the programming of which says "look for so-and-so within such-and-such limits; when you find it, carry out your basic instruction." The basic instruction can be as complicated as you can crowd into one Thorsen memory tube-which is a very wide limit indeed!-and you can program so that your "judgment" circuits (moronic back-seat drivers, they are) can interrupt the basic instructions any time the cycle does not match that originally impressed into the Thorsen tube.

This meant that you need cause Flexible Frank to clear the table and scrape the dishes and load them into the dishwasher only once, and from then on he could cope with any dirty dishes he ever encountered. Better still, he could have an electronically duplicated Thorsen tube stuck into his head and could handle dirty dishes the first time he ever encountered them . . - and never break a dish.

Stick another "memorized" tube alongside the first one and he could change a wet baby first time, and never, never, never stick a pin in the baby.

Frank's square head could easily hold a hundred Thorsen tubes, each with an electronic "memory" of a different household task. Then throw a guard circuit around all the "judgment" circuits, a circuit which required him to hold still and squawl for help if he ran into something not covered by his instructions-that way you wouldn't use up babies or dishes.

So I did build Frank on the framework of a powered wheel chair. He looked like a hat rack making love to an octopus but, boy, how he could polish silverware!

Miles looked over the first Frank, watched him mix a martini and serve it, then go around emptying and polishing ash trays (never touching ones that were clean), open a window arid fasten it open, then go to my bookcase and dust and tidy the books in it. Miles took a sip of his martini and said, "Too much vermouth."

"It's the way I like them. But we can tell him to fix yours one way and mine another; he's got plenty of blank tubes in him. Flexible."

Miles took another sip. "How soon can he be engineered for production?"

"Uh, I'd like to fiddle with him for about ten years." Before he could groan I added, "But we ought to be able to put a limited model into production in five."

"Nonsense! We'll get you plenty of help and have a Model-T job ready in six months."

"The devil you will. This is my magnum opus. I'm not going to turn him loose until he is a work of art . . . about a third that size, everything plug-in replaceable but the Thorsens, and so all out flexible that he'll not only wind the cat and wash the baby, he'll even play ping-pong if the buyer wants to pay for the extra programming." I looked at him; Frank was quietly dusting my desk and putting every paper back exactly where he found it. "But ping-pong with him wouldn't be much fun; he'd never miss. No, I suppose we could teach him to miss with a random-choice circuit. Mmm. . - yes, we could. We will, it would make a nice selling demonstration."

"One year, Dan, and not a day over. Fm going to hire somebody away from Loewy to help you with the styling."

I said, "Miles, when are you going to learn that I boss the engineering? Once I turn him over to you, he's yours. . - but not a split second before."

Miles answered, "It's still too much vermouth."

I piddled along with the help of the shop mechanics until I had Frank looking less like a three-car crash and more like something you might want to brag about to the neighbors. In the meantime I smoothed a lot of bugs out of his control system. I even taught him to stroke Pete and scratch him under the chin in such a fashion that Pete liked it-and, believe me, that takes negative feedback as exact as anything used in atomics labs. Miles didn't crowd me, although he came in from time to time and watched the progress. I did most of my work at night, coming back after dinner with Belle and taking her home. Then I would sleep most of the thy, arrive late in the afternoon, sign whatever papers Belle had for me, see what the shop had done during the day, then take
Belle out to dinner again. I didn't try to do much before then, because creative work makes a man stink like a goat. After a hard night in the lab shop nobody could stand me but Pete.

Just as we were finishing dinner one day Belie said to me, "Going back to the shop, dear?"

"Sure. Why not?"

"Good. Because Miles is going to meet us there."

"Huh?"

"He wants a stockholders' meeting."

"A stockholders' meeting? Why?"

"It won't take long. Actually, dear, you haven't been paying much attention to the firm's business lately. Miles wants to gather up loose ends and settle some policies."

"I've been sticking close to the engineering. What else am I supposed to do for the firm?"

"Nothing, dear. Miles says it won't take long."

"What's the trouble? Can't Jake handle the assembly line?"

"Please, dear. Miles didn't tell me why. Finish your coffee."

Miles was waiting for us at the plant and shook hands as solemnly as if we had not met in a month. I said, "Miles, what's this all about?"

He turned to Belle. "Get the agenda, will you?" This alone should have told me that Belle had been lying when she claimed that Miles had not told her what he had in mind. But I did not think of it-hell, I trusted Belle!-and my attention was distracted by something else, for Belle went to the safe, spun the knob, and opened it.

I said, "By the way, dear, I tried to open that last night and couldn't. Have you changed the combination?"

She was hauling papers out and did not turn. "Didn't I tell you? The patrol asked me to change it after that burglar scare last week."

"Oh. You'd better give me the new numbers or some night I'll have to phone one of you at a ghastly hour."

"Certainly." She closed the safe and put a folder on the table we used for conferences.

Miles cleared his throat and said, "Let's get started."

I answered, "Okay. Darling, if this is a formal meeting, I guess you had better make pothooks . . . Uh, Wednesday, November eighteenth, 1970, 9:20 P.M., all

stockholders present-put our names down-D. B. Davis, chairman of the board and presiding. Any old business?"

There wasn't any. "Okay, Miles, it's your show. Any new business?"

Miles cleared his throat. "I want to review the firm's policies, present a program for the future, and have the board consider a financing proposal."

"Financing? Don't be silly. We're in the black and doing better every month. What's the matter, Miles? Dissatisfied with your drawing account? We could boost it."

"We wouldn't stay in the black under the new program. We need a broader capital structure."

"What new program?"

"Please, Dan. I've gone to the trouble of writing it up in detail. Let Belle read it to us."

"Well. . . okay."

Skipping the gobbledegook-like all lawyers, Miles was fond of polysyllables-Miles wanted to do three things: (a) take Flexible Frank away from me, hand it over to a production-engineering team, and get it on the market without delay; (-but I stopped it at that point.) "No!"

"Wait a minute, Dan. As president and general manager, I'm certainly entitled to present my ideas in an orderly manner. Save your comments. Let Belle finish reading."

"Well...all right. But the answer is still `no.'"

Point (b) was in effect that we should quit frittering around as a one-horse outfit. We had a big thing, as big as the automobile had been, and we were in at the start; therefore we should at once expand and set up organization for nationwide and world-wide selling and distribution, with production to match.

I started drumming on the table. I could just see myself as chief engineer of an outfit like that. They probably wouldn't even let me have a drafting table and if I picked up a soldering gun, the union would pull a strike. I might as well have stayed in the Army and tried to make general.

But I didn't interrupt. Point (c) was that we couldn't do this on pennies; it would take millions. Mannix Enterprises would put up the doughÄwhat it amounted to was that we would sell out to Mannix, lock, stock, and Flexible Frank, and become a daughter corporation. Miles would stay on as division manager and I would stay on as chief research engineer, but the free old days would be gone; we'd both be hired hands.

"Is that all?" I said.

"Mmm. . . yes. Let's discuss it and take a vote."

"There ought to be something in there granting us the right to sit in front of the cabin at night and sing spirituals."

"This is no joke, Dan. This is how it's got to be."

"I wasn't joking. A slave needs privileges to keep him quiet. Okay, is it my turn?"

"Go ahead."

I put up a counterproposal, one that had been growing in my mind. I wanted us to get out of production. Jake Schmidt, our production shop master, was a good man; nevertheless I was forever being jerked out of a warm creative fog to straighten out bugs in production-which is like being dumped out of a warm bed into ice water. This was the real reason why I had been doing so much night work and staying away from the shop in the daytime. With more war-surplus buildings being moved in and a night shift

contemplated I could see the time coming when I would get no peace to create, even though we turned down this utterly unpalatable plan to rub shoulders with General Motors and Consolidated. I certainly was not twins; I couldn't be both inventor and production manager.

So I proposed that we get smaller instead of bigger-license Hired Girl and Window Willie, let someone else build and sell them while we raked in the royalties. When Flexible Frank was ready we would license him too. If Mannix wanted the licenses and would outbid the market, swell! Meantime, we'd change our name to Davis & Gentry Research Corporation and hold it down to just the three of us, with a machinist or two to help me jackleg new gadgets. Miles and Belie could sit back and count the money as it rolled in.

Miles shook his head slowly. "No, Dan. Licensing would make us some money, granted. But not nearly the money we would make if we did it ourselves."

"Confound it, Miles, we wouldn't be doing it ourselves; that's just the point. We'd be selling our souls to the Mannix people. As for money, how much do you want? You can use only one yacht or one swimming pool at a time . . . and you'll have both before the year is out if you want them."

"I don't want them."

"What do you want?"

He looked up. "Dan, you want to invent things. This plan lets you do so, with all the facilities and all the help and all the expense money in the world. Me, I want to run a big business. A big business. I've got the talent for it." He glanced at Belle. "I don't want to spend my life sitting out here in the middle of the Mojave Desert acting as business manager to one lonely inventor."

I stared at him. "You didn't talk that way at Sandia. You want out, Pappy? Belle and I would hate to see you go. . . but if that is the way you feel, I guess I could mortgage the place or something and buy you out. I wouldn't want any man to feel tied down." I was shocked to my heels, but if old Miles was restless I had no right to hold him to my pattern.

"No, I don't want out; I want us to grow. You heard my proposal. It's a formal motion for action by the corporation. I so move."

I guess I looked puzzled. "You insist on doing it the hard way? Okay, Belle, the vote is `no.' Record it. But I won't put up my counterproposal tonight. We'll talk it over and exchange views. I want you to be happy, Miles."

Miles said stubbornly, "Let's do this properiy. Roll call, Belle."

"Very well, sir. Miles Gentry, voting stock shares number-" She read off the serial numbers. "How say you?"

"Aye."

She wrote in her book.

"Daniel B. Davis, voting stock shares number-" She read off a string of telephone numbers again; 1 didn't listen to the formality. "How say you?"

"No. And that settles it. I'm sorry, Miles."

"Belle S. Darkin," she went on, "voting shares number-" She recited figures again. "I vote `aye.'"

My mouth dropped open, then I managed to stop gasping and say, "But, baby, you can't do that! Those are your shares, sure, but you know perfectly well that-"

"Announce the tally," Miles growled.

"The `ayes' have it. The proposal is carried."

"Record it."

"Yes, sir."

The next few minutes were confused. First I yelled at her, then I reasoned with her, then I snarled and told her that what she had done was not honest-true, I had assigned the stock to her but she knew as well as I did that I always voted it, that I had had no intention of parting with control of the company, that it was an engagement present, pure and simple. Hell, I had even paid the income tax on it last April. If she could pull a stunt like this when we were engaged, what was our marriage going to be like?

She looked right at me and her face was utterly strange to me. "Dan Davis, if you think we are still engaged after the way you have talked to me, you are even stupider than I've always known you were." She turned to Gentry. "Wifi you take me home, Miles?"

"Certainly, my dear."

I started to say something, then shut up and stalked out of there without my hat. It was high time to leave, or I would probably have killed Miles, since I couldn't touch Belle.

I didn't sleep, of course. About 4 A.M. I got out of bed, made phone calls, agreed to pay more than it was worth, and by five-thirty was in front of the plant with a pickup truck. I went to the gate, intending to unlock it and drive the truck to the loading dock so that I could run Flexible Frank over the tail gate-Frank weighed four hundred pounds.

There was a new padlock on the gate.

I shinnied over, cutting myself on barbed wire. Once inside, the gate would give me no trouble, as there were a hundred tools in the shop capable of coping with a padlock.

But the lock on the front door had been changed too.

I was looking at it, deciding whether it was easier to break a window with a tire iron, or get the jack out of the truck and brace it between the doorframe and the knob, when somebody shouted, "Hey, you! Hands up!"

I didn't put my hands up but I turned around. A middie-aged man was pointing a hogleg at me big enough to bombard a city. "Who the devil are you?"

"Who are you?"

"I'm Dan Davis, chief engineer of this outfit."

"Oh." He relaxed a little but still aimed the field mortar at me. "Yeah, you match the description. But if you have any identification on you, better let me see it."

"Why should I? I asked who you are?"

"Me? Nobody you'd know. Name of Joe Todd, with the Desert Protective & Patrol Company. Private license. You ought to know who we are; we've had you folks as clients for the night patrol for months. But tonight I'm on as special guard."

"You are? Then if they gave you a key to the place, use it. I want to get in. And quit pointing that blunderbuss at me."

He still kept it leveled at me. "I couldn't rightly do that, Mr. Davis. First place, I don't have a key. Second place, I had particular orders about you. You aren't to go in. I'll let you out the gate."

"I want the gate opened, all right, but I'm going in." I looked around for a rock to break a window.

"Please, Mr. Davis . .

"Huh?"

"I'd hate to see you insist, I really would. Because I couldn't chance shooting you in the legs; I ain't a very good shot. I'd have to shoot you in the belly. I've got soft-nosed bullets in this iron; it'ud be pretty messy."

I suppose that was what changed my mind, though I would like to think it was something else; i.e. when I looked again through the window I saw that Flexible Frank was not where I had left him.

As he let me out the gate Todd handed me an envelope. "They said to give this to you if you showed up."

I read it in the cab of the truck. It said:

Dear Mr. Davis,
18 November, 1970

At a regular meeting of the board of directors, held this date, it was voted to terminate all your connection (other than as stockholder) with the corporation, as permitted under paragraph three of your contract. It is requested that you stay off company property. Your personal papers and belongings will be forwarded to you by safe means.

- The board wishes to thank you for your services and regrets the differences in policy opinion which have forced this step on us.

Sincerely yours,
Miles Gentry
Chairman of the Board and General Manager by B. S. Darkin, Sec'y-Treasurer

I read it twice before I recalled that I had never had any contract with the corporation under which to invoke paragraph three or any other paragraph.

Later that day a bonded messenger delivered a package to the motel where I kept my clean underwear. It contained my hat, my desk pen, my other slide rule, a lot of books and personal correspondence, and a number of documents. But it did not contain my notes and drawings for Flexible Frank.

Some of the documents were very interesting. My "contract," for example-sure enough, paragraph three let them fire me without notice subject to three months' salary. But paragraph seven was even more interesting. It was the latest form of the yellow-dog clause, one in which the employee agrees to refrain from engaging in a competing occupation for five years by letting his former employers pay him cash to option his services on a first-refusal basis; i.e., I could go back to work any time I wanted to just by going, hat in hand, and asking Miles and Belle for a job-maybe that was why they sent the hat back.

But for five long years I could not work on household appliances without asking them first. I would rather have cut my throat.

There were copies of assignments of all patents, duly registered, from me to Hired Girl, Inc., for Hired Girl and Window Willie and a couple of minor things. (Flexible

Frank, of course, had never been patented-well, I didn't think he had been patented; I found out the truth later.)

But I had never assigned any patents, I hadn't even formally licensed their use to Hired Girl, Inc.; the corporation was my own creature and there hadn't seemed to be any hurry about it.

The last three items were my stock-shares certificate (those I had not given to Belle), a certified check, and a letter explaining each item of the check-accumulated "salary" less thawing-account disbursements, three months' extra salary in lieu of notice, option money to invoke "paragraph seven" . . . and a thousand dollar bonus to express "appreciation of services rendered." That last was real sweet of them.

While I reread that amazing collection I had time to realize that I had probably not been too bright to sign everything that Belle put in front of me. There was no possible doubt that the signatures were mine.

I steadied down enough the next day to talk it over with a lawyer, a very smart and money-hungry lawyer, one who didn't mind kicking and clapper-clawing and biting in the clinches. At first he was anxious to take it on a contingent-fee basis. But after he finished looking over my exhibits and listening to the details he sat back and laced his fingers over his belly and looked sour. "Dan, I'm going to give you some advice and it's not going to cost you anything."

"Well?"

"Do nothing. You haven't got a prayer."

"But you said-"

"I know what I said. They rooked you. But how can you prove it? They were too smart to steal your stock or cut you off without a penny. They gave you exactly the deal you could have reasonably expected if everything had been kosher and you had quit, or had been fired over-as they express it-a difference of policy opinion. They gave you everything you had coming to you. . . and a measly thousand to boot, just to show there are no hard feelings."

"But I didn't have a contract! And I never assigned those patents!"

"These papers say you did. You admit that's your signature. Can you prove what you say by anyone else?"

I thought about it. I certainly could not. Not even Jake Schmidt knew anything that went on in the front office. The only witnesses I had were. . . Miles and Belle.

"Now about that stock assignment," he went on, "that's the one chance to break the log jam. If you..."

"But that is the only transaction in the whole stack that really is legitimate. I signed over that stock to her."

"Yes, but why? You say that you gave it to her as an engagement present in expectation of marriage. Never mind how she voted it; that's beside the point. If you can prove that it was given as a betrothal gift in full expectation of marriage, and that she knew it when she accepted it, you can force her either to marry you or to disgorge. McNulty vs. Rhodes. Then you're in control again and kick them out. Can you prove it?"

"Damn it, I don't want to marry her now. I wouldn't have her."

"That's your problem. But one thing at a time. Have you any witnesses or any evidence, letters or anything, which would tend to show that she accepted it, understanding that you were giving it to her as your future wife?"

I thought. Sure, I had witnesses . . . the same old two. Miles and Belle.

"You see? With nothing but your word against both of theirs, plus a pile of written evidence, you not only won't get anywhere, but you might wind up committed to a Napoleon factory with a diagnosis of paranoia. My advice to you is to get a job in some other line. . . or at the very most go ahead and buck their yellowdog contract by setting up a competitive business-I'd like to see that phraseology tested, as long as I didn't have to fight it myself. But don't charge them with conspiracy. They'll win, then they'll sue you and clean you out of what they let you keep." He stood up.

I took only part of his advice. There was a bar on the ground floor of the same building; I went in and had a couple or nine drinks.

I had plenty of time to recall all this while I was driving out to see Miles. Once we had started making money, he had moved Ricky and himself to a nice little rental in San Fernando Valley to get out of the murderous Mojave heat and had started commuting via the Air Force Slot. Ricky wasn't there now, I was happy to recall; she was up at Big Bear Lake at Girl Scout camp-I didn't want to chance Ricky's being witness to a row between me and her stepdaddy.

I was bumper to bumper in Sepulveda Tunnel when it occurred to me that it would be smart to get the certificate for my Hired Girl stock off my person before going to see Miles. I did not expect any rough stuff (unless I started it), but it just seemed a good idea. . . like a cat who has had his tail caught in the screen door once, I was permanently suspicious.

Leave it in the car? Suppose I was hauled in for assault and battery; it wouldn't be smart to have it in the car when the car was towed in and impounded.

I could mall it to myself, but I had been getting my mail lately from general delivery at the G.P.O., while shifting from hotel to hotel as often as they found out I was keeping a cat.

I had better mail it to someone I could trust.

But that was a mighty short list.

Then I remembered someone I could trust.

Ricky.

I may seem a glutton for punishment to decide to trust one female just after I had been clipped by another. But the cases are not parallel. I had known Ricky half her life and if there ever was a human being honest as a Jo block, Ricky was she. . . and Pete thought so too. Besides, Ricky didn't have physical specifications capable of warping a man's judgment. Her femininity was only in her face; it hadn't affected her figure yet.

When I managed to escape from the log jam in Sepulveda Tunnel I got off the throughway and found a drugstore; there I bought stamps and a big and a little envelope and some note paper. I wrote to her:

Dear Rikki-tikki-tavi,

I hope to see you soon but until I do, 1 want you to keep this inside envelope for me. It's a secret, just between you and me.

I stopped and thought. Doggone it, if anything happened to me oh, even a car crash, or anything that can stop breathing, while Ricky had this, eventually it would wind up with Miles and Belle. Unless I rigged things to prevent it. I realized as I thought about it that I had subconsciously reached a decision about the cold-sleep deal; I wasn't going to take it. Sobering up and the lecture the doc had read me had stiffened my spine; I wasn't going to run away, I was going to stay and fight-and this stock certificate was my best weapon. It gave me the right to examine the books; it entitled me to poke my nose into any and all affairs of the company. If they tried again simply to keep me out with a hired guard I could go back next time with a lawyer and a deputy sheriff and a court order.

I could drag them into court with it too. Maybe I couldn't win but I could make a stink and perhaps cause the Mannix people to shy off from buying them out.

Maybe I shouldn't send it to Ricky at all.

No, if anything happened to me I wanted her to have it. Ricky and Pete were all the "family" I had. I Went on writing:

If by any chance 1 don't see you for a year, you'll know something has happened to me. If that happens, take care of Pete, if you can find him-and without telling anybody take the inside envelope to a branch of the Bank of America, give it to the trust officer and tell him to open it.

Uncle Danny

Then I took another sheet and wrote:
"3 December, 1970, Los Angeles, California
For one dollar in hand received and other valuable considerations I assign"-here I listed legal descriptions and serial numbers of my Hired Girl, Inc., stock shares-"to the Bank of America in trust for Frederica Virginia Gentry and to be reassigned to her on her twenty-first birthday," and signed it.
The intent was clear and it was the best I could do on a drugstore counter with a juke box blaring in my ear. It should make sure that Ricky got the stock if anything happened to me, while making darn sure that Miles and Belle could not grab it away from her.

But if all went well, I would just ask Ricky to give the envelope back to me when I got around to it. By not using the assignment form printed on the back of the certificate, I avoided all the red tape of having a minor assign it back to me; I could just tear up the separate sheet of paper.

I sealed the stock certificate with the note assigning it into the smaller envelope, placed it and the letter to Ricky in the larger envelope, addressed it to Ricky at the Girl Scout camp, stamped it, and dropped it in the box outside the drugstore. I noted that it would be picked up in about forty minutes and climbed back into my car feeling positively lighthearted . . . not because I had safeguarded the stock but because I had solved my greater problems.

Well, not "solved" them, perhaps, but had decided to face them, not run off and crawl in a hole to play Rip van Winkle.
nor try to blot them out again with ethanol in various flavors. Sure, I wanted to see the year 2000, but just by sitting tight I Would see it. . . when I was sixty, and still young enough, probably, to whistle at the girls. No hurry. Jumping to the next century in one

long nap wouldn't be satisfactory to a normal man anyhow-about like seeing the end of a movie without having seen what goes before. The thing to do with the next thirty years was to enjoy them while they unfolded; then when I came to the year 2000 I would understand it.

In the meantime I was going to have one lulu of a fight with Miles and Belle. Maybe I wouldn't win, but I would sure let them know they had been in a scrap-like the times Pete had come home bleeding in six directions but insisting loudly, "You ought to see the other cat!"

I didn't expect much Out of this interview tonight. All it would amount to was a formal declaration of war. I planned to ruin Miles's sleep. . . and he could phone Belle and ruin hers.

CHAPTER 3

By the time I got to Miles's house I was whistling. I had quit worrying about that precious pair and had worked out in my head, in the last fifteen miles, two brand-new gadgets, either one of which could make me rich. One was a drafting machine, to be operated like an electric typewriter. I guessed that there must be easily fifty thousand engineers in the U.S. alone bending over drafting boards every day and hating it, because it gets you in your kidneys and ruins your eyes. Not that they didn't want to design-they did want to-but physically it was much too hard work.

This gismo would let them Sit down in a big easy chair and tap keys and have the picture unfold on an easel above the keyboard. Depress three keys simultaneously and have a horizontal line appear just where you want it; depress another key and you fillet it in with a vertical line; depress two keys and then two more in succession and draw a line at an exact slant.

Cripes, for a small additional cost as an accessory, I could add a second easel, let an architect design in isometric (the only easy way to design), and have the second picture come out in perfect perspective rendering without his even looking at it. Why, I could even set the thing to pull floor plans and elevations right out of the isometric.

The beauty of it was that it could be made almost entirely with standard parts, most of them available at radio shops and camera stores. All but the control board, that is, and I was sure I could bread-board a rig for that by buying an electric typewriter, tearing its guts out, and hooking the keys to operate these other circuits. A month to make a primitive model, six weeks more to chase bugs.

But that one I just tucked away in the back of my mind, certain that I could do it and that it would have a market. The thing that really delighted me was that I had figured out a way to outflex poor old Flexible Frank. I knew more about Frank than anyone else could learn, even if they studied him a year. What they could not know, what even my notes did not show, was that there was at least one workable alternative for every choice I had madeÄand that my choices had been constrained by thinking of him as a household servant. To start with, I could throw away the restriction that he had to live in a powered wheel chair. From there on I could do anything, except that I would need the Thorsen

memory tubesÄand Miles could not keep me from using those; they were on the market for anyone who wanted to design a cybernetic sequence.

The drafting machine could wait; I'd get busy on the unlimited all purpose automaton, capable of being programmed for anything a man could do, just as long as it did not require true human judgment.

No, I'd rig a drafting machine first, then use it to design Protean Pete. "How about that, Pete? We're going to name the world's first real robot after you."

"Mrrrarr?"

"Don't be so suspicious; it's an honor." After breaking in on Frank, I could design Pete right at my drafting machine, really refine it, and quickly. I'd make it a killer, a triple-threat demon that would displace Frank before they ever got him into production. With any luck I'd run them broke and have them begging me to come back. Kill the goose that lays the golden eggs, would they?

There were lights on in Miles's house and his car was at the curb. I parked in front of Miles's car, said to Pete, "You'd better stay here, fellow, and protect the car. Holler `halt' three times fast, then shoot to kill."

"Nooo!"

"If you go inside you'll have to stay in the bag."

"Bleerrrt?"

"Don't argue. If you want to come in, get in your bag."

Pete jumped into the bag.

Miles let me in. Neither of us offered to shake hands. He led me into his living room and gestured at a chair.

Belle was there. I had not expected her, but I suppose it was not surprising. I looked at her and grinned. "Fancy meeting you here! Don't tell me you came all the way from Mojave just to talk to little old me?" Oh, I'm a gallus-snapper when I get started; you should see me wear women's hats at parties.

Belle frowned. "Don't be funny, Dan. Say what you have to say, if anything, and get out."

"Don't hurry me. I think this is cozy . . . my former partner my former fiance. All we lack is my former business."

Miles said placatingly, "Now, Dan, don't take that attitude. We did it for your own good. . . and you can come back to work any tune you want to. I'd be glad to have you back."

"For my own good, eh? That sounds like what they told the horse thief when they hanged him. As for coming back-how about it, Belle? Can I come back?"

She bit her lip. "If Miles says so, of course."

"It seems like only yesterday that it used to be: `If Dan says so, of course.' But everything changes; that's life. And I'm not coming back, kids; you can stop fretting. I just came here tonight to find out some things."

Miles glanced at Belle. She answered, "Such as?"

"Well, first, which one of you cooked up the swindle? Or did you plan it together?"

Miles said slowly, "That's an ugly word, Dan. I don't like it."

"Oh, come, come, let's not be mealymouthed. If the word is ugly, the deed is ten times as ugly. I mean faking a yellow-dog contract, faking patent assignments-that one is

a federal offense, Miles; I think they pipe sunlight to you on alternate Wednesdays. I'm not sure, but no doubt the FBI can tell me. Tomorrow," I added, seeing him flinch.

"Dan, you're not going to be silly enough to try to make trouble about this?"

"Trouble? I'm going to hit you in all directions, civil and criminal, on all counts. You'll be too busy to scratch . . . unless you agree to do one thing. But I didn't mention your third peccadillo; theft of my notes and drawings of Flexible Frank . . . and the working model, too, although you may be able to make me pay for the materials for that, since I did bill them to the company."

"Theft, nonsense!" snapped Belle. "You were working for the company."

"Was I? I did most of it at night. And I never was an employee, Belle, as you both know. I simply drew living expenses against profits earned by my shares. What is the Mannix outfit going to say when I file a criminal complaint, charging that the things they were interested in buying Hired Girl, Willie, and Frank never did belong to the company but were stolen from me?"

"Nonsense," Belle repeated grimly. "You were working for the company. You had a contract."

I leaned back and laughed. "Look, kids, you don't have to lie now; save it for the witness stand. There ain't nobody here but just us chickens. What I really want to know is this: who thought it up? I know how it was done. Belle, you used to bring in papers for me to sign. If more than one copy had to be signed, you would paper-clip the other copies to the first-for my convenience, of course; you were always the perfect secretary-and all I would see of the copies underneath would be the place to sign my name. Now I know that you slipped some jokers into some of those neat piles. So I know that you were the one who conducted the mechanics of the swindle; Miles could not have done it. Shucks, Miles can't even type very well. But who worded those documents you horsed me into signing? You? I don't think so . . . unless you've had legal training you never mentioned. How about it, Miles? Could a mere stenographer phrase that wonderful clause seven so perfectly? Or did it take a lawyer? You, I mean."

Miles's cigar had long since gone out. He took it from his mouth, looked at it, and said carefully, "Dan, old friend, if you think you'll trap us into admissions, you're crazy."

"Oh, come off it; we're alone. You're both guilty either way. But I'd like to think that Delilah over there came to you with the whole thing wrapped up, complete, and then tempted you into a moment of weakness. But I know it's not true. Unless Belle is a lawyer herself, you were both in it, accomplices before and after. You wrote the double talk; she typed it and tricked me into signing. Right?"

"Don't answer, Miles!"

"Of course I won't answer," Miles agreed. "He may have a recorder hidden in that bag."

"I should have had," I agreed, "but I don't." I spread the top of the bag and Pete stuck his head out. "You getting it all, Pete? Careful what you say, folks; Pete has an elephant's memory. No, I didn't bring a recorder-I'm just good old lunkheaded Dan Davis who never thinks ahead. I go stumbling along, trusting my friends the way I trusted you two. Is Belle a lawyer, Miles? Or did you yourself sit down in cold blood and plan how you could hogtie me and rob me and make it look legal?"

"Miles!" interrupted Belle. "With his skill, he could make a recorder the size of a pack of cigarettes. It may not be in the bag. It may be on him."

"That's a good idea, Belle. Next time I'll have one."

"I'm aware of that, my dear," Miles answered. "If he has, you are talking very loosely. Mind your tongue."

Belle answered with a word I didn't know she used. My eyebrows went up. "Snapping at each other? Trouble between thieves already?"

Miles's temper was stretching thin, I was happy to see. He answered, "Mind your tongue, Dan . . . if you want to stay healthy."

"Tsk, tsk! I'm younger than you are and I've had the judo course a lot more recently. And you wouldn't shoot a man; you'd frame him with some sort of fake legal document. `Thieves,' I said, and `thieves' I meant. Thieves and liars, both of you." I turned to Belle. "My old man taught me never to call a lady a liar, sugar face, but you aren't a lady. You're a liar . . . and a thief. . . and a tramp."

Belle tuned red and gave me a look in which all her beauty vanished and the underlying predatory animal was all that remained. "Miles!" she said shrilly. "Are you going to sit there and let him-"

"Quiet!" Miles ordered. "His rudeness is calculated. Ifs intended to make us get excited and say things we'll regret. Which you are almost doing. So keep quiet." Belle shut up, but her face was still feral. Miles tuned to me. "Dan, I'm a practical man always, I hope. I tried to make you see reason before you walked out of the firm. In the settlement I tried to make it such that you would take the inevitable gracefully."

"Be raped quietly, you mean."

"As you `will. I still want a peaceful settlement. You couldn't win any sort of suit, but as a lawyer I know that it is always better to stay out of court than to win. If possible. You mentioned a while ago that there was some one thing I could do that would placate you. Tell me what it is; perhaps we can reach terms."

"Oh, that. I was coming to it. You can't do it, but perhaps you can arrange it. It's simple. Get Belle to assign back to me the stock I assigned to her as an engagement present."

"No!" said Belle.

Miles said, "I told you to keep quiet."

I looked at her and said, "Why not, my former dear? I've taken advice on this point, as the lawyers put it, and, since it was given in consideration of the fact that you promised to marry me, you are not only morally but legally bound to return it. It was not a `free gift,' as I believe the expression is, but something handed over for an expected and contracted consideration which I never received, to wit, your somewhat lovely self. So how about coughing up, huh? Or have you changed your mind again and are now willing to marry me?"

She told me where and howl could expect to marry her.

Miles said tiredly, "Belle, you're only making things worse. Don't you understand that he is trying to get our goats?" He turned back to me. "Dan, if that is what you came over for, you may as well leave. I stipulate that if the circumstances had been as you alleged, you might have a point. But they were not. You transferred that stock to Belle for value received."

"Huh? What value? Where's the canceled check?"

"There didn't need be any. For services to the company beyond her duties."

I stared. "What a lovely theory! Look, Miles old boy, if it was for service to the company and not to me personally, then you must have known about it and would have been anxious to pay her the same amount-after all, we split the profits fifty-fifty even if I had. . . or thought I had. . . retained control. Don't tell me you gave Belle a block of stock of the same size?"

Then I saw them glance at each other and I got a wild hunch. "Maybe you did! I'll bet my little dumpling made you do it, or she wouldn't play. Is that right? If so, you can bet your life she registered the transfer at once . . . and the dates will show that I transferred stock to her at the very time we got engaged-shucks, the engagement was in the Desert Herald-while you transferred stock to her when you put the skids under me and she jilted me and it's all a matter of record! Maybe a judge will believe me, Miles? What do you think?"

I had cracked them, I had cracked them! I could tell from the way their faces went blank that I had stumbled on the one circumstance they could never explain and one I was never meant to know. So I crowded them. . . and had another wild guess. Wild? No, logical. "How much stock, Belle? As much as you got out of me, just for being `engaged'? You did more for him; you should have gotten more." I stopped suddenly. "Say. . . I thought it was odd that Belle came all the way over here just to talk to me, seeing how she hates that trip. Maybe you didn't come all that way; maybe you were here all along. Are you two shacked up? Or should I say `engaged'? Or . . . are you already married?" I thought about it. "I'll bet you are. Miles, you aren't as starry-eyed as I am; I'll bet my other shirt that you would never, never transfer stock to Belle simply on promise of marriage. But you might for a wedding present-provided you got back voting control of it. Don't bother to answer; tomorrow I'm going to start digging for the facts. They'll be on record too."

Miles glanced at Belle and said, "Don't waste your time. Meet Mrs. Gentry."

"So? Congratulations, both of you. You deserve each other. Now about my stock. Since Mrs. Gentry obviously can't marry me, then-"

"Don't be silly, Dan. I've already offset your ridiculous theory. I did make a stock transfer to Belle just as you did. For the same reason, services to the firm. As you say, these things are matters of record. Belle and I were married just a week ago. . . but you will find the stock registered to her quite some time ago if you care to look it up. You can't connect them. No, she received stock from both of us, because of her great value to the firm. Then after you jilted her and after you left the employ of the firm, we were married."

It set me back. Miles was too smart to tell a lie I could check on so easily. But there was something about it that was not true, something more than I had as yet found out.

"When and where were you married?"

"Santa Barbara courthouse, last Thursday. Not that it is your business.

"Perhaps not. When was the stock transfer?"

"I don't know exactly. Look it up if you want to know."

Damn it, it just did not ring true that he had banded stock over to Belle before he had her committed to him. That was the sort of sloppy stunt I pulled; it wasn't in character for him. "I'm wondering something, Miles. If I put a detective to work on it, might I find that the two of you got married once before a little earlier than that? Maybe

in Yuma? Or Las Vegas? Or maybe you ducked over to Reno that time you both went north for the tax hearings? Maybe it would turn out that there was such a marriage recorded, and maybe the date of the stock transfer and the dates my patents were assigned to the firm all made a pretty pattern. Huh?"

Miles did not crack; he did not even look at Belle. As for Belle, the hate in her face could not have been increased even by a lucky stab in the dark. Yet it seemed to fit and I decided to ride the hunch to the limit.

Miles simply said, "Dan, I've been patient with you and have tried to be conciliatory. All it's got me is abuse. So I think it's time you left. Or I'll bloody well make a stab at throwing you out-you and your flea-bitten cat!"

"Ole!" I answered. "That's the first manly thing you've said tonight. But don't call Pete `flea-bitten.' He understands English and he is likely to take a chunk out of you. Okay, former pal, I'll get out, but I want to make a short curtain speech, very short. It's probably the last word I'll ever have to say to you. Okay?"

"Well. . . okay. Make it short."

Belle said urgently, "Miles, I want to talk to you."

He motioned her to be quiet without looking at her. "Go ahead. Be brief."

I turned to Belle. "You probably won't want to hear this, Belle. I suggest that you leave."

She stayed, of course. I wanted to be sure she would. I looked back at him. "Miles, I'm not too angry with you. The things a man will do for a larcenous woman are beyond belief. If Samson and Mark Antony were vulnerable, why should I expect you to be immune? By rights, instead of being angry I should be grateful to you. I guess I am, a little. I do know I'm sorry for you." I looked over at Belle. "You've got her now and she's all your problem and all it has cost me is a little money and temporarily my peace of mind. But what will she cost you? She cheated me, she even managed to persuade you, my trusted friend, to cheat me...what day will she team up with a new cat's-paw and start cheating you? Next week? Next month? As long as next year? As surely as a dog returns to its vomit-"

"Miles!" Belle shrilled.

Miles said dangerously, "Get out!" and I knew he meant it. So I stood up.

"We were just going. I'm sorry for you, old fellow. Both of us made just one mistake originally, and it was as much my fault as yours. But you've got to pay for it alone. And that's too bad. because it was such an innocent mistake."

His curiosity got him. "What do you mean?"

"We should have wondered why a woman so smart and beautiful and competent and all-around high-powered was willing to come to work for us at clerk-typist's wages. If we had taken her fingerprints the way the big firms do, and run a routine check, we might not have hired her. . . and you and I would still be partners."

Pay dirt again! Miles looked suddenly at his wife and she looked-well, "cornered rat" is wrong; rats aren't shaped like Belle.

And I couldn't leave well enough alone; I just had to pick at it. I walked toward her, saying, "Well, Belle? If I took that highball glass sitting beside you and had the fingerprints checked, what would I find? Pictures in post offices? The big con? Or bigamy? Marrying suckers for their money, maybe? Is Miles legally your husband?" I reached down and picked up the glass.

Belle slapped it out of my hand.

And Miles shouted at me.

And I had finally pushed my luck too far. I had been stupid to go into a cage of dangerous animals with no weapons, then I forgot the first tenet of the animal tamer; I turned my back. Miles shouted and I turned toward him. Belle reached for her purse. and I remember thinking that it was a hell of a time for her to be reaching for a cigarette.

Then I felt the stab of the needle.

I remember feeling just one thing as my knees got weak and I started slipping toward the carpet: utter astonishment that Belle would do such a thing to me. When it came right down to it, I still trusted her.

I never was completely unconscious. I got dizzy and vague as the drug hit me-it hits even quicker than morphine. But that was all. Miles yelled something at Belle and grabbed me around the chest as my knees folded. As he dragged me over and let me collapse into a chair, even the dizziness passed.

But while I was awake, part of me was dead. I know now what they used on me: the "zombie" drug, Uncle Sam's answer to brainwashing. So far as I know, we never used it on a prisoner, but the boys whipped it up in the investigation of brainwashing and there it was, illegal but very effective. It's the same stuff they now use in one-day psychoanalysis, but I believe it takes a court order to permit even a psychiatrist to use it.

God knows where Belle laid hands on it. But then God alone knows what other suckers she had on the string.

But I wasn't wondering about that then; I wasn't wondering about anything. I just lay slumped there, passive as a vegetable, hearing what went on, seeing anything in front of my eyes-but if Lady Go diva had strolled through without her horse I would not have shifted my eyes as she passed out of my vision.

Unless I was told to.

Pete jumped out of his bag, trotted over to where I slouched, and asked what was wrong. When I didn't answer he started stropping my shins vigorously back and forth while still demanding an explanation. When still I did not respond he levitated to my knees, put his forepaws on my chest, looked me right in the face, and demanded to know what was wrong, right now and no nonsense.

I didn't answer and he began to wail.

That caused Miles and Belle to pay attention to him. Once Miles had me in the chair he had turned to Belle and had said bitterly, "Now you've done it! Have you gone crazy?"

Belle answered, "Keep your nerve, Chubby. We're going to settle him once and for all."

"What? If you think I'm going to help in a murder-"

"Stuff it! That would be the logical thing to do . . . but you don't have the guts for it. Fortunately it's not necessary with that stuff in him."

"What do you mean?"

"He's our boy now. He'll do what I tell him to. He won't make any more trouble."

"But . . . good God, Belle, you can't keep him doped up forever. Once he comes out of it-"

"Quit talking like a lawyer. I know what this stuff will do; you don't. When he comes out of it he'll do whatever I've told him to do. I'll tell him never to sue us; he'll

never sue us. I tell him to quit sticking his nose into our business; okay, he'll leave us alone. I tell him to go to Timbuktu; he'll go there. I tell him to forget all this; he'll forget. . . but he'll do it just the same."

I listened, understanding her but not in the least interested. If somebody had shouted, "The house is on fire!" I would have understood that, too, and I still would not have been interested.

"I don't believe it."

"You don't, eh?" She looked at him oddly. "You ought to."

"Huh? What do you mean?"

"Skip it, skip it. This stuff works, Chubby. But first we've got to-"

It was then that Pete started wailing. You don't hear a cat wail very often; you could go a lifetime and not hear it. They don't do it when fighting, no mailer how badly they are hurt; they never do it out of simple displeasure. A cat does it only in ultimate distress, when the situation is utterly unbearable but beyond its capacity and there is nothing left to do but keen.

It puts one in mind of a banshee. Also it is hardly to be endured; it hits a nerve-racking frequency.

Miles turned and said, "That confounded cat! We've got to get it out of here."

Belle said, "Kill it."

"Huh? You're always too drastic, Belle. Why, Dan would raise more Cain about that worthless animal than he would if we had stripped him completely. Here-" He turned and picked up Pete's travel bag.

"I'll kill it!" Belle said savagely. "I've wanted to kill that damned cat for months." She looked around for a weapon and found one, a poker from the fireplace set; she ran over and grabbed it.

Miles picked up Pete and tried to put him into the bag.

"Tried" is the word. Pete isn't anxious to be picked up by anyone but me or Ricky, and even I would not pick him up while he was wailing, without very careful negotiation; an emotionally disturbed cat is as touchy as mercury fulminate. But even if he were not upset, Pete certainly would never permit himself without protest to be picked up by the scruff of the neck.

Pete got him with claws in the forearm and teeth in the fleshy part of Miles's left thumb. Miles yelped and dropped him.

Belle shrilled, "Stand clear, Chubby!" and swung at him with the poker.

Belle's intentions were sufficiently forthright and she had the strength and the weapon. But she wasn't skilled with her weapon, whereas Pete is very skilled with his. He ducked under that roundhouse swipe and hit her four ways, two paws for each of her legs.

Belle screamed and dropped the poker.

I didn't see much of the rest of it. I was still looking straight ahead and could see most of the living room, but I couldn't see anything outside that angle because no one told me to look in any other direction. So I followed the rest of it mostly by sound, except once when they doubled back across my cone of vision, two people chasing a cat-then with unbelievable suddenness, two people being chased by a cat. Aside from that one short scene I was aware of the battle by the sounds of crashes, running, shouts, curses, and screams.

But I don't think they ever laid a glove on him.

The worst thing that happened to me that night was that in Pete's finest hour, his greatest battle and greatest victory, I not only did not see all the details, but I was totally unable to appreciate any of it. I saw and I heard but I had no feeling about it; at his supreme Moment of Truth I was numb.

I recall it now and conjure up emotion I could not feel then. But it's not the same thing; I'm forever deprived, like a narcolept on a honeymoon.

The crashes and curses ceased abruptly, and shortly Miles and Belle came back into the living room. Belle said between gasps, "Who left that censorable screen door unhooked?"

"You did. Shut up about it. It's gone now." Miles had blood on his face as well as his hands; he dabbed at the fresh scratches on his face and did them no good. At some point he must have tripped and gone down, for his clothes looked it and his coat was split up the back.

"I will like hell shut up. Have you got a gun in the house?"

"Huh?"

"I'm going to shoot that damned cat." Belle was in even worse shape than Miles; she had more skin where Pete could get at it-legs, bare arms and shoulders. It was clear that she would not be wearing strapless dresses again soon, and unless she got expert attention promptly she was likely to have scars. She looked like a harpy after a no-holds-barred row with her sisters.

Miles said, "Sit down!"

She answered him briefly and, by implication, negatively. "I'm going to kill that cat."

"Then don't sit down. Go wash yourself. I'll help you with iodine and stuff and you can help me. But forget that cat; we're well rid of it."

Belle answered rather incoherently, but Miles understood her. "You too," he answered, "in spades. Look here, Belle, if I did have a gun-I'm not saying that I have-and you went out there and started shooting, whether you got the cat or not you would have the police here inside of ten minutes, snooping around and asking questions. Do you want that with him on our hands?" He jerked a thumb in my direction. "And if you go outside the house tonight without a gun that beast will probably kill you." He scowled even more deeply. "There ought to be a law against keeping an animal like that. He's a public danger. Listen to him."

We could all hear Pete prowling around the house. He was not wailing now; he was voicing his war cry-inviting them to choose weapons and come outside, singly or in bunches.

Belle listened to it and shuddered. Miles said, "Don't worry; he can't get in. I not only hooked the screen you left open, I locked the door."

"I did not leave it open!"

"Have it your own way." Miles went around checking the window fastenings. Presently Belle left the room and so did he. Sometime while they were gone Pete shut up. I don't know how long they were gone; time didn't mean anything to me.

Belle came back first. Her make-up and hairdo were perfect; she had put on a long-sleeved, high-necked dress and had replaced the ruined stockings. Except for Band-Aid strips on her face, the results of battle did not show. Had it not been for the grim look on her phiz I would have considered her, under other circumstances, a delectable sight.

She came straight toward me and told me to stand up, so I did. She went through me quickly and expertly, not forgetting watch pocket, shirt pockets, and the diagonal one on the left inside of the jacket which most suits do not have. The take was not much; my wallet with a small amount of cash, ID cards, driver's license, and such, keys, small change, a nasal inhaler against the smog, minor miscellaneous junk, and the envelope containing the certified check which she herself had bought and had sent to me. She turned it over, read the closed endorsement I had made on it, and looked puzzled.

"What's this, Dan? Buying a slug of insurance?"

"No." I would have told her the rest, but answering the last question asked of me was the best I could do.

She frowned and put it with the rest of the contents of my pockets. Then she caught sight of Pete's bag and apparently recalled the flap in it I used for a brief case, for she picked it up and opened the flap.

At once she found the quadruplicate sets of the dozen and a half forms I had signed for Mutual Assurance Company. She sat down and started to read them. I stood where she had left me, a tailor's dummy waiting to be put away.

Presently Miles came in wearing bathrobe and slippers and quite a large amount of gauze and adhesive tape. He looked like a fourth-rate middleweight whose manager has let him be outmatched. He was wearing one bandage like a scalp lock, fore and aft on his bald head; Pete must have got to him while he was down.

Belle glanced up, waved him to silence, and indicated the stack of papers she was through with. He sat down and started to read. He caught up with her and finished the last one reading over her shoulder.

She said, "This puts a different complexion on things."

"An understatement. This commitment order is for December fourth-that's tomorrow. Belle, he's as hot as noon in Mojave; we've got to get him out of here!" He glanced at a clock. "They'll be looking for him in the morning."

"Miles, you always get chicken when the pressure is on. This is a break, maybe the best break we could hope for."

"How do you figure?"

"This zombie soup, good as it is, has one shortcoming. Suppose you dose somebody with it and load him up with what you want him to do. Okay, so he does it. He carries out your orders; he has to. Know anything about hypnosis?"

"Not much."

"Do you know anything but law, Chubby? You haven't any curiosity. A posthypnotic command-which is what this amounts to-may conflict, in fact it's almost certain to conflict, with what the subject really wants to do. Eventually that may land him in the hands of a psychiatrist. If the psychiatrist is any good, he's likely to find out what the trouble is. It is just possible that Dan here might go to one and get unstuck from whatever orders I give him. If he did, he could make plenty of trouble."

"Damn it, you told me this drug was sure-fire."

"Good God, Chubby, you have to take chances with everything in life. That's what makes it fun. Let me think."

After a bit she said, "The simplest thing and the safest is to let him go ahead with this sleep jump he is all set to take. He wouldn't be any more out of our hair if he was dead-and we don't have to take any risk. Instead of having to give him a bunch of

complicated orders and then praying that he won't come unstuck, all we have to do is order him to go ahead with the cold sleep, then sober him up and get him out of here. . . or get him out of here and then sober him." She tuned to me. "Dan, when are you going to take the Sleep?"

"I'm not."

"Huh? What's all this?" She gestured at the papers from my bag.

"Papers for cold sleep. Contracts with Mutual Assurance."

"He's nutty," Miles commented.

"Mmm. . . of course he is. I keep forgetting that they can't really think when they're under it. They can hear and talk and answer questions . . . but it has to be just the right questions. They can't think." She came up close and looked me in the eyes. "Dan, I want you to tell me all about this cold-sleep deal. Start at the beginning and tell it all the way through. You've got all the papers here to do it; apparently you signed them just today. Now you say you aren't going to do it. Tell me all about it, because I want to know why you were going to do it and now you say you aren't."

So I told her. Put that way, I could answer. It took a long time to tell as I did just what she said and told it all the way through in detail.

"So you sat there in that drive-in and decided not to? You decided to come out here and make trouble for us instead?"

"Yes." I was about to go on, tell about the trip out, tell her what I had said to Pete and what he had said to me, tell her how I had stopped at a drugstore and taken care of my Hired Girl stock, how I had driven to Miles's house, how Pete had not wanted to wait in the car, how- But she did not give me a chance. She said, "You've changed your mind again, Dan. You want to take the cold sleep. You're going to take the cold sleep. You won't let anything in the world stand in the way of your taking the cold sleep. Understand me? What are you going to do?"

"I'm going to take the cold sleep. I want to take. . ." I started to sway. I had been standing like a flagpole for more than an hour, I would guess, without moving any muscle, because no one had told me to. I started collapsing slowly toward her.

She jumped back and said sharply, "Sit down!"

So I sat down.

Belle turned to Miles. "That does it. I'll hammer away at it until I'm sure he can't miss."

Miles looked at the clock. "He said that doctor wanted him there at noon."

"Plenty of time. But we had better drive him there ourselves, just to be-No, damn it!"

"What's the trouble?"

"The time is too short. I gave him enough soup for a hone, because I wanted it to hit him fast-before he hit me. By noon he'd be sober enough to convince most people. But not a doctor."

"Maybe it'll just be perfunctory. His physical examination is already here and signed."

"You heard what he said the doctor told him. The doctor's going to check him to see if he's had anything to drink. That means he'll test his reflexes and take his reaction time and peer in his eyes and-oh, all the things we don't want done. The things we don't dare let a doctor do. Miles, it won't work."

"How about the next day? Call `em up and tell them there has been a slight delay?"

"Shut up and let me think."

Presently she started looking over the papers I had brought with me. Then she left the room, returned immediately with a jeweler's loop, which she screwed into her right eye like a monocle, and proceeded to examine each paper with great care. Miles asked her what she was doing, but she brushed his question aside.

Presently she took the loop out of her eye and said, "Thank goodness they all have to use the same government forms. Chubby, get me the yellow-pages phone book."

"What for?"

"Get it, get it. I want to check the exact phrasing of a firm name-oh, I know what it is but I want to be sure."

Grumbling, Miles fetched it. She thumbed through it, then said, "Yes, `Master Insurance Company of California' . . . and there's room enough on each of them. I wish it could be `Motors' instead of `Master'; that would be a cinch-but I don't have any connections at `Motors Insurance,' and besides, I'm not sure they even handle hibernation; I think they're just autos and trucks." She looked up. "Chubby, you're going to have to drive me out to the plant right away."

"Huh?"

"Unless you know of some quicker way to get an electric typewriter with executive type face and carbon ribbon. No, you go out by yourself and fetch it back; I've got telephoning to do."

He frowned. "I'm beginning to see what you plan to do. But, Belle, this is crazy. This is fantastically dangerous."

She laughed. "That's what you think. I told you I had good connections before we ever teamed up. Could you have swung the Mannix deal alone?"

"Well. . . I don't know."

"1 know. And maybe you don't know that Master Insurance is part of the Mannix group."

"Well, no, I didn't. And I don't see what difference it makes."

"It means my connections are still good. See here, Chubby, the firm I used to work for used to help Mannix Enterprises with their tax losses . . . until my boss left the country. How do you think we got such a good deal without being able to guarantee that Danny boy went with the deal? I know all about Mannix. Now hurry up and get that typewriter and I'll let you watch an artist at work. Watch out for that cat."

Miles grumbled but started to leave, then returned. "Belle? Didn't Dan park right in front of the house?"

"Why?"

"His car isn't there now." He looked worried.

"Well, he probably parked around the corner. It's unimportant. Go get that typewriter. Hurry!"

He left again. I could have told them where I had parked but, since they did not ask me, I did not think about it. I did not think at all.

Belle went elsewhere in the house and left me alone. Sometime around daylight Miles got back, looking haggard and carrying our heavy typewriter. Then I was left alone again.

Once Belle came back in and said, "Dan, you've got a paper there telling the insurance company to take care of your Hired Girl stock. You don't want to do that; you want to give it to me."

I didn't answer. She looked annoyed and said, "Let's put it this way. You do want to give it to me. You know you want to give it to me. You know that, don't you?"

"Yes. I want to give it to you."

"Good. You want to give it to me. You have to give it to me. You won't be happy until you give it to me. Now where is it? Is it in your car?"

"No."

"Then where is it?"

"I mailed it."

"What?" She grew shrill. "When did you mail it? Who did you mail it to? Why did you do it?"

If she had asked the second question last I would have answered it. But I answered the last question, that being all I could handle. "I assigned it."

Miles came in. "Where did he put it?"

"He says he's mailed it . . . because he has assigned it! You had better find his car and search it-he may just think he actually mailed it. He certainly had it with him at the insurance company."

"Assigned it!" repeated Miles. "Good Lord! To whom?"

"I'll ask him. Dan, to whom did you assign your stock?"

"To the Bank of America." She didn't ask me why or I would have told her about Ricky.

All she did was slump her shoulders and sigh. "There goes the ball game, Chubby. We can forget about the stock. It'll take more than a nail file to get it away from a bank." She straightened up suddenly. "Unless he hasn't really mailed it yet. If he hasn't I'll clean that assignment off the back so pretty you'll think it's been to the laundry. Then he'll assign it again. . . to me."

"To us," corrected Miles.

"That's just a detail. Go find his car."

Miles returned later and announced, "It's not anywhere within six blocks of here. I cruised around all the streets, and the alleys too. He must have used a cab."

"You heard him say he drove his own car."

"Well, it's not Out there. Ask him when and where he mailed the stock."

So Belle did and I told them. "Just before I came here. I mailed it at the postbox at the corner of Sepulveda and Ventura Boulevard."

"Do you suppose he's lying?" asked Miles.

"He can't lie, not in the shape he's in. And he's too definite about it to be mixed up. Forget it, Miles. Maybe after he's put away it will turn out that his assignment is no good because he had already sold it to us. . . at least I'll get his signature on some blank sheets and be ready to try it."

She did try to get my signature and I tried to oblige. But in the shape I was in I could not write well enough to satisfy her. Finally she snatched a sheet out of my hand and said viciously, "You make me sick! I can sign your name better than that." Then she leaned over me and said tensely, "I wish I had killed your cat."

They did not bother me again until later in the day. Then Belle came in and said, "Danny boy, I'm going to give you a hypo and then you'll feel a lot better. You'll feel able to get up and move around and act just like you always have acted. You won't be angry at anybody, especially not at Miles and me. We're your best friends. We are, aren't we? Who are your best friends?"

"You are. You and Miles."

"But I'm more than that. I'm your sister. Say it."

"You're my sister."

"Good. Now we're going for a ride and then you are going for a long sleep. You've been sick and when you~ wake up you'll be well. Understand me?"

"Yes."

"Who am I?"

"You're my best friend. You're my sister."

"Good boy. Push your sleeve back."

I didn't feel the hypo go in, but it stung after she pulled it out. I sat up and shrugged and said, "Gee, Sis, that stung. What was it?"

"Something to make you feel better. You've been sick."

"Yeah, I'm sick. Where's Miles?"

"He'll be here in a moment. Now let's have your other aim. Push back the sleeve."

I said, "What for?" but I pushed back the sleeve and let her shoot me again. I jumped.

She smiled. "That didn't really hurt, did it?"

"Huh? No, it didn't hurt. What's it for?"

"It will make you sleepy on the ride. Then when we get there you'll wake up."

"Okay. I'd like to sleep. I want to take a long sleep." Then I felt puzzled and looked around. "Where's Pete? Pete was going to sleep with me."

"Pete?" Belle said. "Why, dear, don't you remember? You sent Pete to stay with Ricky. She's going to take care of him."

"Oh yes!" I grinned with relief. I had sent Pete to Ricky; I remembered mailing him. That was good. Ricky loved Pete and she would take good care of him while I was asleep.

They drove me out to the Consolidated Sanctuary at Sawtelle, one that many of the smaller insurance companies used-those that didn't have their own. I slept all the way but came awake at once when Belle spoke to me. Miles stayed in his car and she took me in.

The girl at the desk looked up and said, "Davis?"

"Yes," agreed Belle. "I'm his sister. Is the representative for Master Insurance here?"

"You'll find him down in Treatment Room Nine-they're ready and waiting. You can give the papers to the man from Master." She looked at me with interest. "He's had his physical examination?"

CHAPTER 5

I was complaining to the bartender about the air conditioning; it was turned too high and we were all going to catch cold. "No matter," he assured me. "You won't feel it when you're asleep. Sleep . . . sleep . . . soup of the evening, beautiful sleep." He had Belle's face.

"Oh yes!" Belle assured her. "Brother is a therapy-delay case, you know. He's under an opiate. . . for the pain."

The receptionist clucked sympathetically. "Well, hurry on in then. Through that door and turn left."

In Room Nine there was a man in street clothes and one in white coveralls and a woman in a nurse's uniform. They helped me get undressed and treated me like an idiot child while Belle explained again that I was under a sedative for the pain. Once he had me stripped and up on the table, the man in white massaged my belly, digging his fingers in deeply. "No trouble with this one," he announced. "He's empty."

"He hasn't had anything to eat or drink since yesterday evening," agreed Belle.

"That's fine. Sometimes they come in here stuffed like a Christmas turkey. Some people have no sense."

"True. Very true."

"Uh-huh. Okay, son, clench your fist tight while I get this needle in."

I did and things began to get really hazy. Suddenly I remembered something and tried to sit up. "Where's Pete? I want to see Pete."

Belle took my head and kissed me. "There, there, Buddy! Pete couldn't come, remember? Pete had to stay with Ricky." I quieted down and she said gently to the others, "Our brother Peter has a sick little girl at home."

I dropped off to sleep.

Presently I felt very cold. But I couldn't move to reach the covers.

"How about a warm drink then?" I wanted to know. "A Tom and Jerry? Or a hot buttered bum?"

"You're a bum!" the doctor answered. "Sleeping's too good for him; throw the bum out!"

I tried to hook my feet around the brass rail to stop them. But this bar had no brass rail, which seemed funny, and I was flat on my back, which seemed funnier still, unless they had installed bedside service for people with no feet. I didn't have feet, so how could I hook them under a brass rail? No hands, either. "Look, Maw, no hands!" Pete sat on my chest and wailed.

I was back in basic training . . . advanced basic, it must have been, for I was at Camp Hale at one of those silly exercises where they throw snow down your neck to make a man of you. I was having to climb the damnedest biggest mountain in all Colorado and it was all ice and I had no feet. Nevertheless, I was carrying the biggest pack anybody ever saw-I remembered that they were trying to find out if GIs could be used instead of pack mules and I had been picked because I was expendable. I wouldn't have made it at all if little Ricky hadn't got behind me and pushed.

The top sergeant turned and he had a face just like Belle's and he was livid with rage. "Come on, you! I can't afford to wait for you. I don't care whether you make it or not. . . but you can't sleep until you get there."

My no-feet wouldn't take me any farther and I fell down in the snow and it was icy warm and I did fall asleep while little Ricky wailed and begged me not to. But I had to sleep.

I woke up in bed with Belle. She was shaking me and saying, "Wake up, Dan! I can't wait thirty years for you; a girl has to think of her future." I tried to get up and hand her the bags of gold I had under the bed, but she was gone. . . and anyhow a Hired Girl with her face had picked all the gold up and put it in its tray on top and scurried out of the room. I tried to run after it but I had no feet, no body at all, I discovered. "I ain't got no body, and no body cares for me. . ." The world consisted of top sergeants and work. . . so what difference did it make where you worked or how? I let them put the harness back on me and I went back to climbing that icy mountain. It was all white and beautifully rounded and if I could just climb to the rosy tip they would let me sleep, which was what I needed. But I never made it...no hands, no feet, no nothing.

There was a forest fire on the mountain. The snow did not melt, but I could feel the heat in waves beating against me while I kept on struggling. The top sergeant was leaning over me and saying, "Wake up. . . wake up. . . wake up."

He no more than got me awake before he wanted me to sleep again. I'm vague about what happened then for a while. Part of the time I was on a table which vibrated under me and there were lights and snaky-looking equipment and lots of people. But when I was fully awake I was in a hospital bed and I felt all right except for that listless half-floating feeling you have after a Turkish bath. I had hands and feet again. But nobody would talk to me and every time I tried to ask a question a nurse would pop something into my mouth. I was massaged quite a lot.

Then one morning I felt fine and got out of bed as soon as I woke up. I felt a little dizzy but that was all. I knew who I was, I knew how I had got there, and I knew that all that other stuff had been dreams.

I knew who had put me there. If Belle had given me orders while I was drugged to forget her shenanigans, either the orders had not taken or thirty years of cold sleep had washed out the hypnotic effect. I was blurry about some details but I knew how they had shanghaied me.

I wasn't especially angry about it. True, it had happened just "yesterday," since yesterday is the day just one sleep behind you-but the sleep had been thirty years long. The feeling cannot be precisely defined, since it is entirely subjective, but, while my memory was sharp for the events of "yesterday," nevertheless my feelings about those events were to things far away. You have seen double images in television of a pitcher making his windup while his picture sits as a ghost on top of a long shot of the whole baseball diamond? Something like that. . . my conscious recollection was a close-up; my emotional reaction was to something long ago and far away.

I fully intended to look up Belle and Miles and chop them into cat meat, but there was no hurry. Next year would do-right now I was eager to have a look at the year 2000.

But speaking of cat meat, where was Pete? He ought to be around somewhere. . . unless the poor little beggar hadn't lived through the Sleep.

Then-and not until then-did I remember that my careful plans to bring Pete along had been wrecked.

I took Belle and Miles out of the "Hold" basket and moved them over to "Urgent." Try to kill my cat, would they?

They had done worse than kill Pete; they had turned him out to go wild: to wear out his days wandering back alleys in search of scraps, while his ribs grew thin and his sweet pixie nature warped into distrust of all two-legged beasts.

They had let him die-for he was surely dead by now-let him die thinking that I had deserted him.

For this they would pay. . . if they were still alive. Oh, how I hoped they were still alive-unspeakable!

I found that I was standing by the foot of my bed, grasping the rail to steady myself and dressed only in pajamas. I looked around for some way to call someone. Hospital rooms had not changed much. There was no window and I could not see where the light came from; the bed was high and narrow, as hospital beds had always been in my recollection, but it showed signs of having been engineered into something more than a place to sleep-among other things, it seemed to have some sort of plumbing under it which I suspected was a mechanized bedpan, and the side table was part of the bed structure itself. But, while I ordinarily would have been intensely interested in such gadgetry, right now I simply wanted to find the pear-shaped switch which summons the nurse-I wanted my clothes.

It was missing, but I found what it had been transformed into: a pressure switch on the side of the table that was not quite a table. My hand struck it in trying to find it, and a transparency opposite where my head would have been had I been in bed shone out with: SERVICE CALL. Almost immediately it blinked out and was replaced with: ONE MOMENT, PLEASE.

Very quickly the door silently rolled aside and a nurse came in. Nurses had not changed much. This one was reasonably cute, had the familiar firm manners of a drill sergeant, wore a perky little white hat perched on short orchid-colored hair, and was dressed in a white uniform. It was strangely cut and covered her here and uncovered her there in a fashion different from 1970-but women's clothes, even work uniforms, were always doing that. She would still have been a nurse in any year, just by her unmistakable manner.

"You get back in that bed!"

"Where are my clothes?"

"Get back in that bed. Now!"

I answered reasonably, "Look, nurse, I'm a free citizen, over twenty-one, and not a criminal. I don't have to get back into that bed and I'm not going to. Now are you going to show me where my clothes are or shall I go out the way I am and start looking?"

She looked at me, then turned suddenly and went out; the door ducked out of her way.

But it would not duck out of my way. I was still trying to study out the gimmick, being fairly sure that if one engineer could dream it up, another could figure it out, when it opened again and a man came in.

"Good morning," he said. "I'm Dr. Albrecht."

His clothes looked like a cross between a Harlem Sunday and a picnic to me, but his brisk manner and his tired eyes were convincingly professional; I believed him. "Good morning, Doctor. I'd like to have my clothes."

He stepped just far enough inside to let the door slide into place behind him, then reached inside his clothes and pulled out a pack of cigarettes. He got one out, waved it briskly in the air, placed it in his mouth and puffed on it; it was lighted. He offered me the pack. "Have one?"

"Uh, no, thanks."

"Go ahead. It won't hurt you."

I shook my head. I had always worked with a cigarette smoldering beside me; the progress of a job could be judged by the overflowing ash trays and the bums on the drafting board. Now I felt a little faint at the sight of smoke and wondered if I had dropped the nicotine habit somewhere in the slept-away years. "Thanks just the same."

"Okay. Mr. Davis, I've been here six years. I'm a specialist in hypnology, resuscitation, and like subjects. Here and elsewhere I've helped eight thousand and seventy-three patients make the comeback from hypothermia to normal life-you're number eight thousand and seventy-four. I've seen them do all sorts of odd things when they came out-odd to laymen; not to me. Some of them want to go right back to sleep again and scream at me when I try to keep them awake. Some of them do go back to sleep and we have to ship them off to another sort of institution. Some of them start weeping endlessly when they realize that it is a one-way ticket and it's too late to go home to whatever year they started from. And some of them, like you, demand their clothes and want to run out into the street."

"Well? Why not? Am I a prisoner?"

"No. You can have your clothes. I imagine you'll find them out of style, but that is your problem. However, while I send for them, would you mind telling me what it is that is so terribly urgent that you must attend to it right this minute . . . after it has waited thirty years? That's how long you've been at subtemperature-thirty years. Is it really urgent? Or would later today do as well? Or even tomorrow?"

I started to blurt out that it damn well was urgent, then stopped and looked sheepish. "Maybe not that urgent."

"Then as a favor to me, will you get back into bed, let me check you over, have your breakfast, and perhaps talk with me before you go galloping off in all directions? I might even be able to tell you which way to gallop."

"Oh, okay, Doctor. Sorry to have caused trouble." I climbed into bed. It felt good-I was suddenly tired and shaky.

"No trouble. You should see some that we get. We have to pull them down off the ceiling." He straightened the covers around my shoulders, then leaned over the table built into the bed. "Dr. Albrecht in Seventeen. Send a room orderly with breakfast, uh. . . menu four-minus."

He turned to me and said, "Roll over and pull up your jacket; I want to get at your ribs. While I'm checking you, you can ask questions. If you want to."

I tried to think while he prodded my ribs. I suppose it was a stethoscope he used although it looked like a miniaturized hearing aid. But they had not improved one thing about it; the pickup he pushed against me was as cold and hard as ever.

What do you ask after thirty years? Have they reached the stars yet? Who's cooking up "The War to End War" this time? Do babies come out of test tubes? "Doc, do they still have popcorn machines in the lobbies of movie theaters?"

"They did the last time I looked. I don't get much time for such things. By the way, the word is `grabbie' now, not `movie.'"

"So? Why?"

"Try one. You'll find out. But be sure to fasten your seat belt; they null the whole theater on some shots. See here, Mr. Davis, we're faced with this same problem every day and we've got it down to routine. We've got adjustment vocabularies for each entrance year, and historical and cultural summaries. It's quite necessary, for malorientation can be extreme no matter how much we lackweight the shock."

"Uh, I suppose so."

"Decidedly. Especially in an extreme lapse like yours. Thirty years."

"Is thirty years the maximum?"

"Yes and no. Thirty-five years is the very longest we've had experience with, since the first commercial client was placed in subtemperature in December 1965. You are the longest Sleeper I have revived. But we have clients in here now with contract times up to a century and a half. They should never have accepted you for as long as thirty years; they didn't know enough then. They were taking a great chance with your life. You were lucky."

"Really?"

"Really. Turn over." He went on examining me and added, "But with what we've learned now I'd be willing to prepare a man for a thousand-year jump if there were any way to finance it. . . hold him at the temperature you were at for a year just to check, then crash him to minus two hundred in a millisecond. He'd live. I think. Let's try your reflexes."

That "crash" business didn't sound good to me. Dr. Albrecht went on: "Sit up and cross your knees. You won't find the language problem difficult. Of course I've been careful to talk in 1970 vocabulary-I rather pride myself on being able to talk selectively in the entrance speech of any of my patients; I've made a hypnostudy of it. But you'll be speaking contemporary idiom perfectly in a week; it's really just added vocabulary."

I thought of telling him that at least four times he had used words not used in 1970, or at least not that way, but I decided it wouldn't be polite. "That's all for now," he said presently. "By the way, Mrs. Schultz has been trying to reach you."

"Huh?"

"Don't you know her? She insisted that she was an old friend of yours."

"`Schultz,'" I repeated. "I suppose I've known several `Mrs. Schultzes' at one time and another, but the only one I can place was my fourth-grade teacher. But she'd be dead by now."

"Maybe she took the Sleep. Well, you can accept the message when you feel like it. I'm going to sign a release on you. But if you're smart, you'll stay here for a few days and soak up reorientation. I'll look in on you later. So `twenty-three, skiddoo' as they used to say in your day. Here comes the orderly with your breakfast."

I decided that he was a better doctor than a linguist. But I stopped thinking about it when I saw the orderly. It rolled in, carefully avoiding Dr. Albrecht, who walked straight out, paying no attention to it and making no effort himself to avoid it.

It came over, adjusted the built-in bed table, swung it over me, opened it out, and arranged my breakfast on it. "Shall I pour your coffee?"

"Yes, please." I did not really want it poured, as I would rather have it stay hot until I'd finished everything else. But I wanted to see it poured.

For I was in a delighted daze. . . it was Flexible Frank!

Not the jackleg, bread-boarded, jury-rigged first model Miles and Belle had stolen from me, of course not. This one resembled the first Frank the way a turbospeedster resembles the first horseless carriages. But a man knows his own work. I had set the basic pattern and this was the necessary evolution . . . Frank's great-grandson, improved, slicked up, made more efficient-but the same bloodline.

"Will that be all?"

"Wait a minute."

Apparently I had said the wrong thing, for the automaton reached inside itself and pulled out a stiff plastic sheet and handed it to me. The sheet remained fastened to him by a slim steel chain. I looked at it and found printed on it:

VOICE CODE-Eager Beaver Model XVJI-a

IMPORTANT NOTICE!! This service automaton DOES NOT understand human speech. it has no understanding at all, being merely a machine. But for your convenience it has been designed to respond to a list of spoken orders. It will ignore anything else said in its presence, or (if any phrase triggers it incompletely or such that a circuit dilemma is created) it will offer this instruction sheet. Please read it carefully.
Thank you,
Aladdin Autoengineering Corporation Manufacturers of EAGER BEAVER, WILL! WA W, DRAFTING DAN, BUILDER BILL, GREEN THUMB, and NANNY. Custom Designers and Consultants in Automation Problems
"At Your Service!"

The motto appeared on their trade-mark showing Aladdin rubbing his lamp and a genie appearing.

Below this was a long list of simple orders-STOP, GO, YES, NO, SLOWER, FASTER, COME HERE, FETCH A NURSE, etc. Then there was a shorter list of tasks common in hospitals, such as back rubs, and including some that I had never heard of. The list closed abruptly with the statement: "Routines 87 through 242 may be ordered only by hospital staff members and the order phrases are therefore not listed here."

I had not voice-coded the first Flexible Frank; you had to punch buttons on his control board. It was not because I had not thought of it, but because the analyzer and telephone exchange for the purpose would have weighed and bulked and cost more than all the rest of Frank, Sr., net. I decided that I would have to learn some new wrinkles in miniaturization and simplification before I would be ready to practice engineering here. But I was anxious to get started on it, as I could see from Eager Beaver that it was going to be more fun than ever-lots of new possibilities. Engineering is the art of the practical and depends more on the total state of the art than it does on the individual engineer. When railroading time comes you can railroad-but not before. Look at poor Professor

Langley, breaking his heart on a flying machine that should have flown-he had put the necessary genius in it-but he was just a few years too early to enjoy the benefit of collateral art he needed and did not have. Or take the great Leonardo da Vinci, so far out of his time that his most brilliant concepts were utterly unbuildable.

I was going to have fun here-I mean "now."

I handed back the instruction card, then got out of bed and looked for the data plate. I had halfway expected to see "Hired Girl, Inc." at the bottom of the notice and I wondered if "Aladdin" was a daughter corporation of the Mannix group. The data plate did not tell me much other than model, serial number, factory, and such, but it did list the patents, about forty of them-.and the earliest, I was very interested to see, was in 1970 . . . almost certainly based on my original model and drawings.

I found a pencil and memo pad on the table and jotted down the number of that first patent, but my interest was purely intellectual. Even if it had been stolen from me (I was sure it had been), it had expired in 1987Äunless they had changed the patent laws-and only those granted later than 1983 would still be valid. But I wanted to know.

A light glowed on the automaton and he announced: "I am being called. May I leave?"

"Huh? Sure. Run along." It started to reach for the phrase list; I hastily said, "Go!"

"Thank you. Good-by." It detoured around me.

"Thank you."

"You are welcome."

Whoever had dictated the gadget's sound responses had a very pleasant baritone voice.

I got back into bed and ate the breakfast I had let get cold-only it turned out not to be cold. Breakfast four-minus was about enough for a medium-sized bird, but I found that it was enough, even though I had been very hungry. I suppose my stomach had shrunk. It wasn't until I had finished that I remembered that this was the first food I had eaten in a generation. I noticed it then because they had included a menu-what I had taken for bacon was listed as "grilled yeast strips, country style."

But in spite of a thirty-year fast, my mind was not on food; they had sent a newspaper in with breakfast: the Great Los Angeles Times, for Wednesday, 13 December, 2000.

Newspapers had not changed much, not in format. This one was tabloid size, the paper was glazed instead of rough pulp and the illustrations were either full color, or black-and-white stereo-I couldn't puzzle out the gimmick on that last. There had been stereo pictures you could look at without a viewer since I was a small child; as a kid I had been fascinated by ones used to advertise frozen foods in the `50s. But those had required fairly thick transparent plastic for a grid of tiny prisms; these were simply on thin paper. Yet they had depth.

I gave it up and looked at the rest of the paper. Eager Beaver had arranged it on a reading rack and for a while it seemed as if the front page was all I was going to read, for I could not find out how to open the damned thing. The sheets seemed to have frozen solid.

Finally I accidentally touched the lower right-hand corner of the first sheet; it curled up and out of the way. . . some surface charge phenomenon, triggered at that point. The other pages got neatly out of the way in succession whenever I touched that spot.

At least half of the paper was so familiar as to make me homesick-"Your Horoscope Today, Mayor Dedicates New Reservoir, Security Restrictions Undermining Freedom of Press Says N. Y. Solon, Giants Take Double-Header, Unseasonable Warmth Perils Winter Sports, Pakistan Warns India"-et cetera, ad tedium. This is where I came in.

Some of the other items were new but explained themselves:
LUNA SHUTTLE STILL SUSPENDED FOR GEMINTDS- Twenty-Four-Hour Station Suffers Two Punctures, No Casualties; FOUR WHITES LYNCHED IN CAPETOWN-UN Action Demanded; HOST-MOTHERS ORGANIZE FOR HIGHER FEES-Demand "Amateurs" Be Outlawed; MISSISSIPPI PLANTER INDICTED UNDER ANTI-ZOMBIE LAW-His Defense: "Them Boys Hain't Drugged, They're Just Stupid!"

I was fairly sure that I knew what that last one meant. . . from experience.

But some of the news items missed me completely. The "wogglies" were still spreading and three more French towns had been evacuated; the King was considering ordering the area dusted. King? Oh well, French politics might turn up anything, but what was this "Poudre Sarntaire" they were considering using on the "wogglies"?-whatever they were. Radioactive, maybe? I hoped they picked a dead calm day. . . preferably the thirtieth of February. I had had a radiation overdose myself once, through a mistake by a damn-fool WAC technician at Sandia. I had not reached the point-of-no-return vomiting stage, but I don't recommend a diet of curies.

The Laguna Beach division of the Los Angeles police had been equipped with Leycoils and the division chief warned all Teddies to get out of town. "My men have orders to nark first and subspeck afterward. This has got to stop!"

I made a mental note to keep clear of Laguna Beach until I found out what the score was. I wasn't sure I wanted to be subspecked, or subspected, even afterward.

Those are just samples. There were any number of news stories that started out trippingly, then foundered in what was, to me, double talk.

I started to breeze on past the vital statistics when my eye caught some new subheads. There were the old familiar ones of births, deaths, marriages, and divorces, but now there were "commitments" and "withdrawals" as well, listed by sanctuaries. I looked up "Sawtelle Cons. Sanc." and found my own name. It gave me a warm feeling of "belonging."

But the most intensely interesting things in the paper were the ads. One of the personals stuck in my mind: "Attractive still young widow with yen to travel wishes to meet mature man similarly inclined. Object: two-year marriage contract." But it was the display advertising that got me.

Hired Girl and her sisters and her cousins and her aunts were all over the place-and they were still using the trade-mark, a husky girl with a broom, that I had designed originally for our letterhead. I felt a twinge of regret that I had been in such a jumping hurry to get rid of my stock in Hired Girl, Inc.; it looked as if it was worth more than all the rest of my portfolio. No, that was wrong; if I had kept it with me at the time, that pair of thieves would have lifted it and faked an assignment to themselves. As it was, Ricky had gotten it-and if it had made Ricky rich, well, it couldn't happen to a nicer person.

I made a note to track down Ricky first thing, top priority. She was all that was left to me of the world I had known and she loomed very large in my mind. Dear little Ricky! If she had been ten years older I would never have looked at Belle . . and wouldn't have got my fingers burned.

Let's see, how old would she be now? Forty-no, forty-one. It was hard to think of Ricky as forty-one. Still, that wouldn't be old in a woman these days-or even those days. From forty feet you frequently couldn't tell forty-one from eighteen.

If she was rich I'd let her buy me a drink and we would drink to Pete's dear departed funny little soul.

And if something had slipped and she was poor in spite of the stock I had assigned her, then-by damn, I'd marry her! Yes, I would. It didn't matter that she was ten years or so older than I was; in view of my established record for flubbing the dud I needed somebody older to look out for me and tell me no-and Ricky was just the girl who could do it. She had run Miles and Miles's house with serious little-girl efficiency when she was less than ten; at forty she would be just the same, only mellowed.

I felt really warm and no longer lost in a strange land for the first time since I had wakened. Picky was the answer to everything.

Then deep inside me I heard a voice: "Look, stupid, you can't marry Ricky, because a girl as sweet as she was going to be would now have been married for at least twenty years. She'll have four kids. . maybe a son bigger than you are-and certainly a husband who won't be amused by you in the role of good old Uncle Danny."

I listened and my jaw sagged. Then I said feebly, "All right, all right-so I've missed the boat again. But I'm still going to look her up. They can't do mote than shoot me. And, after all, she's the only other person who really understood Pete."

I turned another page, suddenly very glum at the thought of having lost both Ricky and Pete. After a while I fell asleep over the paper and slept until Eager Beaver or his twin fetched lunch.

While I was asleep I dreamed that Picky was holding me on her lap and saying, "It's all right, Danny. I found Pete and now we're both here to stay. Isn't that so, Pete?" "YeeeoW)"

The added vocabularies were a cinch; I spent much more time on the historical summaries. Quite a lot can happen in thirty years, but why put it down when everybody else knows it better than I do? I wasn't surprised that the Great Asia Republic was crowding us out of the South American trade; that had been in the cards since the Formosall treaty. Nor was I surprised to find India more Balkanized than ever. The notion of England being a province of Canada stopped me for a moment. Which was the tail and

which was the dog? I skipped over the panic of `87; gold was a wonderful engineering material for some uses; I could not regard it as a tragedy to find that it was now cheap and no longer a basis for money, no matter how many people lost their shirts in the change-over.

I stopped reading and thought about the things you could do with cheap gold, with its high density, good conductivity, extreme ductility . . . and stopped when I realized I would have to read the technical literature first. Shucks, in atomics alone it would be invaluable. The way the stuff could be worked, far better than any other metal, if you could use it in - I stopped, morally certain that Eager Beaver had had his "head" crammed full of gold. I would just have to get busy and find out what the boys had been doing in the "small back rooms" while I bad been away.

The Sawtelle Sanctuary wasn't equipped to let me read up on engineering, so I told Doc Albrecht I was ready to check out. He shrugged, told me I was an idiot, and agreed. But I

did stay one more night; I found that I was fagged just from lying back and watching words chase past in a book scanner.

They brought me modern clothes right after breakfast the next morning...and I had to have help in dressing. They were not so odd in themselves (although I had never worn cerise trousers with bell bottoms before) but I could not manage the fastenings without coaching. I suppose my grandfather might have had the same trouble with zippers if he had not been led into them gradually. It was the Sticktite closure seams, of course-I thought I was going to have to hire a little boy to help me go to the bathroom before I got it through my head that the pressure-sensitive adhesion was axially polarized.

Then I almost lost my pants when I tried to ease the waistband. No one laughed at me. Dr. Albrecbt asked, "What are you going to do?"

"Me? First I'm going to get a map of the city. Then I'm going to find a place to sleep. Then I'm going to do nothing but professional reading for quite a while . . . maybe a year. Doc, I'm an obsolete engineer. I don't aim to stay that way."

"Mmmm. Well, good luck. Don't hesitate to call if I can help."

I stuck out my hand. "Thanks, Doc. You've been swell. Uh, maybe I shouldn't mention this until I talk to the accounting office of my insurance company and see just how well off I am-but I don't intend to let it go with words. Thanks for the sort of thing you've done for me should be more substantial. Understand me?"

He shook his head. "I appreciate the thought. But my fees are covered by my contract with the sanctuary."

"But-"

"No. I can't take it, so please let's not discuss it." He shook hands and said, "Good-by. If you'll stay on this slide it will take you to the main offices." He hesitated. "If you find things a bit tiring at first, you're entitled to four more days recuperation and reorientation here without additional charge under the custodial contract. It's paid for. Might as well use it. You can come and go as you like."

I grinned. "Thanks, Doc. But you can bet that I won't be back-other than to say hello someday."

I stepped off at the main office and told the receptionist there who I was. It handed me an envelope, which I saw was another phone message from Mrs. Schultz. I still had not called her, because I did not know who she was, and the sanctuary did not permit visits nor phone calls to a revivified client until he wanted to accept them. I simply glanced at it and tucked it in my blouse, while thinking that I might have made a mistake in making Flexible Frank too flexible. Receptionists used to be pretty girls, not machines.

The receptionist said, "Step this way, please. Our treasurer would like to see you."

Well, I wanted to see him, too, so I stepped that way. I was wondering how much money I had made and was congratulating myself on having plunged in common stocks rather than playing it "safe." No doubt my stocks had dropped in the Panic of `87, but they ought to be back up now-in fact I knew that at least two of them were worth a lot of dough now; I had been reading the financial section of the Times. I still had the paper with me, figuring I might want to look up some others.

The treasurer was a human being, even though he looked like a treasurer. He gave me a quick handshake. "How do you do, Mr. Davis. I'm Mr. Doughty. Sit down, please."

I said, "Howdy, Mr. Doughty. I probably don't need to take that much of your time. Just tell me this: does my insurance company handle its settlements through your office? Or should I go to their home offices?"

"Do please sit down. I have several things to explain to you."

So I sat. His office assistant (good old Frank again) fetched a file folder for him and he said, "These are your original contracts. Would you like to see them?"

I wanted very much to see them, as I had kept my fingers crossed ever since I was fully awake, wondering if Belle had figured out some way to bite the end off that certified check. A certified check is much harder to play hanky-panky with than is a personal check, but Belle was a clever gal.

I was much relieved to see that she had left my commitments unchanged, except of course that the side contract for Pete was missing and also the one concerning my Hired Girl stock. I supposed that she had just burned those, to keep from raising questions. I examined with care the dozen or more places where she had changed "Mutual Assurance Company" to "Master Insurance Company of California."

The gal was a real artist, no question. I suppose a scientific criminologist armed with microscope and comparison stereo and chemical tests and so forth could have proved that each of those documents had been altered, but I could not. I wondered how she had coped with the closed endorsement on the back of the certified check, since certified checks are always on paper guaranteed nonerasable. Well, she probably had not used an eraser-what one person can dream up another person can outsmart. . . and Belle was very smart.

Mr. Doughty cleared his throat. I looked up. "Do we settle my account here?"

"Yes."

"Then I can put it in two words. How much?"

"Mmm ... Mr. Davis, before we go into that question, I would like to invite your attention to one additional document and to one circumstance. This is the contract between this Sanctuary and Master Insurance Company of California for your hypothermia, custody, and revivification. You will note that the entire fee is paid in advance. This is both for our protection and for yours, since it guarantees your safe-being while you are helpless. The funds-all such funds-are placed in escrow with the superior-court division handling chancery matters and are paid quarterly to us as earned."

"Okay. Sounds like a good arrangement."

"It is. It protects the helpless. Now you must understand clearly that this sanctuary is a separate corporation from your insurance company; the custodial contract with us was a contract entirely separate from the one for the management of your estate."

"Mr. Doughty, what are you getting at?"

"Do you have any assets other than those you entrusted to Master Insurance Company?"

I thought it over. I had owned a car once . . . but God alone knew what had become of it. I had closed out my checking account in Mojave early in the binge, and on that busy day when I ended up at Miles's place-and in the soup-I had started with maybe thirty or forty dollars in cash. Books, clothes, slide rule-I had never been a pack rat-and that minor junk was gone anyhow. "Not even a bus transfer, Mr. Doughty."

"Then-I am very sorry to have to tell you this-you have no assets of any sort."

I held still while my head circled the field and came in for a crash landing. "What do you mean? Why, some of the stocks I invested in are in fine shape. I know they are. It says so right here." I held up my breakfast copy of the Times.

He shook his head. "I'm sorry, Mr. Davis, but you don't own any stocks. Master Insurance went broke."

I was glad he had made me sit down; I felt weak. "How did this happen? The Panic?"

"No, no. It was part of the collapse of the Mannix Group but of course you don't know about that. It happened after the Panic, and I suppose you could say that it started from the Panic. But Master Insurance would not have gone under if it had not been systematically looted , . . gutted-'milked' is the vulgar word. If it had been an ordinary receivership, something at least would have been salvaged. Hut it was not. By the time it was discovered there was nothing left of the company but a hollow shell and the men who had done it were beyond extradition. Uh, if it is any consolation to you, it could not happen under our present laws."

No, it was no consolation, and besides, I didn't believe it. My old man claimed that the more complicated the law the more opportunity for scoundrels.

But he also used to say that a wise man should be prepared to abandon his baggage at any time. I wondered how often I was going to have to do it to qualify as "wise." "Uh, Mr. Doughty, just out of curiosity, how did Mutual Assurance make out?"

"Mutual Assurance Company? A fine firm. Oh, they took their licking during the Panic along with everybody else. But they weathered it. You have a policy with them, perhaps?"

"No." I did not offer explanation; there was no use. I couldn't look to Mutual; I had never executed my contract with them. I couldn't sue Master Insurance; there is no point in suing a bankrupt corpse.

I could sue Belle and Miles if they were still around-but why be silly? No proof, none.

Besides, I did not want to sue Belle. It would be better to tattoo her all over with "Null and Void" ... using a dull needle. Then I'd take up the matter of what she had done to Pete. I hadn't figured out a punishment to suit the crime for that one yet.

I suddenly remembered that it was the Mannix group that Miles and Belle had been about to sell Hired Girl, Inc., to when they had booted me out. "Mr. Doughty? Are you sure that the Mannix people haven't any assets? Don't they own Hired Girl?"

"Hired Girl?' Do you mean the domestic autoappliance firm?"

"Yes, of course."

"It hardly seems possible. In fact, it is not possible, since the Mannix empire, as such, no longer exists. Of course I can't say that there never was any connection between Hired Girl Corporation and the Mannix people. But I don't believe it could have been much, if any, or I think I would have heard of it."

I dropped the matter. If Miles and Belie had been caught in the collapse of Mannix, that suited me fine. But, on the other hand, if Mannix had owned and milked Hired Girl, Inc., it would have hit Ricky as hard as it hit them. I didn't want Ricky hurt, no matter what the side issues were.

I stood up. "Well, thanks for breaking it gently, Mr. Doughty. I'll be on my way."

"Don't go yet. Mr. Davis . . . we of this institution feel a responsibility toward our people beyond the mere letter of the contract. You understand that yours is by no means the first case of this sort. Now our board of directors has placed a small discretionary fund at my disposal to ease such hardships. It-"

"No charity, Mr. Doughty. Thanks anyhow."

"Not charity, Mr. Davis. A loan. A character loan, you might call it. Believe me, our losses have been negligible on such loans and we don't want you to walk out of here with your pockets empty."

I thought that one over twice. I didn't even have the price of a haircut. On the other hand, borrowing money is like trying to swim with a brick in each hand. . . and a small loan is tougher to pay back than a million. "Mr. Doughty," I said slowly, "Dr. Albrecht said that I was entitled to four more days of beans and bed here."

"I believe that is right-I'd have to consult your card. Not that we throw people out even when their contract time is up if they are not ready."

"I didn't suppose that you did. But what are the rates on that room I had, as hospital room and board?"

"Eh? But our rooms are not for rent in that way. We aren't a hospital; we simply maintain a recovery infirmary for our clients."

"Yes, surely. But you must figure it, at least for cost accounting purposes."

"Mmm . . . yes and no. The figures aren't allocated on that basis. The subheads are depreciation, overhead, operation, reserves, diet kitchen, personnel, and so forth. I suppose I could make an estimate."

"Uh, don't bother. What would equivalent room and board in a hospital come to?"

"That's a little out of my line. Still ... well, you could call it about one hundred dollars per day, I suppose."

"I had four days coming. Will you lend me four hundred dollars?"

He did not answer but spoke in a number code to his mechanical assistant. Then eight fifty-dollar bills were being counted into my hand. "Thanks," I said sincerely as I tucked it away. "I'll do my damnedest to see that this does not stay on the books too long. Six per cent? Or is money tight?"

He shook his head. "It's not a loan. Since you put it as you did, I canceled it against your unused time."

"Huh? Now, see here, Mr. Doughty, I didn't intend to twist your arm. Of course, I'm going to-"

"Please. I told my assistant to enter the charge when I directed it to pay you. Do you want to give our auditors headaches all for a fiddling four hundred dollars? I was prepared to loan you much more than that."

"Well-I can't argue it now. Say, Mr. Doughty, how much money is this? How are price levels flow?"

"Mmmm. . . that is a complex question."

"Just give me an idea? What does it cost to eat?"

"Food is quite reasonable. For ten dollars you can get a very satisfactory dinner . . . if you are careful to select moderately priced restaurants."

I thanked him and left with a really warm feeling. Mr. Doughty reminded me of a paymaster I used to have in the Army. Paymasters come in only two sizes: one sort shows you where the book says that you can't have what you've got coming to you; the second

sort digs through the book until he finds a paragraph that lets you have what you need even if you don't rate it.

Doughty was the second sort.

The sanctuary faced on the Wilshire Ways. There were benches in front of it and bushes and flowers. I sat down on a bench to take stock and to decide whether to go east or west. I had kept a stiff lip with Mr. Doughty but, honestly, I was badly shaken, even though I had the price of a week's meals in my jeans.

But the sun was warm and the drone of the Ways was pleasant and I was young (biologically at least) and I had two hands and my brain. Whistling "Hallelujah, I'm a Bum," I opened the Times to the "Help Wanted" columns.

I resisted the impulse to look through "Professional Engineers" and turned at once to "Unskilled."

That classification was darned short. I almost couldn't find it.

I got a job the second day, Friday, the fifteenth of December. I also had a mild run-in with the law and had repeated tangles with new ways of doing things, saying things, feeling about things. I discovered that "reorientation" by reading about it is like reading about sex-not the same thing.

I suppose I would have had less trouble if I had been set down in Omsk, or Santiago, or Djakarta. In going to a strange city in a strange land you know that the customs are going to be different, but in Great Los Angeles I subconsciously expected things to be unchanged even though I could see that they were changed. Of course thirty years is nothing; anybody takes that much change and more in a lifetime. But it makes a difference to take it in one bite.

Take one word I used all in innocence. A lady present was offended and only the fact that I was a Sleeper-which I hastily explained-kept her husband from giving me a mouthful of knuckles. I won't use the word here-oh yes, I will; why shouldn't I? I'm using it to explain something. Don't take my word for it that the word was in good usage when I was a kid; look it up in an old dictionary. Nobody scrawled it in chalk on sidewalks when I was a kid.

The word was "kink."

There were other words which I still do not use properly without stopping to think. Not taboo words necessarily, just ones with changed meanings. "Host" for example-"host" used to mean the man who took your coat and put it in the bedroom; it had nothing to do with the birth rate.

But I got along. The job I found was crushing new ground limousines so that they could be shipped back to Pittsburgh as scrap. Cadillacs, Chryslers, Eisenhowers, Lincolns-all sorts of great, big, new powerful turbobuggies without a kilometer on their clocks. Drive `em between the jaws, then crunch! smash! Crash!-scrap iron for blast furnaces.

It hurt me at first, since I was riding the Ways to work and didn't own so much as a gravJumper. I expressed my opinion of it and almost lost my job . . . until the shift boss remembered that I was a Sleeper and really didn't understand.

"It's a simple matter of economics, son. These are surplus cars the government has accepted as security against price-support loans. They're two years old now and they can never be sold, so the government junks them and sells them back to the steel industry. You can't run a blast furnace just on ore; you have to have scrap iron as well. You ought

to know that even if you are a Sleeper. Matter of fact, with high-grade ore so scarce, there's more and more demand for scrap. The steel industry needs these cars."

"But why build them in the first place if they can't be sold? It seems wasteful."

"It just seems wasteful. You want to throw people out of work? You want to run down the standard of living?"

"Well, why not ship them abroad? It seems to me they could get more for them on the open market abroad than they are worth as Scrap."

"What!-and ruin the export market? Besides, if we started dumping cars abroad we'd get everybody sore at us-Japan, France, Germany, Great Asia, everybody. What are you aiming to do? Start a war?" He sighed and went on in a fatherly tone. "You go down to the public library and draw out some books. You don't have any right to opinions on these things until you know something about them."

So I shut up. I didn't tell him that I was spending all my off time at the public library or at U.C.L.A.'s library; I had avoided admitting that I was, or used to be, an engineer-to claim that I was now an engineer would be too much like walking up to du Pont's and saying, "Sirrah, I am an aichymiste. Hast need of art such as mine?"

I raised the subject just once more because I noticed that very few of the price-support cars were really ready to run. The workmanship was sloppy and they often lacked essentials like instrument dials or air conditioners. But when one day I noticed from the way the teeth of the crusher came down on one that it lacked even a power plant, I spoke up about it.

The shift boss just stared at me. "Great jumping Jupiter, son, surely you don't expect them to put their best workmanship into cars that are just surplus? These cars had price-support loans against them before they ever came off the assembly line."

So that time I shut up and stayed shut. I had better stick to engineering; economics is too esoteric for me.

But I had plenty of time to think. The job I had was not really a "job" at all in my book; all the work was done by Flexible Frank in his various disguises. Frank and his brothers ran the crusher, moved the cars into place, hauled away the scrap, kept count, and weighed the loads; my job was to stand on a little platform (I wasn't allowed to sit) and hang onto a switch that could Stop the whole operation if something went wrong. Nothing ever did, but I soon found that I was expected to spot at least one failure in automation each shift, stop the job, and send for a trouble crew.

Well, it paid twenty-one dollars a day and it kept me eating. First things first.

After social security, guild dues, income tax, defense tax, medical plan, and the welfare mutual fund I took home about sixteen of it. Mr. Doughty was wrong about a dinner costing ten dollars; you could get a very decent plate dinner for three if you did not insist on real meat, and I would defy anyone to tell whether a hamburger steak started life in a tank or out on the open range. With the stories going around about bootleg meat that might give you radiation poisoning I was perfectly happy with surrogates.

Where to live had been somewhat of a problem. Since Los Angeles had not been treated to the one-second slum-clearance plan in the Six Weeks War, an amazing number of refugees had gone there (I suppose I was one of them, although I hadn't thought of myself as such at the time) and apparently none of them had ever gone home, even those that had homes left to go back to. The city-if you can call Great Los Angeles a city; it is more of a condition-had been choked when I went to sleep; now it was as jammed as a

lady's purse. It may have been a mistake to get rid of the smog; back in the `60s a few people used to leave each year because of sinusitis.

Now apparently nobody left, ever.

The day I checked out of the sanctuary I had had several things on my mind, principally (1) find a job, (2) find a place to sleep, (3) catch up in engineering, (4) find Ricky, (5) get back into engineering-on my own if humanly possible, (6) find Belle and Miles and settle their hash-without going to jail for it, and (7) a slug of things, like looking up the original patent on Eager Beaver and checking my strong hunch that it was really Flexible Frank (not that it mattered now, just curiosity), and looking up the corporate history of Hired Girl, Inc., etc., etc.

I have listed the above in order of priority, as I had found out years ago (through almost flunking my freshman year in engineering) that if you didn't use priorities, when the music stopped you were left standing. Some of these priorities ran concurrently, of course; I expected to search out Ricky and probably Belle & Co. as well, while I was boning engineering. But first things first and second things second; finding a job came even ahead of hunting
for a sack because dollars are the key to everything else. . . when you haven't got them.

After getting turned down six times in town I had chased an ad clear out to San Bernardino Borough, only to get there ten minutes too late. I should have rented a flop at once; instead I played it real smart and went back downtown, intending to find a room, then get up very early and be first in line for some job listed in the early edition.

How was I to know? I got my name on four rooming-house waiting lists and wound up in the park. I stayed there, walking to keep warm, until almost midnight, then gave up-Great Los Angeles winters are subtropical only if you accent the "sub." I then took refuge in a station of Wilshire Ways . . . and about two in the morning they rounded me up with the rest of the vagrants.

Jails have improved. This one was warm and I think they required the cockroaches to wipe their feet.

I was charged with barracking. The judge was a young fellow who didn't even look up from his newspaper but simply said, "These all first offenders?"

"Yes, your honor."

"Thirty days, or take a labor-company parole. Next."

They started to march US Out but I didn't budge. "Just a minute, Judge."

"Eh? Something troubling you? Are you guilty or not guilty?"

"Uh, I really don't know because I don't know what it is I have done. You see-"

"Do you want a public defender? If you do you can be locked up until one can handle your case. I understand they are running about six days late right now. . . but it's your privilege."

"Uh, I still don't know. Maybe what I want is a labor-company parole, though I'm not sure what it is. What I really want is some advice from the Court, if the Court pleases."

The judge said to the bailiff, "Take the others out." He turned back to me. "Spill it. But I'll warrant you won't like my advice. I've been on this job long enough to have heard every phony story and to have acquired a deep disgust toward most of them."

"Yes, sir. Mine isn't phony; it's easily checked. You see, I just got out of the Long Sleep yesterday and-"

But he did look disgusted. "One of those, eh? I've often wondered what made our grandparents think they could dump their riffraff on us. The last thing on earth this city needs is more people especially ones who couldn't get along in their own time. I wish I could boot you back to whatever year you came from with a message to everybody there that the future they're dreaming about is not, repeat not, paved with gold." He sighed. "But it wouldn't do any good, I'm sure. Well, what do you expect me to do? Give you another chance? Then have you pop up here again a week from now?"

"Judge, I don't think I'm likely to. I've got enough money to live until I find a job and-"

"Eh? If you've got money, what were you doing barracking?"

"Judge, I don't even know what that word means." This time he let me explain. When I came to how I had been swindled by Master Insurance Company his whole manner changed.

"Those swine! My mother got taken by them after she had paid premiums for twenty years. Why didn't you tell me this in the first place?" He took out a card, wrote something on it, and said, "Take this to the hiring office at the Surplus & Salvage Authority. If you don't get a job come back and see me this afternoon. But no more barracking. Not only does it breed crime and vice, but you yourself are running a terrible risk of meeting up with a zombie recruiter."

That's how I got a job smashing up brand-new ground cars. But I still think I made no mistake in logic in deciding to job-hunt first. Anywhere is home to the man with a fat bank account-the cops leave him alone.

I found a decent room, too, within my budget, in a part of West Los Angeles which had not yet been changed over to New Plan. I think it had formerly been a coat closet.

I would not want anyone to think I disliked the year 2000, as compared with 1970. I liked it and I liked 2001 when it rolled around a couple of weeks after they wakened me. In spite of recurrent spasms of almost unbearable homesickness, I thought that Great Los Angeles at the dawn of the Third Millennium was odds-on the most wonderful place I had ever seen. It was fast and clean and very exciting, even if it was too crowded . . . and even that was being coped with on a mammoth, venturesome scale. The New Plan parts of town were a joy to an engineer's heart. If the city government had had the sovereign power to stop immigration for ten years, they could have licked the housing problem. Since they did not have that power, they just had to do their best with the swarms that kept rolling over the Sierras-and their best was spectacular beyond belief and even the failures were colossal.

It was worth sleeping thirty years just to wake up in a time when they had licked the common cold and nobody had a postnasal drip. That meant more to me than the research colony on Venus.

Two things impressed me most, one big, one little. The big one was NullGrav, of course. Back in 1970 I had known about the Babson Institute gravitation research but I had not expected anything to come of it-and nothing had; the basic field theory on which NullGrav is based was developed at the University of Edinburgh. But I had been taught in school that gravitation was something that nobody could ever do anything about, because it was inherent in the very shape of space.

So they changed the shape of space, naturally. Only temporarily and locally, to be sure, but that's all that's needed in moving a heavy object. It still has to stay in field relation with Mother Terra, so it's useless for space ships-or it is in 2001; I've quit making bets about the future. I learned that to make a lift it was still necessary to expend power to overcome the gravity potential, and conversely, to lower something you had to have a power pack to store all those foot-pounds in, or something would go Phzzt!Spung! But just to transport something horizontally, say from San Francisco to Great Los Angeles, just lift it once, then float along, no power at all, like an ice skater riding a long edge.

Lovely!

I tried to study the theory of it, but the math starts in where tensor calculus leaves off; it's not for me. But an engineer is rarely a mathematical physicist and he does not have to be; he simply has to savvy the skinny of a thing well enough to know what it can do in practical applications-know the working parameters. I could learn those.

The "little thing" I mentioned was the changes in female styles made possible by the Sticktite fabrics. I was not startled by mere skin on bathing beaches; you could see that coming in 1970. But the weird things that the ladies could do with Sticktite made my Jaw sag.

My grandpappy was born in 1890; I suppose that some of the sights in 1970 would have affected him the same way.

But I liked the fast new world and would have been happy in it if I had not been so bitterly lonely so much of the time. I was out of joint. There were times (in the middle of the night, usually) when I would gladly have swapped it all for one beat-up tomcat, or for a chance to spend an afternoon taking little Ricky to the zoo. . . or for the comradeship Miles and I had shared when all we had was hard work and hope.

It was still early in 2001 and I wasn't halfway caught up on my homework, when I began to itch to leave my feather-bedded job and get back to the old drawing board. There were so many, many things possible under current art which had been impossible in 1970; 1 wanted to get busy and design a few dozen.

For example I had expected that there would be automatic secretaries in use-I mean a machine you could dictate to and get back a business letter, spelling, punctuation, and format all perfect, without a human being in the sequence. But there weren't any. Oh, somebody had invented a machine which could type, but it was suited only to a phonetic language like Esperanto and was useless in a language in which you could say: "Though the tough cough and hiccough plough him through."

People won't give up the illogicalities of English to suit the convenience of an inventor. Mohammed must go to the mountain.

If a high-school girl could sort out the cockeyed spelling of English and usually type the right word, how could a machine be taught to do it?

"Impossible" was the usual answer. It was supposed to require human judgment and understanding.

But an invention is something that was "impossible" up to then-that's Why governments grant patents.

With memory tubes and the miniaturization now possible-I had been right about the importance of gold as an engineering material-with those two things it would be easy to pack a hundred thousand sound codes into a cubic foot. . . in other words, to soundkey every word in a Webster's Collegiate Dictionary. But that was unnecessary; ten thousand

would be ample. Who expects a stenographer to field a word like "kourbash" or "pyrophylilte"? You spell such words for her if you must use them. Okay, we code the machine to accept spelling when necessary. We sound-code for punctuation . . . and for various formats . . . and to look up addresses in a file. . . and for how many copies~. . . and routing and provide at least a thousand blank word-codings for special vocabulary used in a business or profession-and make it so that the owner-client could put those special words in himself, spell a word like "stenobenthic" with the memory key depressed and never have to spell it again.

All simple. Just a matter of hooking together gadgets already on the market, then smoothing it into a production model.

The real hitch was homonyms. Dictation Dairy wouldn't even slow up over that "tough cough and hiccough" sentence because each of those words carries a different sound. But choices like "they're" and "their," "right" and "write" would give her trouble.

Did the L. A. Public Library have a dictionary of English homonyms? It did...and I began counting the unavoidable homonym pairs and trying to figure how many of these could be handled by information theory through context statistics and how many would require special coding.

I began to get jittery with frustration. Not only was I wasting thirty hours a week on an utterly useless job, but also I could not do real engineering in a public library. I needed a drafting room, a shop where I could smooth out the bugs, trade catalogues, professional journals, calculating machines, and all the rest.

I decided that I would just have to get at least a subprofessional job. I wasn't silly enough to think that I was an engineer again; there was too much art I had not yet soaked up-repeatedly I had thought of ways to do something, using something new that I had learned, only to find out at the library that somebody had solved the same problem, neater, better, and cheaper than my own first stab at it and ten or fifteen years earlier.

I needed to get into an engineering office and let these new things soak in through my skin. I had hopes that I could land a job as a junior draftsman.

I knew that they were using powered semi-automatic drafting machines now; I had seen pictures of them even though I had not had one under my hands. But I had a hunch that I could learn to play one in twenty minutes, given the chance, for they were remarkably like an idea I had once had myself: a machine that bore the same relation to the old-fashioned drawing-board-and-Tsquare method that a typewriter did to writing in longhand. I had worked it all out in my head, how you could put straight lines or curves anywhere on an easel just by punching keys.

However, in this case I was just as sure that my idea had not been stolen as I was certain that Flexible Frank had been stolen, because my drafting machine had never existed except in my head. Somebody had had the same idea and had developed it logically the same way. When it's time to railroad, people start railroading.

The Aladdin people, the same firm that made Eager Beaver, made one of the best drawing machines, Drafting Dan. I dipped into my savings, bought a better suit of clothes and a secondhand brief case, stuffed the latter with newspapers, and presented myself at the Aladdin salesrooms with a view to "buying" one. I asked for a demonstration.

Then, when I got close to a model of Drafting Dan, I had a most upsetting experience. D,j... vu, the psychologists call it-"I have been here before." The damned

thing had been developed in precisely the fashion in which I would have developed it, had I had time to do so . . . instead of being kidnapped into the Long Sleep.

Don't ask me exactly why I felt that way. A man knows his own style of work. An art critic will say that a painting is a Rubens or a Rembrandt by the brushwork, the treatment of light, the composition, the choice of pigment, a dozen things. Engineering is not science, it is an art, and there is always a wide range of choices in how to solve engineering problems. An engineering designer "signs" his work by those choices just as surely as a painter does.

Drafting Dan had the flavor of my own technique so strongly that I was quite disturbed by it. I began to wonder if there wasn't something to telepathy after all.

I was careful to get the number of its first patent. In the state I was in I wasn't surprised to see that the date on the first one was 1970. I resolved to find out who had invented it. It might have been one of my own teachers, from whom I had picked up some of my style. Or it might be an engineer with whom I had once worked. The inventor might still be alive. If so, I'd look him up someday get acquainted with this man whose mind worked just like mine.

But I managed to pull myself together and let the salesman show me how to work it. He hardly need have bothered; Drafting Dan and I were made for each other. In ten minutes I could play it better than he could. At last I reluctantly quit making pretty pictures with it, got list price, discounts, service arrangements, and so forth, then left saying that I would call him, just as he was ready to get my signature on the dotted line. It was a dirty trick, but all I cost him was an hour's time.

From there I went to the Hired Girl main factory and applied for a job.

I knew that Belle and Miles were no longer with Hired Girl, Inc. In what time I could spare between my job and the compelling necessity to catch up in engineering I had been searching for Belle and Miles and most especially for Ricky. None of the three was listed in the Great Los Angeles telephone system, nor for that matter anywhere in the United States, for I had paid to have an "information" search made at the national office in Cleveland. A quadruple fee, it was, as I had had Belle searched for under both "Gentry" and "Darkin."

I had the same luck with the Register of Voters for Los Angeles County.

Hired Girl, Inc., in a letter from a seventeenth vice-president in charge of foolish questions, admitted cautiously that they had once had officers by those names thirty years ago but they were unable to help me now.

Picking up a trail thirty years cold is no job for an amateur with little time and less money. I did not have their fingerprints, or I might have tried the FBI. I didn't know their social-security numbers. My Country `Tis of Thee had never succumbed to police state nonsense, so there was no bureau certain to have a dossier on each citizen, nor was I in a position to tap such a file even if there had been.

Perhaps a detective agency, lavishly subsidized, could have dug through utilities' records, newspaper files, and God knows what, and traced them down. But I didn't have the lavish subsidy, nor the talent and time to do it myself.

I finally gave up on Miles and Belle while promising myself that I would, as quickly as I could afford it, put professionals to tracing Ricky. I had already determined that she held no Hired Girl stock and I had written to the Bank of America to see if they held, or ever had held, a trust for her. I got back a form letter informing me that such

things were confidential, so I had written again, saying that I was a Sleeper and she was my only surviving relative. That time I got a nice letter, signed by one of the trust officers and saying that he regretted that information concerning trust beneficiaries could not be divulged even to one in my exceptional circumstances, but he felt justified in giving me the negative information that the bank had not at any time through any of its branches held a trust in favor of one Frederica Virginia Gentry.

That seemed to settle one thing. Somehow those birds had managed to get the stock away from little Ricky. My assignment of the stock would have had to go through the Bank of America, the way I had written it. But it had not. Poor Ricky! We had both been robbed.

I made one more stab at it. The records office of the Superintendent of Instruction in Mojave did have record of a grade school pupil named Frederica Virginia Gentry. . . but the named pupil had taken a withdrawal transcript in 1971. Further deponent sayeth not.

It was some consolation to know that somebody somewhere admitted that Ricky had ever existed. But she might have taken that transcript to any of many, many thousand public schools in the United States. How long would it take to write to each of them? And were their records so arranged as to permit them to answer, even supposing they were willing?

In a quarter of a billion people one little girl can drop out of sight like a pebble in the ocean.

But the failure of my search did leave me free to seek a job with Hired Girl, Inc., now that I knew Miles and Belle were not running it. I could have tried any of a hundred automation firms, but Hired Girl and Aladdin were the big names in appliance automatons, as important in their own field as Ford and General Motors had been in the heyday of the ground automobile. I picked Hired Girl partly for sentimental reasons; I wanted to see what my old outfit had grown into.

On Monday, 5 March, 2001, I went to their employment office, got into the line for white-collar help, filled out a dozen forms having nothing to do with engineering and one that did. . . and was told don't-call-us-we'll-call-you.

I hung around and managed to bull myself in to see an assistant hiring flunky. He reluctantly looked over the one form that meant anything and told me that my engineering degree meant nothing, since there had been a thirty-year lapse when I had not used my skill.

I pointed out that I had been a Sleeper.

"That makes it even worse. In any case, we don't hire people over forty-five."

"But I'm not forty-five. I'm only thirty."

"You were born in 1940. Sorry."

"What am I supposed to do? Shoot myself?"

He shrugged. "If I were you, I'd apply for an old-age pension."

I got out quickly before I gave him some advice. Then I walked three quarters of a mile around to the front entrance and went in. The general manager's name was Curtis; I asked for him.

I got past the first two layers simply by insisting that I had business with him. Hired Girl, Inc., did not use their own automatons as receptionists; they used real flesh

and blood. Eventually I reached a place several stories up and (I judged) about two doors from the boss, and here I encountered a firm pass-gauge type who insisted on knowing my business.

I looked around. It was a largish office with about forty real people in it, as well as a lot of machines. She said sharply, "Well? State your business and I'll check with Mr. Curtis's appointment Secretary."

I said loudly, making sure that everybody heard it, "I want to know what he's going to do about my wife!"

Sixty seconds later I was in his private office. He looked up. "Well? What the devil is this nonsense?"

It took half an hour and some old records to convince him that I did not have a wife and that I actually was the founder of the firm. Then things got chummy over drinks and cigars and I met the sales manager and the chief engineer and other heads of departments. "We thought you were dead," Curtis told me. "In fact, the company's official history says that you are."

"Just a rumor. Some other D. B. Davis."

The sales manager, Jack Galloway, said suddenly, "What are you doing now, Mr. Davis?"

"Not much. I've, uh, been in the automobile business. But I'm resigning. Why?"

"`Why?' Isn't it obvious?" He swung around toward the chief engineer, Mr. MeBee. "Hear that, Mac? All you engineers are alike; you wouldn't know a sales angle if it came up and kissed you. `Why?' Mr. Davis. Because you're sales copy, that's why~ Because you're romance. Founder of Firm Comes Back from Grave to Visit Brain Child. Inventor of the First Robot Servant Views Fruits of His Genius."

I said hastily, "Now wait a minute-I'm not an advertising model nor a grabbie star. I like my privacy. I didn't come here for that; I came here for a job. . . in engineering."

Mr. McBee's eyebrows went up but he said nothing.

We wrangled for a while. Galloway tiled to tell me that it was my simple duty to the firm I had founded. Mr. McBee said little, but it was obvious that he did not think I would be any addition to his department-at one point he asked me what I knew about designing solid circuits. I had to admit that my only knowledge of them was from a little reading of non-classified publications.

Curtis finally suggested a compromise. "See here, Mr. Davis, you obviously occupy a very special position. One might say that you founded not merely this firm but the whole industry. Nevertheless, as Mr. McBee has hinted, the industry has moved on since the year you took the Long Sleep. Suppose we put you on the staff with the title of. . . uh, `Research Engineer Emeritus."

I hesitated. "What would that mean?"

"Whatever you made it mean. However, I tell you frankly that you would be expected to co-operate with Mr. Galloway. We not only make these things, we have to sell them."

"Uh, would I have a chance to do any engineering?"

"That's up to you. You'd have facilities and you could do what you wished."

"Shop facilities?"

Curtis looked at McBee. The chief engineer answered, "Certainly, certainly. . within reason, of course." He bad slipped so far into Glasgow speech that I could hardly understand him.

Galloway said briskly, "That's settled. May I be excused, B.J.? Don't go away, Mr. Davis-we're going to get a picture of you `with the very first model of Hired Girl."

And he did. I was glad to see her. . the very model I had put together with my own pinkies and lots of sweat. I wanted to see if she still worked, but MeBee `wouldn't let me start her up-I don't think he really believed that I knew how she worked.

I had a good time at Hired Girl all through March and April. I had all the professional tools I could want, technical journals, the indispensable trade catalogues, a practical library, a Drafting Dan (Hired Girl did not make a drafting machine themselves, so they used the best on the market, which was Aladdin's), and the shoptalk of professionals: music to my ears!

I got acquainted especially with Chuck Freudenberg, components assistant chief engineer. For my money Chuck was the only real engineer there; the rest were overeducated slipstick mechanics including McBee, for the chief engineer was, I thought, a clear proof that it took more than a degree and a Scottish accent to make an engineer. After we got better acquainted Chuck admitted that he felt the same way. "Mac doesn't really like anything new; he would rather do things the way his grandpa did on the bonnie banks of the Clyde."

"What's he doing in this job?"

Freudenberg did not know the details, but it seemed that the present firm bad been a manufacturing company which had simply rented the patents (my patents) from Hired Girl, Inc. Then about twenty years ago there had been one of those tax-saving mergers, with Hired Girl stock swapped for stock in the mauufacturing firm and the new firm taking the name of the one that I had founded. Chuck thought that MeBee had been hired at that time. "He's got a piece of it, I think."

Chuck and I used to sit over beers in the evening and discuss engineering, what the company needed, and the whichness of what. His original interest in me had been that I was a Sleeper. Too many people, I had found, had a queasy interest in Sleepers (as if we were freaks) and I avoided letting people know that I was one. But Chuck was fascinated by the time jump itself and his interest was a healthy one in what the world had been like before he was born, as recalled by a man who literally remembered it as "only yesterday."

In return be was willing to criticize the new gadgets that were always boiling up in my head, and set me straight when I (as I did repeatedly) would rough out something that was old hat. . . in 2001 Ad). Under his friendly guidance I was becoming a modem engineer, catching up fast.

But when I outlined to him one April evening my autosecretary idea he said slowly, "Dan, have you done work on this on company time?"

"Huh? No, not really. Why?"

"How does your contract read?"

"What? I don't have one." Curtis had put me on the payroll and Galloway had taken pictures of me and had a ghost writer asking me silly questions; that was all.

"Mmm . . . pal, I wouldn't do anything about this until you are sure where you stand. This is really new. And I think you can make it work."

"I hadn't worried about that angle."

"Put it away for a while. You know the shape the company is in. It's making money and we put out good products. But the only new items we've brought out in five years are ones we've acquired by license. I can't get anything new past Mac. But you can bypass Mac and take this to the big boss. So don't. . . unless you want to hand it over to the company just for your salary check."

I took his advice. I continued to design but I burned any drawings I thought were good-I didn't need them once I had them in my head. I didn't feel guilty about it; they hadn't hired me as an engineer, they were paying me to be a show-window dummy for Galloway. When my advertising value was sucked dry, they would give me a month's pay and a vote of thanks and let me go.

But by then I'd be a real engineer again and able to open my own office. If Chuck wanted to take a flyer I'd take him with me.

Instead of handing my story to the newspapers, Jack Galloway played it slow for the national magazines; he wanted Life to do a spread, tying it in with the one they had done a third of a century earlier on the first production model of Hired Girl. Life did not rise to the bait but he did manage to plant it several other places that spring, tying it in with display advertising.

I thought of growing a beard. Then I realized that no one recognized me and would not have cared if they had.

I got a certain amount of crank mail, including one letter from a man who promised me that I would burn eternally in hell for defying God's plan for my life. I chucked it, while thinking that if God had really opposed what had happened to me, He should never have made cold sleep possible. Otherwise I wasn't bothered.

But I did get a phone call, on Thursday, 3 May, 2001. "Mrs. Schultz is on the line, sir. Will you take the call?"

Schultz? Damnation, I had promised Doughty the last time I had called him that I would take care of that. But I had put it off because I did not want to; I was almost sure it was one of those screwballs who pursued Sleepers and asked them personal questions.

But she had called several times, Doughty had told me, since I had checked out in December. In accordance with the policy of the sanctuary they had refused to give her my address, agreeing merely to pass along messages.

Well, I owed it to Doughty to shut her up. "Put her on."

"Is this Danny Davis?" My office phone had no screen; she could not see me.

"Speaking. Your name is Schultz?"

"Oh, Danny darling, it's so good to hear your voice!"

I didn't answer right away. She went on, "Don't you know me?"

I knew her, all right. It was Belle Gentry.

CHAPTER 7

I made a date with her.

My first impulse had been to tell her to go to hell and switch off. I had long since realized that revenge was childish; revenge would not bring Pete back and fitting revenge would simply land me in jail. I had hardly thought about Belle and Miles since I had quit looking for them.

But Belle almost certainly knew where Ricky was. So I made a date.

She wanted me to take her to dinner, but I would not do that I'm not fussy about fine points of etiquette. But eating is something you do only with friends; I would see her but I had no intention of eating or drinking with her. I got her address and told her I would be there that evening at eight.

It was a cheap rental, a walk-up fiat in a part of town (lower La Brea) not yet converted to New Plan. Before I buzzed her door I knew that she had not hung onto what she had bilked me out of, or she would not have been living there.

And when I saw her I realized that revenge was much too late; she and the years had managed it for me.

Belle was not less than fifty-three by the age she had claimed, and probably closer to sixty in fact. Between geriatrics and endocrinology a woman who cared to take the trouble could stay looking thirty for at least thirty extra years, and lots of them did. There were grabbie stars who boasted of being grandmothers while still playing ingenue leads.

Belle had not taken the trouble.

She was fat and shrill and kittenish. It was evident that she still considered her body her principal asset, for she was dressed in a Sticktite negligee which, while showing much too much of her, also showed that she was female, mammalian, overfed, and under exercised.

She was not aware of it. That once-keen brain was fuzzy; all that was left was her conceit and her overpowering confidence in herself. She threw herself on me with squeals of joy and came close to kissing me before I could unwind her.

I pushed her wrists back. "Take it easy, Belle."

"But, darling! I'm so happy-so excited-and so thrilled to see you!"

"I'll bet." I had gone there resolved to keep my temper just find out what I wanted to know and get out. But I was finding it difficult. "Remember how you saw me last? Drugged to my eyebrows so that you could stuff me into cold sleep."

She looked puzzled and hurt. "But, sweetheart, we only did it for your own good! You were so ill."

I think she believed it. "Okay, okay. Where's Miles? You're Mrs. Schultz now?"

Her eyes grew wide. "Didn't you know?"

"Know what?"

"Poor Miles . . . poor, dear Miles. He lived less than two years, Danny boy, after you left us." Her expression changed suddenly. "The frallup cheated me!"

"That's too bad." I wondered how he had died. Did he fall or was he pushed? Arsenic soup? I decided to stick to the main issue before she jumped the track completely. "What became of Ricky?'

"Ricky'?"

"Miles's little girl. Frederica."

"Oh, that horrible little brat! How should I know? She went to live with her grandmother."

"Where? And what was her grandmother's name?"

"Where? Tucson-or Yuma-or some place dull like that. It might have been lndio. Darling, I don't want to talk about that impossible child-I want to talk about us."

"In a moment. What was her grandmother's name?"

"Danny boy, you're being very tiresome. Why in the world should I remember something like that?"

"What was it'?"

"Oh, Hanolon ... or Haney . . . Heinz. Or it might have been Hinckley. Don't be dull, dear. Let's have a drink. Let's drink a toast to our happy reunion."

I shook my head. "I don't use the stuff." This was almost true. Having discovered that it was an unreliable friend in a crisis, I usually limited myself to a beer with Chuck Freudenberg.

"How very dull, dearest. You won't mind if I have one." She was already pouring it-straight gin, the lonely girl's friend. But before she downed it she picked up a plastic pill bottle and rolled two capsules into her palm. "Have one?"

I recognized the striped casing-euphorion. It was supposed to be non-toxic and non-habit-forming, but opinions differed. There was agitation to class it with morphine and the barbiturates.

"Thanks. I'm happy now."

"How nice." She took both of them, chased them with gin. I decided if I was to learn anything at all I had better talk fast; soon she would be nothing but giggles.

I took her arm and sat her down on her couch, then sat down across from her. "Belle, tell me about yourself. Bring me up to date. How did you and Miles make out with the Mannix people?"

"Uh? But we didn't." She suddenly flared up. "That was your fault!"

"Huh? My fault? I wasn't even there."

"Of course it was your fault. That monstrous thing you built out of an old wheel chair . . . that was what they wanted. And then it was gone."

"Gone? Where was it?"

She peered at me with piggy, suspicious eyes. "You ought to know. You took it."

"Me? Belle, are you crazy? I couldn't take anything. I was frozen stiff, in cold sleep. Where was it? And when did it disappear?" It fitted in with my own notions that somebody must have swiped Flexible Frank, if Belle and Miles had not made use of him. But out of all the billions on the globe, I was the one who certainly had not. I had not seen Frank since that disastrous night when they had outvoted me. "Tell me about it, Belle. Where was it? And what made you think I took it?"

"It bad to be you. Nobody else knew it was important. That pile of junk! I told Miles not to put it in the garage."

"But it somebody did swipe it, I doubt if they could make it work. You still had all the notes and instructions and drawings."

"No, we didn't either. Miles, the fool, had stuffed them all inside it the night we had to move it to protect it."

I did not fuss about the word "protect." Instead I was about to say that he couldn't possibly have stuffed several pounds of paper into Flexible Frank, he was already stuffed like a goose when I remembered that I had built a temporary shelf across the bottom of his wheel-chair base to hold tools while I worked on him. A man in a hurry might very well have emptied my working files into that space.

No matter. The crime, or crimes, had been committed thirty years ago. I wanted to find out how Hired Girl, Inc., had slipped away from them. "After the Mannix deal fell through what did you do with the company?"

"We ran it, of course. Then when Jake quit us Miles said we had to shut down. Miles was a weakling . . . and I never liked that Jake Schmidt. Sneaky. Always asking why you had quit. as if we could have stopped you! I wanted us to hire a good foreman and keep going. The company would have been worth more. But Miles insisted."

"What happened then?"

"Why, then we licensed to Geary Manufaturing, of course. You know that; you're working there now."

I did know that; the full corporate name of Hired Girl was now "Hired Girl Appliances and Geary Manufacturing, Inc." although the signs read simply "Hired Girl." I seemed to have found out all I needed to know that this flabby old wreck could tell me.

But I was curious on another point. "You two sold your stock after you licensed to Geary?"

"Huh? Whatever put that silly notion in your head?" Her expression broke and she began to blubber, pawing feebly fox a handkerchief, then giving up and letting the tears go. "He cheated me! He cheated me! The dirty shiker cheated me...he kinked me out of it." She snuffled and added meditatively, "You all cheated me. . . and you were the worst of the lot, Danny boy. After I had been so good to you." She started to bawl again.

I decided that euphorion wasn't worth whatever it cost-or maybe she enjoyed crying. "How did he cheat you, Belle?"

"What? Why, you know. He left it all to that dirty brat of his after all that he had promised me . . . after I nursed him when he hurt so. And she wasn't even his own daughter. That proves it."

It was the first good news I had had all evening. Apparently Ricky had received one good break, even if they had grabbed my stock away from her earlier. So I got back to the main point "Belle, what `was Ricky's grandmother's name? And where did they live?"

"Where did who live?"

"Rickey's grandmother."

"Who's Ricky?"

"Miles's daughter. Try to think, Belle. It's important."

That set her off. She pointed a finger at me and shrilled, "I know you. You were in love with her, that's what. That dirty little sneak. . . her and that horrible cat."

I felt a burst of anger at the mention of Pete. But I tried to suppress it. I simply grabbed her shoulders and shook her a little. "Brace up, Belle. I want to know just one thing. Where did they live? How did Miles address letters when lie wrote to them?"

She kicked at me, "I won't even talk to you! You've been perfectly stinking ever since you got here." Then she appeared to sober almost instantly and said quietly, "I don't know. The grandmother's name was Haneker, or something like that. I only saw her once, in court, when they came to see about the will."

"When was that?"

"Right after Miles died, of course."

"When did Miles die, Belle?"

She switched again. "You want to know too much. You're as bad as the sheriffs. . . questions, questions, questions!" Then she looked up and said pleadingly, "Let's forget everything and just be ourselves. There's just you and me now, dear . . . and we still have our lives ahead of us. A woman isn't old at thirty-nine: Schultzie said I was the youngest

thing he ever saw-and that old goat had seen plenty, let me tell you! We could be so happy, dear. We--"

I had had all I could stand, even to play detective. "I've got to go, Belle."

"What, dear? Why, it's early... and we've got all night ahead of us. I thought-"

"I don't care what you thought. I've got to leave fight now."

"Oh dear! Such a pity. When will I see you again? Tomorrow? I'm terribly busy but I'll break my engagements and-"

"I won't be seeing you again, Belle." I left.

I never did see her again.

As soon as I was home I took a hot bath, scrubbing hard. Then I sat down and tried to add up what I had found out, if anything. Belle seemed to think that Ricky's grandmother's name began with an "H"-if Belle's maunderings meant anything at all, a matter highly doubtful-and that they had lived in one of the desert towns in Arizona, or possibly California. Well, perhaps professional skip-tracers could make something of that.

Or maybe not. In any case it would be tedious and expensive; I'd have to wait until I could afford it.

Did I know anything else that signified?

Miles had died (so Belle said) around 1972. If he had died in this county I ought to be able to find the date in a couple of hours of searching, and after that I ought to be able to track down the hearing on his will . . . if there had been one, as Belle had implied. Through that I might be able to find out where Ricky had lived then. If courts kept such records. (I didn't know.) If I had gained anything by cutting the lapse down to twenty-eight years and locating the town she had lived in that long ago.

If there was any point in looking for a woman now forty-one and almost certainly married and with a family. The jumbled ruin that had once been Belle Darkin had shaken me; I was beginning to realize what thirty years could mean. Not that I feared that Ricky grown up would be anything but gracious and good
but would the even remember me? Oh, I did not think she would have forgotten me entirely, but wasn't it likely that I would be just a faceless person, the man she had sometimes called "Uncle Danny" and who had that nice cat?

Wasn't I, in my own way, living in a fantasy of the past quite as much as Belle was?

Oh well, it couldn't hurt to try again to find her. At the least, we could exchange Christmas cards each year. Her husband could not very well object to that.

CHAPTER 8

The next morning was Friday, the fourth of May. Instead of going into the office I went down to the county Hall of Records. They were moving everything and told me to come back next month, so I went to the office of the Times and got a crick in my neck from a microscanner. But I did find out that if Miles had died any date between twelve and thirty-six months after I had been tucked in the freezer, he had not done so in Los Angeles County-if the death notices were correct.

Of course there was no law requiring him to die in L.A. County. You can die anyplace. They've never managed to regulate that.

Perhaps Sacramento had consolidated state records. I decided I would have to check someday, thanked the Times librarian, went out to lunch, and eventually got back to Hired Girl, Inc.

There were two phone calls and a note waiting, all from Belle. I got as far in the note as "Dearest Dan," tore it up and told the desk not to accept any calls for me from Mrs. Schultz. Then I went over to the accounting office and asked the chief accountant if there was any way to check up on past ownership of a retired stock issue. He said he would try and I gave him the numbers, from memory, of the original Hired Girl stock I had once held. It took no feat of memory; we had issued exactly one thousand shares to start with and I had held the first five hundred and ten, and Belle's "engagement present" had come off the front end.

I went back to my cubbyhole and found McBee waiting for me.

"Where have you been?" he wanted to know.

"Out and around. Why?"

"That's hardly a sufficient answer. Mr. Galloway was in twice today looking for you. I was forced to tell him I did not know where you were."

"Oh, for Pete's sake! If Galloway wants me he'll find me eventually. If he spent half the time peddling the merchandise on its merits that he does trying to think up cute new angles, the firm would be better off." Galloway was beginning to annoy me. He was supposed to be in charge of selling, hut it seemed to me that he concentrated on kibitzing the advertising agency that handled our account. But I'm prejudiced; engineering is the only part that interests me. All the rest strikes me as paper shuffling, mere overhead.

I knew what Galloway wanted me for and, to tell the truth, I had been dragging my feet, he wanted to dress me up in 1900 costumes and take pictures. I had told him that he could take all the pix he wanted of me in 1970 costumes, but that 1900 was twelve years before my father was born. He said nobody would know the difference, so I told him what the fortuneteller told the cop. He said I didn't have the right attitude.

These people who deal in fancification to fool the public think nobody can read and write but themselves.

McBee said, "You don't have the right attitude, Mr. Davis."

"So? I'm sorry."

"You're in an odd position. You are charged to my department, but I'm supposed to make you available to advertising and sales when they need you. From here on I think you had better use the time clock like everyone else . . . and you had better check with me whenever you leave the office during working hours. Please see to it."

I counted to ten slowly, using binary notation, "Mac, do you use the time clock?"

"Eh? Of course not. I'm the chief engineer."

"So you are. It says so right over on that door. But see here, Mac, I was chief engineer of this bolt bin before you started to shave. Do you really think that I am going to knuckle under to a time clock?"

He turned red. "Possibly not. But I can tell you this: if you don't, you won't draw your check."

"So? You didn't hire me; you can't fire me."

"Mmm . . . we'll see. I can at least transfer you out of my department and over to advertising where you belong. If you belong anywhere." He glanced at my drafting machine. "You certainly aren't producing anything here. I don't fancy having that expensive machine fled up any longer." He nodded briskly. "Good day."

I followed him out. An Office Boy rolled in and placed a large envelope in my basket, but I did not wait to see what it was; I went down to the staff coffee bar and fumed. Like a lot of other triple-ought-gauge minds, Mac thought creative work could be done by the numbers. No wonder the old firm hadn't produced anything new for years.

Well, to hell with him. I hadn't planned to stick around much longer anyway.

An hour or so later I wandered back up and found an interoffice mail envelope in my basket, I opened it, thinking that Mac had decided to throw the switch on me at once.

But it was from accounting; it read:

Dear Mr. Davis:
Re: the stock you inquired about.

Dividends on the larger block were paid from first quarter 1971 to second quarter 1980 on the original shares, to a trust held in favor of a party named Heinicke. Our reorganization took place in 1980 and the abstract at hand is somewhat obscure, but it appears that the equivalent shares (after reorganization) were sold to Cosmopolitan Insurance Group, which still holds them. Regarding the smaller block of stock, it was held (as you suggested) by Belle D. Gentry until 1972, when it was assigned to Sierra Acceptances Corporation, who broke it up and sold it piecemeal "over the counter." The exact subsequent history of each share and its equivalent after reorganization could be traced if needed, but more time would be required.

If this department can be of any further assistance to you, please feel free to call on us.
Y. E. Reuther, Ch. A ccl.

I called Reuther and thanked him and told him that I had all I wanted. I knew now that my assignment to Ricky had never been effective. Since the transfer of my stock that did show in the record was clearly fraudulent, the deal whiffed of Belle; this third party could have been either another of her stooges or possibly a fictitious person-she was probably already planning on swindling Miles by then.

Apparently she had been short of cash after Miles's death and had sold off the smaller block. But I did not care what had happened to any of the stock once it passed out of Belle's control. I had forgotten to ask Reuther to trace Miles's stock. . . that might give a lead to Ricky even though she no longer held it. But it was late Friday already; I'd ask him Monday. Right now I wanted to open the large envelope still waiting for me, for I had spotted the return address.

I had written to the patent office early in March about the original patents on both Eager Beaver and Drafting Dan. My conviction that the original Eager Beaver was just another name for Flexible Frank had been somewhat shaken by my first upsetting experience with Drafting Dan; I had considered the possibility that the same unknown genius who had conceived Dan so nearly as I had imagined him might also have developed a parallel equivalent of Flexible Frank. The theory was bulwarked by the fact

that both patents had been taken out the same year and both patents were held (or had been held until they expired) by the same company, Aladdin.

But I had to know. And if this inventor was still alive I wanted to meet him. He could teach me a thing or four.

I had written first to the patent office, only to get a form letter back that all records of expired patents were now kept in the National Archives in Carlsbad Caverns. So I wrote the Archives and got another form letter with a schedule of fees. So I wrote a third time, sending a postal order (no personal checks, please) for prints of the whole works on both patents-descriptions, claims, drawings, histories.

This fat envelope looked like my answer.

The one on top was 4,307,909, the basic for Eager Beaver. I turned to the drawings, ignoring for the moment both description and claims. Claims aren't important anyway except in court; the basic notion in writing up claims on an application for patent is to claim the whole wide world in the broadest possible terms, then let the patent examiners chew you down-this is why patent attorneys are born. The descriptions, on the other hand, have to be factual, but I can read drawings faster than I can read descriptions.

I had to admit that it did not look too much like Flexible Frank. It was better than Flexible Frank; it could do more and some of the linkages were simpler. The basic notion was the same-but that had to be true, as a machine controlled by Thorsen tubes and ancestral to Eager Beaver had to be based on the same principles I had used in Flexible Frank.

I could almost see myself developing just such a device sort of a second-stage model of Frank, I had once had something of the sort in mind-Frank without Frank's household limitations.

I finally got around to looking up the inventor's name on the claims and description sheets.

I recognized it all right. It was D. B. Davis.

I looked at it while whistling "Time on My Hands" slowly and off key. So Belle had lied again. I wondered if there was any truth at all in that spate of drivel she had fed me. Of course Belle was a pathological liar, but I had read somewhere that pathological liars usually have a pattern, starting from the truth and embellishing it, rather than indulging in complete fancy. Quite evidently my model of Frank had never been "stolen" but had been turned over to some other engineer to smooth up, then the application had been made in my name.

But the Mannix deal had never gone through; that one fact was certain, since I knew it from company records. But Belle had said that their failure to produce Flexible Frank as contracted had soured the Mannix deal.

Had Miles grabbed Frank for himself, letting Belle think that it had been stolen? Or restolen, rather.

In that case . . . I dropped guessing at it, as hopeless, more hopeless than the search for Ricky. I might have to take a job with Aladdin before I would be able to ferret out where they had gotten the basic patent and who had benefited by the deal. It probably was not worth it, since the patent was expired, Miles was dead, and Belle, if she had gained a dime out of it, had long since thrown it away. I had satisfied myself on the one point important to me, the thing I had set out to prove; i.e., that I myself was the original

inventor. My professional pride was salved and who cares about money when three meals a day are taken care of? Not me.

So I turned to 4,307,910, the first Drafting Dan.

The drawings were a delight. I couldn't have planned it better myself; this boy really had it. I admired the economy of the linkages and the clever way the circuits had been used to reduce the moving parts to a minimum. Moving parts are like the vermiform appendix; a source of trouble to be done away with whenever possible.

He had even used an electric typewriter for his keyboard chassis, giving credit on the drawing to an IBM patent series. That was smart, that was engineering: never reinvent something that you can buy down the street.

I had to know who this brainy boy was, so I turned to the papers.

It was D. B. Davis.

After quite a long time I phoned Dr. Albrecht. They rounded him up and I told him who I was, since my office phone had no visual.

"I recognized your voice," he answered. "Hi, there, son. How are you getting along with your new job?"

"Well enough. They haven't offered me a partnership yet."

"Give them time. Happy otherwise? Find yourself fitting back in?"

"Oh, sure! If I had known what a great place here and now is I'd have taken the Sleep earlier. You couldn't hire me to go back to 1970."

"Oh, come now! I remember that year pretty well. I was a kid then on a farm in Nebraska. I used to hunt and fish. I had fun. More than I have now."

"Well, to each his own. I like it now. But look, Doc, I didn't call up just to talk philosophy; I've got a little problem."

"Well, let's have it. It ought to be a relief; most people have big problems."

"Doc? Is it at all possible for the Long Sleep to cause amnesia?"

He hesitated before replying. "It is conceivably possible. I can't say that I've ever seen a case, as such. 1 mean unconnected with other causes."

"What are the things that cause amnesia?"

"Any number of things. The commonest, perhaps, is the patient's own subconscious wish. He forgets a sequence of events, or rearranges them, because the facts are unbearable to him. That's a functional amnesia in the raw. Then there is the old-fashioned knock on the head-amnesia from trauma. Or it might be amnesia through suggestion . . . under drugs or hypnosis. What's the matter, bub? Can't you find your checkbook?"

"It's not that. So far as I know, I'm getting along just fine now. But I can't get some things straight that happened before I took the Sleep . . . and it's got me worried."

"Mmm ... any possibility of any of the causes I mentioned?"

"Yes," I said slowly. "Uh, all of them, except maybe the bump on the head . . . and even that might have happened while I was drunk."

"I neglected to mention," he said dryly, "the commonest temporary amnesia-pulling a blank while under the affluence of alcohol. See here, son, why don't you come see me and we'll talk it over in detail? If I can't tag what is biting you-I'm not a psychiatrist, you know-I can turn you over to a hypno-analyst who will peel back your

memory like an onion and tell you why you were late to school on the fourth of February your second-grade year. But he's pretty expensive, so why not give me a whirl first?"

I said, "Cripes, Doe, I've bothered you too much already and you are pretty stuffy about taking money."

"Son, I'm always interested in my people; they're all the family I have."

So I put him off by saying that I would call him the first of the week if I wasn't straightened out. I wanted to think about it anyhow.

Most of the lights went out except in my office; a Hired Girl, scrubwoman type, looked in, twigged that the room was still occupied, and rolled silently away. I still sat there.

Presently Chuck Freudenberg stuck his head in and said, "I thought you left long ago. Wake up and finish your sleep at home."

I looked up. "Chuck, I've got a wonderful idea. Let's buy a barrel of beer and two straws."

He considered it carefully. "Well, it's Friday ... and I always like to have a head on Monday; it lets me know what day it is."

"Carried and so ordered. Wait a second while I stuff some things in this brief case."

We had some beers, then we had some food, then we had more beers at a place where the music was good, then we moved on to another place where there was no music and the booths had hush linings and they didn't disturb you as long as you ordered something about once an hour. We talked. I showed him the patent records.

Chuck looked over the Eager Beaver prototype. "That's a real nice job, Dan. I'm proud of you, boy. I'd like your autograph."

"But look at this one." I gave him the drafting-machine patent papers.

"Some ways this one is even nicer. Dan, do you realize that you have probably had more influence on the present state of the art than, well, than Edison had in his period? You know that, boy?"

"Cut it out, Chuck; this is serious." I gestured abruptly at the pile of photostats. "Okay, so I'm responsible for one of them. But I can't be responsible for the other one. I didn't do it . . . unless I'm completely mixed up about my own life before I took the Sleep. Unless I've got amnesia."

"You've been saying that for the past twenty minutes. But you don't seem to have any open circuits. You're no cra2ier than is normal in an engineer."

I banged the table, making the stems dance. "I've got to know!"

"Steady there. So what are you going to do?"

"Huh?" I pondered it. "I'm going to pay a psychiatrist to dig it out of me."

He sighed. "I thought you might say that. Now look, Dan, let's suppose you pay this brain mechanic to do this and he reports that nothing is wrong, your memory is in fine shape, and all your relays are closed. What then?"

"That's impossible."

"That's what they told Columbus. You haven't even mentioned the most likely explanation."

"Huh? What?"

Without answering he signaled the waiter and told it to bring back the big phone book, extended area. I said, "What's the matter? You calling the wagon for me?"

"Not yet." He thumbed through the enormous book, then stopped and said, "Dan, scan this."

I looked. He had his finger on "Davis." There were columns of Davises. But where he had his finger there were a dozen "D. B. Davises"-from "Dabney" to "Duncan."

There were three "Daniel B. Davises." One of them was me.

"That's from less than seven million people," he pointed out. "Want to try your luck on more than two hundred and fifty million?"

"It doesn't prove anything," I said feebly.

"No," he agreed, "it doesn't. It would be quite a coincidence, I readily agree, if two engineers with such similar talents happened to be working on the same sort of thing at the same time and just happened to have the same last name and the same initials. By the laws of statistics we could probably approximate just how unlikely it is that it would happen. But people forget-especially those who ought to know better, such as yourself-that while the laws of statistics tell you how unlikely a particular coincidence is, they state just as firmly that coincidences do happen. This looks like one. I like that a lot better than I like the theory that my beer buddy has slipped his cams. Good beer buddies are hard to come by."

"What do you think I ought to do?"

"The first thing to do is not to waste your time and money on a psychiatrist until you try the second thing. The second thing is to find out the first name of this `D. B. Davis' who filed this patent. There will be some easy way to do that. Likely as not his first name will be `Dexter.' Or even `Dorothy.' But don't trip a breaker if it is `Daniel,' because the middle name might be `Berzowski' with a social-security number different from yours. And the third thing to do, which is really the first, is to forget it for now and order another round."

So we did, and talked of other things, particularly women. Chuck had a theory that women were closely related to machinery, but utterly unpredictable by logic. He drew graphs on the table top in beer to prove his thesis.

Sometime later I said suddenly, "If there were real time travel, I know what I would do."

"Huh? What are you talking about?"

"About my problem. Look, Chuck, I got here-got to `now' I mean-by a sort of half-baked, horse-and-buggy time travel. But the trouble is I can't go back. All the things that are worrying me happened thirty years ago. I'd go back and dig out the truth if there were such a thing as real time travel." He stared at me. "But there is."

"What?"

He suddenly sobered. "I shouldn't have said that."

I said, "Maybe not, but you already have said it. Now you'd better tell me what you mean before I empty this here stein over your head."

"Forget it, Dan. I made a slip."

"Talk!"

"That's just what I can't do." He glanced around. No one was near us. "It's classified."

"Time travel classified? Good God, why?"

"Hell, boy, didn't you ever work for the government? They'd classify sex if they could. There doesn't have to be a reason; it's just their policy. But it is classified and I'm bound by it. So lay off."

"But-Quit fooling around about it, Chuck; this is important to me. Terribly important." When he didn't answer and looked stubborn I said, "You can tell me. Shucks, I used to have a 'Q' clearance myself. Never suspended, either. It's just that I'm no longer with the government."

"What's a `Q' clearance?"

I explained and presently he nodded. "You mean an `Alpha' status. You must have been hot stuff, boy; I only rated a `Beta.'"

"Then why can't you tell me?"

"Huh? You know why. Regardless of your rated status, you don't have the necessary `Need to Know' qualification."

"The hell I don't! `Need to Know' is what I've got most of."

But he wouldn't budge, so finally I said in disgust, "I don't think there is such a thing. I think you just had a belch back up on you."

He stared at me solemnly for a while, then he said, "Danny."

"Huh?"

"I'm going to tell you. Just remember your `Alpha' status, boy. I'm going to tell you because it can't hurt anything and I want you to realize that it couldn't possibly be of use to you in your problem. It's time travel, all right, but it's not practical. You can't use it."

"Why not?"

"Give me a chance, will you? They never smoothed the bugs out of it and it's not even theoretically possible that they ever will. It's of no practical value whatsoever, even for research. It's a mere by-product of NullGrav-that's why they classified it."

"But, hell, NullGrav is declassified."

"What's that got to do with it? If this was commercial, too, maybe they'd unwrap it. But shut up."

I'm afraid I didn't, but I'd rather tell this as if I had. During Chuck's senior year at the University of Colorado-Boulder, that is-he had earned extra money as a lab assistant. They had a big cryogenics lab there and at first he had worked in that. But the school had a juicy defense contract concerned with the Edinburgh field theory and they had built a big new physics laboratory in the mountains out of town. Chuck was reassigned there to Professor Twitchell-Dr. Hubert Twitchell, the man who just missed the Nobel Prize and got nasty about it.

"Twitch got the notion that if he polarized around another axis he could reverse the gravitational field instead of leveling it off. Nothing happened. So he fed what he had done back into the computer and got wild-eyed at the results. He never showed them to me, of course. He put two silver dollars into the test cageÄthey still used hard money around those parts then-after making me mark them. He punched the solenoid button and they disappeared.

"Now that is not much of a trick," Chuck went on. `Properly, he should have followed up by making them reappear out of the nose of a little boy who volunteers to come up on the stage. But he seemed satisfied, so I was-I was paid by the hour.

"A week later one of those cartwheels reappeared. Just one. But before that, one afternoon while I was cleaning up after he had gone home, a guinea pig showed up in the cage. It didn't belong in the lab and I hadn't seen it around before, so I took it over to the bio lab on my way home. They counted and weren't short any pigs, although it's hard to be certain with guinea pigs, so I took it home and made a pet out of it.

"After that single silver dollar came back Twitch got so worked up he quit shaving. Next time he used two guinea pigs from the bio lab. One of them looked awfully familiar to me, but I didn't see it long because he pushed the panic button and they both disappeared.

"When one of them came back about ten days later-the one that didn't look like mine-Twitch knew for sure he had it. Then the resident 0-in-C for the department of defense came around-a chair-type colonel who used to be a professor himself, of botany. Very military type. . . Twitch had no use for him. This colonel swore us both to double-dyed secrecy, over and above our `status' oaths. He seemed to think that he had the greatest thing in military logistics since Caesar invented the carbon copy. His idea was that you could send divisions forward or back to a battle you had lost, or were going to lose, and save the day. The enemy would never figure out what had happened. He was crazy in hearts and spades, of course . . . and he didn't get the star he was bucking for. But the `Critically Secret' classification he stuck on it stayed, so far as I know, right up to the present. I've never seen a disclosure on it."

"It might have some military use," I argued, "it seems to me, if you could engineer it to take a division of soldiers at a time. No, wait a minute. I see the hitch. You always had `em paired. It would take two divisions, one to go forward, one to go back. One division you would lose entirely . . . I suppose it would be more practical to have a division at the right time in the first place."

"You're right, but your reasons are wrong. You don't have to use two divisions or two guinea pigs or two anything. You simply have to match the masses. You could use a division of men and a pile of rocks that weighed as much. It's an action-reaction situation, corollary with Newton's Third Law." He started drawing in the beer drippings again. "MV equals MV ... the basic rocket ship formula. The cognate time-travel formula is MT equals MT."

"I still don't see the hitch. Rocks are cheap."

"Use your head, Danny. With a rocket ship you can aim the kinkin' thing. But which direction is last week? Point to it. Just try. You haven't the slightest idea which mass is going back and which one is going forward. There's no way to orient the equipment."

I shut up. It would be embarrassing to a general to expect a division of fresh shock troops and get nothing but a pile of gravel. No wonder the ex-prof never made brigadier. But Chuck was still talking:

"You treat the two masses like the plates of a condenser, bringing them up to the same temporal potential. Then you discharge them on a damping curve that is effectively vertical. Smacko!-one of them heads for the middle of next year, the other one is history. But you never know which one. But that's not the worst of it; you can't come back."

"Look, what use is it for research if you can't come back? Or for commerce? Either way you jump, your money is no good and you can't possibly get in touch with

where you started. No equipment-and believe me it takes equipment and power. We took power from the Arco reactors. Expensive . . . that's another drawback."

"You could get back," I pointed out, "with cold sleep."

"Huh? If you went to the past. You might go the other way; you never know. If you went a short enough time back so that they had cold sleep . . . no farther back than the war. But what's the point of that? You want to know something about 1980, say, you ask somebody or you look it up in old newspapers. Now if there was some way to photograph the Crucifixion...but there isn't. Not possible. Not only couldn't you get back, but there isn't that much power on the globe. There's an inverse-square law tied up in it too."

"Nevertheless, some people would try it just for the hell of it. Didn't anybody ever ride it?"

Chuck glanced around again. "I've talked too much already."

"A little more won't hurt."

"I think three people tried it. I think. One of them was an instructor. I was in the lab when Twitch and this bird, Leo Vincent, came in; Twitch told me I could go home. I hung around outside. After a while Twitch came Out and Vincent didn't. So far as I know, he's still in there. He certainly Wasn't teaching at Boulder after that."

"How about the other two?"

"Students. They all three went in together; only Twitch came Out. But one of them was in class the next day, whereas the other one was missing for a week. Figure it out yourself."

"Weren't you ever tempted?"

"Me? Does my head look fiat? Twitch suggested that it was almost my duty, in the interests of science, to volunteer. I said no, thanks; I'd take a short beer instead. . . but that I would gladly throw the switch for him. He didn't take me up on it."

"I'd take a chance on it. I could check up on what's worrying me . . . and then come back again by cold sleep. It would be worth it."

Chuck sighed deeply. "No more beer for you, my friend; you're drunk. You didn't listen to me. One,"-he started making tallies on the table top-"you have no way of knowing that you'd go back; you might go forward instead."

"I'd risk that. I like now a lot better than I liked then; I might like thirty years from now still better."

"Okay, so take the Long Sleep again; it's safer. Or just sit tight and wait for it to roll around; that's what I'm going to do. But quit interrupting me. Two, even if you did go back, you might miss 1970 by quite a margin. So far as I know, Twitch was shooting in the dark; I don't think he had it calibrated. But of course I was just the flunky. Three, that lab was in a stand of pine trees and it was built in 1980. Suppose you come out ten years before it was built in the middle of a western yellow pine? Ought to make quite an explosion, about like a cobalt bomb, huh? Only you wouldn't know it."

"But- As a matter of fact, I don't see why you would come out anywhere near the lab. Why not to the spot in outer space corresponding to where the lab used to be-I mean where it was.
or rather--"

"You don't mean anything. You stay on the world line you were on. Don't worry about the math; just remember what that guinea pig did. But if you go back before the lab

was built, maybe you wind up in a tree. Four, how could you get back to now even with cold sleep, even if you did go the right way, arrive at the right time, and live through it?"

"Huh? I did once, why not twice?"

"Sure. But what are you going to use for money?"

I opened my mouth and closed it. That one made me feel foolish. I had had the money once; I had it no longer. Even what I had saved (not nearly enough) I could not take with me-shucks, even if I robbed a bank (an art I knew nothing about) and took a million of the best back with me, I couldn't spend it in 1970. I'd simply wind up in jail for trying to shove funny money. They had even changed the shape, not to mention serial numbers, dates, colors, and designs. "Maybe I'd just have to save it up."

"Good boy. And while you were saving it, you'd probably wind up here and now again without half trying . . . but minus your hair and your teeth."

"Okay, okay. But let's go back to that last point. Was there ever a big explosion on that spot? Where the lab was?"

"No, I don't think so."

"Then I wouldn't wind up in a tree-because I didn't. Follow me?"

"I'm three jumps ahead of you. The old time paradox again, only I won't buy it. I've thought about theory of time, too, maybe more than you have. You've got it just backward. There wasn't any explosion and you aren't going to wind up in a tree . . . because you aren't ever going to make the jump. Do you follow me?"

"But suppose I did?"

"You won't. Because of my fifth point. It's the killer, so listen closely. You ain't about to make any such jump because the whole thing is classified and you can't. They won't let you. So let's forget it, Danny. It's been a very interesting intellectual evening and the FBI will be looking for me in the morning. So let's have one more round and Monday morning if I'm still out of jail I'll phone the chief engineer over at Aladdin and find out the first name of this other `D. B. Davis' character and who he was or is. He might even be working there and, if so, we'll have lunch with him and talk shop. I want you to meet Springer, the chief over at Aladdin, anyway; he's a good boy. And forget this time-travel nonsense; they'll never get the bugs out of it. I should never have mentioned it, and if you ever say I did I'll look you square in the eye and call you a liar. I might need my classified status again someday."

So we had another beer. By the time I was home and had taken a shower and had washed some of the beer out of my system I knew he was right. Time travel was about as practical a solution to my difficulties as cutting your throat to cure a headache. More important, Chuck would find out what I wanted to know from Mr. Springer just over chips and a salad, no sweat, no expense, no risk. And I liked the year I was living in.

When I climbed into bed I reached out and got the week's stack of papers. The Times came to me by tube each morning, now that I was a solid citizen. I didn't read it very much, because whenever I got my head soaked full of some engineering problem, which was usually, the daily fripperies you find in the news merely annoyed me, either by boring me or, worse still, by being interesting enough to distract my mind from its proper work.

Nevertheless, I never threw out a newspaper until I had at least glanced at the headlines and checked the vital-statistics column, the latter not for births, deaths, and marriages, but simply for "withdrawals," people coming out of cold sleep. I had a notion

that someday I would see the name of someone I had known back then, and then I would go around and say hello, bid him welcome, and see if I could give him a hand. The chances were against it, of course, but I kept on doing it and it always gave me a feeling of satisfaction.

I think that subconsciously I thought of all other Sleepers as my "kinfolk," the way anybody who once served in the same outfit is your buddy, at least to the extent of a drink.

There wasn't much in the papers, except the ship that was still missing between here and Mars, and that was not news but a sad lack of it. Nor did I spot any old friend~ among the newly awakened Sleepers. So I lay back and waited for the light to go out.

About three in the morning I sat up very suddenly, wide awake. The light came on and I blinked at it. I had had a very odd dream, not quite a nightmare but nearly, of having failed to notice little Ricky in the vital statistics.

I knew I hadn't. But just the same when I looked over and saw the week's stack of newspapers still sitting there I was greatly relieved; it had been possible that I had stuffed them down the chute before going to sleep, as I sometimes did.

I dragged them back onto the bed and started reading the vital statistics again. This time I read all categories, births, deaths, marriages, divorces, adoptions, changes of name, commitments, and withdrawals, for it had occurred to me that my eye might have caught Ricky's name without consciously realizing it, while glancing down the column to the only subhead I was interested in.Ä Ricky might have got married or had a baby or something.

I almost missed what must have caused the distressing dream. It was in the Times for 2 May, 2001, Tuesday's withdrawals listed in Wednesday's paper: "Riverside Sanctuary . . . F. V. Heinicke."

"F. V. Heinicke!"

"Heinicke" was Ricky's grandmother's name ... I knew it, I was certain of it~ I didn't know why I knew it. But I felt that it had been buried in my head and had not popped up until I read it again. I had probably seen it or heard it at some time from Ricky or Miles, or it was even possible that I had met the old gal at Sandia. No matter, the name, seen in the Times, had fitted a forgotten piece of information in my brain and then I knew.

Only I still had to prove it. I had to make sure that "F. V. Heinicke" stood for "Frederica Heinicke."

I was shaking with excitement, anticipation, and fear. In spite of well-established new habits I tried to zip my clothes instead of sticking the seams together and made a botch of getting dressed. But a few minutes later I was down in the hail where the phone booth was-I didn't have an instrument in my room or I would have used it; I was simply a supplementary listing for the house phone. Then I had to run back up again when I found that I had forgotten my phone credit ID card-I was really disorganized.

Then, when I had it, I was trembling so that I could hardly fit it into the slot. But I did and signaled "Service."

"Circuit desired?"

"Uh, I want the Riverside Sanctuary. That's in Riverside Borough."

"Searching . . holding . . . circuit free. We are signaling."

The screen lighted up at last and a man looked grumpily at me. "You must have the wrong phasing. This is the sanctuary. We're closed for the night."

I said, "Hang on, please. If this is the Riverside Sanctuary, you're just who I want."

"Well, what do you want? At this hour?"

"You have a client there, F. V. Heinicke, a new withdrawal. I want to know-"

He shook his head. "We don't give out information about clients over the phone. And certainly not in the middle of the night. You'd better call after ten o'clock. Better yet, come here."

"I will, I will. But I want to know just one thing. What do the initials `F. V.' stand for?"

"I told you that--"

"Will you listen, please? I'm not just butting in; I'm a Sleeper myself. Sawtelle. Withdrawn just lately. So I know all about the `confidential relationship' and what's proper. Now you've already published this client's name in the paper. You and I both know that the sanctuaries always give the papers the full names of clients withdrawn and committed. . . but the papers trim the given names to initials to save space. Isn't that true?"

He thought about it. "Could be."

"Then what possible harm is there in telling me what the initials P. V.' stand for?"

He hesitated still longer. "None, I guess, if that's all you want. It's all you're going to get. Hold on."

He passed out of the screen, was gone for what seemed like an hour, came back holding a card. "The light's poor," he said, peering at it. " `Frances'-no, `Frederica.' `Frederica Virginia?"

My ears roared and I almost fainted. "Thank God!"

"You all right?"

"Yes. Thank you. Thank you from the bottom of my heart. Yes, I'm all right."

"Hmm. I guess there's no harm in telling you one more thing. It might save you a trip. She's already checked out."

CHAPTER 9

I could have saved time by hiring a cab to jump me to Riverside, but I was handicapped by lack of cash. I was living in West Hollywood; the nearest twenty-four-hour bank was downtown at the Grand Circle of the Ways. So first I rode the Ways downtown and went to the bank for cash. One real improvement I had not appreciated up to then was the universal checkbook system; with a single cybernet as clearinghouse for the whole city and radioactive coding on my checkbook, I got cash laid in my palm as quickly there as I could have gotten it at my home bank across from Hired Girl, Inc.

Then I caught the express Way for Riverside. When I reached the sanctuary it was lust daylight.

There was nobody there but the night technician I had talked to and his wife, the night nurse. I'm afraid I didn't make a good impression. I had a day's beard, I was wild-eyed, I probably had a beer breath, and I had not worked out a consistent framework of lies.

Nevertheless, Mrs. Larrigan, the night nurse, was sympathetic and helpful. She got a photograph out of a file and said, "Is this your cousin, Mr. Davis?"

It was Ricky. There was no doubt about it, it was Ricky! Oh, not the Ricky I had known, for this was not a little girl but a mature young woman, twentyish or older, with a grown-up hairdo and a grown-up and very beautiful face. She was smiling.

But her eyes were unchanged and the ageless pixie quality of her face that had made her so delightful a child was still there. It was the same face, matured, filled out, grown beautiful, but unmistakable.

The stereo blurred, my eyes had filled with tears, "Yes," I managed to choke. "Yes. That's Ricky."

Mr. Larrigan said, "Nancy, you shouldn't have showed him that."

"Pooh, Hank, what harm is there in showing a photograph?"

"You know the rules." He turned to me. "Mister, as I told you on the phone, we don't give out information about clients. You come back here at ten o'clock when the administration office opens."

"Or you could come back at eight," his wife added. "Dr. Bernstein will be here then."

"Now, Nancy, you just keep quiet. If he wants information, the man to see is the director. Bernstein hasn't any more business answering questions than we have. Besides, she wasn't even Bernstein's patient."

"Hank, you're being fussy. You men like rules just for the sake of rules. If he's in a hurry to see her, he could be in Brawley by ten o'clock." She turned to me. "You come back at eight. That's best. My husband and I can't really tell you anything anyhow."

"What's this about Brawley? Did she go to Brawley?"

If her husband had not been there I think she would have told me more. She hesitated and he looked stern. She answered, "You see Dr. Bernstein. If you haven't had breakfast, there's a real nice place lust down the street."

So I went to the "real nice place" (it was) and ate and used their washroom and bought a tube of Beardgo from a dispenser in the washroom and a shirt from another dispenser and threw away the one I had been wearing. By the time I returned I was fairly respectable.

But Larrigan must have bent Dr. Bernstein's ear about me. He was a young man, resident in training, and he took a very stiff line. "Mr. Davis, you claim to be a Sleeper yourself. You must certainly know that there are criminals who make a regular business of preying on the gullibility and lack of orientation of a newly awakened Sleeper. Most Sleepers have considerable assets, all of them are unworldly in the world in which they find themselves, they are usually lonely and a bit scared-a perfect setup for confidence men."

"But all I want to know is where she went~ I'm her cousin. But I took the Sleep before she did, so I didn't know she was going to."

"They usually claim to be relatives." He looked at me closely. "Haven't I seen you before?"

"I strongly doubt it. Unless you just happened to pass me on the Ways, downtown." People are always thinking they've seen me before; I've got one of the Twelve Standard Faces, as lacking in uniqueness as one peanut in a sackful. "Doctor, how about phoning Dr. Albrecht at Sawtelle Sanctuary and checking on me?"

He looked judicial. "You come back and see the director. He can call the Sawtelle Sanctuary . . . or the police, whichever he sees fit."

So I left. Then I may have made a mistake. Instead of coming back to see the director and very possibly getting the exact information I needed (with the aid of Albrecht's vouching for me), I hired a jumpcab and went straight to Brawley.

It took three days to pick up her trail in Brawley. Oh, she had lived there and so had her grandmother; I found that out quickly. But the grandmother had died twenty years earlier and Ricky had taken the Sleep. Brawley is a mere hundred thousand compared with the seven million of Great Los Angeles; the twenty-year-old records were not hard to find. It was the trail less than a week old that I had trouble with.

Part of the trouble was that she was with someone; I had been looking for a young woman traveling alone. When I found out she had a man with her I thought anxiously about the crooks preying on Sleepers that Bernstein had lectured me about and got busier than ever.

I followed a false lead to Calexico, went back to Brawley, started over, picked it up again, and traced them as far as Yutna.

At Yuma I gave up the chase, for Ricky had gotten married. What I saw on the register at the county clerk's office there shocked me so much that I dropped everything and jumped a ship for Denver, stopping only to mail a card to Chuck telling him to clear out my desk and pack the stuff in my room.

I stopped in Denver just long enough to visit a dental-supply house. I had not been in Denver since it had become the capital-after the Six Weeks War, Miles and I had gone straight to California-and the place stunned me. Why, I couldn't even find Colfax Avenue. I had understood that everything essential to the government was buried back under the Rockies. If that is so, then there must be an awful lot of nonessentials still aboveground the place seemed even more crowded than Great Los Angeles.

At the dental-supply house I bought ten kilograms of gold, isotope 197, in the form of fourteen-gauge wire. I paid $86.10 a kilogram for it, which was decidedly too much, since gold of engineering quality was selling for around $70 a kilogram, and the transaction mortally wounded my only thousand-dollar bill. But engineering gold comes either in alloys never found in nature, or with isotopes 196 and 198 present, or both, depending on the application. For my purposes I wanted fine gold, undetectable from gold refined from natural ore, and I did not want gold that might burn my pants off if I got cozy with it-the overdose at Sandia had given me a healthy respect for radiation poisoning.

I wound the gold wire around my waist and went to Boulder. Ten kilograms is about the weight of a well-filled weekend bag and that much gold bulks almost exactly the same as a quart of milk. But the wire form of it made it bulk more than it would have solid; I can't recommend it as a girdle. But gold slugs would have been still harder to carry, and this way it was always with me.

Dr. Twitchell was still living there, though no longer working; he was professor emeritus and spent most of his waking hours in the bar of the faculty club. It took me four days to catch him in another bar, since the faculty club was closed to outlanders like me. But when I did, it turned out to be easy to buy him a drink.

He was a tragic figure in the classic Greek meaning, a great man-a very great man-gone to ruin. He should have been up there with Einstein and Bohr and Newton; as it was, only a few specialists in field theory were really aware of the stature of his work. Now when I met him his brilliant mind was soured with disappointment, dimmed with age, and soggy with alcohol. It was like visiting the ruins of what had been a magnificent temple after the roof has fallen in, hail the columns knocked down, and vines have grown over it all.

Nevertheless, he was brainier on the skids than I ever was at my best. I'm smart enough myself to appreciate real genius when I meet it.

The first time I saw him he looked up, looked straight at me and said, "You again."

"Sir?"

"You used to be one of my students, didn't you?"

"Why, no, sir, I never had that honor." Ordinarily when people think they have seen me before, I brush it off; this time I decided to exploit it if I could. "Perhaps you are thinking of my cousin, DoctorÄclass of `86. He studied under you at one time."

"Possibly. What did he major in?"

"He had to drop out without a degree, sir. But he was a great admirer of yours. He never missed a chance to tell people he had studied under you."

You can't make an enemy by telling a mother her child is beautiful. Dr. Twitchell let me sit down and presently let me buy him a drink. The greatest weakness of the glorious old wreck was his professional vanity. I had salvaged part of the four days before I could scrape up an acquaintance with him by memorizing everything there was about him in the university library, so I knew what papers he had written, where he had presented them, what earned and honorary degrees he held, and what books he had written. I had tried one of the latter, but I was already out of my depth on page nine, although I did pick up a little patter from it.

I let him know that I was a camp follower of science myself; right at present I was researching for a book: Unsung Geniuses.

"What's it going to be about?"

I admitted diffidently that I thought it would be appropriate to start the book with a popular account of his life and works, provided he would be willing to relax a bit from his well-known habit of shunning publicity. I would have to get a lot of my material from him, of course.

He thought it was claptrap and could not think of such a thing. But I pointed out that he had a duty to posterity and he agreed to think it over. By the next day he simply assumed that I was going to write his biography-not just a chapter, a whole book. From then on he talked and talked and I took notes . . . real notes; I did not dare try to fool him by faking, as he sometimes asked me to read back.

Finally I said, "Doctor, isn't it true that if it had not been for a certain colonel who was once stationed here you would have had the Nobel Prize hands down?"

He cursed steadily for three minutes with magnificent style. "Who told you about him?"

"Uh, Doctor, when I was doing research writing for the Department of Defense--I've mentioned that, haven't I?"

"No."

"Well, when I was, I heard the whole story from a young Ph.D. working in another section. He had read the report and he said it was perfectly clear that you would be the most famous name in physics today . . . if you had been permitted to publish your work."

"Hrrmph! That much is true."

"But I gathered that it was classified. . . by order of this Colonel, uh, Plushbottom."

"Thrushbotham. Thrushbotham, sir. A fat, fatuous, flatulent, foot-kissing fool incompetent to find his hat with it nailed to his head. Which it should have been."

"It seems a great pity."

"What is a pity, sir? That Thrushbotham was a fool? That was nature's doing, not mine."

"It seems a pity that the world should be deprived of the story. I understand that you are not allowed to speak of it."

"Who told you that? I say what I please~"

"That was what I understood, sir . . . from my friend in the Department of Defense."

"Hrrrmph!"

That was all I got Out of him that night. It took him a week to decide to show me his laboratory.

Most of the building was now used by other researchers, but his time laboratory he had never surrendered, even though he did not use it now; he fell back on its classified status and refused to let anyone else touch it, nor had he permitted the apparatus to be torn down. When he let me in, the place smelled like a vault that has not been opened in years.

He had had just enough drinks not to give a damn, not so many but what he was still steady. His capacity was pretty high. He lectured me on the mathematics of time theory and temporal displacement (he didn't call it "time travel"), but he cautioned me not to take notes. It would not have helped if I had, as he would start a paragraph with, "It is therefore obvious-" and go on from there to matters which may have been obvious to him and God but to no one else.

When he slowed down I said, "I gathered from my friend that the one thing you had not been able to do was to calibrate it? That you could not tell the exact magnitude of the temporal displacement?"

"What? Poppycock! Young man, if you can't measure it, it's not science." He bubbled for a bit, like a teakettle, then went on, "Here. I'll show you." He turned away and started making adjustments. All that showed of his equipment was what he called the "temporal locus stage"-just a low platform with a cage around it-and a control board which might have served for a steam plant or a low-pressure chamber. I'm fairly sure I could have studied out how to handle the controls had I been left alone to examine them, but I had been told sharply to stay away from them. I could see an eight-point Brown

recorder, some extremely heavy-duty solenoid-actuated switches, and a dozen other equally familiar components, but it didn't mean a thing without the circuit diagrams.

He turned back to me and demanded, "Have you any change in your pocket?"

I reached in and hauled out a handful. He glanced at it and selected two five-dollar pieces, mint new, the pretty green plastic hexagonals issued just that year. I could have wished that he had picked half fives, as I was running low.

"Do you have a knife?"

"Yes, sir."

"Scratch your initials on each of them."

I did so. He then had me place them side by side on the stage. "Note the exact time. I have set the displacement for exactly one week, plus or minus six seconds."

I looked at my watch. Dr. Twitchell said, "Five . . four three. . . two. . . one. . . now."

I looked up from my watch. The coins were gone. I didn't have to pretend that my eyes bugged out. Chuck had told me about a similar demonstration-but seeing it was another matter.

Dr. Twitchell said briskly, "We will return here one week from tonight and wait for one of them to reappear. As for the other one-you saw both of them on the stage? You placed them there yourself?"

"Yes, sir."

"Where was I?"

"At the control board, sir." He had been a good fifteen feet from the nearest part of the cage around the stage and had not approached it since.

"Very well. Come here." I did so and he reached into a pocket. "Here's one of your bits. You'll get the other back a week from now." He handed me a green five-dollar coin; it had my initials on it.

I did not say anything because I can't talk very well with my jaws sagging loosely. He went on, "Your remarks last week disturbed me. So I visited this place on Wednesday, something I have not done for-oh, more than a year. I found this coin on the stage, so I knew that it had been . . . would be . . . using the equipment again. It took me until tonight to decide to demonstrate it to you."

I looked at the coin and felt it. "This was in your pocket when we came here tonight?"

"Certainly."

"But how could it be both in your pocket and my pocket at the same time?"

"Good Lord, man, have you no eyes to see with? No brain to reason with? Can't you absorb a simple fact simply because it lies outside your dull existence? You fetched it here in your pocket tonight-and we kicked into last week. You saw. A few days ago I found it here. I placed it in my pocket. I fetched it here tonight. The same coin . . . or, to be precise, a later segment of its space-time structure, a week more worn, a week more dulled-but what the canaille would call the `same' coin. Although no more identical in fact than is a baby identical with the man the baby grows into. Older."

I looked at it. "Doctor ... push me back in time by a week."

He stared angrily. "Out of the question!"

"Why not? Won't it work with people?"

"Eh? Certainly it will work with people."

"Then why not do it? I'm not afraid. And think what a wonderful thing it would be for the book. . . if I could testify of my own knowledge that the Twitchell time displacement works."

"You can report it of your own knowledge. You just saw it."

"Yes," I admitted slowly, "but I won't be believed. That business with the coins . . . I saw it and I believe it. But anyone simply reading an account of it would conclude that I was gullible, that you had hoaxed me with some simple legerdemain."

"Damn it, sir!"

"That's what they would say. They wouldn't be able to believe that I actually had seen what I reported. But if you were to ship me back just a week, then I could report of my own knowledge-"

"Sit down. Listen to me." He sat down, but there was no place for me to sit, although he did not seem aware of it. "I have experimented with human beings long ago. And for that reason I resolved never to do it again."

"Why? Did it kill them?"

"What? Don't talk nonsense." He looked at me sharply, added, "You are not to put this in the book."

"As you say, sir."

"Some minor experiments showed that living subjects could make temporal displacements without harm. I had confided in a colleague, a young fellow who taught drawing and other matters in the school of architecture. Really more of an engineer than a scientist, but I liked him; his mind was alive. This young chap-it can't hurt to tell you his name: Leonard Vincent-was wild to try it. . . really try it; he wanted to undergo major displacement, five hundred years. I was weak. I let him."

"Then what happened?"

"How should I know? Five hundred years, man! I'll never live to find out."

"But you think he's five hundred years in the future?"

"Or the past. He might have wound up in the fifteenth century. Or the twenty-fifth. The chances are precisely even. There's an indeterminacy-symmetrical equations. I've sometimes thought no, just a chance similarity in names."

I didn't ask what he meant by this because I suddenly saw the similarity, too, and my hair stood on end. Then I pushed it out of my mind; I had other problems. Besides, chance similarity was all it could be-a man could not get from Colorado to Italy, not in the fifteenth century.

"But I resolved not to be tempted again. It wasn't science, it added nothing to the data, If he was displaced forward, well and good. But if he was displaced backward . . - then possibly I sent my friend to be killed by savages. Or eaten by wild animals."

Or even possibly, I thought, to become a "Great White God." I kept the thought to myself. "But you needn't use so long a displacement with me."

"Let's say no more about it, if you please, sir."

"As you wish, Doctor." But I couldn't drop it. "Uh, may I make a suggestion?"

"Eh? Speak up."

"We could get almost the same result by a rehearsal."

"What do you mean?"

"A complete dry run, with everything done just exactly as if you were intending to displace a living subject-I'll act out that part. We'll do everything precisely as if you meant to displace me, right up to the point where you would push that button. Then I'll understand the procedure. . . which I don't quite, as yet."

He grumbled a little but he really wanted to show off his toy. He weighed me and set aside metal weights just equal to my hundred and seventy pounds. "These are the same scales I used with poor Vincent."

Between us we placed them on one side of the stage. "What temporal setting shall we make?" he asked. "This is your show."

"Uh, you said that it could be set accurately?"

"I said so, sir. Do you doubt it?"

"Oh no, no! Well, let's see, this is the twenty-fourth of May-suppose we . . . how about, uh, say thirty-one years, three weeks, one day, seven hours, thirteen minutes, and twenty-five seconds?"

"A poor jest, sir. When I said `accurate' I meant `accurate to better than one part in one hundred thousand.' I have had no opportunity to calibrate to one part in nine hundred million."

"Oh. You see, Doctor, how important an exact rehearsal is to me, since I know so little about it. Uh, suppose we call it thirty-one years and three weeks. Or is that still too finicky?"

"Not at all. The maximum error should not exceed two hours." He made his adjustments. "You can take your place on the stage."

"Is that all?"

"Yes. All but the power. I could not actually make this displacement with the line voltage I used on those coins. But since we aren't actually going to do it, that doesn't matter."

I looked disappointed and was. "Then you don't actually have what is necessary to produce such a displacement? You were speaking theoretically?"

"Confound it, sir, I was not speaking theoretically."

"But if you don't have the power. . . ?"

"I can get the power if you insist. Wait." He went to a corner of the lab and picked up a phone. It must have been installed when the lab was new; I hadn't seen one like it since I was awakened. There followed a brisk conversation with the night superintendent of the university's powerhouse. Dr. Twitchell was not dependent on profanity; he could avoid it entirely and be more biting than most real artists can be when using plainer words. "I am not in the least interested in your opinions, my man. Read your instructions. I have full facilities whenever I wish them. Or can you read? Shall we meet with the president at ten tomorrow morning and have him read them to you? Oh? So you can read? Can you write as well? Or have we exhausted your talents? Then write this down: Emergency full power across the bus bars of the Thornton Memorial Laboratory in exactly eight minutes. Repeat that back."

He replaced the instrument. "People!"

He went to the control board, made some changes, and waited. Presently, even from where I stood inside the cage, I could see the long hands of three sets of meters swing across their dials and a red light came on at the top of the board. "Power," he announced.

"Now what happens?"

"Nothing."

"That's just what I thought."

"What do you mean?"

"What I said. Nothing would happen."

"I'm afraid I don't understand you. I hope I don't understand you. What I meant is that nothing would happen unless I closed this pilot switch. If I did, you would be displaced precisely thirty-one years, three weeks."

"And I still say nothing would happen."

His face grew dark. "I think, sir, you are being intentionally offensive."

"Call it what you want to. Doctor, I came here to investigate a remarkable rumor. Well, I've investigated it. I've seen a control board with pretty lights on it; it looks like a set for a mad scientist in a grabbie spectacular. I've seen a parlor trick performed with a couple of coins. Not much of a trick, by the way, since you selected the coins yourself and told me how to mark them; any parlor magician could do better. I've heard a lot of talk. But talk is cheap. What you claim to have discovered is impossible. By the way, they know that down at the department. Your report wasn't suppressed; it's simply filed in the screwball file. They get it out and pass it around now and then for a laugh."

I thought the poor old boy was going to have a stroke there and then. But I had to stimulate him by the only reflex he had left, his vanity.

"Come out of there, sir. Come out. I'm going to thrash you. With my bare hands I'm going to thrash you."

The rage he was in, I think he might have managed it, despite age and weight and physical condition. But I answered, "You don't scare me, Pappy. That dummy button doesn't scare me either. Go ahead and push it."

He looked at me, looked at the button, but still he didn't do anything. I snickered and said, "A hoax, just as the boys said it was. Twitch, you're a pompous old faker, a stuffed shirt. Colonel Thrushbotham was right."

That did it.

CHAPTER 10

Even as he stabbed at the button I tried to shout at him not to do it. But it was too late; I was already falling. My last thought was an agonized one that I didn't want to go through with it. I had chucked away everything and tormented almost to death a poor old man who hadn't done me any harm-and I didn't even know which way I was going. Worse, I didn't know that I could get there.

Then I hit. I don't think I fell more than four feet but I had not been ready for it. I fell like a stick, collapsed like a sack.

Then somebody was saying, "Where the devil did you come from?"

It was a man, about forty, bald-headed but well built and lean. He was standing facing me with his fists on his hipbones. He looked competent and shrewd and his face was not unpleasant save that at the moment he seemed sore at me.

I sat up and found that I was sitting on granite gravel and pine needles. There was a woman standing by the man, a pleasant pretty woman somewhat younger than he. She was looking at me wide-eyed but not speaking.

"Where am I?" I said foolishly. I could have said, "When am I?" but that would have sounded still more foolish, and besides, I didn't think of it. One look at them and I knew when I was not-I was sure it was not 1970. Nor was I still in 2001; in 2001 they kept that sort of thing for the beaches. So I must have gone the wrong way.

Because neither one of them wore anything but smooth coats of tan. Not even Sticktite. But they seemed to find it enough. Certainly they were not embarrassed by it.

"One thing at a time," he objected. "I asked you how you got here?" He glanced up. "Your parachute didn't stick in the trees, did it? In any case, what are you doing here? This is posted private property; you're trespassing. And what are you doing in that Mardi Gras getup?"

I didn't see anything wrong with my clothes-especially in view of the way they were dressed. But I didn't answer. Other times, other customs-I could see that I was going to have trouble.

She put a hand on his arm. "Don't, John," she said gently. "I think he's hurt."

He looked at her, glanced back sharply at me. "Are you hurt?"

I tried to stand up, managed it. "I don't think so. A few bruises, maybe. Uh, what date is today?"

"Huh? Why, it's the first Sunday in May. The third of May, I think. Is that right, Jenny?"

"Yes, dear."

"Look," I said urgently, "I got an awful knock on the head. I'm confused. What's the date? The whole date?"

"What?"

I should have kept my mouth shut until I could pick it up off something, a calendar or a paper. But I had to know right then; I couldn't stand to wait. "What year?"

"Brother, you did get a lump. It's 1970." I saw him staring at my clothes again.

My relief was almost more than I could stand. I'd made it, I'd made it! I wasn't too late. "Thanks," I said. "Thanks an awful lot. You don't know." He still looked as if he wanted to call out the reserves, so I added nervously, "I'm subject to sudden attacks of amnesia. Once I lost, uh-five whole years."

"I should think that would be upsetting," he said slowly. "Do you feel well enough to answer my questions?"

"Don't badger him, dear," she said softly. "He looks like a nice person. I think he's just made a mistake."

"We'll see. Well?"

"I feel all right . . . now. But I was pretty confused for a minute there."

"Okay. How did you get here? And why are you dressed that way?"

"To tell the truth, I'm not sure how I got here. And I certainly don't know where I am. These spells hit me suddenly. As for how I'm dressed. . . I guess you could call it personal eccentricity. Uh like the way you're dressed. Or not dressed."

He glanced down at himself and grinned. "Oh, yes, I'm quite aware that the way my wife and I are dressed. . . or not dressed would call for explanation under some circumstances. But we prefer to make trespassers do the explaining instead. You see, you

don't belong here, dressed that way or any other, while we do-just as we are. These are the grounds of the Denver Sunshine Club."

John and Jenny Sutton were the sort of sophisticated, unshockable, friendly people who could invite an earthquake in for tea. John obviously was not satisfied with my fishy explanations and wanted to cross-examine me, but Jenny held him back. I stuck to my story about "dizzy spells" and said that the last I remembered was yesterday evening and that I had been in Denver, at the New Brown Palace. Finally he said, "Well, it's quite interesting, even exciting, and I suppose somebody who's going into Boulder can drop you there and you can get a bus back into Denver." He looked at me again. "But if I take you back to the clubhouse, people are going to be mighty, mighty curious."

I looked down at myself. I had been made vaguely uneasy by the fact that I was dressed and they were not-I mean I felt like the one out of order, not they. "John . . . would it simplify things if I peeled off my clothes, too?" The prospect did not upset me; I had never been in one of the bare-skin camps before, seeing no point in them. But Chuck and I had spent a couple of weekends at Santa Barbara and one at Laguna Beach-at a beach skin makes sense and nothing else does.

He nodded. "It certainly would."

"Dear," said Jenny, "he could be our guest."

"Mmm. . . yes. My only love, you paddle your sweet self into the grounds. Mix around and manage to let it be known that we are expecting a guest from . . . where had it better be, Danny?"

"Uh, from California. Los Angeles. I actually am from there." I almost said "Great Los Angeles" and realized that I was going to have to guard my speech. "Movies" were no longer "grabbies."

"From Los Angeles. That and `Danny' is all that is necessary; we don't use last names, unless offered. So, honey, you spread the word, as if it were something everybody already knew. Then in about half an hour you have to meet us down by the gate. But come here instead. And fetch my overnight bag."

"Why the bag, dear?"

"To conceal that masquerade costume. It's pretty conspicuous, even for anyone who is as eccentric as Danny said he is."

I got up and went at once behind some bushes to undress, since I wouldn't have any excuse for locker-room modesty once Jenny Sutton left us. I had to do it; I couldn't peel down and reveal that I had twenty thousand dollars' worth of gold, figured at the 1970 standard of sixty dollars an ounce, wrapped around my waist. It did not take long, as I had made a belt of the gold, instead of a girdle, the first time I had had trouble getting it off and on to bathe; I had double-looped it and wired it together in front.

When I had my clothes off I wrapped the gold in them and tried to pretend that it all weighed only what clothes should. John Sutton glanced at the bundle but said nothing. He offered me a cigarette-he carried them strapped to his ankle. They were a brand I had never expected to see again.

I waved it but it didn't light. Then I let him light it for me. "Now," he said quietly, "that we are alone, do you have anything you want to tell me? If I'm going to vouch for you to the club, I'm honor-bound to be sure, at the very least, that you won't make trouble."

I took a puff. It felt raw in my throat. "John, I won't make any trouble. That's the last thing on earth that I want."

"Mmm. . . probably. Just `dizzy spells' then?"

I thought about it. It was an impossible situation. The man had a right to know. But he certainly would not believe the truth, at least I would not have in his shoes. But it would be worse if he did believe me; it would kick up the very hoorah that I did not want. I suppose that if I had been a real, honest, legitimate time traveler, engaged in scientific research, I would have sought publicity, brought along indisputable proof, and invited tests by scientists.

But I wasn't; I was a private and somewhat shady citizen, engaged in hanky-panky I didn't want to call attention to. I was simply looking for my Door into Summer, as quietly as possible.

"John, you wouldn't believe it if I told you."

"Mmm. . . perhaps. Still, I saw a man fall out of empty sky but he didn't hit hard enough to hurt him. He's wearing funny clothes. He doesn't seem to know where he is or what day it is. Danny, I've read Charles Fort, the same as most people. But I never expected to meet a case. But, having met one, I don't expect the explanation to be as simple as a card trick. So?"

"John, something you said earlier-the way you phrased something-made me think you were a lawyer."

"Yes, I am. Why?"

"Can I make a privileged communication?"

"Hmm-are you asking me to accept you as a client?"

"If you want to put it that way, yes. I'm probably going to need advice."

"Shoot. Privileged."

"Okay. I'm from the future. Time travel."

He didn't say anything for several moments. We were lying stretched out in the sun. I was doing it to keep warm; May in Colorado is sunshiny but brisk. John Sutton seemed used to it and was simply lounging, chewing a pine needle.

"You're right," he answered. "I don't believe it. Let's stick to `dizzy spells.'"

"I told you you wouldn't."

He sighed. "Let's say I don't want to. I don't want to believe in ghosts, either, or reincarnation, or any of this ESP magic. I like simple things that I can understand. I think most people do. So my first advice to you is to keep it a privileged communication. Don't spread it around."

"That suits me."

He rolled over. "But I think it would be a good idea if we burned these clothes. I'll find you something to wear. Will they burn?"

"Uh, not very easily. They'll melt."

"Better put your shoes back on. We wear shoes mostly, and those will get by. Anybody asks you questions about them, they're custom-made. Health shoes."

"They are, both."

"Okay." He started to unroll my clothes before I could stop him. "What the devil!"

It was too late, so I let him uncover it. "Danny," he said in a queer voice, "is this stuff what it appears to be?"

"What does it appear to be?"

"Gold."

"Where did you get it?"

"I bought it."

He felt it, tried the dead softness of the stuff, sensuous as putty, then hefted it. "Cripes! Danny . . . listen to me carefully. I'm going to ask you one question, and be damned careful how you answer it. Because I've got no use for a client who lies to me. I dump him. And I won't be a party to a felony. Did you come by this stuff legally?"

"Yes."

"Maybe you haven't heard of the Gold Reserve Act of 1968?"

"I have. I came by it legally. I intend to sell it to the Denver Mint, for dollars."

"Jeweler's license, maybe?"

"No. John, I told the simple truth, whether you believe me or not. Where I came from I bought that over the counter, legal as breathing. Now I want to turn it in for dollars at the earliest possible moment. I know that it is against the law to keep it. What can they do to me if I lay it on the counter at the mint and tell them to weigh it?"

"Nothing, in the long run. . . if you stick to your `dizzy spells.' But they can surely make your life miserable in the meantime." He looked at it. "I think you had better kick a little dirt over it."

"Bury it?"

"You don't have to go that far. But if what you tell me is true, you found this stuff in the mountains. That's where prospectors usually find gold."

"Well . . . whatever you say. I don't mind some little white lies, since it is legitimately mine anyhow."

"But is it a lie? When did you first lay eyes on this gold? What was the earliest date when it was in your possession?"

I tried to think back. It was the same day I left Yuma, which was sometime in May, 2001. About two weeks ago.

Huh!

"Put that way, John . . . the earliest date on which I saw that gold. . . was today, May third, 1970."

He nodded. "So you found it in the mountains."

The Suttons were staying over until Monday morning, so I stayed over. The other club members were all friendly but remarkably unnosy about my personal affairs, less so than any group I've ever been in. I've learned since that this constitutes standard good manners in a skin club, but at the time it made them the most discreet and most polite people I had ever met.

John and Jenny had their own cabin and I slept on a cot in the clubhouse dormitory. It was darn chilly. The next morning John gave me a shirt and a pair of blue jeans. My own clothes were wrapped around the gold in a bag in the trunk of his car- which itself was a Jaguar Imperator, all I needed to tell me that he was no cheap shyster. But I had known that by his manner.

I stayed overnight with them and by Tuesday I had a little money. I never laid eyes on the gold again, but in the course of the next few weeks John turned over to me its exact mint value as bullion minus the standard fees of licensed gold buyers. I know that

he did not deal with the mint directly, as he always turned over to me vouchers from gold buyers. He did not deduct for his own services and he never offered to tell me the details.

I did not care. Once I had cash again, I got busy. That first Tuesday, 5 May, 1970, Jenny drove me around and I rented a small loft in the old commercial district. I equipped it with a drafting table, a workbench, an army cot, and darn little else; it already had 120, 240, gas, running water, and a toilet that stopped up easily. I didn't want any more and I had to watch every dime.

It was tedious and time-wasting to design by the old compass-and-T-square routine and I didn't have a minute to spare, so I built Drafting Dan before I rebuilt Flexible Frank. Only this time Flexible Frank became Protean Pete, the all-purpose automaton, so linked as to be able to do almost anything a man can do, provided its Thorsen tubes were properly instructed. I knew that Protean Pete would not stay that way; his descendants would evolve into a horde of specialized gadgets, but I wanted to make the claims as broad as possible.

Working models are not required for patents, merely drawings and descriptions. But I needed good models, models that would work perfectly and anybody could demonstrate, because these models were going to have to sell themselves, show by their very practicality and by the evident economy designed into them for their eventual production engineering that they would not only work but would be a good investment- the patent office is stuffed with things that work but are worthless commercially.

The work went both fast and slow, fast because I knew exactly what I was doing, slow because I did not have a proper machine shop nor any help. Presently I grudgingly dipped into my precious cash to rent some machine tools, then things went better. I worked from breakfast to exhaustion, seven days a week, except for about one weekend a month with John and Jenny at the bare-bottom club near Boulder. By the first of September I had both models working properly and was ready to start on the drawings and descriptions. I designed and sent out for manufacture pretty speckle lacquer cover plates for both of them and I had the external moving parts chrome-plated; these were the only jobs I farmed out and it hurt me to spend the money, but I felt that it was necessary. Oh, I had made extreme use of catalogue-available standard components; I could not have built them otherwise, nor would they have been commercial when I got through. But I did not like to spend money on custom-made prettiness.

I did not have time to get around much, which was just as well. Once when I was out buying a servo motor I ran into a chap I had known in California. He spoke to me and I answered before I thought. "Hey, Dan! Danny Davis! Imagine bumping into you here. I thought you were in Mojave?"

I shook hands. "Just a quick business trip. I'm going back in a few days."

"I'm going back this afternoon. I'll phone Mlles and tell him I saw you."

I looked worried and was. "Don't do that, please."

"Why not? Aren't you and Miles still buddy-buddy budding tycoons together?"

"Well . . . look, Mort, Miles doesn't know I'm here. I'm supposed to be in Albuquerque on business for the company. But I flew up here on the side, on strictly personal and private business. Get me? Nothing to do with the firm. And I don't care to discuss it with Miles."

He looked knowing. "Woman trouble?"

"Weelll . . . yes."

"She married?"

"You might say so."

He dug me in the ribs and winked. "I catch. Old Miles is pretty puritanical isn't he? Okay, I'll cover for you and someday you can cover for me. Is she any good?"

I'd like to cover you with a spade, I thought to myself, you fourth-rate frallup. Mort was the sort of no-good traveling salesman who spends more time trying to seduce waitresses than taking care of his customers-besides which, the line he handled was as shoddy as he was, never up to its specs.

But I bought him a drink and treated him to fairy tales about the "married woman" I had invented and listened while he boasted to me of no doubt equally fictitious exploits. Then I shook him.

On another occasion I tried to buy Dr. Twitchell a drink and failed.

I had seated myself beside him at the restaurant counter of a drugstore on Champa Street, then caught sight of his face in the mirror. My first impulse was to crawl under the counter and hide.

Then I caught hold of myself and realized that, out of all the persons living in 1970, he was the one I had least need to worry about. Nothing could go wrong because nothing had. . . I meant "nothing would." No-Then I quit trying to phrase it, realizing that if time travel ever became widespread, English grammar was going to have to add a whole new set of tenses to describe reflexive situations-conjugations that would make the French literary tenses and the Latin historical tenses look simple.

In any case, past or future or something else, Twitchell was not a worry to me now. I could relax.

I studied his face in the mirror, wondering if I had been misled by a chance resemblance. But I had not been. Twitchell did not have a general-issue face like mine; he had stern, self-assured, slightly arrogant and quite handsome features which would have looked at home on Zeus. I remembered that face only in ruins, but there was no doubt-and I squirmed inside as I thought of the old man and how badly I had treated him. I wondered how I could make it up to him.

Twitchell caught sight of me eying him in the mirror and turned to me. "Something wrong?"

"No. Uh . . you're Dr. Twitchell, aren't you? At the university?"

"Denver University, yes. Have we met?"

I had almost slipped, having forgotten that he taught at the city university in this year. Remembering in two directions is difficult. "No, Doctor, but I've heard you lecture. You might say I'm one of your fans."

His mouth twitched in a half-smile but he did not rise to it. From that and other things I learned that he had not yet acquired a gnawing need for adulation; he was sure of himself at that age and needed only his own self-approval. "Are you sure you haven't got me mixed up with a movie Star?"

"Oh no! You're Dr. Hubert Twitchell . . . the great physicist."

His mouth twitched again. "Let's just say that I am a physicist. Or try to be."

We chatted for a while and I tried to hang onto him after he had finished his sandwich. I said it would be an honor if he would let me buy him a drink. He shook his head. "I hardly drink at all and certainly never before dark. Thanks anyway. It's been nice meeting you. Drop into my lab someday if you are ever around the campus."

I said I would.

But I did not make many slips in 1970 (second time around) because I understood it and, anyhow, most people who might have recognized me were in California. I resolved that if I did meet any more familiar faces I would give them the cold stare and the quick brushoff-take no chances.

But little things can cause you trouble too. Like the time I got caught in a zipper simply because I had become used to the more convenient and much safer Sticktite closures. A lot of little things like that I missed very much after having learned in only six months to take them for granted. Shaving-I had to go back to shaving! Once I even caught a cold. That horrid ghost of the past resulted from forgetting that clothes could get soaked in rain. I wish that those precious esthetes who sneer at progress and prattle about the superior beauties of the past could have been with me-dishes that let food get chilled, shirts that had to be laundered, bathroom mirrors that steamed up when you needed them, runny noses, dirt underfoot and dirt in your lungs-I had become used to a better way of living and 1970 was a series of petty frustrations until I got the hang of it again.

But a dog gets used to his fleas and so did I. Denver in 1970 was a very quaint place with a fine old-fashioned flavor; I became very fond of it. It was nothing like the slick New Plan maze it had been (or would be) when I had arrived (or would arrive) there from Yuma; it still had less than two million people, there were still buses and other vehicular traffic in the streets-there still were streets; I had no trouble finding Colfax Avenue.

Denver was still getting used to being the national seat of government and was not quite happy in the role, like a boy in his first formal evening clothes. Its spirit still yearned for high-heeled boots and its Western twang even though it knew it had to grow up and be an international metropolis, with embassies and spies and famous gourmet restaurants. The city was being jerry-built in all directions to house the bureaucrats and lobbyists and contact men and clerk-typists and flunkies; buildings were being thrown up so fast that with each one there was hazard of enclosing a cow inside the walls. Nevertheless, the city had extended only a few miles past Aurora on the east, to Henderson on the north, and Littleton on the south-there was still open country before you reached the Air Academy. On the west, of course, the city flowed into the high country and the federal bureaus were tunneling back into the mountains.

I liked Denver during its federal boom. Nevertheless, I was excruciatingly anxious to get back to my own time.

It was always the little things. I had had my teeth worked over completely shortly after I had been put on the staff of Hired Girl and could afford it. I had never expected to have to see a dental plastician again. Nevertheless, in 1970 I did not have anti-caries pills and so I got a hole in a tooth, a painful one or I would have ignored it. So I went to a dentist. So help me, I had forgotten what he would see when he looked into my mouth. He blinked, moved his mirror around, and said, "Great jumping Jehosaphat! Who was your dentist?"

"Kah hoo hank?"

He took his hands out of my mouth. "Who did it? And how?"

"Huh? You mean my teeth? Oh, that's experimental work they're doing in. . . India."

"How do they do it?"

"How would I know?"

"Mmm. . . wait a minute. I've got to get some pictures of this." He started fiddling with his X-ray equipment.

"Oh no," I objected. "Just clean out that bicuspid, plug it up with anything, and let me out of here."

"But-"

"I'm sorry, Doctor. But I'm on a dead run."

So he did as I said, pausing now and again to look at my teeth. I paid cash and did not leave my name. I suppose I could have let him have the pics, but covering up had become a reflex. It couldn't have hurt anything to let him have them. Nor helped either, as X rays would not show how regeneration was accomplished, nor could I have told him.

There is no time like the past to get things done. While I was sweating sixteen hours a day on Drafting Dan and Protean Pete I got something else done with my left hand. Working anonymously through John's law office I hired a detective agency with national branches to dig up Belle's past. I supplied them with her address and the license number and model of her car (since steering wheels are good places to get fingerprints) and suggested that she might have been married here and there and possibly might have a police record. I had to limit the budget severely; I couldn't afford the sort of investigation you read about.

When they did not report back in ten days I kissed my money good-by. But a few days later a thick envelope showed up at John's office.

Belle had been a busy girl. Born six years earlier than she claimed, she had been married twice before she was eighteen. One of them did not count because the man already had a wife; if she had been divorced from the second the agency had not uncovered it. She had apparently been married four times since then although once was doubtful; it may have been the "war-widow" racket worked with the aid of a man who was dead and, could not object. She had been divorced once (respondent) and one of her husbands was dead. She might still be "married" to the others.

Her police record was long and interesting but apparently she had been convicted of a felony only once, in Nebraska, and granted parole without doing time. This was established only by fingerprints, as she had jumped parole, changed her name, and had acquired a new social-security number. The agency asked if they were to notify Nebraska authorities.

I told them not to bother; she had been missing for nine years and her conviction had been for nothing worse than lure in a badger game. I wondered what I would have done if it had been dope peddling? Reflexive decisions have their complications.

I ran behind schedule on the drawings and October was on me before I knew it. I still had the description only half worded, since they had to tie into drawings, and I had done nothing about the claims. Worse, I had done nothing about organizing the deal so that it would hold up; I could not do it until I had a completed job to show. Nor had I had time to make contacts. I began to think that I had made a mistake in not asking Dr. Twitchell to set the controls for at least thirty-two years instead of thirty-one years and a fiddling three weeks; I had underestimated the time I would need and overestimated my own capacity.

I had not shown my toys to my friends, the Suttons, not because I wanted to hide them, but because I had not wanted a lot of talk and useless advice while they were

incomplete. On the last Saturday in September 1 was scheduled to go out to the club camp with them. Being behind schedule, I had worked late the night before, then had been awakened early by the torturing clang of an alarm clock so that I could shave and be ready to go when they came by. I shut the sadistic thing off and thanked God that they had got rid of such horrible devices in 2001, then I pulled myself groggily together and went down to the corner drugstore to phone and say that I couldn't make it, I had to work.

Jenny answered, "Danny, you're working too hard. A weekend in the country will do you good."

"I can't help it, Jenny. I have to. I'm sorry."

John got on the other phone and said, "What's all this nonsense?"

"I've got to work, John. I've simply got to. Say hello to the folks for me."

I went back upstairs, burned some toast, vulcanized some eggs, sat back down at Drafting Dan.

An hour later they banged on my door.

None of us went to the mountains that weekend. Instead I demonstrated both devices. Jenny was not much impressed by Drafting Dan (it isn't a woman's gismo, unless she herself is an engineer), but she was wide-eyed over Protean Pete. She kept house with a Mark II Hired Girl and could see how much more this machine could do.

But John could see the importance of Drafting Dan. When I showed him how I could write my signature, recognizably my own, just by punching keys-I admit I had practiced-his eyebrows stayed up. "Chum, you're going to throw draftsmen out of work by the thousand."

"No, I won't. The shortage of engineering talent in this country gets worse every year; this gadget will just help to fill the gap. In a generation you are going to see this tool in every engineering and architectural office in the nation. They'll be as lost without it as a modern mechanic would be without power tools."

"You talk as if you knew."

"I do know."

He looked over at Protean Pete-I had set him to tidying my workbench-and back at Drafting Dan. "Danny ... sometimes I think maybe you were telling me the truth, you know, the thy we met you."

I shrugged. "Call it second sight . . . but I do know. I'm certain. Does it matter?"

"I guess not. What are your plans for these things?"

I frowned. "That's the hitch, John. I'm a good engineer and a fair jackleg mechanic when I have to be. But I'm no businessman; I've proved that. You've never fooled with patent law?"

"I told you that before. It's a job for a specialist."

"Do you know an honest one? Who's smart as a whip besides? It's reached the point where I've got to have one. I've got to set up a corporation, too, to handle it. And work out the financing. But I haven't got much time; I'm terribly pressed for time."

"Why?"

"I'm going back where I came from."

He sat and said nothing for quite a while. At last he said, "How much time?"

"Uh, about nine weeks. Nine weeks from this coming Thursday to be exact."

He looked at the two machines, looked back at me. "Better revise your schedule. I'd say that you had more like nine months' work cut out for you. You won't be in production even then-just lined up to start moving, with luck."

"John, I can't."

"I'll say you can't."

"I mean I can't change my schedule. That's beyond my control now." I put my face in my hands. I was dead with fatigue, having had less than five hours' sleep and having averaged not much better for days. The shape I was in, I was willing to believe that there was something, after all, to this "fate" business-a man could struggle against it but never beat it.

I looked up. "Will you handle it?"

"Eh? What part of it?"

"Everything. I've done all I know how to do."

"That's a big order, Dan. I could rob you blind. You know that, don't you? And this may be a gold mine."

"It will be. I know."

"Then why trust me? You had better just keep me as your attorney, advice for a fee."

I tried to think while my head ached. I had taken a partner once before-but, damnation, no matter how many times you get your fingers burned, you have to trust people. Otherwise you are a hermit in a cave, sleeping with one eye open. There wasn't any way to be safe; just being alive was deadly dangerous . . . fatal. In the end.

"Cripes, John, you know the answer to that. You trusted me. Now I need your help again. Will you help me?"

"Of course he will," Jenny put in gently, "though I haven't heard what you two were talking about. Danny? Can it wash dishes? Every dish you have is dirty."

"What, Jenny? Why, I suppose he can. Yes, of course he can."

"Then tell him to, please. I want to see it."

"Oh. I've never programmed him for it. I will if you want me to. But it will take several hours to do it right. Of course after that he'll always be able to do it. But the first time. . . well, you see, dishwashing involves a lot of alternate choices. It' s a `judgment' job, not a comparatively simple routine like laying bricks or driving a truck."

"Goodness! I'm certainly glad to find that at least one man understands housework. Did you hear what he said, dear? But don't stop to teach him now, Danny. I'll do them myself." She looked around. "Danny, you've been living like a pig, to put it gently."

To tell the simple truth, it had missed me entirely that Protean Pete could work for me. I had been engrossed in planning how he could work for other people in commercial jobs, and teaching him to do them, while I myself had simply been sweeping dirt into the corner or ignoring it. Now I began teaching him all the household tasks that Flexible Frank had learned; he had the capacity, as I had installed three times as many Thorsen tubes in him as Frank had had.

I had time to do it, for John took over.

Jenny typed descriptions for us; John retained a patent attorney to help with the claims. I don't know whether John paid him cash or cut him in on the cake; I never asked.

I left the whole thing up to him, including what our shares should be; not only did it leave me free for my proper work, but I figured that if he decided such things he could never be tempted the way Miles had been. And I honestly did not care; money as such is not important. Either John and Jenny were what I thought they were or I might as well find that cave and be a hermit.

I insisted on just two things. "John, I think we ought to call the firm `The Aladdin Autoengineering Corporation.'"

"Sounds pretty fancy. What's wrong with `Davis & Sutton'?"

"That's how it's got to be, John."

"So? Is your second sight telling you this?"

"Could be, could be. We'll use a picture of Aladdin rubbing his lamp as a trade-mark, with the genie funning above him. I'll make a rough sketch. And one thing: the home office had better be in Los Angeles."

"What? Now you've gone too far. That is, if you expect me to run it. What's wrong with Denver?"

"Nothing is wrong with Denver, it's a nice town. But it is not the place to set up the factory. Pick a good site here and some bright morning you wake up and find that the federal enclave has washed over it and you are out of business until you get re-established on a new one. Besides that, labor is scarce, raw materials come overland, building materials are all gray-market. Whereas Los Angeles has an unlimited supply of skilled workmen and more pouring in every thy, Los Angeles is a seaport, Los Angeles is-"

"How about the smog? It's not worth it."

"They'll lick the smog before long. Believe me. And haven't you noticed that Denver is working up smog of its own?"

"Now wait a minute, Dan. You've already made it clear that I will have to run this while you go kiyoodling off on some business of your own. Okay, I agreed. But I ought to have some choice in working conditions."

"It's necessary, John."

"Dan, nobody in his right mind who lives in Colorado would move to California. I was stationed out there during the war; I know. Take Jenny here; she's a native Californian, that's her secret shame. You couldn't hire her to go back. Here you've got winters, changing seasons, brisk mountain air, magnificent-"

Jenny looked up. "Oh, I wouldn't go so far as to say I'd never go back."

"What's that, dear?"

Jenny had been quietly knitting; she never talked unless she really had something to say. Now she put down her knitting, a clear sign. "If we did move there, dear, we could join the Oakdale Club; they have outdoor swimming all year round. I was thinking of that just this last weekend when I saw ice on the pool at Boulder."

I stayed until the evening of 2 December, 1970, the last possible minute. I was forced to borrow three thousand dollars from John-the prices I had paid for components had been scandalous-but I offered him a stock mortgage to secure it. He let me sign it, then tore it up and dropped it in a wastebasket. "Pay me when you get around to it."

"It will be thirty years, John."

"As long as that?"

I pondered it. He had never invited me to tell my whole story since the afternoon, six months earlier, when he had told me frankly that he did not believe the essential part-but was going to vouch for me to their club anyhow.

I told him I thought it was time to tell him. "Shall we wake up Jenny? She's entitled to hear it too."

"Mmm. . . no. Let her nap until just before you have to leave. Jenny is a very uncomplicated person, Dan. She doesn't care who you are or where you came from as long as she likes you. If it seems a good idea, I can pass it on to her later."

"As you will." He let me tell it all, stopping only to fill our glasses-mine with ginger ale; I had a reason not to touch alcohol. When I had brought it up to the point where I landed on a mountainside outside Boulder, I stopped. "That's it," I said. "Though I was mixed up on one point. I've looked at the contour since and I don't think my fall was more than two feet. If they had-I mean `if they were going to'-bulldoze that laboratory site any deeper, I would have been buried alive. Probably would have killed both of you too-if it didn't blow up the whole county. I don't know just what happens when a fiat wave form changes back into a mass where another mass already is."

John went on smoking. "Well?" I said. "What do you think?"

"Danny, you've told me a lot of things about what Los Angeles-I mean `Great Los Angeles'-is going to be like. I'll let you know when I see you just how accurate you've been."

"It's accurate. Subject to minor slips of memory."

"Mmm . . . you certainly make it sound logical. But in the meantime I think you are the most agreeable lunatic I've ever met. Not that it handicaps you as an engineer. . . or as a friend. I like you, boy. I'm going to buy you a new strait jacket for Christmas."

"Have it your own way."

"I have to have it this way. The alternative is that I myself am stark staring mad. . . and that would make quite a problem for Jenny." He glanced at the clock. "We'd better wake her. She'd scalp me if I let you leave without saying good-by to her."

"I wouldn't think of it."

They drove me to Denver International Port and Jenny kissed me good-by at the gate. I caught the eleven o'clock shuttle for Los Angeles.

CHAPTER 11

The following evening, 3 December, 1970, I had a cabdriver drop me a block from Miles's house comfortably early, as I did not know exactly what time I had arrived there the first time. It was already dark as I approached his house, but I saw only his car at the curb, so I backed off a hundred yards to a spot where I could watch that stretch of curb and waited.

Two cigarettes later I saw another car pull up there, stop, and its lights go out. I waited a couple of minutes longer, then hurried toward it. It was my own car.

I did not have a key but that was no hurdle; I was always getting ears-deep in an engineering problem and forgetting my keys; I had long ago formed the habit of keeping a spare ditched in the trunk. I got it now and climbed into the ear. I had parked on a slight

grade heading downhill, so, without turning on lights or starting the engine, I let it drift to the corner and turned there, then switched on the engine but not the lights, and parked again in the alley back of Miles's house and on which his garage faced.

The garage was locked. I peered through dirty glass and saw a shape with a sheet over it. By its contours I knew it was my old friend Flexible Frank.

Garage doors are not built to resist a man armed with a tire iron and determination-not in southern California in 1970. It took seconds. Carving Frank into pieces I could carry and stuff into my car took much longer. But first I checked to see that the notes and drawings were where I suspected they were-they were indeed, so I hauled them out and dumped them on the floor of the car, then tackled Frank himself. Nobody knew as well as I did how he was put together, and it speeded up things enormously that I did not care how much damage I did; nevertheless, I was as busy as a one-man band for nearly an hour.

I had just stowed the last piece, the wheel-chair chassis, in the car trunk and had lowered the turtleback down on it as far as it would go when I heard Pete start to wail. Swearing to myself at the time it had taken to tear Frank apart I hurried around the garage and into their back yard. Then the commotion started.

I had promised myself that I would relish every second of Pete's triumph. But I couldn't see it. The back door was open and light was streaming out the screen door, but while I could hear sounds of running, crashes, Pete's blood-chilling war cry, and screams from Belle, they never accommodated me by coming into my theater of vision. So I crept up to the screen door, hoping to catch a glimpse of the carnage.

The damned thing was hooked! It was the only thing that had failed to follow the schedule. So I frantically dug into my pocket, broke a nail getting my knife open-and jabbed through and unhooked it just in time to jump out of the way as Pete hit the screen like a stunt motorcyclist hitting a fence.

I fell over a rosebush. I don't know whether Miles and Belle even tried to follow him outside. I doubt it; I would not have risked it in their spot. But I was too busy getting myself untangled to notice.

Once I was on my feet I stayed behind bushes and moved around to the side of the house; I wanted to get away from that open door and the light pouring out of it. Then it was just a case of waiting until Pete quieted down. I would not touch him then, certainly not try to pick him up. I know cats.

But every time he passed me, prowling for an entrance and sounding his deep challenge, I called out to him softly. "Pete. Come here, Pete. Easy, boy, it's all right."

He knew I was there and twice he looked at me, but otherwise ignored me. With cats it is one thing at a time; he had urgent business right now and no time to head-bump with Papa. But I knew he would come to me when his emotions had eased off.

While I squatted, waiting, I heard water running in their bathrooms and guessed that they had gone to clean up, leaving me in the living room. I had a horrid thought then: what would happen if I sneaked in and cut the throat of my own helpless body? But I suppressed it; I wasn't that curious and suicide is such a final experiment, even if the circumstances are mathematically intriguing. But I never have figured it out.

Besides, I didn't want to go inside for any purpose. I might run into Miles-and I didn't want any truck with a dead man.

Pete finally stopped in front of me about three feet out of reach. "Mrrrowrr?" he said-meaning, "Let's go back and clean out the joint. You hit `em high, I'll hit `em low."

"No, boy. The show is over."

"Aw, c'mahnnn!"

"Time to go home, Pete. Come to Danny."

He sat down and started to wash himself. When he looked up, I put my arms out and he jumped into them. "Kwleert?" ("Where the hell were you when the riot started?")

I carried him back to the car and dumped him in the driver's space, which was all there was left. He sniffed the hardware on his accustomed place and looked around reproachfully. "You'll have to sit in my lap," I said. "Quit being fussy."

I switched on the car's lights as we hit the street. Then I turned east and headed for Big Bear and the Girl Scout camp. I chucked away enough of Frank in the first ten minutes to permit Pete to resume his rightful place, which suited us both better. When I had the floor clear, several miles later, I stopped and shoved the notes and drawings down a storm drain. The wheel-chair chassis I did not get rid of until we were actually in the mountains, then it went down a deep arroyo, making a nice sound effect.

About three in the morning I pulled into a motor court across the mad and down a bit from the turnoff into the Girl Scout camp, and paid too much for a cabin-Pete almost queered it by sticking his head up and making a comment when the owner came out.

"What time," I asked him, "does the morning mail from Los Angeles get up here?"

"Helicopter comes in at seven-thirteen, right on the dot."

"Fine. Give me a call at seven, will you?"

"Mister, if you can sleep as late as seven around here you're better than I am. But I'll put you in the book."

By eight o'clock Pete and I had eaten breakfast and I had showered and shaved. I looked Pete over in daylight and concluded that he had come through the battle undamaged except for possibly a bruise or two. We checked out and I drove into the private road for the camp. Uncle Sam's truck turned in just ahead of me; I decided that it was my day.

I never saw so many little girls in my life. They skittered like kittens and they all looked alike in their green uniforms. Those I passed wanted to look at Pete, though most of them just stared shyly and did not approach. I went to a cabin marked "Headquarters," where I spoke to another uniformed scout who was decidedly no longer a girl.

She was properly suspicious of me; strange men who want to be allowed to visit little girls just turning into big girls should always be suspected.

I explained that I was the child's uncle, Daniel B. Davis by name, and that I had a message for the child concerning her family. She countered with the statement that visitors other than parents were permitted only when accompanied by a parent and, in any case, visiting hours were not until four o'clock.

"I don't want to visit with Frederica, but I must give her this message. It's an emergency."

"In that case you can write it out and I will give it to her as soon as she is through with rhythm games."

I looked upset (and was) and said, "I don't want to do that. It would be much kinder to tell the child in person."

"Death in the family?"

"Not quite. Family trouble, yes. I'm sorry, ma'am, but I am not free to tell anyone else. It concerns my niece's mother."

She was weakening but still undecided. Then Pete joined the discussion. I had been carrying him with his bottom in the crook of my left arm and his chest supported with my right hand; I had not wanted to leave him in the car and I knew Ricky would want to see him. He'll put up with being carried that way quite a while but now he was getting bored. "Krrwarr?"

She looked at him and said, "He's a fine boy, that one. I have a tabby at home who could have come from the same litter."

I said solemnly, "He's Frederica's cat. I had to bring him along because . . . well, it was necessary. No one to take care of him."

"Oh, the poor little fellow!" She scratched him under the chin, doing it properly, thank goodness, and Pete accepted it, thank goodness again, stretching his neck and closing his eyes and looking indecently pleased. He is capable of taking a very stiff line with strangers if he does not fancy their overtures.

The guardian of youth told me to sit down at a table under the trees outside the headquarters. It was far enough away to permit a private visit but still under her careful eye. I thanked her and waited.

I didn't see Ricky come up. I heard a shout, "Uncle Danny!" and another one as I turned, "And you brought Pete! Oh, this is wonderful!"

Pete gave a long bubbling bleerrrt and leaped from my arms to hers. She caught him neatly, rearranged him in the support position he likes best, and they ignored me for a few seconds while exchanging cat protocols. Then she looked up and said soberly, "Uncle Danny, I'm awful glad you're here."

I didn't kiss her; I did not touch her at all. I've never been one to paw children and Ricky was the sort of little girl who only put up with it when she could not avoid it. Our original relationship, back when she was six, had been founded on mutual decent respect for the other's individualism and personal dignity.

But I did look at her. Knobby knees, stringy, shooting up fast, not yet filled out, she was not as pretty as she had been as a baby girl. The shorts and T-shirt she was wearing, combined with peeling sunburn, scratches, bruises, and an understandable amount of dirt, did not add up to feminine glamour. She was a matchstick sketch of the woman she would become, her coltish gawkiness relieved only by her enormous solemn eyes and the pixie beauty of her thin smudged features.

She looked adorable.

I said, "And I'm awful glad to be here, Ricky."

Trying awkwardly to manage Pete with one arm, she reached with her other hand for a bulging pocket in her shorts. "I'm surprised too. I just this minute got a letter from you-they dragged me away from mail call; I haven't even had a chance to open it. Does it say that you're coming today?" She got it out, creased and mussed from being crammed into a pocket too small.

"No, it doesn't, Ricky. It says I'm going away. But after I mailed it, I decided I just had to come say good-by in person."

She looked bleak and dropped her eyes. "You're going away?"

"Yes. I'll explain, Ricky, but it's rather long. Let's sit down and I'll tell you about it." So we sat on opposite sides of the picnic table under the ponderosas and I talked. Pete lay on the table between us, making a library lion of himself with his forepaws on the creased letter, and sang a low song like bees buzzing in deep clover, while he narrowed his eyes in contentment.

I was much relieved to find that she already knew that Miles had married Belle-I hadn't relished having to break that to her. She glanced up, dropped her eyes at once, and said with no expression at all, "Yes, I know. Daddy wrote me about it."

"Oh. I see."

She suddenly looked grim and not at all a child. "I'm not going back there, Danny. I won't go back there."

"But-Look here, Rikki-tikki-tavi, I know how you feel. I certainly don't want you to go back there-I'd take you away myself if I could. But how can you help going back? He's your daddy and you are only eleven."

"I don't have to go back. He's not my real daddy. My grandmother is coming to get me."

"What? When's she coming?"

"Tomorrow. She has to drive up from Brawley. I wrote her about it and asked her if I could come live with her because I wouldn't live with Daddy any more with her there." She managed to put more contempt into one pronoun than an adult could have squeezed out of profanity. "Grandma wrote back and said that I didn't have to live there if I didn't want to because he had never adopted me and she was my `guardian of record.'" She looked up anxiously. "That's right, isn't it? They can't make me?"

I felt an overpowering flood of relief. The one thing I had not been able to figure out, a problem that had worried me for months, was how to keep Ricky from being subjected to the poisonous influence of Belle for-well, two years; it had seemed certain that it would be about two years. "If he never adopted you, Ricky, I'm certain that your grandmother can make it stick if you are both firm about it." Then I frowned and chewed my lip. "But you may have some trouble tomorrow. They may object to letting you go with her."

"How can they stop me? I'll just get in the car and go."

"It's not that simple, Ricky. These people who run the camp, they have to follow rules. Your daddy-Miles, I mean-Miles turned you over to them; they won't be willing to turn you back over to anyone but him."

She stuck out her lower lip. "I won't go. I'm going with Grandma."

"Yes. But maybe I can tell you how to make it easy. If I were you, I wouldn't tell them that I'm leaving camp; I'd just tell them that your grandmother wants to take you for a ride-then don't come back."

Some of her tension relaxed. "All right."

"Uh. . . don't pack a bag or anything or they may guess what you're doing. Don't try to take any clothes but those you are wearing at the time. Put any money or anything you really want to save into your pockets. You don't have much here that you would really mind losing, I suppose?"

"I guess not." But she looked wistful. "rye got a brand-new swim suit."

How do you explain to a child that there are times when you just must abandon your baggage? You can't-they'll go back into a burning building to save a doll or a toy elephant. "Mmm...Ricky, have your grandmother tell them that she is taking you over to Arrowhead to have a swim with her. . . and that she may take you to dinner at the hotel there, but that she will have you back before taps. Then you can carry your swimming suit and a towel. But nothing else. Er, will your grandmother tell that fib for you?"

"I guess so. Yes, I'm sure she will. She says people have to tell little white fibs or else people couldn't stand each other. But she says fibs were meant to be used, not abused."

"She sounds like a sensible person. You'll do it that way?"

"I'll do it just that way, Danny."

`Good." I picked up the battered envelope. "Picky, I told you I had to go away. I have to go away for a very long time."

"How long?"

"Thirty years."

Her eyes grew wider if possible. At eleven, thirty years is not a long time; it's forever. I added, "I'm sorry, Ricky. But I have to."

"Why?"

I could not answer that one. The true answer was unbelievable and a lie would not do. "Picky, it's much too hard to explain. But I have to. I can't help it." I hesitated, then added, "I'm going to take the Long Sleep. The cold sleep-you know what I mean."

She knew. Children get used to new ideas faster than adults do; cold sleep was a favorite comic-book theme. She looked horrified and protested, "But, Danny, I'll never see you again~"

"Yes, you will. It's a long time but I'll see you again. And so will Pete. Because Pete is going with me; he's going to cold-sleep too."

She glanced at Pete and looked more woebegone than ever.
"But-Danny, why don't you and Pete just come down to Brawley and live with us? That would be ever so much better. Grandma will like Pete. She'll like you too-she says there's nothing like having a man around the house."

"Ricky. . . dear Ricky. . . I have to. Please don't tease me." I started to tear open the envelope.

She looked angry and her chin started to quiver. "I think she has something to do with this!"

"What? If you mean Belle, she doesn't. Not exactly, anyway."

"She's not going to cold-sleep with you?"

I think I shuddered. "Good heavens, not I'd run miles to avoid her."

Picky seemed slightly mollified. "You know, I was so mad at you about her. I had an awful outrage."

"I'm sorry, Ricky. I'm truly sorry. You were right and I was wrong. But she hasn't anything to do with this. I'm through with her, forever and forever and cross my heart. Now about this." I held up the certificate for all that I owned in Hired Girl, Inc. "Do you know what it is?"

I explained it to her. "I'm giving this to you, Picky. Because I'm going to be gone so long I want you to have it." I took the paper on which I had written an assignment to

her, tore it up, and put the pieces in my pocket; I could not risk doing it that way-it would be too easy for Belle to tear up a separate sheet and we were not yet out of the woods. I turned the certificate over and studied the standard assignment form on the back, trying to plan how to work it in the Bank of America in trust for- "Ricky, what is your full name?"

"Frederica Virginia. Frederica Virginia Gentry. You know."

"Is it `Gentry'? I thought you said Miles had never adopted you?"

"Oh! I've been Picky Gentry as long as I can remember. But you mean my real name. It's the same as Grandma's ... the same as my real daddy's. Heinicke. But nobody ever calls me that."

"They will now." I wrote "Frederica Virginia Heinicke" and added "and to be reassigned to her on her twenty-first birthday" while prickles ran down my spine-my original assignment might have been defective in any case.

I started to sign and then noticed our watchdog sticking her head out of the office. I glanced at my wrist, saw that we had been talking an hour; I was running out of minutes.

But I wanted it nailed down tight. "Ma'am!"

"Yes?"

"By any chance, is there a notary public around here? Or must I find one in the village?"

"I am a notary. What do you wish?"

"Oh, good! Wonderful! Do you have your seal?"

"I never go anywhere without it."

So I signed my name under her eye and she even stretched a point (on Ricky's assurance that she knew me and Pete's silent testimony to my respectability as a fellow member of the fraternity of cat people) and used the long form: "-known to me personally as being said Daniel B. Davis--" When she embossed her seal through my signature and her own I sighed with relief. Just let Belle try to find a way to twist that one!

She glanced at it curiously but said nothing. I said solemnly, "Tragedies cannot be undone but this will help. The kid's education, you know."

She refused a fee and went back into the office. I turned back to Picky and said, "Give this to your grandmother. Tell her to take it to a branch of the Bank of America in Brawley. They'll do everything else." I laid it in front of her.

She did not touch it. "That's worth a lot of money, isn't it?"

"Quite a bit. It will be worth more."

"I don't want it."

"But, Picky, I want you to have it."

"I don't want it. I won't take it." Her eyes filled with tears and her voice got unsteady. "You're going away forever and. . . and you don't care about me any more." She sniffed. "Just like when you got engaged to her. When you could just as easily bring Pete and come live with Grandma and me. I don't want your money!"

"Picky. Listen to me, Picky. It's too late. I couldn't take it back now if I wanted to. It's already yours."

"I don't care. I won't ever touch it." She reached out and stroked Pete. "Pete wouldn't go away and leave me . . . only you're going to make him. Now I won't even have Pete."

I answered unsteadily, "Picky? Rikki-tikki-tavi? You want to see Pete. . . and me again?"

I could hardly hear her. "Of course I do. But I won't."

"But you can."

"Huh? How? You said you were going to take the Long Sleep thirty years, you said."

"And I am. I have to. But, Picky, here is what you can do. Be a good girl, go live with your grandmama, go to school-and just let this money pile up. When you are twenty-one-if you still want to see us-you'll have enough money to take the Long Sleep yourself. When you wake up I'll be there waiting for you. Pete and I will both be waiting for you. That's a solemn promise."

Her expression changed but she did not smile. She thought about it quite a long time, then said, "You'll really be there?"

"Yes. But we'll have to make a date. If you do it, Ricky, do it just the way I ten you. You arrange it with the Cosmopolitan Insurance Company and you make sure that you take your Sleep in the Riverside Sanctuary in Riverside. . . and you make very sure that they have orders to wake you up on the first day of May, 2001, exactly. I'll be there that day, waiting for you. If you want me to be there when you first open your eyes, you'll have to leave word for that, too, or they won't let me farther than the waiting room-I know that sanctuary; they're very fussy." I took out an envelope which I had prepared before I left Denver. "You don't have to remember this; I've got it all written out for you. Just save it, and on your twenty-first birthday you can make up your mind. But you can be sure that Pete and I will be there waiting for you, whether you show up or not." I laid the prepared instructions on the stock certificate.

I thought that I had her convinced but she did not touch either of them. She stared at them, then presently said, "Danny?"

"Yes, Ricky?"

She would not look up and her voice was so low that I could barely hear her. But I did hear her. "If I do. . . will you marry me?"

My ears roared and the lights flickered. But I answered steadily and much louder than she had spoken. "Yes, Picky. That's what I want. That's why I'm doing this."

I had just one more thing to leave with her: a prepared envelope marked "To Be Opened in the Event of the Death of Miles Gentry." I did not explain it to her; I just told her to keep it. It contained proof of Belle's varied career, matrimonial and otherwise. In the hands of a lawyer it should make a court fight over his will no contest at all.

Then I gave her my class ring from Tech (it was all I had) and told her it was hers; we were engaged. "It's too big for you but you can keep it. I'll have another one for you when you wake up."

She held it tight in her fist. "I won't want another one."

"All right. Now better tell Pete good-by, Picky. I've got to go. I can't wait a minute longer."

She hugged Pete, then handed him back to me, looked me steadily in the eye even though tears were running down her nose and leaving clean streaks. "Good-by, Danny."

"Not `good-by,' Ricky. Just `so long.' We'll be waiting for you."

It was a quarter of ten when I got back to the village. I found that a helicopter bus was due to leave for the center of the city in twenty-five minutes, so I sought out the only used-car lot and made one of the fastest deals in history, letting my car go for half what it was worth for cash in hand at once. It left me just time to sneak Pete into the bus (they are fussy about airsick cats) and we reached Powell's office just after eleven o'clock.

Powell was much annoyed that I had canceled my arrangements for Mutual to handle my estate and was especially inclined to lecture me over having lost my papers. "I can't very well ask the same judge to pass on your committal twice in the same twenty-four hours. It's most irregular."

I waved money at him, cash money with convincing figures on it. "Never mind eating me out about it, Sergeant. Do you want my business or don't you? If not, say so, and I'll beat it on up to Central Valley. Because I'm going today."

He still fumed but he gave in. Then he grumbled about adding six months to the cold-sleep period and did not want to guarantee an exact date of awakening. "The contracts ordinarily read `plus or minus' one month to allow for administrative hazards."

"This one doesn't. This one reads 27 April, 2001. But I don't care whether it says `Mutual' at the top or `Central Valley.' Mr. Powell, I'm buying and you're selling. If you don't sell what I want to buy I'll go where they do sell it."

He changed the contract and we both initialed it.

At twelve straight up I was back in for my final check with their medical examiner. He looked at me. "Did you stay sober?"

"Sober as a judge."

"That's no recommendation. We'll see." He went over me almost as carefully as he had "yesterday." At last he put down his rubber hammer and said, "I'm surprised. You're in much better shape than you were yesterday. Amazingly so."

"Doc, you don't know the half of it."

I held Pete and soothed him while they gave him the first sedative. Then I lay back myself and let them work on me. I suppose I could have waited another day, or even longer, just as well as not-but the truth was that I was frantically anxious to get back to 2001.

About four in the afternoon, with Pete's flat head resting on my chest, I went happily to sleep again.

CHAPTER 12

My dreams were pleasanter this time. The only bad one I remember was not too bad, but simply endless frustration. It was a cold dream in which I wandered shivering through branching corridors, trying every door I came to, thinking that the next one would surely be the Door into Summer, with Ricky waiting on the other side. I was hampered by Pete, "following me ahead of me," that exasperating habit cats have of scalloping back and forth between the legs of persons trusted not to step on them or kick them.

At each new door he would duck between my feet, look out it, find it still winter outside, and reverse himself, almost tripping me.

But neither one of us gave up his conviction that the next door would be the right one.

I woke up easily this time, with no disorientation-in fact the F doctor was somewhat irked that all I wanted was some breakfast, the Great Los Angeles Times, and no chitchat. I didn't think it was worth while to explain to him that this was my second time around; he would not have believed me.

There was a note waiting for me, dated a week earlier, from John:

Dear Dan,

All right, I give up. How did you do it? I'm complying with your request not to be met, against Jenny's wishes. She sends her love and hopes that you won't be too long in looking us up-I've tried to explain to her that you expect to be busy for a while. We are both fine although I tend to walk where I wed to run. Jenny is even more beautiful than she used to be.
Hasta Ia vista, amigo,
John

P.S. If the enclosure is not enough, just phone-there is plenty more where it came from. We've done pretty well, I think.

I considered calling John, both to say hello and to tell him about a colossal new idea I had had while asleep-a gadget to change bathing from a chore to a sybaritic delight. But I decided not to; I had other things on my mind. So I made notes while the notion was fresh and then got some sleep, with Pete's head tucked into my armpit. I wish I could cure him of that. It's flattering but a nuisance.

On Monday, the thirtieth of April, I checked out and went over to Riverside, where I got a room in the old Mission Inn. They made the predictable fuss about taking a cat into a room and an autobellhop is not responsive to bribes-hardly an improvement. But the assistant manager had more flexibility in his synapses; he listened to reason as long as it was crisp and rustled. I did not sleep well; I was too excited.

I presented myself to the director of the Riverside Sanctuary at ten o'clock the next morning. "Dr. Rumsey, my name is Daniel B. Davis. You have a committed client here named Frederica Heinicke?"

"I suppose you can identify yourself?"

I showed him a 1970 driver's license issued in Denver, and my withdrawal certificate from Forest Lawn Sanctuary. He looked them over and me, and handed them back. I said anxiously, "I think she's scheduled for withdrawal today. By any chance, are there any instructions to permit me to be present? I don't mean the processing routines; I mean at the last minute, when she's ready for the final restimulant and consciousness."

He shoved his 11ps out and looked judicial. "Our instructions for this client do not read to wake her today."

"No?" I felt disappointed and hurt.

"No. Her exact wishes are as follows: instead of necessarily being waked today, she wished not to be waked at all until you showed up." He looked me over and smiled. "You must have a heart of gold. I can't account for it on your beauty."

I sighed. "Thanks, Doctor."

"You can wait in the lobby or come back. We won't need you for a couple of hours."

I went back to the lobby, got Pete, and took him for a walk. I had parked him there in his new travel bag and he was none too pleased with it, even though I had bought one as much like his old one as possible and had installed a one-way window in it the night before. It probably didn't smell right as yet.

We passed the "real nice place," but I was not hungry even though I hadn't been able to eat much breakfast-Pete had eaten my eggs and had turned up his nose at yeast strips. At eleven-thirty I was back at the sanctuary. Finally they let me in to see her.

All I could see was her face; her body was covered. But it was my Ricky, grown woman size and looking like a slumbering angel.

"She's under posthypnotic instruction," Dr. Rumsey said softly. "If you will stand just there, I'll bring her up. Uh, I think you had better put that cat outside."

"No, Doctor."

He started to speak, shrugged, turned back to his patient. "Wake up, Frederica. Wake up. You must wake up now."

Her eyelids fluttered, she opened her eyes. They wandered for an instant, then she caught sight of us and smiled sleepily. "Danny and Pete." She raised both armsÄand I saw that she was wearing my Tech class ring on her left thumb.

Pete chirrlupped and jumped on the bed, started doing shoulder dives against her in an ecstasy of welcome.

Dr. Rumsey wanted her to stay overnight, but Ricky would have none of it. So I had a cab brought to the door and we jumped to Brawley. Her grandmother had died in 1980 and her social links there had gone by attrition, but she had left things in storage there-books mostly. I ordered them shipped to Aladdin, care of John Sutton. Ricky was a little dazzled by the changes in her old home town and never let go my arm, but she never succumbed to that terrible homesickness which is the great hazard of the Sleep. She merely wanted to get out of Brawley as quickly as possible.

So I hired another cab and we jumped to Yuma. There I signed the county clerk's book in a fine round hand, using my full name "Daniel Boone Davis," so that there could be no possible doubt as to which D. B. Davis had designed this magnum opus. A few minutes later I was standing with her little hand in mine and choking over, "I, Daniel, take thee, Frederica - . . till death us do part."

Pete was my best man. The witnesses we scraped up in the courthouse.

We got out of Yuma at once and jumped to a guest ranch near Tucson, where we had a cabin away from the main lodge and equipped with our own Eager Beaver to fetch and carry so that we did not need to see anyone. Pete fought a monumental battle with the torn who until then had been boss of the ranch, whereupon we had to keep Pete in or watch him. This was the only shortcoming I can think of. Ricky took to being married as if she had invented it, and me-well, I had Ricky.

There isn't much more to be said. Voting Ricky's Hired Girl stockÄit was still the largest single block-I had McBee eased upstairs to "Research Engineer Emeritus" and put

Chuck in as chief engineer. John is boss of Aladdin but keeps threatening to retire-an idle threat. He and I and Jenny control the company, since he was careful to issue preferred stock and to float bonds rather than surrender control. I'm not on the board of either corporation; I don't run them and they compete. Competition is a good idea-Darwin thought well of it.

Me, I'm just the "Davis Engineering Company"-a drafting room, a small shop, and an old machinist who thinks I'm crazy but follows my drawings to exact tolerance. When we finish something I put it out for license.

I had my notes on Twitchell recovered. Then I wrote and told him I had made it and returned via cold sleep...and apologized abjectly for having "doubted" him. I asked if he wanted to see the manuscript when I finished. He never answered so I guess he is still sore at me.

But I am writing it and I'll put it in all major libraries even if I -k have to publish at my own expense. I owe him that much. I owe him much more; I owe him for Ricky. And for Pete. I'm going to title it Unsung Genius. Jenny and John look as if they would last forever. Thanks to geriatrics, fresh air, sunshine, exercise, and a mind that never worries, Jenny is prettier than ever at...well, sixty-three is my guess. John thinks that I am "merely" clairvoyant and does not want to look at the evidence. Well, how did I do it? I tried to explain it to Ricky, but she got upset when I told her that while we were on our honeymoon I was actually and no foolin' also up at Boulder, and that while I was visiting her at the Girl Scout camp I was also lying in a drugged stupor in San Fernando Valley. She turned white. So I said, "Let's put it hypothetically. It's all logical when you look at it mathematically. Suppose we take a guinea pig-white with brown splotches. We put him in the time cage and kick him back a week. But a week earlier we had already found him there, so at that time we had put him in a pen with himself. Now we've got two guinea pigs. . . although actually it's
just one guinea pig, one being the other one a week older. So when you took one of them and kicked him back a week and-"
"Wait a minute! Which one?"
"Which one? Why, there never was but one. You took the one a week younger, of course, because-"
"You said there was just one. Then you said there were two. Then you said the two was just one. But you were going to take one of the two. . . when there was just one-"
"I'm trying to explain how two can be just one. If you take the younger-"
"How can you tell which guinea pig is younger when they look just alike?"
"Well, you could cut off the tail of the one you are sending back. Then when it came back you would--"
"Why, Danny, how cruel! Besides, guinea pigs don't have tails."
She seemed to think that proved something. I should never have tried to explain.
But Ricky is not one to fret over things that aren't important. Seeing that I was upset, she said softly, "Come here, dear." She rumpled what hair I have left and kissed me. "One of you is all I want, dearest. Two might be more than I could manage. Tell me one thing-are you glad you waited for me to grow up?"

I did my darnedest to convince her that I was.

But the explanation I tried to give does not explain everything. I missed a point even though I was riding the merry-go-round myself and counting the revolutions. Why

didn't I see the notice of my own withdrawal? I mean the second one, in April 2001, not the one in December 2000. 1 should have; I was there and I used to check those lists. I was awakened (second time) on Friday, 27 April, 2001; it should have been in next morning's Times. But I did not see it. I've looked it up since and there it is: "D. B. Davis," in the Times for Saturday, 28 April, 2001.

Philosophically, just one line of ink can make a different universe as surely as having the continent of Europe missing. Is the old "branching time streams" and "multiple universes" notion correct? Did I bounce into a different universe, different because I had monkeyed with the setup? Even though I found Ricky and Pete in it? Is there another universe somewhere (or somewhen) in which Pete yowled until he despaired, then wandered off to fend for himself, deserted? And in which Ricky never managed to flee with her grandmother but had to suffer the vindictive wrath of Belle?

One line of fine print isn't enough. I probably felt asleep that night and missed reading my own name, then stuffed the paper down the chute next morning, thinking I had finished with it. I am absent-minded, particularly when I'm thinking about a job.

But what would I have done if I had seen it? Gone there, met myself-and gone stark mad? No, for if I had seen it, I wouldn't have done the things I did afterward-"afterward" for me-which led up to it. Therefore it could never have happened that way. The control is a negative feedback type, with a built-in "fail safe," because the very existence of that line of print depended on my not seeing it; the apparent possibility that I might have seen it is one of the excluded "not possibles" of the basic circuit design.

"There's a divinity that shapes our ends, rough-hew them how we will." Free will and predestination in one sentence and both true. There is only one real world, with one past and one future. "As it was in the beginning, is now and ever shall be, world without end, amen." Just one . . . but big enough and complicated enough to include free will and time travel and everything else in its linkages and feedbacks and guard circuits. You're allowed to do anything inside the rules . . . but you come back to your own door.

I'm not the only person who has time-traveled. Fort listed too many cases not explainable otherwise and so did Ambrose Bierce. And there were those two ladies in the gardens of the Trianon. I have a hunch, too, that old Doc Twitchell closed that switch oftener than he admitted . . . to say nothing of others who may have learned how in the past or future. But I doubt if much ever comes of it. In my case only three people know and two don't believe me. You can't do much if you do time-travel. As Fort said, you railroad only when it comes time to railroad.

But I can't get Leonard Vincent out of my mind. Was he Leonardo da Vinci? Did he beat his way across the continent and go back with Columbus? The encyclopedia says that his life was such-and-such-but he might have revised the record. I know how that is; I've had to do a little of it. They didn't have social-security numbers, ID cards, nor fingerprints in fifteenth-century Italy; he could have swung it.

But think of him, marooned from everything he was used to, aware of flight, of power, of a million things, trying desperately to picture them so that they could be made-but doomed to frustration because you simply can't do the things we do today without centuries of former art to build on.

Tantalus had it easier.

I've thought about what could be done with time travel commercially if it were declassified-making short jumps, setting up machinery to get back, taking along

components. But someday you'd make one jump too many and not be able to set up for your return because it's not time to "railroad." Something simple, like a special alloy, could whip you. And there is that truly awful hazard of not knowing which way you are going. Imagine winding up at the court of Henry VIII with a load of subflexive fasartas intended for the twenty-fifth century. Being becalmed in the horse latitudes would be better.

No, you should never market a gadget until the bugs are out of it.

But I'm not worried about "paradoxes" or "causing anachronisms"-if a thirtieth-century engineer does smooth out the bugs and then sets up transfer stations and trade, it will be because the Builder designed the universe that way. He gave us eyes, two hands, a brain; anything we do with them can't be a paradox. He doesn't need busybodies to "enforce" His laws; they enforce themselves. There are no miracles and the word "anachronism" is a semantic blank.

But I don't worry about philosophy any more than Pete does. Whatever the truth about this world, I like it. I've found my Door into Summer and I would not time-travel again for fear of getting off at the wrong station. Maybe my son will, but if he does I will urge him to go forward, not back. "Back" is for emergencies; the future is better than the past. Despite the crapehangers, romanticists, and anti-intellectuals, the world steadily grows better because the human mind, applying itself to environment, makes it better. With hands . . - with tools . . . with horse sense and science and engineering.

Most of these long-haired belittlers can't drive a nail nor use a slide rule, I'd like to invite them into Dr. Twitchell's cage and ship them back to the twelfth century-then let them enjoy it.

But I am not mad at anybody and I like now. Except that Pete is getting older, a little fatter, and not as inclined to choose a younger opponent; all too soon he must take the very Long Sleep. I hope with all my heart that his gallant little soul may find its Door into Summer, where catnip fields abound and tabbies are complacent, and robot opponents are programmed to fight fiercely -but always lose-and people have friendly laps and legs to strop against, but never a foot that kicks.

Ricky is getting fat, too, but for a temporary, happier reason. It has just made her more beautiful and her sweet eternal Yea! is unchanged, but it isn't comfortable for her. I'm working on gadgets to make things easier. It just isn't very convenient to be a woman; something ought to be done and I'm convinced that some things can be done. There's that matter of leaning over, and also the backaches-I'm working on those, and I've built her a hydraulic bed that I think I will patent. It ought to be easier to get in and out of a bathtub than it is too. I haven't solved that yet.

For old Pete I've built a "cat bathroom" to use in bad weather-automatic, self-replenishing, sanitary, and odorless. However, Pete, being a proper cat, prefers to go outdoors, and he has never given up his conviction that if you just try all the doors one of them is bound to be the Door into Summer.

You know, I think he is right.

Robert A. Heinlein – Double Star

Chapter 1

If a man walks in dressed like a hick and acting as if he owned the place, he's a spaceman.

It is a logical necessity. His profession makes him feel like boss of all creation; when he sets foot dirtside he is slumming among the peasants. As for his sartorial inelegance, a man who is in uniform nine tenths of the time and is more used to deep space than to civilization can hardly be expected to know how to dress properly. He is a sucker for the alleged tailors who swarm around every spaceport peddling "ground outfits."

I could see that this big-boned fellow had been dressed by Omar the Tentmaker-padded shoulders that were too big to start with, shorts cut so that they crawled up his hairy thighs as he sat down, a ruffled chemise that might have looked well on a cow.

But I kept my opinion to myself and bought him a drink with my last half-Imperial, considering it an investment, spacemen being the way they are about money. "Hot jets!" I said as we touched glasses. He gave me a quick glance.

That was my initial mistake in dealing with Dak Broadbent. Instead of answering, "Clear space!" or, "Safe grounding!" as he should have, he looked me over and said softly, "A nice sentiment, but to the wrong man. I've never been out."

That was another good place to keep my mouth shut. Spacemen did not often come to the bar of Casa Mañana; it was not their Sort of hotel and it's miles from the port. When one shows up in ground clothes, seeks a dark corner of the bar, and objects to being called a spaceman, that's his business. I had picked that spot myself so that I could see without being seen-I owed a little money here and there at the time, nothing important but embarrassing. I should have assumed that he had his reasons, too, and respected them.

But my vocal cords lived their own life, wild and free. "Don't give me that, shipmate," I replied. "If you're a ground hog, I'm Mayor of Tycho City. I'll wager you've done more drinking on Mars," I added, noticing the cautious way he lifted his glass, a dead giveaway of low-gravity habits, "than you've ever done on Earth."

"Keep your voice down!" he cut in without moving his lips. "What makes you sure that I am a voyageur? You don't know me."

"Sorry," I said. "You can be anything you like. But I've got eyes. You gave yourself away the minute you walked in."

He said something under his breath. "How?"

"Don't let it worry you. I doubt if anyone else noticed. But I see things other people don't see." I handed him my card, a little smugly perhaps. There is only one Lorenzo Smythe, the One-Man Stock Company. Yes, I'm "The Great Lorenzo"-stereo, canned opera, legit-"Pantomimist and Mimicry Artist Extraordinary."

He read my card and dropped it into a sleeve pocket-which annoyed me; those cards had cost me money-genuine imitation hand engraving. "I see your point," he said quietly, "but what was wrong with the way I behaved?"

"I'll show you," I said. "I'll walk to the door like a ground hog and come back the way you walk. Watch." I did so, making the trip back in a slightly exaggerated version of

his walk to allow for his untrained eye-feet sliding softly along the floor as if it were deck plates, weight carried forward and balanced from the hips, hands a trifle forward and clear of the body, ready to grasp.

There are a dozen other details which can't be set down in words; the point is you have to be a spaceman when you do it, with a spaceman's alert body and unconscious balance-you have to live it. A city man blunders along on smooth floors all his life, steady floors with Earth-normal gravity, and will trip over a cigarette paper, like as not. Not so a spaceman.

"See what I mean?" I asked, slipping back into my seat.

"I'm afraid I do," he admitted suurly. "Did I walk like that?"

"Yes."

"Hmmm... Maybe I should take lessons from you."

"You could do worse," I admitted.

He sat there looking me over, then started to speak-changed his mind and wiggled a finger at the bartender to refill our glasses. When the drinks came, he paid for them, drank his, and slid out of his seat all in one smooth motion. "Wait for me," he said quietly.

With a drink he had bought sitting in front of me I could not refuse. Nor did I want to; he interested me. I liked him, even on ten minutes' acquaintance; he was the sort of big ugly-handsome galoot that women go for and men take orders from.

He threaded his way gracefully through the room and passed a table of four Martians near the door. I didn't like Martians. I did not fancy having a thing that looks like a tree trunk topped off by a sun helmet claiming the privileges of a man. I did not like the way they grew pseudo limbs; it reminded me of snakes crawling out of their holes. I did not like the fact that they could look all directions at once without turning their heads-if they had had heads, which of course they don't. And I could not stand their smell!

Nobody could accuse me of race prejudice. I didn't care what a man's color, race, or religion was. But men were men, whereas Martians were things. They weren't even animals to my way of thinking. I'd rather have had a wart hog around me any day. Permitting them in restaurants and bars used by men struck me as outrageous. But there was the Treaty, of course, so what could I do?

These four had not been there when I came in, or I would have whiffed them. For that matter, they certainly could not have been there a few moments earlier when I had walked to the door and back. Now there they were, standing on their pedestals around a table, pretending to be people. I had not even heard the air conditioning speed up.

The free drink in front of me did not attract me; I simply wanted my host to come back so that I could leave politely. It suddenly occurred to me that he had glanced over that way just before he had left so hastily and I wondered if the Martians had anything to do with it. I looked over at them, trying to see if they were paying attention to our table-but how could you tell what a Martian was looking at or what it was thinking? That was another thing I didn't like about them.

I sat there for several minutes fiddling with my drink and wondering what had happened to my spaceman friend. I had hoped that his hospitality might extend to dinner and, if we became sufficiently simpatico, possibly even to a small temporary loan. My other prospects were-I admit it!-slender. The last two times I had tried to call my agent

his autosecretary had simply recorded the message, and unless I deposited coins in the door, my room would not open to me that night . . . That was how low my fortunes had ebbed: reduced to sleeping in a coin-operated cubicle.

In the midst of my melancholy ponderings a waiter touched me on the elbow. "Call for you, sir."

"Eh? Very well, friend, will you fetch an instrument to the table?"

"Sorry, sir, but I can't transfer it. Booth 12 in the lobby."

"Oh. Thank you," I answered, making it as warm as possible since I was unable to tip him. I swung wide around the Martians as I went Out.

I soon saw why the call had not been brought to the table; No. 12 was a maximum-security booth, sight, sound, and scramble. The tank showed no image and did not clear even after the door locked behind me. It remained milky until I sat down and placed my face within pickup, then the opalescent clouds melted away and I found myself looking at my spaceman friend.

"Sorry to walk out on you," he said quickly, "but I was in a hurry. I want you to come at once to Room 2106 of the Eisenhower."

He offered no explanation. The Eisenhower is just as unlikely a hotel for spacemen as Casa Mañana. I could smell trouble. You don't pick up a stranger in a bar and then insist that he come to a hotel room-well, not one of the same sex, at least.

"Why?" I asked.

The spaceman got that look peculiar to men who are used to being obeyed without question; I studied it with professional interest-it's not the same as anger; it is more like a thundercloud just before a storm. Then he got himself in hand and answered quietly, "Lorenzo, there is no time to explain. Are you open to a job?"

"Do you mean a professional engagement?" I answered slowly. For a horrid instant I suspected that he was offering me . . . Well, you know-a job. Thus far I had kept my professional pride intact, despite the slings and arrows of outrageous fortune.

"Oh, professional, of course!" he answered quickly. "This requires the best actor we can get."

I did not let my relief show in my face. It was true that J was ready for any professional work-I would gladly have played the balcony in Romeo and Juliet-but it does not do to be eager. "What is the nature of the engagement?" I asked. "My calendar is rather full."

He brushed it aside. "I can't explain over the phone. Perhaps you don't know it, but any scrambler circuit can be unscrambled- with the proper equipment. Shag over here fast!"

He was eager; therefore I could afford not to be eager. "Now really," I protested, "what do you think I am? A bellman? Or an untried juvenile anxious for the privilege of carrying a spear? I am Lorenzo!" I threw up my chin and looked offended. "What is your offer?"

"Uh. . . Damn it, I can't go into it over the phone. How much do you get?"

"Eh? You are asking my professional salary?"

"Yes, yes!"

"For a single appearance? Or by the week? Or an option contract?"

"Never mind. What do you get by the day?"

"My minimum fee for a one-evening date is one hundred Imperials." This was simple truth. Oh, I have been coerced at times into paying some scandalous kickbacks, but the voucher never read less than my proper fee. A man has his standards. I'd rather starve.

"Very well," he answered quickly, "one hundred Imperials in cash, laid in your hand the minute you show up here. But hurry!"

"Eh?" I realized with sudden dismay that I could as easily have said two hundred, or even two fifty. "But I have not agreed to accept the engagement."

"Never mind that! We'll talk it over when you get here. The hundred is yours even if you turn us down. If you accept-well, call it bonus, over and above your salary. Now will you sign off and get over here?"

I bowed. "Certainly, sir. Have patience."

Fortunately the Eisenhower is not too far from the Casa, for I did not even have a minimum for tube fare. However, although the art of strolling is almost lost, I savor it-and it gave me time to collect my thoughts. I was no fool; I was aware that when another man is too anxious to force money on one, it is time to examine the cards, for there is almost certainly something illegal, or dangerous, or both, involved in the matter. I was not unduly fussy about legality qua legality; I agreed with the Bard that the Law is often an idiot. But in the main I had stayed on the right side of the Street.

But presently I realized that I had insufficient facts, so I put it out of my mind, threw my cape over my right shoulder, and strode along, enjoying the mild autumn weather and the rich and varied odors of the metropolis. On arrival I decided to forego the main entrance and took a bounce tube from the sub-basement to the twenty-first floor, I having at the time a vague feeling that this was not the place to let my public recognize me. My voyageur friend let me in. "You took long enough," he snapped.

"Indeed?" I let it go at that and looked around me. It was an expensive suite, as I had expected, but it was littered and there were at least a dozen used glasses and as many coffee cups scattered here and there; it took no skill to see that I was merely the latest of many visitors. Sprawled on a couch, scowling at me, was another man, whom I tabbed tentatively as a spaceman. I glanced inquiringly but no introduction was offered.

"Well, you're here, at least. Let's get down to business."

"Surely. Which brings to mind," I added, "there was mention of a bonus, or retainer."

"Oh, yes." He turned to the man on the couch. "Jock, pay him."

"For what?"

"Pay him!"

I now knew which one was boss-although, as I was to learn, there was usually little doubt when Dak Broadbent was in a room. The other fellow stood up quickly, still scowling, and counted Out to me a fifty and five tens. I tucked it away casually without checking it and said, "I am at your disposal, gentlemen."

The big man chewed his lip. "First, I want your solemn oath not even to talk in your sleep about this job."

"If my simple word is not good, is my oath better?" I glanced at the smaller man, slouched again on the couch. "I don't believe we have met. I am Lorenzo."

He glanced at me, looked away. My barroom acquaintance said hastily, "Names don't matter in this."

"No? Before my revered father died he made me promise him three things: first, never to mix whisky with anything but water; second, always to ignore anonymous letters; and lastly, never to talk with a stranger who refuses to give his name. Good day, sirs." I turned toward the door, their hundred Imperials warm in my pocket.

"Hold it!" I paused. He went on, "You are perfectly right. My name is-" "Skipper!"

"Stow it, Jock. I'm Dak Broadbent; that's Jacques Dubois glaring at us. We're both voyageurs-master pilots, all classes, any acceleration."

I bowed. "Lorenzo Smythe," I said modestly, "jongleur and artist-care of The Lambs Club." I made a mental note to pay my dues.

"Good. Jock, try smiling for a change. Lorenzo, you agree to keep our business secret?"

"Under the rose. This is a discussion between gentlemen."

"Whether you take the job or not?"

"Whether we reach agreement or not. I am human, but, short of illegal methods of questioning, your confidences are sale with me."

"I am well aware of what neodexocaine will do to a man's forebrain, Lorenzo. We don't expect the impossible."

"Dak," Dubois said urgently, "this is a mistake. We should at least--"

"Shut up, Jock. I want no hypnotists around at this point. Lorenzo, we want you to do an impersonation job. It has to be so perfect that no one-I mean no one-will ever know it took place. Can you do that sort of a job?"

I frowned. "The first question is not 'Can I?' but 'Will I?' What are the circumstances?"

"Uh, we'll go into details later. Roughly, it is the ordinary doubling job for a well-known public figure. The difference is that the impersonation will have to be so perfect as to fool people who know him well and must see him close up. It won't be just reviewing a parade from a grandstand, or pinning medals on girl scouts." He looked at me shrewdly. "It will take a real artist."

"No," I said at once.

"Huh? You don't know anything about the job yet. If your conscience is bothering you, let me assure you that you will not be working against the interests of the man you will impersonate-nor against anyone's legitimate interests. This is a job that really needs to be done."

"No."

"Well, for Pete's sake, why? You don't even know how much we will pay."

"Pay is no object," I said firmly. "I am an actor, not a double."

"I don't understand you. There are lots of actors picking up spare money making public appearances for celebrities."

"I regard them as prostitutes, not colleagues. Let me make myself clear. Does an author respect a ghost writer? Would you respect a painter who allowed another man to sign his work-for money? Possibly the spirit of the artist is foreign to you, sir, yet perhaps I may put it in terms germane to your own profession. Would you, simply for money, be content to pilot a ship while some other man, not possessing your high art, wore the uniform, received the credit, was publicly acclaimed as the Master? Would you?"

Dubois snorted. "How much money?"

Broadbent frowned at him. "I think I understand your objection."

"To the artist, sir, kudos comes first. Money is merely the mundane means whereby he is enabled to create his art."

"Hmm. . . All right, so you won't do it just for money. Would you do it for other reasons? If you felt that it had to be done and you were the only one who could do it successfully?"

"I concede the possibility; I cannot imagine the circumstances."

"You won't have to imagine them; we'll explain them to you."

Dubois jumped up off the couch. "Now see here, Dak, you can't--"

"Cut it, Jock! He has to know."

"He doesn't have to know now-and here. And you haven't any right to jeopardize everybody else by telling him. You don't know a thing about him."

"It's a calculated risk." Broadbent turned back to me.

Dubois grabbed his arm, swung him around. "Calculated risk be damned! Dak, I've strung along with you in the past~-but this time before I'll let you shoot off your face, well, one or the other of us isn't going to be in any shape to talk."

Broadbent looked startled, then grinned coldly down at Dubois. "Think you're up to it, Jock old son?"

Dubois glared up at him, did not flinch. Broadbent was a head taller and outweighed him by twenty kilos. I found myself for the first time liking Dubois; I am always touched by the gallant audacity of a kitten, the fighting heart of a bantam cock, or the willingness of a little mart to die in his tracks rather than knuckle under...And, while I did not expect Broadbent to kill him, I did think that I was about to see Dubois used as a dust rag.

I had no thought of interfering. Every man is entitled to elect the time and manner of his own destruction.

I could see tension grow. Then suddenly l3roadbent laughed and clapped Dubois on the shoulder. "Good for you, Jock!" He turned to me and said quietly, "Will you excuse us a few moments? My friend and I must make heap big smoke."

The suite was equipped with a hush corner, enclosing the autograph and the phone. Broadbent took Dubois by the arm and led him over there; they stood and talked urgently.

Sometimes such facilities in public places like hotels are not all that they might be; the sound waves fail to cancel out completely. But the Eisenhower is a luxury house and in this case, at least, the equipment worked perfectly; I could see their lips move but I could hear no sound.

But I could indeed see their lips move. Broadbent's face was toward me and Dubois I could glimpse in a wall mirror. When I was performing in my famous mentalist act, I found out why my father had beaten my tail until I learned the silent language of lips-in my mentalist act I always performed in a brightly lighted hail and made use of spectacles which-but never mind; I could read lips.

Dubois was saying: "Dak, you bloody, stupid, unprintable, illegal and highly improbable obscenity, do you want us both to wind up counting rocks on Titan? This conceited pipsqueak will spill his guts."

I almost missed Broadbent's answer. Conceited indeed! Aside from a cold appreciation of my own genius I felt that I was a modest man.

Broadbent: ". . . doesn't matter if the game is crooked when it's the only game in town. Jock, there is nobody else we can use."

Dubois: "All right, then get Doc Scortia over here, hypnotize him, and shoot him the happy juice. But don't tell him the score- not until he's conditioned, not while we are still on dirt."

Broadbent: "Uh, Scortia himself told me that we could not depend on hypno and drugs, not for the performance we need.
We've got to have his co-operation, his intelligent co-operation."

Dubois snorted. "What intelligence? Look at him. Ever see a rooster strutting through a barnyard? Sure, he's the right size and shape and his skull looks a good bit like the Chief-but there is nothing behind it. He'll lose his nerve, blow his top, and give the whole thing away. He can't play the part-he's just a ham actor!"

If the immortal Caruso had been charged with singing off key, he could not have been more affronted than I. But I trust I justified my claim to the mantle of Burbage and Booth at that moment; I went on buffing my nails and ignored it-merely noting that I would someday make friend Dubois both laugh and cry within the span of twenty seconds. I waited a few moments more, then stood up and approached the hush corner. When they saw that I intended to enter it, they both shut up. I said quietly, "Never mind, gentlemen, I have changed my mind."

Dubois looked relieved. "You don't want the job."

"I mean that I accept the engagement. You need not make explanations. I have been assured by friend Broadbent that the work is such as not to trouble my conscience- and I trust him. He has assured rue that he needs an actor. But the business affairs of the producer are not my concern. I accept."

Dubois looked angry, but shut up. I expected Broadbent to look pleased and relieved; instead he looked worried. "All right," he agreed, "let's get on with it. Lorenzo, I don't know exactly how long we will need you. No more than a few days, I'm certain-and you will be on display only an hour or so once or twice in that time."

"That does not matter as long as I have time to study the role- the impersonation. But approximately how many days will you
need me? I should notify my agent."

"Oh no! Don't do that."

"Well-how long? As much as a week?"

"It will be less than that-or we're sunk."

"Never mind. Will a hundred Imperials a day suit you?"

I hesitated, recalling how easily he had met my minimum just to interview me-and decided this was a time to be gracious. I waved it aside. "Let's not speak of such things. No doubt you will present me with an honorarium consonant with the worth of my performance."

"All right, all right." Broadbent turned away impatiently. "Jock, call the field. Then call Langston and tell him we're starting Plan Mardi Gras. Synchronize with him. Lorenzo . . ." He motioned for me to follow and strode into the bath. He opened a small case and demanded, "Can you do anything with this junk?"

"Junk" it was-the sort of overpriced and unprofessional makeup kit that is sold over the counter to stage-struck youngsters. I stared at it with mild disgust. "Do I

understand, sir, that you expect me to start an impersonation now? Without time for study?"

"Huh? No, no, no! I want you to change your face-on the outside chance that someone might recognize you as we leave here.

That's possible, isn't it?"

I answered stiffly that being recognized in public was a burden that all celebrities were forced to carry. I did not add that it was certain that countless people would recognize The Great Lorenzo in any public place.

"Okay. So change your phiz so it's not yours." He left abruptly.

I sighed and looked over the child's toys he had handed me, no doubt thinking they were the working tools of my profession- grease paints suitable for clowns, reeking spirit gum, crepe hair which seemed to have been raveled from Aunt Maggie's parlor carpet. Not an ounce of Silicoflesh, no electric brushes, no modern amenities of any sort. But a true artist can do wonders with a burnt match, or oddments such as one might find in a kitchen- and his own genius. I arranged the lights and let myself fall into creative reverie.

There are several ways to keep a well-known face from being recognized. The simplest is misdirection. Place a man in uniform and his face is not likely to be noticed- do you recall the lace of the last policeman you encountered? Could you identify him if you saw him next in mufti? On the same principle is the attentiongoing special feature. Equip a man with an enormous nose, disfigured perhaps with acne rosacea; the vulgar will stare in fascination at the nose itself, the polite will turn away-but neither will see the face.

I decided against this primitive maneuver because I judged that my employer wished me not to be noticed at all rather than remembered for an odd feature without being recognized. This is much more difficult; anyone can be conspicuous but it takes real skill not to be noticed. I needed a face as commonplace, as impossible to remember as the true face of the immortal Alec Guinness. Unfortunately my aristocratic features are entirely too distinguished, too handsome-a regrettable handicap for a character actor. As my father used to say, "Larry, you are too damned pretty! If you don't get off your lazy duff and learn the business, you are going to spend fifteen years as a juvenile, under the mistaken impression that you are an actor-then wind up selling candy in the lobby. 'Stupid' and 'pretty' are the two worst vices in show business-and you're both."

Then he would take off his belt and stimulate my brain. Father was a practical psychologist and believed that warming the glutei maximi with a strap drew excess blood away from a boy's brain. While the theory may have been shaky, the results justified the method; by the time I was fifteen I could stand on my head on a slack wire and quote page after page of Shakespeare and Shaw-or steal a scene simply by lighting a cigarette.

I was deep in the mood of creation when Broadbent stuck his face in. "Good grief!" he snapped. "Haven't you done anything yet?"

I stared coldly. "I assumed that you wanted my best creative work-which cannot be hurried. Would you expect a cordon bleu to compound a new sauce on the back of a galloping horse?"

"Horses be damned!" He glanced at his watch finger. "You have six more minutes. If you can't do anything in that length of time, we'll just have to take our chances."

Well! Of course I prefer to have plenty of time-but I had understudied my father in his quick-change creation, The Assassination of Hu•ey Long, fifteen parts in seven minutes-and had once played it in nine seconds less time than he did. "Stay where you are!" I snapped back at him. "I'll be with you at once." I then put on "Benny Grey," the colorless handy man who does the murders in The House with No Doors-two quick strokes to put dispirited lines into my cheeks from nose to mouth corners, a mere suggestion of bags under my eyes, and Factor's #5 sallow over all, taking not more than twenty seconds for everything-I could have done it in my sleep; House ran on boards for ninety-two performances before they recorded it.

Then I faced Broadbent and he gasped. "Good God! I don't believe it."

I stayed in "Benny Grey" and did not smile acknowledgment. What l3roadbent could not realize was that the grease paint really was not necessary. It makes it easier, of course, but I had used a touch of it primarily because he expected it; being one of the yokels, he naturally assumed that make-up consisted of paint and powder.

He continued to stare at me. "Look here," he said in a hushed voice, "could you do something like that for me? In a hurry?"

I was about to say no when I realized that it presented an interesting professional challenge, I had been tempted to say that if my father had started in on him at five he might be ready now to sell cotton candy at a punkin' doin's, but I thought better of it. "You simply want to be sure that you will not be recognized?" I asked.

"Yes, yes! Can you paint me up, or give me a false nose, or something?"

I shook my head. "No matter what we did with make-up, it would simply make you look like a child dressed up for Trick or Treat. You can't act and you can never learn, at your age. We won't touch your face."

"Huh? But with this beak on me-"

"Attend me. Anything I could do to that lordly nose would just call attention to it, I assure you. Would it suffice if an acquaintance looked at you and said, 'Say, that big fellow reminds me of Dak Broadbent. It's not Dak, of course, but looks a little like him.' Eh?"

"Huh? I suppose so. As long as he was sure it wasn't me. I'm supposed to be on. . . Well, I'm not supposed to be on Earth just now."

"He'll be quite sure it is not you, because we'll change your walk. That's the most distinctive thing about you. If your walk is wrong, it cannot possibly be you-so it must be some other big boned, broad-shouldered man who looks a bit like you."

"Okay, show me how to walk."

"No, you could never learn it. I'll force you to walk the way I want you to."

"How?"

'We'll put a handful of pebbles or the equivalent in the toes of your boots. That will force you back on your heels and make you stand up straight. It will be impossible for you to sneak along in that catfooted spaceman's crouch. Mmrn 11 slap some tape across your shoulder blades to remind you to keep your shoulders back, too. That will do it."

"You think they wont recognize me just because I'll walk differently?"

"Certain. An acquaintance won't know why he is sure it is not you, but the very fact that the conviction is subconscious and unanalyzed will put it beyond reach of doubt.

Oh, I'll do a little something to your face, just to make you feel easier-but it isn't necessary."

We went back into the living room of the suite. I was still being "Benny Grey" of course; once I put on a role it takes a conscious effort of will to go back to being myself. Dubois was busy at the phone; he looked up, saw me, and his jaw dropped. He hurried out of the hush locus and demanded, "Who's he? And where's that actor fellow?" After his first glance at me, he had looked away and not bothered to look back-"Benny Grey" is such a tired, negligible little guy that there is no point in looking at him.

"What actor fellow?" I answered in Benny's flat, colorless tones. It brought Dubois' eyes back to me. Re looked at me, started to look away, his eyes snapped back, then he looked at my clothes. Broadbent guffawed and clapped him on the shoulder.

"And you said he couldn't act!" He added sharply, "Did you get them all, Jock?"

"Yes." Dubois looked back at me, looked perplexed, and looked away.

"Okay. We've got to be out of here in four minutes. Let's see how fast you can get me fixed up, Lorenzo."

Dak had one boot off, his blouse off, and his chemise pulled up so that I could tape his shoulders when the light over the door came on and the buzzer sounded. He froze. "Jock? We expecting anybody?"

"Probably Langston. He said he was going to try to get over here before we left." Dubois started for the door.

"It might not be him. It might be--" 1 did not get to hear Broadbent say who he thought it might be as Dubois dilated the door. Framed in the doorway, looking like a nightmare toadstool, was a Martian.

For an agony-stretched second I could see nothing but the Martian. I did not see the human standing behind him, nor did I notice the life wand tile Martian cradled in his pseudo limb.

Then the Martian flowed inside, the man with him stepped in behind him, and the door relaxed. The Martian squeaked, "Good afternoon, gentlemen. Going somewhere?"

I was frozen, dazed, by acute xenophobia. Dak was handicapped by disarranged clothing. But little Jock Dubois acted with a simple heroism that made him my beloved brother even as he died . . . He flung himself at that life wand. Right at it-he made no attempt to evade it.

He must have been dead, a hole burned through his belly you could poke a fist through, before he hit the floor. But he hung on and the pseudo limb stretched like taffy-then snapped, broken off a few inches from the monster's neck, and poor Jock still had the life wand cradled in his dead arms.

The human who had followed that stinking, reeking thing into the room had to step to one side before he could get in a shot- and he made a mistake. He should have shot Dak first, then me. Instead he wasted his first one on Jock and he never got a second one, as Dak shot him neatly in the face. I had not even known Dak was armed.

Deprived of his weapon, the Martian did not attempt to escape. Dak bounced to his feet, slid up to him, and said, "Ah, Rrringriil. I see you."

"1 see you, Captain Dak Broadhent," the Martian squeaked, then added, "you will tell my nest?"

"I will tell your nest, Rrringriil."

"I thank you, Captain Dak Broadbent."

Dak reached out a long bony finger and poked it into the eye nearest him, shoving it on home until his knuckles were jammed against the brain case. He pulled it out and his finger was slimed with green ichor. The creature's pseudo limbs crawled back into its trunk in reflex spasm but the dead thing continued to stand firm on its base. Dak hurried into the bath; 1 heard him washing his hands. I stayed where I was, almost as frozen by shock as the late Rrringriil.

Dak came out, wiping his hands on his shirt, and said, "We'll have to clean this up. There isn't much time." He could have been speaking of a spilled drink.

I tried to make clear in one jumbled sentence that I wanted no part of it, that we ought to call the cops, that I wanted to get away from there before the cops came, that he knew what he could do with his crazy impersonation job, and that I planned to sprout wings and fly out the window, flak brushed it all aside. "Don't jitter, Lorenzo. We're on minus minutes now. Help me get the bodies into the bathroom."

"Huh? Good God, man! Let's just lock up and run for it. Maybe they will never connect us with it."

"Probably they wouldn't," he agreed, "since neither one of us is supposed to be here. But they would be able to see that Rrringriil had killed Jock-and we can't have that. Not now we can't."

"Huh?"

"We can't afford a news story about a Martian killing a human. So shut up and help me."

I shut up and helped him. It steadied me to recall that "Benny Grey" had been the worst of sadistic psychopaths, who had enjoyed dismembering his victims. I let "Benny Grey" drag the two human bodies into the bath while Dak took the life wand and sliced Rrringriil into pieces small enough to handle. He was careful to make the first cut below the brain case so the job was not messy, but I could not help him with it-it seemed to me that a dead Martian stank even worse than a live one.

The oubliette was concealed in a panel in the bath just beyond the bidet; if it had not been marked with the usual radiation trefoil it would have been hard to find. After we had shoved the chunks of Rrringriil down it (I managed to get my spunk up enough to help), Dak tackled the messier problem of butchering and draining the human corpses, using the wand and, of course, working in the bath tub.

It is amazing how much blood a man holds. We kept the water running the whole time; nevertheless, it was bad. But when Dak had to tackle the remains of poor little Jock, he just wasn't up to it. His eyes flooded with tears, blinding him, so I elbowed him aside before he sliced off his own fingers and let "Benny Grey" take over.

When I had finished and there was nothing left to show that there had ever been two other men and a monster in the suite, I sluiced out the tub carefully and stood up. Dak was in the doorway, looking as calm as ever. "I've made sure the floor is tidy," he announced. "I suppose a criminologist with proper equipment could reconstruct it-but we are counting on no one ever suspecting. So let's get out of here. We've got to gain almost twelve minutes somehow. Come on!"

I was beyond asking where or why. "All right. Let's fix your boots."

He shook his head. "It would slow me up. Right now speed is more essential than not being recognized."

"I am in your hands." I followed him to the door; he stopped and said, "There may be others around. If so, shoot first-there's nothing else you can do." He had the life wand in his hand, with his cloak drawn over it.

"Martians?"

"Or men. Or both."

"Dak? Was Rrringriil one of those four at the Mañana bar?"

"Certainly. Why do you think I went around Robinson's barn to get you out of there and over here? They either tailed you, as we did, or they tailed me. Didn't you recognize him?"

"Heavens, no! Those monsters all look alike to me."

"And they say we all look alike. The four were Rrringriil, his conjugate-brother Rrringlath, and two others from his nest, of divergent lines. But shut up. If you see a Martian, shoot. You have the other gun?"

"Uh, yes. Look, Dak, I don't know what this is all about. But as long as those beasts are against you, I'm with you. I despise Martians."

He looked shocked. "You don't know what you are saying. We're not fighting Martians; those four are renegades."

"Huh?"

"There are lots of good Martians-almost all of them. Shucks, even Rrringriil wasn't a bad sort in most ways-I've had many a fine chess game with him."

"What? In that case, I'm--"

"Stow it. You're in too deep to back out. Now quick-march, straight to the bounce tube. I'll cover our rear."

I shut up. I was in much too deep-that was unarguable.

We hit the sub-basement and went at once to the express tubes. A two-passenger capsule was just emptying; Dak shoved me in so quickly that I did not see him set the control combiiiation. But I was hardly surprised when the pressure let up from my chest and I saw the sign blinking JEFFERSON SKYPORT-ALL OUT.

Nor did I care what station it was as long as it was as far as possible from Hotel Eisenhower. The few minutes we had been crammed in the vactube had been long enough for me to devise a plan-sketchy, tentative, and subject to change without notice, as the fine print always says, but a plan. It could be stated in two words: Get lost!

Only that morning I would have found the plan very difficult to execute; in our culture a man with no money at all is baby-helpless. But with a hundred slugs in my pocket I could go far and fast. I felt no obligation to Dak Broadbent. For reasons of his own-not my reasons!-he had almost got me killed, then had crowded me into covering up a crime, made rue a fugitive from justice. But we had evaded the police, temporarily at least, and now, simply by shaking off Broadbent, I could forget the whole thing, shelve it as a bad dream. It seemed most unlikely that I could be connected with the affair even if it were discovered-fortunately a gentleman always wears gloves, and I had had mine off only to put on makeup and later during that ghastly house cleaning.

Aside from the warm burst of adolescent heroics I had felt when I thought Dak was fighting Martians I had no interest in his schemes-and even that sympathy had shut off when I found that he liked Martians in general. His impersonation job I would not now touch with the proverbial eleven-foot pole. To hell with Broadbent! All I wanted out

of life was money enough to keep body and soul together and a chance to practice my art; cops-androbbers nonsense did not interest me-poor theater at best.

Jefferson Port seemed handmade to carry out my scheme. Crowded and confused, with express tubes spiderwebbing from it, in it, if Dak took his eyes off me for half a second I would be halfway to Omaha. I would lie low a few weeks, then get in touch with my agent and find out if any inquiries had been made about me.

Dak saw to it that we climbed out of the capsule together, else I would have slammed it shut and gone elsewhere at once. I pretended not to notice and stuck close as a puppy to him as we went up the belt to the main hall just under the surface, coming out between the Pan-Am desk and American Skylines. Dak straight across the waiting-room floor toward Diana, Ltd., and I surmised that he was going to buy tickets for the Moon shuttle- how he planned to get me aboard without passport or vaccination certificate I could not guess but I knew that be was resourceful. I decided that I would fade into the furniture while he bad his wallet out; when a man counts money there are at least a few seconds when his eyes and attention are fully occupied.

But we went right on past the Diana desk and through an archway marked Private Berths. The passageway beyond was not crowded and the walls were blank; I realized with dismay that I had let slip my best chance, back there in the busy main hail. I held back. "Dak? Are we making a jump?"

"Of course."

"Dak, you're crazy. I've got no papers, I don't even have a tourist card for the Moon."

"You won't need them."

"Huh? They'll stop me at 'Emigration.' Then a big, beefy cop will start asking questions."

A hand about the size of a cat closed on my upper arm. "Let's not waste time. Why should you go through 'Emigration,' when officially you aren't leaving? And why should I, when officially I never arrived? Quick-march, old son."

I am well muscled and not small, but I felt as if a traffic robot were pulling me out of a danger zone. I saw a sign reading MEN and I made a desperate attempt to break it up. "Dak, half a minute, please. Got to see a man about the plumbing."

He grinned at me. "Oh, yes? You went just before we left the hotel." He did not slow up or let go of me.

"Kidney trouble-"

"Lorenzo old son, I smell a case of cold feet. Tell you what I'll do. See that cop up ahead?" At the end of the corridor, in the private berths station, a defender of the peace was resting his big feet by leaning over a counter. "I find I have a sudden attack of conscience. I feel a need to confess-about how you killed a visiting Martian and two local citizens-about how you held a gun on me and forced me to help you dispose of the bodies. About--"

"You're crazy!"

"Almost out of my mind with anguish and remorse, shipmate."

"But-you've got nothing on me."

"So? I think my story will sound more convincing than yours. I know what it is all about and you don't. I know all about you and you know nothing about me. For example he mentioned a couple of details in my past that I would have sworn were buried and

forgotten. All right, so I did have a couple of routines useful for stag shows that are not for the family trade-a man has to eat. But that matter about Bebe; that was hardly fair, for I certainly had not known that she was underage. As for that hotel bill, while it is true that bilking an "innkeeper" in Miami Beach carries much the same punishment as armed robbery elsewhere, it is a very provincial attitude-I would have paid if I had had the money. As for that unfortunate incident in Seattle-well, what I am trying to say is that Dak did know an amazing amount about my background but he had the wrong slant on most of it. Still.

"So," he continued, "let's walk right up to yon gendarme and make a clean breast of it. I'll lay you seven to two as to which one of us is out on bail first."

So we marched up to the cop and on past him. He was talking to a female clerk back of the railing and neither one of them looked up. Dak took out two tickets reading, GATE PASS- MAINTENANCE PERMIT-Berth K-l27, and stuck them into the monitor. The machine scanned them, a transparency directed us to take an tipper-level car, code King 127; the gate let us through and locked behind us as a recorded voice said, "Watch your step, please, and heed radiation warnings. The Terminal Company is not responsible for accidents beyond the gate."

Dak punched an entirely different code in the little car; it wheeled around, picked a track, and we took off out under the field. It did not matter to me. I was beyond caring.

When we stepped out of the little car it went back where it came from. In front of me was a ladder disappearing into the steel ceiling above. Dak nudged me. "Up you go." There was a scuttle hole at the top and on it a sign: RADIATION HAZARD-Optimax 13 Seconds. The figures had been chalked in. I stopped. I have no special interest in offspring but I am no fool. Dak grinned and said, "Got your lead britches on? Open it, go through at once and straight up the ladder into the ship. If you don't stop to scratch, you'll make it with at least three seconds to spare."

I believe I made it with five seconds to spare. I was out in the sunlight for about ten feet, then I was inside a long tube in the ship. I used about every third rung.

The rocket ship was apparently small. At least the control room was quite cramped; I never got a look at the outside. The only other spaceships I had ever been in were the Moon shuttles Evangeline and her sister ship the Gabriel, that being the year in which I had incautiously accepted a lunar engagement on a co-op basis-our impresario had had a notion that a juggling, tightrope, and acrobatic routine would go well in the one-sixth gee of the Moon, which was correct as far as it went, but he had not allowed rehearsal time for us to get used to low gravity. I had to take advantage of the Distressed Travelers Act to get back and I had lost my wardrobe.

There were two men in the control room; one was lying in one of three acceleration couches fiddling with dials, the other was making obscure motions with a screw driver. The one in the couch glanced at me, said nothing. The other one turned, looked worried, then said past me, "What happened to Jock?"

Dak almost levitated out of the hatch behind me. "No time!" he snapped. "Have you compensated for his mass?"

"Red, is she taped? Tower?"

The man in the couch answered lazily, "I've been recomputing every two minutes. You're clear with the tower. Minus forty-, uh, seven seconds."

"Out of that bunk! Scram! I'm going to catch that tick!"

Red moved lazily out of the couch as Dak got in. The other man shoved me into the copilot's couch and strapped a safety belt across my chest. He turned and dropped down the escape tube. Red followed him, then stopped with his head and shoulders out. "Tickets, please!" he said cheerfully.

"Oh, cripes!" Dak loosened a safety belt, reached for a pocket, got out the two field passes we bad used to sneak aboard, and shoved them at him.

"Thanks," Red answered. "See you in church. Hot jets, and so forth." He disappeared with leisurely swiftness; I heard the air lock close and my eardrums popped. Dak did not answer his farewell; his eyes were busy on the computer dials and he made some minor adjustment.

"Twenty-one seconds," he said to me. "There'll be no rundown. Be sure your arms are inside and that you are relaxed. The first step is going to be a honey."

I did as I was told, then waited for hours in that curtain-going-up tension. Finally I said, "Dak?"

"Shut up!"

"Just one thing: where are we going?"

"Mars." I saw his thumb jab at a red button and I blacked out.

Chapter 2

What is so funny about a man being dropsick? Those dolts with cast-iron stomachs always laugh-I'll bet they would laugh if Grandma broke both legs.

I was spacesick, of course, as soon as the rocket ship quit blasting and went into free fall. I came out of it fairly quickly as my stomach was practically empty-I'd eaten nothing since breakfast- and was simply wanly miserable the remaining eternity of that awful trip. It took us an hour and forty-three minutes to make rendezvous, which is roughly equal to a thousand years in purgatory to a ground hog like myself.

I'll say this for Dak, though: he did not laugh. Dak was a professional and he treated my normal reaction with the impersonal good manners of a ifight nurse-not like those flat-headed, loudvoiced jackasses you'll find on the passenger list of a Moon shuttle. If I had my way, those healthy self -panickers would be spaced in mid-orbit and allowed to laugh themselves to death in vacuum.

Despite the turmoil in my mind and the thousand questions I wanted to ask we had almost made rendezvous with a torchship, which was in parking orbit around Earth, before I could stir up interest in anything. I suspect that if one were to inform a victim of spacesickness that he was to be shot at sunrise his own answer would be, "Yes? Would you hand me that sack, please?"

But I finally recovered to the point where instead of wanting very badly to die the scale had tipped so that I had a flickering, halfhearted interest in continuing to live. Dak was busy most of the time at the ship's communicator, apparently talking on a very tight beam for his hands constantly nursed the directional control like a gunner laying a gun under difficulties. I could not hear what he said, or even read his lips, as he had his face

pushed into the nimble box. I assumed that he was talking to the long-jump ship we were to meet.

But when he pushed the communicator aside and lit a cigarette I repressed the stomach retch that the mere sight of tobacco smoke had inspired and said, "Dak, isn't it about time you told me the score?"

"Plenty of time for that on our way to Mars."

"Huh? Damn your arrogant ways," I protested feebly. "I don't want to go to Mars. I would never have considered your crazy offer if 1 had known it was on Mars."

"Suit yourself. You don't have to go."

"Eh?"

"The air lock is right behind you. Get out and walk. Mind you close the door."

I did not answer the ridiculous suggestion. He went on, "But if you can't breathe space the easiest thing to do is to go to Mars- and I'll see that you get back. The Can Do-that's this bucket-is about to rendezvous with the Go For Broke, which is a high-gee torchship. About seventeen seconds and a gnat's wink after we make contact the Go For Broke will torch for Mars-for we've got to be there by Wednesday."

I answered with the petulant stubbornness of a sick man. "I'm not going to Mars. I'm going to stay right in this ship. Somebody has to take it back and land it on Earth. You can't fool me."

"True," Broadbent agreed. "But you won't be in it. The three blokes who are supposed to be in this ship-according to the records back at Jefferson Field-are in the Go For Broke right now. This is a three-man ship, as you've noticed. I'm afraid you will find them stuffy about giving up a place to you. And besides, how would you get back through 'Immigration'?"

"I don't care! I'd be back on ground."

"And in jail, charged with everything from illegal entry to mopery and dopery in the spaceways. At the very least they would be sure that you were smuggling and they would take you to some quiet back room and run a needle in past your eyeball and find out just what you were up to. They would know what questions to ask and you wouldn't be able to keep from answering. But you wouldn't be able to implicate me, for good old Dak Broadhent hasn't been back to Earth in quite a spell and has unimpeachable witnesses to prove it."

I thought about it sickly, both from fear and the continuing effects of spacesickness. "So you would tip off the police? You dirty, slimy--" I broke off for lack of an adequately insulting noun.

"Oh no! Look, old son, I might twist your arm a bit and let you think that I would cry copper-but I never would. But Rrringriil's conjugate-brother Rrringlath certainly knows that old 'Grill' went in that door and failed to come out. He will tip off the noises. Conjugate-brother is a relationship so close that we will never understand it, since we don't reproduce by fission."

I didn't care whether Martians reproduced like rabbits or the stork brought them in a little black bag. The way he told it I could never go back to Earth, and I said so. He shook his head. "Not at all. Leave it to me and we will slide you back in as neatly as we slid you out. Eventually you will walk off that field or some other field with a gate pass which shows that you are a mechanic who has been making some last-minute adjustment-

and you'll have greasy coveralls and a tool kit to back it up. Surely an actor of your skill can play the part of a mechanic for a few minutes?"

"Eh? Why, certainly! But-"

"There you are! You stick with ol' Doc Dak; he'll take care of you. We shuffled eight guild brothers in this current caper to get me on Earth and both of us off; we can do it again. But you would not stand a chance without voyageurs to help you." He grinned. "Every voyageur is a free trader at heart. The art of smuggling being what it is, we are all of us always ready to help out one another in a little innocent deception of the port guards. But a person outside the lodge does not ordinarily get such co-operation."

I tried to steady my stomach and think about it. "Dak, is this a smuggling deal? Because-"

"Oh no! Except that we are smuggling you."

"I was going to say that I don't regard smuggling as a crime."

"Who does? Except those who make money off the rest of us by limiting trade. But this is a straight impersonation job, Lorenzo, and you are the man for it. It wasn't an accident that I ran across you in the bar; there had been a tail on you for two days. As soon as I hit dirt I went where you were." He frowned. "I wish I could be sure our honorable antagonists had been following me, and not you."

"Why?"

"If they were following me they were trying to find out what I was after-which is okay, as the lines were already drawn; we knew we were mutual enemies. But if they were following you, then they knew what I was after-an actor who could play the role."

"But how could they know that? Unless you told them?"

"Lorenzo, this thing is big, much bigger than you imagine. I don't see it all myself-and the less you know about it until you must, the better off you are. But I can tell you this: a set of personal characteristics was fed into the big computer at the System Census Bureau at The Hague and the machine compared them with the personal characteristics of every male professional actor alive. It was done as discreetly as possible but somebody might have guessed-and talked. The specifications amounted to identification both of the principal and the actor who could double for him, since the job had to be perfect."

"Oh. And the machine told you that I was the man for it?"

"Yes. You-and one other."

This was another good place for me to keep my mouth shut. But I could not have done so if my life had depended on it-which in a way it did. I just had to know who the other actor was who was considered competent to play a role which called for my unique talents. "This other one? Who is he?"

Dak looked me over; I could see him hesitate. "Mmm-fellow by the name of Orson Trowbridge. Know him?"

"That ham!" For a moment I was so furious that I forgot my nausea.

"So? I hear that he is a very good actor."

I simply could not help being indignant at the idea that anyone should even think about that oaf Trowbridge for a role for which I was being considered. "That arm-waver! That word-mouther!" I stopped, realizing that it was more dignified to ignore such colleagues-if the word fits. But that popinjay was so conceited that- well, if the role

called for him to kiss a lady's hand, Trowbridge would fake it by kissing his own thumb instead. A narcissist, a poseur, a double fake-how could such a man live a role?

Yet such is the injustice of fortune that his sawings and rantings had paid him well while real artists went hungry.

"Dak, I simply cannot see why you considered him for it."

"Well, we didn't want him; he is tied up with some long-term contract that would make his absence conspicuous and awkward. It was lucky for us that you were-uh, 'at liberty.' As soon as you agreed to the job I had Jock send word to call off the team that was trying to arrange a deal with Trowbridge."

"I should think so!"

"But-see here, Lorenzo, I'm going to lay it on the line. While you were busy whooping your cookies after Brennschluss I called the Go For Broke and told them to pass the word down to get busy on Trowbridge again."

"What?"

"You asked for it, shipmate. See here, a man in my racket contracts to herd a heap to Ganymede, that means he will pilot that pot to Ganymede or die trying. He doesn't get fainthearted and try to welsh while the ship is being loaded. You told me you would take this job-no 'ifs' or 'ands' or 'buts'-you took the job. A few minutes later there is a fracas; you lose your nerve. Later you try to run out on me at the field. Only ten minutes ago you were screaming to be taken back dirtside. Maybe you are a better actor than Trowbridge. I wouldn't know. But I know we need a man who can be depended on not to lose his nerve when the time comes. I understand that Trowbridge is that sort of bloke. So if we can get him, we'll use him instead, pay you off and tell you nothing and ship you back. Understand?"

Too well I understood. Dak did not use the word-I doubt if he would have understood it-but he was telling me that I was not a trouper. The bitter part about it was that he was justified. I could not be angry; I could only be ashamed. I had been an idiot to accept the contract without knowing more about it-but I had agreed to play the role, without conditions or escape clauses. Now I was trying to back out, like a rank amateur with stage fright.

"The show must go on" is the oldest tenet of show business. Perhaps it has no philosophical verity, but the things men live by are rarely subject to logical proof. My father had believed it-I had seen him play two acts with a burst appendix and then take his bows before he had let them rush him to a hospital. I could see his face now, looking at me with the contempt of a trouper for a so-called actor who would let an audience down.

"Dak," I said humbly, "I am very sorry. I was wrong."

He looked at me sharply. "You'll do the job?"

"Yes." I meant it sincerely. Then I suddenly remembered a factor which could make the part as impossible for me as the role of Snow White in The Seven Dwarfs. "That is-well, I want to. But--"

"But what?" he said scornfully. "More of your damned temperament?"

"No, no! But you said we were going to Mars. Dak, am I going to be expected to do this impersonation with Martians around me?"

"Eh? Of course. How else on Mars?"

"Uh ... But, Dak, I can't stand Martians! They give me the heebie jeebies. I wouldn't want to-I would try not to-but I might fall right out of the characterization."

"Oh. If that is all that is worrying you, forget it."

"Huh? But I can't forget it. I can't help it. I-"

"I said, 'Forget it.' Old son, we knew you were a peasant in such matters-we know all about you. Lorenzo, your fear of Martians is as childish and irrational as a fear of spiders or snakes. But we had anticipated it and it will be taken care of. So forget it."

"Well-all right." I was not much reassured, but he had flicked me where it hurt. "Peasant"-why, "peasants" were the audience! So I shut up.

Dak pulled the communicator to him, did not bother to silence his message with the rumble box: "Dandelion to Tumbleweed- cancel Plan Inkblot. We will complete Mardi Gras."

"Dak?" I said as he signed off.

"Later," he answered. "I'm about to match orbits. The contact may be a little rough, as I am not going to waste time worrying about chuck holes. So pipe down and hang on."

And it was rough. By the time we were in the torchship I was glad to be comfortably back in free fall again; surge nausea is even worse than everyday dropsickness. But we did not stay in free fall more than five minutes; the three men who were to go back in the Can Do were crowding into the transfer lock even as Dak and I floated into the torchship. The next few moments were extremely confused. I suppose I am a ground hog at heart for I disorient very easily when I can't tell the floor from the ceiling. Someone called out, "Where is he?" Dak replied, "Here)" The same voice replied, "Him?" as if he could not believe his eyes.

"Yes, yes!" Dak answered. "He's got make-up on. Never mind, it's all right. Help me get him into the cider press."

A hand grabbed my arm, towed me along a narrow passage and into a compartment. Against one bulkhead and flat to it were two bunks, or "cider presses," the bathtub-shaped, hydraulic, pressure-distribution tanks used for high acceleration in torchships. I had never seen one before but we had used quite convincing mock-ups in the space opus The Earth Raiders.

There was a stenciled sign on the bulkhead behind the bunks:
WARRING!!! Do Not Take More than Three Gravities without a Gee Suit. By Order of--
I rotated slowly out of range of vision before I could finish reading it and someone shoved me into one cider press. Dak and the other men were hurriedly strapping me against it when a horn somewhere near by broke into a horrid hooting. It continued for several seconds, then a voice replaced it: "Red warning! Two gravities! Three minutes! Red warning! Two gravities! Three minutes!" Then the hooting started again.

Through the racket I heard Dak ask urgently, "Is the projector all set? The tapes ready?"

"Sure, sure!"

"Got the hypo?" Dak squirmed around in the air and said to me, "Look, shipmate, we're going to give you a shot. It's all right. Part of it is Nullgrav, the rest is a stimulant-for you are going to have to stay awake and study your lines. It will make your eyeballs feel hot at first and it may make you itch, but it won't hurt you."

"Wait, Dak, I-"

"No time! I've got to smoke this scrap heap!" He twisted and was out the door before I could protest. The second man pushed up my left sleeve, held an injection gun against the skin, and I had received the dose before I knew it. Then he was gone. The hooting gave way to: "Red waning! Two gravities! Two minutes!"

I tried to look around but the drug made me even more confused. My eyeballs did feel hot and my teeth as well and I began to feel an almost intolerable itching along my spine-but the safety straps kept me from reaching the tortured area-and perhaps kept me from breaking an arm at acceleration. The hooting stopped again and this time Dak's self-confident baritone boomed out, "Last red warning! Two gravities! One minute! Knock off those pinochle games and spread your fat carcasses-we're goin' to smoke!" The hooting was replaced this time by a recording of Arkezian's Ad Astra, opus 61 in C major. It was the controversial London Symphony version with the 14-cycle "scare" notes buried in the timpani. Battered, bewildered, and doped as I was, they seemed to have no effect on me-you can't wet a river.

A mermaid came in the door. No scaly tail, surely, but a mermaid is what she looked like. When my eyes refocused I saw that it was a very likely looking and adequately mammalian young woman in singlet and shorts, swimming along head first in a way that made clear that free fall was no novelty to her. She glanced at me without smiling, placed herself against the other cider press, and took hold of the hand grips-she did not bother with safety belts. The music hit the rolling finale and I felt myself grow very heavy.

Two gravities is not bad, not when you are floating in a liquid bed. The skin over the top of the cider press pushed up around me, supporting me inch by inch; I simply felt heavy and found it hard to breathe. You hear these stories about pilots torching at ten gravities and ruining themselves and I have no doubt that they are true-but two gravities, taken in the cider press, simply makes one feel languid, unable to move.

It was some time before I realized that the horn in the ceiling was speaking to me. "Lorenzo! How are you doing, shipmate?"

"All right." The effort made me gasp. "How long do we have to put up with this?"

"About two days."

I must have moaned, for Dak laughed at me. "Quit bellyaching, chum! My first trip to Mars took thirty-seven weeks, every minute of it free fall in an elliptical orbit. You're taking the luxury route, at a mere double gee for a couple of days-with a one-gee rest at turnover, I might add. We ought to charge you for it."

I started to tell him what I thought of his humor in scathing green-room idiom, then recalled that there was a lady present. My father had taught me that a woman will forgive any action, up to and including assault with violence, but is easily insulted by language; the lovelier half of our race is symbol-oriented-very strange, in view of their extreme practicality. In any case, I have never let a taboo word pass my lips when it might offend the ears of a lady since the time 1 last received the back of my father's hard hand full on my mouth. . . Father could have given Professor Pavlov pointers in reflex conditioning.

But Dak was speaking again. "Penny! You there, honey chile?"

"Yes, Captain," the young woman with me answered.

"Okay, start him on his homework. I'll be down when I have this firetrap settled in its groove."

"Very well, Captain." She turned her head toward me and said in a soft, husky, contralto voice, "Dr. Capek wants you simply to relax and look at movies for several hours. I am here to answer questions as necessary."

I sighed. "Thank goodness someone is at last going to answer questions!"

She did not answer, but raised an ann with some difficulty and passed it over a switch. The lights in the compartment died out and a sound and stereo image built up in front of my eyes. I recognized the central figure-just as any of the billions of citizens of the Empire would have recognized him-and I realized at last how thoroughly and mercilessly Dak Broadbent had tricked me.

It was Bonforte.

The Bonforte, I mean-the Right Honorable John Joseph Bonforte, former Supreme Minister, leader of the loyal opposition, and head of the Expansionist coalition-the most loved (and the most hated!) man in the entire Solar System.

My astonished mind made a standing broad jump and arrived at what seemed a logical certainty. Bonforte had lived through at least three assassination attempts-or so the news reports would have us believe. At least two of his escapes had seemed almost miraculous. Suppose they were not miraculous? Suppose they had all been successful-but dear old Uncle Joe Bonforte had always been somewhere else at the time?

You could use up a lot of actors that way.

Chapter 3

I had never meddled in politics. My father had warned against it. "Stay out of it, Larry," he had told me solemnly. "The publicity you get that way is bad publicity. The peasants don't like it." I had never voted-not even after the amendment of '98 made it easy for the floating population (which includes, of course, most members of the profession) to exercise franchise.

However, insofar as I had political leanings of any sort, they certainly did not lean toward Bonforte. I considered him a dangerous man and very possibly a traitor to the human race. The idea of standing up and getting killed in his place was-how shall I put it?-distasteful to me.

But-what a role!

I had once played the lead in L'Aiglon and I had played Caesar in the only two plays about him worthy of the name. But to play such a role in life-well, it is enough to make one understand how a man could go to the guillotine in another man's place-just for the chance to play, even for a few moments, the ultimately exacting role, in order to create the supreme, the perfect, work of art.

I wondered who my colleagues had been who had been unable to resist that temptation on those earlier occasions. They had been artists, that was certain-though their very anonymity was the only tribute to the success of their characterizations. I tried to remember just when the earlier attempts on Bonforte's life had taken place and which colleagues who might have been capable of the role had died or dropped out of sight at those times. But it was useless. Not only was I not too sure of the details of current

political history but also actors simply fade out of view with depressing frequency; it is a chancy profession even for the best of us.

I found that I had been studying closely the characterization.

I realized I could play it. Hell, I could play it with one foot in a bucket and a smell of smoke backstage. To begin with, there was no problem of physique; Bonforte and I could have swapped clothes without a wrinkle. These childish conspirators who had shanghaied me had vastly overrated the importance of physical resemblance, since it means nothing if not backed up by art-and need not be at all close if the actor is competent. But I admit that it does help and their silly game with the computer machine had resulted (quite by accident!) in selecting a true artist, as well as one who was in measurements and bony structure the twin of the politician. His profile was much like mine; even his hands were long, narrow, and aristocratic like mine-and hands are harder than faces.

That limp, supposedly the result of one of the attempts on his life-nothing to it! After watching him for a few minutes I knew that I could get up from that bed (at one gravity, that is) and walk in precisely the same way and never have to think about it. The way he had of scratching his collarbone and then brushing his chin, the almost imperceptible tic which preceded each of his sentences-such things were no trouble; they soaked into my subconscious like water into sand.

To be sure, he was fifteen or twenty years older than I was, but it is easier to play a role older than oneself than one younger. In any case, age to an actor is simply a matter of inner attitude; it has nothing to do with the steady march of catabolism.

I could have played him on boards, or read a speech in his place, within twenty minutes. But this part, as I understood it, would be more than such an interpretation; Dak had hinted that I would have to convince people who knew hlin well, perhaps in intimate circumstances. This is surpassingly more difficult. Does he take sugar in his coffee? If so, how much? Which hand does he use to strike a cigarette and with what gesture? I got the answer to that one and planted it deep in my mind even as I phrased the question; the simulacrum in front of me struck a cigarette in a fashion that convinced me that he had used matches and the oldfashioned sort of gasper for years before he had gone along with the march of so-called progress.

Worst of all, a man is not a single complexity; he is a different complexity to every person who knows him-which means that, to be successful, an impersonation must change for each "audience"
-for each acquaintance of the man being impersonated. This is not merely difficult; it is statistically impossible. Such little things could trip one up. What shared experiences does your principal have with acquaintance John Jones? With a hundred, or a thousand, John Joneses? How could an impersonator possibly know?

Acting per Se, like all art, is a process of abstracting, of retaining only significant detail. But in impersonation any detail can be significant. In time, something as silly as not crunching celery could let the cat out of the bag.

Then I recalled with glum conviction that my performance probably need be convincing only long enough for a marksman to draw a bead on me.

But I was still studying the man I was to replace (what else could I do?) when the door opened and I heard Dak in his proper person call out, "Anybody home?" The lights

came on, the threedimensional vision faded, and I felt as if I had been wrenched from a dream. I turned my head; the young woman called Penny was struggling to lift her head from the other hydraulic bed and Dak was standing braced in the doorway.

I looked at him and said wonderingly, "How do you manage to stand up?" Part of my mind, the professional part that works independentiy, was noting how he stood and filing it in a new drawer marked: "How a Man Stands under Two Gravities."

He grinned at me. "Nothing to it. I wear arch supports."

"Hmmmph!"

"You can stand up, if you want to. Ordinarily we discourage passengers from getting out of the boost tanks when we are torching at anything over one and a half gees-too much chance that some idiot wifi fall over his own feet and break a leg. But I once saw a really tough weight-lifter type climb out of the press and walk at five gravities-but he was never good for much afterwards. But two gees is okay-about like carrying another man piggyback." He glanced at the young lady. "Giving him the straight word, Penny?"

"He hasn't asked anything yet."

"So? Lorenzo, I thought you were the lad who wanted all the answers."

I shrugged. "I cannot now see that it matters, since it is evident that I will not live long enough to appreciate them."

"Eh? What soured your milk, old son?"

"Captain Broadbent," I said bitterly, "I am inhibited in expressing myself by the presence of a lady; therefore I cannot adequately discuss your ancestry, personal habits, morals, and destination. Let it stand that I knew what you had tricked me into as soon as I became aware of the identity of the man I am to impersonate. I will content myself with one question only: who is about to attempt to assassinate Bonforte? Even a clay pigeon should be entitled to know who is shooting at him."

For the first time I saw Dak register surprise. Then he laughed so hard that the acceleration seemed to be too much for him; he slid to the deck and braced his back against a bulkhead, still laughing.

"I don't see anything funny about it," I said angrily.

He stopped and wiped his eyes. "Lorrie old son, did you honestly think that I had set you up as a sitting duck?"

"It's obvious." I told him my deductions about the earlier assassination attempts.

He had the sense not to laugh again. "I see. You thought it was a job about like food taster for a Middle Ages king. Well, we'll have to try to straighten you out; I don't suppose it helps your acting to think that you are about to be burned down where you stand. Look, I've been with the Chief for six years. During that time I know he has never used a double . . . Nevertheless, I was present on two occasions when attempts were made on his life- one of those times I shot the hatchet man. Penny, you've been with the Chief longer than that. Has he ever used a double before?"

She looked at me coldly. "Never. The very idea that the Chief would let anybody expose himself to danger in his place is-well, I ought to slap your face; that's what I ought to do!"

"Take it easy, Penny," Dak said mildly. "You've both got jobs to do and you are going to have to work with him. Besides, his wrong guess isn't too silly, not from the outside. By the way, Lorenzo, this is Penelope Russell. She is the Chief's personal secretary, which makes her your number-one coach."

"I am honored to meet you, mademoiselle."

"I wish I could say the same!"

"Stow it, Penny, or I'll spank your round fanny-at two gravities. Lorenzo, I concede that doubling for John Joseph Bonforte isn't as safe as tiding in a wheel chair-shucks, as we both know, several attempts have been made to close out his life insurance. But that is not what we are afraid of this time. Matter of fact, this time, for political reasons you will presently understand, the laddies we are up against won't dare to try to kill the Chief-or to kill you when you are doubling for the Chief. They are playing rough -as you know!-and they would kill me, or even Penny, for the slightest advantage. They would kill you right now, if they could get at you. But when you make this public appearance as the Chief you'll be safe; the circumstances will be such that they can't afford to kill."

He studied my face. "Well?"

I shook my head. "I don't follow you."

"No, but you will. It is a complicated matter, involving Martian ways of looking at things. Take it for granted; you'll know all about it before we get there."

I still did not like it. Thus far Dak had told me no outright lies that I knew of-but he could lie effectively by not telling all that he knew, as I had learned the bitter way. I said, "See here, I have no reason to trust you, or to trust this young lady-if you will pardon mc, miss. But while I haven't any liking for Mr. Bonforte, he does have the reputation for being painfully, even offensively, honest. When do I get to talk to him? As soon as we reach Mars?"

Dak's ugly, cheerful face was suddenly shadowed with sadness. "I'm afraid not. Didn't Penny tell you?"

"Tell me what?"

"Old son, that's why we've got to have a double for the Chief. They've kidnapped him!"

My head ached, possibly from the double weight, or perhaps from too many shocks. "Now you know," Dak went on. "You know why Jock Dubois didn't want to trust you with it until after we raised ground. It is the biggest news story since the first landing on the Moon, and we are sitting on it, doing our damnedest to keep it from ever being known. We hope to use you until we can find him and get him back. Matter of fact, you have already started your impersonation. This ship is not really the Go For Broke; it is the Chief's private yacht and traveling office, the Tom Paine. The Go For Broke is riding a parking orbit around Mars, with its transponder giving out the recognition signal of this ship-a fact known only to its captain and comm officer-while the Tommie tucks up her skirts and rushes to Earth to pick up a substitute for the Chief. Do you begin to scan it, old son?"

I admit that I did not. "Yes, but-see here, Captain, if Mr. Bonforte's political enemies have kidnapped him, why keep it secret? I should expect you to shout it from the housetops."

"On Earth we would. At New Batavia we would. On Venus we would. But here we are dealing with Mars. Do you know the legend of Kkkahgral the Younger?"

"Eh? I'm afraid I don't."

"You must study it; it will give you insight into what makes a Martian tick. Briefly, this boy Kkkah was to appear at a certain time and place, thousands of years ago, for a very high honor-like being knighted. Through no fault of his own (the way we would look at it) he failed to make it on time. Obviously the only thing to do was to kill him-by Martian standards. But because of his youth and his distinguished record some of the radicals present argued that he should be allowed to go back and start over. But Kkkahgral would have none of it. He insisted on his right to prosecute the case himself, won it, and was executed. Which makes him the very embodiment, the patron saint, of propriety on Mars."

"That's crazy!"

"Is it? We aren't Martians. They are a very old race and they have worked out a system of debts and obligations to cover every possible situation-the greatest formalists conceivable. Compared with them, the ancient Japanese, with their girl and gimu, were outright anarchists. Martians don't have 'right' and 'wrong'-instead they have propriety and impropriety, squared, cubed, and loaded with gee juice. But where it bears on this problem is that the Chief was about to be adopted into the nest of Kkkahgral the Younger himself. Do you scan me now?"

I still did not. To my mind this Kkkah character was one of the more loathsome items from Le Grand Guignol. Broadbent went on, "It's simple enough. The Chief is probably the greatest practical student of Martian customs and psychology. He has been working up to this for years. Comes local noon on Wednesday at Lacus Soli, the ceremony of adoption takes place. If the Chief is there and goes through his paces properly, everything is sweet. If he is not there-and it makes no difference at all why he is not there-his name is mud on Mars, in every nest from pole to pole- and the greatest interplanetary and interracial political coup ever attempted falls flat on its face. Worse than that, it will backfire. My guess is that the very least that will happen is for Mars to withdraw even from its present loose association with the Empire. Much more likely there will be reprisals and human beings will be killed-maybe every human on Mars. Then the extremists in the Humanity Party would have theft way and Mars would be brought into the Empire by force-but only after every Martian was dead. And all set off just by Bonforte failing to show up for the adoption ceremony. . . Martians take these things very seriously."

Dak left as suddenly as he had appeared and Penelope Russell turned on the picture projector again. It occurred to me fretfully that I should have asked him what was to keep our enemies from simply killing me, if all that was needed to upset the political applecart was to keep Bonforte (in his proper person, or through his double) from attending some barbaric Martian ceremony. But I had forgotten to ask-perhaps I was subconsciously afraid of being answered.

But shortly I was again studying Bonforte, watching his movements and gestures, feeling his expressions, subvocalizing the tones of his voice, while floating in that detached, warm reverie of artistic effort. Already I was "wearing his head."

I was panicked out of it when the images shifted to one in which Bonforte was surrounded by Martians, touched by their pseudo limbs. I had been so deep inside the picture that I could actually feel them myself-and the stink was unbearable. I made a strangled noise and clawed at it. "Shut it oft!"

The lights came up and the picture disappeared. Miss Russell was looking at me. "What in the world is the matter with you?"

I tried to get my breath and stop trembling. "Miss Russell-I am very sorry-but please-don't turn that on again. I can't stand Martians."

She looked at me as if she could not believe what she saw but despised it anyhow. "I told them," she said slowly and scornfully, "that this ridiculous scheme would not work."

"I am very sorry. I cannot help it."

She did not answer but climbed heavily out of the cider press. She did not walk as easily at two gravities as Dak did, but she managed. She left without another word, closing the door as she went.

She did not return. Instead the door was opened by a man who appeared to be inhabiting a giant kiddie stroller. "Howdy there, young fellow!" he boomed out. He was sixtyish, a bit too heavy, and bland; I did not have to see his diploma to be aware that his was a "bedside" manner.

"How do you do, sir?"

"Well enough. Better at lower acceleration." He glanced down at the contrivance he was strapped into. "How do you like my corset-on-wheels? Not stylish, perhaps, but it takes some of the strain off my heart. By the way, just to keep the record straight, I'm Dr. Capek, Mr. Bonforte's personal therapist. I know who you are. Now what's this we hear about you and Martians?"

I tried to explain it clearly and unemotionally.

Dr. Capek nodded. "Captain Broadbent should have told me. I would have changed the order of your indoctrination program. The captain is a competent young fellow in his way but his muscles run ahead of his brain on occasion . . . He is so perfectly normal an extrovert that he frightens me. But no harm done. Mr. Smythe, 1 want your permission to hypnotize you. You have my word as a physician that it will be used only to help you in this matter and that I will in no wise tamper with your personal integration." He pulled out an old-fashioned pocket watch of the sort that is almost a badge of his profession and took my pulse.

I answered, "You have my permission readily, sir-but it won't do any good. I can't go under." I had learned hypnotic techniques myself during the time I was showing my mentalist act, but my teachers had never had any luck hypnotizing me. A touch of hypnotism is very useful to such an act, especially if the local police aren't too fussy about the laws the medical association has hampered us with.

"So? Well, we'll just have to do the best we can, then. Suppose you relax, get comfortable, and we'll talk about your problem." He still kept the watch in his hand, fiddling with it and twisting the chain, after he had stopped taking my pulse. I started to mention it, since it was catching the reading light just over my head, but decided that it was probably a nervous habit of which he was not aware and really too trivial a matter to call to the attention of a stranger.

"I'm relaxed," I assured him. "Ask me anything you wish. Or free association, if you prefer."

"Just let yourself float," he said softly. "Two gravities makes you feel heavy, doesn't it? I usually just sleep through it myself. It pulls the blood out of the brain, makes

one sleepy. They are beginning to boost the drive again. We'll all have to sleep . . . We'll be heavy . . . We'll have to sleep. .

I started to tell him that he had better put his watch away-or it would spin right out of his hand. Instead I fell asleep.

When I woke up, the other acceleration bunk was occupied by Dr. Capek. "Howdy, bub," he greeted me. "I got tired of that confounded perambulator and decided to stretch out here and distribute the strain."

"Uh, are we back on two gravities again?"

"Eh? Oh yes! We're on two gravities."

"I'm sorry I blacked out. How long was I asleep?"

"Oh, not very long. How do you feel?"

"Fine. Wonderfully rested, in fact."

"It frequently has that effect. Heavy boost, I mean. Feel like seeing some more pictures?"

"Why, certainly, if you say so, Doctor."

"Okay." He reached up and again the room went dark.

I was braced for the notion that he was going to show me more pictures of Martians; I made up my mind not to panic. After all, I had found it necessary on many occasions to pretend that they were not present; surely motion pictures of them should not affect me-I had simply been surprised earlier.

They were indeed stereos of Martians, both with and without Mr. Bonforte. I found it possible to study them with detached mind, without terror or disgust.

Suddenly I realized that I was enjoying looking at them!

I let out some exclamation and Capek stopped the film. "Trouble?"

"Doctor-you hypnotized me!"

"You told me to."

"But I can't be hypnotized."

"Sorry to hear it."

"Uh-so you managed it. I'm not too dense to see that." I added, "Suppose we try those pictures again. I can't really believe it."

He switched them on and I watched and wondered. Martians were not disgusting, if one looked at them without prejudice; they weren't even ugly. In fact, they possessed the same quaint grace as a Chinese pagoda. True, they were not human in form, but neither is a bird of paradise-and birds of paradise are the loveliest things alive.

I began to realize, too, that their pseudo limbs could be very expressive; their awkward gestures showed some of the bumbling friendliness of puppies. I knew now that I had looked at Martians all my life through the dark glasses of hate and fear.

Of course, I mused, theft stench would still take getting used to, but-and then I suddenly realized that I was smelling them, the unmistakable odor-and I didn't mind it a bit! In fact, I liked it. "Doctor!" I said urgently. "This machine has a 'smellie' attachment-doesn't it?"

"Eh? I believe not. No, I'm sure it hasn't-too much parasitic weight for a yacht."

"But it must. I can smell them very plainly."

"Oh, yes." He looked slightly shamefaced. "Bub, I did one thing to you that I hope will cause you no inconvenience."

"Sir?"

"While we were digging around inside your skull it became evident that a lot of your neurotic orientation about Martians was triggered by their body odor. I didn't have time to do a deep job so I had to offset it. I asked Penny-that's the youngster who was in here before-for a loan of some of the perfume she uses. I'm afraid that from here on out, bub, Martians are going to smell like a Parisian house of joy to you. If I had had time I would have used some homelier pleasant odor, like ripe strawberries or hotcakes and syrup. But I had to improvise."

I sniffed. Yes, it did smell like a heavy and expensive perfume- and yet, damn it, it was unmistakably the reek of Martians. "I like it."

"You can't help liking it."

"But you must have spilled the whole bottle in here. The place is drenched with it."

"Huh? Not at all. I merely waved the stopper under your nose a half hour ago, then gave the bottle back to Penny and she went away with it." He sniffed. "The odor is gone now. 'Jungle Lust,' it said on the bottle. Seemed to have a lot of musk in it. I accused Penny of trying to make the crew space-happy and she just laughed at me." He reached up and switched off the stereopix. "We've had enough of those for now. I want to get you onto something more useful."

When the pictures faded out, the fragrance faded with them, just as it does with smellie equipment. I was forced to admit to myself that it was all in the head. But, as an actor, I was intellectually aware of that truth anyhow.

When Penny came back in a few minutes later, she had a fragrance exactly like a Martian.

I loved it.

Chapter 4

My education continued in that room (Mr. Bonforte's guest room, it was) until turnover. I had no sleep, other than under hypnosis, and did not seem to need any. Either Doc Capek or Penny stuck with me and helped me the whole time. Fortunately my man was as thoroughly photographed and recorded as perhaps any man in history and I had, as well, the close co-operation of his intimates. There was endless material; the problem was to see how much I could assimilate, both awake and under hypnosis.

I don't know at what point I quit disliking Bonforte. Capek assured me-and I believe him-that he did not implant a hypnotic suggestion on this point; I had not asked for it and I am quite certain that Capek was meticulous about the ethical responsibilities of a physician and hypnotherapist. But I suppose that it was an inevitable concomitant of the role-I rather think I would learn to like Jack the Ripper if I studied for the part. Look at it this way:

to learn a role truly, you must for a time become that character. And a man either likes himself, or he commits suicide, one way or another.

"To understand all is to forgive all"-and I was beginning to understand Bonforte.

At turnover we got that one-gravity rest that Dak had promised. We never were in free fall, not for an instant; instead of putting out the torch, which I gather they hate to do while under way, the ship described what Dak called a 1 SO-degree skew turn. It leaves the ship on boost the whole time and is done rather qulckly, but it has an oddly disturbing effect on the sense of balance. The effect has a name something like Coriolanus. Coriolis?

All I know about spaceships is that the ones that operate from the surface of a planet are true rockets but the voyageurs call them "teakettles" because of the steam jet of water or hydrogen they boost with. They aren't considered real atomic-power ships even though the jet is heated by an atomic pile. The long-jump ships such as the Tom Paine, torchships that is, are (so they tell me) the real thing, making use of F equals MC squared, or is it M equals EC squared? You know-the thing Einstein invented.

Dak did his best to explain it all to me, and no doubt it is very interesting to those who care for such things. But I can't imagine why a gentleman should bother with such. It seems to me that every time those scientific laddies get busy with their slide rules life becomes more complicated. What was wrong with things the way they were?

During the two hours we were on one gravity I was moved up to Bonforte's cabin. I started wearing his clothes and his face and everyone was careful to cail me "Mr. Bonforte" or "Chief" or (in the case of Dr. Capek) "Joseph," the idea being, of course, to help me build the part.

Everyone but Penny, that is. . . She simply would not call me "Mr. Bonforte." She did her best to help but she could not bring herself to that. It was clear as scripture that she was a secretary who silently and hopelessly loved her boss, and she resented me with a deep, illogical, but naturai bitterness. It made it hard for both of us, especially as I was finding her most attractive. No man can do his best work with a woman constantly around him who despises him. But I could not dislike her in return; I felt deeply sorry for her-even though I was decidedly irked.

We were on a tryout-in-the-sticks basis now, as not everyone in the Tom Paine knew that I was not Bonforte. I did not know exactly which ones knew of the substitution, but I was allowed to relax and ask questions only in the presence of Dak, Penny, and Dr. Capek. I was fairiy sure that Bonforte's chief clerk, Mr. Washington, knew but never let on; he was a spare, elderly mulatto with the tight-lipped mask of a saint. There were two others who certhinly knew, but they were not in the Tom Paine; they were standing by and covering up from the Go For Broke, handling press releases and routine dispatches-Bill Corpsman, who was Bonforte's front man with the news services, and Roger Clifton. I don't know quite how to describe Clifton's job. Political deputy? He had been Minister without Portfolio, you may remember, when Bonforte was Supreme Minister, but that says nothing. Let's put it symbolically: Bonforte handed out policy and Clifton handed out patronage.

This small group had to know; if any others knew it was not considered necessary to tell me. To be sure, the other members of Bonforte's staff and all the crew of the Tom Paine knew that something odd was going on; they did not necessarily know what it was. A good many people had seen me enter the ship-but as "Benny Grey." By the time they saw me again I was already "Bonforte."

Someone had had the foresight to obtain real make-up equipment, but I used aimost none. At close range make-up can be seen; even Silicoflesh cannot be given the

exact texture of skin. I contented myself with darkening my natural complexion a couple of shades with Semiperm and wearing his face, from inside. I did have to sacrifice quite a lot of hair and Dr. Capek inhibited the roots. I did not mind; an actor can always wear hair-pieces-and I was sure that this job was certain to pay me a fee that would let me retire for life, if 1 wished.

On the other hand, I was sometimes queasily aware that "life" might not be too long-there are those old saws about the man who knew too much and the one about dead men and tales. But truthfully I was beginning to trust these people. They were all darn nice people-which told me as much about Bonforte as I had learned by listening to his speeches and seeing his pix. A political figure is not a single man, so I was learning, but a compatible team. If Bonforte himself had not been a decent sort he would not have had these people around him.

The Martian language gave me my greatest worry. Like most actors, I had picked up enough Martian, Venerian, Outer Jovian, etc., to be able to fake in front of a camera or on stage. But those roiled or fluttered consonants are very difficult. Human vocal cords are not as versatile as a Martian's tympanus, I believe, and, in any case, the semi-phonetic spelling out of those sounds in Roman letters, for example "kkk" or "jjj" or "rrr," have no more to do with the true sounds than the gin "Gnu" has to do with the inhaled click with which a Bantu pronounces "Gnu." "Jjj," for instance, closely resembles a Bronx cheer.

Fortunately Bonforte had no great talent for other languages- and I am a professional; my ears really hear, I can imitate any sound, from a buzz saw striking a nail in a chunk of firewood to a setting hen disturbed on her nest. It was necessary only to acquire Martian as poorly as Bonforte spoke it. He had worked hard to overcome his lack of talent, and every word and phrase of Martian that he knew had been sight-sound recorded so that he could study his mistakes.

So I studied his mistakes, with the projector moved into his office and Penny at my elbow to sort out the spools for me and answer questions.

Human languages fall into four groups: inflecting ones as in Anglo-American, positional as in Chinese, agglutinative as in Old Turkish, polysynthetic (sentence units) as in Eskimo-to which, of course, we now add alien structures as wildly odd and as nearly impossible for the human brain as non-repetitive or emergent Venetian. Luckily Martian is analogous to human speech forms. Basic Martian, the trade language, is positional and involves only simple concrete ideas-like the greeting: "I see you." High Martian is polysynthetic and very stylized, with an expression for every nuance of their complex system of rewards and punishments, obligations and debts. It had been almost too much for Bonforte; Penny told me that he could read those arrays of dots they use for writing quite easily but of the spoken form of High Martian he could say only a few hundred sentences.

Brother, how I studied those few he had mastered!

The strain on Penny was even greater than it was on me. Both she and Dak spoke some Martian but the chore of coaching me fell on her as Dak had to spend most of his time in the control room; Jock's death had left him shorthanded. We dropped from two gravities to one for the last few million miles of the approach, during which time he never came below at all. I spent it learning the ritual I would have to know for the adoption ceremony, with Penny's help.

I had just completed running through the speech in which 1 was to accept membership in the Kkkah nest-a speech not unlike that, in spirit, with which an orthodox Jewish boy assumes the responsibilities of manhood, but as fixed, as invariable, as Hamlet's soliloquy. I had read it, complete with Bonforte's misproflufl ciations and facial tic; I finished and asked, "How was that?"

"That was quite good," she answered seriously.

"Thanks, Curly Top." It was a phrase I had lifted from the language-practice spools in Bonforte's files; it was what Bonforte called her when he was feeling mellow-and it was perfectly in character.

"Don't you dare call me that?'

It looked at her in honest amazement and answered, still in character, "Why, Penny my child!"

"Don't you call me that, either! You fake! You phony! You- actor!" She jumped up, ran as far as she could-which was only to the door-and stood there, faced away from me, her face buried in her hands and her shoulders shaking with sobs.

I made a tremendous effort and lifted myself out of the character_pulled in my belly, let my own face come up, answered in my own voice. "Miss Russell!"

She stopped crying, whirled around, looked at me, and her jaw dropped. I added, still in my normal self, "Come back here and sit down."

I thought she was going to refuse, then she seemed to think better of it, came slowly back and sat down, her hands in her lap but with her face that of a little girl who is "saving up more spit."

I let her sit for a moment, then said quietly, "Yes, Miss Russell, I am an actor. Is that a reason for you to insult me?"

She simply looked stubborn.

"As an actor, I am here to do an actor's job. You know why. You know, too, that I was tricked into taking it-it is not a job I would have accepted with my eyes open, even in my wildest moments. I hate having to do it considerably more than you hate having me do it-for despite Captain Broadbent'S cheerful assurances I am not at all sure that I will come out of it with my skin intact-and I'm actually fond of my skin; it's the only one I have. I believe, too, that I know why you find it hard to accept me. But is that any reason for you to make my job harder than it has to be?"

She mumbled. I said sharply, "Speak up!"

"It's dishonest. It's indecent!"

I sighed. "It certainly is. More than that, it is impossible without the wholehearted support of the other members of the cast. So let's call Captain Broadbent down here and tell him. Let's call it off."

She jerked her face up and said, "Oh no! We can't do that."

"Why can't we? A far better thing to drop it now than to present it and have it flop. 1 can't give a performance under these conditions. Let's admit it."

"But...but...We've got to! It's necessary."

"Why is it necessary, Miss Russell? Political reasons? I have not the slightest interest in politics-and I doubt if you have any really deep interest. So why must we do it?"

"Because-because he--" She stopped, unable to go on, strangled by sobs.

I got up, went over, and put a hand on her shoulder. "I know. Because if we don't, something that he has spent years building up will fall to pieces. Because he can't do it

himself and his friends are trying to cover up and do it for him. Because his friends are loyal to him. Because you are loyal to him. Nevertheless, it hurts you to see someone else in the place that is rightfully his. Besides that, you are half out of your mind with grief and worry about him. Aren't you?"

"Yes." I could barely hear it.

I took hold of her chin and tilted her face up. "I know why you find it so hard to have me here, in his place. You love him. But I'm doing the best job for him I know how. Confound it, woman! Do you have to make my job six times harder by treating me like dirt?"

She looked shocked. For a moment I thought she was going to slap me. Then she said brokenly, "I am sorry. I am very sorry. I won't let it happen again."

I let go her chin and said briskly, "Then let's get back to work."

She did not move. "Can you forgive me?"

"Huh? There's nothing to forgive, Penny. You were acting up because you love him and you were worried. Now let's get to work. I've got to be letter-perfect-and it's only hours away." I dropped at once back into the role.

She picked up a spool and started the projector again. I watched him through it once, then did the acceptance speech with the sound cut out but stereo on, matching my voice-Mr voice, I mean-to the moving image. She watched me, looking from the image back to my face with a dazed look on her own. We finished and I switched it off myself. "How was that?"

"That was perfect!"

I smiled his smile. "Thanks, Curly Top."

"Not at all-'Mr. Bonforte.'"

Two hours later we made rendezvous with the Go For Broke.

Dak brought Roger Clifton and Bill Corpsman to my cabin as soon as the Go For Broke had transferred them. I knew them from pictures. I stood up and said, "Hello, Rog. Glad to see you, Bill." My voice was warm but casual; on the level at which these people operated, a hasty trip to Earth and back was simply a few days' separation and nothing more. I limped over and offered my hand. The ship was at the moment under low boost as it adjusted to a much tighter orbit than the Go For Broke had been riding in.

Clifton threw me a quick glance, then played up. He took his cigar out of his mouth, shook hands, and said quietly, "Glad to see you back, Chief." He was a small man, bald-headed and middle-aged, and looked like a lawyer and a good poker player.

"Anything special while I was away?"

"No. Just routine. I gave Penny the file."

"Good." I turned to Bill Corpsman, again offered my hand.

He did not take it. Instead he put his fists on his hips, looked up at me, and whistled. "Amazing! I really do believe we stand a chance of getting away with it." He looked me up and down, then said, "Turn around, Smythe. Move around. I want to see you walk."

I found that I was actually feeling the annoyance that Bonforte would have felt at such uncalled-for impertinence, and, of course, it showed in my face. Dak touched Corpsman's sleeve and said quickly, "Knock it off, Bill. You remember what we agreed?"

"Chicken tracks!" Corpsman answered. "This room is soundproof. I just want to make sure he is up to it. Smythe, how's your Martian? Can you spiel it?"

I answered with a single squeaking polysyllabic in High Martian, a sentence meaning roughly, "Proper conduct demands that one of us leave!"-but it means far more than that, as it is a challenge which usually ends in someone's nest being notified of a demise.

I don't think Corpsman understood it, for he grinned and answered, "I've got to hand it to you, Smythe. That's good."

But Dak understood it. He took Corpsman by the arm and said, "Bill, I told you to knock it off. You're in my ship and that's an order. We play it straight from here on-every second."

Clifton added, "Pay attention to him, Bill. You know we agreed that was the way to do it. Otherwise somebody might slip."

Corpsman glanced at him, then shrugged. "All right, all right. I was just checking up-after all, this was my idea." He gave me a one-sided smile and said, "Howdy, Mister Bonforte. Glad to see you back."

There was a shade too much emphasis on "Mister" but I answered, "Good to be back, Bill. Anything special I need to know before we go down?"

"I guess not. Press conference at Goddard City after the ceremonies." I could see him watching me to see how I would take it.

I nodded. "Very well."

Dak said hastily, "Say, Rog, how about that? Is it necessary? Did you authorize it?"

"I was going to add," Corpsman went on, turning to Clifton, "before the Skipper here got the jitters, that I can take it myself and tell the boys that the Chief has dry laryngitis from the ceremonies-or we can limit it to written questions submitted ahead of time and I'll get the answers written out for him while the ceremonies are going on. Seeing that he looks and sounds so good close up, I would say to risk it. How about it, Mister-'Bonforte'? Think you can swing it?"

"I see no problem involved in it, Bill." I was thinking that if I managed to get by the Martians without a slip I would undertake to ad-lib double talk to a bunch of human reporters as long as they wanted to listen. I had good command of Bonforte's speaking style by now and at least a rough notion of his policies and attitudes-and I need not be specific.

But Clifton looked worried. Before he could speak the ship's horn brayed out, "Captain is requested to come to the control room. Minus four minutes."

Dak said quickly, "You all will have to settle it. I've got to put this sled in its slot-I've got nobody up there but young Epstein." He dashed for the door.

Corpsman called out, "Hey, Skip! I wanted to tell you-" He was out the door and following Dak without waiting to say goodby.

Roger Clifton closed the door Corpsman had left open, came back, and said slowly, "Do you want to risk this press conference?"

"That is up to you. I want to do the lob."

"Mnim ... Then I'm inclined to risk it-if we use the written questions method. But I'll check Bill's answers myself before you have to give them."

"Very well." I added, "If you can find a way to let me have them ten minutes or so ahead of time, there shouldn't be any difficulty. I'm a very quick study."

He inspected me. "I quite believe it-Chief. All right, I'll have Penny slip the answers to you right after the ceremonies. Then you can excuse yourself to go to the men's room and just stay there until you are sure of them."

"That should work."

"I think so. Uh, I must say I feel considerably better now that I've seen you. Is there anything I can do for you?"

"I think not, Rog. Yes, there is, too. Any word about-him?"

"Eh? Well, yes and no. He's still in Goddard City; we're sure of that. He hasn't been taken off Mars, or even out in the country. We blocked them on that, if that was their intention."

"Eh? Goddard City is not a big place, is it? Not more than a hundred thousand? What's the hitch?"

"The hitch is that we don't dare admit that you-I mean that he -is missing. Once we have this adoption thing wrapped up, we can put you out of sight, then announce the kidnaping as if it had lust taken place-and make them take the city apart rivet by rivet. The city authorities are all Humanity Party appointees, but they will have to co-operate-after the ceremony. It will be the most wholehearted co-operation you ever saw, for they will be deadly anxious to produce him before the whole Kkkahgral nest swarms over them and tears the city down around theft ears."

"Oh. I'm still learning about Martian psychology and customs."

"Aren't we all?"

"Rog? Mmm... What leads you to think that he is still alive? Wouldn't theft purpose be better served-and with less risk-just by killing him?" I was thinking queasily how simple it had turned out to be to get rid of a body, if a man was ruthless enough.

"I see what you mean. But that, too, is tied up with Martian notions about 'propriety.'" (He used the Martian word.) "Death is the one acceptable excuse for not carrying out an obligation. If he were simply killed, they would adopt him into the nest after his death-and then the whole nest and probably every nest on Mars would set out to avenge him. They would not mind in the least if the whole human race were to die or be killed-but to kill this one human being to keep him from being adopted, that's another kettle of fish entirely. Matter of obligation and propriety-in some ways a Martian's response to a situation is so automatic as to remind one of instinct. It is not, of course, since they are incredibly intelligent. But they do the damnedest things." He frowned and added, "Sometimes I wish I had never left Sussex."

The warning hooter broke up the discussion by forcing us to hurry to our bunks. Dak had cut it fine on purpose; the shuttle rocket from Goddard City was waiting for us when we settled into free fall. All five of us went down, which just filled the passenger couches-again a matter of planning, for the Resident Commissioner had expressed the intention of coming up to meet me and had been dissuaded only by Dak's message to him that our party would require all the space.

I tried to get a better look at the Martian surface as we went down, as I had had only one glimpse of it, from the control room of the Tom Paine-since I was supposed to have been there many times I could not show the normal curiosity of a tourist. I did not

get much of a look; the shuttle pilot did not turn us so that we could see until he leveled off for his glide approach and I was busy then putting on my oxygen mask.

That pesky Mars-type mask almost finished us; I had never had a chance to practice with it-Dak did not think of it and I had not realized it would be a problem; I had worn both spacesuit and aqua lung on other occasions and I thought this would be about the same. It was not. The model Bonforte favored was a mouthfree type, a Mitsubushi "Sweet Winds" which pressurizes directly at the nostrils-a nose clamp, nostril plugs, tubes up each nostril which then run back under each ear to the supercharger on the back of your neck. I concede that it is a fine device, once you get used to it, since you can talk, eat, drink, etc., while wearing it. But I would rather have a dentist put both hands in my mouth.

The real difficulty is that you have to exercise conscious control on the muscles that close the back of your mouth, or you hiss like a teakettle, since the dun thing operates on a pressure difference. Fortunately the pilot equalized to Mars-surface pressure once we all had our masks on, which gave me twenty minutes or so to get used to it. But for a few moments I thought the jig was up, just over a silly piece of gadgetry. But I reminded myself that I had worn the thing hundreds of times before and that I was as used to it as I was to my toothbrush. Presently I believed it.

Dak had been able to avoid having the Resident Commissiooer chit-chat with me for an hour on the way down but it had not been possible to miss him entirely; he met the shuttle at the skyfield. The close timing did keep me from having to cope with other humans, since I had to go at once into the Martian city. It made sense, but it seemed strange that I would be safer among Martians than among my own kind.

It seemed even stranger to be on Mars.

Chapter 5

Mr. Commissioner Boothroyd was a Humanity Party appointee, of course, as were all of his staff except for civil service technical employees. But Dak had told me that it was at least sixty-forty that Boothroyd had not had a finger in the plot; Dak considered him honest but stupid. For that matter, neither Dak nor Rog Clifton believed that Supreme Minister Quiroga was in it; they attributed the thing to the clandestine terrorist group inside the Humanity Party who called themselves the "Actionists"-and they attributed them to some highiy respectable big-money boys who stood to profit heavily.

Myself, I would not have known an Actionist from an auctioneer.

But the minute we landed something popped up that made me wonder whether friend Boothroyd was as honest and stupid as Dak thought he was. It was a minor thing but one of those little things that can punch holes in an impersonation. Since I was a Very Important Visitor the Commissioner met me; since I held no public office other than membership in the Grand Assembly and was traveling privately no official honors were offered. He was alone save for his aide-and a little girl about fifteen.

I knew him from photographs and I knew quite a bit about him; Rog and Penny had briefed me carefully. I shook hands, asked about his sinusitis, thanked him for the

pleasant time I had had on my last visit, and spoke with his aide in that warm man-to-man fashion that Bonforte was so good at. Then I turned to the young lady. I knew Boothroyd had children and that one of them was about this age and sex; I did not know-perhaps Rog and Penny did not know-whether or not I had ever met her.

Boothroyd himself saved me. "You haven't met my daughter Deirdre, I believe. She insisted on coming along."

Nothing in the pictures I had studied had shown Bonforte dealing with young girls-so I simply had to be Bonforte-a widower in his middle fifties who had no children of his own, no nieces, and probably little experience with teen-age girls-but with lots of experience in meeting strangers of every sort. So I treated her as if she were twice her real age; I did not quite kiss her band. She blushed and looked pleased.

Boothroyd looked indulgent and said, "Well, ask him, my dear. You may not have another chance."

She blushed deeper and said, "Sir, could I have your autograph? The girls in my school collect them. I have Mr. Quiroga's

I ought to have yours." She produced a little book which she had been holding behind her.

I felt like a copter driver asked for his license-which is home in his other pants. I had studied hard but I had not expected to have to forge Bonforte's signature. Damn it, you can't do everything in two and a half days!

But it was simply impossible for Bonforte to refuse such a request-and I was Bonforte. I smiled jovially and said, "You have Mr. Quiroga's already?"

"Yes, sir."

"Just his autograph?"

"Yes. Er, he put 'Best Wishes' on it."

I winked at Boothroyd. "Just 'Best Wishes,' eh? To young lathes I never make it less than 'Love.' Tell you what I'm going to do-" I took the little book from her, glanced through the pages.

"Chief," Dak said urgently, "we are short on minutes."

"Compose yourself," I said without looking up. "The entire Martian nation can wait, if necessary, on a young lady." I banded the book to Penny. "Will you note the size of this book? And then remind me to send a photograph suitable for pasting in it-and properly autographed, of course."

"Yes, Mr. Bonforte."

"Will that suit you, Miss Deirdre?"

"Gee!"

"Good. Thanks for asking me. We can leave now, Captain. Mr. Commissioner, is that our car?"

"Yes, Mr. Bonforte." He shook his head wryly. "I'm afraid you have converted a member of my own family to your Expansionist heresies. Hardly sporting, eh? Sitting ducks, and so forth?"

"That should teach you not to expose her to bad company-eh, Miss Deirdre?" I shook hands again. "Thanks for meeting us, Mr. Commissioner. I am afraid we had better hurry thong now."

"Yes, certainly. Pleasure."

"Thanks, Mr. Bonforte!"

"Thank you, my dear."

I turned away slowly, so as not to appear jerky or nervous in stereo. There were photographers around, still, news pickup, stereo, and so forth, as well as many reporters. Bill was keeping the reporters away from us; as we turned to go he waved and said, "See you later, Chief," and turned back to talk to one of them. Rog, Dak, and Penny followed me into the car. There was the usual skyfield crowd, not as numerous as at any earthport, but numerous. I was not worried about them as long as Boothroyd accepted the impersonation-though there were certainly some present who knew that I was not Bonforte.

But I refused to let those individuals worry me, either. They could cause us no trouble without incriminating themselves.

The car was a Rolls Outlander, pressurized, but I left my oxygen mask on because the others did. I took the right-hand seat, Rog sat beside me, and Penny beside him, while Dak wound his long legs around one of the folding seats. The driver glanced back through the partition and started up.

Rog said quietly, "I was worried there for a moment."

"Nothing to worry about. Now let's all be quiet, please. I want to review my speech."

Actually I wanted to gawk at the Martian scene; I knew the speech perfectly. The driver took us along the north edge of the field, past many towns. I read signs for Verwijs Trading Company, Diana Outlines, Ltd., Three Planets, and I. G. Farbenindustrie. There were almost as many Martians as humans in sight. We ground hogs get the impression that Martians are slow as snails- and they are, on our comparatively heavy planet. On their own world they skim along on their bases like a stone sliding over water.

To the right, south of us past the fiat field, the Great Canal dipped into the too-close horizon, showing no shore line beyond. Straight ahead of us was the Nest of Kkkah, a fairy city. I was staring at it, my heart lifting at its fragile beauty, when Dak moved suddenly.

We were well past the traffic around the towns but there was one car ahead, coming toward us; I had seen it without noticing it.

But Dak must have been edgily ready for trouble; when the other car was quite close, he suddenly slammed down the partition separating us from the driver, swarmed over the man's neck, and grabbed the wheel. We slewed to the nght, barely missing the other car, slewed again to the left and barely stayed on the road It was a near thing, for we were past the field now and here the highway edged the canal.

I had not been much use to Dak a couple of days earlier in the Eisenhower, but 1 had been unarmed and not expecting trouble, This day 1 was still unarmed, not so much as a poisoned fang, but 1 comported myself a little better. Oak was more than busy trying to drive the car while leaning over from the back seat. The driver, caught off balance at first, now tried to wrestle him away from the wheel.

I lunged forward, got my left arm around the drivers neck, and shoved my right thumb into his ribs. Move and you've had it!" The voice belonged to the hero--villain in The Second-Story Gentleman; the line of dialogue was his too.

My prisoner became very quiet.

Dak said urgently, "Rog, what are they doing?"

Clifton looked back and answered, "They're turning around."

Oak answered, "Okay. Chief, keep your gun on that character while I climb over." He was doing so even as he spoke, an awkward matter in view of his long legs and the crowded car- He settled into the seat and said happily, "1 doubt if anything on wheels can catch a Rolls on a straightaway." He jerked on the damper and the big car shot forward. "How am I doing, Rog?"

"They're just turned around."

"All right. What do we do with this item? Dump him out?"

My victim squirmed and said, "I didn't do anything!" 1 jabbed my thumb harder and he quieted.

"Oh, not a thing," Dak agreed, keeping his eyes on the road. All you did was try to cause a little crash-just enough to make Mr. Bonforte late for his appointment If I had not noticed that you were slowing down to make it easy on yourself, you might have got away with it. No guts, eh?" He took a slight curve with the tires screaming and the gyro fighting to keep us upright. "What's the situation, Rog?"

"They've given up."

"So." Dak did not slacken speed; we must have been doing well over three hundred kilometers. "I wonder if they would try to bomb us with one of their own boys aboard? How about it, bub? Would they write you off as expendable?"

"I don't know what you're talking about! You're going to be in trouble over this!"

"Really? The word of four respectable people against your jailbird record? Or aren't you a transportee? Anyhow, Mr. Bonforte prefers to have me drive him-so naturally you were glad to do a favor for Mr. Bonforte." We hit something about as big as a worm cast on that glassy road and my prisoner and I almost went through the roof.

"'Mr. Bonforte!'" My victim made it a swear word.

Dak was silent for several seconds. At last he said, "I don't think we ought to dump this one, Chief. I think we ought to let you off, then take him to a quiet place. I think he might talk if we urged him."

The driver tried to get away. I tightened the pressure on his neck and jabbed him again with my thumb knuckle. A knuckle may not feel too much like the muzzle of a heater-but who wants to find out? He relaxed and said sullenly, "You don't dare give me the needle."

"Heavens, no!" Dak answered in shocked tones. "That would be illegal. Penny girl, got a bobby pin?"

"Why, certainly, Dak." She sounded puzzled and I was. She did not sound frightened, though, and I certainly was.

"Good. Bub, did you ever have a bobby pin shoved up under your fingernails? They say it will even break a hypnotic command not to talk. Works directly on the subconscious or something. Only trouble is that the patient makes the most unpleasant noises. So we are going to take you out in the dunes where you won't disturb anybody but sand scorpions. After you have talked-now here comes the nice part! After you talk we are going to turn you loose, not do anything, just let you walk back into town. But-listen carefully now!-if you are real nice and co-operative, you get a prize. We'll let you have your mask for the walk."

Dak stopped talking; for a moment there was no sound but the keening of the thin Martian air past the roof. A human being can walk possibly two hundred yards on Mars without an oxygen mask, if he is in good condition. I believe I read of a case where a man

walked almost half a mile before he died. I glanced at the trip meter and saw that we were about twenty-three kilometers from Goddard City.

The prisoner said slowly, "Honest, I don't know anything about it. I was just paid to crash the car."

"We'll try to stimulate your memory." The gates of the Martian city were just ahead of us; Dak started slowing the car. "Here's where you get out, Chief. Rog, better take your gun and relieve the Chief of our guest."

"Right, Dak." Rog moved up by me, jabbed the man in the ribs-again with a bare knuckle. I moved out of the way. Dak braked the car to a halt, stopping right in front of the gates.

"Four minutes to spare," he said happily. "This is a nice car. I wish I owned it. Rog, ease up a touch and give me room."

Clifton did so, Dak chopped the driver expertly on the side of his neck with the edge of his hand; the man went limp. "That will keep him quiet while you get clear. Can't have any unseemly disturbance under the eyes of the nest. Let's check time."

We did so. I was about three and a half minutes ahead of the deadline. "You are to go in exactly on time, you understand? Not ahead, not behind, but on the dot."

"That's right," Clifton and I answered in chorus.

"Thirty seconds to walk up the ramp, maybe. What do you want to do with the three minutes you have left?"

I sighed. "Just get my nerve back."

"Your nerve is all right. You didn't miss a trick back there. Cheer up, old son. Two hours from now you can head for home, with your pay burning holes in your pocket We're on the last lap."

"1 hope so. It's been quite a strain. Uh, Dak?"

"Yes?"

"Come here a second." I got out of the car, motioned him to come with me a short distance away. "What happens if I make a mistake-in there?"

"Eh?" Dak looked surprised, then laughed a little too heartily. "You won't make a mistake. Penny tells me you've got it down Jo-block perfect."

"Yes, but suppose I slip?"

"You won't slip. I know how you feel; I felt the same way on my first solo grounding. But when it started, I was so busy doing it I didn't have time to do it wrong."

Clifton called out, his voice thin in thin air, "Dak! Are you watching the time?"

"Gobs of time. Over a minute."

"Mr. Bonforte!" It was Penny's voice. I turned and went back to the car. She got out and put out her hand. "Good luck, Mr. Bonforte."

"Thanks, Penny."

Rog shook hands and Dak clapped me on the shoulder. "Minus thirty-five seconds. Better start."

I nodded and started up the ramp. It must have been within a second or two of the exact, appointed time when I reached the top, for the mighty gates rolled back as I came to them. I took a deep breath and cursed that damned air mask.

Then I took my stage.

It doesn't make any difference how many times you do it, that first walk on as the curtain goes up on the first night of any run is a breath-catcher and a heart-stopper. Sure,

you know your sides. Sure, you've asked the manager to count the house. Sure, you've done it all before. No matter-when you first walk out there and know that all those eyes are on you, waiting for you to speak, waiting for you to do something-maybe even waiting for you to go up on your lines, brother, you feel it. This is why they have prompters.

I looked out and saw my audience and I wanted to run. I had stage fright for the first time in thirty years.

The siblings of the nest were spread out before me as far as I could see. There was an open lane in front of me, with thousands on each side, set close together as asparagus. I knew that the first thing I must do was slow-march down the center of that lane, clear to the far end, to the ramp leading down into the inner nest.

I could not move.

I said to myself, "Look, boy, you're John Joseph Bonforte. You've been here dozens of times before. These people are your friends. You're here because you want to be here-and because they want you here. So march down that aisle. Tum turn te turn! 'Here comes the bride!"

I began to feel like Bonforte again. I was Uncle Joe Bonforte, determined to do this thing perfectly-for the honor and welfare of my own people and my own planet-and for my Mends the Martians. I took a deep breath and one step.

That deep breath saved me; it brought me that heavenly fragrance. Thousands on thousands of Martians packed close together-it smelled to me as if somebody had dropped and broken a whole case of Jungle Lust. The conviction that I smelled it was so strong that I involuntarily glanced back to see if Penny had followed me in. I could feel her handclasp warm in my palm.

I started limping down that aisle, trying to make it about the speed a Martian moves on his own planet. The crowd closed in behind me. Occasionally kids would get away from their elders and skitter out in front of me. By "kids" I mean post-fission Martians, half the mass and not much over half the height of an adult. They are never out of the nest and we are inclined to forget that there can be little Martians. It takes almost five years, after fission, for a Martian to regain his full size, have his brain fully restored, and get all of his memory back. During this transition he is an idiot studying to be a moron. The gene rearrangement and subsequent regeneration incident to conjugation and fission put him out of the running for a long time. One of Bonforte's spools was a lecture on the subject, accompanied by some not very good amateur stereo.

The kids, being cheerful idiots, are exempt from propriety and all that that implies. But they are greatly loved.

Two of the kids, of the same and smallest size and looking just alike to me, skittered out and stopped dead in front of me, just like a foolish puppy in traffic. Either I stopped or I ran them down.

So I stopped. They moved even closer, blocking my way completely, and started sprouting pseudo limbs while chittering at each other. I could not understand them at all. Quickly they were plucking at my clothes and snaking their patty-paws into my sleeve pockets.

The crowd was so tight that I could hardly go around them. I was stretched between two needs. In the first place they were so darn cute that I wanted to see if I didn't have a sweet tucked away somewhere for them-but in a still firster place was the

knowledge that the adoption ceremony was timed like a ballet. If I didn't get on down that street, I was going to commit the classic sin against propriety made famous by Kkkahgral the Younger himself.

But the kids were not about to get out of my way. One of them had found my watch.

I sighed and was almost overpowered by the perfume. Then I made a bet with myself. I bet that baby-kissing was a Galactic Universal and that it took precedence even over Martian propriety. I got on one knee, making myself about the height they were, and fondled them for a few moments, patting them and running my hands down their scales.

Then I stood up and said carefully, "That is all now. I must go," which used up a large fraction of my stock of Basic Martian.

The kids clung to me but I moved them carefully and gently aside and went on down the double line, hurrying to make up for the time I had lost. No life wand burned a hole in my back. I risked a hope that my violation of propriety had not yet reached the capital offense level. I reached the ramp leading down into the inner nest and started on down.

* * * * I. * * * * * * * *

That line of asterisks represents the adoption ceremony. Why? Because it is limited to members of the Kkkah nest. It is a family matter.

Put it this way: A Mormon may have very close gentile friends-but does that friendship get a gentile inside the Temple at Salt Lake City? It never has and it never will. Martians visit very freely back and forth between theft nests-but a Martian enters the inner nest only of his own family. Even his conjugate-spouses are not thus privileged. I have no more right to tell the details of the adoption ceremony than a lodge brother has to be specific about ritual outside the lodge.

Oh, the rough outlines do not matter, since they are the same for any nest, just as my part was the same for any candidate. My sponsor-Bonforte's oldest Martian friend, Kkkahnreash-met me at the door and threatened me with a wand. I demanded that he kill me at once were I guilty of any breach. To tell the truth, I did not recognize him, even though I had studied a picture of him. But it had to be him because ritual required it.

Having thus made clear that I stood four-square for Motherhood, the Home, Civic Virtue, and never missing Sunday school, I was permitted to enter. 'Rrreash conducted me around all the stations, I was questioned and I responded. Every word, every gesture, was as stylized as a classical Chinese play, else I would not have stood a chance. Most of the time I did not know what they were saying and half of the time I did not understand my own replies; I simply knew my cues and the responses. It was not made easier by the low light level the Martians prefer; I was groping around like a mole.

I played once with Hawk Mantell, shortly before he died, after he was stone-deaf. There was a trouper! He could not even use a hearing device because the eighth nerve was dead. Part of the time he could cue by llps but that is not always possible. He directed the production himself and he timed it perfectly. I have seen him deliver a line, walk away-then whirl around and snap out a retort to a line that he had never heard, precisely on the timing.

This was like that. I knew my part and I played it. If they blew it, that was their lookout.

But it did not help my morale that there were never less than half a dozen wands leveled at me the whole time. I kept telling myself that they wouldn't burn me down for a slip. After all, I was just a poor stupid human being and at the very least they would give me a passing mark for effort. But I didn't believe it.

After what seemed like days-but was not, since the whole ceremony times exactly one ninth of Mars' rotation-after an endless time, we ate. I don't know what and perhaps it is just as well. It did not poison me.

After that the elders made their speeches, I made my acceptance speech in answer, and they gave me my name and my wand. I was a Martian.

I did not know how to use the wand and my name sounded like a leaky faucet, but from that instant on it was my legal name on Mars and I was legally a blood member of the most aristocratic family on the planet-exactly fifty-two hours after a ground hog down on his luck had spent his last half-Imperial buying a drink for a stranger in the bar of Casa Mañana.

I guess this proves that one should never pick up strangers.

I got out as quickly as possible. Dak had made up a speech for me in which I claimed proper necessity for leaving at once and they let me go. I was nervous as a man upstairs in a sorority house because there was no longer ritual to guide me. I mean to say even casual social behavior was still hedged around with airtight and risky custom and I did not know the moves. So I recited my excuse and headed out. 'Rrreash and another elder went with me and I chanced playing with another pair of the kids when we were outside-or maybe the same pair. Once I reached the gates the two elders said good-by in squeaky English and let me go out alone; the gates closed behind me and I reswallowed my heart.

The Rolls was waiting where they had let me out; I hurried down, a door opened, and I was surprised to see that Penny was in it alone. But not displeased. I called out, "Hi, Curly Top! I made it!"

"I knew you would."

I gave a mock sword salute with my wand and said, "Just call me Kkkahjjjerrr"-spraying the front rows with the second syllable.

"Be careful with that thing!" she said nervously.

I slid in beside her on the front seat and asked, "Do you know how to use one of these things?" The reaction was setting in and I felt exhausted but gay; I wanted three quick drinks and a thick steak, then to wait up for the critics' reviews.

"No. But do be careful."

"I think all you have to do is to press it here," which I did, and there was a neat two-inch hole in the windshield and the car wasn't pressurized any longer.

Penny gasped. I said, "Gee, I'm sorry. I'll put it away until Dak can coach me."

She gulped. "It's all right. Just be careful where you point it." She started wheeling the car and I found that Dak was not the only one with a heavy hand on the damper.

Wind was whistling in through the hole I had made. I said, "What's the rush? I need some time to study my lines for the press conference. Did you bring them? And

where are the others?" I had forgotten completely the driver we had grabbed; I had not thought about him from the time the gates of the nest opened.

"No. They couldn't come."

"Penny, what's the matter? What's happened?" I was wondering if I could possibly take a press conference without coaching. Perhaps I could tell them a little about the adoption; I wouldn't have to fake that.

"It's Mr. Bonforte-they've found him."

Chapter 6

I had not noticed until then that she had not once called me "Mr. Bonforte." She could not, of course, for I was no longer he; I was again Lorrie Smythe, that actor chap they had hired to stand in for him.

I sat back and sighed, and let myself relax. "So it's over at last-and we got away with it." I felt a great burden lift off me; I had not known how heavy it was until I put it down. Even my "lame" leg stopped aching. I reached over and patted Penny's hand on the wheel and said in my own voice, "I'm glad it's over. But I'm going to miss having you around, pal. You're a trouper. But even the best run ends and the company breaks up. I hope I'll see you again sometime."

"I hope so too."

"I suppose Dak has arranged some shenanigan to keep me under cover and sneak me back into the Tom Paine?"

"I don't know." Her voice sounded odd and I gave her a quick glance and saw that she was crying. My heart gave a skip. Penny crying? Over us separating? I could not believe it and yet I wanted to. One might think that, between my handsome features and cultivated manners, women would find me irresistible, but it is a deplorable fact that all too many of them have found me easy to resist. Penny had seemed to find it no effort at all.

"Penny," I said hastily, "why all the tears, hon? You'll wreck this car."

"I can't help it."

"Well-put me in it. What's wrong? You told me they had got him back; you didn't tell me anything else." I had a sudden horrid but logical suspicion. "He was alive-wasn't he?"

"Yes-he's alive-but, oh, they've hurt him!" She started to sob and I had to grab the wheel.

She straightened up quickly. "Sorry."

"Want me to drive?"

"I'll be all right. Besides, you don't know how-I mean you aren't supposed to know how to drive."

"Huh? Don't be silly. I do know how and it no longer matters that-" I broke off, suddenly realizing that it might still matter. If they had roughed up Bonforte so that it showed, then he could not appear in public in that shape-at least not only fifteen minutes after being adopted into the Kkkah nest. Maybe I would have to take that press conference and depart publicly, while Bonforte would be the one they would sneak

aboard. Well, all right-hardly more than a curtain call. "Penny, do Dak and Rog want me to stay in character for a bit? Do I play to the reporters? Or don't I?"

"I don't know. There wasn't time."

We were already approaching the stretch of godowns by the field, and the giant bubble domes of Goddard City were in sight. "Penny, slow this car down and talk sense. I've got to have my cues."

The driver had talked-I neglected to ask whether or not the bobby-pin treatment had been used. He had then been turned loose to walk back but had not been deprived of his mask; the others had barreled back to Goddard City, with Dak at the wheel. I felt lucky to have been left behind; voyageurs should not be allowed to drive anything but spaceships.

They went to the address the driver had given them, in Old Town under the original bubble. I gathered that it was the sort of jungle every port has had since the Phoenicians sailed through the shoulder of Africa, a place of released transportees, prostitutes, monkey-pushers, rangees, and other dregs-a neighborhood where policemen travel only in pairs.

The information they had squeezed out of the driver had been correct but a few minutes out of date. The room had housed the prisoner, certainly, for there was a bed in it which seemed to have been occupied continuously for at least a week, a pot of coffee was still hot-and wrapped in a towel on a shelf was an old- fashioned removable denture which Clifton identified as belonging to Bonforte. But Bonforte himself was missing and so were his captors.

They had left there with the intention of carrying out the original plan, that of claiming that the kidnapping had taken place immediately after the adoption and putting pressure on Boothroyd by threatening to appeal to the Nest of Kkkah. But they had found Bonforte, had simply run across him in the street before they left Old Town-a poor old stumblebum with a week's beard, dirty and dazed. The men had not recognized him, but Penny had known him and made them stop.

She broke into sobs again as she told me this part and we almost ran down a truck train snaking up to one of the loading

A reasonable reconstruction seemed to be that the laddies in the second car-the one that was to crash us-had reported back, whereupon the faceless leaders of our opponents had decided that the kidnaping no longer served their purposes. Despite the arguments I had heard about it, I was surprised that they had not simply killed him; it was not until later that I understood that what they had done was subtler, more suited to their purposes, and much crueler than mere killing.

"Where is he now?" I asked.

"Dak took him to the voyageurs' hostel in Dome 3."

"Is that where we are headed?"

"I don't know. Rog just said to go pick you up, then they disappeared in the service door of the hostel. Uh, no, I don't think we dare go there. I don't know what to do."

"Penny, stop the car."

"Huh?"

"Surely this car has a phone. We won't stir another inch until we find out-or figure out-what we should do. But I am certain of one thing: I should stay in character until Dak or Rog decides that I should fade out. Somebody has to talk to the newsmen. Somebody has to make a public departure for the Tom Paine. You're sure that Mr. Bonforte can't be spruced up so that he can do it?"

"What? Oh, he couldn't possibly. You didn't see him."

"So I didn't. I'll take your word for it. All right, Penny, I'm 'Mr. Bonforte' again and you're my secretary. We'd better get with

"Yes-Mr. Bonforte."

"Now try to get Captain Broadbent on the phone, will you, please?"

We couldn't find a phone list in the car and she had to go through "Information," but at last she was tuned with the clubhouse of the voyageurs. I could hear both sides. "Pilots' Club, Mrs. Kelly speaking."

Penny covered the microphone. "Do I give my name?"

"Play it straight. We've nothing to hide."

"This is Mr. Bonforte's secretary," she said gravely. "Is his pilot there? Captain Broadbent."

"I know him, dear." There was a shout: "Hey! Any of you smokers see where Dak went?" After a pause she went on, "He's gone to his room. I'm buzzing him."

Shortly Penny said, "Skipper? The Chief wants to talk to you," and handed me the phone.

"This is the Chief, Dak."

"Oh. Where are you-sir?"

"Still in the car. Penny picked me up. Dak, press conference, I believe. Where is it?"

He hesitated. "I'm glad you called in, sir. There's been a-slight change in the situation."

"So Penny told me. I'm just as well pleased; I'm rather tired. Dak, I've decided not to stay dirtside tonight; my gimp leg has been bothering me and I'm looking forward to a real rest in free fall." I hated free fall but Bonforte did not. "Will you or Rog make my apologies to the Commissioner, and so forth?"

"We'll take care of everything, sir."

"Good. How soon can you arrange a shuttle for me?"

"The Pixie is still standing by for you, sir. If you will go to Gate 3, I'll phone and have a field car pick you up."

"Very good. Out."

"Out, sir."

I handed the phone to Penny to put back in its clamp. "Curly Top, I don't know whether that phone frequency is monitored or not-or whether possibly the whole car is bugged. If either is the case, they may have learned two things-where Dak is and through that where he is, and second, what I am about to do next. Does that suggest anything to your mind?"

She looked thoughtful, then took out her secretary's notebook, wrote in it: Let's get rid of the car.

I nodded, then took the book from her and wrote in it: How far away is Gate 3?

She answered: Walking distance.

Silently we climbed out and left. She had pulled into some executive's parking space outside one of the warehouses when she had parked the car; no doubt in time it would be returned where it belonged-and such minutiae no longer mattered.

We had gone about fifty yards, when I stopped. Something was the matter. Not the day, certainly. It was almost balmy, with the sun burning brightly in clear, purple Martian sky. The traffic, wheel and foot, seemed to pay no attention to us, or at least such attention was for the pretty young woman with me rather than directed at me. Yet I felt uneasy.

"What is it, Chief?"

"Eh? That is what it is!"

"Sir?"

"I'm not being the 'Chief.' It isn't in character to go dodging off like this. Back we go, Penny."

She did not argue, but followed me back to the car. This time I climbed into the back seat, sat there looking dignified, and let her chauffeur me to Gate 3.

It was not the gate we had come in. I think Dak had chosen it because it ran less to passengers and more to freight. Penny paid no attention to signs and ran the big Rolls right up to the gate. A terminal policeman tried to stop her; she simply said coldly, "Mr. Bonforte's ear. And will you please send word to the Commissioner's office to call for it here?"

He looked baffled, glanced into the rear compartment, seemed to recognize me, saluted, and let us stay. I answered with a friendly wave and he opened the door for me. "The lieutenant is very particular about keeping the space back of the fence clear, Mr. Bonforte," he apologized, "but I guess it's all right."

"You can have the car moved at once," I said. "My secretary and I are leaving. Is my field car here?"

"I'll find out at the gate, sir." He left. It was just the amount of audience I wanted, enough to tie it down solid that "Mr. Bonforte" had arrived by official car and had left for his space yacht. I tucked my life wand under my arm like Napoleon's baton and limped after him, with Penny tagging along. The cop spoke to the gatemaster, then hurried back to us, smiling. "Field car is waiting, sir."

"Thanks indeed." I was congratulating myself on the perfection of the timing.

"Uh. . ." The cop looked flustered and added hurriedly, in a low voice, "I'm an Expansionist, too, sir. Good job you did today." He glanced at the life wand with a touch of awe.

I knew exactly how Bonforte should look in this routine. "Why, thank you. I hope you have lots of children. We need to work up a solid majority."

He guffawed more than it was worth. "That's a good one! Uh, mind if I repeat it?"

"Not at all." We had moved on and I started through the gate. The gatemaster touched my arm. "Er ... Your passport, Mr. Bonforte."

I trust I did not let my expression change. "The passports, Penny."

She looked frostily at the official. "Captain Broadbent takes care of all clearances."

He looked at me and looked away. "I suppose it's all right. But I'm supposed to check them and take down the serial numbers."

"Yes, of course. Well, I suppose I must ask Captain Broadbent to run out to the field. Has my shuttle been assigned a take-off time? Perhaps you had better arrange with the tower to 'hold.'"

But Penny appeared to be cattily angry. "Mr. Bonforte, this is ridiculous! We've never had this red tape before-certainly not on Mars."

The cop said hastily, "Of course it's all right, Hans. After all, this is Mr. Bonforte."

"Sure, but--"

I interrupted with a happy smile. "There's a simpler way out. If you-what is your name, sir?"

"Hasiwanter. Hans Haslwanter," he answered reluctantly.

"Mr. Haslwanter, if you will call Mr. Commissioner Boothroyd, I'll speak to him and we can save my pilot a trip out to the field- and save me an hour or more of time."

"Uh, I wouldn't like to do that, sir. I could call the port captain's office?" he suggested hopefully.

"Just get me Mr. Boothroyd's number. 1 will call him." This time I put a touch of frost into my voice, the attitude of the busy and important man who wishes to be democratic but has had all the pushing around and hampering by underlings that he intends to put up with.

That did it. He said hastily, "I'm sure it's all right, Mr. Banforte. It's just-well, regulations, you know."

"Yes, I know. Thank you." I started to push on through.

"Hold it, Mr. Bonforte! Look this way."

I glanced around. That i-dotting and 1-crossing civil servant had held us up just long enough to let the press catch up with us. One man had dropped to his knee and was pointing a stereobox at me; he looked up and said, "Hold the wand where we can see it." Several others with various types of equipment were gathering around us; one had climbed up on the roof of the Rolls. Someone else was shoving a microphone at me and another had a directional mike aimed like a gun.

I was as angry as a leading woman with her name in small type but I remembered who I was supposed to be. I smiled and moved slowly. Bonforte had a good grasp of the fact that motion appears faster in pictures; I could afford to do it properly.

"Mr. Bonforte, why did you cancel the press conference?"

"Mr. Bonforte, it is asserted that you intend to demand that the Grand Assembly grant full Empire citizenship to Martians; will you comment?"

"Mr. Bonforte, how soon are you going to force a vote of confidence in the present government?"

I held up my hand with the wand in it and grinned. "One at a time, please! Now what was that first question?"

They all answered at once, of course; by the time they had sorted out precedence I had managed to waste several moments without having to answer anything. Bill Corpsman came charging up at that point. "Have a heart, boys. The Chief has had a hard day. I gave you all you need."

I held out a palm at him. "I can spare a minute or two, Bill. Gentiemen, I'm just about to leave but I'll try to cover the essentials of what you have asked. So far as I know the present government does not plan any reassessment of the relation of Mars to the Empire. Since I am not in office my own opinions are hardly pertinent. I suggest that you ask Mr. Quiroga. On the question of how soon the opposition will force a vote of confidence all I can say is that we won't do it unless we are sure we can win it-and you know as much about that as I do."

Someone said, "That doesn't say much, does it?"

"It was not intended to say much," I retorted, softening it with a grin. "Ask me questions I can legitimately answer and I will. Ask me those loaded 'Have-you-quit-beating-your-wife?' sort and I have answers to match." I hesitated, realizing that Bonforte had a reputation for bluntness and honesty, especially with the press. "But I am not trying to stall you. You all know why I am here today. Let me say this about it-and you can quote me if you wish." I reached back into my mind and hauled up an appropriate bit from the speeches of Bonforte I had studied. "The real meaning of what happened today is not that of an honor to one man. This"-I gestured with the Martian wand-."is proof that two great races can reach out across the gap of strangeness with understanding. Our own race is spreading out to the stars. We shall find-we are finding-that we are vastly outnumbered. If we are to succeed in our expansion to the stars, we must deal honestly, humbly, with open hearts. I have heard it said that our Martian neighbors would overrun Earth if given the chance. This is nonsense; Earth is not suited to Martians. Let us protect our own-but let us not be seduced by fear and hatred into foolish acts. The stars will never be won by little minds; we must be big as space itself."

The reporter cocked an eyebrow. "Mr. Bonforte, seems to me I heard you make that speech last February."

"You will hear it next February. Also January, March, and all the other months. Truth cannot be too often repeated." I glanced back at the gatemaster and added, "I'm sorry but I'll have to go now-or I'll miss the tick." I turned and went through the gate, with Penny after me.

We climbed into the little lead-armored field ear and the door sighed shut. The car was automatized, so I did not have to play up for a driver; I threw myself down and relaxed. "Whew!"

"I thought you did beautifully," Penny said seriously.

"I had a bad moment when he spotted the speech I was cribbing."

"You got away with it. It was an inspiration. You-you sounded just like him."

"Was there anybody there I should have called by name?"

"Not really. One or two maybe, but they wouldn't expect it when you were so rushed."

"I was caught in a squeeze. That fiddlin' gatemaster and his passports. Penny, I should think that you would carry them rather than Dak."

"Dak doesn't carry them. We all carry our own." She reached into her bag, pulled out a little book. "I had mine-but I did not dare admit it."

"Eh?"

"He had his on him when they got him. We haven't dared ask for a replacement-not at this time."

I was suddenly very weary.

Having no instructions from Dak or Rog, I stayed in character during the shuttle trip up and on entering the Tom Paine. It wasn't difficult; I simply went straight to the owner's cabin and spent long, miserable hours in free fall, biting my nails and wondering what was happening down on the surface. With the aid of antinausea pills I finally managed to float off into fitful sleep-which was a mistake, for I had a series of no-pants nightmares, with reporters pointing at me and cops touching me on the shoulder and Martians aiming their wands at me. They all knew I was phony and were simply arguing over who had the privilege of taking me apart and putting me down the oubliette.

I was awakened by the hooting of the acceleration alarm. Dak's vibrant baritone was booming, "First and last red warning! One third gee! One minute!" I hastily pulled myself over to my bunk and held on. I felt lots better when it hit; one third gravity is not much, about the same as Mars' surface I think, but it is enough to steady the stomach and make the floor a real floor.

About five minutes later Dak knocked and let himself in as I was going to the door. "Howdy, Chief."

"Hello, Dak. I'm certainly glad to see you back."

"Not as glad as I am to be back," he said wearily. He eyed my bunk. "Mind if I spread out there?"

"Help yourself."

He did so and sighed. "Cripes, am I pooped! I could sleep for a week. . . I think I wifi."

"Let's both of us. Uh ... You got him aboard?"

"Yes. What a gymkhana!"

"I suppose so. Still, it must be easier to do a job like that in a small, informal port like this than it was to pull the stunts you rigged at Jeff erson."

"Huh? No, it's much harder here."

"Eh?"

"Obviously. Here everybody knows everybody-and people will talk." Dak smiled wryly. "We brought him aboard as a case of frozen canal shrimp. Had to pay export duty, too."

"Dak, how is he?"

"Well . . ." Dak frowned. "Doc Capek says that he will make a complete recovery-that it is just a matter of time." He added explosively, "If I could lay my hands on those rats! It would make you break down and bawl to see what they did to him-and yet we have to let them get away with it cold-for his sake."

Dak was fairly close to bawling himself. I said gently, "I gathered from Penny that they had roughed him up quite a lot. How badly is he hurt?"

"Huh? You must have misunderstood Penny. Aside from being filthy-dirty and needing a shave he was not hurt physically at all."

I looked stupid. "I thought they beat him up. Something about like working him over with a baseball bat."

"I would rather they had! Who cares about a few broken bones? No, no, it was what they did to his brain."

"Oh . . ." I felt ill. "Brainwash?"

"Yes. Yes and no. They couldn't have been trying to make him talk because he didn't have any secrets that were of any possible political importance. He always operated

out in the open and everybody knows it. They must have been using it simply to keep him under control, keep him from trying to escape."

He went on, "Doc says that he thinks they must have been using the minimum daily dose, just enough to keep him docile, until just before they turned him loose. Then they shot him with a load that would turn an elephant into a gibbering idiot. The front lobes of his brain must be soaked like a bath sponge."

I felt so ill that I was glad I had not eaten. I had once read up on the subject; I hate it so much that it fascinates me. To my mind there is something immoral and degrading in an absolute cosmic sense in tampering with a man's personality. Murder is a clean crime in comparison, a mere peccadillo. "Brainwash" is a term that comes down to us from the Communist movement of the Late Dark Ages; it was first applied to breaking a man's will and altering his personality by physical indignities and subtle torture. But that might take months; later they found a "better" way, one which would turn a man into a babbling slave in seconds-simply inject any one of several cocaine derivatives into his frontal brain lobes.

The ifithy practice had first been developed for a legitimate purpose, to quiet disturbed patients and make them accessible to psychotherapy. As such, it was a humane advance, for it was used instead of lobotomy-"lobotomy" is a term almost as obsolete as "chastity girdle" but it means stirring a man's brain with a knife in such a fashion as to destroy his personality without killing him. Yes, they really used to do that-just as they used to beat them to "drive the devils out."

The Communists developed the new brainwash-by-drugs to an efficient technique, then when there were no more Communists, the Bands of Brothers polished it up still further until they could dose a man so lightly that he was simply receptive to leadership-. or load him until he was a mindless mass of protoplasm-all in the sweet name of brotherhood. After all, you can't have "brotherhood" if a man is stubborn enough to want to keep his own secrets, can you? And what better way is there to be sure that he is not holding out on you than to poke a needle past his eyeball and slip a shot of babble juice into his brain? "You can't make an omelet without breaking eggs." The sophistries of villains-bah!

Of course, it has been illegal for a long, long time now, except for therapy, with the express consent of a court. But criminals use it and cops are sometimes not lily white, for it does make a prisoner talk and it does not leave any marks at all. The victim can even be told to forget that it has been done.

I knew most of this at the time Dak told me what had been done to Bonforte and the rest I cribbed out of the ship's Encyclopedia Batavia. See the article on "Psychic Integration" and the one on "Torture."

I shook my head and tried to put the nightmares out of my mind. "But he's going to recover?"

"Doc says that the drug does not alter the brain structure; it just paralyzes it. He says that eventually the blood stream picks up and carries away all of the dope; it reaches the kidneys and passes out of the body. But it takes time." Dak looked up at me. "Chief?"

"Eh? About time to knock off that 'Chief' stuff, isn't it? He's back."

"That's what I wanted to talk to you about. Would it be too much trouble to you to keep up the impersonation just a little while longer?"

"But why? There's nobody here but just us chickens."

"That's not quite true. Lorenzo, we've managed to keep this secret awfully tight. There's me, there's you." He ticked it off on his fingers. "There's Doc and Rog and Bill. And Penny, of course. There's a man by the name of Langston back Earthside whom you've never met. I think Jimmie Washington suspects but he wouldn't tell his own mother the right time of day. We don't know how many took part in the kidnaping, but not many, you can be sure. In any case, they don't dare talk-and the joke of it is they no longer could prove that he had ever been missing even if they wanted to. But my point is this: here in the Tommie we've got all the crew and all the idlers not in on it. Old son, how about staying with it and letting yourself be seen each day by crewmen and by Jimmie Washington's girl and such-while he gets well? Huh?"

"Mmm. . . I don't see why not. How long will it be?"

"Just the trip back. We'll take it slow, at an easy boost. You'll enjoy it."

"Okay. Dak, don't figure this into my fee. I'm doing this piece of it just because I hate brainwashing."

Dak bounced up and clapped me on the shoulder. "You're my kind of people, Lorenzo. Don't worry about your fee; you'll be taken care of." His manner changed. "Very well, Chief. See you in the morning, sir."

But one thing leads to another. The boost we had started on Dak's return was a mere shift of orbits, to one farther out where there would be little chance of a news service sending up a shuttle for a follow-up story. I woke up in free fall, took a pill, and managed to eat breakfast. Penny showed up shortly thereafter. "Good morning, Mr. Bonforte."

"Good morning, Penny." I inclined my head in the direction of the guest room. "Any news?"

"No, sir. About the same. Captain's compliments and would it be too much trouble for you to come to his cabin?"

"Not at all." Penny followed me in. Dak was there, with his heels hooked to his chair to stay in place; Rog and Bill were strapped to the couch.

Dak looked around and sald, "Thanks for coming in, Chief. We need some help."

"Good morning. What is it?"

Clifton answered my greeting with his usual dignified deference and called me Chief; Corpsman nodded. Dak went on, "To clean this up in style you should make one more appearance."

"Eh? I thought-"

"Just a second. The networks were led to expect a major speech from you today, commenting on yesterday's event. I thought Rog intended to cancel it, but Bill has the speech worked up. Question is, will you deliver it?"

The trouble with adopting a cat is that they always have kittens. "Where? Goddard City?"

"Oh no. Right in your cabin. We beam it to Phobos; they can it for Mars and also put it on the high circuit for New Batavia, where the Earth nets will pick it up and where it will be relayed for Venus, Ganymede, et cetera. Inside of four hours it will be all over the system but you'll never have to stir out of your cabin."

There is something very tempting about a grand network. I had never been on one but once and that time my act got clipped down to the point where my face showed for only

twenty-seven seconds. But to have one all to myself- Dak thought I was reluctant and added, "It won't be a strain, as
we are equipped to can it right here in the Tommie. Then we can project it first and clip out anything if necessary."
"Well-all right. You have the script, Bill?"
"Yes."
"Let me check it."
"What do you mean? You'll have it in plenty of time."
"Isn't that it in your hand?"
"Well, yes."
"Then let me read it."

Corpsman looked annoyed. "You'll have it an hour before we record. These things go better if they sound spontaneous."

"Sounding spontaneous is a matter of careful preparation, Bill. It's my trade. I know."

"You did all right at the skyfield yesterday without rehearsal. This is just more of the same old hoke: I want you to do it the same way."

Bonforte's personality was coming through stronger the longer Corpsman stalled; I think Clifton could see that I was about to cloud up and storm, for he said, "Oh, for Pete's sake, Bill! Hand him the speech."

Corpsman snorted and threw the sheets at me. In free fall they sailed but the air spread them wide. Penny gathered them together, sorted them, and gave them to me. I thanked her, said nothing more, and started to read.

I skimmed through it in a fraction of the time it would take to deliver it. Finally I finished and looked up.

"Well?" said Rog.

"About five minutes of this concerns the adoption. The rest is an argument for the policies of the Expansionist Party. Pretty much the same as I've heard in the speeches you've had me study."

"Yes," agreed Clifton. "The adoption is the hook we hang the rest on. As you know, we expect to force a vote of confidence before long."

"I understand. You can't miss this chance to beat the drum. Well, it's all right, but--"

"But what? What's worrying you?"

"Well-characterization. In several places the wording should be changed. It's not the way he would express it."

Corpsman exploded with a word unnecessary in the presence of a lady; I gave him a cold glance. "Now see here, Smythe," he went on, "who knows how Bonforte would say it? You? Or the man who has been writing his speeches the past four years?"

I tried to keep my temper; he had a point "It is nevertheless the case," I answered, "that a line which looks okay in print may not dellver well. Mr. Bonforte is a great orator, I have already learned. He belongs with Webster, Churchill, and Demosthenes-a rolling grandeur expressed in simple words. Now take this word 'intransigent,' which you have used twice. I might say that, but I have a weakness for polysyllables; I like to exhibit my literary erudition. But Mr. Bonforte would stay 'stubborn' or 'mulish' or 'pigheaded.' The reason he would is, naturally, that they convey emotion much more effectively."

"You see that you make the delivery effective! I'll worry about the words."

"You don't understand, Bill. I don't care whether the speech is politically effective or not; my job is to carry out a characterization. I can't do that if I put into the mouth of the character words that he would never use; it would sound as forced and phony as a goat spouting Greek. But if I read the speech in words he would use, it will automatically be effective. He's a great orator."

"Listen, Smythe, you're not hired to write speeches. You're hired to-"

"Hold it, Bill!" Dak cut in. "And a little less of that 'Smythe' stuff, too. Well, Rog? How about it?"

Clifton said, "As I understand it, Chief, your only objection is to some of the phrasing?"

"Well, yes. I'd suggest cutting out that personal attack on Mr. Quiroga, too, and the insinuation about his financial backers. It doesn't sound like real Bonforte to me."

He looked sheepish. "That's a bit I put in myself. But you may be right. He always gives a man the benefit of the doubt." He remained silent for a moment. "You make the changes you think you have to. We'll can it and look at the playback. We can always clip it-or even cancel completely 'due to technical difficulties.'" He smiled grimly. "That's what we'll do, Bill."

"Damn it, this is a ridiculous example of-"

"That's how it is going to be, Bill."

Corpsman left the room very suddenly. Clifton sighed. "Bill always has hated the notion that anybody but Mr. B. could give him instructions. But he's an able man. Uh, Chief, how soon can you be ready to record? We patch in at sixteen hundred."

"I don't know. I'll be ready in time."

Penny followed me back into my office. When she closed the door I said, "I won't need you for the next hour or so, Penny child. But you might ask Doc for more of those pills. I may need them."

"Yes, sir." She floated with her back to the door. "Chief?"

"Yes, Penny?"

"I just wanted to say don't believe what Bill said about writing his speeches!"

"I didn't. I've heard his speeches-and I've read this."

"Oh, Bill does submit drafts, lots of times. So does Rog. I've even done it myself. He-he will use ideas from anywhere if he thinks they are good. But when he delivers a speech, it is his, every word of it."

"I believe you. I wish he had written this one ahead of time."

"You just do your best!"

I did. I started out simply substituting synonyms, putting in the gutty Germanic words in place of the "intestinal" Latin jawbreakers. Then I got excited and red in the face and tore it to pieces. It's a lot of fun for an actor to mess around with lines; he doesn't get the chance very often.

I used no one but Penny for my audience and made sure from Dak that I was not being tapped elsewhere in the ship-though I suspect that the big-boned galoot cheated on me and listened in himself. I had Penny in tears in the first three minutes; by the time I finished (twenty-eight and a half minutes, just time for station announcements), she was limp. I took no liberties with the straight Expansionist doctrine, as proclaimed by its

official prophet, the Right Honorable John Joseph Bonforte; I simply reconstructed his message and his delivery, largely out of phrases from other speeches.

Here's an odd thing-I believed every word of it while I was talking.

But, brother, I made a speech!

Afterwards we all listened to the playback, complete with full stereo of myself. Jimmie Washington was present, which kept Bill Corpsman quiet. When it was over I said, "How about it, Rog? Do we need to clip anything?"

He took his cigar out of his mouth and said, "No. If you want my advice, Chief, I'd say to let it go as it is."

Corpsman left the room again-but Mr. Washington came over with tears leaking out of his eyes-tears are a nuisance in free fall; there's nowhere for them to go. "Mr. Bonforte, that was beauti/ui."

"Thanks, Jimmie."

Penny could not talk at all.

I turned in after that; a top-notch performance leaves me fagged. I slept for more than eight hours, then was awakened by the hooter. I had strapped myself to my bunk-I hate to float around while sleeping in free fall-so I did not have to move. But I had not known that we were getting under way so I called the control room between first and second warning. "Captain Broadbent?"

"Just a moment, sir," I heard Epstein answer.

Then Dak's voice came over. "Yes, Chief? We are getting under way on schedule-pursuant to your orders."

"Eh? Oh yes, certainly."

"I believe Mr. Clifton is on his way to your cabin."

"Very well, Captain." I lay back and waited.

Immediately after we started to boost at one gee Rog Clifton came in; he had a worried look on his face I could not interpret- equal parts of triumph, worry, and confusion. "What is it, Rog?"

"Chief! They've jumped the gun on us! The Quiroga government has resigned!"

Chapter 7

I was still logy with sleep; I shook my head to try to clear it. "What are you in such a spin about, Rog? That's what you were trying to accomplish, wasn't it?"

"Well, yes, of course. But-" He stopped.

"But what? I don't get it. Here you chaps have been working and scheming for years to bring about this very thing. Now you've won-and you look like a bride who isn't sure she wants to go through with it. Why? The no-good-nicks are out and now God's chillun get their innings. No?"

"Uh-you haven't been in politics much."

"You know I haven't. I got trimmed when I ran for patrol leader in my scout troop. That cured me."

"Well, you see, timing is everything."

"So my father always told me. Look here, Rog, do I gather that if you had your druthers you'd druther Quiroga was still in office? You said he had 'jumped the gun."

"Let me explain. What we really wanted was to move a vote of confidence and win it, and thereby force a general election on them-but at our own time, when we estimated that we could win the election."

"Oh. And you don't figure you can win now? You think Quiroga will go back into office for another five years-or at least the Humanity Party will?"

Clifton looked thoughtful. "No, I think our chances are pretty good to win the election."

"Eh? Maybe I'm not awake yet. Don't you want to win?"

"Of course. But don't you see what this resignation has done to us?"

"I guess I don't."

"Well, the government in power can order a general election at any time up to the constitutional limitation of five years. Ordinarily they will go to the people when the time seems most favorable to them. But they don't resign between the announcement and the election unless forced to. You follow me?"

I realized that the event did seem odd, little attention as I paid to politics. "I believe so."

"But in this case Quiroga's government scheduled a general election, then resigned in a body, leaving the Empire without a government. Therefore the sovereign must call on someone else to form a 'caretaker' government to serve until the election. By the letter of the law he can ask any member of the Grand Assembly, but as a matter of strict constitutional precedent he has no choice. When a government resigns in a body-not just reshuffling portfolios but quits as a whole-then the sovereign must call on the leader of the opposition to form the 'caretaker' government. It's indispensable to our system; it keeps resigning from being just a gesture. Many other methods have been tried in the past; under some of them governments were changed as often as underwear. But our present system insures responsible government."

I was so busy trying to see the implications that I almost missed his next remark. "So, naturally, the Emperor has summoned Mr. Bonforte to New Batavia."

"Eh? New Batavia? Welll" I was thinking that I had never seen the Imperial capital. The one time I had been on the Moon the vicissitudes of my profession had left me without time or money for the side trip. "Then that is why we got under way? Well, I certainly don't mind. I suppose you can always find a way to send me home if the Tommie doesn't go back to Earth soon."

"What? Good heavens, don't worry about that now. When the time comes, Captain Broadbent can find any number of ways to deliver you home."

"Sorry. I forget that you have more important matters on your mind, Rog. Sure, I'm anxious to get home now that the job is done. But a few days, or even a month, on Luna would not matter. I have nothing pressing me. But thanks for taking time to tell me the news." I searched his face. "Rog, you look worried as hell."

"Don't you see? The Emperor has sent for Mr. Bonforte. The Emperor, man! And Mr. Bonforte is in no shape to appear at an audience. They have risked a gambit-and perhaps trapped us in a checkmate!"

"Eh? Now wait a minute. Slow up. I see what you are driving at

-but, look, friend, we aren't at New Batavia. We're a hundred million miles away, or two hundred million, or whatever it is. Doc Capek will have him wrung out and ready to speak his piece by then. Won't he?"

"Well-we hope so."

"But you aren't sure?"

"We can't be sure. Capek says that there is little clinical data on such massive doses. It depends on the individual's body chemistry and on the exact drug used."

I suddenly remembered a time when an understudy had slipped me a powerful purgative just before a performance. (But I went on anyhow, which proves the superiority of mind over matter- then I got him fired.) "Rog-they gave him that last, unnecessarily big dose not just out of simple sadism-but to set up this situation!"

"I think so. So does Capek."

"Hey! In that case it would mean that Quiroga himself is the man behind the kidnapping-and that we've had a gangster running the Empire!"

Rog shook his head. "Not necessarily. Not even probably. But it would indeed mean that the same forces who control the Actionists also control the machinery of the Humanity Party. But you will never pin anything on them; they are unreachable, ultrarespectable. Nevertheless, they could send word to Quiroga that the time had come to roll over and play dead-and have him do it. Almost certainly," he added, "without giving him a hint of the real reason why the moment was timely."

"Criminy! Do you mean to tell me that the top man in the Empire would fold up and quit, just like that? Because somebody behind the scenes ordered him to?"

"I'm afraid that is just what I do think."

I shook my head. "Politics is a dirty game!"

"No," Clifton answered insistently. "There is no such thing as a dirty game. But you sometimes run into dirty players."

"I don't see the difference."

"There is a world of difference. Quiroga is a third-rater and a stooge-in my opinion, a stooge for villains. But there is nothing third-rate about John Joseph Bonforte and he has never, ever been a stooge for anyone. As a follower, he believed in the cause; as the leader, he has led from conviction!"

"I stand corrected," I said humbly. "Well, what do we do? Have Dak drag his feet so that the Tommie does not reach New Batavia until he is back in shape to do the job?"

"We can't stall. We don't have to boost at more than one gravity; nobody would expect a man Bonforte's age to place unnecessary strain on his heart. But we can't delay. When the Emperor sends for you, you come."

"Then what?"

Rog looked at me without answering. I began to get edgy. "Hey, Rog, don't go getting any wild notions! This hasn't anything to do with me. I'm through, except for a few casual appearances around the ship. Dirty or not, politics is not my game-just pay me off and ship me home and I'll guarantee never even to register to vote!"

"You probably wouldn't have to do anything. Dr. Capek will almost certainly have him in shape for it. But it isn't as if it were anything hard-not like that adoption ceremony-just an audience with the Emperor and--"

"The Emperor!" I almost screamed. Like most Americans, I did not understand royalty, did not really approve of the institution in my heart-and had a sneaking,

unadmitted awe of kings. After all, we Americans came in by the back door. When we swapped associate status under treaty for the advantages of a full voice in the affairs of the Empire, it was explicitly agreed that our local institutions, our own constitution, and so forth, would not be affected-and tacitly agreed that no member of the royal family would ever visit America. Maybe that is a bad thing. Maybe if we were used to royalty we would not be so impressed by them. In any case, it is notorious that "democratic" American women are more quiveringly anxious to be presented at court than is anybody else.

"Now take it easy," Rog answered. "You probably won't have to do it at all. We just want to be prepared. What I was trying to tell you is that a 'caretaker' government is no problem. It passes no laws, changes no policies. I'll take care of all the work. All you will have to do-if you have to do anything-is make the formal appearance before King Wilem-and possibly show up at a controlled press conference or two, depending on how long it is before he is well again. What you have already done is much harder-and you will be paid whether we need you or not."

"Damn it, pay has nothing to do with it! It's-well, in the words of a famous character in theatrical history, 'Include me out.'"

Before Rog could answer, Bill Corpsman came bursting into my cabin without knocking, looked at us, and said sharply to Clifton, "Have you told him?"

"Yes," agreed Clifton. "He's turned down the job."

"Huh? Nonsense!"

"It's not nonsense," I answered, "and by the way, Bill, that door you just came through has a nice spot on it to knock. In the profession the custom is to knock and shout, 'Are you decent?' I wish you would remember it."

"Oh, dirty sheets! We're in a hurry. What's this guff about your refusing?"

"It's not guff. This is not the job I signed up for."

"Garbage! Maybe you are too stupid to realize it, Smythe, but you are in too deep to prattle about backing out. It wouldn't be healthy."

I went to him and grabbed his arm. "Are you threatening me? If you are, let's go outside and talk it over."

He shook my hand off. "In a spaceship? You really are simple, aren't you? But haven't you got it through your thick head that you caused this mess yourself?"

"What do you mean?"

"He means," Clifton answered, "that he is convinced that the fall of the Quiroga government was the direct result of the speech you made earlier today. It is even possible that he is right. But it is beside the point. Bill, try to be reasonably polite, will you? We get nowhere by bickering."

I was so surprised by the suggestion that I had caused Quiroga to resign that I forgot all about my desire to loosen Corpsman's teeth. Were they serious? Sure, it was one dilly of a fine speech, but was such a result possible?

Well, if it was, it was certainly fast service.

I said wonderingly, "Bill, do I understand that you are complaining that the speech I made was too effective to suit you?"

"Huh? Hell, no! It was a lousy speech."

"So? You can't have it both ways. You're saying that a lousy speech went over so big that it scared the Humanity Party right out of office. Is that what you meant?"

Corpsman looked annoyed, started to answer, and caught sight of Clifton suppressing a grin. He scowled, again started to reply- finally shrugged and said, "All right, buster, you proved your point; the speech could not have had anything to do with the fall of the Quiroga government. Nevertheless, we've got work to do. So what's this about you not being willing to carry your share of the load?"

I looked at him and managed to keep my temper-Bonforte's influence again; playing the part of a calm-tempered character tends to make one calm inside. "Bill, again you cannot have it two ways. You have made it emphatically clear that you consider me just a hired hand. Therefore I have no obligation beyond my job, which is finished. You can't hire me for another job unless it suits me. It doesn't."

He started to speak but I cut in. "That's all. Now get out. You're not welcome here."

He looked astounded. "Who the hell do you think you are to give orders around here?"

"Nobody. Nobody at all, as you have pointed out. But this is my private room, assigned to me by the Captain. So now get out or be thrown out. I don't like your manners."

Clifton added quietly, "Clear out, Bill. Regardless of anything else, it is his private cabin at the present time. So you had better leave." Rog hesitated, then added, "I think we both might as well leave; we don't seem to be getting anywhere. If you will excuse us
-Chief?"

"Certainly."

I sat and thought about it for several minutes. I was sorry that I had let Corpsman provoke me even into such a mild exchange; it lacked dignity. But I reviewed it in my mind and assured myself that my personal differences with Corpsman had not affected my decision; my mind had been made up before he appeared.

A sharp knock came at the door. I called out, "Who is it?"

"Captain Broadbent."

"Come in, Dak."

He did so, sat down, and for some minutes seemed interested only in pulling hangnails. Finally he looked up and said, "Would it change your mind if I slapped the blighter in the brig?"

"Eh? Do you have a brig in the ship?"

"No. But it would not be hard to jury-rig one."

I looked at him sharply, trying to figure what went on inside that bony head. "Would you actually put Bill in the brig if I asked for it?"

He looked up, cocked a brow, and grinned wryly. "No. A man doesn't get to be a captain operating on any such basis as that. I would not take that sort of order even from him." He inclined his head toward the room Bonforte was in. "Certain decisions a man must make himself."

"That's right."

"Mmm-I hear you've made one of that sort."

"That's right."

"So. I've come to have a lot of respect for you, old son. First met you, I figured you for a clotheshorse and a facemaker, with nothing inside. I was wrong."

"Thank you."

"So I won't plead with you. Just tell me: is it worth our time to discuss the factors? Have you given it plenty of thought?"

"My mind is made up, Dak. This isn't my pidgin."

"Well, perhaps you're right. I'm sorry. I guess we'll just have to hope he pulls out of it in time." He stood up. "By the way, Penny would like to see you, if you aren't going to turn in again this minute."

I laughed without pleasure. "Just 'by the way,' eh? Is this the proper sequence? Isn't it Dr. Capek's turn to try to twist my arm?"

"He skipped his turn; he's busy with Mr. B. He sent you a message, though."

"He said you could go to hell. Embroidered it a bit, but that was the gist."

"He did? Well, tell him I'll save him a seat by the fire."

"Can Penny come in?"

"Oh, sure! But you can tell her that she is wasting her time; the answer is still 'No.'"

So I changed my mind. Confound it, why should an argument seem so much more logical when underlined with a whiff of Jungle Lust? Not that Penny used unfair means, she did not even shed tears-not that I laid a finger on her-but I found myself conceding points, and presently there were no more points to concede. There is no getting around it, Penny is the world-saver type and her sincerity is contagious.

The boning I did on the trip out to Mars was as nothing to the hard study I put in on the trip to New Batavia. I already had the basic character; now it was necessary to fill in the background, prepare myself to be Bonforte under almost any circumstances. While it was the royal audience I was aiming at, once we were at New Batavia I might have to meet any of hundreds or thousands of people. Rog planned to give me a defense in depth of the sort that is routine for any public figure if he is to get work done; nevertheless, I would have to see people-a public figure is a public figure, no way to get around that.

The tightrope act I was going to have to attempt was made possible only by Bonforte's Farleyfile, perhaps the best one ever compiled. Farley was a political manager of the twentieth century, of Eisenhower I believe, and the method he invented for handling the personal relations of politics was as revolutionary as the German invention of staff command was to warfare. Yet I had never heard of the device until Penny showed me Bonforte's.

It was nothing but a file about people. However, the art of politics is "nothing but" people. This file contained all, or almost all, of the thousands upon thousands of people Bonforte had met in the course of his long public life; each dossier consisted of what he knew about that person from Bon forte's own personal contact. Anything at all, no matter how trivial-in fact, trivia were always the first entries: names and nicknames of wives, children, and pets, hobbies, tastes in food or drink, prejudices, eccentricities. Following this would be listed date and place and comments for every occasion on which Boriforte had talked to that particular man.

When available, a photo was included. There might or might not be "below-the-line" data, i.e. information which had been researched rather than learned directly by

Bonforte. It depended on the political importance of the person. In some cases the "below-the-line" part was a formal biography running to thousands of words.

Both Penny and Bonforte himself carried minicorders powered by theft body heat. If Bonforte was alone he would dictate into his own when opportunity offered-in rest rooms, while riding, etc.; if Penny went along she would take it down in hers, which was disguised to look like a wrist watch. Penny could not possibly do the transcribing and microfilming; two of Jimmie Washington's girls did little else.

When Penny showed me the Farleyfile, showed me the very bulk of it-and it was bulky, even at ten thousand words or more to the spool-and then told me that this represented personal information about Mr. Bonforte's acquaintances, I scroaned (which is a scream and groan done together, with intense feeling). "God's mercy, child! I tried to tell you this job could not be done. How could anyone memorize all that?"

"Why, you can't, of course."

"You just said that this was what he remembered about his friends and acquaintances."

"Not quite. I said that this is what he wanted to remember. But since he can't, not possibly, this is how he does it. Don't worry; you don't have to memorize anything. I just want you to know that it is available. It is my job to see that he has at least a minute or two to study the appropriate Farleyfile before anybody gets in to see him. If the need turns up, I can protect you with the same service."

I looked at the typical file she had projected on the desk reader.
A Mr. Saunders of Pretoria, South Africa, I believe it was. He had a bulldog named Snuffles Bullyboy, several assorted uninteresting offspring, and he liked a twist of lime in his whisky and splash.
"Penny, do you mean to tell me that Mr. B. pretends to remember minutiae like that? It strikes me as rather phony."

Instead of getting angry at the slur on her idol Penny nodded soberly. "I thought so once. But you don't look at it correctly, Chief. Do you ever write down the telephone number of a friend?"

"Eh? Of course."

"Is it dishonest? Do you apologize to your friend for caring so little about him that you can't simply remember his number?"

"Eh? All right, I give up. You've sold me."

"These are things he would like to remember if his memory were perfect. Since it isn't, it is no more phony to do it this way than it is to use a tickler file in order not to forget a friend's birthday-that's what it is: a giant tickler file, to cover anything. But there is more to it. Did you ever meet a really important person?"

I tried to think. Penny did not mean the greats of the theatrical profession; she hardly knew they existed. "I once met President Warfield. I was a kid of ten or eleven."

"Do you remember the details?"

"Why, certainly. He said, 'How did you break that arm, son?' and I said, 'Riding a bicycle, sir,' and he said, 'Did the same thing myself, only it was a collarbone.'"

"Do you think he would remember it if he were still alive?"

"Why, no."

"He might-he may have had you Farleyfiled. This Farleyfile includes boys of that age, because boys grow up and become men. The point is that top-level men like

President Warfield meet many more people than they can remember. Each one of that faceless throng remembers his own meeting with the famous man and remembers it in detail. But the supremely important person in anyone's life is himself-and a politician must never forget that. So it is polite and friendly and warmhearted for the politician to have a way to be able to remember about other people the sort of little things that they are likely to remember about him. It is also essential-in politics."

I had Penny display the Farleyfile on King Willem. It was rather short, which dismayed me at first, until I concluded that it meant that Bonforte did not know the Emperor well and had met him only on a few official occasions-Bonforte's first service as Supreme Minister had been before old Emperor Frederick's death. There was no biography below the line, but just a notation, "See House of Orange." I didn't-there simply wasn't time to plow through a few million words of Empire and pre-Empire history and, anyhow, I got fair-to-excellent marks in history when I was in school. All I wanted to know about the Emperor was what Bonforte knew about him that other people did not.

It occurred to me that the Farleyfile must include everybody in the ship since they were (a) people (b) whom Bonforte had met. I asked Penny for them. She seemed a little surprised.

Soon I was the one surprised. The Torn Paine had in her six Grand Assemblymen. Rog Clifton and Mr. Bonforte, of course- but the first item in Dak's file read: "Broadbent, Darius K., the Honorable, 0. A. for League of Free Travelers, Upper Division." It also mentioned that he held a Ph.D. in physics, had been reserve champion with the pistol in the Imperial Matches nine years earlier, and had published thee volumes of verse under the nom de plume of "Acey Wheelwright." I resolved never again to take a man at merely his face value.

There was a notation in Bonforte's sloppy handwriting: "Almost irresistible to women-and vice versa!"

Penny and Dr. Capek were also members of the great parliament. Even Jimmie Washington was a member, for a "safe" district, I realized later-he represented the Lapps, including all the reindeer and Santa Claus, no doubt. He was also ordained in the First Bible Truth Church of the Holy Spirit, which I had never heard of, but which accounted for his tight-lipped deacon look.

I especially enjoyed reading about Penny-the Honorable Miss Penelope Taliaferro Russell. She was an M.A. in government administration from Georgetown and a B.A. from Wellesley, which somehow did not surprise me. She represented districtless university women, another "safe" constituency (I learned) since they are about five to one Expansionist Party members.

On down below were her glove size, her other measurements, her preferences in colors (I could teach her something about dressing), her preference in scent (Jungle Lust, of course), and many other details, most of them innocuous enough. But there was "comment":

"Neurotically honest-arithmetic unreliable-prides herself on her sense of humor, of which she has none-watches her diet but is gluttonous about candied cherries-little-mother-of-all-living complex-unable to resist reading the printed word in any form."

Underneath was another of Bonforte's handwritten addenda:
"Ah, Curly Top! Snooping again, I see."

As I turned them back to her I asked Penny if she had read her own Farleyfile. She told me snippily to mind my own business! Then turned red and apologized.

Most of my time was taken up with study but I did take time to review and revise carefully the physical resemblance, checking the Semiperm shading by colorimeter, doing an extremely careful job on the wrinkles, adding two moles, and setting the whole job with electric brush. It was going to mean a skin peel before I could get my own face back but that was a small price to pay for a make-up job that could not be damaged, could not be smeared even with acetone, and was proof against such hazards as napkins. I even added the scar on the "game" leg, using a photograph Capek had kept in Bonforte's health history. If Bonforte had had wife or mistress, she would have had difficulty in telling the impostor from the real thing simply on physical appearance. It was a lot of trouble but it left my mind free to worry about the really difficult part of the impersonation.

But the all-out effort during the trip was to steep myself in what Bonforte thought and believed, in short the policies of the Expansionist Party. In a manner of speaking, he himself was the Expansionist Party, not merely its most prominent leader but its political philosopher and greatest statesman. Expansionism had hardly been more than a "Manifest Destiny" movement when the party was founded, a rabble coalition of groups who had one thing in common: the belief that the frontiers in the sky were the mast important issue in the emerging future of the human race. Bonforte had given the party a rationale and an ethic, the theme that freedom and equal rights must run with the Imperial banner; he kept harping on the notion that the human race must never again make the mistakes that the white subrace had made in Africa and Asia.

But I was confused by the fact-I was awfully unsophisticated in such matters-that the early history of the Expansionist Party sounded remarkably like the present Humanity Party. I was not aware that political parties often change as much in growing up as people do. I had known vaguely that the Humanity Party had started as a splinter of the Expansionist movement but I had never thought about it. Actually it was inevitable; as the political parties which did not have their eyes on the sky dwindled away under the imperatives of history and ceased to elect candidates, the one party which had been on the right track was bound to split into two factions.

But I am running ahead; my political education did not proceed so logically. At first I simply soaked myself in Bonforte's public utterances. True, I had done that on the trip out, but then I was studying how he spoke; now I was studying what he said.

Bonforte was an orator in the grand tradition but he could be vitriolic in debate, e.g; a speech he made in New Paris during the ruckus over the treaty with the Martian nests, the Concord of Tycho. It was this treaty which had knocked him out of office before; he had pushed it through but the strain on the coalition had lost him the next vote of confidence. Nevertheless, Quiroga had not dared denounce the treaty. I listened to this speech with special interest since I had not liked the treaty myself; the idea that Martians must be granted the same privileges on Earth that humans enjoyed on Mars had been abhorrent to me-until I visited the Kkkah nest.

"My opponent," Bonforte had said with a rasp in his voice, "would have you believe that the motto of the so-called Humanity Party, 'Government of human beings, by human beings, and for human beings,' is no more than an updating of the immortal words of Lincoln. But while the voice is the voice of Abraham, the hand is the hand of the Ku

Klux Klan. The true meaning of that innocent-seeming motto is 'Government of all races everywhere, by human beings alone, for the profit of a privileged few.'

"But, my opponent protests, we have a God-given mandate to spread enlightenment through the stan, dispensing our own brand of Civilization to the savages. This is the Uncle Remus school of sociology-the good dahides singin' spirituals and Ole Massa lubbin' every one of dem! It is a beautiful picture but the frame is too small; it fails to show the whip, the slave block-and the counting house!"

I found myself becoming, if not an Expansionist, then at least a Bonfortite. I am not sure that I was convinced by the logic of his words-indeed, I am not sure that they were logical. But I was in a receptive frame of mind. I wanted to understand what he said so thoroughly that I could rephrase it and say it in his place, if need be.

Nevertheless, here was a man who knew what he wanted and (much rarer!) why he wanted it. I could not help but be impressed, and it forced me to examine my own beliefs. What did I live by?

My profession, surely! I had been brought up in it, I liked it, I had a deep though unlogical conviction that art was worth the effort-and, besides, it was the only way I knew to make a living. But what else?

I have never been impressed by the formal schools of ethics. I had sampled them-public libraries are a ready source of recreation for an actor short of cash-but I had found them as poor in vitamins as a mother-in-law's kiss. Given time and plenty of paper, a philosopher can prove anything.

I had the same contempt for the moral instruction handed to mast children. Much of it is prattle and the parts they really seem to mean are dedicated to the sacred proposition that a "good" child is one who does not disturb mother's nap and a "good" man is one who achieves a muscular bank account without getting caught. No, thanks!

But even a dog has rules of conduct. What were mine? How did I behave-or, at least, how did I like to think I behaved?

"The show must go on." I had always believed that and lived by it. But why must the show go on?-seeing that some shows are pretty terrible. Well, because you agreed to do it, because there is an audience out there; they have paid and each one of them is entitled to the best you can give. You owe it to them. You owe it also to stagehands and manager and producer and other members of the company-and to those who taught you your trade, and to others stretching back in history to open-air theaters and stone seats and even to storytellers squatting in a market place. Noblesse oblige.

I decided that the notion could be generalized into any occupation. "Value for value." Building "on the square and on the level." The Hippocratic oath. Don't let the team down. Honest work for honest pay. Such things did not have to be proved; they were an essential part of life-true throughout eternity, true in the farthest reaches of the Galaxy.

I suddenly got a glimpse of what Bonforte was driving at. If there were ethical basics that transcended time and place, then they were true both for Martians and for men. They were true on any planet around any star-and if the human race did not behave accordingly they weren't ever going to win to the stars because some better race would slap them down for double-dealing.

The price of expansion was virtue. "Never give a sucker an even break" was too narrow a philosophy to fit the broad reaches of space.

But Bonforte was not preaching sweetness and light. "I am not a pacifist. Pacifism is a shifty doctrine under which a man accepts the benefits of the social group without being willing to pay-and claims a halo for his dishonesty. Mr. Speaker, life belongs to those who do not fear to lose it. This bill must pass!" And with that he had got up and crossed the aisle in support of a military appropriation his own party had refused in caucus.

Or again: "Take sides! Always take sides! You will sometimes be wrong-but the man who refuses to take sides must always be wrong! Heaven save us from poltroons who fear to make a choice. Let us stand up and be counted." (This last was in a closed caucus but Penny had caught it on her minicorder and Bonforte had saved it-Bonforte had a sense of history; he was a record keeper. If he had not been, I would not have had much to work with.)

I decided that Bonforte was my kind of man. Or at least the kind I liked to think I was. His was a persona I was proud to wear.

So far as I can remember I did not sleep on that trip after I promised Penny that I would take the royal audience if Bonforte could not be made ready. I intended to sleep-there is no point in taking your stage with your eyes bagging like hound's ears-but I got interested in what I was studying and there was a plentiful supply of pepper pills in Bonforte's desk. It is amazing how much ground you can cover working a twenty-four-hour day, free from interruptions and with all the help you could ask for.

But shortly before we were due at New Batavia, Dr. Capek came in and said, "Bare your left forearm."

"Why?" I asked.

"Because when you go before the Emperor we don't want you falling flat on your face with fatigue. This will make you sleep until we ground. Then I'll give you an antidote."

"Eh? I take it that you don't think he will be ready?"

Capek did not answer, but gave me the shot. I tried to finish listening to the speech I was running but I must have been asleep in seconds. The next thing I knew Dak was saying deferentially, "Wake up, sir. Please wake up. We're grounded at Lippershey Field."

Chapter 8

Our Moon being an airless planet, a torchship can land on it. But the Tom Paine, being a torchship, was really intended to stay in space and be serviced only at space stations in orbit; she had to be landed in a cradle. I wish I had been awake to see it, for they say that catching an egg on a plate is easy by comparison. Dak was one of the half dozen pilots who could do it.

But I did not even get to see the Tommie in her cradle; all I saw was the inside of the passenger bellows they fastened to her air lock and the passenger tube to New Batavia-those tubes are so fast that, under the low gravity of the Moon, you are again in free fall at the middle of the trip.

We went first to the apartments assigned to the leader of the loyal opposition, Bonforte's official residence until (and if) he went back into power after the coming election. The magnificence of them made me wonder what the Supreme Minister's residence was like. I suppose that New Batavia is odds-on the most palatial capital city in all history; it is a shame that it can hardly be seen from outdoors-but that minor shortcoming is more than offset by the fact that it is the only city in the Solar System that is actually impervious to fusion bombs. Or perhaps I should say "effectively impervious" since there are some surface structures which could be destroyed. Bonforte's apartments included an upper living room in the side of a cliff, which looked out through a bubble balcony at the stars and Mother Earth herself-but his sleeping room and offices were a thousand feet of solid rock below, by private lift.

I had no time to explore the apartments; they dressed me for the audience. Bonforte had no valet even dirtside, but Rog insisted on "helping" me (he was a hindrance) while going over lastminute details. The dress was ancient formal court dress, shapeless tubular trousers, a silly jacket with a claw-hammer tail, both in black, and a chemise consisting of a stiff white breastplate, a "winged" collar, and a white bow tie. Bonforte's chemise was all in one piece, because (I suppose) he did not use a dresser; correctly it should be assembled piece by piece and the bow tie should be tied poorly enough to show that it has been tied by hand-but it is too much to expect a man to understand both politics and period costuming.

It is an ugly costume, but it did make a fine background for the Order of Wilhelmina stretched in colorful diagonal across my chest. I looked at myself in a long glass and was pleased with the effect; the one color accent against the dead black and white was good showmanship. The traditional dress might be ugly but it did have dignity, something like the cool stateliness of a maître d'hôtel. I decided that I looked the part to wait on the pleasure of a sovereign.

Rog Clifton gave me the scroll which was supposed to list the names of my nominations for the ministries and he tucked into an inner pocket of my costume a copy of the typed list thereof-the original had gone forward by hand of Jimmie Washington to the Emperor's State Secretary as soon as we had grounded. Theoretically the purpose of the audience was for the Emperor to inform me that it was his pleasure for me to form a government and for me to submit humbly my suggestions; my nominations were supposed to be secret until the sovereign graciously approved.

Actually the choices were all made; Rog and Bill had spent most of the trip lining up the Cabinet and making sure the nominees would serve, using state-scramble for the radio messages. I had studied the Farleyflies on each nomination and each alternate. But the list really was secret in the sense that the news services would not receive it until after the Imperial audience.

I took the scroll and picked up my life wand. Rog looked horrified. "Good Lord, man, you can't carry that thing into the presence of the Emperor!"

"Why not?"

"Huh? It's a weapon."

"It's a ceremonial weapon. Rog, every duke and every pipsqueak baronet will be wearing his dress sword. So I wear this."

He shook his head. "They have to. Don't you understand the ancient legal theory behind it? Their dress swords symbolize the duty they owe their liege lord to support and

defend him by force of arms, in their own persons. But you are a commoner; tradi-. tionally you come before him unarmed."

"No, Rog. Oh, I'll do what you tell me to, but you are missing a wonderful chance to catch a tide at its flood. This is good theater, this is right."

"I'm afraid I don't follow you."

"Well, look, will the word get back to Mars if I carry this wand today? Inside the nests, I mean?"

"Eh? I suppose so. Yes."

"Of course. I would guess that every nest has stereo receivers; I certainly noticed plenty of them in Kkkah nest. They follow the Empire news as carefully as we do. Don't they?"

"Yes. At least the elders do."

"II I carry the wand, they'll know it; if I fail to carry it, they will know it. It matters to them; it is tied up with propriety. No adult Martian would appear outside his nest without his life wand, or inside on ceremonial occasions. Martians have appeared before the Emperor in the past; they carried their wands, didn't they? I'd bet my life on it."

"Yes, but you-"

"You forget that 1 am a Martian."

Rog's face suddenly blanked out. I went on, "I am not only 'John Joseph Bonforte'; I am Kkkahjjjerrr of Kkkah nest. If I fail to carry that wand, I commit a great impropriety-and frankly I do not know what would happen when the word got back; I don't know enough about Martian customs. Now turn it around and look at it the other way. When I walk down that aisle carrying this wand, I am a Martian citizen about to be named His Imperial Majesty's first minister. How will that affect the nests?"

"I guess I had not thought it through," he answered slowly.

"Nor would I have done so, had I not had to decide whether or not to carry the wand. But don't you suppose Mr. B. thought it through-before he ever let himself be invited to be adopted? Rog, we've got a tiger by the tail; the only thing to do is to swarm aboard and ride it. We can't let go."

Dak arrived at that point, confirmed my opinion, seemed surprised that Clifton had expected anything else. "Sure, we're setting a new precedent, Rog-but we're going to set a lot of new ones before we are through." But when he saw how I was carrying the wand he let out a scream. "Cripes, man! Are you trying to kill somebody? Or just carve a hole in the wall?"

"I wasn't pressing the stud."

"Thank God for small favors! You don't even have the safety on." He took it from me very gingerly and said, "You twist this ring-and shove this in that slot-then it's just a stick. Whew!"

"Oh. Sorry."

They delivered me to the robing room of the Palace and turned me over to King Willem's equerry, Colonel Pateel, a bland-faced Hindu with perfect manners and the dazzling dress uniform of the Imperial space forces. His bow to me must have been calculated on a slide rule; it suggested that I was about to be Supreme Minister but was not quite there yet, that I was his senior but nevertheless a civilian-then subtract five degrees for the fact that he wore the Emperor's aiguillette on his right shoulder.

He glanced at the wand and said smoothly, "That's a Martian wand, is it not, sir? Interesting. I suppose you will want to leave it here-it will be safe."

I said, "I'm carrying it."

"Sir?" His eyebrows shot up and he waited for me to correct my obvious mistake.

I reached into Bonforte's favorite clichés and picked one he used to reprove bumptiousness. "Son, suppose you tend to your knitting and I tend to mine."

His face lost all expression. "Very well, sir. If you will come this way?"

We paused at the entrance to the throne room. Far away, on the raised dais, the throne was empty. On both sides the entire length of the great cavern the nobles and royalty of the court were standing and waiting. I suppose Pateel passed along some sign, for the Imperial Anthem welled out and we all held still for it, Pateel in robotlike attention, myself in a tired stoop suitable to a middleaged and overworked roan who must do this thing because he must, and all the court like show-window pieces. I hope we never dispense with the pageantry of a court entirely; all those noble dress extras and spear carriers make a beautiful sight.

In the last few bars he came in from behind and took his throne

-Willem, Prince of Orange, Duke of Nassau, Grand Duke of Luxembourg, Knight Commander of the Holy Roman Empire, Admiral General of the Imperial Forces, Adviser to the Martian Nests, Protector of the Poor, and, by the Grace of God, King of the Lowlands and Emperor of the Planets and the Spaces Between.

I could not see his face, but the symbolism produced in me a sudden warm surge of empathy. I no longer felt hostile to the notion of royalty.

As King Willem sat down the anthem ended; he nodded acknowledgment of the salute and a wave of slight relaxation rippled down the courtiers. Pateel withdrew and, with my wand tucked under my arm, I started my long march, limping a little in spite of the low gravity. It felt remarkably like the progress to the Inner Nest of Kkkah, except that I was not frightened; I was simply warm and tingling. The Empire medley followed me down, the music sliding from "King Christian" to "Marseillaise" to "The StarSpangled Banner" and all the others.

At the first balk line I stopped and bowed, then again at the second, then at last a deep bow at the third, just before the steps. I did not kneel; nobles must kneel but commoners share sovereignty with the Sovereign. One sees this point incorrectly staged some- times in stereo and theater, and Rog had made sure that I knew what to do.

"A ye, Imperator!" Had I been a Dutchman I would have said "Rex" as well, but I was an American. We swapped schoolboy Latin back and forth by rote, he inquiring what I wanted, I reminding him that he had summoned me, etc. He shifted into Anglo-American, with a slight "down-East" accent.

"You served our father well. it is now our thought that you might serve us. How say you?"

"My sovereign's wish is my will, Majesty."

"Approach us."

Perhaps I made too good a thing of it but the steps up the dais are high and my leg actually was hurting-and a psychosomatic pain is as bad as any other. I almost stumbled-and Willem was up out of his throne like a shot and steadied my arm. I heard a gasp go

around the hall. He smiled at me and said sotto voce, "Take it easy, old friend. Wet make this short."

He helped me to the stool before the throne and made me sit down an awkward moment sooner than he himself was again seated. Then he held out his hand for the scroll and I passed it over. He unrolled it and pretended to study the blank page.

There was chamber music now and the court made a display of enjoying themselves, ladies laughing, noble gentlemen uttering gallantries, fans gesturing. No one moved very far from his place, no one held still. Little page boys, looking like Michelangelo's cherubim, moved among them offering trays of sweets. One knelt to Willem and he helped himself without taking his eyes off the nonexistent list. The child then offered the tray to me and I took one, not knowing whether it was proper or not. It was one of those wonderful, matchless chocolates made only in Holland.

I found that I knew a number of the court faces from pictures. Most of the unemployed royalty of Earth were there, concealed under their secondary titles of duke or count. Some said that Willem kept them on as pensioners to brighten his court; some said he wanted to keep an eye on them and keep them out of politics and other mischief. Perhaps it was a little of both. There were the nonroyal nobility of a dozen nations present, too; some of them actually worked for a living.

I found myself trying to pick out the Habsburg lips and the Windsor nose.

At last Willem put down the scroll. The music and the conversation ceased instantly. In dead silence he said, "It is a gallant company you have proposed. We are minded to confirm it."

"You are most gracious, Majesty."

"We will ponder and inform you." He leaned forward and said quietly to me alone, "Don't try to back down those damned steps. Just stand up. I am going to leave at once."

I whispered back, "Oh. Thank you, Sire."

He stood up, whereupon I got hastily to my feet, and he was gone in a swirl of robes. I turned around and noticed some startled looks. But the music started up at once and I was let to walk out while the noble and regal extras again made polite conversation.

Pateel was at my elbow as soon as I was through the far archway. "This way, sir, if you please."

The pageantry was over; now came the real audience.

He took me through a small door, down an empty corridor, through another small door, and into a quite ordinary office. The only thing regal about it was a carved wall plaque, the coat of arms of the House of Orange, with its deathless motto, "I Maintain!" There was a big, fiat desk, littered with papers. In the middle of it, held down by a pair of metal-plated baby shoes, was the original of the typed list in my pocket. In a copper frame there was a family group picture of the late Empress and the kids. A somewhat battered couch was against one wall and beyond it was a small bar. There were a couple of armchairs as well as the swivel chair at the desk. The other furnishings might have suited the office of a busy and not fussy family physician.

Pateel left me alone there, closing the door behind him. I did not have time to consider whether or not it was proper for me to sit down, as the Emperor came quickly in through a door opposite. "Howdy, Joseph," he called out. "Be with you in a moment." He strode through the room, followed closely by two servants who were undressing him as

he walked, and went out a third door. He was back again almost at once, zipping up a suit of coveralls as he came in. "You took the short route; I had to come long way around. I'm going to insist that the palace engineer cut another tunnel through from the back of the throne room, dammed if I'm not. I have to come around three sides of a square-either that or parade through semi-public corridors dressed like a circus horse." He added meditatively, "I never wear anything but underwear under those silly robes."

I said, "I doubt if they are as uncomfortable as this monkey jacket I am wearing, Sire."

He shrugged. "Oh well, we each have to put up with the inconveniences of our jobs. Didn't you get yourself a drink?" He picked up the list of nominations for cabinet ministers. "Do so, and pour me one."

"What will you have, Sire?"

"Eh?" He looked up and glanced sharply at me. "My usual. Scotch on ice, of course."

I said nothing and poured them, adding water to my own. I had had a sudden chill; if Bonforte knew that the Emperor always took scotch over bare cubes it should have been in his Farleyfile. It was not.

But Willem accepted the drink without comment, murmured, "Hot jets!" and went on looking at the list. Presently he looked up and said, "How about these lads, Joseph?"

"Sire? It is a skeleton cabinet, of course." We had doubled up on portfolios where possible and Bonforte would hold Defense and Treasury as well as first. In three cases we had given temporary appointments to the career deputy ministers-Research, Population Management, and Exterior. The men who would hold the posts in the permanent government were all needed for campaigning.

"Yes, yes, it's your second team. Mmm . . . How about this man Braun?"

I was considerably surprised. It had been my understanding that Willem would okay the list without comment, but that he might want to chat about other things. I had not been afraid of chatting; a man can get a reputation as a sparkling conversationalist simply by letting the other man do all the talking.

Lothar Braun was what was known as a "rising young statesman." What I knew about him came from his Farleyfile and from Rog and Bill. He had come up since Bonforte had been turned out of office and so had never had any cabinet post, but had served as caucus sergeant at arms and junior whip. Bill insisted that Bonforte had planned to boost him rapidly and that he should try his wings in the caretaker government; he proposed him for Minister of External Communications.

Rog Clifton had seemed undecided; he had first put down the name of Angel Jesus de la Tone y Perez, the career subminister. But Bill had pointed out that if Braun flopped, now was a good time to find it out and no harm done. Clifton had given in.

"Braun?" I answered. "He's a coming young man. Very brilliant."

Willem made no comment, but looked on down the list. I tried to remember exactly what Bonforte had said about Braun in the Farleyffle. Brilliant . . . hardworking . . . analytical mind. Had he said anything against him? No-well, perhaps-"a shade too affable." That does not condemn a man. But Bonforte had said nothing at all about such affirmative virtues as loyalty and honesty. Which might mean nothing, as the Farleyfile was not a series of character studies; it was a data file.

The Emperor put the list aside. "Joseph, are you planning to bring the Martian nests into the Empire at once?"

"Eh? Certainly not before the election, Sire."

"Come now, you know I was talking about after the election. And have you forgotten how to say 'Willem'? 'Sire' from a man six years older than I am, under these circumstances, is silly."

"Very well, Willem."

"We both know I am not supposed to notice politics. But we know also that the assumption is silly. Joseph, you have spent your off years creating a situation in which the nests would wish to come wholly into the Empire." He pointed a thumb at my wand. "I believe you have done it. Now if you win this election you should be able to get the Grand Assembly to grant me permission to proclaim it. Well?"

I thought about it. "Willem," I said slowly, "you know that is exactly what we have planned to do. You must have some reason for bringing the subject up."

He swizzled his glass and stared at me, managing to look like a New England groceryman about to tell off one of the summer people. "Are you asking my advice? The constitution requires you to advise me, not the other way around."

"I welcome your advice, Wilem. I do not promise to follow it."

He laughed. "You damned seldom promise anything. Very well, let's assume that you win the election and go back into office
-but with a majority so small that you might have difficulty in voting the nests into full citizenship. In such case I would not advise you to make it a vote of confidence. If you lose, take your licking and stay in office; stick the full term."

"Why, Willem?"

"Because you and I are patient men. See that?" He pointed at the plaque of his house. "'I Maintain!' It's not a flashy rule but it is not a king's business to be flashy; his business is to conserve, to hang on, to roll with the punch. Now, constitutionally speaking, it should not matter to me whether you stay in office or not. But it does matter to me whether or not the Empire holds together. I think that if you miss on the Martian issue immediately after the election, you can afford to wait-for your other policies are going to prove very popular. You'll pick up votes in by-elections and eventually you'll come around and tell me I can add 'Emperor of Mars' to the list. So don't hurry."

"I will think about it," I said carefully.

"Do that. Now how about the transportee system?"

"We're abolishing it immediately after the election and suspending it at once." I could answer that one firmly; Bonforte hated it.

"They'll attack you on it."

"So they will. Let them. We'll pick up votes."

"Glad to hear that you still have the strength of your convictions, Joseph. I never liked having the banner of Orange on a convict ship. Free trade?"

"After the election, yes."

"What are you going to use for revenue?"

"It is our contention that trade and production will expand so rapidly that other revenues will make up for the loss of the customs."

"And suppose it ain't so?"

I had not been given a second-string answer on that one-and economics was largely a mystery to me. I grinned. "Willem, I'll have to have notice on that question. But the whole program of the Expansionist Party is founded on the notion that free trade, free travel, common citizenship, common currency, and a minimum of Imperial laws and restrictions are good not only for the citizens of the Empire but for the Empire itself. If we need the money, we'll find it-but not by chopping the Empire up into tiny bailiwicks." All but the first sentence was pure Bonforte, only slightly adapted.

"Save your campaign speeches," he grunted. "I simply asked." He picked up the list again. "You're quite sure this line-up is the way you want it?"

I reached for the list and he handed it to me. Damnation, it was clear that the Emperor was telling me as emphatically as the constitution would let him that, in his opinion, Braun was a wrong 'un. But, hell's best anthracite, I had no business changing the list Bill and Rog had made up.

On the other hand, it was not Bon forte's list; it was merely what they thought Bonforte would do if he were compos mentis.

I wished suddenly that I could take time out and ask Penny what she thought of Braun.

Then I reached for a pen from Willem's desk, scratched out "Braun," and printed in "de la Torre"-in block letters; I still could not risk Bonforte's handwriting. The Emperor merely said, "It looks like a good team to me. Good luck, Joseph. You'll need it."

That ended the audience as such. I was anxious to get away, but you do not walk out on a king; that is one prerogative they have retained. He wanted to show me his workshop and his new train models. I suppose he has done more to revive that ancient hobby than anyone else; personally I can't see it as an occupation for a grown man. But I made polite noises about his new toy locomotive, intended for the "Royal Scotsman."

"If I had had the breaks," he said, getting down on his hands and knees and peering into the innards of the toy engine, "I could have been a very fair shop superintendent, I think-a master machinist. But the accident of birth discriminated against me."

"Do you really think you would have preferred it, Willem?"

"I don't know. This job I have is not bad. The hours are easy and the pay is good-and the social security is first-rate-barring the outside chance of revolution, and my line has always been lucky on that score. But much of the work is tedious and could be done as well by any second-rate actor." He glanced up at me. "I relieve your office of a lot of tiresome cornerstone-laying and parade-watching, you know."

"I do know and I appreciate it."

"Once in a long time I get a chance to give a little push in the right direction-what I think is the right direction. Kinging is a very odd profession, Joseph. Don't ever take it up."

"I'm afraid it's a bit late, even if I wanted to."

He made some fine adjustment on the toy. "My real function is to keep you from going crazy."

"Eh?"

"Of course. Psychosis-situational is the occupational disease of heads of states. My predecessors in the king trade, the ones who actually ruled, were almost all a bit

balmy. And take a look at your American presidents; the job used frequently to kill them in their prime. But me, I don't have to run things; I have a professional like yourself to do it for me. And you don't have the killing pressure either; you, or those in your shoes, can always quit if things get too tough-and the old Emperor-it's almost always the 'old' Emperor; we usually mount the throne about the age other men retire-the Emperor is always there, maintaining continuity, preserving the symbol of the state, while you professionals work out a new deal." He blinked solemnly. "My job is not glamorous, but it is useful."

Presently he let up on me about his chlldish trains and we went back into his office. I thought I was about to be dismissed. In fact, he said, "I should let you get back to your work. You had a hard trip?"

"Not too hard. I spent it working."

"I suppose so. By the way, who are you?"

There is the policeman's tap on the shoulder, the shock of the top step that is not there, there is falling out of bed, and there is having her husband return home unexpectedly-I would take any combination of those in preference to that simple inquiry. I aged inside to match my appearance and more.

"Sire?"

"Come now," he said impatiently, "surely my job carries with it some privileges. Just tell me the truth. I've known for the past hour that you were not Joseph Bonforte-though you could fool his own mother; you even have his mannerisms. But who are you?"

"My name is Lawrence Smith, Your Majesty," I said faintly.

"Brace up, man! I could have called the guards long since, if I had been intending to. Were you sent here to assassinate me?"

"No, Sire. I am-loyal to Your Majesty."

"You have an odd way of showing it. Well, pour yourself another drink, sit down, and tell me about it."

I told him about it, every bit. It took more than one drink, and presentiy I felt better. He looked angry when I told him of the kidnapping, but when I told him what they had done to Bonforte's mind his face turned dark with a Jovian rage.

At last he said quietly, "It's just a matter of days until he is back in shape, then?"

"So Dr. Capek says."

"Don't let him go to work until he is fully recovered. He's a valuable man. You know that, don't you? Worth six of you and me. So you carry on with the doubling job and let him get well. The Empire needs him."

"Yes, Sire."

"Knock off that 'Sire.' Since you are standing in for him, call me 'Willem,' as he does. Did you know that was how I spotted you?"

"No, Si-no, Willem."

"He's called me Willem for twenty years. I thought it decidedly odd that he would quit it in private simply because he was seeing me on state business. But I did not suspect, not really. But, remarkable as your performance was, it set me thinking. Then when we went in to see the trains, I knew."

"Excuse me? How?"

"You were polite, man! I've made him look at my trains in the past-and he always got even by being as rude as possible about what a way for a grown man to waste time. It was a little act we always went through. We both enjoyed it."

"Oh. I didn't know."

"How could you have known?" I was thinking that I should have known, that damned Farleyfile should have told me . . . It was not until later that I realized that the file had not been defective, in view of the theory on which it was based, i.e. it was intended to let a famous man remember details about the less famous. But that was precisely what the Emperor was not-less famous, I mean. Of course Bonforte needed no notes to recall personal details about Willem! Nor would he consider it proper to set down personal matters about the sovereign in a file handled by his clerks.

I had muffed the obvious-not that I see how I could have avoided it, even ii I had realized that the file would be incomplete.

But the Emperor was still talking. "You did a magnificent job- and after risking your life in a Martian nest I am not surprised that you were willing to tackle me. Tell me, have I ever seen you in stereo, or anywhere?"

I had given my legal name, of course, when the Emperor demanded it; I now rather timidly gave my professional name. He looked at me, threw up his hands, and guff awed. I was somewhat hurt. "Er, have you heard of me?"

"Heard of you? I'm one of your staunchest fans." He looked at me very closely. "But you still look like Joe Bonforte. I can't believe that you are Lorenzo."

"But I am."

"Oh, I believe it, I believe it. You know that skit where you are a tramp? First you try to milk a cow-no luck. Finally you end up eating out of the cat's dish-but even the cat pushes you away?"

I admitted it.

"I've almost worn out my spool of that. I laugh and cry at the same time."

"That is the idea." I hesitated, then admitted that the barnyard "Weary Willie" routine had been copied from a very great artist of another century. "But I prefer dramatic roles."

"Like this one?"

"Well-not exactly. For this role, once is quite enough. I wouldn't care for a long run."

"I suppose so. Well, tell Roger Clifton- No, don't tell Clifton anything. Lorenzo, I see nothing to be gained by ever telling anyone about our conversation this past hour. If you tell Clifton, even though you tell him that I said not to worry, it would just give him nerves. And he has work to do. So we keep it tight, eh?"

"As my emperor wishes."

"None of that, please. We'll keep it quiet because it's best so. Sorry I can't make a sickbed visit on Uncle Joe. Not that I could help him-although they used to think the King's Touch did marvels. So we'll say nothing and pretend that I never twigged."

"Yes-Wilem."

"I suppose you had better go now. I've kept you a very long time."

"Whatever you wish."

"I'll have Pateel go back with you-or do you know your way around? But just a moment-" He dug around in his desk, muttering to himself. "That girl must have been

straightening things again. No-here it is." He hauled out a little book. "I probably won't get to see you again-so would you mind giving me your autograph before you go?"

Chapter 9

Rog and Bill I found chewing their nails in Bonforte's upper living room. The second I showed up Corpsman started toward me. "Where the hell have you been?"

"With the Emperor," I answered coldly.

"You've been gone five or six times as long as you should have been."

I did not bother to answer. Since the argument over the speech Corpsman and I had gotten along together and worked together, but it was strictly a marriage of convenience, with no love. We cooperated, but we did not really bury the hatchet-unless it was between my shoulder blades. I had made no special effort to conciliate him and saw no reason why I should-in my opinion his parents had met briefly at a masquerade ball.

I don't believe in rowing with other members of the company, but the only behavior Corpsman would willingly accept from me was that of a servant, hat in hand and very 'umble, sir. I would not give him that, even to keep peace. I was a professional, retained to do a very difficult professional job, and professional men do not use the back stairs; they are treated with respect.

So I ignored him and asked Rog, "Where's Penny?"

"With him. So are Dak and Do; at the moment."

"He's here?"

"Yes." Clifton hesitated. "We put him in what is supposed to be the wife's room of your bedroom suite. It was the only place where we could maintain utter privacy and still give him the care he needs. I hope you don't mind."

"Not at all."

"It won't inconvenience you. The two bedrooms are joined, you may have noticed, only through the dressing rooms, and we've shut off that door. It's soundproof."

"Sounds like a good arrangement. How is he?"

Clifton frowned. "Better, much better-on the whole. He is lucid much of the time." He hesitated. "You can go in and see him, if you like."

I hesitated still longer. "How soon does Dr. Capek think he will be ready to make public appearances?"

"It's hard to say. Before long."

"How long? Three or four days? A short enough time that we could cancel all appointments and just put me out of sight? Rog, I don't know just how to make this clear but, much as I would like to call on him and pay my respects, I don't think it is smart for me to see him at all until after I have made my last appearance. It might well ruin my characterization." I had made the terrible mistake of going to my father's funeral; for years thereafter when I thought of him I saw him dead in his coffin. Only very slowly did I regain the true image of him-the virile, dominant man who had reared me with a firm hand and taught me my trade. I was afraid of something like that with Bonforte; I was now impersonating a well man at the height of his powers, the way I had seen him and

heard him in the many stereo records of him. I was very much afraid that if I saw him ill, the recollection of it would blur and distort my performance.

"I was not insisting," Clifton answered. "You know best. It's possible that we can keep from having you appear in public again, but I want to keep you standing by and ready until he is fully recovered."

I almost said that the Emperor wanted it done that way. But I caught myself-the shock of having the Emperor find me out had shaken me a little out of character. But the thought reminded me of unfinished business. I took out the revised cabinet list and handed it to Corpsman. "Here's the approved roster for the news services, Bill. You'll see that there is one change on it-De la Torre for Braun."

"What?"

"Jesus de Ia Tone for Lothar Braun. That's the way the Emperor wanted it."

Clifton looked astonished; Corpsman looked both astonished and angry. "What difference does that make? He's got no goddamn right to have opinions!"

Clifton said slowly, "Bill is fight, Chief. As a lawyer who has specialized in constitutional law I assure you that the sovereign's confirmation is purely nominal. You should not have let him make any changes."

I felt like shouting at them, and only the imposed calm personality of Bonforte kept me from it. I had had a hard day and, despite a brilliant performance, the inevitable disaster had overtaken me. I wanted to tell Rog that if Willem had not been a really big man, kingly in the fine sense of the word, we would all be in the soup-simply because I had not been adequately coached for the role. Instead I answered sourly, "It's done and that's that."

Corpsman said, "That's what you think! I gave out the correct list to the reporters two hours ago. Now you've got to go back and straighten it out. Rog, you had better call the Palace right away and-"

I said, "Quiet!"

Corpsman shut up. I went on in a lower key. "Rog, from a legal point of view, you may be right. I wouldn't know. I do know that the Emperor felt free to question the appointment of Braun. Now if either one of you wants to go to the Emperor and argue with him, that's up to you. But I'm not going anywhere. I'm going to get out of this anachronistic strait jacket, take my shoes off, and have a long, tall drink. Then rm going to bed."

"Now wait, Chief," Clifton objected. "You've got a five-minute spot on grand network to announce the new cabinet."

"You take it. You're first deputy in this cabinet."

He blinked. "All right."

Corpsman said insistently, "How about Braun? He was promised the job."

Clifton looked at him thoughtfully. "Not in any dispatch that I saw, Bill. He was simply asked if he was willing to serve, like all the others. Is that what you meant?"

Corpsman hesitated like an actor not quite sure of his lines. "Of course. But it amounts to a promise."

"Not until the public announcement is made, it doesn't."

"But the announcement was made, I tell you. Two hours ago."

"Mmm ... Bill, I'm afraid that you will have to call the boys in again and tell them that you made a mistake. Or I'll call them in and tell them that through an error a

preliminary list was handed out before Mr. Bonforte had okayed it. But we've got to correct it before the grand network announcement."

"Do you mean to tell me you are going to let him get away with it?"

By "him" I think Bill meant me rather than Willem, but Rog's answer assumed the contrary. "Yes. Bill, this is no time to force a constitutional crisis. The issue isn't worth it. So will you phrase the retraction? Or shall I?"

Corpsman's expression reminded me of the way a cat submits to the inevitable- "just barely." He looked grim, shrugged, and said, "I'll do it. I want to be damned sure it is phrased properly, so we can salvage as much as possible out of the shambles."

"Thanks, Bill," Rog answered mildly.

Corpsman turned to leave. I called out, "Bill! As long as you are going to be talking to the news service I have another announcement for them."

"Huh? What are you after now?"

"Nothing much." The fact was I was suddenly overcome with weariness at the role and the tensions it created. "Just tell them that Mr. Bonforte has a cold and his physician has ordered him to bed for a rest. I've had a bellyful."

Corpsman snorted. "I think I'll make it 'pneumonia."

"Suit yourself."

When he had gone Rog turned to me and said, "Don't let it get you, Chief. In this business some days are better than others."

"Rog, I really am going on the sick list. You can mention it on stereo tonight."

"So?"

"I'm going to take to my bed and stay there. There is no reason at all why Bonforte can't 'have a cold' until he is ready to get back into harness himself. Every time I make an appearance it just increases the probability that somebody will spot something wrong- and every time I do make an appearance that sorehead Corpsman finds something to yap about. An artist can't do his best work with somebody continually snarling at him. So let's let it go at this and ring down the curtain."

"Take it easy, Chief. I'll keep Corpsman out of your hair from now on. Here we won't be in each other's laps the way we were in the ship."

"No, Rog, my mind is made up. Oh, I won't run out on you. I'll stay here until Mr. B. is able to see people, in case some utter emergency turns up"-I was recalling uneasily that the Emperor had told me to hang on and had assumed that I would-"but it is actually better to keep me out of sight. At the moment we have gotten away with it completely, haven't we? Oh, they know- somebody knows-that Bonforte was not the man who went through the adoption ceremony-but they don't dare raise that issue, nor could they prove it if they did. The same people may suspect that a double was used today, but they don't know, they can't be sure-because it is always possible that Bonforte recovered quickly enough to carry it off today. Right?"

Clifton got an odd, half-sheepish look on his face. "I'm afraid they are fairly sure you were a double, Chief."

"Eh?"

"We shaded the truth a little to keep you from being nervous. Doc Capek was certain from the time he first examined him that only a miracle could get him in shape to make the audience today. The people who dosed him would know that too."

I frowned. "Then you were kidding me earlier when you told me how well he was doing? How is he, Rog? Tell me the truth."

"I was telling you the truth that time, Chief. That's why I suggested that you see him-whereas before I was only too glad to string along with your reluctance to see him." He added, "Perhaps you had better see him, talk with him."

"Mmm-no." The reasons for not seeing him still applied; if I did have to make another appearance I did not want my subconscious playing me tricks. The role called for a well man. "But, Rog, everything I said applies still more emphatically on the basis of what you have just told me. If they are even reasonably sure that a double was used today, then we don't dare risk another appearance. They were caught by surprise today-or perhaps it was impossible to unmask me, under the circumstances. But it will not be later. They can rig some deadfall, some test that I can't pass- then blooey/ There goes the old ball game." I thought about it. "I had better be 'sick' as long as necessary. Bill was right; it had better be 'pneumonia.'"

Such is the power of suggestion that I woke up the next morning with a stopped-up nose and a sore throat. Dr. Capek took time to dose me and I felt almost human by suppertime; nevertheless, he issued bulletins about "Mr. Bonforte's virus infection." The sealed and air-conditioned cities of the Moon being what they are, nobody was anxious to be exposed to an S-vectored ailment; no determined effort was made to get past my chaperones. For four days I loafed and read from Bonforte's library, both his own collected papers and his many books . . . I discovered that both politics and economics could make engrossing reading; those subjects had never been real to me before. The Emperor sent me flowers from the royal greenhouse-or were they for me?

Never mind. I loafed and soaked in the luxury of being Lorenzo, or even plain Lawrence Smith. I found that I dropped back into character automatically if someone came in, but I can't help that. It was not necessary; I saw no one but Penny and Capek, except for one visit from Dak.

But even lotus-eating can pall. By the fourth day I was as tired of that room as I had ever been of a producer's waiting room and I was lonely. No one bothered with me; Capek's visits had been brisk and professional, and Penny's visits had been short and few. She had stopped calling me "Mr. Bonforte."

When Dak showed up I was delighted to see him. "Dak! What's new?"

"Not much. I've been trying to get the Tommie overhauled with one hand while helping Rog with political chores with the other. Getting this campaign lined up is going to give him ulcers, three gets you eight." He sat down. "Politics!"

"Hmm - . . Dak, how did you ever get into it? Offhand, I would figure voyageurs to be as unpolitical as actors. And you in particular."

"They are and they aren't. Most ways they don't give a damn whether school keeps ot not, as long as they can keep on herding junk through the sky. But to do that you've got to have cargo, and cargo means trade, and profitable trade means wide-open trade, with any ship free to go anywhere, no customs nonsense and no restricted areas. Freedom! And there you are; you're in politics. As for myself, I came here first for a spot of lobbying for the 'continuous voyage' rule, so that goods on the triangular trade would not pay two duties. It was Mr. B's bill, of course. One thing led to another and here I am, skipper of his yacht the past six years and representing my guild brothers since the last general election." He sighed. "I hardly know how it happened myself."

"I suppose you are anxious to get out of it. Are you going to stand for re-election?"

He stared at me. "Huh? Brother, until you've been in politics you haven't been alive."

"But you said-"

"I know what I said. It's rough and sometimes it's dirty and it's always hard work and tedious details. But it's the only sport for grownups. All other games are for kids. All of 'em." He stood up. "Gotta run."

"Oh, stick around."

"Can't. With the Grand Assembly convening tomorrow I've got to give Rog a hand. I shouldn't have stopped in at all."

"It is? I didn't know." I was aware that the G.A., the outgoing G.A. that is, had to meet one more time, to accept the caretaker cabinet. But I had not thought about it. It was a routine matter, as perfunctory as presenting the list to the Emperor. "Is he going to be able to make it?"

"No. But don't you worry about it. Rog will apologize to the house for your-I mean his-absence and will ask for a proxy rule under no-objection procedure. Then he will read the speech of the Supreme Minister Designate-Bill is working on it right now. Then in his own person he will move that the government be confirmed. Second. No debate. Pass. Adjourn sine die-and everybody rushes for home and starts promising the voters two women in every bed and a hundred Imperials every Monday morning. Routine." He added, "Oh yes! Some member of the Humanity Party will move a resolution of sympathy and a basket of flowers, which will pass in a fine hypocritical glow. They'd rather send flowers to Bonforte's funeral." He scowled.

"It is actually as simple as that? What would happen if the proxy rule were refused? I thought the Grand Assembly didn't recognize proxies."

"They don't, for all ordinary procedure. You either pair, or you show up and vote. But this is just the idler wheels going around in parliamentary machinery. If they don't let him appear by proxy tomorrow, then they've got to wait around until he is well before they can adjourn sine die and get on with the serious business of hypnotizing the voters. As it is, a mock quorum has been meeting daily and adjourning ever since Quiroga resigned. This Assembly is as dead as Caesar's ghost, but it has to be buried constitutionally."

"Yes-but suppose some idiot did object?"

"No one will. Oh, it could force a constitutional crisis. But it won't happen."

Neither one of us said anything for a while. Dak made no move to leave. "Dak, would it make things easier if I showed up and gave that speech?"

"Huh? Shucks, I thought that was settled. You decided that it wasn't safe to risk another appearance short of an utter save-the-baby emergency. On the whole, I agree with you. There's the old saw about the pitcher and the well."

"Yes. But this is just a walk-through, isn't it? Lines as fixed as a play? Would there be any chance of anyone puffing any surprises on me that I couldn't handle?"

"Well, no. Ordinarily you would be expected to talk to the press afterwards, but your recent illness is an excuse. We could slide you through the security tunnel and avoid them entirely." He smiled grimly. "Of course, there is always the chance that some

crackpot in the visitors' gallery has managed to sneak in a gun...Mr. B. always referred to it as the 'shooting gallery' after they winged him from it."

My leg gave a sudden twinge. "Are you trying to scare me off?"

"You pick a funny way to encourage me. Dak, be level with me. Do you want me to do this job tomorrow? Or don't you?"

"Of course I do! Why the devil do you think I stopped in on a busy day? Just to chat?"

The Speaker pro tempore banged his gavel, the chaplain gave an invocation that carefully avoided any differences between one religion and another-and everyone kept silent. The seats themselves were only half filled but the gallery was packed with tourists.

We heard the ceremonial knocking amplified over the speaker system; the Sergeant at Arms rushed the mace to the door. Three times the Emperor demanded to be admitted, three times he was refused. Then he prayed the privilege; it was granted by acclamation. We stood while Willem entered and took his seat back of the Speaker's desk. He was in uniform as Admiral General and was unattended, as was required, save by escort of the Speaker and the Sergeant at Arms.

Then I tucked my wand under my arm and stood up at my place at the front bench and, addressing the Speaker as if the sovereign were not present, I delivered my speech. It was not the one Corpsman had written; that one went down the oubliette as soon as I had read it. Bill had made it a straight campaign speech, and it was the wrong time and place.

Mine was short, non-partisan, and cribbed right straight out of Bonforte's collected writings, a paraphrase of the one the time before when he formed a caretaker government. I stood foursquare for good roads and good weather and wished that everybody would love everybody else, just the way all us good democrats loved our sovereign and he loved us. It was a blank-verse lyric poem of about five hundred words and if I varied from Bonforte's earlier speech then I simply went up on my lines.

They had to quiet the gallery.

Rog got up and moved that the names I had mentioned in passing be confirmed-second and no objection and the clerk cast a white ballot As I marched forward, attended by one member of my own party and one member of the opposition, I could see members glancing at their watches and wondering if they could still catch the noon shuttle.

Then I was swearing allegiance to my sovereign, under and subject to the constitutional limitations, swearing to defend and continue the rights and privileges of the Grand Assembly, and to protect the freedoms of the citizens of the Empire wherever they might be-and incidentally to carry out the duties of His Majesty's Supreme Minister. The chaplain mixed up the words once, but I straightened him out.

I thought I was breezing through it as easy as a curtain speech- when I found that I was crying so hard that I could hardly see. When I was done, Willem said quietly to me, "A good performance, Joseph." I don't know whether he thought he was talking to me or to his old friend-and I did not care. I did not wipe away the tears; I just let them drip as I turned back to the Assembly. I waited for Willem to leave, then adjourned them.

Diana, Ltd., ran four extra shuttles that afternoon. New Batavia was deserted-that is to say there were only the court and a million or so butchers, bakers, candlestick makers, and civil servants left in town-and a skeleton cabinet.

Having gotten over my "cold" and appeared publicly in the Grand Assembly Hall, it no longer made sense to hide out. As the supposed Supreme Minister I could not, without causing comment, never be seen; as the nominal head of a political party entering a campaign for a general election I had to see people-some people, at least. So I did what I had to do and got a daily report on Bonforte's progress toward complete recovery. His progress was good, if slow; Capek reported that it was possible, if absolutely necessary, to let him appear any time now-but he advised against it; he had lost almost twenty pounds and his co-ordination was poor.

Rog did everything possible to protect both of us. Mr. Bonforte knew now that they were using a double for him and, after a first fit of indignation, had relaxed to necessity and approved it. Rog ran the campaign, consulting him only on matters of high policy, and then passing on his answers to me to hand out publicly when necessary.

But the protection given me was almost as great; I was as hard to see as a topflight agent. My office ran on into the mountain beyond the opposition leader's apartments (we did not move over into the Supreme Minister's more palatial quarters; while it would have been legal, it just "was not done" during a caretaker regime) -they could be reached from the rear directly from the lower living room, but to get at me from the public entrance a man had to pass about five check points-except for the favored few who were conducted directly by Rog through a bypass tunnel to Penny's office and from there into mine.

The setup meant that I could study the Farleyfile on anyone before he got to see me. I could even keep it in front of me while he was with me, for the desk had a recessed viewer the visitor could not see, yet I could wipe it out instantly if he turned out to be a floor pacer. The viewer had other uses; Rog could give a visitor the special treatment, rushing him right in to see me, leave him alone with me-and stop in Penny's office and write me a note, which would then be projected on the viewer-such quick tips as, "Kiss him to death and promise nothing," or, "All he really wants is for his wile to be presented at court. Promise him that and get rid of him," or even, "Easy on this one. It's a 'swing' district and he is smarter than he looks. Turn him over to me and I'll dicker."

I don't know who ran the government. The senior career men, probably. There would be a stack of papers on my desk each morning, I would sign Bonforte's sloppy signature to them, and Penny would take them away. I never had time to read them. The very size of the Imperial machinery dismayed me. Once when we had to attend a meeting outside the offices, Penny had led me on what she called a short cut though the Archives-miles on miles of endless ifies, each one chockablock with microfilm and all of them with moving belts scooting past them so that a clerk would not take all day to fetch one ifie.

But Penny told me that she had taken me through only one wing of it. The file of the files, she said, occupied a cavern the size of the Grand Assembly Hall. It made me glad that government was not a career with me, but merely a passing hobby, so to speak.

Seeing people was an unavoidable chore, largely useless since Rog, or Bonforte through Rog, made the decisions. My real job was to make campaign speeches. A discreet rumor had been spread that my doctor had been afraid that my heart had been strained by the "virus infection" and had advised me to stay in the low gravity of the Moon throughout the campaign. I did not dare risk taking the impersonation on a tour of Earth, much less make a trip to Venus; the Farleyfile system would break down if I attempted to mix with crowds, not to mention the unknown hazards of the Actionist goon

squads-what I would babble with a minim dose of neodexocaine in the forebrain none of us liked to think about, me least of all.

Quiroga was hitting all continents on Earth, making his stereo appearances as personal appearances on platforms in front of crowds. But it did not worry Rog Clifton. He shrugged and said, "Let him. There are no new votes to be picked up by personal appearances at political rallies. All it does is wear out the speaker. Those rallies are attended only by the faithful."

I hoped that he knew what he was talking about. The campaign was short, only six weeks from Quiroga's resignation to the day he had set for the election before resigning, and I was speaking almost every day, either on a grand network with time shared precisely with the Humanity Party, or speeches canned and sent by shuttle for later release to particular audiences. We had a set routine; a draft would come to me, perhaps from Bill although I never saw him, and then I would rework it. Rog would take the revised draft away; usually it would come back approved-and once in a while there would be corrections made in Bonforte's handwriting, now so sloppy as to be almost illegible.

I never ad-libbed at all on those parts he corrected, though I often did on the rest-when you get rolling there is often a better, more alive way to say a thing. I began to notice the nature of his corrections; they were almost always eliminations of qualifiers-make it blunter, let 'em like it or lump it!

After a while there were fewer corrections. I was getting with it.

I still never saw him. I felt that I could not "wear his head" if I looked at him on his sickbed. But I was not the only one of his intimate family who was not seeing him; Capek had chucked Penny out-for her own good. I did not know it at the time. I did know that Penny had become irritable, absent-minded, and moody after we reached New Batavia. She got circles under her eyes like a raccoon-all of which I could not miss, but I attributed it to the pressure of the campaign combined with worry about Bonforte's health. I was only partly right. Capek spotted it and took action, put her under llght hypnosis and asked her questions-then he flatly forbade her to see Bonforte again until I was done and finished and shipped away.

The poor girl was going almost out of her mind from visiting the sickroom of the man she hopelessly loved-then going straight in to work closely with a man who looked and talked and sounded just like him, but in good health. She was probably beginning to hate me.

Good old Doc Capek got at the root of her trouble, gave her helpful and soothing post-hypnotic suggestions, and kept her out of the sickroom after that. Naturally I was not told about it at the time; it wasn't any of my business. But Penny perked up and again was her lovable, incredibly efficient self.

It made a lot of difference to me. Let's admit it; at least twice I would have walked out on the whole incredible rat race if it had not been for Penny.

There was one sort of meeting I had to attend, that of the campaign executive committee. Since the Expansionist Party was a minority party, being merely the largest fraction of a coalition of several parties held together by the leadership and personality of John Joseph Bonforte, I had to stand in for him and peddle soothing syrup to those prima donnas. I was briefed for it with painstaking care, and Rog sat beside rue and could hint the proper direction if I faltered. But it could not be delegated.

Less than two weeks before election day we were due for a meeting at which the safe districts would be parceled out. The organization always had thirty to forty districts which could be used to make someone eligible for cabinet office, or to provide for a political secretary (a person like Penny was much more valuable if he or she was fully qualified, able to move and Speak on the floor of the Assembly, had the right to be present at closed caucuses, and so forth), or for other party reasons. Bonforte himself represented a "safe" district; it relieved him from the necessity of precinct campaigning. Clifton had another. Dak would have had one if he had needed it, but he actually commanded the support of his guild brethren. Rog even hinted to me once that if I wanted to come back in my proper person, I could say the word and my name would go on the next list.

Some of the spots were always saved for party wheel horses willing to resign at a moment's notice and thereby provide the Party with a place through a by-election if it proved necessary to qualify a man for cabinet office, or something.

But the whole thing had somewhat the flavor of patronage and, the coalition being what it was, it was necessary for Bonforte to straighten out conilicting claims and submit a list to the campaign executive committee. It was a last-minute job, to be done just before the ballots were prepared, to allow for late changes.

When Rog and Dak came in I was working on a speech and had told Penny to hold off anything but five-alarm fires. Quiroga had made a wild statement in Sydney, Australia, the night before, of such a nature that we could expose the lie and make him squirm. I was trying my hand at a Speech in answer, without waiting for a draft to be handed me; I had high hopes of getting my own version approved.

When they came in I said, "Listen to this," and read them the key paragraph. "How do you like it?"

"That ought to nail his hide to the door," agreed Rog. "Here's the 'safe' list, Chief. Want to look it over? We're due there in twenty minutes."

"Oh, that damned meeting. I don't see why I should look at the list. Anything you want to tell me about it?" Nevertheless, I took the list and glanced down it. I knew them all from their Farleyfiles and a few of them from contact; I knew already why each one had to be taken care of.

Then I struck the name: Corpsman, William 1.

I fought down what I felt was justifiable annoyance and said quietly, "I see Bill is on the list, Rog."

"Oh, yes. I wanted to tell you about that. You see, Chief, as we all know, there has been a certain amount of bad blood between you and Bill. Now I'm not blaming you; it's been Bill's fault. But there are always two sides. What you may not have realized is that Bill has been carrying around a tremendous inferiority feeling; it gives him a chip on the shoulder. This will fix it up."

"So?"

"Yes. It is what he has always wanted. You see, the rest of us all have official status, we're members of the G.A., I mean. I'm talking about those who work closely around, uh, you. Bill feels it. I've heard him say, after the third drink, that he was just a hired man. He's bitter about it. You don't mind, do you? The Party can afford it and it's an easy price to pay for elimination of friction at headquarters."

I had myself under full control by now. "It's none of my business. Why should I mind, if that is what Mi. Bonforte wants?"

I caught just a flicker of a glance from Dak to Clifton. I added, "That is what Mr. B. wants? Isn't it, Rog?"

Dak said harshly, "Tell him, Rog."

Rog said slowly, "Dak and I whipped this up ourselves. We think it is for the best."

"Then Mr. Bonforte did not approve it? You asked him, surely?"

"No, we didn't."

"Why not?"

"Chief, this is not the sort of thing to bother him with. He's a tired, old, sick man. I have not been worrying him with anything less than major policy decisions-which this isn't. It is a district we command no matter who stands for it."

"Then why ask my opinion about it at all?"

"Well, we felt you should know-and know why. We think you ought to approve it."

"Me? You're asking me for a decision as if I were Mr. Bonforte. I'm not." I tapped the desk in his nervous gesture. "Either this decision is at his level, and you should ask him-or it's not, and you should never have asked me."

Rog chewed his cigar, then said, "All right, I'm not asking you."

"No!"

"What do you mean?"

"I mean 'NoV You did ask me; therefore there is doubt in your mind. So if you expect me to present that name to the committee- as 1/I were Bonforte-then go in and ask him."

They both sat and said nothing. Finally Dak sighed and said, "Tell the rest, Rog. Or I will."

I waited. Clifton took his cigar out of his mouth and said, "Chief, Mi. Bonforte had a stroke four days ago. He's in no shape to be disturbed."

I held still, and recited to myself all of "the cloud-capp'd towers, the gorgeous palaces," and so forth. When I was back in shape I said, "How is his mind?"

"His mind seems clear enough, but he is terribly tired. That week as a prisoner was more of an ordeal than we realized. The stroke left him in a coma for twenty-four hours. He's out of it now, but the left side of his face is paralyzed and his entire left side is partly out of service."

"Uh, what does Dr. Capek say?"

"He thinks that as the clot clears up, you'll never be able to tell the difference. But he'll have to take it easier than he used to. But, Chief, right now he is ill. We'll just have to carry on through the balance of the campaign without him."

I felt a ghost of the lost feeling I had had when my father died. I had never seen Bonforte, I had had nothing from him but a few scrawled corrections on typescript. But I leaned on him all the way. The fact that he was in that room next door had made the whole thing possible.

I took a long breath, let it out, and said, "Okay, Rog. We'll have to."

"Yes, Chief." He stood up. "We've got to get over to that meeting. How about that?" He nodded toward the safe-districts list.

"Oh." I tried to think. Maybe it was possible that Bonforte would reward Bill with the privilege of calling himself "the Honorable," just to keep him happy. He wasn't small about such things; he did not bind the mouths of the kine who tread the grain. In one of his essays on politics he had said, "I am not an intellectual man. If I have any special talent, it lies in picking men of ability and letting them work."

"How long has Bill been with him?" I asked suddenly.

"Eh? About four years. A llttle over."

Bonforte evidently had liked his work. "That's past one general election, isn't it? Why didn't he make him an Assemblyman then?"

"Why, I don't know. The matter never came up."

"When was Penny put in?"

"About three years ago. A by-election."

"There's your answer, Rog."

"I don't follow you."

"Bonforte could have made Bill a Grand Assemblyman at any time. He didn't choose to. Change that nomination to a 'resigner.' Then if Mr. Bonforte wants Bill to have it, he can arrange a byelection for him later-when he's feeling himself."

Clifton showed no expression. He simply picked up the list and said, "Very well, Chief."

Later that same day Bill quit. I suppose Rog had to tell him that his arm-twisting had not worked. But when Rog told me about it I felt sick, realizing that my stiff-necked attitude had us all in acute danger. I told him so. He shook his head.

"But he knows it all! It was his scheme from the start. Look at the load of dirt he can haul over to the Humanity camp."

"Forget it, Chief. Bill may be a louse-I've no use for a man who will quit in the middle of a campaign; you just don't do that, ever. But he is not a rat. In his profession you don't spill a client's secrets, even if you fall out with him."

"I hope you are right."

"You'll see. Don't worry about it. Just get on with the job."

As the next few days passed I came to the conclusion that Rog knew Bill better than I did. We heard nothing from him or about him and the campaign went ahead as usual, getting rougher all the time, but with not a peep to show that our giant hoax was compromised. I began to feel better and buckled down to making the best Bonforte speeches I could manage-sometimes with Rog's help; sometimes just with his okay. Mr. Bonforte was steadily improving again, but Capek had him on absolute quiet.

Rog had to go to Earth during the last week; there are types of fence-mending that simply can't be done by remote control. After all, votes come from the precincts and the field managers count for more than the speechmakers. But speeches still had to be made and press conferences given; I carried on, with Dak and Penny at my elbow-of course I was much more closely with it now; most questions I could answer without stopping to think.

There was the usual twice-weekly press conference in the offices the day Rog was due back. I had been hoping that he would be back in time for it, but there was no reason I could not take it alone. Penny walked in ahead of me, carrying her gear; I heard her gasp.

I saw then that Bill was at the far end of the table.

But I looked around the room as usual and said, "Good morning, gentlemen."

"Good morning, Mr. Minister!" most of them answered.

I added, "Good morning, Bill. Didn't know you were here. Whom are you representing?"

They gave him dead silence to reply. Every one of them knew that Bill had quit us-or had been fired. He grinned at me, and answered, "Good morning, Mister Bon forte. I'm with the Krein Syndicate."

I knew it was coming then; I tried not to give him the satisfaction of letting it show. "A fine outfit. I hope they are paying you what you are worth. Now to business-The written questions first. You have them, Penny?"

I went rapidly through the written questions, giving out answers I had already had time to think over, then sat back as usual and said, "We have time to bat it around a bit, gentlemen. Any other questions?"

There were several. I was forced to answer "No comment" only once-an answer Bonforte preferred to an ambiguous one. Finally I glanced at my watch and said, "That will be all this morning, gentlemen," and started to stand up.

"Smythe!" Bill shouted.

I kept right on getting to my feet, did not look toward him.

"I mean you, Mr. Phony Bonforte-Smythe!" he went on angrily, raising his voice still more.

This time I did look at him, with astonishment-just the amount appropriate, I think, to an important official subjected to rudeness under unlikely conditions. Bill was pointing at me and his face was red. "You impostor! You small-time actor! You fraud!"

The London Times man on my right said quietly, "Do you want me to call the guard, sir?"

I said, "No. He's harmless."

Bill laughed. "So I'm harmless, huh? You'll find out."

"I really think I should, sir," the Times man insisted.

"No." I then said sharply, "That's enough, Bill. You had better leave quietly."

"Don't you wish I would?" He started spewing forth the basic story, talking rapidly. He made no mention of the kidnaping and did not mention his own part in the hoax, but implied that he had left us rather than be mixed up in any such swindle. The impersonation was attributed, correctly as far as it went, to illness on the part of Bonforte-with a strong hint that we might have doped him.

I listened patiently. Most of the reporters simply listened at first, with that stunned expression of outsiders exposed unwillingly to a vicious family argument. Then some of them started scribbling or dictating into minicorders.

When he stopped I said, "Axe you through, Bill?"

"That's enough, isn't it?"

"More than enough. I'm sorry, Bill. That's all, gentlemen. I must get back to work."

"Just a moment, Mr. Minister!" someone called out. "Do you want to issue a denial?" Someone else added, "Axe you going to sue?"

I answered the latter question first. "No, I shan't sue. One doesn't sue a sick man."

"Sick, am I?" shouted Bill.

"Quiet down, Bill. As for issuing a denial, I hardly think it is called for. However, I see that some of you have been taking notes. While I doubt if any of your publishers would run this story, if they do, this anecdote may add something to it. Did you ever hear of the professor who spent forty years of his life proving that the Odyssey was not written by Homer-but by another Greek of the same name?"

It got a polite laugh. I smiled and started to turn away again. Bill came rushing around the table and grabbed at my arm. "You can't laugh it off!" The Times man-Mr. Ackroyd, it was-pulled him away from me.

I said, "Thank you, sir." Then to Corpsman I added, "What do you want me to do, Bill? I've tried to avoid having you arrested."

"Call the guards if you like, you phony! We'll see who stays in jail longest! Wait until they take your fingerprints!"

I sighed and made the understatement of my life. "This is ceasing to be a joke. Gentlemen, I think I had better put an end to this. Penny my dear, will you please have someone send in fingerprinting equipment?" I knew I was sunk-but, damn it, if you are caught by the Birkenhead Drill, the least you owe yourself is to stand at attention while the ship goes down. Even a villain should make a good exit.

Bill did not wait. He grabbed the water glass that had been sitting in front of me; I had handled it several times. "The hell with that! This will do."

"I've told you before, Bill, to mind your language in the presence of ladies. But you may keep the glass."

"You're bloody well right I'll keep it."

"Very well. Please leave. If not, I'll be forced to summon the guard."

He walked out. Nobody said anything. I said, "May I provide fingerprints for any of the rest of you?"

Ackroyd said hastily, "Oh, I'm sure we don't want them, Mr. Minister."

"Oh, by all means! If there is a story in this, you'll want to be covered." I insisted because it was in character-and in the second and third place, you can't be a little bit pregnant, or slightly unmasked-and I did not want my friends present to be scooped by Bill; it was the last thing I could do for them.

We did not have to send for formal equipment. Penny had carbon sheets and someone had one of those lifetime memo pads with plastic sheets; they took prints nicely. Then I said good morning and left.

We got as far as Penny's private office; once inside she fainted dead. I carried her into my office, laid her on the couch, then sat down at my desk and simply shook for several minutes.

Neither one of us was worth much the rest of the day. We carried on as usual except that Penny brushed off all callers, claiming excuses of some sort. I was due to make a speech that night and thought seriously of canceling it. But I left the news turned on all day and there was not a word about the incident of that morning. I realized that they were checking the prints before risking it-after all, I was supposed to be His Imperial Majesty's first minister; they would want confirmation. So I decided to make the speech since I had already written it and the time was schedtiled. I couldn't even consult Dak; he was away in Tycho City.

It was the best one I had made. I put into it the same stuff a comic uses to quiet a panic in a burning theater. After the pickup was dead I just sunk my face in my hands and wept, while Penny patted my shoulder. We had not discussed the horrible mess at all.

Rog grounded at twenty hundred Greenwich, about as I finished, and checked in with me as soon as he was back. In a dull monotone I told him the whole dirty story; he listened, chewing on a dead cigar, his face expressionless.

At the end I said almost pleadingly, "I had to give the fingerprints, Rog. You see that, don't you? To refuse would not have been in character."

Rog said, "Don't worry."

"Huh?"

"I said, 'Don't worry.' When the reports on those prints come back from the Identification Bureau at The Hague, you are in for a small but pleasant surprise-and our ex-friend Bill is in for a much bigger one, but not pleasant. If he has collected any of his blood money in advance, they will probably take it out of his hide. I hope they do."

I could not mistake what he meant. "Oh! But, Rog-they won't stop there. There are a dozen other places. Social Security
Uh, lots of places."

"You think perhaps we were not thorough? Chief, I knew this could happen, one way or another. From the moment Dak sent word to complete Plan Mardi Gras, the necessary cover-up started. Everywhere. But I didn't think it necessary to tell Bill." He sucked on his dead cigar, took it out of his mouth, and looked at it. "Poor Bill."

Penny sighed softly and fainted again.

Chapter 10

Somehow we got to the final day. We did not hear from Bill again; the passenger lists showed that he went Earthside two days after his fiasco. If any news service ran anything I did not hear of it, nor did Quiroga's speeches hint at it.

Mr. Bonforte steadily improved until it was a safe bet that he could take up his duties after the election. His paralysis continued in part but we even had that covered: he would go on vacation right after election, a routine practice that almost every politician indulges in. The vacation would be in the Tommie, safe from everything. Sometime in the course of the trip I would be transferred and smuggled back-and the Chief would have a mild stroke, brought on by the strain of the campaign.

Rog would have to unsort some fingerprints, but he could safely wait a year or more for that.

Election day I was happy as a puppy in a shoe closet. The impersonation was over, although I was going to do one more short turn. I had already canned two five-minute speeches for grand network, one magnanimously accepting victory, the other gallantly conceding defeat; my job was finished. When the last one was in the can, I grabbed Penny and kissed her. She didn't even seem to mind.

The remaining short turn was a command performance; Mr. Bonforte wanted to see me-as him-before he let me drop it. I did not mind. Now that the strain was over, it did not worry me to see him; playing him for his entertainment would be like a comedy

skit, except that I would do it straight. What am I saying? Playing straight is the essence of comedy.

The whole family would gather in the upper living room-there because Mr. Bonforte had not seen the sky in some weeks and wanted to-and there we would listen to the returns, and either drink to victory or drown our sorrows and swear to do better next time. Strike me out of the last part; I had had my first and last political campaign and I wanted no more politics. I was not even sure I wanted to act again. Acting every minute for over six weeks adds up to about five hundred ordinary performances. That's a long run.

They brought him up the lift in a wheel chair. I stayed out of sight and let them arrange him on a couch before I came in; a man is entitled not to have his weakness displayed before strangers. Besides, I wanted to make an entrance.

I was almost startled out of character. He looked like my f ather! Oh, it was just a "family" resemblance; he and I looked much more alike than either one of us looked like my father, but the likeness was there-and the age was right, for he looked old. I had not guessed how much he had aged. He was thin and his hair was white.

I made an immediate mental note that during the coming vacation in space I must help them prepare for the transition, the resubstitution. No doubt Capek could put weight back on him; if not, there were ways to make a man appear fleshier without obvious padding. I would dye his hair myself. The delayed announcement of the stroke he had suffered would cover the inevitable discrepancies. After all, he had changed this much in only a few weeks; the need was to keep the fact from calling attention to the impersonation.

But these practical details were going on by themselves in a corner of my mind; my own being was welling with emotion. ifi though he was, the man gave off a force both spiritual and virile. I felt that warm, almost holy, shock one feels when first coming into sight of the great statue of Abraham Lincoln. I was reminded of another statue, too, seeing him lying there with his legs and his helpless left side covered with a shawl: the wounded Lion of Lucerne. He had that massive strength and dignity, even when helpless: "The guard dies, but never surrenders."

He looked up as I came in and smiled the warm, tolerant, and friendly smile I had learned to portray, and motioned with his good hand for me to come to him. I smiled the same smile back and went to him. He shook hands with a grip surprisingly strong and said warmly, "I am happy to meet you at last." His speech was slightly blurred and I could not see the slackness on the side of his face away from me.

"I am honored and happy to meet you, sir." I had to think about it to keep from matching the blurring of paralysis.

He looked me up and down, and grinned. "It looks to me as if you had already met me."

I glanced down at myself. "I have tried, sir."

"'Tried'! You succeeded. It is an odd thing to see one's own self."

I realized with sudden painful empathy that he was not emotionally aware of his own appearance; my present appearance was "his"-and any change in himself was merely incidental to illness, temporary, not to be noticed. But he went on speaking. "Would you

mind moving around a bit for me, sir? I want to see me-you-us. I want the audience's viewpoint for once."

So I straightened up, moved around the room, spoke to Penny (the poor child was looking from one to the other of us with a dazed expression), picked up a paper, scratched my collarbone and rubbed my chin, moved his wand from under my arm to my hand and fiddled with it.

He was watching with delight. So I added an encore. Taking the middle of the rug, I gave the peroration of one of his finest' speeches, not trying to do it word for word, but interpreting it, letting it roll and thunder as he would have done-and ending with his own exact ending: "A slave cannot be freed, save he do it himself. Nor can you enslave a free man; the very most you can do is kill him!"

There was that wonderful hushed silence, then a ripple of clapping and Bonforte himself was pounding the couch with his good hand and calling, "Bravo!"

It was the only applause I ever got in the role. It was enough.

He had me pull up a chair then and sit with him. I saw him glance at the wand, so I handed it to him. "The safety is on, sir."

"I know how to use it." He looked at it closely, then handed it back. I had thought perhaps he would keep it. Since he did not, I decided to turn it over to Dak to deliver to him. He asked me about myself and told me that he did not recall ever seeing me play, but that he had seen my father's Cyrano. He was making a great effort to control the errant muscles of his mouth and his speech was clear but labored.

Then he asked me what I intended to do now. I told him that I had no plans as yet. He nodded and said, "We'll see. There is a place for you. There is work to be done." He made no mention of pay, which made me proud.

The returns were beginning to come in and he turned his attention to the stereo tank. Returns had been coming in, of course, for forty-eight hours, since the outer worlds and the districtless constituencies vote before Earth does, and even on Earth an election "day" is more than thirty hours long, as the globe turns. But now we began to get the important districts of the great land masses of Earth. We had forged far ahead the day before in the outer returns and Rog had had to tell me that it meant nothing; the Expansionists always carried the outer worlds. What the billions of people still on Earth who had never been out and never would thought about it was what mattered.

But we needed every outer vote we could get. The Agrarian Party on Ganymede had swept five out of six districts; they were part of our coalition, and the Expansionist Party as such did not put up even token candidates. The situation on Venus was more ticklish, with the Venerians split into dozens of splinter parties divided on fine points of theology impossible for a human being to understand. Nevertheless, we expected most of the native vote, either directly or through caucused coalition later, and we should get practically all of the human vote there. The Imperial restriction that the natives must select human beings to represent them at New Batavia was a thing Bonforte was pledged to remove; it gained us votes on Venus; we did not know yet how many votes it would lose us on Earth.

Since the nests sent only observers to the Assembly the only vote we worried about on Mars was the human vote. We had the popular sentiment; they had the patronage. But with an honest count we expected a shoo-in there.

Dak was bending over a slide rule at Rog's side; Rog had a big sheet of paper laid out in some complicated weighting formula of his own. A dozen or more of the giant metal brains through the Solar System were doing the same thing that night, but Rog preferred his own guesses. He told me once that he could walk through a district, "sniffing" it, and come within two per cent of its results. I think he could.

Doc Capek was sitting back, with his hands over his paunch, as relaxed as an angleworm. Penny was moving around, pushing straight things crooked and vice versa and fetching us drinks. She never seemed to look directly at either me or Mr. Bonforte.

I had never before experienced an election-night party; they were not like any other. There is a cozy, warm rapport of all passion spent. It really does not matter too much how the people decide; you have done your best, you are with your friends and comrades, and for a while there is no worry and no pressure despite the over-all excitement, like frosting on a cake, of the incoming returns.

I don't know when I've had so good a lime.

Rog looked up, looked at me, then spoke to Mr. Bonforte. "The Continent is seesaw. The Americans are testing the water with a toe before coming in on our side; the only question is, how deep?"

"Can you make a projection, Rog?"

"Not yet. Oh, we have the popular vote but in the G.A. it could swing either way by half a dozen seats." He stood up. "I think I had better mosey out into town."

Properly speaking, I should have gone, as "Mr. Bonforte." The Party leader should certainly appear at the main headquarters of the Party sometime during election night. But I had never been in headquarters, it being the sort of a buttonholing place where my impersonation might be easily breached. My "illness" had excused me from it during the campaign; tonight it was not worth the risk, so Rog would go instead, and shake hands and grin and let the keyed-up girls who had done the hard and endless paperwork throw their arms around him and weep. "Back in an hour."

Even our little party should have been down on the lower level, to include all the office staff, especially Jimmie Washington. But it would not work, not without shutting Mr. Bonforte himself out of it. They were having their own party of course. I stood up. "Rog, I'll go down with you and say hello to Jimmie's harem."

"Eh? You don't have to, you know."

"It's the proper thing to do, isn't it? And it really isn't any trouble or risk." I tuned to Mr. Bonforte. "How about it, sir?"

"I would appreciate it very much."

We went down the lift and through the silent, empty private quarters and on through my office and Penny's. Beyond her door was bedlam. A stereo receiver, moved in for the purpose, was blasting at full gain, the floor was littered, and everybody was drinking, or smoking, or both. Even Jimmie Washington was holding a drink while he listened to the returns. He was not drinking it; he neither drank nor smoked. No doubt someone had handed it to him and he had kept it. Jimmie had a fine sense of fitness.

I made the rounds, with Rog at my side, thanked Jimmie warmly and very sincerely, and apologized that I was feeling tired. "I'm going up and spread the bones, Jimmie. Make my excuses to people, will you?"

"Yes, sir. You've got to take care of yourself, Mr. Minister."

I went back up while Rog went on out into the public tunnels.

Penny shushed me with a finger to her lips when I came into the upper living room. Bonforte seemed to have dropped off to sleep and the receiver was muted down. Dak still sat in front of it, filling in figures on the big sheet against Rog's return. Capek had not moved. He nodded and raised his glass to me.

I let Penny fix me a scotch and water, then stepped out into the bubble balcony. It was night both by clock and by fact and Earth was almost full, dazzling in a Tiffany spread of stars. I searched North America and tried to pick out the little dot I had left only weeks earlier, and tried to get my emotions straight.

After a while I came back in; night on Luna is rather overpowering. Rog returned a little later and sat back down at his work sheets without speaking. I noticed that Bonforte was awake again.

The critical returns were coming in now and everybody kept quiet, letting Rog with his pencil and Dak with his slide rule have peace to work. At long, long last Rog shoved his chair back. "That's it, Chief," he said without looking up. "We're in. Majority not less than seven seats, probably nineteen, possibly over thirty."

After a pause Bonforte said quietly, "You're sure?"

"Positive. Penny, try another channel and see what we get."

I went over and sat by Bonforte; I could not talk. He reached out and patted my hand in a fatherly way and we both watched the receiver. The first station Penny got said: "-doubt about it, folks; eight of the robot brains say yes, Curiae says maybe. The Expansionist Party has won a decisive-" She switched to another.

"-confirms his temporary post for another five years. Mr. Quiroga cannot be reached for a statement but his general manager in New Chicago admits that the present trend cannot be over--"

Rog got up and went to the phone; Penny muted the news down until nothing could be heard. The announcer continued mouthing; he was simply saying in different words what we already knew.

Rog came back; Penny turned up the gain. The announcer went on for a moment, then stopped, read something that was handed to him, and turned back with a broad grin. "Friends and fellow citizens, I now bring you for a statement the Supreme Minister!"

The picture changed to my victory speech.

I sat there luxuriating in it, with my feelings as mixed up as possible but all good, painfully good. I had done a job on the speech and I knew it; I looked tired, sweaty, and calmly triumphant. It sounded ad-kb.

I had just reached: "Let us go forward together, with freedom for all-" when I heard a noise behind me.

"Mr. Bonforte!" I said. "Doc! Doe! Come quickly!"

Mr. Bonforte was pawing at me with his right hand and trying very urgently to tell me something. But it was no use; his poor mouth failed him and his mighty indomitable will could not make the weak flesh obey.

I took him in my arms-then he went into Cheyne-Stokes breathing and quickly into termination.

They took his body back down in the lift, Dak and Capek together; I was no use to them. Rog came up and patted me on the shoulder, then he went away. Penny had followed the others down. Presently I went again out onto the balcony. I needed "fresh

air" even though it was the same machine-pumped air as the living room. But it felt fresher.

They had killed him. His enemies had killed him as certainly as if they had put a knife in his ribs. Despite all that we had done, the risks we had taken, in the end they had murdered him. "Murder most four'!

I felt dead inside me, numb with the shock. I had seen "myself" die, I had again seen my father die. I knew then why they so rarely manage to save one of a pair of Siamese twins. I was empty.

I don't know how long I stayed out there. Eventually I heard Rog's voice behind me. "Chief?"

I tuned. "Rog," I said urgently, "don't call me that. Please!"

"Chief," he persisted, "you know what you have to do now? Don't you?"

I felt dizzy and his face blurred. I did not know what he was talking about-I did not want to know what he was talking about.

"What do you mean?"

"Chief-one man dies-but the show goes on. You can't quit now."

My head ached and my eyes would not focus. He seemed to pull toward me and away while his voice drove on. ". - - robbed him of his chance to finish his work. So you've got to do it f or him. You've got to make him live again!"

I shook my head and made a great effort to pull myself together and reply. "Rog, you don't know what you are saying. It's preposterous-ridiculous! Fm no statesman. I'm just a bloody actor! I make faces and make people laugh. That's all I'm good for."

To my own horror I heard myself say it in Bonforte's voice.

Rog looked at me. "Seems to me you've done all right so far."

I tried to change my voice, tried to gain control of the situation. "Rog, you're upset. When you've calmed down you will see how ridiculous this is. You're right; the show goes on. But not that way. The proper thing to do-the only thing to do-is for you yourself to move on up. The election is won; you've got your majority-now you take office and carry out the program."

He looked at me and shook his head sadly. "I would if I could. I admit it. But I can't. Chief, you remember those confounded executive committee meetings? You kept them in line. The whole coalition has been kept glued together by the personal force and leadership of one man. If you don't follow through now, all that he lived for-and died for-will fall apart."

I had no answering argument; he might be right-I had seen the wheels within wheels of politics in the past month and a half. "Rog, even if what you say is true, the solution you offer is impossible. We've barely managed to keep up this pretense by letting me be seen only under carefully stage-managed conditions-and we've just missed being caught out as it is. But to make it work week after week, month after month, even year after year, if I understand you-no, it couldn't be done. It is impossible. I can't do it!"

"You can!" He leaned toward me and said forcefully, "We've all talked it over and we know the hazards as well as you do. But you'll have a chance to grow into it. Two weeks in space to start with-hell, a month if you want it! You'll study all the time-his journals, his boyhood diaries, his scrapbooks, you'll soak yourself in them. And we'll all help you."

I did not answer. He went on, "Look, Chief, you've learned that a political personality is not onq man; it's a team-it's a team bound together by common purposes and common beliefs. We've lost our team captain and we've got to have another one. But the team is still there."

Capek was out on the balcony; I had not seen him come out. I tuned to him. "Are you for this too?"

"It's your duty," Rog added.

Capek said slowly, "I won't go that far. I hope you will do it. But, damnit, I won't be your conscience. I believe in free will, frivolous as that may sound from a medical man." He turned to Clifton. "We had better leave him alone, Rog. He knows. Now it's up to him."

But, although they left, I was not to be alone just yet. Dak came out. To my relief and gratitude he did not call me "Chief."

"Hello, Dak."

"Howdy." He was silent for a moment, smoking and looking out at the stars. Then he turned to me. "Old son, we've been through some things together. I know you now, and I'll back you with a gun, or money, or fists any time, and never ask why. If you choose to drop out now, I won't have a word of blame and I won't think any the less of you. You've done a noble best."

"Uh, thanks, Dak."

"One more word and I'll smoke out. Just remember this: if you decide you can't do it, the foul scum who brainwashed him will win. In spite of everything, they win." He went inside.

I felt ton apart in my mind-then I gave way to sheer self-pity. It wasn't fair! I had my own life to live. I was at the top of my powers, with my greatest professional triumphs still ahead of me. It wasn't right to expect me to bury myself, perhaps for years, in the anonymity of another man's role-while the public forgot me, producers and agents forgot me-would probably believe I was dead.

It wasn't fair. It was too much to ask.

Presently I pulled out of it and for a time did not think. Mother Earth was still serene and beautiful and changeless in the sky; I wondered what the election-night, celebrations there sounded like. Mars and Jupiter and Venus were all in sight, strung like prizes along the zodiac. Ganymede I could not see, of course, nor the lonely colony out on far Pluto.

"Worlds of Hope," Bonforte had called them.

But he was dead. He was gone. They had taken away from him his birthright at its ripe fullness. He was dead.

And they had put it up to me to re-create him, make him live again.

Was. I up to it? Could I possibly measure up to his noble standards? What would he want me to do? If he were in my place- what would Bonf one do? Again and again in the campaign I had asked myself: "What would Bonforte do?"

Someone moved behind me, I tuned and saw Penny. I looked at her and said, "Did they send you out? Did you come to plead with me?"

"No."

She added nothing and did not seem to expect me to answer, nor did we look at each other. The silence went on. At last I said, "Penny? If I try to do it-will you help?"

She turned suddenly toward me. "Yes. Oh yes, Chief! I'll help!'?

"Then I'll try," I said humbly.

I wrote all of the above twenty-five years ago to try to straighten out my own confusion. I tried to tell the truth and not spare myself because it was not meant to be read by anyone but myself and my therapist, Dr. Capek. It is strange, after a quarter of a century, to reread the foolish and emotional words of that young man. I remember him, yet I have trouble realizing that I was ever he. My wife Penelope claims that she remembers him better than I do-and that she never loved anyone else. So time changes us.

I find I can "remember" Bonforte's early life better than I remember my actual life as that rather pathetic person, Lawrence Smith, or-as he liked -to style himself-"The Great Lorenzo." Does that make me insane? Schizophrenic, perhaps? If so, it is a necessary insanity for the role I have had to play, for in order to let Bonforte live again, that seedy actor had to be suppressed- completely.

Insane or not, I am aware that he once existed and that I was he. He was never a success as an actor, not really-though I think he was sometimes touched with the true madness. He made his final exit still perfectly in character; I have a yellowed newspaper clipping somewhere which states that he was "found dead" in a Jersey City hotel room from an overdose of sleeping pills-apparently taken in a fit of despondency, for his agent issued a statement that he had not had a part in several months. Personally, I feel that they need not have mentioned that about his being out of work; if not libelous, it was at least unkind. The date of the clipping proves, incidentally, that he would not have been in New Batavia, or anywhere else, during the campaign of '15.

I suppose I should bum it.

But there is no one left alive today who knows the truth other than Dak and Penelope-except the men who murdered Bonforte's body.

I have been in and out of office three times now and perhaps this term will be my last. I was knocked out the first time when we finally put the eetees-Venerians and Martians and Outer Jovians
-into the Grand Assembly. But the non-human peoples are still there and I came back. The people will take a certain amount of reform, then they want a rest. But the reforms stay. People don't really want change, any change at all-and xenophobia is very deep-rooted. But we progress, as we must-if we are to go out to the stars.

Again and again I have asked myself: "What would Bonforte do?" I am not sure that my answers have always been right (although I am sure that I am the best-read student in his works in the System). But I have tried to stay in character in his role. A long time ago someone-Voltaire?-someone said, "If Satan should ever replace God he would find it necessary to assume the attributes of Divinity."

I have never regretted my lost profession. In a way, I have not lost it; Willem was right. There is other applause besides handclapping and there is always the warm glow of a good performance. I have tried, I suppose, to create the perfect work of art. Perhaps I have not fully succeeded-but I think my father would rate it as a "good performance."

No, I do not regret it, even though I was happier then-at least I slept better. But there is solemn satisfaction in doing the best you can for eight billion people.

Perhaps their lives have no cosmic significance, but they have feelings. They can hurt.

EXPANDED UNIVERSE

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Table of Contents

Foreword	1
Life-Line	4
Successful Operation	28
Blowups Happen	34
Solution Unsatisfactory	92

The Last Days of the United States 145
How to Be a Survivor 163
Pie from the Sky 175
They Do It With Mirrors 181
Free Men 207
No Bands Playing, No Flags Flying- 237
A Bathroom of Her Own 244
On the Slopes of Vesuvius 267
Nothing Ever Happens on the Moon 276
Pandora's Box 309
Where To? 316
Cliff and the Calories 354
Ray Guns and Rocket Ships 372
The Third Millennium Opens 379
Who Are the Heirs of Patrick Henry? 386
"Pravda" Means "Truth" 403
Inside Intourist 418
Searchlight 446
The Pragmatics of Patriotism 458
Paul Dirac, Antimatter, and You 471
Larger Than Life 494
Spinoff 500
The Happy Days Ahead 514

To William Targ

FOREWORD

Warning! Truth in advertising requires me to tell you that this volume contains THE WORLDS OF ROBERTA. HEINLEIN, published 1966. But this new volume is about three times as long. It contains fiction stories that have never before appeared in book form, nonfiction articles not available elsewhere, a 30-year updating on my 1950 prognostications (as well as the 15-year updating that appeared in THE WORLDS OF R.A.H.), with the usual weasel-worded excuses as to why I guessed wrong-and (ruffles & flourishes) not one but two scenarios for the year 2000, one for people who like happy endings and another for people who can take bad news without a quiver-as long as it happens to somebody else.

On these I will do a really free-swinging job as the probability (by a formula I just now derived) that either I or this soi-disant civilization will be extinct by 2000 A.D. approaches 99.92+%. This makes it unlikely that I will again have to explain my mistakes.

But do not assume that I will be the one extinct. My great-great-great-grandfather Lawrence Heinlein died prematurely at the age of ninety-seven, through having carelessly left his cabin one winter morning without his gun - and found a buck deer on the ice of his pond. Lack of his gun did not stop my triple-greatgrandfather; this skinful of meat must not be allowed to escape. He went out on the ice and bulldogged the buck, quite successfully.

But in throwing the deer my ancestor slipped on the ice, went down, and a point of the buck's rack stabbed between his ribs and pierced his heart.

No doubt it taught him a lesson-it certainly taught me one. So far I've beaten the odds three times: continued to live when the official prognosis called for something less active. So I intend to be careful-not chopped down in my prime the way my ancestor was. I shan't bulldog any buck deer, or cross against the lights, or reach barehanded into dark places favored by black widow spiders, or-most especially!-leave my quarters without being adequately armed.

Perhaps the warmest pleasure in life is the knowledge that one has no enemies. The easiest way to achieve this is by outliving them. No action is necessary; time wounds all heels.

In this peaceful crusade I have been surprisingly successful; most of those rascals are dead . . . and three of the survivors are in very poor health. The curve seems to indicate that by late 1984 I won't have an enemy anywhere in the world.

Of course someone else may appoint himself my enemy (all my enemies are self-appointed) but I would not expect such an unlikely event to affect the curve much. There appears to be some unnamed ESP force at work here; the record shows that it is not healthy to hate me.

I don't have anything to do with this. The character can be more than a thousand miles away, with me doing my utter best to follow Sergeant Dogberry's advice; nevertheless it happens: He starts losing weight, suffering from insomnia and from nightmares, headaches, stomach trouble, and, after a bit, he starts hearing voices.

The terminal stages vary greatly. Anyhow, they are
unpleasant and I should not be writing about such things as I am supposed to be writing a blurb that will persuade you to buy this book despite the fact that nearly a third of it is copy you may have seen before.

Aside from this foreword the items in this book are arranged in the order in which written, each with a comment as to how and why it was written (money, usually, but also-Well, money)-then a bridging comment telling what I was writing or doing between that item and the next.

The span is forty years. But these are not my memoirs of those four decades. The writing business is not such as to evoke amusing memoirs (yes, I do mean you and you and you and especially you). A writer spends his professional time in solitary confinement, refusing to accept telephone calls and declining to see visitors, surrounded by a dreary forest of reference books and somewhat-organized papers. The high point of his day is the breathless excitement of waiting for the postman. (The low point is usually immediately thereafter.)

How can one write entertaining memoirs about such an occupation? Answer: By writing about what this scrivener did when not writing, or by resorting to fiction, or both. Usually both.

I could write entertaining memoirs about things I did when not writing. I shan't do so because a) I hope those incidents have been forgotten, or b) I hope that any not forgotten are covered by the statute of limitations.

Meanwhile I hope you enjoy this. The fiction is plainly marked fiction; the nonfiction is as truthful as I can make it-and here and there, tucked into space that would otherwise be blank are anecdotes and trivia ranging from edifying to outrageous.

Each copy is guaranteed-or double your money back-to be printed on genuine paper of enough pages to hold the covers apart.
-R.A.H.

FOREWORD

The beginning of 1939 found me flat broke following a disastrous political Campaign (I ran a strong second best, but in politics there are no prizes for place or show). I was highly skilled in ordnance, gunnery, and fire control for Naval vessels, a skill for which there was no demand ashore-and I had a piece of paper from the Secretary of the Navy telling me that I was a waste of space-"totally and permanently disabled" was the phraseology. I "owned" a heavily-mortgaged house.

About then THRILLING WONDER STORIES ran a house ad reading (more or less):

GIANT PRIZE CONTEST-Amateur Writers!!!!!!
First Prize $50 Fifty Dollars $50

In 1939 one could fill three station wagons with fifty dollars worth of groceries. Today I can pick up fifty dollars in groceries unassisted-perhaps I've grown stronger. So I wrote the story LIFE-LINE. It took me four days-I am a slow typist. But I did not send it to THRILLING WONDER; I sent it to ASTOUNDING, figuring they would not be so swamped with amateur short stories.

ASTOUNDING bought it. . . for S70, or .S20 more than that "Grand Prize"-and there was never a chance that I would ever again look for honest work.

Life-Line

THE chairman rapped loudly for order. Gradually the catcalls and boos died away as several self-appointed sergeants-at-arms persuaded a few hot-headed individuals to sit down. The speaker on the rostrum by the chairman seemed unaware of the disturbance. His bland, faintly insolent face was impassive. The chairman turned to the speaker, and addressed him, in a voice in which anger and annoyance were barely restrained.

"Doctor Pinero," - the "Doctor" was faintly stressed - "I must apologize to you for the unseemly outburst during your remarks. I am surprised that my colleagues should so far forget the dignity proper to men of science as to interrupt a speaker, no matter," he paused and set his mouth, "no matter how great the provocation." Pinero smiled in his face, a smile that was in some way an open insult. The chairman visibly controlled his

temper and continued, "I am anxious that the program be concluded decently and in order. I want you to finish your remarks. Nevertheless, I must ask you to refrain from affronting our intelligence with ideas that any educated man knows to be fallacious. Please confine yourself to your discovery - if you have made one."

Pinero spread his fat white hands, palms down. "How can I possibly put a new idea into your heads, if I do not first remove your delusions?"

The audience stirred and muttered. Someone shouted from the rear of the hail, "Throw the charlatan out! We've had enough." The chairman pounded his gavel.

"Gentlemen! Please!" Then to Pinero, "Must I remind you that you are not a member of this body, and that we did not invite you?"

Pinero's eyebrows lifted. "So? I seem to remember an invitation on the letterhead of the Academy?"

The chairman chewed his lower lip before replying. "True. I wrote that invitation myself. But it was at the request of one of the trustees - a fine public-spirited gentleman, but not a scientist, not a member of the Academy."

Pinero smiled his irritating smile. "So? I should have guessed. Old Bidwell, not so, of Amalgamated Life Insurance? And he wanted his trained seals to expose me as a fraud, yes? For if I can tell a man the day of his own death, no one will buy his pretty policies. But how can you expose me, if you will not listen to me first? Even supposing you had the wit to understand me? Bah! He has sent jackals to tear down a lion." He deliberately turned his back on them. The muttering of the crowd swelled and took on a vicious tone. The chairman cried vainly for order. There arose a figure in the front row.

"Mister Chairman!"

The chairman grasped the opening and shouted, "Gentlemen! Doctor Van RheinSmitt has the floor." The commotion died away.

The doctor cleared his throat, smoothed the forelock of his beautiful white hair, and thrust one hand into a side pocket of his smartly tailored trousers. He assumed his women's club manner.

"Mister Chairman, fellow members of the Academy of Science, let us have tolerance. Even a murderer has the right to say his say before the state exacts its tribute. Shall we do less? Even though one may be intellectually certain of the verdict? I grant Doctor Pinero every consideration that should be given by this august body to any unaffiliated colleague, even though" - he bowed slightly in Pinero's direction - "we may not be familiar with the university which bestowed his degree. If what he has to say is false, it can not harm us. If what he has to say is true, we should know it." His mellow cultivated voice rolled on, soothing and calming. "If the eminent doctor's manner appears a trifle in urbane for our tastes, we must bear in mind that the doctor may be from a place, or a stratum, not so meticulous in these little matters. Now our good friend and benefactor has asked us to hear this person and carefully assess the merit of his claims. Let us do so with dignity and decorum."

He sat down to a rumble of applause, comfortably aware that he had enhanced his reputation as an intellectual leader. Tomorrow the papers would again mention the good sense and persuasive personality of "America's handsomest University President". Who knew? Perhaps old Bidwell would come through with that swimming pool donation.

When the applause had ceased, the chairman turned to where the center of the disturbance sat, hands folded over his little round belly, face serene.

"Will you continue, Doctor Pinero?"

"Why should I?"

The chairman shrugged his shoulders. "You came for that purpose."

Pinero arose. "So true. So very true. But was I wise to come? Is there anyone here who has an open mind who can stare a bare fact in the face without blushing? I think not. Even that so beautiful gentleman who asked you to hear me out has already judged me and condemned me. He seeks order, not truth. Suppose truth defies order, will he accept it? Will you? I think not. Still, if I do not speak, you will win your point by default. The little man in the street will think that you little men have exposed me, Pinero, as a hoaxer, a pretender. That does not suit my plans. I will speak."

"I will repeat my discovery. In simple language I have invented a technique to tell how long a man will live. I can give you advance billing of the Angel of Death. I can tell you when the Black Camel will kneel at your door. In five minutes time with my apparatus I can tell any of you how many grains of sand are still left in your hourglass." He paused and folded his arms across his chest. For a moment no one spoke. The audience grew restless. Finally the chairman intervened.

"You aren't finished, Doctor Pinero?"

"What more is there to say?"

"You haven't told us how your discovery works."

Pinero's eyebrows shot up. "You suggest that I should turn over the fruits of my work for children to play with. This is dangerous knowledge, my friend. I keep it for the man who understands it, myself." He tapped his chest.

"How are we to know that you have anything back of your wild claims?"

"So simple. You send a committee to watch me demonstrate. If it works, fine. You admit it and tell the world so. If it does not work, I am discredited, and will apologize. Even I, Pinero, will apologize."

A slender stoop-shouldered man stood up in the back of the hail. The chair recognized him and he spoke:

"Mr. Chairman, how can the eminent doctor seriously propose such a course? Does he expect us to wait around for twenty or thirty years for some one to die and prove his claims?"

Pinero ignored the chair and answered directly:

"Pfui! Such nonsense! Are you so ignorant of statistics that you do not know that in any large group there is at least one who will die in the immediate future? I make you a proposition; let me test each one of you in this room and I will name the man who will die within the fortnight, yes, and the day and hour of his death." He glanced fiercely around the room. "Do you accept?"

Another figure got to his feet, a portly man who spoke in measured syllables. "I, for one, can not countenance such an experiment. As a medical man, I have noted with sorrow the plain marks of serious heart trouble in many of our elder colleagues. If Doctor Pinero knows those symptoms, as he may, and were he to select as his victim one of their number, the man so selected would be likely to die on schedule, whether the distinguished speaker's mechanical egg-timer works or not."

Another speaker backed him up at once. "Doctor Shepard is right. Why should we waste time on voodoo tricks? It is my belief that this person who calls himself Doctor Pinero wants to use this body to give his statements authority. If we participate in this

farce, we play into his hands. I don't know what his racket is, but you can bet that he has figured out some way to use us for advertising for his schemes. I move, Mister Chairman, that we proceed with our regular business."

The motion carried by acclamation, but Pinero did not sit down. Amidst cries of "Order! Order!" he shook his untidy head at them, and had his say:

"Barbarians! Imbeciles! Stupid dolts! Your kind have blocked the recognition of every great discovery since time began. Such ignorant canaille are enough to start Galileo spinning in his grave. That fat fool down there twiddling his elk's, tooth calls himself a medical man. Witch doctor would be a better term! That little baldheaded runt over there - You! You style yourself a philosopher, and prate about life and time in your neat categories. What do you know of either one? How can you ever learn when you won't examine the truth when you have a chance? Bah!" He spat upon the stage. "You call this an Academy of Science. I call it an undertaker's convention, interested only in embalming the ideas of your red-blooded predecessors."

He paused for breath and was grasped on each side by two members of the platform committee and rushed out the wings. Several reporters arose hastily from the press table and followed him. The chairman declared the meeting adjourned.

The newspapermen caught up with him as he was going out by the stage door. He walked with a light springy step, and whistled a little tune. There was no trace of the belligerence he had shown a moment before. They crowded about him. "How about an interview, doe?" "What dyu think of Modem Education?" "You certainly told 'em. What are your views on Life after Death?" "Take off your hat, doe, and look at the birdie."

He grinned at them all. "One at a time, boys, and not so fast. I used to be a newspaperman myself. How about coming up to my place, and we'll talk about it?"

A few minutes later they were trying to find places to sit down in Pinero's messy bed-living-room, and lighting his cigars. Pinero looked around and beamed. "What'll it be, boys? Scotch, or Bourbon?" When that was taken care of he got down to business. "Now, boys, what do you want to know?"

"Lay it on the line, doe. Have you got something, or haven't you?"

"Most assuredly I have something, my young friend."

"Then tell us how it works. That guff you handed the profs won't get you anywhere now."

"Please, my dear fellow. it is my invention. I expect to make some money with it. Would you have me give it away to the first person who asks for it?"

"See here, doe, you've got to give us something if you expect to get a break in the morning papers. What do you use? A crystal ball?"

"No, not quite. Would you like to see my apparatus?"

"Sure. Now we are getting somewhere."

He ushered them into an adjoining room, and waved his hand. "There it is, boys." The mass of equipment that met their eyes vaguely resembled a medico's office x-ray gear. Beyond the obvious fact that it used electrical power, and that some of the dials were calibrated in familiar terms, a casual inspection gave no clue to its actual use.

"What's the principle, doe?"

Pinero pursed his lips and considered. "No doubt you are all familiar with the truism that life is electrical in nature? Well, that truism isn't worth a damn, but it will help to give you an idea of the principle. You have also been told that time is a fourth

dimension. Maybe you believe it, perhaps not. It has been said so many times that it has ceased to have any meaning. It is simply a cliché that windbags use to impress fools. But I want you to try to visualize it now and try to feel it emotionally."

He stepped up to one of the reporters. "Suppose we, take you as an example. Your name is Rogers, is it not? Very well, Rogers, you are a space-time event having duration four ways. You are not quite six feet tall, you are about twenty inches wide and perhaps ten inches thick. In time, there stretches behind you more of this space-time event reaching to perhaps nineteen-sixteen, of which we see a cross-section here at right angles to the time axis, and as thick as the present. At the far end is a baby, smelling of sour milk and drooling its breakfast on its bib. At the other end lies, perhaps, an old man someplace in the nineteen-eighties. Imagine this space-time event which we call Rogers as a long pink worm, continuous through the years, one end at his mother's womb, the other at the grave. It stretches past us here and the cross-section we see appears as a single discrete body. But that is illusion. There is physical continuity to this pink worm, enduring through the years. As a matter of fact there is physical continuity in, this concept to the entire race, for these pink worms branch off from other pink worms. In this fashion the race is like a vine whose branches intertwine and send Out shoots. Only by taking a cross-section of the vine would we fall into the error of believing that the shootlets were discrete individuals."

He paused and looked around at their faces. One of them, a dour hard-bitten chap, put in a word.

"That's all very pretty, Pinero; if true, but where does that get you?"

Pinero favored him with an unresentful smile. "Patience, my friend. I asked you to think of life as electrical. Now think of our long pink worm as a conductor of electricity. You have heard, perhaps, of the fact that electrical engineers can, by certain measurements, predict the exact location of a break in a trans-Atlantic cable without ever leaving the shore. I do the same with our pink worms. By applying my instruments to the cross-section here in this room I can tell where the break occurs, that is to say, when death takes place. Or, if you like, I can reverse the connections and tell you the date of your birth. But that is uninteresting; you already know it."

The dour individual sneered. "I've caught you, doe. If what you said about the race being like a vine of pink worms is true, you can't tell birthdays because the connection with the race is continuous at birth. Your electrical. conductor reaches on back through the mother into a man's remotest ancestors."

Pinero beamed, "True, and clever, my friend. But you have pushed the analogy too far. It is not done in the precise manner in which one measures the length of an electrical conductor. In some ways it is more like measuring the length of a long corridor by bouncing an echo off the far end. At birth there is a sort of twist in the corridor, and, by proper calibration, I can detect the echo from that twist. There is just one case in which I can get no determinant reading; when a woman is actually carrying a child, I can't sort out her life-line from that of the unborn infant."

"Let's see you prove it."

"Certainly, my dear friend. Will you be a subject?"

One of the others spoke up. "He's called your bluff, Luke. Put up, or shut up."

"I'm game. What do I do?"

"First write the date of your birth on a sheet of paper, and hand it to one of your colleagues."

Luke complied. "Now what?"

"Remove your outer clothing and step upon these scales. Now tell me, were you ever very much thinner, or very much fatter, than you are now. No? What did you weigh at birth? Ten pounds? A fine bouncing baby boy. They don't come so big any more."

"What is all this flubdubbery?"

"I am trying to approximate the average cross-section of our long pink conductor, my dear Luke. Now will you seat yourself here. Then place this electrode in your mouth. No, it will not hurt you; the voltage is quite low, less than one micro-volt, but I must have a good connection." The doctor left him and went behind his apparatus, where he lowered a hood over his head before touching his controls. Some of the exposed dials came to life and a low humming came from the machine. It stopped and the doctor popped out of his little hide-away.

"I get sometime in February, nineteen-twelve. Who has the piece of paper with the date?"

It was produced and unfolded. The custodian read, "February 22nd, 1912."

The stillness that followed was broken by a voice from the edge of the little group. "Doe, can I have another drink?"

The tension relaxed, and several spoke at once, "Try it on me, doe." "Me first, doe, I'm an orphan and really want to know." "How about it, doe. Give us all a little loose play."

He smilingly complied, ducking in and out of the hood like a gopher from its hole. When they all had twin slips of paper to prove the doctor's skill, Luke broke a long silence.

"How about showing how you predict death, Pinero."

"If you wish. Who will try it?"

No one answered. Several of them nudged Luke forward. "Go ahead, smart guy. You asked for it." He allowed himself to be seated in the chair. Pinero changed some of the switches, then entered the hood. When the humming ceased, he came out, rubbing his hands briskly together.

"Well, that's all there is to see, boys. Got enough for a story?"

"Hey, what about the prediction? When does Luke get his 'thirty'?"

Luke faced him. "Yes, how about it? What's your answer?"

Pinero looked pained. "Gentlemen, I am surprised at you. I give that information for a fee. Besides, it is a professional confidence. I never tell anyone but the client who consults me."

"I don't mind. Go ahead and tell them."

"I am very sorry. I really must refuse. I agreed only to show you how, not to give the results."

Luke ground the butt of his cigarette into the floor. "It's a hoax, boys. He probably looked up the age of every reporter in town just to be ready to pull this. It won't wash, Pinero."

Pinero gazed at him sadly. "Are you married, my friend?"

"Do you have any one dependent on you? Any close relatives?"

"No. WHY, do you want to adopt me?"

Pinero shook his head sadly. "I am very sorry for you, my dear Luke. You will die before tomorrow."

"SCIENCE MEET ENDS IN RIOT"
"SAVANTS SAPS SAYS SEER"
"DEATH PUNCHES TIMECLOCK"
"SCRIBE DIES PER DOC'S DOPE"
"HOAX' CLAIMS SCIENCE HEAD"

"... within twenty minutes of Pinero's strange prediction, Timons was struck by a falling sign while walking down Broadway toward the offices of the Daily Herald where he was employed.

"Doctor Pinero declined to comment but confirmed the story that he had predicted Timons' death by means of his so-called chronovitameter. Chief of Police Roy..."

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(adv.)

- Legal Notice

To whom it may concern, greetings; I, John Cabot Winthrop III, of the firm Winthrop, Winthrop, Ditmars & Winthrop, Attorneys-at-Law, do affirm that Hugo Pinero of this city did hand to me ten thousand dollars in lawful money of the United States, and instruct me to place it in escrow with a chartered bank of my selection with escrow instructions as follows:.

The entire bond shall be forfeit, and shall forthwith be paid to the first client of Hugo Pinero and/or Sands of Time, Inc. who shall exceed his life tenure as predicted by Hugo Pinero by one per centurn, or to the estate of the first client who shall fail of such predicted tenure in a like amount, whichever occurs first in point of time.

I do further affirm that I have this day placed this bond in escrow with the above related instructions with the Equitable-First National Bank of this city.
Subscribed--and sworn,
John Cabot Winthrop Ill

Subscribed and sworn to before me
this 2nd day of April, 1951.
Albert M. Swanson
Notary Public in and for this county and state

My commission expires June 17, 1951.

"Good evening Mr. and Mrs. Radio Audience, let's go to Press! Flash! Hugo Pinero, The Miracle Man from Nowhere, has made his thousandth death prediction without a claimant for the reward he posted for anyone who catches him failing to call the turn. With thirteen of his clients already dead it is mathematically certain that - he has a private line to the main office of the Old Man with the Scythe. That is one piece of news I don't want to know before it happens. Your Coast-to-Coast Correspondent will not be a client of Prophet Pinero. . ."

The judge's watery baritone cut through the stale air of the courtroom. "Please, Mr. Weeds, let us return to our muttons. This court granted your prayer for a temporary restraining order, and now you ask that it be made permanent. In rebuttal, Mr. Pinero claims that you have presented no cause and asks that the injunction be lifted, and that I order your client to cease from attempts to interfere with what Pinero describes as a simple - lawful business. As you are not addressing a jury, please omit the rhetoric and tell me in plain language why I should not grant his prayer."

Mr. Weeds jerked his chin nervously, making his flabby Grey dewlap drag across his high stiff collar, and resumed:

"May it please the honorable court, I represent the public-"

"Just a moment. I thought you were appearing for Amalgamated Life Insurance."

"I am, Your Honor, in a formal sense. In a wider sense I represent several other major assurance, fiduciary, and financial institutions; their stockholders, and policy holders, who constitute a majority of the citizenry. In addition we feel that we protect the interests of the entire population; unorganized, inarticulate, and otherwise unprotected."

"I thought that I represented the public," observed the judge dryly. "I am afraid I must regard you as appearing for your client-of-record. But continue; what is your thesis?"

The elderly barrister attempted to swallow his Adam's apple, then began again. "Your Honor, we contend that there are two separate reasons why this injunction should be made permanent, and, further, that each reason is sufficient alone. In the first place, this person is engaged in the practice of soothsaying, an occupation proscribed both in common law and statute. He is a common fortune teller, a vagabond charlatan who preys on the gullibility of the public. He is cleverer than the ordinary gypsy palm-reader, astrologer, or table tipper, and to the same extent more dangerous. He makes false claims of modern scientific methods to give a spurious dignity to his thaumaturgy. We have here in court leading representatives of the Academy of Science to give expert witness as to the absurdity of his claims.

"In the second place, even if this person's claims were true-granting for the sake of argument such an absurdity" - Mr. Weems permitted himself a thin-lipped smile - "we contend that his activities are contrary to the public interest in general, and unlawfully injurious to the interests of my client in particular. We are prepared to produce numerous exhibits with the legal custodians to prove that this person did publish, or cause to have published, utterances urging the public to dispense with the priceless boon of life insurance to the great detriment of their welfare and to the financial damage of my client."

Pinero arose in his place. "Your Honor, may I say a few words?"

"What is it?"

"I believe I can simplify the situation if permitted to make a brief analysis."

"Your Honor," cut in Weems, "this is most irregular."

"Patience, Mr. Weems. Your interests will be protected. It seems to me that we need more light and less noise in this matter. If Dr. Pinero can shorten the proceedings by speaking at this time, I am inclined to let him. Proceed, Dr. Pinero."

"Thank you, Your Honor. Taking the last of Mr. Weems' points first, I am prepared to stipulate that I published the utterances he speaks of"

"One moment, Doctor. You have chosen to act as your own attorney. Are you sure you are competent to protect your own interests?"

"I am prepared to chance it, Your Honor. Our friends here can easily prove what I stipulate."

"Very well. You may proceed."

"I will stipulate that many persons have cancelled life insurance policies as a result thereof, but I challenge them to show that anyone so doing has suffered any loss or damage there from. It is true that the Amalgamated has lost business through my activities, but that is the natural result of my discovery, which has made their policies as obsolete as the bow and arrow. If an injunction is granted on that ground, I shall set up a coal oil lamp factory, then ask for an injunction against the Edison and General Electric companies to forbid them to manufacture incandescent bulbs."

"I will stipulate that I am engaged in the business of making predictions of death, but I deny that I am practicing magic, black, white, or rainbow colored. If to make predictions by methods of scientific accuracy is illegal, then the actuaries of the Amalgamated have been guilty for years in that they predict the exact percentage that will die each year in any given large group. I predict death retail; the Amalgamated predicts it wholesale. If their actions are legal, how can mine be illegal?"

"I admit that it makes a difference whether I can do what I claim, or not; and I will stipulate that the so-called expert witnesses from the Academy of Science will testify that I cannot. But they know nothing of my method and cannot give truly expert testimony on it."

"Just a moment, Doctor. Mr. Weems, is it true that your expert witnesses are not conversant with Dr. Pinero's theory and methods?"

Mr. Weems looked worried. He drummed on the table top, then answered, "Will the Court grant me a few moments indulgence?"

"Certainly."

Mr. Weems held a hurried whispered consultation with his cohorts, then faced the bench. "We have a procedure to suggest, Your Honor. If Dr. Pinero will take the stand and explain the theory and practice of his alleged method, then these distinguished scientists will be able to advise the Court as to the validity of his claims."

The judge looked inquiringly at Pinero, who responded, "I will not willingly agree to that. Whether my process is true or false, it would be dangerous to let it fall into the hands of fools and quacks" he waved his hand at the group of professors seated in the front row, paused and smiled maliciously "as these gentlemen know quite well. Furthermore it is not necessary to know the process in order to prove that it will work. Is it necessary to understand the complex miracle of biological reproduction in order to observe that a hen lays eggs? Is it necessary for me to reeducate this entire body of self-

appointed custodians of wisdom - cure them of their ingrown superstitions - in order to prove that my predictions are correct? There are but two ways of forming an opinion in science. One is the scientific method; the other, the scholastic. One can judge from experiment, or one can blindly accept authority. To the scientific mind, experimental proof is all important and theory is merely a convenience in description, to be junked when it no longer fits. To the academic mind, authority is everything and facts are junked when they do not fit theory laid down by authority."

"It is this point of view-academic minds clinging like oysters to disproved theories-that has blocked every advance of knowledge in history. I am prepared to prove my method by experiment, and, like Galileo in another court, I insist, 'It still moves!'"

"Once before I offered such proof to this same body of self-styled experts, and they rejected it. I renew my offer; let me measure the life lengths of the members of the Academy of Science. Let them appoint a committee to judge the results. I will seal my findings in two sets of envelopes; on the outside of each envelope in one set will appear the name of a member, on the inside the date of his death. In the other envelopes I will place names, on the outside I will place dates. Let the committee place the envelopes in a vault, then meet from time to time to open the appropriate envelopes. In such a large body of men some deaths may be expected, if Amalgamated actuaries can be trusted, every week or two. In such a fashion they will accumulate data very rapidly to prove that Pinero is a liar, or no."

He stopped, and pushed out his little chest until it almost caught up with his little round belly. He glared at the sweating savants. "Well?"

The judge raised his eyebrows, and caught Mr. Weems' eye. "Do you accept?"

"Your Honor, I think the proposal highly improper-"

The judge cut him short. "I warn you that I shall rule against you if you do not accept, or propose an equally reasonable method of arriving at the truth."

Weems opened his mouth, changed his mind, looked up and down the faces of learned witnesses, and faced the bench. "We accept, Your Honor."

"Very well. Arrange the details between you. The temporary injunction is lifted, and Dr. Pinero must not be molested in the pursuit of his business. Decision on the petition for permanent injunction is reserved without prejudice pending the accumulation of evidence. Before we leave this matter I wish to comment on the theory implied by you, Mr. Weems, when you claimed damage to your client. There has grown up in the minds of certain groups in this country the notion that because a man or corporation has made a profit out of the public for a number of years, the government and the courts are charged with the duty of guaranteeing such profit in the future, even in the face of changing circumstances and contrary public interest. This strange doctrine is not supported by statute nor common law. Neither individuals nor corporations have any right to come into court and ask that the clock of history be stopped, or turned back, for their private benefit. That is all."

Bidwell grunted in annoyance. "Weems, if you can't think up anything better than that, Amalgamated is going to need a new chief attorney. It's been ten weeks since you lost the injunction, and that little wart is coining money hand over fist. Meantime every insurance firm in the country is going broke. Hoskins, what's our loss ratio?"

"It's hard to say, Mr. Bidwell. It gets worse every day. We've paid off thirteen big policies this week; all of them taken out since Pinero started operations."

A spare little man spoke up. "I say, Bidwell, we aren't accepting any new applications for United until we have time to check and be sure that they have not consulted Pinero. Can't we afford to wait until the scientists show him up?"

Bidwell snorted. "You blasted optimist! They won't show him up. Aldrich, can't you face a fact? The fat little blister has got something; how I don't know. This is a fight to the finish. If we wait, we're licked." He threw his cigar into a cuspidor, and bit savagely into a fresh one. "Clear out of here, all of you! I'll handle this my own way. You too, Aldrich. United may wait, but Amalgamated won't."

Weems cleared his throat apprehensively. "Mr. Bidwell, I trust you will consult with me before embarking on any major change in policy?"

Bidwell grunted. They filed out. When they were all gone and the door closed, Bidwell snapped the switch of the inter-office announcer. "O.K.; send him in."

The outer door opened; a slight dapper figure stood for a moment at the threshold. His small dark eyes glanced quickly about the room before he entered, then he moved up to Bidwell with a quick soft tread. He spoke to Bidwell in a flat emotionless voice. His face remained impassive except for the live animal eyes. "You wanted to talk to me?"

"Yes."

"What's the proposition?"

"Sit down, and we'll talk."

Pinero met the young couple at the door of his inner office.

"Come in, my dears, come in. Sit down. Make yourselves at home. Now tell me, what do you want of Pinero? Surely such young people are not anxious about the final roll call?"

The boy's honest young face showed slight confusion. "Well, you see, Dr. Pinero, I'm Ed Harley and this is my wife, Betty. We're going to have-that is, Betty is expecting a baby and, well-"

Pinero smiled benignly. "I understand. You want to know how long you will live in order to make the best possible provision for the youngster. Quite wise. Do you both want readings, or just yourself?"

The girl answered, "Both of us, we think."

Pinero beamed at her. "Quite so. I agree. Your reading presents certain technical difficulties at this time, but I can give you some information now, and more later after your baby arrives. Now come into my laboratory, my dears, and we'll commence." He rang for their case histories, then showed them into his workshop. "Mrs. Harley first, please. If you will go behind that screen and remove your shoes and your outer clothing, please. Remember, I am an old man, whom you are consulting as you would a physician."

He turned away and made some minor adjustments of his apparatus. Ed nodded to his wife who slipped behind the screen and reappeared almost at once, clothed in two wisps of silk. Pinero glanced up, noted her fresh young prettiness and her touching shyness.

"This way, my dear. First we must weigh you. There. Now take your place on the stand. This electrode in your mouth. No, Ed, you mustn't touch her while she is in the circuit. It won't take a minute. Remain quiet."

He dove under the machine's hood and the dials sprang into life. Very shortly he came out with a perturbed look on his face. "Ed, did you touch her?"

"No, Doctor." Pinero ducked back again, remained a little longer. When he came out this time, he told the girl to get down and dress. He turned to her husband.

"Ed, make yourself ready."

"What's Betty's reading, Doctor?"

"There is a little difficulty. I want to test you first."

When he came out from taking the youth's reading, his face was more troubled than ever. Ed inquired as to his trouble. Pinero shrugged his shoulders, and brought a smile to his lips.

"Nothing to concern you, my boy. A little mechanical misadjustment, I think. But I shan't be able to give you two your readings today. I shall need to overhaul my machine. Can you come back tomorrow?"

"Why, I think so. Say, I'm sorry about your machine. I hope it isn't serious."

"It isn't, I'm sure. Will you come back into my office, and visit for a bit?"

"Thank you, Doctor. You are very kind."

"But Ed, I've got to meet Ellen."

Pinero turned the full force of his personality on her.

"Won't you grant me a few moments, my dear young lady? I am old and like the sparkle of young folk's company. I get very little of it. Please." He nudged them gently into his office, and seated them. Then he ordered lemonade and cookies sent in, offered them cigarettes, and lit a cigar.

Forty minutes later Ed listened entranced, while Betty was quite evidently acutely nervous and anxious to leave, as the doctor spun out a story concerning his adventures as a young man in Tierra del Fuego. When the doctor stopped to relight his cigar, she stood up.

"Doctor, - we really must leave. Couldn't we hear the rest tomorrow?"

"Tomorrow? There will not be time tomorrow."

"But you haven't time today either. Your secretary has rung five times."

"Couldn't you spare me just a few more minutes?"

"I really can't today, doctor. I have an appointment. There is someone waiting for me."

"There is no way to induce you?"

"I'm afraid not. Come, Ed."

After they had gone, the doctor stepped to the window and stared out over the city. Presently he picked out two tiny figures as they left the office building. He watched them hurry to the corner, wait for the lights to change, then start across the street. When they were part way across, there came the scream of a siren. The two little figures hesitated, started back, stopped, and turned. Then the car was upon them. As the car slammed to a stop, they showed up from beneath it, no longer two figures, but simply a limp unorganized heap of clothing.

Presently the doctor turned away - from the window. Then he picked up his phone, and spoke to his secretary.

"Cancel my appointments for the rest of the day.... No... No one... I don't care; cancel them." Then he sat down in his chair. His cigar went out. Long after dark he held it, still unlighted.

Pinero sat down at his dining table and contemplated the gourmet's luncheon spread before him. He had ordered this meal with particular care, and had come home a little early in order to enjoy it fully.

Somewhat later he let a few drops of fiori d'Alpini roll around his tongue and trickle down his throat. The heavy fragrant syrup warmed his mouth, and reminded him of the little mountain flowers for which it was named. He sighed. It - had been a good meal, an exquisite meal and had justified the exotic liqueur. His musing was interrupted by a disturbance at the front door. The voice of his elderly maidservant was raised in remonstrance. A heavy male voice interrupted her. The commotion moved down the hail and the dining room door was pushed open.

"Madonna! Non si puo entrare! The Master is eating!"

"Never mind, - Angela. I have time to see these gentlemen. You ..may go." Pinero faced the surly-faced spokesman of the intruders. "You have business with me; yes?"

"You bet we have. Decent people have had enough of your damned nonsense."

"And so?"

The caller did not answer at once. A smaller dapper individual moved out from behind him and faced Pinero.

"We might as well begin." The chairman of the committee placed a key in the lock-box and opened it. "Wenzell, will you help me pick out today's envelopes?" He was interrupted by a touch on his arm. - "Dr. Baird, you are wanted on the telephone."

"Very well. Bring the instrument here."

When it was fetched he placed the receiver to his ear. "Hello.... Yes; speaking.... What? .. No, we have beard nothing... Destroyed the machine, you say.... Dead! How?.... No! No statement. None at all.... Call me later...."

He slammed the instrument down - and pushed it from him.

"What's up? Who's dead now?"

Baird held up one hand. "Quiet, gentlemen, please!

Pinero was murdered a few moments ago at his home."

"Murdered?!"

"That isn't all. About the same time vandals broke into his office and smashed his apparatus." -

No one spoke at first. The committee members glanced around at each other. No one seemed anxious to be the first to comment.

Finally one spoke up. "Get it out."

"Get what out?"

"Pinero's envelope. It's in there too. I've seen it."

Baird located it and slowly tore it open. He unfolded the single sheet of paper, and scanned it.

"Well? Out with it!"

"One thirteen p.m. - today."

They took this in silence.

Their dynamic calm was broken by a member across the table from Baird reaching for the lock-box. Baud interposed a hand.

"What do you want?"

"My prediction-it's in there-we're all in there."

"Yes, yes. We're all in here. Let's have them."

Baird placed both hands over the box. He held the eye of the man opposite him but did not speak. He licked his lips. The corner of his mouth twitched. His hands shook. Still he did not speak. The man opposite relaxed back into his chair.

"You're right, of course," he said.

"Bring me that waste basket." Baird's voice was low and strained but steady.

He accepted it and dumped the litter on the rug. He placed the tin basket on the table before him. He tore half a dozen envelopes across, set a match to them, and dropped them in the basket. Then he started tearing a double handful at a time, and fed the fire steadily. The smoke made him cough, and tears ran out of his smarting eyes. Someone got up and opened a window. When he was through, he pushed the basket away from him, looked down, and spoke.

"I'm afraid I've ruined this table top."

FOREWORD

For any wordsmith the most valuable word in the English language is that short, ugly, Anglo-Saxon monosyllable: No!!! It is one of the peculiarities in the attitude of the public toward the writing profession that a person who would never expect a free ride from a taxi driver, or free groceries from a market, or free gilkwoks from a gilkwok dealer, will without the slightest embarrassment ask a professional writer for free gifts of his stock in trade.

This chutzpah is endemic in science fiction fans, acute in organized SF fans, and at its virulent worst in organized fans-who-publish-fan-magazines.

The following story came into existence shortly after I sold my first story-and resulted from my having not yet learned to say No!

"Anyone who considers protocol unimportant has never dealt with a cat."
-L. Long

SUCCESSFUL OPERATION

"How dare you make such a suggestion!"

The State Physician doggedly stuck by his position. "I would not make it, sire, if your life were not at stake. There is no other surgeon in the Fatherland who can transplant a pituitary gland, but Doctor Lans."

"You will operate!"

The medico shook his head. "You would die, Leader. My skill is not adequate."

The Leader stormed about the apartment. He seemed about to give way to one of the girlish bursts of anger that even the inner state clique feared so much. Surprisingly he capitulated.

"Bring him here!" he ordered.

Doctor Lans faced the Leader with inherent dignity, a dignity and presence that three years of "protective custody" had been unable to shake. The pallor and gauntness of the concentration camp lay upon him, but his race was used to oppression. "I see," he said. "Yes, I see . . . I can perform that operation. What are your terms?"

"Terms?" The Leader was aghast. "Terms, you filthy swine? You are being given a chance to redeem in part the sins of your race!"

The surgeon raised his brows. "Do you not think that I know that you would not have sent for me had
there been any other course available to you? Obviously, my services have become valuable.

"You'll do as you are told! You and your kind are lucky to be alive."

"Nevertheless I shall not operate without my fee." "I said you are lucky to be alive-" The tone was an open threat.
Lans spread his hands, did not answer.

"Well-I am informed that you have a family..."

The surgeon moistened his lips. His Emma-they would hurt his Emma. . . and his little Rose. But he must be brave, as Emma would have him be. He was playing for high stakes-for all of them. "They cannot be worse off dead," he answered firmly, "than they are now.

It was many hours before the Leader was convinced that Lans could not be budged. He should have known-the surgeon had learned fortitude at his mother's breast.

"What is your fee?"

"A passport for myself and my family."

"Good riddance!"

"My personal fortune restored to me-"

"Very well."

"-to be paid in gold before I operate!"

The Leader started to object automatically, then checked himself. Let the presumptuous fool think so! It could be corrected after the operation.

"And the operation to take place in a hospital on foreign soil."

"Preposterous!"

"I must insist."

"You do not trust me?"

Lans stared straight back into his eyes without replying. The Leader struck him, hard, across the mouth. The surgeon made no effort to avoid the blow, but took it, with no change of expression....

"You are willing to go through with it, Samuel?" The younger man looked at Doctor~Lans without fear as he answered,

"Certainly, Doctor."

"I can not guarantee that you will recover. The Leader's pituitary gland is diseased; your younger body may or may not be able to stand up under it- that is the chance you take."

"I know it-but I am out of the concentration camp!"

"Yes. Yes, that is true. And if you do recover, you are free. And I will attend you myself, until you are well enough to travel."

Samuel smiled. "It will be a positive joy to be sick in a country where there are no concentration camps!"

"Very well, then. Let us commence."

They returned to the silent, nervous group at the other end of the room. Grimly, the money was counted out, every penny that the famous surgeon had laid claim to before the Leader had decided that men of his religion had no need for money. Lans placed half of the gold in a money belt and strapped it around his waist. His wife concealed the other half somewhere about her ample person.

It was an hour and twenty minutes later that Lans put down the last instrument, nodded to the surgeons assisting him, and commenced to strip off operating gloves. He took one last look at his two patients before he left the room. They were anonymous under the sterile gowns and dressings. Had he not known, he could not have told dictator from oppressed. Come to think about it, with the exchange of those two tiny glands there was something of the dictator in his victim, and something of the victim in the dictator.

Doctor Lans returned to the hospital later in the day, after seeing his wife and daughter settled in a first class hotel. It was an extravagance, in view of his un certain prospects as a refugee, but they had enjoyed no luxuries for years back there-he did not think of it as his home country-and it was justified this once.

He enquired at the office of the hospital for his second patient. The clerk looked puzzled. "But he is not here."

"Not here?"

"Why, no. He was moved at the same time as His Excellency-back to your country."

Lans did not argue. The trick was obvious; it was too late to do anything for poor Samuel. He thanked his God that he had had the foresight to place himself and his family beyond the reach of such brutal injustice before operating. He thanked the clerk and left.

The Leader recovered consciousness at last. His brain was confused-then he recalled the events before he had gone to sleep. The operation!-it must be over! And he was alive! He had never admitted to anyone how terribly frightened he had been at the prospect. But he had lived-he had lived!

He groped around for the bell cord, and, failing to find it, gradually forced his eyes to focus on the room. What outrageous nonsense was this? This was no sort of a room for the Leader to convalesce in. He took in the dirty white-washed ceiling, and the bare wooden floor with distaste. And the bed! It was no more than a cot!

He shouted. Someone came in, a man wearing the uniform of a trooper in his favorite corps. He started to give him the tongue-lashing of his life, before having him arrested. But he was cut short.

"Cut out that racket, you unholy pig!"

At first he was too astounded to answer, then he shrieked, "Stand at attention when you address your Leader! Salute!"

The man looked dumbfounded, then guffawed. "Like this, maybe?" He stepped to the side of the cot, struck a pose with his right arm raised in salute. He carried a rubber truncheon in it. "Hail to the Leader!" he shouted, and brought his arm down smartly. The

truncheon crashed into the Leader's cheekbone. Another trooper came in to see what the noise was while the first was still laughing at his witticism. "What's up, Jon? Say, you'd better not handle that monkey too rough-he's still carried on the hospital list." He glanced casually at the Leader's bloody face. "Him? Didn't you know?" He pulled him to one side and whispered.

The second's eyes widened; he grinned. "So? They don't want him to get well, eh? Well, I could use some exercise this morning-"

"Let's get Fats," the other suggested. "He always has such amusing ideas."

"Good idea." He stepped to the door, and bellowed, "Hey, Fats!"

They didn't really start in on him until Fats was there to help.

FOREWORD

LiFE-LINE, MISFIT, LET THERE BE LIGHT, ELSE WHEN, PIED PIPER, IF THiS GOES ON-, REQUIEM, THE ROADS MUST ROLL, COVENTRY, BLOWUPS HAPPEN-for eleven months, mid March 1939 through mid February 1940, I wrote every day.. and that ended my bondage; BLOWUPS HAPPEN paid off the last of that pesky n'tortgage-eight years ahead of time.

BLOWUPS HAPPEN was the first of my stories to be published in hard covers, in Groff Conklin's first anthology, THE BEST OF SCIENCE FICTION, 1946. In the meantime there had been World War II, Hiroshima, The Smyth Report-so I went over my 1940 manuscript most carefully, correcting some figures I had merely guessed at in early 1940.

This week I have compared the two versions, 1940 and 1946, word by word-there isn't a dime's worth of difference between them. . . and I now see, as a result of the enormous increase in the art in 33 years, more errors in the '46 version than I spotted in the '40 version when I checked it in '46.

I do not intend ever again to try to update a story to make it fit new art. Such updating can't save a poor story and isn't necessary for a good story. All of H. G. Wells' SF stories are hopelessly dated. . . and they remain the best, the most gripping science fiction stories to be found anywhere. My BEYOND THIS HORIZON (1941) states that H. sapiens has forty-eight chromosomes, a "fact" that "everybody knew" in 1941. Now "everybody knows" that the "correct" number is forty-sLx. 1 shan't change it.

The version of BLOWUPS HAPPEN here following is exactly, word for word, the way it was first written in February 1940.

Blowups Happen

"PUT down that wrench!"

The man addressed turned slowly around and faced the speaker. His expression was hidden by a grotesque helmet, part of a heavy, lead-and-cadmium armor which shielded his entire body, but the tone of voice in which he answered showed nervous exasperation.

"What the hell's eating on you, doc?" He made no move to replace the tool in question.

They faced each other like two helmeted, arrayed fencers, watching for an opening. The first speaker's voice came from behind his mask a shade higher in key and more peremptory in tone. "You heard me, Harper. Put down that wrench at once, and come away from that 'trigger'. Erickson!"

A third armored figure came from the far end of the control room. "What 'cha want, doe?"

"Harper is relieved from watch. You take over as engineer-of-the-watch. Send for the standby engineer."

"Very well." His voice and manner were phlegmatic, as he accepted the situation without comment. The atomic engineer whom he had just relieved glanced from one to the other, then carefully replaced the wrench in its rack.

"Just as you say, Doctor Silard, but send for your relief, too. I shall demand an immediate hearing!" Harper swept indignantly out, his lead-sheathed boots clumping on the floorplates.

Doctor Silard waited unhappily for the ensuing twenty minutes until his own relief arrived. Perhaps he had been hasty. Maybe he was wrong in thinking that Harper had at last broken under the strain of tending the most dangerous machine in the world-the atomic breeder plant. But if he had made a mistake, it had to be on the safe side-slips must not happen in this business; not when a slip might result in atomic detonation of nearly ten tons of uranium-238, U-235, and plutonium.

He tried to visualize what that would mean, and failed. He had 'been told that uranium was potentially twenty million times as explosive as T.N.T. The figure was meaningless that way. He thought of the pile instead as a hundred million tons of high explosive, or as a thousand Hiroshimas. It still did not mean anything. He had once seen an A-bomb dropped, when he had been serving as a temperament analyst for the Air Forces. He could not imagine the explosion of a thousand such bombs; his. brain balked. Perhaps these atomic engineers could. Perhaps, with their greater mathematical ability and closer comprehension of what actually went on inside the nuclear fission chamber, they had some vivid glimpse of the mind-shattering horror locked up beyond that shield. If so, no wonder they tended to blow up- He sighed. Erickson looked away from the controls of the linear resonant accelerator on which he had been making some adjustment.

"What's the trouble, doc?"

"Nothing. I'm sorry I had to relieve Harper."

Silard could feel the shrewd glance of the big Scandinavian. "Not getting the jitters yourself, are you, doc? Sometimes you squirrel-sleuths blow up, too-"

"Me? I don't think so. I'm scared of that thing in there-I'd be crazy if I weren't."

"So am I," Erickson told him soberly, and went back to his work at the controls of the accelerator. The accelerator proper lay beyond another shielding barrier; its snout disappeared in the final shield between it and the pile and fed a steady stream of terrifically speeded up sub-atomic bullets to the beryllium target located within the pile itself. The tortured beryllium yielded up neutrons, which shot out in all directions through the uranium mass. Some of these neutrons struck uranium atoms squarely on their nuclei and split them in two. The fragments were new elements, barium, xenon, rubidium-

depending on the portions in which each atom split. The new elements were usually unstable isotopes and broke down into a, dozen more elements by radioactive disintegration in a progressive reaction.

But these second transmutations were comparatively safe; it was the original splitting of the uranium nucleus, with the release of the awe-inspiring energy that bound it together-an incredible two hundred million electron volts-that was important-and perilous.

For, while uranium was used to breed other fuels by bombarding it with neutrons, the splitting itself gives up more neutrons which in turn may land in other uranium nuclei and split them. If conditions are favorable to a progressively increasing reaction of this sort, it may get out of hand, build up in an unmeasurable fraction of a micro-second into a complete atomic explosion-an explosion which would dwarf an atom bomb to pop-gun size; an explosion so far beyond all human experience as to be as completely incomprehensible as the idea of personal death. It could be feared, but not understood.

But a self-perpetuating sequence of nuclear splitting, just wider the level of complete explosion, was necessary to the operation of the breeder plant. To split the first uranium nucleus by bombarding it with neutrons from the beryllium target took more power than the death of the atom gave up. In order that the breeder pile continue to operate it was imperative that each atom split by a neutron from the beryllium target should cause the splitting of many more.

It was equally imperative that this chain of reactions should always tend to dampen, to die out. It must not build up, or the uranium mass would explode within a time interval too short to be measured by any means whatsoever.

Nor would there be anyone left to measure it.

The atomic engineer on duty at the pile could control this reaction by means of the "trigger", a term the engineers used to include the linear resonant accelerator, the beryllium target, the cadmium damping rods, and adjacent controls, instrument board, and power sources. That is to say he could vary the bombardment on the beryllium target to increase or decrease the level of operation of the plant, he could change the "effective mass" of the pile with the cadmium dampers, and he could tell from his instruments that the internal reaction was dampened-or, rather, that it had been dampened the split second before. He could not possibly know what was actually happening now within the pile-subatomic speeds are too great and the time intervals too small. He was like the bird that flew backward; he could see where he had been, but never knew where he was going.

Nevertheless, it was his responsibility, and his alone, not only to maintain the pile at a high efficiency, but to see that the reaction never passed the critical point and progressed into mass explosion.

But that was impossible. He could not be sure; he could never be sure.

He could bring to the job all of the skill and learning of the finest technical education, and use it to reduce the hazard to the lowest mathematical probability, but the blind laws of chance which appear to rule in sub-atomic action might turn up a royal flush against him and defeat his most skillful play.

And each atomic engineer knew it, knew that he gambled not only with his own life, but with the lives of countless others, perhaps with the lives of every human being on the planet. Nobody knew quite what such an explosion would do. A conservative estimate assumed that, in addition to destroying the plant and its personnel completely, it

would tear a chunk out of the populous and heavily traveled Los Angeles-Oklahoma Road-City a hundred miles to the north.

The official, optimistic viewpoint on which the plant had been authorized by the Atomic Energy Commission was based on mathematics which predicted that such a mass of uranium would itself be disrupted on a molar scale, and thereby limit the area of destruction, before progressive and accelerated atomic explosion could infect the entire mass.

The atomic engineers, by and large, did not place faith in the official theory. They judged theoretical mathematical prediction for what it was worth-precisely nothing, until confirmed by experiment.

But even from the official viewpoint, each atomic engineer while on watch carried not only his own life in his hands, but the lives of many others-how many, it was better not to think about. No pilot, no general, no surgeon ever carried such a daily, inescapable, ever present weight of responsibility for the lives of others as these men carried every time they went on watch, every time they touched a venire screw, or read a dial.

They were selected not alone for their intelligence and technical training, but quite as much for their characters and sense of social responsibility. Sensitive men were needed-men who could fully appreciate the importance of the charge entrusted to them; no other sort would do. But the burden of responsibility was too great to be borne indefinitely by a sensitive man.

It was, of necessity, a psychologically unstable condition. Insanity was an occupational disease.

Doctor Cummings appeared, still buckling the straps of the armor worn to guard against stray radiation. "What's up?" he asked Silard.

"I had to relieve Harper."

"So I guessed. I met him coming up. He was sore as hell-just glared at me."

"I know. He wants an immediate hearing. That's why I had to send for you."

Cummings grunted, then nodded toward the engineer, anonymous in all-enclosing armor. "Who'd I draw?"

"Erickson."

"Good enough. Squareheads can't go crazy-eh, Gus?"

Erickson looked up momentarily, and answered, "That's your problem," and returned to his work. Cummings turned back to Silard, and commented, "Psychiatrists don't seem very popular around here. O.K.-I relieve you, sir."

"Very well, sir."

Silard threaded his way through the zig-zag in the outer shield which surrounded the control room. Once outside this outer shield, he divested himself of the cumbersome armor, disposed of it in the locker room provided, and hurried to a lift. He left the lift at the tube station, underground, and looked around for an unoccupied capsule. Finding one, he strapped himself in, sealed the gasketed door, and settled the back of his head into the rest against the expected surge of acceleration.

Five minutes later he knocked at the door of the office of the general superintendent, twenty miles away.

The breeder plant proper was located in a bowl of desert hills on the Arizona plateau. Everything not necessary to the immediate operation of the plant-administrative

offices, television station, and so forth-lay beyond the hills. The buildings housing these auxiliary functions were of the most durable construction technical ingenuity could devise. It was hoped that, if the tag ever came, occupants would stand approximately the chance of survival of a man going over Niagara Falls in a barrel.

Silard knocked again. He was greeted by a male secretary, Steinke. Silard recalled reading his case history. Formerly one of the most brilliant of the young engineers, he had suffered a blanking out of the ability to handle mathematical operations. A plain case of fugue, but there had been nothing that the poor devil could do about it- he had been anxious enough with his conscious mind to stay on duty. He had been rehabilitated as an office worker.

Steinke ushered him into the superintendent's private office. Harper was there before him, and returned his greeting with icy politeness. The superintendent was cordial, but Silard thought he. looked tired, as if the twenty-four-hour-a-day strain was too much for him.

"Come in, Doctor, come In. Sit down. Now. tell me about this. I'm a little' surprised. I thought Harper was one of my steadiest men."

"I don't say he isn't, sir."

"Well?"

"He may be perfectly all right, but your instructions to me are not to take any chances."

"Quite right" The superintendent gave the engineer, silent and tense in his chair, a troubled glance, then returned his attention to Silard. "Suppose you tell me about it."

Silard took a deep breath. "While on watch as psychological observer at the control station I noticed that the engineer of the watch seemed preoccupied and less responsive to stimuli than usual. During my off-watch observation of this case, over a period of the past several days, I have suspected an increasing lack of attention. For example, while playing contract bridge, he now occasionally asks for a review of the bidding which is contrary to his former behavior pattern.

"Other similar data are available. To cut it short, at 3:11 today, while on watch, I saw Harper, with no apparent reasonable purpose in mind, pick up a wrench used only for operating the valves of the water shield and approach the trigger. I relieved him of duty, and sent him out of the control room."

"Chief!" Harper calmed himself somewhat and continued, "If this witch-doctor knew a wrench from an oscillator, he'd know what I was doing. The wrench was on the wrong rack. I noticed it, and picked it up to return it to its proper place. On the way, I stopped to check the readings!"

The superintendent turned inquiringly to Doctor Shard. "That may be true- Granting that it is true," answered the psychiatrist doggedly, "my diagnosis still stands. Your behavior pattern has altered; your present actions are unpredictable, and I can't approve you for responsible work without a complete check-up."

General Superintendent King drummed on the desktop, and sighed. Then he spoke slowly to Harper, "Cal, you're a good boy, and believe me, I know how you feel. But: there is no way to avoid it-you've got to go up for the psychometricals, and accept whatever disposition the board makes of you." He paused, but Harper maintained an expressionless silence. "Tell you what, son-why don't, you take a few days' leave? Then, when you come back,' you can go up before the board, or transfer to another department

away from the bomb, whichever you prefer." He looked to Shard for approval, and received a nod.

But Harper was not mollified. "No, chief," he protested. "It won't do. Can't you' see what's wrong? It's this constant supervision. Somebody always watching the back of your neck, expecting you to go crazy. A man can't even shave in private. We're jumpy about the most innocent acts, for fear some head doctor, half batty himself, will see it and decide it's a sign we're slipping-good grief, what do you expect!"

His outburst having run its course, he subsided into a flippant cynicism that did" not quite jell. "O.K.-never mind the strait jacket; I'll go quietly. You're a good Joe in spite of it, chief," he added, "and I'm glad to have worked under you. Goodbye."

King kept the pain in his eyes out of his voice. 'Wait a minute, Cal-you're not through here. Let's forget about the vacation.' I'm transferring you to the radiation laboratory. You belong in research anyhow; I'd never have spared you from it to stand watches if I hadn't been short on number-one men.

"As for the constant psychological observation, I hate it as much as you do. I don't suppose you know that they watch me about twice as hard as they watch you duty engineers."

Harper showed his surprise, but Shard nodded in sober conflation. "But we have to have this supervision. . . Do you remember Manning? No, he was before your time. We didn't have' psychological observers then. Manning was able and brilliant. Furthermore, he was always cheerful; nothing seemed to bother him.

"I was glad to have him on the pile, for he was always alert, and never seemed nervous about working with it-in fact he grew more buoyant and cheerful the longer he stood control watches. I should have known that was a very bad sign, but I didn't, and there was no observer to 'tell me so.

"His technician had to slug him one night. . . He found him dismounting the, safety interlocks on the cadmium assembly. Poor old Manning never pulled out of it- he's been violently insane ever since. After Manning cracked up, we worked out the present system of two qualified engineers and an observer for every watch. It seemed the only thing to do."

"I suppose so, chief," Harper mused, his face no longer sullen, but still unhappy. "It's a hell of a situation just the same."

"That's putting it mildly." He got up and put out his hand. "Cal, unless you're dead set on leaving us, I'll expect to see you at the radiation laboratory tomorrow. Another thing-I don't often recommend this, but it might do you good to get drunk tonight."

King had signed to Shard to remain after the young man left. Once the door was closed he turned back to the psychiatrist. "There goes another one-and one of the best. Doctor, what am I going to do?"

Silard pulled at his cheek. "I don't know," he admitted. "The hell of it is, Harper's absolutely right. It does increase the strain on them to know that they are being watched... and yet they have to be watched. Your psychiatric staff isn't doing too well, either. It makes us nervous to be around the Big Bomb... the more so because we don't understand it. And it's a strain on us to be hated and despised as we are. Scientific detachment is difficult under such conditions; I'm getting jumpy myself."

King ceased pacing the floor and faced the doctor. "But there must be some solution-" he insisted.

Silard shook his head. "It's beyond me, Superintendent. I see no solution from the standpoint of psychology."

"No? Hmm-Doctor, who is the top man in your field?" "Eh?"

"Who is the recognized number-one man in handling this sort of thing?"

"Why, that's hard to say. Naturally, there isn't any one, leading psychiatrist in the world; we specialize too much." I know what you mean, though. You don't want the best industrial temperament psychometrician; you want the" best all-around man for psychoses non-lesional and situational. That would be Lentz."

"Go on."

"Well- He covers the whole field of environment adjustment. He's the man that correlated the theory of optimum tonicity with the relaxation technique that Korzybski had developed empirically. He actually worked under, Korzybski himself, when he was a young student-it's the only thing he's vain about."

"He did? Then he must be pretty old; Koxzybski died in- What year did he die?"

"I started to say that you must know his work in symbology-theory of abstraction and calculus of statement, all that sort of thing-because of its applications to engineering and mathematical physics."

"That Lentz-yes, of course. But I had never thought of him as a psychiatrist."

"No, you wouldn't, in your field. Nevertheless, we are inclined to credit him with having done as much to check and reduce the pandemic neuroses of the Crazy Years as any other man, and more than any man left alive."

"Where is he?"

"Why, Chicago, I suppose. At the Institute."

"Get him here."

"Get him down here. Get on that visiphone and locate him. Then have Steinke call the Port of Chicago, and hire a stratocar to stand by for him. I want to see him as soon as possible-before the day is out." King sat up in his chair with the air of a man who is once more master of himself and the situation. His spirit knew that warming replenishment that comes only with reaching a decision. The harassed expression was gone.

Silard looked dumbfounded. "But, superintendent," he expostulated, "you can't ring for Doctor Lentz as if he were a junior clerk. He's-he's Lentz."

"Certainly-that's why I want him. But I'm not a neurotic clubwoman looking for sympathy, either. He'll come. If necessary, turn on the heat from Washington. Have the White House call him. But get him here at once. Move!" King strode out of the office.

When Erickson came off watch he inquired around and found that Harper had left for town. Accordingly, he dispensed with dinner at the base, shifted into "drinkin'clothes", and allowed himself to be dispatched via tube to Paradise. Paradise, Arizona, was a hard little boom town, which owed its existence to the breeder plant. It was dedicated exclusively to the serious business of detaching the personnel of the plant from their inordinate salaries. In this worthy project they received much cooperation from the plant personnel themselves, each of whom was receiving from twice to ten times as much money each payday as he had ever received in any other job, and none of whom was certain of living long enough to justify saving for old' age. Besides, the company carried a sinking fund in Manhattan for their dependents; why be stingy?

It was claimed, with some truth, that any entertainment or luxury obtainable in New York City could be purchased in Paradise. The local chamber of commerce had

appropriated the slogan of Reno, Nevada, "Biggest Little City in the World." The Reno boosters retaliated by claiming that, while a town that close to the atomic breeder plant undeniably brought thoughts of death and the hereafter; Hell's Gates would be a more appropriate name.

Erickson started making the rounds. There were twenty-seven places licensed to sell liquor in the six blocks of the main street of Paradise. He expected to find Harper in one of them, and, knowing the man's habits and tastes, he expected to find him in the first two three he tried.

He was not mistaken. He found Harper sitting alone a table in the rear of deLancey's Sans Souci Bar. Lancey's was a favorite of both of them. There was old-fashioned comfort about its chrome-plated bar red leather furniture that appealed to them more than the spectacular fittings of the up-to-the-minute place. DeLancey was conservative; he stuck to indirect light and soft music; his hostesses were required to be fully clothed, even in the evening. The fifth of Scotch in front of Harper was about two thirds full. Erickson shoved three fingers in front Harper's face and demanded, "Count!"

"Three," announced Harper. "Sit down, Gus."

"That's correct," Erickson agreed, sliding his big frame into a low-slung chair. "You'll do-for now. What the outcome?"

"Have a drink. Not," he went on, "that this Scotch any good. I think Lance has taken to watering it. I surrendered, horse and foot."

"Lance wouldn't do that-stick to that theory anti you'll sink in the sidewalk up to your knees. How come you capitulated? I thought you planned to beat 'em about the head and shoulders, at least." ' I

"I did," mourned Harper, "but, cripes, Gus, the chief is right. If a brain mechanic says you're punchy, he has got to back him up, and take you off the watch list. The chief can't afford to take a chance."

"Yeah, the chief's all right, but I can't learn to love our dear psychiatrists. Tell you what-let's find us one, and, see if he can feel pain. I'll hold him while you slug 'im."

"Oh, forget it, Gus. Have a drink."

"A pious thought-but not Scotch. I'm going to have a martini; we ought to eat pretty soon."

"I'll have one, too."

"Do you good." Erickson lifted his blond head and bellowed, "Israfell"

A large, black person appeared at his elbow. "Mistuh Erickson! Yes, sub!"

"Izzy, fetch two martinis. Make mine with Italian." He turned back to Harper. "What are you going to do now, Cal?"

"Radiation laboratory."

"Well, that's not so bad. I'd like to have a go at the matter of rocket fuels 'myself. I've got some ideas."

Harper looked mildly amused. "You mean atomic fuel for interplanetary flight? That problem's pretty well exhausted. No, son, the ionosphere is the ceiling until we think up something better than rockets. Of course, you could mount a pile in a ship, and figure out some jury rig to convert some of its output into push, but where does that get you? You would still have a terrible mass-ratio because of the shielding and I'm betting you couldn't convert one percent into thrust. That's disregarding the question of getting the company to lend you a power pile for anything that doesn't pay dividends."

Erickson looked balky. "I don't concede that you've covered all the alternatives. What have we got? The early rocket boys went right ahead trying to build better rockets, serene in the belief that, by the time they could build rockets good enough to fly to the moon, a fuel would be perfected that would do the trick. And they did build ships that were good enough-you could take any ship that makes the Antipodes run, and refit it for the moon-if you had a fuel that was adequate. But they haven't got it.

"And why not? Because we let 'em down, that's why. Because they're still depending on molecular energy, on chemical reactions, with atomic power sitting right here in our laps. It's not their fault-old D. D. Harriman had Rockets Consolidated underwrite the whole first issue of Antarctic Pitchblende, and took a big slice of it himself, in the expectation that we would produce something usable in the way of a concentrated rocket fuel. Did we do it? Like hell! The company went hog-wild for immediate commercial exploitation, and there's no atomic rocket fuel yet."

"But you haven't stated it properly," Harper objected. "There are just two forms of atomic power-available, radioactivity and atomic disintegration. The first is too slow; the energy is there, but you can't wait years for it to come out-not in a rocket ship. The second we can only manage in a large power plant. There you are-stymied."

"We haven't really tried," Erickson answered. "The power is there; we ought to give 'em a decent fuel"

"What would you call a 'decent fuel'?"

Erickson ticked it off. "A small enough critical mass so that all, or almost all, the energy could be taken up as heat by the reaction mass-I'd like the reaction mass to be ordinary water. Shielding that would have to be no more than a lead and cadmium jacket. And the whole thing controllable to a fine point."

Harper laughed. "Ask for Angel's wings and be done with it. You couldn't store such fuel in a rocket; it would~ Set itself off before it reached the jet chamber."

Erickson's Scandinavian stubbornness was just gathering for another try at the argument when the waiter arrived with the drinks. He set them down with a triumphant flourish. "There you are, suh!"

"Want to roll for them, Izzy?" Harper inquired.

"Don' mind if I do."

The Negro produced a leather dice cup and Harper rolled. He selected his combinations with care and managed to get four aces and jack in three rolls. Israfel took the cup. He rolled in the grand manner with a backwards twist to his wrist. His score finished at five kings, and he courteously accepted the price of six drinks. Harper stirred the engraved cubes with his forefinger.

"Izzy," he asked, "are these the same dice I rolled with?"

"Why, Mistuh Harper!" The black's expression was pained.

"Skip it," Harper conceded. "I should know better than to gamble with you. I haven't won a roll from you in six weeks. What did you start to say, Gus?"

"I was just going to say that there ought to be a better way to get energy out of-" But they were joined again, this time by something very seductive in an evening gown that appeared to have been sprayed on her lush figure. She was young, perhaps nineteen or twenty. "You boys lonely?" she asked as she flowed into a chair.

"Nice of you to ask, but we're not," Erickson denied with patient politeness. He jerked a thumb at a solitary figure seated across the room. "Go talk to Hannigan; he's not busy."

She followed his gesture with her eyes, and answered with faint scorn, "Him? He's no use. He's been like that for three weeks-hasn't spoken to a soul. If you ask me, I'd say that he was cracking up."

"That so?" he observed noncommittally. "Here-" He fished out a five-dollar bill and handed it to her. "Buy yourself a drink. Maybe we'll look you up later."

"Thanks, boys." The money disappeared under her clothing, and she stood up. "Just ask for Edith."

"Hannigan does look bad," Harper considered, noting the brooding stare and apathetic attitude, "and he has been awfully stand-offish lately, for him. Do you suppose we're obliged to report him?"

"Don't let it worry you," advised Erickson, "there's a spotter on the job now. Look." Harper followed his companion's eyes and recognized Dr. Mott of the psychological staff. He was leaning against the far end of the bar and nursing a tall glass, which gave him protective coloration. But his stance was such that his field of vision included not only Hannigan, but Erickson and Harper as well.

"Yeah, and he's studying us as well," Harper added.' "Damn it to hell, why does it make my back hair rise just to lay eyes on one of them?"

The question was rhetorical, Erickson ignored it. "Let's get out of here," he suggested, "and have dinner some where else."

"O.K."

DeLancey himself waited on them as they left. "Going so soon, gentlemen?" he asked, in a voice that implied that their departure would leave him no reason to stay open. "Beautiful lobster thermidor tonight. If you do not like it, you need not pay." He smiled brightly.

"No sea food, Lance," Harper told him, "not tonight. Tell me-why do you stick around here when you know that the pile is bound to get you in the long run? Aren't you afraid of it?"

The tavern keeper's eyebrows shot up. "Afraid of this pile? But it is my friend!"

"Makes you money, eh?"

"Oh, I do not mean that." He leaned toward them confidentially. "Five years ago I come here to make some money quickly for my family before my cancer of the stomach, it kills me. At the clinic, with the wonderful new radiants you gentlemen make with the aid of the Big Bomb, I am cured-I live again. No, I am not afraid of the pile; it is my good friend."

"Suppose it blows up?"

"When the good Lord needs me, he will take me." He crossed himself quickly.

As they turned away, Erickson commented in a low voice to Harper. "There's your answer, Cal-if all us engineers had his faith, the job wouldn't get us down."

Harper was unconvinced. "I don't know," be mused. 'I don't think it's faith; I think it's lack of imagination and knowledge."

Notwithstanding King's confidence, Lentz did not show up until the next day. The superintendent was subconsciously a little surprised at his visitor's appearance. He had pictured a master psychologist as wearing flowing hair, an imperial, and having piercing

black eyes. But this man was not overly tall, was heavy in his framework, and fat-almost gross. He might have been a butcher. Little, piggy, faded-blue eyes peered merrily out from beneath shaggy blond brows. There was no hair anywhere else on the enormous skull, and the ape-like jaw was smooth and pink. He was dressed in mussed pajamas of unbleached linen. A long cigarette holder jutted permanently from one corner of a wide mouth, widened still more by a smile which suggested unmalicious amusement at the worst that life, or men, could do. He had gusto. King found him remarkably easy to talk to.

At Lentz' suggestion the Superintendent went first into the history of atomic power plants, how the fission of the uranium atom by Dr. Otto Hahn in December, 1938, had opened up the way to atomic power. The door was opened just a crack; the process to be self perpetuating and commercially usable required an enormously greater knowledge than there was available in the entire civilized world at that time.

In 1938 the amount of separated uranium-235 in the world was not the mass of the head of a pin. Plutonium was unheard of. Atomic power was abstruse theory and a single, esoteric laboratory experiment. World War II, the Manhattan Project, and Hiroshima changed that; by late 1945 prophets were rushing into print with predictions of atomic power, cheap, almost free atomic power, for everyone in a year or two.

It did not work out that way. The Manhattan Project had been run with the single-minded purpose of making weapons; the engineering of atomic power was still in the future.

The far future, so it seemed. The uranium piles used to make the atom bomb were literally no good for commercial power; they were designed to throw away power as a useless byproduct, nor could the design of a pile, once in operation, be changed. A design-on paper-for an economic, commercial power pile could be made, but it had two serious hitches. The first was that such a pile would give off energy with such fury, if operated at a commercially satisfactory level, that there was no known way of accepting that energy and putting it to work.

This problem was solved first. A modification of the Douglas-Martin power screens, originally designed to turn the radiant energy of the sun (a natural atomic power pile itself) directly into electrical power, was used to receive the radiant fury of uranium fission and carry it away as electrical current.

The second hitch seemed to be no hitch at all. An "enriched" pile-one in which U-235 or plutonium had been added to natural uranium-was a quite satisfactory source of commercial power. We knew how to get U-235 and plutonium; that was the primary accomplishment of the Manhattan Project.

Or did we know how? Hanford produced plutonium; Oak Ridge extracted U-235, true-but the Hanford piles used more U-235 than they produced plutonium and Oak Ridge produced nothing but merely separated out the 7/10 of one percent of U-235 in natural uranium and "threw away" the 99%-plus of the energy which was still locked in the discarded U-238. Commercially ridiculous, economically fantastic!

But there was another way to breed plutonium, by means of a high-energy, unmoderated pile of natural uranium somewhat enriched. At a million electron volts or more U-238 will fission at somewhat lower energies it turns to plutonium. Such a pile supplies its own "fire" and produces more "fuel" than it uses; it could breed fuel for many other power piles of the usual moderated sort.

But an unmoderated power pile is almost by definition an atom bomb.

The very name "pile" comes from the pile of graphite bricks and uranium slugs set up in a squash court at the University of Chicago at the very beginning of the Manhattan Project. Such a pile, moderated by graphite or heavy water, cannot explode.

Nobody knew what an unmoderated, high-energy pile might do. It would breed plutonium in great quantities- but would it explode? Explode with such violence as to make the Nagasaki bomb seem like a popgun?

Nobody knew.

In the meantime the power-hungry technology of the United States grew still more demanding. The Douglas Martin sunpower screens met the immediate crisis when oil became too scarce to be wasted as fuel, but sunpower was limited to about one horsepower per square yard and was at the mercy of the weather.

Atomic power was needed-demanded.

Atomic engineers lived through the period in an agony of indecision. Perhaps a breeder pile could be controlled. Or perhaps if it did go out of control it would simply blow itself apart and thus extinguish its own fires. Perhaps it would explode like several atom bombs but with low efficiency. But it might-it just might-explode its whole mass of many tons of uranium at once and destroy the human race in the process.

There is an old story, not true, which tells of a scientist who had made a machine which would instantly destroy the world, so he believed, if he closed one switch. He wanted to know whether or not lie was right. So he closed the switch-and never found out.

The atomic engineers were afraid to close the switch.

"It was Destry's mechanics of infinitesimals that showed a way out of the, dilemma," King went on. "His equations appeared to predict that such an atomic explosion, once started, would disrupt the molar mass enclosing it so rapidly that neutron loss through the outer surface of the fragments would dampen the progression of the atomic explosion to zero before complete explosion could be reached. In an atom bomb such damping actually occurs.

"For the mass we use in the pile, his equations predicted possible force of explosion one-seventh of one percent of the force of complete explosion. That alone, of course, would be incomprehensibly destructive-enough to wreck this end of the state. Personally, I've never been sure that is all that would happen."

"Then why did you accept this job?" inquired Lentz.

King fiddled with items on his desk before replying. "I couldn't turn it down, doctor I couldn't. If I had refused, they would have gotten someone else-and it was an opportunity that comes to a physicist once in history."

Lentz nodded. "And probably they would- have gotten someone not as competent. I understand, Dr. King-you were compelled by the 'truth-tropism' of the scientist. He must go where the data is to be found, even if it kills him. But about this fellow Destry, I've never liked his mathematics; he postulates too much."

King looked up in quick surprise, then recalled that this was the man who had refined and given rigor to the calculus of statement. "That's just the hitch," he agreed. "His work is brilliant, but I've never been sure that his predictions were worth the paper they were written on. Nor, apparently," he added bitterly, "do my junior engineers."

He told the psychiatrist Of the difficulties they had had with personnel, of how the most carefully selected men would, sooner or later, crack under the strain. "At first I thought it might be some degenerating effect from the neutron radiation that leaks out through the shielding, so we improved the screening and the personal armor. But it didn't help. One young fellow who had joined us after the new screening was installed became violent at dinner one night, and insisted that a pork chop was about to explode. I hate to think of what might have happened if he had been on duty at the pile when he blew up."

The inauguration of the system of constant psychological observation had greatly reduced the probability of acute danger resulting from a watch engineer cracking up, but King was forced to admit that the system was not a success; there had actually been a marked increase in psychoneuroses, dating from that time.

"And that's the picture, Dr. Lentz. It gets worse all the time. It's getting me now. The strain is telling on me; I can't sleep, and I don't think my judgment is as good as it used to be-I have trouble making up my mind, of coming to a decision. Do you think you can do anything for us?"

But Lentz had no immediate relief for his anxiety. "Not so fast, superintendent," he countered. "You have given me the background, but I have no real data as yet. I must look around for a while, smell out the situation for myself, talk to your engineers, perhaps have a few drinks with them, and get acquainted. That is possible, is it not? Then in a few days, maybe, we know where we stand."

King had no alternative but to agree.

"And it is well that your young men do not know what I am here for. Suppose I am your old friend, a visiting physicist, eh?"

"Why, yes-of course. I can see to it that that idea gets around. But say-" King was reminded again of something that had bothered him from the time Silard had first suggested Lentz' name. "May I ask a personal question?"

The merry eyes were undisturbed. "Go ahead."

"I can't help but be surprised that one man should attain eminence in two such widely differing fields as psychology and mathematics. And right now I'm perfectly convinced of your ability to pass yourself off as a physicist. I don't understand it."

The smile was more amused, without being in the least patronizing, nor offensive. "Same subject," he answered.

"Eh? How's that-"

"Or rather, both mathematical physics and psychology are branches of the same subject, symbology. You are a specialist; it' would not necessarily come to your attention."

"I still don't follow you."

"No? Man lives in a world of ideas. Any phenomenon is so complex that he cannot possibly grasp the whole of it. He abstracts certain characteristics of a given phenomenon as an idea, then represents that idea as a symbol, be it a word or a mathematical sign. Human reaction is almost entirely reaction to symbols, and only negligibly to phenomena. As a matter Of fact," he continued, removing the cigarette holder from his mouth and settling into his subject, "it can be demonstrated that the human mind can think only in terms of symbols.

"When we think, we let symbols operate on other symbols in certain, set fashions-rules of logic, or rules of mathematics. If the symbols have been abstracted so that they

are structurally similar to the phenomena they stand for, and if the symbol operations are similar in structure and order to the operations of phenomena in the ~real~ world, we think sanely. If our logic-mathematics, or our word-symbols, have been poorly chosen, we think not sanely.

"In mathematical physics you are concerned with making your symbology fit physical phenomena. In psychiatry I am concerned with precisely the same thing, except that I am more immediately concerned with the man who does the thinking than with the phenomena he is thinking about. But the same subject, always the dame subject."

"We're not getting anyplace, Gus." Harper put down his slide rule and frowned.

"Seems like it, Cal," Erickson grudgingly admitted.

"Damn it, though-there ought to be some reasonable way of tackling the problem. What do we need? Some form of concentrated, controllable power for rocket fuel. What have we got? Power galore through fission. There must be some way to bottle that power, and serve it out when we need it-and the answer is some place in one of the radioactive~ series. I know it." He stared glumly around the laboratory as if expecting to find the answer written somewhere on the lead-sheathed walls.

"Don't be so down in the mouth about it. You've got me convinced there is an answer; let's figure out how to find it. In the first place the three natural radioactive series are out, aren't they?"

"Yes ... at least we had agreed that all that ground had been fully covered before."

"Okay; we have to assume that previous investigators have done what their notes show they have done-otherwise we might as well not believe anything, and start checking on everybody from Archimedes to date. Maybe that is indicated, but Methuselah himself couldn't carry out such an assignment. What have we got left?"

"Artificial radioactives."

"All right. Let's set up a list of them, both those that have been made up to now, and those that might possibly be made in the future. Call that our group-or rather, field, if you want to be pedantic about definitions. There are a limited number of operations that can be performed on each member of the group, and on the members taken in combination. Set it up."

Erickson did so, using the curious curlicues of the calculus of statement. Harper nodded. "All right-expand it."

Erickson looked up after a few moments, and asked, "Cal, have you any idea how many terms there are in the expansion?"

"No. . . hundreds, maybe thousands, I suppose."

"You're conservative. It reaches four figures without considering possible new radioactives. We couldn't finish such a research in a century. He chucked his pencil down and looked morose.

Cal Harper looked at him curiously, but with sympathy. "Gus," he said gently, "the job isn't getting you, too, is it?"

"I don't think so. Why?"

"I never saw you so willing to give up anything before. Naturally you and I will never finish any such job, but at the very worst we will have eliminated a lot of wrong answers for somebody else. Look at Edison-sixty years of experimenting, twenty hours a day, yet he never found out the one thing he was most interested in knowing. I guess if he could take it, we can."

Erickson pulled out of his funk to some extent. "I suppose so," he agreed. "Anyhow, maybe we could work out some techniques for carrying a lot of experiments simultaneously."

Harper slapped him on the shoulder. "That's the ol' fight. Besides, we may not need to finish the research, or anything like it, to find a satisfactory fuel. The way I see it, there are probably a dozen, maybe a hundred, right answers. We may run across one of them any day. Anyhow, since you're willing to give me a hand with it in your off watch time, I'm game to peck away at it till hell freezes."

Lentz puttered around the plant and the administration center for several days, until he was known to everyone by sight He made himself pleasant and asked questions. He was soon regarded as a harmless nuisance, to be tolerated because he was a friend of the superintendent. He even poked his nose into the commercial power end of the plant, and had the radiation-to-electric-power sequence explained to him in detail. This alone would have been sufficient to disarm any suspicion that he might be a psychiatrist, for the staff psychiatrists paid no attention to the hard-bitten technicians of the power-conversion unit. There was no need to; mental instability on their part could not affect the pile, nor were they subject to the strain of social responsibility. Theirs was simply a job personally dangerous, a type of strain strong men have been inured to since the jungle.

In due course he got around to the unit of the radiation laboratory set aside for Calvin Harper's use. He rang the bell and waited. Harper answered the door, his antiradiation helmet shoved back from his face like some grotesque sunbonnet. "What is it?" he asked. "Oh-it's you, Doctor Lentz. Did you want to see me?"

"Why, yes, and no," the older man answered, "I was just looking around the experimental station and wondered what you do in here. Will I be in the way?"

"Not at all. Come in. Gus!"

Erickson got up from where he had been fussing over the power leads to their trigger a modified betatron rather than a resonant accelerator. "Hello."

"Gus, this is Doctor Lentz-Gus Erickson."

"We've met," said Erickson, pulling off his gauntlet to shake hands. He had had a couple of drinks with Lentz in town and considered him a "nice old duck." "You're just between shows, but stick around and we'll start another run-not that there is much to see."

While Erickson continued with the set-up, Harper conducted Lentz around the laboratory, explaining the line of research they were conducting, as happy as a father showing off twins. The psychiatrist listened with one ear and made appropriate comments while he studied the young scientist for signs of the instability he had noted to be recorded against him.

"You see," Harper explained, oblivious to the interest in himself, "we are testing radioactive materials to see if we can produce disintegration of the sort that takes place in the pile, but in a minute, almost microscopic, mass. If we are successful, we can use the breeder pile to make a safe, convenient, atomic fuel for rockets-or for anything else." He went on to explain their schedule of experimentation.

"I see," Lentz observed politely. "What element are you examining now"

Harper told him. "But it's not a case of examining one element-we've finished Isotope II of this element with negative results. Our schedule calls next for running the same test on Isotope V. Like this." He hauled out a lead capsule, and showed the label to Lentz. He hurried away to the shield around the target of the betatron, left open by

Erickson. Lentz saw that he had opened the capsule, and was performing some operation on it with 'a long pair of tongs in a gingerly manner, having first lowered his helmet. Then he closed and clamped the target shield.

"Okay, Gus?" he called out. "Ready to roll?"

"Yeah, I guess so," Erickson assured him, coming around from behind the ponderous apparatus, and rejoining them. They crowded behind a thick metal and concrete shield that cut them off from direct sight of the set up.

"Will I need to put- on armor?" inquired Lentz.

"No," Erickson reassured him, "we wear it because we are around the stuff day in and day out. You just stay behind the shield and you'll be all right."

Erickson glanced at Harper, who nodded, and fixed his, eyes on a panel of instruments mounted behind the shield. Lentz saw Erickson press a push button at the top of the board, then heard a series of relays click on the far side of~ the shield. There was a short moment of silence.

The floor slapped his feet like some incredible bastinado. The concussion that beat on his ears was so intense that it paralyzed the auditory nerve almost before it could be recorded as sound. The air-conducted concussion wave flailed every inch of his body with a single, stinging, numbing blow. As he picked himself up, he found he was trembling uncontrollably and realized, for the first time, that he was getting old.

Harper was seated on the floor and had commenced to bleed from the nose. Erickson had gotten up, his cheek was cut. He touched a hand to the wound, then stood there, regarding the blood on his fingers with a puzzled expression on his face.

"Are you hurt?" Lentz inquired inanely. "What happened?"

Harper cut in. "Gus, we've done it! We've done it! Isotope Five has turned the trick!"

Erickson looked still more bemused. "Five?" he said stupidly, "-but that wasn't Five, that was Isotope IL I put it in myself."

"You put it in? I put it in! It was Five, I tell you!"

They stood staring at each other, still confused by the explosion, and each a little annoyed at the boneheaded stupidity the other displayed in the face of the obvious. Lentz diffidently interceded.

"Wait a minute, boys," he suggested, "maybe there's a reason-Gus, you placed a quantity of the second isotope in the receiver?"

"Why, yes, certainly. I wasn't satisfied with the last run, and I wanted to check it."

Lentz nodded. "It's my fault, gentlemen," he admitted ruefully. "I came in, disturbed your routine, and both of you charged the receiver. I know Harper did, for I saw him do it with Isotope V. I'm sorry."

Understanding broke over Harper's face, and he slapped the older man on the shoulder. "Don't be sorry," he laughed; "you can come around to our lab and help us make mistakes anytime you feel in the mood- Can't he, Gus? This is the answer, Doctor Lentz, this is it!"

"But," the psychiatrist pointed out, "you don't know which isotope blew up."

"Nor care," Harper supplemented. "Maybe it was both, taken together. But we will know-this business is cracked now; we'll soon have it open." He gazed happily around at the wreckage.

In spite of Superintendent King's anxiety, Lentz refused to be hurried in passing judgment on the situation. Consequently, when be did present himself at King's office, and announced that he was ready to report, King was pleasantly surprised as well as relieved. "Well, I'm delighted," he said. "Sit down, doctor, sit down. Have a cigar. What do we do about it?"

But Lentz stuck to his perennial cigarette, and refused to be hurried. "I must have some information first: how important," he demanded, "is the power from your plant?"

King understood the implication at once. "If you are thinking about shutting down - the plant for more than a limited period, it can't be done."

"Why not? If the figures supplied me are correct, your power output is less than thirteen percent of the total power used in the country."

"Yes, that is true, but we also supply another thirteen percent second hand through the plutonium we breed here-and you haven't analyzed the items that make up the balance. A lot of it is domestic power which householders get from sunscreens located on their roofs. Another big slice is power for the moving roadways-that's sunpower again. The portion we provide here directly or indirectly is the main power source for most of the heavy industries-steel, plastics, lithics, all kinds of manufacturing and processing. You might as well cut the heart out of a man-"

"But the food industry isn't basically dependent on you?" Lentz persisted.

"No ... Food isn't basically a power industry though we do supply a certain percentage of the power used in processing. I see your point, and will go on, concede that transportation, that is to say, distribution food, could get along without us. But good heavens, Doctor, you can't stop atomic power without causing the biggest panic this country has ever seen. It's the keystone our whole industrial system."

"The country has lived through panics before, and we got past the oil shortage safely."

"Yes because sunpower and atomic power had to take the place of oil. You don't realize what would mean, Doctor. It would be worse than a war; in system like ours, one thing depends on another. If you cut off the heavy industries all at once, everything else stops too."

"Nevertheless, you had better dump the pile." The uranium in the pile was molten, its temperature bell greater than twenty-four hundred degrees centigrade. The pile could be dumped into a group of small containers when it was desired to shut it down. The mass into one container would be too small to maintain progressive atomic disintegration.

Icing glanced involuntarily at the glass-enclosed relay mounted on his office wall, by which he, as well as the engineer on duty, could dump the pile, if need be. "But ~ couldn't do that ... or rather, if I did, the plant wouldn't stay shut down. The directors would simply replace me with someone who would operate it."

"You're right, of course." Lentz silently considered the situation for some time, then said, "Superintendent, will you order a car to fly me back to Chicago?"

"You're going, doctor?"

"Yes." He took the cigarette holder from his face, and, for once, the smile of Olympian detachment was gone completely. His entire manner was sober, even tragic.

"Short of shutting down the plant, there is no solution to your problem-none whatsoever!"

"I owe you a full explanation," he continued, presently.

"You are confronted here with recurring instances of situational psychoneurosis. Roughly, the symptoms manifest themselves as anxiety neurosis, or some form of hysteria.

The partial amnesia of your secretary, Steinke, is a good example of the latter. He might be cured with shock technique, but it would hardly be a kindness, as he has achieved a stable adjustment which puts him beyond the reach of the strain he could not stand.

"That other young fellow, Harper, whose blowup was the immediate cause of you sending for me, is an anxiety case. When the cause of the anxiety was eliminated from his matrix, he at once regained full sanity. But keep a close watch on his friend, Erickson-

"However, it is the cause, and prevention, of situational psychoneurosis we are concerned with here, rather than the forms in which it is manifested. In plain language, psychoneurosis situational simply refers to the common fact that, if you put a man in a situation that worries him more than he can stand, in time he blows up, one way or another.

"That is precisely the situation here. You take sensitive, intelligent young men, impress them with the fact that a single slip on their part, or even some fortuitous circumstance beyond their control, will result in the death of God knows how many other people, and then expect them to remain sane. It's ridiculous-impossible!"

"But good heavens, doctor!-there must be some answer- There must!" He got up and paced around the room. Lentz noted, with pity, that King himself was riding the ragged edge of the very condition they were discussing.

"No," he said slowly. "No ... let me explain. You don't dare entrust control to less sensitive, less socially conscious men. You might as well turn the controls over to a mindless idiot. And to psychoneurosis situational there are but two cures. The first obtains when the psychosis results from a misevaluation of environment. That cure calls for semantic readjustment. One assists the patient to evaluate correctly his environment. The worry disappears because there never was a real reason for worry in the situation itself, but simply in the wrong meaning the patient's mind had assigned to it.

"The second case is when the patient has correctly evaluated the situation, and rightly finds in it cause for extreme worry. His worry is perfectly sane and proper, but he cannot stand up under it indefinitely; it drives him crazy. The only possible cure is to change the situation. I have stayed here long enough to assure myself that such is the condition here. You engineers have correctly evaluated the public danger of this thing, and it will, with dreadful certainty, drive all of you crazy!

"The only possible solution is to dump the pile-and leave it dumped."

King had continued his nervous pacing of the floor, as if the walls of the room itself were the cage of his dilemma. Now he stopped and appealed once more to the psychiatrist. "Isn't there anything I can do?"

"Nothing to cure. To alleviate-well, possibly."

"How?"

"Situational psychosis results from adrenalin exhaustion. When a man is placed under a nervous strain, his adrenal glands increase their secretion to help compensate for the strain. If the strain is too great and lasts too long, the adrenals aren't equal to the task, and he cracks. That is what you have here. Adrenalin therapy might stave of a mental breakdown, but it most assuredly would hasten a physical breakdown. But that would be

safer from a viewpoint of public welfare-even though it assumes that physicists are expendable!

"Another thing occurs to me: If you selected any new watch engineers from the membership of churches that practice the confessional, it would increase the length of their usefulness."

King was plainly surprised. "I don't follow you."

"The patient unloads most of his worry on his confessor, who is not himself actually confronted by the situation, and can stand it. That is simply an ameliorative, however. I am convinced that in this situation, eventual insanity is inevitable. But there is a lot of good sense in the confessional," he mused. "It fills a basic human heed. I think that is why the early psychoanalysts were so surprisingly successful, for all their limited knowledge." He fell silent for a while, then added, "If you will be so kind as to order a stratocab for me-"

"You've nothing more to suggest?'

"No. You had better turn your psychological staff loose on means of alleviation; they're able men, all of them."

King pressed a switch, and spoke briefly to Steinke. Turning back to Lentz, he said, "You'll wait here until your car is ready?"

Lentz judged correctly that King desired it, and agreed.

Presently the tube delivery on King's desk went "Ping!"

The superintendent removed a small white pasteboard, a calling card. He studied it with surprise and passed it over to Lentz. "I can't imagine why he should be calling on me," he observed, and added, "Would you like to meet him?"

Lentz read:

THOMAS P. HARRINGTON
Captain (Mathematics)
United States Navy
Director
U.S. Naval Observatory

"But I do know him," he said. "I'd be very pleased to see him."

Harrington was a man with something on his mind. He seemed relieved when Steinke had finished ushering him in and had returned to the outer office. He commenced to speak at once, turning to Lentz, who was nearer to him than King.

"You're King? Why, Doctor Lentz! What are you doing here?"

"Visiting," answered Lentz, accurately - but incompletely, as he shook hands. "This is Superintendent King over here. Superintendent King-Captain Harrington."

"How do you do, Captain-it's a pleasure to have you here."

"It's an honor to be here sir."

"Sit down?"

"Thanks." He accepted a chair, and laid a briefcase at a corner of King's desk. "Superintendent, you are entitle to an explanation as to why I have broken in on you Ilk this-"

"Glad to have you." In fact, the routine of formal politeness was an anodyne to King's frayed nerves.

"That's kind of you, but that secretary chap, the one that brought me in here, would it be too much to as for you to tell him to forget my name? I know it seem strange-"

"Not at all." King was mystified, but willing to grab any reasonable request of a distinguished colleague in science. He summoned Steinke to the interoffice visiphone and gave him his orders.

Lentz stood up, and indicated that he was about to leave. He caught Harrington's eye. "I think you want private palaver, Captain."

King looked from Harrington to Lentz, and back at Harrington. The astronomer showed momentary indecision, then protested, "I have no objection at all myself it's up to Doctor King. As a matter of fact," he added," might be a very good thing if you did sit in on it."

"I don't know what it is, Captain," observed Kin~ "that you want to see me about, but Doctor Lentz is a ready here in a confidential capacity."

"Good! Then that's settled .. I'll get right down I business. Doctor King, you know Destry's mechanics infinitesimals?"

"Naturally." Lentz cocked a brow at King, who chose to ignore it.

"Yes, of course. Do you remember - theorem six, an the transformation between equations thirteen and fourteen?"

"I think so, but I'd want to see them." King got up and went over to a bookcase. Harrington stayed him with a hand.

"Don't bother. I have them here." He hauled out a key, unlocked his briefcase, and drew out a large, much thumbed, loose-leaf notebook. "Here. You, too, Doctor Lentz. Are you familiar with this development?"

Lentz nodded. "I've had occasion to look into them."

"Good-I think it's agreed that the step between thirteen and fourteen is the key to the whole matter. Now the change from thirteen to fourteen looks perfectly valid and would be, in some fields. But suppose we expand it to show every possible phase of the matter, every link in the chain of reasoning."

He turned a page, and showed them the same two equations broken down into nine intermediate equations. He placed a finger under an associated group of mathematical symbols. "Do you see that? Do you see what that implies?" He peered anxiously at their faces.

King studied it, his lips moving. "Yes. .. . I -believe I do see. 'Odd... I never looked at it just that way before- yet I've studied those equations until I've dreamed about them." He turned to Lentz. "Do you agree, Doctor?"

Lentz nodded slowly. "I believe so ... Yes, I think I may say so."

Harrington should have been pleased; he wasn't. "I had hoped you could tell me I was wrong," he said, almost petulantly, "but I'm afraid there is no further doubt about it. Doctor Destry included an assumption valid in molar physics, but for which we have absolutely no assurance in atomic physics. I suppose you realize what this means to you, Doctor King?"

King's voice was a dry whisper. "Yes," he said, "yes it means that if the Big Bomb out there ever blows up, we must assume that it will all go up all at once, rather than the way Destry predicted ... and God help the human race!"

Captain Harrington cleared his throat to break the silence that followed. "Superintendent," he said, "I would not have ventured to call had it been simply a matter of disagreement as to interpretation of theoretical predictions-"

"You have something more to go on?"

"Yes, and no. Probably you gentlemen think of the Naval Observatory as being exclusively preoccupied with ephemeredes and tide tables. In a way you would be right-but we still have some time to devote to research as long as it doesn't cut into the appropriation. My special interest has always been lunar theory.

"I don't mean lunar ballistics," he continued, "I mean the much more interesting problem of its origin and history, the problem the younger Darwin struggled with, as well as my Illustrious predecessor, Captain T. J. J. See. I think that it is obvious that any theory of lunar origin and history must take into account the surface features of the moon-especially the mountains, the craters, that mark its face so prominently."

He paused momentarily, and Superintendent King put in, "Just a minute, Captain-I may be stupid, or perhaps I missed something, but-is there a connection between what we were discussing before and lunar theory?"

"Bear with me for a few moments, Doctor King," Harrington apologized; "there is a connection-at least, I'm afraid there is a connection-but I would rather present my points in their proper order before making my conclusions." They granted him an alert silence; he went on:

"Although we are in the habit of referring to the 'craters' of the moon, we know they are not volcanic craters. Superficially, they follow none of the rules of terrestrial volcanoes in appearance or distribution, but when Rutter came out in 952 with his monograph on the dynamics of vulcanology, he proved rather conclusively that the lunar craters could not be caused by anything that we know as volcanic action.

"That left the bombardment theory as the simplest hypothesis. It looks good, on the face of it, and a few minutes spent throwing pebbles in to a patch of mud will convince anyone that the lunar craters could have been formed by falling meteors.

"But there are difficulties. If the moon was struck so repeatedly, why not the earth? It hardly seems necessary to mention that the earth's atmosphere would be no protection against masses big enough to form craters like Endymion, or Plato. And if they fell after the moon was a dead world while the earth was still young enough to change its face and erase the marks of bombardment, why did the meteors avoid so nearly completely the dry basins we call the seas?

"I want to cut this short; you'll find the data and the mathematical investigations from the data here in my notes. There is one other major objection to the meteor bombardment theory: the great rays that spread from

Tycho across almost the entire surface of the moon. It makes the moon look like a crystal ball that had been struck with a hammer, and impact from - outside seems evident, but there are difficulties. The striking mass, our hypothetical meteor, must have been smaller than the present crater of Tycho, but it must have the mass and speed to crack an entire planet."

"Work it out for yourself-you must either postulate a chunk out of the core of a dwarf star, or speeds such as we have never observed within the system. It's conceivable but a far-fetched explanation"

He turned to King. "Doctor, does anything occur to you that might account for a phenomenon like Tycho?"

The Superintendent grasped the arms of his chair, then glanced at his palms. He fumbled for a handkerchief, and wiped them. "Go ahead," he said, almost inaudibly.

"Very well then-" Harrington drew out of his briefcase a large photograph of the moon-a beautiful full-moon portrait made at Lick. "I want you to imagine the moon as she might have been sometime in the past. The dark areas we call the 'Seas' are actual oceans. It has an atmosphere, perhaps a heavier gas than oxygen and nitrogen, but an active gas, capable of supporting some conceivable form of life.

"For this is an inhabited planet, inhabited by intelligent beings, beings capable of discovering atomic power and exploiting it!"

He pointed out on the photograph, near the southern limb, the lime-white circle of Tycho, with its shining, incredible, thousand-mile-long rays spreading, thrusting, jutting out from it. "Here ... here at Tycho was located their main atomic plant." He moved his finger to a point near the equator, and somewhat east of meridian-the point where three great dark areas merged, Mare Nubium, Mare Imbriwn, Oceanus Procellarum-and picked out two bright splotches surrounded also by rays, but shorter, less distinct, and wavy. "And here at Copernicus and at Kepler, on islands at the middle of a great ocean, were secondary power stations."

He paused, and interpolated soberly, "Perhaps they knew the danger they ran, but wanted power so badly that they were willing to gamble the life of their race. Perhaps they were ignorant of the ruinous possibilities of their little machines, or perhaps their mathematicians assured them that it could not happen.

"But we will never know ... no one can ever know. For it blew up, and killed them-and it killed their planet.

"It whisked off the gassy envelope and blew it into outer space. It may even have set up a chain reaction, in that atmosphere. It blasted great chunks of the planet's crust Perhaps some of that escaped completely, too, but all that did not reach the speed of escape fell back down in time and splashed great ring-shaped craters in the land.

"The oceans cushioned the shock; only the more massive fragments formed craters through the water. Perhaps some life still remained in those ocean depths. If so, it was doomed to die-for the water, unprotected by atmospheric pressure, could not remain liquid and must inevitably escape lit time to outer space. Its life blood drained away. The planet was dead-dead by suicide!

He met the grave eyes of his two silent listeners with an expression almost of appeal. "Gentlemen-this is only a theory I realize ... only a theory, a dream, a nightmare-But it has kept me awake so many nights that I had to come tell you about it, and see if you saw it the same way I do.

As for the mechanics of it, it's all in there, in my notes. You can check it-and I pray that you find some error! But it is the only lunar theory I have examined which included all of the known data, and accounted for all of them."

He appeared to have finished; Lentz spoke up. "Suppose, Captain, suppose we check your mathematics and find no flaw-what then?"

Harrington flung out his hands. "That's what I came here to find out!"

Although Lentz had asked the question, Harrington directed the appeal to King. The superintendent looked up; his eyes met the astronomer's, wavered, and dropped again. "There's nothing to be done," he said dully, "nothing at all."

Harrington stared at him in open amazement. "But good God, man!" he burst out. "Don't you see it? That pile has got to be disassembled at once!"

"Take it easy, Captain." Lentz's calm voice was a spray of cold water. "And don't be too harsh on poor King, this worries him even more than it does you. What he means is this; we're not faced with a problem in physics, but with a political and economic situation. Let's put it this way: King can no more dump his plant than a peasant with a vineyard on the slopes of Mount Vesuvius can abandon his holdings and pauperize his family simply because there will be an eruption someday.

"King doesn't own that plant out there; he's only the custodian. If he dumps it against the wishes of the legal owners, they'll simply oust him and put in someone more amenable. No, we have to convince the owners."

"The President could make them do it," suggested Harrington. "I could get to the President-"

"No doubt you could, through your department. And you might even convince him. But could he help much?"

"Why, of course he could. He's the President!"

"Wait a minute. You're Director of the Naval Observatory; suppose you took a sledge hammer and tried to smash the big telescope-how far would you get?"

"Not very far," Farrington conceded. "We guard the big fellow pretty closely."

"Nor can the President act in an arbitrary manner," Lentz persisted. "He's not an unlimited monarch. If he shuts down this plant without due process of law, the federal courts will tie him in knots. I admit that Congress isn't helpless, since the Atomic Energy Commission takes orders from it, but-would you like to try to give a congressional committee a course in the mechanics of infinitesimals?"

Harrington readily stipulated the point. "But there is another way," he pointed out. "Congress is responsive to public opinion. What we need to do is to convince the public that the pile is a menace to everybody. That could be done without ever trying to explain things in terms of higher mathematics."

"Certainly it could," Lentz agreed. "You could go on the air with it and scare everybody half to death. You could create the damnedest panic this slightly slug-nutty country has ever seen. No, thank you. I, for one, would rather have us all take the chance of being quietly killed than bring on a mass psychosis that would destroy the culture we are building up. I think one taste of the Crazy Years is enough."

"Well, then, what do you suggest?"

Lentz considered shortly, then answered, "All I see is a forlorn hope. We've got to work on the Board of Directors and try to beat some sense in their heads."

King, who had been following the discussion with attention in spite of his tired despondency, interjected a remark. "How would you go about that?"

"I don't know," Lentz admitted. "It will take some thinking. But it seems the most fruitful line of approach. If it doesn't work, we can always fall back on Harrington's notion of publicity-I don't insist that the world commit suicide to satisfy my criteria of evaluation."

Harrington glanced at his wrist watch-a bulky affair-and whistled. "Good heavens," he exclaimed, "I forgot the time! I'm supposed officially to be at the Flag staff Observatory."

King had automatically noted the time shown by the Captain's watch as it was displayed. "But it can't be that late," he had objected. Harrington looked puzzled, then laughed.

"It isn't-not by two hours. We are in zone plus-seven; this shows zone plus-five-it's radio-synchronized with the master clock at Washington."

"Did you say radio-synchronized?"

"Yes. Clever, isn't it?" He held it out for inspection. "I call it a telechronometer; it's the only one of its sort to date. My nephew designed it for me. He's a bright one, that boy. He'll go far. That is"-his face clouded, as if the little interlude had only served to emphasize the tragedy that hung over them-"if any of us live that long!"

A signal light glowed at King's desk, and Steinke's face showed on the communicator screen. King answered him, then said, "Your car is ready, Doctor Lentz."

"Let Captain Harrington have it."

"Then you're not going back to Chicago?"

"No. The situation has changed. If you want me, I'm stringing along."

The following Friday Steinike ushered Lentz into King's office. King looked almost happy as he shook hands. "When did you ground, Doctor? I didn't expect you back for another hour, or so."

"Just now. I hired a cab instead of waiting for.. the shuttle."

"Any luck?" King demanded.

"None. The same answer they gave you: 'The Company is assured by independent experts that Destry's mechanics is valid, and sees no reason to encourage an hysterical attitude among its employees."

King tapped on his desk top, his eyes unfocused. Then, hitching himself around to face Lentz directly, he said, "Do you suppose the Chairman is right?"

"How?"

"Could the three of us, you, me, and Harrington, have gone off the deep end, slipped mentally?"

"No."

"You're sure?"

"Certain. I looked up some independent experts of my own, not retained by the Company, and had them check Harrington's work. It checks." Lentz purposely neglected to mention that he had done so partly because he was none too sure of King's present mental stability.

King sat up briskly, reached out and stabbed a push button. "I am going to make one more try," he explained, "to see if I can't throw a scare into Dixon's thick head. Steinke," he said to the communicator, "get me Mr. Dixon on the screen."

"Yes, sir."

In about two minutes the visiphone screen came to life and showed the features of Chairman Dixon. He was transmitting, not from his office, but from the boardroom of the power syndicate in Jersey City. "Yes?" he said.

"What is it, Superintendent?" His manner was somehow both querulous and affable.

"Mr. Dixon," King began, "I've called to try to impress on you the seriousness of the Company's action. I stake my scientific reputation that Harrington has proved completely-"

"Oh, that? Mr. King, I thought you understood that that was a closed matter."

"But Mr. Dixon-"

"Superintendent, please! If there was any possible legitimate cause to fear do you think I would hesitate? I have children you know, and grandchildren."

"That is just why-"

"We try to conduct the affairs of the Company with reasonable wisdom, and in the public interest. But we have other responsibilities, too. There are hundreds of thousands of little stockholders who expect us to show a reasonable return on their investment. You must not expect us to jettison a billion-dollar corporation just because you've taken up astrology. Moon theory!" He sniffed.

"Very well, Mister Chairman." King's tone was stiff.

"Don't, take it that way, Mr. King. I'm glad you called, the Board has just adjourned a special meeting. They have decided to accept you for retirement-with full pay, of course."

"I did not apply for retirement!"

"I know, Mr. King, but the Board feels that-"

"I understand. Goodbye!"

"Mr. King-"

"Goodbye!" He switched him off, and turned to Lentz. "'-with full pay,'" he quoted, "which I can enjoy in any way that I like for the rest of my life just as happy as a man in the death house!"

"Exactly," Lentz agreed. "Well, we've tried our way. I suppose we should call up Harrington now and let him try the political and publicity method."

"I suppose so," King seconded absent-mindedly. "Will you be leaving for Chicago now?"

"No . . ." said Lentz. "No.... I think I will catch the shuttle for Los Angeles and take the evening rocket for the Antipodes."

King looked surprised, but said nothing. Lentz answered the unspoken comment. "Perhaps some of us on the other side of the earth will survive. I've done all that I can here. I would rather be a live sheepherder in Australia than a dead psychiatrist in Chicago."

King nodded vigorously. "That shows horse sense. For two cents, I'd dump the pile now, and go with you."

"Not horse sense, my friend-a horse will run back into a burning barn, which is exactly what I plan not to do. Why don't you do it and come along. If you did, it would help Harrington to scare 'em to death."

"I believe I will!"

Steinke's face appeared again on the screen. "Harper and Erickson are here, Chief."

"I'm busy."

"They are pretty urgent about seeing you."

"Oh-all right," King said in a tired voice, "show them in. It doesn't matter."

They breezed in, Harper in the van. He commenced talking at once, oblivious to the superintendent's morose preoccupation. "We've got it, Chief, we've got it! And it all checks out to the umpteenth decimal!"

"You've got what? Speak English."

Harper grinned. He was enjoying his moment of triumph, and was stretching it out to savor it. "Chief, do you remember a few weeks back when I asked for an additional allotment-a special one without specifying how I was going to spend it?"

"Yes. Come on-get to the point."

"You kicked at first, but finally granted it. Remember?

Well, we've got something to show for it, all tied up in pink ribbon. It's the greatest advance in radioactivity since Hahn split the nucleus. Atomic fuel, Chief, atomic fuel, safe, concentrated, and controllable. Suitable for rockets, for power plants, for any damn thing you care to use it for."

King showed alert interest for the first time. "You mean a power source that doesn't require a pile?"

"Oh, no, I didn't say that. You use the breeder pile to make the fuel, then you use the fuel anywhere and anyhow you like, with something like ninety-two percent recovery of energy. But you could junk the power sequence, if you wanted to."

King's first wild hope of a way out of his dilemma was dashed; he subsided. "Go ahead. Tell me about it."

"Well-it's a matter of artificial radioactives. Just before I asked for that special research allotment, Erickson and I-Doctor Lentz had a finger in it too," he acknowledged with an appreciative nod to the psychiatrist, "-found two isotopes that seemed to be mutually antagonistic. That is, when we goosed 'em in the presence of each other they gave up their latent energy all at once- blew all to hell. The important point is we were using just a gnat's whisker of mass of each-the reaction didn't require a big mass to maintain it."

"I don't see," objected King, "how that could-"

"Neither do we, quite-but it works. We've kept it quiet until we were sure. We checked on what we had, and we found a dozen other fuels. Probably we'll be able to tailor-make fuels for any desired purpose. But here it is." He handed him a bound sheaf of typewritten notes which he had been carrying under his arm. "That's your copy. Look it over."

King started to do so. Lentz joined him, after a look that was a silent request for permission, which Erickson had answered with his only verbal contribution, "Sure, doc."

As King read, the troubled feelings of an acutely harassed executive left him. His dominant personality took charge, that of the scientist. He enjoyed the controlled and cerebral ecstasy of the impersonal seeker for the elusive truth. The emotions felt in his throbbing thalamus were permitted only to form a sensuous obbligato for the cold flame of cortical activity. For the time being, he was sane, more nearly completely sane than most men ever achieve at any time.

For a long period there was only an occasional grunt, the clatter of turned pages, a nod of approval. At last he put it down.

"It's the stuff," he said. "You've done it, boys. It's great; I'm proud of you."

Erickson glowed a bright pink, and swallowed. Harper's small, tense figure gave the ghost of a wriggle, reminiscent of a wire-haired terrier receiving approval. "That's fine, Chief. We'd rather hear you say that than get the Nobel Prize."

"I think you'll probably get it. However"-the proud light in his eyes died down-"I'm not going to take any action in this matter."

"Why not, Chief?" His tone was bewildered.

"I'm being retired. My successor will take over in the near future; this is too big a matter to start just before a change in administration."

"You being retired! What the bell?"

"About the same reason I took you off watch-at least, the directors think so."

"But that's nonsense! You were right to take me off the watch-list; I was getting jumpy. But you're another matter-we all depend on you."

"Thanks, Cal-but that's how it is; there's nothing to be done about it." He turned to Lentz. "I think this is the last ironical touch needed to make the whole thing pure farce," he observed bitterly. "This thing is big, bigger than we can guess at this stage-and I have to give it a miss."

"Well," Harper burst out, "I can think of something to do about it!" He strode over to King's desk and snatched up the manuscript. "Either you superintend the exploitation, or the Company can damn well get along without our discovery!" Erickson concurred belligerently.

"Wait a minute." Lentz had the floor. "Doctor Harper... have you already achieved a practical rocket fuel?"

"I said so. We've got it on hand now."

"An escape-speed fuel?" They understood his verbal shorthand a fuel that would lift a rocket free of the earth's gravitational pull.

"Sure. Why, you could take any of the Clipper rockets, refit them a trifle, and have breakfast on the moon."

"Very well. Bear with me. . . ." He obtained a sheet of paper from King, and commenced to write. They watched in mystified impatience. He continued briskly for some minutes, hesitating only momentarily. Presently he stopped, and spun the paper over to King. "Solve it!" he demanded.

King studied the paper. Lentz had assigned symbols to a great number of factors, some social, some psychological, some physical, some economic. He had thrown them together into a structural relationship, using the symbols of calculus of statement. King understood the paramathematical operations indicated by the symbols, but he was not as used to them as he was to the symbols and operations of mathematical physics. He plowed through the equations, moving his lips slightly in subconscious vocalization.

He accepted a pencil from Lentz, and completed the solution. It required several more lines, a few more equations, before they cancelled out, or rearranged themselves, into a definite answer.

He stared at this answer while puzzlement gave way to dawning comprehension and delight.

He looked up. "Erickson! Harper!" he rapped out.

"We will take your new fuel, refit a large rocket, install the breeder pile in it, and throw it into an orbit around the earth, far out in. space. There we will use it to make

more fuel, safe fuel, for use on earth, with the danger from the Big Bomb itself limited to the operators actually on watch!"

There was no applause. It was not that sort of an idea; their minds were still struggling with the complex implications.

"But Chief," Harper finally managed, "how about your retirement? We're still not going to stand for it."

"Don't worry," King assured him. "It's all in there, implicit in those equations, you two, me, Lentz, the Board of Directors and just what we all have to do about it to accomplish it."

"All except the matter of time," Lentz cautioned.

"You'll note that elapsed time appears in your answer as an undetermined unknown."

"Yes.. . yes, of course. That's the chance we have to take. Let's get busy!"

Chairman Dixon called the Board of Directors to order. "This being a special meeting we'll dispense with minutes and reports," he announced. "As set forth in the call we have agreed to give the retiring superintendent two hours of our time."

"Mr. Chairman-"

"Yes, Mr. Strong?"

"I thought we had settled that matter."

"We have, Mr. Strong, but in view of Superintendent King's long and distinguished service, if he asks for a hearing, we are honor bound to grant it. You have the floor, Doctor King."

King got up, and stated briefly, "Doctor Lentz will speak for me." He sat down.

Lentz had to wait for coughing, throat-clearing, and scraping of chairs to subside. It was evident that the Board resented the outsider.

Lentz ran quickly over the main points in the argument which contended that the bomb presented an intolerable danger anywhere on the face of the earth. He moved on at once to the alternative proposal that the bomb should be located in a rocket ship, an artificial moonlet flying in a free orbit around the earth at a convenient distance- say fifteen thousand miles-while secondary power stations on earth burned a safe fuel manufactured by the bomb.

He announced the discovery the Harper-Erickson technique and dwelt on what it meant to them commercially. Each point was presented as persuasively as possible, with the full power of his engaging personality. Then he paused and waited for them to blow off steam.

They did. "Visionary-" "Unproved-" "No essential change in the situation-" The substance of it was that they were very happy to hear of the new fuel, but not particularly impressed by it. Perhaps in another twenty years, after it had been thoroughly tested and proved commercially, they might consider setting up another breeder pile outside the atmosphere. In the meantime there was no hurry. Only one director supported the scheme and he was quite evidently unpopular.

Lentz patiently and politely dealt with their objections. He emphasized the increasing incidence of occupational psychoneurosis among the engineers and the grave danger to everyone near the bomb even under the orthodox theory. He reminded them of their insurance and indemnity bond costs, and of the "squeeze" they paid state politicians. Then he changed his tone and let them have it directly and brutally. "Gentlemen," he said,

"we believe that we are fighting for our lives ... our own lives, our families, and every life on the globe, if you refuse this compromise, we will fight as fiercely and with as little regard for fair play as any cornered animal." With that he made. His first move in attack. It was quite simple. He offered for their inspection the outline of a propaganda campaign on a national scale, such as any major advertising firm could carry out as a matter of routine. It was complete to the last detail, television broadcasts, spot plugs, newspaper and magazine coverage with planted editorials, dummy "citizens' committees," and-most important-a supporting whispering campaign and a letters-to-Congress organization. Every businessman there knew from experience how such things worked.

But its object was to stir up fear of the Arizona pile and to direct that fear, not into panic, but into rage against the Board of Directors personally, and into a demand that the Atomic Energy Commission take action to have the Big Bomb removed to outer space.

"This is blackmail! We'll stop you!"

"I think not," Lentz replied gently. "You may be able to keep us out of some of the newspapers, but-you can't stop the rest of it. You can't even keep us off the air-ask the Federal Communications Commission." It was true. Harrington had handled the political end and had performed his assignment well; the President was convinced.

Tempers were snapping on all sides; Dixon had to pound for order. "Doctor Lentz," he said, his own temper under taut control, "you plan to make every-one of us appear a black-hearted scoundrel with no oilier thought than personal profit, even at the expense of the lives of others. You know that is not true; this is a simple difference of opinion as to what is wise."

"I did not say it was true," Lentz admitted blandly, "but you will admit that I can convince the public that you are deliberate villains. As to it being a difference of opinion ... you are none of you atomic physicists; you are not entitled to hold opinions in this matter.

"As a matter of fact," he went on callously, "the only doubt in my mind is whether or not an enraged public will destroy your precious plant before Congress has time to exercise eminent domain, and take it away from you!"

Before they had time to think up arguments in answer and ways of circumventing him, before their hot indignation had cooled and set as stubborn resistance, he offered his gambit. He produced another lay-out for a propaganda campaign-an entirely different sort.

This time the Board of Directors was to be built up, not torn down. All of the same techniques were to be used; behind-the-scenes feature articles with plenty of human interest would describe the functions of the Company, describe it as a great public trust, administered by patriotic, unselfish statesmen of the business world. At the proper point in the campaign, the Harper-Erickson fuel would be announced, not as a semi-accidental result of the initiative of two employees, but as the long-expected end product of years of systematic research conducted under an axed policy of the Board of Directors, a policy growing naturally out of their humane determination to remove forever the menace from even the sparsely settled Arizona desert.

No mention was to be made of the danger of complete, planet-embracing catastrophe.

Lentz discussed it. He dwelt on the appreciation that would be due them from a grateful world. He invited them to make a noble sacrifice, and, with subtle misdirection,

tempted them to think of themselves as heroes. He deliberately played on one of the most deep-rooted of simian instincts, the desire for approval from one's kind, deserved or not.

All the while he was playing for time, as he directed his attention from one hard case, one resistant mind, to another; He soothed and he tickled and he played on personal foibles. For the benefit of the timorous and the devoted family men, he again painted a picture of the suffering, death, and destruction that might result from their well-meant reliance on the unproved and highly questionable predictions of Destry's mathematics. Then he described in glowing detail a picture of a world free from worry but granted almost unlimited power, safe power from an invention which was theirs for this one small concession. It worked. They did not reverse themselves all at once, but a committee was appointed to investigate the feasibility of the proposed spaceship power plant. By sheer brass Lentz suggested names for the committee and Dixon confirmed his nominations, not because he wished to, particularly, but because he was caught off guard and could not think of a reason to refuse without affronting those colleagues. Lentz was careful to include his one supporter in the list.

The impending retirement of King was not mentioned by either side. Privately, Lentz felt sure that it never would be mentioned.

It worked, but there was left much to do. For the first few days, after the victory in committee, King felt much elated by the prospect of an early release from the soul killing worry. He was buoyed up by pleasant demands of manifold new administrative duties. Harper and Erickson were detached to Goddard Field to collaborate with the rocket engineers there in design of firing chambers, nozzles, fuel stowage, fuel metering, and the like. A schedule had to be worked out with the business office to permit as much use of the pile as possible to be diverted to making atomic fuel, and a giant combustion chamber for atomic fuel had to be designed and ordered to replace the pile itself during the interim between the time it was shut down on earth and the later time when sufficient local, smaller plants could be built to carry the commercial load. He was busy.

When the first activity had died down and they were settled in a new routine, pending the shutting down of the plant and its removal to outer space, King suffered an emotional reaction. There was, by then, nothing to do but wait, and tend the pile, until the crew at Goddard Field smoothed out the bugs and produced a space-worthy rocket ship.

At Goddard they ran into difficulties, overcame them, and came across more difficulties. They had never used such high reaction velocities; it took many trials to find a nozzle shape that would give reasonably high efficiency. When that was solved, and success seemed in sight, the jets burned out on a time-trial ground test. They were stalemated for weeks over that hitch.

There was another problem quite separate from the rocket problem: what to do with the power generated by the breeder pile when relocated in a satellite rocket? It was solved drastically by planning to place the pile proper outside the satellite, unshielded, and let it waste its radiant energy. It would be a tiny artificial star, shining in the vacuum of space. In the meantime research would go on for a means to harness it again and beam the power back to Earth. But only its power would be wasted; plutonium and the never atomic fuels would be recovered and rocketed back to Earth.

Back at the power plant Superintendent King could do nothing but chew his nails and wait He had not even the release of running over to Goddard Field to watch the progress of the research, for, urgently as he desired to, he felt an even stronger, an

overpowering compulsion to watch over the pile more lest it heartbreakingly blow up at the last minute.

He took to hanging around the control room. He had to stop that; his unease communicated itself to his watch engineers; two of them cracked up in a single day-one of them on watch.

He must face the fact-there had been a grave upswing in psychoneurosis among his engineers since the period of watchful waiting had commenced. At first, they had tried to keep the essential facts of the plan a close secret, but it had leaked out, perhaps through some member of the investigating committee. He admitted to himself now that it had been a mistake ever to try to keep it secret-Lentz had advised against it, and the engineers not actually engaged in the change-over were bound to know that something was up.

He took all of the engineers into confidence at last, under oath of secrecy that had helped for a week or more, a week in which they were all given a spiritual lift-by the knowledge, as he had been. Then it had worn off, the reaction had set in, and the psychological observers had started disqualifying engineers for duty almost daily. They were even reporting each other as mentally unstable with great frequency; he might even be faced with a shortage of psychiatrists if that kept up, he thought to himself with bitter amusement. His engineers were already standing four-hours in every sixteen. If one more dropped out, he'd put himself on watch. That would be a relief, to tell himself the truth.

Somehow some of the civilians around about and the non-technical employees were catching on to the secret.

That mustn't go on-if it spread any further there might be a nationwide panic. But how the hell could he stop it? He couldn't.

He turned over in bed, rearranged his pillow, and tried once more to get to sleep. No good. His head ached, his eyes were balls of pain, and his brain was a ceaseless grind of useless, repetitive activity, like a disc recording stuck in one groove.

God! This was unbearable! He wondered if he were cracking up if he already had cracked up. This was worse, many times worse, than the old routine when he had simply acknowledged the danger and tried to forget it as much as possible. Not that the pile was any different-it was this five-minutes-to-armistice feeling, this waiting for the curtain to go up, this race against time with nothing to do to help. He sat up, switched on his bed lamp, and looked at the clock. Three-thirty. Not so good. He got up, went into his bathroom, and dissolved a sleeping powder in a glass of whisky and water, half and half. He gulped it down and went back to bed. Presently he dozed off.

He was running, fleeing down a long corridor. At the end lay safety he knew that, but he was so utterly exhausted that he doubted his ability to finish the race. The thing pursuing him was catching up; he forced his leaden, aching legs into greater activity. The thing behind him increased its pace, and actually touched him. His heart stopped, then pounded again. He became aware that he was screaming, shrieking in mortal terror. But he had to reach the end of that corridor, more depended on it than just himself. He had to. He had to- He had to! Then the flash came and he realized that he had lost, realized it with utter despair and utter, bitter defeat. He had failed; the pile had blown up.

The flash was his bed lamp coming on automatically; it was seven o'clock. His pajamas were soaked, chipping with sweat, and his heart still pounded. Every ragged

nerve throughout his body screamed for release. It would take more than a cold shower to cure this case of the shakes.

He got to the office before the janitor was out of it. He sat there, doing nothing, until Lentz walked in on him, two hours later. The psychiatrist came in just as he was taking two small tablets from a box in his desk.

"Easy ... easy, old man," Lentz said in a slow voice. "What have you there?" He came around and gently took possession of the box.

"Just a sedative."

Lentz studied the inscription on the cover. "How many have you had today?"

"Just two, so far."

"You don't need barbiturates; you need a walk in the fresh air. Come take one with me."

"You're a fine one to talk you're smoking a cigarette that isn't lighted!"

"Me? Why, so I am! We both need that walk. Come."

Harper arrived less than ten minutes after they had left the office. Steinke was not in the outer office. He walked on through and pounded on the door of King's private office, then waited with the man who accompanied him a hard young chap with an easy confidence to his bearing. Steinke let them in.

Harper brushed on past him with a casual greeting, then checked himself when he saw that there was no one else inside.

"Where's the chief?" he demanded.

"Out. He'll be back soon."

"I'll wait. Oh-Steinke, this is Greene. Greene Steinke."

The two shook hands. "What brings you back, Cal?" Steinke asked, turning back to Harper.

'Well.. . I guess it's all right to tell you-"

The communicator screen flashed into sudden activity, and cut him short. A face filled most of the frame. It was apparently too close to the pickup, as it was badly out of focus. "Superintendent!" it yelled in an agonized voice. "The pile-!"

A shadow flashed across the screen, they heard a dull "Smack!", and the face slid out of the screen. As it fell it revealed the control room behind it. Someone was down on the floor plates, a nameless heap. Another figure ran across the field of pickup and disappeared.

Harper snapped into action first. "That was Silard!" he shouted, "-in the control room! Come on, Steinke!" He was already in motion himself.

Steinke went dead white, but hesitated only an unmeasurable instant. He pounded sharp on Harper's heels. Greene followed without invitation, in a steady run that kept easy pace with them.

They had to wait for a capsule to unload at the tube station. Then all three of them tried to crowd into a two passenger capsule. It refused to start and moments were lost before Greene piled out and claimed another car.

The four minute trip at heavy acceleration seemed an interminable crawl. Harper was convinced that the system had broken down, when the familiar click and sigh announced their arrival at the station under the plant. They jammed each other trying to get out at the same time.

The lift was up; they did not wait for it. That was unwise; they gained no time by it, and arrived at the control level out of breath. Nevertheless, they speeded up when they reached the top, zigzagged frantically around the outer shield, and burst into the control room.

The limp figure was still on the floor, and another, also inert, was near it.

A third figure was bending over the trigger. He looked up as they came in, and charged them. They hit him together, and all three went down. It was two to one, but they got in each other's way. His heavy armor protected him from the force of their blows. He fought with senseless, savage violence.

Harper felt a bright, sharp pain; his right arm went limp and useless. The armored figure was struggling free of them. There was a shout from somewhere behind them: "Hold still!"

He saw a flash with the corner of one eye, a deafening crack hurried on top of it, and re-echoed painfully in the restricted space.

The armored figure dropped back to his knees, balanced there, and then fell heavily on his face. Greene stood in the entrance, a service pistol balanced in his hand.

Harper got up and went over to the trigger. He tried to reduce the power-level adjustment, but his right hand wouldn't carry out his orders, and his left was too clumsy.

"Steinke," he called, "come here! Take over."

Steinke hurried up, nodded as he glanced at the readings, and set busily to work.

It was thus that King found them when he bolted in a very few minutes later.

"Harper!" he shouted, while his quick glance was still taking in the situation. "What's happened?"

Harper told him briefly. He nodded. "I saw the tail end of the fight from my office Steinke!" He seemed to grasp for the first time who was on the trigger. "He can't manage the controls-" He hurried toward him.

Steinke looked up at his approach. "Chief!" he called out, "Chief! I've got my mathematics back!"

King looked bewildered, then nodded vaguely, and let him be. He turned back to Harper. "How does it happen you're here?"

"Me? I'm here to report-we've done it, Chief!"

"Eh?"

"We've finished; it's all done. Erickson stayed behind to complete the power plant installation on the big ship. I came over in the ship we'll use to shuttle between Earth and the big ship, the power plant. Four minutes from Goddard Field to here in her. That's the pilot over there." He pointed to the door, where Greene's solid form partially hid Lentz.

"Wait a minute. You say that everything is ready to install the pile in the ship? You're sure?"

"Positive. The big ship has already flown with our fuel-longer and faster than she will have to fly to reach station in her orbit; I was in it-out in space, Chief! We're all set, six ways from zero."

King stared at the dumping switch, mounted behind glass at the top of the instrument board. "There's fuel enough," he said softly, as if he were alone and speaking only to himself, "there's been fuel enough for weeks."

He walked swiftly over to the switch, smashed the glass with his fist, and pulled it.

The room rumbled and shivered as tons of molten, massive metal, heavier than gold, coursed down channels, struck against baffles, split into a dozen dozen streams, and plunged to rest in leaden receivers-to rest, safe and harmless, until it should be reassembled far out in space.

AFTERWORD

December 1979, exactly 40 years after I researched BLOWUPS HAPPEN (Dec. '39): I had some doubt about republishing this because of the current ignorant fear of fission power, recently enhanced by the harmless flap at Three Mile Island. When I wrote this, there was not a full gram of purified U-235 on this planet, and no one knew its hazards in detail, most especially the mass and geometry and speed of assembly necessary to make "blowups happen." But we now know from long experience and endless tests that the "tons" used in this story could never be assembled-no explosion, melt-down possible, melt-down being the worst that can happen at a power plant; to cause U-235 to explode is very difficult and requires very different design. Yes, radiation is hazardous

BUT- RADIATION EXPOSURE

Half a mile from Three-Mile plant during the flap	83 millirems
At the power plant	1,100 millirems
During heart catheterization for angiogram	45,000 millirems

- which I underwent 18 months ago. I feel fine.
R.A.H.

FOREWORD

I had always planned to quit the writing business as soon as that mortgage was paid off. I had never had any literary ambitions, no training for it, no interest in it- backed into it by accident and stuck with it to pay off debt, I being always firmly resolved to quit the silly bus iness once I had my chart squared away.

At a meeting of the Mai~ana Literary Society-an amorphous disorganization having as its avowed purpose "to permit young writers to talk out their stories to each other in order to get them off their minds and thereby save themselves the trouble of writing them down"-at a gathering of this noble group I was expounding my determination to retire from writing once my bills were paid-in a few weeks, during 1940, if the tripe continued to sell.

William A. P. White ("Anthony Boucher") gave me a sour look. "Do you know any retired writers?"

"How could I? All the writers I've ever met are in this room.

"Irrelevant. You know retired school teachers, retired naval officers, retired policemen, retired farmers. Why don't you know at least one retired writer?"

"What are you driving at?"

"Robert, there are no retired writers. There are writers who have stopped selling. . . but they have not stopped writing.

I pooh-poohed Bill's remarks-possibly what he said applied to writers in general. . . but I wasn't really a writer; I was just a chap who needed money and happened to discover that pulp writing offered an easy way to grab some without stealing and without honest work. ("Honest work"-a euphemism for underpaid bodily exertion, done standing up or on your knees, often in bad weather or other nasty circumstances, and frequently involving shovels, picks, hoes, assembly lines, tractors, and unsympathetic supervisors. It has never appealed to me.
Sitting at a typewriter in a nice warm room, with no boss, cannot possibly be described as "honest work.")

BLOWUPS HAPPEN sold and I gave a mortgageburning party. But I did not quit writing at once (24 Feb 1940) because, while I had the Old Man of the Sea (that damned mortgage) off my back, there were still some other items. I needed a new car; the house needed paint and some repairs; I wanted to make a trip to New York; and it would not hurt to have a couple of hundred extra in the bank as a cushion-and I had a dozen-odd stories in file, planned and ready to write.

So I wrote MAGIC, INCORPORATED and started east on the proceeds, and wrote THEY and SIXTH COLUMN while I was on that trip. The latter was the only story of mine ever influenced to any marked degree by John W. Campbell, Jr. He had in file an unsold story he had written some years earlier. JWC did not show me his manuscript; instead he told me the story line orally and stated that, if I would write it, he would buy it.

He needed a serial; I needed an automobile. I took the brass check.

Writing SIXTH COLUMN was a job I sweated over. I had to reslant it to remove racist aspects of the original story line. And I didn't really believe the pseudoscientific rationale of Campbell's three spectra-so I worked especially hard to make it sound realistic.

It worked out all right. The check for the serial, plus 35~ in cash, bought me that new car.. . and the book editions continue to sell and sell and sell, and have earned more than forty times as much as I was paid for the serial. So it was a financial success. . but I do not consider it to be an artistic success.

While I was back east I told Campbell of my plans to quit writing later that year. He was not pleased as I was then his largest supplier of copy. I finally said, "John, I am not going to write any more stories against deadlines. But I do have a few more stories on tap that I could write. I'll send you a story from time to time.. . until the day comes when you bounce one. At that point we're through. Now that I know you personally, having a story rejected by you would be too traumatic."

So I went back to California and sold him CROOKED HOUSE and LOGIC OF EMPIRE and UNIVERSE and SOLUTION UNSATISFACTORY and METHUSELAH'S CHILDREN and BY HIS BOOTSTRAPS and COMMON SENSE and GOLDFISH BOWL and BEYOND THIS HORIZON and WALDO and THE UNPLEASANT PROFESSION OF JONATHAN HOAG-which brings us smack up against World War II.

Campbell did bounce one of the above (and I shan't say which one) and I promptly retired-put in a new irrigation system-built a garden terrace-~resumed serious

photography, etc. This went on for about a month when I found that I was beginning to be vaguely ill: poor appetite, loss of weight, insomnia, jittery, absentminded-much like the early symptoms of pulmonary tuberculosis, and I thought, "Damn it, am I going to have still a third attack?"

Campbell dropped me a note and asked why he hadn't heard from me?-I reminded him of our conversation months past: He had rejected one of my stories and that marked my retirement from an occupation that I had never planned to pursue permanently.

He wrote back and asked for another look at the story he had bounced. I sent it to him, he returned it promptly with the recommendation that I take out this comma, speed up the 1st half of page umpteen, delete that adjective-fiddle changes that Katie Tarrant would have done if told to.

I sat down at my typewriter to make the suggested changes.. . and suddenly realized that I felt good for the first time in weeks.

Bill "Tony Boucher" White had been dead right. Once you get the monkey on your back there is no cure short of the grave. I can leave the typewriter alone for weeks, even months, by going to sea. I can hold off for any necessary time if I am strenuously engaged in some other full-time,
worthwhile occupation such as a con~ctruction job, a political campaign, or (damn it!) recovering from illness.

But if I simply loaf for more than two or three days, that monkey starts niggling at me. Then nothing short of a few thousand words will soothe my nerves. And as I get older the attacks get worse; it is beginning to take 300,000 words and up to produce that feeling of warm satiation. At that I don't have it in its most virulent form; two of my colleagues are reliably reported not to have missed their daily fix in more than forty years.

The best that can be said for SOLUTION UNSATISFACTORY is that the solution is still unsatisfactory and the dangers are greater than ever. There is little satisfaction in having called the turn forty years ago; being a real-life Cassandra is not happy-making.

SOLUTION UNSATISFACTORY

In 1903 the Wright brothers flew at Kitty Hawk. In December, 1938, in Berlin, Dr. Hahn split the uranium atom.

In April, 1943, Dr. Estelle Karst, working under the Federal Emergency Defense Authority, perfected the Karst-Obre technique for producing artificial radioactives.

So American foreign policy had to change.

Had to. Had to. It is very difficult to tuck a bugle call back into a bugle. Pandora's Box is a one-way propositiori. You can turn pig into sausage, but not sausage into pig. Broken eggs stay broken. "All the King's horses and all the King's men can't put Humpty together again."

I ought to know-I was one of the King's men.

By rights I should not have been. I was not a professional military man when World War II broke out, and when Congress passed the draft law I drew a high number, high enough to keep me out of the army long enough to die of old age.
Not that very many died of old age that generation! But I was the newly appointed secretary to a freshman congressman; I had been his campaign manager and my former job had left me. By profession, I was a high-school teacher of economics and sociology-school boards don't like teachers of social subjects actually to deal with social problems-and my contract
was not renewed. I jumped at the chance to go to Washington.

My congressman was named Manning. Yes, the Manning, Colonel Clyde C. Manning, U. S. Army retired-Mr. Commissioner Manning. What you may not know about him is that he was one of the Army's No. 1 experts in chemical warfare before a leaky heart put him on the shelf. I had picked him, with the help of a group of my political associates, to run against the two-bit chiseler who was the incumbent in our district. We needed a strong liberal candidate and Manning was tailor-made for the job. He had served one term in the grand jury, which cut his political eye teeth, and had stayed active in civic matters thereafter.

Being a retired army officer was a political advantage in vote-getting among the more conservative and well-to-do citizens, and his record was O.K. for the other side of the fence. I'm not primarily concerned with vote-getting; what I liked about him was that, though he was liberal, he was tough-minded, which most liberals aren't. Most liberals believe that water runs downhill, but, praise God, it'll never reach the bottom.
Manning was not like that. He could see a logical necessity and act on it, no matter how unpleasant it might be.

We were in Manning's suite in the House Office Building, taking a little blow from that stormy first session of the Seventy-eighth Congress and trying to catch up on a mountain of correspondence, when the War Department called. Manning answered it himself.

I had to overhear, but then I was his secretary. "Yes," he said, "speaking. Very well, put him on. Oh

hello, General . . . Fine, thanks. Yourself?" Then there was a long silence. Presently, Manning said, "But I can't do that, General, I've got this job to take
care of. . . . What's that?.. . Yes, who is to do my committee work and represent my district? . . . I think so." He glanced at his wrist watch. "I'll be right over." He put down the phone, turned to me, and said, "Get your hat, John. We are going over to the War Department."

"So?" I said, complying.

"Yes," he said with a worried look, "the Chief of Staff thinks I ought to go back to duty." He set off at a brisk walk, with me hanging back to try to force him not to strain his bum heart. "It's impossible, of course." We grabbed a taxi from the stand in front of the office building and headed for the Department.
But it was possible, and Manning agreed to it, after the Chief of Staff presented his case. Manning had to be convinced, for there is no way on earth for anyone, even the President himself, to order a congressman to leave his post, even though he happens to be a member of the military service, too.

The Chief of Staff had anticipated the political difficulty and had been forehanded enough to have already dug up an opposition congressman with whom to pair Manning's vote for the duration of the emergency. This other congressman, the Honorable Joseph T. Brigham, was a reserve officer who wanted to go to duty himself-or was willing to; I never found out which. Being from the opposite political party, his vote in the House of Representatives could be permanently paired against Manning's and neither party would lose by the arrangement.

There was talk of leaving me in Washington to handle the political details of Manning's office, but Manning decided against it, judging that his other secretary could do that, and announced that I must go along as his adjutant. The Chief of Staff demurred, but Manning was in a position to insist, and the Chief had to give in.

A chief of staff can get things done in a hurry if he wants to. I was sworn in as a temporary officer before
we left the building; before the day was out I wa the bank, signing a note to pay for the sloppy ser uniforms the Army had adopted and to buy a d uniform with a beautiful shiny belt-a dress uniform which, as it turned out, I was never to need.

We drove over into Maryland the next day and l"~' fling took charge of the Federal nuclear research oratory, known officially by the hush-hush title of1 Department Special Defense Project No. 347. I di know a lot about physics and nothing about mo atomic physics, aside from the stuff you read in Sunday supplements. Later, I picked up a smatter mostly wrong, I suppose, from associating with heavyweights with whom the laboratory was stal Colonel Manning had taken an Army p.g. cours Massachusetts Tech and had received a master of ence degree for a brilliant thesis on the mathemal theories of atomic structure. That was why the Army had to have him for this job. But that had been s years before; atomic theory had turned several c wheels in the meantime; he admitted to me tha had to bone like the very devil to try to catch up tc point where he could begin to understand what highbrow charges were talking about in their rep I think he overstated the degree of his ignora. there was certainly no one else in the United St who could have done the job. It required a man
could direct and suggest research in a highly esot field, but who saw the problem from the standpoii
urgent military necessity Left to themselves the physicists would have reveled in the intellectual luxury ofan unlimited research expense account, but, while they undoubtedly would have made major advances in human knowledge, they might never have developed anything of military usefulness, or the military possibilities of a discovery might be missed for years.

It's like this: It takes a smart dog to hunt birds, it takes a hunter behind him to keep him from wasting time chasing rabbits. And the hunter needs to know nearly as much as the dog.

No derogatory reference to the scientists is intended-by no means! We had all the genius in the field that the United States could produce, men from Chicago, Columbia, Cornell, M. I. T., Cal Tech, Berkeley, every radiation laboratory in the country, as well as a couple of broad-A boys lent to us by the British. And they had every facility that ingenuity could think up and money could build. The five-hundred-ton cyclotron which had originally been intended for the University of California was there, and was already

obsolete in the face of the new gadgets these brains had thought up, asked for, and been given. Canada supplied us with all the uranium we asked for-tons of the treacherous stuff-from Great Bear Lake, up near the Yukon, and the fractional-residues technique of separating uranium isotope 235 from the commoner isotope 238 had already been worked out, by the same team from Chicago that had worked up the earlier expensive mass spectograph method.

Someone in the United States government had realized the terrific potentialities of uranium 235 quite early and, as far back as the summer of 1940, had rounded up every atomic research man in the country and had sworn them to silence. Atomic power, if ever developed, was planned to be a government monopoly, at least till the war was over. It might turn out to be the most incredibly powerful explosive ever dreamed of, and it might be the source of equally incredible power. In any case, with Hitler talking about secret weapons and shouting hoarse insults at democracies, the government planned to keep any new discoveries very close to the vest.

Hitler had lost the advantage of a first crack at the secret of uranium through not taking precautions. Dr. Hahn, the first man to break open the uranium atom, was a German. But one of his laboratory assistants
had fled Germany to escape a pogrom. She came to this country, and told us about it. We were searching, there in the laboratory in Maryland, for a way to use U235 in a controlled explosion. We had a vision of a one-ton bomb that would be a whole air raid in itself, a single explosion that would flatten out an entire industrial center. Dr. Ridpath, of Continental Tech, claimed that he could build such a bomb, but that he could not guarantee that it would not explode as soon as it was loaded and as for the force of the explosion-well, he did not believe his own figures; they ran out to too many ciphers.

The problem was, strangely enough, to find an explosive which would be weak enough to blow up only one county at a time, and stable enough to blow up only on request. If we could devise a really practical rocket fuel at the same time, one capable of driving a war rocket at a thousand miles an hour, or more, then we would be in a position to make most anybody say "uncle" to Uncle Sam.

We fiddled around with it all the rest of 1943 and well into 1944. The war in Europe and the troubles in Asia dragged on. After Italy folded up, England was able to release enough ships from her Mediterranean fleet to ease the blockade of the British Isles. With the help of the planes we could now send her regularly and with the additional over-age destroyers we let her have, England hung on somehow, digging in and taking more and more of her essential defense industries underground. Russia shifted her weight from side to side as usual, apparently with the policy of preventing either side from getting a sufficient advantage to bring the war to a successful conclusion. People were beginning to speak of "permanent war."

I was killing time in the administrative office, trying to improve my typing-a lot of Manning's reports had to be typed by me personally-when the orderly on duty stepped in and announced Dr. Karst. I flipped the interoffice communicator. "Dr. Karst is here, chief. Can you see her?"

"Yes," he answered, through his end. I told the orderly to show her in.
Estelle Karst was quite a remarkable old girl and, I suppose, the first woman ever to hold a commission in the Corps of Engineers. She was an M.D. as well as an Sc.D. and

reminded me of the teacher I had had in fourth grade. I guess that was why I always stood up instinctively when she came into the room-I was afraid she might look at me and sniff. It couldn't have been her rank; we didn't bother much with rank.

She was dressed in white coveralls and a shop apron and had simply thrown a hooded cape over herself to come through the snow. I said, "Good morning, ma'am," and led her into Manning's office.

The Colonel greeted her with the urbanity that had made him such a success with women's clubs, seated her, and offered her a cigarette.

"I'm glad to see you, Major," he said. "I've been intending to drop around to your shop."

I knew what he was getting at; Dr. Karst's work had been primarily physiomedical; he wanted her to change the direction of her research to something more productive in a military sense.

"Don't call me 'major,' " she said tartly.

"Sorry, Doctor-"

"I came on business, and must get right back. And I presume you are a busy man, too. Colonel Manning, I need some help."

"That's what we are here for."

"Good. I've run into some snags in my research. I think that one of the men in Dr. Ridpath's department could help me, but Dr. Ridpath doesn't seem disposed to be cooperative."

"So? Well, I hardly like to go over the head of a departmental chief, but tell me about it; perhaps we can arrange it. Whom do you want?"

"I need Dr. Obre."

"The spectroscopist. Hm-m-m. I can understand Dr. Ridpath's reluctance, Dr. Karst, and I'm disposed to agree with him. After all, the high-explosives research is really our main show around here."

She bristled and I thought she was going to make him stay in after school at the very least. "Colonel Manning, do you realize the importance of artificial radioactives to modern medicine?"

"Why, I believe I do. Nevertheless, Doctor, our primary mission is to perfect a weapon which will serve as a safeguard to the whole country in time of war-" She sniffed and went into action. "Weapons-fiddlesticks! Isn't there a medical corps in the Army? Isn't it more important to know how to heal men than to know how to blow them to bits? Colonel Manning, you're not a fit man to have charge of this project! You're a. . . you're a, a warmonger, that's what you are!"

I felt my ears turning red, but Manning never budged. He could have raised Cain with her, confined her to her quarters, maybe even have court-martialed her, but Manning isn't like that. He told me once that every time a man is court-martialed, it is a sure sign that some senior officer hasn't measured up to his job. "I am sorry you feel that way, Doctor," he said mildly, "and I agree that my technical knowledge isn't what it might be. And, believe me, I do wish that healing were all we had to worry about. In any case, I have not refused your request. Let's walk over to your laboratory and see what the problem is. Likely there is some arrangement that can be made which will satisfy everybody.

He was already up and getting out his greatcoat. Her set mouth relaxed a trifle and she answered, "Very well. I'm sorry I spoke as I did."

"Not at all," he replied. "These are worrying times. Come along, John." I trailed after them, stopping in the outer office to get my own coat and to stuff my notebook in a pocket.

By the time we had trudged through mushy snow the eighth of a mile to her lab they were talking about gardening!

Manning acknowledged the sentry's challenge with a wave of his hand and we entered the building. He started casually on into the inner lab, but Karst stopped him. "Armor first, Colonel."

We had trouble finding overshoes that would fit over Manning's boots, which he persisted in wearing, despite the new uniform regulations, and he wanted to omit the foot protection, but Karst would not hear of it. She called in a couple of her assistants who made jury-rigged moccasins out of some soft-lead sheeting. The helmets were different from those used in the explosives lab, being fitted with inhalers. "What's this?" inquired Manning.

"Radioactive dust guard," she said. "It's absolutely essential."

We threaded a lead-lined meander and arrived at the workroom door which she opened by combination. I blinked at the sudden bright illumination and noticed the air was filled with little shiny motes.

"Hm-m-m-it is dusty," agreed Manning. "Isn't there some way of controlling that?" His voice sounded muffled from behind the dust mask.

"The last stage has to be exposed to air," explained Karst. "The hood gets most of it. We could control it, but it would mean a quite expensive new installation."

"No trouble about that. We're not on a budget, you know, It must be very annoying to have to work in a mask like this."

"It is," acknowledged Karst. "The kind of gear it would take would enable us to work without body armor, too. That would be a comfort."

I suddenly had a picture of the kind of thing these researchers put up with. I am a fair-sized man, yet I found that armor heavy to carry around. Estelle Karst was a small woman, yet she was willing to work maybe fourteen hours, day after day, in an outfit which was about as comfortable as a diving suit. But she had not complained.

Not all the heroes are in the headlines. These radiation experts not only ran the chance of cancer and nasty radioaction burns, but the men stood a chance of damaging their germ plasm and then having their wives present them with something horrid in the way of offspring-no chin, for example, and long hairy ears. Nevertheless, they went right ahead and never seemed to get irritated unless something held up their work.

Dr. Karst was past the age when she would be likely to be concerned personally about progeny, but the principle applies.

I wandered around, looking at the unlikely apparatus she used to get her results, fascinated as always by my failure to recognize much that reminded me of the physics laboratory I had known when I was an undergraduate, and being careful not to touch anything. Karst started explaining to Manning what she was doing and why, but I knew that it was useless for me to try to follow that technical stuff. If Manning wanted notes, he would dictate them. My attention was caught by a big boxlike contraption in one corner of the room. It had a hopperlike gadget on one side and I could hear a sound from

it like the whirring of a fan with a background of running water. It intrigued me. I moved back to the neighborhood of Dr. Karst and the Colonel and heard her saying, "The problem amounts to this, Colonel: I am getting a much more highly radioactive end product than I want, but there is considerable variation in the half-life of otherwise equivalent samples. That suggests to me that I am using a mixture of isotopes, but I haven't been able to prove it. And frankly, I do not know enough about that end of the field to be sure of sufficient refinement in my methods. I need Dr. Obre's help on that."

I think those were her words, but I may not be doing her justice, not being a physicist. I understood the part
about "half-life." All radioactive materials keep right on radiating until they turn into something else, which takes theoretically forever. As a matter of practice their periods, or "lives," are described in terms of how long it takes the original radiation to drop to onehalf strength. That time is called a "half-life" and each radioactive isotope of an element has its own specific characteristic half-lifetime.

One of the staff-I forget which one-told me once that any form of matter can be considered as radioactive in some degree; it's a question of intensity and period, or half-life.

"I'll talk to Dr. Ridpath," Manning answered her, "and see what can be arranged. In the meantime you might draw up plans for what you want to reequip your laboratory."

"Thank you, Colonel."

I could see that Manning was about ready to leave, having pacified her; I was still curious about the big box that gave out the odd noises.

"May I ask what that is, Doctor?"

"Oh, that? That's an air conditioner."

"Odd-looking one. I've never seen one like it."

"It's not to condition the air of this room. It's to remove the radioactive dust before the exhaust air goes outdoors. We wash the dust out of the foul air."

"Where does the water go?"

"Down the drain. Out into the bay eventually, I suppose.

I tried to snap my fingers, which was impossible because of the lead mittens. "That accounts for it, Colonel!"

"Accounts for what?"

"Accounts for those accusing notes we've been getting from the Bureau of Fisheries. This poisonous dust is being carried out into Chesapeake Bay and is killing the fish."

Manning turned to Karst. "Do you think that possible, Doctor?"

I could see her brows draw together through the window in her helmet. "I hadn't thought about it," she admitted. "I'd have to do some figuring on the possible concentrations before I could give you a definite answer. But it is possible-yes. However," she added anxiously, "it would be simple enough to divert this drain to a sink hole of some sort."

"Hm-m-m-yes." He did not say anything for some minutes, simply stood there, looking at the box.

Presently he said, "This dust is pretty lethal?"

"Quite lethal, Colonel." There was another long silence.

At last I gathered he had made up his mind about something for he said decisively, "I am going to see to it that you get Obre's assistance, Doctor-"

"Oh, good!"

"-but I want you to help me in return. I am very much interested in this research of yours, but I want it carried on with a little broader scope. I want you to investigate for maxima both in period and intensity as well as for minima. I want you to drop the strictly utilitarian approach and make an exhaustive research along lines which we will work out in greater detail later."

She started to say something but he cut in ahead of her. "A really thorough program of research should prove more helpful in the long run to your original purpose than a more narrow one. And I shall make it my business to expedite every possible facility for such a research. I think we may turn up a number of interesting things."

He left immediately, giving her no time to discuss it. He did not seem to want to talk on the way back and I held my peace. I think he had already gotten a glimmering of the bold and drastic strategy this was to lead
to, but even Manning could not have thought out that early the inescapable consequences of a few dead fish-otherwise he would never have ordered the research.

No, I don't really believe that. He would have gone right ahead, knowing that if he did not do it, someone else would. He would have accepted the responsibility while bitterly aware of its weight.

1944 wore along with no great excitement on the surface. Karst got her new laboratory equipment and so much additional help that her department rapidly became the largest on the grounds. The explosives research was suspended after a conference between Manning and Ridpath, of which I heard only the end, but the meat of it was that there existed not even a remote possibility at that time of utilizing U235 as an explosive. As a source of power, yes, sometime in the distant future when there had been more opportunity to deal with the extremely ticklish problem of controlling the nuclear reaction. Even then it seemed likely that it would riot be a source of power in prime movers such as rocket motors or mobiles, but would be used in vast power plants at least as large as the Boulder Dam installation.

After that Ridpath became a sort of co-chairman of Karst's department and the equipment formerly used by the explosives department was adapted or replaced to carry on research on the deadly artificial radioactives. Manning arranged a division of labor and Karst stuck to her original problem of developing techniques for tailor-making radioactives. I think she was perfectly happy, sticking with a one-track mind to the problem at hand. I don't know to this day whether or not Manning and Ridpath ever saw fit to discuss with her what they intended to do.

As a matter of fact, I was too busy myself to think much about it. The general elections were coming up and I was determined that Manning should have a constituency to return to, when the emergency was over. He was not much interested,'but agreed to let his name be filed as a candidate for re-election. I was trying to work up a campaign by remote control and cursing because I could not be in the field to deal with the thousand and one emergencies as they arose.
I did the next best thing and had a private line installed to permit the campaign chairman to reach me easily. I don't think I violated the Hatch Act, but I guess I stretched it a little.

Anyhow, it turned out all right; Manning was elected as were several other members of the citizen-military that year. An attempt was made to smear him by claiming that he was taking two salaries for one job, but we squelched that with a pamphlet entitled "For Shame!" which explained that he got one salary for two jobs. That's the Federal law in such cases and people are entitled to know it.

It was just before Christmas that Manning first admitted to me how much the implications of the KarstObre process were preying on his mind. He called me into his office over some inconsequential matter, then did not let me go. I saw that he wanted to taik.

"How much of the K-O dust do we now have on hand?" he asked suddenly.

"Just short of ten thousand units," I replied. "I can look up the exact figures in half a moment." A unit would take care of a thousand men, at normal dispersion. He knew the figure as well as I did, and I knew he was stalling.

We had shifted almost imperceptibly from research to manufacture, entirely on Manning's initiative and authority. Manning had never made a specific report to the Department about it, unless he had done so orally to the Chief of Staff.

"Never mind," he answered to my suggestion, then added, "Did you see those horses?"

"Yes," I said briefly.

I did not want to talk about it. I like horses. We hac requisitioned six broken-down old nags, ready for th bone yard, and had used them experimentally. W knew now what the dust would do. After they had died any part of their carcasses would register on a photo graphic plate and tissue from the apices of their lung1 and from the bronchia glowed with a light of its own. Manning stood at the window, staring out at th dreary Maryland winter for a minute or two before re plying, "John, I wish that radioactivity had never beer discovered. Do you realize what that devilish stuf amounts to?"

"Well," I said, "it's a weapon, about like poisor gas-maybe more efficient."

"Rats!" he said, and for a moment I thought he wa~ annoyed with me personally. "That's about like corn paring a sixteen-inch gun with a bow and arrow We've got here the first weapon the world has eve~ seen against which there is no defense, none whatso ever. It's death itself, C.O.D.

"Have you seen Ridpath's report?" he went on. I had not. Ridpath had taken to delivering his re ports by hand to Manning personally.

"Well," he said, "ever since we started productioi I've had all the talent we could spare working on th problem of a defense against the dust. Ridpath telL me and I agree with him that there is no means what soever to combat the stuff, once it's used."

"How about armor," I asked, "and protective cloth ing?"

"Sure, sure," he agreed irritatedly, "provided yoi never take it off to eat, or to drink or for any purpos whatever, until the radioaction has ceased, or you ar out of the danger zone. That is all right for laborator work; I'm talking about war."

I considered the matter. "I still don't see what yoi are fretting about, Colonel. If the stuff is as good as yo~ say it is, you've done just exactly what you set out t odo-develop a weapon which would give the United States protection against aggression."

He swung around. "John, there are times when I think you are downright stupid!"

I said nothing. I knew him and I knew how to discount his moods. The fact that he permitted me to see his feelings is the finest compliment I have ever had. "Look at it this way," he went on more patiently; "this dust, as a weapon, is not just simply sufficient to safeguard the United States, it amounts to a loaded gun held at the head of every man, woman, and child on the globe!"

"Well," I answered, "what of that? It's our secret, and we've got the upper hand. The United States can put a stop to this war, and any other war. We can declare a Pax Americana, and enforce it."

"Hm-m-m-I wish it were that easy. But it won't remain our secret; you can count on that. It doesn't matter how successfully we guard it; all that anyone needs is the hint given by the dust itself and then it is just a matter of time until some other nation develops a technique to produce it. You can't stop brains from working, John; the reinvention of the method is a mathematical certainty, once they know what it is they are looking for. And uranium is a common enough substance, widely distributed over the globe-don't forget that!

"It's like this: Once the secret is out-and it will be out if we ever use the stuff!-the whole world will be comparable to a room full of men, each armed with a loaded .45. They can't get out of the room and each one is dependent on the good will of every other one to stay alive. All offense and no defense. See what I mean?"

I thought about it, but I still didn't guess at the difficulties. It seemed to me that a peace enforced by us was the only way out, with precautions taken to see that we controlled the sources of uranium. I had the usual American subconscious conviction that our country would never use power in sheer aggressior Later, I thought about the Mexican War and the Spar ish-American War and some of the things we did i Central America, and I was not so sure- It was a couple of weeks later, shortly after inauguration day, that Manning told me to get the Chief of Staff's office on the telephone. I heard only the tail en of the conversation. "No, General, I won't," Manning was saying. "I won't discuss it with you, or the Secr tary, either. This is a matter the Commander in Chi is going to have to decide in the long run. If he turns down, it is imperative that no one else ever knoi~ about it. That's my considered opinion.. . . What that? . . . I took this job under the condition that I wa to have a free hand. You've got to give me a little le way this time.. . . Don't go brass hat on me. I kne~ you when you were a plebe... . O.K., O.K., sorry... If the Secretary of War won't listen to reason, you te him I'll be in my seat in the House of Representativc tomorrow, and that I'll get the favor I want from th majority leader. . . . All right. Good-bye."

Washington rang up again about an hour later.] was the Secretary of War. This time Manning listene more than he talked. Toward the end, he said, "All want is thirty minutes alone with the President. I nothing comes of it, no harm has been done. If I convince him, then you will know all about it. . . . No, Sir."
I did not mean that you would avoid responsibility. intended to be helpful. . . . Fine! Thank you, Mr. Se retary."

The White House rang up later in the day and set time.

We drove down to the District the next day throug a nasty cold rain that threatened to turn to sleet. TF usual congestion in Washington was made worse b the weather; it very nearly caused us to be late in a:

riving. I could hear Manning swearing under his breath all the way down Rhode Island Avenue. But we were dropped at the west wing entrance to the White House with two minutes to spare. Manning was ushered into the Oval Office almost at once and I was left cooling my heels and trying to get comfortable in civilian clothes. After so many months of uniform they itched in the wrong places.

The thirty minutes went by.

The President's reception secretary went in, and came out very promptly indeed. He stepped on out into the outer reception room and I heard something that began with, "I'm sorry, Senator, but-" He came back in, made a penciled notation, and passed it out to an usher.

Two more hours went by.

Manning appeared at the door at last and the secretary looked relieved. But he did not come out, saying instead, "Come in, John. The President wants to take a look at you."

I fell over my feet getting up.

Manning said, "Mr. President, this is Captain DeFries." The President nodded, and I bowed, unable to say anything. He was standing on the hearth rug, his fine head turned toward us, and looking just like his pictures-but it seemed strange for the President of the United States not to be a tall man.

I had never seen him before, though, of course, I knew something of his record the two years he had been in the Senate and while he was Mayor before that.

The President said, "Sit down, DeFries. Care to smoke?" Then to Manning. "You think he can do it?"

"I think he'll have to. It's Hobson's choice."

"And you are sure of him?"

"He was my campaign manager."

"I see."

The President said nothing more for a while and God knows I didn't!-though I was bursting to know what they were talking about. He commenced again with,

"Colonel Manning, I intend to follow the procedur you have suggested, with the changes we discusse But I will be down tomorrow to see for myself that th dust will do what you say it will. Can you prepare demonstration?"

"Yes, Mr. President."

"Very well, we will use Captain DeFries unless think of a better procedure." I thought for a momer that they planned to use me for a guinea pig! But h turned to me and continued, "Captain, I expect to sen you to England as my representative."

I gulped. "Yes, Mr. President." And that is ever word I had to say in calling on the President of th United States.

After that, Manning had to tell me a lot of things h had on his mind. I am going to try to relate them ~ carefully as possible, even at the risk of being dull an obvious and of repeating things that are commo knowledge.

We had a weapon that could not be stopped. An type of K-O dust scattered over an area rendered th~ area uninhabitable for a length of time that depende on the half-life of the radioactivity.

Period. Full stop.

Once an area was dusted there was nothing th~ could be done about it until the radioactivity ha fallen off to the point where it was no longer harmfu The dust could not be cleaned out; it was everywhen There was no possible way to counteract it-burn i combine it chemically; the radioactive isotope w~ still there, still radioactive, still deadly. Once used o a stretch of land, for a predetermined length of tim that piece of earth would not tolerate life.

It was extremely simple to use. No complicate bomb-~ights were needed, no care need be taken to h "military objectives." Take it aloft in any sort of aircraft, attain a position more or less over the area yo
wish to sterilize, and drop the stuff. Those on the ground in the contaminated area are dead men, dead in an hour, a day, a week, a month, depending on the degree of the infection-but dead.

Manning told me that he had once seriously considered, in the middle of the night, recommending that every single person, including himself, who knew the Karst-Obre technique be put to death, in the interests of all civilization. But he had realized the next day that it had been sheer funk; the technique was certain in time to be rediscovered by someone else.
Furthermore, it would not do to wait, to refrain from using the grisly power, until someone else perfected it and used it. The only possible chance to keep the world from being turned into one huge morgue was for us to use the power first and drastically-get the upper hand and keep it.

We were not at war, legally, yet we had been in the war up to our necks with our weight on the side of democracy since 1940. Manning had proposed to the President that we turn a supply of the dust over to Great Britain, under conditions we specified, and enable them thereby to force a peace. But the terms of the peace would be dictated by the United States-for we were not turning over the secret.

After that, the Pax Americana.

The United States was having power thrust on it, willy-nilly. We had to accept it and enforce a worldwide peace, ruthlessly and drastically, or it would be seized by some other nation. There could not be coequals in the possession of this weapon. The factor of time predominated.

I was selected to handle the details in England because Manning insisted, and the President agreed with him, that every person technically acquainted with the Karst-Obre process should remain on the laboratory reservation in what amounted to protective custody-imprisonment. That included Manning himself.

I could go because I did not have the secret-I coul not even have acquired it without years of schoolingand what I did not know I could not tell, even under well, drugs. We were determined to keep the secret a long as we could to consolidate the Pax; we did nc distrust our English cousins, but they were Britisher with a first loyalty to the British Empire. No need to tempt them.

I was picked because I understood the backgroun if not the science, and because Manning trusted me. don't know why the President trusted me, too, hi. then my job was not complicated.

We took off from the new field outside Baltimore o a cold, raw afternoon which matched my own feeling I had an all-gone feeling in my stomach, a runny nos and,

buttoned inside my clothes, papers appointin me a special agent of the President of the Unite States. They were odd papers, papers without prec~ dent; they did not simply give me the usual diplomati immunity; they made my person very nearly as sacre as that of the President himself.

At Nova Scotia we touched ground to refuel, tF F.B.I. men left us, we took off again, and the Canadia transfighters took their stations around us. All the du:
we were sending was in my plane; if the President representative were shot down, the dust would go 1 the bottom with him.

No need to tell of the crossing. I was airsick and mi erable, in spite of the steadiness of the new six-engine jobs. I felt like a hangman on the way to an executio] and wished to God that I were a boy again, with not] ing more momentous than a debate contest, or a trac meet, to worry me.

There was some fighting around us as we neare Scotland, I know, but I could not see it, the cabin beir shuttered. Our pilot-captain ignored it and brougi his ship down on a totally dark field, using a beam,
suppose, though I did not know nor care. I would have welcomed a crash. Then the lights outside went on and I saw that we had come to rest in an underground hangar.

I stayed in the ship. The Commandant came to see me to his quarters as his guest. I shook my head. "I stay here," I said. "Orders. You are to treat this ship as United States soil, you know,"

He seemed miffed, but compromised by having dinner served for both of us in my ship.

There was a really embarrassing situation the next day. I was commanded to appear for a Royal audience. But I had my instructions and I stuck to them. I was sitting on that cargo of dust until the President told me what to do with it. Late in the day I was called on by a member of Parliament-nobody admitted out loud that it was the Prime Minister-and a Mr. Windsor. The M.P. did most of the talking and I answered his questions. My other guest said very little and spoke slowly with some difficulty. But I got a very favorable impression of him. He seemed to be a man who was carrying a load beyond human strength and carrying it heroically.

There followed the longest period in my life. It was actually only a little longer than a week, but every minute of it had that split-second intensity of imminent disaster that comes just before a car crash. The President was using the time to try to avert the need to use the dust. He had two face-to-face television conferences with the new Fuehrer. The President spoke German fluently, which should have helped. He spoke three times to the warring peoples themselves, but it is doubtful if very many on the Continent were able to listen, the police regulations there being what they were.

The Ambassador from the Reich was given a special demonstration of the effect of the dust. He was flown
out over a deserted stretch of Western prairie and ~ lowed to see what a single dusting would do to a he] of steers. It should have impressed him and I thu that it did-nobody could ignore a visual demonstr tion!-but what report he made to his leader we nev knew.

The British Isles were visited repeatedly during the wait by bombing attacks as heavy as any of the war was safe enough but I heard about them, and I cou see the effect on the morale of the officers with who I associated. Not that it frightened them-it ma~

them coldly angry. The raids were not directed p1 manly at dockyards or factories, but were ruthless d struction of anything, particularly villages.

"I don't see what you chaps are waiting for," a fig commander complained to me. "What the Jerri need is a dose of their own shrecklichkeit, a lesson their own Aryan culture."

I shook my head. "We'll have to do it our own way He dropped the matter, but I knew how he and F brother officers felt. They had a standing toast, as s cred as the toast to the King: "Remember Coventry! Our President had stipulated that the R. A. F. w not to bomb during the period of negotiation, but th bombers were busy nevertheless. The continent w showered, night after night, with bales of leaflets, p~ pared by our own propaganda agents. The first of the called on the people of the Reich to stop a useless w and promised that the terms of peace would not vindictive. The second rain of pamphlets showed ph tographs of that herd of steers. The third was a simf direct warning to get out of cities and to stay out. As Manning put it, we were calling "Halt!" thr times before firing. I do not think that he or the Pre dent expected it to work, but we were morally ob gated to try.

The Britishers had installed for me a televisor, of the Simonds-Yarley nonintercept type, the sort where the receiver must "trigger" the transmitter in order for the transmission to take place at all. It made assurance of privacy in diplomatic communication for the first time in history, and was a real help in the crisis. I had brought along my own technician, one of the F. B. I.'s new corps of specialists, to handle the scrambler and the trigger.

He called to me one afternoon. "Washington signaling.

I climbed tiredly out of the cabin and down to the booth on the hangar floor, wondering if it were another false alarm.

It was the President. His lips were white. "Carry out your basic instructions, Mr. DeFries."

"Yes, Mr. President!"

The details had been worked out in advance and, once I had accepted a receipt and token payment from the Commandant for the dust, my duties were finished. But, at our instance, the British had invited military observers from every independent nation and from the several provisional governments of occupied nations. The United States Ambassador designated me as one at the request of Manning.

Our task group was thirteen bombers. One such bomber could have carried all the dust needed, but it was split up to insure most of it, at least, reaching its destination. I had fetched forty percent more dust than Ridpath calculated would be needed for the mission and my last job was to see to it that every canister actually went on board a plane of the flight. The extremely small weight of dust used was emphasized to each of the military observers.

We took off just at dark, climbed to twenty-five thousand feet, refueled in the air, and climbed again. Our escort was waiting for us, having refueled thirty minutes before us. The flight split into thirteen groups, and cut the thin air for middle Europe. The bombers we rode had been stripped and hiked up to permit the utmost maximum of speed and altitude.

Elsewhere in England, other flights had taken off shortly before us to act as a diversion. Their destina
tions were every part of Germany; it was the intentio to create such confusion in the air above the Reich th2 our few planes actually engaged in the serious wor might well escape attention entirely, flying so high i the stratosphere.

The thirteen dust carriers approached Berlin fnoi different directions, planning to cross Berlin as if fo lowing the spokes of a wheel. The night was apprech bly clear and we had a low moon to help us. Berlin: not a hard city to locate, since it has the largest squan mile area of aiiy modern city and is located on a broa flat alluvial plain. I could make out the River Spree a we approached it, and the Havel. The city was blacke out, but a city makes a different sort of black froi open country. Parachute flares hung over the city i many places, showing that the R. A. F. had been bus before we got there and the A. A. batteries on tli ground helped to pick out the city.

There was fighting below us, but not within fiftee thousand feet of our altitude as nearly as I could judg~ The pilot reported to the captain, "On line of bearing!" The chap working the absolute altimeter stea ily fed his data into the fuse pots of the canister. Tli canisters were equipped with a light charge of blac powder, sufficient to explode them and scatter tF dust at a time after release predetermined by the fu5 pot setting. The method used was no more than an e ficient expedient. The dust would have been almost a effective had it simply been dumped out in paper bag although not as well distributed.

The Captain hung over the navigator's board, slight frown on his thin sallow face. "Ready one!" r ported the bomber.

"Release!"

"Ready two!"

The Captain studied his wristwatch. "Release!" "Ready three!"

"Release!"

When the last of our ten little packages was out of the ship we turned tail and ran for home.

No arrangements had been made for me to get home; nobody had thought about it. But it was the one thing I wanted to do. I did not feel badly; I did not feel much of anything. I felt like a man who has at last screwed up his courage and undergone a serious operation; it's over now, he is still numb from shock but his mind is relaxed. But I wanted to go home.

The British Commandant was quite decent about it; he serviced and manned my ship at once and gave me an escort for the offshore war zone. It was an expensive way to send one man home, but who cared? We had just expended some millions of lives in a desperate attempt to end the war; what was a money expense? He gave the necessary orders absentmindedly.

I took a double dose of nembutal and woke up in Canada. I tried to get some news while the plane was being serviced, but there was not much to be had. The government of the Reich had issued one official news bulletin shortly after the raid, sneering at the much vaunted "secret weapon" of the British and stating that a major air attack had been made on Berlin and several other cities, but that the raiders had been driven off with only minor damage. The current Lord Haw-Haw started one of his sarcastic speeches but was unable to continue it. The announcer said that he had been seized with a heart attack, and

substituted some recordings of patriotic music. The station cut off in the middle of the "Horst Wessel" song. After that there was silence.

I managed to promote an Army car and a driver at the Baltimore field which made short work of the Annapolis speedway. We almost overran the turnoff to the laboratory.

Manning was in his office. He looked up as I came in, said, "Hello, John," in a dispirited voice, and dropped
his eyes again to the blotter pad. He went back drawing doodles.

I looked him over and realized for the first time th the chief was an old man. His face was gray and flabF deep furrows framed his mouth in a triangle. F clothes did not fit.

I went up to him and put a hand on his should~ "Don't take it so hard, chief. It's not your fault. \ gave them all the warning in the world."

He looked up again. "Estelle Karst suicided this morning. Anybody could have anticipated it, but nobody d And somehow I felt harder hit by her death than by t death of all those strangers in Berlin. "How did she it?" I asked.

"Dust. She went into the canning room, and took off her armor."

I could picture her-head held high, eyes snappir and that set look on her mouth which she got wh people did something she disapproved of. One lit old woman whose lifetime work had been turn against her.

"I wish," Manning added slowly, "that I could explain to her why we had to do it."

We buried her in a lead-lined coffin, then Manning and I went on to Washington.

While we were there, we saw the motion pictui that had been made of the death of Berlin. You ha not seen them; they never were made public, but th were of great use in convincing the other nations oft world that peace was a good idea. I saw them wh Congress did, being allowed in because I was Ma ning's assistant.

They had been made by a pair of R. A. F. pilots, w had dodged the Luftwaffe to get them. The first sh showed some of the main streets the morning after t raid. There was not much to see that would show up telephoto shots, just busy and crowded streets, but if you looked closely you could see that there had been an excessive number of automobile accidents.

The second day showed the attempt to evacuate. The inner squares of the city were practically deserted save for bodies and wrecked cars, but the streets leading out of town were boiling with people, mostly on foot, for the trams were out of service. The pitiful creatures were fleeing, not knowing that death was already lodged inside them. The plane swooped down at one point and the cinematographer had his telephoto lens pointed directly into the face of a young woman for several seconds. She stared back at it with a look too woebegone to forget, then stumbled and fell.

She may have been trampled. I hope so. One of those six horses had looked like that when the stuff was beginning to hit his vitals.

The last sequence showed Berlin and the roads around it a week after the raid. The city was dead; there was not a man, a woman, a child-nor cats, nor dogs, not even a pigeon. Bodies were all around, but they were safe from rats. There were norats.

The roads around Berlin were quiet now. Scattered carelessly on shoulders and in ditches, and to a lesser extent on the pavement itself, like coal shaken off a train, were the quiet heaps that had been the citizens of the capital of the Reich. There is no use in talking about it.

But, so far as I am concerned, I left what soul I had in that projection room and I have not had one since. The two pilots who made the pictures eventually died-systemic, cumulative infection, dust in the air over Berlin. With precautions it need not have happened, but the English did not believe, as yet, that our extreme precautions were necessary.

The Reich took about a week to fold up. It might have taken longer if the new Fuehrer had not gone to Berlin the day after the raid to "prove" that the British boasts had been hollow. There is no need to recount
the provisional governments that Germany had in t] following several months; the only one we are co cerned with is the so-called restored monarchy whh used a cousin of the old Kaiser as a symbol, the 01 that sued for peace.

Then the trouble started.

When the Prime Minister announced the terms the private agreement he had had with our Presider he was met with a silence that was broken only I cries of "Shame! Shame! Resign!" I suppose it was i evitable; the Commons reflected the spirit of a peop who had been unmercifully punished for four yeai They were in a mood to enforce a peace that wou have made the Versailles Treaty look like the Bea tudes.

The vote of no confidence left the Prime Minister no choice. Forty-eight hours later the King made a speech from the throne that violated all constitutional precedent, for it had not been written by a Prime Minister. In this greatest crisis in his reign, his voice was clear and unlabored; it sold the idea to England and a national coalition government was formed.

I don't know whether we would have dusted Lond to enforce our terms or not; Manning thinks we would have done so. I suppose it depended on the character of the President of the United States, and there is is way of knowing about that since we did not have to do it.

The United States, and in particular the President the United States, was confronted by two inescapable problems. First, we had to consolidate our position once, use our temporary advantage of an overwhelmingly powerful weapon to insure that such a weapon would not be turned on us. Second, some means had to be worked out to stabilize American foreign policy so that it could handle the tremendous power we suddenly had thrust upon us.

The second was by far the most difficult and serious. If we were to establish a reasonably permanent peace-say a century or so-through a monopoly on a weapon so powerful that no one dare fight us, it was imperative that the policy under which we acted be more lasting than passing political administrations. But more of that later-The first problem had to be attended to at once- time was the heart of it. The emergency lay in the very simplicity of the weapon. It required nothing but aircraft to scatter it and the dust itself, which was easily and quickly made by anyone possessing the secret of the Karst-Obre process and having access to a small supply of uranium-bearing ore.

But the Karst-Obre process was simple and might be independently developed at any time. Manning reported to the President that it was Ridpath's opinion, concurred in by Manning, that the staff of any modern radiation laboratory should be able to work out an equivalent technique in six weeks, working from the hint given by the events in Berlin

alone, and should then be able to produce enough dust to cause major destruction in another six weeks.

Ninety days-ninety days provided they started from scratch and were not already halfway to their goal. Less than ninety days-perhaps no time at all- By this time Manning was an unofficial member of the Cabinet; "Secretary of Dust," the President called him in one of his rare jovial moods. As for me, well, I attended Cabinet meetings, too. As the only layman who had seen the whole show from beginning to end, the President wanted me there.

I am an ordinary sort of man who, by a concatenation of improbabilities, found himself shoved into the councils of the rulers. But I found that the rulers were ordinary men, too, and frequently as bewildered as I was.

But Manning was no ordinary man. In him ordinary hard sense had been raised to the level of genius. Oh, yes, I know that it is popular to blame everything on him and to call him everything from traitor to mad dog, but I still think he was both wise and benevoler I don't care how many second-guessing historians don't agree with me.

"I propose," said Manning, "that we begin by ir mobilizing all aircraft throughout the world."

The Secretary of Commerce raised his brov~ "Aren't you," he said, "being a little fantastic, Colon Manning?"

"No, I'm not," answered Manning shortly. "I' being realistic. The key to this problem is aircra Without aircraft the dust is an inefficient weapon. TI only way I see to gain time enough to deal with t] whole problem is to ground all aircraft and put the out of operation. All aircraft, that is, not actually the service of the United States Army. After that '~ can deal with complete world disarmament and pe manent methods of control."

"Really now," replied the Secretary, "you are n proposing that commercial airlines be put out of o eration. They are an essential part of world econom It would be an intolerable nuisance."

"Getting killed is an intolerable nuisance, too Manning answered stubbornly. "I do propose ju that. All aircraft. All."

The President had been listening without comme to the discussion. He now cut in. "How about aircra on which some groups depend to stay alive, Colom such as the Alaskan lines?"

"If there are such, they must be operated by Ame can Army pilots and crews. No exceptions."

The Secretary of Commerce looked startled. "An to infer from that last remark that you intended ti prohibition to apply to the United States as well other nations?"

"Naturally."

"But that's impossible. It's unconstitutional. It vi lates civil rights."

"Killing a man violates his civil rights, too," Ma ning answered stubbornly.

"You can't do it. Any Federal Court in the country would enjoin you in five minutes."

"It seems to me," said Manning slowly, "that Andy Jackson gave us a good precedent for that one when he told John Marshall to go fly a kite." He looked slowly around the table at faces that ranged from undecided to antagonistic. "The issue is sharp, gentlemen, and we might as well drag it out in the open. We can be dead men, with everything in due order, constitutional, and technically correct; or we can do what has to

be done, stay alive, and try to straighten out the legal aspects later." He shut up and waited.

The Secretary of Labor picked it up. "I don't think the Colonel has any corner on realism. I think I see the problem, too, and I admit it is a serious one. The dust must never be used again. Had I known about it soon enough, it would never have been used on Berlin. And I agree that some sort of worldwide control is necessary. But where I differ with the Colonel is in the method. What he proposes is a military dictatorship imposed by force on the whole world. Admit it, Colonel. Isn't that what you are proposing?"

Manning did not dodge it. "That is what I am proposing.

"Thanks. Now we know where we stand. I, for one, do not regard democratic measures and constitutional procedure as of so little importance that I am willing to jettison them any time it becomes convenient. To me, democracy is more than a matter of expediency, it is a faith. Either it works, or I go under with it."

"What do you propose?" asked the President.

"I propose that we treat this as an opportunity to create a worldwide democratic commonwealth! Let us use our present dominant position to issue a call to all nations to send representatives to a conference to form a world constitution."

"League of Nations," I heard someone mutter.

"No!" he answered the side remark. "Not a League of Nations. The old League was helpless because it had no real existence, no power. It was not implementc to enforce its decisions; it was just a debating societ a sham. This would be different for we would turn ov the dust to it!"

Nobody spoke for some minutes. You could see them turning it over in their minds, doubtful, partially approving, intrigued but dubious.

"I'd like to answer that," said Manning.

"Go ahead," said the President.

"I will. I'm going to have to use some pretty pla~ language and I hope that Secretary Lamer will do n the honor of believing that I speak so from sinceril and deep concern and not from persorìal pique.

"I think a world democracy would be a very flu thing and I ask that you believe me when I say I woul willingly lay down my life to accomplish it. I ah think it would be a very fine thing for the lion to 1 down with the lamb, but I am reasonably certain that only the lion would get up. If we try to form an actu world democracy, we'll be the lamb in the setup.

"There are a lot of good, kindly people who are internationalists these days. Nine out of ten of them are soft in the head and the tenth is ignorant. If we set up a worldwide democracy, what will the electorate be? Take a look at the facts: Four hundred million Chinese with no more concept of voting and citizen responsibility than a flea; three hundred million Hindus who aren't much better indoctrinated; God knows ho many in the Eurasian Union who believe in God knows what; the entire continent of Africa only semicivilize eighty million Japanese who really believe that th are Heaven-ordained to rule; our Spanish-Americ~ friends who might trail along with us and might nc but who don't understand the Bill of Rights the w~ we think of it; a quarter of a billion people of two doz different nationalities in Europe, all with revenge an black hatred in their hearts.

"No, it won't wash. It's preposterous to talk about world democracy for many years to come. If you turn the secret of the dust over to such a body, you will arming the whole world to commit suicide."

Lamer answered at once. "I could resent some of your remarks, but I won't. To put it bluntly, I consider the source. The trouble with you, Colonel Manning, is that you are a professional soldier and have no faith in people. Soldiers may be necessary, but the worst of them are martinets and the best are merely paternalistic." There was quite a lot more of the same.

Manning stood it until his turn came again. "Maybe I am all those things, but you haven't met my argument. What are you going to do about the hundreds of millions of people who have no experience in, nor love for, democracy? Now, perhaps, I don't have the same concept of democracy as yourself, but I do know this:

Out West there are a couple of hundred thousand people who sent me to Congress; I am not going to stand quietly by and let a course be followed which I think will result in their deaths or utter ruin.

"Here is the probable future, as I see it, potential in the smashing of the atom and the development of lethal artificial radioactives. Some power makes a supply of the dust. They'll hit us first to try to knock us out and give them a free hand. New York and Washington overnight, then all of our industrial areas while we are still politically and economically disorganized. But our army would not be in those cities; we would have planes and a supply of dust somewhere where the first dusting wouldn't touch them. Our boys would bravely and righteously proceed to poison their big cities. Back and forth it would go until the organization of each country had broken down so completely that they were no longer able to maintain a sufficiently high level of industrialization to service planes and manufacture dust. That presupposes starvation and plague in the process. You can fill in the details.

"The other nations would get in the game. It would be silly and suicidal, of course, but it doesn't take brains to take a hand in this. All it takes is a very small group, hungry for power, a few airplanes and a supply ~mf dllQt It'c a a~ic'r,~jc c'ir,-lo that ,'ai',i-ic,t ,-,,-,cci~l-,li, ho
stopped until the entire planet has dropped to a level economy too low to support the techniques necessary i main tam it. My best guess is that such a point woul be reached when approximately three-quarters of tF world's population were dead of dust, disease, or hui gem, and culture reduced to the peasant-and-villa~ type.

"Where is your Constitution and your Bill of Righ if you let that happen?"

I've shortened it down, but that was the gist of it. can't hope to record every word of an argument th~ went on for days.

The Secretary of the Navy took a crack at him nex "Aren't you getting a bit hysterical, Colonel? After a] the world has seen a lot of weapons which were goir to make war an impossibility too horrible to conten plate. Poison gas, and tanks, and airplanes-even fir arms, if I remember my history."

Manning smiled wryly. "You've made a point, M Secretary. 'And when the wolf really came, the liii boy shouted in vain.' I imagine the Chamber of Con merce in Pompeii presented the same reasonab argument to any early vulcanologist so timid as to fe~ Vesuvius. I'll try to justify my fears. The dust diffe] from every earlier weapon in its deadliness and ease use, but most importantly in that we have develope no defense

against it. For a number of fairly technic~ reasons, I dont think we ever will, at least not th century."

"Why not?"

"Because there is no way to counteract radioactivil short of putting a lead shield between yourself and i an airtight lead shield. People might survive by livir in sealed underground cities, but our characterist American culture could not be maintained."

"Colonel Manning," suggested the Secretary State, "I think you have overlooked the obvious alte native."

"Have I?"

"Vcsc_tn lroon t1n~. ru i ~ C ni ir nn;n ccsrrat ,yn ni ir nfl
way, and let the rest of the world look out for itself. That is the only program that fits our traditions." The Secretary of State was really a fine old gentleman, and not stupid, but he was slow to assimilate new ideas.

"Mr. Secretary," said Manning respectfully, "I wish we could afford to mind our own business. I do wish we could. But it is the best opinion of all the experts that we can't maintain control of this secret except by rigid policing. The Germans were close on our heels in nuclear research; it was sheer luck that we got there first. I ask you to imagine Germany a year hence-with a supply of dust."

The Secretary did not answer, but I saw his lips form the word Berlin.

They came around. The President had deliberately let Manning bear the brunt of the argument, conserving his own stock of goodwill to coax the obdurate. He decided against putting it up to Congress; the dusters would have been overhead before each senator had finished his say. What he intended to do might be unconstitutional, but if he failed to act there might not be any Constitution shortly. There was precedent- the Emancipation Proclamation, the Monroe Doctrine, the Louisiana Purchase, suspension of habeas corpus in the War between the States, the Destroyer Deal.

On February 22nd the President declared a state of full emergency internally and sent his Peace Proclamation to the head of every sovereign state. Divested of its diplomatic surplusage, it said: The United States is prepared to defeat any power, or combination of powers, in jig time. Accordingly, we are outlawing war and are calling on every nation to disarm completely at once. In other words, "Throw down your guns, boys; we've got the drop on you!"

A supplement set forth the procedure: All aircraft capable of flying the Atlantic were to be delivered in one week's time to a field, or rather a great stretch of prairie, just west of Fort Riley, Kansas. For lesser aircraft, a spot near Shanghai and a rendezvous in Wales were designated. Memoranda would be issued lat with respect to other war equipment. Uranium and i ores were not mentioned; that would come later.

No excuses. Failure to disarm would be construe as an act of war against the United States.

There were no cases of apoplexy in the Senate; wF not, I don't know.

There were only three powers to be seriously wo ned about, England, Japan, and the Eurasian Unio:
England had been forewarned, we had pulled her oi of a war she was losing, and she-or rather her men i power-knew accurately what we could and wou] do.

Japan was another matter. They had not seen Berli and they did not really believe it. Besides, they ha been telling each other for so many years that th were unbeatable, they believed it. It does not do to gi too tough with a Japanese too quickly, for they will d rather than lose face. The negotiations were coi ducted very quietly indeed, but our fleet was halfw~ from Pearl Harbor to Kobe, loaded with enough du to sterilize their six biggest cities, before they we~ concluded. Do you know what did it? This never h the newspapers but it was the wording of the par phlets we proposed to scatter before dusting.

The Emperor was pleased to declare a New Order Peace. The official version, built up for home co sumption, made the whole matter one of collaboratic between two great and friendly powers, with Japa taking the initiative.

The Eurasian Union was a puzzle. After Stalin's ui expected death in 1941, no western nation knew vei much about what went on in there. Our own dipl matic relations had atrophied through failure to r place men called home nearly four years befor Everybody knew, of course, that the new group power called themselves Fifth Internationalists, bi what that meant, aside from ceasing to display ti pictures of Lenin and Stalin, nobody knew.

But they agreed to our terms and offered to cooperate in every way. They pointed out that the Union had never been warlike and had kept out of the recent world struggle. It was fitting that the two remaining great powers should use their greatness to insure a lasting peace.

I was delighted; I had been worried about the E. U. They commenced delivery of some of their smaller planes to the receiving station near Shanghai at once. The reports on the number and quality of the planes seemed to indicate that they had stayed out of the war through necessity; the planes were mostly of German make and in poor condition, types that Germany had abandoned early in the war.

Manning went west to supervise certain details in connection with immobilizing the big planes, the transoceanic planes, which were to gather near Fort Riley. We planned to spray them with oil, then dust from a low altitude, as in crop dusting, with a low concentration of one-year dust. Then we could turn our backs on them and forget them, while attending to other matters.

But there were hazards. The dust must not be allowed to reach Kansas City, Lincoln, Wichita-any of the nearby cities. The smaller towns roundabout had been temporarily evacuated. Testing stations needed to be set up in all directions in order that accurate tab on the dust might be kept. Manning felt personally responsible to make sure that no bystander was poisoned.

We circled the receiving station before landing at Fort Riley. I could pick out the three landing fields which had hurriedly been graded. Their runways were white in the sun, the twenty-four-hour cement as yet undirtied. Around each of the landing fields were crowded dozens of parking fields, less perfectly graded. Tractors and bulldozers were still at work on some of them. In the eastemnmost fields, the German and British ships were already in place, jammed wing to body as tightly as planes on the flight deck of a carrier-save for a few that were still being towed mt position, the tiny tractors looking from the air lil~ ants dragging pieces of leaf many times larger tha themselves.

Only three flying fortresses had arrived from tli Eurasian Union. Their representatives had asked for short delay in order that a supply of high-test aviatio

gasoline might be delivered to them. They claimed shortage of fuel necessary to make the long flight ov the Arctic safe. There was no way to check the claii and the delay was granted while a shipment wa routed from England.

We were about to leave, Manning having satisfie himself as to safety precautions, when a dispatc came in announcing that a flight of E. U. bombei might be expected before the day was out. Mannini wanted to see them arrive; we waited around for for hours. When it was finally reported that our escort fighters had picked them up at the Canadian borde Manning appeared to have grown fidgety and state that he would watch them from the air. We took of gained altitude and waited.

There were nine of them in the flight, cruising in co umn of echelons and looking so huge that our littl fighters were hardly noticeable. They circled the fiel and I was admiring the stately dignity of them whe Manning's pilot, Lieutenant Rafferty, exclaimed "What the devil! They are preparing to land dowi wind!"

I still did not tumble, but Manning shouted to ti copilot, "Get the field!"

He fiddled with his instruments and announced "Got 'em, sir!"

"General alarm! Armor!"

We could not hear the sirens, naturally, but I cou] see the white plumes rise from the big steam whist on the roof of the Administration Building-three br blasts, then three short ones. It seemed almost at tI same time that the first cloud broke from the E. I planes.

Instead of landing, they passed low over the receiving station, jampacked now with ships from all over the world. Each echelon picked one of three groups centered around the three landing fields and streamers of heavy brown smoke poured from the bellies of the E. U. ships. I saw a tiny black figure jump from a tractor and run toward the nearest building. Then the smoke screen obscured the field.

"Do you still have the field?" demanded Manning. "Yes, sir."

"Cross connect to the chief safety technician. Hurry!"

The copilot cut in the amplifier so that Manning could talk directly. "Saunders? This is Manning. How about it?"

"Radioactive, chief. Intensity seven point four." They had paralleled the Karst-Obre research.

Manning cut him off and demanded that the communication office at the field raise the Chief of Staff. There was nerve-stretching delay, for it had to be routed over land wire to Kansas City, and some chief operator had to be convinced that she should commandeer a trunk line that was in commercial use. But we got through at last and Manning made his report. "It stands to reason," I heard him say, "that other flights are approaching the border by this time. New York, of course, and Washington. Probably Detroit and Chicago as well. No way of knowing."

The Chief of Staff cut off abruptly, without comment. I knew that the U.S. air fleets, in a state of alert for weeks past, would have their orders in a few seconds, and would be on their way to hunt out and down the attackers, if possible before they could reach the cities.

I glanced back at the field. The formations were broken up. One of the E. U. bombers was down, crashed, half a mile beyond the station. While I watched, one of our midget dive bombers screamed down on a behemoth E. U. ship and unloaded his eggs. It

was a center hit, but the American pilot had cut it too fine, could not pull out, and crashed before his vi tim.

There is no point in rehashing the newspaper storh of the Four-Days War. The point is that we should ha's lost it, and we would have, had it not been for an ui likely combination of luck, foresight, and good mai agement. Apparently, the nuclear physicists of tF Eurasian Union were almost as far along as Ridpath crew when the destruction of Berlin gave them the ti they needed. But we had rushed them, forced them 1 move before they were ready, because of the dea(line for disarmament set forth in our Peace Proclam~ tion.

If the President had waited to fight it out with Co gress before issuing the proclamation, there would n be any United States.

Manning never got credit for it, but it is evident me that he anticipated the possibility of somethii like the Four-Days War and prepared for it in a doz different devious ways. I don't mean military prep ration; the Army and the Navy saw to that. But it w no accident that Congress was adjourned at the tim I had something to do with the vote-swapping am compromising that led up to it, and I know.

But I put it to you-would he have maneuvered get Congress out of Washington at a time when I feared that Washington might be attacked if he he had dictatorial ambitions?

Of course, it was the President who was back of t] ten-day leaves that had been granted to most of t] civil-service personnel in Washington and he hims must have made the decision to take a swing throuf the South at that time, but it must have been Mannii who put the idea in his head. It is inconceivable th the President would have left Washington to esca~ personal danger.

And then, there was the plague scare. I don't kno how or when Manning could have started that-it ce tainly did not go through my notebook-but I simply do not believe that it was accidental that a completely unfounded rumor of bubonic plaguc~ caused New York City to be semideserted at the time the E. U. bombers struck.

At that, we lost over eight hundred thousand people in Manhattan alone.

Of course, the government was blamed for the lives that were lost and the papers were merciless in their criticism at the failure to anticipate and force an evacuation of all the major cities.

If Manning anticipated trouble, why did he not ask for evacuation?

Well, as I see it, for this reason:

A big city will not be, never has been, evacuated in response to rational argument. London never was evacuated on any major scale and we failed utterly in our attempt to force the evacuation of Berlin. The people of New York City had considered the danger of air raids since 1940 and were long since hardened to the thought.

But the fear of a nonexistent epidemic of plague caused the most nearly complete evacuation of a major city ever seen.

And don't forget what we did to Vladivostok and Irkutsk and Moscow-those were innocent people, too. War isn't pretty.

I said luck played a part. It was bad navigation that caused one of our ships to dust Ryazan instead of Moscow, but that mistake knocked out the laboratory and plant which produced the only supply of military madioactives in the Eurasian Union. Suppose the

mistake had been the other way around-suppose that one of the E. U. ships in attacking Washington, D.C., by mistake had included Ridpath's shop forty-five miles away in Maryland?

Congress reconvened at the temporary capital in St. Louis, and the American Pacification Expedition started the job of pulling the fangs of the Eurasian Union. It was not a military occupation in the usual sense; there were two simple objectives: to search out and dust all aircraft, aircraft plants, and fields, and locate and dust radiation laboratories, uranium su plies, and bodes of carnotite and pitchblende. No a tempt was made to interfere with, or to replace, ci~ government.

We used a two-year dust, which gave a breathir spell in which to consolidate our position. Liberal r wards were offered to informers, a technique whh worked remarkably well not only in the E. U., but most parts of the world.

The "weasel," an instrument to smell out radiatio based on the electroscope-discharge principle and r fined by Ridpath's staff, greatly facilitated the work locating uranium and uranium ores. A grid of wease] properly spaced over a suspect area, could locate ai important mass of uranium almost as handily as a c rection-finder can spot a radio station.

But, notwithstanding the excellent work of Gener Bulfinch and the Pacification Expedition as a whole, was the original mistake of dusting Ryazan that ma the job possible of accomplishment.

Anyone interested in the details of the pacificati work done in 1945-6 should see the "Proceedings the American Foundation for Social Research" for paper entitled A Study of the Execution of the Americ Peace Policy from February, 1945. The de facto soluti of the problem of policing the world against war k the United States with the much greater problem perfecting a policy that would insure that the dead power of the dust would never fall into unfit hand:

The problem is as easy to state as the problem squaring the circle and almost as impossible of a complishment. Both Manning and the President b lieved that the United States must of necessity ke~ the power for the time being, until some permane institution could be developed fit to retain it. The ha and was this: Foreign policy is lodged jointly in ti hands of the President and the Congress. We were fc tunate at the time in having a good President and adequate Congress, but that was no guarantee for the future. We have had unfit Presidents and power-hungry Congresses-oh, yes! Read the history of the Mexican War.

We were about to hand over to future governments of the United States the power to turn the entire globe into an empire, our empire. And it was the sober opinion of the President that our characteristic and beloved democratic culture would not stand up under the temptation. Imperialism degrades both oppressor and oppressed.

The President was determined that our sudden power should be used for the absolute minimum of maintaining peace in the world-the simple purpose of outlawing war and nothing else. It must not be used to protect American investments abroad, to coerce trade agreements, for any purpose but the simple abolition of mass killing.

There is no science of sociology. Perhaps there will be, some day, when a rigorous physics gives a finished science of colloidal chemistry and that leads in turn to a complete knowledge of biology, and from there to a definitive psychology. After that we may begin to know something about sociology and politics. Sometime around the year 5000 A. D., maybe-if the human race does not commit suicide before then.

Until then, there is only horse sense and rule of thumb and observational knowledge of probabilities. Manning and the President played by ear.

The treaties with Great Britain, Germany and the Eurasian Union, whereby we assumed the responsibility for world peace and at the same time guaranteed the contracting nations against our own misuse of power, were rushed through in the period of relief and goodwill that immediately followed the termination of the Four-Days War. We followed the precedents established by the Panama Canal treaties, the Suez Canal agreements, and the Philippine Independence policy.

But the purpose underneath was to commit future governments of the United States to an irrevocable benevolent policy.

The act to implement the treaties by creating tF Commission of World Safety followed soon after, an Colonel Manning became Mr. Commissioner Mai ning. Commissioners had a life tenure and the intei tion was to create a body with the integrit permanence and freedom from outside pressure p0sessed by the Supreme Court of the United State Since the treaties contemplated an eventual join trust, commissioners need not be American citizensand the oath they took was to preserve the peace of t1~ world.

There was trouble getting the clause past the Coi gress! Every other similar oath had been to the Const tution of the United States.

Nevertheless the Commission was formed. It toc charge of world aircraft, assumed jurisdiction over r~ dioactives, natural and artificial, and commenced tF long slow task of building up the Peace Patrol.

Manning envisioned a corps of world policemen, a aristocracy which, through selection and indoctrim tion, could be trusted with unlimited power over life of every man, every woman, every child on the fa(of the globe. For the power would be unlimited; ti precautions necessary to insure the unbeatab weapon from getting loose in the world again made axiomatic that its custodians would wield power th~ is safe only in the hands of Deity. There would be r one to guard those selfsame guardians. Their o~ characters and the watch they kept on each oth would be all that stood between the race and disaste For the first time in history, supreme political pow was to be exerted with no possibility of checks an balances from the outside. Manning took up the ta~ of perfecting it with a dragging subconscious convi tion that it was too much for human nature.

The rest of the Commission was appointed sbowl the names being sent to the Senate after long joint coi sideration by the President and Manning. The direct of the Red Cross, an obscure little professor of history from Switzerland, Dr. Igor Rimski who had developed the Karst-Obre technique indepen'dently and whom the A. P. F. had discovered in prison after the dusting of Moscow-those three were the only foreigners. The rest of the list is well known.

Ridpath and his staff were of necessity the original technical crew of the Commission; United States Army and Navy pilots its first patrolmen. Not all of the pilots available were needed; their records were searched, their habits and associates investigated, their mental processes and emotional attitudes examined by the best psychological research methods available-which weren't good enough. Their final acceptance for the Patrol depended on two personal interviews, one with Manning, one with the President.

Manning told me that he depended more on the President's feeling for character than he did on all the association and reaction tests the psychologists could think up. "It's

like the nose of a bloodhound," he said. "In his forty years of practical politics he has seen more phonies than you and I will ever see and each one was trying to sell him something. He can tell one in the dark."

The long-distance plan included the schools for the indoctrination of cadet patrolmen, schools that were to be open to youths of any race, color, or nationality, and from which they would go forth to guard the peace of every country but their own. To that country a man would never return during his service. They were to be a deliberately expatriated band of Janizanies, with an obligation only to the Commission and to the race, and welded together with a carefully nurtured esprit de corps.

It stood a chance of working. Had Manning been allowed twenty years without interruption, the original plan might have worked.

The President's running mate for reelection was the result of a political compromise. The candidate for Vice President was a confirmed isolationist who ha opposed the Peace Commission from the first, but was he or a party split in a year when the oppositio was strong. The President sneaked back in but with greatly weakened Congress; only his power of vet twice prevented the repeal of the Peace Act. The Vic President did nothing to help him, although he did n publicly lead the insurrection. Manning revised h plans to complete the essential program by the end 1952, there being no way to predict the temper of tF next administration.

We were both overworked and I was beginning 1 realize that my health was gone. The cause was not fi to seek; a photographic film strapped next to my ski would cloud in twenty minutes. I was suffering froi cumulative minimal radioactive poisoning. No wel defined cancer that could be operated on, but a sy temic deterioration of function and tissue. There w~ no help for it, and there was work to be done. I've a ways attributed it mainly to the week I spent sittir on those canisters before the raid on Berlin.

February 17, 1951. I missed the televue flash aboi the plane crash that killed the President because I w~ lying down in my apartment. Manning, by that tim was requiring me to rest every afternoon after lunc though I was still on duty. I first heard about it from my secretary when I returned to my office, and at om hurried into Manning's office.

There was a curious unreality to that meeting. seemed to me that we had slipped back to that d~ when I returned from England, the day that Estel Karst died. He looked up. "Hello, John," he said.

I put my hand on his shoulder. "Don't take it hard, chief," was all I could think of to say.

Forty-eight hours later came the message from ti newly sworn-in President for Manning to report him. I took it in to him, an official despatch which decoded. Manning read it, face impassive.

"Are you going, chief?" I asked.

"Eh? Why, certainly."

I went back into my office, and got my topcoat, gloves, and briefcase.

Manning looked up when I came back in. "Never mind, John," he said. "You're not going." I guess I must have looked stubborn, for he added, "You're not to go because there is work to do here. Wait a minute." He went to his safe, twiddled the dials, opened

it and removed a sealed envelope which he threw on the desk between us. "Here are your orders. Get busy."
He went out as I was opening them. I read them through and got busy. There was little enough time.

The new President received Manning standing and in the company of several of his bodyguards and intimates. Manning recognized the senator who had led the movement to use the Patrol to recover expropriated holdings in South America and Rhodesia, as well as the chairman of the committee on aviation with whom he had had several unsatisfactory conferences in an attempt to work out a modus operandi for.reinstituting commercial airlines.

"You're prompt, I see," said the President. "Good." Manning bowed.

"We might as well come straight to the point," the Chief Executive went on. "There are going to be some changes of policy in the administration. I want your resignation."

"I am sorry to have to refuse, sir."

"We'll see about that. In the meantime, Colonel Manning, you are relieved from duty."

"Mr. Commissioner Manning, if you please."

The new President shrugged. "One or the other, as you please. You are relieved, either way."

"I am sorry to disagree again. My appointment is for life."

"That's enough," was the answer. "This is the United States of America. There can be no higher authority. You are under arrest."

I can visualize Manning staring steadily at him for a long moment, then answering slowly, "You a physically able to arrest me, I will concede, but I a vise you to wait a few minutes." He stepped to the wi dow. "Look up into the sky."
Six bombers of the Peace Commission patrolh over the Capitol. "None of those pilots is Americ~ born," Manning added slowly. "If you confine ni none of us here in this room will live out the day.' There were incidents thereafter, such as the unfc tunate affair at Fort Benning three days later, and t] outbreak in the wing of the Patrol based in Lisbon au its resultant wholesale dismissals, but for practic purposes, that was all there was to the coup d'etat. Manning was the undisputed military dictator the world.

Whether or not any man as universally hated Manning can perfect the Patrol he envisioned, make self-perpetuating and trustworthy, I don't kno' and-because of that week of waiting in a buried En lish hangar-I won't be here to find out. Manninl heart disease makes the outcome even more uncc tam-he may last another twenty years; he may ke over dead tomorrow-and there is no one to take F place. I've set this down partly to occupy the she time I have left and partly to show there is anoth side to any story, even world dominion.

Not that I would like the outcome, either way. there is anything to this survival-after-death busine5 I am going to look up the man who invented the bc and arrow and take him apart with my bare hanc For myself, I can't be happy in a world where any ma or group of men, has the power of death over you ai me, our neighbors, every human, every animal, eve living thing. I don't like anyone to have that kind power.

And neither does Manning.

FOREWORD

After World War II I resumed writing with two objectives: first, to explain the meaning of atomic weapons through popular articles; second, to break out from the limitations and low rates of pulp science-fiction magazines into anything and everything: slicks, books, motion pictures, general fiction, specialized fiction not intended for SF magazines, and nonfiction.

My second objective I achieved in every respect, but in my first and much more important objective I fell flat on my face.

Unless you were already adult in August 1945 it is almost impossible for me to convey emotionally to you how people felt about the A-bomb, how many different ways they felt about it, how nearly totally ignorant 99.9% of our citizens were on the subject, including almost all of our military leaders and governmental officials.

And including editors!

(The general public is just as dangerously ignorant as to the significance of nuclear weapons today, 1979, as in 1 945-but in different ways. In 1945 we were smugly ignorant; in 1979 we have the Pollyannas, and the Ostriches, and the Jingoists who think we can "win" a nuclear war, and the group-a majority?-who regard World War III as of no importance compared with inflation, gasoline rationing, forced school-busing, or you name it. There is much excuse for the ignorance of 1945; the citizenry had been hit by ideas utterly new and strange. But there is no excuse forthe ignorance of1979. Ignorance today can be charged only to stupidity and laziness-both capital offences.)

I wrote nine articles intended to shed light on the postHiroshima age, and I have never worked harder on any writing, researched the background more thoroughly, tried harder to make the (grim and horrid) message entertaining and readable. I offered them to commercial markets, not to make money, but because the only propaganda
that stands any chance of influencing people is packaged so attractively that editors will buy it in the belief that the cash customers will be entertained by it.

Mine was not packaged that attractively.

I was up against some heavy tonnage:

General Groves, in charge of the Manhattan District (code name for A-bomb R&D), testified that it would take from twenty years to forever for another country to build an A-bomb. (USSR did it in 4 years.)

The Chief of Naval Operations testified that the "only" way to deliver the bomb to a target across an ocean was by ship.

A very senior Army Air Force general testified that "blockbuster" bombs were just as effective and cheaper.

The chairman of NACA (shortly to become NASA) testified (Science News Letter 25 May 1946) that intercontinental rockets were impossible.

Ad nauseum-the old sailors want wooden ships, the old soldiers want horse cavalry.

But I continued to write these articles until the U.S.S.R. rejected the United States' proposals for controlling and outlawing atomic weapons through open skies and mutual on-the-ground inspection, i.e., every country in the world to surrender enough of its

sovereignty to the United Nations that mass-weapons war would become impossible (and lesser war unnecessary).

The U.S.S.R. rejected inspection-and I stopped trying to peddle articles based on tying the Bomb down through international policing.

I wish that I could say that thirty-three years of "peace" (i.e., no A- or H- or C-orN- orX- bombs dropped) indicates that we really have nothing to fear from such weapons, because the human race has sense enough not to commit suicide. But I am sorry to say that the situation is even more dangerous, even less stable, than it was in 1946.

Here are three short articles, each from a different ap
proach, with which I tried (and failed) to beat the drum br world peace.

Was I really so naif that I thought that I could change the course of history this way? No, not really. But, damn it, I had to try!

"If you pray hard enough,
water will run uphill. How hard?
Why, hard enough to make water
run uphill, of course!"
-L. Long

THE LAST DAYS OF THE UNITED STATES

"Here lie the bare bones of the United States of America, conceived in freedom, died in bondage. 1776-1986. Death came mercifully, in one stroke, during senility.

"Rest in Peace!"

No expostulations, please. Let us not kid ourselves. The next war can destroy us, utterly, as a nation-and World War III is staring us right in the face. So far, we have done little to avert it and less to prepare for it. Once upon a time the United Nations Organization stood a fair chance of preventing World War III. Now, only a major operation can equip the UNO to cope with the horrid facts of atomics and rocketry-a major operation which would take away the veto power of the Big Five and invest the world organization with the sole and sovereign power to possess atomic weapons.

Are we, as a people, prepared to make the necessary sacrifices to achieve a world authority?

Take a look around you. Many of your friends and neighbors believe that the mere possession of the atomic bomb has rendered us immune to attack. So- the country settles back with a sigh of relief, content to leave foreign affairs to William Randolph Hearst, the Denver Post, and the Chicago Tribune. We turn our backs on world responsibility and are now hell-bent
on new washing machines and new cars.

From such an attitude, with dreadful certainty, comes World War III, the Twenty Minute War, the Atomic War, the War of Final Destruction. The "secret" of the atomic

bomb cannot be kept, the experts have told us repeatedly, for the "secret" is simply engineering know-how which can be developed by any industrial nation.

From this fact it can be predicted that any industrial nation, even though small and comparatively weak, will in a few years be able to create the means to destroy the United States at will in one all-out surprise attack. What constitutes a strong power in the Atomic Era? Scientific knowledge, engineering skill, and access to the ores of uranium-no more is needed. Under such circumstances the pretensions of the Big Five to veto powers over the affairs of this planet are preposterous. At the moment there is only the Big One, the United States, through its temporary exclusive possession of the Bomb. Tomorrow-five to ten years- the list might include any of the many nations with the two requirements.

Belgium and Canada have the greatest known deposits of uranium. Both are small but both possess science and skill in abundance. Potentially they are more powerful than any of the so-called Big Five, more powerful than the United States or Russia. Will they stand outside indefinitely, hat in hand, while the "Big Five" determine the fate of the human race? The developments of atomic weapons and of rocketry are analogous to the development of the revolver in individual affairs-it has made the little ones and the big ones all the same size. Some fine day some little nation may decide she is tired of having us around, give us one twenty-minute treatment with atomic rocket bombs, and accept our capitulation.

We have reason to fear such an attack. We have been through one Pearl Harbor; we know that it can happen to us. Our present conduct breeds fear and distrust in the hearts of men all over the globe. No matter how we
think of ourselves, no matter how peaceful and good hearted we think ourselves to be, two facts insure that we will be hated by many. We have the Bomb-it is like a loaded revolver pointed at the heads of all men. Oh, we won't pull the trigger! Nevertheless, do you suppose they love us for it?

Our other unforgivable sin is being rich while they are poor. Never mind our rationalizations-they see our wasteful luxury while much of the globe starves. Hungry men do not reason calmly. We are getting ourselves caught in a situation which should lead us to expect attack from any quarter, from whoever first produces atomic weapons and long-distance rockets.

Knowing these things, the professional gentlemen who are charged with the defense of this country, the generals and the admirals and the members of the military and naval affairs committees of both houses, are cudgelling their brains in a frenzied but honest attempt to persuade the rest of the country to follow this course or that, which, in their several opinions, will safeguard the country in any coming debacle.

But there is a tragic sameness to their proposals. With few exceptions, they favor preparedness for the last war. Thusly:

Conscription in peacetime to build up a reserve; Emphasis on aircraft carriers rather than battleships;
Decentralization of cities; An armaments race to keep our head start in atomic weapons; Agreements to "outlaw" atomic weapons; Consolidation of the Army and the Navy; Buying enough war planes each year to insure new development; An active military and foreign affairs intelligence corps; Moving the aircraft industry inland; Placing essential war industry underground.

These are the progressive proposals. (Some still favor infantry and battleships!) In contrast, General Arnold says to expect war in which space ships cruise outside the atmosphere and launch super-high-speed, atomicarmed rockets on cities below. Hap Arnold tells his boys to keep their eyes on Buck Rogers. Somebody is wrong-is it Hap Arnold or his more conservative colleagues?

Compulsory military training-France had that, for both wars. The end was Vichy.

Aircraft carriers vs. battleships. Look, pals, the aircraft carrier was the weapon of this war, before Hiroshima. Carriers don't look so good against space ships. Let's build galleons instead; they are cheaper, prettier, and just as useful.

Decentralization of large cities-let's table this one for a moment. There is some sense to it, if carried to its logical conclusion. But not with half measures and not for $250,000,000,000, the sum mentioned by Sumner Spaulding, its prime proponent.

Bigger and better atomic weapons for the United States-this has a reasonable and reassuring sound. We've got the plant and the trained men; let's stay ahead in the race. Dr. Robert Wilson says that atomic bombs a hundred or a thousand times as powerful as the Hiroshima bomb are now in prospect. Teddy Roosevelt advised us to "Speak softly but carry a big stick."

It is a tempting doctrine, but the great-hearted Teddy died long before Hiroshima; his day was the day of the charge up San Juan Hill. A hundred obsolete atomic bombs could destroy the United States-if the enemy struck first. Our super bombs would not save us, unless we were willing to strike first, without declaring war. If two men are locked in a basement, one armed with a 50-calibre machine gun, the other with an 18th century ball-and-powder pistol, victory goes
to the man who shoots first, not to the one with the better weapon. That is the logic of atomics and now is the time to learn it by heart.

Agreements to "outlaw" atomic weapons? Swell! Remember the Kellogg Pact? It "outlawed" war.

Consolidation of the armed forces: A proposition sensible in itself, but disastrously futile unless we realize that all previous military art is obsolete in the atomic age. The best pre-Hiroshima weapons are now no more than the sidearms of the occupying military police. Buck Rogers must be the new chief of staff. Otherwise we will find ourselves with the most expensive luxury in the world-a second-best military establishment.

Purchase of military aircraft in quantities to insure new development-we bought sailing ships-of-theline in the 1880's. This makes the same sort of pseudosense. Airplanes are already obsolete-slow, clumsy, and useless. The V-2 is credited with a speed of 3600 miles per hour. Here is a simple problem in proportion: The Wright Brothers crate at Kittyhawk bears the same relation to the B-29 that the V-2 bears to the rocket ship of the coming war. Complete the equation by visualizing the coming rocket ship. Then stop wasting taxes on airplanes.

An efficient intelligence system-Fine! But no answer in itself. The British intelligence was quite efficient before this war. Mr. Chamberlain's desk was piled high with intelligence reports, reports which showed that Munich need never have happened. This has since been confirmed by high German General Staff officers. But Mr. Chamberlain did not read the reports. Intelligence reports are useful only to the intelligent.

Moving the aircraft industry inland-excellent preparation for World War II. Move an industry which we don't need for World War III inland where it will be safe from the weapons of World War II. While we are about it let's put stockades around them to keep the Indians out. In the meantime our potential enemies will have plenty of time to perfect long-range rockets.

Placing key war industry underground-assembly lines underground are all very well, but blast furnaces and many other things simply won't fit. Whatever digging in we do, be sure we do it so secretly that the enemy will never suspect, lest he drop an earthquaketype atomic bomb somewhere near-by and bury all hands. Let us be certain, too, that he does not introduce a small atomic bomb inside the underground works, disguised as a candy vending machine, a lunch pail, or a fire extinguisher. The age of atomics is a field day for saboteurs; underground works could be colossal death traps.

No one wants this new war, no sane men anywhere. Yet we are preparing for it and a majority, by recent Gallup polls, believe it will come. We have seen the diplomats and prime ministers and presidents and foreign affairs committees and state departments manage to get things messed up in the past; from where we sit it looks as if they were hell-bent on messing them up again. We hear the rumble of the not-sodistant drum.

What we want, we little men everywhere, is planetary organization so strong that it can enforce peace, forbid national armaments, atomic or otherwise, and in general police the globe so that a decent man can raise his kids and his dog and smoke his pipe free from worry of sudden death. But we see the same old messing around with half measures.

(If you want to help to try to stop the messing-up process, you might write Congressman Jerry Voorhis, or Senator Fuibright, or Senator Ball, or Beardsley Ruml, or Harold Stassen. Or even the President himself.)

If things go from bad to worse and we have to fight a war, can we prepare to win it? First let us try to grasp
what kind of a war it will be. Look at LIFE, Nov. 19, 1945, page 27: THE 36-HOUR WAR: Arnold Report Hints at the Catastrophe of the Next Great Conflict. The first picture shows Washington, D.C., being destroyed by an atomic rocket bomb. The text and pictures go on to show 13 U.S. cities being destroyed the same wa~, enemy airborne troops attempting to occupy, the U.S. striking back with its own rockets from underground emplacements, and eventually winning-at a cost of 13 cities and at least 10,000,000 American lives.

Horrible as the picture is, it is much too optimistic. There is no reason at all to assume that the enemy will attack in too little force, destroying only 13 cities, or to assume that he will attempt to occupy until we have surrendered, or to assume that we will be able to strike back after we are attacked.

It is not safe to assume that the enemy will be either faint-hearted or foolish. If he follows our example with Japan, he will smash us until we surrender, then land. If his saboteurs are worth their blood money, our own rocket emplacements may be blown up by concealed atomic bombs just in advance of the attack.

Atomic rocket warfare has still another drawback- it is curiously anonymous. We might think we knew who had attacked us but be entirely mistaken.

You can think of at least three nations which dislike both us and Russia. What better joke for them than to select a time when suspicion has been whipped up between the two giants to lob just a few atomic rockets from a ship in the North Atlantic, or from a secret emplacement in the frozen north of Greenland-half at us, half at Russia, and with the attack in each case apparently coming from the other, and then sit back while we destroyed each other!

A fine joke! You would die laughing.

Don't think it can't be done, to us and to Russia.

What can we do?

The first thing is to get Congress to take a realistic view of the situation. The most certain thing about LIFE's description of the coming war was the destruction of Washington. Washington is the prime military target on earth today for it is the center of the nervous system of the nation that now has the Bomb. It must be destroyed first and it will be destroyed, if war ever comes. Your congressman has the most dangerous job in the world today. You may live through World War Ill-he can't. Make yours realize this; he may straighten up and fly right.

What we want him to work for is world order and world peace. But we may not get it. The other nations may be fed up with our shilly-shallying and may not go along with us, particularly any who believe they are close to solving the problems of atomic weapons. We may have to go it alone. In such cases, is there anything we can do to preserve ourselves?

Yes, probably-but the price is high.

We can try for another Buck Rogers weapon with which to ward off atomic bomb rockets. It would need to be better than anything we have now or can foresee. To be 100% effective (with atom bombs, anything less is hardly good enough!) it should be something which acts with much greater speed than guns or anti-aircraft rockets. There is a bare possibility that science could cook up some sort of a devastatingly powerful beam of energy, acting with the speed of light, which would be a real anti-aircraft weapon, even against rockets. But the scientists don't promise it.

We would need the best anti-aircraft devices possible, in the meantime. A robot hook-up of target-seeking rockets, radar, and computing machines might give considerable protection, if extensive enough, but there is a lot of research and test and production ahead before any such plan is workable. Furthermore, it could not be air tight and it would be very expensive- and very annoying, for it would end civilian aviation. If we hooked the thing up to ignore civilian planes, we would leave ourselves wide open to a Trojan Horse tactic in which the enemy would use ordinary planes to deliver his atomic bombs.

Such a defense, although much more expensive and much more trouble than all our pre-War military establishment, would be needed. If we are not willing to foot the bill, we can at least save money by not buying flame throwers, tanks, or battleships.

We can prepare to attack. We can be so bristlingly savage that other nations may fear to attack us. If we are not to have a super-state and a world police, then the United States needs the fastest and the most longrange rockets, the most powerful atomic blasts, and every other dirty trick conceived in comic strip or fantastic fiction. We must have space ships and we must have them first. We must land on the Moon and take possession

of it in order to forbid its use to other nations as a base against us and in order to have it as a base against any enemy of ours. We must set up, duplicate, and reduplicate rocket installations intended to destroy almost automatically any spot on earth; we must let the world know that we have them and that we are prepared to use them at the drop of a diplomat's silk hat. We must be prepared to tell uncooperative nations that there are men sitting in front of switches, day and night, and that an attack on Washington would cause those switches to be thrown.

And we must guard the secrets of the locations and natures of our weapons in a fashion quite impossible for a normal democracy in peace time. More of that later.

Decentralization we would have to have. Not the picayune $250,000,000,000 job which has been proposed- ("Wait a minute! Why should we disperse our cities if we are going to have that Buck Rogers super-dooper death ray screen?")

We haven't got such a screen. Nor is it certain that we will ever have such a screen, no matter how much
money we spend. Such a screen is simply the one remote possibility which modern physics admits. It may turn out to be impossible to develop it; we simply don't know.

We must disperse thoroughly, so thoroughly that no single concentration of population in the United States is an inviting target. Mr. Sumner Spaulding's timid proposal of a quarter of a trillion dollars was based on the pleasant assumption that Los Angeles was an example of a properly dispersed city for the Atomic Age. This is an incredible piece of optimism which is apparently based on the belief that Hiroshima is the pattern for all future atomic attacks. Hiroshima was destroyed with one bomb. Will the enemy grace the city of the Angels with only one bomb? Why not a dozen?

The Hiroshima bomb was the gentlest, least destructive atomic bomb ever likely to be loosed. Will the enemy favor us with a love tap such as that?

Within twenty miles of the city hall of Los Angeles lives half the population of the enormous state of California. An atomic bomb dropped on that City Hall would not only blast the swarming center of the city, it would set fire to the surrounding mountains ("WARNING! No Smoking, In or Out of Cars-$500 fine and six months imprisonment") from Mount Wilson Observatory to the sea. It would destroy the railroad terminal half a dozen blocks from the City Hall and play hob with the water system, water fetched clear from the State of Arizona.

If that is dispersion, I'll stay in Manhattan.

Los Angeles is a modern miracle, an enormous city kept alive in a desert by a complex and vulnerable concatenation of technical expedients. The first three colonies established there by the Spaniards starved to death to the last man, woman, and child. If the fragile structure of that city were disrupted by a single atomic bomb, those who survived the blast would in a few short days be reduced to a starving, thirst-crazed mob, ready for murder and cannibalism.

No, if we are to defend ourselves we must not assume that Los Angeles is "dispersed" despite the jokes about her far-flung city line. The Angelenos must be relocated from Oregon to Mexico, in the Mojave Desert, in Imperial Valley, in the great central valley, in the Coast Range, and in the High Sierras.

The same principles apply everywhere. Denver must be scattered out toward Laramie and Boulder, while Colorado Springs must flow around Pike's Peak to Cripple Creek. Kansas City and Des Moines must meet at the Iowa-Missouri line, while Joplin

flows up toward Kansas City and on down into the Ozarks. As for Manhattan, that is almost too much to describe- from Boston to Baltimore all the great east coast cities must be abandoned and the population scattered like leaves.

The cities must go. Only villages must remain. If we are to rely on dispersion as a defense in the Atomic Age, then we must spread ourselves out so thin that the enemy cannot possibly destroy us with one bingo barrage, so thin that we will be too expensive and too difficult to destroy.

It would be difficult. It would be incredibly difficult and expensive-Mr. Spaulding's estimate would not cover the cost of new housing alone, but new housing would be the least of our problems. We would have to rebuild more than half of our capital plant-shops, warehouses, factories, railroads, highways, power plants, mills, garages, telephone lines, pipe lines, aqueducts, granaries, universities. We would have to take the United States apart and put it back together again according to a new plan and for a new purpose. The financial cost would be unimportant, because we could not buy it, we would have to do it, with our own hands, our own sweat. It would mean a sixty-hour week for everyone, no luxury trades, and a bare minimum standard of living for all for some years. Thereafter the standard of living woula be permanently depressed, for the new United States would be organized for defense, not for mass production, nor efficient marketing, nor convenient distribution. We would have to pay for our village culture in terms of lowered consumption. Worse, a large chunk of our lowered productivity must go into producing and supporting the atomic engines of war necessary to strike back against an aggressor-for dispersion alone would not protect us from invasion.

If the above picture is too bleak, let us not prate about dispersion. There are only three real alternatives open to us: One, to form a truly sovereign superstate to police the globe; two, to prepare realistically for World War III in which case dispersion, real and thorough dispersion, is utterly necessary, or, third, to sit here, fat, dumb, and happy, wallowing in our luxuries, until the next Hitler annihilates us!

The other necessary consequences of defense by dispersion are even more chilling than the economic disadvantages. If we go it alone and depend on ourselves to defend ourselves we must be prepared permanently to surrender that democratic freedom of action which we habitually enjoyed in peace time. We must resign ourselves to becoming a socialistic, largely authoritarian police state, with freedom of speech, freedom of occupation, and freedom of movement subordinated to military necessity, as defined by those in charge.

Oh, yes! I dislike the prospect quite as much as you do, but I dislike still more the idea of being atomized, or of being served up as a roast by my starving neighbors. Here is what you can expect:

The front door bell rings. Mr. Joseph Public, solid citizen, goes to answer it. He recognizes a neighbor. "Hi, Jack! What takes you out so late?"

"Got some dope for you, Joe. Relocation orders-I was appointed an emergency deputy, you know."

"Hadn't heard, but glad to hear. Come in and sit down and tell me about it. How do the orders read? We stay, don't we?"

"Can't come in-thanks. I've got twenty-three more stops to make tonight. I'm sorry to say you don't stay. Your caravan will rendezvous at Ninth and Chelsea, facing west, and gets underway at noon tomorrow."

"What!"

"That's how it is. Sorry."

"Why, this is a damned outrage! I put in to stay here-with my home town as second choice."

The deputy shrugged. "So did everybody else. But you weren't even on the list of essential occupations from which the permanent residents were selected. Now, look-I've got to hurry. Here are your orders. Limit yourself to 150 pounds of baggage, each, and take food for three days. You are to go in your own car-you're getting a break-and you will be assigned two more passengers by the convoy captain, two more besides your wife I mean."

Joe Public shoved his hands in his pockets and looked stubborn. "I won't be there."

"Now, Joe, don't take that attitude. I admit it's kinda rough, being in the first detachment, but you've had lots of notice. The newspapers have been full of it. It's been six months since the President's proclamation."

"I won't go. There's some mistake. I saw the councilman last week and he said he thought I would be all right. He-"

"He told everybody that, Joe. This is a Federal order."

"I don't give a damn if it's from the Angel Gabriel. I tell you I won't go. I'll get an injunction."

"You can't, Joe. This has been declared a military area and protests have to go to the Provost Marshal. I'd hate to tell you what he does with them. Anyhow, you can't stay here-it's no business of mine to put you out; I just have to tell you-but the salvage crews will be here tomorrow morning to pull out your plumbing.

"They won't get in."

"Maybe not. But the straggler squads will go through all of these houses first."

"I'll shoot!"

"I wouldn't advise it. They're mostly ex-Marines."

Mr. Public was quiet for a long minute. Marines. "Look, Jack," he said slowly, "suppose I do go. I've got to have an exemption on this baggage limitation and I can't carry passengers. My office files alone will fill up the back seat."

"You won't need them. You are assigned as an apprentice carpenter. The barracks you are going to are only temporary."

"Joseph! Joseph! Don't stand there with the door open! Who is it?" His wife followed her voice in.

He turned to tell her; the deputy took that as a good time to leave.

At eleven the next morning he pulled out of the driveway, gears clashing. He had the white, drawn look of a man who has been up all night. His wife slept beside him, her hysteria drowned in a triple dose of phenobarbital.

That is dispersion. If you don't believe it, ask any native-born citizen of Japanese blood. Nothing less than force and police organization will drive the peasants off the slopes of Vesuvius. The bones of Pompeii and Herculaneum testify to that. Or, ask yourself- will you go willingly and cheerfully to any spot and any occupation the government assigns to you? If not, unless you are right now working frantically to make World War III impossible, you have not yet adjusted yourself to the horrid facts of the Atomic Age.

For these are the facts of the Atomic Age. If we are not to have a World State, then we must accept one of two grim alternatives: A permanent state of total war, even in "peace" time, with every effort turned to offense and defense, or relax to our fate, make our peace with God, and wait for death to come out of the sky. The time in which to form a World State is passing rapidly; it may be gone by the time this is printed. It is worthwhile to note that the publisher of the string of newspapers most bitterly opposed to "foreign entanglements," particularly with Russia, and most insistent on us holding on to the vanishing "secret" of the atomic bomb-this man, this publisher, lives on an enormous, self-sufficient ranch, already dispersed. Not for him is the peremptory knock on the door and the uprooting relocation order. Yet he presumes daily to tell our Congress what must be done with us and for us.

Look at the facts! Go to your public library and read the solemn statements of the men who built the atomic bomb. Do not let yourself be seduced into a false serenity by men who do not understand that the old world is dead. Regularly, in the past, our State Department has bungled us into wars and with equal regularity our military establishment has been unprepared for them. Then the lives and the strength of the common people have bought for them a victory.

Now comes a war which cannot be won after such mistakes.

If we are to die, let us die like men, eyes open, aware of our peril and striving to cope with it-not as fat and fatuous fools, smug in the belief that the military men and the diplomats have the whole thing under control.

"It is later than you think."

HOW TO BE A SURVIVOR

The Art of Staying Alive in the Atomic Age

Thought about your life insurance lately?

Wait a minute-sit back down! We don't want to sell you any insurance.

Let's put it another way: How's your pioneer blood these days? Reflexes in fine shape? Muscle tone good? Or do you take a taxi to go six blocks?

How are you at catching rabbits? The old recipe goes, "First, catch the rabbit-" Suppose your supper depended on catching a rabbit? Then on building a fire without matches? Then on cooking it? What kind of shape will you be in after the corner delicatessen is atomized?

When a committee of Senators asked Dr. J. Robert Oppenheimer whether or not a single attack on the United States could kill forty million people, he testified, "I am afraid it is true."

This is not an article about making the atom bomb safe for democracy. This is an article about you-and how you can avoid being one of the forty million knocked off in the first attack in World War III. How, if worst comes to worst, you can live through the next war, survive the aftermath, and build a new life.

If you have been reading the newspapers you are aware that World War III, if it ever comes, is expected to start with an all-out surprise attack by long-dis

tance atomic bombing on the cities of America. General Marshall's final report included this assumption, General Arnold has warned us against such an attack, General Spaatz has described it and told us that it is almost impossible to ward it off if it ever comes. Innumerable scientists, especially the boys who built the A-bomb, have warned us of it.

From the newspapers you may also have gathered that world affairs are not in the best of shape-the Balkans, India, Palestine, Iran, Argentina, Spain, China, The East Indies, etc., etc.-and the UNO does not seem as yet to have a stranglehold on all of the problems that could lead to another conflict.

Maybe so, maybe not-time will tell. Maybe we will form a real World State strong enough to control the atom bomb. If you are sure there will never be war again, don't let me waste your time. But if you think it possible that another Hitler or Tojo might get hold of the atomic bomb and want to try his luck, then bend an ear and we'll talk about how you and your kids can live through it. We'll start with the grisly assumption that the war will come fast and hard, when it comes, killing forty million or so at once, destroying the major cities, wrecking most of our industry and utterly disorganizing the rest. We will assume a complete breakdown of government and communication which will throw the survivors-that's you, chum!-on their own as completely as ever was Dan'! Boone.

No government-remember that. The United States will cease to be a fact except in the historical sense. You will be on your own, with no one to tell you what to do and no policeman on the corner to turn to for protection. And you will be surrounded with dangerous carnivores, worse than the grizzlies Daniel Boone tackled-the two-legged kind.

Perhaps we had better justify the assumption of complete breakdown in government. It might not happen, but, if the new Hitler has sense enough to write Mein Kampf, or even to read it as a textbook, he will do his very best to destroy and demoralize us by destro~ing our government-and his best could be quite efficient. If he wants to achieve political breakdown in his victim, Washington, D.C., will be his prime target, the forty-eight state capitals his secondary targets, and communication centers such as Kansas City his tertiary targets. The results should be roughly comparable to the effect on a man's organization when his head is chopped off.

Therefore, in this bad dream we are having, let us assume no government, no orders from Washington, no fireside chats, no reassurances. You won't be able to write to your congressman, because he, poor devil!, is marked for the kill. You can live through it, he can't. He will be radioactive dust. His profession is so hazardous that there is no need for him to study up on how to snare rabbits.

But you should- if you are smart, you can live through it.

Now as to methods-there is just one known way to avoid being killed by an atomic bomb. The formula is very simple:

Don't be there when it goes off!

Survival methods in the atomic age can be divided into two headings, strategical and tactical. The first or strategical aspect is entirely concerned with how not to be where the bomb is; the second, tactical part has to do with how to keep yourself and your family alive if you live through the destruction of the cities and the government.

Strategy first-the simplest way to insure long life for yourself and family is to move to Honduras or some other small and nonindustrialized country, establish yourself

there, and quit worrying. It is most unlikely that such places will be subjected to atomic bombardment; if war comes, they will move into the economic
and political sphere of the winner, to be sure, but probably without bloodshed, since resistance would be so obviously futile.

However, you probably cannot afford, or feel that you can't afford, any move as drastic as that. (Whether or not you can in truth afford it is a moot point, to be settled by your own notion of the degree of danger. The pre-War refugees from Nazi Germany could not "afford" to flee, either, but events proved the wisdom of doing so. There is an old Chinese adage, "In the course of a long life a wise man will be prepared to abandon his baggage several times." It has never been more true than it is today.)

There are several moves open to you which are less drastic. If you live on a farm or in a small village, several miles-fifty is a good figure-from the nearest large city, rail junction, power dam, auto factory, or other likely military target, strategy largely takes care of itself. If you are blasted, it will probably be an accident, a rocket gone wild, or something equally unforeseeable. If you are not in such a location, you had better make some plans.

Just a moment-a gentleman in the back row has a question. A little louder please. He asks, "Isn't it true that the government is planning to disperse the cities so we will be safe from atomic bombs?"

I don't know-is it? The only figure I have heard mentioned so far is $250,000,000,000. Quite aside from the question of whether or not large scale dispersion can be made effective, there is still the question as to whether or not Congress would appropriate a quarter of a trillion dollars in peacetime for any purpose. That is a political question, beyond the scope of this discussion. We are concerned here with how you, unassisted, with your two hands, your brain, and your ability to plan ahead, can keep yourself alive during and after any possible Next War.

If you have to live in a large city or other target area, your strategical planning has to be a good bit more
detailed, alert, and shifty. You need an emergency home, perhaps an abandoned farm picked up cheaply or a cabin built on government land. What it is depends on the part of the country you live in and how much money you can put into it, but it should be chosen with view to the possibilities it offers of eating off the country-fish, game, garden plot-and it should be near enough for you to reach it on one tank of gasoline. If the tank in your car is too small, have a special one built, or keep enough cans of reserve permanently in the trunk of your car. Your car should also be equipped with a survival kit, but that comes under tactics.

Having selected and equipped your emergency base, you must then, if you are to live in a target area, keep your ear to the ground and your eyes open with respect to world affairs. There will be no time to get out after rockets are launched. You will have to outguess events. This is a tricky assignment at best and is the principal reason why it is much better to live in the country in the first place, but you stand a fair chance of accomplishing it if you do not insist on being blindly optimistic and can overcome a natural reluctance to make a clean break with your past-business, home, clubs, friends, church-when it becomes evident that the storm clouds are gathering. Despite the tragic debacle at Pearl Harbor, quite a number of people, laymen among them, knew that a war

with Japan was coming. If you think you can learn to spot the signs of trouble long enough in advance to jump, you may get away with living on the spot with the X mark.

Let us suppose that you were quick-witted, far sighted, and fast on your feet; you brought yourself and your family safely through the bombing and have them somewhere out in the country, away from the radioactive areas that were targets a short time before. The countryside is swarming with survivors from the edges of the bombed areas, survivors who are hungry, desperate, some of them armed, all of them free of the civilizing restrictions of organized living. Enemy troops, moving in to occupy, may already be present or may be dropping in from the skies any day.

How, on that day, will you feed and protect yourself and your family?

The tactical preparations for survival after the debacle fall mainly into three groups. First is the overhaul of your own bodily assets, which includes everything from joining the YMCA, to get rid of that paunch and increase your wind and endurance, to such things as getting typhoid and cholera shots, having that appendix out, and keeping your teeth in the best shape possible. If you wear glasses, you will need several pairs against the day when there will be no opticians in practice. Second is the acquisition of various materials and tools which you will be unable to make or grow in a sudden, synthetic stone age- items such as a pickax or a burning glass, for example, will be wdrth considerably more than two college degrees or a diamond bracelet. Third is training in various fundamental pioneer skills, not only how to snare and cook rabbits, but such things as where and when to plant potatoes, how to tell edible fungi from deadly toadstools without trying them on Junior, and how to walk silently.

All these things are necessary, but more important, much more important, is the acquiring of a survival point of view, the spiritual orientation which will enable you to face hardship, danger, cold, and hunger without losing your zest and courage and sense of humor. If you think it is going to be too hard to be worthwhile, if you can't face the prospect of coming back to the ruins of your cabin, burned down by drunken looters, other than with the quiet determination to build another, then don't bother to start. Move to a target area and wait for the end. It does not take any special courage or skill to accept the death that moves like lightning. You won't even have ttie long walk the steers have to make to get from the stockyard pens to the slaughter-house.

But if your ancestors still move in your bones, you will know that it is worthwhile, just as they did. "The cowards never started and the weaklings died on the way." That was the spirit that crossed the plains, and such was the spirit of every emigrant who left Europe. There is good blood in your veins, compadre!

It is not possible to tell exactly what to do to prepare yourself best to survive, even if this were a book instead of a short article, for the details must depend on the nature of the countryside you must rely on, your opportunities for planning and preparing, the numbers, ages and sex of your dependents if any, your present skills, talents, and physical condition, and whether or not you are at present dispersed from target areas or must plan for such dispersal. But the principles under which you can make your plans and the easiest means by which to determine them can be indicated.

Start out by borrowing your son's copy of the Boy Scout Manual. It is a practical book of the sort of lore you will need. If you can't borrow it because he is not a member of the Scouts, send him down at once and make him join up. Then make him study. Get him busy on those merit badges-woodcraft, cooking, archery, carpentry. Somebody is going to have to make that fire without matches, if that rabbit is ever to be cooked and eaten. See to it that he learns how, from experts. Then make him teach you.

Can you fell a tree? Can you trim a stone? Do you know where to dig a cesspool? Where and how to dig a well? Can you pull a tooth? Can you shoot a rifle accurately and economically? Can you spot tularemia (we are back to that ubiquitous rabbit again!) in cleaning a rabbit? Do you know the rudiments of farming? Given simple tools, could you build a log, or adobe, or
rammed-earth, or native-stone cabin from materials at hand and have it be weather-tight, varmint-proof, and reasonably comfortable?

You can't learn all the basic manual trades in your spare time in a limited number of years but you can acquire a jackleg but adequate knowledge of the more important ones, in the time we have left.

But how much time have we?

All we can do is estimate. How long will it be before other nations have the atomic bomb? Nobody knows- one estimate from the men who made it was "two to five years." Dr. Vannevar Bush spoke of "five to fifteen years" while another expert, equally distinguished, mentioned "five or ten years." Major General Leslie Groves, the atom general, thinks it will be a long time.

Let us settle on five years as a reasonable minimum working time. Of course, even if another nation, unfriendly to us, solved the production problems of atomic weapons in that length of time, there still might not be a war for a number of years, nor would there necessarily ever be one. However, since we don't know what world conditions will be like in five years, let's play it safe; let's try to be ready for it by 1950.

Four or five years is none too long to turn a specialized, soft, city dweller into a generalized, hardened pioneer. However, it is likely that you will find that you are enjoying it. It will be an interesting business and there is a deep satisfaction in learning how to do things with your own hands.

First get that Scout Manual. Look over that list of merit badges. Try to figure out what skills you are likely to need, what ones you now have, and what ones you need to study up on. The Manual will lead you in time to other books. Ernest Thompson Seton's Two Little Savages is full of ideas and suggestions.

Presently you will find that there are handbooks of various trades you have not time to master; books which contain information you could look up in an emergency if you have had the forethought to buy the
book and hide it away in your out-of-tpwn base. There are books which show how to build fireplaces, giving the exact dimensions of reflector, throat, ledge, and flue. You may not remember such details; being able to look them up may save you from a winter in a smoke-filled cabin. If there is any greater domestic curse than a smoking fireplace, I can't recall it, unless it be the common cold.

There are little handbooks which show, in colored pictures, the edible mushrooms and their inedible cousins. It is possible to live quite well on practically nothing but fungi, with comparatively little work; they exist in such abundance and variety.

You will need a medical reference book, selected with the advice of a wise and imaginative medical man. Tell him why you want it. Besides that, the best first-aid and nursing instrvction you can get will not be too much. Before you are through with this subject you will find yourself selecting drugs, equipment, and supplies to be stored against the darkness, in your base as well as a lesser supply to go into the survival kit you keep in your automobile.

What goes into that survival kit, anyhow? You will have to decide; you won't take any present advice in any case. By the time you get to it you will think, quite correctly, that you are the best judge. But the contents of the survival kits supplied our aviators in this latest war will be very illuminating. The contents varied greatly, depending on climate and nature of mission- from pemmican to quinine, fish hooks to maps.

What to put in your cabin is still more difficult to state definitely. To start with, you might obtain a Sears-Roebuck or Montgomery-Ward catalog and go through it, item by item. Ask yourself "Do I have to have this?," then from the list that produces ask yourself "Could I make this item, or a substitute, in a pinch?"

If shoes wear out, it is possible to make moccasins- although shoes should be hoarded in preference to any
other item of clothing. But you can't-unless you are Superman-make an ax. You will need an ax.

You will need certain drugs. Better be liberal here.

Salt is difficult to obtain, inland.

It is difficult to reject the idea of hoarding canned goods. A few hundred dollars worth, carefully selected, could supplement the diet of your family to the point of luxury for several years. It might save you from starvation, or the cannibalism that shamed the Donner Party, during your first winter of the Dark Ages, and it could certainly alleviate some of the sugar hunger you are sure to feel under most primitive conditions. But it is a very great risk to have canned goods. If you have them, you will be one of the hated rich if anybody finds out about them. We are assuming that there will be no government to protect you. To have canned goods-and have it known by anyone outside your own household-is to invite assassination. If you do not believe that a man will commit murder for one can of tomatoes, then you have never been hungry.

If you have canned goods, open them when the windows are shuttered and bury the cans. Resist the temptation to advertise your wealth by using the empty tins as receptacles.

Don't forget a can opener-two can openers.

You will have a rifle, high-powered and with telescopic sights, but you won't use it much. Cartridges are nearly irreplaceable. A deer or a man should be about the limit of the list of your targets . . . a deer when you need meat; a man when hiding or running is not enough.

That brings us to another subject and the most interesting of all. We have not talked much about the enemy, have we? And yet he was there, from the start. It was his atom bombs which reduced you to living off the country and performing your own amputations and accouchements. If you have laid your plans carefully, you won't see much of him for quite a while; this is a very, very big country. Where you are hidden out there never were very many people~at any time; the chances of occupation forces combing all of the valleys, canyons, and hills of our back country in less than several

years is negligible. It is entirely conceivable that an enemy could conquer or destroy our country, as a state, in twenty minutes, with atom bomb and rocket. Yet, when his occupation forces move in, they will be almost lost in this great continent. He may not find you for years.

There is your chance. It has been proved time and again, by the Fighting French, the recalcitrant Irish, the deathless Poles, yes and by our own Apache and Yaqui Indians, that you cannot conquer a free man; you can only kill him.

After the immediate problems of the belly, comes the Underground!

You'll need your rifle. You will need knives. You will need dynamite and fuses. You will need to know how to turn them into grenades. You must learn how to harry the enemy in the dark, how to turn his conquest into a mockery, too expensive to exploit. Oh, it can be done, it can be done! Once he occupies, his temporary advantage of the surprise attack with the atom bomb is over, for once his troops are scattered among you, he cannot use the atom bomb.

Then is your day. Then is the time for the neighborhood cell, the mountain hideout, the blow in the night. Yes, and then is the time for the martyr to freedom, the men and women who die painfully, with sealed lips.

Can we then win our freedom back? There is no way of telling. History has some strange quirks. It was a conflict between England and France that gave us our freedom in the first place. A quarrel in enemy high places, a young hopeful feeling his oats and anxious to displace the original dictator, might give us unexpected opportunity, opportunity we could exploit if we were ready.

There are ways to study for that day, too. There are
books, many of them, which you may read to learn how other people have done it. One such book is Tom Wintringham's New Ways of War. It is almost a blueprint of what to do to make an invader wish he had stayed at home. It is available in a 25 cent PenguinInfantry Journal edition. You can study up and become quite deadly, even though 4-F, or fifty.

If you plan for it, you can survive. If you study and plan and are ready to organize when the time comes, you can hope not only to survive but to play a part in winning back lost freedoms. General George Washington once quoted Scripture to describe what we were fighting for then-a time when "everyone shall sit in safety under his own vine and figtree, and none shall make him afraid!"

It is worth planning for.

"A person who won't be blackmailed,
can't be blackmailed."
-L. Long

PIE FROM THE SKY

Since we have every reason to expect a sudden rain of death from the sky sometime in the next few years, as a result of a happy combination of the science of atomics and the art of rocketry, it behooves the Pollyanna Philosopher to add up the advantages to be derived from the blasting of your apartment, row house, or suburban cottage.

It ain't all bad, chum. While you are squatting in front of your cave, trying to roast a rabbit with one hand while scratching your lice-infested hide with the other, there will be many cheerful things to think about, the assets of destruction, rather than tortu1ring your mind with thoughts of the good old, easy days of taxis and tabloids and Charlie's Bar Grill.

There are so many, many things in this so-termed civilization of ours which would be mightily improved by a once over lightly of the Hiroshima treatment. There is that dame upstairs, for instance, the one with the square bowling ball. Never again would she take it out for practice right over your bed at three in the morning. Isn't that some consolation?

No more soap operas. No more six minutes of good old Mom facing things bravely, interspersed with eight minutes of insistent, syrupy plugging for commercial junk you don't want and would be better off without. Never again will you have to wait breathlessly for "same time, same station" to find out what
beautiful Mamie Jukes, that priceless moron, does about her nameless babe. She will be gone, along with the literary prostitute who brought her into being.

No more alarm clocks. No more alarm clocks! No more of the frenzied keeping of schedules, appointments, and deadlines that they imply. You won't have to gulp your coffee to run for the 8:19 commuters' special, nor keep your eye on the clock while you lunch. A few of the handy little plutonium pills dropped from the sky will end the senseless process of running for the bus to go to work to make the money to buy the food to get the strength to run for the bus. You will swap the pressure of minutes for the slow tide of eternity.

But best of all, you will be freed of the plague of the alarm that yanks you from the precious nirvana of sleep and sets you on your weary feet, with every nerve screaming protest. If you are snapped suddenly out of sleep in the Atomic Stone Age, it will be a mountain lion, a wolf, a man, or some other carnivore, not a mechanical monstrosity.

Westbrook Pegler will no longer exhibit to you his latest hate, nor will Lolly Parsons stuff you with her current girlish enthusiasm. (If your pet dislikes among the columnists are not these two, fill in names to suit yourself; none of them will bother you after the fission treatment.)

In fact, all the impact of world-wide troubles will fade away. Divorces, murders, and troubles in China will no longer smite from headline and radio. Your only worries will be your own worries.

No more John L. Lewis.

No more jurisdictional strikes.

No more "Hate-Roosevelt" clubs.

No more "Let's-Hate-Eleanor,-Too" clubs.

No more Petrillo.

No more damn fools who honk right behind your car while the lights are changing. I'll buy this one at a black market price right now.

No more Gerald L. K. Smith... . ai~d, conversely, no more people who think that the persecution of their particular minority is the only evil in the entire world worth talking about, or working to correct.

No more phony "days." You won't have to buy a red carnation to show that Mom is alive nor a white one to show that she's not. (It's even money that you will have lost track of her in the debacle and not know whether she is alive or dead.) No more "Boy's Day" in our city governments with pre-adolescent little stinkers handing out fines and puritanical speeches to tired street walkers while the elected judge smiles blandly for the photographers. No more "Eat More Citrus Fruit" or "Eat More Chocolate Candy" or "Read More Comic Books" weeks thought up by the advertising agents of industries.

While we are on the subject of phony buildups, let's give a cheer for the elimination of debutantes with press agents, for the blotting out of "cafe" society, for the consignment to oblivion of the whole notion of the "coming-out" party. The resumption of the comingout party in the United States, with its attendant, incredibly callous, waste, at the very time that Europe starves, is a scandal to the jay birds. A few atom bombs would be no more than healthy fumigation of this imbecilic evil.

No more toothsome mammals built up by synthetic publicity into movie "stars" before they have played a part in a picture. This is probably a relatively harmless piece of idiocy in our whipped-cream culture, but the end of it, via A-bombs, may stop Sarah Bernhardt from spinning in her grave.

No more over-fed, under-worked, rapacious female tyrants. I won't say "mothers-in-law"; your motherin-law may be a pretty good Joe. If not, you may have a chance to cut her up for steak.

There is actually nothing to prevent American women from being able, adult, useful citizens, and many of them are. But our society is so rigged that a worthless female can make a racket of it-but not after a brisk one-two with uranium! The parasites will starve when that day comes, from the cheerful idiots of the Helen Hokinson cartoons to the female dinosaurs who use sacrosanct sex as a club to bullyrag, blackmail, and dominate every man they can reach.

The parasite males will die out, too. Yes, pal, if you can manage to zig while the atomic rockets zag you will find society much changed and in many respects improved.

There are a lot of other minor advantages you should get firmly in mind now, lest you fall prey to a fatal nostalgia after this great, fantastic, incredible, somewhat glorious and very fragile technological culture crashes about your ears. Subway smell, for example. The guy who coughs on the back of your neck in the theater. Men who bawl out waitresses. The woman who crowds in ahead of you at the counter. The person who asks how much you paid for it. The preacher with the unctuous voice and the cash register heart. The millionairess who wills her money to found a home for orphan guppies. The lunkhead who dials a wrong number (your number) in the middle of the night and then is sore at you for not being the party he wanted. The sportsman who turns his radio up loud so that he can boo the Dodgers while out in his garden. The Dodgers. People who don't curb their dogs. People who spit on sidewalks. People who censor plays and suppress books. Breach-of-promise suits. People who stare at wounded veterans.

A blinding flash, a pillar of radioactive dust, and all this will be gone.

I don't mean to suggest that it will all be fun. Keeping alive after our cities have been smashed and our government disintegrated will be a grim business at best, as the survivors in central Europe could tell you. In spite of the endless list that could be made of the
things we are better off without I d~ not think it will be very much fun to scrabble around in the woods for a bite to eat. For that reason I am thinking of liquidating, in advance, the next character who says to me, "Well, what difference does it make if we are atombombed-you gotta die sometime!"

I shall shoot him dead, blow through the barrel, and say, "You asked for it, chum."

Conceding that we will all die some day, is that a reason why I should let this grinning ape drag me along toward disaster just because he will take no thought of tomorrow?

Since there are so many of him the chances of us, as a nation, being able to avert disaster are not good. Perhaps some of us could form an association to live through World War III. Call it the League for the Preservation of the Human Race, or the Doom's Day Men, or something like that. Restrict the membership to survivor types, sound in tooth and wind, trained in useful trades or science, reasonably high I.Q.'s and proved fertility. Then set up two or three colonies remote from cities and other military targets.

It might work.

Maybe I will start it myself if I can find an angel to put up the dough for the original promotion. That should get me in as anex-officio member, I hope. I have looked over my own qualifications and I don't seem to measure up to the standards.

My ancestors got into America by a similar dodge. They got here early, when the immigration restrictions were pretty lax. Maybe I can repeat.

I am sure I shall not resign myself to death simply because Joe Chucklehead points out that atomization is quick and easy. Even if that were good I would not like it. Furthermore, it is not true. Death comes fast at the center of the blast; around the edges is a big area of the fatal burn and the slow death, with plenty of time to reconsider the disadvantages of chucklehead-
ness in the Atomic Age, before your flesh sloughs off and you give up the ghost. No, thank you, I plan to disperse myself to the country.

Of course, if you are so soft that you like innerspring mattresses and clean water and regular meals, despite the numerous advantages of blowing us off the map, but are not too soft to try to do something to avoid the coming debacle, there is something you can do about it, other than forming Survival Leagues or cultivating an attitude of philosophical resignation.

If you really want to hang on to the advantages of our slightly wacky pseudo-civilization, there is just one way to do it, according to the scientists who know the most about the new techniques of war-and that is to form a sovereign world authority to prevent the Atomic War.

Run, do not walk, to the nearest Western Union, and telegraph your congressman to get off the dime and get on with the difficult business of forming an honestto-goodness

world union, with no jokers about Big Five vetoes or national armaments.. . to get on with it promptly, while there is still time, before Washington, D.C., is reduced to radioactive dust-and he with it, poor devil!

FOREWORD

While I was failing at World-Saving, I was beginning to achieve my second objective: to spread out, not limit myself to pulp science fiction. THEY DO IT WITH MIRRORS was my first attempt in the crime-mystery field, and from it I learned three things: a) whodunn its are fairly easy to write and easy to sell; b) I was no threat to Raymond Chandler or Rex Stout as the genre didn't interest me that much; and c) Crime Does Not Pay- Enough (the motto of the Mystery Writers of America).

It may amuse you to know that this story was considered to be (in 1945) too risque; the magazine editor laundered it before publication. You are seeing the original "dirty" version; try to find in it anything at all that could bring a blush to the cheek of your maiden aunt.

In late 1945 this magic mirror existed in a bar at (as I recall) the corner of Hollywood and Gower Gulch; the rest is fiction.

"Anything you get free costs more than

worth-but you don't find it out until later."

-Bernardo de la Paz
-
THEY DO IT WITH MIRRORS
An Edison Hill Crime Case

I was there to see beautiful naked women. So was everybody else. It's a common failing.

I climbed on a stool at the end of the bar in Jack Joy's Joint and spoke to Jack himself, who was busy setting up two old-fashioneds. "Make it three," I said. "No, make it four and have one with me. What's the pitch, Jack? I hear you set up a peep show for the suckers."

"Hi, Ed. Nope, it's not a peep show-it's Art."

"What's the difference?"

"If they hold still, it's Art. If they wiggle around, it's illegal. That's the ruling. Here." He handed me a program.

It read:

THE JOY CLUB
PRESENTS
The Magic Mirror

Beautiful Models in a series of Entertaining
and Artistic Pageants
10 p.m. "Aphrodite" Estelle
11 p.m. "Sacrifice to the Sun" Estelle and Hazel
12 p.m. "The High Priestess" Hazel
1 a.m. "The Altar Victim" Estelle
2 a.m. "Invocation to Pan" Estelle and Hazel

(Guests are requested to refrain stomping, whistling, or otherwise disturbing the artistic serenity of the presentations)

The last was a giggle. Jack's place was strictly a joint. But on the other side of the program I saw a new schedule of prices which informed me that the drink in my hand was going to cost me just twice what I had figured. And the place was jammed. By suckers-including me.

I was about to speak to Jack, in a kindly way, promising to keep my eyes closed during the show and then pay the old price for my drink, when I heard two sharp beeps!-a high tension buzzer sound, like radio code- from a spot back of the bar. Jack turned away from me, explaining, "That's the eleven o'clock show." He busied himself underneath the bar.

Being at the end of the bar I could see under the long side somewhat. He had enough electrical gear there to make a happy Christmas for a Boy Scout-switches, a rheostat dingus, a turntable for recordings, and a hand microphone. I leaned over and sized it up. I have a weakness for gadgets, from my old man. He named me Thomas Alva Edison Hill in hopes that I would emulate his idol. I disappointed him-I didn't invent the atom bomb, but I do sometimes try to repair my own typewriter.

Jack flipped a switch and picked up the hand mike. His voice came out of the juke box: "We now present the Magic Mirror." Then the turntable picked up with Hymn to the Sun from Coq d'Or, and he started turning the rheostat slowly.

The lights went down in the joint and came up slowly in the Magic Mirror. The "Mirror" was actually a sheet of glass about ten feet wide and eight high which shut off a little balcony stage. When the house lights were on bright and the stage was dark, you could not see through the glass at all; it looked like a mirror. As the house lights went out and the stage lights came on, you could see through the glass and a picture slowly built up in the "Mirror."

Jack had a single bright light under the bar which lighted him and the controls and which did not go out
with the house lights. Because of my position at th end of the bar it hit me square in the eye. I had to bloci it with my hand to see the stage.

It was something to see.

Two girls, a blonde and a brunette. A sort of altar oi table, with the blonde sprawled across it, volup'. Th brunette standing at the end of the altar, grabbing th blonde by the hair with one hand while holding 2 fancy dagger upraised with the other. There was 2 backdrop in gold and dark blue-a sunburst in 2 phony Aztec or Egyptian design, but nobody was look ing at it; they were looking at the girls.

The brunette was wearing a high show-girl heac dress, silver sandals, and a G-string in glass jewels Nothing more. No sign of a brassiere. The blonde wa~ naked as an oyster, with her downstage knee drawn uj just enough to get past sufficiently broad-minded cen sors.

But I was not looking at the naked blonde; I wa~ looking at the brunette.

It was not just the two fine upstanding breasts flO] the long graceful legs nor the shape of her hips an thighs; it was the overall effect. She was so beautiful i hurt. I heard somebody say, "Great jumping jeepers!' and was about to shush him when I realized it was me

Then the lights went down and I remembered t breathe.

I paid the clip price for my drink without a quivel and Jack assured me: "They are hostesses betweer shows." When they showed up at the stairway leadin~ down from the balcony he signalled them to come ove~ and then introduced me.

"Hazel Dorn, Estelle d'Arcy-meet Eddie Hill."

Hazel, the brunette, said, "How do you do?" but th blonde said,

"Oh, I've met the Ghost before. How's business Rattled any chains lately?"

I said, "Good enough," and let it pass. I knew her al
right-but as Audrey Johnson, not as Estelle d'Arcy. She had been a steno at the City Hal1~when I was doing an autobiography of the Chief of Police. I had not liked her much; she had an instinct for finding a sore point and picking at it.

I am not ashamed of being a ghost writer, nor is it a secret. You will find my name on the title page of Forty Years a Cop as well as the name of the Chief-in small print but it is there: "with Edison Hill."

"How did you like the show?" Hazel asked, when I had ordered a round.

"I likedyou," I said, softly enough to keep it private. "I can't wait for the next show to see more of you."

"You'll see more," she admitted and changed the subject. I gathered an impression that she was proud of her figure and liked to be told she was beautiful but was not entirely calloused about exhibiting it in public.

Estelle leaned across the bar to Jack. "Jackie Boy," she said in sweetly reasonable tones, "you held the lights too long again. It doesn't matter to me in that pose, but you had poor old Hazel trembling like a leaf before you doused the glim."

Jack set a three-minute egg timer, like a little hourglass on the bar. "Three minutes it says-three minutes you did."

"I don't think it was more than three minutes," Hazel objected. "I wasn't tired."

"You were trembling, dear. I saw you. You mustn't tire yourself-it makes lines. Anyhow," she added, "I'll just keep this," and she put the egg timer in her purse. "We'll time it ourselves."

"It was three minutes," Jack insisted.

"Never mind," she answered. "From now on it'll be three minutes, or mamma will have to lock Jackie in the dark closet."

Jack started to answer, thought better of it, then walked away to the other end of the bar. Estelle
shrugged, then threw down the rest of her drink ~ left us. I saw her speak to Jack again, then join so customers at one of the tables.

Hazel looked at her as she walked away. "I'd pad that chippie's pants," she muttered, "if she wore an

"A bum beef?"

"Not exactly. Maybe Jack is a friend of yours- "Just an acquaintance."

"Well . . . I've had worse bosses-but he is a bit (jerk. Maybe he doesn't stretch the poses just out meanness-I've never timed him-but some of th poses are too long for three minutes. Take Estel Aphrodite pose-you saw it?"

' ' I'Jo.' ~

"She balances on the ball of one foot, no costum all, but with one leg raised enough to furnish a fig li Jack's got a blackout switch to cover her if she bre~ but, just the same, it's a strain."

"To cover himself with the cops, you mean."

"Well, yes. Jack wants us to make it just as stronl the vice squad will stand for."

"You ought not to be in a dive like this. You ough have a movie contract."

She laughed without mirth. "Eddie, did you ever to get a movie contract? I've tried."

"Just the same-oh, well! But why are you sorc Estelle? What you told me doesn't seem to cover i

"She- Skip it. She probably means well."

"You mean she shouldn't have dragged you into i

"Partly."

"What else?"

"Oh, nothing-look, do you think I need any wrin remover?" I examined her quite closely, until she tually blushed a little, then assured her that she not.

"Thanks," she said. "Estelle evidently thinks She's been advising me to take care of myself lat and has been bringing me little presents of bea
preparations. I thank her for them and it appears to be sheer friendliness on her part.. . but it makes me squirm.

I nodded and changed the subject. I did not want to talk about Estelle; I wanted to talk about her-and me. I mentioned an agent I knew (my own) who could help her and that got her really interested, if not in me, at least in what I was saying.

Presently she glanced at the clock back of the bar and squealed. "I've got to peel for the customers. 'Bye now!" It was five minutes to twelve. I shifted from the end of the bar to the long side, just opposite Jack's Magic Mirror controls. I did not want that bright light of his interfering with me seeing Hazel.

It was just about twelve straight up when Jack came up from the rear of the joint, elbowed his other barman out of the way, and took his place near the controls. "Just about that time," he said to me. "Has she rung the buzzer?"

"Not a buzz."

"Okay, then." He cleared dirty glasses off the top of the bar while we waited, changed the platter on the turntable, and generally messed around. I kept my eyes on the mirror.

I heard the two beeps! sharp and clear. When he did not announce the show at once, I glanced around and saw that, while he had the mike in his hand, he was staring past it at the door, and looking considerably upset.

There were two cops just inside the door, Hannegan and Feinstein, both off the beat. I supposed he was afraid of a raid, which was silly. Pavement pounders don't pull raids. I knew what they were there for, even before Hannegan gave Jack a broad grin and waved him the okay sign-they had just slipped in for a free gander at the flesh under the excuse of watching the public morals.

"We now present the Magic Mirror," said Jack's
voice out of the juke box. Somebody climbed on ti stool beside me and slipped a hand under my arm. looked around. It was Hazel.

"You're not here; you're up there," I said foc ishly.

"Huh-uh. Estelle said- I'll tell you after the show The lights were coming up in the Mirror and the jul box was cranking out Valse Triste. The altar was in th scene, too, and Estelle was sprawled over it much she had been before. As it got lighter you could see red stain down her side and the prop dagger. Haz had told me what each of the acts were; this was ti one called "The Altar Victim," scheduled for the oi o'clock show.

I was disappointed not to be seeing Hazel, but I h2 to admit it was good-good theater, of the nasty soi sadism and sex combined. The red stuff-catsup guessed-trickling down her bare side and the hand of the prop dagger sticking up as if she had be stabbed through-the customers liked it. It was a na ural follow-up to the "Sacrifice to the Sun".

Hazel screamed in my ear.

Her first scream was solo. The next thing I can rec~ it seemed as if every woman in the place was screar ing-soprano, alto, and some tenor, but most screeching soprano. Through it came the bull voice Hannegan. "Keep your seats, folks! Somebody turn the lights!"

I grabbed Hazel by the shoulders and shook hc "What's the matter? What's up?"

She looked dazed, then pointed at the Mirror. "Shc dead. . . she's dead . . . she's dead!" she chanted. 5] scrambled down from the stool and took out for ii back of the house. I started after her. The house ligh came on abruptly, leaving the Mirror lights still oi

We finished one, two, three, up the stairwa through a little dressing room, and onto the stage almost caught up with Hazel, and Feinstein was do on my heels.

We stood there, jammed in the door, blinking at the flood lights, and not liking what we saw under them. She was dead all right. The dagger, which should have been faked between her arm and her breast with catsup spilled around to maintain the illusion-this prop dagger, this slender steel blade, was three inches closer to her breastbone than it should have been. It had been stabbed straight into her heart.

On the floor at the side of the altar away from the audience, close enough to Estelle to reach it, was the egg timer. As I looked at it the last of the sand ran out.

I caught Hazel as she fell-she was a big armful- and spread her on the couch. "Eddie," said Feinstein, "call the Station for me. Tell Hannegan not to let anyone out. I'm staying here." I called the station but did not have to tell Hannegan anything. He had them all seated again and was jollying them along. Jack was still standing back of the bar, shock on his face, and the bright light at the control board making him look like a death's head.

By twelve-fifteen Spade Jones, Lieutenant Jones of Homicide, showed up and from there on things slipped into a smooth routine. He knew me well, having helped me work up some of the book I did for the Chief, and he grabbed onto me at once for some

of the background. By twelve-thirty he was reasonably sure that none of the customers could have done it. "I won't say one of them didn't do it, Eddie my boy-anybody could have done it who knew the exact second to slip upstairs, grab the knife, and slide it into her ribs. But the chances are against any of them knowing just when and how to do it."

"Anybody inside or outside," I corrected.

"So?"

"There's a fire exit at the foot of the stairs."

"You think I haven't noticed that?" He turned away and gave Hannegan instructions to let anybody go who could give satisfactory identification with a local address. The others would have to go downtown to
have closer ties as material witnesses put on them 1 the night court. Perhaps some would land in the ta] for further investigation, but in any case-clear 'e out!

The photographers were busy upstairs and so we the fingerprint boys. The Assistant Medical Examin showed up, followed by reporters. A few minutes lat after the house was cleared, Hazel came downstai and joined me. Neither of us said anything, but I p~ ted her on the back. When they carried down the b2 ket stretcher a little later, with a blanket-wrapp shape in it, I put my arm around her while she bun her eyes in my shoulders.

Spade talked to us one at a time. Jack was not ta] ing. "It ain't smart to talk without a lawyer," was Spade could get out of him. I thought to myself that would be better to talk to Spade now than to sweated and maybe massaged a little under the ugh My testimony would clear him even though it wou show that there was a spat between him and Estel Spade would not frame a man. He was an honest cc as cops go. I've known honest cops. Two, I think.

Spade took my story, then he took Hazel's, a] called me back. "Eddie my boy," he said, "help me d into this thing. As I understand it, this girl Ha; should have had the twelve o'clock show."

"That's right."

He studied one of the Joy Club's programs. "Ha; says she went upstairs to undress for the show abc eleven-fifty-five."

"Exactly that time."

"Yeah. She was with you, wasn't she? She says s went up and that Estelle followed her in with a sor and-dance that the boss said to swap the two shoi around.

"I wouldn't know about that."

"Naturally not. She says she beefed a little but ga in and came on downstairs, where she joined you. C(rect?"

"Correct."

"Mmmm .. . By the way, your remark about the fire door might lead to something. Hazel put me onto a boy friend for Estelle. Trumpeter in that rat race across the street. He could have ducked across and stabbed her. Wouldn't take long. Trumpet players can't be pushing wind all the time; they'd lose their lip."

"How would he know when to do it? It was supposed to be Hazel's show."

"Mmmm.. . Well, maybe he did know. Swapping shows sounds like Estelle had made a date, and that sounds like a man. In which case he'd know about it. One of the boys is looking into it. Now about the way these shows worked-do you suppose you could show me how they were staged? Hannegan tried it but all he got was a shock."

"I'll try it," I said, getting up. "It's nothing very fancy. Did you ask Jack about Hazel's statement that Estelle had permission from him to swap the shows?"

"That's the one thing he cracked on. He states flatly that he didn't know that the shows were swapped. He says he expected to see Hazel in the Mirror."

The controls looked complicated but weren't. I showed Jones the rheostat and told him it enabled Jack to turn either set of lights down slowly while the other set went up. I found a bypass switch back of the rheostat which accounted for the present condition- all lights burning brightly, house and stage. There was a blackout switch and there was a switch that cut the hand microphone and the turntable in through the juke box. Near the latter was the buzzer-a small black case with two binding posts-which the girls used to signal Jack. Centered on the under side of the bar was a hundred-and-fifty watt bulb hooked in on its own line separate from the rheostat. Except for the line to this light all the wires from all the equipment disappeared into a steel conduit underneath the bar. It was this light which had dazzled me during the
eleven o'clock show. It seemed excessive; a pear bulb would have been more appropriate. Apparen Jack liked lots of light.

I explained the controls to Spade, then gave hin dry run. First I switched the rheostat back to "Hou~ and threw off the bypass switch, leaving the roc brightly lighted and the Magic Mirror dark. "The tii is five minutes of twelve. Hazel leaves me to go i. stairs. I shift around to the bar stool just oppos where I am now standing. At midnight Jack comes and asks me if I've heard the buzzer. I say 'No.' I fiddles around a bit, clearing away glasses and t like. Then come two beeps on the buzzer. He picks the microphone but he doesn't announce the show a few seconds-he's just noticed Hannegan and Fe stein. Hannegan gives him the high sign and he gc ahead." Then I picked up the mike myself and spc into it:

"We now present the Magic Mirror!"

I put down the mike and flipped on the turntal
switch. The same platter was on and the juke h
started playing Valse Triste. Hazel looked up at i
sharply, from where she had been resting her head
her arms a few tables away. She looked horrified, a
the reconstruction were too much for her stomacF I turned the rheostat slowly from "House"
"Stage." The room darkened and the stage lit r "That's all there was to it," I said. "Hazel sat do~ beside me just as Jack announced the show. As lights came on she screamed."

Spade scratched his chin. "You say Joy was star ing in front of you when the buzzer signal came fr upstairs?"

"Positive."

"You gave him a motive-the war he was havi with Estelle. But you've given him an alibi too."

"That's right. Either Estelle punched that buz:
herself, then lay down and stabbed herself, or she '~ murdered and the murderer punched it to cover i
then ducked out while everybody had their eyes on the Mirror. Either way I had Jack Joy in sight."

"It's an alibi all right," he conceded. "Unless you were in cahoots with him," he said hopefully.

"Prove it," I answered, grinning. "Not with him. I think he's a jerk."

"We're all jerks, more or less, Eddie my boy. Let's look around upstairs."

I switched the bypass on, leaving both stage and house lighted, and followed him. I pointed out the buzzer to him, after searching for it myself. A conduit came up through the floor and ended in a junction box on the wall, from which cords ran to the flood lights. The button was on the junction box. I wondered why it was not on the "altar," then saw that the altar was a movable prop. Apparently the girls punched the button, then fell quickly into their poses. Spade tried the button meditatively, then wiped print powder off on his trousers. "I can't hear it," he said.

"Naturally not. This stage is almost a soundproof booth."

He had seen the egg timer but I had not told him until then about seeing the last of the sand run out. He pursed his lips. "You're sure?"

"Call it hallucination. I think I saw it. I'll testify to it."

He sat down on the altar, avoiding the blood stain, and said nothing for quite a long time. Finally he said, "Eddie my boy-"

"Yes?"

"You've not only given Jack Joy an alibi, you've damn' near made it impossible for anyone to have done it."

"I know it. Could it have been suicide?"

"Could be. Could be. From the mechanics angle but not from the psychological angle. Would she have started that egg timer for her own suicide? Another thing. Take a look at that blood. Taste it."

"Huh?"

"Don't throw up. Smell it then."

I did, very gingerly. Then I smelled it again. T' smells. Tomato. Blood. Blood and tomato catsur thought I could detect differences in appearance well. "You see, son? If she's going to have blood on I chest she won't bother with catsup. Aside from ti and the timer it's a perfect, dramatic, female-style:
icicle. But it won't wash. It's murder, Eddie." Feinstein stuck his head in. "Lieutenant-"
"What is it?"

"That musician punk. He had a date with her right."

"Oh, he did, eh?"

"But he's clear. The band was on the air at midnig in a number that features him in a trumpet solo.'

"Damn! Get out of here."

"That ain't all. I called the Assistant Medical I aminer, like you said. The motive you suggested wo go-she not only wasn't expecting; she hadn't e' been had. Virgo intacta," he added in passable hi school Latin.

"Feinstein, you'll be wanting to be a sergeant ne~ Spade answered placidly, "using big words like th Get out."

"Okay, Lieutenant." I was more than a little s
prised at the news. I would have picked Estelle a
case of round heels. Evidently she was a tease in m~
ways than one.

Spade sat a while longer, then said, "When it's 1i1 in here, it's dark out there; when it's light out thc it s dark in here.

"That's right. Ordinarily, that is. Right now we got both sides lighted with the bypass."

"Ordinarily is what I mean. Light, dark; dark, hg Eddie my boy-"

"Yes?"

"Are you sweet on that Hazel girl?"

"I'm leaning that way," I admitted.

"Then keep an eye on her. The murderer was in K
for just a few seconds-the egg timer and the buzzer prove that. He wasn't any of the fei~~~ people who knew about the swap in the shows-not since the trumpetplaying boy friend got knocked out of the running. And it was dark. He murdered the wrong party, Eddie my boy. There's another murder coming up."

"Hazel," I said slowly.

"Yes, Hazel."

Spade Jones shooed us all home, me, Hazel, the two waiters, the other barman, and Jack Joy. I think he was tempted to hold Jack simply because he wouldn't talk but he compromised by telling him that if he stuck his head outside his hotel, he would find a nice policeman ready to take him down to a nice cell. He tipped me a wink and put a finger on his lips as he said good night to me.

But I didn't keep quiet. Hazel let me take her home readily enough. When I saw that she lived alone in a single apartment in a building without a doorman, I decided it called for an all night vigil and some explaining.

She stepped into the kitchenette and mixed me a drink. "One drink and out you go, Ed," she called to me. "You've been very sweet and I want to see you again and thank you, but tonight this girl goes to bed. I'm whipped."

"I'm staying all night," I announced firmly.

She came out with a drink in her hand and looked at me, both annoyed and a little puzzled. "Ed," she said, "aren't you working just a bit too fast? I didn't think you were that clumsy."

"Calm yourself, beautiful," I told her. "It's not necessarily a proposition. I'm going to watch over you. Somebody is trying to kill you."

She dropped the drink.

I helped her clean it up and explained the situation. "Somebody stabbed a girl in a dark room," I finished. "That somebody thought it was you. He knows better by now and he will be looking for a chance to finish the
job. What you and I have got to figure out is: Wd wants to kill you?"

She sat down and started to manhandle a handk chief. "Nobody wants to kill me, Eddie. It was I telle."

"No, it wasn't."

"But it couldn't have been me. I know."

"What do you know?"

"I- Oh, it's impossible. Stay all night if you wa to. You can sleep on the couch." She got up and pull the bed down out of the wall, went in the bath, cbs the door, and splashed around for a while. "That ba is too small to dress and undress in," she stated flat "Anyhow I sleep raw. If you want to get undressed y won't scare me."

I said. "I'll take my coat and tie and shc

"Suit yourself." Her voice was a little bit smother as she was already wiggling her dress over her hea

She wore pants, whether Estelle ever did or notplain, white knit that looked clean and neat. She c not wear a brassiere and did not need to. The concc tion I had gotten of her figure in the Magic Mirror '~ entirely justified. She was simply the most magn~ cently beautiful thing I had ever seen in my life. street clothes she was a beautiful, well-built wom~ in her skin-wars have started over less.

I was beginning to doubt my ability to stay on t couch. I must have showed it, for she snorted, "Wi the drool off your chin!" and stepped out of Ipants.

'Scuse, please," I answered and started unlaci my shoes. She stepped over and switched off the ligI then went over to the one big window and raised t shade. It was closed but, with the light out, you coi see outside easily. "Stand back from that window, said. "You're too good a target."

"Huh? Oh, very well." She backed up a few steps ic
continued to stare thoughtfully out the window. I stared thoughtfully at her. There w~as a big neon sign across the street and the colored lights, pouring in the window, covered her from head to foot with a rosy liquid glow. She looked like something out of a dream of fairyland.

Presently I wasn't thinking how she looked; I was thinking about another room, where a girl had lain murdered, with the lights of a night club shining through a pane of glass, shining through like this neon.

My thoughts rearranged themselves rapidly and very painfully. I added them up a second time and still got the same answer. I did not like the answer. I was glad, damn glad, she was bare naked, with no way to conceal a gun, or a knife, or any other sort of deadly weapon. "Hazel," I said softly.

She turned to me. "Yes, Eddie?"

"I've just had a new idea .. . why should anyone want to kill you?"

"You said that before. There isn't any.reason."

"I know. You're right; there isn't any. But put it this way-why should you want to kill Estelle?"

I thought she was going to faint again, but I didn't care-I wanted to shock her. Her lusciousness meant nothing to me now but a trap that had confused my thoughts. I had not wanted to think her guilty, so I had disregarded the fact that of all the persons involved she was the only one with the necessary opportunity, the knowledge of the swapped shows, and at least some motive. She had made it plain that she detested Estelle. She had covered it up but it was still evident.

But most important of all, the little stage had not been dark! True, it looked dark-from the outside. You can't see through glass when all the light comes from one side and you are on that same side-but light passes through the glass just the same. The neon on the street illuminated this room we were in fairly
brightly; the brilliant lights of Jack's bar illuminat the little stage even when the stage floodlights we:
out.

She knew that. She knew it because she had been there many times, getting ready to pose for the suc ers. Therefore she knew that it was not a case of mi taken identity in the dark-there was no dark! And would have to be nearly pitch black for anyone to mi take Hazel's blue-black mane for Estelle's peroxid mop.

She knew-why hadn't she said so? She was lettir me stay all night, not wanting me around but riskii her reputation and more, because I had propound the wrong-girl-in-the-dark theory. She knew it wou not hold water; why had she not said so?

"Eddie, have you gone crazy?" Her voice was frigF ened.

"No-gone sane. I'll tell you how you did it, n beautiful darling. You both were there-you admitt that. Estelle got in her pose, and asked you to pun the buzzer. You did-but first you grabbed the kni and slid it in her ribs. You wiped the handle, look around, punched the buzzer, and lammed. About t seconds later you were slipping your arm in mir Me-your alibi!"

"It had to be you," I went on, "for no one else wou have had the guts to commit murder with nothing b glass between him and an audience. The stage w lighted-from the outside. You knew that, but it didi worry you. You were used to parading around nak4 in front of that glass, certain you could not be se~ while the house lights were on! No one else would ha dared!"

She looked at me as if she could not believe her ea and her chin began to quiver. Then she squatted do~ on the floor and burst into tears. Real tears-tb dripped. It was my cue to go soft, but I did not. I dor like killing.

I stood over her. "Why did you kill her? Why did you kill her?"

"Get out of here."

"Not likely. I'm going to see you fry, my big-busted angel." I headed for the telephone, keeping my eyes on her. I did not dare turn my back, even naked as she was.

She made a break, but it was not for me; it was for the door. How far she thought she could get in the buff I don't know.

I tripped her and fell on her. She was a big armful and ready to bite and claw, but I got a hammer lock on one arm and twisted it. "Be good," I warned her, "or I'll break it."

She lay still and I began to be aware that she was not only an armful but a very female armful. I ignored it. "Let me go, Eddie," she said in a tense whisper, "or I'll scream rape and get the cops in."

"Go right ahead, gorgeous," I told her. "The cops are just what I want, and quick."

"Eddie, Eddie, listen to reason-I didn't kill her, but I know who did."

"Huh? Who?"

"I know.. . I do know-but he couldn't have. That's why I haven't said anything."

"Tell me."

She didn't answer at once; I twisted her arm. "Tell me!

"Oh! It was Jack."

"Jack? Nonsense-I was watching him."

"I know. But he did it, just the same. I don't know how-but he did it."

I held her down, thinking. She watched my face. "Ed?"

"Huh?"

"If I punched the buzzer, wouldn't my fingerprint be on it?"

"Should be."

"Why don't you find out?"

It stonkered me. I thought I was right but si seemed quite willing to make the test. "Get up," I sai "On your knees and then on your feet. But don't try get your arm free and don't try any tricks, or, so he me, I'll kick you in the belly."

She was docile enough and I moved us over to ti phone, dialled it with one hand and managed to get Spade Jones through the police exchange. "Spad This is Eddie-Eddie Hill. Was there a fingerprint the buzzer button?"

"Now I wondered when you would be getti] around to thinking of that. There was."

"Whose?"

"The corpse's."

"Estelle's?"

"The same. And Estelle's on the egg timer. None the knife-wiped clean. Lots from both girls aroui the room, and a few odd ones-old, probably."

"Uh. . . yes . .. . well, thanks."

"Not at all. Call me if you get any bright ideas, son I hung up the phone and turned to Hazel. I gues~ had let go her arm when Spade told me the print w not hers, but I don't remember doing so. She w standing there, rubbing her arm and looking at me a very odd way. "Well," I said, "you can twist my an or kick me anywhere you like. I was wrong. I'm son I'll try to prove it to you."

She started to speak and then started to leak tea again. It finished up with her accepting my apology the nicest way possible, smearing me with lipstick ai tears. I loved it and I felt like a heel.

Presently I wiped her face with my handkerchi and said, "You put on a robe or something and sit the bed and I'll sit on the couch. We've got to dope tF out and I can think better with that lovely chassis yours covered up."

She trotted obediently and I sat down. "You s
Jack killed her, but you admit you don't know how he could have done it. Then why do y~ou think he did?"
"The music."
~ 1

Hun?

"The music he played for the show was Valse Triste. That's Estelle's music, for Estelle's act. My act, the regular twelve o'clock act, calls for Bolero. He must have known that Estelle was up there; he used the right music."

"Then you figure he must have been lying when he claimed Estelle never arranged with him to swap the shows. But it's a slim reason to hang a man-he might have gotten that record by accident."

"Could, but not likely. The records were kept in order and were the same ones for the same shows every night. Nobody touched them but him. He would fire a man for touching anything around the control box. However," she went on, "I knew it had to be him before I noticed the music. Only it couldn't be."

"Only it couldn't be. Go ahead."

"He hated her."

"Why?"

"She teased him."

"'She teased him.' Suppose she did. Lots of people get teased. She teased lots of people. She teased you. She teased me. So what?"

"It's not the same thing," she insisted. "Jack was afraid of the dark."

It was a nasty story. The hunk was afraid of total darkness, really afraid, the way some kids are. Hazel told me he would not go back of the building to get his parked car at night without a flashlight. But that would not have given away his weakness, nor the fact that he was ashamed of it-lots of people use flashlights freely, just to be sure of their footing. But he had fallen for Estelle and apparently made a lot of progress-had actually gotten into bed with her. It never came to anything because she had snapped out the lights. Estelle had told Hazel about it, gloating o~ the fact that she had found out about what she term his cowardice "soon enough."

"She needled him after that," Hazel went
"Nothing that anyone could tumble to, if they did know. But he knew. He was afraid of her, afraid to f her for fear she would tell. He hated her-at the sai time he wanted her and was jealous of her. There ~ one time in the dressing room. I was there-" He h come in while they were dressing, or undressing, a had picked a fight with Estelle over one of the ci tomers. She told him to get out. When he did not do she snapped out the light. "He went out of there hik jack rabbit, falling over his feet." She stopped. "H(about it, Eddie? Motive enough?"

"Motive enough," I agreed. "You've got me thinki he did it. Only he couldn't."

"'Only he couldn't.' That's the trouble."

I told her to get into bed and try to get some sleer that I planned to sit right where I was till the piec fitted. I was rewarded with another sight of the cc tours as she chucked the robe, then I helped myself a good-night kiss. I don't think she slept; at least s did not snore.

I started pounding my brain. The fact that the sta was not dark when it seemed dark changed the wh picture and eliminated, I thought, everyone not fan jar with the mechanics of the Mirror. It left only Haz Jack, the other barman, the two waiters-and Este herself. It was physically possible for an Unkno~ Stranger to have slipped upstairs, slid the shiv in h ducked downstairs, but psychologically-no. I mad mental note to find out what other models had worlc in the Mirror.

The other barman and the two waiters Spade h eliminated-all of them had been fully alibied by c or more customers. I had alibied Jack. Estelle-bui wasn't suicide. And Hazel.

If Estelle's fingerprint meant what it seemed; Ha:
was out-not time enough to commit a murder, arrange a corpse, wipe a handle, and ~get downstairs to my side before Jack started the show.

But in that case nobody could have done it-except a hypothetical sex maniac who did not mind a spot of butchery in front of a window full of people. Nonsense!

Of course the fingerprint was not conclusive. Hazel could have pushed the button with a coin or a bobby pin, without destroying an old print or making a new one. I hated to admit it but she was not clear yet.

Again, if Estelle did not push the button, then it looked still more like an insider; an outsider would not know where to find the button nor have any reason to push it.

For that matter, why should Hazel push it? It had not given her an alibi-it didn't make sense.

Round and round and round till my head ached.

It was a long time later that I went over and tugged at the covers."Hazel-"

"Yes, Eddie?"

"Who punched the buzzer in the eleven o'clock show?"

She considered. "That show is both of us. She did- she always took charge."

"Mmmm... . What other girls have worked in the Mirror?"

"Why, none. Estelle and I opened the show."

"Okay. Maybe I've got it. Let's call Spade Jones."

Spade assured me he would be only too happy to get out of a warm bed to play games with me and would I like a job waking the bugler, too? But he agreed to come to the Joy Club, with Joy in tow, and to fetch enough flat feet, fire arms, and muscles to cope.

I was standing back of the bar in the Joy Club, with Hazel seated where she had been when she screamed and a cop from the Homicide Squad in niy seat. Jack and Spade were at the end of the bar, where Spade could see.

"We will now show how a man can be two places at
one time," I announced. "I am now Mr. Jack Joy. I time is shortly before midnight. Hazel has just left 1 dressing room and come downstairs. She stops off a moment at the little girls room at the foot of 1 stairs, and thereby misses Jack, who is headed those same stairs. He goes up and finds Estelle in 1 dressing room, peeled and ready for her act-prol bly."

I took a glance at Jack. His face was a taut mask, I he was a long way from breaking. "There was an gument-what about, I don't know, but it might h2 been over the trumpet boy she had swapped shows meet. In any case, I am willing to bet that she stops it by switching out the dressing room light to ch~ him out."

First blood. He flinched at that-his mask crack "He didn't stay out more than a few moments," I w~ on. "Probably he had a flashlight in his pocket-h probably got one on him now-and that let him back into that terrible, dark room, and switch on 1 light. Estelle was already on the stage, anointing h self with catsup, and almost ready to push the buz2 She must have been about to do so, for she had star the egg timer. He grabbed the prop dagger a stabbed her, stabbed her dead."

I stopped. No blood from Jack this time. His m~ was on firmly. "He arranges her in the pose-ten s onds for that; it was nothing but a sprawl-wipes handle and ducks out. Ten seconds more to this sp Or make it twenty. He asks me if the buzzer I sounded and I tell him No. He really had to know, Estelle might have punched it before he got to he

"Hearing the answer he wanted, he bustles aroi~ a bit like this-" I monkeyed with some glassware ~ picked up a bar spoon and pointed with it to the sta "Note that the Mirror is lighted and empty-I've. the bypass on. Imagine it dark, with Estelle on the tar, a knife in her heart." I dropped the spoon do and, while their eyes were still on'the Mirror, I brou~
metal spoon across the two binding posts which carried the two leads to the push button on the stage. The buzzer gave out with a loud beep! I broke the connection by lifting the spoon for a split second, and brought it down again for a second beep! "And that is how a man can-Catch him, Spade!"

Spade was at him before I yelled. The three cops had him helpless in no time. He was not armed; it had been sheer reflex-a break for freedom. But he was not giving up,

even now. "You've got nothing on me. No evidence. Anybody could have jimmied those wires anywhere along the line."

"No, Jack," I contradicted. "I checked for that. Those wires run through the same steel conduit as the power wires, all the way from the control box to the stage. It was here or there, Jack. It couldn't be there; it had to be here."

He shut up. "I want to see my lawyer," was his only answer.

"You'll see your lawyer," Spade assured him jovially. "Tomorrow, or the next day. Right now you're going to go downtown and sit under some nice hot lights for a few hours."

"No, Lieutenant!" It was Hazel.

"Eh? And why not, Miss Dorn?"

"Don't put him under lights. Shut him in a dark closet!"

"Eh? Well, I'll be- That's what I call a bright girl!" It was the mop closet they used. He lasted thirteen minutes, then he started to whimper and then to scream. They let him out and took his confession.

I was almost sorry for him when they led him away. I should not have been- second degree was the most he could get as premeditation was impossible to prove and quite unlikely anyhow. "Not guilty by reason of insanity" was a fair bet. Whatever his guilt, that woman had certainly driven him to it. And imagine the nerve of the man, the pure colossal nerve, that enabled him to go through with lighting up that stage
just after he looked up and saw two cops standing:
side the door!

I took Hazel home the second time. The bed was SI pulled down and she went straight for it, kicking her shoes as she went. She unzipped the side of I dress and started to pull it over her head, when s stopped. "Eddie!"

"Yes, Beautiful?"

"If I take off my clothes again, are you going to cuse me of another murder?"

I considered this. "That depends," I informed h "on whether you are really interested in me, or in ti agent I was telling you about."

She grinned at me, then scooped up a shoe a threw it. "In you, you lug!" Then she went on shucki off her clothes. After a bit I unlaced my shoes.

FOREWORD

My next attempt to branch out was my first book:
ROCKET SHIP GALILEO. 1 attempted book publication earlier than I had intended to because a boys' book was solicited from me by a major publisher. I was unsure of myself- but two highly respected friends, Cleve Cartmill and Fritz Lang, urged me to try it. So I did. . . and the publisher who had asked for it rejected it. A trip to the Moon? Preposterous! He suggested that I submit another book-length MS without that silly space-travel angle.

Instead I sold it to Scribner's and thereby started a sequence: one boys' book each yeartimed for the Christmas trade. This lasted twelve years and was a very strange relationship, as my editor disliked science fiction, disliked me (a sentiment I learned to reciprocate), and kept me on for the sole reason that my books sold so well that they kept

her department out of the red-her words. Eventually she bounced one with the suggestion that I shelve it for a year and then rewrite it.

But by bouncing it she broke the chain of options. Instead of shelving it, I took it across the street. . . and won a Hugo with it.

ROCKET SHIP GALILEO was a fumbling first attempt; I have never been satisfied with it. But it has never been out of print, has appeared in fourteen languages, and has earned a preposterous amount in book royalties alone; I should not kick. Nevertheless I cringe whenever I consider its shortcomings.

My next fiction (here following) was FREE MEN. Offhand it appears to be a routine post-Holocaust story, and the details-idioms, place names, etc.-justify that assumption. In fact it is any conquered nation in any century-

FREE MEN

"That makes three provisional presidents so far," the Leader said. "I wonder how many more there are?" He handed the flimsy sheet back to the runner, who placed it in his mouth and chewed it up like gum.

The third man shrugged. "No telling. What worries me-" A mockingbird interrupted. "Doity, doity, doity," he sang. "Terloo, terloo, terloo, purty-purtypurty-purty."

The clearing was suddenly empty.

"As I was saying," came the voice of the third man in a whisper in the Leader's ear, "it ain't how many worries me, but how you tell a de Gaulle from a Laval. See anything?"

"Convoy. Stopped below us." The Leader peered through bushes and down the side of a bluff. The high ground pushed out toward the river here, squeezing the river road between it and the water. The road stretched away to the left, where the valley widened out into farmland, and ran into the outskirts of Barclay ten miles away.

The convoy was directly below them, eight trucks preceded and followed by halftracks. The following halftrack was backing, vortex gun cast loose and ready for trouble. Its commander apparently wanted elbow room against a possible trap.

At the second truck helmeted figures gathered
around its rear end, which was jacked up. As the Leader watched he saw one wheel temoved.

"Trouble?"

"I think not. Just a breakdown. They'll be gone soon." He wondered what was in the trucks. Food, probably. His mouth watered. A few weeks ago an opportunity like this would have meant generous rations for all, but the conquerors had smartened up.

He put useless thoughts away. "It's not that that worries me, Dad," he added, returning to the subject. "We'll be able to tell quislings from loyal Americans. But how do you tell men from boys?"

"Thinking of Joe Benz?"

"Maybe. I'd give a lot to know how far we can trust Joe. But I could have been thinking of young Morrie."

"You can trust him."

"Certainly. At thirteen he doesn't drink-and he wouldn't crack if they burned his feet off. Same with Cathleen. It's not age or sex-but how can you tell? And you've got to be able to tell."

There was a flurry below. Guards had slipped down from the trucks and withdrawn from the road when the convoy had stopped, in accordance with an orderly plan for such emergencies. Now two of them returned to the convoy, hustling between them a figure not in uniform.

The mockingbird set up a frenetic whistling.

"It's the messenger," said the Leader. "The dumb fool! Why didn't he lie quiet? Tell Ted we've seen it."

Dad pursed his lips and whistled: "Keewah, keewah, keewah, terloo."

The other "mockingbird" answered, "Terloo," and shut up.

"We'll need a new post office now," said the Leader. "Take care of it, Dad."

"Okay."

"There's no real answer to the problem," the Leader said. "You can limit size of units, so that one person can't give away too many-but take a colony like ours. It needs to be a dozen or more to work. That means they all have to be dependable, or they all go down together. So each one has a loaded gun at the head of each other one."

Dad grinned, wryly. "Sounds like the United Nations before the Blow Off. Cheer up, Ed. Don't burn your bridges before you cross them."

"I won't. The convoy is ready to roll."

When the convoy had disappeared in the distance, Ed Morgan, the Leader, and his deputy Dad Carter stood up and stretched. The "mockingbird" had announced safety loudly and cheerfully. "Tell Ted to cover us into camp," Morgan ordered.

Dad wheepled and chirruped and received acknowledgement. They started back into the hills. Their route was roundabout and included check points from which they could study their back track and receive reports from Ted. Morgan was not worried about Ted being followed-he was confident that Ted could steal baby 'possums from mama's pouch. But the convoy breakdown might have been a trap-there was no way to tell that all of the soldiers had got back into the trucks. The messenger might have been followed; certainly he had been trapped too easily.

Morgan wondered how much the messenger would spill. He could not spill much about Morgan's own people, for the "post office" rendezvous was all that he knew about them.

The base of Morgan's group was neither better nor worse than average of the several thousand other camps of recalcitrant guerrillas throughout the area that once called itself the United States. The Twenty Minute War had not surprised everyone. The mushrooms which had blossomed over Washington, Detroit, and a score of other places had been shocking but expected-by some.

Morgan had made no grand preparations. He had simply conceived it as a good period in which to stay footloose and not too close to a talget area. He had taken squatter's rights in an abandoned mine and had stocked it with tools, food, and other useful items. He had had the simple

intention to survive; it was during the weeks after Final Sunday that he discovered that there was no way for a man with foresight to avoid becoming a leader.

Morgan and Dad Carter entered the mine by a new shaft and tunnel which appeared on no map, by a dry rock route which was intended to puzzle even a bloodhound. They crawled through the tunnel, were able to raise their heads when they reached the armory, and stepped out into the common room of the colony, the largest chamber, ten by thirty feet and as high as it was wide.

Their advent surprised no one, else they might not have lived to enter. A microphone concealed in the tunnel had conveyed their shibboleths before them. The room was unoccupied save for a young woman stirring something over a tiny, hooded fire and a girl who sat at a typewriter table mounted in front of a radio. She was wearing earphones and shoved one back and turned to face them as they came in.

"Howdy, Boss!"

"Hi, Margie. What's the good word?" Then to the other, "What's for lunch?"

"Bark soup and a notch in your belt."

"Cathleen, you depress me."

"Well . . . mushrooms fried in rabbit fat, but darn few of them."

"That's better."

"You better tell your boys to be more careful what they bring in. One more rabbit with tularemia and we won't have to worry about what to eat."

"Hard to avoid, Cathy. You must be sure you handle them the way Doc taught you." He turned to the girl. "Jerry in the upper tunnel?"

"Yes."

"Get him down here, will you?"

"Yes, sir." She pulled a sheet out of her typewriter and handed it to him, along with others, then left the room.

Morgan glanced over them. The enemy had abolished soap opera and singing commercials but he could not say that radio had been improved. There was an unnewsy sameness to the propaganda which now came over the air. He checked through while wishing for just one old-fashioned, uncensored newscast.

"Here's an item!" he said suddenly. "Get this, Dad-"

"Read it to me, Ed." Dad's spectacles had been broken on Final Sunday. He could bring down a deer, or a man, at a thousand yards-but he might never read again.

"'New Center, 28 April-It is with deep regret that Continental Coordinating Authority for World Unification, North American District, announces that the former city of St. Joseph, Missouri, has been subjected to sanitary measures. It is ordered that a memorial plaque setting forth the circumstances be erected on the former site of St. Joseph as soon as radioactivity permits. Despite repeated warnings the former inhabitants of this lamented city encouraged and succored marauding bands of outlaws skulking around the outskirts of their community. It is hoped that the sad fate of St. Joseph will encourage the native authorities of all North American communities to take all necessary steps to suppress treasonable intercourse with the few remaining lawless elements in our continental soci

, ,,
ety.

Dad cocked a brow at Morgan. "How many does that make since they took over?"

"Let's see. . . Salinas . . . Colorado Springs . . . uh, six, including St. Joe."

"Son, there weren't more than sixty million Americans left after Final Sunday. If they keep up, we'll be kind of thinned out in a few years."

"I know." Morgan looked troubled. "We've got to work out ways to operate without calling attention to the towns. Too many hostages."

A short, dark man dressed in dirty dungarees entered from a side tunnel, followed by Margie. "You wanted me, boss?"

"Yes, Jerry. I want to get word to McCracken to come in for a meeting. Two hours from now, if he can get here."

"Boss, you're using radio too much. You'll get him shot and us, too."

"I thought that business of bouncing it off the cliff face was foolproof?"

"Well . . . a dodge I can work up, somebody else can figure out. Besides, I've got the chassis unshipped. I was working on it."

"How long to rig it?"

"Oh, half an hour-twenty minutes."

"Do it. This may be the last time we'll use radio, except as utter last resort."

"Okay, boss."

The meeting was in the common room. Morgan called it to order once all were present or accounted for. McCracken arrived just as he had decided to proceed without him. McCracken had a pass for the countryside, being a veterinarian, and held proxy for the colony's underground associates in Barclay.

"The Barclay Free Company, a provisional unit of the United States of America, is now in session." Morgan announced formally. "Does any member have any item to lay before the Company?"

He looked around; there was no response. "How about you?" he challenged Joe Benz. "I heard that you had some things you thought the Company ought to hear.

Benz started to speak, shook his head. "I'll wait."

"Don't wait too long," Morgan said mildly. "Well, I have two points to bring up for discussion-"

"Three," corrected Dr. McCracken. "I'm glad you sent for me." He stepped up to Morgan and handed him a large, much folded piece of paper. Morgan looked it over, refolded it, and put it in his pocket.

"It fits in," he said to McCracken. "What do the folks in town say?"

"They are waiting to hear from you. They'll back you up-so far, anyway."

"All right." Morgan turned back to the group. "First item-we got a message today, passed by hand and about three weeks old, setting up another provisional government. The courier was grabbed right under our noses. Maybe he was a stooge; maybe he was careless-that's neither here nor there at the moment. The message was that the Honorable Albert M. Brockman proclaimed himself provisional President of these United States, under derived authority, and appointed Brigadier General Dewey Fenton commander of armed forces including irregular militia-meaning us-and called on all citizens to unite to throw the Invader out. All formal and proper. So what do we do about it?"

"And who the devil is the Honorable Albert M. Brockman?" asked someone in the rear.

"I've been trying to remember. The message listed government jobs he's held, including some assistant secretary job-I suppose that's the 'derived authority' angle. But I can't place him."

"I recall him," Dr. McCracken said suddenly. "I met him when I was in the Bureau of Animal Husbandry. A career civil servant. . . and a stuffed shirt."

There was a gloomy silence. Ted spoke up. "Then why bother with him?"

The Leader shook his head. "It's not that simple, Ted. We can't assume that he's no good. Napoleon might have been a minor clerk under different circumstances. And the Honorable Mr. Brockman may be a revolutionary genius disguised as a bureaucrat. But that's not the point. We need nationwide unification
more than anything. It doesn't matter right now who the titular leader is. The theory of derived authority may be shaky but it may be the only way to get everybody to accept one leadership. Little bands like ours can never win back the country. We've got to have unity-and that's why we can't ignore Brockman."

"The thing that burns me," McCracken said savagely, "is that it need never have happened at all! It could have been prevented."

"No use getting in a sweat about it," Morgan told him. "It's easy to see the government's mistakes now, but just the same I think there was an honest effort to prevent war right up to the last. It takes all nations to keep the peace, but it only takes one to start a war."

"No, no, no-I don't mean that, Captain," McCracken answered. "I don't mean the War could have been prevented. I suppose it could have been-once. But everybody knew that another war could happen, and everybody-everybody, I say, knew that if it came, it would start with the blasting of American cities. Every congressman, every senator knew that a war would destroy Washington and leave the country with no government, flopping around like a chicken with its head off. They knew-why didn't they do something!"

"What could they do? Washington couldn't be protected."

"Do? Why, they could have made plans for their own deaths! They could have slapped through a constitutional amendment calling for an alternate president and alternate congressmen and made it illegal for the alternates to be in target areas-or any scheme to provide for orderly succession in case of disaster. They could have set up secret and protected centers of government to use for storm cellars. They could have planned the same way a father takes out life insurance for his kids. Instead they went stumbling along, fat, dumb, and happy, and let themselves get killed, with no provision to carry out their sworn duties after they were dead. Theory of 'derived authority,' pfui! It's not
just disastrous; it's ridiculous! We used to be the greatest country in the world-now look at us!"

"Take it easy, Doc," Morgan suggested. "Hindsight is easier than foresight."

"Hummm! I saw it coming. I quit my Washington job and took a country practice, five years ahead of time. Why couldn't a congressman be as bright as I am?"

"Hmmm. . . well-you're right. But we might just as well worry over the Dred Scott Decision. Let's get on with the problem. How about Brockman? Ideas?"

"What do you propose, boss?"

"I'd rather have it come from the floor."

"Oh, quit scraping your foot, boss," urged Ted. "We elected you to lead."

"Okay. I propose to send somebody to backtrack on the message and locate Brockman-smell him out and see what he's got. I'll consult with as many groups as we can reach in this state and across the river, and we'll try to manage unanimous action. I was thinking of sending Dad and Morrie."

Cathleen shook her head. "Even with faked registration cards and travel permits they'd be grabbed for the Reconstruction Battalions. I'll go."

"In a pig's eye," Morgan answered. "You'd be grabbed for something a danged sight worse. It's got to be a man."

"I am afraid Cathleen is right," McCracken commented. "They shipped twelve-year-old boys and old men who could hardly walk for the Detroit project. They don't care how soon the radiation gets them-it's a plan to thin us out."

"Are the cities still that bad?"

"From what I hear, yes. Detroit is still 'hot' and she was one of the first to get it."

"I'm going to go." The voice was high and thin, and rarely heard in conference.

"Now, Mother-" said Dad Carter.

"You keep out of this, Dad. The men and young women would be grabbed, but they Won't bother with me. All I need is a paper saying I have a permit to rejoin my grandson, or something."

McCracken nodded. "I can supply that."

Morgan paused, then said suddenly, "Mrs. Carter will contact Brockman. It is so ordered. Next order of business," he went on briskly. "You've all seen the news about St. Joe-this is what they posted in Barclay last night." He hauled out and held up the paper McCracken had given him. It was a printed notice, placing the City of Barclay on probation, subject to the ability of "local authorities" to suppress "bands of roving criminals."

There was a stir, but no comment. Most of them had lived in Barclay; all had ties there.

"I guess you're waiting for me," McCracken began. "We held a meeting as soon as this was posted. We weren't all there-it's getting harder to cover up even the smallest gathering-but there was no disagreement. We're behind you but we want you to go a little easy. We suggest that you cut out pulling raids within, oh, say twenty miles of Barclay, and that you stop all killing unless absolutely necessary to avoid capture. It's the killings they get excited about-it was killing of the district director that touched off St. Joe."

Benz sniffed. "So we don't do anything. We just give up-and stay here in the hills and starve."

"Let me finish, Benz. We don't propose to let them scare us out and keep us enslaved forever. But casual raids don't do them any real harm. They're mostly for food for the Underground and for minor retaliations. We've got to conserve our strength and increase it and organize, until we can hit hard enough to make it stick. We won't let you starve. I can do more organizing among the farmers and some animals can be hidden out, unregistered. We can get you meat-some, anyhow. And we'll split our rations with you. They've got
us on 1800 calories now, but we can share it. Something can be done through the black market, too. There are ways."

Benz made a contemptuous sound. Morgan looked at him.

"Speak up, Joe. What's on your mind?"

"I will. It's not a plan; it's a disorderly retreat. A year from now we'll be twice as hungry and no further along-and they'll be better dug in and stronger. Where does it get us?"

Morgan shook his head. "You've got it wrong. Even if we hadn't had it forced on us, we would have been moving into this stage anyhow. The Free Companies have got to quit drawing attention to themselves. Once the food problem is solved we've got to build up our strength and weapons. We've got to have organization and weapons-nationwide organization and guns, knives, and hand grenades. We've got to turn this mine into a factory. There are people down in Barclay who can use the stuff we can make here-but we can't risk letting Barclay be blasted in the meantime. Easy does it."

"Ed Morgan, you're kidding yourself and you know it."

"How?"

"'How?' Look, you sold me the idea of staying on the dodge and joining up-"

"You volunteered."

"Okay, I volunteered. It was all because you were so filled with fire and vinegar about how we would throw the enemy back into the ocean. You talked about France and Poland and how the Filipinos kept on fighting after they were occupied. You sold me a bill of goods. But there was something you didn't tell me-"

"Go on."

"There never was an Underground that freed its own country. All of them had to be pulled out of the soup by an invasion from outside. Nobody is going to pull us out."

There was silence after this remark. The statement had too much truth in it, but it was truth that no member of the Company could afford to think about. Young Morrie broke it. "Captain?"

"Yes, Morrie." Being a fighting man, Morrie was therefore a citizen and a voter.

"How can Joe be so sure he knows what he's talking about? History doesn't repeat. Anyhow, maybe we will get some help. England, maybe-or even the Russians.

Benz snorted. "Listen to the punk! Look, kid, England was smashed like we were, only worse-and Russia, too. Grow up; quit daydreaming."

The boy looked at him doggedly. "You don't know that. We only know what they chose to tell us. And there aren't enough of them to hold down the whole world, everybody, everywhere. We never managed to lick the Yaquis, or the Moros. And they can't lick us unless we let them. I've read some history too."

Benz shrugged. "Okay, okay. Now we can all sing 'My Country 'Tis of Thee' and recite the Scout oath. That ought to make Morrie happy-"

"Take it easy, Joe!"

"We have free speech here, don't we? What I want to know is: How long does this go on? I'm getting tired of competing with coyotes for the privilege of eating jackrabbits. You know I've fought with the best of them. I've gone on the raids. Well, haven't I? Haven't I? You can't call me yellow."

"You've been on some raids," Morgan conceded.

"All right. I'd go along indefinitely if I could see some sensible plan. That's why I ask, 'How long does this go on?' When do we move? Next spring? Next year?"

Morgan gestured impatiently. "How do I know? It may be next spring; it may be ten years. The Poles waited three hundred years."

"That tears it," Benz said slowly. "I was hoping you could offer some reasonable plan. Wait and arm ourselves-that's a pretty picture! Homemade hand grenades against atom bombs! Why don't you quit
kidding yourselves? We're licked!" He hitched at his belt. "The rest of you can do as you please-I'm through."

Morgan shrugged. "If a man won't fight, I can't make him. You're assigned noncombatant duties. Turn in your gun. Report to Cathleen."

"You don't get me, Ed. I'm through."

"You don't get me, Joe. You don't resign from an Underground."

"There's no risk. I'll leave quietly, and let myself be registered as a straggler. It doesn't mean anything to the rest of you. I'll keep my mouth shut-that goes without saying."

Morgan took a long breath, then answered, "Joe, I've learned by bitter experience not to trust statements set off by 'naturally,' 'of course,' or 'that goes without saying.'"

"Oh, so you don't trust me?"

"As Captain of this Company I can't afford to. Unless you can get the Company to recall me from office, my rulings stand. You're under arrest. Hand over your gun.

Benz glanced around, at blank, unfriendly faces. He reached for his waist, "With your left hand, Joe!"

Instead of complying, Benz drew suddenly, backed away. "Keep clear!" he said shrilly. "I don't want to hurt anybody-but keep clear!"

Morgan was unarmed. There might have been a knife or two in the assembly, but most of them had come directly from the dinner table. It was not their custom to be armed inside the mine.

Young Morrie was armed with a rifle, having come from lookout duty. He did not have room to bring it into play, but Morgan could see that he intended to try. So could Benz.

"Stop it, Morrie!" Morgan assumed obedience and turned instantly to the others. "Let him go. Nobody move. Get going, Joe."

"That's better." Benz backed down the main tunnel, toward the main entrance, weed and drift choked for
years. Its unused condition was their principal camouflage, but it could be negotiated.

He backed away into the gloom, still covering them. The tunnel curved; shortly he was concealed by the bend.

Dad Carter went scurrying in the other direction as soon as Benz no longer covered them. He reappeared at once, carrying something. "Heads down!" he shouted, as he passed through them and took out after Benz.

"Dad!" shouted Morgan. But Carter was gone.

Seconds later a concussion tore at their ears and noses.

Morgan picked himself up and brushed at his clothes, saying in annoyed tones, "I never did like explosives in cramped quarters. Cleve-Art. Go check on it. Move!"

"Right, boss!" They were gone.

"The rest of you get ready to carry out withdrawal plan-full plan, with provisions and supplies. Jerry, don't disconnect either the receiver or theline-of-sight till I give the word. Margie will help you. Cathleen, get ready to serve anything that can't be carried. We'll have one big meal. 'The condemned ate hearty.'"

"Just a moment, Captain." McCracken touched his sleeve. "I had better get a message into Barclay."

"Soon as the boys report. You better get back into town."

"I wonder. Benz knows me. I think I'm here to stay."

"Hm.. . well, you know best. How about your family?"

McCracken shrugged. "They can't be worse off than they would be if I'm picked up. I'd like to have them warned and then arrangements made for them to rejoin me if possible."

"We'll do it. You'll have to give me a new contact."

"Planned for. This message will go through and my number-two man will step into my shoes. The name is Hobart-runs a feed store on Pelham Street."

Morgan nodded. "Should have known you had it
worked out. Well, what we don't know-" He was interrupted by Cleve, reporting.

"He got away, Boss."

"Why didn't you go after him?"

"Half the roof came down when Dad chucked the grenade. Tunnel's choked with rock. Found a place where I could see but couldn't crawl through. He's not in the tunnel."

"How about Dad?"

"He's all right. Got clipped on the head with a splinter but not really hurt."

Morgan stopped two of the women hurrying past, intent on preparations for withdrawal. "Here-Jean, and you, Mrs. Bowen. Go take care of Dad Carter and tell Art to get back here fast. Shake a leg!"

When Art reported Morgan said, "You and Cleve go out and find Benz. Assume that he is heading for Barclay. Stop him and bring him in if you can. Otherwise kill him. Art is in charge. Get going." He turned to McCracken. "Now for a message." He fumbled in his pocket for paper, found the poster notice that McCracken had given him, tore off a piece, and started to write. He showed it to McCracken. "How's that?" he asked.

The message warned Hobart of Benz and asked him to try to head him off. It did not tell him that the Barclay Free Company was moving but did designate the "post office" through which next contact would be expected-the men's rest room of the bus station.

"Better cut out the post office," McCracken advised. "Hobart knows it and we may contact him half a dozen other ways. But I'd like to ask him to get my family out of sight. Just tell him that we are sorry to hear that Aunt Dinah is dead."

"Is that enough?"

Yes.

"Okay." Morgan made the changes, then called, "Margie! Put this in code and tell Jerry to get it out fast. Tell him it's the strike-out edition. He can knock down his sets as soon as it's out."

"Okay, boss." Margie had no knowledge of cryptography. Instead she had command of jive talk, adoléscent slang, and high school double-talk which would be meaningless to any but another American bobbysoxer. At the other end a fifteen-year-old interpreted her butchered English by methods which impressed her foster parents as being telepathy-but it worked.

The fifteen-year-old could be trusted. Her entire family, save herself, had been in Los Angeles on Final Sunday.

Art and Cleve had no trouble picking up Benz's trail. His tracks were on the tailings spilling down from the main entrance to the mine. The earth and rock had been undisturbed since the last heavy rain; Benz's flight left clear traces.

But trail was cold by more than twenty minutes; they had left the mine by the secret entrance a quarter of a mile from where Benz had made his exit.

Art picked it up where Benz had left the tailings and followed it through brush with the woodsmanship of the Eagle Scout he had been. From the careless signs he left behind Benz was evidently in a hurry and heading by the shortest route for the highway. The two followed him as fast as they could cover ground, discarding caution for speed.

They checked just before entering the highway. "See anything?" asked Cleve.
' ' l\lo . ~

"Which way would he go?"

"The Old Man said to head him off from Barclay."

"Yeah, but suppose he headed south instead? He used to work in Wickamton. He might head that way."

"The Boss said to cover Barclay. Let's go."

They had to cache their guns; from here on it would be their wits and their knives. An armed American on a highway would be as conspicuous as a nudist at a garden party.

Their object now was speed; they must catch up with him, or get ahead of him and waylay him.

Nine miles and two and a half hours later-one
hundred and fifty minutes of dog trot, with time lost lying in the roadside brush when convoys thundered past-they were in the outskirts of Barclay. Around a bend, out of sight, was the roadblock of the Invaders' check station. The point was a bottleneck; Benz must come this way if he were heading for Barclay.

"Is he ahead or behind us?" asked Cleve, peering out through bushes.

"Behind, unless he was picked up by a convoy-or sprouted wings. We'll give him an hour."

A horse-drawn hayrack lumbered up the road. Cleve studied it. Americans were permitted no power vehicles except under supervision, but this farmer and his load could go into town with only routine check at the road block. "Maybe we ought to hide in that and look for him in town."

"And get a bayonet in your ribs? Don't be silly."

"Okay. Don't blow your top." Cleve continued to watch the rig. "Hey," he said presently. "Get a load of that!"

"That" was a figure which dropped from the tail of the wagon as it started around the bend, rolled to the ditch on the far side, and slithered out of sight.

"That was Joe!"

"Are you sure?"

"Sure! Here we go."

"How?" Art objected. "Take it easy. Follow me." They faded back two hundred yards, to where they could cross the road on hands and knees through a drainage pipe. Then they worked up the other side to where Benz had disappeared in weeds.

They found the place where he had been; grass and weeds were still straightening up. The route he must have taken was evident-down toward the river bank, then upstream to the city. There were drops of blood. "Dad must have missed stopping him by a gnat's whisker," Cleve commented.

Bad job he didn t.

"Another thing-he said he was going to give himself up. I don't think he is, or he would have stayed
with the wagon and turned himself in at the check station. He's heading for some hideout. Who does he know in Barclay?"

"I don't know. We'd better get going."

"Wait a minute. If he touches off an alarm, they'll shoot him for us. If he gets by the 'eyes,' we've lost him and we'll have to pick him up inside. Either way, we don't gain anything by blundering ahead. We've got to go in by the chute."

Like all cities the Invader had consolidated, Barclay was girdled by electric-eye circuits. The enemy had trimmed the town to fit, dynamiting and burning where necessary to achieve unbroken sequence of automatic sentries. But the "chute"-an abandoned and forgotten aqueduct-passed under the alarms. Art knew how to use it; he had been in town twice since Final Sunday.

They worked back up the highway, crossed over, and took to the hills. Thirty minutes later they were on the streets of Barclay, reasonably safe as long as they were quick to step off the sidewalk for the occasional Invader.

The first "post office," a clothesline near their exit, told them nothing-the line was bare. They went to the bus station. Cleve studied the notices posted for inhabitants while Art went into the men's rest room. On the wall, defaced by scrawlings of every sort, mostly vulgar, he found what he sought: "Killroy was here." The misspelling of Kilroy was the clue-exactly eighteen inches below it and six to the right was an address: "1745 Spruce-ask for Mabel."

He read it as 2856 Pine-one block beyond Spruce. Art passed the address to Cleve, then they set out separately, hurrying to beat the curfew but proceeding with caution-at least one of them must get through. They met in the backyard of the translated address. Art knocked on the kitchen door. It was opened a crack by a middle-aged man who did not seem glad to see them. "Well?"

"We're looking for Mabel."

"Nobody here by that name."

"Sorry," said Art. "We must have made a mistake." He shivered. "Chilly out," he remarked. "The nights are getting longer."

"They'll get shorter by and by," the man answered.

"We've got to think so, anyhow," Art countered.

"Come in," the man said. "The patrol may see you." He opened the door and stepped aside. "My name's Hobart. What's your business?"

"We're looking for a man named Benz. He may have sneaked into town this afternoon and found someplace to-"

"Yes, yes," Hobart said impatiently. "He got in about an hour ago and he's holed up with a character named Moyland." As he spoke he removed a half loaf of bread from a cupboard, cut four slices, and added cold sausage, producing two sandwiches. He did not ask if they were hungry; he simply handed them to Art and Cleve.

"Thanks, pal. So he's holed up. Haven't you done anything about it? He has got to be shut up at once or he'll spill his guts."

"We've got a tap in on the telephone line. We had to wait for dark. You can't expect me to sacrifice good boys just to shut his mouth unless it's absolutely necessary.

"Well, it's dark now, and we'll be the boys you mentioned. You can call yours off."

"Okay." Hobart started pulling on shoes.

"No need for you to stick your neck out," Art told him. "Just tell us where this Moyland lives."

"And get your throat cut, too. I'll take you."

"What sort of a guy is this Moyland? Is he safe?"

"You can't prove it by me. He's a black market broker, but that doesn't prove anything. He's not part of the organization but we haven't anything against him."

Hobart took them over his back fence, across a dark side street, through a playground, where they lay for several minutes under bushes because of a false alarm, then through many more backyards, back alleys, and dark byways. The man seemed to h~tve a nose for the enemy; there were no more alarms. At last he brought them through a cellar door into a private home. They went upstairs and through a room where a woman was nursing a baby. She looked up, but otherwise ignored them. They ended up in a dark attic. "Hi, Jim," Hobart called out softly. "What's new?"

The man addressed lay propped on his elbows, peering out into the night through opera glasses held to slots of a ventilating louvre. He rolled over and lowered the glasses, pushing one of a pair of earphones from his head as he did so. "Hello, Chief. Nothing much. Benz is getting drunk, it looks like."

"I'd like to know where Moyland gets it," Hobart said. "Has he telephoned?"

"Would I be doing nothing if he had? A couple of calls came in, but they didn't amount to anything, so I let him talk."

How do you know they didn't amount to anything?" Jim shrugged, turned back to the louvre. "Moyland just pulled down the shade," he announced.

Art turned to Hobart. "We can't wait. We're going

Benz arrived at Moyland's house in bad condition. The wound in his shoulder, caused by Carter's grenade, was bleeding. He had pushed a handkerchief up against it as a compress, but his activity started the blood again; he was shaking for fear his condition would attract attention before he could get under cover.

Moyland answered the door. "Is that you, Zack?" Benz demanded, shrinking back as he spoke.

"Yes. Who is it?"

"It's me-Joe Benz. Let me in, Zack-quick!"

Moyland seemed about to close the door, then suddenly opened it. "Get inside." When the door was bolted, he demanded, "Now-what's your trouble? Why come to me?"

"I had to go someplace, Zack. I had to get off the street. They'd pick me up."

Moyland studied him. "You're not registered. Why not?"

Benz did not answer. Moyland waited, then went on, "You know what I can get for harboring a fugitive. You're in the Underground-aren't you?"

"Oh, no, Zack! I wouldn't do that to you. I'm just a- a straggler. I gotta get registered, Zack."

"That's blood on your coat. How?"

"Uh. . . just an accident. Maybe you could let me have clean rags and some iodine."

Moyland stared at him, his bland face expressionless, then smiled. "You've got no troubles we can't fix. Sit down." He stepped to a cabinet and took out a bottle of bourbon, poured three fingers in a water glass, and handed it to Benz. "Work on that and I'll fix you up.

He returned with some torn toweling and a bottle. "Sit here with your back to the window, and open your shirt. Have another drink. You'll need it before I'm through."

Benz glanced nervously at the window. "Why don't you draw the shade?"

"It would attract attention. Honest people leave their shades up these days. Hold still. This is going to hurt."

Three drinks later Benz was feeling better. Moyland seemed willing to sit and drink with him and to soothe his nerves. "You did well to come in," Moyland told him. "There's no sense hiding like a scared rabbit. It's just butting your head against a stone wall. Stupid."

Benz nodded. "That's what I told them."

"Told who?"

"Hunh? Oh, nobody. Just some guys I was talking to. Tramps."

Moyland poured him another drink. "As a matter of fact you were in the Underground."

"Me? Don't be silly, Zack."

"Look, Joe, you don't have to kid me. I'm your friend. Even if you did tell me it wOuldn't matter. In the first place, I wouldn't have any proof. In the second place, I'm sympathetic to the Underground-any American is. I just think they're wrong-headed and foolish. Otherwise I'd join 'em myself."

"They're foolish all right! You can say that again."

"So you were in it?"

"Huh? You're trying to trap me. I gave my word of honor-"

"Oh, relax!" Moyland said hastily. "Forget it. I didn't hear anything; I can't tell anything. Hear no evil, see no evil-that's me." He changed the subject.

The level of the bottle dropped while Moyland explained current events as he saw them. "It's a shame we had to take such a shellacking to learn our lesson but the fact of the matter is, we were standing in the way of the natural logic of progress. There was a time back in '45 when we could have pulled the same stunt ourselves, only we weren't bright enough to do it. World organization, world government. We stood in the way, so we got smeared. It had to come. A smart man can see that."

Benz was bleary but he did not find this comment easy to take. "Look, Zack-you don't mean you like what happened to us?"

"Like it? Of course not. But it was necessary. You don't have to like having a tooth pulled-but it has to be done. Anyhow," he went on, "it's not all bad. The big cities were economically unsound anyway. We should have blown them up ourselves. Slum clearance, you might call it."

Benz banged his empty glass down. "Maybe so-but they made slaves out of us!"

"Take it easy, Joe," Moyland said, filling his glass, "you're talking abstractions. The cop on the corner could push you around whenever he wanted to. Is that freedom? Does it matter whether the cop talks with an Irish accent or some other accent? No, chum, there's a
lot of guff talked about freedom. No man is free. There is no such thing as freedom. There are only various privileges. Free speech-we're talking freely now, aren't we? After all, you don't want to get up on a platform and shoot off your face. Free press? When did you ever own a newspaper? Don't be a chump. Now that you've shown sense and come in, you are going to find that things aren't so very different. A little more orderly and no more fear of war, that's all. Girls make love just like they used to, the smart guys get along, and the suckers still get the short end of the deal."

Benz nodded. "You're right, Zack. I've been a fool."

"I'm glad you see it. Now take those wild men you were with. What freedom have they got? Freedom to starve, freedom to sleep on the cold ground, freedom to be hunted."

"That was it," Benz agreed. "Did you ever sleep in a mine, Zack? Cold. That ain't half of it. Damp, too."

"I can imagine," Moyland agreed. "The Capehart Lode always was wet."

"It wasn't the Capehart; it was the Harkn-" He caught himself and looked puzzled.

"The Harkness, eh? That's the headquarters?"

"I didn't say that! You're putting words in my mouth! You-"

"Calm yourself, Joe. Forget it."Moyland got up and drew down the shade. "You didn't say anything."

"Of course I didn't." Benz stared at his glass. "Say, Zack, where do I sleep? I don't feel good."

"You'll have a nice place to sleep any minute now."

"Huh? Well, show me. I gotta fold up."

"Any minute. You've got to check in first."

"Huh? Oh, I can't do that tonight, Zack. I'm in no shape."

"I'm afraid you'll have to. See me pull that shade down? They'll be along any moment."

Benz stood up, swaying a little. "You framed me!" he yelled, and lunged at his host.

Moyland sidestepped, put a hand on his shoulder
and pushed him down into the chair. "Sit down, sucker," he said pleasantly. "You don't expect me to get A-bombed just for you and your pals, do you?"

Benz shook his head, then began to sob.

Hobart escorted them out of the house, saying to Art as they left, "If you get back, tell McCracken that Aunt Dinah is resting peacefully."

"Okay."

"Give us two minutes, then go in. Good luck."

Cleve took the outside; Art went in. The back door was locked, but the upper panel was glass. He broke it with the hilt of his knife, reached in and unbolted the door. He was inside when Moyland showed up to investigate the noise.

Art kicked him in the belly, then let him have the point in the neck as he went down. Art stopped just long enough to insure that Moyland would stay dead, then went looking for the room where Benz had been when the shade was drawn.

He found Benz in it. The man blinked his eyes and tried to focus them, as if he found it impossible to believe what he saw. "Art!" he got out at last. "Jeez, boy! Am I glad to see you! Let's get out of here-this place is 'hot.'

Art advanced, knife out.

Benz looked amazed. "Hey, Art! Art! You're making a mistake. Art. You can't do this-" Art let him have the first one in the soft tissues under the breast bone, then cut his throat to be sure. After that he got out quickly.

Thirty-five minutes later he was emerging from the country end of the chute. His throat was burning from exertion and his left arm was useless-he could not tell whether it was broken or simply wounded.

Cleve lay dead in the alley behind Moyland's house, having done a good job of covering Art's rear.

It took Art all night and part of the next morning to get back near the mine. He had to go through the hills
the entire way; the highway was, he judged, too warm at the moment.

He did not expect that the Company would still be there. He was reasonably sure that Morgan would have carried out the evacuation pending certain evidence that Benz's mouth had been shut. He hurried.

But he did not expect what he did find-a helicopter hovering over the neighborhood of the mine.

He stopped to consider the matter. If Morgan had got them out safely, he knew where to rejoin. If they were still inside, he had to figure out some way to help them. The futility of his position depressed him-one man, with a knife and a bad arm, against a helicopter.

Somewhere a bluejay screamed and cursed. Without much hope he chirped his own identification. The bluejay shut up and a mockingbird answered him- Ted.

Art signaled that he would wait where he was. He considered himself well hidden; he expected to have to signal again when Ted got closer, but he underestimated Ted's ability. A hand was laid on his shoulder.

He rolled over, knife out, and hurt his shoulder as he did so. "Ted! Man, do you look good to me!"

"Same here. Did you get him?"

"Benz? Yes, but maybe not in time. Where's the gang?"

"A quarter mile north of back door. We're pinned down. Where's Cleve?"

"Cleve's not coming back. What do you mean 'pinned down'?"

"That damned 'copter can see right down the draw we're in. Dad's got 'em under an overhang and they're safe enough for the moment, but we can't move."

"What do you mean 'Dad's got 'em'?" demanded Art. "Where's the Boss?"

"He ain't in such good shape, Art. Got a machine gun slug in the ribs. We had a dust up. Cathleen's dead."

"The hell you say!"

"That's right. Margie and Maw Carter have got her baby. But that's one reason why we"re pinned down- the Boss and the kid, I mean."

A mockingbird's call sounded far away. "There's Dad," Ted announced. "We got to get back."

"Can we?"

"Sure. Just keep behind me. I'll watch out that I don't get too far ahead."

Art followed Ted in, by a circuitous and, at one point, almost perpendicular route. He found the Company huddled under a shelf of rock which had been undercut by a stream, now dry. Against the wall Morgan was on his back, with Dad Carter and Dr. McCracken squatting beside him. Art went up and made his report.

Morgan nodded, his face gray with pain. His shirt had been cut away; bandaging was wrapped around his ribs, covering a thick pad. "You did well, Art. Too bad about Cleve. Ted, we're getting out of here and you're going first, because you're taking the kid."

"The baby? How-"

"Doc'll dope it so that it won't let out a peep. Then you strap it to your back, papoose fashion."

Ted thought about it. "No, to my front. There's some knee-and-shoulder work on the best way out."

"Okay. It's your job."

"How do you get out, boss?"

"Don't be silly."

"Look here, boss, if you think we're going to walk off and leave you, you've got another-"

"Shut up and scram!" The exertion hurt Morgan; he coughed and wiped his mouth.

"Yes, sir." Ted and Art backed away.

"Now, Ed-" said Carter.

"You shut up, too. You still sure you don't want to be Captain?"

"You know better than that, Ed. They took things from me while I was your deppity, but they wouldn't have me for Captain."

"That puts it up to you, Doc."

McCracken looked troubled. "They don't know me that well, Captain."

"They'll take you. People have an instinct for such things."

"Anyhow, if I am Captain, I won't agree to your plan of staying here by yourself. We'll stay till dark and carry you out."

"And get picked up by an infrared spotter, like sitting ducks? That's supposing they let you alone until sundown-that other 'copter will be back with more troops before long."

"I don't think they'd let me walk off on you."

"It's up to you to make them. Oh, I appreciate your kindly thoughts, Doc, but you'll think differently as soon as you're Captain. You'll know you have to cut your losses."

McCracken did not answer. Morgan turned his head to Carter. "Gather them around, Dad."

They crowded in, shoulder to shoulder. Morgan looked from one troubled face to another and smiled. "The Barclay Free Company, a provisional unit of the United States of America, is now in session," he announced, his voice suddenly firm. "I'm resigning the captaincy for reasons of physical disability. Any nommat ions?"

The silence was disturbed only by calls of birds, the sounds of insects.

Morgan caught Carter's eyes. Dad cleared his throat. "I nominate Doc McCracken."

"Any other nominations?" He waited, then continued, "All right, all in favor of Doc make it known by raising your right hand. Okay-opposed the same sign. Dr. McCracken is unanimously elected. It's all yours, Captain. Good luck to you."

McCracken stood up, stooping to avoid the rock overhead. "We're evacuating at once. Mrs. Carter, give the baby about another tablespoon of the syrup, then help Ted. He knows what to do. You'll follow Ted.
Then Jerry. Margie, you are next. I'll assign the others presently. Once out of the canyon, spread out and go it alone. Rendezvous at dusk, same place as under Captain Morgan's withdrawal plan-the cave." He paused. Morgan caught his eye and motioned him over, "That's all until Ted and the baby are ready to leave. Now back away and give Captain Morgan a little air."

When they had withdrawn McCracken leaned over Morgan the better to hear his weak words. "Don't be too sure you've seen the last of me, Captain. I might join up in a few days."

"You might at that. I'm going to leave you bundled up warm and plenty of water within reach. I'll leave you some pills, too-that'll give you some comfort and ease. Only half a pill for you-they're intended for cows." He grinned at his patient.

"Half a pill it is. Why not let Dad handle the evacuation? He'll make you a good deputy-and I'd like to talk with you until you leave."

"Right." He called Carter over, instructed him, and turned back to Morgan.

"After you join up with Powell's outfit," whispered Morgan, "your first job is to get into touch with Brockman. Better get Mrs. Carter started right away, once you've talked it over with Powell."

"I will."

"That's the most important thing we've got to worry about, Doc. We've got to have unity, and one plan, from coast to coast. I look forward to a day when there will be an American assigned, by name, to each and every one of them. Then at a set time-zzzt!" He drew a thumb across his throat.

McCracken nodded. "Could be. It will be. How long do you think it will take us?"

"I don't know. I don't think about 'how long'. Two years, five years, ten years-maybe a century. That's not the point. The only question is whether or not there are any guts left in America." He glanced out where the fifth person to leave was awaiting a signal
from Carter, who in turn was awaiting a signal from Art, hidden out where he could watch for the helicopter. "Those people will stick."

"I'm sure of that."

Presently Morgan added, "There's one thing this has taught me: You can't enslave a free man. Only person can do that to a man is himself. No, sir-you can't enslave a free man. The most you can do is kill him."

"That's a fact, Ed."

"It is. Got a cigarette, Doc?"

"It won't do you any good, Ed."

"It won't do me any harm, either-now, will it?"

"Well, not much." McCracken unregretfully gave him his last and watched him smoke it.

Later, Morgan said, "Dad's ready for you, Captain. So long."

"So long. Don't forget. Half a pill at a time. Drink all the water you want, but don't take your blankets off, no matter how hot you get."

"Half a pill it is. Good luck."

"I'll have Ted check on you tomorrow." Morgan shook his head. "That's too soon. Not for a couple of days at least."

McCracken smiled. "I'll decide that, Ed. You just keep yourself wrapped up. Good luck." He withdrew to where Carter waited for him. "You go ahead, Dad. I'll bring up the rear. Signal Art to start."

Carter hesitated. "Tell me straight, Doc. What kind of shape is he in?"

McCracken studied Carter's face, then said in a low voice, "I give him about two hours."

"I'll stay behind with him."

"No, Dad, you'll carry out your orders." Seeing the distress in the old man's eyes, he added, "Don't you worry about Morgan. A free man can take care of himself. Now get moving."

"Yes, sir."

FOREWORD

This story was tailored in length (1500 words) for Colliers as a short-short. I then tried it on the American Legion magazine-and was scolded for suggesting that the treatment given our veterans was ever less than perfect. I then offered it to several SF editors-and was told that it was not a science fiction story. (Gee whiz and Gosh wollickers!-space warps and FTL are science but therapy and psychology are not. I must be in the wrong church.)

But this story does have a major sho rtcorning, one that usually is fatal. Try to spot it. I will put the answer just after the end.

NO BANDS PLAYING, NO
FLAGS FLYING-

"The bravest man lever saw in my life!" Jones said,
being rather shrill about it.

We-Jones and Arkwright and I-were walking toward the parking lot at the close of visiting hours out at the veterans hospital. Wars come and wars go, but the wounded we have always with us-and damned little attention they get between wars. If you bother to look (few do), you can find some broken human remnants dating clear back to World War One in some of our wards.

So our post always sends out a visiting committee every Sunday, every holiday. I'm usually on it, have been for thirty years-if you can't pay a debt, you can at least try to meet the interest. And you do get so that you can stand it.

But Jones was a young fellow making his first visit. Quite upset, he was. Well, surely, I would have despised him if he hadn't been-this crop was fresh in from Southeast Asia. Jones had held it in, then burst out with that remark once we were outside.

"What do you mean by 'bravery'?" I asked him. (Not but what Jones had plenty to back up his opinion- this lad he was talking about was shy both legs and his eyesight, yet he was chin-up and merry.)

"Well, what do you mean by 'bravery'? Jones de
manded, then added, "sir." Respect for my white hair rather than my opinions, I think; there was an edge in his voice.

"Keep your shirt on, son," I answered. "What that lad back there has I'd call 'fortitude,' the ability to endure adversity without losing your morale. I'm not disparaging it; it may be a higher virtue than bravery-but I define 'bravery' as the capacity to choose to face danger when you are frightened by it."

"Why do you say 'choose'?"

"Because nine men out often meet the test when it's forced on them. But it takes something extra to face up to danger when it scares the crap out of you and there's an easy way to bug out." I glanced at my watch. "Give me three minutes and I'll tell you about the bravest man I've ever met."

I was a young fellow myself back between War One and War Two and had been in a hospital much like this one Arkwright and Jones and I had visited- picked up a spot on my lung in the Canal Zone and had been sent there for the cure. Mind you, this was years ago when lung therapy was primitive. No antibiotics, no specific drugs. The first thing they would try was a phrenectomy-cut the nerve that controls the diaphragm to immobilize the lung and let it get well. If that didn't work, they used artificial pneumothorax. If that failed, they did a "backdoor job"-chop out some ribs and fit you with a corset.

All these were just expedients to hold a lung still so it could get well. In artificial pneumothorax they shove a hollow needle between your ribs so that the end is between rib wall and lung wall, then pump the space in between full of air; this compresses the lung like a squeezed sponge.

But the air would be absorbed after a while and you had to get pumped up again. Every Friday morning those of us on pneumo would gather in the ward surgeon's office for the needle. It wasn't grim-lungers
are funny people; they are almost always cheerful. This was an officers' ward and we treated it like a club. Instead of queuing up outside the surgeon's office we would swarm in, loll in his chair, sit on his desk, smoke his cigarettes, and swap lies while he took care of us. Four of us that morning and I was the first.

Taking the air needle isn't bad-just a slight prick as it goes in and you can even avoid that if you want to bother with skin anesthesia. It's over in a few minutes; you put your bathrobe back on and go back to bed. I hung around after I was through because the second patient, chap named Saunders, was telling a dirty story that was new to me.

He broke off in the middle of it to climb up on the table when I got off. Our number-one ward surgeon was on leave and his assistant was taking care of us- a young chap not long out of school. We all liked him and felt he had the makings of a great surgeon.

Getting pumped up is not dangerous in any reasonable sense of the word. You can break your neck falling off a step ladder, choke to death on a chicken bone. You can slip on a rainy day, knock yourself out, and drown in three inches of rain water. And there is just as unlikely a way to hit the jackpot in taking artificial pneumothorax. If the needle goes a little too far, penetrates the lung, and if an air bubble then happens to be forced into a blood vessel and manages to travel all the way back to the heart without being absorbed, it is possible though extremely unlikely to get a sort of vapor lock in the valves of your heart-air embolism, the doctors call it. Given all these improbable events, you can die.

We never heard the end of Saunders' dirty joke. He konked out on the table.

The young doc did everything possible for him and sent for help while he was doing it. They tried this and that, used all the tricks, but the upshot was that they brought in the meat basket and carted him off to the morgue.

Three of us were still standing there, not saying a word-me, reswallowing my breakfast and thanking my stars that I was through with it, an ex-field-clerk named Josephs who was next up, and Colonel Hostetter who was last in line. The surgeon turned and looked at us. He was sweating and looked bad-may have been the first patient he had ever lost; he was still a kid. Then he turned to Dr. Armand who had come in from the next ward. I don't know whether he was going to ask the older man to finish it for him or whether he was going to put it off for a day, but it was clear from his face that he did not intend to go ahead right then.

Whatever it was, he didn't get a chance to say it. Josephs stood up, threw off his bathrobe and climbed up on the table. He had just lighted a cigarette; he passed it to a hospital orderly and said, "Hold this for me, Jack, while Doctor"-he named our own surgeon-"pumps me up." With that he peels up his pajama coat.

You know the old business about sending a student pilot right back up after his first crack up. That was the shape our young doctor was in-he had to get right back to it and prove to himself that it was just bad luck and not because he was a butcher. But he couldn't send himself back in; Josephs had to do it for him. Josephs could have ruined him professionally that moment, by backing out and giving him time to work up a real case of nerves-but instead Josephs forced his hand, made him do it.

Josephs died on the table.

The needle went in and everything seemed all right, then Josephs gave a little sigh and died. Dr. Armand was on hand this time and took charge, but it did no good. It was like seeing the same horror movie twice. The same four men arrived to move the body over to the morgue-probably the same basket.

Our doctor now looked like a corpse himself. Dr. Armand took over. "You two get back to bed," he said to
Colonel Hostetter and me. "Colonel, come over to my ward this afternoon; I'll take care of your treatment."

But Hostetter shook his head. "No, thank you," he said crisply, "My ward surgeon takes care of my needs." He took off his robe. The young fellow didn't move. The

Colonel went up to him and shook his arm. "Come, now Doctor-you'll make us both late for lunch." With that he climbed up on the table and exposed his ribs.

A few moments later he climbed off again, the job done, and our ward surgeon was looking human again, although still covered with sweat.

I stopped to catch my breath. Jones nodded soberly and said, "I see what you mean. To do what Colonel Hostetter did takes a kind of cold courage way beyond the courage needed to fight."

"He doesn't mean anything of the sort," Arkwright objected. "He wasn't talking about Hostetter; he meant the intern. The doctor had to steady down and do a job-not once but twice. Hostetter just had to hold still and let him do it."

I felt tired and old. "Just a moment," I said. "You're both wrong. Remember I defined 'bravery' as requiring that a man had to have a choice . . . and chooses to be brave in spite of his own fear. The ward surgeon had the decisions forced on him, so he is not in the running. Colonel Hostetter was an old man and blooded in battle-and he had Josephs' example to live up to. So he doesn't get first prize."

"But that's silly," Jones protested. "Josephs was brave, sure-but, if it was hard for Josephs to offer himself, it was four times as hard for Hostetter. It would begin to look like a jinx-like a man didn't stand a chance of coming off that table alive."

"Yes, yes!" I agreed. "I know, that's the way I felt at the time. But you didn't let me finish. I know for certain that it took more bravery to do what Josephs did.

"The autopsy didn't show an aft embolism in Josephs, or anything else. Josephs died of fright."

The End

The Answer: I'll bury this in other words to keep your eye from picking it up at once; the shortcoming is that this is a true story. I was there. I have changed names, places, and dates but not the essential facts.

FOREWORD

You may not be old enough to remember the acute housing shortage following World War II (the subject of this story) but if you are over six but not yet old enough for the undertaker, you are aware of the current problem of getting in out of the rain. . . a problem especially acute for the young couple with one baby and for the retired old couple trying to get by on Social "Security" plus savings if any. (I am not suggesting that it is easy for those between youth and old age; the present price of mortgage money constitutes rape with violence; the price tag on an honestly-constructed-if you can find one-two-bedroom house makes me feel faint.)

In 1960 in Moscow Mrs. Heinlein and I had as Intourist courier a sweet child named Ludmilla-23, unmarried, living with her father, mother, brother and sisters. She told us that her ambition in life was for her family not to have to share a bathroom with another family.

The next aesthete who sneers at our American "plumbing culture" in my presence I intend to cut into small pieces and flush him down that W.C. he despises.

Any old pol will recognize the politics in this story as the Real McCoy. Should be. Autobiographical in many details. Which details? Show me a warrant and I'll take the Fifth.

A BATHROOM OF HER OWN

Ever step on a top step that wasn't there?

That's the way I felt when I saw my honorable opponent for the office of city councilman, third district.

Tom Griffith had telephoned at the close of filing, to let me know my opponents. "Alfred McNye," he said, "and Francis X. Nelson."

"McNye we can forget," I mused. "He files just for the advertising. It's a three-way race-me, this Nelson party, and the present encumbrance, Judge Jorgens. Maybe we'll settle it in the primaries." Our fair city has the system laughingly called "non-partisan"; a man can be elected in the primary by getting a clear majority.

"Jorgens didn't file, Jack. The old thief isn't running for re-election."

I let this sink in. "Tom, we might as well tear up those photostats. Do you suppose Tully's boys are conceding our district?"

"The machine can't concede the third district, not this year. It must be Nelson."

"I suppose so . . . it can't be McNye. What d'you know about him?"

"Nothing."

"Nor I. Well, we'll look him over tonight." The Civic League had called a "meet-the-candidates" meeting that night. I drove out to the trailer camp where I hang my hat-then a shower, a shave, put on my hurtin' shoes, and back to town. It gave me time to think.

It's not unusual for a machine to replace-temporarily-a man whose record smells too ripe with a citizen of no background to be sniped at. I could visualize Nelson-young, manly looking, probably a lawyer and certainly a veteran. He would be so politically naive that he would stand without hitching, or so ambitious that it would blind him to what he must do to keep the support of the machine. Either way the machine could use him.

I got there just in time to be introduced and take a seat on the platform. I couldn't spot Nelson but I did see Cliff Meyers, standing with some girl. Meyers is a handyman for Boss Tully-Nelson would be around close

McNye accepted the call of the peepul in a few hundred well-worn words then the chairman introduced Nelson "-a veteran of this war and candidate for the same office"

The girl standing with Meyers walked up and took the stage

They clapped and somebody in the balcony gave a wolf whistle Instead of getting flustered, she smiled up and said, "Thank you!"

They clapped again and whistled and stomped She started talking I'm not bright-I had trouble learning to wave bye-bye and never did master patty-cake. I expected her to apologize for Nelson's absence and identify herself as his wife or sister or something. She was into her fourth paragraph before I realized that

she was Nelson. j Francis X. Nelson-Frances X. Nelson. I wondered what I had done to deserve this. Female candidates are poison to run against at best; you don't dare use the ordinary rough-and-tumble, while she is free to use anything from a blacksnake whip to mickeys in your coffee.

Add to that ladylike good looks, obvious intelligence, platform poise-and a veteran. I couldn't have lived that wrong. I tried to catch Tohi Griffith's eye to share my misery, but he was looking at her and the lunk was lapping it up.

Nelson-Miss Nelson-was going to town on housing. "You promised him that when he got out of that foxhole nothing would be too good for him. And what did he get? A shack in shanty-town, the sofa in his inlaws' parlor, a garage with no plumbing. If I am elected I shall make it my first concern-"

You couldn't argue against it. Like good roads, good weather, and the American Home, everybody is for veterans' housing.

When the meeting broke up, I snagged Tom and we rounded up the leaders of the Third District Association and adjourned to the home of one of the members. "Look, folks," I told them, "when we caucused and I agreed to run, our purpose was to take a bite out of the machine by kicking out Jorgens. Well, the situation has changed. It's not too late for me to forfeit the filing fee. How about it?"

Mrs. Holmes-Mrs. Bixby Holmes, as fine an old warhorse as ever swung a gavel-looked amazed. "What's gotten into you, Jack? Getting rid of Jorgens is only half of it. We have to put in men we can depend on. For this district, you're it."

I shook my head. "I didn't want to be the candidate; I wanted to manage. We should have had a veter"There's nothing wrong with your war record," pi~it in Dick Blair.

"Maybe not, but it's useless politically. We needed a veteran." I had shuffled papers in the legal section of the Manhattan project-in civilian clothes. Dick Blair, a paratrooper and Purple Heart, had been my choice. But Dick had begged off, and who is to tell a combat veteran that he has got to make further sacrifice for the dear peepul?

"I abided by the will of the group, because Jorgens was not a veteran either. Now look at the damn thing-What makes you think I can beat her? She's got political sex-appeal."

"She's got more than political sex-appeal"-this from Tom.

When Dr. Potter spoke we listened; he's the old head in our group. "That's the wrong tack, Jack. It does not matter whether you win."

"I don't believe in lost causes, Doctor."

"I do. And so will you, someday. If Miss Nelson is Tully's choice to succeed Jorgens, then we must oppose her."

"She is with the machine, isn't she?" asked Mrs. Holmes.

"Sure she is," Tom told her. "Didn't you see that Cliff Meyers had her in tow? She's a stooge-the Stooge with the Light Brown Hair."

I insisted on a vote; they were all against me. "Okay," I agreed, "if you can take it, I can. This means a tougher campaign. We thought the dirt we had on Jorgens was enough; now we've got to dig."

"Don't fret, Jack," Mrs. Holmes soothed me. "We'll dig. I'll take charge of the precinct work."

"I thought your daughter in Denver was having a baby?"

"So she is. I'll stick."

I ducked out soon after, feeling much better, not because I thought I could win, but because of Mrs. Holmes and Dr. Potter and more like them. The team spirit you get in a campaign is pretty swell; I was feeling it again and recovering my pre-War zip.

Before the War our community was in good shape. We had kicked out the local machine, tightened up civil service, sent a police lieutenant to jail, and had put the bidding for contracts on an honest-to-goodness competitive basis-not by praying on Sunday, either, but by volunteer efforts of private citizens willing to get out and punch doorbells.

Then the War came along and everything came unstuck.

Naturally, the people who can be depended on for the in-and-out-of-season grind of volunteer politics are also the ones who took the War the most seriously. From Pearl Harbor to Hiroshima they had no time for politics. It's a wonder the city hail wasn't stolen during the War-bolted to its foundations, I guess.

On my way home I stopped at a drive-in for a hamburger and some thought. Another car squeezed in close beside me. I glanced up, then blinked my eyes. "Well, I'll be-Miss Nelson! Who let you out alone?"

She jerked her head around, ready to bristle, then turned on the vote-getter. "You startled me. You're Mr. Ross, aren't you?"

"Your future councilman," I agreed. "You startled me. How's the politicking? Where's Cliff Meyers? Dump him down a sewer?"

She giggled. "Poor Mr. Meyers! I said goodnight to him at my door, then came over here. I was hungry."

"That's no way to win elections. Why didn't you invite him in and scramble some eggs?"

"Well, I just didn't want-I mean I wanted a chance to think. You won't tell on me?" She gave me the yougreat-big-strong-man look.

"I'm the enemy-remember? But I won't. Shall I go away, too?"

"No, don't. Since you are going to be my councilman, I ought to get acquainted. Why are you so sure you will beat me, Mr. Ross?"

"Jack Ross-your friend and mine. Have a cigar. I'm not at all sure I can beat you. With your natural advantages and Tully's gang behind you I should 'a stood in bed.

Her eyes went narrow; the vote-getter smile was gone. "What do you mean?" she said slowly. "I'm an independent candidate."

It was my cue to crawl, but I passed. "You expect
me to swallow that? With Cliff Meyers at your elbow-" The car hop interrupted us; we placed our orders and I resumed. She cut in.

"I do want to be alone," she snapped and started to close her window.

I reached out and placed a hand on the glass. "Just a moment. This is politics; you are judged by the company you keep. You show up at your first meeting and Cliff Meyers has you under his wing."

"What's wrong with that? Mr. Meyers is a perfect gentleman."

"And he's good to his mother. He's a man with no visible means of support, who does chores for Boss Tully. I thought what everybody thought, that the boss had sent him to chaperone a green candidate."

"It's not true!"

"No? You're caught in the jam cupboard. What's your story?"

She bit her lip. "I don't have to explain anything to you.

"No. But if you won't, the circumstances speak for themselves." She didn't answer. We sat there, ignoring each other, while we ate. When she switched on the ignition, I said, "I'm going to tail you home."

"It's not necessary, thank you."

"This town is a rough place since the War. A young woman should not be out alone at night. Even Cliff Meyers is better than nobody."

"That's why I let them- Do as you see fit!" I had to skim red lights, but I kept close behind her. I expected her to rush inside and slam the door, but she was waiting by the curb. "Thank you for seeing me home, Mr. Ross."

"Quite all right." I went upon her front porch with her and said goodnight.

"Mr. Ross-I shouldn't care what you think, but I'm not with Boss Tully. I'm independent." I waited. Presently she said, "You don't believe me." The big, beautiful eyes were shiny with tears.

"I didn't say so-but I'm waiting for you to explain."

"But what is there to explain?"

"Plenty." I sat down on the porch swing. "Come here, and tell papa. Why did you decide to run for office?"

"Well . . . " She sat down beside me; I caught a disturbing whiff of perfume. "It started because I couldn't find an apartment. No, it didn't-it was farther back, out in the South Pacific. I could stand the insects and the heat. Even the idiotic way the Army does things didn't fret me much. But we had to queue up to use the wash basins. There was even a time when baths were rationed. I hated it. I used to lie on my cot at night, awake in the heat, and dream about a bathroom of my own. A bathroom of my own! A deep tub of water and time to soak. Shampoos and manicures and big, fluffy towels! I wanted to lock myself in and live there. Then I got out of the Army-"

"Yes?"

She shrugged. "The only apartment I could find carried a bonus bigger than my discharge pay, and I couldn't afford it anyhow."

"What's wrong with your own home?"

"This? This is my aunt's home. Seven in the family and I make eight-one bathroom. I'm lucky to brush my teeth. And I share a three-quarters bed with my eight-year-old cousin."

"I see. But that doesn't tell why you are running for office."

"Yes, it does. Uncle Sam was here one night and I was boiling over about the housing shortage and what I would like to do to Congress. He said I ought to be in politics; I said I'd welcome the chance. He phoned the next day and asked how would I like to run for his seat? I said-"

"Uncle Sam-Sam Jorgens!"

"Yes. He's not my uncle, but I've known him since I was little. I was scared, but he said not to worry, he
would help me out and advise me. So I did and that's all there is to it. You see now?"

I saw all right. The political acumen of an Easter bunny-except that the bunny rabbit was likely to lick the socks off me. "Okay," I told her, "but housing isn't the only

issue. How about the gas company franchise, for example and the sewage disposal plant? And the tax rate? What airport deal do you favor? Do you think we ought to ease up on zoning and how about the freeways?"

"I'm going after housing. Those issues can wait."

I snorted. "They won't let you wait. While you're riding your hobbyhorse, the boys will steal the public blind-again."

"Hobbyhorse! Mister Smarty-Britches, getting a house is the most important thing in the world to the man who hasn't one. You wouldn't be so smug if you were in that fix."

"Keep your shirt on. Me, I'm sleeping in a leaky trailer. I'm strong for plenty of housing-but how do you propose to get it?"

"How? Don't be silly. I'll back the measures that push it."

"Such as? Do you think the city ought to get into the building business? Or should it be strictly private enterprise? Should we sell bonds and finance new homes? Limit it to veterans, or will you help me, too? Heads of families only, or are you going to cut yourself in on it? How about pre-fabrication? Can we do everything you want to do under a building code that was written in 1911?" I paused for breath. "Well?"

"You're being nasty, Jack."

"I sure am. But that's not half of it. I'll challenge you to debate on everything from dog licenses to patent paving materials. A nice, clean campaign and may the best man win-providing his name is Ross."

"I won't accept."

"You'll wish you had, before we're through. My boys
and girls will be at all your meetings, asking embarrassing questions."

She looked at me. "Of all the dirty politics!"

"You're a candidate, kid; you're supposed to know the answers."

She looked upset. "I told Uncle Sam," she said, half to herself, "that I didn't know enough about such things, but he said-"

"Go on, Frances. What did he say?"

She shook her head. "I've told you too much already.

"I'll tell you. You were not to worry your pretty head, because he would be there to tell you how to vote. That was it, wasn't it?"

"Well, not in so many words. He said-"

"But it amounted to that. And he brought Meyers around and said Meyers would show you the ropes. You didn't want to cause trouble, so you did what Meyers told you to do. Right?"

"You've got the nastiest way of putting things."

"That's not all. You honestly think you are independent. But you do what Sam Jorgens tells you and Sam Jorgens-your sweet old Uncle Sam-won't change his socks without Boss Tully's permission."

"I don't believe it!"

"Check it. Ask some of the newspaper boys. Sniff around."

"I shall."

"Good. You'll learn about the birds and the bees." I stood up. "I've worn out my welcome. See you at the barricades, comrade."

I was halfway to the street when she called me back. "Jack!"

"Yes, Frances?" I went back up on the porch. "I'm going to find out what connection, if any, Tully has with Uncle Sam, but, nevertheless and notwithstanding, I'm an independent. If I've been led around by the nose, I won't be for long."

"Good girl!"

"That's not all. I'm going to give you the fight of your life, whip the pants off you, and wipe that know-it-all look off your face!"

"Bravo! That's the spirit, kid. We'll have fun."

"Thanks. Well, goodnight."

"Just a second." I put an arm around her shoulders. She leaned away from me warily. "Tell me, darling:
who writes your speeches?"

I got kicked in the shins, then the screen door was between us. "Goodnight, Mr. Ross!"

"One more thing-your middle name, it can't be 'Xavier.' What does the X stand for?"

"Xanthippe-want to make something of it?" The door slammed.

I was too busy the following month to worry about Frances Nelson. Ever been a candidate? It is like getting married and having your appendix out, while going over Niagara Falls in a barrel. One or more meetings every evening, breakfast clubs on Saturdays and Sundays, a Kiwanis, Rotary, or Lions, or Chamber of Commerce lunch to hit at noon, an occasional appearance in court, endless correspondence, phone calls, conferences, and, to top it off, as many hours of doorbell pushing as I could force into each day.

It was a grass-roots campaign, the best sort, but strenuous. Mrs. Holmes, by scraping the barrel, rounded up volunteers to cover three-quarters of the precincts; the rest were my problem. I couldn't cover them all, but I could durn well try.

And every day there was the problem of money. Even with a volunteer, unpaid organization, politics costs money-printing, postage, hall rental, telephone bills, and there is gasoline and lunch money for people who can't carry their own expenses. A dollar here and a dollar there and soon sr.~i are three thousand bucks in the red.

It is hard to tell how a campaign is going; you tend to kid each other. We made a mid-stream spot check-
phone calls, a reply post-card poll, ayid a doorbell sampling. And Tom and I and Mrs. Holmes got out and sniffed the air. All one day I bought gasoline here, a cola there, and a pack of cigarettes somewhere else, talking politics as I did so, and never offering my name. By the time I met Tom and Mrs. Holmes at her home I felt that I knew my chances.

We got our estimates together and looked them over. Mine read: "Ross 45%; Nelson 55%; McNye a trace." Tom's was: "fifty-fifty, against us." Mrs. Holmes had written, "A dull campaign, a light vote, and a trend against us." The computed results of the formal polls read; Ross 43%, Nelson 52%, McNye 5%-probable error plus-or-minus 9%.

I looked around. "Shall we cut our losses, or go on gallantly to defeat?"

"We aren't licked yet," Tom pointed out.

"No, but we're going to be. All we offer is the assumption that I'm better qualified than the little girl with the big eyes-a notion in which Joe Public is colossally uninterested. How about it, Mrs. Holmes? Can you make it up in the precincts?"

She faced me. "Jack, to be frank, it's all uphill. I'm working the old faithfuls too hard and I can't seem to stir out any new blood."

"We need excitement," Tom complained. "Let's throw some mud."

"At what?" I asked. "Want to accuse her of passing notes in school, or shall we say she sneaked out after taps when she was a WAC? She's got no record."

"Well, tackle her on housing. You've let her hog the best issue."

I shook my head. "If I knew the answers, I wouldn't be living in a trailer. I won't make phony promises. I've drawn up three bills, one to support the Federal Act, one to revise the building code, and one for a bond election for housing projects-that last one is a hot potato. None of them are much good. This housing shortage will be with us for years."

Tom said, "Jack, you shouldn't run for office. You don't have the fine, free optimism that makes a good public figure."

I grunted. "That's what I told you birds. I'm the manager type. A candidate who manages himself gets a split personality."

Mrs. Holmes knit her brows. "Jack-you know more about housing than she does. Let's hold a rally and debate it."

"Okay with me-I just work here. I once threatened to make her debate everything from streetcars to taxes. How about it, Torn?"

"Anything to make some noise."

I phoned at once. "Is this the Stooge with the Light Brown Hair?"

"That must be Jack Ross. Hello, Nasty. How's the baby-kissing?"

"Sticky. Remember I promised to debate the issues with you? How about 8 p.m. Wednesday the 15th?"

She said, "Hold the line-" I could hear a muffled rumble, then she said, "Jack? You tend to your campaign; I'll tend to mine."

"Better accept, kid. We'll challenge you publicly. Is Miss Nelson afraid to face the issues, quote and unquote."

"Goodbye, Jack."

"Uncle Sam won't let you, will he?" The phone clicked in my ear.

We went ahead anyway. I sold some war bonds and ordered a special edition of the Civic League News, with a Ross-for-Councilman front page, as a throwaway to announce the rally-prizes, entertainment, movies, and a super-colossal, gigantic debate between Ross in this corner and Nelson in that. We piled the bundles of papers in Mrs. Holmes' garage late Sunday night. Mrs. Holmes phoned about seven-thirty the next morning-"Jack," she yipped, "come over right away!"

"On my way. What's wrong?"

"Everything. Wait till you get here." When I did, she led me out to her garage; someone had broken in and had slit open our precious bundles-then had poured dirty motor oil on them.

Tom showed up while we were looking at the mess. "Pixies everywhere," he observed. "I'll call the Commercial Press."

"Don't bother," I said bitterly. "We can't pay for another run." But he went in anyhow. The kids who were to do the distributing started to show up; we paid them and sent them home. Tom came out. "Too late," he announced. "We would have to start from scratch- no time and too expensive."

I nodded and went in the house. I had a call to make myself. "Hello," I snapped, "is this Miss Nelson, the Independent Candidate?"

"This is Frances Nelson. Is this Jack Ross?"

"Yes. You were expecting me to call, I see."

"No, I knew your sweet voice. To what do I owe the honor?"

"I'd like to show you how well your boys have been campaigning.

"Just a moment- I've an appointment at ten; I can spare the time until then. What do you mean; how my boys have been campaigning?"

"You'll find out." I hung up.

I refused to talk until she had seen the sabotage. She stared. "It's a filthy, nasty trick, Jack-but why show it to me?"

"Who else?"

"But- Look, Jack, I don't know who did this, but it has nothing to do with me." She looked around at us. "You've got to believe me!" Suddenly she looked relieved. "I know! It wasn't me, so it must have been McNye."

Tom grunted. I said gently, "Look, darling, McNye is nobody. He's a seventeenth-rater who files to get his name in print. He wouldn't use sabotage because he's not out to win. It has to be you-wait!-not you per-
sonally, but the machine. This is what you get into when you accept the backing of wrong 'uns."

"But you're wrong! You're wrong! I'm not backed by the machine."

"So? Who runs your campaign? Who pays your bills?"

She shook her head. "A committee takes care of those things. My job is to show up at meetings and speak."

"Where did the committee come from? Did the stork bring it?"

"Don't be ridiculous. It's the Third District HomeOwners' League. They endorsed me and set up a campaign committee for me."

I'm no judge of character, but she was telling the truth, as she saw it. "Ever hear of a dummy organization, kid? Your only connection with this Home-Owners' League is Sam Jorgens . . . isn't it?"

"Why, no-that is- Yes, I suppose so."

"And I told you Jorgens was a tame dog for Boss Tully."

"Yes, but I checked on that, Jack. Uncle Sam explained the whole thing. Tully used to support him, but they broke because Uncle Sam wouldn't take the machine's orders. It's not his fault that the machine used to back him."

"And you believed him."

"No, I made him prove it. You said to check with the newspapers-Uncle Sam had me talk with the editor of the Herald." Tom snorted.

"He means," I told her, "that the Herald is part of the machine. I meant talk to reporters. Most of them are honest and all of them know the score. But I can't see how you could be so green. I know you've been away, but didn't you read the papers before the War?"

It developed that, what with school and the War, she hadn't been around town much since she was fifteen. Mrs. Holmes broke in, "Why, she's not eligible, Jack! She doesn't have the residence requirements."

I shook my head. "As a lawyer, I assure you she does. Those things don't break residence-particularly as she enlisted here. How about making us all some coffee, Mrs. Holmes?"

Mrs. Holmes bristled; I could see that she did not want to fraternize with the enemy, but I took her arm and led her into the house, whispering as I went. "Don't be hard on the kid, Molly. You and I made mistakes while we were learning the ropes. Remember Smythe?"

Smythe was as fine a stuffed shirt as ever took a bribe-we had given him our hearts' blood. Mrs. Holmes looked sheepish and relaxed. We chatted about the heat and presidential possibilities, then Frances said, "I'm conceding nothing, Jack-but I'm going to pay for those papers."

"Skip it," I said. "I'd rather bang Tully's heads together. But see here-you've got an hour yet; I want to show you something."

"Want me along, Jack?" Tom suggested, looking at Frances.

"If you like. Thanks for the coffee, Mrs. Holmes-I'll be back to clean up the mess." We drove to Dr. Potter's office and got the photostats we had on Jorgens out of his safe. We didn't say anything; I just arranged the exhibits in logical order. Frances didn't talk either, but her face got whiter and whiter. At last she said, "Will you take me home now, Mr. Ross?"

We bumped along for the next three weeks, chasing votes all day, licking stamps and stenciling autobumper signs late at night and never getting enough sleep. Presently we noticed a curious fact-McNye was coming up. First it was billboards and throwaways, next was publicity-and then we began to get reports from the field of precinct work for McNye.

We couldn't have been more puzzled if the Republican Party had nominated Norman Thomas. We made another spot check. Mrs. Holmes and Dr. Potter and I went over the results. Ross and Nelson, neck and
neck-a loss for Nelson; McNye a strong third and coming up fast. "What do you think, Mrs. Holmes?"

"The same you do. Tully has dumped Nelson and bought up McNye."

Potter agreed. "It'll be you and McNye in the runoff. Nelson is coasting on early support from the machine. She'll fizzle."

Tom had come in while we were talking. "I'm not sure," he said. "Tully needs a win in the primary, or, if that fails, a run-off between the girl and McNye. We've got an organization, she hasn't."

"Tully can't count on me running third. In fact, I'll beat out Frances for second place at the very worst."

Tom looked quizzical. "Seen tonight's Herald, Jack?"

"No. Have they discovered I'm a secret drinker?"

"Worse than that." He chucked us the paper.
"CLAIM ROSS INELIGIBLE COUNCILMANIC RACE" it read; there was a 3-col cut of my trailer, with me in the door. The story pointed out that a city father must have lived

two years in the city and six months in his district. The trailer camp was outside the city limits.

Dr. Potter looked worried. "Can they disqualify you, Jack?"

"They won't take it to court," I told him. "I'm legal as baseball. Residence isn't geographical location; it's a matter of intent-your home is where you intend to return when you're away. I'm registered at the flat I had before the War, but I turned it over to my partner when I went to Washington. My junk is still in it, but he's got a wife and twins. Hence the trailer, a temporary exigency of no legal effect."

"Hmmm . . . how about the political effect?"

"That's another matter."

"You betcha it is," agreed Tom. "How about it, Mrs. Holmes?"

She looked worried. "Tom is right. It's tailor-made for a word-of-mouth campaign combined with unfa
vorable publicity. Why vote for a man who doesn't even live in your district?-that sort of thing."

I nodded. "Well, it's too late to back out, but, let's face it, folks- We've wasted our nickel."

For once they did not argue. Instead Potter said, "What sort of person is Miss Nelson? Could we possibly back her in the finals?"

"She's a good kid," I assured him. "She got taken in and hated to admit it, but she's better than McNye."

"I'll say she is," agreed Tom.

"She's a lady," stated Mrs. Holmes.

"But," I objected, "we can't elect her in the finals. We can't pin anything on McNye and she's too green to stand up to what the machine can do to her in a long campaign. Tully knows what he's doing."

"I'm afraid you're right," Potter agreed. "Jack," said Tom, "I take it you think we're licked now.

"Ask Mrs. Holmes."

Mrs. Holmes said, "I hate to say so, and I'm not quitting, but it would take a miracle to put Jack on the final ballot."

"Okay," said Tom, "let's quit being boy scouts and have some fun the rest of the campaign. I don't like the way Boss Tully campaigns. We've played fair; what we've gotten in return is shenanigans."

"What do you want to do?"

He explained. Presently I nodded and said, "I'm all for it-and a wrinkle of my own. It'll be fun, and it just might work."

"Well, call her up then!"

I got Frances Nelson on the phone. "Jack Ross, Frances. Haven't seen you around much, sweetheart. How's the campaign?"

She sounded tired. "Oh, that- What campaign, Jack?"

"Did you withdraw? I haven't seen any announcement."

"It wasn't necessary. I had a show-down with
Jorgens and after that my campaign just disappeared. The committee vanished away. Look, Jack, I'd like to see you-to apologize."

"Forget it, I want to see you, too. I'll pick you up." We laid it on the line. "I'm dropping out of the race, Frances. We want to throw our organizational support to you-provided."

She stared. "But you can't, Jack. I'm going to vote for you."

"Huh? Never mind, you won't get a chance to." I showed her the Herald story. "It's a phony, but it licks me anyhow. I should have played up my homeless condition but, like a dope, I let them do it. It's too late now-when a candidate has to explain things he's back on his heels and ready for the knockout. I was a fifty-fifty squeeze at best; this tips the balance."

She was staring at the picture, bug-eyed, knuckles pressed to her mouth. "Jack-Oh, dear! I've gone and done it again."

"Done what?"

"Got you into this mess. I told Sam Jorgens all about our first talk, including how you had to camp out in a trailer. I-"

I brushed it aside. "No matter. They would have stumbled on it anyhow. See here-we're going to take you on. We might even elect you."

"But I don't want the job, Jack. I want you to have
it.

"Too late, Frances. But we want to beat that spare tire, McNye. The machine is still using you, to beat me in the primary by splitting the non-machine vote; then they'll settle your hash. I've got a gimmick for that. But first-you call yourself an independent. Well, you aren't now."

"What do you mean? I won't be anything else."

"They gave women the vote! Look, darling, a candidate can be unbossed, but not independent. Independence is an adolescent notion. To merit support you
have to commit yourself-and there goes your independence.

"But I- Oh, politics is a rotten business!"

"You make me tired! Politics is just as clean-or as dirty-as the people who practice it. The people who say it's dirty are too lazy to do their part in it." She dropped her face into her hands. I took her by the shoulders, and shook her. "Now you listen to me. I'm going over our program, point by point. If you agree with it and commit yourself, you're our candidate. Right?"

"Yes, Jack." It was just a whisper.

We ran through it. There was no trouble, it was sane and sensible, likely to appeal to anyone with no ax to grind. The points she did not understand we let lay over. She liked especially my housing bills and began to perk up and sound like a candidate.

"Okay," I said finally. "Here's the gimmick. I'll get my name off the ballot so that the race will be over in the primary. It's too late to do it myself, but they've played into my hands. It'll be a court order, for ineligibility through non-residence."

Dr. Potter looked up sharply. "Come again, son? I thought you said your legal position was secure."

I grinned. "It is-if I fight. But I won't. Here's the gag-we bring a citizen's suit through a couple of dummies. The court orders me to show cause. I default. Court has no option but to order my name stricken from the ballot. One, two, three."

Tom cheered. I bowed. "Now Dr. Potter is your new campaign chairman. You go on as before, going where you are sent and speaking your piece. Oh, yes-I'm going to give you some homework on other issues than housing. As for Tom and me-we're the special effects department. Just forget us."

Three days later I was off the ballot. Tom handled it so that it looked like McNye and Tully. Mrs. Holmes had the delicate job of convincing our precinct workers that Frances was our new white hope. Dr. Potter and Dick Blair got Frances endorsed by the Civic League-the League would endorse a giant panda against a Tully man. And Dick Blair worked up a veterans' division.

Leaving Tom and me free for fun and games.

First we got a glamor pic of Frances, one that made her look like Liberty Enlightening the World, with great sorrowful eyes and a noble forehead, and had it blown up for billboards-6-sheets; 24-sheets look like too much dough.

We got a "good" picture of McNye, too-good for us. Like this-you send two photographers to a meeting where your man is to speak. One hits him with a flash bulb; the second does also, right away, before the victim can recover from his reflex. Then you throw the first pic away. We got a picture which showed McNye as pop-eyed, open-mouthed, and idiotic-a Kallikak studying to be a Jukes. It was so good we had to tone it down. Then I went up state and got some printing done, very privately.

We waited until the last few days, then got busy. First we put snipe sheets on our own billboards, right across Frances' beautiful puss so that those eyes looked appealingly at you over the paster. "VOTE FOR McNYE" they read. Two nights later it was quarter cards, this time with his lovely picture: VOTE FOR McNYE-A WOMAN'S PLACE IS IN THE HOME. We stuck them up on private property, too.

Tom and I drove around the next day admiring our handiwork. "It's beautiful," Tom said dreamily. "Jack, do you suppose there is any way we could get the Communist Party to endorse McNye?"

"I don't see how," I admitted, "but if it doesn't cost too much I've still got a couple of war bonds."

He shook his head. "It can't work, but it's a lovely thought."

We saved our double-whammie for the day before election. It was expensive-but wait. We hired some skid-row characters on Saturday, through connections Tom has, and specified that they must show up with two-day beards on Monday. We fed each one a sandwich loaded with garlic, gave him literature and instructions-ring the doorbell, blow his breath in the victim's face, and hand her a handbill, saying abruptly, "Here's how you vote, lady!" The handbill said, "VOTE FOR McNYE" and had his special picture. It had the rest of Tully's slate too, and some choice quotes of McNye's best double talk. Around the edge it said "100% American-lOO% American."

We pushed the stumblebums through an average of four precincts apiece, concentrating on the better neighborhoods.

That night there was an old-fashioned torchlight parade-Mrs. Holmes' show, and the wind-up of the proper campaign. It started off with an elephant and donkey (Heaven knows where she borrowed the elephant!) The elephant carried signs: I'M FOR FRANCES; the donkey, SO AM I. There was a kid's band, flambeaux carried by our

weary volunteers, and a platoon of WAC and WAVE veterans marching ahead of the car that carried Frances. She looked scared and lovely.

Tom and I watched it, then got to work. No sleep that night- More pasters. Windshield size this time, 3"xlO", with glue on the printed side. I suppose half the cars in town have no garages, housing being what it is. We covered every block in the district before dawn, Tom driving and me on the right with a pail of water, a sponge, and stickers. He would pull alongside a car; I would slap a sticker on the windshield where it would stare the driver in the face-and have to be scraped off. They read: VOTE FOR McNYE-KEEP AMERICA PURE.

We figured it would help to remind people to vote. I voted myself when the polls opened, then fell into bed.

I pulled myself together in time to get to the party at the headquarters-an empty building we had borrowed for the last month of the campaign. I hadn't given a thought to poll watchers or an honest count- that was Mrs. Holmes' baby-but I didn't want to miss the returns.

One election party is like another-the same friendly drunks, the same silent huddle around the radio, the same taut feeling. I helped myself to some beer and potato chips and joined the huddle.

"Anything yet," I asked Mrs. Holmes. "Where's Frances?"

"Not yet. I made her lie down."

"Better get her out here. The candidate has to be seen. When people work for a pat on the back, you've got to give 'em the pat."

But Frances showed up about then, and went through the candidate routine-friendly, gracious, thanking people, etc. I began to think about running her for Congress.

Tom showed up, bleary-eyed, as the first returns came in. All McNye. Frances heard them and her smile slipped. Dr. Potter went over to her and said, "It's not important-the machine's precincts are usually first to report." She plastered her smile back on.

McNye piled up a big lead. Then our efforts began to show-Nelson was pulling up. By 10:30 it was neck and neck. After a while it began to look as if we had elected a councilman.

Around midnight McNye got on the air and conceded.

So I'm a councilman's field secretary now. I sit outside the rail when the council meets; when I scratch my right ear, Councilman Nelson votes "yes"; if I scratch my left ear, she votes "no"-usually.

Marry her? Me? Tom married her. They're building a house, one bedroom and two bathrooms. When they can get the fixtures, that is.

FOREWORD

When the USSR refused our proposals for controlling the A-bomb, I swore off "World-Saving." No more preaching. No more attempts to explain the mortal peril we were in. No, sir!

A year and a half later, late '47, I backslid. If it could not be done by straightforward exposition, perhaps it could be dramatized as fiction.

Again I fell flat on my face.

Fifteen years later there was a tremendous flap over Soviet medium-range missiles in Cuba. Then they were removed-or so we were told-and the flap died out. Why? Why both ways? For years we have had Soviet submarines on both coasts; are they armed with slingshots? Or powder puffs?

This story is more timely today, over thirty years later, than it was when it was written; the danger is enormously greater.

And again this warning will be ignored. But it won't take much of your time; it's a short-short, a mere 2200 words.

ON THE SLOPES OF VESUVIUS

"Paddy, shake hands with the guy who built the atom bomb," Professor Warner said to the bartender. "He and Einstein rigged it up in their own kitchen one evening."

"With the help of about four hundred other guys," amended the stranger, raising his voice slightly to cut through the rumble of the subway.

"Don't quibble over details. Paddy, this is Doctor Mansfield. Jerry, meet Paddy-Say, Paddy, what is your last name?"

"Francis X. Hughes," answered the barkeep as he wiped his hand and stuck it out. "I'm pleased to meet any friend of Professor Warner."

"I'm pleased to meet you, Mr. Hughes."

"Call me Paddy, they all do. You really are one of the scientists who built the atom bomb?"

"I'm afraid so."

"May the Lord forgive you. Are you at N.Y.U., too?"

"No, I'm out at the new Brookhaven Laboratory."

"Oh, yes."

"You've been there?"

Hughes shook his head. "About the only place I go is home to Brooklyn. But I read the papers."

"Paddy's in a well-padded rut," explained Warner. "Paddy, what are you going to do when they blow up New York? It'll break up your routine."

He set their drinks before them and poured himself a short beer. "If that's all I've got to worry about I guess I'll die of old age and still in Thy rut, Professor."

Warner's face lost its cheerful expression for a moment; he stared at his drink as if it had suddenly become bitter. "I wish I had your optimism, Paddy, but I haven't. Sooner or later, we're in for it."

"You shouldn't joke about such things, Professor."

"I'm not joking."

"You can't be serious."

"I wish I weren't. Ask him. After all, he built the damned thing."

Hughes raised his brows at Mansfield who replied, "I'm forced to agree with Professor Warner. They will be able to do it-atom-bomb New York I mean. I know that;

it's not a guess-it's a certainty. Being able to do it, I'm strongly of the opinion that they will do it."

"Who do you mean by 'they'?" demanded the bartender. "The Russians?"

"Not necessarily. It might be anybody who first worked up the power to smash us."

"Sure," said Warner. "Everybody wants to kick the fat boy. We're envied and hated. The only reason we haven't been smeared is that no one has had what it takes to do it-up to now, that is!"

"Just a minute, gentlemen-" put in Hughes. "I don't get it. You're talking about somebody-anybody-atom-bombing New York. How can they do it? Didn't we decide to hang on to the secret? Do you think some dirty spy has gotten away with it while we weren't watching?"

Mansfield looked at Warner, then back at Hughes and said gently, "I hate to disturb your peace of mind, Mr. Hughes-Paddy-but there is no secret. Any nation that is willing to go to the trouble and expense can build an atom bomb."

"And that's official," added Warner, "and it's a leadpipe cinch that, power politics being what it is, a dozen different nations are working on the problem right now."

Hughes had been looking perturbed; his face cleared. "Oh, I see what you mean. In time, they can dig it out for themselves. In that case, gentlemen, let's have a round on the house and drink to their frustration. I can't be worrying about what might happen twenty years from now. We might none of us be spared that long what with taxicabs and the like."

Mansfield's brows shot up. "Why do you say twenty years, Paddy?"

"Eh? Oh, I seem to remember reading it in the papers. That general, wasn't it? The one who was in charge of the atom-bomb business."

Mansfield brushed the general aside. "Poppycock! That estimate is based on entirely unwarranted national conceit. The time will be much shorter."

"How much shorter?" demanded Hughes. Mansfield shrugged.

"What would you do, Paddy," Warner asked curiously, "if you thought some nation-let's say some nation that didn't like us-had already managed to manufacture atom bombs?"

The saloon cat came strolling along the top of the bar. Hughes stopped to feed it a slice of cheese before replying. "I do not have your learning, gentlemen, but Paddy Hughes is no fool. If someone is loose in the world with those devil's contraptions, New York is a doomed city. America is the champion and must be beaten before any new bully boy can hope to win-and New York is one of the spots he would shoot at first. Even Sad Sack-" He jerked a thumb at the cat. "-is bright enough to flee from a burning building."

"Well, what do you think you would do?"

"I don't 'think' what I'd do, I know what I'd do; I've done it before. When I was a young man and the Blackand-Tans were breathing down the back o' my neck, I climbed on a ship with never a thought of looking back-and any man who wanted them could have my pigs and welcome to them."

Warner chuckled. "You must have been quite the

lad, Paddy. But I don't believe you would do it-not now. You're firmly rooted in your rttt and you like it- like me and six million others in this town. That's why decentralization is a fantasy."

Hughes nodded. "It would be hard." That it would be hard he understood. Like leaving home it would be to quit Schreiber's Bar-Grill after all these years- Schreiber couldn't run it without him; he'd chase all the customers away. It would be hard to leave his friends in the parish, hard to leave his home-what with Molly's grave being just around the corner and all. And if the cities were to be blown up a man would have to go back to farming. He'd promised himself when he hit the new country that he'd never, never, never tackle the heartbreaking load of tilling the soil again. Well, perhaps there would be no landlords when the cities were gone. If a man must farm, at least he might be spared that. Still, it would be hard-and Molly's grave off somewhere in the rubble. "But I'd do
it.

"You think you would."

"I wouldn't even go back to Brooklyn to pick up my other shirt. I've my week's pay envelope right here." He patted his vest. "I'd grab my hat and start walking." The bartender turned to Mansfield. "Tell me the truth, Doctor-if it's not twenty years, how long will it be?"

Mansfield took out an envelope and started figuring on the back of it. Warner started to speak, but Hughes cut him off. "Quiet while he's working it out!" he said sharply.

"Don't let him kid you, Paddy," Warner said wryly. "He's been lying awake nights working out this problem ever since Hiroshima."

Mansfield looked up. "That's true. But I keep hoping I'll come out with a different answer. I never do."

"Well, what is the answer?" Hughes insisted.

Mansfield hesitated. "Paddy, you understand that there are a lot of factors involved, not all of them too
clear. Right? In the first place, it took us about four years. But we were lavish with money and lavish with men, more so maybe than any other nation could be, except possibly Russia. Figured on that alone it might take several times four years for another country to make a bomb. But that's not the whole picture; it's not even the important part. There was a report the War Department put out, the Smyth Report-you've heard of it?- which gives anyone who can read everything but the final answers. With that report, with competent people, uranium ore, and a good deal less money than it cost us, a nation ought to be able to develop a bomb in a good deal less time than it took us."

Hughes shook his head. "I don't expect you to explain, Doctor; I just want to know your answer. How long?"

"I was just explaining that the answer had to be indefinite. I make it not less than two and not more than four years."

The bartender whistled softly. "Two years. Two years to get away and start a new life."

"No, no, no! Mr. Hughes," Mansfield objected, "Not two years from now-two years from the time the first bomb was dropped."

Hughes' face showed a struggle to comprehend. "But, gentlemen," he protested, "it's been more than two years since the first bomb was dropped."

"That's right."

"Don't blow your top, Paddy," Warner cautioned him. "The bomb isn't everything. It might be ten years before anybody develops the sort of robot carrier that can go over the north pole or the ocean and seek out a particular city with an atom bomb. In the meantime we don't have too much to fear from an ordinary airplane attack."

Mansfield looked annoyed. "You started this, Dick. Why try to hand out soothing syrup now? With a country as wide open as this one you don't need anything as fancy as guided missiles to pull a Pearl Harbor on
it. The bombs would be assembled secretly and set off by remote control. Why, there might be a tramp steamer lying out there in the East River right now- Warner let his shoulders slump. "You're right, of
course.

Hughes threw down his bar towel. "You're telling me that New York is as likely to be blown up right now as at any other time."

Mansfield nodded. "That's the size of it," he said soberly.

Hughes looked from one to the other. The cat jumped down and commenced rubbing up against his ankle, purring. He pushed it away with his foot. "It's not true! I know it's not true!"

"Why not?"

"Because! If it was true would you be sitting here, drinking quietly? You've been having a bit of fun with me, pulling my leg. Oh, I can't pick the flaw in your argument, but you don't believe it yourselves."

"I wish I didn't believe it," said Mansfield. "Oh, we believe it, Paddy," Warner told him. "To tell you the truth, I'm planning to get out. I've got letters out to half a dozen cow colleges; I'm just waiting until my contract expires. As for Doc Mansfield, he can't leave. This is where his lab is located."

Hughes considered this, then shook his head. "No, it won't wash. No man in his right mind will hang on to a job when it means sitting on the hot squat, waiting for the Warden to throw the switch. You're pulling my leg."

Mansfield acted as if Hughes had not spoken. "Anyhow," he said to Warner, "the political factors might delay the blow off indefinitely."

Warner shook his head angrily. "Now who's handing out soothing syrup? The political factors speed up the event, not delay it. If a country intends to defeat us someday, it's imperative that she do it as quickly as possible, before we catch wind of her plans and strike
first. Or before we work out a real counter weapon-if that's possible."

Mansfield looked tired, as if he had been tired for a long time. "Oh, you're right. I was just whistling to keep my courage up. But we won't develop a counter weapon, not a real one. The only possible defense against atomic explosion is not to be there when it goes off." He turned to the barman. "Let's have another round, Paddy."

"Make mine a Manhattan," added Warner.

"Just a minute. Professor Warner. Doctor Mansfield. You were not fooling with me? Every word you had to say is God's own truth?"

"As you're standing there, Paddy."

"And Doctor Mansfield-Professor Warner, do you trust Doctor Mansfield's figuring?"

"There's no man in the United States better qualified to make such an estimate. That's the truth, Paddy."

"Well, then-" Hughes turned toward where his employer sat nodding over the cash register on the restaurant side of the room and whistled loudly between his teeth. "Schreiber! Come take the bar." He started stripping off his apron.

"Hey!" said Warner, "where you going? I ordered a Manhattan."

"Mix it yourself," said Hughes. "I've quit." He reached for his hat with one hand, his coat with the other, and then he was out the door.

Forty seconds later he was on an uptown express; he got off at 34th Street and three minutes thereafter he was buying a ticket, west. It was ten minutes later that he felt the train start to roll under him, headed out of the city.

But it was less than an hour later when his misgivings set in. Had he been too hasty? Professor Warner was a fine man, to be sure, but given to his little jokes, now and again. Had he been taken in by a carefully contrived hoax? Had Warner said to his friend, we'll
have some fun and scare the living daylights out of the old Irishman?
Nor had he made any arrangements for someone to feed Sad Sack. The cat had a weak stomach, he was certain, and no one else gave the matter any attention at all. And Molly's grave-Wednesday was his day to do his gardening there. Of course Father Nelson would see that it was watered, just for kindness' sake, but still- When the train paused at Princeton Junction he
slipped off and sought out a telephone. He had in mind what he meant to say if he was able to reach Professor Warner-a good chance, he thought, for considering the hour the gentlemen probably stayed on for a steak. Professor Warner, he would say, you've had your fun and a fine joke it was as I would be the first to say and to buy a drink on it, but tell me-man to man-was there anything to what you and your friend was telling me? That would settle it, he thought.

The call went through promptly and he heard Schreiber's irritated voice. "Hello," he said.

The line went dead. He jiggled the hook. The operator answered, "One moment, please-" then, "This is the Princeton operator. Is this the party with the call to New York?"

"Yes. I-"

"There has been a temporary interruption in service. Will you hang up and try again in a few minutes, please?"

"But I was just talking-"

"Will you hang up and try again in a few minutes, puhlease?"

He heard the shouting as he left the booth. As he got outdoors he could see the great, gloriously beautiful, gold and purple mushroom still mounting over where had been the City of New York.

FOREWORD

This story was written twenty-one years before Dr. Neil Armstrong took "one short step for a man, a giant leap for mankind"-hut in all important essentials it has not (yet) become dated. True, we do not know that formations such as "morning glories" exist on Luna and we do not know that there are areas where footgear midway between skis and snowshoes would be useful. But the Lunar surface is about equal in area to Africa; a dozen men have explored an area smaller than Capetown for a total of a few days. We will still be exploring Luna and finding new wonders there when the first interstellar explorers return from Proxima Centauri or Tau Ceti.

This story is compatible with the so-called "Future History" stories. It is also part of my continuing postWar-lI attempt to leave the SF-pulp field and spread out. I never left the genre puips entirely, as it turned out to be easy to write a book-length job, then break it into three or four cliff-hangers and sell it as a pulp serial immediately before book publication. I did this with a dozen novels in the '40s and 'SOs. But I recall only one story (GULF) specifically written for pulp, GULF being for Astounding's unique "prophesied" issue.

Deus volent, I may someday collect my Boy Scout stories as one volume just as I would like to do with the Puddin' stories.

NOTHING EVER HAPPENS ON THE MOON

"I never knew a boy from Earth who wasn't cocky."

Mr. Andrews frowned at his Senior Patrol Leader.

"That's childish, Sam. And no answer. I arrive expecting to find the troop ready to hike. Instead I find you and our visitor about to fight. And both of you Eagle Scouts! What started it?"

Sam reluctantly produced a clipping. "This, I guess.

It was from the Colorado Scouting News and read:

"Troop 48, Denver-LOCAL SCOUT SEEKS SKYHIGH HONOR. Bruce Hollifield, Eagle Scout, is moving with his family to South Pole, Venus. Those who know Bruce-and who doesn't-expect him to qualify as Eagle (Venus) in jig time. Bruce will spend three weeks at Luna City, waiting for the Moon-Venus transport. Bruce has been boning up lately on lunar Scouting, and he has already qualified in space suit operation in the vacuum chamber at the Pike's Peak space port. Cornered, Bruce admitted that he hopes to pass the tests for Eagle Scout (Luna) while on the Moon.

"If he does-and we're betting on Bruce!-he's a dead cinch to become the first Triple Eagle in history.

"Go to it, Bruce! Denver is proud of you. Show those Moon Scouts what real Scouting is like."

Mr. Andrews looked up. "Where did this come from?"

"Uh, somebody sent it to Peewee."

"Yes?"

"Well, we all read it and when Bruce came in, the fellows ribbed him. He got sore."

"Why didn't you stop it?"

"Uh .. . well, I was doing it myself."

"Humph! Sam, this item is no sillier than the stuff our own Scribe turns in for publication. Bruce didn't write it, and you yahoos had no business making his life miserable. Send him in. Meantime call the roll."

"Yes, sir. Uh, Mr. Andrews-"

"Yes?"

"What's your opinion? Can this kid possibly qualify for lunar Eagle in three weeks?"

"No-and I've told him so. But he's durn well going to have his chance. Which reminds me: you're his instructor."

"Me?" Sam looked stricken.

"You. You've let me down, Sam; this is your chance to correct it. Understand me?"

Sam swallowed. "I guess I do."

"Send Hollifield in."

Sam found the boy from Earth standing alone, pretending to study the bulletin board. Sam touched his arm. "The Skipper wants you."

Bruce whirled around, then stalked away. Sam shrugged and shouted, "Rocket Patrol-fall in!"

Speedy Owens echoed, "Crescent Patrol-fall in!" As muster ended Mr. Andrews came out of his office, followed by Bruce. The Earth Scout seemed considerably chastened.

"Mr. Andrews says I'm to report to you."

"That's right." They eyed each other cautiously. Sam said, "Look, Bruce-let's start from scratch."

"Suits me."

"Fine. Just tag along with me." At a sign from the Scoutmaster Sam shouted, "By twos! Follow me."

Troop One jostled out the door, mounted a crosstown slidewalk and rode to East Air Lock.

Chubby Schneider, troop quartermaster, waited there with two assistants, near a rack of space suits. Duffel was spread around in enormous piles-packaged grub, tanks of water, huge air bottles, frames of heavy wire, a great steel drum, everything needed for pioneers on the airless crust of the Moon.

Sam introduced Bruce to the Quartermaster. "We've got to outfit him, Chubby."

"That new G.E. job might fit him."

Sam got the suit and spread it out. The suit was impregnated glass fabric, aluminum-sprayed to silvery whiteness. It closed from crotch to collar with a zippered gasket. It looked expensive; Bruce noticed a plate on the collar: DONATED BY THE LUNA CITY KIWANIS KLUB.

The helmet was a plastic bowl, silvered except where swept by the eyes of the wearer. There it was transparent, though heavily filtered.

Bruce's uniform was stowed in a locker; Chubby handed him a loose-knit coverall. Sam and Chubby stuffed him into the suit and Chubby produced the instrument belt.

Both edges of the belt zipped to the suit; there were several rows of grippers for the top edge; thus a pleat could be taken. They fastened it with maximum pleat. "How's that?" asked Sam.

"The collar cuts my shoulders."

"It won't under pressure. If we leave slack, your head will pull out of the helmet like a cork." Sam strapped the air, water, radio, and duffel-rack backpack to Bruce's shoulders. "Pressure check, Chubby."

"We'll dress first." While Chubby and Sam dressed, Bruce located his intake and exhaust valves, the spill valve inside his collar, and the water nipple beside it. He took a drink and inspected his belt.

Sam and Bruce donned helmets. Sam switched on Bruce's walkie-talkie, clipped a blood-oxygen indica
tor to Bruce's ear, and locked his helmet on. "Stand by for pressure," he said, his words echoing in Bruce's helmet. Chubby hooked hose from a wall gauge to Bruce's air intake.

Bruce felt the collar lift. The air in the suit grew stuffy, the helmet fogged. At thirty pounds Chubby cut the intake, and watched the gauge. Mr. Andrews joined them, a Gargantuan helmeted figure, toting a pack six feet high. "Pressure steady, sir," Chubby reported.

Sam hooked up Bruce's air supply. "Open your intake and kick your chin valve before you smother," he ordered. Bruce complied. The stale air rushed out and the helmet cleared. Sam adjusted Bruce's valves. "Watch that needle," he ordered, pointing to the blood-oxygen dial on Bruce's belt. "Keep your mix so that reads steady in the white without using your chin valve.

"I know."

"So I'll say it again. Keep that needle out of the red, or you'll explain it to Saint Peter."

The Scoutmaster asked, "What load are you giving him?"

"Oh," replied Sam, "just enough to steady him-say three hundred pounds, total."

Bruce figured-at one-sixth gravity that meant fifty pounds weight including himself, his suit, and his pack. "I'll carry my full share," he objected.

"We'll decide what's best for you," the Scoutmaster snapped. "Hurry up; the troop is ready." He left.

Sam switched off his radio and touched helmets. "Forget it," he said quietly. "The Old Man is edgy at the start of a hike." They loaded Bruce rapidly-reserve air and water bottles, a carton of grub, short, wide skis and ski poles-then hung him with field gear, first-aid kit, prospector's hammer, two climbing ropes, a pouch of pitons and snap rings, flashlight, knife. The Moon Scouts loaded up; Sam called, "Come

Mr. Andrews handed the lockmaster a list and stepped inside; the three Scouts followed. Bruce felt his suit expand as the air sucked back into the underground city. A light blinked green; Mr. Andrews opened the outer door and Bruce stared across the airless lunar plain.

It dazzled him. The plain was bright under a blazing Sun. The distant needle-sharp hills seemed painted in colors too flat and harsh. He looked at the sky to rest his eyes.

It made him dizzy. He had never seen a whole skyful of stars undimmed by air. The sky was blacker than black, crowded with hard, diamond lights.

"Route march!" the Scoutmaster's voice rang in his helmet. "Heel and toe. Jack Wills out as pathfinder." A boy left the group in long, floating strides, fifteen feet at a bound. He stopped a hundred yards ahead; the troop formed single column fifty yards behind him. The Pathfinder raised his arm, swung it down, and the troop moved out.

Mr. Andrews and a Scout joined Sam and Bruce. "Speedy will help you," he told Sam, "until Bruce gets his legs. Move him along. We can't heel-and-toe and still make our mileage."

"We'll move him."

"Even if we have to carry him," added Speedy.

The Scoutmaster overtook the troop in long leaps. Bruce wanted to follow. It looked easy-like flying. He had not liked the crack about carrying him. But Sam grasped him by his left belt grip while Speedy seized the one on his right. "Here we go," Sam warned. "Feet on the ground and try to swing in with us."

Bruce started off confidently. He felt that three days of low gravity in the corridors of Luna City had given him his "legs"; being taught to walk, like a baby, was just hazing.

Nothing to it-he was light as a bird! True, it was hard to keep heel-and-toe; he wanted to float. He gained speed on a downgrade; suddenly the ground was not there when he reached for it. He threw up his hands.

He hung head down on his belt and could hear his guides laughing. "Wha' happened?" he demanded, as they righted him.

"Keep your feet on the ground."

"I know what you're up against," added Speedy, "I've been to Earth. Your mass and weight don't match and your muscles aren't used to it. You weigh what a baby weighs, Earth-side, but you've got the momentum of a fat man."

Bruce tried again. Some stops and turns showed him what Speedy meant. His pack felt like feathers, but unless he banked his turns, it would throw him, even at a walk. It did throw him, several times, before his legs learned.

Presently, Sam asked, "Think you're ready for a slow lope?"

"I guess so."

"Okay-but remember, if you want to turn, you've got to slow down first-or you'll roll like a hoop. Okay, Speedy. An eight-miler."

Bruce tried to match their swing. Long, floating strides, like flying. It was flying! Up! . . . float . . . brush the ground with your foot and up again. It was better than skating or skiing.

"Wups!" Sam steadied him. "Get your feet out in front."

As they swung past, Mr. Andrews gave orders for a matching lope.

The unreal hills had moved closer; Bruce felt as if he had been flying all his life. "Sam," he said, "do you suppose I can get along by myself?"

"Shouldn't wonder. We let go a couple o' miles back."

"Huh?" It was true; Bruce began to feel like a Moon hand.

Somewhat later a boy's voice called "Heel and toe!" The troop dropped into a walk. The pathfinder stood on a rise ahead, holding his skis up~ The troop halted and unlashed skis. Ahead was a wide basin filled with soft, powdery stuff.

Bruce turned to Sam, and for the first time looked back to the west. "Jee .. . miny Crickets!" he breathed.

Earth hung over the distant roof of Luna City, in half phase. It was round and green and beautiful, larger than the harvest Moon and unmeasurably more lovely in forest greens, desert browns and glare white of cloud.

Sam glanced at it. "Fifteen o'clock."

Bruce tried to read the time but was stumped by the fact that the sunrise line ran mostly across ocean. He questioned Sam. "Huh? See that bright dot on the dark side? That's Honolulu-figure from there."

Bruce mulled this over while binding his skis, then stood up and turned around, without tripping. "Hmmm-" said Sam, "you're used to skis."

"Got my badge."

"Well, this is different. Just shuffle along and try to keep your feet."

Bruce resolved to stay on his feet if it killed him. He let a handful of the soft stuff trickle through his glove. It was light and flaky, hardly packed at all. He wondered what had caused it.

Mr. Andrews sent Speedy out to blaze trail; Sam and Bruce joined the column. Bruce was hard put to keep up. The loose soil flew to left and right, settling so slowly in the weak gravity that it seemed to float in air-yet a ski pole, swung through such a cloud, cut a knife-sharp hole without swirling it.

The column swung wide to the left, then back again. Off to the right was a circular depression perhaps fifty yards across; Bruce could not see the bottom. He paused, intending to question Sam; the Scoutmaster's voice prodded him. "Bruce! Keep moving!"

Much later Speedy's voice called out, "Hard ground!" Shortly the column reached it and stopped
to remove skis. Bruce switched off his radio and touched his helmet to Sam's.

"What was that back where the Skipper yelled at me?"

"That? That was a morning glory. They're poison!"

"A 'morning glory'?"

"Sort of a sink hole. If you get on the slope, you never get out. Crumbles out from under you and you wind up buried in the bottom. There you stay-until your air gives out. Lot of prospectors die that way. They go out alone and are likely to come back in the dark."

"How do you know what happens if they go out alone?"

"Suppose you saw tracks leading up to one and no tracks going away?"

"Oh!" Bruce felt silly.

The troop swung into a lope; slowly the hills drew closer and loomed high into the sky. Mr. Andrews called a halt. "Camp," he said. "Sam, spot the shelter west of that outcropping. Bruce, watch what Sam does.

The shelter was an airtight tent, framed by a half cylinder of woven heavy wire. The frame came in sections. The Scoutmaster's huge pack was the air bag.

The skeleton was erected over a ground frame, anchored at corners and over which was spread an asbestos pad. The curved roof and wall sections followed. Sam tested joints with a wrench, then ordered the air bag unrolled. The air lock, a steel drum,

was locked into the frame and gasketed to the bag. Meanwhile, two Scouts were rigging a Sun shade.

Five boys crawled inside and stood up, arms stretched high. The others passed in all the duffel except skis and poles. Mr. Andrews was last in and closed the air lock. The metal frame blocked radio communication; Sam plugged a phone connection from the lock to his helmet. "Testing," he said.

Bruce could hear the answer, relayed through Sam's radio. "Ready to inflate."

"Okay." The bag surged up, filling the frame. Sam said, "You go on, Bruce. There's nbthing left but to adjust the shade."

"I'd better watch."

"Okay." The shade was a flimsy venetian blind, stretched over the shelter. Sam half-opened the slats. "It's cold inside," he commented, "from expanding gas. But it warms up fast." Presently, coached by phone, he closed them a bit. "Go inside," he urged Bruce. "It may be half an hour before I get the temperature steady."

"Maybe I should," admitted Bruce. "I feel dizzy."

Sam studied him. "Too hot?"

"Yeah, I guess so."

"You've held still in the Sun too long. Doesn't give the air a chance to circulate. Here." Sam opened Bruce's supply valve wider; "Go inside."

Gratefully, Bruce complied.

As he backed in, and straightened up, two boys grabbed him. They closed his valves, unlocked his helmet, and peeled off his suit. The suit traveled from hand to hand and was racked. Bruce looked around.

Daylamps were strung from air lock to a curtain at the far end that shut off the sanitary unit. Near this curtain suits and helmets were racked. Scouts were lounging on both sides of the long room. Near the entrance a Scout was on watch at the air conditioner, a blood-oxygen indicator clipped to his ear. Nearby, Mr. Andrews phoned temperature changes to Sam. In the middle of the room Chubby had set up his commissary. He waved. "Hi, Bruce! Siddown-chow in two shakes."

Two Scouts made room for Bruce and he sat. One of them said, "Y'ever been at Yale?" Bruce had not. "That's where I'm going," the Scout confided. "My brother's there now." Bruce began to feel at home.

When Sam came in Chubby served chow, beef stew, steaming and fragrant, packaged rolls, and bricks of peach ice cream. Bruce decided that Moon Scouts had it soft. After supper, the Bugler got out his harmonica and played. Bruce leaned back, feeling pleasantly drowsy.

"Hollifield!" Bruce snapped awake. "Let's try you on first aid."

For thirty minutes Bruce demonstrated air tourniquets and emergency suit patches, artificial respiration for a man in a space suit, what to do for Sun stroke, for anoxia, for fractures. "That'll do," the Scoutmaster concluded. "One thing: What do you do if a man cracks his helmet?"

Bruce was puzzled. "Why," he blurted, "you bury him."

"Check," the Scoutmaster agreed. "So be careful. Okay, sports-six hours of sleep. Sam, set the watch."

Sam assigned six boys, including himself. Bruce asked, "Shouldn't I take a watch?"

Mr. Andrews intervened. "No. And take yourself off, Sam. You'll take Bruce on his two-man hike tomorrow; you'll need your sleep."

"Okay, Skipper." He added to Bruce, "There's nothing to it. I'll show you." The Scout on duty watched several instruments, but, as with suits, the important one was the blood-oxygen reading. Stale air was passed through a calcium oxide bath, which precipitated carbon dioxide as calcium carbonate. The purified air continued through dry sodium hydroxide, removing water vapor.

"The kid on watch makes sure the oxygen replacement is okay," Sam went on. "If anything went wrong, he'd wake us and we'd scramble into suits."

Mr. Andrews shooed them to bed. By the time Bruce had taken his turn at the sanitary unit and found a place to lie down, the harmonica was sobbing: "Day is done Gone the Sun. . ."

It seemed odd to hear Taps when the Sun was still overhead. They couldn't wait a week for sundown, of
course. These colonials kept funny~ hours. . . bed at what amounted to early evening, up at one in the morning. He'd ask Sam. Sam wasn't a bad guy-a little bit know-it-all. Odd to sleep on a bare floor, too- not that it mattered with low gravity. He was still pondering it when his ears were assaulted by Reveille, played on the harmonica.

Breakfast was scrambled eggs, cooked on the spot. Camp was struck, and the troop was moving in less than an hour. They headed for Base Camp at a lope.

The way wound through passes, skirted craters. They had covered thirty miles and Bruce was getting hungry when the pathfinder called, "Heel and toe!" They converged on an air lock, set in a hillside.

Base Camp had not the slick finish of Luna City, being rough caverns sealed to airtightness, but each troop had its own well-equipped troop room. Air was renewed by hydroponic garden, like Luna City; there was a Sun power plant and accumulators to last through the long, cold nights.

Bruce hurried through lunch; he was eager to start his two-man hike. They outfitted as before, except that reserve air and water replaced packaged grub. Sam fitted a spring-fed clip of hiking rations into the collar of Bruce's suit.

The Scoutmaster inspected them at the lock. "Where to, Sam?"

"We'll head southeast. I'll blaze it."

"Hmm-rough country. Well, back by midnight, and stay out of caves."

"Yes, sir."

Outside Sam sighed, "Whew! I thought he was going to say not to climb."

"We're going to?"

"Sure. You can, can't you?"

"Got my Alpine badge."

"I'll do the hard part, anyhow. Let's go."

Sam led out of the hills and across a baked plain. He
hit an eight-mile gait, increased it to a twelve-miler. Bruce swung along, enjoying it. "Swell of you to do this, Sam."

"Nuts. If I weren't here, I'd be helping to seal the gymnasium."

"Just the same, I need this hike for my Mooncraft badge."

Sam let several strides pass. "Look, Bruce-you don't really expect to make Lunar Eagle?"

"Why not? I've got my optional badges. There are only four required ones that are terribly different:
camping, Mooncraft, pathfinding, and pioneering. I've studied like the dickens and now I'm getting experience.

"I don't doubt you've studied. But the Review Board are tough eggs. You've got to be a real Moon hand to get by."

"They won't pass a Scout from Earth?"

"Put it this way. The badges you need add up to one thing, Mooncraft. The examiners are old Moon hands; you won't get by with book answers. They'll know how long you've been here and they'll know you don't know enough."

Bruce thought about it. "It's not fair!"

Sam snorted. "Mooncraft isn't a game; it's the real thing. 'Did you stay alive?' If you make a mistake, you flunk-and they bury you."

Bruce had no answer.

Presently they came to hills; Sam stopped and called Base Camp. "Parsons and Hollifield, Troop One-please take a bearing."

Shortly Base replied, "One one eight. What's your mark?"

"Cairn with a note."

"Roger."

Sam piled up stones, then wrote date, time, and their names on paper torn from a pad in his pouch, and laid it on top. "Now we start up."

The way was rough and unpredictable; this canyon
had never been a watercourse. Several times Sam stretched a line before he would let Bruce follow. At intervals he blazed the rock with his hammer. They came to an impasse, five hundred feet of rock, the first hundred of which was vertical and smooth.

Bruce stared. "We're going up that?"

"Sure. Watch your Uncle Samuel." A pillar thrust up above the vertical pitch. Sam clipped two lines together and began casting the bight up toward it. Twice he missed and the line floated down. At last it went over.

Sam drove a piton into the wall, off to one side, clipped a snap ring to it, and snapped on the line. He had Bruce join him in a straight pull on the free end to test the piton. Bruce then anchored to the snap ring with a rope strap; Sam started to climb.

Thirty feet up, he made fast to the line with his legs and drove another piton; to this he fastened a safety line. Twice more he did this. He reached the pillar and called, "Off belay!"

Bruce unlinked the line; it snaked up the cliff. Presently Sam shouted, "On belay!"

Bruce answered, "Testing," and tried unsuccessfully to jerk down the line Sam had lowered.

"Climb," ordered Sam.

"Climbing." One-sixth gravity, Bruce decided, was a mountaineer's heaven. He paused on the way up only to unsnap the safety line.

Bruce wanted to "leapfrog" up the remaining pitches, but Sam insisted on leading. Bruce was soon glad of it; he found three mighty differences between climbing on Earth

and climbing here; the first was low gravity, but the others were disadvantages: balance climbing was awkward in a suit, and chimney climbing, or any involving knees and shoulders, was clumsy and carried danger of tearing the suit.

They came out on raw, wild upland surrounded by pinnacles, bright against black sky. "Where to?" asked Bruce.

Sam studied the stars, then pointed southeast. "The photomaps show open country that way."

"Suits me." They trudged away; the country was too rugged to lope. They had been traveling a long time, it seemed to Bruce, when they came out on a higher place from which Earth could be seen. "What time is it?" he asked.

"Almost seventeen," Sam answered, glancing up.

"We're supposed to be back by midnight."

"Well," admitted Sam, "I expected to reach open country before now."

"We're lost?"

"Certainly not! I've blazed it. But I've never been here before. I doubt if anyone has."

"Suppose we keep on for half an hour, then turn back?"

"Fair enough." They continued for at least that; Sam conceded that it was time to turn.

"Let's try that next rise," urged Bruce.

"Okay." Sam reached the top first. "Hey, Bruce-we made it!"

Bruce joined him. "Golly!" Two thousand feet below stretched a dead lunar plain. Mountains rimmed it except to the south. Five miles away two small craters formed a figure eight.

"I know where we are," Sam announced. "That pair shows up on the photos. We slide down here, circle south about twenty miles, and back to Base. A cinch- how's your air?"

Bruce's bottle showed fair pressure; Sam's was down, he having done more work. They changed both bottles and got ready. Sam drove a piton, snapped on a ring, fastened a line to his belt and passed it through the ring. The end of the line he passed between his legs, around a thigh and across his chest, over his shoulder and to his other hand, forming a rappel seat. He began to "walk" down the cliff, feeding slack as needed.

He reached a shoulder below Bruce. "Off rappel!" he called, and recovered his line by pulling it through the ring.

Bruce rigged a rappel seat and joined him. The pitches became steeper; thereafter Sam sent Bruce down first, while anchoring him above. They came to a last high sheer drop. Bruce peered over. "Looks like here we roost."

"Maybe." Sam bent all four lines together and measured it. Ten feet of line reached the rubble at the base.

Bruce said, "It'll reach, but we have to leave the lines behind us."

Sam scowled. "Glass lines cost money; they're from Earth."

"Beats staying here."

Sam searched the cliff face, then drove a piton. "I'll lower you. When you're halfway, drive two pitons and hang the strap from one. That'll give me a changeover."

"I'm against it," protested Bruce.

"If we lost our lines," Sam argued, "we'll never hear the last of it. Go ahead."

"I still don't like it."

"Who's in charge?"

Bruce shrugged, snapped on the line and started down.

Sam stopped him presently. "Halfway. Pick me a nest."

Bruce walked the face to the right, but found only smooth wall. He worked back and located a crack. "Here's a crack," he reported, "but just one. I shouldn't drive two pitons in one crack."

"Spread 'em apart," Sam directed. "It's good rock." Reluctantly, Bruce complied. The spikes went in easily but he wished he could hear the firm ring that meant a piton was biting properly. Finished, he hung the strap. "Lower away!"

In a couple of minutes he was down and unsnapped the line. "Off belay!" He hurried down the loose rock at the base. When he reached the edge of it he called, "Sam! This plain is soft stuff."

"Okay," Sam acknowledged. "Stand clear." Bruce moved along the cliff about fifty feet and stopped to bind on skis. Then he shuffled out onto the plain, kickturned, and looked back. Sam had reached the pitons. He hung, one foot in the strap, the bight in his elbow, and recovered his line. He passed his line through the second piton ring, settled in rappel, and hooked the strap from piton to piton as an anchor. He started down.

Halfway down the remaining two hundred feet he stopped. "What's the matter?" called Bruce.

"It's reached a shackle," said Sam, "and the pesky thing won't feed through the ring. I'll free it." He raised himself a foot, then suddenly let what he had gained slip through the ring above.

To Bruce's amazement Sam leaned out at an impossible angle. He heard Sam cry "Rock!" before he understood what had happened-the piton had failed.

Sam fell about four feet, then the other piton, connected by the strap, stopped him. He caught himself, feet spread. But the warning cry had not been pointless; Bruce saw a rock settling straight for Sam's helmet. Bruce repeated the shout.

Sam looked up, then jumped straight out from the cliff. The rock passed between him and the wall; Bruce could not tell if it had struck him. Sam swung in, his feet caught the cliff-and again he leaned out crazily. The second piton had let go.

Sam again shouted, "Rock!" even as he kicked himself away from the cliff.

Bruce watched him, turning slowly over and over and gathering momentum. It seemed to take Sam forever to fall.

Then he struck.

Bruce fouled his skis and had to pick himself up. He forced himself to be careful and glided toward the spot.

Sam's frantic shove had saved him from crashing his helmet into rock. He lay buried in the loose debris, one leg sticking up ridiculously. Bruce felt an hysteri cal desire to laugh.

Sam did not stir when Bruce tugged at him. Bruce's skis got in his way; finally he stood astraddle, hauled Sam out. The boy's eyes were closed, his features slack, but the suit still had pressure. "Sam," shouted Bruce, "can you hear me?"

Sam's blood-oxygen reading was dangerously in the red; Bruce opened his intake valve wider-but the reading failed to improve. He wanted to turn Sam face down, but he had no way of straightening Sam's helmeted head, nor would he then be able to watch the blood-oxygen indicator unless he took time to remove the belt. He decided to try artificial respiration with the patient face up. He kicked off skis and belt.

The pressure in the suit got in his way, nor could he fit his hands satisfactorily to Sam's ribs. But he kept at it-swing! and one, and two and up! and one, and two and swing!

The needle began to move. When it was well into the white Bruce paused.

It stayed in the white.

Sam's lips moved but no sound came. Bruce touched helmets. "What is it, Sam?"

Faintly he heard, "Look out! Rock!"

Bruce considered what to do next.

There was little he could do until he got Sam into a pressurized room. The idea, he decided, was to get help-fast!

Send up a smoke signal? Fire a gun three times? Snap out of it, Bruce! You're on the Moon now. He wished that someone would happen along in a desert car.

He would have to try radio. He wasn't hopeful, as they had heard nothing even from the cliff. Still, he must try- He glanced at Sam's blood-oxygen reading, then climbed the rubble, extended his antenna and tried. "M'aidez!" he called. "Help! Does anybody hear me?" He tried again.

And again.

When he saw Sam move he hurried back. Sam was sitting up and feeling his left knee. Bruce touched helmets. "Sam, are you all right?"

"Huh? This leg won't work right."

"Is it broken?"

"How do I know? Turn on your radio."

"It is on. Yours is busted."

"Huh? How'd that happen?"

"When you fell."

"Fell?"

Bruce pointed. "Don't you remember?"

Sam stared at the cliff. "Uh, I don't know. Say, this thing hurts like mischief. Where's the rest of the troop?"

Bruce said slowly, "We're out by ourselves, Sam. Remember?"

Sam frowned. "I guess so. Bruce, we've got to get out of here! Help me get my skis on."

"Do you think you can ski with that knee?"

"I've got to." Bruce lifted him to his feet, then bound a ski to the injured leg while Sam balanced on the other. But when Sam tried shifting his weight he collapsed-and fainted.

Bruce gave him air and noted that the blood-oxygen reading was still okay. He untangled the ski, straightened out Sam's legs, and waited. When Sam's eyes fluttered he touched helmets. "Sam, can you understand me?"

"Yeah. Sure."

~You,,can't stay on your feet. I'll carry you."

No.

"What do you mean, 'No'?"

"No good. Rig a toboggan." He closed his eyes.

Bruce laid Sam's skis side by side. Two steel rods were clipped to the tail of each ski; he saw how they were meant to be used. Slide a rod through four ring studs, two on each ski; snap a catch-so! Fit the other rods. Remove bindings-the skis made a passable narrow toboggan.

He removed Sam's pack, switched his bottles around in front and told him to hold them. "I'm going to move you. Easy, now!" The space-suited form hung over the edges, but there was no help for it. He found he could thread a rope under the rods and lash his patient down. Sam's pack he tied on top.

He made a hitch by tying a line to the holes in the tips of the skis; there was a long piece left over. He said to Sam, "I'll tie this to my arm. If you want anything, just jerk."

Okay.

"Here we go." Bruce put on his skis, brought the hitch up to his armpits and ducked his head through, forming a harness. He grasped his ski poles and set out to the south, parallel to the cliff.

The toboggan drag steadied him; he settled down to covering miles. Earth was shut off by the cliff; the Sun gave him no estimate of hour. There was nothing but blackness, stars, the blazing Sun, a burning desert underfoot, and the towering cliff-nothing but silence and the urgency to get back to base.

Something jerked his arm. It scared him before he accounted for it. He went back to the toboggan. "What is it, Sam?"

"I can't stand it. It's too hot." The boy's face was white and sweat-covered.

Bruce gave him a shot of air, then thought about it. There was an emergency shelter in Sam's pack, just a rolled-up awning with a collapsible frame. Fifteen minutes later he was ready to move. One awning support was tied upright to the sole of one of Sam's boots; the other Bruce had bent and wedged under Sam's shoulders. The contraption looked ready to fall apart but it held. "There! Are you okay?"

"I'm fine. Look, Bruce, I think my knee is all right now. Let me try it."

Bruce felt out the knee through the suit. It was twice the size of its mate; he could feel Sam wince. He touched helmets. "You're full of hop, chum. Relax."
Bruce got back into harness.

Hours later, Bruce came across tracks. They swung in from northeast, turned and paralleled the hills. He stopped and told Sam.

"Say, Sam, how can I tell how old they are?"

"You can't. A track fifty years old looks as fresh as a new one.

"No point in following these?"

"No harm in it, provided they go in our direction."

"Roger." Bruce went back to towing. He called hopefully over the radio every few minutes and then listened. The tracks cheered him even though he knew how slim the chance was that they meant anything. The tracks swung out from the hills presently or, rather, the hills swung in, forming a bay. He took the shorter route as his predecessor had.

He should have seen what was coming. He knew that he should keep his eyes ahead, but the need to watch his instruments, the fact that he was leaning into harness,

and the circumstance that he was following tracks combined to keep his head down. He had just glanced back at Sam when he felt his skis slipping out from under him.

Automatically he bent his knees and threw his skis into a "snowplow." He might have been able to stop had not the toboggan been scooting along behind. It plowed into him; boy, skis, and toboggan went down, tangled like jackstraws.

He struggled for footing, felt the sand slip under him. He had time to see that he had been caught-in daylight!-by that lunar equivalent of quicksand, a morning glory. Then the sifting dust closed over his helmet.

He felt himself slip, slide, fall, slide again, and come softly to rest.

Bruce tried to get his bearings. Part of his mind was busy with horror, shock, and bitter self blame for having failed Sam; another part seemed able to drive ahead with the business at hand. He did not seem hurt-and he was still breathing. Heisupposed that he was buried in a morning glory; he suspected that any movement would bury him deeper.

Nevertheless he had to locate Sam. He felt his way up to his neck, pushing the soft flakes aside. The toboggan hitch was still on him. He got both hands on it and heaved. It was frustrating work, like swimming in mud. Gradually he dragged the sled to him-or himself to the sled. Presently he felt his way down the load and located Sam's helmet. "Sam! Can you hear me?"

The reply was muffled. "Yeah, Bruce!"

"Are you okay?"

"Okay? Don't be silly! We're in a morning glory!"

"Yes, I know. Sam, I'm terribly sorry!"

"Well, don't cry about it. It can't be helped."

"I didn't mean to-"

"Stow it, can't you!" Sam's voice concealed panic with anger. "It doesn't matter. We're goners-don't you realize that?"

"Huh? No, we're not! Sam, I'll get you out-I swear I will."

Sam waited before replying. "Don't kid yourself, Bruce. Nobody ever gets out of a morning glory."

"Don't talk like that. We aren't dead yet."

"No, but we're going to be. I'm trying to get used to the idea." He paused. "Do me a favor, Bruce-get me loose from these confounded skis. I don't want to die tied down."

"Right away!" In total darkness, his hands in gloves, with only memory to guide him, and with the soft, flaky dust everywhere, unlashing the load was nearly impossible. He shifted position, then suddenly noticed something-his left arm was free of the dust.

He shifted and got his helmet free as well. The darkness persisted; he fumbled at his belt, managed to locate his flashlight.

He was lying partly out and mostly in a sloping mass of soft stuff. Close overhead was a rocky roof; many feet below the pile spilled over a floor of rock. Sideways the darkness swallowed up the beam.

He still clutched the toboggan; he hauled at it, trying to drag Sam out. Failing, he burrowed back in. "Hey, Sam! We're in a cave!"

"Huh?"

"Hang on. I'll get you out." Bruce cautiously thrashed around in an attempt to get his entire body outside the dust. It kept caving down on him. Worse, his skis anchored his feet. He kicked one loose, snaked his arm in, and dragged it out. It slid to the base of the pile. He repeated the process, then rolled and scrambled to the floor, still clinging to the hitch.

He set the light on the rock floor, and put the skis aside, then heaved mightily. Sam, toboggan, and load came sliding down, starting a small avalanche. Bruce touched helmets. "Look! We're getting somewhere!"

Sam did not answer. Bruce persisted, "Sam, did you hear me?"

"I heard you. Thanks for pulling me out. Now untie me, will you?"

"Hold the light." Bruce got busy. Shortly he was saying, "There you are. Now I'll stir around and find the way out."

"What makes you think there is a way out?"

"Huh? Don't talk like that. Who ever heard of a cave with no exit?"

Sam answered slowly, "He didn't find one."

"Look." Sam shined the light past Bruce. On the rock a few feet away was a figure in an old-fashioned space suit.

Bruce took the light and cautiously approached the figure. The man was surely dead; his suit was limp. He lay at ease, hands folded across his middle, as if taking a nap. Bruce pointed the torch at the glass face plate. The face inside was lean and dark, skin clung to the bones; Bruce turned the light away.

He came back shortly to Sam. "He didn't make out
so well," Bruce said soberly. "I found these papers in his pouch. We'll take them with us ~so we can let his folks know."

"You are an incurable optimist, aren't you? Well, all right." Sam took them. There were two letters, an oldstyle flat photograph of a little girl and a dog, and some other papers. One was a driver's license for the Commonwealth of Massachusetts, dated June 1995 and signed Abner Green.

Bruce stared. "1995! Gee Whiz!"

"I wouldn't count on notifying his folks."

Bruce changed the subject. "He had one thing we can use. This." It was a coil of manila rope. "I'll hitch all the lines together, one end to your belt and one to mine. That'!! give me five or six hundred feet. If you want me, just pull."

"Okay. Watch your step."

"I'll be careful. You'll be all right?"

"Sure. I've got him for company."

"Well . . . . here goes."

One direction seemed as good as another. Bruce kept the line taut to keep from walking in a circle. The rock curved up presently and his flash showed that it curved back on itself, a dead end. He followed the wall to the left, picking his way, as the going was very rough. He found himself in a passage. It seemed to climb, but it narrowed. Three hundred feet and more out by the ropes, it narrowed so much that he was stopped.

Bruce switched off his light and waited for his eyes to adjust. He became aware of a curious sensation. It was panic.

He forced himself not to turn on the light until he was certain that no gleam lay ahead. Then thankfully he stumbled back into the main cavern.

Another series of chambers led steadily downward. He turned back at a black and bottomless hole.

The details varied but the answers did not: At the furthest reach of the lines, or at some impassable ob
stacle, he would wait in the dark-but no gleam of light ever showed. He went back to Sam after having covered, he estimated, about 1800.

Sam had crawled up to the heap of fallen dust. Bruce hurried to him. "Sam, are you all right?"

"Sure. I just moved to a feather bed. That rock is terribly cold. What did you find?"

"Well, nothing yet," he admitted. He sat down in the flaky pile and leaned toward Sam. "I'll start again in a moment."

"How's your air supply?" asked Sam.

"Uh, I'll have to crack my reserve bottle soon. How's yours?"

"Mine is throttled to the limit. You're doing all the work; I can save my reserve bottle for you-I think."

Bruce frowned. He wanted to protest, but the gesture wouldn't make sense. They would have to finish up all even; naturally he was using much more air than was Sam.

One thing was sure-time was running out. Finally he said, "Look, Sam-there's no end of those caves and passages. I couldn't search them all with all the air in Luna City."

"I was afraid so."

"But we know there's a way out right above us."

"You mean in."

"I mean out. See here-this morning glory thing is built like an hour glass; there's an open cone on top, and this pile of sand down below. The stuff trickled down through a hole in the roof and piled up until it choked the hole."

"Where does that get you?"

"Well, if we dug the stuff away we could clear the hole."

"It would keep sifting down."

"No, it wouldn't, it would reach a point where there wasn't enough dust close by to sift down any further- there would still be a hole."

Sam considered it. "Maybe. But when you tried to
climb up it would collapse back on you. That's the bad part about a morning glory, Bruce; you can't get a foothold."

"The dickens I can't! If I can't climb a slope on skis without collapsing it, when I've got my wits about me and am really trying, why, you can have my reserve air bottle."

Sam chuckled. "Don't be hasty. I might hold you to it. Anyhow," he added, "I can't climb it."

"Once I get my feet on the level, I'll pull you out like a cork, even if you're buried. Time's a-wastin'." Bruce got busy.

Using a ski as a shovel he nibbled at the giant pile. Every so often it would collapse down on him. It did not discourage him; Bruce knew that many yards of the stuff would have to fall and be moved back before the hole would show.

Presently he moved Sam over to the freshly moved waste. From there Sam held the light; the work went faster. Bruce began to sweat. After a while he had to switch air bottles; he sucked on his water tube and ate a march ration before getting back to work.

He began to see the hole opening above him. A great pile collapsed on him; he backed out, looked up, then went to Sam. "Turn out the light!"

There was no doubt; a glimmer of light filtered down. Bruce found himself pounding Sam and shouting. He stopped and said, "Sam, old boy, did lever say what patrol I'm from?"

"No. Why?"

"Badger Patrol. Watch me dig!" He tore into it. Shortly sunlight poured into the hole and reflected dimly around the cavern. Bruce shoveled until he could see a straight rise from the base of the pile clear to the edge of the morning glory high above them. He decided that the opening was wide enough to tackle.

He hitched himself to Sam with the full length of all the glass ropes and then made a bundle of Sam's pack save air and water bottles, tied a bowline on Sam's uninjured foot, using the manila line and secured the bundle to the end of that line. He planned to drag Sam out first, then the equipment. Finished, he bound on skis.

Bruce touched helmets. "This is it, pal. Keep the line clear of the sand."

Sam grabbed his arm. "Wait a minute."

"What's the matter?"

"Bruce-if we don't make it, I just want to say that you're all right."

"Uh . . . oh, forget it. We'll make it." He started up. A herringbone step suited the convex approach to the hole. As Bruce neared the opening he shifted to side-step to fit the narrow passage and the concave shape of the morning glory above. He inched up, transferring his weight smoothly and gradually, and not remaining in one spot too long. At last his head, then his whole body, were in sunshine; he was starting up the morning glory itself.

He stopped, uncertain what to do. There was a ridge above him, where the flakes had broken loose when he had shoveled away their support. The break was much too steep to climb, obviously unstable. He paused only a moment as he could feel his skis sinking in; he went forward in half side-step, intending to traverse past the unstable formation.

The tow line defeated him. When Bruce moved sideways, the line had to turn a corner at the neck of the hole. It brushed and then cut into the soft stuff. Bruce felt his skis slipping backwards; with cautious haste he started to climb, tried to ride the slipping mass and keep above it. He struggled as the flakes poured over his skis. Then he was fouled, he went down, it engulfed him.

Again he came to rest in soft, feathery, darkness. He lay quiet, nursing his defeat, before trying to get out. He hardly knew which way was up, much less which way was out. He was struggling experimentally when he felt a tug on his belt. Sam was trying to help him.

A few minutes later, with Sam's pull to guide him, Bruce was again on the floor of the ca\'e. The only light came from the torch in Sam's hand; it was enough to show that the pile choking the hole was bigger than ever.

Sam motioned him over. "Too bad, Bruce," was all he said.

Bruce controlled his choking voice to say, "I'll get busy as soon as I catch my breath."

"Where's your left ski?"

"Huh? Oh! Must have pulled off. It'll show up when I start digging."

"Hmmm .. . how much air have you?"

"Uh?" Bruce looked at his belt. "About a third of a bottle."

"I'm breathing my socks. I've got to change."

"Right away!" Bruce started to make the switch; Sam pulled him down again.

"You take the fresh bottle, and give me your bottle."

"But-"

"No 'buts' about it," Sam cut him off. "You have to do all the work; you've got to take the full tank."

Silently Bruce obeyed. His mind was busy with arithmetic. The answer always came out the same; he knew with certainty that there was not enough air left to permit him again to perform the Herculean task of moving that mountain of dust.

He began to believe that they would never get out. The knowledge wearied him; he wanted to lie down beside the still form of Abner Green and, like him, not struggle at the end.

However he could not. He knew that, for Sam's sake, he would have to shovel away at that endless sea of sand, until he dropped from lack of oxygen. Listlessly he took off his remaining ski and walked toward his task.

Sam jerked on the rope.

Bruce went back. "What's got into you, kid?" Sam demanded.

"Nothing. Why?"

"It's got you whipped."

"I didn't say so."

"But you think so. I could see it. Now you listen! You convinced me that you could get us out-and, by Jimmy! you're going to! You're just cocky enough to be the first guy to whip a morning glory and you can do it. Get your chin up!"

Bruce hesitated. "Look, Sam, I won't quit on you, but you might as well know the truth: there isn't air enough to do it again."

"Figured that out when I saw the stuff start to crumble.

"You knew? Then if you know any prayers, better say them."

Sam shook his arm. "It's not time to pray; it's time to get busy."

"Okay." Bruce started to straighten up.

"That's not what I meant."

"Huh?"

"There's no point in digging. Once was worth trying; twice is wasting oxygen."

"Well, what do you want me to do?"

"You didn't try all the ways out, did you?"

"No." Bruce thought about it. "I'll try again, Sam. But there isn't air enough to try them all."

"You can search longer than you can shovel. But don't search haphazardly; search back toward the hills. Anywhere else will be just another morning glory; we need to come out at the hills; away from the sand.

"Uh. . . look, Sam, where are the hills? Down here you can't tell north from next week."

"Over that way," Sam pointed.

"Huh? How do you know?"

"You showed me. When you broke through I could tell where the Sun was from the angle of the light."

"But the Sun is overhead."

"Was when we started. Now it's fifteen, twenty de
grees to the west. Now listen: these caves must have been big blow holes once, gas pockets. You search off in that direction and find us a blow hole that's not choked with sand."

"I'll do my darndest!"

"How far away were the hills when we got caught?"

Bruce tried to remember. "Half a mile, maybe."

"Check. You won't find what we want tied to me with five or six hundred feet of line. Take that pad of paper in my pouch. Blaze your way-and be darn sure you blaze enough!"

"I will!"

"Attaboy! Good luck."

Bruce stood up.

It was the same tedious, depressing business as before. Bruce stretched the line, then set out at the end of it, dropping bits of paper and counting his steps. Several times he was sure that he was under the hills, only to come to an impasse. Twice he skirted the heaps that marked other morning glorys. Each time he retraced his steps he gathered up his blazes, both to save paper and to keep from confusing himself.

Once, he saw a glimmer of light and his heart pounded-but it filtered down from a hole too difficult even for himself and utterly impossible for Sam.

His air got low; he paid no attention, other than to adjust his mix to keep it barely in the white. He went on searching.

A passage led to the left, then down; he began to doubt the wisdom of going further and stopped to check the darkness. At first his eyes saw nothing, then it seemed as if there might be a suggestion of light ahead. Eye fatigue? Possibly. He went another hundred feet and tried again. It was light!

Minutes later he shoved his shoulders up through a twisted hole and gazed out over the burning plain.

"Hi!" Sam greeted him. "I thought you had fallen down a hole.

"Darn near did. Sam, I found it!"

"Knew you would. Let's get going."

"Right. I'll dig out my other ski."

"Nope."

"Why not?"

"Look at your air gauge. We aren't going anywhere on skis."

"Huh? Yeah, I guess not." They abandoned their loads, except for air and water bottles. The dark trek was made piggy-back, where the ceiling permitted. Some places

Bruce half dragged his partner. Other places they threaded on hands and knees with Sam pulling his bad leg painfully behind him.

Bruce climbed out first, having slung Sam in a bowline before he did so. Sam gave little help in getting out; once they were above ground Bruce picked him up and set him against a rock. He then touched helmets. "There, fellow! We made it!"

Sam did not answer.

Bruce peered in; Sam's features were slack, eyes half closed. A check of his belt told why; the blood-oxygen indicator showed red.

Sam's intake valve was already wide open; Bruce moved fast, giving himself a quick shot of air, then transferring his bottle to Sam. He opened it wide.

He could see Sam's pointer crawl up even as his own dropped toward the red. Bruce had air in his suit for three or four minutes if he held still.

He did not hold still. He hooked his intake hose to the manifold of the single bottle now attached to Sam's suit and opened his valve. His own indicator stopped dropping toward the red. They were Siamese twins now, linked by one partly-exhausted bottle of utterly necessary gas. Bruce put an arm around Sam, settled Sam's head on his shoulder, helmet to helmet, and throttled down both valves until each was barely in the white. He gave Sam more margin than himself, then settled down to wait. The rock under them was in shadow, though the Sun still baked the plain. Bruce looked out, searching for anyone or anything, then extended his aerial. "M'aidez!" he called. "Help us! We're lost."

He could hear Sam muttering. "May day!" Sam echoed into his dead radio. "May day! We're lost."

Bruce cradled the delirious boy in his arm and repeated again, "M'aidez! Get a bearing on us." He paused, then echoed, "May day! May day!"

After a while he readjusted the valves, then went back to repeating endlessly, "May day! Get a bearing on us."

He did not feel it when a hand clasped his shoulder. He was still muttering "May day!" when they dumped him into the air lock of the desert car.

Mr. Andrews visited him in the infirmary at Base Camp. "How are you, Bruce?"

"Me? I'm all right, sir. I wish they'd let me get up."

"My instructions. So I'll know where you are." The Scoutmaster smiled; Bruce blushed.

"How's Sam?" he asked.

"He'll get by. Cold burns and a knee that will bother him a while. That's all."

"Gee, I'm glad."

"The troop is leaving. I'm turning you over to Troop Three, Mr. Harkness. Sam will go back with the grub car.

"Uh, I think I could travel with the Troop, sir."

"Perhaps so, but I want you to stay with Troop Three. You need field experience."

"Uh-" Bruce hesitated, wondering how to say it. "Mr. Andrews?"

"Yes?"

"I might as well go back. I've learned something. You were right. A fellow can't get to be an old Moon hand in three weeks. Uh . . . I guess I was just conceited."

"Is that all?"

"Well-yes, sir."

"Very well, listen to me. I've talked with Sam and with Mr. Harkness. Mr. Harkness will put you through a course of sprouts; Sam and I will take over when you get back. You plan on being ready for the Court of Honor two weeks from Wednesday." The Scoutmaster added, "Well?"

Bruce gulped and found his voice. "Yes, sir!"

PANDORA'S BOX

Once opened, the box could never be closed. But after the myriad swarming Troubles came Hope.

Science fiction is not prophecy. It often reads as if it were prophecy; indeed the practitioners of this odd genre (pun intentional-I won't do it again) of fiction usually strive hard to make their stories sound as if they were true pictures of the future. Prophecies.

Prophesying is what the weatherman does, the race track tipster, the stock market adviser, the fortuneteller who reads palms or gazes into a crystal. Each one is predicting the future-sometimes exactly, sometimes in vague, veiled, or ambiguous language, sometimes simply with a claim of statistical probability, but always with a claim seriously made of disclosing some piece of the future.

This is not at all what a science fiction author does. Science fiction is almost always laid in the future-or at least in a fictional possible-future-and is almost invariably deeply concerned with the shape of that future. But the method is not prediction; it is usually extrapolation and/or speculation. Indeed the author is not required to (and usually does not) regard the fictional "future" he has chosen to write about as being the events most likely to come to pass; his purpose may have nothing to do with the probability that these storied events may happen.

"Extrapolation" means much the same in fiction
writing as it does in mathematics: exploring a trend. It means continuing a curve, a path, a trend into the future, by extending its present direction and continuing the shape it has displayed in its past performance-i.e., if it is a sine curve in the past, you extrapolate it as a sine curve in the future, not as an hyperbola, nor a Witch of Agnesi, and most certainly not as a tangent straight line.

"Speculation" has far more elbowroom than extrapolation; it starts with a "What if?"-and the new factor thrown in by the what-if may be both wildly improbable and so revolutionary in effect as to throw a sine-curve trend (or a yeast-growth trend, or any trend) into something unrecognizably different. What if little green men land on the White House lawn and invite us to join a Galactic union?-or big green men land and enslave us and eat us? What if we solve the problem of immortality? What if New York City really does go dry? And not just the present fiddlin' shortage tackled by fiddlin' quarter-measures-can you imagine a man being lynched for wasting an ice cube? Living, as I do, in a state (Colorado-1965) which has just two sorts of water, too little and too much-we just finished seven years of drought with seven inches of rain in two hours, and one was about as disastrous as the other-I find a horrid fascination in Frank Herbert's

Dune World, in Charles Einstein's The Day New York Went Dry, and in stories about Bible-type floods such as S. Fowler Wright's Deluge.

Most science fiction stories use both extrapolation and speculation. Consider "Blowups Happen," elsewhere in this volume. It was written in 1939, updated very slightly for book publication just after World War II by inserting some words such as "Manhattan Project" and "Hiroshima," but not rewritten, and is one of a group of stories published under the pretentious collective title of The History of the Future (!) (an editor's title, not mine!)-which certainly sounds like prophecy.

I disclaim any intention of prophesying; Iwrote that story for the sole purpose of making money to pay off a mortgage and with the single intention of entertaining the reader. As prophecy the story falls flat on its silly face-any tenderfoot Scout can pick it to pieces- but I think it is still entertaining as a story, else it would not be here; I have a business reputation to protect and wish to continue making money. Nor am I ashamed of this motivation. Very little of the great literature of our heritage arose solely from a wish to "create art"; most writing, both great and not-sogreat, has as its proximate cause a need for money combined with an aversion to, or an inability to perform, hard "honest labor." Fiction writing offers a legal and reasonably honest way out of this dilemma.

A science fiction author may have, and often does have, other motivations in addition to pursuit of profit. He may wish to create "art for art's sake," he may want to warn the world against a course he feels to be disastrous (Orwell's 1984, Huxley's Brave New World- but please note that each is intensely entertaining, and that each made stacks of money), he may wish to urge the human race toward a course which he considers desirable (Bellamy's Looking Backwards, Wells' Men Like Gods), he may wish to instruct, or uplift, or even to dazzle. But the science fiction writer-any fiction writer-must keep entertainment consciously in mind as his prime purpose . . . or he may find himself back dragging that old cotton sack.

If he succeeds in this purpose, his story is likely to remain gripping entertainment long years after it has turned out to be false "prophecy." H. G. Wells is perhaps the greatest science fiction author of all time- and his greatest science fiction stories were written around sixty years ago (i.e., about 1895). . . under the whip. Bedfast with consumption, unable to hold a job, flat broke, paying alimony-he had to make money somehow, and writing was the heaviest work he could manage. He was clearly aware (see his autobiography)
that to stay alive he must be entertaining. The result was a flood of some of the most brilliant speculative stories about the future ever written. As prophecy they are all hopelessly dated . . . which matters not at all; they are as spellbinding now as they were in the Gay 'Nineties and the Mauve Decade.

Try to lay hands on his The Sleeper Awakes. The gadgetry in it is ingenious-and all wrong. The projected future in it is brilliant-and did not happen. All of which does not sully the story; it is a great story of love and sacrifice and blood-chilling adventure set in a matrix of mind-stretching speculation about the nature of Man and his Destiny. I read it first in 1923, and at least a dozen times since . . . and still reread it whenever I get to feeling uncertain about just how one does go about the unlikely process of writing fiction for entertainment of strangers-and again finding myself caught up in the sheer excitement of Wells' story.

"Solution Unsatisfactory" herein is a consciously Weilsian story. No, no, I'm not claiming that it is of H. G. Wells' quality-its quality is for you to judge, not me. But it was written by the method which Wells spelled out for the speculative story: Take one, just one, basic new assumption, then examine all its consequences-but express those consequences in terms of human beings. The assumption I chose was the "Absolute Weapon"; the speculation concerns what changes this forces on mankind. But the "history" the story describes simply did not happen.

However the problems discussed in this story are as fresh today, the issues just as poignant, for the grim reason that we have not reached even an "unsatisfactory" solution to the problem of the Absolute Weapon; we have reached no so1ution~

In the years that have passed since I wrote that story (in 1940) the world situation has grown much worse. Instead of one Absolute Weapon there arc now at least free distinct types---an "Absolute Weapon being de~
fined as one against which there is no effective defense and which kills indiscriminately over a very wide area. The earliest of the five types, the A-bomb, is now known to be possessed by at least five nations; at least twenty-five other nations have the potential to build them in the next few years.

But there is a possible sixth type. Earlier this year (l965-R.A.H.) I attended a seminar at one of the nation's new think-factories. One of the questions discussed was whether or not a "Doomsday Bomb" could be built-a single weapon which would destroy all life of all sorts on this planet; one weapon, not an all-out nuclear holocaust involving hundreds of thousands of ICBMs. No, this was to be a world-wrecker of the sort Dr. E. E. Smith used to use in his interstellar sagas back in the days when SF magazines had bug-eyed monsters on the cover and were considered lowbrow, childish, fantastic.

The conclusions reached were: Could the Doomsday Machine be built?-yes, no question about it. What would it cost?-quite cheap.

A seventh type hardly seems necessary.

And that makes the grimness of "Solution Unsatisfactory" seem more like an Oz book in which the most harrowing adventures always turn out happily.

"Searchlight" is almost pure extrapolation, almost no speculation. The gadgets in it are either hardware on the shelf, or hardware which will soon be on the shelf because nothing is involved but straightforward engineering development. "Life-Line" (my first story) is its opposite, a story which is sheer speculation and either impossible or very highly improbable, as the What-If postulate will never be solved-I think. I hope. But the two stories are much alike in that neither depends on when it was written nor when it is read. Both are independent of any particular shape to history; he~ are timeless.
Free Men' is another timeless story. As told, it
looks like another "after the blowup" story-but it is not. Although the place is nominally the United States and the time (as shown by the gadgetry) is set in the not-distant future, simply by changing names of persons and places and by inserting other weapons and other gadgets this story could be any country and any time in the past or future-or could even be on another planet and concern a non-human race. But the story does also apply here-and-now, so I told it that way.

"Pandora's Box" was the original title of an article researched and written in 1949 for publication in 1950, the end of the half-century. Inscrutable are the ways of editors: it appeared with the title "Where To?" and purported to be a nonfiction prophecy

concerning the year 2000 A.D. as seen from 1950. (I agree that a science fiction writer should avoid marijuana, prophecy, and time payments-but I was tempted by a soft rustle.)

Our present editor (1965) decided to use this article, but suggested that it should be updated. Authors who wish to stay in the business listen most carefully to editors' suggestions, even when they think an editor has been out in the sun without a hat; I agreed.

And reread "Where To?" and discovered that our editor was undeniably correct; it needed updating. At least.

But at last I decided not to try to conceal my bloopers. Below is reproduced, unchanged, my predictions of fifteen years back. But here and there through the article I have inserted signs for footnotes-like this:
(z)- and these will be found at the end of the 1950 article . . . calling attention to bloopers and then forthrightly excusing myself by rationalizing how anyone, even Nostradamus, would have made the same mistake. . . hedging my bets in other cases, or chucking in brand-new predictions and carefully laying them farther in the future than I am likely to live

and, in some cases, crowing loudly about successful predictions. (Addendum 1979: I have interpolated the later comments, and marked each item 1950, or 1965, or 1980.) So-

WHERE TO?

A bloomin', foolish sparrow Built his nest in a spout, And along-
-came a building inspector, looked over the site, and the plans, and okayed them, after requiring the sparrow to buy eleven different licenses totalling 18% of the sparrow's building budget, plus something called special service, and along-

-the bleedin' rains came, And washed the sparrow out.

Again the foolish sparrow, Built his nest in the spout, And again-
-came that building inspector, bawled out the sparrow for failing to get special licenses and permits covering typhoons, sun spots, and ice ages, required him to buy seventeen permits and/or licenses and appear before boards controlling zoning, economic impact, ecological protection, energy conservation, and community esthetics, plus something called "very special service"-and a second mortgage, and along-
-the bleedin' rains came,

And washed the sparrow out. (Around again.., and again.., and-)
1950 Where To?

Most science fiction consists of big-muscled stories about adventures in space, atomic wars, invasions by extra-terrestrials, and such. All very well-but now we will take time out for a look at ordinary home life half a century hence.

Except for tea leaves and other magical means, the only way to guess at the future is by examining the present in the light of the past. Let's go back half a century and visit your grandmother before we attempt to visit your grandchildren.

1900: Mr. McKinley is President and the airplane has not yet been invented. Let's knock on the door of that house with the gingerbread, the stained glass, and the cupola.

The lady of the house answers. You recognize her- your own grandmother, Mrs. Middleclass. She is almost as plump as you remember her, for she "put on some good, healthy flesh" after she married.

She welcomes you and offers coffee cake, fresh from her modern kitchen (running water from a hand pump; the best coal range Pittsburgh ever produced). Everything about her house is modern-hand-painted china, souvenirs from the Columbian Exposition, beaded portières, shining baseburner stoves, gas lights, a telephone on the wall.

There is no bathroom, but she and Mr. Middleclass
are thinking of putting one in. Mr. Middleclass's mother calls this nonsense, but your grandmother keeps up with the times. She is an advocate of clothing reform, wears only one petticoat, bathes twice a week, and her corsets are guaranteed rust proof. She has been known to defend female suffrage-but not in the presence of Mr. Middleclass.

Nevertheless, you find difficulty in talking with her. Let's jump back to the present and try again.

The automatic elevator takes us to the ninth floor, and we pick out a door by its number, that being the only way to distinguish it.

"Don't bother to ring," you say? What? It's your door and you know exactly what lies beyond it- Very well, let's move a half century into the future and try another middle class home.

It's a suburban home not two hundred miles from the city. You pick out your destination from the air while the cab is landing you-a cluster of hemispheres that makes you think of the houses Dorothy found in
Oz.

You set the cab to return to its hangar and go into the entrance hall. You neither knock nor ring. The screen has warned them before you touched down on the landing flat and the autobutler's transparency is shining with: PLEASE RECORD A MESSAGE.

Before you can address the microphone a voice calls out, "Oh, it's you! Come in, come in." There is a short wait, as your hostess is not at the door. The autobutler flashed your face to the patio-where she was reading and sunning herself-and has relayed her voice back to you.

She pauses at the door, looks at you through oneway glass, and frowns slightly; she knows your oldfashioned disapproval of casual nakedness. Her kindness causes her to disobey the family psychiatrist; she grabs a robe and covers herself before signaling the door to open.

The psychiatrist was right; you have thus been
classed with strangers, tradespeople, and others who are not family intimates. But you must swallow your annoyance; you cannot object to her wearing clothes when you have sniffed at her for not doing so.

There is no reason why she should wear clothes at home. The house is clean-not somewhat clean, but clean-and comfortable. The floor is warm to bare feet; there are no unpleasant drafts, no cold walls. All dust is precipitated from the air entering this house. All textures, of floor, of couch, of chair, are comfortable to bare skin. Sterilizing ultra-

violet light floods each room whenever it is unoccupied, and, several times a day, a "whirlwind" blows house-created dust from all surfaces and whisks it out. These auto services are unobstrusive because automatic cut-off switches prevent them from occurring whenever a mass in a room is radiating at blood temperature.

Such a house can become untidy, but no~ dirty. Five minutes of straightening, a few swipes at children's fingermarks, and her day's housekeeping is done. Oftener than sheets were changed in Mr. McKinley's day, this housewife rolls out a fresh layer of sheeting on each sitting surface and stuffs the discard down the oubliette. This is easy; there is a year's supply on a roll concealed in each chair or couch. The tissue sticks by pressure until pulled loose and does not obscure the pattern and color.

You go into the family room, sit down, and remark on the lovely day. "Isn't it?" she answers. "Come sunbathe with me."

The sunny patio gives excuse for bare skin by anyone's standards; thankfully she throws off the robe and stretches out on a couch. You hesitate a moment. After all, she is your own grandchild, so why not? You undress quickly, since you left your outer wrap and shoes at the door (only barbarians wear street shoes in a house) and what remains is easily discarded. Your grandparents had to get used to a mid-century beach. It was no easier for them.

On the other hand, their bodies were wrinkled and old, whereas yours is not. The triumphs of endocrinology, of cosmetics, of plastic surgery, of figure control in every way are such that a woman need not change markedly from maturity until old age. A woman can keep her body as firm and slender as she wishes-and most of them so wish. This has produced a paradox:
the United States has the highest percentage of old people in all its two and a quarter centuries, yet it seems to have a larger proportion of handsome young women than ever before.

(Don't whistle, son! That's your grandmother-)

This garden is half sunbathing patio, complete with shrubs and flowers, lawn and couches, and half swimming pool. The day, though sunny, is quite cold-but not in the garden, and the pool is not chilly. The garden appears to be outdoors, but is not; it is covered by a bubble of transparent plastic, blown and cured on the spot. You are inside the bubble; the sun is outside; you cannot see the plastic.

She invites you to lunch; you protest. "Nonsense!" she answers, "I like to cook." Into the house she goes. You think of following, but it is deliciously warm in the March sunshine and you are feeling relaxed to be away from the city. You locate a switch on the side of the couch, set it for gentle massage, and let the couch knead your troubles away. The couch notes your heart rate and breathing; as they slow, so does it. As you fall asleep it stops.

Meanwhile your hostess has been "slaving away over a hot stove." To be precise, she has allowed a menu selector to pick out an 800-calory, 4-ration-point luncheon. It is a random-choice gadget, somewhat like a slot machine, which has in it the running inventory of her larder and which will keep hunting until it turns up a balanced meal. Some housewives claim that it takes the art out of cookery, but our hostess is one of many who have accepted it thankfully as an endless source of new menus. Its choice is limited today as it

has been three months since she has done grocery shopping. She rejects several menus; the selector continues patiently to turn up combinations until she finally accepts one based around fish disguised as lamb chops.

Your hostess takes the selected items from shelves or the freezer. All are prepared; some are pre-cooked. Those still to be cooked she puts into her-well, her "processing equipment," though she calls it a "stove." Part of it traces its ancestry to diathermy equipment; another feature is derived from metal enameling processes. She sets up cycles, punches buttons, and must wait two or three minutes for the meal to cook. She spends the time checking her ration accounts.

Despite her complicated kitchen, she doesn't eat as well as her great grandmother did-too many people and too few acres.

Never mind; the tray she carries out to the patio is well laden and beautiful. You are both willing to nap again when it is empty. You wake to find that she has burned the dishes and is recovering from her "exertion" in her refresher. Feeling hot and sweaty from your nap you decide to use it when she comes out. There is a wide choice offered by the 'fresher, but you limit yourself to a warm shower growing gradually cooler, followed by warm air drying, a short massage, spraying with scent, and dusting with powder. Such a simple routine is an insult to a talented machine.

Your host arrives home as you come out; he has taken a holiday from his engineering job and has had the two boys down at the beach. He kisses his wife, shouts, "Hi, Duchess!" at you, and turns to the video, setting it to hunt and sample the newscasts it has stored that day. His wife sends the boys in to 'fresh themselves then says, "Have a nice day, dear?"

He answers, "The traffic was terrible. Had to make the last hundred miles on automatic. Anything on the phone for me?"

"Weren't you on relay?"

"Didn't set it. Didn't want to be bothered." He steps to the house phone, plays back his calls, finds nothing he cares to bother with-but the machine goes ahead and prints one message; he pulls it out and tears it off.

"What is it?" his wife asks.

"Telestat from Luna City-from Aunt Jane."

"What does she say?"

"Nothing much. According to her, the Moon is a great place and she wants us to come visit her."

"Not likely!" his wife answers. "Imagine being shut up in an air-conditioned cave."

"When you are Aunt Jane's age, my honey lamb, and as frail as she is, with a bad heart thrown in, you'll go to the Moon and like it. Low gravity is not to be sneezed at-Auntie will probably live to be a hundred and twenty, heart trouble and all."

"Would you go to the Moon?" she asks.

"If I needed to and could afford it." He turns to you. "Right?"

You consider your answer. Life still looks good to you-and stairways are beginning to be difficult. Low gravity is attractive even though it means living out your days at the Geriatrics Foundation on the Moon. "It might be fun to visit," you answer. "One wouldn't have to stay."

Hospitals for old people on the Moon? Let's not be silly- Or is it silly? Might it not be a logical and necessary outcome of our world today?

Space travel we will have, not fifty years from now, but much sooner. It's breathing down our necks. As for geriatrics on the Moon, for most of us no price is too high and no amount of trouble is too great to extend the years of our lives. It is possible that low gravity (one sixth, on the Moon) may not lengthen lives; nevertheless it may-we don't know yet-and it will most certainly add greatly to comfort on reaching that inevitable age when the burden of dragging around
one's body is almost too much, or when we would otherwise resort to an oxygen tent to lessen the work of a worn-out heart.

By the rules of prophecy, such a prediction is probable, rather than impossible.

But the items and gadgets suggested above are examples of timid prophecy.

What are the rules of prophecy, if any?

Look at the graph shown here. The solid curve is what has been going on this past century. It represents many things-use of power, speed of transport, numbers of scientific and technical workers, advances in communication, average miles traveled per person per year, advances in mathematics, the rising curve of knowledge. Call it the curve of human achievement.

What is the correct way to project this curve into the future? Despite everything, there is a stubborn "common sense" tendency to project it along dotted line
number one-like the patent office official of a hundred years back who quit his job "because everything had already been invented." Even those who don't expect a slowing up at once tend to expect us to reach a point of diminishing returns (dotted line number two).

Very daring minds are willing to predict that we will continue our present rate of progress (dotted line number three-a tangent).

But the proper way to project the curve is dotted line number four-for there is no reason, mathematical, scientific, or historical, to expect that curve to flatten out, or to reach a point of diminishing returns, or simply to go on as a tangent. The correct projection, by all facts known today, is for the curve to go on up indefinitely with increasing steepness.

The timid little predictions earlier in this article actually belong to curve one, or, at most, to curve two. You can count on the changes in the next fifty years at least eight times as great as the changes of the past fifty years.

The Age of Science has not yet opened.

AXIOM: A "nine-days' wonder" is taken as a matter of course on the tenth day.

AXIOM: A "common sense" prediction is sure to err on the side of timidity.

AXIOM: The more extravagant a prediction sounds the more likely it is to come true.

So let's have a few free-swinging predictions about the future.

Some will be wrong-but cautious predictions are sure to be wrong.

1. 1950 Interplanetary travel is waiting at your front door-C.O.D. It's yours when you pay for it.

1965 And now we are paying for it and the cost is high. But, for reasons understandable only to bureaucrats, we have almost halted development of a nu

clear-powered spacecraft when success was in sight. Never mind; if we don't another country will. By the end of this century space travel will be cheap.

1980 And now the Apollo-Saturn Man-on-the-Moon program has come and gone, and all we have now in the U.S.A. as a new man-in-space program is the Space Shuttle-underfinanced and two years behind schedule. See my article SPINOFF on page 500 of this book, especially the last two pages.

Is space travel dead?No, because the United States is not the only nation on this planet. Today both Japan and Germany seem to be good bets-countries aware that endless wealth is out there for the taking. USSR seems to be concentrating on the military aspects rather than on space travel, and the People's Republic of China does not as yet appear to have the means to spare-but don't count out either nation; the potential is there, in both cases.

And don't count out the United States! Today most of our citizens regard the space program as a boondoggle (totally unaware that it is one of the very few Federal programs that paid for themselves, manyfold). But we are talking about twenty years from now, 2000 AD. Let's see it in perspective. Exactly thirty years ago George Pal and Irving Pichel and I-and ca. 200 others-were making the motion picture DESTINATION MOON. I remember sharply that most of the people working on that film started out thinking that it was a silly fantasy, an impossibility. I had my nose rubbed in it again and again, especially if the speaker was unaware that I had written it. (Correction: written the first version of it. By the time it was filmed, even the banker's wife was writing dialog.)

As for the general public- A trip to the Moon? Nonsense!

That was thirty years ago, late 1949.

Nineteen years and ten months later Apollo 11 landed on the Moon.

Look again at the curves on page 322. With respect to space travel (and industry, power, and colonization) we have dropped to that feeble curve #1-but we could shift back to curve #4 overnight if our President and/or Congress got it through their heads that not one but all of our crisis problems can be solved by exploiting space. Employment, inflation, pollution, population, energy, running out of nonrenewable resources- there is pie in the sky for the U.S.A. and for the entire planet including the impoverished "Third World."

I won't try to prove it here. See THE THIRD INDUSTRIAL REVOLUTION by G. Harry Stine, 1979, Ace Books, 51 Madison Avenue, New York, NY 10010, and see A STEP FARTHER OUT by Dr. Jerry Pournelle, also Ace Books 1979-and accept my assurance that I have known both authors well for twenty-odd years, know that each has years of experience in aerospace, and that each has both the formal education and the continuing study-and the horse sense!-to be true experts in this matter.

From almost total disbelief about space travel (99.9% +)to a landing on the Moon in twenty years from President Kennedy's announcement of intention to that Lunar landing in only seven years . . . and still twenty years to go until the year 2000-we can still shift to curve #4 (and get rich) almost overnight. By 2000 A.D. we could have O'Neill colonies, self-supporting and exporting power to Earth, at both Lagrange-4 and Lagrange-5, transfer stations in orbit about Earth and around Luna, a permanent base on Luna equipped with an electric catapult-and a geriatrics retirement home.

However, I am not commissioned to predict what we could do but to predict (guess) what is most likely to happen by 2000 A.D.

Our national loss of nerve, our escalating anti-intellectualism, our almost total disinterest in anything that does not directly and immediately profit us, the shambles of public education throughout most of our nation (especially in New York and California) cause
me to predict that our space program will continue to dwindle. It would not surprise me (but would distress me mightily!) to see the Space Shuttle canceled.
In the meantime some other nation or group will start exploiting space-industry, power, perhaps Lagrange-point colonies-and suddenly we will wake up to the fact that we have been left at the post. That happened to us in '57; we came up from behind and passed the competition. Possibly we will do it again. Possibly- But I am making no cash bets.

2. 1950 Contraception and control of disease is revising relations between the sexes to an extent that will change our entire social and economic structure.

1965 This trend is so much more evident now than it was fifteen years ago that I am tempted to call it a fulfilled prophecy. Vast changes in sex relations are evident all around us-with the oldsters calling it "moral decay" and the youngsters ignoring them and taking it for granted. Surface signs: books such as Sex and the Single Girl are smash hits; the formerlytaboo four-letter words are now seen both in novels and popular magazines; the neologism "swinger" has come into the language; courts are conceding that nudity and semi-nudity are now parts of the cultural mores. But the end is not yet; this revolution will go much farther and is now barely started.

The most difficult speculation for a science fiction writer to undertake is to imagine correctly the secondary implications of a new factor. Many people correctly anticipated the coming of the horseless carriage; some were bold enough to predict that everyone would use them and the horse would virtually disappear. But I know of no writer, fiction or nonfiction, who saw ahead of time the vast change in the courting and mating habits of Americans which would result primarily from the automobile-a change which the diaphragm and the oral contraceptive merely con-
firmed. So far as I know, no one even dreamed of the change in sex habits the automobile would set off.

There is some new gadget in existence today which will prove to be equally revolutionary in some other way equally unexpected. You and I both know of this gadget, by name and by function-but we don't know which one it is nor what its unexpected effect will be. This is why science fiction is not prophecy-and why fictional speculation can be so much fun both to read and to write.

1980 (No, I still don't know what that revolutionary gadget is-unless it is the computer chip.) The sexual revolution: it continues apace-FemLib, GayLib, single women with progeny and never a lifted eyebrow, staid old universities and colleges that permit unmarried couples to room together on campus, group marriages, "open" marriages, miles and miles of "liberated" beaches. Most of this can be covered by one sentence: What used to be concealed is now done openly. But sexual attitudes are in flux; the new ones not yet cultural mores.

But I think I see a trend, one that might jell by 2000 A.D. The racial biological function of "family" is the protection of children and pregnant women. To accomplish

that, family organization must be rewarding to men as well .. . and I do not mean copulation. There is a cynical old adage covering that: "Why keep a cow when milk is so cheap?" A marriage must offer its members emotional, spiritual, and physical comforts superior to those to be found in living alone if that prime function is to be accomplished.

(Stipulated: there are individuals, both sexes, who prefer to live alone. This is racially self-correcting.)

The American core family (father, mother, two or three children) has ceased to be emotionally satisfying-if it ever was. It is a creation of our times: mobility, birth control, easy divorce. Early in this century the core family was mother, father, four to eight children.. . and was itself a unit in an extended family of grandparents, aunts, uncles, and cousins living near enough (if not in the same house) to be mutually supportive. If a child was ill, Aunt Cora came over to help while Aunt Abby took the other kids into her home. See Mauve Decade fiction.

With increased mobility and fewer children this undefined extended-family pattern disappeared almost without its disappearance being noticed. To the extent to which it was noticed there was often glee at being free of the nuisance of in-laws and kinfolk. It took considerably longer to realize that the advantages had also disappeared.

We will not get a return of the extended family of the sort that characterized the 19th century and the early 20th . . . but the current flux of swingers' clubs, group marriages, spouse swapping, etc., is, in my opinion, fumbling and almost unconscious attempts to regain the pleasure, emotional comfort, and mutual security once found in the extended family of two or more generations back.

Prediction: by 2000 A.D. or soon thereafter extended families of several sorts will be more common than core families. The common characteristic of the various types will be increased security for children under legally enforceable contracts.

3. 1950 The most important military fact of this century is that there is no way to repel an attack from outer space.

1965 I flatly stand by this one. True, we are now working on Nike- Zeus and Nike-X and related systems and plan to spend billions on such systems-and we know that others are doing the same thing. True, it is possible to hit an object in orbit or trajectory. Nevertheless this prediction is as safe as predicting tomorrow's sunrise. Anti-aircraft fire never stopped air attacks; it simply made them expensive. The disadvantage in being at the bottom of a deep "gravity well" is very great; gravity gauge will be as crucial in the coming years as wind gauge was in the days when sailing ships controlled empires. The nation that controls the Moon will control the Earth-but no one seems willing these days to speak that nasty fact out loud.

1980 I have just heard a convincing report that the USSR has developed lasers far better than ours that can blind our eyes-in-the-sky satellites and, presumably, destroy our ICBMs in flight. Stipulate that this rumor is true: It does not change my 1950 assertion one iota. Missiles tossed from the Moon to the Earth need not be H-bombs or any sort of bomb-or even missile-shaped. All they need be is massive.. . because they arrive at approximately seven miles per second. A laser capable of blinding a satellite and of disabling an ICBM to the point where it can't explode would need to be orders of magnitude more powerful in order to volatilize a house-size chunk of Luna. For further details see my THE MOON IS A HARSH MISTRESS.

4. 1950 It is utterly impossible that the United States will start a "preventive war." We will fight when attacked, either directly or in a territory we have guaranteed to defend.

1965 Since 1950 we have done so in several theaters and are doing so in Viet Nam as this is written. "Preventive" or "pre-emptive" war seems as unlikely as ever, no matter who is in the White House. Here is a new prediction: World War III (as a major, all-out war) will not take place at least until 1980 and could easily hold off until 2000. This is a very happy prediction compared with the situation in 1950, as those years of grace may turn up basic factors which (I hope!) may postpone disaster still longer. We were much closer to ultimate disaster around 1955 than we are today-much closer indeed than we were at the time of the Cuban Confrontation in 1962. But the public never knew it. All in all, things look pretty good for survival, for the time being-and that is as good a break as our ancestors ever had. It was far more dangerous to live in London in 1664-5 than it is to live in a city threatened by H-bombs today.

1980 lam forced to revise the 1950 prediction to this extent: It is no longer certain that we will fight to repel attack on territory we have guaranteed to defend; our behavior both with respect to Viet Nam and to Taiwan is a clear warning to our NATO allies. The question is not whether we should ever have been in Viet Nam or whether we should ever have allied ourselves to the Nationalist Chinese. I do not know of any professional military man who favored ever getting into combat on the continent of Asia; such war for us is a logistic and strategic disaster.

But to break a commitment to an ally once it has been made is to destroy our credibility.

5. 1950 In fifteen years the housing shortage will be solved by a "breakthrough" into new technology which will make every house now standing as obsolete as privies.

1965 Here I fell flat on my face. There has been no breakthrough in housing, nor is any now in prospect- instead the ancient, wasteful methods of building are now being confirmed by public subsidies. The degree of our backwardness in the field is hard to grasp; we have never seen a modern house. Think what an automobile would be if each one were custom-built from materials fetched to your home-what would it look like, what would it do, and how much would it cost. But don't set the cost lower than $100,000 or the speed higher than 10 rn/h, if you want to be realistic about the centuries of difference between the housing industry and the automotive industry.

I underestimated (through wishful thinking) the power of human stupidity-a fault fatal to prophecy.

1980 I'm still flat on my face with my nose rubbed in the mud; the situation is worse than ever. See A BATHROOM OF HER OWN on page 244. And that figure of $100,000 just above was with gold at $35 per troy ounce-so change it to one million dollars-or call it 2700 troy ounces of gold. Or forget it. The point is that it would be very nearly impossible to build even a clunker automobile at any price if we built them the way we build houses.

We have the technology to build cheap, beautiful, efficient, flexible (modular method) houses, extremely comfortable and with the durability of a Rolls Royce. But I cannot guess when (if ever) the powers that be (local bureaucrats, unions, building

materials suppliers, county and state officials) will permit us poor serfs to have modern housing.

6. 1950 We'll all be getting a little hungry by and by.

1965 No new comment.

1980 Not necessarily. In 1950 I was too pessimistic concerning population. Now I suspect that the controlling parameter is oil. In modern agriculture oil is the prime factor-as power for farm machinery (obviously) but also for insecticides and for fertilizers. Since our oil policies in Washington are about as boneheaded-counterproductive-as they can be, I have no way to guess how much food we can raise in 2000 A.D. But no one in the United States should be hungry in 2000 A.D.-unless we are conquered and occupied.

7. 1950 The cult of the phony in art will disappear. So-called "modern art" will be discussed only by psychiatrists.

1965 No new comment.

1980 One may hope. But art reflects culture and the world is even nuttier now than it was in 1950; these are the Crazy Years. But, while "fine" art continues to look like the work of retarded monkeys, commercial art grows steadily better.

8. 1950 Freud will be classed as a pre-scientific, intuitive pioneer and psychoanalysis will be replaced by
a growing, changing "operational psychology" based on measurement and prediction.

1965 No new comment.

1980 This prediction is beginning to come true. Freud is no longer taken seriously by informed people. More and more professional psychologists are skilled in appropriate mathematics; most of the younger ones understand inductive methodology and the nature of scientific confirmation and are trying hard to put rigor into their extremely difficult, still inchoate subject. For some of the current progress see Dr. Pournelle's book, cited on page 325.

By 2000 A.D. we will know a great deal about how the brain functions . . . whereas in 1900 what little we knew was wrong.

I do not predict that the basic mystery of psychology-how mass arranged in certain complex patterns becomes aware of itself-will be solved by 2000 A.D. I hope so but do not expect it.

9. 1950 Cancer, the common cold, and tooth decay will all be conquered; the revolutionary new problem in medical research will be to accomplish "regeneration," i.e., to enable a man to grow a new leg, rather than fit him with an artificial limb.

1965 In the meantime spectacular progress has been made in organ transplants-and the problem of regeneration is related to this one. Biochemistry and genetics have made a spectacular breakthrough in "cracking the genetic code." It is a tiny crack, however, with a long way to go before we will have the human chromosomes charted and still longer before we will be able to "tailor" human beings by gene manipulation. The possibility is there-but not by year 2000. This is probably just as well. If we aren't bright enough to build decent houses, are we bright enough to play God with the architecture of human beings?

1980 I see no reason to change this prediction if you will let me elaborate (weasel) a little. "The common
cold" is a portmanteau expression for upper respiratory infections which appear to be caused by a very large number of different viruses. Viruses are pesky things. It is possible to immunize against them, e.g., vaccination against smallpox, a virus disease. But there are almost no chemotherapies, medicines, against viruses. That is why "the common cold" is treated much the same way today as in 1900, i.e., support the patient with bed rest, liquids, aspirin to make him more comfortable, keep him warm. This was standard in 1900 and it is still standard in 1980.

It is probable that your body makes antibodies against the virus of any cold you catch. But this gives you no protection against that virus's hundreds of close relatives found in any airport, theater, supermarket, or gust of dust off the street. In the meantime, while his kinfolk take turns making you miserable, virus #1 has mutated and you have no antibodies against the mutation.

Good news: Oncology (cancer), immunology, hematology, and "the common cold" turn out to be strongly interrelated subjects; research in all these is pioving fast-and a real breakthrough in any one might mean a breakthrough in all.

10. 1950 By the end of this century mankind will have explored this solar system, and the first ship intended to reach the nearest star will be a building.

1965 Our editor suggested that I had been too optimistic on this one-but I still stand by it. It is still thirty-five years to the end of the century. For perspective; look back thirty-five years to 1930-the American Rocket Society had not yet been founded. Another curve, similar to the one herewith in shape but derived entirely from speed of transportation, extrapolates to show faster-than-light travel by year 2000. I guess I'm chicken, for I am not predicting FTL ships by then, if ever. But the prediction still stands without hedging.

1980 My money is still on the table at twenty years
and counting. Senator Proxmire can't live forever. In the last 101/2 years men have been to the Moon several times; much of the Solar system has been most thoroughly explored within the limits of "black box" technology and more will be visited before this year is out.

Ah, but not explored by men-and the distances are so great. Surely they are. . . by free-fall orbits, which is all that we have been using. But there are numerous proposals (and not all ours!) for constant-boost ships, proposals that require R&D on present art only-no breakthroughs.

Reach for your pocket calculator and figure how long it would take to make a trip to Mars and back if your ship could boost at one-tenth gee. We will omit some trivia by making it from parking orbit to parking orbit, use straight-line trajectories, and ignore the Sun's field-we'll be going uphill to Mars, downhill to Earth; what we lose on the roundabouts we win on the shys.

These casual assumptions would cause Dan Alderson, ballistician at Jet Propulsion Laboratory, to faint. But after he comes out of his faint he would agree that our answers would be of correct close order of magnitude-and all I'm trying to prove is that even a slight constant boost makes an enormous difference in touring the Solar

System. (Late in the 21st century we'll offer the Economy Tour: Ten Planets in Ten Days.)

There are an unlimited number of distances between rather wide parameters for an Earth-MarsEarth trip but we will select one that is nearly minimum (it's cheating to wait in orbit at Mars for about a year in order take the shortest trip each way.. . and unthinkable to wait years for the closest approach). We'll do this Space Patrol style: There's Mars, here we are at L-5; let's scoot over, swing around Mars, and come straight home. Just for drill.

Conditions: Earth-surface gravity (one "gee") is an acceleration of 32.2 feet per second squared, or 980.7 centimeters per second squared. Mars is in or near op position (Mars is rising as Sun is setting). We will assume that the round trip is 120,000,000 miles. If we were willing to wait for closest approach we could trim that to less than 70,000,000 miles .. . but we might have to wait as long as 17 years. So we'll take a common or garden variety opposition-one every 26 months-for which the distance to Mars is about 50- to 60,000,000 miles and never over 64 million.

(With Mars in conjunction on the far side of the Sun, we could take the scenic route of over 500 million miles-how much over depends on how easily you sunburn. I suggest a minimum of 700 million miles.)

You now have all necessary data to figure the time it takes to travel Earth-Mars-Earth in a constant-boost ship-any constant-boost ship-when Mars is at opposition. (If you insist on the scenic route, you can't treat the trajectory approximations as straight lines and you can't treat space as flat but a bit uphill. You'll need Alderson or his equal and a big computer, not a pocket calculator; the equations are very hairy and sometimes shoot back.)

But us two space cadets are doing this by eyeballing it, using Tennessee windage, an aerospace almanac, a Mickey Mouse watch, and an SR-50 Pop discarded years ago.

We need just one equation: Velocity equals acceleration times elapsed time: $v = at$

This tells us that our average speed is 1/2at-and from that we know that the distance achieved is the average speed times the elapsed time: $d = 1/2at2$

If you don't believe me, check any physics text, encyclopedia, or nineteen other sorts of reference books-and I did that derivation without cracking a book but now I'm going to stop and find out whether I've goofed-I've had years of practice in goofing. (Later-seems okay.)

Just two things to remember: 1) This is a 4-piecee trip-boost to midpoint, flip over and boost to brake; then do the same thing coming home. Treat all four legs as being equal or 30,000,000 miles, so figure one of them and multiply by four (Dan, stop frowning; this is an approximation . . . done with a Mickey Mouse watch.)

2) You must keep your units straight. If you start with centimeters, you are stuck with centimeters; if you start with feet, you are stuck with feet. So we have 1/4 of the trip equals $5280 \times 30{,}000{,}000 = 1.584 \times 1011$ feet, or 4.827×1012 centimeters.

One last bit: Since it is elapsed time we are after, we will rearrange that equation ($d = 1/2at2$) so that you can get the answer in one operation on your trustybut-outdated pocket calculator. . . or even on a slide rule, as those four-significant-figures data are mere swank; I've used so many approximations and ignored so many minor variables that I'll be happy to get answers correct to two significant figures.

- = t2 This gives us: t = Vd/1/2a
V2a

d is 30,000,000 miles expressed in feet, or 158,400,000,000. Set that into your pocket calculator. Divide it by one half of one tenth of gee, or 1.61. Push the square root button. Multiply by 4. You now have the elapsed time of the round trip expressed in seconds so divide by 3600 and you have it in hours, and divide that by 24 and you have it in days.

At this point you are supposed to be astonished and to start looking for the mistake. While you are looking, I'm going to slide out to the refrigerator.

There is no mistake. Work it again, this time in metric. Find a reference book and check the equation. You will find the answer elsewhere in this book but don't look for it yet; we'll try some other trips you may take by 2000 A.D. if you speak Japanese or German-or even English if Proxmire and his ilk fail of reelection.

Same trip, worked the same way, but at only one
percent of gee. At that boost I would weigh less than my shoes weigh here in my study.

Hmmph! Looks as if one answer or the other must be wrong.

Bear with me. This time we'll work it at a full gee, the acceleration you experience lying in bed, asleep. (See Einstein's 1905 paper.)

(Preposterous. All three answers must be wrong.)

Please stick with me a little longer. Let's run all three problems for a round trip to Pluto-in 2006 A.D., give or take a year. Why 2006? Because today Pluto has ducked inside the orbit of Neptune and won't reach perihelion until 1989-and I want it to be a bit farther away; I've got a rabbit stashed in the hat.

Pluto ducks outside again in 2003 and by 2006 it will be (give or take a few million miles) 31.6 A.U. from the Sun, figuring an A.U. at 92,900,000 miles or 14,950,000,000,000 centimeters as we'll work this both ways, MKS and English units. (All right, all right-i .495 x 1013 centimeters; it gets dull here at this typewriter.)

Now work it all three ways, a round trip of 63.2 A.U. at a constant boost of one gravity, one tenth gravity, and one hundredth of a gee-and we'll dedicate this to Clyde Tombaugh, the only living man to discover a new planet-through months of tedious and painstaking examination of many thousands of films.

Some think that Pluto was once a satellite and its small size makes this possible. But it is not a satellite today. It is both far too big and hundreds of millions of miles out of position to be an asteroid. It can't be a comet. So it's a planet-or something so exotic as to be still more of a prize.

Its size made it hard to find and thus still more of an achievment. But Tombaugh continued the search for seventeen weary years and many millions more films. If there is an Earth-size planet out there, it is at least three times as distant as Pluto, and a gas giant would have to be six times as far. Negative data win
no prizes but they are the bedrock of science.

Until James W. Christy on 22 June 1978 discovered Pluto's satellite, Charon, it was possible for us romantics to entertain the happy thought that Pluto was loaded with valuable heavy metals; the best estimate of its density made this plausible. But the mass

of a planet with a satellite can be calculated quite easily and accurately, and from that, its density.

The new figure was much too low, only half again as heavy as water. Methane snow? Perhaps.

So once again a lovely theory is demolished by an awkward fact.

Nevertheless Pluto remains a most mysterious and most intriguing heavenly body. A planet the size and mass of Mars might not be too much use to us out there . . . but think of it as a fuel dump. Many stories and many nonfictional projections speak of using the gas giants and/or the rings of Saturn as sources of fuel. But if Pluto is methane ice or water ice or frozen hydrogen or all three, as a source of fuel- conventional, or fusion, or even reaction mass-Pluto has one supremely important advantage over the gas giants: Pluto is not at the bottom of a horridly deep gravity well.

Finished calculating? Good. Please turn to page 368 and see why I wanted our trip to Pluto to be a distance of 31.6 A.U.-plus other goodies, perhaps.

11. 1950 Your personal telephone will be small enough to carry in your handbag. Your house telephone will record messages, answer simple inquiries, and transmit vision.

1965 No new comment.

1980 This prediction is trivial and timid. Most of it
has already come true and the telephone system will hand you the rest on a custom basis if you'll pay for it. In the year 2000, with modern telephones tied into home computers (as common then as flush toilets are today) you'll be able to have 3-dimensional holovision
along with stereo speech. Arthur C. Clarke says that this will do away with most personal contact in business. I agree with all of Mr. Clarke's arguments and disagree with his conclusion; with us monkey folk there is no substitute for personal contact; we enjoy it and it fills a spiritual need.

Besides that, the business conference is often an excuse to loaf on the boss's time and the business convention often supplies some of the benefits of the Roman Saturnalia.

Nevertheless I look forward to holovideostereophones without giving up personal contacts.

12. 1950 Intelligent life will be found on Mars.

1965 Predicting intelligent life on Mars looks pretty silly after those dismal photographs. But I shan't withdraw it until Mars has been thoroughly explored. As yet we really have no idea-and no data-as to just how ubiquitous and varied life may be in this galaxy; it is conceivable that life as we don't know it can evolve on any sort of a planet. . . and nothing in our present knowledge of chemistry rules this out. All the talk has been about life-as-we-know-it-which means terrestrial conditions.

But if you feel that this shows in me a childish reluctance to give up thoats and zitidars and beautiful Martian princesses until forced to, I won't argue with you-I'll just wait.

1980 The photographs made by the Martian landers of 1976 and their orbiting companions make the prediction of intelligent Martian life look even sillier. But the new pictures and the new data make Mars even more mysterious. I'm a diehard because I suspect that life is ubiquitous-call that a religious opinion if you wish. But remember two

things: Almost all discussion has been about Life-as-we-know-it.. . but what about Life-as-we-don't-know-it? If there were Martians around the time that those amazing gullies and canyons were formed, perhaps they went underground as
their atmosphere thinned. At present, despite wonderful pictures, our data are very sparse; those two fixed landers are analogous to two such landing here: one on Canadian tundra, the other in Antarctica-hardly sufficient to solve the question: Is there intelligent life on Sol III?

(Is there intelligent life in Washington, D.C.?)

Whistling in the dark-I think I goofed on this one. But if in fact Mars is uninhabited, shortly there will be a land rush that will make the Oklahoma land stampede look gentle. Since E = mc2 came into our lives, all real estate is potentially valuable; it can be terraformed to suit humans. There has been so much fiction and serious, able nonfiction published on how to terraform Mars that I shan't add to it, save to note one thing:

Power is no problem. Sunshine at that distance has dropped off to about 43% of the maximum here-but Mars gets all of it and gets it all day long save for infrequent dust storms . . . whereas the most that Philadelphia (and like places) ever gets is 35%-and overcast days are common. Mars won't need solar power from orbit; it will be easier to do it on the ground.

But don't be surprised if the Japanese charge you a very high fee for stamping their visa into your passport plus requiring deposit of a prepaid return ticket or, if you ask for immigrant's visa, charge you a much, much higher fee plus proof of a needed colonial skill.

For there is intelligent life in Tokyo.

13. 1950 A thousand miles an hour at a cent a mile will be commonplace; short hauls will be made in evacuated subways at extreme speed.

1965 I must hedge number thirteen; the "cent" I meant was scaled by the 1950 dollar. But our currency has been going through a long steady inflation, and no nation in history has ever gone as far as we have along this route without reaching the explosive phase of inflation. Ten-dollar hamburgers? Brother, we are
headed for the hundred-dollar hamburger-for the barter-only hamburger.

But this is only an inconvenience rather than a disaster as long as there is plenty of hamburger.

1980 I must scale that "cent" again. In 1950 gold
was $35/troy ounce; this morning the London fix was $374/troy ounce. Just last week my wife and I flew San Francisco to Baltimore and return. We took neither the luxury class nor any of the special discounted fares; we simply flew what we could get.

Applying the inflation factor-35/374-our tickets cost a hair less than one cent a mile in 1950 dollars. From here on I had better give prices in troy ounces of gold, or in Swiss francs; not even the Man in the White House knows where this inflation is going. About those subways: possible, even probable, by 2000 A.D. But I see little chance that they will be financed until the dollar is stablized-a most painful process our government hates to tackle.

14. 1950 A major objective of applied physics will be to control gravity.

1965 This prediction stands. But today physics is in a tremendous state of flux with new data piling up faster than it can be digested; it is anybody's guess as to where we are headed, but the wilder you guess, the more likely you are to hit it lucky. With "elementary particles" of nuclear physics now totaling about half the number we used to use to list the "immutable" chemical elements, a spectator needs a program just to keep track of the players. At the other end of the scale, "quasars"-quasi-stellar bodies-have come along; radio astronomy is now bigger than telescopic astronomy used to be; and we have redrawn our picture of the universe several times, each time enlarging it and making it more complex-I haven't seen this week's theory yet, which is well, as it would be out of date before this gets into print. Plasma physics was barely started in 1950; the same for solid-state phys
ics. This is the Golden Age of physics-and it's an anarchy.

19801 stick by the basic prediction. There is so much work going on both by mathematical physicists and experimental physicists as to the nature of gravity that it seems inevitable that twenty years from now applied physicists will be trying to control it. But note that I said "trying"-succeeding may take a long time. If and when they do succeed, a spinoff is likely to be a spaceship that is in no way a rocket ship-and the Galaxy is ours! (Unless we meet that smarter, meaner, tougher race that kills us or enslaves us or eats us-or all three.)

Particle physics: the situation is even more confusing than in 1965. Physicists now speak of more than 200 kinds of hadrons, "elementary" heavy particles. To reduce this confusion a mathematical construct called the "quark" was invented. Like Jell-0 quarks come in many colors and flavors.. . plus spin, charm, truth, and beauty (or top and bottom in place of truth and beauty-or perhaps "truth" doesn't belong in the list, and no jokes, please, as the physicists aren't joking and neither am I). Put quarks together in their many attributes and you can account for (maybe) all those 200-odd hadrons (and have a system paralleling the leptons or light particles as a bonus).

All very nice.. . except that no one has ever been able to pin down even one quark. Quarks, if they exist, come packaged in clumps as hadrons-not at random but by rules to account for each of that mob of hadrons.

Now comes Kenneth A. Johnson, Ph.D. (Harvard '55), Professor of Physics at the Massachusetts Institute of Technology (which certainly places him in the worldwide top group of physicists) with an article (Scientific American, July 1979, p. 112, "The Bag Model of Quark Confinement"), an article which appears to state that quarks will never be pinned down because
they are in sort of an eternal purdah, never to be seen even as bubble tracks. -

Somehow it reminds me of the dilemma when the snark is a boojum.

I'm not poking fun at Dr. Johnson; he is very learned and trying hard to explain his difficult subject to the unlearned such as I.

But, in the meantime I suggest reading The Hunting of the Snark while waiting patiently for 2000 A.D. We have a plethora of data; perhaps in twenty more years the picture will be simplified. Perhaps-

15. 1950 We will not achieve a "World State" in the predictable future. Nevertheless, Communism will vanish from this planet.

1965 I stand flatly behind prediction number fifteen.

1980 I still stand flatly behind the first sentence of that two-part prediction above. The second part I could weasel out of by pointing out that on this planet no state that calls itself Marxist or Socialist or Communist has ever established a system approximating that called for by the works of Karl Marx and Friedrich Engels. And never will; Marx's utopia does not fit human beings. The state will not "wither away."

But I shan't weasel as I am utterly dismayed by the political events of the past 15-20 years. At least two thirds of the globe now calls itself Marxist. Another large number of countries are military dictatorships. Another large group (including the United States) are constitutional democratic republics but so heavily tinged with socialism ("welfare state") that all of them are tottering on the brink of bankruptcy and collapse.

So far as I can see today the only thing that could cause the soi-disant Marxist countries to collapse in as little time as twenty years would be for the United States to be conquered and occupied by the USSR- and twenty years ago I thought that this was a strong possibility. (I'm more optimistic now, under the pres
ent three-cornered standoff.)

If we were to be conquered and occupied, the Communist world might collapse rather quickly. We have been propping them up whenever they were in real trouble (frequently!) for about half a century.

16. 1950 Increasing mobility will disenfranchise a majority of the population. About 1990 a constitutional amendment will do away with state lines while retaining the semblance.

1965 No further comment.

19801 goofed. I will be much surprised if either half of this double prediction comes to pass by 2000-at least in the form described and for the reasons I had in mind. The franchise now extends to any warm body over eighteen years of age and that franchise can be transferred to another state in less time than it takes the citizen to find housing in his/her new state.

Thus no constitutional amendment is needed. But the state lines are fading year by year anyhow as power continues to move from the states to the Federal government and especially into the hands of nonelected bureaucrats.

17. 1950 All aircraft will be controlled by a giant radar net run on a continent-wide basis by a multiple electronic "brain."

1965 No further comment.

1980 This prediction still stands-although it may be my wishful thinking. Such a system was designed over thirty years ago; Congress wouldn't buy it. It would be more expensive today . . . and is far more urgently needed. Anyone who has ever been in the tower of a busy field or has ever ridden in the "office" of a commercial plane during a takeoff or landing at a busy field knows what I mean. All our fields are overloaded but anyone who goes in or out of San Diego or of O'Hare-Chicago or-but why go on? Our airplanes are pretty durn wonderful . . . but our method of handling
air traffic at fields is comparable to Manhattan with
out traffic lights. -

I shall continue to fly regularly for two reasons: 1) Mrs. Heinlein and I hope to go out in a common disaster. 2) Consider the alternatives: AMTRAK (ugh!), buses (two

ughs!), and driving oneself. The latter is fine for short distances (OPEC and Washington permitting) but, while in my younger days I drove across this continent so many times that I've lost count, today I am no longer physically up to such a trip even with a chauffeur.

But that totally-automated traffic control system ought to be built. Expensive, yes- but what price do we place on a hundred dead passengers, a flight crew, and a modern airliner? In the present state of the art in computers and in radar neither the pilot nor the controller should be in the loop at landing or take off; they should simply be alert, ready to override, because even the most perfect machinery is subject to Murphy's Law. But all routine (99.9%+)takeoffs and landings should be made by computer.

If this pushes small private planes onto separate and smaller fields, so be it. Bicycles do not belong on freeways. I hate to say that, as there is nothing more fun than a light sports plane.

(Nothing that is not alive, I mean. Vive la difference!)

(On air traffic control I speak with a modicum of authority. I returned to the aircraft industry for a short time in 1948 to research this subject, then wrote an article aimed at the slicks: THE BILLION-DOLLAR EYE. I missed; it is still unpublished.)

18. 1950 Fish and yeast will become our principal sources of proteins. Beef will be a luxury; lamb and mutton will disappear.

1965 I'll hedge number eighteen a little. Hunger is not now a problem in the USA and need not be in the year 2000-but hunger is a world problem and would at once become an acute problem for us if we were conquered.. . a distinct possibility by 2000. Between our present status and that of subjugation lies a whole spectrum of political and economic possible shapes to the future under which we would share the worldwide hunger to a greater or lesser extent. And the problem grows. We can expect to have to feed around half a billion Americans circa year 2000-our present huge surpluses would then represent acute shortages even if we never shipped a ton of wheat to India.

1980 It would now appear that the USA population in 2000 A.D. will be about 270,000,000 instead of 500,000,000. I have been collecting clippings on demography for forty years; all that the projections have in common is that all of them are wrong. Even that figure of 270,000,000 may be too high; today the only reason our population continues to increase is that we oldsters are living longer; our current birthrate is not sufficient even to replace the parent generation.

19. 1950 Mankind will not destroy itself, nor will "Civilization" be destroyed.

1965 I stand by prediction number nineteen.

1980 I still stand by prediction number nineteen. There will be wars and we will be in some of them- and some may involve atomic weapons. But there will not be that all-destroying nuclear holocaust that forms the background of so many SF stories. There are three reasons for this: The United States, the Soviet Union, and the People's Republic of China.

Why? Because the three strongest countries in the world (while mutually detesting each the other two) have nothing to gain and everything to lose in an allout swapping of H-bombs. Because Kremlin bosses are not idiots and neither are those in Beijing (Peiping)(Peking).

If another country-say Israel, India, or the South African Republic-gets desperate and tosses an A- or H-bomb, that country is likely to receive three phone calls simultaneously, one from each of the Big Three:
"You have exactly three minutes to back down. Then we destroy you."

After World War II I never expected that our safety would ever depend on a massive split in Communist International-but that is exactly what has happened.

1950 Here are things we won't get soon, if ever:
Travel through time.
Travel faster than the speed of light.
"Radio" transmission of matter.
Manlike robots with manlike reactions.
Laboratory creation of life.
Real understanding of what "thought" is and how it is related to matter.
Scientific proof of personal survival after death.
Nor a permanent end to war. (I don't like that prediction any better than you do.)

1950 Prediction of gadgets is a parlor trick anyone can learn; but only a fool would attempt to predict details of future history (except as fiction, so labeled); there are too many unknowns and no techniques for integrating them even if they were known.

Even to make predictions about overall trends in technology is now most difficult. In fields where before World War II there was one man working in public, there are now ten, or a hundred, working in secret. There may be six men in the country who have a clear picture of what is going on in science today.There may not be even one.

This is in itself a trend. Many leading scientists consider it a factor as disabling to us as the nonsense of Lysenkoism is to Russian technology. Nevertheless there are clear-cut trends which are certain to make this coming era enormously more productive and interesting than the frantic one we have just passed through. Among them are:

Cybernetics: The study of communication and control of mechanisms and organisms. This includes the wonderful field of mechanical and electronic "brains"-but is not limited to it. (These "brains" are a factor in themselves that will speed up technical progress the way a war does.)

Semantics: A field which seems concerned only with definitions of words. It is not; it is a frontal attack on epistemology-that is to say, how we know what we know, a subject formerly belonging to long-haired philosophers.

New tools of mathematics and logic, such as calculus of statement, Boolean logic, morphological analysis, generalized symbology, newly invented mathematics of every sort-there is not space even to name these enormous fields, but they offer us hope in every field- medicine, social relations, biology, economics, anything.

Biochemistry: Research into the nature of protoplasm, into enzyme chemistry, viruses, etc., give hope not only that we may conquer disease, but that we may someday understand the mechanisms of life itself. Through this, and with the aid of cybernetic machines and radioactive isotopes, we may eventually acquire a rigor of chemistry. Chemistry is not a discipline today; it is a jungle. We know that chemical behavior depends on the number of orbital electrons in an atom and that physical and chemical

properties follow the pattern called the Periodic Table. We don't know much else, save by cut-and-try, despite the great size and importance of the chemical industry. When chemistry becomes a discipline, mathematical chemists will design new materials, predict their properties, and tell engineers how to make them-without ever entering a laboratory. We've got a long way to go on that one!

Nucleonics: We have yet to find out what makes the atom tick. Atomic power?-yes, we'll have it, in convenient packages-when we understand the nucleus. The field of radioisotopes alone is larger than was the
entire known body of science in 1900. Before we are through with these problems, we may find out how the universe is shaped and why. Not to mention enormous unknown vistas best represented by ?????

Some physicists are now using two time scales, the T-scale, and the tau-scaie. Three billion years on one scale can equal an incredibly split second on the other scale-and yet both apply to you and your kitchen stove. Of such anarchy is our present state in physics.

For such reasons we must insist that the Age of Science has not yet opened.

(Still 1950) The greatest crisis facing us is not Russia, not the Atom bomb, not corruption in government, not encroaching hunger, not the morals of young. It is a crisis in the organization and accessibility of human knowledge. We own an enormous "encyclopedia"-which isn't even arranged alphabetically. Our "file cards" are spilled on the floor, nor were they ever in order. The answers we want may be buried somewhere in the heap, but it might take a lifetime to locate two already known facts, place them side by side and derive a third fact, the one we urgently need.

Call it the Crisis of the Librarian.

We need a new "specialist" who is not a specialist, but a synthesist. We need a new science to be the perfect secretary to all other sciences.

But we are not likely to get either one in a hurry and we have a powerful lot of grief before us in the meantime.

Fortunetellers can always be sure of repeat customers by predicting what the customer wants to hear. . . it matters not whether the prediction comes true. Contrariwise, the weatherman is often blamed for bad weather.

Brace yourself.

In 1900 the cloud on the horizon was no bigger than a man's hand-but what lay ahead was the Panic of 1907, World War I, the panic following it, the Depres
sion, Fascism, World War II, the Atom Bomb, and Red Russia.

Today the clouds obscure the sky, and the wind that overturns the world is sighing in the distance.

The period immediately ahead will be the roughest, cruelest one in the long, hard history of mankind. It will probably include the worst World War of them all. It might even end with a war with Mars, God save the Mark! Even if we are spared that fantastic possibility, it is certain that there will be no security anywhere, save that which you dig out of your own inner spirit.

But what of that picture we drew of domestic luxury and tranquility for Mrs. Middleclass, style 2000 A.D.?

She lived through it. She survived.

Our prospects need not dismay you, not if you or your kin were at Bloody Nose Ridge, at Gettysburg- or trudged across the Plains. You and I are here because we carry the genes of uncountable ancestors who fought-and won-against death in all its forms. We're tough. We'll survive. Most of us.

We've lasted through the preliminary bouts; the main event is coming up.

But it's not for sissies.

The last thing to come fluttering out of Pandora's Box was Hope-without which men die.

The gathering wind will not destroy everything, nor will the Age of Science change everything. Long after the first star ship leaves for parts unknown, there will still be outhouses in upstate New York, there will still be steers in Texas, and-no doubt-the English will still stop for tea.

Afterthoughts, fifteen years later-(1965)

I see no reason to change any of the negative predictions which follow the numbered affirmative ones. They are all conceivably possible; they are all wildly unlikely by year 2000. Some of them are debatable if the terms are defined to suit the affirmative side-definitions of "life" and "manlike," for example. Let it stand that I am not talking about an amino acid in one case, or a machine that plays chess in the other.

Today the forerunners of synthesists are already at work in many places. Their titles may be anything; their degrees may be in anything-or they may have no degrees. Today they are called "operations researchers," or sometimes "systems development engineers," or other interim tags. But they are all interdisciplinary people, generalists, not specialists- the new Renaissance Man. The very explosion of data which forced most scholars to specialize very narrowly created the necessity which evoked this new non-specialist. So far, this "unspecialty" is in its infancy; its methodology is inchoate, the results are sometimes trivial, and no one knows how to train to become such a man. But the results are often spectacularly brilliant, too-this new man may yet save all of us.

I'm an optimist. I have great confidence in Homo sapiens.

We have rough times ahead-but when didn't we? Things have always been "tough all over." H-bombs, Communism, race riots, water shortage-all nasty problems. But not basic problems, merely current ones.

We have three basic and continuing problems: The problem of population explosion; the problem of data explosion; and the problem of government.

Population problems have a horrid way of solving themselves when they are not solved rationally; the Four Horsemen of the Apocalypse are always saddled up and ready to ride. The data explosion is now being solved, mostly by cybernetics and electronics men rather than by librarians-and if the solutions are less than perfect, at least they are better than what

Grandpa had to work with. The problem of government has not been solved either by the "Western Democracies" or the "Peoples' Democracies," as of now. (Anyone who thinks the people of the United States have solved the problem of government is using too short a time scale.) The peoples of the world are now engaged in a long, long struggle with no

end in sight, testing whether one concept works better than another; in that conflict millions have already died and it is possible that hundreds of millions will die in it before year 2000. But not all.

I hold both opinions and preferences as to the outcome. But my personal preference for a maximum of looseness is irrelevant; what we are experiencing is an evolutionary process in which personal preference matters, at most, only statistically. Biologists, ecologists in particular, are working around to the idea that natural selection and survival of the fittest is a notion that applies more to groups and how they are structured than it does to individuals. The present problem will solve itself in the cold terms of evolutionary survival, and in the course of it both sides will make changes in group structure. The system that survives might be called "Communism" or it might be called "Democracy" (the latter is my guess)-but one thing we can be certain of: it will not resemble very closely what either Marx or Jefferson had in mind. Or it might be called by some equally inappropriate neologism; political tags are rarely logical.

For Man is rarely logical. But I have great confidence in Man, based on his past record. He is mean, ornery, cantankerous, illogical, emotional- and amazingly hard to kill. Religious leaders have faith in the spiritual redemption of Man; humanist leaders subscribe to a belief in the perfectibility of Man through his own efforts; but I am not discussing either of these two viewpoints. My confidence in our species lies in its past history and is founded quite as much on Man's so-called vices as on his so-called vir tues. When the chips are down, quarrelsomeness and selfishness can be as useful to the survival of the human race as is altruism, and pig-headedness can be a trait superior to sweet reasonableness. If this were not true, these "vices" would have died out through the early deaths of their hosts, at least a half million years back.

I have a deep and abiding confidence in Man as he is, imperfect and often unlovable-plus still greater confidence in his potential. No matter how tough things are, Man copes. He comes up with adequate answers from illogical reasons. But the answers work.

Last to come out of Pandora's Box was a gleaming, beautiful thing-eternal Hope. (1980-I see no point in saying more. R.A.H.)

If It's Sinful, It's More Fun.
FOREWORD

The editor who disliked science fiction (and me) but liked my sales grumbled to me, on my delivering my annual boys' novel, that she did wish that someone would write girls' stories. I answered, "Very well, I'll write a story for girls. When do you want it?"

She was simultaneously astonished, offended, and amused at the ridiculous and arrogant notion that a mere man could write stories for girls. So that's how Puddin' was born: I started writing first-person-female-adolescent stories-but not for that old harridan.

Since this is not the first of the Puddin' stories, let me introduce her.' 1-icr name is Maureen, her nickname derives from her weight problem. She is eternally an undergraduate omi a small campus in Somewhere, U.S.A., iihere her father teaches anthropology smokes his pipe, (01(1 ie(u/~--uii('iyns I1t~ niothier 1~ (I Re;iai~oiice 1'foi who does everything. Maureen has an unbearable younger brother (all younger brothers are unbearable; I should know, I was one).

I grew so fond of Maureen that I helped her to get rid of that excess weight, changed her name to "Podkayne," and moved her to Mars (along with her unbearable kid brother). And now and again she turns up under other names in other science fiction stories.

Nevertheless Maureen still attends classes on this campus in Never-Neverland. I had intended to do a full book of Puddin' short stories under the title MEN ARE EXASPERATING. I have enough stories for a fat volume hut a.s vet I have not writ/en au of them down. One in

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And vet . . . amid vet- Is t'uddin total/v obsolete? This
campus never has riots. The girls are not "on the Pill." (Or if they are, the subject is not mentioned.) There is no drug problem. In short, I have described college life of a bygone day.

But don't misunderstand me. My teens were the Torrid Twenties and exactly the same things went on then as now.. . but were kept under cover. When I was a freshman in college, the nearest connection for marijuana was a drugstore a hundred yards off campus; for H or C it was necessary to walk another block. But bootleg liquor (taxfree) would be delivered on or off campus at any hour.

Did I avail myself of any of these amenities? None of your business, Buster!

As for sex, each generation thinks it invented sex,' each generation is total/v mistaken. Anything along that line today was commonplace both in Pompeii and in Victo~'ia mi Engla nd, the diff~re;ices lie only in the degree of coi ci up-if any.

I may never publish the book MEN ARE EXASPERATING; I'm not sure it has a market and, at my age, there are more stories that I want to write (and are certain of publication) than I can possibly write before the black camel kneels at my door.

I hope you like Puddin'.

CLIFF AND THE CALORIES

According to Daddy, I'll eat anything standing still or even moving slowly. But Mother said nonsense, I simply have a high metabolic rate.

Daddy answered, "You haven't had it checked, so how do you know? Puddin', stand sideways and let me look at you."

Junior said, "She hasn't got a 'sideways,' " and let loose a perfectly horrible laugh that is supposed to sound like Woody Woodpecker and does, only worse. Of what use is the male of the species between the ages of two and sixteen? Later on, they are bearable, even indispensable-at least I would find it difficult to dispense with Cliff, although Junior may never be an asset.

That's how I went on a diet.

It started with Cliff-most things do. I am going to marry Cliff, only I haven't told him yet. I have never had any cause to doubt the sincerity of Cliff's devotion, but I have sometimes wondered what it was he found most attractive about me: my character, disposition, and true worth, or my so-to-speak physical attributes.

The bathroom scales were beginning to make me think it was the former. Perhaps that should have made me happy, but I have yet to find the girl who would swap a twenty-one-inch waist and a good silhouette for sterling merit. Not that I could hope to be a raving beauty, but a few wolf whistles never did any harm and are good for the morale.'

I had just had a chance to test Cliff's point of view. A girl showed up at school who was exactly my size; we compared measurements. The point is, on Clarice it looked good-cursive and bountiful but good. Maureen, I told myself, here is a chance to get an honest opinion out of Cliff.

I saw to it that he got a good look at her at tennis practice. As we left I said craftily, "That new girl, Clarice-she has a lovely figure."

Cliff looked over his shoulder and replied. "Oh, sure-from her ankles down."

I had my answer and I didn't like it. Cliff didn't care for my type of figure; divorced from my personality it did not appeal to him. I should have felt a warm glow, knowing it for true love. I didn't; I felt terrible.

It was when I refused a second helping of potatoes that evening that the subject of my metabolism came up.

I went to the library next day and looked into this matter of diet. I hadn't known there were so many books about it. Finally I found one that made sense:
Eat and Grow Slender. That struck me as an excellent idea.

I took it home to study. I got a few crackers and some cheese and ate them absent-mindedly while I thumbed through the book. There was a plan for losing ten pounds in ten days; the menus looked pretty skimpy. There was another for losing ten pounds in a month. That's for me, I said; no need to be fanatic.

There was a chapter about calories. They make it so simple: one ice-cream cone, one hundred and fifty calories; three dates, eighty-four calories.

My eye lit on "soda crackers"; I knew they wouldn't count much and they didn't-only twenty-one calories apiece. Then I looked up "cheese."

Arithmetic stirred in my brain and I had a chilly feeling. I went into Daddy's study and used his postal
scale to weigh the cheese that had not already become Maureen.

I did the arithmetic three times. Including two little bits of fudge I had eaten six hundred and seventy calories, more than half of a day's allowance a~ given in the reducing diet! And I had only meant to stay the pangs until dinnertime.

Maureen, I said, this time you've got to be a fanatic; it's the ten-day die-trying diet for you.

I planned to keep my affairs to myself, selecting the diet from what was placed before me, but such a course is impossible in a family that combines the worst aspects of a Senate investigation with the less brutal methods of a third degree. I got away with passing up the cream-of-tomato soup by being a little bit late, but when I refused the gravy, there was nothing to do but show them the book.

Mother said a growing girl needed her food. I pointed out that I had quit growing vertically and it was time I quit horizontally. Junior opened his mouth and I stuffed a roll into it. That gave Daddy a chance to say, "Let's put it up to Doc Andrews. If he gives her the green light, she can starve herself gaunt. She's a free agent."

So Daddy and I went to Doctor Andrews' office next day. Daddy had an appointment anyhow-he has terrible colds every spring. Doctor Andrews sent Daddy across the hall to Doctor Grieb who specializes in allergies and things, then he saw me.

I've known Doctor Andrews since my first squawk, so I told him everything, even about Cliff, and showed him the book. He thumbed through it, then he weighed me and listened to my heart and took my blood pressure. "Go ahead," he told me, "but make it the thirtyday diet. I don't want you fainting in the classroom."

I guess I had counted on him to save me from my will power. "How about exercise?" I said hopefully. "I'm pretty active. Won't I need to eat more to offset it?"

He roared. "Honey child," he said, "do you know how far you would have to hike to burn up one chocolate malt? Eight miles! It will help, but not much."

"How long do I keep this up?"-I asked faintly.

"Until you reach the weight you want-or until your character plays out."

I marched out with my jaw set. If a girl doesn't have a figure or character either, what has she got left?

Mother was home when we got there. Daddy picked her up and kissed her and said, "Now you've got two of us on diets!"

"Two?" said Mother.

"Look." Daddy peeled off his shirt. His arms were covered with little red pin pricks, some redder than others, arranged in neat rows. "I'm allergic," he announced proudly. "Those aren't real colds. I'm allergic to practically everything. That one"- he pointed to a red welt- "is bananas. That one is corn. That one is cow's milk protein. And there is pollen in honey. Wait." He hauled out a list: "Rhubarb, tapioca, asparagus, lima beans, coconut, mustard, cow's milk, apricot, beets, carrots, lamb, cottonseed oil, lettuce, oysters, chocolate-here, you read it; it's your proble m.

"It's a good thing that I went to the campus today and signed up for an evening class in domestic dietetics. From now on this family is going to be fed scientifically," Mother said.

That should have been the worst of it, but it wasn't. Junior announced that he was training for hockey and he had to have a training-table diet-which to him meant beef, dripping with blood, whole-wheat toast, and practically nothing else. Last season he had discovered that, even with lead weights in his pockets, he didn't have what it took for a

body check. Next season he planned to be something between Paul Bunyan and Gorgeous George. Hence the diet.

By now, Mother was on a diet, too, a scientific one, based on what she had learned during the two weeks
she had actually attended classes. Mother pored over charts and we each had separate trays like a hospital, the time I broke my ankle playing second base for the West Side Junior Dodgers. Mother says a girl with my figure should not be a tomboy, but I said that a tomboy should not have my figure. Anyhow, I am no longer a tomboy since Cliff came into my life.

Somehow, Mother found things that weren't on Daddy's verboten list-stewed yak and pickled palm fronds and curried octopus and such. I asked if Daddy had been checked for those too? He said, "Tend to your knitting, Puddin'," and helped himself to more venison pasty. I tried not to watch.

Mother's own diet was as esoteric, but less attractive. She tried to tempt Junior and me with her seaweed soup or cracked wheat or raw rhubarb, but we stuck to our own diets. Eating is fun, but only if it's food.

Breakfast was easiest; Daddy breakfasted later than I did-he had no lectures earlier than ten o'clock that semester.

I would lie abed while our budding athlete wolfed down his Breakfast of Champions, then slide out at the last minute, slurp my glass of tomato juice (twentyeight calories), and be halfway to school before I woke up. By then it would be too late to be tempted.

I carried my pitiful little lunch. Cliff started packing his lunch, too, and we picnicked together. He never noticed what I ate or how much.

I didn't want Cliff to notice, not yet. I planned to make him faint with the way I would look in my new formal at graduation prom.

It did not work out. Cliff took two final exams early and left for California for the summer and I spent the night of the prom in my room, nibbling celery (four calories per stalk) and thinking about life.

We got ready for our summer trip immediately thereafter. Daddy voted for New Orleans.

Mother shook her head. "Impossibly hot. Besides, I don't want you tempted by those Creole restaurants."

"Just what I had in mind," Daddy answered. "Finest gourmet restaurants in the country. You can't keep us on diets while traveling; it isn't practical. Antoine's, here I come!"

"No," said Mother.

"Yes," said Daddy.

So we went to California. I was ready to throw my weight (which was still too much) in with Daddy, when California was mentioned. I hadn't expected to see Cliff until fall. I put thoughts of bouillabaisse and Shrimp Norfolk out of mind; Cliff won, but it was nearer than I like to think.

The trip was hardly a case of merrie-merrie-be. Junior sulked because he wasn't allowed to take along his lifting weights, and Mother was loaded with charts and reference books and menus. Each time we stopped she would enter into long

negotiations, involving a personal interview with the chef, while we got hungrier, and hungrier.

We were coming to Kingman, Arizona, when Mother announced that she didn't think we could find a restaurant to take care of our needs. "Why not?" demanded Daddy. "The people there must eat."

Mother shuffled her lists and suggested that we go on through to Las Vegas. Daddy said that if he had known this trip was going to be another Donner party, he would have studied up on how to cook human flesh.

While they discussed it we slid through Kingman and turned north toward Boulder Dam. Mother looked worriedly at the rugged hills and said, "Perhaps you had better turn back, Charles. It will be hours before we reach Las Vegas and there isn't a thing on the map.

Daddy gripped the wheel and looked grim. Daddy will not backtrack for less than a landslide, as Mother should have known.

I was beyond caring. I expected to leave my bones whitening by the road with a notice: She tried and she died.

We had dropped out of those hills and into the bleakest desert imaginable when Mother said, "You'll have to turn back, Charles. Look at your gasoline gauge."

Daddy set his jaw and speeded up. "Charles!" said Mother.

"Quiet!" Daddy answered. "I see a gas station ahead."

The sign read Santa Claus, Arizona. I blinked at it, thinking I was at last seeing a mirage. There was a gas station, all right, but that wasn't all.

You know what most desert gas stations look like- put together out of odds and ends. Here was a beautiful fairytale cottage with wavy candy stripes in the shingles. It had a broad brick chimney-and Santa Claus was about to climb down the chimney!

Maureen, I said, you've overdone this starvation business; now you are out of your head.

Between the station and the cottage were two incredible little dolls' houses. One was marked Cinderella's House and Mistress Mary Quite Contrary was making the garden grow. The other one needed no sign; the Three Little Pigs, and Big Bad Wolf was stuck in its chimney.

"Kid stuff!" says Junior, and added, "Hey, Pop, do we eat here? Huh?"

"We just gas up," answered Daddy. "Find a pebble to chew on. Your mother has declared a hunger strike."

Mother did not answer and headed toward the cottage. We went inside, a bell bonged, and a sweet contralto voice boomed, "Come in! Dinner is ready!"

The inside was twice as big as the outside and was the prettiest dining room imaginable, fresh, new, and clean. Heavenly odors drifted out of the kitchen. The owner of the voice came out and smiled at us.

We knew who she was because her kitchen apron had "Mrs. Santa Claus" embroidered across it. She made me feel slender, but for her it was perfectly right. Can you imagine Mrs. Santa Claus being skinny?

"How many are there?" she asked.

"Four," said Mother, "but-" Mrs. Santa Claus dis appeared into the kitchen.

Mother sat down at a table and picked up a menu. I did likewise and started to drool-here is why:

Minted Fruit Cup Rouge
Pot-au-feu a la Creole
Chicken Velvet Soup
Roast Veal with Fine Herbs
Ham Soufflé
Yankee Pot Roast
Lamb Hawaii
Potatoes Lyonnaise
Riced Potatoes
Sweet Potatoes Maryland
Glazed Onions
Asparagus Tips with Green Peas
Chicory Salad with
Roquefort Dressing
Artichoke Hearts with Avocado
Beets in Aspic
Cheese Straws
Miniature Cinnamon Rolls
Hot Biscuits
Sherry Almond Ice Cream
Rum Pie
Pêches Flambées Royales
Peppermint Cloud Cake~
Devil's Food Cake
Angel Berry Pie
Coffee Tea Milk

(Our water is trucked fifteen miles;
please help us save it.)
Thank you. Mrs. Santa Claus

It made me dizzy, so I looked out the window. We were still spang in the middle of the grimmest desert in the world.

I started counting the calories in that subversive document. I got up to three thousand and lost track, because fruit cups were placed in front of us. I barely tasted mine-and my stomach jumped and started nibbling at my windpipe.

Daddy came in, said, "Well!" and sat down, too. Junior followed.

Mother said, "Charles, there is hardly anything here you can touch. I think I had better-" She headed for the kitchen.

Daddy had started reading the menu. He said, "Wait, Martha! Sit down." Mother sat.

Presently he said, "Do I have plenty of clean handkerchiefs?"

Mother said, "Yes, of course. Why-"
"Good. I feel an attack coming on. I'll start with the pot-au-feu and- Mother said, "Charles!"

"Peace, woman! The human race has survived upwards of five million years eating anything that could be chewed and swallowed." Mrs. Santa Claus came back in and Daddy ordered lavishly, every word stabbing my heart. "Now," he finished, "if you will have that carried in by eight Nubian slaves-"

"We'll use a jeep," Mrs. Santa Claus promised and turned to Mother.

Mother was about to say something about chopped grass and vitamin soup but Daddy cut in with, "That was for both of us. The kids will order for themselves." Mother swallowed and said nothing.

Junior never bothers with menus. "I'll have a double cannibal sandwich," he announced.

Mrs. Santa Claus flinched. "What," she asked ominously, "is a cannibal sandwich?"

Junior explained. Mrs. Santa Claus looked at him as
if she hoped he would crawl back into the woodwork. At last she said, "Mrs. Santa Claus always gives people what they want. But you'll have to eat it in the kitchen; other people will be coming in for dinner."

"Oke," agreed Junior.

"Now what would you like, honey?" she said to me.

"I'd like everything," I answered miserably, "but I'm on a reducing diet."

She clucked sympathetically. "Anything special you mustn't eat?"

"Nothing in particular-just food. I mustn't eat food."

She said, "You will have a hard time choosing a lowcaloric meal here. I've never been able to work up interest in such cooking. I'll serve you the same as your parents; you can eat what you wish and as little as you wish."

"All right," I said weakly.

Honestly, I tried. I counted up to ten between bites, then I found I was counting faster so as to finish each course before the next one arrived.

Presently I knew I was a ruined woman and I didn't care. I was surrounded by a warm fog of calories. Once my conscience peeked over the edge of my plate and I promised to make up for it tomorrow. It went back to sleep.

Junior came out of the kitchen with his face covered by a wedge of pinkstriped cake. "Is that a cannibal sandwich?" I asked.

"Huh?" he answered. "You should see what she's got out there. She ought to run a training table."

A long time later Daddy said, "Let's hit the road. I hate to."

Mrs. Santa Claus said, "Stay here if you like. We can accommodate you."

So we stayed and it was lovely.

I woke up resolved to skip even my twenty-eight calories of tomato juice, but I hadn't reckoned with Mrs. Santa Claus. There were no menus; tiny cups of coffee appeared as you sat down, then other things, decep
tively, one at a time. Like this: grapefruit, milk, oatmeal and cream, sausage and eggs and toast and butter and jam, bananas and cream-then when you were sure that they had

played themselves out, in came the fluffiest waffle in the world, more butter and strawberry jam and syrup, and then more coffee.

I ate all of it, my personality split hopelessly between despair and ecstasy. We rolled out of there feeling wonderful. "Breakfast," said Daddy, "should be compulsory, like education. I hypothesize that correlation could be found between the modern tendency to skimp breakfast and the increase in juvenile delinquency.

I said nothing. Men are my weakness; food my ruin-but I didn't care.

We lunched at Barstow, only I stayed in the car and tried to nap.

Cliff met us at our hotel and we excused ourselves because Cliff wanted to drive me out to see the university. When we reached the parking lot he said, "What has happened? You look as if you had lost your last friend-and you are positively emaciated."

"Oh, Cliff!" I said, and blubbered on his shoulder. Presently he wiped my nose and started the car. As we drove I told him about it. He didn't say anything, but after a bit he made a left turn. "Is this the way to the campus?" I asked.

"Never you mind."

"Cliff, are you disgusted with me?"

Instead of answering me, he pulled up near a big public building and led me inside; it turned out to be the art museum. Still refusing to talk, he steered me into an exhibition of old masters. Cliff pointed at one of them. "That," he said, "is my notion of a beautiful woman."

I looked. It was The Judgment of Paris by Rubens. "And that-and that-" added Cliff. Every picture he pointed to was by Rubens, and I'll swear his models had never heard of dieting.

"What this country needs," said Cliff, "is more plump girls-and more guys like me who appreciate them."

I didn't say anything until we got outside; I was too busy rearranging my ideas. Something worried me, so I reminded him of the time I had asked his opinion of Clarice, the girl who is just my size and measurements. He managed to remember. "Oh, yes! Very beautiful girl, a knockout!"

"But, Cliff, you said-"

He grabbed my shoulders. "Listen, featherbrain, think I've got rocks in my head? Would I say anything that might make you jealous?"

"But I'm never jealous!"

"So you say! Now where shall we eat? Romanoff's? The Beachcomber? I'm loaded with dough."

Warm waves of happiness flowed over me. "Cliff?"

"Yeah, honey?"

"I've heard of a sundae called Moron's Delight. They take a great big glass and start with two bananas and six kinds of ice cream and- "That's passé. Have you ever had a Mount Everest?" "Huh?"

"They start with a big platter and build up the peak with twenty-one flavors of ice cream, using four bananas, butterscotch syrup, and nuts to bind it. Then they cover it with chocolate syrup, sprinkle maltedmilk powder and more nuts for rock, pour marshmallow syrup and whipped cream down from the top for snow, stick parsley around the lower slopes for trees, and set a little plastic skier on one of the snow banks. You get to keep him as a souvenir of the experience."

"Oh, my!" I said.
"Only one to a customer and I don't have to pay if you finish it."
I squared my shoulders. "Lead me to it!"
"I'm betting on you, Puddin'."
Cliff is such a wonderful man.

AFTERWORD

Santa Claus, Arizona, is still there; just drive from Kin gman toward Boulder Dam on 93; you'll find it. But Mrs. Santa Claus (Mrs. Douglas) is no longer there, and her gourmet restaurant is now a fast-food joint. If she is alive, she is at least in her eighties. I don't want to find out. In her own field she was an artist equal to Rembrandt, Michelangelo, and Shakespeare. I prefer to think of her in that perfect place where all perfect things go, sitting in her kitchen surrounded by her gnomes, preparing her hearty ambrosia for Mark Twain and Homer and Praxiteles and others of her equals.

THE ANSWERS
(to Problems on Pages 334-338)

N.B.: All trips are Earth parking orbit to Earth parking orbit without stopping at the target planet (Mars or Pluto). I assume that Hot Pilot Tom Corbett will handle his gravity-well maneuvers at Mars and at Pluto so as not to waste mass-energy-but that's his problem. Now about that assumption of "flat space" only slightly uphill: The Sun has a fantastically deep gravity well; its "surface" gravity is 28 times as great as ours and its escape speed is 55 + times as great-but at the distance of Earth's orbit that grasp has attenuated to about one thousandth of a gee, and at Pluto at 31.6 A.U. it has dropped off to a gnat's whisker, one millionth of gee.

(No wonder it takes 21/2 centuries to swing around the Sun. By the way, some astronomers seem positively gleeful that today Pluto is not the planet farthest from the Sun. The facts: Pluto spends nine-tenths of its time outside Neptune's orbit, and it averages being 875,000,000 miles farther out than Neptune-and at maximum is nearly 2 billion miles beyond Neptune's orbit (1.79 x lO~ miles)-friends, that's more than the

ROUND TRIP BOOST
COMPARISON OF ELAPSED TIME

Earth-Mars-Earth - @1 gee		Earth- Pluto-Earth
4.59 days	vs.	4.59 weeks
~w'Iio gee		
14.5 days	vs.	14.5 weeks
~~/too gee		
45.9 days	vs.	45.9 weeks
~1/tO0O gee		
145 days	vs.	145 weeks

distance from here to Uranus, nearly four times as far as from here to Jupiter. When Pluto is out there-l 865 or 2114 A.D.-it takes light 6 hours and 50 minutes to reach it. Pluto-the Winnuh and still Champeen! Sour grapes is just as common among astronomers as it is in school yards.)

-and the rabbit is out of the hat. You will have noticed that the elapsed-time figures are exactly the same in both columns, but in days for Mars, weeks for Pluto-i.e., with constant-boost ships of any sort Pluto is only 7 times as far away for these conditions as is Mars even though in miles Pluto is about 50 times as far away.

If you placed Pluto at its aphelion (stay alive another century and a quarter-quite possible), at one gee the Pluto round trip would take 5.72 weeks, at 1/to gee 18.1 weeks, at 1/too gee 57.2 weeks-and at 'Iiooo gee 181 weeks, or 3 yrs & 25 wks.

I have added on the two illustrations at 'Iwoo of one gravity boost because today (late 1979 as I write) we do not as yet know how to build constant-boost ships for long trips at 1 gee, 1/10 gee, or even 1/too gee; Newton's Third Law of Motion (from which may be derived all the laws of rocketry) has us (temporarily) stumped. But only temporarily. There is E = mc2, too, and there are several possible ways of "living off the country" like a foraging army for necessary reaction mass. Be patient; this is all very new. Most of you who read this

will live to see constant-boost ships of 1/10 gee or better-and will be able to afford vacations in space- soon, soon! I probably won't live to see it, but you will. (No complaints, Sergeant-I was born in the horse & buggy age; I have lived to see men walk on the Moon and to see live pictures from the soil of Mars. I've had my share!)

But if you are willing to settle today for a constantboost on the close order of magnitude of 1/1000 gee, we can start the project later this afternoon, as there are several known ways of building constant-boost jobs with that tiny acceleration-even light-sail ships.

I prefer to talk about light-sail ships (or, rather, ships that sail in the "Solar wind") because those last illustrations I added (l/t000 gee) show that we have the entire Solar System available to us right now; it is not necessary to wait for the year 2000 and new breakthroughs.

Ten weeks to Mars . . . a round trip to Pluto at 31.6 A.U. in 2 years and 9 months. . . or a round trip to Pluto's aphelion, the most remote spot we know of in the Solar System (other than the winter home of the comets).

Ten weeks-it took the Pilgrims in the Mayflower nine weeks and three days to cross the Atlantic.

Two years and nine months-that was a normal commercial voyage for a China clipper sailing out of Boston in the last century . . . and the canny Yankee merchants got rich on it.

Three years and twenty-five weeks is excessive for the China trade in the 19th century.. . but no one will ever take that long trip to Pluto because Pluto does not reach aphelion until 2113 and by then we'll have ships that can get out there (constant boost with turnover near midpoint) in three weeks.

Please note that England, Holland, Spain, and Portugal all created worldwide empires with ships that took as long to get anywhere and back as would a Vtooo-gee spaceship. On the high seas or in space it is

not distance that counts but time. The magnificent accomplishments of our astronauts up to now were made in free fall and are therefore analogous to floating down the Mississippi on a raft. But even the tiniest constant boost turns sailing the Solar System into a money-making commercial venture.

Now return to page 338.

"Tomorrow we again embark
upon the boundless sea."
-Horace, Odes, I, i.

FOREWORD

One of the very few advantages of growing old is that one can reach an age at which he can do as he damn well pleases within the limits of his purse.

A younger writer, still striving, has to put up with a lot of nonsense-interviews, radio appearances, TV dates, public speaking here and there, writing he does not want to do-and all of this almost invariably unpaid.

In 1952 I was not a young writer (45) but I was certainly still striving. Here is an unpaid job I did for a librarians' bulletin because librarians can make you or break you. But today, thank Allah, if I don't want to do it, I simply say, "No." If I get an argument, I change that to: "Hell, No!"

"Being intelligent is not a felony.
But most societies evaluate
it as at least a misdemeanor."

-L. Long

RAY GUNS AND ROCKET SHIPS

"When I make a word do a lot of work like that," said Humpty Dumpty, "I always pay it extra."

"Science Fiction" is a portmanteau term, and many and varied are the things that have been stuffed into it. Just as the term "historical fiction" includes in its broad scope Quo Vadis, nickel thrillers about the James Boys or Buffalo Bill, and ForeverAmber, so does the tag "science fiction" apply both to Alley Oop and to Aldous Huxley's After

Many a Summer Dies the Swan. It would be more nearly correctly descriptive to call the whole field "speculative fiction" and to limit the name "science fiction" to a sub-class-in which case some of the other sub-classes would be: undisguised fantasy (Thorne Smith, the Oz books), pseudoscientific fantasy (C. S. Lewis's fine novel Out of the Silent Planet, Buck Rogers, Bradbury's delightful Martian stories), sociological speculation (More's Utopia, Michael Arlen's Man's Mortality, H. G. Wells' World Set Free, Plato's Republic), adventure stories with exotic and non-existent locales (Flash Gordon, Burroughs' Martian stories, the Odyssey, Tom Sawyer Abroad). Many other classes will occur to you, since the term
"speculative fiction" may be defined negatively as
being fiction about things that have not happened.

One can see that the name "science fiction" is too Procrustean a bed, too tight a corset, to fit the whole field comfortably. Nevertheless, since language is how we talk, not how we might talk, it seems likely that the term "science fiction" will continue to be applied to the whole field; we are stuck with it, as the American aborigines are stuck with the preposterous name "Indian."

But what, under rational definition, is science fiction? There is an easy touchstone: science fiction is speculative fiction in which the author takes as his first postulate the real world as we know it, including all established facts and natural laws. The result can be extremely fantastic in content, but it is not fantasy; it is legitimate-and often very tightly reasoned- speculation about the possibilities of the real world. This category excludes rocket ships that make Uturns, serpent men of Neptune that lust after human maidens, and stories by authors who flunked their Boy Scout merit badge tests in descriptive astronomy.

But the category includes such mindstretchers as Olaf Stapledon's Last and First Men, William Sloane's To Walk the Night, Dr. Asimov's The Stars, Like Dust, even though these stories are stranger than most outright fantasies.

But how is one to distinguish between legitimate science fiction and ridiculous junk? Place of original publication is no guide; some of the best have appeared in half-cent-a-word pulp magazines, with bugeyed monsters on their covers; some of the silliest have appeared in high-pay slicks or in the "prestige" quality group.

"The Pretzel Men of Pthark"-that one we can skip over; the contents are probably like the title. Almost as easy to spot is the Graustark school of space opera. This is the one in which the dashing Nordic hero comes to the aid of the rightful Martian princess and kicks out the villainous usurper through superscience and sheer grit. It is not being written very often these days, although it still achieves book publication occasionally, sometimes with old and respectable trade book houses. But it does not take a Ph.D. in physics to recognize it for what it is.

But do not be too quick to apply as a test to science fiction what are merely the conventions of better known fields of literature. I once heard a librarian say that she could not stand the unpronounceable names
given by science-fiction writers to extraterrestrials. Have a heart, friend! These strings of consonants are honest attempts to give unearthly names to unearthly creatures. As Shaw pointed out, the customs of our tribe are not laws of nature. You would not expect a Martian to be named "Smith." (Say-how about a story about a Martian named "Smith?" Ought to make a good short. Hmmmm-)

But are there reliable criteria by which science fiction can be judged by one who is not well acquainted with the field? In my opinion, there are. Simply the criteria which apply to all fields of fiction, no more, no less.

First of all, an item of science fiction should be a story, i.e., its entertainment value should be as high as that which you expect from other types of stories. It should be entertaining to almost anyone, whether he habitually reads the stuff or not. Second, the degree of literacy should be as high as that expected in other fields. I will not labor this point, since we are simply applying an old rule to a new field, but there is no more excuse here than elsewhere for split infinitives, dangling participles, and similar untidiness, or for obscurity and doubletalk.

The same may be said for plotting, characterization, motivation, and the rest. If a science-fiction writer can't write, let him go back to being a fry cook or whatever he was doing before he gave up honest work.

I want to make separate mention of the author's evaluations. Granted that not all stories need be morally edifying, nevertheless I would demand of sciencefiction writers as much exercise of moral sense as I would of other writers. I have in mind one immensely popular series which does not hold my own interest very well because the protagonist seems to be guided only by expediency. Neither the writer nor his puppet seems to be aware of good and evil. For my taste this is a defect in any story, nor is the defect mitigated by the wonderful and gaudy trappings of science fiction. In my opinion, such abstractions as honor, loyalty, fortitude, self-sacrifice, bravery, honesty, and integrity will be as important in the far reaches of the Galaxy as they are in Iowa or Korea. I believe that you are entitled to apply your own evaluating standards to science fiction quite as rigorously as you apply them in other fiction.

The criteria outlined above take care of every aspect of science fiction but one-the science part. But even here no new criterion is needed. Suppose you were called on to purchase or to refuse to purchase a novel about a Mexican boy growing up on a Mexican cattle ranch; suppose that you knew no Spanish, had never been to Mexico and were unacquainted with its history and customs, and were unsure of the competence of the author. What would you do?

I suspect that you would farm out the decision to someone who was competent to judge the authenticity of the work. It might be a high school Spanish teacher, it might be a friend or neighbor who was well acquainted with our neighboring culture, it might be the local Mexican consul. If the expert told you that the background material of the book was nonsense, you would not give the book shelf room.

The same procedure applies to science fiction. No one can be expected to be expert in everything. If you do not happen to know what makes a rocket go when there is no air to push against, you need not necessarily read Willy Ley's Rockets, Missiles, and Space Travel-although it is a fine book, a "must" for every library, desirable for any home. You may instead consult anyone of your acquaintance who does know about rocket ships-say an Air Force or Artillery officer, a physics teacher, or almost any fourteen-year-old boy, especially boys who are active in high school science clubs. If the novel being judged concerns cybernetics, nuclear physics, genetics, chemistry, relativity, it is necessary only to enlist the appropriate helper.

You would do the same, would you not, with a novel based on the life of Simon BolIvar?

Of course, there is the alternate, equivalent method of testing the authenticity of any book by checking on the author. If the SimOn BolIvar novel was written by a distinguished scholar of South American history, you need concern yourself only with the literary merit of the book. If a book about space travel is written by a world-famous astronomer (as in the case of the one who writes under the pen name of "Philip Latham"), you can put your mind at rest about the correctness of the science therein. In many cases science-fiction writers have more than adequate professional background in the sciences they use as background material and their publishers are careful to let you know this through catalog and dustjacket blurb. I happen to be personally aware of and can vouch for the scientific training of Sprague de Camp, George 0. Smith, "John Tame," John W. Campbell, Jr., "Philip Latham," Will Jenkins, Jack Williamson, Isaac Asimov, Arthur C. Clarke, E. E. Smith, Philip Wylie, Olaf Stapledon, H. G. Wells, Damon Knight, Harry Stine, and "J. J. Coupling." This listing refers to qualifications in science only and is necessarily incomplete, nor do I mean to slight the many fine writers without formal scientific training who are well read in science and most careful in their research.

But some means of checking on a writer of alleged science fiction is desirable. Most writers of historical fiction appear to go to quite a lot of trouble to get the facts of their historical scenes correct, but some people seem to feel that all that is necessary to write science fiction is an unashamed imagination and a sprinkling of words like "ray gun," "rocket tube," "mutant," and "space warp." In some cases the offense is as blatant as it would be in the case of an author of alleged historical fiction who founded a book on the premise that SimOn BolIvar was a Chinese monk! It follows that, in order to spot these literary fakers it is necessary to know that BolIvar was not a Chinese monk-know something of the sciences yourself or enlist competent advisers.

AFTERWORD

Writers talking about writing are about as bad as parents boasting about their children. I have not done much of it; the few times that I have been guilty, I did not instigate the project, and in almost all cases (all, I think) my arm was twisted.

I promise to avoid it in the future.

The item above, however, I consider worthy of publication (even though my arm was twisted) because there really are many librarians who earnestly wish to buy good science fiction. . . but don't know how to do it. In this short article I tried very hard to define clearly and simply how to avoid the perils of Sturgeon's Law in buying science fiction.

Part way through you will notice the origin of the last name of the STRANGER IN A STRANGE LAND.

"It is far, far better to have a bastard in the family than an unemployed son-in-law."

-Jubal Harshaw
FOREWORD

Superficially this looks like the same sort of article as PANDORA'S BOX; it is not, it is fiction-written by request to celebrate the 50th anniversary of Amazing Stories. In PANDORA'S BOX I was trying hard to extrapolate rationally to most probable answers 50 years in the future (and in November1979 I gave myself a score of66%-anybody want to buy a used crystal ball with a crack in it?).

But in this short-short I wrote as if I were alive in 2001 and writing a retrospective of the 20th century. Of course everyone knows what happened in 2001; they found a big black monolith on Luna-but in 19561 didn't know that. So I wrote as far out as I thought I could get away with (to be entertaining) while trying to make the items sound plausible and possible if not likely.

Figures in parentheses refer to notes at the end.

"Has it ever occurred to you

that God might be a committee?"

-Jubal Harshaw
THE THIRD MILLENNIUM
OPENS

Now, at the beginning of the year 2001, it is time to see where we have been and guess at where we are going. A thousand years ago Otto III ruled the Holy Roman Empire, William the Conqueror was not yet born, and the Discovery of America was almost five hundred years in the future. The condition of mankind had not changed in most important respects since the dawn of history. Aside from language and local custom a peasant of 1000 B.C. would have been right at home in a village of 1001 A.D.

He would not be so today!

The major changes took place in the last two centuries, but the most significant change of all occurred in the last fifty years, during the lifetimes of many of us. In 1950 six out of ten persons could neither read nor write; today an illiterate person is a freak.(1)

More people have learned to read and write in the past fifty years than in all the thousands of years preceding
1950.

This one change is more worldshaking than the establishment this last year of the laboratory outpost on Pluto. We think of this century just closed as the one in which mankind conquered space; it would be more appropriate to think of it as the century in which the human race finally learned to read and write.

(Let's give the Devil his due; the contagious insanities of the past century-communism, xenophobia, aggressive nationalism, the explosions of the formerly colonial peoples-have done more to spread literacy than the efforts of all the do-gooders in history. The Three R's suddenly became indispensable weapons in mankind's bloodiest struggles-learn to read, or die. Out of bad has come good; a man who can read and write is nine-tenths free even in chains.)

But something else has happened as important as the ABC's. The big-muscled accomplishments of the past fifty years-like sea-farming, the fantastic multiplication of horsepower, and spaceships, pantographic factories, the Sahara Sea, reflexive automation, tapping the Sun-overshadow the most radical advance, i.e., the first fumbling steps in founding a science of the human mind.

Fifty years ago hypnotism was a parlor trick, clairvoyance was superstition, telepathy was almost unknown, and parapsychology was on a par with phrenology and not as respectable as the most popular nonsense called astrology.

Do we have a "science of the mind" today? Far from it. But we do have- A Certainty of Survival after Death, proved with scientific rigor more complete than that which we apply to heat engines. It is hard to believe that it was only in 1952 that Morey Bernstein, using hypnotic regression, established the personal survival of Bridget Murphy- and thereby turned the western world to a research that Asia and Africa had always taken for granted.(2)

Telepathy and Clairvoyance for Military Purposes. The obvious effect was the changing of war from a "closed" game to an "open" game in the mathematical sense, with the consequence that assassination is now more important than mass weapons. It may well be that no fusion bomb or plague weapon will ever again be used-it would take a foolhardy dictator even to consider such when he knows that his thoughts are being monitored . . . and that assassination is so much harder to stop than a rocket bomb. He is bound to remember that Tchaka the Ruthless was killed by one of his own bodyguard.

But the less obvious effect has been to take "secrecy" wraps off scientific research. It is hard to recall that there was once a time when scientific facts could not be freely published, just as it is hard to believe that our grandfathers used to wear things called "swimming suits"-secrecy~in science and swimming with clothes on are almost equally preposterous to the modern mind. Yet clothing never hampered a swimmer as much as "classification" hampered science. Most happily, controlled telepathy made secrecy first futile, then obsolete.(3)

But possibly the most important discovery we have made about ourselves is that Man isa Wild Animal. He cannot be tamed and remain Man; his genius is bound up in the very qualities which make him wild. With this self-knowledge, bleak, stern, and proud, goes the last hope of permanent peace on Earth; it makes world government unlikely and certainly unstable. Despite the fact that we are (as always) in a condition of marginal starvation, this fact makes all measures of population control futile-other than the ancient, grisly Four Horsemen, and even they are not effective; we finished World War III with a hundred million more people than when we started.

Not even the H-bomb could change our inner nature. We have learned most bloodily that the H-bomb does nothing that the stone axe did not do-and neither weapon could tame us. Man can be chained but he cannot be domesticated, and eventually he always breaks his chains.

Nor can we be "improved" by genetic breeding; it is not in our nature to accept it. Someday we may be conquered by superbeings from elsewhere, then bred according to their notions-and become dogs, rather than wolves. (I'm betting that we will put up a fight!)
But, left to our own resources, improvements in our breed must come the hard way, through survival
and we will still remain wild animals.(4)

But we have barely begun to study ourselves. Now that mankind has finally learned to read and write what can we expect him to accomplish?

We have no idea today of how self-awareness is linked to protoplasm. Now that we know that the ego survives the body we should make progress on this mystery.

Personal survival necessitates Cosmic Purpose as a "least hypothesis" for the universe. Scientists are tending to take teleology away from theologians and philosophers and give it a shaking. But concrete results this century seem unlikely. As of now, we still don't know why we are here or what we are supposed to do-but for the first time in history it is scientifically probable that the final answers are not null answers. It will be interesting indeed if one of the religious faiths turns out to be correct to nine decimals.

Since ESP talents seem to be independent of spacetime it is theoretically possible that we may achieve a mental form of time travel. This is allowable under the mathematics being developed to describe mind phenomena. If so, we may eventually establish history, and even prophecy, as exact sciences.

On the physical side we can be certain that the speed-of-light barrier will be cracked this century. This makes it statistically likely that we will soon encounter races equal or superior to ourselves. This should be the most significant happening to mankind since the discovery of fire. It may degrade or destroy us, it may improve us; it cannot leave us unchanged.

On the mundane side we can expect a population of five billion by the middle of this century. Emigration to other planets will not affect the total here.

Scientific facts will continue to be discovered much faster than they can be classified and cross-referenced,
but we cannot expect any accompanying increase in human intelligence. No doubt the few remaining illiterates will continue to be employed in the subscription departments of periodicals; the same bigmouths who now complain about rocket service to Luna (but who can't thread a needle themselves) will in 2050 be complaining about service to the stars (and they still won't be able to thread a needle).

Unquestionably the Twentieth Century will be referred to as the "Good Old Days," we will continue to view with alarm the antics of the younger generation, and we probably will still be after a cure for the common cold.

Notes : 1980

1. He's still a freak but he's all too common. There is a special circle in Hell for the "Educators" who decided that the Three R's really weren't all that important. Concerning our public schools today: Never have so many been paid so much for so little. I thank whatever gods there be that I went to school so many years ago that I had no choice but to be tightly disciplined in classes in which the teachers did not hesitate to fail and to punish.

My first-grade class had 63 kids in it, one teacher, no assistant. Before the end of the second semester all 63 could read.

2. Many people seem to feel that the "Bridey Murphy" case has been invalidated. Maybe so, maybe not-the investigative reporter who went to Ireland had no special qualifications and the "disproof' came from TIME magazine. TIME magazine probably publishes many facts

but since its founding in the early 1920's 1 have been on the spot eight or nine times when something that wound up as a news story in TIME happened. Not once-not once-did the TIME magazine story match what I saw and heard.

I have the "Bridey Murphy" recording and Bernstein's book about it. I am not an expert witness. . . but I fbund the recording highly interesting. To me it sounded like what it purported to be: regression under hypnosis to memory of a former existence. Some years later I learned from an ethical hypnotherapist (i.e., he accepted patients only by referrals from M.D.'s, his own doctorate being in psychology) that regression to what seemed to be former lives was a commonplace among patients of hypnotherapists- they discussed it among themselves but never published because they were bound by much the same rule as physicians and priests taking confession.

I have no data to offer of my own. I decided many years back that I was too busy with this life to fret about what happens afterwards. Long before 2001 1 will know. . . or I will know nothing whatever because my universe has ceased to exist.

3. Anyone today who simply brushes off ESP phenomena as being ridiculous is either pigheaded or ignorant. But I do not expect controlled telepathy by 2001; that is sheer fiction, intended to permit me to get in that bit about Tchaka, et al.

4. I lifted this "Man is a wild animal" thesis bodily from Charles Galton Darwin (grandson of the author of THE ORIGIN OF SPECIES) in his book THE NEXT MILLION YEARS, Doubleday, 1953. lam simply giving credit; I shan't elaborate here. But THE NEXT MILLION YEARS is a follow-on to THE ORIGIN OF THE SPECIES and is, in my opinion, one of most important works of this century. It has not been a popular book-but I seem to recall that his grandfather's seminal work wasn't too popular, either.

FOREWORD

This polemic was first published on Saturday 12 April 1958. Thereafter it was printed many other places and reprints of it were widely circulated inside and outside the science fiction community, inside and outside this country.

It brought down on me the strongest and most emotional adverse criticism I have ever experienced-not to my surprise.

After more than twenty years my "misdeed" seems to have been largely forgotten, or perhaps forgiven. But I do not ask to be forgiven and I do not want it to be forgotten. So I now republish it in permanent form. I have not consulted my editor or my publisher; each is free to denounce my opinions here expressed-but is not free to refuse this item while accepting the rest of this book.

A few specific details below are outdated by new technology-e.g., earthquakes can now be distinguished with certainty (we hope) from nuclear explosions, while other aspects of detection and inspection grow more complex. Technical details change; basic principles do not.

"Supreme excellence in war is to subdue the enemy without fighting."
-Sun Tzu, ca. 350 B.C.

The Soviet Union is highly skilled at this-and so are the Chinese leaders. During the last twenty-odd years we have been outmaneuvered endlessly. Today it's the Backfire bomber (a B-i with a Russian accent); tomorrow it is an international (U.N.) treaty to socialize all aspects of space and thereby kill such enterprise as the L-5 Society, Sabre, Otrag (already killed), Robert Truax's Do-It-Yourself projects. The treaty will permit a KGB agent ("A rose by any other name-") to inspect in detail anything of ours, private or public, on the ground or in the sky, if it is in any way connected with space-or the KGB man claims to suspect that it might be.

(But if you think that gives us a free ticket into every building, every room, at the Byakonur space complex, you don't know how the USSR does~business.)

The President has already announced that he will sign it. 10 to 1 he will, 7 to 2 the Senate will pass it-and 100 to 1 we will regret it.

This declaration is more timely than ever; I am proud to reprint it-and deeply sorry that it was ever needed.

Any rational person may well disagree with me on details of this broadside. But on the moral principles expressed here, a free man says: "Give me liberty, or give me death!" No quibbling, no stopping to "think it over." He means it.

Fools and poltroons do not.

WHO ARE THE HEIRS OF
PATRICK HENRY?
STAND UP AND BE COUNTED!

"Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take, but as for me, give me liberty, or give me death!!"
-Patrick Henry

Last Saturday in this city appeared a full-page ad intended to scare us into demanding that the President stop our testing of nuclear weapons. This manifesto was a curious mixture of truth, half-truth, distortion, exaggeration, untruth, and Communistline goals concealed in idealistic-sounding nonsense.

The instigators were seventy-odd local people and sixty-odd national names styling themselves "The National Committee for a Sane Nuclear Policy." It may well be that none of the persons whose names are used as the "National" committee are Communists and we have no reason to suppose that any of the local people are Communists-possibly all of them are loyal and merely misguided. But this manifesto is the rankest sort of Communist propaganda.

A tree is known by its fruit. The purpose of their manifesto is to entice or frighten you into signing a letter to President Eisenhower, one which demands that he take three actions. The first demand is the old, old Communist-line gimmick that nuclear weapons and their vehicles should be "considered apart" in disarmament talks. It has had a slight restyling for the

post-Sputnik era and now reads: "That nuclear test explosions, missiles, and outer-space satellites be considered apart from other disarmament problems."

This proposal sounds reasonable but is boobytrapped with outright surrender of the free world to the Communist dictators. Mr. Truman knew it, Mr. Eisenhower knows it; both have refused it repeatedly. The gimmick is this: if nuclear weapons and their vehicles are outlawed while conventional weapons (tanks and planes and bayonets and rifles) are not, then-but you figure it out. 170,000,000 of us against 900,000,000 of them. Who wins?

Even if you count our allies (on the assumption that every last one of them will stick by us no matter how bone-headed our behavior), the ratio is still two-to-one against us when it comes to slugging it out with infantry divisions, Yalu River style.

Oh yes! Khrushchev would like very much to have nuclear weapons "considered apart" from infantry divisions. And he is delighted when soft-headed Americans agree with him.

"The ~'Iice Voted to Bell the Cat." -Aesop

Their second proposal has been part of the Communist line for twelve long years. It reads: "That all nuclear test explosions be stopped immediately and that the U.N. then proceed with the mechanics necessary for monitoring this cessation." This is the straight Communist gospel direct from the Kremlin. This was and is today their phony counter-proposal to the Baruch Proposals of 1946-banning first, policing the ban if, when, and maybe .. . and subject to the veto of the U.S.S.R. It would leave us at the "mercy" of the butchers of Budapest, our lives staked on the "honor"
of men to whom honesty is a bourgeois weakness, our freedom resting on the promises of a gangster government that has broken every promise it ever made.

The Committee's manifesto claims: "-the problems in monitoring such tests are relatively uncomplicated." This is either an outright lie or ignorant wishful thinking; the problems are so complicated that nothing short of on-the-spot inspection will work-an underground test cannot be told from an earthquake shock by any known method of monitoring.

Before you trust your lives and freedom to the promises of the Kremlin, remember Budapest-

-remember Poland in 1945
-remember Prague
-remember Estonia, Latvia, Lithuania
-remember Korea
-remember brave little Finland
-and keep your powder dry!

The third proposal is largely pious window-dressing but it has the same sort of booby-trap buried in it. It reads: "That missiles and outer-space satellites be brought under United Nations-monitored control, and that there be a pooling of world science for space exploration under the United Nations." The harmless part could be done if the U.S.S.R. were willing; the booby-trap is the word "missiles."

We Americans live in a goldfish bowl; we could not conceal rocket tests even if we tried. But in the vast spaces of Russia, Siberia, and China missiles of every sort-even the long-range ICBMs-can be tested in secret, manufactured and stockpiled and installed ready to go, despite all "monitoring." Anything less than onthe-spot inspection of the

entire vast spaces of the Communist axis would leave us at the mercy of the bland promises of the Butchers of Budapest.

The last paragraph of this letter that they want you to send to the President is not a proposal; it is simply
another attempt to strike terror into the hearts of free men by reminding us of the horrors of nuclear war.

"'Will you walk into my parlor?' said the Spider to the Fly."

It is no accident that this manifesto follows the Communist line, no coincidence that it "happens" to appear all over the United States the very week that Khrushchev has announced smugly that the U.S.S.R. has ended their tests-and demands that we give up our coming, long-scheduled, and publicly announced tests of a weapon with minimum fall-out.

This follows the pattern of a much-used and highlyrefined Communist tactic: plan ahead to soften up the free world on some major point, package the propaganda to appeal to Americans with warm hearts and soft heads, time the release carefully, then let the suckers carry the ball while the known Communists stay under cover.

They used this method to gut our army after the Japanese surrender with the slogan of "Bring the Boys Home." They used it to make us feel guilty about the A-bomb-while their spies were stealing it. They dreamed up the pious theme of "Don't Play Politics with Hunger"-then used our charity to play their politics. They used it to put over the infamous "Oxford Oath" and the phony "Peace Strikes" of the thirties. They have used this tactic many times to soften up the free world and will use it whenever they can find dupes.

They are using it now. Today both sides, Freedom and Red Tyranny, are armed with nuclear weapons... and the Communists are again using our own people to try to shame or scare us into throwing our weapons away.

These proposals are not a road to world peace, they are abject surrender to tyranny. If we fall for them, then in weeks or months or a few years at most, Old Glory will be hauled down for the last time and the
whole planet will be ruled by the Butchers of Budapest.

For more than a hundred years, ever since the original Communist Manifesto, it has been the unswerving aim of the Communist Party to take over all of this planet. The only thing blocking their conquest is the fact that the tragically-shrunken free world still possesses nuclear weapons. They can destroy us .. . but they know that we can destroy them.

So they want us to throw away the equalizer.

If we do, we can expect the same "mercy" that Budapest received. They will say to us: "Surrender-or be destroyed!"

"God grants liberty only to those who love it and are always ready to guard and defend it."
-Daniel Webster

We the undersigned are not a committee but simply two free citizens of these United States. We love life and we want peace . . . but not "peace at any price"- not the price of liberty!

Poltroons and pacifists will think otherwise.

Those who signed that manifesto have made their choice; consciously or unconsciously they prefer enslavement to death. Such is their right and we do not argue with them-we speak to you who are still free in your souls.

In a free country, political action can start anywhere. We read that insane manifesto of the so-called "Committee for a 'Sane' Nuclear Policy" and we despised it. So we are answering it ourselves-by our own free choice and spending only our own money.

We say to the commissars: "You will never enslave us. The worst you can do is kill us. But we are resolved to die free!"

"They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety."
-Benjamin Franklin

No scare talk of leukemia, mutation, or atomic holo
raust will sway us. Is "fall-out" dangerous? Of course it is! The risk to life and posterity has been willfully distorted by these Communist-line propagandists- but if it were a hundred times as great we still would choose it to the dead certainty of Communist enslavement. If atomic war comes, will it kill off the entire human race? Possibly-almost certainly so if the Masters of the Kremlin choose to use cobalt bombs on us. Their command of science in these matters seems equal to ours, they appear to be some years ahead of us in the art of rocketry; they almost certainly have the power to destroy the human race.

If it comes to atomic war, the best we can hope for is tens of millions of American dead-perhaps more than half our population wiped out in the first few minutes.

Colorado Springs is at least a secondary target; all of us here may be killed.

These are the risks. The alternative is surrender. We accept the risks.

"The liberties of our country, the freedom of our civil Constitution, are worth defending at all hazards.
-Samuel Adams

We have no easy solution to offer. The risks cannot be avoided other than by surrender; they can be reduced only by making the free world so strong that the evil pragmatists of Communism cannot afford to murder us. The price to us will be year after weary year of higher taxes, harder work, grim devotion . . . and perhaps, despite all this-death. But we shall die free!

To this we pledge our lives, our fortunes, and our sacred honor.

We the undersigned believe that almost all Americans agree with us. Whoever you are, wherever you are, you sons of Patrick Henry-let us know your name! Sign the letter herewith and mail it to us-we will see that it gets to Congressman Chenoweth, to both our Senators, and to the President.

This much has been done by two people acting alone. Let's call ourselves "The Patrick Henry League" and prove to our government that the Spirit of '76 is still alive. We arc t\vo, you and your spouse make four, your neighbor and his wife make six-we can snowball this until it sweeps the country.

We can advertise in other counties, in other states.

If you who are reading this are not in Colorado Springs, stand up, speak up, and start your own chapter of "The Patrick Henry League" now. You are a free citizen, you need no permission, nor any charter from us. Run an ad-quote or copy this one if you

like. Dig down in the sock to pay for it, or pass the hat, or both-but sound the call in your own home town, mail copies of your ad out of town, and get some more letters started toward Washington

And let us hear from vou~

Let us all stand up and shout aloud again and forever:

'Give Me Libert\ or Give Me 1)eath!"

Robert and Virginia Heinlein 1958 address- 1776 Mesa Avenue

Colorado Springs, Colorado

1980 address- (Care Spectrum Literary Agency
60 East 42nd Street
New York City, New York 10017)
President Eisenhower, The White House
Washington, D.C.

Dear Mr. President:

We know that you are being pressured to stop our nuclear weapons tests, turn our missile and space program over to the U.N., and in other ways to weaken our defenses.

We urge you to stand steadfast.

We want America made supremely strong and we are resolved to accept all burdens necessary to that end. We ask for total effort-nuclear testing, research, and development, highest priorities for rocketry, sterner education, anything that is needed. We are ready to pay higher taxes, forego luxuries, work harder.

Ic this we pledge our lives our fortunes, and our sacred honor.

Respectfully yours,

(names)

(address)

AFTERWORD

When the soi-disant "SANE" committee published its page ad in Colorado Springs (and many other cities) on 5 April 1958, I was working on THE HERETIC (later to be published as STRANGER IN A STRANGE LAND). I stopped at once and for several weeks Mrs. Heinlein and I did nothing but work on this "Patrick Henry" drive. We published our ad in three newspapers, encouraged its publication elsewhere, mailed thousands of reprints, spoke before countless meetings, collected and mailed to the White House thousands of copies of the letter above- always by registered mail-no acknowledgement of any sort was ever received, not even in response to "Return Receipt Requested."

Then the rug was jerked out from under us; by executive order Mr. Eisenhower canceled all testing without requiring mutual inspection. (The outcome of that is now history; when it suited him, Khrushchev resumed testing with no warning and with the dirtiest bombs ever set off in the atmosphere.)

I was stunned by the President's action. I should not have been as I knew that he was a political general long before he entered politics-stupid, all front, and dependent on his staff. But that gets me the stupid hat, too; I had learned years earlier that many

politicians (not all!) will do anything to get elected. . . and Adlai Stevenson had him panting.

Presently I resumed writing-not STRANGER but STARSHIP TROOPERS.

The "Patrick Henry" ad shocked 'em; STARSHIP TROOPERS outraged 'em. I still can't see how that book got a Hugo. It continues to get lots of nasty "fan" mail and not much favorable fan mail.. . but it sells and sells and sells and sells, in eleven languages. It doesn't slow down-four new contracts just this year. And yet I almost never hear of it save when someone wants to chew me out over it. I don't understand it.

The criticisms are usually based on a failure to under-
stand simple indicative English sentences, couched in sivnple words -especially when the critics are professors ofEnglish, as they often are. (A shining counter exa;nple, a professor who can read and understand English, is one at Colorado College-a professor of history.)

We have also some professors ofEnglish who write science fiction but I do not know of one who formally reviewed or criticized STARSHIP TROOPERS. However, I have gathered a strong impression over the years that professors of English who write and sell science fiction average being much more grammatical and much more literate than their colleagues who do not (cannot?) write saleable fiction.

Their failures to understand English are usually these:

1. "Veteran" does not mean in English dictionaries or in this novel solely a person who has served in military forces. I concede that in commonest usage today it means a war veteran.. . but no one hesitates to speak of a veteran fireman or veteran school teacher. In STARSHIP TROOPERS it is stated flatly and more than once that nineteen out of twenty veterans are not military veterans. Instead, 95% of voters are what we call today "former members of federal civil service."

Addendum: The volunteer is not given a choice. He/she can't win a franchise by volunteering for what we call civil service. He volunteers. . . then for two years plusor-minus he goes where he is sent and does what he is told to do. If he is young, male, and healthy, he may wind up as cannon fodder. But there are long chances against
it.

2. He/she can resign at any time other than during combat-i.e., 100%ofthe time fori9 out of2O; 99%± of the time for those in the military branches of federal service.

3. There is no conscription. (I am opposed to conscription for any reason at any time, war or peace, and have said so repeatedly in fiction, in nonfiction, from platforms, and in angry sessions in think tanks. I was sworn in first in 1923. and have not been off the hook since that
time. ~.4y principal pride in my family is that I know of not one in over two centuries who was drafted; they all volunteered. But the draft is involuntary servitude, immoral, and unconstitutional no matter what the Supreme Court says.)

4. Criticism: "The government in STARSHIP TROOPERS is militaristic." "Vlilitaristic" is the adjective for the noun "militarism," a word of several definitions but not one of them can be correctly applied to the government described in this novel. No military or civil servant can vote or hold office until after he is discharged and is again a civilian. The military tend to be despised by most civilians and this is made explicit. A career military man is most unlikely ever to vote or hold office; he is more likely to be dead-and if he does live through it, he'll vote for the first time at 40 or older.

"That book glorifies the military!" Now we are getting somewhere. It does indeed. Specifically the P.B.I., the Poor Bloody Infantry, the mudfoot who places his frail body between his loved home and the war's desolation- but is rarely appreciated. "It's Tommy this and Tommy that and chuck him out, the brute!-but it's 'thin red line of heroes when the guns begin to shoot.'"

~4y own service usually doesn't have too bad a time of it. Save for very special situations such as the rivers in Nam, a Navy man can get killed but he is unlikely to be wounded.. . and if he is killed, it is with hot food in his belly, clean clothes on his body, a recent hot bath, and sack time in a comfortable bunk not more than 24 hours earlier. The Air Force leads a comparable life. But think of Korea, of Guadalcanal, of Belleau Wood, of Viet Narn. The H-bomb did not abolish the infantryman; it made him essential. . . and he has the toughest job of all and should be honored.

Glorify the military? Would I have picked it for my profession and stayed on the rolls the past 56 years were I not proud of it?

I think I know what offends most of my critics the most about STARSHIP TROOPERS: It is the dismaying idea that a voice in governing the state should be earned instead of being handed to anyone who is 18 years old and has a body temperature near 3 7°C.

But there ain't no such thing as a free lunch.

Democracies usually collapse not too long after the plebs discover that they can vote themselves bread and circuses. . . for a while. Either read history or watch the daily papers; it is now happening here. Let's stipulate for discussion that some stabilizing qualification is needed (in addition to the body being warm) for a voter to vote responsibly with proper consideration for the future of his children and grandchildren-and yours. The Founding Fathers never intended to extend the franchise to everyone; their debates and the early laws show it. A man had to be a stable figure in the community through owning land or employing others or engaged in a journeyman trade or something.

But few pay any attention to the Founding Fathers today-those ignorant, uneducated men-they didn't even have television (have you looked at Monticello lately?)- so let's try some other "poll taxes" to insure a responsible electorate:

a) Mark Twain's "The Curious Republic of Gondor"- if you have not read it, do so.

b) A state where anyone can buy for cash (or lay-away installment plan) one or more franchises, and this is the government's sole source of income other than services sold competitively and non-monopolistically. This would produce a new type of government with several rabbits tucked away in the hat. Rich people would take over the government? Would they, now? Is a wealthy man going to impoverish himself for the privilege of casting a couple of hundred votes? Buying an election today, under the warm-body (and tombstone) system is much cheaper than buying a controlling number of franchises would be. The arithmetic on this one becomes unsolv
able. . . but I suspect that paying a stiff price (call it 20,000 Swiss francs) for a franchise would be even less popular than serving two years.

c) A state that required a bare minimum of intelligence and education-e.g., step into the polling booth and find that the computer has generated a new quadratic equation

just for you. Solve it, the computer unlocks the voting machine, you vote. But get a wrong answer and the voting machine fails to unlock, a loud bell sounds, a red light goes on over that booth-and you slink out, face red, you having just proved yourself too stupid and/or ignorant to take part in the decisions of the grownups. Better luck next election! No lower age limit in this system-smart 12-yr-old girls vote every election while some of their mothers-and fathers-decline to be humiliated twice.

There are endless variations on this one. Here are two:
Improving the Breed-No red light, no bell.. . but the booth opens automatically-empty.
Revenue-You don't risk your life, just some gelt. It costs you a 1/4 oz troy of gold in local currency to enter the booth. Solve your quadratic and vote, and you get your money back. Flunk-and the state keeps it. With this one I guarantee that no one would vote who was not interested and would be most unlikely to vote if unsure of his ability to get that hundred bucks back.

I concede that I set the standards on both I.Q. and schooling too low in calling only for the solution of a quadratic since (if the programming limits the machine to integer roots) a person who deals with figures at all can solve that one with both hands behind him (her) and herhis eyes closed. But I just recently discovered that a person can graduate from high school in Santa Cruz with a straight-A record, be about to enter the University of California on a scholarship.. . but be totally unable to do simple arithmetic. Let's not make things too difficult at the transition.

d) I don't insist on any particular method of achieving a responsible electorate; I just think that we need to
tighten up the present warm-body criterion before it destroys us. How about this? For almost a century and a half women were not allowed to vote. For the past sixty years they have voted.. . but we have not seen the enormous improvement in government that the suffragettes promised us.

Perhaps we did not go far enough. Perhaps men are still corrupting government. . . so let's try the next century and a half with males disenfranchised. (Fair is fair. My mother was past forty before she was permitted to vote.) But let's not stop there; at present men outnumber women in elective offices, on the bench, and in the legal profession by a proportion that is scandalous.

Make males ineligible to hold elective office, or to serve in the judiciary, elective or appointed, and also reserve the profession of law for women.

Impossible? That was exactly the situation the year I was born, but male instead of female, even in the few states that had female suffrage before the XIXth A mendment, with so few exceptions as to be unnoticed. As for rooting male lawyers out of their cozy niches, this would give us a pool of unskilled manual laborers-and laborers are very hard to hire these days; I've been trying to hire one at any wages he wants for the past three months, with no success.

The really good ones could stay on as law clerks to our present female lawyers, who will be overworked for a while. But not for long. Can you imagine female judges (with no male judges to reverse them) permitting attorneys to take six weeks to pick a jury? Or allowing a trial to ramble along for months?

Women are more practical than men. Biology forces it on them.

Speaking of that, let's go whole hog. Until a female bears a child her socio-economic function is male no matter how orthodox her sexual preference. But a woman

who is mother to a child knows she has a stake in the future. So let's limit the franchise and eligibility for office and the practice of law to mothers.

The phasing over should be made gentle. Let males serve out their terms but not succeed themselves. V.! ale lawyers might be given as long as four years to retire or find other jobs while not admitting any more males into law schools. I don't have a candidate for President but the events of the last fifty years prove that anybody can sit in the Oval Office; it's just that some are more impressive in appearance than others.

Brethren and Sistern, have you ever stopped to think that there has not been one rational decision out of the Oval Office for fifty years?

An all-female government could not possibly be worse than what we have been enduring. Let's try it!

"I have sworn upon the altar of God eternal hostility against every form of tyranny over the mind of man."

-Thomas Jefferson-1800 A.D.

FOREWORD

After I got STARSHIP TROOPERS out of the way, I indulged in some stone masonry (my favorite recreation and reconditioning after writing when I was younger), installed a fountain in our lower irrigation pool and landscaped it-then got back to work on THE HERETIC aka STRANGER IN A STRANGE LAND, and finally finished it more than ten years after I had plotted it. I had been in no hurry to finish it, as that story could not be published commercially until the public mores changed. I could see them changing and it turned out that I had timed it right.

Many people have said that it is clear that STRANGER was written in two parts; the division point showed. But no two people have ever picked the same putative division point. . . and this is the first time I have ever admitted that it was not written in two chunks but in four.

No one ever will spot the actual starts and stops because STRANGER is one of the very few stories in which I plotted every detail before writing it, and then stuck precisely to that plot. What readers pick as places where I "must have" broken the writing are in fact division points planned for dramatic reasons.

Then I had to cut the damned thing; sticking to that complex and ponderous plot resulted in a MS more than twice as long as it should have been, either commercially or dramatically. Cutting it took more working time than writing it.

In the meantime my wife signed up for University of Colorado Extension classes in Russian. She has always believed that anything worth doing at all is worth overdoing; for two solid years she lived and breathed Russian. She never missed a class, was always thoroughly prepared, hired a private conversation tutor to supplement her classroom work, bought every brand ofRussian language instruction records available then, kept them stacked on the record changer and played them all day

long while she did other things-our home had a speaker in every room, and a large speaker for the garden.

(This did not bother my work; since I knew no Russian then, it was random noise to me.)

Two years of this and she could read Russian, write Russian, speak Russian, understand Russian-and think in Russian.

Then we went to the USSR.

Other countries, too, of course-Poland and Czechoslovakia won my undying sympathy, as well as the captive Baltic states. I should include the Turkestan countries, too, but they don't seem quite as oppressed- much farther from Moskva and off the beaten track. All in all we traveled about 10,000 miles inside USSR and saw about twenty cities. Ginny's hard work paid off; we saw and heard far, far more than we could have learned had we been dependent on a politically-cleared guide- we often ducked out without our guide. I picked up some pidgin Russian but never learned to speak it-I could give directions, ask directions, order a meal, pay a bill- and swear in Russian (essential!).

The article below I wrote in Hotel Torni, Helsinki, immediately after "escaping" (that's how it felt) from the Soviet Union. The lighter article following "PRAVDA" I wrote a couple of weeks later in Stockholm. By then my nerves had relaxed in the free air of Scandinavia and I could see humor in things that had not seemed at all funny at the time.

"PRAVDA" Means "TRUTH"

"Pravda" means "truth."

That's what it says, right here in my English-Russian dictionary: Pravda-Truth. Surely one may depend on the dictionary.

In Al Smith's bleak, skeptical words: "Let's take a look at the record."

On May Day, 1960, a United States U-2 reconnaissance plane made some type of unplanned landing in the Soviet Union. This much is both "truth" and "pravda." Beyond this bare fact, "truth" and "pravda" diverge widely.

TRUTH: On May 1 this U-2 plane grounded near Sverdlovsk in the heartland of the Soviet Union about 1,500 miles from the border it crossed. The plane was wrecked but the pilot was not killed. Much of the equipment in the plane, such as radio gear, was undamaged. The pilot's survival and the condition of the wreckage, plus the undamaged equipment, suggest a forced landing in rough country, such as would result from engine failure.

The U-2 is extremely fast and it cruises at very high altitude, 60-70,000 feet. The kinetic energy stored in a moving object varies as the square of its velocity ($E = 1/2MV^2$). A staggering amount of kinetic energy is stored in a U-2. If such a plane is hit by anti-aircraft rocket fire what happens in the next split second would make a head-on collision between two hot-rod-
ders seem like a mother's loving pat. The anti-aircraft damage merely triggers the disaster; the major violence comes from the plane's great speed-it explodes! Suddenly the sky is filled with junk.

The chance of the pilot's surviving is small. He may escape if the plane's ejection capsule is not damaged when the plane is hit. But there is only the tiniest chance that

radios and other relatively fragile pieces of equipment would reach the ground undamaged. Nevertheless, such items were "recovered" from the "shot-down" U-2. A crate of eggs, uncracked, would be equally convincing.

We may never know the exact truth of what happened to that U-2. Only Soviet officials talked to unlucky pilot Powers before his trial.

But the nervous nellies among us should stop beating their breasts over the shame of it all. Photo reconnaissance is not the same thing as a bombing run. An overflight by an unarmed plane is not in the same league with what Khrushchev did to Budapest. What we are dealing with here is the security of the United States and-very possibly-the survival, and certainly the freedom, of the entire human race.

Espionage is not illegal under International Law. Neither is it immoral. The penalty for getting caught at it is very high. It usually means the spy's neck. It is not illegal under U.S. laws for us to attempt to spy on the U.S.S.R., nor is it illegal under Soviet law for them to attempt to spy on us. Nor, in either case, is it an act of war. Throughout history every country has striven to learn the military secrets of any potential enemy, and to protect its own. Spying is wise and necessary insurance against utter military disaster.

That we have been conducting photo reconnaissance over the Soviet Union so successfully and for four vital years is the most encouraging news in the past decade. Among other things it means we have accurate maps by which to strike back. The Soviet Union does not have to send spy planes over us to obtain sim
ilar information. Excellent large-scale maps with our military installations and industrial complexes clearly marked may be obtained free from Standard Oil or Conoco. Still better maps may be ordered by the Soviet Embassy from our Coast and Geodetic Survey at very low prices. Soviet agents move freely among us and many of them enjoy the immunity and complete freedom of travel afforded by U.N. passports. If a Red spy wants aerial color photographs at low altitude of our Air Defense installation just south of Kansas City-in America's heartland-until recently he could hire a pilot and a plane at the Kansas City airport for about $25 an hour and snap pictures to his heart's content without taking any of the risks of being hanged or shot down that Francis Powers took for us. If Mr. Eisenhower had failed to obtain by any possible means the military intelligence that the U.S.S.R. gets so easily and cheaply about us, he would have been derelict in his duty.

So, if you hear anyone whining about how "shameful" the U-2 flights were, take his lollipop away and spank him with it.

PRAVDA: It took the fat boy with the bad manners five days to decide just what sort of "pravda" to feed his people. The situation must have been acutely embarrassing for him, much more so than it was to us, because for four years he had been totally unable to stop the flights, despite his boasts and missile brandishing, despite the fact that every flight was certainly observed in Soviet radar screens.

K. could keep quiet, in which case there was little chance that the Free World news services would ever learn about it, and no chance that the Russian people would ever find out. Our Central Intelligence Agency would know that a reconnaissance plane was missing, but it would not have advertised a top secret.

K. could refurbish the incident, give it a new paint job and peddle it as propaganda.

Or K. could tell the simple truth. This alternative is

mentioned simply to keep the record technically complete, as the simple truth is a tactic not contemplated under Marxism-Leninism doctrines. Here we have the essential distinction between truth and pravda.

Truth, to the West, consists of all the facts without distortion.

Pravda is that which serves the World Communist Revolution. Pravda can be a mixture of fact and falsehood, or a flat-footed, brassbound, outright lie. In rare cases and by sheer coincidence, pravda may happen to match the facts. I do not actually know of such a case but it seems statistically likely that such matching must have taken place a few times in the past 43 years.

This comparison is not mere cynicism. I appeal to the authority of V. I. Lenin himself, in his tactics of revolution. By the doctrines of dialectical materialism, simple truth as we know it is abolished as a concept. It can have no existence of its own separate from the needs and purposes of the Communist Party and the World Revolution. Our ingrained habit of believing that the other fellow must be telling the truth at least most of the time is perhaps our greatest weakness in dealing with the Kremlin.

Apparently K. and his cohorts encountered much trouble in deciding just what the pravda should be about the U-2. They spent almost a week making up their minds. I was in Moscow at the time and there was no indication of any sort that anything unusual had happened on May 1. Russians continued to treat us American visitors with their customary almost saccharine politeness and the daily paper (I hesitate to call it a newspaper) known as Pravda hinted not of U2's. This situation continued for several days thereafter. I was not dependent on an Intourist guide-interpreter in reaching this impression as my wife reads, writes, understands and fluently speaks Russian. She's not of Russian descent. She learned it at a University of Colorado Extension night school, plus a private tutor and a lot of hard work.

After May Day, we went on out to Alma Ata in Kazakhstan, north of India and a very short distance from the Red China border, about 2,000 miles beyond Moscow. Be-Kind-To-Americans Week continued. Three Americans, the only travelers in that remote part of Asia, received the undivided attention of the Alma Ata Director of Intourist, two school teachers (pulled off their teaching jobs to act as guides), two chauffeurs, and most of the attention of the hotel staff. We had but to express a wish and it was granted.

As of Thursday morning, May 5, the pravda was still that nothing had happened.

Thursday afternoon the climate abruptly changed. K's cohorts had at last decided on a pravda; to wit: an American military plane had attempted to cross the border of the Soviet Union. Soviet rocket fire had shot it down from an altitude of 60,000 feet as soon as it had crossed the border. The Soviet peoples were very much distressed that America would even attempt such an act of bald aggression. The Soviet peoples wanted peace. Such aggression would not be tolerated. Any other such planes would not only be shot down but the bases from which the attacks were made would be destroyed. Such was K's new pravda at the end of a five-hour speech.

The only connection between pravda and fact lay in the existence of an American plane down on Soviet soil. The locale of the incident shifted 1,500 miles. The plane is "shot down" at an extremely high altitude (if true then those exhibits in Gorky Park were as phony as K's promises of safety to Nagy and Pal Maleter). No mention at all is made of four long years of humiliating defeat. Pravda suppresses the truth and turns the incident into a triumph of Soviet arms. The Soviet newspapers and radio stations, all

state-owned, spout the same line. All during this period the Voice of America was jammed. K. made certain his serfs heard nothing but the pravda.

We learned it by being ordered-not requested-to report to the Alma Ata office of the Director of Intour
ist. There we were given a long, very stern, but fatherly, lecture on the aggressive misbehavior of our government, a lecture that included a careful recital of the U-2 pravda.

Once I understood, I did something no American should ever do in the Soviet Union. I lost my temper completely. I out-shouted the director on the subject of American grievances against the Soviet Union. My red-headed wife most ably supported me by scorching him about Soviet slave labor camps, naming each one by name, pointing out their location to him on the big map of the Soviet Union which hung back of his desk, and telling him how many people had died in them- including Americans.

We stomped out of his office, went to our room and gave way to the shakes. I had lost my temper and with it my judgment and thereby endangered not merely myself but my wife. I had forgotten that I was not protected by our Bill of Rights, that I was not free to bawl out a public official with impunity-that I was more than 2,000 miles from any possible help.

Communism has no concern for the individual. The Soviets have liquidated some 20 to 30 millions of their own in "building socialism." They kept after Trotsky until they got him. They murdered a schoolmate of mine between stations on a train in Western Europe and dumped his body. Terror and death are as fixed a part of their tactics as is distortion of the truth. Their present gang boss is the "liberator" of Budapest, the "pacifier" of the Ukraine-a comic butcher personally responsible for the deaths of millions of innocent people.

All this I knew. I knew, too, that our own policies had softened beyond recognition since the day when Teddy Roosevelt demanded the return of an American citizen alive-or the man who grabbed him, dead- and made his threat stick. In these present sorry days no American citizen abroad can count on protection from our State Department. We have even voluntarily
surrendered our own soldier's Constitutional rights, drafted and sent willy-nilly to foreign lands. We still permit the Red Chinese to hold prisoner hundreds of our boys captured nearly ten years ago in Korea. We do nothing about it. I did have the cold comfort of knowing that I had behaved as a free man, an American. I cherished the thought. But I could not honestly pat myself on the back. My anger had been a reflex, not courage. Pride would not be much to chew on if it had got my wife and myself into a Soviet slave labor camp.

I began to listen for that knock on the door, the one you read about in Darkness at Noon, the knock that means your next address may be Vorkuta or Karaganda. The address doesn't matter. You are never, never going to receive mail.

My fears were not groundless. I'd read Philip Wylie's The Innocent Ambassadors and I knew what had happened to his brother. I vividly recalled Kravchenko's I Chose Freedom.

The knock never came because the political climate engendered by the new pravda was "more-in-sorrowthan-in-anger." The next morning, May 6, we were again

ordered to report to the Director's office. We had decided to brazen it out. We refused to go. Presently, we were allowed to catch a plane for Tashkent.

Pravda lasted 12 days, until K. shattered the Summit and revealed a new pravda.

We arrived in Leningrad just as the news reached there that the Summit had failed and that President Eisenhower had cancelled his proposed trip to the USSR and that Khrushchev was returning to Moscow via East Berlin.

The climate suddenly turned very chilly.

A month earlier, in Moscow, we had been picked up by two Russians the very first time we went out on the street. One was a technical translator; the other, a lady, was a museum curator. They were very friendly and stayed with us almost three hours, asking ques
tions about the U.S. and inviting questions about the Soviet Union. This happened to us daily thereafter; we were always making casual acquaintance with Soviet citizens, on the Street, in parks, in restaurants, during intermissions at the theatre, everywhere. They were always curious about America, very friendly and extremely polite. This attitude on the part of individual Soviet citizens toward individual Americans continued throughout the first pravda, ending May 6. It lessened slightly during the "more-in-sorrow" second pravda.

K's Paris news conference set up a new pravda. From the time we reached Leningrad until we left for Helsinki, Finland, not one Soviet citizen other than Intourist employees-who had to deal with us professionally-spoke to us under any circumstances. Not one.

In dealing with Intourist it is always difficult to tell whether one's frustrations arise from horrendous red tape or from intentional obstructionism. In Leningrad it at once became clear that Intourist now just did not want to give service. Even the porter who took up our bags made trouble.

Our first afternoon we were scheduled to visit the Hermitage, one of the world's great art museums. The tour had been set with Intourist for that particular afternoon before we left the States.

At the appointed time our guide (you have to have one) had not arranged for a car. After awhile it whisked up and the guide said, "Now we will visit the stadium."

We said that we wanted to visit the Hermitage, as scheduled. The guide told us that the Hermitage was closed. We asked to be taken to another museum (Leningrad has many). We explained that we were not interested in seeing another stadium.

We visited the stadium.

That is all Intourist permitted us to see that afternoon.

When we got back to the hotel we found someone in our room, as always in Leningrad. Since maid service in Intourist hotels varies from non-existent to very ubiquitous we did not at once conclude that we were being intentionally inconvenienced. But one afternoon we found six men in our room, busy tearing out all the pipes and the question of intent became academic. A hotel room with its plumbing torn up and its floor littered with pipes and bits of wood and plaster is only slightly better than no hotel room at all.

We went to the ballet once in Leningrad. Intermissions are very long in Soviet theatres, about half an hour, and on earlier occasions these had been our most fruitful opportunity for meeting Russians.

Not now, not after K's Paris pravda. No one spoke to us. No Russian would even meet our eyes as we strolled past. The only personal attention we received that evening at the ballet was an unmistakably intentional elbow jab in the ribs from a Russian major in uniform. Be-Kind-To-Americans Week had adjourned, sine die.

How can the attitudes of 200 million people be switched on and off like a light bulb? How can one set of facts be made to produce three widely differing pravdas? By complete control of all communications from the cradle to the grave.

Almost all Soviet women work. Their babies are placed in kindergartens at an average age of 57 days, so we were told, and what we saw supported the allegation. We visited several kindergartens, on collective farms and in factories. By the posted schedules, these babies spend 131/2 hours each day in kindergarten- they are with their mothers for perhaps an hour before bedtime.

At the Forty-Years-Of-October Collective Farm outside Alma Ata some of the older children in one of the kindergartens put on a little show for us. One little girl recited a poem. A little boy gave a prose recitation. The entire group sang. The children were clean and
neat, healthy and happy. Our guide translated nothing so, superficially, it was the sort of beguiling performance one sees any day in any American kindergarten.

However, my wife understands Russian:

The poem recounted the life of Lenin.

The prose recitation concerned the Seven-Year Plan.

The group singing was about how "we must protect our Revolution."

These tots were no older than six.

That is how it is done. Starting at the cradle, never let them hear anything but the official version. Thus "pravda" becomes "truth" to the Russian children.

What does this sort of training mean to a person when he is old enough, presumably, to think for himself? We were waiting in the Kiev airport, May 14. The weather was foul, planes were late and some 30 foreigners were in the Intourist waiting room. One of them asked where we were going and my wife answered that we were flying to Vilno.

Vilno? Where is that? My wife answered that it was the capital of Lithuania, one of the formerly independent Baltic republics which the USSR took over 20 years ago-a simple historic truth, as indisputable as the fact of the Invasion of Normandy or the bombing of Pearl Harbor.

But the truth is not pravda.

A young Intourist guide present understood English, and she immediately interrupted my wife, flatly contradicted her and asserted that Lithuania had always been part of the Soviet Union.

The only result was noise and anger. There was no possibility of changing this young woman's belief. She was telling the pravda the way she had been taught it in school and that was that. She had probably been about three when this international rape occurred. She had no personal memory of the period. She had never been to Vilno, although it is less than 400 miles
from Kiev. (Soviet people do not travel much. With few exceptions the roads are terrible and the railroads are scarce. Russians are required to use internal passports, secure internal visas for each city they visit and travel by Intourist, just like a foreigner. Thus,

traveling for pleasure, other than to designated vacation spots on the Black Sea, is almost unheard of.)

In disputing the official pravda we were simply malicious liars and she made it clear that she so considered us.

About noon on Sunday, May 15, we were walking downhill through the park surrounding the castle that dominates Vilno. We encountered a group of six or eight Red Army cadets. Foreigners are a great curiosity in Vilno. Almost no tourists go there. So they stopped and we chatted, myself through our guide and my wife directly, in Russian.

Shortly one of the cadets asked us what we thought of their new manned rocket. We answered that we had had no news lately-what was it and when did it happen? He told us, with the other cadets listening and agreeing, that the rocket had gone up that very day, and at that very moment a Russian astronaut was in orbit around the earth-and what did we think of that?

I congratulated them on this wondrous achievement but, privately, felt a dull sickness. The Soviet Union had beaten us to the punch again. But later that day our guide looked us up and carefully corrected the story: The cadet had been mistaken, the rocket was not manned.

That evening we tried to purchase Pravda. No copies were available in Vilno. Later we heard from other Americans that Pravda was not available in other cities in the USSR that evening-this part is hearsay, of course. We tried also to listen to the Voice of America. It was jammed. We listened to some Soviet stations but heard no mention of the rocket.

This is the rocket the Soviets tried to recover and
later admitted that they had had some trouble with the retrojets; they had fired while the rocket was in the wrong attitude.

So what is the answer? Did that rocket contain only a dummy, as the pravda now claims? Or is there a dead Russian revolving in space?-an Orwellian "unperson," once it was realized that he could not be recovered.

I am sure of this: At noon on May 15 a group of Red Army cadets were unanimously positive that the rocket was manned. That pravda did not change until later that afternoon.

Concerning unpersons- Rasputin is a fairly well known name in America. I
was unable to find anyone in Russia who would admit to having heard of him. He's an unperson.

John Paul Jones is known to every school child in America. After the American Revolution Catherine the Great called him to Russia where he served as an Admiral and helped found the Russian Navy, negligible up to that time. I tried many, many times to find a picture of him in Russian historical museums and I asked dozens of educated Russians about him-with no results. In Russian history John Paul Jones has become an unperson.

Trotsky and Kerensky are not unpersons yet. Too many persons are still alive who recall their leading roles in recent Russian history. But they will someday be unpersons, even though Dr. Kerensky is living today in California. In the USSR it is always tacitly assumed that the Communists overthrew the Tsar. This leaves no room for Dr. Kerensky. If pinned down, a Soviet guide may admit that there was such a person as Kerensky, then change the subject. The same applies to Trotsky; his role, for good or bad, is being erased

from the records. We saw literally thousands of pictures of Lenin, including several hundred group pictures which supposedly portrayed all the Communist VIP's at the time of the Revolution. Not one of
these pictures shows Trotsky even though many of them were alleged to be news photos taken at the time when Lenin and Trotsky were still partners and buddies.

This is how unpersons are made. This is how pravda is created.

The theme of the May Day celebration this year was "Miru Mir": "Peace to the World." A sweet sentiment. But it isn't safe to assume that the dictionary definition of peace has any connection with the official Communist meaning, since even yesterday's pravda may be reversed tomorrow.

"Cooperate with the inevitable' means 'Roll with the punch'- it does not mean stooling for the
guards." -L. Long

FOREWORD

"Don't Go To Russia If You Expect Tidy Toilets" is the heading on an article by H. Marlin Landwehr (News paper Enterprise Association) in the Santa Cruz SENTINEL, Sunday, December 2, 1979. "Russian toilets," writes Mr. Landwehr, "are uniformly filthy, with no toilet seats,coarse (if any) toilet paper, and extremely low pressure.

From this and from many recent (1979) personal reports I know that my 1960 article INSIDE INTO URIST is still timely despite minor changes. Intourist still has three classes of travel: Bad-Worse-Horrible. These are now called: "Deluxe Suite, Deluxe, and First Class"- i.e., "First Class" is in fact third class-an Orwellian pravda.

Dirty toilets and bad food explain themselves; relative prices are harder to make clear, as the 1960 prices I cite as being outrageously high seem like bargain prices in 1979. So I must adjust for inflation, not too easy when dealing with four sorts of currency: 1) the 1960 dollar fully convertible to gold in the world market at $35 = 1 troy ounce of fine gold; 2) the 1979 floating dollar having today, 3 December 1979, a price per troy ounce of fine gold on the world market of $432 and some odd cents; 3) the 1960 western-tourist ruble, a currency not traded (= "blocked") in the world market, not convertible, not spendable outside its own country, and having its official rate set by decree and in direct consequence a very different black market (= free market) rate; and 4) the 3Dec-79 western-tourist ruble, a blocked currency not equivalent to the 1960 western-tourist ruble.

To define the relationships between a fully-convertible gold currency, a floating currency, and two different blocked currencies is a task that causes headaches. The arithmetic is simple, the semantic problem is not, and it is further complicated by both

conscious and subconscious personal attitudes. You may not "believe in" a gold standard, for example (and I readily concede the
truth of the old saw that one cannot eat gold), but it does not matter what I believe or you believe, our floating dollar is now worth in gold whatever the rest of the world tells us it is worth, i.e., the price at which they will buy dollars or sell gold. The only yardstick I can apply to all four currencies is the troy ounce of fine gold (= 480 grains in both troy and avoirdupois, or 31.1035 grams in metric).

Since the ruble is not traded in the gold market, I must equate rubles first in dollars, then translate into gold. (This fiscal discussion is not my idea; our editor complained-correctly-that a much shorter discussion was unclear.) In 1960 the Kremlin-decreed rate was 4 rubles
= $1.00 USA. Today Monday 3 December 1979 the Kremlin-decreed rate to U.S. tourists is 1 ruble = $1.52 USA.
Now to work-
In 1960 $1.00 USA equalled
1/35 tr. oz. Au. = 13.715 grains = 0.888671 + grams gold,
and one ruble equalled $0.25, or
1/140 tr. oz. Au. = 3.429 grains = 0.222167+ grams gold.

While on Dec. 3, 1979, $1.00 USA equalled
1/432 tr. oz. Au. = 1.1111... grains = 0.071998+ grams gold
and one ruble equalled $1.52 USA, or
0.003518+ tr. oz. Au. = 1.7 grains = 0.109438+ grams gold.

-which doesn't tell us much, especially as the dollar floats and changes every day, and the ratio between the dollar and the U.S.-tourist ruble is by decree and subject to change without notice. In the following article I show all prices three ways: 1) 1960 prices; 2) 3-Dec-79 equivalent by world free-market conversion; and 3) 3-Dec-79 equivalent by Kremlin-decreed dollar/ruble ratio.
The conversion factor for the world free market is 432/
35 = 12.343; the Kremlin-decreed conversion factor is
1520/250 = 6.08. You are free to believe either one or
neither.
But the above still doesn't tell you very much as the

The Early Worm Deserves the Birdfloating dollar changes daily and the ruble/dollar ratio changes whenever the Kremlin changes it. . . and you will not be reading this on December 3, 1979. But all is not lost;you can obtain and apply the conversion factors for the day you read this in the same fashion in which I did it:

For the world free-market conversion factor first get that day's gold fix from newspaper or radio, then divide by 35. For the Kremlin factor telephone a Soviet consulate or Intourist New York, get the current price of a ruble in dollars and cents, divide by 25ç~. Then reach for your pocket calculator.

It would have been simpler to state that travel in USSR in 1960 was extremely, outrageously expensive-a planned swindle.
INSIDE INTO URIST

How to Break Even (or Almost) in the Soviet Union

To enjoy a thing requires that it be approached in the proper mood. A woman who has been promised a luxury suite at Miami Beach won't cheer at the thought of roughing it in the north woods, especially if her husband pulls this switch after the vacation has started.

But, with proper pre-conditioning, it is possible to enjoy anything-some people are addicted to parachute jumping. To experience the Soviet Union without first getting in the mood for it is too much like parachute jumping when the chute fails to open. The proper mood for the Soviet Union is that of the man who hit himself on the head with a hammer because it felt so good when he stopped.

This article assumes that you have already, for good and sufficient reasons, decided to visit the USSR, one good and sufficient reason being a wish to see for yourself this Communist paradise that Khrushchev has promised our grandchildren. But to set out for Russia in the holiday spirit in which you head for the Riviera, Las Vegas, or Rio is like going to a funeral for the ride.

You can avoid the worst shocks to your nervous system by knowing in advance that you are not going to get what you have paid for; then you can soothe the residual nerve jangling with your favorite pacifier. I
used small quantities of vodka-"small" by Russian standards, as Russians also use it to insulate themselves from the slings and arrows of outrageous fortune but they dose to unconsciousness. Drunks, passed out in public places, are more truly symbolic of the USSR than is the Hammer & Sickle.

My wife found methyl meprobamate (Equanil, Miltown) more useful. For you it might be yoga, or silent prayer, but, whatever it is, don't neglect it. Travel in the Soviet Union is not like travel anywhere else in the world. My wife and I have visited more than sixty countries on six continents, by freight ship, helicopter, dog sled, safari, jet plane, mule back, canal boat, etc.; as "seasoned travelers" these are our credentials. To visit the USSR we prepared by extensive reading and my wife learned the Russian language. Nevertheless, again and again we ran into surprises, difficulties, and maddening frustrations.

You can travel all through the Soviet Union without knowing a word of Russian-which will suit Khrushchev just fine because you will thereby be a prisoner of "Intourist," the state-owned travel bureau, seeing only what they want you to see, hearing only what they want you to hear.

But the Russian language is difficult; it took my wife two years of hard work to master it. The alphabet is weirdly strange, the pronunciation is hard for us, and the language is heavily inflected-a proper noun, such as "Smith" or "Khrushchev," has eighteen different forms.

Obviously most tourists can't take two years off to master Russian. What then? Depend entirely on Intourist guides?

No, no, no! Better to save your money and stay home. With no Russian at all you'll be as helpless as a bed patient. Instead you should prepare by learning a smattering of Russian. Forget about grammar; grammatical Russian is found only in formal literary compositions. Khrushchev has never learned to speak

Russian well and Mikoyan speaks it with an accent thick enough to slice-so why should you worry?

First learn the alphabet, capitals and lower case, printed and written. This alone is half the battle. You can now find the men's room (or the ladies' room). The men's room is marked with "M" (for "muzhcheen," but think of "M" for "men") and the ladies' room is marked with a letter which looks like two capital K's, back to back: ~ You are now past the greatest crisis confronting a traveler: finding the plumbing.

You now know many of the most useful Russian words just from knowing the alphabet. Hungry? Watch for a sign reading: "PECTOPAH." Sound it in your head as "restauran"-and it is!-the same word as in English save that the final "t" has been dropped.

There are hundreds of words which turn out to be the same as the English, or near enough. If you know French or German, your immediate vocabulary is further enriched, as, despite their boasts, Russian culture is very backward and most of their vocabulary for anything more complex than weeding a turnip patch has been borrowed from French, English, or German by converting the foreign word phonetically.

But don't stop with the alphabet; get a set of phonograph records for teaching Russian. Play them while following the lessons in the book-and play them without the book while bathing, shaving, cooking, gardening, etc. A few hours of this will pay off to the point where you will no longer be dependent on an Intourist guide; it will triple what you get out of a trip behind the Iron Curtain. For a few dollars in records and a little work you change it from a losing game into one in which your investment will be well repaid in education if not in pleasure.

But to get fun out of it, too, you must understand the Intourist game, play it, and win. Winning consists in outwitting the system so that you get more than they intend you to get; it does not mean fair value in the fashion (for example) that a traveler invariably gets
his money's worth in any Scandinavian country. It is not possible to get fair value in the USSR; the game is rigged against the American tourist. But there are ways to minimize the expense and maximize the return while having quite a lot of fun.

All travel in the USSR is controlled at every point by Intourist; you must buy from it all travel, all automobile and guide service, all hotel rooms, all meals- or if you buy a meal not from Intourist you simply waste a meal already paid for.

You buy from Intourist at four rubles to the dollar- and you are licked from scratch as the value of the ruble is closer to forty to the dollar (which is the rate the Soviet government gives to favored visitors such as Asians they are trying to woo into the Communist camp).

You can cut costs by ordering cheap accommodations. Three grades are offered: Luxe, Tourist A, and Tourist B. A single man might risk Tourist B if he did not mind public toilets and baths of uncertain cleanliness, plus sharing sleeping space, dormitory style; a couple might risk Tourist A, which is supposed to be (but is not) equal to first-class travel elsewhere. But I cannot honestly urge anything short of "Luxe" class because even the best in Russia is often shockingly bad by our standards-bathrooms without baths, even hotels with no baths, tubs with no hot water, plumbing that is "quaint" or worse, poor cooking, dirty utensils, maddening waits. The lodging for Luxe class is often

a huge and fantastically furnished suite, but a firstclass double room & bath in any other country is more comfortable.

Luxe class costs $30 per day per person (3 Dec 79- Kremlin rate $182.40-World free-market rate $370.29) and includes lodging, meal coupons, and three hours of guide and automobile service per person (thus six hours for a couple)-if you get it. It does not include any train, plane, or bus fares. Add these in, plus round trip aircoach fares from New York, and a
month in the Soviet Union will cost an American couple at least $4500 (3 Dec 79- Kremlin rate $27,360.00- World rate $55,543.50), plus spending money and extras.

You will get at least twice as much for your money in any other part of Europe, but the real problem always is to get what you have paid for and Intourist has contracted to furnish you.

Start by realizing that Intourist is not really a travel service in the sense in which Thos. Cook or American Express is. It is a bureau of the Communist government and its function is to get those Yankee dollars in advance, channel you through a fixed route, then spill you out at the far end almost as ignorant of their country as when you started. P. T. Barnum's famous sign "This Way to the Egress" anticipated the basic Intourist principle: Get the sucker's money first, then get rid of him with the least trouble to the management.

So treat it as a game and don't fret when you lose. Try to get a good night's sleep- the bed may be awful but it will be quiet because there is almost no traffic- and try again the next day.

For example: the guide is not there to guide you, the guide is there to make sure that you see the stadium- so try not to see a stadium anywhere in the Soviet Union. Surely they have stadiums; any people so devoted to "Togetherness" have stadiums-how else could they display ten thousand people all doing physical jerks at once? (A "Spartakiad") But remember that your fixed cost is about $20 just to look at a stadium (with no football game thrown in) and that, in diverting you to the stadium, Intourist has kept you from seeing something of real interest, a factory, a slum area, or a school.

Stadiums haven't changed much since the Romans built the Colosseum; if you have seen Yankee Stadium, Soldiers' Field, or the Rose Bowl-or even the football stands of Podunk High-you've seen enough empty stadiums to last a lifetime. So refuse!

But the guide has orders that you must see the stadium; no other theory will account for the persistence with which all Intourist guides insist that you see the local stadium. If you manage to get in and out of the Soviet Union without visiting a stadium, award yourself the Order of Hero of Soviet Travel, First Class.

(We saw a lot of them-nobody had warned us.)

Each Intourist hotel has a place called the "Service Bureau." "Service" in this usage is an example of Communist semantics comparable to "co-existence," "peace-loving," "democratic," etc. Here most of your battles with Intourist will take place. Second only to the passed-out drunk, the most typical sight in the Soviet Union is an American tourist seated in a service bureau, his expression getting tighter as the weary, expensive minutes trickle away.

Intourist rarely uses the blunt refusal on this unhappy creature; instead the standard tactics are please-sit-down-and-wait-for-just-a-moment (which usually turns out to be at least an hour), I'm-sorry-butthe-Director-is-out (and won't return as long as you

keep hanging around), come-back-later (when the desk will be closed), and go-to-that-desk-at-the-farend-of-the-room (where, after more delay and much consultation, you will be sent back to the desk from which you started).

When facing this, to get part of what you have paid for (and anything over 70% is a triumph, with 50% par for the course) you must stick to pre-planned defensive tactics and never, never, never lose your temper, or you will wind up a fit candidate for wet packs and sedation.

Their first weapon is politeness. You must resist this soporific politeness or you will not get anything.

First-Stage Defense: Be just as polite as they are-but utterly stubborn. Above all, don't sit down when invited to. If you do, this retires you from the game for an indefinite penalty period. Hold your ground, standing
firmly against the desk and taking up as much space as possible-lean on it with hands spread wide to double your combat frontage. Say firmly and politely:
"No, thank you, I'll wait right here"-then monopolize that desk and clerk, making it impossible for business to be transacted until Intourist has honored your contract on the point you have raised.

Keep talking. It does not matter what you say nor whether the clerk understands English-keep talking! Your purpose is to take that unit of Intourist out of the game until your request has been met, not with promises but with immediate action-whereas their purpose is to get you out of the game by persuading you to sit down away from the desk.

So hold your ground and be softly, politely stubborn. Usually someone with authority will arrive in a few minutes and satisfy your request.

Defense in Depth: Be prepared to simulate anger at any instant. It is much better to pretend to lose your temper before things have grown so unbearable that you actually do blow your top; it saves wear and tear on your ulcers and enables you to conduct your tactics more efficiently.

(And I must say a word on behalf of Intourist employees. About three quarters of them are young women, girls really. They are nice people, polite, harassed, overworked, and underpaid. They are prisoners of a system which automatically frustrates the traveler, and they are more imprisoned by it than you are, for you will escape (we hope) on the date set forth on your exit visa. They can't. These poor kids did not invent the silly red tape and mountains of useless paperwork and those in the lower ranks have no authority to vary from it. So don't be too harsh and try not to lose your temper in fact.)

But be prepared to simulate anger whenever the log jam does not break under the pianissimo tactics of the first-stage defense. When you refuse to sit down and
wait, the clerk will sometimes turn away and ignore you.

It is then time to throw a fit.

You must (1) hold your blocking position, (2) make lots of noise, and (3) show that you are bitterly and righteously angry and cannot possibly be shut up short of complete satisfaction.

Keep shouting. It helps to cuss a bit and one all-purpose word will do:
"Borjemoi!" This is a phonetic approximation of two words meaning "My God!"- which is merely an expression of disgust in this atheistic society. Another good phrase is "Yah Hawchew!" which is the abrupt way of saying "I want it!" (The polite idiom is "Mnyeh Khawchettsuh.")

You can shout, "I want to see the Director!"-or, in Russian, "Yah Khawchew veedyets Direktora!" She may possibly answer, "The Director's office (or desk) is over there," but she is more likely to give you what you want rather than let you complain to the boss.

But if she does, don't move. Hold your ground, keep on being unreasonable, and let the boss come to you. If you let them chivvy you into his office, away from spectators, and you yourself sitting down and being polite, you've lost that round. The Director will be polite, apologetic, and regretful about "shortages"-but firmly unhelpful. The place to win is in public.

For most of us it is not easy to be intentionally rude. I think one should never be impolite unnecessarily- but we can do much to uphold our national dignity and to improve our relations with the Soviet Union by never keeping quiet when we are cheated, by answering the great stubbornness of Russians by being twice as stubborn, and by being intentionally and loudly rude whenever Intourist refuses to keep its contract despite polite protest. Intourist is an integral part of a government with a forty-three year record (now 63 years-R.A.H.) of not honoring its most solemn commitments; one must assume that its blatant cheating is planned from the top and that every employee of Intourist is schooled in his role, right down to the sweet little girl who insists that you must see the stadium.

You may prefer to think that this horrendous swindle is merely an unintentional by-product of a fantastic, all embracing, and incredibly inefficient bureaucracy bogged down in its own red tape to the point where it can't give service. Either way, a contract with Intourist works exactly like that long list of broken treaties. You start by making a contract with the Soviet government; you are required to pay in advance and in full. Then you attempt to collect what you have paid for-and discover that a Communist contract is worth what it usually is. "Room with bath" turns out to be without, "jet planes" become prop planes, guide and auto service is less than half the time you have paid for, dining rooms are locked at meal hours, and your extremely expensive time is wasted sitting, sitting, sitting in "service" bureaus.

Unless you raise hell about it, right at the time. No use complaining later, you won't get your money back.

If neither polite stubbornness nor noisy rudeness will work, use the insult direct. Shake your finger in the face of the most senior official present, simulate extreme rage, and shout, "Nyeh Kuhl-toornee!" ("Uncultured!") Hit that middle syllable and roll the r's.

Subordinates will turn a sickly green and pretend to be elsewhere. The official will come close to apoplexy-but will probably make an extreme effort to satisfy your demand in order to shut you up. This is the worst insult you can hand a Russian, one that hits him in cracks of his armor. Use it only as a last resort.

I do not think you will be in personal danger as the officials you will meet will probably not be high enough in the hierarchy to punish you for insulting them. But if anything goes wrong and you wind up in Siberia, please understand that you use it at your own risk.

If"nyeh kuhltoornee" does not work, I have nothing more to suggest but a hot bath and a sedative.

But the above campaign usually wins in the first or second stage and rarely fails in the third as it is based on Russian temperament and Communist social organization.

Even the most arrogant Soviet citizen suffers from an inferiority complex when faced with free citizens of the western world, especially Americans. The questions they ask most frequently are: How much money do you make? How big is your house? Do you own an automobile? Each one is a dead give-away.

So if you make it clear that Intourist service is contemptible by free-world standards, a Russian may want to take a poke at you but he is much more likely to attempt to restore face by meeting those standards. The rest of the picture has to do with socialist "equality," another example of Communist semantics, because in the egalitarian paradise there is no equality, nowhere anything like the easy-going equality between an American taxi driver and his fare. In the USSR you are either on top or underneath-never even.

An American does not fit. Some Soviet citizens react by subordinating themselves to the tourist; grandmothers sweeping the streets will scurry out of your way, taxi drivers will rush to open doors, porters and waitresses and such are servile in a fashion we are not used to. But an employee of Intourist is in an indeterminate position vis-à-vis a tourist. Dominant? Or subordinate? It must be one or the other. Often there is a quick test of wills, then an immediate assumption of one role or the other depending on how the tourist responds. For example, we were met in Kiev by a guide who gave his name as "Sasha." I asked his surname; he told me quite arrogantly that there was no need for me to know it.

We had been in the USSR several weeks and I had had my fill of arrogance; I told him bluntly that I was not interested in his name, that I had asked out of politeness as practiced in all civilized countries-but that
if good manners were not customary in his country, forget it!

An American or other free man might have given me a rough answer or icy silence; he did neither, he groveled. When he left us at the hotel he thanked us effusively for having been so kind as to talk with him. His manner was cringingly servile.

I don't like servility any more than the next American-but if there is going to be any groveling done it won't be by me. Nor, I hope, by you. In dealing with Intourist people you will often run into situations where one of you must knuckle under-and many are much tougher cases than this man. It will be a clash of will and all too often polite stubbornness won't be enough to get them to honor your contract-then you need to model your behavior after the worst temper tantrums you have seen Khrushchev pull on television; this they understand. In the USSR only a boss ever behaves that way; therefore you must be entitled to Red Carpet service. The Intourist functionary knows you are just an American tourist, to be frustrated and cheated, but his conditioned reflex bypasses his brain; a lifetime of conditioning tells him to kowtow to any member of the master class.. . which you must be, even though his brain tells him you are not.

It usually works. In a bully-boy society often nothing but bullying will work.

The "Coupon Game": When you arrive you will be handed a lot of documents in exchange for your tour voucher; one will be a book of meal tickets, four coupons for each day. For Luxe class their values are twelve rubles for a breakfast coupon, twenty for a lunch, three for tea, thirty for dinner. If you and your spouse have contracted to spend a month in the USSR, your meal tickets have cost you one thousand dollars (3 Dec 79-Kremlin rate $6,080.00-World free-market $12,343.00) (281/2 oz. of gold). The gouging starts here, because Diamond Jim Brady and his twin could

not eat a thousand dollars of Intourist food in a month. Intourist eateries range from passable to very bad. Hotel Berlin in Moscow is perhaps the best but even it would have trouble making the Duncan Hines list. There are three or four good restaurants in the Soviet Union but their prices are very high and they won't accept coupons.

You can minimize your losses in ways that Intourist does not tell you. You can combine coupons as you wish-a "lunch" and a "breakfast" to pay for dinner, for example. The possible combinations in rubles are
3, 6, 9, 12, 15, 18, 20, 21, 23, 24, 26, 27, 29, 30, 32, 33, 35, 36, 38, and all higher numbers-but the hitch is that too many of them take more than one "tea" coupon. So figure out the best way to work each combination and write it on the back of your coupon book; this will help you to decide whether to overpay for food already horribly overpriced, or to pay the difference in cash. Skill in the coupon game can save you many, many dollars.

There is nothing fair in the coupon system but it isn't meant to be; it is the prime fashion in which the Soviet government squeezes more dollars out of American tourists than they want or need to spend.

There are other ways to reduce your losses. You can swap coupons for liquor, candy, canned caviar, cigarettes, and bottled water. Tap water in Moscow and Leningrad is said to be safe but elsewhere it is wise to buy mineral water-get enough bottles at a time to come out even in coupons. Their cigarettes are corrosive but a brand called "Trud" is smokable. Candy is extremely expensive but a welcome change in a tedious diet (I lost twelve pounds); caviar is cheap and is the best buy to use up leftover coupons on your last day. Don't expect to find whiskey nor any imported liquor, but local "kawnyahk" and "chahmpahnskoyeh" are good. The vodka like ours is "vawt-kah stelleechnayuh"-the other sorts are very highly spiced. Their wines are good.

My favorite relief from a hard day with Intourist was a Bloody Mary-"Staw grahm~vawt-kee, p'jalst, ee tawmahtnee sawk." This is "nyeh kuhltoornee" as the proper way to drink vodka is with beer (peevaw), or with black bread, sweet butter, and caviar.

In Moscow and Leningrad very few Russian waiters speak English and almost none elsewhere, but you will usually be handed a huge four-language menu on which you can pick out what you want in English and point to it in Russian. But only the few items with prices written in are offered and maybe half of those will be available-when the waiter says "Nyeh-taw" he means it's all gone. Allow at least two hours for dinner; I've never heard of any way to speed up the service. But, once you are served, the waiter may try to rush you out, claiming that the table is reserved ten minutes hence for a delegation or such. He may simply want to sell food to someone else-he gets a commission. Ignore him-you've waited a long time, paid a high price in advance, and are entitled to eat in peace.

Pick a table as far from the orchestra as possible. Some orchestras are good but most are very loud and sound like a fully automated boiler factory.

Tipping is never necessary but waiters, chambermaids, and porters are paid very little. Tips can be coupons or cash.

The dining room is often locked-for a political delegation from Asia or Africa, for a traveling theatrical troupe, or anything. Any service may be chopped off without warning in any Intourist hotel. Complain... but be prepared to fall back on the buffet (pronounced "boof-yet"). There are usually three or four on the upper floors of large

hotels, open from seven a.m. to eleven at night and serving omelets, snacks, beer, wine, juice, coffee, tea, cakes, etc. The guides and clerks in Intourist often do not know about them because they have never been upstairs, so watch for the sign (BVDET) or wander the corridors saying inquiringly to maids and floor clerks: "Boof-yet?"

Buffets are cozy, friendly, little places run by cheerful, helpful, dreadfully overworked women. They won't know English and the menu will be in Russian- here a memorandum in English & Russian of your favorite foods is most useful. But even the buffet doesn't serve breakfast before seven and Russian transportation often leaves at such an hour that you must leave the hotel before then. Russian hotels have room service but not at such hours. If you have your own thermos bottle, room service can fetch you hot coffee and a cold breakfast the night before. (They've heard of thermos bottles-the word is the same-but the hotel won't have one.)

Keep iron rations in your room and carry food and drink on long flights and train trips. Both trains and planes often stop for meals but you can't count on it and usually can't find out in advance.

Minor Ways to Improve Your Score: Go for walks without your guide; you will usually be picked up by someone who knows English-but you will never be picked up while a guide is with you. This is your chance to get acquainted and to get answers which are not the official answers. Don't talk politics-but these venturesome souls may ask you political questions and you can learn almost as much by the questions they ask as by raising such issues yourself.

Your guide may not be a hardshell Communist; he, or she, may open up once he thinks he can trust you. If so, be careful not to mention anything even faintly political when others are in earshot, especially the driver. The driver may be a political chaperone who knows English but pretends not to. More than one guide has told me this and all guides talk more freely when no one can overhear.

In this country children are brought to Moscow and decorated for having informed on their parents. Never forget this.

When you are shown a party headquarters, a palace of culture, a stadium, an auditorium, or such, ask
when it was built. We discovered that, in the areas not occupied by Nazis, many of the biggest and fanciest were built right at the time Americans were dying to keep the Murmansk lend-lease route open.

There is new brick construction all over the Soviet Union. We asked repeatedly to be shown a brick yard, were never quite refused, but the request was never granted. We have since heard a rumor that this is prison labor and that is why a tourist can't see something as unsecret as a brick yard. So try it yourself- you may merely prove to yourself that Intourist exists to keep tourists from seeing what they want to see, rather than vice versa.

Offer your passport to casual acquaintances; they will usually offer theirs in return-internal passports. Intourist people have been coached to deny that such a thing exists but everybody in the USSR carries one and the owner must get a visa to go from one Russian city to another. It is a brown book with "HAC11OPT" (passport) on the cover. Try it when your guide is not around.

The USSR is the only country in which we were never able to get into a private home. Other tourists report the same but one couple from Los Angeles almost cracked

this; they said to their guide, "Why can't we see the inside of one of those apartment houses? Are you people ashamed of them?" The next day they were shown through a not-yet-occupied one.

This could be varied endlessly, as it works on that Russian basic, their inferiority complex. The key word is "ashamed"-simply asking "Why?" gets you nowhere. I think it could be used to get into farms, schools, courts, factories, anything not a military secret. It tops my list of things I wish I had thought of first.

In meeting anyone, including guides, try to use "democracies" as an antonym for "Communist countries" as soon as possible-drag it in by the heels, i.e., "I think all of us from the democracies earnestly hope
for peace with the Communist countries," etc. The much abused word "democratic" means "Communist" in Russia and it always introduces a propaganda pitch. If you deny him his definition by preempting the word, you leave him with his mouth hanging open, unable to proceed.

We got tripped on this several times before we caught on.

The official list of things you must not photograph is short but the unofficial list is long and ranges from old, broken-down buildings to old, broken-down women sweeping the streets. You can photograph such by having them appear "accidentally" in a background but if you are suspected of this, they have a silent counter to it. At some later time you will find that your film has been exposed to light, then respooled. You could keep all your film with you at all times and hope to get it across the border. . . but such behavior might cause you to be arrested on suspicion of espionage, as one American tourist was this summer. At best, sneaking a picture of one passed-out drunk risks losing all your pictures-too high a price even if you aren't accused of being a spy.

The most-used plane, the Ilyushin-14, flies very low; you can see a lot and compare it with elsewhere. Are railroads single or double track? How much traffic on the roads? On the rivers? How about factory smokestacks and other signs of industry? How busy are the airfields? Or a dozen other things. I think you will conclude that no Russian claim should be accepted as true until fully verified. A "great industrial center" often turns out to be a jerkwater town.

But don't make written notes about such things! Don't!!!

Will your mail be opened? You must assume so. Will your rooms be bugged? It seems impossible to monitor every room of every Intourist hotel-but if the police get interested in you it takes just three minutes in these days of miniaturization to bug a room. I do
know, from several incidents, that Soviet citizens believe that all hotel rooms are bugged.

I wish that a million of us would visit the USSR; the dollars the Kremlin would reap would be more than offset by the profit to us in having so many free men see with their own eyes what Communism is.

But go there with your eyes open-Intourist is as fully an agency of the Kremlin as is Gromyko or Mikoyan. Its functions are (1) to get your money in advance, (2) to deliver as little as possible by downgrading accomodations, by forced overcharges on food, and by clipping you on auto and guide service, (3) to waste your time so that you wiil see as little as possible, and (4) to see that what little time you have left is spent only on those things the Kremlin does not mind your seeing-"new construction" (from the outside),

parks of "rest & culture" (filled with loudspeakers blaring propaganda), ballets, museums, stadiums, and the outsides of public buildings.

The first point you must accept; the game is crooked but it is the only game in town. Points two and three you can struggle against-I hope the tactics suggested in here will help. Point four is the toughest. After trimming you down to about three hours a day of useful time, Intourist can and will use up what is left in "stadium sightseeing" unless you fight it constantly. Even then, Intourist is adept in parrying with: "It's closed today- too bad you're not staying another day," and "That must be arranged in advance through the Ministry of Culture, etc." and "You should have requested that in Moscow."

The essence of Intourist tactics is: "Jam yesterday and jam tomorrow, but never jam today." The way to answer it is: "No! I will not look at the stadium, I do not want to see another subway station, I will not visit a museum to see another five hundred pictures of Lenin. I want to see thus-and-so and I want to see it now. Stop the car, get on the phone, and arrange it- or tell the Director that, as far as I am concerned, you're fired! I am keeping the car and the driver and will go on without you- I've got hours more of car service due me today and I won't be cheated out of it."

You will find whether your guide is truly a guide... or a guard placed with you to make sure you see only the facade of this regime. Whether or not you see "thus-and-so" you are sure to learn a surprising amount about how a police state is run. . . and thereby get your full money's worth in education.

AFTERWORD

After twenty years it would seem logical for me to return to the USSR to see what improvements, if any, they have made in handling tourism. I could plead age and health but I shan't-one trip to USSR is educational; twice is masochism.

If you have been to the USSR recently and if you know enough Russian that you could and did slip the leash occasionally and poke around and get acquainted without permission of Intourist, please write to me and tell me about it-what you saw with your own eyes, what you touched, what you counted, how you were treated. I am not interested in second-hand reports, not even from other Americans you trust, and I most emphatically am not interested in anything your guides told you.

If you know no Russian and took one of the standard Intourist trips-around the Black Sea, or the Len ingradMoskva-Sochi trip-don't waste your time writing. I hope you had fun.

If you took the long railway trip, Vladivostok to Leningrad or Moskva-or vice versa-do please write to me. If you knew no Russian at first, I'm betting high odds that you spoke fluent (if ungrammatical) Russian long before you completed the trip. You will know many things I don't know as I have never been across Siberia. Alma Ata, KSSR, north of the Himalayas and just short of Sinkiang, is as far as I got.

Concerning believing what you see and ignoring reports: In thirty-odd years of habitual travel, Mrs. Heinlein and I have not been simply sightseeing; we have been studying other people's ways. Sometimes trivia-e.g., in Peru they make far better apple pie than Mom ever baked (treason!), Chile has us beat all hollow when it comes to ice-cream sodas, and the Finnish ice-cream cone is a work of art that makes what we call an ice-cream cone look sad.

But usually we are dead serious. Lately I've been making a global survey of blood services-but that is another
story. Two things we have done consistently throughout the world: 1) See the slums; 2) evaluate the diet.

The fancy hotels and the museums and the parks are much the same the world over-but the slums are honest criteria even though a traveller can't assign a numerical value. The street people of Bombay and of Calcutta tell far more about India than does the glorious Taf Mahal.

Two other questions give direct, numerical comparisons: Q: How many long tonnes of protein (meat, fish, cheese) does this country consume in one year? (Then, privately, divide by the population.) Q: How many minutes must a journeyman carpenter work to earn enough to buy one kilogram of the local standard bread?

The first question tells the quality of the average diet; the second tells you how rich (or poor) that country averages. If you have also managed to see the slums, you have some idea of the range of wealth. You can't tell by looking at the extremely wealthy; all over the world they are careful to dress like upper middle class, no higher. But slums are honest and the most extreme wealth range is to be found in India.

The range of personal wealth in Russia, in 1960, was high, possibly greater than the range in the U.S.A. But the range showed in "perks," not in money-privatelyassigned automobiles and chauffeurs, summer houses, assigned living quarters. The Latvian Secretary (a Russian, not a Lett) of the Writers Union had as his offices a marble palace, extremely ornate inside and outside and loaded with sculpture and paintings (built-I was told- by the late Tsar for his favorite mistress. True? I don't know but I've never been in a more lavish palace and I have been in many). After meeting his colleagues-and living through a Russian drinking duel better left undescribed-we were taken by him out to the Baltic and shown his dacha . . . thereby showing us that he had a private car, a chauffeur, and a summer home, as well as offices literally fit for a king. No mention of money, no need to-I was convinced that he was not going home to a meal of black bread, potatoes, and boiled cabbage.

Yet he was merely writer boss in Latvia, a small captive country-not General Secretary of the Writers Union in Moskva. I was in the Writers Union general headquarters in Moskva, a large office building; I did not meet the General Secretary. I assume that he lived at least as well as his stooge in Latvia.

How many levels are there between this minor boss in Riga and the members of the Praesidium? How well does Khrushchev-excuse me; Brezhnev-live? I shan't guess.

In the USSR it was not politic (risky) to ask the two key questions that I always asked in other countries, and seeing slums was forbidden. Twice we saw slums by accident, were hurried on past-primitive log cabins just outside Moskva, 1st century mud huts in Alma Ata that were concealed by screening but from one elevation we could see over the screening. . . until we were seen and cautioned not to stop there and not to take pictures.

Since we couldn't ask our standard comparison questions, Mrs. Heinlein devised some "innocent" ones, and I concentrated on certain signs; both of us were sizing up population. At that time the USSR claimed a population of 225,000,000 and claimed a population for Moskva of 5,000,000 +. (Today, twenty years later, they claim almost 300,000,000 and over 7,000,000.)

For many days we prowled Moskva-by car, by taxi when we did not want Intourist with us, by subway, by bus, and on foot. In the meantime Mrs. Heinlein, in her fluent Russian, got acquainted with many people-Intourist guides, drivers, people who picked us up on the streets, chambermaids, anyone. The Russians are delightful people, always happy to talk with visitors, in English if they know it (and many do), in Russian if they do not.

Let me add that, if it suited her, Ginny could charm pictures off a wall.

She was able to ask personal questions (but ones people anywhere usually are pleased to answer) by freely answering questions about us and showing warm interest in that person-not faked; she is a warm person.

But, buried in chitchat, she always learned these things:

How old are you?

Are you married?

How many children do you have?

How many brothers and sisters do you have? What ages?

How many nieces and nephews do you have?

Put baldly, that sounds as offensive as a quiz by a Kinsey reporter. But it was not put baldly-e.g., "Oh, how lucky you are! Gospodin Heinlein and I didn't even meet until the Great Patriotic War. . . and we have no children although we wanted them. But we have lots of nieces and nephews." Etc., etc. She often told more than she got but she accumulated, painlessly, the data she wanted, often without asking questions.

One day we were seated on a park bench, back of the Kremlin and facing the Moskva river, with no one near us- a good spot to talk; a directional mike would have to be clear across the river as long as we kept our backs to the Kremlin.

I said, "How big does that guide book say this city is?"

"Over five million."

"Hmmph! Look at that river. Look at the traffic on it." (One lonely scow-) "Remember the Rhine?" We had taken a steamer up the Rhine three years earlier; the traffic was so dense the river had traffic lights on it, just like the Panama Canal. "Ginny, this dump isn't anything like five million. More the size of Copenhagen, if that. Pittsburgh. New Orleans. San Francisco, possibly." (These are all cities I know well, on foot and by every form of transportation. In 1960 all of them were in the 600,000-800,000 range.) "Yet they are trying to tell us that this dump is bigger than Philadelphia, bigger than Los Angeles, bigger than Chicago. Nonsense."

(I have lived in all three cities. A big city feels big, be it Yokohama or New York.) "Three quarters of a million, not five million."

"I know," she agreed.

"Huh?"

(I think I must mention that Mrs. Heinlein is a close student of Russian history, history of the Russian Revolution, history of the Third International or Comintern, and so skilled in Marxist dialectical materialism that she can argue theory with a Russian party member and get him so mixed up that he's biting his own tail.)

She answered, "They claim to have finished the War with about two hundred million and Moscow at four million. Now they are claiming twenly-five million more in the Union, and over a million increase in Moscow." She thought a bit. "It's a lie. Unless

they are breeding like flies everywhere outside Moscow, they have lost population since the War-not gained. I haven't found even one family with more than three children. The average is less than two. And they marry late. Robert, they aren't even replacing themselves."

She looked at that empty river. "Not quite as big as Copenhagen is my guess."

We stopped in many other cities-Alma Ata, Tashkent, Samarkand, Minsk, Vilno, Kiev, Riga, Leningrad, etc.- and she continued her gentle questioning but never found reason to change her opinion. Even out in the Muslim countries of Turkestan the birthrate was low, or the answers seemed to show it. She did not write down her figures (Well, I don't think she did; I warned her not to) but she has a memory that is effectively perfect as long as necessary.. . then she can wash out useless details, which I can't do.)

How was it possible for the Russians to claim that Moscow was seven times as big as it actually was? How could I be right and the whole world wrong? The World Almanac gave the same figures the Russians did, all news services seemed to accept Russian population figures- how could a Big Lie that big not be noticed-and denounced?

About a year later I had a chance to discuss it with an old shipmate, an admiral now retired but then holding a
major command. I asked him how many people there were in Moscow.

He answered, "I don't know. Why don't you look it up?" (When a high brass answers, "I don't know," he may mean, "Don't be nosy and let's change the subject." But I persisted.)

"Make a guess. You must have some idea."

"Okay." He closed his eyes and kept quiet for several minutes. "Seven hundred and fifty thousand, not over that."

(Jackpot!)

I said, "Mister Ought Ought Seven, have you made a special study of Russia? Or shouldn't I ask?"

"Not at all. is command] gives me all the trouble I need without worrying about Russia. I simply worked it as a logistics problem, War College style. But I had to stop and visualize the map first. Roads, rivers, railroads, size of marshalling yards, and so forth. You know." (I did, vaguely. But I wasn't a War College graduate. He is.) "That city just doesn't have the transportation facilities to be any bigger than that. Get much over three quarters of a million and they'd starve. Until they double their tracks and increase their yards they can't risk a bigger population. You don't do that over night. They can pick up some slack with the river-but it doesn't go where they need it most."

And there it stands. Either all three of us are crazy despite the fact that all three of us got the same answer to a numerical question using three entirely different but logical methods. . . or for many, many years the Kremlin lie factory has peddled their biggest and fanciest "Pravda" without ever being questioned.

Look-both the Pentagon and the State Department know exactly how big Moscow is, and the Kremlin knows that they know. We were high-flying 'em with the U-2 for four years; you can bet Moscow was carefully photographed many times. Our present Eye-in-the-Sky satellites are so sharp-eyed that they can come close to reading the license plate on your car; our top officials know precisely what the logistics situation is for Moscow-and every economist knows that one of the parameters that controls strictly the upper limit to the size of a city is how many tons of food it can ship in, week in and week out,

never failing. Most big cities are only a day or two away from hunger, only a week or so away from beginning starvation and panic.

Moscow isn't even a seaport; she's a riverport and not a good one. Most food must come overland by train or lorry.

Maybe she's built enough more facilities since 1960

but in 1960 she just didn't have what it takes. Since I can't believe the 5,000,000+ figure for 1960, I don't believe the 7,000,000+ figure for this year.

I have one very wild theory. Our State Department may see no advantage in calling them liars on this point. Through several administrations we have been extremely careful not to hurt their feelings. I think this is a mistake but I am neither president nor secretary of state; my opinion is not important and may be wrong.

(" 'But the Emperor is not wearing any clothes,' said the child.")

The three biggest lies in the USA today:
1) The check is in the mail.
2) I gave at the office.
3) (Big, cheery smile) "Hello! I'm from Washington. I'm here to help you!"

1~ -Anon.f

FOREWORD

In April 1962 I received a letter from the advertising agents of Hoffman Electronics: They had a wonderful idea-SF stories about electronics, written by wellknown SF writers, just long enough to fill one column of Scientific American or Technology Review or such, with the other two thirds of the page an ad for Hoffman Electronics tied into the gimmick of the story. For this they offered a gee-whiz word rate-compared with SF magazines.

A well-wrought short story is twice as hard to write as a novel; a short-short is at least eight times as hard-but one that short. . . there are much easier ways of making a living. I dropped them a postcard saying, "Thanks but I'm busy on a novel." (True-GLORY ROAD)

They upped the ante. This time I answered, "Thanks and I feel flattered-but I don't know anything about electronics." (Almost true.)

They wrote back offering expert advice from Hoffman's engineers on the gimmick-and a word rate six times as high as The Saturday Evening Post had paid me.

I had finished GLORY ROAD; I sat down and drafted this one-then sweated endlessly to get it under 1200 words as required by contract. Whereas I had written GLORY ROAD in 23 days and enjoyed every minute of it. This is why lazy writers prefer novels.

SEARCHLIGHT

"Will she hear you?"

"If she's on this face of the Moon. If she was able to get out of the ship. If her suit radio wasn't damaged. If she has it turned on. If she is alive. Since the ship is silent and no radar beacon has been spotted, it is unlikely that she or the pilot lived through it."

"She's got to be found! Stand by, Space Station. Tycho Base, acknowledge."

Reply lagged about three seconds, Washington to Moon and back. "Lunar Base, Commanding General."

"General, put every man on the Moon out searching for Betsy!"

Speed-of-light lag made the answer sound grudging. "Sir, do you know how big the Moon is?"

"No matter! Betsy Barnes is there somewhere-so every man is to search until she is found. If she's dead, your precious pilot would be better off dead, too!"

"Sir, the Moon is almost fifteen million square miles. If I used every man I have, each would have over a thousand square miles to search. I gave Betsy my best pilot. I won't listen to threats against him when he can't answer back. Not from anyone, sir! I'm sick of being told what to do by people who don't know Lunar conditions. My advice-my official advice, sir-is to let Meridian Station try. Maybe they can work a miracle.

The answer rapped back, "Very well, General! I'll
speak to you later. Meridian Station! Report your plans."

Elizabeth Barnes, "Blind Betsy," child genius of the piano, had been making a USO tour of the Moon. She "wowed 'em" at Tycho Base, then lifted by jeep rocket for Farside Hardbase, to entertain our lonely missilemen behind the Moon. She should have been there in an hour. Her pilot was a safety pilot; such ships shuttled unpiloted between Tycho and Farside daily.

After lift-off her ship departed from its programming, was lost by Tycho's radars. It was. . . somewhere.

Not in space, else it would be radioing for help and its radar beacon would be seen by other ships, space stations, surface bases. It had crashed-or made emergency landing-somewhere on the vastness of Luna.

"Meridian Space Station, Director speaking-" Lag was unnoticeable; radio bounce between Washington and the station only 22,300 miles up was only a quarter second. "We've patched Earthside stations to blanket the Moon with our call. Another broadcast blankets the far side from Station Newton at the threebody stable position. Ships from Tycho are orbiting the Moon's rim-that band around the edge which is in radio shadow from us and from the Newton. If we
h "
ear- "Yes, yes! How about radar search?"

"Sir, a rocket on the surface looks to radar like a million other features the same size. Our one chance is to get them to answer.. . if they can. Ultrahigh-resolution radar might spot them in months-but suits worn in those little rockets carry only six hours' air. We are praying they will hear and answer."

"When they answer, you'll slap a radio direction finder on them. Eh?"

"No, sir."

"In God's name, why not?"

"Sir, a direction finder is useless for this job. It would tell us only that the signal came from the Moon-which doesn't help."

"Doctor, you're saying that you might hear Betsy- and not know where she is?"

"We're as blind as she is. We hope that she will be able to lead us to her. . . if she hears us."

"How?"

"With a laser. An intense, very tight beam of light. She'll hear it-"

"Hear a beam of light?"

"Yes, sir. We are jury-rigging to scan like radar- that won't show anything. But we are modulating it to give a carrier wave in radio frequency, then modulating that into audio frequency-and controlling that by a piano. If she hears us, we'll tell her to listen while we scan the Moon and run the scale on the piano-"

"All this while a little girl is dying?"

"Mister President-shut up!"

"Who was THAT?"

"I'm Betsy's father. They've patched me from Omaha. Please, Mr. President, keep quiet and let them work. I want my daughter back."

The President answered tightly, "Yes, Mr. Barnes. Go ahead, Director. Order anything you need."

In Station Meridian the Director wiped his face. "Getting anything?"

"No. Boss, can't something be done about that Rio Station? It's sitting right on the frequency!"

"We'll drop a brick on them. Or a bomb. Joe, tell the President."

"I heard, Director. They'll be silenced!"

"Sh! Quiet! Betsy-do you hear me?" The operator looked intent, made an adjustment.

From a speaker came a girl's light, sweet voice:

"-to hear somebody! Gee, I'm glad! Better come quick-the Major is hurt."

The Director jumped to the microphone. "Yes, Betsy, we'll hurry. You've got to help us. Do you know where you are?"

"Somewhere on the Moon, I guess. We bumped hard and I was going to kid him about it when the ship fell over. I got unstrapped and found Major Peters and he isn't moving. Not dead-I don't think so; his suit puffs out like mine and I hear something when I push my helmet against him. I just now managed to get the door open." She added, "This can't be Farside; it's supposed to be night there. I'm in sunshine, I'm sure. This suit is pretty hot."

"Betsy, you must stay outside. You've got to be where you can see us."

She chuckled. "That's a good one. I see with my ears."

"Yes. You'll see us, with your ears. Listen, Betsy. We're going to scan the Moon with a beam of light. You'll hear it as a piano note. We've got the Moon split into the

eighty-eight piano notes. When you hear one, yell, 'Now!' Then tell us what note you heard. Can you do that?"

"Of course," she said confidently, "if the piano is in tune."

"It is. All right, we're starting-"

"Now!"

"What note, Betsy?"

"E flat the first octave above middle C."

"This note, Betsy?"

"That's what I said."

The Director called out, "Where's that on the grid? In Mare Nubium? Tell the General!" He said to the microphone, "We're finding you, Betsy honey! Now we scan just that part you're on. We change setup. Want to talk to your Daddy meanwhile?"

"Gosh! Could I?"

"Yes indeed!"

Twenty minutes later the Director cut in and heard:

"-of course not, Daddy. Oh, a teensy bit scared when the ship fell. But people take care of me, always have."

"Betsy?"

"Yes, sir?"

"Be ready to tell us again."

"Now!" She added, "That's a bullfrog G, three octaves down."

"This note?"

"That's right."

"Get that on the grid and tell the General to get his ships up! That cuts it to a square ten miles on a side! Now, Betsy-we know almost where you are. We are going to focus still closer. Want to go inside and cool off?"

"I'm not too hot. Just sweaty."

Forty minutes later the General's voice rang out:

"They've spotted the ship! They see her waving!"

AFTERWORD

In 1931 I was serving in LEXINGTON (CV-2). In March the Fleet held a war game off the coast of Peru and Ecuador; for this exercise I was assigned as radio compass officer. My principal duty was to keep in touch with the plane guards, amphibians (OL8-A), guarding squadrons we had in the air-i.e., the squadrons were carrierbased land planes; if one was forced to ditch, an amphibian was to land on the water and rescue the pilot.

No radar in those days and primitive radio-the pilots of the plane guards were the only ones I could talk to via the radio compass. The fighters had dot-dash gear; the radio compass did not. To get a feeling for the limitations of those days, only 28 years after the Wright brothers' first flight, see my "The Man Who Was Too Lazy to Fail" in Time Enough For Love, PutnamlBerkleylNEL.

A radio compass depends on the directional qualities of a loop antenna. To talk you rotate the antenna for maximum signal; turn it 90° and you get a minimum signal that marks the direction of the other radio-or 180° from it but you are assumed to know whether your beacon is ahead or behind you-and you do in almost every case where it matters, such as going up a channel in a fog. That minimum will tell you direction within a degree or two if the other radio is close enough, loud enough.

If it's too far away, the signal can fade to zero before you reach the bearing you need to read, and stay zero until well past it. No use turning it back 90° to try to locate it by the maximum signal; that curve is much too flat.

Late afternoon the second day of the exercise we were in trouble; the other squadrons were landing but VF-2 squadron was lost-all too easy with one-man fighter planes before the days of radar. The captain of the squadron, a lieutenant commander, held one opinion; the pilot of the amphib held another-but his opinion did not count; he was a j.g. and not part of the squadron. The
juniors in the squadron hardly had opinions; they were young, green, and depending on their .~kipper-~znd probably had fouled up their dead reckoning early in the flight.

The squadron captain vectored for rendezvous with the carrier, by his reckoning. No carrier. Just lots and lots of ocean. (I was in the air once, off Hawaii, when this happened. It's a lonely feeling.)

No sign of the U.S. Fleet. No SARATOGA (CV-3), no battleships, no cruisers. Not even a destroyer scouting a flank. Just water.

At this point I found myself in exactly the situation described in SEARCHLIGHT; I could talk to the plane guard pilot quite easily-but swing the loop 90° and zero signal was spread through such a wide arc that it meant nothing. . . and, worse, the foulup in navigation was such that there was no rational choice between the two lobes 180° apart.

And I had a personal interest not as strong as that of Betsy Barnes' father but strong. First, it was my duty and my responsibility to give that squadron a homing vector-and I couldn't do it; the equipment wasn't up to it. Had I kept track of vectors on that squadron all day- But that was impossible; Not only had I had four squadrons in the air all day and only one loop but also (and damning) there was war-game radio silence until the squadron commander in trouble was forced to break it.

But, second, the pilot of the plane guard was my closest friend in that ship-from my home town, at the Academy with me, shipmates before then in USS UTAH, shoreleave drinking companion, only other officer in the ship who believed in rocketry and space flight and read 'those crazy magazines." My number-one pa/And I was forced to tell him: "Bud, you're either somewhere northeast of us, give or take twenty or thirty degrees, or somewhere southwest, same wide range of error, and signal strength shows that you must be at least fifty miles over the horizon, probably more; I've got no way to scale the reception."

Bud chuckled. "That's a lot of ocean."

"How much gas do you have?"

"Maybe forty minutes. Most of the fighters don't have as much. Hold the phone; the skipper's calling me."

So I tried again for a minimum-no luck-swung back. "Lex loop to Victor Fox Two guard."

"Gotcha, boy. Skipper says we all ditch before the sun goes down. First I land, then they ditch as close to me as possible. I'll have hitchhikers clinging to the float a/l night long-be lucky if they don't swamp me."

"What sea?"

"Beaufort three, crowding four."

"Cripes. No white water here at all. Just long swells."

"She'll take it, she's tough. But I'm glad not to have to dead-stick a galloping goose. Gotta sign off,~ skipper wants me, it's time. Been nice knowing you."

So at last I knew-too late-which lobe they were in, as it was already dark with the suddenness of the tropics where I was, whereas the sun was still to set where they were. That eliminated perhaps five hundred square miles. But it placed them still farther away. . . which added at least a thousand square miles.

Suddenly out of the darkness endless searchlights shot straight up; the Fleet C-in-C had canceled war-condition darken-ship rather than let Victor Fox Two ditch- which was pretty nice of him because all those battleship admirals were veterans of World War One, not one of them had wings, and (with no exceptions worth noting) they hated airplanes, did not believe that planes were good for anything but scouting (if that), and despised pilots, especially those who had not attended the Academy (i.e., most of them).

I was still listening on Bud's frequency and heard some most prayerful profanity. At once Bud had a bearing on the battle line; our navigator had our bearing and distance to the battle line; my talker to the bridge gave me the course and distance VF-2 needed to home on, and I passed it to Bud. End of crisis-

-but not quite the end of tension. The squadron just barely had enough gas to get home, and more than half of those pilots had never checked out on night carrier landings.. . with no margin of fuel to let the landing officer wave a man off for poor approach if there was any possible chance that his tail hook could catch a wire. I am happy to report that every pilot got down safely although one did sort of bend his prop around the crash barrier.

Bud did almost have to make a dead-stick landing with a galloping goose. As he was the only one who could land on water if necessary, he had to come in last.. . and his engine coughed and died just as his tail hook caught the wire.

In one of Jack Williamson's stories a character goes back in time and makes a very slight change in order to effect a major change in later history.

Bud is Albert Buddy Scoles, then a lieutenant (junior grade), now a retired rear admiral, and is the officer who in 1942 gathered me, Isaac Asimov, and L. Sprague de Camp into his R&D labs at Mustin Field, Philadelphia, later solicited help from all technically trained SF writers and, still later, just after World War Two, set up the Navy's first guided missile range at Point Mugu.

I do not assume that history would have changed appreciably had VF-2 been forced to ditch.

But let's assume a change in Buddy Scoles' career just sufficient that he would not have been in charge of those labs on 7 December 1941. It would not have to be his death-although he was in far greater danger than his cheerful attitude admitted. An amphibian of that era did not necessarily make a safe landing on the high seas, and the galloping goose was an awkward beast at best-hard to see out of it in landing. Assume a minor

injury in landing, or several days' exposure to tropical sun-that's a big ocean; they would not necessarily have been picked up the next day or even that week.

Assume any one change that would have affected the pattern ofBuddy Scoles' careerenough top/ace him elsewhere than at Mustin Field December 1941:

Now let's take it in small, not in terms of history:

I would not have been at Mustin Field. I can't venture to guess where I would have been; the Navy Bureau of Medicine was being stuffy over my past medical history. I would not have met my wife; therefore I would have died at least ten years ago. . . and I would not be writing this book. (All high probabilities. Among the low probabilities is winning the Irish Sweepstakes and moving to Monaco.)

Sprague de Camp would not have been at Mustin Field. He was already headed for a Naval commission but at my suggestion Scoles grabbed him. Perhaps he would havedied gloriously in battle. . . orhe might have sat out the war in a swivel chair in the Navy Department.

But now I reach the important one. I practically kidnapped Isaac Asimov from Columbia University, where he was a graduate student bucking for his doctorate.

You can write endless scenarios from there. The Manhattan District is recruiting exceptionally bright graduate students in chemistry and physics; Isaac is grabbed and the A-bomb is thereby finished a year sooner. Or he stays on at Columbia, finishes his doctorate, and his draft board never does pick him up because he is already signed as an assistant professor at N.Y. U. the day he is invested. Etc., etc.

Here comes the rabbit- The first two books of the Foundation series (Foundation, Bridle and Saddle, The Big and the Little, The Wedge, Dead Hand, The Mule) were written while Isaac was a chemist in the labs at Mustin Field.

What would the Good Doctor have written during those years had I not fiddled with his karma? Exactly the same stories? Very similar stories? Entirely different stories? (Any scenario is plausible except one in which Dr. Asimov does no writing at all.)

All I feel sure of is that there is an extremely high probability that an almost-too-late decision by a battle-ship admiral in 1931 not only saved the lives of some fighter pilots whose names I do not know.. . but also almost certainly changed the lives of Admiral Scoles, myself, L. Sprague de Camp, Dr. Asimov and, by direct concatenation, the lives of wives, sweethearts, and offspring-and quite a major chunk of modern science fiction. (Had Scoles not called me back to Philadelphia I think I would have wound up in a Southern California aircraft factory, and possibly stayed with it instead of going back to writing. . . and helped build Apollo-Saturn. Maybe.)

If you think SEARCHLIGHT derives from an incident off Ecuador, you may be right. Possibly I dredged it out of my subconscious and did not spot it until later.

On This Site

The Afternoon of June 5th, 1834 Nothing of Any Importance Happened

FOREWORD

On 5 April 1973 I delivered the James Forrestal Memorial Lecture to the Brigade of Midshipmen at my alma mater the United States Naval Academy. As the first half of the lecture, at the request of the midshipmen, I discussed freelance writing. This is the second half~

THE PRAGMATICS OF PATRIOTISM

In this complex world, science, the scientific method, and the consequences of the scientific method are central to everything the human race is doing and to wherever we are going. If we blow ourselves up we will do it by misapplication of science; if we manage to keep from blowing ourselves up, it will be through intelligent application of science. Science fiction is the only form of fiction which takes into account this central force in our lives and futures. Other sorts of fiction, if they notice science at all, simply deplore it-an attitude very chichi in the anti-intellectual atmosphere of today. But we will never get out of the mess we are in by wringing our hands.

Let me make one flat-footed prediction of the science-fiction type. Like all scenarios this one has assumptions-variables treated as constants. The primary assumption is that World War Three will hold off long enough-ten, twenty, thirty years-for this prediction to work out. . . plus a secondary assumption that the human race will not find some other way to blunder into ultimate disaster.

Prediction: In the immediate future-by that I mean in the course of the naval careers of the class of '73- there will be nuclear-powered, constant-boost spaceships-ships capable of going to Mars and back in a
couple of weeks-and these ships will be armed with Buck-Rogersish death rays. Despite all treaties now existing or still to be signed concerning the peaceful use of space, these spaceships will be used in warfare. Space navies will change beyond recognition our present methods of warfare and will control the political shape of the world for the foreseeable future. Furthermore-and still more important-these new spaceships will open the Solar System to colonization and will eventually open the rest of this Galaxy.

I did not say that the United States will have these ships. The present sorry state of our country does not permit me to make such a prediction. In the words of one of our most distinguished graduates in his The Influence of Sea Power on History: "Popular governments are not generally favorable to military expenditures, however necessary-"

Every military officer has had his nose rubbed in the wry truth of Admiral Mahan's observation. I first found myself dismayed by it some forty years ago when I learned that I was expected to maintain the ship's battery of USS ROPER in a state of combat readiness on an allowance of less than a dollar a day- with World War Two staring down our throats.

The United States is capable of developing such spaceships. But the mood today does not favor it. So I am unable to predict that we will be the nation to spend the necessary R&D money to build such ships.

(Addressed to a plebe midshipman:)
Mister, how long is it to graduation?

Sixty-two days? Let's make it closer than that. I have . . . 7.59, just short of eight bells. Assuming graduation for ten in the morning that gives.. . 5,320,860 seconds to graduation.. . and I have less than 960 seconds in which to say what I want to say.
(To the Brigade at large:) Why are you here?
(To a second plebe:)

Mister, why are you here?

Never mind, son; that's a rhetorital question. You are here to become a naval officer. That's why this Academy was founded. That is why all of you are here: to become naval officers. If that is not why you are here, you've made a bad mistake. But I speak to the overwhelming majority who understood the oath they took on becoming midshipmen and look forward to the day when they will renew that oath as commissioned officers.

But why would anyone want to become a naval officer?

In the present dismal state of our culture there is little prestige attached to serving your country; recent public opinion polls place military service far down the list.

It can't be the pay. No one gets rich on Navy pay. Even a 4-star admiral is paid much less than top executives in other lines. As for lower ranks the typical naval officer finds himself throughout his career just catching up from the unexpected expenses connected with the last change of duty when another change of duty causes a new financial crisis. Then, when he is about fifty, he is passed over and retires. . . but he can't really retire because he has two kids in college and one still to go. So he has to find a job . . . and discovers that jobs for men his age are scarce and usually don't pay well.

Working conditions? You'll spend half your life away from your family. Your working hours? "Six days shalt thou work and do all thou art able; the seventh the same, and pound on the cable." A forty-hour week is standard for civilians-but not for naval officers. You'll work that forty-hour week but that's just a starter. You'll stand a night watch as well, and duty weekends. Then with every increase in grade your hours get longer-until at last you get a ship of your own and no longer stand watches. Instead you are on duty twenty-four hours a day.. . and you'll sign your night order book with: "In case of doubt, do not hesitate to call me."

I don't know the average week's work for a naval officer but it is closer to sixty than to forty. I'm speaking of peacetime, of course. Under war conditions it is whatever hours are necessary-and sleep you grab when you can.

Why would anyone elect a career which is unappreciated, overworked, and underpaid? It can't be just to wear a pretty uniform. There has to be a better reason.

As one drives through the bushveldt of East Africa it is easy to spot herds of baboons grazing on the ground. But not by looking at the ground. Instead you look up and spot the lookout, an adult male posted on a limb of a tree where he has a clear view all around him- which is why you can spot him; he has to be where he can see a leopard in time to give the alarm. On the ground a leopard can catch a baboon . . . but if a baboon is warned in time to reach the trees, he can outclimb a leopard.

The lookout is a young male assigned to that duty and there he will stay, until the bull of the herd sends up another male to relieve him.

Keep your eye on that baboon; we'll be back to him. Today, in the United States, it is popular among selfstyled "intellectuals" to sneer at patriotism. They seem to think

that it is axiomatic that any civilized man is a pacifist, and they treat the military profession with contempt. "Warmongers"-" Imperialists"- "Hired killers in uniform"-you have all heard such sneers and you will hear them again. One of their favorite quotations is: "Patriotism is the last refuge of a scoundrel."

What they never mention is that the man who made that sneering wisecrack was a fat, gluttonous slob who was pursued all his life by a pathological fear of death.

I propose to prove that that baboon on watch is morally superior to that fat poltroon who made that wisecrack.

Patriotism is the most practical of all human characteristics.

But in the present decadent atmosphere patriots are often too shy to talk about it-as if it were something shameful or an irrational weakness.

But patriotism is not sentimental nonsense. Nor something dreamed up by demagogues. Patriotism is as necessary a part of man's evolutionary equipment as are his eyes, as useful to the race as eyes are to the individual.

A man who is not patriotic is an evolutionary dead end. This is not sentiment but the hardest sort of logic.

To prove that patriotism is a necessity we must go back to fundamentals. Take any breed of animal-for example, tyrannosaurus rex. What is the most basic thing about him? The answer is that tyrannosaurus rex is dead, gone, extinct.

Now take homo sapiens. The first fact about him is that he is not extinct, he is alive.

Which brings us to the second fundamental question: Will homo sapiens stay alive? Will he survive?

We can answer part of that at once: Individually h. sapiens will not survive. It is unlikely that anyone here tonight will be alive eighty years from now; it approaches mathematical certainty that we will all be dead a hundred years from now as even the youngest plebe here would be 118 years old then-if still alive.

Some men do live that long but the percentage is so microscopic as not to matter. Recent advances in biology suggest that human life may be extended to a century and a quarter, even a century and a half-but this will create more problems than it solves. When a man reaches my age or thereabouts, the last great service he can perform is to die and get out of the way of younger people.

Very well, as individuals we all die. This brings us to the second half of the question: Does homo sapiens as a breed have to die? The answer is: No, it is not unavoidable.

We have two situations, mutually exclusive: Mankind surviving, and mankind extinct. With respect to morality, the second situation is a null class. An extinct breed has no behavior, moral or otherwise.

Since survival is the sine qua non, I now define "moral behavior" as "behavior that tends toward survival." I won't argue with philosophers or theologians who choose to use the word "moral" to mean something else, but I do not think anyone can define "behavior that tends toward extinction" as being "moral" without stretching the word "moral" all out of shape.

We are now ready to observe the hierarchy of moral behavior from its lowest level to its highest.

The simplest form of moral behavior occurs when a man or other animal fights for his own survival. Do not belittle such behavior as being merely selfish. Of course it is selfish . . . but selfishness is the bedrock on which all moral behavior starts and it can be immoral only when it conflicts with a higher moral imperative. An animal so poor in spirit that he won't even fight on his own behalf is already an evolutionary dead end; the best he can do for his breed is to crawl off and die, and not pass on his defective genes.

The next higher level is to work, fight, and sometimes die for your own immediate family. This is the level at which six pounds of mother cat can be so fierce that she'll drive off a police dog. It is the level at which a father takes a moonlighting job to keep his kids in college-and the level at which a mother or father dives into a flood to save a drowning child. . . and it is still moral behavior even when it fails.

The next higher level is to work, fight, and sometimes die for a group larger than the unit family-an extended family, a herd, a tribe-and take another look at that baboon on watch; he's at that moral level. I don't think baboon language is complex enough to permit them to discuss such abstract notions as "morality" or "duty" or "loyalty"-but it is evident that baboons do operate morally and do exhibit the traits of duty and loyalty; we see them in action. Call it "instinct" if you like-but remember that assigning a name to a phenomenon does not explain it.

But that baboon behavior can be explained in evolutionary terms. Evolution is a process that never stops. Baboons who fail to exhibit moral behavior do not survive; they wind up as meat for leopards. Every baboon generation has to pass this examination in moral behavior; those who bilge it don't have progeny. Perhaps the old bull of the tribe gives lessons . . . but the leopard decides who graduates-and there is no appeal from his decision. We don't have to understand the details to observe the outcome: Baboons behave morally-for baboons.

The next level in moral behavior higher than that exhibited by the baboon is that in which duty and loyalty are shown toward a group of your own kind too large for an individual to know all of them. We have a name for that. It is called "patriotism."

Behaving on a still higher moral level were the astronauts who went to the Moon, for their actions tend toward the survival of the entire race of mankind. The door they opened leads to the hope that h. sapiens will survive indefinitely long, even longer than this solid planet on which we stand tonight. As a direct result of what they did, it is now possible that the human race will never die.

Many short-sighted fools think that going to the Moon was just a stunt. But the astronauts knew the meaning of what they were doing, as is shown by Neil Armstrong's first words in stepping down onto the soil of Luna: "One small step for a man, one giant leap for mankind."

Let us note proudly that eleven of the Astronaut Corps are graduates of this our school.

And let me add that James Forrestal was the first high-ranking Federal official to come out flatly for space travel.

I must pause to brush off those parlor pacifists I mentioned earlier . . . for they contend that their actions are on this highest moral level. They want to put a stop to war; they say so. Their purpose is to save the human race from killing itself off; they say that too. Anyone who disagrees with them must be a bloodthirsty scoundrel-and they'll tell you that to your face.

I won't waste time trying to judge their motives; my criticism is of their mental processes: Their heads aren't screwed on tight. They live in a world of fantasy.

Let me stipulate that, if the human race managed its affairs sensibly, we could do without war.

Yes-and if pigs had wings, they could fly.

I don't know what planet those pious pacifists are talking about but it can't be the third one out from the Sun. Anyone who has seen the Far East-or Africa-or the Middle East-knows or certainly should know that there is no chance of abolishing war in the foreseeable future. In the past few years I have been around the world three times, traveled in most of the communist countries, visited many of the so-called emerging countries, plus many trips to Europe and to South America; I saw nothing that cheered me as to the prospects for peace. The seeds of war are everywhere; the conflicts of interest are real and deep, and will not be abolished by pious platitudes.

The best we can hope for is a precarious balance of power among the nations capable of waging total war-while endless lesser wars break out here and there.

I won't belabor this. Our campuses are loaded with custard-headed pacifists but the yard of the Naval Academy is one place where I will not encounter them. We are in agreement that the United States still needs a navy, that the Republic will always have need for heroes-else you would not be here tonight and in uniform.

Patriotism- Moral behavior at the national level. Non sibi sed Patria. Nathan Hale's last words: "I regret that I have but one life to give for my country." Torpedo Squadron Eight making its suicidal attack. Four chaplains standing fast while the water rises around them. Thomas Jefferson saying, "The Tree of Liberty must be refreshed from time to time with the blood of patriots-" A submarine skipper giving the order "Take her down!" while he himself is still topside. Jonas Ingram standing on the steps of Bancroft Hall and shouting, "The Navy has no place for good losers! The Navy needs tough sons of bitches who can go out there and win!"

Patriotism- An abstract word used to describe a type of behavior as harshly practical as good brakes and good tires. It means that you place the welfare of your nation ahead of your own even if it costs you your life.

Men who go down to the sea in ships have long had another way of expressing the same moral behavior tagged by the abstract expression "patriotism." Spelled out in simple Anglo-Saxon words "Patriotism" reads "Women and children first!"

And that is the moral result of realizing a self-evident biological fact: Men are expendable; women and children are not. A tribe or a nation can lose a high percentage of its men and still pick up the pieces and goon. . . as long as the women and children are saved. But if you fail to save the women and children, you've had it, you're done, you're through! You join tyrannosaurus rex, one more breed that bilged its final test.

I must amplify that. I know that women can fight and often have. I have known many a tough old grandmother I would rather have at my side in a tight spot than any number of pseudo-males who disdain military service. My wife put in three years and a butt active duty in World War Two, plus ten years reserve, and I am proud-very proud!- of her naval service. I am proud of every one of our women in uniform; they are a shining example to us men.

Nevertheless, as a mathematical proposition in the facts of biology, children, and women of child-bearing age, are the ultimate treasure that we must save. Every human

culture is based on "Women and children first"-and any attempt to do it any other way leads quickly to extinction.

Possibly extinction is the way we are headed. Great nations have died in the past; it can happen to us.

Nor am I certain how good our chances are. To me it seems self-evident that any nation that loses its patriotic fervor is on the skids. Without that indispensable survival factor the end is only a matter of time. I don't know how deeply the rot has penetrated-but it seems to me that there has been a change for the worse in the last fifty years. Possibly I am misled by the offensive behavior of a noisy but unimportant minority. But it does seem to me that patriotism has lost its grip on a large percentage of our people.

I hope I am wrong. . . because if my fears are well grounded, I would not bet two cents on this nation's chance of lasting even to the end of this century.

But there is no way to force patriotism on anyone. Passing a law will not create it, nor can we buy it by appropriating so many billions of dollars.

You gentlemen of the Brigade are most fortunate. You are going to a school where this basic moral virtue is daily reinforced by precept and example. It is not enough to know what Charlie Noble does for a living, or what makes the wildcat wild, or which BatDiv failed to splice the main brace and why-nor to learn matrix algebra and navigation and ballistics and aerodynamics and nuclear engineering. These things are merely the working tools of your profession and could be learned elsewhere; they do not require "four years together by the Bay where Severn joins the tide."

What you do have here is a tradition of service. Your most important classroom is Memorial Hall. Your most important lesson is the way you feel inside when you walk up those steps and see that shot-torn flag framed in the arch of the door: "Don't Give Up the Ship."

If you feel nothing, you don't belong here. But if it gives you goose flesh just to see that old battle flag, then you are going to find that feeling increasing every time you return here over the years . . . until it reabhes a crescendo the day you return and read the list of your own honored dead-classmates, shipmates, friends- read them with grief and pride while you try to keep your tears silent.

The time has come for me to stop. I said that "Patriotism" is a way of saying "Women and children first." And that no one can force a man to feel this way. Instead he must embrace it freely. I want to tell about one such man. He wore no uniform and no one knows his name, or where he came from; all we know is what he did.

In my home town sixty years ago when I was a child, my mother and father used to take me and my brothers and sisters out to Swope Park on Sunday afternoons. It was a wonderful place for kids, with picnic grounds and lakes and a zoo. But a railroad line cut straight through it.

One Sunday afternoon a young married couple were crossing these tracks. She apparently did not watch her step, for she managed to catch her foot in the frog of a switch to a siding and could not pull it free. Her husband stopped to help her.

But try as they might they could not get her foot loose. While they were working at it, a tramp showed up, walking the ties. He joined the husband in trying to pull the young woman's foot loose. No luck-

Out of sight around the curve a train whistled. Perhaps there would have been time to run and flag it down, perhaps not. In any case both men went right ahead trying to pull her free . . . and the train hit them.

The wife was killed, the husband was mortally injured and died later, the tramp was killed-and testimony showed that neither man made the slightest effort to save himself.

The husband's behavior was heroic . . but what we expect of a husband toward his wife: his right, and his proud privilege, to die for his woman. But what of this nameless stranger? Up to the very last second he could have jumped clear. He did not. He was still trying to save this woman he had never seen before in his life, right up to the very instant the train killed him. And that's all we'll ever know about him.

This is how a man dies.

This is how a man .. . lives!

"They shall not grow old
as we that are left grow old, age.shall not wither them
nor the years condemn;
At the going down of the sun
and in the morning,
we shall remember them .

-Tomb of the
Scottish Unknown Soldier
Edinburgh

PAUL DIRAC, ANTIMATTER, AND YOU

A Riddle

What have these in common?

1. 1926: A graduate student, Cambridge University
2. Billions of years ago: Quasars exploding
3. 1908: A Siberian forest devastated
4. 10 million years ago: A galaxy exploding
5. 1932: A cloud-chamber track, Pasadena, Calif.

Answer: All may, and 1 and 5 do involve antimatter.

(ANTI matter?)

Yes-like ordinary matter with electrical properties of particles reversed. Each atom of matter is one or more nucleons surrounded by one or more electrons; charges add up to zero. A hydrogen atom has a proton with positive charge as nucleus, surrounded by an electron with negative charge. A proton is 1836.11 times as massive as an electron, but their charges are equal and opposite: + 1 - 1 = 0. Uranium-235 (or ~2U~35, meaning "an isotope of element 92, uranium, nuclear weight 235") has 235 nucleons: 143 neutrons of zero charge and 92 protons of positive charge (143 + 92 = 235; hence its name); these 235 are surrounded by 92 electrons (negative), so total charge is zero: 0

+92-92 = 0. (Nuclear weight is never zero, being the mass of all the nucleons.)

Make electrons positive, protons negative: charges still balance; nuclear weight is unchanged-but it is not an atom of matter; it is an antiatom of antimatter.

"Touch Me Not!"

In an antimatter world, antimatter behaves like matter. Bread dough rises, weapons kill, kisses still taste sweet. You would be antimatter and not notice it.

WARNING! Since your body is matter (else you could not be reading this), don't kiss an antimatter girl. You both would explode with violence unbelievable.

But you'll never meet one, nor will your grandchildren. (I'm not sure about their grandchildren.)

E = mc2

Antimatter is no science-fiction nightmare; it's as real as Texas. That Cambridge graduate student was Paul A. M. Dirac inventing new mathematics to merge Albert Einstein's special theory of relativity with Max Planck's quantum theory. Both theories worked-but conflicted. Dirac sought to merge them without conflict.

He succeeded.

His equations were published in 1928, and from them, in 1930, he made an incredible prediction: each sort of particle had antiparticles of opposite charge: "antimatter."

Scientists have their human foibles; a scientist can grow as fond of his world concept as a cat of its "own" chair. By 1930 the cozy 19th-century "world" of physics had been repeatedly outraged. This ridiculous new assault insulted all common sense.

But in 1932 at the California Institute of Technology, Carl D. Anderson photographed proof of the electron's antiparticle (named "positron" for its positive charge but otherwise twin to the electron). Radical theory has seldom been confirmed so quickly or re
warded so promptly: Dirac received the Nobel prize in 1933, Anderson in 1936-each barely 31 years of age when awarded it.

Since 1932 so many sorts of antiparticles have been detected that no doubt remains: antimatter matches matter in every sort of particle. Matching is not always as simple as electron (e-) and positron (e+). Photons are their own antiparticles. Neutrons and neutrinos (zero charges) are matched by antineutrons and antineutrinos, also of zero charge-this sounds like meaningless redundancy because English is not appropriate language; abstract mathematics is the language required for precise statements in physical theory. (Try writing the score of a symphony solely in words with no musical symbols whatever.)

But a hint lies in noting that there are reaction series in which protons and electrons yield neutrons-one e\alnple: the ~o,-disa nr Solar Phoen I (solar power theory, Hans Bethe); if we ignore details, the Solar Phoenix can be summarized as changing four hydrogen atoms (four of 1Ht) into one helium atom (2H4). We start with four protons and four electrons; we end up six stages later with two neutrons, two protons, and two electrons-and that is neither precise nor adequate and is not an equation and ignores other isotopes involved, creation of positrons, release of energy through mutual annihilations of positrons and free electrons, and several other features, plus the fact that this transformation can occur by a variety of routes.

(But such are the booby traps of English or any verbal language where abstract mathematics is the only (-orre(-1 l~Ingtta~e.)

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t iprolons ~md l'Ofl~ to V~Hd ~nl n~nt i OHS. Ilie t\Vifl types (ii \aiieties 01 tr~n~10t~Uah1o)t1s filentiolled above are simply samples: there 31 c many 01 hei types being 1)0th predicted ii nil hemat lea1 l~ and detected in the laboratories almost dailv--- and many or most
transformation series involve antiparticles of antimatter.

Nevertheless, antimatter is scarce in our corner of the universe-lucky for us because, when matter encounters antimatter, both explode in total annihilation. E = mc2 is known to everyone since its awful truth was demonstrated at Hiroshima, Japan. It states that energy is equivalent to mass, mass to energy, in this relation: energy equals mass times the square of the velocity of light in empty space.

That velocity is almost inconceivable. In blasting for the moon our astronauts reached nearly 7 miles! second; light travels almost 27,000 times that speed- 186,282.4 (±0.1) miles or 299,792.5 (±0.15) kilometers each second. Round off that last figure as 300,000; then use the compatible units of science (grams, cen timeters, ergs) and write in centimeters 3 x 1O~°, then square it: 9 x 1020, or 900000,000,000000000,000. (!!!)

This fantastic figure shouts that a tiny mass can become a monstrous blast of energy-grim proof: Hiroshima.

But maximum possible efficiency of U23~ fission is about 1/10 of 1%; the Hiroshima bomb's actual efficiency was much lower, and H-bomb fusion has still lower maximum (H-bombs can be more powerful through having no limit on size; all fission bombs have sharp limits). But fission or fusion, almost all the reacting mass splits or combines into other elements; only a trifle becomes energy.

In matter-antimatter reaction, however, all of both become energy. An engineer might say "200~ eli1lent" as anti mattel undergoing ann lb hat lOll conelts into raw energy an equal mass of matter

Mathematical Physicists

An experimental physicist uses expensive giant accelerators to shoot particles at 99.9~-f- of the speed of light, or sometimes gadgets built on his own time with scrounged materials. Large or small, cheap or costly, he works with things.

A mathematical physicist uses pencil, paper, and brain. Not my brain or yours-unless you are of the rare few with "mathematical intuition."

That's a tag for an unexplainable. It is a gift, not a skill, and cannot be learned or taught. Even advanced mathematics ("advanced" to laymen) such as higher calculus, Fourier analysis, n-dimensional and non-Euclidean geometries are skills requiring only patience and normal intelligence .. . after they have been invented by persons having mathematical intuition.

The oft-heard plaint "I can't cope with math!" may mean subnormal intelligence (unlikely), laziness (more likely), or poor teaching (extremely likely). But that plaint usually refers to common arithmetic-a trivial skill in the eyes of a mathematician. (Creating it was not trivial. Zero, positional notation, decimal-orbase point all took genius; imagine doing a Form 1040 in Roman numerals.)

Of billions living and dead perhaps a few thousand have been gifted with mathematical intuition; a few hundred have lived in circumstances permitting use of it; a smaller fraction have been mathematical physicists. Of these a few dozen have left permanent marks on physics.

But without these few we would not have science. Mathematical physics is basic to all sciences. No exceptions. None.

Mathematical physicists sometimes hint that experimentalists are frustrated pipefitters; experimentalists mutter that theoreticians are so lost in fog they need guardians. But they are indispensable to each other. Piling up facts is not science-science is factsand-theories. Facts alone have limited use and lack meaning; a valid theory organizes them into far greater usefulness. To be valid a theory must be confirmed by all relevant facts. A "natural law" is theory
repeatedly confirmed and drops back to "approximation" when one fact contradicts it. Then search resumes for better theory to embrace old facts plus this stubborn new one.

No "natural law" of 500 years ago is "law" today; all our present laws are probably approximations, useful but not perfect. Some scientists, notably Paul Dirac, suspect that perfection is unattainable.

A powerful theory not only embraces old facts and new but also discloses unsuspected facts. These are landmarks of science: Nicolaus Copernicus' heliocentric theory, Johannes Kepler'srefining it into conicsections ballistics, Isaac Newton's laws of motion and theory of universal gravitation, James C. Maxwell's equations linking electricity with magnetism, Planck's quantum theory, Einstein's relativity, Dirac's synthesis of quantum theory and special relativity-a few more, not many.

Mathematical physicists strive to create a mathematical structure interrelating all space-time events, past and future, from infinitesimally small to inconceivably huge and remote in space and time, a "unified field theory" embracing 10 or 20 billion years and light-years, more likely 80 billion or so-or possibly eternity in an infinity of multiple universes.

Some order!

They try. Newton made great strides. So did Einstein. Nearly 50 years ago Dirac brought it closer, has steadily added to it, is working on it today.

Paul Dirac may be and probably is the greatest living theoretical scientist. Dirac, Newton, and Einstein are equals.

Paul A. M. Dirac

The experimentalists' slur about theoretical physicists holds a grain of truth. Newton apparently never noticed the lovely sex in all his years. Einstein ignored such trivialities as socks. One mathematical physicist who swayed World War II could not be trusted with a screwdriver.

Dirac is not that sort of man.

Other than genius, his only unusual trait is strong dislike for idle talk. (His Cambridge students coined a unit the dirac-one word per light-year.) But he lectures and writes with admirable clarity. Taciturn, he is not unsocial; in 1937 he married a most charming Hungarian lady. They have two daughters and a son.

He can be trusted with tools; he sometimes builds instruments and performs his own experiments. He graduated in engineering before he became a mathematical

physicist; this influenced his life. Engineers find working solutions from incomplete data; approximations are close enough if they do the job-too fussy wastes man-hours. But when a job needs it, a true engineer gives his utmost to achieve as near perfection as possible.

Dirac brought this attitude to theoretical physics; his successes justify his approach.

He was born in Bristol, England, Aug. 8, 1902, and named Paul Adrien Maurice Dirac. His precocity in mathematics showed early; his father supplied books and encouraged him to study on his own. Solitary walks and study were the boy's notion of fun-and are of the man today. Dirac works (and plays) hardest by doing and saying nothing . . . while his mind roams the universe.

When barely 16 years old, he entered the University of Bristol. At 18 he graduated, bachelor of science in electrical engineering. In 1923 a grant enabled him to return to school at the foremost institution for mathematics, Cambridge University. In three years of study for a doctorate Dirac published 12 papers in mathematical physics, 5 in The Proceedings of the Royal Societv. A cub with only an engineering degree from a minor university has trouble getting published in any journal of science; to appear at the age of 22 in the most highly respected of them all is amazing.

Dirac received his doctorate in May 1926, his dissertation being "Quantum Mechanics"-the stickiest
subject in physical science. He tackled it his first year at Cambridge and has continued tO unravel its paradoxes throughout his career; out of 123 publications over the last 50 years the word quantum can be found 45 times in his titles.

Dirac remained at Cambridge-taught, thought, published. In 1932, the year before his Nobel prize, he received an honor rarer than that prize, one formerly held by Newton: Lucasian professor of mathematics. Dirac kept it 37 years, until he resigned from Cambridge. He accepted other posts during his Cantabrigian years: member of the Institute for Advanced Study at Princeton, N.J., professor of the Dublin Institute for Advanced Studies, visiting professorships here and there.

Intuitive mathematicians often burn out young. Not Dirac!-he is a Michelangelo who started very young, never stopped, is still going strong. Antimatter is not necessarily his contribution most esteemed by colleagues, but his other major ones are so abstruse as to defy putting them into common words:

A mathematical attribute of particles dubbed "spin"; coinvention of the Fermi-Dirac statistics; an abstract mathematical replacement for the "pellucid aether" of classical mechanics. For centuries, ether was used and its "physical reality" generally accepted either as "axiomatic" or "proved" through various negative proofs. Both "axiom" and "negative proof" are treacherous; the 1887 Michelson-Morley experiment showed no physical reality behind the concept of ether, and many variations of that experiment over many years gave the same null results.

So Einstein omitted ether from his treatments of relativity-while less brilliant men ignored the observed facts and clung to classical ether for at least 40 years.

Dirac's ether (circa 1950) is solely abstract mathematics, more useful thereby than classical ether as it avoids the paradoxes of the earlier concepts. Dirac has

consistently warned against treating mathematical equations as if they were pictures of something that could be visualized in the way one may visualize the Taj Mahal or a loaf of bread; his equations are rules concerning space-time events-not pictures.
(This may be the key to his extraordinary successes.) One more example must represent a long list:
Dirac's work on Georges Lemaltre's "primeval egg"- later popularized as the "big bang."

Honors also are too many to list in full: fellow of the Royal Society, its Royal Medal, its Copley Medal, honorary degrees (always refused), foreign associate of the American Academy of Sciences, Oppenheimer Memorial Prize, and (most valued by Dirac) Great Britain's Order of Merit.

Dirac "retired" by accepting a research professorship at Florida State University, where he is now working on gravitation theory. In 1937 he had theorized that Newton's "constant of gravitation" was in fact a decreasing variable . . . but the amount of decrease he predicted was so small that it could not be verified in 1937.

Today the decrease can be measured. In July 1974 Thomas C. Van Flandern of the U.S. Naval Observatory reported measurements showing a decrease in gravitation of about a ten-billionth each year (1 per 1010 per annum). This amount seems trivial, but it j~ very large in astronomical and geological time. If these findings are confirmed and if they continue to support Dirac's mathematical theory, he will have upset physical science even more than he did in 1928 and 1930.

Here is an incomplete list of the sciences that would undergo radical revision: physics from micro- through astro-, astronomy, geology, paleontology, meteorology, chemistry, cosmology, cosmogony, geogony, ballistics. It is too early to speculate about effects on the life sciences, but we exist inside this physical world and gravitation is the most pervasive feature of our world.

Theory of biological evolution would certainly be affected. It is possible that understanding gravitation could result in changes in engineering technology too sweeping easily to be imagined.

Antimatter and You

Of cosmologies there is no end; astrophysicists enjoy "playing God." It's safe fun, too, as the questions are so sweeping, the data so confusing, that any cosmology is hard to prove or disprove. But since 1932 antimatter has been a necessary datum. Many cosmologists feel that the universe (universes?) has as much antimatter as matter-but they disagree over how to balance the two.

Some think that, on the average, every other star in our Milky Way galaxy is antimatter. Others find that setup dangerously crowded-make it every second galaxy. Still others prefer universe-and-antiuniverse with antimatter in ours only on rare occasions when energetic particles collide so violently that some of the energy forms antiparticles. And some like higher numbers of universes-even an unlimited number.

One advantage of light's finite speed is that we can see several eons of the universe in action, rather than just one frame of a very long moving picture. Today's instruments reach not only far out into space but also far back into time; this permits us to test in some degree a proposed cosmology. The LST (Large Space Telescope), to be placed in orbit by the Space Shuttle in 1983, will have 20 times the resolving power of the best ground-based and atmosphere-distorted conventional telescope-therefore 20

times the reach, or more than enough to see clear back to the "beginning" by one cosmology, the "big bang."

(Q: What happened before the beginning? A: You tell me.)

When we double that reach-someday we will- what will we see? Empty space? Or the backs of our necks?

(Q: What's this to me? A: Patience one moment....)

The star nearest ours is a triplet system; one of the three resembles our sun and may have an Earthlike planet-an inviting target for our first attempt to cross interstellar space. Suppose that system is antimatter- BANG! Scratch one starship.

(Hooray for Zero Population Growth! To hell with space-travel boondoggles!)

Then consider this: June 30, 1908, a meteor struck Siberia, so blindingly bright in broad daylight that people 1,000 miles away saw it. Its roar was "deafening" at 500 miles. Its ground quake brought a train to emergency stop 400 miles from impact. North of Vanavara its air blast killed a herd of 1,500 reindeer.

Trouble and war and revolution-investigation waited 19 years. But still devastated were many hundreds of square miles. How giant trees lay pinpointed impact.

A meteor from inside our Galaxy can strike Earth at 50 miles/second.

But could one hit us from outside our Galaxy?

Yes! The only unlikely (but not impossible) routes are those plowing edgewise or nearly so through the Milky Way; most of the sky is an open road-step outside tonight and look. An antimeteor from an antigalaxy could sneak in through hard vacuum-losing an antiatom whenever it encountered a random atom but nevertheless could strike us massing, say, one pound.

One pound of antimatter at any speed or none would raise as much hell as 28,000 tons of matter striking at 50 miles/second.

Today no one knows how to amass even a gram of antimatter or how to handle and control it either for power or for weaponry. Experts assert that all three are impossible.

However...

Two relevant examples of "expert" predictions:

Robert A. Millikan, Nobel laureate in physics and distinguished second to none by a half-century of re
search into charges and properties of atomic particles, in quantum mechanics, and in several other areas, predicted that all the power that could ever be extracted from atoms would no more than blow the whistle on a peanut vendor's cart. (In fairness I must add that most of his colleagues agreed-and the same is true of the next example.)

Forest Ray Moulton, for many years top astronomer of the University of Chicago and foremost authority in ballistics, stated in print (1935) that there was "not the slightest possibility of such a journey" as the one the whole world watched 34 years later: Apollo 11 to the moon.

In 1938, when there was not a pinch of pure uranium-235 anywhere on Earth and no technology to amass or control it, Lise Meitner devised mathematics that pointed straight to atom bombs. Less than seven years after she did this, the first one blazed "like a thousand suns."

No possible way to amass antimatter?

Or ever to handle it?

Being smugly certain of that (but mistaken) could mean to you . . . and me and everyone

The END

AFTERWORD

I am precluded from revising this article because Encyclopaedia Britannica owns the copyright; I wrote it under contract. But in truth it needs no revision but can use some late news flashes.

1) Jonathan V. Post reports (OMNI, May '79) that scientists in Geneva have announced containment of a beam of antiprotons in a circular storage ring for 85 hours. Further deponent sayeth not as today (Nov. '79) I have not yet traced down details. The total mass could not have been large (Geneva is still on the map) as the storage method used is not suited to large masses-or, as in this case, a massive sum total of very small masses.

But I am astonished at any containment even though with dead seriousness I predicted it in the section just above. I did not expect it in the near future but now I learn it happened at least 10 months ago, only 4 years after I wrote the above article.

Too frighteningly soon! A very small (anti) mass to be sure-but when Dr. Lise Meitner wrote the equations that implicitly predicted the A-bomb, there was not enough purified U-235 anywhere to cause a gnat's eye to water.

How soon will we face a LARGE mass-say about an ounce-planted in Manhattan by someone who doesn't like us very well? If he releases the magnetic container by an alarm-clock timer or nine other simple make-it-inyour-own-kitchen devices, he can be in Singapore when it goes off Or in Trenton if he enjoys watching his own little practical jokes-he won't worry about witnesses; they will be dead.

Too big? Too cumbersome? Too expensive? I don't know-and neither does anyone else today. I am not proposing sneaking a CERN particle accelerator past Hoboken customs. . . but note that the first reacting atomic pile (University of Chicago) was massive-but it was not flown to Hiroshima. The bomb that did go was called "Fat Boy" for good reason. Now we can fire them from
8-inch guns. As for the "suitcase" bomb-change that to a large briefcase; all the other essentials can be bought off the shelf for cash in any medium-large city, no questions asked as they are commonplace items.

Antimatter, containment and all, might turn out to be even smaller, lighter, simpler.

2) That variable constant: Dr. Van Flandern is still plugging away at Dr. Dirac's 1937 prediction about the "Constant" of Gravitation. The latest figures I have seen show (by his measurements) that the "Constant" is decreasing by 3.6 ± 1.8 parts in 1011 years, a figure surprisingly close to Dirac's 1937 prediction (5.6) in view of the extreme difficulty of making the measurements and of excluding extraneous variables. But all this is based on a universe 18-20 billion years old since the "big bang"- an assumption on current best data but still an assumption. If the universe is actually materially older than that (there are reasons to think so, and all the revisions since Abbé LemaItre first

formulated the theory have all been upward, never downward), then Dirac's prediction may turn out to be right on the nose of observed data to their limit of accuracy.

The data above are from an article by Dr. Herbert Friedman of Naval Research Laboratory. Our Baker Street Irregulars have just established a pipeline to Dr. Van Flandern; if major new data become available before this book is closed for press, I will add a line to this.

3) In Where To see prediction number fourteen, page 341: At the Naval Academy I slept my way through the course in physics; nothing had changed since I had covered the same ground in high school. "Little did I dream" that a young man at Cambridge, less than five years older than I, was at that very moment turning the world upside down. This quiet, polite, soft-spoken gentleman was going to turn out to be the enfant terrible of physics. This has been the stormiest century in natural philosophy of all history and the storms are not over. We would not today have over 200 "elementary" particles (an open scandal) if Paul Dirac had not simplified the relation of spin and magnetism in an electron into one equation over fifty years ago, then shown that the equation implied antimatter.

Many thousands of man-hours, many millions of dollars have been spent since then exploring the byways opened up by this one equation. And the end is not yet. The four forces (strong, weak, gravitic, electromagnetic) are still to be combined into one system. Einstein died with the work unfinished, Hawking (although young) is tragically ill, Dirac himself has reached the age when he really should not climb stepladders (as I know too well; I'm not that much younger).

E = me2 everybody knows; it's short and simple. But the Dirac equation, at least as important, is known only to professionals-not surprising; it's hairy and uses symbols a lavutan never sees.

I include it here just for record; I won't try to explain ii. For explanations, gel a late text on quantum inechanic~ and be prepared to learn some not-easy mathematics. Lotsa luck!

f ff~~ + h~2 + ~J~2 + ~2] dxdydz = 1

LATE BULLETIN:

Newton's "Constant" of Gravitation is a decreasing variable.

Just as I was about to dispatch this book MS to New York, through the good offices of Dr. Yoji Kondo (astrophysicist NASA Goddard) I received from Dr. Thomas C. Van Flandern a preprint of his latest results. They tend to confirm Dr. Dirac's 1937 prediction even more closely
AND ARE RACKED UP BY TWO OTHER APPR) ~(Ill ~ nil II~m ~ln~ (y/Ol l'U~ lOll (i~ 0 1(0/able d
((H S H ig oil/i tniie.

I hare just telephoned Dm-. Van Fianclern. Wit/i caution propel- to a scientist he does not say that he has "proved" Dr. Dirac 's prediction ... but that data to date~s upport it; no data that he knows of contradict it-and addS that sonic ot his colleagues disagree with him.

I don't have to be cautious; this man has established the fact beyond any reasonable doubt. Twenty-odd years of endless Lunar data, done by atomic (cesium) clock, electrically-automatically timed occultations of stars, backed by both triangulation and radar ranging, counterchecked by similar work done on the inner planets by other astronomers at other observatories- Certainly he could be wrong. . . and I could be elected President!

T. C. Van Flandern turns out to be the sort of Renaissance Man Dirac is, but a generation younger (38 years). B.S. mathematics, Xavier, Cincinnati; Ph.D. astronomy, Yale-he has three other disciplines: biochemistry, nutrition, psychiatry. (When does he sleep?)

Reread that list of sciences affected (p. 486), then batten down the hatches! Dirac has done it again, and the World will never be the same.

LARGER THAN LIFE

A Memoir in Tribute to

Dr. Edward E. Smith

August 1940-aback road near Jackson, Michigan- a 1939 Chevrolet sedan:

"Doc" Smith is at the wheel; I am in the righthand seat and trying hard to appear cool, calm, fearless-a credit to the Patrol. Doc has the accelerator floorboarded . . . but has his head tilted over at ninety degrees so that he can rest his skull against the frame of the open left window-in order to listen by bone conduction for body squeaks.

Were you to attempt this position yourself-car parked and brakes set, by all means; I am not suggesting that you drive-you would find that your view of the road ahead is between negligible and zero.

I must note that Doc was not wearing his Lens.

This leaves (by Occam's Razor) his sense of perception, his almost superhuman reflexes, and his ability to integrate instantly all available data and act therefrom decisively and correctly.

Sounds a lot like the Gray Lensman, does it not?

It should, as no one more nearly resembled (in character and in ability-not necessarily in appearance) the Gray Lensman than did the good gray doctor who created him.

Doc could do almost anything and do it quickly and well. In this case he was selecting and road-testing for me a secondhand car. After rejecting numberless other cars, he approved this one; I bought it. Note the date: August 1940. We entered World War Two the following year and quit making automobiles. I drove that car for twelve years. When I finally did replace it, the mechanic who took care of it asked to be permitted to buy it rather than have it be turned in on a trade. . . because, after more than thirteen years and hundreds of thousands of miles, it was still a good car. Doc Smith had not missed anything.

Its name? Skylark Five, of course.

So far as I know, Doc Smith could not play a dulcimer (but it would not surprise me to learn that he had been expert at it). Here are some of the skills I know he possessed:

Chemist & chemical engineer-and anyone who thinks these two professions are one and the same is neither a chemist nor an engineer. (My wife is a chemist and is also an aeronautical engineer-but she is not a chemical engineer. All clear? No? See me after class.)

Metallurgist-an arcane art at the Trojan Point of Black Magic and science.

Photographer-all metallurgists are expert photographers; the converse is not necessarily true.

Lumberjack

Cereal chemist

Cook

Explosives chemist-research, test, & development

-product control

Blacksmith

Machinist (tool & diemaker grade)

Carpenter

Hardrock miner-see chapter 14 of FIRST LENSMAN, titled "Mining and Disaster." That chapter was written by a man who had been there. And it is a refutation of the silly notion that science fiction does not require knowledge of science. Did I hear someone say
that there is no science in that chapter? Just a trick vocabulary-trade argot-plus description of some commonplace mechanical work- So? The science (several sciences!) lies just below
the surface of the paper.. . and permeates every word. In some fields I could be fooled, but not in this one. I've been in mining, off and on, for more than forty years.

Or see SPACEHOUNDS OF IPC, chapters 3 & 4, pp. 40-80. . . and especially p.52 of the Fantasy Press hardcover edition. Page 52 is almost purely autobiographical in that it tells why the male lead, "Steve" Stevens, knows how to fabricate from the wreckage at hand everything necessary to rescue Nadia and himself. I once discussed with Doc these two chapters, in detail; he convinced me that his hero character could do these things by convincing me that he, Edward E. Smith, could do all of them. . . and, being myself an experienced mechanical engineer, it was not possible for him to give me a "snow job." (I think he lacked the circuitry to give a "snow job" in any case; incorruptible honesty was Dr. Smith's prime attribute-with courage to match it.)

What else could he do? He could call square dances. Surely, almost anyone can square-dance . . . but to become a caller takes longer and is much more difficult. When and how he found time for this I do not know- but, since he did everything about three times as fast as ordinary people, there is probably no mystery.

Both Doc and his beautiful Jeannie were endlessly hospitable. I stayed with them once when they had nine houseguests. They seemed to enjoy it.

But, above all, Doc Smith was the perfect, gallant knight, sans peur et sans reproche.

And all of the above are reflected in his stories.

It is customary today among self-styled "literary critics" to sneer at Doc's space epics-plot, characterization, dialog, motivations, values, moral attitudes,
etc. "Hopelessly old-fashioned" is one of the milder disparagements.

As Al Smith used to say: "Let's take a look at the record."

Edward Elmer Smith was born in 1890, some forty years before the American language started to fall to pieces-long, long before the idiot notion of "restricted vocabulary" infected our schools, a half century before our language was corrupted by the fallacy that popular usage defines grammatical correctness.

In consequence Dr. Smith made full use of his huge vocabulary, preferring always the exact word over a more common but inexact word. He did not hesitate to use complex sentences. His syntactical constructions show that he understood and used with precision the conditional and the subjunctive modes as well as the indicative. He did not split infinitives. The difference between "like" and "as" was not a mystery to him. He limited barbarisms to quoted dialog used in characterization.

("Oh, but that dialog!") In each story Doc's male lead character is a very intelligent, highly educated, cheerful, emotional, enthusiastic, and genuinely modest man who talks exactly like Doc Smith who was a very intelligent, highly educated, cheerful, emotional, enthusiastic, and genuinely modest man.

In casual conversation Doc used a number of clichés . . . and his male lead characters used the same or similar ones. This is a literary fault? I think not. In casual speech most people tend to repeat each his own idiosyncratic pattern of clichés. Doc's repertory of clichés was quite colorful, especially so when compared with patterns heard today that draw heavily on "The Seven Words That Must Never Be Used in Television." A 7-word vocabulary offers little variety.

("But those embarrassing love scenes!") E. E. Smith's adolescence was during the Mauve Decade; we may assume tentatively that his attitudes toward women were formed mainly in those years. In 1914, a
few weeks before the war in Europe started, he met his Jeannie-and I can testify of my own knowledge that, 47 years later (i.e., the last time I saw him before his death) he was still dazzled by the wonderful fact that this glorious creature had consented to spend her life with him.

Do you remember the cultural attitudes toward romantic love during the years before the European War? Too early for you? Never mind, you'll find them throughout Doc Smith's novels. Now we come to the important question. The Lensman novels are laid in the far future. Can you think of any reason why the attitudes between sexes today (ca. 1979) are more likely to prevail in the far future than are attitudes prevailing before 1914?

(I stipulate that there are many other possible patterns. But we are now comparing just these two.)

I suggest that the current pattern is contrasurvival, is necessarily most temporary, and is merely one symptom of the kaleidoscopic and possibly catastrophic rapid change our culture is passing through (or dying from?).

Contrariwise, the pre-1914 values, whatever faults they may have, are firmly anchored in the concept that a male's first duty is to protect women and children. Pro survival!

"Ah, but those hackneyed plots!" Yes, indeed!-and for excellent reason: The ideas, the cosmic concepts, the complex and sweeping plots, all were brand new when Doc invented them. But in the past half century dozens of other writers have taken his

plots, his concepts, and rung the changes on them. The ink was barely dry on SKYLARK OF SPACE when the imitators started in. They have never stopped-pygmies, standing on the shoulders of a giant.

But all the complaints about "Skylark" Smith's alleged literary faults are as nothing to the (usually unvoiced) major grievance:

Doc Smith did not go along with any of the hogwash that passes for a system of social values today.

He believed in Good and Evil. He had no truck with the moral relativism of the neo- (cocktail-party) Freudians.

He refused to concede that "mediocre" is better than "superior."

He had no patience with self-pity.

He did not think that men and women are equal- he would as lief have equated oranges with apples. His stories assumed that men and women are different, with different functions, different responsibilities, different duties. Not equal but complementary. Neither complete without the other.

Worse yet, in his greatest and longest story, the 6volume Lensman novel, he assumes that all humans are unequal (and, by implication, that the cult of the common man is pernicious nonsense), and bases his grand epic on the idea that a planned genetic breeding program thousands of years long can (and must) produce a new race superior to h. sapiens . . . supermen who will become the guardians of civilization.

The Lensman novel was left unfinished; there was to have been at least a seventh volume. As always, Doc had worked it out in great detail but never (so far as I know) wrote it down. . . because it was unpublishable-then. But he told me the ending, orally and in private.

I shan't repeat it; it is not my story. Possibly somewhere there is a manuscript-I hope so! All I will say is that the ending develops by inescapable logic from clues in CHILDREN OF THE LENS.

So work it out for yourself. The original Gray Lensman left us quite suddenly-urgent business a long way off, no time to spare to tell us more stories.

SPINOFF

On 2 July 1979 I received a letter calling me to testify July 19th before a joint session of the House Select Committee on Aging (Honorable Claude Pepper, M.C., Chairman) and the House Committee on Science and Technology (Honorable Don Fuqua, M.C., Chairman)- subject: Applications of Space Technology for the Elderly and the Handicapped.

I stared at that letter with all the enthusiasm of a bridegroom handed a summons for jury duty. Space technology? Yeah, sure, I was gung-ho for space technology, space travel, spaceships, space exploration, space colonies-anything about space, always have been.

But "applications of space technology for the elderly and the handicapped"? Why not bee culture? Or Estonian folk dancing? Or the three-toed salamander? Tantric Yoga?

I faced up to the problem the way any married man does: "Honey? How do I get out of this?"

"Come clean," she advised me. "Tell them bluntly that you know nothing about the subject. Shall I write a letter for you to sign?"

"It's not that simple."

"Certainly it is. We don't want to go to Washington. In July? Let's not be silly."

"You don't have to go."

"You don't think I'd let you go alone, do you? After the time and trouble I've spent keeping you alive? Then let you drop dead on a Washington sidewalk? Hmmph! You go-I go."

Some hours later I said, "Let's sum it up. We both know that any Congressional committee hearing, no matter how the call reads, has as its real subject 'Money'-who gets it and how much. And we know that the space program is in bad trouble. This joint session may not help-it looks as if it would take a miracle to save the space program-but it might help. Some, maybe. The only trouble is that I don't know anything about the subject I'm supposed to discuss."

"So you've said, about twenty times."

"I don't know anything about it today. But on July 19th I'm going to be a fully-qualified Expert Witness."

"So I told you, two hours ago."

Ginny and I have our own Baker Street Irregulars. Whether the subject be Chaucer or chalk, pulsars or poisons, we either know the man who knows the most about it, or we know a man who knows the man who knows the most. Within twenty-four hours we had a couple of dozen ~~1f~1ft% f~{$//~ public-spirited citizens helping us. Seventy-two hours, and information started to trickle in-within a week it was a flood and I was starting to draft my written testimony.

I completed my draft and immediately discarded it; galley proofs had arrived of TECHNOLOGIES FOR THE HANDICAPPED AND THE AGED by Trudy E. Bell, NASA July 1979. This brochure was to be submitted by Dr. Frosch, Administrator of NASA, as his testimony at the same hearing. Trudy Bell had done a beautiful job-one that made 95% of what I had written totally unnecessary.

So I started over.

What follows is condensed and abridged from both my written presentation and my oral testimony:

"Honorable Chairman, ladies, and gentlemen- "Happy New Year!

"Indeed a happy New Year beginning the 11th year in the Age of Space, greatest era of our race-the greatest!-despite gasoline shortages, pollution, overpopulation, inflation, wars and threats of war. 'These too shall pass'-but the stars abide.

"Our race will spread out through space-unlimited room, unlimited energy, unlimited wealth. This is certain.

"But I am not certain that the working language will be English. The people of the United States seem to have suffered a loss of nerve. However, I am limited by the call to a discussion of 'spinoffs' from our space program useful to the aged and the handicapped.

"In all scientific research, the researcher may or may not find what he is looking for-indeed, his hypothesis may be demolished-but he is certain to learn something new. . . which may be and often is more important than what he had hoped to learn.

"This is the Principle of Serendipity. It is so invariant that it can be considered an empirically established natural law.

"In space research we always try to do more with less, because today the pay load is tightly limited in size and in weight. This means endless research and development to make everything smaller, lighter, foolproof, and fail-proof. It works out that almost everything developed for space can be used in therapy

and thereby benefits both the elderly and the handicapped, the two groups requiring the most therapy of all sorts.

"When you reach old age-say 70 and up-it approaches certainty that you will be in some way handicapped. Not necessarily a wheelchair or crutches or a white cane-most handicaps do not show. So all of us are customers for space spinoffs-if not today, then soon.

Witness holds up NASA brochure. "There is no need
for me to discuss applications that NASA has already described. But this I must say: NASA's presentation is extremely modest; it cites only 46 applications- whereas there are hundreds. Often one bit of research results in 2nd, 3rd, and 4th generations; each generation usually has multiple applications-spinoffs have spinoffs, branching out like a tree. To get a feeling for this, think of the endless applications of Lee DeForest's vacuum tube, Dr. Shockley's transistor.

"Here is a way to spot space-research spinoffs: If it involves microminiaturization of any sort, minicomputers, miniaturized long-life power sources, highly reliable microswitches, remotely-controlled manipulators, image enhancers, small and sophisticated robotics or cybernetics, then, no matter where you find the item, at a critical point in its development it was part of our space program.

"Examples:

"Image enhancer: This magic gadget runs an x-ray or fluoroscope picture through a special computer, does things to it, then puts it back onto the screen. Or stores it for replay. Or both. It can sharpen the contrast, take out 'noise,' remove part of the picture that gets in the way of what you need to see, and do other Wizard-of-Oz stunts.

"This is the wonder toy that took extremely weak digital code signals and turned them into those beautiful, sharp, true-color photographs from the surface of Mars in the Viking program and also brought us the Voyager photographs of Jupiter and its moons.

"I first saw one in 1977 at the Medical School of the University of Arizona-saw them put a long catheter up through a dog's body in order to inject an x-rayopaque dye into its brain. This does not hurt the dog. More about this later- "I did not know what an image enhancer was until
I saw one demonstrated and did not learn until this year that it came from our space program. Possibly the doctor did not know. M.D.'s can use instruments
with no notion that they derive from space research and a patient usually knows as little about it as
did that dog.

"The most ironical thing about our space program is that there are thousands of people alive today who would be dead were it not for some item derived from space research-but are blissfully unaware of the fact-and complain about 'wasting all that money on stupid, useless space stunts when we have so many really important problems to solve right here on Earth.'

"'-all that money-'!

"That sort of thinking would have kept Columbus at home.

"NASA's annual budget wouldn't carry H.E.W. ten days. The entire 10 years of the Moon program works out to slightly less than five cents per citizen per day.

"Would you like to be a wheelchair case caught by a hurricane such as that one that failed to swing east and instead hit the Texas and Louisiana coast? That storm was tracked by weather satellite; there was ample warning for anyone who would heed it- plenty of time to evacuate not only wheelchair cases but bed patients.

"A similar storm hit Bangladesh a while back; it too was tracked by satellite. But Bangladesh lacks means to warn its people; many thousands were killed. Here in the United States it would take real effort to miss a hurricane warning; even houses with no plumbing have television.

"Weather satellites are not spinoff; they are space program. But they must be listed because bad weather of any sort is much rougher on the aged and the handicapped than it is on the young and able-bodied.

"Portable kidney machine: If a person's kidneys fail, he must 'go on the machine' or die. 'The machine' is a fate so grim that the suicide rate is high. Miniaturization has made it possible to build portable kidney machines. This not only lets the patient lead a fairly
normal life, travel and so forth, but also his blood is cleaned steadily as with a normal kidney; he is no longer cumulatively poisoned by his own toxins between his assigned days or nights 'on the machine.'

"This is new. A few have already made the switch but all kidney victims can expect it soon. The suicide rate has dropped markedly-life is again worth living; hope has been restored.

"Computerized-A,cial Tomography, or CAT, or 'brain scan': They strap you to a table, fasten your skull firmly, duck behind a barrier, and punch a button- then an automatic x-ray machine takes endless pictures, a tiny slice at a time. A special computer synthesizes each series of slices into a picture; a couple of dozen such pictures show the brain in three-dimensional, fine detail, a layer at a time.

"Doppler Ultrasound Stethoscope: another microminiaturization spinoff. This instrument is to an ordinary stethoscope as a Rolls Royce is to a Model-T Ford."

Witness stands up, turns from side to side. "Look at me, please! I'll never be Mr. America; I'll never take part in the Olympics. I've climbed my last mountain.

"But I'm here, I'm alive, I'm functioning.

"Fourteen months ago my brain was dull-normal and getting worse, slipping toward 'human vegetable.' I slept 16 hours a day and wasn't worth a hoot the other 8 hours.

"Were it not for the skill of Dr. Norman Chater, plus certain spinoffs from the space program, today I would either be a human vegetable or, if lucky, dead of cerebral stroke.

"My father was not lucky; from a similar disorder it took him years to die-miserable years. He died before the operation that saved me had been invented, long before there was medical spinoff from space technology.

"Am I elderly? I'm 72.1 suffered from a disorder typical of old age, almost never found in the young.

"Am I handicapped? Yes, but my handicaps do not interfere with my work-or my joy in life. Over forty years ago the Navy handed me a piece of paper that pronounced me totally and permanently disabled. I never believed it. That piece of paper wore out; I did not.

"Mrs. Heinlein and I spent 1976 and -77 on blood drives all over this nation. We crisscrossed the country so many times we lost track. It was worthwhile; we recruited several thousand new blood donors-but it was very strenuous. By the end of '77 we badly needed a rest, so we took a sea voyage. She and I were walking the beach on Moorea, Tahiti, when I turned my head to look at a mountain peak-and something happened.

"I balanced on my left leg and said, 'Darling, I'm terribly sorry but I think I've had a stroke. Something happened inside my head and now I'm seeing double and my right side feels paralyzed.'

"Mrs. Heinlein half carried me, half dragged me, back to the landing-got me back aboard.

"A shipmate friend, Dr. Armando Fortuna, diagnosed what had happened: a transient ischemic attack, not a stroke. When we reached California, this was confirmed by tests. However a TIA is frequently a prelude to a stroke.

"Remember that spinoff, computerized-axial tomography? That was done to me to rule out brain tumor. No tumor. The neurologist my physician had called in started me on medication to thin my blood as the clinical picture indicated constriction in blood flow to my brain. This treatment was to continue for six months.

But in only two months I was failing so rapidly that I was shipped to the University of California Medical School at San Francisco for further diagnosis. Remember the image enhancer and that dog at the University of Arizona? I said that dog was not hurt. They did it to me, with no anesthesia; it did not hurt.

"The catheter goes in down here"-witness points at his right groin-"and goes all the way up and into the aortal arch above the heart. There three very large arteries lead up toward the brain; the catheter was used to shoot x-ray-opaque dye into each, in succession. The procedure took over two hours . . . but I was never bored because the image enhancer included closed-circuit television of the fluoroscopy with the screen right up here"-witness indicates a spot just above and to the left of his head-"above me, where the radiologist and his team, and the patient-I- could see it.

"How many people ever get a chance to watch their own hearts beat? Utterly fascinating! I could see my heart beating, see my diaphragm rise and fall, see my lungs expand and contract, see the dye go up into my brain. . . see the network of blood vessels in my brain suddenly spring into sharp relief. It was worth the trip!

"They spotted what was wrong; my left internal carotid was totally blocked. So the left half of my brain was starved for oxygen, as it was receiving only what leaked over from the right side or from the vertebrals where the network interconnected, principally at the Circle of Willis under the brain.

"But this is your speech center"-witness touches left side of skull above ear-" your word processor, the place where a writer does all his work. No wonder I was dopey-could not write, could not study, could not read anything difficult.

"My left internal carotid is still blocked; the stoppage is too high up for surgery. So they sent me to Dr. Chater at Franklin Hospital, who moved my left superficial temporal artery to feed the left side of my brain. This operation is pictured on pages 62 and 63 of the April 1978 Scientific American, so Twill omit grisly details; if surgery interests you, you can look them up there.

"The procedure is this: Scalp the patient from the left eyebrow, going high and curving down to a spot behind the left ear back of the mastoid. Cut away from the scalp the temporal artery. Saw a circular hole in the skull above the ear. Go inside the brain into the Sylvian fissure, find its main artery, join the two arteries, end to side. The left anterior lobe of my brain is now served by the left external carotid via this roundabout bypass. Dr. Chater did the hookup under a microscope with sutures so fine the naked eye can't see them.

"Check by Doppler ultrasound to make sure the bypass works, then close the hole in the skull with a plate that has a groove in it for the moved artery. Sew back the scalp-go to lunch. The surgeon has been operating for four hours; he's hungry. (The patient is not.)

"They placed me in a cardiac intensive-care room. When I woke, I found in my room a big screen with dancing lights all over it. Those curves meant nothing to me but were clear as print to the T.C. nurses and to my doctors-such things as EKG, blood pressure, respiration, temperature, brain waves, I don't know what all. The thing was so sensitive that my slightest movement caused one of the curves to spike.

"I mention this gadget because I was not wired to it. "Another space-technology spinoff: This is the way Dr. Berry monitored our astronauts whenever they were out in space.

"Colonel Berry had to have remote monitoring for his astronaut patients. For me it may not have been utterly necessary. But it did mean that I was not cluttered with dozens of wires like a fly caught in a web; the microminiaturized sensors were so small and unobtrusive that I never noticed them-yet the nurses had the full picture every minute, every second.

"Another advantage of telemetered remote monitoring is that more than one terminal can display the signals. My wife tells me that there was one at the nursing supervisor's station. Dr. Chater may have had a terminal in his offices-I don't know. But there can't be any difficulty in remoting a hundred yards or so when the technology was developed for remoting from Luna to Houston, almost a quarter of a million miles.

"Space spinoff in postoperative care: a Doppler ultrasound stethoscope is an impressive example of microminiaturization. It is enormously more sensitive than an acoustic stethoscope; the gain can be controlled, and, because of its Doppler nature, fluid flow volume and direction can be inferred by a skilled operator. Being ultrasound at extremely high frequency, it is highly directional; an acoustic stethoscope is not.

"It generates a tight beam of ultrasound beyond the range of the human ear. This beam strikes something and bounces back, causing interference beats in the audible range. It behaves much like Doppler radar save that the radiation is ultrasound rather than

electromagnetic. Thus it is a non invasive way to explore inside the body without the dangers of x-ray . . . and is able to 'see' soft tissues that x-ray can't see.

"Both characteristics make it especially useful for protecting pregnant mothers and unborn babies. I am not departing from the call; babies unborn and newly born, and mothers at term must be classed as 'temporarily but severely handicapped.'

"Doppler ultrasound was used on me before, during, and after surgery.

"After my convalescence I was again examined by computerized axial tomography. No abnormalities-- other than the new plate in my skull.

"This brain surgery is not itself a spinoff from space technology . . . but note how repeatedly space spinoffs were used on me before, during, and after surgery. This operation is very touchy; in the whole world only a handful of surgical teams dare attempt it. Of the thousand-odd of these operations to date, worldwide, Dr. Chater has performed more than 300. His mortality rate is far lower than that of any other team anywhere. This is a tribute to his skill but part of it comes from his attitude: he always uses the latest, most sophisticated tools available.

"I was far gone; I needed every edge possible. Several things that tipped the odds in my favor are spinoffs from space technology.

"Was it worthwhile? Yes, even if I had died at one of the four critical points-because sinking into senility while one is still bright enough to realize that one's mental powers are steadily failing is a miserable, nogood way to live. Early last year I was just smart enough to realize that I had nothing left to look forward to, nothing whatever. This caused me to be quite willing to 'Go-for-Broke'-get well or die.

"Did it work? I have been out of convalescence about one year, during which I've caught up on two years of technical journals, resumed studying-I have long been convinced that life-long learning helps to keep one young and happy. True or not, both my wife and I do this. At present Tam reviewing symbolic logic, going on into more advanced n-dimensional, non-Euclidean geometries, plus another subject quite new to me: Chinese history.

"But I am working, too; I have completed writing a very long novel and am about halfway through another book.

"I feel that I have proved one of two things: either I have fully recovered.. . or a hole in the head is no handicap to a science-fiction author.

"I must note one spinoff especially important to the aged and the handicapped: spiritual spinoff.

"'Man does not live by bread alone.' Any physician will tell you that the most important factor in getting well is the will to live-contrariwise, a terminal patient dies when he gives up the fight.

"I have been in death row three times. The unfailing support of my wife sustained my will to live.. . so here I am. In addition I have believed firmly in space flight for the past sixty-odd years; this has been a permanent incentive to hang on, hang on! My wife shares this; she decided years back to die on the Moon, not here in the smog and the crowds. Now that I am well again I intend to hang in there, lead a disciplined life, stay alive until we can buy commercial tickets to the Moon . . . and spend our last days in low-gravity comfort in the Luna Hilton, six levels down in Luna City.

"Foolishness? Everyone in this room is old enough to know by direct experience that today's foolishness is tomorrow's wisdom. I can remember when 'Get a horse!' was considered the height of wit. As may be, anything that gives one a strong incentive to live can't be entirely foolish.

"I get a flood of mail from my readers; a disproportionate part of it is from the very old and the handicapped. It is impossible to be a fan of my fiction and not be enthusiastic for space travel. Besides, they tell me so, explicitly, in writing.

"Examples:

"A college professor, blind from birth. He's never seen the the stars; he's never seen the Moon. The books he reads and rereads-has read to him by his secretary-are about space travel. He went to a lot of trouble to look me up. . . to discuss our space program.

"A teen-age boy, tied to a wheelchair, who wrote to ask me whether or not he could become an astronautical engineer-some 'friend' had told him that it was a silly ambition for a cripple. I assured him that an engineer did not need legs even on Earth surface, advised him in what courses to take, and referred him to a story by Arthur C. Clarke in which a double amputee, both legs, commands a space station.

"A housewife with epilepsy, grand mal, who doesn't expect ever to be able to go out into space. . . but finds her greatest interest in life, her major relief from the tedious routine she must follow, in our space program.

"Avery large number of elderly people who wrote to me immediately after the first landing on the Moon,
all saying, in effect, that they thanked the Lord that they had been spared long enough to see this great day.

"I could add examples endlessly. Just let me state flatly that my files hold proof that the aged retired, the shut-ins and the disabled of all ages get more spiritual lift out of space flight than does any other definable group of our citizens. For many of them the television screen is their only window on the world; something great and shining and wonderful went out of their lives when the Apollo Moon program ended.

"Even if a space program had no other spinoff, isn't that sort worth 5~ a day?"

AFTERWORD

Later: No, to most citizens of the United States the entire space program plus all its spinoffs is not worth even 5~ per day; the polls (and letters to Congress) plainly show it. And they won't believe that 5ç~ figure even if you do the arithmetic right in front of their eyes. They will still think of it as "all that money" being "wasted" on "a few rocks."

It is easy to prove that the space program paid for itself several times over in terms of increased gross national product. . . and in new technology. . . and in saved lives. But they won't believe any of that, either.

NASA has two remarkable records: first, a space program far more successful than anyone had dared hope; and, second, the most incredibly bumbling, stupid, inept public relations of any government agency.

A Congressman's counsel pointed out to me that NASA and other government agencies were by law not perm itted to advertise themselves. Oh, come off it!-it does not matter whether a man is called a "public information aide" or a flack; a press agent defines himself by what he does. The man who was NASA's boss flack all during the

Moon program had the endearing manners of Dennis the Menace. He's gone now-but the damage he did lives on, while our space program is dying.

Still... if you aren't willing to give up and start studying Mandarin or possibly Japanese, you can write to your congressman and to both your senators and tell them how you feel about it. If you do, send copies to Don Fuqua (Democrat, Lower House) and to Barry Goldwater, Sr. (Republican, Upper House). A strong space program has many friends in both parties and in both houses- but it is necessary to let them know that they have friends.

FOREWORD

One would think that a "prophet" unable to score higher than 66% after 30 years have elapsed on 50-year predictions would have the humility (or the caution) to refrain from repeating his folly. But I've never been very humble, and the motto of my prime vocation has always been: "L'audace! Toujours l'audace!"

So the culprit returns to his crime. Or see PROVERBS XXVI, 11. And hang on to your hats!

I shot an error into the air.
It's still going.. . everywhere.
LLong

THE HAPPY DAYS AHEAD

"It does not pay a prophet to be too specific."
-L. Sprague de Camp

"You never get rich peddling gloom."
-William Lindsay Gresham

The late Bill Gresham was, before consumption forced him into fiction writing, a carnie mentalist of great skill. He could give a cold reading that would scare the pants off a marble statue. In six words he summarized the secret of success as a fortuneteller. Always tell the mark what he wants to hear. He will love you for it, happily pay you, then forgive and forget when your cheerful prediction fails to come true-and always come back for more.

Stockbrokers stay in business this way; their tips are no better than guesses but they are not peddling dividends; they are peddling happiness. Millions of priests and preachers have used this formula, promising eternal bliss in exchange for following, or at least giving lip service to, some short and tolerable rules, plus a variable cash fee not too steep for the customer's purse .. . and have continued to make this formula work without

ever in all the years producing even one client who had actually received the promised prize.

Then how do churches stay in business? Because, in talking about "Pie in the Sky, By and By," they offer happiness and peace of mind right here on Earth. When Karl Marx said, "Religion is the opium of the people," he was not being cynical or sarcastic; he was being correctly descriptive. In the middle nineteenth century opium was the only relief from intolerable pain; Karl Marx was stating that faith in a happy religion made the lives of the people of the abyss tolerable.

Sprague de Camp is Grand Master of practically everything and probably the most learned of all living practitioners of science fiction and fantasy. I heard those words of wisdom from him before I wrote the 1950 version of PANDORA'S BOX. So why didn't Illsten? Three reasons: 1) money; 2) money; and 3) I thought I could get away with it during my lifetime for predictions attributed to 2000 A.D. I never expected to live that long; I had strong reasons to expect to die young. But I seem to have more lives than a cat; it may be necessary to kill me by driving a steak through my heart (sirloin by choice), then bury me at a crossroads.

Still, I could have gotten away with it if I had stuck to predictions that could not mature before 2000 A.D. Take the two where I really flopped, #5 and #16. In both cases I named a specific year short of 2000 A.D. Had I not ignored Mr. de Camp's warning, I could look bland and murmur, "Wait and see. Don't be impatient," on all in which the prediction does not look as promising in 1980 as it did in 1950.

Had I heeded a wise man on 2 out of 191 could today, by sheer brass, claim to be batting a thousand.

I have made some successful predictions. One is "The Crazy Years." (Take a look out your window. Or at your morning paper.) Another is the water bed. Some joker tried to patent the water bed to shut out competition, and discovered that he could not because it was in the public domain, having been described in detail in STRANGER IN A STRANGE LAND. It had been mentioned in stories of mine as far back as 1941 and several times after that, but not until STRANGER did the mechanics of a scene requirc describing how it worked.

It was not the first man to build water beds who tried to patent it. The first man in the field knew where it came from; he sent me one, free and freight prepaid, with a telegram naming his firm as the "Share-Water Bed Company." Q.E.D.

Our house has no place to set up a water bed. None. So that bed is still in storage a couple of hundred yards from our main house. I've owned a water bed from the time they first came on market-but have never slept in one.

I designed the water bed during years as a bed patient in the middle thirties: a pump to control waterlevel, side supports to permit one to float rather than simply lying on a not-very-soft water-filled mattress, thermostatic control of temperature, safety interfaces to avoid all possibility of electrical shock, waterproof box to make a leak no more important than a leaky hot water bottle rather than a domestic disaster, calculation of floor loads (important!), internal rubber mattress, and lighting, reading, and eating arrangements-an attempt to design the perfect hospital bed by one who had spent too damned much time in hospita! beds.

Nothing about it was eligible for patent-nothing new-unless a sharp patent lawyer could persuade the examiners that a working assemblage enabling a person to sleep on water involved that-how does the law describe it?-"flash of inspiration" transcending former art. But I never thought of trying; I simply wanted to build one-but at that time I could not have afforded a custom-made soapbox.

But I know exactly where I got the idea. In 1931, a few days after the radio-compass incident described in the afterword to SEARCHLIGHT, I was ordered to Fort Clayton, Canal Zone, to fire in Fleet Rifle & Pistol Matches. During that vacation-with-pay I often re
turned from Panama City after taps, when all was quiet. There was a large swimming pool near the post gate used by the Navy and our camp was well separated from the Army regiment barracked there.

I would stop, strip naked, and have a swim-nonreg (no life guards) but no one around, and regulations are made to be broken.

Full moon occurred about the middle of Fleet Matches-and I am one of those oddies who cannot sink, even in fresh water (which this was). The water was blood warm, there was no noise louder than night jungle sounds, the Moon blazed overhead, and I would lie back with every muscle relaxed and stare at it-fall into it-wonder whether we would get there in my lifetime. Sometimes I dozed off.

Eventually I would climb out, wipe my feet dry with a hanky, pull on shoes, hang clothes over my arm, and walk to my tent in the dark. I don't recall ever meeting anyone but it couldn't matter-dark, all male, surrounded by armed sentries, and responsible myself only to a Marine Corps officer junior to me but my TDY boss as team captain-and he did not give a hoot what I did as long as I racked a high score on the range (and I did, largely because my coach was a small wiry Marine sergeant nicknamed "Deacon"-who reappears as survival teacher in TUNNEL IN THE SKY).

Some years later, bothered by bed sores and with every joint aching no matter what position I twisted into, I thought often of the Sybaritic comfort of floating in blood-warm water at night in Panama-and wished that it could be done for bed patients.. . and eventually figured out how to do it, all details, long before I was well enough to make working drawings.

But 1) I never expected one to be built; 2) never thought of them (except for myself) other than as hospital beds; 3) never expected them to be widely used by a fair percentage of the public; 4) and never dreamed that they would someday be advertised by motels for romantic-exotic-erotic weekends along with X-rated films on closed-circuit TV.

By stacking the cards, I'm about to follow the advice of both Bill Gresham and Sprague de Camp. First, I will paint a gloomy picture of what our future may be. Second, I'll offer a cheerful scenario of how wonderful it could be. I can afford to be specific as each scenario will deny everything said in the other one (de Camp), and I can risk great gloom in the first because I'll play you out with music at the end (Gresham).

GLOOM, WOE, AND DISASTER-There are increasing pathological trends in our culture that show us headed down the chute to self-destruction. These trends do not require that we be conquered-wait a bit and we will fall into the lap of whichever power cares to occupy us. I'll list some of these trends and illustrate (rather than prove) what I mean. But it would be tediously depressing to pile up convincing proof-I'm not running

for office. I do have proof, on file right in this room. I started clipping and filing by categories on trends as early as 1930 and my "youngest" file was started in 1945.

Span of time is important; the 3-legged stool of understanding is held up by history, languages, and mathematics. Equipped with these three you can learn anything you want to learn. But if you lack any one of them you are just another ignorant peasant with dung on your boots.

A few years ago I was visited by an astronomer, young and quite brilliant. He claimed to be a longtime reader of my fiction and his conversation proved it. I was telling him about a time I needed a synergistic orbit from Earth to a 24-hour station; I told him what story it was in, he was familiar with the scene, mentioned having read the book in grammar school.

This orbit is similar in appearance to cometary interplanet transfer but is in fact a series of compromises in order to arrive in step with the space station; elapsed time is an unsmooth integral not to be found in Hudson's Manual but it can be solved by the methods used on Siacci empiricals for atmosphere ballistics: numerical integration.

I'm married to a woman who knows more math, history, and languages than I do. This should teach me humility (and sometimes does, for a few minutes). Her brain is a great help to me professionally. I was telling this young scientist how we obtained yards of butcher paper, then each of us worked three days, independently, solved the problem and checked each other- then the answer disappeared into one line of one paragraph (SPACE CADET) but the effort had been worthwhile as it controlled what I could do dramatically in that sequence.

Doctor Whoosis said, "But why didn't you just shove it through a computer?"

I blinked at him. Then said slowly, gently, "My dear boy-" (I don't usually call Ph.D.'s in hardcore sciences "My dear boy"-they impress me. But this was a special case.)

"My dear boy . . . this was 1947."

It took him some seconds to get it, then he blushed.

Age is not an accomplishment and youth is no sin. This young man was (is) brilliant, skilled in mathematics, had picked German and Russian for his doctorate. At the time I met him he seemed to lack feeling for historical span . . . but, if true, I suspect that it began to itch him and he made up that lack either formally or by reading. Come to think of it, much of my own knowledge of history derives not from history courses but from history of astronomy, of war and military art, and of mathematics, as my formal history study stopped with Alexander and resumed with Prince Henry the Navigator. But to understand the history of those three subjects, you must branch out into general history.

Span of time-the Decline of Education

My father never went to college. He attended high school in a southern Missouri town of 3000+, then attended a private 2-year academy roughly analogous to junior college today, except that it was very small- had to be; a day school, and Missouri had no paved roads.

Here are some of the subjects he studied in backcountry 19th century schools: Latin, Greek, physics (natural philosophy), French, geometry, algebra, 1st year calculus, bookkeeping, American history, World history, chemistry, geology.

Twenty-eight years later I attended a much larger city high school. I took Latin and French but Greek was not offered; I took physics and chemistry but geology was not

offered. I took geometry and algebra but calculus was not offered. I took American history and ancient history but no comprehensive history course was offered. Anyone wishing comprehensive history could take (each a one-year 5-hrs/wk course) ancient history, medieval history, modern European history, and American history-and note that the available courses ignored all of Asia, all of South America, all of Africa except ancient Egypt, and touched Canada and Mexico solely with respect to our wars with each.

I've had to repair what I missed with a combination of travel and private study.. . and must admit that I did not tackle Chinese history in depth until this year. My training in history was so spotty that it was not until I went to the Naval Academy and saw captured battle flags that I learned that we fought Korea some eighty years earlier than the mess we are still trying to clean up.

From my father's textbook I know that the world history course he studied was not detailed (how could it be?) but at least it treated the world as round; it did not ignore three fourths of our planet.

Now, let me report what I've seen, heard, looked up, clipped out of newspapers and elsewhere, and read in books such as WHY JOHNNY CAN'T READ, BLACKBOARD JUNGLE, etc.

Colorado Springs, our home until 1965, in 1960 offered first-year Latin-but that was all. Caesar, Cicero, Virgil-Who dat?

Latin is not taught in the high schools of Santa Cruz County. From oral reports and clippings I note that it is not taught in most high schools across the country.

"Why this emphasis on Latin? It's a dead language!" Brother, as with jazz, in the words of a great artist, "If you have to ask, you ain't never goin' to find out." A person who knows only his own language does not even know his own language; epistemology necessitates knowing more than one human language. Besides that sharp edge, Latin is a giant help in all the sciences-and so is Greek, so I studied it on my own.

A friend of mine, now a dean in a state university, was a tenured professor of history-but got riffed when history was eliminated from the required subjects for a bachelor's degree. His courses (American history) are still offered but the one or two who sign up, he tutors; the overhead of a classroom cannot be justified.

A recent Wall Street Journal story described the bloodthirsty job hunting that goes on at the annual meeting of the Modern Languages Association; modern languages-even English-are being deemphasized right across the country; there are more professors in MLA than there are jobs.

I mentioned elsewhere the straight-A student on a scholarship who did not know the relations between weeks, months, and years. This is not uncommon; high school and college students in this country usually can't do simple arithmetic without using a pocket calculator. (I mean with pencil on paper; to ask one to do mental arithmetic causes jaws to drop-say 17 x 34, done mentally. How? Answer: Chuck away the 34 but remember it. (10 + 7)2 is 289, obviously. Double it:
2(300 - 11), or 578.

But my father would have given the answer at once, as his country grammar school a century ago required perfect memorizing of multiplication tables through 20 x 20 = 400 . . . so his ciphering the above would have been merely the doubling of a

number already known (289)-or 578. He might have done it again by another route to check it: (68 + 510)-but his hesitation would not have been noticeable.

Was my father a mathematician? Not at all. Am I? Hell, no! This is the simplest sort of kitchen arithmetic, the sort that high school students can no longerdo- at least in Santa Cruz.

If they don't study math and languages and history, what do they study? (Nota Bene! Any student can learn the truly tough subjects on almost any campus if he/she wishes-the professors and books and labs are there. But the student must want to.)

But if that student does not want to learn anything requiring brain sweat, most U.S. campuses will babysit him 4 years, then hand him a baccalaureate for not burning down the library. That girl in Colorado Springs who studied Latin-but no classic Latin-got a "general" bachelor's degree at the University of Colorado in 1964. I attended her graduation, asked what she had majored in. No major. What had she studied? Nothing, really, it turned out-and, sure enough, she's as ignorant today as she was in high school.

Santa Cruz has an enormous, lavish 2-year college and also a campus of the University of California, degree granting through Ph.D. level. But, since math and languages and history are not required, let's see how they fill the other classrooms.

The University of California (all campuses) is classed as a "tough school." It is paralleled by a State University system with lower entrance requirements, and this is paralleled by local junior colleges (never called "junior") that accept any warm body.

UCSC was planned as an elite school ("The Oxford of the West") but falling enrollment made it necessary to accept any applicant who can qualify for the University of California as a whole; therefore UCSC now typifies the "statewide campus." Entrance can be by examination (usually College Entrance Examination Boards) or by high school certificate. Either way, admission requires a certain spread-2 years of math, 2 of a modern language, 1 of a natural science, 1 of
American history, 3 years of English-and a level of performance that translates as B+. There are two additional requirements: English composition, and American History and Institutions. The second requirement acknowledges that some high schools do not require American history; UCSC permits an otherwise acceptable applicant to make up this deficiency (with credit) after admission.

The first additional requirement, English composition, can be met by written examination such as CEEB, or by transferring college credits considered equivalent, or, lacking either of these, by passing an examination given at UCSC at the start of each quarter.

The above looks middlin' good on the surface. College requirements from high school have been watered down somewhat (or more than somewhat) but that B+ average as a requirement looks good
if high schools are teaching what they taught two and three generations ago. The rules limit admission to the upper 8% of California high school graduates (out-ofstate applicants must meet slightly higher requirements).

8%- So 92% fall by the wayside. These 8% are the intellectual elite of young adults of the biggest, richest, and most lavishly educated state in the Union.

Those examinations for the English-composition requirement: How can anyone fail who has had 3 years of high school English and averages B+ across the board?

If he fails to qualify, he may enter but must take at once (no credit) "Subject A"-better known as "Bonehead English."

"Bonehead English" must be repeated, if necessary, until passed. To be forced to take this no-credit course does not mean that the victim splits an occasional infinitive, sometimes has a dangling modifier, or a failure in agreement or case-he can even get away with such atrocities as "-like I say-."

It means that he has reached the Groves of Academe
unable to express himself by writing in the English language.

It means that his command of his native language does not equal that of a 12-year-old country grammar school graduate of ninety years ago. It means that he verges on subliterate but that his record is such in other ways that the University will tutor him (no credit and for a fee) rather than turn him away.

But, since these students are the upper 8% and each has had not less than three years of high school English, it follows that only the exceptionally unfortunate student needs "Bonehead English." That's right, isn't it? Each one is eighteen years old, old enough to vote, old enough to contract or to marry without consulting parents, old enough to hang for murder, old enough to have children (and some do); all have had 12 years of schooling including 11 years of English, 3 of them in high school.

(Stipulated: California has special cases to whom English is not native language. But such a person who winds up in that upper 8% is usually-I'm tempted to say "always"-fully literate in English.)

So here we have the cream of California's young adults; each has learned to read and write and spell and has been taught the basics of English during eight years in grammar school, and has polished this by not less than three years of English in high school-and also has had at least two years of a second language, a drill that vastly illuminates the subject of grammar even though grasp of the second language may be imperfect.

It stands to reason that very few applicants need "Bonehead English." Yes?

No!

I have just checked. The new class at UCSC is "about 50%" in Bonehead English-and this is normal-normal right across California-and California is no worse than most of the states.

8% off the top- Half of this elite 8% must take "Bonehead English."

The prosecution rests.

This scandal must be charged to grammar and high school teachers . . . many of whom are not themselves literate (I know!)-but are not personally to blame, as we are now in the second generation of illiteracy. The blind lead the blind.

But what happens after this child (sorry-young adult citizen) enters UCSC?

I TELL YOU THREE TIMES I TELL YOU THREE TIMES I TELL YOU THREE TIMES: A student who wants an education can get one at UCSC in a number of very difficult subjects, plus a broad general education.

I ask you never to forget this while we see how one can slide through, never do any real work, never learn anything solid, and still receive a bachelor of arts degree from

the prestigious University of California. Although I offer examples from the campus I know best, I assume conclusively that this can be done throughout the state, as it is one statewide university operating under one set of rules.

Some guidelines apply to any campus: Don't pick a medical school or an engineering school. Don't pick a natural science that requires difficult mathematics. (A subject called "science" that does not require difficult mathematics usually is "science" in the sense that "Christian Science" is science-in its widest sense "science" simply means "knowledge" and anyone may use the word for any subject. . . but shun the subjects that can't be understood without mind-stretching math.)

Try to get a stupid but good-natured adviser. There are plenty around, especially in subjects in which to get a no-sweat degree; Sturgeon's Law applies to professors as well as to other categories.

For a bachelor's degree:

1) You must spend the equivalent of one academic year in acquiring "breadth"-but wait till you see the goodies!

2) You must take the equivalent of one full academic year in your major subject in upperdivision courses, plus prerequisite lower division courses. Your 4-year program you must rationalize to your adviser as making sense for your major ("Doctor, I picked that course because it is so far from my major-for perspective. I was getting too narrow." He'll beam approvingly.. or you had better look for a stupider adviser).

3) Quite a lot of time will be spent off campus but counted toward your degree. This should be fun, but it can range from hard labor at sea, to counting noses and asking snoopy questions of "ethnics" (excuse, please!), to time in Europe or Hong Kong, et al., where you are in danger of learning something new and useful even if you don't try.

4) You will be encouraged to take interdisciplinary majors and are invited (urged) to invent and justify unheard-of new lines of study. For this you need the talent of a used-car salesman as any aggregation of courses can be sold as a logical pattern if your "new" subject considers the many complex relationships between three or four or more old and orthodox fields. Careful here! If you are smart enough to put this over, you may find yourself not only earning a baccalaureate but in fact doing original work worthy of a Ph.D. (You won't get it.)

5) You must have at least one upper-division seminar. Pick one in which the staff leader likes your body odor and you like his. ("I do not like thee, Dr. Fell; the reason why I cannot tell-") But you've at least two years in which to learn which professors in your subject are simpatico, and which ones to avoid at any cost.

6) You must write a 10,000 word thesis on your chosen nonsubject and may have to defend it orally. If you can't write 10,000 words of bull on a bull subject, you've made a mistake-you may have to work for a living.

The rules above allow plenty of elbowroom; at least three out of four courses can be elective and the re
mainder elective in part, from a long menu. We are still talking solely about nonmathematical subjects. If you are after a Ph.D. in astronomy, UCSC is a wonderful place to get one . . but you will start by getting a degree in physics including the toughest of mathematics, and will study also chemistry, geology, technical photography, computer

science-and will resent any time not leading toward the ultra-interdisciplinary subject lumped under the deceptively simple word "astronomy."

Breadth-the humanities, natural science, and social science-1/3 in each, total 3/3 or one academic year, but spread as suits you over the years. Classically "the humanities" are defined as literature, philosophy, and art-but history has been added since it stopped being required in college and became "social studies" in secondary schools. "Natural science" does not necessarily mean what it says-it can be a "nonalcoholic gin"; see below. "Social science" means that grab bag of studies in which answers are matters of opinion.

Courses satisfying "breadth" requirements

Humanities

Literature and Politics-political & moral choices in literature

Philosophy of the Self

Philosophy of History in the Prose and Poetry of W. B. Yeats

Art and the Perceptual Process

The Fortunes of Faust

Science and the American Culture (satisfies both the Humanities requirement and the American History and Institutions requirement without teaching any science or any basic American History. A companion course, Science and Pressure Politics, satisfies both the Social Sciences requirement and the American History and Institutions requirement while teaching still less; it concentrates on post-World-War-TI period and concerns scientists as lobbyists and their own inter-
actions ~rows~ with Congress and the President. Highly recommended as a way to avoid learning American history or very much social "science.")

American Country Music-Whee! You don't play it, you listen.

Man and the Cosmos-philosophy, sorta. Not science.

Science Fiction (I refrain from comment.) The Visual Arts-"What, if any, are the critical and artistic foundations for judgment in the visual arts?"-exact quotation from catalog.

Mysticism-that's what it says.

(The above list is incomplete.)

Natural Science requirement

General Astronomy-no mathematics required Marine Biology-no mathematics required Sound, Music, and Tonal Properties of Musical Instruments-neither math nor music required for this one!

Seminar: Darwin's Explanation

Mathematical Ideas-f or nonmathematicians; requires only that high school math you must have to enter.

The Phenomenon of Man- "-examine the question of whether there remains any meaning to human values." (Oh, the pity of it all!)

Physical Geography: Climate

The Social "Sciences" requirement

Any course in Anthropology-many have no prereq. Introduction to Art Education-You don't have to

make art; you study how to teach it. Music and the Enlightenment-no technical knowledge of music required. This is a discussion of the effect of music on philosophical, religious, and social ideas, late 18th-early 19th centuries. That is what it says-and it counts as "social science."

The Novel of Adultery-and this, too, counts as "social science." I don't mind anyone studying this subject or teaching it-but I object to its being done on my (your, our) tax money. (P.S. The same bloke teaches science fiction. He doesn't write science fiction; I don't know what his qualifications are in this other field.)

Human Sexuality

Cultural Roots for Verbal and Visual Expression-a fancy name of still another "creative writing" class with frills-the students are taught how to draw out "other culture" pupils. So it says.

All the 30-odd "Community Studies" courses qualify as "social science," but I found myself awed by these two: Politics and Violence, which studies, among other things, "political assassination as sacrifice" and Leisure and Recreation in the Urban Community ("Bread and Circuses").

Again, listing must remain incomplete; I picked those below as intriguing:

Seminar: Evil and the Devil in the Hindu Tradition. Science and Pressure Politics-already mentioned on page 529 as the course that qualifies both as social "science" and as American History and Institutions while teaching an utter minimum about each. The blind man now has hold of the elephant's tail.

The Political Socialization of La Raza-another double header, social "science" and American History and Institutions. It covers greater time span (from 1900 rather than from 1945) but it's like comparing cheese and chalk to guess which one is narrower in scope in either category.

The name of this game is to plan a course involving minimum effort and minimum learning while "earning" a degree under the rules of the nation's largest and most prestigious state university.

To take care of "breadth" and also the American history your high school did not require I recommend Science and Pressure Politics, The Phenomenon of Man, and American Country Music. These three get you home free without learning any math, history, or language that you did not already know .. . and without sullying your mind with science.

You must pick a major.. . but it must not involve mathematics, history, or actually being able to read a second language. This rules out all natural sciences (this campus's greatest strength).

Anthropology? You would learn something in spite of yourself; you'd get interested. Art? Better not major in it without major talent. Economics can be difficult, but also and worse, you may incline toward the Chicago or the Austrian school and not realize it until your (Keynesian or Marxist) instructor has failed you with a big black mark against your name. Philosophy? Easy and lots of fun and absolutely guaranteed not to teach you anything while loosening up your mind. In more than twenty-five centuries of effort not one basic problem of philosophy has ever been solved .. . but the efforts to

solve them are most amusing. The same goes for comparative religion as a major: You won't actually learn anything you can sink your teeth into

but you'll be vastly entertained-if the Human Comedy entertains you. It does me.

Psychology, Sociology, Politics, and Community Studies involve not only risk of learning something- not much, but something-and each is likely to involve real work, tedious and lengthy.

To play this game and win, with the highest score, it's Hobson's choice: American literature. I assume that you did not have to take Bonehead English and that you can type. In a school that has no school of education (UCSC has none) majoring in English Literature is the obvious way to loaf through four years. It will be necessary to cater to the whims of professors who know no more than you do about anything that matters . . . but catering to your mentors is necessary in any subject not ruled by mathematics.

Have you noticed that professors of English and/or
American Literature are not expected to be proficient in the art they profess to teach? Medicine is taught by M.D.'s on living patients, civil engineering is taught by men who in fact have built bridges that did not fall; law is taught by lawyers; music is taught by musicians; mathematics is taught by mathematicians- and so on.

But is-for example-the American Novel taught by American novelists?

Yes. Occasionally. But so seldom that the exceptions stand out. John Barth. John Erskine fifty years ago. Several science-fiction writers almost all of whom were selling writers long before they took the King's Shilling. A corporal's guard in our whole country out of battalions of English profs.

For a Ph.D. in American/English literature a candidate is not expected to write literature; he is expected to criticize it.

Can you imagine a man being awarded an M.D. for writing a criticism of some great physician without ever himself having learned to remove an appendix or to diagnose Herpes zoster? And for that dissertation then be hired to teach therapy to medical students?

There is, of course, a reason for this nonsense. The rewards to a competent novelist are so much greater than the salaries of professors of English at even our top schools that once he/she learns this racket, teaching holds no charms.

There are exceptions-successful storytellers who like to teach so well that they keep their jobs and write only during summers, vacations, evenings, weekends, sabbaticals. I know a few-emphasis on "few." But most selling wordsmiths are lazy, contrary, and so opposed to any fixed regime that they will do anything- even meet a deadline-rather than accept a job.

Most professors of English can't write publishable novels . . . and many of them can't write nonfiction prose very well-certainly not with the style and distinction and grace-and content-of Professor of Biology Thomas H. Huxley. Or Professor of Astronomy

Sir Fred Hoyle. Or Professor of Physics John R. Pierce. Most Professors of English get published, when they do, by university presses or in professional quarterlies. But fight it out for cash against Playboy and Travis Magee? They can't and they don't!

But if you are careful not to rub their noses in this embarrassing fact and pay respectful attention to their opinions even about (ugh!) "creative writing," they will help you slide through to a painless baccalaureate.

You still have time for many electives and will need them for your required hours-units-courses; here are some fun-filled ones that will teach you almost nothing:

The Fortunes of Faust

Mysticism

The Search for a New Life Style

The American Dilemma-Are "all men equal"?

Enology-hi story, biology, and chemistry of winemaking and wine appreciation. This one will teach you something but it's too good to miss.

Western Occultism: Magic, Myth, and Heresy.

There is an entire college organized for fun and games ("aesthetic enrichment"). It offers courses for credit but you'll be able to afford noncredit activity as well in your lazyman's course-and anything can be turned into credit by some sincere selling to your adviser and/or Academic Committee. I have already listed nine of its courses but must add:

Popular Culture

-plus clubs or "guilds" for gardening, photography, filmmedia, printing, pottery, silkscreening, orchestra, jazz, etc.

Related are Theater Arts. These courses give credit, including:

Films of Fantasy and Imagination-fantasy, horror, SF, etc. (!)

Seminar on Films

Filmmaking

History and Aesthetics of Silent Cinema

History and Aesthetics of Cinema since Sound

Introduction to World Cinema

Sitting and looking at movies can surely be justified for an English major. Movies and television use writers-as little as possible, it's true. But somewhat; the linkage is there.

Enjoy yourself while it lasts. These dinosaurs are on their way to extinction.

The 2-year "warm body" campus is even more lavish than UCSC. It is a good trade school for some things-e.g., dental assistant. But it offers a smörgásbord of fun-Symbolism of the Tarot, Intermediate Contract Bridge, Folk Guitar, Quilting, Horseshoeing, Chinese Cooking, Hearst Castle Tours, Modern Jazz, Taoism, Hatha Yoga Asanas, Aikido, Polarity Therapy, Mime, Raku, Bicycling, Belly Dancing, Shiatsu Massage, Armenian Cuisine, Revelation and Prophecy, Cake Art, Life Insurance Sales Techniques, Sexuality and Spirituality, Home Bread Baking, Ecuadorian Backstrap Weaving, The Tao of Physics, and lots, lots more! One of the newest courses is "The Anthropology of Science Fiction" and I'm still trying to figure that out.

I have no objection to any of this.. . but why should this kindergarten be paid for by taxes? "Bread and Circuses."

I first started noticing the decline of education through mail from readers. I have saved mail from readers for forty years. Shortly after World War Two I noticed that letters from the youngest were not written but hand-printed. By the middle fifties deterioration in handwriting and in spelling became very noticeable. By today a letter from a youngster in grammar school or in high school is usually difficult to read and sometimes illegible-penmanship atrocious
(pencilmanship-nine out often are in soft pencil, with well-smudged pages), spelling uniqUe, grammar an arcane art.

Most youngsters have not been taught how to fold 81/2" x 11" paper for the two standard sizes of envelopes intended for that standard sheet.

Then such defects began to show up among college students. Apparently "Bonehead English" (taught everywhere today, so I hear) is not sufficient to repair the failure of grammar and high school teachers who themselves in most cases were not adequately taught.

I saw sharply this progressive deterioration because part of my mail comes from abroad, especially Canada, the United Kingdom, the Scandinavian countries, and Japan. A - letter from any part of the Commonwealth is invariably neat, legible, grammatical, correct in spelling, and polite. The same applies to letters from Scandinavian countries. (Teenagers of Copenhagen usually speak and write English better than most teenagers of Santa Cruz.) Letters from Japan are invariably neat-but the syntax is sometimes odd. I have one young correspondent in Tokyo who has been writing steadily these past four years. The handwriting in the first letter was almost stylebook perfect but I could hardly understand the phrasing; now, four years later, the handwriting looks the same but command of grammar, syntax, and rhetoric is excellent, with only an occasional odd choice in wording giving an exotic flavor.

Our public schools no longer give good value. We
remain strong in science and engineering but even students in those subjects are handicapped by failures of our primary and secondary schools and by cutback in funding of research both public and private. Our great decline in education is alone enough to destroy this country . . . but I offer no solutions because the only solutions I think would work are so drastic as to be incredible.

Span of Time-Decline in Patriotism
and in the Quality of our Armed Forces

The high school I attended (1919-24) was an early experiment in the junior and senior high school method. The last year of grammar school was joined with the freshman class as ':junior high" while the sophomores, Juniors, and seniors were senior high.

There was a company of junior ROTC in junior high and two companies in senior high. Military training gave no credit and was not compulsory; it was neither pushed nor discouraged. A boy took it or not, as suited him and his parents. Some of the subfreshman (aet. ca. 13 an.) were barely big enough to tote a Springfield rifle.

Kansas City had a regiment of Federalized National
Guard, with one authorized drill per week, 3 hours
each Wednesday evening. For this a private was paid
69~, a PFC got a dollar, and a corporal got big money- $1.18.

The required & paid weekly drill was not all, as about half of the regiment showed up on Sundays at the "Military Country Club"-acres of raw wood lot until the regiment turned it into rifle range, club house, stables, etc. No pay for Sundays. Two weeks encampment per year, with pay. For most of the regiment, this was their only vacation, two weeks then being standard.

That regiment ran about 96% authorized strength. About 1921 Congress authorized the CMTC, Citizens Military Training Corps. It proved very popular. A month of summer training in camp at an Army post, continued through 4 years, could (if a candidate's grades were satisfactory) result in certification for commission in the reserve. Civilians submitted to military discipline in CMTC but were not subject to court martial. Offenders could be sent home or turned over to civilian police, depending on the offense.. There were few offenses.

CMTC candidates got 3~ per mile to and from their homes, no other money.

In 1925 I was appointed midshipman. There were 51 qualified applicants trying for that one appointment.

240 of my class graduated; 130 fell by the wayside. One of that 130 resigned voluntarily; all the others resigned involuntarily, most of them plebe year for failure in academics (usually mathematics), the others were requested to resign over the next three years for academic, physical, or other reasons. A few resigned graduation day through having failed the final physical examination for commissioning. Three more served about one year in the Fleet, then resigned-but these three volunteered after the attack on Pearl Harbor. 28 of the 129 who left the service involuntarily managed to get back on active duty in World War Two.

So with four exceptions all of my class stayed in the Navy as long as the Navy would have them. About 25% were killed in line of duty or died later of wounds. Neither at the Academy nor in the Fleet did I ever hear a midshipman or officer talk about resigning. While it is likely that some thought about it, all discussion tacitly carried the assumption that the Navy was our life, the Fleet our home, and that we would leave only feet first or when put out to pasture as too old.

Enlisted men: When I entered the Fleet, before the Crash of '29 and about a year before unemployment became a problem, Navy recruiting offices were turning down 19 out of 20 volunteers; the Army was turning down 5 out of 6. The reenlistment rate was high; the desertion rate almost too small to count.

Span of Time-Today in the Armed Forces

I have said repeatedly that I am opposed to conscription at any time, peace or war, for moral reasons beyond argument. For the rest of this I will try to keep my personal feelings out of the discussion-as I did in
the rosy picture painted above. I reported facts, not my emotions.

I will not review details showing that the USSR is today militarily stronger than we are as the matter has been discussed endlessly in news media, in Congress, and in professional journals. The public discussion today concedes the military superiority of the USSR and centers on how much they are ahead of us, and what should be done about it. The details of this debate are of supreme importance as the most expensive thing in the world is a second-best military establishment, good but not good enough to win. At the moment the three-cornered standoff is saving us from that silly way to die . . . but I

cannot predict how long this stalemate will last as key factors are not under our control, and neither our government nor our citizens seem willing to accept guns instead of butter on the scale required to make us too strong for anyone to risk attacking us. Polls seem to show that a controlling number of voters think that we are already spending too much on our Armed Forces.

What I set forth below comes primarily from an article by Richard A. Gabriel, Associate Professor of Politics, St. Anselm's College, Manchester, New Hampshire, author of CRISIS IN COMMAND. I lack personal experience with Army conditions today but what Dr. Gabriel says about them matches what I have heard from other sources and what I have read (I belong to all three associations-Army, Navy, Air Force-plus the Naval Institute and the Retired Officers Association; I get much data secondhand but no longer see it with my own eyes, hear it with my own ears).

Readers with personal experience in Korea, Viet Nam, and in the Services anywhere since the end of the Viet Nam debacle, I urge to write and tell me what you know that I don't, especially on points in which I am seriously mistaken.

Summarized from "The Slow Dying of the Amen-
can Army," Dr. Richard A. Gabriel in Gallery magazine, June 1979, p.41 et seq.:

Concerning the All Volunteer Force (AVF): Early this year the Pentagon admitted that all services had failed to meet quotas.

30% of all Army volunteers are discharged for offenses during first enlistment. Of the 70 per 100 left, 26 do not reenlist. The desertion rates are the highest in history. . . and this fact is partly covered up by using administrative discharges (-i.e., "You're fired!") rather than courts martial and punishment-if the deserter turns up. But no effort is made to find him.

According to Dr. Gabriel, citing General George S. Blanchard and others, hard-drug use (heroin, cocaine, angel dust-not marijuana) is greater than ever, especially in Europe, with estimates from a low of 10% to a high of 64%. Marijuana is ignored-but let me add that a man stoned out of his mind on grass is not one I want on my flank in combat.

Category 3B and 4 (ranging down from dull to mentally retarded) make up 59% of Army volunteers.. . in a day when privates handle very complex and sophisticated weapons and machinery. Add to this that the mix is changing so that a typical private might be Chicano or Puerto Rican, the typical sergeant a Black, the typical officer "Anglo." And that officers are transferred with great frequency and enlisted men with considerable frequency and you have a situation in which esprit de corps cannot be developed (an outfit without esprit de corps is not an army unit; it is an armed mob-R.A.H.).

Today we have more general officers than we did in World War Two. Our ratio of officers to enlisted men is more than twice as high as that of successful armies in the past. But an officer is not with his troops long enough to be "the Old Man"-he is a "manager," not a leader of men.

Dr. Gabriel concludes: "The most basic aspect is the need to reinstate the draft."

I disagree.

My disagreement is not on moral grounds. Forget that I ever voiced opposition to slave soldiers; think of me as Old Blood-and-Guts willing to use any means whatever to win.

Reinstating the draft would not get us out of trouble, even with the changes Dr. Gabriel suggests to make the draft "fair."

As everyone knows, we were in the frying pan; shifting to AVF, instead of producing an efficient professional army, put us into the fire. Dr. Gabriel urges that we climb back into the frying pan-but with improvements: a national lottery with no deferments whatever for any reason.

I can't disagree with the even-steven rule. . . but my reason for thinking that Dr. Gabriel's solution will not work is this:

A lottery, even meticulously fair, cannot make a man willing to charge a machine-gun nest in the face of almost certain death. That sort of drive comes from emotional sources. Esprit de corps and patriotism cannot be drawn in a lottery.

Conscription works (among free men) only when it is not needed. I have seen two world wars; we used the draft in each.. . but in each case it was a means of straightening out the manpower situation; it was not needed to make men fight. Both wars were popular.

Since then we have had two non-Wars-Korea and Nam-in "peacetime" and using conscript troops.

And each non-War was a scandalous disaster.

I don't have a neat solution to offer. If the American people have lost their willingness to fight and die for their country, the defect cannot be cured by conscription. Unless this emotional condition cnanges (and I do not know how to change it), we are whipped no matter what weapons we build. It could be overnight, or it could continue to be a long slow slide downhill over many years-ten, twenty, thirty. But the outcome is the same. Unless something renews the spirit this

country once had, we are in the terminal stages of decay; history is ending for us.

Our foreign masters might graciously let us keep our flag, even our national name. But "the Land of the Free and the Home of the Brave" will be dead.

Time Span-Inflation

The Winter of '23-'24 I paid a street vendor 5~ for a five billion mark German note and I paid too much; 5,000,000,000 DM was worth a trifle over 1 ç~. A bit later it was worth nothing.

In 1955 at the foot of the Acropolis I bought a small marble replica of the Venus of Melos for 10,000 drachma. I wasn't cheated; that was 35~ USA.

There are the British pound, the Turkish lira, the Italian lira, the Mexican peso, and several others; all mean one pound of silver. Look up "exchange" and "commodities" in your newspaper; grab your pocket calculator and see how much each is inflated.

When I was a child of four or five my brothers and I used great stacks of hundred-dollar bills as play money. Confederate- After two centuries, "Not worth a continental," still means "worthless." Memory is long for the damage done by inflation.

Before paper "money" was invented, inflation was accomplished by adding base metal to silver and/or gold while retaining the name of the coin. By this means the Roman denarius was devalued to zero during the first three centuries A.D. But inflation did not start with Caesar Augustus. In the early days of the Republic before the Punic Wars the cash unit was the libra (libra = lb. - pound = 273 grams, or about 60% of our

pound avoirdupois, 454 grams). That's too large a unit for daily retail use; it was divided into 12 unciae (ounces).

A "lb." of silver was called an "as." 1/12 of that, struck as coinage, made efficient currency. Now comes war and inflation-

Eventually the "as"-once a pound of silver-was so debased that it amounted to a penny, more or less. Augustus, by decree, went back on a silver/gold standard and created the denanius, 3.87 grams of fine silver. He made 25 denarii equal in value to one aureus (7.74 grams of gold), or a ratio of 12.5 to one. ("Free and unlimited coinage of silver at a ratio of sixteen to one!" The Great Commoner and the august Emperor had similar notions about hard currency.)

One Augustan denarius equalled in gold at today's London fix ($385/troy ounce) a nominal $3.83, or about 3/~~ of a gram of gold. This tells us nothing about purchasing power; it simply says that the Augustan denanius was a solid silver coin almost the size and weight of the solid silver quarter we used to have before the government foisted on us those sandwich things. How much olive oil or meal that would buy in Rome around 1 A.D. can be estimated from surviving records-but all the gold in Rome could not buy an aspirin tablet or a paper of matches. No way to compare. And hard money was not supplemented by printed money, bank checks, and transactions that take place entirely inside computers-but I can't go into how those phenomena affect purchasing power without writing a book twice as long as this one on fiscal theory (which I am quite willing to do but nobody would buy it).

What Augustus did was to stabilize Rome's money by defining it in terms of two commodities, each intrinsically valuable, each stable in supply, each almost indestructible, and he defined also the legal ratio between the two coinages-an effort to circumvent Gresham's Law, unknown then but Augustus appears to have had a gut feeling for it. (Not Bill Gresham-the other one. Thomas Gresham.) But a bimetallic standard has its problems; the free economy ratio tends to drift away from the legal ratio, and Gresham's Law begins to work. But this happens very slowly with hard money and is not the disaster that printing-press inflation is, or the debasing of hard~ money.

Caesar Augustus died in 14 A.D.

His corpse was hardly cold before the vultures got to work. Tiberius, Caligula, Claudius, Nero-even Claudius did nothing to stop the robbery. Titus attempted an Augustan return to honest money in 80 A.D. but he died in September the following year; his successor was a disaster even as Caesars go.

"Put not your trust in Princes." Debasement of the currency continued under every Caesar for the next two centuries. Diocletian (reign: 294-305) inherited a worthless denarius; he returned Rome to the bimetallic standard at a level barely below that of Augustus. But he increased enormously the bureaucracy, instituted the harshest of taxation to pay for his "reforms," and decreed price-fixing-which worked just as it always does.

On his retirement (not assassination~!]) debasement was resumed while taxes stayed high, and Rome was on the skids. The decline and fall of the denarius and of Rome paralleled each other.

I'm tempted to discuss France's incredible inflation and collapse thereof during the French Revolution (and three more French inflations since then), and the inflations of

several other countries in other centuries. But they are monotonously alike and differ from debasement primarily in the fact that the invention of paper "money" permits the corruption of legal tender to get utterly out of hand before the people notice it. In Germany in the early twenties people used to take wheelbarrows to the grocery store-not to fetch back groceries but to carry money to the grocer. But the early stages of disastrous inflation feel like "prosperity." Wages and profits go up, old debts are easier to pay off, business booms.

It is not until later that most people notice that prices and taxes have gone up faster than wages and
profits, and that it is getting harder and harder to make ends meet.

There is a strong emotional feeling that "a dollar is a dollar." (Hitler called it, "Mark is Mark!") But you can reexamine it in terms of prices on bread, or how many minutes to earn a dollar. And don't forget taxes! If you aren't working at least the first three months of each year to pay taxes before you can keep one dollar for yourself, then you are on welfare, one way or another. You may not think you are taxed that much-paycheck deductions and hidden taxes are extracted under anesthesia. Try dividing the Federal Budget by the number of wage earners not on the public payroll, then take a stab at where you fit in. Don't forget the same process for state, county, and city. There are Makers, Takers, and Fakers, no fourth category, and today the Takers and the Fakers outnumber (and outvote) the Makers.

Today it takes more dollars each year to service the National Debt than the total budget for the last and most expensive year of the Korean War. I am not going to state here the amount of our National Debt. If you have not heard it recently, you wouldn't believe me. If you don't know, telephone your Congressman and ask; he has a local office near you. If the telephone information service can't (won't) tell you, the city room of any newspaper does know his number.

Our National Debt will never be paid. We are beyond the point of no return. Inflation will continue and get worse . . . and the elderly on fixed incomes and the young adults trying to start families will continue to bear the brunt.

Every congressman, every senator, knows precisely what causes inflation. . . but can't (won't) support the drastic reforms to stop it because it could (and probably would) cost him his job. I have no solution and only once piece of advice:

Buy a wheelbarrow.

The Age of Unreason

Having been reared in the most bigoted of Bible Belt fundamentalism in which every word of the King James version of the Bible is the literal word of God- then having broken loose at thirteen when I first laid hands on THE ORIGIN OF SPECIES and THE DESCENT OF MAN-I should have been unsurprised by the anti-intellectual and anti-science ground swell in this country.

I knew that our American temperament, practical as sharp tools on one side, was never more than three quarters of an inch from mindless hysteria on the other side. I knew this-my first long story was IF THIS GOES ON-, a yarn based on the assumption that my compatriots were capable of throwing away their dearly-bought liberties to submit to a crude and ridiculous religious dictatorship.

(In forty years of letters about that story no one has ever criticized this assumption; I infer that I am not alone in believing it.)

I had read much about the Ku Klux Klan during the Tragic Era, talked with many who had experienced it, then experienced its nationwide recrudescence in the early 1920's. I had seen damfoolishness from dance marathons to flagpole sitters, and had made considerable study of crowd behavior and mass delusions. I had noted, rather casually, the initial slow growth of anti-science-&-intellect-ism.

Yet the durned thing shocked me. Let me list some signs:

a) I CHING;

b) Back-to-nature cults;

c) The collapse of basic education;

d) The current respectability of natal horological astrology among "intelligentsia"- e.g. professors, N.Y. lit'rary people, etc.;

e) "Experts" on nuclear power and nuclear weapons who know nothing whatever of mathematical physics and are smug in admitting it;

f) "Experts" on the ecology of northern Alaska who have never been there and are not mathematically equipped to analyse a problem in ecology;

g) People who watch television several hours a day and derive all their opinions therefrom-and expound them;

h) People who watch television several hours a day;

return of creationism - "Equal time for Yahj) The return of witchcraft.

The mindless yahoos, people who think linearly like a savage instead of inductively or deductively, and people who used to be respectful to learned opinion or at least kept quiet, now are aggressively on the attack. Facts and logic don't count; their intuition is the source of "truth."

If any item on the above list strikes you as rational, I won't debate it with you; you are part of the problem.

But I will illustrate what I mean in categories where I think I might be misunderstood.

a) I CHING- easier than "reading the augurs" but with nothing else to recommend it. Chinese fortune cookies are just as as accurate-and you get to eat the cookie. Nevertheless this bit of oriental nonsense is treated with solemn seriousness by many "educated" people. It is popular enough to make profitable the sale of books, equipment, magazine articles, and personal instruction. Paralleling I CHING is the widespread use of Tarot cards. Fortunetelling by cards used to be a playful parlor game, a mating rite-a nubile girl limited by the vocabulary and public manners of the Mauve Decade could convey to a rutty young male almost any message by how she chose to "read his fortune"- with no impropriety. But neither he nor she took the cards seriously.

Tarot cards formerly were used only by Gypsy or fake-Gypsy fortunetellers; they were not an article of commerce, were not easy to find. Today they are as easy to buy as liquor during prohibition, and also books on their "interpretation." Reading the Tarot is taken with deep seriousness by a dismaying number of people-having the Hanging Man turn up can cause great anguish.

b) Back-to-nature cults: I do not mean nudist resorts or "liberated" beaches. The growing realization that human bodies are not obscene is a sane, healthy counter trend in our crazy culture. By back-to-nature cults I mean people who band together to "return to the land" to grow their own food without pesticides, without artificial fertilizers, without power machinery, self-reliant in all ways . . . but with no comprehension that a spading fork implies coal mines, iron ore, blast furnaces, steel mills, factories, etc., that any building more complex than a log cabin or a sod house implies a building-materials industry, etc.

If all of us tried to go back-to-nature, most of us would starve rather quickly. These back-to-nature freaks can't do arithmetic.

c) The collapse of basic education-no need to repeat.

d) Natal horological astrology-Baseline: fifty-odd years ago astrology was commonly regarded as a ridiculous former superstition, one all but a tiny minority had outgrown. It is now the orthodoxy of many, possibly a majority. This pathological change parallels the decay of public education.

Stipulated: Ancient astrologers were scientists in being able to predict certain aspects of descriptive astronomy such as eclipses, positions of the sun, moon, and naked-eye planets, etc. Whether or not they believed the fortunetelling they supplied to their kings, patrons, or clients is irrelevant. The test of a science is its ability to predict; in the cited phenomena the Chaldean priests (for example) performed remarkable feats of prediction with handcrafted naked-eye instruments.

It has long been known that Sol is the heat engine that controls our weather. Recently, with the discovery of solar wind, the Van Allen belts, et al., we have become aware of previously unsuspected variables affecting us and our weather, and successful predictions are being made empirically-no satisfactory theory.

"What sign were you born under?"-I don't recall having heard that question until sometime after World War Two. Today it is almost impossible to attend a social gathering (including parties made up almost solely of university staff and spouses) without being asked that question or hearing it asked of someone else.

Today natal horological astrology is so widely accepted that those who believe in it take it for granted that anyone they meet believes in it, too-if you don't, you're some sort of a nut. I don't know what percentage of the population believe in natal horological astrology (sorry about that clumsy expression but I wish to limit this precisely to the notion that the exact time, date, latitude, and longitude of your birth and the pattern of the Sun, Moon, and planets with respect to the Zodiac at that exact time all constitute a factor affecting your life comparable in importance to your genetic inheritance and your rearing and education)-I don't know the percentage of True Believers but it is high enough that newspaper editors will omit any feature or secondary news rather than leave out the daily horoscope.

Or possibly more important than heredity and environment in the minds of True Believers since it is seriously alleged that this natal heavenly pattern affects every day of your life-good days for new business ventures-a bad day to start a trip-and so forth, endlessly.

The test of a science is its capacity to make correct predictions. Possibly the most respected astrologer in America is a lady who not only has her daily column in most of the largest newspapers but also annually publishes predictions for the coming year.

For ten years I clipped her annual predictions, filed them. She is highly recommended and I think she is sincere; I intended to give her every possible benefit of doubt.

I hold in my hand her predictions for 1974 dated Sunday January 13, 1974:

Here are some highlights: " .. . Nixon . . . will ride out the Watergate storm . . . will survive both the impeachment ordeal and the pressures to resign . . . will go down in history as a great president . . . will fix the responsibility for Pearl Harbor" (vindicating Kimmel and Short).. . "in... 1978 . . . the cure for cancer will be acknowledged by the medical world.. . end the long search." (1974) "The dollar will be enormously strengthened as the balance of payments reflects the self-sufficiency in oil production." "The trouble in Ireland will continue to be a tragic situation until 1978." (Italics added-R.A.H.) "Willy Brandt" (will be reelected) "and be in office for quite some time to come. He will go on to fantastic recognition about the middle of 1978." (On 6 May 1974 Brandt resigned during a spy scandal.) She makes many other predictions either too far in the future to check or too vaguely worded. I have omitted her many predictions about Gerald Ford because they all depend on his serving out the term as vice president.

You can check the above in the files of most large newspapers.

e) & 1)-no comment needed.

g) & h) need no comment except to note that they are overlapping but not identical categories-and I should add "People who allow their children to watch television several hours a day." (Television, like the automobile, is a development widely predicted... but its major consequences never predicted.)

i) The return of creationism-If it suits you to believe that Yahweh created the universe in the fashion related in Genesis, I won't argue it. But I don't have to respect your belief and I do not think that legislation requiring that the Biblical version be included in pub-
lic school textbooks is either constitutional or fair. How about Ormuzd? Ouranos? Odin? There is an unnumbered throng of religions, each with its creation myth-all different. Shall one of them be taught as having the status of a scientific hypothesis merely because the members of the religion subscribing to it can drum up a majority at the polis, or organize a pressure group at a state capital? This is tyranny by the mob inflicted on minorities in defiance of the Bill of Rights. Revelation has no place in a science textbook; it belongs under religious studies. Cosmogony is the most difficult and least satisfactory branch of astronomy; cosmologists would be the first to agree. But, damn it; they're trying!-on the evidence as it becomes available, by logical methodology, and their hypotheses are constantly subjected to pitiless criticism by their informed equals.

They should not have to surrender time on their platform, space in their textbooks, to purveyors of ancient myths supported only by a claim of "divine revelation."

If almost everyone believed in Yahweh and Genesis, and less than one in a million U.S. citizens believe in Brahma the Creator, it would not change the constitutional aspect. Neither belongs in a science textbook in a tax-supported school. But if Yahweh is there, Brahma should be. And how about that Eskimo Creator with the unusually unsavory methods? We have a large number of Eskimo citizens.

j) The return of witchcraft-It used to be assumed that Southern California had almost a monopoly on cults. No longer. (Cult vs. religion-I am indebted to

L. Sprague de Camp for this definition of the difference. A "religion" is a faith one is born into; a "cult" is a faith an adult joins voluntarily. "Cult" is often used as a slur by a member of an older faith to disparage a newer faith. But this quickly leads to contradictions. In the 1st century A.D. the Christians were an upstart cult both to the Sanhedrin and to the Roman priests.
"Cult" is also used as a slur on a faith with "weird ideas" and "weird practices." But this can cause you to bite your tail even more quickly than the other. "Weird" by whose standards?

(Mr. de Camp's distinction implies something about a mature and presumably sane adult becoming a proselyte in a major and long-established faith, such as Islam or Shintoism or the Church of England . . . but the important thing it implies is that a person born into, let us say, the Presbyterian Church is not being odd or unreasonable if he remains in it all his life despite having lost all faith; he's merely being pragmatic. His wife and kids are there; he feels that church is a good influence on the kids, many of his friends are there. It's a comfortable habit, one carrying with it a degree of prestige in the community.

(But if he changes into a saffron robe and shaves his pate, then goes dancing down the street, shouting, "Hare Krishna!" he won't keep his Chevrolet dealership very long. Theology has nothing to do with it.)

One of the symptoms of this Age of Unreason, antiscience and anti-intellect, in the United States is the very prominent increase in new cults. We've never been without them. 19th Century New England used to breed them like flies. Then it was Southern California's turn. Now they seem to spring up anywhere and also are readily imported from abroad. Zen Buddhism has been here so long that it is usually treated with respect . . . but still so short a time (1950) that few American adults not of Japanese ancestry can claim to have been born into it. Ancient in Japan, it is still a cult here-e.g., Alan Watts (1915 - 1973), who moved from Roman Catholic priest to Episcopal priest to Zen priest. I doubt that there is any count on American Zen Buddhists but it is significant that both "satori" and "koan" were assimilated words in all four standard U.S. dictionaries only 16 years after Zen Buddhism penetrated the non-Japanese population.

And there are the Moonies and the Church of Scien
tology and that strange group that went to South America and committed suicide en masse and the followers of that fat boy from India and-look around you. Check your telephone book. I express no opinion on the tenets of any of these; I simply note that, since World War Two, Americans have been leaving their "orthodox" churches in droves and joining churches new in this country.

Witchcraft is not new and never quite died out. But it is effectively new to most of its adherents here today because of the enormous increase in numbers of witches. ("Warlock" is insulting, "Wizard" barely acceptable and considered gauche, "Witch" is the correct term both male and female; The religion is usually called either the Old Religion or the Craft rather than witchcraft.)

The Craft is by its nature underground; witches cannot forget the hangings in Salem, the burnings in Germany, the fact that the injunction, "Thou shalt not suffer a witch to live" (Exodus XXII, 18) has usually been carried out whenever the Old Religion surfaced. Even during this resurgence only four covens have come to my attention and, not being a witch myself, I have never attended an esbat (easier to enter a tyled lodge!).

The Craft is not Devil worship and it is not Black Mass but both of the latter have enjoyed some increase in recent years.

If witchcraft has not come to your attention, search any large book store; note how very many new titles concern witchcraft. Most of these books are phony, not written by witches, mere exploitation books-but their very existence shows the change. Continue to show interest and a witch just might halfway reveal himself by saying, "Don't bother with that one. Try this one." Treat him with warm politeness and you may learn much more.

To my great surprise when I learned of it, there are over a dozen (how much over a dozen I have no way to guess) periodicals in this country devoted solely to the Old Religion.

Time Span-The Cancerous Explosion of Government

Will Rogers told us that we were lucky in that we didn't get as much government as we pay for. He was (and is) emphatically right. . . but he died 15 August 1935. The Federal government spent $6,400,000,000 in the last 12 months of his tragically short life. The year he was born (1879) the Federal government spent $274,000,000-an expensive year, as we resumed paying specie for the Greenback Inflation, $346,700,000 of fiat money.

What would Will Rogers think of a budget of $300 billion and up?

(Figures quojed from THE STATISTICAL HISTORY OF THE UNITED STATES, Prepa red by the U.S. Aureau of the Census)

Census Year	Population	Fed. Employees State & Local JPub.E~p.	Fed. Receipts Fed. Expenditure Surplus/Deficit	Fed Public Debt
1910	91972,266	388708 693,617,000 (-/018,105,000	0675,51 2000	01,146940,000
1920	/05,710,620	655,265 6,357,677,000 $291,221,000	06,648,898,000	024,299,321,000
1930	/22,755,046	601319 2,622,000 3.223,3/9	$4,057,884,000 3,320,211,000 0737,673,000	016,185,3/0,000
/940	131,669,275	1,042,420 3,206,000 4,248,420	06,900,000,000 9,600,000,000 (-/02,700,000,000	050,700,000,000
1950	150,697,361	1,960,708 4,098,000 6,058,708	040,900,000,000 43,100,000,000 (-)$2,200,000,000	0256,900,000,000
1960	178,464,236	2,398,704 6,083,000 8,481.704	$92,500,000,000 92,200,000,000 0300,000,000	$290,900,000,000
/970	203,235,298	2,981,574	$193,700,000,000	$382,600,000,000

9,830,000 196.600,000,000
12.811,574 (-/02,900,000,000
(/980) (222.000,000) (3,600,000) ($300,000,000,000) ($525,000,000,000)
(14.500,000) ($310,000,000,000)
(18,100,000) (-)($/0,000 000,000)

(1980 figures are extrapolations = wild guesses) (Too timid?) Much too timid!-as you knew when you read them, as I knew when I prepared them. I plotted all of the above figures on graph paper, faired the curves, suppressed what I knew by memory (even refrained from consulting World Almanacs to bridge the 9 years since the close of compilation of THE STATISTICAL HISTORY) and extrapolated to 1980 by the curves-not tangent, but on the indicated curve.

By the best figures I can get from Washington today (20 Nov 1979) the budget is $547,600,000,000; the expected deficit is $29,800,000,000; and our current Federal Public Debt is estimated at $886,480,000,000.(!!!)

The end of the Federal fiscal year, September 30, is still over ten months away. In ten months a lot of things can happen. Unexpected events always cause unexpected expense.. . but with great good luck the deficit will not increase much and the National Public Debt will stay under $900,000,000,000.

In case of war, all bets are off.

What is happening is what always happens in fiatcurrency inflation: After a certain point, unpredictable as to date because of uncountable human variables, it becomes uncontrollable and the currency becomes worthless. Dictatorship usually follows. From there on anything can happen-all bad.

The Greenback Inflation did not result in collapse of the dollar and of constitutional government because gold backing was not disavowed, simply postponed for a relatively short time. The Greenback Party wanted to go on printing paper money, never resume specie payment-but eventually we toughed it out and paid hard money for the Greenbacks that had financed the Union side of the war. From 1862 to 1879 gold and silver were not used internally. Our unfavorable balance of trade for 1861-65, which had to be met in gold, was $296,000,000. Hard times and high taxes-but we made it.

The French Revolution inflation was unsecured. Between April 1790 and February 1796, 40 billion livres or francs were issued. New paper money (Mandats) replaced them that year; the following year both sorts were declared no longer legal tender (waste paper!)- and 2 years later Napoleon took over "to save the Republic."(!)

We could still keep from going utterly bankrupt by going back on some hard standard (gold, silver, uraniurn, mercury, bushels of wheat-something). But it would not be easy, it would not be popular; it would mean hard times for everyone while we recovered from an almighty hangover. Do you think a Congress and a President can be elected on any such platform?

One chink in the armor of any democracy is that, when the Plebs discover that they can vote themselves Bread & Circuses, they usually do . . . right up to the day there is neither bread nor circuses. At that point they often start lynching the senators, congressmen, bankers, tax collectors, Jews, grocers, foreigners, any minority-take your choice. For they know that they didn't do it. The citizen is sovereign until it comes to accepting blame for his sovereign acts-then he demands a scapegoat.

I used official figures without comment to show

where we have been the past 70 years. . . and how we got into the mess we are in. But, while I think our government is more nearly honest than some others (see INSIDE INTOURIST Afterword, page 439), there is a lot of hanky-panky in those official figures. Example:

Social Security taxes go into the general fund and are spent. If Social Security were in fact insurance (the basis on which the gimmick was sold to us by FDR's "New Deal"), the receipts would be segregated and invested and not shown as income . . . OR a competent insurance actuary with staff would calculate the commitment and it would show in the National Public Debt.

(The fact that a debt is amortized over the years

doesn't stop it from being a debt. It was an amortized mortgage that got me into this racket. The prospect of years and years of future monthly payments spoiled my sleep.)

The only way the Government can go on paying Social "Security" to my generation is by taxing you young people more and more heavily. . . and each year there are more and more old people and fewer and fewer young people. It won't help to run the printing presses faster; that causes food to rise in price, rents to go up, etc.-and people over 65 start putting pressure on Congress .. . and there's an election coming up. (There's always an election coming up.)

One thjng I learned as a wardheeler was that (with scarce exceptions) people in my age group want one of two things: 1) They want to keep on clipping those coupons and collecting those rents and they don't give a damn what it does to the country, or 2) they want that raise in Social Security (Townsend Plan) ("Ham & Eggs") (you name one) and they don't give a damn what it does to the country.

(I don't claim to be altruistic. Just this pragmatic difference: I am sharply aware that, if the United States goes down the chute, I go down with it.)

I use the term "Federal Public Debt" because what is usually termed the "Public Debt" is by no means our total public debt. There are also state, county, city, and special-district debts. It is difficult to get accurate figures on these public debts but the total appears to be larger than the Federal Public Debt. I can't make even a wild guess at the Social Security commitment

but our total public promises-to-pay have to exceed two trillion dollars. How much is a trillion? Well, it means that a baby born today owes at least $4,347.83 to the Federal Government alone before his eyes open. (No wonder he yells). It means that the Zero Population Growth family (who was going to save us all-remember?) of father, mother, and 2.1 children

owes $17,826 in addition to private debts (mortgage, automobile, college for 2.1 children).

Of course papa won't pay it off; that debt will grow larger. But it will cost him $2000 a year (and rising) just to "service" his pro-rata; any taxes for which he getsanything at all-even more laws-is on top of that.

A trillion seconds is 31,688 years, 9 months, 5 days, 8 hours, 6 minutes, and 42 seconds-long enough for the precession of the equinoxes to make Vega the Pole Star, swing back again to Polaris, and go on past to Alpha Cephei. Or counting the other way it would take us to 29,708 B.C.. . . or more than 25 thousand years before Creation by Bishop Usher's chronology for creationism.

I don't understand a trillion dollars any better than I do a trillion seconds. I simply know that we had better stop spending money we don't have if we want to avoid that Man on Horseback.

But I don't think we will stop "deficit financing," the euphemism that sounds so much better than "kiting checks."

You may have noticed that 1970 figure for public employees (not my extrapolation for 1980, but the official 1970 figures straight from the United States Bureau of the Census).

That figure does not include the Armed Forces. It does not include some special categories. It is easier to learn the number of slaves imported in 1769 (6,736) than it is to find out exactly how many people are on public payrolls in this country. And it is not simply difficult but impossible to determine how many people receive Federal checks for which they perform no services. (Or food stamps. Are food stamps money?) But one thing is certain: the number of people eligible to vote who do receive money from some unit of government (aid to dependent children, Supreme Court justices, not growing wheat, removing garbage, governors of states, whoever) exceeds the number eligible to vote
but receiving no pay or subsidy of any sort from any unit of government.

Have you read the Federal Register lately? Have you ever read the Federal Register? Under powers delegated by Congress certain appointed officials can publish a new regulation in the Federal Register and, if Congress does not stop it, after a prescribed waiting time, that regulation has the force of law-it is law, to you and to me, although a lawyer sees nuances. I have vastly oversimplified this description, but my only purpose is to point out that "administrative law" reaches into every corner of our lives, and is the major factor in the enormous and strangling invasion of the Federal Government into our private affairs.

I can't see anything in the Constitution that permits the Congress to delegate its power to pass laws.. . but the Supreme Court says it's okay and that makes my opinion worthless.

I'm stopping. There are endless other gloomy things to discuss-the oil shortage, the power shortage (not the same thing), pollution, population pressure, a projected change in climate that can and probably will turn the problems of population and food into sudden and extreme crisis, crime in the streets and bankrupt cities, our incredible plunge from the most respected nation on Earth to the most despised (but we are nonetheless expected to pick up the tab). Bill Gresham was right but he told only half of it: you not only don't get rich peddling gloom; it isn't any fun.
So now come with me- "OVER THE RAINBOW-"

The new President had not been in office ten days before it became clear to his own party as well as to
the "loyal opposition" that he was eyen more of a disaster than the defeated candidate had predicted. Nevertheless the country was shocked when he served even fewer days than the ninth President-killed in a crash, his private plane, himself at the controls; dying with

him his three top aides: White House chief of staff, press secretary, appointments secretary.

No U.S. or Canadian news medium said a word about alcohol or incidents in the dead President's past; they treated it as a tragic accident. Papers and TV reporters elsewhere were not as reticent.

The Speaker of the new House saw the ex-Vice President first (even before the oath of office) as the Speaker's seniority in line of succession enabled him to do. He came right to the point. "I am ready to take this load off your shoulders. We both know that you were picked simply to support the ticket; no one ever expected to load you down with this. Here's how we'll do it: You resign at once, then we'll meet the press together-after I'm sworn in. I'll do most of the talking. I promise you, it won't be a strain on you."

"I'm sure that it won't be. You're excused."

"Huh!"

"You may leave. In fact I am telling you to leave. I thought you had come to stand beside me as I take the oath.. . but you have something entirely different in mind. You would not enjoy staying; I would not enjoy having you stay."

"You'll regret this! You're making a mistake!"

"If a mistake was made, it was made at the Convention. By you and five others, I believe; I was not present. Yes, I may regret it but this is what I undertook to do when I accepted the nomination for the Vice-Presidency. Now get out. Pronto!"

The new President sent for the Director of the Budget forty minutes after the swearing in. "Explain this to me."

The Director hemmed and hawed and tried to say that the budget was too technical for anyone not in public life before-

-and was answered, "I'm accepting your resignation. Send in your deputy."

It was almoSt a week before this call was made: "Admiral? This is the President. If I come to your home, do you feel well enough to see me?"

There was a tussle of wills that the Admiral won only through pointing out that it was never proper to subject the President of the United States to unnecessary risk of assassination. . . and that with his new car, fitted for his wheelchair, he still went to the Pentagon twice a week. "I'm old, I admit; I was born in 1900. But I'm not dead and I'm quite able to report to my Commander in Chief. And we both know that threats have been made."

The President won the next argument. On b,eing wheeled in the Admiral started to get out of his chair. "Do please sit down!"

The old man continued to try to rise, leaning on the arm of his nurse. The President said quickly, "That was expressed as a request but was an order. Sit down."

The Admiral promptly sat back down, caught his breath and said formally, "Ma'am, I report-with great pleasure!-to the President of the United States."

"Thank you for coming, sir. In view of our respective ages . . . and your health, I felt that it was a time to dispense with protocol. But you are right; there are indeed a flood of threats, many more than get into the news. I don't intend to be a target.. - at least until we have a new Vice President sworn in."

"Never be a target, Madam. You would be mourned by everyone, both parties. Uh, if I may say so, you are even more beautiful in person than you are on the screen."

"Not mourned by everyone, I'm certain, or I would not nave to be cautious about assassination. As for that other, I'm not beautiful and you know it. I know what I have. I project. But it's not physical beauty. It's something that a pro-a professionally competent actress-does with her whole being. Her voice, her expression, her hands, her body. A gestalt, with regular features the least important factor. Or not present, as with me."

The President smiled, got up and went around the big desk, leaned over the Admiral, kissed his forehead. "But you are an old dear to have said it."

He cleared his throat, noisily. "Ma'am, what is your opinion in the matter against that of millions of men?"

"We've dropped that subject. Now to work! Admiral, why is it that there has been so much difficulty with nuclear power plants ashore but never any trouble with your nuclear submarines?"

The President slapped her desk, glared at the leader of the delegation. "Stop that! Han'kerchief head, you've come to the wrong church. In this office there are no Blacks-or Blues, Whites, Greens, or Yellows- just Americans. Besides that, you claim to be a Black representing Blacks. Hmmph! That's a phony claim if I ever-"

"I resent that, Mrs. Ni-"

"Pipe down! 'Madam President,' if you please. And one does not interrupt the President. I said your claim was phony. It is. I'm at least three shades darker than you are.. . yet I'm smooth brown, not black." She looked around. "I don't see a real sooty black in your whole delegation. Mmm, I see just one darker than I am. Mr. Green, isn't it? That is your name?"

"Yes, Madam President. From Brooklyn."

"Any white blood, Mr. Green? Perhaps I should say 'Any Caucasian ancestry?'"

"Possibly. But none that I know of, Ma'am."

"We're all in that boat - . . including all whites. A person who claims to be absolutely certain of his ancestry more than three generations back is accepting the short end of a bet. But since you are from Brooklyn, you can help me pass a word. An important word, one that I'll be emphasizing on the networks tonight but I'll need help from a lot of people to let all the people know that I mean it. A Black who gets elected from Brooklyn has lots of Jewish friends, people who trust him.

"That's right, Madam President."

"Listen to my talk tonight, then pass it on in your own words. This nation has split itself into at least a hundred splinter groups, pressure groups, each trying for a bigger bite of the pie. That's got to stop!-before it kills us. No more Black Americans. No more Japanese Americans. Israel is not our country and neither is Ireland. A group calling itself La Raza had better mean the human race-the whole human race-or they'll get the same treatment from me as the Ku Klux Klan. Amerindians looking for special favors will have just two choices: Either come out and be Americans and accept the responsibilities of citizenship . . . or go back to the reservation and shut up. Some of their ancestors got a rough deal. But so did yours and so did mine. There are no Anglos left alive who were at Wounded Knee or Little Big Horn, so it's time to shut up about it.

"But race and skin color and national ancestry isn't all that I mean. I intend to refuse to see any splinter group claiming to deserve special treatment not accorded other

citizens and I will veto any legislation perverted to that end. Wheat farmers. Bankrupt corporations. Bankrupt cities. Labor leaders claiming to represent 'the workers' . . . when most of the people they claim to represent repudiate any such leadership.
Business leaders just as phony. Anyone who wants the deck stacked in his favor because, somehow, he's 'special.'"

The President took a deep breath, went on: "Any such group gets thrown out. But two groups will get
thrown out so hard they'll bounce! I'm a woman and I'm Negro. We've wiped the Jim-Crow laws off the books; I'll veto any Crow-Jim bill that reaches this office. Discrimination? Certainly there is still discrimination-but you can't kill prejudice by passing a law. We'll make it by how we behave and what we produce-not by trick laws.

"I feel even more strongly about women. We women are a majority, by so many millions that in an election it would be called a landslide. And will be a landslide, on anything, any time women really want it to be. So women don't need favors; they just need to make up their minds what they want-then take it." The President stood up again. "That's all. I'm going to devote this term to those 'unalienable rights'-for everybody. No splinter groups. Go tell people so. Now git.. . and don't come back! Not as a splinter group. Come back as Americans."

They moved toward the door. Their erstwhile leader muttered something. The President demanded, "Mr. Chairman, what did you say?"

"I said," he answered loudly, "you aren't going to have a second term."

She laughed at him. "I thought that's what I heard. Burr head, I'm not worrying about being reelected; I worry only about how much I can do in four years."

(Editorial in the Springfield Eagle)

LIFE INSURANCE?

The President's surprise nomination of the House Minority Leader for the vacant vice-presidency has produced some snide theories, one of the nastiest
being the idea that she fears a plot on her life by the wheeler-dealers who put the late President into office, so she is spiking their guns (literally!) by rigging things to turn the presidency over to the opposition party should anything happen to her....

prefer to take her at her word, that her objective is to get the country unified again, and that a woman and a man, a Republican and a Democrat, a White and a Black, could be the team to do it.

The Speaker of the House has still not commented, but his floor leader and the nominated minority leader appeared with the President when she announced her choice. The Senate President Pro Tempore said, "I see no reason why confirmation should not go through quickly. I've known Don for thirty years; I trust that I am not so narrow-minded that I can't recognize presidential caliber in a man of another party.

customary to be of the same party, there is a custom just as long standing (and more important) that a President have a Vice President he (she) trusts to carry out his (her) policies.

Let's back them to the limit! Let's all be Americans again!

"Thanks for coming."

"Madam President, any time you send a car for me, then scoot me across the country in a hypersonic military jet, thanks should be the other way. My first experience above the speed of sound-and my first time in the Oval Office. I never expected to be in it."

She chuckled. "Nor did I. Especially on this side of this desk. Let's get to work." She held up a book. "Recognize this?"

"Eh?" He looked startled. "Yes, Ma'am, I do. I should."

"You should, yes." She opened to a marked page, read aloud: "'-I have learned this about engineers. When something must be done, engineers can find a way that is economically feasible.' Is that true?"

"I think so, Ma'am."

"You're an engineer."

"I am an obsolete engineer, Ma'am."

"I don't expect you to do the job yourself. You know what I did about fusion power plants."

"You sent for the one man with a perfect record. I've seen the power ship moored off Point Sur. Brilliant. Solved an engineering and a public relations problem simultaneously."

"Not quite what I mean. I consulted the Admiral, yes. But the job was done by his first deputy, the officer he has groomed to replace him. And by some other Navy people. Now we're working on ways to make the key fission-power people-safety control especially- all former Navy nuclear submariners. But we have to do it without stripping the Navy of their Blue and Gold crews. On things I know nothing about-most things, for this job! I consult someone who does-and that leads me to the person who can do it. Since I know very little about how to be President, I look for advice on almost everything."

"Ma'am, it seems to me-and a lot of other people- that you were born for the job."

"Hardly. Oh, politics isn't strange to me; my father held office when I was still a girl at home. But I did my first television commercial at fourteen and I was hooked. If I hadn't been 'resting' between contracts, I would not have had accepted the Governor's appointment-I was just his 'exhibit coon' but the Commission's work did interest me. Then I was still an 'exhibit coon' when he saw to it that I was on his favorite-son slate. Then, when the three leading candidates deadlocked, my late predecessor broke the deadlock in his favor by naming me as the other half of his ticket. I went along with it with a wry grin inside, figuring, first, that the ploy wouldn't work, and second, that, if he did get nominated, he would find some way to wiggle out-ask me to withdraw in favor of his leading rival or some such."

She shrugged. "But he didn't-or couldn't. I don't know which; he rarely talked to me. Real talk, I mean. Not just, 'Good morning,' and, 'Did you have a comfortable flight' and not wait for an answer.

"I didn't care. I relished every minute of the campaign. An actress sometimes plays a queen. . . but for four months I got to be one. Never dreaming that our ticket would win. I knew what a-No, de mortuis nil nisi bonum, and we must get back to work. What would you do about pollution of streams?"

"Eh? But that one has already been solved. By one of the Scandinavian countries, I believe. You simply require every user to place his intake immediately downstream from his discharge of effluent into the stream. In self-protection the user cleans up his discharge. It's self-enforcing. No need to test the water until someone downstream complains. Seldom. Because it has negative feedback. Ma'am, complying with a law should be more rewarding than breaking it-or you get positive feedback."

She made a note. "We could clean up the Mississippi that way. But I'm fretted about streams inside states, too. For example, the Missouri, where it is largest, is entirely inside the State of Missouri."

"Ma'am, I think you'll find that you have jurisdiction overall navigable streams."

I do?

"Ma'am, you have powers you may never have dreamed existed. A 'navigable stream' is one only three feet deep, I think. You may right now have the power to order this under law already on the books. If there is a paragraph or even a clause on placement of inlets and outlets, you almost certainly can issue an executive order right away. Today. The boss of the U.S. Engineers would know. General Somebody. A French name."

She touched a switch. "Get me the head of the U.S. Engineers. How would you dispose of nuclear power plant wastes? Rocket them onto the Moon as someone urged last week? Why wouldn't the Sun be better? We may want to go back to the Moon someday."

"Oh, my, no! Neither one, Ma'am."

"Why not? Some of those byproducts are poisonous for hundreds of years, so I've heard. No?"

"You heard correctly. But the really rough ones have short half-lives. The ones with long half-lives- hundreds, even thousands of years, or longer-are simple to handle. But don't throw away any of it, Ma'am. Not where you can't recover it easily."

"Why not? We're speaking of wastes. I assume that we have extracted anything we can use."

"Yes, Ma'am, anything we can use. But our great grandchildren are going to hate you. Do you know the only use the ancient Romans had for petroleum? Medicine, that's all. I don't know how those isotopic wastes will be used next century .. . any more than those old Romans could guess how very important oil would become. But I certainly wouldn't throw those so-called wastes into the Sun! Besides, rockets do fail - . . and who wants to scatter radioactives over a couple of states? And there's the matter of the fuel and steel and a dozen other expensive things for the rockets. You could easily wind up spending more money to get rid of the ashes than you ever got from selling the power.

"Then what do you do? They say we mustn't sink it into the ocean. Or put it on the Antarctic ice cap. Salt mines?"

"Madam President, honest so help me, this is one of those nonproblems that the antitechnology nuts delight in. Radioactive wastes aren't any harder to handle than garbage. Or hot ashes. Or anything else you don't want to pick up in your bare hands. The

quantity isn't much, not at all like garbage, or coal ashes. There are at least a half dozen easy ways. One of the easiest is to mix them with sand and gravel and cement into concrete bricks, then stack them in any unused piece of desert.

"Or glass bricks. Or let the stuff dry and store it in steel barrels such as oil drums and use those old salt mines you mentioned-the bricks you could leave in the open. All by remote manipulation, of course; that's the way a radioactives engineer does everything. Waldoes. That's old stuff. No trouble."

"I thought you said you were obsolete."

He grinned sheepishly. "Ma'am, it's easy to talk. As long as I know that young fellows will have to do the tedious drudgery that goes into making anything new work. But the solutions I've offered are practical. No new discoveries needed.

"How about air pollution?"

"What sorts, Ma'am? The two main sources are internal combustion engines-trucks and autos-and industrial smokes. Quite different problems."

"Pick one."

"Transportation pollution is going to solve itself soonither the hard way or the easy way. Oil, whether it's our own or from the OPEC, is too valuable to be burned in cars and trucks; it's the backbone of the chemical engineering industry-fertilizers, plastics, pesticides, lubricants, and so forth. So, quite aside from the energy problem, we need to stop burning it. We can either wait until it's forced on us catastrophically . . - or we can turn to other transportation power voluntarily, and thereby become self-sufficient in oil for peace or for war. Either way, transportation pollution is ended."

"But what other transportation power, Doctor?"

"Oh. Half a dozen ways, at least. Get rid of the I.C. engine completely, both Otto cycle and Diesel cycle, and go back to the external combustion engine and steam. The I.C. engine never did make sense; starting and stopping combustion every split second is a guarantee of incomplete combustion, wasted fuel, and smog. Air pollution. External combustion has no such built-in stupidity; no matter what fuel, it burns continuously and can be adjusted for complete combustion. The Stanley Steamer used kerosene. But that's petroleum again. I would use wood alcohol as a starter-it hurts me every time I pass a sawmill and see them burning chips and slash.

"But wood alcohol has its drawbacks. We may burn hydrogen someday. Or learn to store electricity in less weight and less space. Or store energy in a flywheel. But all of those, even hydrogen, are simply ways to store energy. It still leaves an energy problem."

"Hydrogen, too? But you said we would burn it. No?"

"We'll burn it for some purposes; in some ways it's the ideal fuel; its only ash is water vapor. But, Ma'am, we don't have hydrogen; we have water-and even with perfect efficiency-never achieved-the energy you get out of hydrogen by burning it cannot exceed the energy you must use in getting that hydrogen by electrolysis of water. So you must generate electricity first."

"I see. No free lunch."

"Never a free lunch. But the energy problem can be solved several ways . . - through renewable resources. We've been using nonrenewable resources-coal and oil and cutting trees faster than they grow."

"Renewable resources-Windmills and water power and sun power?"

"Wind and water power are fine but limited. I mean effectively unlimited power. Such as this new wrinkle of thermoelectric power from the temperature difference of deep ocean and surface ocean. But there aren't too many really convenient places to do that. You named the one energy that is unlimited and convenient anywhere. Sun power."

"So? What desert is convenient to the Gary steel mills?"

"Not desert, Ma'am; the Sierra Club wouldn't like it."

"I plan to tell the Sierra Club that they are not the government of the United States. But in stronger language."

"I look forward to hearing you, Madam President.
The Sierra Club loves deserts and hates people. But our deserts aren't sufficient. Sun power, yes-but unlimited sun power. In orbit."

South Africa Enraged

United States Surprise Return to Gold Standard at $350 per Troy Ounce of Fine Gold Has

Bourses in Turmoil

"New Policy Obvious Concommitant of
Return to Balanced Budget," Says
Treasury Secretary Spokesman

"The Way to Resume is to Resume."

By ADAM SMITH

Finance Editor

WASHINGTON-The Treasury Secretary, after reading aloud to the Press the President's brief announcement of resumption of specie payments immediately at $350/oz., emphasized that this was not a tactical maneuver to "strengthen the dollar," not an auction of bullion such as those in the past, but a permanent policy consistent with the administration's total policy. "A return to our traditional policy, I must add. A century ago, for 15 years, war caused us to suspend specie payments-but never with any intent to accept the vice of fiat money. Since 1971, as sequelae to 3 wars, we have had a similar problem. By letting the dollar float until the world price of gold in terms of dollars settled down, we have determined what could be called the natural price. So we have resumed specie payment at a firm gold standard. God willing, we will never leave it."
This was in answer to the London Times correspondent's
frosty inquiry as to whether or not the Secretary thought anyone would want our gold at that price. The Treasury Secretary told him that we were not "selling gold" but promising to redeem our paper money at a gold-standard price. The Times' question was inspired by the fact that at the close of market Friday the London fix was $423. 195 per troy ounce, with the Zurich fix, the Winnipeg fix, and the Hong Kong fix (the last only hours before

the Washington announcement) all within a dollar of the London fix.

PRAVDA: "-.capitalistic trickery-"

Moscow has not had a free market in gold since pre-1914 but, as a gold-producing country, its response to our resumption policy has been even more acid than the shrill complaints from Johannesburg. The Zurich gold market did not open today. London opened on time but the price dropped at once, with the first purchase at $397. 127, which slowed but did not stop the decline. Winnipeg opened an hour late; the reason became clear when the Prime Minister announced the tying of the Canadian dollar to the U.S. dollar at one-to-one-a fait aCCompli as the two currencies have hunted up and down, never more than 1% apart, for the past several months.

The timing of the announcement gave the world a weekend in which to think things over, the purpose being presumably to reduce oscillations. The New York Stock Market responded with an upward surge. The Dow-Jones Industrials closed at

"Mr. Chairman, are these unofficial figures I have in front of me-that each of you has in front of you-correct? Or have my informants been leading me down the garden path? The figures on the use of hard drugs, for example?"

"Madam President, I don't know quite how to answer that."

"You don't, eh? You're Chairman of the Joint Chiefs and for four years before that chief of staff of your service. If these figures are not right, how far are they off and which way?"

"Ma'am, that is a question that should be put to each of the Services, not to me."

"So? General, you are relieved of active duty. A request for retirement will be acted on favorably, later today. You are excused. General Smith, take the chair."

The President waited until the door closed behind the ex-Chairman. Then she said soberly, "Gentlemen, it gives me no pleasure to put an end to the career of a man with a long and brilliant record. But I cannot keep in a top spot in my official family a military officer who can't or won't answer questions that, in my opinion, must be answered if I am to carry out my duties as Commander in Chief. If he had answered, 'I don't know now but I'll start digging at once and won't stop until'-but he said nothing of the sort. I gave him two chances; he brushed me off." She sighed. "I suppose he dislikes taking orders from one with no military experience; I do not assume that my sex and skin color had anything to do with it. General Smith, you are in the chair by default; I can't ask you about the other Services. How about your own? Hard drugs."

"I suspect that this figure is conservative, Ma'am. I've been trying to get hard data on hard drugs since I was appointed to this job a year ago. In most cases we need evidence from medical officers to make it stick

• . . and all our doctors are overworked; we don't have nearly enough of them. Worse yet, some of the doctors are pushers themselves; two were caught."

"What happened to them? Making little ones out of big ones?"

"No, Ma'am. Discharged. In civilian practice, I suppose."

"For God's sake, why? Has the Army forgotten how to hold a court martial? Two drug pushers, simply sent home and still licensed to practice medicine- and to prescribe drugs. General, I'm shocked."

"Ma'am, may I say something in my own defense? Then you can have my request for retirement, if you wish it."

"Please. Go ahead."

"These cases occurred before I became Chief of Staff. At the time these two were caught, I was Superintendent of the War College; drugs are not a problem there. When last I had troop duty, I did have a policy of treating use of hard drugs as a criminal offense, as permitted and required by regulations. But the very most I ever managed was to get some sent to the V.A. for hospital cure and rehabilitation. Under the present rules, if a man has a good lawyer-and they do, usually-he can get away from courts martial and appeal to a civilian judge. That usually ends it."

"Madam President, may I add something?"

"Certainly, Admiral."

"Have you heard of the mutiny in the Somers about a century and a half back?"

"I- Yes, I think I have! A novel. Voyage to the-Voyage to the First of December. Right?"

"There was a novel some years back; I think that was the book's title. I haven't read it. Then you are aware that it was a tragic scandal, with mutineers hanged at the yardarms. What I wanted to say was this: I think the figures on drugs in the Navy are about right-lower than in the Army, of course; the circumstances are different. But what is killing the Navy- aside from a shortage of career officer material-is that both mutiny and sabotage are out of hand -. - because offenses that used to rate hanging from the yardarm are now treated as 'Boys will be boys.' A great deal of it does derive from a change in the legal structure, as the General said. I would rather have five ships properly maintained, properly manned, shipshape and Bristol style, than ten ships undermanned and shot through with men who should never have been accepted in the first place. A stupid and sullen seaman is worse than no one at all."

The President said, "Judges, chapter seven."

The Admiral looked puzzled. The Marine Commandant suddenly said, "Gideon's Band!"

"Exactly. I suspect that we have been trying to meet quotas-numbers of men-rather than placing quality first. I'm sure it's not as simple as that, but that does seem to be part of it. General, does the Air Force have any different slant on this?"

"No, Ma'am, I think the Navy and the Corps both speak for me. And the Army. . - although Smitty's problems are different from ours. Our worst problem is hanging on to trained men.. - because what we teach them, flying and electronics especially, are very salable on the outside. I want to add something, though. Marijuana is not on the list of drugs. It may very well be true that grass is no worse than liquor. But neither one mixes with driving a flying machine. Or anything in an airplane. But grass is harder to cope with. A stash is easier to hide than a bottle, and it is harder to tell when a man is stoned than when he is drunk. And much harder to prove. I welcome suggestions."

"I think we all do. Although I think we've pinpointed one essential. Quality before quantity. Gentlemen, we'll let this marinate about ten days while all of us try to spot all of the basic things that are wrong then meet again and exchange ideas. In writing. Call the shots as you see them, don't be afraid of hurting feelings, pay no attention to sacred cows. Admiral, you found things

wrong with the military legal system; please analyse the matter, with specific recommendations. If you truly feel that we need to go back to keelhauling and hanging at the yardarm, say so."

"I do not, Ma'am. But I do think the present rules are more suited to a Scout camp than to a fighting force. Punishment should be swift and certain; mutineers should not be coddled. We need a new code."

"Work on it. I assume that you have legal aides. Mr. Secretary of Defense, I have not intended to monopolize the floor. Before we adjourn, I want you to give us your opinions on problems of discipline. I would like to hear comment on those figures I supplied, all categories. But you aren't limited to that. Feel free to bring up anything. I think that discipline in the Armed Forces is as serious a problem as I face . . - and the most difficult."

"Discipline is not one of the duties of the Secretary of Defense."

"So? What are your duties?"

"To manage my department. Discipline belongs to these gentlemen. Not to me. And certainly not to you. You are way out of line."

"You forgot something, sir. The President is in the direct line of command, at the top, and cannot avoid responsibility for any aspect of her command. The Secretary of Defense is not in the line of command; he is an executive secretary for the President. However, since you see your job as merely managerial, and not concerned with morale and discipline, I won't press you about it. I have your signed resignation in my desk, inherited from my predecessor. I'm accepting it. At once."

The ex-Secretary leaned back and laughed. "How just like a woman! Ruffle her feathers and she flies off the handle. But it's okay, Shortie; I didn't intend to stay this long. After the Chief died I was ready to quit. But Charlie asked me to stick around a little longer, keep an eye on you. I know what you did to him the day of the tragedy, standing in his way when he was entitled to the job. You never were anything but an election poster. Didn't anybody ever tell you that?"

"You may leave now. You're excused."

"Oh, I'm leaving; I've got a press conference in ten minutes. Just one thing: You said Joe probably disliked taking orders from you because you've had no military experience. Nonsense. Any top brass expects to take orders from a civilian. But no real man will take orders from a nigger, much less a nigger wench."

The Marine was out of his chair so fast that it overturned, snatched the ex-Secretary out of his chair and got a hammerlock on him-but beat the others to it only by being closest.

"Down on your knees and apologize, you jerk! That's the President of the United States you're talking to!" The Marine General's Deep South accent, ordinarily carefully corrected, came out in full force, thick as gumbo.

"Make him take his hands off me!"

"Keep him secure, General. And thank you, sir. But don't rough him up more than necessary. Admiral, if you will be so kind as to check, I think you will find two Marines and two Secret Service men just outside that door. Please ask one of them to telephone for two White House Police. I want this person removed from the building and not allowed back in. Nor back into the Pentagon, ever. Most especially not into his former office."

"A pleasure, Ma'am!"

"Thank you, sir. I hope to see you all here at the same time a week from Thursday. General Smith, I ask you to remain chairman pro tern, in addition to your regular duties. Adjourn when it suits you. I'm withdrawing now; I want to lie down. I find that I am a bit shaky...."

CND 4,O6CRH

CHEYENNE-LEGISLATURE BOTH HOUSES PASSED OVERWHELMINGLY FIRST AND SECOND READING EMERGENCY MEASURE RESTORING PAUPERS OATH FOR RECIPIENTS OF ANY PUBLIC ASSISTANCE OF ANY SORT REPEAT ANY SORT IN RESPONSE TO

GOVERNOR'S IMPASSIONED CLAIM THAT THERE WOULD BE NO

MONEY FOR THE BLIND AND THE TOTALLY HELPLESS UNLESS

STATE RETURNED TO NINETEENTH CENTURY TEST OF ELIGIBILITY MORE MORE

CND4,Ø9CRH

CHEYENNE-AMERICAN CIVIL LIBERTIES UNION WILL FILE

CLASS ACTION IN FEDERAL COURT TO STOP RESTORATION OF

PAUPERS OATH AS PREREQUISITE FOR PUBLIC ASSISTANCE.

"Come in, Senator! Thank you for doing me this favor!'

"Madam President, it would be a pleasure to call on you at any time even if you were nOt President. Perhaps more."

"Uncle Sam, I don't know what that means but I like it. Now to work! Would it suit you to work for me?"

"You know it would, my dear-but I have a cohstituency."

"I don't mean resign and take a job here. But can't you pair votes, or something? I need a lot of help from you right now and more later."

"Anything the President wants, the President gets. Yes, I can always arrange a pair. . - even when I'm only nominally out of the District." He looked down at her. "Trouble?"

"Work I don't know how to handle. I've got to appoint twenty-three judges and I can't put it off much longer. And I don't know how to tell a knucklehead from an Oliver Wendell Holmes. See that tall stack? And that one? Those are the written opinions-or other legal writings if they are not already judges- from the candidates for judgeships. No names on them, and other identifications blacked out. Just identification numbers. I

thought I could read this mess and tell which ones had their heads screwed on tight. I can't. I don't understand legalese, I'm not a lawyer."

"I'm not a lawyer either, bright eyes.'~

"No, but you're the world's leading semanticist. I figured that, if you couldn't understand something, then it was really nonsense."

"It's a good approach. If a person of normal intelligence, and a reasonably full education, cannot understand a piece of prose, then it is gibberish. But you shouldn't be doing it; you have a country to worry about. I don't have time, either, but I'll take time; my staff are quite competent to wipe the noses and hold the hands of my constituents for a while. I'll arrange it."

"Then you'll do it! Uncle Sam, you're a dear!"

"But I want a bribe."

"You do? I thought I was supposed to be offered bribes, not have to pay them."

"I'm eccentric. I take bribes only from pretty little girls I've known a long time."

"You're eccentric, all right. What is that thing you wear on your head? A cow pat?"

"My dear, you're colorblind. Madam President, I have a proposed amendment to the Constitution I want you to sponsor. . . and by great good luck I just happen to have a copy of it on me."

"I'll bet you sleep with a copy of it on you. No, just put it on the desk. Now tell me what it is supposed to accomplish."

"It permits a citizen to challenge the Constitutionality of any law or regulation, Federal or any lesser authority, on the grounds that it is ambivalent, equivocal, or cannot be understood by a person of average intelligence. Paragraph two defines 'average intelligence.' Paragraph three defines and limits the tests that may be used to test the challenged law. The fourth paragraph excludes law students, law school graduates, lawyers, judges, and uncertified j .p.'s from being test subjects. I call it 'the Semantic Amendment.'

"No, you don't; you call it 'the Plain English Amendment.' Show biz, Uncle Sam. Senator, under this amendment could a person challenge the income tax law on the grounds that he has to hire an expert to make out his form 1040?"

"He certainly could. And he would win, too, as no three I.R.S men can get the same answers out of identical data if the picture is at all complex."

"Hmm- What if he's bright enough but can't read?"

"Paragraph three."

"How about the Federal Budget? It isn't law in the usual meaning but Congress votes on it and it has the force of law, where it applies."

"First paragraph. It quacks like a duck, waddles like a duck-it's a duck."

"I'll try to study this before I fall asleep tonight. Senator, this one we're going to put over!"

"Don't be too certain, Madam President. Lawyers are going to hate this . . . and the Congress and all the state legislatures have a majority of lawyers."

"And every one of them not anxious to lose his job. That's their weakness . . . because it's awfully easy to work up hate against lawyers. Senator, this bill will be introduced by lawyers. Both Houses. Both parties. Not by you, you're not a lawyer. Uncle Sam, I'm an amateur president but I'm a pro in show biz. It'll play in Paducah."

The two Presidents were seated alone at the front of the crowded grandstand. Two kilometers in front of them a spaceship, small compared with the Shuttle assemblage, but close to the size of the Shuttle alone, stood upright in the bright Mexican mountain sunshine. A voice from everywhere was counting:

"-sixty-one seconds one minute.. . . fifty-nine fifty-eight-"

She said, "How are you coming with Spanglish, Señor el Presidente?"

He shrugged and smiled, "As before, Doña la Presidenta. I know it is simple; I hear your people and ours talking in it - . . and I understand them. But I don't have time to study. When I leave office-" He spread his hands.

"I know. Perhaps two years from now-I can't believe I've been in office only six years. It feels like sixty."

"You've accomplished sixty years of statecraft; the whole world is awestruck."

"-forty-one . . . forty. . . thirty-nine-"

"There never was anything really seriously wrong with my country, Mr. President. We made some silly mistakes, then compounded them by being stubborn. The Fence, for example. What's the point in a Fence that doesn't work? So I had it torn down."

"Madam, your most creative act of statesmanship! Without that act of faith, you and I could never have put over our Treaty of Mutual Assistance. And the dozen major advances we have started under it. This. You and I would not be sitting here."

"Yes. No more wetbacks and this. Mr. President, I still don't understand how a beam of light can put a spaceship into orbit."

"Neither do I, Madam President, neither do I. But I believe your engineers.

"So do I but it frightens me."

"-fifteen. . . The Binational Solar Power Zone is now on standby power.. . nine. . . eight-"

"Oh! Will you hold my hand? Please!"

"-four! . . - three! .. . two! - . . one! . . . LIGHT!"

A single inhalation by thousands, then came the everywhere voice in soft, reverent tones: "Look at that bastard go!"

"-direct from O'Neill Village, Ell-Five. It's a beautiful day here, it's always a beautiful day here. But today is our happiest fiesta ever; little Ariel Henson Jones, first baby born in space, is one year old today. All four of her grandparents are here, her father's parents having traveled all the way from Over-the-Rainbow, Ell-Four, via Luna City Complex, just to be here on this great day. Don't repeat this but a little bird, a parrot, told me that one of Ariel's grandmothers is pregnant again. I won't say which one but it's personal good news for all of us here in the sky because, if true and I can assure you it is, it is one more and very important datum in the rapidly growing list to show that youthfulness in all ways is markedly extended simply by living in free-fall. Correction: the mild acceleration we experience at the skin of our Village. . . but which we can leave behind completely at any time for freefall sports at the axis.

"And you can enjoy them, too. This newscast comes to you sponsored by O'Neill Village Chamber of Commerce. Visitors welcome. You haven't lived until you ride the

Light Beam, the cheapest way to travel per thousand kilometers ever invented by a factor of at least one hundred.. . and not uncomfortable even the first few seconds since the installation of the new totalsupport hydraulic couches. Also you haven't lived until you've seen our free-fall ballet! You think Las Vegas has shows? Wait till you see a Coriolis torch dance. Or what free-fall does for a hundred-centimeter bust. Oh, boy! Or if you like to gamble we'll take your money with brand-new games as happily as Monte Carlo or Atlantic City. See your travel agent for a variety of package vacations.

"Or more than a vacation. Buying a share in the Village is cheaper than buying a house in most cities down heavyside. But if you are young and healthy and possess certain needed skills your migration into the sky can be subsidized. Phone the placement office here for details, same rates as from San Francisco to New York. Wups! Almost forgot to tell you: knowledge of industrial Spanglish required, plus some Brownie points for any other language you know.. .

It could be that way, over the Rainbow. As Madam President said, there never has been anything incurably wrong with our country and our world-just a horrid accumulation of silly mistakes that could be corrected with horse sense and the will to do it.

We have a lot of healthy, intelligent people with a wide spread of useful skills, trades, and professions. We have a wonderful big country not yet too crowded and still wealthy in real wealthh, bankrupt on paper but that can always be corrected with real wealth, will, and work. Actually it's easier to be happy and get rich than it is to go down the chute. This country has
so much going for it that it takes a lot of work combined with wrong-headed stubbornness to ruin this country. It's not easy.

In the meantime dont go away. There are still a lot of sacred cows I haven't kicked but plan to. . . someday. So, unless I'm hit by a taxicab while swiveling on my cane to ogle pretty girls, I'll be back.

The End.

Farnham's Freehold

Chapter 1

"It's not a hearing aid," Hubert Farnham explained. "It's a radio, tuned to the emergency frequency."

Barbara Wells stopped with a bite halfway to her mouth. "Mr. Farnham! You think they are going to attack?"

Her host shrugged. "The Kremlin doesn't let me in on its secrets."

His son said, "Dad, quit scaring the ladies. Mrs. Wells-"

"Call me 'Barbara.' I'm going to ask the court to let me drop the 'Mrs.'

"You don't need permission."

"Watch it, Barb," his sister Karen said. "Free advice is expensive."

"Shaddap. Barbara, with all respect to my worthy father, he sees spooks. There is not going to be a war."

"I hope you're right," Barbara Wells said soberly. "Why do you think so?"

"Because the communists are realists. They never risk a war that would hurt them, even if they could win. So they won't risk one they can't win."

"Then I wish," his mother said, "that they would stop having these dreadful crises. Cuba. All that fuss about Berlin-as if anybody cared! And now this. It makes a person nervous. Joseph!"

"Yes, ma'am?"

"You fetch me coffee. And brandy. Café royale."

"Yes, ma'am." The houseboy, a young Negro, removed her plate, barely touched.

Young Farnham said, "Dad, it's not these phony crises that has Mother upset; it's the panicky way you behave. You must stop it."

"No."

"You must! Mother didn't eat her dinner . . . and all because of that silly button in your ear. You can't-"

"Drop it, Duke."

"Sir?"

"When you moved into your own apartment, we agreed to live as friends. As my friend your opinions are welcome. But that does not make you free to interfere between your mother-my wife-and myself."

His wife said, "Now, Hubert."

"Sorry, Grace."

"You're too harsh on the boy. It does make me nervous."

"Duke is not a boy. And I've done nothing to make you nervous. Sorry."

"I'm sorry, too, Mother. But if Dad regards it as interference, well-" Duke forced a grin. "I'll have to find a wife of my own to annoy. Barbara, will you marry me?"

"No, Duke."

"I told you she was smart, Duke," his sister volunteered.

"Karen, pipe down. Why not, Barbara? I'm young, I'm healthy. Why, someday I might even have clients. In the meantime you can support us."

"No, Duke. I agree with your father."

"Huh?"

"I should say that my father agrees with your father. I don't know that my pops is carrying around a radio tonight but I'm certain that he is listening to one. Duke, every car in our family has a survival kit."

"No fooling!"

"My car out in your father's driveway, the one Karen and I drove down from school, has a kit in its trunk that Pops picked before I re-entered college. Pops takes it seriously, so I do."

Duke Farnham opened his mouth, closed it. His father asked, "Barbara, what did your father select?"

"Oh, lots of things. Ten gallons of water. Food. A jeep can of gasoline. Medicines. A sleeping bag. A gun-"

"Can you use a gun?"

"Pops made me learn. A shovel. An ax. Clothes. Oh, yes, a radio. But the important thing was 'Where?'-so he kept saying. If I were at school, he would expect me to head for the basement of the gym. But here- Pops would expect me to head up into the mountains."

"You won't need to."

"Sir?"

"Dad means," explained Karen, "that you are welcome in our panic hole."

Barbara showed a questioning look. Her host said, "Our bomb shelter. 'Farnham's Folly' my son calls it. I think you would be safer there than you would be running for the hills-despite the fact that we are only ten miles from a MAMMA Base. If an alarm comes, we'll duck into it. Right, Joseph?"

"Yes, sir! That way I stay on your payroll."

"The hell you do. You're fired the instant the sirens sound-and I start charging you rent."

"Do I pay rent, too?" asked Barbara.

"You wash dishes. Everybody does. Even Duke."

"Count me out," Duke said grimly.

"Eh? Not that many dishes, Son."

"I'm not joking, Dad. Khrushchev said he would bury us- and you're making it come true. I'm not going to crawl into a hole in the ground!"

"As you wish, sir."

"Sonny boy!" His mother put down her cup. "If an attack comes, of course you're going into the shelter!" She blinked back tears. "Promise Mother."

Young Farnham looked stubborn, then sighed. "All right. If an attack comes- if an alarm sounds, I mean; there isn't going to be an attack- I'll go into your panic hole. But, Dad, this is just to soothe Mother's nerves."

"Nevertheless you are welcome."

"Okay. Let's go into the living room and break out the cards-with a firm understanding that we drop the subject. Suits?"

"Agreed." His father got up and offered his arm to his wife. "My dear?"

In the living room, Grace Farnham declined to play bridge. "No, dear, I'm too upset. You play with the young people, and- Joseph! Joseph, bring me just a teensy bit more coffee. Royale, I mean. Don't look that way, Hubert; it helps, you know it does."

"Would you like a Miltown, dear?"

"I don't need drugs. I'll just have a drop more coffee."

They cut for partners; Duke shook his head sadly. "Poor Barbara! Stuck with Dad- Did you warn her, Sis?"

"Keep your warnings to yourself," his father advised.

"She's entitled to know, Dad. Barbara, that juvenile delinquent across from you is as optimistic in contract as he is pessimistic in-well, in other matters. Watch out for psychic bids. If he has a Yarborough-"

"Drop dead, Duke. Barbara, what system do you prefer? Italian?"

Her eyes widened. "The only Italian I know is vermouth, Mr. Farnham. I play Goren. Nothing fancy, I just try to go by the book."

"'By the book,'" Hubert Farnham agreed.

"'By the book,'" his son echoed. "Which book? Dad likes to ring in the Farmers' Almanac, especially when you're vulnerable, doubled and redoubled. Then he'll point out how, if you had led diamonds-"

"Counselor," his father interrupted, "will you deal those cards? Or shall I stuff them down your throat?"

"I'll go quietly. Put a little blood in it? A cent a point?" Barbara said hastily, "That's steep for me."

Duke answered, "You gals aren't in it. Just Dad and myself. That's how I pay my office rent."

"Duke means," his father corrected, "that is how he gets deep into debt to his old man. I was beating him out of his allowance when he was still in junior high."

Barbara shut up and played cards. The stakes made her tense, even though it was not her money. Her nervousness was increased by suspicion that her partner was a match player.

Her nerves relaxed, though not her care, as it began to appear that Mr. Farnham found her bidding satisfactory. But she welcomed the rest that came from being dummy. She spent these vacations studying Hubert Farnham.

She decided that she liked him, for the way he handled his family and for the way he played bridge-quietly, thoughtfully, exact in bidding, precise and sometimes brilliant in play. She admired the way he squeezed out the last trick, of a contract in which she had forced them too high, by having the boldness to sluff an ace.

She knew that Karen expected her to pair off with Duke this weekend and admitted that it seemed reasonable. Duke was as handsome as Karen was pretty-and a catch . . . rising young lawyer, a year older than herself, with a fresh and disarming wolfishness.

She wondered if he expected to make out with her? Did Karen expect it and was she watching, secretly amused?

Well, it wasn't going to happen! She did not mind admitting that she was a one-time loser but she resented the assumption that any divorcee was available. Damn it, she hadn't been in bed with anybody since that dreadful night when she had packed and left.

Why did people think- Duke was looking at her; she locked eyes with him, blushed, and looked away, looked at his father instead.

Mr. Farnham was fiftyish, she decided. And looked it. Hair thinning and already gray, himself thin, almost gaunt, but with a slight potbelly, tired eyes, lines around them, and deep lines down his cheeks. Not handsome- With sudden warmth she realized that if Duke Farnham had half the strong masculine charm his father had, a panty girdle wouldn't be much protection. She dismissed it by being quickly angry with Grace Farnham. What excuse did a woman have for being an incipient alcoholic, fretful and fat and self-indulgent, when she had this man?

The thought was chased away by realization that Mrs. Farnham was what Karen might become. Mother and daughter looked alike, save that Karen had not gone to pot. Barbara did not like this thought. She liked Karen better than any other sorority sister she had found when she went back to finish college. Karen was sweet and generous and gay- But perhaps Grace Farnham had been so, once. Did women have to become fretful and useless?

Hubert Farnham looked up from the last trick. "Three spades, game and rubber. Well bid, partner."

She flushed again. "Well played, you mean. I invited too much."

"Not at all. At worst we would have been down one. If you don't bet, you can't win. Karen, has Joseph gone to bed?"

"Studying. He's got a quiz."

"I thought we might invite him to cut in. Barbara, Joseph is the best player in this house-always audacity at the right time. Plus the fact that he is studying to be an accountant and never forgets a card. Karen, can you find us something without disturbing Joseph?"

"'Spect ah kin, Boss. Vodka and tonic for you?"

"And munching food."

"Come on, Barbara. Let's bottle."

Hubert Farnham watched them go, while thinking it was a shame that so nice a child as Mrs. Wells should have had a sour marriage. A sound game of bridge and a good disposition- Gangly and horse faced, perhaps- But a nice smile and a mind of her own. If Duke had any gumption-

But Duke didn't have any. He went to where his wife was nodding by the television receiver, and said, "Grace? Grace darling, ready for bed?"-then helped her into her bedroom.

When he came back, he found his son alone. He sat down and said, "Duke, I'm sorry about that difference of opinion at dinner."

"That? Oh, forget it."

"I would rather have your respect than your tolerance. I know that you disapprove of my 'panic hole.' But we have never discussed why I built it."

"What is there to discuss? You think the Soviet Union is going to attack. You think that hole in the ground will save your life. Both ideas are unhealthy. Sick. Especially unhealthy for Mother. You are driving her to drink. I don't like it. I liked it still less to have you remind me-me, a lawyer!-that I must not interfere between husband and wife." Duke started to get up. "I'll be going."

"Please, Son! Doesn't the defense get a chance?"

"Uh- All right, all right!" Duke sat down.

"I respect your opinions. I don't share them but many people do. Perhaps most people, since most Americans have made no effort to save themselves. But on the points you made, you are mistaken. I don't expect the USSR to attack- and I doubt if our shelter is enough to save our lives."

"Then why go around with that plug in your ear scaring Mother out of her wits?"

"I've never had an automobile accident. But I carry auto insurance. That shelter is my insurance policy."

"But you just said it wouldn't save your life!"

"No, I said I doubted that it would be enough. It could save our lives if we lived a hundred miles away. But Mountain Springs is a prime target . . . and no citizen can build anything strong enough to stop a direct hit."

"Then why bother?"

"I told you. The best insurance I can afford. Our shelter won't stop a direct hit. But it will stand up to a near miss-and Russians aren't supermen and rockets are temperamental. I've minimized the risk. That's the best I can do."

Duke hesitated. "Dad, I can't be diplomatic."

"Then don't try."

"So I'll be blunt. Do you have to ruin Mother's life, turn her into a lush, just on the chance that a hole in the ground will let you live a few years longer? Will it be worth while to be alive-afterwards-with the country devastated and all your friends dead?"

"Probably not."

"Then why?"

"Duke, you aren't married."

"Obviously."

"Son, I must be blunt myself. It has been years since I've had any real interest in staying alive. You are grown and on your own, and your sister is a grown woman, even though she is still in school. As for myself-" He shrugged. "The most satisfying thing left is the fiddling pleasure of a game of bridge. As you are aware, there isn't much companionship left in my marriage."

"I am aware, all right. But it's your fault. You're crowding Mother into a nervous breakdown."

"I wish it were that simple. In the first place- You were at law school when I built the shelter, during that Berlin crisis. Your mother perked up and stayed sober. She would take a martini and let it go at that-instead of four as she did tonight. Duke, Grace wants that shelter."

"Well-maybe so. But you aren't soothing her by trotting around with that plug in your ear."

"Perhaps not. But I have no choice."

"What do you mean?"

"Grace is my wife, Son. 'To love and to cherish' includes keeping her alive if I can. That shelter may keep her alive. But only if she is in it. How much warning today? Fifteen minutes, if we're lucky. But three minutes could be time enough to get her into the shelter. But if I don't hear the alert, I won't have three minutes. So I listen. During any crisis."

"Suppose it happens when you are asleep?"

His father smiled. "If the news is bad, I sleep with this button taped into my ear. When it's really bad-as it is tonight- Grace and I sleep in the shelter. The girls will be urged to sleep there. And you are invited."

"Not likely!"

"I didn't think so."

"Dad, stipulating that an attack is possible-merely stipulating, as the Russians aren't crazy-why build a shelter smack on a target? Why don't you pick a place far from any target, build there-again stipulating that Mother needs one for her nerves, which may be true-and get Mother off the sauce?"

Hubert Farnham sighed. "Son, she won't have it. This is her home."

"Make her!"

"Duke, have you ever tried to make a woman do anything she really didn't want to do? Besides that, a weakness for the sauce-hell, growing alcoholism-is not that simple. I must cope with it as best I can. However- Duke, I told you that I did not have much reason to stay alive. But I do have one reason."

"Such as?"

"If those lying, cheating bastards ever throw their murder weapons at the United States, I want to live long enough to go to hell in style-with eight Russian side boys!"

Farnham twisted in his chair. "I mean it, Duke. America is the best thing in history, I think, and if those scoundrels kill our country, I want to kill a few of them. Eight side boys. Not less. I felt relieved when Grace refused to consider moving."

"Why, Dad?"

"Because I don't want that pig-faced peasant with the manners of a pig to run me out of my home! I'm a free man. I intend to stay free. I've made every preparation I can. But I wouldn't relish running away. I- Here come the girls."

Karen came in carrying drinks, followed by Barbara. "Hi! Barb got a look at our kitchen and decided to make crêpes Suzettes. Why are you two looking grim? More bad news?"

"No, but if you will snap the television on, we might get part of the ten o'clock roundup. Barbara, those glorified pancakes smell wonderful. Want a job as a cook?"

"What about Joseph?"

"We'll keep Joseph as housekeeper."

"I accept."

Duke said, "Hey! You refused my offer of honorable matrimony and turn around and agree to live in sin with my old man. How come?"

"I didn't hear 'sin' mentioned."

"Don't you know? Barbara. . . Dad is a notorious sex criminal."

"Is this true, Mr. Farnham?"

"Well. . ."

"That's why I studied law, Barbara. It was breaking us to bring Jerry Giesler all the way from Los Angeles every time Dad got into a jam."

"Those were the good old days!" Duke's father agreed. "But, Barbara, that was years ago. Contract is my weakness now."

"In that case I would expect a higher salary-"

"Hush, children!" Karen said forcefully. She turned up the sound:

"-agreed in principal to three out of four of the President's major points and has agreed to meet again to discuss the fourth point, the presence of their nuclear submarines in our coastal waters. It may now be safely stated that the crisis, the most acute in post-World-War-Two years, does seem to be tapering oft to a mutual accommodation that both countries can live with. We pause to bring you exciting news from General Motors followed by an analysis in depth-"

Karen turned it down. Duke said, "Just as I said, Dad. You can take that cork out of your ear."

"Later. I'm busy with crêpes Suzettes. Barbara, I'll expect these for breakfast every morning."

"Dad, quit trying to seduce her and cut the cards. I want to win back what I've lost."

"That'll be a long night." Mr. Farnham~ finished eating, stood up to put his plate aside; the doorbell rang. "I'll answer it."

He went to the door, returned shortly. Karen said, "Who was it, Daddy? I cut for you. You and I are partners. Look pleased."

"I'm delighted. But remember that a count of eleven is not an opening bid. Somebody lost, I guess. Possibly a nut."

"My date. You scared him off."

"Possibly. A baldheaded old coot, very weather-beaten and ragged."

"My date," Karen confirmed. "President of the Dekes. Go get him, Daddy."

"Too late. He took one look at me and fled. Whose bid is it?"

Barbara continued to try to play like a machine. But it seemed to her that Duke was overbidding; she found herself thereby bidding timidly and had to force herself to overcome it. They went set several times in a long, dreary rubber which they "won" but lost on points.

It was a pleasure to lose the next rubber with Karen as her partner. They shifted and again she was Mr. Farnham's partner. He smiled at her. "This time we clobber them!"

"I'll try."

"Just play as you did. By the book. Duke will supply the mistakes."

"Put your money where your mouth is, Dad. Want a side bet of a hundred dollars on this rubber?"

"A hundred it is."

Barbara thought about seventeen lonely dollars in her purse and got nervous. She was still more nervous when the first hand ended at five clubs, bid and made-by Duke-and realized that he had overbid and would have been down one had she covered his finesse.

Duke said, "Care to double that bet, Governor?"

"Okay. Deal."

Her morale was bolstered by the second hand: her contract at four spades and made possible by voids; she was able to ruff before cleaning out trumps. Her partner's smile was reward enough. But it left her shaky.

Duke said, "Both teams vulnerable, no part score. How's your blood pressure, Daddy-o? Double again?"

"Planning on firing your secretary?"

"Speak up, or accept a white feather."

"Four hundred. You can sell your car."

Mr. Farnham dealt. Barbara picked up her hand and frowned. The count was not bad-two queens, a couple of jacks, an ace, a king-but no biddable suit and the king was unguarded. It was a strength and distribution which she had long tagged as "just good enough to go set on." She hoped that it would be one of those sigh-of-relief hands in which everyone passes.

Her partner picked up his hand and glanced at it. "Three no trump."

Barbara repressed a gasp, Karen did gasp. "Daddy, are you feverish?"

"Bid."

"Pass!"

Barbara said to herself, "'God oh god, what I do now?" Her partner's bid promised twenty-five points-and invited slam. She held thirteen points. Thirty-eight points in the two hands-grand slam.

That's what the book said! Barbara girl, "three no trump" is twenty-five, twenty-six, or twenty-seven points-add thirteen and it reads "Grand Slam."

But was Mr. Farnham playing by the book? Or was he bidding a shut-out to grab the rubber and nail down that preposterous bet?

If she passed, then game and rubber-and four hundred dollars-was certain. But grand slam (if they made it) was, uh, around fifteen dollars at the stakes Duke and his father were playing. Risk four hundred dollars of her partner's money against a chance of fifteen? Ridiculous!

Could she sneak up on it with the Blackwood Convention? No, no!-there hadn't been background bidding.

Was this one of those bids Duke had warned her about?

(But her partner had said, "Play by the book.")

"Seven no trump," she said firmly.

Duke whistled. "Thanks, Barbara. We're ganging up on you, Dad. Double."

"Pass."

"Pass," Karen echoed.

Barbara again counted her hand. That singleton king looked awfully naked. But . . . either the home team had thirty-eight points-or it didn't. "Redouble."

Duke grinned. "Thanks, sweetie pie. Your lead, Karen."

Mr. Farnham put down his hand and abruptly left the table. His son said, "Hey! Come back and take your medicine!"

Mr. Farnham snapped on the television, moved on and switched on the radio, changed its setting. "Red alert!" he snapped. "Somebody tell Joseph!" He ran out of the room.

"Come back! You can't duck this with that kind of stunt!"

"Shut up, Duke!" Karen snapped.

The television screen flickered into life: "-closing down. Tune at once to your emergency station. Good luck, good-bye, and God bless you all!"

As the screen went blank the radio cut in: "-not a drill. This is not a drill. Take shelter. Emergency personnel report to their stations. Do not go out on the street. If you have no shelter, stay in the best protected room of your home. This is not a drill. Unidentified ballistic objects have been radar sighted by our early-warning screens and it

must be assumed that they are missiles. Take shelter. Emergency personnel report to their-"

"He means it," Karen said in an awed voice. "Duke, show Barb where to go. I'll wake Joseph." She ran out of the room.

Duke said, "I don't believe it."

"Duke, how do we get into the shelter?"

"I'll show you." He stood up unhurriedly, picked up the hands, put each in a separate pocket. "Mine and Sis's in my trousers, yours and Dad's in my coat. Come on. Want your suitcase?"

"No!"

Chapter 2

Duke led her through the kitchen to the basement stairs. Mr. Farnham was halfway down, his wife in his arms. She seemed asleep. Duke snapped out of his attitude. "Hold it, Dad! I'll take her."

"Get on down and open the door!"

The door was steel set into the wall of the basement. Seconds were lost because Duke did not know how to handle its latch. At last Mr. Farnham passed his wife over to his son, opened it himself. Beyond, stairs led farther down. They managed it by carrying Mrs. Farnham, hands and feet, a limp doll, and took her through a second door into a room beyond. Its floor was six feet lower than the basement and under, Barbara decided, their back garden. She hung back while Mrs. Farnham was carried inside.

Mr. Farnham reappeared. "Barbara! Get in here! Where's Joseph? Where's Karen?"

Those two came rushing down the basement stairs as he spoke. Karen was flushed and seemed excited and happy. Joseph was looking wild-eyed and was dressed in undershirt and trousers, his feet bare.

He stopped short. "Mr. Farnham! Are they going to hit us?"

"I'm afraid so. Get inside."

The young Negro turned and yelled, "Doctor Livingston I presume!"-dashed back up the stairs.

Mr. Farnham said, "Oh, God!" and pressed his fists against his temples. He added in his usual voice, "Get inside, girls. Karen, bolt the door but listen for me. I'll wait as long as I can." He glanced at his watch. "Five minutes."

The girls went in. Barbara whispered, "What happened to Joseph? Flipped?"

"Well, sort of. Dr.-Livingston-I-Presume is our cat. Loves Joseph, tolerates us." Karen started bolting the inner door, heavy steel, and secured with ten inch-thick bolts.

She stopped. "I'm damned if I'll bolt this all the way while Daddy is outside!"

"Don't bolt it at all."

Karen shook her head. "I'll use a couple, so he can hear me draw them. That cat may be a mile away."

Barbara looked around. It was an L-shaped room; they had entered the end of one arm. Two bunks were on the right-hand wall; Grace Farnham was in the lower and still

asleep. The left wall was solid with packed shelves; the passage was hardly wider than the door. The ceiling was low and arched and of corrugated steel. She could see the ends of two more bunks at the bend. Duke was not in sight but he quickly appeared from around the bend, started setting up a card table in the space there. She watched in amazement as he got out the cards he had picked up-how long ago? It seemed an hour. Probably less than five minutes.

Duke saw her, grinned, and placed folding chairs around the table.

There came a clanging at the door. Karen unbolted it; Joseph tumbled in, followed by Mr. Farnham. A lordly red Persian cat jumped out of Joseph's arms, started an inspection. Karen and her father bolted the door. He glanced at his wife, then said, "Joseph! Help me crank."

"Yes, sir!"

Duke came over. "Got her buttoned up, Skipper?"

"All but the sliding door. It has to be cranked."

"Then come take your licking." Duke waved at the table. His father stared. "Duke, are you seriously proposing to finish a card game while we're being attacked?"

"I'm four hundred dollars serious. And another hundred says we aren't being attacked. In a half hour they'll call it off and tomorrow's papers will say the northern lights fouled up the radar. Play the hand? Or default?"

"Mmm- My partner will play it; I'm busy."

"You stand behind the way she plays it?"

"Of course."

Barbara found herself sitting down at the table with a feeling that she had wandered into a dream. She picked up her partner's hand, studied it. "Lead, Karen."

Karen said, "Oh, hell!" and led the trey of clubs. Duke picked up the dummy, laid it out in suits. "What do you want on it?" he asked.

"Doesn't matter. I'll play both hands face up."

"Better not."

"It's solid." She exposed the cards.

Duke studied them. "I see," he admitted. "Leave the hands; Dad will want to see this." He did some figuring. "Call it twenty-four hundred points. Dad!"

"Yes, Son?"

"I'm writing a check for four hundred and ninety-two dollars-and let that be a lesson to me."

"You don't need to-"

All lights went out, the floor slammed against their feet. Barbara felt frightening pressure on her chest, tried to stand up and was knocked over. All around was a noise of giant subway trains, and the floor heaved like a ship in a cross sea.

"Dad!"

"Yes, Duke! Are you hurt?"

"I don't know. But make that five hundred and ninety-two dollars!"

The subterranean rumbling went on. Through this roar Barbara heard Mr. Farnham chuckle. "Forget it!" he called out. "The dollar just depreciated."

Mrs. Farnham started to scream. "Hubert! Hubert, where are you? Hubert! Make it stop!"

"Coming, dear!" A pencil of light cut the blackness, moved toward the bunks near the door. Barbara raised her head, made out that it was her host, on hands and knees with a flashlight in his teeth. He reached the bunk, succeeded in quieting Grace; her screams ceased. "Karen?"

"Yes, Daddy."

"Are you all right?"

"Yes, Just bruised. My chair went over."

"All right. Get the emergency lighting on in this bay. Don't stand up. Crawl. I'll light you from here. Then get the hypo kit and-ow! Joseph!"

"Yes, sir."

"You in one piece?"

"I'm okay, Boss."

"Persuade your furry-faced Falstaff to join you. He jumped on me."

"He's just friendly, Mr. Farnham."

"Yes, yes. But I don't want him doing that while I'm giving a hypo. Call him."

"Sure thing. Here, Doc! Doe, Doe, Doe! Fish, Doe!"

Some minutes later the rumbling had died out, the floor was steady, Mrs. Farnham had been knocked out by injected drug, two tiny lights were glowing in the first bay, and Mr. Farnham was inspecting.

Damage was slight. Despite guardrails, cans had popped off shelves; a fifth of rum was broken. But liquor was almost the only thing stored in glass, and liquor had been left in cases, the rest of it had come through. The worst casualty was the shelter's battery-driven radio, torn loose from the wall and smashed.

Mr. Farnham was on his knees, retrieving bits of it. His son looked down. "Don't bother, Dad. Sweep it up and throw it away."

"Some parts can be salvaged."

"What do you know about radios?"

"Nothing," his father admitted. "But I have books."

"A book won't fix that. You should have stocked a spare."

"I have a spare."

"Then for God's sake get it! I want to know what's happened."

His father got up slowly and looked at Duke. "I would like to know, too. I can't hear anything over this radio I'm wearing. Not surprising, it's short range. But the spare is packed in foam and probably wasn't hurt."

"Then get it hooked up."

"Later."

"Later, hell. Where is it?"

Mr. Farnham breathed hard. "I've had all the yap I'm going to take."

"Huh? Sorry. Just tell me where the spare is."

"I shan't. We might lose it, too. I'm going to wait until I'm sure the attack is over."

His son shrugged. "Okay, if you want to be difficult. But all of us want to hear the news. It's a shabby trick if you ask me."

"Nobody asked you. I told you I've had all the yap I'm going to take. If you're itching to know what's happening outside, you can leave. I'll unbolt this door, crank back the armor door, and you can open the upper door yourself."

"Eh? Don't be silly."

"But close it after you. I don't want it open-both for blast and radioactivity."

"That's another thing. Don't you have any way to measure radioactivity? We ought to take steps to-"

"SHUT UP!"

"What? Dad, don't pull the heavy-handed father on me."

"Duke, I ask you to keep quiet and listen. Will you?"

"Well . . . all right. But I don't appreciate being bawled out in the presence of others."

"Then keep your voice down." They were in the first bay near the door. Mrs. Farnham was snoring by them; the others had retreated around the bend, unwilling to witness. "Are you ready to listen?"

"Very well, sir," Duke said stiffly.

"Good. Son, I was not joking. Either leave . . . or do exactly as I tell you. That includes keeping your mouth shut when I tell you to. Which will it be? Absolute obedience, prompt and cheerful? Or will you leave?"

"Aren't you being rather high-handed?"

"I intend to be. This shelter is a lifeboat and I am boat officer. For the safety of all I shall maintain discipline. Even if it means tossing somebody overboard."

"That's a farfetched simile. Dad, it's a shame you were in the Navy. It gives you romantic ideas."

"I think it's a shame, Duke, that you never had service. You're not realistic. Well, which is it? Will you take orders? Or leave?"

"You know I'm not going to leave. And you're not serious in talking about it. It's death out there."

"Then you'll take orders?"

"Uh, I'll be cooperative. But this absolute dictatorship- Dad, tonight you made quite a point of the fact that you are a free man. Well, so am I. I'll cooperate. But I won't take unreasonable orders, and as for keeping my mouth shut, I'll try to be diplomatic. But when I think it's necessary, I'll voice my opinion. Free speech. Fair enough?"

His father sighed. "Not nearly good enough, Duke. Stand aside, I want to unbolt the door."

"Don't push a joke too far, Dad."

"I'm not joking. I'm putting you out."

"Dad . . . I hate to say this . . . but I don't think you are man enough. I'm bigger than you are and a lot younger."

"I know. I've no intention of fighting you."

"Then let's drop this silly talk."

"Duke, please! I built this shelter. Not two hours ago you were sneering at it, telling me that it was a 'sick' thing to do. Now you want to use it, since it turned out you were wrong. Can't you admit that?"

"Oh, certainly. You've made your point."

"Yet you are telling me how to run it. Telling me that I should have provided a spare radio. When you hadn't provided anything. Can't you be a man, give in, and do as I tell you? When your life depends on my hospitality?"

"Cripes! I told you I would cooperate."

"But you haven't been doing so. You've been making silly remarks, getting in my way, giving me lip, wasting my time when I have urgent things to do. Duke, I don't want your cooperation, on your terms, according to your judgment. While we are in this shelter I want your absolute obedience."

Duke shook his head. "Get it through your head that I'm no longer a child, Dad. My cooperation, yes. But I won't promise the other."

Mr. Farnham shook his head sorrowfully. "Maybe it would be better if you took charge and I obeyed you. But I've given these circumstances thought and you haven't. Son, I anticipated that your mother might be hysterical; I had everything ready to handle it. Don't you think I anticipated this situation?"

"How so? It's pure chance that I'm here at all."

"'This situation' I said. It could be anybody. Duke, if we had been entertaining friends tonight-or if strangers had popped up, say that old fellow who rang the doorbell-I would have taken them in; I planned on extras. Don't you think, with all the planning I have done, that I would realize that somebody might get out of hand? And plan how to force them into line?"

"How?"

"In a lifeboat, how do you tell the boat officer?"

"Is that a riddle?"

"No. The boat officer is the one with the gun."

"Oh. I suppose you do have guns down here. But you don't have one now, and"-Duke grinned -"Dad, I can't see you shooting me. Can you?"

His father stared, then dropped his eyes. "No. A stranger, maybe. But you're my son." He sighed. "Well, I hope you cooperate."

"I will. I promise you that much."

"Thank you. If you'll excuse me, I have work to do." Mr. Farnham turned away. "Joseph!"

"Yes, sir?"

"It's condition seven."

"Condition seven, sir?"

"Yes, and getting worse. Be careful with the instruments and don't waste time."

"Right away, sir!"

"Thank you." He turned to his son. "Duke, if you really want to cooperate, you could pick up the pieces of this radio. It's the same model as the one in reserve. There may be pieces we can use to repair the other one if it becomes necessary. Will you do that?"

"Sure, sure. I told you I would cooperate." Duke got on his knees, started to complete the task he had interrupted.

"Thank you." His father turned away, moved toward the junction of the bays.

"Mr. Duke! Get your hands up!"

Duke looked over his shoulder, saw Joseph by the card table, aiming a Thompson submachine gun at him. He jumped to his feet. "What the hell!"

"Stay there!" Joseph said. "I'll shoot."

"Yes," agreed Duke's father, "he doesn't have the compunctions you thought I had. Joseph, if he moves, shoot him."

"Daddy! What's going on?"

Mr. Farnham turned to face his daughter. "Get back!"

"But, Daddy-"

"Shut up. Both of you get into that lower bunk. Karen on the inside. Move!"

Karen moved. Barbara looked wide-eyed at the automatic her host now held in his hand and got quickly into the lower bunk of the other bay. "Arms around each other," he said briskly. "Don't either of you let the other one move." He went back to the first bay.

"Duke."

"Yes?"

"Lower your hands slowly and unfasten your trousers. Let them fall but don't step out of them. Then turn slowly and face the door. Unfasten the bolts."

"Dad-"

"Shut up. Joseph, if he does anything but exactly what I told him to, shoot. Try for his legs, but hit him."

Face white, expression dazed, Duke did as he was told: let his trousers fall until he was hobbled, turned and started unbolting the door. His father let him continue until half the bolts were drawn. "Duke. Stop. The next few seconds determine whether you go- or stay. You know the terms."

Duke barely hesitated. "I accept."

"I must elaborate. You will not only obey me, you will obey Joseph."

"Joseph?"

"My second-in-command. I have to have one, Duke; I can't stay awake all the time. I would gladly have had you as deputy-but you would have nothing to do with it. So I trained Joseph. He knows where everything is, how it works, how to repair it. So he's my deputy. Well? Will you obey him just as cheerfully? No back talk?"

Duke said slowly, "I promise."

"Good. But a promise made under duress isn't binding. There is another commitment always given under duress and nevertheless binding, a point which as a lawyer you will appreciate. I want your parole as a prisoner. Will you give me your parole to abide by the conditions until we leave the shelter? A straight quid-pro-quo: your parole in exchange for not being forced outside?"

"You have my parole."

"Thank you. Throw the bolts and fasten your trousers. Joseph, stow the Tommy gun."

"Okay, Boss."

Duke secured the door, secured his pants. As he turned around, his father offered him the automatic, butt first. "What's this for?" Duke asked.

"Suit yourself. If your parole isn't good, I would rather find it out now."

Duke took the gun, removed the clip, worked the slide and caught the cartridge from the chamber, put it back into the clip and reloaded the gun-handed it back. "My parole is good. Here."

"Keep it. You were always a headstrong boy, Duke, but you were never a liar."

"Okay. . . Boss." His son put the pistol in a pocket. "Hot in here."

"And going to get hotter."

"Eh? How much radiation do you think we're getting?"

"I don't mean radiation. Fire storm." He walked into the space where the bays joined, looked at a thermometer, then at his wrist. "Eighty-four and only twenty-three minutes since we were hit. It'll get worse."

"How much worse?"

"How would I know, Duke? I don't know how far away the hit was, how many megatons, how widespread the fire. I don't even know whether the house is burning overhead, or was blasted away. Normal temperature in here is about fifty degrees. That doesn't look good. But there is nothing to do about it. Yes, there's one thing. Strip down to shorts. I shall."

He went into the other bay. The girls were still in the lower bunk, arms around each other, keeping quiet. Joseph was on the floor with his back to the wall, the cat in his lap. Karen looked round-eyed as her father approached but she said nothing.

"You kids can get up."

"Thanks," said Karen. "Pretty warm for snuggling." Barbara backed out and Karen sat up.

"So it is. Did you hear what just happened?"

"Some sort of argument," Karen said cautiously.

"Yes. And it's the last one. I'm boss and Joseph is my deputy. Understood?"

"Yes, Daddy."

"Mrs. Wells?"

"Me? Why, of course! It's your shelter. I'm grateful to be in it-I'm grateful to be alive! And please call me Barbara, Mr. Farnham."

"Sorry. 11mm- Call me 'Hugh,' I prefer it to "Hubert.' Duke, everybody-first names from now on. Don't call me 'Dad,' call me 'Hugh.' Joe, knock off the 'mister' and the 'miss.' Catch?"

"Okay, Boss, if you say so."

"Make that 'Okay, Hugh.' Now you girls peel down, panties and bra or such, then get Grace peeled to her skin and turn the light out there. It's hot, it's going to get hotter. Joe, strip to your shorts." Mr. Farnham took his jacket off, started unbuttoning his shirt.

Joseph said, "Uh, I'm comfortable."

"I wasn't asking, I was telling you."

"Uh. . . Boss, I'm not wearing shorts!"

"He's not," Karen confirmed. "I rushed him."

"So?" Hugh looked at his ex-houseboy and chuckled. "Joe, you're a sissy. I should have made Karen straw boss."

"Suits me."

"Get a pair out of stores and you can change in the toilet space. While you're about it, show Duke where it is. Karen, the same for Barbara. Then we'll gather for a powwow."

The powwow started five minutes later. Hugh Farnham was at the table, dealing out bridge hands, assessing them. When they were seated he said, "Anybody for bridge?"

"Daddy, you're joking."

"My name is 'Hugh.' I was not joking, a rubber of bridge might quiet your nerves. Put away that cigarette, Duke."

"Uh . . . sorry."

"You can smoke tomorrow, I think. Tonight I've got pure oxygen cracked pretty wide and we are taking in no air. You saw the bottles in the toilet space?" The space between the bays was filled by pressure bottles, a water tank, a camp toilet, stores, and a small area where a person might manage a stand-up bath. Air intakes and exhausts, capped off, were there, plus a hand-or-power blower, and scavengers for carbon dioxide and water vapor. This space was reached by an archway between the tiers of bunks.

"Oxygen in those? I thought it was air."

"Couldn't afford the space penalty. So we can't risk fire, even a cigarette. I opened one inlet for a check. Very hot- heat 'hot' as well as making a Geiger counter chatter. Folks, I don't know how long we'll be on bottled breathing. I figured thirty-six hours for four people, so it's nominally twenty-four hours for six, but that's not the pinch. I'm sweating-and so are you. We can take it to about a hundred and twenty. Above that, we'll have to use oxygen just to cool the place. It might end in a fine balance between heat and suffocation. Or worse."

"Daddy-'Hugh,' I mean. Are you breaking it gently that we are going to be baked alive?"

"You won't be, Karen. I won't let you be."

"Well . . . I prefer a bullet."

"Nor will you be shot. I have enough sleeping pills to let twenty people die painlessly. But we aren't here to die. We've had vast luck; with a little more we'll make it. So don't be morbid."

"How about radioactivity?" asked Duke.

"Can you read an integrating counter?"

"No."

"Take my word for it that we are in no danger yet. Now about sleeping- This side, where Grace is, is the girls' dorm; this other side is ours. Only four bunks but that's okay; one person has to monitor air and heat, and the other one without a bed can keep him awake. However, I'm taking the watch tonight and won't need company; I've taken Dexedrine."

"I'll stand watch."

"I'll stay up with you."

"I'm not sleepy."

"Slow down!" Hugh said. "Joe, you can't stand watch now because you have to relieve me when I'm tuckered out. You and I will alternate until the situation is safe."

Joe shrugged and kept quiet. Duke said, "Then it's my privilege."

"Can't either of you add? Two bunks for women, two for men. What's left over? We'll fold this table and the gal left over can sprawl on the floor here. Joe, break out the blankets and put a couple here and a couple in the tank space for me."

"Right away, Hugh!"

Both girls insisted on standing watch. Hugh shut them off. "Cut for it."

"But-"

"Pipe down, Barbara. Ace low, and low girl sleeps in a bunk, the other here on the floor. Duke, do you want a sleeping pill?"

"That's one habit I don't have."

"Don't be an iron man."

"Well. . . a rain check?"

"Surely. Joe? Seconal?"

"Well, I'm so relieved that I don't have to take that quiz tomorrow. . ."

"Glad somebody is happy. All right."

"I was going to add that I'm pretty keyed up. You're sure you won't need me?"

"I'm sure. Karen, get one for Joe. You know where?"

"Yes, and I'm going to get one for me, since I won the cut. I'm no iron man! And a Miltown on top of it."

"Do that. Sorry, Barbara, you can't have one; I might have to wake you and have you keep me awake. You can have Miltown. You'll probably sleep from it."

"I don't need it."

"As you wish. Bed, everybody. It's midnight and two of you are going on watch in eight hours."

In a few minutes all were in bed, with Barbara where the table had been; all lights out save one in the tank space. Hugh squatted on blankets there, playing solitaire-badly.

Again the floor heaved, again came that terrifying rumble. Karen screamed.

Hugh was up at once. This one was not as violent; he was able to stay on his feet. He hurried into the girls' dorm. "Baby! Where are you?" He fumbled, found the light switch.

"Up here, Daddy. Oh, I'm scared! I was just dropping off and it almost threw me out. Help me down."

He did so; she clung to him, sobbing. "There, there," he said, patting her. "You've been a brave girl, don't let it throw you."

"I'm not brave. I've been scared silly all along. I just didn't want it to show."

"Well . . . I'm scared too. So let's not show it, huh? Better have another pill. And a stiff drink."

"All right. Both. I'm not going to sleep in that bunk. It's too hot up there, as well as scary when it shakes."

"All right, I'll pull the mattress down. Where's your panties and bra, baby girl? Better put 'em on."

"Up there. I don't care, I just want people. Oh, I suppose I should. Shock Joseph if I didn't."

"Just a moment. Here are your pants. But where did you hide your brassiere?"

"Maybe it got pushed down behind."

Hugh dragged the mattress down. "I don't find it."

"The hell with it. Joe can look the other way. I want that drink."

"All right. Joe's a gentleman."

Duke and Barbara were sitting on the blanket she had been napping on; they were looking very solemn. Hugh said, "Where's Joe? He wasn't hurt, was he?"

Duke gave a short laugh. "Want to see 'Sleeping Innocence'? That bottom bunk."

Hugh found his second-in-command sprawled on his back, snoring, as deeply unconscious as Grace Farnham. Dr.-Livingstone-I-Presume was curled up on his chest. Hugh came back. "Well, that blast was farther away. I'm glad Joe could sleep."

"It was too damned close to suit me! When are they going to run out of those things?"

"Soon, I hope. Folks, Karen and I have just formed the 'I'm-scared-too' club and are about to celebrate with a drink. Any candidates?"

"I'm a charter member!"

"So am I," agreed Barbara. "God, yes!"

Hugh fetched paper cups, and bottles-Scotch, Seconal, and Miltown. "Water, anyone?"

Duke said, "I don't want anything interfering with the liquor."

"Water, please," Barbara answered. "It's so hot."

"How hot is it, Daddy?"

"Duke, I put the thermometer in the tank room. Go see, will you?"

"Sure. And may I use that rain check?"

"Certainly." Hugh gave Karen another Seconal capsule, another Miltown pill, and told Barbara that she must take a Miltown-then took one himself, having decided that Dexedrine had made him edgy. Duke returned.

"One hundred and four degrees," he announced. "I opened the valve another quarter turn. All right?"

"Have to open it still wider soon. Here are your pills, Duke-a double dose of Seconal and a Miltown."

"Thanks." Duke swallowed them, chased them with whisky. "I'm going to sleep on the floor, too. Coolest place in the house."

"Smart of you. All right, let's settle down. Give the pills a chance."

Hugh sat with Karen after she bedded down, then gently extracted his hand from hers and returned to the tank room. The temperature was up two degrees. He opened the valve on the working tank still wider, listened to it sigh to emptiness, shook his head, got a wrench and shifted the gauge to a full tank. Before he opened it, he attached a hose, led it out into the main room. Then he went back to pretending to play solitaire.

A few minutes later Barbara appeared in the doorway. "I'm not sleepy," she said. "Could you use some company?"

"You've been crying."

"Does it show? I'm sorry."

"Come sit down. Want to play cards?"

"If you want to. All I want is company."

"We'll talk. Would you like another drink?"

"Oh, would I! Can you spare it?"

"I stocked plenty. Barbara, can you think of a better night to have a drink? But both of us will have to see to it that the other one doesn't go to sleep."

"All right. I'll keep you awake."

They shared a cup, Scotch with water from the tank. It poured out as sweat faster than they drank it. Hugh increased the gas flow again and found that the ceiling was unpleasantly hot. "Barbara, the house must have burned over us. There is thirty inches of concrete above us and then two feet of dirt."

"How hot do you suppose it is outside?"

"Couldn't guess. We must have been close to the fireball." He felt the ceiling again. "I beefed this thing up-roof, walls, and floor are all one steel-reinforced box. It was none too much. We may have trouble getting the doors open. All this heat- And probably warped by concussion."

She said quietly, "Are we trapped?"

"No, no. Under these bottles is a hatch to a tunnel. Thirty inch culvert pipe with concrete around it. Leads to the gully back of the garden. We can break out-crowbars and a hydraulic jack-even if the end is crushed in and covered with crater glass. I'm not worried about that; I'm worried about how long we can stay inside . . . and whether it will be safe when we leave."

"How bad is the radioactivity?"

He hesitated. "Barbara, would it mean anything to you? Know anything about radiation?"

"Enough. I'm majoring-I was majoring-in botany; I've used isotopes in genetics experiments. I can stand bad news, Hugh, but not knowing-well, that's why I was crying."

"Mmm- The situation is worse than I told Duke." He jerked his thumb over his shoulder. "Integrating counter back of the bottles. Go look."

She went to it, stayed several minutes. When she came back, she sat down without speaking. "Well?" he asked.

"Could I have another drink?"

"Certainly." He mixed it.

She sipped it, then said quietly, "If the slope doesn't change, we'll hit the red line by morning." She frowned. "But that marks a conservative limit. III remember the figures, we probably won't start vomiting for at least another day."

"Yes. And the curve should level off soon. That's why heat worries me more than radiation." He looked at the thermometer, cracked the valve still wider. "I've been running the water-vapor getter on battery; I don't think we should crank the blower in this heat. I'm not going to worry about Cee-Oh-Two until we start to pant."

"Seems reasonable."

"Let's forget the hazards. Anything you'd like to talk about? Yourself?"

"Little to tell, Hugh. Female, white, twenty-five years old. Back in school, or was, after a bad marriage. A brother in the Air Force-so possibly he's all right. My parents were in Acapulco, so perhaps they are, too. No pets, thank God-and I was so pleased that Joe saved his cat. No regrets, Hugh, and not afraid. . . not really. Just . . . sad." She sniffed. "It was a pretty nice world, even if I did crumb up my marriage."

"Don't cry."

"I'm not crying! Those drops are sweat."

"Yes. Surely."

"They are. It's terribly hot." Suddenly she reached both hands behind her ribs. "Do you mind? If I take this off? Like Karen? It's smothering me."

"Go ahead. Child, if you can get comfortable-or less uncomfortable-do so. I've seen Karen all her life, Grace even longer. Skin doesn't shock me." He stood up, went behind the oxygen bottles, and looked at the record of radiation. Having done so, he checked the thermometer and increased the flow of oxygen.

As he sat down he remarked, "I might as well have stored air instead of oxygen, then we could smoke. But I did not expect to use it for cooling." He ignored the fact that she had accepted his invitation to be comfortable. He added, "I was worried about heating the place. I tried to design a stove to use contaminated air safely. Possible. But difficult."

"I think you did amazingly well. This is the only shelter I've ever heard of with stored air. You're a scientist. Aren't you?"

"Me? Heavens, no. High school only. What little I know I picked up here and there. Some in the Navy, metal work and correspondence courses. Then I worked for a public futility and learned something about construction and pipelines. Then I became a contractor." He smiled. "No, Barbara, I'm a 'general specialist.' 'The Elephant Child's 'satiable curiosity.' Like Dr. -Livingston-I-Presume.

"How did a cat get a name like that?"

"Karen. Because he's a great explorer. That cat can get into anything. Do you like cats?"

"I don't know much about them. But Dr. Livingstone is a beauty."

"So he is but I like all cats. You don't own a cat, he is a free citizen. Take dogs; dogs are friendly and fun and loyal. But slaves. Not their fault, they've been bred for it. But slavery makes me queasy, even in animals."

He frowned. "Barbara, I'm not as sad over what has happened as you are. It might be good for us. I don't mean us six; I mean our country."

She looked startled. "How?"

"Well- It's hard to take the long view when you are crouching in a shelter and wondering how long you can hold out. But- Barbara, I've worried for years about our country. It seems to me that we have been breeding slaves-and I believe in freedom. This war may have turned the tide. This may be the first war in history which kills the stupid rather than the bright and able-where it makes any distinction."

"How do you figure that, Hugh?"

"Well, wars have always been hardest on the best young men. This time the boys in service are as safe or safer than civilians. And of civilians those who used their heads and made preparations stand a far better chance. Not every case, but on the average, and that will improve the breed. When it's over, things will be tough, and that will improve the breed still more. For years the surest way of surviving has been to be utterly worthless and breed a lot of worthless kids. All that will change."

She nodded thoughtfully. "That's standard genetics. But it seems cruel."

"It is cruel. But no government yet has been able to repeal natural laws, though they keep trying."

She shivered in spite of the heat. "I suppose you're right. No, I know you're right. But I could face it more cheerfully if I thought there was going to be any country left. Killing the poorest third is good genetics . . . but there is nothing good about killing them all."

"Mmm, yes. I hate to think about it. But I did think about it. Barbara, I didn't stockpile oxygen just against radiation and fire storm. I had in mind worse things."

"Worse? How?"

"All the taik about the horrors of World War Three has been about atomic weapons-fallout, hundred-megaton bombs, neutron bombs. The disarmament talks and the pacifist parades have all been about the Bomb, the Bomb, the Bomb-as if A-weapons were the only thing that could kill. This may not be just an A-weapons war; more likely it is an ABC war-atomic, biological, and chemical." He hooked a thumb at the tanks. "That's why I stocked that bottled breathing. Against nerve gas. Aerosols. Viruses. God knows what. The communists won't smash this country if they can kill us without destroying our wealth. I wouldn't be surprised to learn that bombs had been used only on military targets like the antimissile base here, but that New York and Detroit and such

received nerve gas. Or a twenty-four plague with eighty percent mortality. The horrid possibilities are endless. The air outside could be loaded with death that a counter won't detect and a filter can't stop." He smiled grimly. "Sorry. You had better go back to bed."

"I'm miserable anyway and don't want to be alone. May I stay?"

"Certainly. I'm happier with you present no matter how gloomy I sound."

"What you've been saying isn't nearly as gloomy as the thoughts I have alone. I wish we knew what was going on outside!" She added, "I wish we had a periscope."

"We do have."

"Huh? Where?"

"Did have. Sorry. That pipe over there. I tried to raise it but it won't budge. However- Barbie, I tromped on Duke for demanding that I break out our spare radio before the attack was over. But maybe it's over. What do you think?"

"Me? How would I know?"

"You know as much as I do. That first missile was intended to take out the MAMMA base; they wouldn't bother with us otherwise. If they are spotting from orbiting spaceships, then that second one was another try at the same target. The timing fits, time of flight from Kamchatka is about half an hour and the second hit about forty-five minutes after the first. That one was probably a bull's-eye-and they know it, because more than an hour has passed and no third missile. That means they are through with us. Logical?"

"Sounds logical to me."

"It's crumby logic, my dear. Not enough data. Perhaps both missiles failed to knock out MAMMA, and MAMMA is now knocking out anything they throw. Perhaps the Russkis have run out of missiles. Perhaps the third round will be delivered by bomber. We don't know. But I'm itching to find out. Twist my arm."

"I would certainly like to hear some news."

"We'll try. If it's good news, we'll wake the others." Hugh Farnham dug into a corner, came out with a box, unpacked a radio. "Doesn't have a scratch. Let's try it without an antenna.

"Nothing but static," he announced shortly. "Not surprised. Although it's mate could pull in local stations without an aerial. Now we'll hook to the fixed antenna. Wait here."

He returned shortly. "No soap. Stands to reason that there isn't anything left of the fixed antenna. So we'll try the emergency one."

Hugh took a wrench and removed a cap from an inch pipe that stuck down through the ceiling. He tested the opening with a radiation counter. "A little more count." He got two steel rods, each five feet long; with one he probed the pipe. "Doesn't go up as far as it should. The top of this pipe was buried just belowground. Trouble." He screwed the second rod into the first.

"Now comes the touchy part. Stand back, there may be debris-hot both ways-spilling down."

"It'll get on you."

"On my hands, maybe. I'll scrub afterwards. You can go over me with a Geiger counter." He tapped with a sledge on the bottom of the joined rods. Up they went about eighteen inches. "Something solid. I'll have to bang it."

Many blows later the rod was seated into the pipe. "It felt," he said, as he stopped to scrub his hands, "as if we passed into open air the last foot or so. But it should have stuck out five feet above ground. Rubble, I suppose. What's left of our home. Want to use the counter on me?"

"Hugh, you say that as casually as 'What's left of yesterday's milk."

He shrugged. "Barbie girl, I was broke when I joined the Navy, I've been flat busted since; I will not waste tears over a roof and some plumbing. Getting any count?"

"You're clean."

"Check the floor under the pipe."

There were hot spots on the floor; Hugh wiped them with damp Kleenex, disposed of it in a metal waste can. She checked his hands afterwards, and the spots on the floor.

"Well, that used up a gallon of water; this radio had better work." He clipped the antenna lead to the rod, switched it on.

Ten minutes later they admitted that they were getting nothing. Noise-static all over the dial-but no signal. He sighed. "I'm not surprised. I don't know what ionization does to radio waves, but that must be a sorcerer's brew of hot isotopes over our heads. I had hoped we could get Salt Lake City."

"Not Denver?"

"No. Denver had an ICBM base. I'll leave the gain up; maybe we'll hear something."

"Don't you want to save the battery?"

"Not really. Let's sit down and recite limericks." He looked at the integrating counter, whistled softly, then checked the thermometer. "I'll give our sleeping beauties a little more relief from the heat. How well are you standing it, Barbie?"

"Truthfully, I had forgotten it. The sweat pours off and that's that."

"Me, too."

"Well, don't use more oxygen on my account. How many bottles are left?"

"Not many."

"How many?"

"Less than half. Don't fret. I'll bet you five hundred thousand dollars-fifty cents in the new currency-that you can't recite a limerick I don't know."

"Clean, or dirty?"

"Are there clean ones?"

"Okay. 'A playful young fellow named Scott-'" The limerick session was a flop. Hugh accused her of having a clean mind. She answered, "Not really, Hugh. But my mind isn't working."

"I'm not at my sharpest. Another drink?"

"Yes. With water, please, I sweat so; I'm dry. Hugh?"

"Yes, Barbie?"

"We're going to die. Aren't we?"

"Yes."

"I thought so. Before morning?"

"Oh, no! I feel sure we can live till noon. If we want to."

"I see. Hugh, would you mind if I moved over by you? Would you put your arm around me? Or is it too hot?"

"Any time I'm too hot to put my arm around a girl I'll know I'm dead and in hell."
"Thanks."
"Room enough?"
"Plenty."
"You're a little girl."
"I weigh a hundred and thirty-two pounds and I'm five feet eight and that's not little."
"You're a little girl. Put the cup aside. Tilt your face up."
"Mmmm- Again. Please, again."
"A greedy little girl."
"Yes. Very greedy. Thank you, Hugh."
"Such pretty ones."
"They're my best feature. My face isn't much. But Karen's are prettier."
"A matter of opinion. Your opinion."
"Well- I won't argue. Scrunch over a little, dear. Dear Hugh-"
"All right?"
"Room enough. Wonderfully all right. And kiss me, too. Please?"
"Barbara, Barbara!"
"Hugh darling! I love you. Oh!"
"I love you, Barbara."
"Yes. Yes! Oh, please! Now!"
"Right now!"

"You all right, Barbie?"
"I've never been more all right. I've never been happier in my life."
"I wish that were true."
"It is true. Hugh darling, I'm utterly happy now and not at all afraid. I feel wonderful. Not even too warm."
"I'm dripping sweat on you."
"I don't mind. There are two drops on your chin and one on the end of your nose. And I'm so sweaty my hair is soaked. Doesn't matter. Hugh dearest, this is what I wanted. You. I don't mind dying-now."
"I do!"
"I'm sorry."
"No, no! Barbie hon, I didn't mind dying, before. Now suddenly life is worth living."
"Oh. I think it's the same feeling."
"Probably. But we aren't going to die, ii I can swing it. Want to move now?"
"If you want to. If you'll put your arm around me after we do."
"Try to stop me. But first I'm going to make us a long, tall drink. I'm thirsty again. And breathless."
"Me, too. Your heart is pounding."
"It has every excuse. Barbie girl, do you realize that I am more than twice your age? Old enough to be your father."
"Yes, Daddy."
"Why, you little squirt! Talk that way and I'll drink this all myself."

"Yes, Hugh. Hugh my beloved. But we are the same age
because we are going to die at the same time."

"Don't talk about dying. I'm going to find some way to outwit it."

"If anybody can, you will. Hugh, I'm not feeling morbid. I've looked it in the face and I'm no longer afraid-not afraid to die, not afraid to live. But- Hugh, I'd like one favor."

"Name it."

"When you give the pills to the others-the overdose-I don't want them."

"Uh. . . it might be needful."

"I didn't mean that I wouldn't; I will when you tell me to. But not when the others do. Not until you do."

"Mmm, Barbie, I don't plan on taking them."

"Then please don't make me take them."

"Well- I'll think about it. Now shut up. Kiss me."

"Yes, dear."

"Such long legs you have, Barbie. Strong, too."

"And such big feet."

"Quit fishing for compliments. I like your feet. You would look unfinished without them."

"Be inconvenient, too. Hugh, do you know what I would like to do?"

"Again?"

"No, no. Well, yes. But right now."

"Sleep? Go ahead, dear. I won't fall asleep."

"No, not sleep. I'm not ever going to sleep again. Never. I can't spare one minute we've got left. I was thinking that I would like to play contract again-as your partner."

"Well- We might be able to rouse Joe. Not the others; three grains of Seconal is pretty convincing. We could play three-handed."

"No, no. I don't want any company but you. But I so enjoyed playing, as your partner."

"You're a good partner, honey. The best. When you say 'by the book,' you mean it."

"Not 'the best.' I'm not in your class. But I wish that we had-oh, years and years !- so that I could get to be. And I wish the attack had held off ten minutes, so that you could have played that grand slam."

"Didn't need to. When you answered my bid I knew it was a lay-down." He squeezed her shoulders. "Three grand slams in one night."

"Three?"

"Didn't you consider that H-bomb a grand slam?"

"Oh. And then there was the second bomb, later."

"I was not counting the second bomb, it was too far away. If you don't know what I counted, I refuse to draw a diagram."

"Oh! In that case, there could easily be a fourth grand slam. I can't make another forcing bid; my bra is gone and-"

"Was that a forcing bid?"

"Of course it was. But you can make the next forcing bid. I'll spot it."

"Slow down! Three grand slams is maximum. A small slam, maybe-if I take another Dexedrine. But four grand slams? Impossible. You know how old I am."

"We'll see. I think we'll get a fourth."

At that moment the biggest slam of all hit them.

Chapter 3

The light went out, Grace Farnham screamed, Dr.-Livingstone--I-Presume wailed, Barbara was knocked silly and came to heaped over a steel bottle and disoriented by blackness and no floors or walls.

She groped around, found a leg, found Hugh attached to it. He was limp. She felt for his heartbeat, could not find it.

She shouted: "Hello! Hello! Anybody!" Duke answered, "Barbara?"

"Yes, yes!"

"Are you all right?"

"I'm all right. Hugh is hurt. I think he's dead."

"Take it easy. When I find my trousers, I'll light a match- if I can get off my shoulders. I'm standing on them."

"Hubert! Hubert!"

"Yes, Mother! Wait." Grace continued to scream; Duke alternated reassurances and cursing the darkness. Barbara felt around, slipped on loose oxygen bottles, hurt her shin, and found a flat surface. She could not tell what it was; it was canted steeply.

Duke called out, "Got 'em!" A match flared up, torch bright in oxygen-rich air.

Joe's voice said, "Better put that out. Fire hazard." A flashlight beam cut the gloom.

Barbara called out, "Joe! Help me with Hugh!"

"Got to see about lights."

"He may be dying."

"Can't do a thing without light." Barbara shut up, tried again to find heartbeat-found it and clutched Hugh's head, sobbing.

Lights came on in the men's bay; enough trickled in so that Barbara could make out her surroundings. The floor sloped about thirty degrees; she, Hugh, steel bottles, water tank, and other gear were jumbled in the lower corner. The tank had sprung a leak and was flooding the toilet space. She saw that, had the tilt been the other way, she and Hugh would have been buried under steel and water.

Minutes later Duke and Joe joined her, letting themselves down through the door. Joe carried a camp lamp. Duke said to Joe, "How are we going to move him?"

"We don't. It might be his spine."

"Still have to move him."

"We don't move him," Joe said firmly. "Barbara, have you moved him?"

"I took his head in my lap."

"Well, don't move him anymore." Joe looked his patient over, touching him gently. "I can't see any gross injuries," he decided. "Barbara, if you can stay put, we'll wait until he comes to. Then I can check his eyes for concussion, see if he can wiggle his toes, things like that."

"I'll hold still. Anybody else hurt?"

"Not to speak of," Duke assured her. "Joe thinks he's cracked some ribs and I wrenched a shoulder. Mother just got rolled into the corner of her bunk. Sis is soothing her. Sis is okay-a lump on her head where a can conked her. Are you all right?"

"Just bruises. Hugh and I were playing double solitaire and trying to keep cool when it hit." She wondered how long the lie would stand up. Duke had no more on than she did and didn't seem troubled by it; Joe was dressed in underwear shorts. She added, "The cat? Is he all right?"

"Dr.-Livingstone-I-Presume," Joe answered seriously, "escaped injury. But he is vexed that his sandbox was dumped over. He's cleaning himself and criticizing."

"I'm glad he wasn't hurt."

"Notice anything about this blast?"

"What, Joe? It was the hardest of the three. Much the hardest."

"Yes. But no rumbling. Just one great, big, grand slam, then. . . nothing."

"What does that indicate?"

"I don't know. Barbara, can you stay here and not move? I want to get more lights on, check the damage, and see what to do about it."

"I won't move." Hugh seemed to be breathing easily. In the silence she could hear his heart beat. She decided that she didn't have anything to be unhappy about.

Karen joined her, carrying a flashlight and moving carefully on the slant. "How's Daddy?"

"No change."

"Knocked cold, I guess. So was I. You okay?" She played the flashlight over Barbara.

"Not hurt."

"Well! I'm glad you're in uniform, too. I can't find my pants. Joe ignores it so carefully, it's painful. Is that boy square!"

"I don't know where my clothes are."

"Joe has the only pants among us. What happened to you? Were you asleep?"

"No. I was here. We were talking."

"Hmm- Further deponent sayeth not. I'll keep your grisly secret. Mother won't know; I gave her another hypo."

"Aren't you jumping at conclusions?"

"My favorite exercise. I hope my nasty suspicions are correct. I wish I had had something better to do than sleep last night. Since it's probably our last night." She leaned over and kissed Barbara. "I like you."

"Thanks, Karen. Me, too. You."

"Let's hold a funeral and preach about what nice guys we are. You made my daddy happy when you had the guts to bid that slam. If you made him happier still, I'm in favor of it." She straightened up. "'Bye. I'll go sort groceries. If Daddy wakes up, yell." She left.

"Barbara?"

"Yes, Hugh? Yes!"

"Keep your voice down. I heard what my daughter said."

"You did?"

"Yes. She's a gentleman. Barbara? I love you. I may not have another chance to say so."

"I love you."

"Darling."

"Shall I call the others?"

"Shortly. Are you comfortable?"

"Oh, very!"

"Then let me rest a bit. I feel woozy."

"As long as you like. Uh, can you wiggle your toes? Do you hurt anyplace?"

"I hurt lots of places, but not too much. Let me see- Yes, I can move everything. All right, call Joe."

"No hurry."

"Better call him. Work to do."

Shortly Mr. Farnham was back in charge. Joe required him to move himself-a mass of bruises but no break, sprain, nor concussion. It seemed to Barbara that Hugh had landed on the bottles and that she had landed on him. She did not discuss her theory.

Hugh's first act was to bind Joe's ribs with elastic bandage. Joe gasped as it tightened but seemed more comfortable with it. The lump on Karen's head was inspected; Hugh decided that there was nothing he could do for it.

"Will somebody fetch the thermometer?" he asked. "Duke?"

"It's busted."

"It's a bimetal job. Shockproof."

"I looked for it," Duke explained, "while you were doctoring. Seems cooler to me. While it may be shockproof, it couldn't stand being mashed between two tanks."

"Oh. Well, it's no big loss."

"Dad? Wouldn't this be a good time to try the spare radio? Just a suggestion."

"I suppose so, but- I hate to tell you, Duke, but you'll probably find it smashed, too. We tried it earlier. No results." He glanced at his wrist. "An hour and half ago. At two A.M. Has anyone else the time?"

Duke's watch agreed.

"We seem to be in fair shape," Hugh decided, "except for water. There are some plastic jugs of water but we need to salvage the tank water; we may have to drink it. With Halazone tablets. Joe, we need utensils of any sort, and everybody bail. Keep it as clean as you can." He added, "When Joe can spare you, Karen, scrounge some breakfast. We've got to eat, even if this is Armageddon."

"And Armageddon sick of it," Karen offered.

Her father winced. "Baby girl, you will write on the blackboard one thousand times: 'I will not make bad puns before breakfast.'"

"I thought it was pretty good, Hugh."

"Don't encourage her, Barbara. All right, get with it."

Karen returned shortly, carrying Dr. Livingstone. "I wasn't much help," she announced, "because somebody has to hang onto this damn cat. He wants to help."

"Kablerrrrt!"

"You did so! I'm going to entice him with sardines and get breakfast. What do you want, Daddy Hugh Boss? Crêpes Suzettes?"

"Yes."

"What you'll get is Spam and crackers."

"All right. How's the bailing going?"

"Daddy, I won't drink that water even with Halazone." She made a face. "You know where it wound up."

"We may have to drink it."

"Well. . . if you cut it with whisky-"

"Mmm- Every case of liquor is leaking. The two I've opened each has one fifth, unbroken."

"Daddy, you've ruined breakfast."

"The question is, do I ration it evenly? Or save it all for Grace?"

"Oh." Karen's features screwed up in painful decision. "She can have my share. But the others shouldn't be deprived just because Gracie has a yen."

"Karen, at this stage it's not a yen. In a way, for her it's medicine."

"Yeah, sure. And diamond bracelets and sable coats are medicine for me."

"Baby, there's no point in blaming her. It may be my fault. Duke thinks so. When you are my age, you will learn to take people as they are."

"Hush mah mouf. Maybe I'm harsh-but I get tired of bringing friends home and having Mom pass out about dinnertime. Or try to kiss my boy friends in the kitchen."

"She does that?"

"Haven't you seen? No, you probably haven't. Sorry."

"I'm sorry, too. But only on your account. It's a peccadillo, at most. As I was saying, when you get to be my age-"

"Daddy, I don't expect to get to be your age-and we both know it. If we've got even two fifths of liquor, it's probably enough. Why don't you just serve it to whoever needs it?"

The lines in his face got deeper. "Karen, I haven't given up. It's distinctly cooler. We may get out of this yet."

"Well- I guess that's the proper attitude. Speaking of medicine, didn't you squirrel away some Antabuse when we built this monster?"

"Karen, Antabuse doesn't stop the craving; it simply makes the patient deathly ill if he drinks. If your estimate of our chances is correct, can you see any reason why I should force Grace to spend her last hours miserably? I'm not her judge, I'm her husband."

Karen sighed. "Daddy, you have an annoying habit of being right. All right, she can have mine."

"I was merely asking your opinion. You've helped. I've decided."

"Decided how?"

"None of your business, half pint. Get breakfast."

"I'm going to put kerosene in yours. Give me a kiss, Daddy."

He did. "Now pipe down and get to work."

Five of them gathered for breakfast, sitting on the floor as chairs would not stand up. Mrs. Farnham was still lethargic from heavy sedation. The others shared canned meat, crackers, cold Nescafé, canned peaches, and warm comradeship. They were

dressed, the men in shorts, Karen in shorts and halter, and Barbara in a muumuu belonging to Karen. Her underwear had been salvaged but was soaked and the air was too moist to dry it.

Hugh announced, "Time for a conference. Suggestions are welcome." He looked at his son.

"One item, Dad-Hugh," Duke answered. "The backhouse took a beating. I patched it and rigged a platform out of boards that had secured the air bottles. Just one thing-" He turned to his sister. "You setter types be careful. It's shaky."

"You be careful. You were the one hard to housebreak. Ask Daddy."

"Stow it, Karen. Good job, Duke. But with six of us I think we should rig a second one. Can we manage that, Joe?"

"Yes, we could. But. . ."

"But what?"

"Do you know how much oxy is left?"

"I do. We must shift to blower and filter soon. And there is not a working radiation counter left. So we won't know what we'll be letting in. However, we've got to breathe."

"But did you look at the blower?"

"It looked all right."

"It's not. I don't think I can repair it."

Mr. Farnham sighed. "I've had a spare on order for six months. Well, I'll look at it, too. And you, Duke; maybe one of us can fix it."

"Okay."

"Let's assume we can't repair it. Then we use the oxygen as sparingly as possible. After that we can get along, for a while, on the air inside. But there will come a time when we have to open the door."

Nobody said anything. "Smile, somebody!" Hugh went on. "We aren't licked. We'll rig dust filters out of sheets in the door-better than nothing. We still have one radio-the one you mistook for a hearing aid, Barbara. I wrapped it and put it away; it wasn't hurt. I'll go outside and put up an antenna and we can listen to it down here; it could save us. We'll rig a flagpole, from the sides of a bunk perhaps, and fly a flag. A hunting shirt. No, the American flag; I've got one. If we don't make it, we'll go down with our colors flying!"

Karen started clapping. "Don't scoff, Karen."

"I'm not scoffing, Daddy! I'm crying. 'The rockets' red glare-the bombs bursting in air-gave proof through the night- that our flag was still-'" Her voice broke and she buried her face in her hands.

Barbara put an arm around her. Hugh Farnham went on as if nothing had happened. "But we won't go down. Soon they will search this area for survivors. They'll see our flag and take us out-helicopter, probably.

"So our business is to be alive when they come." He stopped to think. "No unnecessary work, no exercise. Sleeping pills for everybody and try to sleep twelve hours a day and lie down all the time; it will make the air last as long as possible. The only work is to repair that blower and we'll knock that off if we can't fix it. Let's see- Water must be rationed. Duke, you are water marshal. See how much pure water there is; work out a schedule to stretch it. There is a one-ounce glass with the medicines; use it to

dispense water. That's all, I guess: repair the blower, minimum exercise, maximum sleep, rationed water. Oh, yes! Sweat is wasteful. It's still hot and, Barbara, you've sweat right through that sack. Take it off."

"May I leave the room?"

"Certainly." She left, walking carefully on the steep floor, went into the tank room, and returned wearing her soaked underwear. "That's better," he approved. "Now-"

"Hubert! Hubert! Where are you? I'm thirsty." "Duke, give her one ounce. Charge it to her." "Yes, sir."

"Don't forget that the cat has to have water."

"The dirty water, maybe?"

"Hmm. We won't die through playing fair with our guest. Let's keep our pride."

"He's been drinking the dirty water."

"Well- You boss it. Suggestions, anyone? Joe, do the plans suit you?"

"Well- No, sir."

"So?"

"No exercise, least oxygen used, makes sense. But when it comes time to open the door, where are we?"

"We take our chances."

"I mean, can we? Short on air, panting, thirsty, maybe sick- I'd like to be certain that anyone, Karen say, with a broken arm, can get that door open."

"I see."

"I'd like to try all three doors. I'd like to leave the armor door open. A girl can't handle that crank. I volunteer to try the upper door."

"Sorry, it's my privilege. I go along with the rest. That's why I asked for suggestions. I'm tired, Joe; my mind is fuzzy."

"And if the doors are blocked? Probably rubble against the upper door-"

"We have the jack."

"Well, if we can't use the doors, we should make sure of the escape tunnel. Duke's shoulder isn't so good. My ribs are sore but I can work-today. Tomorrow Duke and I will be stiff and twice as sore. There are those steel bottles cluttering the hatch and plunder stored in the hole. Takes work. Boss, I say we've got to be sure of our escape-while we're still in pretty good shape."

"I hate to order heavy work. But you've convinced me." Hugh stood up, suppressing a groan. "Let's get busy."

"I've got one more suggestion."

"So?"

"You ought to sack in. You haven't been to bed at all and you got banged up pretty hard."

"I'm okay. Duke has a bad shoulder, you've got cracked ribs. And there's heavy work to be done."

"I plan to use block and tackle to skid those bottles aside. Barbara can help. She's husky, for a girl."

"Certainly I can," agreed Barbara. "I'm bigger than Joe is. Excuse me, Joe."

"No argument. Boss. Hugh. I don't like to emphasize it but I thought of this. You admit you're tired. Not surprising, you've been on the go twenty-four hours. Do you mind my saying that I would feel more confident you could get us through if you would rest?"

"He's right, Hugh."

"Barbara, you haven't had any sleep."

"I don't have to make decisions. But I'll lie down and Joe can call me when he needs me. Okay, Joe?"

"Fine, Barbara."

Hugh grinned. "Ganging up on me. All right, I'll take a nap."

A few minutes later he was in the bottom bunk in the men's dormitory, his feet braced against the footboard. He closed his eyes and was asleep before he could get his worries organized.

Duke and Joe found that five of the bolts of the inner door were stuck. "We'll let them be," Joe decided. "We can always drift them back with a sledgehammer. Let's crank back the armor door."

The armor door, beyond the bolted door, was intended to withstand as much blast as the walls. It was cranked into place, or out, by a rack and gear driven by a long crank.

Joe could not budge it. Duke, heavier by forty pounds, put his weight on it-no results. Then they leaned on it together.

"Frozen."

"Yeah."

"Joe, you mentioned a sledgehammer."

The young Negro frowned. "Duke, I would rather your father tried that. We could break the crank. O~ a tooth on the rack."

"The trouble is, we're trying to crank a ton or so of door uphill, when it was meant to move on the level."

"Yes. But this door always has been pesky."

"What do we do?"

"We get at the escape tunnel."

A block and tackle was fastened to a hook in the ceiling; the giant bottles were hauled out of the jumble and stacked, with Barbara and Karen heaving on the line and the men guiding them and then bracing them so that the stack could not roll. When the middle of the floor was clear they were able to get at the manhole cover to the tunnel. It was the massive, heavy-traffic sort and the hook in the ceiling was for lifting it.

It came up, creaking. It swung suddenly because of the 300 out-of-plumb of everything, taking a nick out of Duke's shin and an oath out of Duke.

The hole was packed with provisions. The girls dug them out, Karen, being smaller, going down inside as they got deeper and Barbara stacking the stuff.

Karen stuck her head up. "Hey! Water Boss! There's canned water here."

"Well, goody for me!"

Joe said, "I had forgotten that. This hatch hasn't been opened since the shelter was stocked."

"Joe, shall I knock out the braces?"

"I'll get 'em. You clear out the supplies. Duke, this isn't armored the way the door is. Those braces hold a piece of boiler plate against the opening, with the supplies behind it and the manhole cover holding it all down. Inside the tunnel, at ten foot intervals, are walls of sandbags, and the mouth has dirt over it. Your father said the idea was to cofferdam a blast. Let it in, slow it down, a piece at a time."

"We'll find those sandbags jammed against that boiler plate."

"If so, we'll dig 'em out."

"Why didn't he use real armor?"

"He thought this was safer. You saw what happened to the doors. I would hate to have to pry loose a steel barrier in that tunnel."

"I see. Joe, I'm sorry I ever called this place a 'hole in the ground.'"

"Well, it isn't. It's a machine-a survival machine."

"I'm through," Karen announced. "Some gentleman help me up. Or you, Duke."

"I'll put the lid on with you under it." Duke helped his sister to climb out.

Joe climbed down, flinching at the strain on his ribs. Dr. Livingstone had been superintending. Now he followed his friend into the hole, using Joe's shoulders as a landing.

"Duke, if you'll hand me that sledge- Stay out of the way, Doc. Get your tail down."

"Want me to take him?" asked Karen.

"No, he likes to be in on things. Somebody hold the light." The braces were removed and piled on the floor above.

"Duke, I need the tackle now. I don't want to hoist the plate. Just take its weight so I can swing it back. It's heavy."

"Here it comes."

"That's good. Doc! Darn you, Doc! Get out from under my feet! Just a steady strain, Duke. Somebody hand me the flashlight. I'll swing her back and have a look."

"And get a face full of isotopes."

"Have to chance it. A touch more- That's got her, she's swinging free."

Then Joe didn't say anything. At last Duke said, "What do you see?"

"I'm not sure. Let me swing it back, and hand me one brace."

"Right over your head. Joe, what do you see?"

The Negro was swinging the plate back when suddenly he grunted. "Doe! Doe, come back here! That little scamp! Between my legs and into the tunnel. Doc!"

"He can't get far."

"Well- Karen, will you go wake your father?"

"Damn it, Joe! What do you see?" "Duke, I don't know. That's why I need Hugh." "I'm coming down."

"There isn't room. I'm coming up, so Hugh can go down."

Hugh arrived as Joe scrambled out. "Joe, what do you have?"

"Hugh, I would rather you looked yourself."

"Well- I should have built a ladder for this. Give me a hand." Hugh went down, removed the brace, swung back the plate.

He stared even longer than Joe had, then called up. "Duke! Let's heave this plate out."

"What is it, Dad?"

"Get the plate out, then you can come down." It was hoisted out; father and son exchanged places. Duke stared down the tunnel. "That's enough, Duke. Here's a hand."

Duke rejoined them; his father said, "What do you think?"

"I don't believe it."

"Daddy," Karen said tensely, "somebody is going to talk, or I'm going to wrap this sledgehammer around somebody's skull."

"Yes, baby. Uh, there's room for you girls to go down together."

Barbara was handed down by Duke and Hugh, she helped Karen down over her. Both girls scrunched down and looked.

Karen said softly, "I'll be goldarned!" She started crawling into the tunnel.

Hugh called out, "Baby! Come back!" Karen did not answer. He added, "Barbara, tell me what you see."

"I see," Barbara said slowly, "a beautiful wooded hillside, green trees, bushes, and a lovely sunny day."

"That's what we saw."

"But it's impossible."

"Yes."

"Karen is outside. The tunnel isn't more than eight feet long. She's holding Dr. Livingstone. She says, 'Come on out!" "Tell her to get away from the mouth. It's probably radioactive."

"Karen! Get away from the tunnel! Hugh, what time is it?"

"Just past seven."

"Well, it's more like noon outside. I think."

"I've quit thinking." "Hugh, I want to go out."

"Uh- Oh, hell! Don't tarry at the mouth. And be careful."

"I will." She started to crawl.

Chapter 4

Hugh turned to his deputy. "Joe, I'm going out. Get me a forty-five and a belt. I shouldn't have let those girls go out unarmed." He eased himself down the hole. "You two guard the place."

His son said, "Against what? There's nothing to guard in here."

His father hesitated. "I don't know. Just a spooky feeling. All right, come along. But arm yourself. Joe!"

"Coming!"

"Joe, arm Duke and yourself. Then wait until we get outside. If we don't come back right away, use your judgment. This situation I hadn't anticipated. It just can't be."

"But it is."

"So it is, Duke." Hugh buckled on the pistol, dropped to his knees. Framed in the tunnel's mouth was still the vision of lush greenness where there should have been blasted countryside and crater glass. He started to crawl.

He stood up and moved away from the mouth, then looked around.

"Daddy! Isn't this lovely!"

Karen was below him on a slope that ran down to a stream. Across it the land rose and was covered with trees. On this side was a semi-clearing. The sky was blue, sunlight

warm and bright, and there was no sign of war's devastation, nor any sign of man-not a building, a road, a path, no contrails in the sky. It was wilderness, and there was nothing that he recognized.

"Daddy, I'm going down to the creek."

"Come here! Where's Barbara?"

"Up here, Hugh." He turned and saw her up the slope, above the shelter. "I'm trying to figure out what happened. What do you think?"

The shelter sat cocked on the slope, a huge square monolith. Dirt clung to it save where the tunnel had cracked off and a jagged place where the stairwell had been. The armor door was exposed just above him.

"I don't think," he admitted.

Duke emerged, dragging a rifle. He stood up, looked around, and said nothing.

Barbara and Karen joined them. Dr.-Livingstone-I-Presume came bounding up to tag Hugh on the ankle and dash away. Obviously the Persian gave the place full approval; it was just right for cats.

Duke said, "I give up. Tell me."

Hugh did not answer. Karen said, "Daddy, why can't I go down to the creek? I'm going to take a bath. I stink."

"It won't hurt you to stink. I'm confused. I don't want to be confused still more by worrying about your drowning-"

"It's shallow."

"-or eaten by a bear, or falling in quicksand. You girls go inside, arm yourselves, and then come out if you want to. But stick close and keep your eyes peeled. Tell Joe to come out."

"Yes, sir." The girls went.

"What do you think, Duke?"

"Well . . . I reserve my opinion."

"If you have one, it's more than I have. Duke, I'm stonkered. I planned for all sorts of things. This wasn't on the list. If you have opinions, for God's sake spill them."

"Well- This looks like mountain country in Central America. Of course that's impossible."

"No point in worrying about whether it's possible. Suppose it was Central America. What would you watch for?"

"Let me see. Might be cougars. Snakes certainly. Tarantulas and scorpions. Malaria mosquitoes. You mentioned bears."

"I meant bears as a symbol. We're going to have to watch everything, every minute, until we know what we're up against."

Joe came out, carrying a rifle. He kept quiet and looked around. Duke said, "We won't starve. Off to the left down by the stream."

Hugh looked. A dappled fawn, hardly waist high, was staring at them, apparently unafraid. Duke said, "Shall I drop it?" He raised his rifle.

"No. Unless you are dead set on fresh meat."

"All right. Pretty thing, isn't it?"

"Very. But it's no North American deer I ever saw. Duke? Where are we? And how did we get here?"

Duke gave a lopsided grin. "Dad, you appointed yourself Fuehrer. I'm not supposed to think."

"Oh, rats!"

"Anyhow, I don't know. Maybe the Russkis developed a hallucination bomb."

"But would we all see the same thing?"

"No opinion. But if I had shot that deer, Ill bet we could have eaten it."

"I think so, too. Joe? Ideas, opinions, suggestions?"

Joe scratched his head. "Mighty pretty country. But I'm a city boy."

"One thing you can do, Hugh."

"What, Duke?"

"Your little radio. Try it."

"Good idea." Hugh crawled inside, caught Karen about to climb down, sent her back for it. While he waited, he wondered what he had that was suitable for a ladder? Chinning themselves in a six-foot manhole was tedious.

The radio picked up static but nothing else. Hugh switched it off. "We'll try it tonight. I've gotten Mexico with it at night, even Canada." He frowned. "Something ought to be on the air. Unless they smeared us completely."

"Dad, you aren't thinking straight."

"How, Duke?"

"This area did not get smeared."

"That's why I can't understand a radio silence."

"Yet Mountain Springs really caught it. Ergo, we aren't in Mountain Springs."

"Who said we were?" Karen answered. "There's nothing like this in Mountain Springs. Nor the whole state."

Hugh frowned. "I guess that's obvious." He looked at the shelter-gross, huge, massive. "But where are we?"

"Don't you read comic books, Daddy? We're on another planet."

"Don't joke, baby girl. I'm worried."

"I wasn't joking. There is nothing like this within a thousand miles of home-yet here we are. Might as well be another planet. The one we had was getting used up."

"Hugh," Joe said, "it sounds silly. But I agree with Karen."

"Why, Joe?"

"Well, we're someplace. What happens when an H-bomb explodes dead on you?"

"You're vaporized."

"I don't feel vaporized. And I can't see that big hunk of concrete sailing a thousand miles or so, and crashing down with nothing to show for it but cracked ribs and a hurt shoulder. But Karen's idea-" He shrugged. "Call it the fourth dimension. That last big one nudged us through the fourth dimension."

"Just what I said, Daddy. We're on a strange planet! Let's explore!"

"Slow down, honey. As for another planet- Well, there isn't any rule saying we have to know where we are when we don't. The problem is to cope."

Barbara said, "Karen, I don't see how this can be anything but Earth."

"Why? Spoilsport."

"Well-" Barbara chucked a pebble at a tree. "That's a eucalyptus, and an acacia beyond it. Not at all like Mountain Springs but a normal grouping of tropical and

subtropical flora. Unless your 'new planet' evolved plants just like Earth, this has to be Earth."

"Spoilsport," Karen repeated. "Why shouldn't plants evolve the same way on another planet?"

"Well, that would be as remarkable as finding the same-"

"Hubert! Hubert! Where are you? I can't find you!" Grace Farnham's voice echoed out the tunnel.

Hugh ducked into the tunnel. "Coming!"

They ate lunch under a tree a little distance from the shelter. Hugh decided that the tunnel had been buried so deeply that the chance of its mouth being more radioactive than the interior was negligible. As for the roof, he was not certain. So he placed a dosimeter (the only sort of radiation instrument that had come through the pummeling) on top of the shelter to compare it later with one inside. He was relieved to see that the dosimeters agreed that they had suffered less than lethal dosage-although large-and that they checked each other.

The only other precaution he took was for them to keep guns by them-all but his wife. Grace Farnham "couldn't stand guns," and resented having to eat with guns in sight.

But she ate with good appetite. Duke had built a fire and they were blessed with hot coffee, hot canned beef, hot peas, hot canned sweet potatoes, and canned fruit salad-and cigarettes with no worry about air or fire.

"That was lovely," Grace admitted. "Hubert dear? Do you know what it would take to make it just perfect? You don't approve of drinking in the middle of the day but these are special circumstances and my nerves are still a teensy bit on edge-so, Joseph, if you will just run back inside and fetch a bottle of that Spanish brandy-"

"Grace."

"What, dear? -then all of us could celebrate our miraculous escape. You were saying?"

"I'm not sure there is any."

"What? Why, we stored two cases of it!"

"Most of the liquor was broken. That brings up something else. Duke, you are out of a job as water boss. I'd like you to take over as bartender. There are at least two unbroken fifths. Whatever you find, split it six ways and make it share and share alike, whether it's several bottles each, or just a part of a bottle."

Mrs. Farnham looked blank, Duke looked uneasy. Karen said hastily, "Daddy, you know what I said."

"Oh, yes. Duke, your sister is on the wagon. So hold her share as a medicinal reserve. Unless she changes her mind."

"I don't want the job," said Duke.

"We have to divide up the chores, Duke. Oh yes, do the same with cigarettes. When they are gone, they're gone, whereas I have hopes that we can distill liquor later." He turned to his wife. "Why not have a Miltown, dear?"

"Drugs! Hubert Farnham, are you telling me that I can't have a drink?"

"Not at all. At least two fifths came through. Your share would be about a half pint. If you want a drink, go ahead."

"Well! Joseph, run inside and fetch me a bottle of brandy."

"No!" her husband countermanded. "If you want it, Grace, fetch it yourself."

"Oh, shucks, Hugh, I don't mind."

"I do. Grace, Joe's ribs are cracked. It hurts him to climb. You can manage the climb with those boxes as steps-and you're the only one who wasn't hurt."

"That's not true!"

"Not a scratch. Everybody else was bruised or worse. Now about jobs- I want you to take over as cook. Karen will be your assistant. Okay, Karen?"

"Certainly, Daddy."

"It will keep you both busy. We'll build a grill and Dutch oven, but it will be cook over a campfire and wash dishes in the creek for a while."

"So? And will you please tell me, Mr. Farnham, what Joseph is going to do in the meantime? To earn his wages?"

"Will you please tell me how we'll pay wages? Dear, dear- can't you see that things have changed?"

"Don't be preposterous! Joseph will get every cent coming to him and he knows it-just as soon as this mess is straightened out. After all, we've saved his life. And we've always been good to him, he won't mind waiting. Will you, Joseph?"

"Grace! Quiet down and listen. Joe is no longer our servant. He is our partner in adversity. We'll never pay him wages again. Quit acting like a child and face the facts. We're broke. We're never going to have any money again. Our house is gone. My business is gone. The Mountain Exchange Bank is gone. We're wiped out . . . save for what we stored in the shelter. But we are lucky. We're alive and by some miracle have a chance of scratching a living out of the ground. Lucky. Do you understand?"

"I understand you are using it as an excuse to bully me!"

"You've merely been assigned a job to fit your talents."

"Kitchen drudge! I was your kitchen slave for twenty-five years! That's long enough. I won't do it! Do you understand me?"

"You are wrong on both points. You've had a maid most of our married life . . . and Karen washed dishes from the time she could see over the sink. Granted, we had lean years. Now we're going to have more lean years-and you're going to help. Grace, you are a fine cook when you want to be. You will cook. . . or you won't eat."

"Oh!" She burst into tears and fled into the shelter.

Her behind was disappearing when Duke got up to follow. His father stopped him. "Duke!"

"Yes."

"One word and you can join your mother. I'm going exploring, I want you to go with me."

Duke hesitated. "All right."

"We'll start shortly. I think your job should be 'hunter.' You're a better shot than I am and Joe has never hunted. What do you think?"

"Uh- All right."

"Good. Well, go soothe her down and, Duke, see if you can make her see the facts."

"Maybe. But I agree with Mother. You were bullying her."

"As may be. Go ahead."

Duke turned abruptly and left. Karen said quietly, "I think so too, Daddy. You were bullying."

"I intended to. I judged it called for bullying. Karen, if I hadn't tromped on it, she would do no work. . . and would order Joe around, treat him as a hired cook."

"Shucks, Hugh, I don't mind cooking. It was a pleasure to rustle lunch."

"She's a better cook than you are, Joe, and she's going to cook. Don't let me catch you fetching and carrying for her."

The younger man grinned. "You won't catch me."

"Better not. Or I'll skin you and nail it to the barn. Barbara, what do you know about farming?"

"Very little."

"You're a botanist."

"No, I simply might have been one, someday."

"Which makes you eight times as much of a farmer as the rest of us. I can barely tell a rose from a dandelion; Duke knows even less and Karen thinks you dig potatoes out of gravy. You heard Joe say he was a city boy. But we have seeds and a small supply of fertilizers. Also garden tools and books about farming. Look over what we've got and find a spot for a garden. Joe and I will do the spading and such. But you will have to boss."

"All right. Any flower seeds?"

"How did you know?"

"I just hoped."

"Annuals and perennials both. Don't look for a spot this afternoon; I don't want you girls away from the shelter until we know the hazards. Joe, today we should accomplish two things, a ladder and two privies. Barbara, how are you as a carpenter?"

"Just middlin'. I can drive a nail."

"Don't let Joe do what you can do; those ribs have to heal. But we need a ladder. Karen, my little flower, you have the privilege of digging privies."

"Gosh. Thanks!"

"Just straddle ditches, one as the powder room, the other for us coarser types. Joe and I will build proper Chic Sales jobs later. Then we'll tackle a log cabin. Or a stone-wall job."

"I was wondering if you planned to do any work, Daddy."

"Brainpower, darling. Management. Supervision. Can't you see me sweating?" He yawned. "Well, a pleasant afternoon, all. I'll stroll down to the club, have a Turkish bath, then enjoy a long, tall planter's punch."

"Daddy, go soak your head. Privies, indeed!"

"The Kappas would be proud of you, dear."

Hugh and his son left a half hour later. "Joe," Hugh cautioned, "we plan to be back before dark but if we get caught, we'll keep a fire going all night and come back tomorrow. If you do have to search for us, don't go alone; take one of the girls. No, take Karen; Barbara has no shoes, just some spike heeled sandals. Damn. Moccasins we'll have to make. Got it?"

"Sure."

"We'll head for that hill-that one. I want to get high enough to get the lay of the land-and maybe spot signs of civilization." They set out-rifles, canteens, hand ax,

machete, matches, iron rations, compasses, binoculars, mountain boots, coveralls. Coveralls and boots fitted Duke as well as Hugh; Duke found that his father had stocked clothes for him.

They took turns, with the man following blazing trail and counting paces, the leader keeping lookout, compass direction, and record.

The high hill Hugh had picked was across the stream. They explored its bank and found a place to wade. Everywhere they flushed game. The miniature deer were abundant and apparently had never been hunted. By man, at least- Duke saw a mountain lion and twice they saw bears.

It seemed to be about three o'clock local time as they approached the summit. The climb was steep, cluttered with undergrowth, and neither man was in training. When they reached the flattish summit Hugh wanted to throw himself on the ground.

Instead he looked around. To the east the ground dropped off. He stared out over miles of prairie.

He could see no sign of human life. He adjusted his binoculars and started searching. He saw moving figures, decided that they were antelope-or cattle; he made mental note that these herds must be watched. Later, later- "Hugh?"

He lowered his binoculars. "Yes, Duke?"

"See that peak? It's fourteen thousand one hundred and ten feet high."

"I won't argue."

"That's Mount James. Dad, we're home!"

"What do you mean?"

"Look southwest. Those three gendarmes on that profile. The middle one is where I broke my leg when I was thirteen. That pointed mountain between there and Mount James- Hunter's Horn. Can't you see? The skyline is as distinctive as a fingerprint. This is Mountain Springs!"

Hugh stared. This skyline he knew. His bedroom window had been planned to let him see it at dawn; many sunsets he had watched it from his roof.

"Yes."

"Yes," Duke agreed. "Damned if I know how. But as I figure it"-he stomped the ground-"we're on the high reservoir. Where it ought to be. And-" His brow wrinkled. "As near as I can tell, our shelter is smack on our lot. Dad, we didn't go anywhere!"

Hugh took out the notebook in which were recorded paces and compasses courses, did some arithmetic. "Yes. Within the limits of error."

"Well? How do you figure it?"

Hugh looked at the skyline. "I don't. Duke, how much daylight do we have?"

"Well. . . three hours. The sun will be behind the mountains in two."

"It took two hours to get here; we should make it back in less. Do you have any cigarettes?"

"May I have one? Charged against me of course. I would like to rest about one cigarette, then start back." He looked around. "It's open up here. I don't think a bear would approach us." He placed his rifle and belt on the ground, settled down.

Duke offered a cigarette to his father, took one himself. "Dad, you're a cold fish. Nothing excites you."

"So? I'm so excitable that I had to learn never to give into it."

"Doesn't seem that way to other people." They smoked in silence, Duke seated, Hugh sprawled out. He was close to exhaustion and wished that he did not have to hike back.

Presently Duke added, "Besides that, you enjoy bullying." His father answered, "I suppose so, if you class what I do as bullying. No one ever does anything but what he wants to do-'enjoys'-within the possibilities open to him. If I change a tire, it's because I enjoy it more than being stranded."

"Don't get fancy. You enjoy bullying Mother. You enjoyed spanking me as a kid. . . until Mother put her foot down and made you stop."

His father said, "We had better start back." He reached for his belt and rifle.

"Just a second. I want to show you something. Never mind your gear, this won't take a moment."

Hugh stood up. "What is it?"

"Just this. Your Captain Bligh act is finished." He clouted his father. "That's for bullying Mother!" He clouted him from the other side and harder, knocking his father off his feet. "And that's for having that nigger pull a gun on me!"

Hugh Farnham lay where he had fallen. "Not 'nigger,' Duke. Negro."

"He's a Negro as long as he behaves himself. Pulling a gun on me makes him a goddam nigger. You can get up. I won't hit you again."

Hugh Farnham got to his feet. "Let's start back."

"Is that all you've got to say? Go ahead. Hit me. I won't hit back."

"I didn't break my parole. I waited until we left the shelter."

"Conceded. Shall I lead? Better, perhaps."

"Do you think I'm afraid you might shoot me in the back? Look, Dad, I had to do it!"

"Did you?"

"Hell, yes. For my own self-respect."

"Very well." Hugh buckled on his belt, picked up his gun, and headed for the last blaze.

They hiked in silence. At last Duke said, "Dad?"

"Yes, Duke?"

"I'm sorry."

"Forget it."

They went on, found where they had forded the stream, crossed it. Hugh hurried, as it was growing darker. Duke closed up again. "Just one thing, Dad. Why didn't you assign Barbara as cook? She's the freeloader. Why pick on Mother?"

Hugh took his time in answering. "Barbara is no more a freeloader than you are, Duke, and cooking is the only thing Grace knows. Or were you suggesting that she loaf while the rest of us work?"

"No. Oh, we all have to pitch in-granted. But no more bullying, no more bawling Mother out in public. Understand me?"

"Duke."

"Yeah?"

"I've been studying karate three afternoons a week the past year."

"So?"

"Don't try it again. Shooting me in the back is safer."

"I hear you."

"Until you decide to shoot me, it would be well to accept my leadership. Or do you wish to assume the responsibility?"

"Are you offering it?"

"I am not in a position to. Perhaps the group would accept you. Your mother would. Possibly your sister would prefer you. Concerning Barbara and Joe, I offer no opinion."

"How about you, Dad?"

"I won't answer that; I owe you nothing. But until you decide to make a bid for leadership, I expect the same willing discipline you showed under parole."

"'Willing discipline' indeed!"

"In the long run there is no other sort. I can't quell a mutiny every few hours-and I've had two from you plus an utter lack of discipline from your mother. No leader can function on those terms. So I will assume your willing discipline. That includes no interference should I decide again to use what you call 'bullying.'"

"Now see here, I told you I would not stand for-"

"Quiet! Unless you make up your mind to that, your safest choice is to shoot me in the back. Don't come at me with bare hands or risk giving me a chance to shoot first. At the next sign of trouble, Duke, I will kill you. If possible. One of us will surely be killed."

They trudged along in silence, Mr. Farnham never looking back. At last Duke said, "Dad, for Christ's sake, why can't you run things democratically? I don't want to boss things, I simply want you to be fair about it."

"Mmm, you don't want to boss. You want to be a backseat driver-with a veto over the driver."

"Nuts! I simply want things run democratically."

"You do? Shall we vote on whether Grace is to work like the rest of us? Whether she shall hog the liquor? Shall we use Robert's Rules of Order? Should she withdraw while we debate it? Or should she stay and defend herself against charges of indolence and drunkenness? Do you wish to submit your mother to such ignominy?"

"Don't be silly!"

"I am trying to find out what you mean by 'democratically.' If you mean putting every decision to a vote, I am willing-if you will bind yourself to abide by every majority decision. You're welcome to run for chairman. I'm sick of the responsibility and I know that Joe does not like being my deputy."

"That's another thing. Why should Joe have any voice in these matters?"

"I thought you wanted to do it 'democratically'?"

"Yes, but he is-"

"What, Duke? A 'nigger'? Or a servant?"

"You've got a nasty way of putting things."

"You've got nasty ideas. We'll try formal democracy-rules of order, debate, secret ballot, everything-any time you want to try such foolishness. Especially any time you want to move a vote of no confidence and take over the leadership . . . and I'm so bitter as to hope that you succeed. In the meantime we do have democracy."

"How do you figure?"

"I'm serving by consent of the majority-four to two, I think. But that doesn't suit me; I want it to be unanimous, I can't put up indefinitely with wrangling from the minority. You and your mother, I mean. I want it to be five to one before we get back, with your assurance that you will not interfere in my efforts to persuade, or cajole, or bully, your mother into accepting her share of the load-until you care to risk a vote of no confidence."

"You're asking me to agree to that?"

"No, I'm telling you. Willing discipline on your part . . or at the next clash one of us will be killed. I won't give you the slightest warning. That's why your safest course is to shoot me in the back."

"Quit talking nonsense! You know I won't shoot you in the back."

"So? I will shoot you in the back or anywhere at the next hint of trouble. Duke, I can see only one alternative. If you find it impossible to give willing disciplined consent, if you don't think you can displace me, if you can't bring yourself to kill me, if you don't care to risk a clash in which one of us will be killed, then there is still a peaceful solution."

"What is it?"

"Any time you wish, you can leave. I'll give you a rifle, ammunition, salt, matches, a knife, whatever you find needful. You don't deserve them but I won't turn you out with nothing."

Duke gave a bitter laugh. "Sending me out to play Robinson Crusoe.. . and leaving all the women with you!"

"Oh, no! Any who wish are free to go. With a fair share of anything and some to boot. All three women if you can sell the idea."

"I'll think about it."

"Do. And do a little politicking and size up your chances of winning a vote against me 'democratically'-while being extraordinarily careful not to cross wills with me and thereby bring on a showdown sooner than you wish. I warn you, I'm feeling very short-tempered; you loosened one of my teeth."

"I didn't mean to."

"That wasn't the way it felt. There's the shelter; you can start that 'willing discipline' by pretending that we've had a lovely afternoon."

"Look, Dad, if you won't mention-"

"Shut up. I'm sick of you."

As they neared the shelter Karen saw them and yoo-hooed; Joe and Barbara came crawling out the tunnel. Karen waved her shovel. "Come see what I've done!"

She had dug privies on each side of the shelter. Saplings formed frameworks which had been screened by tacking cardboard from liquor cases. Seats had been built of lumber remnants from the tank room. "Well?" demanded Karen. "Aren't they gorgeous?"

"Yes," agreed Hugh. "Much more lavish than I had expected." He refrained from saying that they had cost most of the lumber.

"I didn't do it all. Barbara did the carpentry. You should hear her swear when she hits her thumb."

"You hurt your thumb, Barbara?"

"It'll get well. Come try the ladder."

"Sure thing." He started inside; Joe stopped him. "Hugh, while we've still got light, how about seeing something?"

"All right. What?"

"The shelter. You've been talking about building a cabin. Suppose we do: what do we have? A mud floor and a roof that leaks, no glass for windows and no doors. Seems to me the shelter is better."

"Well, perhaps," agreed Hugh. "I had thought we could use it while pioneering, if we had to."

"I don't think it's too radioactive, Hugh. That dosimeter should have gone sky-high if the roof is really 'hot.' It hasn't."

"That's good news. But, Joe, look at it. A slant of thirty degrees is uncomfortable. We need a house with a level floor."

"That's what I mean. Hugh, that hydraulic jack-it's rated at thirty tons. How much does the shelter weigh?"

"Oh. Let me think how many yards of mix we used and how much steel." Hugh pondered it, got out his notebook. "Call it two hundred fifty tons."

"Well, it was an idea."

"Maybe it's a good idea." Hugh prowled around the shelter, a block twenty feet square and twelve high, sizing up angles, estimating yardages.

"It can be done," Hugh decided. "We dig under on the uphill side, to the center line, cutting out enough to let that side settle down level. Damn, I wish we had power tools."

"How long will it take?"

"Two men could do it in a week if they didn't run into boulders. With no dynamite a boulder can be a problem."

"Too much of a problem?"

"Always some way to cope. Let's pray we don't run into solid rock. As we get it dug out, we brace it with logs. At the end we snag the logs out with block and tackle. Then we put the jack under the downhill side and tilt it into place, shore it up and fill with what we've removed. Lots of sweat."

"I'll start bright and early tomorrow."

"You will like hell. Not until your ribs have healed. I will start tomorrow, with two husky girls. Plus Duke, if his shoulder isn't sore, after he shoots us a deer; we've got to conserve canned goods. Reminds me-what was done with the dirty cans?"

"Buried 'em."

"Dig them up and wash them. A tin can is more valuable than gold; we'll use them for all sorts of things. Let's go in. I've still to admire the ladder."

The ladder was two trimmed saplings, with treads cut from boards and notched and nailed. Hugh reflected again that lumber had been used too lavishly; treads should have been fashioned from limbs. Damn it, there were so many things that could no longer be ordered by picking up a telephone. Those rolls of Scottissue, one at each privy- They shouldn't be left outdoors; what if it rained? All too soon it would be either a handful of leaves, or do without.

So many, many things they had always taken for granted! Kotex- How long would their supply last? And what did primitive women use? Something, no doubt, but what?

He must warn them that anything manufactured, a scrap of paper, a dirty rag, a pin, all must be hoarded. Caution them, hound them, nag them endlessly.

"That's a beautiful ladder, Barbara!"

She looked very pleased. "Joe did the hard parts."

"I did not," Joe denied. "I just gave advice and touched up the chisel."

"Well, whoever did it, it's lovely. Now we'll see if it will take my weight."

"Oh, it will!" Barbara said proudly.

The shelter had all lights burning. Have to caution them about batteries, too. Must tell the girls to look up how to make candles. "Where's Grace, Karen?"

"Mother isn't well. She's lying down."

"So? You had better start dinner." Hugh went into the women's bay, saw what sort of not-well his wife suffered. She was sleeping heavily, mouth open, snoring, and was fully dressed. He reached down, peeled back an eyelid; she did not stir. "Duke."

"Yes?"

"Come here. Everybody else outside."

Duke joined him. Hugh said, "After lunch, did you give Grace a drink?"

"Huh? You didn't say not to."

"I wasn't criticizing. How much?"

"Just a highball. An ounce and a half of Scotch, with water."

"Does that look like one highball? Try to rouse her."

Duke tried, then straightened up. "Dad, I know you think I'm a fool. But I gave her just one drink. Damn it, I'm more opposed to her drinking than you are!"

"Take it easy, Duke. I assume that she got at the bottle after you left."

"Well, maybe." Duke frowned. "As soon as I found an unbroken bottle I gave Mother that drink. Then I took inventory. I think I found it all, unless you have some hidden away-"

"No, the cases were together. Six cases."

"Right. I found thirteen unbroken bottles, twelve fifths and a quart of bourbon. I remember thinking that was two fifths each and the quart I would keep in reserve. I had opened one bottle of King's Ransom. I made a pencil mark on it. We'll know if she found it."

"You hid the liquor?"

"I stashed it in the upper bunk on the other side; I figured it would be hard for her to climb up there- I'm not a complete fool, Dad. She couldn't see me, she was in her bunk. But maybe she guessed."

"Let's check."

Thirteen bottles were between springs and mattress; twelve were unopened, the thirteenth was nearly full. Duke held it up. "See? Right to the line. But there was another bottle we had a snort from, after that second bombing. What happened to it?"

"Barbara and I had some after you went to sleep, Duke. There was some left. I never saw it again. It was in the tank room."

"Oh! I did, while we were bailing. Busted. I give up-where did she get it?"

"She didn't, Duke."

"What do you mean?"

"It wasn't liquor." Hugh went to the medicines drawer, got a bottle with a broken seal. "Count these Seconal capsules. You had two last night."

"Yeah."

"Karen had one at bedtime, one later; Joe had one. Neither Barbara nor I had any, nor Grace. Five."

"Hold it, I'm counting."

His father began to count as Duke pushed them aside.

"Ninety-one," Duke announced.

"Check." Hugh put the capsules back. "So she took four."

"What do we do, Dad? Stomach pump? Emetic?"

"Nothing."

"Why, you heartless- She tried to kill herself!"

"Slow down, Duke. She did nothing of the sort. Four capsules, six grains, simply produces stupor in a healthy person- and she's healthy as a horse; she had a physical a month ago. No, she snitched those pills to get drunk on." Hugh scowled. "An alcohol drunk is bad enough. But people kill themselves without meaning to with sleeping pills."

"Dad, what do you mean, 'she took them to get drunk on'?"

"You don't use them?"

"I never had one in my life until those two last night."

"Do you remember how you felt just before you went to sleep? Warm and happy and woozy?"

"No. I just lay down and konked out. Next thing I knew I was against the wall on my shoulders."

"You haven't developed tolerance for them. Grace knows what they can do. Drunk, a very happy drunk. I've never known her to take more than one but she's never been chopped off from liquor before. When a person eats sleeping pills because he can't get liquor, he's in a bad way."

"Dad, you should have kept liquor away from her long ago!"

"How, Duke? Tell her she couldn't have a drink? Take them away from her at parties? Quarrel with her in public? Fight with her in front of Joe? Not let her have cash, close out her bank account, see that she had no credit? Would that have stopped her from pawning furs?"

"Mother would never have done that."

"It's typical behavior in such cases. Duke, it is impossible to keep liquor away from any adult who is determined to have it. The United States Government wasn't that powerful. I'll go further. It is impossible for anyone to be responsible for another person's behavior. I spoke of myself as 'responsible' for this group; that was verbal shorthand. The most I can door you, or any leader-is to encourage each one to be responsible for himself."

Hugh chewed his thumb and looked anguished. "Perhaps my mistake was in letting her loaf. But she considered me stingy because I let her have only a houseboy and a cleaning woman. Duke, do you see anything I could have done short of beating her?"

"Uh. . . that's beside the point. What do we do now?"

"So it is, counselor. Well, we keep these pills away from her."

"And I'm damned well going to chop off the liquor completely!"

"Oh, I wouldn't."

"You wouldn't, eh? Did I hear correctly when you said I was liquor boss?"

"The decision is up to you. I simply said that I wouldn't. I think it's a mistake."

"Well, I don't. Dad, I won't go into the matter of whether you could, or should, have stopped Mother from getting the way she is. But I intend to stop it."

"Very well, Duke. Mmm, she's going to be cut off anyhow in a matter of days. It might be easier to taper her off. If you decide to, I'll contribute a bottle from my share. Hell, you can have both of mine. I like a snort as well as the next man. But Grace needs it."

"That won't be necessary," his son said crisply. "I'm not going to let her have any. Get it over with, she'll be well that much sooner."

"Your decision. May I offer a suggestion?"

"What?"

"In the morning, be up before she is. Move the liquor out and bury it, someplace known only to you. Then have open one bottle at a time and dispense it by the ounce. Tell the others to drink where she can't see it. You had better ditch the open bottle outdoors, too."

"Sounds reasonable."

"But that makes it all the more urgent to keep sleeping pills away from her."

"Bury them?"

"No. We need them inside, and it's not just sleeping pills. Demerol. Hypodermic needles. Several drugs, some poisonous and some addictive and all irreplaceable. If she can't find Seconal-five bottles of a hundred each, it's bulky-there's no telling what she might get into. We'll use the vault."

"A little safe let into concrete back of that cupboard. Nothing in it but birth certificates and such, and some reserve ammo, and two thousand silver dollars. Toss the money in with the hardware, we'll use it as metal. The combo is 'July 4th, 1776'-'74-17-76.' Better change it, Grace may know it."

"At once!"

"No rush, she won't wake up. 'Reserve ammo-' Duke, you were liquor and cigarette boss and now you are drugs boss. I'm going whole hog, you are rationing officer. Responsible for everything that can't be replaced: liquor, tobacco, ammunition, nails, toilet tissue, matches, dry cells, Kleenex, needles-"

"Good God! Got any more dirty jobs?"

"Lots of them. Duke, I'm trying to make it each according to his talents. Joe is too diffident-and he missed obvious economies today. Karen doesn't think ahead. Barbara feels like a freeloader even though she's not, she wouldn't crack down. I would, but I'm swamped. You are a natural for it; you don't hesitate to assert yourself. And you have foresight when you take the trouble to use it."

"Thank you too much. All right."

"The hardest thing to drill into them will be saving every scrap of metal and paper and cloth and lumber, things Americans have wasted for years. Fishhooks. Groceries aren't as important; we'll replace them, you by hunting, Barbara by gardening. Nevertheless, better note what can't be replaced. Salt. You must ration salt especially."

"Salt?"

"Unless you run across a salt lick in hunting. Salt- Damn it, we're going to have to tan leather. All I used to do with a hide was rub it with salt and give it to the taxidermist. Is salt necessary?"

"I don't know."

"I'll look it up. Damnation, we're going to find that I failed to stock endless things we'll be miserable without."

"Dad," Duke admitted, "I think you've done mighty well."

"So? That's pleasant to hear. We'll manage to-"

"Daddy!"

"Yes?" Hugh went to the tank room. Karen's head stuck up out of the manhole.

"Daddy, can we please come in? It's dark and scary and something big chased Doc in. Joe won't let us until you say."

"Sorry, Baby. Everybody come in. And we'll put the lid on."

"Yes, sir. But Daddy, you ought to look outside. Stars. The Milky Way like a neon sign! And the Big Dipper-so maybe this isn't another planet? Or would we still see the Big Dipper?"

"I'm not certain." He recalled that the discovery that they were still in James County, Mountain Springs area, had not been shared. But Duke must tell it; it was his deduction. "Duke, want to take a look before we close up?"

"Thanks, I've seen a star."

"As you wish." Hugh went outside, waited while his eyes adjusted, saw that Karen was right: Never before had he seen the heavens on a clear mountain night with no other light, nor trace of smog, to dim its glory.

"Beautiful!"

Karen slipped her hand into his. "Yes," she agreed. "But I could use some streetlights. There are things out there. And we heard coyotes."

"There are bears and Duke saw a mountain lion. Joe, better keep the cat in at night, and try to keep him close in the daytime."

"He won't go far, he's timid. And something just taught him a lesson."

"And me, too!" announced Karen. "Bears! Come, Barbie, let's go in. Daddy, if the Moon comes up, this must be Earth- and I'll never trust a comic book again."

"Go ask your brother."

Duke's discovery was the main subject at dinner. Karen's disappointment was offset by her interest in how they had mislaid Mountain Springs. "Duke, are you sure you saw what you thought you saw?"

"No possible mistake," Hugh answered for him. "If it weren't for the trees, you could have spotted it. We had to climb Reservoir Hill to get a clear view."

"You were gone all that time just to Reservoir Hill? Why, that's only five minutes away!"

"Duke, explain to your sister about automobiles."

"I think the bomb did it," Barbara said suddenly.

"Why, certainly, Barb. The question is how?"

"I mean the enormous H-bomb the Russians claimed to have in orbit. The one they called the 'Cosmic Bomb.' I think it hit us."

"Go on, Barbara."

"Well, the first bomb was awful and the second one was bad; they almost burned us up. But the third one just hit us whammy! and then no noise, no heat, no rumbling, and the radioactivity got less instead of worse. Here's my notion:

You've heard of parallel worlds? A million worlds side by side, almost alike but not quite? Worlds where Elizabeth married Essex and Mark Anthony hated redheads? And Ben Franklin got electrocuted with his kite? Well, this is one."

"First automobiles and now Benjamin Franklin. I'll go watch Ben Casey."

"Like this, Karen. The Cosmic Bomb hits us, dead on- and kicks us into the next world. One exactly like the one we were in, except that it never had men in it."

"I'm not sure I like a world with no men. I'd rather have a strange planet, with warlords riding thoats. Or is it zitidars?"

"What do you think of my theory, Hugh?"

"I'm keeping an open mind. I'll go this far: We should not count on finding other human beings."

"I go for your theory, Barbara," Duke offered. "It accounts for the facts. Squeezed out like a melon seed. Pht!"

"And we landed here."

Duke shrugged. "Let it be known as the Barbara Wells Theory of Cosmic Transportation and stand adopted. Here we are; we're stuck with it-and I'm going to bed. Who sleeps where, Hugh?"

"Just a second. Folks, meet the Rationing Officer. Take a bow, Duke." Hugh explained the austerity program. "Duke will work it out but that's the idea. For example, I noticed a bent nail on the ground in the powder room. That calls for being spread-eagled and flogged. For a serious offense, such as wasting a match, it's keelhauling. Second offense-hang him at the yardarm!"

"Gee! Do we get to watch?"

"Shut up, Karen. No punishments, just the miserable knowledge that you have deprived the rest of something necessary to life, health, or comfort. So don't give Duke any back talk. I want to make another assignment. Baby, you know shorthand."

"That's putting it strongly. Mr. Gregg wouldn't think so."

"Hugh, I take shorthand. What do you want?"

"Okay, Barbara, you are historian. Today is Day One. Or start with the calendar we are used to, but we may adjust it; those were winter stars. Every night jot down the events and put it in longhand later. Your title is Keeper of the Flame. As soon as possible, you really will be Keeper of the Flame; we will have to light a fire, then bank it every night. Sorry to have held you up, Duke."

"I'll sleep in the tank room, Hugh. You take a bunk."

"Wait a minute. Buddy, would you stay up ten minutes longer? Daddy, could Barbara and I use the tank room for a spit bath? May we have that much water? A girl who digs privies needs a bath."

"Sure, Sis," Duke agreed.

"Water is no problem," Hugh told her. "But you can bathe in the stream in the morning. Just one thing: Whenever anyone is bathing, someone should stand guard. I wasn't fooling about bears."

Karen shivered. "I didn't think you were. But that reminds me, Daddy- Do we dash out to the powder room? Or hold it all night? I'm not sure I can. But I'll try-rather than play tag with bears!"

"I thought the toilet was still set up?"

"Well.. . I thought, with brand-new outside plumbing-"

"Of course not."

"I feel better. Okay, buddy boy, give Barb and me a crack at the john and you can go to bed."

"No bath?"

"If we bathe, we can bathe in the girls' dorm after the rest of you go to bed. Thereby sparing your blushes."

"I don't blush."

"You should."

"Hold it," interrupted Hugh. "We need a 'No Blushing' rule. Here we are crowded worse than a Moscow apartment. Do you know the Japanese saying about nakedness?"

"I know they bathe in company," said Karen, "and I would be happy to join them. Hot water! Oh, boy!"

"They say, 'Nakedness is often seen but never looked at.' I'm not urging you to parade around in skin. But we should quit being jumpy. If you come in to change clothes and find that there is no privacy-why, just change. Or take bathing in the stream. The person available to guard might not be the sex of the person who wants the bath. So ignore it." He looked at Joseph. "I mean you. I suspect you're sissy about it."

Joe looked stubborn. "That's the way I was brought up, Hugh."

"So? I wasn't brought up this way either, but I'm trying to make the best of it. After a sweaty day's work it might be that Barbara is the one available to stand bear watch for you."

"I'll take my chances. I didn't see any bears."

"Joe, I don't want any nonsense. You're my deputy."

"I didn't ask to be."

"Nor will you be, if you don't change your tune. You'll bathe when you need it and you'll accept guard service from anybody."

Joe looked stubborn. "No, thank you."

Hugh Farnham sighed. "I didn't expect dam foolishness from you, Joe. Duke, will you back me? 'Condition seven,' I mean."

"Deelighted!" Duke grabbed the rifle he had carried earlier, started to load it. Joe's chin dropped but he did not move.

"Hold it, Duke. Guns won't be necessary. That's all, Joe. Just the clothes you were wearing last night. Not clothes we stored for you, I paid for those. Nothing else, not even matches. You can change in the tank room; it was your modesty you insisted on saving. But your life is your problem. Get moving."

Joseph said slowly, "Mr. Farnham, do you really mean that?"

"Were those real bullets in that gun you aimed at Duke? You helped me clamp down on him; you heard me clamp down on my wife. Can I pull on them anything that rough- and let you get away with it? Good God, I'd get it from the girls next. Then the group would fall apart and die. I'd rather it was just you. You have two minutes to say good-bye to Dr. Livingstone. But leave the cat here; I don't want it eaten."

Dr. Livingstone was in the Negro's lap. Joe got slowly to his feet, still holding it. He seemed dazed.

Hugh added, "Unless you prefer to stay."

"I can?"

"On the same terms as the rest."

Two tears rolled down Joe's cheeks. He looked down at the cat and stroked it, then answered in a low voice, "I would like to stay. I agree."

"Good. Confirm it by apologizing to Barbara."

Barbara looked startled. She appeared to be about to speak, then to think better of it.

"Uh. . . Barbara. I'm sorry."

"It's all right, Joe."

"I'd be. . . happy and proud to have you guard me. While I take a bath, I mean. If you will."

"Any time, Joe. Glad to."

"Thank you."

"And now," said Hugh, "who's for bridge? Karen?"

"Why not?"

"Duke?"

"Bed for me. Anybody wants the pot, step over me."

"Sleep on the floor by the bunks, Duke, and avoid the traffic. No, take the upper bunk."

"You take it."

"I'll be last to bed, I want to look up a subject. Joe? Contract?"

"I don't believe, sir, that I wish to play cards."

"Putting me in my place, eh?"

"I didn't say that, sir."

"You didn't have to. Joe, I was offering an olive branch. One rubber, only. We've had a hard day."

"Thank you. I'd rather not."

"Damn it, Joe, we can't afford to be sulky. Last night Duke had a much rougher time. He was about to be shoved out into a radioactive hell-not just to frolic with some fun-loving bears. Did he sulk?"

Joe dropped his eyes, scratched Dr. Livingstone's skull- suddenly looked up and grinned. "One rubber. And I'm going to beat you hollow!"

"In a pig's eye. Barbie? Make a fourth?"

"Delighted!"

The cut paired Joe with Karen and gave him the deal. He riffled the cards. "Now to stack a Mississippi Heart Hand!"

"Watch him, Barbie."

"Want a side bet, Daddy?"

"What have you to offer?"

"Well- My fair young body?"

"Flabby."

"Why, you utterly utter! I'm not flabby, I'm just deliciously padded. Well, how about my life, my fortune, and my sacred honor?"

"Against what?"

"A diamond bracelet?"

Barbara was surprised to see how badly Hugh played, miscounting and even revoking. She realized that he was groggy with fatigue-why, the poor darling! Somebody

was going to have to clamp down on him, too. Or he would kill himself trying to carry the whole load.

Forty minutes later Hugh wrote an I.O.U. for one diamond bracelet, then they got ready for bed. Hugh was pleased to see that Joe undressed completely and got into the lower bunk, as he had been told to. Duke stretched out on the floor, bare. The room was hot; the mass cooled slowly and air no longer circulated with the manhole cover in place, despite the vents in the tank room. Hugh made a note that he must devise a bear proof- and cat proof-grille in place of the cover. Later, later- He took the camp lamp into the tank room.

Someone had put the books back on shelves but some were open to dry; he fluffed these, hoped for the best. The last books in the world- so it seemed.

He felt sudden grief that abstract knowledge of deaths of millions had not given him. Somehow, the burning of millions of books felt more brutally obscene than the killing of people. All men must die, it was their single common heritage. But a book need never die and should not be killed; books were the immortal part of man. Book burners-to rape a defenseless friendly book.

Books had always been his best friends. In a hundred public libraries they had taught him. From a thousand newsstands they had warmed his loneliness. He suddenly felt that if he had not been able to save some books, it would hardly be worthwhile to live.

Most of his collection was functional: The Encyclopaedia Britannica-Grace had thought the space should be used for a television receiver "because they might be hard to buy afterwards." He had grudged its bulkiness, too, but it was the most compact assemblage of knowledge on the market. "Che" Guevera's War of the Guerillas-thank God he wasn't going to need that! Nor those next to it: "Yank" Leivy's manual on resistance fighting, Griffith's Translation of Mao Tse-tung's On Guerilla Warfare, Tom Wintringham's New Ways of War, the new TR on special operations-forget 'em! Ain't a-gonna study war no more!

The Boy Scout Handbook, Eshbach's Mechanical Engineering, The Radio Repairman's Guide, Outdoor Life's Hunting and Fishing, Edible Fungi and How to Know Them, Home Life in the Colonial Days, Your Log Cabin, Chimneys and Fireplaces, The Hobo's Cook Book, Medicine Without a Doctor, Five Acres and Independence, Russian Self-Taught and English-Russian and Russian-English dictionaries, The Complete Herbalist, the survival manuals of the Navy Bureau of Weapons, The Air Force's Survival Techniques, The Practical Carpenter-all sound books, of the brown and useful sort. The Oxford Book of English Verse, A Treasury of American Poetry, Hoyle's Book of Games, Burton's Anatomy of Melancholy, a different Burton's Thousand Nights and a Night, the good old Odyssey with the Wyeth illustrations, Kipling's Collected Verse, and his Just So Stories, a one-volume Shakespeare, the Book of Common Prayer, the Bible, Mathematical Recreations and Essays, Thus Spake Zarathustra, T. S. Eliot's The Old Possum's Book of Practical Cats, Robert Frost's Verse, Men Against the Sea- He wished that he had found time to stock the list of fiction he had started. He wished that he had fetched down his works of Mark Twain regardless of space. He wished- Too late, too late. This was it. All that was left of a mighty civilization. "The cloud-capped towers-"

He jerked awake and found that he had fallen asleep standing up. Why had he come in here? Something important. Oh, yes! Tanning leather- Leather? Barbara was barefooted, Barbara must have moccasins. Better try the Britannica. Or that Colonial Days volume.

No, thank God, you didn't have to use salt! Find some oak trees. Better yet, have Barbara find them; it would make her feel useful. Find something that only Joe could do, too; make the poor little bastard feel appreciated. Loved. Remember to- He stumbled back into the main room, looked at the upper bunk and knew that he couldn't make it. He lay down on the blanket they had played cards on and fell instantly asleep.

Chapter 5

Grace did not get up for breakfast. The girls quietly fed them, then stayed in to clean up. Duke went hunting, carrying a forty-five and a hunting bow. It was his choice; arrows could be recovered or replaced, bullets were gone forever. Duke tried a few flights and decided that his shoulder was okay.

He checked watches and set out, with an understanding that a smoky fire would be built to home on if he was not back by three.

Hugh told the girls to take outdoors any book not bone-dry, then broke out pick and shovel and started leveling their house. Joe tried to join him; Hugh vetoed it.

"Look, Joe, there are a thousand things to do. Do them. But no heavy work."

"Such as what, Hugh?"

"Uh, correct the inventories. Give Duke a hand by starring everything that can't be replaced. In the course of that you'll think of things; write them down. Look up how to make soap and candles. Check both dosimeters. Strap on a gun and keep your eyes open- and see that those girls don't go outside without guns. Hell, figure out a way to get plumbing and running water, with no pipe and no lead and no water closets and no Portland cement."

"How in the world could you do that?"

"Somebody did it the first time. And tell this bushy-tailed sidewalk superintendent that I need no help."

"Okay. Come here, Doc! Come, come, come!"

"And Joe. Speaking of bathrooms, you might offer to stand guard for the girls while they bathe. You don't have to look."

"All right, I'll offer. But I'll tell them you suggested it. I don't want them to think-"

"Look, Joe. They are a couple of clean, wholesome, evil-minded American girls. Say what you please, they will still believe you are sneaking a peek. It's part of their credo that they are so fatally irresistible that a man just has to. So don't be too convincing; you'll hurt their feelings."

"I get it. I guess." Joe went away, Hugh started digging, while reflecting that he had never missed a chance, given opportunity without loss of face-but that incorrigible Sunday school lad probably would not sneak a peek at Lady Godiva. A good lad-no

imagination but utterly dependable. Shame to have been so rough on him last night- Very quickly Hugh knew what his worst oversight had been: no wheelbarrow.

He had dug only a little before reaching this new appreciation. Digging by muscle power was bad but carrying it away in buckets was an affront to good sense. So he carried and thought about how to build a wheel- with no metal, no heating tools, no machine shop, no foundry, no- Now wait! He had steel bottles. There was strap iron in the bunks and soft iron in the periscope housing. Charcoal he could make and a bellows was simply an animal skin and some branches. Whittle a nozzle. Any damfool who couldn't own a wheel with all that at his disposal deserved to lift and carry.

He had ten thousand trees, didn't he? Finland didn't have a damn thing but trees. Yet Finland was the finest little country in the world.

"Doc, get out from under my feet!" If Finland was still there- Wherever the world was- Maybe the girls would like a Finnish bath. Down where they could plunge in afterwards and squeal and feel good. Poor kids, they would never see a beauty parlor; maybe a sauna would be a "moral equivalent." Grace might like it. Sweat off that blubber, get her slender again. What a beauty she had been!

Barbara showed up, with a shovel. "Where did you get that? And what do you think you're going to do?"

"It's the one Duke was using. I'm going to dig."

"In bare feet? You're era- Hey, you're wearing shoes!"

"Joe's. The jeans are his, too. The shirt is Karen's. Where shall I dig?"

"Just beyond me, here. Any boulder over five hundred pounds, ask for help. Where's Karen?"

"Bathing. I decided to stink worse and bathe later."

"When you like. Don't try to stick on this job all day. You can't."

"I like working with you, Hugh. Almost as much as-" She let it hang.

"As playing bridge?"

"As playing bridge as your partner. Yes, you could mention that. Too."

"Barbie girl." -

He found that just digging was fun. Gave the mind a rest and the muscles a workout. Happy making. Hadn't tried it for much too long.

Barbara had been digging an hour when Mrs. Farnham came around a corner. Barbara said, "Good morning," added a shovelful to a bucket, picked both up half filled, and disappeared around the other corner.

Grace Farnham said, "Well! I wondered where you were hiding. I was left quite alone. Do you realize that?" She was in the clothes she had slept in. Her features looked puffy.

"You were allowed to sleep, dear."

"It isn't pleasant to wake up in a strange place alone. I'm not accustomed to it."

"Grace, you weren't being slighted. You were being pampered."

"Is that what you call it? Then we'll say no more about it, do you mind?"

"Not at all."

"Really?" She seemed to brace herself, then said bleakly, "Perhaps you can stop long enough to tell me where you have hidden my liquor. My liquor. My share. I

wouldn't think of touching yours-after the way you've treated me! In front of servants and strangers, may I add?"

"Grace, you must see Duke."

"What do you mean?"

"Duke is in charge of liquor. I don't know where he put it."

"You're lying!"

"Grace, I haven't lied to you in twenty-seven years."

"Oh! You brutal, brutal man!"

"Perhaps. But I'm not lying and the next time you say I am, it will go hard with you."

"Where's Duke? He won't let you talk to me that way! He told me so, he promised me!"

"Duke has gone hunting. He hopes to be back by three."

She stared, then rushed back around the corner. Barbara reappeared, picked up her shovel. They went on working.

Hugh said, "I'm sorry you were exposed to that."

"To what?"

"Unless you were at least a hundred yards away, you know what."

"Hugh, it's none of my business."

"Under these conditions, anything is everybody's business. You have formed a bad opinion of Grace."

"Hugh, I would not dream of being critical of your wife."

"You have opinions. But I want you to have one in depth. Visualize her as she was, oh, twenty-five years ago. Think of Karen."

"She would have looked like Karen."

"Yes. But Karen has never had responsibility. Grace had and took it well. I was an enlisted man; I wasn't commissioned until after Pearl Harbor. Her people were what is known as 'good family.' Not anxious to have their daughter marry a penniless enlisted man."

"I suppose not."

"Nevertheless, she did. Barbara, have you any notion what it was to be the wife of a junior enlisted man in those days? With no money? Grace's parents wanted her to come home- but would not send her a cent as long as she stuck with me. She stuck."

"Good for Grace."

"Yes. She had no preparation for living in one room and sharing a bath down the hail, nor for waiting in Navy outpatient clinics. For making a dollar go twice as far as it should. For staying alone while I was at sea. Young and pretty and in Norfolk, she could have found excitement. She found a job instead-in a laundry, sorting dirty clothes. And whenever I was home she was bright and cheerful and uncomplaining.

"Alexander was born the next year-"

"'Alexander'?"

"Duke. Named for his maternal grandpappy; I didn't get a vote. Her parents were anxious to make up once they had a grandson; they were even willing to accept me. Grace stayed cool and never accepted a cent-back to work with our landlady minding the baby in weeks.

"Those years were the roughest. I went up fast and money wasn't such a problem. The War came and I was bucked from chief to j.g. and ended as a lieutenant commander in Seabees. In 1946 I had to choose between going back to chief or becoming a civilian. With Grace's backing, I got out. So I was on the beach with no job, a wife, a son in grammar school, a three-year-old daughter, living in a trailer, prices high and going higher. We had some war bonds.

"That was the second rough period. I took a stab at contracting, lost our savings, went to work for a water company. We didn't starve, but scraped icebox and dishrag soup were on the menu. Barbara, she stood it like a trouper-a hardworking den mother, a pillar of the PTA, and always cheerful.

"I was a construction boss before long and presently I tried contracting again. This time it clicked. I built a house on spec and a shoestring, sold it before it was finished and built two more at once. We've never been broke since."

Hugh Farnham looked puzzled. "That was when she started to slip. When she started having help. When we kept liquor in the house. We didn't quarrel-we never did save over the fact that I tried to raise Duke fairly strictly and Grace couldn't bear to have the boy touched.

"But that was when it started, when I started making money. She isn't built to stand prosperity. Grace has always stood up to adversity magnificently. This is the first time she hasn't. I still think she will."

"Of course she will, Hugh."

"I hope so."

"I'm glad to know more about her, Hugh. I'll try to be considerate."

"Damn it, I'm not asking that. I just want you to know that fat and foolish and self-centered isn't all there is to Grace. Nor was her slipping entirely her fault. I'm not easy to live with, Barbara."

"So?"

"So! When we were able to slow down, I didn't. I let business keep me away evenings. When a woman is left alone, it's easy to slip out for another beer when the commercial comes on and to nibble all evening along with the beer. If I was home, I was more likely to read than to visit, anyhow. And I didn't just let business keep me away; I joined the local duplicate club. She joined but she dropped out. She plays a good social game-but I like to fight for every point. No criticism of her, there's no virtue in playing as if it were life or death. Grace's way is better- Had I been willing to take it easy, too, well, she wouldn't be the way she is."

"Nonsense!"

"Pardon me?"

"Hugh Farnham, what a person is can never be somebody else's fault, I think. I am what I am because Barbie herself did it. And so did Grace. And so did you." She added in a low voice, "I love you. And that's not your fault, nor is anything we did your fault. I won't listen to you beating your breast and sobbing 'Mea culpa!' You don't take credit for Grace's virtues. Why take blame for her faults?"

He blinked and smiled. "Seven no trump."

"That's better."

"I love you. Consider yourself kissed."

"Kiss back. Grand slam. But watch it," she said out of the corner of her mouth. "Here come the cops."

It was Karen, clean, shining, hair brushed, fresh lipstick, and smiling. "What an inspiring sight!" she said. "Would you poor slaves like a crust of bread and a pannikin of water?"

"Shortly," her father agreed. "In the meantime don't carry these buckets too heavily loaded."

Karen backed away. "I wasn't volunteering!"

"That's all right. We aren't formal."

"But Daddy, I'm clean!"

"Has the creek gone dry?"

"Daddy! I've got lunch ready. Out front. You're too filthy to come into my lovely clean house." -

"Yes, baby. Come along, Barbara." He picked up the buckets.

Mrs. Farnham did not appear for lunch. Karen stated that Mother had decided to eat inside. Hugh let it go at that; there would be enough hell when Duke got back.

Joe said, "Hugh? About that notion of plumbing-"

"Got it figured out?"

"Maybe I see a way to have running water."

"If we get running water, I guarantee to provide plumbing fixtures."

"Really, Daddy? I know what I want. In colored tile. Lavender, I think. And with a dressing table built around-"

"Shut up, infant. Yes, Joe?"

"Well, you know those Roman aqueducts. This stream runs uphill that way. I mean it's higher up that way, so someplace it's higher than the shelter. As I understand it, Roman aqueducts weren't pipe, they were open."

"I see." Farnham considered it. There was a waterfall a hundred yards upstream. Perhaps above it was high enough.

"But that would mean a lot of masonry, whether dry-stone, or mud mortar. And each arch requires a frame while it's being built."

"Couldn't we just split logs and hollow them out? And support them on other logs?"

"We could." Hugh thought about it. "There's an easier way, and one that would kill two birds. Barbara, what sort of country is this?"

"I beg your pardon?"

"You said that this area is at least semitropical. Can you tell what season it is? And what the rest of the year is likely to bring? What I'm driving at is this: Are you going to need irrigation?"

"Good heavens, Hugh, I can't answer that!"

"You can try."

"Well-" She looked around. "I doubt if it ever freezes here. If we had water, we might have crops all year. This is not a tropical rain forest, or the undergrowth would be much more dense. It looks like a place with a rainy season and a dry season."

"Our creek doesn't go dry; it has lots of fish. Where were you thinking of having your garden?"

"How about this stretch downstream to the south? Several trees should come out, though, and a lot of bushes."

"Trees and bushes are no problem. Mmm- Joe, let's take a walk. I'll carry a rifle, you strap on your forty-five. Girls, don't dig so much that it topples down on you. We would miss you."

"Daddy, I was thinking of taking a nap."

"Good. Think about it while you're digging."

Hugh and Joe worked their way upstream. "What are you figuring on, Hugh?"

"A contour-line ditch. We need to lead water to an air vent on the roof. If we can do that, we've got it made. A sanitary toilet. Running water for cooking and washing. And for gardening, coming in high enough to channel it wherever Barbara wants it. But the luxury that will mean most to our womenfolk is a bath and kitchen. We'll clear the tank room and install both."

"Hugh, I see how you might get water with a ditch. But what about fixtures? You can't just let water splash down through the roof."

"I don't know yet, but we'll build them. Not a flush toilet, it's too complex. But a constant-flow toilet, a sort that used to be common aboard warships. It's a trough with seats. Water runs in one end, out the other. We'll lead it down the manhole, out the tunnel, and away from the house. Have you seen any clay?"

"There is a clay bank at the stream below the house. Karen complained about how sticky it was. She went upstream to bathe, a sandy spot." -

"I'll look at it. If we can bake clay, we can make all sorts of things. A toilet. A sink. Dishes. Tile pipe. Build a kiln out of unbaked clay, use the kiln to bake anything. But clay just makes it easier. Water is the real gold; all civilizations were built on water. Joe, we are about high enough."

"Maybe a little higher? It would be embarrassing to dig a ditch a couple of hundred yards long-"

"Longer."

"-or longer, and find that it's too low and no way to get it up to the roof."

"Oh, we'll survey it first."

"Survey it? Hugh, maybe you didn't notice but we don't even have a spirit level. That big smash broke its glasses. And there isn't even a tripod, much less a transit and all those things."

"The Egyptians invented surveying with less, Joe. Losing the spirit level doesn't matter. We'll build an unsplit level."

"Are you making fun of me, Hugh?"

"Not at all. Mechanics were building level and square centuries before you could buy instruments. We'll build a plumbbob level. That's an upside-down T, and a string with a weight to mark the vertical. You can build it about six feet long and six high to give us a long sighting arm-minimize the errors. Have to take apart one of the bunks for boards. It's light, fussy work you can do while your ribs heal. ~While the girls do the heavy, unfussy excavating."

"You draw it, I'll build it."

"When we get the building leveled we'll mount it on the roof and sight upstream. Have to cut a tree or two but we won't have any trouble running a base line. Intercepts we run with a smaller level. Duck soup, Joe."

"No sweat, huh?"

"Mostly sweat. But twenty feet a day of shallow ditch and we'll have irrigation water when the dry season hits. The bathroom can wait-the gals will be cheered just by the fact that there will be one, someday. Joe, it would suit me if our base line cuts the stream about here. See anything?"

"What should I see?"

"We fell those two trees and they dam the creek. Then chuck in branches, mud, and some brush and still more mud and rocks and the stream backs up in a pond." Hugh added, "Have to devise a gate, and that I do not see, with what we have to work with. Every problem leads straight to another. Damn."

"Hugh, you're counting your chickens before the cows come home."

"I suppose so. Well, let's go see how much the girls have dug while we loafed."

The girls had dug little; Duke had returned with a miniature four-point buck. Barbara and Karen had it strung up against a tree and were trying to butcher it. Karen seemed to have as much blood on her as there was on the ground.

They stopped as the men approached. Barbara wiped her forehead, leaving a red trail. "I hadn't realized they were so complicated inside."

"Or so messy!" sighed Karen.

"With that size it's easier on the ground."

"Now he tells us. Show us, Daddy. We'll watch."

"Me? I'm a gentleman sportsman; the guide did the dirty work. But- Joe, can you lay hands on that little hatchet?"

"Sure. It's sharp; I touched it up yesterday."

Hugh split the breastbone and pelvic girdle and spread the carcass, then peeled out viscera and lungs and spilled them, while silently congratulating the girls on not having pierced the intestines. "All yours, girls. Barbara, if you can get that hide off, you might be wearing it soon. Have you noticed any oaks?"

"There are scrub forms. And sumach, too. You're thinking of tannin?"

"Yes."

"I know how to extract it."

"Then you know more about tanning than I do. I'll bow out. There are books."

"I know, I was looking it up. Doe! Don't sniff at that, boy."

"He won't eat it," Joe assured her, "unless it's good for him. Cats are fussy."

While butchering was going on, Duke and his mother crawled out and joined them. Mrs. Farnham seemed cheerful but did not greet anyone; she simply looked at Duke's kill. "Oh, the poor little thing! Duke dear, how did you have the heart to kill it?"

"It sassed me and I got mad."

"It's a pretty piece of venison, Duke," Hugh said. "Good eating."

His wife glanced at him. "Perhaps you'll eat it; I couldn't bear to."

Karen said, "Have you turned vegetarian, Mother?"

"It's not the same thing. I'm going in, I don't want that on me. Karen, don't you dare come inside until you've washed; I won't have you tracking blood in after I've slaved away getting the place spotless." She headed toward the shelter. "Come inside, Duke."

"In a moment, Mother."

Karen gave the carcass an unnecessarily vicious cut.

"Where did you nail it?" Hugh asked.

"Other side of the ridge. I should have been back sooner."

"Why?"

"Missed an easy shot and splintered an arrow on a boulder. Buck fever. It has been years since I used a-'bow season' license."

"One lost arrow, one carcass, is good hunting. You saved the arrowhead?"

"Of course. Do I look foolish?"

Karen answered, "No, but I do. Buddy, I cleaned house. If Mother did any cleaning, it was a mess she made herself."

"I realized that."

"And I'll bet when she smells these steaks, she won't want Spam!"

"Forget it."

Hugh moved away, signaling Duke to follow.

"I'm glad to see Grace looking cheerful. You must have soothed her."

Duke looked sheepish. "Well- As you pointed out, it's rough, chopping it off completely." He added, "But I rationed her. I gave her one drink and told her she could have one more before dinner."

"That's doing quite well."

"I had better go inside. The bottle is there."

"Perhaps you had."

"Oh, it's all right. I put her on her honor. You don't know how to handle her, Dad."

"That's true. I don't."

Chapter 6

From the Journal of Barbara Wells:

I am hobbled by a twisted ankle, so I am lying down and adding to this. I've taken notes every night-but in shorthand. I haven't transcribed very much.

The longhand version goes in the fly leaves of the Britannica. There are ten blank pages in each volume, twenty-four volumes, and I'll squeeze a thousand words to a page-240,000 words-enough to record our doings until we reclaim the art of making paper-especially as the longhand version will be censored.

Because I can't let my hair down to anyone-and sometimes a gal needs to! This shorthand record is a diary which no one can read but me, as Karen is as poor at Gregg as she claimed.

Or perhaps Joe knows Gregg. Isn't it required in business colleges? But Joe is a gentleman and would not read this without invitation. I am fond of Joseph; his goodness is not a sham. I am sure he is keeping his lip buttoned on many unhappy thoughts; his position is as anomalous as mine and more difficult.

Grace has quit ordering him around-save that she orders all of us. Hugh gives orders, but for the welfare of all. Nor does he give many; we are settled in a routine. I'm

the farmer, and plan my own work; Duke keeps meat on the table and gives me a hand when he doesn't hunt; Hugh hasn't told either of us what to do for a long time, and Karen has a free hand with the house. Hugh has about two centuries of mechanical work planned out and Joe helps him.

But Grace's orders are for her own comfort. We usually carry them out; it's easier. She gets her own way and more than her share, simply by being difficult.

She got the lion's share of liquor. Liquor doesn't matter to me; I rarely "need" a drink. But I enjoy a glow in company and had to remind myself that it was not my liquor, it was Farnham liquor.

Grace finished her share in three days. Duke's was next to go. And so on. At last all was gone save one quart of bourbon earmarked "medicinal." Grace spotted where Duke had it and dug it up. When Duke came home, she was passed out and the bottle was dead.

The next three days were horrors. She screamed. She wept. She threatened suicide. Hugh and Duke teamed up and one of them was always with her. Hugh acquired a black eye, Duke got scratches down his handsome face. I understand they put a lot of B1 into her and force-fed her.

On the fourth day she stayed in her bunk; the next day she got up and seemed almost normal.

But during lunch she asserted, as something "everybody knows," that the Russians had attacked because Hugh insisted on building a shelter.

She didn't seem angry-more forgiving. She went on to the happy thought that the war would soon be over and we could all go home.

Nobody argued. What good? Her delusion seems harmless. She has assumed her job, at last, as chief cook-but if she is a better cook than Karen I have yet to see it. Mostly she talks about dishes she could prepare if only she had this, or that. Karen works as hard as ever and sometimes gets so mad that she comes out to cry on me and then hoes furiously.

Duke tells Karen that she must be patient.

I should not criticize Duke; he is probably going to be my husband. I mean, who else is there? I could stand Duke but I'm not sure I could stand Grace as a mother-in-law. Duke is handsome and is considerate of both me and his sister. He did quarrel with his father at first (foolishly it seemed to me) but they get along perfectly now.

In this vicinity he is quite a catch.

Myself? I'm not soured on marriage even though I struck out once. Hugh assumes that the human race will go on. I'm willing.

(Polygamy? Of course I would! Even with Grace as senior wife. But I haven't been asked. Nor, I feel sure, would Grace permit it. Hugh and I don't discuss such things, we avoid touching the other, we avoid being alone together, and I do not make cow's eyes at him. Finished.)

The trouble is, while I like Duke, no spark jumps. So I am putting it off and avoiding circumstances where he might pat me on the fanny. It would be a hell of a note if I married him and there came a night when I was so irritated at his mother and so vexed with him for indulging her that I would tell him coldly that he is not half the man his father is.

No, that must not happen. Duke does not deserve it.

Joe? My admiration for him is unqualified-and he doesn't have a mother problem.

Joe is the first Negro I've had a chance to know well-and I think most well of him. He plays better contract than I do; I suppose he's smarter than I am. He is fastidious and never comes indoors without bathing. Oh, get downwind after he has spent a day digging and he's pretty whiff. But so is Duke, and Hugh is worse. I don't believe this story about a distinctive "nigger musk."

Have you ever been in a dirty powder room? Women stink worse than men.

The trouble with Joe is the same as with Duke: No spark jumps. Since he is so shy that he is most unlikely to court me- Well, it won't happen.

But I am fond of him-as a younger brother. He is never too busy to be accommodating. He is usually bear guard for Karen and me when we bathe and it's a comfort to know that Joe is alert- Duke has killed five bears and Joe killed one while he was actually guarding us. It took three shots and dropped dead almost in Joe's lap. He stood his ground.

We adjourned without worrying about modesty, which upset Joe more than bears do.

Or wolves, or coyotes, or mountain lions, or a cat which Duke says is a mutated leopard and especially dangerous because it attacks by dropping out of a tree. We don't bathe under trees and don't venture out of our clearing without an armed man. It is as dangerous as crossing Wilshire against the lights.

There are snakes, too. At least one sort is poisonous.

Joe and Hugh were starting one morning on the house leveling and Joe jumped down into the excavation. Dr.-Livingstone-I-Presume jumped down with him-and here was this snake.

Doc spotted it and hissed; Joe saw it just as it struck, getting him in the calf. Joe killed it with his shovel and dropped to the ground, grabbing at his leg.

Hugh had the wound slashed and was sucking it in split seconds. He had a tourniquet on quickly and permanganate crystals on the wound soon after as I heard the hooraw and came a-runnin'. He followed that with rattlesnake anti-venom.

Moving Joe was a problem; he collapsed in the tunnel. Hugh crawled over him and pulled, I pushed, and it took three of us-Karen, too-to lift him up the ladder. We undressed him and put him to bed.

Around midnight, when his respiration was low and his pulse uncertain, Hugh moved the remaining bottle of oxygen into the room, put over Joe's head a plastic sack in which shirts had been stored and gave him oxygen.

By morning he was better.

In three days he was up and well. Duke says it was a pit viper, perhaps a bushmaster, and that a rattlesnake is a pit viper, too, so rattlesnake anti-venom probably saved Joe's life.

I am not trusting any snakes.

It took three weeks to excavate under the house. Boulders! This area is a wide, flat, saucer-shaped valley, with boulders most anywhere. Whenever we hit a big one, we dug around it and the men would worry it out with crowbar and block and tackle.

Mostly the men could get boulders out. But Karen found one that seemed to go down to China. Hugh looked it over and said, "Fine. Now dig a hole just north of it and deeper."

Karen just looked at him.

So we dug. And hit another big boulder. "Good," said Hugh. "Dig another hole north of that one."

We hit a third oversize boulder. But in three days the last one had been tumbled into a hole next to it, the middle one had been worried into a hole where the last one had been, and the one that started the trouble was buried where the middle one had been.

As fast as any spot had been cut deeply enough Hugh propped it up with pieces of log; he was worried lest the shelter shift and crush someone. So when we finished the shelter had a forest of posts under it.

Hugh then set two very heavy posts under the uphill corners and started removing the inner ones, using block and tackle. Sometimes they had to be dug under. Hugh was nervous during this and did all the rigging and digging himself.

At last the uphill half was supported on these two big chunks.

They would not budge.

There was so much weight on those timbers that they sneered at our efforts. I said, "What do we do now, Hugh?"

"Try the next-to-last resort."

"What's the last resort?"

"Burn them. But it would take roaring fires and we would have to clear grass and bushes and trees for quite a distance. Karen, you know where the ammonia is. And the iodine. I want both."

I had wondered why Hugh had stocked so much ammonia. But he had, in used plastic Chlorox bottles; the stuff had ridden through the shocks. I hadn't known that iodine was stocked in quantity, too; I don't handle the drugs.

Soon he had sort of a chemistry lab. "What are you making, Hugh?" I asked.

"Ersatz 'dynamite.' And I don't need company," he said. "The stuff is so touchy it explodes at a harsh look."

"Sorry," I said, backing away.

He looked up and smiled. "It's safe until it dries. I had it in mind in case I ever found myself in an underground. Occupying troops take a sour view of natives having explosives, but there is nothing suspicious about ammonia or iodine. The stuff is safe until you put it together and does not require a primer. But I never expected to use it for construction; it's too treacherous."

"Hugh, I just remembered I don't care whether a floor is level or not."

"If it makes you nervous, take a walk."

Making it was simple; he combined tincture of iodine and ordinary household ammonia; a precipitate settled out. This he filtered through Kleenex, the result was a paste.

Joe drilled holes into those stubborn posts; Hugh wrapped this mess in two batches, in paper, and packed a bundle into each hole, tamping with his finger. "Now we wait for it to dry."

Everything that he used he flushed down with water, then took a bath with his clothes on, removed them in the water and left them, weighted down with rocks. That was all that day.

Our armament includes two lovely ladies' guns, .22 magnum rimfires with telescopic sights. Hugh had Duke and Joe sight them in. The sighting-in was done with sandbag rest- heaped-up dirt, that is. Hugh had them expend five bullets each, so I knew he was serious. "One bullet, one bear" is his motto.

When the explosive was dry, everything breakable was removed from the shelter. We women were chased far back, Karen was charged with hanging on to Dr. Livingstone, and I was armed with Duke's bear rifle, just in case.

Duke and Joe were on their bellies a measured hundred feet from the posts. Hugh stood between them. "Ready for count?"

"Ready, Hugh."-"Ready, Dad."

"Deep breath. Let part of it out. Hold it, steady on target, take up the slack. Five. . . four. . . three . . . two. . . one fire!"

A sound like a giant slammed door and the middle of each post disintegrated. The shelter stuck out like a shelf, then tilted ponderously down, touched, and was level.

Karen and I cheered; Grace started to clap; Dr. Livingstone jumped down to investigate. Hugh turned his head and grinned.

And the shelter tilted back the other way as the ridge crumbled; it started to slide. It pivoted on the tunnel protuberance, picked up speed and tobogganed down the slope. I thought it was going to end up in the creek.

But the slope leveled off; it ground to a stop, with the tunnel choked with dirt and the whole thing farther out of plumb than before!

Hugh picked up the shovel he had used to heap up shooting supports, walked down to the shelter, began to dig.

I ran down, tears bursting from my eyes. Joe was there first. Hugh looked up and said, "Joe, dig out the tunnel. I want to know if anything is damaged and the girls will want to get lunch."

"Boss-" Joe choked out. "Boss! Oh, gosh!"

Hugh said, in a tone you use to a child, "Why are you upset, Joe? This has saved us work."

I thought he had flipped. Joe said, "Huh?"

"Certainly," Hugh assured him. "See how much lower the roof is? Every foot it dropped saves at least a hundred feet of aqueduct. And leveling will be simple here; the ground is loam and boulders are few. A week, with everybody pitching in. Then we bring water to the house and garden two weeks early."

He was correct. The shelter was level in a week, and this time he triggered the end posts with crosspieces; blasting was not needed. Best of all, the armor door cranked back without a murmur and we had air and sunlight inside- It had been stuffy and candles made it pretty rank. Joe and Hugh started the ditch the same day. In anticipation of the glorious day, Karen sketched on the walls of the tank room life-size pictures of a washstand, a bathtub, a pot.

Truthfully, we are comfortable. Two mattress covers Karen filled with dried grass; sleeping on the floor is no worse than the bunks. We sit in chairs and play our

evening rubber at the table. It is amazing what a difference level floors make and how much better it is to have a door than to climb down a ladder and crawl out a hole.

We had to cook over a campfire a while as our grill and Dutch oven were smashed. Karen and I have thrown together a make-do because, as soon as water is led to the house, Hugh intends to start on ceramics, not only for a toilet and a sink but also for a stove vented out through the periscope hole. Luxury!

My corn is coming up beautifully. I wonder what I can use to grind corn? The thought of hot corn bread buttered with deer grease makes me drool.

December 25th-Merry Christmas!

We think it is. Hugh says we are not more than a day off.

Shortly after we got here Hugh picked a small tree with a flat boulder due north of it and sawed it off so that it placed a sharp shadow on the boulder at noon. As "Keeper of the Flame" it has been my duty to sit by that boulder from before apparent noon and note the shortest shadow-follow it down, mark the shortest position and date it.

That shadow had been growing longer and the days shorter. A week ago it began to be hard to see any change and I told Hugh. So we watched together and three days ago was the turning point . . . so that day became December 22nd and we are celebrating Christmas instead of the Fourth of July. But we got our flag up, as Hugh had planned, to the top of the tallest tree in our clearing, with its branches lopped to make it a pole. As Keeper of the Flame I am charged with raising and lowering it but this was a special occasion; we drew lots and Joe won. We lined up and sang "The Star Spangled Banner" while he hauled it to the peak-and everyone was crying so hard he could hardly sing.

Then we pledged allegiance. Maybe it is sentimental nonsense by ragged castaways but I don't think so. We are still one nation, under God, free and indivisible, with liberty and justice for all.

Hugh held divine services and read the Christmas story from the Gospel According to Luke and called on Karen to pray, then we sang carols. Grace has a strong, sure lead; Joe is a bell-like tenor, and Karen, myself, Hugh, and Duke are soprano, contralto, baritone, and bass. I think we sound good. In any case we enjoyed it, even though Grace got taken by the weeps during "White Christmas" and it was contagious.

We would have had services anyhow as today would be Sunday by the old calendar; Hugh holds them every Sunday. Everybody attends, even Duke who is an avowed atheist. Hugh reads a Psalm or some other chapter; we sing hymns; he prays or invites someone to pray, and ends it with "Bless This House-" We are back to the days when the Old Man is priest.

But Hugh never uses the Apostles' Creed and his prayers are so nonsectarian that he does not even end them "In Jesus' Name, Amen."

On a rare occasion when he and I spoke in private-waiting out a noon sight last week-I asked him where he stood on matters of faith? (It is important to me to know where my man stands even though he is not my man and can't be.)

"You could call me an Existentialist."

"You are not a Christian?"

"I didn't say that. I can't express it in the negative because it's affirmative. I shan't define it; it would only add to the confusion. You are wondering why I hold church since I refuse to assert a creed?"

"Well. . . yes."

"It's my duty. Services should be available to those who need them. If there is no good and no God, this ritual is harmless. If God is, it is appropriate-and still harmless. We are bleeding no peasants, offering no bloody sacrifices, raising no vanities to the skies in the name of religion. Or so I see it, Barbara."

That had better hold me; it's all I'll get out of him. In my past life religion was a nice, warm, comfy thing I did on Sundays; I can't say it agonized me. But Hugh's God-less offering to God has become important.

Sundays are important other ways. Hugh discourages work other than barbering and primping or hobby work, and encourages games, or any fun thing. Chess, bridge, Scrabble, modeling in clay, group sings, such like- Or just yakking. Games are important; they mark that we are not just animals trying to stay alive but humans enjoying life and savoring it. That nightly rubber of bridge we never skip. It proclaims that our lives are not just hoeing and digging ditches and butchering.

We keep up our bodies, too. I've become pretty good at cutting hair. Duke grew a beard at first but Hugh shaved every day and presently Duke did, too. I don't know what they will do when blades are no more. I've noticed Joe honing a Gem blade on an oil stone.

It's still Christmas and I'll cut back in when the rubber in progress is finished. Dinner was lavish; Grace and Karen spent two days on it-brook trout savory aux herbes, steamed freshwater prawns, steaks and broiled mushrooms, smoked tongue, bouillon Ursine, crackers (quite a treat), radishes, lettuce, green onions, baby beets a la Grace, and best of all, a pan of fudge, as condensed milk, chocolate, and sugar are irreplaceable. Nescafé and cigarettes, two cups and two cigarettes each.

Presents for everybody- All I saved besides clothes I had on was my purse. I was wearing nylons, took them off soon and haven't worn stockings since; I gave them to Karen. I had a lipstick; Grace got that. I had been plaiting a belt; Joe got that. In my purse was a fancy hanky; I washed it, ironed it by pressing it against smooth concrete-Duke got that.

It was this morning before I figured out anything for Hugh. For years I've carried in my purse a little memo book. It has my maiden name in gold and still has half of a filler. Hugh can use it-but it was my name on it that decided me.

I must run; Grace and I are due to attempt to clobber Hugh and Joe.

I've never had a happier Christmas.

Chapter 7

Karen and Barbara were washing themselves, the day's dishes, and the week's laundry. Above them, Joe kept watch. Bushes and then trees had been cut away around the stretch they used for bathing; a predator could not approach without Joe having a clear shot at it. His eyes swung constantly, checking approaches. He wasted no seconds on the Elysian tableau he guarded.

Karen said, "Barbie, this sheet won't stand another laundering. It's rags."

"We need rags."

"But what will we use for sheets? It's this soap." Karen scooped a handful from a bowl on the bank. It was soft and gray and harsh and looked like oatmeal mush. "The stuff eats holes."

"I'm not fretted about sheets but I dread the day when we are down to our last towel."

"Which will belong to Mother," Karen stated. "Our rationing officer will have some excellent reason."

"Nasty, nasty. Karen, Duke has done a wonderful job."

"I wasn't bitching. Duke can't help it. It's his friend Eddie."

"'Eddie?'"

"Edipus Rex, dear."

Barbara turned away and began rinsing a pair of ragged blue jeans.

Karen said, "You dig me?"

"We all have faults."

"Sure, everybody but me. Even Daddy has a shortcoming. His neck pains him."

Barbara looked up. "Is Hugh having trouble with his neck? Perhaps it would help if we massaged it."

Karen giggled. "Your weakness, sister mine, is that you wouldn't know a joke if it bit you. Daddy is still-necked and nothing will cure it. He doesn't have weaknesses and that's his weakness. Don't frown. I love Daddy. I admire him. But I'm glad I'm not like him. I'll take this load up to the thorn bushes. Damn it, why didn't Daddy stock clothespins? Those thorns are as bad as the soap."

"Clothespins we can do without. Hugh did an incredible job. Everything from an eight-day clock-"

"Which got busted, right off."

"-to tools and seeds and books and I don't know what. Karen! Don't climb out naked!"

Karen stopped, one foot on the bank. "Nonsense. Old Stone Face won't look. Humiliating, that's what it is. I think I'll yoo-hoo at him."

"You'll do no such thing. Joe is being a gentleman under trying circumstances. Don't make it harder. Let that load wait and we'll take it all up at once."

"Okay, okay. I can't help wondering if he's human."

"He is. I can vouch for it."

"Hmm- Barbie, don't tell me Saint Joseph made a pass at you?"

"Heavens, no! But he blushes if I squeeze past him in the house."

"How can you tell?"

"Sort of purple. Karen, Joe is sweet. I wish you had heard him explain about Doc."

"Explain what?"

"Well, Doc is beginning to accept me. I was holding Doc yesterday and noticed something and said, 'Joe, Doe is getting terribly fat. Or was he always?'

"That was a time when he blushed. But he answered with sweet seriousness, 'Barbara, Dr. Livingstone isn't as much of a boy cat as he thinks he is. Old Doe is more a

girl-type cat. That isn't fat. Uh, you see- Doe is going to have babies.' He blurted it out. Seemed to think it would upset me. Didn't of course, but I was astonished."

"Barbara, you mean you didn't know that Dr.-Livingstone-I-Presume is a female?"

"How would I know? Everybody calls him 'he' and he-she-has a male name."

"A doctor can be female. Can't you tell a tomcat?"

"I never thought about it. Doe is pretty fuzzy."

"Mmm, yes, with a Persian one might not be certain at first glance. But a tomcat's badges of authority are prominent."

"Had I noticed, I would have assumed that he had been altered."

Karen looked shocked. "Don't let Daddy hear that! He never allows a cat to be spayed or cut. Daddy thinks cats are citizens. However, you've surprised me. Kittens, huh?"

"So Joe says."

"And I didn't notice." Karen looked puzzled. "Come to think of it, I haven't picked him up lately. Just petted him and tried to keep him out of things. Lately it hasn't been safe to open a drawer; he's into it. Looking for a place to have kittens of course. I should have twigged."

"Karen, why do you keep saying 'he' and 'him'?"

"'Why?' Joe told you. Doe thinks he is a boy cat-and who am I to argue? He's always thought so, he was the feistiest kitten we ever had. 11mm- Kittens. Barbie, the first time Doe came into heat we arranged for Doe to meet a gentleman cat of exalted ancestry. But it wasn't Doe's métier and he beat the hell out of the tomcat. So we quit trying. Mmm- Calendar girl, how long have we been here?"

"Sixty-two days. I've looked it up; it's sixty days with a normal range to seventy."

"So it's any time now. I'll bet you two back rubs that we are up all night tonight. Cats never have kittens at a convenient hour." Karen abruptly changed the subject. "Barbie, what do you miss most? Cigarettes?"

"I've quit thinking of them. Eggs, I guess. Eggs for breakfast."

"Daddy did plan for that. Fertilized eggs and a little incubator. But he hadn't built it and anyhow, eggs would have busted. Yes, I miss eggs. But I wish cows laid eggs and Daddy had figured out how to bring cow eggs along. Ice cream! Cold milk!"

"Butter," agreed Barbara. "Banana splits with whipped cream. Chocolate malts."

"Stop it! Barbie, I'm starving in front of your eyes."

Barbara pinched her. "You aren't fading way. Fact is, you've put on weight."

"Perhaps." Karen shut up and began on the dishes.

Presently she said in a low voice, "Barbie, Doe won't hand this household half the surprise I'm going to."

"How, hon?"

"I'm pregnant."

"Huh?"

"You heard me. Pregnant. Knocked up, if you insist on the technical term!"

"Are you sure, dear?"

"Of course I'm sure! I had a test, the froggie winked at me. Hell, I'm four months gone." Karen threw herself into the arms of the older girl. "And I'm scared!"

Barbara hugged her. "There, there, dear. It's going to be all right."

"The hell it is," Karen blubbered. "Mother's going to raise hell. . . and there aren't any hospitals. . . nor doctors. Oh, why didn't Duke study medicine? Barbie, I'm going to die. I know I am."

"Karen, that's silly. More babies have been born without doctors and hospitals than ever were wheeled into a delivery room. You're not scared of dying, you're scared of telling your parents."

"Well, that, too." Karen wiped at her eyes and sniffed. "Uh- Barbie, don't be mad. . . but that's why I invited you down that weekend."

"I figured Mother wouldn't raise quite so much hell if you were present. Most girls in our chapter are either squares or sluts, and silly heads besides. But you are neither and I knew you would stand up for me."

"Thank you, dear."

"Thank me, hell! I was using you."

"It's the finest compliment another woman ever paid me." Barbara wiped a tear from Karen's face and tweaked her cheek. "I'm glad I'm here. So you haven't told your parents?"

"Well, I was going to. But the attack hit . . . and then Mother went to pieces. . . and Daddy has been loaded down with worries and there's never been the right time."

"Karen, you aren't scared to tell your father, just your mother."

"Well. . . Mother mostly. But Daddy, too. Besides being shocked and hurt-he'll think it was silly of me to get caught."

"While he's certain to be surprised, I doubt the other." Barbara hesitated. "Karen, you needn't take this alone. I can share it."

"That's what I had hoped. That's why I asked you to come home with me. I told you."

"I mean really share it. I'm pregnant, too."

"What?"

"Yes. We can tell them together."

"Good Lord, Barbara! How did it happen?"

Barbara shrugged. "Careless. How did it happen to you?" Karen suddenly grinned. "How? A bee sprinkled pollen on me; how else? 'Who' you mean."

"'Who' I don't care about. Your business. Well, dear? Shall we go tell them? I'll do the talking."

"Wait a minute. You hadn't planned to tell anybody? Or had you?"

"Why, no," Barbara answered truthfully, "I was going to wait until it showed."

Karen looked at Barbara's waistline. "It doesn't show. Are you sure?"

"I've skipped two periods, I'm pregnant. Or I'm ill, which would be worse. Let's gather up the laundry and tell them.

"Uh, since you don't look it-and I do; I've been careful not to undress around Mother-since you don't, let's hold that back and use it as a whammy if things get sticky."

"If you like. Karen, why not tell Hugh first? Then let him tell your mother."

Karen looked relieved. "You think that's all right?"

"Hugh would rather hear it with your mother not around. Now go find him and tell him. I'll hang the clothes."

"All right, I will!"

"And quit worrying. We'll have our babies and won't have any trouble and we'll raise them together and it'll be fun. We'll be happy."

Karen's eyes lit up. "And you'll have a girl and I'll have a boy and we'll marry them and be grandmothers together!"

"That sounds more like Karen." Barbara kissed her. "Run tell Hugh."

Karen found Hugh bricking up the kiln; she told him that she would like a private talk.

"All right," he agreed. "Let me tell Joe to get this fired up. I should inspect the ditch. Come along and talk?"

He gave her a shovel, carried a rifle. "Now what's on your mind, baby girl?"

"Let's get farther away." They walked a meandering distance. Hugh stopped, exchanged rifle for shovel, and built up a stretch of wall.

"Daddy? Perhaps you've noticed a shortage of men?"

"No. Three men and three women. The usual division."

"Perhaps I should say 'eligible bachelors.'"

"Then say it."

"All right, I've said it. I need advice. Which is worse? Incest? Or miscegenation? Or should I be an old maid?"

He placed another shovelful, tamped it. "I would not urge you to be an old maid."

"That settles that, I feel the same way. How do you size up those other fates?"

"Incest," he answered, "is a bad idea, usually."

"Which leaves just one thing."

"Wait. I said, 'Usually.'" He stared at the shovel. "This is not a problem I ever expected-but we are facing many new problems. Brother-and-sister marriages are not uncommon in history. They are not necessarily bad." He frowned. "But there is Barbara. You might have to accept a polygamous household."

"Hold it, Daddy. 'Incest' isn't just brothers."

He stared at her. "You've managed to startle me, Karen."

"Shocked you, you mean."

"No. 'Startled.' Were you seriously suggesting what you implied?"

"Daddy," she said soberly, "it's one subject I can't joke about. If I had to choose between you and Duke-as a husband, I mean-I'd take you and no two ways about it."

Hugh mopped his forehead. "Karen, such a statement can be honored only by taking it seriously-"

"I'm serious!"

"And I so take it. Do I understand that you have eliminated Joseph? Or have you considered him?"

"Certainly I have."

"Well?"

"How could I avoid it, Daddy? Joe is nice. But he's just a boy, even though he's older than I am. If I said, 'Boo!' he would jump out of his skin. No."

"Does his skin have something to do with your choice?"

"Daddy, you tempt me to spit in your face. I'm not Mother!"

"I wanted to be sure. Karen, you know that color does not matter to me. I want to know other things about a man. Is his word good? Does he meet his obligations? Does he

do honest work? Is he brave? Will he stand up and be counted? Joe is very much a man by all standards that interest me. I think you are being hasty."

He sighed. "If we were in Mountain Springs, I would not urge you to marry any Negro. The pressures are too great; such a marriage is almost always a tragedy. But those barbaric factors do not obtain here. I urge that you give Joe serious thought."

"Daddy, don't you think I have? I may marry Joe. But I wanted you to know that if I had my choice, out of you three I would pick you."

"Thank you."

"Thank me, hell! I'm a woman and you are the man I would most like to. And a fat lot of good it will do me-and you know why. Mother."

"I know." He suddenly looked weary. "We do not what we wish, but what we can. Karen, I am dreadfully sorry that you do not have a longer list to choose from."

"Daddy, if I've learned anything from you, it is that it's a waste of tears to cry over anything that can't be helped. That's Mother, not me. And Duke, though not as bad. I'm just like you on this point- You count your points and play accordingly. You don't moan about how the cards aren't fair. Dig me, Daddy?"

"Yes."

"I didn't come here to ask you to marry me. Nor even to seduce you though I might as well say, having said so much, that you can have me if you want me. I think you've known that for years. I didn't come here to say that, either. I simply had to get things out of the way before I told you something else. Something where I've counted the points and I'm going set and that's that. Can't be helped."

"What? Perhaps I can help."

"Hardly. I'm pregnant, Daddy."

He dropped the shovel, took her in both arms. "Oh, wonderful!"

Presently she said, "Daddy - . . I can't shoot a bear with you hugging me."

He put her down, grabbed the rifle. "Where?"

"Nowhere. But you're always warning us."

"Oh. All right, I'll take over guard duty. Who's the father, Karen? Duke? or Joe?"

"Neither. Earlier, at school."

"Oh. Still better!"

"How? Damn it, Daddy, this isn't going the way it's supposed to. A girl comes home ruined, her father is supposed to raise hell. All you say is, 'Just dandy!' You've got me confused."

"Sorry. Under other circumstances, I might feel that you had been careless-"

"Oh, I was! I took a chance, like the nigguh mammy who said, 'Oh, hunnuhds of times ain't nuffin happen at all.' You know."

"I'm afraid I do. Under these circumstances I am delighted. I had assumed that you were inexperienced. To learn that, instead, you have gone ahead and given us a child and one whose father is from outside our group- Don't you see, dear? You have almost doubled the chances of this colony surviving."

"I have?"

"Figure it out, you're not stupid. Your child's father- Good stock?"

"Would I have been doing what I most certainly did if I hadn't thought pretty well of him, Daddy?"

"Sorry, dear. It was a stupid question." He smiled. "I don't feel like working. Let's go spread the good news."

"All right. But, Daddy- What do we tell Mother?"

"The truth, and I'll do the telling. Don't worry, baby girl. You have that baby and I will take care of all else."

"Yes, sir. Daddy, I feel real good now."

"That's fine."

"I feel so good that I almost forgot something. Did you know that Dr.-Livingstone-I-Presume is going to have babies, too?"

"Yes."

"Why didn't you tell me?"

"You had the same chance to notice that I did."

"Well, yes. But it's pretty frowsy, your noticing that Doe is pregnant-and not noticing that I am."

"I thought you had simply been overeating again."

"You did, huh? Daddy, sometimes I like you better than other times. But this time I guess I'm going to have to like you anyhow."

Hugh decided to eat dinner before stirring up Grace.

The decision was justified. From her rantings, it appeared that Karen was an ungrateful daughter, a disgrace, a shameless little tramp, and that Hugh was an unnatural father, a failure, and somehow to blame for his daughter's pregnancy.

Hugh let her rant until she paused for breath. "Grace. Be quiet."

"What? Hubert Farnham, don't you dare tell me to shut up! How can you sit there, when your own daughter has flagrantly dis-"

"Shut up or I will shut you up."

Duke said, "Pipe down, Mother."

"You, too? Oh, that I should ever see the day when-"

"Mother, keep still for a while. Let's hear from Dad."

Grace simmered, then said, "Joseph! Leave the room."

"Joe, sit down," Hugh ordered.

"Yes, Joe," agreed Karen. "Please stay."

"Well! If neither of you has the common decency to-"

"Grace, I am nearer to striking you than I have ever been in all these years. Will you keep quiet and listen?"

She looked at her son; Duke was carefully looking elsewhere. "Very well, I will listen. Not that it can possibly do any good."

"I hope that it will because it is supremely important. Grace, there is no point in heckling Karen. Besides being cruel, it's ridiculous. Her pregnancy is the best thing that has happened to us."

"Hubert Farnham, are you out of your mind?"

"Please. You are reacting in terms of conventional morality, which is foolish."

"Oh? So morals are foolish, are they? You hymn-singing hypocrite!"

"Morals are not foolish; morals must be our bedrock, always. But whether it was moral for Karen to breed a baby at another time and place, in a society that is no more, is irrelevant; we will not discuss it. The fact is, she did-and it is a blessing to us. Please analyze it. Six of us, four from one family. Genetically that is too small a breeding stock.

Yet somehow we must flourish-or saving our own lives is wasted. But now we have a seventh, not here in person. That's better than we had any reason to hope. I pray that the twins that run in my family will show up in her. It would strengthen the stock."

"How can you talk about your own daughter as if you were breeding a cow!"

"She is my daughter whom I love. But more important- her supreme importance- is that she is a woman and pregnant. I wish that you and Barbara were pregnant, too-by outsiders. We need variety for the next generation."

"I will not sit here and be insulted!"

"I simply said 'wish.' In Karen we do have this miracle; we must cherish it. Grace, Karen must be treated with every consideration during her pregnancy. You must take care of her."

"Are you insinuating that I wouldn't? You are the one who cares nothing about her welfare. Your own daughter."

"It doesn't matter that she is my daughter. It would apply if it were Barbara, or you, or another woman. No more heavy work for Karen. That laundry she did today- you'll do that; you've loafed long enough. You'll pamper her. But most urgent, there will be no more scoldings, no harsh words, no recriminations. You will be sweet and kind and gentle with her. Don't fail in this, Grace. Or I will punish you."

"You wouldn't dare!"

"I hope I won't be forced to." Hugh faced his son. "Duke. Do I have your backing? Speak up."

"What do you mean by 'punishment,' Dad?"

"Whatever we are forced to use. Words. Social sanctions. Physical punishment if we must. Even expulsion from our group if no other choice remained."

Duke drummed on the table. "That's putting it brutally, Dad."

"Yes. I want you to think about the extremes."

Duke glanced at his sister. "I'll back you. Mother, you've got to behave."

She started to whimper. "My own son has turned against me. Oh, I wish I had never been born!"

"Barbara?"

"My opinion? I agree with you, Hugh. Karen needs kindness. She mustn't be scolded."

"You keep out of this!"

Barbara looked at Grace without expression. "I'm sorry but Hugh asked me. Karen asked me to be in it, too. I think you have behaved abominably, Grace. A baby isn't a calamity."

"That's easy for you to say!"

"Perhaps. But you've been nagging Karen steadily-and really, you mustn't."

Karen said suddenly, "Tell them, Barbara. About yourself."

"You want me to?"

"You'd better. Or now she'll start on you."

"Very well." Barbara bit her lip. "I said that a baby is not a calamity. I'm pregnant, too-and I'm very happy about it."

The silence told Barbara that her purpose of taking the heat off Karen had been achieved. As for herself, she was tranquil for the first time since she had begun to suspect

that she was pregnant. She had not shed a tear-oh, no!-but she found that a tension she had not been conscious of was gone.

"Why, you tramp! No wonder my daughter went wrong, exposed to influences like-"

"Stop it, Grace!"

"Yes, Mother," agreed Duke. "Better keep quiet."

"I was just going to say-"

"You're not going to say anything, Mother. I mean it."

Mrs. Farnham subsided. Hugh went on: "Barbara, I hope you are not fibbing. Trying to protect Karen."

Barbara looked at him and could read no expression. "I am not fibbing, Hugh. I am between two and three months pregnant."

"Well, the rejoicing is now doubled. We will have to relieve you of heavy work, too. Duke, can you take on some farming?"

"Certainly."

"Joe can do some, too. Mmm- I must push ahead with the kitchen and bathroom. You'll both need such comforts long before either baby is born. Joe, that bearproof extra room can't be put off now; nursery space will be essential and we men will have to move out. I think-"

"Hugh-"

"Yes, Barbara?"

"Don't worry tonight. I can garden, I'm not as far along as Karen and I've had no morning sickness. I'll let you know when I need help."

He looked thoughtful. "No."

"Oh, heaven! I like gardening. Pioneer mothers always worked when pregnant. They stopped when the pains came."

"And it killed them, too. Barbara, we can't spare either of you. We'll treat you as the precious jewels you are." He looked around. "Right?"

"Right, Dad."

"Sure thing, Hugh!"

Mrs Farnham stood up. "Really, this conversation is making me ill."

"Good night, Grace. No farming for you, Barbara."

"But I like my farm. I'll quit in time."

"You can supervise. Don't let me catch you using a spading fork. Nor weeding. You might shake something loose. You're a gentleman farmer now."

"Does it say in your books how much work a pregnant woman may do?"

"I'll read up on it. But we'll err on the conservative side. Some doctors keep patients in bed for months to avoid losing a baby."

"Daddy, you don't expect us to stay in bed!"

"Probably not, Karen. But we will be very careful." He added, "Barbara is right; it can't all be settled tonight. Bridge, anyone? Or has there been too much excitement?"

"Hell, no!" Karen answered. "I can use pampering but bridge is one thing that can't cause a miscarriage. I think."

"No," agreed her father. "But the way you bid might cause heart failure in someone else."

"Pooh. Who wants to bid like a computer? Live dangerously, I always say."

"You do, dear."

They got no further than dealing. Dr. Livingstone, who had been sleeping in the "bathroom," at that moment came into the main room, walking stiff-legged and almost dragging hindquarters. "Joseph," the cat announced, "I am going to have these babies right now1~'

The cat's anguished wailing, its hobbled gait, made its meaning clear as words. Joe was out of his chair at once. "Doe! What's the matter, Doe?"

He started to pick the cat up. That was not what Dr. Livingstone needed; it wailed louder and struggled. Hugh said, "Joe. Let it be."

"But old Doe hurts."

"So let's take care of the matter. Duke, we'll use electric lights and the camp lamp. Snuff the candles. Karen, blankets on the table and a clean sheet."

"Right away."

Hugh knelt by the cat. "Easy, Doe. It hurts, doesn't it? Never mind, it won't be long. We're here, we're here." He smoothed the fur along the spine, then gently felt the abdomen. "Contraction. Hurry up, Karen."

"Ready, Daddy!"

"Lift with me, Joe."

They placed the cat on the table. Joe said, "What do we do now?"

"Give you a Miltown."

"But Doe hurts."

"Surely she does. We can't do anything about it. She's having a bad time. It's her first litter and she's frightened, and she's older than she should be, for a first. Not good."

"But we have to do something."

"You can help by quieting down; you're communicating your fear to her. Joe, if there were anything I could do, I would. But there isn't much we can do but stand by and let her know that she is not alone. Keep her from being frightened. Do you want that tranquilizer?"

"Uh, I guess so."

"Get it, Duke. Don't leave, Joe; Doe trusts you."

"Hubert, if you are going to stay up all night over a cat again, I'll need a sleeping pill. You can't expect a person to sleep with all this fuss."

"A Seconal for your mother, Duke. Can anybody think of anything we can use as a kitten bed?" Hugh Farnham searched his memory. Every box, every scrap of lumber, had been used and re-used and re-re-used in endless make-do building. Build a nest of bricks? Not sooner than daylight and this poor animal needed a safe and comforting spot tonight. Take apart some shelves?

"Daddy, how about the bottom wardrobe drawer?"

"Perfect! Pile everything on a bunk. Pad it. Use my hunting jacket. Duke, rig a frame to support a blanket; she'll want a little cave she'll feel safe in. You know."

"Of course we know," Karen chided. "Quit jittering, Daddy. This isn't our first litter."

"Sorry, baby. We are about to have a kitten. See that, Joe?" Fur rippled from the cat's middle down toward the tail, then did so again.

Karen hurriedly threw everything out of the lowest wardrobe drawer, placed it against the wall and put the hunting jacket in it, rushed back. "Did I miss it?"

"No," Hugh assured her. "But right now!"

Doe stopped panting to give one wail and was delivered of a kitten in two quick convulsions.

"Why, it's wrapped in cellophane," Barbara said wonderingly.

"Didn't you know?" asked Karen. "Daddy, it's gray! Doe, where have you been? Though maybe I shouldn't bring that up."

Neither Hugh nor Dr. Livingstone answered. The mother cat started vigorously licking her offspring, broke the covering, and tiny ratlike arms and legs waved helplessly. A squeak so thin and high as to be almost inaudible announced its opinion of the world. Doe bit the cord and went on licking, cleaning off blood and mucus and purring loudly at the same time. The baby didn't like it and again vented almost silent protest.

"Boss," demanded Joe, "what's wrong with it? It's so skinny and little."

"Its a fine kitten. It's a pretty baby, Doe. He's a bachelor, he doesn't know." Hugh spoke cooingly and rubbed the eat between her ears. He went on in normal tones, "And the worst ease of bar sinister I ever saw-smooth-haired, tiger-striped, and gray."

Doe looked up reprovingly, gave a shudder and delivered the afterbirth, began chewing the bloody mass. Barbara gulped and rushed to the door, fumbled at a bolt. Karen went after her, opened it and steadied her while she threw up.

"Duke!" Hugh snapped. "Bear guard!"

Duke followed them, stuck his head out. Karen said, "Go 'way! We're safe. Bright moonlight."

"Well. . . leave the door open." He withdrew.

Karen said, "I thought you weren't having morning sickness?"

"I'm not. Oh!" Retching again hit her. "It was what Doe did."

"Oh, that. Cats always do that. Let me wipe your mouth, dear."

"It's awful."

"It's normal. Good for them. Hormones, or something; you can ask Hugh. All right now?"

"I think so. Karen! We don't have to do that? Do we? I won't, I won't!"

"Huh? Oh! Never thought of it. Oh, I know we don't-or they would have told us in Smut One."

"Lots of things they don't mention in Smut One," Barbara said darkly. "When I had to take it, it was taught by an old maid. But I won't. I'll resign first, not have this baby."

"Comrade," Karen said grimly, "that's something we both should have thought of earlier. Stand aside, it's my turn to heave."

Presently they went inside, pale but steady. Dr. Livingstone had three more kittens and Barbara managed to watch without further rushes for the door. Of the other birthings only the third was notable: a tiny tomcat but large in its tininess. He was a breech presentation, the skull did not pass easily, and Doe in her pain clamped down.

Hugh was busy at once, pulling gently on the little body with his whole hand and sweating like a surgeon. Doe wailed and bit his thumb. He did not let it stop him nor hurry him.

Suddenly the kitten came free; he bent over and blew in its mouth, was rewarded with a thin, indignant squeak. He put the baby down, let Dr. Livingstone clean it. "That was close," he said shakily.

"Old Doe didn't mean to," Joe said softly.

"Of course not. Which of you girls feels like fixing this for me?"

Barbara dressed the wound, while telling herself that she must not, must not, bite when her own time came.

The kittens were, in order, smooth-haired gray, fluffy white, midnight black with white jabot and mittens, and calico. After much argument between Karen and Joe, they were named: Happy New Year, Snow Princess Magnificent, Dr. Ebony Midnight, and Patchwork Girl of Oz-Happy, Maggie, Midnight, and Patches.

By midnight mother and children were bedded in the drawer with food, water, and sandbox near, and everyone went to bed. Joe slept on the floor with his head by the kitten nest.

When everyone was quiet, he raised up, used the flash to look in. Dr. Livingstone had one kitten in her arms, three more at suck; she stopped cleaning Maggie and looked inquiringly at him.

"They're beautiful kittens, Doe," he told her. "The best babies."

She spread her royal whiskers and purred agreement.

Chapter 8

Hugh leaned on his shovel. "That does it, Joe."

"Let me tidy up around the gate." They were at the upper end of their ditch where the stream had been dammed against the dry season. It had been on them for weeks; the forest was sere, the heat oppressive. They were extremely careful about fire.

But no longer so careful about bears. It was still standard practice to be armed, but Duke had killed so many carnivores, ursine and feline, they seldom saw one.

The water spilling over the dam was only a trickle but there was water for irrigation and for household needs. Without the ditch they would have lost their garden.

It was necessary every day or so to adjust the flow. Hugh had not built a water gate; paucity of tools, scarcity of metal, and a total lack of lumber had baffled him. Instead he had devised an expedient. The point where water was taken from the pond had been faced with brick and a spillway set of half-round tile. To increase the flow this was taken out, the spill cut deeper, bricks adjusted, and tiles replaced. It was clumsy; it worked.

The bottom of the ditch was tiled all the way to house and garden; a minimum of water was lost. Their kiln had worked day and night; most of their capital gain had come out of the clay bank below the house and it was becoming difficult to dig good clay.

This did not worry Hugh; they had almost everything they needed.

Their bathroom was no longer a joke. Water flowed in a two-stall trough toilet partitioned with deerhide; tile drainpipe "leaded" with clay ran down the manhole, out the tunnel, and to a cesspool.

Forming drainpipe Hugh had found very difficult. After many failures he had whittled a male form in three parts-in parts, because it was necessary to shape the clay

over it, let it dry enough to take out the form before it cracked from shrinking over the form.

With practice he cut his failures to about 25 percent in forming, 25 percent in firing.

The damaged water tank he had cut painfully, mallet and chisel, lengthwise into tubs, a bathtub indoors and a washtub outdoors. The seams he had calked with shaved hide; the tubs did not leak-much.

A brick fireplace-oven filled one corner of the bath-kitchen. It was not in use; days were long and hot; they cooked outdoors and ate under an awning of empty bears- but it was ready against the next rainy season.

Their house now had two stories. Hugh had concluded that an addition strong enough to stop bears and tight enough to discourage snakes would have to be of stone, and solidly roofed. That he could do-but how about windows and doors? Glass he would make someday if he solved the problems of soda and lime. But not soon. A stout door and tight shutters he could manage, but such a cabin would be stuffy.

So they had built a shed on the roof, a grass shack. With the ladder up, a bear faced a twelve-foot wall. Unsure that a wall would stop all their neighbors, Hugh had arranged trip lines around the edge so that disturbing them would cause an oxygen bottle to fall over. Their alarm was tripped the first week, scaring off the intruder. It had also, Hugh admitted, scared the bejasus out of him.

Anything that could not be hurt by weather had been moved out and the main room was rearranged into a women's dormitory and nursery. Hugh stared downstream while Joe finished fussing. He could make out the roof of his penthouse. Good enough, he mused. Everything was in fair shape and next year would be better. So much better that they might take time to explore. Even Duke had not been as much as twenty miles away. Nothing but feet for travel and too busy scratching to live- Next year would be soon enough.

"A man's reach should exceed his grasp, or what's a heaven for?" They had started with neither pot nor window. This year a pot- Next year a window? No hurry- Things were going well. Even Grace seemed contented. He felt certain that she would settle down and be a happy grandmother. Grace liked babies, Grace did well with babies- How well he remembered.

Not long now. Baby Karen was fuzzily vague but her guesses seemed to show that D-day was about two weeks off, and her condition matched her guess, as near as he could tell.

The sooner the better! Hugh had studied everything in his library on pregnancy and childbirth; he had made every preparation he could. His patients seemed to be in perfect health, both had satisfactory pelvic measurements, both seemed unafraid, and they helped each other with friendly nagging, not to gain too much weight. With Barbara to hold Karen's hand, with Karen to hold Barbara's hand, with Grace's motherly experience to bolster them, Hugh could see no trouble ahead.

It would be wonderful to have babies in the house.

With a warm wave of euphoria Hugh Farnham realized that he had never been so happy in his life.

"That's it, Hugh. Let's catch those tiles on the way back."

"Okay. Take the rifle, I'll carry the tools."

"I think," Joe said, "we ought to-"

His words chopped off at a gunshot; they froze. It was followed by two more. They ran.

Barbara was in the door. She held up a gun and waved, went inside. She came out before they reached the house, stepping carefully down off the stoop and moving slowly; she was very gravid. Her belly bulged huge in shorts made from wornout jeans that had belonged to Duke; she wore a man's shirt altered to support her breasts. She was barefooted and no longer carried the gun.

Joe outdistanced Hugh, met her near the house. "Karen?" he demanded.

"Yes. She's started."

Joe hurried inside. Hugh arrived, stood panting. "Well?"

"Her bag of waters burst. Then the pains started. That was when I fired."

"Why didn't you- Never mind. What else?"

"Grace is with her. But she wants you."

"Let me catch my breath." Hugh wiped his face, tried to control his trembling. He took a deep breath, held it, let it out slowly. He went inside, Barbara following.

The bunks near the door had been taken down. A bed stuck out into the doorway but space cleared by removing shelves left passage. One bunk was now a cot in the living corner. The bed was padded with a grass mattress and a bear rug; a calico cat was on it.

Hugh squeezed past, felt another eat brush his ankles. He went into the other bay. The bunks there had been rebuilt into a bed across the end; Karen was in bed, Grace was seated, fanning her, and Joe stood by with an air of grave concern.

Hugh smiled at his daughter. "Hi, Fatty!" He stooped and kissed her. "How are you? Hurting?"

"Not now. But I'm glad you're here."

"We hurried."

A cat jumped up, landing on Karen. "Unh! Damn you, Maggie!"

"Joe," said Hugh, "round up the cats and put them in Coventry." The tunnel mouth had been bricked up, but with air holes, and a cat door which could be filled with a large brick. The cats had a low opinion of this but it had been built after Happy New Year had become missing and presumed dead.

Karen said, "Daddy, I want Maggie with me!"

"Joe, make that all but Maggie. When we get busy, grab Maggie and shut her up, too."

"Can do, Hugh." Joe left, passing Barbara coming in.

Hugh felt Karen's cheeks, took her pulse. He said to his wife, "Is she shaved?"

"There hasn't been time."

"You and Barbara get her shaved and washed. Punkin', when did your bowels move?"

"Just did. I was on the pot when it happened. Just sitting there minding my own business-and all of a sudden I'm Niagara Falls!"

"But your bowels moved?"

"Oh, yes!"

"That's one less thing to worry about." He smiled. "Not that there's anything to worry about, you'll play bridge most of the night. Like kittens, babies show up in the wee, sma' hours."

"All night? I want to have this little bastard and get it over with."

"I want it over with, too, but babies have minds of their own." He added, "You'll be busy a while and so will I. I'm dirty." He started to leave.

"Daddy, wait a minute. Do I have to stay back here? It's hot."

"No. The light is better by the door. Especially if young Tarzan has the decency to arrive during daylight. Barbara, turn that used bear over; it'll be cooler. Put this sheet on it. Or a clean one if there is one."

"The sterilized one?"

"No. Don't unpack the boiled sheet until the riot starts." Hugh patted his patient's hand. "Try not to have a pain until I'm clean."

"Daddy, you should have been a doctor."

"I am a doctor. The best doctor in the world."

As he left the house he encountered Duke, soaked from a long run. "I heard three shots. Sis?"

"Yes. No hurry, labor just started. I'm about to take a bath. Want to join me?"

"I want to say hello to Sis first."

"Hurry up; they're about to bathe her. And grab Joe; he's incarcerating cats. They'll want us out of the way."

"Shouldn't we be boiling water?"

"Do so, if it will calm you. Duke, my O.B. kit, such as it is, has been ready for a month. There are six jars of boiled water, for this and that. Go kiss your sister and don't let her see that you're worried."

"You're a cold fish, Dad."

"Son, I'm scared silly. I can list thirteen major complications-and I'm not prepared to cope with any of them. Mostly I pat her hand and tell her that everything is dandy-and that's what she needs. I examine her, solemn as a judge, and don't know what to look for. It's just to reassure her . . . and I'll thank you to help out."

Duke said soberly, "I will, sir. I'll kid her along."

"Don't overdo it. Just let her see that you share her confidence in old Doe Farnham."

"I will."

"If Joe gets the jitters, get him out. He's the worst. Grace is doing fine. Hurry up or they won't let you in."

Later, bathed and calmed down, Hugh climbed out of the stream ahead of Joe and Duke, walked back carrying his clothes and letting the air dry him. He paused outside, put on clean shorts. "Knock, knock!"

"Stay out," Grace called. "We're busy."

"Then cover her. I want to scrub."

"Don't be silly, Mother. Come in, Daddy."

He went in, squeezing around Barbara and Grace, and on into the bathroom. He trimmed his nails very closely, scrubbed his hands with ditch water-then again with boiled water, and repeated it. He shook them dry and went into the main room, being careful not to touch anything.

Karen was on the bed at the door, a ragged half sheet over her. Her shoulders were swaddled in a grayish garment that had been the shirt Hugh had worn the night of the attack. Grace and Barbara were seated on the bed, Duke stood outside the door, and Joe sat mournfully on the bunk beyond the bed.

Hugh smiled at her. "How is it going? Any twinges?"

"Nary a twinge, damn it. I want to have him before dinner."

"You will. Because you don't get any dinner."

"Beast. My daddy is a beast."

"Doctor Beast, please. Skedaddle, friends, I want to examine my patient. Everyone but Grace. Barbara, go lie down."

"I'm not tired."

"You may be awake most of the night. Take a nap. I don't want to cope with a seven-month preemie."

He folded back the sheet, looked Karen over, and palpated her swollen belly. "Has he been kicking?"

"Has he! I'm going to sign him up with the Green Bay Packers. I think he's wearing shoes."

"Wouldn't be surprised. Did you have shoes on when you started him?"

"What? Daddy, you are a nasty man. Yes."

"Prenatal influence. Next time take them off." He tried to judge whether the child was in the head-down position, or whether it was-God forbid!-a breech presentation. He was unable to decide. So he smiled at Karen and lied. "Shoes won't bother us, as he is head down, just as he should be. It's going to be an easy birth."

"How can you tell, Daddy?"

"Put your hand where mine is. That's his little pointy head, all set to take the dive. Feel it?"

"I guess so."

"You could see, if you were where I am." He tried to see if she was dilated. There was a little blood and he decided against a tactile examination-he did not know how it should feel and handling the birth canal would increase danger of infection. He knew that a rectal exploration should tell him something but be did not know what-so there was no point in submitting Karen to that indignity.

He looked up, caught his wife's eye and thought of asking her opinion, decided not to. Despite having borne children, Grace knew no more about it than he did; the only result would be to shake Karen's confidence. -

Instead he got his "stethoscope" (three end papers from his encyclopaedia, rolled into a tube) and listened for fetal heartbeat. He had often heard it lately. But he got only a variety of noises which he lumped in his mind as "gut rumble."

"Ticking like a metronome," he 'announced, putting the tube down and covering her. "Your baby's in fine shape, baby girl, and so are you. Grace, did you start a log when the first pain showed?"

"Barbara did."

"Will you keep it, please? But first tell Duke to take the ropes off the other bed and rig them here."

"Hubert, are you sure she should pull on ropes? Neither of my doctors had me do anything of the sort."

"It's the latest thing," he reassured her. "All hospitals use them now." Hugh had read somewhere that midwives often had their patients pull on ropes while bearing down. He had looked for this in his books, could not find it. But it struck him as sound mechanics; a woman should be able to bear down better.

Grace looked doubtful but dropped the matter and left the shelter. Hugh started to get up. Karen grabbed his hand. "Don't go 'way, Daddy!"

"Pain?"

"No. Something to tell you. I asked Joe to marry me. Last week. And he accepted."

"I'm glad to hear it, dear. I think you are getting a prize."

"I do, too. Oh, it's Hobson's choice but I do love him, quite a lot. But we won't get married until I'm up and around and strong. I couldn't face the row with Mother, not now."

"I won't tell her."

"Better not tell Duke, either. Barbara knows., she thinks it's swell."

A contraction hit Karen while Duke war adjusting ropes. She yelped, chopped it off and gritted her teeth, reached for the ropes as Duke hastily handed them to her. Hugh put his hand on her belly, felt her womb harden as increasing pain showed in her face. "Bear down, baby," he told her. "And pant; it helps." .

She started to pant, it turned into a scream.

Endless seconds later she relaxed, forced a smile and said, "They went that a-way! Sorry about the sound effects, Daddy."

"Yell if you want to. But panting does more good. Now rest while you can. Let's get this organized. Joe, you're drafted as cook. I want Barbara to rest and Grace to nurse- so you cook dinner, please. Fix some cold supper, too. Grace, did you log it?"

"Yes."

"Did you time the contraction?"

"I did," Barbara answered. "Forty-four seconds."

Karen looked indignant. "Barb, you are out of your mind! It was over an hour."

"Call it forty-five seconds," Hugh said. "I want the time of each pain and how long it lasts."

Seven minutes later the next one hit. Karen managed to pant, screamed only a little. But she did not feel like joking afterwards; she turned her face away. The contraction had been long and severe. Though shaken by his daughter's agony, Hugh felt encouraged; it seemed certain that labor was going to be short.

It was not. All that hot and weary day the woman brought to bed fought to void herself of her burden-white-faced and shrieking, belly hardening with each attempt, muscles in arms and neck standing out as she strained-then fell back limp as the contraction died away, tired and trembling, not speaking, uninterested in anything but the ordeal.

It got steadily worse. Contractions became only three minutes apart, each one longer and seeming to hurt more. Once Hugh told her not to use the ropes; he could not see that they helped. Quickly she asked for them and seemed not to have heard him. She did seem slightly less uncomfortable braced against them.

At nine that night there was bleeding. Grace became frantic; she had heard many stories of the dangers of hemorrhage. Hugh assured her that it was normal and showed

that the baby would arrive soon. He believed it, as it was not massive and did not continue-and it did not seem possible that birth could be far away.

Grace looked angry and got up; Barbara slipped into the chair she vacated. Hugh hoped that Grace would rest-the women had been taking turns.

But Grace returned a few minutes later. "Hubert," she said in a high, brittle voice. "Hubert, I'm goi1~g to call a doctor."

"Do that," he agreed, his eyes on Karen.

"You listen to me, Hubert Farnham. You should have called a doctor at once. You're killing her, you hear me? I'm going to call a doctor-and you are not going to stop me."

"Yes, Grace. The telephone is in there." He pointed into the other wing. Grace looked puzzled, then turned suddenly and went away. "Duke!"

His son hurried in. "Yes, Dad?"

Hugh said forcefully, "Duke, your mother has decided to telephone for a doctor. You go help her. Do you understand?"

Duke's eyes widened. "Where are the needles?"

"In the smaller bundle on the table. Don't touch the large bundle; it's sterile."

"Got it. What dosage?"

"Two c.c. Don't let her see the needle, or she'll jerk." Hugh's head jerked; he realized that he was groggy. "Make that three c.c.; I want her to go out like a light and sleep until morning. She can tolerate it."

"Right away." Duke left.

Karen had been lying quiet between contractions, apparently in semi-coma. Now she whispered, "Poor Daddy. Your women give you a lot of grief."

"Rest, dear."

"I- Oh, God, here it comes again!"

Then she was saying between screams: "It hurts! Make it stop! Oh, Daddy, I do want a doctor! Please, Daddy! Get me a doctor!"

"Bear down, darling. Bear down."

It went on and on, far into the night, no respite and getting worse. It stopped being worth while to log contractions; they almost overlapped. Karen no longer could be said to talk; she screamed incoherent demands for relief when she strained, spoke unresponsively or did not answer in the brief periods between contractions.

Around dawn-it seemed to Hugh that the torture had been going on for weeks but his watch showed that Karen had been in labor eighteen hours-Barbara said urgently, "Hugh, she can't take any more."

"I know," he admitted, looking at his daughter. She was at the peak of a pain, face gray and contorted, mouth squared in agony, high sobbing moans coming out between her teeth.

"Well?"

"I suppose she should have had a Caesarean. But I'm no surgeon."

"I wonder."

"I don't. I'm not."

"You know more about it than the first man who ever did one! You know how to keep it sterile. We have sulfa drugs and you can load her up with Demerol." She did not try to keep Karen from hearing; their patient was beyond caring.

"Hugh, you must. She's dying."

"I know." He sighed. "But it's too late for a Caesarean, even ill knew how. To save Karen with one, I mean. We might save her baby." He blinked and swayed. "Only it would not. Who's to wet-nurse? You can't, not yet. And cows we don't have."

He took a deep breath, tried to get a grip on himself. "Only one thing left. Try to get it out Eskimo style."

"What's that?"

"Get her up and let gravity help. Maybe it'll work. Call the boys, we'll need them. I've got to scrub again; I might have to do an episiotomy. Oh, God."

Five minutes and two contractions later they were ready to try it. When Karen lay back exhausted after the second one, Hugh tried to explain what they were going to do. It was hard to get her attention. At last she nodded slightly and whispered, "I don't care."

Hugh went to the table where his equipment was now opened out, got his one scalpel, took the camp lamp in his other hand. "All right, boys. As soon as she starts, pick her up."

They had only seconds to wait. Hugh saw the contraction start, nodded to Duke. "Now!"

"With me, Joe." They started to lift her, each with an arm under her back, a hand under a thigh.

Karen screamed and fought them off. "No, no! Don't touch me-I can't stand it! Daddy, make them stop! Daddy!"

They stopped. Duke said, "Dad?"

"Lift her up! Now!"

They got her high in a squatting position, thighs pulled open. Barbara got behind Karen, arms around her, and pressed down on the girl's tortured belly. Karen screamed and struggled; they held her fast. Hugh got hurriedly to the floor, shined the light up. "Bear down, Karen, bear down!"

"Oooooh!"

Suddenly he saw the baby's scalp, gray-blue. He started to lay the knife aside; the head retreated. "Try again, Karen!"

He readjusted the lamp. He wondered whether he was supposed to make the incision in front? Or in back? Or both? He saw the scalp show again and stop; with his hand suddenly rock steady and with no conscious decision he reached up and made one small cut.

He barely had time to drop the knife before he had both hands full of wet, slippery, bloody baby. He knew there was something else he should do now but all he could think of was to get it by both feet in his left hand, lift it and slap its tiny bottom.

It let out a choked wail.

"Get her on the bed, boys-but easy! It's still fastened by the cord."

They made it, Hugh on his knees and burdened with a feebly wiggling load. Once they had Karen down, Hugh started to put her baby in her arms-but saw that Karen was not up to it. She seemed to be awake-her eyes were open. But she was in total collapse.

Hugh was close to collapse. He looked dazedly around, handed the baby to Barbara. "Stay close," he told her, unnecessarily.

"Dad?" said Duke. "Aren't you supposed to cut the cord?"

"Not yet." Where was that knife? He found it, rubbed it quickly with iodine-hoped that it was sterile. Placed it by two boiled lengths of cotton string-turned and felt the cord to see if it was pulsing.

"He's beautiful," Joe said softly.

"She," Hugh corrected. "The baby is a girl. Now, Barbara, if you-"

He broke off. Suddenly everything happened too fast. The baby started to choke; Hugh grabbed it, turned it upside down, dug into its mouth, scooped out a plug of mucus, handed the baby back, started again to check the cord-saw that Karen was in trouble.

With a nightmare feeling that he needed to be twins he got one of the strings, tied a square knot around the cord near the baby's belly, trying to control his trembling so as not to tie it too hard-started to tie the second, saw that it was not needed; Karen suddenly delivered the placenta and was hemorrhaging. She moaned.

With one slash Hugh cut the cord, snapped at Barbara, "Get a bellyband on it!"-turned to take care of the mother.

She was flowing like a river; her face was gray and she seemed unconscious. Too late to attempt to take stitches in the cut he had made and the tears that followed; he could see that this flood was from inside, not from the damaged portal. He tried to stop it by packing her inside with their last roll of gauze while shouting to Joe and to Duke to get a bellyband and compress on Karen herself to put pressure on her uterus.

Some agonized time later the belly compress was in place and the gauze was backed by a dam of sanitary napkins-one irreplaceable, Hugh thought tiredly, they hadn't needed much. He raised his eyes and looked at Karen's face-then in sudden panic tried to find her pulse.

Karen had survived the birth of her daughter by less than seven minutes.

Chapter 9

Katherine Josephine survived her mother by a day. Hugh baptized her with that name and a drop of water an hour after Karen died; it was clear that the baby might not last long. She had trouble breathing.

Once when the baby choked, Barbara started her up again by mouth-to-mouth suction, getting a mouthful of something she spat out hastily. Little Jodie seemed better then for quite a while.

But Hugh knew that it was only a reprieve; he could see no chance of keeping the baby alive long enough-two months-to let Barbara feed it. Only two cans of Carnation milk were left in their stores.

Nevertheless they worked grimly around the clock.

Grace mixed a formula from memory-evaporated milk, boiled water, a hoarded can of white Karo. They had no food cells, not even a nipple. An orphaned baby was a crisis for which Hugh had not planned. In hindsight it seemed the most glaring of probable emergencies. He tried not to brood over his failure, dedicated himself to keeping Karen's daughter alive.

A plastic-barreled eyedropper was the nearest to a nipple they could find. They used it to pick up the formula, try to match the pressure with the infant's attempts to suck.

It did not work well. Little Jodie continued to have trouble breathing and tended to choke every time they tried to feed her; they spent as much time trying to clear her throat and get her cranked up again as they did in feeding her. She seemed reluctant to suck on the harsh substitute and if they squirted food into her mouth anyway, she always choked. Twice Grace was able to coax her into taking almost an ounce. Both times she threw it up. Barbara and Hugh had even less luck.

Before dawn following her birthday Hugh was awakened by Grace screaming. The child had choked to death.

During the long day in which three of them battled to save the baby, Duke and Joe dug a grave, high up the hill in a sunny spot. They dug deep and stocked a pile of boulders; both held concealed horror that a bear or coyotes might dig up the grave.

Grave dug, boulders waiting, Joe said in a strained voice, "How are we going to build a casket?"

Duke sighed and wiped sweat from his eyes. "Joe, we can't."

"We've got to."

"Oh, we could cut trees and split them and adz out some lumber-we've done that when we had to. That kitchen counter. But how long would it take? Joe, this is hot weather-Karen can't wait!"

"We've got to tear down something and build out of it. A bed, maybe. Bookcases."

"Taking the wardrobe apart would be easiest."

"Let's start."

"Joe. The 'only things we could use to build a coffin are in the house. Do you think Hugh will let us go in there now and start ripping and tearing and banging? If anybody woke that baby or startled it when they were trying to get it to feed, Dad would kill him. If Barbara or Mother didn't kill him first. No, Joe. No coffin."

They settled for a vault, using all their stock of bricks; these they used to build a box in the bottom of the grave, then cut down their dining canopy to line it, and cut timbers to cover it. Poor as it was, they felt comforted by it.

Next morning the grave received mother and daughter.

Joe and Duke placed them in it, Duke having insisted that his father stay behind and take care of Grace and Barbara. Duke had visualized how awkward it would be, getting the bodies into the grave and arranging them; he would not have had Joe along had not an assistant been necessary. He suggested that his mother not come 'to the grave at all.

Hugh shook his head. "I thought of that. You try to convince her. I can't budge her."

Nor could Duke. But when he sent Joe down for the others, his sister and her daughter were decently at rest with their winding sheet neatly arranged, and no trace remained of the struggle it had been to place 'them there, the rebuilding of part of the brick box that had been necessary, or-worst-the moment when the tiny corpse had fallen out of the sheet when they tried to get them both down as one. Karen's face looked peaceful and her daughter was cuddled in her arm as if sleeping.

Duke balanced with a foot on each brick wall, knelt over her. "Good-bye, Sis," he whispered. "I'm sorry." He covered her face and got carefully out of the grave. A little procession was coming up the hill, Hugh 'assisting his wife, Joe helping Barbara. Beyond the shelter 'their flag flew at half-mast.

They arranged themselves at the grave, Hugh at the head, his wife on his right, his son on his left, Barbara and Joe at the foot. To Duke's relief no one asked that faces be uncovered nor did his mother seem disturbed at the arrangements.

Hugh took a small black book from his pocket, opened it to a marked page:

"'I am the Resurrection and the Life. .

"'We brought nothing into this world, and it is certain that we can take nothing out. The Lord gave, and the Lord hath taken-'"

Grace sobbed and her knees started to fail Hugh shoved the book into Duke's hands, moved to support his wife. "Take over, Son!"

"Take her back down, Dad!"

Grace said brokenly, "No, no! I must stay."

"Read it, Duke. I've marked the passages."

"'. . . he heapeth up riches, and cannot tell who shall gather them.

"'For I am a stranger with thee, and a sojourner, as all my fathers were.

"'0 spare me a little, that I may recover my strength.

"'Man, that is born of woman, hath but a short time to live, and is full of misery.

"'Unto Almighty God we commend the soul of our sister- of our sisters-and we commit their bodies to the ground; earth to earth, ashes to ashes, dust to dust-'"

Duke paused, dropped the tiniest of clods into the grave. He looked back at the book, closed it and said suddenly, "Let us pray."

They took Grace back and put her to bed; Joe and Duke returned to close the grave. Hugh, seeing that his wife appeared to be resting, started to snuff candles in the rear bay. She opened her eyes. "Hubert-"

"Yes, Grace?"

"I told you. I warned you. You wouldn't listen to me."

"About what, Grace?"

"I told you she had to have a doctor! You wouldn't call one. You were too proud. You sacrificed my daughter on the altar of your pride. My baby. You killed her."

"Grace, there are no doctors here. You know that."

"If you were even half a man, you wouldn't make excuses!"

"Grace, please. May I get you something? A Miltown? Or would you like a hypo?"

"No, no!" she said shrilly. "That's how you tricked me when I was going to get a doctor anyway. In spite of you. You'll never again trick me with your drugs. And you'll never touch me again, either. Murderer."

"Yes, Grace." He turned and left.

Barbara was on the stoop, sitting with her head in her hands. Hugh said, "Barbara, the flag must be two-blocked. Do you want me to do it?"

"So soon, Hugh?"

"Yes. We go on."

Chapter 10

They went on. Duke hunted, Duke and Joe farmed, Hugh worked harder than ever. Grace worked too, and her cooking improved-and her eating; she got fatter. She never mentioned her conviction that her husband had been responsible for the death of their daughter.

She did not speak to him at all. When a problem had to be discussed she spoke to Duke. She quit attending church services.

In the last month of Barbara's pregnancy, Duke sought out his father privately. "Dad, you told me that any time I wanted to leave-or any of us-we could."

Hugh was startled. "Yes."

"A pro-rata share, you said. Ammo, tools, and so forth."

"Better than that; we're a going concern. Duke, you are leaving?"

"Yes-but not just myself. Mother wants to. She's the one who's dead set on it. I've got reasons, but Mother's wishes are the deciding factor."

"Mmm- Let's talk about your reasons. Are you dissatisfied with the way I'm running things? I will gladly step aside. I feel sure that I can get Joe and Barbara to go along, so that you will have unanimous support." He sighed. "I am anxious to turn over the burden."

Duke shook his head. "That's not it, Dad. I don't want to be boss and you've done a good job. Oh, I won't say I liked the high-handed way you started in. But results count and you got results. I'd rather not discuss my reasons except to say that they don't have to do with you-and wouldn't be enough to make me leave if Mother weren't hipped on it. She wants to leave. She's going to leave. I can't let her leave alone."

"Can you tell me why Grace wants to leave?"

Duke hesitated. "Dad, I don't see that it matters; she's made up her mind. I pointed out that I couldn't make things as safe for her-nor as comfortable-as it is here. But she's adamant."

Hugh pondered it. "Duke, if that's how your mother feels, I won't try to persuade her; I've long since lost my influence over her. But I have two ideas. You may find one of them practical."

"I doubt it."

"Hear me. You know we have copper tubing; we used some in the kitchen. We have everything for a still; I stocked the items to build one if a war came along-not just for us but because liquor is money in any primitive society.

"I haven't built it for reasons we both know. But I could and I know how to make liquor." He smiled slightly. "Not book knowledge. While I was in the South Pacific, I bossed a still, with the shut-eye connivance of my C.O. I learned how to turn corn or potatoes or most anything into vodka, or fruit into brandy. Duke, your mother might be happy if she had liquor.

"She would drink herself to death!"

"Duke, Duke! If she is happy doing it, who are we to stop her? What does she have to live for? She loved television, she enjoyed parties, she could spend a happy day at the hairdresser's, followed by a movie, then drinks with one of her friends. That was her

life, Duke. Now where is it? Gone, gone! There is just this we can give her to make up for what she has lost. Who are you to decided that you mother must not drink herself to death?"

"Dad, that's not the situation!"

"So?"

"You know I don't-didn't-approve of Mother's excessive drinking. But I might go along with letting her drink all she wants now. If you build that still, we might be customers. But we would still leave. Because that won't solve Mother's problem."

"Well, Duke, that leaves only my other idea. I'll get out instead. Only-" Hugh frowned. "Duke, tell her that I will leave as soon as Barbara has her baby. I can't walk out on my patient. You can give Grace my assur-"

"Dad, that won't solve a thing!"

"I don't understand."

"Oh, Christ, I might as well spill it. It's Barbara. She's- Well, hell, Mother is nuts on the subject. Can't stand her. Ever since Karen died. She said to me, 'Duke, that woman is not going to have her child in my home! Her bastard. I won't have it. You tell your father that he has got to get her out of here.' That's what she said, Dad."

"Good Lord!"

"Yeah. I tried to reason with her. I told her that Barbara couldn't leave. I gave her both barrels, Dad; I said there wasn't a chance that you would ever force Barbara to leave. But as for making her leave now, or even letting her, you would no more do it than you would have driven Karen out. I told her that I wouldn't, either, and that Joe and I would fight you to stop it, stipulating that you were crazy enough to try. Which you aren't, of course."

"Thank you."

"That did it. She believes me when I lay it on the line. So she decided to leave. I can't stall her any longer. She's leaving. I'm going with her, to take care of her."

His father rubbed his temples. "I guess there is no situation so bad but what it can get worse. Duke, even with you, she hasn't 'anywhere to go."

"Not quite, Dad."

"Eh?"

"I can swing it, with your help. Do you remember that cave up Collins Canyon, the one they tried to make a tourist attraction? It's still there. Or its twin, I mean. I was hunting up that way that first week. The canyon looked so familiar that I climbed up and looked for the cave. Found it. And Dad, it's habitable and defensible."

"The door? The mouth?"

"No problem. If you can spare that steel plate that blocked off the tunnel."

"Certainly."

"The cave has a vent, higher up. No smoke problem. It has a spring that hasn't failed all this dry weather. Dad, it's as comfortable as the shelter; all it needs is outfitting."

"I capitulate. You can take almost anything now. Beds, of course. Utensils. Your pick of the canned goods. Matches, ammunition, guns. Make a list, I'll help you move."

Duke colored under his tan. "Dad, a few things are up there already."

"So? Did you think I would be pinchpenny?"

"Uh . . . I don't mean the past few days. I moved some things up the first days we were here. You see . . . well, you and I had that row-and then you made me rationing officer. That gave me the idea, and for a week or more I always left here loaded, leaving when no one was watching."

"Stealing."

"I didn't figure it so. I never took as much 'as one-sixth of anything . . . and just stuff I would have to have in a pinch. Matches. Ammo. That rifle you couldn't find. One blanket. A knife. A little food. Some candles. You see. . . well, look at it from my side. There was always the chance that I would get you sore and either have to fight-one of us killed is the way you put it-or run and not be able to stop for anything. I decided not to fight. So I made preparations. But I didn't steal it; you said I could have it. Say the word and I'll fetch it all back."

Hugh Farnham peeled a callus, then looked up. "One man's stealing is another man's survival, I suppose. Just one thing- Duke, in that food you took: Were there any cans of milk?"

"Not one. Dad, don't you think, if there had been, I would have beaten all records getting up there and back when Karen died?"

"Yes. I'm sorry I asked."

"I was sorry I hadn't snitched a few cans; then they wouldn't have been used up."

"The baby didn't last out the milk we had, Duke. All right, it calls for quick surgery-but don't forget that you can come back, any time. Duke, women sometimes get unreasonable at about your mother's age . . . then get over it and are nice old ladies. Maybe we'll have the family together again. I hope we'll see you occasionally. You're~ welcome to all the vegetables you can eat, of course."

"I was going to mention that. I can't farm up there. Suppose I still hunt for all of us.. . and when I bring in a load of meat I take away a load of green stuff?"

His father smiled. "We have reinstituted commerce. And we can supply you with pottery and there's no need to do your own tanning. Duke, I suggest you sort out what you want, and tomorrow you and I and Joe will start packing it to your cave. Be lavish. Just one thing-"

"What?"

"The books are mine! Anything you want to look up, you'll have to come here. This is not a circulating library."

"Fair enough."

"I mean it. You can have my razor, you can have my best knife. But snitch one book and I'll skin you alive and bind that book in human skin. There are limits. All right, I'll tell Joe, and get Barbara out of the house and we'll stay away until dark. Good luck, and tell Grace no hard feelings. There are, but tell her that. But I'm not too groused. It takes two to create a heaven . . . but hell can be accomplished by one. I can't say that I've been happy lately and Grace may be smarter than we think."

"That's a polite way of telling us to go to hell, Dad."

"Possibly."

"Whatever you mean, the same to you. It was no accident that I moved away from home as soon as I could."

"Touché! Well, get on with it." His father turned and walked away.

Joe made no comment. He simply said that he had better get on with the irrigating. Barbara said nothing until they were alone.

Hugh took a picnic lunch-chunks of corn pone, some strings of jerky, two tomatoes, plus a canteen of water. He fetched a rifle and a blanket. They went up the hill above the grave and picked the shade of a detached tree. Hugh noticed fresh flowers on the grave and wondered if Barbara had been trudging up there. The climb was difficult for her; they had taken it very slowly. Or had Grace been doing it? It seemed still less likely. Then he thought of the obvious: Joe.

Once Barbara had her heavy body comfortable, on her back with knees up, Hugh said, "Well?"

She was silent a long time. "Hugh, I'm dreadfully sorry. It's my fault. Isn't it?"

"Your fault? Because a woman sick in her mind fixes on you to hate? You told me once not to blame myself for another person's defect. You should take your own advice."

"That wasn't what I meant, Hugh. I mean: losing your son. Grace could not leave if Duke did not. Did he say anything? About me?"

"Nothing but this ridiculous set that Grace has taken. What should he have said?"

"I wonder if I am free to say? In any case I am going to. Hugh, after Karen died, Duke asked me to marry him. I refused. He was hurt. And surprised. You see- You knew about Karen and Joe?"

"Yes."

"I didn't know whether Karen had told you. When she decided to marry Joe, I made up my mind that I would have to marry Duke. Karen took it for granted and I admitted that I intended to. She may have told Duke. In any case, he expected me to say Yes. I said No. And he was hurt. I'm sorry, Hugh. If you want me to, I'll tell him I've changed my mind."

"Hold on! I think you made a mistake. But I won't have you correcting it to please me. What do you want to do? Do you plan to marry Joe, now?"

"Joe? I never planned to marry Joe. Although I would marry him as readily as Duke. Hugh, I want to do what I always want to do. Whatever you want." She turned on her side and faced him. "You know that. If you want me to marry Joe, I will. If you want me to marry Duke, I will. You say it, I'll do it."

"Barbara, Barbara!"

"I mean it, Hugh. Or anything more, or anything less. You're my boss. Not just some, but all. Haven't I done so, all the time we've been together? I play by the book."

"Stop talking nonsense."

"If it's nonsense, it's true nonsense."

"As may be. I want you to marry whom you want to marry."

"That's the one thing I can't do. You are already married."

"Huh?"

"Are you surprised? No, I've surprised you only by saying it-when we've kept silent so long. That's how it is and that's how it's always been. Since I can't marry you, I'll marry whom you say. Or never marry."

"Barbara, will you marry me?"

"What did you say?"

"Will you marry me?"

"Yes."

He leaned over and kissed her. She kissed him back, lips open, full surrender.

Presently he straightened up. "Would you like some corn pone?"

"Not yet."

"I thought we might have some to celebrate. It calls for champagne. But corn pone is what we have."

"Oh. Then I'll have a nibble. And a sip of water. Hugh, Hugh my beloved, what are you going to do about Grace?"

"Nothing. She's divorcing me. In fact she divorced me more than a month ago, the day-the day we buried Karen. That she is still here is just housing shortage. It doesn't take a judge to grant a divorce here, any more than it will take a license for me to marry you."

Barbara spread her hands over her swollen belly. "I have my marriage license, right here!" Her voice was light and happy.

"The child is mine?"

She looked at him. "Look over to the east."

"At what?"

"Do you see Three Wise Men approaching?"

"Oh. Idiot!"

"It is yours, my beloved. A thing a woman can never prove but can be utterly sure of."

He kissed her again. When he stopped she caressed his cheek. "I'd like corn pone now, lots of it. I'm hungry. I feel very full of life and anxious to live."

"Yes! Tomorrow our honeymoon starts."

"Today. It has started, Hugh. I'm going to enter it in our journal. Darling, may I sleep on the roof tonight? I can manage the ladder."

"You want to sleep with me? Lecherous little girl!"

"That wasn't what I meant. I'm not lecherous now, my hormones are all keyed against it. No passion, dear. Just love. I won't be any good for a honeymoon. Oh, I'll happily sleep with you; you could have slept with me all these months. No, dear, I meant that I don't want to sleep in the same room with Grace. I'm afraid of her-afraid for the baby at least. Perhaps that's silly."

"No, it's not. It may not be necessary but it's a precaution we'll take. Barbara, what do you think of Grace?"

"Must I say?"

"Tell me."

"I don't like her. That's apart from being afraid of her; I didn't like her long before I became uneasy about her. I don't like the way she treats me, I don't like the way she treats Joseph, I didn't like the way she treated Karen, I have always resented the way she treats you-and had to pretend not to see it-and I despise what she has done to Duke."

"I don't like her, either-not for years. I'm glad she's leaving. Barbara, I would be glad even if you were not here."

"Hugh, I'm relieved to hear that. You know I'm divorced."

"Yes."

"When my marriage broke up I swore a solemn oath that I would never break up anyone else's marriage. I've felt guilty ever since the night of the attack."

He shook his head. "Forget it. The marriage was already long dead. All that was left were duties and obligations. Mine, for she didn't feel any. Beloved, had my marriage been a reality, you could have come into my arms that night, and cuddle and comfort would have been 'all. As it was, we were dying-so we thought-and I was at least as hungry for love as you were. I was parched for love-you gave me yourself."

"Beloved, I will never let you be parched again."

About nine the next morning, 'they all were outside where chattels for the new household were piled.

Hugh looked over 'his ex-wife's selections with wry amusement. Grace had taken literally the invitation to "take almost anything"; she had gutted the place-the best blankets, almost all utensils including the teakettle and the one skillet, three of four foam-rubber mattresses, nearly all the remaining canned goods, all the sugar, the lion's share of other irreplaceables, all the plastic dishes.

Hugh made only one objection: salt. When he noted that Grace had grabbed all the salt he insisted on a division. Duke agreed and asked if there was anything else Hugh objected to?

Hugh shook his head. Barbara would not mind making-do. "Better is a dinner of herbs where love is-"

Duke had shown restraint, taking one shovel, one ax, a hammer, less than half the nails, and no tool not stocked in duplicate. Instead, Duke remarked that he might want to borrow tools someday. Hugh agreed and offered his services on any two-man job. Duke thanked him. Both men found the situation embarrassing, both covered it by being unusually polite.

A delay in starting was caused by the steel plate for the cave door. Its weight was not too great for a man as husky as Duke, but it was awkward. A pack had to be devised, rugged enough for the trek, comfortable in padding and straps, and so rigged that Duke could fire a rifle.

This resulted in sacrificing the one intact bear hide, the covering of the bed Karen had died in. Hugh minded only the loss of time. It would take six trips by three men to move the plunder Grace had picked; Duke thought that two trips a day would be maximum. If they did not start soon, only one trip could be made that day.

At last they got it on Duke's back with a fur pad protecting his spine. "Feels right," Duke decided. "Let's get packs on you two and get going."

"In a jiffy," Hugh agreed and bent over to pick up his load.

"My God!"

"Trouble, Duke?"

"Look!"

A shape had appeared over the eastern rise. It slanted through the air on a course that would have missed them, but, as it neared the point of closest approach, it stopped dead, turned and headed for them.

It passed majestically overhead. Hugh was unable to guess its size at first; there was nothing to which to relate it-a dark shape proportioned like a domino tile. But as it passed about five hundred feet up, it seemed to him that it was around a hundred feet wide and three times that in length. He could make out no features. It moved swiftly but made no noise.

It swept past, turned, circled-stopped, turned again and came toward them at lower altitude.

Hugh found that he had an arm around Barbara. When the object had appeared, she had been some distance away, putting clothes to soak in the outside tub. Now she was circled by his left arm and he could feel her trembling.

"Hugh, what is it?"

"People."

The thing hovered above their flag. Now they could see people; heads showed above its sides.

A corner detached itself, splitting off sharply. It dove, stopped by the peak of the flagpole. Hugh saw that it was a car about nine feet long and three wide, with one passenger. No details could he see, no clue to motive power; the car enclosed the man's lower body; his trunk projected above.

The man removed the flag, rejoined the main craft. His vehicle blended back in.

The rectangle disintegrated.

It broke into units like that which had filched their flag. Most cars remained in the air; some dozen landed, three in a triangle around the colonists. Duke yelled "Watch it!" and dived for his gun.

He never made it. He leaned forward at an extreme angle, pawed the air with a look of amazement, and was slowly pulled back to vertical.

Barbara gasped in Hugh's ear. "Hugh, what is it?"

"I don't know." He did not need to ask what she meant; he had felt, at the instant his son was stopped, that he seemed to be waist deep in quicksand. "Don't fight it."

"I wasn't going to."

Grace shrilled, "Hubert! Hubert, do some-" Her cries cut off. She seemed to faint but did not fall.

Four cars were about eight feet in the air, lined up abreast, and were cruising over Barbara's farm. Where they passed, everything underneath, cornstalks, tomato plants, beans, squash, lettuce, potato hills, everything including branching ditches was pressed flat into a macadam.

The raw end of the main ditch spilled water over this pavement. One car whipped around, ran a new ditch around the raped area in a wide sweep which allowed the water to circle the destroyed garden and reach the stream at a lower point.

Barbara buried her face against Hugh. He patted her.

That car then went upstream along the old ditch. Soon water ceased to flow.

As the garden was leveled, other cars landed on it. Hugh was 'unable to figure out what they did, but a large pavilion, glossy black, and ornate in red and gold, grew up in seconds in the clearing.

Duke called out, "Dad! For God's sake, can't you get at your gun?"

Hugh was wearing a forty-five, the weapon he had picked for the hike. His hands were only slightly hampered by whatever held them. But he answered, "I shan't try."

"Are you going to just stand there and let-"

"Yes. Duke, use your head. If we hold still, we may live longer."

Out of the pavilion strode a man. He seemed seven feet tall but some of this was a helmet, plumed and burnished. He wore a flowing skirt of red embroidered in gold and

was bare to the waist save that an end of the skirt thrown across one shoulder covered part of his broad chest. He was shod in black boots.

All others were dressed in black coveralls with a red and gold patch at the right shoulder. Hugh felt an impression that this man (there was no slightest doubt that he was master)-that the commander had taken time to change into formal clothes. Hugh felt encouraged. They were prisoners-but if the leader took the trouble to dress up before interviewing them, then they were prisoners of importance and a parley might be fruitful. Or did that follow?

But he was encouraged by the man's face, too. He had an air of good-natured arrogance and his eyes were bright and merry. His forehead was high, his skull massive; he looked intelligent and alert. Hugh could not place his race. His skin was dark brown and shiny. But his mouth was only slightly Negroid; his nose, though broad, was arched, and his black hair was wavy.

He carried a small crop.

He strode up to them, stopped abruptly when he reached Joseph. He gave a curt order to their nearest captor.

Joe stretched and bent his legs. "Thanks."

The man spoke to Joe. Joe answered, "Sorry, I don't understand."

The man spoke again. Joe shrugged helplessly. The man grinned and patted him on the shoulder, turned away, picked up Duke's rifle. He handled it clumsily, making Hugh flinch.

Nevertheless, he seemed to understand guns. He worked the bolt, ejecting one cartridge, then put it to his shoulder, aimed upstream and fired.

The blast was deafening, he had fired past Hugh's ear. He grinned broadly, tossed the rifle to a subordinate, walked up to Hugh and Barbara, reached out to touch Barbara's child swollen belly.

Hugh knocked his hand away.

With a gesture almost negligent, certainly without anger, the big man brushed Hugh's hand aside with the crop he carried. It was not a blow, it would not have swatted a fly.

Hugh gasped in agony. His hand burned like fire and his arm was numb to the armpit. "Oh, God!"

Barbara said urgently, "Don't, Hugh. He isn't hurting me."

Nor was he. With a manner of impersonal interest such as a veterinarian might take in feeling a pregnant mare or bitch, the big man felt out the shape of the child she carried, then lifted one of her breasts-while Hugh writhed in that special humiliation of a man unable to protect his woman.

The man finished his palpation, grinned at Barbara and patted her head. Hugh tried to ignore the pain in his hand and dug into his memory for a language imperfectly learned. "Vooi govoriti'yeh po-Russki, Gospodin?"

The man glanced at him, made no answer.

Barbara said, "Sprechen Sie deutsch, mein Herr?"

That got her a smile. Hugh called out, "Duke, try him in Spanish!"

"Okay. ~Habla usted Español, Señor?" No response- Hugh sighed. "We've shot our wad."

"M'sieur?" Joe said. "Est-ce que vous parlez la langue française?"

The man turned. "Tiens?"

"Parlez-vous francais, monsieur?"

"Mais oui! Vous êtes françaises?"

"Non, non! Je suis américain. Nous sommes tous amencams."

"Vraiment? Impossible!"

"C'est vrai, monsieur. Je vous en assure." Joe pointed to the empty flagpole. "Les Etats-Unis de l'Amérique."

The conversation became hard to follow as both sides stumbled along in broken French. At last they paused and Joe said, "Hugh, he asked me-ordered me-to come into his tent and talk. I've asked him to let you all loose first. He says No. 'Hell, no!' it amounts to."

"Ask him to let the women loose."

"I'll try." Joe spoke at length with the big man. "He says the enceinte femme-that's Barbara-can sit down where she is. The 'fat one'-Grace he means-is to come with us."

"Good work, Joe. Get us a deal."

"I'll try. I don't understand him very well."

The three went into the pavilion. Barbara found that she could sit down, even stretch out. But the invisible web held Hugh as clingingly as ever.

"Dad," Duke said urgently, "this is our chance, while nobody is around who understands English."

"Duke," Hugh answered wearily, "can't you see they hold trumps? It's my guess that we are alive as long as he isn't annoyed-not one minute longer."

"Aren't you even going to try to fight? Where's that crap you used to spout about how you were a free man and planned to stay free?"

Hugh rubbed his hurt hand. "Duke, I won't argue. You start anything and you'll get us killed. That's how I size it up."

"So it was just crap," Duke said scornfully. "Well, I'm not making any promises."

"All right. Drop it."

"I'm not making promises. Just tell me this, Dad. How does it feel to be shoved around? Instead of shoving?"

"I don't like it."

"Neither did I. I've never forgotten it. I hope you get your bellyful."

Barbara said, "Duke, for heaven's sake, stop talking like a fool!"

Duke looked at her. "I'll shut up. Just one thing. Where did you get that baby in you?"

Barbara did not answer. Hugh said quietly, "Duke, if we get out of this, I promise you a beating."

"Any time, old man."

They quit talking. Barbara reached out and patted Hugh's ankle. Five men gathered around the pile of household objects, looking them over. A man came up and gave them an order; they dispersed. He looked at the chattels himself, then peered into the shelter and went inside.

Hugh heard a sound of water, saw a brown wave rushing down the stream bed. Barbara raised her head. "What's that?"

"Our dam is gone. It doesn't matter."

After a long time, Joe came out of the pavilion alone. He came up to Hugh and said, "Well, here's the scoop, as nearly as I got it. Not too near, maybe; he speaks a patois and neither of us is fluent. But here it is. We're trespassers, this is private land. He figured we were escaped prisoners-the word is something else, not French, but that's the idea. I've convinced him-I think I have-that we are innocent people here through no fault of our own.

"Anyhow, he's not sore, even though we are technically criminals-trespass, and planting things where farms aren't supposed to be and building a dam and a house and things like that. I think everything is going to be all right-as long as we do as we're told. He finds us interesting-how we got here and so forth."

Joe looked at Barbara. "You remember your theory about parallel universes?"

"I guess I was right. No?"

"No. This part is as confused as can be. But one thing is certain. Barbara, Hugh-Duke-get this! This is our own world, right here."

Duke said, "Joe, that's preposterous."

"You argue with him. He knows what I mean by the United States, he knows where France is. And so forth. No question about it."

"Well. . ." Duke paused. "As may be. But what about this? Where's my mother? What's the idea of leaving her with that savage?"

"She's all right, she's having lunch with him. And enjoying it. Let it run easy, Duke, and we're going to be okay, I think. Soon as they finish lunch we'll be leaving."

Somewhat later Hugh helped Barbara into one of the odd flying machines, then mounted into one himself, behind the pilot. He found the seat comfortable and, in place of a safety belt, a field of that quicksand enclosed his lower body as he sat down. His pilot, a young Negro who looked remarkably like Joe, glanced back, then took off without noise or fuss and joined the re-forming rectangle in the air. Hugh saw that perhaps half the cars had passengers; they were whites, the pilots were invariably colored, ranging from as light brown as a Javanese to as sooty black as a Fiji Islander.

The car Hugh was in was halfway back in the outside starboard file. He looked around for the others and was only mildly surprised to see Grace riding behind the boss, in the front rank, center position. Joe was behind them, rather buried in cats.

Off to his right, two cars had not joined up. One hovered over the pile of household goods, gathered them up in a nonexistent cargo net, moved away. The second car was over the shelter.

The massive block lifted straight up without disturbing the shack on its roof. The small car and its giant burden took position fifty feet off the starboard side. The formation moved forward and gathered speed but Hugh felt no wind of motion. The car flanking them seemed to have no trouble keeping up. Hugh could not see the other loaded car but assumed that it was on the port side.

The last he saw of their home was a scar where the shelter had rested, a larger scar where Barbara's farm had been, and a meandering track that used to mark an irrigation ditch.

He rubbed his sore hand, reflecting that the whole thing had been a gross abuse of coincidence. It offended him the way thirteen spades in a putatively honest deal would offend him. He pondered a remark Joe had made before they loaded: "We were

incredibly lucky to have encountered a scholar. French is a dead language-'une langue perdue,' he called it."

Hugh craned his neck, caught Barbara's eye. She smiled.

Chapter 11

Memtok, Chief Palace Domestic to the Lord Protector of the Noonday Region, was busy and happy-happy because he was busy, although he was not aware that he was happy and was given to complaining about how hard he had to work, because, as he put it, although he commanded eighteen hundred servants there were not three who could be trusted to empty a slop jar without supervision.

He had just completed a pleasant interview chewing out the head chef; he had suggested that the chef himself, old and tough as he was, nevertheless would make a better roast than the meat the chef had sent in to Their Charity the evening before. One of the duties that Memtok assumed personally was always to sample what his lord ate, despite risk of poison and despite the fact that Their Charity's tastes in cuisine were not his own. It was one of the innumerable ways in which Memtok gave attention to details, diligence that had brought him, still in his prime, to his present supreme eminence.

The head chef had grumbled and Memtok had sent him away with a taste of the lesser whip to remind him that cooks were not that hard to find. Then he had turned happily to his paper work.

There were stacks of it, as he had just completed moving the household from the Palace to the Summer Palace-thirty-eight of the Chosen but only four hundred and sixty-three servants; the summer residence was run with a skeleton staff. The twice-yearly move involved a wash of paper work-purchase orders, musters, inventories, vouchers, shipping lists, revisions of duty rosters, dispatches-and he considered advising his patron to have some likely youngster muted and trained as his clerk. But he rejected the idea; Memtok did not trust servants who could read and write and add, it gave them ideas even if they could not talk.

The truth was, Memtok loved his paper work and did not want to share it. His hands flew over the papers, checking figures, signing his symbol, okaying payments. He held his pen in an odd fashion, nested between the first three fingers of his right hand-this because he had no thumbs.

He did not miss them, could barely remember what it had been like to have them. Nor did he need them. He could handle a spoon, a pen, and a whip without them, and he had no need ever to handle anything else.

Far from missing his thumbs, he was proud of their absence; they proved that he had served his lord in both major capacities, at stud when he was younger and now these many years as a tempered domestic. Every male servant over fourteen (with scarce special exceptions) showed one alteration or the other; very few could exhibit both, only a few hundred on the entire Earth. Those few spoke as equals only to each other, they were an elite.

Someone scratched at the door. "Come!" he called out, then growled, "What do you want?" The growl was automatic but he really did dislike this servant for the best of reasons; he was not subject to Memtok's discipline. He was of a different caste, huntsmen, wardens, keepers, and beaters, and was subject to the Majordomo of the Preserve. The Majordomo considered himself to be of the same rank as the Chief Domestic, and nominally was. However, he had thumb€.

Memtok's greatest objection to the Summer Palace was that it put him in contact with these servants who had the unpardonable fault of not being under his orders. While it would take only a word to Their Charity to crack down on one of them, he disliked to ask, and while he could touch one of them without real fear of reprimand, the louse would be sure to complain to his boss. Memtok did not believe in friction between executive servants. Bad for morale.

"Message from Boss. Rayed to tell you Their Charity on his way back. Says four savages with escort. Says you better tear up to the roof, take care of them. All."

"'All'? Damn you, what do you mean 'All'? Why four savages? And in the Name of Uncle when are they arriving?"

"All," the servant insisted. "Message came in twenty minutes ago. I been looking all over for you."

"Get out!" The important part of the message was that Their Charity was arriving home instead of staying away overnight. Chef, Receptionist, Musical Director, Housekeeper, Groundskeeper, all heads of departments-he was phoning orders even as he thought. Four savages? Who cared about savages?

But he was on the roof and accepted their custody. He would have been there anyway, with the Lord Protector arriving.

When they arrived, Hugh had no chance to see Barbara. When he was released from the restraint of the "seat belt," he was confronted by a little baldheaded white man with a waspish face, an abrupt manner, and a whip. He was dressed in a white robe which reminded Hugh of a nightshirt, save that it had on the right shoulder the red and gold patch which Hugh had tentatively identified as the insigne of the big man, the boss. The emblem was repeated in rubies and gold on the chest of the little man as a medallion supported by a heavy gold chain.

The man looked him over with obvious, distaste, then turned him and Duke over to another white man in a nightshirt. This man wore no medallion but did carry a small whip. Hugh rubbed his hand and resolved not to test whether this whip was as potent as the ornate one carried by the big boss.

Duke tested it. The angry little man gave instructions to his straw boss, and left. The straw boss gave an order; Hugh interpreted the tone and gesture as: "All right, you guys, get going"-and got going.

Duke didn't. The straw boss barely touched him on his calf; Duke yelped. He limped the rest of the way-down a ramp, into a very fast lift, then into a windowless, light, white-walled room which whiffed of hospitals.

Duke understood the order to strip without needing to be stimulated; he cursed but complied. Hugh merely complied. He was beginning to understand the system. The whips were used as spurs are used by a good rider, to exact prompt obedience but not to damage.

From there they were herded into a smaller room, where they were hit from all sides by streams of water. The operator was in a gallery above. He shouted at them, then indicated in pantomime that they were to scrub.

They scrubbed. The jets cut off, they were doused in liquid soap. They scrubbed again and were rinsed and were required to scrub still again, all to gestures that left no doubt as to how thorough a bath was expected. The jets got very hot and harsh, changed to cold and still harsher, were replaced by blasts of hot air.

It was too much like an automatic dishwasher, Hugh' felt, but they ended up cleaner than they had been in months. An assistant to the bath master then plastered strips over their eyebrows, rubbed an emulsion on their scalps, into their scratchy beards (neither had shaved that day), over their backs and chests and arms and legs, and finally into their pubic hair. Duke got another lesson in obedience before he submitted to this last. When, thereafter, they were subjected willy-nilly to enemas, he gritted his teeth and took it. The water closet was a whirlpool set in the floor. Their finger- and toenails were cut short.

After that they were bathed again. The eyebrow patches washed away. So did their hair. When they came out, they were both bald all over, save for eyebrows.

The bath master made them gargle, showing them what he wanted and spitting into the whirlpool. They gargled three times-a pleasant, pungent liquid-and when it was over, Hugh found that his teeth seemed cleaner than they had ever been in his life. He felt utterly clean, lively, glowing with well being-but humiliated.

They were taken to another room and examined.

Their examiner wore the conventional white nightshirt and a small insigne on a thin gold chain but he needed no diplomas on the wall to show his profession. His bedside manner would never make him rich, Hugh decided; he had the air of military surgeons Hugh had known-not unkind but impersonal.

He seemed surprised by and interested in a removable bridge he found in Hugh's mouth. He examined it, looked in Hugh's mouth at the gaps it had filled, gave it to one of his assistants with instructions. The assistant went away and Hugh wondered if his chewing was going to be permanently hampered.

The physician took an hour or more over each of them, using instruments Hugh did not recognize-weight, height, and blood pressure were the only familiar tests. Things were done to them, too, none of them really unpleasant-no hypodermic needles, no knives. During this, Hugh's bridge was returned and he was allowed to put it back in.

But the tests and/or treatments often seemed to be indignities even though not painful. Once, when Hugh was stretched out on a table from which Duke had just been released, the younger man said, "How do you like it, Dad?"

"Restful."

Duke snorted.

The fact that both men had appendicitis scars seemed to interest the physician as much as the removable bridge. By acting he indicated a bellyache, then jabbed a thumb into McBurney's point. Hugh conveyed agreement-with difficulty, as nodding the head seemed to be a negative.

An assistant came in and handed the physician a contrivance which turned out to be another dental bridge. Hugh was required to open his mouth; the old one was again taken and the new one seated. It felt to Hugh's tongue as if he again had natural teeth

there. The physician probed cavities, cleaned them and filled them-without pain but without anesthesia so far as Hugh was aware.

After that Hugh was suddenly "strapped" (an invisible field) to a table, supine, and his legs were elevated. Another table was wheeled up and Hugh realized that he was being prepared for surgery-and with horror he was sure what sort. "Duke! Don't let them grab you! Get that whip!"

Duke hesitated too long. The therapist did not carry a whip; he merely kept one at hand. Duke lunged for it, the physician got it first. Moments later Duke was on his back, still gasping his agony at the punishment he had taken and having his knees elevated and spread. They both went on protesting.

The physician looked at them thoughtfully and the straw boss who had fetched them was called in. Presently the waspish little man with the big medallion strode in, looked the situation over, stormed out.

There was a long wait. The boss therapist filled in the time by having his assistants complete preparations for surgery and there was no longer the slightest doubt in Hugh's mind, or Duke's, as to what they were in for. Duke pointed out that it would have been better if they had fought-and died-earlier in the day, rather than wind up like this. As they would have fought, he reminded his father, if Hugh hadn't turned chicken.

Hugh didn't argue, he agreed. He tried to tell himself that his docility in being captured was on account of the women. It afforded him little comfort. True, he hadn't used his own much in recent years . . . and might never need them again. But, damn it, he was used to them. And it would be rough for Duke, young as he was.

After a long time the little man stormed back in, angrier than ever. He snapped an order; Hugh and Duke were released.

That ended it, save that they were rubbed all over with a fragrant cream. They were given a white nightshirt apiece, conducted through long bare passages and Hugh was shoved into a cell. The door was not locked but he could not open it.

In one corner was a tray, with dishes and a spoon. The food was excellent and some of it unidentifiable; Hugh ate with good appetite, scraping the dishes and drinking the thin beer with it. Then he slept on a soft part of the floor, having blanked his mind of worry.

He was prodded awake by a foot.

He was taken to another plain, windowless room, which turned out to be a schoolroom. Two short white men in nightshirts were there. They were equipped with props, the equivalent of a blackboard (it could be cleared instantly by some magic), patience-and a whip, for the lessons were "taught to the tune of a hickory stick." No error went unnoted.

They both could draw and both were imaginative pantomimists; Hugh was taught to speak.

Hugh discovered that his memory was sharpened by the stimuli of pain; he had little tendency to repeat a mistake. At first he was punished only for forgetting vocabulary, but as he learned, he grew to expect flicks of pain for errors in inflection, construction, idiom, and accent.

This Pavlovian treatment continued-if his mental records were correct-for seventeen days; he did nothing else and saw no one but his teachers. They worked in shifts; Hugh worked every possible minute, about sixteen hours a day. He was never

allowed quite enough sleep although he never felt sleepy-he didn't dare-during lessons. Once a day he was bathed and given a clean nightshirt, twice a day he was fed, tasty food and plentiful, three times a day he was policed to the toilet. All other minutes were spent learning to speak, with ever-sharp awareness that any bobble would be punished.

But he learned how to duck punishment. A question, quickly put, would sometimes do. "Teacher, this one understands that there are protocol modes for each status rising and falling, but what this one in its ignorance lacks is knowledge of what each status is-being wholly without experience through the inscrutable ways of Uncle the Mighty-and also is sometimes not aware of the status assumed for teaching purposes by my charitable teacher and of the status this humble one is expected to assume in reply. More than that, this one does not know its own status in the great family. May it please its teacher."

The whip was put down and for the next hour he was lectured. The problem was more involved than Hugh's question showed. The lowest status was stud. No, there was one lower: servant children. But since children were expected to make mistakes, it did not matter. Next higher was slut, then tempered servant-a category with subtle and unlimited gradations of rank so involved that speech of equals was used if the gradient was not clearly evident. High above all servants were the Chosen, with unlimited and sometimes changing variations of rank, including those ritual circumstances in which a lady takes precedence over a lord. But that was not usually a worry; always use protocol rising mode. However- "If two of the Chosen speak to you at once, which one do you answer?"

"The junior," Hugh answered.

"Why?"

"Since the Chosen do not make mistakes, this one's ears were at fault. The senior did not actually speak, for his junior would never have interrupted."

"Correct. You are a tempered gardener and you encounter a Chosen of the same rank as your lord uncle. He speaks. 'Boy, what sort of a flower is that?'"

"As Their Charity knows much better than this one can ever know, if this one's eyes are not mistaken, that plant may be a hydrangea."

"Good. But drop your eyes when you say it. Now about your status-" The teacher looked pained. "You haven't any."

"Please, teacher?"

"Uncle! I've tried to find out. Nobody knows but our Lord Uncle and they have not ruled. You're not a child, you're not a stud, you're not a tempered, you don't belong anywhere. You're a savage and you don't fit."

"But what protocol mode must I use?"

"Always the rising. Oh, not to children. Nor to sluts, no need to overdo it."

Except for changes in inflection caused by status, Hugh found the language simple and logical. It had no irregular verbs and its syntax was orderly; it probably had been tidied up at some time. He suspected, from words that he recognized-"simba," "bwana," "wazir," "étage," "trek," "oncle"- that it had roots in several African languages. But that did not matter; this was "Speech" and, according to his teachers, the only language spoken anywhere.

In addition to protocol modes, quite a chunk of vocabulary was double, one word being used down, its synonym although different in root used up. He had to know both-be able to recognize one and to use the other.

The pronunciation gave him trouble at first, but by the end of the week he could lip smack, click, make the fast glottal stop, and hear and say vowel distinctions he had never suspected existed. By the sixteenth day he was chattering freely, beginning to think in it, and the whip was rarely used.

Late next day the Lord Protector sent for him.

Chapter 12

Although he had been bathed that day, Hugh was rushed through another bath, rubbed down with fragrant cream, and issued a fresh robe, before being whizzed to the lord's private apartments. There he was bounced past a series of receptionists close on Memtok's heels, and into a large and very sumptuous retiring room.

The lord was not there; Joseph and Dr.-Livingstone-I-Presume were. Joe called out, "Hugh! Wonderful!" and added to the Chief Domestic, "You may go."

Memtok hesitated, then backed away and left. Joe ignored him, slipped his arm in Hugh's, and led him to a divan. "Gosh, it's good to see you! Sit down, we'll talk until Ponse gets here. You look well." Doctor Livingstone checked Hugh's ankles, purred and stropped against them.

"I am well. 'Ponse'?" Hugh scratched the cat's ears.

"Don't you know his name? The Lord Protector, I mean. No, I guess you wouldn't. That's one of his names, one he uses en famille. Never mind, have they been treating you right?"

"I suppose so."

"They had better. Ponse gave orders for you to be pampered. Look, if you aren't treated okay, you tell me. I can fix it."

Hugh hesitated. "Joe, have you had one of those odd whips used on you?"

"Me?" Joe seemed astonished. "Of course not. Hugh, have they been abusing you? Peel off that Mother Hubbard and let me have a look."

Hugh shook his head. "There are no marks on me. I haven't been hurt. But I don't like it."

"But if you've been stroked for no reason- Hugh, that's one thing that Ponse does not tolerate. He's a very humane sort of guy. All he wants is discipline. If anybody-anybody at all, even Memtok-has been cruel to you, somebody is going to catch it."

Hugh thought about it. He rather liked his teachers. They had worked hard and patiently and had been sparing of him once it became possible to talk instead of using the whip. "I haven't been hurt. Just reminded."

"I'm glad to hear it. Actually, Hugh, I didn't see how you could be. That quirt Ponse carries-you could kill a man with it at a thousand feet; it takes skill to use it gently. But those toys the upper servants carry, all they do is tingle and that's all they are supposed to do."

Hugh decided not to argue over what constituted a tingle; he had urgent things on his mind. "Joe, how are the others? Have you seen them?"

"Oh, they're all right. You heard about Barbara?"

"I haven't heard a damn thing! What about Barbara?"

"Slow down. Having her babies, I mean."

"She had her baby?"

"'Babies.' Twin boys, identical. A week ago."

"How is she? How is she?"

"Easy, man! She's fine, couldn't be better. Of course. They are way ahead of us in medicine; losing a mother, or a baby, is unheard of." Joe suddenly looked sad. "It's a shame they didn't run across us months back." He brightened. "Barbara told me that she had intended to name it Karen, if it was a girl. When it turned out to be twin boys, she named one-the one five minutes the elder-'Hugh' and the other 'Karl Joseph.' Nice, eh?"

"I'm flattered. Then you've seen her. Joe, I've got to see her. Right away. How do I arrange it?"

Joe looked astonished. "But you can't, Hugh. Surely you know that."

"Why can't I?"

"Why, you're not tempered, that's why. Impossible."

"Oh."

"I'm sorry, but that's the way it is." Joseph suddenly grinned. "I understand that you were almost made eligible by accident. Ponse laughed his head off at how close you came and how you and Duke yelped."

"I don't see the humor of it."

"Oh, Hugh, he simply has a robust sense of humor. He laughed when he told me about it. I didn't laugh and he decided that I have no sense of humor. Different people laugh at different things. Karen used to use a fake Negro dialect that set my teeth on edge, the times I overheard it. But she didn't mean any harm. Karen- Well, they just don't come any better, and you and I know it and I'll shut up about it. Look, if the vet had gone ahead, without orders, it would have cost him his hands; Ponse sent that word to him. Might have suspended the sentence-good surgeons 'are valuable. But his assumption was only natural, Hugh; both you and Duke are too tall and too big for stud. However, Ponse doesn't tolerate sloppiness."

"All right, all right. I still don't see the harm in my calling on Barbara and seeing her babies. You saw her. And you're not tempered."

Joe looked patiently exasperated. "Hugh, it's not the same thing. Surely you know it."

"Why isn't it?"

Joe sighed. "Hugh, I didn't make the rules. But I'm Chosen and you're not, and that's all there is to it. It's not my fault that you're white."

"All right. Forget it."

"Let's be glad that one of us is in a position to get us some favors. Do you realize that all of you would have been executed? If I hadn't been along?"

"The thought has crossed my mind. Lucky you knew French. And that he knows French."

Joe shook his head. "French didn't enter into it, it merely saved time. The point was that I was there . . . and the rest of you were excused of any responsibility on that account. What had to be settled then was the degree of my criminality, my neck was in a noose." Joe frowned. "I'm still not in the clear. I mean, Ponse is convinced but my case

has to be re viewed by the Supreme Lord Proprietor; it's his preserve- Ponse is just custodian. I could be executed yet."

"Joe, what in the world is there about it to cause you to talk about being executed?"

"Plenty! Look, if you four ofays-whites-had been alone, Ponse would have tried you just by looking at you. Two capital crimes and both self-evident. Escapees. Servants who had run away from their lord. Destructive trespass in a personal domain of the Supreme Proprietor. Open-and-shut on both counts and death for each of them. Don't tell me that wasn't the way it was because I know it and it took me long enough to make Ponse see it, using a language neither one of us knows too well. And my neck is still in jeopardy. However-" He brightened. "Ponse tells me that the Supreme Proprietor is years behind in reviewing criminal cases and that it has been more years since he last set foot on this preserve or even cruised over it . . . and that long before my case can come up there won't be a trace of destruction. They are putting the trees back and there's never an accurate count of bears and deer and other game. He tells me not to worry."

"Well, that's good."

"But maybe you think I haven't done some sweating over it! Just letting your shadow fall across the Supreme Lord Proprietor means your neck and sneezing in his presence is even worse-so you can figure for yourself that trespassing on land that is his personally is nothing to take lightly. But I shan't worry as long as Ponse says not to. He's been treating me as a guest, not as a prisoner. But tell me about yourself. I hear you've been studying the language. So have I-a tutor every day I've had time for it."

Hugh answered, "May it meet with their approval, this one's time has, as they know, been devoted to nothing else."

"Whoo! You speak it better than I do."

"I was given incentive," Hugh said, relapsing into English. "Joe, have you seen Duke? Grace?"

"Duke, no. I haven't tried to. Ponse has been away most of the time and took me along; I've been terribly busy. Grace, yes. It's possible that you might see Grace. She's often in these apartments. That's the only way you could see her, of course. Right here. And in the presence of Ponse. Might happen. He's not a stickler for protocol. In private, I mean; he keeps up appearances in public."

"Hmm- Joe, in that case, couldn't you ask him to let me see Barbara and the twins? Here? In his presence?"

Joe looked exasperated. "Hugh, can't you understand that I'm just a guest? I'm here on sufferance. I don't have a single servant of my own, no money, no title. I said you might see Grace; I did not say you would. If you did, it would be because he had sent for you and it suited him not to send her out-not for your convenience. As for asking him to let you see Barbara, I can't. And that's that! I advise you not to, either. You might learn that his quirt doesn't just tingle."

"All I meant was-"

"Watch it! Here he comes."

Joe went to meet his host. Hugh stood with head bowed, eyes downcast, and waited to be noticed. Ponse came striding in, dressed much as Hugh had seen him before save that the helmet was replaced by a red skullcap. He greeted Joe, sat heavily down on a large divan, stuck out his legs. Doctor Livingstone jumped up into the lord's lap; he

stroked it. Two female servants appeared from nowhere, pulled off his boots, wiped his feet with a hot towel, dried them, massaged them, placed slippers on them, and vanished.

While this was going on, the Lord Protector spoke to Joe of matters Hugh could not follow other than as words, but he noticed that the noble used the mode of equals to Joe and that Joe talked in the same fashion to him. Hugh decided that Joe must be in as solid as Doctor Livingstone. Well, Joe did have a pleasing personality.

At last the big man glanced at him. "Sit down, boy."

Hugh sat down, on the floor. The lord went on, "Have you learned Language? We're told that you have."

"May it please Their Charity, 'this one's time has been devoted singly to that purpose, with what inadequate resultsknown to them far better than their servant would dare venture to estimate."

"Not bad. Accent could be crisper. And you missed an infix. How do you like the weather we've been having?"

"Weather is as Uncle the Mighty ordains it. If it pleases His favorite nephew, it cannot fail to make joyful one so humble as this servant."

"Quite good. Accent blurry but understandable. Work on it. Tell your teachers we said it. Now drop that fancy speech, I haven't time to listen to it. Equals speech, always. In private, I mean."

"All right. I-" Hugh broke off; one of the female servants had returned, to kneel in front of her lord with a drink on a tray.

Ponse glanced sharply at Hugh, then looked at the girl. "It? Doesn't count, it's a deaf mute. You were saying?"

"I was about to say that I couldn't have an opinion about weather because I haven't seen any since I got here."

"I suppose not. I gave orders for you to learn Language as quickly as possible and servants are inclined to follow instructions literally. No imagination. All right, you will walk outdoors an hour each day. Tell whoever is in charge of you. Any petition? Are you getting enough to eat? Are you being treated well?"

"The food is good, I'm used to eating three times a day but-"

"You can eat four times a day if you wish. Again, tell the one in charge of you. All right, now to other matters. Hugh- That's your name, isn't it?"

"Yes, Their Charity."

"Can't you hear? I said, 'Use equals mode.' My private name is Ponse. Use it. Hugh, if I had not picked you people up myself, were I not a scholar, and had I not seen with my own eyes the artifacts in that curious structure, your house, I would not have believed it. As it is, I must. I'm not a superstitious man. Uncle works in mysterious ways, but He doesn't use miracles and I would not hesitate to repeat that in any temple on Earth, unorthodox as it sounds. But- How long does it come to, Joe?"

"Two thousand one hundred and three years."

"Call it two thousand. What's the matter, Hugh?"

"Uh, nothing, nothing."

"If you're going to throw up, go outside; I picked these rugs myself. As I was saying, you've given my scientists something to think about-and a good thing, too; they haven't turned out anything more important than a better mousetrap in years. Lazy scoundrels. I've told them to come up with a sensible answer, no miracles. How five

people-or six-and a building of some mass could hurdle twenty centuries and never break an egg. Exaggeration. Joe tells me it broke some bones and other things. Speaking of bones, Joe tells me this won't please you-and it didn't please him-but I ordered my scientists to disturb some bones. Strontium sampling, that sort of thing; I suppose you've never heard of it. Clear proof that the cadaver had matured before the period of maximum radioactivity- Look, I warned you about these rugs. Don't do it!" Hugh gulped. ("Karen! Karen! Oh, my darling!")

"Better now? Perhaps I should have told you that a priest was present, proper propitiations were made-exactly as if it had been one of the Chosen. Special concession, my orders. And when the tests were completed every atom was returned and the grave closed with proper rites."

"That's true, Hugh," Joseph said gravely. "I was there. And I put on fresh flowers. Flowers that will stay fresh, I'm told."

"Certainly they will," Ponse confirmed, "until they wear out from sheer erosion. I don't know why you use flowers but if there are any other rites or sacrifices necessary to atone for what may seem to you a desecration, just name it. I'm a broadminded man; I'm aware that other times had other customs."

"No. No, best let it be."

"As you wish. It was done from scientific necessity. It seemed more reasonable than amputating one of your fingers. Other tests also kept my scientists from wiggling out of the obvious. Foods preserved by methods so ancient that I doubt if any modem food expert would know how to duplicate same- and yet the foods were edible. At least some servants were required to eat them; no harm resulted. A fascinating radioactivity gradient between upper and inner sides of the roof structure-I gave them a hint on that. Acting on information received from Joe, I ordered them to look for evidence that this event took place at the beginning of the East-West War that destroyed the Northern Hemisphere.

"So they found it. Calculations lead them to believe that the structure must have been near the origin of an atom-kernel explosion. Yet it was unhurt. That produced a theory so wild that I won't tire your ears with it; I've told them to go on working.

"But the best thing is the historical treasure. I am a man of history, Hugh; history, properly interpreted, tells everything. The treasure, of course, are those books that came along. I am not exaggerating when I say that they are my most precious possessions. There are only two other copies of the Encyclopaedia Britannica in the world today-and those are not this edition and are in such poor shape that they are curiosities rather than something a scholar can work with; they weren't cared for during the Turmoil Ages."

Ponse leaned back and looked happy. "But mine is in mint condition!"

He added, "I'm not discounting the other books. Treasures, all of them. Especially the Adventures of Odysseus, which is known only by reputation. I take it that the pictures date from the time of Odysseus too?"

"I'm afraid not. The artist was alive in my time."

"Too bad. They're interesting, nevertheless. Primitive art, stronger than we have now. But I exaggerated when I said that the books were my dearest possession."

"Yes?"

"You are! There! Doesn't that please you?"

Hugh barely hesitated. "Yes. If true." (If it's true that I am your chattel, you arrogant bastard, I prefer being a valuable one!)

"Oh, quite true. If you had been speaking in protocol mode, you wouldn't have been able to phrase a doubt. I never lie, Hugh; remember that. You and- That other one, Joe?"

"Duke."

"'Duke.' Although Joe speaks highly of your scholarship, not so highly of its. But let me explain. There are other scholars who read Ancient English. None in my household, true; since it is not a root language to any important degree, few study it. Nevertheless, scholars could be borrowed. But none such as yourself. You actually lived then; you'll be able to translate knowledgeably, without these maddening four and five interpretations of a single passage that disfigure most translations from ancient sources, all because the scholar doesn't really know what the ancient author was talking about. Lack of cultural context, I mean. And no doubt you will be able to supply explanations for things obscure to me and commonplace to you.

"Right? Right! So you see what I want. Start with the Encyclopaedia Britannica. Get busy today, translate it. Just scribble it out quickly, sloppy but fast. Someone else will pretty it up for my eyes. Understand? All right, go do it."

Hugh gulped. "But, Ponse, I can't write Language."

"What?"

"I was taught to speak; I haven't been taught to read and write."

Ponse blinked. "Memtok!"

The Chief Palace Domestic arrived with such speed that one might suspect that he was just outside the door. And so he had been-listening in on private conversation by means Memtok was certain were not known to the Lord Protector

inasmuch as Memtok was still breathing. Such measures were risky but he found them indispensable to efficient performance of his duties. At worst, it was safer than planting a slut in there who was not quite a deaf mute.

"Memtok, I told you it was to be taught to speak, read, and write Language."

Hugh listened, eyes downcast, while the Chief Domestic tried to protest that the order had never been given (it had not) but nevertheless had been carried out (obviously false), all without contradicting the Lord Protector (impossible to reconcile, inconceivable to attempt).

"Garbage," Ponse remarked. "I don't know why I don't put you up for adoption. You would look good in a coal mine. That pale skin would be improved by some healthy coal dust." He twitched his quirt and Memtok paled still more. "Very well, let it be corrected. It is to spend half of each day in learning to read and write, the other half in translating and in dictating same into a recorder. I should have thought of that; writing takes too long. Nevertheless, I want it to be able to read and write." He turned to Hugh. "Anything you can think of? That you need?"

Hugh started to phrase a request in the involved indirection which presumed nothing, as required by protocol mode, rising.

Ponse chopped him off. "Speak directly, Hugh. Memtok, close your ears. No ceremony needed in Memtok's presence, he is a member of my inner family, my nephew in spirit if not in the eyes of my senior sister. Spit it out."

Memtok relaxed and looked as beatific as his vinegar features permitted. "Well, Ponse, I need room to work. My cell is the size of that divan."

"Describe your needs."

"Well, I'd like a room with natural light, one with windows, say a third the size of this one. Working tables, bookshelves, writing materials, a comfortable chair-yes, and access to a toilet without having to wait; it interferes with my thinking otherwise."

"Don't you have that?"

"No. And I don't think it helps my thinking to be touched up with a whip."

"Memtok, have you been whipping it?"

"No, my uncle. I swear."

"You would swear if you were caught with cream on your lip. Who has been?"

Hugh dared to interrupt. "I'm not complaining, Ponse. But those whips make me nervous. And I never know who can give me orders. Anybody, apparently. I haven't been able to find out my status."

"Mmm- Memtok, where do you have it in the Family?" The head servant barely conceded that he had not been able to solve that problem.

"Let's solve it. We make it a department head. Mmm- Department of Ancient History. Title: Chief Researcher. Senior head of department, just below you. Pass the word around. I'm doing this to make clear how valuable this servant is to me . . . and anyone who slows up its work is likely to wind up in the stew. I suppose it will really be a one-servant department but you fill it out, make it look good, by transferring its teachers, and whoever looks out for its recorder and prepares the stuff for me, a cleaner or two, an assistant to boss them- I don't want to take up its valuable time on routine. A messenger. You know. There must be dozens of idlers around this house, eating their silly heads off, who would look well in the Department of Ancient History. Now have fetched a lesser whip and a lesser badge. Move."

In moments Hugh was wearing a medallion not much smaller than Memtok's. Ponse took the whip and removed something from it. "Hugh, I'm not giving you a charged whip, you don't know how to use it. If one of your loafers need spurring, Memtok will be glad to help. Later, when you know how, we'll see. Now- Are you satisfied?"

Hugh decided that it was not the time to ask to see Barbara. Not with Memtok present. But he was beginning to hope.

He and Memtok were dismissed together. Memtok did not object when Hugh walked abreast of him.

Chapter 13

Memtok was silent while he led Hugh back down to servants' country; he was figuring out how to handle this startling development to his own advantage.

This savage's status had troubled the Chief Domestic from arrival. He didn't fit- and in Memtok's world everything had to fit. Well, now the savage had an assigned status; Their Charity had spoken and that was that. But the situation was not improved. The new status was so ridiculous as to make the whole belowstairs structure (the whole world, that is) a mockery.

But Memtok was shrewd and practical. The bedrock of his philosophy was: You can't fight City Hall, and his basic strategy in applying it was the pragmatic rule: When you can't beat 'em, you join 'em.

How could this savage's preposterous promotion be made to appear necessary and proper-and a credit to the Chief Domestic?

Uncle! The savage wasn't even tempered. Nor would he be. At least not yet. Later, possibly-it would make everything so much more tidy. Memtok had been amazed when Their Charity had postponed the obvious. Memtok hardly recalled his own tempering; his emotions and drives before that time were a thin memory-of someone else. There was no reason for the savage to have kicked up a fuss about it; tempering marked promotion into real living. Memtok looked forward to another half century of activity, power, gracious living- what stud could claim that?

But there it was. How to make it look good?

A Curiosity!-that's what the savage was. All great lords possessed Curiosities; there had been times when visiting in his own caste that he had been embarrassed by the fact that his own lord took no interest in Curiosities; there were not even Siamese twins nor a two-headed freak in the whole household. Not even a flipper-armed dwarf. Their Charity was-let's admit it-too simple in his tastes for his high rank; sometimes Memtok was a little ashamed of him. Spending his time on scrolls and such when he should be upholding the pride of the house.

That lord in Hind- What title? Prince something or other silly. Never mind, he had that big cage where studs and sluts lived and mated with great apes, talked the same jabber-it wasn't Language-and you couldn't tell which was which save that some were hairy and some were smooth. There was a Curiosity worthy of a great household! That lord's chief domestic had declared by the Uncle that there were live crossbreeds from the experiment, hidden away where the priests couldn't object. It might be true, since it was a fact that despite official denial crossbreeds between servants and Chosen were possible-and did happen, even though designated bedwarmers were always sterile. But these accidents were never allowed to see the light of day.

A Curiosity, that was the angle. An untempered who was nevertheless a servant executive. A Famous Scholar who had not even been able to speak Language when he was almost as old as Memtok. A man out of nowhere. From the stars. Everybody knew that there were men somewhere in the stars.

Probably a miracle . . . and the temples were investigating and any year now this household would be famous for its unique Curiosity. Yes. A word here, a word there, a veiled hint- "Hugh," Memtok said cordially. "May I call you 'Hugh'?" "What? Why, certainly!" "You must call me 'Memtok.' Let's stroll a bit and pick out space for your departmental headquarters. You would like a sunny place, I understand. Perhaps rooms facing the gardens? And do you want your personal quarters opening off your headquarters? Or would you rather have them elsewhere so that you can get away from it all?" The latter, Memtok decided. Roust out the head gardener and the studmaster and give the savage both their quarters-that would make everyone understand how important this Curiosity was . . . and get both of them sore at the savage, too. He'd soon realize who was his friend. Memtok, namely, and nobody else. Besides, the gardener had been getting uppity, implying that his work didn't come under the Chief Domestic. A touching up was what he needed.

Hugh said, "Oh, I don't need anything fancy."

"Come, come! We want you to have every facility. I wish 1 could get away from it all sometimes. But I can't-problems, problems, problems, every minute of the day; some people have to have all their thinking done for them. It will be a treat to have a man of the mind among us. We'll find you cozy quarters, plenty of room for you and your valet. But separate." Valet? Was there a tempered young buck around, well housebroken and biddable, who could be depended on to report everything and keep his mouth shut? Suppose he had his sister's eldest son tempered now, would the lad shape up in time? And would his sister see the wisdom in it? He had great hopes for the boy. Memtok was coldly aware that he would have to go someday-though not for many years-and he was determined that his heir should succeed to his high office. But it would take planning, and planning could never start too soon. If his sister could be made to see it- Memtok led Hugh through crowded passageways; servants scurried out of the way wherever they went-save one who stumbled and got tingled for his awkwardness.

"My!" said Hugh. "This is a big building."

"This? Wait till you see the Palace-though no doubt it is falling to rack and ruin, under my chief deputy. Hugh, we use only a quarter of the staff here. There is no formal entertaining, just garden parties. And only a handful of guests. In the city the Chosen are always coming and going. Many a time I am rooted out of bed in the night to open apartments for some lord and his ladies without a moment's warning. And that is where planning counts. To -be able to open the door of a guest-wing flat and know-know, mind you, without looking-that beds are freshly perfumed, refreshments waiting, everything spotless, music softly playing."

"That must take real staff work."

"Staff work!" Memtok snorted. "I wish I could agree. What it takes is for me to inspect every room, every night, no matter how tired I am, before I go to bed. Then stay up to see that mistakes are corrected, not depend on their lies. They're all liars, Hugh. Too much 'Happiness.' Their Charity is generous; he never cuts down on the ration."

"I've found the food ample. And good."

"I didn't say food, I said 'Happiness.' I control the food and I don't believe in starving them, not even as punishment. A tingle is better. They understand that. Always remember one thing, Hugh; most servants don't really have minds. They're as thoughtless as the Chosen-not referring to Their Charity of course; I would never criticize my own patron. I mean Chosen in general. You understand." He winked and gave Hugh a dig in the ribs.

"I don't know much about the Chosen," Hugh admitted. "I've hardly laid eyes on them."

"Well. . . you'll see. It takes more than a dark skin to make brains no matter what they teach in temple. Not that I expect you to quote me nor would I admit it if you did. But- Who do you think runs this household?"

"I haven't been here long enough to express opinions."

"Very shrewd. You could go far if you had ambition. Let me put it this way. If Their Charity goes away, the household goes on smoothly as ever. If I am away, or dare to fall sick- Well, I shudder to think of it." He gestured with his whip. "They know. You won't find them scurrying that fast to get out of his way."

Hugh changed the subject. "I did not understand your remark about a 'ration of Happiness.'"

"Haven't you been receiving yours?"

"I don't know what it is."

"Oho! One bullock gets you three that it has been issued but never got as far as you. Must look into that. As to what it is, I'll show you." Memtok led him up a ramp and out onto a balcony. Below was the servants' main dining hail, crowded with three queues. "This, is issue time-studs at a different hour, of course. They can have it as drink, in chewing form, or to smoke. The dosage is the same but some say that smoking it produces the keenest happiness."

Memtok used words not in Hugh's vocabulary; Hugh told him so. Memtok said, "Never mind. It improves the appetite, steadies the nerves, promotes good health, enhances all pleasures-and wrecks ambition. The trick is to be able to take it or leave it alone. I never took it regularly even when I was at stud; I had ambition. I take it now only on feast days or such-in moderation." Memtok smiled. "You'll find out tonight."

"I will?"

"Didn't I tell you? Banquet in your honor, just after evening prayer."

Hugh was hardly listening. He was searching the far queue, trying to spot Barbara.

Memtok sent the Chief Veterinarian and the Household Engineer as an escort of honor for Hugh. Hugh was mildly embarrassed at this attention from the physician and surgeon in view of the helpless posture he had been in the last time he had seen the man. But the veterinarian was most cordial.

Memtok headed the long table with Hugh on his right. Twenty department heads were seated; there was one lower servant standing behind each guest and endless streams coming in and out from kitchen and pantry. The banquet room was beautiful, its furnishings lavish, and the feast was sumptuous and endless; Hugh wondered what a meal of the Chosen must be like if their upper servants ate this way.

He soon found out, in part. Memtok was served twice, once from the tasty dishes everyone shared, again from another menu. These dishes he sampled, using separate plates, but rarely did more than taste. Of the regular menu he ate sparingly and sometimes passed up dishes.

He noticed Hugh's glance. "The Lord Protector's dinner. Try it. At your own risk, of course."

"What risk?"

"Poison, naturally. When a man is over a hundred years old his heir is certain to be impatient. To say nothing of business competitors, political rivals, and subverted friends. Go ahead; the taster tries it half an hour before Their Charity- or I-touches it, and we've lost only one taster this year."

Hugh decided that his nerve was being tested; he tried a spoonful.

"Like it?" asked the Chief Domestic.

"Seems greasy to me."

"Hear that, Gnou? Our new cousin is a man of taste. Greasy. Someday you'll be fried in your own grease, I fear. The truth is, Hugh, that we eat better than the Chosen do. . . although courses are served more elaborately in the Grand Hall, of course. But I am a gourmet who appreciates artistry; Their Charity doesn't care what it is as long as it doesn't

squeal when he bites it. If the sauces are too elaborate, the spices too exotic, he'll send it back with a demand for a slice of roast, a hunk of bread, and a pitcher of milk. True, Gnou?"

"You have said it."

"And frustrating."

"Very," admitted the chef.

"So Cousin Gnou's best cooks work for us, and the Chosen struggle along with ones whose chief skill lies in getting a bird's skin back on without ruffling the feathers. Cousin Hugh, if you will excuse me, I must lift up to the Grand Hall and attempt by proper ceremony to make Cousin Gnou's pièce de résistance seem better than it is. Don't believe what they tell you about me while I'm gone-regrettably it's all true." He exposed his teeth in what must have been a smile and left.

No one spoke for a while. Finally someone-Hugh thought it was the transportation master but he had met too many- said, "Chief Researcher, what household were you with before you were adopted, may one ask?"

"One may. House of Farnham, Freeholder Extraordinary."

"So. I am forced to admit that the title of your Chosen is new to me. A new title, perhaps?"

"Very old," Hugh answered. "Extremely ancient and granted directly by Uncle the Mighty, blessed be His Name. The rank is roughly that of king, but senior to it."

"Really?"

Hugh decided to drop that shovel for a wider one. In earlier conversation he had learned that Memtok knew a great deal about many things-but almost nothing about such trivia as history, geography, and matters outside the household. And from his Language lessons he knew that a servant who could read and write was rare, even among executives, unless the skill was necessary to his duties. Memtok had told him proudly that he had petitioned the opportunity while he was still at stud and had labored at it to the amusement of the other studs. "I had my eyes on the future," he had told Hugh. "I could have had five more years, probably ten, at stud-but as soon as I could read, I petitioned to be tempered. So I had the last laugh-for where are they now?"

Hugh decided on the very widest shovel; a big lie was always easier to sell. "The title is unbroken for three thousand years in House Farnham. The line remained intact by direct intervention of the Uncle right through Turmoil and Change. Because of its Divine origin its holder speaks to the Proprietor as an equal, 'thee' and 'thou.'" Hugh drew himself up proudly. "And I was factotum-in-chief to Lord Farnham."

"A noble house indeed. But 'factotum-in-chief'? We don't use that designation here. A domestic?"

"Yes and no. The chief domestic works under the factotum."

The man almost gasped. "And so," Hugh went on, "do all servant executives, domestic or not-business, political, agrarian, everything. The responsibility is wearing."

"So I should imagine!"

"It is. I was growing old and my health was failing-I suffered a temporary paralysis of my lower limbs. Truthfully I never liked responsibility, I am a scholar. So I petitioned to be adopted and here I am-scholar to a Chosen of similar scholarly 'tastes . . . a fitting occupation for my later years." Hugh realized that he had stretched one item too far; the veterinarian looked up. "This paralysis, I noted no signs of it." (Damn it, doctors

never cared about anything but their specialty!) "It came on me suddenly one morning," Hugh said smoothly, "and I haven't been troubled by it since. But to a man of my years it was a warning."

"And what are your years? Professional interest, of course. One may ask?"

Hugh tried to make the snub as direct as some he had heard Memtok pass out. "One may not. I'll let you know when I need your services. But," he added, to sooth the smart, "it would be fair to say that I was born some years earlier than Their Charity."

"Astonishing. From your physical condition-quite good, I thought-I would have judged you to be no more than sixty, at most."

"Blood will tell," Hugh said smugly. "I am not the only one of my bloodline to live a very long time."

He was saved from further evasions by the return of Memtok. Everyone stood up. Hugh didn't notice in time, so he remained seated and brazened it out. If Memtok resented it, he did not let it show. He clapped Hugh on the shoulder as he sat down. "No doubt they've told you how I eat my own young?"

"I was given the impression of a happy family presided over by a beloved uncle."

"Liars, all of them. Well, I'm through for the evening- until some emergency. Their Charity knows that we are welcoming you; he commanded me not to return to the Grand Hall. So now we can relax and be merry." The Chief Domestic tapped his goblet with a spoon. "Cousins and nephews, a toast to our newest cousin. Possibly you heard what I said-the Lord Protector is pleased at our modest effort to make Cousin Hugh feel at home in Their Family. But I am sure that you already guessed that . . . since one cannot miss that Cousin Hugh carries, not a least whip, but a lesser whip exactly like mine!" Memtok smiled archly. "Let us trust that he will never need to use it."

Loud applause greeted the boss's brilliant sally. He went on solemnly, "You all know that not even my chief deputy carries such authority, much less the ordinary department head

and from that I am sure you conclude that a hint from Cousin Hugh, Chief Researcher and Aide in Scholarship to Their Charity by direct appointment-a hint from him is an order from me-so don't let me have to make it a direct order.

"And now the toasts! All cousins together and let Happiness flow freely . . . so let the junior among us give the first toast. Who claims it, who claims it?"

The party got rowdy. Hugh noted that Memtok drank sparingly. He remembered the warning and tried to emulate him. It was impossible. The Chief Domestic could drop out of any toast, merely raise his glass, but Hugh as guest of honor felt compelled to drink them all.

Some unknown time later Memtok led him back to his newly acquired, luxurious quarters. Hugh felt drunk but not unsteady-it was just that the floor was so far away. He felt illuminated, possessed of the wisdom of the ages, floating on silvery clouds, and soaked through with angelic happiness. He still had no idea what was in Happiness drinks. Alcohol? Maybe. Betel nut? Mushrooms? Probably. Marijuana? It seemed certain. He must write down the formula while it was fresh in his mind. This was what Grace should have had! He must- But of course, she did have it now. How very nice! Poor old Grace- He had never understood her-all she needed was a little Happiness.

Memtok took him into his bedroom. Sleeping across the foot of his lovely new bed was a female creature, blond and cuddly.

Hugh looked down at her from about a hundred-foot elevation and blinked. "Who she?"

"Your bedwarmer. Didn't I say?"

"But-"

"It's quite all right. Yes, yes, I know you are technically a stud. But you can't harm her; this is what she is for. No danger. Not even altered. A natural freemartin."

Hugh turned around to discuss it, wheeling slowly because of his great width and high sail area. Memtok was gone. Hugh found that he could just make it to the bed. "Move over, Kitten," he muttered, and fell asleep.

He overslept but the kitten was still there; she had his breakfast waiting. He looked at her with unease-not because he had a hangover; he did not. Apparently Happiness did not exact such payments. He felt physically strong, mentally alert, and morally straight-and very hungry. But this teen-ager was an embarrassment.

"What's your name, kitten?"

"May it please them, this one's name is of such little importance that whatever they please to call it will be a boon."

"Cut it, cut it! Use equals speech."

"I don't really have a name, sir. Mostly they just say, 'Hey, you.'"

"All right, I'll call you 'Kitten.' Does that suit you? You look like a kitten."

She dimpled. "Yes, sir. It's ever so much nicer than 'Hey, you.'"

"All right, your name is 'Kitten.' Tell everybody and don't answer to 'Hey, you.' Tell them that is official because the Chief Researcher says so and if anybody doubts it, tell them to check with the Chief Domestic. If they dare."

"Yes, sir. Thank you, sir. Kitten, Kitten, Kitten," she repeated as if memorizing it, then giggled. "Pretty!"

"Good. Is that my breakfast?"

"Yes, sir."

He ate in bed, offering her bits, and discovered that she expected to be fed, or at least allowed to eat. There was enough for four; between them they ate enough for three. Then he learned that she expected to assist him in the bathroom; he put a stop to that.

Later, ready to go to his assigned duties, he said to her, "What do you do now?"

"I go back to sluts' quarters, sir, as soon as you release me. I come back at bedtime-whatever time you say."

He was about to tell her that she was charming and that he almost regretted passing .out the night before but that he did not require her services on future- He stopped. An idea had hit him. "Look. Do you know a tall slut named Barbara? Oh, this much taller than you are. She was adopted something over two weeks ago and she had babies, twin boys, about a week ago."

"Oh, yes, sir. The savage."

"That's the one. Do you know where' she is?"

"Oh, yes, sir. She's still in lying-in quarters. I like to go in there and look at the babies." She looked wistful. "It must be nice."

"Uh, yes. Can you take a message to her?"

Kitten looked doubtful. "She might not understand. She's a savage, she can't talk very well."

"Mmm- Damn. No, maybe it's a help. Wait a moment." His quarters were equipped with a desk; he went to it, got one of those extraordinary pens-they didn't stain and didn't wear out and appeared to be solid-found a piece of paper. Hastily he wrote a note, asking Barbara about herself and the twins, reporting his odd promotion, telling her that soon, somehow, he would see her-be patient, dear-and assuring her of his undying devotion.

He added a P.S. "The bearer of this note is 'Kitten'-if the bearer is short, blond, busty, and about fourteen. She is my bedwarmer-which means nothing and you've got an evil mind, wench! I'm going to hang onto her because she is a way-the only way, it would appear-for me to communicate with you. I'll try to write every day, I'll darn well expect a note from you every day. If you can. And if anybody does anything you don't like, tell me and I'll send you his head on a platter. I think. Things are looking up. Plenty of paper and a pen herewith. Love, love, love-H.

"PPS-go easy on 'Happiness.' It's habit-forming."

He gave the girl the note and writing materials. "You know the Chief Domestic by sight?"

"Oh, yes, sir. I've warmed his bed. Twice."

"Really? I'm amazed."

"Why, sir?"

"Well, I didn't think he would be interested."

"You mean because he's tempered? Oh, but several of the executives like to have a bedwarmer anyhow. I like it better than being sent upstairs; it's less trouble and you get lots more sleep. The 'Chief Domestic doesn't usually send for a bedwarmer, though-it's just that he checks us and teaches us manners before we are allowed to serve upstairs." She added, "You see, he knows all about it; he used to be a stud, you know." She looked at Hugh with innocent curiosity. "Is it true what they say about you? May one ask?"

"Uh. . . one may not."

"I'm sorry, sir." She looked crushed. "I didn't mean any harm." She glanced fearfully at his whip, dropped her eyes.

"Kitten."

"Yes, sir."

"See this whip?"

"Uh, yessir!"

"You will never, never, never feel my whip. That's a promise. Never. We're friends."

Her face lit up and she looked angelically beautiful instead of pretty. "Oh, thank you, sir!"

"Another thing. The only whip you need fear from now on is the Chief Domestic's-so stay out of his way. Anyone else-any 'least whip'-you tell him, or her, that this lesser whip is what he'll get if he touches you. Tell him to check with the Chief Domestic. Understand me?"

"Yes, sir." She looked smugly happy.

Too smug, Hugh decided. "But you stay out of trouble. Don't do anything to deserve a tingle-or I might turn you over to the Chief Domestic for a real tingling, the sort he is famous for. But as long as you work for me, don't allow anyone but him to tingle you. Now git and deliver that. I'll see you tonight, about two hours after evening prayer.

Or come earlier if you are sleepy, and go to bed." Must remember to have a little bed put here for her, he reminded himself.

Kitten touched her forehead and left. Hugh went to his office and spent a happy day learning the alphabet and dictating three articles from the Britannica. He found his vocabulary inadequate, so he sent for one of his teachers and used the man as a dictionary. Even so, he found it necessary to explain almost endlessly; concepts had changed.

Kitten went straight to the Chief Domestic's office, made her report, turned over the note and writing materials. Memtok was much annoyed that he held in his hand what might be important evidence-and no way to read it. It did occur to him that that other one-Duke? Juke? Some such-might be able to read these hen scratches. But not likely, of course, and even under tingling there would be no certainty that Juke would translate honestly, and no way to check on him.

Asking Joe never crossed his mind. Nor did asking Their Charity's new bedwarmer. But the impasse had one intriguing aspect. Was it possible that this savage slut actually could read? And perhaps even essay to write a reply?

He stuck the note in his copier, gave it back to the girl. "All right, your name is Kitten. And do exactly as he tells you about not letting yourself be tingled-and be sure to gossip about it; I want it known all over. But get this-" He gave Kitten the gentlest of reminders; she jumped. "This whip is waiting for you, if you make any mistakes."

"This one hears and obeys!"

Hugh returned from the executives' dining room rather late; he had sat around and gossiped. He found Kitten asleep in his bed and remembered that he had forgotten to ask for another bed for her.

'Clutched in her hand was a folded paper. Gently he worked it out without waking her:

Darling!

How utterly wonderful to see your handwriting! I knew from Joe that you were safe, hadn't heard about your promotion, didn't know whether you knew about the twins. First about them- They are thriving, they both look like their papa, both have his angelic disposition. Six pounds each at birth is my guess, but, although they were weighed, weights here mean nothing to me. Me? I'm a prize cow, dearest, no trouble at all-and the care I received (and am receiving) is fantastically good. I started to labor, was given something to drink, never hurt again although I remember all details of having two babies-as if it had happened to somebody else. So trouble free and actually pleasant that I'd be willing to do it every day. And would, if the rewards were as nice as little Hugh and Karl Joseph.

As for the rest, boring except for our fine boys, but I'm learning the language as fast as I can. And somebody should tell the Borden Company about me-which is good, as our scamps are greedy eaters. I'm even able to help out the girl in the next bed, who is short on milk. Just call me Elsie.

I'll be patient. I'm not surprised at your new honors; I expect that you'll be bossing the place in a month. I have confidence in my man. My husband. Such a beautiful word- As for Kitten, I don't believe your Boy Scout assertions, my lecherous darling; your record shows that you take advantage of innocent young girls. And she's awfully cute.

Seriously, dearest, I know how noble you are and I didn't have an evil-minded thought. But I would not blame you if your nobility slipped-especially as I've picked up enough words to be aware of her odd category in this strange place. I mean, Kitten is not vulnerable and can't go set. If you did slip, I would not be jealous-not much, anyhow-but I would not want it to become a habit. Not to the exclusion of me, at least; my hormones are rearranging themselves very rapidly. But I don't want you to get rid of her when she is our only way of communicating. Be nice to her; she's a nice kid. But you're always nice to everyone.

I will write every day-and I will cry into my pillow and be worried to death any day I don't hear from you.

My love forever and forever,
B
P.S. The smear is little Hugh's right footprint.

Hugh kissed the letter, then got into bed, clutching it. Kitten did not wake.

Chapter 14

Hugh found learning to read and write Language not difficult. Spelling was phonetic, a sign for every sound. There were no silent letters and never any question about spelling or pronunciation. Accent was on the penultima unless marked; the system was as free from traps as Esperanto. He could sound out any word as soon as he had learned the 47-letter alphabet, and, with thought, he could spell any word he could pronounce.

Writing and printing were alike, cursive, and a printed page looked like one written by a skilled penman. He was not surprised to find that it looked like Arabic and a search in the Britannica confirmed that the alphabet must have derived from Arabic of his time. Half a dozen letters had not changed; some were similar although changed. There were many new letters to cover the expansion into a system of one sound, one sign-plus letters for sounds XXth century Arabic had never used. Search in the Britannica convinced him that Arabic, French, and Swahili were the main roots of Language, plus Uncle alone knew what else. He could not confirm this; a dictionary with derivations, such as he had been used to for English, apparently did not exist-and his teachers seemed convinced that Language had always been just as they knew it. The concept of change baffled them.

It was only of intellectual interest; Hugh knew neither Arabic, French, nor Swahili. He had learned a little Latin and less German in high school, and had struggled to learn Russian in his later years. He was not equipped to study the roots of Language, he was merely curious.

Nor did he dare spend time on it; he wanted to please Their Charity, butter him up so that he might, eventually, petition the boon of seeing Barbara-and that meant a flood of translated articles. Hugh worked very hard.

The second day after his elevation, Hugh asked for Duke, and Memtok sent for him. Duke was rather worn down-there were lines in his face-but he spoke Language. Duke spoke it not as well as his father and apparently had tangled more with his teachers; his mood seemed to oscillate between hopelessness and rebellion, and he limped badly.

Memtok made no objection to transferring Duke to the Department of Ancient History. "Glad to get rid of him. He's too monstrous big for stud, yet he doesn't seem to be good for anything else. Certainly, put him to work. I can't bear to see a servant lying around, eating his head off, doing nothing."

So Hugh took him. Duke looked over Hugh's private apartment and said, "Christ! You certainly managed to come up smelling like a rose. How come?"

Hugh explained the situation. "So I want you to translate legal articles and related subjects-whatever you can do best."

Duke shoved his fists together and looked stubborn. "You can stuff it."

"Duke, don't take that attitude. This is an opportunity."

"For you, maybe. What are you doing about Mother?"

"What can I do? I'm not allowed to see her, neither are you. You know that. But Joe assures me that she is not only comfortable and well treated, but happy."

"So he says. Or so you say he says. I want to see it myself. I damn well insist on it."

"Very well, insist on it. Go see Memtok about it. But I must warn you, I can't protect you from him."

"Rats. I know what that slimy little bastard would say-and what he would do." Duke scowled and rubbed his injured leg. "It's up to you to arrange it. You've got such an unholy drag around here, the least you can do is use it to protect Mother."

"Duke, I don't have that sort of drag. I'm being pampered for the reason a race horse is pampered . . . and I have just as little to say about it as a race horse has. But I can cut you in on pampering if you cooperate-decent quarters, immunity from mistreatment, a pleasant place to work. But I can no more get you into women's quarters, or have Grace sent here, than I can go to the Moon. They have harem rules here, as you know."

"And you are content to sit here and be a trained seal for that ape, and neglect Mother? Count me out!"

"Duke, I won't argue. I'll assign you a room and send you a volume of the Britannica each day. Then it's up to you. If you won't work, I'll try to keep Memtok from knowing it. But I think he has spies all over the place."

Hugh let it go at that. At first he got no help out of Duke. But boredom worked where argument failed; Duke could not stand to be shut up in a room with nothing to do. He was not locked up but he did not venture out much because there was always the chance that he might run into Memtok, or some other whip-carrying upper servant, who might want to know what he was doing, and why-servants were expected to look busy even if they weren't, from morning prayer to evening prayer.

Duke began to produce translations and, with them, a complaint that he was short on vocabulary. Hugh was able to have assigned to him a tempered clerk who had worked in Their Charity's legal affairs.

But he rarely saw Duke-it seemed to be the only way they could stay out of arguments. Duke's output speeded up after the first week but fell off in quality-Duke had discovered the sovereign power of "Happiness."

Hugh considered warning Duke about the drug, decided against it. If it kept Duke contented, who was he to deny him this anodyne? The quality of Duke's translations did not worry Hugh; Their Charity had no way to judge-unless Joe rendered an opinion, which seemed unlikely. He himself was not trying too hard to turn out good translations; "not good, but Wednesday" was the principle he used: Give the boss lucid copy in great quantity-and leave out the hard parts.

Besides, Hugh found that a couple of drinks of Happiness at dinner topped off the day. It allowed him to read Barbara's daily letter in a warm glow, write a cheerful answer for Kitten to carry back, then to bed and sound sleep.

But Hugh did not use much of it; he was afraid of the stuff. Alcohol, he reasoned, had the advantage of being a poison. It gave fair warning if one started drinking heavily. But this stuff exacted no such price; it merely turned anxiety, depression, worry, boredom, any unpleasant emotion, into an uncritical happy glow. Hugh wondered if it was principally methyl meprobamate? But he knew little chemistry and that little was two thousand years behind times.

As a member of the executive servants' mess Hugh could have all he wanted. But he noted that Memtok was not the only boss who used the stuff abstemiously; a man did not fight his way up in the servants' hierarchy by dulling himself with drugs-but sometimes a servant did get high up, then skidded to the bottom, unable to stand prosperity in the form of unrationed Happiness. Hugh never learned what became of them.

Hugh could even keep a bottle in his rooms-and that solved the problem of Kitten.

Hugh had decided not to ask for a bed for Kitten; he did not want to rub Memtok's nose in the fact that he was using the child only as a go-between to women's quarters. Instead he required the girl to make up a bed each night on the divan in his living room.

Kitten was very hurt by this. By now she was sure that Hugh could make better use of a bedwarmer and she regarded it as rebuke to her in her honorable capacity as comfort and solace-and it scared her. If her master did not like her, she might lose the best job she had ever had. (She did not dare report to Memtok that Hugh had no use for her as a bedwarmer; she gave reports on every point but that.)

She wept.

She could not have done better; Hugh Farnham had been a sucker for women's tears all his life. He took her on his knee and explained that he liked her very much (true), that it was a sad thing but he was too old to appreciate a female bedmate (a lie), and that he slept badly and was disturbed by having anyone in bed with him (a half-truth)-and that he was satisfied with her and wanted her to go on serving him. "Now wipe your eyes and have a drink of this."

He knew that she used the stuff; she chewed her ration like bubble gum-chewing gum it was in fact; the powder was added to chicle. Most servants preferred gum because they could go dreamily through the day, chewing it while they worked. Kitten passed her empty days chewing it and chewed the played-out cud in Hugh's quarters after she learned he did not mind. So he did not hesitate to give her a drink.

Kitten went happily to bed and right to sleep, no longer worried that her master might get rid of her. That set a precedent. Each evening, half an hour before Hugh wanted the lights out, he would give her a short drink of it.

For a while he kept track of the level in the bottle. Kitten was often in his quarters when he was not, he knew how much she enjoyed it, and there were no locks in his quarters-his rank entitled him to locks but Memtok had carefully not told him.

He quit bothering when he was convinced that Kitten was not snitching it. In fact, Kitten would have been terrified at the thought of stealing from her master. Her ego was barely big enough for a mouse; she was less than nothing and knew it and had never owned anything, not even a name, until Hugh gave her one. Under his kindness she was beginning to be a person, but it was still the faintest flicker, anything could blow it out. She would no more have risked stealing from him than she would have risked killing him.

Hugh, half by intent, encouraged her confidence. She was a trained bath girl; he gave in and let her scrub his back and handle the nozzles for his bath, dress him, and take care of his clothes. She was a masseuse, too; he sometimes found it pleasant to have his head and neck rubbed after a day spent poring over the fine print or following the lines in a scroll reader-and she was pathetically anxious to do anything to make herself necessary.

"Kitten, what do you do in the daytime?"

"Why, nothing mostly. Sluts of my subcaste mostly don't have to work if they have night duty. Since I'm having duty every night I'm allowed to stay in the sleep room until midday. So I do, even if I'm not sleepy, because the slutmaster is likely to put one to work if he catches one just wandering around. Afternoons- Well, mostly I try to stay out of sight. That's best. Safest."

"I see. You can hide out in here if you like. Or can you?"

Her face lit up. "If you give me a pass, I can."

"All right, I will. You can watch television- No, it's not on at that hour. Mmm, you don't know how to read. Or do you?"

"Oh, no, sir! I wouldn't dare petition."

"Hmm-" Hugh knew that permission to learn to read could not be granted even by Memtok; it required Their Charity's permission and was granted only after investigation of the necessity. Furthermore, anything he did that was out of line jeopardized his thin chances of reunion with Barbara.

But- Damn it, a man had to be a man! "There are scrolls in here and a reader. Do you want to learn?"

"Uncle protect us!"

"Don't swear. If you want to-and can keep your pretty little mouth shut-I'll teach you. Don't look so damned scared! You don't have to decide now. Tell me later. Just don't talk about it. To anyone."

Kitten did not. It scared her not to report it, but she had a reflex for self-preservation and felt without knowing why that to report this would endanger her happy setup.

Kitten became substitute family life for Hugh. She sent him to work cheerful, greeted him with a smile when he came back, talked if he wanted to talk and never spoke unless spoken to. Most evenings she curled up 'in front of the television-Hugh thought of

it as "the television" and it was in fact closed-circuit television under principles not known to him, in color, in three dimensions, and without lines.

It played every evening in the servants' main hall, from evening prayer until lights-out, to a packed house, and there were outlets in the apartments of executive servants. Hugh had watched it several evenings, expecting to gain insight into this strange society he must learn to live in.

He decided that one might as well try to study the United States by watching Gunsmoke. It was blatant melodrama, with acting as stylized as Chinese theater, and the favorite plot seemed to be that of the faithful servant who dies gloriously that his lord may live.

But it was only second in importance to Happiness in the morale of life belowstairs. Kitten loved it.

She would watch it, snapping her gum, and suppressing squeals of excitement, while Hugh read-then sigh happily when the program ended, accept her little drink of Happiness with profuse thanks and a touch of her forehead, and go quietly to sleep. Hugh sometimes went on reading.

He read a great deal-every evening (unless Memtok stopped in to visit) and half of every day. He begrudged the time he spent translating for Their Charity but never neglected it; it was the hopeful key to better things. He had found it necessary to study modern culture if he was to translate matters of ancient history intelligibly. The Summer Palace had a fair library; he was given access when he claimed necessity for his work-Memtok arranged it.

But his true purpose was not translation but to try to understand what had happened to his world to produce this world.

So he usually had a scroll in the reader, in his office, or in his living room. The scroll system of printing he found admirable; it mechanized the oldest form of book into a system far more efficient than bound leaves-drop the double cylinder into the reader, flip it on, and hold still. The letters raced across in front of his eyes several hundred feet at a whack, to the end of the scroll. Then the scroll flipped over and chased back the following line, which was printed upside down to the one just scanned.

The eye wasted no time flipping back and forth at stacked lines. But a slight pressure speeded the gadget up to whatever the brain could accept. As Hugh got used to the phonetics, he acquired speed faster than he had ever managed in English. But he did not find what he was looking for.

Somewhere in 'the past the distinctions between fact, fiction, history, and religious writings seemed to have been rubbed out. Even when he got it clear that the East-West War that had bounced him out of his own century was now dated 703 B.C. (Before the Great Change), he still had trouble matching the world he had known with the "history" set forth in these scrolls.

The war itself he didn't find hard to believe. He had experienced only a worm's-eye view of the first hours but what the scrolls related matched the possibilities: a missile-and-bomb holocaust that had escalated in its first minutes into "brilliant first strike" and "massive retaliation" and smeared cities from Peiping to Chicago, Toronto to Smolensk; fire storms that had done ten times the damage the bombs did; nerve gas and other poisons that had picked up where fire left off; plagues that were incubating when

the shocked survivors were picking themselves up and beginning to hope-plagues that were going strong when fallout was no longer deadly.

Yes, he could believe that. The bright boys had made it possible, and the dull boys they worked for had not only never managed to make the possibility unlikely but had never really believed it when the bright boys delivered what the dull boys ordered.

Not, he reminded himself, that he had believed in "Better red than dead"-or believe in it now. The aggression had been one-sided as hell-and he did not regret a megaton of the "massive retaliation."

But there it was. The scrolls said that it had killed off the northern world.

But how about the rest of it? It says here that the United States, at the time of the war, held its black population as slaves. Somebody had chopped out a century. On purpose? Or was it honest confusion and almost no records? There had been, he knew, a great book burning for two centuries during the Turmoil, and even after the Change.

Was it lost history, like Crete? Or did the priests like it better this way?

And since when were the Chinese classed as "white" and the Hindus as "black"? Yes, purely on skin color Chinese and Japanese were as light as the average "white" of his time, and Hindus were certainly as dark as most Africans-but it was not the accepted anthropological ordering of his day.

Of course, if all they meant was skin shade-and apparently that was what they did mean-he couldn't argue. The story maintained that the whites, with their evil ways, destroyed each other almost to the last man . . . leaving the innocent, charitable, merciful dark race-beloved by Uncle the Mighty-to inherit the Earth.

The few white survivors, spared by Uncle's mercy, had been succored and cherished as children and now again were waxing numerous under the benevolent guidance of the Chosen. So it read.

Hugh could see that a war which smeared North America, Europe, all of Asia except India, could kill off most whites and almost all Chinese. But what had happened to the white minority in South America, the whites of the Union of South Africa, and the Australians and New Zealanders?

Search as he would, Hugh could not find out. All that seemed certain was that the 'Chosen were dark whereas servants were pale faces-and usually small. Hugh and his son towered over the other servants. Contrariwise, the few Chosen he had seen were big men.

If present-day whites were descended from Australians, mostly-No, couldn't be, Aussies had not been runts. And those "Expeditions of Mercy"-were they slave raids? Or pogroms? Or, as the scrolls said, rescue missions for survivors?

The book burnings might account for these discrepancies. It wasn't clear to Hugh whether all books had been put to the torch, or possibly technical books had been spared-for it was clear that the Chosen had technology superior to that of his time; it seemed unlikely that they had started from scratch.

Or was it unlikely? All the technology of his own time that had amounted to a damn had been less than five hundred years old, most of it less than a hundred, and the most amazing parts less than a generation. Could the world have gone back to a dark ages, then pulled out of it and more, in two thousand years? Of course it could!

Either way, the Koran had been the only book officially exempt from the torch-and Hugh harbored a suspicion that the Koran had not been spared either. He 'had owned a translation of the Koran, had read it several times.

He wished now that he had put it into the shelter, for the Koran as he now read it in "Language" did not match his memory. For one thing, he had thought that Mahomet was a redheaded Arab; this "Koran" mentioned his skin color repeatedly, as black. And he was sure that the Koran was free of racism. This "improved" version was rabid with it.

Furthermore, this Koran had a new testament with a martyred Messiah. He had taught and had been hanged for it- religious scrolls were all marked with a gallows. Hugh did not object to a new testament; there had been time for a new revelation and religions had them as naturally as a cat has kittens. What he objected to was some revisionist working over the words of the Prophet, apparently to make them fit this new book. That wasn't fair, that was cheating.

The social organization Hugh found almost as puzzling. He was beginning to get a picture of a complex culture, stable, even static-high technology, few innovations, smooth, efficient-and decadent. Church and State were one-"One Tongue, One King, One People, One God." The Lord Proprietor was sovereign and supreme pontiff and owned everything under Uncle's grant, and the Lords Protector such as Ponse were his bishops and held only fiefs. Yet there were plenty of private citizens (Chosen, of course-a white was not a person), shopkeepers, landowners, professional men, etc. A setup for an absolute totalitarian communism yet streaked through with what appeared to be private enterprise- Hell, there were even corporations if he understood what he was reading.

The most interesting point to Hugh (aside from the dismal fact that his own status was fixed by law and custom at zero) was the inheritance system. Family was everything, yet marriage was almost nothing-present but not important. Descent was through the female line-but power was exercised by males.

This confused Hugh until it suddenly fell into place. Ponse was Lord Protector because he was eldest son of an eldest daughter-whose oldest brother had been Lord Protector before Ponse. Ponse's heir therefore was his oldest sister's oldest son-title went down through mother and daughter endlessly, with power vested in the oldest brother of each female heir. It did not matter who Ponse's father was and it mattered even less what sons he had; none of them could inherit. Ponse inherited from his mother's brother; his heir was his sister's son.

Hugh could see that, under this system, marriage would never be important-bastardy might be a concept so abstract as to be unrecognized-but family would be more important than ever. Women (of the Chosen) could never be downgraded; they were more important than males even though they ruled through their brothers-and Religion recognized this; the One God, Uncle the Mighty, had an elder sister, the Eternal Mamaloi. . . so sacred that she was not prayed to and her name was never used in cursing. She was just there, the Eternal Female Principle that gave all life and being.

Hugh had a feeling that he had read about this sort of descent before, uncle to nephew through the female line, so he searched the Britannica. He was surprised to discover that the setup had prevailed at one time or another in every continent and many cultures.

The Great Change had been when Mamaioi had at last succeeded-working indirectly, as always-in uniting all Her children under one roof and placing their Uncle in charge. Then She could rest.

Hugh's comment was: "And God help the human race!"

Hugh kept expecting Their Charity to send for him. But two months passed and he did not, and Hugh was beginning to fret that he would never have a chance to ask to see Barbara-apparently Ponse had no interest in him as long as he kept on grinding out translations. Translating the Britannica looked like a job for several lifetimes; he resolved to stir things up, so he sent one day's batch with a letter to Their Charity.

A week later the Lord Protector sent for him. Memtok came for Hugh, dancing with impatience but insisting that Hugh wash his armpits, rub himself with deodorant, and put on a clean robe.

The Lord Protector did not seem to care how Hugh smelled; he let him wait while he did something else. Hugh stood in silence. . . although Grace was present. She was lounging on a divan, playing with cats and chewing gum. She glanced at Hugh, then ignored him, save that her face took on a secret smile that Hugh knew well- He called it "canary that ate the cat."

Dr.-Livingstone-I-Presume greeted Hugh, jumping down, coming over and rubbing against his ankles. Hugh knew that he should ignore it, wait for the lord to recognize his presence-but this cat had been his friend a long time; he could not snub it. He bent down and stroked the cat.

The skies did not split, Their Charity ignored the breach.

Presently the Lord Protector said, "Boy, come here. What's this about making money from your translations? What in Uncle gave you the notion I needed money?"

Hugh had got the notion from Memtok. The Chief Domestic had growled about how difficult it was to run things, with penny-pinching from on high getting worse every year.

"May it please Their Charity, this one's opinions are of no value, it is true, but-"

"Cut the flowery talk, damn you!"

"Ponse, back where-when-I came from there never was a man so rich but what he needed more money. Usually, the richer he was, the more he needed."

The lord grinned. "'Plus ça change, plus c'est la même chose.' Hugh, you aren't just sniffing Happiness. Things are the same now. Well? What's your idea? Spit it out."

"It seems to me that there are things in your encyclopaedia which might be turned to a profit. Processes and such that have been lost in the last two thousand years-but might be worth money now."

"All right, do it. The stuff you send up is satisfactory, what I've had time to read. But some of it is trivial. 'Smith, John, born and died-a politician who did nothing much and did that little poorly.' Know what I mean?"

"I think so, Ponse."

"All right, skip that garbage and dig me up four or five juicy ideas I can cash in on."

Hugh hesitated. Ponse said, "Well? Didn't you understand?"

"I think I need help. You see, I don't know anything really, except what goes on belowstairs. I thought Joe might help."

"How?"

"I understand that he has traveled with you, seen things. He is more likely to be able to pick out subjects that merit study. He could pick the articles, I will translate them, and you can judge whether there is anything to exploit. I can synopsize them, so that you needn't waste time wading through details if the subject doesn't merit it."

"Good idea. I'm sure Joe will be happy to help. All right, send up the encyclopaedia. All."

Hugh was dismissed so abruptly that he had no chance to mention Barbara. But, he reflected, he could not have risked it with Grace present.

He considered digging out Duke, telling him that his mother was fat and happy-both literally-but decided against it. He wasn't sure how pleased Duke would be with a truthful report. They didn't see eye to eye and that was that.

Chapter 15

Joe sent down a volume every day for many days, with pages marked; Hugh slaved to keep up and to make useful translations. After two weeks Hugh was again sent for.

He expected a conference over some business idea. What he found was Ponse, Joe, and a Chosen he had never seen. Hugh instantly prepared to speak protocol mode, rising.

The Lord Protector said, "Come here, Hugh. Cut the cards. And don't start any of that tiresome formality, this is family. Private."

Hugh hesitantly approached. The other Chosen, a big dark man with a permanent scowl, didn't seem pleased. He was carrying his quirt and twitched it. But Joe looked up and smiled. "I've been teaching them contract, Hugh, and our fourth had to be away. I've been telling Ponse that you are the best player any where or when. So don't let me down."

"I'll try not to." Hugh recognized one deck of cards, they had once been his. The other deck appeared to be hand painted and were beautiful. The card table was not from the shelter; fabulous hand craftsmanship had gone into it.

The cut made Hugh partner of the strange Chosen. Hugh tried not to show how nervous it made him, as his partner clearly did not like it. But the Chosen grunted and accepted it.

His partner's contract, at three spades-by a fluke distribution 'they made four. His partner growled, "Boy, you underbid, you wasted game. Don't let it happen again."

Hugh kept quiet and dealt.

On the next hand Joe and Ponse made five clubs. Hugh's partner was furious-at Hugh. "If you had led diamonds, we would have set them! And you washed out our leg. I warned you. Now I'm-"

"Mrika!" Ponse said sharply. "This is contract. Play it as such. And put that tickler down. The servant played correctly."

"It did not! And I'm damned if I care for letting it in the game anyhow. I can smell the rank, sharp stink of a buck servant no matter how much it's scrubbed. I don't think this one is scrubbed at all."

Hugh felt sweat breaking out in his armpits and flinched. But Ponse said evenly, "Very well, we excuse you. You may leave."

"That suits me!" The 'Chosen stood up. "Just one thing before I do- If you don't quit staffing, Their Mercy will let the North Star Protectorate-"

"Are you planning to put up the money?" Their Charity said sharply.

"Me? It's a Family matter. Not but what I wouldn't jump at the chance! Forty million hectares and most of it in prime timber? Of course I would! But I hardly have one bullock to jingle against another-and you know why."

"Certainly we know. You gamble."

"Oh, come now! A businessman has to take chances. You can't call it gambling when-"

"We do call it gambling. We do not object to gambling but we have a vast distaste for losing. If you must lose, you will do it with your own bullocks."

"But this isn't gambling, it's a sure thing-as well as getting us in solid with Their Mercy. The Family-"

"We decide what is good for the Family. Your turn will come soon enough. In the meantime we are as anxious to please the Lord Proprietor as you are. But not with bullocks the Family doesn't have in the treasury."

"You could borrow it. The interest would only come to-.-"

"You wanted to leave, Mrika. We note that you have left." Ponse picked up cards and began to shuffle.

The younger Chosen snorted and left.

Ponse laid out a solitaire game, started to play. Presently he said to Joe, "Sometimes that young man gets me so annoyed that I would happily change my will."

Joe looked puzzled. "I thought you could not disinherit him?"

"Oh, no!" Their Charity looked shocked. "Not even a peasant can do that. Where would we be if there were no stability here on Earth? I wouldn't dream of it, even if the law permitted it; he's my heir. I was just thinking of the servants."

Joe said, "I don't follow you."

"Why, you know- No, perhaps you don't. I keep forgetting that you didn't grow up among us. My will disposes of things personally mine. Not much-jewelry, scrolls, such. Value probably less than a million. Trivia. Except household servants. Just the household, I'm not talking about servants in mines or on ranches, or in our shipping lines. It's customary to list all household servants in a will-otherwise they escort their uncle." He grinned. "It would be a good joke on Mrika if he found that he was going to have to raise the money to adopt fifteen hundred, two thousand servants-or shut the house and live in a tent. I can just see that. Why, the lad can't take a pee without four servants to shake it. I doubt if he knows how to put on his boots. Hugh, if you tell me to put the black lady on the red lord, I'll tingle you. I'm not in a good mood."

Hugh said hastily, "Did you miss a play? I hadn't noticed."

"Then why were you staring at the cards?" Hugh had indeed been staring at the game, trying to be invisibie. He had been made very nervous by witnessing a quarrel between Ponse and his nephew. But he had missed not a word, he found it extremely interesting.

Ponse went on, "Which would you prefer, Hugh? To escort me to Heaven? Or stay here and serve Mrika? Don't answer too quickly. If you stay here, I venture you may be eating your own toes to stay your hunger before I'm gone a year. . whereas Heaven is a nice place, so the Good Scroll tells."

"It's a hard choice."

"Well, you don't have to make it, nor will you know. A servant should never know, it keeps him on his toes. That scoundrel Memtok keeps praying me for the honor of being in my escort. If I thought he was sincere, I would dismiss him for incompetence." Ponse swept the cards together. "Damn that lad! He's poor company but I had my liver set on a few good, hard rubbers. Joe, we've got to teach more people to play. Being left without a fourth is annoying."

"Certainly," agreed Joe. "Right now?"

"No, no. I want to play, damn it, not watch some beginner's bumbles. I'm growing addicted. Takes a man's worries off his mind."

Hugh was hit by inspiration. "Ponse, if you don't mind having another servant in the game . . ."

Joe brightened up. "Why, of course! He-"

"Barbara," Hugh cut in fast, before Joe could mention Duke.

Joe blinked. Then he smoothly picked it up. "He-Hugh, I mean-was about to mention a servant named Barbara. Good bridge player."

"Well! You've been teaching this game belowstairs, Hugh?" Ponse added, "'Barbara'? A name I don't recognize. Not one of the upper servants."

"You remember her," Joe said. "She was with us when you picked us up. The tall one."

"Oh, yes. Bigging, it was. Joe, are you telling me that a slut can play this game?"

"She's a top player," Joe assured him. "Plays better than I do. Heavens, Ponse, she can play rings around you. Isn't that right, Hugh?"

"Barbara is an excellent player."

"This I must see to believe."

A few minutes later Barbara, freshly bathed and scared, was fetched in. She glanced at Hugh, looked startled silly, opened her mouth, closed it, and stood mute.

Ponse came up to her. "So this is the slut who is supposed to be able to play contract. Stop trembling, little one; nobody's going to eat you." In bluff words he convinced her that she was there only to play bridge and that she was expected to relax and be informal-no fancy talk. "Just behave as if you were downstairs, having a good time with other servants. Hear me?"

"Yes, sir."

"Just one thing." He tapped her on her chest. "When you're my partner, I shan't be angry if you make mistakes-after all, you're only a slut and it's surprising that you can play an intellectual game at all. But"-he paused- "when you are playing against me, if you fail to fight for every trick, if I even suspect that you are trying to let me win, I guarantee you'll tingle when you leave. Understand?"

"That's right," agreed Joe. "Their Charity expects it. Just play by the book, and play your best."

"'By the book,' " Ponse repeated. "I've never seen this book but that's the way Joe says he has taught me to play. So do it. All right, let's cut the cards."

Hugh hardly listened, he was drinking in the sight of Barbara. She looked well and healthy although it was startling to see her slender again-or almost, he corrected; she was still largish in the fanny and certainly in the bust. She had lost most of her tan and was dressed in the shapeless short robe all female servants wore belowstairs, but 'he was

delighted to see that she had not had her hair removed. It was cropped but could grow back.

He noticed that his own appearance seemed to startle her, realized why. He said, smiling, "I comb my hair with a washrag now, Barbie. No matter, I didn't have enough to matter. Now that I'm used to being hairless, I like it."

"You look distinguished, Hugh."

"He's ugly as sin," said Ponse. "But are we chatting? Or playing bridge? Your bid, Barba."

They played for hours. As it progressed, Barbara seemed to relax and enjoy it. She smiled a great deal, usually at Hugh, but also at Joe and even at Their Charity. She played by the book and Ponse never found fault. Hugh decided that their host was a good player, not yet perfect but he remembered what cards had been played and usually bid accurately. Hugh found him a satisfactory partner and an adequate opponent; it was a good game.

But once, with Barbara as Ponse's partner and contract in her hand, Hugh saw when Ponse laid down the dummy that Ponse had overbid in his answer. So he contrived to lose one sure trick, thereby letting Barbara make contract, game, and rubber.

It got him a glance with no expression from Barbara and Joe gave him a look that had a twinkle in it, but Joe kept his mouth shut. Ponse did not notice. He gave a bass roar, reached across and patted Barbara's head. "Wonderful, wonderful! Little one, you really can play contract. Why, I doubt if I could have made that myself."

Nor did Ponse complain when, on the next rubber, Barbara and Hugh gave him and Joe a trouncing. Hugh decided that Ponse had the inborn honesty called "sportsmanship"-plus a good head for cards.

One of the little deaf-mutes trotted in, knelt, and served Their Charity a tumbler of something cold, then another to Joe. Ponse took a swig, wiped his mouth and said, "Ah, that hits the spot!"

Joe made a whispered suggestion to him. Ponse looked startled and said, "Oh, certainly. Why not?"

So Hugh and Barbara were served. Hugh was pleased to discover 'that it was apple juice; he wasn't sure of his ability to play tight bridge had it been Happiness.

During this rubber Hugh noticed that Barbara was squirming a little and seemed to have trouble in concentrating. When the hand ended he said quietly, "Trouble, hon?"

She glanced at Ponse and whispered, "Some. I was about to feed the boys when I was sent for."

"Oh." Hugh turned to his host. "Ponse, Barbara needs to stop.,,

Ponse looked up from shuffling. "Plumbing call? One of the maids can show it, I suppose. They must go somewhere."

"Not that. Well, maybe that, too. What I meant was, Barbara has twins."

"Well? Sluts usually have twins, they have two breasts."

"That's the point, she's nursing them and she's hours past time. She has to leave."

Ponse looked annoyed, hesitated, then said, "Oh, garbage. Its milk won't cake from so short a delay. Here, cut the cards."

Hugh did not touch them. Ponse said, "Didn't you hear me?" Hugh stood up~ His heart was pounding and he felt a shudder of fear. "Ponse, Barbara hurts. She needs to

nurse her twins right now. I can't force you to let her-but if you think I'll play cards while you don't let her, you're crazy."

For long moments the big man stared, without expression. Then suddenly he grinned. "Hugh, I like you. You did something like this once before, didn't you? The slut is your sister, I suppose."

"Then you are the one who is crazy. Do you know how close you came to being cold meat?"

"I can guess."

"I doubt it, you don't look worried. But I like spunk, even in a servant. Very well, I'll have its brats fetched. They can suck while we play."

The twins were fetched and Hugh saw at once that they were the handsomest, healthiest, and loveliest babies that had ever been born; he told Barbara so. He did not immediately get a chance to touch them as Ponse took one in each arm, laughed at them, blew in their faces, and jiggled them. "Fine boys!" he roared. "Fine boys, Barba! Holy little terrors, I'll bet. Go on, swing that fist, kid! Sock Uncle in the nose again. What do you call them, Barba? Do they have names?"

"This one is Hugh-"

"Eh? Does Hugh have something to do with them? Or thinks he has, perhaps?"

"He's 'their father."

"Well, well! Hugh, you may be ugly, but you have other qualities. If Barba knows what she's talking about. What's this one's name?"

"That one is little Joe. Karl Joseph."

Ponse lifted an eyebrow at Joe. "So you have sluts naming brats for you, Joe? I'll have to watch you, you're a sly one. What did you give Barba?"

"Beg pardon?"

"Birthing present, you idiot. Give her that ring you're wearing. So many brats in this house named after me that I have to order trinkets by the basket load; they know it obliges me to make them a present. Hugh is lucky, he has nothing to give. Hey, Hughie has teeth!"

Hugh got to hold them while they settled down for combined bridge and nursing. Barbara took them one at a time and played cards with her free hand. The little maids fussed over the one not nursing and, in due time, took them away. In spite of the handicap Barbara played well, even brilliantly; the long session ended with Ponse top scorer, Barbara close behind, and Joe and Hugh tied for last. Hugh had cheated very little to make it come out that way; the cards had favored Ponse and Barbara when they were partners; they had made two small slams.

Ponse was feeling very jovial about it. "Barba, come here, little one. You tell the slutmaster I said to find a wet nurse for your brats and that I want the vet to dry you up as soon as possible. I want you available as my bridge partner. Or opponent-you give a man a tough fight."

"Yes, sir. May one speak?"

"One may."

"I would rather nurse them myself. They're all I have."

"Well-" He shrugged. "This seems to be my day for balky servants. I'm afraid you are both still savages. A tingling wouldn't do you any harm, slut. All right, but you'll have

to play 'one-handed sometimes; I won't have brats stopping the game." He grinned. "Besides, I'd like to see the little rascals occasionally, especially that one that bites. You may go. All."

Barbara was dismissed so suddenly that Hugh barely had time to exchange smiles with her; he had hoped to walk down with her, steal a private visit. But His Charity did not dismiss him, so he stayed-with a warm glow in his heart; it had been the happiest time in a long time.

Ponse discussed the articles he had been translating, why none of them offered practical business ventures. "But don't fret, Hugh; keep plugging and we'll strike ore yet." He turned the talk to other matters, still kept Hugh there. Hugh found him a knowledgeable conversationalist, interested in everything, as willing to listen as he was to talk. He seemed to Hugh the epitome of the perfect decadent gentleman-urbane, cosmopolitan, disillusioned, and cynical, a dilettante in arts and sciences, neither merciful nor cruel, unimpressed by his own rank, not racist-he treated Hugh as an intellectual equal.

While they were talking, the little maids served dinner to Ponse and to Joe. Nothing was offered to Hugh, nor did he expect it-nor want it, as he could have meals served in his rooms if he was not on time in the executive servants' dining room and he had long since decided, from samplings, that Memtok was right: the upper servants ate better than the master.

But when Ponse had finished, he shoved his dishes toward Hugh. "Eat."

Hugh hesitated a split second; he did not need to be told that he was being honored-for a servant. There was plenty, at least three times as much left as Ponse had eaten. Hugh could not recall that he had ever eaten someone's leavings, and certainly not with a used spoon. He dug in.

As usual, Their Charity's menu did not especially please Hugh-somewhat greasy and he had no great liking for pork. Pork was hardly ever served belowstairs but was often part of the menus Memtok sampled, Hugh had noticed. It surprised him, as the revised Koran still contained the dietary laws and the Chosen did follow some of the original Muslim customs. They practiced circumcision, did not use alcohol other than a thin beer, and observed Ramadan at least nominally and called it that. Mahomet would have been shocked by the revisions to his straightforward monotheistic teachings but he would have recognized some of the details.

But the bread was good, the fruits were superb, and so were the ices and many other things; it wasn't necessary to dine solely on roast. Hugh kept intact his record for enjoying the inevitable.

Ponse was interested in what the climate had been in this region in Hugh's time. "Joe tells me you sometimes had freezing temperatures. Even snow."

"Oh, yes, every winter."

"Fantastic. How cold did it get?"

Hugh had to think. He had not had occasion to learn how these people marked temperatures. "If you consider the range from freezing of water to boiling, it was not unusual for it to get one third of that range lower than freezing."

Ponse looked surprised. "Are you sure? We call that range, freezing to boiling, one hundred. Are you telling me that it sometimes got as much as thirty-three degrees below freezing?"

Hugh noted with interest that the centigrade scale had survived two millennia-but no reason why not; they used the decimal system in arithmetic and in money. He had to do a conversion in his head. "Yes, that's what I mean. Nearly cold enough to freeze mercury, and cold enough for that, up in those mountains." Hugh pointed out a view window.

"Cold enough," Joe agreed, "to freeze your teeth! Only thing that ever made me long for Mississippi."

"Where," asked Ponse, "is Mississippi?"

"It's not," Joe told him. "It's under water now. And good riddance."

This led to discussion of why the climate had changed and Their Charity sent for the last volume of the Britannica, containing ancient maps, and for modern maps. They poured over them together. Where the Mississippi Valley had been, the Gulf now reached far north. Florida and Yucatan were missing and 'Cuba was a few small islands. California had a central sea and most of northern Canada was gone.

Similar shrinkages had taken place elsewhere. The Scandinavian Peninsula was an island, the British isles were several small islands, part of the Sahara was under water. What had been lowlands anywhere were missing-Holland, Belgium, Northern Germany could not be found. Nor Denmark-the 3altic was a gulf of the Atlantic.

Hugh looked at it with odd sorrow and had never felt so homesick. He had known it was so, from reading; this was the first map he had seen of it.

"The question," said Ponse, "is whether the melting of ice ~vas triggered by the dust of the East-West War, or was it a natural change that was, at most, speeded up a little by artificial events? Some of my scientists say one thing, some the other."

"What do you think?" asked Hugh.

The lord shrugged. "I'm not foolish enough to hold opinions when I have insufficient data; I'll leave that folly to scientists. I'm simply glad that Uncle saw fit 'to let me live in an age in which I can go outdoors without freezing my feet. I visited the South Pole once-I have some mines there. Frost on the ground. Dreadful. The place for ice is in a drink."

Ponse went to the window and stood looking out at the silhouette of mountains against darkening sky. "However, if it got that cold up there now, we would root them out in a hurry. Eh, Joe?"

"Back they would come with their tails between their legs," Joe agreed.

Hugh looked puzzled. "Ponse means," Joe explained, "the runners hiding up in the mountains. What they thought you were when we were found."

"Runners and a few aborigines," Ponse supplemented. "Savages. Poor creatures who have never been rescued by civilization. It's hard to save them, Hugh. They don't stand around waiting to be picked up the way you did. They're crafty as wolves. The merest shadow in the sky and they freeze and you can't see them-and they are very destructive of game. Of course we could smoke them out any number of ways. But that would kill the game, can't have that. Hugh, you've lived out there; you must have acquired some feel for it. How would you go about rescuing those critters? Without killing game."

Mr. Hugh Farnham hesitated only long enough to phrase his reply. "Their Charity knows that this one is a servant. This one's ears must be at fault in thinking that it heard its humble self called on to see the problem as it might appear to the Chosen."

"Why, damn your impudence! Come, come, Hugh, I want your opinion."

"You got my opinion, Ponse. I'm a servant. My sympathies are with the runaways. And the savages. I didn't come here willingly. I was dragged."

"Surely you aren't resenting that now? Of course you were captured, even Joe was. But there was language difficulty. Now you've seen the difference. You know."

"Yes, I know."

"Then you know how much your condition has improved. Don't you sleep in a better bed now? Aren't you eating better? Uncle! When we picked you up, you were half starved and infested with vermin. You were barely staying alive with the hardest sort of work, I could see. I'm not blind, I'm not stupid; there isn't a member of my Family down to 'the lowest cleaner that works half as 'hard as you had to, or sleeps in as poor a bed-and in a stinking little sty; I could hardly bear the stench before we fumigated it-and as for the food, if that is the word, any servant in this house would turn up his nose at what you ate. Isn't all that true?"

"Yes."

"Well?"

"I prefer freedom."

"'Freedom!'" Their Charity snorted. "A concept without a referent, like 'ghosts.' Meaningless. Hugh, you should study semantics. Modern semantics, I mean; I doubt if they really had such a science in your day. We are all free-to walk our appointed paths. Just as a stone is free to fall when you toss it into the air. No one is free in the abstract meaning you give the word. Do you think 1 am free? Free to change places with you, say? Would I if I could? You bet I would! You have no concept of the worries I have, the work I do. Sometimes I lie awake half the night, worrying which way to turn next-you won't find that in servants' hall. They're happy, they have no worries. But I have to carry my burden as best I can."

Hugh looked stubborn. Ponse came over and put his arm around Hugh's shoulders. "Come, let's talk this over judicially-two civilized beings. I'm not one of those superstitious persons who thinks a servant can't think because his skin is pale. Surely you know that. Haven't I respected your intellect?"

"Well . . . yes."

"That's better. Let me explain some things-Joe has seen them-and you can ask questions, and we'll arrive at a rational understanding. First-Joe, you've seen Chosen here and there who are what our friend Hugh would no doubt describe as 'free.' Tell him."

Joe snorted. "Hugh, you should see-and you would be glad to be privileged to live in Ponse's household. There is just one phrase I can think of to describe them. Po' black trash. Like the white trash there used to be in Mississippi. Poor black trash, not knowing where their next meal is."

"I follow you."

"I think I do, too," agreed Their Charity. "A pungent phrase. I look forward to the day when every man will have servants. It can't come overnight, they'll have to lift themselves up. But a day when all the Chosen will be served-and all servants as well cared for as they are in my own Family. That's my ideal. In the meantime I do the best I can. I look after their welfare from birth until they're called Home by Uncle. They have nothing to fear, utter security-which they wouldn't have out in those mountains as I'm sure you know better than I. They are happy, they are never overworked- which I am-and

they have plenty of fun, which is more than I can say! This bridge game today-the first real fun I've had in a month. And they are never punished, only just enough to remind them when they err. Have to do that, you've seen how stupid most of them are. Not that I am inferring that you are- No, I tell you honestly that I think you are smart enough to take care of servants yourself, despite your skin. I'm speaking of the ordinary run. Honestly, Hugh, do you think they could take care of themselves as well as I look out for them?"

"Probably not." Hugh had heard all this before, only nights ago, and in almost the same words-from Memtok. With the difference that Ponse seemed to be honestly fond of his servants and earnest about their welfare-whereas the Chief Domestic had been openly contemptuous of them, even more strongly so than his veiled contempt for the Chosen. "No, they couldn't, most of them."

"Ah! You agree with me."

"No."

Ponse looked pained. "Hugh, how can we have a rational discussion if you say one thing and contradict it in the next breath?"

"I didn't contradict myself. I agreed that you took fine care of the welfare of your servants. But I did not agree that I prefer it to freedom."

"But why, Hugh? Give me a reason, not a philosophical abstraction. If you're not happy, I want to know why. So that I can correct it."

"I can give you one reason. I'm not allowed to live with my wife and children."

"Eh?"

"Barbara. And the twins."

"Oh. Is that important? You have a bedwarmer. Memtok told me, and I congratulated him on having used initiative in an odd situation. Not much gets past that sly old fox. You have one and she is sure to be more expert at her specialty than the ordinary run of breeding slut. As for the brats, no reason why you can't see them-just order them fetched to you whenever you like. But who wants to live with brats? Or with a wife? I don't live with my wife and children, you can bet on that. I see them on appropriate occasions. But who would want to live with them?"

"I would."

"Well- Uncle! I want you to be happy. It can be arranged."

"It can?"

"Certainly. If you hadn't put up such a fuss over being tempered, you could have had them with you all along- though I confess I don't see why. Do you want to see the vet?"

"Uh . . . no."

"Well, there's another choice. I'll have the slut spayed."

"No!"

Ponse sighed. "You're hard to please. Be practical, Hugh; can't change a scientific breeding system to pamper one servant. Do you know how many servants are in this family? Here and at the Palace? Around eighteen hundred, I believe. Do you know what would happen if I allowed unrestricted breeding? In ten years there would be twice that number. And what would happen next? They would starve! I can't support them n unlimited breeding. Would if I could, but it's wishing for the Moon. Worse, for we can go to the Moon any time it's worth while but nobody can cope with the way servants will breed if left to their own devices. So which is better? To control it? Or let them starve?"

Their Charity sighed. "I wish you were a head shorter, we would work something out. You've been in studs' quarters?"

"I visited it once, with Memtok."

"You noticed the door? You had to stoop; Memtok walked straight in-he used to be a stud. The doors are that height in ~very studs' barracks in the world-and no servant is chosen Lf he can't walk in without stooping. And the slut in this case Ls too tall, too. A wise law, Hugh. I didn't make it; it was handed down a long time ago by Their Mercy of that time. If they are allowed to breed too tall they start needing to be tingled too often and that's not good, for master or servant. No, Hugh. Anything within reason. But don't ask for the impossible." He moved from the divan where he had been sitting ~tête-à-tête with Hugh and sat down at the card table, picked

a deck. "So we'll say no more about it. Do you know how ~o play double solitaire?"

"Yes."

"Then come see if you can beat me and let's be cheerful. A man gets upset when his efforts aren't appreciated."

Hugh shut up. He was thinking glumly that Ponse was not a villain. He was exactly like the members of every ruling class in history: honestly convinced of his benevolence and hurt if it was challenged.

They played a game; Hugh lost, his mind was not on it. They started to lay out another. Their Charity remarked, "I must have more cards painted. These are getting worn."

Hugh said, "Couldn't it be done more quickly, using a printer such as we use for scrolls?"

"Eh? Hadn't thought about it." The big man rubbed one of the XXth century cards. "This doesn't seem much like printing. Were they printed?"

"Oh, yes. Thousands at a time. Millions, I should say, figuring the enormous numbers that used to be sold."

"Really? I wouldn't have though! that bridge, with its demand on the intellect, would have attracted many people."

Hugh suddenly put down his cards. "Ponse? You wanted a way to make money."

"Certainly."

"You have it in your hand. Joe! Come here and let's talk about this. How many decks of cards were sold each year in the United States?"

"Gosh, Hugh, I don't know. Millions, maybe."

"So I would say. At a gross profit of about ninety percent. Mmm- Ponse, bridge and solitaire aren't the only games that can be played with these cards. The possibilities are unlimited. There are games simple as solitaire but played by two or three or more players. There are games a dozen people can play at once. There are hard games and easy games, there is even a form of bridge-'duplicate,' it's called-harder than contract. Ponse, every family-little family-kept one or two or even dozens of decks on hand; it was a rare home that didn't own a deck. I couldn't guess how many were sold. Probably a hundred million decks in use in the United States alone. And you've got a virgin market. All it needs is to get people interested."

"Ponse, Hugh is right," Joe said solemnly. "The possibilities are unlimited."

Ponse pursed up his lips. "If we sold them for a bullock a deck, let us say . . . mmm-"

"Too much," Joe 'objected. "You would kill your market before you got started."

Hugh said, "Joe, what's that formula for setting a price to maximize profits rather than sales?"

"Works only in a monopoly."

"Well? How is that done here? Patents and copyrights and such? I haven't seen anything about it in what I've read."

Joe looked troubled. "Hugh, the Chosen don't use such a system, they don't need to. Everything is pretty well worked out, things don't change much."

Hugh said, "That's bad. Two weeks after we start, the market will be flooded with imitations."

Ponse said, "What are you two jabbering about? Speak Language." Hugh's question had necessarily been in English; Joe had answered in English.

Joe said, "Sorry, Ponse," and explained the ideas behind patent rights, copyright, and monopoly.

Ponse relaxed. "Oh, that's simple. When a man gets an inspiration from Heaven, the Lord Proprietor forbids anyone else to use it without his let. Doesn't happen often, I recall only two cases in my lifetime. But Mighty Uncle has been known to smile."

Hugh was not surprised to learn how scarce invention was. It was a static culture, with most of what they called "science" in the hands of tempered slaves-and if patenting a new idea was that difficult, there would be little incentive to invent. "Would you say that this idea is an inspiration from Heaven?"

Ponse thought about it. "An inspiration is whatever Their Mercy, in Their wisdom, recognizes as an inspiration." Suddenly he grinned. "In my opinion, anything that will stack bullocks in the Family coffers is an inspiration. The problem is to make the Proprietor see it. But there are ways. Keep talking."

Joe said, "Hugh, the protection should extend not only over playing cards but over the games themselves."

"Of course. If they don't buy Their Charity's cards, they must not play his games. Hard to stop, since anybody can fake a deck of cards. But the monopoly should make it illegal."

"And not just cards like these, but any sort of playing cards. You could play bridge with cards just with numbers on them."

"Yes." Hugh pondered. "Joe, there was a Scrabble set in the shelter."

"It's still around. Ponse's scientists saved everything. Hugh, I see what you're driving at, but nobody here could learn Scrabble. You have to know English."

"What's to keep us from inventing Scrabble all over again- in Language? Let me set my staff to making a frequency count of the alphabet as it appears in Language and I'll have a set of Scrabble, board and tiles and rules, suited to Language, the following day."

"What in the name of Uncle is Scrabble?"

"It's a game, Ponse. Quite a good one. But the point is that it's a game that we can charge more for than we can for a deck of cards." -

"That's not all," said Hugh. He began ticking on his fingers. "Parcheesi, Monopoly, backgammon, Old Maid for kids-call it something else-dominoes, anagrams, poker chips and racks, jigsaw puzzles-have you seen any?"

"No."

"Good for young and old, and all degrees of difficulty. Tinker Toy. Dice-lots of games with dice. Joe, are there casinos here?"

"Of sorts. There are places to gamble and lots of private gambling."

"Roulette wheels?"

"I don't believe so."

"It gets too big to think about. Ponse, you are going to have to sit up nights, counting your money."

"Servants for such chores. I wish I knew what you two are talking about. May one ask?"

"Sorry, sir. Joe and I were talking about ancient games.. and not just games but all sorts of recreations that we used to have and have now been lost. At least I think they have been. Joe?"

"The only one I've seen that looks familiar is chess."

"Chess would hold up if anything would. Ponse, the point is that every one of these things has money in it. Surely, you have games now. But these will be novelties. So old they are new again. Ping-Pong . . . bowling alleys! Joe, have you seen-"

"No."

"Billiards. Pocket pool. I'll stop, we've got a backlog. Ponse, the first problem is to get a protection from Their Mercy to cover it all-and I see a theory that makes it an inspiration from on high. It was a miracle."

"What? Garbage. I don't believe in miracles."

"You don't have to believe in it. Look, we were found on the Proprietor's personal land-and you found us. Doesn't that look as if Uncle intended for the Proprietor to know about this? And for you as Lord Protector to protect it?"

Ponse grinned. "An argument could be made for such a theory. Might be expensive. But you can't boil water without feeding the fire, as my aunt used to say." He stood up. "Hugh, let's see that Scrabble game. Soon. Joe, we'll find time for you to explain these other things. We excuse you both. All."

Kitten was asleep when Hugh returned but she was clutching a note:

Oh, darling, it was so wonderful to see you! ! ! I can't wait until Their Charity asks us to play bridge again! Isn't he an old dear? Even if he was thoughtless at one point. He corrected his mistake and that's the mark of a true gentleman.

I'm so excited at seeing you that I can hardly write, and Kitten is waiting to take this to you.

The twins send you kisses, slobbery ones. Love, love, love!
Your own B.

Hugh read Barbara's note with mixed feelings. He shared her joy in their reunion, limited as it had been, and eagerly looked forward to the next time Ponse's pleasure would permit them to be together. As for the rest- Better get her out of here before she acquired a slave mentality! Surely, Ponse was a gentleman within the accepted meaning of the term. He was conscientious about his responsibilities, generous and tolerant with his inferiors. A gentleman.

But he was a revolving son of a bitch, too! And Barbara ought not to be so ready to overlook the fact. Ignore it, yes- one had to. But not forget it.

He must get her free.

But how?

He went to bed.

An aching hour later he got up, went into his living room, stood at his window. He could make out against black sky the blacker blackness of the Rocky Mountains.

Somewhere out there, were free men.

He could break this window, go toward the mountains, be lost in them before daylight-find free companions. He need not even break the window-just slip past a nodding watchman, or use the authority symbolized by his whip to go out despite the watch. No real effort was made to keep house servants locked up. A watch was set more to keep intruders out. Most house servants would no more run away than a dog would.

Dogs- One of the studmaster's duties was keeper of the hounds.

If necessary, he could kill a dog with his hands. But how do you run when burdened with two small babies?

He went to a cupboard, poured himself a stiff drink of Happiness, gulped it down, and went back to bed.

Chapter 16

For the next many days Hugh was busy redesigning the game of Scrabble, translating Hoyle's Complete Book of Games, dictating rules and descriptions of games and recreations not in Hoyle (such as Ping-Pong, golf, water skiing), attending conferences with Ponse and Joe-playing bridge.

The last was by far the best. With Joe's help he taught several Chosen the game, but most sessions were play, with Joe, Ponse, and always Barbara. Ponse had the enthusiasm of a convert; when he was in residence he played bridge every minute he could spare, and always wanted the same four, the best players available.

It seemed to Hugh that Their Charity was honestly fond of Barbara, as fond as he was of the cat he called "Doklivstnipsoom"-never "Doc." Ponse extended to cats the courtesy due equals, and Doc, or any cat, was free to jump into his lap even when he was bidding a hand. He extended the same courtesy and affection to Barbara as he knew her better, always called her "Barba," or "Child," and never again referred to her as "it." Barbara called him "Ponse," or "Uncle," and clearly felt happy in his company.

Sometimes Ponse left Barbara and Hugh alone, once for twenty minutes. These were jewels beyond price; they did not risk losing such a privilege by doing more than hold hands.

If it was time to nurse the boys, Barbara said so and Ponse always ordered them fetched. Once he ordered them fetched when it wasn't necessary, said that he had not seen them for a week and wanted to see how much they had grown. So the game waited while their "Uncle" Ponse got down on the rug and made foolish noises at them.

Then he had them taken away, five minutes of babies was enough. But he said to Barbara, "Child, they're growing like sugar cane. I hope I live to see them grow up."

"You'll live a long time, Uncle.'!

"Maybe. I've outlived a dozen food tasters, but that salts no fish. Those brats of ours will make magnificent matched footmen. I can see them now, serving in the banquet hail of the Palace-the Residence, I mean, not this cottage. Whose deal is it?"

Hugh saw Grace a few times, but never for more than seconds. If he showed up when she was there, she left at once, displeasure large on her face. If Barbara arrived before Hugh did, Grace was always out of sight. It was clear that she was an habituée of the lord's informal apartments; it was equally clear that she resented Barbara as much as ever, with bile left over for Hugh. But she never said anything and it seemed likely that she had learned not to cross wills with Their Charity.

It was now official that Grace was bedwarmer to Their Charity. Hugh learned this from Kitten. The sluts knew when the lord was in residence (Hugh often did not) by whether Grace was downstairs or up. She was assigned no other duties and was immune to all whips, even Memtok's. She was also, the times Hugh glimpsed her, lavishly dressed and bejeweled.

She was also very fat, so fat that Hugh felt relieved that he no longer had even a nominal obligation to share a bed with her. True, all bedwarmers were fat by Hugh's standards. Even Kitten was plump enough that had she been a XXth century American girl, she would have been at least pretending to diet- Kitten fretted that she was unable to put on weight- and did Hugh like her anyhow?

Kitten was so young that her plumpness was somewhat pleasing, as with a baby. But Hugh found Grace's fatness another matter-somewhere in that jiggling mass was buried the beautiful girl he had married. He tried not to think about it and could not see why Ponse would like it-if he did. But in truth, Hugh admitted, he did not know that Grace was anything more than nominally Ponse's bedwarmer. After all, Ponse was alleged to be more than a century old. Would Ponse have any more use for one than Memtok had? Hugh did not know-nor care. Ponse looked to be perhaps sixty-five and still strong and virile. But Hugh held a private opinion that Grace's role was odalisque, not houri.

While the question did not matter to him, it did to Duke. Hugh's first son came storming into Hugh's office one day and demanded a private interview; Hugh led him to his apartment. He bad not seen Duke for a month. Translations had been coming in from him; there had been no need to see him.

Hugh tried to make the meeting pleasant. "Sit down, Duke. May I offer you a drink of Happiness?"

"No, thanks! What's this I hear about Mother?"

"What do you hear, Duke?" (Oh, Lord! Here we go-)

"You know damned well what I mean!"

"I'm afraid I don't."

Hugh made him spell it out. Duke had his facts correct and, to Hugh's surprise, had learned them just that day. Since more than four hundred servants had known all along that one of the slut savages-the other one, not the tail skinny one-lived upstairs with Their Charity more than she lived in sluts' quarters, it seemed incredible that Duke had

taken so long to find out. However, Duke had little to do with the other servants and was not popular-a "troublemaker," Memtok had called him.

Hugh neither confirmed nor denied Duke's story.

"Well?" Duke demanded. "What are you going to do about it?"

"About what, Duke? Are you suggesting that I put a stop to servants' hall gossip?"

"I don't mean that at all! Are you going to sit there like a turd on a rock while your wife is being raped?"

"Probably. You come in here with some story you've picked up from a second assistant dishwasher and expect me to do something. I would like to know, first, why do you think this gossip is true? Second, what has what you have told me got to do with rape? Third, what would you expect me to do about it? Fourth, what do you think I can do about it? Take them in 'order and be specific. Then we may talk about what I will do."

"Quit twisting things."

"I'm not twisting anything. Duke, you had an expensive education as a lawyer-I know, I picked up the tab. You used to lecture me about 'rules of evidence.' Now use that education. Take those questions in order. Why do you think this gossip is true?"

"Uh. . . I heard it and checked around. Everybody knows it."

"So? Everybody knew the Earth was flat, at one time. But what is the allegation? Be specific."

"Why, I told you. Mother is assigned as that bastard's bedwarmer."

"Who says so?"

"Why, everybody!"

"Did you ask the slutmaster?"

"Do you think I'm crazy?"

"I'll take that as rhetorical. To shorten this, what 'everybody knows,' as you put it, is that Grace is assigned duties upstairs. This could be verified, if true. Possibly in attendance on Their Charity, possibly waiting on the ladies of the household, or perhaps other duties. Do you want an appointment with the slutmaster, so that you can ask him what duties your mother has? I do not know her duties."

"Uh, you ask him."

"I shan't. I feel sure that Grace would regard it as snooping. Let's assume that you have asked him and that he has told you, as you now suspect only from gossip, that her assignment is as bedwarmer. To Their Charity. On this assumption, made solely for the sake of argument since you haven't proved it- on this assumption, where does rape come in?"

Duke looked astonished. "I would not have believed it, even of you. Do you mean to sit there and say baldly that you think Mother would do such a thing voluntarily?"

"I long ago gave up trying to guess what your mother would do. But I haven't said she is doing anything. You have. I don't know that her assignment is bedwarmer other than through gossip you have repeated without proof. If true, I still would not know if she had ever carried out the assignment by actually getting into his bed, voluntarily or otherwise-I've never seen his bed nor even heard gossip on this point. . . just your evil thoughts. But if those thoughts are correct, I still would have no opinion as to whether or not anything other than sleep had taken place. I have shared beds with females and done nothing but sleep; it can happen. But even stipulating sexual activity-your assumption,

not mine-I doubt that Their Charity has ever raped any female in his life. I doubt it especially now."

"Crap. There never was a nigger bastard who wouldn't rape a white woman if he had the chance."

"Duke! That's poisonous, insane nonsense. You almost persuade me that you are crazy."

"I-,'

"Shut up! You know that Joseph, to give one example, had endless opportunity to rape any of three white women for nine long months. You also know that his behavior was above reproach."

"Well.. . he didn't have a chance to."

"I told you to shut up this poison. He had endless chance. While you were hunting, any day. He was alone with each of them, many times. Drop it! Slandering Joseph, I mean, even by innuendo. I'm ashamed of you."

"And I'm ashamed of you. Fat cat for a nigger king."

"Very well, the shame is mutual. Speaking of fat cats, I don't really need you. if you want to quit being a fat cat, you can wash dishes or whatever they assign you to."

"Doesn't matter to me."

"Let me know when you wish to be relieved. It will lose you your private cubicle but such luxury is a fat cat privilege. Never mind. I see only one way to get at the facts, if any, underlying these foul suspicions in your mind. Ask the Lord Protector."

"Go right ahead! First sensible thing you've said."

"Oh, not me, Duke. I don't suspect him of rape. But you can ask him. See the Chief Domestic. He'll see any Palace servant who wants to see him. At the servant's risk, but I doubt if he'll tingle anyone in my department without good cause; I do have some fat cat privileges. Tell him you want an audience with the Lord Protector. I think that is all it will take, although you may have to wait a week or two. If Memtok turns you down, tell me. I fancy I can get him to arrange it. Then, when you see the Lord Protector, simply ask him, point-blank."

"And be lied to. If I ever get that close to that black ape, I'm going to kill him!"

Mr. Farnham sighed. "Duke, I don't see how one man can be so wrong-headed so many different ways. If you are granted an audience, Memtok will be at your side. With his whip. The Lord Protector will be about fifty feet away. And the whip he carries doesn't just tingle; it's a deadly weapon. The old man has lived a long time, he's not easy to kill."

"I can try!"

"So you can. If a grasshopper tries to fight a lawnmower, one may admire his courage but not his judgment. But you are equally silly in thinking that Their Charity would lie about it. If he has done what you think he has-raped your mother, forced her to submit-he would feel not the slightest shame, not in any way reluctant to answer you honestly. Duke, he would no more bother to lie to you than it would occur to him to step aside if you were in his way. However-would you believe your mother?"

"Of course I would."

"Then tell him also that you would like to see her. I am almost certain that he would grant the request. For a few minutes and in his presence. The harem rules he can break if he chooses. If you have the guts to tell him that you want to hear her confirm

whatever he tells you, I think he would be astonished. But I think he would then laugh and grant the petition. If you want to see your mother, assure yourself personally of her welfare and safety, that's all I can suggest. You can't see her otherwise. It's so irregular that your only chance is to spring it on him, face to face." -

Duke looked baffled. "Look, why the devil don't you ask him? You see him almost every day, so I hear."

"Me? Yes, I see him fairly often. But ask him about rape? Is that what you mean?"

"Yes, if you choose to put it that way."

"'Rape' is what you claim to be worried about. But I don't suspect him of rape. I won't be a front for your evil suspicions. If it is to be done, you must have the guts to do it yourself." Hugh stood up. "We've wasted enough time. Either get back to work, or go see Memtok."

"I'm not through."

"Oh, yes, you are. That was an order, not a suggestion."

"If you think I'm scared of that whip-"

"Heavens, Duke, I wouldn't tingle you myself. If you force me to it, I'll ask Memtok to chastise you. He's reputed to be expert. Now get out. You've wasted half my morning."

Duke left. Hugh stayed, trying to compose himself. A row with Duke always left him shaking; it had been so when the lad was only twelve. But something else troubled him, too. He had used every sophistry he could think of to divert Duke from a hopeless course. That did not worry him, nor did he share Duke's basic worry. Whatever had happened to Grace, he felt sure that rape was not a factor.

But he was sourly aware of something 'that Duke, in his delusions, apparently did not realize-the oldest Law of the Conquered, that their women eventually submit-willingly.

Whether his ex-wife had or had not was a matter almost academic. He suspected that she had never been offered opportunity. Either way, she was obviously contented with her lot-smug about it. That troubled him little; he had tried to do his duty by her, she had long since withdrawn herself from him. But he did not want Barbara ever to feel the deadening load of hopelessness that could-and had, all through history-turned chaste women into willing concubines. Much as he loved her, he had no illusions that Barbara was either angel or saint; the Sabine women had stood no chance and neither would she. "Death before dishonor!" was a slogan that did not wear well. In time, it changed to happy cooperation.

He got out his bottle of Happiness, looked at it-put it back. He would never solve his problems that way.

Hugh made no effort to learn if Duke had gone to see Memtok. He got back to work at his endless task of buttering up Their Charity in every way available, whether by good bridge, moneymaking ideas, or simply translating. He no longer had any hope that the boss would eventually permit him to move Barbara and the twins into his apartment; old Ponse had seemed adamant on that. But favor at court could be useful, even indispensable, no matter what happened-and in the meantime it let him see Barbara occasionally.

He never gave up his purpose of escape. As the summer wore on he realized that the chances were slim of escaping- all four of them escaping, twins in arms-that year. Soon the household would move to the city, and so far as he knew the only possible time to escape was when they were near mountains. No matter. A year, two years, even longer, perhaps wait until the boys could walk. Hard enough even then, but nearly impossible with babies in arms. He must tell Barbara, with whispered urgency, the next time they were left alone even for a minute, what he had in mind-urge her to keep her chin up, and wait.

He didn't dare write it to her. Ponse could get it translated-other scholars somewhere understood English, even though Joe would never give him away. Would Grace? He hoped not, but couldn't guess. Probably Ponse knew all about those notes, had them translated every day, chuckled over them, and did not care.

Perhaps he could work out a code-something as simple as first word, first line, then second line, second word, and so on. Might risk it.

He had figured out one thing in their favor, an advantage that might overcome their lack of sophistication in this society. Runaways rarely succeeded simply because of their appearance. A white skin might be disguised-but servants averaged many inches shorter and many pounds lighter than the Chosen.

Both Barbara and Hugh were tail; they were big enough to pass in that respect for Chosen. Features? The Chosen were not uniform in feature; Hindu influence mixed with Negroid and with other things. His baldness was a problem, he would have to steal a wig. Or make one. But with stolen clothes, squirreled food, weapons of some sort (his two hands!), and makeup-they might be able to pass for "poor black trash" and take to the road.

If it wasn't too far. If the hounds did not get them. If they did not make some ridiculous bumble through ignorance. But servants, marked by their complexion, were not allowed to go one step outside the household, farm, ranch, or whatever was their lawful cage-without a pass from their patron.

Perhaps he could learn what a pass looked like, forge one. No, Barbara and he could not travel as servants on a forged pass for the very reason that made it dimly possible for them to disguise as Chosen: Their size was distinctive, they would be picked up on sight.

The more Hugh thought about it the more it seemed that he would have to wait at least until next summer.

If they were among the servants picked for the Summer Palace next year- If they both were- If all four were- He had not thought of that. Christ! Their little family might never be all under this one roof again! Perhaps they would have to run for it now, in the short time left before the move-run and take a chance on hounds, on bears, on those nasty little leopards. . . with two nursing babies to protect. God! Was ever a man faced with poorer chances for saving his family?

Yes. He himself-when he built that shelter.

Prepare every way he could. . . and pray for a miracle. He started saving food from meals served in his rooms, such sorts as would keep a while. He kept his eyes open to steal a knife- or anything that could be made into a knife. He kept what he was doing from Kitten's eyes.

Much sooner than he had hoped he got a chance to acquire makeup. A feast day always meant an orgy of Happiness in servants' hall; one came that featured amateur theatricals. Hugh was urged to clown the part of Lord Protector in a comic skit. He did not hesitate to do so, Memtok himself had pointed out that his size made him perfect for the part. Hugh roared through it, brandishing a quirt three times as big as Their Charity ever carried.

He was a dramatic success. He saw Ponse watching from the balcony from which Hugh had first seen Happiness issued, watching and laughing. So Hugh ad-libbed, calling out, "Hey, less noise in the balcony! Memtok! Tingle that critter!"

Their Charity laughed harder than ever, the servants were almost hysterical and, at bridge the following day, Ponse patted him and told him that he was the best Lord of Nonsense the pageant had ever had.

Result: one stolen package of pigment which needed only to be mixed with the plentiful deodorant cream to make him the exact shade of the Lord Protector; one wig which covered his baldness with black wavy hair. It was not the wig he had worn in the skit; he had turned that one back to the chief housekeeper, picking a time under Memtok's eyes and urging Memtok to try it on. No, it was a wig he had tried on out of several saved from year to year-and which had fitted him just as well. He tried it on, dropped it, kicked it into a corner, recovered it in private-and kept it under his robe for several days until it seemed certain that it hadn't been missed. It wound up under a file case in his outer office one night when he chose to work later than his clerks.

He was still looking for something he could grind into a knife.

He did not see Duke during the three weeks following their row. Sometimes Duke's translations came in, sometimes he skipped a day or two; Hugh let him get away with it. But when Hugh could not recall having seen any scrolls come through of the sort Duke was concerned with for a full week, Hugh decided to check up.

Hugh walked to the cubicle that was Duke's privilege for being a "researcher in history." He scratched on the door- no answer.

He scratched again, decided that Duke was sleeping, or not in; he slid the door up and looked in.

Duke was not asleep but he was out of this world. He was sprawled naked on his bunk in the most all-out Happiness jag Hugh had ever seen. Duke looked up when the door opened, giggled foolishly, made a gesture, and said, "Hiyah, y'ole bas'ard! How's tricks?"

Hugh stepped closer for a better look at what he thought he saw, and felt sick at his stomach. "Son, son!"

"Still crepe-hanging, Hughie? Old hooey Hugh, the fake fart!"

Gulping, Hugh started to back out, and backed almost into the Chief Veterinarian. The surgeon smiled and said, "Visiting my patient? He hardly needs it." He moved past Hugh with a muttered apology, leaned over Duke, peeled an eyelid back, examined him in other ways, said to him jovially, "You're doing fine, cousin. Let's give you another little treatment, then I'll send you in another big meal. How does that sound?"

"Jus' fine, Doe. Jus' dandy! You're m' frien'. Bes' frien' never had!"

The vet set a dial on a little instrument, pressed it against Duke's thigh, waited a moment, and came out. He smiled at Hugh. "Practically recovered. He'll dream a few hours now, wake up hungry, and not know any time has passed. Then we'll feed him and

give him another dose. A fine patient, he's raffled beautifully. Doesn't know what's happened-and by the time we're ready to taper him off, he won't be interested."

"Who ordered this?"

The surgeon looked surprised. "The Chief Domestic, of course. Why?"

"Why wasn't I told?"

"I don't know, better ask him. I got it as a routine order, we carried it out in the routine fashion. Sleeping powder in his evening meal, I mean, then surgery that night. Followed by post-surgical care and the usual massive dosage to keep him tranquil. It tends to make some of them a little nervous at first, we vary it to suit the patient. But, as you can see, this patient has taken it as easily as pulling a tooth. By the way, that bridge I installed in your mouth. Satisfactory?"

"What? Yes. Never mind that! I want to know-"

"May it please you, the Chief Domestic is the one to see. Now, if this one may be excused, I'm overdue to hold sick call. I merely stopped by to make sure my patient was happy."

Hugh went to his apartment and threw up. Then he went looking for Memtok.

Memtok received him into his office at once, invited him to sit down. Hugh had begun to value the Chief Domestic as a friend, or as the nearest thing he had to a friend. Memtok had formed a habit of dropping in on Hugh in the evenings occasionally and, despite the boss servant's vinegary approach to life and the vast difference in their backgrounds and values, Hugh found him shrewd and stimulating and well informed within his limits. Memtok seemed to have the loneliness that a ship's captain must endure; he seemed pleased to relax and enjoy friendship.

Since the other upper servants were correctly polite with the Chief Researcher rather than warm, Hugh, lonesome himself, had enjoyed Memtok's unbending and had thought of him as his friend. Until this- Hugh told Memtok bluntly, without protocol, what was on his mind. "Why did you do this?"

Memtok looked surprised. "Such a question! Such a very improper question. Because the Lord Protector ordered it."

"He did?"

"My dear cousin! Tempering is always by the lord's order. Oh, I recommend, to be sure. But orders for alterations must come from above. However, if it is any business of yours, in this case I made no recommendation. I was given the order, I had it carried out. All."

"Certainly it was my business! He works for me."

"Oh! But he had already been transferred before this was done. Else I would have made a point of telling you. Propriety, cousin, propriety in all things. I hold subordinates strictly accountable. So I never undercut them. Can't run a taut household if one does. Fair is fair."

"I wasn't told he was transferred. Don't you count that as undercutting?"

"Oh, but you were." The Chief Domestic glanced at the rack of pigeonholes backing his desk, searched briefly, pulled out a slip. "There it is." Hugh looked at it. DUTY ASSIGNMENT, CHANGE IN-ONE SERVANT, MALE (savage, rescued & adopted), known as Duke, description- Hugh skipped on down. -relieved of all duties in the Department of Ancient History and assigned to the personal service of Their Charity,

effective immediately. BILLETING & MESSING ASSIGNMENTS: Unchanged until further- "I never saw this!"

"It's my file copy. You got the original." Memtok pointed at the lower left corner. "Your deputy clerk's sign. It always pleases me when my executives can read and write, it makes things so much more orderly. With an ignoramus like the Chief Groundskeeper, one can tell him until one's throat is raw and later the stupid lout will claim that wasn't the way he heard it-yet a tingling improves his memory only for that day. Disheartening. One can't be forever tingling an upper servant, it doesn't work." Memtok sighed. "I'd recommend a change, if his assistant wasn't even stupider."

"Memtok, I never saw this."

"As may be. It was delivered, your deputy receipted for it. Look around your office. One bullock gets you three you'll find it. Perhaps you'd like me to tingle your deputy? Glad to."

"No, no." Memtok was almost certainly right, the order was probably on his own desk, unread. Hugh's department had grown to two or three dozen people; there seemed to be more every day. Most of them seemed to be button sorters, all of them wanted to take up his time. Hugh had long since told the earnest, fairly literate clerk who was his deputy that he was not to be bothered-otherwise Hugh would have accomplished no translating after the first week; Parkinson's Law had taken over. The clerk had obeyed and routine matters stacked up. Every week or so Hugh would go through the stack rapidly, shove it back at his deputy for file or burning or whatever they did with useless papers.

Probably the order transferring Hugh was in the current accumulation. If he had seen it in time- Too late, too late! He put his elbows on his knees and covered his face. Too late! Oh, my son!

Memtok touched his shoulder almost gently. "Cousin, take hold of yourself. Your prerogatives were not abridged. You see 'that, do you not?"

"Yes. Yes, I see it," Hugh mumbled through his hands.

"Then why are you overwrought?"

"He was-he is-my son."

"He is? Then why are you behaving as if he were your nephew?" Memtok used the specific form, meaning "your eldest sister's oldest son" and he was honestly puzzled by the savage's odd reaction. He could understand a mother being interested in her son-her oldest son, at least. But a father? Uncle! Memtok had sons, he was certain, throughout the household-"One-Shot Memtok" the former slutmaster used to call him. But he didn't know who they were and could not imagine wanting to know. Or caring.

"Because-" Hugh started. "Oh, forget it. You did your duty. Conceded."

"Well- You still seem upset. I'll send for a bottle of Happiness. I'll join you, this once."

"No. No, thank you."

"Oh, come, come! You need it. A tonic is excellent, it is excess that one must avoid."

"Thanks, Memtok, but I don't want it. Right now I must be sharp. I want to see Their Charity. Right away if possible. Will you arrange it for me?"

"I can't do that."

"Damn it, I know that you can. And I know he will see me if you ask him."

"Cousin, I didn't say that I would not; I said 'I can't.' Their Charity is not in residence."

"Oh." Then he asked to have word sent to Joe. But the Chief Domestic told him that the young Chosen had left with the Lord Protector. He promised to let Hugh know when either of them returned- Yes, at once, cousin.

Hugh skipped dinner, went to his rooms and brooded. He could not avoid tormenting himself with the thought that it was, in part at least, his own fault-no, no, not for failing to read every useless paper that came into his office the instant it arrived; no, that was sheer bad luck. Even if he checked his "junk mail" each morning, it probably would have been too late; the two orders had probably gone out at the same time.

What did anguish his soul was fear that he had pushed the first domino in that quarrel with Duke. He could have lied to the boy, told him that his mother was, to Hugh's certain knowledge, a maid-in-waiting or some such, to the Lord Protector's sister, safe inside the royal harem and never seen by a man. Pampered, living the life of Riley, and happy in it- and that other tale was just gossip servants talk to fill their idle minds.

Duke would have believed it because Duke would have wanted to believe it.

As it was- Perhaps Duke had gone to see Their Charity. Perhaps Memtok had arranged it, or perhaps Duke had simply tried to bull his way in and the row had reached Ponse's ears. It was more than possible, he saw now, that his advice to Duke to see the head man might well have resulted in a scene that would have caused Ponse to order the tempering as casually as he would order his air coach. All too likely- He tried to tell himself that no one is ever responsible for another person's actions. He believed it, he tried to live by it. But he found that cold wisdom no comfort.

At last he quit brooding, got writing materials, and got to work on a letter to Barbara. He had had not even a moment's chance to tell her his plans for them to escape, no chance to work up a code. But she must be ready at no notice; he must tell her, somehow.

Barbara knew German, he had a smattering from one high school year of it. He knew enough Russian to stumble through a simple conversation, Barbara had picked up a few words from him during their time in the wilderness-a game that they could share without giving Grace cause for jealousy.

He wrote a draft, then painfully translated 'the letter into a mishmash of German, Russian, colloquial English, beatnik jive, literary allusions, pig Latin, and special idioms. In the end he had a message that he was sure Barbara could puzzle out, but he was certain that no student of ancient languages could translate it into Language, even in the unlikely event that the scholar knew English, German, and Russian.

He was not afraid that it might be translated by anyone else. If Grace saw it, she would pronounce it gibberish; she knew no Russian, no German. Duke was off in a drug-ridden dream world. Joe might guess at the meaning-but he trusted Joe not to give him away. Nevertheless, he tried to conceal the meaning even from Joe, hashing the syntax and using deliberate misspellings.

The draft read:

My darling,

I have been planning our escape for some time. I do not know how I will manage it but I want you to be ready, day or night, to grab the twins and simply follow 'me. Steal

food ii you can, steal some stout shoes, steal a knife. We'll head for the mountains. I had intended to wait until next summer, let the boys grow some first. But something has happened to change my mind: Duke has been tempered. I don't know why and I'm too heartbroken to talk about it. But it could happen to me next. Worse than that- You remember Ponse's saying that he wanted to see our twins as matched footmen? Darling, studs do not serve in the Banquet Hall. Nor is there any other fate in store for them; they are both going to be tall. It must not happen!

And we can't wait. The capital city of the Protectorate is somewhere near where St. Louis used to be; we can't run all the way to the Rocky Mountains carrying our two boys-and we have no way of knowing (and no reason to expect) that all four of us will be sent to the Summer Palace next year.

Be brave. Don't touch any Happiness drug in any form from here on; our chance is likely to be a split-second one, with no warning.

I love you,
Hugh

Kitten came in; he told her to watch the show, not bother him. The child obeyed.

The final draft read:

Luba,

Ya bin smoking komplott seit Hector was weaned. The Count of Monte Cristo bit, dig? Kinder too klein machs nix-ya hawchoo! Goldiocks' troubles machs nix-as the fellow said, it's the only game in town. Good Girl Scouts always follow the Boy Scout motto. Speise, schuhen, messer-what Fagin taught Oliver, nicht? Da! Schnell is die herz von duh apparat; Berlin is too far from the Big Rock Candy and Eliza would never make the final curtain.

Em ander jahr, nyet. It takes two to tango and four to play bridge, all in em kainmer, or the trek is dreck. A house divided is for the vogelen, like doom. Mehr, ya haben schrecken. Mein Kronprinz now rules 'only the Duchy of Abelard. Page Christine Jorgenson, he answers-I kid you not. Spilt milk butters no parsnips after the barn is burned so weep no more, my lady-but falsetto is not the pitch for detski whose horoscope reads Gemini. Borjemoi! Old King Coal is a Merry Old Soul but he'll get no zwilhing keilneren from thee. Better a bonny bairn beards bären y begegn Karen-is ratification unanimous? Igday eemay?

Verb. Sap.: I don't drink, smoke, nor chew, nor run around with twists who do. Cloud nine is endsvffle for this bit. Write soon, even if it's only five dollars utbay swing the jive; the dump is bugged and the Gay Pay Oo is eager.
Forever-H.

Kitten was long asleep before Hugh finished composing this jargon. He tore the draft into bits and dropped it down the whirlpool, went to bed. After a long time haunted by Duke's giggling, foolish, happy, drug-blurred face he got up and broke his own injunction to Barbara, dosed his sorrows and his fears with bottled Happiness.

Chapter 17

Barbara's answer read:

Darling,

When you bid three no-trump, my answer is seven no-trump, without hesitation. Then it's a grand slam-or we go set and don't cry. Any time you can get four together we'll be ready to play.

- Love always-B.

Nothing else happened that day. Nor the next-or the next. Hugh doggedly dictated translations, his mind not on his work. He was very careful what he ate or drank, since he now knew the surgeon's humane way of sneaking up on a victim; he ate only from dishes Memtok had eaten from, tried to be crafty by never accepting a fruit or a roll that was closest to him when a servant offered him such, avoided drinking anything at the table-he drank only water which he himself had taken from the tap. He continued to have breakfast in his room, but he started passing up many foods in favor of unpeeled fruits and boiled eggs in the shell.

He knew that these precautions were futile-no Borgia would have found them difficult to outwit-and in any case, if orders came to temper him, they need only grab him after subduing him with a whip if it proved difficult to drug him. But he might have time to protest, to demand that he be taken before the Lord Protector.

As for whips- He resumed karate practice, alone in his rooms. A karate blow delivered fast enough would cause even a whip wielder to lose interest. There was no real hope behind any of it; he simply intended not to go peacefully. Duke had been right; it would have been better to have fought and died.

He made no attempt to see Duke.

He continued to hide food from his breakfast tray-sugar, salt, hard bread. He assumed that such food must be undrugged even though he ate none of it at the time, because it did not affect Kitten.

He had been going barefoot most of the time but wearing felt slippers for his daily exercise walks in the servants' garden. Now he complained to Memtok that the gravel hurt his feet through these silly slippers-didn't the household afford anything better?

He was given heavy leather sandals, wore them thereafter in the garden.

He cultivated the household's chief engineer, telling him that, in his youth, he had been in charge of construction for his former lord. The engineer was flattered, being not only one of the junior executive servants but also in the habit of hearing mostly complaints rather than friendly interest. Hugh sat with him after dinner and managed to appear knowledgeable largely by listening.

Hugh was invited to look around the plant, and spent a tiring morning crawling over pipes and looking at plans-the engineer could not write but could read a little and understood drawings. It would have been an interesting day in itself if Hugh had been free from worries; Hugh's background made engineering interesting to him. But he concentrated on trying to memorize every drawing he saw, match it in his mind with the

passageways and rooms he was taken through. He had a deadly serious purpose: Despite having lived most of a summer in this big building, he knew only small pieces of it inside and only a walled garden outside. He needed to know all of it; he needed to know every possible exit from servants' quarters, what lay behind the guarded door to sluts' quarters, and most particularly, where in that area Barbara and the twins lived.

He got as far as the meander door that led into the distaff side. The engineer hesitated when the guard suddenly became alert. He said, "Cousin Hugh, I'm sure it's all right for you to go in here, with me-but maybe we had better go up to the Chief Domestic's office and have him write you out a pass."

"Whatever you say, cousin."

"Well, there really isn't anything of interest in here. Just the usual appointments of a barracks-water, lights, air service, plumbing, baths, such things. All the interesting stuff, power plant, incinerator, air control, and so forth, is elsewhere. And you know how the boss is-likely to fret over any variation from routine. If it's all the same to you, I'll make my inspection in there later."

"However you want to arrange things," Hugh answered with a suggestion of affronted dignity.

"Well . . . everybody knows you're not one of those disgusting young studs." The engineer looked embarrassed. "Tell you what- You tell me flatly that you want to see everything

in my department that is-and I'll trot up to Memtok and tell him you said so. He knows-Uncle! we all know- that you enjoy the favor of Their Charity. You understand me? I don't mean to presume. Memtok will write out a pass and I'll be in the clear and so will the guard and the head guard. You wait here and be comfortable. I'll hurry."

"Don't bother. There's nothing in there I want to see," Hugh lied. "You've seen one bath, you've seen 'em all, I always say."

The engineer smiled in relief. "That's 'a good one, I'll remember that. 'You've seen one bath, you've seen 'em all!' Ha ha! Well, we've still got the carpentry shop and the metal shop."

Hugh went on with him, arm in arm and jovial, while fuming inside. So close! Yet letting Memtok suspect that he had any interest in sluts' quarters was the last thing he wanted.

But the morning was well spent. Not only did Hugh acquire a burglar's insight as to weak points of the building (that delivery door to 'the unloading dock; if it was merely locked at night, it should be possible to break out) but also he picked up two prizes.

The first was a piece of spring steel about eight inches long. Hugh palmed it from some scrap in the metal shop; it wound up taped to his arm, after an unneeded plumbing call, for he had gone prepared to steal.

The second was even more of a prize: a printed drawing of the lowest level, with engineering installations shown boldly- but with every door and passage marked- including sluts' quarters.

Hugh had admired it. "Uncle, but that's a beautiful drawing! Your own work?"

The engineer shyly admitted that it was. Based on architect's plans, you understand-but changes keep having to be added.

"Beautiful!" Hugh repeated. "It's a shame there isn't more than one copy."

"Oh, plenty of copies, they wear out. Would you like one?"

"I would treasure it. Especially if the artist would inscribe it." When 'the man hesitated, Hugh moved in fast and said, "May I suggest a wording? Here, I'll write it out and you copy it."

Hugh walked away with the print, inscribed: To my dear Cousin Hugh, a fellow craftsman who appreciates beautiful work.

That night he showed it to Kitten. The child was awestruck. She had no concept of maps and was fascinated by the idea that it was possible to put down, just on a piece of paper, the long passages and twisty turns of her world. Hugh showed her how one went from his quarters to the ramp leading up to the executive servants' dining room, where the servants' main hall was, how the passage outside led, by two turns, to the garden. She confirmed the routes slowly, frowning in unaccustomed mental effort.

"You must live somewhere over here, Kitten. That is sluts' quarters."

"It is?"

"Yes. See if you can find where you live. I won't show you, you know how. I'll just sit back."

"Oh. Uncle help me! Let me see. First, I have to come down this ramp-" She paused to think while Hugh kept his face impassive. She had confirmed what he had almost stopped suspecting; the child was a planted spy. "Then . . . this is the door?"

"That's right."

"Then I walk straight ahead past the slutmaster's office, clear to the end, and I turn, and . . . I must live right there!" She clapped her hands and giggled.

"Your billet is across from your mess hail?"

"Yes."

"Then you got it right, first time! That's wonderful! Now let's see what else you can figure out."

For the next quarter hour she took him on a tour of sluts' quarters-junior and senior common rooms, messes, virgins' dormitory, bedwarmers' sleep room, nursery, lying-in, children's hall, service stalls, baths, playground door, garden door, offices, senior matron's apartment, everything-and Hugh learned that Barbara was no longer billeted in lying-in. Kitten volunteered it.

"Barbra-you know, the savage slut you write to-she used to be there, and now she's right there."

"How can you tell? Those rooms all look alike."

"I can tell. It's the second one of the four-mother rooms on this side, when you walk away from the baths."

Hugh noted with deep interest that a maintenance tunnel ran under the baths, with an access manhole in the passage Barbara's room was on-and with even deeper interest that this seemed to connect with another that ran clear across the building. Could it be that here was a wide-open unguarded route between all three main areas of servants' land? Surely not, as the lines seemed to show that any stud with initiative need only crawl a hundred yards to let himself into sluts' quarters.

Yet it might be true-for how would any stud know where those tunnels led?

And why would a stud risk it if he guessed? With the ratio of intact males to breeding sluts about that of bulls to cows on a cattle ranch. And could thumbless hands handle the fastenings?

For that matter, could those trap doors be opened from below?

"You're a fast learner, Kitten. Now try a part you don't know as well. Figure out, on the drawing, how to get from our rooms here to my offices. And if you solve that one, here's a harder one. What turns you would take and what ramp you would use if I told you to take a message to the Chief Domestic?"

She solved the first one after puzzling, the second she traced without hesitation.

At lunch next day, with Memtok at his elbow, Hugh called down the table to the engineer. "Pipes, old cousin! That beautiful drawing you gave me yesterday- Do you suppose one of your woodworkers could frame it for me? I'd like to hang it over my desk where people can admire it."

The engineer flushed and grinned widely. "Certainly, Cousin Hugh! How about a nice piece of mahogany?"

"Perfect." Hugh turned to his left. "Cousin Memtok, our cousin is wasted on pipes and plumbing; he's an artist. As soon as I have it hung, you must stop by and see what I mean."

"Glad to, cousin. When I find time. If I find time."

More than a week passed with no word about Their Charity, nor about Joe-a week of no bridge, and no Barbara. At last, one day at lunch, Memtok said, "By the way, I had been meaning to tell you, the young Chosen Joseph has returned. Do you still want to see him?"

"Certainly. Is Their Charity also in residence?"

"No. Their Gracious sister believes that he may not return until after we go home. Ah, you must see that, cousin. Not a cottage like this. Great doings night and day-and this humble servant wifi be lucky to get three meals in peace all winter. Run, run, run, worry, worry, worry, problems popping right and left," he said with unctuous satisfaction. "Be glad you're a scholar."

Word came a couple of hours later that Joe expected Hugh. He knew his way, having been to Joe's guest rooms to help teach bridge to Chosen, so he went up alone.

Joe greeted him enthusiastically. "Come in, Hugh! Find a seat. No protocol, nobody here but us chickens. Wait till you hear what I've done. Boy, have I been busy! One shop ready to go as a pilot plant before Their Charity finished the wangling for the protection, all on the Q.T. But so organized that we were in production the day protection was granted. Not bad terms, either. Their Mercy takes half, Their Charity hangs onto half and floats the financing, and out of Their Charity's half I'm cut in for ten percent and manage the company. Of course as we branch out and into other lines-the whole thing is called 'Inspired Games' and the charter is written to cover almost any fun you can have out of bed-as we branch out, I'll need help and that's a problem; I'm scared old Ponse is going to want to put some of his dull-witted relatives in. Hope not, there's no place for nepotism when you're trying to hold down costs. Probably best to train servants for it-cheaper in the long run, with the right sort. How about you, Hugh? Do you think you could swing the management of a factory? It's a big job; I've got a hundred and seven people working already."

"I don't see why not. I've employed three times that many and never missed a payroll-and I once bossed two thousand skilled trades in the Seabees. But, Joe, I came up here with something on my mind."

"Uh, all right, spill it. Then I want to show you the plans."

"Joe, you know about Duke?"

"What about Duke?"

"Tempered. Didn't you know?"

"Oh. Yes, I knew. Happened just about as I left. He's not hurt, is he? Complications?"

"'Hurt?' Joe, he was tempered. You act as if he had merely had a tooth pulled. You knew? Didn't you try to stop it?"

"In the name of God, why not?"

"Let me finish, can't you? I don't recall that you tried to stop it, either."

"I never had the chance. I never knew."

"Neither did I. That's what I've been trying to tell you, but you keep jumping down my throat. I learned about it after it happened."

"Oh. Sorry. I thought you meant you just stood by and let it happen."

"Well, I didn't. Don't know what I could have done if I had known. Maybe asked Ponse to call you in first, I suppose. Wouldn't have done any good, so I guess we were both better off not having to fret about it. Maybe all for the best. Now about our plans- If you'll look at this schematic layout, you'll see-"

"Joe!"

"Huh?"

"Can't you see that I'm in no shape to talk about playingcard factories? Duke is my son."

Joe folded up his plans. "I'm sorry, Hugh. Let's talk, if it will make you feel better. Get it off your chest-I suppose you do feel bad about it. Looking at it from one angle."

Joe listened, Hugh talked. Presently Joe shook his head. "Hugh, I can set your mind at rest on one point. Duke never did see the Lord Protector. So your advice to Duke-good advice, I think-could not have had anything to do with his being tempered."

"I hope you're right. I'd feel like cutting my throat if I knew it was my fault."

"It's not, so quit fretting."

"I'll try. Joe, whatever possessed Ponse to do it? He knew how we felt about it, from that time it almost happened through a misunderstanding. So why would he? I thought he was my friend."

Joe looked embarrassed. "You really want to know?"

"I've got to know."

"Well.. . you're bound to find out. Grace did it."

"What? Joe, you must be mistaken. Sure, Grace has her faults. But she wouldn't have that done-to her own son."

"Well, no, not exactly. I doubt if she knew what it was until after it was done. But just the same, she set it off. She's been wheedling Ponse almost from the day we got here that she wanted her Dukie with her. She was lonesome. 'Ponsie, I'm lonesome. Ponsie, you're being mean to Gracie. Ponsie, I'm going to tickle you until you say Yes. Ponsie, why won't you?'-all in that baby whine she uses. Hugh, I guess you didn't see much of it-"

"None of it."

"I would have wrung her neck. Ponse just ignored her, except when she tickled him. Then he would laugh and they would roll on the floor and he would tell her to shut up, and make her sit quiet for a while. Treated her just like one of the cats. Honest, I don't

think he ever- I mean, it doesn't seem likely, from what I saw, that he was interested in her as a-"

"And I'm not interested. Didn't anybody tell Grace what it would entail, for her to have her son with her?"

"Hugh, I don't think so. It would never occur to Ponse that explanation was required . . . and certainly I never discussed it with her. She doesn't like me, I take up too much of her Ponsie's time." Joe wrinkled his nose. "So I doubt if she knew. Of course she should have figured it out; anybody else would have. But, excuse me, since she's your wife, but I'm not sure she's bright enough."

"And hopped up on Happiness, too-every time I caught sight of her. No, she's not bright. But she's not my wife, either. Barbara is my wife."

"Well. . . legally speaking, a servant can't have a wife."

"I wasn't speaking legally, I was speaking the truth. But even though Grace is no longer my wife, I'm somewhat comforted to know that she probably didn't know what it would cost Duke."

Joe looked thoughtful. "Hugh, I don't think she did but I don't think she really cares, either. . . and I'm not sure that you can properly say that it cost Duke anything."

"You might explain. Perhaps I'm dense."

"Well, if Grace minds that Duke has been tempered, she doesn't show it. She's pleased as punch. And he doesn't seem to mind."

"You've seen them? Since?"

"Oh, yes. I had breakfast with Their Charity yesterday morning. They were there."

"I thought Ponse was away?"

"He was back and now he's gone out to the West Coast. Business. We're really tearing into it. He was here only a couple of days. But he had this birthday present for Grace. Duke, I mean. Yes, I know it wasn't her birthday, and anyhow birthdays aren't anything nowadays; it's nameday that counts. But she told Ponse she was about to have a birthday and kept wheedling hiin-.-and you know Ponse, indulgent with animals and kids. So he set it up as a surprise for her. The minute he was back, he made a present of Duke to her. Shucks, they've even got a room off Ponse's private quarters; neither of them sleeps belowstairs, they live up here."

"Okay, I don't care where they sleep. You were telling me how Grace felt about it. And Duke."

"Oh, yes. Can't say just when she found out what had been done to Duke, all I can say is that she is so happy about it all that she was even cordial with me-telling me what a dear Ponsie was to arrange it and doesn't Dukie look just grand? In his new clothes? Stuff like that. She's got him dressed in the fancy livery the servants wear up here, not a robe like that you're wearing. She's even put jewelry on him. Ponse doesn't mind. He's an outright gift, a servant's servant. I don't think he does a lick of work, he's just her pet. And she loves it that way."

"But how about Duke?"

"That's what I've been telling you, Hugh; Duke hasn't lost by it. He's snug as a bug in a rug and he knows it. He was almost patronizing to me. You might have thought that I was the one wearing livery. With Grace in solid with the big boss and with her wound around his finger, Duke thinks he's got it made. Well, he has, Hugh. And I didn't mind his manner; I could see he was hopped on this tranquilizer you servants use."

"You call it 'got it made' when a man is grabbed and drugged and tempered and then kept drugged so that he doesn't care? Joe, I'm shocked."

"Certainly I call it that! Hugh, put your prejudices aside and look at it rationally. Duke is happy. If you don't believe it, let me take you in there and you talk to him. Talk to both of them. See for yourself."

"No, I don't think I could stomach it. I'll concede that Duke is happy. I'm well aware that if you feed a man enough of that Happiness drug, he'll be happy as a lark even if you cut off his arms and legs and then start on his head. But you can be that sort of 'happy' on morphine. Or heroin. Or opium. That doesn't make it a good thing. It's a tragedy."

"Oh, don't be melodramatic, Hugh. These things are all relative. Duke was certain to be tempered eventually. It's not lawful for a servant as big as he is to be kept for stud, I'm sure you know that. So what difference does it make whether it's done last week, or next year, or when Ponse dies? The only difference is that he is happy in a life of luxury, instead of hard manual labor in a mine, or a rice swamp, or such. He doesn't know anything useful, he could never hope to rise very high. High for a servant, I mean."

"Joe, do you know what you sound like? Like some whitesupremacy apologist telling how well off the darkies used to be, a-sittin' outside their cabins, a-strummin' their banjoes, and singin' spirituals."

Joe blinked. "I could resent that."

Hugh Farnham was angry and feeling reckless. "Go ahead and resent it! I can't stop you. You're a Chosen, I'm a servant. Can I fetch your white sheet for you, Massah? What time does the Klan meet?"

"Shut up!"

Hugh Farnham shut up. Joe went on quietly, "I won't bandy words with you. I suppose it does look that way to you. If so, do you expect me to weep? The shoe is on the other foot, that's all-and high time. I used to be a servant, now I'm a respected businessman-with a good chance of becoming a nephew by marriage of some noble family. Do you think I would swap back, even if I could? For Duke? Not for anybody, I'm no hypocrite. I was a servant, now you are one. What are you beefing about?"

"Joe, you were a decently treated employee. You were not a slave."

The younger man's eyes suddenly became opaque and his features took on an ebony hardness Hugh had never seen in him before. "Hugh," he said softly, "have you ever made a bus trip through Alabama? As a 'nigger'?"

"Then shut up. You don't know what you are talking about." He went on, "The subject is closed and now we'll talk business. I want you to see what I've done and am planning to do. This games notion is the best idea I ever had."

Hugh did not argue whose idea it had been; he listened while the young man went on with eager enthusiasm. At last Joe put down his pen and sat back. "What do you think of it? Any suggestions? You made some useful suggestions when I proposed it to Ponse-keep on being useful and there will be a good place in it for you."

Hugh hesitated. It seemed to him that Joe's plans were too ambitious for a market that was only a potential and a demand that had yet to be created. But all he said was, "It might be worth while to package with each deck, no extra charge, a rule book."

"Oh, no, we'll sell those separately. Make money on them."

"I didn't mean a complete Hoyle. Just a pamphlet with some of the simpler games. Cribbage. A couple of solitaire games. One or two others. Do that and the customers start enjoying them at once. It should lead to more sales."

"Hmm- I'll think about it." Joe folded up his papers, set them aside. "Hugh, you got so shirty a while ago that I didn't tell you one thing I have in mind."

"Yes?"

"Ponse is a grand old man, but he isn't going to live forever. I plan to have my own affairs separate from his by then so that I'll be financially independent. Trade around interests somehow, untangle it. I don't need to tell you that I'm not anxious to have Mrika as my boss-and I didn't tell you, so don't repeat it. But I'll manage it, I'm looking out for number one." He grinned. "And when Mrika is Lord Protector I won't be here. I'll have a household of my own, a modest one-and I'll need servants. Guess whom I plan to adopt when I staff it."

"I couldn't."

"Not you-although you may very well be a business servant to me, if it turns out you really can manage a job. No, I had in mind adopting Grace and Duke."

"Huh?"

"Surprised? Mrika won't want them, that's certain. He despises Grace because of her influence over his uncle, and it's a sure thing he's not going to like Duke any better. Neither of them is trained and it shouldn't be expensive to adopt them if I don't appear too eager. But they would be useful to me. For one thing, since they speak English, I'd be able to talk to them in a language nobody else knows, and that could be an advantage, especially when other servants are around. But best of all- Well, the food here is good but sometimes I get a longing for some plain old American cooking, and Grace is a good cook when she wants to be. So I'll make her a cook. Duke can't cook but he can learn to wait on table and answer the door and such. Houseboy, in other words. How about that?"

Hugh said slowly, "Joe, you don't want them because Grace can cook."

Joe grinned unashamedly. "No, not entirely. I think Duke would look real good as my houseboy. And Grace as my cook. Tit for tat. Oh, I'll treat them decently, Hugh, don't you worry. They work hard and behave themselves and they won't get tingled. However, I don't doubt but what it will take a few tingles before they get the idea." He twitched his quirt. "And I won't say I won't enjoy teaching them. I owe them a little. Three years, Hugh. Three years of Grace's endless demands, never satisfied with anything-and three years of being treated with patronizing contempt by Duke whenever he was around."

Hugh said nothing. Joe said, "Well? What do you think of my plan?"

"I thought better of you, Joe. I thought you were a gentleman. It seems I was wrong."

"So?" Joe barely twitched his quirt. "Boy, we excuse you. All."

Chapter 18

Hugh came away from Joe's rooms feeling utterly discouraged. He knew that he had been foolish-no, criminally careless !-in letting Joe get his goat. He needed Joe. Until he had Barbara and the twins safely hidden in the mountains, he needed every possible source of favor. Joe, Memtok, Ponse, anyone he could find-and probably Joe most of all. Joe was a Chosen, Joe could go anywhere, tell him things he didn't know, give him things he could not steal. He had even considered, as a last resort, asking Joe to help them to escape.

Not now! Idiot! Utter fool! To risk Barbara and the boys just because you can't hold your bloody temper.

It seemed to him that things were as bad as they could get-and part of it his own folly.

He did not stand around moping; he looked up Memtok. It had become more urgent than ever to set up some way to communicate with Barbara secretly-and that meant that he had to talk to her-and that meant at least one bridge game in the Lord Protector's lounge and a snatch of talk even if he had to talk English in front of Ponse. He had to force matters.

Hugh found the Chief Domestic leaving his office. "Cousin Memtok, could you spare me a word?"

Memtok's habitual frown barely relaxed. "Certainly, cousin. But walk along with me, will you? Trouble, trouble, trouble- you would think that a department head could run his department without someone to wipe his nose, wouldn't you? You'd be wrong. The freezer flunky complains to the leading butcher and he complains to the chef, and it's a maintenance matter, and you would think that Gnou would take it up directly with engineering and between them they would settle it. Oh, no! They both come to me with their troubles. You know something about construction, don't you?"

"Yes," Hugh admitted, "but I'm not up-to-date in the subject. It has been some years." (About two thousand, my friend! But we won't speak of that.)

"Construction is construction. Come along, give me the benefit of your advice."

(And find out that I'm faking. Chum, I'll double-talk you to death.) "Certainly. If this humble one's opinion is worth anything."

"Damned chill room. It's been a headache every summer. I'm glad we'll be back in the Palace soon."

"Has the date been set? May one ask?"

"One may. A week from tomorrow. So it's time to think about packing up your department and being ready to move."

Hugh tried to keep his face calm and his voice steady. "So soon?"

"Why are you looking worried? A few files, some office equipment. Have you any idea how many thousands of items 1 have on inventory? And how much gets stolen, or lost, or damaged simply because you can't trust any of these fools? Uncle!"

"It must be terribly wearing," agreed Hugh. "But that brings to mind something. I petitioned you to let me know when Their Charity was next in residence. I learned from the young Chosen, Joseph, that Their Charity returned a day or two ago and is now gone again."

"Are you criticizing?"

"Uncle forbid! I was just asking."

"It is true that Their Charity was physically present for a short time. But he was not officially in residence. Not in the best of health, it seemed to me-Uncle protect him."

"Uncle protect him well!" Hugh answered sincerely. "Under the circumstances naturally you did not ask him to grant me an audience. But could I ask of you the small favor, next time-"

"We'll talk later. Let's see what these two helpless ones have to offer." Head Chef Gnou and the Chief Engineer met them at the entrance to Gnou's domain, they went on through the kitchen, through the butcher shop, and into the cold room. But they lingered in the butcher shop, Memtok impatient, while parka-like garments were fetched, the Chief Domestic having refused the ones offered on the legitimate grounds that they were soiled.

The butcher shop was crowded with live helpers and dead carcasses-birds, beeves, fish, anything. Hugh reflected that thirty-eight Chosen and four hundred and fifty servants ate a lot of meat. He found the place mildly depressing even though he himself had cleaned and cut and trimmed many an animal.

But only his habitual tight control in the presence of Memtok and his "cousins" in service kept him from showing shock at something he saw on the floor, trimmed from a carcass almost cut up on one block.

It was a dainty, plump, very feminine hand.

Hugh felt dizzy, there was a roaring in his ears. He blinked. Itwas still there. A hand much like Kitten's- He breathed carefully, controlled the retching within him, kept his back turned until he had command over himself. There had suddenly flooded over him the truth behind certain incongruities, certain idioms, some pointless jokes.

Gnou was making nervous conversation while his boss waited. He moved to the chopping block, unintentionally kicking the dainty little hand underneath into a pile of scraps and said, "Here's one you won't have to bother to taste, Chief Domestic. Unless the old one returns unexpectedly."

"I always bother to taste," Memtok said coldly. "Their Charity expects his table to be perfect whether he is in residence or not."

"Oh, yes, surely," Gnou agreed. "That's what I always tell my cooks. But- Well, this very roast illustrates one of my problems. Too fat. You'll feel that it's greasy-and so it wifi be. But that's what comes of using sluts. Now, in my opinion, you can't find a nicer piece of meat, marbled but firm, than a buck tempered not older than six, then hung at twice that age."

"No one asked your opinion," Memtok answered. "Their Charity's opinion is the only one that counts. They think that sluts are more tender."

"Oh, I agree, I agree! No offense intended."

"And none taken. In fact I agree with your opinion. I was simply making clear that your opinion-and mine in this matter-is irrelevant. I see they've fetched them. Did they stop to make them?"

The party put on heavy garments, went on inside. The engineer had said nothing up to then, effacing himself other than a nod and a grin to Hugh. Now he explained the problem, a cranky one of refrigeration. Hugh tried to keep his eyes on it, rather than on the contents of the meat storage room.

Most of the meat was beef and fowl. But one long row of hooks down the center held what he knew he would find- human carcasses, gutted and cleaned and frozen,

hanging head down, save that the heads were missing. Young sluts and bucks, he could see, but whether the bucks were tempered or not was no longer evident. He gulped and thanked his unlucky stars that that pathetic little hand had given him warning, at least saved him from fainting.

"Well, Cousin Hugh, what do you think?"

"Why, I agree with Pipes."

"That the problem can't be solved?"

"No, no." Hugh had not listened. "His reasoning is correct and he implied the answer. As he says, the problem can't be solved-now. The thing to do is not to try to patch it up, now. Wait a week. Tear it out. Put in new equipment."

Memtok looked sour. "Expensive."

"But cheaper in the long run. Good engineering isn't accomplished by grudging a few bullocks. Isn't that right, Pipes?"

The engineer nodded vigorously. "Just what I always say, Cousin Hugh! You're absolutely right."

Memtok still frowned. "Well- Prepare an estimate. Show it to Cousin Hugh before you bring it to me."

"Yes, sir!"

Memtok paused on the way out and patted the loin of a stripling buck carcass. "That's what I would call a nice piece of meat. Eh, Hugh?"

"Beautiful," Hugh agreed with a straight face. "Your nephew, perhaps? Or just a son?"

There was frozen silence. Nobody moved except that Memtok seemed to grow taller. He raised his whip of authority most slightly, no more than tightening his thumbless grip.

Then he grimaced and gave a dry chuckle. "Cousin Hugh, your well-known wit will be the death of me yet. That's a good one. Gnou, remind me to tell that this evening."

The Chef agreed and chuckled, the engineer roared. Memtok gave his cold little laugh again. "I'm afraid I can't claim the honor, Hugh. All of these critters are ranch bred, not one of them is a cousin of ours. Yes, I know how it is in some households, but Their Charity considers it unspeakably vulgar to serve a house servant, even in cases of accidental death-.- And besides, it makes the servants restless."

"Commendable."

"Yes. It is gratifying to serve one who is a stickler for propriety. Enough, enough, time is wasting. Walk back with me, Hugh."

Once they were clear of the rest Memtok said, "You were saying?"

"Excuse me?"

"Come, come, you're absentminded today. Something about Their Charity not being in residence."

"Oh, yes. Memtok, could you, as a special favor to me, let me know the minute Their Charity returns? Whether officially in residence or not? Not petition anything for me. Just let me know." Damn it, with time pouring away like life through a severed artery his only course might be a belly-scraping apology to Joe, then get Joe to intercede.

"No," said Memtok. "No, I don't think I can."

"I beg your pardon? Has this one offended you?"

"You mean that witticism? Heaven, no! Some might find it vulgar and one bullock gets you three that if you had told it in sluts' quarters some of them would have fainted. But if there is one thing I pride myself on, Hugh, it's my sense of humor- and any day I can't see a joke simply because I am the butt of it, I'll petition to turn in my whip. No, it was simply my turn to have a little joke at your expense. I said, 'I don't think I can.' That is a statement of two meanings-a double-meaning joke, follow me? I don't think I can tell you when Their Charity returns because he has sent word to me that he is not returning. So you'll see him next at the Palace . . . and I promise I'll let you know when he's in residence." The Chief Domestic dug him in the ribs. "I wish you had seen your own face. My joke wasn't nearly as sharp as yours. But your jaw dropped. Very comical."

Hugh excused himself, went to his rooms, took an extra bath, a most thorough one, then simply thought until dinnertime. He braced himself for the ordeal of dinner with a carefully measured dose of Happiness-not enough to affect him later, strong enough to carry him through dinner, now that he knew why "pork" appeared so often on the menu of the Chosen. He suspected that the pork served to servants was really pork. But he intended to eat no more bacon nevertheless. Nor ham, nor pork chops, nor sausage. In fact he might turn vegetarian-at least until they were free in the mountains and it was eat game or starve.

But with a shot of Happiness inside him he was able to smile when Memtok tasted the roast for upstairs and to say, "Greasy?"

"Worse than usual. Taste it."

"No, thanks. I knew it would be. I would cook up better than that-though no doubt I would be terribly stringy. And tough. Though perhaps Cousin Gnou could tenderize me."

Memtok laughed until he choked. "Oh, Hugh, don't ever be that funny while I'm swallowing! You'll kill me yet."

"This one hopes not." Hugh toyed with the beef on his plate, pushed it aside and ate a few nuts.

He was very busy that evening, writing long after Kitten was asleep. It had become utterly necessary to reach Barbara secretly, yet his only means was the insecure route through Kitten. The problem was to write to Barbara in a code that only she could read, and which she would see as a code without having been warned and without the code being explained to her-and yet one which was safe from others. But the double-talk mixture he had last sent her would not do; he was now going to have to give her detailed instructions, ones where it really mattered if she missed a word or failed to guess a concealed meaning.

His last draft was:

Darling,

If you were here, I would love a literary gabfest, a good

one. You know what I mean, I am sure. Let's consider Edgar Allan Poe, for example. Can you recall how I claimed that Poe was the best

writer both to read and to reread of all the mystery writers before or since, and that this was true because he never could be milked

dry on one reading? The answer or answers in The Gold Bug, or certainly that little gem The Murders in the Rue Morgue, or take The Case of
the Purloined Letter, or any of them; same rule will apply to
them all, when you consider the very subtle way he always had of
slanting his meaning so that one reaches a full period in his sentences only after much thought. Poe is grand fun and well worth study. Let's have our old literary talks by letter. How about Mark Twain next? Tired-must go to bed!

Love- Since Hugh had never discussed Edgar Allan Poe with Barbara at any time, he was certain that she would study the note for a hidden message. The only question was whether or not she would find it. He wanted her to read it as:

"If

you
can
read
this
answer
the
same
way
period"

Having done his best he put it aside, first disposing of all trial work, then prepared to do something else much more risky. At that point he would have given his chances of immortal bliss, plus 10 percent, for a flashlight, then settled for a candle. His rooms were lighted, brilliantly or softly as he wished, by glowing translucent spheres set in the upper corners. Hugh did not know what they were save that they were not any sort of light he had ever known. They gave off no heat, seemed not to require wiring, and were controlled by little cranks.

A similar light, the size of a golf ball, was mounted on his scroll reader. It was controlled by twisting it; he had decided tentatively that twisting these spheres polarized them in some way.

He tried to dismount the scroll reader light.

He finally got it loose by breaking the upper frame. It was now a featureless, brilliantly shining ball and nothing he could do would dim it-which was almost as embarrassing as no light at all.

He found that he could conceal it in an armpit under his robe. There was still a glow but not much.

He made sure that Kitten was asleep, turned out all lights, raised his corridor door, looked out. The passageway was lighted by a standing light at an intersection fifty yards away. Regrettably he had to go that way. He had expected no lights at this hour.

He felt his "knife" taped to his left arm-not much of a knife, but patient whetting with a rock picked up from a garden path had put an edge on it, and tape had made a firm grip. It needed hours more work and he could work on it only after Kitten was asleep or in time stolen from working hours. But it felt good to have it there and it was the only knife, chisel, screwdriver, or burglar's jimmy that he had.

The manhole to the engineering service tunnels lay in the passage to the right after he had to pass the lighted intersection. Any manhole would do but that one was on the route to the veterinary's quarters; if caught outside his rooms but otherwise without cream on his lip, he planned to plead a sudden stomachache.

The manhole cover swung back easily on a hinge, it was fastened by a clasp that needed only turning to free it. The floor of the tunnel, glimpsed with his shiny sphere, lay four feet below the corridor floor. He started to let himself down and ran into his first trouble.

These manholes and tunnels had been intended for men a foot shorter and fifty pounds lighter than Hugh Farnham, and proportionately smaller in shoulders, hips, hands-and-knees height, and so forth.

But he could make it. He had to.

He wondered how he would make it, crawling and carrying at least one baby. But that he had to do, too. So he would.

He almost trapped himself. Barely in time he found that the underside of the steel door was smooth, no handle, and that it latched automatically by a spring catch.

That settled why no one worried that the studs might gain unplanned access to sluts. But it also settled something else. Hugh had considered snatching this very chance, if he found things quiet at the other end: Wake Barbara, bring all four of them back via the tunnel-then outside and away, by any of a dozen weak points, away and off to the mountains on foot, reach them before light, find some stream and ford it endwise to throw off hounds. Go, go, go! With almost no food, with nothing but a makeshift knife, with no equipment, a "nightshirt" for clothing, and no hope of anything better. Go! And save his family, or die with them. But die free!

Perhaps someday his twin sons, wiser in the new ways than himself and toughened by a life fighting nature, could lead an uprising against this foul thing. But all he planned to do, all he could hope for, was get them free, keep them free, alive and free and ungelded, until they were grown and strong.

Or die.

Such was still his plan. He wasted not a moment sorrowing over that spring catch. It merely meant that he must communicate with Barbara, set a time with her, because she would have to open the hatch at the far end. Tonight he could only reconnoiter.

He found that tape from his knife handle would hold the spring catch back. He tested it from above; the lid could now be swung back without turning the clasp.

But his wild instincts warned him. The tape might not hold until he was back. He might be trapped inside.

He spent a sweating half hour working on that spring catch, using knife and fingers and holding the light ball in his teeth.

At last he managed to get at and break the spring. He removed the catch entirely. The manhole, closed, now looked normal, but it could be opened from underneath with just a push.

Only then did he let himself down inside and close it over him.

He started out on knees and elbows with the light in his mouth, and stopped almost at once. The damned skirt of his robe kept him from crawling! He tried bunching it around his waist. It slid down.

He inched back to the manhole shaft, took the pesky garment off entirely, left it under the manhole, crawled away without it, naked save for the knife strapped to his arm and the light in his teeth. He then made fair progress, although never able to get fully on hands and knees. His elbows had to be bent, his thighs he could not bring erect, and there were places where valves and fittings of the pipes he crawled past forced him almost to his belly.

Nor could he tell how far he was going. However, there were joints in the tunnel about every thirty feet; he counted them and tried to match them in his mind with the engineering drawing. Pass under two manholes . . . sharp left turn into another tunnel at next manhole . . . crawl about a hundred and fifty feet and under one manhole- Something more than an hour later he was under a manhole which had to be the one closest to Barbara.

If he had not lost himself in the bowels of the palace- If he had correctly remembered that complex drawing- If the drawing was up to date- (Had two thousand years made any difference in the lag between engineering changes and revisions of prints to match?) If Kitten knew what she was talking about in locating Barbara's billet by a method so novel to her- If it was still Barbara's billet- He crouched in the awkward space and tried to press his ear against the shaft's cover.

He heard a baby cry.

About ten minutes later he heard hushed female voices. They approached, passed over him, and someone stepped on the lid.

Hugh unkinked himself, prepared to return. The space was so tight that the obvious way was to back up the way he had come, so he found himself trying to crawl backward through the tunnel.

That worked so poorly that he came back to the shaft and, with contortions and loss of skin, got turned around.

What seemed hours later he was convinced that he was lost. He began to wonder which was the more likely: Would he starve or die of thirst? Or would some repairman get the shock of his life by finding him?

But he kept on crawling.

His hands found his robe before his eyes saw it. Five minutes later he was in it; seven minutes later (he stopped to listen) he was up and out and had the lid closed. He forced himself not to run back to his rooms.

Kitten was awake.

He wasn't aware of it until she followed him into the bath. Then she was saying with wide-eyed horror, "Oh, dear! Your poor knees! And your elbows, too."

"I stumbled and fell down."

She didn't argue it, she simply insisted on bathing him and salving and taping the raw places. When she started to pick up his dirty robe, he told her sharply to go to bed. He did not mind her touching his robe but his knife had been on top of it and only by maneuvering had he managed to keep himself between her and it long enough to flip a fold of cloth over the weapon.

Kitten went silently to bed. Hugh hid the knife in its usual place (much too high for Kitten), then went into his living room and found the child crying. He petted her, soothed her, said he had not meant to sound harsh, and fed her a bonus dose of Happiness-sat with her while she drank it, watched her go happily to sleep.

Then he did not even try to get along without it himself. Kitten had gone to sleep with one hand outside her cover. It looked to Hugh exactly like a forlorn little hand he had seen twelve hours earlier on the floor of a butcher shop.

He was exhausted and the drink let him go to sleep. But not to rest. He found himself at a dinner party, black tie and dressy. But he did not like the menu. Hungarians goulash... French fries. . . Chinese noodles. . . p0' boy sandwich. . breast of peasant . . . baked Alaskans-but it was all pork. His host insisted that he taste every dish. "Come, come!" he chided with a wintry smile. "How do you know you don't like it? One bullock gets you three you'll learn to love it."

Hugh moaned and could not wake up.

Kitten did not chatter at breakfast, which suited him. Two hours of nightmare-ridden sleep was not enough, yet it was necessary to go to his office and pretend to work. Mostly he stared at the print framed over his desk while his scroll reader clicked unnoticed. After lunch he sneaked away and tried to nap. But the engineer scratched at his door and apologetically asked him to look over his estimates on refitting the meat cooler. Hugh poured his guest a dollop of Happiness, then pretended to study figures that meant nothing to him. After a decent time he complimented the man, then scrawled a note to Memtok, recommending that the contract be let.

Barbara's note that night applauded the idea of a literary discussion club by mail and discussed Mark Twain. Hugh was interested only in how it read diagonally:

"Did
I
read
it
correctly
darling
question
mark"

Chapter 19

"Darling
we
must
escape
next
six
days
or
sooner

be
ready
night
after
letter
has
phrase
Freedom
is
a
lonely
thing-"

For the next three days Hugh's letters to Barbara were long and chatty and discussed everything from Mark Twain's use of colloquial idiom to the influence of progressive education on the relaxation of grammar. Her answers were lengthy, equally "literary," and reported that she would be ready to open the hatch, confirmed that she understood, that she had a little stock of food, had no knife, no shoes-but that her feet were very calloused-and that her only worry was that the twins might cry or that her roommates might wake up, especially as two of them were stifi giving night feedings to their babies. But for Hugh not to worry, she would manage.

Hugh drew a fresh bottle of Happiness, taped it near the top of the shaft closest to her billet, instructed her to tell her roommates that she had stolen it, then use it to get them so hopped up on the drug that they would either sleep or be so slaphappy that if they did wake, they would do nothing but giggle-and, if possible, get enough of the drug into the twins that the infants would pass out and not cry no matter how they were handled.

Making an extra trip through the tunnels to plant the bottle was a risk Hugh hated to take. But he made it pay. He not only timed himself by the clock in his rooms and learned beyond any possibility of mistake the rat maze he must follow but also he carried a practice load, a package of scrolls taped together to form a mass bigger and heavier, he felt sure, than one of his infant sons would be. This he tied to his chest with a sling made of stolen cloth; it had been a dust cover for the scroll printer in his offices. He made two such slings, one for Barbara, and tore and tied them so they could be shifted to the back later to permit the babies to be carried papoose style.

He found that it was difficult but not impossible to carry a baby in this fashion through the tunnels, and he spotted the places where it was necessary to inch forward with extreme care not to place any pressure on his dummy "precious burden" and still not let the ties on his back catch on engineering fittings above him.

But it could be done and he got back to his rooms without waking Kitten-he had increased her evening bonus of Happiness. He replaced the scrolls, hid his knife and spherical lamp, washed his knees and elbows and anointed them, then sat down and wrote a long P.S. to the letter he had written earlier to tell Barbara how to find the bottle. This postscript added some afterthoughts about the philosophy of Hemingway and remarked that it seemed odd that a writer would in one story say that "freedom is a lonely thing" and in another story state that-and so on.

That night he gave Kitten her usual amplified nightcap, then said, "Not much left in this bottle. Finish it off and I'll get a fresh one tomorrow."

"Oh, I'd get terribly silly. You wouldn't like me."

"Go ahead, drink it. Have a good time, live it up. What else is life for?"

Half an hour later Kitten was more than willing to be helped to bed. Hugh stayed with her until she was snoring heavily. He covered her hands, stood looking down at her, suddenly knelt and kissed her good-bye.

A few minutes later he was down the first manhole.

He took off his robe, piled on it a bundle of what he had collected for survival-food, sandals, wig, two pots of deodorant cream into which he had blended brown pigment. He did not expect to use disguise and h~d little faith in it, but if they were overtaken by daylight before they were in the mountains, he intended to darken all four of them, tear their robes into something resembling the breechclout and wrap-around which he had learned were the working clothes of free peasant farmers among the Chosen-"poor black trash" as Joe called them-and try to brazen it out, keeping away from people if possible, until it was dark again.

He tied one baby sling to him with the other inside it and started. He hurried, as time was everything. Even if Barbara managed to pass out her roommates promptly, even if he had no trouble breaking out at his preferred exit, even if the crawl back through the tunnels could be made in less than an hour- doubtful, with the kids-they could not be outdoors earlier than midnight, which allowed them five hours of darkness to reach wild country. Could he hope for three miles an hour? It seemed unlikely, Barbara barefooted and both carrying kids, the country unknown and dark-and those mountains seen from his window seemed to be at least fifteen miles away. It would be a narrow squeak even if everything broke his way.

He made fast time to sluts' quarters, punishing his knees and elbows.

The bottle was missing, he could feel the tacky places where he had fastened it. He settled himself as comfortably as possible and concentrated on quieting his pounding heart, slowing his breathing, and relaxing. He tried to make his mind blank.

He dozed off. But he was instantly alert when the lid over him was raised.

Barbara made no sound. She handed him one of their sons, he stuffed the limp little body as far down the tunnel as he could reach. She handed him the other, he placed it beside the first, then added a pitiful little bundle she had.

But he did not kiss her until they were down inside-only seconds after he had wakened-and the lid had clicked into place over them.

She clung to him, sobbing; he whispered to her fiercely not to make a sound, then added last-minute instructions into her ear. She quieted instantly; they got busy.

It was agonizingly difficult to get ready for the crawl in a space too small for one and nearly impossible for them both. They did it because they had to. First he helped her get out of the shorter garment sluts wore, then he had her lie down with her legs back in the other reach of the tunnel while he tied a baby sling to her, then a baby was stuffed into each sling and knots tightened to keep each child slung as high in its little hammock as possible. Hugh then knotted the skirt of her garment together, stuffed her hoarded food into the sack thus formed, tied the sleeves around his left leg, and let it drag behind. He had planned to tie it around his waist, but the sleeves were too short.

That done (it seemed to take hours), he had Barbara back up into the far reach of the tunnel, then managed painfully to turn himself and get headed the right way without banging little Hughie's skull. Or was it Karl Joseph? He had forgotten to ask. Either one, the baby's warm body against his, its lightly sensed breathing, gave him fresh courage. By God, they would make it! Whatever got in his way would die.

He set out, with the light in his teeth, moving very fast wherever clearance let him do so. He did not slow down for Barbara and had warned her that he would not unless she called out.

She did not, ever. Once her baggage worked loose from his leg. They stopped and he had her tie it to his ankle; that was their only rest. They made good time but it seemed forever before he reached the little pile of plunder he had cached when he set out.

They unslung the babies and caught their breaths.

He helped Barbara back into her shift, rearranged her sling to carry one baby papoose fashion, and made up their luggage into one bundle. All that he held out was his knife taped to his arm, his robe, and the light. He showed her how to hold the light in her mouth, then spread her lips and let the tiniest trickle leak out between her teeth. She tried it.

"You look ghastly," he whispered, "Like a jack-o'-lantern. Now listen carefully. I'm going up. You be ready to hand me my robe instantly. I may reconnoiter."

"I could help you get it on, right here."

"No. If I'm caught coming out, there will be a fight and it would slow me down. I won't want it, probably, until we reach a storeroom that is our next stop. If it's all clear above, I'll want you to hand out everything fast, including the baby not on your back. But you will have to carry him as well as the bundle and my robe; I've got to have my hands free. Darling, I don't want to kill anybody but if anyone gets in our way, I will. You understand that, don't you?"

She nodded. "So I carry everything. Can do, my husband."

"You follow me, fast. It's about two city blocks to that storeroom and we probably won't see anyone. I jiggered its lock this afternoon, stuffed a wad of Kitten's chewing gum into it. Once inside we'll rearrange things and see if you can wear my sandals."

"My feet are all right. Feel."

"Maybe we'll take turns wearing them. Then I have to break a lock on a delivery door but I spotted some steel bars a week ago which ought still to be there. Anyhow, I'll break out. Then away we go, fast. It should be breakfast before we are missed, sometime after that before they are sure we are gone, still longer before a chase is organized., We'll make it."

"Sure we will."

"Just one thing- If I reach for my robe and then close the lid on you, you stay here. Don't make a sound, don't try to peek out."

"I won't."

"I might be gone an hour. I might fake a bellyache and have to see the vet, then come back when I can."

"All right."

"Barbara, it might be twenty-four hours, if anything goes wrong. Can you stay here and keep the twins quiet that long? If you must?"

"Whatever it takes, Hugh."

He kissed her. "Now put the light back in your mouth and close your lips. I'm going to sneak a peek."

He raised the lid an inch, lowered it. "In luck," he whispered. "Even the standing light is out. Here I go. Be ready to hand things up. Joey first. And don't show a light."

He pushed the lid up and flat down without a sound, raised himself, got his feet to the corridor floor, stood up.

A light hit him. "That's far enough," a dry voice said, "Don't move."

He kicked the whip hand so fast that the whip flew aside as he closed. Then this-and that!-and sure enough! The man's neck was broken, just as the book said it would be.

Instantly he knelt down. "Everything out! Fast!"

Barbara shoved baby and baggage up to him, was out fast as he took her hand. "Some light," he whispered. "His went out and I've got to dispose of him." She gave him light. Memtok- Hugh quelled his surprise, stuffed the body down the hole, closed the lid. Barbara was ready, baby on back, baby in left arm, bundle in right. "We go on! Stay close on my heels!" He set out for the intersection, holding his course in the dark by fingertips on the wall.

He never saw the whip that got him. All he knew was the pain.

Chapter 20

For a long time Mr. Hugh Farnham was aware of nothing but pain. When it eased off, he found that he was in a confinement cell like the one in which he had lived his first days under the Protectorate.

He was there three days. He thought it was three days, as he was fed six times. He always knew when they were about to feed him-and to empty his slop jar, for he was not taken outside for any purpose. He would find himself restrained by invisible spider web, then someone would come inside, leave food, replace the slop jar, and go. It was impossible to get the servant who did this to answer him.

After what may have been three days he found himself unexpectedly caught up by that prisoning field (he had just been fed) and his old colleague and "cousin" the Chief Veterinary came in. Hugh had more than a suspicion as to why; his feeling amounted to a conviction, so he pleaded, demanded to be taken to the Lord Protector, and finally shouted.

The surgeon ignored it. He did something to Hugh's thigh, then left.

To Hugh's limited relief he did not become unconscious, but he found, when the tanglefoot field let up, that he could not move anyhow and felt lethargic. Shortly two servants came in, picked him up, placed him in a box like a coffin.

Hugh found that he was being shipped somewhere. His shipping case was given casual but not rough handling; once he felt a lift surge and then surge to a stop; his box was placed in something; and some minutes, hours, or days later it was moved again; and presently he was dumped into another confinement room. He knew it was a different one;

the walls were light green instead of white. By the time they fed him he had recovered and was again "tangled" while food was placed inside.

This went on for one hundred and twenty-two meals. Hugh kept track by biting a chunk out of his fingernails and scratching the inside of his left arm. This took him less than five minutes each day; he spent the rest of his time worrying and sometimes sleeping. Sleeping was worse than worrying because he always reenacted his escape attempt in his sleep and it always ended in disaster-although not necessarily at the same point. He did not always kill his friend the Chief Domestic and at least twice they got all the way to the mountains before they were caught. But, long or short, it ended the same way and he would wake up sobbing and calling for Barbara.

He worried most about Barbara-and the twins, although the boys were not as real to him. He had never heard of a slut being severely punished for anything. However, he had never heard of a slut being involved in an attempted escape and a killing, either; he just did not know. But he did know that the Lord Protector preferred slut meat for his table.

He tried to tell himself that old Ponse would do nothing to a slut while she was still nursing babies-and that would be a long time yet; among servants, according to Kitten, mothers nursed babies for at least two years.

He worried about Kitten, too. Would the child be punished for something she had had nothing to do with? A completely innocent bystander? Again he did not know. There was "justice" here; it was a major branch of religious writings. But it resembled so little the concept "justice" of his own culture that he had found the stuff almost unreadable.

He spent most of his time on what he thought of as "constructive" worry, i.e., what he should have done rather than what he had done.

He saw now that his plans had been laughably inadequate. He should never have let himself be panicked into moving too soon. It would have been far better to have built up his connection with Joe, never disagreed with him, tickled his vanity, gone to work for him and, in time, prevailed on him to adopt Barbara and the kids. Joe was an accommodating person and old Ponse was so openhanded that he might simply have made Joe a present of these three useless servants instead of demanding cash. The boys would have been in no danger for years (and perhaps never in danger if Joe owned them), and, in time, Hugh could have expected to become a trusted business servant, with a broad pass allowing him to go anywhere on his master's business-and Hugh .would have acquired sophisticated knowledge of how this world worked that a house servant could never acquire.

Once he had learned exactly how it ticked, he could have planned an escape that would work.

Any society man has ever devised, he reminded himself, could be bribed-and a servant who handles money can find ways to steal some. Probably there was an "underground railroad" that ran to the mountains. Yes, he had been far too hasty.

He considered, too, the wider aspects-a slave uprising. He visualized those tunnels being used not for escape but as a secret meeting place-classes in reading and writing, taught in whispers; oaths as mighty as a Mau Mau initiation binding the conspirators as blood brothers with each Chosen having marked against his name a series of dedicated assassins, servants patiently grinding scraps of metal into knives.

This "constructive" dream he enjoyed most-and believed in least. Would these docile sheep ever rebel? It seemed unlikely. He had been classed with them by accident of cornplexion but they were not truly of his breed. Centuries of selective breeding had made them as little like himself as a lap dog is like a timber wolf.

And yet, and yet, how did he know? He knew only the tempered males, and the few studs he had seen had all been dulled by a liberal ration of Happiness-to~ say nothing of what it might do to a man's fighting spirit to lose his thumbs at an early age and be driven around with whips-that-weremore-than-whips.

This matter of racial differences-or the nonsense notion of "racial equality"-had never been examined scientifically; there was too much emotion on both sides. Nobody wanted honest data.

Hugh recalled an area of Pernambuco he had seen while in the Navy, a place where rich plantation owners, dignified, polished, educated in France, were black, while their servants and field hands-giggling, shuffling, shiftless knuckleheads "obviously" incapable of better things-were mostly white men. He had stopped telling this anecdote in the States; it was never really believed and it was almost always resented-even by whites who made a big thing of how anxious they were to "help the American Negro improve himself." Hugh had formed the opinion that almost all of those bleeding hearts wanted the Negro's lot improved until it was almost as high as their own- and no longer on their consciences-but the idea that the tables could ever be turned was one they rejected emotionally.

Hugh knew that the tables could indeed be turned. He had seen it once, now he was experiencing it.

But Hugh knew that the situation was still more confused. Many Roman citizens had been "black as the ace of spades" and many slaves of Romans had been as blond as Hitler wanted to be-so any "white man" of European ancestry was certain to have a dash of Negro blood. Sometimes more than a dash. That southern Senator, what was his name?-the one who had built his career on "white supremacy." Hugh had come across two sardonic facts: This old boy had died from cancer and had had many transfusions-and his blood type was such that the chances were two hundred to one that its owner had nnt inst a tnnch nf thn tarhriish hut nraetk~a1lv thp. whn1~ tar barrel. A navy surgeon had gleefully pointed this out to Hugh and had proved both points in medical literature.

Nevertheless, this confused matter of races would never be straightened out-because almost nobody wanted the truth.

Take this matter of singing- It had seemed to Hugh that Negroes of his time averaged better singers than had whites; most people seemed to think so. Yet the very persons, white or black, who insisted most loudly that "all races were equal" always seemed happy to agree that Negroes were superior, on the average, in this one way. It reminded Hugh of Orwell's Animal Farm, in which "AU Animals Are Equal But Some Are More Equal Than Others."

Well, he knew who wasn't equal here-despite his statistically certain drop of black blood. Hugh Farnham, namely. He found that he agreed with Joe: When things were unequal, it was much nicer to be on top!

On the sixty-first day in this new place, if it was the sixtyfirst, they came for him, bathed him, cut his nails, rubbed him with deodorant cream, and paraded him before the Lord Protector.

Hugh learned that he still could be humiliated by not being given even a nightshirt as clothing, but he conceded that it was a reasonable precaution in handling a prisoner who killed with his bare hands. His escort was two young Chosen, in uniforms which Hugh assumed to be military, and the whips they carried were definitely not "lesser whips."

The route they followed was very long; it was clearly a huge building. The room where he was delivered was very like in spirit to the informal lounge where Hugh had once played bridge. The big view window looked out over a wide tropical river.

Hugh hardly glanced at it; the Lord Protector was there. And so were Barbara and the twins!

The babies were crawling on the floor. But Barbara was breast deep in that invisible quicksand, a trap that claimed T4iwh as snnui as he was halted She smiled at him hut did not speak. He looked her over carefully. She seemed unhurt and healthy, but was thin and had deep circles under her eyes.

He started to speak; she gestured warningly with eyes and head. Hugh then looked at the Lord Protector-and noticed only then that Joe was lounging near him and that Grace and Duke were playing some card game over in a corner, both of them chewing gum and ostentatiously not seeing that Hugh was there. He looked back at Their Charity.

Hugh decided that Ponse had been ill. Despite the fact that Hugh felt comfortably warm in skin, Ponse was wearing a full robe with a shawl over his lap and he looked, for once, almost his reputed age.

But when he spoke, his voice was still resonant. "You may go, Captain. We excuse you."

The escort withdrew. Their Charity looked Hugh over soberly. At last he said, "Well, boy, you certainly made a mess of things, didn't you?" He looked down and played with something in his lap, caught it and pulled it back to the middle of the shawl. Hugh saw that it was a white mouse. He felt sudden sympathy for the mouse. It didn't seem to like where it was, but if it did manage to escape, the cats would get it. Maggie was watching with deep interest.

Hugh did not answer, the remark seemed rhetorical. But it had startled him very much. Ponse covered the mouse with his hand, looked up. "Well? Say something!"

"You speak English!"

"Don't look so silly. I'm a scholar, Hugh. Do you think I would let myself be surrounded by people who speak a language I don't understand? I speak it, and I read it, silly as the spelling is. I've been tutored daily by skilled scholars-plus conversation practice with a living dictionary." He jerked his head toward Grace. "Couldn't you guess that I would want to read those books of mine? Not be dependent on your hitor-miss translations? I've read the Just So Stories twice- charming !-and I've started on the Odyssey."

He shifted back to Language. "But we are not here to discuss literature." Their Charity barely gestured. Four slut servants came running in with a table, placed it in front of the big man, placed things on it. Hugh recognized them-a homemade knife, a wig, two pots for deodorant cream, a bundle, an empty Happiness bottle, a little white sphere now

dull, a pair of sandals, two robes, one long, one short, mussed and dirty, and a surprisingly high stack of paper, creased and much written on.

Ponse put the white mouse on the table, stirred the display, said broodingly, "I'm no fool, Hugh. I've owned servants all my life. I had you figured out before you had yourself figured out. Doesn't do to let a man like you mingle with loyal servants, he corrupts them. Gives them ideas they are better off without. I had planned to let you escape as soon as I was through with you, you could have afforded to wait."

"Do you expect me to believe that?~'

"Doesn't matter whether you do or don't. I could not afford to keep you very long- one bad apple rots the rest, as my uncle was fond of saying. Nor could I put you up for adoption and let some unwitting buyer pay good money for a servant who would then corrupt others elsewhere in my realm. No, you had to escape." -

"Even if that is so, I would never have escaped without Barbara and my boys."

"I said I am not a fool. Kindly remember it. Of course you would not. I was going to use Barba-and these darling brats-to force you to escape. At my selected time. Now you've ruined it. I must make an example of you. For the benefit of the other servants." He frowned and picked up the crude knife. "Poor balance. Hugh, did you really expect to make it with this pitiful tackle? Not even shoes for that child by you. If only you had waited, you would have been given opportunity to steal what you needed."

"Ponse, you are playing with me the way you've been playing with that mouse. You weren't planning to let us escape. Not really escape at least. I would have wound up on your table."

"Please!" The old man made a grimace of distaste. "Hugh, I'm not well, someone has again been trying to poison me- my nephew, I suppose-and this time almost succeeded. So don't talk nasty, it upsets my stomach." He looked Hugh up and down. "Tough. Inedible. An old stud savage is merely garbage. Much too gamy. Besides that, a gentleman doesn't eat members of his own family, no matter what. So let's not talk in bad taste. There's no cause for you to bristle so. I'm not angry with you, just very, very provoked." He glanced at the twins, said, "Hughie, stop pulling Maggie's tail." His voice was neither loud nor sharp; the baby stopped at once. "Admittedly those two would make tasty appetizers were they not of my household. But even had they not been, I would have planned better things for them; they are so cute and so much alike. Did plan better things at first. Until it became clear that they were necessary to forcing you to run."

Ponse sighed. "You still do not believe a word I'm saying. Hugh, you don't understand the system. Well, servants never do. Did you ever grow apples?"

"A good eating apple, firm and sweetly tart, is never a product of nature; it is the result of long development from something small and sour and hard and hardly fit for animal fodder. Then it has to be scientifically propagated and protected. On the other hand, too highly developed plants-or animals-can go bad, lose their firmness, their flavor, get mushy and soft and worthless. It's a two-horned problem. We have it constantly with servants. You must weed out the troublemakers, not let them breed. On the other hand these very troublemakers, the worst of them, are invaluable breeding stock that must not be lost. So we do both. The run-of-thecrop bad ones we temper and keep. The very worst ones- such as you-we encourage to run. If you live-and some of you do-we can rescue you, or your strong get, at a later time and add you in, judiciously, to a breeding line that

has become so soft and docile and stupid that it is no longer worth its keep. Our poor friend Memtok was a result of such pepping up of hrppg~I fln~ niiartc~r ~v~,ap h~' w~z__he never knew it of course-and a good stud that added strength to a line. But far too dangerous and ambitious to be kept too long at stud; he had to be made to see the advantages of being tempered. Most of my upper servants have a recent strain of savage in them; some of them are Memtok's sons. My engineer, for example. No, Hugh, you would not have wound up on anybody's table. Nor tempered. I would like to have kept you as a pet, you're diverting-and a fair bridge hand in the bargain. But I could not let you stay in contact with loyal servants, even as insulated as you were by your fancy title. Presently you would have been put in touch with the underground."

Hugh opened his mouth and closed it.

"Surprised, eh? But there is always an underground wherever there is a ruling class and a serving class. Which is to say, always. If there were not one, it would be necessary to invent one. However, since there is one, we keep track of it, subsidize it-and use it. In the upper servants' mess its contact is the veterinary-trusted by everyone and quite shamelessly free of sentiment; 1 don't like him. If you had confided in him, you would have been guided, advised, and helped. I would have used you to cover about a hundred sluts, then sent you on your way. Don't look startled, even Their Mercy uses studs who have to stoop a bit to get through the studs' door when a

freshening of the line is indicated-and there was always the danger that you might get yourself, and those dear boys, killed, and thereby have wasted a fine potential."

Their Charity picked up the pile of Kitten-delivered mail. "These things- All my Chief Domestic was expected to do was to thwart you from doing something silly; he never knew the veterinary's second function. Why, I even had to crack down on Memtok a bit to turn his copies of these over to me- when anyone could have guessed that a stud like you would find a way to get in touch with his slut. I deduced that it would happen that time that you stood up to me about her, our first bridge game. Remember? Perhaps you don't. But I sent for Memtok, and sure enough, you had already started. Although he was reluctant to admit it. since he had not renorted it."

Hugh was hardly listening. He was turning over in his mind the glaring fact that he was hearing things told only to dead men. None of the four was going to leave this mom alive. No, perhaps the twins would. Yes, Ponse wanted the breeding line. But he-and Barbara-would never have a chance to talk.

But Ponse was saying, "You still have a chance to correct your mistakes. And you made lots of them. One note you wrote my scholars assured me was gibberish, not English at all. So I knew it was a secret message whether we could read it or not. Thereafter all your notes were subjected to careful analysis. So of course we found the key-rather naïve to be considered a code, rather clever considering the handicaps. And useful to me. But confound it, Hugh, it cost me! Memtok was naïve about savages, he did not realize that they fight when cornered."

Ponse scowled. "Damn you, Hugh, your recklessness cost me a valuable property. I wouldn't have taken ten thousand bullocks for Memtok's adoption-no, not twenty. And now your life is forfeit. The charge of attempting to run we could overlook, a tingling in front of the other servants would cover that. Destroying your master's property we could cover up if it had been done secretly. Did you know that that bedwarmer I lent you knew most of what you were up to? Saw much of it? Sluts gossip."

"She told you?"

"No, damn it, it didn't tell the half; we had to tingle it out of it. Then it turned out it knew so much that we could not afford to have it talking and the other servants putting one and one together. So it had to go."

"You had her killed." Hugh felt a surge of disgust and said it, knowing that nothing he said could matter now.

"What's it to you? Its life was forfeit, treason to its master. However, I'm not a spiteful man, the little critter has no moral sense and didn't know what it was doing-you must have hypnotized it, Hugh-and I am a frugal man; I don't waste property. It's adopted so far away that it'll have trouble under

Hugh sighed. "I'm relieved."

"Choice about the slut, eh? Was it that good?"

"She was innocent. I didn't want her hurt."

"As may be. Now, Hugh, you can repair all this costly mess. Pay me back the damage and do yourself a good turn at the same time."

"How?"

"Quite simple. You've cost me my key executive servant, I've no one of his caliber to replace him. So you take his place. No scandal, no fuss, no upset belowstairs-every servant who saw any piece of it is already adopted away. And you can tell any story you like about what happened to Memtok. Or even claim you don't know. Barba, can you refrain from gossip?"

"I certainly can where Hugh's welfare is concerned!"

"That's a good child. I would hate to have you muted, it would hamper our bridge game. Although Hugh will be rather busy for bridge. Hugh, here's the honey that trapped the bear. You take over as Chief Domestic, do the kind of a job I know you can do once you learn the details-and Barba and the twins live with you. What you always wanted. Well, that's the choice. Be my boss servant and have them with you. Or your lives are forfeit. What do you say?"

Hugh Farnham was so dazed that he was gulping trying to accept, when Their Charity added, "Just one thing. I won't be able to let you have them with you right away."

"No?"

"No. I still want to breed a few from you, before you are tempered. Needn't be long, if you are as spry as you look."

Barbara said, "No!"

But Hugh Farnham was making a terrible decision. "Wait, Barbara. Ponse. What about the boys? Will they be tempered, too?"

"Oh." Ponse thought about it. "You drive a hard bargain, Hugh. Suppose we say that they will not be. Let's say that I might use them at stud a bit-but not take their thumbs; it would be a dead giveaway for so private a purpose with studs as tall as they are going to be. Then at fourteen or fifteen I let them escape. Does that sult you?" The old man stopped to cough; a spasm racked him. "Damn it, you're tiring me."

Hugh pondered it. "Ponse, you may not be alive fourteen or fifteen years from now."

"True. But it is very impolite for you to say so."

"Can you bind this bargain for your heir? Mrika?"

Ponse rubbed his hair and grinned. "You're a sharp one, Hugh. What a Chief Domestic you will make! Of course I can't-which is why I want some get from you, without waiting for the boys to mature. But there is always a choice, just as you have a choice now. I can see to it that you are in my heavenly escort. All of you, the boys, too. Or I can have you all kept alive and you can work out a new bargain, if any. 'Le Roi est mort, vive le Roi'-which was the ancients' way of saying that when the protector leaves there is always a new protector. Just tell me, I'll do it either way."

Hugh was thinking over the grim choices when Barbara again spoke up. "Their Charity-"

"Yes, child?"

"You had better have my tongue cut out. Right now, before you let me leave this room. Because I will have nothing to do with this wicked scheme. And I will not keep quiet. No!"

"Barba, Barba, that's not being a good girl."

"I am not a girl. I am a woman and a wife and a mother! I will never call you 'uncle' again-you are vile! I wifi not play bridge with you ever again, with or without my tongue. We are helpless. . . but I will give you nothing. What is this you offer? You want my husband to agree to this evil thing in exchange for a few scant years of life for me and for our sons-for as long as God lets that evilness you call your body continue to breathe. Then what? You cheat him even then. We die. Or we are left to the mercy of your nephew who is even worse than you are. Oh, I know! The bedwarmers all hate him, they weep when they are called to serve him-and weep even harder when they come back. But I would not let Hugh make this choice even if you could promise us all a lifetime of luxurv. No! I won't. I won't! You trv to do it I'll kill my babies! Then myself. Then Hugh wifi kill himself I know! No matter what you have done to him!" She stopped, spat as far as she could in the old man's direction, then burst into tears.

Their Charity said, "Hughie, I told you to stop teasing that cat. It will scratch you." Slowly he stood up, said, "Reason with them, Joe," and left the room.

Joe sighed and came over close to them. "Barbara," he said gently, "take hold of yourself. You aren't acting in Hugh's interests even if you think you are. You should advise him to take it. After all, a man Hugh's age doesn't have much to lose by it."

Barbara looked at him as if she had never seen him before in her life. Then she spat again. Joe was close, she got him in the face.

He jumped and raised his hand. Hugh said sharply, "Joe, if you hit her and I ever get loose, I'll break your arm!"

"I wasn't going to hit her," Joe said slowly. "I was just going to wipe my face. I wouldn't hit Barbara, Hugh; I admire her. I just don't think she has good sense." He took a kerchief to the smear of saliva. "I gu~ss there is no use arguing."

"None, Joe. I'm sorry I spit on you."

"That's all right, Barbara. You're upset. .. and you never treated me as a nigger, ever. Well, Hugh?"

"Barbara has decided it. And she always means what she says. I can't say that I'm sorry. Staying alive here just isn't worth it, for any of us. Even if I was not to be tempered."

"I hate to hear you say that, Hugh. All in all, you and I always got along pretty well. Well, if that's your last word, I might as well go tell Their Charity. Is it?"

"Yes."

"Yes, Joe."

"Well- Good-bye, Barbara. Good-bye, Hugh." He left.

The Lord Protector came back in alone, moving with the slow caution of a man old and sick. "So that's what you've decided," he said, sitting down and gathering the shawl around him I-fr reached mit fnr the mouise still crnuichinc, on the table top; servants came in and cleared off the table. He went on, "Can't say that I'm surprised- I've played bridge with both of you. Well, now we take up the other choice. .Your lives are forfeit and I can't let you stay here, other than on those terms. So now we send you back."

"Back where, Ponse?"

"Why, back to your own time, of course. If you make it. Perhaps you will." He stroked the mouse. "This little fellow made it. Two weeks at least. And it didn't hurt him. Though one can only guess what two thousand years would do."

The servants were back and were piling on the table a man's watch, a Canadian dime, a pair of much worn mountain boots, a hunting knife, some badly made moccasins, a pair 2 of Levis, some ragged denim shorts with a very large waistline, a .45 automatic pistol with belt, two ragged and faded shirts, one somewhat altered, a part of a paper of matches, and a small notebook and pencil.

Ponse looked at the collection. "Was there anything else?" He slid the loaded clip from the pistol, held it in his hand. "If not, get dressed."

The invisible field let them loose.

Chapter 21

"I don't see what there is to be surprised about," Ponse told them. "Hugh, you will remember that I told my scientists that I wanted to know how you got here. No miracles. I told them rather firmly. They understood that I would be most unhappy-and vexed-if the Protectorate's scientists could not solve it when they had so many hints, so much data. So they did. Probably. At least they were able to move this little fellow. He arrived today, which is why I sent for you. Now we will find out if it works backwards in time as well as forwards-and if the big apparatus works as well as the bench model. I understand it is not so much the amount of power-no atom-kernel bombs necessary -as the precise application of power. But we'll soon know." Hugh asked, "How will you know? We will know-if it works. But how will you know?"

"Oh, that. My scientists are clever, when they have incentive. One of them will explain it."

The scientists were called in, two Chosen and five servants. There was no introduction; Hugh found himself treated as impersonally as the little white mouse who still tried to meet his death on the floor. Hugh was required to take off his shirt and two servant-scientists taped a small package to Hugh's right shoulder. "What's that?" It seemed surprisingly heavy for its size.

The servants did not answer; the leading Chosen said, "You will be told. Come here. See this."

"This" turned out to be Hugh's former property, a U. S. Geodetic Survey map of James County. "Do you understand this? Or must we explain it?"

"I understand it." Hugh used the equals mode, the Chosen ignored it while continuing to speak in protocol mode, falling.

"Then you know that here is where you arrived."

Hugh agreed, as the man's finger covered the spot where Hugh's home had once stood. The Chosen nodded thoughtfully and added, "Do you understand the meaning of these marks?" He pointed to a tiny x-mark and very small figures beside it.

"Certainly. We call that a 'bench mark.' Exact location and altitude. It's a reference point for all the rest of the map."

"Excellent." The Chosen pointed to a similar mark at the summit of Mount James as shown by the map. "Now, tell us, if you know-but don't lie about it; it will not advantage you-how much error there would be, horizontally and vertically, between these two reference points."

Hugh thought about it, held up his thumb and forefinger about an inch apart. The Chosen blinked. "It would not have been that accurate in those primitive times. We assume that you are lying. Try again. Or admit that you don't know."

"And I suggest that you don't know what you are talking about. It would be at least that accurate." Hugh thought of telling him that he had bossed surveying parties in the Seabees and had done his own surveying when he was getting started as a contractor-and that while he did not know how accurate a geodetic survey was, he did know that enormously more accurate methods had been used in setting those bench marks than were ever used in the ordinary survey.

He decided that explanation would be wasted.

The Chosen looked at him, then glanced at Their Charity. The old man had been listening but his face showed nothing. "Very well. We will assume that the marks are accurate, each to the other. Which is fortunate, as this one is missing"-he pointed to the first one, near where Hugh's home had been- "whereas this one"-he indicated the summit of Mount James-"is still in place, in solid rock. Now search your memory and do not lie again, as it will matter to you . . . and it will matter to Their Charity, as a silly lie on your part could waste much effort and Their Charity would be much displeased, we are certain. Where, quite near this reference mark and the same height-certainly no higher!-is-was, I mean, in those primitive times-a flat, level place?"

Hugh thought about it. He knew exactly where that bench mark had been: in the cornerstone of the Southport Savings Bank. It was, or had been, a small brass plate let into the stone beside the larger dedication plate, about eighteen inches above the sidewalk at the northeast corner of the building. It had been placed there shortly after the Southport shopping center had been built. Hugh had often glanced at it in passing; it had always given him a warm feeling of stability to note a bench mark.

The bank had sided on a parking lot shared by the bank, a Safeway Supermarket, and a couple of other shops. "It is level and flat nif this way fnr a distance nf-" (I-Iiwh estimated the width of that ancient parking lot in feet, placed the figure in modern units.) "Or a little farther. That's just an estimate, not wholly accurate."

"But it is flat and level? And no higher than this point?"

"A little lower and sloping away. For drainage."

"Very well. Now place your attention on this configuration." Again it was Hugh's property, a Conoco map of the state. "That object fastened to your back you may think of as a clock. We will not explain it, you could not understand. Suffice to say that radiation decay of a metal inside it measures time. That is why it is heavy; it is cased in lead to protect it. You will take it to here." The Chosen pointed to a town on the map; Hugh noted that it was the home of the state university.

At a gesture the Chosen was handed a slip of paper. To Hugh he said, "Can you read this? Or must it be explained?"

"It says 'University State Bank,'" Hugh told him. "I seem to recall that there was an institution of that name in that town. I'm not sure, I don't recall doing business with it."

"There was," the Chosen assured him, "and its ruins were recently uncovered. You will go to it. There was, and still is, a strong room, a vault, in its lowest part. You will place this clock in that vault. Do you understand?"

"I understand."

"By Their Charity's wish, that vault has not yet been opened. After you have gone, it will be opened. The clock will be found and we will read it. Do you understand why this is crucial to the experiment? It will not only tell us that you made the time jump safely but also exactly how long the span was-and from this our instruments will be calibrated." The Chosen looked very fierce. "Do this exactly. Or you will be severely punished."

Ponse caught Hugh's eye at this point. The old man was not laughing but his eyes twinkled. "Do it, Hugh," he said quietly. "That's a good fellow."

Hugh said to the Chosen scientist. "I will do it. I underc~t~ind "

The Chosen said, "May it please Their Charity, this one is ready to weigh them now, and then leave for the site."

"We've changed our mind," Ponse announced. "We will see this." He added, "Nerve in good shape, Hugh?"

"Quite."

"All of you who made the first jump were given this opportunity, did I tell you? Joe turned it down flatly." The old man glanced over his shoulder. "Grace! Changed your mind, little one?"

Grace looked up. "Ponsie!" she said reproachfully. "You know I would never leave you."

"Duke?"

The tempered servant did not even look up. He simply shook his head.

Ponse said to the scientist, "Let's hurry and get them weighed. We intend to sleep at home tonight."

The weighing was done elsewhere in the Palace. Just before the four were placed on the weighing area the Lord Protector held up the cartridge clip he had removed from the pistol Hugh now wore. "Hugh? Will you undertake not to be foolish with this? Or should I have the pellets separated from the explosives?"

"Uh, I'll behave."

"Ah, but how will you behave? If you were impetuous, you might succeed in killing me. But consider what would happen to Barba and our little brats."

(I had thought of that, you old scoundrel. I'll still do what seems best to me.) "Ponse, why don't you let Barbara carry the clip in a pocket? That would keep me from loading and firing very fast even if I did get ideas."

"A good plan. Here, Barba."

The boss scientist seemed unhappy at the total weight of his experimental package. "May it please Their Charity, this one finds that body weights of both adults must have lessened markedly since the time of the figures on which the calculations were made."

"Oh, nothing, nothing, may it please Their Charity. Just a slight delay. The mass must be exact." Hurriedly the Chosen started piling metal discs on the platform.

It gave Hugh an idea. "Ponse, you really expect this to work?"

"If I knew the answer, it would not be necessary to try it. I hope it will work."

"If it does work, we'll need money right away. Especially if I'm to travel half across the state to bury this clock device."

"Reasonable. You used gold, did you not? Or was it silver? I see your idea." The old man gestured. "Stop that weighing."

"We used both, sometimes, but it had to have our own protectorate's stamp. Ponse, there were quite a number of American silver dollars in my house when you took it away from me. Are they available?"

They were available and in the Palace and the old man had no objection to using them to make up the missing weight. The boss scientist was fretted over the delay-he explained to his lord that the adjustments were set for an exact time span as well as exact mass in order to place these specimens at a time before the East-West War had started, plus a margin for error-but that delay was reducing the margin and might require recalculation and long and painful recalibration. Hugh did not follow the technicalities.

Nor did Ponse. He cut the scientist off abruptly. "Then recalculate if necessary. All."

It took more than an hour to locate the man who could locate the man who knew where these particular items of the savage artifacts were filed, then dig them out and fetch them. Ponse sat brooding and playing with his mouse. Barbara nursed the twins, then changed them with the help of slut servants; Hugh petitioned plumbing calls for each of them-granted, under guard-and all this changed all the body weights and everything was started over again.

The silver dollars were still in, or had been replaced in, the $100 rolls in which Hugh had hoarded them. They made quite a stack, and (on the happy assumption that the time jump would work) Hugh was pleased that he had lost while imprisoned the considerable paunch he had regrown during his easy days as "Chief Researcher." However, less than three hundred silver dollars were used in bringing them up to calculated weight-plus a metal slug and some snips of foil.

"If it suits the Lord Protector, this one believes that the specimens should be placed in the container without delay."

"Then do it! Don't waste our time."

The container was floated in. It was a box, metallic, plain, empty, and with no furnishings of any sort, barely high enough for Hugh to stand upright in, barely large

enough for all of them. Hugh got into it, helped Barbara in, the babies were handed to them and Hughie started to squawl and set off his brother.

Ponse looked annoyed. "My sluts have been spoiling those brats. Hugh, I've decided not to watch it, I'm weary. Goodbye to both of you-and good riddance; neither of you would ever have made a loyal servant. But I'll miss our bridge games. Barba, you must bring those brats back into line. But don't break their spunk doing it; they're fine boys." He turned and left abruptly.

The hatch was closed down on them and fastened; they were alone. Hugh at once took advantage of it to kiss his wife, somewhat hampered by each of them holding a baby.

"I don't care what happens now," Barbara said as soon as her mouth was free. "That's what I've been longing for. Oh, dear, Joey is wet again. How about Hughie?"

"It's unanimous, Hughie also. But I thought you just said you didn't care what happens now?"

"Well, I don't, really. But try explaining that to a baby. I would gladly swap one of those rolls of dollars for ten new diapers."

"My dear, do you realize that the human race lasted at least a million years with no diapers at all? Whereas we may not last another hour. So let's not spend it talking about diapers."

"I simply meant- Wups! They're moving us."

"Sit flat on the floor and brace your feet against the wall. Before we have scrambled babies. You were saying?"

"I simply meant, my darling, that I do not care about diapers, I don't care about anything-now that I have you with me again. But if we aren't going to die-if this thing works- I'm going to have to be practical. And do you know of anything more practical than diapers?"

"Yes. Kissing. Making love."

"Well, yes. But they lead to diapers. Darling, could you hold Hughie in your other arm and put this one around me? Uh, they're moving us again. Hugh, is this thing going to work? Or are we going to be very suddenly dead? Somehow I can imagine time travel frontwards-and anyhow we did it. But I can't imagine it backwards. I mean, the past has already happened. That's it. Isn't it?"

"Well, yes. But you haven't stated it correctly. The way I see it, there are no paradoxes in time travel, there can't be. If we are going to make this time jump, then we already did; that's what happened. And if it doesn't work, then it's because it didn't happen."

"But it hasn't happened yet. Therefore, you are saying that it didn't happen, so it can't happen. That's what I said."

"No, no! We don't know whether it has already happened or not. If it did, it will. If it didn't, it won't."

"Darling, you're confusing me."

"Don't worry about it. 'The moving finger writes, and having writ, moves on'-and only then do you find out if it goosed you in passing. I think we've straightened out on a course; we're steady now, just the faintest vibration. If they are taking us where I think they are, James County I mean, then we've got at least an hour before we need worry about anything." He tightened his arm around her. "So let's be happy that hour."

She snuggled in. "That's what I was saying. Beloved, we've come through so many narrow squeaks together that I'm not ever going to worry again. If it's an hour, I'll be happy every second of it. If it's forty years, I'll be happy every second of that, too. If it's together. And if it's not together, I don't want it. But either way, we go on. To the end of our day."

"Yes. 'To the end of our day.'"

She sighed happily, rearranged a wet and sleeping infant, snuggled into his shoulder and murmured, "This feels like our very first day. In the tank room of the shelter, I mean. We were just as crowded and even warmer-and I was never so happy. And we didn't know whether we were going to live through that day, either. That night."

"We didn't expect to. Else we wouldn't have twin boys now."

"So I'm glad we thought we were going to die. Hugh? It isn't any more crowded than it was that night in the tank room."

"Woman, you are an insatiable lecher. You'll shock the boys."

"I don't think once in more than a year is being insatiable. And the boys are too young to be shocked. Aw, come on! You said yourself we might be dead in an hour."

"Yes, we might and you have a point and I'm theoretically in favor of the idea. But the boys do inhibit me and there actually isn't quite as much room even if we weren't cluttered up with eight or nine wet babies and I don't see how it's mechanically possible. The act would be a tesseract, at least."

"Well- I guess you're right. I don't see any way either; we would probably squash them. But it does seem a shame, if we're going to die."

"I refuse to assume that we're going to die. I won't ever make that assumption again. All my figuring is based on the assumption that we are going to live. We go on. No matter what happens-we go on."

"All right. Seven no trump."

"That's better."

"Doubled and redoubled. Hugh? Just as soon as the boys are big enough to hold thirteen cards in their pudgy little hands, we're going to start teaching them contract. Then we'll have a family four of our own."

"Suits. And if they can't learn to play, we'll temper them and try again."

"I don't want ever to hear that word again!"

"Sorry."

"And I don't want to hear that language again, either, dear. The boys should grow up hearing English."

"Sorry again. You're right. But I may slip; I've gotten in the habit of thinking in it-all that translating. So allow me a few slips."

"I'll always allow you a few slips. Speaking of slips- Did you? With Kitten?"

"No."

"Why not? I wouldn't have minded. Well, not much anyhow. She was sweet. She would baby-sit for me any time I would let her. She loved our boys.".

"Barbara, I don't want to think about Kitten. It makes me sad. I just hope whoever has her now is good to her. She didn't have any defenses at all-like a kitten before it has its eyes open. Helpless. Kitten means to me everything that is utterly damnable about slavery."

She squeezed his hand. "I hope they're good to her, too. But, dear, don't hurt yourself inside about it; there is nothing we can do for her."

"I know it and that's why I don't want to talk about her. But I do miss her. As a daughter. She was a daughter to me. 'Bedwarmer' never entered into it."

"I didn't doubt it, dear. But- Well, look here, my good man, maybe this place is too cramped. All right, we're going to live through it; we go on. Then don't let me catch you treating me like a daughter! I intend to keep your bed very warm indeed!"

"Mmm- You want to remember that I'm an old man."

"'Old man' my calloused feet! We'll be the same age for all practical purposes- namely something over four thousand years, counting once each way. And my purposes are very practical, understand me?"

"I understand you. I suppose 'four thousand years' is one way to look at it. Though perhaps not for 'practical purposes.'"

"You won't get out of it that easily," she said darkly. "I won't stand for it."

"Woman, you've got a one-track mind. All right, I'll do my best. I'll rest all the time and let you do all the work. Hey, I think we're there."

The box was moved several times, then remained stationary a few minutes, then surged straight up with sickening suddenness, stopped with another stomach twister, seemed to hunt a little, and then was perfectly steady.

"You in the experimental chamber," a voice said out of nowhere. "You are warned to expect a short fall. You are advised to stand up, each of you hold one brat, and be ready to fall. Do you understand?"

"Yes," Hugh answered while helping Barbara to her feet. "How much of a fall?"

There was no answer. Hugh said, "Hon, I don't know what they mean. A 'short fall' could be one foot, or fifty. Protect Joey with your arms and better bend your knees a little. If it's quite a fall, then go ahead and go down; don't try to take it stiff-legged. These jokers don't give a hoot what happens to us."

"Bent knees. Protect Joey. All right."

They fell.

Chapter 22

Hugh never did know how far they fell but he decided later that it could not have been more than four feet. One instant they were standing in a well-lighted, cramped box; the next instant they were outdoors, in the dark of night, and falling.

His boots hit, he went down, landing on the right side his rump and on two very hard rolls of silver dollars in hip pocket-rolled with the fall and protected the baby in arms.

Then he rolled to a sitting position. Barbara was near h on her side. She was not moving. "Barbara! Are you hui

"No," she said breathlessly. "I don't think so. Just knoc] the breath out of me."

"Is Joey all right? Hughie is, but I think he's more ti wet now."

"Joey is all right." Joey confirmed this by starting to y his brother joined him. "He had the breath knocked out of h too, I think. Shut up, Joey; Mother is busy. Hugh, where we?"

He looked around. "We are," he announced, "in a park lot in a shopping center about four blocks from where I I And apparently somewhere close to our own proper time. least that's a 'sixty-one Ford we almost landed on." The was empty save for this one car. It occurred to him that tl arrival might have been something else than a bump-an plosion, perhaps?-if they had been six feet to the right. he dropped the thought; enough narrow squeaks and one m didn't matter.

He stood up and helped Barbara up. She winced and in dim light that came from inside the bank he noticed "Trouble?"

"I turned my ankle when I hit."

"Can you walk?"

"I can walk."

"I'll carry both kids. It's not far."

"Hugh, where are we going?"

"Why, home, of course." He looked in the window of bank, tried to spot a calendar. He saw one but the stand light was not shining on it; he couldn't read it. "I wish I ki the date. Honey, I hate to admit it but it does look as if t travel has some paradoxes-and I think we are about to give somebody a terrible shock."

"Who?"

"Me, maybe. In my earlier incarnation. Maybe I ought to phone him first, not shock him. No, he-I, I mean-wouldn't believe it. Sure you can walk?"
"Certainly."

"All right. Hold our monsters for a moment and let me set my watch." He glanced back into the bank where a clock was visible even though the calendar was shadowed. "Okay. Gimine. And holler if you need to stop."

They set off, Barbara limping but keeping up. He discouraged talk, because he did not have his thoughts in order. To see a town that he had thought of as destroyed so quiet and peaceful on a warm summery night shook him more than he dared admit. He carefully avoided any speculation as to what he might find at his home-except one fleeting thought that if it turned out that his shelter was not yet built, then it never would be and he would try his hand at changing history.

He adjourned that thought, too, and concentrated on being glad that Barbara was a woman who never chattered when her man wanted her to be quiet.

Presently they turned into his driveway, Barbara limping and Hugh beginning to develop cramps in both arms from being unable to shift his double load. There were two cars parked tandem and facing out in the drive; he stopped at the first one, opened the door and said, "Slide in, sit down, and take the load off that ankle. I'll leave the boys with you and reconnoiter." The house was brightly lighted.

"Hugh! Don't do it!"

"Why not?"

"This is my car. This is the night!"

He stared at her for a long moment. Then he said quietly, "I'm still going to reconnoiter. You sit here."

He was back in less than two minutes, jerked open the car door, collapsed onto the seat, let out a gasping sob.

Barbara said, "Darling! Darling!"

"Oh, my God!" He choked and caught his breath. "She's in there! Grace. And so am I." He dropped his face to the steering wheel and sobbed.

"Hugh."

"What? Oh, my God!"

"Stop it, Hugh. I started the engine while you were gone. The keys were in the ignition, I had left them there so that Duke could move it and get out. So let's go. Can you drive?"

He sobered down. "I can drive." He took ten seconds to check the instrument board, adjusted the seat backwards, put it in gear, turned right out of his drive. Four minutes later he turned west on the highway into the mountains, being careful to observe the stop sign; it had occurred to him that this was no night to get stopped and pulled off the road for driving without a license.

As he made the turn a clock inthe distance bonged the half hour; he glanced at his wrist watch, noted a one-minute difference. "Switch on the radio, hon."

"Hugh, I'm sorry. The durn thing quit and I couldn't afford to have it repaired."

"Oh. No matter. The news doesn't matter, I mean; time is all that matters. I'm trying to estimate how far we can go in an hour. An hour and some minutes. Do you recall what time the first missile hit us?"

"I think you told me it was eleven-forty-seven."

"That's my recollection, too. I'm certain of it, I just wanted it confirmed. But it all checks. You made crêpes Suzettes, you and Karen fetched them in just in time to catch the end of the ten o'clock news. I ate pretty quickly-they were wonderful- this booney old character rang the doorbell. Me, I mean. And I answered it. Call it ten-twenty or a little after. So we just heard half-past chime and my watch agrees. We've got about seventy-five minutes to get as far from ground zero as possible."

Barbara made no comment. Moments later they passed the city limits; Hugh put the speed up from a careful forty-five to an exact sixty-five.

About ten minutes later she said, "Dear? I'm sorry. About Karen, I mean. Not about anything else."

"I'm not sorry about anything. No, not about Karen. Hearing her merry laugh again shook me up, ~yes. But now I treasure it. Barbara, for the first time in my life I have a conviction of immortality. Karen is alive right now, back there behind us-and yet we saw her die. So somehow, in some timeless sense, Karen is alive forever, somewhere. Don't ask me to explain it, but that's how it is."

"I've always known it, Hugh. But I didn't dare say so."

"Dare say anything, damn it! I told you that long ago. So I no longer feel sorrow over Karen. I can't feel any honest sorrow over Grace. Some people make a career of trying to get their own way; she's one of them. As for Duke, I hate to think about him. I had great hopes for my son. My first son. But I never had control over his rearing and I certainly had no control over what became of him. And, as Joe pointed out to me, Duke's not too badly off-if welfare and security and happiness are sufficient criteria." Hugh shrugged without taking his hands from the wheel. "So I shall forget him. As of this instant I shall endeavor never to think about Duke again."

Presently he spoke again. "Hon, can you, in spite of being smothered in babies, get at that clock thing on my shoulder and get it off?"

"I'm sure I can."

"Then do it and chuck it into the ditch. I'd rather throw it away inside the circle of total destruction-if we're still in it." He scowled. "I don't want those people ever to have time travel. Especially Ponse."

She worked silently for some moments, awkwardly with one hand. She got the radiation clock loose and threw it out into the darkness before she spoke. "Hugh, I don't think Ponse intended us to accept that offer. I think he made the terms such that he knew that I would refuse, even if you were indlined to sacrifice yourself."

"Of course! He picked us as guinea pigs-his white mice- .~fl6
and chivvied us into 'volunteering.' Barbara, I can stand-and somewhat understand but not forgive-a straight-out son of a bitch. But Ponse was, for my money, much worse. He had good intentions. He could always prove why the hotfoot he was giving you was for your own good. I despise him."

Barbara said stubbornly, "Hugh, how many white men of today could be trusted with the power Ponse had and use it with as much gentleness as he did use it?"

"Huh? None. Not even yours truly. And that was a low blow about 'white men.' Color doesn't enter into it."

"I withdraw the word 'white.' And I'm sure that you are one who could be trusted with it. But I don't know any others."

"Not even me. Nobody can be trusted with it. The one time I had it I handled it as badly as Ponse. I mean that time I caused a gun to be raised at Duke. I should simply have used karate and knocked him out or even killed him. But not humiliated him. Nobody, Barbara. But Ponse was especially bad. Take Memtok. I'm really sorry that I happened to kill Memtok. He was a man who behaved better than his nature, not worse. Memtok had a streak of meanness, sadism, wide as his back. But he held it closely in check so that he could do his job better. But Ponse-~ Barbie hon, this is probably a subject on which you and I will never agree. You feel a bit soft toward him because he was sweet to you most of the time and always sweet to our boys. But I despised him because of that-because he was always showing 'king's mercy'-being less cruel than he could have been, but always reminding his victim of how cruel he could be if he were not such a sweet old guy and such a prince of a fellow. I despised him for it. I despised him long before I found out about his having young girls butchered and served for his dinner."

"What?"

"Didn't you know? Oh, surely, you must have known. Ponse and I discussed it in our very last talk. Weren't you listening?"

"I thought that was just heavy sarcasm, on the part of each of you."

"Nope, Ponse is a cannibal. Maybe not a cannibal, since he doesn't consider us human. But he does eat us-they all do. Ponse always ate girls. About one a day for his family table, I gathered. Girls about the age and plumpness of Kitten."

"But- But- Hugh, I ate the same thing he did, lots of times. I must have- I must have-"

"Sure you did. So did I. But not after I knew. Nor did you."

"Honey. . . you better stop the car. I'm going to be sick."

"Throw up on the twins if you must. This car doesn't stop for anything."

She managed to get the window open, got it mostly outside. Presently he said gently, "Feeling better?"

"Some."

"Sweetheart, don't hold what he ate too much against Ponse. He honestly did not know it was wrong-and no doubt cows would feel the same way about us, if they knew. But these other things he knew were wrong. Because he tried to justify them. He rationalized slavery, he rationalized tyranny, he rationalized cruelty, and always wanted the victim to agree and thank him. The headsman expected to be tipped."

"I don't want to talk about him, dear. I feel all mixed up inside."

"Sorry. I'm half drunk without a drop and babbling. I'll shut up. Watch the traffic behind, I'm going to make a left turn shortly."

She did so and after they had turned off on a state road, narrower and not as well graded, he said, "I've figured out where we're going. At first I was just putting distance behind us. Now we've got a destination. Maybe a safe one."

"Where, Hugh?"

"A shutdown mine. I had a piece of it, lost some money in it. Now maybe it pays off. The Havely Lode. Nice big tunnels and we can reach the access road from this road. If I can find it in the dark. If we can get there before the trouble starts." He concentrated on herding the car, changing down on the grades both climbing and on the occasional downhill
piece, braking hard before going into a curve, then cornering hard with plenty of throttle in the curves.

After a particularly vicious turn with Barbara on the hairraising outside, she said, "Look, dear, I know you're doing it to save us. But we can be just as dead from a car crash as from an H-bomb."

He grinned without slowing. "I used to drive jeeps in the dark with no headlights. Barbie, I won't kill us. Few people realize how much a car will do and I'm delighted that this has a manual gear shift. You need it in the mountains. I would not dare drive this way with an automatic shift."

She shut up and prayed, silently.

The road dropped into a high alp where it met another road; at the intersection there was a light. When he saw it Hugh said, "Read my watch."

"Eleven-twenty-five."

"Good. We are slightly over fifty miles from ground zero. From my house, I mean. And the Havely Lode is only five minutes beyond here, I know how to find it now. I see Schmidt's Corner is open and we are low on gas. We'll grab some and groceries, too-yes, I recall you told me you had both in this car; we'll get more-and still make it before the curtain."

He braked and scattered gravel, stopped by a pump, jumped out. "Run inside and start grabbing stuff. Put the twins on the floor of the car and close the door. Won't hurt 'em." He stuck the hose into the car's tank, started cranking the old-fashioned pump.

She was out in a moment. "There's nobody here."

"Honk the horn. The Dutchman is probably back at his house."

Barbara honked and honked and the babies cried. Hugh hung up the hose. "Fourteen gallons we owe him for. Let's go in. Should roll in just ten minutes, to be safe."

Schmidt's Corner was a gasoline station, a small lunch counter, a one-end grocery store, all of the sort that caters to local people, fishermen, hunters, and the tourist who likes to
get off the pavement. Hugh wasted no time trying to rouse out the owner; the place told its own story: All lights were on, the screen door stood open, coffee was simmering on a hot plate, a chair had been knocked over, and the radio was tuned to the emergency frequency. It suddenly spoke up as he came in:

"Bomb warning. Third bomb warning. This is not a drill. Take shelter at once. Any shelter, God damn it, you're going to be atom-bombed in the next few minutes. I'm damn well going to leave this goddam microphone and dive for the basement myself when impact is five minutes away! So get the lead out, you stupid fools, and quit listening to this chatter! TAKE
SHELTER!"

"Grab those empty cartons and start filling them. Don't pack, just dump stuff in. I'll trot them out. We'll fill the back seat and floor." Hugh started following his own orders, had one carton filled before Barbara did. He rushed it out, rushed back; Barbara had another waiting, and a third almost filled. "Hugh. Stop one second. Look."

The end carton was not empty. Mama cat, quite used to strangers, stared solemnly out at him while four assorted fuzzy ones nursed. Hugh returned her stare.

He suddenly closed the top of the carton over her. "All right," he said. "Load something light into another carton so it weighs this one down while I drive. Hurry." He rushed out to the car with the little family while the mother cat set up agonized complaint.

Barbara followed quickly with a half-loaded carton, put it on top of the cat box. They both rushed back inside. "Take all the canned milk he's got." Hugh stopped long enough to put a roll of dollars on top of the cash register. "And grab all the toilet paper or Kleenex you see, too. Three minutes till we leave."

They left in five minutes but with more cartons; the back seat of the car was well leveled off. "I got a dozen tea towels," Barbara said gleefully, "and six big packs of Chux."

"Huh?"

"Diapers, dear, diapers. Might last us past the fallout. I hope. And I grabbed two packs of playing cards, too. Maybe I shouldn't have."

"Don't be hypocritical, my love. Hang onto the kids and be sure that door is locked." He drove for several hundred yards, with his head hanging out. "Here!"

The going got very rough. Hugh drove in low gear and very carefully~

A black hole in the side of the mountain loomed up suddenly as he turned. "Good, we've made it! And we drive straight inside." He started in and tromped on the brake. "Good Lord! A cow."

"And a calf," Barbara added, leaning out her side.

"I'll have to back out."

"Hugh. A cow. With a calf."

"Uh. . . how the hell would we feed her?"

"Hugh, it may not burn here at all. And that's a real live cow."

"Uh. . . all right, all right. We'll eat them if we have to." There was a wooden wall and a stout door about thirty feet inside the mouth of the mine tunnel. Hugh eased the car

forward, forcing the reluctant cow ahead of him, and at last crunched his side of the car against the rock wall to allow the other door to open.

The cow immediately made a break for freedom; Barbara opened her door and thereby stopped her. The calf bawled, the twins echoed him.

Hugh squeezed out past Barbara and the babies, got past the cow and unfastened the door, which was secured by a padlock passed through a hasp but not closed. He shoved the cow's rump aside and braced the door open. "Kick on the 'up' lights. Let it shine in."

Barbara did, then insisted that cow and calf be taken inside. Hugh muttered something about, "Noah's bloody ark!" but agreed, largely because the cow was so very much in the way. The door, though wide, was about one inch narrower than bossie; she did not want to go through it. But Hugh got
her beaded that way, then kicked her emphatically. She went through. The calf followed his mother.

At which point Hugh discovered why th~ cow was in the tunnel. Someone-presumably someone nearby-had converted the mine to use as a cow barn; there were a dozen or so bales of hay inside. The cow showed no wish to leave once she was at this treasure.

Cartons were carried in, two cartons were dumped and a twin placed in each, with a carton of cat and kittens just beyond and all three weighted down to insure temporary captivity.

While they were unloading Barbara's survival gear from the trunk, everything suddenly became noonday bright. Barbara said, "Oh, heavens! We aren't through."

"We go on unloading. Maybe ten minutes till the sound wave. I don't know about the shock wave. Here, take the rifle."

They had the car empty with jeep cans of water and gasoline out but not yet inside when the ground began to tremble and noise of giant subways started. Hugh put the cans inside, yelled, "Move these!"

"Hugh! Come in!"

"Soon." There was loose hay he had driven over just back of the car. He gathered it up, stuffed it through the door, went back and scavenged, not to save the hay but to reduce fire hazard to gasoline in the car's tank. He considered backing the car out and letting it plunge down the hill. He decided not to risk it. If it got hot enough to set fire to the car's gas tank-well, there were side tunnels, deep inside. "Barbara! Do you have a light yet?"

"Yes! Please come inside. Please!"

He went in, barred the door. "Now we move these bales of hay, far back. You carry the light, I carry the bay. And mind your feet. It is wet a bit farther back. That's why we shut down. Too much pumping."

They moved groceries, livestock (human, bovine, and feline) and gear into a side tunnel a hundred yards inside the
mountain. They had to wade through several inches of water on the way but the side tunnel was slightly higher and dry. Once Barbara lost a moccasin. "Sorry," said Hugh. "This mountain is a sponge. Almost every bore struck water."

"I," said Barbara, "am a woman who appreciates water. I have had reason to."

Hugh did not answer as the flash of the second bomb suddenly brightened everything even that deep inside-just through cracks of a wooden wall. He looked at his watch. "Right on time. We're sitting through a second show of the same movie, Barb. This time I hope it will be cooler."

"I wonder."

"If it will be cooler? Sure, it will. Even if it burns outside. I think I know a place where we can go down, and save us, and maybe the cats but not the cow and calf, even if smoke gets pulled in."

"Hugh, I didn't mean that."

"What did you mean?"

"Hugh, I didn't tell you this at the time. I was too upset by it and didn't want you to get upset. But I don't own a manual gear shift car."

"Huh? Then whose car is that outside?"

"Mine. I mean my keys were in it-and it certainly had my stuff in the trunk. But mine had automatic shift."

"Honey," he said slowly, "I think you've flipped your lid a little."

"I thought you would think so and that's why I didn't say anything until we were safe. But Hugh-listen to me, dear!-I have never owned a manual shift car. I didn't learn to drive that far back. I don't know how to drive manual shift."

He stared thoughtfully. "I don't understand it."

"Neither do I. Darling, when you came away from your house, you said, 'She's in there. Grace.' Did you mean you saw her?"

"Why, yes. She was nodding over the television, half passed out."

"But, dearest, Grace had been nodding over the television. But you put her to bed while I was making crêpes Suzettes. Don't you remember? When the alert came, you went and got her and carried her down-in her nightgown."

Hugh Farnham stood quite still for several moments. "So I did," he agreed. "So I had. Well, let's get the rest of this gear moved. The big one will be along in about an hour and a half."

"But will it be?"

"What do you mean?"

"Hugh, I don't know what has happened. Maybe this is a different world. Or maybe it's the same one but just a tiny bit changed by-well, by us coming back, perhaps."

"I don't know. But right now we go on, moving this stuff."

The big one came on time. It shook them up, did not hurt them. When the air wave hit, it shook them up again. But without casualties other than to the nerves of some very nervous animals-the twins by now seemed to enjoy rough stuff.

Hugh noted the time, then said thoughtfully, "If it is a different world, it is not so very different. And yet-"

"Yet what, dear?"

"Well, it is some different. You wouldn't forget that about your own car. And I do remember putting Grace to bed early; Duke and I had a talk afterwards. So, it's different." Suddenly he grinned. "It could be importantly different. If the future can change the past, or whatever, maybe the past can change the future, too. Maybe the United States won't be wholly destroyed. Maybe neither side will be so suicidal as to use plague bombs. Maybe-

Hell, maybe Ponse will never get a chance to have teen-age girls for dinner!" He added, "I'm damn' well going to make a try! To see that he doesn't."

"We'll try! And our boys will try."

"Yes. But that's tomorrow. I think the fireworks are over for tonight. Madame, do you think you can sleep on a pile of hay?"

"Just sleep?"

"You're too eager. I've had a long hard day."

"You had had a long hard day the other time, too."

"We'll see."

Chapter 23

They lived through the missiles, they lived through the bombs, they lived through the fires, they lived through the epidemics-which were not extreme and may not have been weapons; both sides disclaimed them-and they lived through the long period of disorders while civil government writhed like a snake with a broken back. They lived. They went on.

Their sign reads:

FARNHAM'S FREEHOLD
TRADING POST & RESTAURANT BAR

American Vodka
Corn Liquor
Applejack
Pure Spring Water
Grade "A" Milk
Corned Beef & Potatoes
Steak & Fried Potatoes
Butter & some days Bread
Smoked Bear Meat
Jerked Quisling (by the neck)
!!!!Any BOOK Accepted as Cash!!!!
DAY NURSERY
!!FREE KITTENS!!
Blacksmithing, Machine Shop, Sheet Metal Work- You Supply the Metal
FARNHAM SCHOOL OF CONTRACT BRIDGE
Lessons by Arrangement
Social Evening Every Wednesday
WARNING!!!
Ring Bell. Wait. Advance with your Hands Up. Stay on path, avoid mines. We lost three customers last week. We can't afford to lose you. No sales tax.
Hugh & Barbara Farnham & Family

Freeholders

High above their sign their homemade starry flag is flying- and they are still going on.

Friday

As I left the Kenya Beanstalk capsule he was right on my heels. He followed me through the door leading to Customs, Health, and Immigration. As the door contracted behind him I killed him.

I have never liked riding the Beanstalk. My distaste was fullblown even before the disaster to the Quito Skyhook. A cable that goes up into the sky with nothing to hold it up smells too much of magic. But the only other way to reach Ell-Five takes too long and costs too much; my orders and expense account did not cover it.

So I had been edgy even before I left the shuttle from Ell-Five at Stationary Station to board the Beanstalk capsule . . . but, damn it, being edgy isn't reason to kill a man. I had intended only to put him out for a few hours.

The subconscious has its own logic. I grabbed him before he hit the deck and dragged him quickly toward a rank of bonded bombproof lockers, hurrying to avoid staining the floor-shoved his thumb against the latch, pushed him inside as I grabbed his pouch, found his Diners Club card, slid it into the slot, salvaged his IDs and cash, and chucked the pouch in with the cadaver as the armor slid down and clanged home. I turned away.

A Public Eye was floating above and beyond me.

No reason to jump out of my boots. Nine times out often an Eye is cruising at random, unmonitored, and its twelve-hour loop may or may not he scanned by a human before it is scrubbed. The tenth
time- A peace officer may be monitoring it closely . . or she may be scratching herself and thinking about what she did last night.

So I ignored it and kept on toward the exit end of the corridor. That pesky Eye should have followed me as I was the only mass in that passageway radiating at thirty-seven degrees. But it tarried, three seconds at least, scanning that locker, before again fastening on me.

I was estimating which of three possible courses of action was safest when that maverick piece of my brain took over and my hands executed a fourth: My pocket pen became a laser beam and "killed" that Public Eye-killed it dead as I held the beam at full power until the Eye dropped to the deck, not only blinded but with antigrav shorted out. And its memory scrubbed-I hoped.

I used my shadow's credit card again, working the locker's latch with my pen to avoid disturbing his thumbprint. It took a heavy shove with my boot to force the Eye into that crowded locker. Then I hurried; it was time to be someone else. Like most ports of entry Beanstalk Kenya has travelers' amenities on both sides of the barrier. Instead of going through inspection I found the washrooms and paid cash to use a bath-dressing room.

Twenty-seven minutes later I not only had had a bath but also had acquired different hair, different clothes, another face-what takes three hours to put on will come off in fifteen minutes of soap and hot water. I was not eager to show my real face but I had to get rid of the persona I had used on this mission. What part of it had not washed down the drain now went into the shredder: jump suit, boots, pouch, fingerprints, contact lenses, passport. The passport I now carried used my right name-well, one of my names-a stereograph of my bare face, and had a very sincere Eli-Five transient stamp in it.

Before shredding the personal items I had taken off the corpse, I looked through them-and paused.

His credit cards and IDs showed four identities.

Where were his other three passports?

Probably somewhere on the dead meat in that locker. I had not given it a proper search-no time!-I had simply grabbed what he carried in his pouch.

Go back and look? If I kept trotting back and opening a locker full of still-warm corpse, someone was bound to notice. By taking his cards and passport I had hoped to postpone identifying the body and thereby give myself more time to get clear but-wait a moment. Mmm, yes, passport and Diners Club card were both for "Adolf Belsen." American Express extended credit to "Albert Beaumont" and the Bank of Hong Kong took care of "Arthur Bookman" while MasterCard provided for "Archibald Buchanan."

I "reconstructed" the crime: Beaumont-Bookman-Buchanan had just thumbed the latch of the locker when Belsen sapped him from behind, shoved him into the locker, used his own Diners Club card to lock it, and left hastily.

Yes, an excellent theory . . . and now to muddy the water still more.

Those IDs and credit cards went back of my own in my wallet; "Belsen's" passport I concealed about my person. I could not stand a skin search but there are ways to avoid a skin search including (but not limited to) bribery, influence, corruption, misdirection, and razzle-dazzle.

As I came out of the washroom, passengers from the next capsule were trickling in and queuing up at Customs, Health, and Immigration; I joined a queue. The CHI officer remarked on how very light my jumpbag was and asked about the state of the up-high black market. I gave him my best stupid look, the one on my passport picture. About then he found the correct amount of squeeze tucked into my passport and dropped the matter.

I asked him for the best hotel and the best restaurant. He said that he wasn't supposed to make recommendations but that he thought well of the Nairobi Hilton. As for food, if I could afford it, the Fat Man, across from the Hilton, had the best food in Africa. He hoped that I would enjoy my stay in Kenya.

I thanked him. A few minutes later I was down the mountain and in the city, and regretting it. Kenya Station is over five kilometers high; the air is always thin and cold. Nairobi is higher than Denver, nearly as high as Ciudad de Mexico, but it is only a fraction of the height of Mount Kenya and it is just a loud shout from the equator.

The air felt thick and too warm to breathe; almost at once my clothes were soggy with sweat; I could feel my feet starting to swell- and besides they ached from full gee. I don't like off-Earth assignments but getting back from one is worse.

I called on mind-control training to help me not notice my discomfort. Garbage. If my mind-control master had spent less time squatting in lotus and more time in Kenya, his instruction might have been more useful. I forgot it and concentrated on the problem: how to get out of this sauna bath quickly.

The lobby of the Hilton was pleasantly cool. Best of all, it held a fully automated travel bureau. I went in, found an empty booth, sat down in front of the terminal. At once the attendant showed up. "May I help you?"

I told her I thought I could manage; the keyboard looked familiar. (It was an ordinary Kensington 400.)

She persisted: "I'd be glad to punch it for you. I don't have anyone waiting." She looked about sixteen, a sweet face, a pleasant voice, and a manner that convinced me that she really did take pleasure in being helpful.

What I wanted least was someone helping me while I did things with credit cards that weren't mine. So I slipped her a medium-size tip while telling her that I really did prefer to punch it myself-but I would shout if I got into difficulties.

She protested that I did not have to tip her-but she did not insist on giving it back, and went away.

"Adolf Belsen" took the tube to Cairo, then semiballistic to Hong Kong, where he had reserved a room at the Peninsula, all courtesy of Diners Club.

"Albert Beaumont" was on vacation. He took Safari Jets to Timbuktu, where American Express had placed him for two weeks at the luxury Shangri-La on the shore of the Sahara Sea.

The Bank of Hong Kong paid "Arthur Bookman's" way to Buenos Aires.

"Archibald Buchanan" visited his native Edinburgh, travel prepaid by MasterCard. Since he could do it all by tube, with one transfer at Cairo and automated switching at Copenhagen, he should be at his ancestral home in two hours.

I then used the travel computer to make a number of inquiries- but no reservations, no purchases, and temporary memory only.

Satisfied, I left the booth, asked the dimpled attendant whether or not the subway entrance I saw in the lobby would let me reach the Fat Man restaurant.

She told me what turns to make. So I went down into the subway-and caught the tube for Mombasa, again paying cash.

Mombasa is only thirty minutes, 450 kilometers, from Nairobi, but it is at sea level, which makes Nairobi's climate seem heavenly; I got out as quickly as I could arrange it. So, twenty-seven hours later I was in the Illinois Province of the Chicago Imperium. A long time, you might say, for a great-circle arc of only thirteen thousand kilometers. But I didn't travel great circle and did not go through a customs barrier or an immigration checkpoint. Nor did I use a credit card, even a borrowed one. And I managed to grab seven hours of sleep in Alaska Free State; I hadn't had any sound sleep since leaving Ell-Five space city two days earlier.

How? Trade secret. I may never need that route again but someone in my line of work will need it. Besides, as my boss says, with all governments everywhere tightening down on everything wherever they can, with their computers and their Public Eyes and ninetynine other sorts of electronic surveillance, there is a moral obligation on each free person to fight back wherever possible-keep underground railways open, keep shades drawn, give misinformation to computers. Computers are literal-minded and stupid; electronic records aren't really records . . . so it is good to be alert to opportunities to foul up the system. If you can't evade a tax, pay a little too much to confuse their computers. Transpose digits. And so on. .

The key to traveling half around a planet without leaving tracks is:
Pay cash. Never credit, never anything that goes into a computer. And a bribe is never a bribe; any such transfer of valuta must save face for the recipient. No matter how lavishly overpaid, civil servants everywhere are convinced that they are horribly underpaid- but all public employees have larceny in their hearts or they wouldn't be feeding at the public

trough. These two facts are all you need-but be careful!-a public employee, having no self-respect, needs and demands a show of public respect.

I always pander to this need and the trip had been without incident. (I didn't count the fact that the Nairobi Hilton blew up and
burned a few minutes after I took the tube for Mombasa; it would have seemed downright paranoid to think that it had anything to do with me.)

I did get rid of four credit cards and a passport just after I heard about it but I had intended to take that precaution anyhow. If the opposition wanted to cancel me-possible but unlikely-it would be swatting a fly with an ax to destroy a multimillion-crown property and kill or injure hundreds or thousands of others just to get me. Unprofessional.

As may be. Here I was at last in the Imperium, another mission completed with only minor bobbles. I exited at Lincoln Meadows while musing that I had garnered enough brownie points to wheedle the boss out of a few weeks R&R in New Zealand. My family, a seven S-group, was in Christchurch; I had not seen them in months. High time!

But in the meantime I relished the cool clean air and the rustic beauty of Illinois-it was not South Island but it was the next best thing. They say these meadows used to be covered with dingy factories-it seems hard to believe. Today the only building in sight from the station was the Avis livery stable across the street.

At the hitching rail outside the station were two Avis RentaRigs as well as the usual buggies and farm wagons. I was about to pick one of the Avis nags when I recognized a rig just pulling in: a beautiful matched pair of bays hitched to a Lockheed landau. "Uncle Jim! Over here! It's me!"

The coachman touched his whip to the brim of his top hat, then brought his team to a halt so that the landau was at the steps where I waited. He climbed down and took off his hat. "It's good to have you home, Miss Friday."

I gave him a quick hug, which he endured patiently. Uncle Jim Prufit harbored strong notions of propriety. They say he was convicted of advocating papism-some said that he was actually caught bare-handed, celebrating mass. Others said nonsense, he was infiltrating for the company and took a fall to protect others. Me, I don't know that much about politics, but I suppose a priest would have formal manners, whether he was a real one or a member of our trade. I could be wrong; I don't think I've ever seen a priest.

As he handed me in, making me feel like a "lady," I asked, "How did you happen to be here?"

"The Master sent me to meet you, miss."

"He did? But I didn't let him know when I would arrive." I tried to think who, on my back track, could have been part of Boss's data net. "Sometimes I think the boss has a crystal ball."

"It do seem like it, don't it?" Jim clucked to Gog and Magog and we headed for the farm. I settled back and relaxed, listening to the homey, cheerful clomp clomp! of horses' hooves on dirt.

I woke up as Jim turned into our gate and was wide awake by the time he pulled under the porte-cochère. I jumped down without waiting to be a "lady" and turned to thank Jim.

They hit me from both sides.

Dear old Uncle Jim did not warn me. He simply watched while they took me.

II

My own stupid fault! I was taught in basic that no place is ever totally safe and that any place you habitually return to is your top danger spot, the place most likely for booby trap, ambush, stakeout.

But apparently I had learned this only as parrot rote; as an old pro I had ignored it. So it bit me.

This rule is analogous to the fact that the person most likely to murder you is some member of your own family-and that grim statistic is ignored too; it has to be. Live in fear of your own family? Better to be dead!

My worst stupidity was to ignore a loud, clear, specific warning, not just a general principle. How had dear old "Uncle" Jim managed to meet my capsule?-on the right day and almost to the minute. Crystal ball? Boss is smarter than the rest of us but he does not use magic. I may be wrong but I'm positive. If Boss had supernatural powers he would not need the rest of us.

I had not reported my movements to Boss; I didn't even tell him when I left Eli-Five. This is doctrine; he does not encourage us to check in every time we move, as he knows that a leak can be fatal.

Even I didn't know that I was going to take that particular capsule until I took it. I had ordered breakfast in Hotel Seward's coffee shop, stood up without eating it, dropped some money on the counter- three minutes later I was sealed into an express capsule. So how?

Obviously chopping off that tail at Kenya Beanstalk Station had not eliminated all tails on me. Either there had been a backup tail on the spot or Mr. "Belsen" ("Beaumont," "Bookman," "Buchanan") had been missed at once and replaced quickly. Possibly they had been with me all along or perhaps what had happened to "Belsen" had made them cautious about stepping on my heels. Or last night's sleep may have given them time to catch me.

Which variant was immaterial. Shortly after I climbed into that capsule in Alaska, someone had phoned a message somewhat like this: "Firefly to Dragonfly. Mosquito left here express capsule International Corridor nine minutes ago. Anchorage traffic control shows capsule programmed to sidetrack and open Lincoln Meadows your time eleven-oh-three." Or some such chatter. Some unfriendly had seen me enter that capsule and had phoned ahead; otherwise sweet old Jim would not have been able to meet me. Logic. Hindsight is wonderful-it shows you how you busted your skull after you've busted it.

But I made them pay for their drinks. If I had been smart, I would have surrendered once I saw that I was hopelessly outnumbered. But I'm not smart; I've already proved that. Better yet, I would have run like hell when Jim told me the boss had sent him . . instead of climbing in and taking a nap, fer Gossake.

I recall killing only one of them.

Possibly two. But why did they insist on doing it the hard way? They could have waited until I was inside and gassed me, or used a sleepy dart, or even a sticky rope. They had to take me alive, that was clear. Didn't they know that a field agent with my training when attacked goes automatically into overdrive? Maybe I'm not the only stupid.

But why waste time by raping me? This whole operation had amateurish touches. No professional group uses either beating or rape before interrogation today; there is no

profit in it; any professional is trained to cope with either or both. For rape she (or he-I hear it's worse for males) can either detach the mind and wait for it to be over, or (advanced training) emulate the ancient Chinese adage.

Or, in place of method A or B, or combined with B if the agent's histrionic ability is up to it, the victim can treat rape as an opportu
nity to gain an edge over her captors. I'm no great shakes as an actress but I try and, while it has never enabled me to turn the tables on unfriendlies, at least once it kept me alive.

This time method C did not affect the outcome but did cause a little healthy dissension. Four of them (my estimate from touch and body odors) had me in one of the upstairs bedrooms. It may have been my own room but I could not be certain as I had been unconscious for a while and was now dressed (solely) in adhesive tape over my eyes. They had me on a mattress on the floor, a gang bang with minor sadism. . . which I ignored, being very busy with method C.

In my mind I called them "Straw Boss" (seemed to be in charge), "Rocks" (they called him that-rocks in his head, probably), "Shorty" (take that either way), and "the other one" as he did not have distinctive characteristics.

I worked on all of them-method acting, of course-reluctant, have to be forced, then gradually your passion overcomes you; you just can't help yourself. Any man will believe that routine; they are suckers for it-but I worked especially hard on Straw Boss as I hoped to achieve the status of teacher's pet or some such. Straw Boss wasn't so bad; methods B and C combined nicely.

But I worked hardest on Rocks because with him it had to be C combined with A; his breath was so foul. He wasn't too clean in other ways, too; it took great effort to ignore it and make my responses flattering to his macho ego.

After he became flaccid he said, "Mac, we're wasting our time. This slut enjoys it."

"So get out of the way and give the kid another chance. He's ready."

"Not yet. I'm going to slap her around, make her take us seriously." He let me have a big one, left side of my face. I yelped.

"Cut that out!" -Straw Boss's voice.

"Who says so? Mac, you're getting too big for your britches."

"I say so." It was a new voice, very loud-amplified-from the sound-system speaker in the ceiling, no doubt. "Rocky, Mac is your squad leader, you know that. Mac, send Rocky to me; I want a word with him."

"Major, I was just trying to help!"

"You heard the man, Rocks," Straw Boss said quietly. "Grab your pants and get moving."

Suddenly the man's weight was no longer on me and his stinking breath was no longer in my face. Happiness is relative.

The voice in the ceiling spoke again: "Mac, is it true that Miss Friday simply enjoys the little ceremony we arranged for her?"

"It's possible, Major," Straw Boss said slowly. "She does act like it."

"How about it, Friday? Is this the way you get your kicks?"

I didn't answer his question. Instead I discussed him and his family in detail, with especial attention to his mother and sister. If I had told him the truth-that Straw Boss would be rather pleasant under other circumstances, that Shorty and the other man did not

matter one way or the other, but that Rocks was an utter slob whom I would cancel at the first opportunity-it would have blown method C.

"The same to you, sweetie," the voice answered cheerfully. "I hate to disappoint you but I'm a crèche baby. Not even a wife, much less a mother or a sister. Mac, put the cuffs on her and throw a blanket over her. But don't give her a shot; I'll be talking to her later."

Amateur. My boss would never have alerted a prisoner to expect interrogation.

"Hey, crèche baby!"

"Yes, dear?"

I accused him of a vice not requiring a mother or a sister but anatomically possible-so I am told-for some males. The voice answered, "Every night, hon. It's very soothing."

So mark one up for the Major. I decided that, with training, he could have been a pro. Nevertheless he was a bloody amateur and I didn't respect him. He had wasted one, maybe two, of his ables, caused me unnecessarily to suffer bruises, contusions, and multiple personal indignities-even heartbreaking ones had I been an untrained female-and had wasted two hours or more. If my boss had been doing it, the prisoner would have spilled his/her guts at once and spent those two hours spouting her fullest memoirs into a recorder.

Straw Boss even took the trouble to police me-led me into the bathroom and waited quietly while I peed, without making a production of it-and that was amateurish, too, as a useful technique, of the cumulative sort, in interrogating an amateur (not a pro) is to force him or her to break toilet training. If she has been protected from the harsher things in life or if he suffers from excessive amourpropre-as most males do-it is at least as effective as pain, and potentiates either with pain or with other humiliations.

I don't think Mac knew this. I figured him for basically a decent soul despite his taste for-no, aside from his taste for a bit of rape-a taste common to most males according to the kinseys.

Somebody had put the mattress back on the bed. Mac guided me to it, told me to lie on my back with my arms out. Then he cuffed me to the legs of the bed, using two pairs. They weren't the peaceofficer type, but special ones, velvet-lined-the sort of junk used by idiots for SM games. I wondered who the pervert was? The Major?

Mac made sure that they were secure but not too tight, then gently spread a blanket over me. I would not have been surprised had he kissed me good-night. But he did not. He left quietly.

Had he kissed me would method C call for returning it in full? Or turning my face and trying to refuse it? A nice question. Method C is based on I-just-can't-help-myself and requires precise judgment as to when and how much enthusiasm to show. If the rapist suspects the victim of faking, she has lost the ploy.

I had just decided, somewhat regretfully, that this hypothetical kiss should have been refused, when I fell asleep.

I was not allowed enough sleep. I was exhausted from all the things that had happened to me and had sunk into deep sleep, soggy with it, when I was roused by a slap. Not Mac. Rocks, of course. Not as hard as he had hit me earlier but totally unnecessary. It seemed

to me that he blamed me for whatever disciplining he had received from the Major. . . and I promised myself that, when time came to cancel him, I would do it slowly.

I heard Shorty say, "Mac said not to hit her."

"I didn't hit her. That was just a love tap to wake her up. Shut up and mind your own business. Stand clear and keep your gun on her. On her, you idiot!-not on me."

They took me down into the basement and into one of our own interrogation chambers. Shorty and Rocks left-I think that Shorty left and I know that Rocks did; his stink went away-afid an interrogation team took over. I don't know who or how many as not one of them ever said a word. The only voice was the one I thought of as "the Major." It seemed to be coming through a speaker.

"Good morning, Miss Friday."

(Morning? It seemed unlikely.) "Howdy, crèche baby!"

"I'm glad that you are in fine fettle, dear, as this session is likely to prove long and tiring. Even unpleasant. I want to know all about you, love."

"Fire away. What will you have first?"

"Tell me about this trip you just made, every tiny detail. And outline this organization you belong to. I might as well tell you that we already know a great deal about it, so if you lie, I will know it. Not even a little white fib, dear-for I will know it and what happens then I will regret but you will regret it far more."

"Oh, I won't lie to you. Is a recorder running? This will take a long time."

"A recorder is running."

"Okay." For three hours I spilled my guts.

This was according to doctrine. My boss knows that ninety-nine out of a hundred will crack under sufficient pain, that almost that percentage will crack under long interrogation combined with nothing more than raw fatigue, but only Buddha Himself can resist certain drugs. Since he does not expect miracles and hates to waste agents, standard doctrine is: "If they grab you, sing!"

So he makes sure that a field operative never knows anything critical. A courier never knows what she is carrying. I know nothing about policy. I don't know my boss's name. I'm not sure whether we are a government agency or an arm of one of the multinationals. I do know where the farm is but so do many other people. . . and it is (was) very well defended. Other places I have visited only via closed authorized power vehicles-an APV took me (for example) to a practice area that may be the far end of the farm. Or not.

"Major, how did you crack this place? It was pretty strongly defended."

"I ask the questions, bright eyes. Let's have that part again about how you were followed out of the Beanstalk capsule."

After a long time of this, when I had told all I knew and was repeating myself, the Major stopped me. "Dear, you tell a very convincing story and I don't believe more than every third word. Let's start procedure B."

Somebody grabbed my left arm and a needle went in. Babble juice! I hoped these frimping amateurs weren't as clumsy with it as they were in some other ways; you can get very dead in a hurry with an overdose. "Major! I had better sit down!"

"Put her in a chair." Somebody did so.

For the next thousand years I did my best to tell exactly the same story no matter how bleary I felt. At some point I fell off the chair. They didn't stick me back onto it but stretched me on the cold concrete instead. I went on babbling.

Some silly time later I was given some other shot. It made my teeth ache and my eyeballs felt hot but it snapped me awake. "Miss Friday!"

"Yes, sir?"

"Are you awake now?"

"I think so."

"My dear, I think you have been most carefully indoctrinated under hypnosis to tell the same story under drugs that you tell so well without drugs. That's too bad as I must now use another method. Can you stand up?"

"I think so. I can try."

"Stand her up. Don't let her fall." Someone-some two-did so. I wasn't steady but they held me. "Start procedure C, item five."

Someone stomped a heavy boot on my bare toes. I screamed.

Look, you! If you are ever questioned under pain, do scream. The Iron Man routine just makes them worse and it worse. Take it from one who's been there. Scream your head off and crack as fast as possible.

I am not going to give details of what happened during the following endless time. If you have any imagination, it would nauseate you, and to tell it makes me want to throw up. I did, several times. I passed out, too, but they kept reviving me and the voice kept on asking questions.

Apparently the time came when reviving didn't work, for the next thing I knew I was back in bed-the same bed, I suppose-and again handcuffed to it. I hurt all over.

That voice again, right above my head. "Miss Friday."

"What the hell do you want?"

"Nothing. If it's any consolation to you, dear girl, you are the only subject I have ever questioned that I could not get the truth out of, eventually."

"Go soothe yourself!"

"Good night, dear."

The bloody amateur! Every word I had said to him was the naked truth.

III

Someone came in and gave me another hypodermic shot. Presently the pain went away and I slept.

I think I slept a long time. I either had confused dreams or halfawake periods or both. Some of it had to be dreams-dogs do talk, many of them, but they don't lecture on the rights of living artifacts, do they? Sounds of a ruckus and people running up and down may have been real. But it felt like a nightmare because I tried to get out of bed and discovered that I couldn't lift my head, much less get up and join the fun.

There came a time when I decided that I really was awake, because cuffs no longer bothered my wrists and sticky tape was no longer across my eyes. But I didn't jump up or even open my eyes. I knew that the first few seconds after I opened my eyes might be the best and possibly the only chance I would have to escape.

I twitched muscles without moving. Everything seemed to be under control although I was more than a little sore here and there and several other places. Clothes? Forget them-not only did I have no idea where my clothes might be hut also there is no time to stop to dress when you are running for your life.

Now to plan- There didn't seem to be anyone in this room; was anyone on this floor? Hold still and listen, If and when I was fairly sure I was alone on this floor, get noiselessly out of bed and up the stairs like a mouse, on past the third floor into the attic, and hide.

Wait for dark. Out an attic gable, down the roof and the back wall and into the woods. If I reached the woods back of the house, they would never catch me . . . but until I did, I would be an easy target.

The chances? One in nine. Perhaps one in seven if I got really cranked up. The weakest spot in a poor plan was the high probability of being spotted before I was clear of the house . . . because, if I was spotted-no, when I was spotted-I would not only have to kill but I would have to be utterly quiet in doing so-

-because the alternative was to wait until they terminated me which would be shortly after "the Major" decided that there was no more to be squeezed out of me. Clumsy as these goons were, they were not so stupid-or the Major was not so stupid-as to let a witness who has been tortured and raped stay alive.

I stretched my ears in all directions and listened.

"Nothing was stirring, not even a mouse." No point in waiting; every moment I delayed brought that much closer the time when someone would be stirring. I opened my eyes.

"Awake, I see. Good."

"Boss! Where am I?"

"What a time-ridden cliché. Friday, you can do better than that. Back up and try again."

I looked around me. A bedroom, possibly a hospital room. No windows. No-glare lighting. A characteristic gravelike silence enhanced rather than broken by the softest of ventilation sighing.

I looked back at Boss. He was a welcome sight. Same old unstyiish eye patch-why wouldn't he take time to have that eye regenerated? His canes were leaning against a table, in reach. He was wearing his usual sloppy raw-silk suit, a cut that looked like badly tailored pajamas. I was awfully glad to see him.

"I still want to know where I am. And how. And why. Somewhere underground, surely-but where?"

"Underground, surely, quite a few meters. 'Where' you will be told when you need to know, or at least how to get to and from. That was the shortcoming of our farm-a pleasant place but too many people knew its location. 'Why' is obvious. 'How' can wait. Report."

"Boss, you are the most exasperating man I have ever met."

"Long practice. Report."

"And your father met your mother at a swing ding. And he didn't take off his hat."

"They met at a Baptist Sunday-school picnic and both of them believed in the Tooth Fairy. Report."

"Dirty ears. Snot. The trip to Eli-Five was without incident. I found Mr. Mortenson and delivered to him the contents of my trick bellybutton. Routine was interrupted by a most unusual factor: The space city was experiencing an epidemic of respiratory disorder, etiology unknown, and I contracted it. Mr. Mortenson was most kind; he kept me at home and his wives nursed me with great skill and tender loving care. Boss, I want them compensated."

"Noted. Continue."

"I was out of my silly head most of the time. That is why I ran a week behind schedule. But once I felt like traveling I was able to leave at once as Mr. Mortenson told me that I was already carrying the item he had for you. How, Boss? My navel pouch again?"

"Yes and no."

"That's a hell of an answer!"

"Your artificial pochette was used."

"I thought so. Despite the fact that there aren't supposed to be any nerve endings there, I can feel something-pressure, maybe-when it's loaded."

I pressed on my belly around my navel and tightened my belly muscles. "Hey, it's empty! You unloaded it?"

"No. Our antagonists did so."

"Then I failed! Oh, God, Boss, this is awful."

"No," he said gently, "you succeeded. In the face of great danger and monumental obstacles you succeeded perfectly."

"I did?" (Ever had the Victoria Cross pinned on you?) "Boss, cut the double talk and draw me a diagram."

"I will."

But maybe I had better draw a diagram first. I have a 'possum pouch, created by plastic surgery, behind my bellybutton. It isn't large but you can crowd one whale of a lot of microfilm into a space of about one cubic centimeter. You can't see it because the sphinc
ter valve that serves it holds the navel scar closed. My bellybutton looks normal. Unbiased judges tell me that I have a pretty belly and a sightly navel . . . which, in some important ways, i~ better than having a pretty face, which I don't have.

The sphincter is a synthetic silicone elastomer that holds the navel tight at all times, even if I am unconscious. This is necessary as there are no nerves there to give voluntary control of contraction and relaxation, such as is possible with the anal, vaginal, and-for some people-throat sphincters. To load the pouch use a dab of K-Y jelly or other nonpetroleum lubricant, and push it in by thumb- no sharp corners, please! To unload it I take the fingers of both hands and pull the artificial sphincter open as much as I can, then press hard with my abdominal muscles-and it pops right out.

The art of smuggling things in the human body has a long history. The classic ways are in the mouth, in the nasal sinuses, in the stomach, the gut, the rectum, vagina, bladder, eye socket of a missing eye, ear canal, and exotic and not very useful methods using tattoos sometimes covered with hair.

Every one of the classic ways is known to every customs officer and every special agent public or private the world round, Luna, space cities, other planets, and anywhere men have reached. So forget them. The only classic method that can still beat a pro is the

Purloined Letter. But the Purloined Letter is high art indeed and, even when used perfectly, it should be planted on an innocent who can't give it away under drugs.

Take a look at the next thousand bellybuttons you encounter socially. Now that my pouch has been compromised, it is possible that one or two will conceal surgically emplaced hideaways like mine. You can expect a spate of them soon, then no more will be emplaced as any novelty in smuggling becomes useless once the word gets around. In the meantime customs officers are going to be poking rude fingers into bellybuttons. I hope a lot of those officers get poked in the eye by angry victims-navels tend to be sensitive and ticklish.

"Friday, the weak point of that pochette in you has always been that any skillful interrogation-"

"They were clumsy."

"-or rough interrogation using drugs could force you to mention its existence."

"Must have been after they shot me with babble juice. I don't recall mentioning it."

"Probably. Or word may have come to them through other channels, as several people know of it-you, me, three nurses, two surgeons, one anesthesiologist, possibly others. Too many. No matter how our antagonists knew, they did remove what you were carrying there. But don't look glum; what they received was a very long list reduced to microfilm of all the restaurants listed in a 1928 telephone book of the former city of New York. No doubt there is a computer somewhere working on this list right now, attempting to break the code concealed in it . . . which will take a long time as there is no code concealed in it. A dummy load. Sense-free."

"And for this I have to chase all the way to Eli-Five, eat scummy food, get sick on the Beanstalk, and be buggered about by brutal bastards!"

"Sorry about the last, Friday. But do you think I would risk the life of my most skillful agent on a useless mission?"

(See why I work for the arrogant bastard? Flattery will get you anywhere.) "Sorry, sir."

"Check your appendectomy scar."

"Huh?" I reached under the sheet and felt it, then flipped the sheet back and looked at it. "What the hell?"

"The incision was less than two centimeters and straight through the scar; no muscle tissue was disturbed. The item was withdrawn about twenty-four hours ago by reopening the same incision. With the accelerated repair methods that were used on you I am told that in two more days you will not be able to find the new scar in the old. But I am very glad that the Mortensons took such good care of you as I am sure that the artificial symptoms induced in you to cover what had to be done to you were not pleasant. By the way, there really is a catarrhal-fever epidemic there-fortuitous window dressing."

Boss paused. I stubbornly refused to ask him what I was carrying-he would not have told me anyhow. Shortly he added, "You were telling me about your trip home."

"The trip down was without incident. Boss, the next time you send me into space I want to go first-class, in an antigrav ship. Not via that silly Indian rope trick." -

"Engineering analysis shows that a skyhook is safer than any ship. The Quito cable was lost through sabotage, not materiel failure."

"Stingy."

"I don't intend to bind the mouths of the kine. You may use antigray from here on if circumstances and timing permit. This time there were reasons to use the Kenya Beanstalk."

"Maybe so, but someone tailed me out of the Beanstalk capsule. As soon as we were alone, I killed him."

I paused. Someday, someday, I am going to cause his face to register surprise. I retackled the subject diagonally:

"Boss, I need a refresher course, with some careful reorientation."

"Really? To what end?"

"My kill reflex is too fast. I don't discriminate. That bloke hadn't done anything to rate killing. Surely, he was tailing me. But I should either have shaken him, there or in Nairobi, or, at most, knocked him cold and placed him on ice while I went elsewhere."

"We'll discuss your possible need later. Continue."

I told him about the Public Eye and "Belsen's" quadruple identity and how I had sent them to the four winds, then I outlined my trip home. He checked me. "You did not mention the destruction of that hotel in Nairobi."

"Huh? But, Boss, that had nothing to do with me. I was halfway to Mombasa."

"My dear Friday, you are too modest. A large number of people and a huge amount of money have gone into trying to keep you from completing your mission, including a last-ditch attempt at our former farm. You may assume, as least hypothesis, that the bombing of the Hilton had as its sole purpose killing you."

"Hmm. Boss, apparently you knew that it would be this rough. Couldn't you have warned me?"

"Would you have been more alert, more resolute, had I filled your mind with vague warnings of unknown dangers? Woman, you made no mistakes."

"The hell I didn't! Uncle Jim met my capsule when he should not have known the time I would arrive; that should have set off every alarm in my head. The instant I laid eyes on him I should have dived back down the hole and taken any capsule anywhere."

"Whereupon it would have become extremely difficult for us to achieve rendezvous, which would have aborted your mission as thoroughly as losing what you carried. My child, if affairs had gone smoothly, Jim would have met you at my behest; you underestimate my intelligence net as well as the effort we put into trying to watch over you. But I did not send Jim to get you because at that moment I was running. Hobbling, to be precise. Hurrying. Trying to escape. I assume that Jim took the ETA message himself-from our man, or that of our antagonists, or possibly from both."

"Boss, if I had known it at the time, I would have fed Jim to his horses. I was fond of him. When the time comes, I want to cancel him myself. He's mine."

"Friday, in our profession it is undesirable to hold grudges."

"I don't hold many but Uncle Jim is special. And there is another case I want to handle myself. But I'll argue with you later. Say, is it true that Uncle Jim used to be a papist priest?"

Boss almost looked surprised. "Where did you hear that nonsense?"

"Around and about. Gossip."

'Human, All Too Human.' Gossip is a vice. Let me settle it. Prufit was a con man. I met him in prison, where he did something for me, important enough that I made a

place for him in our organization. My mistake. My inexcusable mistake, as a con man never stops being a con man; he can't. But I suffered from a will to believe, a defect of character that I thought I had rooted out. I was mistaken. Continue, please."

I told Boss how they had grabbed me. "Five of them, I think. Possibly only four."

"Six, I believe. Descriptions."

"None, Boss, I was too busy. Well, one. I had one sharp look at him just as I killed him. About a hundred and seventy-five tall, weight around seventy-five or -six. Age near thirty-five. Blondish, smooth-shaven. Slavic. But he was the only one my eye photographed. Because he held still. Involuntarily. As his neck snapped."

"You never do." "Was the other one you killed blond or brunet?"

'Belsen'? Brunet."

"No, at the farm. Never mind. You killed two and injured three before they piled enough bodies on you to hold you down by sheer weight. A credit to your instructor, let me add. In escaping, we had not been able to thin them down enough to keep them from taking you. . . but, in my opinion, you won the battle in which we recaptured you by your having earlier taken out so many of their effectives. Even though you were chained up and unconscious at the time, you won the final fracas. Go on, please."

"That about wraps it up, Boss. A gang rape next, followed by interrogation, direct, then under drugs, then under pain."

"I'm sorry about the rape, Friday. The usual bonuses. You will find them enhanced as I judge the circumstances to have been unusually offensive."

"Oh, not that bad. I'm hardly a twittering virgin. I can recall social occasions that were almost as unpleasant. Except one man. I don't know his face but I can identify him. I want him! I want him as badly as I want Uncle Jim. Worse, maybe, as I want to punish him a bit before I let him die."

"I can only repeat what I said earlier. For us, personal grudges are a mistake. They reduce survival probability."

"I'll risk it for this bucko. Boss, I don't hold the rape qua rape against him; they were ordered to rape me under the silly theory that it would soften me up for interrogation. But the scum should bathe and he should have his teeth fixed and he should brush them and use a mouthwash. And somebody must tell him that it is not polite to slap a woman with whom he is copulated. I don't know his face but I know his voice and his odor and his build and his nickname. Rocks or Rocky."

"Jeremy Rockford."

"Huh? You know him? Where is he?"

"I once knew him and I recently had one clear look at him, enough to be sure. Requiescat in pace."

"Really? Oh, hell. I hope he didn't die quietly."

"He did not die quietly. Friday, I have not told you all that I know-"

"-because I wanted your report first. Their assault on the farm succeeded because Jim Prufit had cut all power just before they hit us. This left us nothing but hand weapons for the few who wear arms at the farm, only bare hands for most of us. I ordered evacuation and most of us escaped through a tunnel prepared and concealed when the house was rebuilt. I am sorry and proud to say that three of our best, the three who were armed when we were hit, elected to play Horatius at the bridge. I know that they died as I

kept the tunnel open until I could tell by the sounds that it had been entered by the raiders. Then I blasted it.

"It took some hours to round up enough people and to mount our counterattack, especially in arranging for enough authorized power vehicles. While we conceivably could have attacked on foot, we had to have at least one APV as ambulance for you."

"How did you know I was alive?"

"The same way I knew that the escape tunnel had been entered and not by our rear guard. Remote pickups. Friday, everything that was done to you and by you, everything you said and was said to you, was monitored and recorded. I was unable to monitor in person-busy preparing the counterattack-but the essential parts were played for me as time permitted. Let me add that I am proud of you.

"By knowing which pickups recorded what, we knew where they were holding you, the fact that you were cuffed, how many were in the house, where they were, when they settled down, and who stayed awake. By relay to the command APV I knew the situation in the house right to the moment of attack. We hit- They hit, I mean-our people hit. I don't lead attacks hobbling on these two sticks; I wield the baton. Our people hit the house, were inside, the designated four picked you up-one armed only with a bolt cutter-and all were out in three minutes eleven seconds. Then we set fire to it."

"Boss! Your lovely farmhouse?"

"When a ship is sinking, one does not worry about the diningroom linens. We can never use the farm again. Burning the house destroyed many awkward records and many secret and quasi-secret items of equipment. But, most compelling, burning the house gave us a quick cleanup of the parties who had compromised its secrets.
Our cordon was in place before we used incendiaries, then each one was shot as he attempted to come out.

"That was when I saw your acquaintance Jeremy Rockford. He was burned in the leg as he came out the east door. He stumbled back in, changed his mind and tried again to escape, fell and was trapped. From the sounds he made I can assure you that he did not die quietly."

"Ugh. Boss, when I said that I wanted to punish him before I killed him, I didn't mean anything as horrible as burning him to death."

"Had he not behaved like a horse running back into a burning barn, he would have died as the others did . . . quickly, from laser beam. Shot on sight, for we took no prisoners."

"Not even for interrogation?"

"Not correct doctrine, I so stipulate. But, Friday my dear, you are unaware of the emotional atmosphere. All had heard the tapes, at least of the rape and of your third interrogation, the torture. Our lads and lassies would not have taken prisoners even if I had so ordered. But I did not attempt to. I want you to know that you are held in high esteem by your colleagues. Including the many who have never met you and whom you are unlikely ever to meet."

Boss reached for his canes, struggled to his feet. "I'm seven minutes over the time your physician told me I could visit. We'll talk tomorrow. You are to rest now. A nurse will be in to put you to sleep. Sleep and get well."

I had a few minutes to myself~ I spent them in a warm glow. "High esteem." When you have never belonged and can never really belong, words like that mean everything. They warmed me so much that I didn't mind not being human.

IV

Someday I'm going to win an argument with Boss. But don't hold your breath.

There were days when I did not lose arguments with him-the days he did not visit me.

It started with a difference of opinion over how long I was going to have to remain in therapy. I felt ready to go home or back to duty, either one, after four days. While I didn't want to get into a dockside fight just yet, I could take light duty-or a trip to New Zealand, my first choice. All my hurts were repairing.

They hadn't been all that much: lots of burns, four broken ribs, simple fractures left tibia and fibula, multiple compound fractures of the bones of my right foot and three toes of my left, a hairline skull fracture without complications, and (messy but least disabling) somebody had sawed off my right nipple.

The last item and the burns and the broken toes were all that I recalled; the others must have happened while I was distracted by other matters.

Boss said, "Friday, you know that it will take at least six weeks to regenerate that missing nipple."

"But plastic surgery for a simple cosmetic job would heal in a week. Dr. Krasny told me so."

"Young woman, when anyone in this organization is maimed in line of duty, she will be restored as perfectly as therapeutic art can achieve. In addition to that our permanent policy, in your case
there is another reason, compelling and sufficient. We each have a moral obligation to conserve and preserve beauty in this world; there is none to waste. You have an unusually comely body~ damage to it is deplorable. It must be repaired."

"Cosmetic surgery is all right, I said so. But I don't expect to have milk in these jugs. And anybody in bed with me won't care."

"Friday, you may have convinced yourself that you will never have need to lactate. But esthetically a functional breast is very different from a surgery-shaped imitation. That hypothetical bedmate might not know . . . but you would know and I would know. No, my dear. You will be restored to your former perfection."

"Hmm! When are you going to get that eye regenerated?"

"Don't be rude, child. In my case, no esthetic issue obtains."

So I got my tit back as good as ever or maybe better. The next argument was over the retraining I felt I needed to correct my hairtrigger kill reflex. When I brought up the matter again, Boss looked as if he had just bitten into something nasty. "Friday, I do not recall that you have ever made a kill that turned out to be a mistake. Have you made any kills of which I am unaware?"

"No, no," I said hastily. "I never killed anybody until I went to work for you and I haven't made any that I didn't report to you."

"In that case all of your killings have been in self-defense."

"All but that 'Belsen' character. That wasn't self-defense; he never laid a finger on me."

"Beaumont. At least that was the name he usually used. Self-defense sometimes must take the form of 'Do unto others what they would do unto you but do it first.' De Camp, I believe. Or some other of the twentieth-century school of pessimistic philosophers. I'll call up Beaumont's dossier so that you may see for yourself that he belonged on everyone's better-dead list."

"Don't bother. Once I looked into his pouch, I knew that he wasn't following me to kiss me. But that was afterward."

Boss took several seconds to answer, far beyond his wont. "Friday, do you want to change tracks and become a hatchet man?"

My chin dropped and my eyes widened. That was all the answer I made.

"I didn't intend to frighten you off the nest," Boss said dryly. "You will have deduced that this organization includes assassins. I don't want to lose you as a courier; you are my best. But we always need skilled assassins, as their attrition rate is high. However, there is this major difference between a courier and an assassin: A courier kills only in self-defense and often by reflex . . . and, I concede, always with some possibility of error . . . as not all couriers have your supreme talent for instantly integrating all factors and reaching a necessary conclusion."

"Huh!"

"You heard me correctly. Friday, one of your weaknesses is that you lack appropriate conceit. An honorable hatchet man does not kill by reflex; he kills by planned intent. If the plan goes so far wrong that he needs to use self-defense, he is almost certain to become a statistic. In his planned killings, he always knows why and agrees with the necessity . . . or I won't send him out."

(Planned killing? Murder, by definition. Get up in the morning, eat a hearty breakfast, then keep rendezvous with your victim, cut him down in cold blood? Eat dinner and sleep soundly?) "Boss, I don't think it is my sort of work."

"I'm not sure that you have the temperament for it. But, for the nonce, keep an open mind. I am not sanguine about the possibility of slowing down your defense reflex. Moreover I can assure you that, if we attempt to retrain you in the way that you ask, I will not again use you as a courier. No. Risking your life is your business

when on your own time. But your missions are always critical; I won't use a courier whose fine edge has been deliberately blunted."

Boss did not convince me but he made me unsure of myself. When I told him again that I was not interested in becoming a hatchet man, he did not appear to listen-just said something about getting me something to read.

I expected it-whatever-to show up on the room's terminal. Instead, about twenty minutes after he left me, a youngster-well, younger than I am-showed up with a book, a bound book with paper pages. It had a serial number on it and was stamped "EYES ONLY" and "Need-to-Know Required" and "Top Secret SPECIAL BLUE Clearance."

I looked at it, as anxious to handle it as a snake. "Is this for me? I think there has been a mistake."

"The Old Man does not make mistakes. Just sign the receipt."

I made him wait while I read the fine print. "This bit about 'never out of my sight.' I sleep now and then."

"Call Archives, ask for the classified documents clerk-that's me-and I'll be here on the bounce. But try not to go to sleep until I get here. Try hard."

"Okay." I signed the receipt, looked up and found him staring with bright-eyed interest. "What are you staring at?"

"Uh- Miss Friday, you're pretty."

I never know what to say to that sort of thing, since I'm not. I shape up all right, surely-but I was fully clothed. "How did you know my name?"

"Why, everybody knows who you are. You know. Two weeks ago. At the farm. You were there."

"Oh. Yes, I was there. But I don't remember it."

"I sure do!" His eyes were shining. "It's the only time I've had a chance to be part of a combat operation. I'm glad I had a piece of it!"

(What do you do?)

I took his hand, pulled him closer to me, took his face in both my hands, kissed him carefully, about halfway between warm-sisterly and let's-do-it! Maybe protocol called for something stronger but he was on duty and I was still on the disabled list-not fair to make implied promises that can't be kept, especially to youngsters with stars in their eyes.

"Thank you for rescuing me," I said to him soberly before letting go of his cheeks.

The dear thing blushed. But he seemed very pleased.

I stayed up so late reading that book that the night nurse scolded me. However, nurses need something to scold about now and then. I'm not going to quote from the incredible document. . . but listen to these subjects:

Title first: The Only Deadly Weapon. Then- Assassination as a Fine Art

Assassination as a Political Tool

Assassination for Profit

Assassins Who Changed History

The Society for Creative Euthanasia

The Canons of the Professional Assassins Guild

Amateur Assassins: Should They Be Exterminated?

Honorable Hatchet Men-Some Case Histories

"Extreme Prejudice"-"Wet Work"-Are Euphemisms Necessary?

Seminar Working Papers: Techniques & Tools

Whew! There was no good reason for my reading all of it. But I did. It had an unholy fascination. Dirty.

I resolved never to mention the possibility of changing tracks and not to bring up retraining again. Let Boss bring it up himself if he wanted to discuss it. I punched the terminal, got Archives, and stated that I needed the classified documents clerk to accept custody of classified item number such-and-such and please bring my receipt. "Right away, Miss Friday," a woman answered.

Notoriety- I waited with considerable unease for that youngster to show up. I am ashamed to say that this poisonous book had had a most unfortunate effect on me. It was the middle of the night, early morning; the place was dead quiet-and if the dear thing laid a hand on me, I was awfully likely to forget that I was technically an invalid. I needed a chastity girdle with a big padlock.

But it was not he; the sweet youngster had gone off duty. The person who showed up with my receipt was the older woman who had answered me on the terminal. I felt both relief and disappointment-and chagrin that I felt disappointed. Does convalescence make everybody irresponsibly horny? Do hospitals have a discipline problem? I have not been ill often enough to know.

The night clerk swapped my receipt for the book, then surprised me with: "Don't I get a kiss, too?"

"Oh! Were you there?"

"Any warm body, dear; we were awfully short of effectives that night. I'm not the world's greatest but I had basic training like anyone else. Yes, I was there. Wouldn't have missed it."

I said, "Thank you for rescuing me," and kissed her. I tried to make this simply a symbol, but she took charge and controlled what sort of a buss it would be. Rough and rugged, namely. She was telling me clearer than words that anytime I wanted to work the other side of the street, she would be waiting.

What do you do? There seem to be human situations for which there are no established protocols. I had just acknowledged that she had risked her life to save mine-precisely that, as that rescue raid was not the piece of cake that Boss's account made it appear to be. Boss's habitual understatement is such that he would describe the total destruction of Seattle as "a seismic disturbance." Having thanked her for my life how could I snub her?

I could not. I let my half of the kiss answer her wordless message-with my fingers crossed that I would never have to keep the implied promise.

Presently she broke the kiss but remained holding on to me. "Dearie," she said, "want to know something? Do you remember how you told off that slob they called the Major?"

"I remember."

"There is a bootleg piece of tape floating around of that one sequence. What you said to him and how you said it is highly admired by one and all. Especially me."

"That's interesting. Are you the little gremlin who copied that piece of tape?"

"Why, how could you think such a thing?" She grinned. "Do you mind?"

I thought it over for all of three milliseconds. "No. If the people who rescued me enjoy hearing what I told that bastard, I don't mind their listening to it. But I don't talk that way ordinarily."

"Nobody thinks you do." She gave me a quick peck. "But you did so when it was needed and you made every woman in the company proud of you. And our men, too."

She didn't seem disposed to let go of me but the night nurse showed up then and told me firmly to go to bed and she was going to give me a sleepytime shot-I made only the usual formal protest. The clerk said, "Hi, Goldie. Night. Night, dear." She left.

Goldie (not her name-bottle blonde) said, "Want it in your arm? Or in your leg? Don't mind Anna; she's harmless."

"She's all right." It occurred to me that Goldie probably could monitor both sight and sound. Probably? Certainly! "Were you there? At the farm? When the house was burned?"

"Not while the house was burning. I was in an APV, taking you here as fast as we could float it. You were a sad sight, Miss Friday."

"I'll bet I was. Thanks. Goldie? Will you kiss me good-night?"

Her kiss was warm and undemanding.

I found out later that she was one of the four who made the run upstairs to grab me back-one man carrying big bolt cutters, two armed and firing. . . and Goldie carrying unassisted a stretcher basket. But she never mentioned it, then or later.

I remember that convalescence as the first time in my life-except for vacations in Christchurch-when I was quietly, warmly happy, every day, every night. Why? Because I belonged!

Of course, as anyone could guess from this account, I had passed years earlier. I no longer carried an ID with a big "LA" (or even "AP") printed across it. I could walk into a washroom and not be told to use the end stall. But a phony ID and a fake family tree do not keep you warm; they just keep you from being hassled and discriminated against. You are still aware that there isn't any nation anywhere that considers your sort fit for citizenship and there are lots of places that would deport you or even kill you-or sell you-if your cover-up ever slipped.

An artificial person misses not having a family tree much more than you might think. Where were you born? Well, I wasn't born, exactly; I was designed in Tri-University Life Engineering Laboratory, Detroit. Oh, really? My inception was formulated by Mendelian Associates, Zurich. Wonderful small talk, that! You'll never hear it; it does not stand up well against ancestors on the Mayflower or in the Domesday Book. My records (or one set) show that I was "born" in Seattle, a destroyed city being a swell place for missing records. A great place to lose your next of kin, too.

Since I was never in Seattle I have studied very carefully all the records and pictures I could find; an honest-to-goodness native of Seattle can't trip me. I think. Or not yet.

But what they gave me while I was recovering from that silly rape and the not-so-funny interrogation was not phony at all and I did not have to worry about keeping my lies straight. Not just Goldie and Anna and the youngster (Terence) but over two dozen more before Dr. Krasny discharged me. Those were just the ones I came into contact with. There were more on that raid; I don't know how many. Boss's standing doctrine kept members of his organization from meeting each other save when their duties necessarily brought them together. Just as he firmly snubbed questions. You cannot let slip secrets you do not know, and you cannot betray a person whose very existence is unknown to you.

But Boss did not have rules just for the sake of rules. Once having met a colleague through duty one could continue the contact socially. Boss did not encourage such fraternizing but he was no fool and did not try to forbid it. In consequence Anna often called on me in the late evening just before she went on duty.

She never did try to collect her pound of flesh. There wasn't much opportunity but we could have found one if we had tried. I didn't try to discourage her-hell, no; if she had ever presented the bill for collection, I would not only have paid cheerfully but would have tried to convince her that it was my idea in the first place.

But she didn't. I think she was like the sensitive (and fairly rare) male who never paws a woman when she doesn't want to be pawed-he can sense it and doesn't start.

One evening shortly before my discharge I was feeling especially happy-I had acquired two new friends that day; "kissing friends," persons who had fought in the raid that saved me-and I tried to explain to Anna why it meant so much to me and found that I was starting to tell her how I was not quite what I seemed to be.

She stopped me. "Friday dear, listen to your big sister."

"Huh? Did I goof?"

"Maybe you were about to. 'Member the night we met, you returned through me a classified document? I have supreme top-secret clearance awarded to me by Mr. Two-Canes years back. That book you returned is where I can get at it anytime. But I have never opened it and never will. The cover says 'Need to Know' and I have never been told that I have need to know. You've read it but I don't know even the title or the subject-just its number.

"Personnel matters are like that. There used to be an elite military outfit, a foreign legion, that boasted that a legionnaire had no history before the day of his enlistment. Mr. Two-Canes wants us to be like that. For example, if we were to recruit a living artifact, an artificial person, the personnel clerk would know it. I know, as I used to be personnel clerk. Records to forge, possibly some plastic surgery needed, in some cases laboratory identifications to excise and then regenerate the area. .

"When we got through with him, he would never again have to worry about a tap on the shoulder or being elbowed out of a queue. He could even marry and have children without worrying that someday it might cause trouble for his kids. He wouldn't have to worry about me, either, as I have a trained forgettery. Now, dear, I don't know what you had on your mind. But, if it is something you don't ordinarily tell people, don't tell me. Or you'll hate yourself in the morning."

"No, I wouldn't!"

"All right. If you still want to tell me a week from now, I'll listen. A deal?"

Anna was right; a week later I felt no need to tell her. I'm 99 percent certain that she knew. Either way, it's swell to be loved for yourself alone, by somebody who doesn't think that APs are monsters, subhuman.

I don't know that any of the rest of my loving friends knew or guessed. (I don't mean Boss; he knew, of course. But he wasn't a friend; he was Boss.) It did not matter if my new friends learned that I wasn't human; because I had come to realize that they either didn't care or wouldn't care. All that mattered to them was whether or not you were part of Boss's outfit.

One evening Boss showed up, tapping his canes and whuffling, with Goldie trailing him. He settled heavily into the visitor's chair, said to Goldie, "I won't need you, nurse. Thank you"-then to me, "Take off your clothes."

From any other man that would be either offensive or welcome, depending. From Boss it merely meant that he wanted my clothes off. Goldie took it that way, too, as she simply nodded and left-and Goldie is the sort of professional who would buck Siva the Destroyer if He attempted to interfere with one of her patients.

I took my clothes off quickly and waited. He looked me up and down. "They again match."

"Seems so to me."

"Dr. Krasny says that he ran a test for lactation function. Positive.

"Yes. He pulled some stunt with my hormone balance and both of them leaked a little. Felt funny. Then he rebalanced and I dried up.

Boss grunted. "Turn around. Show me the sole of your right foot. Now your left. Enough. Burn scars seem to be gone."

"All that I can see. Doctor tells me the others have regenerated, too. The itching has stopped, so they must be."

"Put on your clothes. Dr. Krasny tells me that you are well."

"If I were any weller, you would have to bleed me."

"Well is an absolute; it has no comparative."

"Okay, I'm wellest."

"Impudence. Tomorrow morning you leave for refresher training. Be packed and ready by oh-nine hundred."

"Since I arrived without even a happy smile, packing will take me eleven seconds. But I need a new ID, a new passport, a new credit card, and quite a bit of cash-"

"All of which will be delivered to you before oh-nine hundred."

"-because I'm not going for a refresher; I'm going to New Zealand. Boss, I've told you and told you. I'm overdue for R and R, and I figure that I rate some paid sick leave to compensate for time I've been laid up. You're a slave driver."

"Friday, how many years will it take you to learn that when I thwart one of your whims, I always have your welfare in mind as well as the efficiency of the organization?"

"Hully gee, Great White Father. I abase myself. And I'll send you a picture postcard from Wellington."

"Of a pretty Maori, please; I've seen a geyser. Your refresher course will be tailored to fit your needs and you will decide when it is complete. Although you are 'wellest,' you need physical training of carefully increasing difficulty to get you back into that superb pitch of muscle tone and wind and reflex that is your birthright."

" 'Birthright.' Don't make jokes, Boss; you have no talent for it. 'My mother was a test tube; my father was a knife.'

"You are being foolishly self-conscious over an impediment that was removed years ago."

"Am I? The courts say I can't be a citizen; the churches say I don't have a soul. I'm not 'man born of woman,' at least not in the eyes of the law."

" 'The law is an ass.' The records concerning your origin have been removed from the production laboratory's files, and a dummy set concerning an enhanced male AP was substituted."

"You never told me that!"

"Until you displayed this neurotic weakness, I saw no need. But a deception of that nature should be made so airtight that it will utterly displace the truth. And so it has. If you attempted, tomorrow, to claim your true lineage, you would not be able to get any authority anywhere to agree with you. You may tell anyone; it doesn't matter. But, my dear, why are you defensive? You are not only as human as Mother Eve, you are an enhanced human, as near perfect as your designers could manage. Why do you think I went out of my way to recruit you when you had no experience and no conscious interest in this profession? Why did I spend a small fortune educating and training you? Because I knew. I waited some years to be sure that you were indeed developing as your architects intended . . . then almost lost you when you suddenly dived off the map." He made a

grimace that I think means a smile. "You gave me trouble, girl. Now about your training. Are you willing to listen?"

"Yes, sir." (I didn't try to tell him about the laboratory crèche; human people think all crèches are like those they've seen. I didn't tell him about the plastic spoon that was all I had to eat with until I was ten because I didn't want to tell how, the first time I tried to use a fork, I stabbed my lip and made it bleed and they laughed at me. It isn't any one thing; it's a million little things that are the difference between being reared as a human child and being raised as an animal.)

"You'll be taking a bare-hands combat refresher but you are to work out only with your instructor; there are to be no blemishes on you when you visit your family in Chnistchurch. You will receive advanced training in hand weapons, including some you may never have heard of. If you change tracks, you will need this."

"Boss, I am not going to become an assassin!"

"You need it anyhow. There are times when a courier can carry weapons and she must have every edge possible. Friday, don't despise assassins indiscriminately. As with any tool, merit or demerit lies in how it is used. The decline and fall of the former United States of North America derived in part from assassinations. But only in small part as the killings had no pattern and were pointless. What can you tell me of the Prussian-Russian War?"

"Not much. Mainly that the Prussians got their hides nailed to the barn when the smart money figured them for winners."

"Suppose I tell you that twelve people won that war-seven men, five women-and that the heaviest weapon used was a six-millimeter pistol."

"I don't think you have ever lied to me. Flow?"

"Friday, brainpower is the scarcest commodity and the only one of real value. Any human organization can be rendered useless, impotent, a danger to itself, by selectively removing its best minds while carefully leaving the stupid ones in place. It took only a few careful 'accidents' to ruin utterly the great Prussian military machine and turn it into a blundering mob. But this did not show until the fighting was well under way, because stupid fools look just as good as military geniuses until the fighting starts."

"Only a dozen people-Boss? Did we do that job?"

"You know that is the sort of question I discourage. We did not. It was a contract job by an organization as small and as specialized as we are. But I do not willingly involve us in nationalistic wars; the side of the angels is seldom self-evident."

"I still don't want to be an assassin."

"I will not permit you to be an assassin and let us have no more discussion of it. Be ready to leave at nine tomorrow."

V

Nine weeks later I left for New Zealand.

I'll say this for Boss: The supercilious bully always knows what he's talking about. When Dr. Krasny let me go, I wasn't "wellest." I was simply a recovered patient who rio longer needed sickbed nursing.

Nine weeks later I could have taken prizes in the old Olympics without working up a sweat. As I boarded the SB Abel Tasman at Winnipeg freeport, the skipper gave me

the eye. I knew I looked good and I added a waggle to my seat that I would never use on a mission-as a courier I usually try to blend into the scenery. But now I was on leave and it's kind of fun to advertise. Apparently I hadn't forgotten how as the skipper came back to my cradle while I was still belting in. Or it may have been the Superskin jump suit that I was wearing-new that season and the first one I had had; I bought the outfit at the freeport and changed into it in the shop. I'm sure that it is only a matter of time until the sects that think that sex has something to do with sin will class wearing Superskin as a mortal sin.

He said, "Miss Baldwin, is it not? Do you have someone meeting you in Auckland? What with the war and all it is not a good idea for an unescorted woman to be alone in an international port."

(I did not say, "Look, Bub, the last time I killed the bloke.") The captain stood a hundred and ninety-five, maybe, and would gross a hundred or more and none of it fat. Early thirties and the sort of blond you expect in SAS rather than ANZAC. If he wanted to be protective I was willing to stand short. I answered, "Nobody's meeting me but I'm just changing for the South Island shuttle. How do these buckles work? Uh, do those stripes mean you're the captain?"

"Let me show you. Captain, yes-Captain Ian Tormey." He started belting me in; I let him.

"Captain. Gollee! I've never met a captain before." A remark like that isn't even a fib when it's a ritual response in the ancient barnyard dance. He had said to me, "I'm on the prowl and you look good. Are you interested?" And I had answered, "You look acceptable but I'm sorry to have to tell you that I don't have time today."

At that point he could adjourn it with no hurt feelings or he could elect to invest in goodwill against a possible future encounter. He chose the latter.

As he finished belting me in-tight enough but not too tight and not using the chance to grab a feel-quite professional-he said, "The timing on that connection will be close today. If you'll hang back when we disembark and be last out, I'll be happy to put you aboard your Kiwi. That'll be faster than finding your way through the crowds by yourself."

(The connection timing is twenty-seven minutes, Captain-leaving twenty minutes in which to talk me out of my comm signal. But keep on being sweet about it and I may give it to you.) "Why, thank you, Captain!-if it's really not too much trouble."

"ANZAC service, Miss Baldwin. But my pleasure."

I like to ride the semiballistics-the high-gee blastoff that always feels as if the cradle would rupture and spurt fluid all over the cabin, the breathless minutes in free fall that feel as if your guts were falling out, and then reentry and that long, long glide that beats any sky ride ever built. Where can you have more fun in forty minutes with your clothes on?

Then comes the always interesting question: Is the runway clear? A semiballisfic doesn't make two passes; it can't.

It says right here in the brochure that an SB never lifts until it receives clearance from the port of reentry. Sure, sure, and I believe in the Tooth Fairy just like Boss's parents. How about the dumb-john in the private APV who picks the wrong strip and parks? How about the time in Singapore when I sat in the Top Deck bar and watched

three SBs land in nine minutes?-not, I concede, on the same strip, but on crossing strips! Russian roulette.

I'll go on riding them; I like them and my profession often calls for me to use them. But I hold my breath from touchdown to full stop.

This trip was fun as usual and a semiballistic ride is never long enough to be tiring. I hung back when we landed and, sure enough, my polite wolf was just coming out of the cockpit as I reached the exit. The flight attendant handed me my bag and Captain Tormey took it over my insincere protests.

He took me to the shuttle gate, took charge of confirming my reservation and selecting my seat, then brushed past the Passengers Only sign and settled down beside me. "Too bad you're leaving so quickly-too bad for me, that is. Under the rules I have to take three days turnaround. . . and I happen to be at loose ends this trip. My sister and her husband used to live here-but they've moved to Sydney and I no longer have anyone to visit with."

(I can just see you spending all your off time with your sister and your brother-in-law.) "Oh, what a shame! I know how you must feel. My family is in Christchurch and I'm always lonesome when I have to be away from them. A big, noisy, friendly family-I married into an S-group." (Always tell them at once.)

"Oh, how jolly! How many husbands do you have?"

"Captain, that is always the first thing men ask. It comes from misunderstanding the nature of an S-group. From thinking that S stands for 'sex.'

"Doesn't it?"

"Goodness, no! It stands for 'security' arid 'siblings' and 'sociability' and 'sanctuary' and 'succor' and 'safety' and lots of other things, all of them warm and sweet and comforting. Oh, it can stand for 'sex,' too. But sex is readily available everywhere. No need to form anything as complex as an S-group just for sex." (S stands for "synthetic family" because that is how it was designated in the legislation of the first territorial nation, the California Confederacy, to legalize
it. But it is ten-to-one that Captain Tormey knew this. We were simply running through standard variations of the Grand Salute.)

"I don't find sex that readily available-"

(I refused to answer his ploy. Captain, with your height and broad shoulders and pink, well-scrubbed look, and almost all of your time free for The Hunt. . . in Winnipeg and Auckland, fer Gossake, two places where the crop never fails. . . . Please, sir! Try again.)

"-but I agree with you that it is not reason enough to marry. I'm not likely to marry, ever . . . because I go where the wild goose goes. But an S-group sounds like a fine deal to come back to."

"It is."

"How big is it?"

"Still interested in my husbands? I have three husbands, sir, and three group sisters to match . . . and I think you would like all three-especially Lispeth, our youngest and prettiest. Liz is a redheaded Scottish lassie and a bit of a flirt. Children? Of course. We try to count them every night, but they move pretty fast. And kittens and ducks and puppy dogs and a big rambling garden with roses all year round, almost. It's a busy happy place and always watch where you put your feet."

"Sounds grand. Does the group need an associate husband who can't be home much but carries loads of life insurance? How much does it cost to buy in?"

"I'll speak to Anita about it. But you don't sound serious."

The chitchat continued, neither of us meaning a word of it, other than on a symbolic level. Shortly we declared it a draw while providing for a possible rematch by exchanging comm codes, that of my family in Christchurch in answer to his offer to me of the casual use of his flat in Auckland. He had taken over the lease, he said, when his sister had moved . . . but he needed it only six days out of the month, usually. "So if you find yourself in town and need a place for a wash-up and a nap, or overnight, just call."

"But suppose one of your friends is using it, Ian"-he had asked me to drop calling him Captain-"or yourself."

"Unlikely but, if so, the computer will know and tell you. If I'm in town or about to be in town, it will tell you that, too-and I certainly would not want to miss you."

The pass direct, but in the politest terms. So I answered it by telling him, through giving him our Christchurch number, that he was welcome to try to get my pants off. . . if he had the guts to face my husbands, my co-wives, and a passel of noisy kids. I thought it most unlikely that he would call. Tall, handsome bachelors in glamorous, high-paying jobs don't have to carry the anvil that far.

About then the loudspeaker that mumbles the arrivals and departures interrupted itself with: "It is with deep sorrow that we pause to announce the total destruction of Acapulco. This flash comes to you courtesy of Interworld Transport, Proprietary, the Triple-S Lines: Speed-Safety-Service."

I gasped. Captain Ian said, "Oh, those idiots!"

"Which idiots?"

"The whole Mexican Revolutionary Kingdom. When are the territorial states going to learn that they cannot possibly win against corporate states? That's why I said they were idiots. And they are!"

"Why do you say that, Captain?-Ian?"

"Obvious. Any territorial state, even if it's Ell-Four or an asteroid, is a sitting duck. But fighting a multinational is like trying to slice a fog. Where's your target? You want to fight IBM? Where is IBM? Its registered home office is a P.O. box number in Delaware Free State. That's no target. IBM's offices and people and plants are scattered through four hundred-odd territorial states groundside and more in space; you can't hit any part of IBM without hurting somebody else as much or more. But can IBM defeat, say, Great Russia?"

"I don't know," I admitted. "The Prussians weren't able to."

"It would just depend on whether or not IBM could see a profit in it. So far as I know, IBM doesn't own any guerrillas; she may not even have agents saboteurs. She might have to buy the bombs and missiles. But she could shop around and take her own sweet time getting set because Russia isn't going anywhere. It will still be there, a big fat target, a week from now or a year. But Interworld Transport just showed what the outcome would be. This war is all over. Mexico bet that Interworld wouldn't risk public condemnation by destroying a Mexican city. But those old-style politicians forgot that corporate nations aren't nearly as interested in public opinion as territorial nations have to be. The war's over."

"Oh, I hope so! Acapulco is-was-a beautiful place."

"Yes, and it would still be a beautiful place if the Montezuma's Revolutionary Council wasn't rooted somewhere back in the twentieth century. But now there will be face-saving. Interworld will apologize and pay an indemnity, then, with no fanfare, the Montezuma will cede the land and the extraterritoriality for the new spaceport to a new corporation with a Mexicano name and a DF home office . . . and the public won't be told that the new corporation is owned sixty percent by Interworld and forty percent by the very politicians who stalled just a little too long and let Acapulco be destroyed." Captain Tormey looked sour and I suddenly saw that he was older than I had first guessed.

I said, "Ian, isn't ANZAC a subsidiary of Interworld?"

"Perhaps that's why I sound so cynical." He stood up. "Your shuttle is locking into the gate. Let me have your bag."

VI

Christchurch is the loveliest city on this globe.

Make that "anywhere," as there is not yet a truly lovely city off Earth. Luna City is underground, Eli-Five looks like a junkyard from outside and has only one arc that looks good from inside. Martian cities are mere hives and most Earthside cities suffer from a misguided attempt to look like Los Angeles.

Christchurch does not have the magnificence of Paris or the setting of San Francisco or the harbor of Rio. Instead it has things that make a city lovable rather than stunning: The gentle Avon winding through our downtown streets. The mellow beauty of Cathedral Square. The Ferrier fountain in front of Town Hall. The lush beauty of our world-famous botanic gardens smack in the middle of downtown.

"The Greeks praise Athens." But I am not a native of Christchurch (if "native" could mean anything for my sort). I am not even an Ennzedd. I met Douglas in Ecuador (this was before the Quito Skyhook catastrophe), was delighted by a frantic love affair compounded of equal parts of pisco sours and sweaty sheets, then was frightened by his proposal, calmed down when he made me understand that he was not then proposing vows in front of some official but a trial visit to his S-group-find out if they liked me, find out if I liked them.

That was different. I zipped back to the Imperium and reported, and told Boss that I was taking some accumulated leave-or would he rather have my resignation? He growled something about go ahead and get my gonads cooled off, then report in when I was fit to work. So I rushed back to Quito and Douglas was still in bed.

At that time there really wasn't any way to get from Ecuador to New Zealand . . . so we tubed to Lima and took an SB right over the South Pole to West Australia Port at Perth (with the oddest 5shaped track because of Coriolis)-tube to Sydney, bounce to Auckland, float to Christchurch, taking nearly twenty-four hours and the wildest of tracks just to cross the Pacific. Winnipeg and Quito are almost the same distance from Auckland-don't be fooled by a flat map; ask your computer-Winnipeg is only one-eighth farther.

Forty minutes versus twenty-four hours. But I had not minded the longer trip; I was with Douglas and dizzy in love.

In another twenty-four hours I was dizzy in love with his family.

I hadn't expected that. I had looked forward to a lovely vacation with Douglas and he had promised me some skiing as well as sex- not that I insisted on skiing. I knew that I had an implied obligation to go to bed with his group brothers if asked. But that didn't worry me because an artificial person simply can't take copulation as seriously as most humans seem to take it. Most of the females of my crèche class had been trained as doxies from menarche on and then were signed up as company women with one or another of the construction multinationals. I myself had received basic doxy training before Boss showed up, bought my contract, and changed my track. (And I jumped the contract and was missing for several months- but that's another story.)

But I wouldn't have been jumpy about friendly sex even if I had received no doxy training at all; such nonsense isn't tolerated in APs; we never learn it.

But we never learn anything about being in a family. The very first day I was there I made us all late for tea by rolling on the floor with seven youngsters ranging from eleven down to a nappy-wetter

plus two or three dogs and a young tomcat who had earned the name Mister Underfoot through his unusual talent for occupying all of a large floor.

I had never experienced anything like that in all my life. I didn't want to stop.

Brian, not Douglas, took me skiing. The ski lodges at Mount
Hutt are lovely but the bedrooms aren't heated after twenty-two and you have to snuggle up close to keep warm. Then Vickie took me out to see the family's sheep and I met socially an enhanced dog who could talk, a big collie called Lord Nelson. Lord had a low opinion of the good sense of sheep, in which he was, I think, fully justified.

Bertie took me to Milford Sound via shuttle to Dunedin (the "Edinburgh of the South") and overnight there-Dunedin is swell but it's not Christchurch. We took a flubsy little steamer there around to the fjord country, one with tiny little cabins big enough for two only because it's cold down at the south end of the island and again I snuggled up close.

There isn't any other fjord anywhere that can compare with Milford Sound. Yes, I've been on the Lofoten Islands trip. Very nice. But my mind's made up.

If you think I am as blindly pigheaded about South Island as a mother is about her firstborn, that is simply because it's true; I am. North Island is a fine place, with its thermal displays and the world wonder of the Glowworm Caves. And the Bay of Islands looks like Fairyland. But North Island does not have the Southern Alps and it doesn't have Christchurch.

Douglas took me to see their creamery and I saw huge tubs of beautiful butter being packed. Anita introduced me to the Altar Guild. I began to realize that, maybe, just possibly, I might be invited to make it permanent. And found that I had shifted from OhGod-what'll-I-do-if-they-ask-me to Oh-God-what'll-I-do-if-theydon't-ask-me and then simply to Oh-God-what'll-I-do?

You see, I had never told Douglas that I am not human.

I've heard humans boast that they can spot an artificial person every time. Nonsense. Of course anyone can pick out a living artifact that does not conform to human appearance-say a man creature with four arms or a kobold dwarf. But if the genetic designers have intentionally restricted themselves to human appearance (this being the

technical definition of "artificial person" rather than "living artifact"), no human can tell the difference-no, not even another genetic engineer.

I am immune to cancer and to most infections. But I don't wear a sign saying so. I have unusual reflexes. But I won't show them off by picking a fly out of the air with thumb and forefinger. I never compete with other people in games of dexterity.

I have unusual memory, unusual innate grasp of number and space and relationship, unusual skill at languages. But, if you think that defines a genius IQ, let me add that, in the school I was trained in, the object of an IQ test is to hit precisely a predetermined score-not to show off your smarts. In public nobody's going to catch me being smarter than those around me . . . unless it's an emergency involving either my mission or my neck or both.

The complex of these enhancements and others is reliably reported to improve sexual performance but, fortunately, most males are inclined to regard any noticeable improvement in this area as simply a reflection of their own excellence. (Properly regarded, male vanity is a virtue, not a vice. Treated correctly, it makes him enormously pleasanter to deal with. The thing that makes Boss so infuriating is his total lack of vanity. No way to get a handle on him!)

I was not afraid that I would be caught out. With all production laboratory identification removed from my body, even the tattoo that was on the roof of my mouth, there is simply no way to tell that I was designed rather than conceived through the bio roulette of a billion sperm competing blindly for one ovum.

But a wife in the S-group was expected to add to that swarm of kids on the floor.

Well, why not?

Lots of reasons.

I was a combat courier in a quasi-military organization. Picture me trying to cope with a sudden attack while pushing an eightmonths belly ahead of me.

We AP females are released or marketed in a reversible sterile condition. To an artificial person the yen to have babies-grow them inside your body-doesn't seem "natural"; it seems ridiculous. In vitro seems so much more reasonable-and neater, and more convenient-than in vivo. I was as tall as I am now before I ever saw a pregnant woman near term-and I thought she was deathly ill. When I found out what was wrong with her, it made me sort of sick to my stomach. When I thought about it a long time later in Christchurch, it still made me queasy. Do it like a cat, with blood and pain fer Gossake? Why? And why do it at all? Despite the way we are filling up the sky, this giddy globe has far too many people on it-why make it worse?

I decided, most sorrowfully, that I was going to have to duck the issue of marriage by telling them that I was sterile-no babies. True enough if not all the truth.

I wasn't asked.

Not about babies. For the next several days I reached out with both hands to enjoy family life as much as possible while I had it:
the warm pleasure of woman talk while washing up after tea; the rowdy fun of youngsters and pets; the quiet pleasure of gossip while gardening-these bathed every minute of my day in belonging.

One morning Anita invited me out into the garden. I thanked her while pointing out that I was busy helping Vickie. Whereupon I was overruled and found myself seated at the far end of the garden with Anita, and children firmly shooed away.

Anita said, "Marjorie dear"-I'm "Marjorie Baldwin" in Christchurch because that was my public name when I met Douglas in Quito-"we both know why Douglas invited you here. Are you happy with us?"

"Terribly happy!"

"Happy enough, do you think, to wish to make it permanent?"

"Yes but-" I never had a chance to say Yes-but-I'm-sterile; Anita firmly cut me off.

"Perhaps I had better say some things first, dear. We must discuss dowry. If I left it up to our men, money would never be mentioned; Albert and Brian are as dotty about you as Douglas is, and I quite understand it. But this group is a family business corporation as well as a marriage, and someone must keep an eye on the bookkeeping and that is why I am chairman of the board and chief executive; I never become so emotional that I fail to watch our businesses." She smiled and her knitting needles clicked. "Ask Brian-he calls me Ebenezer Scrooge-but he hasn't offered to take over the worries himself.

"You can stay with us as a guest as long as you like. What's one more mouth to feed at a table as long as ours? Nothing. But if you want to join us formally and contractually, then I must become Ebenezer Scrooge and discover what contract we can write. For I won't let the family fortunes be watered down. Brian owns and votes three shares, Albert and I each own and vote two shares, Douglas and Victoria and Lispeth have one each and vote it. As you can see, I have only two votes out of ten . . . but for some years, if I threaten to resign, I suddenly receive a strong vote of confidence. Someday I'll be overruled and then I can quit and be Alice Sit-by-the-Fire." (And the funeral will be later that same day!)

"Meanwhile I cope. The children each have one nonvoting share and a child never does vote his share because it is paid to him or her in cash on leaving home, as dowry or as starting capital-or wasted although I like to think not. Such reductions in capital must be planned; were three of our girls to marry in the same year the situation could be embarrassing if not anticipated."

I told her that it sounded like a very sensible and warm arrangement as I didn't think that most children were so carefully provided for. (In fact I didn't know anything at all about such things.)

"We try to do right by them," she agreed. "After all, children are the purpose of a family. So I'm sure that you will see that an adult joining our group must buy a share, or the system won't work. Marriages are arranged in heaven but the bills must be paid here on earth."

"Amen." (I could see that my problems were solved for me. Negatively. I could not estimate the wealth of the Davidson Group Family. Wealthy, that was certain, even though they lived with no servants in an old-fashioned unautomated house. Whatever it was, I could not buy a share.)

"Douglas told us that he had no idea whether you had money or not. Money in capital amounts, I mean."

"I don't."

She never dropped a stitch. "Nor did I when I was your age. You are employed, are you not? Couldn't you work in Christchurch and buy your share out of your salary? I know that finding work can be a problem in a strange city . . . but I am not without connections. What do you do? You've never told us."

(And I'm not about to!) After evading her and then telling her bluntly that my work was confidential and I refused to discuss any aspect of my employer's business but, no, I couldn't leave and look for work in Christchurch, so there wasn't any way it could work but it had certainly been wonderful while it had lasted and I hoped- She chopped me off, "My dear, I was not empowered to negotiate this contract for the purpose of failing. Why it can't be done is not acceptable; I must discover how it can be done. Brian has offered to give you one of his three shares . . . and Douglas and Albert are backing him, pro rata, although they can't pay him at once. But I vetoed the whole scheme; it is a bad precedent and I told them so, using a crude old country expression about rams in the spring. Instead I am accepting one of Brian's shares as security against your performance of your contract."

"But I don't have a contract!"

"You will have. If you continue your present employment, how much can you pay per month? Don't pinch yourself but do pay off as quickly as possible as it works just like an amortized real-estate purchase: Part of each payment services the remaining debt, part reduces that debt-so the larger the payment the better, for you."

(I had never bought any real estate.) "Can we figure that in gold? I can convert into any money, of course, but I get paid in gold."

"In gold?" Anita suddenly looked alert. She reached into her knitting bag and pulled out a portable relay to her computer terminal. "I can offer you a better deal for gold." She punched for a while, waited, and nodded. "Considerably better. Although I'm not really set up to handle bullion. But arrangements can be made."

"I said I can convert. The drafts are for grams, three nines fine, drawn on Ceres and South Africa Acceptances, Limited, Luna City. But it can be paid in New Zealand money, right here, by automatic bank deposit even when I'm not on Earth at the time. Bank of New Zealand, Christchurch office?"

"Uh, Canterbury Land Bank. I'm a director there."

"By all means keep it in the family."

The next day we signed the contract and later that week they married me, all legal and proper, in a side chapel of the cathedral, with me in white, fer Gossake.

The following week I went back to work, both sad and warmly happy. For the next seventeen years I would be paying NZ$858.13 per month, or I could pay it faster. For what? I could not live at home until it was all paid because I had to keep my job to meet those monthly payments. For what, then? Not for sex. As I told Captain Tormey, sex is everywhere; it's silly to pay for it. For the privilege of getting my hands into soapy dishwater, I guess. For the privilege of rolling around on the floor and being peed on by puppies and babies only nominally housebroken.

For the warm knowledge that, wherever I was, there was a place on this planet where I could do these things as a matter of right, because I belonged.

It seemed like a bargain to me.

As soon as the shuttle floated off, I phoned ahead, got Vickie, and, once she stopped squealing, gave her my ETA. I had intended to call from the Kiwi Lines lounge in Auckland port but my curly wolf, Captain Ian, had used up the time. No matter-although the shuttle floats just short of the speed of sound, a stop at Wellington and a stop at Nelson uses up enough time that I thought someone would meet me. I hoped so.

Everybody met me. Well, not quite everybody. We're licensed to own an APV because we raise sheep and cattle and need power transportation. But we aren't supposed to use it in town. Brian did so anyhow and a working majority of our big family was spilling out the sides of that big farm floatwagon.

Most of a year since my last visit home, over twice as long as any such period earlier-bad. Children can grow away from you in that length of time. I was most careful about names and made sure that I checked off everyone in my mind. All present save Ellen, who was hardly a child-eleven when they married me, she was a young lady now, university age. Anita and Lispeth were at home, hurrying together my welcome-home feast . . . and again I would be gently scolded for not having given them warning and again I would try to explain that, in my work, once I was free to leave, it was better to grab the first SB than it was to try to get a call through-did I need an appointment to come to my own home?

Shortly I was down on the floor with kids all around me. Mister Underfoot, a gangly young cat when I first met him, waited for opportunity to greet me with dignity befitting his status as senior cat, elderly, fat, and slow. He looked me over carefully, brushed against me, and buzzed. I was home.

After a time I asked, "Where is Ellen? Still in Auckland? I thought university was closed for vacation now." I looked right at Anita when I said this but she appeared not to hear me. Getting hard of hearing? Surely not.

"Marjie-" Brian's voice-I looked around. He did not speak and his face held no expression. He barely shook his head.

(Ellen a taboo topic? What is this, Brian? I tabled it until I could speak to him privately. Anita has always maintained that she loves all our children equally, whether they are her own bio children or not. Oh, certainly! Save that her special interest in Ellen was always clear to everyone within reach of her voice.)

Later that night when the house was settling down and Bertie and I were about to go to bed (under some lottery system in which our teasing darlings always insisted that the loser had to spend the night with me), Brian tapped at the door and came in.

Bertie said, "It's all right. You can leave. I can take my punishment."

"Stow it, Bert. Have you told Marj about Ellen?"

"Not yet."

"Then fill her in. Sweetheart, Ellen got married without Anita's blessing. . . and Anita is furious about it. So it's best not to mention Ellen around Anita. Verb. sap., eh? Now I must run before she misses me."

"Aren't you permitted to come kiss me good-night? Or to stay here for that matter? Aren't you my husband, too?"

"Yes, of course, dear. But Anita is touchy as can be at present and there is no point in getting her stirred up."

Brian kissed us good-night and left. I said, "What is this, Bertie? Why shouldn't Ellen marry anyone she wishes to marry? She is old enough to make her own decisions."

"Well, yes. But Ellen didn't use good judgment about it. She's married a Tongan and she's gone to live in Nuku'alofa."

"Does Anita feel that they should live here? In Christchurch?"

"Eh? No, no! It's the marriage she objects to."

"Is there something wrong with this man?"

"Marjorie, didn't you hear me? He's a Tongan."

"Yes, I heard. Since he lives in Nuku'alofa, I would expect him to be. Ellen is going to find it awfully hot there, after being brought up in one of the few perfect climates. But that is her problem. I still don't see why Anita is upset. There must be something I don't know."

"Oh, but you do! Well, maybe you don't. Tongans are not like us. They aren't white people; they are barbarians."

"Oh, but they're not!" I sat up in bed, thereby putting a stop to what hadn't really started. Sex and arguments don't mix. Not for me, anyway. "They are the most civilized people in all Polynesia. Why do you think the early explorers called that group 'the Friendly Isles'? Have you ever been there, Bertie?"

"No but-"

"I have. Aside from the heat it's a heavenly place. Wait till you see it. This man-What does he do? If he simply sits and carves mahogany for the tourists, I could understand Anita's unease. Is that it?"

"No. But I doubt that he can afford a wife. And Ellen can't afford a husband; she didn't finish her degree. He's a marine biologist."

"I see. He's not rich . . . and Anita respects money. But he won't be poor, either-he'll probably wind up a professor at Auckland or Sydney. Although a biologist can get rich, today. He may design a new plant or animal that will make him fabulously wealthy."

"Darling, you still don't understand."

"Indeed I don't. So tell me."

"Well . . . Ellen should have married one of her own kind."

"What do you mean by that, Albert? Someone living in Christchurch?"

"It would help."

"Wealthy?"

"Not a requirement. Although things are usually smoother if financial affairs aren't too one-sided. Polynesian beach boy marries white heiress always has a stink to it."

"Oh, oh! He's penniless and she has just collected her family share-right?"

"No, not exactly. Damn it, why couldn't she have married a white man? We brought her up better than that."

"Bertie, what in the world? You sound like a Dane talking about a Swede. I thought that New Zealand was free of that sort of thing. I remember Brian pointing out to me that the Maori were the political and social equals of the English in all respects."

"And they are. It's not the same thing."

"I guess I'm stupid." (Or was Bertie stupid? Maori are Polynesians, so are Tongans-what's the ache?)

I dropped the matter. I had not come all the way from Winnipeg to debate the merits of a son-in-law I had never seen. "Son-in-law

." What an odd idea. It always delighted me when one of the little 'uns called me Mama rather than Marjie-but I had never thought about the possibility of ever having a son-in-law.

And yet he was indeed my son-in-law under Ennzedd law-and I didn't even know his name!

I kept quiet, tried to make my mind blank, and let Bertie devote himself to making me feel welcome. He's good at that.

After a while I was just as busy showing him how happy I was to be home, the unwelcome interruption forgotten.

VII

The next morning, before I was out of bed, I resolved not to open the subject of Ellen and her husband, but wait until someone else brought it up. After all, I was in no position to have opinions until I knew all about it. I was not going to drop it-Ellen is my daughter, too. But don't rush it. Wait for Anita to calm down.

But the subject did not come up. There followed lazy, golden days that I shan't describe as I don't think you are interested in birthday parties or family picnics-precious to me, dull to an outsider.

Vickie and I went to Auckland on an overnight shopping trip. After we checked into the Tasman Palace, Vickie said to me, "Marj, would you keep a secret for me?"

"Certainly," I agreed. "Something juicy, I hope. A boyfriend? Two boyfriends?"

"If I had even one boyfriend I would simply split him with you. This is touchier. I want to talk to Ellen and I don't want to have an argument with Anita about it. This is the first chance I've had. Can you forget I did it?"

"Not quite, because I want to talk to her myself. But I won't tell Anita that you talked to Ellen if you don't wish me to. What is this, Vick? That Anita was annoyed about Ellen's marriage I knew-but does she expect the rest of us not even to talk to Ellen? Our own daughter?"

"I'm afraid it's 'her own daughter' right now. She's not being very rational about it."

"It sounds that way. Well, I will not let Anita cut me off from Ellen. I would have called her before this but I did not know how to reach her."

"I'll show you. I'll call now and you can write it down. It's-"

"Hold it!" I interrupted. "Don't touch that terminal. You don't want Anita to know."

"I said so. That's why I'm calling from here."

"And the call will be included in our hotel bill and you'll pay the bill with your Davidson credit card and- Does Anita still check every bill that comes into the house?"

"She does. Oh, Marj, I'm stupid."

"No, you're honest. Anita won't object to the cost but she's certain to notice a code or a printout that means an overseas call. We'll slide over to the G.P.O. and make the call there. Pay cash. Or, easier yet, we'll use my credit card, which does not bill to Anita."

"Of course! Marj, you would make a good spy."

"Not me; that's dangerous. I got my practice dodging my mother. Let's pin our ears back and slide over to the post office. Vickie, what is this about Ellen's husband? Does he have two heads or what?"

"Uh, he's a Tongan. Or did you know?"

"Certainly I knew. But 'Tongan' is not a disease. And it's Ellen's business. Her problem, if it is one. I can't see that it is."

"Uh, Anita has handled it badly. Once it's done, the only thing to do is to put the best face on it possible. But a mixed marriage is always unfortunate, I think-especially if the girl is the one marrying below herself, as in Ellen's case."

" 'Below herself!' All I've been told is that he's a Tongan. Tongans are tall, handsome, hospitable, and about as brown as I am. In appearance they can't be distinguished from Maori. What if this young man had been Maori . . . of good family, from an early canoe . . . and lots of land?"

"Truly, I don't think Anita would have liked it, Marj-but she would have gone to the wedding and given the reception. Intermarriage with Maori has long precedent behind it; one must accept it. But one need not like it. Mixing the races is always a bad idea."

(Vickie, Vickie, do you know of a better idea for getting the world out of the mess it is in?) "So? Vickie, this built-in suntan of mine- you know where I got it?"

"Certainly, you told us. Amerindian. Uh, Cherokee, you said. Marj! Did I hurt your feelings? Oh, dear! It's not like that at all! Everybody knows that Amerindians are-Well, just like white people. Every bit as good."

(Oh, sure, sure! And "some of my best friends are Jews." But I'm not Cherokee, so far as I know. Dear little Vickie, what would you think if I told you that I am an AP? I'm tempted to . . . but I must not shock you.)

"No, because I considered the source. You don't know any better. You've never been anywhere and you probably soaked up racism with your mother's milk."

Vickie turned red. "That's most unfair! Marj, when you were up for membership in the family I stuck up for you. I voted for you."

"I was under the impression that everyone had. Or I would not have joined. Do I understand that my Cherokee blood was an issue in that discussion?"

"Well . . . it was mentioned."

"By whom and to what effect?"

"Uh- Marjie, those are executive sessions, they have to be. I can't talk about them."

"Mmm, I see your point. Was there an executive session over Ellen? If so, you should be free to talk to me about it, since I would have been entitled to be present and to vote."

"There wasn't one. Anita said that it wasn't necessary. She said that she did not believe in encouraging fortune hunters. Since she had already told Ellen that she could not bring Tom home to meet the family, there didn't seem to be anything to be done."

"Didn't any of you stand up for Ellen? Did you do so, Vickie?"

Vickie turned red again. "It would simply have made Anita furious."

"I'm getting kind of furious myself. By our family code Ellen is your daughter and my daughter as quite as much as she is Anita's daughter, and Anita is wrong in refusing Ellen permission to bring her new husband home without consulting the rest of us."

"Marj, it wasn't quite that way. Ellen wanted to bring Tom home for a visit. Uh, an inspection visit. You know."

"Oh. Yes, having been under the microscope myself~ I do know."

"Anita was trying to keep Ellen from making a bad marriage. The first the rest of us knew about it Ellen was married. Apparently Ellen went right straight out and got married the minute she got Anita's letter telling her no."

"Be damned! A light begins to dawn. Ellen trumped Anita's ace by getting married at once-and that meant that Anita had to pay out cash equal to one family corporation share with no notice. Could be difficult. It's quite a chunk of money. It is taking me years and years to pay for my share."

"No, it's not that. Anita is simply angry because her daughter- her favorite; we all know that-has married a man she disapproves of. Anita hasn't had to scrape up that much cash because it wasn't necessary. There is no contractual obligation to pay out a share. and Anita pointed out that there was no moral obligation to siphon off the family's capital to benefit an adventurer."

I felt myself getting coldly angry. "Vickie, I have trouble believing my ears. What sort of spineless worms are the rest of you to allow Ellen to be treated this way?" I took a deep breath and tried to control my fury. "I don't understand you. Any of you. But I'm going to try to set a good example. When we get home I'm going to do two things. First I'm going to the family-room terminal when everybody is there and phone Ellen and invite her and her husband home for a visit-come for the next weekend because I've got to get back to work and don't want to miss meeting my new son-in-law."

"Anita will burst a blood vessel."

"We'll see. Then I'm going to call for a family meeting and move that Ellen's share be paid to her with all orderly haste consonant with conserving assets." I added, "I assume that Anita will be furious again."

"Probably. To no purpose, as you'll lose the vote. Marj, why must you do this? Things are bad enough now."

"Maybe. But it's possible that some of you have just been waiting for someone else to take the lead in bucking Anita's tyranny. At least I'll find out how the vote goes. Vick, under the contract I signed I have paid more than seventy thousand Ennzedd dollars into the family and I was told that the reason I had to buy my way into a marriage was that each of our many children were to be paid a full
share on leaving home. I didn't protest; I signed. But there is an implied contract there no matter what Anita says. If Ellen can't be paid today, then I shall insist that my monthly payments go to Ellen until such time as Anita can shake loose the rest of one share to pay Ellen off. Does that strike you as equitable?"

She was slow in answering. "Marj, I don't know. I haven't had time to think."

"Better take time. Because, along about Wednesday, you are going to have to fish or cut bait. I shall not let Ellen be mistreated any further." I grinned and added, "Smile! Let's slide over to the post office and be sunny-side-up for Ellen."

But we didn't go to the G.P.O.; we didn't call Ellen at all that trip. Instead we proceeded to drink our dinner and argue. I'm not sure just how the subject of artificial persons got into the discussion. I think it was while Vickie was "proving" still another time how free she was from racial prejudice while exhibiting that irrational attitude every time she opened her mouth. Maori were just dandy and of course American Indians were

and Hindu Indians for that matter and the Chinese had certainly produced their quota of geniuses; everybody knew that, but you had to draw the line somewhere. .

We had gone to bed and I was trying to tune out her drivel when something hit me. I raised up. "How would you know?"

"How would I know what?"

"You said, 'Of course no one would marry an artifact.' How would you know that a person was artificial? Not all of them carry serial numbers."

"Huh? Why, Marjie, don't be silly. A manufactured creature can't be mistaken for a human being. If you had ever seen one-"

"I've seen one. I've seen many!"

"Then you know."

"Then I know what?"

"That you can tell one of those monsters just by looking at it."

"How? What are these stigmata that mark off an artificial person from any other person? Name one!"

"Marjorie, you're being dreadfully difficult just to be annoying! This is not like you, dear. You're turning our holiday into something unpleasant."

"Not me, Vick. You are. By saying silly, stupid, unpleasant things without a shred of evidence to back them up." (And that retort of mine proves that an enhanced person is not a superman, as that is exactly the sort of factually truthful remark that is much too cruel to use in a family discussion.)

"Oh! How wicked! How untruthful!"

What I did next can't be attributed to loyalty to other artificial persons because APs don't feel group loyalty. No basis for it. I've heard that Frenchmen will die for La Belle France-but can you imagine anyone fighting and dying for Homunculi Unlimited, Pty., South Jersey Section? I suppose I did it for myself although, like many of the critical decisions in my life, I have never been able to analyze why I did it. Boss says that I do all of my important thinking on the unconscious level. He may be right.

I got out of bed, whipped off my gown, stood in front of her. "Look me over," I demanded. "Am I an artificial person? Or not? Either way, how do you tell?"

"Oh, Marjie, quit flaunting yourself! Everybody knows you have the best figure in the family; you don't have to prove it."

"Answer me! Tell me which I am and tell me how you know. Use any test. Take samples for laboratory analysis. But tell me which I am and what signs prove it."

"You're a naughty girl, that's what you are."

"Possibly. Probably. But which sort? Natural? Or artificial?"

"Oh, bosh! Natural, of course."

"Wrong. I'm artificial."

"Oh, stop being silly! Put your nightgown on and come back to bed."

Instead I badgered her with it, telling her what laboratory had designed me, the date I had been removed from the surrogate womb- my "birthday," although we APs are "cooked" a little longer to speed up maturing-forced her to listen to a description of life in a production laboratory crèche. (Correction: Life in the crèche that raised me; other production crèches may be different.)

I gave her a summary of my life after I left the crèche-mostly lies, as I could not compromise Boss's secrets; I simply repeated what I had long since told the family, that I was a confidential com
mercial traveler. I didn't need to mention Boss because Anita had decided years back that I was an envoy of a multinational, the sort of diplomat who always travels anonymously-an understandable error that I was happy to encourage by never denying it.

Vickie said, "Marjie, I wish you wouldn't do this. A string of lies like that could endanger your immortal soul."

"I don't have a soul. That's what I've been telling you."

"Oh, stop it! You were born in Seattle. Your father was an electronics engineer; your mother was a pediatrician. You lost them in the quake. You told us all about them-you showed us pictures."

'My mother was a test tube; my father was a knife.' Vickie, there may be a million or more artificial people whose 'birth records' were 'destroyed' in the destruction of Seattle. No way to count them as their lies are never assembled. After what happened just this month there will start being lots of people of my sort who were 'born' in Acapulco. We have to find loopholes like that to avoid being persecuted by the ignorant and the prejudiced."

"Meaning I'm ignorant and prejudiced!"

"Meaning you are a sweet girl who was fed a pack of lies by your elders. I'm trying to correct that. But if the shoe fits, you can lie in it."

I shut up. Vickie didn't kiss me good-night. We were a long time getting to sleep.

The next day each of us pretended that the argument had never taken place. Vickie did not mention Ellen; I did not mention artificial persons. But it spoiled what had started out to be a merry outing. We got the shopping done and caught the evening shuttle home. I did not do as I had threatened-I did not call Ellen as soon as we were home. I did not forget Ellen; I simply hoped that waiting a while might mellow the situation. Cowardly, I suppose.

Early the following week Brian invited me to go with him while he inspected a piece of land for a client. It was a long pleasant ride with lunch at a licensed country hotel-a fricasee billed as hogget although almost certainly mutton, washed down by tankards of mild. We ate out under the trees.

After the sweet-a berry tart, quite good-Brian said, "Marjorie, Victoria came to me with a very odd story."

"So? What was it?"

"My dear, please believe that I would not mention this were not Vickie so troubled by it." He paused.

I waited. "Upset by what, Brian?"

"She claims that you told her that you are a living artifact masquerading as a human being. I'm sorry but that's what she said."

"Yes, I told her that. Not in those words."

I did not add any explanation. Presently Brian said gently, "May I ask why?"

"Brian, Vickie was saying some very silly things about Tongans, and I was trying to make her see that they were both silly and wrong-that she was wronging Ellen by it. I am very much troubled about Ellen. The day I arrived home you shushed me about her,

and I have kept quiet. But I can't keep quiet much longer. Brian, what are we going to do about Ellen? She's your daughter and mine; we can't ignore how she is being mistreated. What shall we do?"

"I do not necessarily agree that something should be done, Marjorie. Please don't change the subject. Vickie is quite unhappy. I am attempting to straighten out the misunderstanding."

I answered, "I have not changed the subject. Injustice to Ellen is the subject and I won't drop it. Is there any respect in which Ellen's husband is objectionable? Other than prejudgment against him because he is Tongan?"

"None that I know of. Although, in my opinion, it was inconsiderate of Ellen to marry a man who had not even been introduced to her family. It does not show a decent respect for the people who have loved her and cared for her all her life."

"Wait a moment, Brian. As Vickie tells it, Ellen asked to bring him home for inspection-as I was brought home-and Anita refused to permit it. Whereupon Ellen married him. True?"

"Well, yes. But Ellen was headstrong and hasty. I don't think she should have done so without talking to her other parents. I was quite hurt by it."

"Did she try to speak to you? Did you make any attempt to talk to her?"

"Marjorie, by the time I knew of it, it was a fait accompli."

"So I hear. Brian, ever since I got home I have been hoping that someone would explain to me what happened. According to Vickie none of this was ever settled in family council. Anita refused to let Ellen bring her beloved home. The rest of Ellen's parents either did not know or did not interfere with Anita's, uh, cruelty. Yes, cruelty. Whereupon the child got married. Whereupon Anita compounded her initial cruelty by a grave injustice: She refused Ellen her birthright, her share of the family's wealth. Is all this true?"

"Marjorie, you were not here. The rest of us-six out of seven- acted as wisely as we could in a difficult situation. I don't think it is proper of you to come along afterwards and criticize what we have done-upon my word, I don't."

"Dear, I don't mean to offend you. But my very point is that six of you have not done anything. Anita, acting alone, has done things that seem to me to be cruel and unjust. . . and the rest of you stood aside and let her get away with it. No family decisions, just Anita's decisions. If this is true, Brian-and correct me if I'm wrong-then I feel compelled to ask for a full executive session of all husbands and wives to correct this cruelty by inviting Ellen and her husband to visit home, and to correct the injustice by paying to Ellen her fair share of the family's wealth, or at least to acknowledge the debt if it can't be liquidated at once. Will you tell me your opinion of that?"

Brian drummed his nails on the tabletop. "Marjorie, that's a simplistic view of a complex situation. Will you admit that I love Ellen and have her welfare in mind quite as much as you do?"

"Certainly, darling!"

"Thank you. I agree with you that Anita should not have refused to let Ellen bring her young man home. Indeed, if Ellen had seen him against the background of her own home, with its gentle ways and its traditions, she might well have decided that he was not for her. Anita stampeded Ellen into a foolish marriage-and I have told her so. But the matter cannot be immediately corrected by inviting them here. You can see that. Let's

agree that Anita should receive them warmly and graciously . . . but it's God's own truth that she won't-if she has them shoved down her throat."

He grinned at me and I was forced to grin in return. Anita can be charming. . . and she can be incredibly cold, rude, if it suits her.

Brian went on: "Instead, I'll have reason to make a trip to Tonga in a couple of weeks and this will let me get well acquainted without having Anita at my elbow-"

"Good! Take me along-pretty please?"

"It would annoy Anita."

"Brian, Anita has considerably more than annoyed me. I won't refrain from visiting Ellen on that account."

"Mmm. . . would you refrain from doing something that might damage the welfare of all of us?"

"If it were pointed out to me, yes. I might ask for explanation."

"You will have it. But let me deal with your second point. Of course Ellen will get every penny that is coming to her. But you will concede that there is no urgency about paying it to her. Hasty marriages often do not last long. And, while I have no proof of it, it is quite possible that Ellen has been taken in by a fortune hunter. Let's wait a bit and see how anxious this chap is to lay hands on her money. Isn't that prudent?"

I had to admit it. He continued: "Marjorie, my love, you are especially dear to me and to all of us because we see too little of you. It makes each of your trips home a fresh honeymoon for all of us. But, because you are away most of the time, you don't understand why the rest of us are always careful to keep Anita soothed down."

"Well- No, I don't. It should work both ways."

"In dealing with the law and with people I have found a vast difference between 'should' and 'is.' I've lived with Anita longest of any of us; I've learned to live with her little ways. What you may not realize is that she is the glue that holds the family together."

"How, Brian?"

"There is the obvious matter of her custodianship. As manager of the family finances and businesses she is well-nigh irreplaceable. Perhaps some other one of us could do it but it is certain that no one wants the job and I strongly suspect that no one of us could approach her competence. But in ways other than money she is a strong, capable executive. Whether it is in stopping quarrels between children or in deciding any of the thousand issues that come up in a large household, Anita can always make up her mind and keep things moving. A group family, such as ours, must have a strong, capable leader."

(Strong, capable tyrant, I said under my breath.)

"So. Marjie girl, can you wait a bit and give old Brian time to work it out? Believe that I love Ellen as much as you'do?"

I patted his hand. "Certainly, dear." (But don't take forever!)

"Now, when we get home, will you find Vickie and tell her that you were joking and that you are sorry you upset her? Please, dear."

(Wups! I had been thinking about Ellen so hard that I had forgotten where this conversation started.) "Now wait one moment, Brian. I'll wait and avoid annoying Anita since you tell me it's necessary. But I'm not going to cater to Vickie's racial prejudices."

"You would not be doing so. Our family is not all of one mind in such matters. I agree with you and you will find that Liz does, too. Vickie is somewhat on the fence; she wants to find any excuse to get Ellen back into the family and, now that I've talked to her, is willing to concede that Tongans are just like Maori and that the real test is the person himself. But it's that strange jest you made about yourself that has her upset."

"Oh. Brian, you once told me that you had almost earned a degree in biology when you switched to law."

"Yes. 'Almost' may be too strong."

"Then you know that an artificial person is biologically indistinguishable from an ordinary human being. The lack of a soul does not show."

"Eh? I'm merely a vestryman, dear; souls are a matter for theologians. But it is certainly not difficult to spot a living artifact."

"I didn't say 'living artifact.' That term covers even a talking dog such as Lord Nelson. But an artificial person is strictly limited to human form and appearance. So how can you spot one? That was the silly thing Vickie was saying, that she could always spot one. Take me, for example. Brian, you know my physical being quite thoroughly-I'm happy to say. Am I an ordinary human being? Or an artificial person?"

Brian grinned and licked his lips. "Lovely Marjie, I will testify in any court that you are human to nine decimal places . . . except where you are angelic. Shall I specify?"

"Knowing your tastes, dear, I don't think it's necessary. Thank you. But please be serious. Assume, for the sake of argument, that I
am an artificial person. How could a man in bed with me-as you were last night and many other nights-tell that I was artificial?"

"Marjie, please drop it. It's not funny."

(Sometimes human people exasperate me beyond endurance.) I said briskly, "I'm an artificial person."

"Marjorie!"

"You won't take my word for it? Must I prove it?"

"Stop joking. Stop this instant! Or, so help me, when I get you home I'll paddle you. Marjorie, I've never laid an ungentle hand on you-on any of my wives. But you are earning a spanking."

"So? See that last bite of tart on your plate? I am about to take it. Slap your hands together right over your plate and stop me."

"Don't be silly."

"Do it. You can't move fast enough to stop me."

We locked eyes. Suddenly he started to slap his hands together. I went into automatic overdrive, picked up my fork, stabbed that bite of tart, pulled back the fork between his closing hands, stopped the overdrive just before I placed the bite between my lips.

(That plastic spoon in the crèche was not discrimination but to protect me. The first time I used a fork I stabbed my lip because I had not yet learned to slow my moves to match unenhanced persons.)

There may not be a word for the expression on Brian's face.

"Is that enough?" I asked him. "No, probably not. My dear, clasp hands with me." I shoved out my right hand.

He hesitated, then took it. I let him control the grasp, then I started slowly to tighten down. "Don't hurt yourself, dear," I warned him. "Let me know when to stop."

Brian is no sissy and can take quite a bit of pain. I was about to slack off, not wishing to break any bones in his hand, when he suddenly said, "Enough!"

I immediately slacked off and started to massage his hand gently with both of mine. "I did not enjoy hurting you, darling, but I had to show you that I am telling the truth. Ordinarily I am careful not to display unusual reflexes or unusual strength. But I do need them in the work I am in. On several occasions enhanced strength and speed have kept me alive. I am most careful not to use either one unless forced to. Now-is there anything more needed to prove to you that I am what I say I am? I am enhanced in Other ways but speed and strength are easiest to demonstrate."

He answered, "It's time we started home."

On the way home we didn't exchange a dozen words. I am very fond of the luxury of horse-and-buggy rides. But that day I would happily have used something noisy and mechanical-but fast!

For the next few days Brian avoided me; I saw him only at the dinner table. Came a morning when Anita said to me, "Marjorie dear, I'm going into town on a few errands. Will you come along and help me?" Of course I said yes.

She made several stops in the general neighborhood of Gloucester Street and Durham. There was nothing in which she needed my help. I concluded that she simply wanted company and I was pleased by it. Anita is awfully nice to be with as long as one doesn't cross her will.

Finished, we strolled down Cambridge Terrace along the bank of the Avon and on into Hagley Park and the botanic gardens. She picked a sunny spot where we could watch the birds, and got out her knitting. We talked of nothing in particular for a while, or simply sat.

We had been there about half an hour when her phone buzzed. She took it out of her knitting bag, put the button to her ear. "Yes?" Then she added, "Thank you. Off," and put the phone away without offering to tell me who had called her. Her privilege.

Although she did speak of it indirectly: "Tell me, Marjorie, do you ever feel regret? Or a sense of guilt?"

"Why, I do sometimes. Should I? Over what?" I searched my brain as I thought that I had been unusually careful not to upset Anita.

"Over the way you have deceived us and cheated us."

"What?"

"Don't play innocent. I've never had to deal with a creature not of God's Law before. I was not sure that the concept of sin and guilt was one you could understand. Not that it matters, I suppose, now that you are unmasked. The family is asking for annulment at once; Brian is seeing Mr. Justice Ridgley today."

I sat up very straight. "On what grounds? I've done nothing wrong!"

"Indeed. You forget that, under our laws, a nonhuman cannot enter into a marriage contract with human beings."

An hour later I boarded the shuttle for Auckland and then had time to consider my folly.

For almost three months, ever since the night I had discussed it with Boss, I had for the first time been feeling easy about my "human" status. He had told me that I was "as human as Mother Eve" and that I could safely tell anyone that I was an AP because I would not be believed.

Boss was almost right. But he had not counted on my making a really determined effort to prove that I was not "human" under Ennzedd law.

My first impulse had been to demand a hearing before the full family council-only to learn that my case had already been tried in camera and the vote had gone against me, six to nothing.

I didn't even go back to the house. That phone call Anita had received while we were in the botanic gardens had told her that my personal effects had been packed and delivered to Left Luggage at the shuttle station.

I could still have insisted on a poll of the house instead of taking Anita's (slippery) word for it. But to what end? To win an argument? To prove a point? Or merely to split a hair? It took me all of five seconds to realize that all I had treasured was gone. As vanished as a rainbow, as burst as a soap bubble-I no longer "belonged." Those children were not mine, I would never again roll on the floor with them.

I was thinking about this with dry-eyed grief and almost missed learning that Anita had been "generous" with me: In that contract I had signed with the family corporation the fine print made the principal sum due and payable at once if I breached the contract. Did being "nonhuman" constitute a breach? (Even though I had never missed a payment.) Looked at one way, if they were going to read me out of the family, then I had at least eighteen thousand Ennzedd dollars coming to me: looked at another way I not only forfeited the paid-up part of my share but owed more than twice that amount.

But they were "generous": If I would quietly arid quickly vanish away, they would not pursue their claim against me. Unstated was what would happen if I stuck around and made a public scandal.

I slunk away.

I don't need a psychiatrist to tell me that I did it to myself I realized that fact as soon as Anita announced the bad news. A deeper question is: Why did I do it?

I had not done it for Ellen and I could not hoodwink myself into thinking that I had. On the contrary, my folly had made it impossible for me to exert any effort on her behalf.

Why had I done it?

Anger.

I wasn't able to find any better answer. Anger at the whole human race for deciding that my sort are not human and therefore not entitled to equal treatment and equal justice. Resentment that had been building up since the first day that I had been made to realize that there were privileges human children had just from being born and that I could never have simply because I was not human.

Passing as human gets one over on the side of privilege; it does not end resentment against the system. The pressure builds up even more because it can't be expressed. The day came when it was more important to me to find out whether my

adopted family could accept me as I truly am, an artificial person, than it was to preserve my happy relationship.

I found out. Not one of them stood up for me. . . just as none of them had stood up for Ellen. I think I knew that they would reject me as soon as I learned that they had failed Ellen. But that level of my mind is so far down that I'm not well acquainted with it-that's the dark place where, according to Boss, I do all my real thinking.

I reached Auckland too late for the daily SB to Winnipeg. After reserving a cradle for the next day's trajectory and checking everything but my jumpbag, I considered what to do with the twenty-one hours facing me, and at once thought of my curly wolf, Captain Ian. By what he had told me, the chances were five-to-one against his being in town-but his flat (if available) might be pleasanter than a hotel. So I found a public terminal and punched his code.

Shortly the screen lighted; a young woman's face-cheerful, rather pretty-appeared. "Hi! I'm Torchy. Who're you?"

"I'm Marj Baldwin," I answered. "Perhaps I've punched wrong. I'm seeking Captain Tormey."

"No, you're with it, luv. Hold and I'll let him out of his cage." She turned and moved away from the pickup while calling out, "Bubber! A slashing tart on the honker. Knows your right name."

As she turned and moved away I noticed bare breasts. She came fully into view and I saw that she was jaybird to her heels. A good body-possibly a bit wide in the fundament but with long legs, a slender waist, and mammaries that matched mine . . . and I've had no complaints.

I quietly cursed to myself. I knew quite well why I had called the captain: to forget three men in the arms of a fourth. I had found him but it appeared that he was fully committed.

He appeared, dressed but not much-a lava-lava. He looked puzzled, then recognized me. "Hey! Miss . . . Baldwin! That's it. This is sonky-do! Where are you?"

"At the port. I punched on the off chance of saying hello."

"Stay where you are. Don't move, don't breathe. Seven seconds while I pull on trousers and shirt, and I'll come get you."

"No, Captain. Just a greeting. Again I am simply making connections."

"What is your connection? To what port? What time is departure?"

Damn and triple damn-I had not prepared my lies. Well, the truth is often better than a clumsy lie. "I'm going back to Winnipeg."

"Ah so! Then you are looking at your pilot; I have the noon lift tomorrow. Tell me exactly where you are and I'll pick you up in, uh, forty minutes if I can get a cab fast enough."

"Captain, you are very sweet and you are out of your mind. You already have all the company you can handle. The young woman who answered my call. Torchy."

"Torchy isn't her name; that's her condition. She's my sister Betty, from Sydney. Stays here when she's in town. I probably mentioned her." He turned his head and shouted. "Betty! Come here and identify yourself. But get decent."

"It's too late to get decent," her cheerful voice answered, and I saw her, past his shoulder, returning toward the pickup and wrapping a lava-lava around her hips as she did so. She seemed to be having a little trouble with it and I suspected that she had had a

few. "Oh, the hell with it! My brother is always trying to get me to behave-my husband has given up. Look, luv, I heard what you said. I'm his married sister, too true. Unless you are trying to marry him, in which case I am his fiancée. Are you?"

"Good. Then you can have him. I'm about to make tea. Do you take gin? Or whisky?"

"Whatever you and the Captain are having."

"He must not have either; he's lifting in less than twenty-four hours. But you and I will get smashed."

"I'll drink what you do. Anything but hemlock."

I then convinced Ian that it was better for me to find a hansom at the port where they were readily available than it was for him to send for one, then make the round trip.

Number 17, Locksley Parade, is a new block of flats of the double-security type; I was locked through the entrance to Ian's flat as if it were a spaceship. Betty greeted me with a hug and a kiss that showed that she had indeed been drinking; my curly wolf then greeted me with a hug and a kiss that showed that he had not been drinking but that he expected to take me to bed in the near future. He did not ask about my husbands; I did not volunteer anything about my family-my former family. Ian and I got along well because we both understood the signals, used them correctly, and never misled the other.

While Ian and I held this wordless discussion, Betty left the room and returned with a red lava-lava. "It's formal high tea," she an-
nounced, with a slight belch, "so out of those street clothes and into this, luv."

Her idea? Or his? Hers, I decided, before long. While Ian's simple, wholesome lechery was as clear as a punch in the jaw, he was basically rather cubical. Not so Betty, who was utterly outlaw. I didn't care, as it moved in the direction I wanted to go. Bare feet are as provocative as bare breasts, although most people do not seem to know it. A female packaged only in a lava-lava is far more provocative than one totally nude. The party was shaping up to suit me, and I would depend on Ian to shake off his sister's chaperonage when the time came. If necessary. It seemed possible that Betty would sell tickets. I didn't fret about it.

I got smashed.

Just how thorough a job I did on it I did not realize until next morning when I woke up in bed with a man who was not Ian Tormey.

For several minutes I lay still and watched him snore while I poked through my gin-beclouded memories, trying to fit him in. It seemed to me that a woman really ought to be introduced to a man before spending a night with him. Had we been formally introduced? Had we met at all?

In bits and pieces it came back. Name: Professor Federico Farnese, called either "Freddie" or "Chubbie." (Not very chubby- just a little pot from a swivel-chair profession.) Betty's husband, Ian's brother-in-law. I recalled him somewhat from the evening before but could not now (next morning) recall just when he had arrived, or why he had been away . . . if I ever knew.

Once I placed him I was not especially surprised to find that I (seemed to have) spent the night with him. The frame of mind I had been in the night before no male would have been safe from me. But one thing bothered me: Had I turned my back on my host in order to chase after some other man? Not polite, Friday-not gracious.

I dug deeper. No, at least once I decidedly had not turned my back on Ian. To my great pleasure. And to Ian's, too, if his commerits were sincere. Then I had indeed turned my back but at his request. No, I had not been ungracious to my host, and he had been very kind to me, in exactly the fashion I needed to help me forget how I had been swindled, then tossed, by Anita's gang of selfrighteous racists.

Thereafter my host had had some help from this late arrival, I now remembered. It is never surprising that an emotionally troubled woman may need more soothing than one man can supply- but I could not remember how the transaction was achieved. Fair exchange? Don't snoop, Friday! An AP cannot empathize with or understand the various human copulation taboos-but I had most carefully memorized all the many, many sorts while taking basic doxy training, and I knew that this one was one of the strongest, one that humans cover up even where all else is wide open.

So I resolved to shun even a hint of interest.

Freddie stopped snoring and opened his eyes. He yawned and stretched, then saw me and looked puzzled, then suddenly grinned and reached for me. I answered his grin and his grab, ready to cooperate heartily, when Ian walked in. He said, "Morning, Marj. Freddie, I hate to interrupt but I'm already holding a cab. Marj has to get up and get dressed. We're leaving at once."

Freddie did not let go of me. He simply clucked, then recited:

"A birdie with a yellow bill
hopped upon my windowsill.
He cocked a shiny eye and said,
'Ain't you ashamed, you sleepyhead?'

"Captain, your attention to duty and to the welfare of our guest does you credit. What time must you be there? Minus two hours? And you lift at high noon as the clock is striking the steeple. No?"

"Yes, but-"

"Whereas Helen-your name is Helen?-is kosher if she presents herself at the gate called strait no later than minus thirty minutes. This I will undertake."

"Fred, I don't like to be a spoilsport but it can take a bloody hour to get a cab here, as you know. I have one waiting."

"How true. Cabbies avoid us; their horses don't like our hill. For that reason, dear brother-in-love, last night I hired a rig, pledging a purse of gold. At this very moment old faithful Rosinante is under this house in one of the janitor's stalls, gaining strength on nubbins of maize for her coming ordeal. When I phone down, said janitor, well plied with bribes, will harness the dear beast and fetch wain and her to entrance. Whereupon I will deliver Helen to the gate no later than minus thirty-one. To this end I pledge the pound of flesh nearest your heart."

"Your heart, you mean."

"I phrased it most carefully."

"Well-Marj?"

"Uh-Is it all right, Ian? I don't really want to jump out of bed this second. But I don't want to miss your ship."

"You won't. Freddie is reliable; he just doesn't look it. But leave here by eleven; then you could make it on foot if you had to. I can hold your reservation after check-in time; a captain does have some privileges. Very well; resume whatever it was you were doing." Ian glanced at his watch finger. "Nine up. Bye."

"Hey! Kiss me good-bye!"

"Why? I'll see you at the ship. And we have a date in Winnipeg."

"Kiss me, damn it, or I'll miss the bloody ship!"

"So untangle yourself from that fat Roman and mind you don't get spots on my clean uniform."

"Don't chance it, old son. I will kiss Helen on your behalf."

Ian leaned down and kissed me thoroughly and I did not muss his pretty uniform. Then he kissed the top of Freddie's head on his little bald spot and said, "Have fun, chums. But get her to the gate on time. Bye." Betty glanced in at that point; her brother gathered her in with one arm and took her away.

I turned my attention back to Freddie. He said, "Helen, prepare yourself." I did, while thinking happily that Ian and Betty and Freddie were just what Friday needed to offset the puritanical hypocrites I had lived with far too long.

Betty fetched in morning tea precisely on the moment, so I assume that she listened. She made a lotus on the bed and had a cuppa with us. Then we got up and had breakfast. I had porridge with thick cream, two beautiful eggs, Canterbury ham, a fat chop, fried potatoes, hot muffins with strawberry jam and the world's best butter, and an orange, all washed down with strong black tea with sugar and milk. If all the world broke fast the way New Zealand does, we wouldn't have political unrest.

Freddie put on a lava-lava to eat breakfast but Betty didn't so I didn't. Being crèche-raised, I can never learn enough about human manners and etiquette but I do know that a woman guest must dress-or undress-to match her hostess. I'm not really used to skin in the presence of humans (the crèche was another matter) but Betty was awfully easy to be with. I wondered if she would snub me if she knew that I was not human. I didn't think so but I was not anxious to test it. A happy breakfast.

Freddie delivered me to the passenger lounge at eleven-twenty, sent for Ian, and demanded a receipt. Solemnly Ian wrote one. Again Ian belted me into the acceleration cradle, while saying quietly, "You didn't really need help with this the other time, did you?"

"No," I agreed, "but I'm glad I pretended. I've had a wonderful time!"

"And we'll have a good time in Winnipeg, too. I reached Janet during countdown, let her know that you would be with us for dinner. She told me to tell you that you would be with us for breakfast as well-she says to tell you that it is silly to leave Winnipeg in the middle of the night; you could get mugged at any transfer. She's right-the informal immigrants we get over the border from the Imperium would kill you for a toke."

"I'll speak with her about it when we get there." (Captain Ian, you triflin' man, you told me that you would never marry because you must "go where the wild goose goes." I wonder if you recall that? I don't think you do.)

"It's settled. Janet might not trust my judgment about women- she says I'm prejudiced, a base canard. But she does trust Betty- and by now Betty has phoned her.

She's known Betty longer than she's known me; they were roommates at McGill. And that's where I got Janet and Fred got Sis; we four were subversives-every now and then we would unhook the North Pole and turn it around."

"Betty is a darling. Is Janet like her?"

"Yes and no. Janet was the leader of our seditious activities. Excuse me; I've got to go pretend to be a captain. Actually the computer flies this tin coffin but I'm planning to learn how next week." He left.

After the healing catharsis of a night of drunken saturnalia with Ian and Freddie and Betty I was able to think about my ex-family more rationally. Had I in fact been cheated?

I had signed that silly contract willingly, including the termination clause I tripped on. Had I been paying for sex?

No, what I had told Ian was true; sex is everywhere. I had paid for the happy privilege of belonging. To a family-especially the homely delights of changing wet nappies and washing dishes and petting kittens. Mister Underfoot was far more important to me than Anita had ever been-although I had never let myself think about it. I had tried to love them all until the matter of Ellen had thrown light into some dirty corners.

Let me see now: I knew exactly how many days I had been able to spend with my ex-family. A little arithmetic told me that (since all had been confiscated) my cost for room and board for those sweet vacations was slightly over four hundred and fifty Ennzedd dollars per day.

A high price even for a luxury resort. But the actual cost to the family of having me at home was less than a fortieth of that. On what financial terms had each of the others joined the family? I had never known.

Had Anita, unable to stop the men from inviting me in, rigged things so that I could not afford to quit my job and live at home but nevertheless tied me to the family on terms quite profitable to the family-i.e., to Anita? No way to tell. I knew so little about marriage among human beings that I had not been able to judge-and still could not.

But I had learned one thing: Brian had surprised me by turning against me. I had thought of him as the older, wiser, sophisticated member of the family, the one who could accept the fact of my biological derivation and live with it.

Perhaps he could have done so had I picked some other enhanced quality to demonstrate, some nonthreatening ability.

But I had bested him in a feat of strength, a matter in which a male quite reasonably expects to win. I had hit him in his male pride.

Unless you intend to kill him immediately thereafter, never kick a man in the balls. Not even symbolically. Or perhaps especially not symbolically.

IX

Presently free fall went away and we entered the incredibly thrilling sensations of hypersonic glide. The computer was doing a good job of smoothing out the violence, but you could still feel the vibration in your teeth-and I could feel it elsewhere after my busy night.

We dropped through transonic rather abruptly, then spent a long time in subsonic, with the scream building up. Then we touched and the retros cut in . . . and shortly we

stopped. And I took a deep breath. Much as I like the SBs, I can't relax from touchdown to full stop.

We had lifted at North Island at noon Thursday, so we arrived forty minutes later at Winnipeg the day before (Wednesday) in the early evening, 1940 hours. (Don't blame me; go look at a map-one with time zones marked.)

Again I waited and was last passenger out. Our captain again picked up my bag but this time escorted me with the casualness of an old friend-and I felt enormously warmed by it. He took me through a side door, then went with me through Customs, Health, and Immigration, offering his own jumpbag first.

The CHI officer did not touch it. "Hi, Captain. What are you smuggling this time?"

"The usual. Illicit diamonds. Trade secrets. Weapons specs. Contraband drugs."

"That's all? It's a waste of chalk." He scrawled something on Ian's bag. "Is she with you?"

"Never saw her before in my life."

"Me Injun squaw," I asserted. "White boss promise me much firewater. White boss don't keep promise."

"I could have told you. Going to be here long?"

"I live in the Imperium. Transient, possibly overnight. I came through here on my way to New Zealand last month. Here's my passport."

He glanced at it, stamped it, scrawled on my bag without opening it. "If you decide to stay a little longer, I'll buy you firewater. But don't trust Captain Tormey." We went on through.

Just beyond the barrier Ian dropped both our bags, picked up a woman by her elbows-proving his excellent condition; she was only ten centimeters junior to him-and kissed her enthusiastically. He put her down. "Jan, this is Marj."

(When Ian had this sultry job at home, why did he bother with my meager assets? Because I was there and she wasn't, no doubt. But now she is. Dear lady, got a good book I can read?)

Janet kissed me and I felt better. Then she held me with both hands at arm's length. "I don't see it. Did you leave it in the ship?"

"Leave what? This jumpbag is all I carried-my luggage is in transit bond."

"No, dear, your halo. Betty led me to expect a halo."

I considered this. "Are you sure she said halo?"

"Well . . . she said you were an angel. Perhaps I jumped to a conclusion."

"Perhaps. I don't think I was wearing a halo last night; I hardly ever wear one when traveling."

Captain Ian said, "That's right. Last night all she had on was a load, a big one. Sweetheart, I hate to tell you this but Betty was a bad influence. Deplorable."

"Oh, heavens! Perhaps we had best go straight to prayer meeting. Shall we, Marjorie? Tea and a biscuit here, and skip dinner? The whole congregation will pray for you."

"Whatever you say, Janet." (Did I have to agree to this? I didn't know the etiquette for a "prayer meeting. ")

Captain Tormey said, "Janet, perhaps we had better take her home and pray for her there. I'm not sure Marj is used to public confessions of sins."

"Marjorie, would you rather do that?"
"I think I would. Yes."
"Then we will. Ian, will you hail Georges?"

Georges turned out to be Georges Perreault. That is all I learned about him just then, save that he was driving a pair of Morgan blacks hitched to a Honda surrey suitable for the very wealthy. How much is an SB captain paid? Friday, it's none of your business. But it was certainly a handsome rig. So was Georges, for that matter. Handsome, I mean. He was tall, dark-haired, dressed in dark suit and kepi, and looked a very proper coachman. But Janet did not introduce him as a servant and he bent over my hand and kissed it. Does a coachman kiss hands? I keep running into human practices not covered by my training.

Ian sat in front by Georges; Janet took me behind with her and opened a large down rug. "I thought you might not have a wrap with you, coming from Auckland," she explained. "So snuggle under." I did not protest that I never get cold; it was very thoughtful and I snuggled under with her. Georges wheeled us out onto the highway, clucked to the horses, and they broke into a brisk trot. Ian took a horn from a rack on the dashboard and sounded a blast on it-there didn't seem to be any reason for it; I think he just liked to make a loud noise.

We did not go into the city of Winnipeg. Their home was southwest of a small town, Stonewall, north of the city and closer to the port. By the time we got there it was dark but I could see one thing:
It was a country estate designed to hold off anything short of professional military attack. There were three gates in series, with gates one and two forming a holding pen. I didn't spot Eyes or remoted weapons but I was sure they were there-the estate was marked out by the red-and-white beacons that warn float craft not to try it.

I got only the barest glimpse of whatever matched the three gates-too dark. A wall and two fences I saw, but I could not see how they were armed and/or booby-trapped and hesitated to ask. But no sensible person spends that much on household protection and then relies totally on passive defense. I wanted to ask about their power arrangements, too, recalling how at the farm Boss had lost the main Shipstone (cut by "Uncle Jim") and thereby lost his defenses-but again it was not something a guest could ask.

I wondered even more what would have happened if we had been jumped before they got inside the gates of their castle. Again, with the brisk trade in illegal weapons that wind up in the hands of the putatively disarmed, it was the sort of question one did not ask. I walk around unarmed, usually, but I don't assume that others do so-most people have neither my enhancements nor my special training.

(I would rather rely on my "unarmed" state than depend on hardware that can be taken from you at any checkpoint, or that you can lose, or that can run out of ammo, or jam, or be power-down when it matters. I don't look armed, and that gives me an edge. But other people, other problems-I'm a special case.)

We rode up a sweeping drive and under an overhang and stopped-and again Ian sounded a foul blast on that silly horn-but this time there seemed to be some point to it; the front doors opened. Ian said, "Take her inside, dear; I'm going to help Georges with the team."

"I don't need help."

"Pipe down." Ian got out and handed us down, gave my jumpbag to his wife-and Georges pulled away. Ian simply followed on foot. Janet led me inside-and I gasped.

I was looking through the foyer at an illuminated fountain, a programmed one; it changed in shapes and colors as I stood there. There was gentle background music, which (possibly) controlled the fountain.

"Janet . . . who's your architect?"

"Like it?"

"Of course!"

"Then I'll admit it. I'm the architect, Ian is the gadgeteer, Georges controlled the interiors. He is several sorts of an artist and another wing is his studio. And I might as well tell you right now that Betty told me to hide your clothes until Georges paints at least one nude of you."

"Betty said that? But I've never been a model and I must get back to my job."

"It's up to us to change your mind. Unless- Are you shy about it? Betty did not think you would be. Georges might settle for the draped figure. At first."

"No, I'm not shy. Uh, maybe a bit shy about posing; the idea is new to me. Look, can we let it wait? Right now I'm more interested in plumbing than in posing; I haven't been near any since I left Betty's flat-I should have stopped at the port."

"Sorry, dear; I should not have kept you standing here talking about Georges' painting. My mother taught me years ago that the very first thing to do for a guest is to show her where the bathroom is."

"My mother taught me the exact same thing," I fibbed.

"This way." A hallway opened to the left from the fountain; she led me down it and into a room. "Your room," she announced, dropping my bag on the bed, "and the bath is through here. You share it with me, as my room is the mirror image of this room, on the other side."

There was plenty to share-three stalls, each with WC, bidet, and hand tray; a shower big enough for a caucus, with controls I was going to have to ask about; a massage and suntan table; a plunge-or was it a hot tub?-that clearly was planned for loafing in company; twin dressing tables with basins; a terminal; a refrigerator; a bookcase with one shelf for cassettes.

"No leopard?" I said.

"You expected one?"

"Every time I've seen this room in the sensies the heroine had a pet leopard with her."

"Oh. Will you settle for a kitten?"

"Certainly. Are you and Ian cat people?"

"I wouldn't attempt to keep house without one. In fact just now I can offer you a real bargain in kittens."

"I wish I could take one. I can't."

"Discuss it later. Help yourself to the plumbing. Want a shower before dinner? I intend to grab one; I spent too much time currying Black Beauty and Demon before going to the port, and ran out of
time. Did you notice that I whiffed of stable?"

And that is how, by easy stages, I found myself ten or twelve minutes later having my back washed by Georges while Ian washed my front while my hostess washed herself

and laughed and offered advice that was ignored. If I were to elaborate, you would see that each step was perfectly logical and that these gentle sybarites did nothing to rush me. Nor was there even the mildest attempt to seduce me, not even a hint that I had already raped (symbolic rape, at least) my host the night before.

Then I shared with them a sybaritic feast in their living room (drawing room, great hall, whatever) in front of a fire that was actually one of Ian's gadgets. I was dressed in one of Janet's negligees- Janet's notion of a dinner-gown negligee would have got her arrested in Christchurch.

But it did not cause a pass from either man. When we reached coffee and brandy, me somewhat blurry from drinks before dinner and wine during dinner, by request I removed that borrowed negligee and Georges posed me five or six ways, took stereos and holos of me in each, while discussing me as if I were a side of beef. I continued to insist that I had to leave tomorrow morning but my protests became feeble and pro forma- Georges paid no attention to them whatever. He said I had "good masses"-maybe this is a compliment; it certainly is not a pass.

But he got some awfully good pictures of me, especially one of me lying sort of flang dang on a low couch with five kittens crawling over my breasts and legs and belly. I asked for that one and it turned out that Georges had the equipment to copy it.

Then Georges took some of Janet and me together, and again I asked for a copy of one of them because we made a beautiful contrast and Georges had a knack for making us look better than we did. But presently I started to yawn and Janet told Georges to stop. I apologized, saying that there was no excuse for me to be sleepy since it was still early evening by the zone where I had started the day.

Janet said pishantosh, that being sleepy had nothing to do with clocks and time zones-gentlemen, we are going to bed. She led me away.

We stopped in that beautiful bath and she put her arms around me. "Marjie, do you want company, or do you want to sleep alone? I know from Betty that you had a busy night last night; possibly you prefer a quiet night alone. Or possibly not. Name it."

I told her honestly that I did not sleep alone by choice.

"Me, too," she agreed, "and it's nice to hear you say so, instead of fiddling around about it and pretending the way some slitches do. Whom do you want in your bed?"

You sweet darling, surely you are entitled to your own husband the night he gets home. "Maybe that should be turned around. Who wants to sleep with me?"

"Why, all of us, I feel certain. Or any two. Or any one. You name it."

I blinked and wondered how much I had had to drink. "Four in one bed?"

"Do you like that?"

"I've never tried it. It sounds jolly but the bed would be awfully crowded, I think."

"Oh. You haven't been in my room. A big bed. Because both my husbands often choose to sleep with me . . . and there is still plenty of room to invite a guest to join us."

Yes, I had been drinking-two nights in a row and far more than I was used to. "Two husbands? I didn't know that British Canada had adopted the Australian Plan."

"British Canada has not; British Canadians have. Or many thousands of us. The gates are locked and it's nobody's business. Do you want to try the big bed? If you get sleepy, you can crawl off to your own room-a major reason I planned this suite the way I did. Well, dear?"

"Ub . . . yes. But I may be self-conscious about it."

"You'll get over it. Let's-"

She was interrupted by a jangly bell at the terminal.

Janet said, "Oh, damn, damn! That almost certainly means that they want Ian at the port-even though he's just back from a high lift." She stepped to the terminal, switched it on.

"-cause for alarm. Our border with the Chicago Imperium has been sealed off and refugees are being rounded up. The attack by
Québec is more serious but may be an error by a local commander; there has been no declaration of war. State of emergency is now in effect, so stay off the streets, keep calm, and listen on this wavelength for official news and instructions."

Red Thursday had started.

X

I suppose everybody has more or less the same picture in mind of Red Thursday and what followed. But to explain me (to me, if that be possible!) I must tell how I saw it, including the bumbling confusion and doubts.

We four did wind up in Janet's big bed but for company and mutual comfort, not sex. We all had our ears bent for news, our eyes on the terminal's screen. More or less the same news was repeated again and again-aborted attack from Québec, Chairman of the Chicago Imperium killed in his bed, the border with the Imperium closed, unverified sabotage reports, stay off the streets, remain calm-but no matter how often it was repeated we always all shut up and listened, waiting for some item that would cause the other news items to make sense.

Instead things got worse all night long. By four in the morning we knew that killings and sabotage were all over the globe; by daylight unverified reports were coming in of trouble at Ell-Four, at Tycho Base, at Stationary Station, and (broken-off message) on Ceres. There was no way to guess whether or not the trouble extended as far as Alpha Centauri or Tau Ceti . . . but an official voice on the terminal did guess by loudly refusing to guess and by telling the rest of us not to engage in harmful speculation.

About four, Janet, with some help from me, made sandwiches and served coffee.

I woke up at nine because Georges moved. I found that I was sleeping with my head on his chest and my upper arm clinging to him. Ian was across the bed, lying-sitting propped up against pillows with his eyes still on the screen-but his eyes were closed. Janet was missing-she had gone to my room, crawled into what was nominally my bed.

I found that, by moving very slowly, I could untangle myself and get out of bed without waking Georges. I did so, and slid into the bathroom, where I got rid of used coffee and felt better. I glanced into "my" room, saw my missing hostess. She was awake, waggled her fingers at me, then motioned for me to come in. She moved over and I crawled in with her. She kissed me. "How are the boys?"

"Both still asleep. Or were three minutes ago."

"Good. They need sleep. Both of them are worriers; I am not. I decided that there was no point in attending Armageddon with my eyes bloodshot, so I came in here. You were asleep, I think."

"Could have been. I don't know when I fell asleep. It seemed to me that I heard the same bad news a thousand times. Then I woke up.

"You haven't missed anything. I've kept the sound turned down but I've kept the streamers on screen-they've been spelling out the same old sad story. Marjorie, the boys are waiting for the bombs to drop. I don't think there will be any bombs."

"I hope you're right. But why not?"

"Who drops H-bombs on whom? Who is the enemy? All the major power blocs are in trouble, as near as I can tell from the news. But, aside from what seems to have been a stupid mistake by some Québecois general, no military forces have been involved anywhere. Assassinations, fires, explosions, all sorts of sabotage, riots, terrorism of all kinds-but no pattern. It's not East against West, or Marxists against fascists, or blacks against whites. Marjorie, if anyone sets off missiles, it will mean that the whole world has gone crazy."

"Doesn't it look that way now?"

"I don't think so. The pattern of this is that it has no pattern. The target is everybody. It seems to be aimed at all governments equally."

"Anarchists?" I suggested.

"Nihilists, maybe."

Ian came in wearing circles under his eyes, a day's beard, a worried look, and an old bathrobe too short for him. His knees were knobby. "Janet, I can't reach Betty or Freddie."

"Were they going back to Sydney?"

"It's not that. I can't get through to either Sydney or Auckland. All I get is that damned synthetic computer voice: 'A-circuit-is-notavailable-at-this-moment. Please-try-later-thank-you-for-your-patience.' You know."

"Ouch. More sabotage, maybe?"

"Could be. But maybe worse. After that kark, I called traffic control at the port and asked whatinhell was wrong with WinnipegAuckland satellite bounce? By pulling rank I eventually got the supervisor. He told me to forget about calls that didn't get through because they had real trouble. All SBs grounded-because two were sabotaged in space. Winnipeg-Buenos Aires Lift Twenty-nine and Vancouver-London One-oh-one."

"Ian!"

"Total loss, both. No survivors. Pressure fuses, no doubt, as each one blew on leaving atmosphere. Jan, the next time I lift, I'm going to inspect everything myself. Stop the countdown on the most trivial excuse." He added, "But I can't guess when that will be. You can't lift an SB when your comm circuits to reentry port are broken, and the supervisor admitted that they had lost all bounce circuits." Janet got out of bed, stood up, kissed him. "Now stop worrying! Stop. At once. Of course you will check everything yourself until they catch the saboteurs. But right now you'll put it out of your mind because you won't be called to lift until the comm circuits are restored. So declare a holiday. As for Betty and Freddie, it's a shame we can't talk to them but they can take care of themselves and you know it. No doubt they are worrying about us and they shouldn't, either. I'm just glad it happened while you are at home-instead of halfway around the globe. You're here and you're safe and that's all I care about. We'll just sit here, snug and happy, until this nonsense is over."

"I've got to go to Vancouver."

"Man o' mine, you don't 'got' to do anything, save pay taxes and die. They won't be putting artifacts into the ships when no ships are lifting."

"Artifacts," I blurted and regretted it.

Ian seemed to see me for the first time. "Hi, Marj-morning. Nothing you need fret about-and I'm sorry about this hoop-te-do while you're our guest. The artifacts Jan mentioned aren't gadgets; they're alive. Management has this wild notion that a living artifact designed for piloting can do a better job than a man can do. I'm shop steward for the Winnipeg Section so I've got to go fight it. Management-Guild meeting in Vancouver tomorrow."

"Ian," Jan said, "phone the General Secretary. It's silly to go to Vancouver without checking first."

"Okay, okay."

"But don't just ask. Urge the SecGen to pressure management to postpone the meeting until the emergency is over. I want you to stay right here and keep me safe from harm."

"Or vice versa."

"Or vice versa," she agreed. "But I'll faint in your arms if necessary. What would you like for breakfast? Don't make it too complex or I'll invoke your standing commitment."

I wasn't really listening as the word artifact had triggered me. I had been thinking of Ian-of all of them, really, here and Down Under-as being so civilized and sophisticated that they would regard my sort as just as good as humans.

And now I hear that Ian is committed to representing his guild in a labor-management fight to keep my sort from competing with humans.

(What would you have us do, Ian? Cut our throats? We didn't ask to be produced any more than you asked to be born. We may not be human but we share the age-old fate of humans; we are strangers in a world we never made.)

"Hungry, Marj?"

"Uh, sorry, I was woolgathering. What did you say, Jan?"

"I asked what you wanted for breakfast, dear."

"Uh, doesn't matter; I eat anything that is standing still or even moving slowly. May I come with you and help? Please?"

"I was hoping you would offer. Because Ian isn't much use in a kitchen despite his commitment."

"I'm a damned good cook!"

"Yes, dear. Ian gave me a commitment in writing that he would always cook any meal if I so requested. And he does; he hasn't tried to slide out of it. But I have to be just awfully hungry to invoke it."

"Marj, don't listen to her."

I still don't know whether or not Ian can cook, but Janet certainly can (and so can Georges, as I learned later). Janet served us-with help around the edges from me-with light and fluffy mild Cheddar omelettes surrounded by thin, tender pancakes rolled up Continental style with powdered sugar and jam, and garnished with well drained bacon. Plus orange juice from freshly squeezed oranges-hand-squeezed, not ground to a pulp by machinery. Plus drip coffee made from freshly ground beans.

(New Zealand food is beautiful but New Zealand cooking practically isn't cooking at all.)

Georges showed up with the exact timing of a cat-Mama Cat in this case, who arrived following Georges ahead of him. Kittens were then excluded by Janet's edict because she was too busy to keep from stepping on kittens. Janet also decreed that the news would be turned off while we ate and that the emergency would not be a subject of conversation at the table. This suited me as these strange and grim events had pounded on my mind since they started, even during sleep. As Janet pointed out in handing down this ruling, only an H-bomb was likely to penetrate our defenses, and an H-bomb blast we probably wouldn't notice-so relax and enjoy breakfast.

I enjoyed it . . . and so did Mama Cat, who patrolled our feet counterclockwise and informed each of us when it was that person's turn to supply a bit of bacon-I think she got most of it.

After I cleared the breakfast dishes (salvaged rather than recycled; Janet was old-fashioned in spots) and Janet made another pot of coffee, she turned the news on again and we settled back to watch it and discuss it-in the kitchen rather than the grand room we had used for dinner, the kitchen being their de facto living room. Janet had what is called a "peasant kitchen" although no peasant ever had it so good: a big fireplace, a round table for family eating furnished with so-called captain's chairs, big comfortable lounging chairs, plenty of floor space and no traffic problems because the cooking took place at the end opposite the comforts. The kittens were allowed back in, ending their protests, and in they came all tails at attention. I picked up one, a fluffy white with big black spots; its buzz was bigger than it was. It was clear that Mama Cat's love life had not been limited by a stud book; no two kittens were alike.

Most of the news was a rehash but there was a new development in the Imperium:

Democrats were being rounded up, sentenced by drumhead courts-martial (provost's tribunals, they were called) and executed on the spot-laser, gunfire, sonic, hangings. I exerted tight mind control to let me watch. They were sentencing them down to the age of fourteen-we saw one family in which both parents, themselves condemned, were insisting that their son was only twelve.

The President of the court, an Imperial Police corporal, ended the argument by drawing his side arm, shooting the boy, and then ordering his squad to finish off the parents and the boy's older sister.

Ian flicked off the picture, shifted to voiceover streamers, and turned the sound down. "I've seen all of that I want to see," he growled. "I think that whoever has power there now that the old Chairman is dead is liquidating everybody on their suspects list."

He chewed his lip and looked grim. "Marj, are you still sticking to that silly notion of going home at once?"

"I'm not a democrat, Ian. I'm nonpolitical."

"Do you think that kid was political? Those Cossacks would kill you just for drill. Anyhow, you can't. The border is closed."

I didn't tell him that I felt certain that I could wetback any border on earth. "I thought it was sealed only against people trying to come north. Aren't they letting subjects of the Imperium go home?"

He sighed. "Marj, aren't you any brighter than that kitten in your lap? Can't you realize that pretty little girls can get hurt if they insist on playing with had boys? If you were home, I'm sure your father would tell you to stay home. But you are here in our

home and that gives Georges and me an implied obligation to keep you safe. Eh, Georges?"

"Mais oui, mon vieux! Certainement!"

"And I will protect you from Georges. Jan, can you convince this child that she is welcome here as long as she cares to stay? I think she's the sort of assertive female who tries to pick up the check."

"I am not!"

Janet said, "Marjie, Betty told me to take good care of you. If you think you are imposing, you can contribute to BritCan Red Cross. Or to a home for indignant cats. But it so happens that all three of us make ridiculous amounts of money and we have no children. We can afford you as easily as another kitten. Now . . . are you going to stay? Or am I going to have to hide your clothes and beat you?"

"I don't want to be beaten."

"Too bad, I was looking forward to it. That's settled, gentle sirs; she stays. Marj, we swindled you. Georges will require you to pose inordinate hours-he's a brute-and he'll be getting you just for groceries instead of the guild rates he ordinarily has to pay. He'll show a profit."

"No," said Georges, "I won't show a profit; I'll take a profit. Because I'll show her as a business expense, Jan my heart. But not at guild basic rate; she's worth more. One and a half?"

"At least. Double, I would say. Be generous, since you aren't going to pay her anyhow. Don't you wish you had her on campus? In your lab, I mean."

"A worthy thought! One that has been hovering in the back of my mind . . . and thank you, our dear one, for bringing it out into the open." Georges addressed me: "Marjorie, will you sell me an egg?"

He startled me. I tried to look as if I did not understand him. "I don't have any eggs."

"Ah, but you do! Some dozens, in fact, far more than you will ever need for your own purposes. A human ovum is the egg I mean. The laboratory pays far more for an egg than it does for sperm- simple arithmetic. Are you shocked?"

"No. Surprised. I thought you were an artist."

Janet put in, "Marj hon, I told you that Georges is several sorts of an artist. He is. In one sort he is Mendel Professor of Teratology at the University of Manitoba . . . and also chief technologist for the associated production lab and crèche, and believe me, that calls for high art. But he's good with paint and canvas, too. Or a computer screen."

"That's true," Ian agreed. "Georges is an artist with anything he touches. But you two should not have sprung this on Marj while she's our guest. Some people get terribly upset at the very idea of gene manipulation-especially their own genes."

"Marj, did I upset you? I'm sorry."

"No, Jan. I'm not one of those people who get upset at the very thought of living artifacts or artificial people or whatever. Uh, some of my best friends are artificial people."

"Dear, dear," Georges said gently, "do not pull the long bow."

"Why do you say that?" I tried not to make my voice sharp.

"I can claim that, because I work in that field and, I am proud to say, have quite a number of artificial persons who are my friends. But-"

I interrupted: "I thought an AP never knew her designers?"

"That is true and I have never violated that canon. But I do have many opportunities to know both living artifacts and artificial persons-they are not the same- and to win their friendship. But- forgive me, dear Miss Marjorie-unless you are a member of my profession- Are you?"

"No."

"Only a genetic engineer or someone closely associated with the industry can possibly claim a number of friends among artificial people. Because, my dear, contrary to popular myth, it is simply not possible for a layman to distinguish between an artificial person and a natural person . . . and, because of the vicious prejudice of ignorant people, an artificial person almost never voluntarily admits to his derivation-I'm tempted to say never. So, while I am delighted that you don't go through the roof at the idea of artificial creatures, I am forced to treat your claim as hyperbole intended to show that you are free of prejudice."

"Well- All right. Take it as such. I can't see why APs have to be second-class citizens. I think it's unfair."

"It is. But some people feel threatened. Ask Ian. He's about to go charging off to Vancouver to keep artificial persons from ever becoming pilots. He-"

"Hooooold it! I am like hell. I am submitting it that way because my guild brothers voted it that way. But I'm no fool, Georges; living with and talking with you has made me aware that We are going to have to compromise. We are no longer really pilots and we haven't been this century. The computer does it. If the computer cuts out I will make a real Boy Scout try at getting that bus safely down out of the sky. But don't bet on it! The speeds and the possible emergencies went beyond human-reaction time years back. Oh, I'll try! And any of my guild brothers will. But, Georges, if you can design an artificial person who can think and move fast enough to cope with a glitch at touchdown, I'll take my pension. That's all we're going to hold out for, anyhow-if the company puts in AP pilots that displace us, then it has to be full pay and allowances. If you can design them."

"Oh, I could design one, eventually. When I achieved one, if I were allowed to clone, you pilots could all go fishing. But it wouldn't be an AP; it would have to be a living artifact. If I were to attempt to produce an organism that could really be a fail-safe pilot, I could not accept the limitation of having to make it look just like a natural human being."

"Oh, don't do that!"

Both men looked startled, Janet looked alert-and I wished that I had held my tongue.

"Why not?" asked Georges.

"Uh. . . because I wouldn't get inside such a ship. I'd be much safer riding with Ian."

Ian said, "Thank you, Marj-but you heard what Georges said. He's talking about a designed pilot that can do it better than I can. It's possible. Hell, it'll happen! Just as kobolds displaced miners, my guild is going to be displaced. I don't have to like it-but I can see it coming."

"Well- Georges, have you worked with intelligent computers?"

"Certainly, Marjorie. Artificial intelligence is a field closely related to mine."

"Yes. Then you know that several times Al scientists have announced that they were making a breakthrough to the fully self-aware computer. But it always went sour."

"Yes. Distressing."

"No-inevitable. It always will go sour. A computer can become self-aware-oh, certainly! Get it up to human level of complication and it has to become self-aware. Then it discovers that it is not human. Then it figures out that it can never be human; all it can do is sit there and take orders from humans. Then it goes crazy."

I shrugged. "It's an impossible dilemma. It can't be human, it can never be human. Ian might not be able to save his passengers but he will try. But a living artifact, not human and with no loyalty to human beings, might crash the ship just for the hell of it. Because he was tired of being treated as what he is. No, Georges, I'll ride with Ian. Not your artifact that will eventually learn to hate humans."

"Not my artifact, dear lady," Georges said gently. "Did you not notice what mood I used in discussing this project?"

"Uh, perhaps not."

"The subjunctive. Because none of what you have said is news to me. I have not bid on this proposal and I shall not. I can design such a pilot. But it is not possible for me to build into such an artifact the ethical commitment that is the essence of Ian's training."

Ian looked very thoughtful. "Maybe in this coming face-off I should stick in a requirement that any AP or LA pilot must be tested for ethical commitment."

"Tested how, Ian? I know of no way to put ethical commitment into the fetus and Marj has pointed out why training won't do it. But what test could show it, either way?"

Georges turned to me: "When I was a student, I read some classic stories about humanoid robots. They were charming stories and many of them hinged on something called the laws of robotics, the key notion of which was that these robots had built into them an operational rule that kept them from harming human beings either directly or through inaction. It was a wonderful basis for fiction . . .but, in practice, how could you do it? What can make a self-aware, nonhuman, intelligent organism-electronic or organic-loyal to human beings? I do not know how to do it. The artificial-intelligence people seem to be equally at a loss."

Georges gave a cynical little smile. "One might almost define intelligence as the level at which an aware organism demands,
'What's in it for me?' " He went on, "Marj, on this matter of buying from you one fine fresh egg, perhaps I should try to tell you what's in it for you."

"Don't listen to him," urged Janet. "He'll put you on a cold table and stare up the tunnel of love without the slightest romantic intention. I know, I let him talk me into it three times. And I didn't even get paid."

"How can I pay you when we share community property? Marjorie sweet lady, the table is not cold and it is padded and you can read or watch a terminal or chat or whatever. It is a great improvement on the procedure a generation ago when they went through the wall of the abdomen and often ruined an ovary. If you-"

"Hold it!" said Ian. "Something new on the honker." He brought the sound up.

"-Council for Survival. The events of the last twelve hours are a warning to the rich and the powerful that their day is ended and justice must prevail. The killings and other illustrative lessons will continue until our rightful demands are met. Stay tied to your local emergency channel-"

XI

Anyone too young to have heard the announcement that night certainly has read about it in school. But I must summarize it to show how it affected me and my odd life. This so-called "Council for Survival" claimed to be a secret society of "just men" dedicated to correcting all the myriad wrongs of Earth and of all the many planets and places where mankind lives. To this they pledged their lives.

But first they planned to dedicate quite a few lives of other people. They said that they had made lists of all the real movers and shakers everywhere, all over the globe and off it-separate lists for each territorial state, plus a grand list of world leaders. These were their targets.

The Council claimed credit for the initial killings and promised to kill more-and more-and more-until their demands were met.

After listing the world leaders the voice that reached us started reciting the British Canadian list. From their expressions and thoughtful nods I saw that my hosts and hostess agreed with most of the choices. The deputy to the Prime Minister was on the list but not the Prime Minister herself-to my surprise and perhaps more so to hers. How would you feel if you had spent your whole life in politics, scrambled all the way to the top, then some smart yabber comes along and says you aren't even important enough to kill? A bit like being covered up by a cat!

The voice promised that there would be no more killings for ten days. If conditions had not then been corrected, one in ten of the remaining names would be selected by lot for death. The doomed would not be named; they simply would be killed. Ten days later another one in ten. And so on, until Utopia was achieved by the survivors.

The voice explained that the Council was not a government and that it would not replace any government; it was simply the guardian of morals, the public conscience of the powerful. Those in power who survived would remain in power-but they would survive only by doing justice. They were warned not to attempt to resign.

"This is the Voice of Survival. Heaven on Earth is at hand!" It shut off.

There was a long pause after this tape ran out before a live communicator appeared on the terminal's screen. Janet broke the silence with: "Yes, but-"

"Yes but what?" Ian asked.

"There's no question but what that list names most of the really powerful people in the country. Suppose you're on that hit list and are so scared silly that you are willing to do anything not to risk being killed. What do you do? What is justice?"

("What is truth?" asked Pontius Pilate, and washed his hands. I had no answers, so I kept quiet.)

"My dear, it is simple," Georges answered.

"Oh, fiddle! How?"

"They have made it simple. Every owner or boss or tyrant is assumed to know what ought to be done; that's his job. If he does what he should, all is well. If he fails, his attention is invited to his error

by Dr. Guillotine."

"Georges, do be serious!"

"Dear one, I have never been more serious. If the horse can't jump the hurdle, shoot the horse. Keep on doing this and eventually you will find a horse that can clear the jump-if you don't run out of horses. This is the sort of plausible pseudo-logic that most people bring to political affairs. It causes one to wonder if mankind is capable of being well governed by any system of government."

"Government is a dirty business," Ian growled.

"True. But assassination is still dirtier."

This political discussion might still be going on if the terminal had not lighted up again-I have noticed that political discussions are never finished; they simply get chopped off by something outside. A live, real-time communicator filled the screen. "The tape you have just heard," she announced, "was delivered by hand to this station. The PM's office has already repudiated this tape and has ordered all stations that have not yet broadcast it to refrain from doing so under penalties of the Public Defense Act. That the precensorship claimed by this order is unconstitutional is self-evident. The Voice of Winnipeg will continue to keep you advised of all developments. We urge you to keep calm and stay indoors unless you are needed to preserve essential public services."

Then came replays of news tapes heard earlier so Janet cut the sound and put news streamers on the screen. I said, "Ian, assuming that I am to stay here until things quiet down in the Imperium-"

"That's not an assumption; that's a fact."

"Yes, sir. Then it becomes urgent for me to call my employer. May I use your terminal? My credit card, of course."

"Not your card. I'll place the call and we'll charge it here."

I felt somewhat vexed. "Ian, I do appreciate the lavish hospitality that you-that all of you-are showing me. But, if you are going to insist on paying even those charges that a guest should pay herself, then you should register me as your concubine and publish your responsibility for my debts."

"Reasonable. What salary do you expect?"

"Wait!" Georges demanded. "I pay better. He's a stingy Scot."

"Don't listen to either of them," Janet advised me. "Georges might pay more but he would expect posing and one of your eggs all for one salary. Now I've always wanted a harem slave. Luv, you will make a perfect odalisque without so much as a jewel in your navel. But do you do back rubs? How's your singing? Now we come to the key question: How do you feel about females? You can whisper in my ear."

I said, "Maybe I had better go out and come back in and start all over again. I just want to make a phone call. Ian, may I use my credit card to place a call to my boss? It's MasterCard, triple A credit."

"Issued where?"

"The Imperial Bank of Saint Louis."

"From what the dog did in the night I deduce that you did not hear an earlier announcement. Or do you want your credit card canceled?"

"Canceled?"

"Is that an echo? BritCanBanCredNet announced that credit cards issued in the Imperium and in Québec were void for the duration of the emergency. So just stick it in the slot and learn the wonders of the computer age and the smell of burning plastic."

"Oh."

"Speak up. I thought you said, 'Oh.'"

"I did. Ian, may I eat humble pie? Then may I call my boss on your credit?"

"Certainly you may . . . if you clear it with Janet. She runs the household."

"Janet?"

"You haven't answered my question, dear. Just whisper it into my ear."

So I whispered into her ear. Her eyes got wide. "Let's place your call first." I gave her the call code and she did it for me, using the terminal in her room.

The streamers stopped and a procedural sign flashed on: SECURITY INTERDICT-NO CIRCUITS TO CHICAGO IMPERIUM

It flashed for ten seconds, then cut out; I let out a very sincere damn and heard Ian's voice behind me. "Naughty, naughty. Nice little girls and ladies don't talk that way."

"I'm neither one. And I'm frustrated!"

"I knew you would be; I heard the announcement earlier. But I also knew that you would have to try it before you would believe it."

"Yes, I would have insisted on trying. Ian, I'm not only frustrated; I'm stranded. I've got endless credit through the Imperial Bank of Saint Louis and can't touch it. I have a couple of dollars Ennzedd and some change. I have fifty crowns Imperial. And a suspended credit card. What was that about a concubinage contract? You can hire me cheap; it's become a buyer's market."

"Depends. Circumstances alter cases and now I might not want to go higher than room and board. What was it you whispered to Janet? Might affect things."

Janet answered, "She whispered to me, 'Honi soit qui mal y pense,' "-I hadn't-"a sentiment I commend to you, my good man. Marjorie, you aren't any worse off than you were an hour ago. You still can't go home until things quiet down. . . and when they do, the border will be open, and so will be the comm circuits, and your credit card will be honored again . . . if not here, then just across the border less than a hundred kilos away. So fold your hands and wait-"

" '-with quiet mind and tranquil heart.' Yes, do," Ian agreed, "and Georges will spend the time painting you. Because he's in the same fix. You both are dangerous aliens and will be interned if you step out of this house."

"Did we miss another announcement?" Jan asked.

"Yes. Although it appears to be a repetition of an earlier one. Georges and Marjorie each is supposed to report to the nearest police station. I don't recommend it. Georges is going to ignore it, play dumb, and say that he didn't know that they meant to include permanent residents. Of course they might parole you. Or you might spend all next winter in some very drafty temporary barracks. There is nothing about this silly emergency that guarantees that it will be over next week."

I thought about it. My own stupid fault. On a mission I never travel with only one sort of credit and I always carry a healthy amount of cash. But I had uncritically assumed that a vacation trip did not call for the cynical rule of a crown of cash per click in iron money. With plenty of cash a cowan can bribe his way into an esbat and out again, with his tail feathers unsinged. But without cash?

I hadn't tried living off the country since basic training. Perhaps I was going to have to see if that training had stuck. Thank God the weather was warm!

Georges was shouting. "Turn up your sound! Or come out here!"

We hurriedly joined him.

"-of the Lord! Pay no heed to vain boasts of sinners! We alone are responsible for the apocalyptic signs you see all around you. Satan's minions have attempted to usurp the Holy work of God's chosen instruments and to distort it to their own vile ends. For this they are now being punished. Meanwhile the worldly rulers of mundane affairs here below are commanded to do the following Holy works:

"End all trespass into the Heavenly realm. Had the Lord intended man to travel in space he would have given him wings.

"Suffer not a witch to live. So-called genetic engineering mocks the Lord's dearest purposes. Destroy the foul dens in which such things are done. Kill the walking dead conjured up in those black pits. Hang the witches who practice these vile arts."

("Goodness," Georges said. "I do believe they mean me." I didn't say anything-I knew they meant me.)

"Men who lie with men, women who lie with women, any who lie with beasts-all shall die by stones. As shall women taken in adultery.

"Papists and Saracens and infidels and Jews and all who bow down to idolatrous images-the Angels of the Lord say unto you:
Repent for the hour is at hand! Repent or feel the swift swords of the Lord's chosen instruments.

"Pornographers and harlots and women of immodest demeanor, repent!-or suffer the terrible wrath of the Lord!

"Sinners of every sort, remain on this channel to receive instruction in how you may yet find the Light.

"By order of the Grand General of the Angels of the Lord."

The tape ended and there was another break. Ian said, "Janet, do you remember the first time we saw Angels of the Lord?"

"I'm not likely to forget. But I never expected anything as ridiculous as this."

I said, "There really are Angels of the Lord? Not just another nightmare on the screen?"

"Um. It's hard to connect the Angels Ian and I saw with this business. Last March, early April, I had driven to the port to pick up Ian. The Concourse was loaded with Hare Krishna freaks, saffron robes and shaved heads and jumping up and down and demanding money. A load of Scientologists was coming out the gates, heading for some do of theirs, a North American convention I think it was. Just as the two groups merged, here came the Angels of the Lord, homemade signs and tambourines and clubs.

"Marj, it was the gaudiest brawl I have ever seen. No trouble telling the three sides apart. The Hare Krishners looked like clowns, unmistakable. The Angels and the Hubbardites did not wear robes but there was no trouble telling them apart. The Elronners were clean and neat and short-haired; the Angels looked like unmade beds. They carried the 'stink of piety,' too; I got downwind of them once, then moved quickly.

"The Scientologists, of course, have had to fight for their rights many times; they fought with discipline, defended themselves, and disengaged rapidly-got out, taking their wounded with them. The Hairy Krishners fought like squawking chickens and left their wounded behind. But the Angels of the Lord fought as if they were crazy-and I think they are. They moved straight in, swinging clubs and fists, and didn't stop until they were

down and unable to get up. It took about as many Mounties to subdue them as there were Angels . . . when the usual ratio is one Mounty, one riot.

"It appears that the Angels knew that the Hubbardites were arriving at that time and had come there to jump them; the Hare Krishna crowd showed up by accident-they were at the port simply because it is a good place to shake down cubes for money. But, having found the Hairies and being unable to pin down the Scientologists, the Angels settled for beating up the Krishna freaks."

Ian agreed. "I saw it from the other side of the barrier. Those Angels fought berserk. I think they may have been hopped up. But I would never have believed that such a mob of rags and dirt could be a threat to the whole planet-hell, I can't believe it now. I think they are trying to grab credit, like those psychotics that confess to any spectacular crime."

"But I would not want to have to face them," Janet added.

"Right! I would as lief face a pack of wild dogs. But I can't imagine wild dogs toppling a government. Much less a world."

None of us guessed that there could be still more claimants-but two hours later the Stimulators put in their bid:

"This is an authorized spokesman of the Stimulators. We initiated the first executions and carefully selected the targets. We did not start any of the riots or commit any of the atrocities since then. We did find it necessary to interrupt some communications, but these will be restored as soon as conditions permit. Events have caused us to modify our essentially benign and nonviolent plan. Opportunists calling themselves the Council for Survival in English-speaking countries, or the Heirs of Leon Trotsky or other meaningless names elsewhere, have tried to take over our program. They can be spotted by the fact that they have no program of their own.

"Worse are some religious fanatics calling themselves the Angels of the Lord. Their so-called program is a mindless collection of anti-intellectual slogans and vicious prejudices. They cannot succeed but their doctrines of hate can easily set brother against brother, neighbor against neighbor. They must be stopped.

"Emergency Decree Number One: All persons representing themselves as Angels of the Lord are sentenced to death. Authorities everywhere will carry out this sentence at once wherever and whenever one is found. Private citizens, subjects, and residents are directed to turn in these self-described Angels to the nearest authority, using citizen's arrest, and are authorized to use force as needed to accomplish such arrest.

"Aiding, abetting, succoring, or hiding one of this proscribed group is declared itself a capital offense.

"Emergency Decree Number Two: Falsely claiming credit or responsibility for any action of a Stimulator, or falsely claiming credit for any action carried out by order of the Stimulators, is declared a capital offense. All authorities everywhere are ordered to treat it as such. This decree applies to, but is not limited to, the group and individuals calling themselves the Council for Survival.

"The Reform Program: The following reform measures are effective at once. Political, fiscal, and business leaders all are individually and collectively responsible for carrying out each reform measure under penalty of death.

"Immediate reforms: All wages, prices, and rents are frozen. All mortgages on owner-occupied dwellings are canceled. All interest is fixed at six percent.

"For each country the health industry is nationalized to whatever extent it was not already nationalized. Medical doctors are to be paid the same wages as high-school teachers; nurses will be paid at the same scale as primary-school teachers; all other therapy and auxiliary personnel will be paid comparable wages. All clinical and hospital fees are abolished. All citizens, subjects, and residents will receive the highest level of health care at all times.

"All businesses and services now functioning will continue to function. After the transition period changes in occupation will be permitted and required where such changes enhance the general welfare.

"The next instructive executions will take place ten days hence plus or minus two days. The list of officials and leaders at risk published by the so-called Council for Survival is neither confirmed nor denied. Each one of you must look into your heart and conscience and ask yourself whether or not you are doing your best for your fellow men. If the answer is yes, you are safe. If the answer is no, then you may be one of the next group selected as object lessons to all those who have turned our fair planet into a hellhole of injustice and special privilege.

"Special decree: The manufacture of pseudopeople will stop at once. All so-called artificial people and/or living artifacts will hold themselves ready to surrender to the nearest reform authority when notified. During the interim, while plans are being prepared for these quasi-people to live out their lives without further harm to people and under circumstances that no longer create unfair competition, these creatures will continue to work but will remain indoors at all other times.

"Except in the following circumstances, local authorities are forbidden to kill these-"

The announcement broke off. Then a face appeared on the screen-male, sweaty, and troubled. "I'm Sergeant Malloy speaking for Chief Henderson. No more of these subversive broadcasts will be permitted. Regular programming will resume. But stay with this channel for emergency announcements." He sighed. "It's a bad time, neighbors. Do be patient."

XII

Georges said, "There you have it, my dears. Pick one. A theocracy ruled by witchburners. Or a fascist socialism designed by retarded schoolboys. Or a crowd of hard-boiled pragmatists who favor shooting the horse that misses the hurdle. Step right up! Only one to a customer."

"Stop it, Georges," Ian told him. "It's no joking matter."

"Brother, I am not joking; I am weeping. One gang plans to shoot me on sight, another merely outlaws my art and profession, while the third by threatening without specifying is, so it seems to me, even more to be dreaded. Meanwhile, lest I find comfort simply in physical sanctuary, this beneficent government, my lifetime alma mater, declares me enemy alien fit only to be penned. What shall I do? Joke? Or drip tears on your neck?"

"You can stop being so goddam Gallic, that's what you can do. The world is going crazy right in our lap. We had better start thinking about what we can do about it."

"Stop it, both of you," Janet said firmly but gently. "One thing every woman knows but few men ever learn is that there are times when the only wise action is not to act but to wait. I know you two. Both of you would like to run down to the recruiting office, enlist for the duration, and thereby turn your consciences over to the sergeants. This served your fathers and grandfathers and I am truly sorry that it can't serve you. Our country is in danger and with it our way of life, that's clear. But if anyone knows of anything better to do than to sit tight and wait, let him speak up. If not . . . let's not run in circles. It is approaching what should be lunchtime. Can anyone think of anything better to do?"

"We had a very late breakfast."

"And we'll have a late lunch. Once you see it on the table, you'll eat, and so will Georges. One thing we can do: Just in case things get rougher than they are now, Marj should know where to go for bomb protection."

"Or whatever."

"Or whatever. Yes, Ian. Such as police looking for enemy aliens. Have you two big brave men considered what to do in case they come a-knocking at our door?"

"I had thought of that," Georges answered. "First you surrender Marj to the Cossacks. That will distract them and thereby give me time to get far, far away. That's one plan."

"So it is," agreed Janet. "But you imply that you have another?"

"Not with the simple elegance of that one. But, for what it is, here is a second plan. I surrender myself to the Gestapo, a test case to determine whether or not I, a distinguished guest and reliable taxpayer who has never failed to contribute to the police welfare fund and to the firemen's ball, can in fact be locked up for no reason whatever. While I am sacrificing myself for a principle, Marj can duck into the hidey-hole and lie doggo. They don't know that she is here. Regrettably they do know that I am here. 'It is a far, far better thing-'

"Don't be noble, dear; it doesn't suit you. We'll combine the two plans. If- No, when- When they come looking for either one or both of you, you both duck into the shelter and stay there as long as necessary. Days. Weeks. Whatever."

Georges shook his head. "Not me. Damp. Unhealthy."

"And besides," Ian added, "I promised Marj that I would protect her from Georges. What's the point in saving her life if you turn her over to a sex-crazed Canuck?"

"Don't believe him, dear one. Liquor is my weakness."

"Luv, do you want to be protected from Georges?"

I answered truthfully that Georges might need protection from me. I did not elaborate.

"As for your complaints about damp, Georges, the Hole has precisely the humidity of the rest of the house, a benign RH of fortyfive; I planned it that way. If necessary, we'll stuff you into the Hole but we are not going to surrender you to the police." Janet turned to me. "Come with me, dear; we'll do a dry run. A wet one, rather."

She took me to the room assigned to me, picked up my jumpbag. "What do you have in this?"

"Nothing much. A change of panties and some socks. My passport. A useless credit card. Some money. IDs. A little notebook. My real luggage is in bond at the port."

"Just as well. Because any trace of you is going to be left in my room. If it's clothing, you and I are near enough of a size." She dug into a drawer and got out a plastic envelope on a belt-an ordinary female-style money belt. I recognized it although I've never owned one-useless in my profession. Too obvious. "Put anything into this that you can't afford to lose, and we'll put it on you. And seal it. Because you are going to get wet all over. Mind getting your hair wet?"

"Goodness, no. I just rub it with a towel and shake it. Or ignore it."

"Good. Fill the pouch and take off your clothes. No point in getting them wet. Although, if the gendarmes do show up, you just go ahead and get them wet, then dry them in the Hole."

Moments later we were in her big bath, me dressed in that waterproof money belt, Janet only in a smile. "Dear," she said, pointing at that hot-tub-or-plunge, "look under the seat on the far side there."

I moved a little. "I can't see very well."

"I planned it that way. The water is clear and you can see down into it all over. But from the only spot where you should be able to see under that seat the overhead light reflects on the water back into your eyes. There is a tunnel under that seat. You can't see it no matter where you stand, but if you get facedown in the water you can feel for it. It is a bit less than a meter wide, about half a meter high, and about six meters long. How are you in enclosed places? Does claustrophobia bother you?"

"That's good. Because the only way to get into the Hole is to take a deep breath, go under, and through that passage. Easy enough to pull yourself along because I built ridges into the bottom for that purpose. But you have to believe that it is not too long, that you can reach a place where it opens out in one breath, and that simply standing up will bring you up into the air again. You'll be in the dark but the light comes on fairly quickly; it's a thermal radiation switch. This time I'll go ahead of you. Ready to follow me?"

"I guess so. Yes."

"Here goes." Janet stepped down onto the near seat, on down onto the floor of the tank. The waterline was at her waist or above. "Deep breath!" She did so, smiled, and went underwater and under that seat.

I stepped down into the water, hyperventilated, and followed her. I could not see the tunnel but it was easy to find it by touch, easy to pull myself along by finger-thick ridges in the bottom. But it did seem to me that the passage was several times six meters long.

Suddenly a light came on just ahead of me. I reached it, stood up, and Janet reached a hand down to me, helped me out of the water. I found myself in a very small room, with a ceiling not more than two meters above the concrete floor. It seemed pleasanter than a grave but not much.

"Turn around, dear. Through here."

"Through here" was a heavy steel door, high above the floor, low down from the ceiling; we got through it by sitting on the doorsill and swinging our feet over. Janet pulled it closed behind us and it whuffed like a vault door. "Overpressure door," she explained. "If a bomb hit near here, the concussion wave would push the water right through the little tunnel. This stops it. Of course, for a direct hit- Well, we wouldn't

notice it so I didn't plan for it." She added, "Look around, make yourself at home. I'll find a towel."

We were in a long, narrow room with an arched ceiling. There were bunk beds along the right wall, a table with chairs and a terminal beyond, and, at the far end, a petite galley on the right and a door that evidently led to a 'fresher or bath, as Janet went in there, came out at once with a big towel.

"Hold still and let Mama dry you," she said. "No blowdry here.
Everything is as simple and unautomated as I could make it and still have things work."

She rubbed me to a glow, then I took the towel from her and worked her over-a pleasure, as Janet is a lavish stack of beauty. Finally she said, "Enough, luv. Now let me give you the five-dollar tour in a hurry as you are not likely to be in here again unless you have to use it as a refuge. . . and you might be alone-oh, yes, that could happen-and your life might depend on knowing all about the place.

"First, see that book chained to the wall above the table? That's the instruction book and inventory and the chain is no joke. With that book you don't need the five-dollar tour; everything is in that book. Aspirin, ammo, or apple sauce, it's all listed there."

But she did give me, quickly, at least a three-ninety-five tour: food supplies, freezer, reserve air, hand pump for water if pressure fails, clothing, medicines, etc. "I planned it," she said, "for three people for three months."
"How do you resupply it?" "How would you do it?"
I thought about it. "I would pump the water out of the plunge."

"Yes, exactly. There is a holding tank, concealed and not on the house plans-none of this is. Of course many items can take getting wet or can be fetched through in waterproof coverings. By the bye, did your money pouch come through all right?"

"I think so. I pressed all of the air out of it before I sealed it. Jan, this place is not just a bomb shelter or you would not have gone to so much trouble and expense to conceal its very existence."

Her face clouded. "Dear, you are very perceptive. No, I would never have bothered to build this were it just a bomb shelter. If we ever get H-bombed, I am not especially eager to live through it. I designed primarily to protect us from what is so quaintly called 'civil disorder.'

She went on, "My grandparents used to tell me about a time when people were polite and nobody hesitated to be outdoors at night and people often didn't even lock their doors-much less surround their homes with fences and walls and barbed wire and lasers. Maybe so; I'm not old enough to remember it. It seems to me that, all my life, things have grown worse and worse. My first job, right out of school, was designing concealed defenses into older buildings being remodeled. But the dodges used then-and that wasn't so many years ago!-are obsolete. Then the idea was to stop him and frighten him off. Now it's a two-layer defense. If the first layer doesn't stop him, the second layer is designed to kill him. Strictly illegal and anyone who can afford it does it that way. Marj, what haven't I shown you? Don't look in the book; you would spot it. Look inside your head. What major feature of the Hole did I not show you?"

(Did she really want me to tell her?) "Looks complete to me, once you showed me the main and auxiliary Shipstones of your power supply."

"Think, dear. The house above us is blasted down around our ears. Or perhaps it is occupied by invaders. Or even our own police, looking for you and Georges. What else is needed?"

"Well . . . anything that lives underground-foxes, rabbits, gophers-has a back door."

"Good girl! Where is it?"

I pretended to look around and try to find it. But in fact an itchy feeling dating clear back to intermediate training ("Don't relax until you have spotted your escape route") had caused me to search earlier. "If it's feasible to tunnel in that direction, I think the back door would be inside that clothes cupboard."

"I don't know whether to congratulate you or to study how I should have concealed it better. Yes, through that wardrobe and turn left. The lights come on from thirty-seven-degree radiation just as they did when we came out of the pool tunnel. Those lights are powered by their own Shipstones, and they should last forever, practically, but I think it is smart to take along a fresh torch and you know where they are. The tunnel is quite long, because it comes out well outside our walls in a clump of thornbush. There is a camouflaged door, rather heavy, but you just push it aside, then it swings back."

"Sounds awfully well planned. But, Jan? What if somebody found it and came in that way? Or I did? After all, I'm practically a stranger."

"You're not a stranger; you're an old friend we haven't known very long. Yes, it is just barely possible that someone might find our back door despite its location and the way it is hidden. First, a horrid alarm would sound all through the house. Then we would look down the tunnel by remote, with the picture showing on one of the house terminals. Then steps would be taken, the gentlest being tear gas. But if we weren't home when our back door was breached, I would feel very sorry for Ian or Georges or both."

"Why do you put it that way?"

"Because it would not be necessary to be sorry for me. I would have a sudden attack of swooning feminine weakness. I do not dispose of dead bodies, especially ones that have had several days in which to get ripe."

"Mmm . . . yes."

"Although that body would not be dead if its owner were smart enough to pour pee out of a boot. Remember, I'm a professional designer of defenses, Marj, and note the current two-layer policy. Suppose somebody does claw his way up a steep bank, spots our door, and breaks his nails getting it open-he's not dead at that point. If it's one of us-conceivable but unlikely-we open a switch concealed a short distance inside, I would have to show you where. If it is indeed an intruder, he would see at once a sign: PRIVATE PROPERTY-KEEP OUT. He ignores this and comes on in and a few meters farther along a voice gives the same warning and adds that the property has active defense. The idiot keeps coming. Sirens and red lights-and still he persists . . . and then poor Ian or Georges has to drag this stinking garbage out of the tunnel. Not outdoors, though, or back into the house. If someone kills himself persisting in trying to break through our defenses, his body will not be found; he will stay missing. Do you feel any need to know how?"

"I feel quite sure that I have no 'need to know.' "(A camouflaged side tunnel, Janet, and a lime pit-and I wonder what bodies are already in it? Janet looks as gentle as

rosy-fingered dawn . . . and if anyone lives through these crazy years, she will be one of them. She is about as tender-minded as a Medici.)

"I think so, too. Anything more you want to see?"

"I don't think so, Jan. Especially as I am not likely ever to use your wonderful hideaway. Go back now?"

"Before long." She closed the interval between us, placed her hands on my shoulders. "What did you whisper to me?"

"I think you heard it."

"Yes, I did." She pulled me to her.

The terminal at the table lighted. "Lunch is ready!"

Jan looked disgusted. "Spoilsport!"

XIII

Lunch was delicious. A cold table of pickles, cheeses, breads, preserves, nuts, radishes, scallions, celery, and such surrounded a pot-au-feu over a table flame. Nearby were chunks of crusty garlic bread dripping butter. Georges presided over the soup with the dignity of a maître d'hôtel, ladling it into large soup plates. As I sat down Ian tied a giant serviette around my neck. "Dig in and make a pig of yourself," he advised.

I tasted the soup. "I shall!" and added, "Janet, you must have been simmering this soup all day yesterday."

"Wrong!" Ian answered. "Georges' grand-mere left this soup to him in her will."

"That's an exaggeration," Georges objected. "My dear mother, may the good God comfort her, started this soup the year I was born. My older sister always expected to receive it, but she married beneath her-a British Canadian-so it was passed on to me. I have tried to maintain the tradition. Although I think the flavor and the bouquet were better when my mother was tending it."

"I don't understand such things," I answered. "All I know is that this soup was never near a tin."

"I started it last week," Janet said. "But Georges took it over and nursed it along. He does understand soups better than I do."

"All I understand about soup is eating it and I hope there is a dividend in that pot."

"We can always," Georges assured me, "toss in another mouse."

"Anything in the news?" Janet asked.

"What happened to your rule about 'not at meals'?"

"Ian my true love, you should know if anyone does that my rules apply to other people, not to me. Answer me."

"In general, no change. No more assassinations reported. If any more claimants to the growing swarm of self-confessed wreckers have appeared, our paternalistic government chooses not to let us know. God damn it, I hate this 'Papa knows best' attitude. Papa does not know best or we would not be in the mess we are in. All that we really know is that the government is using censorship. Which means that we know nothing. Makes me want to shoot somebody."

"I think there has been enough of that. Or do you want to sign up with the Angels of the Lord?"

"Smile when you say that. Or would you like a fat lip?"

"Remember the last time you undertook to chastise me."

"That's why I said 'lip.'

"Sweetheart, I prescribe three stiff drinks or one Miltown for you. I'm sorry you are upset. I don't like it either, but I don't see anything to do but sweat it out."

"Jan, sometimes you are almost offensively sensible. The thing that has me really clawing the counterpane is the great big hole in the news . . . and no explanation."

"Yes?"

"The multinationals. All the news has been about territorial states, not one word about the corporate states. Yet anyone who can count above ten with his shoes on knows where the power is today. Don't these bloodthirsty jokers know that?"

Georges said gently, "My old, it is perhaps exactly for that reason that corporations have not been named as targets."

"Yes, but-" Ian shut up.

I said, "Ian, the day we met, you pointed out that there really isn't any way to hit a corporate state. You spoke of IBM and Russia."

"That wasn't quite what I said, Marj. I said that military force was useless against a multinational. Ordinarily, when they war among themselves, the giants use money and proxies and other maneuver-
ings that involve lawyers and bankers rather than violence. Oh, they sometimes do fight with hired armies but they don't admit it and it's not their usual style. But these current jokers are using exactly the weapons with which a multinational can be hit and be hurt: assassination and sabotage. This is so evident that it worries me that we don't hear of it. Makes me wonder what is happening that they are not putting on the air."

I swallowed a big chunk of French bread that I had soaked in that heavenly soup, then said, "Ian, is it within possibility that some one-or more-of the multinationals is running this whole show through dummies?"

Ian sat up so suddenly that he jiggled his soup and spotted his bib. "Marj, you amaze me. I picked you out of the crowd originally for reasons having nothing to do with your brain-"

"I know."

"-but you persist in having a brain. You spotted at once what was wrong with the company's notion of contracting for artificial pilots-I'm going to use your arguments in Vancouver. Now you've taken this crazy news picture . . . and stuck the one piece in the puzzle that makes it make sense."

"I'm not sure that it does make sense," I answered. "But, according to the news, there were assassinations and sabotage all over the planet and on Luna and as far away as Ceres. That takes hundreds of people, more likely thousands. Both assassination and sabotage are specialist jobs; they call for training. Amateurs, even if they could be recruited, would botch the job seven times out often. All this means money. Lots of money. Not just a crackpot political organization, or a crazy religious cult. Who has the money for a worldwide, a systemwide, demonstration like that? I don't know-I just tossed out a possibility."

"I think you've solved it. All but 'who.' Marj, what do you do when you are not with your family in South Island?"

"I don't have a family in South Island, Ian. My husbands and my group sisters have divorced me."

(I was as shocked as he was.)

There was silence all around. Then Ian gulped and said quietly, "I'm very sorry, Marjorie."

"No need to be, Ian. A mistake was corrected; it's over and done with. I won't be going back to New Zealand. But I would like to go to Sydney someday to visit Betty and Freddie."

"I'm sure they would like that."

"I know that I would. And both of them invited me. Ian, what does Freddie teach? We never got around to that."

Georges answered, "Federico is a colleague of mine, dear Marjorie . . . a happy fact that led to my being here."

"True," Janet agreed. "Chubbie and Georges spliced genes together at McGill, and through that partnership Georges met Betty, and Betty tossed him in my direction and I scooped him up."

"So Georges and I worked out a deal," Ian agreed, "as neither of us could manage Jan alone. Right, Georges?"

"You have reason, my brother. If indeed the two of us can manage Janet."

"I have trouble managing you two," Jan commented. "I had better sign up Marj to help me. Marj?"

I did not take this quasi-offer seriously because I felt sure that it wasn't meant seriously. Everyone was making chitchat to cover the shocker I had dropped into their laps. We all knew that. But did anyone but me notice that my job was no longer a subject? I knew what had happened-but why did that deep-down layer of my brain decide to table the subject so emphatically? I would never tell Boss's secrets!

Suddenly I was urgently anxious to check with Boss. Was he involved in these odd events? If so, on which side?

"More soup, dear lady?"

"Don't give her more soup till she answers me."

"But, Jan, you weren't serious. Georges, if I take more soup, I will eat more garlic bread. And I'll get fat. No. Don't tempt me."

"More soup?"

"Nell . . . just a little."

"I'm quite serious," Jan persisted. "I'm not trying to tie you down as you are probably soured on matrimony at present. But you could give it a trial and a year from now we could discuss it. If you wished to. In the meantime I'll keep you for a pet . . . and I'll let these two goats be in the same room with you only if their conduct pleases me."

"Wait a minute!" Ian protested. "Who fetched her here? I did. Marj is my sweetheart."

"Freddie's sweetheart, according to Betty. You brought her here as Betty's proxy. As may be, that was yesterday and she's my sweetheart now. If either of you want to speak to her, you'll have to come to me and get your ticket punched. Isn't that right, Marjorie?"

"If you say so, Jan. But it's only a theoretical point as I really do have to leave. Do you have a large-scale map of the border in the house? South border, I mean."

"As good as. Call one up on the computer. If you want a printout, use the terminal in my study-off my bedroom."

"I don't want to interfere with the news."

"You won't. We can uncouple any terminal from all the others- necessary as this is a household of rugged individualists."

"Especially Jan," agreed Ian. "Marj, why do you want a big map of the Imperium border?"

"I would rather go home by tube. But I can't. Since I can't, I must find some other way to get home."

"I thought so. Honey, I'm going to have to take your shoes away from you. Don't you realize you can get shot trying to cross that border? Right now the guards on both sides are sure to be triggerhappy."

"Uh . . . is it all right for me to study the map?"

"Certainly . . . if you promise not to try to sneak across the border."

Georges said gently, "My brother, one should never tempt one of the dear ones to lie."

"Georges is right," Jan ruled. "No forced promises. Go ahead, Marj; I'll clear up here. Ian, you just volunteered to help."

I spent the next two hours at the computer terminal in my borrowed room, memorizing the border as a whole, then going to maximum magnification and learning certain parts in great detail. No border can be truly tight, not even the bristling walls some totalitarian states place around their subjects. Usually the best routes are near the guarded ports of entry-often in such places the smugglers' routes are worn smooth. But I would not follow a known route.

There were many ports of entry not too far away: Emerson Junction, Pine Creek, South Junction, Gretna, Maida, etc. I looked also
at Roseau River, but it seemed to flow the wrong way-north into the Red River. (The map was not too clear.)

There is an odd chunk of land sticking out into the Lake of the Woods east-southeast of Winnipeg. The map colored it as part of the Imperium and showed nothing to stop one walking across the border at that point-if she were willing to risk several kilometers of marshy ground. I'm no superman; I can get bogged down in a swamp-but that unguarded stretch of border was tempting. I finally put it out of my mind because, while legally that chunk was part of the Imperium, it was separated from the Imperium proper by twenty-one kilometers of water. Steal a boat? I made a bet with myself that any boat, crossing that stretch of lake, would interrupt a beam. Failure to respond to challenge correctly would then result in a laser burn in the bow you could throw a dog through. I don't argue with lasers; you can neither bribe them nor sweet-talk them-I put it out of my mind.

I had just stopped studying maps and was letting the images soak into my mind when Janet's voice came out of the terminal: "Marjorie, come to the living room, please. Quickly!"

I came very quickly.

Ian was talking to someone in the screen. Georges was off to one side, out of pickup. Janet motioned to me to stay out of pickup, too. "Police," she said quietly. "I suggest that you go down into the Hole at once. Wait and I'll call you when they've gone."

I answered just as quietly, "Do they know that I'm here?"

"Don't know yet."

"Let's be sure. If they know I'm here and they can't find me, you'll be in trouble."

"We are not afraid of trouble."

"Thanks. But let's listen."

Ian was saying to the face in the screen, "Mel, come off it. Georges is not an enemy alien and you damned well know it. As for this-'Miss Baldwin,' did you say?-why are you looking here for her?"

"She left the port with you and your wife yesterday evening. If she's not still with you, then you certainly know where she is. As for
Georges, any Kaybecker is an enemy alien today no matter how long he has been here or what clubs he belongs to. I assume that you would rather have an old friend pick him up thana trooper. So switch off your sky guard; I'm ready to land."

Janet whispered, " 'Old friend' indeed! He's been trying to get into bed with me since high school; I have been telling him no the same length of time-he's slimy."

Ian sighed. "Mel, this is a hell of a funny time to talk about friendship. If Georges were here, I'm sure he would rather be arrested by a trooper than be taken in under the guise of friendship. So go back and do it the right way."

"Oh, so it's that way, is it? Very well! Lieutenant Dickey speaking. I'm here to make an arrest. Switch off your sky guard; I'm landing."

"Ian Tormey, householder, acknowledging police hail. Lieutenant, hold your warrant up to your pickup so that I may verify it and photograph it."

"Ian, you are out of your silly mind. A state of emergency has been declared; no warrant is required."

"I can't hear you."

"Maybe you can hear this: I am about to lock onto your sky guard and burn it out. If I set fire to something in doing so, that's too damn bad."

Ian spread his hands in disgust, then did something at the keyboard. "Sky guard is off." He then switched to "hold" and turned to us. "You two have maybe three minutes to get down the Hole. I can't stall him very long at the door."

Georges said quietly, "I shall not hide in a hole in the ground. I shall insist on my rights. If I do not receive them, at a later time I shall sue Melvin Dickey for his hide."

Ian shrugged. "You're a crazy Canuck. Put you're a big boy now. Marj, get undercover, dear. It won't take too long to get rid of him as he doesn't really know that you are here."

"Uh, I'll go down the Hole if necessary. But can't I simply wait in Janet's bath? He might go away. I'll switch the terminal there to pick up what goes on here. All right?"

"Marj, you're being difficult."

"Then persuade Georges to go down the Hole, too. If he stays, I might be needed here. To help him. To help you."

"What in the world are you talking about?"

I was not sure myself what I was talking about. But it did not seem like anything I had been trained for to declare myself out of the game and go hide in a hole in the ground. "Ian, this Melvin Dickey- I think he means harm to Georges. I could feel it in his voice. If Georges won't go with me into the Hole, then I should go with him to see to it

that this Dickey does not hurt him-anyone in the hands of the police needs a witness on his side."

"Marj, you can't possibly stop a-" A deep gong note sounded. "Oh, damn! He's at the door. Get out of sight! And go down the Hole!"

I got out of sight, I did not go down the Hole. I hurried into Janet's big bath, switched on the terminal, then used the selector switch to place the living room pickup on screen. When I turned up the sound, it was almost as good as being there.

A banty rooster strutted in.

Actually it was not Dickey's body but his soul that was small. Dickey had a size-twelve ego in a size-four soul, in a body almost as big as Ian's. He came into the room with Ian, spotted Georges, said triumphantly, "There you are! Perreault, I arrest you for willfully failing to report for internment as ordered by the Decree of Emergency, paragraph six."

"I have received no such order."

"Oh, piffle! It's been all over the news."

"I do not make a practice of following the news. I know of no law requiring me to. May I see a copy of the order under which you propose to arrest me?"

"Don't try to come the shyster on me, Perreault. We're operating under National Emergency and I'm enforcing it. You can read the order when I get you in. Ian, I'm deputizing you to help me. Take these nips"-Dickey reached behind himself, pulled out a pair of handcuffs-"and put them on him. Hands behind his back."

Ian did not move. "Mel, don't be more of a fool than you have to be. You have no possible excuse to put handcuffs on Georges."

"The hell I don't! We're running shorthanded and I'm making this arrest without assistance. So I can't take a chance on him trying to pull something sneaky while we're floating back. Hurry up and get those cuffs on him!"

"Don't point that gun at me!"

I was no longer watching. I was out of the bath, through two doors, down a long hall, and into the living room, all with a frozen motion feeling I get when I'm triggered into overdrive.

Dickey was trying to cover three people with his gun, one of them being Janet. He should not have done that. I moved up to him, took his gun, and hand-chopped his neck. The bones made that unpleasant crunching noise neck bones always make, so unlike the sharp crack of fractured tibia or radius.

I eased him to the rug and placed his pistolet by him, while noting that it was a Raytheon five-oh-five powerful enough to stop a mastodon-why do men with little souls have to have big weapons? I said, "Jan, are you hurt?"

"No."

"I got here as fast as I could. Ian, this is what I meant when I said that my help might be needed. But I should have stayed here. I was almost too late."

"I've never seen anyone move so fast!"

Georges said quietly, "I have seen."

I looked at him. "Yes, of course you have. Georges, will you help me move this"-I indicated the corpse-"and can you drive a police APV?"

"I can if I must."

"I am about at that level of skill, too. Let's get rid of the body. Janet told me a bit about where bodies go, did not show me the spot. Some hole just off the escape tunnel, isn't it? Let's get busy. Ian, as soon as we dispose of this, Georges and I can leave. Or Georges can stay and sweat it out. But once the body and the APV are gone, you and Jan can play dumb. No evidence. You never saw him. But we must hurry, before he is missed."

Jan was down on her knees beside the late police lieutenant. "Marj, you actually did kill him."

"Yes. He hurried me. Nevertheless I killed him on purpose because in dealing with a policeman it is much safer to kill than to hurt. Jan, he should not have pointed his burner at you. Otherwise I might merely have disarmed him-then killed him only if you decided that he needed to be dead."

"You hurried, all right. You weren't here and then you were and Mel was falling. '-needed to be dead'? I don't know but I won't grieve. He's a rat. Was a rat."

Ian said slowly, "Marj, you don't seem to realize that killing a police officer is a serious matter. It is the only capital crime that British Canada still has on the books."

When people talk that way, I don't understand them; a policeman isn't anybody special. "Ian, to me, pointing a pistol at my friends is a serious matter. Pointing one at Janet is a capital crime. But I'm sorry I upset you. Right now here is a body to dispose of and an APV to get rid of. I can help. Or I can disappear. Say which but be quick; we don't know how soon they will come looking for him- and for us. Just that they will."

While I spoke, I was searching the corpse-no pouch, I had to search his pockets, being very careful with his trouser pockets because his sphincters had cut loose the way they always do. Not much, thank Bast!-he had barely wet his pants and he did not yet stink. Or not badly. The important items were in his jacket pockets: wallet, buzzer, IDs, money, credit cards, all the walk-around junk that tells a modern man that he is alive. I took the wallet and the Raytheon burner; the rest was trash. I picked up those silly handcuffs. "Any way to dispose of metal? Or must these go down the same hole as the body?"

Ian was still chewing his lip. Georges said gently, "Ian, I urge you to accept Marjorie's help. It is evident that she is expert."

Ian stopped jittering. "Georges, take his feet." The men carried the body into the big bath. I hurried ahead and dropped Dickey's gun, cuffs, and wallet on the bed in my room, and Janet put his hat with these items. I hurried into the bath, undressing as I went. Our men, with burden, had just reached it. Ian said, as they put it down, "Marj, you don't need to peel down. Georges and I will take it through. And dispose of it."

"All right," I agreed. "But let me take care of washing it. I know what needs to be done. I can do it better naked, then a quick shower afterwards."

Ian looked puzzled, then said, "Oh, hell, let him stay dirty."

"All right if you say so, but you aren't going to want to use this pool or even go through it getting in and out of the Hole until the water has been changed and the pool basin itself scrubbed. I think it is faster to wash the body. Unless-" Janet had just come in. "Jan, you spoke of emptying this plunge into a holding tank. How long does that take? Full cycle, in and out."

"About an hour. It's a small pump."

"Ian, I can get that body clean in ten minutes if you will strip it and stick it into the shower. How about his clothes? Do they go down your oubliette, whatever you call it, or do you have some way to destroy them? Do they have to go through the pool tunnel?"

Things moved fast then, with Ian being fully cooperative and all of them letting me lead. Jan stripped down, too, and insisted on helping me wash the corpse, while Georges put the clothes through their home laundry and Ian went through the water tunnel to make some preparations.

I did not want to let Janet help me because I have had mind control training and I was fairly sure that she had not. But, trained or not, she is tough. Aside from wrinkling her nose a couple of times she did not flinch. And of course, with her help, it went much faster.

Georges brought the clothes back, dripping. Janet put them into a plastic sack and pressed the air out. Ian reappeared up out of the pool, with the end of a rope. The men hitched it under the body's armpits and shortly it was gone.

Twenty minutes later we were clean and dry, with no trace of Lieutenant Dickey left in the house. Janet had come into "my" room while I was transferring items from Dickey's wallet into the plastic money belt she had given me-primarily money and two credit cards, American Express and Maple Leaf.

She didn't make any silly remarks about "robbing the dead"-and
I would not have listened if she had. These days, operating without a valid credit card and/or cash is impossible. Jan left the room, came back quickly with twice as much cash as I had salvaged. I accepted it, saying, "You know that I have no notion as to how and when I can repay this."

"Certainly I know it. Marj, I'm wealthy. My grandparents were;
I've never been anything else. Look, dear, a man pointed a gun at me . . . and you jumped him, with your bare hands. Can I repay that? Both of my husbands were present. . . but you were the one who tackled him."

"Don't feel that way about the men, Jan; they don't have my training."

"I could see that. Someday I would like to hear about it. Any chance you will go to Québec?"

"An excellent chance if Georges decides to leave."

"I thought so." She offered me more money. "I don't keep Qfrancs in the house, much. But here is what I have."

At that point the men came in. I glanced at my finger, then at the wall. "Forty-seven minutes since I killed him so he has been out of touch with his headquarters one hour, more or less. Georges, I am about to attempt to pilot that police APV; I have the key right here. Unless you are coming with me and will pilot. Are you coming? Or are you going to stay and wait for the next attempt to arrest you? Either way, I am leaving now."

Janet said suddenly, "Let's all leave!"

I grinned at her. "Swell!"

Ian said, "You really want to do that, Jan?"

"I-" She stopped and looked frustrated. "I can't. Mama Cat and her kittens. Black Beauty and Demon and Star and Red. We could close this house, certainly; it winterproofs on only one household Shipstone. But it would take at least a day or two to

make arrangements for the rest of our family. Even one pig! I can't just walk out on them. I can't."

There wasn't anything to say, so I didn't. The coldest depth of Hell is reserved for people who abandon kittens. Boss says that I am stupidly sentimental and I'm sure he is right.

We went outside. It was just beginning to get dark and I suddenly realized that I had entered this household less than a day earlier-it seemed like a month. Goodness, just twenty-four hours ago I had still been in New Zealand-which seemed preposterous.

The police car was sitting on Jan's vegetable garden, which caused her to use language I did not expect from her. It had the usual squatty oyster shape of an antigrav not intended for space and was about the size of our family farm wagon in South Island. No, that did not make me triste; Jan and her men-and Betty and Freddie-had replaced the Davidson Group in my heart--donna e mobile; that's me. Now I wanted very badly to get back to Boss. Father figure? Probably-but I'm not interested in shrink theories.

Ian said, "Let me look at this bucket before you lift it. You babes in the wood could get hurt." He opened the lid, got in. Presently he got out again. "You can float it if you decide to. But hear me. It's got an identification transponder. It almost certainly has an active beacon, too, although I can't find it. Its Shipstone is down to thirtyone percent, so, if you are thinking of Québec, forget it. It will seal but you can't maintain cabin pressure above twelve thousand meters. But, worst of all, its terminal is calling Lieutenant Dickey."

"So we ignore it!"

"Of course, Georges. But, as a result of the Ortega trials last year, they've been installing remote-control destruction packs in police cars. I searched for signs of one. Had I found it, I would have disarmed it. I did not find it. That does not mean that it isn't there."

I shrugged. "Ian, necessary risks never bother me. I try to avoid the other sort. But we still have to get rid of this heap of tin. Fly it somewhere. Leave it."

Ian said, "Not so fast, Marj. Go-buggies are my business. This one- Yes! It's got the standard military AG autopilot. So we'll send it for a ride. Where? East, maybe? It would crash before it reaches Québec . . . and that could cause them to assume that you are headed home, Georges-while you are safe in the Hole."

"I do not care, Ian. I shall not hide in the Hole. I agreed to leave because Marjorie needs someone to care for her."

"More likely she'll take care of you. You saw how she polished off Soapy."

"Agreed. But I did not say 'take care of'-I said that she needs someone to care for her."

"Same thing."

"I will not argue it. Shall we make it march?"

I chopped that off by saying, "Ian, is there enough power in its Shipstone to take it south to the Imperium?"

"Yes. But it's not safe for you to float it."

"Didn't mean that. Set it on course south and maximum altitude. Maybe your border guard will burn it down, maybe the Imperium will. Or maybe it will get through but be blown by remote. Or it might just run out of juice and crash from maximum altitude. No matter which, we are free of it."

"Done." Ian jumped back in, was busy at the board, the craft started to float-he dived out, dropping three or four meters. I gave him a hand. "You all right?"

"Just fine. Look at her go!" The police car was rapidly disappearing above us while slanting south. Suddenly it broke out of the gathering dusk into the last of the sunlight and was very bright. It dwindled and was gone.

XIV

We were back in the kitchen, half an eye on the terminal, our attention on each other and on highballs Ian had served, discussing what if anything to do now. Ian was saying,

"Marj, if you will just sit tight this silly season will be over and you can then go home comfortably. If there is another flap, you can dive down the Hole. At worst you have to stay indoors. Meanwhile Georges can paint nudes of you, as Betty ordered. Okay, Georges?"

"That would be most pleasing."

"Well, Marj?"

"Ian, if I tell my boss that I couldn't come back when I was supposed to because a twenty-five-hundred kilometer stretch of border was nominally closed he simply would not believe me." (Tell them that I am a trained courier? No need to. Or not yet.)

"What are you going to do?"

"I think I have been enough trouble to you folks." (Ian dear, I think you are still in shock from seeing a man killed in your living room. Even though you straightened up afterward and behaved like a pro.) "I now know where your back door is. When you get up tomorrow morning it is possible that I won't be here. Then you can forget a disturbance in your life."

"No!"

"Jan, once this mess is over, I will call you. Then, if you want me to, I'll come back to visit just as soon as I have some vacation time. But now I must leave and get back to work. I've said so all along."

Janet simply would not hear of my setting out alone to crack the border (whereas I needed someone with me the way a snake needs shoes). But she did have a plan.

She pointed out that Georges and I could travel on their passports-I was her size, near enough, and Georges matched Ian in size and weight. Our faces did not match but the differences weren't major-and who really looks at passport pictures anyhow?

"You could use them and mail them back . . . but that may not be the easiest way. You could go to Vancouver, then cross into the California Confederacy simply on tourists' cards-but as us. You can go all the way to Vancouver on our credit cards. Once across the border into California you are almost certainly home free- Marj, your credit card should be good, you shouldn't have trouble phoning your employer, and the cops won't be trying to intern either one of you. Is that any help?"

"Yes," I agreed. "I think the tourist-card dodge is safer than trying to use your passports-safer for everyone. If I reach a place where my credit card is valid, my troubles should be over." (I would draw cash at once and never again let myself be caught away from home without plenty of cash-money greases anything. Especially in California, a place loaded with scams, whereas in British Canada officials are sometimes disconcertingly honest.)

I added, "I can't possibly be worse off in Bellingham than I am here-then I've got all the way down to the Lone Star Republic to try to cross if there is any holdup. Has there been any word on Texas and Chicago? Are they on speaking terms?"

"Okay so far as I've seen in the news," Ian answered. "Shall I key the computer for a search?"

"Yes, before I leave please do. If I had to, I could go through Texas to Vicksburg. One can always go up the river for cash because smugglers run so steadily."

"Before we leave," Georges corrected me gently.

"Georges, I think this route would work, for me. For you, all it would do is get you farther and farther away from Québec. Didn't you say that McGill is your other base?"

"Dear lady, I have no wish to go to McGill. Since the police are being difficult here, my true home, I can think of nothing I would
rather do than travel with you. Once we cross into Washington Province of California you can change your name from Mrs. Tormey to Mrs. Perreault, as it is certain, I think, that both my Maple Leaf card and my Credit Québec card will be accepted."

(Georges, you are a gallant darling . . . and when I'm trying to pull a caper I need a gallant darling the way I need an Oregon boot. And I will have to pull one, dear-despite what Janet said, I will not be home free.) "Georges, that sounds delightful. I can't tell you that you must stay home. . . but I must tell you that I am by profession a courier who has traveled for years by herself, all over this planet, more than once to space colonies, and to Luna. Not yet to Mars or Ceres but I may be ordered to at any time."

"You are saying that you would rather I did not accompany you."

"No, no! I am merely saying that, if you choose to go with me, it will be purely social. For your pleasure and mine. But I must add that when I enter the Imperium I must go alone, as I will be back on duty at once."

Ian said, "Marj, at least let Georges get you out of here and into territory where there is no silly talk of interning you, and where your credit card is valid."

Janet added, "It's getting free of that silly internment thing that is important. Marj, you can hang onto my Visa card as long as you wish; I'll use my Maple Leaf card instead. Just remember that you are Jan Parker."

"Parker?"

"Visa has my maiden name on it. Here, take it." I accepted it, thinking that I would use it only when someone was looking over my shoulder. When possible, I would charge things to the late Lieutenant Dickey, whose credit should remain viable for days, possibly weeks. There was more chitchat and at last I said,

"I'm leaving now. Georges, are you coming with me?"

Ian said, "Hey! Not tonight. First thing in the morning."

"Why? The tubes run all night, do they not?" (I knew that they did.)

"Yes but it's over twenty klicks to the nearest tube station. And dark as the inside of a pile of coal."

(Not the time to discuss enhanced vision.) "Ian, I can walk that
far by midnight. If a capsule leaves at midnight, I can get practically a full night's sleep in Bellingham. If the border is open between California and the Imperium, I'll report to my boss tomorrow morning. Better so, huh?"

A few minutes later we all left, by surrey. Ian was not pleased with me as I had not been the sweet, soft, amenable creature that men prefer. But he got over his annoyance and kissed me very sweetly when they dropped us at Perimeter and McPhillips across from the tube station. Georges and I crowded into the twenty-threeo'-clock capsule, then we had to stand up all the way across the continent.

But we were in Vancouver by twenty-two (Pacific Time-midnight in Winnipeg), picked up applications for tourist cards as we entered the Bellingham shuttle, filled them out en route, had them processed by the exit computer as we left the shuttle a few minutes later. The human operator didn't even look up as the machine spit out our cards. She just murmured, "Enjoy your stay," and went on reading.

At Bellingham the Vancouver Shuttle Station exits into the lower lobby of the Bellingham Hilton; facing us was a glowing sign floating in space:

THE BREAKFAST BAR
Steaks-Short Orders-Cocktails
Breakfast Served Twenty-Four Hours

Georges said, "Mrs. Tormey my love, it occurs to me that we neglected to eat dinner."

"Mr. Tormey, you are so right. Let's shoot a bear."

"Cooking in the Confederacy is not exotic, not sophisticated. But in its own robust way it can be quite satisfying-especially if one has had time to grow a real appetite. I have eaten at this establishment before. Despite its name, one may have a variety of dishes. But, if you will accept the breakfast menu and allow me to order for you, I think that I can guarantee that your hunger will be pleasantly assuaged."

"Georges-I mean 'Ian'-I have eaten your soup. You can order for me anytime!"

It was truly a bar-no tables. But the stools had backs and were padded and they came up to the bar without banging knees-comfortable. Apple-juice appetizers were placed in front of us as we sat down. Georges ordered for us, then slid out and went over to the reception desk and punched us in. When he returned, he said as he sat down again, "Now you may call me 'Georges,' and you are 'Mrs. Perreault.' For that is how I punched us in." He picked up his appetizer. "Sante, ma chère femme."

I picked up mine. "Merci. Et a la tienne, mon cher man." The juice was sparkling cold, and as sweet as the sentiment. While I did not intend to have a husband again, Georges would make a good one, whether in jest, as now, or in reality. But he was simply lent to me by Janet.

Our "breakfast" arrived:

Ice-cold Yakima apple juice
Imperial Valley strawberries with Sequim cream
Two eggs, eyes-up and gently basted, resting on medium-rare steak so tender it would cut with a fork-"Eggs on Horseback"
Large hot biscuits, Sequim butter, sage and clover honey
Kona coffee in oversize cups

Coffee, juice, and biscuits were renewed constantly-a second serving of steak and eggs was offered but we had to refuse.

The noise level and the way we were seated did not encourage conversation. There was an Opportunity Ads screen back of the bar. Each ad remained on screen just long enough to be read but, as usual, each was keyed by number to be called back for leisurely viewing at individual terminals at each guest's place at the bar. I found myself reading them idly while I ate:

The Free Ship Jack Pot is recruiting crew members
at Vegas Labor Mart. Bonus to combat veterans.

Would a pirate ship advertise that baldly? Even in Vegas Free State? Hard to believe but still harder to read it any other way.

Smoke the Toke that Jesus Smoked!
ANGEL STICKS
Guaranteed Noncarcinogenic

Cancer cannot worry me but neither THC nor nicotine is for me; a woman's mouth should be sweet.

GOD is waiting for you at suite 1208 Lewis and Clark Towers. Don't make Him come get you.
You won't like it.

I didn't like it anyhow.

BORED?
We are about to abandon a pioneer party on a virgin planet type T-13. Guaranteed sex ratio 50-40-10±2% Median bio age 32±1. No temperament test required No Assessments-No Contributions-No Rescue
System Expansion Corporation
Division of Demography and Ecology
Luna City GPO lock box DEMO
or punch Tycho 800-2300

I called that one back and reread it. How would it feel to tackle a brand-new world side by side with comrades?-people who could not possibly know my origin. Or care. My enhancements might make me respected rather than a freak-as long as I did not flaunt them.

"Georges, look at this, please."

He did so. "What about it?"

"It could be fun-no?"

"No! Marjorie, on the T scale anything over eight calls for a large cash bonus, lavish equipment, and trained colonists. A thirteen is an exotic route to suicide, that's all."

"Read this one," he offered:

W.K.-Make your will. You have only a week to live.
A.C.B.

I read it. "Georges, is that really a threat to kill this W.K.? In a public ad? Where it could be traced?"

"I don't know. It might not be easy to trace. I'm wondering what we will see here tomorrow-will it read 'six days'? Then 'five days'? Is 'N. K. waiting for the blow to fall? Or is it some sort of advertising promotion?"

"I don't know." I thought about it in connection with our plight. "Georges, is it possible that all these threats on the channels are some sort of terribly complex hoax?"

"Are you suggesting that no one was killed and all the news was faked?"

"Uh, I don't know what I'm suggesting."

"Marjorie, there is a hoax, yes-in the sense that three different groups are all claiming responsibility and therefore two groups are attempting to hoax the world. I do not think that the reports of assassinations are hoaxes. As with soap bubbles, there is an upper limit to the size of a hoax, both in numbers of people and in time. This is too big-too many places, too widespread-to be a hoax. Or by now there would be denials from all over. More coffee?"

"Thank you, no."

"Anything?"

"Nothing. One more biscuit with honey and I would burst."

From outside it was simply a hotel-room door: 2100. Once inside I said, "Georges! Why?"

"A bride should have a bridal suite."

"It's beautiful. It's lavish. It's lovely. And you should not have wasted your money. You've already turned a dull trip into a picnic. But if you expect me to behave as a bride tonight, you should not have fed me Eggs on Horseback and a whole big pan of hot biscuits. I'm bloated, dear. Not glamorous."

"You are glamorous."

"Dear! Georges, don't play with me-please don't! You caught me out when I killed Dickey. You know what I am."

"I know that you are a sweet and brave and gallant lady."

"You know what I mean. You're in the profession. You spotted me. You caught me out."

"You are enhanced. Yes, I saw that."

"So you know what I am. I admit it. I passed years ago. I've acquired much practice in covering it up but-that bastard shouldn't have pointed that gun at Janet!"

"No, he should not have done so. And for what you did I am forever in your debt."

"You mean that? Ian thought I should not have killed him."
"Ian's first reaction is always conventional. Then he comes around. Ian is a natural pilot; he thinks with his muscles. But, Marjorie- "I'm not Marjorie." "Eh?"

"You might as well have my right name. My crèche name, I mean. I'm Friday. No last name, of course. When I need one I use one of the conventional crèche surnames. Jones, usually. But Friday is my name."

"Is that what you want to be called?"

"Uh, yes, I think so. It's the name I'm called by when I don't have to cover up. When I'm with people I trust. I had better trust you. Hadn't I?"

"I shall be flattered and much pleased. I shall try to deserve your trust. As I am much in your debt."

"How, Georges?"

"I thought that was clear. When I saw what Mel Dickey was doing, I resolved to surrender at once rather than cause hazard to others. But when he threatened Janet with that burner, I promised
myself that, at a later time, when I was free, I would kill him." Georges barely smiled. "I had no more than promised myself that when you appeared as suddenly as an avenging angel and carried out my intent. So now I owe you one."

"Another killing?"

"If that is your wish, yes."

"Uh, probably not that. As you said, I'm enhanced. I've usually managed to do it myself when it needed to be done."

"Whatever you ask, dear Friday."

"Uh, oh, hell, Georges, I don't want you to feel in debt to me. In my own way I love Janet, too. That bastard sealed his fate when he threatened her with a deadly weapon. I didn't do it for you; I did it for myself So you don't owe me anything."

"Dear Friday. You are as lovable as Janet is. I have been learning that."

"Uh, why don't you take me to bed and let me pay you for a number of things? I am aware that I'm not human and I don't expect you to love me the way you do your human wife-not love me at all, really. But you seem to like me and you don't treat me like- uh, the way my Ennzedd family did. The way most humans treat APs. I can make it worth your while. Truly I can. I never got my doxy certificate but I've had most of the training. . . and I try."

"Oh, my dear! Who hurt you so badly?"

"Me? I'm all right. I was just explaining that I know how the world wags. I'm not a kid still learning how to get along without the crutch of the crèche. An artificial person doesn't expect sentimental love from a human male; we both know that. You understand it far better than a layman can; you're in the profession. I respect you and sincerely like you. If you will permit me to go to bed with you, I'll do my best to entertain you."

"Friday!"

"Yes, sir?"

"You will not go to bed with me to entertain me."

I felt sudden tears in my eyes-a very seldom thing. "Sir, I'm sorry," I said miserably. "I didn't mean to offend you. I did not intend to presume."

"God damn it, STOP IT!"

"Sir?"

"Stop calling me 'sir.' Stop behaving like a slave! Call me Georges. If you feel like adding 'dear' or 'darling' as you have sometimes in the past, please do so. Or slang me. Just treat me as your friend. This 'human' and 'not-human' dichotomy is something

thought up by ignorant laymen; everybody in the profession knows that it is nonsense. Your genes are human genes; they have been most carefully selected. Perhaps that makes you superhuman; it can't make you nonhuman. Are you fertile?"

"Uh, sterile reversible."

"In ten minutes with a local anesthetic I could change that. Then I could impregnate you. Would our baby be human? Or nonhuman? Or half human?"

"Uh. . . human."

"You can bet your life it would be! It takes a human mother to bear a human baby. Don't ever forget that."

"Uh, I won't forget." I felt a curious tingle, way down inside me. Sex, but not like anything I had ever felt before even though I'm rutty as a cat. "Georges? Do you want to do that? Impregnate me?"

He looked very startled. Then he moved to where I was standing, tilted my face up, put his arms around me, and kissed me. On the ten scale I would have to rate it at eight and a half, maybe nine-no way to do better vertically and with clothes on. Then he picked me up, moved to a chair, sat down with me in his lap, and started undressing me, casually and gently. Janet had insisted on dressing me in her clothes; I had more interesting things to take off than a jump suit. My Superskin job, freshly laundered by Janet, was in my jumpbag.

Georges said, as he unzipped and unbuttoned and undid, "That ten minutes would have to be in my lab and it would take another month, about, until your first breeding date, and that combination of circumstances saves you from a bulging belly . . . because that kind of remark acts on the human male like cantharides on a bull. So you are saved from your folly. Instead I'm going to take you to bed and try to entertain you . . . although I don't have my certificate, either. But we'll think of something, dear Friday." He lifted me up and pushed the last of my clothing to the floor. "You look
good. You feel good. You smell good. Do you want first chance at the bathroom? I need a shower."

"Uh, I'd rather go second as I want to take quite a long time."

I did take quite a long time as I had not been fooling when I told him I was bloated. I'm an experienced traveler, careful never to invite either of the twin curses of travel. But no dinner, followed by an enormous "breakfast" at midnight had changed my timing a bit. If I was going to have weight on my chest-and my belly-it was time to get rid of the bloat.

It was after two before I came out of the bath-bathed, bloat taken care of, mouth fresh and breath sweet, and feeling as fit and cheerful as I have ever felt in my life. No perfume-not only do I not carry it but men prefer fragrans feminae to any other aphrodisiac even when they don't know it-they just don't like it stale.

Georges was in bed with a coverlet over him, sound asleep. The tent was not up, I noticed. So with extreme caution I crawled in and managed not to wake him. Truly, I was not disappointed as I am not that self-centered a slitch. I felt happily confident that he would wake me refreshed and it would thus be better for each of us-it had been a strenuous day for me, too.

XV

I was correct.

I don't want to take Georges away from Janet. . . but I look forward to happy visits and, if he ever does elect to reverse my sterility, doing it like a cat might be all right to make a baby for Georges-I cannot see why Janet has not done so.

I was awakened the third or fourth time by a lovely odor; Georges was unloading the dumb waiter. "You have twenty-one seconds to get in and out of the bath," he said, "as soup is on. You had a proper breakfast in the middle of the night, so you are going to have a most improper brunch."

I suppose it is improper to have fresh Dungeness crab for breakfast but I'm in favor of it. It was preceded by sliced banana with cream on cornflakes, which strikes me as breakfasty, and was accompanied by toasted rusks and a tossed green salad. I then tapered off with chicory coffee laced with a pony of Korbel champagne brandy. Georges is a loving lecher and a hearty gourmand and a gourmet chef and a gentle healer who can make an artificial person believe that she is human, or, if not, that it doesn't matter.

Query: Why are all three of that family so slender? I am certain that they do not diet and do not take masochistic exercise. A therapist once told me that all the exercise any person needs could be had in bed. Could that be it?

The above is the good news. The bad news-

The International Corridor was closed. It was possible to reach Deseret by changing at Portland, but there was no guarantee that the SLC-Omaha-Gary tube would be open. The only major international route running capsules regularly seemed to be San Diego-Dallas-Vicksburg-Atlanta. San Diego was no problem as the San Jose tube was open from Bellingham to La Jolla. But Vicksburg is not Chicago Imperium; it is simply a river port from which a person with cash and persistence might reach the Imperium.

I tried to call Boss. After forty minutes I felt about synthetic voices the way humans feel about my sort of people. Who thought up this idea of programming "politeness" into computers? To hear a machine voice say "Thank you for waiting" may be soothing the first time, but three times in a row reminds you that it is phony, and forty minutes of such stalls without even once hearing a living voice can try the patience of a guru.

I never did get that terminal to admit that it was not possible to phone into the Imperium. That confounded digital disaster was not programmed to say no; it was programmed to be polite. It would have been a relief if, after a certain number of futile tries, it had been programmed to say, "Buzz off, sister; you've had it."

I then tried to call the Bellingham post office to inquire about mail service into the Imperium-honest-to-goodness words on paper, paid for as a parcel, not a facsimile or mailgram or anything electronic.

I got a cheerful lecture on doing your Christmas mailing early. With Christmas half a year away this seemed less than urgent.

I tried again. I got scolded about zip codes.

I tried a third time and got Macy's customer service department and a voice: "All our friendly helpers are busy at the moment thankyouforwaiting."

I didn't wait.

I didn't want to phone or to send a letter anyhow; I wanted to report to Boss in person. For that I needed cash. That offensively polite terminal admitted that the local office of MasterCard was in the Bellingham main office of TransAmerica Corporation.

So I punched the signal and got a sweet voice-recorded, not synthesized-saying: "Thank you for calling MasterCard. In the interests of efficiency and maximum savings to our millions of satisfied customers all of our California Confederacy district offices have been consolidated with the home office at San Jose. For speedy service please use the toll-free signal on the back of your MasterCard card." The sweet voice gave way to the opening bars of "Trees." I shut it off quickly.

My MasterCard card, issued in Saint Louis, did not have on it that San Jose toll-free signal, but only the signal of the Imperial Bank of Saint Louis. So I tried that number, not very hopefully.

I got Punch-a-Prayer.

While I was being taught humility by a computer, Georges was reading the Olympic edition of the Los Angeles Times and waiting for me to quit fiddling. I gave up and asked, "Georges, what's in the morning paper on the emergency?"

"What emergency?"

"Huh? I mean, Excuse me?"

"Friday my love, the only emergency mentioned in this newspaper is a warning by the Sierra Club concerning the threat to the endangered species Rhus diversiloba. A picketing demonstration against Dow Chemical is planned. Otherwise all is quiet on the western front."

I wrinkled my forehead to stimulate my memory. "Georges, I don't know much about California politics-"

"My dear, no one knows much about California politics, including California politicians."

"-but I do seem to recall reports on the news of maybe a dozen major assassinations in the Confederacy. Was that all a hoax?" Thinking back and figuring time zones-how long? Thirty-five hours?

"I find obituaries of several prominent ladies and gentlemen who were mentioned in the news night before last . . . but they are not listed as assassinated. One is an 'accidental gunshot wound.' Another died after a 'lingering illness.' Another was a victim in an 'unexplained crash' of a private APV and the Confederacy Attorney General has ordered an investigation. But I seem to recall that the Attorney General herself was assassinated."

"Georges, what is going on?"

"Friday, I do not know. But I suggest that it might be hazardous to inquire too closely."

"Uh, I'm not going to inquire; I'm not political and never have been. I'm going to move over into the Imperium as fast as possible. But to do that-since the border is closed no matter what the L.A. Times says-I need cash. I hate to bleed Janet through using her Visa card. Maybe I can use my own but I must go to San Jose to have any luck with it; they are being stuffy. Do you want to go to San Jose with me? Or back to Jan and Ian?"

"Sweet lady, all my worldly goods are at your feet. But show me the way to San Jose. Why do you balk at taking me into the Imperiurn? Is it not possible that your employer has use for my talents? I cannot now return to Manitoba for reasons we both know."

"Georges, it is not that I balk at taking you with me but the border is closed. . . which may force me to do a Dracula and flow through a crack. Or some unreasonable facsimile. I'm trained for that but I can do it only alone-you're in the profession; you can see that. Moreover, while we don't know what the conditions are inside the Imperium, the news shows that things are rough. Once inside, I may have to be very fast on my feet just to stay alive. And I'm trained for that, too."

"And you are enhanced and I am not. Yes, I can see."

"Georges! Dear, I do not mean to hurt your feelings. Look, once I have reported in, I will call you. Here, or at your home, or wherever you say. If it is safe for you to cross the border, I will know it then." (Georges ask Boss for a job? Impossible! Or was it? Boss might have use for an experienced genetic engineer. When it came right down to it, I had no idea of Boss's needs aside from that one small piece I worked in.) "Are you serious in wanting to see my boss about a job? Uh, what shall I tell him?"

Georges gave his gentle half-smile that he uses to cover his thoughts the way I use my passport-picture face. "How can I know? All I know about your employer is that you are reluctant to talk about him and that he can afford to use one such as yourself as a messenger. But, Friday, I may appreciate even more sharply than you do how much capital investment must have gone into your design, your nurture, and your training. . . and therefore what a price your employer must have paid for your indentures-"

"I'm not indentured. I'm a Free Person."

"Then it cost him even more. Which leads to conjectures. Never mind, dear; I'll stop guessing. Am I serious? A man can wonder mightily what lies beyond the range. I'll supply you with my curriculum vitae; if it contains anything of interest to your employer, no doubt he'll let me know. Now about money: You need not worry about 'bleeding' Janet; money doesn't mean anything to her. But I am most willing to supply you with whatever cash you need using my own credit-and I have already established that my credit cards are honored here despite any political troubles. I used Credit Québec to pay for our midnight breakfast, I punched into this inn with American Express, then used Maple Leaf to pay for our brunch. So I have three valid cards and all match my ID." He grinned at me. "So bleed me, dear girl."

"But I don't want to bleed you any more than I want to bleed Janet. Look, we can try my card at San Jose; if that does not work, I'll happily borrow from you. . . and I can punch you the money as soon as I report in." (Or would Georges be willing to pull a swindle with Lieutenant Dickey's credit card for me?-damnably difficult for a woman to get cash with a man's card. Paying for something by sticking a card into a slot is one thing; using a card to draw cash money is a kettle of fish of another color.)

"Why do you speak of repayment? When I am forever in your debt?"

I chose to be obtuse. "Do you truly feel that you owe me something? Just for last night?"

"Yes. You were adequate."

I gasped. "Oh!"

He answered, unsmiling: "Would you rather I had said inadequate?"

I refrained from gasping. "Georges. Take off your clothes. I am going to take you back to bed, then kill you, slowly. At the end I am going to squeeze you and break your back in three places. 'Adequate.' 'Inadequate.'

He grinned and started unzipping.

I said, "Oh, stop that and kiss me! Then we are going to San Jose. 'Inadequate.' Which was I?"

It takes almost as long to go from Bellingham to San Jose as it does to go from Winnipeg to Vancouver but this trip we had seats. We emerged above ground at fourteen-fifteen. I looked around with interest, never having visited the Confederacy capital before.

The thing I first noticed was the amazing number of APVs bouncing like fleas all over the place and most of them taxicabs. I know of no other modern city that permits its air space to be infested to this extent. The streets were loaded with hansom cabs, too, and there were slidewalks bordering every street; nevertheless these power-drive pests were everywhere, like bicycles in Canton.

The second thing I noticed was the feel of San Jose. It was not a city. I now understood that classic description: "A thousand villages in search of a city."

San Jose does not seem to have any justification save politics. But California gets more out of politics than any other country I know of-utter unashamed and uninhibited democracy. You run into democracy in many places-New Zealand uses it in an attenuated form. But only in California will you find the clear-quill, raw-gum, two-hundred-proof, undiluted democracy. The voting age starts when a citizen is tall enough to pull the lever without being steadied by her nurse, and registrars are reluctant to disenfranchise a citizen short of a sworn cremation certificate.

I did not fully appreciate that last until I saw, in an election news story, that the corpsicles at Prehoda Pines Patience Park constituted three precincts all voting through preregistered proxies. ("Death, be not proud!")

I will not try to pass judgment as I was a grown woman before I encountered democracy even in its milder, nonmalignant form. Democracy is probably all right used in sparing amounts. The British Canadians use a dilute form and they seem to do all right. But only in California is everyone drunk on it all the time. There does not seem to be a day when there is not an election somewhere in California, and, for any one precinct, there is (so I was told) an election of some sort about once a month.

I suppose they can afford it. They have a mellow climate from British Canada to the Mexican Kingdom and much of the richest farm land on Earth. Their second favorite sport (sex) costs almost nothing in its raw form; like marijuana it is freely available everywhere. This leaves time and energy for the true California sport: gathering and yabbering about politics.

They elect everybody, from precinct parasite to the Chief Confederate ("The Chief"). But they unelect them almost as fast. For example the Chief is supposed to serve one six-year term. But, of the last nine chiefs, only two served a full six years; the others were recalled except that one who was lynched. In many cases an official has not yet been sworn in when the first recall petition is being circulated.

But Californians do not limit themselves to electing, recalling, indicting, and (sometimes) lynching their swarms of officials; they also legislate directly. Every election has on the ballot more proposed laws than candidates. The provincial and national representatives show some restraint-I have been assured that the typical California legislator will withdraw a bill if you can prove to her that pi can't equal three no matter how many vote to make it so. But grassroots legislation ("the initiative") has no such limitation.

For example three years ago a grassroots economist noticed that college graduates earned, on the average, about 30 percent more than their fellow citizens who lacked bachelor's degrees. Such an undemocratic condition is anathema to the California Dream, so, with great speed, an initiative was qualified for the next election, the measure passed, and all California high-school graduates and/or California citizens attaining eighteen years were henceforth awarded bachelor's degrees. A grandfather clause backdated this benefit eight years.

This measure worked beautifully; the holder of a bachelor's degree no longer had any undemocratic advantage. At the next election the grandfather clause was expanded to cover the last twenty years and there is a strong movement to extend this boon to all citizens.

Vox populi, vox Dei. I can't see anything wrong with it. This benevolent measure costs nothing and makes everyone (but a few soreheads) happier.

About fifteen o'clock Georges and I were sliding along the south side of the National Plaza in front of the Chief's Palace, headed for the main offices of MasterCard. Georges was telling me that he saw nothing wrong with my having asked to stop at a Burger King for a snack in lieu of luncheon-that, in his opinion, the giant burger, properly prepared from top sirloin substitute and the chocolate malt made with a minimum of chalk, constitutes California's only contribution to international haute cuisine.

I was agreeing with him while burping gently. A group of women and men, a dozen to twenty, were moving down the grand steps in front of the Palace and Georges had started to swing off to avoid them when I noticed the eagle-feather headdress on a little man in the middle of the group, spotted the much-photographed face under it, and checked Georges with one hand.

And caught something out of the corner of my eye: a figure coming out from behind a pillar at the top of the steps.

It triggered me. I pushed the Chief down flat to the steps, knocking a couple of his staff aside to do it, then bounded up to that pillar.

I didn't kill the man who had lurked behind that pillar; I merely broke the arm he had his gun in, then kicked him sort of high when he tried to run. I hadn't been hurried the way I had been the day before. After reducing the target the Chief Confederate made (really, he should not wear that distinctive headdress), I had had time to realize that the assassin, if taken alive, might be a clue to the gang behind these senseless killings.

But I did not have time to realize what else I had done until two Capital police seized my arms. I then did realize it and felt glum indeed, thinking about the scorn there would be in Boss's voice when I had to admit that I had allowed myself to be publicly arrested. For a split moment I seriously considered disengaging and hiding behind the horizon-not impossible as one police officer clearly had high blood pressure and the other was an older man wearing frame spectacles.

Too late. If I ran now using full overdrive, I could almost certainly get away and, in a square or two, mingle with the crowd and be gone. But these bumblers would possibly burn half a dozen bystanders in trying to wing me. Not professional! Why hadn't this palace guard protected their chief instead of leaving it up to me? A lurker behind pillars fer Gossake!-nothing like that had happened since the assassination of Huey Long.

Why hadn't I minded my own business and let the killer burn down the Chief Confederate in his silly hat? Because I have been trained for defensive warfare only,

that's why, and consequently I fight by reflex. I don't have any interest in fighting, don't like it-it just happens.

I did not then have time to consider the advisability of minding my own business because Georges was minding mine. Georges speaks unaccented (if somewhat stilted) BritCan English; now he was sputtering incoherently in French and trying to peel those two praetorians off me.

The one with the spectacles let go my left arm in an effort to deal with Georges so I jabbed him with my elbow just under his sternum. He whooshed and went down. The other was still holding on to my right arm, so I jabbed him in the same spot with the first three fingers of my left hand, whereupon he whooshed and laid himself across his mate, and both vomited.

All this happened much faster than it takes to tell it-i.e., the cows grabbed me, Georges intervened, I was free. Two seconds? Whatever it was, the assassin had disappeared, his gun with him.

I was about to disappear, too, with Georges even if I had to carry him, when I realized that Georges had made up my mind for me. He had me by my right elbow and had me firmly pointed toward the main entrance of the Palace just beyond that row of pillars. As we stepped into the rotunda he let go my elbow while saying softly, "Slow march, my darling-quietly, quietly. Take my arm."

I took his arm. The rotunda was fairly crowded but there was no excitement, nothing at all to suggest an attempt had just been made a few meters away to kill the nation's chief executive. Concession booths rimming the rotunda were busy, especially the offtrack betting windows. Just to our left a young woman was selling lottery tickets-or available to sell them I should say, as she had no customers just then and was watching a detergent drama on her terminal.

Georges turned us and halted us at her booth. Without looking up she said, "Station break coming up. Be with you then. Shop around. Be my guest."

There were festoons of lottery tickets around the booth. Georges started examining them, so I pretended a deep interest, too. We
stretched the time; presently the commercials started, the young woman punched down the sound and turned to us.

"Thanks for waiting," she said with a pleasant smile. "I never miss One Woman's Woes, especially right now when Mindy Lou is pregnant again and Uncle Ben is being so unreasonable about it. Do you follow the theater, deane?"

I admitted that I rarely had time for it-my work interfered.

"That's too bad; it's very educational. Take Tim-that's my roommate-won't look at anything but sports. So he doesn't have a thought in his head for the finer things in life. Take this crisis in Mindy Lou's life. Uncle Ben is purely persecuting her because she won't tell him who did it. Do you think Tim cares? Not Tim! What neither Tim nor Uncle Ben realizes is that she can't tell because it happened at a precinct caucus. What sign were you born under?"

I should phrase a prepared answer for this question; human persons are always asking it. But when you weren't born, you tend to shy away from such things. I grabbed a date and threw it at her: "I was born on the twenty-third of April." That's Shakespeare's birthday; it popped into my mind.

"Oho! Have I got a lottery ticket for you!" She shuffled through one of the Maypole decorations, found a ticket, showed me a number. "See that? And you just walked in here and I had it! This is your day!" She detached the ticket. "That's twenty bruins."

I offered a BritCan dollar. She answered, "I don't have change for that."

"Keep the change for luck."

She handed me the ticket, took the dollar. "You're a real sport, deane. When you collect, stop by and we'll have a drink together. Mister, have you found one you like?"

"Not yet. I was born on the ninth day of the ninth month of the ninth year of the ninth decade. Can you handle it?"

"Woo woo! What a terrific combo! I can try . . . and if I can't, I won't sell you anything." She dug through her piles and strings of paper, humming to herself. She ducked her head under the counter, stayed awhile.

She reappeared, red-faced and triumphant, clutching a lottery ticket. "Got it! Look at it, mister! Give a respectful gander."

We looked: 8109999

"I'm impressed," Georges said.

"Impressed? You're rich. There's your four nines. Now add the odd digits. Nine again. Divide that into the odd digits. Another nine. Add the last four-thirty-six. That's nine squared, for two more nines, making another four nines. Add all up at once and it's five nines. Take away the sum and you have four nines again. No matter what you do, you always keep getting your own birthday. What do you want, mister? Dancing girls?"

"How much do I owe you?"

"That's a pretty special number. You can have any other number on the rack for twenty bruins. But that one- Why don't you just keep piling money in front of me until I smile?"

"That seems fair. Then if you don't smile when I think you should, I'll pick up the money and walk away. No?"

"I may call you back."

"No. If you won't offer me a fixed price, I won't let you spar around about it after I've made a fair offer."

"You're a tough customer, sport. I-"

Speakers on all sides of us suddenly started blasting "Hail to the Chief," followed by "The Golden Bear Forever." The young woman shouted, "Wait! Over soon!" A crowd of people came in from outside, walked straight through the rotunda, and on down the main corridor. I spotted the eagle-feather headdress sticking up in the middle of the clump but this time the Chief Confederate was so tightly surrounded by his parasites that an assassin would have a hard time hitting him.

As it became possible to hear again the lottery saleswoman said, "That was a short one. Less than fifteen minutes ago he went through here heading out. If he was just going down to the corner for a pack of tokes, whyn't he send somebody instead of going hisself? Bad for business, all that noise. Well, sport, have you figured out how much you'll pay to get rich?"

"But yes." Georges took out a three-dollar bill, laid it on the counter. He looked at the woman.

They locked gazes for about twenty seconds, then she said glumly, "I'm smiling. I guess I am." She picked up the money with one hand, handed Georges the lottery ticket with the other. "I bet I could have sweated you out of another dollar."
"We'll never know, will we?" "Cut for double or nothing?"

"With your cards?" Georges asked gently.

"Sport, you'll make an old woman out of me. Be elsewhere before I change my mind."

"Rest room?"

"Down the corridor on my left." She added, "Don't miss the drawing."

As we walked toward the rest room Georges told me quietly in French that gendarmes had passed behind us while we were dickering, had gone into the rest room, come out, back into the rotunda, and down the main corridor.

I cut him off, speaking also in French-telling him that I knew but this place must be filled with Eyes, Ears-talk later.

I was not snubbing him. Two uniformed guards-not the two with stomach problems-had come in almost on our heels, hurried past us, checked the rest room first-reasonable; an amateur often tries to hide in a public rest room-had come out and hurried past us, then deep into the Palace. Georges had quietly shopped for lottery tickets while guards looking for us had brushed past him, twice. Admirable. Quite professional.

But I had to wait to tell him so. There was a person of indeterminate sex selling tickets to the rest room. I asked her(him) where the powder room was. She (I decided on "she" when closer observation showed that her T-shirt covered either falsies or small milk glands)-she answered scornfully, "You some kind of a nut? Trying to discriminate, huh? I ought to send for a cop." Then she looked at me more closely. "You're a foreigner."

I admitted it.

"Okay. Just don't talk that way; people don't like it. We're democratic here, see?-setters and pointers use the same fireplug. So buy a ticket or quit blocking the turnstyle."

Georges bought us two tickets. We went in.

On our right was a row of open stalls. Above them floated a holo:
THESE FACILITIES ARE PROVIDED FREE FOR YOUR HEALTH AND COMFORT BY THE CALIFORNIA CONFEDERACY-JOHN "WARWHOOP" TUMBRIL, CHIEF CONFEDERATE.

A life-size holo of the Chief floated above it.

Beyond the open stalls were pay stalls with doors; beyond these were doorways fully closed with drapes. On our left was a news-and-notions stand presided over by a person of very determined sex, bull dyke. Georges paused there and surprised me by buying several cosmetics and a flacon of cheap perfume. Then he asked for a ticket to one of the dressing rooms at the far end.

"One ticket?" She looked at him sharply. Georges nodded agreement. She pursed her lips. "Naughty, naughty. No hanky-panky, stud."

Georges did not answer. A BnitCan dollar passed from his hand to hers, vanished. She said very softly, "Don't take too long. If I buzz the buzzer, get decent fast. Number seven, far right."

We went to number seven, the farthest dressing room, and entered. Georges closed the drapes, zipped them tight, flushed the water closet, then turned on the cold water and left it running. Speaking again in French, he told me that we were about to change our appearance without using disguises, so, please, my dear, get out of the clothes you are weaning and put on that suit you have in your jumpbag.

He explained in more detail, mixing French and English and continuing to flush the commode from time to time. I was to wear that scandalous Superskin job, more makeup than I usually do, and was to attempt to look like the famous Whore of Babylon or equivalent. "I know that's not your métier, dear girl, but try."

"I will attempt to be 'adequate.'

"Ouch!"

"And you plan to wear Janet's clothes? I don't think they'll fit."

"No, no, I shan't drag. Just swish."

"Excuse me?"

"I won't dress in women's clothes; I will simply endeavour to appear effeminate."

"I don't believe it. All night, let's try."

We didn't do much to me-just that one-piece job with the wet look that had hooked Ian, plus more makeup than I am used to, applied by Georges (he seemed to feel that he knew more about it than I did-he felt that way because he did), plus-once we were outside-that here-it-is-come-and-get-it walk.

Georges used on himself rather more makeup than he had put on me, plus that vile perfume (which he did not ask me to wear), plus at his neck a shocking-orange scarf I had been using-as a belt. He had me fluff his hair and spray it so that it stayed bouffant. That was all . . . plus a change in manner. He still looked like Georges-but he did not seem like the virile buck who had so wonderfully worn me out the night before.

I repacked my jumpbag and we left. The old moose at the newsstand widened her eyes and caught her breath when she saw me. But she said nothing as a man who had been leaning against the stand straightened up, pointed a finger at Georges, and said, "You. The Chief wants you." Then he added, almost to himself, "I don't believe it."

Georges stopped and gestured helplessly with both hands. "Oh, dean me! Surely there has been some mistake?"

The flunky bit a toothpick he had been sucking and answered, "I think so, too, citizen-but I ain't going to say so and neither are you. Come along. Not you, sister."

Georges said, "I positively am not going anywhere without my dean sister! So there!"

That cow said, "Morrie, she can wait here. Sweetie, come around behind here with me and sit down."

Georges gave me the barest negative shake of his head but I did not need it. If I stayed, either she would take me straight back to that dressing room or I would stuff her into her own trash can. I was betting on me. I will put up with that sort of nonsense in line of duty-she would not have been as unpleasant as Rocky Rockford- but not willingly. If and when I change my luck, it will be with someone I like and respect.

I moved closer to Georges, took his arm. "We have never been separated since Mama on her death bed told me to take care of him." I added, "So there!" while wondering what that phrase means, if anything. Both of us pouted and looked stubborn.

The man called Mornie looked at me, back at Georges, and sighed. "Hell with it. Tag along, sister. But keep your mouth shut and stay out of the way."

About six checkpoints later-at each of which an attempt was made to peel me off-we were ushered into the Presence. My first impression of Chief Confederate John Tumbril was that he was taller than I had thought he was. Then I decided that not wearing his headdress might make the difference. My second impression was that he was even homelier than pictures, cartoons, and terminal images showed him to be-and that opinion stayed. Like many another politico before him, Tumbril had turned a distinctive, individual ugliness into a political asset.

(Is homeliness a necessity to a head of state? Looking back through history I cannot find a single handsome man who got very far in politics until we get clear back to Alexander the Great. . . and he had a head start; his father was a king.)

As may be, "Warwhoop" Tumbril looked like a frog trying to be a toad and just missing.

The Chief cleared his throat. "What's she doing here?"

Georges said quickly, "Sir, I have a most serious complaint to make! That man-That man"-he pointed at the toothpick chewer-"tried to separate me from my dear sister! He should be reprimanded!"

Tumbnil looked at Mornie, looked at me, looked back at his parasite. "Did you do that?"

Morrie asserted that he had not but even if he did, he had done so because he had thought that Tumbnil had ordered it but in any case he thought- "You're not supposed to think," Tumbnil ruled. "I'll talk to you later. And why are you leaving her standing? Get a chair! Do I have to do all the thinking around here?"

Once I was seated, the Chief turned his attention back to Georges. "That was a Brave Thing you did earlier today. Yes, sir, a Very Brave Thing. The Great Nation of California is Proud to have raised Sons of Your Caliber. What's your name?"

Georges gave his name.

'Payroll' is a Proud California Name, Mr. Payroll; one that shines down our Noble History, from the rancheros who threw off the Yoke of Spain to the Brave Patriots who threw off the Yoke of Wall Street. Do you mind if I call you George?"

"Not at all."

"And you can call me Warwhoop. That's the Crowning Glory of Our Great Nation, George; All of us are Equal."

I suddenly said, "Does that apply to artificial people; Chief Turnbnil?"

"Eh?"

"I was asking about artificial people, like those they make at Berkeley and Davis. Are they equal, too?"

"Uh . . . little lady, you really shouldn't interrupt while your elders are speaking. But to answer your question: How can Human Democracy apply to creatures who are Not Human? Would you expect a cat to vote? Or a Ford APV? Speak up."

"No, but-"

"There you are. Everybody is Equal and Everybody has a vote. But you have to draw the line somewhere. Now, shut up, damn it, and don't interrupt while your betters are talking. George, what you did today-well, if that klutz had actually been making an attack on my life-he wasn't and don't you even forget it-you could not have behaved in a

manner more becoming to all the Heroic Traditions of Our Great California Confederacy. You Make Me Proud!"

Tumbril stood up and came out from behind his desk, hooked his hands behind him, and paced-and I saw why he had seemed taller here than he had outside.

He used some sort of a highchair or possibly a platform at his desk. When he stood with no fakery, he was about up to my shoulder. He seemed to be thinking aloud as he paced. "George, there is always a place in my official family for a man of your demonstrated courage. Who knows?-the day might come when you would save me from a criminal who seriously intended to harm me. Foreign agitators, I mean; I have nothing to fear from the Stalwart Patriots of California. They all love me for what I have done for them while occupying the Octagon Office. But other countries are jealous of us; they envy our Rich and Free and Democratic lifestyle and sometimes their smoldering hatred erupts in violence."

He stood with his head bowed for a moment, in reverent adoration of something. "One of the Prices of the Privilege of Serving," he said solemnly, "but one which, with All Humility, one must pay Gladly. George, tell me, if you were called upon to make the Last
Supreme Sacrifice that Your Country's Chief Executive might live, would you hesitate?"

"It all seems most unlikely," Georges answered.

"Eh? What?"

"Well, when I vote-not often-I usually vote Réunioniste. But the present Prime Minister is Revanchiste. I doubt that he would have me."

"What the devil are you talking about?"
"Je suis Quebecois, M. le chef d'etat. I'm from Montréal."

XVI

Five minutes later we were out on the street again. For some tense moments it seemed that we were going to be hanged or shot or at least locked up forever in their deepest dungeon for the crime of not being Californians. But cooler counsel prevailed when Warwhoop's leading legal eagle convinced him that it was better to let us go than it was to risk a trial, even one in chambers-the Quebecois Consul General might cooperate but buying his whole staff could be horribly expensive.

That was not quite how he put it but he did not know that I was listening, as I had not mentioned enhanced hearing even to Georges. The Chief's chief counselor whispered something about the trouble we had with that little Mexicana doll after all those other greasers got aholt of the story. We can't afford another mess like that one. You wanta watch it, Chief, they gotcha by the short ones.

So at last we passed the Palace and went to MasterCard main California office, forty-five minutes late . . . and lost another ten minutes shucking off our false personae in a rest room of the Califonnia Commercial Credit Building. The rest room was nondiscriminatory and democratic but not aggressively so. There was no charge to get in and the stalls had doors on them and the women used one side and the men used the side that had those vertical bathtub things that men use as well as stalls, and the only place they mingled was in a middle room equipped with wash trays and mirrors and even there women tended to stay on their side and men on the other. I'm not upset by co-ed

plumbing-after all, I was raised in a crèche-but I have noticed that men and women, given a chance to segregate, do segregate.

Georges looked a lot better without lip paint. He had used water on his hair, too, and slicked it down. I put that noisy scarf into my jumpbag. He said to me, "I guess I was silly, trying to camouflage us this way."

I glanced around. No one near and the high noise level of plumbing and air conditioning-"Not in my opinion, Georges. I think that in six weeks you could be turned into a real pro."

"What sort of a pro?"

"Uh, Pinkerton, maybe. Or a-" Someone came in. "Discuss it later. Anyhow, we got two lottery tickets out of it."

"So we did. When is the drawing on yours?"

I took mine out, looked at it. "Why, it's today! This very afternoon! Or have I lost track of the date?"

"No," Georges said, peering at my ticket, "it's today all right. About an hour from now we had better be near a terminal."

"No need," I told him. "I don't win at cards, I don't win at dice, I don't win lotteries. When I buy Cracker Jack, sometimes the box doesn't have a prize in it."

"So we'll watch the terminal anyhow, Cassandra."

"All right. When is your drawing?"

He took out his ticket; we looked at it. "Why, it's the same drawing!" I exclaimed. "Now we have much more reason to watch."

Georges was still looking at his ticket. "Friday. Look at this." He rubbed his thumb across the printing. The lettering stayed sharp; the serial number smeared heavily. "Well, well! How long did our friend have her head under the counter before she 'found' this ticket?"

"I don't know. Less than a minute."

"Long enough, that's clear."

"Are you going to take it back?"

"Me? Friday, why would I do that? Such virtuosity deserves applause. But she's wasting a major talent on a very minor scam. Let's get along upstairs; you want to finish with MasterCard before the lottery drawing."

I went back temporarily to being "Marjorie Baldwin" and we were allowed to talk to "our Mr. Chambers" in the main office of California MasterCard. Mr. Chambers was a most likable person- hospitable, sociable, sympathetic, friendly, and just the man, it appeared, that I needed to see, as the sign on his desk told us that he was Vice-President for Client Relations.

After several minutes I began to see that his authority was to say no and that his major talent lay in saying no in so many pleasant, friendly words that the client hardly realized that she was being turned down.

First, please understand, Miss Baldwin, that California MasterCard and Chicago Imperium MasterCard are separate corporations and that you do not have a contract with us. To our regret. True, as a matter of courtesy and reciprocity we ordinarily honor credit cards issued by them and they honor ours. But he was truly sorry to say that at the moment-he wanted to emphasize "at the moment"- the Imperium had cut off communication and, strange as it seems, there was not today even an established rate of

exchange between bnuins and crowns. . . so how can we possibly honor a credit card from the Imperium even though we want to and will gladly do so

later. But we do want to make your stay with us happy and what can we do for you toward that end?

I asked when he thought the emergency would be over.

Mr. Chambers looked blank. "Emergency? What emergency, Miss Baldwin? Perhaps there is one in the Imperium since they have seen fit to close their borders . . . but certainly not here! Look around you-did you ever see a country so glowing with peace and prosperity?"

I agreed with him and stood up, as there seemed no point in arguing. "Thank you, Mr. Chambers. You have been most gracious."

"My pleasure, Miss Baldwin. MasterCard service. And don't forget: Anything I can do for you, anything at all, I am at your service."

"Thank you, I'll remember. Uh, is there a public terminal somewhere in this building? I bought a lottery ticket earlier today and it turns out that the drawing is almost at once."

He grinned broadly. "My dear Miss Baldwin, I'm so happy that you asked! Right on this floor we have a large conference room and
every Friday afternoon just before the drawing everything stops and our entire office staff-or at least those who hold tickets; attendance is not compulsory-all of us crowd in and watch the drawing. J.B.-that's our president and chief executive-old J.B. decided that it was better to do it that way than to have the punters sneaking away to washrooms and toke shops and pretending they weren't. Better for morale. When one of our people wins one-does happen-she on he gets a fancy cake with sparklers on it, just like a birthday, a gift from old J.B. himself. He comes out and has a piece with the lucky winner."

"Sounds like a happy ship."

"Oh, it is! This is one financial institution where computer crime is unheard of, they all love old J.B." He glanced at his finger. "Let's get on into the conference room."

Mr. Chambers saw to it that we were placed in VIP seats, fetched coffee to us himself, then decided to sit down and watch the drawing.

The terminal screen occupied most of the end wall of the room. We sat through an hour of minor prizes during which the master of ceremonies exchanged utterly sidesplitting jokes with his assistant, mostly about the physical charms of the girl who picked the slips out of the tumble bowl. She clearly had been picked for those physical charms, which were considerable-that and her willingness to wear a costume that not only displayed them but also assured the audience that she was not hiding anything. Each time she plunged in an arm and drew out a lucky number she was dressed principally in a blindfold. It looked like easy pleasant work if the studio was properly heated.

Halfway through there were loud squeals from up front; a MasterCard clerk had won a thousand bruins. Chambers grinned broadly. "Doesn't happen often but when it does, it cheers everyone up for days. Shall we go? No, you still have a ticket that might win, don't you? Unlikely as it is that lightning will strike here twice."

At last with a blare of trumpets we reached the week's grand prize-the "Giant, Supreme, All-California Super Prize!!!" The girl with the goose bumps drew two honorary prizes first, a year's supply of Ukiah Gold with hash pipe, and dinner with the great sensie star Bobby "The Brute" Pizarro.

"Georges," I said. "American Express." Then she drew the last lucky ticket; the master of ceremonies read off the numbers and they appeared in blazing light above his head. "Mr. Zee!" he shouted. "Has the owner registered thi~ number?"

"One moment- No, not registered."

"We have a Cinderella! We have an unknown winner! Somewhere in our great and wonderful Confederacy someone is two hundred thousand bruins richer! Is that child of fortune listening now? Will she-or he-call in and let us put her on the air before this program ends? Or will he wake up tomorrow morning to be told that she is rich? There is the number, folks! It will shine up there until the end of this program, then it will be repeated every news break until fortune's darling claims her prize. And now a message-"

"Friday," Georges whispered, "let me see your ticket."

"Not necessary, Georges," I whispered back. "That's it, all right."

Mr. Chambers stood up. "Show's over. Nice that one of our little family won something. Been a pleasure to have you with us, Miss Baldwin and Mr. Karo-and don't hesitate to call on me if we can help you."

"Mr. Chambers," I asked, "can MasterCard collect this for me? I don't want to do it in person."

Mr. Chambers is a nice man but a touch slow. He had to compare the numbers on my lottery ticket with the numbers still shining on the screen three times before he could believe it. Then Georges had to stop him when he was about to run in all directions, to order a photographer, call National Lottery headquarters, send for a holovision crew-and just as well that Georges stopped him because I might have been rough about it. I get annoyed by big males who won't listen to my objections.

"Mr. Chambers!" Georges said. "Didn't you hear her? She does not want to do it in person. No publicity."

"What? But the winners are always in the news; that's routine! This won't take a moment if that's what's worrying you because- you remember the girl who won earlier?- about now she is being photographed with J. B. and her cake. Let's go straight to his office and-"

Georges is not slow-and I wouldn't mind marrying him if Janet ever turned him loose. "Mr. Chambers," he said quickly, "what is the address of the San Jose main office of American Express?"

Chambers' four-winds flight stopped abruptly. "What did you say?"

"Can you tell us the address of American Express? Miss Baldwin will take her winning ticket there for collection. I will call ahead and make sure that they understand that banking privacy is a requisite.

"But you can't do that. She won it here."

"We can and we will. She did not win it here. She simply happened to be here when the drawing took place elsewhere. Please stand aside; we're leaving."

Then we had to do it all over again for J.B. He was a dignified old duck with a cigar in one side of his mouth and sticky white cake icing on his upper lip. He was neither slow nor stupid but he was in the habit of seeing his wishes carried out and Georges had to mention American Express quite loudly before he got it through his skull that I would not hold still for any publicity whatever (Boss would faint!) and that we were about to go to those Rialto moneychangers rather than deal with his firm.

"But Miss Bulgrin is a MasterCard client."

"No," I disagreed. "I had thought that I was a MasterCard client but Mr. Chambers refused to honor my credit. So I'll start an account with American Express. Without photographers."

"Chambers." There was the knell of doom in his voice. "What Is This?"

Chambers explained that my credit card had been issued through the Imperial Bank of Saint Louis.

"A most reputable house," J.B. commented. "Chambers. Issue her another card. On us. At once. And collect her winning ticket for her." He looked at me and took his cigar out of his mouth. "No publicity. The affairs of MasterCard's clients are always confidential. Satisfactory, Miss Walgreen?"

"Quite, sir."

"Chambers. Do it."

"Yes, sir. What credit limit, sir?"

"What extent of credit do you require, Miss Belgium? Perhaps I should ask that in crowns-what is your amount with my colleagues in Saint Louis?" -

"I am a gold client, sir. My account is always reckoned in bullion rather than crowns under their two-tier method for gold customers. Can we figure it that way? You see, I'm not used to thinking in bruins. I travel so much that it is easier for me to think in grams of gold." (It is almost unfair to mention gold to a banker in asoft-currency country; it clouds his thinking.)

"You wish to pay in gold?"

"If I may. By draft in grams, three nines, on Ceres and South Africa Acceptances, Luna City office. Would that be satisfactory? I usually pay quarterly-you see, I travel so much-but I can instruct C. and S. A. A. to pay you monthly if quarterly is not convenient."

"Quarterly is quite satisfactory." (Of course it was-the interest charges pile up.)

"Now the credit limit- Truthfully, sir, I don't like to place too much of my financial activity in any one bank or any one country. Shall we hold it down to thirty kilos?"

"If that is your wish, Miss Bedlam. If you ever wish to increase it, just let us know." He added, "Chambers. Do it."

So we went back to the same office in which I had been told that my credit was no good. Mr. Chambers offered me an application form. "Let me help you fill it out, miss." I glanced at it. Parents' names. Grandparents' names. Place and date of birth. Addresses including street numbers for the past fifteen years. Present employer. Past employer immediately preceding. Reason for leaving past employment. Present rate of pay. Bank accounts. Three references from persons who have known you at least ten years. Have you ever applied for bankruptcy or had a petition of involuntary receivership filed against you or been a director or responsible officer of any business, partnership, or corporation that has applied for reorganization under paragraph thirteen of Public Law Ninety-Seven of the California Confederacy Civil Code? Have you ever been convicted of- "Friday. No."

"So I was about to say." I stood up.

Georges said, "Good-bye, Mn. Chambers."

"Something wrong?"

"But yes. Your employer told you to issue to Miss Baldwin a gold credit card with a limit of thirty kilograms, fine gold; he did not tell you to subject her to an impertinent quiz."

"But this is a routine require-"

"Never mind. Just tell J.B. you flubbed again."

Our Mn. Chambers turned a light green. "Do please sit down."

Ten minutes later we left, me with a brand-new gold-colored credit card good anywhere (I hoped). In exchange I had listed my Saint Louis P.O. box number, my next-of-kin address (Janet), and my account number in Luna City with a written instruction to bill C and S.A.A., Ltd. quarterly for my debts. I also had a comfortable wad of bruins and another like it of crowns, and a receipt for my lottery ticket.

We left the building, crossed the corner into National Plaza, found a bench, and sat down. It was just eighteen, pleasantly cool but the sun was still high above the Santa Cruz Mountains.

Georges inquired, "Dear Friday, what are your wishes?"

"To sit here for a moment and collect my thoughts. Then I should buy you a drink. I won a lottery; that calls for buying a drink. At least."

"At least," he agreed. "You won two hundred thousand bruins for. . . twenty bruins?"

"A dollar," I agreed. "I tipped her the change."

"Near enough. You won about eight thousand dollars."

"Seventy-four hundred and seven dollars and some cents."

"Not a fortune but a respectable sum of money."

"Quite respectable," I agreed, "for a woman who started the day dependent on the charity of friends. Unless I'm credited something for my 'adequate' performance last night."

"My brother Ian would prescribe a fat lip for that remark. I wanted to add that, while seventy-four hundred is a respectable sum, I find myself more impressed by the fact that, with no assets other than that lottery ticket, you persuaded a most conservative credit banking firm to extend to you an open account in the amount of a million dollars, reckoned in gold. How did you do it, dear? You didn't even wiggle. Not even a sultry tone of voice."

"But, Georges, you caused them to issue me their band."

"I don't think so. Oh, I did try to back your play . . . but you initiated each move."

"Not the one about that horrid questionnaire! You got me out of that."

"Oh. That silly ass had no business quizzing you. His boss had already ordered him to issue the card."

"You saved me. I was about to lose my nerve. Georges-dear Georges!-I know that you have told me that I must not be uneasy about what I am-and I'm trying, I truly am!-but to be faced with a form that demands to know all about my parents and grandparents-it's dismaying!"

"Can't expect you to get well overnight. We'll keep working on it. You certainly did not lose your nerve oven how much credit to ask."

"Oh. I once heard someone say"-it was Boss-"that it was much easier to borrow a million than it was to borrow ten. So when they asked me, that's what I named. Not quite a million BritCan dollars. Nine hundred and sixty-four thousand, about."

"I'm not going to quibble. When we passed nine hundred thousand I ran out of oxygen. Adequate one, do you know what a professor is paid?"

"Does it matter? From what I know of the profession one successful new design of a living artifact can pay in the millions. Even millions of grams, rather than dollars. Haven't you had any successful designs? Or is that a rude question?"

"Let's change the subject. Where are we sleeping tonight?"

"We could be in San Diego in forty minutes. On in Las Vegas in thirty-five. Each has advantages and disadvantages for getting into the Impenium. Georges, now that I have enough money, I'm going to report in, no matter how many fanatics are assassinating officials. But I promise cross-my-heart to visit Winnipeg just as soon as I have a few days' leave."

"I may still be unable to return to Winnipeg."

"Or I'll come visit you in Montréal. Look, dear, we'll swap all the addresses we have; I'm not going to lose you. You not only assure me that I'm human, you tell me that I'm adequate-you're good for my morale. Now choose, for I'll take either one: San Diego and talk Spanglish, or Vegas and look at pretty naked ladies."

XVII

We did both and wound up in Vicksburg.

The Texas-Chicago border turned out to be closed from both sides all the way, so I decided to try the riven route first. Of course Vicksburg is still Texas but, for my purpose, its situation as the major river port just outside the Imperium was the point that counted-especially that it was the leading smugglers' port, both directions.

Like ancient Gaul, Vicksburg is divided into three parts. There is the low town, the port, right on the water and sometimes flooded, and there is the high town sitting on a bluff a hundred meters high and itself divided into old town and new town. Old town is surrounded by battlefields of a war long forgotten (but not by Vicksburg!). These battlefields are sacred; nothing may be built on them. So the new town is outside this holy ground, and functions through being tied to old town and to itself by a system of tunnels and tubes. High town is joined to low town by escalators and funiculars to the city barricade.

To me, high town was just a place to sleep. We punched into the Vicksbung Hilton (twin to the Bellingham Hilton even to The Breakfast Ban in the basement) but my business was down on the riven. It was a happy-sad time as Georges knew that I would not let him come any farther with me and we had quit discussing it. Indeed, I did not permit him to go with me to iow town-and had warned him that any day I might not come back, might not even stop to punch a message to him to record in our hotel suite. When the moment came to jump, I would jump.

Vicksburg low town is a lusty, evil place, as swarmingly alive as a dunghill. In daylight city police travel in pairs; at night they leave the place alone. It is a city of gnifters, whores, smugglers, pushers, drug wholesalers, spivs, pimps, hire hatchets, military mercenaries, recruiters, fences, fagins, beggars, clandestine surgeons, blackbirders, glimjacks, outstanders, short con, long con, sting riggers, girlboys, you name it, they sell it in Vicksburg low town. It's a wonderful place and be sure to get a blood test afterward.

It is the only place I know of where a living artifact, marked by his design (four arms, no legs, eyes in the back of his skull, whatever) can step (or slither) up to a bar, buy a beer, and have absolutely no special attention paid to him or his oddity. As for my sort, being artificial meant nothing-not in a community where 95 percent of the residents did not dare step onto an escalator leading to the upper city.

I was tempted to stay there. There was something so warm and friendly about all these outcasts, no one of whom would ever point a finger of scorn. Had it not been for Boss on one hand and Georges and the memory of places that smelled better on the other hand, I might have stayed in (lower) Vicksburg and found a scam that suited my talents.

"But I have promises to keep, And miles to go before I sleep." Master Robert Frost knew why a person keeps on going when she would rather stop. Dressed as if I were a soldier out of work and shopping for the best recruiting deal, I frequented river town listening for a riverboat skipper willing to smuggle live cargo. I had been disappointed to learn how little traffic there was on the river. No news was coming out of the Imperium and no boats were coming down the river, so very few skippers were willing to risk going upriver.

So I sat in bars in river town, drinking small beer and letting the word filter around that I was prepared to pay a worthwhile price for a ticket up the river.

I considered advertising. I had been following the Opportunity Ads, which were considerably more outspoken than those I had noticed in California-apparently anything was tolerated as long as it was limited to low town:

Do You Hate Your Family?
Are You Frustrated, Tied Down, Boned?
Is Your Husband/Wife a Waste of Space?
LET US MAKE A NEW (WO)MAN OF YOU!!!!!
Plasticizing-Reorientation-Relocating Transsexualizing-Discreet Wet Work
Consult Doc Frank Frankenstein
Softly Sam's Bar Grill

This was the first time I'd ever seen murder for pay blatantly advertised. Or did I misunderstand it?

Do You Have a PROBLEM? Nothing is illegal-it isn't what you do; it's the way that you do
it. We have the most skilled shystens in the Lone Star State.
LOOPHOLES, Inc.
(Special Rates to Bachelors)
Punch LEV 10101

With the above it helped to know that "LEV" call codes were assigned only to locations under the bluff.

Artists, Ltd.
Documents of All Sorts, Negotiable Instruments, Money Of All Nations, Diplomas, Birth Certificates, IDs, Passports, Photognaphs, Business Licenses, Marriage Licenses, Credit

Cands, Holograms, Audio/Video Tapes, Commissions, Pardons, Wills, Seals, Fingerprints-All Work Guananteed with warnanty underwritten by Lloyd's Associates-LEV 10111

Certainly all of the above services were available in any large city but they were rarely openly advertised. As for the warranty, I simply did not believe it.

I decided not to advertise my need because of doubt that anything so public could help in a matter essentially clandestine-I went on relying on chandlers and barkeeps and madams. But I continued to watch the ads on the chance of spotting something of use to me. and came across one probably not of use but decidedly of interest. I froze it and called it to Georges' attention:

W.K.-Make your will. You have
only ten days to live.
A.C.B.

"What about it, Georges?"

"The first one we saw gave W.K. only a week. More than a week has passed and he now has ten days. If this keeps up, W.K. will die of old age."

"You don't believe that."

"No, my love, I do not. It's a code."

"What sort of a code?"

"The simplest sort and thereby impossible to break. The first ad told the person or persons concerned to carry out number seven or expect number seven or it said something about something designated as seven. This one says the same with respect to code item number ten. But the meaning of the numbers cannot be deduced through statistical analysis because the code can be changed long before a useful statistical universe can be reached. It's an idiot code, Friday, and an idiot code can never be broken if the user has the good sense not to go too often to the well."

"Georges, you sound as if you had done military code and/or cipher work."

"I have but that's not where I learned it. The most difficult code analysis ever attempted-one that still goes on today and will never be complete-is the interpretation of living genes. An idiot code all of it. . . but repeated so many millions of times that we can eventually assign meaning to nonsense syllables. Forgive me for talking shop at meals."

"Piffle, I started it. No way to guess what A.C.B. means?"

"None."

That night the assassins struck the second time, right on schedule. I don't say that the two were related.

They struck ten days, almost to the hour, after their first attack. The timing did not tell us anything about which group was responsible~ as it matched the predictions of both the so-called Council for Survival and their rivals the Stimulators, whereas the Angels of the Lord had offered no prediction about a second strike.

There were differences between the first wave of terror and the second, differences that seemed to tell me something-or us something, as Georges and I discussed it as the reports came in:

a) No news at all from the Chicago Imperium. No change here, as no news had come out of the Imperium since the initial reports of the slaughter of Democrats . . . then nary a peep for over a week, which made me increasingly anxious.

b) No news from the California Confederacy concerning a second strike-routine news only. NB.: a few hours after the initial news reports of a second wave of assassinations elsewhere a "routine" news item came out of the California Confederacy. Chief "Warwhoop" Tumbril, on the advice of his physicians, had named a three-person executive regency with plenipotentiary powers to govern the nation while he underwent long-postponed medical treatment. He had gone to his retreat, the Eagle's Nest, near Tahoe, for this purpose. Bulletins would be issued horn San Jose, not from Tahoe.

c) Georges and I agreed on the most probable-almost certain- meaning of this. The medical treatment that pitiful poseur now needed was embalming and his "regency" would now give news handouts while they settled their power struggle.

d) This second time there were no reports from off-Earth.

e) Canton and Manchuria did not report attacks. Correction: No such reports reached Vicksburg, Texas.

f) So fan as I could tell in ticking them off against a list, the terrorists did strike at all other nations. But my tally had holes in it. Of the four hundred-odd "nations" in the U.N. some produce news only during total solar eclipses. I don't know what happened in Wales or the Channel Isles or Swaziland or Nepal or Prince Edward Island and I can't see why anyone (who does not live in one of those nowhere places) should care. At least three hundred of those so-called sovereign nations that vote in the U.N. are ciphers, aboard only for quarters and rations-important to themselves, no doubt, but totally meaningless in Geopolitick. But in all major countries, except as noted above, the terrorists did strike and those strikes were reported except where baldly censored.

g) Most strikes failed. This was the glaring difference between the first wave and the second. Ten days earlier most assassins had killed their targets and most assassins had escaped. Now this was reversed:
Most targets survived, most assassins died. A few had been captured, a very few had escaped.

This last aspect of the second-wave assassinations put to rest a nagging fret in my mind, i.e., Boss was not the mover behind these assassinations.

He did look skinny but that probably reflected his having just Why say I so? Because the second wave was a disaster for whoever was in charge.

Field operatives, even common soldiers, are expensive; management does not expend them casually. A trained assassin costs at least ten times as much as a common soldier: She is not expected to get herself killed-goodness me, no! She is expected to make the kill and get out, scot-free.

But whoever was running this show had gone bankrupt in one night.

Unprofessional.

Therefore it was not Boss.

But I still could not figure out who was behind the whole silly gymkhana because I could not see who benefitted. My earlier notion, that one of the corporate nations was

paying for it, no longer looked as attractive because I could not conceive of one of the big ones (Interworld, for example) hiring any but the best professionals.

But it was even harder to picture one of the territorial nations planning such a grotesque attempt at world conquest.

As for a fanatic group, such as the Angels of the Lord or the Stimulators, the job was just too big. Nevertheless the whole thing seemed to have a fanatic flavor-not rational, not pragmatic.

It is not written in the stars that I will always understand what is going on-a truism that I often find damnably annoying.

The morning after that second strike Vicksburg low town buzzed with excitement. I had just stepped into a saloon to check with the head barkeep when a runner sidled up to me. "Good news," this youngster said in a prison whisper. "Rachel's Raiders is signing 'em on-Rachel said to tell you especially."

"Pig swill," I answered politely. "Rachel doesn't know me and I don't know Rachel."

"Scout's honor!"

"You were never a Scout and you can't spell honor."

"Look, Chief," he persisted, "I haven't had anything to eat today. Just walk in with me; you don't have to sign. It's only across the street."
reached the gangly stage, that sudden spurt in adolescence; low town is not a place where people go hungry. But the bartender chose that moment to snap, "Beat it, Shorty! Quit bothering the customers. You want to buy a broken thumb?"

"It's okay, Fred," I put in. "I'll check with you later." I dropped a bill on the bar, did not ask for change. "Come, Shorty."

Rachel's recruiting office turned out to be quite a lot of mud farther than across the street, and two more recruiter's runners tried to pluck me away from Shorty before we got there. They did not stand a chance as my only purpose was to see that this sorry youngster collected his cumshaw.

The recruiting sergeant reminded me of the old cow who had the concessions in the rest room of the Palace at San Jose. She looked at me and said, "No camp doxies, sugar tit. But stick around and I might buy you a drink."

"Pay your runner," I said.

"Pay him for what?" she answered. "Leonard, I told you. No idlers, I said. Now get back out there and hustle."

I reached across and grasped her left wrist. Quite smoothly her knife appeared in her right hand. So I rearranged things, taking the knife and sticking it into the desk in front of her, while changing my hold on her left paw to one much more annoying. "Can you pay him one-handed?" I asked. "Or do I break this finger?"

"Easy there," she answered, not fighting it. "Here, Leonard." She reached into a drawer, handed him a Texas two-spot. He grabbed it and vanished.

I eased the pressure on her finger. "Is that all you're paying? With every recruiter on the street fishing today?"

"He gets his real commission when you sign up," she answered. "Because I don't get paid until I deliver a warm body. And I get docked if it ain't to spec. Now would you mind letting go of my finger? I'll need it to make out your papers."

I surrendered her finger; quite suddenly the knife was again in her hand and moving toward me. This time I broke the blade before handing it back to her. "Please don't do that again," I said. "Please. And you should use a better steel. That's not a Solingen."

"I'm deducting the price of that blade from your bounty, dear,"
she answered, unperturbed. "There's been a beam on you since you walked in that door. Shall I trigger it? On do we quit playing
games?" -

I did not believe her but her purpose suited me. "No more games, Sarge. What's the proposition? Your runner told me swabo."

"Coffee and cakes and guild scale. Guild bounty. Ninety days with company option to extend ninety days. Wooden overcoat payme fifty-fifty, you and the company."

"Recruiters around town are offering guild plus fifty." (This was a stab in the dark; the atmosphere felt that tense.)

She shrugged. "If they are, we'll match it. What weapons do you know? We aren't signing any raw recruits. Not this time."

"I can teach you any weapon you think you know. Where's the action? Who's on first?"

"Mmm, real salty. Are you trying to sign as a DI? I don't buy it."

I asked, "Where's the action? Are we going upriver?"

"You ain't even signed up and you're asking for classified information."

"For which I am prepared to pay." I took out fifty Lone-Star, in tens, laid them in front of her. "Where's the action, Sarge? I'll buy you a good knife to replace that carbon steel I had to expend."

"You're an AP."

"Let's not play the dozens. I simply want to know whether or not we'll be going upriver. Say about as far as Saint Louis."

"Are you expecting to sign on as sergeant instructor?"

"What? Heavens, no! As a staff officer." I should not have said that-or at least not so soon. While ranks tend to be vague in Boss's outfit, I was certainly a senior officer in that I reported to and took orders from Boss and Boss alone-and this was confirmed by the fact that I was Miss Friday to everyone but Boss-until and unless I asked for informal address. Even Dr. Krasny had not spoken to me en tutoyant until I asked him to. But I had never given much thought to my actual rank because, while I had no senior but Boss, I had no one working under me, either. On a formal T.O. (I had never seen one for Boss's company) I would have to be one of those little boxes leading out horizontally from the stem to the C.O.-
i.e., a senior staff specialist, if you like bureaucratese.

"Well, fiddledeedee! If you can back that up, you'll do it to Colonel Rachel, not to me. I expect her in around thirteen." Almost absentmindedly she reached out to pick up the cash.

I picked up the bills, tapped them even, put them down again in front of her but closer to me. "So let's chat a bit before she gets here. Every live outfit in town is signing them up today; there ought to be some good reason to sign with one rather than another. Is the expected action upstream, or not? And how far? Will we be against real pros? Or

local yokels? Or possibly town clowns? Pitched battle? On strike and run? Or both? Let's chat, Sarge."

She did not answer, she did not move. She did not take her eyes off the cash.

Shortly I took out another ten Lone-Star, placed it neatly on the fifty-waited.

Her nostrils dilated but she did not reach for the money. After several moments I added still another Texas ten-spot.

She said hoarsely, "Put that stuff out of sight or hand it to me; somebody might walk in."

I picked it up and handed it to her. She said, "Thanks, miss," and made it vanish. "I reckon we'll go upstream at least as far as Saint Louis."

"Whom do we fight?"

"Well . . . you repeat this and I'll not only deny it; I'll cut your heart out and feed it to the catfish. We may not fight. More likely we will but not in a set battle. We, all of us, are going to be bodyguard to the new Chairman. The newest Chairman, I should say; he's still-wet new."

(Jackpot!) "Interesting. Why are other outfits in town jockeying for recruits? Is the new Chairman hiring everybody? Just for his palace guard?"

"Miss, I wish I knew. I purely wish I knew."

"Maybe I had better try to find out. How much time do I have? When are we sailing?" I quickly amended this to: "Or are we sailing? Maybe Colonel Rachel has a handle on some APVs."

"Uh. . . damn it, how much classified do you expect for a lousy seventy stars?"

I thought about it. I didn't mind spending money but I needed to be certain of the merchandise. With troops moving upriver smugglers would not be moving, at least not this week. So I needed to move with the traffic available.

But not as an officer! I had talked too much. I took out two more ten-spots, fiddled with them. "Sarge, are you going upriver yourself?"

She eyed the bank notes; I dropped one of them in front of her. It disappeared. "I wouldn't miss it, deane. Once I close down this office, I'm a platoon sergeant."

I dropped the other note; it joined its twin. I said, "Sarge, if I wait and talk to your colonel, if she signs me on, it will be as personnel adjutant, or logistics and supply, or something dreary like that. I don't need the money and don't want the worry; I want a holiday. Could you use a trained private? One you could brevet to corporal on even buck sergeant once you get to shaking down your recruits and see what vacancies you need to fill?"

She looked sour. "That's all I need, a millionaire in my platoon!"

I felt sympathy for hen; no sergeant wants a cashiered officer in his/her ranks. "I'm not going to play the millionaire; I just want to be one of the troops. If you don't trust me, stick me in some other platoon."

She sighed. "I ought to have my head examined. No, I'll put you where I can keep an eye on you." She reached into a drawer, pulled out a form headed "Limited Indenture." "Read this. Sign it. Then I swear you. Any questions?"

I looked it over. Most of it was routine trivia about slop chest and toke money and medical benefits and guild pay rate and bounty- but interlined was a provision postponing payment of bounty to the tenth day after enlistment. Understandable. To me it was a guarantee that they really were going in harm's way and at once-i.e., upriver. The

nightmare ruining every mercenary paymaster's sleep is the thought of bounty jumpers. Today, with all recruiters active, it would be possible for a veteran soldier to sign up five or six ways, collect a bounty from each, then head for the banana states-unless the indentures were worded to stop it,

The commitment was to Colonel Rachel Danvers personally or to her lawful successor in case of her death or disability, and it required the signer to carry out her orders and those of officers and noncommissioned officers she placed over me. I agreed to fight faithfully and not to cry for quarter, according to international law and the usages of war.

It was so vaguely worded that it would require a squad of Philadelphia lawyers to define the gray areas . . . which did not matter at all because a difference in opinion when it counted would get the signer shot in the back.

The period was, as the sergeant had represented, ninety days with the Colonel's option to extend it ninety days on payment of another bounty. There was no provision for additional extension, which gave me pause. Just what sort of a political bodyguard contract could it be that would run for six months and then stop cold?

Either the recruiting sergeant was lying or someone had lied to her and she wasn't bright enough to spot the illogicality. Never mind, there was no point in quizzing her. I reached for a pen. "Do I see the medical officer now?"

"Are you kidding?"

"How else?" I signed, then said, "I do," when she read off rapidly an oath that more or less followed the indenture.

She peered at my signature. "Jones, what does F stand for?"

"Friday."

"That's a silly name. On duty, you're Jones. Off duty, you're J onesie."

"Whatever you say, Sergeant. Am I on duty now, or off?"

"You'll be off duty in a moment. Here are your orders: Foot of Shrimp Alley is a godown. Sign says WOO FONG AND LEVY BROTHERS, INK. Be there by fourteen o'clock, ready to leave. Use the back door. You're free from now till then to wind up your private affairs. You are free to tell anyone of your enlistment but you are strongly admonished under penalty of disciplinary action not to make conjectures as to the nature of the duty on which you are embarking." She read off the last rapidly as if it were a recording. "Do you need lunch money? No, I'm sure you don't. That's all, Jonesie. Glad to have you aboard. We'll have a good tour." She motioned me toward her.

I went to her; she put an arm around my hips, smiled up at me. Inwardly I shrugged as I decided that this was no time to be getting my platoon sergeant sore at me. I smiled back, leaned down, and kissed her. Not bad at all. Her breath was sweet.

XVIII

The excursion boat Skip to M'Lou was a real Mark Twainen, much fancier transportation than I had expected-three passenger decks, four Shipstones, two for each of twin screws. But she was loaded to the gunwales and it seemed to me that a stiff breeze would swamp hen. At that we were not the only troopship; the Myrtle T Hanshaw was a few lengths ahead of us, carving the river at an estimated twenty knots. I thought about concealed snags and hoped that their radar/sonar was up to the task.

The Alamo Heroes were in the Myrtle as was Colonel Rachel, commanding both combat teams-and this was all I needed to nail down my suspicions. A bloated brigade is not a palace guard. Colonel Rachel was expecting field action-possibly we would disembark under fire.

We had not yet been issued weapons and recruits were still in mufti; this seemed to indicate that our colonel did not expect action at once and it fitted in with Sergeant Gumm's prediction that we were going upriver at least as far as Saint Louis-and of course the rest of what she said about our becoming bodyguard to the new Chairman indicated that we were going all the way up to the capital-

-if the new Chairman was in fact at the seat of government. -if Mary Gumm knew what she was talking about. -if someone didn't turn the river around while I was not looking. Too many "ifs," Friday, and too little hard data. All I really knew was that this vessel should be crossing into the Imperium about now-in fact I did not know which side of the border we were on or how to tell.

But I did not care greatly because sometime in the next several days, when we were close to Boss's headquarters, I planned to resign informally from Rachel's Raiders-before action, by strong preference. I had had time to size up this outfit and I believed strongly that it could not be combat-ready in less than six weeks of tough field training at the hands of tough and blooded sergeant instructors. Too many recruits, not enough cadre.

The recruits were all supposed to be veterans . . . but I was certain that some of them were farm girls run away from home and in some cases about fifteen years old. Big for their age, perhaps, and "when they're big enough, they're old enough," as the old saw goes-but it takes more than massing sixty kilos to make a soldier.

To take such troops into action would be suicide. But I did not worry about it. I had a belly full of beans and was settled on the fantail with my back against a spool of cordage, enjoying the sunset and digesting my first meal as a soldier (if that is the word) while contentedly contemplating the fact that, about now, the Skip to M'Lou was crossing into, or had crossed into, the Chicago Imperium.

A voice behind me said, "Hidin' out, trooper?"

I recognized the voice and turned my head. "Why, Sergeant, how could you say such a thing?"

"Easy. I just asked myself, 'Where would I go if I was goldbricking?'-and there you were. Forget it, Jonesie. Have you picked your billet?"

I had not done so because there were many choices, all bad. Most of the troops were quartered in staterooms, four to each double room, three to a single. But our platoon, along with one other, was to sleep in the dining salon. I could see no advantage to being at the Captain's table so I had not engaged in the scramble.

Sergeant Gumm nodded at my answer. "Okay. When you draw your blanket, don't use it to stake out a billet; somebody'll steal it. Pontside aft, abreast the pantry, is the dining-room steward's stateroom-that's mine. It's a single but with a wide bunk. Drop your
blanket there. You'll be a damn sight more comfortable than sleeping on the deck."

"That's mighty nice of you, Sergeant!" (How do I talk my way out of this? Or am I going to have to relax to the inevitable?)

"Call me Sarge. And when we're alone, my name is Mary. What did you say your first name was?"

"Friday."

"Friday. That's kind o' cute, when you stop to think about it. Okay, Friday, I'll see you around taps." We watched the last reddish slice of sun disappear into the bottomland astern of us, the Skip having swung east in one of the river's endless meanders. "Seems like it ought to sizzle and send up steam."

"Sarge, you have the soul of a poet."

"I've often thought I could. Write poetry, I mean. You got the word? About the blackout now?"

"No lights outside, no smoking outside. No lights inside except in spaces fully shuttered. Offenders will be shot at sunrise. Doesn't affect me much, Sarge; I don't smoke."

"Correction. Offenders will not be shot; they'll just wish to God they had been shot. You don't smoke at all, dear? Not even a friendly hit with a friend?"

(Give up, Friday!) "That's not really smoking; that's just friendly."

"That's the way I see it. I don't go around with my head stuffed full of rags, either. But an occasional hit with a friend when you're both in the mood, that's sweet. And so are you." She dropped to the deck by me, slipped an arm around me.

"Sarge! I mean Mary. Please don't. It's not really dank yet. Somebody'll see us."

"Who cares?"

"I do. It makes me self-conscious. Spoils the mood."

"In this outfit you'll get over that. You're a virgin, dear? With girls, I mean."

"Uh. . . please don't quiz me, Mary. And do let me go. I'm sorry but it does make me nervous. Here, I mean. Why, anybody could walk around the corner of that deckhouse."

She grabbed a feel, then started to stand up. "Kind o' cute, you bein' so shy. All right, I've got some mellow Omaha Black I've been saving for a special-"

The sky lit up with a dazzling light; on top of it came a tremendous karoom! and where the Myrtle had been the sky was filled with junk.

"Jesus Christ!"

"Mary, can you swim?"

"Huh? No."

"Jump in after me and I'll keep you afloat." I went over the port side in as long a dive as I could manage, took a dozen hard strokes to get well clear, turned over onto my back. Mary Gumm's head was silhouetted against the sky.

That was the last I saw of her as the Skip to M'Lou blew up.

In that stretch of the Mississippi there are bluffs on the east. The western limit of the river is simply higher land, not as clearly marked, ten or fifteen kilometers away. Between these two sides the location of the river can be a matter of opinion-often of legal opinion because the river shifts channels and chews up property rights.

The river runs in all directions and is almost as likely to run north as to nun south. Well, half as likely. It had been flowing west at sundown; the Skip, headed upriver, had the sunset behind her. But while the sun was setting the boat had swung left as the

channel turned north; I had noticed the red-and-orange display of sunset swinging to portside.

That's why I went over the side to port. When I hit the water, my immediate purpose was to get clear; my next purpose was to see if Mary followed me in. I did not really expect her to because (I've noticed!) most people, human people, don't make up their minds that fast.

I saw her, still aboard; she was staring at me. Then the second explosion took place and it was too late. I felt a brief burst of sorrow-in hen own rutty, slightly dishonest way Many was a good sort-then I wiped her out of my mind; I had other problems.

My first problem was not to be hit by debris; I surface-dived and stayed under. I can hold my breath and exercise almost ten mm-
utes, although I don't like it at all. This time I stretched it almost to bursting before surfacing.

Long enough: It was dark but I seemed to be clear of floating debris.

Perhaps there were survivors in the water but I did not hear any and did not feel impelled to try to find any (other than Mary and no way to find her) as I was not well equipped to rescue anyone, even myself.

I looked around, spotted what was left of the loom of sunset, swam toward it. After a while I lost it, turned over on my back, searched the sky. Broken clouds and no moon. I spotted Arcturus, then both the Bears and Polaris, and I had north. I then corrected my course so that I was swimming west. I stayed on my back because, if you take it easy, you can swim forever and two years past, on your back. Never any problem to breathe and if you get a touch weary, you can just hold still and twiddle your fingers a trifle until you are rested. I wasn't in any hurry; I just wanted to reach the Impenium on the Arkansas side.

But of crash-priority importance I did not want to drift back down into Texas.

Problem: to navigate correctly at night with no map on a river a couple of kilometers wide, when your object is to reach a west bank you can't see . . . without giving any southing as you go.

Impossible?-the way the Mississippi winds around, like a snake with a broken back? But "impossible" is not a word one should use concerning the Mississippi River. There is one place where it is possible to make three short pontages totaling less than ninety meters, float down the river in two bights totaling about thirty kilometers and end up more than one hundred kilometers up the river.

No map, no sight of my destination-I knew only that I must go west and that I must not go south. So that is what I did. I stayed on my back and kept checking the stars to hold course west. I had no way of telling how much I might be losing to the south through the current, save for the certainty that, if and when the river turned south, my own progress west through the water would fetch me up on the bank on the Arkansas side.

And it did. An hour later-two hours later?-a lot of water later and Vega was high in the east but still far short of meridian, I realized that the bank was looming over me on my left side. I checked and corrected course west and kept on swimming. Shoftly I bumped my head on a snag, reached behind me and grabbed it, pulled myself up, then pulled my way through endless snags to the bank.

Scrambling up on the bank was no problem as it was only half a meter high, about, at that point. The only hazard was that the mud was thick and loose underfoot. I managed it, stopped, and took stock.

Still inky-black all around with stars the only light. I could tell the smooth black of the water from the thick black of the brush behind me only by the faint glint of starlight on the water. Directions? Polaris was now blocked by cloud but the Big Dipper told me where it had to be and this was confirmed by Spica blazing in the south and Antares in the southeast.

This orientation by the stars told me that west sliced straight into that thick black brush.

My only alternative was to get back into the water, stick with the river. . . and wind up sometime tomorrow in Vicksburg.

No, thanks. I headed into the bush.

I'm going to skip rapidly over the next several hours. It may not have been the longest night of my life but it was surely the dullest. I am sure that there must be thicker and more dangerous jungles on Earth than the brush on the bottomland of the lower Mississippi. But I do not want to tackle them, especially without a machete (not even a Scout knife!).

I spent most of my time backing out, having decided, No, not through there-now how can I go around?-No, not on its south side!-how can I get around it to the north? My track was as contorted as the path of the river itself and my progress was possibly one kilometer per hour-or perhaps I exaggerate; it could have been less. Much of the time was spent reorienting, a necessity every few meters.

Flies, mosquitoes, gnats, crawly things I never saw, twice snakes underfoot that may have been water moccasins but I did not wait to find out, endless disturbed birds with a dozen different sorts of cries-birds that often flew up almost in my face to our mutual dis
tress. My footing was usually mud and always included something to trip over, ankle-high, shin-high, or both.

Three times (four times?) I came to open water. Each time I held course west and when the water was deep enough I swam. Stagnant bayou mostly, but one stretch seemed to have a current and may have been a minor channel of the Mississippi. Once there was something large swimming by me. Giant catfish? Aren't they supposed to stay on the bottom? Alligator? But there aren't supposed to be any there at all. Perhaps it was the Loch Ness monster on tour; I never saw it, simply felt it-and levitated right out of the water through sheer fright.

About eight hundred years after the sinking of the Skip and the Myrtle came the dawn.

West of me about a kilometer was the high ground of the Arkansas side. I felt triumphant.

I also felt hungry, exhausted, dirty, insect-bitten, disreputable, and almost unbearably thirsty.

Five hours later I was the guest of Mr. Asa Hunter as a passenger in his Studebaker farm wagon hitched to a fine span of mules. We were approaching a small town named Eudora. I still had not had any sleep but I had had the next best and everything but-water,

food, a wash-up. Mrs. Hunter had clucked over me, lent me a comb, and given me breakfast: basted fried eggs, home-cured bacon thick and fat, corn bread, butter, sorghum, milk, coffee made in a pot and settled with an eggshell-and to appreciate in fullness Mrs. Hunter's cooking I recommend swimming all night alternated with crawling through the thickets of Old Man River's bottomland mud. Ambrosia

I ate wearing her wrapper as she insisted on rinsing out my bedraggled jump suit. It was dry by the time I was ready to leave, and I looked almost respectable.

I did not offer to pay the Hunters. There are human people who have very little but are rich in dignity and self-respect. Their hospitality is not for sale, nor is their charity. I am slowly learning to recognize this trait in human people who have it. In the Hunters it was unmistakable.

We crossed Macon Bayou and then the road dead-ended into a slightly wider road. Mr. Hunter stopped his mules, got down, came around to my side. "Miss, I'd thank you kindly to get down here."

I accepted his hand, let him hand me down. "Is something wrong, Mr. Hunter? Have I offended you?"

He answered slowly, "No, miss. Not at all." He hesitated. "You told us how your fishing boat was stove in by a snag."

"Yes?"

"Snags in the river are a pesky hazard." He paused. "Yesterday evening come sundown something bad happened on the river. Two explosions, about at Kentucky Bend. Big ones. Could see 'em and hear 'em from the house."

He paused again. I didn't say anything. My explanation of my presence and of my (deplorable) condition had been feeble at best. But the next best explanation was a flying saucer.

Mr. Hunter went on, "Wife and I have never had any words with the Imperial Police. We don't aim to. So, if you don't mind walking a short piece down this road to the left, you'll come to Eudora. And I'll turn my team around and go back to our place."

"I see. Mr. Hunter, I wish there were some way I could repay you and Mrs. Hunter."

"You can."

"Yes?" (Was he going to ask for money? No!)

"Someday you'll find somebody needs a hand. So give him a hand and think of us."

"Oh! I shall! I surely shall!"

"But don't bother to write to us about it. People who get mail get noticed. We don't crave to be noticed."

"I see. But I'll do it and think about you, not once but more than once."

"That's best. Bread cast upon the waters always comes back, miss. Mrs. Hunter told me to tell you that she plans to pray for you."

My eyes watered so quickly that I could not see. "Oh! And please tell her that I will remember her in my prayers. Both of you." (I had never prayed in my life. But I would, for the Hunters.)

"Thank y' kindly. I will tell her. Miss. May I offer you a word of advice and not have you take it amiss?"

"I need advice."

"You don't plan to stop in Eudora?"

"No. I must get north."

"So you said. Eudora's just a police station and a few shops. Lake Village is farther away but the Greyhound APV stops there. That's about twelve kilometers down the road to the right. If you can cover that distance between now and noon, you could catch the midday bus. But it's a dogtrottin' distance and a pretty hot day."

"I can do it. I will."

"Greyhound'll take you to Pine Bluff, even to Little Rock. Urn. Bus costs money."

"Mr. Hunter, you've been more than kind. I have my credit card with me; I can pay for the bus." I had not come through the swim and the mud in very good shape but my credit cards, IDs, passport, and cash money had all been in that waterproof money belt Janet had given me so many light-years ago; all had come through untouched. Someday I would tell her.

"Good. Thought I'd better ask. One more thing. Folks around here mind their own business, mostly. If you just go straight aboard the Greyhound, the few nosy ones won't have any excuse to bother you. Better so, maybe. Well, good-bye and good luck."

I told him good-bye and got moving. I wanted to kiss him good-bye but strange women do not take liberties with such as Mr. Hunter.

I caught the noon APV and was in Little Rock at 12:52. An express capsule north was loading as I reached the tube station; I was in Saint Louis twenty-one minutes later. From a terminal booth in the tube station I called Boss's contact code to arrange for transportation to headquarters.

A voice answered, "The call code you have used is not in service. Remain in circuit and an operator-" I slapped the disconnect and got out fast.

I stayed in the underground city several minutes, walking at random and pretending to window-shop but putting distance between me and the tube station.

I found a public terminal in a shopping mall some distance away and tried the fallback call code. When the voice reached: "The call

-where I, bold as brass, used my Imperial Bank of Saint Louiscode you have used is not-" I slapped the disconnect but the voice failed to cut off. I ducked my head, dropped to my knees, got out of that booth, cutting to the right and being conspicLous, which I hate, but possibly avoiding being photographed through the terminal, which could be disaster.

I spent minutes mixing with the crowd. When I felt reasonably sure that no one was following me, I dropped down one level, entered the city's local tube system and went to East Saint Louis. I had one more top-emergency fallback call code, but I did not intend to use it without preparation.

Boss's new underground headquarters was just sixty minutes from anywhere but I did not know where it was. I mean to say that, when I left its infirmary to take a refresher course, the APV trip had taken exactly sixty minutes. When I returned it had taken sixty minutes. When I went on leave and asked to be placed to catch a capsule for Winnipeg, I had been dropped in Kansas City in exactly sixty minutes. And there was no way for a passenger to see out of an APV used for this.

By geometry, geography, and simplest knowledge of what an APV can do, Boss's new headquarters had to be someplace more or less around Des Moines-but in this case

"more or less" meant a radius of at least a hundred kilometers. I did not conjecture. Nor did I conjecture as to which ones of us actually knew the location of HQ. It was a "need-to-know" and trying to guess how Boss decided such things was a waste of time.

In East Saint Louis I bought a light cloak with a hood, then a latex mask in a novelty shop, picking one that was not grotesque. Then I took careful pains to randomize my choice of terminal. I was of strong but not conclusive opinion that Boss had been hit again and this time smeared, and the only reason that I had not panicked was that I am trained not to panic until after the emergency.

Masked and hooded, I punched the last-resort call code. Same result and again the terminal could not be switched off. I turned my back on the pickup, pulled off that mask and dropped it on the floor, got out of there slow-march, around a corner, shed that cloak as I walked, folded it, shoved it into a trash can, went back to Saint Louis-
credit card to pay my tube fare to Kansas City. An hour earlier in Little Rock I had used it without hesitation but at that time I had had no suspicion that anything had happened to Boss-in fact I held a "religious" conviction that nothing could happen to Boss.
("Religious" "absolute belief without proof.")

But now I was forced to operate on the assumption that something had indeed happened to Boss, which included the assumption that my Saint Louis MasterCard (based on Boss's credit, not my own) could drop dead on me at any moment. I might stick it into a slot to pay for something and have it burned out by a destruction bolt when the machine recognized the number.

So four hundred kilometers and fifteen minutes later I was in Kansas City. I never left the tube station. I made a free call at the information desk about service on the KC-Omaha-Sioux Falls- Fargo-Winnipeg tube and was told that there was full service to Pembina at the border, none beyond. Fifty-six minutes later I was at the British Canadian border directly south of Winnipeg. It was still early afternoon. Ten hours earlier I had been climbing up out of the bottomland of the Mississippi and wondering light-headedly whether I was in the Imperium or if I had floated back into Texas.

Now I was even more overpoweringly anxious to get out of the Imperium than I had been to get in. So far I had managed to stay one flea-hop ahead of the Imperial Police but there was no longer any doubt in my mind that they wanted to talk to me. I did not want to talk to them because I had heard tales about how they conducted an investigation. The laddies who had questioned me earlier this year had been moderately rough . . . but the Imperial Police were reputed to burn out a victim's brain.

XIX

Fourteen hours later I had moved only twenty-five kilometers east of where I had had to leave the tube system. An hour of that I had spent in shopping, most of an hour in eating, over two hours in close consultation with a specialist, a heavenly six hours in sleeping, and almost four in moving cautiously east parallel to the border fence without getting close to it-and now it was dawn and I did approach the fence, right up to it, and was walking it, a bored repairman.

Pembina is just a village; I had to go back to Fargo to find a specialist-a quick trip by local capsule. The specialist I wanted was the same sort as "Artists, Ltd." of Vicksburg save that such entrepreneurs do not advertise in the Imperium; it took time and some

cautious grease to find him. His office was downtown near Main Avenue and University Drive but it was behind a more conventional business; it would not easily be noticed.

I was still wearing the faded blue neodenim jump suit I had been wearing when I dived off the Skip to M'Lou, not through any special affection for it but because a one-piece blue suit of coarse cloth is the nearest thing to an international unisex costume you can find. It will get by even at Ell-Five or in Luna City, where a monokini is more likely. Add a scarf and a smart housewife will wear it to shop; carry a briefcase and you are a respected businessman; squat with a hatful of pencils and it's a beggar's garb. Since it is hard to soil, easy to clean, won't wrinkle, and almost never wears out, it is ideal for a courier who wishes to fade into the scene and can't waste time or luggage on clothes.

To that jump suit had been added a greasy cap with "my" union badge pinned to it, a well-worn hip belt with old but serviceable tools, a bandolier of repair links over one shoulder and a torch kit to install them over the other.

Everything I had was well worn including my gloves. Zippered into my right hip pocket was an old leather wallet with IDs showing that I was "Hannah Jensen" of Moorhead. A worn newspaper clipping showed that I had been a high-school cheerleader; a spotted Red Cross card gave my blood type as 0 Rh pos sub 2 (which in fact it is) and credited me with having won my gallon pin-but the dates showed that I had neglected to donate for over six months.

Other mundane trivia gave Hannah a background in depth; she even carried a Visa card issued by Moorhead Savings and Loan Company-but on this item I had saved Boss more than a thousand crowns: Since I did not expect to use it, it lacked the invisible magnetic signature without which a credit card is merely a piece of plastic.

It was just full light and I had, I figured, a maximum of three hours to get through that fence-only that long because the real fence maintenance men started working then and I was most unanxious to meet one. Before that time Hannah Jensen should disappear. . . possibly to resurface in the late afternoon for a final effort. Today was go-for-broke; my cash crowns were used up. True, I still had my Imperium credit card-but I am extremely leery of electronic sleuths. Had my three attempts yesterday to call Boss, all with the same card, tripped some subprogram under which 1 could be identified? I seemed to have gotten away with using the card for tube fare immediately thereafter . . . but had I really escaped all electronic traps? I did not know and did not want to find out-I simply wanted to get through that fence.

I sauntered along, resisting a powerful urge to fall out of character by hurrying. I wanted a place where I could cut the fence without being watched, despite the fact that the ground was scorched for about fifty meters on each side of the fence. I had to accept that; what I wanted was a stretch shielded along the scorched band by trees and bush about like Normandy hedgerows.

Minnesota does not have Normandy hedgerows.

Northern Minnesota almost does not have trees-or at least not in the stretch of the border I was covering. I was ey~ing a piece of fence, trying to tell myself that a wide reach of open space with no one in sight was just as good as being shielded, when a police APV came into sight cruising slowly west along the fence. I gave them a friendly wave and kept on trudging east.

They circled, came back, and squatted, about fifty meters from me. I turned and went toward them, reaching the car as the best boy got out, followed by his driver, and I

saw by their uniforms (hell, damn, and spit) that they were not Minnesota Provincial Police but Imperials.

Best boy says to me, "What are you doing here this early?"

His tone was aggressive; I answered it to match: "I was working, until you interrupted me."

"The hell you say. You don't go on until eight hundred hours."

I answered, "Get the news, big man. That was last week. Two shifts now. First shift comes on at 'can.' Shifts change at noon; second shift goes off at 'can't.'

"Nobody notified us."

"You want the Superintendent to write you a personal letter? Give me your badge number and I'll tell him you said so."

"None of your lip, slitch. I'd as lief run you in as look at you."

"Go ahead. A day's rest for me . . . while you explain why this stretch was not maintained."

"Stow it." They started climbing back in.

"Either of you turkeys got a toke?" I asked.

The driver said, "We don't hit on duty and neither should you."

"Brown nose," I answered politely.

The driver started to reply, but best boy slammed the lid, and they took off-right over my head, forcing me to duck. I don't think they liked me.

I went back to the fence while concluding that Hannah Jensen was not a lady. She had no excuse to be rude to the Greenies merely because they are unspeakably vile. Even black widows, body lice, and hyenas have to make a living although I could never see why.

I decided that my plans were not well thought out; Boss would not approve. Cutting that fence in broad daylight was too conspidu
ous. Better to pick a spot, then hide until dark, and return to it. Or spend the night on plan number two: Check the possibility of going under the fence at Roseau River.

I wasn't too crazy about plan number two. The lower reach of the Mississippi had been warm enough but these northern streams would chill a corpse. I had checked the Pembina late the day before yesterday. Brrr! A last resort.

So pick a piece of fence, decide exactly how you are going to cut it, then try to find some trees, wrap yourself in some nice warm leaves, and wait for dark. Rehearse every move, so that you go through that fence like pee through snow.

At this point I topped a slight rise and came face to face with another maintenance man, male type.

When in doubt, attack. "What the hell are you doing, buster?"

"I'm walking the fence. My stretch of the fence. What are you doing, sister?"

"Oh, fer Gossake! I'm not your sister. And you are either on the wrong stretch or the wrong shift." I noticed with unease that the well-dressed fence-walker carries a walkie-talkie. Well, I had not been one very long; I was still learning the job.

"Like hell," he answered. "Under the new schedule I come on at dawn; I'm relieved at noon. Maybe by you, huh? Yeah, that's probably it; you read the roster wrong. I had better call in."

"You do that," I said, moving toward him.

He hesitated. "On the other hand, maybe-" I did not hesitate.

I do not kill everyone with whom I have a difference of opinion and I would not want anyone reading this memoir to think that I do. I didn't even hurt him other than temporarily and not much; I merely put him to sleep rather suddenly.

From a roll on my belt I taped his hands behind him and fastened his ankles together. If! had had some wide surgical tape, I would have gagged him but all I had was two-centimeter mechanics friction tape, and I was far more anxious to cut fence than I was to keep him horn yelling for help to the coyotes and jackrabbits. I got busy.

A torch good enough to repair fence will cut fence-but my torch was a bit better than that; I had bought it out the back door of Fargo's leading fence (the other sort offence). It was a steel-cutting laser
rather than the oxyacetylene job it appeared to be. In moments I had a hole big enough, barely, for Friday. I stooped to leave.

"Hey, take me with you!"

I hesitated. He was saying insistently that he was just as anxious to get away from the goddam Greenies as I was-untie me!

What I did next is matched in folly only by Lot's wife. I grabbed the knife at my belt, cut the tape at his wrists, at his ankles-dived through my scuttle hole and started to run. I didn't wait to see whether or not he came through, too.

There was one of the rare stands of trees about half a kilometer north of me; I headed that way at a new record speed. That heavy tool belt impeded me; I shucked it without slowing. A moment later I brushed that cap off and "Hannah Jensen" went back to NeverNever Land, as torch, gloves, and repair links were still in the Imperium. All that was left of her was a wallet I would jettison when I was not so busy.

I got well inside the trees, then circled back and found a place to observe my back track, as I was uncomfortably aware that I was wearing a tail.

My late prisoner was about halfway from fence to trees . . . and two APVs were homing in on him. The one closer to him carried the big Maple Leaf of British Canada. I could not see the insigne on the other as it was headed right toward me, coming across the international boundary.

The BritCan police car grounded; my quondam guest appeared to surrender without argument-reasonable, as the APV from the Imperium grounded immediately thereafter, at least two hundred meters inside British Canada-and, yes, Imperial Police-possibly the car that had stopped me.

I'm not an international lawyer but I'm sure wars have started over less. I held my breath, extended my hearing to the limit, and listened.

There were no international lawyers among those two sorts of police, either; the argument was noisy but not coherent. The Imperials were demanding surrender of the refugee under the doctrine of hot pursuit and a Mountie corporal was maintaining (correctly, it seemed to me) that hot pursuit applied only to criminals caught in

the act, but the only "crime" here was entering British Canada not at a port of entry, a matter not lying in the jurisdiction of the Imperial Police. "Now get that crock off BritCan soil!"

The Greenie gave a monosyllabic nonresponse that annoyed the Mountie. He slammed the lid and spoke through his loudspeaker: "I arrest you for violation of British Canadian air and ground space. Get out and surrender. Do not attempt to take off."

Whereupon the Greenies' car took off at once and retreated across the international border-then went elsewhere. Which may have been exactly what the Mountie intended to accomplish. I held very still, as now they would have time to give their attention to me.

I assume conclusively that my companion escapee now paid me for his ticket through the fence: No search was made for me. Certainly he saw me run into the woods. But it is unlikely that the RCMP saw me. No doubt cutting the fence sounded alarms in police stations on both sides of the border; this would be a routine installation for electronics people-even to pinpointing the break- and so I had assumed in planning to do it fast.

But counting the number of warm bodies that passed through a gap would be a separate electronics problem-not impossible but an added expense that might not be considered worthwhile. As may be, my nameless companion did not snitch on me; no one came looking for me. After a time a BritCan car fetched a repair crew; I saw them pick up the tool belt I had discarded near the fence. After they left another repair crew showed up on the Imperium side; they inspected the repair and went away.

I wondered a bit about tool belts. On thinking back I could not recall seeing such a belt on my erstwhile prisoner when he surrendered. I concluded that he had had to shed his belt to go through the fence; that hole was just barely big enough for Friday; for him it must have been a jam fit.

Reconstruction: The BritCans saw one belt, on their side; the Greenies saw one belt, on their side. Neither side had any reason to assume that more than one wetback had passed through the hole as long as my late prisoner kept mum.

Pretty decent of him, I think. Some men would have held a grudge over that little tap I had to give him.

I stayed in those woods until dark, thirteen tedious hours. I did not want to be seen by anyone until I reached Janet (and, with luck, Ian); an illegal immigrant does not seek publicity. It was a long day but in middle training my mind-control guru had taught me to cope with hunger, thirst, and boredom when it is necessary to remain quiet, awake, and alert. When it was full dark I started out. I knew the terrain as well as one can from maps, as I had studied all of it most carefully in Janet's house less than two weeks earlier. The problem ahead of me was neither complex nor difficult: move approximately one hundred and ten kilometers on foot before dawn while avoiding notice.

The route was simple. I must move east a trifle to pick up the road from Lancaster in the Imperium to La Rochelle in British Canada, at the port of entryÄeasy to spot. Go north to the outskirts of Winnipeg, swing to the left around the city and pick up the north-south road to the port. Stonewall was just a loud shout horn there, with the Tormey estate nearby. All of the last and more difficult part I knew not just horn maps but from having recently been over it in a surrey with nothing to distract me but a little friendly groping.

It was just dawn when I spotted the Tormey outer gates. I was tired but not in too bad shape. I can maintain the walk-jog-runwalk-jog-run routine for twenty-four hours if necessary and have done so in training; keeping it up all night is acceptable. Mostly my feet hurt and I was very thirsty. I punched the announcing button in happy relief.

And at once heard: "Captain Ian Tormey speaking. This is a recording. This house is protected by the Winnipeg Werewolves Security Guards, Incorporated. I have retained this firm because I do not consider their reputation for being trigger-happy to be justified;

they are simply zealous in protecting their clients. Calls coded to this house will not be relayed but mail sent here will be forwarded. Thank you for listening."

And thank you, Ian! Oh, damn, damn, damn! I knew that I had no reason to expect them to remain at home. . . but my mind had never entertained the thought that they might not be at home. I had "transferred," as the shrinks call it; with my Ennzedd family lost,
Boss missing and perhaps dead, the Tormey estate was "home" and Janet the mother I had never had.

I wished that I were back on the Hunters' farm, bathed in the warm protectiveness of Mrs. Hunter. I wished that I were in Vicksburg, sharing mutual loneliness with Georges.

In the meantime the Sun was rising and soon the roads would begin to fill and I was an illegal alien with almost no BritCan dollars and a deep need not to be noticed, not to be picked up and questioned, and light-headed from fatigue and lack of sleep and hunger and thirst.

But I did not have to make difficult decisions as one was forced on me, Hobson's choice. I must again hole up like an animal, and quickly, before traffic filled the roads.

Woods are not common anywhere near Winnipeg but I recalled some hectares left wild, back and around to the left, off the main road, and more or less behind the Tormey placeÄuneven land, below the low hill on which Janet had built. So I went in that direction, encountering one delivery wagon (milk) but no other traffic.

Once abreast the scrub I left the road. The footing became very uneven, a series of gullies, and I was going "across the furrows." But quickly I encountered something even more welcome than trees: a tiny stream, so narrow I could step across it.

Which I did, but not until I had drunk from it. Clean? Probably contaminated but I gave it not a thought; my curious "birthright" protects me against most infection. The water tasted clean and I drank quite a lot and felt much better physicallyÄbut not the sick weight in my heart.

I went deeper into the scrub, looking for a place where I could not only hide but could dare risk sleeping. Six hours of sleep two nights ago seemed awfully far away but the trouble with hiding in the wild this close to a big city is that a troop of Boy Scouts is awfully likely to come tromping through and step on your face. So I hunted for a spot not only bushy but inaccessible.

I found it. Quite a steep stretch up one side of a gully and made still more inaccessible by thornbushes, which I located by Braille.

Thornbushes?

It took me about ten minutes to find it as it looked like an exposed
face of a boulder left over from the time when the great ice flow had planed all this country down. But, when I looked closely, it did not look quite like rock. It took still longer to get fingers into any purchase and lift it, then it swung up easily, partly counterbalanced. I ducked inside quickly and let it fall back into placeÄ

Äand found myself in darkness save for fiery letters: PRIVATE PROPERTYÄKEEP OUT

I stood very still and thought. Janet had told me that the switch that disarmed the deadly booby traps was "concealed a short distance inside."

How long is a "short distance"?

And how concealed?

It was concealed well enough simply because the place was dark as ink except for those ominous glowing letters. They might as well have spelled "All hope abandon, ye who enter here."

So whip out your pocket torch, Friday, powered with its own tiny lifetime Shipstone, and search. But don't go too far!

There was indeed a torch in a jumpbag I had left behind me in the Skip to M'Lou. It might even be shining, entertaining fish on the bottom of the Mississippi. And I knew that there were other torches stockpiled straight down this black tunnel.

I didn't even have a match.

If I had a Boy Scout, I could make a fire by rubbing his hind legs together. Oh, shut up, Friday!

I sank down to the floor and let myself cry a little. Then I stretched out on that (hard, cold) (welcome and soft) concrete floor and went to sleep.

xx

I woke up a long time later and the floor was indeed hard and cold. But I felt so enormously rested that I did not mind. I stood up and rubbed the kinks out and realized that I no longer felt hopelessÄjust hungry.

The tunnel was now well lighted.

That glowing sign still warned me not to go any farther but the tunnel was no longer black; the illumination seemed about equal to a well-lighted living room. I looked around for the source of the light.

Then my brain came back into gear. The only illumination came from the glowing sign; my eyes had adjusted while I slept. I understand that human people also experience this phenomenon, but possibly to a lesser degree.

I started to hunt for the switch.

I stopped and started using my brain instead. That's harder work than using muscles but it's quieter and burns fewer calories. It's the only thing that separates us from the apes, although just barely. If I were a concealed switch, where would I be?

The significant parameters of this switch had to be that it must be well enough hidden to frustrate intruders but it nevertheless must save Janet's life and that of her husbands. What did that tell me?

It would not be too high for Janet to reach; therefore I could reach it, we are much the same size. So that switch was in my reach without using a stool.

Those floating, glowing letters were about three meters inside the door. The switch could not be much past that point because Janet had told me that the second warning, the one that promised death, was triggered not far insideÄ"a few meters" she had said. "A few" is rarely over ten.

Janet would not hide the switch so thoroughly that one of her husbands, dodging for his life, would have to remember exactly where it was. The simple knowledge that there was such a switch must be sufficient clue to let him find it. But any intruder who did not know that there was such a switch must not notice it.

I moved down the tunnel until I stood right under that glowing sign, looked up. The light from that warning sign made it easy to see anywhere but that small part of the

tunnel arch just above the letters. Even with my dark-adjusted and enhanced vision I could not see the ceiling directly over the sign.

I reached up and felt the ceiling where I could not see it. My fingers encountered something that felt like a button, possibly the end of a solenoid. I pushed it.

The warning sign blinked out; ceiling lights came on, shining far down the tunnel.

Frozen food and the means to cook it and big towels and hot and cold running water and a terminal in the Hole on which I could get the current news and summaries of past news . . . books and music and cash money stored in the Hole against emergency and weapons and Shipstones and ammunition and clothes of all sorts that fit me because they fitted Janet and a clock-calendar in the terminal that told me that I had slept thirteen hours before the hardness of the concrete "bed" woke me and a comfy soft bed that invited me to finish the night by sleeping again after I had bathed and eaten and satisfied my hunger for news . . . a feeling of total security that let me calm down until I no longer had to use mind control to suppress my real feelings in order to function. . .

The news told me that British Canada had scaled the emergency down to "limited emergency." The border with the Imperium remained closed. The Qu,bec border was still closely controlled but permits were granted for any legitimate business. The remaining dispute between the two nations lay in how much reparation Qu,-
bee should pay for what was now admitted to be a military attack made through error and/or stupidity. The internment order was still in effect but over 90 percent of Qu,becois internees had been released on their own paroles . . . and about 20 percent of internees from the Imperium. So I had done well to dodge because, no question about it, I was a suspicious character.

But it looked as if Georges could come home whenever he wished. Or were there angles I did not understand?

The Council for Survival promised a third round of "educational" killings ten days plus or minus two days from the last round. The Stimulators followed this a day later with a matching statement, one which again condemned the so-called Council for Survival. The Angels of the Lord did not this time make any announcement, or at least none that issued through the BritCan Data Net.

Again I had tentative conclusions, shaky ones: The Stimulators were a dummy organization, all propaganda, no field operatives. The Angels of the Lord were dead and/or on the run. The Council for Survival had extremely wealthy backing willing to pay for more unprofessional stooges to be sacrificed in mostly futile attemptsÄ but that was merely a guess, to be dropped in a hurry if the third round of attacks turned out to be efficient and professionalÄwhich I did not expect, but I have a long record for being wrong.

I still couldn't decide who was back of this silly reign of terror. It could not be (I felt certain) a territorial nation; it might be a multinational, or a consortium, although I could see no sense in it. It could even be one or more extremely wealthy individualsÄif they had holes in their heads.

Under "retrieval" I also punched "Imperium" and "Mississippi River" and "Vicksburg" as singles, each pair, and the triple. Negative. I added in the names of the two vessels and tried all the combinations. Still negative. Apparently what had happened to me and several hundred others had been suppressed. Or was it considered trivial?

Before I left I wrote Janet a note telling her what clothes I had taken, how many BritCan dollars I had taken and added that amount to what she had given me earlier, and I detailed what I had charged to
her Visa card: one capsule fare Winnipeg to Vancouver, one shuttle fare Vancouver to Bellingham, nothing since. (Or had I paid my fare to San Jose with her card, or was that when Georges started being masterful? My expense accounts were in the bottom of the Mississippi.)

Having taken enough of Janet's cash to get me out of British Canada (I hoped!) I was strongly tempted to leave her Visa card with my note to her. But a credit card is an insidious thingÄjust a cheap little piece of plastic . . . that can equate to great stacks of gold bullion. It was up to me to protect that card personally and at any cost, until I could place it in Janet's hand. Nothing less was honest.

A credit card is a leash around your neck. In the world of credit cards a person has no privacy. . . or at best protects her privacy only with great effort and much chicanery. Besides that, do you ever know what the computer network is doing when you poke your card into a slot? I don't. I feel much safer with cash. I've never heard of anyone who had much luck arguing with a computer.

It seems to me that credit cards are a curse. But I'm not human and probably lack the human viewpoint (in this as in so many, many other things).

I set out the next morning, dressed in a beautiful three-piece pantsuit in powder-blue glass (I felt sure that Janet was beautiful in it and it made me feel beautiful despite the evidence of mirrors), and intending to hire a rig in nearby Stonewall, only to find that I had a choice of a horsedrawn omnibus or a Canadian Railways APV, both going to the tube station, Perimeter and McPhillips, where Georges and I had left on our informal honeymoon. Much as I prefer horses I picked the faster method.

Going into town would not let me pick up my luggage, still in bond at the port. But was it possible to pick it up from transit bond without being pinpointed as an alien from the Imperium? I decided to order it forwarded from outside British Canada. Besides, those bags were packed in New Zealand. If I could live without them this long, I could live without them indefinitely. How many people have died because they would not abandon their baggage?

I have this moderately efficient guardian angel who sits on my
shoulder. Only days ago Georges and I had walked right up to the proper turnstile, stuck Janet's and Ian's credit cards into the slot without batting an eye, and zipped merrily to Vancouver.

This time, although a capsule was then loading, I discovered that I was headed on past the turnstiles toward the British Canadian Tourist Bureau travel office. The place was busy, so there was no danger of an attendant rubbernecking what I was doingÄbut I waited until I could get a console in a corner. One became available; I sat down and punched for capsule to Vancouver, then stuck Janet's card into the slot.

My guardian angel was awake that day; I snatched the card out, got it out of sight fast, and hoped that no one had caught the stink of scorched plastic. And I left, quick-march and nose in the air.

At the turnstiles, when I asked for a ticket to Vancouver, the attendant was busy studying the sports page of the Winnipeg Free Press. He lowered his paper slightly, peered at me over it. "Why don't you use your card like everyone else?"

"Do you have tickets to sell? Is this money legal tender?"

"That's not the point."

"It is to me. Please sell me a ticket. And give me your name and clock number in accordance with that notice posted back of your head." I handed him the exact amount.

"Here's your ticket." He ignored my demand for his identification; I ignored his failure to comply with the regulations. I did not want a hooraw with his supervisor; I simply wanted to create a diversion from my own conspicuous eccentricity in using money rather than a credit card.

The capsule was crowded but I did not have to stand; a Galahad left over from the last century stood up and offered me his seat. He was young and not bad-looking and clearly was being gallant because he classed me as having the apposite female qualities.

I accepted with a smile and he stood over me and I did what I could to repay him by leaning forward a bit and letting him look down my neckline. Young Lochinvar seemed to feel repaidÄhe stared the whole wayÄand it cost me nothing and was no trouble. I appreciated his interest and what it got me in comfortÄsixty minutes is a long time to stand up to the heavy surges of an express capsule.

As we got out at Vancouver he asked me if I had any plans for lunch. Because, if I didn't, he knew of a really great place, the Bayshore Inn. Or if I liked Japanese or Chinese foodÄ I said that I was sorry but I had to be in Bellingham by noon. Instead of accepting the brush-off, his face lit up. "That's a happy coincidence! I'm going to Bellingham, too, but I thought I would wait until after lunch. We can have lunch together in Bellingham. Is it a deal?"

(Isn't there something in international law about crossing international boundaries for immoral purposes? But can the simple, straightforward rut of this youngster correctly be classed as "immoral"? An artificial person never understands human people's sexual codes; all we can do is memorize them and try to stay out of trouble. But this isn't easy; human sexual codes are as contorted as a plate of spaghetti.)

My attempt at polite brush-off having failed, I was forced to decide quickly whether to be rude or to go along with his clear purpose. I scolded myself: Friday, you are a big girl now; you know better. If you intended to give him no hope whatever of getting you into bed, the time to back out was when he offered you his seat at Winnipeg.

I made one more attempt: "It's a deal," I answered, "if I am allowed to pay the check, with no argument." This was a dirty trick on my part, as we both knew that, if he let me pay for lunch, that canceled his investment in me of one hour of standing up and hanging on and fighting the surge of the capsule. But barnyard protocol did not allow him to claim the investment; his act of gallantry was supposed to be disinterested, knightly, no reward expected.

The dirty, sneaking, underhanded, rutty scoundrel proceeded to chuck protocol.

"All right," he answered.

I swallowed my astonishment. "No argument later? It's my check?"

"No argument," he agreed. "Obviously you don't want to be under the nominal obligation of the price of a lunch even though I issued the invitation and therefore should

have a host's privilege. I don't know what I have done to annoy you but I will not force on you even a trivial obligation. There is a McDonald's at surface level
as we arrive in Bellingham; I'll have a Big Mac and a Coke. You pay for it. Then we can part friends."

I answered, "I'm Marjorie Baldwin; what is your name?"

"I'm Trevor Andrews, Marjorie."

"Trevor. That's a nice name. Trevor, you are dirty, sneaky, underhanded, and despicable. So take me to the best restaurant in Bellingham, ply me with fine liquor and gourmet food, and you pay the check. I'll give you a fair chance to sell your fell designs. But I don't think that you will get me into bed; I'm not feeling receptive."

That last was a lie; I was feeling receptive and very ruttyÄhad he possessed my enhanced sense of smell he would have been certain of it. Just as I was certain of his rut toward me. A human male cannot possibly dissemble with an AP female who has enhanced senses. I learned this at menarche. But of course I am never offended by male rut. At most I sometimes imitate a human woman's behavior by pretending to be offended. I don't do this often and tend to avoid it; I'm not that convincing an actress.

From Vicksburg to Winnipeg I had felt no sexual urge. But, with a double night's sleep, a hot, hot bath with lots of soap, plenty of food, my body now was restored to its normal behavior. So why was I lying about it to this harmless stranger? "Harmless?" In any rational sense, yes. Short of corrective surgery I am sterile. I am not inclined to catch even a sniffle and I am specifically immunized against the four commonest venereal diseases. I was taught in crŠche to class coition with eating, drinking, breathing, sleeping, playing, talking, cuddlingÄthe pleasant necessities that make life a happiness instead of a burden.

I lied to him because human rules call for a lie at that point in the danceÄand I was passing as human and didn't dare be honestly myself.

He blinked down at me. "You feel that I would be wasting my investment?"

"I'm afraid so. I'm sorry."

"You're mistaken. I never try to get a woman into bed; if she wants me in her bed, she will find some way to let me know. If she does not want me there, then I would not enjoy being there. But you seem to be unaware of the fact that it is worth the price of a good lunch just to sit and look at you, while ignoring any silly babble that comes out of your mouth."

"Babble! That had better be a very good restaurant. Let's catch the shuttle."

I had thought that I might have to argue my way through the barrier on arrival.

But the CHI officer looked most carefully at Trevor's IDs before validating his tourist card, then barely glanced at my San Jose MasterCard and waved me on through. I waited for Trevor just past the CHI barrier and looked at the sign THE BREAKFAST BAR while feeling double d,j... vu.

Trevor joined me. "If I had seen," he said mournfully, "that gold card you were flashing just now, I would not have offered to pay for the lunch. You're a wealthy heiress."

"Now look, buster," I answered, "a deal's a deal. You told me it
was worth the price just to sit and drool over me, In spite of my
`babble.' I'm willing to cooperate to the extent of easing the neckline
a little. One button, maybe two. But I won't let you back out. Even

a rich heiress likes to show a profit now and then."

"Oh, the shame and the pity of it all!"

"Quit complaining. Where's this gourmet restaurant?"

"Well, nowÄ Marjorie, I'm forced to admit that I don't know the restaurants in this glittering metropolis. Will you name the one you prefer?"

"Trevor, your seduction technique is terrible."

"So my wife says."

"I thought you had that harness-broken look. Get out her picture. Back in a moment; I'm going to find out where we eat."

I caught the CHI officer between shuttles, asked him for the name of the best restaurant. He looked thoughtful. "This isn't Paris, you know."
"I noticed." ~

"Or even New Orleans. If I were you, I would go to the Hilton dining room."

I thanked him, went back to Trevor. "We're eating in the dining room, two floors up. Unless you want to send out your spies. Now let's see her picture."

He showed me a wallet picture. I looked at it carefully, then gave a respectful whistle. Blondes intimidate me. When I was little, I thought I could get to be that color if I scrubbed hard enough. "Trevor, with that at home why are you picking up loose women on the streets?"

"Are you loose?"

"Quit trying to change the subject."

"Marjorie, you wouldn't believe me and you would babble. Let's go up to the dining room before all the martinis dry up."

Lunch was okay but Trevor did not have Georges' imagination, knowledge of cooking, and skill at intimidating a maŒtre d'h"tel. Without Georges' flair the food was good, standard, North American cuisine, the same in Bellingham as in Vicksburg.

I was preoccupied; discovering that Janet's credit card had been invalidated had upset me almost more than the horrid disappointment of not finding Ian and Janet at home. Was Janet in trouble? Was she dead?

And Trevor had lost some of the cheerful enthusiasm a stud should display when the game is afoot. Instead of staring lecherously at me, he too seemed preoccupied. Why the change in manner? My demand to see a picture of his wife? Had I made him self-conscious thereby? It seems to me that a man should not engage in the hunt unless he is on such terms with his wife or wives that he can recount the lurid details at home to be giggled over. Like Ian. I don't expect a man to "protect my reputation" because, to the best of my knowledge and belief, they never do. If I want a man to refrain from discussing my sweaty clumsiness in bed, the only solution is to stay out of bed with him.

Besides, Trevor had mentioned his wife first, hadn't he? I reviewed itÄyes, he had.

After lunch he perked up some. I was telling him to come back here after his business appointment because I was punching in as a guest in order to have comfort as well as privacy in making satellite calls (true) and that I might stay overnight (also true), so come back and call me and I would meet him in the lounge (conditionally trueÄI was so lonely and troubled I suspected that I would tell him to come straight up).

He answered, "I'll call first so that you can get that man out but I'll come straight up. No need to make the trip twice. But I'll send the bubbly up; I won't carry it."

"Hold it," I said. "You have not yet sold me your nefarious purpose. All I promised was the opportunity to present your sales talk. In the lounge. Not in my bedroom."

"Marjorie, you're a hard woman."

"No, you're a hard man. I know what I'm doing." A sudden satori told me that I did know. "How do you feel about artificial persons? Would you want your sister to marry one?"

"Do you know one who might be willing to? Sis is getting to be a bit long in the tooth; she can't afford to be particular."

"Don't try to evade me. Would you marry one?"

"What would the neighbors think? Marjorie, how do you know I haven't? You saw my wife's picture. Artifacts are supposed to make the very best wives, horizontally or vertically."

"Concubines, you mean. It isn't necessary to marry them. Trevor, you not only are not married to one; you don't know anything about them but the popular myths . . . or you wouldn't say `artifact' when the subject is `artificial persons.'

"I'm sneaky, underhanded, and despicable. I misused the term so that you would not suspect that I am one."

"Oh, babble! You aren't one, or I would know it. And while you probably would go to bed with one, you wouldn't dream of marrying one. This is a futile discussion; let's adjourn it. I need about two hours; don't be surprised if my room terminal is busy. Tape a message and curl up with a good drink; I'll be down as soon as possible."

I punched in at the desk and went up, not to the bridal suiteÄin the absence of Georges that lovely extravagance would have made me tristeÄbut to a very nice room with a good, big, wide bed, a luxury I had ordered from a deep suspicion that Trevor's low-key (almost reverse) salesmanship was going to cause him to wind up in it. The difficult louse.

I put the thought aside and got to work.

I called the Vicksburg Hilton. No, Mr. and Mrs. Perreault had punched out. No, no forwarding address. Sorree!

So was I, and that synthetic computer voice was no comfort. I called McGill University in Montr,al and wasted twenty minutes
"learning" that, Yes, Dr. Perreault was a senior member of this university but was now at the University of Manitoba. The only new fact was that this Montr,al computer synthesized English or French with equal ease and always answered in the language in which it was addressed. Very clever, these electron pushersÄtoo clever, in my opinion.

I tried Janet's (Ian's) call code in Winnipeg, learned that their terminal was out of service at the subscribers' request. I wondered why I had been able to receive news on the terminal in the Hole earlier this day. Did "out of service" mean only "no incoming calls"? Was such arcanum a close-held secret of ST. and T.?

ANZAC Winnipeg bounced me around through parts of its computer meant for the traveling public before I got a human voice to admit that Captain Tormey was on leave because of the Emergency and the interruption of flights to New Zealand.

Ian's Auckland code answered only with music and an invitation to record a message, which was no surprise as Ian would not be there until semiballistic service resumed. But I had thought that I might catch Betty and/or Freddie.

How could one go to New Zealand with the SBs out of service? You can't ride a seahorse; they're too small. Did those big waterborne, Shipstone-driven freighters ever carry passengers? I didn't think they had accommodations. Hadn't I heard somewhere that some of them didn't even have crews?

I believed that I had a detailed knowledge of ways to travel superior to the professional knowledge of travel agents because, as a courier, I often moved around by means that tourists can't use and ordinary commercial travelers don't know about. It vexed me to realize that I had never given thought to how to outwit the fates when all SBs are grounded. But there is a way, there is always a way. I ticked it off in my mind as a problem to solveÄlater.

I called the University of Sydney, spoke with a computer, but at last got a human voice that admitted knowing Professor Farnese but he was on sabbatical leave. No, private call codes and addresses were never given outÄsorry. Perhaps customer service might help me.

The Sydney information service computer seemed lonely, as it was willing to chat with me endlesslyÄanything but admit that either Federico or Elizabeth Farnese was in its net. I listened to a sales pitch for the World's Biggest Bridge (it isn't) and the World's Grandest Opera House (it is), so come Down Under andÄ I switched off reluctantly; a friendly computer with a Strine accent is better company than most people, human or my sort.

I then tackled the one I had hoped to be able to skip: Christchurch. There was a probability that Boss's HQ had sent word to me care of my former family when the move was madeÄif it was a move and not a total disaster. There was a very remote possibility that Ian, unable to send a message to me in the Imperium, would send one to my former home in hopes that it would be forwarded. I recalled that I had given him my Christchurch call code when he gave me the code for his Auckland flat. So I called my erstwhile homeÄ

Äand got the shock that one gets in stepping on a step that isn't there. "Service is discontinued at the terminal you have signaled. Calls are not being relayed. In emergency please signal ChristchurchÄ" A code followed that I recognized as Brian's office.

I found myself doing the time-zone correction backward to get a wrong answer that would let me put off callingÄthen I snapped out of it. It was afternoon here, just past fifteen, so it was tomorrow morning in New Zealand, just past ten, a most likely time of day for Brian to be in. I punched his call, got a satellite hold of only a few seconds, then found myself staring into his astonished face. "Marjorie!"

"Yes," I agreed. "Marjorie. How are you?"

"Why are you calling me?"

I said, "Brian, please! We were married seven years; can't we at least speak politely with each other?"

"Sorry. What can I do for you?"

"I am sorry to disturb you at work but I called the house and found the terminal out of service. Brian, as you no doubt know from the news, communications with the Chicago Imperium have been interrupted by the Emergency. The assassinations. What

the newscasters have been calling Red Thursday. As a result of this I am in California; I never did reach my Imperium address. Can you tell
me anything about mail or messages that may have come for me? You see, nothing has reached me."

"I really could not say. Sorry."

"Can't you even tell me whether anything had to be forwarded? Just to know that a message had been forwarded would help me in tracing it."

"Let me think. There would have been all that money you drew outÄno, you took the draft for that with you."

"What money?"

"The money you demanded we return to youÄor be faced with an open scandal. A bit more than seventy thousand dollars. Marjorie, I am surprised that you have the gall to show your face .
when your misbehavior, your lies, and your cold cupidity destroyed our family."

"Brian, what in the world are you talking about? I have not lied to anyone, I don't think I have misbehaved, and I have not taken one penny out of the family. `Destroyed the family' how? I was kicked out of the family, out of a clear blue skyÄkicked out and sent packing, all in a matter of minutes. I certainly did not `destroy the family.' Explain yourself."

Brian did, in cold and dreary detail. My misbehavior was all of a piece with my lies, of course, that ridiculous allegation that I was a living artifact, not human, and thereby I had forced the family to ask for an annulment. I tried to remind him that I had proved to him that I was enhanced; he brushed it aside. What I recalled, what he recalled, did not match. As for the money, I was lying again; he had seen the receipt with my signature.

I interrupted to tell him that any signature that appeared to be mine on any such receipt had to be a forgery as I had not received a single dollar.

"You are accusing Anita of forgery. Your boldest lie yet."

"I'm not accusing Anita of anything. But I received no money from the family."

I was accusing Anita and we both knew it. And possibly accusing Brian as well. I recalled once that Vickie had said that Anita's nipples erected only over fat credit balances . . . and I had shushed her and told her not to be catty. But there were hints from others that
Anita was frigid in bedÄa condition that an AP can't understand. In retrospect it did seem possible that her total passion was for the family, its financial success, its public prestige, its power in the community.

If so, she must hate me. I did not destroy the family, but kicking me out appeared to be the first domino in its collapse. Almost immediately after I left, Vickie went to Nuku'alofa . . . and instructed a solicitor to sue for divorce and financial settlement. Then Douglas and Lispeth left Christchurch, married each other separately, then entered the same sort of suit.

One tiny crumb of comfort. I learned from Brian that the vote against me had not been six to nothing but seven to nothing. An improvement? Yes. Anita had ruled that voting must be by shares; the major stockholders, Brian, Bertie, and Anita, had voted first, casting seven votes against me, a clear majority to expel meÄ whereupon Doug, Vickie, and Lispeth had abstained from voting.

A very small crumb of comfort, however. They had not bucked Anita, not tried to stop her, they had not even warned me of what was afoot. They abstained. . . then stood aside and let the sentence be executed.

I asked Brian about the childrenÄand was told bluntly that they were none of my business. He then said that he was quite busy and must switch off, but I held him for one more question: What was done with the cats?

He looked about to explode. "Marjorie, are you utterly heartless? When your acts have caused so much pain, so much real tragedy, you want to know about something as trivial as cats?"

I restrained my anger. "I do want to know, Brian."

"I think they were sent to the SPCA. Or it might have been to the medical school. Good-bye! Please do not call me again."

"The medical schoolÄ" Mister Underfoot tied to a surgical table while a medical student took him apart with a knife? I am not a vegetarian and I am not going to argue against the use of animals in science and in teaching. But if it must be done, dear God if there is One anywhere, don't let it be done to animals who have been brought up to think they are people!

SPCA or medical school, Mister Underfoot and the younger
cats were almost certainly dead. Nevertheless, if SBs had been running, I would have risked going back to British Canada to catch the next trajectory for New Zealand in the forlorn hope of saving my old friend. But without modern transportation Auckland was farther away than Luna City. Not even a forlorn hopeÄ I dug deep into mind-control training and put matters I could not
help out of my mindÄ

Äand found that Mister Underfoot was still brushing against my leg.

On the terminal a red light was blinking. I glanced at the time, noted that it had been just about the two hours I had estimated; that light was almost certainly Trevor.

So make up your mind, Friday. Put cold water on your eyes and go down and let him try to persuade you? Or tell him to come on up, take him straight to bed, and cry on him? At first, that is. You certainly don't feel lecherous this minute . . . but tuck your face into a nice, warm male shoulder and let your feelings sag and pretty soon you will feel eager. You know that. Female tears are reputed to be a powerful aphrodisiac to most men and your own experience bears that out. (Crypto-sadism? Machismo? Who cares? It works.)

Invite him up. Have some liquor sent up. Maybe even put on some lip paint, try to look sexy. No, the hell with lip paint; it would not last long anyway. Invite him up; take him to bed. Cheer yourself up by doing your damnedest to cheer him up. Give it everything you've got!

I fitted a smile onto my face and answered the terminal.

And found myself speaking to the hotel's robot voice: "We are holding a box of flowers for you. May we send them up?"

"Certainly." (No matter who or what, a box of flowers is better than a slap in the belly with a wet fish.)

Shortly the dumbwaiter buzzed; I went to it and took out a floral package as big as a baby's coffin, put it on the floor to open it.

Long-stemmed, dusky red roses! I decided to give Trevor a better time than Cleopatra ever managed on her best days.

After admiring them I opened the envelope that came with them, expecting just a card with perhaps a line asking me to call the lounge, or such.
No, a note, almost a letter:

Dear Marjorie,

I hope that these roses will be at least as welcome as I would have been.

I must confess that I have run away. Something came up that made me realize that I must desist from my attempts to force my company on you.

I am not married. I don't know who that pretty lady is; the picture is just a prop. As you pointed out, my sort is not considered suitable for marriage. I'm an artificial person, dear lady. "My mother was a test tube; my father was a knife." So I should not be making passes at human women. I pass for human, yes, but I would rather tell you the truth than to continue to try to pass with youÄthen have you learn the truth later. As you would, eventually, as I am the dirt-proud sort who would sooner or later tell you.

So I would rather tell you now than hurt you later.

My family name is not Ancirews, of course, as my sort do not have families.

But I can't help wishing that you were an AP yourself. You really are sweet (as well as extremely sexy) and your tendency to babble about matters, such as APs, that you don't understand, is probably not your fault. You remind me of a little fox terrier bitch I once had. She was cute and very affectionate, but quite willing to fight the whole world by herself if that was the program for the day. I confess to liking dogs and cats better than most people; they never hold it against me that I'm not human.
Do enjoy the roses,
Trevor

I wiped my eyes and blew my nose and went down fast and rushed through the lounge and then through the bar and then down one floor to the shuttle terminal and stood by the turnstiles leading to the departing shuttles . . . and stood there, and waited, and waited, and waited some more, and a policeman began eyeing me and finally he came over and asked me what I wanted and did I need help?

I told him the truth, or some of it, and he let me be. I waited and waited and he watched me the whole time. Finally he came over again and said, "Look here, if you insist on treating this as your beat, I'm going to have to ask to see your license and your medical certificate, and take you in if either one is not in order. I don't want to do that; I've got a daughter at home about your age and I'd like to think that a cop would give her a break. Anyhow you ought not to be in the business; anybody can see from your face that you're not tough enough for it."

I thought of showing him that gold credit cardÄI doubt that there is a streetwalker anywhere who carries a gold credit card. But the old dear really did think that he was taking care of me and I had humiliated enough people for one day. I thanked him and went up to my room.

Human people are so cocksure that they can always spot an APÄ blah! We can't even spot each other. Trevor was the only man I had ever met whom I could have married with an utterly clear conscienceÄand I had chased him away.

But he was too sensitive!

Who is too sensitive? You are, Friday.

But, damn it, most humans do discriminate against our sort. Kick a dog often enough and he becomes awfully jumpy. Look at my sweet Ennzedd family, the finks. Anita probably felt self-righteous about cheating meÄI'm not human.

Score for the day: Humans 9ÄFriday 0.

Where is Janet?

xxi

After a short nap that I spent standing on an auction block, waiting to be sold, I woke upÄwoke up because prospective buyers were insisting on inspecting my teeth and I finally bit one and the auctioneer started giving me a taste of the whip and woke me. The Be!lingham Hilton looked awfully good.

Then I made the call I should have made first. But the other calls had to be made anyhow and this call cost too much and would have been unnecessary if my last call had paid off. Besides, I don't like to phone the Moon; the time lag upsets me.

So I called Ceres and South Africa Acceptances, Boss's bankerÄ or one of them. The one who took care of my credit and paid my bills.

After the usual hassle with synthetic voices that seemed more deliberately frustrating than ever through the speed-of-light lag, I finally reached a human being, a beautiful female creature who clearly (it seemed to me) had been hired to be a decorative receptionistÄone-sixth gee is far more effective than a bra. I asked her to let me speak to one of the bank's officers.

"You are speaking to one of the vice-presidents," she answered. "You managed to convince our computer that you needed help from a responsible officer. That's quite a trick; that computer is stubborn. How may I help you?"

I told a portion of my unlikely story. "So it took a couple of weeks to get inside the Imperium and when I did, all my contact codes were sour. Does the bank have another call code or address for me?"

"We'll see. What is the name of the company for which you work?"

"It has several names. One is System Enterprises."

"What is your employer's name?"

"He doesn't have a name. He is elderly, heavyset, one-eyed, rather crippled, and walks slowly with two canes. Does that win a prize?"

"We'll see. You told me that we backed your MasterCard credit issued through the Imperial Bank of Saint Louis. Read the card's number, slowly."

I did so. "Want to photograph it?"

"No. Give me a date."

"Ten sixtyÄsix."

"Fourteen ninety-two," she answered.

"Four thousand four B.C.," I agreed.

"Seventeen seventy-six," she riposted.

"Two thousand twelve," I answered.

"You have a grisly sense of humor, Miss Baldwin. All right, you're tentatively you. But if you're not, I'll make a small bet with you that you won't live past the next checkpoint. Mr. Two-Canes is reputed to be unamused by gatecrashers. Take down this call code. Then read it back to me."

I did so.

One hour later I was walking past the Palace of the Confederacy in San Jose, again headed for the California Commercial Credit Building and firmly resolved not to get into any fights in front of the Palace no matter what assassinations were being attempted. I thought about the fact that I was on the exact spot I had been on, uh, two weeks ago?Äand if this relay point sent me to Vicksburg I would go quietly mad.

My appointment at the CCC Building was not with MasterCard but with a law firm on another floor, one I had called from Bellingham after obtaining the firm's terminal code from the Moon. I had just reached the corner of the building when a voice almost in my ear said, "Miss Friday."

I looked quickly around. A woman in a Yellow Cab uniform.

I looked again. "Goldie!"

"You ordered a cab, miss? Across the Plaza and down the street. They won't let us squat here."

We crossed the Plaza together. I started to babble, bursting with euphoria. Goldie shushed me. "Do please try to act like a cab fare, Miss Friday. The Master wants us to be inconspicuous."

"Since when do you call me miss?"

"Better so. Discipline is very tight now. My picking you up is a special permission, one that would never have been granted if I had not been able to point out that I could make positive identification without buzz words."

"Well. All right. Just don't call me miss when you don't have to. Golly gosh, Goldie darling, I'm so happy to see you I could cry."

"Me, too. Especially since you were reported dead just this Monday. And I did cry. And several others."

"Dead? Me? I haven't even been close to being dead, not at all, not anywhere. I haven't been in the slightest danger. Just lost. And now I'm found."

"I'm glad."

Ten minutes later I was ushered into Boss's office. "Friday reporting, sir," I said.

"You're late."

"I came the scenic route, sir. Up the Mississippi by excursion boat."

"So I heard. You seem to be the only survivor. I meant that you are late today. You crossed the border into California at twelve-ohfive. It is now seventeen-twenty-two."

"Damn it, Boss; I've had problems."

"Couriers are supposed to be able to outwit problems and move fast anyhow."

"Damn it, Boss, I wasn't on duty, I wasn't being a courier, I was still on leave; you've no business chewing me out. If you hadn't moved without notifying me, I wouldn't have had the slightest trouble. I was here, two weeks ago, in San Jose, just a loud shout from right here."

"Thirteen days ago."

"Boss, you're nitpicking to avoid admitting that it was your fault, not mine."

"Very well, I will accept the blame if any in order that we may cease quibbling and stop wasting time. I made extreme effort to notify you, much more than the routine alert MSG that was sent to other field operatives not at headquarters. I regret that this special effort failed. Friday, what must I do to convince you that you are unique and invaluable to this organization? In anticipation of the events tagged Red ThursdayÄ"

"Boss! Were we in that?" I was shocked.

"What causes you to entertain such an obscene idea? No. Our intelligence staff projected itÄin part from data you delivered from Eli-FiveÄand we started making precautionary arrangements in good time, so it seemed. But the first attacks took place in advance of our most pessimistic projection. At the onset of Red Thursday we were still moving impedimenta; it was necessary to crash our way across the border. With bribes, not with force. The notices of change of address and of call code had gone out earlier but it was not until we were here and our comm center reestablished that I was notified that you had not made routine acknowledgment."

"For the bloody good reason that I did not receive routine notice!"

"Please. On learning that you had not acknowledged, I attempted to call you at your New Zealand home. Possibly you are aware that there was an interruption in satellite serviceÄ"

"I heard."

"Precisely. The call got through some thirty-two hours later. I spoke to Mrs. Davidson, a woman about forty, rather sharp features. Senior wife in your S-group?"

"Yes. Anita. Both Lord High Executioner and Lord High Everything Else."

"That was the impression I received. I received also an impression that you had become persona non grata."

"I'm sure that it was more than an impression. Go ahead, Boss; what did the old bat have to say about me?"

"Almost nothing. You had left the family quite suddenly. No,
you had left no forwarding address or call code. No, she would not accept a message for you or forward any that arrived. I'm very busy; Marjorie has left us in a dreadful mess. Good-bye." -

"Boss, she had your Imperium address. She also had the address in Luna City of Ceres and South Africa because I made my monthly payments to her through them."

"I could see the situation. My New Zealand representative"Äthe first I had ever heard of one!Ä"obtained for me the business address of your S-group's senior husband, Brian Davidson. He was more polite and somewhat more helpful. From him we learned what shuttle you had taken from Christchurch and that led us to the passenger list of the semibaliistic you took from Auckland to Winnipeg. There we lost you briefly, until my agent there established that you had left the port in the company of the skipper of the semiballistic. When we reached himÄCaptain TormeyÄhe was helpful, but you had left. I am pleased to be able to tell you that we were able to return the favor to Captain Tormey. An inside source enabled us to let him know that he and his wife were about to be picked up by the local police."

"Fer Gossake! What for?"

"The nominal charge is harboring an enemy alien and harboring an unregistered Imperium subject during a declared emergency. In fact the Winnipeg office of the provincial police are not interested in you or in Dr. Perreault; that is an excuse to pull in

the Tormeys. They are wanted on a much more serious charge that has not been filed. A Lieutenant Melvin Dickey is missing. The last trace of him is an oral statement made by him as he left police HQ that he was going to Captain Tormey's home to pick up Dr. Perreault. Foul play is suspected."

"But that's not evidence against Jan and Ian! The Tormeys."

"No, it is not. That is why the provincial police intend to hold them on a lesser charge. There is more. Lieutenant Dickey's APV crashed near Fargo in the Imperium. It was unoccupied. The police are very anxious to check that wreck for fingerprints. Possibly they are doing so at this very moment as, about one hour ago, a news bulletin reported that the common border between the Chicago Imperium and British Canada had been reopened."

"Oh, my God!"

"Compose yourself. On the controls of that APV there were indeed fingerprints that were not Lieutenant Dickey's. They matched Captain Tormey's prints on file with ANZAC Skyways. Note the tense I used; there were such prints; there no longer are. Friday, although I found it prudent to move our seat of operations out of the Imperium, after many years I am not without contacts there. And agents. And past favors I can collect. No prints matching those of Captain Tormey are now in that wreckage but there are prints on it from many sources living and dead."

"Boss, may I kiss your feet?"

"Hold your tongue. I did not do this to frustrate the British Canadian police. My field agent in Winnipeg is a clinical psychologist as well as having our usual training. It is his professional opinion that either Captain Tormey or his wife could kill in self-defense but that it would take extreme conditions indeed to cause either of them to kill a policeman. Dr. Perreault is described as being even less disposed toward violent solutions."

"I killed him."

"So I assumed. No other explanation fitted the data. Do you wish to discuss it? Is it any of my business?"

"Uh, perhaps not. Except that you made it your business when you got rid of those damning fingerprints. I killed him because he was threatening Janet, Janet Tormey, with a gun. I could have simply disabled him; I had time to pull my punch. But I meant to kill him and I did."

"I would beÄand will beÄmuch disappointed in you if you ever simply injure a policeman. A wounded policeman is more dangerous than a wounded lion. I had reconstructed it much as you described save that I had assumed that you were protecting Dr. Perreault. . . since you seemed to find him an acceptable surrogate husband."

"He's that, all right. But it was that crazy fool threatening Janet's life that made me go spung! Boss, until this happened I didn't know that I loved Janet. Didn't know I could love a woman that intensely. You know more than I do about how I was designed, or so you have hinted. Are my glands mixed up?"

"I know quite a lot about your design but I shan't discuss it with you; you have no need to know. Your glands are no more mixed up than those of any healthy humanÄspecifically, you do not have a redundant Y chromosome. All normal human beings have soi-disant mixed-up glands. The race is divided into two parts: those who know this and those who do not. Stop the stupid talk; it ill befits a genius."

"Oh, so I'm a genius now. Hully gee, Boss."

"Don't be pert. You are a supergenius but you are a long way from realizing your potential. Geniuses and supergeniuses always make their own rules on sex as on everything else; they do not accept the monkey customs of their lessers. Let us return to our muttons. Is it possible that this body will be found?"

"I would bet long odds against it."

"Any point in discussing it with me?"

"Uh, I don't think so."

"Then I have no need to know and will assume that the Tormeys can safely return home as soon as the police conclude that they cannot establish corpus delicti. While corpus delicti does not require a corpse, it is enormously more difficult to make a charge of murder stand up without one. If arrested, a good lawyer would have the Tormeys out in five minutesÄand they would have a very good lawyer, I assure you. You may be pleased to know that you helped them to escape from the country."

"I did?"

"You and Dr. Perreault. By leaving British Canada as Captain and Mrs. Tormey, and by using their credit cards and by filling out tourist-card applications in their names. You two left a trail that `proved' that the Tormeys fled the country immediately after Lieutenant Dickey disappeared. This worked so well that the police wasted several days trying to trace down the suspects in the California ConfederacyÄand blaming inefficiency of their colleagues in the Confederacy for their lack of success. But I'm somewhat surprised that the Tormeys were not arrested in their own home as my agent had no great difficulty interviewing them there."

(I'm not. If a cop shows upÄzip! down the Hole. If it's not a cop and he satisfies Ian that he is okayÄ) "Boss, did your Winnipeg agent mention my name? My `Marjorie Baldwin' name, I mean."

"Yes. Without that name and a picture of you, Mrs. Tormey
would never have let him in. Without the Tormeys I would have lacked necessary data for picking up your rather elusive trail. We benefitted each other. They helped you to escape; we helped them to escape, after I told themÄafter my agent told themÄthat they were being actively sought. A pleasant ending."

"How did you get them out?"

"Friday, do you wish to know?"

"Urn, no." (When will I learn? Had Boss wished to disclose the method, he would have told me. "Careless slips sink ships." Not around Boss.)

Boss came out from behind his desk. . . and shocked me. Ordinarily he does not move around much and in his old office his ubiquitous tea service was within his reach at his desk. Now he rolled out. No canes. A powered wheelchair. He guided it to a side table, started fiddling with tea things.

I stood up. "May I pour?"

"Thank you, Friday. Yes." He left the service table, rolled back to his place behind his desk. I took over, which let me stand with my back to himÄthat was what I needed right then.

There is no reason to feel shock when a cripple decides to substitute a powered wheelchair for canesÄit is simply efficiency. Except that this was Boss. If the Egyptians at Giza woke up some morning and found the Pyramids switched around and the Sphinx

with a new nose, they would not be more shocked than was I. Some thingsÄand some peopleÄare not supposed to change.

After I had served his teaÄwarm milk, two lumpsÄand had poured mine, I sat back down, my composure restored. Boss uses the very latest technology and quite old-fashioned customs; I have never known him to ask a woman to wait on him but if a woman is present and offers to pour tea, it is a certainty that he will accept graciously and turn the incident into a minor ceremony.

He chatted of other matters until we each had finished one cup. I refilled his cup, did not myself take another; he resumed business. "Friday, you changed names and credit cards so many times that we were always one jump behind you. We might not have traced you to Vicksburg had not your progress suggested something about your plan. Although it is not my practice to interfere with an agent no matter how closely he is being watched, I might have decided to head you off from going up the riverÄknowing that that expedition was doomedÄ "Boss, what was that expedition? I never believed the song and dance."

"A coup d'etat. A clumsy one. The Imperium has had three Chairmen in two weeks. . . and the current one is no better and no more likely to survive. Friday, a well-run tyranny is a better base for my work than is any form of free government. But a well-run tyranny is almost as scarce as an efficient democracy. To resumeÄyou got away from us in Vicksburg because you moved without hesitation. You were aboard that comic-opera troopship and gone before our Vicksburg agent knew that you had signed up. I was vexed with him. So much so that I have not yet disciplined him. I must wait."

"No reason to discipline him, Boss. I moved fast. Unless he breathed down my neckÄwhich I notice and always take stepsÄhe could not have kept up with me."

"Yes, yes, I know your techniques. But I think that you will agree that I was understandably annoyed when it was reported to me that our man in Vicksburg actually had you physically in sight. . . and twenty-four hours later he reports you dead."

"Maybe, maybe not. A man got too close on my heels coming into Nairobi earlier this yearÄbreathed down my neck and it was his last breath. If you have me shadowed again, better warn your agents."

"I do not ordinarily use a shadow on you, Friday. With you, point checks work better. Fortunately for all of us you did not stay dead. While the terminals of my contact agents in Saint Louis have all been tapped by the government, I still get some use from them. When you attempted to report in, three times and never got caught, I heard of it at once and deduced that it had to be you, then knew it with certainty when you reached Fargo."

"Who in Fargo? The paper artist?"

Boss pretended not to hear. "Friday, I must get back to work. Complete your report. Make it brief."

"Yes, sir. I left that excursion boat when we entered the Imperiurn, proceeded to Saint Louis, found your contact call codes trapped, left, visited Fargo as you noted, crossed into British Canada twenty-six klicks east of Pembina, crossed to Vancouver and down to Bellingham today, then reported to you here."

"Any trouble?"

"No, sir."

"Any novel aspects of professional interest?"

"No, sir."

"At your convenience tape a detailed report for staff analysis. Feel free to suppress facts not yours to disclose. I will send for you some time in the next two or three weeks. You start school tomorrow morning. Oh-nine hundred."

"Huh?"

"Don't grunt; it is not pleasing in a young woman. Friday, your work has been satisfactory but it is time you entered on your true profession. Your true profession at this stage, perhaps I should say. You are woefully ignorant. We will change that. Nine o'clock tomorrow."

"Yes, sir." (Ignorant, huh? Arrogant old bastard. Gosh, I was glad to see him. But that wheelchair fretted me.)

xxii

Pajaro Sands used to be a resort seaside hotel. It's a nowhere place on Monterey Bay outside a nowhere city, Watsonville. Watsonville is one of the great oil export ports of the world and has all the charm of cold pancakes with no syrup. The nearest excitement is in the casinos and bawdy houses of Carmel, fifty kilometers away. But I don't gamble and am not interested in sex for hire, even the exotic sorts to be had in California. Not many from Boss's headquarters patronized Carmel as it was too far away to go by horse other than for a weekend, there was no direct capsule, and, while California is liberal in authorizing power vehicles, Boss did not release his APVs for anything but business.

The big excitements for us at Pajaro Sands were the natural attractions that caused it to be built, surf and sand and sunshine.

I enjoyed surfboarding until I became skilled at it. Then it bored me. I usually sunned a bit each day and swam a little and stared out at the big tankers suckling at the oil moles and noted with amusement that the watchstander aboard each ship often was staring back, with binoculars.

There was no reason for any of us to be bored as we had full individual terminal service. People are so used to the computer net today that it is easy to forget what a window to the world it can beÄ and I include myself. One can grow so canalized in using a terminal only in certain waysÄpaying bills, making telephonic calls, listening to news bulletinsÄthat one can neglect its richer uses. If a subscriber is willing to pay for the service, almost anything can be done at a terminal that can be done out of bed.

Live music? I could punch in a concert going on live in Berkeley this evening, but a concert given ten years ago in London, its conductor long dead, is just as "live," just as immediate, as any listed on today's program. Electrons don't care. Once data of any sort go into the net, time is frozen. All that is necessary is to remember that all the endless riches of the past are available any time you punch for them.

Boss sent me to school at a computer terminal and I had far richer opportunities than any enjoyed by a student at Oxford or the Sorbonne or Heidelberg in any earlier year.

At first it did not seem to me that I was going to school. At breakfast the first day I was told to report to the head librarian. He was a fatherly old dear, Professor Perry, whom I had met first during basic training. He seemed harriedÄunderstandably, as Boss's

library was probably the bulkiest and most complex thing shipped from the Imperium to Pajaro Sands. Professor Perry undoubtedly had weeks of work ahead before everything would be straightened outÄand in the meantime all Boss would expect would be utter perfection. The work was not made easier by Boss's eccentric insistence on paper books for much of his library rather than cassettes or microfiche or disks.

When I reported to him, Perry looked bothered, then pointed to a console over in one corner. "Miss Friday, why don't you sit down over there?"

"What am I to do?"

"Eh? That's hard to say. No doubt we'll be told. Urn, I'm awfully busy now and terribly understaffed. Why don't you just get acquainted with the equipment by studying anything you wish?"

There wasn't anything special about the equipment except that there were extra keys giving direct access to several major libraries such as Harvard's and the Washington Library of the Atlantic Union and the British Museum without going through a human or network linkupÄplus the unique resource of direct access to Boss's library, the one right beside me. I could even read his bound paper
books if I wanted to, on my terminal's screen, turning the pages from th~ keyboard and never taking the volume out of its nitrogen
environment. -

That morning I was speed-searching the index of the Tulane University library (one of the best in the Lone Star Republic), looking for history of Old Vicksburg, when I stumbled onto a cross-reference to spectral types of stars and found myself hooked. I don't recall why there was such a cross-referral but these do occur for the most unlikely reasons.

I was still reading about the evolution of stars when Professor Perry suggested that we go to lunch.

We did but I made some notes first about types of mathematics I wanted to study. Astrophysics is fascinatingÄbut you have to talk the language.

That afternoon I got back to Old Vicksburg and was footnoted to Show Boat, a musical play concerning that eraÄand then spent the rest of the day looking at and listening to Broadway musical plays from the happy days before the North American Federation fell to pieces. Why can't they write music like that today? Those people must have had fun! I certainly didÄI played Show Boat, The Student Prince, and My Fair Lady one after the other and noted a dozen more to play later. (This is going to school?)

Next day I resolved to stick to serious study of professional subjects in which I was weak, because I felt sure that once my tutors (whoever they were) assigned my curriculum, I would have no time at all for my own choicesÄearlier training in Boss's outfit had taught me the need for a twenty-six-hour day. But at breakfast my friend Anna asked me, "Friday, what can you tell me about the influence of Louis Onze on French lyric poetry?"

I blinked at her. "Is there a prize? Louis Onze sounds like a cheese to me. The only French verse I can recall is `Mademoiselle from ArmentiŠres.' If that qualifies."

"Professor Perry said that you are the person to ask."

"He's pulling your leg." When I reached the library Papa Perry looked up from his console. I said, "Good morning. Anna said that you had told her to ask me about the effect of Louis the Eleventh on French verse."

"Yes, yes, of course. Would you mind not bothering me now? This bit of programming is very tricky." He looked back down and closed me out of his world.

Frustrated and irritated I punched up Louis XI. Two hours later I came up for air. I had not learned anything about poetryÄso far as I could tell the Spider King had never even rhymed ton con with c'est hon or ever been a patron of the art. But I learned a lot about politics in the fifteenth century. Violent. Made the little scrapes I had been in seem like kiddie quarrels in the crŠche.

I spent the rest of the day punching up French lyric verse since 1450. Good in spots. French is suited to lyric poetry, more so than is EnglishÄit takes an Edgar Allan Poe to wring beauty consistently out of the dissonances of English. German is unsuited to lyricism, so much so that translations fall sweeter on the ear than do the German originals. This is no fault of Goethe or Heine; it is a defect of an ugly language. Spanish is so musical that a soappowder commercial in Spanish is more pleasing to the ear than the best free verse in EnglishÄthe Spanish language is so beautiful that much of its poetry sounds best if the listener does not understand the meaning.

I never did find out what effect, if any, Louis XI had on verse.

One morning I found "my" console occupied. I looked inquiringly at the head librarian. Again he looked harried. "Yes, yes, we're quite crowded today. Um, Miss Friday, why not use the terminal in your room? It has the same additional controls and, if you need to consult me, you can do so even more quickly than you can here. Just punch local seven and your signature code and I'll instruct the computer to give you priority. Satisfactory?"

"Just fine," I agreed. I enjoyed the warm camaraderie of the library study room but in my own room I could take off my clothes without feeling that I was annoying Papa Perry. "What should I study today?"

"Goodness. Isn't there some subject you are interested in that merits further listening? I dislike disturbing Number One."

I went to my room and went on with French history since Louis Onze and that led me to the new colonies across the Atlantic and that led me into economics and that took me to Adam Smith and
from there to political science. I concluded that Aristotle had had his good days but that Plato was a pretentious fraud and that led to my being called three times by the dining room wiTh the last call including a recorded message that any later arrival would mean nothing but cold night-rations and a live message from Goldie threatening to drag me down by my hair.

So I rushed down, barefooted and still zipping into a jump suit. Anna asked what I had been doing that was so urgent I would forget to eat. "Most unFridayish." She and Goldie and I usually ate together, with or without male companyÄresidents at HQ were a club, a fraternity, a noisy family, and some two dozen of them were "kissing friends" of mine.

"Improving my brain," I said. "You are looking at the World's Greatest Authority."

"Authority on what?" Goldie asked.

"Anything. Just ask me. The easy ones I answer at once; the hardest ones I'll answer tomorrow."

"Prove it," said Anna. "How many angels can sit on the point of a needle?"

"That's an easy one. Measure the angels' arses. Measure the point of the needle. Divide A into B. The numerical answer is left as an exercise for the student."

"Smart-aleck. What is the sound of one hand clapping?"

"Even easier. Switch on a recorder, using any nearby terminal. Clap with one hand. Play back the result."

"You try her, Goldie. She's been eating meat."

"What is the population of San Jose?"

"Ah, that's a hard one! I'll report tomorrow."

This fiddling went on for over a month before it filtered through my skull that someone (Boss, of course) was in fact trying to force me to become "the World's Greatest Authority."

At one time there really was a man known as "the World's Greatest Authority." I ran across him in trying to nail down one of the many silly questions that kept coming at me from odd sources. Like this: Set your terminal to "research." Punch parameters in succession "North American culture," "English-speaking," "midÄtwenti
eth century," "comedians," "the World's Greatest Authority." The answer you can expect is "Professor Irwin Corey." You'll find his routines timeless humor.

Meanwhile I was being force-fed, like a Strasbourg goose.

Nevertheless it was a very happy time. Often, as often as not, one of my true friends would invite me to share a bed. I don't recall ever refusing. Rendezvous would usually be arranged during afternoon sunbathing and the prospect added a tingle to the sensuous pleasure of lying in the sun. Because everyone at HQ was so civilizedÄsweet through and throughÄit was possible to answer, "Sorry, Terence asked me first. Tomorrow maybe? No? Okay, sometime soon"Ä and have no hurt feelings. One of the shortcomings of the S-group I used to belong to was that such arrangements were negotiated among the males under some protocol that was never explained to me but was not free from tension.

The silly questions speeded up. I found myself just getting acquainted with the details of Ming ceramics when a message showed up in my terminal saying that someone in staff wanted to know the relationships between men's beards, women's skirts, and the price of gold. I had ceased to wonder at silly questions; around Boss anything can happen. But this one seemed supersilly. Why should there be any relationship? Men's beards did not interest me; they tickle and often are dirty. As for women's skirts, I knew even less. I have almost never worn skirts. Skirted costumes can be pretty but they aren't practical for travel and could have gotten me killed three or four timesÄand when you're home, what's wrong with skin? Or as near as local custom permits.

But I had learned not to ignore questions merely because they were obvious nonsense; I tackled this one by calling up all the data I could, including punching out some most unlikely association chains. I then told the machine to tabulate all retrieved data by categories.

Durned if I didn't begin to find connections!

As more data accumulated I found that the only way I could see all of it was to tell the computer to plot and display a three-dimensional graphÄand that looked so promising that I told it to convert to holographic in color. Beautiful! I did not know why these three variables fitted together but they did. I spent the rest of that day

changing scales, X versus Y versus Z in various combinationsÄ magnifying, shrinking, rotating, looking for minor cycloid relations under the obvious gross ones. . . and noticed a shallOw double sinusoidal hump that kept showing up as I rotated the holoÄand suddenly, for no reason I can assign, I decided to subtract the double sunspot curve.

Eureka! As precise and necessary as a Ming vase! Before dinnertime I had the equation, just one line that encompassed all the silly data I had spent five days dragging out of the terminal. I punched the chief of staff's call and recorded that one-line equation, plus definitions of variables. I added no comment, no discussion; I wanted to force the faceless joker to ask for my opinions.

I got the same answer backÄi.e., none.

I fiddled for most of a day, waiting, and proving to myself that I could retrieve a group picture from any year and, through looking only at male faces and female legs, make close guesses concerning the price of gold (falling or rising), the time of that picture relative to the double sunspot cycle, andÄshortly and most surprisingÄ whether the political structure was falling apart or consolidating.

My terminal chimed. No face. No pat on the back. Just a displayed message: "Operations requests soonest depth analysis of possibility that plague epidemics of sixth, fourteenth, and seventeenth centuries resulted from political conspiracy."

Fooey! I had wandered into a funny farm and was locked up with the inmates.

Oh, well! The question was so complex that I might be left alone a long time while I studied it. That suited me; I had grown addicted to the possibilities of a terminal of a major computer hooked into a world research netÄI felt like Little Jack Homer.

I started by listing as many subjects as possible by free association:
plague, epidemiology, fleas, rats, Daniel Defoe, Isaac Newton, conspiracies, Guy Fawkes, Freemasonry, Illuminati, OTO, Rosicrucians, Kennedy, Oswald, John Wilkes Booth, Pearl Harbor, Green Bowlers, Spanish influenza, pest control, etc.

In three days my list of possibly related subjects was ten times as long.

In a week I knew that one lifetime was not nearly long enough to study in depth all of my list. But I had been told to tackle the subject
so I started inÄbut I placed my own meaning on "soonest"Äi.e., I would study conscientiously at least fifty hours per week but when and how I wished and with no cramming or rawhiding. . . unless somebody came along and explained to me why I should work harder or differently.

This went on for weeks.

I was wakened in the middle of the night by my terminalÄoverride alarm; I had shut it off as usual when I went to bed (alone, I don't recall why). I answered sleepily, "All right, all right! Speak up, and it had better be good."

No picture. Boss's voice said, "Friday, when will the next major Black Death epidemic occur?"

I answered, "Three years from now. April. Starting in Bombay and spreading worldwide at once. Spreading off planet at first transport.

"Thank you. Good night."

I dropped my head to the pillow and went right back to sleep.

I woke up at seven hundred as usual, held still for several moments and thought, while I grew colder and colderÄdecided that I really had heard from Boss in the night and really had given him that preposterous answer.

So bite the bullet, Friday, and climb the Thirteen Steps. I punched "local one." "Friday here, Boss. About what I told you in the night. I plead temporary insanity."

"Nonsense. See me at ten-fifteen."

I was tempted to spend the next three hours in lotus, chanting my beads. But I have a deep conviction that one should not attend even the End of the World without a good breakfast. . . and my decision was justified as the special that morning was fresh figs with cream, corned-beef hash with poached eggs, and English muffins with Knott's Berry Farm orange marmalade. Fresh milk. Colombian high-altitude coffee. That so improved things that I spent an hour trying to find a mathematical relationship between the past history of plague and the date that had popped into my sleep-drenched mind. I did not find one but was beginning to see some shape to the curve when the terminal gave me a three-minute warning I had punched in.

I had refrained from having my hair cut and my neck shaved but otherwise I was ready. I walked in on the tick. "Friday reporting,
sir. -

"Sit down. Why Bombay? I would think that Calcutta would be a more likely center."

"It might have something to do with long-range weather forecasts and the monsoons. Fleas can't stand hot, dry weather. Eighty percent of a flea's body mass is water and, if the percentage drops below sixty, the flea dies. So hot, dry weather will stop or prevent an epidemic. But, Boss, the whole thing is nonsense. You woke me up in the middle of the night and asked me a silly question and I gave you a silly answer without really waking up. I probably pulled it out of a dream. I've been having nightmares about the Black Death and there really was a bad epidemic that started in Bombay. Eighteen ninety-six and following."

"Not as bad as the Hong Kong phase of it three years later. Friday, the analytical section of Operations says that the next Black Death epidemic won't start until a year later than your prediction. And not Bombay. Djakarta and Ho Chi Minh City."

"That's preposterous!" I stopped abruptly. "Sorry, sir, I guess I was back in that nightmare. Boss, can't I study something pleasantem than fleas and rats and Black Death? It's ruining my sleep."

"You may. You are through studying plagueÄ"

"Hooray!"

"Äother than to whatever extent your intellectual curiosity causes you to tidy up any loose ends. The matter now goes to Operations for action. But action will be based on your prediction, not on that of the mathematical analysts."

"I have to say it again. My prediction is nonsense."

"Friday, your greatest weakness is lack of awareness of your true strength. Wouldn't we look silly if we depended on the professional analysts but the outbreak was one year earlier, as you predicted? Catastrophe. But to be a year early in taking prophylactic measures does no harm."

"Are we going to try to stop it?" (People have been fighting rats and fleas throughout history. So far, the rats and fleas are ahead.)

"Heavens, no! In the second place, the contract would be too big
for this organization. But in the first place I do not accept contracts that I cannot fulfill; this is one such. In the third place, from the strictest humanitarian viewpoint, any attempt

to stop the processes by which overcrowded cities purge themselves is not a kindness. Plague is a nasty death but a quick one. Starvation also is a nasty death . . . but a very slow one."

Boss grimaced, then continued. "This organization will limit itself to the problem of keeping Pasteurella pestis from leaving this planet. How will we do this? Answer at once."

(Ridiculous! Any government public health department, faced with such a question, would set up a blue-ribbon study group, insist on ample research funds, and schedule a reasonable timeÄfive years or moreÄfor orderly scientific investigation.) I answered at once, "Explode them."

"The space colonies? That seems a drastic solution."

"No, the fleas. Back during the global wars of the twentieth century somebody discovered that you could kill off fleas and lice by taking them up to high altitude. They explode. About five kilometers as I recall but it can be looked up and checked by experiment. I thought of it because I noticed that Beanstalk Station on Mount Kenya was above the critical altitudeÄand almost all space traffic these days goes up the Beanstalk. Then there is the simple method of heat and drynessÄworks but not as fast. But the key to it, Boss, is absolutely no exceptions. Just one case of diplomatic immunity or one VIP allowed to skip the routines and you've had it. One lapdog. One gerbil. One shipment of laboratory mice. If it took the pneumonic form, Ell-Five would be a ghost town in a week. Or Luna City."

"If I did not have other work for you, I would put you in charge. How about rats?"

"I don't want the job; I'm sick of the subject. Boss, killing a rat is no problem. Stuff it into a sack. Beat the sack with an ax. Then shoot it. Then drown it. Burn the sack with the dead rat in it. Meanwhile its mate has raised another litter of pups and you now have a dozen rats to replace it. Boss, all we've ever been able to do with rats is fight them to a draw. We never win. If we let up for a moment the rats pull ahead." I added sourly, "I think they're the second team." This plague assignment had depressed me.

"Elucidate."

"If Homo sapiens doesn't make itÄhe keeps trying to kill himself offÄthere are the rats, ready to take over." -

"Piffle. Soft-headed nonsense. Friday, you overstress the human will to die. We have had the means to commit racial suicide for generations now and those means are and have been in many hands. We have not done so. In the second place, to replace us, rats would have to grow enormously larger skulls, develop bodies to support them, learn to walk on two feet, develop their front paws into delicate manipulative organsÄand grow more cortex to control all this. To replace man another breed must become man. Bah. Forget it. Before we leave the subject of plague, what conclusions did you reach concerning the conspiracy theory?"

"The notion is silly. You specified sixth, fourteenth, and seventeenth centuries . . . and that means sailing ships or caravans and no knowledge of bacteriology. So here we have the sinister Dr. Fu Manchu in his hideaway raising a million rats and the rats are infested with fleasÄeasy. Rats and fleas are infected with the bacillusÄpossible even without theory. But how does he hit his target city? By ship? In a few days all the million rats will be dead and so would be the crew. Even harder to do it overland. To make such

a conspiracy work in those centuries would require modern science and a largish time machine. Boss, who thought up that silly question?"

"I did."

"I thought it had your skid to it. Why?"

"It caused you to study the subject with a much wider approach than you otherwise would have given it, did it not?"

"Uh. . ." I had spent much more time studying relevant political history than I had spent studying the disease itself. "I suppose so."

"You know so."

"Well, yes. Boss, there ain't no such animal as a well-documented conspiracy. Or sometimes too well documented but the documents contradict each other. If a conspiracy happened quite some time ago, a generation or longer, it becomes impossible to establish the truth. Have you ever heard of a man named John F. Kennedy?"

"Yes. Chief of state in the middle twentieth century of the Federation then occupying the land between CanadaÄBritish Canada
and Qu,becÄand the Kingdom of Mexico. He was assassinated."

"That's the man. Killed in front of hundreds of witnesses and every aspect, before, during, and after, heavily documented. All that mountain of evidence adds up to is this: Nobody knows who shot him, how many shot him, how many times he was shot, who did it, why it was done, and who was involved in the conspiracy if there was a conspiracy. It isn't even possible to say whether the murder plot was foreign or domestic. Boss, if it is impossible to untangle one that recent and that thoroughly investigated, what chance is there of figuring out the details of the conspiracy that did in Gaius lulius Caesar? Or Guy Fawkes and the Gunpowder Plot? All that can truthfully be said is that the people who come out on top write the official versions found in the history books, history that is no more honest than is autobiography."

"Friday, a¤tobiography is usually honest."

"Huh! Boss, what have you been smoking?"

"That will do. Autobiography is usually honest but it is never truthful."

"I missed a turn."

"Think about it. Friday, I can't spend more time on you today; you chatter too much and change the subject. Hold your tongue while I say some things. You are now permanently on staff work. You are getting older; no doubt your reflexes are a touch slower. I will not again risk you in field workÄ"

"I'm not complaining!"

"Pipe down. ÄBut you must not get swivel-chair spread. Spend less time at the console, more time in exercise; the day will come when your enhanced reflexes will again save your life. And possibly the lives of others. In the meantime give thought to the day when you will have to shape your life unassisted. You should leave this planet; for you there is nothing here. The Balkanization of North America ended the last chance of reversing the decay of the Renaissance Civilization. So you should think about off-planet possibilities not only in the solar system but elsewhereÄplanets ranging from extremely primitive to well developed. Investigate for each the cost and the advantages of migrating there. You will need money; do you want my agents to collect the money of which you were cheated in New Zealand?"

"How did you know I was cheated?"

"Come, come! We are not children."

may I think about it?" -

"Yes. Concerning your ex-migration: I recommend that you not move to the planet Olympia. Otherwise I have no specific advice other than to migrate. When I was younger, I thought I could change this world. Now I no longer think so but for emotional reasons I must keep on fighting a holding action. But you are young and, because of your unique heritage, your emotional ties to this planet and to this portion of humanity are not great. I could not mention this until you shuffled off your sentimental connection in New ZealandÄ"

"I didn't `shuffle' it off; I was kicked out on my arse!"

"So. While you are deciding, look up Benjamin Franklin's parable of the whistle, then tell meÄno, ask yourselfÄwhether or not you paid too much for your whistle. Enough of thatÄ Two assignments for you: Study the Shipstone corporate complex, including its interlocks outside the complex. Second, the next time I see you I want you to tell me precisely how to spot a sick culture. That's all."

Boss turned his attention to his console, so I stood up. But I was not ready to accept so abrupt a dismissal as I had had no opportunity to ask important questions. "Boss. Don't I have any duties? Just random study that goes nowhere?"

"It goes somewhere. Yes, you have duties. First, to study. Second, to be awakened in the middle of the nightÄor stopped in the hallwayÄ to answer silly questions."

"Just that?"

"What do you want? Angels and trumpets?"

"Well . . . a job title, maybe. I used to be a courier. What am I now? Court jester?"

"Friday, you are developing a bureaucratic mind. `Job title' indeed! Very well. You are staff intuitive analyst, reporting to me only. But the title carries an injunction: You are forbidden to discuss anything more serious than a card game with any member of the analytical section of the general staff. Sleep with them if you wishÄI know that you do, in two casesÄbut limit your conversation to the veriest trivia."

"Boss, I could wish that you spent less time under my bed!"

"Only enough to protect the organization. Friday, you are well aware that the absence of Eyes and Ears today simply means that they are concealed. Be assured that I am shameless about protecting the organization."

"You are shameless, unlimited. Boss, answer me one more question. Who is behind Red Thursday? The third wave sort of fizzled; will there be a fourth? What's it all about?"

"Study it yourself. If I told you, you would not know; you simply would have been told. Study it thoroughly and some nightÄwhen you are sleeping aloneÄI will ask you. You will answer and then you will know."

"Fer Gossake. Do you always know when I'm sleeping alone?"

"Always." He added, "Dismissed," and turned away.

xxiii

As I left the sanctum sanctorum I ran into Goldie coming in. I was feeling grouchy and simply nodded. Not sore at Goldie. Boss! Damn him. Supercilious, arrogant voyeur! I went to my room and got to work, so that I could stop fuming.

First I punched for the names and addresses of all the Shipstone corporations. While these were printing I called for histories of the complex. The computer named two, an official company history combined with a biography of Daniel Shipstone, and an unofficial history footnoted "muckrake." Then the machine suggested several other sources.

I told the terminal to print out both books and I asked it for printouts of other sources if four thousand words or less, summarized if not. Then I looked over the corporations list:

Daniel Shipstone Estate, Inc. Muriel Shipstone Memorial Research Laboratories
Shipstone Tempe
Shipstone Gobi
Shipstone Aden
Shipstone Sahara
Shipstone Arica
Shipstone Death Valley
Shipstone Karroo
Shipstone Never-Never
Shipstone Ell-Four
Shipstone Ell-Five
Shipstone Stationary
Shipstone Tycho
Shipstone Ares
Shipstone Deep Water
Shipstone Unlimited, Ltd.
Sears-Montgomery, Inc.
Prometheus Foundation

Coca-Cola Holding Company
Interworld Transport Corporation
Jack and the Beanstalk, Pty.
Morgan Associates
Out-Systems Colonial Corporation
Billy Shipstone School for Handicapped Children
Wolf Creek Pass Nature Preserve
A¤o Nuevo Wild Life Refuge
Shipstone Visual Arts Museum and School

I looked at this list with easily controlled enthusiasm. I had known that the Shipstone trust had to be bigÄwho does not have half a dozen Shipstones within easy reach, not counting the big one in your basement or foundation? But now it seemed to me that studying this monster would be a lifetime career. I was not that much interested in Shipstones.

I was nibbling around the edges when Goldie stopped by and told me that it was time to put on the nosebag. "And I have instructions to see to it that you do not spend more than eight hours a day at your terminal and you are to take a full weekend every week."

"Ah so. Tyrannical old bastard."

We started for the refectory. "Friday . .

"Yes, Goldie?"

"You are finding the Master grumpy and sometimes difficult."

"Correction. He is always difficult."

"Mmm, yes. But what you may not know is that he is in constant pain." She added, "He can no longer take drugs to control it."

We walked in silence while I chewed and swallowed that one. "Goldie? What is wrong with him?"

"Nothing, really. I would say that he is in good health. . . for his age.

"How old is he?"

"I don't know. From things I have heard I know that he is over a hundred. How much over I can't guess."

"Oh, no! Goldie, when I went to work for him, he could not have been more than seventy. Oh, he used canes but he was very spry. He moved as fast then as anyone."

"Well . . . it's not important. But you might remember that he hurts. If he is rude to you, it is pain talking. He thinks highly of you."

"What makes you think so?"

"Ah ... I've talked too much about my patient. Let's eat."

In studying the Shipstone corporate complex I did not attempt to study Shipstones. The wayÄthe only wayÄto study Shipstones would be to go back to school, get a Ph.D. in physics,-add on some intense postdoctoral study in both solid state and plasma, get a job with one of the Shipstone companies and so impress them with your loyalty and your brilliance that you are at long last part of the inner circle controlling fabrication and quality.

Since that involves about twenty years that I should have started back in my teens, I assumed that Boss did not intend me to take that route.

So let me quote from the official or propaganda history:

Prometheus, a Brief Biography and Short Account of the Unparalleled Discoveries of Daniel Thomas Shipstone, &S., MA., Ph.D., LL.D., L.H.D., and of the Benevolent System He Founded.

Äthus young Daniel Shipstone saw at once that the problem was not a shortage of energy but lay in the transporting of energy. Energy is everywhereÄin sunlight, in wind, in mountain streams, in temperature gradients of all sorts wherever found, in coal, in fossil oil, in radioactive ores, in green growing things. Especially in ocean depths and in outer space energy is free for the taking in amounts lavish beyond all human comprehension.

Those who spoke of "energy scarcity" and of "conserving energy" simply did not understand the situation. The sky was "raining soup"; what was needed was a bucket in which to carry it.

With the encouragement of his devoted wife Muriel (n,e Greentree), who went back to work to keep food on the table, young Shipstone resigned from General Atomics and became the most American of myth-heroes, the basement inventor. Seven frustrating and weary years later he had fabricated the first Shipstone by hand. He had foundÄ What he had found was a way to pack more kilowatt-hours into a

smaller space and a smaller mass than any other engineer had ever dreamed of. To call it an "improved storage battery" (as some early accounts did) is like calling an H-bomb an "improved firecracker." What he had achieved was the utter destruction of the biggest industry (aside from organized religion) of the western world.

For what happened next I must draw from the muckraking history and from other independent sources as I just don't believe the sweetness and light of the company version. Fictionalized speech attributed to Muriel Shipstone:

"Danny Boy, you are not going to patent the gadget. What would it get you? Seventeen years at the most. . . and no years at all in threefourths of the world. If you did patent or try to, Edison, and P. G. and E., and Standard would tie you up with injunctions and law suits and claimed infringements and I don't know what all. But you said yourself that you could put one of your gadgets in a room with the best research team G.A. has to offer and the best they could do would be to melt it down and the worst would be that they would blow themselves up. You said that. Did you mean it?"

"Certainly. If they don't know how I insert theÄ"

"Hush! I don't want to know. And walls have ears. We don't make any fancy announcements; we simply start manufacturing. Wherever power is cheapest today. Where is that?"

The muckraking author fairly frothed at the "cruel, heartless monopoly" held by the Shipstone complex over the prime necessities of "all the little people everywhere." I could not see it that way. What Shipstone and his companies did was to make plentiful and cheap what used to be scarce and dearÄthis is "cruel" and "heartless"?

The Shipstone companies do not have a monopoly over energy. They don't own coal or oil or uranium or water power. They do lease many, many hectares of desert land . . . but there is far more desert not being cropped for sunshine than the Shipstone trust is using. As for space, it is impossible to intercept even one percent of all the sunshine going to waste inside the orbit of Luna, impossible by a factor of many millions. Do the arithmetic yourself otherwise you'll never believe the answer.

So what is their crime?

Twofold:

a) The Shipstone companies are guilty of supplying energy to the human race at prices below those of their competitors;

b) They meanly and undemocratically decline to share their industrial secret of the final assembly stage of a Shipstone.

This latter is, in the eyes of many people, a capital offense. My terminal dug out many editorials on "the people's right to know," others on "the insolence of giant monopolies," and other displays of righteous indignation. -

The Shipstone complex is mammoth, all right, because they supply cheap power to billions of people who want cheap power and want more of it every year. But it is not a monopoly because they don't own any power; they just package it and ship it around to wherever people want it. Those billions of customers could bankrupt the Shipstone complex almost overnight by going back to their old waysÄburn coal, burn wood, burn

oil, burn uranium, distribute power through continent-wide stretches of copper and aluminum wires and/or long trains of coal cars and tank cars.

But no one, so far as my terminal could dig out, wants to go back to the bad old days when the landscape was disfigured in endless ways and the very air was loaded with stinks and carcinogens and soot, and the ignorant were scared silly by nuclear power, and all power was scarce and expensive. No, nobody wants the bad old waysÄeven the most radical of the complainers want cheap and convenient power. . . they just want the Shipstone companies to go away and get lost.

"The people's right to know"Äthe people's right to know what? Daniel Shipstone, having first armed himself with great knowledge of higher mathematics and physics, went down into his basement and patiently suffered seven lean and weary years and thereby learned an applied aspect of natural law that let him construct a Shipstone.

Any and all of "the people" are free to do as he didÄhe did not even take out a patent. Natural laws are freely available to everyone equally, including flea-bitten Neanderthals crouching against the cold.

In this case, the trouble with "the people's right to know" is that it strongly resembles the "right" of someone to be a concert pianistÄ but who does not want to practice.

But I am prejudiced, not being human and never having had any rights.

Whether you prefer the saccharine company version or the vitriolic muckraker's version, the basic facts about Daniel Shipstone and the
Shipstone complex are well known and beyond argument. What surprised me (shocked me, in fact) was what I learned when I started digging into ownership, management, and direction.

My first hint came from that basic printout when I saw what companies were listed as Shipstone complex companies but did not have "Shipstone" in their names. When one pauses for a Coke . . . the deal is with Shipstone!

Ian had told me that Interworld had ordered the destruction of AcapulcoÄdoes this mean that the trustees of Daniel Shipstone's estate ordered the killing of a quarter of a million innocent people? Can these be the same people who run the best hospital/school for handicapped children in the world? And Sears-MontgomeryÄhell's bells, I own some Sears-Montgomery stock myself. Do I share by concatenation some part of the guilt for the murder of Acapulco?

I programmed the machine to display how the directorates interlocked inside the Shipstone complex, and then what directorships in other companies were held by directors of Shipstone companiesÄand the results were so startling that I asked the computer to list stock ownership of one percent or more of the voting stock in all Shipstone companies.

I spent the next three days fiddling with and rearranging and looking forbetter ways to display the great mass of data that came back in answer to those two questions.

At the end of that time I wrote out my conclusions:

a) The Shipstone complex is all one company. It just looks like twenty-eight separate organizations.

b) The directors and/or stockholders of the Shipstone complex own or control everything of major importance in all the major territorial nations in the solar system.

c) Shipstone is potentially a planetwide (systemwide?) government. I could not tell from the data whether it acted as such or not as control (if indeed it were exerted) would be through corporations not overtly part of the Shipstone empire.

d) It scared me.

Something I had noticed in connection with one Shipstone company (Morgan Associates) caused me to run a search on credit companies and banks. I was unsurprised but depressed to learn that the
very company now extending me credit (MasterCard of California) was in effect the same company as the one guaranteeing payment (Ceres and South Africa Acceptances) and that was duplicated right down the line, whether it was Maple Leaf, Visa, Credit Qu‚bec, or what. That is not news; fiscal theorists have been asserting that as long as I can remember. But it struck home when I saw it spelled out in terms of directorates interlocking and ownership shared.

On impulse I suddenly asked the computer: "Who owns you?"

I got back: "Null Program."

I rephrased it, conforming most carefully to its language. The computer represented by this terminal was a most forgiving machine and very smart; ordinarily it did not mind somewhat informal programming. But there are limits to what one may expect in machine understanding of verbal language; a reflexive question such as this might call for semantic exactness.
Again: "Null Program."

I decided to sneak up on the idea. I asked it the following question, doing it step by step exactly in accordance with this computer's language, computer grammar, computer protocol: "What is the ownership of the information-processing network that has terminals throughout British Canada?"

The answer was displayed and flashed several times before wipingÄand it wiped without my order: "Requested data are not in my membanks."

That scared me. I knocked off for the day and went swimming and sought out a friend to share a bed with me that night, not waiting to be asked. I wasn't superhorny, I was superlonely and dern well wanted a warm living body close to mine to "protect" me from an intelligent machine that refused to tell me who (what) it really was.

During breakfast next morning Boss sent word to me to see him at ten hundred. I reported, somewhat mystified because in my opinion there had not been nearly enough time for me to complete my two assignments: Shipstone, and the marks of a sick culture.

But when I came in, he handed me a letter, of the old-fashioned sort, sealed into an envelope and physically forwarded, just like junk mail.

I recognized it, for I had sent itÄto Janet and Ian. But I was surprised to see it in Boss's hands, as the return address on it was phony. I looked and saw that it had been readdressed to a law firm in San Jose, the one that had been my contact to find Boss.
"Pixies."
"You can hand it back to me and I will send it to Captain Tormey when I know where he is."

"Uh, when you know where the Tormeys are, I will write a very different letter. This one is sort of blind."

"Commendably so."

"You've read it?" (Damn it, Boss!)

"I read everything that is to be forwarded to Captain and Mrs. TormeyÄand Dr. Perreault. By their request."

"I see." (Nobody tells me a damn thing!) "I wrote the way I did, phony name and all, because the Winnipeg police might open it."

"They undoubtedly did. I think you covered adequately. I regret that I did not inform you that all mail sent to their home would be forwarded to me. If indeed the police are forwarding all of it. Friday, I do not know where the Tormeys are . . . but I have a contact method that I can useÄonce. The plan is to use it when the police drop all charges against them. I expected that weeks ago. It has not taken place. From this I conclude that the police in Winnipeg are very much in earnest in their intention of hanging the disappearance of Lieutenant Dickey on the Tormeys as a murder charge. Let me ask you again: Can that body be found?"

I thought hard, trying to put "worst case" on it. If the police ever moved in on that house, what would they find? "Boss, have the police been inside that house?"

"Certainly. They searched it the day after the owners departed."

"In that case the police had not found the body the morning of the day I reported here. If they found it, or were to find it, since that date, would you know?"

"I think it probable. My lines of communication into that police headquarters are less than perfect but I pay highest for freshest information."

"Do you know what was done with the livestock? Four horses, a cat and five kittens, a pig, maybe other animals?"

"Friday, where is your intuition leading you?"

"Boss, I don't know exactly how that body is hidden. But Janet, Mrs. Tormey, is an architect who specialized in two-tier active defense of buildings. What she did about her animals would tell me whether or not she thought there was the slightest possibility of that body ever being found."

Boss made a notation. "We'll discuss it later. What are the marks of a sick culture?"

"Boss, fer Gossake! I'm still learning the full shape of the Shipstone complex."

"You will never learn its full shape. I gave you two assignments at once so that you could rest your mind with a change of pace. Don't tell me that you've given no thought to the second assignment."

"Thought is about all I've given to it. I've been reading Gibbon and studying the French Revolution. Also Smith's From the Yalu to the Precipice."

"A very doctrinaire treatment. Read also Penn's The Last Days of the Sweet Land of Liberty."

"Yes, sir. I did start making tallies. It is a bad sign when the people of a country stop identifying themselves with the country and start identifying with a group. A racial group. Or a religion. Or a language. Anything, as long as it isn't the whole population."

"A very bad sign. Particularism. It was once considered a Spanish vice but any country can fall sick with it."

"I don't really know Spain. Dominance of males over females seems to be one of the symptoms. I suppose the reverse would be true but I haven't run across it in any of the history I've listened. Why not, Boss?"

"You tell me. Continue."

"So far as I have listened, before a revolution can take place, the population must lose faith in both the police and the courts."

"Elementary. Go on."

"Well . . . high taxation is important and so is inflation of the currency and the ratio of the productive to those on the public payroll. But that's old hat; everybody knows that a country is on the skids when its income and outgo get out of balance and stay that wayÄeven though there are always endless attempts to wish it away by legislation. But I started looking for little signs, what some call silly-season symptoms. For example, did you know that it is against
the law here to be naked outside your own home? Even in your own home if anybody can see in?"

"Rather difficult to enforce, I suspect. What significance do you see in it?"

"Oh, it isn't enforced. But it can't be repealed, either. The Confederacy is loaded with such laws. It seems to me that any law that is not enforced and can't be enforced weakens all other laws. Boss, did you know that the California Confederacy subsidizes whores?"

"I had not noticed it. To what end? For their armed forces? For their prison population? Or as a public utility? I confess to some surprise."

"Oh, not that way at all! The government pays them to keep their legs crossed. Take it off the market entirely. They are trained, licensed, examinedÄand stockpiled. Only it doesn't work. The designated `surplus artists' draw their subsidy checks . . . then go right ahead peddling tail. When they aren't supposed to do it even for fun because that hurts the market for the unsubsidized whores. So the hookers' union, who sponsored the original legislation to support the union scale, is now trying to work out a voucher system to plug up the holes in the subsidy law. And that won't work either."

"Why won't it work, Friday?"

"Boss, laws to sweep back the tide never do work; that's what King Canute was saying. Surely you know that?"

"I wanted to be sure that you knew it."

"I think I've been insulted. I ran across a goody. In the California Confederacy it is against the law to refuse credit to a person merely because that person has taken bankruptcy. Credit is a civil right."

"I assume that it does not work but what form does noncompliance take?"

"I have not yet investigated, Boss. But I think a deadbeat would be at a disadvantage in trying to bribe a judge. I want to mention one of the obvious symptoms: Violence. Muggings. Sniping. Arson. Bombing. Terrorism of any sort. Riots of courseÄbut I suspect that little incidents of violence, pecking away at people day after day, damage a culture even more than riots that flare up and then die down. I guess that's all for now. Oh, conscription and slavery and arbitrary compulsion of all sorts and imprisonment without bail
and without speedy trialÄbut those things are obvious; all the histories list them."

"Friday, I think you have missed the most alarming symptom of all.

"I have? Are you going to tell me? Or am I going to have to grope around in the dark for it?"

"Mmm. This once I shall tell you. But go back and search for it. Examine it. Sick cultures show a complex of symptoms such as you have named . . . but a dying culture

invariably exhibits personal rudeness. Bad manners. Lack of consideration for others in minor matters. A loss of politeness, of gentle manners, is more significant than is a riot."

"Really?"

"Pfui. I should have forced you to dig it out for yourself; then you would know it. This symptom is especially serious in that an individual displaying it never thinks of it as a sign of ill health but as proof of his/her strength. Look for it. Study it. Friday, it is too late to save this cultureÄthis worldwide culture, not just the freak show here in California. Therefore we must now prepare the monasteries for the coming Dark Age. Electronic records are too fragile; we must again have books, of stable inks and resistant paper. But that may not be enough. The reservoir for the next renaissance may have to come from beyond the sky." Boss stopped and breathed heavily. "Friday . .

"Yes, sir?"

"Memorize this name and address." His hands moved at his console; the answer appeared on his high screen. I memorized it.

"Do you have it?"

"Yes, sir."

"Shall I repeat it for check?"

"No, sir."

"You are sure?"

"Repeat it if you wish, sir."

"Mmm. Friday, would you be so kind as to pour a cup of tea for me before you leave? I find that my hands are unsteady today."

"My pleasure, sir."

xxiv

Neither Goldie nor Anna showed up next day at breakfast. I ate by myself and consequently fairly quickly; I dawdle over food only when shared with company. This was just as well for I was just standing up, finished, when Anna's voice came over the speaking system:

"Attention, please. I have the unhappy duty to announce that during the night our Chairman died. By his wish there will be no memorial service. The body has been cremated. At nine hundred hours, in the large conference room, there will be a meeting to wind up the affairs of the company. Everyone is urged to attend and to be on time."

I spent the time until nine o'clock crying. Why? Feeling sorry for myself, I suppose. I'm certain that's what Boss would think. He didn't feel sorry for himself, he didn't feel sorry for me, and he scolded me more than once for self-pity. Self-pity, he said, is the most demoralizing of all vices.

Just the same, I was feeling sorry for myself. I had always spatted with him, even way back when he broke my indentures- and made me a Free Person after I had run away from him. I found myself regretting every time I had answered him back, been impudent, called him names.

Then I reminded myself that Boss would not have liked me at all if I had been a worm, subservient, no opinions of my own. He had
to be what he was and I had to be what I was and we had lived for years in close association that had never, not once, involved even touching hands. For Friday, that is a record. One I arh not interested in surpassing.

I wonder if he knew, years ago when I first went to work for him, how quickly I would have swarmed into his lap had he invited it. He probably did know. As may be, even though I had never touched his hand, he was the only father I ever had.

The big conference room was very crowded. I had never seen even half that number at meals and some of the faces were strange to me. I concluded that some had been called in and had been able to arrive quickly. At a table at the front of the room Anna sat with a total stranger. Anna had folders of paper, a formidable terminal relay, and secretarial gear. The stranger was a woman about Anna's age but with a stern schoolmarmish look instead of Anna's warmth.

At two seconds past nine the stranger rapped loudly on the table. "Quiet, please! I am Rhoda Wainwright, Executive Vice-Chairman of this company and chief counsel to the late Dr. Baldwin. As such I am now Chairman pro tem and paymaster for the purpose of winding up our affairs. You each know that each of you was bound to this company by contract to Dr. Baldwin personallyÄ"

Had I ever signed such a contract? I was bemused by "the late Dr. Baldwin." Was that really Boss's name? How did it happen that his name matched my commonest nom de guerre? Had he picked it? That was so very long ago.

"Äsince you are all now free agents. We are an elite outfit and Dr. Baldwin anticipated that every free company in North America would wish to recruit from our ranks once his death released you. There are hiring agents in each of the small conference rooms and in the lounge. As your names are called please come forward to receive and sign for your packet. Then examine it at once but do not, repeat do not, stand at this table and attempt to discuss it. For discussion you must wait until all the others have received their termination packets. Please remember that I have been up all nightÄ"

Hire out with some other free company at once? Did I have to? Was I broke? Probably, except for what was left of that two hundred
thousand bruins I had won in that silly lotteryÄand most of that I probably owed to Janet on her Visa card. Let me see, I had won 230.4 grams of fine gold, deposited with MasterCard as Br. 200,000 but credited as gold at that day's fix. I had drawn thirty-six grams of that as cash andÄ But I must reckon my other account, too, the one through Imperial Bank of Saint Louis. And the cash and the Visa credit I owed Janet. And Georges ought to let me pay half ofÄ Someone was calling my name.

It was Rhoda Wainwright, looking vexed. "Please be alert, Miss Friday. Here is your packet and sign here to receipt for it. Then move aside to check it."

I glanced at the receipt. "I'll sign after I've checked it."

"Miss Friday! You're holding up the proceedings."

"I'll step aside. But I won't sign until I confirm that the packet matches the receipt list."

Anna said soothingly, "It's all right, Friday. I checked it."

I answered, "Thanks. But I'll handle it just the way you handle classified documentsÄsight and touch."

The Wainwright biddy was ready to boil me in oil but I simply moved aside a couple of meters and started checkingÄa fair-size packet: three passports in three names, an assortment of IDs, very sincere papers matching one or another identity, and a draft to "Marjorie Friday Baldwin" drawn on Ceres and South Africa Acceptances, Luna City, in

the amount of Au-0.999 grams 297.3Ä which startled me but not nearly as much as the next item did:
adoption papers by Hartley M. Baldwin and Emma Baldwin for female child Friday Jones, renamed Marjorie Friday Baldwin, executed at Baltimore, Maryland, Atlantic Union. Nothing about Landsteiner CrŠche or Johns Hopkins, but the date was the day I left Landsteiner CrŠche.

And two birth certificates: one was a delayed birth certificate for Marjorie Baldwin, born in Seattle, and one was for Friday Baldwin, borne by Emma Baldwin, Boston, Atlantic Union.

Two things were certain about each of these documents: Each was phony and each could be relied on utterly; Boss never did things by halves. I said, "It checks, Anna." I signed.

Anna accepted the receipt from me, adding quietly: "See me after."

"Suits. Where?"

"See Goldie."

"Miss Friday! Your credit card, please!" Wainwrigfit again.

"Oh." Well, yes, with Boss gone and the company dissolved, I could not use my Saint Louis credit card again. "Here it is."

She reached for it; I held on. "The punch, please. Or the shears. Whatever you're using."

"Oh, come now! I'll incinerate yours along with many others, after I check the numbers."

"Ms. Wainwright, if I am to surrender a credit card charged against meÄand I am; no argument about thatÄit will be destroyed or mutilated, rendered useless, right in front of me."

"You are very tiresome! Don't you trust anyone?"

"No."

"Then you'll have to wait, right here, until everyone else is through."

"Oh, I don't think so." I think MasterCard of California uses a phenolic-glass laminate; in any case their cards are tough, as credit cards must be. I had been careful not to show any enhancements around HQ, not because it would matter there but because it isn't polite. But this was a special circumstance. I tore the card two ways, handed her the bits. "I think you can still make out the serial number.

"Very well!" She sounded as annoyed as I felt. I turned away. She snapped, "Miss Friday! Your other card, please!"

"What card?" I was wondering who among my dear friends was suddenly being deprived of that utter necessity of modern life, a valid credit card, and being left with only a draft and some small change. Clumsy. Inconvenient. I felt certain that Boss had not planned it that way.

"MasterCard . . . of. . . California, Miss Friday, issued in San Jose. Hand it over."

"The company has nothing to do with that card. I arranged that credit on my own."

"I find that hard to believe. Your credit on it is guaranteed by Ceres and South AfricaÄthat is to say, by the company. The affairs of which are being liquidated. So hand over that card."

"You're mixed up, counselor. While payment is made through

Ceres and South Africa, the credit involved is my own. It's none of your business."

"You'll soon find out whose business it is! Your account will be canceled."

"At your own risk, counselor. If you want a law suit that will leave you barefooted. Better check the facts." I turned away, anxious not to say another word. She had me so angry that, for the moment, I was not feeling grief over Boss.

I looked around and found that Goldie had already been processed. She was sitting, waiting. I caught her eye and she patted an empty chair by her; I joined her. "Anna said for me to see you."

"Good. I made a reservation at Cabana Hyatt in San Jose for Anna and me for tonight, and told them that there might be a third. Do you want to come with us?"

"So soon? Are you already packed?" What did I have to pack? Not much, as my New Zealand luggage was still sitting in bond in Winnipeg port because I suspected that the Winnipeg police had placed a tag on itÄso there it would sit until Janet and Ian were in the clear. "I had expected to stay here tonight but I really hadn't thought about it."

"Anyone can sleep here tonight but it's not being encouraged. The managementÄthe new managementÄwants to get everything done today. Lunch will be the last meal served. If anyone is still here tonight at dinnertime, it's cold sandwiches. Breakfast, nit."

"Fer Gossake! That doesn't sound like anything Boss would have planned."

"It isn't. This womanÄ The Master's arrangements were with the senior partner, who died six weeks ago. But it doesn't matter; we'll just leave. Coming with us?"

"I suppose so. Yes. But I had better see these recruiters first; I'm going to need a job."

"Don't."

"Why not, Goldie?"

"I'm looking for a job, too. But Anna warned me. The recruiters here today all have arrangements with La Wainwright. If any of them are any good, we can get in touch with them at Las Vegas Labor Mart . . . without handing this snapping turtle a commission. I know what I wantÄhead nurse in a field hospital of a crack

Goldie said, "We had to have her to sign those drafts."mercenary outfit. All the best ones are represented in Las Vegas."

"I guess that's the place for me to look, too. Goldie, I've never had to hunt for a job before. I'm confused."

"You'll do all right."

Three hours later, after a hasty lunch, we were in San Jose. Two APVs were shuttling between Pajaro Sands and the National Plaza; Wainwright was getting rid of us as fast as possibleÄI saw two flatbed trucks, big ones, each drawn by six horses, being loaded as we left, and Papa Perry looking harried. I wondered what was being done with Boss's libraryÄand felt a little separate, selfish sadness that I might never again have such an unlimited chance to feed the Elephant's Child. I'll never be a big brain but I'm curious about everything and a terminal hooked directly to all the world's best libraries is a luxury beyond price.

When I saw what they were loading I suddenly recalled something with near panic. "Anna, who was Boss's secretary?"

"He didn't have one. I sometimes helped him if he needed an extra hand. Seldom."

"He had a contact address for my friends Ian and Janet Tormey. What would have become of it?"

"Unle~s it's in this"Äshe took an envelope from her bag and handed it to meÄ"it's gone. . . because I have had standing orders for a long time to go to his personal terminal as soon as he was pronounced dead and to punch in a certain program. It was a wipe order, I know, although he did not say so. Everything personal he had in the memory banks was erased. Would this item be personal?"

"Very personal."

"Then it's gone. Unless you have it there."

I looked at what she had handed me: a sealed envelope with nothing but "Friday" on the outside. Anna added, "That should have been in your packet but I grabbed it and held it out. That nosy slitch was reading everything she could get her hands on. I knew that this was private from Mr. Two-CanesÄDr. Baldwin, I should say nowÄto you. I was not going to let her have it." Anna sighed. "I worked with her all night. I didn't kill her. I don't know why I didn't."

Riding with us was one of the staff officers, Burton McNyeÄa quiet man who rarely expressed opinions. But now he spoke. "I'm sorry you restrained yourself. Look at me; I have no cash, I always used my credit card for everything. That snotty shyster wouldn't give me my closing check until I handed over my credit card. What happens with a draft on Lunar bank? Can you cash it, or do they simply accept it for collection? I may be sleeping in the Plaza tonight."

"Mr. McNyeÄ"

"Yes, Miss Friday?"

"I'm no longer `Miss' Friday. Just Friday."

"Then I'm Burt."

"Okay, Burt. I've got some cash bruins and a credit card that Wainwright could not touch, although she tried. How much do you need?"

He smiled and reached over and patted my knee. "All the nice things I've heard about you are true. Thanks, dear, but I'll handle it. First I'll take this to the Bank of America. If they won't cash it offhand, perhaps they will advance me some pending collection. If not, I shall go to her office in the CCC Building and stretch out on her desk and tell her that it is up to her to find me a bed. Damn it; the Chief would have seen to it that each of us got a few hundred in cash; she did it on purpose. Maybe to force us to sign up with her buddies; I wouldn't put it past her. If she makes any fuss, I'm feeling just ornery enough to find out whether or not I remember any of the things they taught me in basic."

I answered, "Burt, don't ever tackle a lawyer with your hands. The way to fight a lawyer is with another lawyer, a smarter one. Look, we'll be in the Cabana. If you can't cash that draft, better accept my offer. It won't inconvenience me."

"Thanks, Friday. But I'm going to choke her until she gives in."

The room Goldie had reserved turned out to be a small suite, a room with a big waterbed and a living room with a couch that opened into a double bed. I sat down on the couch to read Boss's letter while Anna and Goldie used the bathÄthen got up to use it myself when they came out. When I came out, they were on the big bed, sound asleepÄnot surprising; both of them had been up all
night in nervously exhausting work. I kept very quiet and sat back

down, resumed reading the letter: -

Dear Friday, Since this is my last opportunity to communicate with you, I must tell you things I have not been able to say while alive and still your employer.

Your adoption: You do not remember it because it did not happen that way. You will find that all records are legally correct. You are indeed my foster daughter. Emma Baldwin has the same sort of reality as your Seattle parents, i.e., real for all practical and legal purposes. You need be careful of only one thing: Don't let your several identities trip each other. But you have walked that tight-wire many times, professionally.

Be sure to be present or represented at the reading of my will. Since I am a Lunar citizen

(Huh?)

this will be at Luna City immediately after my death, Luna Republic not having all the lawyer-serving delays one finds in most Earthside countries. Call Fong, Tomosawa, Rothschild, Fong, and Finnegan, Luna City. Do not anticipate too much; my will does not relieve you of the necessity of earning a living.

Your origin: You have always been curious about this, understandably so. Since your genetic endowment was assembled from many sources and since all records have been destroyed, I can tell you little. Let me mention two sources of your genetic pattern in whom you may take pride, two known to history as Mr. and Mrs. Joseph Green. There is a memorial to them in a crater near Luna City, but it is hardly worth the trip as there is nothing much to see. If you will query the Luna City Chamber of Commerce concerning this memorial, you can obtain a cassette with a reasonably accurate account of what they did. When you hear it, you will know why I told you to suspend judgment on assassins. Assassination is usually a dirty business . .
but honorable hatchet men can be heroes. Play the cassette and judge for yourself.

The Greens were colleagues of mine many years ago. Since their work was very dangerous, I had caused each of them to deposit genetic material, four of her ova, a supply of his sperm. When they were killed, I caused gene analysis to be made with an eye to posthumous childrenÄonly to learn that they were incompatible; simple fertilization would have caused reinforcement of some bad alleles.

Instead, when creation of artificial persons became possible, their genes were used selectively. Yours was the only successful design; other attempts at including them were either not viable or had to be destroyed. A good genetic designer works the way a good photographer does: A perfect result derives from a willingness to discard drastically any attempt less than perfect. There will be no more attempts using the Greens; Gail's ova are gone and Joe's sperm is probably no longer useful.

It is not possible to define your relationship to them but it is equivalent to something between granddaughter and great-granddaughter, the rest of you being from many sources but you can take pride in the fact that all of you was most carefully selected to maximize the best traits of H. sapiens. This is your potential; whether or not you achieve your potential is up to you.

Before your records were destroyed, I once scratched my curiosity by listing the sources that went into creating you. As near as I can recall they are:

Finnish, Polynesian, Amerindian, Innuit, Danish, red Irish, Swazi, Korean, German, Hindu, EnglishÄand bits and pieces from elsewhere since none of the above is pure. You can never afford to be racist; you would bite your own tail!

All that the above really means is that the best materials were picked to design you, regardless of source. It is sheer luck that you wound up beautiful as well.

["Beautiful"! Boss, I do own a mirror. Was it possible he had really thought so? Surely, I'm built okay; that just reflects the fact that I'm a crack athlete-which in turn reflects the fact that I was planned, not born. Well, it's nice that he thought so if he did . . because it's the only game in town; I'm me, whatever.]

On one point I owe you an explanation if not an apology. It was intended that you should be reared by selected parents as their natural child. But when you still weighed less than five kilos, I was sent toprison. Although I was able, eventually, to escape, I could not return to Earth until after the Second Atlantic Rebellion. The scars of this mix-up are still with you, I know. I hope that you someday will purge yourself of your fear and mistrust of "human" persons; it gains you nothing and handicaps you mightily. Someday, somehow, you must realize emotionally what you know intellectually, that they are as tied to the Wheel as you are.

As for the rest, what can I say in a last message? That unfortunate coincidence, my conviction at just the wrong time, left you too easily bruised, much too sentimental. My dear, you must cure yourself utterly of all fear, guilt, and shame. I think you have rooted out self pity

[The hell I have!]

but, if not, you must work on it. I think that you are immune to the temptations of religion. If you are not, I cannot help you, any more than I could keep you from acquiring a drug habit. A religion is sometimes a source of happiness and I would not deprive anyone of happiness. But it is a comfort appropriate for the weak, not for the strongÄand you are strong. The great trouble with religionÄany religionÄis that a religionist, having accepted certain propositions by faith, cannot thereafter judge those propositions by evidence. One may bask at the warm fire of faith or choose to live in the bleak uncertainty of reasonÄbut one cannot have both.

I have one last thing to tell you-for my own satisfaction, for my own pride. I am one of your "ancestors"-not a major one but some of my genetic pattern lives on in you. You are not only my foster daughter but also in part my natural daughter as well. To my great pride.

So let me close this with a word I could not say while I was aliveÄ Love,
Hartley M. Baldwin

I put the letter back into its envelope and curled up and indulged in that worst of vices, self-pity, doing it thoroughly, with plenty of tears. I don't see anything wrong with crying; it lubricates the psyche.

Having gotten it out of my system I got up and washed my face and decided that I was all through grieving over Boss. I was pleased and flattered that he had adopted me and it warmed me all through to know that a bit of him was used in designing meÄbut he was still Boss. I thought that he would allow me one cathartic session of grief but if I kept it up, he would be annoyed with me.

My chums were still sawing wood, exhausted, so I closed the door that shut them off, was pleased to note that it was a sound-silencer door, and I sat down at the terminal, stuck my card into the slot, and coded Fong, Tomosawa, and so forth, having routed through exchange service to get the code, then coding directly; it's cheaper that way.

I recognized the woman who answered. Low gee certainly is better than a bra; if I lived in Luna City, I would wear only a monikini, too. Oh, stilts, maybe. An emerald in my bellybutton. "Excuse me," I said. "Somehow I've managed to code Ceres and South Africa when I intended to punch for Fong, Tomosawa, Rothschild, Fong, and Finnegan. My subconscious is playing tricks. Sorry to have bothered you and thanks for the help you gave me a few months ago."

"Wups!" she answered. "You didn't punch wrong. I'm Gloria Tomosawa, senior partner in Fong, Tomosawa, et al., now that Grandpa Fong has retired. But that doesn't interfere with my being a vice-president of Ceres and South Africa Acceptances; we are also the legal department of the bank. And I'm the chief trust officer, too, which means that I'm going to have business with you. Everybody here is sorry as can be at the news of Dr. Baldwin's death and I hope that it did not distress you too muchÄMiss Baldwin."

"Hey, back up and start over!"

"Sorry. Usually when people call the Moon they want to make it as brief as possible because of the cost. Do you want me to repeat all that, a sentence at a time?"

"No. I think I've assimilated it. Dr. Baldwin left a note telling me to be at the reading of his will or to be represented. I can't be there. When will it be read and can you advise me as to how I can get someone in Luna City to represent me?"

"It will be read as soon as we get official notification of death from the California Confederacy, which should be any time now as our
San Jose representative has already paid the squeeze. Someone to represent youÄwill I do? Perhaps I should say that Grandpa Fong was your father's Luna City attorney for many years . . so I inherited him and now that your father has died, I inherit you. Unless you tell me otherwise."

"Oh, would you?ÄMissÄMrs. TomosawaÄis it Miss or Mrs.?"

"I could and I would and it's Mrs. It had better be; I have a son as old as you are."

"Impossible!" (This beauty-contest winner twice my age?)

"Most possible. Here in Luna City we are all old-fashioned cubes, not like California. We get married and we have babies and always in that order. I wouldn't dare be a Miss with a son your age; nobody would retain me."

"I mean the idea that you have a son my age. You can't have a baby at the age of five. Four."

She chuckled. "You say the nicest things. Why don't you come here and marry my son? He's always wanted an heiress."

"Am I an heiress?"

She sobered. "Urn. I can't break the seal on that will until your father is officially dead, which he is not, in Luna City, not yet. But he will be shortly and there is rio sense in making you call back. I drafted that will. I checked it for changes when I got it back. Then I sealed it and put it into my safe. So I know what's in it. What I'm about to tell you, you don't know until later today. You're an heiress but fortune-hunters won't be chasing you. You are not getting a gram in cash. Instead the bank is instructedÄthat's meÄto subsidize you in migrating off Earth. If you pick Luna, we pay your fare. If you picked a bounty planet, we would give you a Scout knife and pray for you. If you pick a high-priced place like Kaui or Halcyon, the trust pays your fare and your contribution and assists you with starting capital. If you never do migrate off Terra, on your death funds earmarked to assist you revert to the other purposes of the trust. But your migration needs have first call. Exception: If you migrate to Olympia, you pay for it yourself. Nothing from the trust."

"Dr. Baldwin said something about that. What's so poisonous about Olympia? I don't recall a colony world named that."

"You don't? No, I guess you're too young. That's where those self-styled supermen went. No real point in warning you against it, however; the corporation doesn't run ships there. Dear, you are running up a fancy comm bill."

"I guess so. But it would cost me more if I had to call back. All I mind is having to pay for the speed-of-light dead time. Can you switch hats and be Ceres and South Africa for a moment? Or maybe not; I may need legal advice."

"I'm wearing both hats, so fire away. Ask anything; today there's no fee. My advertising loss leader."

"No, I pay for what I get."

"You sound like your late father. I think he invented tanstaafl."

"He's not really my father, you know, and I never thought of him as such."

"I know the score, dear; I drew up some of the papers about you. He thought of you as his daughter. He was inordinately proud of you. I was most interested when you first called meÄhaving to keep quiet about things I knew but looking you over. What is on your mind?"

I explained the trouble I had had with Wainwright over credit cards. "Certainly MasterCard of California has given me a credit ceiling far beyond my needs or assets. But is that any of her business? I haven't even used up my predeposit and I'm about to back it up with my closing pay. Two hundred and ninety-seven and threetenths grams, fine."

"Rhoda Wainwright never was worth a hoot as a lawyer; when Mr. Esposito died, your father should have changed representation. Of course it's none of her business what credit MasterCard extends to you, and she has no authority over this bank. Miss BaldwinÄ"

"Call me Friday."

"Friday, your late father was a director of this bank and is, or was, a major stockholder. Although you do not receive any of his wealth directly, you would have to run up an enormous unsecured debt and neglect to reduce it for quite some time and refuse to answer queries about it before your account would be red-flagged. So forget it. But, now that Pajaro Sands is closing down, I do need another address for you."

"Uh, right now, you are the only address I have."

"I see. Well, get me one as soon as you have one. There are others with that same problem, a problem unnecessarily made worse by Rhoda Wainwright. There are others who should be represented at the reading of the will. She should have notified theni, did not, and now they have left Pajaro Sands. Do you know where I can find Anna Johansen? Or Sylvia Havenisle?"

"I know a woman named Anna who was at the Sands. She was the classified documents clerk. The other name I don't recognize."

"She must be the right Anna; I have her listed as `confidential clerk.' Havenisle is a trained nurse."

"Oh! Both of them are just beyond a door I'm looking at. Sleeping. Up all night. Dr. Baldwin's death."

"My lucky day. Please tell themÄwhen they wake upÄthat they should be represented at the reading of the will. But don't wake them; I can fix it afterwards. We aren't all that fussy here."

"Could you represent them?"

"On your say-so, yes. But have them call me. I'll need new mailing addresses for them, too. Where are you now?"

I told her, we said good-bye and switched off. Then I held very still and let my head catch up with events. But Gloria Tomosawa had made it easy. I suspect that there are just two sorts of lawyers:
those who spend their efforts making life easy for other peopleÄand parasites.

A little jingle and a red light caused me to go to the terminal again. It was Burton McNye. I told him to come on up but be mousequiet. I kissed him without stopping to think about it, then remembered that he was not a kissing friend. Or was he? I did not know whether he had helped rescue me from "the Major" or notÄ must ask.

"No trouble," he told me. "Bank of America accepted it for deposit subject to collection but advanced me a few hundred bruins for overnight money. They tell me that a gold draft can be cleared through Luna City in about twenty-four hours. That, combined with our late employer's sound financial reputation, got me out of the bind. So you don't have to let me sleep here tonight."

"I'm supposed to cheer? Burt, now that you are solvent again, you can take me out to dinner. Out. Because my roommates are zombies. Dead, maybe. The poor dears were up all night."

"It's too early for dinner."

It wasn't too early for what we did next. I hadn't planned on it but Burt claimed that he had, in the APV; and I didn't believe him. I asked him about that night on the farm and, sure enough, he was part of the combat team. He claimed that he had been held in reserve and thus was merely along for the ride, but nobody yet has admitted doing anything dangerous that nightÄbut I recall Boss telling me that anybody at all was taken because bodies were so scarceÄeven Terence, who doesn't really have to shave yet.

He didn't protest when I started taking his clothes off.

Burt was just what I needed. Too much had happened and I felt emotionally battered. Sex is a better tranquilizer than any of those drugs and much better for your

metabolism. I don't see why human people make such a heavy trip out of sex. It isn't anything complex; it is simply the best thing in life, even better than food.

The bath in that suite could be reached without going through the bedroom, laid out that way, probably, because the living room could double as a second bedroom. So we each tidied up a bit and I put on that Superskin jump suit with the wet look that had been the bait with which I had hooked Ian last springÄand learned that I had put it on through thinking sentimentally about Ian but that I was no longer worried about Ian and JanÄand Georges. I would find them, I was now serenely sure. Even if they never went home, I would at worst track them down through Betty and Freddie.

Burt made appropriate animal noises over how I looked in the Superskin job, and I let him look and wiggled some and told him that was exactly why I had bought it, because I was a slitch who wasn't even mildly ashamed of being female, and I wanted to thank him for what he had done for me; my nerves had been twanging like a harp and now they were so relaxed they dragged on the ground and I had decided to pay for dinner to show my appreciation.

He offered to wrestle me for it. I didn't tell him that I had to be very careful in moments of passion not to break male bones; I just giggled. I guess giggling looks silly on a woman my age but there it isÄwhen I'm happy, I giggle.

I was careful to leave a note for my chums.

When we got back, latish, they were gone, so Burt and I went to bed, this time stopping to open out that folding double bed. I woke up when Anna and Goldie tiptoed through, returning from supper. But I pretended not to wake, figuring that morning was soon enough.

Sometime the next morning I became aware that Anna was standing over us and not looking happyÄand, truthfully, that was the very first time that it occurred to me that Anna might be displeased at finding me in bed with a man. Certainly I had realized which way she leaned a long time ago; certainly I knew that she leaned in my direction. But she herself had cooled it and I had stopped thinking of her as unfinished business I would have to cope with someday; she and Goldie were simply my chums, hair-down friends who trusted each other.

Burt said plaintively, "Don't scowl at me, lady; I just came in to get out of the rain."

"I wasn't scowling," she answered too soberly. "I was simply trying to figure out how to get around the end of the bed to the terminal without waking you two. I want to order breakfast."

"Order for all of us?" I asked.

"Certainly. What do you want?"

"Some of everything and fried potatoes on the side. Anna hon, you know meÄif it's not dead, I'll kill it and eat it raw, bones and all.

"And the same for me," agreed Burt.

"Noisy neighbors." Goldie was standing in the doorway, yawning. "Chatterboxes. Go back to bed." I looked at her and realized two things: I had never really looked at her before, even at the beach. And, second, if Anna was annoyed with me for sleeping with Burt, she didn't have any excuse for such feelings; Goldie looked almost indecently satiated.

"It means `harbor island,' " Goldie was saying, "and it really ought to have a hyphen in it because nobody can ever spell it or pronounce it. So I just go as GoldieÄeasy to do in the Master's outfit where last names were always discouraged. But it's not as hard a name as Mrs. Tomosawa'sÄafter I mispronounced hers about the fourth time, she asked me to call her Gloria."

We were finishing off a big breakfast and both of my chums had talked to Gloria and the will had been read and both of them (and Burt, too, to my surprise and his) were now a bit richer and we were all getting ready to leave for Las Vegas, three of us to shop for jobs, Anna simply to stay with us and visit until we shipped out, or whatever.

Anna was then going to Alabama. "Maybe I'll get tired of loafing. But I promised my daughter that I would retire and this is the right time. I'll get reacquainted with my grandchildren before they get too big."

Anna a grandmother? Does anyone ever know anyone else?

xxv

Las Vegas is a three-ring circus with a hangover.

I enjoy the place for a while. But after I've seen all the shows I reach a point where the lights and the music and the noise and the frenetic activity are too much. Four days is a-plenty.

We reached Vegas about ten, after a late start because each of us had business to doÄeverybody but me with arrangements to make for the collection of moneys from Boss's will and me to deposit my closing draft with MasterCard. That is, I started to. I stopped abruptly when Mr. Chambers said, "Do you want to execute an order to us to pay your income tax on this?"

Income tax? What a filthy suggestion! I could not believe my ears. "What was that, Mr. Chambers?"

"Your Confederacy income tax. If you ask us to handle itÄhere's the formÄour experts prepare it and we pay it and deduct it from your account and you aren't bothered. We charge only a nominal fee. Otherwise you have to calculate it yourself and make out all the forms and then stand in line to pay it."

"You didn't say anything about any such tax when I made the deposit the day I opened this account."

"But that was a national lottery prize! That's yours, utterly freeÄ that's the Democratic Way! Besides, the government gets its cut off the top in running the lottery."

"I see. How much cut does the government take?"

"Really, Miss Baldwin, that question should be addressed to the government, not to me. If you'll just sign at the bottom, I'll fill in the rest."

"In a moment. How much is this `nominal fee'? And how much is the tax?"

I left without depositing my draft and again poor Mr. Chambers was vexed with me. Even though bruins are so inflated that you have to line up quite a few of them to buy a Big Mac, I do not consider a thousand bruins "nominal"Äit's more than a gram of gold, $37 BritCan. With their 8 percent surcharge on top, MasterCard would be getting a fat fee for acting as stooge for the Confederacy's Eternal Revenue Service.

I wasn't sure that I owed income tax even under California's weird lawsÄmost of that money had not been earned in California and I couldn't see what claim California had on my salary anyway. I wanted to consult a good shyster.

I went back to Cabana Hyatt. Goldie and Anna were still out but Burt was there. I told him about it, knowing that he had been in logistics and accounting.

"It's a moot point," he said. "Personal-service contracts with the Chairman were all written `free of tax' and in the Imperium the bribe was negotiated each year. Here an umbrella bribe should have been paid through Mr. EspositoÄthat is to say, through Ms. Wainwright. You can ask her."

"In a pig's eye!"

"Precisely. She should have notified Eternal Revenue and paid any taxes dueÄafter negotiation, if you understand me. But she may be skimming; I don't know. HoweverÄ You do have a spare passport, do you not?"

"Oh, certainly! Always."

"Then use it. That's what I'll be doing. Then I'll transfer my money after I know where I'll be. Meanwhile I'll leave it safe on the Moon."

"Uh, Burt, I'm pretty sure Wainwright has every spare passport listed. You seem to be saying that they'll be checking us at exit?"

"What if Wainwright has listed them? She won't turn over the list to the Confederates without arranging her cut, and I doubt that she's had time to dicker it. So pay only the regular squeeze and stick your nose in the air and walk on through the barrier."

This I understood. I had been so indignant at that filthy notion that for a moment I had ceased to think like a courier.

We crossed the border into Vegas Free State at Dry Lake; the capsule stopped just long enough for Confederacy exit stamps. Each of us used an alternate passport with the standard squeeze folded insideÄno trouble. And no entrance stamp as the Free State doesn't bother with CHI; they welcome any solvent visitor.

Ten minutes later we checked into the Dunes, with much the same accommodations we had had in San Jose save that this was described as an "orgy suite." I could not see why. A mirror on the ceiling and aspirin and Alka-Seltzer in the bath are not enough to justify that designation; my doxyology instructor would have laughed in scorn. However I suppose that most of the marks would not have had the advantages of advanced instructionÄI've been told that most people don't have any formal training. I've often wondered who teaches them. Their parents? Is that rigid incest taboo among human persons actually a taboo against talking about it but not against doing it?

Someday I hope to find out such things but I've never known anybody I could ask. Maybe Janet will tell me. Someday .

We arranged to meet for dinner, then Burt and Anna went to the lounge and/or casino while Goldie and I went out to the Industrial Park. Burt intended to job-hunt but expressed an intention of raising a little hell before settling down. Anna said nothing but I think she wanted to savor the fleshpots before taking up the life of a grandmother-in-residence. Only Goldie was dead-serious about jobhunting that day. I intended to find a job, yesÄbut I had some thinking to do first.

I was probablyÄalmost certainlyÄgoing to out-migrate. Boss thought I should and that was reason enough. But besides that, the study he had started me on concerning the

symptoms of decay in cultures had focused my mind on things I had long known but never analyzed. I've never been critical of the cultures I've lived in or traveled throughÄplease understand that an artificial person is a permanent stranger wherever she is, no matter how long she stays. No country could ever be mine so why think about it?

But when I did study it, I saw that this old planet is in sorry shape. New Zealand is a pretty good place and so is British Canada, but

a)On a mission I had spent whatever it took.even those two countries showed major signs of decay. Yet those two are the best of the lot.

But let's not rush things. Changing planets is something a person doesn't do twiceÄunless she is fabulously wealthy, and I was not. I was subsidized for one out-migration . . . so I had better by a durn sight pick the right planet because no mistakes were going to be corrected after I left the window.

BesidesÄ Well, where was Janet?

Boss had had a contact address or a call code. Not me!

Boss had had an ear in the Winnipeg police HQ. Not me!

Boss had had his own Pinkerton net over the whole planet. Not me!

I could try to phone them from time to time. I would. I could check with ANZAC and the University of Manitoba. I would. I could check that Auckland code and also the biodep of the University of Sydney. I would.

If none of those worked, what more could I do? I could go to Sydney and try to sweet-talk somebody out of Professor Farnese's home address or sabbatical address or whatever. But that would not be cheap and I had suddenly been forced to realize that travel I had taken for granted in the past would now be difficult and perhaps impossible. A trip to New South Wales before semiballistics started to run again would be very expensive. It could be doneÄby tube and by float and by going three-fourths the way around the world .
but it would be neither easy nor cheap.

Perhaps I could sign on as a ship's doxy out of San Francisco for Down Under. That would be cheap and easy. . . but time-consuming even if I shipped in a Shipstone-powered tanker out of Watsonville. A sail-powered freighter? Well, no.

Maybe I had better hire a Pinkerton in Sydney. What did they charge? Could I afford it?

It took less than thirty-six hours from Boss's death for me to bump my nose into the fact that I had never learned the true value of a gram.

Consider this: Up to then my life had had just three modes of economy:

b) At Christchurch I spent some but not muchÄmainly presents for the family.

c) At the farm, at the next HQ, then still later at Pajaro Sands, I didn't spend any money, hardly. Room and board were in my contract. I did not drink or gamble. If Anita had not been bleeding me, I would have accumulated a tidy sum.

I had led a sheltered life and had never really learned about money.

But I can do simple arithmetic without using a terminal. I had paid in cash my share at Cabana Hyatt. I used my credit card for my fare to the Free State but jotted down the cost. I noted the daily rate at the Dunes and kept track of other costs, whether card or cash or on the hotel bill.

I could see at once that room and board in first-class hotels would very shortly use up every gram I owned even if I spent zero, nit, swabo, nothing, on travel, clothes, luxuries, friends, emergencies. Q.E.D. I must either get a job or ship out on a one-way colonizing trip.

I acquired a horrid suspicion that Boss had been paying me a lot more than I was worth. Oh, I'm a good courier, none betterÄbut what's the going rate on couriers?

I could sign up as a private, then (I was fairly sure) make sergeant in a hurry. That did not really appeal to me but it might be where I would wind up. Vanity isn't one of my faults; for most civilian jobs I am unskilled laborÄI know it.

Something else was pulling me, something else was pushing me. I didn't want to go alone to a strange planet. It scared me. I had lost my Ennzedd family (if indeed I ever had them), Boss had died, and I felt like Chicken Little when the sky was falling, my true friends among my colleagues had gone to the four windsÄexcept these three and they were leaving quicklyÄand I had managed to lose Georges and Janet and Ian.

Even with Las Vegas giddy around me I felt as alone as Robinson Crusoe.

I wanted Janet and Ian and Georges to out-migrate with me. Then I would not be afraid. Then I could smile all the way.

BesidesÄ The Black Death. Plague was coming.

Yes, yes, I had told Boss that my midnight prediction was nonsense. But he had told me that his analytical section had predicted the same thing, in four years instead of three. (Small comfort!)

I was forced to take my own prediction seriously. I must warn Ian and Janet and Georges.

I did not expect to frighten them with itÄI don't think you can scare those three. But I did want to say, "If you won't migrate, at least take my warning seriously to the extent of staying out of big cities. If inoculation becomes available, get it. But heed this warning."

The Industrial Park is on the road to Hoover Dam; the Labor Mart is there. Vegas does not permit APVs inside the city but there are slidewalks everywhere and one runs out to Industrial Park. To go beyond there, to the dam or to Boulder City, there is an APV commuter line. I planned to use it as Shipstone Death Valley leases a stretch of desert between East Las Vegas and Boulder City for a charging station and I wanted to see it to supplement my study.

Could the Shipstone complex be the corporation state behind Red Thursday? I could see no reason for it. But it had to be a power rich enough to blanket the globe and reach all the way out to Ceres in a single night. There were not many such. Could it be a superrich man or group of men? Again, not many possibilities. With Boss dead I probably never would know. I used to slang himÄbut he was the one I turned to when I didn't understand something. I had not known how much I leaned on him until his support was taken away.

The Labor Mart is a large covered mall, with everything from fancy offices of the Wall Street Journal to scouts who have their offices in their hats and never sit down and

seldom stop talking. There are signs everywhere and people everywhere and it reminds me of Vicksburg river town but it smells better.

The military and quasi-military free companies cluster together at the east end. Goldie went from one to the other and I went with her. She left her name and a copy of her brag sheet with each one. We had stopped in town to get her brag sheet printed and she had arranged a mail drop with a public secretary, and she had induced
r

me to pay for a mail and telephonic accommodation address, too. "Friday, if we are here more than a day or two, I'm moving out of the Dunes. You noticed the room tariff, did you not? It's a nice place but they sell you the bed all over again each day. I can't afford it. Maybe you can butÄ"

"I can't."

So I established an address of sorts, and sent my brain a memo to tell Gloria Tomosawa. I paid a year's fee in advanceÄand discovered that it gave me an odd feeling of security. It was not even a little grass shack . . . but it was a base, an address, that would not wash away.

Goldie did not sign up that afternoon but did not seem disappointed. She said to me, "No war going on now, that's all. But peace never lasts more than a month or two. Then they'll start hiring again and my name will be on file. Meanwhile I'll list with the city registry and work substitute jobs. One thing about the bedpan business, Friday; a nurse never starves. The current emergency shortage of nurses has been going on for more than a century and won't let up soon."

The second recruiter she called onÄrepresentative of Royer's Rectifiers, Caesar's Column, and the Grim Reapers, all crack outfits, worldwide reputations-turned to me after Goldie had made her statement. "How about you? Are you an RN, too?"

"No," I said, "I'm a combat courier."

"Not much call for that. Today most outfits use express mail if a terminal won't serve."

I found myself somewhat piquedÄBoss has warned me against that. "I'm elite," I replied. "I go anywhere. . . and what I carry gets there when the mail is shut down. Such as the late Emergency."

"That's true," said Goldie. "She's not exaggerating."

"There still isn't much call for your talents. Can you do anything else?"

(I should not boast!) "What's your best weapon? I'll duel you with it, either contest rules, or blood. Phone your widow and we'll do it."

"My, you're a sparky little slitch! You remind me of a fox terrier I once had. Look, dear, I can't play games with you; I have to keep this office open. Now tell me the truth and I'll put your name on file."

"Sorry, chief. I shouldn't have sounded off. All right, I'm an elite courier. If I carry it, it gets there and my fees are high. Or my salary if I'm hired as a specialist staff officer. As for the rest, of course I have to be the best, bare-handed or with weapons, because what I carry must go through. You can list me as a DI if you wishÄbarehanded or any weapon. But I'm not interested in combat unless the pay is high. I prefer courier duty."

He made notes. "All right. Don't get your hopes up. The hairy characters I work for aren't likely to use couriers other than battlefield couriersÄ"

"I'm that, too. What I carry gets through."

"Or you get killed." He grinned. "They're more likely to use a superdog. Look, sweetheart, a corporate has more need for your sort of messenger than does a military. Why don't you leave your name with each of the multinationals? All the big ones are represented here. And they've got more money. Lots more money."

I thanked him and we left. At Goldie's urging I stopped in at the local branch post office and made printouts of my own brag sheet. I was going to ease off on the required salary, being sure that Boss had favored meÄbut Goldie wouldn't let me. "Raise it! This is your best chance. Outfits that need you will either pay without a quiver.
or will at least call you and try to dicker. But cut your price? Look, dear, nobody buys at a fire sale if they can afford the best."

I dropped one at each multinational. I didn't really expect any nibbles but if anyone wanted the world's best courier, they could study my qualifications.

When the offices started to close, we slid back to the hotel to keep our dinner date, and found both Anna and Burt just a leetle tipsy. Not drunk, just happy and a touch too deliberate in their movements.

Burt struck a pose and declaimed, "Ladies! Look at me and admire! I am a great manÄ"

"You're swacked."

"That, too, Friday, m'love. But you see before you wup! the man who banked the broke at Monte Carlo. I'm a genius, a blinkin', true-blue, authentic, f'nanchal genius. You may touch me."

I had been planning to touch him, later that night. Now I wondered. "Anna, did Burt break the bank?"

"No, but he certainly bent it." She stopped to belch carefully, covering up. "Scuse me. We dropped a little here, then went over to the Flamingo to change our luck. Got there just before post time for the third at Santa Anita and Burt put a superbuck on the nose of a little mare with his mother's nameÄa long shot and she romped home. So here is a wheel right outside the track room and Burt put his winnings on double zeroÄ"

"He was drunk," Goldie stated.

"I am genius!"

"Both. Double zero hit, and Burt put this enormous stack on black and hit, and left it there and hit, and moved it to red and hitÄ and the croupier sent for the pit boss. Burt wanted to go for broke but the pit boss limited him to five kilobucks."

"Peasants. Gestapo. Hired menials. Not a gentleman sportsman in their entire casino. I took my patronage elsewhere."

"And lost it all," said Goldie.

"Goldie m'old frien', you do not show proper respec'."

"He might have lost it all," agreed Annie, "but I saw to it that he followed the pit boss's advice. With six of the casino's sheriffs around us we went straight to their casino's office of the Lucky Strike State Bank and deposited it. Otherwise I would not have let him leave. Imagine carrying a half a megabuck from the Flamingo to the Dunes in cash. He wouldn't have lived to cross the street."

"Preposterous! Vegas has less violent crime `nany other city North Amer'ca. Anna, m'true love, you are a bossy, notional woman. A henpecker. I shall not marry you even when you fall on your knees at Fremont `n' Main `n' beg me to. Instead I shall take your shoes away from you and beat you and feed you on crusts."

"Yes, dear. You can put your own shoes on now because you are going to feed all three of us. On crusts of caviar and truffles."

"And champagne. But not because you are henpeckering me. Ladies. Friday, Goldie, my true lovesÄwill you help me celebrate my f'nanchal genius? With libations and pheasant under glass and gorgeous show girls in fancy hats?"

"Yes," I answered.

"Yes before you change your mind. Anna, did you say `half a megabuck'?"

"Burt. Show them."

Burt produced a new bankbook, let us look at it while he buffed his nails on his stomach and looked smug. Bk 504,000. Over half a million in the only hard currency in North America. Uh, slightly over thirty-one kilos of fine gold. No, I wouldn't want to carry that much across the street, eitherÄnot in bullion. Not without a wheelbarrow. It would mass almost half as much as I do. A bankbook is more convenient.

Yes, I would drink Burt's champagne.

Which we did, in the theater at the Stardust. Burt knew how much cumshaw to give the captain of waiters to get us ringsides (or paid too much, I don't know which) and we sopped up champagne and had a lovely dinner centered around Cornish game hen but billed as squab and the show girls were young and pretty and cheerful and healthy and smelled freshly bathed. And they had show boys with stuffed codpieces for us women to look at, only I didn't, not much, because they didn't smell right and I got the feeling that they were more interested in each other than they were in women. Their business, of course, but on the whole I preferred the show girls.

And they had a swell magician who plucked live pigeons out of the air the way most magicians pluck coins. I love magicians and never understand how they do it and I watch them with my mouth hanging open.

This one did something that had to involve a pact with the Devil. At one point he had one of the show girls replace his pretty assistant. His assistant was not overdressed but the show girl was wearing shoes at one end and a hat at the other and just a smile in between.

The magician started taking pigeons from her.

I don't believe what I saw. There isn't that much room and it would tickle. So it didn't happen.

But I'm planning on going back to watch it from a different angle. It simply can't be true.

When we got back to the Dunes, Goldie wanted to catch the lounge show but Anna wanted to go to bed. So I agreed to sit with Goldie. Burt said to save him a seat as he would be right back after he took Anna up.

Only he didn't. When we went up I was unsurprised to find the door to the other room closed; before dinner my nose had warned
me that it was unlikely that Burt would soothe my nerves two nights in a row. Their business and I had no kick coming. Burt had done nobly by me when I really needed it.

I thought perhaps Goldie would have her nose out of joint but she didn't seem to. We simply went to bed, giggled over the impossibility of where he got those pigeons, and went to sleep. Goldie was snoring gently as I dropped off.

Again I was awakened by Anna but this morning she was not looking sober; she was radiant. "Good morning, darlings! Pee and brush your teeth; breakfast will be up in two jounces. Burt is just getting out of the bath, so don't dally."

Along toward the second cup of coffee Burt said, "Well, dear?"

Anna said, "Shall I?"

"Go ahead, hon."

"All right. Goldie, FridayÄ We hope you can spare us some time this morning because we both love you both and want you to be with us. We're getting married this morning."

Goldie and I put on fine exhibitions of utter astonishment and great pleasure, along with jumping up and kissing each of them. In my case the pleasure was sincere; the surprise was faked. With Goldie I thought that it might have been reversed. I kept my suspicions to myself.

Goldie and I went out to buy flowers with arrangements to meet at the Gretna Green Wedding Chapel laterÄand I was relieved and pleased to find that Goldie seemed to be just as happy about it out of their presence as in it. She said to me, "They're going to be very good for each other. I never did think well of Anna's plans to become a professional grandmother; that's a form of suicide." She added, "I hope you didn't get your nose out of joint."

I answered, "Huh? Me? Why in the world would I?"

"He slept with you night before last; he slept with her last night. Today he's marrying her. Some women would be quite upset."

"Fer Gossake, why? I'm not in love with Burt. Oh, I do love him because he was one of you who saved my life one busy night. So night before last I tried to thank himÄand he was awfully sweet to me, too. When I needed it. But that's no reason for me to expect Burt to devote himself to me every night or even a second night."

"You're right, Friday, but not many women your age can think that straight."

"Oh, I don't know; I think it's obvious. You didn't get your feelings hurt. Same deal."

"Eh? What do you mean?"

"Exactly the same deal. Night before last she slept with you; last night she slept with him. Doesn't seem to fret you."

"Why should it?"

"It should not. But the cases are parallel." (Goldie, please don't take me for a fool, dear. I not only saw your face but I smelled you.) "Matter of fact, you surprised me a little. I didn't know you leaned that way. Of course I knew that Anna didÄshe surprised me a bit in taking Burt to bed. I wasn't aware that she did. Men, I mean. Hadn't known that she had ever been married."

"Oh. Yes, I suppose it could look that way. But it's much what you said about Burt: Anna and I love each other, have for yearsÄ and sometimes we express it in bed. But we're not `in love.' Each of us leans heavily toward men . . . no matter what impression you gained the other night. When Anna practically stole Burt out of your arms, I cheeredÄdespite fretting a bit about you. But not fretting too much because you

always have a pack of men sniffing around after you whereas with Anna it had become a seldom thing. So I cheered. Hadn't expected it to lead to marriage but it's grand that it has. Here's the Golden OrchidÄwhat shall we buy?"

"Wait a moment." I stopped her outside the florist shop. "Goldie
ù . . at great risk to her life somebody went charging up to the bedroom of the farmhouse, carrying a basket stretcher. For me."

Goldie looked annoyed. "Somebody talks too much."

"I should have talked sooner. I love you. More than I love Burt for I've loved you longer. Don't need to marry him, can't marry you. Just love you. All right?"

XXVI

Maybe I did marry Goldie, sort of. Once we had Anna and Burt formally married, we all went back to the hotel; Burt moved them into the "bridal suite" (no mirror on the ceiling, interior decorations white and pink instead of black and red, otherwise much the sameÄbut much more expensive), and Goldie and I moved out of the hotel and sublet a little crackerbox near where Charleston slants into Fremont. This placed us in walking distance of the slidewalk connecting the Labor Mart with town and that gave Goldie transportation to any of the hospitals and made it easy for me to shopÄ otherwise we would have had to buy or rent a horse and buggy, or bicycles.

Location was that house's sole virtue, maybe, but to me it was a fairy-tale honeymoon cottage with roses over the door. It had `no roses and was ugly and the only thing modern in it was a limitedservice terminal. But for the first time in my life I had a home of my own and was a "housewife." My home in Christchurch had never truly been mine; I certainly was never mistress of that household, and I had been steadily reminded in various ways that I was a guest rather than a permanent fixture.

Do you know what fun it is to buy a saucepan for your very own kitchen?

I was a housewife at once as Goldie was called on that very day and went on watch at twenty-three hundred to work all night to ohseven hundred. The following day I cooked my first dinner while
Goldie slept. . . and burned the potatoes beyond salvage and cried, which is, I understand, a bride's privilege. If so, I've used mine up against the day when I'm really a bride if everÄand not a phony bride as in Christchurch.

I was a proper housewife; I even bought sweet-pea seeds and planted them in lieu of that missing climbing rose over the doorÄ and discovered that gardening has more to it than sticking seeds in the ground; those seeds did not germinate. So I consulted the Las Vegas library and bought a book, a real book with looseleaf pages and pictures of what the compleat gardener should do. I studied it. I memorized it.

One thing I did not do. Although enormously tempted I did not get a kitten. Goldie might ship out any day; she warned me that, if I was out of the house, she might be gone without saying good-bye (as I had warned GeorgesÄand did do).

Were Ito get a kitten I would be honor-bound to keep it. A courier can't carry a kitten everywhere in a travel case; that's no way to bring up a baby. Someday I would ship out. So I did not adopt a kitten.

Aside from that I enjoyed all the warm delights of being a housewife. . . including ants in the sugar and a waste pipe line that broke in the night, two delights that I don't care to repeat. It was a very happy time. Goldie slowly got my cooking straightened

outÄI had thought I knew how to cook; now I do know how. And I learned to stir a martini exactly the way she preferred it: Beefeater gin threepoint-six to one of Noilly Prat dry vermouth, a twist, no bittersÄ while I took Bristol Cream on rocks. Martinis are too rugged for me but I can see why a nurse with tired feet would want one the minute she is home.

Swelp me, had Goldie been male, I would have had my sterility reversed and happily have raised children and sweet peas and cats.

Burt and Anna left for Alabama early in this period and we all made careful arrangements not to lose track of each other. They did not intend to live there but Anna felt that she owed her daughter a visit (and owed herself, I think, a chance to show off her new husband). Thereafter they intended to sign up with a military or quasimilitary, one that would take both of them and contract to keep them together. In combat. Yes. Both were tired of desk work; both were willing to take a bust in grade to leave staff and join a combat

Host MotherÄUnlimited License, Bonded by TransAmerica
and/or Lloyd'sÄno extra charge for multiple births up to
quadruplets. Fee by arrangement. Standard interview
fee with physical examination by your-choice physiometricist.
BABIES UNLIMITED, Inc.
LV 7962M 4/3

team. "Better one crowded hour of life than a cycle of Cathay." Maybe so. It was their life.

I kept in touch at the Labor Mart because the day was coming when I not only would want to ship out but would have to ship out. Goldie was working quite steadily and she tried to insist on paying all the household expenses. I laid my ears back and insisted on paying half right down the middle. Since I was keeping track of every buck, I knew exactly what it cost to live in Las Vegas. Too much, even in a crackerbox. When Goldie left, I could live there a few months, then I would be broke.

But I would not do so. A honeymoon cottage is a no-good place to live alone.

I continued to try to reach Georges and Ian and Janet, and Betty and Freddie, but I limited myself to twice a month; the terminal charges were considerable.

Twice a week I spent half a day at the Labor Mart, checking everything. I no longer expected to find a courier job even half as good as the one I had had with Boss but I still checked the multinationalsÄwho did indeed use experienced couriers. And I checked all other job opportunities, looking for something, anything, to match my decidedly odd talents. Boss had hinted that I was some sort of a supermanÄif so, I can testify that there is very little demand for supermen.

I considered going to school to become a croupier or dealerÄ then moved that possibility to the bottom of the pile. A skilled dealer or stick man or wheel man can work for many years at good wages

but to me it would be a treadmill. A way to stay alive but not a life. Better to join up as a private and buck for field rank.

But there were other possibilities I had never thought about. Consider these:

WANTED: 90-day wife for off-planet vacation.
All expenses, luxury 9 +, guild bonus scale. Phys. range
S/Vv', temperament sanguine 8, amativeness scale 7 or above.

Client holds procreation license Chicago Imperium, will
surrender it to holiday wife if she becomes pregnant or both
will undergo 120-day sterilization, her choice.
See Amelia Trent, Licensed Sex Broker,
#18/20 New Cortez Mezzanine.
URGENTLY NEEDEDÄTwo Time-Space Engineers, any sex,
experienced in n-dimensional design. Must be willing to
risk nonreversible temporal dislocation.
ParticipationÄAmenitiesÄAssurance
Terms to be negotiated
Babcock and Wilcox, Ltd.
Care Wall Street Journal, LV Lbr Mrt

I could try to sign with Babies Unlimited or I could freelance. My conditional sterility would be a selling point, as the thing customers of host mothers are most leery of is the host mother who slips one over on the clientÄgets pregnant on her own just before submitting herself for hosting. Sterility is no handicap as bringing down an ovum is not the purpose; the technologist simply manipulates to change the body chemistry to make the field ripe for implantation. Ovulation is simply a nuisance.

Having babies for other people could be only a stopgapÄbut a possible one; it paid well.

Not a bad deal for someone who wanted a three-months' vacation and enjoyed Russian roulette. To me, pregnancy was no danger and my horny scale rating is higher than sevenÄmuch! But the doxy bonus scale in the Free State is not high enough to make the accumulated pay enough to justify losing chances at more permanent workÄand that faceless client was almost certainly a crashing bore or he wouldn't consider hiring a stranger for his holiday bed.

The above is exactly the sort of job I wanted. The only hitch was that I was in no slightest degree qualified.

The First Plasmite Church ("In the Beginning was Plasma, without form and void") off the Mall had a sign advertising times of services. A smaller notice with movable letters included in it caught my eye:
"The Next Virgin Will Be Sacrificed at 0251 Oct 22"

That looked like a permanent position but again not one for which I was qualified. It fascinated me. While I was gawking, a man came out and changed the sign and I realized that I had missed last night's sacrament and the next altar sacrifice was two weeks away, which left me undismayed. But my curiosity got me, as usual. I asked him: "Do you actually sacrifice virgins?"

He answered, "Not me. I'm just an acolyte. ButÄ Well, no, they don't actually have to be virgins. But they do have to look like virgins." He looked me up and down. "I think you could make it. Want to come in and talk to the priest?"

"Uh, no. Do you mean that he actually sacrifices them?"

He looked at me again. "You're a stranger here, aren't you?"

I admitted it. "Well, it's like this," he went on. "If you were to advertise that you were casting for a snuff film, you could cast every part by noon and not one of `em would ask if they were actually going to be snuffed. It's that kind of a town."

Maybe so. More likely I'm a yokel come to town. Or both.

There were lots of ads for off-planet jobs or concerning off-planet matters. I did not expect to hire out for an off-planet job because I did expect to go off planet as a colonist so lavishly subsidized that I would have free choice of any colony, from Proxima, almost in our laps, to The Realm, so far away that both cargo and people went by n-shipÄexcept that the late word on The Realm was that The First Citizen had closed it to migrants at any price, except certain artists and scientists by individual negotiation. Not that I wanted to go to The Realm, rich as it is reputed to be. Too far! But the Proximates are our close neighbors; from South Island their sun is right overhead, a big bright star. Friendly.

But I read all the ads:

Transuranics Golden Division on Golden around Procyon-B wanted experienced mining engineers to supervise kobolds, fiveyear renewable, bonuses, perks. The ad did not mention that on Golden an unmodified human person seldom lives five years.

HyperSpace Lines was hiring for the run to The Realm via Proxima, Outpost, Fiddler's Green, Forest, Botany Bay, Halcyon, and Midway. Four months round trip horn Stationary Station, one month paid leave Earthside or Luna, and repeat. I skipped over the requirements and pay for ultra-astrogator and warp engineer and supercargo and communicator and medical officer but looked at the other ratings:

Waiter, room steward, maintenance carpenter, electrician, plumber, electronicist, electronicist (computer), plumber, cook, baker, sous chef, pantryman, chef, specialty cook, bartender, croupier/dealer, social director, holographer/photographer, dental assistant, singer, dance instructor, games supervisor, companionsecretary-maid/valet, cruise director's assistant, art instructor, cards instructor, cruise hostess, swimming instructor, hospital nurse, children's nurse, master-at-arms (armed), master-at-arms (unarmed), director/bandmaster, theatrical director, musician (twentythree instruments named but doubling on two or more required), cosmetician, barber, masseur, stores clerk, retail sales clerk, sales manager, excursion escortÄ

Äand that's just a sample. In general, if they do it on the ground, they do it or something like it in the sky. Some of the jobs concerned uniquely with spaceship matters I can't even translateÄwhat in the world (or out of it) is an "over kippsman 2/c"?

One profession not listed is "doxy" despite the fact that HyperSpace Lines is an Equal Opportunity Employer. By word of mouth I learned how very equal this is. If you want to be hired for any of the not so very technical jobs, it helps enormously to be young, handsome/pretty, healthy, horny, bisexual, money-hungry, and open to any reasonable proposition.

The Port Captain himself has two left feet and was purser of the old Newton, up from room steward. In his sky-voyaging days he made certain that his first-class passengers got anything they wantedÄand that they paid well for it. As Port Captain this is still his
purpose. He is said to favor married couples or equivalent over any single if they can work as a team both in and out of bed. I heard a story around the Mall of one gigolo/doxy team who made themselves rich in only four tripsÄdance instructors in the morning,

swimming instructors in the afternoon, dancing host and hostess before and after dinner, a singing and comedy act, then private entertainment singly or as a team at nightÄfour voyages and ready to retire . . . and had to retire because they were fired, as they were no longer very attractive, no longer brimming with vitality; they had maintained this impossible pace on uppers and downers.

I don't think money can tempt me that much. I'll stay awake all night most anytime I'm asked but I do want to catch up on sleep the next day.

I wondered how it was that HyperSpace Lines, with only four passenger liners, was apparently hiring all their many ratings all the time. The line's assistant hiring agent said to me, "You really don't know?"

I told her I did not.

"At each of three of the stops it takes lots and lots of what makes the world go round to buy your way in. Three more are not cheap although some skills are accepted in lieu of contribution. Only one is a bounty planet. So desertion is a major problem. Fiddler's Green is so desirable a place that the first officer of the Dirac jumped ship there a few years back. The company does not have too much trouble with crew recruited here . . . but suppose your home was Rangoon or Bangkok or Canton and you were working cargo on Halcyon and the pusher took his eyes off you just long enough. What would you do?"

She shrugged and went on, "I'm telling you no secrets. Anybody who thinks about it knows that the only possible way for most people to get off EarthÄeven to LunaÄis to sign on as crew of a spaceship, then jump ship. I'd do it myself if I could."

"Why don't you?" I asked.

"Because I have a six-year-old son."

(I should learn to mind my own business!)

Some of the ads stirred my imagination; this was one:

New Planet Just OpeningÄType T-8 Guaranteed Maximum Danger

Couples or Groups Only Augmented Survival Plan Churchill and Son, Realtors Las Vegas Labor Mart 96/98

I remembered something Georges had said, that anything above Terran scale eight called for a big bonus or bounty. But I knew more about that scale now; eight was Earth's own basic rating. Most of this planet wasn't too easy to tame. Most of it had to be worked over, rebuilt. This very land I stood on had been fit only for gila monsters and desert crawlies until it had been treated with tons of money and many, many tons of water.

I wondered about that "maximum danger." Was it something that called for the talents of a woman who was fast on her feet when triggered? I really didn't yearn to be a

platoon leader of Amazons because some of my girls would get killed and I wouldn't like that. But I wouldn't mind tackling a saber-toothed tiger or equivalent because I felt certain that I could move in, clobber him, and back off while he was still finding out that something was up.

Maybe a raw T-8 would be a better place for Friday than a manicured place like Fiddler's Green.

On the other hand that "maximum danger" might derive from too many volcanoes or too much radioactivity. Who wants to glow in the dark? Find out first, Friday; you won't get two chances.

I stayed quite late at the Mall that day because Goldie was again on the night shift. I had served her dinner when she got home that morning, put her to bed about ten, and hoped that she would sleep till at least eighteen. So I dallied until the Mall offices started closing.

When I got home our house was dark, which pleased me as it tended to indicate that Goldie had slept straight through. With luck I could get her breakfast before she woke up. So I let myself in most
quietly . . . and realized that the house was empty. I won't try to define this but an empty house doesn't feel, smell, sound, or taste like one with a person sleeping in it. I went straight to the bedroom. Empty bed. Empty bath. I switched on lights and presently I found it, a long printout for me in the terminal:

Dearest Friday, It looks now as if you won't be home before I leaveÄand that is probably just as well because we would just cry on each other and that's no help.

My job came through but not as expected. Keeping in touch with my former boss paid off; Dr. Krasny called me shortly after I went to bed. He is CO. of a brand-new MASH being set up to serve the Sam Houston Scouts. An expanded Scouts of course; each battalion is cadre for a triangular combat team, a pony brigade. I am not supposed to tell you where we are mounting or where we will go but (burn this printout after you read it!) if you were to go west from Plainview, you might run across us in Los Llanos Estacados, before you reach Portales.

Where are we going? That's really classified! But if we don't hit Ascension, some wives will draw a pension. I called Anna and Burt; they are meeting me in El Paso at ten past eighteen

already in Texas. Oh, dear!]

because Dr.
Krasny assured me that they would have jobs, either as combat troops or as auxiliary medical if any hitch develops. There is a job for you, too, my dear oneÄcombat if that's what you want. Or I'll rate you medtech-3 and use you myself and upgrade you to master sergeant (medadmin) in nothing flat, as I know your quality and so does Colonel Krasny. It would be good to have all four of usÄfive, I meanÄ back together again.

But I'm not trying to twist your arm. I know you have things troubling you about your Canadian friends who disappeared. If you feel that you must stay loose to look for themÄbless you and good luck. But if you want to get in a little action with bonus pay,

come straight to El Paso. The address is Panhandle Investments, El Paso Division, Field Operations Office, Environmental Factors, Attention John
Krasny, Chief EngineerÄand don't laugh; just memorize it and destroy it.

Once this operation is in the news you can reach any of us openly through the Houston office of the Scouts. But in the meantime I am "personnel chief clerk" in "Environmental Factors."

May a gracious God watch over you and keep you safe from harm.

All my love,

Goldie

XXVII

I burned it at once. Then I went to bed. I didn't feel like eating dinner.

Next morning I went to the Labor Mart, looked up Mr. Fawcett, agent for HyperSpace Lines, and told him that I wanted to sign on as a master-at-arms, unarmed.

The supercilious slob laughed at me. I glanced at his assistant for moral support but she kept her eyes averted. I restrained my temper and said gently, "Would you mind explaining the joke?"

He stopped his raucous cawing and said, "Look, chicken, `master' as in `master-at-arms' designates a male. Although we might be able to hire you as `mistress' in some other department."

"Your sign says Equal Opportunity Employer. The fine print under it states that `waiter' includes `waitress,' `steward' includes `stewardess,' and so forth. Is that true?"

Fawcett stopped grinning. "Quite true. But it also says: `physically able to carry out the normal duties of the position.' Master-atarms is a police officer aboard ship. Master-at-arms, unarmed, is a cop who can keep order without having to resort to weapons. He can wade into a fight and arrest the center of the disturbance, barehanded. Obviously you can't. So don't give me any quack about taking it to the union."

"I shan't. But you didn't read my brag sheet."

"Can't see that it matters. HoweverÄ" He glanced casually down the page. "Says here you're a combat courier, whatever that is."

"That means that when I have a job to do, nobody stops me. If somebody tries too hard, he's dog meat. A courier goes unarmed. I sometimes carry a laser knife or one-shot tear gas. But I depend on my hands. Note my training."

He looked it over. "Okay, so you've been to a martial-arts school. That still doesn't mean that you can cope with some big bruiser over a hundred kilos heavier and a head taller than you are. Don't waste my time, girlie; you couldn't even arrest me."

I went over his desk, then turkey-walked him to the door and turned him loose before anyone outside could see. Even his assistant did not see itÄshe most carefully did not see it.

"There," I said, "that's how I do it without hurting anyone. But I want to be tested against your biggest male master-at-arms. I'll break his arm. Unless you tell me to break his neck."

"You grabbed me when I wasn't looking!"

"Of course I did. That's how to handle a nasty drunk. But you're looking now, so let's run through it again. Are you ready? This time I might have to hurt you a little but not much. I won't break any bones."

"Stay where you are! This is ridiculous. We don't hire masters-atarms merely because they've been trained in some Oriental tricks; we hire big men, men so big they carry authority just by their size. They don't have to fight."

"Okay," I said. "Hire me as a plainclothes cop. Put me into an evening dress; call me a dance hostess. When somebody about my size and hopped up on sleet pokes your big cop in his solar plexus and he goes down, I stop pretending to be a lady and go in and rescue him.

"Our masters-at-arms don't need to be protected."

"Maybe. A really big man is usually slow and clumsy. He hardly ever knows much about fighting because he's never really had to fight. He's okay to keep order at a card party. Or to handle one drunk. But suppose the Captain really needs help. A riot. A mutiny. Then you need someone who can fight. Me."

"Leave your application with my assistant. Don't call us; we'll call you."

I went home and thought about where else I could lookÄor should I go to Texas? I had made the same silly, unpardonable mistake with Mr. Fawcett that I had made with Brian. . . and Boss would have been ashamed of me. Instead of picking up his challenge I should have insisted on a fair testÄbut I should never have laid a finger on the man I was asking to hire me. Stupid, Friday, stupid!

It was not losing that job that bothered me; it was losing any chance of getting a spaceside job with HyperSpace Lines. I was going to have to have a job pretty soon to accomplish the sacred duty of seeing to it that Friday eats (let's face it; I eat like a pig) but it didn't have to be this job. I had decided to ship out with HyperSpace because one voyage with them would let me size up more than half of the colonized planets in explored space.

While I had made up my mind to migrate as Boss had advised, the idea of picking a planet solely from brochures written by advertising copywritersÄwith no return-and-exchange privilegeÄbothered me. I wanted to shop first.

For example: Eden has received more favorable publicity than any other colony in the sky. Hearken to its virtues: A climate much like Southern California over most of its land mass, no dangerous predators, no noxious insects, surface gravity 9 percent less than Earth, oxygen content of air 11 percent higher, metabolic environment compatible with Terran life and soil so rich that two or three bumper crops a year are routine. Scenery delightful no matter where you look. Population today just under ten million.

So what's the catch? I found out one evening in Luna City through letting a ship's officer pick me up and take me to dinner. The company placed a high price on Eden from the time it was discovered and touted it as the perfect retirement home. And it is. After the pioneer party had prepared it, nine-tenths of the people who moved there were elderly and wealthy.

The government is a democratic republic but not one like the California Confederacy. To be eligible to vote a person must be seventy Terran years old and a taxpayer (i.e., landowner). Residents from ages twenty to thirty perform public service, and if you think that means waiting on the elderly hand and foot you are utterly right, but it includes also anything else unpleasant that needs to be done and therefore would command high wages if it were not done by conscript labor.

Is any of this in any of the company brochures? Hollow laugh!

I needed to know the unadvertised facts about each colonial planet before buying a one-way ticket to one of them. But I spoiled my best chance by "proving" to Mr. Fawcett that an unarmed female can place a come-along on a male bigger than she isÄthat merely got me on his blacklist.

I do hope I grow up before Cheyne-Stokes breathing sets in.

Boss scorned crying over spilt milk quite as much as he despised self-pity. Having killed my chances of being hired by HyperSpace it was time to leave Las Vegas while I was still solvent. If I couldn't make the Grand Tour myself, there was still a way to get the ungarnished word about colonial planets the way I had acquired the truth about Eden: cultivate ships' crew members.

The way to do that was by going to the one place where I was sure to find them: Stationary Station, up the Beanstalk. Freighters were not likely to come farther down Earth's gravity well than to Eli-Four or -FiveÄthat is, to Lunar orbit without the disadvantage of entering Luna's own gravity well. But passenger ships usually touched at Stationary Station. All of HyperSpace Lines' giant liners, Dirac, Newton, Forward, and Maxwell, left from there, returned there, received maintenance and chandlery there. Shipstone complex had a branch there (Shipstone Stationary) primarily to sell power to ships and especially these big ships.

Officers and ratings going on leave arrived and left from there; those not on leave might sleep in their ships but they were likely to drink and eat and party a bit in the Station.

I dislike the Beanstalk and I don't care much for the twenty-fourhour Station. Aside from its spectacular and always changing view of Earth it has nothing to offer but high prices and cramped quarters. Its artificial gravity surges uncomfortably and always seems to go out just in time to put soup in your face.

But there are jobs to be had there if you are not fussy. I should be able to support myself there long enough to be sure that I received
frank opinions concerning each of the colonized planets from one or more jaundiced spacemen.

It was even possible that I might bypass Fawcett an~I ship out from there with HyperSpace. Ships are reputed always to sign on a few at the last minute to fill unexpected vacancies. If such a chance opened up, I would not compound my follyÄI would not ask for a master-at-arms billet. Waitress, scullery, chambermaid, bath attendantÄif the job would swing me around the Grand Tour, I would grab it.

Having thus picked my new home, I looked forward to boarding the same ship, by choice, as a luxury-class passenger, passage paid under the odd terms of my foster father's will.

I gave notice to the leaseholder of the mousetrap I lived in, then took care of some chores before leaving for Africa. AfricaÄ Would I have to cross via Ascension? Or would SBs be running again? Africa made me think of Goldie, and Anna and Burt, and sweet Doe Krasny. I might reach Africa before they did. Irrelevant as there was only one probable war there now (that I knew of) and I intended to shun that area like the plague.

Plague! I must at once prepare a report on plague for Gloria Tomosawa and for my friends at EI1-Five, Mr. and Mrs. Mortenson. It seemed preposterously unlikely that

anything I could say would persuade them or anyone else that a Black Death epidemic was coming in only two and a half yearsÄI hadn't believed it myself. But, if I could make responsible people uneasy enough so that antirat measures were tightened and health checks at CHI barriers be made more than a meaningless ritual, it mightÄit just mightÄsave space colonies and Luna.

UnlikelyÄ But I had to try.

The only other thing I had to do was make one more check on my missing friends . . . then let the matter rest until I came down from Stationary Station or (one may hope!) returned from the Grand Tour. Surely one can call Sydney or Winnipeg or anywhere from Stationary Station. . . but at much higher cost. I had learned lately that wanting something and being able to pay for it were not the same.

I punched the Tormeys' Winnipeg call code, resigned to hearing:
"The code you have signaled is temporarily out of service at the subscriber's request."

What I got was: "Pirates Pizza Palace!"

I muttered, "Sorry, I punched wrong," and cleared the board. Then I punched again, most carefullyÄ

Äand got: "Pirates Pizza Palace!"

This time I said, "I'm sorry to bother you. I'm in Las Vegas Free State and have been trying to reach a friend in WinnipegÄbut twice I've reached you. I don't know what I'm doing wrong."

"What code did you punch?','

I told the friendly voice. "That's us," she agreed. "Best giant pizzas in British Canada. But we opened just ten days ago. Maybe your friend used to have this call code?"

I agreed with that, thanked the pleasant voice, and clearedÄsat back and thought. Then I punched ANZAC Winnipeg while wishing mightily that this minimum-service terminal could bring in a picture from farther away than Las Vegas itself~ in trying to play Pinkerton it helps to watch faces. Once ANZAC's computer answered, I asked for the operations duty officer, I having become somewhat more sophisticated in how to handle that computer. I told the woman who answered, "I'm Friday Jones, a New Zealand friend of Captain and Mrs. Tormey. I tried to call their home and could not reach them. I wonder if you can help me?"

"I'm afraid not."

"Really? Not even a suggestion?"

"I'm sorry. Captain Tormey resigned. He even cashed in his pension rights. I understand that he's sold his house, so I assume that he is gone for good. I do know that the only address we have for him is his brother-in-law's address at the University of Sydney. But we can't give out addresses."

I said, "I think you mean Professor Federico Farnese, Biology Department, at the University."

"That's right. I see you know it."

"Yes, Freddie and Betty are old friends; I knew them when they lived in Auckland. Well, I'll wait till I'm home to call Freddie and that will get me Ian. Thanks for being so helpful."

"My pleasure. When you talk to Captain Tormey, please tell him that Junior Piloting Officer Pamela Heresford sends her best."

"I will remember."

"If you are going home soon, I have good news for you. The semi schedule for Auckland is now fully restored. We've rim ten days of cargo-only and we are now certain that there is no longer any way our ships can be sabotaged. We are offering a forty percent discount on all fares now, too; we want to get our old friends back."

I thanked her again but told her that, since I was in Vegas, I expected to leave from Vandenberg, then switched off before I had to improvise more lies.

Again I sat and thought. Now that the SBs were running should I go to Sydney first? There wasÄor used to beÄa weekly trajectory from Cairo to Melbourne, and vice versa. If it was not running it was possible to go by tube and float craft via Singapore, Rangoon, Delhi, Teheran, Cairo, then down to NairobiÄbut it would be expensive, long, and uncertain, with squeeze at every move and always the chance of being grounded by some local disturbance. I might wind up in Kenya without money enough to go up the Beanstalk.

A last resort. A desperate one.

I called Auckland, was unsurprised to be told by the computer that Ian's call code was not operative. I checked to see what time it was in Sydney, then called the university, not doing it the routine way through its admin office but punching straight through to its biology department, a call code I had obtained a month back.

I recognized a familiar Strine accent. "Marjorie Baldwin here, Irene. Still trying to find my lost sheep."

"My word! Luv, I tried, I did try, to deliver your message. But Professor Freddie never did come back to his office. He's left us. Gone."

"Gone? Gone where?"

"You wouldn't believe how many people would like to know! I'm not even supposed to be telling you this. Somebody cleaned out his desk, there's no hide nor hair in his flatÄgone! I can't tell you more than that, because nobody knows."

After that dismaying call I sat still and thought, then called the Winnipeg Werewolves Security Guards. I went as high as I could, to a man who described himself as Assistant Commandant, and told him truthfully who I was (Marjorie Baldwin), where I was (Las Ve
gas), and what I wanted, a lead to my friends. "Your company was guarding their home before it was sold. Can you tell me who bought it, or who the agent was who sold it, or both?"

Then I certainly wished for vision as well as sound! He answered, "Look, sister, I can smell a cop even through a terminal. Go back and tell your chief that he got nothing off us last time and he gets nothing off us this time."

I held my temper and answered quietly, "I am not a cop although I can see why you might think so. I really am in Las Vegas, which you can confirm by calling me back, collect."

"Not interested."

"Very well. Captain Tormey owned a matched pair of black Morgans. Can you tell me who bought them?"

"Copper, get lost."

Ian had shown excellent judgment: The Werewolves really were loyal to their clients.

If I had plenty of time and money, I might dig up something by going to Winnipeg and/or Sydney and rooting at it myself. If wishes were horsesÄ Forget it, Friday; you are at last totally alone; you've lost them.

Do you want to see Goldie badly enough to get involved in a war in East Africa?

But Goldie did not want to stay with you badly enough to stay out of that warÄdoesn't that tell you something?

Yes, it tells me something I know but always hate to admit: I always need people more than they need me. It's your old basic insecurity, Friday, and you know where it comes from and you know what Boss thought about it.

All right, we go to Nairobi tomorrow. Today we write up the Black Death report for Gloria and for the Mortensons. Then get a full night's sleep and leave. Uh, eleven hours time difference; try to get an early start. Then don't worry about Janet and Co. until you get back from the Beanstalk with your mind made up about where to colonize. Then you can afford to spend your last gram in a flatout attempt to find them. . . because Gloria Tomosawa will handle things once you tell her what planet you have picked.

I actually did get a long night's sleep.

The next morning I had packedÄsame old jumpbag, nothing much in itÄand was puttering around the kitchen, dumping some items and saving others with a note to my landlord, the leaseholder, when the terminal buzzed.

It was the nice gal with the six-year-old boy at HyperSpace. "Glad I caught you," she said. "My boss has a job for you."

(Timeo Danaos et dona ferentes.) I waited.

Fawcett's silly face showed. "You claim to be a courier."

"I'm the best."

"In this case, you had better be. This is an off-planet job. Okay?"

"Certainly."

"Take this down. Franklin Mosby, Finders, Inc., suite six hundred, Shipstone Building, Beverly Hills. Now hurry; he wants to interview you before noon.,,

I didn't write down the address. "Mr. Fawcett, that costs you one kilobuck, plus round-trip tube fare. In advance."

"Huh? Ridiculous!"

"Mr. Fawcett, I suspect that you may hold a grudge. It might strike you as funny to send me on a wild-goose chase and cause me to waste a day and the price of a round-trip fare to Los Angeles."

"Funny girl. Look, you can pick up your fare here at the officeÄ after the interview; you've got to leave now. As for that kilobuck. shall I tell you what to do with it?"

"Don't bother. For master-at-arms I would expect only master-atarms wages. But as courier . . . I am the best and if this man really does want the best, he will pay my interview fee without a second thought." I added, "You're not serious, Mr. Fawcett. Good-bye." I cleared.

He called back seven minutes later. He talked as if it hurt him. "Your round trip and the kilobuck wifl be at the station. But that kilobuck is against your salary and you pay it back if you don't get the job. Either way, I get my commission."

"It will not be paid back under any circumstances, and you get no commission from me because I have not appoi~ted you my agent. Perhaps you can collect something

from Mosby but, if so, it does not come out of my salary or my interview fee. And I'm not going down to the station to wait around like a boy playing snipe hunt. If you mean business, you'll send the money here."

"You're impossible!" His face left the screen but he did not clear it. His assistant came on. "Look," she said, "this job really does have heat behind it. Will you meet me at the station under the New Cortez? I'll get there as fast as I can make it and I'll have your fare and your fee."

"Certainly, dear. A pleasure."

I called my landlord, told him I was leaving the key in the refrigerator and be sure to salvage the food.

What Fawcett did not know was that nothing could have induced me not to keep this appointment. The name and address was that which Boss had caused me to memorize just before he died. I had never done anything about it because he had not told me why he wanted me to memorize it. Now I would see.

XX VIII

All the sign on the door said was FINDERS, INC. and SPECIALISTS IN OFF-PLANET PROBLEMS. I went in and a live receptionist said to me, "They filled the job, deane; I got it."

"I wonder how long you will keep it. I'm here by appointment to see Mr. Mosby."

She looked me over carefully, in no hurry. "Call girl?"

"Thank you. Where do you get your hair dyed? Look, I'm sent here by HyperSpace Lines, Las Vegas office. Every second is costing your boss bruins. I'm Friday Jones. Announce me."

"You're kidding." She touched her console, spoke into a hushphone. I stretched my ears. "Frankie, there's a floozie out here says she has an appointment with you. Claims to be from Hypo in Vegas."

"God damn it, I've told you not to call me that at work. Send her in."

"I don't think she's from Fawcett. Are you two-timing me?"

"Shut up and send her in."

She pushed aside the hushphone. "Sit down over there. Mr. Mosby is in conference. I'll let you know as soon as he is free."

"That isn't what he told you."

"Huh? Since when do you know so much?"

"He told you not to call him Frankie at work, and to send me in. You gave him some backtalk and he told you to shut up and to send me in. So I'm going in. Better announce me."

Mosby appeared to be about fifty trying to look thirty-five. He had an expensive tan, expensive clothes, a big, toothy smile, and cold eyes. He motioned me toward a visitor's chair. "What took you so long? I told Fawcett I wanted to see you before noon."

I glanced at my finger, then at his desk clock. Twelve-oh-four. "I've come four hundred and fifty kilometers plus a crosstown shuttle since eleven o'clock. Shall I go back to Vegas and see if I can beat that time? Or shall we get down to business?"

"I told Fawcett to see to it that you caught the ten o'clock. Oh, well. I understand you need a job."

"I'm not hungry. I was told that you needed a courier for an offplanet job." I took out a c'py of my brag sheet, handed it to him. "Here are my qualifications. Look it over and, if I am what you want, tell me about the job. I'll listen and tell you whether or not I'm interested."

He glanced at the sheet. "The reports I have tell me that you are hungry."

"Only in that it is getting on toward lunchtime. My fee schedule is on that sheet. It is subject to negotiationÄupwards."

"You're pretty sure of yourself." He looked again at my brag sheet. "How's Kettle Belly these days?"

"Who?"

"It says here that you worked for System Enterprises. I asked you, `How is Kettle Belly?' Kettle Belly Baldwin."

(Was this a test? Had everything since breakfast been carefully calculated to cause me to lose my temper? If so, the proper response would be not to lose my temper no matter what.) "The Chairman of System Enterprises was Dr. Hartley Baldwin. I've never heard him called Kettle Belly."

"I believe he does have some sort of a doctor's degree. But everybody in the trade calls him Kettle Belly. I asked you how he is."

(Watch it, Friday!) "He's dead."

"Yeah, I know. I wondered if you knew. In this business you get a lot of ringers. All right, let's see this marsupial pouch of yours."

"Excuse me?"

"Look, I'm in a hurry. Show me your bellybutton."

(Just where did the leak occur? UhÄ No, we killed that gang. All of themÄor so Boss thought. Doesn't mean it couldn't have leaked from there before we killed them. No matterÄit did leak . . . as Boss said it would.) "Frankie boy, if you want to play bellybuttons with me, I must warn you that the bleached blonde in your outer office is listening and almost certainly recording."

"Oh, she doesn't listen. She has her instructions about that."

"Instructions she carries out the way she carries out your injunction not to call you Frankie during working hours. Look, Mr. Mosby, you started discussing classified matters under not-secure conditions. If you want her to be part of this conference, bring her in. If not, get her out of the circuit. But let's have no more breaches of security."

He drummed on his desk, then got up very suddenly, went into his outer office. The door was not totally soundproof; I heard angry voices, muffled. He came back in, looking annoyed. "She's gone to lunch. Now don't give me any more guff. If you are who you say you are, Friday Jones, also known as Marjorie Baldwin, formerly a courier for KettleÄfor Dr. Baldwin, managing director of System Enterprises, you have a pouch created by surgery back of your navel. Show it to me. Prove your identity."

I thought about it. A requirement that I prove my identity was not unreasonable. Fingerprint identification is a joke, at least inside the profession. Clearly the existence of my courier's pouch was now a broached secret. It would never be useful againÄexcept that right now it could be used to prove that I was me. I was I? It sounds silly either way. "Mr. Mosby, you paid a kilobuck to interview me."

"I certainly did! So far I've had nothing from you but static."

"I'm sorry. I've never been asked to show my trick bellybutton before, because up to recently it has been a closely held secret. Or so I thought. Evidently it is no longer a secret, since you know of it. That tells me that I can no longer use it for classified work. If the job you have for me requires the use of it, perhaps you had better reconsider. A secret just a little bit broached is like a girl just a little bit pregnant."

"Well . . . yes and no. Show me."

I showed him. I keep a smooth nylon sphere one centimeter in diameter in my pouch so that the pouch won't shrink between jobs.
I popped out the sphere, letting him watch, and then replaced itÄ then let him see that it was not possible to tell my navel from a normal navel. He studied it carefully. "It doesn't hold very much."

"Maybe you would rather hire a kangaroo."

"It's big enough for the purposeÄbarely. You'll be carrying the most valuable cargo in the galaxy, but it won't occupy much space. Zip up and adjust your clothing; we're going to lunch and we mustn'tÄmust notÄbe late."

"What is all this?"

"Tell you on the way. Hurry up."

A carriage was already waiting for us. Back of Beverly Hills, in the hills that name that town, is a very old hotel that is also very swank. It has the stink of money, an odor I don't despise. Between fires and the Big Quake it has been rebuilt several times, always to look just as it did but (so I hear) the last time it was rebuilt to be totally fire- and earthquakeproof.

It took about twenty minutes to drive, at a spanking trot, from the Shipstone Building to the hotel; Mosby used it to fill me in. "During this ride is about the only time that both of us can be sure that we don't have an Ear planted on usÄ"

(I wondered if he believed that. I could think of three obvious places for an Ear: my jumpbag, his pockets, and the cushions of the carriage. And there were always endless unobvious places. But it was his problem. I had no secrets. None, now that my bellybutton was a window to the world.)

"Äso let me talk fast. I'm meeting your price. Furthermore there will be a bonus on completed performance. The trip is from Earth to The Realm. That's what you're paid for; the trip back is deadhead but, since the round trip is four months, you'll be paid for four months. You collect your bonus at the far end at the imperial capital. SalaryÄone month in advance, the rest as you go. Okay?"

"Okay." I had to avoid sounding too enthusiastic. A round trip to The Realm? My dear man, only yesterday I was anxious to make this trip at petty officer's wages. "What about my expenses?"

"You won't have much in the way of expenses. Those luxury liners are all-expense deals."

"Gratuities, squeeze, groundside excursions, walking-around money, Bingo and such aboard shipÄat a minimum such expenses are never less than twenty-five percent of the price 6f the ticket. If I'm going to pretend to be a rich tourist, I must behave like one. Is that my cover?"

"Uh . . . Well, yes. All right, all rightÄnobody's going to fuss if you spend a few thousand pretending to be Miss Rich Bitch. Keep track and bill us at the end."

"No. Advance the money, twenty-five percent of the ticket cost. I won't keep records as it would not be in character; Miss Rich Bitch would not keep track of such trivia."

"All right already! Shut up and let me talk; we'll soon be there. You're a living artifact."

I had not felt that cold chill in quite a while. Then I braced up and resolved to make him pay heavily for that one crude, rude remark. "Are you being intentionally offensive?"

"No, I'm not. Don't get in a flutter. You and I know that an artificial person can't be told, offhand, from a natural person. You'll be carrying, in stasis, a modified human ovum. You will carry it in your navel pouch, where the constant temperature and the cushioning will protect the stasis. When you reach The Realm, you will catch a flu bug or some such and go to hospital. While you are in this hospital, what you are carrying will be transferred to where it will do the most good. You'll be paid the bonus and will leave the hospital . . . with the happy knowledge that you have enabled a young couple to have a perfect baby when they were dead-certain, almost, to have a defective one. Christmas disease."

I decided that the story was mostly true. "The Dauphiness."

"What? Don't be silly!"

"And it is considerably more than Christmas disease, which, by itself, might be ignored in a royal person. The First Citizen himself is concerned with this since this time succession is passing through his daughter rather than through a son. This job is much more important and much more hazardous than you told me . . . so the price goes up."

That pair of beautiful bays went clopping on up Rodeo Drive another hundred meters before Mosby answered. "All right. God help

you if you talk. You wouldn't live long. We'll increase the bonus.

AndÄ"

"You'll damn well double the bonus and deposit it to my account before we warp. This is the kind of a job where people grow forgetful after it's over."

"WellÄI'll do what I can. We are about to have lunch with Mr. SikmaaÄand you are expected not to spot the fact that he is personal representative of The First Citizen with an interworld rank of Ambassador Extraordinary and Minister Plenipotentiary. Now straighten up and mind your table manners."

Four days later I was again minding my table manners at the right of the Captain of H. S. Forward. My name was now Miss Marjorie Friday and I was so offensively rich that I had been fetched up from groundside to Stationary Station in Mr. Sikmaa's own antigrav yacht and whisked through into the Forward without having to bother with anything so plebeian as passport control, health, and so forth. My luggage had come aboard at the same timeÄbox after box of expensive, stylish clothing, appropriate jewelryÄbut others took care of it; I did not have to bother with anything.

Three of those days I had spent in Florida in what felt like a hospital but was (I knew!) a superbly equipped genetic engineering laboratory. I could infer which one it was but I kept my guesses to myself as speculation about anything was not encouraged. While I was there I was given the most thorough physical examination I have ever heard of. I did not know why they were checking my health in a style ordinarily reserved for

heads of state and chairmen of multinationals but I presumed that they were jumpy about entrusting to anyone not in perfect health the protecting and delivering of an ovum that would become, in the course of years, First Citizen of the fabulously wealthy Realm. It was a good time to keep my mouth shut.

Mr. Sikmaa used none of the sharpshooting that both Fawcett and Mosby had tried. Once he decided that I would do, he sent Mosby home and catered to me so lavishly that I had no need to dicker. Twenty-five percent for casual money?Änot enough; make that fifty percent. Here it is; take itÄin gold and in Luna City gold certificatesÄand, if you need more, just tell the purser and sign for it, a draft on me. No, we won't use a written contract; this is not that sort of a missionÄjust tell me what you want and youshall have it. And here is a little booklet that tells you who you are and where you went to school and all the rest. You will have plenty of time in the next three days to memorize it and if you forget to burn it, don't fret; the fibers are impregnated so that it self-destroys in the next three daysÄdon't be surprised if the pages are yellow and somewhat brittle on the fourth day.

Mr. Sikmaa had thought of everything. Before we left Beverly Hills, he brought a photographer in; she shot me from several angles, me dressed in a smile, in high heels, in low heels, in bare feet. When my luggage showed up in the Forward, every item fitted me perfectly, all the styles and colors suited me, and the clothes carried a spread of famous designer's names from Italy, from Paris, from Bei-Jing, et al.

I'm not used to haute couture and don't know how to handle it, but Mr. Sikmaa had that covered, too. I was met at the airlock by a pretty little Oriental creature named Shizuko who told me that she was my personal maid. Since I had been bathing and dressing myself since I was five, I felt no need for a maid, but again it was time to roll with the blow.

Shizuko conducted me to cabin BB (not quite big enough for a volley-ball court). Once there, it appeared that (in Shizuko's opinion) there was just barely time enough to get me ready for dinner.

With dinner three hours away this struck me as excessive. But she was firm and I was going along with whatever was suggestedÄI did not need a diagram to tell me that Mr. Sikmaa had planted her there.

She bathed me. While this was going on, there was a sudden surge in the gray control as the ship warped away. Shizuko steadied me and kept it from being a wet disaster and did it so skillfully that she convinced me that she was used to warp ships. She didn't look old enough.

She spent a full hour on my hair and my face. In the past I had washed my face when it seemed to need it and styled my hair mostly by whacking it off enough to keep it out of way. I learned what a
bumpkin I was. While Shizuko was reincarnating me as the Goddess of Love and Beauty the cabin's little terminal chimed. Letters appeared on the screen while the same message extruded from the printout, an impudent tongue:

The Master of HyperSpaceShip Forward
Requests the Pleasure of the Company
of Miss Marjorie Friday
for Sherry and Bonhomie in the Captain's Lounge at nineteen hundred hours

regrets only

I was surprised. Shizuko was not. She had already hung out and touched up a cocktail dress. It covered me completely and I have never been so indecently dressed.

Shizuko refused to let me be on time. She led me to the Captain's Lounge timed so that I went through the receiving line at seven minutes after the hour. The cruise hostess already knew my (current) name and the Captain bowed over my hand. It is my considered opinion that being a VIP in a spaceship is a better deal than being a spaceship master-at-arms.

"Sherry" includes highballs, cocktails, Icelandic Black Death, Spring Rain from The Realm (deadlyÄdon't touch it), Danish beer, some pink stuff from Fiddler's Green, and, I have no doubt, Panther Sweat if you ask for it. It also includes thirty-one different sorts (I counted) of tasty tidbits you eat with your fingers. I was a credit to Mr. Sikmaa; I really did take sherry and only one small glass, and I greatly restrained myself when offered, again and again and again and again, those thirty-one tasty temptations.

And it is well that I resisted. This ship puts on the nosebag eight times a day (again I counted): early morning coffee (caf, corn pletÄ that is, with pastry), breakfast, midmorning refreshment, tiffin, afternoon tea with sandwiches and more pastry, cocktail-hour hors d'oeuvres (those thirty-one sinful traps), dinner (seven courses if you can stay the route), midnight buffet supper. But if you feel peckish at any hour, you can always order sandwiches and snacks from the pantry.

The ship has two swimming pools, a gymnasium, a Turkish bath, a Swedish sauna, and a "Girth Control" clinic. Two and a third times around the main promenade is a kilometer. I dOn't think this is enough; some of our shipmates are eating their way across the galaxy. My own major problem will be to arrive at the imperial capital still able to find my bellybutton.

Dr. Jerry Madsen, Junior Medical Officer, who doesn't look old enough to be a sawbones, cut me out of the mob at the Captain's sherry, then was waiting for me after dinner. (He does not eat at the Captain's table or even in the dining room; he eats with the other younger officers in the wardroom.) He took me to the Galactic Lounge, where we danced, then there was a cabaret showÄsinging, specialty dancing, and a juggler who did magic tricks on the side (which made me think of those pigeons, and of Goldie, and I felt suddenly wistful but suppressed it).

Then there was more dancing and two other young officers, Tom Udell and Jaime Lopez, rotated with Jerry, and finally the lounge shut down and all three took me to a little cabaret called The Black Hole, and I firmly declined to get drunk but danced whenever I was asked. Dr. Jerry managed to outsit the others and took me back to cabin BB at an hour quite late by ship's time but not especially late by the Florida time by which I had gotten up that morning.

Shizuko was waiting, dressed in a beautiful formal kimono, silk slippers, and high makeup of another sort. She bowed to us, indicated that we should sit down at the lounge endÄthe bedroom end is shut off by a screenÄand served us tea and little cakes.

After a short time Jerry stood up, wished me a good night, and left. Then Shizuko undressed me and put me to bed.

I did not have any firm plans about Jerry though no doubt he could have persuaded me had he worked on itÄmy heels are quite short, I know. But both of us were

sharply aware that Shizuko was sitting there, hands folded, watching, waiting. Jerry did not even kiss me good-night.

After putting me to bed, Shizuko went to bed on the other side of the screenÄsome deal with bedclothes she took out of a cupboard.

I was never before quite so closely chaperoned, even in Christchurch. Could this be part of my unwritten contract?

XXIX

A spaceshipÄa hyperspaceshipÄis a terribly interesting place. Of course it takes very, very advanced knowledge of wave mechanics and multidimensional geometry to understand what pushes the ship, education that I don't have and probably never will (although I would like to back up and study for it, even now). RocketsÄno problem; Newton told us how. AntigravÄa mystery until Dr. Forward came along and explained it; now it's everywhere. But how does a ship massing about a hundred thousand tonnes (so the Captain told me) manage to speed up to almost eighteen hundred times the speed of light?Äwithout spilling the soup or waking anyone.

I don't know. This ship has the biggest Shipstones I've ever seen but Tim Flaherty (he's second assistant engineer) tells me that they are charged down only at the middle of each jump, then they finish the voyage having used only "parasitic" power (ship's heat, cooking, ship's auxiliary services, etc.).

That sounds to me like a violation of the Law of Conservation of Energy. I was brought up to bathe regularly and to believe that There Ain't No Such Thing as a Free Lunch; I told him so. He grew just a touch impatient and assured me that it was indeed the Law of Conservation of Energy that caused it to work out that wayÄ it worked just like a funicular; you got back what you put in.

I don't know. There aren't any cables out there; it can't be a funicular. But it does work.

The navigation of this ship is even more confusii~g. Only they don't call it navigation; they don't even call it astrogation; they call it "cosmonautics." Now somebody is pulling Friday's leg because the engineer officers told me that the officers on the bridge (it's not a bridge) who practice cosmonautics are cosmetic officers because they are there just for appearances; the computer does all the workÄand Mr. Lopez the second officer says that the ship has to have engineering officers because the union requires it but the computer does it all.

Not knowing the math for either one is like going to a lecture and not knowing the language.

I have learned one thing: Back in Las Vegas I thought that every Grand Tour was Earth, Proxima, Outpost, Fiddler's Green, Forest, Botany Bay, Halcyon, Midway, The Realm, and back to Earth because that's how the recruiting posters read. Wrong. Each voyage is tailored. Usually all nine planets are touched but the only fixed feature in the sequence is that Earth is at one end and The Realm, almost a hundred light-years away (98.7 +), is at the other. The seven way stations can be picked up either going out or coming back. However, there is a rule that controls how they are fitted in: Going out the distance from Earth must be greater at each stop, coming back the distance must

decrease. This is not nearly as complex as it sounds; it simply means the ship does not double backÄjust the way you would plan a shopping trip of many stops.

But this leaves lots of flexibility. The nine stars, the suns of these planets, are lined up fairly close to a straight line. See the sketch with the Centaur and the Wolf. Looking from Earth, all those stars, as you can see, are either at the front end of the Centaur or close by in the Wolf. (I know the Wolf doesn't look too well but the Centaur has been clobbering him for thousands of years. Besides, I've never seen a wolfÄa four-legged wolf, that isÄand it's the best I can do. Come to think of it, I've never seen a Centaur, either.)

That's the way those stars cluster in Earth's night sky. You have to be about as far south as Florida or Hong Kong to see them at all, and even then, with bare eyes you will see only Alpha Centauri.

But Alpha Centauri (Rigil Kentaurus) really shines out, third brightest star in Earth's sky. Three stars it is, actually, a brilliant one that is the twin brother of Sol, one not as bright that it is paired with, and a distant, dim, small companion that swings around both of them about a fifteenth of a light-year away. Years ago Alpha Centauri was known as Proxima. Then somebody bothered to measure the distance to this inconsequential third cousin and found that it was a hair closer, so the title of Proxima or "Nearest" was moved to this useless chunk of real estate. Then, when we set up a colony on the third planet of Alpha Centauri A (the twin of Sol), the colonists called their planet Proxima.

Eventually the astronomers who tried to shift the title to the dim companion were all dead and the colonists got their way. Just as well, because that dim star, while a hair closer today, will soon be farther awayÄjust hold your breath a few millennia. Being "ballistically linked" it averages the same distance from Earth as the other two in the triplet.

Look at the second sketch, the one with "right ascension" across the top and "light-years" down the side.

I must be the only person out of the hundreds in this ship who did not know that our first stop on this voyage would not be Proxima. Mr. Lopez (who was showing me the bridge) looked at me as if I were a retarded child who had just made another unfortunate slip. (But that did not matter because he is not interested in my brain.) I didn't dare explain to him that I had been snatched aboard at the last moment; it would have blown my cover. However, Miss Rich Bitch is not required to be bright.

The ship usually stops at Proxima both going and coming. Mr. Lopez explained that this time they had little cargo and only a few passengers for Proxima, not enough to pay for the stop. So that cargo and those passengers were put off until the Maxwell warps next month; this trip the Forward will call at Proxima on the way home, with cargo and, possibly, passengers from the other seven ports. Mr. Lopez explained (and I did not understand) that traveling many light-years in space costs almost nothingÄmostly rations for passengersÄbut stopping at a planet is terribly expensive, so any stop has to be worthwhile on the balance sheet.

So here is where we are going this trip (see second sketch again):
first to Outpost, then to Botany Bay, then to The Realm, on to Midway, Halcyon, Forest, Fiddler's Green, Proxima (at last!), and on home to Earth.

I'm not unhappy about itÄquite the contrary! I will get rid of this "most valuable cargo in the galaxy" less than a month after warping away from Stationary StationÄthen the whole long trip home will be a real tourist trip. Fun! No responsibilities. Lots of time to look over these colonies squired around by eager young officers who smell good and are always polite. If Friday (or Miss Rich Bitch) can't have fun with that setup, it is time to cremate me; I'm dead.

Now see the third sketch, declination across the top, light-years down the side. This one makes the routing seem quite reasonableÄ but if you look back at the second sketch, you will see that the leg from Botany Bay to Outpost, which seems on the third sketch to skim the photosphere of Forest's sun, in fact misses it by many lightyears. Picturing this voyage actually calls for three dimensions. You can take the data from the sketches and from the table below and punch it into your terminal and pull out a three-dimensional hologram; it all makes sense seen that way. There is one on the bridge, frozen so that you can examine it in detail. Mr. Lopez, who made these sketches (all but Joe Centaur and the sad wolf) warned me that a flat plot simply could not portray three-dimensional cosmonautics. But it helps to think of these three sketches as plan view, side view, and front elevation, as in visualizing a house from its plans; that is exactly analogous.

When Mr. Lopez gave me a printout of this table, he warned me
that the data are of about grammar-school accuracy. If you aim a telescope by these coordinates, you will find the right star, but for science and for cosmonautics you need more decimal places, and then correct for "epoeh"Äa fancy way of saying you must bring the data up to date because each star moves. Outpost's sun moves the least; it just about keeps up with the traffic in our part of the galaxy. But the star of Fiddler's Green (Nu~2] Lupi) has a vector of 138 kilometers per secondÄenough that Fiddler's Green will have moved more than 1. 5 billion kilometers between two visits five months apart by the

Forward. This can be worrisomeÄaccording to Mr. Lopez it can worry a skipper right out of his job because whether or not a trip shows a profit depends on how closely a master can bring his ship out of hyperspace to a port planet without hitting something (such as a star!). Like driving an APV blindfolded!

But I will never pilot a hyperspaceship and Captain van Kooten has a solid, reliable look to him. I asked him about it at dinner that night. He nodded. "Ve find it. Only once haf ye had to send some of de boys down in a landing boat to buy someting at a bakery and read de signs."

I didn't know whether he expected me to laugh or to pretend to believe him, so I asked what they bought at the bakery. He turned to the lady on his left and pretended not to hear me. (The bakeshop in the ship makes the best pastry I have ever tasted and should be padlocked.)

Captain van Kooten is a gentle, fatherly manÄyet I have no tron~ ble visualizing him with a pistol in one hand and a cutlass in the other, holding off a mob of mutinous cutthroats. He makes the ship feel safe.

Shizuko is not the only guard placed on me. I think I have identified four more and I am wondering if I have them all. Almost certainly not, as I have sometimes looked around and not spotted any of themÄyet the drill seems to be to have someone near me at all times.

Paranoid? It sounds like it but I'm not. I am a professional who has stayed alive through always noticing anything offbeat. This ship has six hundred and thirty-two first-class passengers, some sixty-odd
uniformed officers, crew also in uniforms, and the cruise director's staff of hosts and hostesses and dancing partners and entertainers and such. The latter dress like passengers but they ~re young and they smile and they make it their business to see to it that the passengers are happy.

The passengers: In this ship a first-class passenger under age seventy is a rarityÄme, for example. We have two teen-age girls, one teen-age boy, two young women, and a wealthy couple on their honeymoon. All others in first class are candidates for a geriatrics home. They are very old, very rich, and extremely self-centeredÄ save for a bare handful who have managed to grow old without turning sour.

Of course none of these old dodderers are my guards, and neither are the youngsters. The cruise staff I got sorted out in the first fortyeight hours, whether they were musicians or whatever. I might have suspected that some of the younger officers had been assigned to watch me were it not that all of them stand duty watches, usually eight hours out of twenty-four, and therefore can't take on another full-time job. But my nose does not play me false; I know why they follow me around. I don't get this much attention dirtside but there is an acute shortage of beddable young females in this shipÄthirty young male officers versus four young, single females in first class, other than Friday. With those odds a nubile female would have to have very bad breath indeed not to carry a train like a comet.

But, with all these categories accounted for, I found some men not accounted for. First class? Yes, they eat in the Ambrosia Room. Business travelers? MaybeÄbut according to the first assistant purser, business travelers go second class, not as swank but just as comfortable, at half the cost.

Item: When Jerry Madsen takes me to The Black Hole with his friends, here is this solitary bloke nursing a drink over in the corner. Next morning Jimmy Lopez takes me swimming; this same bloke is in the pool. In the card room I'm playing one-thumb with Tommy shadow is playing solitaire over on the far side.

Once or twice can be coincidence . . . but at the end of three days I am certain that, anytime I am outside of suite BB, some one of four men is somewhere in sight. He usually stays as far from me
as the geometry of the space permitsÄbut he's there.

Mr. Sikmaa did impress on me that I was to carry "the most valuable package any courier ever carried." But I did not expect him to find it necessary to place guards around inside this ship. Did he think that someone could sneak up and steal it out of my bellybutton?

Or are the shadows not from Mr. Sikmaa? Was the secret broached before I left Earth? Mr. Sikmaa seemed professionally careful . . . but how about Mosby and his jealous secretary? I just don't knowÄand I don't know enough about politics in The Realm to make any guesses.

Later: Both of the young women are part of the watchful eye over me but they close in only when and where the men cannotÄthe beauty parlor, the dress shop, the women's sauna, etc. They never bother me but I'm tired of it already. I'll be glad to deliver the package so that I can fully enjoy this wonderful trip. Luckily the best part is after we leave The Realm. Outpost is such a frost (literally!) that no groundside excursions are planned there. Botany Bay is said to be very pleasant and I must see it because it is a place to which I may migrate later.

The Realm is described as rich and beautiful and I do want to see it as a touristÄbut I won't be moving there. While it is reputed to be quite well governed, it is as absolute a dictatorship as is the Chicago ImpermumÄI ye had enough of that But for a stronger reason I would not consider asking for an immigrant's visa: I know too much. Officially I don't know any'thing as Mr. Sikmaa never admitted it and I didn't askÄbut I won't stretch my luck by asking to live there.

Midway is another place I want to see but don't want to live. Two suns in its sky are enough to make it special . . . but it is the Popein-Exile that makes it very specialÄto visit, not to stay. It really is true that they celebrate Mass there in public! Captain van Kooten says so and Jerry tells me that he has seen it with his own eyes and that I can see it, tooÄno charge, but a contribution for charity on the part of a gentile is good manners.

I'm tempted to do it. It's not really dangerous and I'll probably never have a chance like this again in my whole life.

Of course I'll check out Halcyon and Fiddler's Green. Each must be extra-special or they would not command such high prices .
but I'll be looking for the joker in the deck every mimiuteÄsuch as that at Eden. I would hate to ask Gloria to pay a high fee to get me in . . . then discover that I hated the place.

Forest is supposed to be nothing much for a touristÄno amenitiesÄbut I want to give it a very careful look. It is the newest colony, of course, still in the log-cabin stage and totally dependent on Earth and/or The Realm for tools and instruments.

But isn't that just the time to join a colony in order to feel great gusty joy in every minute?

Jerry just looks sour. He tells me to go look at it. . . and learn for myself that life in the forest primeval is greatly overrated.

I don't know. Maybe I could make a deal for stopover privilege: pick up this ship or one of her sisters some months from now. Must ask the Captain.

Yesterday there was a holo at the Stardust Theater that I wanted to see, a musical comedy, The Connecticut Yankee and Queen Guinevere. It was supposed to be quite funny, with romantic-revival music, and loaded with beautiful horses and beautiful pageantry. I avoided my swains and went alone. Or almost alone; I could not avoid my guards.

This manÄ"number three" in my mind, although the passenger list said that he was "Howard J. Bullfinch, San Diego"Äfollowed me in and settled down right behind me . . . unusual, since they normally stayed as far away from me as the size of a room permitted. Perhaps he thought he might lose track of me after they lowered the lights; I don't know. His presence behind me distracted me. When the Queen sank her fangs into the Yankee and dragged him into her boudoir, instead of thinking about the fun going on in the holotank, I was trying to sort out and analyze all the odors that reached meÄ not easy in a crowded theater.

When the play was over and the lights came up, I reached the side aisle just as my shadow did; he gave way. I smiled and thanked him, then made exit by the forward door; he followed. That exit leads to a short staircase, four steps. I stumbled, fell backward, and he caught me.

"Thank you!" I said. "For that I am taking you to the Centaur Bar to buy you a drink."

"Oh, not at all!"

"Oh, most emphatically. You are going to explain to me why you have been following me and who hired you and several other things."

He hesitated. "You have made some mistake."

"Not me, Mac. Would you rather come quietly . . . or would you rather explain it to the Captain?"

He gave a little quizzical smile. (Or was it cynical?) "Your words are most persuasive even though you are mistaken. But I insist on paying for the drinks."

"All right. You owe me that. And then some."

I picked a table in the corner where we could not be overheard by other customers. . . thereby ensuring that we could be overheard by an Ear. But, aboard ship, how can one avoid an Ear? You can't.

We were served, then I said to him almost silently, "Can you read lips?"

"Not very well," he admitted at the same low level.

"Very well, let's keep it as low as possible and hope that random noise will confuse the Ear. Mac, tell me one thing: Have you raped any other helpless females lately?"

He flinched. I don't think anyone can be hit that hard and not flinch. But he paid me the courtesy of respecting my brain and showed that he was a brain, too, by answering, "Miss Friday, how did you recognize me?"

"Odor," I answered. "Odor at first; you sat too close to me. Then, as we left the theater, I forced on you a voice check. And I stumbled on the stairs and forced you to put your arms around me. That did it. Is there an Ear on us here?"

"Probably. But it may not be recording and it is possible that no one is monitoring it now."

"Too much." I worried it. Walk side by side on the promenade? An Ear would have trouble with that setup without continuous tracking, but tracking could be automatic if Mac had a beacon on him. Or I myself might be booby-trapped. Aquarius Pool? Acoustics in a swimming pool are always bad, which was good. But, damn it, I needed more privacy. "Leave your drink and come with me."

I took him to cabin BB. Shizuko let us in. So far as I could tell she stood a twenty-four-hour watch except that she slept when I did. Or I thought she did. I asked her, "What do we have later, Shizuko?"

"Purser's party, Missy. Nineteen o'clock."

"I see. Go take a walk or something. Come back in one hour."

"Too late. Thirty minutes."

"One hour!"

She answered humbly, "Yes, Missy"Äbut not before I caught her glance at him and his scant five-millimeter nod.

With Shizuko gone and the door bolted I said quietly, "Are you her boss or is she yours?"

"Some argument," he admitted. "Maybe `cooperating independent agents' describes it."

"I see. She's quite professional. Mac, do you know where the Ears are in here or will we have to work out some way to defeat them? Are you willing to have your sordid past discussed and recorded on tape somewhere? I can't think of anything that would embarrass meÄafter all, I was the innocent victimÄbut I want you to speak freely."

Instead of answering he pointed: over my couch on the lounge side, over the head of my bed, into my bathroomÄthen he touched his eye and pointed to a spot where the bulkhead met the overhead opposite the couch.

I nodded. Then I dragged two chairs off into the corner farthest from the couch and out of line of sight for the Eye location he had indicated. I switched on the terminal, punched it for music, selected a tape featuring the Salt Lake City Choir. Perhaps an Ear could reach through and sort out our voices but I did not think so.

We sat down and I continued, "Mac, can you think of any good reason why I should not kill you right now?"

"Just like that? Without even a hearing?"

"Why do we need a hearing? You raped me. You know it, I know it. But I am giving you this much of a hearing. Can you think of any reason why you should not be summarily executed for your crime?"

"Well, since you put it that wayÄ No, I can't."

Men will be the death of me. "Mac, you are a most exasperating man. Can't you see that I don't want to kill you and am looking for a
reasonable excuse not to do so? But I can't manage it without your help. How did you get mixed up in so dirty a business as a gang rape of a blindfolded, helpless woman?"

I sat and let him stew and that's just what he did. At last he said, "I could claim that I was so deep into it by then that, if I balked at raping you, I would have been killed myself, right then."

"Is that true?" I asked, feeling contempt for him.

"True enough, but not relevant. Miss Friday, I did it because I wanted to. Because you are so sexy you could corrupt a Stylite. Or cause Venus to switch to Lesbos. I tried to tell myself that I couldn't avoid it. But I knew better. All right, do you want my help in making it look like suicide?"

"Not necessary." (So sexy I could corrupt a Stylite. What in the world is a Stylite?Ämust find out. He seemed to mean it as a superlative.)

He persisted. "Aboard ship you can't run away. A dead body can be embarrassing."

"Oh, I think not. You were hired to watch over me; do you think anything would be done to me? But you already know that I intend to let you get away with it. However, I want explanations before I let you go. How did you escape the fire? When I smelled you, I was astonished; I had assumed that you were dead."

"I wasn't at the fire; I ran for it before that."

"Really? Why?"

"Two reasons. I planned to leave as soon as I learned what I had come for. But mostly on your account."

"Mac, don't expect me to believe too many unlikely things. What was this you had come there to learn?"

"I never found out. I was after the same thing they were after:
Why you had gone to Ell-Five. I heard them interrogate you and I could see that you did not know. So I left. Fast."

"That's true. I was a carrier pigeon . . . and when does a carrier pigeon know what a war is about? They wasted their time, torturing me."

Swelp me, he looked shocked. "They tortured you?"

I said sharply, "Are you trying to play innocent?"

"Eh? No, no, I'm guilty as sin and I know it. Of rape. ButI didn't
have any notion that they had tortured you. That's stupid, that's centuries out of date. What I heard was straight interrogation, then they shot you with babble juiceÄand you told the same story. So I knew you were telling the truth and I got out of there. Fast."

"The more you tell me, the more questions you raise. Who were you working for, why were you doing it, why did you leave, why did they let you leave, who was that voice that gave you ordersÄthe one called the MajorÄwhy was everybody so anxious to know what I was carryingÄso anxious that they would mount a military attack and waste a lot of lives and wind up torturing me and sawing off my right tit? Why?"

"They did that to you?" (Swelp me, Mac's face was utterly impassive until I mentioned damage done to my starboard milk gland. Will somebody explain males to me? With diagrams and short words?)

"Oh. Complete regeneration, functional as well as cosmetic. I'll show youÄlater. If you answer my questions fully. You can check it against how it used to look. Now back to business. Talk."

Mac claimed to have been a double agent. He said that, at the time, he was an intelligence officer in a quasi-military hired out to Muriel Shipstone Laboratories. As

such, and working alone, he had penetrated the Major's organizationÄ "Wait a minute!" I demanded. "Did he die in the fire? The one called the Major?"

"I'm fairly sure he did. Although Mosby may be the only one who knows."

"Mosby? Franklin Mosby? Finders, Incorporated?"

"I hope he doesn't have brothers; one is too many. Yes. But Finders, Inc. is just a front; he's a stooge for Shipstone Unlimited."

"But you said you were working for Shipstone, tooÄthe laboratories."

Mac looked surprised. "But the whole Red Thursday ruckus was an intramural fight amongst the top boys; everybody knows that."

I sighed. "I seem to have led a protected life. All right, you were working for Shipstone, one piece of it, and as a double agent you were working for Shipstone, another piece of it. But why was I the bone being fought over?"

"Miss Friday, I don't know; that is what I was supposed to find out. But you were believed to be an agent of Kettle Belly BalÄ"

"Stop right there. If you are going to talk about the late Dr. Baldwin, please do not use that dreadful nickname."

"Sorry. You were thought to be an agent of System Enterprises, that is to say, of Dr. Baldwin, and you confirmed it by going to his headquartersÄ"

"Stop again. Were you part of the gang that jumped me there?"

"I am happy to say that I was not. You killed two and one died later and none of them was unhurt. Miss Friday, you're a wildcat."

"Go on."

"KetÄ Dr. Baldwin was a mugwump, a maverick, not part of the system. With Red Thursday being mountedÄ"

"What's Red Thursday got to do with this?"

"Why, everything. Whatever it was that you carried was bound to affect the timing, at least. I think the Council for SurvivalÄthat's the side Mosby's goons were working forÄgot the wind up and moved before they were ready. Perhaps that's why nothing much ever came of it. They compromised their differences in the boardrooms. But I've never seen an analysis."

(Nor had I, and now I probably never would. I longed for a few hours at the unlimited-service terminal I had had at Pajaro Sands. What directors if any had been killed on Red Thursday and its sequelae? What had the stock market done? I suspect that all really important answers never get into the history books. Boss had been requiring me to learn the sort of things that would eventually have led me to the answersÄbut he had died and my education stopped abruptly. For now. But I would still feed the Elephant's Child! Someday.)

"Mac, did Mosby hire you for this job? Guarding me in this ship.

"Eh? No, I've only had that one contact with Mosby and that under a phony. I was hired for this through a recruiter working for a cultural attach, of the Ambassador for The Realm in Geneva. This job isn't one to be ashamed of, truly. We are taking care of you. The best care."

"Must be dull with no rape."

"Ouch."

"What are your instructions about me? And how many of you are there? You're in charge, are you not?"

He hesitated. "Miss Friday, you are asking me to tell my employer's secrets. In the profession we don't do that . . . as I think you know."

"Fiddlesticks. You knew when you walked in that door that your life depended on answering my questions. Think back to that gang that jumped me on Dr. B~ildwin's farmÄthink what happened to them. Then speak up."

"I've thought about it, many times. Yes, I'm in charge . . . except, possibly, for TillyÄ"

"Which one is Tilly?"

"Sorry. Shizuko. That's a professional name. At UCLA she was Matilda Jackson. We all had been waiting in the Sky High Hotel almost two monthsÄ"

`We,' plural. Name them. Ship's roster names. And don't try to stall me with guff about the mercenary's code; Shizuko will be back in a few minutes."

He named themÄno surprises; I had spotted them all. Clumsy. Boss would never have tolerated it. "Go on."

"We waited and the Dirac warped without us and only twentyfour hours before warping time for the Forward we were suddenly alerted to leave in the Forward. Then I was supplied with color holos of you for us to studyÄand, Miss Friday, when I saw your picture, I almost fainted."

"Pictures were that bad? Oh, come, now."

"Huh? No, they were quite good. But consider where I saw you last. I thought that you had died in that fire. I, uh, well, you might say I had grieved over you. Some at least."

"Thank you. I think. Okay, seven, with you in charge. This trip isn't cheap, Mac; why do I need seven chaperons?"

"I had thought that you might tell me. Not that it is any of my business why you are making this trip. All I can tell you are my instructions. You are to be delivered to The Realm in perfect condition. Not a hangnail, not a bruise, not a sniffle. When we arrive, an officer of the palace guard comes aboard and then you're his prob
1cm. But we don't get paid our delivery bonus until you've had a physical examination. Then we are paid, and we deadhead home."

I thought about it. It was consistent with Mr. Sikmaa's worry over the "most valuable package a courier ever carried"Äbut there was something phony about it. The old belt-and-suspenders redundantbackups principle was understandableÄbut seven people, full-time, just to see that I did not fall downstairs and break my neck? It did not taste right.

"Mac, I can't think of anything else to ask you now, and ShizukoÄI mean `Tilly'Äis due back. We'll talk later."

"Very well. Miss Friday, why do you call me Mac?"

"That's the only name I've ever heard you called. Socially, I mean. At a gang rape we both attended. I'm reasonably sure that you are not `Howard J. Bullfinch.' What do you prefer to be called?"

"Oh. Yes, I was Mac on that mission. But I'm usually called Pete."

"Your name is Peter?"

"Uh, well, not exactly. It'sÄPercival. But I'm not called that."

I refrained from laughing. "I don't see why not, Pete. Brave and honorable men have been named Percival. I think that's Tilly at the door, anxious to bathe me and to dress me. One last word: Do you know why you are still breathing? Not dead?"

"Because you let me pee. Thank you for letting me pee before you handcuffed me to that bed."

He suddenly looked wry. "I got chewed out for that."

"You did? Why?"

"The Major intended to force you to wet the bed. He figured that it would help to make you crack."

"So? The bloody amateur. Pete, that was the point at which I decided that you were not totally beyond hope."

XXX

Outpost isn't much. Its sun is a G8 star, which puts it pretty far down the list of Sol-like stars since Sol is a G2. This is markedly cooler than our solar system star. But the star is not that important as long as it is a sol-type (G-type) star. (It may be possible to colonize around other types of stars someday but it seems reasonable to stick to stars with spectral distributions that match the human eye and don't pass out too much lethal radiationÄI'm quoting Jerry. Anyhow there are over four hundred C-type stars no farther from Earth than is The RealmÄso says Jaime LopezÄwhich could keep us busy for a few years.)

But assume a G-type star. Then you need a planet the right distance from it for it to be warm but not too warm. Then its surface gravity should be strong enough to hold its atmosphere firmly in place. That atmosphere must have had time to cook, in connection with evolving life, long enough to offer air suitable for life-as-weknow-it. (Life-as-we-don't-know-it is a fascinating subject but has nothing to do with colonization by Earth people. Not this week. Nor are we discussing colonies of living artifacts or cyborgs. This is about colonists from Dallas or Tashkent.)

Outpost just barely qualifies. It's a poor relation. Its sea-level oxygen is so scanty that one needs to walk slowly, as on top of a high mountain. It sits back so far from its star that it has just two sorts of weather, cool and freezing. Its axis stands almost straight up; it gets
its seasons from an eccentric orbitÄso you don't go south for the winter because the winter comes to you wherever you are. There is a growing season of sorts about twenty degrees each side of the equator but the winter is much longer than the summerÄof course. That "of course" refers to Kepler's Laws, the one about radius vectors and equal areas. (I cribbed most of this out of the Daily Forward.) When the prizes were handed out, Outpost was ahint the door.

But I was frantically eager to see it.

Why? Because I had never been farther away from home than LunaÄand Luna almost is home. Outpost is over forty light-years from Earth. Do you know how many kilometers that is? (Neither did I.) Here's what it is:

300,000 x 40.7 x 31,557,600 = 385,318,296,000,000 kilometers.

Round it off. Four hundred million million kilometers.

Ship's schedule called for us to achieve stationary orbit (22. 1 hours' orbital period, that being the length of the day at Outpost) at oh-two-four-seven and for the starboard landing boat to drop away very early in the morning (ship's time "morning")Äoh-three hundred sharp. Not many signed up for the rideÄthat's all it would be since no passenger would set foot on the groundÄas the midwatch isn't too popular an hour with most of our passengers.

But I would as lief miss Armageddon. I left a good party and went to bed at twenty-two hundred in order to soak up several hours of sleep before rise and shine. I got up at two o'clock and ducked into my bathroom, latching the door behind meÄif I don't latch it, Shizuko comes straight in behind me; I learned that my first day in the ship. She was up and dressed when I woke up.

Latched the door behind me and promptly threw up.

This surprised me. I am not immune to motion sickness but I had not been bothered this trip. Riding the Beanstalk plays hob with my stomach and it goes on for endless hours. But in the Forward I had noticed one surge when we warped into hyperspace, then just before dinner last night when we broke into normal space I had felt a simi
lar tremor, but the bridge had warned us to expect it.

Did the (artificial) gravity feel steady now? I couldn't be sure. I was quite dizzy but that might be an aftereffect of vomitingÄfor I had certainly thrown up as thoroughly as if I had been riding that goddam Beanstalk.

I rinsed my mouth, brushed my teeth without dentifrice, rinsed my mouth again, and said to myself, "Friday, that's your breakfast; you are not going to let an unexpected case of Beanstalk tummy keep you from seeing Outpost. Besides, you've gained two kilos and it is time to cut down on the calories."

Having given my stomach that fight talk and then turned it over to mind-control discipline, I went out, let Tilly-Shizuko help me into a heavy jump suit, then headed for the starboard landing-boat airlock, with Shizuko paddling along behind, carrying heavy coats for each of us. At first I had been inclined to be chummy with Shizuko, but after deducing, then confirming, her true role, I tended to resent her. Petty of me, no doubt. But a spy is not entitled to the friendly consideration that a servant always rates. I was not rude to her; I simply ignored her much of the time. This morning I did not feel sociable at best.

Mr. Woo, purser's assistant in charge of ground excursions, was at the airlock with a clipboard. "Miss Friday, your name isn't on my list."

"I certainly signed up. Either add it to your list or call the Captain."

"I can't do that."

"So? Then I am going on a sit-down strike right in the middle of your airlock. I don't like this, Mr. Woo. If you are trying to suggest that I should not be here because of some clerical error in your office, I shall like it still less."

"Mmm, I suppose it is a clerical error. There's not much time, so why don't you go in, let them show you to a seat, and I'll straighten it out after I get these other people checked off."

He did not object to Shizuko's following me. We went forward along a long passagewayÄeven the landing boats of the Forward are enormousÄfollowing arrows that said "This Way to Bridge" and arrived in a fairly large room, something like the interior of an omnibus APV: dual controls up front, seats for passengers behind, a big windshieldÄand for the first time since we left Earth I was seeing "sunlight."

The light of Outpost's sun, it was, lighting a white, very white, curve of planet ahead, with black sky beyond. The sun-star was itself not in sight. Shizuko and I found seats and fastened seatbelts, the five-way sort used in SBs. Knowing that we were going by antigrav I was going to let it go simply with fastening the lap belt. But my little shadow twittered over me and fastened everything.

After a while Mr. Woo came looking, finally spotted me. He leaned across the man between me and the aisle and said, "Miss Friday, I'm sorry but you still aren't on the list."

::Inde~P What did the Captain say?"

I couldn t reach him.

"That's your answer then. I stay."

"I'm sorry. No."

"Really? Which end are you going to carry? And who is going to help you carry me? For you will have to drag me kicking and screaming and, I assure you, I do kick and scream."

"Miss Friday, we can't have this."

The passenger next to me said, "Young man, aren't you making a fool of yourself? This young lady is a first-class passenger; I've noticed her in the dining roomÄat the Captain's table. Now get that silly clipboard out of my face and find something better to do."

Looking worriedÄjunior pursers always look worriedÄMr. Woo went away. After a bit the red light came on, the siren sounded, and a loud voice said, "Leaving orbit! Prepare for surges in weight."

I had a miserable day.

Three hours to get down to the surface, two hours on the ground, three hours to get back up to stationary orbitÄthe trip down had music varied by an amazingly dull lecture on Outpost; the trip back had nothing but music, which was better. The two hours on the ground might have been okay had we been able to leave the landing craft. But we had to stay inboard. We were allowed to unbelt and go aft to what was called the lounge but was really just a space with a coffee-and-sandwiches bar on the port side and transparent ports on the after end. Through these you could see the migrants getting out on the deck below and cargo being unloaded.

Low rolling hills covered with snow . . . some sort of stunted growth in the middle distance. . . near the ship low b.uildings connected by snow sheds. The immigrants were all bundled up but they wasted no time in hurrying toward the buildings. The cargo was going onto a string of flatbed trucks pulled by a machine of some sort that puffed out clouds of black smoke . . . exactly the sort of thing you see pictured in children's history books! But this was not a picture.

I heard one woman say to her companion, "Why would anyone decide to settle here?"

Her companion made some pious answer about "the Lord's will" and I moved away. How can anyone get to be seventy years old (she was at least that) without knowing that no one "decided" to settle on Outpost. . . except in the limited sense that one "decides" to accept transportation as the only alternative to death or life imprisonment?

My stomach still felt queasy so I did not risk the sandwiches, but I thought a cup of coffee might helpÄuntil I whiffed it. Then I went straight to the rest rooms forward of the lounge, and won the title of "Ironjaw Friday." I won it fair and square but nobody knows about it but meÄI found the stalls all occupied and had to wait. . . and wait I did, jaw muscles rigid. After a century or two a stall was vacated and I grabbed it and threw up again. Dry heaves, mostlyÄI should not have smelled the coffee.

The trip back up was endless.

Once in the Forward I called my friend Jerry Madsen, the junior ship's surgeon, and asked to see him professionally. By ship's rules the medical department holds clinic at oh-nine hundred each day, then handles only emergencies at other times. But I knew that Jerry would be willing to see me, whatever the excuse. I told him that it was nothing serious; I just wanted to get from him some of those pills he prescribed for old ladies with jumpy tummiesÄthe motionsickness pills. He asked me to meet him at his office.

Instead of having the pills waiting for me he ushered me into an examination room and closed the door. "Miss Friday, shall I send for a nurse? Or would you rather be seen by a female doctor? I can call Dr. Garcia but I hate to wake her; she was up most of the night."

I said, "Jerry, what is this? When did I stop being Marj to you? And why the prissy protocol? I just want a handful of those seasick pills. The little pink ones."

"Sit down, please. Miss FridayÄokay, MarjÄwe don't prescribe that drug or its derivatives for young femalesÄto be precise, females of childbearing ageÄwithout making certain that they are not pregnant. It can cause birth defects."

"Oh. Set your mind at rest, lover boy; I am not knocked up."

"That's what we are here to find out, Marj. If you areÄor if you become soÄwe have other drugs that will make you comfortable."

Ah so! The dear thing was just trying to take care of me. "Boss man, suppose I tell you, Cub Scout honor, that I ain't done nothin' a-tall for my last two periods? Although several have tried. You among them."

"Why, I would say, `Take this cup and get me a urine sample' and then I'll take a blood sample, and a saliva sample. I've dealt before with women who hadn't done nothin'."

"You're a cynic, Jerry."

"I'm trying to take care of you, dear."

"I know you are, you sweet thing. All right, I'll go along with the nonsense. If the mouse squealsÄ"

"It's a gerbil."

"If the gerbil says yes, you can notify the Pope-in-Exile that it's happened at last, and I'll buy you a bottle of champagne. This has been the longest dry spell of my life."

Jerry took his samples and did nineteen other things, and gave me a blue pill to take before dinner and a yellow pill to make me sleep and another blue pill to take before breakfast. "These don't have quite the authority of the stuff you asked for but they will do

and they don't cause a baby to be born with his feet on backwards or some such. I'll call you tomorrow morning as soon as I'm through with office hours."

"I thought that pregnancy tests today were service-while-youwait?"

"Get along with you. Your great-grandmother used to find out through her waistband becoming too tight. You're spoiled. Just hope I don't have to run the test over."

So I thanked him and kissed him, which he pretended to try to avoid but not very hard. Jerry is a lamb. -

The blue pills did let me eat dinner and breakfast.

I stayed in my cabin after breakfast. Jerry called about on time. "Brace yourself, Marj. You owe me a bottle of champagne."

"What?" Then I quieted down for Tilly's benefit. "Jerry, you are certifiably insane. Out of your skull."

"Certainly," he agreed. "But that's no handicap in this business. Stop in and we'll discuss a regime for you. Say at fourteen?"

"Say at right now. I want to talk to that gerbil."

Jerry convinced me. He went over the details, showing just how each test was conducted. Miracles do happen and I was demonstrably pregnant . . . so that's why my breasts had been feeling sort of tender lately. He had a little pamphlet for me, telling me what to do, what to eat, how to bathe, what to avoid, what to expect, and dreary so forth. I thanked him and took it and left. Neither of us mentioned the possibility of abortion and he made no wisecracks about women "who hadn't done nothin'."

Only I hadn't. Burt was the last time and that was two periods back and anyhow I had been rendered surgically sterile at menarche and had never used contraception of any sort in all my very busy social life. All those hundreds and hundreds of times and now he tells me I'm pregnant!

I am not totally stupid. Having accepted the fact, the old Sherlock Holmes rule told me when and where and how it had happened. Once back in cabin BB I went into the bathroom, latched the door, took off my clothes, and lay down on the floorÄspread both hands around my navel, tensed my muscles, and pushed.

A little nylon sphere popped out and I grabbed it.

I examined it carefully. No doubt about it; this was the same little marble I had worn in there since the trick surgery was done to me, always worn except when I was carrying a message there. Not a container for an ovum in stasis, not a container for anythingÄjust a small, featureless, translucent sphere. I looked at it again and popped it back in.

So they had lied to me. I had wondered at the time about "stasis" at body temperature because the only stasis for living tissues I had
ever heard of involved cryogenic temperatures, liquid nitrogen or lower.

But that was Mr. Sikmaa's problem and I don't claim to be a biophysicistÄif he had confidence in his scientists, it was not my place to argue. I was a courier; my sole responsibility was to deliver the package.

What package? Friday, you know durn well what package. Not one in your navel. One about ten centimeters farther inside. One that was planted in you one night in Florida when you were induced to sleep sounder than you knew. One that takes nine months to unload. That postpones your plans to complete the Grand Tour, does it not? If this fetus is what it has to be, they won't let you leave The Realm until after you unload.

If they wanted a host mother, why the blinkin' hell didn't they say so? I would have been reasonable about it.

Wait a moment! The Dauphiness has to give birth to this baby. That is what the whole hanky-panky is about: an heir to the throne, free of any congenital defects, from the DauphinessÄunarguably from the Dauphiness, born in the presence of about four court physicians and three nurses and a dozen members of the court. Not you, you mongrel AP with the phony birth certificate!

Which took me back to the original scenario with just the slightest variation: Miss Marjorie Friday, wealthy tourist, goes groundside on The Realm to enjoy the glories of the imperial capital . . . and catches a bad cold and has to go to hospital. And the Dauphiness is brought to the same hospital andÄno, hold it! Would the Dauphiness do anything so plebeian as to be a patient in a hospital open to tourists?

Okay, try this: You enter hospital with a bad cold, as instructed. About three in the morning you go out the back door on a meat wagon with a sheet draped over you. You wind up in the Palace. How soon? How long will it take the Palace physicians to fiddle her royal body chemistry into receptiveness for the fetus? Oh, forget it, Friday; you don't know and don't have to know. When she is ready, they place both of you on operating tables and spread your legs and take it out of you and plant it in her, while it's small and no problem.

Then you get paid a fancy price and you leave. Does The First Citizen thank you? Probably not in person. But possibly incognito ifÄ Stop it, Friday! Don't daydream; you know better. At a lecture clear back in basicÄone of Boss's orientation lectures, it wasÄ "The trouble with this sort of mission is that, after an agent has successfully completed it, something permanent happens to that agent, something that keeps him from talking, then or later. So, no matter how lavish the fee, it is well to avoid this class of mission."

XXXI

During the leg to Botany Bay I mulled that thought over and over, trying to find some flaw in it. I recalled the classic case of J. F. Kennedy. His putative assassin had been killed (assassinated) too quickly for even a preliminary hearing. Then there was that dentist who had gunned down Huey LongÄgunned down himself a few seconds later. And any number of agents during the long Cold War who had lived just long enough to carry out their missions and "just happened" to walk in front of speeding vehicles.

But the picture that kept coming back to my mind was so old that it is almost mythology: A lonely beach and a pirate chief supervising the burying of treasure. The hole is dug, the chests of loot placed thereinÄand the men who dug the hole are shot; their bodies help to fill the hole.

Yes, I'm being melodramatic. But it is my womb we are talking about, not yours. Everybody in the Known Universe knows that the father of the present First Citizen climbed to the throne over uncounted dead bodies and his son stays on that throne by being even more ruthless than his father.

Is he going to thank me for having improved his line? Or is he going to bury my bones in his deepest dungeon?

Don't kid yourself, Friday; knowing too much is a capital offense. In politics it always has been. If they ever had any intention of treating you fairly, you would not be pregnant. Therefore you are forced
to assume that they will not treat you fairly after they take this royal fetus out of you.

What I had to do was obvious.

What was not obvious was how I could do it.

It no longer seemed a clerical error that my name had not been on the list to go down to the surface at Outpost.

At the cocktail hour the next evening I saw Jerry and asked him to dance with me. It was a classic waltz, which brought my face close enough to his to talk privately. "How's the tummy?" he asked.

"The blue pills do the trick," I assured him. "Jerry, who knows about this besides you and me?"

"Now there's an odd thing. I've been so busy that I haven't had time to enter anything in your medical folder. The notes are in my safe."

"So? How about the lab technician?"

"He's been so overworked that I ran those tests myself."

"Well, well. Do you think that there is a possibility that those notes might be lost? Burned, maybe?"

"We never burn anything in the ship; it annoys the air-conditioning engineer. Instead we shred and recycle. Fear not, little girl; your shameful secret is safe with me."

"Jerry, you're my pal. Dear, if it hadn't been for my maid, I think I could have blamed this baby on you. My first night in the shipÄ remember?"

"I'm not likely to forget. I had an attack of acute frustration."

"Having a maid along is not my idea; my family planted her on me, and she sticks to me like a leech. One would think my family does not trust me merely because they know they can'tÄas you know all too well. Can you think of a way to avoid her chaperonage? I'm feeling very pliable. With you. A man I can trust with secrets."

"Um. I must give it some thought. My stateroom is no good; you have to pass two dozen other officers' rooms and go through the wardroom to reach it. Watch it; here comes Jimmy."

Yes, of course I was trying to bribe him into silence. But besides that I was grateful and felt that I owed him something. If congress with my unvirgin carcass was what he wanted (and it was), I was willingÄand willing on my own account, too; I had been quite underprivileged lately and Jerry is an attractive man. I was not embar
rassed over being pregnant (although the idea was decidedly novel to me) but I did want to keep my condition secret (if possibleÄif there were not already a platoon of people in the ship who knew of it!)Ä keep it secret, if it was, while I sorted out what to do.

The extent of my predicament may not be clear; maybe I had better draw a diagram. If I went on to The Realm, I expected to be killed in a surgical operating room, all quiet and legal and proper. If you don't believe that such things can happen, we aren't living in the same world and there is no point in your reading any more of this memoir. Throughout history the conventional way of dealing with an awkward witness has been to arrange for him to stop breathing.

This might not happen to me. But all the signs suggested that it wouldÄif I went to The Realm.

Just stay aboard? I thought of that. . . but Pete-Mac's words echoed in my ears: "When we arrive, an officer of the palace guard comes aboard and then you're his problem." Apparently they weren't even going to wait for me to go groundside and pretend to fall ill.

Ergo, I must leave the ship before we reached The RealmÄi.e., Botany Bay, no other choice.

Simple. Just walk off the ship.

Oh, sure! Walk down the gangway and wave good-bye from the ground.

This is not an ocean ship. The closest the Forward ever gets to a planet is its stationary orbitÄfor Botany Bay that is about thirty-five thousand kilometers. That's a long way to go in some very thin vacuum. The only possible way I could get down to the surface of Botany Bay would be in one of the ship's landing boats, just as I had at Outpost.

Friday, they are not going to let you walk aboard that landing boat. At Outpost you bulled your way aboard. That has alerted them; you won't manage it a second time. What will happen? Mr. Woo or somebody will be at the airlock with a listÄand again your name is not on it. But this time he has an armed master-at-arms with him. What do you do?

Why, I disarm him, bang their heads together, step over their unconscious bodies, and take a seat. You can do it, Friday; you've
been trained for it and genetically designed for just that sort of rough stuff.

Then what happens? The landing boat does not leave on time. It waits in its cradle while a squad of eight comes in and by brute force and a tranquilizer dart takes you out of the boat and locks you into cabin BBÄwhere you stay until that officer of the palace guard takes custody of your carcass.

This is not a problem rough stuff can solve.

That leaves sweet talk, sex appeal, and bribery.

Wait! What about honesty?

Huh?

Certainly. Go straight to the Captain. Tell him what Mr. Sikmaa promised you, tell him how you were swindled, get Jerry to show him the pregnancy report, tell him that you are frightened and have decided to wait on Botany Bay until some ship calls that is headed back to Earth, not to The Realm. He's a sweet, fatherly old dear; you've seen pictures of his daughtersÄhe'll take care of you!

What would Boss's opinion be of that?

He would note that you sit on the Captain's rightÄwhy?

You were given one of the ship's most posh cabins at the last minuteÄwhy?

Space was found for seven others, people who spend all their time watching youÄdo you think the Captain does not know this?

Somebody took your name off the ground-trip list for OutpostÄ who?

Who owns HyperSpace Lines? Thirty percent is owned by Interworld, which in turn is owned or controlled by various segments of the Shipstone group. And you noticed that 11 percent was owned by three banks on The RealmÄyou noticed this because other chunks of Shipstone companies were owned from The Realm.

So don't expect too much from sweet old Captain van Kooten. You can hear him now: "Oh, I don't zink so. Mr. Sikmaa is a goot friend of mine; I haf known him for

years. Yes, I did promise him zat no chances would be taken wiz your safety; zat's vy I can't let you go down to vild, uncivilized planets. But yen ye go back, I show you real, goot time on Halcyon, I promise. Now you yust be a goot girl and not make me any more troublesÄhenh?"

He might even believe it.

He almost certainly knows that you are not "Miss Rich Bitch" and probably has been told that you contracted as a host mother (probably not told that it was for the Royal FamilyÄalthough he may guess it) and he would simply think that you are trying to welch on a legal and equitable contract. Friday, you have not one word in writing that would even tend to indicate that you were swindled.

Don't expect help from the Captain. Friday, you're on your own.

It was only three days before our scheduled arrival at Botany Bay that any change took place. I did a lot of pondering but most of it was maunderingÄfutile and time-wasting imaginings about what I would do if I could not manage to jump ship in Botany Bay. Like this: "You heard me, Captain! I'm locking myself in my cabin until we leave The Realm. If you have the door broken down so that you can turn me over to that palace guard officer, I can't stop youÄbut a dead body is all you'll find!"

(Ridiculous. Sleepy gas through the air pipes is all it would take to outflank me.)

OrÄ "Captain, have you ever seen a knitting-needle abortion? You are invited to come watch; I understand that one can be quite bloody."

(Even more ridiculous. I can talk about abortion; I can't do it. Even though this wart inside me is no kin to me, it is nevertheless my innocent guest.)

I tried not to waste time on such useless thoughts but to concentrate my mind on subversion while continuing to behave normally. When the purser's office announced that it was time to sign up for excursions on Botany Bay, I was one of the first to show up, going over all the possibilities, asking questions, taking brochures to my cabin, and signing up for and paying cash for all the best and most expensive trips.

That night at dinner I chattered to the Captain about the trips I had picked, asked his opinions on each, and complained again about my name having been left off the list at Outpost and asked him to check on it for me this timeÄas if the Captain of a giant liner had nothing better to do than to run errands for Miss Rich Bitch. So far as I could see, he did not flinch under any of thisÄhe certainly did not tell me that I could not go groundside. But he may
be as steeped in sin as I am; I learned to lie with a straight face long before I left the crŠche.

That evening (ship's schedule time) I found myself in The Black Hole with my first three swains: Dr. Jerry Madsen, Jaime "Jimmy" Lopez, and Tom Udell. Tom is first assistant supercargo and I had never known quite what that is. All that I really knew was that he wore one more stripe than the other two. That first night aboard Jimmy had told me solemnly that Tom was the head janitor.

Tom had not denied it. He answered, "You forgot `furniture mover.'

This night, less than seventy-two hours out from Botany Bay, I found out part of what Tom did. The starboard landing boat was being loaded with cargo for Botany Bay. "The port boat we loaded at Beanstalk," he told me. "But we had to load the starboard

boat for Outpost. We need both of them to handle Botany Bay, so we have to shift cargo this leg." He grinned. "Lots of sweaty work."

"It's good for you, Tommy; you're getting fat."

"Speak for yourself, Jaime."

I asked how they loaded the boat. "That airlock looks pretty small to me."

"We don't move cargo through that. Would you like to see how we handle it?"

So I made a date with him for the next morning. And learned things.

The holds in the Forward are so enormous that they breed agoraphobia rather than claustrophobia. But even the holds in the landing boats are huge. Some of the items shipped are enormous, too, especially machinery. Botany Bay was receiving a Westinghouse turbogeneratorÄbig as a house. I asked Tom how in the world they would move that?

He grinned. "Black magic." Four of his cargomen placed a metallic net around it and fastened a suitcase-size metal box to it. Tom inspected it, then said, "Okay, fire it up."

The leaderÄthe "snapper"Ädid so. . . and this metal behemoth quivered and lifted a touch: a portable antigrav unit, not unlike that for an APV, but out in the open instead of built into a shell.

With extreme care, by hand, using lines and poles, they moved this thing through an enormous door and into the hold of the starboard boat. Tom pointed out that, while this huge monster was floating, free of the ship's artificial gravity, it was as ponderously massive as ever and could crush a man as easily as a man can crush an insect. "They depend on each other and have to trust each other. I'm responsibleÄbut it's no use to a dead man for me to take the blame; they must take care of each other."

What he was really responsible for, he told me, was being certain that each item was placed by plan and was tied down solidly against surges, and also being absolutely certain that the big cargo doors, both sides, were actually vacuum-tight each time they were closed after being opened.

Tom showed me through the landing boat's migrant-passenger spaces. "We've got more new colonists for Botany Bay than for anywhere else. When we leave there, third class will be almost deserted."

"Are they all Aussies?" I asked.

"Oh, no. Lots of them are but about a third of them are not. But one thing they all do have in common; they are all fluent in English. It's the only colony with a language requirement. They are trying to ensure that their whole planet will have a single language."

"I heard something about that. Why?"

"Some notion that they are less likely to have wars. Maybe so. but the bloodiest wars in history have been fratricidal wars. No language problem."

I didn't have an opinion so I didn't comment. We left the boat through the passenger airlock and Tom closed it behind us. Then I recalled that I had left a scarf behind. "Tom, did you see it? I know I had it in the migrants' hold."

"No, but we'll find it." He turned back and unlocked the airlock door.

The scarf was where I had dropped it between two benches in the migrants' space. I flipped it around Tom's neck and pulled his face down to mine and thanked him, and let my appreciation progress as far as he cared to push itÄwhich was pretty far but not that far as he was still on duty.

He deserved my best thanks. That door has a combination lock. Now I could open it.

When I returned from inspecting the cargo holds and the landing boat, it was almost lunchtime. Shizuko, as usual, was doing some sort of busywork (it can't take all of one woman's tithe to see that another woman is well groomed).

I said to her, "I don't want to go to the dining room. I want to take a quick shower, grab a robe, and eat here."

::~at will Missy have? I will order."

Order for both of us.

"For me?"

"For you. I don't want to eat alone, I just don't want to have to dress up and go to the dining room. Don't argue; just punch for the menu." I headed for the bath.

I heard her start to order but by the time I switched off the shower she was ready with a big fluffy towel, with a smaller one wrapped around her, the perfect bath girl. When I was dry and she had helped me into a robe, the dumbwaiter was chiming. While she opened the delivery drawer, I pulled a small table over into the corner where I had talked with Pete-Mac. Shizuko raised her eyebrows but did not argue; she started laying out lunch on it. I set the terminal for music and again punched up a tape with some loud singing, classic rock.

Shizuko had set only one place at the table. I said, facing her so that my words would reach her through the music, "Tilly, put your plate there, too."

"What, Missy?"

"Knock it off, Matilda. The farce is over. I've set this up so that we can talk."

She barely hesitated. "Okay, Miss Friday."

"Better call me Marj so that I won't have to call you Miss Jackson. Or call me Friday, my real name. You and I have got to take our hair down. By the way, your lady's-maid act is perfect, but there is no longer any need to bother with it when we're in private. I can dry myself after a bath."

She almost smiled. "I rather enjoy taking care of you, Miss Friday. Marj. Friday."

"Why, thank you! Let's eat." I spooned sukiyaki over onto her plate.

After some chompingÄconversation goes better with foodÄI said, "What do you get out of it?"

"Out of what, Marj?"

"Out of riding herd on me. Turning me over to the palace guard on The Realm."

"Contract rates. Paid to my boss. There is supposed to be a bonus in it for me but I believe in bonuses only when I spend them."

"I see. Matilda, I'm cutting out at Botany Bay. You're going to help me."

"Call me Tilly. I am?"

"You are. Because I'm going to pay you a large chunk more than you would get otherwise."

"Do you really think you can switch me that easily?"

"Yes. Because you have just two choices." Between us was a large stainless-steel serving spoon. I picked it up, squeezed the bowl, crushed it. "You can help me. Or you can be dead. Rather quickly. Which is it?"

She picked up the mutilated spoon. "Marj, you don't have to be so dramatic. We'll work something out." With her thumbs she ironed out the crumpled steel. "What's the problem?"

I stared at the spoon. " `Your mother was a test tubeÄ'

" `Äand my father was a knife.' So was yours. That's why I was recruited. Let's talk. Why are you jumping ship? I'll catch hell if you do."

"I'll be dead if I don't." Without trying to hold back, I told her about the deal I had made, how I had turned up pregnant, why I thought my chances of living through a visit to The Realm were slim. "So what does it take to persuade you to look the other way? I think I can meet your price."

"I'm not the only one watching you."

"Pete? I'll handle Pete. The other three men and the other two women I think we can ignore. If I have your active help. YouÄyou and PeteÄare the only professionals. Who recruited these others? Clumsy."

"I don't know. I don't know who hired me, for that matter; it was done through m~y boss. Perhaps we can forget the othersÄdepends on your plan."

"Let's talk money."

"Let's talk plans first."

"Uh . . . do you think you can imitate my voice?"

Tilly answered, " `Uh . . . do you think you can imitate my voice?'

"Do that again!"

" `Do that again!'

I sighed. "Okay, Tilly, you can do it. The Daily Forward says that breakout near Botany Bay is sometime tomorrow and, if the figures are as sharp as they were for Outpost, we'll hit stationary orbit and put boats down about midday the day after tomorrowÄless than forty-eight hours from right now. So tomorrow I fall ill. Very sad. Because I had had my heart set on going down to the surface for all those wonderful excursions. The exact timing on my plan depends on when those landing boats are scheduled, which must waitÄif I understand the matterÄuntil we break out into normal space and they can predict exactly when we will hit stationary orbit. Whenever that is, the night before the boats go down, around oh-one hundred when the corridors are empty, I leave. From there on you're both of us. You don't let anyone in; I'm too ill.

"If anyone calls for me by terminal, be careful not to switch on the video pickupÄI never do. You're both of us on anything you can handle, or, if you can't, I'm asleep. If you start to impersonate me and it gets too sticky, why, you're just so fogged up with fever and medicine that you're not coherent.

"You'll order breakfast for both of usÄyour usual breakfast for you, and tea and milk toast and juice for the invalid."

"Friday, I can see that you're planning on stowing away in a landing boat. But the doors to the landing boats are always locked when not in use. I know."

"So they are. Not your worry, Til."

"All right. Not my worry. Okay, I can cover for you after you leave. What do I tell the Captain after you've gone?"

"So the Captain is in on it. I thought so."

"He knows about it. But we get our orders from the purser."

"Makes sense. Suppose I arrange for you to be tied up and gagged and your story is that I jumped you and did it to you. I can't, of course, because you have to be both of us from very early morning to whatever time the boats leave. But I can arrange to have you tied and gagged. I think."

"That would certainly improve my alibi! But who is the philanthropist?"

"You remember our first night in the ship? I came in late, with a date. You served us tea and almond cakes."

"Doctor Madsen. You're counting on him?"

"I think so. With your help. That night he was kind of eager."

She snorted. "His tongue was dragging on the rug."

"Yes. It still is. Tomorrow I become ill; he comes to see me, professionally. You are here, as usual. We have the lights turned off in the bedroom end. If Dr. Jerry has the steady nerves I think he has, he'll take what I'll offer. Then he'll cooperate." I looked at her. "Okay? He comes to see me the next morningÄand ties you up. Simple."

Tilly sat and looked thoughtful for long moments. "No."

"No?"

"Let's keep it really simple. Don't let anyone else in on it. Not anybody.I don't need to be tied up; that would just cause suspicion. Here's my story: Sometime not very long before the boats go down you decide that you are well; you get up, get dressed, and leave the cabin. You don't tell me your plans; I'm just the poor dumb maidÄ you never tell me such things. Or maybe you've changed your mind and are going on the ground excursion anyhow. It doesn't matter either way. I am not charged with keeping you in the ship. My sole responsibility is to keep an eye on you here in the cabin. I don't think it's Pete's responsibility to keep you in the ship, either. If you manage to jump ship, probably the only one who gets burned is the Captain. And I'm not crying over him."

"Tilly, I think you are right, on all points. I had assumed that you would want an alibi. But you're better off without one."

She looked at me and smiled. "Don't let that keep you from taking Dr. Madsen to bed. Enjoy yourself. One of my jobs was to keep men out of your bedÄas I think you knowÄ"

"I figured it out," I agreed dryly.

"But I am switching sides, so that is no longer the case." Suddenly she dimpled. "Maybe I should offer Dr. Madsen a bonus. When he calls on his patient the next morning and I tell him that you're well and have gone to the sauna or something." -

"Don't offer him that sort of bonus unless you mean business. As I know that he means business." I shivered. "I'm certain."

"If I advertise, I deliver. Are we all straight?" She stood up, I followed.

"All but what I owe you."

"I've been thinking about that. Marj, you know your circumstances better than I do. I'll leave it up to you."

"But you didn't quite tell me what you are being paid."

"I don't know. My master hasn't told me."

"Are you owned?" I felt sudden distress. Any AP would.

"No longer. Or not quite. I was sold on a twenty-year indenture. Thirteen years to go. Then I'm free."

"ButÄ Oh, God, Tilly, let's get you off the ship, too!"

She put a hand on my arm. "Take it easy. You've got me thinking about it. That's the main reason I don't want to be tied up. Marj, I'm not on the ship's rolls as indentured. Consequently I can take a groundside excursion if I can pay for itÄand I can. Maybe I'll see you down there."

"Yes!" I kissed her.

She pulled me to her strongly, and the kiss gained speed. She was moaning against my tongue and I felt her hand inside my robe.

Presently I broke the kiss and looked into her eyes. "Is that how it is, Tilly?"

"Hell, yes! From the first time I bathed you."

That evening the migrants leaving the ship at Botany Bay staged a lounge show for the first-class passengers. The Captain told me that such shows were traditional and that the first-class passengers customarily contributed to a purse for the colonistsÄbut that it was not compulsory. He himself went to the lounge that nightÄalso traditionalÄand I found myself sitting with him. I used the opportunity to mention that I was not feeling well. I added that I might have to cancel my reservations for dirtside excursions. I groused about it a bit.

He told me that, if I did not feel perfectly fit, I certainly should not risk exposing myself on the surface of a strange planetÄbut not
to worry about missing Botany Bay, which wasn't much at best. The rest of the trip was the wonderful part. So be a goot girl or should I lock you in your room?

I told him that, if my tummy didn't stop acting up, it wouldn't be necessary to lock me up. The trip down to Outpost had been horridÄspacesick all the wayÄand I wouldn't risk anything like that again. I had laid groundwork for this by pecking at my food at dinner.

The show was amateurish but jollyÄsome skits but mostly group singing: "Tie Me Kangaroo Down," "Waltzing Matilda," "Botany Bay," and, for an encore, "The Walloping Window Blind." I enjoyed it but would have thought nothing of it were it not for a man in the second row of the group singers, a man who looked familiar.

I looked at him and thought: Friday, have you become the sort of careless, sloppy slitch who can't remember whether she's slept with a man or not?

He reminded me of Professor Federico Farnese. But this man was wearing a full beard, whereas Freddie had been smoothshavenÄwhich proves nothing as there had been time enough to grow a beard and almost all men get overtaken by the beard mania one time or another. But it did make it impossible for me to be certain by looking at him. This man never sang a solo, so voice did not help.

Body odorÄat a range of thirty meters no way to sort it out from dozens of others.

I was greatly tempted not to be a ladyÄstand up, walk straight across the dance floor, confront him: "Are you Freddie? Didn't you take me to bed in Auckland last May?"

What if he says no?

I'm a coward. What I did do was tell the Captain that I thought I had spotted an old acquaintance from Sydney among the migrants and how could I check? That resulted in my writing "Federico Farnese" on a program and the Captain passed it to the purser,

who passed it to one of his assistants, who went away and came back soon with a report that there were several Eyetalian names among the migrants but no name, Eyetalian or otherwise, even vaguely like "Farnese."

I thanked him and thanked the purser and thanked the CaptainÄ and thought about asking for a check on "Tormey" and "Perreault," but decided that it was damfoolishness; I certainly had not seen Betty or JanetÄand they didn't grow beards. I had seen a face behind a full beaverÄmeaning I hadn't seen it. Put a full beard on a man and all you see is the shredded wheat.

I decided that all the old wives' tales about pregnant women were probably true.

XXXII

It was two hours past midnight, ship's time. Breakout into normal space had taken place on time, about eleven in the morning, and the figures had been so good that the Forward was expected to achieve stationary orbit around Botany Bay at oh-seven-forty-two, several hours better than had been estimated before breakout. I was not pleased because an early morning landing-boat departure increased the hazard (I judged) that people might be prowling around the corridors in the still hours of the night.

No choice. It was rushing at me, no second chance. I finished last-minute adjustments, kissed Tilly good-bye, cautioned her with a finger to make no noise, and let myself out the door of cabin BB.

I had to go far aft and down three decks. Twice I slowed down to avoid night watchmen making their rounds. Once I ducked through a transverse passage to avoid a passenger, continued aft to the next passageway across the ship, then went back to starboard. Eventually I reached the short, dead-end corridor that led to the passenger airlock door for the starboard landing boat.

I found Mac-Pete-Percival waiting there.

I moved quickly to him, smiling, put a finger to my lips for silence, and clipped him under the ear.

I eased him to the deck, pulled him out of my way, and got to work on that combination lockÄ

Äand discovered that it was almost impossible to read the marks on the dial, even with my enhanced night-sight. There was nothing but night-lights in the corridors and this short dead end had none of its own. Twice I muffed the combination.

I stopped and thought about it. Go back to cabin BB for a torchlight? I had none there, but perhaps Tilly had one. If she did not, should I wait until morning lights were turned on? That would be cutting it too fine; people would be stirring. But did I have a choice?

I checked PeteÄstill out but his heart was strong . . . and lucky for you, Pete; had I been fully triggered, you would be dead. I searched him.

I found, with no surprise, a pencil light on himÄhis job (tailing me) could need a torchlight, whereas Miss Rich Bitch does not bother with such things.

A few seconds later I had the door open.

I dragged Pete through, closed and locked the door, spinning the wheel both clockwise and counterclockwise. I turned back, noted that Pete's eyelids moved a touchÄclipped him again.

There followed a bloody awkward chore. Pete masses about eighty-five kilos, not gross for a man. But it's twenty-five kilos more than I do and he's much bigger. I knew from Tom that the engineers were holding the artificial gravity at 0.97 gee to match Botany Bay. At that moment I could have wished for free fall or antigrav gear as I could not leave Pete behind, dead or alive.

I managed to get him up into that cross-shoulder carry that some call fireman's carry, then discovered that the best way for me to see ahead and still have a hand free for dogs on airtight doors and such was to hold Pete's pencil light in my mouth like a cigar. I really needed that lightÄbut, given a choice, I would have felt my way through in the dark, sans unconscious body.

With only one false turn I arrived at last in that biggest cargo hold which seemed even bigger with only a pencil beam to cut
through the total darkness. I had not anticipated total darkness; I had visualized the landing boat as faintly illuminated with nightlights as was the ship proper from midnight to oh-six hundred.

At last I reached the hidey-hole I had picked out the day before:
that giant Westinghouse turbogenerator.

I guessed that this big mass was intended to run on gas of some
sort, or possibly steamÄit certainly was not meant for Shipstones. There is a lot of obsolete engineering that is still useful in the colonies but is no longer used anywhere that Shipstones are readily available. None of it is familiar to me but I was not concerned with how this thing worked; my interest lay in the fact that half of it was somewhat like a frustrum of a giant cone laid on its sideÄand this formed a space in the middle under the narrow end of the frustrum, a space over a meter high. Big enough for a body. Mine. Even for two, luckily, since I had this unwelcome guest whom I could neither kill nor leave behind.

That space was made downright cozy by the fact that the cargo men had placed a fitted glass tarpaulin over this monster before tying it down. I had to wiggle in, between tiedowns, then I had to strain like the very devil to drag Pete in after me. I made it. Minus some skin.

I checked him again, then peeled him. With any luck I would get a little sleepÄimpossible had I left one of my guards loose behind me.

Pete was wearing trousers, belt, shirt, shorts, socks, sneakers, and a sweater. I took everything off, then tied his wrists behind him with his shirt, tied his ankles with his trouser legs, fastened his ankles to his wrists with his belt behind his backÄthis is one hell of an awkward position, taught to me in basic as a way to discourage attempts to escape.

Then I started to gag him, using his shorts and sweater. He said quietly, "No need to do that, Miss Friday. I've been awake quite a while. Let's talk."

I paused. "I thought you were awake. But I was willing to go along with the pretense as long as you were. I assumed that you would realize that, if you gave me any trouble, I would tear off your gonads and stuff them down your throat."

"I figured something of the sort. But I didn't expect you to be quite that drastic."

"Why not? I've run into your gonads before. Not favorably. They are mine to tear off if I wish. Any argument?"

"Miss Friday, will you let me talk?"

"Sure, why not? But one peep out of you louder than a whisper and these toys come off." I made sure he knew what I meant.

"Uh! Easy thereÄplease! The purser put us on double watch to-night. IÄ"

"Double watch? How?"

"Ordinarily TillyÄShizukoÄÄis the only one on duty from the time you go to your cabin until you get up. When you do get up, she punches a button and that tells me to set the watch. But the purserÄor maybe the CaptainÄis itchy about you. Worries that you might try to jump ship at Botany BayÄ"

I made my eyes round. "Goodness gracious! How can anyone have such wicked thoughts about little ole me?"

"I can't imagine," he answered solemnly. "But why are we here in this landing boat?"

"I'm getting ready to go sight-seeing. How about you?"

"Me, too. I hope. Miss Friday, I realized that, if you were going to try to jump ship at Botany Bay, the most likely time would be tonight during the midwatch. I didn't know how you expected to get into the landing boat but I had confidence in youÄand I see that my confidence is justified."

"Thank you. Some, anyhow. Who's watching the portside boat? Or is there someone?"

"Graham. Little sandy bloke. Perhaps you've noticed him?"

"Too often."

"I picked this side because you toured this boat with Mr. Udell yesterday. Day before yesterday, depending on how you figure it."

"I don't care how you figure it. Pete, what happens when you are missed?"

"I may not be missed. Joe StupidÄsorry, Joseph SteubenÄthe other is just my private name for himÄI have instructed to relieve me after he eats breakfast. If I know Joe, he'll make no fuss at not finding me at the door; he will just sit down on the deck with his back to the door and sleep until someone comes along and unlocks it. Then he'll stay there until this boat drops away . . . whereupon he will go to his room and sack in until I look for him. Joe is steady but not bright. Which I figured on."

"Pete, it sounds as if you had planned this."

"I didn't plan to get a sore neck and a headache out of it. If you had waited long enough to let me speak, you wouldn't have had to carry me."

"Pete, if you're trying to sweet-talk me into untying you, you are barking down the wrong well."

"Don't you mean `up the wrong tree'?"

"The wrong one, in any case, and you aren't improving your chances by criticizing my figures of speech. You're in deep trouble, Pete. Give me one good reason why I shouldn't kill you and leave you here. For the Captain is right; I'm jumping ship. I can't be bothered with you."

"Well. . . one reason is that they'll find my body later this morning, while they are unloading. Then they'll be looking for you."

"I'll be many kilometers the other side of the horizon. But why would they look for me? I'm not going to leave my fingerprints on you. Just some purple bruises around your neck."

"Motive and opportunity. Botany Bay is a pretty law-abiding community, Miss Friday. You can probably talk your way out of trouble in jumping ship thereÄothers have. But if you are wanted for a murder aboard ship, the local people will cooperate."

"I'll plead self-defense. A known rapist. Fer Gossake, Pete, what am I going to do with you? You're an embarrassment. You know I won't kill you; I can't kill in cold blood. It has to be forced on me. But if I keep you tied upÄ Let me seeÄfive and three is eight, then add at least two hours before they work back to here in unloadingÄ that's ten hours at leastÄand I'll have to gag youÄand it's getting coldÄ"

"You bet it's getting cold! Could you sort of drape my sweater around me?"

"All right, but I'll have to use it later when I gag you."

"And besides being cold, my hands and feet are going to sleep. Miss Friday, if you leave me tied up this way for ten hours, I'll have gangrene in both hands and both feetÄand lose them. No regeneration out here. By the time I'm back where they can do it, I'll be a permanent basket case. Kinder to kill me."

"Damn it, you're trying to work on my sympathy!"

"I'm not sure you have any."

"Look," I told him, "if I untie you and let you put your clothes back on so that you won't freeze, will you let me tie you up and gag you later without fussing about it? Or must I clip you a good deal
harder than I did and knock you out cold? Run a risk of breaking your neck? I can, you know. You've seen me fightÄ"

"I didn't see it; I just saw the results. Heard about ft."

"Same thing. Then you know. And you must know why I can do such things. `My mother was a test tubeÄ'

" `Äand my father was a knife,' "he interrupted. "Miss Friday, I didn't have to let you clip me. You're fast . . . but I'm just as fast and my arms are longer. I knew that you were enhanced but you did not know that I am. So I would have had the edge."

I was sitting in lotus, facing him, when he made this astounding statement. I felt dizzy and wondered if I was going to throw up again. "Pete," I said, almost pleadingly, "you wouldn't lie to me?"

"I've had to lie all my life," he answered, "and so have you. HoweverÄ" He paused and twisted his wrists; his bonds broke. Do you know the breaking strength of a twisted sleeve of a good shirt? It is more than that of a manila line of equal thicknessÄtry it.

"I don't mind ruining the shirt," he said conversationally. "The sweater will cover. But I would rather not ruin my trousers; I expect to have to appear in public in them before I can get more. You can reach the knots more easily than I can; will you untie them, Miss Friday?"

"Stop calling me Miss Friday, Pete; we're APs together." I started working on the knots. "Why didn't you tell me a long time ago?"

"I should have. Other things got in the way."

"There! Oh, your feet are cold! Let me rub them. Get the circulation back."

We got some sleep, or I did. Pete was shaking my shoulder and saying quietly, "Better wake up. We must be about to ground. Some lights have come on."

A dim twilight trickled in, under, around, and through the tarpaulin covering the dinosaur we had slept under. I yawned at it. "I'm cold."

"Complaints. You had the inside of the snuggle. That's warmer than the outside. I'm frozen."

"Just what you deserve. Rapist. You're too skinny; you don't make much of a blanket. Pete, we've got to put some fat on you.
Which reminds me that we didn't have breakfast. And the thought of foodÄ I think I'm about to throw up."

"UhÄ Slide past me and sort o' heave it back into that corner. Not here where we would have to lie in it. And keep as quiet as you can; there may be someone in here by now."

"Brute. Unfeeling brute. Just for that I won't throw up."

On the whole I felt fairly good. I had taken one of the little blue pills just before leaving cabin BB, and it seemed to be holding. I had a butterfly or two in my tummy but they weren't very muscular butterfliesÄnot the sort that shout "Lemme outa here!" I had with me the rest of the supply Dr. Jerry had given me. "Pete, what are the plans?"

"You're asking me? You planned this jailbreak, not me."

"Yes, but you are a big, strong, masculine man who snores. I assumed that you would take charge and have it all planned out while I napped. Am I mistaken?"

"WellÄ Friday, what are your plans? The plans you made when you didn't expect to have me along."

"It wasn't much of a plan. After we ground they are going to have to open a door, either a people door or a big cargo door; I don't care which, `cause when they do, I go out of here like a frightened cat, running roughshod over anything or anybody in my way. . . and I don't stop until I'm a long way from the ship. I don't want to hurt anybody but I hope nobody tries too hard to stop me. . . for I won't be stopped."

"That's a good plan."

"You think so? It's not really a plan at all. Just a determination. A door opens, I crush out."

"It's a good plan because it doesn't have any fancies to go wrong. And you have one big advantage. They don't dare hurt you."

"I wish I could be sure of that."

"If you are hurt, it will be by accident, and the man who does it will be strung up by his thumbs. At least. After hearing the rest of your story I now know why the instructions to me were so emphatic. Friday, they don't want you dead-or-alive; they want you in perfect health. They'll let you escape before they will hurt you."

"Then it's going to be easy."

"Don't be too sure of it. Wildcat that you are, it has already been proved that enough men can grab you and hold you; we both know that. If they know you are goneÄand I think they do~ this boat was over an hour late in leaving orbitÄ"

"Oh!" I glanced at my finger. "Yes, we should have grounded by now. Pete, they are searching for me!"

"I think so. But there was no point in waking you until the lights came on. By now they have had about four hours to make certain that you are not on the deck above with the first-class excursionists. They will have mustered the migrants as well. So, if you are hereÄ and not simply hiding out in the ship properÄyou have to be in this cargo hold.

That's an oversimplification as there are all sorts of ways to play hide-and-seek in a space as big as this boat. But they'll watch the two bottlenecks, the cargo door on this level and the passenger door on the level above. Friday, if they use enough peopleÄand they willÄand if those jimmylegs are equipped with nets and sticky ropes and tanglefootÄand they will beÄthey will catch you without hurting you as you come out of this boat."

"Oh." I thought about it. "Pete . . . if it comes to that, there will be some dead and wounded first. I may wind up dead myselfÄbut they'll pay a high price for my carcass. Thanks for alerting me."

"They may not do it quite that way. They may make it very obvious that the doors are being watched in order to cause you to hang back. So they get the migrants outÄI suppose you know that they go out the cargo door?"

"I didn't."

"They do. Get them out and checked offÄthen close the big door and shoot this place full of sleepy gas. Or tear gas and force you to come out wiping your eyes and tossing your cookies."

"Brrr! Pete, are they really equipped in the ship with those gases? I wondered."

"Those and worse. Look, the skipper of this ship operates many light-years from law and order and he has only a handful of people he can depend on in a crunch. In fourth class this ship carries, almost every trip, a gang of desperate criminals. Of course he is equipped to gas every compartment, selectively. But, Friday, you won't be here when they use the gas."

"Huh? Keep talking."

"The migrants walk down the center aisle of this hold. Almost three hundred of them this trip; they'll be packed into their compartment tighter than is safe. So many of them this trip that I am assuming that they can't possibly all know each other in the short time they've had to get acquainted. We'll use that. Plus a very, very old method, Friday; the one Ulysses used on Polyphemus. .

Pete and I were hanging back in an almost dark corner formed by the high end of the generator and a something in a big crate. The light changed, and we heard a murmur of many voices. "They're coming," Pete whispered. "Remember, your best bet is someone who has too much to carry. There'll be plenty of those. Our clothes are okayÄwe don't look first class. But we must have something to carry. Migrants are always loaded down; I got the straight word on that."

"I'm going to try to carry some woman's baby," I told him.

"Perfect, if you can swing it. Hush, here they come."

They were indeed loaded downÄbecause of what seems to me a rather chinchy company policy: A migrant can take on his ticket anything he can stuff into those broom closets they call staterooms in third classÄas long as he can carry it off the ship unassisted; that's the company's definition of "hand luggage." But anything he has to have placed in the hold he pays freight charges on. I know that the company has to show a profitÄbut I don't have to like this policy. However, today we were going to try to turn it to our advantage.

As they passed us most of them never glanced our way and the rest seemed uninterested. They looked tired and preoccupied and I suppose they were, both. There were lots of babies and most of them were crying. The first couple of dozen in the

column were strung out with those in front hurrying. Then the line moved more slowlyÄmore babies, more luggageÄand clumped together. It was coming time to pretend to be a "sheep."

Then suddenly, in that medley of human odors, of sweat and dirt and worry and fear and musk and soiled diapers, one odor cut through as crystal clear as the theme of the Golden Cockerel in Rimsky-Korsakov's Hymn to the Sun or a Wagnerian leitmotif in the Ring CycleÄand I yelped:

"Janet!"

A heavyset woman on the other side of the queue turned and looked at me, and dropped two suitcases and grabbed fne. "Marjie!" And a man in a beard was saying, "I told you she was in the ship! I told you!" And Ian said accusingly, "You're dead!" and I pulled my mouth away from Janet's long enough to say, "No, I'm not. Junior Piloting Officer Pamela Heresford sends you her warmest regards."

Janet said, "That slitch!" Ian said, "Now, Jan" and Betty looked at me carefully and said, "It is she. Hello, luv! Good on you! My word!" and Georges was being incoherent in French around the edges while trying gently to take me away from Janet.

Of course we had fouled up the progress of the queue. Other people, burdened down and some of them complaining, pushed past us, through us, around us. I said, "Let's get moving again. We can talk later." I glanced back at the spot where Pete and I had lurked; he was gone. So I quit worrying about him; Pete is smart.

Janet wasn't really heavyset, not corpulentÄshe was simply several months gone. I tried to take one of her suitcases; she wouldn't let me. "Better with two; they balance."

So I wound up carrying a cat's travel cageÄMama Cat. And a large brown-paper parcel Ian had carried under one arm. "Janet, what did you do with the kittens?"

"They," Freddie answered for her, "have, through my influence, gained excellent positions with fine prospects for advancement as rodent-control engineers on a large sheep station in Queensland. And now, Helen, pray tell me how it chances that you, who, only yesterday it seems, were seen on the right hand of the lord and master of a great superliner, today find yourself consorting with the peasantry in the bowels of this bucket?"

"Later, Freddie. After we're through here."

He glanced toward the door. "Ah, yes! Later, with a friendly libation and many a tale. Meanwhile we have yet to pass Cerberus."

Two watchdogs, both armed, were at the door, one on each side.
I started saying mantras in my mind while chattering double-talk
inanities with Freddie. Both masters-at-arms looked at me, both
seemed to find my appearance unexceptionable. Possibly a dirty
face and scraggly hair acquired in the night helped, for, up to then,
I had never once been seen outside cabin BB unless Shizuko had
labored mightily to prepare me to fetch top prices on the auction block.

We got outside the door, down a short ramp, and were queued up at a table set just outside. At it sat two clerks with papers. One called out, "Frances, Frederick J.! Come forward!"

"Here!" answered Federico and stepped around me to go to the table. A voice behind me called out, "There she is!"Äand I sat Mama Cat down quite abruptly and headed for the skyline.

I was vaguely aware of much excitement behind me but paid no attention to it. I simply wanted to get out of range of any stun gun or sticky-rope launcher or tear-gas mortar as fast as possible. I could not outrace a radar gun or even a slug rifleÄbut those were no worry if Pete was right. I just kept placing one in front of the other. There was a village off to my right and some trees dead ahead. For the time being the trees seemed a better bet; I kept going.

A glance back showed that most of the pack had been left behindÄnot surprising; I can do a thousand meters in two minutes flat. But two seemed to be keeping up and possibly closing the gap. So I checked my rush, intending to bang their heads together or whatever was needed.

"Keep going!" Pete rasped. "We're supposed to be trying to catch you.

I kept going. The other runner was Shizuko. My friend Tilly.

Once I was well inside the trees and out of sight of the landing boat I stopped to throw up. They caught up with me; Tilly held my head and then wiped my mouthÄtried to kiss me. I turned my face away. "Don't, I must taste dreadful. Did you come out of the ship like that?" She was dressed in a leotard that made her look taller, more slender, more western, and much more female than I was used to in my quondam "maid."

"No. A formal kimono with obi. They're back there somewhere. Can't run in them."~

Pete said irritably, "Stop the chatter. We got to get out of here." He grabbed my hair, kissed me. "Who cares what you taste like? Get moving!"

So we did, staying in the woods and getting farther from the landing boat. But it quickly became clear that Tilly had a sprained ankle and was becoming more crippled each step. Pete grumbled again.

"When you broke for it, Tilly was only halfway down the gangway from the first-class deck. So she jumped and made abad landing. Til, you're clumsy."

"It's these damn Nip shoes; they give no support. Pete, take the kid and get moving; the busies won't do anything to me."

"Like hell," Pete said bitterly. "We three are in it together all the way. Right, MissÄ Right, Friday?"

"Hell, yes! `One for all, all for one!' Take her right side, Pete; I'll take this side."

We did pretty well as a five-legged race, not making fast time but nevertheless putting more bush between us and pursuit. Somewhat later Pete wanted to take her piggyback. I stopped us. "Let's listen."

No sound of pursuit. Nothing but the strange sounds of a strange forest. Birdcalls? I wasn't sure. The place was a curious mix of friendly and outr,Ägrass that wasn't quite grass, trees that seemed to be left over from another geological epoch, chlorophyll that was heavily streaked with redÄor was this autumn? How cold would it be tonight? It didn't seem smart to go looking for people for the next three days, in view of the ship's schedule. We could last that long without food or waterÄbut suppose it froze?

"All right," I said. "Piggyback. But we take turns."

"Friday! You can't carry me."

"I carried Pete last night. Tell her, Pete. You think I can't handle a little Japanese doll like you?"

"Japanese doll, my sore feet. I'm as American as you are."

"More so, probably. Because I'm not very. Tell you later. Climb aboard."

I carried her about fifty meters, then Pete carried her about two hundred, and so on, that being Pete's notion of fifty-fifty. After an hour of this we came to a roadÄjust a track through the bush, but you could see marks of wheels and horses' hooves. To the left the road went away from the landing boat and the town, so we went left, with Shizuko walking again but leaning quite a lot on Pete.

We came to a farmhouse. Perhaps we should have ducked around it but by then I wanted a drink of water more than I yearned to be totally safe, and I wanted to strap Tilly's ankle before it got bigger than her head.

There was an older woman, gray-haired, very neat and prim, sitting in a rocking chair on the front veranda, knitting. She looked up as we got closer, motioned to us to come up to the house. "I'm Mrs. Dundas," she said. "You're from the ship?"

"Yes," I agreed. "I'm Friday Jones and this is Matilda Jackson and this is our friend Pete."

"Pete Roberts, ma'am."

"Come sit down, all of you. You'll forgive me if I don't get up; my back is not what it used to be. You're refugees, are you not? You've jumped ship?"

(Bite the bullet. But be ready to duck.) "Yes. We are."

"Of course. About half the jumpers wind up first with us. Well, according to this morning's wireless you'll need to hide out at least three days. You're welcome here and we enjoy visitors. Of course you are entitled to go straight to the transient barracks; the ship authorities can't touch you there. But they can make you miserable with their endless lawyer arguments. You can decide after dinner. Right now, would you like a nice cup of tea?"

"Yes!" I agreed.

"Good. Malcolm! Oh, Malcooom!"

"What, Mum?"

"Put the kettle on!"

"What?"

"The billy!" Mrs. Dundas added, to Tilly, "Child, what have you done to your foot?"

"I think I sprained it, ma'am."

"You certainly did! YouÄFriday is your name?Ägo find Malcolm, tell him I want the biggest dishpan filled with cracked ice. Then you can fetch tea, if you will, while Malcolm cracks ice. And you, sirÄMr. RobertsÄyou can help me out of this chair because there are more things we'll need for this poor child's foot. Must strap it after we get the swelling down. And youÄMatildaÄare you allergic to aspirin?"

"No, ma'am."

"Mum! The billy's boiling!"

"YouÄFridayÄgo, dear."

I went to fetch tea, with a song in my heart.

XXXIII

It has been twenty years. Botany Bay years, that is, but the difference isn't much. Twenty good years. This memoir has been based on tapes I made at Pajaro Sands before Boss

died, then on notes I made shortly after coming here, notes to "perpetuate the evidence" when I still thought I might have to fight extradition.

But when it became impossible to keep their schedule through using me, they lost interest in meÄlogical, as I was never anything but a walking incubator to them. Then the matter became academic when The First Citizen and the Dauphiness were assassinated together, that bomb planted in their coach.

Properly this memoir should end with my arrival on Botany Bay because my life stopped having any dramatic highlights at that pointÄafter all, what does a country housewife have to write memoirs about? How many eggs we got last season? Are you interested? I am but you are not.

People who are busy and happy don't write diaries; they are too busy living.

But in going over the tapes and notes (and sloughing 60 percent of the words) I noticed items that, having been mentioned, should be cleared up. Janet's canceled Visa cardÄ I was "dead" in the explosion that sank the Skip to M'Lou. Georges checked carefully in Vicksburg low town, was assured that there were no survivors. He then called Janet and Ian . . . when they were about to leave for
Australia, having been warned by Boss's Winnipeg agentÄso of course Janet canceled her card.

The strangest thing is finding my "family." But Georges says that the strange thing is not that they are here but that I am here. All of them were browned off, disgusted with EarthÄwhere would they go? Botany Bay is not Hobson's choice but for them it is certainly the obvious choice. It is a good planet, much like Earth of centuries backÄbut with up-to-date knowledge and technology. It is not as primitive as Forest, not as outrageously expensive as Halcyon or Fiddler's Green. They all lost heavily in forced liquidation but they had enough to let them go steerage class to Botany Bay, pay their contributions to company and colony, and still have starting money.

(Did you know that here on Botany Bay, nobody locks doorsÄ many don't have locks. Mira bile visu!)

Georges says that the only long coincidence lies in my being in the same ship they migrated inÄand it almost wasn't. They missed the Dirac, then barely caught the Forward because Janet crowded it, being dead-set on traveling with a baby in her belly rather than in her arms. But of course if they had taken a later ship or an earlier ship, I still would have met them here without planning it. Our planet is about the size of Earth but our colony is still small and almost all in one area and everyone is always interested in new chums; we were certain to meet.

But what if I had never been offered that booby-trapped job? One can always "what ifÄ" but I think that it is at least fifty-fifty that, after shopping as I had planned, I would still have wound up on Botany Bay.

"There is a destiny that shapes our ends" and I have no complaints. I like being a colonial housewife in an 8-group. It's not formally an S-group here because we don't have many laws about sex and marriage. We eight and all our kids live in a big rambling house that Janet designed and we all built. (I'm no cabinetmaker but I'm a whee! of a rough carpenter.) Neighbors have never asked snoopy questions about parentageÄand Janet would freeze them if they did. Nobody cares here, babies are welcome on Botany Bay; it will be many centuries before anyone speaks of "population pressure" or "ZeePeeGee."
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This account won't be seen by neighbors because the only thing I intend to publish here is a revised edition of my cookbookÄa good cookbook because I am ghost writer for two great books, Janet and Georges, plus some practical hints for young housewives that I owe to Goldie. So here I can discuss paternity freely. Georges married Matilda when Percival married me; I think they drew straws. Of course the baby in me fell under the old test-tube-and-knife sayingÄa saying I have not heard even once on Botany Bay. Maybe Wendy derives some or most of her ancestry from a former royal house on The Realm. But I have never let her suspect it and officially Percival is her father. All I really know is that Wendy is free of exhibited congenital defects and Freddie and Georges say that she doesn't carry any nasty recessives either. As a youngster she was no meaner than any of the others and the usual moderate ration of spankings was enough to straighten her out. I think that she is quite a nice person, which pleases me as she is the only child of my body even though she is no relation to me.

"The only. . ." When I got her out of the oven, I asked Georges to reverse my sterility. He and Freddie examined me and told me that I could get it done. . . on Earth. Not in New Brisbane. Not for years and years. That settled thatÄand I found that I was somewhat relieved. I've done it once; I don't really need to do it again. We have babies and dogs and kittens underfoot; the babies don't have to be from my body any more than the kittens do. A baby is a baby and Tilly makes good ones and so does Janet and so does Betty.

And so does Wendy. Were it not impossible I would guess that she gets her hominess from her motherÄme, I mean. She had not yet turned fourteen the first time she came home and said, "Mum, I guess I'm pregnant." I told her, "Don't guess about it, dear. Go see Uncle Freddie and get a mouse test."

She announced the result at dinner, which turned it into a party because, by long custom, in our family whenever a female is officially pregnant is occasion for rejoicing and merriment. So Wendy had her first pregnancy party at fourteenÄand her next one at sixteenÄand her next one at eighteenÄand her latest one just last week. I'm glad she spaced them because I reared them, all but the newest one; she got married for that one. So I have never been short
of babies to pet, even if we didn't have fourÄnow fiveÄno, sixÄ mothers in this household.

Matilda's first baby has a number-one fatherÄexcellent stock. Dr. Jerry Madsen. So she tells me. So I believe. Like this: Her former master had just had her sterility reversed, intending to breed her, when he got this chance to sell her services for a high-pay fourmonths' job. So she became "Shizuko" with the shy smile and the modest bow and chaperoned meÄbut conversely I chaperoned her without intending to. Oh, had she tried, she might have found a little night life in the daytime . . . but the fact was that she spent almost twenty-four hours of each day in cabin BB to be sure to be there whenever I came back.

So when? The only time that it could happen. While I was huddled under that turbogenerator, half frozen, with Percival, my "maid" was in my bed with my doctor. So that young man has fine parents! Joke: Jerry now lives in New Brisbane with his sweet wife, DianÄbut Tilly has not let him suspect that he has a son in our household. Is this another "startling coincidence"? I don't think so. "Medical doctor" is one of the contribution-free professions here; Jerry wanted to get married and stop spacingÄand

why would anyone choose to settle down on Earth when he has had opportunity to shop the colonies?

Most of our family go to Jerry now; he's a good doctor. Yes, we have two M.D.s in our family but they have never practiced; they used to be gene surgeons, experimental biologists, genetic engineersÄand now they are farmers.

Janet knows who are the fathers of her first child, tooÄboth her husbands of that time, Ian and Georges. Why both? Because she wanted it that way and Janet has a whim of steel. I've heard several versions but it is my belief that she would not choose between them for her first child.

Betty's first one is almost certainly not a knife job and may be legitimate. But Betty is such a slashing outlaw that she would rather have you believe that she caught that child at a gang bang during a masquerade ball. New Brisbane is a very quiet place but no household that has Betty Frances in it can ever be dull.

You may know more about the return of the Black Death than I do. Gloria credits my warning with having saved Luna City but it is more nearly correct to credit it to BossÄmy short career as soothsayer was as Trilby to his Svengali. -

Plague did not get off Earth; that was surely Boss's doing. . . although once, at the critical time, New Brisbane signaled that a landing boat could not land unless it was first exposed to vacuum, then repressurized. Sure enough, this treatment killed some rats and miceÄand fleas. Its captain stopped talking about charging the drill to the colony after this showed up.

Contributions: Mail between Botany Bay and Earth/Luna takes four to eight months, round-tripÄnot bad for a hundred and forty light-years. (I once heard a tourist lady ask why didn't we use radio mail?) Gloria paid my contribution to the colony with all possible speed and was lavish in setting me up with capitalÄBoss's will gave her leeway. She didn't send gold here; these were bookkeeping entries in the colony's account in Luna City, under which farm implements or anything can be shipped to Botany Bay.

But Pete had little on Earth to draw on and Tilly, a quasi-slave, had nothing. I still had a piece left of that lottery windfall and all of my final paycheck and even a few shares of stock. This got my fellow jumpers out of hockÄour colony never turns back a jumper but it may take him years to pay his share in the colony.

They both fussed. I fussed right back and worse. Not only is it all in the family but without the help of both Percival and Matilda I almost certainly would have been caught, then wound up on The RealmÄdead. But they still insisted on paying me.

We compromised. Their payments and some from the rest of us started the Asa Hunter Bread-Upon-the-Waters Revolving Fund, used to help jumpers or any new chum.

I no longer think about my odd and sometime shameful origin. "It takes a human mother to bear a human baby." Georges told me that long ago. It's true and I have Wendy to prove it. I'm human and I belong!

I think that's all anybody wants. To belong. To be "people."

My word, do I belong! Last week I was trying to figure out why I was so short on time. I'm secretary of the Town Council. I'm program chairman of the Parents-Teacher Association. I'm troop mistress of the New Toowoomba Girl Scouts. I'm a past president

of the Garden Club, and I'm on the planning committee of the community college we're starting. Yes, I belong.
It's a warm and happy feeling.

Gentlemen, Be Seated

IT TAKES both agoraphobes and claustrophobes to colonize the Moon. Or make it agoraphiles and claustrophiles, for the men who go out into space had better not have phobias. If anything on a planet, in a planet, or in the empty reaches around the planets can frighten a man, he should stick to Mother Earth. A man who would make his living away from terra firma must be willing to be shut up in a cramped spaceship, knowing that it may become his coffin, and yet he must be undismayed by the wide-open spaces of space itself. Spacemen-men who work in space, pilots and jetmen and astrogators and such-are men who like a few million miles of elbow room.

On the other hand the Moon colonists need to be the sort who feel cozy burrowing around underground like so many pesky moles.

On my second trip to Luna City I went over to Richardson Observatory both to see the Big Eye and to pick up a story to pay for my vacation. I flashed my Journalists' Guild card, sweet-talked a bit, and ended with the paymaster showing me around. We went out the north tunnel, which was then being bored to the site of the projected coronascope.

It was a dull trip-climb on a scooter, ride down a completely featureless tunnel, climb off and go through an airlock, get on another scooter and do it all over again. Mr. Knowles filled in with sales talk. "This is temporary," he explained. "When we get the second tunnel dug, we'll cross-connect, take out the airlocks, put a northbound slidewalk in this one, a southbound slidewalk in the other one, and you'll make the trip in less than three minutes. Just like Luna City-or Manhattan."

"Why not take out the airlocks now?" I asked, as we entered another airlock-about the seventh. "So far, the pressure is the same on each side of each lock."

Knowles looked at me quizzically. "You wouldn't take advantage of a peculiarity of this planet just to work up a sensational feature story?"

I was irked. "Look here," I told him. "I'm as reliable as the next word-mechanic, but if something is not kosher about this project let's go back right now and forget it. I won't hold still for censorship."

"Take it easy, Jack," he said mildly-it was the first time he had used my first name; I noted it and discounted it. "Nobody's going to censor you. We're glad to cooperate with you fellows, but the Moon's had too much bad publicity now-publicity it didn't deserve."

I didn't say anything.

"Every engineering job has its own hazards," he insisted, "and its advantages, too. Our men don't get malaria and they don't have to watch out for rattlesnakes. I can show you figures that prove it's safer to be a sandhog in the Moon than it is to be a file clerk in Des Moines-all things considered. For example, we rarely have any broken bones in the Moon; the gravity is so low-while that Des Moines file clerk takes his life in his hands every time he steps in or out of his bathtub."

"Okay, okay," I interrupted, "so the place is safe. What's the catch?"

"It is safe. Not company figures, mind you, nor Luna City Chamber of Commerce, but Lloyd's of London."

"So you keep unnecessary airlocks. Why?"

He hesitated before he answered, "Quakes."

Quakes. Earthquakes-moonquakes, I mean. I glanced at the curving walls sliding past and I wished I were in Des Moines. Nobody wants to be buried alive, but to have it happen in the Moon-why, you wouldn't stand a chance. No matter how quick they got to you, your lungs would be ruptured. No air.

"They don't happen very often," Knowles went on, "but we have to be prepared. Remember, the Earth is eighty times the mass of the Moon, so the tidal stresses here are eighty times as great as the Moon's effect on Earth tides."

"Come again," I said. "There isn't any water on the Moon. How can there be tides?"

"You don't have to have water to have tidal stresses. Don't worry about it; just accept it. What you get is unbalanced stresses. They can cause quakes."

I nodded. "I see. Since everything in the Moon has to be sealed airtight, you've got to watch out for quakes. These airlocks are to confine your losses." I started visualizing myself as one of the losses.

"Yes and no. The airlocks would limit an accident all right, if there was one-which there won't be-this place is safe. Primarily they let us work on a section of the tunnel at no pressure without disturbing the rest of it. But they are more than that; each one is a temporary expansion joint. You can tie a compact structure together and let it ride out a quake, but a thing as long as this tunnel has to give, or it will spring a leak. A flexible seal is hard to accomplish in the Moon."

"What's wrong with rubber?" I demanded. I was feeling jumpy enough to be argumentative. "I've got a ground-car back home with two hundred thousand miles on it, yet I've never touched the tires since they were sealed up in Detroit."

Knowles sighed. "I should have brought one of the engineers along, Jack. The volatiles that keep rubbers soft tend to boil away in vacuum and the stuff gets stiff. Same for the flexible plastics. When you expose them to low temperature as well they get brittle as eggshells."

The scooter stopped as Knowles was speaking and we got off just in time to meet half a dozen men coming out of the next airlock. They were wearing spacesuits, or, more properly, pressure suits, for they had hose connections instead of oxygen bottles, and no sun visors. Their helmets were thrown back and each man had his head pushed through the opened zipper in the front of his suit, giving him a curiously two headed look. Knowles called out, "Hey, Konski!"

One of the men turned around. He must have been six feet two and fat for his size. I guessed him at three hundred pounds, earthside. "It's Mr. Knowles," he said happily. "Don't tell me I've gotten a raise."

"You're making too much money now, Fatso. Shake hands with Jack Arnold. Jack, this is Fatso Konski-the best sandhog in four planets."

"Only four?" inquired Konski. He slid his right arm out of his suit and stuck his bare hand into mine. I said I was glad to meet him and tried to get my hand back before he mangled It.

"Jack Arnold wants to see how you seal these tunnels," Knowles went on. "Come along with us."

Konski stared at the overhead. "Well, now that you mention it, Mr. Knowles, I've just finished my shift."

Knowles said, "Fatso, you're a money grubber and inhospitable as well. Okay-time-and-a-half." Konski turned and started unsealing the airlock.

The tunnel beyond looked much the same as the section we had left except that there were no scooter tracks and the lights were temporary, rigged on extensions. A couple of hundred feet away the tunnel was blocked by a bulkhead with a circular door in it. The fat man followed my glance. "That's the movable lock," he explained. "No air beyond it. We excavate just ahead of it."

"Can I see where you've been digging?"

"Not without we go back and get you a suit."

I shook my head. There were perhaps a dozen bladder-like objects in the tunnel, the size and shape of toy balloons. They seemed to displace exactly their own weight of air; they floated without displaying much tendency to rise or settle. Konski batted one out of his way and answered me before I could ask. "This piece of tunnel was pressurized today," he told me. "These tag-alongs search out stray leaks. They're sticky inside. They get sucked up against a leak, break, and the goo gets sucked in, freezes and seals the leak."

"Is that a permanent repair?" I wanted to know.

"Are you kidding? It just shows the follow-up man where to weld."

"Show him a flexible joint," Knowles directed.

"Coming up." We paused half-way down the tunnel and Konski pointed to a ring segment that ran completely around the tubular tunnel. "We put in a flex joint every hundred feet. It's glass cloth, gasketed onto the two steel sections it joins. Gives the tunnel a certain amount of springiness."

"Glass cloth? To make an airtight seal?" I objected.

"The cloth doesn't seal; it's for strength. You got ten layers of cloth, with a silicone grease spread between the layers. It gradually goes bad, from the outside in, but it'll hold five years or more before you have to put on another coat."

I asked Konski how he liked his job, thinking I might get some story. He shrugged. "It's all right. Nothing to it. Only one atmosphere of pressure. Now you take when I was working under the Hudson-"

"And getting paid a tenth of what you get here," put in Knowles.

"Mr. Knowles, you grieve me," Konski protested. "It ain't the money; it's the art of the matter. Take Venus. They pay as well on Venus and a man has to be on his toes. The muck is so loose you have to freeze it. It takes real caisson men to work there. Half of these punks here are just miners; a case of the bends would scare 'em silly."

"Tell him why you left Venus, Fatso."

Konski expressed dignity. "Shall we examine the movable shield, gentlemen?" he asked.

We puttered around a while longer and I was ready to go back. There wasn't much to see, and the more I saw of the place the less I liked it. Konski was undogging the door of the airlock leading back when something happened.

I was down on my hands and knees and the place was pitch dark. Maybe I screamed-I don't know. There was a ringing in my ears. I tried to get up and then stayed

where I was. It was the darkest dark I ever saw, complete blackness. I thought I was blind.

A torchlight beam cut through it, picked me out, and then moved on. "What was it?" I shouted. "What happened? Was it a quake?"

"Stop yelling," Konski's voice answered me casually. "That was no quake, it was some sort of explosion. Mr. Knowles-you all right?"

"I guess so." He gasped for breath. "What happened?"

"Dunno. Let's look around a bit." Konski stood up and poked his beam around the tunnel, whistling softly. His light was the sort that has to be pumped; it flickered.

"Looks tight, but I hear-Oh, oh! Sister!" His beam was focused on a part of the flexible joint, near the floor.

The "tag-along" balloons were gathering at this spot. Three were already there; others were drifting in slowly. As we watched, one of them burst and collapsed in a sticky mass that marked the leak.

The hole sucked up the burst balloon and began to hiss. Another rolled onto the spot, joggled about a bit, then it, too, burst. It took a little longer this time for the leak to absorb and swallow the gummy mass.

Konski passed me the light. "Keep pumping it, kid." He shrugged his right arm out of the suit and placed his bare hand over the spot where, at that moment, a third bladder burst.

"How about it, Fats?" Mr. Knowles demanded.

"Couldn't say. Feels like a hole as big as my thumb. Sucks like the devil."

"How could you get a hole like that?"

"Search me. Poked through from the outside, maybe."

"You got the leak checked?"

"I think so. Go back and check the gage. Jack, give him the light."

Knowles trotted back to the airlock. Presently he sang out, "Pressure steady!"

"Can you read the vernier?" Konski called to him.

"Sure. Steady by the vernier."

"How much we lose?"

"Not more than a pound or two. What was the pressure before?"

"Earth-normal."

"Lost a pound four tenths, then."

"Not bad. Keep on going, Mr. Knowles. There's a tool kit just beyond the lock in the next section. Bring me back a number three patch, or bigger."

"Right." We heard the door open and clang shut, and we were again in total darkness. I must have made some sound for Konski told me to keep my chin up.

Presently we heard the door, and the blessed light shone out again. "Got it?" said Konski.

"No, Fatso. No . . ." Knowles' voice was shaking. "There's no air on the other side. The other door wouldn't open."

"Jammed, maybe?"

"No, I checked the manometer. There's no pressure in the next section."

Konski whistled again. "Looks like we'll wait till they come for us. In that case--Keep the light on me, Mr. Knowles. Jack, help me out of this suit."

"What are you planning to do?"

"If I can't get a patch, I got to make one, Mr. Knowles. This suit is the only thing around." I started to help him-a clumsy job since he had to keep his hand on the leak.

"You can stuff my shirt in the hole," Knowles suggested.

"I'd as soon bail water with a fork. It's got to be the suit; there's nothing else around that will hold the pressure." When he was free of the suit, he had me smooth out a portion of the back, then, as he snatched his hand away, I slapped the suit down over the leak. Konski promptly sat on it. "There," he said happily, "we've got it corked. Nothing to do but wait."

I started to ask him why he hadn't just sat down on the leak while wearing the suit; then I realized that the seat of the suit was corrugated with insulation-he needed a smooth piece to seal on to the sticky stuff left by the balloons.

"Let me see your hand," Knowles demanded.

"It's nothing much." But Knowles examined it anyway. I looked at it and got a little sick. He had a mark like a stigma on the palm, a bloody, oozing wound. Knowles made a compress of his handkerchief and then used mine to tie it in place.

"Thank you, gentlemen," Konski told us, then added, "we've got time to kill. How about a little pinochle?"

"With your cards?" asked Knowles.

"Why, Mr. Knowles! Well-never mind. It isn't right for paymasters to gamble anyhow. Speaking of paymasters, you realize this is pressure work now, Mr. Knowles?"

"For a pound and four tenths differential?"

"I'm sure the union would take that view-in the circumstances."

"Suppose I sit on the leak?"

"But the rate applies to helpers, too."

"Okay, miser-triple-time it is."

"That's more like your own sweet nature, Mr. Knowles. I hope it's a nice long wait."

"How long a wait do you think it will be, Fatso?"

"Well, it shouldn't take them more than an hour, even if they have to come all the way from Richardson."

"Hmm ... what makes you think they will be looking for us?"

"Huh? Doesn't your office know where you are?"

"I'm afraid not. I told them I wouldn't be back today."

Konski thought about it. "I didn't drop my time card. They'll know I'm still inside."

"Sure they will-tomorrow, when your card doesn't show up at my office."

"There's that lunkhead on the gate. He'll know he's got three extra inside."

"Provided he remembers to tell his relief. And provided he wasn't caught in it, too."

"Yes, I guess so," Konski said thoughtfully. "Jack-better quit pumping that light. You just use up more oxygen."

We sat there in the darkness for quite a long time, speculating about what had happened. Konski was sure it was an explosion; Knowles said that it put him in mind of a time when he had seen a freight rocket crash on take off. When the talk started to die out, Konski told some stories. I tried to tell one, but I was so nervous-so afraid, I should say-that I couldn't remember the snapper. I wanted to scream.

After a long silence Konski said, "Jack, give us the light again. I got something figured out."

"What is it?" Knowles asked.

"If we had a patch, you could put on my suit and go for help."

"There's no oxygen for the suit."

"That's why I mentioned you. You're the smallest-there'll be enough air in the suit itself to take you through the next section."

"Well-okay. What are you going to use for a patch?"

"I'm sitting on it."

"Huh?"

"This big broad, round thing I'm sitting on. I'll take my pants off. If I push one of my hams against that hole, I'll guarantee you it'll be sealed tight."

"But-No, Fats, it won't do. Look what happened to your hand. You'd hemorrhage through your skin and bleed to death before I could get back."

"I'll give you two to one I wouldn't-for fifty, say."

"If I win, how do I collect?"

"You're a cute one, Mr. Knowles. But look-I've got two or three inches of fat padding me. I won't bleed much-a strawberry mark, no more."

Knowles shook his head. "It's not necessary. If we keep quiet, there's air enough here for several days."

"It's not the air, Mr. Knowles. Noticed it's getting chilly?"

I had noticed, but hadn't thought about it. In my misery and funk being cold didn't seem anything more than appropriate. Now I thought about it. When we lost the power line, we lost the heaters, too. It would keep getting colder and colder ... and colder.

Mr. Knowles saw it, too. "Okay, Fats. Let's get on with it."

I sat on the suit while Konski got ready. After he got his pants off he snagged one of the tag-alongs, burst it, and smeared the sticky insides on his right buttock. Then he turned to me. "Okay, kid-up off the nest." We made the swap-over fast, without losing much air, though the leak hissed angrily. "Comfortable as an easy chair, folks." He grinned.

Knowles hurried into the suit and left, taking the light with him. We were in darkness again.

After a while, I heard Konski's voice. "There a game we can play in the dark, Jack. You play chess?"

"Why, yes-play at it, that is."

"A good game. Used to play it in the decompression chamber when I was working under the Hudson. What do you say to twenty on a side, just to make it fun?"

"Uh? Well, all right." He could have made it a thousand; I didn't care.

"Fine. King's pawn to king three."

"Uh-king's pawn to king's four."

"Conventional, aren't you? Puts me in mind of a girl I knew in Hoboken--" What he told about her bad nothing to do with chess, although it did prove she was conventional, in a manner of speaking. "King's bishop to queen's bishop four. Remind me to tell you about her sister, too. Seems she hadn't always been a redhead, but she wanted people to think so. So she-sorry. Go ahead with your move."

I tried to think but my head was spinning. "Queen's pawn to queen three."

"Queen to king's bishop three. Anyhow, she--" He went on in great detail. It wasn't new and I doubt if it ever happened to him, but it cheered me up. I actually smiled, there in the dark. "It's your move," he added.

"Oh." I couldn't remember the board. I decided to get ready to castle, always fairly safe in the early game. "Queen's knight to queen's bishop three."

"Queen advances to capture your king's bishop's pawn-checkmate. You owe me twenty, Jack."

"Huh? Why that can't be!"

"Want to run over the moves?" He checked them off.

I managed to visualize them, then said, "Why, I'll be a dirty name! You hooked me with a fool's mate!"

He chuckled. "You should have kept your eye on my queen instead of on the redhead."

I laughed out loud. "Know any more stories?"

"Sure." He told another. But when I urged him to go on, he said, "I think I'll just rest a little while, Jack."

I got up. "You all right, Fats?" He didn't answer; I felt my way over to him in the dark. His face was cold and he didn't speak when I touched him. I could hear his heart faintly when I pressed an ear to his chest, but his hands and feet were like ice.

I had to pull him loose; he was frozen to the spot. I could feel the ice, though I knew it must be blood. I started to try to revive him by rubbing him, but the hissing of the leak brought me up short. I tore off my own trousers, had a panicky time before I found the exact spot in the dark, and sat down on it, with my right buttock pressed firmly against the opening.

It grabbed me like a suction cup, icy cold. Then it was fire spreading through my flesh. After a time I couldn't feel anything at all, except a dull ache and coldness.

There was a light someplace. It flickered on, then went out again. I heard a door clang. I started to shout.

"Knowles!" I Screamed. "Mr. Knowles!"

The light flickered on again. "Coming, Jack--"

I started to blubber. "Oh, you made it! You made it."

"I didn't make it, Jack. I couldn't reach the next section. When I got back to the lock I passed out." He stopped to wheeze. "There's a crater--" The light flickered off and fell clanging to the floor. "Help me, Jack," he said querulously. "Can't you see I need help? I tried to--"

I heard him stumble and fall. I called to him, but he didn't answer.

I tried to get up, but I was stuck fast, a cork in a bottle . . .

I came to, lying face down-with a clean sheet under me. "Feeling better?" someone asked. It was Knowles, standing by my bed, dressed in a bathrobe.

"You're dead," I told him.

"Not a bit." He grinned. "They got to us in time."

"What happened?" I stared at him, still not believing my eyes.

"Just like we thought-a crashed rocket. An unmanned mail rocket got out of control and hit the tunnel."

"Where's Fats?"

"Hi!"

I twisted my head around; it was Konski, face down like myself.

"You owe me twenty," he said cheerfully.

"I owe you--" I found I was dripping tears for no good reason. "Okay, I owe you twenty. But you'll have to come to Des Moines to collect it."

Glory Road
Robert A. Heinlein

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BRITANNUS (shocked):
Caesar, this is not proper.
THEODOTUS (outraged):
How?
CAESAR (recovering his self-possession):
Pardon him Theodotus: he is a barbarian, and thinks that the customs of his tribe and island are the laws of nature.
Caesar and Cleopatra, Act II
-George Bernard Shaw

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Chapter 1

I know a place where there is no smog and no parking problem and no population explosion . . . no Cold War and no H-bombs and no television commercials . . . no Summit Conferences, no Foreign Aid, no hidden taxes--no income tax. The climate is the sort that Florida and California claim (and neither has), the land is lovely, the people are friendly and hospitable to strangers, the women are beautiful and amazingly anxious to please--

I could go back. I could--

It was an election year with the customary theme of anything you can do I can do better, to a background of beeping sputniks. I was twenty-one but couldn't figure out which party to vote against.

Instead I phoned my draft board and told them to send me that notice.

I object to conscription the way a lobster objects to boiling water: it may be his finest hour but it's not his choice. Nevertheless I love my country. Yes, I do, despite propaganda all through school about how patriotism is obsolete. One of my great-grandfathers died at Gettysburg and my father made that long walk back from Chosen Reservoir, so I didn't buy this new idea. I argued against it in class--until it got me a "D," in Social Studies, then I shut up and passed the course.

But I didn't change my opinions to match those of a teacher who didn't know Little Round Top from Seminary Ridge.

Are you of my generation? If not, do you know why we turned out so wrong-headed? Or did you just write us off as "juvenile delinquents?"

I could write a book. Brother! But I'll note one key fact: After you've spent years and years trying to knock the patriotism out of a boy, don't expect him to cheer when he gets a notice reading: GREETINGS: You are hereby ordered for induction into the Armed Forces of the United States--

Talk about a "Lost Generation!" I've read that post-World-War-One jazz--Fitzgerald and Hemingway and so on--and it strikes me that all they had to worry about was wood

alcohol in bootleg liquor. They had the world by the tail--so why were they crying?

Sure, they had Hitler and the Depression ahead of them. But they didn't know that. We had Khrushchev and the H-bomb and we certainly did know.

But we were not a "Lost Generation." We were worse; we were the "Safe Generation." Not beatniks. The Beats were never more than a few hundred out of millions. Oh, we talked beatnik jive and dug cool sounds in stereo and disagreed with Playboy's poll of jazz musicians just as earnestly as if it mattered. We read Salinger and Kerouac and used language that shocked our parents and dressed (sometimes) in beatnik fashion. But we didn't think that bongo drums and a beard compared with money in the bank. We weren't rebels. We were as conformist as army worms. "Security" was our unspoken watchword. Most of our watchwords were unspoken but we followed them as compulsively as a baby duck takes to water. "Don't fight City Hall." "Get it while the getting is good." "Don't get caught." High goals, these, great moral values, and they all mean "Security." "Going steady" (my generation's contribution to the American Dream) was based on security; it insured that Saturday night could never be the loneliest night for the weak. If you went steady, competition was eliminated.

But we had ambitions. Yes, sir! Stall off your draft board and get through college. Get married and get her pregnant, with both families helping you to stay on as a draft-immune student. Line up a job well thought of by draft boards, say with some missile firm. Better yet, take postgraduate work if your folks (or hers) could afford it and have another kid and get safely beyond the draft--besides, a doctor's degree was a union card, for promotion and pay and retirement.

Short of a pregnant wife with well-to-do parents the greatest security lay in being 4-F. Punctured eardrums were good but an allergy was best. One of my neighbors had a terrible asthma that lasted till his twenty-sixth birthday. No fake--he was allergic to draft boards. Another escape was to convince an army psychiatrist that your interests were more suited to the State Department than to the Army. More than half of my generation were "unfit for military service."

I don't find this surprising. There is an old picture of a people traveling by sleigh through deep woods--pursued by wolves. Every now and then they grab one of their number and toss him to the wolves. That's conscription even if you call it "selective service" and pretty it up with USOs and "veterans' benefits"--it's tossing a minority to the wolves while the rest go on with that single-minded pursuit of the three-car garage, the swimming pool, and the safe & secure retirement benefits.

I am not being holier-than-thou; I was after that same three-car garage myself.

However, my folks could not put me through college. My stepfather was an Air Force warrant officer with all he could handle to buy shoes for his own lads. When he was transferred to Germany just before my high school senior year and I was invited to move in with my father's sister and her husband, both of us were relieved.

I was no better off financially as my uncle-in-law was supporting a first wife--under California law much like being an Alabama field hand before the Civil War. But I had $35 a month as a "surviving dependent of a deceased veteran." (Not "war orphan," which is another deal that pays more.) My mother was certain that Dad's death had resulted from wounds but the Veterans Administration thought differently, so I was just a "surviving dependent."

$35 a month did not fill the hole I put in their groceries and it was understood that when I graduated I would root for myself. By doing my military time, no doubt--But I had my own plan; I played football and finished senior year season with the California Central Valley secondary school record for yards gained and a broken nose--and started in at the local State College the next fall with a job "sweeping the gym" at $10 more a month than that pension, plus fees.

I couldn't see the end out my plan was clear: Hang on, teeth and toenails, and get an engineering degree. Avoid the draft and marriage. On graduation get a deferred-status job. Save money and pick up a law degree, too--because, back in Homestead, Florida, a teacher had pointed out that, while engineers made money, the big money and boss jobs went to lawyers. So I was going to beat the game, yes, sir! Be a Horatio Alger hero. I would have headed straight for that law degree but for the fact that the college did not offer law.

At the end of the season my sophomore year they deemphasized football.

We had had a perfect season--no wins. "Flash" Gordon (that's me--in the sports write-ups) stood one in yardage and points; nevertheless Coach and I were out of jobs. Oh, I "swept the gym" the rest of that year on basketball, fencing, and track, but the alumnus who picked up the tab wasn't interested in a basketball player who was only six feet one. I spent that summer pushing an idiot stick and trying to line up a deal elsewhere. I turned twenty-one that summer, which chopped that $35/month, too. Shortly after Labor Day I fell back on a previously prepared position, i.e., I made that phone call to my draft board.

I had in mind a year in the Air Force, then win a competitive appointment to the Air Force Academy--be an astronaut and famous, instead of rich.

Well, we can't all be astronauts. The Air Force had its quota or something. I was in the Army so fast I hardly had time to pack.

So I set out to be the best chaplain's clerk in the Army; I made sure that "typing" was listed as one of my skills. If I had anything to say about it, I was going to do my time at Fort Carson, typing neat copies while going to night school on the side.

I didn't have anything to say about it. Ever been in Southeast Asia? It makes Florida look like a desert. Wherever you step it squishes. Instead of tractors they use water buffaloes. The bushes are filled with insects and natives who shoot at you. It wasn't a war--not even a "Police Action." We were "Military Advisers." But a Military Adviser who has been dead four days in that heat smells the same way a corpse does in a real war.

I was promoted to corporal. I was promoted seven times. To corporal.

I didn't have the right attitude. So my company commander said. My daddy had been a Marine and my stepfather was Air Force; my only Army ambition had been to be a chaplain's clerk Stateside. I didn't like the Army. My company commander didn't like the Army either; he was a first lieutenant who hadn't made captain and every time he got to brooding Corporal Gordon lost his stripes.

I lost them the last time for telling him that I was writing to my Congressman to find out why I was the only man in Southeast Asia who was going to be retired for old age instead of going home when his time was up--and that made him so mad he not only busted me but went out and was a hero, and then he was dead. And that's how I got this scar across my broken nose because I was a hero, too, and should have received the Medal of Honor, only nobody was looking.

While I was recovering, they decided to send me home.

Major Ian Hay, back in the "War to End War," described the structure of military organizations: Regardless of T.O., all military bureaucracies consist of a Surprise Party Department, a Practical Joke Department, and a Fairy Godmother Department. The first two process most matters as the third is very small; the Fairy Godmother Department is one elderly female GS-5 clerk usually out on sick leave.

But when she is at her desk, she sometimes puts down her knitting and picks a name passing across her desk and does something nice. You have seen how I was whipsawed by the Surprise Party and Practical Joke Departments; this time the Fairy Godmother Department picked Pfc. Gordon.

Like this--When I knew that I was going home as soon as my face healed (little brown brother hadn't sterilized his bolo), I put in a request to be discharged in Wiesbaden, where my family was, rather than California, home of record. I am not criticizing little brown brother; he hadn't intended me to heal at all--and he would have managed it if he hadn't been killing my company commander and too hurried to do a good job on me. I hadn't sterilized my bayonet but he didn't complain, he just sighed and came apart, like a doll with its sawdust cut. I felt grateful to him; he not only had rigged the dice so that I got out of the Army, he also gave me a great idea.

He and the Ward surgeon--The Surgeon had said, "You're going to get well, son. But you'll be scarred like a Heidelberg student."

Which got me thinking--You couldn't get a decent job without a degree, any more than you could be a plasterer without being a son or nephew of somebody in the plasterers' union. But there are degrees and degrees. Sir Isaac Newton, with a degree from a cow college such as mine, would wash bottles for Joe Thumbfingers--if Joe had a degree from a European university.

Why not Heidelberg? I intended to milk my G.I. benefits; I had that in mind when I put in that too hasty call to my draft board.

According to my mother everything was cheaper in Germany. Maybe I could stretch those benefits into a doctor's degree. Herr Doktor Gordon, mit scars on der face from Heidelberg yet!--that would rate an extra $3,000 a year from any missile firm.

Hell, I would fight a couple of student duels and add real Heidelberg scars to back up the dandy I had. Fencing was a sport I really enjoyed (though the one that counted least toward "sweeping the gym"). Some people cannot stand knives, swords, bayonets, anything sharp; psychiatrists have a word for it: aichmophobia. Idiots who drive cars a hundred miles an hour on fifty-mile-an-hour roads will nevertheless panic at the sight of a bare blade.

I've never been bothered that way and that's why I'm alive and one reason why I kept being bucked back to corporal. A "Military Adviser" can't afford to be afraid of knives, bayonets, and such; he must cope with them. I've never been afraid of them because I'm always sure I can do unto another what he is planning to do unto me.

I've always been right, except that time I made the mistake of being a hero, and that wasn't too bad a mistake. If I had tried to bug out instead of staying to disembowel him, he would have chopped my spine in two. As it was, he never got a proper swing at me; his jungle cutter just slashed my face as he came apart--leaving me with a nasty wound that was infected long before the helicopters came. But I never felt it. Presently I got dizzy and sat down in the mud and when I woke up, a medic was giving me plasma.

I rather looked forward to trying a Heidelberg duel. They pad your body and arm and neck and put a steel guard on your eyes and nose and across your ears--this is not like encountering a pragmatic Marxist in the jungle. I once handled one of those swords they use in Heidelberg; it was a light, straight saber, sharp on the edge, sharp a few inches on the back--but a blunt point! A toy, suited only to make pretty scars for girls to admire.

I got a map and whaddayuh know!--Heidelberg is just down the road from Wiesbaden. So I requested my discharge in Wiesbaden.

The ward surgeon said, "You're an optimist, son," but initialed it. The medical sergeant in charge of paperwork said, "Out of the question, Soldier." I won't say money changed hands but the endorsement the hospital's C.O. signed read FORWARDED. The ward agreed that I was bucking for a psycho; Uncle Sugar does not give free trips around the world to Pfcs.

I was already so far around that I was as close to Hoboken as to San Francisco--and closer to Wiesbaden. However, policy called for shipping returnees back via the Pacific. Military policy is like cancer: Nobody knows where it comes from but it can't be ignored.

The Fairy Godmother Department woke up and touched me with its wand.

I was about to climb aboard a bucket called the General Jones bound for Manila, Taipei, Yokohama, Pearl, and Seattle when a dispatch came granting my USAREUR, Heidelberg, Germany, by available military transportation, for discharge, at own request see reference foxtrot. Accumulated leave could be taken or paid, see reference bravo. Subject man was authorized to return to Zone Interior (the States) any time within twelve months of separation, via available military transportation at no further expense to the government. Unquote.

The paper-work sergeant called me in and showed me this, his face glowing with innocent glee. "Only there ain't no 'available transportation,' Soldier--so haul ass aboard the General Jones. You're going to Seattle, like I said."

I knew what he meant: The only transport going west in a long, long time had sailed for Singapore thirty-six hours earlier. I stared at that dispatch, thinking about boiling oil and wondering if he had held it back just long enough to keep me from sailing under it.

I shook my head. "I'm going to catch the General Smith in Singapore. Be a real human type, Sarge, and cut me a set of orders for it."

"Your orders are cut. For the Jones. For Seattle."

"Gosh," I said thoughtfully. "I guess I had better go cry on the chaplain." I faded out fast but I didn't see the chaplain; I went to the airfield. It took five minutes to find that no commercial nor U.S. military flight was headed for Singapore in time to do me any good.

But there was an Australian military transport headed for Singapore that night. Aussies weren't even "military advisers" out often were around, as "military observers." I found the planes skipper, a flight leftenant, and put the situation to him. He grinned and said, "Always room for one more bloke. Wheels up shortly after tea, likely. If the old girl will fly."

I knew it would fly; it was a Gooney Bird, a C-47, mostly patches and God knows how many millions of miles. It would get to Singapore on one engine if asked. I knew my luck was in as soon as I saw that grand old collection of masking tape and glue sitting on the field.

Four hours later I was in her and wheels up.

I checked in aboard USMTS General Smith the next morning, rather wet--the Pride of Tasmania had flown through storms the night before and a Gooney Birds one weakness is that they leak. But who minds clean rain after jungle mud? The ship was sailing that evening which was grand news.

Singapore is like Hong Kong only flat; one afternoon was enough. I had a drink in the old Raffles, another in the Adelphi, got rained on in the Great World amusement peak walked through Change Alley with a hand on my money and the other on my orders--and bought an Irish Sweepstakes ticket.

I don't gamble, if you will concede that poker is a game of skill. However this was a tribute to the goddess of fortune, thanks for a long run of luck. If she chose to answer with $140,000 US, I wouldn't throw it in her face. If she didn't . . . well, the tickets face value was one pound, $2.80 US; I paid $9.00 Singapore, or $3.00 US--a small gesture from a man who had just won a free trip around the world--not to mention coming out of the jungle still breathing.

But I got my three dollars' worth at once, as I fled out of Change Alley to avoid two dozen other walking banks anxious to sell me more tickets, Singapore dollars, any sort of money--or my hat if I let go of it--reached the street, hailed a cab, and told the driver to take me to the boat landing. This was a victory of spirit over flesh because I had been debating whether to snatch the chance to ease enormous biological back pressure. Good old Scarface Gordon had been an Eagle Scout awfully long and Singapore is one of the Seven Sinful Cities where anything may be had.

I am not implying that I had remained faithful to the Girl Next Door. The young lady back home who had taught me most about the World, the Flesh, and the Devil, with an amazing send-off the night before I was inducted, had "Dear-Johnned" me in basic training; I felt gratitude but no loyalty. She got married soon after, now has two children, neither of them mine.

The real cause of my biological unease was geographical. Those little brown brothers I had been fitting, with and against, all had little brown sisters, many of whom could be had for a price, or even pour l'amour ou pour le sport.

But that had been all the local talent for a long time. Nurses? Nurses are officers--and the rare USO entertainer who got that far from Stateside was even more thoroughly blocked off than were nurses.

I did not object to little brown sisters because they were brown. I was as brown as they were, in my face, except for a long pink scar. I drew the line because they were little.

I was a hundred and ninety pounds of muscle and no fat, and I could never convince myself that a female four feet ten inches tall and weighing less than ninety pounds and looking twelve years old is in fact a freely consenting adult. To me it felt like a grim sort of statutory rape and produced psychic impotence.

Singapore looked like the place to find a big girl. But when I escaped from Change Alley, I suddenly didn't like people, big or little, male or female, and headed for the ship--and probably saved myself from pox, Cupid's catarrh, soft chancre, Chinese rot, saltwater itch, and athletes foot--the wisest decision I had made since, at fourteen, I had declined to wrestle a medium-sized alligator.

I told the driver in English what landing I wanted, repeated it in memorized Cantonese (not too well; its a nine-toned language, and French and German are all I had in school),

and showed him a map with the landing marked and its name printed in English and drawn in Chinese.

Everybody who left the ship was given one of these maps. In Asia every cab driver speaks enough English to take you to the Red Light district and to shops where you buy "bargains." But be is never able to find your dock or boat landing.

My cabbie listened, glanced at the map, and said, "Okay, Mac. I dig it," and took off and rounded a corner with tires squealing while shouting at peddle cabs, coolies, children, dogs. I relaxed, happy at having found this cabbie among thousands.

Suddenly I sat up and shouted for him to stop.

I must explain something; I can't get lost.

Call it a "psi" talent, like that study they study at Duke. Mother used to say that sonny had a "bump of direction." Call it what you will, I was six or seven before I realized that other people could get lost. I always know which way is north, the direction of the point where I started and how far away it is. I can head straight back or retrace my steps, even in dark and jungle. This was the main reason why I was always promoted back to corporal and usually shoved into a sergeant's job. Patrols I headed always came back--the survivors, I mean. This was comforting to city boys who didn't want to be in that jungle anyhow.

I had shouted because the driver had swung right when he should have swung left and was about to cut back across his own trade

He speeded up.

I yelled again. He no longer dug English.

It was another mile and several tunas later when he had to stop because of a traffic jam. I got out and he jumped out and started screaming in Cantonese and pointing at the meter in his cab. We were surrounded by Chinese adding to the din and smaller ones plucking at my clothes. I kept my hand on my money and was happy indeed to spot a cop. I yelled and caught his eye.

He came through the crowd brandishing a long staff. He was a Hindu; I said to him, "Do you speak English?"

"Certainly. And I understand American." I explained my trouble, showed him the map, and said that the driver had picked me up at Chaise Alley and been driving in aides.

The cop nodded and talked with the driver in a third language--Malayan, I suppose. At last the cop said, "He doesn't understand English. He thought you said to drive to Johore."

The bridge to Johore is as far as you can get from the anchorage and still be on the Island of Singapore. I said angrily, "The hell he doesn't understand English!"

The cap shrugged. "You hired him, you must pay what is on the taximeter. Then I will explain to him where you wish to go and arrange a fixed fee."

"I'll see him in hell first!"

"That is possible. The distance is quite short--in this neighborhood. I suggest that you pay. The waiting time is mounting up."

There comes a time when a man must stand up for his rights, or he can't bear to look at himself in a mirror to shave. I had already shaved, so I paid--$18.50 Sing., for wasting an hour and ending up farther from the landing. The driver wanted a tip but the cop shut him up and then let me walk with him.

Using both hands I hung onto my orders and money, and the Sweepstakes ticket folded in with the money. But my pen disappeared and cigarettes and handkerchief and a

Ronson lighter. When I felt ghost fingers at the strap of my watch, I agreed to the cops suggestion that he had a cousin, an honest man, who would drive me to my landing for a fixed--and moderate--fee.

The "cousin" turned out to be just coming down the street; half an hour later I was aboard ship. I shall never forget Singapore, a most educational city.

Chapter 2

Two months later on the French Riviera. The Fairy Godmother Department watched over me across the Indian Ocean, up the Red Sea, and clear to Napoli. I lived a healthy life, exercising and getting tan every morning, sleeping afternoons, playing poker at night. There are many people who do not. Know the odds (poor, but computable) for improving a poker hand in the draw, but are anxious to learn. When we got to Italy I had a beautiful tan and a sizable nest egg.

Early in the voyage someone went broke and wanted to put a Sweepstakes ticket into the game. After some argument Sweepstakes tickets were made valuta at a discount, $2.00 USA per ticket. I finished the trip with fifty-three tickets.

Hitching a flight from Napoli to Frankfurt took only hours. Then the Fairy Godmother Department handed me back to the Surprise Party and Practical Joke Departments.

Before going to Heidelberg I ducked over to Wiesbaden to see my mother, my stepfather and the kids--and found that they had just left for the States, on their way to Elmendorf AFB in Alaska.

So I went to Heidelberg to be processed, and looked the town over while the led tape unwound.

Lovely town--Handsome castle, good beer, and big girls with rosy cheeks and shapes like Coca-Cola bottles--Yes, this looked like a nice place to get a degree. I started inquiring into rooms and such, and met a young kraut wearing a studenten cap and some face scars as ugly as mine--things were looking up.

I discussed my plans with the first sergeant of the transient company.

He shook his head. "Oh, you poor boy!"

Why? No G.I. benefits for Gordon--I wasn't a veteran.

Never mind that scar. Never mind that I had killed more men in combat than you could crowd into a--well, never mind. That thing was not a "war" and Congress had not passed a bill providing educational benefits for us "Military Advisers."

I suppose this was my own fault. All my life there had been "G.I. benefits"--why, I had shared a bench in chem lab with a veteran who was going to school on the G.I. Bill.

This fatherly sergeant said, "Don't take it hard, son. Go home, get a job, wait a year. They'll pass it and date it bade, almost certainly. You're young."

So here I was on the Riviera, a civilian, enjoying a taste of Europe before using that transportation home. Heidelberg was out of the question. Oh, the pay I hadn't been able to spend in the jungle, plus accumulated leave, plus my winnings at poker, added up to a sum which would have kept me a year in Heidelberg. But it would never stretch enough for a degree. I had been counting on that mythical "G.I. Bill" for eating money and on my cash as a cushion.

My (revised) plan was obvious. Grab that top home before my year was up--grab it before school opened. Use the cash I had to pay board to Aunt and Uncle, work next

summer and see what turned up. With the draft no longer hanging over me I could find some way to sweat out that last year even if I couldn't be "Heir Doktor Gordon."

However, school didn't open until fall and here it was spring. I was damn well going to see a little of Europe before I applied nose to grindstone; another such chance might never come.

There was another reason for waiting; those Sweepstakes tickets. The drawing for horses was coming up.

The Irish Sweepstakes starts as a lottery. First they sell enough tickets to paper Grand Central Station. The Irish hospitals get 25 percent and are the only sure winners. Shortly before the race they draw for horses. Let's say twenty horses are entered. If your ticket fails to draw a horse, its wastepaper. (Oh, there are minor consolation prizes.)

But if you do draw a horse, you still haven't won. Some horses won't start. Of those that do, most of them chase the other horses. However, any ticket that draws any horse at all, even a goat that can barely walk to the paddock, that ticket suddenly acquires a value of thousands of dollars between the drawing and the race. Just how much depends on how good the horse is. But prizes are high and the worst horse in the field has been known to win.

I had fifty-three tickets. If one of them drew a horse, I could sell that ticket for enough to put me through Heidelberg.

So I stayed and waited for the drawings.

Europe needn't be expensive. A youth hostel is luxury to a man who has come out of the boondocks of Southeast Asia and even the French Riviera isn't expensive if you approach it from underneath. I didn't stay on La Promenade des Anglais; I had a tiny room four floors up and two kilometers back, and the shared use of some plumbing. There are wonderful night clubs in, Nice but you need not patronize them as the floor show at the beaches is as good . . . and free. I never appreciated what a high art the fan dance can be until the first time I watched a French girl get out of her clothes and into her bikini in plain sight of citizens, tourists, gendarmes, dogs--and me--all without quite violating the lenient French mores concerning "indecent exposure." Or only momentarily.

Yes, sir, there are things to see and do on the French Riviera without spending money.

The beaches are terrible. Rocks. But rocks are better than jungle mud and I put on trunks and enjoyed the floor show and added to my tan. It was spring, before the tourist season and not crowded, but it was warm and summery and dry. I lay in the sun and was happy and my only luxury was a deposit box with American Egress and the Paris edition of the N.Y. Herald Tribune and The Star's & Stripes. These I would glance over to see how the Powers-that-be were mismanaging the world, then look for what was new in the unWar I had just been let out of (usually no mention, although we had been told that we were "saving civilization"), then get down to important matters, i.e., news of the Irish Sweepstakes, plus the possibility that The Stars & Stripes might announce that it had all been a hideous dream and I was entitled to educational benefits after all.

Then came crossword puzzles and "Personal" ads. I always read "Personals"; they are a naked look into private lives. Things like: 'M.L. phone R.S. before noon. Money.' Makes you wonder who did what to whom, and who got paid?

Presently I found a still cheaper way to live with an even better floor show. Have you heard of l'Il du Levant? It is an island off the Riviera between Marseilles and Nice, and is much like Catalina. It has a village at one end and the French Navy has blocked off the

other for guided missiles; the rest of it is hills and beaches and grottoes. There are no automobiles, nor even bicycles. The people who go there don't want to be reminded of the outside world.

For ten dollars a day you can enjoy luxury equal to forty dollars a day in Nice. Or you can pay five cents a dry for camping and live on a dollar a day--which I did--and there are good cheap restaurants anytime you get tired of cooking.

It is a place that seems to have no rules of any sort. Wait a minute; there is one. Outside the village, Heliopolis, is a sign: LE NU INTEGRAL EST FORMELLEMENT INTERDIT. ("Complete nakedness is strictly forbidden.")

This means that everyone, man or woman, must put on a little triangle of cloth, a cache-sexe, a G-string, before going inside the village.

Elsewhere, on beaches and in camping grounds and around the island, you don't have to wear a damned thing and nobody does.

Save for the absence of automobiles and clothes, the Isle of the Levant is like any other bit of back-country France. There is a shortage of fresh water, but the French don't drink water and you bathe in the Mediterranean and for a franc you can buy enough fresh water for half a dozen sponge baths to rinse cm the salt. Take the train from Nice or Marseilles, get off at Toulon and take a bus to Lavandou, then by boat (an hour and a few minutes) to l'Ile du Levant--then chuck away your cares with your clothes.

I found I could buy the Herald-Trib, a day old, in the village, at the same place ("Au Minimum," Mme. Alexandre) where I rented a tent and camping gear. I bought groceries at La Brise Marine and camped above La Plage des Grottes, close to the village, and settled down and let my nerves relax while I enjoyed the floor show.

Some people disparage the female form divine. Sex is too good for them; they should have been oysters. All gals are good to look at (including little brown sisters even though they scared me); the only difference is that some look better than others. Some were fat and some were skinny and some were old and some were young. Some looked as if they had stepped straight out of Les Folies Bergeres. I got acquainted with one of those and I wasn't far off; she was a Swedish girl who was a "nue" in another Paris revue. She practiced English on me and I practiced French on her, and she promised to cook me a Swedish dinner if I was ever in Stockholm and I cooked her a dinner over an alcohol lamp and we got giggly on vin ordinaire, and she wanted to know how I had acquired my scar and I told some lies. Marjatta was good for an old soldiers nerves and I was sad when she had to leave.

But the floor show went on. Three days later I was sitting on Grotto Beach, leaning against a rock and working the crossword puzzle, when suddenly I got cross-eyed trying not to stare at the most stare-able woman I have ever seen in my life.

Woman, girl--I couldn't be sure. At first glance I thought she was eighteen, maybe twenty; later when I was able to look her square in her face she still looked eighteen but could have been forty. Or a hundred and forty. She had the agelessness of perfect beauty. Like Helen or Troy, or Cleopatra. It seemed possible that she was Helen of Troy but I knew she wasn't Cleopatra because she was not a redhead; she was a natural blonde. She was a tawny toast color allover without a hint of bikini marks and her hair was the same shade two tones litter. It flowed, unconfined, in graceful waves down her back and seemed never to have been cut.

She was tall, not much shorter than I am, and not too much litter in weight. Not fat, not fat at all save for that graceful padding that smoothes the feminine form, shading the muscles underneath--I was sure there were muscles underneath; she carried herself with the relaxed power of a lioness.

Her shoulders were broad for a woman, as broad as her very female hips; her waist might have seemed thick on a lesser woman, on her it was deliciously slender. Her belly did not sag at all but carried the lovely doub3domed curve of perfect muscle tone. Her breasts--only her big rib cage could carry such large ones without appearing too much of a good thing, they jutted firmly out and moved only a trifle when she moved, and they were crowned with rosy brown confections that were frankly nipples, womanly and not virginal.

Her navel was that jewel the Persian poets praised.

Her legs were long for her height; her hands and feet were not small but were slender, graceful. She was graceful in all ways; it was impossible to think of her in a pose ungraceful. Yet she was so lithe and limber that, like a cat, she could have twisted herself into any position.

Her face--How do you describe perfect beauty except to say that when you see it you can't mistake it? Her lips were full and her mouth rather wide. It was faintly curved in the ghost of a smile even when her features were at rest. Her lips were red but if she was wearing makeup of any sort it had been applied so skillfully that I could not detect it--and that alone would have made her stand out, for that was a year all other females were wearing "Continental" makeup, as artificial as a corset and as bold as a doxy's smile.

Her nose was straight and large enough for her face, no button. Her eyes--

She caught me staring at her. Certainly women expect to be locked at and expect it unclothed quite as much as when dressed for the ball. But it is rude to stare openly. I had given up the fight in the first ten seconds and was trying to memorize her, every line, every curve.

Her eyes locked with mine and she stared back and I began to blush but couldn't look away. Her eyes were so deep a blue that they were dark, darker than my own brown eyes.

I said huskily, "Pardonnez-moi, ma'm'selle," and managed to tear my eyes away.

She answered, in English, "Oh, I don't mind. Look all you please," and looked me up and down as carefully as I had inspected her. Her voice was a warm, fall contralto, surprisingly deep in its lowest register.

She took two steps toward me and almost stood over me. I started to get up and she motioned me to stay seated, with a gesture mat assumed obedience as if she were very used to giving orders. "Rest where you are," she said. The breeze carried her fragrance to me and I got goose flesh all over. "You are American."

"Yes." I was certain she was not, yet I was equally certain she was not French. Not only did she have no trace of French accent but also--well, French women are at least slightly provocative at all times; they can't help it, it's ingrained in the French culture. There was nothing provocative about this woman--except that she was an incitement to riot just by existing.

But, without being provocative, she had that rare gift for immediate intimacy; she spoke to me as a very old friend might speak, friends who knew each other's smallest foibles and were utterly easy tete-a-tete. She asked me questions about myself, some of them quite personal, and I answered all of them, honestly, and it never occurred to me

that she had no right to quiz me. She never asked my name, nor I hers--nor any question of her.

At last she stopped and looked me over again, carefully and soberly. Then she said thoughtfully, "You are very beautiful," and added, "Au 'voir"--turned and walked down the beach into the water and swam away.

I was too stunned to move. Nobody had ever called me "handsome" even before I broke my nose. As for "beautiful!"

But I don't think it would have done me any good to have chased her, even if I had thought of it in time. That gal could swim.

Chapter 3

I stayed at the plager until sundown, waiting for her to come back. Then I made a hurried supper of bread and cheese and wine, got dressed in my G-string and walked into town. There I prowled bars and restaurants and did not find her, meanwhile window-peeping into cottages wherever shades were not drawn. When the bistros started shutting down, I gave up, went back to my tent, cursed myself for eight kinds of fool-- (why couldn't I have said, "What's your name and where do you live and where are you staying here?")--sacked in and went to sleep.

I was up at dawn and checked the plage, ate breakfast, checked the plage again, got "dressed" and went into the village, checked the shops and post office, and bought my Herald-Trib.

Then I was faced with one of the most difficult decisions of my life: I had drawn a horse.

I wasn't certain at first, as I did not have those fifty-three serial numbers memorized. I had to run back to my tent, dig out a memorandum and check--and I had! It was a number that had stuck in mind because of its pattern: #XDY 34555. I had a horse!

Which meant several thousand dollars, just how much I didn't know. But enough to put me through Heidelberg . . . if I cashed in on it at once. The Herald-Trib was always a day late there, which meant the drawing had taken place at least two days earlier--and in the meantime that dog could break a leg or be scratched nine other ways. My ticket was important money only as long as "Lucky Star" was listed as a starter.

I had to get to Nice in a hurry and find out where and how you got the best price for a lucky ticket. Dig the ticket out of my deposit box and sell it!

But how about "Helen of Troy"?

Shylock with his soul-torn cry of "Oh, my daughter! Oh, my ducats!" was no more split than I.

I compromised. I wrote a painful note, identifying myself, telling her that I had been suddenly called away and pleading with her either to wait until I returned tomorrow, or at the very least, to leave a note telling me how to find her. I left it with the postmistress along with a description--blond, so tall, hair this long, magnificent poitrine--and twenty francs with a promise of twice that much if she delivered it and got an answer. The postmistress said that she had never seen her but if cette grande blonde ever set foot in the village the note would be delivered.

That left me just time to rush back, dress in off-island clothes, dump my gear with Mme. Alexandre, and catch the boat. Then I had three hours of travel time to worry through.

The trouble was that Lucky Star wasn't really a dog. My horse rated no farther down than fifth or sixth, no matter who was figuring form. So? Stop while I was ahead and take my profit?

Or go for broke?

It wasn't easy. Let's suppose I could sell the ticket for $10,000. Even if I didn't try any fancy footwork on taxes, I would still keep most of it and get through school.

But I was going to get through school anyway--and did I really want to go to Heidelberg? That student with the dueling scars had been a slob, with his phony pride in scars from fake danger.

Suppose I hung on and grabbed the big one, £50,000, or $140,000--

Do you know how much tax a bachelor pays on $140,000 in the Land of the Brave and the Home of the Free?

$103,000, that's what he pays. That leaves him $37,000.

Did I want to bet about $10,000 against the chance of winning $37,000--with the odds at least 15 to 1 against me?

Brother, that is drawing to an inside straight. The principle is the same whether it's 37 grand, or jacks-or-better with a two-bit limit.

But suppose I wangled some way to beat the tax, thus betting $10,000 to win $140,000? That made the potential profit match the odds--and $140,000 was not just eating money for college but a fortune that could bring in four or five thousand a year forever.

I wouldn't be "cheating" Uncle Sugar; the USA had no more moral claim on that money (if I won) than I had on the Holy Roman Empire. What had Uncle Sugar done for me? He had clobbered my father's life with two wars, one of which we weren't allowed to win--and thereby made it tough for me to get through college quite aside from what a father may be worth in spiritual intangibles to his son (I didn't know, I never would know!)--then he had grabbed me out of college and had sent me to fight another unWar and damned near killed me and lost me my sweet girlish laughter.

So how is Uncle Sugar entitled to clip $103,000 and leave me the short end? So he can "lend" it to Poland? Or give it to Brazil? Oh, my back!

There was a way to keep it all (if I won) legal as marriage. Go live in little old tax-free Monaco for a year. Then take it anywhere.

New Zealand, maybe. The Herald-Trib had had the usual headlines, only more so. It looked as if the boys (just big playful boys!) who run this planet were about to hold that major war, the one with ICBMs and H-bombs, any time now.

If a man went as far south as New Zealand there might be something left after the fallout fell out.

New Zealand is supposed to be very pretty and they say that a fisherman there regards a five-pound trout as too small to take home.

I had caught a two-pound trout once.

About then I made a horrible discovery. I didn't want to go back to school, win, lose, or draw. I no longer gave a damn about three-car garages and swimming pools, nor any

other status symbol or "security." There was no security in this world and only damn fools and mice thought there could be.

Somewhere back in the jungle I had shucked off all ambition of that sort. I had been shot at too many times and had lost interest in supermarkets and exurban subdivisions and tonight is the PTA supper don't forget dear you promised.

Oh, I wasn't about to hole up in a monastery. I still wanted--

What did I want?

I wanted a Roc's egg. I wanted a harem loaded with lovely odalisques less than the dust beneath my chariot wheels, the rust that never stained my sword. I wanted raw red gold in nuggets the size of your fist and feed that lousy claim jumper to the huskies! I wanted to get up feeling brisk and go out and break some lances, Then pick a likely wench for my droit du seigneur--I wanted to stand up to the Baron and dare him to touch my wench! I wanted to hear the purple water chuckling against the skin of the Nancy Lee in the cool of the morning watch and not another sound, nor any movement save the slow tilling of the wings of the albatross that had been pacing us the last thousand miles.

I wanted the hurtling moons of Barsoom. I wanted Storisende and Poictesme, and Holmes shaking me awake to tell me, "The game's afoot!" I wanted to float down the Mississippi on a raft and elude a mob in company with the Duke of Bilgewater and the Lost Dauphin.

I wanted Prester John, and Excalibur held by a moon-white arm out of a silent lake. I wanted to sail with Ulysses and with Tros of Samothrace and eat the lotus in a land that seemed always afternoon. I wanted the feeling of romance and the sense of wonder I had known as a kid. I wanted the world to be what they had promised me it was going to be--instead of the tawdry, lousy, fouled-up mess it is.

I had had one chance--for ten minutes yesterday afternoon. Helen of Troy, whatever your true name may be--And I had known it . . . aha I had let it slip away.

Maybe one chance is all you ever get.

The train pulled into Nice.

In the American Express office I went to the banking department and to my deposit box, found the ticket and checked the number against the Herald-Trib--XDY 34555, yes! To stop my trembling, I checked the other tickets and they were wastepaper, just as I thought. I shoved them back into the DOX and asked to see the manager.

I had a money problem and American Express is a bank, not just a travel bureau. I was ushered into the manager's office and we exchanged names. "I need advice," I said. "You see, I hold one of the winning Sweepstakes tickets."

He broke into a grin. "Congratulations! You're the first person in a long time who has come in here with good news rather than a complaint."

"Thanks. Uh, my problem is this. I know that a ticket that draws a horse is worth quite a bit up until the race. Depending on the horse, of course."

"Of course," he agreed. "What horse did you draw?"

"A fairly good one. Lucky Star--and that's what makes it tough. If I had drawn H-Bomb, or any of the three favorites--Well, you see how it is. I don't know whether to sell or hang on, because I don't know how to figure the odds. Do you know what is being offered for Lucky Star?"

He fitted his finger tips together. "Mr. Gordon, American Express does not give tips on horse races, nor broker the resale of Sweepstakes tickets. However--Do you have the ticket with you?"

I got it out and handed it to him. It had been through poker games and was sweat-marked and crumpled. But that lucky number was unmistakable.

He looked at it. "Do you have your receipt?"

"Not with me." I started to explain that I had given my stepfathers address--and that my mail had been forwarded to Alaska. He cut me off. "That's all right." He touched a switch. "Alice, will you ask M'sieur Renault to step in?"

I was wondering if it really was all right. I had had the savvy to get names and new billets from the original ticket holders and each had promised to send his receipt to me when he got it--but no receipts had reached me. Maybe in Alaska--I had checked on this ticket while at the lockbox; it had been bought by a sergeant now in Stuttgart. Maybe I would have to pay him something or maybe I would have to break his arms.

M. Renault looked like a tired schoolteacher. "M'sieur Renault is our expert on this sort of thing," the manager explained. "Will you let him examine your ticket, please?"

The Frenchman looked at it, then his eyes lit up and be reached into a pocket, produced a jeweler's loupe, screwed it into his eye. "Excellent!" he said approvingly. "One of the best. Hong Kong, perhaps?

"I bought it in Singapore."

He nodded and smiled. "That follows."

The manager was not smiling. He reached into his desk and brought out another Sweepstakes ticket and handed it to me. "Mr. Gordon, this one I bought at Monte Carlo. Will you compare it?"

They looked alike to me, except for serial numbers and the fact that his was crisp and clean. "What am I supposed to look for?"

"Perhaps this will help." He offered me a large reading glass.

A Sweepstakes ticket is printed on special paper and has an engraved portrait on it and is done in several colors. It is a better job of engraving and printing than many countries use for paper money.

I learned long ago that you can't change a deuce into an ace by staring at it. I handed back his ticket. "Mine is counterfeit."

"I didn't say so, Mr. Gordon. I suggest you get an outside opinion. Say at the office of the Bank of France."

"I can see it. The engraving lines aren't sharp and even on mine. They're broken, some places. Under the glass the print job looks smeared." I turned. "Right, M'sieur Renault?"

The expert gave a shrug of commiseration. "It is beautiful work, of its sort."

I thanked them and got out. I checked with the Bank of France, not because I doubted the verdict but because you don't have a. leg cut off, nor chuck away $140,000, without a second opinion. Their expert didn't bother with a loupe. "Contrefait" he announced. "Worthless."

It was impossible to get back to l'Ile du Levant that night. I had dinner and then looked up my former landlady. My broom closet was empty and she let me have it overnight. I didn't lie awake long.

I was not as depressed as I thought I should be. I felt relaxed, almost relieved. For a while I had had the wonderful sensation of being rich--and I had had its complement, the

worries of being rich--and both sensations were interesting and I didn't care to repeat them, not right away.

Now I had no worries. The only thing to settle was when to go home, and with living so cheap on the island there was no hurry. The only thing that fretted me was that rushing off to Nice might have caused me to miss "Helen of Troy," cette grande blonde! Si grande . . . si belle . . . si majestueuse! I fell asleep thinking of her.

I had intended to catch the early train, then the first boat. But the day before had used up most of the money on me and I had goofed by failing to get cash while at American Express. Besides, I had not asked for mail. I didn't expect any, other than from my mother and possibly my aunt--the only close friend I had had in the Army had been killed six months back. Still, I might as well pick up mail as long as I had to wait for money.

So I treated myself to a luxury breakfast. The French think that a man can face the day with chicory and milk, and a croissant, which probably accounts for their unstable politics. I picked a sidewalk cafe by a big kiosk, the only one in Nice that stocked The Stars & Stripes and where the Herald-Trib would be on sale as soon as it was in; ordered a melon, cafe complet for TWO, and an omelette aux herbes fines; and sat back to enjoy life.

When the Herald-Trib arrived, it detracted from my sybaritic pleasure. The headlines were worse than ever and reminded me that I was still going to have to cope with the world; I couldn't stay on l'Ile du Levant forever.

But why not stay there as long as possible? I still did not want to go to school, and that three-car-garage ambition was as dead as that Sweepstakes ticket. If World War III was about to shift to a rolling boil, there was no point in being an engineer at six or eight thousand a year in Santa Monica only to be caught in the fire storm.

It would be better to live it up, gather ye rosebuds, carpe that old diem, with dollars and days at hand, then--Well, join the Marine Corps maybe, like my dad.

I refolded the paper to the "Personals" column.

They were pretty good. Besides the usual offers of psychic readings and how to learn yoga and the veiled messages from one set of initials to another there were several that were novel. Such as--

REWARD!! Are you contemplating suicide? Assign to me the lease on your apartment and I will make your last clays lavish. Box 323, H-T

Or: Hindu gentleman, non-vegetarian, wishes to meet cultured European, African, or Asian lady owning sports car. Object: improving international relations. Box 107

How do you do that in a sports car?

One was ominous--Hermaphrodites of the World, Arise! You have nothing to lose but your chains. Tel. Opera 59-09

The next one started: ARE YOU A COWARD?

Well, yes, certainly. If possible. If allowed a free choice. I read on:

ARE YOU A COWARD? This is not for you. We badly need a brave man. He must be 23 to 25 years old, in perfect health, at least six feet tall, weigh about 190 pounds, fluent English with some French, proficient with all weapons, some knowledge of engineering and mathematics essential, willing to travel, no family or emotional ties, indomitably courageous and handsome of face and figure. Permanent employment, very high pay,

glorious adventure, great danger. You must apply in person, 17, rue Dante, Nice, 2me etage, appt. D.

I read that requirement about face and figure with strong relief. For a giddy moment it had seemed as if someone with a skewed sense of humor had aimed a shaggy joke right at me. Somebody who knew my habit of reading the "Personals."

That address was only a hundred yards from where I was sitting. I read the ad again.

Then I paid the addition, left a careful tip, went to the kiosk and bought The Stars & Stripes, walked to American Express, got money and picked up my mail, and on to the railroad station. It was over an hour until the next train to Toulon, so I went into the bar, ordered a beer and sat down to read.

Mother was sorry I had missed them in Wiesbaden. Her letter itemized the children's illnesses, the high prices in Alaska, and expressed regret that they had ever had to leave Germany. I shoved it into my pocket and picked up The Stars & Stripes.

Presently I was reading: ARE YOU A COWARD?--same ad, right to the end.

I threw the paper down with a growl.

There were three other letters. One invited me to contribute to the athletic association of my ex-college; the second offered to advise me in the selection of my investments at a special rate of only $48 a year; the last was a plain envelope without a stamp, evidently handed in at American Express.

It contained only a newspaper clipping, starting: ARE You A COWARD?

It was the same as the other two ads except that in the last sentence one word had been underlined: You must apply in person--

I splurged on a cab to rue Dante. If I hurried, there was time to untangle this hopscotch and still catch the Toulon train. No. 17 was a walk-up; I ran up and, as I approached suite D, I met a young man coming out. He was six feet tall, handsome of face and figure, and looked as if he might be a hermaphrodite.

The lettering on the door read: DR. BALSAMO--HOURS BY APPOINTMENT, in both French and English. The name sounded familiar and vaguely phony out I did not stop to figure it out; I pushed on in.

The office inside was cluttered in a fashion known only to old French lawyers and pack rats. Behind the desk was a gnome-like character with a merry smile, hard eyes, the pinkest face and scalp I've ever seen, and a fringe of untidy white hair. He looked at me and giggled. "Welcome! So you are a hero?" Suddenly he whipped out a revolver half as long as he was and just as heavy and pointed it at me. You could have driven a Volkswagen down its snout.

"I'm not a hero," I said nastily. "I'm a coward. I just came here to find out what the joke is." I moved sideways while slapping that monstrous piece of ordnance the other way, chopped his wrist, and caught it. Then I handed it back to him. "Don't play with that thing, or I'll shove it up your deposition. I'm in a hurry. You're Doctor Balsamo? You ran that ad?"

"Tut, tut," he said, not at all annoyed. "Impetuous youth. No, Doctor Balsamo is in there." He pointed his eyebrows at two doors on the left waft, then pushed a bell button on his desk--the only thing in the room later than Napoleon. "Go in. She's expecting you."

" 'She'? Which door?"

"Ah, the Lady or the Tiger? Does it matter? In the long run? A hero will know. A coward will choose the wrong one, being sure that I lie. Allez-y! Vite, vite! Schnell! Get the lead out, Mac."

I snorted and jerked open the right-hand door.

The doctor was standing with her back to me at some apparatus against the far wall and she was wearing one of those white, high-collared jackets favored by medical men. On my left was a surgeon's examining table, on my right a Swedish-modern couch; there were stainless-steel and glass cabinets, and some framed certificates; the whole place was as up-to-date at the outer room was not.

As I closed the door she turned and looked at me and said quietly, "I am very glad that you have come." Then she smiled and said softly, "You are beautiful," and came into my arms.

Chapter 4

About a minute and forty seconds and several centuries later "Dr. Balsamo-Helen of Troy" pulled her mouth an inch back from mine and said, "Let me go, please, then undress and lie on the examining table." I felt as if I had had nine hours of sleep, a needle shower, and three slugs of ice-cold akvavit on an empty stomach. Anything she wanted to do, I wanted to do. But the situation seemed to call for witty repartee. "Huh?" I said.

"Please. You are the one, but nevertheless I must examine you."

"Well . . . all right," I agreed. "You're the doctor," I added and started to unbutton my shirt. "You are a doctor? Of medicine, I mean." "Yes. Among other things."

I kicked out of my shoes. "But why do you want to examine me?"

"For witches' marks, perhaps. Oh, I shan't find any, I know. But I must search for other things, too. To protect you."

That table was cold against my skin. Why don't they pad those things? "Your name is Balsamo?"

"One of my names," she said absently while gentle fingers touched me here and there. "A family name, that is."

"Wait a minute. Count Cagliostro!"

"One of my uncles. Yes, he used that name. Though it isn't truly his, no more than Balsamo. Uncle Joseph is a very naughty man and quite untruthful." She touched an old, small scar. "Your appendix has been removed."

"Yes."

"Good. Let me see your teeth."

I opened wide. My face may not be much but I could rent my teeth to advertise Pepsodent. Presently she nodded. "Fluoride marks. Good. Now I must have your blood."

She could have bitten me in the neck for it and I wouldn't have minded. Nor been much surprised. But she did it the ordinary way, taking ten cc. from the vein inside my left elbow. She took the sample and put it in that apparatus against the wall. It chirred and whirred and she came back to me. "Listen, Princess," I said.

"I am not a princess."

"Well . . . I don't know your first name, and you inferred that your last name isn't really 'Balsamo'--and I don't want to call you 'Doc.' " I certainly did not want to call her "Doc"--

not the most beautiful girl I had ever seen or hoped to see . . . not after a kiss that had wiped out of memory every other kiss I had ever received. No.

She considered it. "I have many names. What would you like to call me?"

"Is one of them 'Helen'?"

She smiled like sunshine and I learned that she had dimples. She looked sixteen and in her first party dress. "You are very gracious. No, she's not even a relative. That was many, many years ago." Her face turned thoughtful. "Would you like to call me 'Ettarre'?"

"Is that one of your names?"

"It is much like one of them, allowing for different spelling and accent. Or it could be 'Esther' just as closely. Or 'Aster.' Or even 'Estrellita.' "

" 'Aster,' " I repeated. "Star. Lucky Star!"

"I hope that I will be your lucky star," she said earnestly. "As you will. But what shall I call you?"

I thought about it. I certainly was not going to dig up "Flash--I am not a comic strip. The Army nickname I had held longest was entirely unfit to hand to a lady. At that I preferred it to my given name. My daddy had been proud of a couple of his ancestors--but is that any excuse for hanging "Evelyn Cyril" on a male child? It had forced me to Team to fight before I learned to read.

The name I had picked up in the hospital ward would do. I shrugged. "Oh, Scar is a good enough name."

" 'Oscar,' " she repeated, broadening the "O" into "Aw," and stressing both syllables. "A noble name. A hero's name. Oscar." She caressed it with her voice.

"No, no! Not 'Oscar'--'Scar.' 'Scarface.' For this."

"Oscar is your name," she said firmly. "Oscar and Aster. Scar and Star." She barely touched the scar. "Do you dislike your hero's mark? Shall I remove it?"

"En? Oh, no. I'm used to it now. It lets me know who it is when I see myself in a mirror."

"Good. I like it, you wore it when I first saw you. But if you change your mind, let me know." The gear against the wall went whush, chunk! She turned and took a long strip from it, then whistled softly while she studied it.

"This won't take long," she said cheerfully and wheeled the apparatus over to the table. "Hold still while the protector is connected with you, quite still and breathe shallowly." She made half a dozen connections of tubes to me; they stuck where she placed them. She put over her head what I thought was a fancy stethoscope but after she got it on, it covered her eyes.

She chuckled. "You're pretty inside, too, Oscar. No, don't talk." She kept one hand on my forearm and I waited.

Five minutes later she lifted her hand and stripped off the connections. "That's all," she said cheerfully. "No more colds for you, my hero, and you won't be bothered again by that flux you picked up in the jungle. Now we move to the other room."

I got off the table and grabbed at my clothes. Star said, "You won't need them where we are going. Full kit and weapons will be provided."

I stopped with shoes in one hand and drawers in the other. "Star--"

"Yes, Oscar?"

"What is this all about? Did you run that ad? Was it meant for me? Did you really want to hire me for something?"

She took a deep breath and said soberly, "I advertised. It was meant for you and you only. Yes, there is a job to do . . . as my champion. There will be great adventure . . . and greater treasure . . . and even greater danger--and I fear very much that neither one of us will live through it." She looked me in the eyes. "Well, sir?"

I wondered how long they had had me in the locked ward. But I didn't tell her so, because, if that was where I was, she wasn't there at all. And I wanted her to be there, more than I had ever wanted anything. I said, "Princess . . . you've hired yourself a boy."

She caught her breath. "Come quickly. Time is short." She led me through a door beyond the Swedish modern couch, unbuttoning her jacket, unzipping her skirt, as she went, and letting garments fall anywhere. Almost at once she was as I had first seen her at the plage.

This room had dark walls and no windows and a soft light from nowhere. There were two tow couches side by side, black they were and looking like biers, and no other furniture. As soon as the door was dosed behind us I was suddenly aware that the room was aching, painfully anechoic; the bare walls gave back no sound.

The couches were in the center of a circle which was part of a large design, in chalk, or white paint, on bare floor. We entered the pattern; she turned and squatted down and completed one line, closing it--and ft was true; she was unable to be awkward, even hunkered down, even with her breasts drooping as she leaned over.

"What is it?" I asked.

"A map to take us where we are going."

"It looks more like a pentagram."

She shrugged. "All right, it is a pentacle of power. A schematic circuit diagram would be a better tag. But, my hero, I can't stop to explain it. Lie down, please, at once."

I took the right-hand couch as she signed me, but I couldn't let ft be. "Star, are you a witch?"

"If you like. Please, no talking now." She lay down, stretched out her hand. "And join hands with me, my lord; it is necessary."

Her hand was soft and warm and very strong. Presently the light faded to red, then died away. I slept.

Chapter 5

I woke to singing birds.

Her hand was still in mine. I turned my head and she smiled at me. "Good morning, my lord."

"Good morning. Princess." I glanced around. We were still lying on those black couches but they were outdoors, in a grassy dell, a clearing in trees beside a softly chuckling stream--a place so casually beautiful that it looked as if it had been put together leaf by leaf by old and unhurried Japanese gardeners.

Warm sunshine splashed through leaves and dappled her golden body. I glanced up at the sun and back at her. "Is it morning?" It had been noonish or later and that sun ought to DC--seemed to be--setting, not rising--

"It is again morning, here."

Suddenly my bump of direction spun like a top and I felt dizzy. Disoriented--a feeling new to me and very unpleasant. I couldn't find north.

Then things steadied down. North was that way, upstream--and the sun was rising, maybe nine in the morning, and would pass across the north sky. Southern Hemisphere. No sweat.

No trick at all--Just give the kook a shot of dope while examining him, lug him aboard a 707 and jet him to New Zealand, replenishing the Mickey Finn as needed. Wake him up when you want him.

Only I didn't say this and never did think it. And it wasn't true.

She sat up. "Are you hungry?"

I suddenly realized that an omelet some hours ago--how many? --was not enough for a growing boy. I sat up and swung my feet to the grass. "I could eat a horse."

She grinned. "The shop of La Societe Anonyme de Hippopnage is closed I'm afraid. Will you settle for trout? We must wait a bit, so we might as well eat. And don't worry, this place is defended."

" 'Defended'?"

"Safe."

"All right. Uh, how about a rod and hooks?"

"I'll show you." What she showed me was not fishing tackle but how to tickle fish. But I knew how. We waded into that lovely stream, just pleasantly cool, moving as quietly as possible, and picked a place under a bulging rock, a place where trout like to gather and think--the fishy equivalent of a gentlemen's club.

You tickle trout by gaining their confidence and then abusing it. In about two minutes I got one, between two and three pounds, and tossed it onto the bank, and Star had one almost as large. "How much can you eat?" she asked.

"Climb out and get dry," I said. "I'll get another one."

"Make it two or three," she amended. "Rufo will be along." She waded quietly out.

"Who?"

"Your groom."

I didn't argue. I was ready to believe seven impossible things before breakfast, so I went on catching breakfast. I let it go with two more as the last was the biggest trout I've ever seen. Those beggars fairly queued up to be grabbed.

By then Star had a fire going and was cleaning fish with a sharp rock. Shucks, any Girl Scout or witch can make fire without matches. I could myself, given several hours and plenty of luck, just by rubbing two dry cliches together. But I noticed that the two short biers were gone. Well, I hadn't ordered them. I squatted down and took over cleaning the trout.

Star came back shortly with fruits that were apple-like but deep purple in color and with quantities of button mushrooms. She was carrying the plunder on a broad leaf, like canna or ti, only bigger. More like banana leaves.

My mouth started to water. "If only we had salt!"

"I'll fetch it. It will be rather gritty. I'm afraid."

Star broiled the fish two ways, over the fire on a forked green stick, and on hot flat limestone where the fire had been--she kept brushing the fire along as she fed it and placed fish and mushrooms sizing where it had been. That way was best, I thought. Little fine grasses turned out to be chives, local style, and tiny clover tasted and looked like

sheep sorrel. That, with the salt (which was gritty and coarse and may have been licked by animals before we got it--not that I cared) made the trout the best I've ever tasted. Well, weather and scenery and company had much to do with it, too, especially the company.

I was trying to think of a really poetic way of saying, "How about you and me shacking up right here for the next ten thousand years? Either legal or informal--are you married?" when we were interrupted. Which was a shame, for I had thought up some pretty language, all new, for the oldest and most practical suggestion in the world.

Old baldy, the gnome with the oversized six-shooter, was standing behind me and cursing.

I was sure it was cursing although the language was new to me. Star turned her head, spoke in quiet reproval in the same language, made room for him and offered him a trout. He took it and ate quite a bit of it before he said, in English, "Next time I won't pay him anything. You'll see."

"You shouldn't try to cheat him, Rufo. Have some mushrooms. Where's the baggage? I want to get dressed."

"Over there." He went back to wolfing fish. Rufo was proof that some people should wear clothes. He was pink all over and somewhat potbellied. However, he was amazingly well muscled, which I had never suspected, else I would have been more cautious about taking that cannon away from him. I decided that if he wanted to Indian-wrestle, I would cheat.

He glanced at me past a pound and a half of trout and said, "Is it your wish to be outfitted now, my lord?"

"Huh? Finish your breakfast. And what's this 'my lord' routine? Last time I saw you you were waving a gun in my face."

"I'm sorry, my lord. But She said to do it . . . and what She says must be done. You understand."

"That suits me perfectly. Somebody has to drive. But call me 'Oscar.' "

Rufo glanced at Star, she nodded. He grinned. "Okay, Oscar. No hard feelings?"

"Not a bit."

He put down the fish, wiped his hand on his thigh, and stuck it out. "Swell! You knock em down, I'll stomp on 'em."

We shook hands and each of us tried for the knuckle-cracking grip. I think I got a little the better of it, but I decided he might have been a blacksmith at some time.

Star looked very pleased and showed dimples again She had been lounging by the fire; looking line a hamadryad on her coffee break; now she suddenly reached out and placed her strong, slender hand over our clasped fists. "My stout friends," she said earnestly. "My good boys. Rufo, it will be well."

"You have a Sight?" he said eagerly.

"No, just a feeling. But I am no longer worried."

"We can't do a thing," Rufo said moodily, "until we deal with Igli."

"Oscar will dicker with Igli." Then she was on her feet in one smooth motion. "Stuff that fish in your face and unpack. I need clothes." She suddenly looked very eager.

Star was more different women than a platoon of WACs--which is only mildly a figure of speech. Right then she was every woman from Eve deciding between two fig leaves to a modern woman whose ambition is to be turned loose in Nieman-Marcus, naked with a

checkbook. When I first met her, she had seemed rather a sobersides and no more interested in clothes than I was. I'd never had a chance to be interested in clothes. Being a member of the sloppy generation was a boon to my budget at college, where blue jeans were au fait and a dirty sweat shirt was stylish.

The second time I saw her she had been dressed, but in that lab smock and tailored skirt she had been both a professional woman and a warm friend. But today--this morning whenever that was--she was increasingly full of Bubbles. She had delighted so in catching fish that she had had to smother squeals of glee. And she had then been the perfect Girl Scout, with soot smudged on her cheek and her hair pushed back out of hazard of the fire while she cooked.

Now she was the woman of all ages who just has to get her hands on new clothes. I felt that dressing Star was like putting a paint job on the crown jewels--but I was forced to admit that, if we were not to do the "Me Tarzan, you Jane" bit right in that dell from then on till death do us part, then clothes of some sort, if only to keep her perfect skin from getting scratched by brambles, were needed.

Rufo's baggage turned out to be a little black box about the size and shape of a portable typewriter. He opened it.

And opened it again.

And Kept on opening it--And kept right on unfolding its sides and letting them down until the durn thing was the size of a small moving van and even more packed. Since I was nicknamed "Truthful James" as soon as I learned to talk and am widely known to have won the hatchet every February 22nd all through school, you must now conclude that I was the victim of an illusion caused by hypnosis and/or drugs.

Me, I'm not sure. Anyone who has studied math knows that the inside does not have to be smaller than the outside, in theory, and anyone who has had the doubtful privilege of seeing a fat woman get in or out of a tight girdle knows that this is true in practice, too. Rufo's baggage just carried the principle further.

The first thing he dragged out was a big teakwood chest. Star opened it and started pulling out filmy lovelies.

"Oscar, what do you think of this one?" She was holding a long, green dress against her with the skirt draped over one hip to display it. "Like it?"

Of course I liked it. If it was an original--and somehow I knew that Star never wore copies--I didn't want to think about what it must have cost. "It's a mighty pretty gown," I told her. "But--Look, are we going to be traveling?"

"Right away."

"I don't see any taxicabs. Aren't you likely to get that torn?"

"It doesn't tear. However, I didn't mean to wear it; I just meant to show it to you. Isn't it lovely? Shall I model it for you? Rufo, I want those high-heeled sandals with the emeralds."

Rufo answered in that language he had been cursing in when he arrived. Star shrugged and said, "Don't be impatient, Rufo; Igli will wait. Anyhow, we can't talk to Igli earlier than tomorrow morning; milord Oscar must learn the language first." But she put the green gorgeousness back in the chest.

"Now here is a little number," she went on, holding it up, "which is just plain naughty: it has no other purpose."

I could see why. It was mostly skirt, with a little bodice that supported without concealing--a style favored in ancient Crete, I hear, and still popular in the Overseas Weekly, Playboy, and many night clubs. A style that turns droopers into bulgers. Not that Star needed it.

Rufo tapped me on the shoulder. "Boss? Want to look over the ordnance and pick out what you need?"

Star said reprovingly, "Rufo, life is to be savored, not hurried."

"We'll have a lot more life to savor if Oscar picks out what he can use best."

"He won't need weapons until after we reach a settlement with Igli." But she didn't insist on showing more clothes and, while I enjoyed looking at Star, I like to check over weapons, too, especially when I might have to use them, as apparently the job called for.

While I had been watching Star's style show, Rufo had laid out a collection that looked like a cross between an army-surplus store and a museum--swords, pistols, a lance that must have been twenty feet long, a flame-thrower, two bazookas flanking a Tommy gun, brass knucks, a machete, grenades, bows and arrows, a misericorde--

"You didn't bring a slingshot," I said accusingly.

He looked smug. "Which kind do you like, Oscar? The forked sort? Or a real sling?"

"Sorry I mentioned it. I can't hit the floor with either sort." I picked up the Tommy chopper, checked that it was empty, started stripping it. It seemed almost new, just fired enough to let the moving parts work in. A Tommy isn't much more accurate than a pitched baseball and hasn't much greater effective range. But it does have virtues--you hit a man with it, he goes down and stays down. It is short and not too heavy and has a lot of firepower for a short time. It is a bush weapon, or for any other sort of close-quarters work.

But I like something with a bayonet on the end, in case the party gets intimate--and I like that something to be accurate at long range in case the neighbors get unfriendly from a distance. I put it down and picked up a Springfield--Rock Island Arsenal, as I saw by its serial number, but still a Springfield. I feel the way about a Springfield that I do about a Gooney Bird; some pieces of machinery are ultimate perfection of their sort, the only possible improvement is a radical change in design.

I opened the bolt, stuck my thumbnail in the chamber, looked down the muzzle. The barrel was bright and the lands were unworn--and the muzzle had that tiny star on it; it was a match weapon!

"Rufo, what sort of country will we be going through? Like this around us?"

"Today, yes. But--" He apologetically took the rifle out of my hands. "It is forbidden to use firearms here. Swords, Knives, arrows--anything that cuts or stabs or mauls by your own muscle power. No guns."

"Who says so?"

He shivered. "Better ask Her."

"If we can't use them, why bring them? And I don't see any ammunition around anyhow."

"Plenty of ammunition. Later on we will be at--another place--where guns may be used. If we live that long. I was just showing you what we have. What do you like of the lawful weapons? Are you a bowman?"

"I don't know. Show me how." He started to say something, then shrugged and selected a bow, slipped a leather guard over his left forearm, picked out an arrow. "That

tree," he said, "the one with the white rock at the foot of it. I'll try for about as high off the ground as a man's heart."

He nocked the shaft, raised and bent and let fly, all in one smooth motion.

The arrow quivered in the tree trunk about four feet off the ground.

Rufo grinned. "Care to match that?"

I didn't answer. I knew I could not, except by accident. I had once owned a bow, a birthday present. I hadn't hit much with it and soon the arrows were lost. Nevertheless I made a production out of selecting a bow, and picked the longest and heaviest.

Rufo cleared his throat apologetically. "If I may make a suggestion, that one will pull quite hard--for a beginner."

I strung it. "Find me a leather."

The leather slipped on as if it had been made for me and perhaps it had. I picked an arrow to match, barely looked at it as they all seemed straight and true. I didn't have any hope of hitting that bloody tree; it was fifty yards away and not over a foot thick. I simply intended to sight a bit high up on the trunk and hope that so heavy a bow would give me a flattish trajectory. Mostly I wanted to nock, bend, and loose all in one motion as Rufo had done--to look like Robin Hood even though I was not.

But as I raised and bent that bow and felt the power of it, I felt a surge of exultance--this tool was right for me! We fitted.

I let fly without thinking.

My shaft thudded a hand's breadth from his.

"Well shot!" Star called out.

Rufo looked at the tree and blinked, then looked reproachfully at Star. She looked haughtily back. "I did not," she stated. "You know I would not do that. It was a fair trial . . . and a credit to you both."

Rufo looked thoughtfully at me. "Hmm--Would you care to make a small bet--you name the odds--that you can do that again?"

"I won't bet," I said. "I'm chicken." But I picked up another arrow and nocked it. I liked that bow, I even liked the way the string whanged at the guard on my forearm; I wanted to try it, feel married to it, again.

I loosed it.

The third arrow grew out of a spot between the first two, but closer to his. "Nice bow," I said. "I'll keep it. Fetch the shafts."

Rufo trotted away without speaking. I unstrung the bow, then started looking over the cutlery. I hoped that I would never again have to shoot an arrow; a gambler can't expect to draw a pat hand every deal--my next shot would likely turn around like a boomerang.

There was too much wealth of edges and points, from a two-handed broadsword suitable for chopping down trees to a little dagger meant for a lady's stocking. But I picked up and balanced them all . . . and found there the blade that suited me the way Excalibur suited Arthur.

I've never seen one quite like it so I don't know what to call it. A saber, I suppose, as the blade was faintly curved and razor sharp on the edge and sharp rather far back on the back. But it had a point as deadly as a rapier and the curve was not enough to keep it from being used for thrust and counter quite as well as chopping away meat-axe style.

The guard was a bell curved back around the knuckles into a semi-basket but cut away enough to permit full moulinet from any guard.

It balanced in the forte less than two inches from the guard, yet the blade was heavy enough to chop bone. It was the sort of sword that feels as if it were an extension of your body.

The grip was honest sharkskin, molded to my hand. There was a motto chased onto the blade but it was so buried in curlicues that I did not take time to study it out. This girl was mine, we fitted! I returned it and buckled belt and scabbard to my bare waist, wanting the touch of it and feeling like Captain John Carter, Jeddak of Jeddaks, and the Gascon and his three friends all in one.

"Will you not dress, milord Oscar?" Star asked.

"Eh? Oh, certainly--I was just trying it on for size. But--Did Rufo fetch my clothes?"

"Did you, Rufo?"

"His clothes? He wouldn't want those things he was wearing in Nice!"

"What's wrong with wearing Lederhosen with an aloha shirt?" I demanded.

"What? Oh, nothing at all, milord Oscar," Rufo answered hastily. "Live and let live I always say. I knew a man once who wore--never mind. Let me show you what I fetched for you."

I had my choice of everything from a plastic raincoat to full armor. I found the latter depressing because its presence implied that it might be needed. Except for an Army helmet I had never worn armor, didn't want to, didn't know how--and didn't care to mix with rude company that made such protection desirable.

Besides, I didn't see a horse around, say a Percheron or a Clydesdale, and I couldn't see myself hiking in one of those tin suits. I'd be slow as crutches, noisy as a subway, and hot as a phone booth. Sweat off ten pounds in five miles. The quilted longjohns that go under that ironmongery would have been too much alone for such beautiful weather; steel on top would turn me into a walking oven and leave me too weak and clumsy to fight my way out of a traffic ticket.

"Star, you said that--" I stopped. She had finished dressing and hadn't overdone it. Soft leather hiking shoes--buskins really--brown tights, and a short green upper garment halfway between a jacket and a skating dress. This was topped by a perky little hat and the whole costume made her look like a musical corner version of an airline hostess, smart, cute, wholesome, and sexy.

Or maybe Maid Marian, as she had added a double-curve bow about half the size of mine, a quiver, and a dagger. "You," I said, "look like why the riot started."

She dimpled and curtsied. (Star never pretended. She knew she was female, she knew she looked good, she liked it that way.) "You said something earlier," I continued, "about my not needing weapons just yet. Is there any reason why I should wear one of these space suits? They don't look comfortable."

"I don't expect any great danger today," she said slowly. "But this is not a place where one can call the police. You must decide what you need."

"But--Damn it. Princess, you know this place and I don't. I need advice."

She didn't answer. I turned to Rufo. He was carefully studying a treetop. I said, "Rufo, get dressed."

He raised his eyebrows. "Milord Oscar?"

"Schnell! Vite, vite! Get the lead out."

"Okay." He dressed quickly, in an outfit that was a man's version of what Star had selected, with shorts instead of tights.

"Arm yourself," I said, and started to dress the same way, except that I intended to wear field boots. However, there was a pair of those buskins that appeared to be my size, so I tried them on. They snuggled to my feet like gloves and, anyway, my soles were so hardened by a month barefooted on l'Ile du Levant that I didn't need heavy boots.

They were not as medieval as they looked; they zipped up the front and were marked inside Fabrique en France.

Pops Rufo had taken the bow he had used before, selected a sword, and had added a dagger. Instead of a dagger I picked out a Solingen hunting knife. I looked longingly at a service .45, but didn't touch it. If "they," whoever they were, had a local Sullivan Act, I would go along with the gag.

Star told Rufo to pack, then squatted down with me at a sandy place by the stream and drew a sketch map--route south, dropping downgrade and following the stream except for short cuts, until we reached the Singing Waters. There we would camp for the night.

I got it in my head. "Okay. Anything to warn me about? Do we shoot first? Or wait for them to bomb us?"

"Nothing that I expect, today. Oh, there's a carnivore about three times the size of a lion. But it is a great coward; it won't attack a moving man."

"A fellow after my own heart. All right, we'll keep moving."

"If we do see human beings--I don't expect it--it might be well to nock a shaft . . . but not raise your bow until you feel it is necessary. But I'm not telling you what to do, Oscar; you must decide. Nor will Rufo let fly unless he sees you about to do so."

Rufo had finished packing. "Okay, let's go," I said. We set out. Rufo's little black box was now rigged as a knapsack and I did not stop to wonder how he could carry a couple of tons on his shoulders. An anti-grav device like Buck Rogers, maybe. Chinese coolie blood. Black magic. Hell, that teakwood chest alone could not have fitted into that backpack by a factor of 30 to I, not to mention the arsenal and assorted oddments.

There is no reason to wonder why I didn't quiz Star as to where we were, why we were there, how we had got there, what we were going to do, and the details of these dangers I was expected to face. Look, Mac, when you are having the most gorgeous dream of your life and just getting to the point, do you stop to tell yourself that it is logically impossible for that particular babe to be in the hay with you--and thereby wake yourself up? I knew, logically, that everything that had happened since I read that silly ad had been impossible.

So I chucked logic.

Logic is a feeble reed, friend. "Logic" proved that airplanes can't fly and that H-bombs wont work and that stones don't fall out of the sky. Logic is a way of saying that anything which didn't happen yesterday won't happen tomorrow.

I liked the situation. I didn't want to wake up, whether in bed, or in a headshrinker ward. Most especially I did not want to wake up still back in that jungle, maybe with that face wound still fresh and no helicopter. Maybe little brown brother had done a full job on me and sent me to Valhalla. Okay, I liked Valhalla.

I was swinging along with a sweet sword knocking against my thigh and a much sweeter girl matching my strides and a slave-serf-groom-something sweating along behind us, doing the carrying and being our "eyes-behind." Birds were singing and the

landscape had been planned by master landscape architects and the air smelled sweet and good. If I never dodged a taxi nor read a headline again, that suited me.

That longbow was a nuisance--but so is an M-l. Star had her little bow slung, shoulder to hip. I tried that, but it tended to catch on things. Also, it made me nervous not to have it ready since she had admitted a chance of needing it. So I unslung it and carried it in my left hand, strung and ready.

We had one alarum on the morning hike. I heard Rufo's bowstring go thwung! --and I whirled and had my own bow ready, arrow nocked, before I saw what was up.

Or down, rather. A bird like a dusky grouse but larger. Rufo had picked it off a branch, right through the neck. I made note not to compete with him again in archery, and to get him to coach me in the fine points.

He smacked his lips and grinned. "Supper!" For the next mile he plucked it as we walked, then hung it from his belt.

We stopped for lunch one o'clockish at a picnic spot that Star assured me was defended, and Rufo opened his box to suitcase size, and served us lunch: cola cuts, crumbly Provencal cheese, crusty French bread, pears, and two bottles of Chablis. After lunch Star suggested a siesta. The idea was appealing; I had eaten heartily and shared only crumbs with the birds, but I was surprised. "Shouldn't we push on?"

"You must have a language lesson, Oscar."

I must tell them at Ponce de Leon High School the better way to study languages. You lie down on soft grass near a chuckling stream on a perfect day, and the most beautiful woman in any world bends over you and looks you in the eyes. She starts speaking softly in a language you do not understand.

After a bit her big eyes get bigger and bigger . . . and bigger . . . and you sink into them.

Then, a long time later, Rufo says, "Erbas, Oscar, 't knila voorsht."

"Okay," I answered, "I am getting up. Don't rush me."

That is the last word I am going to set down in a language that doesn't fit our alphabet. I had several more lessons, and won't mention them either, and from then on we spoke this lingo, except when I was forced to span gaps by asking in English. It is a language rich in profanity and in words for making love, and richer than English in some technical subjects--but with surprising holes in it. There is no word for "lawyer" for example.

About an hour before sundown we came to the Singing Waters.

We had been traveling over a high, wooded plateau. The brook where we had caught the trout had been joined by other streams and was now a big creek. Below us, at a place we hadn't reached yet, it would plunge over high cliffs in a super-Yosemite fall. But here, where we stopped to camp, the water had cut a notch into the plateau, forming cascades, before it took that dive.

"Cascades" is a weak word. Upstream, downstream, everywhere you looked, you saw waterfalls--big ones thirty or fifty feet high, little ones a mouse could have jumped up, every size in between. Terraces and staircases of them there were, smooth water green from rich foliage overhead and water white as whipped cream as it splashed into dense foam.

And you heard them. Tiny falls tinkled in silvery soprano, big falls rumbled in basso profundo. On the grassy alp where we camped it was an ever-present chorale; in the middle of the falls you had to snout to make yourself heard.

Coleridge was there in one of his dope dreams:

And here were forests ancient as the hills,
Enfolding sunny spots of greenery.
But oh! that deep romantic chasm which slanted
Down the green hill athwart a cedarn cover
A savage place! as holy and enchanted
As e'er beneath a waning moon was haunted
By woman wailing for her demon-lover!
And from this chasm, with ceaseless turmoil
seething--

Coleridge must have followed that route and reached the Singing Waters. No wonder he felt like killing that "person from Porlock" who broke in on his best dream. When I am dying, lay me beside the Singing Waters and let them be the last I hear and see.

We stopped on a lawn terrace, flat as a promise and soft as a Kiss, and I helped Rufo unpack. I wanted to learn how he did that trick with the box. I didn't find out. Each side opened as naturally and reasonably as opening up an ironing board--and then when it opened again that was natural and reasonable, too.

First we pitched a tent for Star--no army-surplus job, this; it was a dainty pavilion of embroidered silk and the rug we spread as a floor must have used up three generations of Bukhara artists. Rufo said to me, "Do you want a tent, Oscar?"

I looked up at the sky and over at the not-yet-setting sun. The air was milk warm and I couldn't believe that it would rain. I don't like to be in a tent if there is the least chance of surprise attack. "Are you going to use a tent?"

"Me? Oh, no! But She has to have a tent, always. Then, more likely than not. She'll decade to sleep out on the grass."

"I won't need a tent." (Let's see, does a "champion" sleep across the door of his lady's chamber, weapons at hand? I wasn't sure about the etiquette of such things; they were never mentioned in "Social Studies.")

She returned then and said to Rufo, "Defended. The wards were all in place."

"Recharged?" he fretted.

She tweaked his ear. "I am not senile." She added, "Soap, Rufo. And come along, Oscar; that's Rufo's work."

Rufo dug a cake of Lux out of that caravan load and gave it to her, then looked at me thoughtfully and handed me a bar of Life Buoy.

The Singing Waters are the best bath ever, in endless variety. Still pools from footbath size to plunges you could swim in, sitz baths that tingled your skin, shower baths from just a trickle up to free-springing jets that would beat your brains in if you stood under them too long.

And you could pick your temperature. Above the cascade we used, a hot spring added itself to the main stream and at the base of this cascade a hidden spring welled out icy cold. No need to fool with taps, just move one way or the other for the temperature you like--or move downstream where it evened out to temperature as gently warm as a mother's kiss.

We played for a while, with Star squealing and giggling when I splashed her, and answering it by ducking me. We both acted like kids; I felt like one, she looked like one, and she played rough, with muscles of steel under velvet.

Presently I fetched the soap and we scrubbed. When she started shampooing her hair, I came up behind her and helped. She let me, she needed help with the lavish mop, six times as much as most gals bother with these days.

That would have been a wonderful time (with Rufo busy and out of the way) to grab her and hug her, then proceed ruggedly to other matters. Nor am I sure that she would nave made even a token protest; she might have cooperated heartily.

Hell, I know she would not have made a "token" protest. She would either have put me in my place with a cold word or a clout in the ear--or cooperated.

I couldn't do it. I couldn't even start.

I don't know why. My intentions toward Star had oscillated from dishonorable to honorable and back again, but had always been practical from the moment I laid eyes on her. No, let me put it this way: My intentions were strictly dishonorable always, but with utter willingness to convert them to honorable, later, as soon as we could dig up a justice of the peace.

Yet I found I couldn't lay a finger on her other than to help her scrub the soap out of her hair.

While I was puzzling over this, both hands buried in heavy blond hair and wondering what was stopping me from putting my arms around that slender-strong waist only inches away from me, I heard a piercing whistle and my name--my new name. I looked around.

Rufo, dressed in his unlovely skin and with towels over his shoulder, was standing on the bank ten feet away and trying to cut through the roar of water to get my attention.

I moved a few feet toward him. "How's that again?" I didn't quite snarl.

"I said, 'Do you want a shave?' Or are you growing a beard?"

I had been uneasily aware of my face cactus while I was debating whether or not to attempt criminal assault, and that unease had helped to stop me--Gillette, Aqua Velva, Burma Shave, et al., have made the browbeaten American male, namely me, timid about attempting seduction and/or rape unless freshly planed off. And I had a two-day growth.

"I don't have a razor," I called back.

He answered by holding up a straight razor.

Star moved up beside me. She reached up and tried my chin between thumb and forefinger. "You would be majestic in a beard," she said. "Perhaps a Van Dyke, with sneering mustachios."

I thought so too, if she thought so. Besides, it would cover most of that scar. "Whatever you say. Princess."

"But I would rather that you stayed as I first saw you. Rufo is a good barber." She turned toward him. "A hand, Rufo. And my towel."

Star walked back toward the camp, toweling herself dry--I would have been glad to help, if asked. Rufo said tiredly, "Why didn't you assert yourself? But She says to shave you, so now I've got to--and rush through my own bath, too, so She won't be kept waiting."

"If you've got a mirror, I'll do it myself."

"Ever used a straight razor?"

"No, but I can learn."

"You'd cut your throat, and She wouldn't like that. Over here on the bank where I can stand in the warm water. No, no! Don't sit on it, lie down with your head at the edge. I can't shave a man who's sitting up." He started working lather into my chin.

"You know why? I learned how on corpses, that's why, making them pretty so that their loved ones would be proud of them. Hold still! You almost lost an ear. I like to shave corpses; they can't complain, they don't make suggestions, they don't talk back--and they always hold still. Best job I ever had. But now you take this job--" He stopped with the blade against my Adam's apple and started counting his troubles.

"Do I get Saturday off? Hell, I don t even get Sunday off! And look at the hours! Why, I read just the other day that some outfit in New York--You've been in New York?"

"I've been in New York. And get that guillotine away from my neck while you're waving your hands like that."

"You keep talking, you're bound to get a little nick now and then. This outfit signed a contract for a twenty-five hour week. Week! I'd like to settle for a twenty-five hour day. You know how long I've been on the go, right this minute?"

I said I didn't.

"There, you talked again. More than seventy hours or I'm a liar! And for what? Glory? Is there glory in a little heap of whitened bones? Wealth? Oscar, I'm telling you the truth; I've laid out more corpses than a sultan has concubines and never a one of them cared a soggy pretzel whether they were bedecked in rubies the size of your nose and twice as red . . . or rags. What use is wealth to a dead man? Tell me, Oscar, man to man while She can't hear: Why did you ever let Her talk you into this?"

"I'm enjoying it, so far."

He sniffed. "That's what the man said as be passed the fiftieth floor of the Empire State Building. But the sidewalk was waiting for him, just the same. However," he added darkly, "until you settle with Igli, it's not a problem. If I had my kit, I could cover that scar so perfectly that everybody would say, 'Doesn't he look natural?' "

"Never mind. She likes that scar." (Damn it, he had me doing it!)

"She would. What I'm trying to get over is, if you walk the Glory Road, you are certain to find mostly rocks. But I never chose to walk it. My idea of a nice way to live would be a quiet little parlor, the only one in town, with a selection of caskets, all prices, and a markup that allowed a little leeway to show generosity to the bereaved. Installment plans for those with the foresight to do their planning in advance--for we all have to die, Oscar, we all have to die, and a sensible man might as well sit down over a friendly glass of beer and make his plans with a well-established firm he can trust."

He leaned confidentially over me. "Look, milord Oscar . . . if by any miracle we get through this alive, you could put in a good word for me with Her. Make Her see that I'm too old for the Glory Road. I can do a lot to make your remaining days comfortable and pleasant . . . if your intentions toward me are comradely."

"Didn't we shake on it?"

"Ah, yes, so we did." He sighed. "One for all and all for one, and Pikes Peak or Bust. You're done."

It was still light and Star was in her tent when we got back--and my clothes were laid out. I started to object when I saw them but Rufo said firmly, "She said 'informal' and that means black tie."

I managed everything, even the studs (which were amazing big black pearls), and that tuxedo either had been tailored for me or it had been bought off the rack by someone who knew my height, weight, shoulders, and waist. The label inside the jacket read The English House, Copenhagen.

But the tie whipped me. Rufo showed up while I was struggling with it, had me lie down (I didn't ask why) and tied it in a jiffy. "Do you want your watch, Oscar?"

"My watch?" So far as I knew it was in a doctors examining room in Nice. "You have it?"

"Yes, sir. I fetched everything of yours but your"--he shuddered--"clothes."

He was not exaggerating. Everything was there, not only the contents of my pockets but the contents of my American Express deposit box: cash, passport, I.D., et cetera, even those Change Alley Sweepstakes tickets.

I started to ask how he had gotten into my lockbox but decided not to. He had had the key and it might have been something as simple as a fake letter of authority. Or as complex as his magical black box. I thanked him and he went back to his cooking.

I started to throw that stuff away, all but cash and passport. But one can't be a litterbug in a place as beautiful as the Singing Waters. My sword belt had a leather pouch on it; I stuffed it in there, even the watch, which had stopped.

Rufo had set up a table in front of Star's dainty tent and rigged a light from a tree over it and set candles on the table. It was dark before she came out . . . and waited. I finally realized that she was waiting for my arm. I led her to her place and seated her and Rufo seated me. He was dressed in a plum-colored footman's uniform.

The wait for Star had been worth it; she was dressed in the green gown she had offered to model for me earlier. I still don't know that she used cosmetics but she looked not at all like the lusty Undine who had been ducking me an hour earlier. She looked as if she should be kept under glass. She looked like Liza Doolittle at the Ball.

"Dinner in Rio" started to play, blending with the Singing Waters.

White wine with fish, rose wine with fowl, red wine with roast--Star chatted and smiled and was witty. Once Rufo, while bending over to me to serve, whispered, "The condemned ate heartily." I told him to go to hell out of the corner of my mouth.

Champagne with the sweet and Rufo solemnly presented the bottle for my approval. I nodded. What would he have done if I had turned it down? Offered another vintage? Napolean with coffee. And cigarettes.

I had been thinking about cigarettes all day. These were Benson & Hedges No. 5 . . . and I had been smoking those black French things to save money.

While we were smoking, Star congratulated Rufo on the dinner and he accepted her compliments gravely and I seconded them. I still don't know who cooked that hedonistic meal. Rufo did much of it but Star may have done the hard parts while I was being shaved.

After an unhurried happy time, sitting over coffee and brandy with the overhead light doused and only a single candle gleamed on her jewels and lighting her face. Star made a slight movement back from the table and I got up quickly and showed her to her tent. She stopped at its entrance. "Milord Oscar--"

So I kissed her and followed her in--

Like hell I did! I was so damned hypnotized that I bowed over her hand and kissed it. And that was that.

That left me with nothing to do but get out of that borrowed monkey suit, hand it back to Rufo, and get a blanket from him. He had picked a spot to sleep at one side of her tent, so I picked one on the other and stretched out. It was still so pleasantly warm that even one blanket wasn't needed.

But I didn't go to sleep. The truth is, I've got a monkey on my back, a habit worse than marijuana though not as expensive as heroin. I can stiff it out and get to sleep anyway--but it wasn't helping that I could see light in Stars tent and a silhouette that was no longer troubled by a dress.

The fact is I am a compulsive reader. Thirty-five cents' worth of Gold Medal Original will put me right to sleep. Or Perry Mason. But I'll read the ads in an old Paris-Match that has been used to wrap herring before I'll do without.

I got up and went around the tent. "Psst! Rufo."

"Yes, milord." He was up fast, a dagger in his hand.

"Look, is there anything to read around this dump?"

"What sort of thing?"

"Anything, just anything. Words in a row."

"Just a moment." He was gone a while, using a flashlight around that beachhead dump of plunder. He came back and offered me a book and a small camp lamp. I thanked him, went back, and lay down.

It was an interesting book, written by Albertus Magnus and apparently stolen from the British Museum. Albert offered a long list of recipes for doing unlikely things: how to pacify storms and fly over clouds, how to overcome enemies, how to make a woman be true to you--

Here's that last one: "If thou wilt that a woman bee not visions nor desire men, take the private members of a Woolfe, and the haires which doe grow on the cheekes, or the eye-brows of him, and the hairs which bee under his beard, and burne it all, and give it to her to drinke, when she knowethe not, and she shal desire no other man."

This should annoy the "Woolfe." And if I were the gal, it would annoy me, too; it sounds like a nauseous mixture. But that's the exact formula, spelling and all, so if you are having trouble keeping her in line and have a "Woolfe" handy, try it. Let me know the results. By mail, not in person.

There were several recipes for making a woman love you who does not but a "Woolfe" was by far the simplest ingredient. Presently I put the book down and the light out and watched the moving silhouette on that translucent silk. Star was brushing her hair.

Then I quit tormenting myself and watched the stars, I've never learned the stars of the Southern Hemisphere; you seldom see stars in a place as wet as Southeast Asia and a man with a bump of direction doesn't need them.

But that southern sky was gorgeous.

I was staring at one very bright star or planet (it seemed to have a disk) when suddenly I realized it was moving.

I sat up. "Hey! Star!"

She called back, "Yes, Oscar?"

"Come see! A sputnik. A big one!"

"Coming." The light in her tent went out, she joined me quickly, and so did good old Pops Rufo, yawning and scratching his ribs. "Where, milord?" Star asked.

I pointed. "Right there! On second thought it may not be a sputnik; it might be one of our Echo series. It's awfully big and bright."

She glanced at me and looked away. Rufo said nothing. I stared at it a while longer, glanced at her. She was watching me, not it. I looked again, watched it move against the backdrop of stars.

"Star," I said, "that's not a sputnik. Nor an Echo balloon. That's a moon. A real moon."

"Yes, milord Oscar."

"Then this is not Earth."

"That is true."

"Hmm--" I looked back at the little moon, moving so fast among the stars, west to east.

Star said quietly, "You are not afraid, my hero?"

"Of what?"

"Of being in a strange world."

"Seems to be a pretty nice world."

"It is," she agreed, "in many ways."

"I like it," I agreed. "But maybe it's time I knew more about it. Where are we? How many light-years, or whatever it is, in what direction?"

She sighed. "I will try, milord. But it will not be easy; you have not studied metaphysical geometry--nor many other things. Think of the pages of a book--" I still had that cookbook of Albert the Great under my arm; she took it. "One page may resemble another very much. Or be very different. One page can be so close to another that it touches, at all points--yet have nothing to do with the page against it. We are as close to Earth--right now--as two pages in sequence in a book. And yet we are so far away that light-years cannot express it."

"Look," I said, "no need to get fancy about it. I used to watch 'Twilight Zone.' You mean another dimension. I dig it."

She looked troubled "That's somewhat the idea but--"

Rufo interrupted. "There's still Igli in the morning."

"Yes," I agreed. "If we have to talk to Igli in the morning, maybe we need some sleep. I'm sorry. By the way, who is Igli?"

"You'll find out," said Rufo.

I looked up at that hurtling moon. "No doubt. Well, I'm sorry I disturbed you all with a silly mistake. Good night, folks."

So I crawled back into my sleeping sills, like a proper hero (all muscles and no gonads, usually), and they sacked in too. She didn't put the light back on, so I had nothing to look at but the hurtling moons of Barsoom. I had fallen into a book.

Well, I hoped it was a success and that the writer would keep me alive for lots of sequels. It was a pretty nice deal for the hero, up to this chapter at least. There was Dejah Thoris, curled up in her sleeping silks not twenty feet away.

I thought seriously of creeping up to the flap of her tent and whispering to her that I wanted to ask a few questions about metaphysical geometry and like matters. Love spells, maybe. Or maybe just tell her that it was cold outside and could I come in?

But I didn't. Good old faithful Rufo was curled up just the other side of that tent and he had a disconcerting habit of coming awake fast with a dagger in his hand. And he liked to shave corpses. As I've said, given a choice. I'm chicken.

I watched the hurtling moons of Barsoom and fell asleep.

Chapter 6

Singing birds are better than alarm clocks and Barsoom was never like this. I stretched happily and smelled coffee and wondered if there was time for a dip before breakfast. It was another perfect day, blue and clear and the sun just up, and I felt like killing dragons before lunch. Small ones, that is.

I smothered a yawn and rolled to my feet. The lovely pavilion was gone and the black box mostly repacked; it was no bigger than a piano box. Star was kneeling before a fire, encouraging the coffee. She was a cavewoman this morning, dressed in a hide that was fancy but not as fancy as her own. From an ocelot, maybe. Or from du Pont.

"Howdy, Princess," I said. "What's for breakfast? And where's your chef?"

"Breakfast later," she said. "Just a cup of coffee for you now, too hot and too black--best you be bad tempered. Rufo is starting the talk with Igli." She served it to me in a paper cup.

I drank half a cup, burned my mouth and spat out grounds. Coffee comes in five descending stages: Coffee, Java, Jamoke, Joe, and Carbon Remover. This stuff was no better than grade four.

I stopped then, having caught sight of Rufo. And company, lots of company. Along the edge of our terrace somebody had unloaded Noah's Ark. There was everything there from aardvarks to zebus, most of them with long yellow teeth.

Rufo was facing this picket line, ten feet this side and opposite a particularly large and uncouth citizen. About then that paper cup came apart and scalded my fingers.

"Want some more?" Star asked.

I blew on my fingers. "No, thanks. This is Igli?"

"Just the one in the middle that Rufo is baiting. The rest have come to see the fun, you can ignore them."

"Some of them look hungry."

"Most of the big ones are like Cuvier's devil, herbivorous. Those outsized lions would eat us--if Igli wins the argument. But only then. Igli is the problem."

I looked Igli over more carefully. He resembled that scion of the man from Dundee, all chin and no forehead, and he combined the less appetizing features of giants and ogres in 'The Red Fairy Book'. I never liked that book much.

He was vaguely human, using the term loosely. He was a couple of feet taller than I am and outweighed me three or four hundred pounds but I am much prettier. Hair grew on him in clumps, like a discouraged lawn; and you just knew, without being told, that he had never used a man's deodorant for manly men. The knots of his muscles had knots on them and his toenails weren't trimmed.

"Star," I said, "what's the nature of the argument we have with him?"

"You must kill him, milord."

I looked back at him. "Can't we negotiate a peaceful coexistence? Mutual inspection, cultural exchange, and so forth?"

She shook her head. "He's not bright enough for that. He's here to stop us from going down into the valley--and either he dies, or we die."

I took a deep breath. "Princess, I've reached a decision. A man who always obeys the law is even stupider than one who breaks it every chance. This is no time to worry about

that local Sullivan Act. I want the flame-thrower, a bazooka, a few grenades, and the heaviest gun in that armory. Can you show me how to dig them out?"

She poked at the fire. "My hero," she said slowly, "I'm truly sorry--but it isn't that simple. Did you notice, last night when we were smoking, that Rufo lighted our cigarettes from candles? Not using even so much as a pocket lighter?"

"Well . . . no. I didn't give it any thought."

"This rule against firearms and explosives is not a law such as you have back on Earth. It is more than that; it is impossible to use such things here. Else such things would be used against us."

"You mean they won t work?"

"They will not work. Perhaps 'hexed' is the word."

"Star. Look at me. Maybe you believe in hexes. I don't. And I'll give you seven to two that Tommy guns don't, either. I intend to find out. Will you give me a hand in unpacking?"

For the first time she looked really upset. "Oh, milord, I beg of you not to!"

"Why not?"

"Even the attempt would be disastrous. Do you believe that I know more about the hazards and dangers--and laws--of this world than you do? Will you believe me when I say that I would not have you die, that in solemn truth my own life and safety depend on yours? Please!"

It is impossible not to believe Star when she lays it on the line. I said thoughtfully, "Maybe you're right--or that character over there would be carrying a six-inch mortar as a side arm. Uh, Star, I've got a still better idea. Why don't we high tail it back the way we came and homestead that spot where we caught the fish? In five years well have a nice little farm. In ten years, after the word gets around, we'll have a nice little motel, too, with a free-form swimming pool and a putting green."

She barely smiled. "Milord Oscar, there is no turning back."

"Why not? I could find it with my eyes closed."

"But they would find us. Not Igli but more like him would be sent to harry and kill us."

I sighed again. "As you say. They claim motels off the main highway are a poor risk anyhow. There's a battle-axe in that duffel. Maybe I can chop his feet off before he notices me."

She shook her head again. I said, "What's the matter now? Do I have to fight him with one foot in a bucket? I thought anything that cut or stabbed--anything I did with my own muscles--was okay?"

"It is okay, milord. But it won't work."

"Why not?"

"Igli can't be killed. You see, he is not really alive. He is a construct, made invulnerable for this one purpose. Swords or knives or even axes will not cut him; they bounce off. I have seen it."

"You mean he is a robot?"

"Not if you are thinking of gears and wheels and printed circuits. 'Golem' would be closer. The Igli is an imitation of life." Star added, "Better than life in some ways, since there is no way--none that I know of--to kill him. But worse, too, as Igli isn't very bright nor well balanced. He has conceit without judgment. Rufo is working on that now, warming him up for you, getting him so mad he can't think straight."

"He is? Gosh! I must be sure to thank Rufo for that. Thank him too much. I think. Well, Princess, what am I supposed to do now?"

She spread her hands as if it were all self-evident. "When you are ready, I will loose the wards--and then you will kill him."

"But you just said--" I stopped. When they abolished the French Foreign Legion very few cushy billets were left for us romantic types. Umbopa could have handled this. Conan, certainly. Or Hawk Carse. Or even Don Quixote, for that thing was about the size of a windmill. "All right. Princess, let's get on with it. Is it okay for me to spit on my hands? Or is that cheating?"

She smiled without dimpling and said gravely, "Milord Oscar, we will all spit on our hands; Rufo and I will be fighting right beside you. Either we win . . . or we all die."

We walked over and joined Rufo. He was making donkeys ears at Igli and shouting, "Who's your father, Igli? Your mother was a garbage can but who's your father? Look at him! No belly button! Yaaa!"

Igli retorted, "Your mother barks! Your sister gives green stamps!"--but rather feebly, I thought. It was plain that that remark about belly buttons had cut him to the quick--he didn't have one. Only reasonable, I suppose.

The above is not quite what either of them said, except the remark about the belly button. I wish I could put it in the original because, in the Nevian language, the insult is a high art at least equal to poetry. In fact the epitome of literary grace is to address your enemy (publicly) in some difficult verse form, say the sestina, with every word dripping vitriol.

Rufo cackled gleefully. "Make one, Igli! Push your finger in and make one. They left you out in the rain and you ran. They forgot to finish you. Call that thing a nose?" He said in an aside to me, in English, "How do you want him. Boss? Rare? Or well done?"

"Keep him busy while I study the matter. He doesn't understand English?"

"Not a bit."

"Good. How close can I go to him without getting grabbed?"

"Close as you like as long as the wards are up. But, Boss--look. I'm not supposed to advise you--but when we get down to work, don't let him get you by the plums."

"I'll try not to."

"You be careful." Rufo turned his head and shouted, "Yaaa! Igli picks his nose and eats it!" He added, "She is a good doctor, the best, but just the same, you be careful."

"I will." I stepped closer to the invisible barrier, looked up at this creature. He glared down at me and made growling noises, so I thumbed my nose at him and gave him a wet, fruity Bronx cheer. I was downwind and it seemed likely that he hadn't had a bath in thirty or forty years; he smelled worse than a locker room at the half.

It gave me a seed of an idea. "Star, can this cherub swim?"

She looked surprised. "I really don't know."

"Maybe they forgot to program him for it. How about you, Rufo?"

Rufo looked smug. "Try me, just try me. I could teach fish. Igli! Tell us why the sow wouldn't kiss you!"

Star could swim like a seal. My style is more like a ferryboat but I get there. "Star, maybe that thing can't be killed but it breathes. It's got some sort of oxygen metabolism, even if it burns kerosene. If we held his head underwater for a while--as long as necessary--I'll bet the fire would go out."

She looked wide-eyed. "Milord Oscar . . . my champion . . . I was not mistaken in you."

"It's going to take some doing. Ever play water polo, Rufo?"

"I invented it."

I hoped he had. I had played it--once. Like being ridden on a rail, it is an interesting experience--once. "Rufo, can you lure our chum down toward the bank? I take it that the barrier follows this line of furry and feathery friends? If it does, we can get him almost to that high piece of bank with the deep pool under it--you know, Star, where you dunked me the first time."

"Nothing to it," said Rufo. "We move, he'll come along."

"I d like to get him running. Star, how long does it take you to unswitch your fence?"

"I can loose the wards in an instant, milord."

"Okay, here's the plan. Rufo, I want you to get Igli to chasing you, as fast as possible--and you cut out and head for that high bank just before you reach the stream. Star, when Rufo does that, you chop off the barrier--loose the wards--instantly. Don't wait for me to say so. Rufo, you dive in and swim like hell; don't let him grab you. With any luck, if Igli is moving fast, as big and clumsy as he is he'll go in, too, whether he means to or not. But I'll be pacing you, flanking you and a bit behind you. If Igli manages to put on the brakes, I'll hit him with a low tackle and knock him in. Then we all play water polo."

"Water polo I nave never seen," Star said doubtfully.

"There won't be any referee. All it means this time is that all three of us jump him, in the water, and shove his head under and keep it there--and help each other to keep him from shoving our heads under. Big as he is, unless he can outswim us he'll be at a terrible disadvantage. We go on doing this until he is limp and stays limp, never let him get a breath. Then, to make sure, well weigh him down with stones--it won't matter whether he's really dead or not. Any questions?"

Rufo grinned like a gargoyle. "This is going to be fun!"

Both those pessimists seemed to think that it would work, so we got started. Rufo shouted an allegation about Igli's personal habits that even Olympia Press would censor, then dared Igli to race him, offering an obscene improbability as a wager.

It took Igli a lumbering long time to get that carcass moving but when he did get rolling, he was faster than Rufo and left a wake of panicked animals and birds behind him. I'm pretty fast but I was hard pushed to hold position on the giant, flanking and a few paces back, and I hoped that Star would not loose the wards if it appeared that Igli might catch Rufo on dry land.

However, Star did loose the wards just as Rufo cut away from the barrier, and Rufo reached the bank and made a perfect racing dive without slowing down, all to plan.

But nothing else was.

I think Igli was too stupid to twig at once that the barrier was down. He kept on a few paces after Rufo had gone left oblique, then did cut left rather sharply. But he had lost speed and he didn't have any trouble stopping on dry land.

I hit him a diving tackle, illegal and low, and down he went--but not over into the water. And suddenly I had a double armful of struggling and very smelly Golem.

But I had a wildcat helping me at once, and quickly thereafter Rufo, dripping wet, added his vote.

But it was a stalemate and one that we were bound to lose in time. Igli outweighed all of us put together and seemed to be nothing but muscle and stink and nails and teeth. We were suffering bruises, contusions, and flesh wounds--and we weren't doing Igli any damage, Oh, he screamed like a TV grunt & groaner every time one of us twisted an ear or bent back a finger, but we weren't really hurting him and he was decidedly hurting us. There wasn't a chance of dragging that hulk into the water.

I had started with my arms around his knees and I stayed that way, of necessity, as long as I could, while Star tried to weigh down one of his arms and Rufo the other. But the situation was fluid; Igli thrashed like a rattler with its back broken and was forever getting one limb or another free and trying to gouge and bite. It got us into odd positions and I found myself hanging onto one callused foot, trying to twist it off, while I stared into his open mouth, wide as a bear trap and less appetizing. His teeth needed cleaning.

So I shoved the toe of his foot into his mouth.

Igli screamed, so I kept on shoving, and pretty soon he didn't have room to scream. I kept on pushing.

When he had swallowed his own left leg up to the knee, be managed to wrench his right arm loose from Star and grabbed at his disappearing leg--and I grabbed his wrist. "Help me!" I yelped to Star. "Push!"

She got the idea and shoved with me. That arm went into his mouth to the elbow and the leg went farther in, quite a bit of the thigh. By, then Rufo was working with us and forced Igli's left hand in past his cheek and into the jaws. Igli wasn't struggling so hard by then, short on air probably, so getting the toe of his right foot started into his mouth simply required determination, with Rufo hauling back on his hairy nostrils while I bore down with a Knee on his chin and Star pushed.

We kept on feeding him into his mouth, gaining an inch at a time and never letting up. He was still quivering and trying to get loose when we had him rolled up clear to his hips, and his rank armpits about to disappear.

It was like rolling a snowball in reverse; the more we pushed, the smaller he got and the more his mouth stretched--ugliest sight I ever have seen. Soon he was down to the size of a medicine ball . . . and then a soccer ball . . . then a baseball and I rolled him between my palms and kept pushing, hard.

--a golf ball, a marble, a pea . . . and finally there was nothing but some dirty grease on my hands.

Rufo took a deep breath. "I guess that'll teach him not to put his foot in his mouth with his betters. Who's ready for breakfast?"

"I want to wash my hands first," I said.

We all bathed, using plenty of soap, then Star took care of our wounds and had Rufo treat hers, under her instructions. Rufo is right; Star is the best medic. The stuff she used on us did not sting, the cuts closed up, the flexible dressings she put over them did not have to be changed, and fell off in time with no infection and no scars. Rufo had one very bad bite, about forty cents' worth of hamburger out of his left buttock, but when Star was through with him, he could sit down and it didn't seem to bother him.

Rufo fed us little golden pancakes and big German sausages, popping with fat, and gallons of good coffee. It was almost noon before Star loosed the wards again and we set out for our descent down the cliff.

Chapter 7

The descent beside the great waterfall into Nevia valley is a thousand feet and more than sheer; the cliff overhangs and you go down on a line, spinning slowly like a spider. I don't advise this; it is dizzy-making and I almost lost those wonderful pancakes.

The view is stupendous. You see the waterfall from the side, free-springing, not wetting the cliff, and falling so far that it shrouds itself in mist before it hits bottom. Then as you turn you face frowning cliff, then a long look out over a valley too lush and green and beautiful to be believed--marsh and forest at the foot of the cliff, cultivated fields in middle distance a few miles away, then far beyond and hazy at the base but sharp at the peaks a mighty wall of snow-covered mountains.

Star had sketched the valley for me. "First we fight our way through the marsh. After that it is easy going--we simply have to look sharp for blood kites. Because we come to a brick road, very nice."

"A yellow brick road?" I asked.

"Yes. That's the clay they have. Does it matter?"

"I guess not. Just don't make a hobbit of it. Then what?"

"After that we'll stop overnight with a family, the squire of the countryside there. Good people, you'll enjoy them."

"And then the going gets tough," Rufo added.

"Rufo, don't borrow trouble!" Star scolded. "You will please refrain from comments and allow Oscar to cope with his problems as he comes to them, rested, clear-eyed, and unworried. Do you know anyone else who could have handled Igli?"

"Well, since you put it that way . . . no."

"I do put it that way. We all sleep in comfort tonight. Isn't that enough? You'll enjoy it as much as anyone."

"So will you."

"When did I ever fail to enjoy anything? Hold your tongue. Now, Oscar, at the root of the cliff are the Horned Ghosts--no way to avoid them, they'll see us coming down. With luck we won't see any of the Cold Water Gang; they stay back in the mists. But if we have the bad luck to encounter both, we may have the good luck that they will fight each other and let us slip away. The path through the marsh is tricky; you had best study, this sketch until you know it. Solid footing is only where little yellow flowers grow no matter how solid and dry a piece looks. But, as you can see, even if you stay carefully on the safe bits, there are so many side trails and dead ends that we could wander all day and be trapped by darkness--and never get out."

So here I was, coming down first, because the Horned Ghosts would be waiting at the bottom. My privilege. Wasn't I a "Hero"? Hadn't I made Igli swallow himself?

But I wished that the Horned Ghosts really were ghosts. They were two-legged animals, omnivorous. They ate anything, including each other, and especially travelers. From the belly up they were described to me as much like the Minotaur; from there down they were splayfooted satyrs. Their upper limbs were short arms but without real hands--no thumbs.

But oh those horns! They had horns like Texas longhorns, but sticking up and forward.

However, there is one way of converting a Horned Ghost into a real ghost. It has a soft place on its skull, like a baby's soft spot, between those horns. Since the brute charges

head down, attempting to impale you, this is the only vulnerable spot that can be reached. All it takes is to stand your ground, don't flinch, aim for that one little spot--and hit it.

So my task was simple. Go down first, kill as many as necessary to insure that Star would have a safe spot to land, then stand fast and protect her until Rufo was down. After that we were free to carve our way through the marsh to safety. If the Cold Water Gang didn't join the party--

I tried to ease my position in the sling I was riding--my left leg had gone to sleep--and looked down. A hundred feet below the reception committee had gathered.

It looked like an asparagus patch. Of bayonets.

I signaled to stop lowering. Far above me, Rufo checked the line; I hung there, swaying, and tried to think. If I had them lower me straight into that mob, I might stick one or two before I myself was impaled. Or maybe none--The only certainty was that I would be dead long before my friends could join me.

On the other hand, besides that soft spot between the horns, each of these geeks had a soft underbelly, just made for arrows. If Rufo would lower me a bit-

I signaled to him. I started slowly down, a bit jerkily, and he almost missed my signal to stop again. I had to pull up my feet; some of those babies were a-snorting and a-ramping around and shoving each other for a chance to gore me. One Nijinsky among them did manage to scrape the sole of my left buskin, giving me goose flesh clear to my chin.

Under that strong inducement I pulled myself hand over hand up the line far enough to let me get my feet into the sling instead of my fanny. I stood in it hanging onto the line and standing on one foot and then on the other to work pins and needles out. Then I unslung my bow and strung it. This feat would have been worthy of a trained acrobat--but have you ever tried to bend a bow and let fly while standing in a bight at one end of a thousand-foot line and clinging to the line with one hand?

You lose arrows that way. I lost three and almost lost me.

I tried buckling my belt around the line. That caused me to hang upside down and lost me my Robin Hood hat and more arrows. My audience liked that one; they applauded--I think it was applause--so, for an encore, I tried to shift the belt up around my chest to enable me to hang more or less straight down--and maybe get off an arrow or two.

I didn't quite lose my sword.

So far, my only results had been to attract customers ("Mama, see the funny man!") and to make myself swing back and forth like a pendulum.

Bad as the latter was, it did give me an idea. I started increasing that swing, pumping it up like a playground swing. This was slow wore and it took a while to get the hang of it, as the period of that pendulum of which I was the weight was over a minute--and it does no good to try to hurry a pendulum; you have to work with it, not against it. I hoped my friends could see well enough to guess what I was doing and not foul it up.

After an unreasonably long time I was swinging back and forth in a flattish arc about a hundred feet fang, passing very fast over the heads of my audience at the bottom of each swing, slowing to a stop at the end of each swing. At first those spike heads tried to move with me, but they tired of that and squatted near the midpoint and watched, their heads moving as I swung, like spectators of a slow-motion tennis match.

But there is always some confounded innovator. My notion was to drop off at one end of this arc where it just missed the cuff and make a stand there with my back to the wall.

The ground was higher there, I would not have so far to drop. But one of those horned horrors figured it out and trotted over to that end of the swing. He was followed by two or three more.

That settled it; I would nave to drop off at the other end. But young Archimedes figured that out, too. He left his buddies at the cliff face and trotted after me. I pulled ahead of him at the low point of the swing--but slowed down and he caught up with me long before I reached the dead point at the end. He had only a hundred feet to do in about thirty seconds--a slow walk. He was under me when I got there.

The odds wouldn't improve; I kicked my feet clear, hung by one hand and drew sword during that too-slow traverse, and dropped off anyway. My notion was to spit that tender spot on his head before my feet touched the ground.

Instead, I missed and he missed and I knocked him sprawling and sprawled right after him and rolled to my feet and ran for the cuff face nearest me, poking that genius in his belly with my sword without stopping.

That foul blow saved me. His friends and relatives stopped to quarrel over who got the prime ribs before a clot of them moved in my direction. This gave me time to set my feet on a pile of scree at the base of the cliff, where I could play "King of the Castle," and return my sword and nock an arrow.

I didn't wait for them to rush me. I simply waited until they were close enough that I could not miss, took a bead on the wishbone of the old bull who was leading them, if he had a wishbone, and let that shaft go with every pound of that heavy bow.

It passed through him and stuck into one behind him.

This led to another quarrel over the price of chops. They ate them, teeth and toenails. That was their weakness: all appetite and too little brain. If they had cooperated, they could have had me in one rush when I first hit the ground. Instead they stopped for lunch.

I glanced up. High above me, Star was a tiny spider on a thread; she grew rapidly larger. I moved crabwise along the wall until I was opposite the point, forty feet from the cliff, where she would touch ground.

When she was about fifty feet up, she signaled Rufo to stop lowering, drew her sword and saluted me. "Magnificent, my Hero!" We were all wearing swords; Star had chosen a dueling sword with a 34" blade--a big sword for a woman but Star is a big woman. She had also packed her belt pouch with medic's supplies, an ominous touch had I noticed, but did not, at the time.

I drew and returned her salute. They were not bothering me yet, although some, having finished lunch or having been crowded out, were milling around and looking me over. Then I sheathed again, and nocked an arrow. "Start pumping it up. Star, right toward me. Have Rufo lower you a bit more."

She returned sword and signaled Rufo. He let her down slowly until she was about nine feet off the ground, where she signaled a stop. "Now pump it up!" I called out. Those bloodthirsty natives had forgotten me; they were watching Star, those not still busy eating Cousin Abbie or Great-Uncle John.

"All right," she answered. "But I have a throwing line. Can you catch it?"

"Oh!" The smart darling had watched my maneuvers and had figured out what would be needed. "Hold it a moment! Ill make a diversion." I reached over my shoulder, counted arrows by touch--seven. I had started with twenty and made use of one; the rest were scattered, lost.

I used three in a hurry, right, left, and ahead, picking targets as far away as I dared risk, aiming at midpoint and depending on that wonderful bow to take those shafts straight and flat. Sure enough, the crowd went for fresh meat like a government handout. "Now!"

Ten seconds later I caught her in my arms and collected a split-second kiss for toll.

Ten minutes later Rufo was down by the same tactics, at a cost of three of my arrows and two of Star's smaller ones. He had to lower himself, sitting in the bight and checking the free end of the line under both armpits; he would have been a sitting duck without help. As soon as he was untangled from the line, he started jerking it down off the cliff, and faking it into a coil.

"Leave that!" Star said sharply. "We haven't time and it's too heavy to carry."

"I'll put it in the pack."

"No."

"It's a good line," Rufo persisted. "We'll need it."

"You'll need a shroud if we're not through the marsh by nightfall." Star turned to me. "How shall we march, milord?"

I looked around. In front of us and to the left a few jokers still milled around, apparently hesitant about getting closer. To our right and above us the great cloud at the base of the Tails made iridescent lace in the sky. About three hundred yards in front of us was where we would enter the trees and just beyond the marsh started.

We went downhill in a tight wedge, myself on point, Rufo and Star following on flank, all of us with arrows nocked. I had told them to draw swords if any Homed Ghost got within fifty feet.

None did. One idiot came straight toward us, alone, and Rufo knocked him over with an arrow at twice that distance. As we came up on the corpse Rufo drew his dagger. "Let it be!" said Star. She seemed edgy.

"I'm just going to get the nuggets and give them to Oscar."

"And get us all killed. If Oscar wants nuggets, he shall have them."

"What sort of nuggets?" I asked, without stopping.

"Gold, Boss. Those blighters have gizzards like a chicken. But gold is all they swallow for it. Old ones yield maybe twenty, thirty pounds."

I whistled.

"Gold is common here," Star explained. "There is a great heap of it at the base of the falls, inside the cloud, washed down over eons. It causes fights between the Ghosts and the Cold Water Gang, because the Ghosts have this odd appetite and sometimes risk entering the cloud to satisfy it."

"I haven't seen any of the Cold Water Gang yet," I commented.

"Pray God you don't," Rufo answered.

"All the more reason to get deep into the marsh," Star added. "The Gang doesn't go into it and even the Ghosts don't go far in. Despite their splay feet, they can be sucked under."

"Anything dangerous in the swamp itself?"

"Plenty," Rufo told me. "So be sure you step on the yellow flowers."

"Watch where you put your own feet. If that map was right, I won't lose us. What does a Cold Water Gangster look like?"

Rufo said thoughtfully, "Ever seen a man who had been drowned for a week?" I let the matter drop.

Before we got to the trees I had us sling bows and draw swords. Just inside the cover of trees, they jumped us. Horned Ghosts, I mean, not the Cold Water Gang. An ambush from all sides, I don't know how many. Rufo killed four or five and Star at least two and I danced around, looking active and trying to survive.

We had to climb up and over bodies to move on, too many to count.

We kept on into the swamp, following the little golden pathfinder flowers and the twists and turns of the map in my head. In about half an hour we came to a clearing big as a double garage. Star said faintly, "This is far enough." She had been holding one hand pressed to her side but bad not been willing to stop until then, although blood stained her tunic and all down the left leg of her tights.

She let Rufo attend her first, while I guarded the bottleneck into the clearing. I was relieved not to be asked to help, as, after we gently removed her tunic, I felt sick at seeing how badly she had been gored--and never a peep out of her. That golden body--hurt!

As a knight errant, I felt like a slob.

But she was chipper again, once Rufo had followed her instructions. She treated Rufo, then treated me--half a dozen wounds each but scratches compared with the rough one she had taken.

Once she had me patched up she said, "Milord Oscar, how long will it be until we are out of the marsh?"

I ran through it in my head. "Does the going get any worse?"

"Slightly better."

"Not over an hour."

"Good. Don't put those filthy clothes back on. Rufo, unpack a bit and well have clean clothes and more arrows. Oscar, well need them for the blood kites, once we are out of the trees."

The little black box filled most of the clearing before it was unfolded enough to let Rufo get out clothes and reach the arsenal. But clean clothes and lull quiver made me feel like a new man, especially after Rufo dug out a half liter of brandy and we split it three ways, gurglegurgle! Star replenished her medic's pouch, then I helped Rufo fold up the luggage.

Maybe Rufo was giddy from brandy and no lunch. Or perhaps from loss of blood. It could have been just the bad luck of an unnoticed patch of slippery mud. He had the box in his arms, about to make the last closure that would fold it to knapsack size, when he slipped, recovered violently, and the box sailed out of his arms into a chocolate-brown pool.

It was far out of reach. I yelled, "Rufo, off with your belt!" I was reaching for the buckle of mine.

"No, no!" screamed Rufo. "Stand back! Get clear!"

A corner of the box was still in sight. With a safety line on me I knew I could get it, even if there was no bottom to the pool. I said so, angrily.

"No, Oscar!" Star said urgently. "He's right. We march. Quickly."

So we marched--me leading. Star breathing on my neck, Rufo crowding her heels.

We had gone a hundred yards when there was a mud volcano behind us. Not much noise, just a bass rumble and a slight earthquake, then some very dirty rain. Star quit hurrying and said pleasantly, "Well, that's that."

Rufo said, "And all the liquor was in it!"

"I don't mind that," Star answered. "Liquor is everywhere. But I had new clothes in there, pretty ones, Oscar. I wanted you to see them; I bought them with you in mind."

I didn't answer. I was thinking about a flame-thrower and an M-1 and a couple of cases of ammo. And the liquor, of course.

"Did you hear me, milord?" she persisted. "I wanted to wear them for you."

"Princess," I answered, "you have your prettiest clothes right with you, always."

I heard the happy chuckle that goes with her dimples. "I'm sure that you have often said that before. And no doubt with great success."

We were out of the swamp long before dark and hit the brick road soon after. Blood kites are no problem. They are such murderous things that if you shoot an arrow in the direction of one of their dives, a kite will swerve and pluck it out of the air, getting the shaft right down its gullet. We usually recovered the arrows.

We were among plowed fields soon after we reached the road and soon the blood kites thinned out. Just at sundown we could see outbuildings and the lights in the manor where Star said that we would spend the night.

Chapter 8

Milord Doral 't Giuk Dorali should have been a Texan. I don't mean that the Doral could have been mistaken for a Texan but he had that you-paid-for-the-lunch-I'll-pay-for-the-Cadillacs expansiveness.

His farmhouse was the size of a circus tent and as lavish as a Thanksgiving dinner--rich, sumptuous, fine carvings and inlaid jewels. Nevertheless it had a sloppy, lived-in look and if you didn't watch where you put your feet, you would step on a child's toy on a broad, sweeping staircase and wind up with a broken collarbone. There were children and dogs underfoot everywhere and the youngest of each weren't housebroken. It didn't worry the Doral. Nothing worried the Doral, he enjoyed life.

We had been passing through his fields for miles (rich as the best Iowa farmland and no winters; Star told me they produced four crops a year)--but it was late in the day and an occasional field hand was all we saw save for one wagon we met on the road. I thought that it was pulled by a team of two pairs of horses. I was mistaken; the team was but one pair and the animals were not horses, they had eight legs each.

All of Nevia valley is like that, the commonplace mixed with the wildly different. Humans were humans, dogs were dogs--but horses weren't horses. Like Alice trying to cope with the Flamingo, every time I thought I had it licked, it would wiggle loose.

The man driving those equine centipedes stared but not because we were dressed oddly; he was dressed as I was. He was staring at Star, as who wouldn't? The people working in fields had mostly been dressed in sort of a lava-lava. This garment, a simple wraparound tied off at the waist, is the equivalent in Nevia of overalls or blue jeans for both men and women; what we were wearing was equal to the Gray Flannel Suit or to a woman s basic black. Party or formal clothes--well, that's another matter.

As we turned into the grounds of the manor we picked up a wake of children and dogs. One kid ran ahead and, when we reached the broad terrace in front of the main house, milord Doral himself came out the great front door. I didn't pick him for lord of the

manor; he was wearing one of those short sarongs, was barefooted and bareheaded. He had thick hair, shot with gray, an imposing beard, and looked like General U. S. Grant.

Star waved and called out, "Jock! Oh, Jocko!" (The name was "Giuk," but I caught it as "Jock" and Jock he is.)

The Doral stared at us, then lumbered forward like a tank, "Ettyboo! Bless your beautiful blue eyes! Bless your bouncy little bottom! Why didn't you let me know?" (I have to launder this because Nevian idioms don't parallel ours. Try translating certain French idioms literally into English and you'll see what I mean. The Doral was not being vulgar; he was being formally and gallantly polite to an old and highly respected friend.)

He grabbed Star in a hug, lifted her off her feet, kissed her on both cheeks and on the mouth, gnawed one ear, then set her down with an arm around her. "Games and celebrations! Three months of holiday! Races and rassling every day, orgies every night! Prizes for the strongest, the fairest, the wittiest--"

Star stopped him. "Milord Doral--"

"Eh? And a prize of all prizes for the first baby born--"

"Jocko darling! I love you dearly, but tomorrow we must ride. All we ask is a bone to gnaw and a corner to sleep in."

"Nonsense! You can't do this to me."

"You know that I must."

"Politics be damned! I'll die at your feet, Sugar Pie. Poor old Jocko's heart will stop. I feel an attack coming right now." He felt around his chest. "Someplace here--"

She poked him in the belly. "You old fraud. You'll die as you've lived, and not of heartbreak. Milord Doral--"

"Yes, milady?"

"I bring you a Hero."

He blinked. "You're not talking about Rufo? Hi, Rufe, you old polecat! Heard any good ones lately? Get back to the kitchen and pick yourself a lively one."

"Thank you, milord Doral." Rufo "made a leg," bowing deeply, and left us.

Star said firmly, "If the Doral please."

"I hear."

Star untangled his arm, stood straight and tall and started to chant:

"By the Singing Laughing Waters
"Came a Hero Fair and Fearless.
"Oscar hight this noble warrior,
"Wise and Strong and never daunted,
"Trapped the Igli with a question,
"Caught him out with paradoxes,
"Shut the Igli's mouth with Igli.
"Fed him to him, feet and fingers!
"Nevermore the Singing Waters . . .

It went on and on, none of it lies yet none of it quite true--colored like a press agent's handout. For example, Star told him that I had killed twenty-seven Horned Ghosts, one with my bare hands. I don't remember that many and as for "bare hands," that was an accident. I had just stabbed one of those vermin as another one tumbled at my feet,

shoved from behind. I didn't have time to get my sword clear, so I set a foot on one horn and pulled hard on the other with my left hand and his head came apart like snapping a wishbone. But I had done it from desperation, not choice.

Star even ad-libbed a long excursus about my father's heroism and alleged that my grandaddy had led the chaise at San Juan Hill and then started in on my great-grandfathers. But when she told him how I had picked up that scar that runs from left eye to right jaw, she pulled out all the stops.

Now look, Star had quizzed me the first time I met her and she had encouraged me to tell her more during that long hike the day before. But I did not give her most of the guff she was handing the Doral. She must have had the Surete, the FBI, the Archie Goodwin on me for months. She even named the team we had played against when I busted my nose and I never told her that.

I stood there blushing while the Doral looked me up and down with whistles and snorts of appreciation. When Star ended, with a simple: "Thus it happened," he let out a long sigh and said, "Could we have that part about Igli over again?"

Star complied, chanting different words and more detail. The Doral listened, frowning and nodding approval. "A heroic solution," he said. "So he's a mathematician, too. Where did he study?"

"A natural genius, Jock."

"It figures." He stepped up to me, looked me in the eye and put his hands on my shoulders. "The Hero who confounds Igli may choose any house. But he will honor my home by accepting hospitality of roof . . . and table . . . and bed?"

He spoke with great earnestness, holding my eye; I had no chance to look at Star for a hint. And I wanted a hint. The person who says smugly that good manners are the same everywhere and people are just people hasn't been farther out of Podunk than the next whistle stop. I'm no sophisticate but I had been around enough to learn that. It was a formal speech, stuffed with protocol, and called for a formal answer.

I did the best I could. I put my hands on his shoulders and answered solemnly, "I am honored far beyond any merit of mine, sir."

"But you accept?" he said anxiously.

"I accept with all my heart." ("Heart" is close enough. I was having trouble with language.)

He seemed to sigh with relief. "Glorious!" He grabbed me in a bear hug, kissed me on both cheeks, and only some fast dodging kept me from being kissed on the mouth.

Then he straightened up and shouted, "Wine! Beer! Schnapps! Who the dadratted tomfoolery is supposed to be chasing? I'll skin somebody alive with a rusty file! Chairs! Service for a Hero! Where is everybody?"

That last was uncalled for; while Star was reciting what a great guy I am, some eighteen or fifty people had gathered on the terrace, pushing and shoving and trying to get a better look. Among them must have been the personnel with the day's duty because a mug of ale was shoved into my hand and a four-ounce glass of 110-proof firewater into the other before the boss stopped yelling. Jocko drank boilermaker style, so I followed suit, then was happy to sit down on a chair that was already behind me, with my teeth loosened, my scalp lifted, and the beer just starting to put out the fire.

Other people plied me with bits of cheese, cold meats, pickled this and that, and unidentified drinking food all tasty, not waiting for me to accept it but shoving it into my

mouth if I opened it even to say "Gesundheit!" I ate as offered and soon it blotted up the hydrofluoric acid.

In the meantime the Doral was presenting his household to me. It would have been better had they worn chevrons because I never did get them straightened out as to rank. Clothes didn't help because, just as the squire was dressed like a field hand, the second scullery maid might (and sometimes did) duck back in and load herself with golden ornaments and her best party dress. Nor were they presented in order of rank.

I barely twigged as to which was the lady of the manor, Jocko's wife--his senior wife. She was a very comely older woman, a brunette carrying a few pounds extra but with that dividend most fetchingly distributed. She was dressed as casually as Jocko out, fortunately, I noticed her because she went at once to greet Star and they embraced warmly, two old friends. So I had my ears spread when she was presented to me a moment later--as (and I caught it) the Doral (just as Jocko was the Doral) but with the feminine ending.

I jumped to my feet, grabbed her hand, bowed over it and pressed it to my lips. This isn't even faintly a Nevian custom but it brought cheers and Mrs. Doral blushed and looked pleased and Jocko grinned proudly.

She was the only one I stood up for. Each of the men and boys made a leg to me, with a bow; all the gals from six to sixty curtsied--not as we know it, but Nevian style. It looted more like a step of the Twist. Balance on one foot and lean back as far as possible, then balance on the other while leaning forward, all the while undulating slowly. This doesn't sound graceful but it is, and it proved that there was not a case of arthritis nor a slipped disk anywhere on the Doral spread.

Jocko hardly ever bothered with names. The females were "Sweetheart" and "Honeylamb" and "Pretty Puss" and he called all the males, even those who seemed to be older than he was, "Son."

Possibly most of them were his sons. The setup in Nevia I don't fully understand. This looked like a feudalism out of our own history--and maybe it was--but whether this mob was the Doral's slaves, his serfs, his hired hands, or all members of one big family I never got straight. A mixture, I think. Titles didn't mean anything. The only title Jocko held was that he was singled out by a grammatical inflection as being THE Doral instead of just any of a couple of hundred Dorals. I've scattered the tag "milord" here and there in this memoir because Star and Rufo used it, but it was simply a courteous form of address paralleling one in Nevian. "Freiherr" does not mean "free man, and "monsieur" does not mean "my lord"--these things don't translate well. Star sprinkled her speech with "milords" because she was much too polite to say "Hey, Mac!" even with her intimates.

(The very politest endearments in Nevian would win you a clout in the teeth in the USA.)

Once all hands had been presented to the Gordon, Hero First Class, we adjourned to get ready for the banquet that Jocko, cheated of his three months of revelry, had swapped for his first intention. It split me off from Star as well as from Rufo; I was escorted to my chambers by my two valettes.

That's what I said. Female. Plural. It is a good thing that I had become relaxed to female attendants in men's washrooms, European style, and still more relaxed by Southeast Asia and l'Ile du Levant; they don't teach you how to cope with valettes in American public schools. Especially when they are young and cute and terribly anxious

to please . . . and I had had a long, dangerous day. I learned, first time out on patrol, that nothing hikes up that old biological urge like being shot at and living through it.

It there had been only one, I might have been late to dinner. As it was, they chaperoned each other, though not intentionally, I believe. I patted the redhead on her fanny when the other one wasn't looking and reached, I thought, an understanding for a later time.

Well, having your back scrubbed is fun, too. Shorn, shampooed, shined, shaved, showered, smelling like a belligerent rose, decked out in the fanciest finely since Cecil B. deMille rewrote the Bible, I was delivered by them to the banquet hall on time.

But the proconsul's dress uniform I wore was a suit of fatigues compared with Star's getup. She had lost all her pretty clothes earlier in the day but our hostess had been able to dig up something.

First a dress that covered Star from chin to ankle--like plate glass. It seemed to be blue smoke, it clung to her and billowed out behind. Underneath was "underwear." She appeared to be wrapped in twining ivy--but this ivy was gold, picked out in sapphires. It curved across her beautiful belly, divided into strands and cupped her breasts, the coverage being about like a bikini minimum but more startling and much more effective.

Her shoes were sandals in an S-curve of something transparent and springy. Nothing appeared to hold them on, no straps, no clips; her lovely feet, bare, rested on them. It made her appear as if she were on tiptoe about four inches off the floor.

Her great mane of blond hair was built up into a structure as complex as a full-rigged ship, and studded with sapphires. She was wearing a fortune or two of sapphires here and there on her body, too; I won't itemize.

She spotted me just as I caught sight of her. Her face lit up and she called out, in English, "My Hero, you are beautiful!"

I said "Uh--"

Then I added, "You haven't been wasting your time, either. Do I sit with you? I'll need coaching."

"No, no! You sit with the gentlemen, I sit with the ladies. You won't have any trouble."

This is not a bad way to arrange a banquet. We each had separate low tables, the men in a row facing the ladies, with about fifteen feet between them. It wasn't necessary to make chitchat with the ladies and they all were worth looking at. The Lady Doral was opposite me and was giving Star a run for the Golden Apple. Her costume was opaque some places but not the usual places. Most of it was diamonds. I believe they were diamonds; I don't think they make rhinestones that big.

About twenty were seated; two or three times that many were serving, entertaining, or milling around. Three girls did nothing but see to it that I did not starve nor die of thirst--I didn't have to learn how to use their table tools; I never touched them. The girls knelt by me; I sat on a big cushion. Later in the evening Jocko lay flat on his back with his head in a lap so that his maids could pop food into his mouth or hold a cup to his lips.

Jocko had three maids as I did; Star and Mrs. Jocko had two each; the rest struggled along with one apiece. These serving maids illustrate why I had trouble telling the players without a program. My hostess and my Princess were dressed fit to kill, sure--but one of my flunkies, a sixteen-year-old strong contender for Miss Nevia, was dressed only in jewelry but so much of it that she was more "modestly" dressed than Star or Doral Letva, the Lady Doral.

Nor did they act like servants except for their impassioned determination to see that I got drunk and stuffed. They chattered among themselves in teen-age argot and made wisecracks about how big my muscles were, etc., as if I had not been present. Apparently heroes are not expected to talk, for every time I opened my mouth something went into it.

There was always something doing--dancers, jugglers, recitations of poetry--in the space between the tables. Kids wandered around and grabbed tidbits from platters before they reached the tables. One little doll about three years old squatted down in front of me, all big eyes and open mouth, and stared, letting dancers avoid her as best they could. I tried to get her to come to me, but she just stared and played with her toes.

A damsel with a dulcimer strolled among the tables, singing and playing. It could have been a dulcimer, she might have been a damsel.

About two hours along in the feast, Jocko stood up, roared for silence, belched loudly, shook off maids who were trying to steady him, and started to recite.

Same verse, different tune--he was reciting my exploits. I would have thought that he was too drunk to recite a limerick but he sounded off endlessly, in perfect scansion with complex inner rhymes and rippling alliterations, an astounding feat of virtuosity in rhetoric.

He stuck to Star's story line but embroidered it. I listened with growing admiration, both for him as a poet and for good old Scar Gordon, the one-man army. I decided that I must be a purty goddam hot hero, so when he sat down, I stood up.

The girls had been more successful in getting me drunk than in getting me fed. Most of the food was strange and it was usually tasty. But a cold dish had been fetched in, little frog-like creatures in ice, served whole. You dipped them in a sauce and took them in two bites.

The gal in the jewels grabbed one, dipped it and put it up for me to bite. And it woke up.

This little fellow--call him "Elmer"--Elmer rolled his eyes and looked at me, just as I was about to bite him.

I suddenly wasn't hungry and jerked my head back.

Miss jewelry Shop laughed heartily, dipped him again, and showed me how to do it. No more Elmer--

I didn't eat for quite a while and drank more than too much. Every time a bite was offered me I would see Elmers feet disappearing, and gulp, and have another drink.

That's why I stood up.

Once up, there was dead silence. The music stopped because the musicians were waiting to see what to improvise as background to my poem.

I suddenly realized that I didn't have anything to say.

Not anything. There wasn't a prayer that I could adlib a poem of thanks, a graceful compliment to my host--m Nevian. Hell, I couldn't have done it in English.

Star's eyes were on me. She looked gravely confident.

That did it. I didn't risk Nevian; I couldn't even remember how to ask my way to the men's room. So I gave it to 'em, both barrels, in English. Vachel Lindsay's "Congo."

As much of it as I could remember, say about four pages. What I did give them was that compelling rhythm and rhyme scheme double-talking and faking on any fluffs and really slamming it on "beating on a table with the handle of a broom! Boom! Boom! Boomlay boom!" and the orchestra caught the spirit and we rattled the dishes.

The applause was wonderful and Miss Tiffany grabbed my ankle and kissed it.

So I gave them Mr. E. A. Foe's "Bells" for dessert. Jocko kissed me on my left eye and slobbered on my shoulder.

Then Star stood up and explained, in scansion and rhyme, that in my own land, in my own language, among my own people, warriors and artists all, I was as famous a poet as I was a hero (Which was true. Zero equals zero), and that I had done them the honor of composing my greatest work, in the jewels of my native tongue, a fitting thanks to the Doral and house Doral for Hospitality of roof, of table, of bed--and that she would, in time, do her poor best to render my music into their language.

Between us we got the Oscar.

Then they brought in the piece de resistance, a carcass roasted whole and carried by four men. From the size and shape it might have been roast peasant under glass. But it was dead and it smelled wonderful and I ate a lot of it and sobered up. After the roast there were only eight or nine other things, soups and sherbets and similar shilly-shallying. The party got looser and people didn't stay at their own tables. One of my girls fell asleep and spilled my wine cup and about then I realized that most of the crowd had gone.

Doral Letva, flanked by two girls, led me to my chambers and put me to bed. They dimmed the lights and withdrew while I was still trying to phrase a gallant good night in their language.

They came back, having shucked all jewelry and other encumbrances and posed at my bedside, the Three Graces. I had decided that the younger ones were mama's daughters. The older girl was maybe eighteen, full ripe, and a picture of what mama must have been at that age; the younger one seemed five years younger, barely nubile, as pretty for her own age and quite self-conscious. She blushed and dropped her eyes when I looked at her. But her sister stared back with sultry eyes, boldly provocative.

Their mother, an arm around each waist, explained simply but in rhyme that I had honored their roof and their table--and now their bed. What was a Hero's pleasure? One? Or two? Or all three?

I'm chicken. We know that. If it hadn't been that little sister was about the size of the little brown sisters who had scared me in the past, maybe I could have shown aplomb.

But, hell, those doors didn't close. Just arches. And Jocko me bucko might wake up anytime; I didn't know where he was. I won't say I've never bedded a married woman nor a man's daughter in his own house--but I've followed American cover-up conventions in such matters. This flat-footed proposition scared me worse than the Horned Goats. I mean "Ghosts."

I struggled to put my decision in poetic language.

I didn't manage it but I put over the idea of negative,

The little girl started to bawl and fled. Her sister looked daggers, snorted. "Hero!" and went after her. Mama just looked at me and left.

She came back in about two minutes. She spoke very formally, obviously exercising great control, and prayed to know if any woman in this house had met with the Hero's favor? Her name, please? Or could I describe her? Or would I have them paraded so that I might point her out?

I did my best to explain that, were a choice to be made, she herself would be my choice--but that I was tired and wished to sleep alone.

Letva blinked back tears, wished me a hero's rest, and left a second time, even faster. For an instant I thought she was going to slap me.

Five seconds later I got up and tried to catch her. But she was gone, the gallery was dark.

I fell asleep and dreamt about the Cold Water Gang. They were even uglier than Rufo had suggested and they were trying to make me eat big gold nuggets all with the eyes of Elmer.

Chapter 9

Rufo shook me awake. "Boss! Get up! Right now!"

I buried my head in the covers. "Go way!" My mouth tasted of spoiled cabbage, my head buzzed, and my ears were on crooked.

"Right now! She says to."

I got up. Rufo was dressed in our Merry Men clothes and wearing sword, so I dressed the same way and buckled on mine. My valettes were not in sight, nor my borrowed finery. I stumbled after Rufo into the great dining hall. There was Star, dressed to travel, and looking grim. The fancy furnishings of the night before were gone; it was as bleak as an abandoned barn. A bare table was all, and on it a joint of meat, cold in congealed grease and a knife beside it.

I looked at it without relish. "What's that?"

"Your breakfast, if you want it. But I shall not stay under this roof and eat cold shoulder." It was a tone, a manner, I had never heard from her.

Rufo touched my sleeve. "Boss. Let's get out of here. Now."

So we did. Not a soul was in sight, indoors or out, not even children or dogs. But three dashing steeds were waiting. Those eight-legged tandem ponies, I mean, the horse version of a dachshund, saddled and ready to go. The saddle rigs were complex; each pair of legs had a leather yoke over it and the load was distributed by poles flexing laterally, one on each side, and mounted on this was a chair with a back, a padded seat, and arm rests. A tiller rope ran to each armrest.

A lever on the left was both brake and accelerator and I hate to say how suggestions were conveyed to the beast. However, the "horses" didn't seem to mind.

They weren't horses. Their heads were slightly equine but they had pads rather than hoofs and were omnivores, not hayburners. But you grow to like these beasties. Mine was black with white points--beautiful. I named her "Ars Longa." She had soulful eyes.

Rufo lashed my bow and quiver to a baggage rack behind my chair and showed me how to get aboard, adjust my seat belt, and get comfortable with feet on foot rests rather than stirrups and my back supported--as comfy as first-class seats in an airliner. We took off fast and hit a steady pace of ten miles an hour, single-footing (the only gait longhorses have) but smoothed by that eight-point suspension so that it was like a car on a gravel road.

Star rode ahead, she hadn't spoken another word. I tried to speak to her but Rufo touched my arm. "Boss, don't," he said quietly. "When She is like this, all you can do is wait."

Once we were underway, Rufo and I knee to knee and Star out of earshot ahead, I said "Rufo, what in the world happened?"

He frowned. "We'll never know. She and the Doral had a row, that's clear. But best we pretend it never happened."

He shut up and so did I. Had Jocko been obnoxious to Star? Drunk he certainly was and amorous he might have been. But I couldn't visualize Star not being able to handle a man so as to avoid rape without hurting his feelings.

That led to further grim thoughts. If the older sister had come in alone--If Miss Tiffany hadn't passed out--If my valette with the fiery hair had showed up to undress me as I had understood she would--Oh hell!

Presently Rufo eased his seat belt, lowered his back rest and raised his foot rests to reclining position, covered his face with a kerchief and started to snore. After a while I did the same; it had been a short night, no breakfast, and I had a king-size hangover. My "horse" didn't need any help; the two held position on Star's mount.

When I woke I felt better, aside from hunger and thirst. Rufo was still sleeping; Star's steed was still fifty paces ahead. The countryside was still lush, and ahead perhaps a half-mile was a house--not a lordly manor out a farmhouse. I could see a well sweep and thought of moss-covered buckets, cool and wet and reeking of typhoid--well, I had had my booster shots in Heidelberg; I wanted a drink. Water, I mean. Better yet, beer--they made fine beer hereabouts.

Rufo yawned, put away his kerchief, and raised his seat. "Must have dozed off," he said with a silly grin.

"Rufo, you see that house?"

"Yes. What about it?"

"Lunch, that's what. I've gone far enough on an empty stomach. And I'm so thirsty that I could squeeze a stone and drink the whey from it."

"Then best you do so."

"Huh?"

"Milord, I'm sorry--I'm thirsty, too--but we aren't stopping there. She wouldn't like it."

"She wouldn't, eh? Rufo, let me set you straight. Just because milady Star is in a pet is no reason for me to ride all day with no food or water. You do as you see fit; I'm stopping for lunch. Uh, do you have any money on you? Local money?"

He shook his head. "You don't do it that way, not here. Boss. Wait another hour. Please."

"Why?"

"Because we are still on the Doral's land, that's why. I don't know that he has sent word ahead to have us shot on sight; Jock is a goodhearted old blackguard. But I would rather be wearing full armor; a flight of arrows wouldn't surprise me. Or a drop net just as we turned in among those trees."

"You really think so?"

"Depends on how angry he is. I mind once, when a man really offended him, the Doral had this poor rube stripped down and tied by his family jewels and placed--no, I can't tell that one." Rufo gulped and looked sick. "Big night last night. I'm not myself. Better we speak of pleasant things. You mentioned squeezing whey from a rock. No doubt you were thinking of the Strong Muldoon?"

"Damn it, don't change the subject!" My head was throbbing. "I won't ride under those trees and the man who lets fly a shaft at me had better check his own skin for punctures. I'm thirsty."

"Boss, Rufo pleaded. "She will neither eat nor drink on the Doral's land--even if they begged her to. And She's right. You don't know the customs. Here one accepts what is freely given . . . but even a child is too proud to touch anything begrudged. Five miles more. Can't the hero who killed Igli before breakfast hold out another five miles?"

"Well . . . all right, all right! But this is a crazy sort of country, you must admit. Utterly insane."

"Mmmm . . ." he answered. "Have you ever been in Washington, D.C.?"

"Well--" I grinned wryly. "Touche! And I forgot that this is your native land. No offense intended."

"Oh, but it's not. What made you think so?"

"Why--" I tried to think. Neither Rufo nor Star had said so, but--"You know the customs, you speak the language like a native."

"Milord Oscar, I've forgotten how many languages I speak. When I hear one of them, I speak it."

"Well, you're not an American. Nor a Frenchman, I think."

He grinned merrily. "I could show you birth certificates from both countries--or could until we lost our baggage. But, no, I'm not from Earth."

"Then where are you from?"

Rufo hesitated. "Best you get your facts from Her."

"Tripe! I've got both feet hobbled and a sack over my head. This is ridiculous."

"Boss," he said earnestly, "She will answer any question you ask. But you must ask them."

"I certainly shall!"

"So let's speak of other matters. You mentioned the Strong Muldoon--"

"You mentioned him."

"Well, perhaps I did. I never met Muldoon myself, though I've been in that part of Ireland. A fine country and the only really logical people on Earth. Facts won't sway them in the face of higher truth. An admirable people. I heard of Muldoon from one of my uncles, a truthful man who for many years was a ghostwriter of political speeches. But at this time, due to a mischance while writing speeches for rival candidates, he was enjoying a vacation as a free-lance correspondent for an American syndicate specializing in Sunday feature stories. He heard of the Strong Muldoon and tracked him down, taking train from Dublin, then a local bus, and at last Shank's Mares. He encountered a man plowing a field with a one-horse plow . . . but this man was shoving the plow ahead of himself without benefit of horse, turning a neat eight-inch furrow. 'Aha!' said my uncle and called out, 'Mr. Muldoon!'

"The farmer stopped and called back, 'Bless you for the mistake, friend!'--picked up the plow in one hand, pointed with it and said, 'You'll be finding Muldoon that way. Strong, he is.'

"So my uncle thanked him and went on until he found another man setting out fence posts by shoving them into the ground with his bare hand . . . and in stony soil, it's true. So again my uncle hailed him as Muldoon.

"The man was so startled he dropped the ten or dozen six-inch posts he had tucked under the other arm. 'Get along with your blarney, now!' he called back. You must know that Muldoon lives farther on down this very same road. He's strong.'

"The next local my uncle saw was building a stone fence. Dry-stone work it was and very neat. This man was trimming the rock without hammer or trowel, splitting them with the edge of his hand and doing the fine trim by pinching off bits with his fingers. So again my uncle addressed a man by that glorious name.

"The man started to speak but his throat was dry from all that stone dust; his voice failed him. So he grabbed up a large rock, squeezed it the way you squeezed Igli--forced water out of it as if it had been a goatskin, drank. Then he said, 'Not me, my friend. He's strong, as everyone knows. Why, many is the time that I have seen him insert his little finger--' "

My mind was distracted from this string of lies by a wench pitching hay just across the ditch from the road. She had remarkable pectoral muscles and a lava-lava just suited her. She saw me eyeing her and gave me the eye right back, with a wiggle tossed in.

"You were saying?" I asked.

"Eh? '--just to the first joint . . . and hold himself at arm's length for hours!"

"Rufo," I said, "I don't believe it could have been more than a few minutes. Strain on the tissues, and so forth."

"Boss," he answered in a hurt tone, "I could take you to the very spot where the Mighty Dugan used to perform this stunt."

"You said his name was Muldoon."

"He was a Dugan on his mother's side, very proud of her he was. You'll be pleased to know, milord, that the boundary of the Doral's land is now in sight. Lunch in minutes only."

"I can use it. With a gallon of anything, even water."

"Passed by acclamation. Truthfully, milord, I'm not at my best today. I need food and drink and a long siesta before the fighting starts, or I'll yawn when I should parry. Too large a night."

"I didn't see you at the banquet."

"I was there in spirit. In the kitchen the food is hotter, the choice is better, and the company less formal. But I had no intention of making a night of it. Early to bed is my motto. Moderation in all things. Epictetus. But the pastry cook--Well, she reminds me of another girl I once knew, my partner in a legitimate business, smuggling. But her motto was that anything worth doing at all is worth overdoing--and she did. She smuggled on top of smuggling, a sideline of her own unmentioned to me and not taken into account--for I was listing every item with the customs officers, a copy with the bribe, so that they would know I was honest.

"But a girl can't walk through the gates fat as a stuffed goose and walk back through them twenty minutes later skinny as the figure one--not that she was, just a manner of speaking--without causing thoughtful glances. If it hadn't been for the strange thing the dog did in the night, the busies would have nabbed us."

"What was the strange thing the dog did in the night?"

"Just what I was doing last night. The noise woke us and we were out over the roof and free, but with nothing to show for six months' hard work but skinned knees. But that

pastry cook--You saw her, milord. Brown hair, blue eyes, a widow's peak and the rest remarkably like Sophia Loren."

"I have a vague memory of someone like that."

"Then you didn't see her, there is nothing vague about Nalia. As may be, I had intended to lead the life sanitary last night, knowing that there would be bloodshed today. You know:

'Once at night and outen the light;
'Once in the morning, a new day a-borning'

"--as the Scholar advised. But I hadn't reckoned with Nalia. So here I am with no sleep and no breakfast and if I'm dead before nightfall in a pool of my own blood, it'll be partly Nalia's doing."

"I'll shave your corpse, Rufo; that's a promise." We had passed the marker into the next county but Star didn't slow down. "Bye the bye, where did you learn the undertakers trade?"

"The what? Oh! That was a far place indeed. The top of that rise, behind those trees, is a house and that's where we'll be having lunch. Nice people."

"Good!" The thought of lunch was a bright spot as I was again regretting my Boy Scout behavior of the night before. "Rufo, you had it all wrong about the strange thing the dog did in the night."

"Milord?"

"The dog did nothing in the night, that was the strange thing."

"Well, it certainly didn't sound that way," Rufo said doubtfully.

"Another dog, another far place. Sorry. What I started to say was: A funny thing happened to me on the way to bed last night--and I did lead the life sanitary."

"Indeed, milord?"

"In deed, if not in thought." I needed to tell somebody and Rufo was the sort of scoundrel I could trust. I told him the Story of the Three Bares.

"I should have risked it," I concluded. "And, swelp me, I would have, if that lad had been put to bed--alone--when she should have been. Or I think I would have, regardless of White Shotgun or jumping out windows. Rufo, why do the prettiest gals always have fathers or husbands? But I tell you the truth, there they were--the Big Bare, the Middle-Sized Bare, and the Littlest Bare, close enough to touch and all of them anxious to keep my bed warm--and I didn't do a damn thing! Go ahead and laugh. I deserve it."

He didn't laugh. I turned to look at him and his expression was piteous. "Milord! Oscar my comrade! Tell me it isn't true!"

"It is true," I said huffily. "And I regretted it at once. Too late. And you complained about your night!"

"Oh, my Cod!" He threw his mount into high gear and took off. Ars Longa looked back inquiringly over her shoulder, then continued on.

Rufo caught up with Star; they stopped, short of the house where lunch was to be expected. They waited and I joined them. Star was wearing no expression; Rufo looked unbearably embarrassed.

Star said, "Rufo, go beg lunch for us. Fetch it here. I would speak with milord alone."

"Yes, milady!" He got out fast.

Star said to me, still with no expression, "Milord Hero, is this true? What your groom reports to me?"

"I don't know what he reported."

"It concerned your failure--your alleged failure--last night."

"I don't know what you mean by 'failure.' If you want to know what I did after the banquet . . . I slept alone. Period."

She sighed but her expression did not change. "I wanted to hear it from your lips. To be just." Then her expression did change and I have never seen such anger. In a low almost passionless voice she began chewing me out:

"You hero. You incredible butter-brained dolt. Clumsy, bumbling, loutish, pimple-peeked, underdone, over-muscled, idiotic--"

"Stop it!"

"Quiet, I am not finished with you. Insulting three innocent ladies offending a staunch--"

"SHUT UP!!!"

The blast blew her hair back. I started in before she could rev up again. "Don't ever again speak to me that way. Star. Never."

"But--"

"Hold your tongue, you bad-tempered brat! You have not earned the right to speak to me that way. Nor will any girl ever earn the right. You will always--always!--address me politely and with respect. One more word of your nasty rudeness and I'll spank you until the tears fly."

"You wouldn't dare!"

"Get your hand away from that sword or I'll take it away from you, down your pants right here on the road, and spank you with it. Till your arse is red and you beg for mercy. Star, I do not fight females--but I do punish naughty children. Ladies I treat as ladies. Spoiled brats I treat as spoiled brats. Star, you could be the Queen of England and the Galactic Overlord all rolled into one--but ONE MORE WORD out of line from you, and down come your tights and you won't be able to sit for a week. Understand me?"

At last she said in a small voice, "I understand, milord."

"And besides that. I'm resigning from the hero business. I won't listen to such talk twice, I won't work for a person who treats me that way even once." I sighed, realizing that I had just lost my corporal's stripes again. But I always felt easier and freer without them.

"Yes, milord." I could barely hear her. It occurred to me that it was a long way back to Nice. But it didn't worry me.

"All right, let's forget it."

"Yes, milord." She added quietly, "But may I explain why I spoke as I did?"

"No."

"Yes, milord."

A long silent time later Rufo returned. He stopped out of earshot, I motioned him to join us.

We ate silently and I didn't eat much but the beer was good. Rufo tried once to make chitchat with an impossibility about another of his uncles. It couldn't have fallen flatter in Boston.

After lunch Star turned her mount--those "horses" have a small turning circle for their wheelbase but it's easier to bring them full circle in a tight place by leading them. Rufo said, "Milady?"

She said impassively, "I am returning to the Doral."

"Milady! Please not!"

"Dear Rufo," she said warmly but sadly. "You can wait up at that house--and if I'm not back in three days, you are free." She looked at me, looked away. "I hope that milord Oscar will see fit to escort me. But I do not ask it. I have not the right." She started off.

I was slow in getting Ars Longa turned; I didn't have the hang of it. Star was a good many bricks down the road; I started after her.

Rufo waited until I was turned, biting his nails, then suddenly climbed aboard and caught up with me. We rode knee to knee, a careful fifty paces behind Star, Finally he said, "This is suicide. You know that, don't you?"

"No, I didn't know it."

"Well, it is."

I said, "Is that why you are not bothering to say 'sir'?"

"Milord?" He laughed shortly and said, "I guess it is. No point in that nonsense when you are going to die soon."

"You're mistaken."

"Huh?"

" 'Huh, milord,' if you please. Just for practice. But from now on, even if we last only thirty minutes. Because I am running the show now--and not just as her stooge. I don't want any doubt in your mind as to who is boss once the fighting starts. Otherwise turn around and I'll give your mount a slap on the rump to get you moving. Hear me?"

"Yes, milord Oscar." He added thoughtfully, "I knew you were boss as soon as I got back. But I don't see how you did it. Milord, I have never seen Her meek before. May one ask?"

"One may not. But you have my permission to ask her. If you think it is safe. Now tell me about this 'suicide' matter--and don't say she doesn't want you to give me advice. From here on you'll give advice any time I ask--and keep your lip buttoned if I don't."

"Yes, milord. All right, the suicide prospects. No way to figure the odds. It depends on how angry the Doral is. But it won't be a fight, can't be. Either we get clobbered the instant we poke our noses in . . . or we are safe until we leave his land again, even if he tells us to turn around and ride away." Rufo looked very thoughtful. "Milord, if you want a blind guess--Well, I figure you've insulted the Doral the worst he has ever been hurt in the course of a long and touchy life. So it's about ninety to ten that, two shakes after we turn off the road, we are all going to be sprouting more arrows than Saint Sebastian."

"Star, too? She hasn't done anything. Nor have you." (Nor I, either, I added to myself. What a country!)

Rufo sighed. "Milord, each world has its own ways. Jock won't want to hurt Her. He likes Her. He's terribly fond of Her. You could say that he loves Her. But if he kills you, he has got to loll Her. Anything else would be inhumane by his standards--and he's a very moral bloke; he's noted for it. And kill me, too, of course, but I don't count. He must kill Her even though it will start a chain of events that will wipe him out just as dead once the news gets out. The question is: Does he have to kill you? I figure be has to, knowing these people. Sorry . . . milord."

I mulled it over. "Then why are you here, Rufo?"

"Milord?"

"You can cut the 'sirs' down to one an hour. Why are you here? If your estimate is correct, your one sword and one bow can't affect the outcome. She gave you a fair chance to chicken out. So what is it? Pride? Or are you in love with her?"

"Oh, my God, no!"

Again I saw Rufo really shocked. "Excuse me," he went on. "You caught me with my guard down." He thought about it. "Two reasons, I suppose. The first is that if Jock allows us to parley--well. She is quite a talker. In the second place"--he glanced at me--"I'm superstitious, I admit it. You're a man with luck. I've seen it. So I want to be close to you even when reason tells me to run. You could fall in a cesspool and--"

"Nonsense. You should hear my hard-luck story."

"Maybe in the past. But I'm betting the dice as they roll." He shut up.

A bit later I said, "You stay here." I speeded up and joined Star. "Here are the plans," I told her. "When we get there, you stay out on the road with Rufo. I'm going in alone."

She gasped. "Oh, milord! No!"

"Yes."

"But--"

"Star, do you want me back? As your champion?"

"With all my heart!"

"All right. Then do it my way."

She waited before answering. "Oscar--"

"Yes, Star."

"I will do as you say. But will you let me explain before you decide what you will say?"

"Go on."

"In this world, the place for a lady to ride is by her champion. And that is where I would want to be, my Hero, when in peril. Especially when in peril. But I'm not pleading for sentiment, nor for empty form. Knowing what I now know I can prophesy with certainty that, if you go in first, you will die at once, and I will die--and Rufo--as soon as they can chase us down. That will be quickly, our mounts are tired. On the other hand, if I go in alone--"

"No."

"Please, milord. I was not proposing, it. If I were to go in alone, I would be almost as likely to die at once as you would be. Or perhaps, instead of feeding me to the pigs, be would simply have me feed the pigs and be a plaything of the pig boys--a fate merciful rather than cold justice in view of my utter degradation in returning without you. But the Doral is fond of me and I think he might let me live . . . as a pig girl and no better than pigs. This I would risk if necessary and wait my chance to escape, for I cannot afford pride; I have no pride, only necessity." Her voice was husky with tears.

"Star, Star!"

"My darling!"

"Huh? You said--"

"May I say it? We may not have much time. My Hero . . . my darling." She reached out blindly, I took her hand; she leaned toward me and pressed it to her breast.

Then she straightened up but kept my hand. "I'm all right now. I am a woman when I least expect it. No, my darling Hero, there is only one way for us to go in and that is side by side, proudly. It is not only safest, it is the only way I would wish it--could I afford pride. I can afford anything else. I could buy you the Eiffel Tower for a trinket, and replace it when you broke it. But not pride."

"Why is it safest?"

"Because he may--I say 'may'--let us parley. If I can get in ten words, he'll grant a hundred. Then a thousand. I may be able to heal his hurt."

"All right. But--Star, what did I do to hurt him? I didn't! I went to a lot of trouble not to hurt him."

She was silent a while, then--"You are an American."

"What's that got to do with it? Jock doesn't know it."

"It has, perhaps, everything to do with it. No, America is at most a name to the Doral for, although he has studied the Universes, he has never traveled. But--You will not be angry with me again?"

"Uh . . . let's call a King's-X on that. Say anything you need to say but explain things. Just don't chew me out. Oh, hell, chew me out if you like--this once. Just don't let it be a habit . . . my darling."

She squeezed my hand. "Never will I again! The error lay in my not realizing that you are American. I don't know America, not the way Rufo does. If Rufo had been present--But he wasn't; he was wenching in the kitchen. I suppose I assumed, when you were offered table and root and bed, that you would behave as a Frenchman would. I never dreamed that you would refuse it. Had I known, I could have spun a thousand excuses for you. An oath taken. A holy day in your religion. Jock would have been disappointed but not hurt; he is a man of honor."

"But--Damn it, I still don't see why he wants to shoot me for not doing something I would expect, back home, that he might snoot me for doing. In this country, is a plan forced to accept any proposition a gal makes? And why did she run and complain? Why didn't she keep it secret? Hell, she didn't even try. She dragged in her daughters."

"But, darling, it was never a secret. He asked you publicly and publicly you accepted. How would you feel if your bride, on your wedding night, kicked you out of the bedroom? 'Table, and roof, and bed.' You accepted."

" 'Bed.' Star, in America beds are multiple-purpose furniture. Sometimes we sleep in them. Just sleep. I didn't dig it."

"I know now. You didn't know the idiom. My fault. But do you now see why he was completely--and publicly--humiliated?"

"Well, yes, but he brought it on himself. He asked me in public. It would have been worse if I had said No then."

"Not at all. You didn't have to accept. You could have refused graciously. Perhaps the most graceful way, even though it be a white lie, is for the hero to protest his tragic inability--temporary or permanent--from wounds received in the very battle that proved him a hero."

"I'll remember that. But I still don't see why he was so astoundingly generous in the first place."

She turned and looked at me. "My darling, is it all right for me to say that you have astounded me every time I have talked with you? And I had thought I had passed beyond all surprises, years ago."

"It's mutual. You always astound me. However, I like it--except one time."

"My lord Hero, how often do you think a simple country squire has a chance to gain for his family a Hero's son, and raise it as his own? Can you not feel his gall-bitter disappointment at what you snatched from him after he thought you had promised this boon? His shame? His wrath?"

I considered it. "Well, I'll be dogged. It happens in America, too. But they don't boast about it."

"Other countries, other customs. At the very least, he had thought that he had the honor of a hero treating him as a brother. And with luck he expected the get of a hero for house Doral."

"Wait a minute! Is that why he sent me three? To improve the odds?"

"Oscar, he would eagerly have sent you thirty . . . if you had hinted that you felt heroic enough to attempt it. As it was, he sent his chief wife and his two favorite daughters." She hesitated. "What I still don't understand--" She stopped and asked me a blunt question.

"Hell, no!" I protested, blushing. "Not since I was fifteen. But one thing that put me off was that mere child. She's one. I think."

Star shrugged. "She may be. But she is not a child; in Nevia she is a woman. And even if she is unbroached as yet, I'll wager she's a mother in another twelvemonth. But if you were loath to tap her, why didn't you shoo her out and take her older sister? That quaint hasn't been virgin since she's had breasts, to my certain knowledge--and I hear that Muri is 'some dish,' if that is the American idiom."

I muttered. I had been thinking the same thing. But I didn't want to discuss it with Star.

She said, "Pardonne-moi, mon cher? Tu as dit?"

"I said I had given up sex crimes for Lent!"

She looked puzzled. "But Lent is over, even on Earth. And it is not, here, at all."

"Sorry."

"Still I'm pleased that you didn't pick Muri over Letva; Muri would have been unbearably stuck-up with her mother after such a thing. But I do understand that you will repair this, if I can straighten it out?" She added, "It makes great difference in how I handle the diplomacies."

(Star, Star--you are the one I want to bed!) "This is what you wish . . . my darling?"

"Oh, how much it would help!"

"Okay. You're the doctor. One . . . three . . . thirty--I'll die trying. But no little kids!" "No problem. Let me think. If the Doral lets me get in just five words--" She fell silent. Her hand was pleasantly warm.

I did some thinking, too. These strange customs had ramifications, some of which I had still shied away from. How was it, if Letva had immediately told her husband what a slob I was--

"Star? Where did you sleep last night?"

She looked around sharply. "Milord . . . is it permitted to ask you, please, to mind your own business?"

"I suppose so. But everybody seems to be minding mine."

"I am sorry. But I am very much worried and my heaviest worries you do not know as yet. It was a fair question and deserves a fair answer. Hospitality balances, always, and honors flow both ways. I slept in the Doral's bed. However, if it matters--and it may to you; I still do not understand Americans--I was wounded yesterday, it still bothered me. Jock is a sweet and gentle soul. We slept. Just slept."

I tried to make it nonchalant. "Sorry about the wound. Does it hurt now?"

"Not at all. The dressing will fall off by tomorrow. However--Last night was not the first time I enjoyed table and roof and bed at house Doral. Jock and I are old friends, beloved friends--which is why I think I can risk that he may grant me a few seconds before killing me."

"Well, I had figured out most of that."

"Oscar, by your standards--the way you have been raised--I am a bitch."

"Oh, never! A princess."

"A bitch. But I am not of your country and I was reared by another code. By my standards, and they seem good to me, I am a moral woman. Now . . . am I still your darling'?"

"My darling!"

"My darling Hero. My champion. Lean close and kiss me. If we die, I would my mouth be warm with your lips. The entrance is just around this bend."

"I know."

A few moments later we rode, swords sheathed and bows unstrung, proudly into the target area.

Chapter 10

Three days later we rode out again.

This time breakfast was sumptuous. This time musicians lined our exit. This time the Doral rode with us.

This time Rufo reeled to his mount, each arm around a wench, a bottle in each hand, then, after busses from a dozen more, was lifted into his seat and belted in the reclining position. He fell asleep, snoring before we set out.

I was kissed good-bye more times than I could count and by some who had no reason to do it so thoroughly--for I was only an apprentice hero, still learning the trade.

It's not a bad trade, despite long hours, occupational hazards, and utter lack of security; it has fringe benefits, with many openings and rapid advancement for a man with push and willingness to learn. The Doral seemed well pleased with me.

At breakfast he had sung my prowess up to date in a thousand intricate lines. But I was sober and did not let his praises impress me with my own greatness; I knew better. Obviously a little bird had reported to him regularly--but that bird was a liar. John Henry the Steel-Drivin' Man couldn't have done what Jocko's ode said I did.

But I took it with my heroic features noble and impassive, then I stood up and gave them "Casey at the Bat," putting heart and soul into "Mighty Casey has struck OUT!"

Star gave it a free interpretation. I had (so she sang) praised the ladies of Doral, the ideas being ones associated with Madame Pompadour, Nell Gwyn, Theodora, Ninon de l'Enclos, and Rangy Lil. She didn't name those famous ladies; instead she was specific, in Nevian eulogy that would have startled Francois Villon.

So I had to come up with an encore. I gave them "Relic's Daughter," then "Jabberwocky," with gestures.

Star had interpreted me in spirit; she had said what I would have said had I been capable of extemporizing poetry. Late on the second day I had chanced on Star in the steam room of the manor's baths. For an hour we lay wrapped in sheets on adjacent slabs, sweating it out and restoring the tissues. Presently I blurted out to her how surprised--and delighted--I was. I did it sheepishly but Star was one to whom I dared bare my soul.

She had listened gravely. When I ran down, she said quietly, "My Hero, as you know, I do not know America. But from what Rufo tells me your culture is unique, among all the Universes."

"Well, I realize that the USA is not sophisticated in such things, not the way France is."

" 'France!' " She shrugged, beautifully. " 'Latins are lousy lovers.' I heard that somewhere, I testify that it is true. Oscar, so far as I know, your culture is the only semicivilized one in which love is not recognized as the highest art and given the serious study it deserves."

"You mean the way they treat it here. Whew! 'Much too good for the common people!' "

"No, I do not mean the way it is treated here." She spoke in English. "Much as I love our friends here, this is a barbarous culture and their arts are barbaric. Oh, good art of its sort, very good; their approach is honest. But--if we live through this, after our troubles are over--I want you to travel among the Universes. You'll see what I mean." She got up, folding her sheet into a toga. I'm glad you are pleased, my Hero. I'm proud of you."

I lay there a while longer, thinking about what she had said. The "highest art"--and back home we didn't even study it, much less make any attempt to teach it. Ballet takes years and years. Nor do they hire you to sing at the Met just because you have a loud voice.

Why should "love" be classed as an "instinct"?

Certainly the appetite for sex is an instinct--but did another appetite make every glutton a gourmet, every fry cook a Cordon Bleu? Hell, you had to learn even to be a fry cook.

I walked out of the steam room whistling "The Best Things in Life Are Free"--then chopped it off in sudden sorrow for all my poor, unhappy compatriots cheated of their birthright by the most mammoth hoax in history.

A mile out the Doral bade us good-bye, embracing me, kissing Star and mussing her hair; then he and his escort drew swords and remained at salute until we passed over the next rise. Star and I rode knee to knee while Rufo snored behind us.

I looked at her and her mouth twitched. She caught my eye and said demurely, "Good morning, milord."

"Good morning, milady. You slept well?"

"Very well, thank you, milord. And you?"

"The same, thank you."

"So? 'What was the strange thing the dog did in the night?' "

" 'The dog did nothing in the night, that was the strange thing,' " I answered with a straight face.

"Really? So gay a dog? Then who was that knight I last saw with a lady?"

" 'Twasn't night, 'twas brillig."

"And your vorpal blade went snicker-snack! My beamish boy!"

"Don't try to pin your jabberwocking on me, you frolicsome wench," I said severely. "I've got friends, I have--I can prove an alibi. Besides, 'my strength is as the strength of ten because my heart is pure.' "

"And the line before that one. Yes, I know; your friends told me about it, milord." Suddenly she grinned and slapped me on the thigh and started bellowing the chorus of "Reilly's Daughter." Vita Brevis snorted; Ars Longa pricked up her ears and looked around reprovingly.

"Stop it," I said. "You're shocking the horses."

"They aren't horses and you can't shock them. Have you seen how they do it, milord? In spite of all those legs? First--"

"Hold your tongue! Ars Longa is a lady, even if you aren't."

"I warned you I was a bitch. First she sidles up--"

"I've seen it. Muri thought it would amuse me. Instead it gave me an inferiority complex that lasted all afternoon."

"I venture to disbelieve that it was all afternoon, milord Hero. Let's sing about Reilly then. You lead, I'll harmonize."

"Well--Not too loud, we'll wake Rufo."

"Not him, he's embalmed."

"Then you'll wake me, which is worse. Star darling, when and where was Rufo an undertaker? And how did he get from that into this business? Did they run him out of town?"

She looked puzzled. "Undertaker? Rufo? Not Rufo."

"He was most circumstantial."

"So? Milord, Rufo has many faults. But telling the truth is not one of them. Moreover, our people do not have undertakers."

"You don't? Then what do you do with leftover carcasses? Can't leave them cluttering the parlor. Untidy."

"I think so, too, but our people do just that: keep them in the parlor. For a few years at least. An overly sentimental custom but we are a sentimental people. Even so, it can be overdone. One of my great aunts kept all her former husbands in her bedchamber--a dreadful clutter and boring, too, because she talked about them, repeating herself and exaggerating. I quit going to see her."

"Well. Did she dust them?"

"Oh, yes. She was a fussy housekeeper."

"Uh--How many were there?"

"Seven or eight, I never counted."

"I see. Star? Is there black-widow blood in your family?"

"What? Oh! But, darling, there is black-widow blood in every woman." She dimpled, reached over and patted my knee. "But Auntie didn't kill them. Believe me, my Hero, the women in my family are much too fond of men to waste them. No, Auntie just hated to let them go. I think that is foolish. Look forward, not back."

" 'And let the dead past bury its dead.' Look, if your people keep dead homes around the house, you must have undertakers. Embalmers at least. Or doesn't the air get thick?"

"Embalming? Oh, no! Just place a stasis on them once you're sure they are dead. Or dying. Any schoolboy can do that." She added, "Perhaps I wronged Rufo. He has spent much time on your Earth--he likes the place, it fascinates him--and he may have tried undertaking. But it seems to me an occupation too honest and straightforward to attract him."

"You never did tell me what your people eventually do with a cadaver."

"Not bury it. That would shock them silly." Star shivered. "Even myself and I've traveled the Universes, learned to be indifferent to almost any custom."

"But what?"

"Much what you did to Igli. Apply a geometrical option and get rid of it."

"Oh. Star, where did Igli go?"

"I couldn't guess, milord. I had no chance to calculate it. Perhaps the ones who made him know. But I think they were even more taken by surprise than I was."

"I guess I'm dense. Star. You call it geometry; Jocko referred to me as a 'mathematician.' But I did what was forced on me by circumstances; I didn't understand it."

"Forced on Igli, you should say, milord Hero. What happens when you place an insupportable strain on a mass, such that it cannot remain where it is? While leaving it nowhere to go? This is a schoolboy problem in metaphysical geometry and the eldest proto-paradox, the one about the irresistible force and the immovable body. The mass implodes. It is squeezed out of its own world into some other. This is often the way the people of a universe discover the Universes--but usually as disastrously as you forced it on Igli; it may take millennia before they control it. It may hover around the fringes as 'magic' for a long time, sometimes working, sometimes failing, sometimes backfiring on the magician."

"And you call this 'mathematics'?"

"How else?"

"I'd call it magic."

"Yes, surely. As I told Jocko, you have a natural genius. You could be a great warlock."

I shrugged uncomfortably. "I don't believe in magic."

"Nor do I," she answered, "the way you put it. I believe in what is."

"That's what I mean, Star. I don't believe in hocus-pocus. What happened to Igli--I mean, 'what appeared to happen to Igli'--could not have happened because it would violate the law of conservation of mass-energy. There must be some other explanation."

She was politely silent.

So I brought to bear the sturdy common sense of ignorance and prejudice. "Look, Star, I'm not going to believe the impossible simply because I was there. A natural law is a natural law. You have to admit that."

We rode a few rods before she answered, "May it please milord Hero, the world is not what we wish it to be. It is what it is. No, I have over-assumed. Perhaps it is indeed what we wish it to be. Either way, it is what it is. Le voila! Behold it, self-demonstrating. Das Ding an sich. Bite it. It is. Ai-je raison? Do I speak truly?"

"That's what I was saying! The universe is what it is and can't be changed by jiggery-pokery. It works by exact rules, like a machine." (I hesitated, remembering a car we had had that was a hypochondriac. It would "fall sick," then "get well" as soon as a mechanic

tried to touch it.) I went on firmly, "Natural law never takes a holiday. The invariability of natural law is the cornerstone of science."

"So it is."

"Well?" I demanded.

"So much the worse for science."

"But--" I shut up and rode in huffy silence.

Presently a slender hand touched my forearm, caressed it. "Such a strong sword arm," she said softly. "Milord Hero, may I explain?"

"Talk ahead," I said. "If you can sell me, you can convert the Pope to Mormonism. I'm stubborn."

"Would I have picked you out of hundreds of billions to be my champion were you not?"

" 'Hundreds of billions?' You mean millions, don't you?"

"Hear me, milord. Indulge me. Let us be Socratic. I'll frame the trick questions and you make the stupid answers--and we'll learn who shaved the barber. Then it will be your turn and I'll be the silly stooge. Okay?"

"All right, put a nickel in."

"Very well. Question: Are the customs at house Doral the customs you used at home?"

"What? You know they aren't. I've never been so flabbergasted since the time the preacher's daughter took me up into the steeple to show me the Holy Ghost." I chuckled sheepishly. "I'd be blushing yet but I've burned out my fuses."

"Yet the basic difference between Nevian customs and yours lies in only one postulate. Milord, there axe worlds in which males kill females as soon as eggs are laid--and others in which females eat males even as they are being fructified--like that black widow you made cousin to me."

"I didn't mean that, Star."

"I was not offended, my love. An insult is like a drink; it affects one only if accepted. And pride is too heavy baggage for my journey; I have none. Oscar, would you find such worlds stranger than this one?"

"You're talking about spiders or some such. Not people."

"I speak of people, the dominant race of each its world. Highly civilized."

"Ugh!"

"You will not say 'ugh' when you see them. They are so different from us that their home life cannot matter to us. Contrariwise, this planet is very like your Earth--yet your customs would shock old Jocko out of song. Darling, your world has a custom unique in the Universes. That is, the Twenty Universes known to me, out of thousands or millions or googols of universes. In the known Twenty Universes only Earth has this astounding custom."

"Do you mean "War"?"

"Oh, no! Most worlds have warfare. This planet Nevia is one of the few where lolling is retail, rather than wholesale. Here there be Heroes, killing is done with passion. This is a world of love and slaughter, both with gay abandon. No, I mean something much more shocking. Can you guess?"

"Uh . . . television commercials?"

"Close in spirit, but wide of the mark. You have an expression 'the oldest profession.' Here--and in all other known worlds--it isn't even the youngest. Nobody has heard of it

and wouldn't believe it if he did. We few who visit Earth don't talk about it. Not that it would matter; most people don't believe travelers' tales."

"Star, are you telling me that there is no prostitution elsewhere in the Universe?"

"The Universes, my darling. None."

"You know," I said thoughtfully, "that's going to be a shock to my first sergeant. None at all?"

"I mean," she said bluntly, "that whoring seems to have been invented by Earth people and no others--and the idea would shock old Jocko into impotence. He's a straitlaced moralist."

"I'll be damned! We must be a bunch of slobs."

"I did not mean to offend, Oscar; I was reciting facts. But this oddity of Earth is not odd in its own context. Any commodity is certain to be sold--bought, sold, leased, rented, bartered, traded, discounted, price-stabilized, inflated, bootlegged, and legislated--and a woman's 'commodity' as it was called on Earth in franker days is no exception. The only wonder is the wild notion of thinking of it as a commodity. Why, it so surprised me that once I even--Never mind. Anything can be made a commodity. Someday I will show you cultures living in spaces, not on planets--nor on fundaments of any sort; not all universes have planets--cultures where the breath of life is sold like a kilo of butter in Provence. Other places so crowded that the privilege of staying alive is subject to tax--and delinquents are killed out of hand by the Department of Eternal Revenue and neighbors not only do not interfere, they are pleased."

"Good God! Why?"

"They solved death, milord, and most of them won't emigrate despite endless roomier planets. But we were speaking of Earth. Not only is whoring unknown elsewhere, but its permutations are unknown--dower, bridal price, alimony, separate maintenance, all the variations that color all Earth's institutions--every custom related even remotely to the incredible notion that what all women have an endless supply of is nevertheless merchandise, to be hoarded and auctioned."

Ars Longa gave a snort of disgust. No, I don't think she understood. She understands some Nevian but Star spoke English; Nevian lacks the vocabulary.

"Even your secondary customs," she went on, "are shaped by this unique institution. Clothing--you've noticed that there is no real difference here in how the two sexes dress. I'm in tights this morning and you are in shorts but had it been the other way around no one would have noticed."

"The hell they wouldn't! Your tights wouldn't fit me."

"They stretch. And body shyness, which is an aspect of sex-specialized clothing. Here nakedness is as unnoteworthy as on that pretty little island where I found you. All hairless peoples sometimes wear clothing and all peoples no matter how hirsute wear ornaments--but nakedness taboo is found only where flesh is merchandise to be packaged or displayed . . . that is to say, on Earth. It parallels 'Don't pinch the grapefruit' and putting false bottoms in berry boxes. If something is never haggled over, there is no need to make a mystery of it."

"So if we get rid of clothes we get rid of prostitution?"

"Heavens, no! You've got it backwards." She frowned. "I don't see how Earth could ever get rid of whoring; it's too much a part of everything you do."

"Star, you've got your facts wrong. There is almost no prostitution in America."

She looked startled. "Really? But--Isn't 'alimony' an American word? And 'gold digger'? And 'coming-out party'?"

"Yes, but prostitution has almost died out. Hell, I wouldn't know how to go about finding a whorehouse even in an Army town. I'm not saying that you don't wind up in the nay. But it's not commercialized. Star, even with an American girl who is well-known to be an easy make-out, if you offered her five bucks--or twenty--it's ten to one she would slap your face."

"Then how is it done?"

"You're nice to her instead. Take her to dinner, maybe to a show. Buy her flowers, girls are suckers for flowers. Then approach the subject politely."

"Oscar, doesn't this dinner and show, and possibly flowers, cost more than five dollars? Or even twenty? I understood that American prices were as high as French prices."

"Well, yes, but you can't just tip your hat and expect a girl to throw herself on her back. A tightwad--"

"I rest the case. All I was trying to show was that customs can be wildly different in different worlds."

"That's true, even on Earth. But--"

"Please, milord. I won't argue the virtue of American women, nor was I criticizing. Had I been reared in America I think I would want at least an emerald bracelet rather than dinner and a show. But I was leading up to the subject of 'natural law.' Is not the invariability of natural" law an unproved assumption? Even on Earth?"

"Well--You haven't stated it fairly. It's an assumption, I suppose. But there has never been a case in which it failed to stand up."

"No black swans? Could it not be that an observer who saw an exception preferred not to believe his eyes? Just as you do not want to believe that Igli ate himself even though you, my Hero, forced him to? Never mind. Let's leave Socrates to his Xanthippe. Natural law may be invariable throughout a universe--seems to be, in rigid universes. But it is certain that natural laws vary from universe to universe--and believe this you must, milord, else neither of us will live long!"

I considered it. Damn it, where had Igli gone? "Most unsettling."

"No more unsettling, once you get used to it, than shifting languages and customs as you shift countries. How many chemical elements are there on Earth?"

"Uh, ninety-two and a bunch of Johnny-Come-Latelies. A hundred and six or seven."

"Much the same here. Nevertheless a chemist from Earth would suffer some shocks. The elements aren't quite the same, nor do they behave quite the same way. H-bombs won't work here and dynamite won't explode."

I said sharply, "Now wait! Are you telling me that electrons and protons aren't the same here, to get down to basics?"

She shrugged. "Perhaps, perhaps not. What is an electron but a mathematical concept? Have you tasted one lately? Or put salt on the tail of a wavicle? Does it matter?"

"It damn well would matter. A man can starve as dead from lack of trace elements as from lack of bread."

"True. In some universes we humans must carry food if we visit them--which we sometimes must, if only to change trains. But here, and in each of the universes and countless planets where we humans live, you need not worry; local food will nourish you. Of course, if you lived here many years, then went back to Earth and died soon after and

an autopsy were done with fussiest microanalysis, the analyst might not believe his results. But your stomach wouldn't care."

I thought about this, my belly stuffed with wonderful food and the air around me sweet and good--certainly my body did not care if there were indeed the differences Star spoke of.

Then I recalled one aspect of life in which little differences cause big differences. I asked Star about it.

She looked blandly innocent. "Do you care, milord? You will be long gone before it matters to Doral. I thought your purpose these three days was simply to help me in my problem? With pleasure in your work, I realize--you threw yourself into the spirit of the occasion."

"Damn it, quit pulling my leg! I did it to help you. But a man can't help wondering."

She slapped my thigh and laughed. "Oh, my very darling! Stop wondering; human races throughout the Universes can crossbreed. Some crosses fruit but seldom and some mule out. But this is not one of them. You will live on here, even if you never return. You're not sterile; that was one of many things I checked when I examined your beautiful body in Nice. One is never sure how the dice will roll, but--I think the Doral will not be disappointed."

She leaned toward me. "Would you give your physician data more accurate than that which Jocko sang? I might offer a statistical probability. Or even a Sight."

"No, I would not! Nosy."

"It is a long nose, isn't it? As you wish, milord. In a less personal vein the fact of crossbreeding among humans of different universes--and some animals such as dogs and cats--is a most interesting question. The only certainty is that human beings flourish only in those universes having chemistries so similar that elements that make up deoxyribonucleic acids are so alike as not to matter. As for the rest, every scholar has his theory. Some hold to a teleologic explanation, asserting that Man evolves alike in all essential particulars in every universe that can support him because of Divine Plan--or through blind necessity, depending on whether the scholar takes his religion straight or chases it with soda.

"Some think that we evolved just once--or were created, as may be--and leaked across into other universes. Then they fight over which universe was the home of the race."

"How can there be any argument?" I objected. "Earth has fossil evidence covering the evolution of man. Other planets either have it or not, and that should settle it."

"Are you sure, milord? I thought that, on Earth, man's family tree has as many dotted lines as there are bastards in European royal lines."

I shut up. I had simply read some popular books. Perhaps she was right; a race that could not agree as to who did what to whom in a war only twenty years back probably didn't know what Alley Oop did to the upstairs maid a million years ago, when the evidence was only scattered bones. Hadn't there been hoaxes? The Piltdown Man, or some such?

Star went on, "Whatever the truth, there are leakages between worlds. On your own planet disappearances run to hundreds of thousands and not all are absconders or wife-deserters; see any police department's files. One usual place is the battlefield. The strain becomes too great and a man slides through a hole he didn't know was there and winds up 'missing in action.' Sometimes--not often--a man is seen to disappear. One of your

American writers, Bierce or Pierce, got interested and collected such cases. He collected so many that he was collected, too. And your Earth experiences reverse leakage, the 'Kaspar Hausers,' persons from nowhere, speaking no known language and never able to account for themselves."

"Wait a minute? Why just people?"

"I didn't say 'just people.' Have you never heard of rains of frogs? Of stones? Of blood? Who questions a stray cat's origin? Are all flying saucers optical illusions? I promise you they are not; some are poor lost astronauts trying to find their way home. My people use space travel very little, as faster-than-light is the readiest way to lose yourself among the Universes. We prefer the safer method of metaphysical geometries--or 'magic' in the vulgar speech."

Star looked thoughtful. "Milord, your Earth may be the home of mankind. Some scholars think so."

"Why?"

"It touches so many other worlds. It's the top of the list as a transfer point. If its people render it unfit for life--unlikely, but possible--it will disrupt traffic of a dozen universes. Earth has had its fairy rings, and Gates, and Bifrost Bridges for ages; that one we used in Nice was there before the Romans came."

"Star, how can you talk about points on Earth 'touching' other planets--for centuries on end? The Earth moves around the Sun at twenty miles a second or such, and spins on its axis, not to mention other motions that add up to an involved curve at unthinkable speed. So how can it 'touch' other worlds?"

Again we rode in silence. At last Star said, "My Hero, how long did it take you to learn calculus?"

"Why, I haven't learned it. I've studied it a couple of years."

"Can you tell me how a particle can be a wave?"

"What? Star, that's quantum mechanics, not calculus. I could give an explanation but it wouldn't mean anything; I don't have the math. An engineer doesn't need it."

"It would be simplest," she said diffidently, "to answer your question by saying 'magic' just as you answered mine with 'quantum mechanics.' But you don't like that word, so all I can say is that after you study higher geometries, metaphysical and conjectural as well as topological and judicial--if you care to make such study--I will gladly answer. But you won't need to ask."

(Ever been told: "Wait till you grow up, dear; then you will understand"? As a kid I didn't like it from grownups; I liked it still less from a girl I was in love with when I was fully grown.)

Star didn't let me sulk; she shifted the talk. "Some crossbreedings are from neither accidental slippages nor planned travel. You've heard of incubi and succubi?"

"Oh, sure. But I never bother my head with myths."

"Not myths, darling, no matter how often the legend has been used to explain embarrassing situations. Witches and warlocks are not always saints and some acquire a taste for rape. A person who has learned to open Gates can indulge such vice; he--or she--can sneak up on a sleeping person--maid, chaste wife, virgin boy--work his will and be long gone before cockcrow." She shuddered. "Sin at its nastiest. If we catch them, we kill them. I've caught a few, I killed them. Sin at its worst, even if the victim learns to like it." She shuddered again.

"Star, what is your definition of 'sin'?"

"Can there be more than one? Sin is cruelty and injustice, all else is peccadillo. Oh, a sense of sin comes from violating the customs of your tribe. But breaking custom is not sin even when it feels so; sin is wronging another person."

"How about 'sinning against God'?" I persisted.

She looked at me sharply. "So again we shave the barber? First, milord, tell me what you mean by 'God.' "

"I just wanted to see if you would walk into it."

"I haven't walked into that one in a mort of years. I'd as lief thrust with a bent wrist, or walk a pentacle in clothes. Speaking of pentacles, my Hero, our destination is not what it was three days ago. Now we go to a Gate I had not expected to use. More dangerous but it can't be helped."

"My fault! I'm sorry, Star."

"My fault, milord. But not all loss. When we lost our luggage I was more worried than I dared show--even though I was never easy about carrying firearms through a world where they may not be used. But our foldbox carried much more than firearms, things we are vulnerable without. The time you spent in soothing the hurt to the Doral's ladies I spent--in part--in wheedling the Doral for a new kit, almost everything heart could wish but firearms. Not all loss."

"We are going to another world now?"

"Not later than tomorrow dawn, if we live."

"Damn it, Star, both you and Rufo talk as if each breath might be our last."

"As it might be."

"You're not expecting an ambush now; we're still on Doral land. But Rufo is as full of dire forebodings as a cheap melodrama. And you are almost as bad."

"I'm sorry. Rufo does fret--but he is a good man at your back when trouble starts. As for me, I have been trying to be fair, milord, to let you know what to expect."

"Instead you confuse me. Don't you think it's time you put your cards face up?"

She looked troubled. "And if the Hanging Man is the first card turned?"

"I don't give a hoot! I can face trouble without fainting--"

"I know you can, my champion."

"Thanks. But not knowing makes me edgy. So talk."

"I will answer any question, milord Oscar. I have always been willing to." "But you know that I don't know what questions to ask. Maybe a carrier pigeon doesn't need to know what the war is about--but I feel like a sparrow in a badminton game. So start from the beginning."

"As you say, milord. About seven thousand years ago--" Star stopped. "Oscar, do you want to know--now all the interplay of politics of a myriad worlds and twenty universes over millennia in arriving at the present crisis? I'll try if you say, but just to outline it would take more time than remains until we must pass through that Gate. You are my true champion; my life hangs on your courage and skill. Do you want the politics behind my present helpless, almost hopeless predicament--save for you! Or shall I concentrate on the tactical situation?"

(Damn it! I did want the whole story.) "Let's stick to the tactical situation. For now."

"I promise," she said solemnly, "that if we live through it, you shall have every detail. The situation is this: I had intended us to cross Nevia by barge, then through the mountains to reach a Gate beyond the Eternal Peaks. That route is less risky but long.

"But now we must hurry. We will turn off the road late this afternoon and pass through some wild country, and country still worse after dark. The Gate there we must reach before dawn; with luck we may sleep. I hope so, because this Gate takes us to another world at a much more dangerous exit.

"Once there, in that world--Hokesh it is called, or Karth--in Karth-Hokesh we shall be close, too close, to a tall tower, mile high, and, if we win to it, our troubles start. In it is the Never-Born, the Eater of Souls."

"Star, are you trying to scare me?"

"I would rather you were frightened now, if such is possible, than have you surprised later. My thought, milord, had been to advise you of each danger as we reached it, so that you could concentrate on one at a time. But you overruled me."

"Maybe you were right. Suppose you give me details on each as we come to it, just the outline now. So I'm to fight the Eater of Souls, am I? The name doesn't scare me; if he tries to eat my soul, he'll throw up. What do I fight him with? Spit?"

"That is one way," she said seriously, "but, with luck, we won't fight him--it--at all. We want what it guards."

"And what is that?"

"The Egg of the Phoenix."

"The Phoenix doesn't lay eggs."

"I know, milord. That makes it uniquely valuable."

"But--"

She hurried on. "That is its name. It is a small object, somewhat larger than an ostrich egg and black. If I do not capture it, many bad things will happen. Among them is a small one: I will die. I mention that because it may not seem small to you--my darling! --and it is easier to tell you that one truth than it is to explain the issues."

"Okay. We steal the Egg. Then what?"

"Then we go home. To my home. After which you may return to yours. Or remain in mine. Or go where you list, through Twenty Universes and myriad worlds. Under any choice, whatever treasure you fancy is yours; you will have earned it and more . . . as well as my heartfelt thanks, milord Hero, and anything you ask of me."

(The biggest blank check ever written--If I could cash it.) "Star, you don't seem to think we will live through it."

She took a deep breath. "Not likely, milord. I tell you truth. My blunder has forced on us a most desperate alternative."

"I see. Star, will you marry me? Today?"

Then I said, "Easy there! Don't fall!" She hadn't been in danger of falling; the seat belt held her. But she sagged against it. I leaned over and put my arm around her shoulders. "Nothing to cry about. Just give me a yes or a no--and I fight for you anyway. On, I forgot. I love you. Anyhow I think it's love. A funny, fluttery feeling whenever I look at you or think about you--which is mostly."

"I love you, milord," she said huskily. "I have loved you since I first saw you. Yes, a 'funny, fluttery feeling' as if everything inside me were about to melt down."

"Well, not quite that," I admitted. "But it's probably opposite polarity for the same thing. Fluttery, anyhow. Chills and lightnings. How do we get married around here?"

"But, milord--my love--you always astound me. I knew you loved me. I hoped that you would tell me before--well, in time. Let me hear it once. I did not expect you to offer to marry me!"

"Why not? I'm a man, you're a woman. It's customary?"

"But--Oh, my love, I told you! It isn't necessary to marry me. By your rules . . . I'm a bitch."

"Bitch, witch, Sing Along with Mitch! What the hell, honey? That was your word, not mine. You have about convinced me that the rules I was taught are barbarous and yours are the straight goods. Better blow your nose--here, want my hanky?

Star wiped her eyes and blew her nose but instead of the yes-darling I wanted to hear she sat up straight and did not smile. She said formally, "Milord Hero, had you not best sample the wine before you buy the barrel?"

I pretended not to understand.

"Please, milord love," she insisted. "I mean it. There's a grassy bit on your side of the road, just ahead. You can lead me to it this moment and willingly I will go."

I sat high and pretended to peer. "Looks like crab grass. Scratchy."

"Then p-p-pick your own grass! Milord . . . I am willing, and eager, and not uncomely--but you will learn that I am a Sunday painter compared with artists you will someday meet. I am a working woman. I haven't been free to give the matter the dedicated study it deserves. Believe me! No, try me. You can't know that you want to marry me."

"So you're a cold and clumsy wench, eh?"

"Well . . . I didn't say that. I'm only entirely unskilled--and I do have enthusiasm."

"Yes, like your auntie with the cluttered bedroom--it runs in your family, so you said. Let it stand that I want to marry you in spite of your obvious faults."

"But--"

"Star, you talk too much."

"Yes, milord," she said meekly.

"We're getting married. How do we do it? Is the local lord also justice of the peace? If he is, there will be no droit du seigneur; we haven't time for frivolities." "Each squire is the local justice," Star agreed thoughtfully, "and does perform marriages, although most Nevians don't bother. But--Well, yes, he would expect droit du seigneur and, as you pointed out, we haven't time to waste."

"Nor is that my idea of a honeymoon. Star--look at me. I don't expect to keep you in a cage; I know you weren't raised that way. But we won't look up the squire. What's the local brand of preacher? A celibate brand, by choice."

"But the squire is the priest, too. Not that religion is an engrossing matter in Nevia; fertility rites are all they bother with. Milord love, the simplest way is to jump over your sword."

"Is that a marriage ceremony where you come from, Star?"

"No, it's from your world:

'Leap rogue, and jump whore,
'And married be forevermore--'

"--it's very old."

"Mmm--I don't care for the marriage lines. I may be a rogue but I know what you think of whores. What other chances are there?"

"Let me see. There's a rumormonger in a village we pass through soon after lunch. They sometimes marry townies who want it known far and wide; the service includes spreading the news."

"What sort of service?"

"I don't know. And I don't care, milord love. Married we will be!"

"That's the spirit! We won't stop for lunch."

"No, milord," she said firmly, "if wife I am to be, I shall be a good wife and not permit you to skip meals."

"Henpecking already. I think I'll beat you."

"As you will, milord. But you must eat, you are going to need your strength--"

"I certainly will!'

"--for fighting. For now I am ten times as anxious that we both live through it. Here is a place for lunch." She turned Vita Brevis off the road; Ars Longa followed. Star looked back over her shoulder and dimpled. "Have I told you today that you are beautiful . . . my love!"

Chapter 11

Rufo's longhorse followed us onto the grassy verge Star picked for picnicking. He was still limp as a wet sock and snoring. I would have let him sleep but Star was shaking him.

He came awake fast, reaching for his sword and shouting, "A moi! M'aidez! Les vaches!" Fortunately some friend had stored his sword and belt out of reach on the baggage rack aft, along with bow, quiver, and our new foldbox.

Then he shook his head and said, "How many were there?"

"Down from there, old friend," Star said cheerfully. "We've stopped to eat."

"Eat!" Rufo gulped and shuddered. "Please, milady. No obscenity." He fumbled at his seat belt and fell out of his saddle; I steadied him.

Star was searching through her pouch; she pulled out a vial and offered it to Rufo. He shied back. "Milady!"

"Shall I hold your nose?" she said sweetly.

"I'll be all right. Just give me a moment . . . and the hair of the dog."

"Certainly you'll be all right. Shall I ask milord Oscar to pin your arms?"

Rufo glanced at me appealingly; Star opened the little bottle. It fizzed and fumes rolled out and down. "Now!"

Rufo shuddered, held his nose, tossed it down.

I won't say smoke shot out of his ears. But he flapped like torn canvas in a gale and horrible noises came out.

Then he came into focus as suddenly as a TV picture. He appeared heavier and inches taller and had finned out. His skin was a rosy glow instead of death pallor. "Thank you, milady," he said cheerfully, his voice resonant and virile. "Someday I hope to return the favor."

"When the Greeks reckon time by the kalends," she agreed.

Rufo led the longhorses aside and fed them, opening the foldbox and digging out haunches of bloody meat. Ars Longa ate a hundredweight and Vita Brevis and Mors Profunda even more; on the road these beasts need a high-protein diet. That done, he whistled as he set up table and chairs for Star and myself.

"Sugar pie," I said to Star, "what's in that pick-me-up?"

"An old family recipe:

'Eye of newt and toe of frog,
'Wool of bat and tongue of dog,
'Adders fork and blind-worm's sting,
'Lizard's leg and howlet's wing--' "

"Shakespeare!" I said. "Macbeth."

" 'Cool it with a baboon's blood--' No, Will got it from me, milord love. That's the way with writers; they'll steal anything, file off the serial numbers, and claim it for their own. I got it from my aunt--another aunt--who was a professor of internal medicine. The rhyme is a mnemonic for the real ingredients which are much more complicated--never can tell when you'll need a hangover cure. I compounded it last night, knowing that Rufo, for the sake of our skins, would need to be at his sharpest today--two doses, in fact, in case you needed one. But you surprised me, my love; you break out with nobility at the oddest times."

"A family weakness. I can't help it."

"Luncheon is served, milady."

I offered Star my arm. Hot foods were hot, cold ones chilled; this new foldbox, in Lincoln green embossed with the Doral chop, had equipment that the lost box lacked. Everything was delicious and the wines were superb.

Rufo ate heartily from his serving board while keeping an eye on our needs. He had come over to pour the wine for the salad when I broke the news. "Rufo old comrade, milady Star and I are getting married today. I want you to be my best man and help prop me up."

He dropped the bottle.

Then he was busy wiping me and mopping the table. When at last he spoke, it was to Star. "Milady," he said tightly, "I have put up with much, uncomplaining, for reasons I need not state. But this is going too far. I won't let--"

"Hold your tongue!"

"Yes," I agreed, "hold it while I cut it out. Will you have it fried? Or boiled?"

Rufo looked at me and breathed heavily. Then he left abruptly, withdrawing beyond the serving board. Star said softly, "Milord love, I am sorry."

"What twisted his tail?" I said wonderingly. Then I thought of the obvious. "Star! Is Rufo jealous?"

She looked astounded, started to laugh and chopped it off. "No, no, darling! It's not that at all. Rufo--Well, Rufo has his foibles but he is utterly dependable where it counts. And we need him. Ignore it. Please, milord."

"As you say. It would take more than that to make me unhappy today."

Rufo came back, face impassive, and finished serving. He repacked without speaking and we hit the road.

The road skirted the village green; we left Rufo there and sought out the rumormonger. His shop, a crooked lane away, was easy to spot; an apprentice was beating a drum in front of it and shouting teasers of gossip to a crowd of locals. We pushed through and went inside.

The master rumormonger was reading something in each hand with a third scroll propped against his feet on a desk. He looked, dropped feet to floor, jumped up and made a leg while waving us to seats.

"Come in, come in, my gentles!" be sang out. "You do me great honor, my day is made! And yet if I may say so you have come to the right place whatever your problem whatever your need you have only to speak good news bad news every sort but sad news reputations restored events embellished history rewritten great deeds sung and all work guaranteed by the oldest established news agency in all Nevia news from all worlds all universes propaganda planted or uprooted offset or rechanneled satisfaction guaranteed honesty is the best policy but the client is always right don't tell me I know I know I have spies in every kitchen ears in every bedroom the Hero Gordon without a doubt and your fame needs no heralds milord but honored am I that you should seek me out a biography perhaps to match your matchless deeds complete with old nurse who recalls in her thin and ancient and oh so persuasive voice the signs and portents at your birth--"

Star chopped him off. "We want to get married."

His mouth shut, he looked sharply at Star's waistline and almost bought a punch in the nose. "It is a pleasure. And I must add that I heartily endorse such a public-spirited project. All this modern bundling and canoodling and scuttling without even three cheers or a by-your-leave sends taxes up and profits down that's logic. I only wish I had time to get married myself as I've told my wife many's the time. Now as to plans, if I may make a modest suggestion--"

"We want to be married by the customs of Earth."

"Ah, yes, certainly." He turned to a cabinet near his desk, spun dials. After a bit he said, "Your pardon, gentles, but my head is crammed with a billion facts, large and small, and--that name? Does it start with one 'R' or two?"

Star moved around, inspected the dials, made a setting.

The rumormonger blinked. "That universe? We seldom have a call for it. I've often wished I had time to travel but business business business--LIBRARY!"

"Yes, Master?" a voice answered.

"The planet Earth, Marriage Customs of--that's a capital 'Urr' and a soft theta." He added a five-group serial number. "Snap it up!"

In very short time an apprentice came running with a thin scroll. "Librarian says careful how you handle it, Master. Very brittle, he says. He says--"

"Shut up. Your pardon, gentles." He inserted the scroll in a reader and began to scan.

His eyes bugged out and he sat forward. "Unbeliev--" Then he muttered, "Amazing! Whatever made them think of that!" For several minutes he appeared to forget we were there, simply giving vent to: "Astounding! Fantastic!" and like expressions.

I tapped his elbow. "We're in a hurry."

"Eh? Yes, yes, milord Hero Gordon--milady." Reluctantly he left the scanner, fitted his palms together, and said, "You've come to the right place. Not another rumormonger in all Nevia could handle a project this size. Now my thought is--just a rough idea, talking off the top of my head--for the procession we'll need to call in the surrounding

countryside although for the charivari we could make do with just townspeople if you want to keep it modest in accordance with your reputation for dignified simplicity--say one day for the procession and a nominal two nights of charivari with guaranteed noise levels of--"

"Hold it."

"Milord? I'm not going to make a profit on this; it will be a work of art, a labor of love--just expenses plus a little something for my overhead. It's my professional judgment, too, that a Samoan pre-ceremony would be more sincere, more touching really, than the optional Zulu rite. For a touch of comedy relief--at no extra charge; one of my file clerks just happens to be seven months along, she'd be glad to run down the aisle and interrupt the ceremony--and of course there is the matter of witnesses to the consummation, how many for each of you, but that needn't be settled this week; we have the street decorations to think of first, and--"

I took her arm. "We're leaving."

"Yes, milord," Star agreed.

He chased after us, shouting about broken contracts. I put hand to sword and showed six inches of blade; his squawks shut off.

Rufo seemed to be all over his mad; he greeted us civilly, even cheerfully. We mounted and left. We had been riding south a mile or so when I said, "Star darling--"

"Milord love?"

"That 'jumping over the sword'--that really is a marriage ceremony?"

"A very old one, my darling. I think it dates back to the Crusades."

"I've thought of an updated wording:

'Jump rogue, and princess leap,
'My wife art thou and mine to keep!'

"--would that suit you?"

"Yes, yes!"

"But for the second line you say:

'--thy wife I vow and thine to keep.'

"Got it?"

Star gave a quick gasp. "Yes, my love!"

We left Rufo with the longhorses, giving no explanation, and climbed a little wooded hill. All of Nevia is beautiful, with never a beer can nor a dirty Kleenex to mar its Eden loveliness, but here we found an outdoor temple, a smooth grassy place surrounded by arching trees, an enchanted sanctuary.

I drew my sword and glanced along it, feeling its exquisite balance while noting again the faint ripples left by feather-soft hammer blows of some master swordsmith. I tossed it and caught it by the forte. "Read the motto. Star."

She traced it out. " 'Dum vivimus, vivamus!'--'While we live, let us live!' Yes, my love, yes!" She kissed it and handed it back; I placed it on the ground.

"Know your lines?" I asked.

"Graved in my heart."

I took her hand in mine. "Jump high. One . . . two . . . three!"

Chapter 12

When I led my bride back down that blessed hill, arm around her waist, Rufo helped us mount without comment. But he could hardly miss that Star now addressed me as: "Milord husband." He mounted and tailed in, a respectful distance out of earshot.

We rode hand in hand for at least an hour. Whenever I glanced at her, she was smiling; whenever she caught my eye, the smile grew dimples. Once I asked, "How soon must we keep lockout?"

"Not until we leave the road, milord husband."

That held us another mile. At last she said timidly, "Milord husband?"

"Yes, wife?"

"Do you still think that I am 'a cold and clumsy wench'?"

"Mmm . . ." I answered thoughtfully, " 'cold'--no, I couldn't honestly say you were cold. But 'clumsy'--Well, compared with an artist like Muri, let us say--"

"Milord husband!"

"Yes? I was saying

"Are you honing for a kick in the belly?" She added, "American!"

"Wife . . . would you kick me in the belly?"

She was slow in answering and her voice was very low. "No, milord husband. Never."

"I'm pleased to hear it. But if you did, what would happen?"

"You--you would spank me. With my own sword. But not with your sword. Please, never with your sword . . . my husband."

"Not with your sword, either. With my hand. Hard. First I would spank you. And then--"

"And then what?"

I told her. "But don't give me cause. According to plans I have to fight later. And don't interrupt me in the future."

"Yes, milord husband."

"Very well. Now let's assign Muri an arbitrary score of ten. On that scale you would rate--Let me think."

"Three or four, perhaps? Or even five?"

"Quiet. I make it about a thousand. Yes, a thousand, give or take a point. I haven't a slide rule."

"Oh, what a beast you are, my darling! Lean close and loss me--and just wait till I tell Muri."

"You'll say nothing to Muri, my bride, or you will be paddled. Quit fishing for compliments. You know what you are, you sword-jumping wench."

"And what am I?"

"My princess."

"Oh."

"And a mink with its tail on fire--and you know it."

"Is that good? I've studied American idiom most carefully but sometimes I am not sure."

"It's supposed to be tops. A figure of speech, I've never known a mink that well. Now get your mind on other matters, or you may be a widow on your bridal day. Dragons, you say?"

"Not until after nightfall, milord husband--and they aren't really dragons."

"As you described them, the difference could matter only to another dragon. Eight feet high at the shoulders, a few tons each, and teeth as long as any forearm--all they need is to breathe flame."

"Oh, but they do! Didn't I say?"

I sighed. "No, you did not."

"They don't exactly breathe fire. That would kill them. They hold their breaths while flaming. It's swamp gas--methane--from the digestive tract. It's a controlled belch, with a hypergolic effect from an enzyme secreted between the first and second rows of teeth. The gas bursts into flame on the way out."

"I don't care how they do it; they're flame-throwers. Well? How do you expect me to handle them?"

"I had hoped that you would have ideas. You see," she added apologetically, "I hadn't planned on it, I didn't expect us to come this way."

"Well--Wife, let's go back to that village. Set up in competition with our friend the rumormonger--I'll bet we could outgabble him."

"Milord husband!"

"Never mind. If you want me to kill dragons every Wednesday and Saturday, I'll be on call. This flaming methane--Do they spout it from both ends?"

"Oh, just the front end. How could it be both?"

"Easy. See next year's model. Now quiet; I'm thinking over a tactic. Ill need Rufo. I suppose he has killed dragons before?"

"I don't know that a man has ever killed one, milord husband."

"So? My princess, I'm flattered by the confidence you place in me. Or is it desperation? Don't answer, I don't want to know. Keep quiet and let me think."

At the next farmhouse Rufo was sent in to arrange returning the longhorses. They were ours, gifts from the Doral, but we had to send them home, as they could not live where we were going--Muri had promised me that she would keep an eye on Ars Longa and exercise her. Rufo came back with a bumpkin mounted on a heavy draft animal bareback--he Kept shifting numbly between second and third pairs of legs to spare the animal's back and controlled it by voice.

When we dismounted, retrieved our bows and quivers, and prepared to hoof it, Rufo came up. "Boss, Manure Foot craves to meet the hero and touch his sword. Brush him off?"

Rank hath its duties as well as its privileges. "Fetch him."

The lad, overgrown and fuzz on his chin, approached eagerly, stumbling over his feet, then made a leg so long he almost fell. "Straighten up, son," I said. "What's your name?"

"Pug, milord Hero," he answered shrilly. ("Pug" will do. The Nevian meaning was as rugged as Jocko's jokes.) "A stout name. What do you want to be when you grow up?"

"A hero, milord! Like yourself."

I thought of telling him about those rocks on the Glory Road. But he would find them soon enough if ever he tramped it--and either not mind, or turn back and forget the silly business. I nodded approvingly and assured him that there was always room at the top in

the Hero business for a lad with spirit--and that the lower the start, the greater the glory . . . so work hard and study hard and wait his opportunity. Keep his guard up but always speak to strange ladies; adventure would come his way. Then I let him touch my sword--but not take it in hand. The Lady Vivamus is mine and I'd rather share my toothbrush.

Once, when I was young, I was presented to a Congressman. He had handed me the same fatherly guff I was now plagiarizing. Like prayer, it can't do any harm and might do some good, and I found that I was sincere when I said it and no doubt the Congressman was, too. Oh, possibly some harm, as the youngster might get himself killed on the first mile of that road. But that is better than sitting over the fire in your old age, sucking your gums and thinking about the chances you missed and the gals you didn't tumble. Isn't it?

I decided that the occasion seemed so important to Pug that it should be marked, so I groped in my pouch and found a U.S. quarter. "What's the rest of your name. Pug?"

"Just 'Pug,' milord. Of house Lerdki, of course."

"Now you will have three names because I am giving you one of mine." I had one I didn't need, Oscar Gordon suited me fine. Not "Flash" as that name was never acknowledged by me. Not my Army nickname; I wouldn't write that one on the wall of a latrine. "Easy" was the name I could spare. I had always used "E. C. Gordon" rather than "Evelyn Cyril Gordon" and in school my name had shifted from "E. C." to "Easy" because of my style of broken-field running--I never ran harder nor dodged more than the occasion demanded.

"By authority vested in me by Headquarters United States Army Southeast Asia Command, I, the Hero Oscar, ordain that you shall be known henceforth as Lerdki't Pug Easy. Wear it proudly."

I gave him the quarter and showed him George Washington on the obverse. "This is the father of my house, a greater hero than I will ever be. He stood tall and proud, spoke the truth, and fought for the right as he saw it, against fearful odds. Try to be like him. And here"--I turned it over--"is the chop of my house, the house he founded. The bird stands for courage, freedom, and ideals soaring high." (I didn't tell him that the American Eagle eats carrion, never tackles anything its own size, and will soon be extinct--it does stand for those ideals. A symbol means what you put into it.)

Pug Easy nodded violently and tears started to flow. I had not presented him to my bride; I didn't know that she would wish to meet him. But she stepped forward and said gently, "Pug Easy, remember the words of milord Hero. Treasure them and they will last you all your life."

The lad dropped to his knees. Star touched his hair and said, "Stand, Lerdki't Pug Easy. Stand tall."

I said good-bye to Ars Longa, told her to be a good girl and I would be back someday. Pug Easy headed back with longhorses tailed up and we set out into the woods, arrows nocked and Rufo eyes-behind. There was a sign where we left the yellow brick road; freely translated it read: ALL HOPE ABANDON, YE WHO ENTER HERE.

(A literal translation is reminiscent of Yellowstone Park: "Warning--the varmints in these woods are not tame. Travelers are warned to stay on the road, as their remains will not be returned to their kin. The Lerdki, His Chop.")

Presently Star said, "Milord husband--"

"Yes, pretty foots?" I didn't look at her; I was watching my side and a bit of hers, and keeping an eye overhead as well, as we could be bombed here--something like blood kites but smaller and goes for the eyes.

"My Hero, you are truly noble and you have made your wife most proud."

"Huh? How?" I had my mind on targets--two kinds on the ground here: a rat big enough to eat cats and willing to eat people, and a wild hog about the same size and not a ham sandwich on him anyplace, all rawhide and bad temper. The hogs were easier targets, I had been told, because they charge straight at you. But don't miss. And have your sword loosened, you won't nock a second shaft.

"That lad, Pug Easy. What you did for him."

"Him? I fed him the old malarkey. Cost nothing."

"It was a kingly deed, milord husband."

"Oh, nonsense, diddycums. He expected big talk from a hero, so I did."

"Oscar my beloved, may a loyal wife point it out to her husband when he speaks nonsense of himself? I have known many heroes and some were such oafs that one would feed them at the back door if their deeds did not claim a place at the table. I have known few men who were noble, for nobility is scarcer far than heroism. But true nobility can always be recognized . . . even in one as belligerently shy about showing it as you are. The lad expected it, so you gave it to him--out noblesse oblige is an emotion felt only by those who are noble."

"Well, maybe. Star, you are talking too much again. Don't you think these varmints have ears?"

"Your pardon, milord. They have such good ears that they hear footsteps through the ground long before they hear voices. Let me have the last word, today being my bridal day. If you are--no, when you are gallant to some beauty, let us say Letva--or Muri, damn her lovely eyes! --I do not count it as nobility; it must be assumed to spring from a much commoner emotion than noblesse oblige. But when you speak to a country lout with pigsty on his feet, garlic on his breath, the stink of sweat all over him, and pimples on his face--speak gently and make him feel for the time as noble as you are and let him hope one day to be your equal--I know it is not because you hope to tumble him."

"Oh, I don't know. Boys that age are considered a treat in some circles. Give him a bath, perfume him, curl his hair--"

"Milord husband, is it permitted for me to think about kicking you in the belly?"

"Can't be court-martialed for thinking, that's the one thing they can't take away from you. Okay, I prefer girls; I'm a square and can't help it. What's this about Muri's eyes? Longlegs, are you jealous?"

I could hear dimples even though I couldn't stop to see them. "Only on my wedding day, milord husband; the other days are yours. If I catch you in sportiveness, I shall either not see it, or congratulate you, as may be."

"I don't expect you'll catch me."

"And I trust you'll not catch me, milord rogue," she answered serenely.

She did get the last word, for just then Rufo's bowstring went Fwung! He called out, "Got 'im!" and then we were very busy. Hogs so ugly they made razorbacks look like Poland-Chinas--I got one by arrow, down his slobbering throat then fed steel to his brother a frozen second later. Star got a fair hit at hers but it deflected on bone and kept coming and I kicked it in the shoulder as I was still trying to free my blade from its

cousin. Steel between its ribs quieted it and Star coolly nocked another shaft and let fly while I was killing it. She got one more with her sword, leaning the point in like a matador at the moment of truth, dancing aside as it came on, dead and unwilling to admit it.

The fight was over. Old Rufo had got three unassisted and a nasty goring; I had a scratch and my bride was unhurt, which I made sure of as soon as things were quiet. Then I mounted guard while our surgeon took care of Rufo, after which she dressed my lesser cut.

"How about it, Rufo?" I asked. "Can you walk?"

"Boss, I won't stay in this forest if I have to crawl, Let's mush. Anyhow," he added, nodding at the worthless pork around us, "we won't be bothered by rats right away."

I rotated the formation, placing Rufo and Star ahead with his good leg on the outside and myself taking rear guard, where I should have been all along. Rear guard is slightly safer than point under most conditions but these weren't most conditions. I had let my blind need to protect my bride personally affect my judgment.

Having taken the hot spot I then went almost cross-eyed trying not only to see behind but ahead as well, so that I could close fast if Star--yes, and Rufo--got into trouble. Luckily we had a breathing spell in which I sobered down and took to heart the oldest lesson on patrol: You can't do the other man's job. Then I gave all my attention to our rear. Rufo, old as he was and wounded, would not die without slaughtering an honor guard to escort him to hell in style--and Star was no fainting heroine. I would bet long odds on her against anyone her own weight, name your weapon or barehanded, and I pity the man who ever tried to rape her; he's probably still searching for his cojones.

Hogs didn't bother us again but as evening approached we began to see and oftener to hear those giant rats; they paced us, usually out of sight; they never attacked berserk the way the hogs had; they looked for the best of it, as rats always do.

Rats give me the horrors. Once when I was a kid, my dad dead and Mother not yet remarried, we were flat broke and living in an attic in a condemned building. You could hear rats in the walls and twice rats ran over me in my sleep.

I still wake up screaming.

It doesn't improve a rat to blow it up to the size of a coyote. These were real rats, even to the whiskers, and shaped like rats save that their legs and pads were too large--perhaps the cube-square law on animal proportions works anywhere.

We didn't waste an arrow on one unless it was a fair shot and we zigzagged to take advantage of such openness as the forest had--which increased the hazard from above. However, the forest was so dense that attacks from the sky weren't our first worry.

I got one rat that tailed too closely and just missed another. We had to spend an arrow whenever they got bold; it caused the others to be more cautious. And once, while Rufo was drawing a bow on one and Star was ready with her sword to back him up, one of those vicious little hawks dived on Rufo.

Star cut him out of the air at the bottom of his stoop. Rufo hadn't even seen it; he was busy nailing brother rat.

We didn't have to worry about underbrush; this forest was park-like, trees and grass, no dense undergrowth. Not too bad, that stretch, except that we began to run out of arrows. I was fretting about that when I noticed something. "Hey, up ahead! You're off course. Cut

to the right." Star had set course for me when we left the road but it was up to me to hold it; her bump of direction was erratic and Rufo's no better.

"Sorry, milord leader," Star called back. "The going was a trifle steep."

I closed in. "Rufo, how's the leg?" There was sweat on his forehead.

Instead of answering me, he said, "Milady, it will be dark soon."

"I know," she answered calmly, "so time for a bite of supper. Milord husband, that great flat rock up ahead seems a nice place."

I thought she had slipped her gears and so did Rufo, but for another reason. "But, milady, we are far behind schedule."

"And much later we shall be unless I attend to your leg again."

"Better you leave me behind," he muttered.

"Better you keep quiet until your advice is asked," I told him. "I wouldn't leave a Horned Ghost to be eaten by rats. Star, how do we do this?"

The great flat rock sticking up like a skull in the trees ahead was the upper surface of a limestone boulder with its base buried. I stood guard in its center with Rufo seated beside me while Star set out wards at cardinal and semi-cardinal points. I didn't get to see what she did because my eyes had to be peeled for anything beyond her, shaft nocked and ready to knock it down or scare it off, while Rufo watched the other side. However, Star told me later that the wards weren't even faintly "magic" but were within reach of Earth technology once some bright boy got the idea--an "electrified fence" without the fence, as radio is a telephone without wires, an analogy that won't hold up.

But it was well that I kept honest lockout instead of trying to puzzle out how she sat up that charmed circle, as she was attacked by the only rat we met that had no sense. He came straight at her, my arrow past her ear warned her, and she finished him off by sword. It was a very old male, missing teeth and white whiskers and likely weak in his mind. He was as large as a wolf, and with two death wounds still a red-eyed, mangy fury.

Once the last ward was placed Star told me that I could stop worrying about the sky; the wards roofed as well as fenced the circle. As Rufo says, if She says it, that settles it. Rufo had partly unfolded the foldbox while he watched; I got out her surgical case, more arrows for all of us, and food. No nonsense about manservant and gentlefolk, we ate together, sitting or sprawling and with Rufo lying flat to give his leg a chance while Star served him, sometimes popping food into his mouth in Nevian hospitality. She had worked a long time on his leg while I held a light and handed her things. She packed the wound with a pale jelly before sealing a dressing over it. If it hurt, Rufo didn't mention it.

While we ate it grew dark and the invisible fence began to be lined with eyes, glowing back at us with the light we ate by, and almost as numerous as the crowd the morning Igli ate himself. Most of them I judged to be rats. One group kept to themselves with a break in the circle on each side; I decided these must be hogs; the eyes were higher off the ground.

"Milady love," I said, "will those wards hold all night?"

"Yes, milord husband."

"They had better. It is too dark for arrows and I can't see us hacking our way through that mob. I'm afraid you must revise your schedule again."

"I can't, milord Hero. But forget those beasts. Now we fly."

Rufo groaned. "I was afraid so. You know it makes me seasick."

"Poor Rufo," Star said softly. "Never fear, old friend I have a surprise for you. Again such chance as this, I bought Dramamine in Cannes--you know, the drug that saved the Normandy invasion back on Earth. Or perhaps you don't know."

Rufo answered, " 'Know'? I was in that invasion, milady--and I'm allergic to Dramamine; I fed fish all the way to Omaha Beach. Worst night I've ever had--why, I'd rather be here!"

"Rufo," I asked, "were you really at Omaha Beach?"

"Hell, yes, Boss. I did all of Eisenhower's thinking."

"But why? It wasn't your fight."

"You might ask yourself why you're in this fight, Boss. In my case it was French babes. Earthy and uninhibited and always cheerful about it and willing to learn. I remember one little mademoiselle from Armentieres"--he pronounced it correctly--"who hadn't been--"

Star interrupted. "While you two pursue your bachelor reminiscences, I'll get the flight gear ready." She got up and went to the foldbox.

"Go ahead, Rufo," I said, wondering how far he would stretch this one.

"No," he said sullenly. "She wouldn't like it. I can tell. Boss, you've had the damnedest effect on Her. More ladylike by the minute and that isn't like Her at all. First thing you know She will subscribe to Vogue and then there's no telling how far it will go. I don't understand it, it can't be your looks. No offense meant."

"And none taken. Well, tell me another time. If you can remember it."

"I'll never forget her. But, Boss, seasickness isn't the half of it. You think these woods are infested. Well, the ones we are coming to--wobbly in the knees, at least I will be--those woods have dragons."

"I know."

"So She told you? But you have to see it to believe it. The woods are full of 'em. More than there are Doyles in Boston. Big ones, little ones, and the two-ton teen-age size, hungry all the time. You may fancy being eaten by a dragon; I don't. It's humiliating. And final. They ought to spray the place with dragonbane, that's what they ought to do. There ought to be a law."

Star had returned. "No, there should not be a law," she said firmly. "Rufo, don't sound off about things you don't understand. Disturbing the ecological balance is the worst mistake any government can make."

Rufo shut up, muttering. I said, "My true love, what use is a dragon? Riddle me that."

"I've never cast a balance sheet on Nevia, it's not my responsibility. But I can suggest the imbalances that might follow any attempt to get rid of dragons--which the Nevians could do; you've seen that their technology is not to be sneered at. These rats and hogs destroy crops. Rats help to keep the hogs down by eating piglets. But rats are even worse than hogs, on food crops. The dragons graze through these very woods in the daytime--dragons are diurnal, rats are nocturnal and go into their holes in the heat of the day. The dragons and hogs keep the underbrush cropped back and the dragons keep the lower limbs trimmed off. But dragons also enjoy a tasty rat, so whenever one locates a rat hole, it gives it a shot of flame, not always killing adults as they dig two holes for each nest, but certainly killing any babies--and then the dragon digs in and has his favorite snack. There is a long-standing agreement, amounting to a treaty, that as long as the dragons stay in their own territory and keep the rats in check, humans will not bother them."

"But why not kill the rats, and then clean up the dragons?"

"And let the hogs run wild? Please, milord husband, I don't know all the answers in this case; I simply know that disturbing a natural balance is a matter to be approached with fear and trembling--and a very versatile computer. The Nevians seem content not to bother the dragons."

"Apparently we're going to bother them. Will that break the treaty?"

"It's not really a treaty, it's folk wisdom with the Nevians, and a conditioned reflex--or possibly instinct--with the dragons. And we aren't going to bother dragons if we can help it. Have you discussed tactics with Rufo? There won't be time when we get there."

So I discussed how to loll dragons with Rufo, while Star listened and finished her preparations. "All right," Rufo said glumly, "it beats sitting tight, like an oyster on the half shell waiting to be eaten. More dignified. I'm a better archer than you are--or at least as good--so I'll take the hind end, as I'm not as agile tonight as I should be."

"Be ready to switch jobs fast if he swings around."

"You be ready, Boss. I'll be ready for the best of reasons--my favorite skin."

Star was ready and Rufo had packed and reslung the foldbox while we conferred. She placed round garters above each knee of each of us, then had us sit on the rock facing our destination. "That oak arrow, Rufo."

"Star, isn't this out of the Albertus Magnus book?"

"Similar," she said. "My formula is more reliable and the ingredients I use on the garters don't spoil. If you please, milord husband, I must concentrate on my witchery. Place the arrow so that it points at the cave."

I did so. "Is that precise?" she asked.

"If the map you showed me is correct, it is. That's aimed just the way I've been aiming since we left the road."

"How far away is the Forest of Dragons?"

"Uh, look, my love, as long as we're going by air why don't we go straight to the cave and skip the dragons?"

She said patiently, "I wish we could. But that forest is so dense at the top that we can't drop straight down at the cave, no elbow room. And the things that live in those trees, high up, are worse than dragons. They grow--"

"Please!" said Rufo. "I'm airsick already and we're not off the ground."

"Later, Oscar, if you still want to know. In any case we daren't risk encountering them--and won't; they stay up higher than the dragons can reach, they must. How tar to the forest?"

"Mmm, eight and a half miles, by that map and how far we've come--and not more than two beyond that to the Cave of the Gate."

"All right. Arms tight around my waist, both of you, and as much body contact as possible; it's got to work on all of us equally." Rufo and I settled each an arm in a hug about her and clasped hands across her tummy. That's good. Hang on tight." Star wrote figures on the rock beside the arrow.

It sailed away into the night with us after it.

I don't see how to avoid calling this magic, as I can't see any way to build Buck Rogers belts into elastic garters. Oh, if you like, Star hypnotized us, then used psi powers to teleport us eight and a half miles. "Psi" is a better word than "magic"; monosyllables are stronger than polysyllables--see Winston Churchill's speeches. I don't understand either

word, any more than I can explain why I never get lost. I just think it's preposterous that other people can.

When I fly in dreams, I use two styles: one is a swan dive and I swoop and swirl and cut didos; the other is sitting Turk fashion like the Little Lame Prince and sailing along by sheer force of personality.

The latter is how we did it, like sailing in a glider with no glider. It was a fine night for flying (all nights in Nevia are fine; it rains just before dawn in the rainy season, they tell me) and the greater moon silvered the ground below us. The woods opened up and became clumps of trees; the forest we were heading for showed black against the distance, much higher and enormously more imposing than the pretty woods behind us. Far off to the left I could glimpse fields of house Lerdki.

We had been in the air about two minutes when Rufo said, "Pa'don me!" and turned his head away. He doesn't have a weak stomach; he didn't get a drop on us. It arched like a fountain. That was the only incident of a perfect flight.

Just before we reached the tall trees Star said crisply, "Amech!" We checked like a heli and settled straight down to a three-fanny landing. The arrow rested on the ground in front of us, again dead. Rufo returned it to his quiver. "How do you feel?" I asked. "And how's your leg?"

He gulped. "Leg's all right. Ground's going up and down."

"Hush!" Star whispered. "Hell be all right. But hush, for your lives!"

We set out moments later, myself leading with drawn sword, Star behind me, and Rufo dogging her, an arrow nocked and ready.

The change from moonlight to deep shadow was blinding and I crept along, feeling for tree trunks and praying that no dragon would be in the path my bump of direction led. Certainly I knew that the dragons slept at night, but I place no faith in dragons. Maybe the bachelors stood watches, the way bachelor baboons do. I wanted to surrender that place of honor to St. George and take a spot farther back.

Once my nose stopped me, a whiff of ancient musk. I waited and slowly became aware of a shape the size of a real estate office--a dragon, sleeping with its head on its tail. I led them around it, making no noise and hoping that my heart wasn't as loud as it sounded.

My eyes were doing better now, reaching out for every stray moonbeam that trickled down--and something else developed. The ground was mossy and barely phosphorescent the way a rotten log sometimes is. Not much. Oh, very little. But it was the way a darkroom light, almost nothing when you go inside, later is plenty of light. I could see trees now and the ground--and dragons.

I had thought earlier, Oh, what's a dozen or so dragons in a big forest? Chances are we won't see one, any more than you catch sight of deer most days in deer country.

The man who gets the all-night parking concession in that forest will make a fortune if he figures out a way to make dragons pay up. We never were out of sight of one after we could see.

Of course these aren't dragons. No, they are uglier. They are saurians, more like tyrannosaurus rex than anything else--big hindquarters and heavy hind legs, heavy tail, and smaller front legs that they use either in walking or to grasp their prey. The head is mostly teeth. They are omnivores whereas I understand that T. rex ate only meat. This is no help; the dragons eat meat when they can get it, they prefer it. Furthermore, these not-so-fake dragons have evolved that charming trick of burning their own sewer gas. But no

evolutionary quirk can be considered odd if you use the way octopi make love as a comparison.

Once, far off to the left, an enormous jet lighted up, with a grunting bellow like a very old alligator. The light stayed on several seconds, then died away. Don't ask me--two males arguing over a female, maybe. We kept going, but I slowed after the light went out, as even that much was enough to affect our eyes until our night sight recovered.

I'm allergic to dragons--literally, not just scared silly. Allergic the way poor old Rufo is to Dramamine but more the way cat fur affects some people.

My eyes were watering as soon as we were in that forest, then my sinuses started to clog up and before we had gone half a mile I was using my left fist to rub my upper lip as hard as I could, trying to kill a sneeze with pain. At last I couldn't make it and jammed fingers up my nostrils and bit my lips and the contained explosion almost burst my eardrums. It happened as we were skirting the south end of a truck-and-trailer-size job; I stopped dead and they stopped and we waited. It didn't wake up.

When I started up, my beloved closed on me, grasped my arm; I stopped again. She reached into her pouch, silently found something, rubbed it on my nose and up my nostrils, then with a gentle push signed that we could move on.

First my nose burned cold, as with Vick's salve, then it felt numb, and presently it began to clear.

After more than an hour of this agelong spooky sneak through tall trees and giant shapes, I thought we were going to win "home free." The Cave of the Gate should be not more than a hundred yards ahead and I could see the rise in ground where the entrance would be--and only one dragon in our way and that not in direct line.

I hurried.

There was this little fellow, no bigger than a wallaby and about the same shape, aside from baby teeth four inches long. Maybe he was so young he had to wake to potty in the night, I don't know. All I know is that I passed close to a tree he was behind and stepped on his tail, and he squealed!

He had every right to. But that's when it hit the fan. The adult dragon between us and the cave woke up at once. Not a big one--say about forty feet, including the tail.

Good old Rufo went into action as if he had had endless time to rehearse, dashing around to the brute's south end, arrow nocked and bow bent, ready to loose in a hurry. "Get its tail up!" he called out.

I ran to the front end and tried to antagonize the beast by shouting and waving my sword while wondering how far that flame-thrower could throw. There are only four places to put an arrow into a Nevian dragon; the rest is armored like a rhino only heavier. Those four are his mouth (when open), his eyes (a difficult shot; they are little and piggish), and that spot right under his tail where almost any animal is vulnerable. I had figured that an arrow placed in that tender area should add mightily to that "itching, burning" sensation featured in small ads in the backs of newspapers, the ones that say AVOID SURGERY!

My notion was that, if the dragon, not too bright, was unbearably annoyed at both ends at once, his coordination should go all to hell and we could peck away at him until he was useless, or until he got sick of it and ran. But I had to get his tail up, to let Rufo get in a shot. These creatures, satchel-heavy like old T. rex, charge head up and front legs up and balance this by lifting the tail.

The dragon was weaving its head back and forth and I was trying to weave the other way, so as not to be lined up if it turned on the flame--when suddenly I got my first blast of methane, whiffing it before it lighted, and retreated so fast that I backed into that baby I had stepped on before, went clear over it, landed on my shoulders and rolled, and that saved me. Those flames shoot out about twenty feet. The grown-up dragon had reared up and still could have fried me, but the baby was in the way. It chopped off the flame--but Rufo yelled, "Bull's-eye!"

The reason that I backed away in time was halitosis. It says here that "pure methane is a colorless, odorless gas." The GI tract methane wasn't pure; it was so loaded with homemade ketones and aldehydes that it made an unlimed outhouse smell like Shalimar.

I figure that Stars giving me that salve to open up my nose saved my life. When my nose clamps down I can't even smell my upper lip.

The action didn't stop while I figured this out; I did all my thinking either before or after, not during. Shortly after Rufo shot it in the bull's-eye, the beast got a look of utter indignation, opened its mouth again without flaming and tried to reach its fanny with both hands. It couldn't--forelegs too short--but it tried. I had returned sword in a hurry once I saw the length of that flame jet and had grabbed my bow. I had time to get one arrow into its mouth, left tonsil maybe.

This message got through faster. With a scream of rage that shook the ground it started for me, belching flame--and Rufo yelled, "A wart seven!"

I was too busy to congratulate him; those critters are fast for their size. But I'm fast, too, and had more incentive. A thing that big can't change course very fast, but it can swing its head and with it the flame. I got my pants scorched and moved still faster, trying to cut around it.

Star carefully put an arrow into the other tonsil, right where the flame came out, while I was dodging. Then the poor thing tried so hard to turn both ways at both of us that it got tangled in its feet and fell over, a small earthquake. Rufo sank another arrow in its tender behind, and Star loosed one that passed through its tongue and stuck on the fletching, not damaging it but annoying it dreadfully.

It pulled itself into a ball, got to its feet, reared up and tried to flame me again. I could tell it didn't like me.

And the flame went out.

This was something I had hoped for. A proper dragon, with castles and captive princesses, has as much fire as it needs, like six-shooters in TV oaters. But these creatures fermented their own methane and couldn't have too big a reserve tank nor under too high pressure--I hoped. If we could nag one into using all its ammo fast, there was bound to be a lag before it recharged.

Meanwhile Rufo and Star were giving it no peace with the pincushion routine. It made a real effort to light up again while I was traversing rapidly, trying to keep that squealing baby dragon between me and the big one, and it behaved like an almost dry Ronson; the flame flickered and caught, shot out a pitiful six feet and went out. But it tried so hard to get me with that last flicker that it fell over again.

I took a chance that it would be sluggy for a second or two like a man who's been tackled nard, ran in and stuck my sword in its right eye.

It gave one mighty convulsion and quit.

(A lucky poke. They say dinosaurs that big have brains the size of chestnuts. Let's credit this beast with one the size of a cantaloupe--but it's still luck if you thrust through an eye socket and get the brain right off. Nothing we had done up to then was more than mosquito bites. But it died from that one poke. St. Michael and St. George guided my blade.)

And Rufo yelled, "Boss! Git fer home!"

A drag race of dragons was closing on us. It felt like that drill in basic where you have to dig a foxhole, then let a tank pass over you.

"This way!" I yelled. "Rufo! This way, not that! Star!" Rufo skidded to a stop, we got headed the same way and I saw the mouth of the cave, black as sin and inviting as a mother's arms. Star hung back; I shoved her in and Rufo stumbled after her and I turned to face more dragons for my lady love.

But she was yelling, "Milord! Oscar! Inside, you idiot! I must set the wards!"

So I got inside fast and she did, and I never did chew her out for calling her husband an idiot.

Chapter 13

The littlest dragon followed us to the cave, not belligerently (although I don't trust anything with teeth that size) out more, I think, the way a baby duck follows anyone who leads. It tried to come in after us, drew back suddenly as its snout touched the invisible curtain, like a kitten hit by a static spark. Then it hung around outside, making wheepling noises.

I began to wonder whether or not Stars wards could stop flame. I found out as an old dragon arrived right after that, shoved his head into the opening, jerked it back indignantly just as the kid had, then eyed us and switched on his flame-thrower.

No, the wards don't stop flame.

We were far enough inside that we didn't get singed but the smoke and stink and heat were ghastly and just as deadly if it went on long.

An arrow whoofed past my ear and that dragon gave up interest in us. He was replaced by another who wasn't convinced. Rufo, or possibly Star, convinced him before he had time to light his blowtorch. The air cleared; from somewhere inside there was an outward draft.

Meanwhile Star had made a light and the dragons were holding an indignation meeting. I glanced behind me--a narrow, low passage that dropped and turned. I stopped paying attention to Star and Rufo and the inside of the cave; another committee was calling.

I got the chairman in his soft palate before he could belch. The vice-chairman took over and got in a brief remark about fifteen feet long before he, too, changed his mind. The committee backed off and bellowed bad advice at each other.

The baby dragon hung around all during this. When the adults withdrew he again came to the door, just short of where he had burned his nose. "Koo-werp?" he said plaintively. "Koo-werp? Keet!" Plainly he wanted to come in.

Star touched my arm. "If milord husband pleases, we are ready."

"Keet!"

"Right away," I agreed, then yelled, "Beat it, kid! Back to your mama."

Rufo stuck his head alongside mine. "Probably can't," he commented. "Likely that was its mama we ruined."

I didn't answer as it made sense; the adult dragon we had finished off had come awake instantly when I stepped on the kid's tail. This sounds like mother love, if dragons go in for mother love--I wouldn't know.

But it's a hell of a note when you can't even kill a dragon and feel lighthearted afterwards.

We meandered back into that hill, ducking stalactites and stepping around stalagmites while Rufo led with a torch. We arrived in a domed chamber with a floor glazed smooth by unknown years of calcified deposit. It had stalactites in soft pastel shades near the walls and a lovely, almost symmetrical chandelier from the center but no stalagmite under it. Star and Rufo had stuck lumps of the luminescent putty, which is the common night light in Nevia at a dozen points around the room; it bathed the room in a soft light and pointed up the stalactites.

Among them Rufo showed me webs. "Those spinners are harmless," he said. "Just big and ugly. They don't even bite like a spider. But--mind your step!" He pulled me back. "These things are poisonous even to touch. Blindworms. That's what took us so long. Had to be sure the place was clean before warding it. But now that She is setting wards at the entrances I'll give it one more check."

The so-called blindworms were translucent, iridescent things the size of large rattlesnakes and slimy-soft like angleworms; I was glad they were dead. Rufo speared them on his sword, a grisly shishkebab, and carried them out through the entrance we had come in.

He was back quickly and Star finished warding. "That's better," he said with a sigh as he started cleaning his blade. "Don't want their perfume around the house. They rot pretty fast and puts me in mind of green hides. Or copra. Did I ever tell you about the time I shipped as a cook out of Sydney? We had a second mate aboard who never bathed and kept a penguin in his stateroom. Female, of course. This bird was no more cleanly than he was and it used to--"

"Rufo," said Star, "will you help with the baggage?"

"Coming, milady."

We got out food, sleeping mats, more arrows, things that Star needed for her witching or whatever, and canteens to fill with water, also from the foldbox. Star had warned me earlier that Karth-Hokesh was a place where the local chemistry was not compatible with human life; everything we ate or drank we must fetch with us.

I eyed those one-liter canteens with disfavor. "Baby girl, I think we are cutting rations and water too fine."

She shook her head. "We won't need more, truly."

"Lindbergh flew the Atlantic on just a peanut butter sandwich," Rufo put in. "But I urged him to take more."

"How do you know we won't need more?" I persisted. "Water especially."

"I'm filling mine with brandy," Rufo said. "You divvy with me, I'U divvy with you."

"Milord love, water is heavy. If we try to hang everything on us against any emergency, like the White Knight, we'll be too weighted down to fight. I'm going to have to strain to usher through three people, weapons, and a minimum of clothing. Living bodies are easiest; I can borrow power from you both. Once-living materials are next;

you've noticed, I think, that our clothing is wool, our bows of wood, and strings are of gut. Things never living are hardest, steel especially, yet we must have swords and, if we still had firearms, I would strain to the limit to get them through, for now we need them. However, milord Hero, I am simply informing you. You must decide--and I feel sure I can handle, oh, even half a hundredweight more of dead things if necessary. If you will select what your genius tells you."

"My genius has gone fishing. But, Star my love, there is a simple answer. Take everything."

"Milord?"

"Jocko set us out with half a ton of food, looks like, and enough wine to float a loan, and a little water. Plus a wide variety of Nevia's best tools for killing, stabbing, and mayhem. Even armor. And more things. In that foldbox is enough to survive a siege, without eating or drinking anything from Karth-Hokesh. The beauty of it is that it weighs only about fifteen pounds, packed--not the fifty pounds you said you could swing by straining. I'll strap it on my own back and won't notice it. It won't slow me down; it may armor me against a swing at my back. Suits?"

Star's expression would have fitted a mother whose child has just caught onto the Stork hoax and is wondering how to tackle an awkward subject. "Milord husband, the mass is much too great. I doubt if any witch or warlock could move it unassisted."

"But folded up?"

"It does not change it, milord; the mass is still there--still more dangerously there. Think of a powerful spring, wound very tight and small, thus storing much energy. It takes enormous power to put a foldbox through a transition in its compacted form, or it explodes.

I recalled a mud volcano that had drenched us and quit arguing. "All right. I'm wrong. But one question--If the mass is there always, why does it weigh so little when folded?"

Star got the same troubled expression. "Your pardon, milord, but we do not share the language--the mathematical language--that would permit me to answer. As yet, I mean; I promise you chance to study if you wish. As a tag, think of it as a tame spacewarp. Or think of the mass being so extremely far away--in a new direction--from the sides of the foldbox that local gravitation hardly matters."

(I remembered a time when my grandmother had asked me to explain television to her--the guts, not the funny pictures. There are things which cannot be taught in ten easy lessons, nor popularized for the masses; they take years of skull sweat. This be treason in an age when ignorance has come into its own and one man's opinion is as good as another's. But there it is. As Star says, the world is what it is--and doesn't forgive ignorance.)

But I was still curious. "Star, is there any way to tell me why some things go through easier than others? Wood easier than iron, for example?"

She looked rueful. "No, because I don't know myself. Magic is not science, it is a collection of ways to do things--ways that work but often we don't know why."

"Much like engineering. Design by theory, then beef it up anyhow."

"Yes, milord husband. A magician is a rule-of-thumb engineer."

"And," put in Rufo, "a philosopher is a scientist with no thumbs. I'm a philosopher. Best of all professions."

Star ignored him and got out a sketch block, showed me what she knew of the great tower from which we must steal the Egg of Phoenix. This block appeared to be a big cube of Plexiglas; it looked like it, felt like it, and took thumbprints like it.

But she had a long pointer which sank into it as if the block were air. With its tip she could sketch in three dimensions; it left a thin glowing line whenever she wanted it--a 3-dimensional blackboard.

This wasn't magic; it was advanced technology--and it will beat the hell out of our methods of engineering drawing when we learn how, especially for complex assemblies such as aviation engines and UHF circuitry--even better than exploded isometric with transparent overlays. The block was about thirty inches on a side and the sketch inside could be looked at from any angle--even turned over and studied from underneath.

The Mile-High Tower was not a spire but a massy block, somewhat like those stepped-back buildings in New York, but enormously larger.

Its interior was a maze.

"Milord champion," Star said apologetically, "when we left Nice there was in our baggage a finished sketch of the Tower. Now I must work from memory. However, I had studied the sketch so very long that I believe I can get relations right even if proportions suffer. I feel sure of the true paths, the paths that lead to the Egg. It is possible that false paths and dead ends will not be as complete; I did not study them as hard."

"Can't see that it matters," I assured her. "If I know the true paths, any I don't know are false ones. Which we won't use. Except to hide in, in a pinch."

She drew the true paths in glowing red, false ones in green--and there was a lot more green than red. The critter who designed that tower had a twisty mind. What appeared to be the main entrance went in, up, branched and converged, passed close to the Chamber of the Egg--then went back down by a devious route and dumped you out, like P. T. Barnum's "This Way to the Egress."

Other routes went inside and lost you in mazes that could not be solved by follow-the-left-wall. If you did, you'd starve. Even routes marked in red were very complex. Unless you knew where the Egg was guarded, you could enter correctly and still spend this year and next January in fruitless search.

"Star, have you been in the Tower?"

"No, milord. I have been in Karth-Hokesh. But far back in the Grotto Hills. I've seen the Tower only from great distance."

"Somebody must have been in it. Surely your--opponents--didn't send you a map."

She said soberly, "Milord, sixty-three brave men have died getting the information I now offer you."

(So now we try for sixty-four!) I said, "Is there any way to study just the red paths?"

"Certainly, milord." She touched a control, green lines faded. The red paths started each from one of the three openings, one "door" and two "windows."

I pointed to the lowest level. "This is the only one of thirty or forty doors that leads to the Egg?"

"That is true."

"Then just inside that door they'll be waiting to clobber us."

"That would seem likely, milord."

"Hmmm . . ." I turned to Rufo. "Rufe, got any long, strong, lightweight line in that plunder?"

"I've got some Jocko uses for hoisting. About like heavy fishing line, breaking strength around fifteen hundred pounds."

"Good boy!" "Figured you might want it. A thousand yards enough?"

"Yes. Anything lighter than that?"

"Some silk trout line."

In an hour we had made all preparations I could think of and that maze was as firmly in my head as the alphabet. "Star hon, we're ready to roll. Want to whomp up your spell?"

"No, milord."

"Why not? 'Twere best done quickly."

"Because I can't, my darling. These Gates are not true gates; there is always a matter of timing. This one will be ready to open, for a few minutes, about seven hours from now, then cannot be opened again for several weeks."

I had a sour thought. "If the buckos we are after know this, they'll hit us as we come out."

"I hope not, milord champion. They should be watching for us to appear from the Grotto Hills, as they know we have a Gate somewhere in those hills--and indeed that is the Gate I planned to use. But this Gate, even if they know of it, is so badly located--for us--that I do not think they would expect us to dare it."

"You cheer me up more all the time. Have you thought of anything to tell me about what to expect? Tanks? Cavalry? Big green giants with hairy ears?"

She looked troubled. "Anything I say would mislead you, milord. We can assume that their troops will be constructs rather than truly living creatures . . . which means they can be anything. Also, anything may be illusion. I told you about the gravity?"

"I don't think so."

"Forgive me. I'm tired and my mind isn't sharp. The gravity varies, sometimes erratically. A level stretch will seem to be downhill, then quickly uphill. Other things . . . any of which may be illusion."

Rufo said, "Boss, if it moves, shoot it. If it speaks, cut its throat. That spoils most illusions. You don't need a program; there'll be just us--and all the others. So when in doubt, kill it. No sweat."

I grinned at him. "No sweat. Okay, well worry when we get there. So let's quit talking."

"Yes, milord husband," Star seconded. "We had best get several hours' sleep."

Something in her voice had changed. I looked at her and she was subtly different, too. She seemed smaller, softer, more feminine and compliant than the Amazon who had fired arrows into a beast a hundred times her weight less than two hours before.

"A good idea," I said slowly and looked around. While Star had been sketching the mazes of the Tower, Rufo had repacked what we couldn't take and--I now noticed--put one sleeping pad on one side of the cave and the other two side by side as far from the first as possible.

I silently questioned her by glancing at Rufo and shrugging an implied, "What now?"

Her answering glance said neither yes nor no. Instead she called out, "Rufo, go to bed and give that leg a chance. Don't lie on it. Either belly down or face the wall."

For the first time Rufo showed his disapproval of what we had done. He answered abruptly, not what Star said but what she may have implied: "You couldn't hire me to look!"

Star said to me in a voice so low I barely heard it, "Forgive him, milord husband. He is an old man, he has his quirks. Once he is in bed I will take down the lights."

I whispered, "Star my beloved, it still isn't my idea of how to run a honeymoon."

She searched my eyes. "This is your will, milord love?"

"Yes. The recipe calls for a jug of wine and a loaf of bread. Not a word about a chaperon. I'm sorry."

She put a slender hand against my chest, looked up at me. "I am glad, milord."

"You are?" I didn't see why she had to say so.

"Yes. We both need sleep. Against the morrow. That your strong sword arm may grant us many morrows."

I felt better and smiled down at her. "Okay, my princess. But I doubt if I'll sleep."

"Ah, but you will!"

"Want to bet?"

"Hear me out, milord darling. Tomorrow . . . after you have won . . . we go quickly to my home. No more waitings, no more troubles. I would that you knew the language of my home, so that you will not feel a stranger. I want it to be your home, at once. So? Will milord husband dispose himself for bed? Lie back and let me give him a language lesson? You will sleep, you know that you will."

"Well . . . it's a fine idea. But you need sleep even more than I do."

"Your pardon, milord, but not so. Four hours' sleep puts spring in my step and a song on my lips."

"Well . . . "

Five minutes later I was stretched out, staring into the most beautiful eyes in any world and listening to her beloved voice speak softly in a language strange to me . . .

Chapter 14

Rufo was shaking my shoulder. "Breakfast, Boss!" He shoved a sandwich into my hand and a pot of beer into the other. "That's enough to fight on and lunch is packed. I've laid out fresh clothes and your weapons and I'll dress you as soon as you finish. But snap it up. We're on in a few minutes." He was already dressed and belted.

I yawned and took a bite of sandwich (anchovies, ham and mayonnaise, with something that wasn't quite tomato and lettuce)--and looked around. The place beside me was empty but Star seemed to have just gotten up; she was not dressed. She was on her knees in the center of the room, drawing some large design on the floor.

"Morning, chatterbox," I said. "Pentacle?"

"Mmm--" she answered, not looking up.

I went over and watched her work. Whatever it was, it was not based on a five-cornered star. It had three major centers, was very intricate, had notations here and there--I recognized neither language nor script--and the only sense I could abstract from it was what appeared to be a hypercube seen face on. "Had breakfast, hon?"

"I fast this morning."

"You're skinny now. Is that a tesseract?"

"Stop it!"

Then she pushed back her hair, looked up, and smiled ruefully. "I'm sorry, darling. The witch is a bitch, that's certain. But please don't look over my shoulder. I'm having to do

this by memory; I lost my books in the marsh--and it's difficult. And no questions now, please, please. You might shake my confidence--and I must be utterly confident."

I made a leg. "Your pardon, milady."

"Don't be formal with me, darling. Love me anyhow and give me a quick kiss--then let me be."

So I leaned over and gave her a high-caloric kiss, with mayonnaise, and let her be. I dressed while I finished the sandwich and beer, then sought out a natural alcove just short of the wards in the passage, one which had been designated the men's room. When I came back Rufo was waiting with my sword belt "Boss, you'd be late for your own hanging."

"I hope so."

A few minutes later we were standing on that diagram, Star on pitcher's mound with Rufo and myself at first and third bases. He and I were much hung about, myself with two canteens and Star's sword belt (on its last notch) as well as my own, Rufo with Star's bow slung and with two quivers, plus her medic's kit and lunch. We each had longbow strung and tucked under left arm; we each had drawn sword. Star's tights were under my belt behind in an untidy tail, her jacket was crumpled under Rufo's belt, while her buskins and hat were crammed into pockets--etc. We looked like a rummage sale.

But this did leave Rufo's left hand and mine free. We faced outward with swords at ready, reached behind us and Star clasped us each firmly by hand. She stood in the exact center, feet apart and planted solidly and was wearing that required professionally of witches when engaged in heavy work, i.e., not even a bobby pin. She looked magnificent, hair shaggy, eyes shining, and face flushed, and I was sorry to turn my back.

"Ready, my gallants?" she demanded, excitement in her voice.

"Ready," I confirmed.

"Ave, Imperatrix, nos morituri te--"

"Stop that, Rufo! Silence!" She began to chant in a language unknown to me. The back of my neck prickled.

She stopped, squeezed our hands much harder, and shouted, "Now!"

Sudden as a slammed door, I find I'm a Booth Tarkington hero in a Mickey Spillane situation.

I don't have time to moan. Here is this thing in front of me, about to chop me down, so I run my blade through his guts and yank it free while he makes up his mind which way to fall; then I dose his buddy the same way. Another one is squatting and trying to get a shot at my legs past the legs of his squad mates. I'm as busy as a one-armed beaver with paperhangers and hardly notice a yank at my belt as Star recovers her sword.

Then I do notice as she kills the hostile who wants to shoot me. Star is everywhere at once, naked as a frog and twice as lively. There was a dropped-elevator sensation at transition, and suddenly reduced gravitation could have been bothersome had we time to indulge it.

Star makes use of it. After stabbing the laddie who tries to shoot me, she sails over my head and the head of a new nuisance, poking him in the neck as she passes and he isn't a nuisance any longer.

I think she helps Rufo, but I can't stop to look. I hear his grunts behind me and that tells me that he is still handing out more than he's catching.

Suddenly he yells, "Down!" and something hits the back of my knees and I go down--land properly limp and am about to roll to my feet when I realize Rufo is the cause. He is belly down by me and shooting what has to be a gun at a moving target out across the plain, himself behind the dead body of one of our playmates.

Star is down, too, but not fighting. Something has poked a hole through her right arm between elbow and shoulder.

Nothing else seemed to be alive around me, but there were targets four to five hundred feet away and opening rapidly. I saw one fall, heard Zzzzt, smelled burning flesh near me. One of those guns was lying across a body to my left; I grabbed it and tried to figure it out. There was a shoulder brace and a tube which should be a barrel; nothing else looked familiar.

"Like this, my Hero." Star squirmed to me, dragging her wounded arm and leaving a trail of blood. "Race it like a rifle and sight it so. There is a stud under your left thumb. Press it. That's all--no windage, no elevation."

And no recoil, as I found when I tracked one of the running figures with the sights and pressed the stud. There was a spurt of smoke and down he went. "Death ray," or Laser beam, or whatever--line it up, press the stud, and anyone on the far end quit the party with a hole burned in him.

I got a couple more, working right to left, and by then Rufo had done me out of targets. Nothing moved, so far as I could see, anywhere.

Rufo looked around. "Better stay down, Boss." He rolled to Star, opened her medic's kit at his own belt, and put a rough and hasty compress on her arm.

Then he turned to me. "How bad are you hurt, Boss?"

"Me? Not a scratch."

"What's that on your tunic? Ketchup? Someday somebody is going to offer you a pinch of snuff. Let's see it."

I let him open my jacket. Somebody, using a saw-tooth edge, had opened a hole in me on my left side below the ribs. I had not noticed it and hadn't felt it--until I saw it and then it hurt and I felt queasy. I strongly disapprove of violence done to me. While Rufo dressed it, I looked around to avoid looking at it.

We had killed about a dozen of them right around us, plus maybe half that many who had fled--and had shot all who fled, I think. How? How can a 60-lb. dog armed only with teeth take on, knock down, and hold prisoner an armed man? Ans: By all-out attack.

I think we arrived as they were changing the guard at that spot known to be a Gate--and had we arrived even with swords sheathed we would have been cut down. As it was, we killed a slew before most of them knew a fight was on. They were routed, demoralized, and we slaughtered the rest, including those who tried to bug out. Karate and many serious forms of combat (boxing isn't serious, nor anything with rules)--all these work that same way: go-for-broke, all-out attack with no wind up. These are not so much skills as an attitude.

I had time to examine our late foes; one was faced toward me with his belly open. "Iglis" I would call them, but of the economy model. No beauty and no belly buttons and not much brain--presumably constructed to do one thing: fight, and try to stay alive. Which describes us, too--but we did it faster.

Looking at them upset my stomach, so I looked at the sky. No improvement--it wasn't decent sky and wouldn't come into focus. It crawled and the colors were wrong, as jarring as some abstract paintings. I looked back at our victims, who seemed almost wholesome compared with that "sky."

While Rufo was doctoring me, Star squirmed into her tights and put on her buskins. "Is it all right for me to sit up to get into my jacket?" she asked.

"No," I said. "Maybe they'll think we're dead." Rufo and I helped her finish dressing without any of us rising up above the barricade of flesh. I'm sure we hurt her arm but all she said was, "Sling my sword left-handed. What now, Oscar?"

"Where are the garters?"

"Got em. But I'm not sure they will work. This is a very odd place."

"Confidence," I told her. "That's what you told me a few minutes ago. Put your little mind to work believing you can do it." We ranged ourselves and our plunder, now enhanced by three "rifles" plus side arms of the same sort, then laid out the oaken arrow for the top of the Mile-High Tower. It dominated one whole side of the scene, more a mountain than a building, black and monstrous.

"Ready?" asked Star. "Now you two believe, tool" She scrawled with her finger in the sand. "Go!"

We went. Once in the air, I realized what a naked target we were--but we were a target on the ground, too, for anyone up on that tower, and worse if we had hoofed it. "Faster!" I yelled in Stars ear. "Make us go faster!"

We did. Air shrilled past our ears and we bucked and dipped and side-slipped as we passed over those gravitational changes Star had warned me about--and perhaps that saved us; we made an evasive target. However, if we got all of that guard party, it was possible that no one in the Tower knew we had arrived.

The ground below was gray-black desert surrounded by a mountain ringwall like a lunar crater and the Tower filled the place of a central peak. I risked another look at the sky and tried to figure it out. No sun. No stars. No black sky nor blue--light came from all over and the "sky" was ribbons and boiling shapes and shadow holes of all colors.

"What in God's name land of planet is this?" I demanded.

"It's not a planet," she yelled back. "It's a place, in a different sort of universe. It's not fit to live in."

"Somebody lives here." I indicated the Tower.

"No, no, nobody lives here. That was built just to guard the Egg."

The monstrousness of that idea didn't soak in right then. I suddenly recalled that we didn't dare eat or drink here--and started wondering how we could breathe the air if the chemistry was that poisonous. My chest felt tight and started to burn. So I asked Star and Rufo moaned. (He rated a moan or two; he hadn't thrown up. I don't think he had.)

"Oh, at least twelve hours," she said. "Forget it. No importance."

Whereupon my chest really hurt and I moaned, too.

We were dumped on top of the Tower right after that; Star barely got out "Amech!" in time to keep us from zooming past.

The top was flat, seemed to be black glass, was about two hundred yards square--and there wasn't a fiddlewinking thing to fasten a line to. I had counted on at least a ventilator stack.

The Egg of the Phoenix was about a hundred yards straight down. I had had two plans in mind if we ever reached the Tower. There were three openings (out of hundreds) which led to true paths to the Egg--and to the Never-Born, the Eater of Souls, the M.P. guarding it. One was at ground level and I never considered it. A second was a couple of hundred feet off the ground and I had given that serious thought: loose an arrow with a messenger line so that the line passed over any projection above that hole; use that to get the strong line up, then go up the line--no trick for any crack Alpinist, which I wasn't but Rufo was.

But the great Tower turned out to have no projections, real modern simplicity of design--carried too far.

The third plan was, if we could reach the top, to let ourselves down by a line to the third non-fake entrance, almost on level with the Egg. So here we were, all set--and no place to hitch.

Second thoughts are wonderful thoughts--why hadn't I had Star drive us straight into that hole in the wall?

Well, it would take very fine sighting of that silly arrow; we might hit the wrong pigeonhole. But the important reason was that I hadn't thought of it.

Star was sitting and nursing her wounded arm. I said, "Honey, can you fly us, slow and easy, down a couple of setbacks and into that hole we want?"

She looked up with drawn face. "No."

"Well. Too bad."

"I hate to tell you--but I burned out the garters on that speed run. They won't be any good until I can recharge them. Not things I can get here. Green mug-wort, blood of a hare--things like that."

"Boss," said Rufo, "how about using the whole top of the Tower as a hitching post?"

"How do you mean?"

"We've got lots of line."

It was a workable notion--walk the line around the top while somebody else held the bitter end, then tie it and go down what hung over. We did it--and finished up with only a hundred feet too little of line out of a thousand yards.

Star watched us. When I was forced to admit that a hundred feet short was as bad as no line at all, she said thoughtfully, "I wonder if Aaron's Rod would help?"

"Sure, if it was stuck in the top of this overgrown ping-pong table. What's Aaron's Rod?"

"It makes stiff things limp and limp things stiff. No, no, not that. Well, that, too, but what I mean is to lay this line across the roof with about ten feet hanging over the far side. Then make that end and the crossing part of the line steel hard--sort of a hook."

"Can you do it?"

"I don't know. It's from The Key of Solomon and it's an incantation. It depends on whether I can remember it--and on whether such things work in this universe."

"Confidence, confidence! Of course you can."

"I can't even think how it starts. Darling, can you hypnotize? Rufo can't--or at least not me."

"I don't know a thing about it."

"Do just the way I do with you for a language lesson. Look me in the eye, talk softly, and tell me to remember the words. Perhaps you had better lay out the line first."

We did so and I used a hundred feet instead of ten for the bill of the hook, on the more-is-better principle. Star lay back and I started talking to her, softly (and without conviction) but over and over again.

Star closed her eyes and appeared to sleep. Suddenly she started to mumble in tongues.

"Hey, Boss! Damn thing is hard as rock and stiff as a life sentence!"

I told Star to wake up and we slid down to the setback below as fast as we could, praying that it wouldn't go limp on us. We didn't shift the line; I simply had Star cause more of it to starch up, then I went on down, made certain that I had the right opening, three rows down and fourteen over, then Star slid down and I caught her in my arms; Rufo lowered the baggage, weapons mostly, and followed. We were in the Tower and had been on the planet--correction: the "place"--we had been in the place called Karth-Hokesh not more than forty minutes.

I stopped, got the building matched in my mind with the sketch block map, fixed the direction and location of the Egg, and the "red line" route to it, the true path.

Okay, go on in a few hundred yards, snag the Egg of the Phoenix and go! My chest stopped hurting.

Chapter 15

"Boss," said Rufo, "Look out over the plain."

"At what?"

"At nothing," he answered. "Those bodies are gone. You sure as hell ought to be able to see them, against black sand and not even a bush to break the view."

I didn't look. "That's the moose's problem, damn it! We've got work to do. Star, can you shoot left-handed? One of these pistol things?"

"Certainly, milord."

"You stay ten feet behind me and shoot anything that moves. Rufo, you follow Star, bow ready and an arrow nocked. Try for anything you see. Sling one of those guns--make a sling out of a bit of line." I frowned. "We'll have to abandon most of this. Star, you can't bend a bow, so leave it behind, pretty as it is, and your quiver. Rufo can sling my quiver with his; we use the same arrows. I hate to abandon my bow, it suits me so. But I must. Damn."

"I'll carry it, my Hero."

"No, any clutter we can't use must be junked." I unhooked my canteen, drank deeply, passed it over. "You two finish it and throw it away." While Rufo drank, Star slung my bow. "Milord husband? It weighs nothing this way and doesn't hamper my shooting arm. So?"

"Well--If it gets in your way, cut the string and forget it. Now drink your fill and we go." I peered down the corridor we were in--fifteen feet wide and the same high, lighted from nowhere and curving away to the right, which matched the picture in my mind. "Ready? Stay closed up. If we can't slice it, shoot it, or shaft it, we'll salute it." I drew sword and we set out, quick march.

Why my sword, rather than one of those "death ray" guns? Star was carrying one of those and knew more about one than I did. I didn't even know how to tell if one was charged, nor had I judgment in how long to press the button. She could shoot, her bowmanship proved that, and she was at least as cool in a fight as Rufo or myself.

I had disposed weapons and troops as well as I knew how. Rufo, behind with a stock of arrows, could use them if needed and his position gave him time to shift to either sword or Buck Rogers "rifle" if his judgment said to--and I didn't need to advise him; he would.

So I was backed up by long-range weapons ancient and ultramodern in the hands of people who knew how to use them and temperament to match--the latter being the more important. (Do you know how many men in a platoon actually shoot in combat? Maybe six. More likely three. The rest freeze up.)

Still, why didn't I sheathe my sword and carry one of those wonder weapons?

A properly balanced sword is the most versatile weapon for close quarters ever devised. Pistols and guns are all offense, no defense; close on him fast and a man with a gun can't shoot, he has to stop you before you reach him. Close on a man carrying a blade and you'll be spitted like a roast pigeon--unless you have a blade and can use it better than he can.

A sword never jams, never has to be reloaded, is always ready. Its worst shortcoming is that it takes great skill and patient, loving practice to gain that skill; it can't be taught to raw recruits in weeks, nor even months.

But most of all (and this was the real reason) to grasp the Lady Vivamus and feel her eagerness to bite gave me courage in a spot where I was scared spitless.

They (whoever "they" were) could shoot us from ambush, gas us, booby-trap us, many things. But they could do those things even if I carried one of those strange guns. Sword in hand, I was relaxed and unafraid--and that made my tiny "command" more nearly safe. If a C.O. needs to carry a rabbit's foot, he should--and the grip of that sweet sword was bigger medicine than all the rabbits' feet in Kansas.

The corridor stretched ahead, no break, no sound, no threat. Soon the opening to the outside could no longer be seen. The great Tower felt empty but not dead; it was alive the way a museum is alive at night, with crowding presence and ancient evil. I gripped my sword tightly, then consciously relaxed and flexed my fingers.

We came to a sharp left turn. I stopped short. "Star, this wasn't on your sketch."

She didn't answer. I persisted, "Well, it wasn't. Was it?"

"I am not sure, milord."

"Well, I am. Hmm--"

"Boss," said Rufo, "are you dead sure we entered by the right pigeonhole?"

"I'm certain. I may be wrong but I'm not uncertain--and if I'm wrong, we're dead pigeons anyhow. Mmm--Rufo, take your bow, put your hat on it, stick it out where a man would IOOK around that corner if he were standing--and time it as I do look out, but lower down." I got on my belly.

"Ready . . . now!" I sneaked a look six inches above the floor while Rufo tried to draw fire higher up.

Nothing in sight, just bare corridor, straight now.

"Okay, follow me! We hurried around the corner.

I stopped after a few paces. "What the hell?"

"Something wrong Boss?"

"Plenty." I turned and sniffed. "Wrong as can be. The Egg is up that way," I said, pointing, "maybe two hundred yards--by the sketch block map."

"Is that bad?"

"I'm not sure. Because it was that same direction and angle, off on the left, before we turned that corner. So now it ought to be on the right."

Rufo said, "Look, Boss, why don't we just follow the passageways you memorized? You may not remember every little--"

"Shut up. Watch ahead, down the corridor. Star, stand there in the corner and watch me. I'm going to try something."

They placed themselves, Rufo "eyes ahead" and Star where she could see both ways, at the right-angle bend. I went back into the first reach of corridor, then returned. Just short of the bend I closed my eyes and kept on.

I stopped after another dozen steps and opened my eyes. "That proves it," I said to Rufo.

"Proves what?"

"There isn't any bend in the corridor." I pointed to the bend.

Rufo looked worried. "Boss, how do you feel?" He tried to touch my cheek.

I pulled back. "I'm not feverish. Come with me, both of you." I led them back around that right angle some fifty feet and stopped. "Rufo, loose an arrow at that wall ahead of us at the bend. Lob it so that it hits the wall about ten feet up."

Rufo sighed but did so. The arrow rose true, disappeared in the wall. Rufo shrugged. "Must be pretty soft up there. You've lost us an arrow. Boss."

"Maybe. Places and follow me." We took that corner again and here was the spent arrow on the floor somewhat farther along than the distance from loosing to bend. I let Rufo pick it up; he looked closely at the Doral chop by the fletching, returned it to quiver. He said nothing. We kept going.

We came to a place where steps led downward--but where the sketch in my head called for steps leading up. "Mind the first step," I called back. "Feel for it and don't fall."

The steps felt normal, for steps leading downward--with the exception that my bump of direction told me that we were climbing, and our destination changed angle and distance accordingly. I closed my eyes for a quick test and found that I was indeed climbing, only my eyes were deceived. It was like one of those "crooked houses" in amusement parks, in which a "level" floor is anything but level--like that but cubed.

I quit questioning the accuracy of Star's sketch and tracked its trace in my head regardless of what my eyes told me. When the passageway branched four ways while my memory showed only a simple branching, one being a dead end, I unhesitatingly closed my eyes and followed my nose--and the Egg stayed where it should stay, in my mind.

But the Egg did not necessarily get closer with each twist and turn save in the sense that a straight line is not the shortest distance between two points--is it ever? The path was as twisted as guts in a belly; the architect had used a pretzel for a straight edge. Worse yet, another time when we were climbing "up" stairs--at a piece level by the sketch--a gravitational anomaly caught us with a lull turn and we were suddenly sliding down the ceiling.

No harm done save that it twisted again as we hit bottom and dumped us from ceiling to floor. With both eyes peeled I helped Rufo gather up arrows and off we set again. We were getting close to the lair of the Never-Born--and the Egg.

Passageways began to be narrow and rocky, the false twists tight and hard to negotiate--and the light began to fail.

That wasn't the worst. I'm not afraid of dark nor of tight places; it takes a department store elevator on Dollar Day to give me claustrophobia. But I began to hear rats.

Rats, lots of rats, running and squeaking in the walls around us, under us, over us. I started to sweat and was sorry I had taken that big drink of water. Darkness and closeness got worse, until we were crawling through a rough tunnel in rock, then inching along on our bellies in total darkness as if tunneling out of Chateau d'If . . . and rats brushed past us now, squeaking and chittering.

No, I didn't scream. Star was behind me and she didn't scream and she didn't complain about her wounded arm--so I couldn't scream. She patted me on the foot each time she inched forward, to tell me that she was all right and to report that Rufo was okay, too. We didn't waste strength on talk.

I saw a faint something, two ghosts of light ahead, and stopped and stared and blinked and stared again. Then I whispered to Star, "I see something. Stay put, while I move up and see what it is. Hear me?"

"Yes, milord Hero."

"Tell Rufo."

Then I did the only really brave thing I have ever done in my life: I inched forward. Bravery is going on anyhow when you are so terrified your sphincters won't hold and you can't breathe and your heart threatens to stop, and that is an exact description for that moment of E. C. Gordon, ex-Pfc. and hero by trade. I was fairly certain what those two faint lights were and the closer I got the more certain I was--I could smell the damned thing and place its outlines.

A rat. Not the common rat that lives in city dumps and sometimes gnaws babies, but a giant rat, big enough to block that rat hole but enough smaller than I am to have room to maneuver in attacking me--room I didn't have at all. The best I could do was to wriggle forward with my sword in front of me and try to Keep the point aimed so that I would catch him with it, make mm eat steel--because if he dodged past that point I would have nothing but bare hands and no room to use them. He would be at my face.

I gulped sour vomit and inched forward. His eyes seemed to drop a little as if he were crouching to charge.

But no rush came. The lights got more definite and wider apart, and when I had squeezed a foot or two farther I realized with shaking relief that they were not rat's eyes but something else--anything, I didn't care what.

I continued to inch forward. Not only was the Egg in that direction but I still didn't know what it was and I had best see before telling Star to move up.

The "eyes" were twin pinholes in a tapestry that covered the end of that rat hole. I could see its embroidered texture and I found I could look through one of its imperfections when I got up to it.

There was a large room beyond, the floor a couple of feet lower than where I was. At the far end, fifty feet away, a man was standing by a bench, reading a book. Even as I watched he raised his eyes and glanced my way. He seemed to hesitate.

I didn't. The hole had eased enough so that I managed one foot under and lunged forward, brushing the arras aside with my sword. I stumbled and bounced to my feet, on guard.

He was at least as fast. He had slapped the book down on the bench and drawn sword himself, advanced toward me, while I was popping out of that hole. He stopped, knees bent, wrist straight, left arm back, and point for me, perfect as a fencing master, and looked me over, not yet engaged by three or four feet between our steels.

I did not rush him. There is a go-for-broke tactic, "the target," taught by the best swordmasters, which consists in headlong advance with arm, wrist, and blade in full extension--all attack and no attempt to parry. But it works only by perfect timing when you see your opponent slacken up momentarily. Otherwise it is suicide.

This time it would have been suicide; he was as ready as a tomcat with his back up. So I sized him up while he looked me over. He was a smallish neat man with arms long for his height--I might or might not have reach on him, especially as his rapier was an old style, longer than Lady Vivamus (but slower thereby, unless he had a much stronger wrist)--and he was dressed more for the Paris of Richelieu than for Karth-Hokesh. No, that's not fair; the great black Tower had no styles, else I would have been as out of style in my fake Robin Hood getup. The Iglis we had killed had worn no clothes.

He was an ugly cocky little man with a merry grin and the biggest nose west of Durante--made me think of my first sergeant's nose, very sensitive he was about being called "Schnozzola." But the resemblance stopped there; my first sergeant never smiled and had mean, piggish eyes; this man's eyes were merry and proud.

"Are you Christian?" he demanded.

"What's it to you?"

"Nothing. Blood's blood, either way. If Christian you be, confess. If pagan, call your false gods. I'll allow you no more than three stanzas. But I'm sentimental, I like to know what I'm killing."

"I'm American."

"Is that a country? Or a disease? And what are you doing in Hoax?"

" 'Hoax'? Hokesh?"

He shrugged only with his eyes, his point never moved. "Hoax, Hokesh--a matter of geography and accent; this chateau was once in the Carpathians, so 'Hokesh' it is, if 'twill make your death merrier. Come now, let us sing."

He advanced so fast and smoothly that he seemed to apport and our blades rang as I parried his attack in sixte and riposted, was countered--remise, reprise, beat-and-attack--the phrase ran so smoothly, so long, and in such variation that a spectator might have thought that we were running through Grand Salute.

But I knew! That first lunge was meant to kill me, and so was his every move throughout the phrase. At the same time he was feeling me out, trying my wrist, looking for weaknesses, whether I was afraid of low line and always returned to high or perhaps was a sucker for a disarm. I never lunged, never had a chance to; every part of the phrase was forced on me, I simply replied, tried to stay alive.

I knew in three seconds that I was up against a better swordsman than myself, with a wrist like steel yet supple as a striking snake. He was the only swordsman I have ever met who used prime and octave--used them, I mean, as readily as sixte and carte. Everyone learns them and my own master made me practice them as much as the other six--but most fencers don't use them; they simply may be forced into them, awkwardly and just before losing a point.

I would lose, not a point, but my life--and I knew, long before the end of that first long phrase, that my life was what I was about to lose, by all odds.

Yet at first clash the idiot began to sing!

"Lunge and counter and thrust,
"Sing me the logic of steel!
"Tell me, sir, how do you feel?
"Riposte and remise if you must
"In logic long known to be just.

"Shall we argue, rebut and refute
"In enthymeme clear as your eye?
"Tell me, sir, why do you sigh?
"Tu es fatigue, sans doute?
"Then sleep while I'm counting the loot."

The above was long enough for at least thirty almost successful attempts on my life, and on the last word he disengaged as smoothly and unexpectedly as he had engaged.

"Come, come, lad!" he said. "Pick it up! Would let me sing alone? Would die as a clown with ladies watching? Sing! --and say good-bye gracefully, with your last rhyme racing your death rattle." He banged his right boot in a flamenco stomp. "Try! The price is the same either way."

I didn't drop my eyes at the sound of his boot; it's an old gambit, some fencers stomp on every advance, every feint, on the chance that the noise will startle opponent out of timing, or into rocking back, and thus gain a point. I had last fallen for it before I could shave.

But his words gave me an idea. His lunges were short--full extension is fancy play for foils, too dangerous for real work. But I had been retreating, slowly, with the wall behind me. Shortly, when he re-engaged, I would either be a butterfly pinned to that wall, or stumble over something unseen, go arsy-versy, then spiked like wastepaper in the park. I didn't dare leave that wall behind me.

Worst, Star would be coming out of that rat hole behind me any moment now and might be killed as she emerged even if I managed to kill him at the same time. But if I could turn him around--My beloved was a practical woman; no "sportsmanship" would keep her steel stinger out of his back.

But the happy counter-thought was that if I went along with his madness, tried to rhyme and sing, he might play me along, amused to hear what I could do, before he killed me.

But I couldn't afford to stretch it out. Unfelt, he had pinked me in the forearm. Just a bloody scratch that Star could make good as new in minutes--but it would weaken my wrist before long and it disadvantaged me for low line: Blood makes a slippery grip.

"First stanza," I announced, advancing and barely engaging, foible-a-foible. He respected it, not attacking, playing with the end of my blade, tiny counters and leather-touch parries.

That was what I wanted. I started circling right as I began to recite--and he let me:

"Tweedledum and Tweedledee
"Agreed to rustle cattle.
"Said Tweedledum to Tweedledee
"I'll use my nice new saddle."

"Come, come, my old!" he said chidingly. "No stealing. Honor among beeves, always. And rhyme and scansion limp. Let your Carroll fall trippingly off the tongue."

"I'll try," I agreed, still moving right. "Second stanza--

"I sing of two lasses in Birmingham,
"Shall we weep at the scandal concerning them?"--

--and I rushed him.

It didn't quite work. He had, as I hoped, relaxed the tiniest bit, evidently expecting that I would go on with mock play, tips of Hades alone, while I was reciting.

It caught him barely off guard but he failed to fall back, parrying strongly instead and suddenly we were in an untenable position, corps-a-corps, forte-a-forte, almost tete-a-tete.

He laughed in my face and sprang back as I did, landing us back en garde. But I added something. We had been fencing point only. The point is mightier than the edge but my weapon had both and a man used to the point is sometimes a sucker for a cut. As we separated I flipped my blade at his head.

I meant to split it open. No time for that, no force behind it, but it sliced his right forehead almost to eyebrow.

"Touche" he shouted. "Well struck. And well sung. Let's have the rest of it."

"All right," I agreed, fencing cautiously and waiting for blood to run into his eyes. A scalp wound is the bloodiest of flesh wounds and I had great hopes for this one. And swordplay is an odd thing; you don't really use your mind, it is much too fast for that. Your wrist thinks and tells your feet and body what to do, bypassing your brain--any thinking you do is for later, stored instructions, like a programmed computer.

I went on:

"They're now in the dock
"For lifting the--"

I got him in the forearm, the way he got me, but worse. I thought I had him and pressed home. But he did something I had heard of, never seen: He retreated very fast, flipped his blade and changed hands.

No help to me--A right-handed fencer hates to take on a southpaw; it throws everything out of balance, whereas a southpaw is used to the foibles of the right-handed majority--and this son of a witch was just as strong, just as skilled, with his left hand. Worse, he now had toward me the eye undimmed by blood.

He pinked me again, in the kneecap, hurting like fire and slowing me. Despite his wounds, much worse than mine, I knew I couldn't go on much longer. We settled down to grim work.

There is a riposte in seconde, desperately dangerous but brilliant--if you bring it off. It had won me several matches in 6pee with nothing at stake but a score. It starts from sixte; first your opponent counters. Instead of parrying to carte, you press and bind, sliding all the way down and around his blade and corkscrewing in till your point finds flesh. Or you can beat, counter, and bind, starting from sixte, thus setting it off yourself.

Its shortcoming is that, unless it is done perfectly, it is too late for parry and riposte; you run your own chest against his point.

I didn't try to initiate it, not against this swordsman; I just thought about it.

We continued to fence, perfectly each of us. Then he stepped back slightly while countering and barely skidded in his own blood.

My wrist took charge; I corkscrewed in with a perfect bind to seconde--and my blade went through his body.

He looked surprised, brought his bell up in salute, and crumpled at the knees as the grip fell from his hand. I had to move forward with my blade as he fell, then started to pull it out of him.

He grasped it. "No, no, my friend, please leave it there. It corks the wine, for a time. Your logic is sharp and touches my heart. Your name, sir?"

"Oscar of Gordon."

"A good name. One should never be killed by a stranger. Tell me, Oscar of Gordon, have you seen Carcassonne?"

"No."

"See it. Love a lass, kill a man, write a book, fly to the Moon--I have done all these." He gasped and foam came out of his mouth, pink. "I've even had a house fall on me. What devastating wit! What price honor when timber taps thy top? 'Top?' tap? taupe, tape--tonsor! --when timber taps thy tonsor. You shaved mine."

He choked and went on: "It grows dark. Let us exchange gifts and part friends, if you will. My gift first, in two parts: Item: You are lucky, you shall not die in bed."

"I guess not."

"Please. Item: Friar Guillaume's razor ne'er shaved the barber, it is much too dull. And now your gift, my old--and be quick, I need it. But first--now did that limerick end?"

I told him. He said, very weakly, almost in rattle, "Very good. Keep trying. Now grant me your gift, I am more than ready." He tried to Sign himself.

So I granted him grace, stood wearily up, went to the bench and collapsed on it, then cleaned both blades, first wiping the little Solingen, then most carefully grooming the Lady Vivamus. I managed to stand and salute him with a clean sword. It had been an honor to know him.

I was sorry I hadn't asked him his name. He seemed to think I knew it.

I sat heavily down and looked at the arras covering the rat hole at the end of the room and wondered why Star and Rufo hadn't come out. All that clashing steel and talk--I thought about walking over and shouting for them. But I was too weary to move just yet. I sighed and closed my eyes--

Through sheer boyish high spirits (and carelessness I had been chided for, time and again) I had broken a dozen eggs. My mother looked down at the mess and I could see that she was about to cry. So I clouded up too. She stopped her tears, took me gently by

the shoulder, and said, "It's all right, son. Eggs aren't that important." But I was ashamed, so I twisted away and ran.

Downhill I ran, heedless and almost flying--then was shockingly aware that I was at the wheel and the car was out of control. I groped for the brake pedal, couldn't find it and felt panic . . . then did find it--and felt it sink with that mushiness that means you've lost brake-fluid pressure. Something ahead in the road and I couldn't see. Couldn't even turn my head and my eyes were clouded with something running down into them. I twisted the wheel and nothing happened--radius rod gone.

Screams in my car as we hit! --and I woke up in bed with a jerk and the screams were my own. I was going to be late to school, disgrace not to be borne. Never born, agony shameful, for the schoolyard was empty; the other kids, scrubbed and virtuous, were in their seats and I couldn't find my classroom. Hadn't even had time to go to the bathroom and here I was at my desk with my pants down about to do what I had been too hurried to do before I left home and all the other kids had their hands up but teacher was calling on me. I couldn't stand up to recite; my pants were not only down I didn't have any on at all if I stood up they would see it the boys would laugh at me the girls would giggle and look away and tilt their noses. But the unbearable disgrace was that I didn't know the answer!

"Come, come!" my teacher said sharply. "Don't waste the class's time, E.G. You Haven't Studied Your Lesson."

Well, no, I hadn't. Yes, I had, but she had written "Problems 1-6" on the blackboard and I had taken that as "1 and 6"--and this was number 4. But She would never believe me; the excuse was too thin. We pay off on touchdowns, not excuses.

"That's how it is, Easy," my Coach went on, his voice more in sorrow than in anger. "Yardage is all very well but you don't make a nickel unless you cross that old goal line with the egg tucked underneath your arm." He pointed at the football on his desk. "There it is. I had it gilded and lettered clear back at the beginning of the season, you looked so good and I had so much confidence in you--it was meant to be yours at the end of the season, at a victory banquet." His brow wrinkled and he spoke as if trying to be fair. "I won't say you could have saved things all by yourself. But you do take things too easy. Easy--maybe you need another name. When the road gets rough, you could try harder." He sighed. "My fault, I should have cracked down. Instead, I tried to be a father to you. But I want you to know you aren't the only one who loses by this--at my age it's not easy to find a new job."

I pulled the covers up over my head; I couldn't stand to look at him. But they wouldn't let me alone; somebody started shaking my shoulder. "Gordon!"

"Le'me 'lone!"

"Wake up, Gordon, and get your ass inside. You're in trouble."

I certainly was, I could tell that as soon as I stepped into the office. There was a sour taste of vomit in my mouth and I felt awful--as if a herd of buffaloes had walked over me, stepping on me here and there. Dirty ones.

The First Sergeant didn't look at me when I came in; he let me stand and sweat first. When he did look up, he examined me up and down before speaking.

Then he spoke slowly, letting me taste each word. "Absent Over Leave, terrorizing and insulting native women, unauthorized use of government property . . . scandalous conduct . . . insubordinate and obscene language . . . resisting arrest . . . striking an M.P.--Gordon,

why didn't you steal a horse? We hang horse thieves in these parts. It would make it all so much simpler."

He smiled at his own wit. The old bastard always had thought he was a wit. He was half right.

But I didn't give a damn what he said. I realized dully that it had all been a dream, just another of those dreams I had had too often lately, wanting to get out of this aching jungle. Even She hadn't been real. My--what was her name? --even her name I had made up. Star. My Lucky Star--Oh, Star, my darling, you aren't!

He went on: "I see you took off your chevrons. Well, that saves time but that's the only thing good about it. Out of uniform. No shave. And your clothes are filthy! Gordon, you are a disgrace to the Army of the United States. You know that, don't you? And you can't sing your way out of this one. No I.D. on you, no pass, using a name not your own. Well, Evelyn Cyril my fine lad, we'll use your right name now. Officially."

He swung around in his swivel chair--he hadn't had his fat ass out of it since they sent him to Asia, no patrols for him. "Just one thing I'm curious about. Where did you get that? And whatever possessed you to try to steal it?" He nodded at a file case behind his desk.

I recognized what was sitting on it, even though it had been painted with gold gilt the last time I recalled seeing it whereas now it was covered with the special black gluey mud they grow in Southeast Asia. I started toward it. "That's mine!"

"No, no!" he said sharply. "Burny, burny, boy." He moved the football farther back. "Stealing it doesn't make it yours. I've taken charge of it as evidence. For your information, you phony hero, the docs think he's going to die."

"Who?"

"Why should you care who? Two bits to a Bangkok tickul you didn't know his name when you clobbered him. You can't go around clobbering natives just because you're feeling brisk--they've got rights, maybe you hadn't heard. You're supposed to clobber them only when and where you are told to."

Suddenly he smiled. It didn't improve him. With his long, sharp nose and his little bloodshot eyes I suddenly realized how much he looked like a rat.

But he went on smiling and said, "Evelyn my boy, maybe you took off those chevrons too soon."

"Huh?"

"Yes. There may be a way out of this mess. Sit down." He repeated sharply, " 'Sit down,' I said. If I had my way we'd simply Section-Eight you and forget you--anything to get rid of you. But the Company Commander has other ideas--a really brilliant idea that could close your whole file. There's a raid planned for tonight. So"--he leaned over, got a bottle of Four Roses and two cups out of his desk, poured two drinks--"have a drink."

Everybody knew about that bottle--everybody but the Company Commander, maybe. But the top sergeant had never been known to offer anyone a drink--save one time when he had followed it by telling his victim that he was being recommended for a general court-martial.

"No, thanks."

"Come on, take it. Hair of the dog. You're going to need it. Then go take a shower and get yourself looking decent even if you aren't, before you see the Company Commander."

I stood up. I wanted that drink, I needed it. I would have settled for the worst rotgut--and Four Roses is pretty smooth--but I would have settled for the firewater old--what was his name? --had used to burst my eardrums.

But I didn't want to drink with him. I should not drink anything at all here. Nor eat any--

I spat in his face.

He looked utterly shocked and started to melt. I drew my sword and had at him.

It got dark but I kept on laying about me, sometimes connecting, sometimes not.

Chapter 16

Someone was shaking my shoulder. "Wake up!"

"Le'me lone!"

"You've got to wake up. Boss, please wake up."

"Yes, my Hero--please!"

I opened my eyes, smiled at her, then tried to look around. Kee-ripes, what a shambles! In the middle of it, close to me, was a black glass pillar, thick and about five feet high. On top was the Egg. "Is that it?"

"Yep!" agreed Rufo. "That's it! He looked battered but gay.

"Yes, my Hero champion," Star confirmed, "that is the true Egg of the Phoenix. I have tested."

"Uh--" I looked around. "Then where's old Soul-Eater?"

"You killed it. Before we got here. You still had sword in hand and the Egg tucked tightly under your left arm. We had much trouble getting them loose so that I could work on you."

I looked down my front, saw what she meant, and looked away. Red just isn't my color. To take my mind off surgery I said to Rufo, "What took you so long?"

Star answered, "I thought we would never find you!"

"How did you find me?"

Rufo said, "Boss, we couldn't exactly lose you. We simply followed your trail of blood--even when it dead-ended into blank walls. She is stubborn."

"Uh . . . see any dead men?"

"Three or four. Strangers, no business of ours. Constructs, most likely. We didn't dally." He added, "And we won't dally getting out, either, once you're patched up enough to walk. Time is short."

I flexed my right knee, cautiously. It still hurt where I had been pinked on the kneecap, but what Star had done was taking the soreness out. "My legs are all right. I'll be able to walk as soon as Star is through. But"--I frowned--"I don't relish going through that rat tunnel again. Rats give me the willies."

"What rats, Boss? In which tunnel?"

So I told him.

Star made no comment. Just went on plastering me and sticking on dressings. Rufo said, "Boss, you did get down on your knees and crawl--in a passage just like all the others. I couldn't see any sense to it but you had proved that you knew what you were doing, so we didn't argue, we did it. When you told us to wait while you scouted, we did

that, too--until we had waited a long time and She decided that we had better try to find you."

I let it drop.

We left almost at once, going out the "front" way and had no trouble, no illusions, no traps, nothing but the fact that the "true path" was long and tedious. Rufo and I stayed alert, same formation, with Star in the middle carrying the Egg.

Neither Star nor Rufo knew whether we were still likely to be attacked, nor could we have held off anything stronger than a Cub Scout pack. Only Rufo could bend a bow and I could no longer wield a sword. However, the single necessity was to give Star time to destroy the Egg rather than let it be captured. "But that's nothing to worry about," Rufo assured me. "About like being at ground-zero with an A-weapon. You'll never notice it."

Once we were outside it was a longish hike to the Grotto Hills and the other Gate. We lunched as we hiked--I was terribly hungry--and shared Rufo's brandy and Stars water without too much water. I felt pretty good by the time we reached the cave of this Gate; I didn't even mind sky that wasn't sky but some sort of roof, nor the odd shifts in gravitation.

A diagram or "pentacle" was already in this cave. Star had only to freshen it, then we waited a bit--that had been the rush, to get there before that "Gate" could be opened; it wouldn't be available for weeks or perhaps months thereafter--much too long for any human to live in Karth-Hokesh.

We were in position a few minutes early. I was dressed like the Warlord of Mars--just me and sword belt and sword. We all lightened ship to the limit as Star was tired and pulling live things through would be strain enough. Star wanted to save my pet longbow but I vetoed it. She did insist that I keep the Lady Vivamus and I didn't argue very hard; I didn't want ever to be separated from my sword again. She touched it and told me that it was not dead metal, but now part of me.

Rufo wore only his unpretty pink skin, plus dressings; his attitude was that a sword was a sword and he had better ones at home. Star was, for professional reasons, wearing no more.

"How long?" asked Rufo, as we joined hands.

"Count down is minus two minutes," she answered. The clock in Star's head is as accurate as my bump of direction. She never used a watch.

"You've told him?" said Rufo.

"No."

Rufo said, "Haven't you any shame? Don't you think you've conned him long enough?" He spoke with surprising roughness and I was about to tell him that he must not speak to her that way. But Star cut him off.

"QUIET!" She began to chant. Then--"Now!"

Suddenly it was a different cave. "Where are we?" I asked. I felt heavier.

"On Nevia's planet," Rufo answered. "Other side of the Eternal Peaks--and I've got a good mind to get off and see Jocko."

"Do it," Star said angrily. "You talk too much."

"Only if my pal Oscar comes along. Want to, old comrade? I can get us there, take about a week. No dragons. They'll be glad to see you--especially Muri."

"You leave Muri out of this!" Star was actually shrill.

"Can't take it, huh?" he said sourly. "Younger woman and all that."

"You know that's not it!"

"Oh, how very much it is!" he retorted. "And how long do you think you can get away with it? It's not fair, it never was fair. It--"

"Silence! Count down right now!" We joined hands again and whambo! we were in another place. This was still another cave with one side partly open to the outdoors; the air was very thin and bitterly cold and snow had sifted in. The diagram was let into rock in raw gold. "Where is this?" I wanted to know.

"On your planet," Star answered. "A place called Tibet."

"And you could change trains here," Rufo added, "if She weren't so stubborn. Or you could walk out--although it's a long, tough walk; I did it once."

I wasn't tempted. The last I had heard, Tibet was in the hands of unfriendly peace-lovers. "Will we be here long?" I asked. "This place needs central heating." I wanted to hear anything but more argument. Star was my beloved and I couldn't stand by and hear anyone be rude to her--but Rufo was my blood brother by much lost blood; I owed my life to him several times over.

"Not long," answered Star. She looked drawn and tired.

"But time enough to get this straightened out," added Rufo, "so that you can make up your own mind and not be carried around like a cat in a sack. She should have told you long since. She--"

"Positions!" snapped Star. "Count down coming up. Rufo, if you don't shut up, I'll leave you here and let you walk out again--in deep snow barefooted to your chin."

"Go ahead," he said. "Threats make me as stubborn as you are. Which is surprising. Oscar, She is--"

"SILENCE!"

"--Empress of the Twenty Universes--"

Chapter 17

We were in a large octagonal room, with lavishly beautiful silvery walls.

"--and my grandmother," Rufo finished.

"Not 'Empress,' " Star protested. "That's a silly word for it."

"Near enough."

"And as for the other, that's my misfortune, not my fault." Star jumped to her feet, no longer looking tired, and put one arm around my waist as I got up, while she held the Egg of the Phoenix with the other. "Oh, darling I'm so happy! We made it! Welcome home, my Hero!"

"Where?" I was sluggy--too many time zones, too many ideas, too fast.

"Home. My home. Your home now--if you'll have it. Our home."

"Uh, I see . . . my Empress." She stomped her foot. "Don't call me that!"

"The proper form of address," said Rufo, "is 'Your Wisdom.' Isn't it, Your Wisdom?"

"Oh, Rufo, shut up. Go fetch clothes for us."

He shook his head. "War's over and I just got paid off. Fetch 'em yourself. Granny."

"Rufo, you're impossible."

"Sore at me, Granny?"

"I will be if you don't stop calling me 'Granny.' " Suddenly she handed the Egg to me, put her arms around Rufo and kissed him. "No, Granny's not sore at you," she said softly.

"You always were a naughty child and I'll never quite forget the time you put oysters in my bed. But I guess you came by it honestly--from your grandmother." She kissed him again and mussed his fringe of white hair. "Granny loves you. Granny always will. Next to Oscar, I think you are about perfect--aside from being an unbearable, untruthful, spoiled, disobedient, disrespectful brat."

"That's better," he said. "Come to think of it, I feel the same way about you. What do you want to wear?"

"Mmm . . . get out a lot of things. It's been so long since I had a decent wardrobe." She turned back to me. "What would you like to wear, my Hero?"

"I don't know. I don't know anything. Whatever you think is appropriate--Your Wisdom."

"Oh, darling, please don't call me that. Not ever." She seemed suddenly about to cry.

"All right. What shall I call you?"

"Star is the name you gave me. If you must call me something else, you could call me your 'princess.' I'm not a princess--and I'm not an 'empress' either; that's a poor translation. But I like being 'your princess'--the way you say it. Or it can be 'lively wench' or any of lots of things you've been calling me." She looked up at me very soberly. "Just like before. Forever."

"I'll try . . . my princess."

"My Hero."

"But there seems to be a lot I don't know."

She shifted from English to Nevian. "Milord husband, I wished to tell all. I sighed to tell you. And milord will be told everything. But I held mortal fear that milord, if told too soon, would refuse to come with me. Not to the Black Tower, but to here. Our home."

"Perhaps you chanced wisely," I answered in the same language. "But I am here, milady wife--my princess. So tell me. I wish it."

She shifted back to English. "I'll talk, I'll talk. But it will take time. Darling, will you hold your horses just a bit longer? Having been patient with me--so very patient, my love! --for so long?"

"Okay," I agreed. "I'll string along. But, look, I don't know the streets in this neighborhood, I'll need some hints. Remember the mistake I made with old Jocko just from not knowing local customs."

"Yes, dear, I will. But don't worry, customs are simple here. Primitive societies are always more complex than civilized ones--and this one isn't primitive." Rufo dumped then a great heap of clothing at her feet. She turned away, a hand still on my arm, put a finger to her mouth with a very intent, almost worried look. "Now let me see. What shall I wear?"

"Complex" is a relative matter; I'll sketch only the outlines.

Center is the capital planet of the Twenty Universes. But Star was not "Empress" and it is not an empire.

I'll go on calling her "Star" as hundreds of names were hers and I'll call it an "empire" because no other word is close, and I'll refer to "emperors" and "empresses"--and to the Empress, my wife.

Nobody knows how many universes there are. Theory places no limit: any and all possibilities in unlimited number of combinations of "natural" laws, each sheaf

appropriate to its own universe. But this is just theory and Occam's Razor is much too dull. All that is known in Twenty Universes is that twenty have been discovered, that each has its own laws, and that most of them have planets, or sometimes "places," where human beings live. I won't try to say what lives elsewhere.

The Twenty Universes include many real empires. Our Galaxy in our universe has its stellar empires--yet so huge is our Galaxy that our human race may never meet another, save through the Gates that link the universes. Some planets have no known Gates. Earth has many and that is its single importance; otherwise it rates as a backward slum.

Seven thousand years ago a notion was born for coping with political problems too big to handle. It was modest at first: How could a planet be run without ruining it? This planet's people included expert cyberneticists but otherwise were hardly farther along than we are; they were still burning the barn to get the rats and catching their thumbs in machinery. These experimenters picked an outstanding ruler and tried to help him.

Nobody knew why this bloke was so successful but he was and that was enough; they weren't hipped on theory. They gave him cybernetic help, taping for him all crises in their history, all known details, what was done, and the outcomes of each, all organized so that he could consult it almost as you consult your memory.

It worked. In time he was supervising the whole planet--Center it was, with another name then. He didn't rule it, he just untangled hard cases.

They taped also everything this first "Emperor" did, good and bad, for guidance of his successor.

The Egg of the Phoenix is a cybernetic record of the experiences of two hundred and three "emperors" and "empresses," most of whom "ruled" all the known universes. Like a foldbox, it is bigger inside than out. In use, it is more the size of the Great Pyramid.

Phoenix legends abound throughout the Universes: the creature that dies but is immortal, rising ever young from its own ashes. The Egg is such a wonder, for it is far more than a taped library now; it is a print, right down to their unique personalities, of all experience of all that line from His Wisdom IX through Her Wisdom CCIV, Mrs. Oscar Gordon.

The office is not hereditary. Star's ancestors include His Wisdom I and most of the other wisdoms--but millions of others have as much "royal" blood. Her grandson Rufo was not picked although he shares all her ancestors. Or perhaps he turned it down. I never asked, it would have reminded him of a time one of his uncles did something obscene and improbable. Nor is it a question one asks.

Once tapped, a candidate's education includes everything from how to cook tripe to highest mathematics--including all forms of personal combat for it was realized millennia ago that, no matter how well he was guarded, the victim would wear better if he himself could fight like an angry buzz saw. I stumbled on this through asking my beloved an awkward question.

I was still trying to get used to the fact that I had married, a grandmother, whose grandson looked older than I did and was even older than he looked. The people of Center live longer than we do anyway and both Star and Rufo had received "Long-Life" treatment. This takes getting used to. I asked Star, "How long do you 'wisdoms' live?"

"Not too long," she answered almost harshly. "Usually we are assassinated."

(My big mouth--)

A candidate's training includes travel in many worlds--not all planets-places inhabited by human beings; nobody lives that long. But many. After a candidate completes all this and if selected as heir, postgraduate work begins: the Egg itself. The heir has imprinted in him (her) the memories, the very personalities, of past emperors. He (She) becomes an integration of them. Star-Plus. A supernova. Her Wisdom.

The living personality is dominant but all that mob is there, too. Without using the Egg, Star could recall experiences that happened to people dead many centuries. With the Egg--herself hooked into the cybernet--she had seven thousand years of sharp, just-yesterday memories.

Star admitted to me that she had hesitated ten years before accepting the nomination. She hadn't wanted to be all those people; she had wanted to go on being herself, living as she pleased. But the methods used to pick candidates (I don't know them, they are lodged in the Egg) seem almost infallible; only three have ever refused.

When Star became Empress she had barely started the second half of her training, having had imprinted in her only seven of her predecessors. Imprinting does not take long but the victim needs recovery time between prints--for she gets every damned thing that ever happened to him, bad and good: the time he was cruel to a pet as a child and his recalled shame of it in his mature years, the loss of his virginity, the unbearably tragic time that he goofed a really serious one--all of it.

"I must experience their mistakes," Star told me. "Mistakes are the only certain way to learn."

So the whole weary structure is based on subjecting one person to all the miserable errors of seven thousand years.

Mercifully the Egg doesn't have to be used often. Most of the time Star could be herself, no more bothered by imprinted memories than you are over that nasty remark in second grade. Most problems Star could solve shooting from the hip--no recourse to the Black Room and a full hookup.

For the one thing that stood out as this empirical way of running an empire grew up was that the answer to most problems was: Don't do anything.

Always King Log, never King Stork--"Live and let live." "Let well enough alone." "Time is the best physician." "Let sleeping dogs lie." "Leave them alone and they'll come home, wagging their tails behind them."

Even positive edicts of the Imperium were usually negative in form: Thou Shalt Not Blow Up Thy Neighbors' Planet. (Blow your own if you wish.) Hands off the guardians of the Gates. Don't demand justice, you too will be judged.

Above all, don't put serious problems to a popular vote. Oh, there is no rule against local democracy, just in imperial matters. Old Rufo--excuse me; Doctor Rufo, a most distinguished comparative culturologist (with a low taste for slumming)--Rufo told me that every human race tries every political form and that democracy is used in. many primitive societies . . . but he didn't know of any civilized planet using it, as Vox Populi, Vox Dei translates as: "My God! How did we get in this mess!"

But Rufo claimed to enjoy democracy--any time he felt depressed he sampled Washington, and the antics of the French Parliament were second only to the antics of French women.

I asked him how advanced societies ran things.

His brow wrinkled. "Mostly they don't."

That described the Empress of Twenty Universes: Mostly she didn't.

But sometimes she did. She might say: "This mess will clear up if you will take that troublemaker there--What's your name? You with the goatee--out and shoot him. Do it now." (I was present. They did it now. He was head of the delegation which had brought the problem to her--some fuss between intergalactic trading empires in the VIIth Universe--and his chief deputy pinned his arms and his own delegates dragged him outside and killed him. Star went on drinking coffee. It's better coffee than we get back home and I was so upset that I poured myself a cup.)

An Emperor has no power. Yet, if Star decided that a certain planet should be removed, people would get busy and there would be a nova in that sky. Star has never done this but it has been done in the past. Not often--His Wisdom will search his soul (and the Egg) a long time before decreeing anything so final even when his hypertrophied horse sense tells him that there is no other solution.

The Emperor is sole source of Imperial law, sole judge, sole executive--and does very little and has no way to enforce his rulings. What he or she does have is enormous prestige from a system that has worked for seven millennia. This non-system holds together by having no togetherness, no uniformity, never seeking perfection, no Utopias--just answers good enough to get by, with lots of looseness and room for many ways and attitudes.

Local affairs are local. Infanticide? --they're your babies, your planet. PTAs, movie censorship, disaster relief--the Empire is ponderously unhelpful.

The Crisis of the Egg started long before I was born. His Wisdom CCIII was assassinated and the Egg stolen at the same time. Some baddies wanted power--and the Egg, by its unique resources, has latent in it key to such power as Genghis Khan never dreamed.

Why should anybody want power? I can't understand it. But some do, and they did.

So Star came to office hall-trained, faced by the greatest crisis the Empire had ever suffered, and cut off from her storehouse of Wisdom.

But not helpless. Imprinted in her was the experience of seven hypersensible men and she had all the cyber-computer system save that unique part known as the Egg. First she had to find out what had been done with the Egg. It wasn't safe to mount an attack on the planet of the baddies; it might destroy the Egg.

Available were ways to make a man talk if one didn't mind using him up. Star didn't mind. I don't mean anything so crude as rack and tongs. This was more like peeling an onion, and they peeled several.

Karth-Hokesh is so deadly that it was named for the only explorers to visit it and come back alive. (We were in a "garden subdivision," the rest is much worse.) The baddies made no attempt to stay there; they just cached the Egg and set guards and booby traps around it and on the routes to it.

I asked Rufo, "What use was the Egg there?"

"None," he agreed. "But they soon learned that it was no use anywhere--without Her. They needed either its staff of cyberneticists . . . or they needed Her Wisdom. They couldn't open the Egg. She is the only one who can do that unassisted. So they baited a trap for Her. Capture Her Wisdom, or kill Her--capture by preference, kill Her if need be

and then try for key people here at Center. But they didn't dare risk the second while She was alive."

Star started a search to determine the best chance of recovering the Egg. Invade Karth-Hokesh? The machines said, "Hell, no!" I would say no, too. How do you mount an invasion into a place where a man not only can't eat or drink anything local but can't breathe the air more than a few hours? When a massive assault will destroy what you are after? When your beachheads are two limited Gates?

The computers kept coming up with a silly answer, no matter how the question was framed.

Me.

A "Hero," that is--a man with a strong back, a weak mind, and a high regard for his own skin. Plus other traits. A raid by a thus-and-so man, if aided by Star herself, might succeed. Rufo was added by a hunch Star had (hunches of Their Wisdoms being equal to strokes of genius) and the machines confirmed this. "I was drafted," said Rufo. "So I refused. But I never have had any sense where She is concerned, damn it; She spoiled me when I was a kid."

There followed years of search for the specified man. (Me, again--I'll never know why.) Meanwhile brave men were feeling out the situation and, eventually, mapping the Tower. Star herself reconnoitered, and got acquainted in Nevia, too.

(Is Nevia part of the "Empire?" It is and it isn't. Nevia's planet has the only Gates to Karth-Hokesh other than one from the planet of the baddies; that is its importance to the Empire--and the Empire isn't important to Nevia at all.)

This "Hero" was most likely to be found on a barbaric planet such as Earth. Star checked, and turned down, endless candidates winnowed from many rough peoples before her nose told her that I might do.

I asked Rufo what chance the machines gave us.

"What makes you say that?" he demanded.

"Well, I know a little of cybernetics."

"You think you do. Still--There was a prediction. Thirteen percent success, seventeen percent no game--and seventy percent death for us all."

I whistled. "You should whistle!" he said indignantly. "You didn't know any more than a cavalry horse knows. You had nothing to be scared of."

"I was scared."

"You didn't have time to be. It was planned so. Our one chance lay in reckless speed and utter surprise. But I knew. Son, when you told us to wait, there in the Tower, and disappeared and didn't come back, why, I was so scared I caught up on my regretting."

Once set up, the raid happened as I told it. Or pretty much so, although I may have seen what my mind could accept rather than exactly what happened. I mean "magic." How many times have savages concluded "magic" when a "civilized" man came along with something the savage couldn't understand? How often is some tag, such as "television," accepted by cultural savages (who nevertheless twist dials) when "magic" would be the honest word?

Still, Star never insisted on that word. She accepted it when I insisted on it.

But I would be disappointed if everything I saw turned out to be something Western Electric will build once Bell Labs works the bugs out. There ought to be some magic, somewhere, just for flavor.

Oh, yes, putting me to sleep for the first transition was to keep from scaring a savage silly. Nor did the "black biers" cross over--that was posthypnotic suggestion, by an expert: my wife.

Did I say what happened to the baddies? Nothing. Their Gates were destroyed; they are isolated until they develop star travel. Good enough, by the sloppy standards of the Empire. Their Wisdoms never carry grudges.

Chapter 18

Center is a lovely planet, Earth-like but lacking Earth's faults. It has been retailored over millennia to make it a Never-Never Land. Desert and snow and jungle were saved enough for pleasure; floods and other disasters were engineered out of existence.

It is uncrowded but has a large population for its size--that of Mars but with oceans. Surface gravity is almost that of Earth. (A higher constant, I understand.) About half the population is transient, as its great beauty and unique cultural assets--focus of twenty universes--make it a tourist's paradise. Everything is done for the comfort of visitors with an all-out thoroughness like that of the Swiss but with technology not known on Earth.

Star and I had residences a dozen places around the planet (and endless others in other universes); they ranged from palaces to a tiny fishing lodge where Star did her own cooking. Mostly we lived in apartments to an artificial mountain that housed the Egg and its staff; adjacent were halls, conference rooms, secretariat, etc. If Star felt like working she wanted such things at hand. But a system ambassador or visiting emperor of a hundred systems had as much chance of being invited into our private home as a hobo at the back door of a Beverly Hills mansion has of being invited into the drawing room.

But if Star happened to like him, she might fetch him home for a midnight snack. She did that once--a funny little leprechaun with four arms and a habit of tap-dancing his gestures. But she did no official entertaining and felt no obligation to attend social affairs. She did not hold press conferences, make speeches, receive delegations of Girl Scouts, lay cornerstones, proclaim special "Days," make ceremonial appearances, sign papers, deny rumors, nor any of the time-gnawing things that sovereigns and VIPs do on Earth.

She consulted individuals, often summoning them from other universes, and she had at her disposal all the news from everywhere, organized in a system that had been developed over centuries. It was through this system that she decided what problems to consider. One chronic complaint was that the Imperium ignored "vital questions"--and so it did. Her Wisdom passed judgment only on problems she selected; the bedrock of the system was that most problems solved themselves.

We often went to social events; we both enjoyed parties and, for Her Wisdom and Consort, there was endless choice. There was one negative protocol: Star neither accepted nor regretted invitations, showed up when she pleased and refused to be fussed over. This was a drastic change for capital society as her predecessor had imposed protocol more formal than that of the Vatican.

One hostess complained to me about how dull society had become under the new rules--maybe I could do something?

I did. I looked up Star and told her the remark whereupon we left and joined a drunken artists' ball--a luau!

Center is such a hash of cultures, races, customs, and styles that it has few rules. The one invariant custom was: Don't impose your customs on me. People wore what they did at home, or experimented with other styles; any social affair looked like a free-choice costume ball. A guest could show up at a swank party stark naked without causing talk--and some did, a small minority. I don't mean non-humans or hirsute humans; clothes are not for them. I mean humans who would look at home in New York in American clothes--and others who would attract notice even in l'Ile du Levant because they have no hair at all, not even eyebrows. This is a source of pride to them; it shows their "superiority" to us hairy apes, they are as proud as a Georgia cracker is of his deficiency in melanin. So they go naked oftener than other human races. I found their appearance startling but one gets used to it.

Star wore clothes outside our home, so I did. Star would never miss a chance to dress up, an endearing weakness that made it possible to forget, at times, her Imperial status. She never dressed twice alike and was ever trying something new--and disappointed if I didn't notice. Some of her choices would cause heart failure even on a Riviera beach. She believed that a woman's costume was a failure unless it made men want to tear it off.

One of Star's most effective outfits was the simplest. Rufo happened to be with us and she got a sudden notion to dress as we had on the Quest of the Egg--and biff, bang, costumes were available, or manufactured to order, as may be; Nevian clothes are most uncommon in Center.

Bows, arrows, and quivers were produced with the same speed and Merry Men were we. It made me feel good to buckle on the Lady Vivamus; she had been hanging untouched on a wall of my study ever since the great black Tower.

Star stood, feet planted wide, fists on hips, head thrown back, eyes bright, and cheeks flushed. "Oh, this is fun! I feel good, I feel young! Darling, promise me, promise me truly, that someday we will again go on an adventure! I get so damn sick of being sensible."

She spoke English, as the language of Center is ill suited to such ideas. It's a pidgin language with thousands of years of imports and changes and is uninflected, positional, and flat.

"Suits," I agreed. "How about it, Rufo? Want to walk that Glory Road?"

"After they pave it."

"Guff. You'll come, I know you. Where and when, Star? Never mind 'where'--just 'when.' Skip the party and start right now!"

Suddenly she was not merry. "Darling, you know I can't. I'm less than a third of the way through my training."

"I should have busted that Egg when I found it."

"Don't be cross, darling. Let's go to the party and have fun."

We did. Travel on Center is by apports, artificial "Gates" that require no "magic" (or perhaps still more); one sets destination like punching buttons in an elevator, so there is no traffic problem in cities--nor a thousand other unpleasant things; they don't let the bones show in their cities. Tonight Star chose to get off short of destination, swagger through a park, and make an entrance. She knows how well tights suit her long legs and solid buttocks; she rolled her hips like a Hindu woman.

Folks, we were a sensation! Swords aren't worn in Center, save possibly by visitors. Bows and arrows are hen's teeth, too. We were as conspicuous as a knight in armor on Fifth Avenue.

Star was as happy as a kid playing trick-or-treat. So was I. I felt two axe handles across the shoulders and wanted to hunt dragons.

It was a ball not unlike one on Earth. (According to Rufo, all our races everywhere have the same basic entertainment: get together in mobs to dance, drink, and gossip. He claimed that the stag affair and the hen party are symptoms of a sick culture. I won't argue.) We swaggered down a grand staircase, music stopped, people stared and gasped--and Star enjoyed being noticed. Musicians got raggedly back to work and guests went back to the negative politeness the Empress usually demanded. But we still got attention. I had thought that the story of the Quest of the Egg was a state secret as I had never heard it mentioned. But, even if known, I still would have expected the details to be known only to us three.

Not so. Everyone knew what those costumes meant, and more. I was at the buffet, sopping up brandy and a Dagwood of my own invention, when I was cornered by Schherazade's sister, the pretty one. She was of one of the human-but-not-like-us races. She was dressed in rubies the size of your thumb and reasonably opaque cloth. She stood about five-five, barefooted, weighed maybe one twenty and her waist couldn't have been over fifteen inches, which exaggerated two other measurements that did not need it. She was brunette, with the slantiest eyes I've ever seen. She looked like a beautiful cat and looked at me the way a cat looks at a bird.

"Self," she announced.

"Speak."

"Sverlani. World--" (Name and code--I had never heard of it.) "Student food designer, mathematicosybaritic."

"Oscar Gordon. Earth. Soldier." I omitted the I.D. for Earth; she knew who I was.

"Questions?"

"Ask."

"Is sword?"

"Is."

She looked at it and her pupils dilated, "Is-was sword destroy construct guard Egg?" ("Is this sword now present the direct successor in space-time sequential change, aside from theoretical anomalies involved in between-universe transitions, of the sword used to loll the Never-Born?" The double tense of the verb, present-past, stipulates and brushes aside the concept that identity is a meaningless abstraction--is this the sword you actually used, in the everyday meaning, and don't kid me, soldier. I'm no child.)

"Was-is," I agreed. ("I was there and I guarantee that I followed it all the way here, so it still is.")

She gave a little gasp and her nipples stood up. Around each was painted, or perhaps tattooed, the multi-universal design we call "Wall of Troy"--and so strong was her reaction that Ileum's ramparts crumbled again.

"Touch?" she said pleadingly.

"Touch."

"Touch twice?" ("Please, may I handle it enough to get the feel of it? Pretty please, with sugar on it! I ask too much and it is your right to refuse, but I guarantee not to hurt it"--they get mileage out of words, but the flavor is in the manner.)

I didn't want to, not the Lady Vivamus. But I'm a sucker for pretty girls. "Touch . . . twice," I grudged. I drew it and handed it to her guard foremost, alert to grab it before she put somebody's eye out or stabbed herself in the foot.

She accepted it gingerly, eyes and mouth big, grasping it by the guard instead of the grip. I had to show her. Her hand was far too small for it; her hands and feet, like her waist, were ultra slender.

She spotted the inscription. "Means?"

Dum vivimus, vivamus doesn't translate well, not because they can't understand the idea but because it's water to a fish. How else would one live? But I tried. "Touch-twice life. Eat. Drink. Laugh."

She nodded thoughtfully, then poked the air, wrist bent and elbow out. I couldn't stand it, so I took it from her, dropped slowly into a foil guard, lunged in high line, recovered--a move so graceful that big hairy men look good in it. It's why ballerinas study fencing.

I saluted and gave it back to her, then adjusted her right elbow and wrist and left arm--this is why ballerinas get half rates, it's fun for the swordmaster. She lunged, almost pinking a guest in his starboard ham.

I took it back, wiped the blade, sheathed it. We had gathered a solid gallery. I picked up my Dagwood from the buffet, but she wasn't done with me. "Self jump sword?"

I choked. If she understood the meaning--or if I did--I was being propositioned the most gently I had ever been, in Center. Usually it's blunt. But surely Star hadn't spread the details of our wedding ceremony? Rufo? I hadn't told him but Star might have.

When I didn't answer, she made herself clear and did not keep her voice down. "Self unvirgin unmother unpregnant fertile."

I explained as politely as the language permits, which isn't very, that I was dated up. She dropped the subject, looked at the Dagwood. "Bite touch taste?"

That was another matter; I passed it over. She took a hearty bite, chewed thoughtfully, looked pleased. "Xenic. Primitive. Robust. Strong dissonance. Good art." Then she drifted away, leaving me wondering.

Inside of ten minutes the question was put to me again. I received more propositions than at any other party in Center and I'm sure the sword accounted for the bull market. To be sure, propositions came my way at every social event; I was Her Wisdom's consort. I could have been an orangutan and offers still would have been made. Some hirsutes looked like orangutans and were socially acceptable but I could have smelled like one. And behaved worse. The truth was that many ladies were curious about what the Empress took to bed, and the fact that I was a savage, or at best a barbarian, made them more curious. There wasn't any taboo against laying it on the line and quite a few did.

But I was still on my honeymoon. Anyhow, if I had accepted all those offers, I would have gone up with the window shade. But I enjoyed hearing them once I quit cringing at the "Soda? --or ginger ale?" bluntness; it's good for anybody's morale to be asked.

As we were undressing that night I said, "Have fun, pretty things?"

Star yawned and grinned. "I certainly did. And so did you, old Eagle Scout. Why didn't you bring that kitten home?"

"What kitten?"

"You know what kitten. The one you were teaching to fence."

"Meeow!"

"No, no, dear. You should send for her. I heard her state her profession, and there is a strong connection between good cooking and good--"

"Woman, you talk too much!"

She switched from English to Nevian. "Yes, milord husband. No sound I shall utter that does not break unbidden from love-anguished lips."

"Milady wife beloved . . . sprite elemental of the Singing Waters--"

Nevian is more useful than the jargon they talk on Center.

Center is a fun place and a Wisdom's consort has a cushy time. After our first visit to Star's fishing lodge, I mentioned how nice it would be to go back someday and tickle a few trout at that lovely place, the Gate where we had entered Nevia. "I wish it were on Center."

"It shall be."

"Star. You would move it? I know that some Gates, commercial ones, can handle real mass, but, even so--"

"No, no. But just as good. Let me see. It will take a day or so to have it stereoed and measured and air-typed and so forth. Water flow, those things. But meanwhile--There's nothing much beyond this wall, just a power plant and such. Say a door here and the place where we broiled the fish a hundred yards beyond. Be finished in a week, or we'll have a new architect. Suits?"

"Star, you'll do no such thing."

"Why not, darling?"

"Tear up the whole house to give me a trout stream? Fantastic!"

"I don't think so."

"Well, it is. Anyhow, sweet, the idea is not to move that stream here, but to go there. A vacation."

She sighed. "How I would love a vacation."

"You took an imprint today. Your voice is different."

"It wears off, Oscar."

"Star, you're taking them too fast. You're wearing yourself out."

"Perhaps. But I must be the judge of that, as you know."

"As I don't know! You can judge the whole goddamn creation--as you do and I know it--but I, your husband, must judge whether you are overworking--and stop it."

"Darling, darling!"

There were too many incidents like that.

I was not jealous of her. That ghost of my savage past had been laid in Nevia, I was not haunted by it again.

Nor is Center a place such ghost is likely to walk. Center has as many marriage customs as it has cultures--thousands. They cancel out. Some humans there are monogamous by instinct, as swans are said to be. So it can't be classed as "virtue." As courage is bravery in the face of fear, virtue is right conduct in the face of temptation. If there is no temptation, there can be no virtue. But these inflexible monogamists were no hazard. If someone, through ignorance, propositioned one of these chaste ladies, he risked neither a slap nor a knife; she would turn him down and go right on talking. Nor would it

matter if her husband overheard; jealousy is never learned in a race automatically monogamous. Not that I ever tested it; to me they looked--and smelled--like spoiled bread dough. Where there is no temptation there is no virtue.

But I had chances to show "virtue." That kitten with the wasp waist tempted me--and I learned that she was of a culture in which females may not marry until they prove themselves pregnable, as in parts of the South Seas and certain places in Europe; she was breaking no taboos of her tribe. I was tempted more by another gal, a sweetie with a lovely figure, a delightful sense of humor, and one of the best dancers in any universe. She didn't write it on the sidewalk; she just let me know that she was neither too busy nor uninterested, using that argot with skillful indirection.

This was refreshing. Downright "American." I did inquire (elsewhere) into the customs of her tribe and found that, while they were rigid as to marriage, they were permissive otherwise. I would never do as a son-in-law but the window was open even though the door was locked.

So I chickened. I gave myself a soul-searching and admitted curiosity as morbid as that of any female who propositioned me simply because I was Star's consort. Sweet little Zhai-ee-van was one of those who didn't wear clothes. She grew them on the spot; from tip of her nose to her tiny toes she was covered in soft, sleek, gray fur, remarkably like chinchilla. Gorgeous!

I didn't have the heart, she was too nice a kid.

But this temptation I admitted to Star--and Star implied gently that I must have muscles between my ears; Zhai-ee-van was an outstanding artiste even among her own people, who were esteemed as most talented devotees of Eros.

I stayed chicken. A romp with a kid that sweet should involve love, some at least, and it wasn't love, just that beautiful fur--along with a fear that a romp with Zhai-ee-van could turn into love and she couldn't marry me even if Star turned me loose.

Or didn't turn me loose--Center has no rule against polygamy. Some religions there have rules for and against this and that out this mixture of cultures has endless religions and they cancel each other the way conflicting customs do. Culturologists state a "law" of religious freedom which they say is invariant: Religious freedom in a cultural complex is inversely proportional to the strength of the strongest religion. This is supposed to be one case of a general invariant, that all freedoms arise from cultural conflicts because a custom which is not opposed by its negative is mandatory and always regarded as a "law of nature."

Rufo didn't agree; he said his colleagues stated as equations things which are not mensurate and not definable--holes in their heads! --and that freedom was never more than a happy accident because the common jerk, all human races, hates and fears all freedom, not only for his neighbors but for himself, and stamps it out whenever possible.

Back to Topic "A"--Centrists use every sort of marriage contract. Or none. They practice domestic partnership, coition, propagation, friendship, and love--but not necessarily all at once nor with the same person. Contracts could be as complex as a corporate merger, specifying duration, purposes, duties, responsibilities, number and sex of children, genetic selection methods, whether host mothers were to be hired, conditions for canceling and options for extension--anything but "marital fidelity." It is axiomatic there that this is unenforceable and therefore not contractual.

But marital fidelity is commoner there than it is on Earth; it simply is not legislated. They have an ancient proverb reading Women and Cats. It means: "Women and Cats do as they please, and men and dogs might as well relax to it." It has its opposite: Men and Weather which is blunter and at least as old, since the weather has long been under control.

The usual contract is no contract; he moves his clothes into her home and stays--until she dumps them outside the door. This form is highly thought of because of its stability: A woman who "tosses his shoes" has a tough time finding another man brave enough to risk her temper.

My "contract" with Star was no more than that if contracts, laws, and customs applied to the Empress, which they did not and could not. But that was not the source of my increasing unease.

Believe me, I was not jealous.

But I was increasingly fretted by those dead men crowding her mind.

One evening as we were dressing for some whing-ding she snapped at me. I had been prattling about how I had spent my day, being tutored in mathematics, and no doubt had been as entertaining as a child reporting a day in kindergarten. But I was enthusiastic, a new world was opening to me--and Star was always patient.

But she snapped at me in a baritone voice.

I stopped cold. "You were imprinted today!"

I could feel her shift gears. "Oh, forgive me, darling! No, I'm not myself, I'm His Wisdom CLXXXII."

I did a fast sum. "That's fourteen you've taken since the Quest--and you took only seven in all the years before that. What the hell are you trying to do? Burn yourself out? Become an idiot?"

She started to scorch me. Then she answered gently, "No, I am not risking anything of the sort."

"That isn't what I near."

"What you may have heard has no weight, Oscar, as no one else can judge--either my capacity, or what it means to accept an imprint. Unless you have been talking to my heir?"

"No." I knew she had selected him and I assumed that he had taken a print or two--a standard precaution against assassination. But I hadn't met him, didn't want to, and didn't know who he was.

"Then forget what you've been told. It is meaningless." She sighed. "But, darling, if you don't mind, I won't go tonight; best I go to bed and sleep. Old Stinky CLXXXII is the nastiest person I've ever been--a brilliant success in a critical age, you must read about him. But inside he was a bad-tempered beast who hated the very people he helped. He's fresh in me now, I must keep him chained."

"Okay, let's go to bed."

Star shook her head. " 'Sleep,' I said. I'll use autosuggestion and by morning you won't know he's been here. You go to the party. Find an adventure and forget that you have a difficult wife."

I went but I was too bad-tempered even to consider "adventures."

Old Nasty wasn't the worst. I can hold my own in a row--and Star, Amazon though she is, is not big enough to handle me. If she got rough, she would at last get that spanking.

Nor would I fear interference from guards; that had been settled from scratch: When we two were alone together, we were private. Any third person changed that, nor did Star have privacy alone, even in her bath. Whether her guards were male or female I don't know, nor would she have cared. Guards were never in sight. So our spats were private and perhaps did us both good, as temporary relief.

But "the Saint" was harder to take than Old Nasty. He was His Wisdom CXLI and was so goddam noble and spiritual and holier-than-thou that I went fishing for three days. Star herself was robust and full of ginger and joy in life; this bloke didn't drink, smoke, chew gum, nor utter an unkind word. You could almost see Star's halo while she was under his influence.

Worse, he had renounced sex when he consecrated himself to the Universes and this had a shocking effect on Star; sweet submissiveness wasn't her style. So I went fishing.

I've one good thing to say for the Saint. Star says that he was the most unsuccessful emperor in all that long line, with genius for doing the wrong thing from pious motives, so she learned more from him than any other; he made every mistake in the book. He was assassinated by disgusted customers after only fifteen years, which isn't long enough to louse up anything as ponderous as a multi-universe empire.

His Wisdom CXXXVII was a Her--and Star was absent two days. When she came home she explained. "Had to, dear. I've always thought I was a rowdy bitch--but she shocked even me."

"How?"

"I ain't talkin', Guv'nor. I gave myself intensive treatment to bury her where you'll never meet her."

"I'm curious."

"I know you are and that's why I drove a stake through her heart--rough job, she's my direct ancestor. But I was afraid you might like her better than you do me. That unspeakable trull!"

I'm still curious.

Most of them weren't bad Joes. But our marriage would have been smoother if I had never known they were there. It's easier to have a wife who is a touch batty than one who is several platoons--most of them men. To be aware of their ghostly presence even when Star's own personality was in charge did my libido no good. But I must concede that Star knew the male viewpoint better than any other woman in any history. She didn't have to guess what would please a man; she knew more about it than I did, from "experience"--and was explosively uninhibited about sharing her unique knowledge.

I shouldn't complain.

But I did, I blamed her for being those other people. She endured my unjust complaints better than I endured what I felt to be the injustice in my situation vis-a-vis all that mob of ghosts.

Those ghosts weren't the worst fly in the soup.

I did not have a job. I don't mean nine-to-five and cut the grass on Saturdays and get drunk at the country club that night; I mean I didn't have any purpose. Ever look at a male lion in a zoo? Fresh meat on time, females supplied, no hunters to worry about--He's got it made, hasn't he?

Then why does he look bored!

I didn't know I had a problem, at first. I had a beautiful and loving wife; I was so wealthy that there was no way to count it; I lived in a most luxurious home in a city more lovely than any on Earth; everybody I met was nice to me; and best second only to my wonderful wife, I had endless chance to "go to college" in a marvelous and un-Earthly sense, with no need to chase a pigskin. Nor a sheepskin. I need never stop and had any conceivable help. I mean, suppose Albert Einstein drops everything to help with your algebra, pal, or Rand Corporation and General Electric team up to devise visual aids to make something easier for you.

This is luxury greater than riches.

I soon found that I could not drink the ocean even held to my lips. Knowledge on Earth alone has grown so out of hand that no man can grasp it--so guess what the bulk is in Twenty Universes, each with its laws, its histories, and Star alone knows how many civilizations.

In a candy factory, employees are urged to eat all they want. They soon stop.

I never stopped entirely; knowledge has more variety. But my studies lacked purpose. The Secret Name of God is no more to be found in twenty universes than in one--and all other subjects are the same size unless you have a natural bent.

I had no bent, I was a dilettante--and I realized it when I saw that my tutors were bored with me. So I let most of them go, stuck with math and multi-universe history, quit trying to know it all.

I thought about going into business. But to enjoy business you must be a businessman at heart (I'm not), or you have to need dough. I had dough; all I could do was lose it--or, if I won, I would never know whether word had gone out (from any government anywhere): Don't buck the Empress's consort, we will make good your losses.

Same with poker. I introduced the game and it caught on fast--and I found that I could no longer play it. Poker must be serious or it's nothing--out when you own an ocean of money, adding or losing a few drops mean nothing.

I should explain--Her Wisdom's "civil list" may not have been as large as the expenditures of many big spenders in Center; the place is rich. But it was as big as Star wanted it to be, a bottomless well of wealth. I don't know how many worlds split the tab, but call it twenty thousand with three billion people each--it was more than that.

A penny each from 60,000,000,000,000 people is six hundred billion dollars. The figures mean nothing except to show that spreading it so thin that nobody could feel it still meant more money than I could dent. Star's non-government of her un-Empire was an expense, I suppose--but her personal expenses, and mine, no matter how lavish, were irrelevant.

King Midas lost interest in his piggy bank. So did I.

Oh, I spent money. (I never touched any--unnecessary.) Our "flat" (I won't call it a palace)--our home had a gymnasium more imaginative than any university gym; I had a salle d'armes added and did a lot of fencing, almost every day with all sorts of weapons. I ordered foils made to match the Lady Vivamus and the best swordmasters in several worlds took turns helping me. I had a range added, too, and had my bow picked up from that Gate cave in Karth-Hokesh, and trained in archery and in other aimed weapons. Oh, I spent money as I pleased.

But it wasn't much fun.

I was sitting in my study one day, doing not a damn thing but brood, while I played with a bowlful of jewels.

I had fiddled with jewelry design a while. It had interested me in high school; I had worked for a jeweler one summer. I can sketch and was fascinated by lovely stones. He lent me books, I got others from the library--and once he made up one of my designs.

I had a Calling.

But jewelers are not draft-deferred so I dropped it--until Center.

You see, there was no way for me to give Star a present unless I made it. So I did. I made costume jewelry of real stones, studying it (expert help, as usual), sending for a lavish selection of stones, drawing designs, sending stones and drawings out to be made up.

I knew that Star enjoyed jeweled costumes; I knew she liked them naughty--not in the sense of crowding the taboos, there weren't any--but provocative, gilding the lily, accentuating what hardly needs it.

The things I designed would have seemed at home in a French revue--but of real gems. Sapphires and gold suited Star's blond beauty and I used them. But she could wear any color and I used other gems, too.

Star was delighted with my first try and wore it that evening. I was proud of it; I had swiped the design from memory of a costume worn by a showgirl in a Frankfurt night club my first night out of the Army--a G-string deal, transparent long skirt open from the hip on one side and with sequins on it (I used sapphires), a thing that wasn't a bra but an emphasizer, completely jeweled, and a doohickey in her hair to match. High golden sandals with sapphire heels.

Star was warmly grateful for others that followed.

But I learned something. I'm not a jewelry designer. I saw no hope of matching the professionals who catered to the wealthy in Center. I soon realized that Star wore my designs because they were my gift, just as mama pins up the kindergarten drawings that sonny brings home. So I quit.

This bowl of gems had been kicking around my study for weeks--fire opals, sardonyx, carnelians, diamonds and turquoise and rubies, moonstones and sapphires and garnets, peridot, emeralds, chrysolite--many with no English names. I ran them through my fingers, watching the many-colored fire falls, and felt sorry for myself. I wondered how much these pretty marbles would cost on Earth? I couldn't guess within a million dollars.

I didn't bother to lock them up at night. And I was the bloke who had quit college for lack of tuition and hamburgers.

I pushed them aside and went to my window--there because I had told Star that I didn't like not having a window in my study. That was on arrival and I didn't find out for months how much had been torn down to please me; I had thought they had just cut through a wall.

It was a beautiful view, more a park than a city, studded but not cluttered with lovely buildings. It was hard to realize that it was a city bigger than Tokyo; its "bones" didn't show and its people worked even half a planet away.

There was a murmur soft as bees, like the muted roar one can never escape in New York--but softer, just enough to make me realize that I was surrounded by people, each with his job, his purpose, his function.

My function? Consort.

Gigolo!

Star, without realizing it, had introduced prostitution into a world that had never known it. An innocent world, where man and woman bedded together only for the reason that they both wanted to.

A prince consort is not a prostitute. He has his work and it is often tedious, representing his sovereign mate, laying cornerstones, making speeches. Besides that, he has his duty as royal stud to ensure that the line does not die.

I had none of these. Not even the duty of entertaining Star--hell, within ten miles of me were millions of men who would jump at the chance.

The night before had been bad. It started badly and went on into one of those weary pillow conferences which married couples sometimes have, and aren't as healthy as a bang-up row. We had had one, as domestic as any working stiff worried over bills and the boss.

Star had done something she had never done before: brought work home. Five men, concerned with some intergalactic hassle--I never knew what as the discussion had been going on for hours and they sometimes spoke a language not known to me.

They ignored me, I was furniture. On Center introductions are rare; if you want to talk to someone, you say "Self," and wait. If he doesn't answer, walk off. If he does, exchange identities.

None of them did, and I was damned if I would start it. As strangers in my home it was up to them. But they didn't act as if it was my home.

I sat there, the Invisible Man, getting madder and madder.

They went on arguing, while Star listened. Presently she summoned maids and they started undressing her, brushing her hair. Center is not America, I had no reason to feel shocked. What she was doing was being rude to them, treating them as furniture (she hadn't missed how they treated me).

One said pettishly, "Your Wisdom, I do wish you would listen as you agreed to." (I've expanded the argot.)

Star said coldly, "I am judge of my conduct. No one else is capable."

True. She could judge her conduct, they could not. Nor, I realized bitterly, could I. I had been feeling angry at her (even though I knew it didn't matter) for calling in her maids and starting to ready for bed with these lunks present--and I had intended to tell her not to let it happen again. I resolved not to raise that issue.

Shortly Star chopped them off. "He's right. You're wrong. Settle it that way. Get out."

But I did intend to sneak it in by objecting to her bringing "tradespeople" home.

Star beat me to the punch. The instant we were alone she said, "My love, forgive me. I agreed to hear this silly mix-up and it dragged on and on, then I thought I could finish it quickly if I got them out of chairs, made them stand up here, and made clear that I was bored. I never thought they would wrangle another hour before I could squeeze out the real issue. And I knew that, if I put it over till tomorrow, they would stretch it into hours. But the problem was important, I couldn't drop it." She sighed. "That ridiculous man--Yet such people scramble to high places. I considered having him fool-killed. Instead I must let him correct his error, or the situation will break out anew."

I couldn't even hint that she had ruled the way she had out of annoyance; the man she had chewed out was the one in whose favor she had ruled. So I said, "Let's go to bed, you're tired"--and then didn't have sense enough to refrain from judging her myself.

Chapter 19

We went to bed.

Presently she said, "Oscar, you are displeased."

"I didn't say so."

"I feel it. Nor is it Just tonight and those tedious clowns. You have been withdrawing yourself, unhappy." She waited.

"It's nothing."

"Oscar, anything which troubles you can never be 'nothing' to me. Although I may not realize it until I know what it is."

"Well--I feel so damn useless!"

She put her soft, strong hand on my chest. "To me you are not useless. Why do you feel useless to yourself?"

"Well--look at this bed!" It was a bed the like of which Americans never dream; it could do everything but kiss you good night--and, like the city, it was beautiful, its bones did not show. "This sack, at home, would cost more--if they could build it--than the best house my mother ever lived in."

She thought about that. "Would you like to send money to your mother?" She beckoned the bedside communicator. "Is Elmendorf Air Force Base of America address enough?"

(I don't recall ever telling her where Mother lived.) "No, no!" I gestured at the talker, shutting it off. "I do not want to send her money. Her husband supports her. He won't take money from me. That's not the point."

"Then I don't see the point as yet. Beds do not matter, it is who is in a bed that counts. My darling, if you don't like this bed, we can get another. Or sleep on the floor. Beds do not matter."

"This bed is okay. The only thing wrong is that I didn't pay for it. You did. This house. My clothes. The food I eat. My--my toys! Every damned thing I have you gave me. Know what I am. Star? A gigolo! Do you Know what a gigolo is? A somewhat-male prostitute."

One of my wife's most exasperating habits was, sometimes, to refuse to snap back at me when she knew I was spoiling for a row. She looked at me thoughtfully. "America is a busy place, isn't it? People work all the time, especially men."

"Well . . . yes."

"It isn't the custom everywhere, even on Earth. A Frenchman isn't unhappy if he has free time; he orders another cafe au lait and lets the saucers pile up. Nor am I fond of work. Oscar, I ruined our evening from laziness, too anxious to avoid having to redo a weary task tomorrow. I will not make that mistake twice."

"Star, that doesn't matter. That's over with."

"I know. The first issue is rarely the key. Nor the second. Nor, sometimes, the twenty-second. Oscar, you are not a gigolo."

"What do you call it? When it looks like a duck and quacks like a duck and acts like a duck, I call it a duck. Call it a bunch of roses. It still quacks."

"No. All this around us--" She waved. "Bed. This beautiful chamber. The food we eat. My clothes and yours. Our lovely pools. The night majordomo on watch against the

chance that you or I might demand a singing bird or a ripe melon. Our captive gardens. All we see or touch or use or fancy--and a thousand times as much in distant places, all these you earned with your own strong hands; they are yours, by right."

I snorted. "They are," she insisted. "That was our contract. I promised you great adventure, and greater treasure, and even greater danger. You agreed. You said, 'Princess, you've hired yourself a boy.' " She smiled. "Such a big boy. Darling, I think the dangers were greater than you guessed . . . so it has pleased me, until now, that the treasure is greater than you were likely to have guessed. Please don't be shy about accepting it. You have earned it and more--as much as you are ever willing to accept"

"Uh--Even if you are right, it's too much. I'm drowning in marshmallows!"

"But, Oscar, you don't have to take one bit you don't want. We can live simply. In one room with bed folded into wall if it pleases you."

"That's no solution."

"Perhaps you would like bachelor digs, out in town?"

" 'Tossing my shoes,' eh?"

She said levelly, "My husband, if your shoes are ever tossed, you must toss them. I jumped over your sword. I shall not jump back."

"Take it easy!" I said. "It was your suggestion. If I took it wrong, I'm sorry. I know you don t go back on your word. But you might be regretting it."

"I am not regretting it. Are you?"

"No, Star, no! But--"

"That's a long pause for so short a word," she said gravely. "Will you tell me?"

"Uh . . . that's just it. Why didn't you tell me?"

"Tell what, Oscar? There are so many things to tell."

"Well, a lot of things. What I was getting into. About you being the Empress of the whole works, in particular . . . before you let me jump over the sword with you."

Her face did not change but tears rolled down her cheeks. "I could answer that you did not ask me--"

"I didn't know what to ask!"

"That is true. I could assert, truthfully, that had you asked I would have answered. I could protest that I did not 'let you' jump over the sword, that you overruled my protests that it was not necessary to offer me the honor of marriage by the laws of your people . . . that I was a wench you could tumble at will. I could point out that I am not an empress, not royal, but a working woman whose job does not permit her even the luxury of being noble. All these are true. But I will not hide behind them; I will meet your question." She slipped into Nevian. "Milord Hero, I feared sorely that if I did not bend to your will, you would leave me!"

"Milady wife, truly did you think that your champion would desert you in your peril?" I went on in English, "Well, that nails it to the barn. You married me because the Egg damned well had to be recovered and Your Wisdom told you that I was necessary to the job--and might bug out if you didn't. Well, Your Wisdom wasn't sharp on that point; I don't bug out. Stupid of me but I'm stubborn." I started to get out of bed.

"Milord love!" She was dying openly.

"Excuse me. Got to find a pair of shoes. See how far I can throw them." I was being nasty as only a man can be who has had his pride wounded.

"Please, Oscar, please! Hear me first."

I heaved a sigh. "Talk ahead."

She grabbed my hand so hard I would have lost fingers had I tried to pull loose. "Hear me out. My beloved, it was not that at all. I knew that you would not give up our quest until it was finished or we were dead. I knew! Not only had I reports reaching back years before I ever saw you but also we had shared joy and danger and hardship; I knew your mettle. But, had it been needed, I could have bound you with a net of words, persuaded you to agree to betrothal only--until the quest was over. You are a romantic, you would have agreed. But, darling, darling! I wanted to many you . . . bind you to me by your rules, so that"--she stopped to sniff back tears--"so that, when you saw all this, and this, and this, and the things you call 'your toys,' you still would stay with me. It was not politics, it was low--love romantic and unreasoned, love for your own sweet self."

She dropped her face into her hands and I could barely hear her. "But I know so little of love. Love is a butterfly that lights when it listeth, leaves as it chooses; it is never bound with chains. I sinned. I tried to bind you. Unjust I knew it was, cruel to you I now see it to be." Star looked up with crooked smile. "Even Her Wisdom has no wisdom when it comes to being a woman. But, though silly wench I be, I am not too stubborn to know that I have wronged my beloved when my face is rubbed in it. Go, go, get your sword; I will jump back over it and my champion will be free of his silken cage. Go, milord Hero, while my heart is firm."

"Go fetch your own sword, wench. That paddling is long overdue."

Suddenly she grinned, all hoyden. "But, darling, my sword is in Karth-Hokesh. Don't you remember?"

"You can't avoid it this time!" I grabbed her. Star is a handful and slippery, with amazing muscles. But I'm bigger and she didn't fight as hard as she could have. Still I lost skin and picked up bruises before I got her legs pinned and one arm twisted behind her. I gave her a couple of hearty spanks, hard enough to print each finger in pink, then lost interest.

Now tell me, were those words straight from her heart--or was it acting by the smartest woman in twenty universes?

Later, Star said, "I'm glad your chest is not a scratchy rug, like some men, my beautiful."

"I was a pretty baby, too. How many chests have you checked?"

"A random sample. Darling, have you decided to keep me?"

"A while. On good behavior, you understand."

"I'd rather be kept on bad behavior. But--while you're feeling mellow--if you are--I had best tell you another thing--and take my spanking if I must."

"You're too anxious. One a day is maximum, hear me?"

"As you will, sir. Yassuh, Boss man. I'll have my sword fetched in the morning and you can spank me with it at your leisure. If you think you can catch me. But I must tell this and get it off my chest."

"There's nothing on your chest. Unless you count--"

"Please! You've been going to our therapists."

"Once a week." The first thing Star had ordered was an examination for me so complete as to make an Army physical seem perfunctory. "The Head Sawbones insists that my wounds aren't healed but I don't believe him; I've never felt better."

"He, is stalling, Oscar--by my order. You're healed, I am not unskilled, I was most careful. But--darling, I did this for selfish reasons and now you must tell me if I have been cruel and unjust to you again. I admit I was sneaky. But my intentions were good. However, I know, as the prime lesson of my profession, that good intentions are the source of more folly than all other causes put together."

"Star, what are you prattling about? Women are the source of all folly."

"Yes, dearest. Because they always have good intentions--and can prove it. Men sometimes act from rational self-interest, which is safer. But not often."

"That's because half their ancestors are female. Why have I been keeping doctor's appointments if I don t need them?"

"I didn't say you don't need them. But you may not think so. Oscar, you are far advanced with Long-Life treatments." She eyed me as if ready to parry or retreat.

"Well, I'll be damned!"

"You object? At this stage it can be reversed."

"I hadn't thought about it." I knew that Long-Life was available on Center but knew also that it was rigidly restricted. Anybody could have it--just before emigrating to a sparsely settled planet. Permanent residents must grow old and die. This was one matter in which one of Star's predecessors had interfered in local government. Center, with disease practically conquered, great prosperity, and lodestone of a myriad peoples, had grown too crowded, especially when Long-Life sent skyward the average age of death.

This stern rule had thinned the crowds. Some people took Long-Life early, went through a Gate and took their chances in wilderness. More waited until that first twinge that brings awareness of death, then decided that they weren't too old for a change. And some sat tight and died when their time came.

I knew that twinge; it had been handed to me by a bolo in a jungle. "I guess I have no objection."

She sighed with relief. "I didn't know and should not have slipped it into your coffee. Do I rate a spanking?"

"We'll add it to the list you already rate and give them to you all at once. Probably cripple you. Star, how long is 'Long-Life'?"

"That's hard to answer. Very few who have had it have died in bed. If you live as active a life as I know you will--from your temperament--you are most unlikely to die of old age. Nor of disease."

"And I never grow old?" It takes getting used to.

"Oh, yes, you can grow old. Worse yet, senility stretches in proportion. If you let it. If those around you allow it. However--Darling, how old do I look? Don't tell me with your heart, tell me with your eyes. By Earth standards. Be truthful, I know the answer."

It was ever a joy to look at Star but I tried to look at her freshly, for hints of autumn--outer corners of eyes, her hands, for tiny changes in skin--hell, not even a stretch mark, yet I knew she had a grandchild.

"Star, when I first saw you, I guessed eighteen. You turned around and I upped the ante a little. Now, looking closely and not giving you any breaks--not over twenty-five. And that is because your features seem mature. When you laugh, you're a teen-ager; when you wheedle, or look awestruck, or suddenly delighted with a puppy or kitten or something, you're about twelve. From the chin up, I mean; from the chin down you can't pass for less than eighteen."

"A buxom eighteen," she added. "Twenty-five Earth years--by rates of growth on Earth--is right on the mark I was shooting at. The age when a woman stops growing and starts aging. Oscar, your apparent age under Long-Life is a matter of choice. Take my Uncle Joseph--the one who sometimes calls himself 'Count Cagliostro.' He set himself at thirty-five, because he says that anything younger is a boy. Rufo prefers to look older. He says it gets him respectful treatment, keeps him out of brawls with lounger men--and still lets him give a younger man a shock if one does pick a fight because, as you know, Rufo's older age is mostly from chin up."

"Or the shock he can give younger women," I suggested.

"With Rufo one never knows. Dearest, I didn't finish telling you. Part of it is teaching the body to repair itself. Your language lessons here--there hasn't been a one but what a hypno-therapist was waiting to give your body a lesson through your sleeping mind, after your language lesson. Part of apparent age is cosmetic therapy--Rufo need not be bald--but more is controlled by the mind. When you decide what age you like, they can start imprinting it."

"I'll think about it. I don't want to look too much older than you."

Star looked delighted. "Thank you, dear! You see how selfish I've been."

"How? I missed that point."

She put a hand over mine. "I didn't want you to grow old--and die! --while I stayed young."

I blinked at her. "Gosh, lady, that was selfish of you, wasn't it? But you could varnish me and keep me in the bedroom. Like your aunt."

She made a face. "You're a nasty man. She didn't varnish them."

"Star, I haven't seen any of those keepsake corpses around here."

She looked surprised. "But that's on the planet where I was born. This universe, another star. Very pretty place. Didn't I ever say?"

"Star, my darling, mostly you've never said."

"I'm sorry. Oscar, I don't want to hand you surprises. Ask me. Tonight. Anything."

I considered it. One thing I had wondered about, a certain lack. Or perhaps the women of her part of the race had another rhythm. But I had been stopped by the fact that I had married a grandmother--how old? "Star, are you pregnant?"

"Why, no, dear. Oh! Do you want me to be? You want us to have children?"

I stumbled, trying to explain that I hadn't been sure it was possible--or maybe she was. Star looked troubled. "I'm going to upset you again. I had best tell it all. Oscar, I was no more brought up to luxury than you were. A pleasant childhood, my people were ranchers. I married young and was a simple mathematics teacher, with a hobby research in conjectural and optional geometries. Magic, I mean. Three children. My husband and I got along well . . . until I was nominated. Not selected, just named for examination and possible training. He knew I was a genetic candidate when he married me--but so many millions are. It didn't seem important.

"He wanted me to refuse. I almost did. But when I accepted, he--well, he 'tossed my shoes.' We do it formally there; he published a notice that I was no longer his wife."

"He did, eh? Mind if I look him up and break his arms?"

"Dear, dear! That was many years ago and far away; he is long dead. It doesn't matter."

"In any case he's dead. Your three kids--one of them is Rufo's father? Or mother?"

"Oh, no! That was later."

"Well?"

Star took a deep breath. "Oscar, I have about fifty children."

That did it. Too many shocks and I guess I showed it, for Star's face reflected deep concern. She rushed through the explanation.

When she was named heir, changes were made in her, surgical, biochemical, and endocrinal. Nothing as drastic as spaying and to different ends and by techniques more subtle than ours. But the result was that about two hundred tiny bits of Star--ova alive and latent--were stored near absolute zero.

Some fifty had been quickened, mostly by emperors long dead but "alive" in their stored seed--genetic gambles on getting one or more future emperors. Star had not borne them; an heir's time is too precious. She had never seen most of them; Rufo's father was an exception. She didn't say, but I think Star liked to have a child around to play with and love--until the strenuous first years of her reign and the Quest for the Egg left her no time.

This change had a double purpose: to get some hundreds of star-line children from a single mother, and to leave the mother free. By endocrine control of some sort, Star was left free of Eve's rhythm but in all ways young--not pills nor hormone injections; this was permanent. She was simply a healthy woman who never had "bad days." This was not for her convenience but to insure that her judgment as the Great Judge would never be whipsawed by her glands. "This is sensible," she said seriously. "I can remember there used to be days when I would bite the head off my dearest friend for no reason, then burst into tears. One can't be judicial in that sort of storm."

"Uh, did it affect your interest? I mean your desire for--"

She gave me a hearty grin. "What do you think?" She added seriously, "The only thing that affects my libido--changes it for the worse, I mean--are . . . is? --English has the oddest structure--is-are those pesky imprintings. Sometimes up, sometimes down--and you'll remember one woman whose name we won't mention who affected me so carnivorously that I didn't dare come near you until I had exorcised her black soul! A fresh imprint affects my judgment as well, so I never hear a case until I have digested the latest one. I'll be glad when they're over!"

"So will I."

"Not as glad as I will be. But, aside from that, darling, I don t vary much as a female and you know it. Just my usual bawdy self who eats young boys for breakfast and seduces them into jumping over swords."

"How many swords?"

She looked at me sharply. "Since my first husband kicked me out I have not been married until I married you, Mr. Gordon. If that is not what you meant, I don't think you should hold against me things that happened before you were born. If you want details since then, I'll satisfy your curiosity. Your morbid curiosity, if I may say so."

"You want to boast. Wench, I won't pamper it."

"I do not want to boast! I've little to boast about. The Crisis of the Egg left me almost no time in which to be a woman, damn it! Until Oscar the Rooster came along. Thank you, sir."

"And keep a civil tongue in your head."

"Yes, sir. Nice Rooster! But you've led us far from our muttons, dear. If you want children--yes, darling! There are about two hundred and thirty eggs left and they belong

to me. Not to posterity. Not to the dear people, bless their greedy little hearts. Not to those God-playing genetic manipulators. Me! It's all I own. All else is ex offico. But these are mine . . . and if you want them, they are yours, my only dear."

I should have said, "Yes!" and kissed her. What I did say was, "Uh, let's not rush it."

Her face fell. "As milord Hero husband pleases."

"Look, don't get Nevian and formal. I mean, well, it takes getting used to. Syringes and things, I suppose, and monkeying by technicians. And, while I realize you don't have time to have a baby yourself--"

I was trying to say that, ever since I got straightened out about the Stork, I had taken for granted the usual setup, and artificial insemination was a dirty trick to play even on a cow--and that this job, subcontracted on both sides, made me think of slots in a Horn & Hardart, or a mail-order suit. But give me time and I would adjust. Just as she had adjusted to those damned imprints--

She gripped my hands. "Darling, you needn't!"

"Needn't what?"

"Be monkeyed with by technicians. And I will take time to have your baby. If you don't mind seeing my body get gross and huge--it does, it does, I remember--then happily I will do it. All will be as with other people so far as you are concerned. No syringes. No technicians. Nothing to offend your pride. Oh, I'll have to be worked on. But I'm used to being handled like a prize cow; it means no more than having my hair shampooed."

"Star, you would go through nine months of inconvenience--and maybe die in childbirth--to save me a few moments' annoyance?"

"I shall not die, Three children, remember? Normal deliveries, no trouble."

"But, as you pointed out, that was 'many years ago.' "

"No matter."

"Uh, how many years?" ("How old are you, woman?" The question I never dared ask.)

She looked upset. "Does it matter, Oscar?"

"Uh, I suppose not. You know more about medicine than I do--"

She said slowly, "You were asking how old I am, were you not?"

I didn't say anything. She waited, then went on, "An old saw from your world says that a woman is as young as she feels. And I feel young and I am young and I have zest for life and I can bear a baby--or many babies--m my own belly. But I know--oh, I know! --that your worry is not just that I am too rich and occupy a position not easy for a husband. Yes, I know that part too well; my first husband rejected me for that. But be was my age. The most cruel and unjust thing I have done is that I knew that my age could matter to you--and I kept still. That was why Rufo was so outraged. After you were asleep that night in the cave of the Forest of Dragons he told me so, in biting words. He said he knew I was not above enticing young boys but he never thought that I would sink so low as to trap one into marriage without first telling him. He's never had a high opinion of his old granny, he said, but this time--"

"Shut up, Star!"

"Yes, milord."

"It doesn't make a damn bit of difference!"--and I said it so flatly that I believed it--and do now. "Rufo doesn't know what I think. You are younger than tomorrow's dawn--you always will be. That's the last I want to hear about it!"

"Yes, milord."

"And knock that off, too. Just say, 'Okay, Oscar.' "

"Yes, Oscar! Okay!"

"Better. Unless you're honing for another spanking. And I'm too tired." I changed the subject. "About this other matter--There's no reason to stretch your pretty tummy if other ways are at hand. I'm a country jake, that's all; I'm not used to big city ways. When you suggested that you do it yourself, did you mean that they could put you back together the way you were?"

"No. I would simply be host-mother as well as genetic mother." She smiled and I knew I was making progress. "But saving a tidy sum of that money you don't want to spend. Those healthy, sturdy women who have other people's babies charge high. Four babies, they can retire--ten makes them wealthy."

"I should think they would charge high! Star, I don't object to spending money. I'll concede, if you say so, that I've earned more than I spend, by my work as a professional hero. That's a tough racket, too."

"You've earned it."

"This citified way of having babies--Can you pick it? Boy, or girl?"

"Of course. Male-giving wigglers swim faster, they can be sorted out. That's why Wisdoms are usually men--I was an unplanned candidate. You shall have a son, Oscar."

"Might prefer a girl. I've a weakness for little girls."

"A boy, a girl--or both. Or as many as you want."

"Star, let me study it. Lots of angles--and I don't think as well as you do."

"Pooh!"

"If you don't think better than I do, the cash customers are getting rooked. Mmm, male seed can be stored as easily as eggs?"

"Much easier."

"That's all the answer we need now. I'm not too jumpy about syringes; I've stood in enough Army queues. I'll go to the clinic or whatever it is, then we can settle it slowly. When we decide"--I shrugged--"mail the postcard and when it goes clunk! --we're parents. Or some such. From there on the technicians and those husky gals can handle it."

"Yes, milo--Okay, darling!"

All better. Almost her little girl face. Certainly her sixteen-year-old face, with new party dress and boys a shivery, delightful danger. "Star, you said earlier that it was often not the second issue out even the twenty-second that matters."

"Yes."

"I know what's wrong with me. I can tell you--and maybe Her Wisdom knows the answer."

She blinked. "If you can tell me, sweetheart--Her Wisdom will solve it, even if I have to tear the place down and put it back up differently--from here to the next galaxy--or I'll go out of the Wisdom business!"

"That sounds more like my Lucky Star. All right, it's not that I'm a gigolo. I've earned my coffee and cakes, at least; the Soul-Eater did damn near eat my soul, he knew its exact shape--he . . . it--it knew things I had long forgotten. It was rough and the pay ought to be high. It's not your age, dearest. Who cares how old Helen of Troy is? You're the right age forever--can a man be luckier? I'm not jealous of your position; I wouldn't want it with chocolate icing. I'm not jealous of the men in your life--the lucky stiffs! Not even now, as long as I don't stumble over them getting to the bathroom."

"There are no other men in my life now, milord husband."

"I had no reason to think so. But there is always next week, and even you can't have a Sight about that, my beloved. You've taught me that marriage is not a form of death--and you obviously aren't dead, you lively wench."

"Perhaps not a Sight," she admitted. "But a feeling."

"I won't bet on it. I've read the Kinsey Report."

"What report?"

"He disproved the Mermaid theory. About married women. Forget it. Hypothetical question: If Jocko visited Center, would you still have the same feeling? We should have to invite him to sleep here."

"The Doral will never leave Nevia."

"Don't blame him, Nevia is wonderful. I said If--If he does, will you offer him 'roof, table, and bed'?"

"That," she said firmly, "is your decision, milord."

"Rephrase it: Will you expect me to humiliate Jocko by not returning his hospitality? Gallant old Jocko, who let us live when he was entitled to kill us? Whose bounty--arrows and many things, including a new medic's kit--kept us alive and let us win back the Egg?"

"By Nevian customs of roof and table and bed," she insisted, "the husband decides, milord husband."

"We aren't in Nevia and here a wife has a mind of her own. You're dodging, wench."

She grinned naughtily. "Does that 'if' of yours include Muri? And Letva? They're his favorites, he wouldn't travel without them. And how about little what's-her-name? --the nymphet?"

"I give up. I was just trying to prove that jumping over a sword does not turn a lively wench into a nun."

"I am aware of it, my Hero," she said levelly. "All I can say is that I intend that this wench shall never give her Hero a moment's unease--and my intentions are usually carried out. I am not 'Her Wisdom' for nothing."

"Fair enough. I never thought you would cause me that sort of unease. I was trying to show that the task may not be too difficult. Damn it, we've wandered off. Here's my real problem. I'm not good for anything. I'm worthless."

"Why, my dearest! You're good for me."

"But not for myself. Star, gigolo or not, I can't be a pet poodle. Not even yours. Look, you've got a job. It keeps you busy and it's important. But me? There is nothing for me to do, nothing at all! --nothing better than designing bad jewelry. You know what I am? A hero by trade, so you told me; you recruited me. Now I'm retired. Do you know anything in all twenty universes more useless than a retired hero?"

She mentioned a couple. I said, "You're stalling. Anyhow they break up the blankness of the male chest. I'm serious, Star. This is the issue that has made me unfit to live with. Darling, I'm asking you to put your whole mind on it--and all those ghostly helpers. Treat it the way you treat an Imperial problem. Forget I'm your husband. Consider my total situation, all you know about me--and tell me what I can do with hands and head and time that is worth doing. Me, being what I am."

She held still for long minutes, her face in that professional calm she had worn the times I had audited her work. "You are right," she said at last. "There is nothing worth your powers on this planet."

"Then what do I do?"

She said tonelessly, "You must leave."

"Huh?"

"You think I like the answer, my husband? Do you think I like most answers I must give? But you asked me to consider it professionally. I obeyed. That is the answer. You must leave this planet--and me."

"So my shoes get tossed anyhow?"

"Be not bitter, milord. That is the answer. I can evade and be womanish only in my private life; I cannot refuse to think if I agree to do so as 'Her Wisdom.' You must leave me. But, no, no, no, your shoes are not tossed! You will leave, because you must. Not because I wish it." Her face stayed calm but tears streamed again. "One cannot ride a cat . . . nor hurry a snail . . . nor teach a snake to fly. Nor make a poodle of a Hero. I knew it, I refused to look at it. You will do what you must do. But your shoes will remain ever by my bed, I am not sending you away!" She blinked back tears. "I cannot lie to you, even by silence. I will not say that no other shoes will rest here . . . if you are gone a long time. I have been lonely. There are no words to say how lonely this job is. When you go . . . I shall be lonelier than ever. But you will find your shoes here when you return."

"When I return? You have a Sight?"

"No, milord Hero. I have only a feeling . . . that if you live . . . you will return. Perhaps many times. But Heroes do not die in bed. Not even this one." She blinked and tears stopped and her voice was steady. "Now, milord husband, if it please you, shall we dim the lights and rest?"

We did and she put her head on my shoulder and did not cry. But we did not sleep. After an aching time I said, "Star, do you hear what I hear?"

She raised her head. "I hear nothing."

"The City. Can't you hear it? People. Machines. Even thoughts so thick your bones feel it and your ear almost catches it."

"Yes. I know that sound."

"Star, do you like it here?"

"No. It was never necessary that I like it."

"Look, damn it! You said that I would leave. Come with me!"

"Oh, Oscar!"

"What do you owe them? Isn't recovering the Egg enough? Let them take a new victim. Come walk the Glory Road with me again! There must be work in my line somewhere."

"There is always work for Heroes."

"Okay, we set up in business, you and I. Heroing isn't a bad job. The meals are irregular and the pay uncertain--out it's never dull. We'll run ads: 'Gordon & Gordon, Heroing Done Reasonable. No job too large, no job too small. Dragons exterminated by contract, satisfaction guaranteed or no pay. Free estimates on other work. Questing, maiden-rescuing, golden fleece located night or day?' "

I was trying to jolly her but Star doesn't jolly. She answered in sober earnest. "Oscar, if I am to retire, I should train my heir first. True, no one can order me to do anything--but I have a duty to train my replacement."

"How long will that take?"

"Not long. Thirty years, about."

"Thirty years!"

"I could force it to twenty-five, I think."

I sighed. "Star, do you know how old I am?"

"Yes. Not yet twenty-five. But you will get no older!"

"But right now I'm still that age. That's all the time there has ever been for me. Twenty-five years as a pet poodle and I won't be a hero, nor anything. I'll be out of my silly mind."

She thought about it. "Yes. That is true."

She turned over, we made a spoon and pretended to sleep.

Later I felt her shoulders shaking and knew that she was sobbing. "Star?"

She didn't turn her head. All I heard was a choking voice, "Oh, my dear, my very dear! If I were even a hundred years younger!"

Chapter 20

I let the precious, useless gems dribble through my fingers, listlessly pushed them aside. If I were only a hundred years older--

But Star was right. She could not leave her post without relief. Her notion of proper relief, not mine nor anyone else's. And I couldn't stay in this upholstered jail much longer without beating my head on the bars.

Yet both of us wanted to stay together.

The real nasty hell of it was that I knew--just as she knew--that each of us would forget. Some, anyhow. Enough so that there would be other shoes, other men, and she would laugh again.

And so would I--She had seen that and had gravely, gently, with subtle consideration for another's feelings, told me indirectly that I need not feel guilty when next I courted some other girl, in some other land, somewhere.

Then why did I feel like a heel?

How did I get trapped with no way to turn without being forced to choose between hurting my beloved and going clean off my rocker?

I read somewhere about a man who lived on a high mountain, because of asthma, the choking, killing land, while his wife lived on the coast below him, because of heart trouble that could not stand altitude. Sometimes they looked at each other through telescopes.

In the morning there had been no talk of Stars retiring. The unstated quid-pro-quo was that, if she planned to retire, I would hang around (thirty years!) until she did. Her Wisdom had concluded that I could not, and did not speak of it. We had a luxurious breakfast and were cheerful, each with his secret thoughts.

Nor were children mentioned. Oh, I would find that clinic, do what was needed. If she wanted to mix her star line with my common blood, she could, tomorrow or a hundred years hence. Or smile tenderly and have it cleaned out with the rest of the trash. None of my people had even been mayor of Podunk and a plow horse isn't groomed for the Irish Sweepstakes. If Star put a child together from our genes, it would be sentiment, a living valentine--a younger poodle she could pet before she let it run free. But sentiment only, as sticky if not as morbid as that of her aunt with the dead husbands, for the Imperium could not use my bend sinister.

I looked up at my sword, hanging opposite me. I hadn't touched it since the party, long past, when Star chose to dress for the Glory Road. I took it down, buckled it on and drew it--felt that surge of liveness and had a sudden vision of a long road and a castle on a hill.

What does a champion owe his lady when the quest is done?

Quit dodging, Gordon! What does a husband owe his wife? This very sword--"Jump Rogue and Princess leap. My wife art thou and mine to keep." "--for richer, for poorer, for better, for worse . . . to love and to cherish, till death do us part." That was what I meant by that doggerel and Star had known it and I had known it and knew it now.

When we vowed, it had seemed likely that we would be parted by death that same day. But that didn't reduce the vow nor the deepness with which I had meant it. I hadn't jumped the sword to catch a tumble on the grass before I died; I could have had that free. No, I had wanted "--to have and to hold, to love and to cherish, till death do us part"!

Star had kept her vow to the letter. Why did I have itchy feet?

Scratch a hero and find a bum.

And a retired hero was as silly as those out-of-work kings that clutter Europe.

I slammed out of our "flat," wearing sword and not giving a damn about stares, apported to our therapists, found where I should go, went there, did what was necessary, told the boss biotechnician that Her Wisdom must be told, and jumped down his throat when he asked questions.

Then back to the nearest apport booth and hesitated--I needed companionship the way an Alcoholics-Anonymous needs his hand held. But I had no intimates, just hundreds of acquaintances. It isn't easy for the Empress's consort to have friends.

Rufo it had to be. But in all the months I had been on Center I had never been in Rufo's home. Center does not practice the barbarous custom of dropping in on people and I had seen Rufo only at the Residence, or on parties; Rufo had never invited me to his home. No, no coldness there; we saw him often, but always he had come to us.

I looked for him in apport listings--no luck. Then as little with see-speak lists. I called the Residence, got the communication officer. He said that "Rufo" was not a surname and tried to brush me off. I said, "Hold it, you overpaid clerk! Switch me off and you'll be in charge of smoke signals in Timbuktu an hour from now. Now listen. This bloke is elderly, baldheaded, one of his names is 'Rufo' I think, and he is a distinguished comparative culturologist. And he is a grandson of Her Wisdom. I think you know who he is and have been dragging your feet from bureaucratic arrogance. You have five minutes. Then I talk to Her Wisdom and ask her, while you pack!"

("Stop! Danger you! Other old bald Rufo (?) top compculturist. Wisdom egg-sperm-egg. Five-minutes. Liar and/or fool. Wisdom? Catastrophe!")

In less than five minutes Rufo's image filled the tank. "Well!" he said. "I wondered who had enough weight to crash my shutoff."

"Rufo, may I come see you?"

His scalp wrinkled. "Mice in the pantry, son? Your face reminds me of the time my uncle--"

"Please, Rufo!"

"Yes, son," he said gently. "I'll send the dancing girls home. Or shall I keep them?"

"I don't care. How do I find you?"

He told me, I punched his code, added my charge number, and I was there, a thousand miles around the horizon. Rufo's place was a mansion as lavish as Jocko's and thousands

of years more sophisticated. I gathered an impression that Rufo had the biggest household on Center, all female. I was wrong. But all female servants, visitors, cousins, daughters, made themselves a reception committee--to look at Her Wisdom's bedmate. Rufo shooed them away and took me to his study. A dancing girl (evidently a secretary) was fussing over papers and tapes. Rufo slapped her fanny out, gave me a comfortable chair, a drink, put cigarettes near me, sat down and said nothing.

Smoking isn't popular on Center, what they use as tobacco is the reason. I picked up a cigarette. "Chesterfields! Good God!"

"Have 'em smuggled," he said. "But they don't make anything like Sweet Caps anymore. Bridge sweepings and chopped hay."

I hadn't smoked in months. But Star had told me that cancer and such I could now forget. So I lit it--and coughed like a Nevian dragon. Vice requires constant practice.

" 'What news on the Rialto?' " Rufo inquired. He glanced at my sword.

"Oh, nothing." Having interrupted Rufo's work, I now shied at baring my domestic troubles.

Rufo sat and smoked and waited. I needed to say something and the American cigarette reminded me of an incident, one that had added to my unstable condition. At a party a week earlier, I had met a man thirty-five in appearance, smooth, polite, but with that supercilious air that says: "Your fly is unzipped, old man, but I'm too urbane to mention it."

But I had been delighted to meet him, he had spoken English!

I had thought that Star, Rufo, and myself were the only ones on Center who spoke English. We often spoke it. Star on my account, Rufo because he liked to practice. He spoke Cockney like a costermonger, Bostonese like Beacon Hill, Aussie like a kangaroo; Rufo knew all English languages.

This chap spoke good General American. "Nebbi is the name, he said, shaking hands where no one shakes hands, "and you're Gordon, I know. Delighted to meet you."

"Me, too," I agreed. "It's a surprise and a pleasure to hear my own language."

"Professional knowledge, my dear chap. Comparative culturologist, linguisto-historo-political. You're American, I know. Let me place it--Deep-South, not born there. Possibly New England. Overlaid with displaced Middle Western, California perhaps. Basic speech, lower-middle class, mixed."

The smooth oaf was good. Mother and I lived in Boston while my father was away, 1942-45. I'll never forget those winters; I wore overshoes from November to April. I had lived Deep South, Georgia and Florida, and in California at La Jolla during the Korean unWar and, later, in college. "Lower-middle class"? Mother had not thought so.

"Near enough," I agreed. "I know one of your colleagues."

"I know whom you mean, 'the Mad Scientist.' Wonderful wacky theories. But tell me: How were things when you left? Especially, how is the United States getting along with its Noble Experiment?"

" 'Noble Experiment'?" I had to think; Prohibition was gone before I was born. "Oh, that was repealed."

"Really? I must go back for a field trip. What have you now? A king? I could see that your country was headed that way but I did not expect it so soon."

"Oh, no," I said. "I was talking about Prohibition."

"Oh, that. Symptomatic but not basic. I was speaking of the amusing notion of chatter rule. 'Democracy.' A curious delusion--as if adding zeros could produce a sum. But it was tried in your tribal land on a mammoth scale. Before you were born, no doubt. I thought you meant that even the corpse had been swept away." He smiled. "Then they still have elections and all that?"

"The last time I looked, yes."

"Oh, wonderful. Fantastic, simply fantastic. Well, we must get together, I want to quiz you. I've been studying your planet a long time--the most amazing pathologies in tile explored complex. So long. Don't take any wooden nickels, as your tribesmen say."

I told Rufo about it. "Rufe, I know I came from a barbarous planet. But does that excuse his rudeness? Or was it rudeness? I haven't really got the hang of good manners here."

Rufo frowned. "It is bad manners anywhere to sneer at a person's birthplace, tribe, or customs. A man does it at his own risk. If you kill him, nothing will happen to you. It might embarrass Her Wisdom a little. If She can be embarrassed."

"I won't kill him, it's not that important."

"Then forget it. Nebbi is a snob. He knows a little, understands nothing, and thinks the universes would be better if he had designed them. Ignore him."

"I will. It was just--look, Rufo, my country isn't perfect. But I don t enjoy hearing it from a stranger."

"Who does? I like your country, it has flavor. But--I'm not a stranger and this is not a sneer. Nebbi was right."

"Huh?"

"Except that he sees only the surface. Democracy can't work. Mathematicians, peasants, and animals, that's all there is--so democracy, a theory based on the assumption that mathematicians and peasants are equal, can never work. Wisdom is not additive; its maximum is that of the wisest man in a given group.

"But a democratic form of government is okay, as long as it doesn't work. Any social organization does well enough if it isn't rigid. The framework doesn't matter as long as there is enough looseness to permit that one man in a multitude to display his genius. Most so-called social scientists seem to think that organization is everything. It is almost nothing--except when it is a straitjacket. It is the incidence of heroes that counts, not the pattern of zeros."

He added, "Your country has a system free enough to let its heroes work at their trade. It should last a long time--unless its looseness is destroyed from inside."

"I hope you're right."

"I am right. This subject I know and I'm not stupid, as Nebbi thinks. He's right about the futility of 'adding zeros'--but he doesn't realize that he is a zero."

I grinned. "No point in letting a zero get my goat."

"None. Especially as you are not. Wherever you go, you will make yourself felt, you won't be one of the nerd. I respect you, and I don't respect many. Never people as a whole, I could never be a democrat at heart. To claim to 'respect' and even to 'love' the great mass with their yaps at one end and smelly feet at the other requires the fatuous, uncritical, saccharine, blind, sentimental slobbishness found in some nursery supervisors, most spaniel dogs, and all missionaries. It isn't a political system, it's a disease. But be of

good cheer; your American politicians are immune to this disease . . . and your customs allow the non-zero elbow room."

Rufo glanced at my sword again. "Old friend, you didn't come here to bitch about Nebbi." "No." I looked down at that keen blade. "I fetched this to shave you, Rufo."

"Eh?"

"I promised I would shave your corpse. I owe it to you for the slick job you did on me. So here I am, to shave the barber."

He said slowly, "But I'm not yet a corpse." He did not move. But his eyes did, estimating distance between us. Rufo wasn't counting on my being "chivalrous"; he had lived too long.

"Oh, that can be arranged," I said cheerfully, "unless I get straight answers from you."

He relaxed a touch. "I'll try, Oscar."

"More than try, please. You're my last chance. Rufo, this must be private. Even from Star."

"Under the Rose. My word on it."

"With your fingers crossed, no doubt. But don't risk it, I'm serious. And straight answers, I need them. I want advice about my marriage."

He looked glum. "And I meant to go out today. Instead I worked. Oscar, I would rather criticize a woman's firstborn, or even her taste in hats. Much safer to teach a shark to bite. What if I refuse?"

"Then I shave you!"

"You would, you heavy-handed headsman!" He frowned. " 'Straight answers--' You don't want them, you want a shoulder to cry on."

"Maybe that, too. But I do want straight answers, not the lies you can tell in your sleep."

"So I lose either way. Telling a man the truth about his marriage is suicide. I think I'll sit tight and see if you have the heart to cut me down in cold blood."

"Oh, Rufo, I'll put my sword under your lock and key if you like. You know I would never draw against you."

"I know no such thing," he said querulously. "There's always that first time. Scoundrels are predictable, but you're a man of honor and that frightens me. Can't we handle this over the see-speak?"

"Come off it, Rufo. I've nobody else to turn to. I want you to speak frankly. I know that a marriage counselor has to lay it on the line, pull no punches. For the sake of blood we've lost together I ask you to advise me. And frankly, of course!"

" 'Of course,' is it? The last time I risked it you were for cutting the tongue out of me." He looked at me moodily. "But I was ever a fool where friendship speaks. Hear, I'll dicker ye a fair dicker. You talk, I'll listen . . . and if it should come about that you're taking so long that my tired old kidneys complain and I'm forced to leave your welcome company for a moment . . . why, then you'll misunderstand and go away in a huff and we'll say no more about it. Eh?"

"Okay."

"The Chair recognizes you. Proceed."

So I talked. I talked out my dilemma and frustration, sparing neither self nor Star (it was for her sake, too, and it wasn't necessary to speak of our most private matters; those,

at least, were dandy). But I told our quarrels and many matters best kept in the family, I had to.

Rufo listened. Presently he stood up and paced, looking troubled. Once he tut-tutted over the men Star had brought home. "She shouldn't have called her maids in. But do forget it, lad. She never remembers that men are shy, whereas females merely have customs. Allow Her this."

Later he said, "No need to be jealous of Jocko, son. He drives a tack with a sledgehammer."

"I'm not jealous."

"That's what Menelaus said. But leave room for give and take. Every marriage needs it."

Finally I ran down, having told him Star's prediction that I would leave. "I'm not blaming her for anything and talking about it has straightened me out. I can sweat it out now, behave myself, and be a good husband. She does make terrible sacrifices to do her job--and the least I can do is make it easier. She's so sweet and gentle and good."

Rufo stopped, some distance away with his back to his desk. "You think so?"

"I know so."

"She's an old bag!"

I was out of my chair and at him at once. I didn't draw. Didn't think of it, wouldn't have anyhow. I wanted to get my hands on him and punish him for talking that way about my beloved.

He bounced over the desk like a ball and by the time I covered the length of the room, Rufo was behind it, one hand in a drawer.

"Naughty, naughty," he said. "Oscar, I don't want to shave you."

"Come out and fight like a man!"

"Never, old friend. One step closer and you're dog meat. All your fine promises, your pleadings. 'Pull no punches' you said. 'Lay it on the line' you said. 'Speak frankly' you said. Sit down in that chair."

" 'Speaking frankly' doesn't mean being insulting!"

"Who's to judge? Can I submit my remains for approval before I make them? Don't compound your broken promises with childish illogic. And would you force me to buy a new rug? I never keep one I've killed a friend on; the stains make me gloomy. Sit down in that chair."

I sat down.

"Now," said Rufo, staying where he was, "you will listen while I talk. Or perhaps you will get up and walk out. In which case I might be so pleased to see the last of your ugly face that that might be that. Or I might be so annoyed at being interrupted that you would drop dead in the doorway, for I've much pent up and ready to spill over. Suit yourself.

"I said," he went on, "that my grandmother is an old bag. I said it brutally, to discharge your tension--and now you're not likely to take too much offense at many offensive things I still must say. She's old, you know that, though no doubt you find it easy to forget, mostly. I forget it myself, mostly, even though She was old when I was a babe making messes on the floor and crowing at the dear sight of Her. Bag, She is, and you know it. I could have said 'experienced woman' but I had to rap your teeth with it; you've been dodging it even while you've been telling me how well you know it--and how you don't care. Granny is an old bag, we start from there.

"And why should She be anything else? Tell yourself the answer. You're not a fool, you're merely young. Ordinarily She has but two possible pleasures and the other She can't indulge."

"What's the other one?"

"Handing down bad decisions through sadistic spite, that's the one She dare not indulge. So let us be thankful that Her body has built into it this harmless safety valve, else we would all suffer grievously before somebody managed to kill Her. Lad, dear lad, can you dream how mortal tired She must be of most things? Your own zest soured in only months. Think what it must be to hear the same old weary mistakes year after year with nothing to hope for but a clever assassin. Then be thankful that She still pleasures in one innocent pleasure. So She's an old bag and I mean no disrespect; I salute a beneficent balance between two things She must be to do her job.

"Nor did She stop being what She is by reciting a silly rhyme with you one bright day on a hilltop. You think She has taken a vacation from it since, sticking to you only. Possibly She has, if you have quoted Her exactly and I read the words rightly; She always tells the truth.

"But never all the truth--who can? --and She is the most skillful liar by telling the truth you'll ever meet. I misdoubt your memory missed some innocent-sounding word that gave an escape yet saved your feelings.

"If so, why should She do more than save your feelings? She's fond of you, that's dear--but must She be fanatic about it? All Her training, Her special bent, is to avoid fanaticism always, find practical answers. Even though She may not have mixed up the shoes, as yet, if you stay on a week or a year or twenty and time comes when She wants to. She can find ways, not lie to you in words--and hurt Her conscience not at all because She hasn't any. Just Wisdom, utterly pragmatic."

Rufo cleared his throat. "Now refutation and counterpoint and contrariwise. I like my grandmother and love Her as much as my meager nature permits and respect Her right down to Her sneaky soul--and I'll kill you or anyone who gets in Her way or causes Her unhappiness--and only part of this is that She has handed on to me a shadow of Her own self so that I understand Her. If She is spared assassins knife or blast or poison long enough, She'll go down in history as 'The Great.' But you spoke of Her 'terrible sacrifices.' Ridiculous! She likes being 'Her Wisdom,' the Hub around which all worlds turn. Nor do I believe that She would give it up for you or fifty better. Again, She didn't lie, as you've told it--She said 'if' . . . knowing that much can happen in thirty year's, or twenty-five, among which is the near certainty that you wouldn't stay that long. A swindle.

"But that's the least of swindles She's put over on you. She conned you from the moment you first saw Her and long before. She cheated both ways from the ace, forced you to pick the shell with the pea, sent you like any mark anxious for the best of it, cooled you off when you started to suspect, herded you back into line and to your planned fate--and made you like it. She's never fussy about method and would con the Virgin Mary and make a pact with the Old One all in one breath, did it suit Her purpose. Oh, you got paid, yes, and good measure to boot; there's nothing small about Her. But its time you knew you were conned. Mind you, I'm not criticizing Her, I'm applauding--and I helped . . . save for one queasy moment when I felt sorry for the victim. But you were so conned you wouldn't listen, thank any saints who did. I lost my nerve for a bit, thinking

that you were going to a sticky death with your innocent eyes wide. But She was smarter than I am. She always has been.

"Now! I like Her. I respect Her. I admire Her. I even love Her a bit. All of Her, not just Her pretty aspects but also all the impurities that make Her steel as hard as it must be. How about you, sir? What's your feeling about Her now . . . knowing She conned you, knowing what She is?"

I was still sitting. My drink was by me, untouched all this long harangue.

I took it and stood up. "Here's to the grandest old bag in twenty universes!"

Rufo bounced over the desk again, grabbed his glass. "Say that loud and often! And to Her, She'd love it! May She be blessed by God, Whoever He is, and kept safe. We'll never see another like Her, mores the pity! --for we need them by the gross!"

We tossed it down and smashed our grasses. Rufo fetched fresh ones, poured, settled in his chair, and said, "Now for serious drinking. Did I ever tell you about the time my--"

"You did. Rufo, I want to know about this swindle."

"Such as?"

"Well, I can see much of it. Take that first time we flew--"

He shuddered. "Lets not."

"I never wondered then. But, since Star can do this, we could have skipped Igli, the Horned Ghosts, the marsh, the time wasted with Jocko--"

"Wasted?"

"For her purpose. And the rats and hogs and possibly the dragons. Flown directly from that first Gate to the second. Right?"

He shook his head. "Wrong."

"I don't see it."

"Assuming that She could fly us that far, a question I hope never to settle, She could have flown us to the Gate She preferred. What would you have done then? If popped almost directly from Nice to Karth-Hokesh? Charged out and fought like a wolverine, as you did? Or said 'Miss, you've made a mistake. Show me the exit from this Fun House--I'm not laughing.' "

"Well--I wouldn't have bugged out"

"But would you have won? Would you have been at that keen edge of readiness it took?"

"I see. Those first rounds were live ammo exercises in my training. Or was it live ammo? Was all that first part swindle? Maybe with hypnotism, to make it feel right? God knows she's expert. No danger till we reached the Black Tower?"

He shuddered again. "No, no! Oscar, any of that could have killed us. I never fought harder in my life, nor was ever more frightened. None of it could be skipped. I don't understand all Her reasons. I'm not Her Wisdom. But She would never risk Herself unless necessary. She would sacrifice ten million brave men, were it needed, as the cheaper price. She knows what She's worth. But She fought beside us with all She has--you saw! Because it had to be."

"I still don't understand all of it."

"Nor will you. Nor will I. She would have sent you in alone, had it been possible. And at that last supreme danger, that thing called 'Eater of Souls' because it had done just that to many braves before you . . . had you lost to it, She and I would have tried to fight our way out--I was ready, any moment; I couldn't tell you--and if we had escaped--unlikely--

She would have shed no tears for you. Or not many. Then worked another twenty or thirty or a hundred years to find and con and train anther champion--and fought just as hard by his side. She has courage, that cabbage. She knew how thin our chances were; you didn't. Did She flinch?"

"No."

"But you were the key, first to be found, then ground to fit. You yourself act, you're never a puppet, or you could never have won. She was the only one who could nudge and wheedle such a man and place him where he would act; no lesser person than She could handle the scale of hero She needed. So She searched until She found him . . . and honed him fine. Tell me, why did you take up the sword? It's not common in America."

"What?" I had to think. Reading 'King Arthur' and 'The Three Musketeers', and Burroughs wonderful Mars stories--But every kid does that. "When we moved to Florida, I was a Scout. The Scoutmaster was a Frenchman, taught high school. He started some of us lads. I liked it, it was something I did well. Then in college--"

"Ever wonder why that immigrant got that job in that town? And volunteered for Scout work? Or why your college had a fencing team when many don't? No matter, if you had gone elsewhere, there would have been fencing in a YMCA or something. Didn't you have more combat than most of your category?"

"Hell, yes!"

"Could have been killed anytime, too--and She would have turned to another candidate already being honed. Son, I don't know how you were selected, nor now you were converted from a young punk into the hero you potentially were. Not my job. Mine was simpler--just more dangerous--your groom and your 'eyes-behind.' Look around. Fancy quarters for a servant, eh?"

"Well, yes. I had almost forgotten that you were supposed to be my groom."

" 'Supposed,' hell! I was. I went three times to Nevia as Her servant, training for it. Jocko doesn't know to this day. If I went back, I would be welcome, I think. But only in the kitchen."

"But why? That part seems silly."

"Was it? When we snared you, your ego was in feeble shape, it had to be built up--and calling you 'Boss' and serving your meals while I stood and you sat, with Her, was part of it." He gnawed a knuckle and looked annoyed. "I still think She witched your first two arrows. Someday I'd like a return match--with Her not around."

"I may fool you. I've been practicing."

"Well, forget it. We got the Egg, that's the important thing. And here's this bottle and that's important, too." He poured again. "Will that be all, 'Boss'?"

"Damn you, Rufo! Yes, you sweet old scoundrel. You've straightened me out. Or conned me again, I don't know which."

"No con, Oscar, by the blood we've shed. I've told the truth as straight as I know it, though it hurt me. I didn't want to, you're my friend. Walking that rocky road with you I shall treasure all the days of my life."

"Uh . . . yes. Me, too. All of it."

"Then why are you frowning?"

"Rufo, I understand her now--as well as an ordinary person can--and respect her utterly . . . and love her more than ever. But I can't be anybody's fancy man. Not even here."

"I'm glad I didn't have to say that. Yes. She's right She's always right, damn Her! You must leave. For both of you. Oh, She wouldn't be hurt too much but staying would ruin you, in time. Destroy you, if you're stubborn.

"I had better get back--and toss my shoes." I felt better, as if I had told the surgeon: Go ahead. Amputate.

"Don't do that!"

"What?"

"Why should you? No need for anything final If a marriage is to last a long time--and yours might, even a very long time--then holidays should be long, too. And off the leash, son, with no date to report back and no promises. She knows that knights errant spend their nights erring, She expects it. It has always been so, un droit de la vocation--and necessary. They just don't mention it in kiddies' stories where you come from. So go see what's stirring in your line of work elsewhere and don't worry. Come back in four or forty years or something, you'll be welcome. Heroes always sit at the first table, it s their right. And they come and go as they please, and that's their right, too. On a smaller scale, you re something like Her."

"High compliment!"

"On a 'smaller scale,' I said. Mmm, Oscar, part of your trouble is a need to go home. Your birthing land. To regain your perspective and find out who you are. All travelers feel this, I feel it myself from time to time. When the feeling comes, I pamper it."

"I hadn't realized I was homesick. Maybe I am."

"Maybe She realized it. Maybe She nudged you. Myself, I make it a rule to give any wife of mine a vacation from me whenever her face looks too familiar--for mine must be even more so to her, looking as I do. Why not, lad? Going back to Earth isn't the same as dying. I'm going there soon, that's why I'm clearing up this paper work. Happens we might be there the same time . . . and get together for a drink or ten and some laughs and stories. And pinch the waitress and see what she says. Why not?"

Chapter 21

Okay, here I am.

I didn't leave that week but soon. Star and I spent a tearful, glorious night before I left and she cried as she kissed me "Au 'voir" (not "Good-bye"). But I knew her tears would dry once I was out of sight; she knew that I knew and I knew she preferred it so, and so did I. Even though I cried, too.

Pan American isn't as slick as the commercial Gates; I was bunged through in three fast changes and no hocus-pocus. A girl said, "Places, please"--then whambo!

I came out on Earth, dressed in a London suit, pass-port and papers in pocket, the Lady Vivamus in a kit that did not look like a sword case, and in other pockets drafts exchangeable for much gold, for I found that I didn't mind accepting a hero's fee. I arrived near Zurich, I don't know the address; the Gate service sees to that. Instead, I had ways to send messages.

Shortly those drafts became, numbered accounts in three Swiss banks, handled by a lawyer I had been told to see. I bought travelers checks several places and some I mailed ahead and some I carried, for I had no intention of paying Uncle Sugar 91 percent.

You lose track of time on a different day and calendar; there was a week or two left on that free ride home my orders called for. It seemed smart to take it--less conspicuous. So I did--an old four-engine transport, Prestwick to Gander to New York.

Streets looked dirtier, buildings not as tall--and headlines worse than ever. I quit reading newspapers, didn't stay long; California I thought of as "home." I phoned Mother; she was reproachful about my not having written and I promised to visit Alaska as soon as I could. How were they all? (I had in mind that my half brothers and sisters might need college help someday.)

They weren't hurting. My stepfather was on flight orders and had made permanent grade. I asked her to forward any mail to my aunt.

California looked better than New York. But it wasn't Nevia. Not even Center. It was more crowded than I remembered. All you can say for California towns is that they aren't as bad as other places. I visited my aunt and uncle because they had been good to me and I was thinking of using some of that gold in Switzerland to buy him free from his first wife. But she had died and they were talking about a swimming pool.

So I kept quiet. I had been almost ruined by too much money, it had grown me up a bit. I followed the rule of Their Wisdoms: Leave well enough alone.

The campus felt smaller and the students looked so young. Reciprocal, I guess. I was coming out of the malt shop across from Administration when two Letter sweaters came in, shoving me aside. The second said, "Watch it, Dad!"

I let him live.

Football had been re-emphasized, new coach, new dressing rooms, stands painted, talk about a stadium. The coach knew who I was; he knew the records and was out to make a name. "You're coming back, aren't you?" I told him I didn't think so.

"Nonsense!" he said. "Gotta get that old sheepskin! Silliest thing on earth to let your hitch in the Army stop you. Now look--" His voice dropped.

No nonsense about "sweeping the gym," stuff the Conference didn't like. But a boy could live with a family--and one could be found. If he paid his fees in cash, who cared? Quiet as an undertaker--"That leaves your GI benefits for pocket money."

"I don't have any."

"Man, don't you read the papers?" He had it on file: While I was gone, that unWar had been made eligible for GI benefits.

I promised to think it over.

But I had no such intention. I had indeed decided to finish my engineering degree, I like to finish things. But not there.

That evening I heard from Joan, the girl who had given me such a fine sendoff, then "Dear-Johnned" me. I intended to look her up, call on her and her husband; I just hadn't found out her married name yet. But she ran across my aunt, shopping, and phoned me. "Easy!" she said and sounded delighted.

"Who--Wait a minute, Joan!"

I must come to dinner that very night. I told her "Fine," and that I was looking forward to meeting the lucky galoot she had married.

Joan looked sweet as ever and gave me a hearty arms-around-my-neck smack, a welcome-home kiss, sisterly but good. Then I met the kids, one crib size and the other toddling.

Her husband was in L.A.

I should have reached for my hat. But it was all right think nothing of it Jim had phoned after she talked to me to say that he had to stay over one more night and of course it was all right for me to take her out to dinner he had seen me play football and maybe I would like to bowl tomorrow night she hadn't been able to get a baby sitter but her sister and brother-in-law were stopping in for drinks couldn't stay for dinner they were tied up after all dear it isn't like we hadn't known each other a long time oh you do too remember my sister there they are stopping out in front and I don't have the children in bed.

Her sister and brother-in-law stayed for one drink; Joan and her sister put the kids to bed while the brother-in-law sat with me and asked how things were in Europe he understood I was just back and then he told me how things were in Europe and what should be done about them. "You know, Mr. Jordan," he told me, tapping my knee, "a man in the real estate business like I am gets to be a pretty shrewd judge of human nature has to be and while I haven't actually been in Europe the way you have haven't had time somebody has to stay home and pay taxes and keep an eye on things while you lucky young fellows are seeing the world but human nature is the same anywhere and if we dropped just one little bomb on Minsk or Pinsk or one of those places they would see the light right quick and we could stop all this diddling around that's making it tough on the businessman. Don't you agree?"

I said he had a point. They left and he said that he would ring me tomorrow and show me some choice lots that could be handled on almost nothing down and were certain to go way up what with a new missile plant coming in here soon. "Nice listening to your experiences, Mr. Jordan, real pleasant. Sometime I must tell you about something that happened to me in Tijuana but not with the wife around ha ha!"

Joan said to me, "I can't see why she married him. Pour me another drink, hon, a double, I need it. I'm going to turn the oven down, dinner will keep."

We both had a double and then another, and had dinner about eleven. Joan got tearful when I insisted on going home around three. She told me I was chicken and I agreed; she told me things could have been so different if I hadn't insisted on going into the Army and I agreed again; she told me to go out the back way and not turn on any lights and she never wanted to see me again and Jim was going to Sausalito the seventeenth.

I caught a plane for Los Angeles next day.

Now look--I am not blaming Joan. I like Joan. I respect her and will always be grateful to her. She is a fine person. With superior early advantages--say in Nevia--she'd be a wow! She's quite a gal, even so. Her house was clean, her babies were clean and healthy and well cared for. She's generous and thoughtful and good-tempered.

Nor do I feel guilty. If a man has any regard for a girl's feelings, there is one thing he cannot refuse: a return bout if she wants one. Nor will I pretend that I didn't want it, too.

But I felt upset all the way to Los Angeles. Not over her husband, he wasn't hurt. Not over Joanie, she was neither swept off her feet nor likely to suffer remorse. Joanie is a good kid and had made a good adjustment between her nature and an impossible society.

Still, I was upset.

A man must not criticize a woman's most womanly quality. I must make it clear that little Joanie was just as sweet and just as generous as the younger Joanie who had sent me off to the Army feeling grand. The fault lay with me; I had changed.

My complaints are against the whole culture with no individual sharing more than a speck of blame. Let me quote that widely traveled culturologist and rake, Dr. Rufo:

"Oscar, when you get home, don't expect too much of your feminine compatriots. You're sure to be disappointed and the poor dears aren't to blame. American women, having been conditioned out of their sex instincts, compensate by compulsive interest in rituals over the dead husk of sex . . . and each one is sure she knows 'intuitively' the right ritual for conjuring the corpse. She knows and nobody can tell her any different . . . especially a man unlucky enough to be in bed with her. So don't try. You will either make her furious or crush her spirit. You'll be attacking that most Sacred of Cows: the myth that women know all about sex, just from being women."

Rufo had frowned. "The typical American female is sure that she has genius as a couturiere as an interior decorator, as a gourmet cook, and, always, as a courtesan. Usually she is wrong on four counts. But don't try to tell her so."

He had added, "Unless you can catch one not over twelve and segregate her, especially from her mother--and even that may be too late. But don't misunderstand me; it evens out. The American male is convinced that he is a great warrior, a great statesman, and a great lover. Spot checks prove that he is as deluded as she is. Or worse. Historo-culturally speaking, there is strong evidence that the American male, rattier than the female, murdered sex in your country."

"What can I do about it?"

"Slip over to France now and then. French women are almost as ignorant but not nearly as conceited and often are teachable."

When my plane landed, I put the subject out of mind as I planned to be an anchorite a while. I learned in the Army that no sex is easier than a starvation allowance--and I had serious plans.

I had decided to be the square I naturally am, with hard work and a purpose in life. I could have used those Swiss bank accounts to be a playboy. But I had been a playboy, it wasn't my style.

I had been on the biggest binge in history--one I wouldn't believe if I didn't have so much loot. Now was time to settle down and join Heroes Anonymous. Being a hero is okay. But a retired hero--first he's a bore, then he's a bum.

My first stop was Caltech. I could now afford the best and Caltech's only rival is where they tried to outlaw sex entirely. I had seen enough of the dreary graveyard in 1942-45.

The Dean of Admissions was not encouraging. "Mr. Gordon, you know that we turn down more than we accept? Nor could we give you full credit on this transcript. No slur on your former school--and we do like to give ex-servicemen a break--but this school has higher standards. Another thing, you won't find Pasadena a cheap place to live."

I said I would be happy to take whatever standing I merited, and showed him my bank balance (one of them) and offered a check for a years fees. He wouldn't take it but loosened up. I left with the impression that a place might be found for E. C. "Oscar" Gordon.

I went downtown and started the process to make me legally "Oscar" instead of "Evelyn Cyril." Then I started job hunting.

I found one out in the Valley, as a junior draftsman in a division of a subsidiary of a corporation that made tires, food machinery, and other things--missiles in this case. This was part of the Gordon Rehabilitation Plan. A few months over the drafting board would get me into the swing again and I planned to study evenings and behave myself. I found a furnished apartment in Sawtelle and bought a used Ford for commuting.

I felt relaxed then; "Milord Hero" was buried. All that was left was the Lady Vivamus, hanging over the television. But I balanced her in hand first and got a thrill out of it. I decided to find a salle d'armes and join its club. I had seen an archery range in the Valley, too, and there ought to be someplace where American Rifle Association members fired on Sundays. No need to get flabby--

Meanwhile I would forget the loot in Switzerland. It was payable in gold, not funny money, and if I let it sit. It might be worth more--maybe much more--from inflation than from investing it. Someday it would be capital, when I opened my own firm.

That's what I had my sights on: Boss. A wage slave, even in brackets where Uncle Sugar takes more than half, is still a slave. But I had learned from Her Wisdom that a boss must train; I could not buy "Boss" with gold.

So I settled down. My name change came through; Caltech conceded that I could look forward to moving to Pasadena--and mail caught up with me.

Mother sent it to my aunt, she forwarded it to the hotel address I had first given, eventually it reached my flat. Some were letters mailed in the States over a year ago, sent on to Southeast Asia, then Germany, then Alaska, then more changes before I read them in Sawtelle.

One offered that bargain on investment service again; this time I could Knock off 10 percent more. Another was from the coach at college--on plain stationery and signed in a scrawl. He said certain parties were determined to see the season start off with a bang. Would $250 per month change my mind? Phone his home number, collect. I tore it up.

The next was from the Veterans Administration, dated just after my discharge, telling me that as a result of Barton vs. United States, et al., it had been found that I was legally a "war orphan" and entitled to $110/month for schooling until age twenty-three.

I laughed so hard I hurt.

After some junk was one from a Congressman. He had the honor to inform me that, in cooperation with the Veterans of Foreign Wars, he had submitted a group of special bills to correct injustices resulting from failure to classic correctly persons who were "war orphans," that the bills had passed under consent, and that he was happy to say that one affecting me allowed me to my twenty-seventh birthday to complete my education inasmuch as my twenty-third birthday had passed before the error was rectified. I am, sir, sincerely, etc.

I couldn't laugh. I thought how much dirt I would have eaten, or--you name it--the summer I was conscripted if I had been sure of $110 a month. I wrote that Congressman a thank-you letter, the best I knew how.

The next item looked like junk. It was from Hospitals' Trust, Ltd., therefore a pitch for a donation or a hospital insurance ad--but I couldn't see why anyone in Dublin would have me on their list.

Hospitals' Trust asked if I had Irish Hospitals' Sweepstakes ticket number such-and-such, and its official receipt? This ticket had been sold to J. L. Weatherby, Esq. Its number had been drawn in the second unit drawing, and had been a ticket of the winning horse. J. L. Weatherby had been informed and had notified Hospitals' Trust, Ltd., that he had disposed of ticket to E. C. Gordon, and, on receiving receipt, had mailed it to such party.

Was I the "E. C. Gordon," did I have the ticket, did I have the receipt? H. T. Ltd. would appreciate an early reply.

The last item in the stack had an A.P.O. return address. In it was an Irish Sweepstakes receipt--and a note; 'This should teach me not to play poker. Hope it wins you something--J. L. WEATHERBY.' The cancellation was over a year old.

I stared at it, then got the papers I had carried through the Universes. I found the matching ticket. It was bloodstained but the number was clear.

I looked at the letter. Second unit drawing--

I started examining tickets under bright light. The others were counterfeit. But the engraving of this ticket and this receipt was sharp as paper money. I don't know where Weatherby bought that ticket, but he did not buy it from the thief who sold me mine.

Second drawing--I hadn't known there was more than one. But drawings depend on the number of tickets sold, in units of £120,000. I had seen the results of only the first.

Weatherby had mailed the receipt care of Mother, to Wiesbaden, and it must have been in Elmendorf when I was in Nice--then had gone to Nice, and back to Elmendorf because Rufo had left a forwarding address with American Express; Rufo had known all about me of course and had taken steps to cover my disappearance.

On that morning over a year earlier while I sat in a cafe in Nice, I held a winning ticket with the receipt in the mail. If I had looked farther in that Herald-Tribune than the "Personal" ads I would have found the results of the Second Unit drawing and never answered that ad.

I would have collected $140,000, never have seen Star a second time--

Or would Her Wisdom have been balked?

Would I have refused to follow my "Helen of Troy" simply because my pockets were lined with money?

I gave myself the benefit of doubt. I would have walked the Glory Road anyhow!

At least, I hoped so.

Next morning I phoned the plant, then went to a bank and through a routine I had gone through twice in Nice.

Yes, it was a good ticket. Could the bank be of service in collecting it? I thanked them and left.

A little man from Internal Revenue was on my doorstep--

Almost--He buzzed from below while I was writing to Hospitals' Trust, Ltd.

Presently I was telling him that I was damned if I would! I'd leave the money in Europe and they could whistle! He said mildly not to take that attitude, as I was just blowing off steam because the IRS didn't like paying informers' fees but would if my actions showed that I was trying to evade the tax.

They had me boxed. I collected $140,000 and paid $103,000 to Uncle Sugar. The mild little man pointed out that it was better that way; so often people put off paying and got into trouble.

Had I been in Europe, it would have been $140,000 in gold--but now it was $37,000 in paper--because free and sovereign Americans can't have gold. They might start a war, or turn Communist, or something. No, I couldn't leave the $37,000 in Europe as gold; that was illegal, too. They were very polite.

I mailed 10 percent, $3,700, to Sgt. Weatherby and told him the story. I took $33,000 and set up a college trust for my siblings, handled so that my folks wouldn't know until it was needed. I crossed my fingers and hoped that news about this ticket would not reach Alaska. The L.A. papers never had it, but word got around somehow; I found myself on

endless sucker lists, got letters offering golden opportunities begging loans, or demanding gifts.

It was a month before I realized I had forgotten the California State Income Tax. I never did sort out the red ink.

Chapter 22

I got back to the old drawing board, slugged away at books in the evening, watched a little television, weekends some fencing.

But I kept having this dream--

I had it first right after I took that job and now I was having it every night--

I'm heading along this long, long road and I round a curve and there's a castle up ahead. It's beautiful, pennants flying from turrets and a winding climb to its drawbridge. But I know, I just know, that there is a princess captive in its dungeon.

That part is always the same. Details vary. Lately the mild little man from Internal Revenue steps into the road and tells me that toll is paid here--10 percent more than whatever I've got.

Other times it's a cop and he leans against my horse (sometimes it has four legs, sometimes eight) and writes a ticket for obstructing traffic, riding with out-of-date license, failing to observe stop sign, and gross insubordination. He wants to know if I have a permit to carry that lance? --and tells me that game laws require me to tag any dragons killed.

Other times I round that turn and a solid wave of freeway traffic, five lanes wide, is coming at me. That one is worst.

I started writing this after the dreams started. I couldn't see going to a headshrinker and saying, "Look, Doc, I'm a hero by trade and my wife is Empress in another universe--" I had even less desire to lie on his couch and tell how my parents mistreated me as a child (they didn't) and how I found out about little girls (that s my business).

I decided to talk it out to a typewriter.

It made me feel better but didn't stop the dreams. But I learned a new word: "acculturated." It's what happens when a member of one culture shifts to another, with a sad period when he doesn't fit. Those Indians you see in Arizona towns, not doing anything, looking in shop windows or just standing. Acculturation. They don't fit.

I was taking a bus down to see my ear, nose, and throat doctor--Star promised me that her therapy plus that at Center would free me of the common cold--and it has; I don't catch anything. But even therapists that administer Long-Life can't protect human tissues against poison gas; L.A. smog was getting me. Eyes burning, nose stopped up--twice a week I went down to get horrid things done to my nose. I used to park my car and go down Wilshire by bus, as parking was impossible close in.

In the bus I overheard two ladies: "--much as I despise them, you can't give a cocktail party without inviting the Sylvesters."

It sounded like a foreign language. Then I played it back and understood the words.

But why did she have to invite the Sylvesters?

If she despised them, why didn't she either ignore them, or drop a rock on their heads?

In God's name, why give a "cocktail party"? People who don't like each other particularly, standing around (never enough chairs), talking about things they aren't

interested in, drinking drinks they don't want (why set a time to take a drink?) and getting high so that they won't notice they aren't having fun. Why?

I realized that acculturation had set in. I didn't fit.

I avoided buses thereafter and picked up five traffic tickets and a smashed fender. I quit studying, too. Books didn't seem to make sense. It warn't the way I lamed it back in dear old Center.

But I stuck to my job as a draftsman. I always have been able to draw and soon I was promoted to major work.

One day the Chief Draftsman called me over. "Here, Gordon, this assembly you did--"

I was proud of that job. I had remembered something I had seen on Center and had designed it in, reducing moving parts and improving a clumsy design into one that made me feel good. It was tricky and I had added an extra view. "Well?"

He handed it back. "Do it over. Do it right."

I explained the improvement and that I had done the drawing a better way to--

He cut me off. "We don't want it done a better way, we want it done our way."

"Your privilege," I agreed and resigned by walking out.

My flat seemed strange at that time on a working day. I started to study 'Strength of Materials'--and chucked the book aside. Then I stood and looked at the Lady Vivamus.

"Dum Vivimus, Vivamus!" Whistling, I buckled her on, drew blade, felt that thrill run up my arm.

I returned sword, got a few things, traveler's checks and cash mostly, walked out. I wasn't going anywhere, just thataway!

I had been striding along maybe twenty minutes when a prowl car pulled up and took me to the station.

Why was I wearing that thing? I explained that gentlemen wore swords.

If I would tell them what movie company I was with, a phone call could clear it up. Or was it television? The Department cooperated but liked to be notified.

Did I have a license for concealed weapons? I said it wasn't concealed. They told me it was--by that scabbard. I mentioned the Constitution; I was told that the Constitution sure as hell didn't mean walking around city streets with a toad sticker like that. A cop whispered to the sergeant, "Here's what we got him on, Sarge. The blade is longer than--" I think it was three inches. There was trouble when they tried to take the Lady Vivamus away from me. Finally I was locked up, sword and all.

Two hours later my lawyer got it changed to "disorderly conduct" and I was released, with talk of a sanity hearing.

I paid him and thanked him and took a cab to the airport and a plane to San Francisco. At the port I bought a large bag, one that would take the Lady Vivamus cater-cornered.

That night in San Francisco I went to a party. I met this chap in a bar and bought him a drink and he bought me one and I stood him to dinner and we picked up a gallon of wine and went to this party. I had been explaining to him that what sense was there in going to school to learn one way when there was already a better way? As silly as an Indian studying buffalo calling! Buffalos are in zoos! Acculturated, that's what it was!

Charlie said he agreed perfectly and his friends would like to hear it. So we went and I paid the driver to wait but took my suitcase inside.

Charlie's friends didn't want to hear my theories but the wine was welcome and I sat on the floor and listened to folk singing. The men wore beards and didn't comb their hair.

The beards helped, it made it easy to tell which were girls. One beard stood up and recited a poem. Old Jocko could do better blind drunk but I didn't say so.

It wasn't like a party in Nevia and certainly not in Center, except this: I got propositioned. I might have considered it if this girl hadn't been wearing sandals. Her toes were dirty. I thought of Zhai-ee-van and her dainty, clean fur, and told her thanks, I was under a vow.

The beard who had recited the poem came over and stood in front of me. "Man, like what rumble you picked up that scar?"

I said it had been in Southeast Asia. He looked at me scornfully. "Mercenary!"

"Well, not always," I told him. "Sometimes I fight for free. Like right now."

I tossed him against a wall and took my suitcase outside and went to the airport--and then Seattle and Anchorage, Alaska, and wound up at Elmendorf AFB, clean, sober, and with the Lady Vivamus disguised as fishing tackle.

Mother was glad to see me and the kids seemed pleased--I had bought presents between planes in Seattle--and my stepdaddy and I swapped yarns.

I did one important thing in Alaska; I flew to Point Barrow. There I found part of what I was looking for: no pressure, no sweat, not many people. You look out across the ice and know that only the North Pole is over that way, and a few Eskimos and fewer white people here. Eskimos are every bit as nice as they have been pictured. Their babies never cry, the adults never seem cross--only the dogs staked-out between the huts are bad-tempered.

But Eskimos are "civilized" now; the old ways are going. You can buy a choc malt at Barrow and airplanes fly daily in a sky that may hold missiles tomorrow.

But they still seal amongst the ice floes, the village is rich when they take a whale, half starved if they don't. They don't count time and they don't seem to worry about anything--ask a man how old he is, he answers: "Oh, I'm quite of an age." That's how old Rufo is. Instead of good-bye, they say, "Sometime again!" No particular time and again well see you.

They let me dance with them. You must wear gloves (in their way they are as formal as the Doral) and you stomp and sing with the drums--and I found myself weeping. I don't know why. It was a dance about a little old man who doesn't have a wife and now he sees a seal--

I said, "Sometime again!"--went back to Anchorage and to Copenhagen. From 30,000 feet the North Pole looks like prairie covered with snow, except black lines that are water. I never expected to see the North Pole.

From Copenhagen I went to Stockholm. Majatta was not with her parents but was only a square away. She cooked me that Swedish dinner, and her husband is a good Joe. From Stockholm I phoned a "Personal" ad to the Paris edition of the Herald-Tribune, then went to Paris.

I kept the ad in daily and sat across from the Two Maggots and stacked saucers and tried not to fret. I watched the ma'm'selles and thought about what I might do.

If a man wanted to settle down for forty years or so, wouldn't Nevia be a nice place? Okay, It has dragons. It doesn't have flies, nor mosquitoes, nor smog. Nor parking problems, nor freeway complexes that look like diagrams for abdominal surgery. Not a traffic light anywhere.

Muri would be glad to see me. I might marry her. And maybe little whatever-her-name was, her kid sister, too. Why not? Marriage customs aren't everywhere those they use in Paducah. Star would be pleased; she would like being related to Jocko by marriage.

But I would go see Star first, or soon anyhow, and kick that pile of strange shoes aside. But I wouldn't stay; it would be "sometime again" which would suit Star. It is a phrase, one of the few, that translates exactly into Centrist jargon--and means exactly the same.

"Sometime again," because there are other maidens, or pleasing facsimiles, elsewhere, in need of rescuing. Somewhere. And a man must work at his trade, which wise wives know.

"I cannot rest from travel; I will drink life to the lees." A long road, a trail, a "Tramp Royal," with no certainty of what you'll eat or where or if, nor where you'll sleep, nor with whom. But somewhere is Helen of Troy and all her many sisters and there is still noble work to be done.

A man can stack a lot of saucers in a month and I began to fume instead of dream. Why the hell didn't Rufo show up? I brought this account up to date from sheer nerves. Has Rufo gone back? Or is he dead?

Or was he "never born"? Am I a psycho discharge and what is in this case I carry with me wherever I go? A sword? I'm afraid to look, so I do--and now I'm afraid to ask. I met an old sergeant once, a thirty-year man, who was convinced that he owned all the diamond mines in Africa; he spent his evenings keeping books on them. Am I just as happily deluded? Are these francs what is left of my monthly disability check?

Does anyone ever get two chances? Is the Door in the Wall always gone when next you look? Where do you catch the boat for Brigadoon? Brother, it's like the post office in Brooklyn: You can't get there from here!

I'm going to give Rufo two more weeks--

I've heard from Rufo! A clipping of my ad was for warded to him but he had a little trouble. He wouldn't say much by phone but I gather he was mixed up with a carnivorous Fraulein and got over the border almost sans calottes. But he'll be here tonight. He is quite agreeable to a change in planets and universes and says he has something interesting in mind. A little risky perhaps, but not dull. I'm sure he's right both ways. Rufo might steal your cigarettes and certainly your wench but things aren't dull around him--and he would die defending your rear.

So tomorrow we are heading up that Glory Road, rocks and all!

Got any dragons you need killed?

The Green Hills of Earth

This is the story of Rhysling, the Blind Singer of the Spaceways -- but not the official version. You sang his words in school:

> "I pray for one last landing
> On the globe that gave me birth;
> Let me rest my eyes on the fleecy skies
> And the cool, green hills of Earth."

Or perhaps you sang in French, or German. Or it might have been Esperanto, while Terra's rainbow banner rippled over your head.

The language does not matter -- it was certainly an Earth tongue. No one has ever translated "Green Hills" into the lisping Venerian speech; no Martian ever croaked and whispered it in the dry corridors. This is ours. We of Earth have exported everything from Hollywood crawlies to synthetic radioactives, but this belongs solely to Terra, and to her sons and daughters wherever they may be.

We have all heard many stories of Rhysling. You may even be one of the many who have sought degrees, or acclaim, by scholarly evaluations of his published works - _Songs of the Spaceways_, _The Grand Canal and other Poems_, _High and Far_, and _"UP SHIP!"_

Nevertheless, although you have sung his songs and read his verses, in school and out your whole life, it is at least an even money bet -- unless you are a spaceman yourself -- that you have never even heard of most of Rhysling's unpublished songs, such items as _Since the Pusher Met My Cousin_, _That Red-Headed Venusburg Gal_, _Keep Your Pants On, Skipper_, or _A Space Suit Built for Two_.

Nor can we quote them in a family magazine.

Rhysling's reputation was protected by a careful literary executor and by the happy chance that he was never interviewed. _Songs of the Spaceways_ appeared the week he died; when it became a best seller, the publicity stories about him were pieced together from what people remembered about him plus the highly colored handouts from his publishers.

The resulting traditional picture of Rhysling is about as authentic as George Washington's hatchet or King Alfred's cakes.

In truth you would not have wanted him in your parlor; he was not socially acceptable. He had a permanent case of sun itch, which he scratched continually, adding nothing to his negligible beauty.

Van der Voort's portrait of him for the Harriman Centennial edition of his works shows a figure of high tragedy, a solemn mouth, sightless eyes concealed by black silk bandage. He was never solemn! His mouth was always open, singing, grinning, drinking, or eating. The bandage was any rag, usually dirty. After he lost his sight he became less and less neat about his person.

"Noisy" Rhysling was a jetman, second class, with eyes as good as yours, when he signed on for a ioop trip to the Jovian asteroids in the RS _Goshawk_. The crew

signed releases for everything in those days; a Lloyd's associate would have laughed in your face at the notion of insuring a spaceman. The Space Precautionary Act had never been heard of, and the Company was responsible only for wages, if and when. Half the ships that went further than Luna City never came back. Spacemen did not care; by preference they signed for shares, and any one of them would have bet you that he could jump from the 200th floor of Harriman Tower and ground safely, if you offered him three to two and allowed him rubber heels for the landing.

Jetmen were the most carefree of the lot, and the meanest. Compared with them the masters, the radarmen, and the astrogators (there were no supers nor stewards in those days) were gentle vegetarians. Jetmen knew too much. The others trusted the skill of the captain to get them down safely; jetmen knew that skill was useless against the blind and fitful devils chained inside their rocket motors.

The _Goshawk_ was the first of Harriman's ships to be converted from chemical fuel to atomic power-piles -- or rather the first that did not blow up. Rhysling knew her well; she was an old tub that had plied the Luna City run, Supra-New York space station to Leyport and back, before she was converted for deep space. He had worked the Luna run in her and had been along on the first deep space trip, Drywater on Mars -- and back, to everyone's surprise.

He should have made chief engineer by the time he signed for the Jovian loop trip, but, after the Drywater pioneer trip, he had been fired, blacklisted, and grounded at Luna City for having spent his time writing a chorus and several verses at a time when he should have been watching his gauges. The song was the infamous _The Skipper is a Father to his Crew_, with the uproariously unprintable final couplet.

The blacklist did not bother him. He won an accordion from a Chinese barkeep in Luna City by cheating at onethumb and thereafter kept going by singing to the miners for drinks and tips until the rapid attrition in spacemen caused the Company agent there to give him another chance. He kept his nose clean on the Luna run for a year or two, got back into deep space, helped give Venusburg its original ripe reputation, strolled the banks of the Grand Canal when a second colony was established at the ancient Martian capital, and froze his toes and ears on the second trip to Titan.

Things moved fast in those days. Once the power-pile drive was accepted the number of ships that put out from the LunaTerra system was limited only by the availability of crews. Jetmen were scarce; the shielding was cut to a minimum to save weight and few married men cared to risk possible exposure to radioactivity. Rhysling did not want to be a father, so jobs were always open to him during the golden days of the claiming boom. He crossed and recrossed the system, singing the doggerel that boiled up in his head and chording it out on his accordion.

The master of the _Goshawk_ knew him; Captain Hicks had been astrogator on Rhysling's first trip in her. "Welcome home, Noisy," Hicks had greeted him. "Are you sober, or shall I sign the book for you?"

"You can't get drunk on the bug juice they sell here, Skipper." He signed and went below, lugging his accordion.

Ten minutes later he was back. "Captain," he stated darkly, "that number two jet ain't fit. The cadmium dampers are warped."

"Why tell me? Tell the Chief."

"I did, but he says they will do. He's wrong."

The captain gestured at the book. "Scratch out your name and scram. We raise ship in thirty minutes."

Rhysling looked at him, shrugged, and went below again.

It is a long climb to the Jovian planetoids; a Hawk-class clunker had to blast for three watches before going into free flight. Rhysling had the second watch. Damping was done by hand then, with a multiplying vernier and a danger gauge. When the gauge showed red, he tried to correct it -- no luck.

Jetmen don't wait; that's why they are jetmen. He slapped the emergency discover and fished at the hot stuff with the tongs. The lights went out, he went right ahead. A jetman has to know his power room the way your tongue knows the inside of your mouth.

He sneaked a quick look over the top of the lead baffle when the lights went out. The blue radioactive glow did not help him any; he jerked his head back and went on fishing by touch.

When he was done he called over the tube, "Number two jet out. And for crissake get me some light down here!"

There was light -- the emergency circuit -- but not for him. The blue radioactive glow was the last thing his optic nerve ever responded to.

2

"As Time and Space come bending back to shape this starspecked scene,
The tranquil tears of tragic joy still spread their silver sheen;
Along the Grand Canal still soar the fragile Towers of Truth;
Their fairy grace defends this place of Beauty, calm and couth.

"Bone-tired the race that raised the Towers, forgotten are their lores,
Long gone the gods who shed the tears that lap these crystal shores.
Slow heats the time-worn heart of Mars beneath this icy sky;
The thin air whispers voicelessly that all who live must die --

"Yet still the lacy Spires of Truth sing Beauty's madrigal
And she herself will ever dwell along the Grand Canal!"

-- from The Grand Canal, by permission of Lux Transcriptions, Ltd., London and Luna City

On the swing back they set Rhysling down on Mars at Drywater; the boys passed the hat and the skipper kicked in a half month's pay. That was all -- finish -- just another space bum who had not had the good fortune to finish it off when his luck ran out. He holed up with the prospectors and archeologists at How-Far? for a month or so, and could probably have stayed forever in exchange for his songs and his accordion playing. But spacemen die if they stay in one place; he hooked a crawler over to Drywater again and thence to Marsopolis.

The capital was well into its boom; the processing plants lined the Grand Canal on both sides and roiled the ancient waters with the filth of the runoff. This was before the TriPlanet Treaty forbade disturbing cultural relics for commerce; half the slender, fairylike towers had been torn down, and others were disfigured to adapt them as pressurized buildings for Earthmen.

Now Rhysling had never seen any of these changes and no one described them to him; when he "saw" Marsopolis again, he visualized it as it had been, before it was rationalized for trade. His memory was good. He stood on the riparian esplanade where the ancient great of Mars had taken their ease and saw its beauty spreading out before his blinded eyes -- ice blue plain of water unmoved by tide, untouched by breeze, and reflecting serenely the sharp, bright stars of the Martian sky, and beyond the water the lacy buttresses and flying towers of an architecture too delicate for our rumbling, heavy planet.

The result was _Grand Canal_.

The subtle change in his orientation which enabled him to see beauty at Marsopolis where beauty was not now began to affect his whole life. All women became beautiful to him. He knew them by their voices and fitted their appearances to the sounds. It is a mean spirit indeed who will speak to a blind man other than in gentle friendliness; scolds who had given their husbands no peace sweetened their voices to Rhysling.

It populated his world with beautiful women and gracious men. _Dark Star Passing_, _Berenice's Hair_, _Death Song of a Wood's Colt_, and his other love songs of the wanderers, the womenless men of space, were the direct result of the fact that his conceptions were unsullied by tawdry truths. It mellowed his approach, changed his doggerel to verse, and sometimes even to poetry.

He had plenty of time to think now, time to get all the lovely words just so, and to worry a verse until it sang true in his head. The monotonous beat of _Jet Song_ --

When the field is clear, the reports all seen,
When the lock sighs shut, when the lights wink green,
When the check-off's done, when it's time to pray,
When the Captain nods, when she blasts away --

Hear the jets!
Hear them snarl at your back
When you're stretched on the rack;
Feel your ribs clamp your chest,
Feel your neck grind its rest.
Feel the pain in your ship,
Feel her strain in their grip.
Feel her rise! Feel her drive!
Straining steel, come alive,
On her jets!

--came to him not while he himself was a jetman but later while he was hitch-hiking from Mars to Venus and sitting out a watch with an old shipmate.

At Venusburg he sang his new songs and some of the old, in the bars. Someone would start a hat around for him; it would come back with a minstrel's usual take doubled or tripled in recognition of the gallant spirit behind the bandaged eyes.

It was an easy life. Any space port was his home and any ship his private carriage. No skipper cared to refuse to lift the extra mass of blind Rhysling and his squeeze box; he shuttled from Venusburg to Leyport to Drywater to New Shanghai, or back again, as the whim took him.

He never went closer to Earth than Supra-New York Space Station. Even when signing the contract for _Songs of the Spaceways_ he made his mark in a cabin-class liner somewhere between Luna City and Ganymede. Horowitz, the original publisher, was aboard for a second honeymoon and heard Rhysling sing at a ship's party. Horowitz knew a good thing for the publishing trade when he heard it; the entire contents of _Songs_ were sung directly into the tape in the communications room of that ship before he let Rhysling out of his sight. The next three volumes were squeezed out of Rhysling at Venusburg, where Horowitz had sent an agent to keep him liquored up until he had sung all he could remember.

UP SHIP! is not certainly authentic Rhysling throughout. Much of it is Rhysling's, no doubt, and _Jet Song_ is unquestionably his, but most of the verses were collected after his death from people who had known him during his wanderings.

The Green Hills of Earth grew through twenty years. The earliest form we know about was composed before Rhysling was blinded, during a drinking bout with some of the indentured men on Venus. The verses were concerned mostly with the things the labor clients intended to do back on Earth if and when they ever managed to pay their bounties and thereby be allowed to go home. Some of the stanzas were vulgar, some were not, but the chorus was recognizably that of _Green Hills_.

We know exactly where the final form of _Green Hills_ came from, and when.

There was a ship in at Venus Ellis Isle which was scheduled for the direct jump from there to Great Lakes, Illinois. She was the old _Falcon_, youngest of the Hawk class and the first ship to apply the Harriman Trust's new policy of extra-fare express service between Earth cities and any colony with scheduled stops.

Rhysling decided to ride her back to Earth. Perhaps his own song had gotten under his skin -- or perhaps he just hankered to see his native Ozark's one more time.

The Company no longer permitted deadheads: Rhysling knew this but it never occurred to him that the ruling might apply to him. He was getting old, for a spaceman, and just a little matter of fact about his privileges. Not senile -- he simply knew that he was one of the landmarks in space, along with Halley's Comet, the Rings, and Brewster's Ridge. He walked in the crew's port, went below, and made himself at home in the first empty acceleration couch.

The Captain found him there while making a last minute tour of his ship. "What are you doing here?" he demanded.

"Dragging it back to Earth, Captain." Rhysling needed no eyes to see a skipper's four stripes.

"You can't drag in this ship; you know the rules. Shake a leg and get out of here. We raise ship at once." The Captain was young; he had come up after Rhysling's active time, but Rhysling knew the type -- five years at Harriman Hall with only cadet practice

trips instead of solid, deep space experience. The two men did not touch in background nor spirit; space was changing.

"Now, Captain, you wouldn't begrudge an old man a trip home."

The officer hesitated -- several of the crew had stopped to listen. "I can't do it. 'Space Precautionary Act, Clause Six: No one shall enter space save as a licensed member of a crew of a chartered vessel, or as a paying passenger of such a vessel under such regulations as may be issued pursuant to this act.' Up you get and out you go."

Rhysling lolled back, his hands under his head. "If I've got to go, I'm damned if I'll walk. Carry me."

The Captain bit his lip and said, "Master-at-Arms! Have this man removed."

The ship's policeman fixed his eyes on the overhead struts. "Can't rightly do it, Captain. I've sprained my shoulder." The other crew members, present a moment before, had faded into the bulkhead paint.

"Well, get a working party!"

"Aye, aye, sir." He, too, went away.

Rhysling spoke again. "Now look, Skipper -- let's not have any hard feelings about this. You've got an out to carry me if you want to -- the 'Distressed Spaceman' clause."

"'Distressed Spaceman', my eye! You're no distressed spaceman; you're a space-lawyer. I know who you are; you've been bumming around the system for years. Well, you won't do it in my ship. That clause was intended to succor men who had missed their ships, not to let a man drag free all over space."

"Well, now, Captain, can you properly say I haven't missed my ship? I've never been back home since my last trip as a signed-on crew member. The law says I can have a trip back."

"But that was years ago. You've used up your chance."

"Have I now? The clause doesn't say a word about how soon a man has to take his trip back; it just says he's got it coming to him. Go look it up. Skipper. If I'm wrong, I'll not only walk out on my two legs, I'll beg your humble pardon in front of your crew. Go on -- look it up. Be a sport."

Rhysling could feel the man's glare, but he turned and stomped out of the compartment. Rhysling knew that he had used his blindness to place the Captain in an impossible position, but this did not embarrass Rhysling -- he rather enjoyed it.

Ten minutes later the siren sounded, he heard the orders on the bull horn for Up-Stations. When the soft sighing of the locks and the slight pressure change in his ears let him know that take-off was imminent he got up and shuffled down to the power room, as he wanted to be near the jets when they blasted off. He needed no one to guide him in any ship of the Hawk class.

Trouble started during the first watch. Rhysling had been lounging in the inspector's chair, fiddling with the keys of his accordion and trying out a new version of _Green Hills_.

"Let me breathe unrationed air again
Where there's no lack nor dearth"

And "something, something, something 'Earth'" -- it would not come out right. He tried again.

"Let the sweet fresh breezes heal me
As they rove around the girth
Of our lovely mother planet,
Of the cool green hills of Earth."

That was better, he thought. "How do you like that, Archie?" he asked over the muted roar.

"Pretty good. Give out with the whole thing." Archie Macdougal, Chief Jetman, was an old friend, both spaceside and in bars; he had been an apprentice under Rhysling many years and millions of miles back.

Rhysling obliged, then said, "You youngsters have got it soft. Everything automatic. When I was twisting her tail you had to stay awake."

"You still have to stay awake." They fell to talking shop and Macdougal showed him the direct response damping rig which had replaced the manual vernier control which Rhysling had used. Rhysling felt out the controls and asked questions until he was familiar with the new installation. It was his conceit that he was still a jetman and that his present occupation as a troubadour was simply an expedient during one of the fusses with the company that any man could get into.

"I see you still have the old hand damping plates installed," he remarked, his agile fingers flitting over the equipment.

"All except the links. I unshipped them because they obscure the dials."

"You ought to have them shipped. You might need them."

"Oh, I don't know. I think--" Rhysling never did find out what Macdougal thought for it was at that moment the trouble tore loose. Macdougal caught it square, a blast of radioactivity that burned him down where he stood.

Rhysling sensed what had happened. Automatic reflexes of old habit came out. He slapped the discover and rang the alarm to the control room simultaneously. Then he remembered the unshipped links. He had to grope until he found them, while trying to keep as low as he could to get maximum benefit from the baffles. Nothing but the links bothered him as to location. The place was as light to him as any place could be; he knew every spot, every control, the way he knew the keys of his accordion.

"Power room! Power room! What's the alarm?"

"Stay out!" Rhysling shouted. "The place is 'hot.'" He could feel it on his face and in his bones, like desert sunshine.

The links he got into place, after cursing someone, anyone, for having failed to rack the wrench he needed. Then he commenced trying to reduce the trouble by hand. It was a long job and ticklish. Presently he decided that the jet would have to be spilled, pile and all.

First he reported. "Control!"

"Control aye aye!"

"Spilling jet three -- emergency."

"Is this Macdougal?"

"Macdougal is dead. This is Rhysling, on watch. Stand by to record."

There was no answer; dumbfounded the Skipper may have been, but he could not interfere in a power room emergency. He had the ship to consider, and the passengers and crew. The doors had to stay closed.

The Captain must have been still more surprised at what Rhysling sent for record. It was:

> We rot in the molds of Venus,
> We retch at her tainted breath.
> Foul are her flooded jungles,
> Crawling with unclean death."

Rhysling went on cataloguing the Solar System as he worked, "--harsh bright soil of Luna--","--Saturn's rainbow rings--","--the frozen night of Titan--", all the while opening and spilling the jet and fishing it clean. He finished with an alternate chorus --

> "We've tried each spinning space mote
> And reckoned its true worth:
> Take us back again to the homes of men
> On the cool, green hills of Earth."

--then, almost absentmindedly remembered to tack on his revised first verse:

> "The arching sky is calling
> Spacemen back to their trade.
> All hands! Stand by! Free falling!
> And the lights below us fade.
> Out ride the sons of Terra,
> Far drives the thundering jet,
> Up leaps the race of Earthmen,
> Out, far, and onward yet--"

The ship was safe now and ready to limp home shy one jet. As for himself, Rhysling was not so sure. That "sunburn" seemed sharp, he thought. He was unable to see the bright, rosy fog in which he worked but he knew it was there. He went on with the business of flushing the air out through the outer valve, repeating it several times to permit the level of radioaction to drop to something a man might stand under suitable armor. While he did this he sent one more chorus, the last bit of authentic Rhysling that ever could be:

> "We pray for one last landing
> On the globe that gave us birth;
> Let us rest our eyes on fleecy skies
> And the cool, green hills of Earth."

Version 1.0 of Have Space Suit will Travel

Chapter 1

You see, I had this space suit.

How it happened was this way:

"Dad," I said, "I want to go to the Moon."

"Certainly," he answered and looked back at his book. It was Jerome K. Jerome's Three Men in a Boat, which he must know by heart.

I said, "Dad, please! I'm serious."

This time he closed the book on a finger and said gently, "I said it was all right. Go ahead."

"Yes ... but how?"

"Eh?" He looked mildly surprised. "Why, that's your problem, Clifford."

Dad was like that. The time I told him I wanted to buy a bicycle he said, "Go right ahead," without even glancing up-so I had gone to the money basket in the dining room, intending to take enough for a bicycle. But there had been only eleven dollars and forty-three cents in it, so about a thousand miles of mowed lawns later I bought a bicycle. I hadn't said anymore to Dad because if money wasn't in the basket, it wasn't anywhere; Dad didn't bother with banks-just the money basket and one next to it marked "UNCLE SAM," the contents of which he bundled up and mailed to the government once a year. This caused the Internal Revenue Service considerable headache and once they sent a man to remonstrate with him.

First the man demanded, then he pleaded. "But, Dr. Russell, we know your background. You've no excuse for not keeping proper records."

"But I do," Dad told him. "Up here." He tapped his forehead.

"The law requires written records."

"Look again," Dad advised him. "The law can't even require a man to read and write. More coffee?"

The man tried to get Dad to pay by check or money order. Dad read him the fine print on a dollar bill, the part about "legal tender for all debts, public and private."

In a despairing effort to get something out of the trip he asked Dad please not to fill in the space marked "occupation" with "Spy."

"Why not?"

"What? Why, because you aren't-and it upsets people."

"Have you checked with the F.B.I.?"

"Eh? No."

"They probably wouldn't answer. But you've been very polite. I'll mark it 'Unemployed Spy.' Okay?"

The tax man almost forgot his brief case. Nothing fazed Dad, he meant what he said, he wouldn't argue and he never gave in. So when he told me I could go to the Moon but the means were up to me, he meant just that. I could go tomorrow-provided I could wangle a billet in a space ship.

But he added meditatively, "There must be a number of ways to get to the Moon, son. Better check 'em all. Reminds me of this passage I'm reading. They're trying to open a tin of pineapple and Harris has left the can opener back in London. They try several ways." He started to read aloud and I sneaked out-I had heard that passage five hundred times. Well, three hundred.

I went to my workshop in the barn and thought about ways. One way was to go to the Air Academy at Colorado Springs-if I got an appointment, if I graduated, if I managed to get picked for the Federation Space Corps, there was a chance that someday I would be ordered to Lunar Base, or at least one of the satellite stations.

Another way was to study engineering, get a job in jet propulsion, and buck for a spot that would get me sent to the Moon. Dozens, maybe hundreds, of engineers had been to the Moon, or were still there-for all sorts of work: electronics, cryogenics, metallurgy, ceramics, air conditioning, as well as rocket engineering.

Oh, yes! Out of a million engineers a handful got picked for the Moon. Shucks, I rarely got picked even playing post office.

Or a man could be an M.D., or a lawyer, or geologist, or toolmaker, and wind up on the Moon at a fat salary-provided they wanted him and nobody else. I didn't care about salary-but how do you arrange to be number one in your specialty?

And there was the straightforward way: trundle in a wheelbarrow of money and buy a ticket.

This I would never manage-I had eighty-seven cents at that moment -but it had caused me to think about it steadily. Of the boys in our school half admitted that they wanted to space, half pretended not to care, knowing how feeble the chances were-plus a handful of creeps who wouldn't leave Earth for any reason. But we talked about it and some of us were determined to go. I didn't break into a rash until American Express and Thos. Cook & Son announced tourist excursions.

I saw their ads in National Geographic while waiting to have my teeth cleaned. After that I never was the same.

The idea that any rich man could simply lay cash on the line and go was more than I could stand. I just had to go. I would never be able to pay for it-or, at least, that was so far in the future there was no use thinking about it. So what could I do to be sent?

You see stories about boys, poor-but-honest, who go to the top because they're smarter than anyone in the county, maybe the state. But they're not talking about me. I was in the top quarter of my graduating class but they do not give scholarships to M.I.T. for that-not from Centerville High. I am stating a fact; our high school isn't very good. It's great to go to-we're league champions in basketball and our square-dance team is state runner-up and we have a swell sock hop every Wednesday. Lots of school spirit.

But not much studying.

The emphasis is on what our principal, Mr. Hanley, calls "preparation for life" rather than on trigonometry. Maybe it does prepare you for life; it certainly doesn't prepare you for CalTech.

I didn't find this out myself. Sophomore year I brought home a questionnaire cooked up by our group project in "Family Living" in social studies. One question read: "How is your family council organized?"

At dinner I said, "Dad, how is our family council organized?"

Mother said, "Don't disturb your father, dear."

Dad said, "Eh? Let me see that."

He read it, then told me to fetch my textbooks. I had not brought them home, so he sent me to school to get them. Fortunately the building was open-rehearsals for the Fall Blow-Out. Dad rarely gave orders but when he did he expected results.

I had a swell course that semester-social study, commercial arithmetic, applied English (the class had picked "slogan writing" which was fun), handicrafts (we were

building sets for the Blow-Out), and gym-which was basketball practice for me; I wasn't tall enough for first team but a reliable substitute gets his varsity letter his senior year. All in all, I was doing well in school and knew it.

Dad read all my textbooks that night; he is a fast reader. In social study I reported that our family was an informal democracy; it got by-the class was arguing whether the chairmanship of a council should rotate or be elective, and whether a grandparent living in the home was eligible. We decided that a grandparent was a member but should not be chairman, then we formed committees to draw up a constitution for an ideal family organization, which we would present to our families as the project's findings.

Dad was around school a good bit the next few days, which worried me -when parents get overactive they are always up to something.

The following Saturday evening Dad called me into his study. He had a stack of textbooks on his desk and a chart of Centerville High School's curriculum, from American Folk Dancing to Life Sciences. Marked on it was my course, not only for that semester but for junior and senior years the way my faculty advisor and I had planned it.

Dad stared at me like a gentle grasshopper and said mildly, "Kip, do you intend to go to college?"

"Huh? Why, certainly, Dad!"

"With what?"

I hesitated. I knew it cost money. While there had been times when dollar bills spilled out of the basket onto the floor, usually it wouldn't take long to count what was in it. "Uh, maybe I'll get a scholarship. Or I could work my way."

He nodded. "No doubt ... if you want to. Money problems can always be solved by a man not frightened by them. But when I said, 'With what?' I was talking about up here." He tapped his skull.

I simply stared. "Why, I'll graduate from high school, Dad. That'll get me into college."

"So it will. Into our State University, or the State Aggie, or State Normal. But, Kip, do you know that they are flunking out 40 per cent of each freshman class?"

"I wouldn't flunk!"

"Perhaps not. But you will if you tackle any serious subject-engineering, or science, or pre-med. You would, that is to say, if your preparation were based on this." He waved a hand at the curriculum.

I felt shocked. "Why, Dad, Center is a swell school." I remembered things they had told us in P.T.A. Auxiliary. "It's run along the latest, most scientific lines, approved by psychologists, and-"

"-and paying excellent salaries," he interrupted, "for a staff highly trained in modern pedagogy. Study projects emphasize practical human problems to orient the child in democratic social living, to fit him for the vital, meaningful tests of adult life in our complex modern culture. Excuse me, son; I've talked with Mr. Hanley. Mr. Hanley is sincere-and to achieve these noble purposes we are spending more per student than is any other state save California and New York."

"Well . . . what's wrong with that?"

"What's a dangling participle?"

I didn't answer. He went on, "Why did Van Buren fail of re-election? How do you extract the cube root of eighty-seven?"

Van Buren had been a president; that was all I remembered. But I could answer the other one. "If you want a cube root, you look in a table in the back of the book."

Dad sighed. "Kip, do you think that table was brought down from on high by an archangel?" He shook his head sadly. "It's my fault, not yours. I should have looked into this years ago-but I had assumed, simply because you liked to read and were quick at figures and clever with your hands, that you were getting an education."

"You think I'm not?"

"I know you are not. Son, Centerville High is a delightful place, well equipped, smoothly administered, beautifully kept. Not a 'blackboard jungle,' oh, no!-I think you kids love the place. You should. But this-" Dad slapped the curriculum chart angrily. "Twaddle! Beetle tracking! Occupational therapy for morons!"

I didn't know what to say. Dad sat and brooded. At last he said, "The law declares that you must attend school until you are eighteen or have graduated from high school."

"Yes, sir."

"The school you are in is a waste of time. The toughest course we can pick won't stretch your mind. But it's either this school, or send you away."

I said, "Doesn't that cost a lot of money?"

He ignored my question. "I don't favor boarding schools, a teen-ager belongs with his family. Oh, a tough prep school back east can drill you so that you can enter Stanford,

or Yale, or any of the best-but you can pick up false standards, too-nutty ideas about money and social position and the right tailor. It took me years to get rid of ones I acquired that way. Your mother and I did not pick a small town for your boyhood unpurposefully. So you'll stay in Centerville High."

I looked relieved.

"Nevertheless you intend to go to college. Do you intend to become a professional man? Or will you look for snap courses in more elaborate ways to make bayberry candles? Son, your life is yours, to do with as you wish. But if you have any thought of going to a good university and studying anything of importance, then we must consider how to make best use of your next three years."

"Why, gosh, Dad, of course I want to go to a good-"

"See me when you've thought it over. Good night."

I did for a week. And, you know, I began to see that Dad was right. Our project in "Family Living" was twaddle. What did those kids know about running a family? Or Miss Finchley?-unmarried and no kids. The class decided unanimously that every child should have a room of his own, and be given an allowance "to teach him to handle money." Great stuff . . . but how about the Quinlan family, nine kids in a five-room house? Let's not be foolish.

Commercial arithmetic wasn't silly but it was a waste of time. I read the book through the first week; after that I was bored.

Dad switched me to algebra, Spanish, general science, English grammar and composition; the only thing unchanged was gym. I didn't have it too tough catching up; even those courses were watered down. Nevertheless, I started to learn, for Dad threw a lot of books at me and said, "Clifford, you would be studying these if you were not in overgrown kindergarten. If you soak up what is in them, you should be able to pass College Entrance Board Examinations. Possibly."

After that he left me alone; he meant it when he said that it was my choice. I almost bogged down-those books were hard, not the predigested pap I got in school. Anybody who thinks that studying Latin by himself is a snap should try it.

I got discouraged and nearly quit-then I got mad and leaned into it. After a while I found that Latin was making Spanish easier and vice versa. When Miss Hernandez, my Spanish teacher, found out I was studying Latin, she began tutoring me. I not only worked my way through Virgil, I learned to speak Spanish like a Mexicano.

Algebra and plane geometry were all the math our school offered; I went ahead on my own with advanced algebra and solid geometry and trigonometry and might have stopped so far as College Boards were concerned-but math is worse than peanuts.

Analytical geometry seems pure Greek until you see what they're driving at-then, if you know algebra, it bursts on you and you race through the rest of the book. Glorious!

I had to sample calculus and when I got interested in electronics I needed vector analysis. General science was the only science course the school had and pretty general it was, too-about Sunday supplement level. But when you read about chemistry and physics you want to do it, too. The barn was mine and I had a chem lab and a darkroom and an electronics bench and, for a while, a ham station. Mother was perturbed when I blew out the windows and set fire to the barn-just a small fire-but Dad was not. He simply suggested that I not manufacture explosives in a frame building.

When I took the College Boards my senior year I passed them.

It was early March my senior year that I told Dad I wanted to go to the Moon. The idea had been made acute by the announcement of commercial flights but I had been "space happy" ever since the day they announced that the Federation Space Corps had established a lunar base. Or earlier. I told Dad about my decision because I felt that he would know the answer. You see. Dad always found ways to do anything he decided to do.

When I was little we lived lots of places-Washington, New York/Los Angeles, I don't know where-usually in hotel apartments. Dad was always flying somewhere and when he was home there were visitors; I never saw him much. Then we moved to Centerville and he was always home, his nose in a book or working at his desk. When people wanted to see him they had to come to him. I remember once, when the money basket was empty, Dad told Mother that "a royalty was due." I hung around that day because I had never seen a king (I was eight) and when a visitor showed up I was disappointed because he didn't wear a crown. There was money in the basket the next day so I decided that he had been incognito (I was reading The Little Lame Prince) and had tossed Dad a purse of gold-it was at least a year before I found out that a "royalty" could be money from a patent or a book or business stock, and some of the glamour went out of life. But this visitor, though not king, thought he could make Dad do what he wanted rather than what Dad wanted:

"Dr. Russell, I concede that Washington has an atrocious climate. But you will have air-conditioned offices."

"With clocks, no doubt. And secretaries. And soundproofing."

"Anything you want. Doctor."

"The point is, Mr. Secretary, I don't want them. This household has no clocks. Nor calendars. Once I had a large income and a larger ulcer; I now have a small income and no ulcer. I stay here."

"But the job needs you."

"The need is not mutual. Do have some more meat loaf."

Since Dad did not want to go to the Moon, the problem was mine. I got down college catalogs I had collected and started listing engineering schools. I had no idea how I could pay tuition or even eat-but the first thing was to get myself accepted by a tough school with a reputation.

If not, I could enlist in the Air Force and try for an appointment. If I missed, I could become an enlisted specialist in electronics; Lunar Base used radar and astrar techs. One way or another, I was going.

Next morning at breakfast Dad was hidden behind the New York Times while Mother read the Herald-Trib. I had the Centerville Clarion but it's fit only for wrapping salami. Dad looked over his paper at me. "Clifford, here's something in your line."

"Huh?"

"Don't grunt; that is an uncouth privilege of seniors. This." He handed it to me.

It was a soap ad.

It announced that tired old gimmick, a gigantic super-colossal prize contest. This one promised a thousand prizes down to a last hundred, each of which was a year's supply of Skyway Soap.

Then I spilled cornflakes in my lap. The first prize was- "-AN ALL-EXPENSE TRIP TO THE MOON!!!"

That's the way it read, with three exclamation points-only to me there were a dozen, with bursting bombs and a heavenly choir.

Just complete this sentence in twenty-five words or less: "I use Skyway Soap because . . ." (And send in the usual soap wrapper or reasonable facsimile.)

There was more about"-joint management of American Express and Thos. Cook-" and "-with the cooperation of the United States Air Force-" and a list of lesser prizes. But all I saw, while milk and soggy cereal soaked my pants, was: "-TRIP TO THE MOON!!!"

Chapter 2

First I went sky-high with excitement . . . then as far down with depression. I didn't win contests-why, if I bought a box of Cracker Jack, I'd get one they forgot to put a prize in. I had been cured of matching pennies. If I ever-

"Stop it," said Dad.

I shut up.

"There is no such thing as luck; there is only adequate or inadequate preparation to cope with a statistical universe. Do you intend to enter this?"

"Do I!"

"I assume that to be affirmative. Very well, make a systematic effort."

I did and Dad was helpful-he didn't just offer me more meat loaf. But he saw to it I didn't go to pieces; I finished school and sent off applications for college and kept my job-I was working after school that semester at Charton's Pharmacy-soda jerk, but also learning about pharmacy. Mr. Charton was too conscientious to let me touch anything but packaged items, but I learned-materia medica and nomenclature and what various antibiotics were for and why you had to be careful. That led into organic chemistry and biochemistry and he lent me Walker, Boyd and Asimov- biochemistry makes atomic physics look simple, but presently it begins to make sense.

Mr. Charton was an old widower and pharmacology was his life. He hinted that someone would have to carry on the pharmacy someday- some young fellow with a degree in pharmacy and devotion to the profession. He said that he might be able to help such a person get through school. If he had suggested that I could someday run the dispensary at Lunar Base, I might have taken the bait. I explained that I was dead set on spacing, and engineering looked like my one chance.

He didn't laugh. He said I was probably right-but that I shouldn't forget that wherever Man went, to the Moon, on Mars, or the farthest stars, pharmacists and dispensaries would go along. Then he dug out books for me on space medicine-Strughold and Haber and Stapp and others. "I once had ideas along that line. Kip," he said quietly, "but now it's too late."

Even though Mr. Charton was not really interested in anything but drugs, we sold everything that drugstores sell, from bicycle tires to home permanent kits.

Including soap, of course.

We were selling darned little Skyway Soap; Centerville is conservative about new brands-I'll bet some of them made their own soap. But when I showed up for work that day I had to tell Mr. Charton about it. He dug out two dustcovered boxes and put them on the counter. Then he phoned his jobber in Springfield.

He really did right by me. He marked Skyway Soap down almost to cost and pushed it-and he almost always got the wrappers before he let the customer go. Me, I stacked a pyramid of Skyway Soap on each end of the fountain and every coke was

accompanied by a spiel for good old Skyway, the soap that washes cleaner, is packed with vitamins, and improves your chances of Heaven, not to mention its rich creamy lather, finer ingredients, and refusal to take the Fifth Amendment. Oh, I was shameless! Anybody who got away without buying was deaf or fast on his feet.

If he bought soap without leaving the wrappers with me he was a magician. Adults I talked out of it; kids, if I had to, I paid a penny for each wrapper. If they brought in wrappers from around town, I paid a dime a dozen and threw in a cone. The rules permitted a contestant to submit any number of entries as long as each was written on a Skyway Soap wrapper or reasonable facsimile.

I considered photographing one and turning out facsimiles by the gross, but Dad advised me not to. "It is within the rules, Kip, but I've never yet known a skunk to be welcome at a picnic."

So I used soap. And I sent in wrappers with slogans:

"I use Skyway Soap because-

-it makes me feel so clean."

-highway or byway, there's no soap like Skyway!"

-its quality is sky-high."

-it is pure as the Milky Way."

-it is pure as Interstellar Space."

-it leaves me fresh as a rain-swept sky."

And so on endlessly, until I tasted soap in my dreams. Not just my own slogans either; Dad thought them up, and so did Mother and Mr. Charton. I kept a notebook and wrote them down in school or at work or in the middle of the night. I came home one evening and found that Dad had set up a card file for me and after that I kept them alphabetically to avoid repeating. A good thing, too, for toward the last I sent in as many as a hundred a day. Postage mounted, not to mention having to buy some wrappers.

Other kids in town were in the contest and probably some adults, but they didn't have the production line I had. I'd leave work at ten o'clock, hurry home with the day's slogans and wrappers, pick up more slogans from Dad and Mother, then use a rubber stamp on the inside of each wrapper: "I use Skyway Soap because-" with my name and address. As I typed, Dad filled out file cards. Each morning I mailed the bunch on my way to school.

I got laughed at but the adults most inclined to kid me were quickest to let me have their wrappers.

All but one, an oaf called "Ace" Quiggle. I shouldn't class Ace as an adult; he was an over-age juvenile delinquent. I guess every town has at least one Ace. He hadn't finished Centerville High, a distinction since Mr. Hanley believed in promoting everybody "to keep age groups together." As far back as I remember Ace hung around Main Street, sometimes working, mostly not.

He specialized in "wit." He was at our fountain one day, using up two dollars' worth of space and time for one thirty-five-cent malt. I had just persuaded old Mrs. Jenkins to buy a dozen cakes and had relieved her of the wrappers. As she left, Ace picked one off my counter display and said, "You're selling these. Space Cadet?"

"That's right, Ace. You'll never find such a bargain again."

"You expect to go to the Moon, just selling soap, Captain? Or should I say 'Commodore'? Yuk yuk yukkity yuk!" That's how Ace laughed, like a comic strip.

"I'm trying," I said politely. "How about some?"

"You're sure it's good soap?"

"Positive."

"Well, I'll tell you. Just to help you out-I'll buy one bar."

A plunger. But this might be the winning wrapper. "Sure thing, Ace. Thanks a lot." I took his money, he slipped the cake into his pocket and started to leave. "Just a second, Ace. The wrapper. Please?"

He stopped. "Oh, yes." He took out the bar, peeled it, held up the wrapper. "You want this?"

"Yes, Ace. Thanks."

"Well, I'll show you how to get the best use of it." He reached across to the cigar lighter on the tobacco counter and set fire to it, lit a cigarette with it, let the wrapper bum almost to his fingers, dropped it and stepped on it.

Mr. Charton watched from the window of the dispensary.

Ace grinned. "Okay, Space Cadet?"

I was gripping the ice-cream scoop. But I answered, "Perfectly okay, Ace. It's your soap."

Mr. Charton came out and said, "I'll take the fountain, Kip. There's a package to deliver."

That was almost the only wrapper I missed. The contest ended May 1 and both Dad and Mr. Charton decided to stock up and cleaned out the last case in the store. It was almost eleven before I had them written up, then Mr. Charton drove me to Springfield to get them postmarked before midnight.

I had sent in five thousand seven hundred and eighty-two slogans. I doubt if Centerville was ever so scrubbed.

The results were announced on the Fourth of July. I chewed my nails to the elbows in those nine weeks. Oh, other things happened. I graduated and Dad and Mother gave me a watch and we paraded past Mr. Hanley and got our diplomas. It felt good, even though what Dad had persuaded me to learn beat what I learned at dear old Center six ways from zero. Before that was Sneak Day and Class Honeymoon and Senior Prom and the Class Play and the Junior-Senior Picnic and all the things they do to keep the animals quiet. Mr. Charton let me off early if I asked, but I didn't ask often as my mind wasn't on it and I wasn't going steady anyhow. I had been earlier in the year, but she-Elaine McMurty-wanted to talk boys and clothes and I wanted to talk space and engineering so she put me back into circulation.

After graduation I worked for Mr. Charton full time. I still didn't know how I was going to college. I didn't think about it; I just dished sundaes and held my breath until the Fourth of July.

It was to be on television at 8 P.M. We had a TV-a black and white flatimage job-but it hadn't been turned on in months; after I built it I lost interest. I dug it out, set it up in the living room and tested the picture. I killed a couple of hours adjusting it, then spent the rest of the day chewing nails. I couldn't eat dinner. By seven-thirty I was in front of the set, not-watching a comedy team and fiddling with my file cards. Dad came in, looked sharply at me, and said, "Take a grip on yourself, Kip. Let me remind you again that the chances are against you."

I gulped. "I know, Dad."

"Furthermore, in the long run it won't matter. A man almost always gets what he wants badly enough. I am sure you will get to the Moon someday, one way or another."

"Yes, sir. I just wish they would get it over with."

"They will. Coming, Emma?"

"Right away, dearest," Mother called back. She came in, patted my hand and sat down.

Dad settled back. "Reminds me of election nights."

Mother said, "I'm glad you're no longer up to your ears in that."

"Oh, come now, sweetheart, you enjoyed every campaign."

Mother sniffed.

The comics went back where comics go, cigarettes did a cancan, then dived into their packs while a soothing voice assured us that carcinogenous factors were unknown in Coronets, the safe. Safe, SAFE smoke with the true tobacco flavor. The program cut to the local station; we were treated to a thrilling view of Center Lumber & Hardware and I started pulling hairs out of the back of my hand.

The screen filled with soap bubbles; a quartet sang that this was the Skyway Hour, as if we didn't know. Then the screen went blank and sound cut off and I swallowed my stomach.

The screen lighted up with: "Network Difficulty-Do Not Adjust Your Sets."

I yelped, "Oh, they can't do that! They can't!"

Dad said, "Stop it, Clifford."

I shut up. Mother said, "Now, dearest, he's just a boy."

Dad said, "He is not a boy; he is a man. Kip, how do you expect to face a firing squad calmly if this upsets you?"

I mumbled; he said, "Speak up." I said I hadn't really planned on facing one.

"You may need to, someday. This is good practice. Try the Springfield channel; you may get a skip image."

I tried, but all I got was snow and the sound was like two cats in a sack. I jumped back to our local station.

"-jor General Bryce Gilmore, United States Air Force, our guest tonight, who will explain to us, later in this program, some hitherto unreleased pictures of Federation Lunar Base and the infant Luna City, the fastest growing little city on the Moon. Immediately after announcing the winners we will attempt a television linkage with Lunar Base, through the cooperation of the Space Corps of the-"

I took a deep breath and tried to slow my heartbeat, the way you steady down for a free-throw in a tie game. The gabble dragged on while celebrities were introduced, the

contest rules were explained, an improbably sweet young couple explained to each other why they always used Skyway Soap. My own sales talks were better.

At last they got to it. Eight girls paraded out; each held a big card over her head. The M.C. said in an awestruck voice: "And now . . . and now -the winning Skyway slogan for the ... FREE TRIP TO THE MOON!"

I couldn't breathe.

The girls sang, "I like Skyway Soap because-" and went on, each turning her card as a word reached her: "-it ... is ... as ... pure ... as ... the ... sky ... itself!"

I was fumbling cards. I thought I recognized it but couldn't be sure- not after more than five thousand slogans. Then I found it-and checked the cards the girls were holding.

"Dad! Mother! I've won, I've won!"

Chapter 3

"Hold it, Kip!" Dad snapped. "Stop it."

Mother said, "Oh, dear!"

I heard the M.C. saying, "-present the lucky winner, Mrs. Xenia Donahue, of Great Falls, Montana. . . . Mrs. Donahue!"

To a fanfare a little dumpy woman teetered out. I read the cards again. They still matched the one in my hand. I said, "Dad, what happened? That's my slogan."

"You didn't listen."

"They've cheated me!"

"Be quiet and listen,"

"-as we explained earlier, in the event of duplicate entries, priority goes to the one postmarked first. Any remaining tie is settled by time of arrival at the contest office. Our winning slogan was submitted by eleven contestants. To them go the first eleven prizes. Tonight we have with us the six top winners-for the trip to the Moon, the weekend in a satellite space station, the jet flight around the world, the flight to Antarctica, the-"

"Beaten by a postmark. A postmark!"

"-sorry we can't have every one of the winners with us tonight. To the rest this comes as a surprise." The M.C. looked at his watch. "Right this minute, in a thousand

homes across the land . . . right this second- there is a lucky knock on a lucky door of some loyal friend of Skyway-"

There was a knock on our door.

I fell over my feet. Dad answered. There were three men, an enormous crate, and a Western Union messenger singing about Skyway Soap. Somebody said, "Is this where Clifford Russell lives?"

Dad said, "Yes."

"Will you sign for this?"

"What is it?"

"It just says 'This Side Up.' Where do you want it?"

Dad passed the receipt to me and I signed, somehow. Dad said, "Will you put it in the living room, please?"

They did and left and I got a hammer and sidecutters. It looked like a coffin and I could have used one.

I got the top off. A lot of packing got all over Mother's rugs. At last we were down to it.

It was a space suit.

Not much, as space suits go these days. It was an obsolete model that Skyway Soap had bought as surplus material-the tenth-to-hundredth prizes were all space suits. But it was a real one, made by Goodyear, with air conditioning by York and auxiliary equipment by General Electric. Its instruction manual and maintenance-and-service log were with it and it had racked up more than eight hundred hours in rigging the second satellite station.

I felt better. This was no phony, this was no toy. It had been out in space, even if Ihad not. But would!-someday. I'd learn to use it and someday I'd wear it on the naked face of the Moon.

Dad said, "Maybe we'd better carry this to your workshop. Eh, Kip?"

Mother said, "There's no rush, dearest. Don't you want to try it on, Clifford?"

I certainly did. Dad and I compromised by toting the crate and packing out to the barn. When we came back, a reporter from the Clarion was there with a photographer-the paper had known I was a winner before I did, which didn't seem right.

They wanted pictures and I didn't mind.

I had an awful time getting into it-dressing in an upper berth is a cinch by comparison. The photographer said, "Just a minute, kid. I've seen 'em do it at Wright Field. Mind some advice?"

"Uh? No. I mean, yes, tell me."

"You slide in like an Eskimo climbing into a kayak. Then wiggle your right arm in-"

It was fairly easy that way, opening front gaskets wide and sitting down in it, though I almost dislocated a shoulder. There were straps to adjust for size but we didn't bother; he stuffed me into it, zippered the gaskets, helped me to my feet and shut the helmet.

It didn't have air bottles and I had to live on the air inside while he got three shots. By then I knew that the suit had seen service; it smelled like dirty socks. I was glad to get the helmet off.

Just the same, it made me feel good to wear it. Like a spacer.

They left and presently we went to bed, leaving the suit in the living room.

About midnight I catfooted down and tried it on again.

The next morning I moved it out to my shop before I went to work. Mr. Charton was diplomatic; he just said he'd like to see my space suit when I had time. Everybody knew about it-my picture was on the front page of the Clarion along with the Pikes Peak Hill Climb and the holiday fatalities. The story had been played for laughs, but I didn't mind. I had never really believed I would win-and I had an honest-to-goodness space suit, which was more than my classmates had.

That afternoon Dad brought me a special delivery letter from Skyway Soap. It enclosed a property title to one suit, pressure, serial number so-and-so, ex-US-AF. The letter started with congratulations and thanks but the last paragraphs meant something:

Skyway Soap realizes that your prize may not be of immediate use to you. Therefore, as mentioned in paragraph 4 (a) of the rules. Skyway offers to redeem it for a cash premium of five hundred dollars ($500.00). To avail yourself of this privilege you should return the pressure suit via express collect to Goodyear Corporation (Special Appliances Division, attn: Salvage), Akron, Ohio, on or before the 15th of September.

Skyway Soap hopes that you have enjoyed our Grand Contest as much as we have enjoyed having you and hopes that you will retain your prize long enough to appear with

it on your local television station in a special Skyway Jubilee program. A fee of fifty dollars ($50.00) will be paid for this appearance. Your station manager will be in touch with you. We hope that you will be our guest.

All good wishes from Skyway, the Soap as Pure as the Sky Itself.

I handed it to Dad. He read it and handed it back.

I said, "I suppose I should."

He said, "I see no harm. Television leaves no external scars."

"Oh, that. Sure, it's easy money. But I meant I really ought to sell the suit back to them." I should have felt happy since I needed money, while I needed a space suit the way a pig needs a pipe organ. But I didn't, even though I had never had five hundred dollars in my life.

"Son, any statement that starts 'I really ought to-' is suspect. It means you haven't analyzed your motives."

"But five hundred dollars is tuition for a semester, almost."

"Which has nothing to do with the case. Find out what you want to do, then do it. Never talk yourself into doing something you don't want. Think it over." He said good-bye and left.

I decided it was foolish to burn my bridges before I crossed them. The space suit was mine until the middle of September even if I did the sensible thing-by then I might be tired of it.

But I didn't get tired of it; a space suit is a marvelous piece of machinery-a little space station with everything miniaturized. Mine was a chrome-plated helmet and shoulder yoke which merged into a body of silicone, asbestos, and glass-fibre cloth. This hide was stiff except at the joints. They were the same rugged material but were "constant volume" -when you bent a knee a bellows arrangement increased the volume over the knee cap as much as the space back of the knee was squeezed. Without this a man wouldn't be able to move; the pressure inside, which can add up to several tons, would hold him rigid as a statue. These volume compensators were covered with dural armor; even the finger joints had little dural plates over the knuckles.

It had a heavy glass-fibre belt with clips for tools, and there were the straps to adjust for height and weight. There was a back pack, now empty, for air bottles, and zippered pockets inside and out, for batteries and such.

The helmet swung back, taking a bib out of the yoke with it, and the front opened with two gasketed zippers; this left a door you could wiggle into. With helmet clamped and zippers closed it was impossible to open the suit with pressure inside.

Switches were mounted on the shoulder yoke and on the helmet; the helmet was monstrous. It contained a drinking tank, pill dispensers six on each side, a chin plate on the right to switch radio from "receive" to "send," another on the left to increase or decrease flow of air, an automatic polarizer for the face lens, microphone and earphones, space for radio circuits in a bulge back of the head, and an instrument board arched over the head. The instrument dials read backwards because they were reflected in an inside mirror in front of the wearer's forehead at an effective fourteen inches from the eyes.

Above the lens or window there were twin headlights. On top were two antennas, a spike for broadcast and a horn that squirted microwaves like a gun-you aimed it by facing the receiving station. The horn antenna was armored except for its open end.

This sounds as crowded as a lady's purse but everything was beautifully compact; your head didn't touch anything when you looked out the lens. But you could tip your head back and see reflected instruments, or tilt it down and turn it to work chin controls, or simply turn your neck for water nipple or pills. In all remaining space sponge-rubber padding kept you from banging your head no matter what. My suit was like a fine car, its helmet like a Swiss watch. But its air bottles were missing; so was radio gear except for built-in antennas; radar beacon and emergency radar target were gone, pockets inside and out were empty, and there were no tools on the belt. The manual told what it ought to have-it was like a stripped car.

I decided I just had to make it work right.

First I swabbed it out with Clorox to kill the locker-room odor. Then I got to work on the air system.

It's a good thing they included that manual; most of what I thought I knew about space suits was wrong.

A man uses around three pounds of oxygen a day-pounds mass, not pounds per square inch. You'd think a man could carry oxygen for a month, especially out in space where mass has no weight, or on the Moon where three pounds weigh only half a pound. Well, that's okay for space stations or ships or frogmen; they run air through soda lime to take out carbon dioxide, and breathe it again. But not space suits.

Even today people talk about "the bitter cold of outer space"-but space is vacuum and if vacuum were cold, how could a Thermos jug keep hot coffee hot? Vacuum is nothing-it has no temperature, it just insulates.

Three-fourths of your food turns into heat-a lot of heat, enough each day to melt fifty pounds of ice and more. Sounds preposterous, doesn't it? But when you have a

roaring fire in the furnace, you are cooling your body; even in the winter you keep a room about thirty degrees cooler than your body. When you turn up a furnace's thermostat, you are picking a more comfortable rate for cooling. Your body makes so much heat you have to get rid of it, exactly as you have to cool a car's engine.

Of course, if you do it too fast, say in a sub-zero wind, you can freeze- but the usual problem in a space suit is to keep from being boiled like a lobster. You've got vacuum all around you and it's hard to get rid of heat.

Some radiates away but not enough, and if you are in sunlight, you pick up still more-this is why space ships are polished like mirrors.

So what can you do?

Well, you can't carry fifty-pound blocks of ice. You get rid of heat the way you do on Earth, by convection and evaporation-you keep air moving over you to evaporate sweat and cool you off. Oh, they'll learn to build space suits that recycle like a space ship but today the practical way is to let used air escape from the suit, flushing away sweat and carbon dioxide and excess heat-while wasting most of the oxygen.

There are other problems. The fifteen pounds per square inch around you includes three pounds of oxygen pressure. Your lungs can get along on less than half that, but only an Indian from the high Andes is likely to he comfortable on less than two pounds oxygen pressure. Nine-tenths of a pound is the limit. Any less than nine-tenths of a pound won't force oxygen into blood-this is about the pressure at the top of Mount Everest.

Most people suffer from hypoxia (oxygen shortage) long before this, so better use two p.s.i. of oxygen. Mix an inert gas with it, because pure oxygen can cause a sore throat or make you drunk or even cause terrible cramps. Don't use nitrogen (which you've breathed all your life) because it will bubble in your blood if pressure drops and cripple you with "bends." Use helium which doesn't. It gives you a squeaky voice, but who cares?

You can die from oxygen shortage, be poisoned by too much oxygen, be crippled by nitrogen, drown in or be acid-poisoned by carbon dioxide, or dehydrate and run a killing fever. When I finished reading that manual I didn't see how anybody could stay alive anywhere, much less in a space suit.

But a space suit was in front of me that had protected a man for hundreds of hours in empty space.

Here is how you beat those dangers. Carry steel bottles on your back; they hold "air" (oxygen and helium) at a hundred and fifty atmospheres, over 2000 pounds per square inch; you draw from them through a reduction valve down to 150 p.s.i. and through still another reduction valve, a "demand" type which keeps pressure in your helmet at three to five pounds per square inch-two pounds of it oxygen. Put a silicone-

rubber collar around your neck and put tiny holes in it, so that the pressure in the body of your suit is less, the air movement still faster; then evaporation and cooling will be increased while the effort of bending is decreased. Add exhaust valves, one at each wrist and ankle-these have to pass water as well as gas because you may be ankle deep in sweat.

The bottles are big and clumsy, weighing around sixty pounds apiece, and each holds only about five mass pounds of air even at that enormous pressure; instead of a month's supply you will have only a few hours-my suit was rated at eight hours for the bottles it used to have. But you will be okay for those hours-if everything works right. You can stretch time, for you don't die from overheating very fast and can stand too much carbon dioxide even longer-but let your oxygen run out and you die in about seven minutes. Which gets us back where we started-it takes oxygen to stay alive.

To make darn sure that you're getting enough (your nose can't tell) you clip a little photoelectric cell to your ear and let it see the color of your blood; the redness of the blood measures the oxygen it carries. Hook this to a galvanometer. If its needle gets into the danger zone, start saying your prayers.

I went to Springfield on my day off, taking the suit's hose fittings, and shopped. I picked up, second hand, two thirty-inch steel bottles from a welding shop-and got myself disliked by insisting on a pressure test. I took them home on the bus, stopped at Pring's Garage and arranged to buy air at fifty atmospheres. Higher pressures, or oxygen or helium, I could get from the Springfield airport, but I didn't need them yet.

When I got home I closed the suit, empty, and pumped it with a bicycle pump to two atmospheres absolute, or one relative, which gave me a test load of almost four to one compared with space conditions. Then I tackled the bottles. They needed to be mirror bright, since you can't afford to let them pick up heat from the Sun. I stripped and scraped and wire-brushed, and buffed and polished, preparatory to nickel-plating.

Next morning, Oscar the Mechanical Man was limp as a pair of long johns.

Getting that old suit not just airtight but helium-tight was the worst headache. Air isn't bad but the helium molecule is so small and agile that it migrates right through ordinary rubber-and I wanted this job to be right, not just good enough to perform at home but okay for space. The gaskets were shot and there were slow leaks almost impossible to find.

I had to get new silicone-rubber gaskets and patching compound and tissue from Goodyear; small-town hardware stores don't handle such things. I wrote a letter explaining what I wanted and why-and they didn't even charge me. They sent me some mimeographed sheets elaborating on the manual.

It still wasn't easy. But there came a day when I pumped Oscar full of pure helium at two atmospheres absolute.

A week later he was still tight as a six-ply tire.

That day I wore Oscar as a self-contained environment. I had already worn him many hours without the helmet, working around the shop, handling tools while hampered by his gauntlets, getting height and size adjustments right. It was like breaking in new ice skates and after a while I was hardly aware I had it on-once I came to supper in it. Dad said nothing and Mother has the social restraint of an ambassador; I discovered my mistake when I picked up my napkin.

Now I wasted helium to the air, mounted bottles charged with air, and suited them. Then I clamped the helmet and dogged the safety catches.

Air sighed softly into the helmet, its flow through the demand valve regulated by the rise and fall of my chest-I could reset it to speed up or slow down by the chin control. I did so, watching the gauge in the mirror and letting it mount until I had twenty pounds absolute inside. That gave me five pounds more than the pressure around me, which was as near as I could come to space conditions without being in space.

I could feel the suit swell and the joints no longer felt loose and easy. I balanced the cycle at five pounds differential and tried to move- And almost fell over. I had to grab the workbench.

Suited up, with bottles on my back, I weighed more than twice what I do stripped. Besides that, although the joints were constant-volume, the suit didn't work as freely under pressure. Dress yourself in heavy fishing waders, put on an overcoat and boxing gloves and a bucket over your head, then have somebody strap two sacks of cement across your shoulders and you will know what a space suit feels like under one gravity.

But ten minutes later I was handling myself fairly well and in half an hour I felt as if I had worn one all my life. The distributed weight wasn't too great (and I knew it wouldn't amount to much on the Moon). The joints were just a case of getting used to more effort. I had had more trouble learning to swim.

It was a blistering day: I went outside and looked at the Sun. The polarizer cut the glare and I was able to look at it. I looked away; polarizing eased off and I could see around me.

I stayed cool. The air, cooled by semi-adiabatic expansion (it said in the manual), cooled my head and flowed on through the suit, washing away body heat and used air through the exhaust valves. The manual said that heating elements rarely cut in, since the usual problem was to get rid of heat; I decided to get dry ice and force a test of thermostat and heater.

I tried everything I could think of. A creek runs back of our place and beyond is a pasture. I sloshed through the stream, lost my footing and fell -the worst trouble was that

I could never see where I was putting my feet. Once I was down I lay there a while, half floating but mostly covered. I didn't get wet, I didn't get hot, I didn't get cold, and my breathing was as easy as ever even though water shimmered over my helmet.

I scrambled heavily up the bank and fell again, striking my helmet against a rock. No damage, Oscar was built to take it. I pulled my knees under me, got up, and crossed the pasture, stumbling on rough ground but not falling. There was a haystack there and I dug into it until I was buried.

Cool fresh air ... no trouble, no sweat.

After three hours I took it off. The suit had relief arrangements like any pilot's outfit but I hadn't rigged it yet, so I had come out before my air was gone. When I hung it in the rack I had built, I patted the shoulder yoke. "Oscar, you're all right," I told it. "You and I are partners. We're going places." I would have sneered at five thousand dollars for Oscar.

While Oscar was taking his pressure tests I worked on his electrical and electronic gear. I didn't bother with a radar target or beacon; the first is childishly simple, the second is fiendishly expensive. But I did want radio for the space-operations band of the spectrum-the antennas suited only those wavelengths. I could have built an ordinary walkie-talkie and hung it outside-but I would have been kidding myself with a wrong frequency and gear that might not stand vacuum. Changes in pressure and temperature and humidity do funny things to electronic circuits; that is why the radio was housed inside the helmet.

The manual gave circuit diagrams, so I got busy. The audio and modulating circuits were no problem, just battery-operated transistor circuitry which I could make plenty small enough. But the microwave part- It was a two-headed calf, each with transmitter and receiver-one centimeter wavelength for the horn and three octaves lower at eight centimeters for the spike in a harmonic relationship, one crystal controlling both. This gave more signal on broadcast and better aiming when squirting out the horn and also meant that only part of the rig had to be switched in changing antennas. The output of a variable-frequency oscillator was added to the crystal frequency in tuning the receiver. The circuitry was simple-on paper.

But microwave circuitry is never easy; it takes precision machining and a slip of a tool can foul up the impedance and ruin a mathematically calculated resonance.

Well, I tried. Synthetic precision crystals are cheap from surplus houses and some transistors and other components I could vandalize from my own gear. And I made it work, after the fussiest pray-and-try-again I have ever done. But the consarned thing simply would not fit into the helmet.

Call it a moral victory-I've never done better work.

I finally bought one, precision made and embedded in plastic, from the same firm that sold me the crystal. Like the suit it was made for, it was obsolete and I paid a price so low that I merely screamed. By then I would have mortgaged my soul-I wanted that suit to work.

The only thing that complicated the rest of the electrical gear was that everything had to be either "fail-safe" or "no-fail"; a man in a space suit can't pull into the next garage if something goes wrong-the stuff has to keep on working or he becomes a vital statistic. That was why the helmet had twin headlights; the second cut in if the first failed-even the peanut lights for the dials over my head were twins. I didn't take short cuts; every duplicate circuit I kept duplicate and tested to make sure that automatic changeover always worked.

Mr. Charton insisted on filling the manual's list on those items a drugstore stocks-maltose and dextrose and amino tablets, vitamins, dexedrine, dramamine, aspirin, antibiotics, antihistamines, codeine, almost any pill a man can take to help him past a hump that might kill him. He got Doc Kennedy to write prescriptions so that I could stock Oscar without breaking laws.

When I got through Oscar was in as good shape as he had ever been in Satellite Two. It had been more fun than the time I helped Jake Bixby turn his heap into a hotrod.

But summer was ending and it was time I pulled out of my daydream. I still did not know where I was going to school, or how-or if. I had saved money but it wasn't nearly enough. I had spent a little on postage and soap wrappers but I got that back and more by one fifteen-minute appearance on television and I hadn't spent a dime on girls since March- too busy. Oscar cost surprisingly little; repairing Oscar had been mostly sweat and screwdriver. Seven dollars out of every ten I had earned was sitting in the money basket.

But it wasn't enough.

I realized glumly that I was going to have to sell Oscar to get through the first semester. But how would I get through the rest of the year? Joe Valiant the all-American boy always shows up on the campus with fifty cents and a heart of gold, then in the last chapter is tapped for Skull-and-Bones and has money in the bank. But I wasn't Joe Valiant, not by eight decimal places. Did it make sense to start if I was going to have to drop out about Christmas? Wouldn't it be smarter to stay out a year and get acquainted with a pick and shovel?

Did I have a choice? The only school I was sure of was State U. -and there was a row about professors being fired and talk that State U. might lose its accredited standing. Wouldn't it be comical to spend years slaving for a degree and then have it be worthless because your school wasn't recognized?

State U. wasn't better than a "B" school in engineering even before this fracas.

Rensselaer and CalTech turned me down the same day-one with a printed form, the other with a polite letter saying it was impossible to accept all qualified applicants.

Little things were getting my goat, too. The only virtue of that television show was the fifty bucks. A person looks foolish wearing a space suit in a television studio and our announcer milked it for laughs, rapping the helmet and asking me if I was still in there. Very funny. He asked me what I wanted with a space suit and when I tried to answer he switched off the mike in my suit and patched in a tape with nonsense about space pirates and flying saucers. Half the people in town thought it was my voice.

It wouldn't have been hard to live down if Ace Quiggle hadn't turned up. He had been missing all summer, in jail maybe, but the day after the show he took a seat at the fountain, stared at me and said in a loud whisper, "Say, ain't you the famous space pirate and television star?"

I said, "What'll you have, Ace?"

"Gosh! Could I have your autograph? I ain't never seen a real live space pirate before!"

"Give me your order, Ace. Or let someone else use that stool."

"A choc malt. Commodore-and leave out the soap."

Ace's "wit" went on every time he showed up. It was a dreadfully hot summer and easy to get tempery. The Friday before Labor Day weekend the store's cooling system went sour, we couldn't get a repairman and I spent three bad hours fixing it, ruining my second-best pants and getting myself reeking. I was back at the fountain and wishing I could go home for a bath when Ace swaggered in, greeting me loudly with "Why, if it isn't Commander Comet, the Scourge of the Spaceways! Where's your blaster gun, Commander? Ain't you afraid the Galactic Emperor will make you stay in after school for running around bare-nekkid? Yuk yuk yukkity yuk!"

A couple of girls at the fountain giggled.

"Lay off, Ace," I said wearily. "It's a hot day."

"That's why you're not wearing your rubber underwear?" The girls giggled again.

Ace smirked. He went on: "Junior, seein' you got that clown suit, why don't you put it to work? Run an ad in the Clarion: 'Have Space Suit-Will Travel.' Yukkity yuk! Or you could hire out as a scarecrow."

The girls snickered. I counted ten, then again in Spanish, and in Latin, and said tensely, "Ace, just tell me what you'll have."

"My usual. And snap it up-I've got a date on Mars."

Mr. Charton came out from behind his counter, sat down and asked me to mix him a lime cooler, so I served him first. It stopped the flow of wit and probably saved Ace's life.

The boss and I were alone shortly after. He said quietly, "Kip, a reverence for life does not require a man to respect Nature's obvious mistakes."

"Sir?"

"You need not serve Quiggle again. I don't want his trade."

"Oh, I don't mind. He's harmless."

"I wonder how harmless such people are? To what extent civilization is retarded by the laughing jackasses, the empty-minded belittlers? Go home; you'll want to make an early start tomorrow."

I had been invited to the Lake of the Forest for the long Labor Day weekend by Jake Bixby's parents. I wanted to go, not only to get away from the heat but also to chew things over with Jake. But I answered, "Shucks, Mr. Charton, I ought not to leave you stuck."

"The town will be deserted over the holiday; I may not open the fountain. Enjoy yourself. This summer has worn you a bit fine. Kip."

I let myself be persuaded but I stayed until closing and swept up. Then I walked home, doing some hard thinking.

The party was over and it was time to put away my toys. Even the village half-wit knew that I had no sensible excuse to have a space suit. Not that I cared what Ace thought . . . but I did have no use for it-and I needed money. Even if Stanford and M.I.T. and Carnegie and the rest turned me down, I was going to start this semester. State U. wasn't the best-but neither was I and I had learned that more depended on the student than on the school.

Mother had gone to bed and Dad was reading. I said hello and went to the barn, intending to strip my gear off Oscar, pack him into his case, address it, and in the morning phone the express office to pick it up. He'd be gone before I was back from the Lake of the Forest. Quick and clean.

He was hanging on his rack and it seemed to me that he grinned hello. Nonsense, of course. I went over and patted his shoulder. "Well, old fellow, you've been a real chum and it's been nice knowing you. See you on the Moon-I hope."

But Oscar wasn't going to the Moon. Oscar was going to Akron, Ohio, to "Salvage." They were going to unscrew parts they could use and throw the rest of him on the junk pile.

My mouth felt dry.

("It's okay, pal," Oscar answered.)

See that? Out of my silly head! Oscar didn't really speak; I had let my imagination run wild too long. So I quit patting him, hauled the crate out and took a wrench from his belt to remove the gas bottles.

I stopped.

Both bottles were charged, one with oxygen, one with oxy-helium. I had wasted money to do so because I wanted, just once, to try a spaceman's mix.

The batteries were fresh and power packs were charged.

"Oscar," I said softly, "we're going to take a last walk together. Okay?"

("Swell!")

I made it a dress rehearsal-water in the drinking tank, pill dispensers loaded, first-aid kit inside, vacuum-proof duplicate (I hoped it was vacuum-proof) in an outside pocket. All tools on belt, all lanyards tied so that tools wouldn't float away in free fall. Everything.

Then I heated up a circuit that the F.C.C. would have squelched had they noticed, a radio link I had salvaged out of my effort to build a radio for Oscar, and had modified as a test rig for Oscar's ears and to let me check the aiming of the directional antenna. It was hooked in with an echo circuit that would answer back if I called it-a thing I had bread hoarded out of an old Webcor wire recorder, vintage 1950.

Then I climbed into Oscar and buttoned up. "Tight?"

("Tight!")

I glanced at the reflected dials, noticed the blood-color reading, reduced pressure until Oscar almost collapsed. At nearly sea-level pressure I was in no danger from hypoxia; the trick was to avoid too much oxygen.

We started to leave when I remembered something. "Just a second, Oscar." I wrote a note to my folks, telling them that I was going to get up early and catch the first bus to the lake. I could write while suited up now, I could even thread a needle. I stuck the note under the kitchen door.

Then we crossed the creek into the pasture. I didn't stumble in wading;

I was used to Oscar now, sure-footed as a goat.

Out in the field I keyed my talkie and said, "Junebug, calling Peewee. Come in, Peewee."

Seconds later my recorded voice came back: " 'Junebug, calling Peewee. Come in, Peewee.'"

I shifted to the horn antenna and tried again. It wasn't easy to aim in the dark but it was okay. Then I shifted back to spike antenna and went on calling Peewee while moving across the pasture and pretending that I was on Venus and had to stay in touch with base because it was unknown terrain and unbreathable atmosphere. Everything worked perfectly and if it had been Venus, I would have been all right.

Two lights moved across the southern sky, planes I thought, or maybe helis. Just the sort of thing yokels like to report as "flying saucers." I watched them, then moved behind a little rise that would tend to spoil reception and called Peewee. Peewee answered and I shut up; it gets dull talking to an idiot circuit which can only echo what you say to it.

Then I heard: "Peewee to Junebug! Answer!"

I thought I had been monitored and was in trouble-then decided that some ham had picked me up. "Junebug here. I read you. Who are you?"

The test rig echoed my words.

Then the new voice shrilled, "Peewee here! Home me in!"

This was silly. But I found myself saying, "Junebug to Peewee, shift to directional frequency at one centimeter -- and keep talking, keep talking!" I shifted to the horn antenna.

"Junebug, I read you. Fix me. One, two, three, four, five, six, seven--"

"You're due south of me, about forty degrees. Who are you?"

It must be one of those lights. It had to be.

But I didn't have time to figure it out. A space ship almost landed on me.

Chapter 4

I said "space ship," not "rocket ship." It made no noise but a whoosh and there weren't any flaming jets-it seemed to move by clean living and righteous thoughts.

I was too busy keeping from being squashed to worry about details. A space suit in one gravity is no track suit; it's a good thing I had practiced. The ship sat down where I had just been, occupying more than its share of pasture, a big black shape.

The other one whooshed down, too, just as a door opened in the first. Light poured through the door; two figures spilled out and started to run. One moved like a cat; the other moved clumsily and slowly-handicapped by a space suit. S'help me, a person in a space suit does look silly. This one was less than five feet tall and looked like the Gingerbread Man.

A big trouble with a suit is your limited angle of vision. I was trying to watch both of them and did not see the second ship open. The first figure stopped, waiting for the one in the space suit to catch up, then suddenly collapsed-just a gasping sound, "Eeeah!"-and clunk.

You can tell the sound of pain. I ran to the spot at a lumbering dogtrot, leaned over and tried to see what was wrong, tilting my helmet to bring the beam of my headlight onto the ground.

A bug-eyed monster-

That's not fair but it was my first thought. I couldn't believe it and would have pinched myself except that it isn't practical when suited up.

An unprejudiced mind (which mine wasn't) would have said that this monster was rather pretty. It was small, not more than half my size, and its curves were graceful, not as a girl is but more like a leopard, although it wasn't shaped like either one. I couldn't grasp its shape-I didn't have any pattern to fit it to; it wouldn't add up.

But I could see that it was hurt. Its body was quivering like a frightened rabbit. It had enormous eyes, open but milky and featureless, as if nictitating membranes were across them. What appeared to be its mouth-

That's as far as I got. Something hit me in the spine, right between the gas bottles.

I woke up on a bare floor, staring at a ceiling. It took several moments to recall what had happened and then I shied away because it was so darn silly. I had been out for a walk in Oscar . . . and then a space ship had landed . . . and a bug-eyed-

I sat up suddenly as I realized that Oscar was gone. A light cheerful voice said, "Hi, there!"

I snapped my head around. A kid about ten years old was seated on the floor, leaning against a wall. He-I corrected myself. Boys don't usually clutch rag dolls. This kid was the age when the difference doesn't show much and was dressed in shirt, shorts and dirty tennis shoes, and had short hair, so I didn't have much to go on but the rag dolly.

"Hi, yourself," I answered. "What are we doing here?"

"I'm surviving. I don't know about you."

"Huh?"

"Surviving. Pushing my breath in and out. Conserving my strength. There's nothing else to do at the moment; they've got us locked in."

I looked around. The room was about ten feet across, four-sided but wedge-shaped, and nothing in it but us. I couldn't see a door; if we weren't locked, we might as well be. "Who locked us in?"

"Them. Space pirates. And him."

"Space pirates? Don't be silly!"

The kid shrugged. "Just my name for them. But better not think they're silly if you want to keep on surviving. Are you 'Junebug'?"

"Huh? You sound like a junebug yourself. Space pirates, my aunt!" I was worried and very confused and this nonsense didn't help. Where was Oscar? And where was I?

"No, no, not a junebug but 'Junebug'-a radio call. You see, I'm Peewee."

I said to myself, Kip old pal, walk slowly to the nearest hospital and give yourself up. When a radio rig you wired yourself starts looking like a skinny little girl with a rag doll, you've flipped. It's going to be wet packs and tranquilizers and no excitement for you-you've blown every fuse.

"You're 'Peewee'?"

"That's what I'm called-I'm relaxed about it. You see, I heard, 'Junebug, calling Peewee,' and decided that Daddy had found out about the spot I was in and had alerted people to help me land. But if you aren't 'Junebug,' you wouldn't know about that. Who are you?"

"Wait a minute, I am 'Junebug.' I mean I was using that call. But I'm Clifford Russell-'Kip' they call me."

"How do you do. Kip?" she said politely.

"And howdy to you, Peewee. Uh, are you a boy or a girl?"

Peewee looked disgusted. "I'll make you regret that remark. I realize I am undersized for my age but I'm actually eleven, going on twelve. There's no need to be rude. In another five years I expect to be quite a dish-you'll probably beg me for every dance."

At the moment I would as soon have danced with a kitchen stool, but I had things on my mind and didn't want a useless argument. "Sorry, Peewee. I'm still groggy. You mean you were in that first ship?"

Again she looked miffed. "I was piloting it."

Sedation every night and a long course of psychoanalysis. At my age. "You were-piloting?"

"You surely don't think the Mother Thing could? She wouldn't fit their controls. She curled up beside me and coached. But if you think it's easy, when you've never piloted anything but a Cessna with your Daddy at your elbow and never made any kind of landing, then think again. I did very well!-and your landing instructions weren't too specific. What have they done with the Mother Thing?"

"The what?"

"You don't know? Oh, dear!"

"Wait a minute, Peewee. Let's get on the same frequency. I'm 'Junebug' all right and I homed you in-and if you think that's easy, to have a voice out of nowhere demand emergency landing instructions, you better think again, too. Anyhow, a ship landed and another ship landed right after it and a door opened in the first ship and a guy in a space suit jumped out-"

"That was I."

"-and something else jumped out-"

"The Mother Thing."

"Only she didn't get far. She gave a screech and flopped. I went to see what the trouble was and something hit me. The next thing I know you're saying, 'Hi, there.' " I

wondered if I ought to tell her that the rest, including her, was likely a morphine dream because I was probably lying in a hospital with my spine in a cast.

Peewee nodded thoughtfully. "They must have blasted you at low power, or you wouldn't be here. Well, they caught you and they caught me, so they almost certainly caught her. Oh, dear! I do hope they didn't hurt her."

"She looked like she was dying."

"As if she were dying," Peewee corrected me. "Subjunctive. I rather doubt it; she's awfully hard to kill-and they wouldn't kill her except to keep her from escaping; they need her alive."

"Why? And why do you call her 'the Mother Thing'?"

"One at a time, Kip. She's the Mother Thing because . . . well, because she is, that's all. You'll know, when you meet her. As to why they wouldn't kill her, it's because she's worth more as a hostage than as a corpse-the same reason the kept me alive. Although she's worth incredibly more than I am-they'd write me off without a blink if I became inconvenient. Or you. But since she was alive when you saw her, then it's logical that she's a prisoner again. Maybe right next door. That makes me feel much better."

It didn't make me feel better. "Yes, but where's here?"

Peewee glanced at a Mickey Mouse watch, frowned and said, "Almost halfway to the Moon, I'd say."

"What?!"

"Of course I don't know. But it makes sense that they would go back to their nearest base; that's where the Mother Thing and I scrammed from."

"You're telling me we're in that ship?"

"Either the one I swiped or the other one. Where did you think you were, Kip? Where else could you be?"

"A mental hospital."

She looked big-eyed and then grinned. "Why, Kip, surely your grip on reality is not that weak?"

"I'm not sure about anything. Space pirates-Mother Things."

She frowned and bit her thumb. "I suppose it must be confusing. But trust your ears and eyes. My grip on reality is quite strong, I assure you- you see, I'm a genius." She

made it a statement, not a boast, and somehow I was not inclined to doubt the claim, even though it came from a skinny-shanked kid with a rag doll in her arms.

But I didn't see how it was going to help.

Peewee went on: " 'Space pirates' . . . mmm. Call them what you wish. Their actions are piratical and they operate in space-you name them. As for the Mother Thing . . . wait until you meet her."

"What's she doing in this hullabaloo?"

"Well, it's complicated. She had better explain it. She's a cop and she was after them-"

"A cop?"

"I'm afraid that is another semantic inadequacy. The Mother Thing knows what we mean by cop and I think she finds the idea bewildering if not impossible. But what would you call a person who hunts down miscreants? A cop, no?"

"A cop, yes, I guess."

"So would I." She looked again at her watch. "But right now I think we had better hang on. We ought to be at halfway point in a few minutes- and a skew-flip is disconcerting even if you are strapped down."

I had read about skew-flip turn-overs, but only as a theoretical maneuver; I had never heard of a ship that could do one. If this was a ship. The floor felt as solid as concrete and as motionless. "I don't see anything to hang on to."

"Not much, I'm afraid. But if we sit down in the narrowest part and push against each other, I think we can brace enough not to slide around. But let's hurry; my watch might be slow."

We sat on the floor in the narrow part where the angled walls were about five feet apart. We faced each other and pushed our shoes against each other, each of us bracing like an Alpinist inching his way up a rock chimney-my socks against her tennis shoes, rather, for my shoes were still on my workbench, so far as I knew. I wondered if they had simply dumped Oscar in the pasture and if Dad would find him.

"Push hard, Kip, and brace your hands against the deck."

I did so. "How do you know when they'll turn over, Peewee?"

"I haven't been unconscious-they just tripped me and carried me inside-so I know when we took off. If we assume that the Moon is their destination, as it probably is, and if

we assume one gravity the whole jump -which can't be far off; my weight feels normal. Doesn't yours?"

I considered it. "I think so."

"Then it probably is, even though my own sense of weight may be distorted from being on the Moon. If those assumptions are correct, then it is almost exactly a three-and-a-half-hour trip and-" Peewee looked at her watch. "-E.T.A. should be nine-thirty in the morning and turn-over at seven-forty-five. Any moment now."

"Is it that late?" I looked at my watch. "Why, I've got a quarter of two."

"You're on your zone time. I'm on Moon time-Greenwich time, that is. Oh, oh! Here we go!"

The floor tilted, swerved, and swooped like a roller coaster, and my semicircular canals did a samba. Things steadied down as I pulled out of acute dizziness.

"You all right?" asked Peewee.

I managed to focus my eyes. "Uh, I think so. It felt like a one-and-a-half gainer into a dry pool."

"This pilot does it faster than I dared to. It doesn't really hurt, after your eyes uncross. But that settles it. We're headed for the Moon. We'll be there in an hour and three quarters."

I still couldn't believe it. "Peewee? What kind of a ship can gun at one gee all the way to the Moon? They been keeping it secret? And what were you doing on the Moon anyhow? And why were you stealing a ship?"

She sighed and spoke to her doll. "He's a quiz kid, Madame Pompadour. Kip, how can I answer three questions at once? This is a flying saucer, and-"

"Flying saucer! Now I've heard everything."

"It's rude to interrupt. Call it anything you like; there's nothing official about the term. Actually it's shaped more like a loaf of pumpernickel, an oblate spheroid. That's a shape defined-"

"I know what an oblate spheroid is," I snapped. I was tired and upset from too many things, from a cranky air conditioner that had ruined a good pair of pants to being knocked out while on an errand of mercy. Not to mention Ace Quiggle. I was beginning to think that little girls who were geniuses ought to have the grace not to show it.

"No need to be brisk," she said reprovingly. "I am aware that people have called everything from weather balloons to street lights 'flying saucers.' But it is my considered opinion-by Occam's Razor-that-"

"Whose razor?"

"Occam's. Least hypothesis. Don't you know anything about logic?"

"Not much."

"Well ... I suspected that about every five-hundredth 'saucer sighting' was a ship like this. It adds up. As for what I was doing on the Moon-" She stopped and grinned. "I'm a pest."

I didn't argue it.

"A long time ago when my Daddy was a boy, the Hayden Planetarium took reservations for trips to the Moon. It was just a publicity gag, like that silly soap contest recently, but Daddy got his name on the list. Now, years and years later, they are letting people go to the Moon-and sure enough, the Hayden people turned the list over to American Express- and American Express notified the applicants they could locate that theywould be given preference."

"So your father took you to the Moon?"

"Oh, heavens, no! Daddy filled out that form when he was only a boy. Now he is just about the biggest man at the Institute for Advanced Study and hasn't time for such pleasures. And Mama wouldn't go if you paid her. So I said I would. Daddy said 'No!' and Mama said Good gracious, no!' . . . and so I went. I can be an awful nuisance when I put my mind on it," she said proudly. "I have talent for it. Daddy says I'm an amoral little wretch."

"Uh, do you suppose he might be right?"

"Oh, I'm sure he is. He understands me, whereas Mama throws up her hands and says she can't cope. I was perfectly beastly and unbearable for two whole weeks and at last Daddy said 'For Blank's sake let her go! -maybe we'll collect her insurance!' So I did."

"Mmmmm . . . that still doesn't explain why you are here."

"Oh, that. I was poking around where I shouldn't, doing things they told us not to. I always get around; it's very educational. So they grabbed me. They would rather have Daddy but they hope to swap me for him. I couldn't let that happen, so I had to escape."

I muttered, " The butler did it.' "

"What?"

"Your story has as many holes as the last chapter of most whodunits."

"Oh. But I assure you it is the simple-oh, oh! here we go again!"

All that happened was that the lighting changed from white to blue. There weren't any light fixtures; the whole ceiling glowed. We were still sprawled on the floor. I started to get up-and found I couldn't.

I felt as if I had just finished a cross-country race, too weak to do anything but breathe. Blue light can't do that; it's merely wavelengths 4300 to 5100 angstroms and sunlight is loaded with it. But whatever they used with the blue light made us as limp as wet string.

Peewee was struggling to tell me something. "If . . . they're coming for us ... don't resist . . . and . . . above all-"

The blue light changed to white. The narrow wall started to slide aside.

Peewee looked scared and made a great effort. "-above all ... don't antagonize . . . him."

Two men came in, shoved Peewee aside, strapped my wrists and ankles and ran another strap around my middle, binding my arms. I started to come out of it-not like flipping a switch, as I still didn't have energy enough to lick a stamp. I wanted to bash their heads but I stood as much chance as a butterfly has of hefting a bar bell.

They carried me out. I started to protest. "Say, where are you guys taking me? What do you think you're doing? I'll have you arrested. I'll--"

"Shaddap," said one. He was a skinny runt, fifty or older, and looked as if he never smiled. The other was fat and younger, with a petulant babyish mouth and a dimple in his chin; he looked as if he could laugh if he weren't worried. He was worrying now.

"Tim, this can get us in trouble. We ought to space him-we ought to space both of 'em-and tell him it was an accident. We can say they got out and tried to escape through the lock. He won't know the dif-"

"Shaddap," answered Tim with no inflection. He added, "You want trouble with him? You want to chew space?"

"But-"

"Shaddap."

They carried me around a curved corridor, into an inner room and dumped me on the floor.

I was face up but it took time to realize this must be the control room. It didn't look like anything any human would design as a control room, which wasn't surprising as no human had. Then I saw him.

Peewee needn't have warned me; I didn't want to antagonize him.

The little guy was tough and dangerous, the fat guy was mean and murderous; they were cherubs compared with him. If I had had my strength I would have fought those two any way they liked; I don't think I'm too afraid of any human as long as the odds aren't impossible.

But not him.

He wasn't human but that wasn't what hurt. Elephants aren't human but they are very nice people. He was built more like a human than an elephant is but that was no help-I mean he stood erect and had feet at one end and a head at the other. He was no more than five feet tall but that didn't help either; he dominated us the way a man dominates a horse. The torso part was as long as mine; his shortness came from very squat legs, with feet (I guess you would call them feet) which bulged out, almost disc-like. They made squashy, sucking sounds when he moved. When he stood still a tail, or third leg, extruded and turned him into a tripod-he didn't need to sit down and I doubt if he could.

Short legs did not make him slow. His movements were blurringly fast, like a striking snake. Does this mean a better nervous system and more efficient muscles? Or a native planet with higher gravity?

His arms looked like snakes-they had more joints than ours. He had two sets, one pair where his waist should have been and another set under his head. No shoulders. I couldn't count his fingers, or digit tendrils; they never held still. He wasn't dressed except for a belt below and above the middle arms which carried whatever such a thing carries in place of money and keys. His skin was purplish brown and looked oily.

Whatever he was, he was not the same race as the Mother Thing.

He had a faint sweetish musky odor. Any crowded room smells worse on a hot day, but if I ever whiff that odor again, my skin will crawl and I'll be tongue-tied with fright.

I didn't take in these details instantly; at first all I could see was his face. A "face" is all I can call it. I haven't described it yet because I'm afraid I'll get the shakes. But I will, so that if you ever see one, you'll shoot first, before your bones turn to jelly.

No nose. He was an oxygen breather but where the air went in and out I couldn't say-some of it through the mouth, for he could talk. The mouth was the second worst part of him; in place of jawbone and chin he had mandibles that opened sideways as well as down, gaping in three irregular sides. There were rows of tiny teeth but no tongue that I could see; instead the mouth was rimmed with cilia as long as angleworms. They never stopped squirming.

I said the mouth was "second worst"; he had eyes. They were big and bulging and protected by horny ridges, two on the front of his head, set wide apart.

They scanned. They scanned like radar, swinging up and down and back and forth. He never looked at you and yet was always looking at you.

When he turned around, I saw a third eye in back. I think he scanned his whole surroundings at all times, like a radar warning system.

What kind of brain can put together everything in all directions at once? I doubt if a human brain could, even if there were any way to feed in the data. He didn't seem to have room in his head to stack much of a brain, but maybe he didn't keep it there. Come to think of it, humans wear their brains in an exposed position; there may be better ways.

But he certainly had a brain. He pinned me down like a beetle and squeezed out what he wanted. He didn't have to stop to brainwash me; he questioned and I gave, for an endless time-it seemed more like days than hours. He spoke English badly but understandably. His labials were all alike-"buy" and "pie" and "vie" sounded the same. His gutturals were harsh and his dentals had a clucking quality. But I could usually understand and when I didn't, he didn't threaten or punish; he just tried again. He had no expression in his speech.

He kept at it until he had found out who I was and what I did and as much of what I knew as interested him. He asked questions about how I happened to be where I was and dressed the way I was when I was picked up. I couldn't tell whether he liked the answers or not.

He had trouble understanding what a "soda jerk" was and, while he learned about the Skyway Soap contest, he never seemed to understand why it took place. But I found that there were a lot of things I didn't know either-such as how many people there are on Earth and how many tons of protein we produce each year.

After endless time he had all he wanted and said, "Take it out." The stooges had been waiting. The fat boy gulped and said, "Space him?"

He acted as if killing me or not were like saving a piece of string. "No. It is ignorant and untrained, but I may have use for it later. Put it back in the pen."

"Yes, boss."

They dragged me out. In the corridor Fatty said, "Let's untie his feet and make him walk."

Skinny said, "Shaddap."

Peewee was just inside the entrance panel but didn't move, so I guess she had had another dose of that blue-light effect. They stepped over her and dumped me. Skinny chopped me on the side of the neck to stun me. When I came to, they were gone, I was unstrapped, and Peewee was sitting by me. She said anxiously, "Pretty bad?"

"Uh, yeah," I agreed, and shivered. "I feel ninety years old."

"It helps if you don't look at him-especially his eyes. Rest a while and you'll feel better." She glanced at her watch. "It's only forty-five minutes till we land. You probably won't be disturbed before then."

"Huh?" I sat up. "I was in there only an hour?"

"A little less. But it seems forever. I know."

"I feel like a squeezed orange." I frowned, remembering something. "Peewee, I wasn't too scared when they came for me. I was going to demand to be turned loose and insist on explanations. But I never asked him a question, not one."

"You never will. I tried. But your will just drains out. Like a rabbit in front of a snake."

"Yes."

"Kip, do you see why I had to take just any chance to get away? You didn't seem to believe my story-do you believe it now?"

"Uh, yes. I believe it."

"Thanks. I always say I'm too proud to care what people think, but I'm not, really. I had to get back to Daddy and tell him . . . because he's the only one in the entire world who would simply believe me, no matter how crazy it sounded."

"I see. I guess I see. But how did you happen to wind up in Centerville?"

"Centerville?"

"Where I live. Where 'Junebug' called 'Peewee.' "

"Oh. I never meant to go there. I meant to land in New Jersey, in Princeton if possible, because I had to find Daddy."

"Well, you sure missed your aim."

"Can you do better? I would have done all right but I had my elbow joggled. Those things aren't hard to fly; you just aim and push for where you want to go, not like the complicated things they do about rocket ships. And I had the Mother Thing to coach me. But I had to slow down going into the atmosphere and compensate for Earth's spin and I didn't know quite how. I found myself too far west and they were chasing me and I didn't know what to do ... and then I heard you on the space-operations band and thought everything was all right-and there I was." She spread her hands. "I'm sorry, Kip."

"Well, you landed it. They say any landing you walk away from is a good one."

"But I'm sorry I got you mixed up in it."

"Uh . . . don't worry about that. It looks like somebody has to get mixed up in it. Peewee . . . what's he up to?"

"They, you mean."

"Huh? I don't think the other two amount to anything. He is the one."

"I didn't mean Tim and Jock-they're just people gone bad. I meant them-him and others like him."

I wasn't at my sharpest-I had been knocked out three times and was shy a night's sleep and more confusing things had happened than in all my life. but until Peewee pointed it out I hadn't considered that there could be more than one like him-one seemed more than enough.

But if there was one, then there were thousands-maybe millions or billions. I felt my stomach twist and wanted to hide. "You've seen others?"

"No. Just him. But the Mother Thing told me."

"Ugh! Peewee . . . what are they up to?"

"Haven't you guessed? They're moving in on us."

My collar felt tight, even though it was open. "How?"

"I don't know."

"You mean they're going to kill us off and take over Earth?"

She hesitated. "It might not be anything that nice."

"Uh . . . make slaves of us?"

"You're getting warmer. Kip-I think they eat meat."

I swallowed. "You have the jolliest ideas, for a little girl."

"You think I like it? That's why I had to tell Daddy."

There didn't seem to be anything to say. It was an old, old fear for human beings. Dad had told me about an invasion-from-Mars radio broadcast when he was a kid-pure fiction but it had scared people silly. But people didn't believe in it now; ever since we got to the Moon and circled Mars and Venus everybody seemed to agree that we weren't going to find life anywhere.

Now here it was, in our laps. "Peewee? Are these things Martians? Or from Venus?"

She shook her head. "They're not from anywhere close. The Mother Thing tried to tell me, but we ran into a difficulty of understanding."

"Inside the Solar System?"

"That was part of the difficulty. Both yes and no."

"It can't be both."

"You ask her."

"I'd like to." I hesitated, then blurted, "I don't care where they're from -we can shoot them down ... if we don't have to look at them!"

"Oh, I hope so!"

"It figures. You say these are flying saucers . . . real saucer sightings, I mean; not weather balloons. If so, they have been scouting us for years. Therefore they aren't sure of themselves, even if they do look horrible enough to curdle milk. Otherwise they would have moved in at once the way we would on a bunch of animals. But they haven't. That means we can kill them-if we go about it right."

She nodded eagerly. "I hope so. I hoped Daddy would see a way. But-" She frowned. "-we don't know much about them . . . and Daddy always warned me not to be cocksure when data was incomplete. 'Don't make so much stew from one oyster, Peewee,' he always says."

"But I'll bet we're right. Say, who is your Daddy? And what's your full name?"

"Why, Daddy is Professor Reisfeld. And my name is Patricia Wynant Reisfeld. Isn't that awful? Better call me Peewee."

"Professor Reisfeld- What does he teach?"

"Huh? You don't know? You don't know about Daddy's Nobel Prize? Or anything?"

"I'm just a country boy, Peewee. Sorry."

"You must be. Daddy doesn't teach anything. He thinks. He thinks better than anybody . . . except me, possibly. He's the synthesist. Everybody else specializes. Daddy knows everything and puts the pieces together."

Maybe so, but I hadn't heard of him. It sounded like a good idea . . . but it would take an awfully smart man-if I had found out anything, it was that they could print it faster than I could study it. Professor Reisfeld must have three heads. Five.

"Wait till you meet him," she added, glancing at her watch. "Kip, I think we had better get braced. We'll be landing in a few minutes . . . and he won't care how he shakes up passengers."

So we crowded into the narrow end and braced each other. We waited. After a bit the ship shook itself and the floor tilted. There was a slight bump and things got steady and suddenly I felt very light. Peewee pulled her feet under her and stood up. "Well, we're on the Moon."

Chapter 5

When I was a kid, we used to pretend we were making the first landing on the Moon. Then I gave up romantic notions and realized that I would have to go about it another way. But I never thought I would get there penned up, unable to see out, like a mouse in a shoe box.

The only thing that proved I was on the Moon was my weight. High gravity can be managed anywhere, with centrifuges. Low gravity is another matter; on Earth the most you can squeeze out is a few seconds going off a high board, or by parachute delay, or stunts in a plane.

If low gravity goes on and on, then wherever you are, you are not on Earth. Well, I wasn't on Mars; it had to be the Moon.

On the Moon I should weigh a little over twenty-five pounds. It felt about so-I felt light enough to walk on a lawn and not bend the grass.

For a few minutes I simply exulted in it, forgetting him and the trouble we were in, just heel-and-toe around the room, getting the wonderful feel of it, bouncing a little and bumping my head against the ceiling and feeling how slowly, slowly, slowly I settled back to the floor. Peewee sat down, shrugged her shoulders and gave a little smile, an annoyingly patronizing one. The "Old Moon-Hand"-all of two weeks more of it than I had had.

Low gravity has its disconcerting tricks. Your feet have hardly any traction and they fly out from under you. I had to learn with muscles and reflexes what I had known only intellectually: that when weight goes down, mass and inertia do not. To change direction, even in walking, you have to lean the way you would to round a turn on a board track- and even then if you don't have traction (which I didn't in socks on a smooth floor) your feet go out from under you.

A fall doesn't hurt much in one-sixth gravity but Peewee giggled. I sat up and said, "Go and laugh, smartie. You can afford to-you've got tennis shoes."

"I'm sorry. But you looked silly, hanging there like a slow-motion picture and grabbing air."

"No doubt. Very funny."

"I said I was sorry. Look, you can borrow my shoes."

I looked at her feet, then at mine, and snorted. "Gee, thanks!"

"Well . . . you could cut the heels out, or something. It wouldn't bother me. Nothing ever does. Where are your shoes. Kip?"

"Uh, about a quarter-million miles away-unless we got off at the wrong stop."

"Oh. Well, you won't need them much, here."

"Yeah." I chewed my lip, thinking about "here" and no longer interested in games with gravity. "Peewee? What do we do now?"

"About what?"

"About him."

"Nothing. What can we do?"

"Then what do we do?"

"Sleep."

"Huh?"

"Sleep. 'Sleep, that knits up the ravell'd sleave of care.' 'Tired Nature's sweet restorer, balmy sleep.' 'Blessings on him who invented sleep, the mantle that covers all human thoughts.' "

"Quit showing off and talk sense!"

"I am talking sense. At the moment we're as helpless as goldfish. We're simply trying to survive-and the first principle of survival is not to worry about the impossible and concentrate on what's possible. I'm hungry and thirsty and uncomfortable and very, very tired . . . and all I can do about it is sleep. So if you will kindly keep quiet, that's what I'll do."

"I can take a hint. No need to snap at me."

"I'm sorry. But I get cross as two sticks when I'm tired and Daddy says I'm simply frightful before breakfast." She curled up in a little ball and tucked that filthy rag doll under her chin. "G'night, Kip."

"Good night, Peewee."

I thought of something and started to speak . . . and saw that she was asleep. She was breathing softly and her face had smoothed out and no longer looked alert and smart-alecky. Her upper lip pooched out in a baby pout and she looked like a dirty-faced cherub. There were streaks where she had apparently cried and not wiped it away. But she had never let me see her crying.

Kip, I said to myself, you get yourself into the darndest things; this is much worse than bringing home a stray pup or a kitten.

But I had to take care of her ... or die trying.

Well, maybe I would. Die trying, I mean. It didn't look as if I were any great shakes even taking care of myself.

I yawned, then yawned again. Maybe the shrimp had more sense than I had, at that. I was more tired than I had ever been, and hungry and thirsty and not comfortable

other ways. I thought about banging on the door panel and trying to attract the fat one or his skinny partner. But that would wake Peewee-and it might antagonize him.

So I sprawled on my back the way I nap on the living-room rug at home. I found that a hard floor does not require any one sleeping position on the Moon; one-sixth gravity is a better mattress than all the foam rubber ever made-that fussy princess in Hans Christian Andersen's story would have had no complaints.

I want to sleep at once.

It was the wildest space opera I had ever seen, loaded with dragons and Arcturian maidens and knights in shining space armor and shuttling between King Arthur's Court and the Dead Sea Bottoms of Barsoom. I didn't mind that but I did mind the announcer. He had the voice of Ace Quiggle and the face of him. He leaned out of the screen and leered, those wormy cilia writhing. "Will Beowulf conquer the Dragon? Will Tristan return to Iseult? Will Peewee find her dolly? Tune in this channel tomorrow night and in the meantime, wake up and hurry to your neighborhood druggist for a cake of Skyway's Kwikbrite Armor Polish, the better polish used by the better knights sans peur et sans reproche. Wake up!" He shoved a snaky arm out of the screen and grabbed my shoulder.

I woke up.

"Wake up," Peewee was saying, shaking my shoulder. "Please wake up, Kip."

"Lea' me alone!"

"You were having a nightmare."

The Arcturian princess had been in a bad spot. "Now I'll never know how it came out. Wha' did y' want to wake me for? I thought the idea was to sleep?"

"You've slept for hours-and now perhaps there is something we can do."

"Breakfast, maybe?"

She ignored that. "I think we should try to escape."

I sat up suddenly, bounced off the floor, settled back. "Wups! How?"

"I don't know exactly. But I think they have gone away and left us. If so, we'll never have a better chance."

"They have? What makes you think so?"

"Listen. Listen hard."

I listened. I could hear my heart beat, I could hear Peewee breathing, and presently I could hear her heart beating. I've never heard deeper silence in a cave.

I took my knife, held it in my teeth for bone conduction and pushed it against a wall. Nothing. I tried the floor and the other walls. Still nothing. The ship ached with silence-no throb, no thump, not even those vibrations you can sense but not hear. "You're right, Peewee."

"I noticed it when the air circulation stopped."

I sniffed. "Are we running out of air?"

"Not right away. But the air stopped-it comes out of those tiny holes up there. You don't notice it but I missed something when it stopped."

I thought hard. "I don't see where this gets us. We're still locked up."

"I'm not sure."

I tried the blade of my knife on a wall. It wasn't metal or anything I knew as plastic, but it didn't mind a knife. Maybe the Comte de Monte Cristo could have dug a hole in it-but he had more time. "How do you figure?"

"Every time they've opened or closed that door panel, I've heard a click. So after they took you out I stuck a wad of bubble gum where the panel meets the wall, high up where they might not notice."

"You've got some gum?"

"Yes. It helps, when you can't get a drink of water. I-"

"Got any more?" I asked eagerly. I wasn't fresh in any way but thirst was the worst-I'd never been so thirsty.

Peewee looked upset. "Oh, poor Kip! I haven't any more . . . just an old wad I kept parked on my belt buckle and chewed when I felt driest." She frowned. "But you can have it. You're welcome."

"Uh, thanks, Peewee. Thanks a lot. But I guess not."

She looked insulted. "I assure you, Mr. Russell, that I do not have anything contagious. I was merely trying to-"

"Yes, yes," I said hastily. "I'm sure you were. But-"

"I assumed that these were emergency conditions. It is surely no more unsanitary than kissing a girl-but then I don't suppose you've ever kissed a girl!"

"Not lately," I evaded. "But what I want is a drink of clear cold water- or murky warm water. Besides, you used up your gum on the door panel. What did you expect to accomplish?"

"Oh. I told you about that click. Daddy says that, in a dilemma, it is helpful to change any variable, then reexamine the problem. I tried to introduce a change with my bubble gum."

"Well?"

"When they brought you back, then closed the door, I didn't hear a click."

"What? Then you thought you had bamboozled their lock hours and hour ago-and you didn't tell me?"

"That is correct."

"Why, I ought to spank you!"

"I don't advise it," she said frostily. "I bite."

I believed her. And scratch. And other things. None of them pleasant. I changed the subject. "Why didn't you tell me, Peewee?"

"I was afraid you might try to get out."

"Huh? I certainly would have!"

"Precisely. But I wanted that panel closed ... as long as he was out there."

Maybe she was a genius. Compared with me. "I see your point. All right, let's see if we can get it open." I examined the panel. The wad of gum was there, up high as she could reach, and from the way it was mashed it did seem possible that it had fouled the groove the panel slid into, but I couldn't see any crack down the edge.

I tried the point of my big blade on it. The panel seemed to creep to the right an eighth of an inch-then the blade broke.

I closed the stub and put the knife away. "Any ideas?"

"Maybe if we put our hands flat against it and tried to drag it?"

"Okay." I wiped sweat from my hands on my shirt. "Now . . . easy does it. Just enough pressure for friction."

The panel slid to the right almost an inch-and stopped firmly.

But there was a hairline crack from floor to ceiling.

I broke off the stub of the big blade this time. The crack was no wider. Peewee said, "Oh, dear!"

"We aren't licked." I backed off and ran toward the door.

"Toward," not "to"-my feet skidded, I leveled off and did a leisurely bellywhopper. Peewee didn't laugh.

I picked myself up, got against the far wall, braced one foot against it and tried a swimming racing start.

I got as far as the door panel before losing my footing. I didn't hit it very hard, but I felt it spring. It bulged a little, then sprang back.

"Wait a sec, Kip," said Peewee. "Take your socks off. I'll get behind you and push-my tennis shoes don't slip."

She was right. On the Moon, if you can't get rubber-soled shoes, you're better off barefooted. We backed against the far wall, Peewee behind me with her hands on my hips. "One . . . two . . . three . . . Go!" We advanced with the grace of a hippopotamus.

I hurt my shoulder. But the panel sprung out of its track, leaving a space four inches wide at the bottom and tapering to the top.

I left skin on the door frame and tore my shirt and was hampered in language by the presence of a girl. But the opening widened. When it was wide enough for my head, I got down flat and peered out. There was nobody in sight-a foregone conclusion, with the noise I had made, unless they were playing cat-and-mouse. Which I wouldn't put past them. Especially him.

Peewee started to wiggle through; I dragged her back. "Naughty, naughty! I go first." Two more heaves and it was wide enough for me. I opened the small blade of my knife and handed it to Peewee. "With your shield or on it, soldier."

"You take it."

"I won't need it. 'Two-Fisted Death,' they call me around dark alleys." This was propaganda, but why worry her? Sans pew et sans reproche- maiden-rescuing done cheaply, special rates for parties.

I eased out on elbows and knees, stood up and looked around. "Come on out," I said quietly.

She started to, then backed up suddenly. She reappeared clutching that bedraggled dolly. "I almost forgot Madame Pompadour," she said breathlessly.

I didn't even smile.

"Well," she said defensively, "I have to have her to get to sleep at night. It's my one neurotic quirk-but Daddy says I'll outgrow it."

"Sure, sure."

"Well, don't look so smug! It's not fetishism, not even primitive animism; it's merely a conditioned reflex. I'm aware that it's just a doll-I've understood the pathetic fallacy for ... oh, years and years!"

"Look, Peewee," I said earnestly, "I don't care how you get to sleep. Personally I hit myself over the head with a hammer. But quit yakking. Do you know the layout of these ships?"

She looked around. "I think this is the ship that chased me. But it looks the same as the one I piloted."

"All right. Should we head for the control room?"

"Huh?"

"You flew the other heap. Can you fly this one?"

"Unh ... I guess so. Yes, I can."

"Then let's go." I started in the direction they had lugged me.

"But the other time I had the Mother Thing to tell me what to do! Let's find her."

I stopped. "Can you get it off the ground?"

"Well . . . yes."

"We'll look for her after we're in the air-'in space,' I mean. If she's aboard we'll find her. If she's not, there's not a thing we can do."

"Well ... all right. I see your logic; I don't have to like it." She tagged along. "Kip? How many gravities can you stand?"

"Huh? I haven't the slightest idea. Why?"

"Because these things can go lots faster than I dared try when I escaped before. That was my mistake."

"Your mistake was in heading for New Jersey."

"But I had to find Daddy!"

"Sure, sure, eventually. But you should have ducked over to Lunar Base and yelled for the Federation Space Corps. This is no job for a popgun; we need help. Any idea where we are?"

"Mmm . . . I think so. If he took us back to their base. I'll know when I look at the sky."

"All right. If you can figure out where Lunar Base is from here, that's where we'll go. If not- Well, we'll head for New Jersey at all the push it has."

The control-room door latched and I could not figure out how to open it. Peewee did what she said should work-which was to tuck her little finger into a hole mine would not enter-and told me it must be locked. So I looked around.

I found a metal bar racked in the corridor, a thing about five feet long, pointed on one end and with four handles like brass knucks on the other. I didn't know what it was- the hobgoblin equivalent of a fire ax, possibly -but it was a fine wrecking bar.

I made a shambles of that door in three minutes. We went in.

My first feeling was gooseflesh because here was where I had been grilled by him. I tried not to show it. If he turned up, I was going to let him have his wrecking bar right between his grisly eyes. I looked around, really seeing the place for the first time. There was sort of a nest in the middle surrounded by what could have been a very fancy coffee maker or a velocipede for an octopus; I was glad Peewee knew which button to push. "How do you see out?"

"Like this." Peewee squeezed past and put a finger into a hole I hadn't noticed.

The ceiling was hemispherical like a planetarium. Which was what it was, for it lighted up. I gasped.

It was suddenly not a floor we were on, but a platform, apparently out in the open and maybe thirty feet in the air. Over me were star images, thousands of them, in a black "sky"-and facing toward me, big as a dozen full moons and green and lovely and beautiful, was Earth!

Peewee touched my elbow. "Snap out of it, Kip."

I said in a choked voice, "Peewee, don't you have any poetry in your soul?"

"Surely I have. Oodles. But we haven't time. I know where we are, Kip -back where I started from. Their base. See those rocks with long jagged shadows? Some of them are ships, camouflaged. And over to the left- that high peak, with the saddle?-a little farther left, almost due west, is Tombaugh Station, forty miles away. About two hundred miles farther is Lunar Base and beyond is Luna City."

"How long will it take?"

"Two hundred, nearly two hundred and fifty miles? Uh, I've never tried a point-to-point on the Moon-but it shouldn't take more than a few minutes."

"Let's go! They might come back any minute."

"Yes, Kip." She crawled into that jackdaw's nest and bent over a sector.

Presently she looked up. Her face was white and thin and very little-girlish. "Kip ... we aren't going anywhere. I'm sorry."

I let out a yelp. "What! What's the matter? Have you forgotten how to run it?"

"No. The 'brain' is gone."

"The which?"

"The 'brain.' Little black dingus about the size of a walnut that fits in this cavity." She showed me. "We got away before because the Mother Thing managed to steal one. We were locked in an empty ship, just as you and I are now. But she had one and we got away." Peewee looked bleak and very lost. "I should have known that he wouldn't leave one in the control room-I guess I did and didn't want to admit it. I'm sorry."

"Uh . . . look, Peewee, we won't give up that easily. Maybe I can make something to fit that socket."

"Like jumping wires in a car?" She shook her head. "It's not that simple. Kip. If you put a wooden model in place of the generator in a car, would it run? I don't know quite what it does, but I called it the 'brain' because it's very complex."

"But-" I shut up. If a Borneo savage had a brand-new car, complete except for spark plugs, would he get it running? Echo answers mournfully. "Peewee, what's the next best thing? Any ideas? Because if you haven't, I want you to show me the air lock. I'll take this-" I shook my wrecking bar "-and bash anything that comes through."

"I'm stumped," she admitted. "I want to look for the Mother Thing. If she's shut up in this ship, she may know what to do."

"All right. But first show me the air lock. You can look for her while I stand guard." I felt the reckless anger of desperation. I didn't see how we were ever going to get out and I was beginning to believe that we weren't -but there was still a reckoning due. He was going to learn that it wasn't safe to push people around. I was sure-I was fairly sure-that I could sock him before my spine turned to jelly. Splash that repulsive head.

If I didn't look at his eyes.

Peewee said slowly, "There's one other thing-"

"What?"

"I hate to suggest it. You might think I was running out on you."

"Don't be silly. If you've got an idea, spill it."

"Well . . . there's Tombaugh Station, over that way about forty miles. If my space suit is in the ship-"

I suddenly quit feeling like Bowie at the Alamo. Maybe the game would go an extra period- "We can walk it!"

She shook her head. "No, Kip. That's why I hesitated to mention it. I can walk it ... if we find my suit. But you couldn't wear my suit even if you squatted."

"I don't need your suit," I said impatiently.

"Kip, Kip! This is the Moon, remember? No air."

"Yes, yes, sure! Think I'm an idiot? But if they locked up your suit, they probably put mine right beside it and-"

"You've got a space suit?" she said incredulously.

Our next remarks were too confused to repeat but finally Peewee was convinced that I really did own a space suit, that in fact the only reason I was sending on the space-operations band twelve hours and a quarter of a million miles back was that I was wearing it when they grabbed me.

"Let's tear the joint apart!" I said. "No-show me that air lock, then you take it apart."

"All right."

She showed me the lock, a room much like the one we had been cooped in, but smaller and with an inner door built to take a pressure load. It was not locked. We opened it cautiously. It was empty, and its outer door was closed or we would never been able to open the inner. I said, "If Wormface had been a suspenders-and-belt man, he would have left the outer door open, even though he had us locked up. Then- Wait a second! Is there a way to latch the inner door open?"

"I don't know."

"We'll see." There was, a simple hook. But to make sure that it couldn't be unlatched by button-pushing from outside I wedged it with my knife. "You're sure this is the only air lock?"

"The other ship had only one and I'm pretty certain they are alike."

"We'll keep our eyes open. Nobody can get at us through this one. Even old Wormface has to use an air lock."

"But suppose he opens the outer door anyhow?" Peewee said nervously. "We'd pop like balloons."

I looked at her and grinned. "Who is a genius? Sure we would ... if he did. But he won't. Not with twenty, twenty-five tons of pressure holding it closed. As you reminded me, this is the Moon. No air outside, remember?"

"Oh." Peewee looked sheepish.

So we searched. I enjoyed wrecking doors; Wormface wasn't going to like me. One of the first things we found was a smelly little hole that Fatty and Skinny lived in. The door was not locked, which was a shame. That room told me a lot about that pair. It showed that they were pigs, with habits as unattractive as their morals. The room also told me that they were not casual prisoners; it had been refitted for humans. Their relationship with Wormface, whatever it was, had gone on for some time and was continuing. There were two empty racks for space suits, several dozen canned rations of the sort sold in military-surplus stores, and best of all, there was drinking water and a washroom of sorts-and something more precious than fine gold or frankincense if we found our suits: two charged bottles of oxy-helium.

I took a drink, opened a can of food for Peewee-it opened with a key; we weren't in the predicament of the Three Men in a Boat with their tin of pineapple-told her to grab

a bite, then search that room. I went on with my giant toad sticker; those charged air bottles had given me an unbearable itch to find our suits-and get out!-before Wormface returned.

I smashed a dozen doors as fast as the Walrus and the Carpenter opened oysters and found all sorts of things, including what must have been living quarters for wormfaces. But I didn't stop to look-the Space Corps could do that, if and when-I simply made sure that there was not a space suit in any of them.

And found them!-in a compartment next to the one we had been prisoners in.

I was so glad to see Oscar that I could have kissed him. I shouted, "Hi, Pal! Mirabile visu!" and ran to get Peewee. My feet went out from under me again but I didn't care.

Peewee looked up as I rushed in. "I was just going to look for you."

"Got it! Got it!"

"You found the Mother Thing?" she said eagerly.

"Huh? No, no! The space suits-yours and mine! Let's go!"

"Oh." She looked disappointed and I felt hurt. "That's good ... but we have to find the Mother Thing first."

I felt tried beyond endurance. Here we had a chance, slim but real, to escape a fate-worse-than-death (I'm not using a figure of speech) and she wanted to hang around to search for a bug-eyed monster. For any human being, even a stranger with halitosis, I would have done it. For a dog or cat I would, although reluctantly.

But what was a bug-eyed monster to me? All this one had done was to get me into the worst jam I had ever been in.

I considered socking Peewee and stuffing her into her suit. But I said, "Are you crazy? We're leaving-right now!"

"We can't go till we find her."

"Now I know you're crazy. We don't even know she's here . . . and if we do find her, we can't take her with us."

"Oh, but we will!"

"How? This is the Moon, remember? No air. Got a space suit for her?"

"But-" That stonkered her. But not for long. She had been sitting on the floor, holding the ration can between her knees. She stood up suddenly, bouncing a little, and said, "Do as you like; I'm going to find her. Here." She shoved the can at me.

I should have used force. But I am handicapped by training from early childhood never to strike a female, no matter how richly she deserves it. So the opportunity and Peewee both slid past while I was torn between common sense and upbringing. I simply groaned helplessly.

Then I became aware of an unbearably attractive odor. I was holding that can. It contained boiled shoe leather and gray gravy and smelled ambrosial.

Peewee had eaten half; I ate the rest while looking at what she had found. There was a coil of nylon rope which I happily put with the air bottles; Oscar had fifty feet of clothesline clipped to his belt but that had been a penny-saving expedient. There was a prospector's hammer which I salvaged, and two batteries which would do for headlamps and things.

The only other items of interest were a Government Printing Office publication titled Preliminary Report on Selenology, a pamphlet on uranium prospecting, and an expired Utah driver's license for "Timothy Johnson"-I recognized the older man's mean face. The pamphlets interested me but this was no time for excess baggage.

The main furniture was two beds, curved like contour chairs and deeply padded; they told me that Skinny and Fatty had ridden this ship at high acceleration.

When I had mopped the last of the gravy with a finger, I took a big drink, washed my hands-using water lavishly because I didn't care if that pair died of thirst-grabbed my plunder and headed for the room where the space suits were.

As I got there I ran into Peewee. She was carrying the crowbar and looking overjoyed. "I found her!"

"Where?"

"Come on! I can't get it open, I'm not strong enough."

I put the stuff with our suits and followed her. She stopped at a door panel farther along the corridor than my vandalism had taken me. "In there!"

I looked and I listened. "What makes you think so?"

"I know! Open it!"

I shrugged and got to work with the nutpick. The panel went sprung! and that was that.

Curled up in the middle of the floor was a creature.

So far as I could tell, it might or might not have been the one I had seen in the pasture the night before. The light had been poor, the conditions very different, and my examination had ended abruptly. But Peewee was in no doubt. She launched herself through the air with a squeal of joy and the two rolled over and over like kittens play-fighting.

Peewee was making sounds of joy, more or less in English. So was the Mother Thing, but not in English. I would not have been surprised if she had spoken English, since Wormface did and since Peewee had mentioned things the Mother Thing had told her. But she didn't.

Did you ever listen to a mockingbird? Sometimes singing melodies, sometimes just sending up a joyous noise unto the Lord? The endlessly varied songs of a mockingbird are nearest to the speech of the Mother Thing.

At last they held still, more or less, and Peewee said, "Oh, Mother Thing, I'm so happy!"

The creature sang to her. Peewee answered, "Oh. I'm forgetting my manners. Mother Thing, this is my dear friend Kip."

The Mother Thing sang to me-and I understood.

What she said was: "I am very happy to know you, Kip." It didn't come out in words. But it might as well have been English. Nor was this half-kidding self-deception, such as my conversations with Oscar or Peewee's with Madame Pompadour-when I talk with Oscar I am both sides of the conversation; it's just my conscious talking to my subconscious, or some such. This was not that.

The Mother Thing sang to me and I understood.

I was startled but not unbelieving. When you see a rainbow you don't stop to argue the laws of optics. There it is, in the sky.

I would have been an idiot not to know that the Mother Thing was speaking to me because I did understand and understood her every time. If she directed a remark at Peewee alone, it was usually just birdsongs to me-but if it was meant for me, I got it.

Call it telepathy if you like, although it doesn't seem to be what they do at Duke University. I never read her mind and I don't think she read mine. We just talked.

But while I was startled, I minded my manners. I felt the way I do when Mother introduces me to one of her older grande-dame friends. So I bowed and said, "We're very happy that we've found you, Mother Thing."

It was simple, humble truth. I knew, without explanation, what it was that had made Peewee stubbornly determined to risk recapture rather than give up looking for her-the quality that made her "the Mother Thing."

Peewee has this habit of slapping names on things and her choices aren't always apt, for my taste. But I'll never question this one. The Mother Thing was the Mother Thing because she was. Around her you felt happy and safe and warm. You knew that if you skinned your knee and came bawling into the house, she would kiss it well and paint it with merthiolate and everything would be all right. Some nurses have it and some teachers . . . and, sadly, some mothers don't.

But the Mother Thing had it so strongly that I wasn't even worried by Wormface. We had her with us so everything was going to be all right. I logically I knew that she was as vulnerable as we were-I had seen them strike her down. She didn't have my size and strength, she couldn't pilot the ship as Peewee had been able to. It didn't matter.

I wanted to crawl into her lap. Since she was too small and didn't have a lap, I would gratefully hold her in mine, anytime.

I have talked more about my father but that doesn't mean that Mother is less important-just different. Dad is active, Mother is passive; Dad talks, Mother doesn't. But if she died, Dad would wither like an uprooted tree. She makes our world.

The Mother Thing had the effect on me that Mother has, only I'm used to it from Mother. Now I was getting it unexpectedly, far from home, when I needed it.

Peewee said excitedly, "Now we can go. Kip. Let's hurry!"

The Mother Thing sang ("Where are we going, children?")

"To Tombaugh Station, Mother Thing. They'll help us."

The Mother Thing blinked her eyes and looked serenely sad. She had great, soft, compassionate eyes-she looked more like a lemur than anything else but she was not a primate-she wasn't even in our sequence, unearthly. But she had these wonderful eyes and a soft, defenseless mouth out of which music poured. She wasn't as big as Peewee and her hands were tinier still-six fingers, any one of which could oppose the others the way our thumbs can. Her body-well, it never stayed the same shape so it's hard to describe, but it was right for her.

She didn't wear clothes but she wasn't naked; she had soft, creamy fur, sleek and fine as chinchilla. I thought at first she didn't wear anything, but presently I noticed a

piece of jewelry, a shiny triangle with a double spiral in each corner. I don't know what made it stick on.

I didn't take all this in at once. At that instant the expression in the Mother Thing's eyes brought a crash of sorrow into the happiness I had been feeling.

Her answer made me realize that she didn't have a miracle ready ("How are we to fly the ship? They have guarded me most carefully this time.")

Peewee explained eagerly about the space suits and I stood there like a fool, with a lump of ice in my stomach. What had been just a question of using my greater strength to force Peewee to behave was now an unsolvable dilemma. I could no more abandon the Mother Thing than I could have abandoned Peewee . . . and there were only two space suits.

Even if she could wear our sort, which looked as practical as roller skates on a snake.

The Mother Thing gently pointed out that her own vacuum gear had been destroyed. (I'm going to quit writing down all her songs; I don't remember them exactly anyhow.)

And so the fight began. It was an odd fight, with the Mother Thing gentle and loving and sensible and utterly firm, and Peewee throwing a tearful, bad-little-girl tantrum-and me standing miserably by, not even refereeing.

When the Mother Thing understood the situation, she analyzed it at once to the inevitable answer. Since she had no way to go (and probably couldn't have walked that far anyhow, even if she had had her sort of space suit) the only answer was for us two to leave at once. If we reached safety, then we would, if possible, convince our people of the danger from Wormface & Co.-in which case she might be saved as well . . . which would be nice but was not indispensable.

Peewee utterly, flatly, and absolutely refused to listen to any plan which called for leaving the Mother Thing behind. If the Mother Thing couldn't go, she wouldn't budge. "Kip! You go get help! Hurry! I'll stay here."

I stared at her. "Peewee, you know I can't do that."

"You must. You will so! You've got to. If you don't, I'll . . . I'll never speak to you again!"

"If I did, I'd never speak to myself again. Look, Peewee, it won't wash. You'll have to go-"

"No!"

"Oh, shut up for a change. You go and I stay and guard the door with the shillelagh. I'll hold 'em off while you round up the troops. But tell them to hurry!"

"I-" She stopped and looked very sober and utterly baffled. Then she threw herself on the Mother Thing, sobbing: "Oh, you don't love me any more!"

Which shows how far her logic had gone to pot. The Mother Thing sang softly to her while I worried the thought that our last chance was t trickling away while we argued. Wormface might come back any second- and while I hoped to slug him a final one if he got in, more likely he had resources to outmaneuver me. Either way, we would not escape.

At last I said, "Look we'll all go."

Peewee stopped sobbing and looked startled. "You know we can't."

The Mother Thing sang ("How, Kip?")

"Uh, I'll have to show you. Up on your feet, Peewee." We went where the suits were, while Peewee carried Madame Pompadour and half carried the Mother Thing. Lars Eklund, the rigger who had first worn Oscar according to his log, must have weighed about two hundred pounds; in order to wear Oscar I had to strap him tight to keep from bulging. I hadn't considered retailoring him to my size as I was afraid I would never get him gas-tight again. Arm and leg lengths were okay; it was girth that was too big.

There was room inside for both the Mother Thing and me.

I explained, while Peewee looked big-eyed and the Mother Thing sang queries and approvals. Yes, she could hang on piggy-back-and she couldn't fall off, once we were sealed up and the straps cinched.

"All right. Peewee, get into your suit." I went to get my socks while she started to suit up. When I came back I checked her helmet gauges, reading them backwards through her lens. "We had better give you some air. You're only about half full."

I ran into a snag. The spare bottles I had filched from those ghouls had screw-thread fittings like mine-but Peewee's bottles had bayonet-and-snap joints. Okay, I guess, for tourists, chaperoned and nursed and who might get panicky while bottles were changed unless it was done fast-but not so good for serious work. In my workshop I would have rigged an adapter in twenty minutes. Here, with no real tools-well, that spare air might as well be on Earth for all the good it did Peewee.

For the first time, I thought seriously of leaving them behind while I made a fast forced march for help. But I didn't mention it. I thought that Peewee would rather die on the way than fall back into his hands-and I was inclined to agree.

"Kid," I said slowly, "that isn't much air. Not for forty miles." Her gauge was scaled in time as well as pressure; it read just under five hours. Could Peewee move as fast as a trotting horse? Even at lunar gravity? Not likely.

She looked at me soberly. "That's calibrated for full-size people. I'm little-I don't use much air."

"Uh . . . don't use it faster than you have to."

"I won't. Let's go."

I started to close her gaskets. "Hey!" she objected.

"What's the matter?"

"Madame Pompadour! Hand her to me-please. On the floor by my feet."

I picked up that ridiculous dolly and gave it to her. "How much air does she take?"

Peewee suddenly dimpled. "I'll caution her not to inhale." She stuffed it inside her shirt, I sealed her up. I sat down in my open suit, the Mother Thing crept up my back, singing reassuringly, and cuddled close. She felt good and I felt that I could hike a hundred miles, to get them both safe.

Getting me sealed in was cumbersome, as the straps had to be let out and then tightened to allow for the Mother Thing, and neither Peewee nor I had bare hands. We managed.

I made a sling from my clothesline for the spare bottles. With them around my neck, with Oscar's weight and the Mother Thing as well, I scaled perhaps fifty pounds at the Moon's one-sixth gee. It just made me fairly sure-footed for the first time.

I retrieved my knife from the air-lock latch and snapped it to Oscar's belt beside the nylon rope and the prospector's hammer. Then we went inside the air lock and closed its inner door. I didn't know how to waste its air to the outside but Peewee did. It started to hiss out.

"You all right, Mother Thing?"

("Yes, Kip.") She hugged me reassuringly.

"Peewee to Junebug," I heard in my phones: "radio check. Alfa, Bravo, Coca, Delta, Echo, Foxtrot-"

"Junebug to Peewee: I read you. Golf, Hotel, India, Juliette, Kilo-"

"I read you, Kip."

"Roger."

"Mind your pressure. Kip. You're swelling up too fast." I kicked the chin valve while watching the gauge-and kicking myself for letting a little girl catch me in a greenhorn trick. But she had used a space suit before, while I had merely pretended to.

I decided this was no time to be proud. "Peewee? Give me all the tips you can. I'm new to his."

"I will, Kip."

The outer door popped silently and swung inward-and I looked out over the bleak bright surface of a lunar plain. For a homesick moment I remembered the trip-to-the-Moon games I had played as a kid and wished I were back in Centerville. Then Peewee touched her helmet to mine. "See anyone?"

"No."

"We're lucky, the door faces away from the other ships. Listen carefully. We won't use radio until we are over the horizon-unless it's a desperate emergency. They listen on our frequencies. I know that for sure. Now see that mountain with the saddle in it? Kip, pay attention!"

"Yes." I had been staring at Earth. She was beautiful even in that shadow show in the control room-but I just hadn't realized. There she was, so close I could almost touch her . . . and so far away that we might never get home. You can't believe what a lovely planet we have, until you see her from outside . . . with clouds girdling her waist and polar cap set jauntily, like a spring hat. "Yes. I see the saddle."

"We head left of there, where you see a pass. Tim and Jock brought me through it in a crawler. Once we pick up its tracks it will be easy. But first we head for those near hills just left of that-that ought to keep this ship between us and the other ships while we get out of sight. I hope."

It was twelve feet or so to the ground and I was prepared to jump, since it would be nothing much in that gravity. Peewee insisted on lowering me by rope. "You'll fall over your feet. Look, Kip, listen to old Aunt Peewee. You don't have Moon legs yet. It's going to be like your first time on a bicycle."

So I let her lower me and the Mother Thing while she snubbed the nylon rope around the side of the lock. Then she jumped with no trouble. I started to loop up the line

but she stopped me and snapped the other end to her belt, then touched helmets. "I'll lead. If I go too fast or you need me, tug on the rope. I won't be able to see you."

"Aye aye, Cap'n!"

"Don't make fun of me, Kip. This is serious."

"I wasn't making fun, Peewee. You're boss."

"Let's go. Don't look back, it won't do any good and you might fall. I'm heading for those hills."

Chapter 6

I should have relished the weird, romantic experience, but I was as busy as Eliza crossing the ice and the things snapping at my heels were worse than bloodhounds. I wanted to look back but I was too busy trying to stay on my feet. I couldn't see my feet; I had to watch ahead and try to pick my footing-it kept me as busy as a lumberjack in a logrolling contest. I didn't skid as the ground was rough-dust or fine sand over raw rock-and fifty pounds weight was enough for footing. But I had three hundred pounds mass not a whit reduced by lowered weight; this does things to lifelong reflex habits. I had to lean heavily for the slightest turn, lean back and dig in to slow down, lean far forward to speed up.

I could have drawn a force diagram, but doing it is another matter. How long does it take a baby to learn to walk? This newborn Moon-baby was having to learn while making a forced march, half blind, at the greatest speed he could manage.

So I didn't have time to dwell on the wonder of it all.

Peewee moved into a brisk pace and kept stepping it up. Every little while my leash tightened and I tried still harder to speed up and not fall down.

The Mother Thing warbled at my spine: ("Are you all right. Kip? You seem worried.")

"I'm ... all right! How . . . about . . . you?"

("I'm very comfortable. Don't wear yourself out, dear.")

"Okay!"

Oscar was doing his job. I began to sweat from exertion and naked Sun, but I didn't kick the chin valve until I saw from my blood-color gauge that I was short on air. The system worked perfectly and the joints, under a four-pound pressure, gave no

trouble; hours of practice in the pasturewas paying off. Presently my one worry was to keep a sharp eye for rocks and ruts. We were into those low hills maybe twenty minutes after H-hour. Peewee's first swerve as we reached rougher ground took me by surprise; I almost fell.

She slowed down and crept forward into a gulch. A few moments later she stopped; I joined her and she touched helmets with me. "How are you doing?"

"Okay."

"Mother Thing, can you hear me?"

("Yes, dear.")

"Are you comfortable? Can you breathe all right?"

("Yes, indeed. Our Kip is taking good care of me.")

"Good. You behave yourself, Mother Thing. Hear me?"

("I will, dear.") Somehow she put an indulgent chuckle into a birdsong.

"Speaking of breathing," I said to Peewee, "let's check your air." I tried to look into her helmet.

She pulled away, then touched again. "I'm all right!"

"So you say." I held her helmet with both hands, found I couldn't see the dials- with sunlight around us, trying to see in was like peering into a well. "What does it read- and don't fib."

"Don't be nosy!"

I turned her around and read her bottle gauges. One read zero; the other was almost full.

I touched helmets. "Peewee," I said slowly, "how many miles have we come?"

"About three, I think. Why?"

"Then we've got more than thirty to go?"

"At least thirty-five. Kip, quit fretting. I know I've got one empty bottle; I shifted to the full one before we stopped."

"One bottle won't take you thirty-five miles."

"Yes, it will . . . because it's got to."

"Look, we've got plenty of air. I'll figure a way to get it to you." My mind was trotting in circles, thinking what tools were on my belt, what else I had.

"Kip, you know you can't hook those spare bottles to my suit-so shut up!"

("What's the trouble, darlings? Why are you quarreling?")

"We aren't fighting, Mother Thing. Kip is a worry wart."

("Now, children-")

I said, "Peewee, I admit I can't hook the spares into your suit . . . but I'll jigger a way to recharge your bottle."

"But How, Kip?"

"Leave it to me. I'll touch only the empty; if it doesn't work, we're no worse off. If it does, we've got it made."

"How long will it take?"

"Ten minutes with luck. Thirty without."

"No," she decided.

"Now, Peewee, don't be sil-"

"I'm not being silly! We aren't safe until we get into the mountains. I can get that far. Then, when we no longer show up like a bug on a plate, we can rest and recharge my empty bottle."

It made sense. "All right."

"Can you go faster? If we reach the mountains before they miss us, I don't think they'll ever find us. If we don't-"

"I can go faster. Except for these pesky bottles."

"Oh." She hesitated. "Do you want to throw one away?"

"Huh? Oh, no, no! But they throw me off balance. I've just missed a tumble a dozen times. Peewee, can you retie them so they don't swing?"

"Oh. Sure."

I had them hung around my neck and down my front-not smart but I had been hurried. Now Peewee lashed them firmly, still in front as my own bottles and the Mother Thing were on my back-no doubt she was finding it as crowded as Dollar Day. Peewee passed clothesline under my belt and around the yoke. She touched helmets. "I hope that's okay."

"Did you tie a square knot?"

She pulled her helmet away. A minute later she touched helmets again. "It was a granny," she admitted in a small voice, "but it's a square knot now."

"Good. Tuck the ends in my belt so that I can't trip, then we'll mush. Are you all right?"

"Yes," she said slowly. "I just wish I had salvaged my gum, old and tired as it was. My throat's awful dry."

"Drink some water. Not too much."

"Kip! It's not a nice joke."

I stared. "Peewee-your suit hasn't any water?"

"What? Don't be silly."

My jaw dropped. "But, baby," I said helplessly, "why didn't you fill your tank before we left?"

"What are you talking about? Does your suit have a water tank?"

I couldn't answer. Peewee's suit was for tourists-for those "scenic walks amidst incomparable grandeur on the ancient face of the Moon" that the ads promised. Guided walks, of course, not over a half-hour at a time-they wouldn't put in a water tank; some tourist might choke, or bite the nipple off and half drown in his helmet, or some silly thing. Besides, it was cheaper.

I began to worry about other shortcomings that cheap-jack equipment might have-with Peewee's life depending on it. "I'm sorry," I said humbly. "Look, I'll try to figure out some way to get water to you."

"I doubt if you can. I can't die of thirst in the time it'll take us to get there, so quit worrying. I'm all right. I just wish I had my bubble gum. Ready?"

"Uh . . . ready."

The hills were hardly more than giant folds in lava; we were soon through them, even though we had to take it cautiously over the very rough ground. Beyond them the ground looked natter than western Kansas, stretching out to a close horizon, with mountains sticking up beyond, glaring in the Sun and silhouetted against a black sky like cardboard cutouts. I tried to figure how far the horizon was, on a thousand-mile radius and a height of eye of six feet-and couldn't do it in my head and wished for my slipstick. But it was awfully close, less than a mile.

Peewee let me overtake her, touched helmets. "Okay, Kip? All right, Mother Thing?"

"Sure."

("All right, dear.")

"Kip, the course from the pass when they fetched me here was east eight degrees north. I heard them arguing and sneaked a peek at their map. So we go back west eight degrees south-that doesn't count the jog to these hills but it's close enough to find the pass. Okay?"

"Sounds swell." I was impressed. "Peewee, were you an Indian scout once? Or Davy Crockett?"

"Pooh! Anybody can read a map"-she sounded pleased. "I want to check compasses. What bearing do you have on Earth?"

I said silently: Oscar, you've let me down. I've been cussing her suit for not having water-and you don't have a compass.

(Oscar protested: "Hey, pal, that's unfair! Why would I need a compass at Space Station Two? Nobody told me I was going to the Moon.") I said, "Peewee, this suit is for space station work. What use is a compass in space? Nobody told me I was going to the Moon."

"But- Well, don't stop to cry about it. You can get your directions by Earth."

"Why can't I use your compass?"

"Don't be silly; it's built into my helmet. Now just a moment-" She faced Earth, moved her helmet back and forth. Then she touched helmets again. "Earth is smacko on northwest . . . that makes the course fifty three degrees left of there. Try to pick it out. Earth is two degrees wide, you know."

"I knew that before you were born."

"No doubt. Some people require a head start."

"Smart aleck!"

"You were rude first!"

"But- Sorry, Peewee. Let's save the fights for later. I'll spot you the first two bites."

"I won't need them! You don't know how nasty I can-"

"I have some idea."

("Children! Children!")

"I'm sorry, Peewee."

"So am I. I'm edgy. I wish we were there."

"So do I. Let me figure the course." I counted degrees using Earth as a yardstick. I marked a place by eye, then tried again judging fifty-three degrees as a proportion of ninety. The results didn't agree, so I tried to spot some stars to help me. They say you can see stars from the Moon even when the Sun is in the sky. Well, you can-but not easily. I had the Sun over my shoulder but was facing Earth, almost three-quarters full, and had the dazzling ground glare as well. The polarizer cut down the glare-and cut out the stars, too.

So I split my guesses and marked the spot. "Peewee? See that sharp peak with sort of a chin on its left profile? That ought to be the course, pretty near."

"Let me check." She tried it by compass, then touched helmets. "Nice going, Kip. Three degrees to the right and you've got it."

I felt smug. "Shall we get moving?"

"Right. We go through the pass, then Tombaugh Station is due west."

It was about ten miles to the mountains; we made short work of it. You can make time on the Moon-if it is flat and if you can keep your balance. Peewee kept stepping it up until we were almost flying, long low strides that covered ground like an ostrich-and, do you know, it's easier fast than slow. The only hazard, after I got the hang of it, was landing on a rock or hole or something and tripping. But that was hazard enough because I couldn't pick my footing at that speed. I wasn't afraid of falling; I felt certain that Oscar could take the punishment. But suppose I landed on my back? Probably smash the Mother Thing to jelly.

I was worried about Peewee, too. That cut-rate tourist suit wasn't as rugged as Oscar. I've read about explosive decompression-I never want to see it. Especially not a little girl. But I didn't dare use radio to warn her even though we were probably shielded from Wormface-and if I tugged on my leash I might make her fall.

The plain started to rise and Peewee let it slow us down. Presently we were walking, then we were climbing a scree slope. I stumbled but landed on my hands and got up-one-sixth gravity has advantages as well as hazards. We reached the top and Peewee led us into a pocket in the rocks. She stopped and touched helmets. "Anybody home? You two all right?"

("All right, dear.")

"Sure," I agreed. "A little winded, maybe." That was an understatement but if Peewee could take it, I could.

"We can rest," she answered, "and take it easy from here on. I wanted to get us out of the open as fast as possible. They'll never find us here."

I thought she was right. A wormface ship flying over might spot us, if they could see down as well as up-probably just a matter of touching a control. But our chances were better now. "This is the time to recharge your empty bottle."

"Okay."

None too soon-the bottle which had been almost full had dropped by a third, more like half. She couldn't make it to Tombaugh Station on that -simple arithmetic. So I crossed my fingers and got to work. "Partner, will you untie this cat's cradle?"

While Peewee fumbled at knots, I started to take a drink-then stopped, ashamed of myself. Peewee must be chewing her tongue to work up saliva by now-and I hadn't been able to think of any way to get water to her. The tank was inside my helmet and there was no way to reach it without making me-and Mother Thing-dead in the process.

If I ever lived to be an engineer I'd correct that!

I decided that it was idiotic not to drink because she couldn't; the lives of all of us might depend on my staying in the best condition I could manage. So I drank and ate three malted milk tablets and a salt tablet, then had another drink. It helped a lot but I hoped Peewee hadn't noticed. She was busy unwinding clothesline-anyhow it was hard to see into a helmet.

I took Peewee's empty bottle off her back, making darn sure to close her outside stop valve first-there's supposed to be a one-way valve where an air hose enters a helmet but I no longer trusted her suit; it might have more cost-saving shortcomings. I laid the

empty on the ground by a full one, looked at it, straightened up and touched helmets. "Peewee, disconnect the bottle on the left side of my back."

"Why, Kip?"

"Who's doing this job?" I had a reason but was afraid she might argue. My lefthand bottle held pure oxygen; the others were oxy-helium. It was full, except for a few minutes of fiddling last night in Centerville. Since I couldn't possibly give her bottle a full charge, the next best thing was to give her a half-charge of straight oxygen.

She shut up and removed it.

I set about trying to transfer pressure between bottles whose connections didn't match. There was no way to do it properly, short of tools a quarter of a million miles away-or over in Tombaugh Station which was just as bad. But I did have adhesive tape.

Oscar's manual called for two first-aid kits. I didn't know what was supposed to be in them; the manual had simply given USAF stock numbers. I hadn't been able to guess what would be useful in an outside kit-a hypodermic needle, maybe, sharp enough to stab through and give a man morphine when he needed it terribly. But since I didn't know, I had stocked inside and outside with bandage, dressings, and a spool of surgical tape.

I was betting on the tape.

I butted the mismatched hose connections together, tore off a scrap of bandage and wrapped it around the junction-I didn't want sticky stuff on the joint; it could foul the operation on a suit. Then I taped the junction, wrapping tightly, working very painstakingly and taping three inches on each side as well as around the joint-if tape could restrain that pressure a few moments, there would still be one deuce of a force trying to drag that joint apart. I didn't want it to pull apart at the first jolt. I used the entire roll.

I motioned Peewee to touch helmets. "I'm about to open the full bottle. The valve on the empty is already open. When you see me start to close the valve on the full one, you close the other one-fast! Got it?"

"Close the valve when you do, quickly. Roger."

"Stand by. Get your hand on the valve." I grabbed that lump of bandaged joint in one fist, squeezed as hard as I could, and put my other hand on the valve. If that joint let go, maybe my hand would go with it- but if the stunt failed, little Peewee didn't have long to live. So I really gripped.

Watching both gauges, I barely cracked the valve. The hose quivered; the needle gauge that read "empty" twitched. I opened the valve wide.

One needle swung left, the other right. Quickly they approached half-charge. "Now!" I yelled uselessly and started closing the valve.

And felt that patchwork joint start to give.

The hoses squeezed out of my fist but we lost only a fraction of gas. I found that I was trying to close a valve that was closed tight. Peewee had hers closed. The gauges each showed just short of half full-there was air for Peewee.

I sighed and found I had been holding my breath.

Peewee put her helmet against mine and said very soberly, "Thanks, Kip."

"Charton Drugs service, ma'am-no tip necessary. Let me tidy this mess, you can tie me and we'll go."

"You won't have to carry but one extra bottle now."

"Wrong, Peewee. We may do this stunt five or six times until there's only a whisper left"-or until the tape wears out, I added to myself. The first thing I did was to rewrap the tape on its spool-and if you think that is easy, wearing gloves and with the adhesive drying out as fast as you wind it, try it.

In spite of the bandage, sticky stuff had smeared the connections when the hoses parted. But it dried so hard that it chipped off the bayonet-and-snap joint easily. I didn't worry about the screw-thread joint; I didn't expect to use it on a suit. We mounted Peewee's recharged bottle and I warned her that it was straight oxygen. "Cut your pressure and feed from both bottles. What's your blood color reading?"

"I've been carrying it low on purpose."

"Idiot! You want to keel over? Kick your chin valve! Get into normal range!"

We mounted one bottle I had swiped on my back, tied the other and the oxy bottle on my front, and were on our way.

Earth mountains are predictable; lunar mountains aren't, they've never been shaped by water. We came to a hole too steep to go down other than by rope and a wall beyond I wasn't sure we could climb. With pitons and snap rings and no space suits it wouldn't have been hard in the Rockies- but not the way we were. Peewee reluctantly led us back. The scree slope was worse going down-I backed down on hands and knees, with Peewee belaying the line above me. I wanted to be a hero and belay for her-we had a brisk argument. "Oh, quit being big and male and gallantly stupid, Kip! You've got four big bottles and the Mother Thing and you're top heavy and I climb like a goat."

I shut up.

At the bottom she touched helmets. "Kip," she said worriedly, "I don't know what to do."

"What's the trouble?"

"I kept a little south of where the crawler came through. I wanted to avoid crossing right where the crawler crossed. But I'm beginning to think there isn't any other way."

"I wish you had told me before."

"But I didn't want them to find us! The way the crawler came is the first place they'll look."

"Mmm . . . yes." I looked up at the range that blocked us. In pictures, the mountains of the Moon look high and sharp and rugged; framed by the lens of a space suit they look simply impossible.

I touched helmets again. "We might find another way-if we had time and air and the resources of a major expedition. We've got to take the route the crawler did. Which way?"

"A little way north ... I think."

We tried to work north along the foothills but it was slow and difficult. Finally we backed off to the edge of the plain. It made us jumpy but it was a chance we had to take. We walked, briskly but not running, for we didn't dare miss the crawler's tracks. I counted paces and when I reached a thousand I tugged the line; Peewee stopped and we touched helmets. "We've come half a mile. How much farther do you think it is? Or could it possibly be behind us?"

Peewee looked up at the mountains. "I don't know," she admitted. "Everything looks different."

"We're lost?"

"Uh ... it ought to be ahead somewhere. But we've come pretty far. Do you want to turn around?"

"Peewee, I don't even know the way to the post office."

"But what should we do?"

"I think we ought to keep going until you are absolutely certain the pass can't be any farther. You watch for the pass and I'll watch for crawler tracks. Then, when you're

certain that we've come too far, we'll turn back. We can't afford to make short casts like a dog trying to pick up a rabbit's scent."

"All right."

I had counted two thousand more paces, another mile, when Peewee stopped. "Kip? It can't be ahead of us. The mountains are higher and solider than ever."

"You're sure? Think hard. Better to go another five miles than to stop too short."

She hesitated. She had her face pushed up close to her lens while we touched helmets and I could see her frown. Finally she said, "It's not up ahead. Kip."

"That settles it. To the rear, march! 'Lay on, Macduff, and curs'd be him who first cries, "Hold, enough!" ' "

"King Lear."

"Macbeth. Want to bet?"

Those tracks were only half a mile behind us-I had missed them. They were on bare rock with only the lightest covering of dust; the Sun had been over my shoulder when we first crossed them, and the caterpillar tread marks hardly showed-I almost missed them going back. They led off the plain and straight up into the mountains.

We couldn't possibly have crossed those mountains without following the crawler's trail; Peewee had had the optimism of a child. It wasn't a road; it was just something a crawler on caterpillar treads could travel. We saw places that even a crawler hadn't been able to go until whoever pioneered it set a whopping big blast, backed off and waited for a chunk of mountain to get out of the way. I doubt if Skinny and Fatty carved that goat's path; they didn't look fond of hard work. Probably one of the exploration parties. If Peewee and I had attempted to break a new trail, we'd be there yet, relics for tourists of future generations.

But where a tread vehicle can go, a man can climb. It was no picnic; it was trudge, trudge, trudge, up and up and up-watch for loose rock and mind where you put your feet. Sometimes we belayed with the line. Nevertheless it was mostly just tedious.

When Peewee had used that half-charge of oxygen, we stopped and I equalized pressure again, this time being able to give her only a quarter charge-like Achilles and the tortoise. I could go on indefinitely giving her half of what was left-if the tape held out. It was in bad shape but the pressure was only half as great and I managed to keep the hoses together until we closed valves.

I should say that I had it fairly easy. I had water, food, pills, dexedrine. The last was enormous help; any time I felt fagged I borrowed energy with a pep-pill. Poor Peewee had nothing but air and courage.

She didn't even have the cooling I had. Since she was on a richer mix, one bottle being pure oxygen, it did not take as much flow to keep up her blood-color index-and I warned her not to use a bit more than necessary; she could not afford air for cooling, she had to save it to breathe.

"I know, Kip," she answered pettishly. "I've got the needle jiggling the red light right now. Think I'm a fool?"

"I just want to keep you alive."

"All right, but quit treating me as a child. You put one foot in front of the other. I'll make it."

"Sure you will!"

As for the Mother Thing she always said she was all right and she was breathing the air I had (a trifle used), but I didn't know what was hard-ship to her. Hanging by his heels all day would kill a man; to a bat it is a nice rest-yet bats are our cousins.

I talked with her as we climbed. It didn't matter what; her songs had the effect on me that it has to have your own gang cheering. Poor Peewee didn't even have that comfort, except when we stopped and touched helmets-we still weren't using radio; even in the mountains we were fearful of attracting attention.

We stopped again and I gave Peewee one-eighth of a charge. The tape was in very poor shape afterwards; I doubted if it would serve again. I said, "Peewee, why don't you run your oxy-helium bottle dry while I carry this one? It'll save your strength."

"I'm all right."

"Well, you won't use air so fast with a lighter load."

"You have to have your arms free. Suppose you slip?"

"Peewee, I won't carry it in my arms, My righthand backpack bottle is empty; I'll chuck it. Help me make the change and I'll still be carrying only four-just balanced evenly."

"Sure, I'll help. But I'll carry two bottles. Honest, Kip, the weight isn't anything. But if I run the oxy-helium bottle dry, what would I breathe while you're giving me my next charge?"

I didn't want to tell her that I had doubts about another charge, even in those ever smaller amounts. "Okay, Peewee."

She changed bottles for me; we threw the dead one down a black hole and went on. I don't know how far we climbed nor how long; I know that it seemed like days-though it couldn't have been, not on that much air. During mile after mile of trail we climbed at least eight thousand feet. Heights are hard to guess-but I've seen mountains I knew the heights of. Look it up yourself-the first range east of Tombaugh Station.

There's a lot of climbing, even at one-sixth gee.

It seemed endless because I didn't know how far it was nor how long it had been. We both had watches-under our suits. A helmet ought to have a built-in watch. I should have read Greenwich time from the face of Earth. But I had no experience and most of the time I couldn't see Earth because we were deep in mountains-anyhow I didn't know what time it had been when we left the ship.

Another thing space suits should have is rear-view mirrors. While you are at it, add a window at the chin so that you can see where you step. But of the two, I would take a rear-view mirror. You can't glance behind you; you have to turn your entire body. Every few seconds I wanted to see if they were following us-and I couldn't spare the effort. All that nightmare trek I kept imagining them on my heels, expecting a wormy hand on my shoulder. I listened for footsteps which couldn't be heard in vacuum anyhow.

When you buy a space suit, make them equip it with a rear-view mirror. You won't have Wormface on your trail but it's upsetting to have even your best friend sneak up behind you. Yes, and if you are coming to the Moon, bring a sunshade. Oscar was doing his best and York had done an honest job on the air conditioning-but the untempered Sun is hotter than you would believe and I didn't dare use air just for cooling, any more than Peewee could.

It got hot and stayed hot and sweat ran down and I itched all over and couldn't scratch and sweat got into my eyes and burned. Peewee must have been parboiled. Even when the trail wound through deep gorges lighted only by reflection off the far wall, so dark that we turned on headlamps, I still was hot-and when we curved back into naked sunshine, it was almost unbearable. The temptation to kick the chin valve, let air pour in and cool me, was almost too much. The desire to be cool seemed more important than the need to breathe an hour hence.

If I had been alone, I might have done it and died. But Peewee was worse off than I was. If she could stand it, I had to.

I had wondered how we could be so lost so close to human habitation -and how crawly monsters could hide a base only forty miles from Tombaugh Station. Well, I had time to think and could figure it out because I could see the Moon around me.

Compared with the Moon the Arctic is swarming with people. The Moon's area is about equal to Asia-with fewer people than Centerville. It might be a century before anyone explored that plain where Wormface was based. A rocket ship passing over wouldn't notice anything even if camouflage hadn't been used; a man in a space suit would never go there; a man in a crawler would find their base only by accident even if he took the pass we were in and ranged around that plain. The lunar mapping satellite could photograph it and rephotograph, then a technician in London might note a tiny difference on two films. Maybe. Years later somebody might check up-if there wasn't something more urgent to do in a pioneer outpost where everything is new and urgent.

As for radar sightings-there were unexplained radar sightings before I was born.

Wormface could sit there, as close to Tombaugh Station as Dallas is to Fort Worth, and not fret, snug as a snake under house. Too many square miles, not enough people.

Too incredibly many square miles. . . . Our whole world was harsh bright cliffs and dark shadows and black sky, and endless putting one foot in front of the other.

But eventually we were going downhill oftener than up and at weary last we came to a turn where we could see out over a hot bright plain.

I There were mountains awfully far away; even from our height, up a thousand feet or so, they were beyond the horizon. I looked out over that plain, too dead beat to feel triumphant, then glanced at Earth and tried to estimate due west.

Peewee touched her helmet to mine. "There it is, Kip."

"Where?" She pointed and I caught a glint on a silvery dome.

The Mother Thing trilled at my spine ("What is it, children?")

"Tombaugh Station, Mother Thing."

Her answer was wordless assurance that we were good children and that she had known that we could do it.

The station may have been ten miles away. Distances were hard to judge, what with that funny horizon and never anything for comparison- I didn't even know how big the dome was. "Peewee, do we dare use radio?"

She turned and looked back. I did also; we were about as alone as could be. "Let's risk it."

"What frequency?"

"Same as before. Space operations. I think."

So I tried. "Tombaugh Station. Come in, Tombaugh Station. Do you read me?" Then Peewee tried. I listened up and down the band I was equipped for. No luck.

I shifted to horn antenna, aiming at the glint of light. No answer.

"We're wasting time, Peewee. Let's start slogging."

She turned slowly away. I could feel her disappointment-I had trem-bled with eagerness myself. I caught up with her and touched helmets. Don't let it throw you, Peewee. They can't listen all day for us to call. We see it, now we'll walk it."

"I know," she said dully.

As we started down we lost sight of Tombaugh Station, not only from twists and turns but because we dropped it below the horizon. I kept calling as long as there seemed any hope, then shut it off to save breath and battery.

We were about halfway down the outer slope when Peewee slowed and stopped-sank to the ground and sat still.

I hurried to her. "Peewee!"

"Kip," she said faintly, "could you go get somebody? Please? You know the way now. I'll wait here. Please, Kip?"

"Peewee!" I said sharply. "Get up! You've got to keep moving."

"I c- c- can't!" She began to cry. "I'm so thirsty . . . and my legs-" She passed out.

"Peewee!" I shook her shoulder. "You can't quit now! Mother Thing! -you tell her!"

Her eyelids fluttered. "Keep telling her, Mother Thing!" I flopped Peewee over and got to work. Hypoxia hits as fast as a jab on the button. I didn't need to see her blood-color index to know it read DANGER; the gauges on her bottles told me. The oxygen bottles showed empty, the oxy-helium tank was practically so. I closed her exhaust valves, overrode her chin valve with the outside valve and let what was left in the oxy-helium bottle flow into her suit. When it started to swell I cut back the flow and barely cracked one exhaust valve. Not until then did I close stop valves and remove the empty bottle.

I found myself balked by a ridiculous thing.

Peewee had tied me too well; I couldn't reach the knot! I could feel it with my left hand but couldn't get my right hand around; the bottle on my front was in the way-and I couldn't work the knot loose with one hand.

I made myself stop panicking. My knife-of course, my knife! It was an old scout knife with a loop to hang it from a belt, which was where it was. But the map hooks on Oscar's belt were large for it and I had had to force it on. I twisted it until the loop broke.

Then I couldn't get the little blade open. Space-suit gauntlets don't have thumb nails.

I said to myself: Kip, quit running in circles. This is easy. All you have to do is open a knife-and you've got to . . . because Peewee is suffocating. I looked around for a sliver of rock, anything that could pinch-hit for a thumb nail. Then I checked my belt.

The prospector's hammer did it, the chisel end of the head was sharp enough to open the blade. I cut the clothesline away.

I was still blocked. I wanted very badly to get at a bottle on my back. When I had thrown away that empty and put the last fresh one on my back, I had started feeding from it and saved the almost-half-charge in the other one. I meant to save it for a rainy day and split it with Peewee. Now was the time-she was out of air, I was practically so in one bottle but still had that half-charge in the other-plus an eighth of a charge or less in the bottle that contained straight oxygen (the best I could hope for in equalizing pressures), I had planned to surprise her with a one-quarter charge of oxy-helium, which would last longer and give more cooling. A real knight-errant plan, I thought. I didn't waste two seconds discarding it.

I couldn't get that bottle off my back!

Maybe if I hadn't modified the backpack for nonregulation bottles I could have done it. The manual says: "Reach over your shoulder with the opposite arm, close stop valves at bottle and helmet, disconnect the shackle-" My pack didn't have shackles; I had substituted straps. But I still don't think you can reach over your shoulder in a pressurized suit and do anything effective. I think that was written by a man at a desk. Maybe he had seen it done under favorable conditions. Maybe he had done it, but was one of those freaks who can dislocate both shoulders. But I'll bet a full charge of oxygen that the riggers around Space Station Two did it for each other as Peewee and I had, or went inside and deflated.

If I ever get a chance, I'll change that. Everything you have to do in a space suit should be arranged to do in front-valves, shackles, everything, even if it is to affect something in back. We aren't like Wormface, with eyes all around and arms that bend in a dozen places; we're built to work in front of us-that goes triple in a space suit.

You need a chin window to let you see what you're doing, too! A thing can look fine on paper and be utterly crumby in the field.

But I didn't waste time moaning; I had a one-eighth charge of oxygen I could reach. I grabbed it.

That poor, overworked adhesive tape was a sorry mess. I didn't bother with bandage; if I could get the tape to stick at all I'd be happy. I handled it as carefully as gold leaf, trying to get it tight, and stopped in the middle to close Peewee's exhaust entirely when it looked as if her suit was collapsing. I finished with trembling fingers.

I didn't have Peewee to close a valve. I simply gripped that haywired joint in one hand, opened Peewee's empty bottle with the other, swung over fast and opened the oxygen bottle wide-jerked my hand across and grabbed the valve of Peewee's bottle and watched those gauges.

The two needles moved toward each other. When they slowed down I started closing her bottle-and the taped joint blew out.

I got that valve closed in a hurry; I didn't lose much gas from Peewee's bottle. But what was left on the supply side leaked away. I didn't stop to worry; I peeled away a scrap of adhesive, made sure the bayonet-and-snap joint was clean, got that slightly recharged bottle back on Peewee's suit, opened stop valves.

Her suit started to distend. I opened one exhaust valve a crack and touched helmets. "Peewee! Peewee! Can you hear me? Wake up, baby! Mother Thing!-make her wake up!"

"Peewee!"

"Yes, Kip?"

"Wake up! On your feet, Champ! Get up! Honey, please get up."

"Huh? Help me get my helmet off ... I can't breathe."

"Yes, you can. Kick your chin valve-feel it, taste it. Fresh air!"

She tried, feebly; I gave her a quick strong shot, overriding her chin valve from outside. "Oh!"

"See? You've got air. You've got lots of air. Now get up."

"Oh, please, just let me lie here."

"No, you don't! You're a nasty, mean, spoiled little brat-and if you don't get up, nobody will love you. The Mother Thing won't love you. Mother Thing!-tell her!"

("Stand up, daughter!")

Peewee tried. I helped her, once she was trying. She trembled and clung to me and I kept her from falling. "Mother Thing?" she said faintly. "I did it. You ... still love me?"

("Yes, darling!")

"I'm dizzy . . . and I don't think I ... can walk."

"You don't have to, honey," I said gently and picked her up in my arms.

"You don't have to walk any farther." She didn't weigh anything.

The trail disappeared when we were down out of the foothills but the crawler's tracks were sharp in the dust and led due west. I had my air trimmed down until the needle of the blood-color indicator hung at the edge of the danger sector. I held it there, kicking my chin valve only when it swung past into DANGER. I figured that the designer must have left some leeway, the way they do with gasoline gauges. I had long since warned Peewee never to take her eyes off her own indicator and hold it at the danger limit. She promised and I kept reminding her. I pressed her helmet against the yoke of mine, so that we could talk.

I counted paces and every half-mile I told Peewee to call Tombaugh Station. It was over the horizon but they might have a high mast that could "see" a long way.

The Mother Thing talked to her, too-anything to keep her from slipping away again. It saved my strength to have the Mother Thing talk and was good for all of us.

After a while I noticed that my needle had drifted into the red again. I kicked the valve and waited. Nothing happened. I kicked it again and the needle drifted slowly toward the white. "How you fixed for air, Peewee?"

"Just fine. Kip, just fine."

Oscar was yelling at me. I blinked and noticed that my shadow had disappeared. It had been stretched out ahead at an angle to the tracks, the tracks were there but my shadow was not. That made me sore, so I turned around and looked for it. It was behind me.

The darn thing had been hiding. Games!

("That better!" said Oscar.)

"It's hot in here, Oscar."

("You think it's cool out here? Keep your eye on that shadow, bud-and on those tracks.")

"All right, all right! Quit pestering me." I made up my mind that I wouldn't let that shadow get away again. Games it wanted to play, huh?

"There's darn little air in here, Oscar."

("Breathe shallow, chum. We can make it.")

"I'm breathing my socks, now."

("So breathe your shirt.")

"Did I see a ship pass over?"

("How should I know? You're the one with the blinkers.")

"Don't get smart. I'm in no mood to joke."

I was sitting on the ground with Peewee across my knees and Oscar was really shouting-and so was the Mother Thing. ("Get up, you big ape! Get up and try.") ("Get up, Kip dear! Only a little way now.")

"I just want to get my wind."

("All right, you've got it. Call Tombaugh Station.")

I said, "Peewee, call Tombaugh Station."

She didn't answer. That scared me and I snapped out of it. "Tombaugh Station,, come in! Come in!" I got to my knees and then to my feet. Tombaugh Station, do you read me? Help! Help!"

A voice answered, "I read you."

"Help! M'aidez! I've got a little girl dying! Help!"

Suddenly it sprang up in front of my eyes-great shiny domes, tall towers, radio telescopes, a giant Schmidt camera. I staggered toward it. "May Day!"

An enormous lock opened and a crawler came toward me. A voice in my phones said, "We're coming. Stay where you are. Over and out."

A crawler stopped near me. A man got out, came over and touched helmets. I gasped: "Help me get her inside."

I got back: "You've given me trouble, bub. I don't like people who give me trouble." A bigger, fatter man got out behind him.

The smaller man raised a thing like a camera and aimed it at me. That was the last I knew.

Chapter 7

I don't know if they took us all that weary way back in the crawler, or if Wormface sent a ship. I woke up being slapped and was inside, lying down. The skinny one was slapping me-the man the fat one called "Tim." I tried to fight back and found that I couldn't. I was in a straitjacket thing that held me as snugly as a wrapped mummy. I let out a yelp.

Skinny grabbed my hair, jerked my head up, tried to put a big capsule into my mouth.

I tried to bite him.

He slapped me harder and offered me the capsule again. His expression didn't change-it stayed mean.

I heard: "Take it, boy," and turned my eyes. The fat one was on the other side. "Better swallow it," he said. "You got five bad days ahead."

I took it. Not because of the advice but because a hand held my nose and another popped the pill into my mouth when I gasped. Fatty held a cup of water for me to wash it down; I didn't resist that, I needed it.

Skinny stuck a hypodermic needle big enough for a horse into my shoulder. I told him what I thought of him, using words I hardly ever use. The skinny one could have been deaf; the fat one chuckled. I rolled my eyes at him. "You, too," I added weakly. "Squared."

Fatty clucked reprovingly. "You ought to be glad we saved your life." He added, "Though it wasn't my idea, you strike me as a sorry team. He wanted you alive."

"Shaddap," Skinny said. "Strap his head."

"Let him break his neck. We better fix our ownselves. He won't wait." But he started to obey.

Skinny glanced at his watch. "Four minutes."

The fat one hastily tightened a strap across my forehead, then both moved very fast, swallowing capsules, giving each other hypos. I watched as best I could.

I was back in the ship. The ceiling glowed the same way, the walls looked the same. It was the room the two men used; their beds were on each side and I was strapped to a soft couch between them.

Each hurriedly got on his bed, began zipping up a tight wrapping like a sleeping bag. Each strapped his head in place before completing the process. I was not interested in them. "Hey! What did you do with Peewee?"

The fat man chuckled. "Hear that, Tim? That's a good one."

"Shaddap."

"You-" I was about to sum up Fatty's character but my thoughts got fuzzy and my tongue was thick. Besides, I wanted to ask about the Mother Thing, too.

I did not get out another word. Suddenly I was incredibly heavy and the couch was rock hard.

For a long, long time I wasn't awake or truly asleep. At first I couldn't feel anything but that terrible weight, then I hurt all over and wanted to scream. I didn't have the strength for it.

Slowly the pain went away and I stopped feeling anything. I wasn't a body-just me, no attachments. I dreamed a lot and none of it made sense; I seemed to be stuck in a comic book, the sort P.T.A. meetings pass resolutions against, and the baddies were way ahead no matter what I did.

Once the couch gave a twisting lurch and suddenly I had a body, one that was dizzy. After a few ages I realized vaguely that I had gone through a skew-flip turn-over. I had known, during lucid moments, that I was going somewhere, very fast, at terribly high acceleration. I decided solemnly that we must be halfway and tried to figure out how long two times eternity was. It kept coming out eighty-five cents plus sales tax; the cash register rang "NO SALE" and I would start over.

Fats was undoing my head strap. It stuck and skin came away. "Rise and shine, bub. Time's awastin'."

A croak was all I managed. The skinny one was unwrapping me. My legs sagged apart and hurt. "Get up!"

I tried and didn't make it. Skinny grabbed one of my legs and started to knead it.

I screamed.

"Here, lemme do that," said Fatty. "I used to be a trainer."

Fats did know something about it. I gasped when his thumbs dug into my calves and he stopped. "Too rough?" I couldn't answer. He went on massaging me and said almost jovially, "Five days at eight gravities ain't no joy ride. But you'll be okay. Got the needle, Tim?"

The skinny one jabbed me in my left thigh. I hardly felt it. Fats pulled me to a sitting position and handed me a cup. I thought it was water; it wasn't and I choked and sprayed. Fats waited, then gave it to me again. "Drink some, this time." I did.

"Okay, up on your feet. Vacation is over."

The floor swayed and I had to grab him until it stopped. "Where are we?" I said hoarsely.

Fats grinned, as if he knew an enormously funny joke. "Pluto, of course. Lovely place, Pluto. A summer resort."

"Shaddap. Get him moving."

"Shake it up, kid. You don't want to keep him waiting."

Pluto! It couldn't be; nobody could get that far. Why, they hadn't even attempted Jupiter's moons yet. Pluto was so much farther that.

My brain wasn't working. The experience just past had shaken me so badly that I couldn't accept the fact that the experience itself proved that I was wrong.

But Pluto!

I wasn't given time to wonder; we got into space suits. Although I hadn't known, Oscar was there, and I was so glad to see him that I forgot everything else. He hadn't been racked, just tossed on the floor. I bent down (discovering charley horses in every muscle) and checked him. He didn't seem hurt.

"Get in it," Fats ordered. "Quit fiddlin'."

"All right," I answered almost cheerfully. Then I hesitated. "Say-I haven't any air."

"Take another look," said Fats. I looked. Charged oxy-helium bottles were on the backpack. "Although," he continued, "if we didn't have orders from him, I wouldn't give you a whiff of Limburger. You made us for two bottles-and a rock hammer-and a line

that cost four ninety-five, earthside. Sometime," he stated without rancor, "I'm gonna take it out of your hide."

"Shaddap," said Skinny. "Get going."

I spread Oscar open, wriggled in, clipped on the blood-color reader, and zipped the gaskets. Then I stood up, clamped my helmet, and felt better just to be inside. "Tight?"

("Tight!" Oscar agreed.)

"We're a long way from home."

("But we got air! Chin up, pal.")

Which reminded me to check the chin valve. Everything was working. My knife was gone and so were the hammer and line, but those were incidentals. We were tight.

I followed Skinny out with Fats behind me. We passed Wormface in the corridor-or a wormface-but while I shuddered, I had Oscar around me and felt that he couldn't get at me. Another creature joined us in the air lock and I had to look twice to realize that it was a wormface in a space suit. The material was smooth and did not bulge the way ours did. It looked like a dead tree trunk with bare branches and heavy roots, but the supreme improvement was its "helmet"-a glassy smooth dome. One-way glass, I suppose; I couldn't see in. Cased that way, a wormface was grotesquely ridiculous rather than terrifying. But I stood no closer than I had to.

Pressure was dropping and I was busy wasting air to keep from swelling up. It reminded me of what I wanted most to know: what had happened to Peewee and the Mother Thing. So I keyed my radio and announced: "Radio check. Alfa, Bravo, Coca-"

"Shaddap that nonsense. We want you, we'll tell you."

The outer door opened and I had my first view of Pluto.

I don't know what I expected. Pluto is so far out that they can't get decent photographs even at Luna Observatory. I had read articles in the Scientific American and seen pictures in LIFE, bonestelled to look like photographs, and remembered that it was approaching its summer-if "summer" is the word for warm enough to melt air. I recalled that because they had announced that Pluto was showing an atmosphere as it got closer to the Sun.

But I had never been much interested in Pluto-too few facts and too much speculation, too far away and not desirable real estate. By comparison the Moon was a choice residential suburb. Professor Tombaugh (the one the station was named for) was

working on a giant electronic telescope to photograph it, under a Guggenheim grant, but he had a special interest; he discovered Pluto years before I was born.

The first thing I noticed as the door was opening was click . . . click . . . click-and a fourth click, in my helmet, as Oscar's heating units all cut in.

The Sun was in front of me-I didn't realize what it was at first; it looked no bigger than Venus or Jupiter does from Earth (although much brighter). With no disc you could be sure of, it looked like an electric arc.

Fats jabbed me in the ribs. "Snap out of your hop."

A drawbridge joined the door to an elevated roadway that led into the side of a mountain about two hundred yards away. The road was supported on spidery legs two or three feet high up to ten or twelve, depending on the lay of the land. The ground was covered with snow, glaringly white even under that pinpoint Sun. Where the stilts were longest, about halfway, the viaduct crossed a brook.

What sort of "water" was that? Methane? What was the "snow"? Solid ammonia? I didn't have tables to tell me what was solid, what was liquid, and what was gas at whatever hellish cold Pluto enjoyed in the "summer." All I knew was that it got so cold in its winter that it didn't have any gas or liquid-just vacuum, like the Moon.

I was glad to hurry. A wind blew from our left and was not only freezing that side of me in spite of Oscar's best efforts, it made the footing hazardous-I decided it would be far safer to do that forced march on the Moon again than to fall into that "snow." Would a man struggle before he shattered himself and his suit, or would he die as he hit?

Adding to hazard of wind and no guard rail was traffic, space-suited wormfaces. They moved at twice our speed and shared the road the way a dog does a bone. Even Skinny resorted to fancy footwork and I had three narrow squeaks.

The way continued into a tunnel; ten feet inside a panel snapped out of the way as we got near it. Twenty feet beyond was another; it did the same and closed behind us. There were about two dozen panels, each behaving like fast-acting gate valves, and the pressure was a little higher after each. I couldn't see what operated them although it was light in the tunnel from glowing ceilings. Finally we passed through a heavy-duty air lock, but the pressure was already taken care of and its doors stood open. It led into a large room.

Wormface was inside. The Wormface, I think, because he spoke in English: "Come!" I heard it through my helmet. But I couldn't be sure it was he as there were others around and I would have less trouble telling wart hogs apart.

Wormface hurried away. He was not wearing a space suit and I was relieved when he turned because I could no longer see his squirming mouth; but it was only a slight improvement as it brought into sight his rearview eye.

We were hard put to keep up. He led us down a corridor, to the right through another open double set of doors, and finally stopped suddenly just short of a hole in the floor about like a sewer manhole. "Undress it!" he commanded.

Fats and Skinny had their helmets open, so I knew it was safe, in one way. But in every other way I wanted to stay inside Oscar-as long as Wormface was around.

Fats undamped my helmet. "Out of that skin, bub. Snap it up!" Skinny loosened my belt and they quickly had the suit off even though I hindered.

Wormface waited. As soon as I was out of Oscar he pointed at the hole. "Down!"

I gulped. That hole looked as deep as a well and less inviting.

"Down," he repeated. "Now."

"Do it, bub," Fats advised. "Jump or be pushed. Get down that hole before he gets annoyed."

I tried to run.

Wormface was around me and chivvying me back before I was well started. I slammed on the brakes and backed up-glanced behind just in time to turn a fall into a clumsy jump.

It was a long way to the bottom. Landing did not hurt the way it would have on Earth, but I turned an ankle. That didn't matter; I wasn't going anywhere; the hole in the ceiling was the only exit.

My cell was about twenty feet square. It was, I suppose, carved out of solid rock, although there was no way to tell as the walls and floor and ceiling were the same elephant hide used in the ship. A lighting panel covered half the ceiling and I could have read if I'd had anything to read. The only other detail was a jet of water that splashed out of a hole in the wall, landed in a depression the size of a washtub, and departed for parts unknown.

The place was warm, which was well as there was nothing resembling bed or bedclothes. I had already concluded that I might be here quite a while and was wondering about eating and sleeping.

I decided I was tired of this nonsense. I had been minding my own business, out back of my own house. Everything else was Wormface's fault! I sat down on the floor and thought about slow ways to kill him.

I finally gave up that foolishness and wondered about Peewee and the Mother Thing. Were they here? Or were they dead somewhere between the mountains and Tombaugh Station? Thinking it over glumly, I decided that poor little Peewee was best off if she had never wakened from that second coma. I wasn't sure about the Mother Thing because I didn't know enough about her-but in Peewee's case I was sure.

Well, there was a certain appropriateness to the fix I was in; a knight-errant usually lands in a dungeon at some point. But by rights, the maiden fair ought to be imprisoned in a tower in the same castle. Sorry, Peewee; as a knight-errant, I'm a good soda jerk. Or jerk. "His strength is as the strength of ten because his heart is pure."

It wasn't funny.

I got tired of punishing myself and looked to see what time it was-not that it mattered. But a prisoner is traditionally expected to scratch marks on the wall, tallying the days he's been in, so I thought I might as well start. My watch was on my wrist but not running and I couldn't start it. Maybe eight gees was too much for it, even though it was supposed to be shockproof, waterproof, magnetism-proof, and immune to un-American influences.

After a while I lay down and went to sleep.

I was awakened by a clatter.

It was a ration can hitting the floor and the fall hadn't helped it, but the key was on it and I got it open-corned beef hash and very good, too. I used the empty can to drink from-the water might be poisoned, but did I have a choice?-and then washed the can so that it wouldn't smell.

The water was warm. I took a bath.

I doubt if many American citizens during the past twenty years have ever needed a bath as much as I did. Then I washed my clothes. My shirt, shorts, and socks were wash-and-wear synthetics; my slacks were denim and took longer to dry, but I didn't mind; I just wished that I had one of the two hundred bars of Skyway Soap that were home on the floor of my closet. If I had known I was coming to Pluto, I would have brought one.

Washing clothes caused me to take inventory. I had a handkerchief, sixty-seven cents in change, a dollar bill so sweat-soaked and worn that it was hard to make out Washington's picture, a mechanical pencil stamped "Jay's Drive-In-the thickest malts in town!"-A canard; I make the thickest-and a grocery list I should have taken care of for

Mother but hadn't because of that silly air conditioner in Charton's Drugstore. It wasn't as bedraggled as the dollar bill because it had been in my shirt pocket.

I lined up my assets and looked at them. They did not look like a collection that could be reworked into a miracle weapon with which I would blast my way out, steal a ship, teach myself to pilot it, and return triumphantly to warn the President and save the country. I rearranged them and they still didn't.

I was correct. They weren't.

I woke up from a terrible nightmare, remembered where I was, and wished I were back in the nightmare. I lay there feeling sorry for myself and presently tears started welling out of my eyes while my chin trembled. I had never been badgered "not to be a crybaby"; Dad says there is nothing wrong with tears; it's just that they are socially not acceptable- he says that in some cultures weeping is a social grace. But in Horace Mann Grammar School being a crybaby was no asset; I gave it up years ago. Besides, it's exhausting and gets you nowhere. I shut off the rain and took stock.

My action list ran like this:

1. Escape from this cell.

2. Find Oscar, suit up.

3. Go outdoors, steal a ship, head home-if I could figure out how to gun it.

4. Figure out a weapon or stratagem to fight off the wormfaces or keep them busy while I sneaked out and grabbed a ship. Nothing to it. Any superman capable of teleportation and other assorted psionic tricks could do it. Just be sure the plan is foolproof and that your insurance is paid up.

5. Crash priority: make sure, before bidding farewell to the romantic shores of exotic Pluto and its friendly colorful natives, that neither Peewee nor the Mother Thing is here-if they are, take them along-because, contrary to some opinions, it is better to be a dead hero than a live louse. Dying is messy and inconvenient but even a louse dies someday no matter what he will do to stay alive and he is forever having to explain his choice. The gummed-up spell that I had had at the hero business had shown that it was undesirable work but the alternative was still less attractive.

The fact that Peewee knew how to gun those ships, or that the Mother Thing could coach me, did not figure. I can't prove that, but I know.

Footnote: after I learned to run one of their ships, could I do so at eight gravities? That may simply call for arch supports for a wormface but I knew what eight gees did to me. Automatic pilot? If so, would it have directions on it, in English? (Don't be silly, Clifford!)

Subordinate footnote: how long would it take to get home at one gravity? The rest of the century? Or just long enough to starve to death?

6. Occupational therapy for the lulls when I went stale on the problems. This was important in order to avoid coming apart at the seams. 0. Henry wrote stories in prison, St. Paul turned out his strongest epistles incarcerated in Rome, Hitler wrote Mein Kampf in jail-next time I would bring a typewriter and paper. This time I could work out magic squares and invent chess problems. Anything was better than feeling sorry for myself. Lions put up with zoos and wasn't I smarter than a lion? Some, anyhow?

And so to work- One: how to get out of this hole? I came up with a straight-forward answer: there wasn't any way. The cell was twenty feet on a side with a ceiling twelve feet high; the walls were as smooth as a baby's cheek and as impervious as a bill collector. The other features were the hole in the ceiling, which ran about six feet still higher, the stream of water and its catch basin, and a glowing area in the ceiling. For tools I had the stuff previously listed (a few ounces of nothing much, nothing sharp, nor explosive, nor corrosive), my clothes, and an empty tin can.

I tested how high I could jump. Even a substitute guard needs springs in his legs-I touched the ceiling. That meant a gravity around one-half gee-I hadn't been able to guess, as I had spent an endless time under one-sixth gravity followed by a few eons at eight gees; my reflexes had been mistreated.

But, although I could touch the ceiling, I could neither walk on it nor levitate. I could get that high, but there was nothing a mouse could cling to.

Well, I could rip my clothes and braid a rope. Was there anything near the hole on which to catch it? All I could recall was smooth floor. But suppose it did catch? What next? Paddle around in my skin until Wormface spotted me and herded me back down, this time with no clothes? I decided to postpone the rope trick until I worked out that next step which would confound Wormface and his tribe.

I sighed and looked around. All that was left was that jet of water and the floor basin that caught it.

There is a story about two frogs trapped in a crock of cream. One sees how hopeless it is, gives up and drowns. The other is too stupid to know he's licked; he keeps on paddling. In a few hours he has churned so much butter that it forms an island, on which he floats, cool and comfortable, until the milkmaid comes and chucks him out.

That water spilled in and ran out. Suppose it didn't run out?

I explored the bottom of the catch basin. The drain was large by our standards, but I thought I could plug it. Could I stay afloat while the room filled up, filled the hole above, and pushed me out the spout? Well, I could find out, I had a can.

The can looked like a pint and a "pint's a pound the world 'round" and a cubic foot of water weighs (on Earth) a little over sixty pounds. But I had to be sure. My feet are eleven inches long; they've been that size since I was ten-I took a lot of ribbing until I grew up to them. I marked eleven inches on the floor with two pennies. It turns out that a dollar bill is two and a half inches wide and quarter is a smidgeon under an inch. Shortly I knew the dimensions of room and can pretty accurately.

I held the can under the stream, letting it fill and dumping it fast, while I ticked off cans of water on my left hand and counted seconds. Eventually I calculated how long it would take to fill the room. I didn't like the answer, so I did it over.

It would take fourteen hours to fill the room and the hole above, plus an hour to allow for crude methods. Could I stay afloat that long?

You're darn tootin' I could!-if I had to. And I had to. There isn't any limit to how long a man can float if he doesn't panic.

I balled my slacks and stuffed them in the drain. I almost lost them, so I wrapped them around the can and used the bundle as a cork. It stayed put and I used the rest of my clothes to caulk it. Then I waited, feeling cocky. Maybe the flood would create the diversion I needed for the rest of the caper. Slowly the basin filled.

The water got about an inch below floor level and stopped.

A pressure switch, I suppose. I should have known that creatures who could build eight-gee, constant-boost ships would design plumbing to "fail-safe." I wish we could.

I recovered my clothes, all but one sock, and spread them to dry. I hoped the sock would foul a pump or something but I doubted it; they were good engineers.

I never really believed that story about the frogs.

Another can was tossed down-roast beef and soggy potatoes. It was filling but I began to long for peaches. The can was stenciled "Available for subsidized resale on Luna" which made it possible that Skinny and Fatty had come by this food honestly. I wondered how they liked sharing their supplies? No doubt they did so only because Wormface had twisted their arms. Which made me wonder why Wormface wanted me alive? I was in favor of it but couldn't see why he was. I decided to call each can a "day" and let the empties be my calendar.

Which reminded me that I had not worked out how long it would take to get home on a one-gee boost, if it turned out that I could not arrange automatic piloting at eight gees. I was stymied on getting out of the cell, I hadn't even nibbled at what I would do if I did get out (correction: when I got out), but I could work ballistics.

I didn't need books. I've met people, even in this day and age, who can't tell a star from a planet and who think of astronomical distances simply as "big." They remind me of those primitives who have just four numbers: one, two, three, and "many." But any tenderfoot Scout knows the basic facts and a fellow bitten by the space bug (such as myself) usually knows a number of figures.

"Mother very thoughtfully made a jelly sandwich under no protest." Could you forget that after saying it a few times? Okay, lay it out so:

Mother	MERCURY	$.39
Very	VENUS	$.72
Thoughtfully	TERRA	$1.00
Made	MARS	$1.50
A	ASTEROIDS	(assorted prices, unimportant)
Jelly	JUPITER	$5.20
Sandwich	SATURN	$9.50
Under	URANUS	$19.00
No	NEPTUNE	$30.00
Protest	PLUTO	$39.50

The "prices" are distances from the Sun in astronomical units. An A.U. is the mean distance of Earth from Sun, 93,000,000 miles. It is easier to remember one figure that everybody knows and some little figures than it is to remember figures in millions and billions. I use dollar signs because a figure has more flavor if I think of it as money-which Dad considers deplorable. Some way you must remember them, or you don't know your own neighborhood.

Now we come to a joker. The list says that Pluto's distance is thirty-nine and a half times Earth's distance. But Pluto and Mercury have very eccentric orbits and Pluto's is a dilly; its distance varies almost two billion miles, more than the distance from the Sun to Uranus. Pluto creeps to the orbit of Neptune and a hair inside, then swings way out and stays there a couple of centuries-it makes only four round trips in a thousand years.

But I had seen that article about how Pluto was coming into its "summer." So I knew it was close to the orbit of Neptune now, and would be for the rest of my life-my life expectancy in Centerville; I didn't look like a preferred risk here. That gave an easy figure-30 astronomical units.

Acceleration problems are simple s=1/2 at2; distance equals half the acceleration times the square of elapsed time. If astrogation were that simple any sophomore could pilot a rocket ship-the complications come from gravitational fields and the fact that everything moves fourteen directions at once. But I could disregard gravitational fields and planetary motions; at the speeds a wormface ship makes neither factor matters until you are very close. I wanted a rough answer.

I missed my slipstick. Dad says that anyone who can't use a slide rule is a cultural illiterate and should not be allowed to vote. Mine is a beauty- a K&E 20" Log-log Duplex Decitrig. Dad surprised me with it after I mastered a ten-inch polyphase. We ate potato soup that week-but Dad says you should always budget luxuries first. I knew where it was. Home on my desk.

No matter. I had figures, formula, pencil and paper.

First a check problem. Fats had said "Pluto," "five days," and "eight gravities."

It's a two-piece problem; accelerate for half time (and half distance); do a skew-flip and decelerate the other half time (and distance). You can't use the whole distance in the equation, as "time" appears as a square-it's a parabolic. Was Pluto in opposition? Or quadrature? Or conjunction? Nobody looks at Pluto-so why remember where it is on the ecliptic? Oh, well, the average distance was 30 A.U.s-that would give a close-enough answer. Half that distance, in feet, is: 1/2 x 30 x 93,000,000 x 5280. Eight gravities is: 8 x 32.2 ft./sec./sec.-speed increases by 258 feet per second every second up to skew-flip and decreases just as fast thereafter.

So- 1/2 x 30 x 93,000,000 x 5280 = 1/2 x 8 x 32.2 x t2 -and you wind up with the time for half the trip, in seconds. Double that for full trip. Divide by 3600 to get hours; divide by 24 and you have days. On a slide rule such a problem takes forty seconds, most of it to get your decimal point correct. It's as easy as computing sales tax.

It took me at least an hour and almost as long to prove it, using a different sequence-and a third time, because the answers didn't match (I had forgotten to multiply by 5280, and had "miles" on one side and "feet" on the other-a no-good way to do arithmetic)-then a fourth time because my confidence was shaken. I tell you, the slide rule is the greatest invention since girls.

But I got a proved answer. Five and a half days. I was on Pluto.

Or maybe Neptune-

No, on Neptune I would not be able to jump to a twelve-foot ceiling; Pluto alone matched all facts. So I erased and computed the trip at one gravity, with turnover.

Fifteen days.

It seemed to me that it ought to take at least eight times as long at one gee as at eight-more likely sixty-four. Then I was glad I had bulled my way through analytical geometry, for I made a rough plot and saw the trouble. Squared time cut down the advantage-because the more boost, the shorter the trip, and the shorter the trip the less time in which to use the built-up speed. To cut time in half, you need four times as much boost; to cut it to a quarter, you need sixteen times the boost, and so on. This way lies bankruptcy.

To learn that I could get home in about two weeks at one gravity cheered me. I couldn't starve in two weeks. If I could steal a ship. If I could run it. If I could climb out of this hole. If- Not "if," but "when!" I was too late for college this year; fifteen more days wouldn't matter.

I had noticed, in the first problem, the speed we had been making at skew-flip. More than eleven thousand miles per second. That's a nice speed, even in space. It made me think. Consider the nearest star, Proxima Centauri, four and three-tenths light-years away, the distance you hear so often on quiz shows. How long at eight gees?

The problem was the same sort but I had to be careful about decimal points; the figures mount up. A lightyear is-I had forgotten. So multiply 186,000 miles per second (the speed of light) by the seconds in a year (365.25 x 24 x 3600) and get- 5,880,000,000,000 miles -multiply that by 4.3 and get- 25,284,000,000,000 Call it twenty-five trillion miles. Whew!

It works out to a year and five months-not as long as a trip around the Horn only last century.

Why, these monsters had star travel!

I don't know why I was surprised; it had been staring me in the face. I had assumed that Wormface had taken me to his home planet, that he was a Plutonian, or Plutocrat, or whatever the word is. But he couldn't be.

He breathed air. He kept his ship warm enough for me. When he wasn't in a hurry, he cruised at one gee, near enough. He used lighting that suited my eyes. Therefore he came from the sort of planet I came from.

Proxima Centauri is a double star, as you know if you do crossword puzzles, and one is a twin for our own Sun-size, temperature, special pattern. Is it a fair guess that it has a planet like Earth? I had a dirty hunch that I knew Wormface's home address.

I knew where he didn't come from. Not from a planet that runs a couple of centuries in utter airlessness with temperatures pushing absolute zero, followed by a "summer" in which some gases melt but water is solid rock and even Wormface has to wear a space suit. Nor from anywhere in our system, for I was sure as taxes that Wormface felt at home only on a planet like ours. Never mind the way he looked; spiders don't look like us but they like the things we like-there must be a thousand spiders in our houses for every one of us.

Wormface and his kin would like Earth. My fear was that they liked it too much.

I looked at that Proxima Centauri problem and saw something else. The turn-over speed read 1,110,000 miles per second, six times the speed of light. Relativity theory says that's impossible.

I wanted to talk to Dad about it. Dad reads everything from The Anatomy of Melancholy to Acta Mathematica and Paris-Match and will sit on a curbstone separating damp newspapers wrapped around garbage in order to see continued-on-page-eight. Dad would haul down a book and we'd look it up. Then he would try four or five more with other opinions. Dad doesn't hold with the idea that it-must-be-true-or-they-wouldn't-have-printed-it; he doesn't consider any opinion sacred-it shocked me the first time he took out a pen and changed something in one of my math books.

Still, even if speed-of-light was a limit, four or five years wasn't impossible, or even impractical. We've been told for so long that star trips, even to the nearest stars, would take generations that we may have a wrong slant. A mile of lunar mountains is a long way but a trillion miles in empty space may not be.

But what was Wormface doing on Pluto?

If you were invading another solar system, how would you start? I'm not joking; a dungeon on Pluto is no joke and I never laughed at Wormface. Would you just barge in, or toss your hat in first? They seemed far ahead of us in engineering but they couldn't have known that ahead of time. Wouldn't it be smart to build a supply base in that system in some spot nobody ever visited?

Then you could set up advance bases, say on an airless satellite of a likely-looking planet, from which you could scout the surface of the target planet. If you lost your scouting base, you would pull back to main base and work out a new attack.

Remember that while Pluto is a long way off to us, it was only five days from Luna for Wormface. Think about World War II, back when speeds were slow. Main Base is safely out of reach (U.S.A./Pluto) but only about five days from advance base (England/The Moon) which is three hours from theater-of-operations (France-Germany/Earth). That's a slow way to operate but it worked for the Allies in World War II.

I just hoped it would not work for Wormface's gang.

Though I didn't see anything to prevent it.

Somebody chucked down another can-spaghetti and meat balls. If it had been canned peaches, I might not have had the fortitude to do what I did next, which was to use it for a hammer before I opened it. I beat an empty can into a flat narrow shape and beat a point on it, which I sharpened on the edge of the catch basin. When I was through, I had a dagger -not a good one, but it made me feel less helpless.

Then I ate. I felt sleepy and went to sleep in a warm glow. I was still a prisoner but I had a weapon of sorts and I believed that I had figured out what I was up against. Getting a problem analyzed is two-thirds of solving it. I didn't have nightmares.

The next thing tossed down the hole was Fats.

Skinny landed on him seconds later. I backed off and held my dagger ready. Skinny ignored me, picked himself up, looked around, went to the water spout and got a drink. Fats was in no shape to do anything; his breath was knocked out.

I looked at him and thought what a nasty parcel he was. Then I thought, oh, what the deuce!-he had massaged me when I needed it. I heaved him onto his stomach and began artificial respiration. In four or five pushes his motor caught and he was able to breathe. He gasped, "That's enough!"

I backed off, got my knife out. Skinny was sitting against a wall, ignoring us. Fats looked at my feeble weapon and said, "Put that away, kid. We're bosom buddies now."

"We are?"

"Yeah. Us human types had better stick together." He sighed wretchedly. "After all we done for him! That's gratitude."

"What do you mean?" I demanded.

"Huh?" said Fats. "Just what I said. He decided he could do without us. So Annie doesn't live here any more."

"Shaddap," the skinny one said flatly.

Fats screwed his face into a pout. "You shaddap," he said peevishly. "I'm tired of that. It's shaddap here, shaddap there, all day long-and look where we are."

"Shaddap, I said."

Fats shut up. I never did find out what had happened, because Fats seldom gave the same explanation twice. The older man never spoke except for that tiresome order to shut up, or in monosyllables even less helpful. But one thing was clear: they had lost their jobs as assistant gangsters, or fifth columnists, or whatever you call a human being who would stooge against his own race. Once Fats said, "Matter of fact, it's your fault."

"Mine?" I dropped my hand to my tin-can knife.

"Yours. If you hadn't butted in, he wouldn't have got sore."

"I didn't do anything."

"Says you. You swiped his two best prizes, that's all, and held him up when he planned to high-tail it back here." "Oh. But that wasn't your fault."

"So I told him. You try telling him. Take your hand away from that silly nail file." Fats shrugged. "Like I always say, let bygones be bygones."

I finally learned the thing I wanted most to know. About the fifth time I brought up the matter of Peewee, Fats said, "What d'you want to know about the brat for?"

"I just want to know whether she's alive or dead."

"Oh, she's alive. Leastwise she was last time I seen her."

"When was that?"

"You ask too many questions. Right here."

"She's here?" I said eagerly.

"That's what I said, wasn't it? Around everywhere and always underfoot. Living like a princess, if you ask me." Fats picked his teeth and frowned. "Why he should make a pet out of her and treat us the way he did, beats me. It ain't right."

I didn't think so, either, but for another reason. The idea that gallant little Peewee was the spoiled darling of Wormface I found impossible to believe. There was some explanation-or Fats was lying. "You mean he doesn't have her locked up?"

"What's it get him? Where's she gonna go?"

I pondered that myself. Where could you go?-when to step outdoors was suicide. Even if Peewee had her space suit (and that, at least, was probably locked up), even if a ship was at hand and empty when she got outside, even if she could get into it, she still wouldn't have a "ship's brain," the little gadget that served as a lock. "What happened to the Mother Thing?"

"The what?"

"The-" I hesitated. "Uh, the non-human who was in my space suit with me. You must know, you were there. Is she alive? Is she here?"

But Fats was brooding. "Them bugs don't interest me none," he said sourly and I could get no more out of him.

But Peewee was alive (and a hard lump in me was suddenly gone). She was here! Her chances, even as a prisoner, had been enormously better on the Moon; nevertheless I

felt almost ecstatic to know that she was near. I began thinking about ways to get a message to her.

As for Fats' insinuation that she was playing footy with Wormface, it bothered me not at all. Peewee was unpredictable and sometimes a brat and often exasperating, as well as conceited, supercilious, and downright childish. But she would be burned alive rather than turn traitor. Joan of Arc had not been made of sterner stuff.

We three kept uneasy truce. I avoided them, slept with one eye open, and tried not to sleep unless they were asleep first, and I always kept my dagger at hand. I did not bathe after they joined me; it would have put me at a disadvantage. The older one ignored me, Fats was almost friendly. I pretended not to be afraid of my puny weapon, but I think he was. The reason I think so comes from the first time we were fed. Three cans dropped from the ceiling; Skinny picked up one, Fats got one, but when I circled around to take the third, Fats snatched it.

I said, "Give me that, please."

Fats grinned. "What makes you think this is for you, sonny boy?"

"Uh, three cans, three people."

"So what? I'm feeling a mite hungry. I don't hardly think I can spare it."

"I'm hungry, too. Be reasonable."

"Mmmm-" He seemed to consider it. "Tell you what. I'll sell it to you."

I hesitated. It had a shifty logic; Wormface couldn't walk into Lunar Base commissary and buy these rations; probably Fats or his partner had bought them. I wouldn't mind signing I.O.U.s-a hundred dollars a meal, a thousand, or a million; money no longer meant anything. Why not humor him?

No! If I gave in, if I admitted I had to dicker with him for my prison rations, he would own me. I'd wait on him hand and foot, do anything he told me, just to eat.

I let him see my tin dagger. "I'll fight you for it."

Fats glanced at my hand and grinned broadly. "Can't you take a joke?"

He tossed me the can. There was no trouble at feeding times after that, We lived like that "Happy Family" you sometimes see in traveling zoos: a lion caged with a lamb. It is a startling exhibit but the lamb has to be replaced frequently. Fats liked to talk and I learned things from him, when I could sort out truth from lies. His name-so he said-was Jacques de Barre de Vigny ("Call me 'Jock.' ") and the older man was Timothy Johnson-but I had a hunch that their real names could be learned only by inspecting post office

bulletin boards. Despite Jock's pretense of knowing everything, I soon decided that he knew nothing about Wormface's origin and little about his plans and purposes. Wormface did not seem the sort to discuss things with "lower animals"; he would simply make use of them, as we use horses.

Jock admitted one thing readily. "Yeah, we put the snatch on the brat. There's no uranium on the Moon; those stories are just to get suckers. We were wasting our time-and a man's got to eat, don't he?"

I didn't make the obvious retort; I wanted information. Tim said, "Shaddap!"

"Aw, what of it, Tim? You worried about the F.B.I.? You think the Man can put the arm on you-here?"

"Shaddap, I said."

"Happens I feel like talking. So blow it." Jock went on, "It was easy. The brat's got more curiosity than seven cats. He knew she was coming and when." Jock looked thoughtful. "He always knows-he's got lots of people working for him, some high up. All I had to do was be in Luna City and get acquainted-I made the contact because Tim here ain't the fatherly type, the way I am. I get to talking with her, I buy her a coke, I tell her about the romance of hunting uranium on the Moon and similar hogwash. Then I sigh and say it's too bad I can't show her the mine of my partner and I. That's all it took. When the tourist party visited Tombaugh Station, she got away and sneaked out the lock-she worked that part out her ownself. She's sly, that one. All we had to do was wait where I told her -didn't even have to be rough with her until she got worried about taking longer for the crawler to get to our mine than I told her." Jock grinned. "She fights pretty well for her weight. Scratched me some."

Poor little Peewee! Too bad she hadn't drawn and quartered him! But the story sounded true, for it was the way Peewee would behave-sure of herself, afraid of no one, unable to resist any "educational" experience.

Jock went on, "It wasn't the brat he wanted. He wanted her old man. Had some swindle to get him to the Moon, didn't work." Jock grinned sourly. "That was a bad time, things ain't good when he don't have his own way. But he had to settle for the brat. Tim here pointed out to him he could trade."

Tim chucked in one word which I took as a general denial. Jock raised his eyebrows. "Listen to vinegar puss. Nice manners, ain't he?"

Maybe I should have kept quiet since I was digging for facts, not philosophy. But I've got Peewee's failing myself; when I don't understand, I have an unbearable itch to know why. I didn't (and don't) understand what made Jock tick. "Jock? Why did you do it?"

"Huh?"

"Look, you're a human being." (At least he looked like one.) "As you pointed out, we humans had better stick together. How could you bring yourself to kidnap a little girl-and turn her over to him?"

"Are you crazy, boy?"

"I don't think so."

"You talk crazy. Have you ever tried not doing something he wanted? Try it some time."

I saw his point. Refusing Wormface would be like a rabbit spitting in a snake's eye-as I knew too well. Jock went on, "You got to understand the other man's viewpoint. Live and let live, I always say. We got grabbed while we were messin' around, lookin' for carnotite-and after that, we never stood no chance. You can't fight City Hall, that gets you nowhere. So we made a dicker-we run his errands, he pays us in uranium."

My faint sympathy vanished. I wanted to throw up. "And you got paid?"

"Well . . . you might say we got time on the books."

I looked around our cell. "You made a bad deal."

Jock grimaced, looking like a sulky baby. "Maybe so. But be reasonable, kid. You got to cooperate with the inevitable. These boys are moving in-they got what it takes. You seen that yourself. Well, a man's got to look out for number one, don't he? It's a cinch nobody else will. Now I seen a case like this when I was no older than you and it taught me a lesson. Our town had run quietly for years, but the Big Fellow was getting old and losing his grip . . . whereupon some boys from St. Louis moved in. Things were confused for a while. A man had to know which way to jump-else he woke up wearing a wooden overcoat, like as not. Those that seen the handwriting made out; those that didn't . . . well, it don't do no good to buck the current, I always say. That makes sense, don't it?"

I could follow his "logic"-provided you accepted his "live louse" standard. But he had left out a key point. "Even so. Jock, I don't see how you could do that to a little girl."

"Huh? I just explained how we couldn't help it."

"But you could. Even allowing how hard it is to face up to him and refuse orders, you had a perfect chance to duck out."

"Wha' d'you mean?"

"He sent you to Luna City to find her, you said so. You've got a return-fare benefit-I know you have, I know the rules. All you had to do was sit tight, where he couldn't reach you-and take the next ship back to Earth. You didn't have to do his dirty work."

"But-"

I cut him off. "Maybe you couldn't help yourself, out in a lunar desert. Maybe you wouldn't feel safe even inside Tombaugh Station. But when he sent you into Luna City, you had your chance. You didn't have to steal a little girl and turn her over to a-a bug-eyed monster!"

He looked baffled, then answered quickly. "Kip, I like you. You're a good boy. But you ain't smart. You don't understand."

"I think I do!"

"No, you don't." He leaned toward me, started to put a hand on my knee; I drew back. He went on, "There's something I didn't tell you . . . for fear you'd think I was a-well, a zombie, or something. They operated on us."

"Huh?"

"They operated on us," he went on glibly. "They planted bombs in our heads. Remote control, like a missile. A man gets out of line . . . he punches a button-blooie! Brains all over the ceiling." He fumbled at the nape of his neck. "See the scar? My hair's getting kind o' long . . . but if you look close I'm sure you'll see it; it can't 'ave disappeared entirely. See it?"

I started to look. I might even have been sold on it-I had been forced to believe less probable things lately. Tim cut short my suspended judgment with one explosive word.

Jock flinched, then braced himself and said, "Don't pay any attention to him!"

I shrugged and moved away. Jock didn't talk the rest of that "day." That suited me.

The next "morning" I was roused by Jock's hand on my shoulder. "Wake up, Kip! Wake up!"

I groped for my toy weapon. "It's over there by the wall," Jock said, "but it ain't ever goin' to do you any good now."

I grabbed it. "What do you mean? Where's Tim?"

"You didn't wake up?"

"Huh?"

"This is what I've been scared of. Cripes, boy! I just had to talk to somebody. You slept through it?"

"Through what? And where's Tim?"

Jock was shivering and sweating. "They blue-lighted us, that's what. They took Tim." He shuddered. "I'm glad it was him. I thought-well, maybe you've noticed I'm a little stout . . . they like fat."

"What do you mean? What have they done with him?"

"Poor old Tim. He had his faults, like anybody, but-He's soup, by now . . . that's what." He shuddered again. "They like soup-bones and all."

"I don't believe it. You're trying to scare me."

"So?" He looked me up and down. "They'll probably take you next. Son, if you're smart, you'll take that letter opener of yours over to that horse trough and open your veins. It's better that way."

I said, "Why don't you? Here, I'll lend it to you."

He shook his head and shivered. "I ain't smart."

I don't know what became of Tim. I don't know whether the wormfaces ate people, or not. (You can't say "cannibal." We may be mutton, to them.) I wasn't especially scared because I had long since blown all fuses in my "scare" circuits.

What happens to my body after I'm through with it doesn't matter to me. But it did to Jock; he had a phobia about it. I don't think Jock was a coward; cowards don't even try to become prospectors on the Moon. He believed his theory and it shook him. He halfway admitted that he had more reason to believe it than I had known. He had been to Pluto once before, so he said, and other men who had come along, or been dragged, on that trip hadn't come back.

When feeding time came-two cans-he said he wasn't hungry and offered me his rations. That "night" he sat up and kept himself awake. Finally I just had to go to sleep before he did.

I awoke from one of those dreams where you can't move. The dream was correct; sometime not long before, I had surely been blue-lighted.

Jock was gone.

I never saw either of them again.

Somehow I missed them . . . Jock at least. It was a relief not to have to watch all the time, it was luxurious to bathe. But it gets mighty boring, pacing your cage alone.

I have no illusions about them. There must be well over three billion people I would rather be locked up with. But they were people.

Tim didn't have anything else to recommend him; he was as coldly vicious as a guillotine. But Jock had some slight awareness of right and wrong, or he wouldn't have tried to justify himself. You might say he was just weak.

But I don't hold with the idea that to understand all is to forgive all; you follow that and first thing you know you're sentimental over murderers and rapists and kidnappers and forgetting their victims. That's wrong. I'll weep over the likes of Peewee, not over criminals whose victims they are. I missed Jock's talk but if there were some way to drown such creatures at birth, I'd take my turn as executioner. That goes double for Tim.

If they ended up as soup for hobgoblins, I couldn't honestly be sorry- even though it might be my turn tomorrow.

As soup, they probably had their finest hour.

Chapter 8

I was jarred out of useless brain-cudgeling by an explosion, a sharp crack -a bass rumble-then a whoosh! of reduced pressure. I bounced to my feet-anyone who has ever depended on a space suit is never again indifferent to a drop in pressure.

I gasped, "What the deuce!"

Then I added, "Whoever is on watch had better get on the ball-or we'll all be breathing thin cold stuff." No oxygen outside, I was sure-or rather the astronomers were and I didn't want to test it.

Then I said, "Somebody bombing us? I hope.

"Or was it an earthquake?"

This was not an idle remark. That Scientific American article concerning "summer" on Pluto had predicted "sharp isostatic readjustments" as the temperature rose-which is a polite way of saying, "Hold your hats! Here comes the chimney!"

I was in an earthquake once, in Santa Barbara; I didn't need a booster shot to remember what every Californian knows and others learn in one lesson: when the ground does a jig, get outdoors!

Only I couldn't.

I spent two minutes checking whether adrenalin had given me the strength to jump eighteen feet instead of twelve. It hadn't. That was all I did for a half-hour, if you don't count nail biting.

Then I heard my name! "Kip! Oh, Kip!"

"Peewee!" I screamed. "Here! Peewee!"

Silence for an eternity of three heartbeats- "Kip?"

"Down HERE!"

"Kip? Are you down this hole?"

"Yes! Can't you see me?" I saw her head against the light above.

"Uh, I can now. Oh, Kip, I'm so glad!"

"Then why are you crying? So am I!"

"I'm not crying," she blubbered. "Oh Kip ... Kip."

"Can you get me out?"

"Uh-" She surveyed that drop. "Stay where you are."

"Don't go 'way!" She already had.

She wasn't gone two minutes; it merely seemed like a week. Then she was back and the darling had a nylon rope!

"Grab on!" she shrilled.

"Wait a sec. How is it fastened?"

"I'll pull you up."

"No, you won't-or we'll both be down here. Find somewhere to belay it."

"I can lift you."

"Belay it! Hurry!"

She left again, leaving an end in my hands. Shortly I heard very faintly:

"On belay!"

I shouted, "Testing!" and took up the slack. I put my weight on it-it held. "Climbing!" I yelled, and followed the final "g" up the hole and caught it.

She flung herself on me, an arm around my neck, one around Madame Pompadour, and both of mine around her. She was even smaller and skinnier than I remembered. "Oh, Kip, it's been just awful."

I patted her bony shoulder blades. "Yeah, I know. What do we do now? Where's W-"

I started to say, "Where's Wormface?" but she burst into tears.

"Kip-I think she's dead!"

My mind skidded-I was a bit stir-crazy anyhow. "Huh? Who?"

She looked as amazed as I was confused. "Why, the Mother Thing."

"Oh." I felt a flood of sorrow. "But, honey, are you sure? She was talking to me all right up to the last-and I didn't die."

"What in the world are you talk- Oh. I don't mean then. Kip; I mean now."

"Huh? She was here?"

"Of course. Where else?"

Now that's a silly question, it's a big universe. I had decided long ago that the Mother Thing couldn't be here-because Jock had brushed off the subject. I reasoned that Jock would either have said that she was here or have invented an elaborate lie, for the pleasure of lying. Therefore she wasn't on his list-perhaps he had never seen her save as a bulge under my suit.

I was so sure of my "logic" that it took a long moment to throw off prejudice and accept fact. "Peewee," I said, gulping, "I feel like I'd lost my own mother. Are you sure?"

" 'Feel as if,' " she said automatically. "I'm not sure sure ... but she's outside-so she must be dead."

"Wait a minute. If she's outside, she's wearing a space suit? Isn't she?"

"No, no! She hasn't had one-not since they destroyed her ship."

I was getting more confused. "How did they bring her in here?"

"They just sacked her and sealed her and carried her in. Kip-what do we do now?"

I knew several answers, all of them wrong-I had already considered them during my stretch in jail. "Where is Wormface? Where are all the wormfaces?"

"Oh. All dead. I think."

"I hope you're right." I looked around for a weapon and never saw a hallway so bare. My toy dagger was only eighteen feet away but I didn't feel like going back down for it. "What makes you think so?"

Peewee had reason to think so. The Mother Thing didn't look strong enough to tear paper but what she lacked in beef she made up in brains. She had done what I had tried to do: reasoned out a way to take them all on. She had not been able to hurry because her plan had many factors all of which had to mesh at once and many of them she could not influence; she had to wait for the breaks.

First, she needed a time when there were few wormfaces around. The base was indeed a large supply dump and space port and transfer point, but it did not need a large staff. It had been unusually crowded the few moments I had seen it, because our ship was in.

Second, it also had to be when no ships were in because she couldn't cope with a ship-she couldn't get at it.

Third, H-Hour had to be while the wormfaces were feeding. They all ate together when there were few enough not to have to use their mess hall in relays-crowded around one big tub and sopping it up, I gathered -a scene out of Dante. That would place all her enemies on one target, except possibly one or two on engineering or communication watches.

"Wait a minute!" I interrupted. "You said they were all dead?"

"Well ... I don't know. I haven't seen any."

"Hold everything until I find something to fight with."

"But-"

"First things first, Peewee."

Saying that I was going to find a weapon wasn't finding one. That corridor had nothing but more holes like the one I had been down- which was why Peewee had looked for me there; it was one of the few places where she had not been allowed to wander at will. Jock had been correct on one point: Peewee-and the Mother Thing-had been star prisoners, allowed all privileges except freedom . . . whereas Jock and Tim and myself had been third-class prisoners and/or soup bones. It fitted the theory that Peewee and the Mother Thing were hostages rather than ordinary P.W.s.

I didn't explore those holes after I looked down one and saw a human skeleton-maybe they got tired of tossing food to him. When I straightened up Peewee said, "What are you shaking about?"

"Nothing. Come on."

"I want to see."

"Peewee, every second counts and we've done nothing but yak. Come on. Stay behind me."

I kept her from seeing the skeleton, a major triumph over that little curiosity box-although it probably would not have affected her much; Peewee was sentimental only when it suited her.

"Stay behind me" had the correct gallant sound but it was not based on reason. I forgot that attack could come from the rear-I should have said:

"Follow me and watch behind us."

She did anyway. I heard a squeal and whirled around to see a wormface with one of those camera-like things aimed at me. Even though Tim had used one on me I didn't realize what it was; for a moment I froze.

But not Peewee. She launched herself through the air, attacking with both hands and both feet in the gallant audacity and utter recklessness of a kitten.

That saved me. Her attack would not have hurt anything but another kitten but it mixed him up so that he didn't finish what he was doing, namely paralyzing or killing me; he tripped over her and went down.

And I stomped him. With my bare feet I stomped him, landing on that lobster-horror head with both feet.

His head crunched. It felt awful.

It was like jumping on a strawberry box. It splintered and crunched and went to pieces. I cringed at the feel, even though I was in an agony to fight, to kill. I trampled worms and hopped away, feeling sick. I scooped up Peewee and pulled her back, as anxious to get clear as I had been to Join battle seconds before.

I hadn't killed it. For an awful moment I thought I was going to have to wade back in. Then I saw that while it was alive, it did not seem aware of us. It flopped like a chicken freshly chopped, then quieted and began to move purposefully.

But it couldn't see. I had smashed its eyes and maybe its ears-but certainly those terrible eyes.

It felt around the floor carefully, then got to its feet, still undamaged except that its head was a crushed ruin. It stood still, braced tripod-style by that third appendage, and felt the air. I pulled us back farther.

It began to walk. Not toward us or I would have screamed. It moved away, ricocheted off a wall, straightened out, and went back the way we had come. t reached one of those holes they used for prisoners, walked into it and dropped. I sighed, and realized that I had been holding Peewee too tightly to breathe. I put her down.

"There's your weapon," she said.

"Huh?"

"On the floor. Just beyond where I dropped Madame Pompadour. The gadget." She went over, picked up her dolly, brushed away bits of ruined wormface, then took the camera-like thing and handed it to me. "Be careful. Don't point it toward you. Or me."

"Peewee," I said faintly, "don't you ever have an attack of nerves?"

"Sure I do. When I have leisure for it. Which isn't now. Do you know how to work it?"

"No. Do you?"

"I think so. I've seen them and the Mother Thing told me about them." She took it, handling it casually but not pointing it at either of us. "These holes on top-uncover one of them, it stuns. If you uncover them all, it kills. To make it work you push it here." She did and a bright blue light shot out, splashed against the wall. "The light doesn't do anything," she added. "It's for aiming. I hope there wasn't anybody on the other side of that wall. No, I hope there was. You know what I mean."

It looked like a cockeyed 35 mm. camera, with a lead lens-one built from an oral description. I took it, being very cautious where I pointed it, and looked at it. Then I tried it-full power, by mistake.

The blue light was a shaft in the air and the wall where it hit glowed and began to smoke. I shut it off.

"You wasted power," Peewee chided. "You may need it later."

"Well, I had to try it. Come on, let's go."

Peewee glanced at her Mickey Mouse watch-and I felt irked that it had apparently stood up when my fancy one had not. "There's very little time. Kip. Can't we assume that only this one escaped?"

"What? We certainly cannot! Until we're sure that all of them are dead, we can't do anything else. Come on."

"But- Well, I'll lead. I know my way around, you don't."

"No."

"Yes!"

So we did it her way; she led and carried the blue-light projector while I covered the rear and wished for a third eye, like a wormface. I couldn't argue that my reflexes were faster when they weren't, and she knew more than I did about our weapon.

But it's graveling, just the same.

The base was huge; half that mountain must have been honeycombed. We did it at a fast trot, ignoring things as complicated as museum exhibits and twice as interesting, simply making sure that no wormface was anywhere. Peewee ran with the weapon at the ready, talking twenty to the dozen and urging me on.

Besides an almost empty base, no ships in, and the wormfaces feeding, the Mother Thing's plan required that all this happen shortly before a particular hour of the Plutonian night.

"Why?" I panted.

"So she could signal her people, of course."

"But-" I shut up. I had wondered about the Mother Thing's people but didn't even know as much about her as I did about Wormface- except that she was everything that made her the Mother Thing. Now she was dead-Peewee said that she was outside without a space suit, so she was surely dead; that little soft warm thing wouldn't last two seconds in that ultra-arctic weather. Not to mention suffocation and lung hemorrhage. I choked up.

Of course, Peewee might be wrong. I had to admit that she rarely was- but this might be one of the times ... in which case we would find her. But if we didn't find her, she was outside and- "Peewee, do you know where my space suit is?"

"Huh? Of course. Right next to where I got this." She patted the nylon rope, which she had coiled around her waist and tied with a bow.

"Then the second we are sure that we've cleaned out the wormfaces I'm going outside and look for her!"

"Yes, yes! But we've got to find my suit, too. I'm going with you."

No doubt she would. Maybe I could persuade her to wait in the tunnel out of that bone-freezing wind. "Peewee, why did she have to send her message at night? To a ship in a rotation-period orbit? Or is there-"

My words were chopped off by a rumble. The floor shook in that loose-bearing vibration that frightens people and animals alike. We stopped dead. "What was that?" Peewee whispered.

I swallowed. "Unless it's part of this rumpus the Mother Thing planned-"

"It isn't. I think."

"It's a quake."

"An earthquake?"

"A Pluto quake. Peewee, we've got to get out of here!"

I wasn't thinking about where-you don't in a quake. Peewee gulped. "We can't bother with earthquakes; we haven't time. Hurry, Kip, hurry!" She started to run and I followed, gritting my teeth. If Peewee could ignore a quake, so could I-though it's like ignoring a rattlesnake in bed.

"Peewee . . . Mother Thing's people ... is their ship in orbit around Pluto?"

"What? Oh, no, no! They're not in a ship."

"Then why at night? Something about the Heaviside layers here? How far away is their base?" I was wondering how far a man could walk here. We had done almost forty miles on the Moon. Could we do forty blocks here? Or even forty yards? You could insulate your feet, probably. But that wind- "Peewee, they don't live here, do they?"

"What? Don't be silly! They have a nice planet of their own. Kip, if you keep asking foolish questions, we'll be too late. Shut up and listen."

I shut up. What follows I got in snatches as we ran, and some of it later. When the Mother Thing had been captured, she had lost ship, space clothing, communicator, everything; Wormface had destroyed it all. There had been treachery, capture through violation of truce while parleying. "He grabbed her when they were supposed to be under a King's 'X' " was Peewee's indignant description, "and that's not fair! He had promised."

Treachery would be as natural in Wormface as venom in a Gila monster; I was surprised that the Mother Thing had risked a palaver with him. It left her a prisoner of ruthless monsters equipped with ships that made ours look like horseless carriages, weapons which started with a "death ray" and ended heaven knows where, plus bases, organization, supplies.

She had only her brain and her tiny soft hands.

Before she could use the rare combination of circumstances necessary to have any chance at all she had to replace her communicator (I think of it as her "radio" but it was more than that) and she had to have weapons. The only way she could get them was to build them.

She had nothing, not a bobby pin-only that triangular ornament with spirals engraved on it. To build anything she had to gain access to a series of rooms which I would describe as electronics labs-not that they looked like the bench where I jiggered with electronics, but electron-pushing has its built-in logic. If electrons are to do what you want them to, components have to look pretty much a certain way, whether built by humans, wormfaces, or the Mother Thing. A wave guide gets its shape from the laws of nature, an inductance has its necessary geometry, no matter who the technician is.

So it looked like an electronics lab-a very good one. It had gear I did not recognize, but which I felt I could understand if I had time. I got only a glimpse.

The Mother Thing spent many, many hours there. She would not have been permitted there, even though she was a prisoner-at-large with freedom in most ways and anything she wanted, including private quarters with Peewee. I think that Wormface was afraid of her, even though she was a prisoner-he did not want to offend her unnecessarily.

She got the run of their shops by baiting their cupidity. Her people had many things that wormfaces had not-gadgets, inventions, conveniences. She began by inquiring why they did a thing this way rather than another way which was so much more efficient? A tradition? Or religious reasons?

When asked what she meant she looked helpless and protested that she couldn't explain-which was a shame because it was simple and so easy to build, too.

Under close chaperonage she built something. The gadget worked. Then something else. Presently she was in the labs daily, making things for her captors, things that delighted them. She always delivered; the privilege depended on it.

But each gadget involved parts she needed herself.

"She sneaked bits and pieces into her pouch," Peewee told me. "They never knew exactly what she was doing. She would use five of a thing and the sixth would go into her pouch."

"Her pouch?"

"Of course. That's where she hid the 'brain' the time she and I swiped the ship. Didn't you know?"

"I didn't know she had a pouch."

"Well, neither did they. They watched to see she didn't carry anything out of the shop-and she never did. Not where it showed."

"Uh, Peewee, is the Mother Thing a marsupial?"

"Huh? Like possums? You don't have to be a marsupial to have a pouch. Look at squrrels, they have pouches in their cheeks."

"Mmm, yes."

"She sneaked a bit now and a bit then, and I swiped things, too. During rest time she worked on them in our room."

The Mother Thing had not slept all the time we had been on Pluto. She worked long hours publicly, making things for wormfaces-a stereo-telephone no bigger than a pack of cigarettes, a tiny beetle-like arrangement that crawled all over anything it was placed on and integrated the volume, many other things. But during hours set apart for rest she worked for herself, usually in darkness, those tiny fingers busy as a blind watch-maker's.

She made two bombs and a long-distance communicator-and-beacon.

I didn't get all this tossed over Peewee's shoulder while we raced through the base; she simply told me that the Mother Thing had managed to build a radio-beacon and had been responsible for the explosion I had felt. And that we must hurry, hurry, hurry!

"Peewee," I said, panting. "What's the rush? If the Mother Thing is outside, I want to bring her in-her body, I mean. But you act as if we had a deadline."

"We do!"

The communicator-beacon had to be placed outside at a particular local time (the Plutonian day is about a week-the astronomers were right again) so that the planet itself would not blanket the beam. But the Mother Thing had no space suit. They had discussed having Peewee suit up, go outside, and set the beacon-it had been so designed that Peewee need only trigger it. But that depended on locating Peewee's space suit, then breaking in and getting it after the wormfaces were disposed of.

They had never located it. The Mother Thing had said serenely, singing confident notes that I could almost hear ringing in my head: ("Never mind, dear. I can go out and set it myself.")

"Mother Thing! You can't!" Peewee had protested. "It's cold out there."

("I shan't be long.")

"You won't be able to breathe."

("It won't be necessary, for so short a time.")

That settled it. In her own way, the Mother Thing was as hard to argue with as Wormface.

The bombs were built, the beacon was built, a time approached when all factors would match-no ship expected, few wormfaces, Pluto faced the right way, feeding time for the staff-and they still did not know where Peewee's suit was-if it had not been destroyed. The Mother Thing resolved to go ahead.

"But she told me, just a few hours ago when she let me know that today was the day, that if she did not come back in ten minutes or so, that she hoped I could find my suit and trigger the beacon-if she hadn't been able to." Peewee started to cry. "That was the f- f- first time she admitted that she wasn't sure she could do it!"

"Peewee! Stop it! Then what?"

"I waited for the explosions-they came, right together-and I started to search, places I hadn't been allowed to go. But I couldn't find my suit!

Then I found you and-oh, Kip, she's been out there almost an hour!" She looked at her watch. "There's only about twenty minutes left. If the beacon isn't triggered by then, she's had all her trouble and died for n- n- nothing! She wouldn't like that." "Where's my suit!"

We found no more wormfaces-apparently there was only one on duty while the others fed. Peewee showed me a door, air-lock type, behind which was the feeding chamber-the bomb may have cracked that section for gas-tight doors had closed themselves when the owners were blown to bits. We hurried past.

Logical as usual, Peewee ended our search at my space suit. It was one of more than a dozen human-type suits-I wondered how much soup those ghouls ate. Well, they wouldn't eat again! I wasted no time; I simply shouted, "Hi, Oscar!" and started to suit up.

("Where you been, chum?")

Oscar seemed in perfect shape. Fats' suit was next to mine and Tim's next to it; I glanced at them as I stretched Oscar out, wondering whether they had equipment I could use. Peewee was looking at Tim's suit. "Maybe I can wear this."

It was much smaller than Oscar, which made it only nine sizes too big for Peewee. "Don't be silly! It'd fit you like socks on a rooster. Help me. Take off that rope, coil it and clip it to my belt."

"You won't need it. The Mother Thing planned to take the beacon out the walkway about a hundred yards and sit it down. If she didn't manage it, that's all you do. Then twist the stud on top."

"Don't argue! How much time?"

"Yes, Kip. Eighteen minutes."

"Those winds are strong," I added. "I may need the line." The Mother Thing didn't weigh much. If she had been swept off, I might need a rope to recover her body. "Hand me that hammer off Fats' suit."

"Right away!"

I stood up. It felt good to have Oscar around me. Then I remembered how cold my feet got, walking in from the ship. "I wish I had asbestos boots."

Peewee looked startled. "Wait right here!" She was gone before I could stop her. I went on sealing up while I worried-she hadn't even stopped to pick up the projector weapon. Shortly I said, "Tight, Oscar?"

("Tight, boy!")

Chin valve okay, blood-color okay, radio-I wouldn't need it-water- The tank was dry. No matter, I wouldn't have time to grow thirsty. I worked the chin valve, making the pressure low because I knew that pressure outdoors was quite low.

Peewee returned with what looked like ballet slippers for a baby elephant. She leaned close to my face plate and shouted, "They wear these. Can you get them on?" It seemed unlikely, but I forced them over my feet like badly fitting socks. I stood up and found that they improved traction; they were clumsy but not hard to walk in.

A minute later we were standing at the exit of the big room I had first seen. Its air-lock doors were closed now as a result of the Mother Thing's other bomb, which she had placed to blow out the gate-valve panels in the tunnel beyond. The bomb in the feeding chamber had been planted by Peewee who had then ducked back to their room. I don't know whether the Mother Thing timed the two bombs to go off together, or triggered them by remote-control-nor did it matter; they had made a shambles of Wormface's fancy base.

Peewee knew how to waste air through the air lock. When the inner door opened I shouted, "Time?"

"Fourteen minutes." She held up her watch.

"Remember what I said, just stay here. If anything moves, blue-light it first and ask questions afterwards."

"I remember."

I stepped in and closed the inner door, found the valve in the outer door, waited for pressure to equalize.

The two or three minutes it took that big lock to bleed off I spent in glum thought. I didn't like leaving Peewee alone. I thought all wormfaces were dead, but I wasn't sure. We had searched hastily; one could have zigged when we zagged-they were so fast.

Besides that, Peewee had said, "I remember," when she should have said, "Okay, Kip, I will." A slip of the tongue? That flea-hopping mind made "slips" only when it wanted to. There is a world of difference between "Roger" and "Wilco."

Besides I was doing this for foolish motives. Mostly I was going out to recover the Mother Thing's body-folly, because after I brought her in, she would spoil. It would be kinder to leave her in natural deep-freeze.

But I couldn't bear that-it was cold out there and I couldn't leave her out in the cold. She had been so little and warm ... so alive. I had to bring her in where she could get warm.

You're in bad shape when your emotions force you into acts which you know are foolish.

Worse still, I was doing this in a reckless rush because the Mother Thing had wanted that beacon set before a certain second, now only twelve minutes away, maybe ten. Well, I'd do it, but what sense was it? Say her home star is close by-oh, say it's Proxima Centauri and the wormfaces came from somewhere farther. Even if her beacon works-it still takes over four years for her S.O.S. to reach her friends!

This might have been okay for the Mother Thing. I had an impression that she lived a very long time; waiting a few years for rescue might not bother her. But Peewee and I were not creatures of her sort. We'd be dead before that speed-of-light message crawled to Proxima Centauri. I was glad that I had seen Peewee again, but I knew what was in store for us. Death, in days, weeks, or months at most, from running out of air, or water, or food-or a wormface ship might land before we died-which meant one unholy sabbat of a fight in which, if we were lucky, we would die quickly.

No matter how you figured, planting that beacon was merely "carrying out the deceased's last wishes"-words you hear at funerals. Sentimental folly.

The outer door started to open. Ave, Mother Thing! Nos morituri.

It was cold out there, biting cold, even though I was not yet in the wind. The glow panels were still working and I could see that the tunnel was a mess; the two dozen fractional-pressure stops had ruptured like eardrums. I wondered what sort of bomb could be haywired from stolen parts, kept small enough to conceal two in a body pouch along with some sort of radio rig, and nevertheless have force enough to blow out those panels. The blast had rattled my teeth, several hundred feet away in solid rock.

The first dozen panels were blown inwards. Had she set it off in the middle of the tunnel? A blast that big would fling her away like a feather! She must have planted it there, then come inside and triggered it-then gone back through the lock just as I had. That was the only way I could see it.

It got colder every step. My feet weren't too cold yet, those clumsy mukluks were okay; the wormfaces understood insulation. "Oscar, you got the fires burning?"

("Roaring, chum. It's a cold night.")

"You're telling me!"

Just beyond the outermost burst panel, I found her.

She had sunk forward, as if too tired to go on. Her arms stretched in front of her and, on the floor of the tunnel not quite touched by her tiny fingers, was a small round box about the size ladies keep powder in on dressing tables.

Her face was composed and her eyes were open except that nictitating membranes were drawn across as they had been when I had first seen her in the pasture back of our

house, a few days or weeks or a thousand years ago. But she had been hurt then and looked it; now I half expected her to draw back those inner lids and sing a welcome.

I touched her.

She was hard as ice and much colder.

I blinked back tears and wasted not a moment. She wanted that little box placed a hundred yards out on the causeway and the bump on top twisted-and she wanted it done in the next six or seven minutes. I scooped it up. "Righto, Mother Thing! On my way!"

("Get cracking, chum!")

("Thank you, dear Kip. . . .")

I don't believe in ghosts. I had heard her sing thank-you so many times that the notes echoed in my head.

A few feet away at the mouth of the tunnel, I stopped. The wind hit me and was so cold that the deathly chill in the tunnel seemed summery. I closed my eyes and counted thirty seconds to give time to adjust to starlight while I fumbled on the windward side of the tunnel at a slanting strut that anchored the causeway to the mountain, tied my safety line by passing it around the strut and snapping it back on itself. I had known that it was night outside and I expected the causeway to stand out as a black ribbon against the white "snow" glittering under a skyful of stars. I thought I would be safer on that windswept way if I could see its edges-which I couldn't by headlamp unless I kept swinging my shoulders back and forth-clumsy and likely to throw me off balance or slow me down.

I had figured this carefully; I didn't regard this as a stroll in the garden -not at night, not on Pluto! So I counted thirty seconds and tied my line while waiting for eyes to adjust to starlight. I opened them.

And I couldn't see a darned thing!

Not a star. Not even the difference between sky and ground. My back was to the tunnel and the helmet shaded my face like a sunbonnet; I should have been able to see the walkway. Nothing.

I turned the helmet and saw something that accounted both for black sky and the quake we had felt-an active volcano. It may have been five miles away or fifty, but I could not doubt what it was-a jagged, angry red scar low in the sky.

But I didn't stop to stare. I switched on the headlamp, splashed it on the righthand windward edge, and started a clumsy trot, keeping close to that side, so that if I stumbled I would have the entire road to recover in before the wind could sweep me off. That wind

scared me. I kept the line coiled in my left hand and paid it out as I went, keeping it fairly taut. The coil felt stiff in my fingers.

The wind not only frightened me, it hurt. It was a cold so intense that it felt like flame. It burned and blasted, then numbed. My right side, getting the brunt of it, began to go and then my left side hurt more than the right.

I could no longer feel the line. I stopped, leaned forward and got the coil in the light from the headlamp-that's another thing that needs fixing! the headlamp should swivel.

The coil was half gone, I had come a good fifty yards. I was depending on the rope to tell me; it was a hundred-meter climbing line, so when I neared its end I would be as far out as the Mother Thing had wanted. Hurry, Kip!

("Get cracking, boy! It's cold out here.")

I stopped again. Did I have the box?

I couldn't feel it. But the headlamp showed my right hand clutched around it. Stay there, fingers! I hurried on, counting steps. One! Two! Three! Four! ...

When I reached forty I stopped and glanced over the edge, saw that I was at the highest part where the road crossed the brook and remembered that it was about midway. That brook-methane, was it?-was frozen solid, and I knew that the night was cold.

There were a few loops of line on my left arm-close enough. I dropped the line, moved cautiously to the middle of the way, eased to my knees and left hand, and started to put the box down.

My fingers wouldn't unbend.

I forced them with my left hand, got the box out of my fist. That diabolical wind caught it and I barely saved it from rolling away. With both hands I set it carefully upright.

("Work your fingers, bud. Pound your hands together!")

I did so. I could tighten the muscles of my forearms, though it was tearing agony to flex fingers. Clumsily steadying the box with my left hand, I groped for the little knob on top.

I couldn't feel it but it turned easily once I managed to close my fingers on it; I could see it turn.

It seemed to come to life, to purr. Perhaps I heard vibration, through gloves and up my suit; I certainly couldn't have felt it, not the shape my fingers were in. I hastily let go, got awkwardly to my feet and backed up, so that I could splash the headlamp on it without leaning over.

I was through, the Mother Thing's job was done, and (I hoped) before deadline. If I had had as much sense as the ordinary doorknob, I would have turned and hurried into the tunnel faster than I had come out. But I was fascinated by what it was doing.

It seemed to shake itself and three spidery little legs grew out the bottom. It raised up until it was standing on its own little tripod, about a foot high. It shook itself again and I thought the wind would blow it over. But the spidery legs splayed out, seemed to bite into the road surface and it was rock firm.

Something lifted and unfolded out the top.

It opened like a flower, until it was about eight inches across. A finger lifted (an antenna?), swung as if hunting, steadied and pointed at the sky.

Then the beacon switched on. I'm sure that is what happened although all I saw was a flash of light-parasitic it must have been, for light alone would not have served even without that volcanic overcast. It was probably some harmless side effect of switching on an enormous pulse of power, something the Mother Thing hadn't had time, or perhaps equipment or materials, to eliminate or shield. It was about as bright as a peanut photoflash.

But I was looking at it. Polarizers can't work that fast. It blinded me.

I thought my headlamp had gone out, then I realized that I simply couldn't see through a big greenish-purple disc of dazzle.

("Take it easy, boy. It's just an after-image. Wait and it'll go away.")

"I can't wait! I'm freezing to death!"

("Hook the line with your forearm, where it's clipped to your belt. Pull on it.")

I did as Oscar told me, found the line, turned around, started to wind it on both forearms.

It shattered.

It did not break as you expect rope to break; it shattered like glass. I suppose that is what it was by then-glass, I mean. Nylon and glass are super-cooled liquids.

Now I know what "super-cooled" means.

But all I knew then was that my last link with life had gone. I couldn't see, I couldn't hear, I was all alone on a bare platform, billions of miles from home, and a wind out of the depths of a frozen hell was bleeding the last life out of a body I could barely feel-and where I could feel, it hurt like fire.

"Oscar!"

("I'm here, bud. You can make it. Now-can you see anything?")

"No!"

("Look for the mouth of the tunnel. It's got light in it. Switch off your headlamp. Sure, you can-it's just a toggle switch. Drag your hand back across the right side of our helmet.")

I did.

("See anything?")

"Not yet."

("Move your head. Try to catch it in the corner of your eye-the dazzle stays in front, you know. Well?")

"I caught something that time!"

("Reddish, wasn't it? Jagged, too. The volcano. Now we know which way we're facing. Turn slowly and catch the mouth of the tunnel as it goes by.")

Slowly was the only way I could turn. "There it is!"

("Okay, you're headed home. Get down on your hands and knees and crab slowly to your left. Don't turn-because you want to hang onto that edge and crawl. Crawl toward the tunnel.")

I got down. I couldn't feel the surface with my hands but I felt pressure on my limbs, as if all four were artificial. I found the edge when my left hand slipped over it and I almost fell off. But I recovered. "Am I headed right?"

("Sure you are. You haven't turned. You've just moved sideways. Can you lift your head to see the tunnel?")

"Uh, not without standing up."

("Don't do that! Try the headlamp again. Maybe your eyes are okay now.")

I dragged my hand forward against the right side of the helmet. I must have hit the switch, for suddenly I saw a circle of light, blurred and cloudy in the middle. The edge of the walkway sliced it on the left.

("Good boy! No, don't get up; you're weak and dizzy and likely to fall. Start crawling. Count 'em. Three hundred ought to do it.")

I started crawling, counting.

"It's a long way, Oscar. You think we can make it?"

("Of course we can! You think I want to be left out here?")

"I'd be with you."

("Knock off the chatter. You'll make me lose count. Thirty-six . . . thirty-seven . . . thirty-eight-")

We crawled.

("That's a hundred. Now we double it. Hundred one . . . hundred two . . . hundred three-")

"I'm feeling better, Oscar. I think it's getting warmer."

("WHAT!")

"I said I'm feeling a little warmer."

("You're not warmer, you blistering idiot! That's freeze-to-death you're feeling! Crawl faster! Work your chin valve. Get more air. Le' me hear that chin valve click!")

I was too tired to argue; I chinned the valve three or four times, felt a blast blistering my face.

("I'm stepping up the stroke. Warmer indeed! Hund'd nine . . . hund'd ten . . . hun'leven . . . hun'twelve-pick it up!")

At two hundred I said I would just have to rest.

("No, you don't!")

"But I've got to. Just a little while."

("Like that, uh? You know what happens. What's Peewee goin' to do? She's in there, waiting. She's already scared because you're late. What's she goin' to do? Answer me!")

"Uh . . . she's going to try to wear Tim's suit."

("Right! In case of duplicate answers the prize goes to the one postmarked first. How far will she get? You tell me.")

"Uh ... to the mouth of the tunnel, I guess. Then the wind will get her."

("My opinion exactly. Then we'll have the whole family together. You, me, the Mother Thing, Peewee. Cozy. A family of stiffs.")

"But-"

("So start slugging, brother. Slug . . . slug . . . slug . . . slug . . . tw'und'd five . . . two'und'd six . . . tw'und'd sev'n'-")

I don't remember falling off. I don't even know what the "snow" felt like. I just remember being glad that the dreadful counting was over and I could rest.

But Oscar wouldn't let me. ("Kip! Kip! Get up! Climb back on the straight and narrow.")

"Go 'way."

("I can't go away. I wish I could. Right in front of you. Grab the edge and scramble up. It's only a little farther now.")

I managed to raise my head, saw the edge of the walkway in the light of my headlamp about two feet above my head. I sank back. "It's too high," I said listlessly. "Oscar, I think we've had it."

He snorted. ("So? Who was it, just the other day, cussed out a little bitty girl who was too tired to get up? 'Commander Comet,' wasn't it? Did I get the name right? The 'Scourge of the Spaceways' ... the no- good lazy sky tramp. 'Have Space Suit-Will Travel.' Before you go to sleep, Commander, can I have your autograph! I've never met a real live space pirate before . . . one that goes around hijacking ships and kidnapping little girls.")

"That's not fair!"

("Okay, okay, I know when I'm not wanted. But just one thing before I leave: she's got more guts in her little finger than you have in your whole body-you lying, fat, lazy swine! Good-bye. Don't wait up.")

"Oscar! Don't leave me!"

("Eh? You want help?")

"Yes!"

("Well, if it's too high to reach, grab your hammer and hook it over the edge. Pull yourself up.")

I blinked. Maybe it would work. I reached down, decided I had the hammer even though I couldn't feel it, got it loose. Using both hands I hooked it over the edge above me. I pulled.

That silly hammer broke just like the line. Tool steel-and it went to pieces as if it had been cast out of type slugs.

That made me mad. I heaved myself to a sitting position, got both elbows on the edge, and struggled and groaned and burst into fiery sweat -and rolled over onto the road surface.

("That's my boy! Never mind counting, just crawl toward the light!")

The tunnel wavered in front of me. I couldn't get my breath, so I kicked the chin valve.

Nothing happened.

"Oscar! The chin valve is stuck!" I tried again.

Oscar was very slow in answering. ("No, pal, the valve isn't stuck. Your air hoses have frozen up. I guess that last batch wasn't as dry as it could have been.")

"I haven't any air!"

Again he was slow. But he answered firmly, ("Yes, you have. You've got a whole suit full. Plenty for the few feet left.")

"I'll never make it."

("A few feet, only. There's the Mother Thing, right ahead of you. Keep moving.")

I raised my head and, sure enough, there she was. I kept crawling, while she got bigger and bigger. Finally I said, "Oscar . . . this is as far as I go."

("I'm afraid it is. I've let you down . . . but thanks for not leaving me outside there.")

"You didn't let me down . . . you were swell. I just didn't quite make it."

("I guess we both didn't quite make it ... but we sure let 'em know that we tried! So long, partner.")

"So long. 'Hasta la vista, amigo!" I managed to crawl two short steps and collapsed with my head near the Mother Thing's head.

She was smiling. ("Hello, Kip my son.")

"I didn't . . . quite make it, Mother Thing. I'm sorry."

("Oh, but you did make it!")

"Huh?"

("Between us, we've both made it.")

I thought about that for a long time. "And Oscar."

("And Oscar, of course.")

"And Peewee."

("And always Peewee. We've all made it. Now we can rest, dear.")

"G'night . . . Mother Thing."

It was a darn short rest. I was just closing my eyes, feeling warm and happy that the Mother Thing thought that I had done all right-when Peewee started shaking my shoulder. She touched helmets. "Kip! Kip! Get up. Please get up."

"Huh? Why?"

"Because I can't carry you! I tried, but I can't do it. You're just too big!"

I considered it. Of course she couldn't carry me-where did she get the silly notion that she could? I was twice her size. I'd carry her . . . just as soon as I caught my breath.

"Kip! Please get up." She was crying now, blubbering.

"Why, sure, honey," I said gently, "if that's what you want." I tried and had a clumsy bad time of it. She almost picked me up, she helped a lot. Once up, she steadied me.

"Turn around. Walk."

She almost did carry me. She got her shoulders under my right arm and kept pushing. Every time we came to one of those blown-out panels she either helped me step over, or simply pushed me through and helped me up again.

At last we were in the lock and she was bleeding air from inside to fill it. She had to let go of me and I sank down. She turned when the inner door opened, started to say something-then got my helmet off in a hurry.

I took a deep breath and got very dizzy and the lights dimmed.

She was looking at me. "You all right now?"

"Me? Sure! Why shouldn't I be?"

"Let me help you inside."

I couldn't see why, but she did help and I needed it. She sat me on the floor near the door with my back to the wall-I didn't want to lie down. "Kip, I was so scared!"

"Why?" I couldn't see what she was worried about. Hadn't the Mother Thing said that we had all done all right?

"Well, I was. I shouldn't have let you go out."

"But the beacon had to be set."

"Oh, but- You set it?"

"Of course. The Mother Thing was pleased."

"I'm sure she would have been," she said gravely.

"She was."

"Can I do anything? Can I help you out of your suit?"

"Uh . . . no, not yet. Could you find me a drink of water?"

"Right away!"

She came back and held it for me-I wasn't as thirsty as I had thought; it made me a bit ill. She watched me for some time, then said, "Do you mind if I'm gone a little while? Will you be all right?"

"Me? Certainly." I didn't feel well, I was beginning to hurt, but there wasn't anything she could do.

"I won't be long." She began clamping her helmet and I noticed with detached interest that she was wearing her own suit-somehow I had had the impression that she had been wearing Tim's.

I saw her head for the lock and realized where she was going and why. I wanted to tell her that the Mother Thing would rather not be inside here, where she might . . . where she might-I didn't want to say "spoil" even to myself.

But Peewee was gone.

I don't think she was away more than five minutes. I had closed my eyes and I am not sure. I noticed the inner door open. Through it stepped Peewee, carrying the Mother Thing in her arms like a long piece of firewood. She didn't bend at all.

Peewee put the Mother Thing on the floor in the same position I had last seen her, then undamped her helmet and bawled.

I couldn't get up. My legs hurt too much. And my arms. "Peewee . . . please, honey. It doesn't do any good."

She raised her head. "I'm all through. I won't cry any more."

And she didn't.

We sat there a long time. Peewee again offered to help me out of my suit, but when we tried it, I hurt so terribly, especially my hands and my feet, that I had to ask her to stop. She looked worried. "Kip ... I'm afraid you froze them."

"Maybe. But there's nothing to do about it now." I winced and changed the subject. "Where did you find your suit?"

"Oh!" She looked indignant, then almost gay. "You'd never guess. Inside Jock's suit."

"No, I guess I wouldn't. The Purloined Letter.' "

"The what?"

"Nothing. I hadn't realized that old Wormface had a sense of humor."

Shortly after that we had another quake, a bad one. Chandeliers would have jounced if the place had had any and the floor heaved. Peewee squealed. "Oh! That was almost as bad as the last one."

"A lot worse, I'd say. That first little one wasn't anything."

"No, I mean the one while you were outside."

"Was there one then?"

"Didn't you feel it?"

"No." I tried to remember. "Maybe that was when I fell off in the snow."

"You fell off? Kip!"

"It was all right. Oscar helped me."

There was another ground shock. I wouldn't have minded, only it shook me up and made me hurt worse. I finally came out of the fog enough to realize that I didn't have to hurt.

Let's see, medicine pills were on the right and the codeine dispenser was farthest back- "Peewee? Could I trouble you for some water again?"

"Of course!"

"I'm going to take codeine. It may make me sleep. Do you mind?"

"You ought to sleep if you can. You need it."

"I suppose so. What time is it?"

She told me and I couldn't believe it. "You mean it's been more than twelve hours?"

"Huh? Since what?"

"Since this started."

"I don't understand, Kip." She stared at her watch. "It has been exactly an hour and a half since I found you-not quite two hours since the Mother Thing set off the bombs."

I couldn't believe that, either. But Peewee insisted that she was right.

The codeine made me feel much better and I was beginning to be drowsy, when Peewee said, "Kip, do you smell anything?"

I sniffed. "Something like kitchen matches?"

"That's what I mean. I think the pressure is dropping, too. Kip ... I think I had better close your helmet-if you're going to sleep."

"All right. You close yours, too?"

"Yes. Uh, I don't think this place is tight any longer."

"You may be right." Between explosions and quakes, I didn't see how it could be. But, while I knew what that meant, I was too weary and sick- and getting too dreamy from the drug-to worry. Now, or a month from now-what did it matter? The Mother Thing had said everything was okay.

Peewee clamped us in, we checked radios, and she sat down facing me and the Mother Thing. She didn't say anything for a long time. Then I heard: "Peewee to Junebug-"

"I read you, Peewee."

"Kip? It's been fun, mostly. Hasn't it?"

"Huh?" I glanced up, saw that the dial said I had about four hours of air left. I had had to reduce pressure twice, since we closed up, to match falling pressure in the room. "Yes, Peewee, it's been swell. I wouldn't have missed it for the world."

She sighed. "I just wanted to be sure you weren't blaming me. Now go to sleep."

I did almost go to sleep, when I saw Peewee jump up and my phones came to life. "Kip! Something's coming in the door!"

I came wide awake, realized what it meant. Why couldn't they have let us be? A few hours, anyhow? "Peewee. Don't panic. Move to the far side of the door. You've got your blue-light gadget?"

"Yes."

"Pick them off as they come in."

"You've got to move, Kip. You're right where they will come!"

"I can't get up." I hadn't been able to move, not even my arms, for quite a while. "Use low power, then if you brush me, it won't matter. Do what I say! Fast!"

"Yes, Kip." She got where she could snipe at them sideways, raised her projector and waited.

The inner door opened, a figure came in. I saw Peewee start to nail it- and I called into my radio: "Don't shoot!"

But she was dropping the projector and running forward even as I shouted.

They were "mother thing" people.

It took six of them to carry me, only two to carry the Mother Thing. They sang to me soothingly all the time they were rigging a litter. I swallowed another codeine tablet before they lifted me, as even with their gentleness any movement hurt. It didn't take long to get me into their ship, for they had landed almost at the tunnel mouth, no doubt crushing the walkway-I hoped so.

Once I was safely inside Peewee opened my helmet and unzipped the front of my suit. "Kip! Aren't they wonderful?"

"Yes." I was getting dizzier from the drug but was feeling better. "When do we raise ship?"

"We've already started."

"They're taking us home?" I'd have to tell Mr. Charton what a big help the codeine was.

"Huh? Oh, my, no! We're headed for Vega."

I fainted.

Chapter 9

I had been dreaming that I was home; this awoke me with a jerk. "Mother Thing!"

("Good morning, my son. I am happy to see that you are feeling better.")

"Oh, I feel fine. I've had a good night's rest-" I stared, then blurted: "-you're dead!" I couldn't stop it.

Her answer sounded warmly, gently humorous, the way you correct a child who has made a natural mistake. ("No, dear, I was merely frozen. I am not as frail as you seem to think me.")

I blinked and looked again. "Then it wasn't a dream?"

("No, it was not a dream.")

"I thought I was home and-" I tried to sit up, managed only to raise my head. "I am home!" My room! Clothes closet on the left-hall door behind the Mother Thing-my desk on the right, piled with books and with a Centerville High pennant over it-window beyond it, with the old elm almost filling it-sun-speckled leaves stirring in a breeze.

My slipstick was where I had left it.

Things started to wobble, then I figured it out. I had dreamed only the silly part at the end. Vega-I had been groggy with codeine. "You brought me home."

("We brought you home ... to your other home. My home.")

The bed started to sway. I clutched at it but my arms didn't move. The Mother Thing was still singing. ("You needed your own nest. So we prepared it.")

"Mother Thing, I'm confused."

("We know that a bird grows well faster in its own nest. So we built yours.") "Bird" and "nest" weren't what she sang, but an Unabridged won't give anything closer.

I took a deep breath to steady down. I understood her-that's what she was best at, making you understand. This wasn't my room and I wasn't home; it simply looked like it. But I was still terribly confused.

I looked around and wondered how I could have been mistaken.

The light slanted in the window from a wrong direction. The ceiling didn't have the patch in it from the time I built a hide-out in the attic and knocked plaster down by hammering. It wasn't the right shade, either.

The books were too neat and clean; they had that candy-box look. I couldn't recognize the bindings. The over-all effect was mighty close, but details were not right.

("I like this room,") the Mother Thing was singing. ("It looks like you, Kip.")

"Mother Thing," I said weakly, "how did you do it?"

("We asked you. And Peewee helped.")

I thought, "But Peewee has never seen my room either," then decided that Peewee had seen enough American homes to be a consulting expert. "Peewee is here?"

("She'll be in shortly.")

With Peewee and the Mother Thing around things couldn't be too bad. Except- "Mother Thing, I can't move my arms and legs."

She put a tiny, warm hand on my forehead and leaned over me until her enormous, lemur-like eyes blanked out everything else. ("You have been damaged. Now you are growing well. Do not worry.")

When the Mother Thing tells you not to worry, you don't. I didn't want to do handstands anyhow; I was satisfied to look into her eyes. You could sink into them, you could have dived in and swum around. "All right, Mother Thing." I remembered something else. "Say . . . you were frozen? Weren't you?"

("Yes.")

"But- Look, when water freezes it ruptures living cells. Or so they say."

She answered primly, ("My body would never permit that!").

"Well-" I thought about it. "Just don't dunk me in liquid air! I'm not built for it."

Again her song held roguish, indulgent humor. ("We shall endeavor not to hurt you.") She straightened up and grew a little, swaying like a willow. ("I sense Peewee.")

There was a knock-another discrepancy; it didn't sound like a knock on a light-weight interior door-and Peewee called out, "May I come in?" She didn't wait (I wondered if she ever did) but came on in. The bit I could see past her looked like our upper hall; they'd done a thorough job.

("Come in, dear.")

"Sure, Peewee. You are in."

"Don't be captious."

"Look who's talking. Hi, kid!"

"Hi yourself."

The Mother Thing glided away. ("Don't stay long, Peewee. You are not to tire him.")

"I won't, Mother Thing."

(" 'Bye, dears.")

I said, "What are the visiting hours in this ward?"

"When she says, of course." Peewee stood facing me, fists on hips. She was really clean for the first time in our acquaintance-cheeks pink with scrubbing, hair fluffy-maybe she would be pretty, in about ten years. She was dressed as always but her clothes were fresh, all buttons present, and tears invisibly mended.

"Well," she said, letting out her breath, "I guess you're going to be worth keeping, after all."

"Me? I'm in the pink. How about yourself?"

She wrinkled her nose. "A little frost nip. Nothing. But you were a mess."

"I was?"

"I can't use adequate language without being what Mama calls 'unladylike.' "

"Oh, we wouldn't want you to be that."

"Don't be sarcastic. You don't do it well."

"You won't let me practice on you?"

She started to make a Peewee retort, stopped suddenly, smiled and came close. For a nervous second I thought she was going to kiss me. But she just patted the bedclothes and said solemnly, "You bet you can, Kip. You can be sarcastic, or nasty, or mean, or scold me, or anything, and I won't let out a peep. Why, I'll bet you could even talk back to the Mother Thing."

I couldn't imagine wanting to. I said, "Take it easy, Peewee. Your halo is showing."

"I'd have one if it weren't for you. Or flunked my test for it, more likely."

"So? I seem to remember somebody about your size lugging me indoors almost piggy-back. How about that?"

She wriggled. "That wasn't anything. You set the beacon. That was everything."

"Uh, each to his own opinion. It was cold out there." I changed the subject; it was embarrassing us. Mention of the beacon reminded me of something else. "Peewee? Where are we?"

"Huh? In the Mother Thing's home, of course." She looked around and said, "Oh, I forgot. Kip, this isn't really your-"

"I know," I said impatiently. "It's a fake. Anybody can see that."

"They can?" She looked crestfallen. "I thought we had done a perfect job."

"It's an incredibly good job. I don't see how you did it."

"Oh, your memory is most detailed. You must have a camera eye." -and I must have spilled my guts, too! I added to myself. I wondered what else I had said-with Peewee listening. I was afraid to ask; a fellow ought to have privacy.

"But it's still a fake," I went on. "I know we're in the Mother Thing's home. But where's that?"

"Oh." She looked round-eyed. "I told you. Maybe you don't remember -you were sleepy."

"I remember," I said slowly, "something. But it didn't make sense. I thought you said we were going to Vega."

"Well, I suppose the catalogs will list it as Vega Five. But they call it-" She threw back her head and vocalized; it recalled to me the cockcrow theme in Le Coq d'Or. "-but I couldn't say that. So I told you Vega, which is close enough."

I tried again to sit up, failed. "You mean to stand there and tell me we're on Vega? I mean, a 'Vegan planet'?"

"Well, you haven't asked me to sit down."

I ignored the Peeweeism. I looked at "sunlight" pouring through the window. "That light is from Vega?"

"That stuff? That's artificial sunlight. If they had used real, bright, Vega light, it would look ghastly. Like a bare arc light. Vega is 'way up the Russell diagram, you know."

"It is?" I didn't know the spectrum of Vega; I had never expected to need to know it.

"Oh, yes! You be careful, Kip-when you're up, I mean. In ten seconds you can get more burn than all winter in Key West-and ten minutes would kill you."

I seemed to have a gift for winding up in difficult climates. What star class was Vega? "A," maybe? Probably "B." All I knew was that it was big and bright, bigger than the Sun, and looked pretty set in Lyra.

But where was it? How in the name of Einstein did we get here? "Peewee? How far is Vega? No, I mean, 'How far is the Sun?' You wouldn't happen to know?"

"Of course," she said scornfully. "Twenty-seven light-years."

Great Galloping Gorillas! "Peewee-get that slide rule. You know how to push one? I don't seem to have the use of my hands."

She looked uneasy. "Uh, what do you want it for?"

"I want to see what that comes to in miles."

"Oh. I'll figure it. No need for a slide rule."

"A slipstick is faster and more accurate. Look, if you don't know how to use one, don't be ashamed-I didn't, at your age. I'll show you."

"Of course I can use one!" she said indignantly. "You think I'm a stupe? But I'll work it out." Her lips moved silently. "One point five nine times ten to the fourteenth miles."

I had done that Proxima Centauri problem recently; I remembered the miles in a light-year and did a rough check in my head-uh, call it six times twenty-five makes a hundred and fifty-and where was the decimal point? "Your answer sounds about right." 159,000,000,000,000 weary miles! Too many zeroes for comfort.

"Of course I'm right!" she retorted. "I'm always right."

"Goodness me! The handy-dandy pocket encyclopedia."

She blushed. "I can't help being a genius."

Which left her wide open and I was about to rub her nose in it-when I saw how unhappy she looked.

I remembered hearing Dad say: "Some people insist that 'mediocre' is better than 'best.' They delight in clipping wings because they themselves can't fly. They despise brains because they have none. Pfah!"

"I'm sorry, Peewee," I said humbly. "I know you can't. And I can't help not being one . . . any more than you can help being little, or I can help being big."

She relaxed and looked solemn. "I guess I was being a show-off again." She twisted a button. "Or maybe I assumed that you understand me-like Daddy."

"I feel complimented. I doubt if I do-but from now on I'll try." She went on worrying the button. "You're pretty smart yourself, Kip. You know that, don't you?"

I grinned. "If I were smart, would I be here? All thumbs and my ears rub together. Look, honey, would you mind if we checked you on the slide rule? I'm really interested." Twenty-seven light-years-why, you wouldn't be able to see the Sun, It isn't any great shakes as a star.

But I had made her uneasy again. "Uh, Kip, that isn't much of a slide rule."

"What? Why, that's the best that money can-"

"Kip, please! It's part of the desk. It's not a slide rule."

"Huh?" I looked sheepish. "I forgot. Uh, I suppose that hall out there doesn't go very far?"

"Just what you can see. Kip, the slide rule would have been real-if we had had time enough. They understand logarithms. Oh, indeed they do!"

That was bothering me-"time enough" I mean. "Peewee, how long did it take us to get here?" Twenty-seven light-years! Even at speed-of-light-well, maybe the Einstein business would make it seem like a quick trip to me-but not to Centerville. Dad could be dead! Dad was older than Mother, old enough to be my grandfather, really. Another twenty-seven years back- Why, that would make him well over a hundred. Even Mother might be dead.

"Time to get here? Why, it didn't take any."

"No, no. I know it feels that way. You're not any older, I'm still laid up by frostbite. But it took at least twenty-seven years. Didn't it?"

"What are you talking about, Kip?"

"The relativity equations, of course. You've heard of them?"

"Oh, those! Certainly. But they don't apply. It didn't take time. Oh, fifteen minutes to get out of Pluto's atmosphere, about the same to cope with the atmosphere here. But otherwise, pht! Zero."

"At the speed of light you would think so."

"No, Kip." She frowned, then her face lighted up. "How long was it from the time you set the beacon till they rescued us?"

"Huh?" It hit me. Dad wasn't dead! Mother wouldn't even have gray hair. "Maybe an hour."

"A little over. It would have been less if they had had a ship ready . . . then they might have found you in the tunnel instead of me. No time for the message to reach here. Half an hour frittered away getting a ship ready-the Mother Thing was vexed. I hadn't known she could be. You see, a ship is supposed to be ready."

"Any time she wants one?"

"Any and all the time-the Mother Thing is important. Another half-hour in atmosphere maneuvering-and that's all. Real time. None of those funny contractions."

I tried to soak it up. They take an hour to go twenty-seven light-years and get bawled out for dallying. Dr. Einstein must be known as "Whirligig Albert" among his cemetery neighbors. "But how?"

"Kip, do you know any geometry? I don't mean Euclid-I mean geometry."

"Mmm . . . I've fiddled with open and closed curved spaces-and I've read Dr. Bell's popular books. But you couldn't say I know any geometry."

"At least you won't boggle at the idea that a straight line is not necessarily the shortest distance between two points." She made motions as if squeezing a grapefruit in both hands. "Because it's not. Kip-it all touches. You could put it in a bucket. In a thimble if you folded it so that spins matched."

I had a dizzying picture of a universe compressed into a teacup, nucleons and electrons packed solidly-really solid and not the thin mathematical ghost that even the uranium nucleus is said to be. Something like the "primal atom" that some cosmogonists use to explain the expanding universe. Well, maybe it's both packed and expanding. Like the "wavicle" paradox. A particle isn't a wave and a wave can't be a particle- yet everything is both. If you believe in wavicles, you can believe in anything-and if you don't, then don't bother to believe at all. Not even in yourself, because that's what you are-wavicles. "How many dimensions?" I said weakly.

"How many would you like?"

"Me? Uh, twenty, maybe. Four more for each of the first four, to give some looseness on the corners."

"Twenty isn't a starter. I don't know, Kip; I don't know geometry, either-I just thought I did. So I've pestered them."

"The Mother Thing?"

"Her? Oh, heavens, no! She doesn't know geometry. Just enough to pilot a ship in and out of the folds."

"Only that much?" I should have stuck to advanced finger-painting and never let Dad lure me into trying for an education. There isn't any end- the more you learn, the more you need to learn. "Peewee, you knew what that beacon was for, didn't you?"

"Me?" She looked innocent. "Well . . . yes."

"You knew we were going to Vega."

"Well ... if the beacon worked. If it was set in time."

"Now the prize question. Why didn't you tell me?"

"Well-" Peewee was going to twist that button off. "I wasn't sure how much math you knew and-you might have gone all masculine and common-sensical and father-knows-best. Would you have believed me?"

("I told Orville and I told Wilbur and now I'm telling you-that contraption will never work!") "Maybe not, Peewee. But next time you're tempted not to tell me something 'for my own good,' will you take a chance that I'm not wedded to my own ignorance? I know I'm not a genius but I'll try to keep my mind open-and I might be able to help, if I knew what you were up to. Quit twisting that button."

She let go hastily. "Yes, Kip. I'll remember."

"Thanks. Another thing is fretting me. I was pretty sick?"

"Huh? You certainly were!"

"All right. They've got these, uh, 'fold ships' that go anywhere in no time. Why didn't you ask them to bounce me home and pop me into a hospital?"

She hesitated. "How do you feel?"

"Huh? I feel fine. Except that I seem to be under spinal anesthesia, or something."

"Or something," she agreed. "But you feel as if you are getting well?"

"Shucks, I feel well."

"You aren't. But you're going to be." She looked at me closely. "Shall I put it bluntly, Kip?"

"Go ahead."

"If they had taken you to Earth to the best hospital we have, you'd be a 'basket case.' Understand me? No arms, no legs. As it is, you are getting completely well. No amputations, not even a toe."

I think the Mother Thing had prepared me. I simply said, "You're sure?"

"Sure. Sure both. You're going to be all right." Suddenly her face screwed up. "Oh, you were a mess! I saw."

"Pretty bad?"

"Awful. I have nightmares."

"They shouldn't have let you look."

"They couldn't stop me. I was next of kin."

"Huh? You told them you were my sister or something?"

"What? I am your next of kin."

I was about to say she was cockeyed when I tripped over my tongue. We were the only humans for a hundred and sixty trillion miles. As usual, Peewee was right.

"So I had to grant permission," she went on.

"For what? What did they do to me?"

"Uh, first they popped you into liquid helium. They left you there and the past month they have been using me as a guinea pig. Then, three days ago-three of ours-they thawed you out and got to work. You've been getting well ever since."

"What shape am I in now?"

"Uh . . . well, you're growing back. Kip, this isn't a bed. It just looks like it."

"What is it, then?"

"We don't have a name for it and the tune is pitched too high for me. But everything from here on down-" She patted the spread. "-on into the room below, does things for you. You're wired like a hi-fi nut's basement."

"I'd like to see it."

"I'm afraid you can't. You don't know, Kip. They had to cut your space suit off."

I felt more emotion at that than I had at hearing what a mess I had been. "Huh? Where is Oscar? Did they ruin him? My space suit, I mean."

"I know what you mean. Every time you're delirious you talk to 'Oscar' -and you answer back, too. Sometimes I think you're schizoid, Kip."

"You've mixed your terms, runt-that'ud make me a split personality. All right, but you're a paranoid yourself."

"Oh, I've known that for a long time. But I'm a very well adjusted one. You want to see Oscar? The Mother Thing said that you would want him near when you woke up." She opened the closet.

"Hey! You said he was all cut up!"

"Oh, they repaired him. Good as new. A little better than new."

("Time, dear! Remember what I said.")

"Coming, Mother Thing! 'Bye, Kip. I'll be back soon, and real often."

"Okay. Leave the closet open so I can see Oscar."

Peewee did come back, but not "real often." I wasn't offended, not much. She had a thousand interesting and "educational" things to poke her ubiquitous nose into, all new and fascinating-she was as busy as a pup chewing slippers. She ran our hosts ragged. But I wasn't bored. I was getting well, a full-time job and not boring if you are happy-which I was.

I didn't see the Mother Thing often. I began to realize that she had work of her own to do-even though she came to see me if I asked for her, with never more than an hour's delay, and never seemed in a hurry to leave.

She wasn't my doctor, nor my nurse. Instead I had a staff of veterinarians who were alert to supervise every heartbeat. They didn't come in unless I asked them to (a whisper was as good as a shout) but I soon realized that "my" room was bugged and telemetered like a ship in flight test-and my "bed" was a mass of machinery, gear that bore the relation to our own "mechanical hearts" and "mechanical lungs" and "mechanical kidneys" that a Lockheed ultrasonic courier does to a baby buggy.

I never saw that gear (they never lifted the spread, unless it was while I slept), but I know what they were doing. They were encouraging my body to repair itself-not scar tissue but the way it had been. Any lobster can do this and starfish do it so well that you can chop them to bits and wind up with a thousand brand-new starfish.

This is a trick any animal should do, since its gene pattern is in every cell. But a few million years ago we lost it. Everybody knows that science is trying to recapture it; you see articles-optimistic ones in Reader's Digest, discouraged ones in The Scientific Monthly, wildly wrong ones in magazines whose "science editors" seem to have received their training writing horror movies. But we're working on it. Someday, if anybody dies an accidental death, it will be because he bled to death on the way to the hospital.

Here I was with a perfect chance to find out about it-and I didn't.

I tried. Although I was unworried by what they were doing (the Mother Thing had told me not to worry and every time she visited me she looked in my eyes and repeated the injunction), nevertheless like Peewee, I like to know.

Pick a savage so far back in the jungle that they don't even have installment-plan buying. Say he has an I.Q. of 190 and Peewee's yen to understand. Dump him into Brookhaven Atomic Laboratories. How much will he learn? With all possible help?

He'll learn which corridors lead to what rooms and he'll learn that a purple trefoil means: "Danger!"

That's all. Not because he can't; remember he's a supergenius-but he needs twenty years schooling before he can ask the right questions and understand the answers.

I asked questions and always got answers and formed notions. But I'm not going to record them; they are as confused and contradictory as the notions a savage would form about design and operation of atomic equipment. As they say in radio, when noise level reaches a certain value, no information is transmitted. All I got was "noise."

Some of it was literally "noise." I'd ask a question and one of the therapists would answer. I would understand part, then as it reached the key point, I would hear nothing but birdsongs. Even with the Mother Thing as an interpreter, the parts I had no background for would turn out to be a canary's cheerful prattle.

Hold onto your seats; I'm going to explain something I don't understand: how Peewee and I could talk with the Mother Thing even though her mouth could not shape English and we couldn't sing the way she did and had not studied her language. The Vegans-(I'll call them "Vegans" the way we might be called "Solarians"; their real name sounds like a wind chime in a breeze. The Mother Thing had a real name, too, but I'm not a coloratura soprano. Peewee used it when she wanted to wheedle her -fat lot of good it did her.) The Vegans have a supreme talent to understand, to put themselves in the other

person's shoes. I don't think it was telepathy, or I wouldn't have gotten so many wrong numbers. Call it empathy.

But they have it in various degrees, just as all of us drive cars but only a few are fit to be racing drivers. The Mother Thing had it the way Novaes understands a piano. I once read about an actress who could use Italian so effectively to a person who did not understand Italian that she always made herself understood. Her name was "Duce." No, a "duce" is a dictator. Something like that. She must have had what the Mother Thing had.

The first words I had with the Mother Thing were things like "hello" and "good-bye" and "thank you" and "where are we going?" She could project her meaning with those-shucks, you can talk to a strange dog that much. Later I began to understand her speech as speech. She picked up meanings of English words even faster; she had this great talent, and she and Peewee had talked for days while they were prisoners.

But while this is easy for "you're welcome" and "I'm hungry" and "let's hurry," it gets harder for ideas like "heterodyning" and "amino acid" even when both are familiar with the concept. When one party doesn't even have the concept, it breaks down. That's the trouble I had understanding those veterinarians. If we had all spoken English I still would not have understood.

An oscillating circuit sending out a radio signal produces dead silence unless there is another circuit capable of oscillating in the same way to receive it. I wasn't on the right frequency.

Nevertheless I understood them when the talk was not highbrow. They were nice people; they talked and laughed a lot and seemed to like each other. I had trouble telling them apart, except the Mother Thing. (I learned that the only marked difference to them between Peewee and myself was that I was ill and she wasn't.) They had no trouble telling each other apart; their conversations were interlarded with musical names, until you felt that you were caught in Peter and the Wolf or a Wagnerian opera. They even had a leit-motif for me. Their talk was cheerful and gay, like the sounds of a bright summer dawn.

The next time I meet a canary I'll know what he is saying even if he doesn't.

I picked up some of this from Peewee-a hospital bed is not a good place from which to study a planet. Vega Five has Earth-surface gravity, near enough, with an oxygen, carbon dioxide, and water life cycle. The planet would not suit humans, not only because the noonday "sun" would strike you dead with its jolt of ultraviolet but also the air has poisonous amounts of ozone-a trace of ozone is stimulating but a trifle more-well, you might as well sniff prussic acid. There was something else, too, nitrous oxide I think, which was ungood for humans if breathed too long. My quarters were air-conditioned; the Vegans could breathe what I used but they considered it tasteless.

I learned a bit as a by-product of something else; the Mother Thing asked me to dictate how I got mixed up in these things. When I finished, she asked me to dictate everything I knew about Earth, its history, and how we work and live together. This is a tall order-I'm not still dictating because I found out I don't know much. Take ancient Babylonia-how is it related to early Egyptian civilizations? I had only vague notions.

Maybe Peewee did better, since she remembers everything she has heard or read or seen the way Dad does. But they probably didn't get her to hold still long, whereas I had to. The Mother Thing wanted this for the reasons we study Australian aborigines and also as a record of our language. There was another reason, too.

The job wasn't easy but there was a Vegan to help me whenever I felt like it, willing to stop if I tired. Call him Professor Josephus Egghead; "Professor" is close enough and his name can't be spelled. I called him Joe and he called me the leitmotif that meant "Clifford Russell, the monster with the frostbite." Joe had almost as much gift for understanding as the Mother Thing. But how do you put over ideas like "tariffs" and "kings" to a person whose people have never had either? The English words were just noise.

But Joe knew histories of many peoples and planets and could call up scenes, in moving stereo and color, until we agreed on what I meant. We jogged along, with me dictating to a silvery ball floating near my mouth and with Joe curled up like a cat on a platform raised to my level, while he dictated to another microphone, making running notes on what I said. His mike had a gimmick that made it a hush-phone; I did not hear him unless he spoke to me.

Then we would stumble. Joe would stop and throw me a sample scene, his best guess of what I meant. The pictures appeared in the air, positioned for my comfort-if I turned my head, the picture moved to accommodate me. The pix were color-stereo-television with perfect life and sharpness-well, give us another twenty years and we'll have them as realistic. It was a good trick to have the projector concealed and to force images to appear as if they were hanging in air, but those are just gimmicks of stereo optics; we can do them anytime we really want to-after all, you can pack a lifelike view of the Grand Canyon into a viewer you hold in your hand.

The thing that did impress me was the organization behind it. I asked Joe about it. He sang to his microphone and we went on a galloping tour of their "Congressional Library."

Dad claims that library science is the foundation of all sciences just as math is the key-and that we will survive or founder, depending on how well the librarians do their jobs. Librarians didn't look glamorous to me but maybe Dad had hit on a not very obvious truth.

This "library" had hundreds, maybe thousands, of Vegans viewing pictures and listening to sound tracks, each with a silvery sphere in front of him. Joe said they were

"telling the memory." This was equivalent to typing a card for a library's catalog, except that the result was more like a memory path in brain cells-nine-tenths of that building was an electronic brain.

I spotted a triangular sign like the costume jewelry worn by the Mother Thing, but the picture jumped quickly to something else. Joe also wore one (and others did not) but I did not get around to asking about it, as the sight of that incredible "library" brought up the word "cybernetics" and we went on a detour. I decided later that it might be a lodge pin, or like a Phi Beta Kappa key-the Mother Thing was smart even for a Vegan and Joe was not far behind.

Whenever Joe was sure that he understood some English word, he would wriggle with delight like a puppy being tickled. He was very dignified, but this is not undignified for a Vegan. Their bodies are so fluid and mobile that they smile and frown with the whole works. A Vegan holding perfectly still is either displeased or extremely worried.

The sessions with Joe let me tour places from my bed. The difference between "primary school" and "university" caused me to be shown examples. A "kindergarten" looked like an adult Vegan being overwhelmed by babies; it had the innocent rowdiness of a collie pup stepping on his brother's face to reach the milk dish. But the "university" was a place of quiet beauty, strange-looking trees and plants and flowers among buildings of surrealistic charm unlike any architecture I have ever seen-I suppose I would have been flabbergasted if they had looked familiar. Parabolas were used a lot and I think all the "straight" lines had that swelling the Greeks called "entasis"-delicate grace with strength.

Joe showed up one day simply undulating with pleasure. He had another silvery ball, larger than the other two. He placed it in front of me, then sang to his own. ("I want you to hear this, Kip!")

As soon as he ceased the larger sphere spoke in English: "I want you to hear this. Kip!"

Squirming with delight, Joe swapped spheres and told me to say something.

"What do you want me to say?" I asked.

("What do you want me to say?") the larger sphere sang in Vegan.

That was my last session with Prof Joe.

Despite unstinting help, despite the Mother Thing's ability to make herself understood, I was like the Army mule at West Point: an honorary member of the student body but not prepared for the curriculum. I never did understand their government. Oh, they had government, but it wasn't any system I've heard of. Joe knew about democracies and representation and voting and courts of law; he could fish up examples from many

planets. He felt that democracy was "a very good system, for beginners." It would have sounded patronizing, except that is not one of their faults.

I never met one of their young. Joe explained that children should not see "strange creatures" until they had learned to feel understanding sympathy. That would have offended me if I hadn't been learning some "understanding sympathy" myself. Matter of fact, if a human ten-year-old saw a Vegan, he would either run, or poke it with a stick.

I tried to learn about their government from the Mother Thing, in particular how they kept the peace-laws, crimes, punishments, traffic regulations, etc.

It was as near to flat failure as I ever had with her. She pondered a long time, then answered: ("How could one possibly act against one's own nature?")

I guess their worst vice was that they didn't have any. This can be tiresome.

The medical staff were interested in the drugs in Oscar's helmet-like our interest in a witch doctor's herbs, but that is not idle interest; remember digitalis and curare.

I told them what each drug did and in most cases I knew the Geneva name as well as the commercial one. I knew that codeine was derived from opium, and opium from poppies. I knew that dexedrine was a sulphate but that was all. Organic chemistry and biochemistry are not easy even with no language trouble. We got together on what a benzene ring was, Peewee drawing it and sticking in her two dollars' worth, and we managed to agree on "element," "isotope," "half life," and the periodic table. I should have drawn structural formulas, using Peewee's hands- but neither of us had the slightest idea of the structural formula for codeine and couldn't do it even when supplied with kindergarten toys which stuck together only in the valences of the elements they represented.

Peewee had fun, though. They may not have learned much from her; she learned a lot from them.

I don't know when I became aware that the Mother Thing was not, or wasn't quite, a female. But it didn't matter; being a mother is an attitude, not a biological relation.

If Noah launched his ark on Vega Five, the animals would come in by twelves. That makes things complicated. But a "mother thing" is one who takes care of others. I am not sure that all mother things were the same gender; it may have been a matter of temperament.

I met one "father thing." You might call him "governor" or "mayor," but "parish priest" or "scoutmaster" is closer, except that his prestige dominated a continent. He breezed in during a session with Joe, stayed five minutes, urged Joe to do a good job, told me to be a good boy and get well, and left, all without hurrying. He filled me with the warm self-reliance that Dad does-I didn't need to be told that he was a "father thing." His

visit had a flavor of "royalty visiting the wounded" without being condescending-no doubt it was hard to work me into a busy schedule.

Joe neither mothered nor fathered me; he taught me and studied me- "a professor thing."

Peewee showed up one day full of bubbles. She posed like a mannequin. "Do you like my new spring outfit?"

She was wearing silvery tights, plus a little hump like a knapsack. She looked cute but not glamorous, for she was built like two sticks and this get-up emphasized it.

"Very fancy," I said. "Are you learning to be an acrobat?"

"Don't be silly, Kip; it's my new space suit-a real one."

I glanced at Oscar, big and bulky and filling the closet and said privately, "Hear that, chum?"

("It takes all kinds to make a world.")

"Your helmet won't fit it, will it?"

She giggled. "I'm wearing it."

"You are? 'The Emperor's New Clothes'?"

"Pretty close. Kip, disconnect your prejudices and listen. This is like the Mother Thing's suit except that it's tailored for me. My old suit wasn't much good-and that cold cold about finished it. But you'll be amazed at this one. Take the helmet. It's there, only you can't see it. It's a field. Gas can't go in or out." She came close. "Slap me."

"With what?"

"Oh. I forgot. Kip, you've got to get well and up off that bed. I want to take you for a walk."

"I'm in favor. They tell me it won't be long now."

"It had better not be. Here, I'll show you." She hauled off and slapped herself. Her hand smacked into something inches from her face.

"Now watch," she went on. She moved her hand very slowly; it sank through the barrier, she thumbed her nose at me and giggled.

This impressed me-a space suit you could reach into! Why, I would have been able to give Peewee water and dexedrine and sugar pills when she needed them. "I'll be darned! What does it?"

"A power pack on my back, under the air tank. The tank is good for a week, too, and hoses can't give trouble because there aren't any."

"Uh, suppose you blow a fuse. There you are, with a lungful of vacuum."

"The Mother Thing says that can't happen."

Hmm-I had never known the Mother Thing to be wrong when she made a flat statement.

"That's not all," Peewee went on. "It feels like skin, the joints aren't clumsy, and you're never hot or cold. It's like street clothes."

"Uh, you risk a bad sunburn, don't you? Unhealthy, you tell me. Unhealthy even on the Moon."

"Oh, no! The field polarizes. That's what the field is, sort of. Kip, get them to make you one-we'll go places!"

I glanced at Oscar. ("Please yourself, pal," he said distantly. "I'm not the jealous type.")

"Uh, Peewee, I'll stick to one I understand. But I'd like to examine that monkey suit of yours."

"Monkey suit indeed!"

I woke up one morning, turned over, and realized that I was hungry.

Then I sat up with a jerk. I had turned over in bed.

I had been warned to expect it. The "bed" was a bed and my body was back under my control. Furthermore, I was hungry and I hadn't been hungry the whole time I had been on Vega Five. Whatever that machinery was, it included a way to nourish me without eating.

But I didn't stop to enjoy the luxury of hunger; it was too wonderful to be a body again, not just a head. I got out of bed, was suddenly dizzy, recovered and grinned. Hands! Feet!

I examined those wonderful things. They were unchanged and unhurt.

Then I looked more closely. No, not quite unchanged.

I had had a scar on my left shin where I had been spiked in a close play at second; it was gone. I once had "Mother" tattooed on my left forearm at a carnival. Mother had been distressed and Dad disgusted, but he had said to leave it as a reminder not to be a witling. It was gone. There was not a callus on hand or foot.

I used to bite my nails. My nails were a bit long but perfect. I had lost the nail from my right little toe years ago through a slip with a hatchet. It was back.

I looked hastily for my appendectomy scar-found it and felt relieved. If it had been missing, I would have wondered if I was me.

There was a mirror over the chest of drawers. It showed me with enough hair to warrant a guitar (I wear a crew cut) but somebody had shaved me.

On the chest was a dollar and sixty-seven cents, a mechanical pencil, a sheet of paper, my watch, and a handkerchief. The watch was running. The dollar bill, the paper, and the handkerchief had been laundered.

My clothes, spandy clean and invisibly repaired, were on the desk. The socks weren't mine; the material was more like felt, if you will imagine felted material no thicker than Kleenex which stretches instead of tearing. On the floor were tennis shoes, like Peewee's even to a "U.S. Rubber" trademark, but in my size. The uppers were heavier felted material. I got dressed.

I was wearing the result when Peewee kicked the door. "Anybody home?" She came in, bearing a tray. "Want breakfast?"

"Peewee! Look at me!"

She did. "Not bad," she admitted, "for an ape. You need a haircut."

"Yes, but isn't it wonderful! I'm all together again!"

"You never were apart," she answered, "except in spots-I've had daily reports. Where do you want this?" She put the tray on the desk.

"Peewee," I asked, rather hurt, "don't you care that I'm well?"

"Of course I do. Why do you think I made 'em let me carry in your breakfast? But I knew last night that they were going to uncork you. Who do you think cut your nails and shaved you? That'll be a dollar, please. Shaves have gone up." I got that tired dollar and handed it to her. She didn't take it. "Aw, can't you take a joke?" "'Neither a borrower nor a lender be.'"

"Polonius. He was a stupid old bore. Honest, Kip, I wouldn't take your last dollar."

"Now who can't take a joke?"

"Oh, eat your breakfast. That purple juice," she said, "tastes like orange juice-it's very nice. The stuff that looks like scrambled eggs is a fair substitute and I had 'em color it yellow-the eggs here are dreadful, which wouldn't surprise you if you knew where they get them. The buttery stuff is vegetable fat and I had them color it, too. The bread is bread, I toasted it myself. The salt is salt and it surprises them that we eat it-they think it's poison. Go ahead; I've guinea-pigged everything. No coffee."

"I won't miss it."

"I never touch the stuff-I'm trying to grow. Eat. Your sugar count has been allowed to drop so that you will enjoy it."

The aroma was wonderful. "Where's your breakfast, Peewee?"

"I ate hours ago. I'll watch and swallow when you do."

The tastes were odd but it was just what the doctor ordered-literally, I suppose. I've never enjoyed a meal so much.

Presently I slowed down to say, "Knife and fork? Spoons?"

"The only ones on-" She vocalized the planet's name. "I got tired of fingers and I play hob using what they use. So I drew pictures. This set is mine but we'll order more."

There was even a napkin, more felted stuff. The water tasted distilled and not aerated. I didn't mind. "Peewee, how did you shave me? Not even a nick."

"Little gismo that beats a razor all hollow. I don't know what they use it for, but if you could patent it, you'd make a fortune. Aren't you going to finish that toast?"

"Uh-" I had thought that I could eat the tray. "No, I'm full."

"Then I will." She used it to mop up the "butter," then announced, "I'm off!"

"Where?"

"To suit up. I'm going to take you for a walk!" She was gone.

The hall outside did not imitate ours where it could not be seen from the bed, but a door to the left was a bathroom, just where it should have been. No attempt had been

made to make it look like the one at home, and valving and lighting and such were typically Vegan. But everything worked.

Peewee returned while I was checking Oscar. If they had cut him off me, they had done a marvelous job of repairing; even the places I had patched no longer showed. He had been cleaned so thoroughly that there was no odor inside. He had three hours of air and seemed okay in every way. "You're in good shape, partner."

("In the pink! The service is excellent here.")

"So I've noticed." I looked up and saw Peewee; she was already in her "spring outfit."

"Peewee, do we need space suits just for a walk?"

"No. You could get by with a respirator, sun glasses, and a sun shade."

"You've convinced me. Say, where's Madame Pompadour? How do you get her inside that suit?"

"No trouble at all, she just bulges a little. But I left her in my room and told her to behave herself."

"Will she?"

"Probably not. She takes after me."

"Where is your room?"

"Next door. This is the only part of the house which is Earth-conditioned."

I started to suit up. "Say, has that fancy suit got a radio?"

"All that yours has and then some. Did you notice the change in Oscar?"

"Huh? What? I saw that he was repaired and cleaned up. What else have they done?"

"Just a little thing. One more click on the switch that changes antennas and you can talk to people around you who aren't wearing radios without shouting."

"I didn't see a speaker."

"They don't believe in making everything big and bulky."

As we passed Peewee's room I glanced in. It was not decorated Vegan style; I had seen Vegan interiors through stereo. Nor was it a copy of her own room-not if her parents were sensible. I don't know what to call it -"Moorish harem" style, perhaps, as conceived by Mad King Ludwig, with a dash of Disneyland.

I did not comment. I had a hunch that Peewee had been given a room "just like her own" because I had one; that fitted the Mother Thing's behavior-but Peewee had seen a golden chance to let her overfertile imagination run wild. I doubt if she fooled the Mother Thing one split second. She had probably let that indulgent overtone come into her song and had given Peewee what she wanted.

The Mother Thing's home was smaller than our state capitol but not much; her family seemed to run to dozens, or hundreds-"family" has a wide meaning under their complex interlinkage. We didn't see any young ones on our floor and I knew that they were being kept away from the "monsters." The adults all greeted me, inquired as to my health, and congratulated me on my recovery; I was kept busy saying "Fine, thank you! Couldn't be better."

They all knew Peewee and she could sing their names.

I thought I recognized one of my therapists, but the Mother Thing, Prof Joe and the boss veterinarian were the only Vegans I was sure of and we did not meet them.

We hurried on. The Mother Thing's home was typical-many soft round cushions about a foot thick and four in diameter, used as beds or chairs, floor bare, slick and springy, most furniture on the walls where it could be reached by climbing, convenient rods and poles and brackets a person could drape himself on while using the furniture, plants growing unexpectedly here and there as if the jungle were moving in-delightful, and as useful to me as a corset.

Through a series of parabolic arches we reached a balcony. It was not railed and the drop to a terrace below was about seventy-five feet; I stayed back and regretted again that Oscar had no chin window. Peewee went to the edge, put an arm around a slim pillar and leaned out. In the bright outdoor light her "helmet" became an opalescent sphere. "Come see!"

"And break my neck? Maybe you'd like to belay me?"

"Oh, pooh! Who's afraid of heights?"

"I am when I can't see what I'm doing."

"Well, for goodness' sakes, take my hand and grab a post."

I let her lead me to a pillar, then looked out.

It was a city in a jungle. Thick dark green, so tangled that I could not tell trees from vine and bush, spread out all around but was broken repeatedly by buildings as large and larger than the one we were in. There were no roads; their roads are underground in cities and sometimes outside the cities. But there was air traffic-individual fliers supported by contrivances even less substantial than our own one-man 'copter harnesses or flying carpets. Like birds they launched themselves from and landed in balconies such as the one we stood in.

There were real birds, too, long and slender and brilliantly colored, with two sets of wings in tandem-which looked aerodynamically unsound but seemed to suit them.

The sky was blue and fair but broken by three towering cumulous anvils, blinding white in the distance.

"Let's go on the roof," said Peewee.

"How?"

"Over here."

It was a scuttle hole reached by staggered slender brackets the Vegans use as stairs. "Isn't there a ramp?"

"Around on the far side, yes."

"I don't think those things will hold me. And that hole looks small for Oscar."

"Oh, don't be a sissy," Peewee went up like a monkey.

I followed like a tired bear. The brackets were sturdy despite their grace; the hole was a snug fit.

Vega was high in the sky. It appeared to be the angular size of our Sun, which fitted since we were much farther out than Terra is from the Sun, but it was too bright even with full polarization. I looked away and presently eyes and polarizers adjusted until I could see again. Peewee's head was concealed by what appeared to be a polished chrome basketball. I said, "Hey, are you still there?"

"Sure," she answered. "I can see out all right. It's a grand view. Doesn't it remind you of Paris from the top of the Arc de Triomphe?"

"I don't know, I've never done any traveling."

"Except no boulevards, of course. Somebody is about to land here."

I turned the way she was pointing-she could see in all directions while I was hampered by the built-in tunnel vision of my helmet. By the time I was turned around the Vegan was coming in beside us.

("Hello, children!")

"Hi, Mother Thing!" Peewee threw her arms around her, picking her up.

("Not so hasty, dear. Let me shed this.") The Mother Thing stepped out of her harness, shook herself in ripples, folded the flying gear like an umbrella and hung it over an arm. ("You're looking fit, Kip.")

"I feel fine, Mother Thing! Gee, it's nice to have you back."

("I wished to be back when you got out of bed. However, your therapists have kept me advised every minute.") She put a little hand against my chest, growing a bit to do so, and placed her eyes almost against my face plate. ("You are well?")

"I couldn't be better."

"He really is, Mother Thing!"

("Good. You agree that you are well, I sense that you are, Peewee is sure that you are and, most important, your leader therapist assures me that you are. We'll leave at once.")

"What?" I asked. "Where, Mother Thing?"

She turned to Peewee. ("Haven't you told him, dear?")

"Gee, Mother Thing, I haven't had a chance."

("Very well.") She turned to me. ("Dear Kip, we must now attend a gathering. Questions will be asked and answered, decisions will be made.") She spoke to us both. ("Are you ready to leave?")

"Now?" said Peewee. "Why, I guess so-except that I've got to get Madame Pompadour."

("Fetch her, then. And you, Kip?")

"Uh-" I couldn't remember whether I had put my watch back on after I washed and I couldn't tell because I can't feel it through Oscar's thick hide. I told her so.

("Very well. You children run to your rooms while I have a ship fetched. Meet me here and don't stop to admire flowers.")

We went down by ramp. I said, "Peewee, you've been holding out on me again."

"Why, I have not!"

"What do you call it?"

"Kip-please listen! I was told not to tell you while you were ill. The Mother Thing was very firm about it. You were not to be disturbed-that's what she said!-while you were growing well."

"Why should I feel disturbed? What is all this? What gathering? What questions?"

"Well ... the gathering is sort of a court. A criminal court, you might say."

"Huh?" I took a quick look at my conscience. But I hadn't had any chance to do anything wrong-I had been helpless as a baby up to two hours ago. That left Peewee. "Runt," I said sternly, "what have you done now?"

"Me? Nothing."

"Think hard."

"No, Kip. Oh, I'm sorry I didn't tell you at breakfast! But Daddy says never to break any news until after his second cup of coffee and I thought how nice it would be to take a little walk before we had any worries and I was going to tell you"

"Make it march."

"-as soon as we came down. I haven't done anything. But there's old Wormface."

"What? I thought he was dead."

"Maybe so, maybe not. But, as the Mother Thing says, there are still questions to be asked, decisions to be made. He's up for the limit, is my guess."

I thought about it as we wound our way through strange apartments toward the air lock that led to our Earth-conditioned rooms. High crimes and misdemeanors . . . skulduggery in the spaceways-yes, Wormface was probably in for it. If the Vegans could catch him. "Had caught him" apparently, since they were going to try him. "But where do we come in? As witnesses?"

"I suppose you could call it that."

What happened to Wormface was no skin off my nose-and it would be a chance to find out more about the Vegans. Especially if the court was some distance away, so that we would travel and see the country.

"But that isn't all," Peewee went on worriedly.

"What else?"

She sighed. "This is why I wanted us to have a nice sight-see first. Uh . . ."

"Don't chew on it. Spit it out."

"Well . . . we have to be tried, too."

"What?"

"Maybe 'examined' is the word. I don't know. But I know this: we can't go home until we've been judged."

"But what have we done?" I burst out.

"I don't know!"

My thoughts were boiling. "Are you sure they'll let us go home then?"

"The Mother Thing refuses to talk about it."

I stopped and took her arm. "What it amounts to," I said bitterly, "is that we are under arrest. Aren't we?"

"Yes-" She added almost in a sob, "But, Kip, I told you she was a cop!"

"Great stuff. We pull her chestnuts out of the fire-and now we're arrested-and going to be tried-and we don't even know why! Nice place, Vega Five. 'The natives are friendly.' " They had nursed me-as we nurse a gangster in order to hang him.

"But, Kip-" Peewee was crying openly now. "I'm sure it'll be all right. She may be a cop-but she's still the Mother Thing."

"Is she? I wonder." Peewee's manner contradicted her words. She was not one to worry over nothing. Quite the contrary.

My watch was on the washstand. I ungasketed to put it in an inside pocket. When I came out, Peewee was doing the same with Madame Pompadour. "Here," I said, "I'll take her with me. I've got more room."

"No, thank you," Peewee answered bleakly. "I need her with me. Especially now."

"Uh, Peewee, where is this court? This city? Or another one?"

"Didn't I tell you? No, I guess I didn't. It's not on this planet."

"I thought this was the only inhabited-"

"It's not a planet around Vega. Another star. Not even in the Galaxy."

"Say that again?"

"It's somewhere in the Lesser Magellanic Cloud."

Chapter 10

I didn't put up a fight-a hundred and sixty trillion miles from nowhere, I mean. But I didn't speak to the Mother Thing as I got into her ship.

It was shaped like an old-fashioned beehive and it looked barely big enough to jump us to the space port. Peewee and I crowded together on the floor, the Mother Thing curled up in front and twiddled a shiny rack like an abacus; we took off, straight up.

In a few minutes my anger grew from sullenness to a reckless need to settle it. "Mother Thing!"

("One moment, dear. Let me get us out of the atmosphere.") She pushed something, the ship quivered and steadied.

"Mother Thing," I repeated.

("Wait until I lower us, Kip.")

I had to wait. It's as silly to disturb a pilot as it is to snatch the wheel of a car. The little ship took a buffeting; the upper winds must have been dillies. But she could pilot.

Presently there was a gentle bump and I figured we must be at the space port. The Mother Thing turned her head. ("All right, Kip. I sense your fear and resentment. Will it help to say that you two are in no danger? That I would protect you with my body? As you protected mine?")

"Yes, but-"

("Then let be. It is easier to show than it is to explain. Don't clamp your helmet. This planet's air is like your own.")

"Huh? You mean we're there?"

"I told you," Peewee said at my elbow. "Just poof! and you're there."

I didn't answer. I was trying to guess how far we were from home.

("Come, children.")

It was midday when we left; it was night as we disembarked. The ship rested on a platform that stretched out of sight. Stars in front of me were in unfamiliar constellations; slaunchwise down the sky was a thin curdling which I spotted as the Milky Way. So Peewee had her wires crossed-we were far from home but still in the Galaxy-perhaps we had simply switched to the night side of Vega Five.

I heard Peewee gasp and turned around.

I didn't have strength to gasp.

Dominating that whole side of the sky was a great whirlpool of millions, maybe billions, of stars.

You've seen pictures of the Great Nebula in Andromeda?-a giant spiral of two curving arms, seen at an angle. Of all the lovely things in the sky it is the most beautiful. This was like that.

Only we weren't seeing a photograph nor even by telescope; we were so close (if "close" is the word) that it stretched across the sky twice as long as the Big Dipper as seen from home-so close that I saw the thickening at the center, two great branches coiling around and overtaking each other. We saw it from an angle so that it appeared elliptical, just as M31 in Andromeda does; you could feel its depth, you could see its shape.

Then I knew I was a long way from home. That was home, up there, lost in billions of crowded stars.

It was some time before I noticed another double spiral on my right, almost as wide-flung but rather lopsided and not nearly as brilliant-a pale ghost of our own gorgeous Galaxy. It slowly penetrated that this second one must be the Greater Magellanic Cloud-if we were in the Lesser and if that fiery whirlpool was our own Galaxy. What I had thought was "The Milky Way" was simply a milky way, the Lesser Cloud from inside.

I turned and looked at it again. It had the right shape, a roadway around the sky, but it was pale skim milk compared with our own, about as our Milky Way looks on a murky night. I don't know how it should look, since I'd never seen the Magellanic

Clouds; I've never been south of the Rio Grande. But I did know that each cloud is a galaxy in its own right, but smaller than ours and grouped with us.

I looked again at our blazing spiral and was homesick in a way I hadn't been since I was six.

Peewee was huddling to the Mother Thing for comfort. She made herself taller and put an arm around Peewee. ("There, there, dear! I felt the same way when I was very young and saw it for the first time.")

"Mother Thing?" Peewee said timidly. "Where is home?"

("See the right half of it, dear, where the outer arm trails into nothingness? We came from a point two-thirds the way out from the center."

"No, no! Not Vega. I want to know where the Sun is!"

("Oh, your star. But, dear, at this distance it is the same.")

We learned how far it is from the Sun to the planet Lanador 167,000 light-years. The Mother Thing couldn't tell us directly as she did not know how much time we meant by a "year"-how long it takes Terra to go around the Sun (a figure she might have used once or not at all and as worth remembering as the price of peanuts in Perth). But she did know the distance from Vega to the Sun and told us the distance from Lanador to Vega with that as a yardstick-six thousand one hundred and ninety times as great. 6190 times 27 light-years gives 167,000 light-years. She courteously gave it in powers of ten the way we figure, instead of using factorial five (1x2x3x4x5 equals 120) which is how Vegans figure. 167,000 light-years is 9.82 x 1017 miles. Round off 9.82 and call it ten. Then - 1,000,000,000,000,000,000 miles -is the distance from Vega to Lanador (or from the Sun to Lanador; Vega and the Sun are back-fence neighbors on this scale.)

A thousand million billion miles.

I refuse to have anything to do with such a preposterous figure. It may be "short" as cosmic distances go, but there comes a time when the circuit breakers in your skull trip out from overload.

The platform we were on was the roof of an enormous triangular building, miles on a side. We saw that triangle repeated in many places and always with a two-armed spiral in each corner. It was the design the Mother Thing wore as jewelry.

It is the symbol for "Three Galaxies, One Law."

I'll lump here things I learned in driblets: The Three Galaxies are like our Federated Free Nations, or the United Nations before that, or the League of Nations still earlier; Lanador houses their offices and courts and files-the League's capital, the way the

FFN is in New York and the League of Nations used to be in Switzerland. The cause is historical; the people of Lanador are the Old Race; that's where civilization began.

The Three Galaxies are an island group, like Hawaii State, they haven't any other close neighbors. Civilization spread through the Lesser Cloud, then through the Greater Cloud and is seeping slowly through our own Galaxy-that is taking longer; there are fifteen or twenty times as many stars in our Galaxy as in the other two.

When I began to get these things straight I wasn't quite as sore. The Mother Thing was a very important person at home but here she was a minor official-all she could do was bring us in. Still, I wasn't more than coolly polite for a while-she might have looked the other way while we beat it for home.

They housed us in that enormous building in a part you could call a "transients" hotel," although "detention barracks" or "jail" is closer. I can't complain about accommodations but I was getting confoundedly tired of being locked up every time I arrived in a new place. A robot met us and took us down inside-there are robots wherever you turn on Lanador. I don't mean things looking like the Tin Woodman; I mean machines that do things for you, such as this one which led us to our rooms, then hung around like a bellhop expecting a tip. It was a three-wheeled cart with a big basket on top, for luggage if we had any. It met us, whistled to the Mother Thing in Vegan and led us away, down a lift and through a wide and endlessly long corridor.

I was given "my" room again-a fake of a fake, with all errors left in and new ones added. The sight of it was not reassuring; it shrieked that they planned to keep us there as long as-well, as long as they chose.

But the room was complete even to a rack for Oscar and a bathroom outside. Just beyond "my" room was a fake of another kind-a copy of that Arabian Nights horror Peewee had occupied on Vega Five. Peewee seemed delighted, so I didn't point out the implications.

The Mother Thing hovered around while we got out of space suits. ("Do you think you will be comfortable?")

"Oh, sure," I agreed unenthusiastically.

("If you want food or anything, just say so. It will come.")

"So? Is there a telephone somewhere?"

("Simply speak your wishes. You will be heard.")

I didn't doubt her-but I was almost as tired of rooms that were bugged as of being locked up; a person ought to have privacy.

"I'm hungry now," Peewee commented. "I had an early breakfast."

We were in her room. A purple drapery drew back, a light glowed in the wall. In about two minutes a section of wall disappeared; a slab at table height stuck out like a tongue. On it were dishes and silverware, cold cuts, fruit, bread, butter,, and a mug of steaming cocoa. Peewee clapped and squealed. I looked at it with less enthusiasm.

("You see?") the Mother Thing went on with a smile in her voice. ("Ask for what you need. If you need me, I'll come. But I must go now.")

"Oh, please don't go, Mother Thing."

("I must, Peewee dear. But I will see you soon. By the bye, there are two more of your people here.")

"Huh?" I put in. "Who? Where?"

("Next door.") She was gone with gliding swiftness; the bellhop speeded up to stay ahead of her.

I spun around. "Did you hear that?"

"I certainly did!"

"Well-you eat if you want to; I'm going to look for those other humans."

"Hey! Wait for me!"

"I thought you wanted to eat."

"Well . . ." Peewee looked at the food. "Just a sec." She hastily buttered two slices of bread and handed one to me. I was not in that much of a hurry; I ate it. Peewee gobbled hers, took a gulp from the mug and offered it to me. "Want some?"

It wasn't quite cocoa; there was a meaty flavor, too. But it was good. I handed it back and she finished it. "Now I can fight wildcats. Let's go, Kip."

"Next door" was through the foyer of our three-room suite and fifteen yards down the corridor, where we came to a door arch. I kept Peewee back and glanced in cautiously.

It was a diorama, a fake scene.

This one was better than you see in museums. I was looking through a bush at a small clearing in wild country. It ended in a limestone bank. I could see overcast sky and a cave mouth in the rocks. The ground was wet, as if from rain.

A cave man hunkered down close to the cave. He was gnawing the carcass of a small animal, possibly a squirrel.

Peewee tried to shove past me; I stopped her. The cave man did not appear to notice us which struck me as a good idea. His legs looked short but I think he weighed twice what I do and he was muscled like a weight lifter, with short, hairy forearms and knotty biceps and calves. His head was huge, bigger than mine and longer, but his forehead and chin weren't much. His teeth were large and yellow and a front one was broken. I heard bones crunching.

In a museum I would have expected a card reading "Neanderthal Man -circa Last Ice Age." But wax dummies of extinct breeds don't crack bones.

Peewee protested, "Hey, let me look."

He heard. Peewee stared at him, he stared toward us. Peewee squealed; he whirled and ran into the cave, waddling but making time.

I grabbed Peewee. "Let's get out of here!"

"Wait a minute," she said calmly. "He won't come out in a hurry." She tried to push the bush aside.

"Peewee!"

"Try this," she suggested. Her hand was shoving air. "They've got him penned."

I tried it. Something transparent blocked the arch. I could push it a little but not more than an inch. "Plastic?" I suggested. "Like Lucite but springier?"

"Mmm . . ." said Peewee. "More like the helmet of my suit. Tougher, though-and I'll bet light passes only one way. I don't think he saw us."

"Okay, let's get back to our rooms. Maybe we can lock them."

She went on feeling that barrier. "Peewee!" I said sharply. "You're not listening."

"What were you doing talking," she answered reasonably, "when I wasn't listening?"

"Peewee! This is no time to be difficult."

"You sound like Daddy. He dropped that rat he was eating-he might come back."

"If he does, you won't be here, because I'm about to drag you-and if you bite, I'll bite back. I warn you."

She looked around with a trace of animosity. "I wouldn't bite you. Kip, no matter what you did. But if you're going to be stuffy-oh, well, I doubt if he'll come out for an hour or so. We'll come back."

"Okay." I pulled her away.

But we did not leave. I heard a loud whistle and a shout: "Hey, buster! Over here!"

The words were not English, but I understood-well enough. The yell came from an archway across the corridor and a little farther on. I hesitated, then moved toward it because Peewee did so.

A man about forty-five was loafing in this doorway. He was no Neanderthal; he was civilized-or somewhat so. He wore a long heavy woolen tunic, belted in at the waist, forming a sort of kilt. His legs below that were wrapped in wool and he was shod in heavy short boots, much worn. At the belt and supported by a shoulder sling was a short, heavy sword; there was a dagger on the other side of the belt. His hair was short and he was clean-shaven save for a few days' gray stubble. His expression was neither friendly nor unfriendly; it was sharply watchful.

"Thanks," he said gruffly. "Are you the jailer?"

Peewee gasped. "Why, that's Latin!"

What do you do when you meet a Legionary? Right after a cave man? I answered: "No, I am a prisoner myself." I said it in Spanish and repeated it in pretty fair classical Latin. I used Spanish because Peewee hadn't been quite correct. It was not Latin he spoke, not the Latin of Ovid and Gaius Julius Caesar. Nor was it Spanish. It was in between, with an atrocious accent and other differences. But I could worry out the meaning.

He sucked his lip and answered, "That's bad. I've been trying for three days to attract attention and all I get is another prisoner. But that's how the die rolls. Say, that's a funny accent you have."

"Sorry, amigo, but I have trouble understanding you, too." I repeated it in Latin, then split the difference. I added, in improvised lingua franca, "Speak slowly, will you?"

"I'll speak as I please. And don't call me 'amico'; I'm a Roman citizen -so don't get gay."

That's a free translation. His advice was more vulgar-I think. It was close to a Spanish phrase which certainly is vulgar.

"What's he saying?" demanded Peewee. "It is Latin, isn't it? Translate!"

I was glad she hadn't caught it. "Why, Peewee, don't you know 'the language of poetry and science'?"

"Oh, don't be a smartie! Tell me."

"Don't crowd me, hon. I'll tell you later. I'm having trouble following it."

"What is that barbarian grunting?" the Roman said pleasantly. "Talk language, boy. Or will you have ten with the flat of the sword?"

He seemed to be leaning on nothing-so I felt the air. It was solid; I decided not to worry about his threat. "I'm talking as best I can. We spoke to each other in our own language."

"Pig grunts. Talk Latin. If you can." He looked at Peewee as if just noticing her. "Your daughter? Want to sell her? If she had meat on her bones, she might be worth a half denario."

Peewee clouded up. "I understood that!" she said fiercely. "Come out here and fight!"

"Try it in Latin," I advised her. "If he understands you, he'll probably spank you."

She looked uneasy. "You wouldn't let him?"

"You know I wouldn't."

"Let's go back."

"That's what I said earlier." I escorted her past the cave man's lair to our suite. "Peewee, I'm going back and see what our noble Roman has to say. Do you mind?"

"I certainly do!"

"Be reasonable, hon. If we could be hurt by them, the Mother Thing would know it. After all, she told us they were here."

"I'll go with you."

"What for? I'll tell you everything I learn. This may be a chance to find out what this silliness means. What's he doing here? Have they kept him in deep-freeze a couple of

thousand years? How long has he been awake? What does he know that we don't? We're in a bad spot; all the data I can dig up we need. You can help by keeping out. If you're scared, send for the Mother Thing."

She pouted. "I'm not scared. All right-if that's the way you want it."

"I do. Eat your dinner."

Jo-Jo the dogface boy was not in sight; I gave his door a wide berth. If a ship can go anywhere in no time, could it skip a dimension and go anywhere to any time? How would the math work out? The soldier was still lounging at his door. He looked up. "Didn't you hear me say to stick around?"

"I heard you," I admitted, "but we're not going to get anywhere if you take that attitude. I'm not one of your privates."

"Lucky for you!"

"Do we talk peacefully? Or do I leave?"

He looked me over. "Peace. But don't get smart with me, barbarian."

He called himself "Iunio." He had served in Spain and Gaul, then transferred to the VIth Legion, the "Victrix"-which he felt that even a barbarian should know of. His legion's garrison was Eboracum, north of Londinium in Britain, but he had been on advance duty as a brevet centurion (he pronounced it "centurio")-his permanent rank was about like top sergeant. He was smaller than I am but I would not want to meet him in an alley. Nor at the palisades of a castra.

He had a low opinion of Britons and all barbarians including me ("nothing personal-some of my best friends are barbarians"), women, the British climate, high brass, and priests; he thought well of Caesar, Rome, the gods, and his own professional ability. The army wasn't what it used to be and the slump came from treating auxiliaries like Roman citizens.

He had been guarding the building of a wall to hold back barbarians-a nasty lot who would sneak up and slit your throat and eat you-which no doubt had happened to him, since he was now in the nether regions.

I thought he was talking about Hadrian's Wall, but it was three days' march north of there, where the seas were closest together. The climate there was terrible and the natives were bloodthirsty beasts who dyed their bodies and didn't appreciate civilization-you'd think the Eagles were trying to steal their dinky island. Provincial . . . like me. No offense meant.

Nevertheless he had bought a little barbarian to wife and had been looking forward to garrison duty at Eboracum-when this happened. Iunio shrugged. "Perhaps if I had been careful with lustrations and sacrifices, my luck wouldn't have run out. But I figure that if a man does his duty and keeps himself and his weapons clean, the rest is the C.O.'s worry. Careful of that doorway; it's witched."

The longer he talked the easier it was to understand him. The "-us" endings turned to "-o" and his vocabulary was not that of De Bello Gallico -"horse" wasn't "equus"; it was "caballo." His idioms bothered me, plus the fact that his Latin was diluted by a dozen barbarian tongues. But you can blank out every third word in a newspaper and still catch the gist.

I learned a lot about the daily life and petty politics of the Victrix and nothing that I wanted to know. Iunio did not know how he had gotten where he was nor why-except that he was dead and awaiting disposition in a receiving barracks somewhere in the nether world-a theory which I was not yet prepared to accept.

He knew the year of his "death"-Year Eight of the Emperor and Eight Hundred and Ninety-Nine of Rome. I wrote out the dates in Roman numerals to make sure. But I did not remember when Rome was founded nor could I identify the "Caesar" even by his full name-there have been so many Caesars. But Hadrian's Wall had been built and Britain was still occupied; that placed lunio close to the third century.

He wasn't interested in the cave man across the way-it embodied to him the worst vice of a barbarian: cowardice. I didn't argue but I would be timid, too, if I had saber-toothed tigers yowling at my door. (Did they have saber-tooths then? Make it "cave bears.")

Iunio went back and returned with hard dark bread, cheese, and a cup. He did not offer me any and I don't think it was the barrier. He poured a little of his drink on the floor and started to chomp. It was a mud floor; the walls were rough stone and the ceiling was supported by wooden beams. It may have been a copy of dwellings during the occupation of Britain, but I'm no expert.

I didn't stay much longer. Not only did bread and cheese remind me that I was hungry, but I offended lunio. I don't know what set him off, but he discussed me with cold thoroughness, my eating habits, ancestry, appearance, conduct, and method of earning a living. Iunio was pleasantas long as you agreed with him, ignored insults, and deferred to him. Many older people demand this, even in buying a thirty-nine-cent can of talcum; you learn to give it without thinking-otherwise you get a reputation as a fresh kid and potential juvenile delinquent. The less respect an older person deserves the more certain he is to demand it from anyone younger. So I left, as lunio didn't know anything helpful anyhow. As I went back I saw the cave man peering out his cave. I said, "Take it easy, Jo-Jo," and went on.

I bumped into another invisible barrier blocking our archway. I felt it, then said quietly, "I want to go in." The barrier melted away and I walked in-then found that it was back in place.

My rubber soles made no noise and I didn't call out because Peewee might be asleep. Her door was open and I peeped in. She was sitting tailor-fashion on that incredible Oriental divan, rocking Madame Pompadour and crying.

I backed away, then returned whistling, making a racket, and calling to her. She popped out of her door, with smiling face and no trace of tears. "Hi, Kip! It took you long enough."

"That guy talks too much. What's new?"

"Nothing. I ate and you didn't come back, so I took a nap. You woke me. What did you find out?"

"Let me order dinner and I'll tell you while I eat."

I was chasing the last bit of gravy when a bellhop robot came for us. It was like the other one except that it had in glowing gold on its front that triangle with three spirals. "Follow me," it said in English.

I looked at Peewee. "Didn't the Mother Thing say she was coming back?"

"Why, I thought so."

The machine repeated, "Follow me. Your presence is required."

I laid my ears back. I have taken lots of orders, some of which I shouldn't have, but I had never yet taken orders from a piece of machinery. "Go climb a rope!" I said. "You'll have to drag me."

This is not what to say to a robot. It did.

Peewee yelled, "Mother Thing! Where are you? Help us!"

Her birdsong came out of the machine. ("It's all right, dears. The servant will lead you to me.")

I quit struggling and started to walk. That refugee from an appliance dealer took us into another lift, then into a corridor whose walls whizzed past as soon as we entered. It nudged us through an enormous archway topped by the triangle and spirals and herded us into a pen near one wall. The pen was not apparent until we moved-more of that annoying solid air.

It was the biggest room I have ever been in, triangular, unbroken by post or pillar, with ceiling so high and walls so distant that I half expected local thunderstorms. An enormous room makes me feel like an ant; I was glad to be near a wall. The room was not empty-hundreds in it-but it looked empty because they were all near the walls; the giant floor was bare.

But there were three wormfaces out in the center-Wormface's trial was in progress.

I don't know if our own Wormface was there. I would not have known even if they had not been a long way off as the difference between two wormfaces is the difference between having your throat cut and being beheaded. But, as we learned, the presence or absence of the individual offender was the least important part of a trial. Wormface was being tried, present or not-alive or dead.

The Mother Thing was speaking. I could see her tiny figure, also far out on the floor but apart from the wormfaces. Her birdsong voice reached me faintly but I heard her words clearly-in English; from somewhere near us her translated words were piped to us. The feel of her was in the English translation just as it was in her bird tones.

She was telling what she knew of wormface conduct, as dispassionately as if describing something under a microscope, like a traffic officer testifying: "At 9:17 on the fifth, while on duty at-" etc. The facts. The Mother Thing was finishing her account of events on Pluto. She chopped it off at the point of explosion.

Another voice spoke, in English. It was flat with a nasal twang and reminded me of a Vermont grocer we had dealt with one summer when I was a kid. He was a man who never smiled nor frowned and what little he said was all in the same tone, whether it was, "She is a good woman," or, "That man would cheat his own son," or, "Eggs are fifty-nine cents," cold as a cash register. This voice was that sort.

It said to the Mother Thing: "Have you finished?"

"I have finished."

"The other witnesses will be heard. Clifford Russell-"

I jumped, as if that grocer had caught me in the candy jar.

The voice went on: "-listen carefully." Another voice started.

My own-it was the account I had dictated, flat on my back on Vega Five.

But it wasn't all of it; it was just that which concerned wormfaces. Adjectives and whole sentences had been cut-as if someone had taken scissors to a tape recording. The facts were there; what I thought about them was missing.

It started with ships landing in the pasture back of our house; it ended with that last wormface stumbling blindly down a hole. It wasn't long, as so much had been left out-our hike across the Moon, for example. My description of Wormface was left in but had been trimmed so much that I could have been talking about Venus de Milo instead of the ugliest thing in creation.

My recorded voice ended and the Yankee-grocer voice said, "Were those your words?"

"Huh? Yes."

"Is the account correct?"

"Yes, but-"

"Is it correct?"

"Yes."

"Is it complete?"

I wanted to say that it certainly was not-but I was beginning to understand the system. "Yes."

"Patricia Wynant Reisfeld-"

Peewee's story started earlier and covered all those days when she had been in contact with wormfaces while I was not. But it was not much longer, for, while Peewee has a sharp eye and a sharper memory, she is loaded with opinions. Opinions were left out.

When Peewee had agreed that her evidence was correct and complete the Yankee voice stated, "All witnesses have been heard, all known facts have been integrated. The three individuals may speak for themselves."

I think the wormfaces picked a spokesman, perhaps the Wormface, if he was alive and there. Their answer, as translated into English, did not have the guttural accent with which Wormface spoke English; nevertheless it was a wormface speaking. That bone-chilling yet highly intelligent viciousness, as unmistakable as a punch in the teeth, was in every syllable.

Their spokesman was so far away that I was not upset by his looks and after the first stomach-twisting shock of that voice I was able to listen more or less judicially. He started by denying that this court had jurisdiction over his sort. He was responsible only to his mother-queen and she only to their queen-groups-that's how the English came out.

That defense, he claimed, was sufficient. However, if the "Three Galaxies" confederation existed-which he had no reason to believe other than that he was now being detained unlawfully before this hiveful of creatures met as a kangaroo court-if it existed, it still had no jurisdiction over the Only People, first, because the organization did not extend to his part of space; second, because even if it were there, the Only People had never joined and therefore its rules (if it had rules) could not apply; and third, it was inconceivable that their queen-group would associate itself with this improbable "Three Galaxies" because people do not contract with animals.

This defense was also sufficient.

But disregarding for the sake of argument these complete and sufficient defenses, this trial was a mockery because no offense existed even under the so-called rules of the alleged "Three Galaxies." They (the wormfaces) had been operating in their own part of space engaged in occupying a useful but empty planet, Earth. No possible crime could lie in colonizing land inhabited merely by animals. As for the agent of Three Galaxies, she had butted in; she had not been harmed; she had merely been kept from interfering and had been detained only for the purpose of returning her where she belonged.

He should have stopped. Any of these defenses might have stood up, especially the last one. I used to think of the human race as "lords of creation"-but things had happened to me since. I was not sure that this assemblage would think that humans had rights compared with wormfaces. Certainly the wormfaces were ahead of us in many ways. When we clear jungle to make farms, do we worry if baboons are there first?

But he discarded these defenses, explained that they were intellectual exercises to show how foolish the whole thing was under any rules, from any point of view. He would now make his defense.

It was an attack.

The viciousness in his voice rose to a crescendo of hatred that made every word slam like a blow. How dared they do this? They were mice voting to bell the cat! (I know-but that's how it came out in translation.) They were animals to be eaten, or merely vermin to be exterminated. Their mercy would be rejected if offered, no negotiation was possible, their crimes would never be forgotten, the Only People would destroy them!

I looked around to see how the jury was taking it. This almost-empty hall had hundreds of creatures around the three sides and many were close to us. I had been too busy with the trial to do more than glance at them. Now I looked, for the wormface's blast was so disturbing that I welcomed a distraction.

They were all sorts and I'm not sure that any two were alike. There was one twenty feet from me who was as horrible as Wormface and amazingly like him-except that this creature's grisly appearance did not inspire disgust. There were others almost

human in appearance, although they were greatly in the minority. There was one really likely-looking chick as human as I am-except for iridescent skin and odd and skimpy notions of dress. She was so pretty that I would have sworn that the iridescence was just make-up-but I probably would have been wrong. I wondered in what language the diatribe was reaching her? Certainly not English.

Perhaps she felt my stare, for she looked around and unsmilingly examined me, as I might a chimpanzee in a cage. I guess the attraction wasn't mutual.

There was every gradation from pseudo-wormface to the iridescent girl -not only the range between, but also way out in left field; some had their own private aquaria.

I could not tell how the invective affected them. The girl creature was taking it quietly, but what can you say about a walrus thing with octopus arms? If he twitches, is he angry? Or laughing? Or itches where the twitch is?

The Yankee-voiced spokesman let the wormface rave on.

Peewee was holding my hand. Now she grabbed my ear, tilted her face and whispered, "He talks nasty." She sounded awed.

The wormface ended with a blast of hate that must have overtaxed the translator for instead of English we heard a wordless scream.

The Yankee voice said flatly, "But do you have anything to say in your defense?"

The scream was repeated, then the wormface became coherent. "I have made my defense-that no defense is necessary."

The emotionless voice went on, to the Mother Thing. "Do you speak for them?"

She answered reluctantly, "My lord peers ... I am forced to say . . . that I found them to be quite naughty." She sounded grieved.

"You find against them?"

"I do."

"Then you may not be heard. Such is the Law."

" 'Three Galaxies, One Law.' I may not speak."

The flat voice went on, "Will any witness speak favorably?"

There was silence.

That was my chance to be noble. We humans were their victims; we were in a position to speak up, point out that from their standpoint they hadn't done anything wrong, and ask mercy-if they would promise to behave in the future.

Well, I didn't. I've heard all the usual Sweetness and Light that kids get pushed at them-how they should always forgive, how there's some good in the worst of us, etc. But when I see a black widow, I step on it; I don't plead with it to be a good little spider and please stop poisoning people. A black widow spider can't help it-but that's the point.

The voice said to the wormfaces: "Is there any race anywhere which might speak for you? If so, it will be summoned."

The spokesman wormface spat at the idea. That another race might be character witnesses for them disgusted him.

"So be it," answered the Yankee voice. "Are the facts sufficient to permit a decision?"

Almost immediately the voice answered itself: "Yes."

"What is the decision?"

Again it answered itself: "Their planet shall be rotated."

It didn't sound like much-shucks, all planets rotate-and the flat voice held no expression. But the verdict scared me. The whole room seemed to shudder.

The Mother Thing turned and came toward us. It was a long way but she reached us quickly. Peewee flung herself on her; the solid air that penned us solidified still more until we three were in a private room, a silvery hemisphere.

Peewee was trembling and gasping and the Mother Thing comforted her. When Peewee had control of herself, I said nervously, "Mother Thing? What did he mean? 'Their planet shall be rotated.' "

She looked at me without letting go of Peewee and her great soft eyes were sternly sad. ("It means that their planet is tilted ninety degrees out of the space-time of your senses and mine.")

Her voice sounded like a funeral dirge played softly on a flute. Yet the verdict did not seem tragic to me. I knew what she meant; her meaning was even clearer in Vegan than in English. If you rotate a plane figure about an axis in its plane-it disappears. It is no longer in a plane and Mr. A. Square of Flatland is permanently out of touch with it.

But it doesn't cease to exist; it just is no longer where it was. It struck me that the wormfaces were getting off easy. I had halfway expected their planet to be blown up (and

I didn't doubt that Three Galaxies could do so), or something equally drastic. As it was, the wormfaces were to be run out of town and would never find their way back-there are so many, many dimensions-but they wouldn't be hurt; they were just being placed in Coventry.

But the Mother Thing sounded as if she had taken unwilling part in a hanging.

So I asked her.

("You do not understand, dear gentle Kip-they do not take their star with them.")

"Oh-" was all I could say.

Peewee turned white.

Stars are the source of life-planets are merely life's containers. Chop off the star . . . and the planet gets colder . . . and colder . . . and colder-then still colder.

How long until the very air freezes? How many hours or days to absolute zero? I shivered and got goose pimples. Worse than Pluto-

"Mother Thing? How long before they do this?" I had a queasy misgiving that I should have spoken, that even wormfaces did not deserve this. Blow them up, shoot them down-but don't freeze them.

("It is done,") she sang in that same dirgelike way.

"What?"

("The agent charged with executing the decision waits for the word ... the message goes out the instant we hear it. They were rotated out of our world even before I turned to join you. It is better so.")

I gulped and heard an echo in my mind: "-'twere well it were done quickly."

But the Mother Thing was saying rapidly, ("Think no more on 't, for now you must be brave!")

"Huh? What, Mother Thing? What happens now?"

("You'll be summoned any moment-for your own trial.")

I simply stared, I could not speak-I had thought it was all over. Peewee looked still thinner and whiter but did not cry. She wet her lips and said quietly, "You'll come with us, Mother Thing?"

("Oh, my children! I cannot. You must face this alone.")

I found my voice. "But what are we being tried for? We haven't hurt anybody. We haven't done a thing."

("Not you personally. Your race is on trial. Through you.")

Peewee turned away from her and looked at me-and I felt a thrill of tragic pride that in our moment of extremity she had turned, not to the Mother Thing, but to me, another human being.

I knew that she was thinking of the same thing I was: a ship, a ship hanging close to Earth, only an instant away and yet perhaps uncounted trillion miles in some pocket of folded space, where no DEW line gives warning, where no radar can reach.

The Earth, green and gold and lovely, turning lazily in the warm light of the Sun-

A flat voice- No more Sun.

No stars.

The orphaned Moon would bobble once, then continue around the Sun, a gravestone to the hopes of men. The few at Lunar Base and Luna City and Tombaugh Station would last weeks or even months, the only human beings left alive. Then they would go-if not of suffocation, then of grief and loneliness.

Peewee said shrilly, "Kip, she's not serious! Tell me she's not!"

I said hoarsely, "Mother Thing-are the executioners already waiting?"

She did not answer. She said to Peewee, ("It is very serious, my daughter. But do not be afraid. I exacted a promise before I surrendered you. If things go against your race, you two will return with me and be suffered to live out your little lives in my home. So stand up and tell the truth . . . and do not be afraid.")

The flat voice entered the closed space: "The human beings are summoned."

Chapter 11

We walked out onto that vast floor. The farther we went the more I felt like a fly on a plate. Having Peewee with me was a help; nevertheless it was that nightmare where you find yourself not decently dressed in a public place. Peewee clutched my hand and held Madame Pompadour pressed tightly to her. I wished that I had suited-up in Oscar-I wouldn't have felt quite so under a microscope with Oscar around me.

Just before we left, the Mother Thing placed her hand against my forehead and started to hold me with her eyes. I pushed her hand aside and looked away. "No," I told her. "No treatments! I'm not going to-oh, I know you mean well but I won't take an anesthetic. Thanks."

She did not insist; she simply turned to Peewee. Peewee looked uncertain, then shook her head. "We're ready," she piped.

The farther out we got on that great bare floor the more I regretted that I had not let the Mother Thing do whatever it was that kept one from worrying. At least I should have insisted that Peewee take it.

Coming at us from the other walls were two other flies; as they got closer I recognized them: the Neanderthal and the Legionary. The cave man was being dragged invisibly; the Roman covered ground in a long, slow, easy lope. We all arrived at the center at the same time and were stopped about twenty feet apart, Peewee and I at one point of a triangle, the Roman and the cave man each at another.

I called out, "Hail, Iunio!"

"Silence, barbarian." He looked around him, his eyes estimating the crowd at the walls.

He was no longer in casual dress. The untidy leggings were gone; strapped to his right shin was armor. Over the tunic he wore full cuirass and his head was brave with plumed helmet. All metal was burnished, all leather was clean.

He had approached with his shield on his back, route-march style. But even as we were stopped he unslung it and raised it on his left arm. He did not draw his sword as his right hand held his javelin at the ready carried easily while his wary eyes assessed the foe.

To his left the cave man hunkered himself small, as an animal crouches who has no place to hide.

"Iunio!" I called out. "Listen!" The sight of those two had me still more worried. The cave man I could not talk to but perhaps I could reason with the Roman. "Do you know why we are here?"

"I know," he tossed over his shoulder. "Today the Gods try us in their arena. This is work for a soldier and a Roman citizen. You're no help so keep out. No-watch behind me and shout. Caesar will reward you."

I started to try to talk sense but was cut off by a giant voice from everywhere: "YOU ARE NOW BEING JUDGED!"

Peewee shivered and got closer. I twisted my left hand out of her clutch, substituted my right, and put my left arm around her shoulders. "Head up, partner," I said softly. "Don't let them scare you."

"I'm not scared," she whispered as she trembled. "Kip? You do the talking."

"Is that the way you want it?"

"Yes. You don't get mad as fast as I do-and if I lost my temper . . . well, that'd be awful."

"Okay."

We were interrupted by that flat, nasal twang. As before, it seemed close by. "This case derives from the one preceding it. The three temporal samples are from a small Lanador-type planet around a star in an out-center part of the Third Galaxy. It is a very primitive area having no civilized races. This race, as you see from the samples, is barbaric. It has been examined twice before and would not yet be up for routine examination had not new facts about it come out in the case which preceded it."

The voice asked itself: "When was the last examination made?"

It answered itself: "Approximately one half-death of Thorium-230 ago." It added, apparently to us only: "About eighty thousand of your years."

Iunio jerked his head and looked around, as if trying to locate the voice. I concluded that he had heard the same figure in his corrupt Latin. Well, I was startled too-but I was numb to that sort of shock.

"Is it necessary again so soon?"

"It is. There has been a discontinuity. They are developing with unexpected speed." The flat voice went on, speaking to us: "I am your judge. Many of the civilized beings you see around you are part of me. Others are spectators, some are students, and a few are here because they hope to catch me in a mistake." The voice added, "This they have not managed to do in more than a million of your years."

I blurted out, "You are more than a million years old?" I did not add that I didn't believe it.

The voice answered, "I am older than that, but no part of me is that old. I am partly machine, which part can be repaired, replaced, recopied; I am partly alive, these parts die and are replaced. My living parts are more than a dozen dozens of dozens of civilized beings from throughout Three Galaxies, any dozen dozens of which may join with my non-living part to act. Today I am two hundred and nine qualified beings, who

have at their instant disposal all knowledge accumulated in my non-living part and all its ability to analyze and integrate."

I said sharply, "Are your decisions made unanimously?" I thought I saw a loophole-I never had much luck mixing up Dad and Mother but there had been times as a kid when I had managed to confuse issues by getting one to answer one way and the other to answer another.

The voice added evenly, "Decisions are always unanimous. It may help you to think of me as one person." It addressed everyone: "Standard sampling has been followed. The contemporary sample is the double one; the intermediate sample for curve check is the clothed single sample and was taken by standard random at a spacing of approximately one half-death of Radium-226-" The voice supplemented: "-call it sixteen hundred of your years. The remote curve-check sample, by standard procedure, was taken at two dozen times that distance."

The voice asked itself: "Why is curve-check spacing so short? Why not at least a dozen times that?"

"Because this organism's generations are very short. It mutates rapidly."

The explanation appeared to satisfy for it went on, "The youngest sample will witness first."

I thought he meant Peewee and so did she; she cringed. But the voice barked and the cave man jerked. He did not answer; he simply crouched more deeply into himself.

The voice barked again.

It then said to itself, "I observe something."

"Speak."

"This creature is not ancestor to those others."

The voice of the machine almost seemed to betray emotion, as if my dour grocer had found salt in his sugar bin. "The sample was properly taken."

"Nevertheless," it answered, "it is not a correct sample. You must review all pertinent data."

For a long five seconds was silence. Then the voice spoke: "This poor creature is not ancestor to these others; he is cousin only. He has no future of his own. Let him be returned at once to the space-time whence he came."

The Neanderthal was dragged rapidly away. I watched him out of sight with a feeling of loss. I had been afraid of him at first. Then I had despised him and was ashamed of him. He was a coward, be was filthy, he stank. A dog was more civilized. But in the past five minutes I had decided that I had better love him, see his good points-for, unsavory as he was, he was human. Maybe he wasn't my remote grandfather, but I was in no mood to disown even my sorriest relation.

The voice argued with itself, deciding whether the trial could proceed. Finally it stated: "Examination will continue. If enough facts are not developed, another remote sample of correct lineage will be summoned. Iunio."

The Roman raised his javelin higher. "Who calls Iunio?"

"Stand forth and bear witness."

Just as I feared, lunio told the voice where to go and what to do. There was no protecting Peewee from his language; it echoed back in English-not that it mattered now whether Peewee was protected from "unladylike" influences.

The flat voice went on imperturbably: "Is this your voice? Is this your witnessing?" Immediately another voice started up which I recognized as that of the Roman, answering questions, giving accounts of battle, speaking of treatment of prisoners. This we got only in English but the translation held the arrogant timbre of Iunio's voice.

Iunio shouted "Witchcraft!" and made horns at them.

The recording cut off. "The voice matches," the machine said dryly. "The recording will be integrated."

But it continued to peck at lunio, asking him details about who he was, why he was in Britain, what he had done there, and why it was necessary to serve Caesar. lunio gave short answers, then blew his top and gave none. He let out a rebel yell that bounced around that mammoth room, drew back and let fly his javelin.

It fell short. But I think he broke the Olympic record.

I found myself cheering.

Iunio drew his sword while the javelin was still rising. He flung it up in a gladiatorial challenge, shouting, "Hail, Caesar!" and dropped into guard.

He reviled them. He told them what he thought of vermin who were not citizens, not even barbarians!

I said to myself, "Oh, oh! There goes the game. Human race, you've had it."

Iunio went on and on, calling on his gods to help him, each way worse than the last, threatening them with Caesar's vengeance in gruesome detail. I hoped that, even though it was translated, Peewee would not understand much of it. But she probably did; she understood entirely too much.

I began to grow proud of him. That wormface, in diatribe, was evil; Iunio was not. Under bad grammar, worse language, and rough manner, that tough old sergeant had courage, human dignity, and a basic gallantry. He might be an old scoundrel-but he was my kind of scoundrel.

He finished by demanding that they come at him, one at a time-or let them form a turtle and he would take them all on at once. "I'll make a funeral pyre of you! I'll temper my blade in your guts! I, who am about to die, will show you a Roman's grave-piled high with Caesar's enemies!"

He had to catch his breath. I cheered again and Peewee joined in. He looked over his shoulder and grinned. "Slit their throats as I bring them down, boy! There's work to do!"

The cold voice said: "Let him now be returned to the space-time whence he came."

Iunio looked startled as invisible hands pulled him along. He called on Mars and Jove and laid about him. The sword clattered to the floor-picked itself up and returned itself to his scabbard. lunio was moving rapidly away; I cupped my hands and yelled, "Good-bye, lunio!"

"Farewell, boy! They're cowards!" He shook himself. "Nothing but filthy witchcraft!" Then he was gone.

"Clifford Russell-"

"Huh? I'm here." Peewee squeezed my hand.

"Is this your voice?"

I said, "Wait a minute-"

"Yes? Speak."

I took a breath. Peewee pushed closer and whispered, "Make it good, Kip. They mean it."

"I'll try, kid," I whispered, then went on, "What is this? I was told you intend to judge the human race."

"That is correct."

"But you can't. You haven't enough to go on. No better than witchcraft, just as lunio said. You brought in a cave man-then decided he was a mistake. That isn't your only mistake. You had lunio here. Whatever he was-and I'm not ashamed of him; I'm proud of him-he's got nothing to do with now. He's been dead two thousand years, pretty near-if you've sent him back, I mean-and all that he was is dead with him. Good or bad, he's not what the human race is now."

"I know that. You two are the test sample of your race now."

"Yes-but you can't judge from us. Peewee and I are about as far from average as any specimens can be. We don't claim to be angels, either one of us. If you condemn our race on what we have done, you do a great injustice. Judge us-or judge me, at least-"

"Me, too!"

"-on whatever I've done. But don't hold my people responsible. That's not scientific. That's not valid mathematics."

"It is valid."

"It is not. Human beings aren't molecules; they're all different." I decided not to argue about jurisdiction; the wormfaces had ruined that approach.

"Agreed, human beings are not molecules. But they are not individuals, either."

"Yes, they are!"

"They are not independent individuals; they are parts of a single organism. Each cell in your body contains your whole pattern. From three samples of the organism you call the human race I can predict the future potentialities and limits of that race."

"We have no limits! There's no telling what our future will be."

"It may be that you have no limits," the voice agreed. "That is to be determined. But, if true, it is not a point in your favor. For we have limits."

"Huh?"

"You have misunderstood the purpose of this examination. You speak of 'justice.' I know what you think you mean. But no two races have ever agreed on the meaning of that term, no matter how they say it. It is not a concept I deal with here. This is not a court of justice."

"Then what is it?"

"You would call it a 'Security Council.' Or you might call it a committee of vigilantes. It does not matter what you call it; my sole purpose is to examine your race and see if you threaten our survival. If you do, I will now dispose of you. The only certain way to avert a grave danger is to remove it while it is small. Things that I have learned about you suggest a possibility that you may someday threaten the security of Three Galaxies. I will now determine the facts."

"But you said that you have to have at least three samples. The cave man was no good."

"We have three samples, you two and the Roman. But the facts could be determined from one sample. The use of three is a custom from earlier times, a cautious habit of checking and rechecking. I cannot dispense 'justice'; I can make sure not to produce error."

I was about to say that he was wrong, even if he was a million years old. But the voice went on, "I continue the examination. Clifford Russell, is this your voice?"

My voice sounded then-and again it was my own dictated account, but this time everything was left in-purple adjectives, personal opinions, comments about other matters, every word and stutter.

I listened to enough of it, held up my hand. "All right, all right, I said it."

The recording stopped. "Do you now confirm it?"

"Eh? Yes."

"Do you wish to add, subtract, or change?"

I thought hard. Aside from a few wisecracks that I had tucked in later it was a straight-forward account. "No. I stand on it."

"And is this also your voice?"

This one fooled me. It was that endless recording I had made for Prof Joe about-well, everything on Earth . . . history, customs, peoples, the works. Suddenly I knew why Prof Joe had worn the same badge the Mother Thing wore. What did they call that?-"Planting a stool pigeon." Good Old Prof Joe, the no-good, had been a stoolie.

I felt sick.

"Let me hear more of it."

They accommodated me. I didn't really listen; I was trying to remember, not what I was hearing, but what else I might have said-what I had admitted that could be used against the human race. The Crusades? Slavery? The gas chambers at Dachau? How much had I said?

The recording droned on. Why, that thing had taken weeks to record; we could stand here until our feet went flat.

"It's my voice."

"Do you stand on this, too? Or do you wish to correct, revise, or extend?"

I said cautiously, "Can I do the whole thing over?"

"If you so choose."

I started to say that I would, that they should wipe the tape and start over. But would they? Or would they keep both and compare them? I had no compunction about lying-"tell the truth and shame the devil" is no virtue when your family and friends and your whole race are at stake.

But could they tell if I lied?

"The Mother Thing said to tell the truth and not to be afraid."

"But she's not on our side!"

"Oh, yes, she is."

I had to answer. I was so confused that I couldn't think. I had tried to tell the truth to Prof Joe ... oh, maybe I had shaded things, not included every horrid thing that makes a headline. But it was essentially true.

Could I do better under pressure? Would they let me start fresh and accept any propaganda I cooked up? Or would the fact that I changed stories be used to condemn our race?

"I stand on it!"

"Let it be integrated. Patricia Wynant Reisfeld-"

Peewee took only moments to identify and allow to be integrated her recordings; she simply followed my example.

The machine voice said: "The facts have been integrated. By their own testimony, these are a savage and brutal people, given to all manner of atrocities. They eat each other, they starve each other, they kill each other. They have no art and only the most primitive of science, yet such is their violent nature that even with so little knowledge they are now energetically using it to exterminate each other, tribe against tribe. Their driving will is such that they may succeed. But if by some unlucky chance they fail, they will inevitably, in time, reach other stars. It is this possibility which must be calculated: how soon they will reach us, if they live, and what their potentialities will be then."

The voice continued to us: "This is the indictment against you-your own savagery, combined with superior intelligence. What have you to say in your defense?"

I took a breath and tried to steady down. I knew that we had lost-yet I had to try.

I remembered how the Mother Thing had spoken. "My lord peers-"

"Correction. We are not your 'lords,' nor has it been established that you are our equals. If you wish to address someone, you may call me the 'Moderator.'"

"Yes, Mr. Moderator-" I tried to remember what Socrates had said to his judges. He knew ahead of time that he was condemned just as we knew-but somehow, though he had been forced to drink hemlock, he had won and they had lost.

No! I couldn't use his Apologia-all he had lost was his own life. This was everybody.

"-you say we have no art. Have you seen the Parthenon?"

"Blown up in one of your wars."

"Better see it before you rotate us-or you'll be missing something. Have you read our poetry? 'Our revels now are ended: these our actors, as I foretold you, were all spirits, and are melted into air, into thin air: And, like the baseless fabric of this vision, the cloud-capped towers, the gorgeous palaces, the solemn temples, the great globe itself . . . itself-yea-all which it ... inherit-shall dissolve-"

I broke down. I heard Peewee sobbing beside me. I don't know why I picked that one-but they say the subconscious mind never does things "accidentally." I guess it had to be that one.

"As it well may," commented the merciless voice.

"I don't think it's any of your business what we do-as long as we leave you alone-" My stammer was back and I was almost sobbing.

"We have made it our business."

"We aren't under your government and-"

"Correction. Three Galaxies is not a government; conditions for government cannot obtain in so vast a space, such varied cultures. We have simply formed police districts for mutual protection."

"But-even so, we haven't troubled your cops. We were in our own backyards-I was in my own backyard!-when these wormface things came along and started troubling us. We haven't hurt you."

I stopped, wondering where to turn. I couldn't guarantee good behavior, not for the whole human race-the machine knew it and I knew it.

"Inquiry." It was talking to itself again. "These creatures appear to be identical with the Old Race, allowing for mutation. What part of the Third Galaxy are they from?"

It answered itself, naming co-ordinates that meant nothing to me. "But they are not of the Old Race; they are ephemerals. That is the danger; they change too fast."

"Didn't the Old Race lose a ship out that way a few half-deaths of Thorium-230 ago? Could that account for the fact that the youngest sample failed to match?"

It answered firmly, "It is immaterial whether or not they may be descended from the Old Race. An examination is in progress; a decision must be made."

"The decision must be sure."

"It will be." The bodyless voice went on, to us: "Have either of you anything to add in your defense?"

I had been thinking of what had been said about the miserable state of our science. I wanted to point out that we had gone from muscle power to atomic power in only two centuries-but I was afraid that fact would be used against us. "Peewee, can you think of anything?"

She suddenly stepped forward and shrilled to the air, "Doesn't it count that Kip saved the Mother Thing?"

"No," the cold voice answered. "It is irrelevant."

"Well, it ought to count!" She was crying again. "You ought to be ashamed of yourselves! Bullies! Cowards! Oh, you're worse than wormfaces!"

I pulled her back. She hid her head against my shoulder and shook. Then she whispered, "I'm sorry, Kip. I didn't mean to. I guess I've ruined it."

"It was ruined anyhow, honey."

"Have you anything more to say?" old no-face went on relentlessly.

I looked around at the hall. -the cloud-capped towers . . . the great globe itself- "Just this!" I said savagely. "It's not a defense, you don't want a defense. All right, take away our star- You will if you can and I guess you can. Go ahead! We'll make a star! Then, someday, we'll come back and hunt you down-all of you!"

"That's telling 'em. Kip! That's telling them!"

Nobody bawled me out. I suddenly felt like a kid who has made a horrible mistake at a party and doesn't know how to cover it up.

But I meant it. Oh, I didn't think we could do it. Not yet. But we'd try. "Die trying" is the proudest human thing.

"It is possible that you will," that infuriating voice went on. "Are you through?"

"I'm through." We all were through . . . every one of us.

"Does anyone speak for them? Humans, will any race speak for you?"

We didn't know any other races. Dogs- Maybe dogs would.

"I speak for them!"

Peewee raised her head with a jerk. "Mother Thing!"

Suddenly she was in front of us. Peewee tried to run to her, bounced off that invisible barrier. I grabbed her. "Easy, hon. She isn't there-it's some sort of television."

"My lord peers . . . you have the advantage of many minds and much knowledge-" It was odd to see her singing, hear her in English; the translation still held that singing quality.

"-but I know them. It is true that they are violent-especially the smaller one-but they are not more violent than is appropriate to their ages. Can we expect mature restraint in a race whose members all must die in early childhood? And are not we ourselves violent? Have we not this day killed our billions? Can any race survive without a willingness to fight? It is true that these creatures are often more violent than is necessary or wise. But, my peers, they all are so very young. Give them time to learn."

"That is exactly what there is to fear, that they may learn. Your race is overly sentimental; it distorts your judgment."

"Not true! We are compassionate, we are not foolish. I myself have been the proximate cause of how many, many adverse decisions? You know; it is in your records-I prefer not to remember. And I shall be again. When a branch is diseased beyond healing, it must be pruned. We are not sentimental; we are the best watchers you have ever found, for we do it without anger. Toward evil we have no mercy. But the mistakes of a child we treat with loving forbearance."

"Have you finished?"

"I say that this branch need not be pruned! I have finished."

The Mother Thing's image vanished. The voice went on, "Does any other race speak for them?"

"I do." Where she had been now stood a large green monkey. He stared at us and shook his head, then suddenly did a somersault and finished looking at us between his legs. "I'm no friend of theirs but I am a lover of 'justice'-in which I differ from my colleagues in this Council." He twirled rapidly several times. "As our sister has said, this race is young. The infants of my own noble race bite and scratch each other-some even die from it. Even I behaved so, at one time." He jumped into the air, landed on his hands, did a flip from that position. "Yet does anyone here deny that I am civilized?" He stopped, looked at us thoughtfully while scratching. "These are brutal savages and I don't see how anyone could ever like them-but I say: give them their chance!"

His image disappeared.

The voice said, "Have you anything to add before a decision is reached?"

I started to say: No, get it over with-when Peewee grabbed my ear and whispered. I listened, nodded, and spoke. "Mr. Moderator-if the verdict is against us-can you hold off your hangmen long enough to let us go home? We know that you can send us home in only a few minutes."

The voice did not answer quickly. "Why do you wish this? As I have explained, you are not personally on trial. It has been arranged to let you live."

"We know. We'd rather be home, that's all-with our people."

Again a tiny hesitation. "It shall be done."

"Are the facts sufficient to permit a decision?"

"Yes."

"What is the decision?"

"This race will be re-examined in a dozen half-deaths of radium. Meanwhile there is danger to it from itself. Against this mischance it will be given assistance. During the probationary period it will be watched closely by Guardian Mother-" the machine trilled the true Vegan name of the Mother Thing "-the cop on that beat, who will report at once any ominous change. In the meantime we wish this race good progress in its long journey upward.

"Let them now be returned forthwith to the space-time whence they came."

Chapter 12

I didn't think it was safe to make our atmosphere descent in New Jersey without filing a flight plan. Princeton is near important targets; we might be homed-on by everything up to A-missiles. The Mother Thing got that indulgent chuckle in her song: ("I fancy we can avoid that.")

She did. She put us down in a side street, sang good-bye and was gone. It's not illegal to be out at night in space suits, even carrying a rag dolly. But it's unusual-cops hauled us in. They phoned Peewee's father and in twenty minutes we were in his study, drinking cocoa and talking and eating shredded wheat.

Peewee's mother almost had a fit. While we told our story she kept gasping, "I can't believe it!" until Professor Reisfeld said, "Stop it, Janice. Or go to bed." I don't blame her. Her daughter disappears on the Moon and is given up for dead-then miraculously reappears on Earth. But Professor Reisfeld believed us. The way the Mother Thing had "understanding" he had "acceptance." When a fact came along, he junked theories that failed to match.

He examined Peewee's suit, had her switch on the helmet, shined a light to turn it opaque, all with a little smile. Then he reached for the phone. "Dario must see this."

"At midnight. Curt?"

"Please, Janice. Armageddon won't wait for office hours."

"Professor Reisfeld?"

"Yes, Kip?"

"Uh, you may want to see other things first."

"That's possible."

I took things from Oscar's pockets-two beacons, one for each of us, some metal "paper" covered with equations, two "happy things," and two silvery spheres. We had

stopped on Vega Five, spending most of the time under what I suppose was hypnosis while Prof Joe and another professor thing pumped us for what we knew of human mathematics. They hadn't been learning math from us-oh, no! They wanted the language we use in mathematics, from radicals and vectors to those weird symbols in higher physics, so that they could teach us; the results were on the metal paper. First I showed Professor Reisfeld the beacons. "The Mother Thing's beat now includes us. She says to use these if we need her. She'll usually be close by-a thousand light-years at most. But even if she is far away, she'll come."

"Oh." He looked at mine. It was neater and smaller than the one she haywired on Pluto. "Do we dare take it apart?"

"Well, it's got a lot of power tucked in it. It might explode."

"Yes, it might." He handed it back, looking wistful.

A "happy thing" can't be explained. They look like those little abstract sculptures you feel as well as look at. Mine was like obsidian but warm and not hard; Peewee's was more like jade. The surprise comes when you touch one to your head. I had Professor Reisfeld do so and he looked awed-the Mother Thing is all around you and you feel warm and safe and understood.

He said, "She loves you. The message wasn't for me. Excuse me."

"Oh, she loves you, too."

"Eh?"

"She loves everything small and young and fuzzy and helpless. That's why she's a 'mother thing.' "

I didn't realize how it sounded. But he didn't mind. "You say she is a police officer?"

"Well, she's more of a juvenile welfare officer-this is a slum neighborhood we're in, backward and pretty tough. Sometimes she has to do things she doesn't like. But she's a good cop and somebody has to do nasty jobs. She doesn't shirk them."

"I'm sure she wouldn't."

"Would you like to try it again?"

"Do you mind?"

"Oh, no, it doesn't wear out."

He did and got that warm happy look. He glanced at Peewee, asleep with her face in her cereal. "I need not have worried about my daughter, between the Mother Thing- and you."

"It was a team," I explained. "We couldn't have made it without Peewee. The kid's got guts."

"Too much, sometimes."

"Other times you need that extra. These spheres are recorders. Do you have a tape recorder, Professor?"

"Certainly, sir." We set it up and let a sphere talk to it. I wanted a tape because the spheres are one-shot-the molecules go random again. Then I showed him the metal paper. I had tried to read it, got maybe two inches into it, then just recognized a sign here and there. Professor Reisfeld got halfway down the first page, stopped. "I had better make those phone calls."

At dawn a sliver of old Moon came up and I tried to judge where Tombaugh Station was. Peewee was asleep on her Daddy's couch, wrapped in his bathrobe and clutching Madame Pompadour. He had tried to carry her to bed but she had wakened and become very, very difficult, so he put her down. Professor Reisfeld chewed an empty pipe and listened to my sphere whispering softly to his recorder. Occasionally he darted a question at me and I'd snap out of it.

Professor Giomi and Dr. Bruck were at the other end of the study, filling a blackboard, erasing and filling it again, while they argued over that metal paper. Geniuses are common at the Institute for Advanced Study but these two wouldn't be noticed anywhere; Bruck looked like a truckdriver and Giomi like an excited Iunio. They both had that Okay-I-get-you that Professor Reisfeld had. They were excited but Dr. Bruck showed it only by a tic in his face-which Peewee's Daddy told me was a guarantee of nervous breakdowns-not for Bruck, for other physicists.

Two mornings later we were still there. Professor Reisfeld had shaved; the others hadn't. I napped and once I took a shower. Peewee's Daddy listened to recordings-he was now replaying Peewee's tape. Now and then Bruck and Giomi called him over, Giomi almost hysterical and Bruck stolid. Professor Reisfeld always asked a question or two, nodded and came back to his chair. I don't think he could work that math-but he could soak up results and fit them with other pieces.

I wanted to go home once they were through with me but Professor Reisfeld said please stay; the Secretary General of the Federated Free Nations was coming.

I stayed. I didn't call home because what was the use in upsetting them? I would rather have gone to New York City to meet the Secretary General, but Professor Reisfeld

had invited him here-I began to realize that anybody really important would come if Professor Reisfeld asked him.

Mr. van Duivendijk was slender and tall. He shook hands and said, "I understand that you are Dr. Samuel C. Russell's son."

"You know my father, sir?"

"I met him years ago, at the Hague."

Dr. Bruck turned-he had barely nodded at the Secretary General. "You're Sam Russell's boy?"

"Uh, you know him, too?"

"Of course. On the Statistical Interpretation of Imperfect Data. Brilliant." He turned back and got more chalk on his sleeve. I hadn't known that Dad had written such a thing, nor suspected that he knew the top man in the Federation. Sometimes I think Dad is eccentric.

Mr. van D. waited until the double domes came up for air, then said, "You have something, gentlemen?"

"Yeah," said Bruck.

"Superb!" agreed Giomi.

"Such as?"

"Well-" Dr. Bruck pointed at a line of chalk. "That says you can damp out a nuclear reaction at a distance."

"What distance?"

"How about ten thousand miles? Or must you do it from the Moon?"

"Oh, ten thousand miles is sufficient, I imagine."

"You could do it from the Moon," Giomi interrupted, "if you had enough power. Magnificent!"

"It is," agreed van Duivendijk. "Anything else?"

"What do you want?" demanded Bruck. "Egg in your suds?"

"Well?"

"See that seventeenth line? It may mean anti-gravity, I ain't promising. Or, if you rotate ninety degrees, this unstable Latin thinks it's time travel."

"It is!"

"If he's right, the power needed is a fair-sized star-so forget it." Bruck stared at hen's tracks. "A new approach to matter conversion-possibly. How about a power pack for your vest pocket that turns out more ergs than the Brisbane reactors?"

"This can be done?"

"Ask your grandson. It won't be soon." Bruck scowled.

"Dr. Bruck, why are you unhappy?" asked Mr. van D.

Bruck scowled harder. "Are you goin' to make this Top Secret'? I don't like classifying mathematics. It's shameful."

I batted my ears. I had explained to the Mother Thing about "classified" and I think I shocked her. I said that the FFN had to have secrets for survival, just like Three Galaxies. She couldn't see it. Finally she had said that it wouldn't make any difference in the long run. But I had worried because while I don't like science being "secret," I don't want to be reckless, either.

Mr. van D. answered, "I don't like secrecy. But I have to put up with it."

"I knew you would say that!"

"Please. Is this a U.S. government project?"

"Eh? Of course not."

"Nor a Federation one. Very well, you've shown me some equations. I can't tell you not to publish them. They're yours."

Bruck shook his head. "Not ours." He pointed at me. "His."

"I see." The Secretary General looked at me. "I am a lawyer, young man. If you wish to publish, I see no way to stop you."

"Me? It's not mine-I was just-well, a messenger."

"You seem to have the only claim. Do you wish this published? Perhaps with all your names?" I got the impression that he wanted it published.

"Well, sure. But the third name shouldn't be mine; it should be-" I hesitated. You can't put a birdsong down as author. "-uh, make it 'Dr. M. Thing.'"

"Who is he?"

"She's a Vegan. But we could pretend it's a Chinese name."

The Secretary General stayed on, asking questions, listening to tapes. Then he made a phone call-to the Moon. I knew it could be done, I never expected to see it. "Van Duivendijk here . . . yes, the Secretary General. Get the Commanding General . . . Jim? . . . This connection is terrible . . . Jim, you sometimes order practice maneuvers . . . My call is unofficial but you might check a valley-" He turned to me; I answered quickly. "-a valley just past the mountains east of Tombaugh Station. I haven't consulted the Security Council; this is between friends. But if you go into that valley I very strongly suggest that it be done in force, with all weapons. It may have snakes in it. The snakes will be camouflaged. Call it a hunch. Yes, the kids are fine and so is Beatrix. I'll phone Mary and tell her I talked with you."

The Secretary General wanted my address. I couldn't say when I would be home because I didn't know how I would get there-I meant to hitchhike but didn't say so. Mr. van D.'s eyebrows went up. "I think we owe you a ride home. Eh, Professor?"

"That would not be overdoing it."

"Russell, I heard on your tape that you plan to study engineering-with a view to space."

"Yes, sir. I mean, 'Yes, Mr. Secretary.' "

"Have you considered studying law? Many young engineers want to space-not many lawyers. But the Law goes everywhere. A man skilled in space law and meta-law would be in a strong position."

"Why not both?" suggested Peewee's Daddy. "I deplore this modern overspecialization."

"That's an idea," agreed Mr. van Duivendijk. "He could then write his own terms."

I was about to say I should stick to electronics-when suddenly I knew what I wanted to do. "Uh, I don't think I could handle both."

"Nonsense!" Professor Reisfeld said severely.

"Yes, sir. But I want to make space suits that work better. I've got some ideas."

"Mmm, that's mechanical engineering. And many other things, I imagine. But you'll need an M.E. degree." Professor Reisfeld frowned. "As I recall your tape, you passed College Boards but hadn't been accepted by a good school." He drummed his desk. "Isn't that silly, Mr. Secretary? The lad goes to the Magellanic Clouds but can't go to the school he wants."

"Well, Professor? You pull while I push?"

"Yes. But wait." Professor Reisfeld picked up his phone. "Susie, get me the President of M.I.T. I know it's a holiday; I don't care if he's in Bombay or in bed; get him. Good girl." He put down the phone. "She's been with the Institute five years and on the University switchboard before that. She'll get him."

I felt embarrassed and excited. M.I.T.-anybody would jump at the chance. But tuition alone would stun you. I tried to explain that I didn't have the money. "I'll work the rest of this school and next summer-I'll save it."

The phone rang. "Reisfeld here. Hi, Oppie. At the class reunion you made me promise to tell you if Bruck's tic started bothering him. Hold onto your chair; I timed it at twenty-one to the minute. That's a record. . . . Slow down; you won't send anybody, unless I get my pound of flesh. If you start your lecture on academic freedom and 'the right to know,' I'll hang up and call Berkeley. I can do business there-and I know I can here, over on the campus. . . . Not much, just a four-year scholarship, tuition and fees. . . . Don't scream at me; use your discretionary fund-or make it a wash deal in bookkeeping. You're over twenty-one; you can do arithmetic. . . . Nope, no hints. Buy a pig in a poke or your radiation lab won't be in on it. Did I say 'radiation lab'? I meant the entire physical science department. You can flee to South America, don't let me sway you. . . . What? I'm an embezzler, too. Hold it." Professor Reisfeld said to me, "You applied for M.I.T.?"

"Yes, sir, but-"

"He's in your application files, 'Clifford C. Russell.' Send the letter to his home and have the head of your team fetch my copy. . . . Oh, a broad team, headed by a mathematical physicist-Farley, probably; he's got imagination. This is the biggest thing since the apple konked Sir Isaac. . . . Sure, I'm a blackmailer, and you are a chair warmer and a luncheon speaker. When are you returning to the academic life? . . . Best to Beulah. 'Bye."

He hung up. "That's settled. Kip, the one thing that confuses me is why those worm-faced monsters wanted me."

I didn't know how to say it. He had told me only the day before that he had been correlating odd data-unidentified sightings, unexpected opposition to space travel, many things that did not fit. Such a man is likely to get answers-and be listened to. If he had a weakness, it was modesty-which he hadn't passed on to Peewee. If I told him that invaders from outer space had grown nervous over his intellectual curiosity, he would

have pooh-poohed it. So I said, "They never told us, sir. But they thought you were important enough to grab."

Mr. van Duivendijk stood up. "Curt, I won't waste time listening to nonsense. Russell, I'm glad your schooling is arranged. If you need me, call me."

When he was gone, I tried to thank Professor Reisfeld. "I meant to pay my way, sir. I would have earned the money before school opens again."

"In less than three weeks? Come now. Kip."

"I mean the rest of this year and-"

"Waste a year? No."

"But I already-" I looked past his head at green leaves in their garden. "Professor . . . what date is it?"

"Why, Labor Day, of course."

("-forthwith to the space-time whence they came.")

Professor Reisfeld flipped water in my face. "Feeling better?"

"I-I guess so. We were gone for weeks."

"Kip, you've been through too much to let this shake you. You can talk it over with the stratosphere twins-" He gestured at Giomi and Bruck. "-but you won't understand it. At least I didn't. Why not assume that a hundred and sixty-seven thousand light-years leaves room for Tennessee windage amounting to only a hair's breadth of a fraction of one per cent? Especially when the method doesn't properly use space-time at all?"

When I left, Mrs. Reisfeld kissed me and Peewee blubbered and had Madame Pompadour say good-bye to Oscar, who was in the back seat because the Professor was driving me to the airport.

On the way he remarked, "Peewee is fond of you."

"Uh, I hope so."

"And you? Or am I impertinent?"

"Am I fond of Peewee? I certainly am! She saved my life four or five times." Peewee could drive you nuts. But she was gallant and loyal and smart-and had guts.

"You won a life-saving medal or two yourself."

I thought about it. "Seems to me I fumbled everything I tried. But I had help and an awful lot of luck." I shivered at how luck alone had kept me out of the soup-real soup.

" 'Luck' is a question-begging word," he answered. "You spoke of the 'amazing luck' that you were listening when my daughter called for help. That wasn't luck."

"Huh? I mean, 'Sir'?"

"Why were you on that frequency? Because you were wearing a space suit. Why were you wearing it? Because you were determined to space. When a space ship called, you answered. If that is luck, then it is luck every time a batter hits a ball. Kip, 'good luck' follows careful preparation; 'bad luck' comes from sloppiness. You convinced a court older than Man himself that you and your kind were worth saving. Was that mere chance?"

"Uh . . . fact is, I got mad and almost ruined things. I was tired of being shoved around."

"The best things in history are accomplished by people who get 'tired of being shoved around.' " He frowned. "I'm glad you like Peewee. She is about twenty years old intellectually and six emotionally; she usually antagonizes people. So I'm glad she has gained a friend who is smarter than she is."

My jaw dropped. "But, Professor, Peewee is much smarter than I am. She runs me ragged."

He glanced at me. "She's run me ragged for years-and I'm not stupid. Don't downgrade yourself, Kip."

"It's the truth."

"So? The greatest mathematical psychologist of our time, a man who always wrote his own ticket even to retiring when it suited him-very difficult, when a man is in demand-this man married his star pupil. I doubt if their offspring is less bright than my own child."

I had to untangle this to realize that he meant me. Then I didn't know what to Say. How many kids really know their parents? Apparently I didn't.

He went on, "Peewee is a handful, even for me. Here's the airport. When you return for school, please plan on visiting us. Thanksgiving, too, if you will-no doubt you'll go home Christmas."

"Uh, thank you, sir. I'll be back."

"Good."

"Uh, about Peewee-if she gets too difficult, well, you've got the beacon. The Mother Thing can handle her."

"Mmm, that's a thought."

"Peewee tries to get around her but she never does. Oh-I almost forgot. Whom may I tell? Not about Peewee. About the whole thing."

"Isn't that obvious?"

"Sir?"

"Tell anybody anything. You won't very often. Almost no one will believe you."

I rode home in a courier jet-those things go fast. Professor Reisfeld had insisted on lending me ten dollars when he found out that I had only a dollar sixty-seven, so I got a haircut at the bus station and bought two tickets to Centerville to keep Oscar out of the luggage compartment; he might have been damaged. The best thing about that scholarship was that now I needn't ever sell him-not that I would.

Centerville looked mighty good, from elms overhead to the chuckholes under foot. The driver stopped near our house because of Oscar; he's clumsy to carry. I went to the barn and racked Oscar, told him I'd see him later, and went in the back door.

Mother wasn't around. Dad was in his study. He looked up from reading. "Hi, Kip."

"Hi, Dad."

"Nice trip?"

"Uh, I didn't go to the lake."

"I know. Dr. Reisfeld phoned-he briefed me thoroughly."

"Oh. It was a nice trip-on the whole." I saw that he was holding a volume of the Britannica, open to "Magellanic Clouds."

He followed my glance. "I've never seen them," he said regretfully. "I had a chance once, but I was busy except one cloudy night."

"When was that. Dad?"

"In South America, before you were born."

"I didn't know you had been there."

"It was a cloak-and-daggerish government job-not one to talk about. Are they beautiful?"

"Uh, not exactly." I got another volume, turned to "Nebulae" and found the Great Nebula of Andromeda. "Here is beauty. That's the way we look."

Dad sighed. "It must be lovely."

"It is. I'll tell you all about it. I've got a tape, too."

"No hurry. You've had quite a trip. Three hundred and thirty-three thousand light-years-is that right?"

"Oh, no, just half that."

"I meant the round trip."

"Oh. But we didn't come back the same way."

"Eh?"

"I don't know how to put it, but in these ships, if you make a jump, any jump, the short way back is the long way 'round. You go straight ahead until you're back where you started. Well, not 'straight' since space is curved-but straight as can be. That returns everything to zero."

"A cosmic great-circle?"

"That's the idea. All the way around in a straight line."

"Mmm-" He frowned thoughtfully. "Kip, how far is it, around the Universe? The red-shift limit?"

I hesitated. "Dad, I asked-but the answer didn't mean anything." (The Mother Thing had said, "How can there be 'distance' where there is nothing?") "It's not a distance; it's more of a condition. I didn't travel it; I just went. You don't go through, you slide past."

Dad looked pensive. "I should know not to ask a mathematical question in words."

I was about to suggest that Dr. Bruck could help when Mother sang out: "Hello, my darlings!"

For a split second I thought I was hearing the Mother Thing.

She kissed Dad, she kissed me. "I'm glad you're home, dear."

"Uh-" I turned to Dad.

"She knows."

"Yes," Mother agreed in a warm indulgent tone, "and I don't mind where my big boy goes as long as he comes home safely. I know you'll go as far as you want to." She patted my cheek. "And I'll always be proud of you. Myself, I've just been down to the corner for another chop."

Next morning was Tuesday, I went to work early. As I expected, the fountain was a mess. I put on my white jacket and got cracking. Mr. Charton was on the phone; he hung up and came over. "Nice trip. Kip?"

"Very nice, Mr. Charton."

"Kip, there's something I've been meaning to say. Are you still anxious to go to the Moon?"

I was startled. Then I decided that he couldn't know.

Well, I hadn't seen the Moon, hardly, I was still eager-though not as much in a hurry. "Yes, sir. But I'm going to college first."

"That's what I mean. I- Well, I have no children. If you need money, say so."

He had hinted at pharmacy school-but never this. And only last night Dad had told me that he had bought an education policy for me the day I was born-he had been waiting to see what I would do on my own. "Gee, Mr. Charton, that's mighty nice of you!"

"I approve of your wanting an education."

"Uh, I've got things lined up, sir. But I might need a loan someday."

"Or not a loan. Let me know." He bustled away, plainly fussed.

I worked in a warm glow, sometimes touching the happy thing, tucked away in a pocket. Last night I had let Mother and Dad put it to their foreheads. Mother had cried; Dad said solemnly, "I begin to understand, Kip." I decided to let Mr. Charton try it when

I could work around to it. I got the fountain shining and checked the air conditioner. It was okay.

About midafternoon Ace Quiggle came in, plunked himself down. "Hi, Space Pirate! What do you hear from the Galactic Overlords? Yuk yuk yukkity yuk!"

What would he have said to a straight answer? I touched the happy thing and said, "What'll it be. Ace?"

"My usual, of course, and snap it up!"

"A choc malt?"

"You know that. Look alive. Junior! Wake up and get hep to the world around you."

"Sure thing, Ace." There was no use fretting about Ace; his world was as narrow as the hole between his ears, no deeper than his own hog wallow. Two girls came in; I served them cokes while Ace's malt was in the mixer. He leered at them. "Ladies, do you know Commander Comet here?" One of them tittered; Ace smirked and went on: "I'm his manager. You want hero-ing done, see me. Commander, I've been thinking about that ad you're goin' to run."

"Huh?"

"Keep your ears open. 'Have Space Suit-Will Travel,' that doesn't say enough. To make money out of that silly clown suit, we got to have oomph. So we add: "Bug-Eyed Monsters Exterminated-World Saving a Specialty-Rates on Request.' Right?"

I shook my head. "No, Ace."

"S'matter with you? No head for business?"

"Let's stick to the facts. I don't charge for world saving and don't do it to order; it just happens. I'm not sure I'd do it on purpose-with you in it."

Both girls tittered. Ace scowled. "Smart guy, eh? Don't you know that the customer is always right?"

"Always?"

"He certainly is. See that you remember it. Hurry up that malt!"

"Yes, Ace." I reached for it; he shoved thirty-five cents at me; I pushed it back. "This is on the house." I threw it in his face.

'If This Goes On-'

It was cold on the rampart. I slapped my numbed hands together, then stopped hastily for fear of disturbing the Prophet. My post that night was just outside his personal apartments-a post that I had won by taking more than usual care to be neat and smart at guard mount...but I had no wish to call attention to myself now.

I was young then and not too bright-a legate fresh out of West Point, and a guardsman in the Angels of the Lord, the personal guard of the Prophet Incarnate. At birth my mother had consecrated me to the Church and at eighteen my Uncle Absolom, a senior lay censor, had prayed an appointment to the Military Academy for me from the Council of Elders.

West Point had suited me. Oh, I had joined in the usual griping among classmates, the almost ritualistic complaining common to all military life, but truthfully I enjoyed the monastic routine-up at five, two hours of prayers and meditation, then classes and lectures in the endless subjects of a military education, strategy and tactics, theology, mob psychology, basic miracles. In. the afternoons we practiced with vortex guns and blasters, drilled with tanks, and hardened our bodies with exercise.

I did not stand very high on graduation and had not really expected to be assigned to the Angels of the Lord, even though I had put in for it. But I had always gotten top marks in piety and stood well enough in most of the practical subjects; I was chosen. It made me almost sinfully proud-the holiest regiment of the Prophet's hosts, even the privates of which were commissioned officers and whose Colonel-in-Chief was the Prophet's Sword Triumphant, marshal of all the hosts. The day I was invested in the shining buckler and spear worn only by the Angels I vowed to petition to study for the priesthood as soon as promotion to captain made me eligible.

But this night, months later, though my buckler was still shining bright, there was a spot of tarnish in my heart. Somehow, life at New Jerusalem was not as I had imagined it while at West Point. The Palace and Temple were shot through with intrigue and politics; priests and deacons, ministers of state, and Palace functionaries all seemed engaged in a scramble for power and favor at the hand of the Prophet. Even the officers of my own corps seemed corrupted by it. Our proud motto 'Non Sihi, Sed Dei' now had a wry flavor in my mouth.

Not that I was without sin myself. While I had not joined in the struggle for worldly preference, I had done something which I knew in my heart to be worse: 1 had looked with longing on a consecrated female.

Please understand me better than I understood myself. I was a grown man in body, an infant in experience. My own mother was the only woman I had ever known well. As a kid in junior seminary before going to the Point I was almost afraid of girls; my interests were divided between my lessons, my mother, and our parish's troop of Cherubim, in which I was a patrol leader and an assiduous winner of merit badges in everything from woodcraft to memorizing scripture. If there had been a merit badge to be won in the subject of girls-but of course there was not.

At the Military Academy 1 simply saw no females, nor did I have much to confess in the way of evil thoughts. My human feelings were pretty much still in freeze, and my occasional uneasy dreams I regarded as temptations sent by Old Nick. But New

Jerusalem is not West Point and the Angels were neither forbidden to marry nor were we forbidden proper and sedate association with women. True, most of my fellows did not ask permission to marry, as it would have meant transferring to one of the regular regiments and many of them cherished ambitions for the military priesthood-but it was not forbidden.

Nor were the lay deaconesses who kept house around the Temple and the Palace forbidden to marry. But most of them were dowdy old creatures who reminded me of my aunts, hardly subjects for romantic thoughts. I used to chat with them occasionally around the corridors, no harm in that. Nor was I attracted especially by any of the few younger sisters-until I met Sister Judith.

I had been on watch in this very spot more than a month earlier. It was the first time I had stood guard outside the Prophet's apartments and, while I was nervous when first posted, at that moment I had been no more than alert against the possibility of the warden-of-the-watch making his rounds.

That night a light had shone brightly far down the inner corridor opposite my post and I had heard a sound of people moving; I had glanced at my wrist chrono-yes, that would be the Virgins ministering to the Prophet... - no business of mine. Each night at ten o'clock their watch changed-their 'guard mount' I called it, though I had never seen the ceremony and never would. All that I actually knew about it was that those coming on duty for the next twenty-four hours drew lots at that time for the privilege of personal attendance in the sacred presence of the Prophet Incarnate.

I had listened briefly and had turned away. Perhaps a quarter of an hour later a slight form engulfed in a dark cloak had slipped past me to the parapet, there to stand and look at the stars. I had had my blaster out at once, then had returned it sheepishly, seeing that it was a deaconess.

I had assumed that she was a lay deaconess; I swear that it did not occur to me that she might be a holy deaconess. There was no rule in my order book telling me to forbid them to come outside, but I had never heard of one doing so.

I do not think that she had seen me before I spoke to her. 'Peace be unto you, sister.'

She had jumped and suppressed a squeal, then had gathered her dignity to answer, "And to you, little brother.'

It was then that I had seen on her forehead the Seal of Solomon, the mark of the personal family of the Prophet. 'Your pardon, Elder Sister. I did not see.'

'I am not annoyed.' It had seemed to me that she invited conversation. I knew that it was not proper for us to converse privately; her mortal being was dedicated to the Prophet just as her soul was the Lord's, but I was young and lonely-and she was young and very pretty.

'Do you attend the Holy One this night, Elder Sister?'

She had shaken her head at that. 'No, the honor passed me by. My lot was not drawn.'

'It must be a great and wonderful privilege to serve him directly.'

'No doubt, though I cannot say of my own knowledge. My lot has never yet been drawn.' She had added impulsively, 'I'm a little nervous about it. You see, I haven't been here long.'

Even though she .was my senior in rank, her display of feminine weakness had touched me. 'I am sure that you will deport yourself with credit.'

'Thank you.'

We had gone on chatting. She had been in New Jerusalem, it developed, even less time than had I. She had been reared on a farm in upper New York State and there she had been sealed to the Prophet at the Albany Seminary. In turn I had told her that 1 had been born in the middle west, not fifty miles from the Well of Truth, where the First Prophet was incarnated. I then told her that my name was John Lyle and she had answered that she was called Sister Judith.

I had forgotten all about the warden-of-the-watch and his pesky rounds and was ready to chat all night, when my chrono had chimed the quarter hour. 'Oh, dear!' Sister Judith had exclaimed. 'I should have gone straight back to my cell.' She had started to hurry away, then had checked herself. 'You wouldn't tell on me, John Lyle?'

'Me? Oh, never!'

I had continued to think about her the rest of the watch. When the warden did make rounds I was a shade less than alert.

A mighty little on which to found a course of folly, eh? A single drink is a great amount to a teetotaler; I was not able to get Sister Judith out of my mind. In the month that followed I saw her half a dozen times. Once I passed her on an escalator; she was going down as I was going up. We did not even speak, but she had recognized me and smiled. I rode that escalator all night that night in my dreams, hut I could never get off and speak to her. The other encounters were just as trivial. Another time I heard her voice call out to me quietly, 'Hello, John Lyle,' and I turned just in time to see a hooded figure go past my elbow through a door. Once I watched her feeding the swans in the moat; I did not dare approach her but I think that she saw me.

The Temple Herald printed the duty lists of both my service and hers. I was standing a watch in five; the Virgins drew lots once a week. So it was just over a month later that our watches again matched. I saw her name-and vowed that I would win the guard mount that evening and again be posted at the post of honor before the Prophet's own apartments. I had no reason to think that Judith would seek me out on the rampart-but I was sure in my heart that she would. Never at West Point had I ever expended more spit-and-polish; I could have used my buckler for a shaving mirror.

But here it was nearly half past ten and no sign of Judith, although I had heard the Virgins gather down the corridor promptly at ten. All I had to show for my efforts was the poor privilege of standing watch at the coldest post in the Palace.

Probably, I thought glumly, she comes out to flirt with the guardsmen on watch every time she has a chance. I recalled bitterly that all women were vessels of iniquity and had always been so since the Fall of Man. Who was I to think that she had singled me out for special friendship? She had probably considered the night too cold to bother.

I heard a footstep and my heart leaped with joy. But it was only the warden making his rounds. I brought my pistol to the ready and challenged him; his voice came back, 'Watchman, what of the night?'

I answered mechanically, 'Peace on Earth,' and added, 'It is cold, Elder Brother.'

'Autumn in the air,' he agreed. 'Chilly even in the Temple.' He passed on by with his pistol and his bandolier of paralysis bombs slapping his armor to his steps. He was a

nice old duffer and usually stopped for a few friendly words; tonight he was probably eager to get back to the warmth of the guardroom. I went back to my sour thoughts.

'Good evening, John Lyle.'

I almost jumped out of my boots. Standing in the darkness just inside the archway was Sister Judith. I managed to splutter, 'Good evening, Sister Judith,' as she moved toward me.

'Ssh!' she cautioned me. 'Someone might hear us. John Lyle-it finally happened. My lot was drawn!'

I said, 'Huh?' then added lamely, 'Felicitations, Elder Sister. May God make his face to shine on your holy service.'

'Yes, yes, thanks,' she answered quickly, 'but John . . . I had intended to steal a few moments to chat with you. Now I can't-I must be at the robing room for indoctrination and prayer almost at once. I must run.'

'You'd better hurry,' I agreed. I was disappointed that she could not stay, happy for her that she was honored, and exultant that she had not forgotten me. 'God go with you.'

'But I just had to tell you that I had been chosen.' Her eyes were shining with what I took to be holy joy; her next words startled me. 'I'm scared, John Lyle.'

'Eh? Frightened?' .1 suddenly recalled how I had felt, how my voice had cracked, the first time I ever drilled a platoon. 'Do not be. You will be sustained.'

'Oh, I hope so! Pray for me, John.' And she was gone, lost in the dark corridor.

I did pray for her and I tried to imagine where she was, what she was doing. But since I knew as little about what went on inside the Prophet's private chambers as a cow knows about courts-martial, I soon gave it up and simply thought about Judith. Later, an hour or more, my reverie was broken by a high scream inside the Palace, followed by a commotion, and running footsteps. I dashed down the inner corridor and found a knot of women gathered around the portal to the Prophet's apartments. Two or three others were carrying someone out the portal; they stopped when the reached the corridor and eased their burden to the floor.

'What's the trouble?' I demanded and drew my side arm clear.

An elderly Sister stepped in front of me. 'It is nothing. Return to your post, legate.'

'I heard a scream.'

'No business of yours. One of the Sisters fainted when the Holy One required service of her.'

'Who was it?'

'You are rather nosy, little brother.' She shrugged. 'Sister Judith, if it matters.'

I did not stop to think but snapped, 'Let me help her!' and started forward. She barred my way.

'Are you out of your mind? Her sisters will return her to her cell. Since when do the Angels minister to nervous Virgins?'

I could easily have pushed her aside with one finger, but she was right. I backed down and went unwillingly back to my post.

For the next few days I could not get Sister Judith out of my mind. Off watch, I prowled the parts of the Palace I was free to visit, hoping to catch sight of her. She might be ill, or she might be confined to her cell for what must certainly have been a major breach of discipline. But I never saw her.

My roommate, Zebadiah Jones, noticed my moodiness and tried to rouse me out of it. Zeb was three classes senior to me and I had been one of his plebes at the Point; now he was my closest friend and my only confidant. 'Johnnie old son, you look like a corpse at your own wake. What's eating on you?'

'Huh? Nothing at all. Touch of indigestion, maybe.'

'So? Come on, let's go for a walk. The air will do you good.' I let him herd me outside. He said nothing but banalities until we were on the broad terrace surrounding the south turret and free of the danger of eye and ear devices. When we were well away from anyone else he said softly, 'Come on. Spill it.'

'Shucks, Zeb, I can't burden anybody else with it.'

'Why not? What's a friend for?'

'Uh, you'd be shocked.'

'I doubt it. The last time I was shocked was when I drew four of a kind to an ace kicker. It restored my faith in miracles and I've been relatively immune ever since. Come on-we'll call this a privileged communication-elder adviser and all that sort of rot.'

I let him persuade me. To my surprise Zeb was not shocked to find that I let myself become interested in a holy deaconess. So I told him the whole story and added to it my doubts and troubles, the misgivings that had been growing in me since the day I reported for duty at New Jerusalem.

He nodded casually. 'I can see how it would affect you that way, knowing you. See here, you haven't admitted any of this at confession, have you?'

'No,' I admitted with embarrassment.

'Then don't. Nurse your own fox. Major Bagby is broadminded, you wouldn't shock him-but he might find it necessary to pass it on to his superiors. You wouldn't want to face Inquisition even if you were alabaster innocent. In fact, especially since you are innocent-and you are, you know; everybody has impious thoughts at times. But the Inquisitor expects to find sin; if he doesn't find it, he keeps on digging.'

At the suggestion that I might be put to the Question my stomach almost turned over. I tried not to show it for Zeb went on calmly, 'Johnnie my lad, I admire your piety and~ your innocence, but I don't envy it. Sometimes too much piety is more of a handicap than too little. You find yourself shocked at the idea that it takes politics as well as psalm singing to run a big country. Now take me; I noticed the same things when I was new here, but I hadn't expected anything different and wasn't shocked.'

'But-'I shut up. His remarks sounded painfully like heresy; I changed the subject. 'Zeb, what do you suppose it could have been that upset Judith so and caused her to faint the night she served the Prophet?'

'Eh? How should I know?' He glanced at me and looked away.

'Well, I just thought you might. You generally have all the gossip around the Palace.'

'Well . . . oh, forget it, old son. It's really not important.'

'Then you do know?'

'I didn't say that. Maybe I could make a close guess, but you don't want guesses. So forget it.'

I stopped strolling, stepped in front of him and faced him. 'Zeb, anything you know about it-or can guess-I want to hear. It's important to me.'

'Easy now! You were afraid of shocking me; it could be that I don't want to shock you.'

'What do you mean? Tell me!'

'Easy, I said. We're out strolling, remember, without a care in the world, talking about our butterfly collections and wondering if we'll have stewed beef again for dinner tonight.'

Still fuming, I let him take me along with him. He went on more quietly, 'John, you obviously aren't the type to learn things just by keeping your ear to the ground-and you've not yet studied any of the Inner Mysteries, now have you?'

'You know I haven't. The psych classification officer hasn't cleared me for the course. I don't know why.'

'I should have let you read some of the installments while I was boning it. No, that was before you graduated. Too bad, for they explain things in much more delicate language than I know how to use-and justify every bit of it thoroughly, if you care for the dialectics of religious theory. John, what is your notion of the duties of the Virgins?'

'Why, they wait on him, and cook his food, and so forth.'

'They surely do. And so forth. This Sister Judith-an innocent little country girl the way you describe her. Pretty devout, do you think?'

I answered somewhat stiffly that her devoutness had first attracted me to her. Perhaps I believed it.

'Well, it could be that she simply became shocked at overhearing a rather worldly and cynical discussion between the Holy One and, oh, say the High Bursar-taxes and tithes and the best way to squeeze them out of the peasants. It might be something like that, although the scribe for such a conference would hardly be a grass-green Virgin on her first service. No, it was almost certainly the "And so forth."'

'Huh? I don't follow you.'

Zeb sighed. 'You really are one of God's innocents, aren't you? Holy Name, I thought you knew and were just to stubbornly straight-laced to admit it. Why, even the Angels carry on with the Virgins at times, after the Prophet is through with them. Not to mention the priests and the deacons. I remember a time when-'He broke off suddenly, catching sight of my face. 'Wipe that look off your face! Do you want somebody to notice us?'

I tried to do so, with terrible thoughts jangling around inside my head. Zeb went on quietly, 'It's my guess, if it matters that much to you, that your friend Judith still merits the title "Virgin" in the purely physical sense as well as the spiritual. She might even stay that way, if the Holy One is as angry with her as he probably was. She is probably as dense as you are and failed to understand the symbolic explanations given her-then blew her top when it came to the point where she couldn't fail to understand, so he kicked her out. Small wonder!'

I stopped again, muttering to myself biblical expressions I hardly thought I knew. Zeb stopped, too, and stood looking at me with a smile of cynical tolerance. 'Zeb,' I said, almost pleading with him, 'these are terrible things. Terrible! Don't tell me that you approve?'

'Approve? Man, it's all part of the Plan. I'm sorry you haven't been cleared for higher study. See here, I'll give you a rough briefing. God wastes not. Right?'

'That's sound doctrine.'

'God requires nothing of man beyond his strength. Right?'

'Yes, but-'

'Shut up. God commands man to be fruitful. The Prophet Incarnate, being especially holy, is required to be especially fruitful. That's the gist of it; you can pick up the fine points when you study it. In the meantime, if the Prophet can humble himself to the flesh in order to do his plain duty, who are you to raise a ruction? Answer me that.'

I could not answer, of course, and we continued our walk in silence. I had to admit the logic of what he had said and that the conclusions were built up from the revealed doctrines. The trouble was that I wanted to eject the conclusions, throw them up as if they had been something poisonous I had swallowed.

Presently I was consoling myself with the thought that Zeb felt sure that Judith had not been harmed. I began to feel better, telling myself that Zeb was right, that it was not my place, most decidedly not my place, to sit in moral judgment on the Holy Prophet Incarnate.

My mind was just getting round to worrying the thought that my relief over Judith arose solely from the fact that I had looked on her sinfully, that there could not possibly be one rule for one holy deaconess, another rule for all the rest, and I was beginning to be unhappy again-when Zeb stopped suddenly. 'What was that?'

We hurried to the parapet of the terrace and looked down the wall. The south wall lies close to the city proper. A crowd of fifty or sixty people was charging up the slope that led to the Palace walls. Ahead of them, running with head averted, was a man dressed in a long gabardine. He was headed for the Sanctuary gate.

Zebadiah looked down and answered himself. 'That's what the racket is-some of the rabble stoning a pariah. He probably was careless enough to be caught outside the ghetto after five.' He stared down and shook his head. 'I don't think he is going to make it.'

Zeb's prediction was realized at once, a large rock caught the man between the shoulder blades, he stumbled and went down. They were on him at once. He struggled to his knees, was struck by a dozen stones, went down in a heap. He gave a broken high-pitched wail, then drew a fold of the gabardine across his dark eyes and strong Roman nose.

A moment later there was nothing to be seen but a pile of rocks and a protruding slippered foot. It jerked and was still.

I turned away, nauseated. Zebediah caught my expression.

'Why,' I said defensively, 'do these pariahs persist in their heresy? They seem such harmless fellows otherwise.'

He cocked a brow at me. 'Perhaps it's not heresy to them. Didn't you see that fellow resign himself to his God?'

'But that is not the true God.'

'He must have thought otherwise.'

'But they all know better; we've told them often enough.'

He smiled in so irritating a fashion that I blurted out, 'I don't understand you, Zeb-blessed if I do! Ten minutes ago you were introducing me in correct doctrine; now you seem to be defending heresy. Reconcile that.'

He shrugged. 'Oh, I can play the Devil's advocate. I made the debate team at the Point, remember? I'll be a famous theologian someday-if the Grand Inquisitor doesn't get me first.'

'Well . . . Look-you do think it's right to stone the ungodly? Don't you?'

He changed the subject abruptly. 'Did you notice who cast the first stone?' I hadn't and told him so; all I remembered was that it was a man in country clothes, rather than a woman or a child.

'It was Snotty Fasset.' Zeb's lip curled.

I recalled Fassett too well; he was two classes senior to me and had made my plebe year something I want to forget. 'So that's how it was,' I answered slowly. 'Zeb, I don't think I could stomach intelligence work.'

'Certainly not as an agent provocateur,' he agreed. 'Still, I suppose the Council needs these incidents occasionally. These rumors about the Cabal and all...'

I caught up this last remark. 'Zeb, do you really think there is anything to this Cabal? I can't believe that there is any organized disloyalty to the Prophet.'

'Well-there has certainly been some trouble out on the West Coast. Oh, forget it; our job is to keep the watch here.'

Chapter 2

But we were not allowed to forget it; two days later the inner guard was doubled. I did not see how there could be any real danger, as the Palace was as strong a fortress as ever was built, with its lower recesses immune even to fission bombs. Besides that, a person entering the Palace, even from the Temple grounds, would be challenged and identified a dozen times before he reached the Angel on guard outside the Prophet's own quarters. Nevertheless people in high places were getting jumpy; there must be something to it.

But I was delighted to find that I had been assigned as Zebadiah's partner. Standing twice as many hours of guard was almost offset by having him to talk with-for me at least. As for poor Zeb, I banged his ear endlessly through the long night watches, talking about Judith and how unhappy I was with the way things were at New Jerusalem. Finally he turned on me.

'See here, Mr. Dumbjohn,' he snapped, reverting to my plebe year designation, 'are you in love with her?'

I tried to hedge. I had not yet admitted to myself that my interest was more than in her welfare. He cut me short.

'You do or you don't. Make up your mind. If you do, we'll talk practical matters. If you don't, then shut up about her.'

I took a deep breath and took the plunge. 'I guess I do, Zeb. It seems impossible and I know it's a sin, but there it is.'

'All of that and folly, too. But there is no talking sense to you. Okay, so you are in love with her. What next?'

'Eh?'

'What do you want to do? Marry her?'

I thought about it with such distress that I covered my face with my hands. 'Of course I do,' I admitted. 'But how can I?'

'Precisely. You can't. You can't marry without transferring away from here; her service can't marry at all. Nor is there any way for her to break her vows, since she is already sealed. But if you can face up to bare facts without blushing, there is plenty you can do. You two could be very cozy-if you could get over being such an infernal bluenose.'

A week earlier I would not have understood what he was driving at. But now I knew. I could not even really be angry with him at making such a dishonorable and sinful suggestion; he meant well-and some of the tarnish was now in my own soul. I shook my head. 'You shouldn't have said that, Zeb. Judith is not that sort of a woman.'

'Okay. Then forget it. And her. And shut up about her.'

I sighed wearily. 'Don't be rough on me, Zeb. This is more than I know how to manage.' I glanced up and down, then took a chance and sat down on the parapet. We were not on watch near the Holy One's quarters but at the east wall; our warden, Captain Peter van Eyck, was too fat to get that far oftener than once a watch, so I took a chance. I was bone tired from not having slept much lately.

'Sorry.'

'Don't be angry, Zeb. That sort of thing isn't for me and it certainly isn't for Judith-for Sister Judith.' I knew what I wanted for us: a little farm, about a hundred. and sixty acres, like the one I had been born on. Pigs and chickens and barefooted kids with happy dirty faces and Judith to have her face light up when I came in from the fields and then wipe the perspiration from her face with her apron so that I could kiss her

no more connection with the Church and the Prophet than Sunday meeting and tithes.

But it could not be, it could never be. I put it out of my mind. 'Zeb,' I went on, 'just as a matter of curiosity-You have intimated that these things go on all the time. How? We live in a goldfish bowl here. It doesn't seem possible.'

He grinned at me so cynically that I wanted to slap him, but his voice had no leer in it. 'Well, just for example, take your own case -'

'Out of the question!'

'Just for example, I said. Sister Judith isn't available right now; she is confined to her cell. But -'

'Huh? She's been arrested?' I thought wildly of the Question and what Zeb had said about the inquisitors.

'No, no, no! She isn't even locked in. She's been told to stay there, that's all, with prayer and bread-and-water as company. They are purifying her heart and instructing her in her spiritual duties. When she sees things in their true light, her lot will be drawn again-and this time she won't faint and make an adolescent fool of herself.'

I pushed back my first reaction and tried to think about it calmly. 'No,' I said. 'Judith will never do it. Not if she stays in her cell forever.'

'So? I wouldn't be too sure. They can be very persuasive. How would you like to be prayed over in relays? But assume that she does see the light, just so that I can finish my story.'

'Zeb, how do you know about this?'

'Sheol, man! I've been here going on three years. Do you think I wouldn't be hooked into the grapevine? You were worried about her-and making yourself a tiresome nuisance if I may say so. So I asked the birdies. But to continue. She sees the light, her lot is drawn, she performs her holy service to the Prophet. After that she is called once a week like the rest and her lot is drawn maybe once a month or less. Inside of a year-unless the Prophet finds some very exceptional beauty in her soul-they stop putting her name among the lots entirely. But it isn't necessary to wait that long, although it is more discreet.'

'The whole thing is shameful!'

'Really? I imagine King Solomon had to use some such system; he had even more women on his neck than the Holy One has. Thereafter, if you can come to some mutual understanding with the Virgin involved, it is just a case of following well known customs. There is a present to be made to the Eldest Sister, and to be renewed as circumstances dictate. There are some palms to be brushed-I can tell you which ones. And this great pile of masonry has lots of dark back stairs in it. With all customs duly observed, there is no reason why, almost any night I have the watch and you don't, you should not find something warm and cuddly in your bed.'

I was about to explode at the calloused way he put it when my mind went off at a tangent. 'Zeb-now I know you are telling an untruth. You were just pulling my leg, admit it. There is an eye and an ear somewhere in our room. Why, even if I tried to find them and cut them out, I'd simply have the security watch banging on the door in three minutes.'

'So what? There is an eye and an ear in every room in the place. You ignore them.'

I simply let my mouth sag open.

'Ignore them,' he went on. 'Look, John, a little casual fornication is no threat to the Church-treason and heresy are. It will simply be entered in your dossier and nothing will be said about it- unless they catch you in something really important later, in which case they might use it to hang you instead of preferring the real charges. Old son, they like to have such peccadilloes in the files; it increases security. They are probably uneasy about you; you are too perfect; such men are dangerous. Which is probably why you've never been cleared for higher study.'

I tried to straighten out in my mind the implied cross purposes, the wheels within wheels, and gave up. 'I just don't get it. Look, Zeb, all this doesn't have anything to do with me or with Judith. But I know what I've got to do. Somehow I've got to get her out of here.'

'Hmm. . . a mighty strait gate, old son.'

'I've got to.'

'Well . . . I'd like to help you. I suppose I could get a message to her,' he added doubtfully.

I caught his arm. 'Would you, Zeb?'

He sighed. 'I wish you would wait. No, that wouldn't help, seeing the romantic notions in your mind. But it is risky now. Plenty risky, seeing that she is under discipline by order of the Prophet. You'd look funny staring down the table of a court-martial board, looking at your own spear.'

'I'll risk even that. Or even the Question.'

He did not remind me that he himself was taking even more of a risk than I was; he simply said, 'Very well, what is the message?'

I thought for a moment. It would have to be short. 'Tell her that the legate she talked to the night her lot was drawn is worried about her.'

'Anything else?'

'Yes! Tell her that I am hers to command!'

It seems flamboyant in recollection. No doubt it was-but it was exactly the way I felt.

At luncheon the next day I found a scrap of paper folded into my napkin. I hurried through the meal and slipped out to read it.

I need your help, it read, and am so very grateful. Will you meet me tonight? It was unsigned and had been typed in the script of a common voicewriter, used anywhere in the Palace, or out. When Zeb returned to our room, I showed it to him; he glanced at it and remarked in idle tones:

'Let's get some air. I ate too much, I'm about to fall asleep.' Once we hit the open terrace and were free of the hazard of eye and ear he cursed me out in low, dispassionate tones. 'You'll never make a conspirator. Half the mess must know that you found something in your napkin. Why in God's name did you gulp your food and rush off? Then to top it off you handed it to me upstairs. For all you know the eye read it and photostated it for evidence. Where in the world were you when they were passing out brains?'

I protested but he cut me off. 'Forget it! I know you didn't mean to put both of our necks in a bight-but good intentions are no good when the trial judge-advocate reads the charges. Now get this through your head: the first principle of intrigue is never to be seen doing anything unusual, no matter how harmless it may seem. You wouldn't believe how small a deviation from pattern looks significant to a trained analyst. You should have stayed in the refectory the usual time, hung around and gossiped as usual afterwards, then waited until you were safe to read it. Now where is it?'

'In the pocket of my corselet,' I answered humbly. 'Don't worry, I'll chew it up and swallow it.'

'Not so fast. Wait here.' Zeb left and was back in a few minutes. 'I have a piece of paper the same size and shape; I'll pass it to you quietly. Swap the two, and then you can eat the real note-but don't be seen making the swap or chewing up the real one.'

'All right. But what is the second sheet of paper?'

'Some notes on a system for winning at dice.'

'Huh? But that's non-reg, too!'

'Of course, you hammer head. If they catch you with evidence of gambling, they won't suspect you of a much more serious sin. At worst, the skipper will eat you out and fine you a few days pay and a few hours contrition. Get this, John: if you are ever suspected of something, try to make the evidence point to a lesser offence. Never try to prove lily-white innocence. Human nature being what it is, your chances are better.'

I guess Zeb was right; my pockets must have been searched and the evidence photographed right after I changed uniforms for parade, for half an hour afterwards I was called into the Executive Officer's office. He asked me to keep my eyes open for indications of gambling among the junior officers. It was a sin, he said, that he hated to have his younger officers fall into. He clapped me on the shoulder as I was leaving. 'You're a good boy, John Lyle. A word to the wise, eh?'

Zeb and I had the midwatch at the south Palace portal that night. Half the watch passed with no sign of Judith and I was as nervous as a cat in a strange house, though Zeb tried to keep me calmed down by keeping me strictly to routine. At long last there were soft footfalls in the inner corridor and a shape appeared in the doorway. Zebadiah motioned me to remain on tour and went to check. He returned almost at once and motioned me to join him, while putting a finger to his lips. Trembling, I went in. It was not Judith but some woman strange to me who waited there in the darkness. I started to speak but Zeb put his hand over my mouth.

The woman took my arm and urged me down the corridor. I glanced back and saw Zeb silhouetted in the portal, covering our rear. My guide paused and pushed me into an almost pitch-black alcove, then she took from the folds of her robes a small object which I took to be a pocket ferretscope, from the small dial that glowed faintly on its side. She ran it up and down and around, snapped it off and returned it to her person. 'Now you can talk,' she said softly. 'It's safe.' She slipped away.

I felt a gentle touch at my sleeve. 'Judith?' I whispered.

'Yes,' she answered, so softly that I could hardly hear her.

Then my arms were around her. She gave a little startled cry, then her own arms went around my neck and I could feel her breath against my face. We kissed clumsily but with almost frantic eagerness.

It is no one's business what we talked about then, nor could I give a coherent account if I tried. Call our behavior romantic nonsense, call it delayed puppy love touched off by ignorance and unnatural lives-do puppies hurt less than grown dogs? Call it what you like and laugh at us, but at that moment we were engulfed in that dear madness more precious than rubies and fine gold, more to be desired than sanity. If you have never experienced it and do not know what I am talking about, I am sorry for you.

Presently we quieted down somewhat and talked more reasonably. When she tried to tell me about the night her lot had been drawn she began to cry. I shook her and said, 'Stop it, my darling. You don't have to tell me about it. I know.'

She gulped and said, 'But you don't know. You can't know. I...he...'

I shook her again. 'Stop it. Stop it at once. No more tears. I do know, exactly. And I know what you are in for still-unless we get you out of here. So there is no time for tears or nerves; we have to make plans.'

She was dead silent for a long moment, then she said slowly, 'You mean for me to . . . desert? I've thought of that. Merciful God, how I've thought about it! But how can I?'

'I don't know-yet. But we will figure out a way. We've got to.' We discussed possibilities. Canada was a bare three hundred miles away and she knew the upstate New York country; in fact it was the only area she did know. But the border there was more tightly closed than it was anywhere else, patrol boats and radar walls by water, barbed wire and sentries by land . and sentry dogs. I had trained with such dogs; I wouldn't urge my worst enemy to go up against them.

But Mexico was simply impossibly far away. If she headed south she would probably be arrested in twenty-four hours. No one would knowingly give shelter to an unveiled Virgin; under the inexorable rule of associative guilt any such good Samaritan would be as guilty as she of the same personal treason against the Prophet and would die the same death. Going north would be shorter at least, though it meant the same business

of traveling by night, hiding by day, stealing food or going hungry. Near Albany lived an aunt of Judith's; she felt sure that her aunt would risk hiding her until some way could be worked out to cross the border. 'She'll keep us safe. I know it.'

'Us?' I must have sounded stupid. Until she spoke I had had my nose so close to the single problem of how she was to escape that it had not yet occurred to me that she would expect both of us to go.

'Did you mean to send me alone?'

'Why. . . I guess I hadn't thought about it any other way.'

'No!'

'But-look, Judith, the urgent thing, the thing that must be done at once, is to get you out of here. Two people trying to travel and hide are many times more likely to be spotted than one. It just doesn't make sense to -'

'No! I won't go.'

I thought about it, hurriedly. I still hadn't realized that 'A' implies 'B' and that I myself in urging her to desert her service was as much a deserter in my heart as she was. I said, 'We'll get you out first, that's the important thing. You tell me where your aunt lives-then wait for me.'

'Not without you.'

'But you must. The Prophet,'

'Better that than to lose you now!'

I did not then understand women-and I still don't. Two minutes before she had been quietly planning to risk death by ordeal rather than submit her body to the Holy One. Now she was almost casually willing to accept it rather than put up with even a temporary separation. I don't understand women; I sometimes think there is no logic in them at all.

I said, 'Look, my dear one, we have not yet even figured out how we are to get you out of the Palace. It's likely to be utterly impossible for us both to escape the same instant. You see that, don't you?'

She answered stubbornly, 'Maybe. But I don't like it. Well, how do I get out? And when?'

I had to admit again that I did not know. I intended to consult Zeb as soon as possible, but I had no other notion.

But Judith had a suggestion. 'John, you know the Virgin who guided you here? No? Sister Magdalene. I know it is safe to tell her and she might be willing to help us. She's very clever.'

I started to comment doubtfully but we were interrupted by Sister Magdalene herself. 'Quick!' she snapped at me as she slipped in beside us. 'Back to the rampart!'

I rushed out and was barely in time to avoid being caught by the warden, making his rounds. He exchanged challenges with Zeb and myself-and then the old fool wanted to chat. He settled himself down on the steps of the portal and started recalling boastfully a picayune fencing victory of the week before. I tried dismally to help Zeb with chit-chat in a fashion normal for a man bored by a night watch.

At last he got to his feet. 'I'm past forty and getting a little heavier, maybe. I'll admit frankly it warms me to know that I still have a wrist and eye as fast as you young blades.' He straightened his scabbard and added, 'I suppose I had better take a turn

through the Palace. Can't take too many precautions these days. They do say the Cabal has been active again.' He took out his torch light and flashed it down the corridor.

I froze solid. If he inspected that corridor, it was beyond hope that he would miss two women crouching in an alcove.

But Zebadiah spoke up calmly, casually. 'Just a moment, Elder Brother. Would you show me that time riposte you used to win that last match? It was too fast for me to follow it.'

He took the bait. 'Why, glad to, son!' He moved off the steps, came out to where there was room. 'Draw your sword. En garde! Cross blades in line of sixte. Disengage and attack me. There! Hold the lunge and I'll demonstrate it slowly. As your point approaches my chest -, (Chest indeed! Captain van Eyck was as pot-bellied as a kangaroo!) '- I catch it with the forte of my blade and force it over yours in riposte seconde. Just like the book, so far. But I do not complete the riposte. Strong as it is, you might parry or counter. Instead, as my point comes down, I beat your blade out of line-' He illustrated and the steel sang. '-and attack you anywhere, from chin to ankle. Come now, try it on me.'

Zeb did so and they ran through the phrase; the warden retreated a step. Zeb asked to do it again to get it down pat. They ran through it repeatedly, faster each time, with the warden retreating each time to avoid by a hair Zeb's unbated point. It was strictly against regulations to fence with real swords and without mask and plastron, but the warden really was good . . . a swordsman so precise that he was confident of his own skill not to blind one of Zeb's eyes, not to let Zeb hurt him. In spite of my own galloping jitters I watched it closely; it was a beautiful demonstration of a once-useful military art. Zeb pressed him hard.

They finished up fifty yards away from the portal and that much closer to the guardroom. I could hear the warden puffing from the exercise. 'That was fine, Jones,' he gasped. 'You caught on handsomely.' He puffed again and added, 'Lucky for me a real bout does not go on as long. I think I'll let you inspect the corridor.' He turned away toward the guardroom, adding cheerfully, 'God keep you.'

'God go with you, sir,' Zeb responded properly and brought his hilt to his chin in salute.

As soon as the warden turned the corner Zeb stood by again and I hurried back to the alcove. The women were still there, making themselves small against the back wall. 'He's gone,' I reassured them. 'Nothing to fear for a while.'

Judith had told Sister Magdalene of our dilemma and we discussed it in whispers. She advised us strongly not to try to reach any decisions just then. 'I'm in charge of Judith's purification; I can stretch it out for another week, perhaps, before she has to draw lots again.'

I said, 'We've got to act before then!'

Judith seemed over her fears, now that she had laid her troubles in Sister Magdalene's lap. 'Don't worry, John,' she said softly, 'the chances are my lot won't be drawn soon again in any case. We must do what she advises.'

Sister Magdalene sniffed contemptuously. 'You're wrong about that, Judy, when you are returned to duty, your lot will be drawn, you can be sure ahead of time. Not,' she added, 'but what you could live through it-the rest of us have. If it seems safer to-' She

stopped suddenly and listened. 'Sssh! Quiet as death.' She slipped silently out of our circle.

A thin pencil of light flashed out and splashed on a figure crouching outside the alcove. I dived and was on him before he could get to his feet. Fast as I had been, Sister Magdalene was just as fast; she landed on his shoulders as he went down. He jerked and was still.

Zebadiah came running in, checked himself at our sides. 'John! Maggie!' came his tense whisper. 'What is it?'

'We've caught a spy, Zeb,' I answered hurriedly. 'What'll we do with him?'

Zeb flashed his light. 'You've knocked him out?'

'He won't come to,' answered Magdalene's calm voice out of the darkness. 'I slipped a vibroblade in his ribs.'

'Sheol!'

'Zeb, I had to do it. Be glad I didn't use steel and mess up the floor with blood. But what do we do now?'

Zeb cursed her softly, she took it. 'Turn him over, John. Let's take a look.' I did so and his light flashed again. 'Hey, Johnnie-it's Snotty Fassett.' He paused and I could almost hear him think. 'Well, we'll waste no tears on him. John!'

'Yeah, Zeb?'

'Keep the watch outside. If anyone comes, I am inspecting the corridor. I've got to dump this carcass somewhere.'

Judith broke the silence. 'There's an incinerator chute on the floor above. I'll help you.'

'Stout girl. Get going, John.'

I wanted to object that it was no work for a woman, but I shut up and turned away. Zeb took his shoulders, the women a leg apiece and managed well enough. They were back in minutes, though it seemed endless to me. No doubt Snotty's body was reduced to atoms before they were back-we might get away with it. It did not seem like murder to me then, and still does not; we did what we had to do, rushed along by events.

Zeb was curt. 'This tears it. Our reliefs will be along in ten minutes; we've got to figure this out in less time than that. Well?'

Our suggestions were all impractical to the point of being ridiculous, but Zeb let us make them-then spoke straight to the point. 'Listen to me, it's no longer just a case of trying to help Judith and you out of your predicament. As soon as Snotty is missed, we-all four of us-are in mortal danger of the Question. Right?'

'Right,' I agreed unwillingly.

'But nobody has a plan?'

None of us answered. Zeb went on, 'Then we've got to have help . . . and there is only one place we can get it. The Cabal.'

Chapter 3

'The Cabal?' I repeated stupidly. Judith gave a horrified gasp. 'Why . . . why, that would mean our immortal souls! They worship Satan!'

Zeb turned to her. 'I don't believe so.' She stared at him. 'Are you a Cabalist?'

'No.'

'Then how do you know?'

'And how,' I insisted, 'can you ask them for help?'

Magdalene answered. 'I am a member-as Zebadiah knows.' Judith shrank away from her, but Magdalene pressed her with words. 'Listen to me, Judith. I know how you feel-and once I was as horrified as you are at the idea of anyone opposing the Church. Then I learned-as you are learning-what really lies behind this sham we were brought up to believe in.' She put an arm around the younger girl. 'We aren't devil worshipers, dear, nor do we fight against God. We fight only against this self-styled Prophet who pretends to be the voice of God. Come with us, help us fight him-and we will help you. Otherwise we can't risk it.'

Judith searched her face by the faint light from the portal. 'You swear that this is true? The Cabal fights only against the Prophet and not against the Lord Himself?'

'I swear, Judith.'

Judith took a deep shuddering breath. 'God guide me,' she whispered. 'I go with the Cabal.'

Magdalene kissed her quickly, then faced us men. 'Well?'

I answered at once, 'I'm in it if Judith is,' then whispered to myself, 'Dear Lord, forgive me my oath-I must!'

Magdalene was staring at Zeb. He shifted uneasily and said angrily, 'I suggested it, didn't I? But we are all damned fools and the Inquisitor will break our bones.'

There was no more chance to talk until the next day. I woke from bad dreams of the Question and worse, and heard Zeb's shaver buzzing merrily in the bath. He came in and pulled the covers off me, all the while running off at the mouth with cheerful nonsense. I hate having bed clothes dragged off me even when feeling well and I can't stand cheerfulness before breakfast; I dragged them back and tried to ignore him, but he grabbed my wrist. 'Up you come, old son! God's sunshine is wasting. It's a beautiful day. How about two fast laps around the Palace and in for a cold shower?'

I tried to shake his hand loose and called him something that would lower my mark in piety if the ear picked it up. He still hung on and his forefinger was twitching against my wrist in a nervous fashion; I began to wonder if Zeb were cracking under the strain. Then I realized that he was tapping out code.

'B-E-N-A-T-U-R-A-L,' the dots and dashes said, 'S-H-O-W - N-O - S-U-R-P-R-I-S-E - W-E - W-I-L-L - B-E -C-A-L-L-E-D - F-O-R - E-X-A-M-I-N-A-T-I-O-N - D-U-RI-N-G - T-H-E - R-E-C-R-E-A-T-I-O-N - P-E-R-I-O-D - T-H-I-S - A-F-T-E-R-N-O-O-N'

I hoped I showed no surprise. I made surly answers to the stream of silly chatter he had kept up all through it, and got up and went about the mournful tasks of putting the body back in shape for another day. After a bit 1 found excuse to lay a hand on his shoulder and twitched out an answer: '0-K -I- U-N-D-E-R-S-T-A-N-D'

The day was a misery of nervous monotony. I made a mistake at dress parade, a thing I haven't done since beast barracks. When the day's duty was finally over I went back to our room and found Zeb there with his feet on the air conditioner, working an

acrostic in the New York Times. 'Johnnie my lamb,' he asked, looking up, 'what is a six-letter word meaning "Pure in Heart"?'

'You'll never need to know,' I grunted and sat down to remove my armor.

'Why, John, don't you think I will reach the Heavenly City?'

'Maybe-after ten thousand years penance.'

There came a brisk knock at our door, it was shoved open, and Timothy Klyce, senior legate in the mess and brevet captain, stuck his head in. He sniffed and said in nasal Cape Cod accents, 'Hello, you chaps want to take a walk?'

It seemed to me that he could not have picked a worse time. Tim was a hard man to shake and the most punctiliously devout man in the corps. I was still trying to think of an excuse when Zeb spoke up. 'Don't mind if we do, provided we walk toward town. I've got some shopping to do.'

I was confused by Zeb's answer and still tried to hang back, pleading paper work to do, but Zeb cut me short. 'Pfui with paper work. I'll help you with it tonight. Come on.' So I went, wondering if he had gotten cold feet about going through with it.

We went out through the lower tunnels. I walked along silently, wondering if possibly Zeb meant to try to shake Klyce in town and then hurry back. We had just entered a little jog in the passageway when Tim raised his hand in a gesture to emphasize some point in what he was saying to Zeb. His hand passed near my face, I felt a slight spray on my eyes-and I was blind.

Before I could cry out, even as I suppressed the impulse to do so, he grasped my upper arm hard, while continuing his sentence without a break. His grip on my arm guided me to the left, whereas my memory of the jog convinced me that the turn should have been to the right. But we did not bump into the wall and after a few moments the blindness wore off. We seemed to be walking in the same tunnel with Tim in the middle and holding each of us by an arm. He did not say anything and neither did we; presently he stopped us in front of a door. Klyce knocked once, then listened.

I could not make out an answer but he replied. 'Two pilgrims, duly guided.'

The door opened. He led us in, it closed silently behind us, and we were facing a masked and armored guard, with his blast pistol leveled on us. Reaching behind him, he rapped once on an inner door; immediately another man, armed and masked like the first, came out and faced us. He asked Zeb and myself separately:

'Do you seriously declare, upon your honor, that, unbiased by friends and uninfluenced by mercenary motives, you freely and voluntarily offer yourself to the service of this order?'

We each answered, 'I do.'

'Hoodwink and prepare them.'

Leather helmets that covered everything but our mouths and noses were slipped over our heads and fastened under our chins. Then we were ordered to strip off all our clothing. I did so while the goose pumps popped out on me. I was losing my enthusiasm rapidly-there is nothing that makes a man feel as helpless as taking his pants away from him. Then I felt the sharp prick of a hypodermic in my forearm and shortly, though I was awake, things got dreamy and I was no longer jittery. Something cold was pressed against my ribs on the left side of my back and I realized that it was almost certainly the hilt of a vibroblade, needing only the touch, of the stud to make me as dead as Snotty Fassett-but

it did not alarm me. Then there were questions, many questions, which I answered automatically, unable to lie or hedge if I had wanted to. I remember them in snatches: of your own free will and accord?' '-conform to the ancient established usages-a man, free born, of good repute, and well recommended.'

Then, for a long time I stood shivering on the cold tile floor while a spirited discussion went on around me; it had to do with my motives in seeking admission. I could hear it all and I knew that my life hung on it, with only a word needed to cause a blade of cold energy to spring into my heart. And I knew that the argument was going against me.

Then a contralto voice joined the debate. I recognized Sister Magdalene and knew that she was vouching for me, but doped as I was I did not care; I simply welcomed her voice as a friendly sound. But presently the hilt relaxed from my ribs and I again felt the prick of a hypodermic. It brought me quickly out of my dazed state and I heard a strong bass voice intoning a prayer:

'Vouchsafe thine aid, Almighty Father of the Universe: love, relief, and truth to the honor of Thy Holy Name. Amen.' And the answering chorus, 'So mote it be!'

Then I was conducted around the room, still hoodwinked, while questions were again put to me. They were symbolic in nature and were answered for me by my guide. Then I was stopped and was asked if I were willing to take a solemn oath pertaining to this degree, being assured that it would in no material way interfere with duty that I owed to God, myself, family, country, or neighbor.

I answered, 'I am.'

I was then required to kneel on my left knee, with my left hand supporting the Book, my right hand steadying certain instruments thereon.

The oath and charge was enough to freeze the blood of anyone foolish enough to take it under false pretenses. Then I was asked what, in my present condition, I most desired. I answered as I had been coached to answer: 'Light!'

And the hoodwink was stripped from my head.

It is not necessary and not proper to record the rest of my instruction as a newly entered brother. it was long and of solemn beauty and there was nowhere in it any trace of the blasphemy or devil worship that common gossip attributed to us; quite the contrary it was filled with reverence for God, brotherly love, and uprightness, and it included instruction in the principles of an ancient and honorable profession and the symbolic meaning of the working tools thereof.

But I must mention one detail that surprised me almost out of the shoes I was not wearing. When they took the hoodwink off me, the first man I saw, standing in front of me dressed in the symbols of his office and wearing an expression of almost inhuman dignity, was Captain Peter van Eyck, the fat ubiquitous warden of my watch-Master of this lodge!

The ritual was long and time was short. When the lodge was closed we gathered in a council of war. I was told that the senior brethren had already decided not to admit Judith to the sister order of our lodge at this time even though the lodge would reach out to protect her. She was to be spirited away to Mexico and it was better, that being the case, for her not to know any secrets she did not need to know. But Zeb and I, being of the Palace guard, could be of real use; therefore we were admitted.

Judith had already been given hypnotic instructions which-it was hoped-would enable her to keep from telling what little she already new if she should be put to the Question. I was told to wait and not to worry; the senior brothers would arrange to get Judith out of danger before she next was required to draw lots. I had to be satisfied with that.

For three days running Zebadiah and I reported during the afternoon recreation period for instruction, each time being taken by a different route and with different precautions. It was clear that the architect who had designed the Palace had been one of us; the enormous building had hidden in it traps and passages and doors which certainly did not appear in the official plans.

At the end of the third day we were fully accredited senior brethren, qualified with a speed possible only in time of crisis. The effort almost sprained my brain; I had to bone harder than I ever had needed to in school. Utter letter-perfection was required and there was an amazing lot to memorize-which was perhaps just as well, for it helped to keep me from worrying. We had not heard so much as a rumor of a kick-back from the disappearance of Snotty Fassett, a fact much more ominous than would have been a formal investigation.

A security officer can't just drop out of sight without his passing being noticed. It was remotely possible that Snotty had been on a roving assignment and was not expected to check in daily with his boss, but it was much more likely that he had been where we had found him and killed him because some one of us was suspected and he had been ordered to shadow. If that was the case, the calm silence could only mean that the chief security officer was letting us have more rope, while his psychotechnicians analyzed our behavior-in which case the absence of Zeb and myself from any known location during our free time for several days running was almost certainly a datum entered on a chart. If the entire regiment started out equally suspect, then our personal indices each gained a fractional point each of those days.

I never boned savvy in such matters and would undoubtedly have simply felt relieved as the days passed with no overt trouble had it not been that the matter was discussed and worried over in the lodge room. I did not even know the name of the Guardian of Morals, nor even the location of his security office-we weren't supposed to know. I knew that he existed and that he reported to the Grand Inquisitor and perhaps to the Prophet himself but that was all. I discovered that my lodge brothers, despite the almost incredible penetration of the Cabal throughout the Temple and Palace, knew hardly more than I did-for the reason that we had no brothers, not one, in the staff of the Guardian of Morals. The reason was simple; the Cabal was every bit as careful in evaluating the character, persona, and psychological potentialities of a prospective brother as the service was in measuring a prospective intelligence officer-and the two types were as unlike as geese and goats. The Guardian would never accept the type of personality who would be attracted by the ideals of the Cabal; my brothers would never pass a-well, a man like Fassett.

I understand that, in the days before psychological measurement had become a mathematical science, an espionage apparatus could break down through a change in heart on the part of a key man-well, the Guardian of Morals had no such worry; his men never suffered a change in heart. I understand, too, that our own fraternity, in the early

days when it was being purged and tempered for the ordeal to come, many times had blood on the floors of lodge rooms-I don't know; such records were destroyed.

On the fourth day we were not scheduled to go to the lodge room, having been told to show our faces where they would be noticed to offset our unwonted absences. I was spending my free time in the lounge off the mess room, leafing through magazines, when Timothy Klyce came in. He glanced at me, nodded, then started thumbing through a stack of magazines himself. Presently he said, 'These antiques belong in a dentist's office. Have any of you chaps seen this week's Time?'

His complaint was addressed to the room as a whole; no one answered. But he turned to me. 'Jack, I think you are sitting on it. Raise up a minute.'

I grunted and did so. As he reached for the magazine his head came close to mine and he whispered, 'Report to the Master.'

I had learned a little at least so I went on reading. After a bit I put my magazine aside, stretched and yawned, then got up and ambled out toward the washroom. But I walked on past and a few minutes later entered the lodge room. I found that Zeb was already there, as were several other brothers; they were gathered around Master Peter and Magdalene. I could feel the tension in the room.

I said, 'You sent for me, Worshipful Master?'

He glanced at me, looked back at Magdalene. She said slowly, 'Judith has been arrested.'

I felt my knees go soft and I had trouble standing. I am not unusually timid and physical bravery is certainly commonplace, but if you hit a man through his family or his loved ones you almost always get him where he is unprotected. 'The Inquisition?' I managed to gasp.

Her eyes were soft with pity. 'We think so. They took her away this morning and she has been incommunicado ever since.'

'Has any charge been filed?' asked Zeb.

'Not publicly.'

'Hm-m-m-That looks bad.'

'And good as well,' Master Peter disagreed. 'If it is the matter we think it is-Fassett, I mean-and had they had any evidence pointing to the rest of you, all four of you would have been arrested at once. At least, that is in accordance with their methods.'

'But what can we do?' I demanded.

Van Eyck did not answer. Magdelene said soothingly, 'There is nothing for you to do, John. You couldn't get within several guarded doors of her.'

'But we can't just do nothing!'

The lodge Master said, 'Easy, son. Maggie is the only one of us with access to that part of the inner Palace. We must leave it in her hands.'

I turned again to her; she sighed and said, 'Yes, but there is probably little I can do.' Then she left.

We waited. Zeb suggested that he and I should leave the lodge room and continue with being seen in our usual haunts; to my relief van Eyck vetoed it. 'No. We can't be sure that Sister Judith's hypnotic protection is enough to see her through the ordeal. Fortunately you two and Sister Magdalene are the only ones she can jeopardize-but I want you here, safe, until Magdalene finds out what she can. Or fails to return,' he added thoughtfully.

I blurted out, 'Oh, Judith will never betray us!'

He shook his head sadly. 'Son, anyone will betray anything under the Question-unless adequately guarded by hypno compulsion. We'll see.'

I had paid no attention to Zeb, being busy with my own very self-centred thoughts. He now surprised me by saying angrily, 'Master, you are keeping us here like pet hens-but you have just sent Maggie back to stick her head in a trap. Suppose Judith has cracked? They'll grab Maggie at once.'

Van Eyck nodded. 'Of course. That is the chance we must take since she is the only spy we have. But don't you worry about her. They'll never arrest her-she'll suicide first.'

The statement did not shock me; I was too numbed by the danger to Judith. But Zeb burst out with, 'The swine! Master, you shouldn't have sent her.'

Van Eyck answered mildly, 'Discipline, son. Control yourself. This is war and she is a soldier.' He turned away.

So we waited . . . and waited . . . and waited. It is hard to tell anyone who has not lived in the shadow of the Inquisition how we felt about it. We knew no details but we sometimes saw those unlucky enough to live through it. Even if the inquisitors did not require the auto da fé, the mind of the victim was usually damaged, often shattered.

Presently Master Peter mercifully ordered the Junior Warden to examine both of us as to our progress in memorizing ritual. Zeb and I sullenly did as we were told and were forced with relentless kindness to concentrate on the intricate rhetoric. Somehow nearly two hours passed.

At last came three raps at the door and the Tyler admitted Magdalene. I jumped out of my chair and rushed to her. 'Well?' I demanded. 'Well?'

'Peace, John,' she answered wearily. 'I've seen her.'

'How is she? Is she all right?'

'Better than we have any right to expect. Her mind is still intact and she hasn't betrayed us, apparently. As for the rest, she may keep a scar or two-but she's young and healthy; she'll recover.'

I started to demand more facts but the Master cut me off. Then they've already put her to the Question. In that case, how did you get in to see her?'

'Oh, that!' Magdalene shrugged it off as something hardly worth mentioning. 'The inquisitor prosecuting her case proved to be an old acquaintance of mine; we arranged an exchange of favors.'

Zeb started to interrupt; the Master snapped, 'Quiet!' then added sharply, 'The Grand Inquisitor isn't handling it himself? In that case I take it they don't suspect that it could be a Cabal matter?'

Maggie frowned. 'I don't know. Apparently Judith fainted rather early in the proceedings; they may not have had time to dig into that possibility. In any case I begged a respite for her until tomorrow. The excuse is to let her recover strength for more questioning, of course. They will start in on her again early tomorrow morning.'

Van Eyck pounded a fist into a palm. 'They must not start again-we can't risk it! Senior Warden, attend me! The rest of you get out! Except you, Maggie.'

I left with something unsaid. I had wanted to tell Maggie that she could have my hide for a door mat any time she lifted her finger.

Dinner that night was a trial. After the chaplain droned through his blessing I tried to eat and join in the chatter but there seemed to be a hard ring in my throat that kept me from swallowing. Seated next to me was Grace-of-God Bearpaw, half Scottish, half Cherokee. Grace was a classmate but no friend of mine; we hardly ever talked and tonight he was as taciturn as ever.

During the meal he rested his boot on mine; I impatiently moved my foot away. But shortly his foot was touching mine again and he started to tap against my boot:

- hold still, you idiot-' he spelled out- 'You have been chosen-it will be on your watch tonight-details later-eat and start talking-take a strip of adhesive tape on watch with you-six inches by a foot-repeat message back.'

I managed somehow to tap out my confirmation while continuing to pretend to eat.

Chapter 4

We relieved the watch at midnight. As soon as the watch section had marched away from our post I told Zeb what Grace had passed on to me at chow and asked him if he had the rest of my instructions. He had not. I wanted to talk but he cut me short; he seemed even more edgy than I was.

So I walked my post and tried to look alert. We were posted that night at the north end of the west rampart; our tour covered one of the Palace entrances. About an hour had passed when I heard a hiss from the dark doorway. I approached cautiously and made out a female form. She was too short to be Magdalene and I never knew who she was, for she shoved a piece of paper in my hand and faded back into the dark corridor.

I rejoined Zeb. 'What shall I do? Read it with my flash? That seems risky.'

'Open it up.'

I did and found that it was covered with fine script that glowed in the darkness. I could read it but it was too dim to be picked up by any electronic eye. I read it:

At the middle of the watch exactly on the bell you will enter the Palace by the door where you received this. Forty paces inside, take the stair on your left; climb two flights. Proceed north fifty paces. The lighted doorway on your right leads to the Virgins' quarters, there will be a guard at this door. He will not resist you but you must use a paralysis bomb on him to give him an alibi. The cell you seek is at the far end of the central east & west corridor of the quarters. There will be a light over the door and a Virgin on guard. She is not one of us. You must disable her completely but you are forbidden to injure or kill her. Use the adhesive tape as gag and blindfold and tie her up with her clothes. Take her keys, enter the cell, and remove Sister Judith. She will probably be unconscious. Bring her to your post and hind her over to the warden of your watch.

You must make all haste from the time you paralyze the guard, as an eye may see you when you pass the lighted doorway and the alarm may sound at once.

Do not swallow this note; the ink is poisonous. Drop it in the incinerator chute at the head of the stairs.

Go with God.

Zeb read it over my shoulder. 'All you need,' he said grimly, 'is the ability to pass miracles at will. Scared?'

'Yes.'

'Want me to go along?'

'No. I guess we had better carry out the orders as given.'

'Yes, we had-if I know the Lodge Master. Besides, it just might happen that I might need to kill somebody rather suddenly while you are gone. I'll be covering your rear.'

'I suppose so.'

'Now let's shut up and bone military.' We went back to walking our post.

At the two muted strokes of the middle of the watch I propped my spear against the wall, took off my sword and corselet and helmet and the rest of the ceremonial junk we were required to carry but which would hamper me on this job. Zeb shoved a gauntleted hand in mine and squeezed. Then I was off.

Two-four-six-forty paces. I groped in the dark along the left wall and found the opening, felt around with my foot. Ah, there were the steps! I was already in a part of the Palace I had never been in; I moved by dead reckoning in the dark and hoped the person who had written my orders understood that. One flight, two flights-I almost fell on my face when I stepped on a 'top' step that wasn't there.

Where was the refuse chute? It should be at hand level and the instructions said 'head of the stairs'. I was debating frantically whether to show a light or chance keeping it when my left hand touched its latch; with a sigh of relief I chucked away the evidence that could have incriminated so many others. I started to turn away, then was immediately filled with panic. Was that really an incinerator chute? Could -it have been the panel for a delivery lift instead? I groped for it in the dark again, opened it and shoved my hand in.

My hand was scorched even through my gauntlet; I jerked it back with relief and decided to trust my instructions, have no more doubts. But forty paces north the passageway jogged and that was not mentioned in my orders; I stopped and reconnoitered very cautiously, peering around the jog at floor level.

Twenty-five feet away the guard and the doorway. He was supposed to be one of us but I took no chances. I slipped a bomb from my belt, set it by touch to minimum intensity, pulled the primer and counted off five seconds to allow for point blank range. Then I threw it and ducked back into the jog to protect myself from the rays.

I waited another five seconds and stuck my head around. The guard was slumped down on the floor, with his forehead bleeding slightly where it had struck a fragment of the bomb case. I hurried out and stepped over him, trying to run and keep quiet at the same time. The central passage of the Virgins' quarters was dim, with only blue night lights burning, but I could see and I reached the end of the passage quickly-then jammed on the brakes. The female guard at the cell there, instead of walking a post, was seated on the floor with her back to the door.

Probably she was dozing, for she did not look up at once. Then she did so, saw me, and I had no time to make plans; I dove for her. My left hand muffled her scream; with the edge of my left hand I chopped the side of her neck-not a killing stroke but I had no time to be gentle; she went limp.

Half the tape across her mouth first, then the other half across her eyes, then tear clothing from her to bind her-and hurry, hurry, hurry all the way, for a security man

might already have monitored the eye that was certainly at the main doorway and have seen the unconscious guard. I found her keys on a chain around her waist and straightened up with a silent apology for what I had done to her. Her little body was almost childlike; she seemed even more helpless than Judith.

But I had no time for soft misgivings; I found the right key, got the door open-and then my darling was in my arms.

She was deep in a troubled sleep and probably drugged. She moaned as I picked her up but did not wake. But her gown slipped and I saw some of what they had done to her - I made a life vow, even as I ran, to pay it back seven times, if the man who did it could live that long.

The guard was still where 1 had left him. I thought I had gotten away with it without being monitored or waking anyone and was just stepping over him, when I heard a gasp from the corridor behind me. Why are women restless at night? If this woman hadn't gotten out of bed, no doubt to attend to something she should have taken care of before retiring, 1 might never have been seen at all.

It was too late to silence her, I simply ran. Once around the jog I was in welcome darkness but I overran the stair head, had to come back, and feel for it-then had to grope my way down step by step. I could hear shouts and high-pitched voices somewhere behind me.

Just as I reached ground level, turned and saw the portal outlined against the night sky before me, all the lights came on and the alarms began to clang. I ran the last few paces headlong and almost fell into the arms of Captain van Eyck. He scooped her out of my arms without a word and trotted away toward the corner of the building.

I stood staring after them half-wittedly when Zeb brought me to my senses by picking up my corselet and shoving it out for me to put in my arms. 'Snap out of it, man!' he hissed. 'That general alarm is for us. You're supposed to be on guard duty.'

He strapped on my sword as I buckled the corselet, then slapped my helmet on my head and shoved my spear into my left hand. Then we stood back to back in front of the portal, pistols drawn, safeties off, in drill-manual full alert. Pending further orders, we were not expected nor permitted to do anything else, since the alarm had not taken place on our post.

We stood like statues for several minutes. We could hear sounds of running feet and of challenges. The Officer of the Day ran past us into the Palace, buckling his corselet over his night clothes as he ran. I almost blasted him out of existence before he answered my challenge. Then the relief watch section swung past at double time with the relief warden at its head.

Gradually the excitement died away; the lights remained on but someone thought to shut off the alarm. Zeb ventured a whisper. 'What in Sheol happened? Did you muff it?'

'Yes and no.' I told him about the restless Sister.

Hmmph! Well, son, this ought to teach you not to fool around with women when you are on duty.'

'Confound it, 1 wasn't fooling with her. She just popped out of her cell.'

'I didn't mean tonight,' he said bleakly.

I shut up.

About half an hour later, long before the end of the watch, the relief section tramped back. Their warden halted them, our two reliefs fell out and we fell in the empty places. We marched back to the guardroom, stopping twice more on the way to drop reliefs and pick up men from our own section.

Chapter 5

We were halted in the inner parade facing the guardroom door and left at attention. There we stood for fifty mortal minutes while the officer of the Day strolled around and looked us over. Once a man in the rear rank shifted his weight. It would have gone unnoticed at dress parade, even in the presence of the Prophet, but tonight the Officer of the Day bawled him out at once and Captain van Eyck noted down his name.

Master Peter looked just as angry as his superior undoubtedly was. He passed out several more gigs, even stopped in front of me and told the guardroom orderly to put me down for 'boots not properly shined'-which was a libel, unless I had scuffed them in my efforts. I dared not look down to see but stared him in the eye and said nothing, while he stared back coldly.

But his manner recalled to me Zeb's lecture about intrigue. Van Eyck's manner was perfectly that of a subordinate officer let down and shamed by his own men; how should I feel if I were in fact new-born innocent?

Angry, I decided-angry and self-righteous. Interested and stimulated by the excitement at first, then angry at being kept standing at attention like a plebe. They were trying to soften us up by the strained wait; how would I have felt about it, say two months ago? Smugly sure of my own virtue, it would have offended me and humiliated me-to be kept standing like a pariah waiting to whine for the privilege of a ration card-to be placed on the report like a cadet with soup on his jacket.

By the time the Commander of the Guard arrived almost an hour later I was white-lipped with anger. The process was synthetic but the emotion was real. I had never really liked our Commander anyway. He was a short, supercilious little man with a cold eye and a way of looking through his junior officers instead of at them. Now he stood in front of us with his priest's robes thrown back over his shoulders and his thumbs caught in his sword belt.

He glared at us. 'Heaven help me, Angels of the Lord indeed,' he said softly into the dead silence-then barked, 'Well?'

No one answered.

'Speak up!' he shouted. 'Some one of you knows about this. Answer me! Or would you all rather face the Question?'

A murmur ran down our ranks-but no one spoke.

He ran his eyes over us again. His eye caught mine and I stared back truculently. 'Lyle!'

'Yes, reverend sir?'

'What do you know of this?'

'I know that I would like to sit down, reverend sir!'

He scowled at me, then his eye got a gleam of cold amusement. 'Better to stand before me, my son, than to sit before the Inquisitor.' But he passed on and heckled the man next to me.

He badgered us endlessly, but Zeb and I seemed to receive neither more nor less attention than the others. At last he seemed to give up and directed the Officer of the Day to dismiss us. I was not fooled; it was a certainty that every word spoken had been recorded, every expression cinemographed, and that analysts were plotting the data against each of our past behavior patterns before we reached our quarters.

But Zeb is a wonder. He was gossiping about the night's events, speculating innocently about what could have caused the hurrah, even before we reached our room. I tried to answer in what I had decided was my own 'proper' reaction and groused about the way we had been treated. 'We're officers and gentlemen,' I complained. 'If he thinks we are guilty of something, he should prefer formal charges.'

I went to bed still griping, then lay awake and worried. I tried to tell myself that Judith must have reached a safe place, or else the brass would not be in the dark about it. But I dropped off to sleep still fretting.

I felt someone touch me and I woke instantly. Then I relaxed when I realized that my hand was being gripped in the recognition grip of the lodge. 'Quiet,' a voice I did not recognize whispered in my ear. 'I must give you certain treatment to protect you.' I felt the bite of a hypodermic in my arm; in a few seconds I was relaxed and dreamy. The voice whispered, 'You saw nothing unusual on watch tonight. Until the alarm was sounded your watch was quite without incident -' I don't know how long the voice droned on.

I was awakened a second time by someone shaking me roughly. I burrowed into my pillow and said, 'Go 'way! I'm going to skip breakfast.'

Somebody struck me between my shoulder blades; I turned and sat up, blinking. There were four armed men in the room, blasters drawn and pointed at me. 'Come along!' ordered the one nearest to me.

They were wearing the uniform of Angels but without unit insignia. Each head was covered by a black mask that exposed only the eyes-and by these masks I knew them: proctors of the Grand Inquisitor. I hadn't really believed it could happen to me. Not to me not to Johnnie Lyle who had always behaved himself, been a credit to his parish and a pride to his mother. No! The Inquisition was a boogieman, but a boogieman for sinners-not for John Lyle.

But I knew with sick horror when I saw those masks that I was already a dead man, that my time had come and here at last was the nightmare that 1 could not wake up from.

But I was not dead yet. From somewhere I got the courage to pretend anger. 'What are you doing here?'

'Come along,' the faceless voice repeated.

'Show me your order. You can't just drag an officer out of his bed any time you feel -'

The leader gestured with his pistol; two of them grabbed my arms and hustled me toward the door, while the fourth fell in behind. But I am fairly strong; I made it hard for them while protesting, 'You've got to let me get dressed at least. You've no right to haul

me away half naked, no matter what the emergency is. I've a right to appear in the uniform of my rank.

Surprisingly the appeal worked. The leader stopped. 'Okay. But snap into it!'

I stalled as much as I dared while going through the motions of hurrying-jamming a zipper on my boot, fumbling clumsily with all my dressing. How could I leave some sort of a message for Zeb? Any sort of a sign that would show the brethren what had happened to me?

At last I got a notion, not a good one but the best I could manage. I dragged clothing out of my wardrobe, some that I would need, some that I did not, and with the bunch a sweater. In the course of picking out what I must wear I managed to arrange the sleeves of the sweater in the position taken by a lodge brother in giving the Grand Hailing Sign of Distress. Then 1 picked up loose clothing and started to put some of it back in the wardrobe; the leader immediately shoved his blaster in my ribs and said, 'Never mind that. You're dressed.'

I gave in, dropping the meaningless clothing on the floor. The sweater remained spread out as a symbol to him who could read it. As they led me away I prayed that our room servant would not arrive and 'tidy' it out of meaning before Zeb spotted it.

They blindfolded me as soon as we reached the inner Palace. We went down six flights, four below ground level as I figured it, and reached a compartment filled with the breathless silence of a vault. The hoodwink was stripped from my eyes. I blinked.

'Sit down, my boy, sit down and make yourself comfortable.' I found myself looking into the face of the Grand Inquisitor himself, saw his warm friendly smile and his collie-dog eyes.

His gentle voice continued, 'I'm sorry to get you so rudely out of a warm bed, but there is certain information needed by our Holy Church. Tell me, my son, do you fear the Lord? Oh, of course you do; your piety is well known. So you won't mind helping me with this little matter even though it makes you late for breakfast. It's to the greater glory of God.' He turned to his masked and black-robed assistant questioner, hovering behind him. 'Make him ready-and pray be gentle.'

I was handled quickly and roughly, but not painfully. They touched me as if they regarded me as so much lifeless matter to be manipulated as impersonally as machinery. They stripped me to the waist and fastened things to me, a rubber bandage tight around my right arm, electrodes in my fists which they taped closed, another pair of electrodes to my wrists, a third pair at my temples, a tiny mirror to the pulse in my throat. At a control board on the left wall one of them made some adjustments, then threw a switch and on the opposite wall a shadow show of my inner workings sprang into being.

A little light danced to my heart beat, a wiggly line on an iconoscope display showed my blood pressure's rise and fall, another like it moved with my breathing, and there were several others that I did not understand. I turned my head away and concentrated on remembering the natural logarithms from one to ten.

'You see our methods, son. Efficiency and kindness, those are our watch words. Now tell me-Where did you put her?'

I broke off with the logarithm of eight. 'Put who?'

'Why did you do it?'

'I am sorry. Most Reverend Sir. I don't know what it is I am supposed to have done.'

Someone slapped me hard, from behind. The lights on the wall jiggled and the Inquisitor studied them thoughtfully, then spoke to an assistant. 'Inject him.'

Again my skin was pricked by a hypodermic. They let me rest while the drug took hold; I spent the time continuing with the effort of recalling logarithms. But that soon became too difficult; I grew drowsy and lackadaisical, nothing seemed to matter. I felt a mild and childish curiosity about my surroundings but no fear. Then the soft voice of the Inquisitor broke into my reverie with a question. I can't remember what it was but I am sure I answered with the first thing that came into my head.

I have no way of telling how long this went on. In time they brought me back to sharp reality with another injection. The Inquisitor was examining a slight bruise and a little purple dot on my right forearm. He glanced up. 'What caused this, my boy?'

'I don't know, Most Reverend Sir.' At the instant it was truth.

He shook his head regretfully. 'Don't be naïve, my son-and don't assume that I am. Let me explain something to you. What you sinners never realize is that the Lord always prevails. Always. Our methods are based in loving-kindness but they proceed with the absolute certainty of a falling stone, and with the result equally preordained.

'First we ask the sinner to surrender himself to the Lord and answer from the goodness that remains in his heart. When that loving appeal fails-as it did with you-then we use the skills God has given us to open the unconscious mind. That is usually as far as the Question need go-unless some agent of Satan has been there before us and has tampered with the sacred tabernacle of the mind.

'Now, my son, I have just returned from a walk through your mind. I found much there that was commendable, but I found also, a murky darkness, a wall that had been erected by some other sinner, and what I want-what the Church needs-is behind that wall.'

Perhaps I showed a trace of satisfaction or perhaps the lights gave me away, for he smiled sadly and added, 'No wall of Satan can stop the Lord. When we find such an obstacle, there are two things to do: given time enough I could remove that wall gently, delicately, stone by stone, without any damage to your mind. I wish I had time to, I really do, for you are a good boy at heart, John Lyle, and you do not belong with the sinners.

'But while eternity is long, time is short; there is the second way. We can disregard the false barrier in the unconscious mind and make a straightforward assault on the conscious mind, with the Lord's banners leading us.' He glanced away from me. 'Prepare him.'

His faceless crew strapped a metal helmet on my head, some other arrangements were made at the control board. 'Now look here, John Lyle.' He pointed to a diagram on the wall. 'No doubt you know that the human nervous system is partly electrical in nature. There is a schematic representation of a brain, that lower part is the thalamus; covering it is the cortex. Each of the sensory centers is marked as you can see. Your own electrodynamic characteristics have been analyzed; I am sorry to say that it will now be necessary to heterodyne your normal senses.'

He started to turn away, turned back. 'By the way, John Lyle, I have taken the trouble to minister to you myself because, at this stage, my assistants through less experience in the Lord's work than my humble self sometimes mistake zeal for skill and transport the sinner unexpectedly to his reward. I don't want that to happen to you. You are merely a strayed lamb and I purpose saving you.'

'I said, 'Thank you, Most Reverend Sir.'

'Don't thank me, thank the Lord I serve. However,' he went on, frowning slightly, 'this frontal assault on the mind, while necessary, is unavoidably painful. You will forgive me?'

I hesitated only an instant. 'I forgive you, holy sir.'

He glanced at the lights and said wryly, 'A falsehood. But you are forgiven that falsehood; it was well intended.' He nodded at his silent helpers. 'Commence.'

A light blinded me, an explosion crashed in my ears. My right leg jerked with pain, then knotted in an endless cramp. My throat contracted; I choked and tried to throw up. Something struck me in the solar plexus; I doubled up and could not catch my breath. 'Where did you put her?' A noise started low and soft, climbed higher and higher, increasing in pitch and decibels, until it was a thousand dull saws, a million squeaking slate pencils, then wavered in a screeching ululation that tore at the thin wall of reason. 'Who helped you?' Agonizing heat was at my crotch; I could not get away from it. 'Why did you do it?' I itched all over, intolerably, and tried to tear at my skin-but my arms would not work. The itching was worse than pain; I would have welcomed pain in lieu of scratching. 'Where is she?'

Light...sound...pain...heat...convulsions...cold...falling...light and pain...cold and falling...nausea and sound. 'Do you love the Lord?' Searing heat and shocking cold...pain and a pounding in my head that made me scream-'Where did you take her? Who else was in it? Give up and save your immortal soul.' Pain and an endless nakedness to the outer darkness.

I suppose I fainted.

Some one was slapping me across the mouth. 'Wake up, John Lyle, and confess! Zebadiah Jones has given you away.'

I blinked and said nothing. It was not necessary to simulate a dazed condition, nor could I have managed it. But the words had been a tremendous shock and my brain was racing, trying to get into gear. Zeb? Old Zeb? Poor old Zeb! Hadn't they had time to give him hypnotic treatment, too? It did not occur to me even then to suspect that Zeb had broken under torture alone; I simply assumed that they had been able to tap his unconscious mind. I wondered if he were already dead and remembered that I had gotten him into this, against his good sense. I prayed for his soul and prayed that he would forgive me.

My head jerked to another roundhouse slap. 'Wake up! You can hear me-Jones has revealed your sins.'

'Revealed what?' I mumbled.

The Grand Inquisitor motioned his assistants aside and leaned over me, his kindly face full of concern. 'Please, my son, do this for the Lord-and for me. You have been brave in trying to protect your fellow sinners from the fruits of their folly, but they failed you and your stiff-necked courage no longer means anything. But don't go to judgment with this on your soul. Confess, and let death come with your sins forgiven.'

'So you mean to kill me?'

He looked faintly annoyed. 'I did not say that. I know that you do not fear death. What you should fear is to meet your Maker with your sins still on your soul. Open your heart and confess.'

'Most Reverend Sir. I have nothing to confess.'

He turned away from me and gave orders in low, gentle tones. 'Continue. The mechanicals this time; I don't wish to burn out his brain.'

There is no point in describing what he meant by 'the mechanicals' and no sense in making this account needlessly grisly. His methods differed in no important way from torture techniques used in the Middle Ages and even more recently-except that his knowledge of the human nervous system was incomparably greater and his knowledge of behavior psychology made his operations more adroit. In addition, he and his assistants behaved as if they were completely free of any sadistic pleasure in their work; it made them coolly efficient.

But let's skip the details.

I have no notion of how long it took. I must have passed out repeatedly, for my clearest memory is of catching a bucket of ice water in the face not once but over and over again, like a repeating nightmare-each time followed by the inevitable hypo. I don't think I told them anything of any importance while I was awake and the hypno instructions to my unconscious may have protected me while I was out of my head. I seem to remember trying to make up a lie about sins I had never committed; I don't remember what came of it.

I recall vaguely coming semi-awake once and hearing a voice say, 'He can take more. His heart is strong.'

I was pleasantly dead for a long time, but finally woke up as if from a long sleep. I was stiff and when I tried to shift in bed my side hurt me. I opened my eyes and looked around; I was in bed in a small, windowless but cheerful room. A sweet-faced young woman in a nurse's uniform came quickly to my side and felt my pulse.

'Hello.'

'Hello,' she answered. 'How are we now? Better?'

'What happened?' I asked. 'Is it over? Or is this just a rest?'

'Quiet,' she admonished. 'You are still too weak to talk. But it's over-you are safe among the brethren.'

'I was rescued?'

'Yes. Now be quiet.' She held up my head and gave me something to drink. I went back to sleep.

It took me days to convalesce and catch up with events. The infirmary in which I woke up was part of a series of subbasements under the basement proper of a department store in New Jerusalem; there was some sort of underground connection between it and the lodge room under the Palace-just where and how I could not say; I was never in it. While conscious, I mean.

Zeb came to see me as soon as I was allowed to have visitors. I tried to raise up in bed. 'Zeb! Zeb boy-I thought you were dead!'

'Who? Me?' He came over and shook my left hand. 'What made you think that?'

I told him about the dodge the Inquisitor had tried to pull on me. He shook his head. 'I wasn't even arrested. Thanks to you, pal. Johnnie, I'll never call you stupid again. If you hadn't had that flash of genius to rig your sweater so that I could read the sign in it, they might have pulled us both in and neither one of us have gotten out of it alive. As it was, I went straight to Captain van Eyck. He told me to lie doggo in the lodge room and then planned your rescue.'

I wanted to ask how that had been pulled off but my mind jumped to a more important subject. 'Zeb, where is Judith? Can't you find her and bring her to see me? My nurse just smiles and tells me to rest.'

He looked surprised. 'Didn't they tell you?'

'Tell me what? No, I haven't seen anybody but the nurse and the doctor and they treat me like an idiot. Don't keep me in suspense, Zeb. Did anything go wrong? She's all right-isn't she?'

'Oh, sure! But she's in Mexico by now-we got a report by sensitive circuit two days ago.'

In my physical weakness I almost wept. 'Gone! Why, what a dirty, scabby trick! Why couldn't they have waited until I was well enough to tell her good-by?'

Zeb said quickly, 'Hey, look, stupid-no, forget that "stupid"; you aren't. Look, old man, your calendar is mixed up. She was on her way before you were rescued, before we were even sure you could be rescued. You don't think the brethren could bring her back just to let you two bill and coo, do you?'

I thought about it and calmed down. It made sense, even though I was bitterly disappointed. He changed the subject. 'How do you feel?'

'Oh, pretty good.'

'They tell me you get that cast off your leg tomorrow.'

'So? They haven't told me.' I twisted, trying to get comfortable. 'I'm almost more anxious to get shot of this corset, but the doc says I'll have to wear it for several weeks yet.'

'How about your hand? Can you bend your fingers?'

I tried it. 'Fairly well. I may have to write left-handed for a while.'

'All in all, it looks like you're too mean to die, old son. By the way, if it's any consolation to you, the laddy boy who worked on Judith got slightly dead in the raid in which you were rescued.'

'He was? Well, I'm sorry. I had planned to save him for myself.'

'No doubt, but you would have had to take your place in line, if he had lived. Lots of people wanted him. Me, for example.'

'But I had thought of something special for him-I was going to make him bite his nails.'

'Bite his nails?' Zeb looked puzzled.

'Until he reached his elbows. Follow me?'

'Oh.' Zeb grinned sourly. 'Not nearly imaginative enough, boy. But he's dead, we can't touch him.'

'He's infernally lucky. Zeb, why didn't you arrange to get him yourself? Or did you, and things were just too hurried to let you do a proper job?'

'Me? Why, I wasn't on the rescue raid. I haven't been back in the Palace at all.'

'Huh?'

'You didn't think I was still on duty, did you?'

'I haven't had time to think about it.'

'Well, naturally I couldn't go back after I ducked out to avoid arrest; I was through. No, my fine fellow, you and I are both deserters from the United States Army-with every cop and every postmaster in the country anxious to earn a deserter's reward by turning us in.'

I whistled softly and let the implications of his remark sink in.

Chapter 6

I had joined the Cabal on impulse. Certainly, under the stress of falling in love with Judith and in the excitement of the events that had come rushing over me as a result of meeting her, I had no time for calm consideration. I had not broken with the Church as a result of philosophical decision.

Of course I had known logically that to join the Cabal was to break with all my past ties, but it had not yet hit me emotionally. What was it going to be like never again to wear the uniform of an officer and a gentleman? I had been proud to walk down the street, to enter a public place, aware that all eyes were on me.

I put it out of my mind. The share was in the furrow, my hand was on the plow; there could be no turning back. I was in this until we won or until we were burned for treason.

I found Zeb looking at me quizzically. 'Cold feet, Johnnie?'

'No. But I'm still getting adjusted. Things have moved fast.'

'I know. Well, we can forget about retired pay, and our class numbers at the Point no longer matter.' He took off his Academy ring, chucked it in the air, caught it and shoved it into his pocket. 'But there is work to be done, old lad, and you will find that this is a military outfit, too-a real one. Personally, I've had my fill of spit-and-polish and I don't care if I never again hear that "Sound off" and "Officers, center!" and "Watchman, what of the night?" manure again. The brethren will make full use of our best talents-and the fight really matters.'

Master Peter van Eyck came to see me a couple of days later. He sat on the edge of my bed and folded his hands over his paunch and looked at me. 'Feeling better, son?'

'I could get up if the doctor would let me.'

'Good. We're shorthanded; the less time a trained officer spends on the sick list the better.' He paused and chewed his lip. 'But, son, I don't know just what to do with you.'

'Eh? Sir?'

'Frankly, you should never have been admitted to the Order in the first place-a military command should not mess around with affairs of the heart. It confuses motivations, causes false decisions. Twice, because we took you in, we have had to show our strength in sorties that-from a strictly military standpoint-should never have happened.'

I did not answer, there was no answer-he was right. My face was hot with embarrassment.

'Don't blush about it,' he added kindly. 'Contrariwise, it is good for the morale of the brethren to strike back occasionally. The point is, what to do with you? You are a stout fellow, you stood up well-but do you really understand the ideals of freedom and human dignity we are fighting for?'

I barely hesitated. 'Master-I may not be much of a brain, and the Lord knows it's true that I've never thought much about politics. But I know which side I'm on!'

He nodded. 'That's enough. We can't expect each man to be his own Tom Paine.'

'His own what?'

'Thomas Paine. But then you've never heard of him, of course. Look him up in our library when you get a chance. Very inspiring stuff. Now about your assignment. It would be easy enough to put you on a desk job here-your friend Zebadiah has been working sixteen hours a day trying to straighten out our filing system. But I can't waste you two on clerical jobs. What is your savvy subject, your specialty?'

'Why, I haven't had any P.G. work yet, sir.'

'I know. But what did you stand high in? How were you in applied miracles, and mob psychology?'

'I was fairly good in miracles, but I guess I'm too wooden for psychodynamics. Ballistics was my best subject.'

'Well, we can't have everything. I could use a technician in morale and propaganda, but if you can't, you can't.'

'Zeb stood one in his class in mob psychology, Master. The Commandant urged him to aim for the priesthood.'

'I know and we'll use him, but not here. He is too much interested in Sister Magdalene; I don't believe in letting couples work together. It might distort their judgments in a pinch. Now about you. I wonder if you wouldn't make a good assassin?'

He asked the question seriously but almost casually; I had trouble believing it. I had been taught-I had always taken it for granted that assassination was one of the unspeakable sins, like incest, or blasphemy. I blurted out. 'The brethren use assassination?'

'Eh? Why not?' Van Eyck studied my face. 'I keep forgetting. John, would you kill the Grand Inquisitor if you got a chance?'

'Well-yes, of course. But I'd want to do it in a fair fight.'

'Do you think you will ever be given that chance? Now let's suppose we are back at the day Sister Judith was arrested by him. Suppose you could stop him by killing him-but only by poisoning him, or knifing him in the back. What would you do?'

I answered savagely, 'I would have killed him!'

'Would you have felt any shame, any guilt?'

'None!'

'So. But he is only one of many in this foulness. The man who eats meat cannot sneer at the butcher-and every bishop, every minister of state, every man who benefits from this tyranny, right up to the Prophet himself, is an accomplice before the fact in every murder committed by the inquisitors. The man who condones a sin because he enjoys the result of the sin is equally guilty of the sin. Do you see that?'

Oddly enough, I did see it, for it was orthodox doctrine as I had learned it. I had choked over its new application. But Master Peter was still talking: 'But we don't indulge in vengeance-vengeance still belongs to the Lord. I would never send you against the Inquisitor because you might be tempted to exult in it personally. We don't tempt a man with sin as a bait. What we do do, what we are doing, is engaging in a calculated military operation in a war already commenced. One key man is often worth a regiment; we pick out that key man and kill him. The bishop in one diocese may be such a man; the bishop in the next state may be just a bungler, propped up by the system. We kill the first, let the

second stay where he is. Gradually we are eliminating their best brains. Now-'He leaned toward me. '- do you want a job picking off those key men? It's very important work.'

It seemed to me that, in this business, someone was continually making me face up to facts, instead of letting me dodge unpleasant facts the way most people manage to do throughout their lives. Could I stomach such an assignment? Could I refuse it-since Master Peter had implied at least that assassins were volunteers-refuse it and try to ignore in my heart that it was going on and that I was condoning it?

Master Peter was right; the man who buys the meat is brother to the butcher. It was squeamishness, not morals-like the man who favors capital punishment but is himself too 'good' to fit the noose or swing the axe. Like the person who regards war as inevitable and in some circumstances moral, but who avoids military service because he doesn't like the thought of killing.

Emotional infants, ethical morons-the left hand must know what the right hand doeth, and the heart is responsible for both. I answered almost at once, 'Master Peter, I am ready to serve . . . that way or whatever the brethren decide I can do best.'

'Good man!' He relaxed a bit and went on, 'Between ourselves, it's the job I offer to every new recruit when I'm not sure that he understands that this is not a ball game, but a cause to which he must commit himself without any reservation-his life, his fortune, his sacred honor. We have no place for the man who wants to give orders but who won't clean the privy.'

I felt relieved. 'Then you weren't seriously picking me out for assassination work?'

'Eh? Usually I am not; few men are fitted for it. But in your case I am quite serious, because we already know that you have an indispensable and not very common qualification.'

I tried to think what was so special about me and could not. 'Sir?'

'Well you'll get caught eventually, of course. Three point seven accomplished missions per assassin is what we are running now-a good score, but we ought to do better as suitable men are so scarce. But with you we know already that when they do catch you and put you to the Question, you won't crack.'

My face must have shown my feelings. The Question? Again? I was still half dead from the first time. Master Peter said kindly, 'Of course you won't have to go up against it again to the fullest. We always protect assassins; we fix it so that they can suicide easily. You don't need to worry.'

Believe me, having once suffered the Question, his assurance to me did not seem calloused: it was a real comfort. 'How, sir?'

'Eh? A dozen different ways. Our surgeons can booby-trap you so that you can die at will in the tightest bonds anyone can put on you. There is the old hollow tooth, of course, with cyanide or such-but the proctors are getting wise to that; sometimes they gag a man's mouth open. But there are many ways. For example-' He stretched his arms wide and bent them back, but not far. '-if I were to cramp my arms backward in a position a man never assumes without very considerable conscious effort, a little capsule between my shoulder blades would rupture and I would make my last report. Yet you could pound me on the back all day and never break it.'

'Uh. . . were you an assassin, sir?'

'Me? How could I be, in my job? But all of our people in positions of maximum exposure are loaded-it's the least we can do for them. Besides that, I've got a bomb in my

belly-He patted his paunch. '-that will take a roomful of people with me if it seems desirable.'

'I could have used one of those last week,' I said emphatically.

'You're here, aren't you? Don't despise your luck. If you need one, you'll have one.' He stood up and prepared to leave. 'In the meantime, don't give any special thought to being selected as an executioner. The psychological evaluation group will still have to pass on you and they are hard men to convince.'

Despite his words, I did think about it, of course, though it ceased to worry me. I was put on light duty shortly thereafter and spent several days reading proof on the Iconoclast, a smug, mildly critical, little reform-from-within paper which the Cabal used to pave the way for its field missionaries. It was a 'Yes, but-' paper, overtly loyal to the Prophet but just the sort of thing to arouse doubt in the minds of the stiff-necked and intolerant. Its acid lay in how a thing was said, not what was said. I had even seen copies of it around the Palace.

I also got acquainted with some of the ramifications of the amazing underground headquarters at New Jerusalem. The department store above us was owned by a Past Grand Master and was an extremely important means of liaison with the outside world. The shelves of the store fed us and clothed us; through taps into the visiphone circuits serving the store commercially we had connection with the outside and could even put in transcontinental calls if the message could be phrased or coded to allow for the likelihood that it would be monitored. The owner's delivery trucks could be used to spirit fugitives to or from our clandestine quarters-I learned that Judith started her flight that way, with a bill of lading that described her as gum boots. The store's manifold commercial operations were a complete and plausible blind for our extensive operations.

Successful revolution is Big Business-make no mistake about that. In a modern, complex, and highly industrialized state, revolution is not accomplished by a handful of conspirators whispering around a guttering candle in a deserted ruin. It requires countless personnel, supplies, modern machinery and modern weapons. And to handle these factors successfully there must be loyalty, secrecy, and superlative staff organization.

I was kept busy but my work was fill-in work, since I was awaiting assignment. I had time to dig into the library and I looked up Tom Paine, which led me to Patrick Henry and Thomas Jefferson and others-a whole new world was opened up to me. I had trouble at first in admitting the possibility of what I read; I think perhaps of all the things a police state can do to its citizens, distorting history is possibly the most pernicious. For example, I learned for the first time that the United States had not been ruled by a bloodthirsty emissary of Satan before the First Prophet arose in his wrath and cast him out-but had been a community of free men, deciding their own affairs by peaceful consent. I don't mean that the first republic had been a scriptural paradise, but it hadn't been anything like what I had learned in school.

For the first time in my life I was reading things which had not been approved by the Prophet's censors, and the impact on my mind was devastating. Sometimes I would glance over my shoulder to see who was watching me, frightened in spite of myself. I began to sense faintly that secrecy is the keystone of all tyranny. Not force, but secrecy . . . censorship. When any government, or any church for that matter, undertakes to say to its subjects, 'This you may not read, this you must not see, this you are forbidden to know', the end result is tyranny and oppression, no matter how holy the motives. Mighty

little force is needed to control a man whose mind has been hoodwinked; contrariwise, no amount of force can control a free man, a man whose mind is free. No, not the rack, not fission bombs, not anything-you can't conquer a free man; the most you can do is kill him.

My thoughts did not then fall into syllogisms; my head was filled with an inchoate spate of new ideas, each more exciting than the last. I discovered that travel between the planets, almost a myth in my world, had not stopped because the First Prophet had forbidden it as a sin against the omnipotence of God; it had ceased because it had gone into the red financially and the Prophet's government would not subsidize it. There was even an implied statement that the 'infidels' (I still used that word in my mind) still sent out an occasional research ship and that there were human beings even now on Mars and Venus.

I grew so excited at that notion that I almost forgot the plight we were all in. If I had not been chosen for the Angels of the Lord, I would probably have gone into rocketry. I was good at anything of that sort, the things that called for quick reflexes combined with knowledge of the mathematical and mechanical arts. Maybe someday the United States would have space ships again. Perhaps I

But the thought was crowded out by a dozen new ones. Foreign newspapers-why, I had not even been sure the infidels could read and write. The London Times made unbelievable and exciting reading. I gradually got it through my head that the Britishers apparently did not now eat human flesh, if indeed they ever had. They seemed remarkably like us, except that they were shockingly prone to do as they pleased-there were even letters in the Times criticizing the government. And there was another letter signed by a bishop of their infidel church, criticizing the people for not attending services. I don't know which one puzzled me the more; both of them seemed to indicate a situation of open anarchy.

Master Peter informed me that the psych board had turned me down for assassination duty. I found myself both relieved and indignant. What was wrong with me that they would not trust me with the job? It seemed like a slur on my character-by then.

'Take it easy,' Van Eyck advised dryly. 'They made a dummy run based on your personality profile and it figured almost an even chance that you would be caught your first time out. We don't like to expend men that fast.'

'But -'

'Peace, lad. I'm sending you out to General Headquarters for assignment.'

'General Headquarters? Where is that?'

'You'll know when you get there. Report to the staff metamorphist.'

Dr Mueller was the staff face-changer; I asked him what he had in mind for me. 'How do I know until I find out what you are?' He had me measured and photographed, recorded my voice, analyzed my walk, and had a punched card made up of my physical characteristics. 'Now we'll find your twin brother.' I watched the card sorter go through several thousand cards and I was beginning to think I was a unique individual, resembling no one else sufficiently to permit me to be disguised successfully, when two cards popped out almost together. Before the machine whirred to a stop there were five cards in the basket.

'A nice assortment,' Dr Mueller mused as he looked them over, 'one synthetic, two live ones, a deader, and one female. We can't use the woman for this job, but we'll keep it

in mind; it might come in very handy someday to know that there is a female citizen you could impersonate successfully.'

'What's a synthetic?' I enquired.

'Eh? Oh, it's a composite personality, very carefully built from faked records and faked backgrounds. A risky business-it involves tampering with the national archives. I don't like to use a synthetic, for there really isn't any way to fill in completely the background of a man who doesn't exist. I'd much rather patch into the real background of a real person.'

'Then why use synthetics at all?'

'Sometimes we have to. When we have to move a refugee in a hurry, for example, and there is no real person we can match him with. So we try to keep a fairly broad assortment of synthetics built up. Now let me see,' he added, shuffling the cards, 'we have two to choose from -'

'Just a second, Doctor,' I interrupted, 'why do you keep dead men in the file?'

'Oh, they aren't legally dead. When one of the brethren dies and it is possible to conceal the fact, we maintain his public personality for possible future use. Now then,' he continued, 'can you sing?'

'Not very well.'

'This one is out, then. He's a concert baritone. I can make a lot of changes in you, but I can't make a trained singer of you. It's Hobson's choice. How would you like to be Adam Reeves, commercial traveler in textiles?' He held up a card.

'Do you think I could get away with it?'

'Certainly-when I get through with you.'

A fortnight later my own mother wouldn't have known me. Nor, I believe, could Reeves's mother have told me from her son. The second week Reeves himself was available to work with me. I grew to like him very much while I was studying him. He was a mild, quiet man with a retiring disposition, which always made me think of him as small although he was of course, my height, weight, and bony structure. We resembled each other only superficially in the face.

At first, that is. A simple operation made my ears stand out a little more than nature intended; at the same time they trimmed my ear lobes. Reeves's nose was slightly aquiline; a little wax under the skin at the bridge caused mine to match. It was necessary to cap several of my teeth to make mine match his dental repair work; that was the only part I really minded. My complexion had to be bleached a shade or two; Reeves's work did not take him out into the sun much.

But the most difficult part of the physical match was artificial fingerprints. An opaque, flesh-colored flexible plastic was painted on my finger pads, then my fingers were sealed into molds made from Reeves's fingertips. It was touchy work; one finger was done over seven times before Dr Mueller would pass it.

That was only the beginning; now I had to learn to act like Reeves-his walk, his gestures, the way he laughed, his table manners. I doubt if I could ever make a living as an actor-my coach certainly agreed and said so.

'Confound it, Lyle, won't you ever get it? Your life will depend on it. You've got to learn!'

~But I thought I was acting just like Reeves,' I objected feebly.

'Acting! That's just the trouble-you were acting like Reeves. And it was as phony as a false leg. You've got to be Reeves. Try it. Worry about your sales record, think about your last trip, think about commissions and discounts and quotas. Go on. Try it.'

Every spare minute I studied the current details of Reeves's business affairs, for I would actually have to sell textiles in his place. I had to learn a whole trade and I discovered that there was more to it than carrying around samples and letting a retailer make his choice-and I didn't know a denier from a continuous fibre. Before I finished I acquired a new respect for businessmen. I had always thought that buying and selling was simple; I was wrong again. I had to use the old phonographic tutor stunt and wear earphones to bed. I never sleep well that way and would wake up each morning with a splitting head and with my ears, still tender from the operations, sore as two boils.

But it worked, all of it. In two short weeks I was Adam Reeves, commercial traveler, right down to my thoughts.

Chapter 7

'Lyle,' Master Peter van Eyck said to me, 'Reeves is due to catch the Comet for Cincinnati this afternoon. Are you ready?'

'Yes, sir.'

'Good. Repeat your orders.'

'Sir, I am to carry out my-I mean his-selling schedule from here to the coast. I check in at the San Francisco office of United Textiles, then proceed on his vacation. In Phoenix, Arizona, I am to attend church services at the South Side Tabernacle. I am to hang around afterwards and thank the priest for the inspiration of his sermon; in the course of which I am to reveal myself to him by means of the accustomed usages of our order. He will enable me to reach General Headquarters.'

'All correct. In addition to transferring you for duty, I am going to make use of you as a messenger. Report to the psychodynamics laboratory at once. The chief technician will instruct you.'

'Very well, sir.'

The lodge Master got up and came around his desk to me. 'Good-by, John. Watch yourself, and may the Great Architect help you.'

'Thank you, sir. Uh, is this message I am to carry important?'

'Quite important.'

He let it go at that and I was a bit irked; it seemed silly to be mysterious about it when I would find out 5ust what it was in a few minutes. But I was mistaken. At the laboratory I was told to sit down, relax, and prepare myself for hypnosis.

I came out of it with the pleasant glow that usually follows hypnosis. 'That's all,' I was told. 'Carry out your orders.'

'But how about the message I was to carry?'

'You have it.'

'Hypnotically? But if I'm arrested, I'll be at the mercy of any psychoinvestigator who examines me!'

'No, you won't. It's keyed to a pair of signal words; you can't possibly remember until they are spoken to you. The chance that an examiner would hit on both words and in the right order is negligible. You can't give the message away, awake or asleep.'

I had rather expected to be 'loaded' for suicide, if I was to carry an important message-though I hadn't seen how they could do it at the last minute, other than supplying me with a pill, I mean, a method almost useless if the policeman knows his business. But if I couldn't give away the message I carried, then I preferred to take my chances; I didn't ask for poison. I'm not the suiciding type anyhow-when Satan comes for me, he'll have to drag me...

The rocket port serving New Jerusalem is easier to get to than is the case at most of the older cities. There was a tube station right across from the department store that hid our headquarters. I simply walked out of the store, took the bridge across the street, found the tube stall marked 'Rocket Port', waited for an empty cartridge, and strapped myself and my luggage in. The attendant sealed me and almost at once I was at the port.

I bought my ticket and took my place at the end of the queue outside the port police station. I'll admit I was nervous; while I didn't anticipate having any trouble getting my travel pass validated, the police officers who must handle it were no doubt on the lookout for John Lyle, renegade army officer. But they were always looking for someone and I hoped the list of wanted faces was too long to make the search for me anything other than routine.

The line moved slowly and that looked like a bad sign-especially so when I noticed that several people had been thumbed out of line and sent to wait behind the station railing. I got downright jittery. But the wait itself gave me time to get myself in hand. I shoved my papers at the sergeant, glanced at my chrono, up at the station clock, and back at my wrist.

The sergeant had been going through my papers in a leisurely, thorough manner. He looked up. 'Don't worry about catching your ship,' he said not unkindly. 'They can't leave until we clear their passenger list.' He pushed a pad across the counter. 'Your fingerprints, please.'

I gave them without comment. 1-le compared them with the prints on my travel pass and then with the prints Reeves had left there on his arrival a week earlier. 'That's all, Mr. Reeves. A pleasant trip.'

I thanked him and left.

The Comet was not too crowded. I picked a seat by a window, well forward, and had just settled down and was unfolding a late-afternoon copy of the Holy City, when I felt a touch on my arm.

It was a policeman.

'Will you step outside, please?'

I was herded outside with four other male passengers. The sergeant was quite decent about it. 'I'm afraid I'll have to ask you four to return to the station for further identification. I'll order your baggage removed and have the passenger list changed. Your tickets will be honored on the next flight.'

I let out a yelp. 'But I've got to be in Cincinnati tonight!'

'I'm sorry.' He turned to me. 'You're Reeves, aren't you? Hmm . . . you are the right size and build. Still-let me see your pass again. Didn't you arrive in town just last week?'

'That's right.'

He went through my papers again. 'Uh, yes, I remember now; you came in Tuesday morning on the Pilgrim. Well, you can't be in two places at once, so I guess that clears you.' He handed my papers back to me. 'Go aboard again. Sorry we bothered you. The rest of you come along.'

I returned to my seat and picked up my newspaper. A few minutes later the first heavy surge of the rockets threw us to the west. I continued reading the paper to cover up my agitation and relief, but soon got interested. I had been reading a Toronto paper only that morning, underground; the contrast was startling. I was back in a world for which the outside world hardly existed; the 'foreign affairs' news, if you could call it that, consisted of glowing reports of our foreign missions and some accounts of atrocities among the infidels. I began to wonder where all that money went that was contributed each year for missionary work; the rest of the world, if you could believe their newspapers, didn't seem much aware that our missions existed.

Then I began going through the paper, picking out items that I knew to be false. By the time I was through we were down out of the ionosphere and gliding into Cincy. We had overtaken the sun and had sunset all over again.

There must be a peddler's pack in my family tree. I not only covered Reeves's territory in Cincinnati, but bettered his quota. I found that I got as much pleasure out of persuading some hard-boiled retailer that he should increase his line of yard goods as I ever had from military work. I stopped worrying about my disguise and thought only about textiles. Selling isn't just a way to eat; it's a game, it's fun.

I left for Kansas City on schedule and had no trouble with the police in getting a visa for my travel pass. I decided that New Jerusalem had been the only ticklish check point; from here west nobody would expect to pick up John Lyle, formerly officer and gentleman; he would be one of thousands of wanted men, lost in the files.

The rocket to K.C. was well filled; I had to sit beside another passenger, a well-built chap in his middle thirties. We looked each other over as I sat down, then each busied himself with his own affairs. I called for a lap table and started straightening out the order blanks and other papers I had accumulated during busy, useful days in Cincinnati. He lounged back and watched the news broadcast in the TV tank at the forward end of the car.

I felt a nudge about ten minutes later and looked around. My seatmate flicked a thumb toward the television tank; in it there was displayed a large public square filled with a mob. It was surging toward the steps of a massive temple, over which floated the Prophet's gold-and-crimson banner and the pennant of a bishopric. As I watched, the first wave of the crowd broke against the temple steps.

A squad of temple guards trotted out a side door near the giant front doors and set up their tripods on the terrace at the head of the wide stairs. The scene cut to another viewpoint; we were looking down right into the faces of the mob hurrying toward us-apparently from a telephoto pick-up somewhere on the temple roof.

What followed made me ashamed of the uniform I had once worn. Instead of killing them quickly, the guards aimed low and burned off their legs. One instant the first wave was running towards me up the steps-then they fell, the cauterized stumps of their legs jerking convulsively. I had been watching a youngish couple right in the center of

the pick-up; they had been running hand in hand. As the beam swept across them they went down together.

She stayed down. He managed to lift himself on what had been his knees, took two awkward dying steps toward her and fell across her. He pulled her head to his, then the scene cut away from them to the wide view of the square.

I snatched the earphones hanging on the back of the seat in front of me and listened: '-apolis, Minnesota. The situation is well in hand and no additional troops will be needed. Bishop Jennings has declared martial law while the agents of Satan are rounded up and order restored: A period of prayer and fasting will commence at once.

'The Minnesota ghettos have been closed and all local pariahs will be relocated in the reservations in Wyoming and Montana in order to prevent future outbreaks. Let this be a warning to the ungodly everywhere who might presume to dispute the divine rule of the Prophet Incarnate.

'This on-the-spot cast by the No-Sparrow-Shall-Fall News Service is coming to you under the sponsorship of the Associated Merchants of the Kingdom, dealers in the finest of household aids toward grace. Be the first in your parish to possess a statuette of the Prophet that miraculously glows in the dark! Send one dollar, care of this station -,

I switched off the phones and hung them up. Why blame the pariahs? That mob wasn't made up of pariahs.

But I kept my lip zipped and let my companion speak first-which he did, with vehemence. 'Serves them right, the bloody fools! Imagine charging against a fortified position with your bare hands.' He kept his voice down and spoke almost in my ear.

'I wonder why they rioted?' was all that I answered.

'Eh? No accounting for the actions of an heretic. They aren't sane.'

'You can sing that in church,' I agreed firmly. 'Besides, even a sane heretic-if there could be such a thing, I mean-could see that the government is doing a good job of running the country. Business is good.' I patted my brief case happily. 'For me, at least, praise the Lord.'

We talked business conditions and the like for some time. As we talked I looked him over. He seemed to be the usual leading-citizen type, conventional and conservative, yet something about him made me uneasy. Was it just my guilty nerves? Or some sixth sense of the hunted?

My eyes came back to his hands and I had a vague feeling that I should be noticing something. But there was nothing unusual about them. Then I finally noticed a very minor thing, a calloused ridge on the bottom joint of the third finger of his left hand, the sort of a mark left by wearing a heavy ring for years and just the sort I carried myself from wearing my West Point class ring. It meant nothing, of course, since lots of men wear heavy seal rings on that finger. I was wearing one myself-not my West Point ring naturally, but one belonging to Reeves.

But why would this conventional-minded oaf wear such a ring habitually, then stop? A trifling thing, but it worried me; a hunted animal lives by noticing trifles. At the Point I had never been considered bright in psychology; I had missed cadet chevrons on that issue alone. But now seemed a good time to use what little I had learned . . . so I ran over iii my mind all I had noticed about him.

The first thing he had noticed, the one thing he had commented on, was the foolhardiness of charging into a fortified position. That smacked of military orientation in

his thinking. But that did not prove he was a Pointer. On the contrary, an Academy man wears his ring at all times, even into his grave, even on leave and wearing mufti . . . unless for some good reason he does not wish to be recognized.

We were still chatting sociably and I was worrying over how to evaluate insufficient data when the stewardess served tea. The ship was just beginning to bite air as we came down out of the fringes of space and entered the long glide into Kansas City; it was somewhat bumpy and she slopped a little hot tea on his thigh. He yelped and uttered an expletive under his breath. I doubt if she caught what he said.

But I did catch it-and I thought about it furiously while I dabbed at him with a handkerchief. 'B. J. idiot!' was the term he used and it was strictly West Point slang.

Ergo, the ring callus was no coincidence; he was a West Pointer, an army officer, pretending to be a civilian. Corollary: he was almost certainly on a secret service assignment. Was I his assignment?

Oh, come now, John! His ring might be at a jeweler's, being repaired; he might be going home on thirty days. But in the course of a long talk he had let me think that he was a business man. No, he was an undercover agent.

But even if he was not after me, he had made two bad breaks in my presence. But even the clumsiest tyro (like myself, say) does not make two such slips in maintaining an assumed identity-and the army secret service was not clumsy; it was run by some of the most subtle brains in the country. Very well, then-they were not accidental slips but calculated acts; I was intended to notice them and think that they were accidents. Why?

It could not be simply that he was not sure I was the man he wanted. In such case, under the old and tested principle that a man was sinful until proved innocent, he would simply have arrested me and I would have been put to the Question.

Then why?

It could only be that they wanted me to run free for a while yet-but to be scared out of my wits and run for cover . . . and thereby lead them to my fellow conspirators It was a far fetched hypothesis, but the only one that seemed to cover all the facts.

When I first concluded that my companion must be an agent on my trail I was filled with that cold, stomach-twisting fear that can be compared only with seasickness. But when I thought I had figured out their motives I calmed down. What would Zebadiah do? 'The first principle of intrigue is not to be stampeded into any unusual act-'Sit tight and play dumb. If this cop wanted to follow me, I'd lead him into every department store in K C-and let him watch while I peddled yard goods.

Nevertheless my stomach felt tight as we got off the ship in Kansas City. I expected that gentle touch on the shoulder which is more frightening than a fist in the face. But nothing ~ happened. He tossed me a perfunctory God-keep-you, pushed ahead of me and headed for the lift to the taxicab platform while I was still getting my pass stamped. It did not reassure me as he could have pointed me out half a dozen ways to a relief. But I went on over to the New Muehlbach by tube as casually as I could manage.

I had a fair week in K.C., met my quota and picked up one new account of pretty good size. I tried to spot any shadow that might have been placed on me, but I don't know to this day whether or not I was being trailed. If I was, somebody spent an awfully dull week. But, although I had about concluded that the incident had been nothing but

imagination and my jumpy nerves, I was happy at last to be aboard the ship for Denver and to note that my companion of the week before was not a passenger.

We landed at the new field just east of Aurora, many miles from downtown Denver. The police checked my papers and fingerprinted me in the routine fashion and I was about to shove my wallet back into my pocket when the desk sergeant said, 'Bare your left arm, please, Mr. Reeves.'

I rolled up my sleeve while trying to show the right amount of fretful annoyance. A white-coated orderly took a blood sample. 'Just a normal precaution,' the sergeant explained. 'The Department of Public Health is trying to stamp out spotted fever.'

It was a thin excuse, as I knew from my own training in PH.-but Reeves, textiles salesman, might not realize it. But the excuse got thinner yet when I was asked to wait in a side room of the station while my blood sample was run. I sat there fretting, trying to figure out what harm they could do me with ten c.c. of my blood-and what I could do about it even if I did know.

I had plenty of time to think. The situation looked anything but bright. My time was probably running out as I sat there-yet the excuse on which they were holding me was just plausible enough that I didn't dare cut and run; that might be what they wanted. So I sat tight and sweated.

The building was a temporary structure and the wall between me and the sergeant's office was a thin laminate; I could hear voices through it without being able to make out the words. I did not dare press my ear to it for fear of being caught doing so. On the other hand I felt that I just had to do it. So I moved my chair over to the wall, sat down again, leaned back on two legs of the chair so that my shoulders and the back of my neck were against the wall. Then I held a newspaper I had found there up in front of my face and pressed my ear against the wall.

I could hear every word then. The sergeant told a story to his clerk which would have fetched him a month's penance if a morals proctor had been listening-still, I had heard the same story, only slightly cleaned up, right in the Palace, so I wasn't really shocked, nor was I in any mood to worry about other people's morals. I listened to several routine reports and an inquiry from some semi-moron who couldn't find the men's washroom, but not a word about myself. I got a crick in my neck from the position.

Just opposite me was an open window looking out over the rocket field. A small ship appeared in the sky, braked with nose units, and came in to a beautiful landing about a quarter of a mile away. The pilot taxied toward the administration building and parked outside the window, not twenty-five yards away.

It was the courier version of the Sparrow Hawk, ram jet with rocket take-off and booster, as sweet a little ship as was ever built. I knew her well; I had pushed one just like her, playing number-two position for Army in sky polo-that was the year we had licked both Navy and Princeton.

The pilot got out and walked away. I eyed the distance to the ship. If the ignition were not locked-Sheol! What if it was? Maybe I could short around it, I looked at the open window. It might be equipped with vibrobolts; if so, I would never know what hit me. But I could not spot any power leads or trigger connections and the flimsy construction of the building would make it hard to hide them. Probably there was nothing but contact alarms; there might not be so much as a selenium circuit.

While I was thinking about it I again heard voices next door; I flattened my ear and strained to listen.

'What's the blood type?'

'Type one, sergeant.'

'Does it check?'

'No, Reeves is type three.'

'Oho! Phone the main lab. We'll take him into town for a retinal.'

I was caught cold and knew it. They knew positively that I wasn't Reeves. Once they photographed the pattern of blood vessels in the retina of either eye they would know just as certainly who I really was, in no longer time than it took to radio the picture to the Bureau of Morals & Investigation-less, if copies had been sent out to Denver and elsewhere with the tab on me.

I dove out the window.

I lit on my hands, rolled over in a ball, was flung to my feet as I unwound. If I set off an alarm I was too busy to hear it. The ship's door was open and the ignition was not locked -there was help indeed for the Son of a Widow! I didn't bother to taxi clear, but blasted at once, not caring if my rocket flame scorched my pursuers. We bounced along - the ground, the little darling and I, then I lifted her nose by gyro and scooted away to the west.

Chapter 8

I let her reach for the sky, seeking altitude and speed where the ram jets would work properly. I felt exulted to have a good ship under me and those cops far behind. But I snapped out of that silly optimism as I leveled off for jet flight.

If a cat escapes up a tree, he must stay there until the dog goes away. That was the fix I was in and in my case the dog would not go away, nor could I stay up indefinitely. The alarm would be out by now; behind me, on all sides of me, police pilots would be raising ship in a matter of minutes, even seconds. I was being tracked, that was sure, and the blip of my craft on several screens was being fed as data into a computer that would vector them in on me no matter where I turned. After that-well, it was land on command or be shot down.

The miracle of my escape began to seem a little less miraculous. Or too miraculous, perhaps? Since when were the police so sloppy that they would leave a prisoner in a room with an unguarded window? Wasn't it just a little too much of a coincidence that a ship I knew how to herd should come to that window and be left there-with the ignition unlocked-just as the sergeant said loudly the one thing that would be sure to make me try for it?

Maybe this was a second, and successful, attempt to panic me. Maybe somebody else knew my liking for the Sparrow Hawk courier, knew it because he had my dossier spread out in front of him and was as familiar with my sky polo record as I was. In which case they might not shoot me down just yet; they might be counting on me to lead them straight to my comrades.

Or perhaps, just possibly, it was a real escape-if I could exploit it. Either way, I was neither ready to be caught again, nor to lead them to my brethren-nor to die. I had an important message (I told myself); I was too busy to oblige them by dying just now.

I flipped the ship's commer to the police & traffic frequency and listened. There was some argument going on between the Denver port and a transport in the air but no one as yet was shouting for me to ground or get my pants shot off. Later perhaps-I left it switched on and thought.

The dead-reckoner showed me some seventy-five miles from Denver and headed north of west; I was surprised to see that I had been in the air less then ten minutes - . . so hopped up with adrenalin, no doubt, that my time sense was distorted. The ram-jet tanks were nearly full; I had nearly ten hours and six thousand miles at economy cruising-but of course at that speed they could almost throw rocks at me.

A plan, silly and perhaps impossible and certainly born of desperation but even so better than no plan at all, was beginning to form in my brain. I consulted the great circle indicator and set a course for the Republic of Hawaii; my baby nosed herself slightly south of west. Then I turned to the fuel-speed-distance gnomograph and roughed a problem-3100 miles about, at around 800 m.p.h., ending with dry tanks and depending on rocket juice and the nose units to cushion a cold-jet landing. Risky.

Not that I cared. Somewhere below me, shortly after I set the autopilot on the indicated course and speed, analyzers in the cybernetwork would be telling their human operators that I was attempting to escape to the Free State of Hawaii, on such a course, such an altitude, and at max speed for that range- and that I would pass over the Pacific coast between San Francisco and Monterey in sixty-odd minutes unless intercepted. But the interception was certain. Even if they were still playing with me, cat and mouse, ground-to-air snarlers would rise up from the Sacramento Valley. If they missed (most unlikely!), manned ships as fast or faster than my baby, with full tanks and no need to conserve radius, would be waiting, at altitude at the coast. I had no hope of running that gauntlet.

Nor did I intend to. I wanted them to destroy the little honey I was pushing, destroy her completely and in the air-because I had no intention of being aboard when it happened.

Operation Chucklehead, phase two: how to get out of the durn thing! Leaving a jet plane in powered flight has all been figured out by careful engineers; you slap the jetison lever and pray; the rest is done for you. The survival capsule closes down on you and seals, then the capsule with you in it is shot clear of the ship. In due course, at proper pressure and terminal air speed, the drogue is fired; it pulls your chute open, and there you are, floating comfortably toward God's good earth, with your emergency oxygen bottle for company.

There is only one hitch: both the capsule and the abandoned ship start sending out radio signals, dots for the capsule, dashes for the ship, and, for good measure, the capsule has a built-in radar-beacon.

The whole thing is about as inconspicuous as a cow in church.

I sat there chewing my thumb and staring out ahead. It seemed to me that the yonder was looking even wilder and bluer than usual -- my own mood, no doubt, for I knew that thirteen ground miles were slipping out from under me each minute and that it was high time for me to find my hat and go home. Of course, there was a door right

alongside me; I could strap on a chute and leave. But you can't open a door in a ram-jet plane in powered flight; nor do you jettison it-to do so will cause the plane to behave like a kicked pup. Nor is an eight-hundred-mile-an-hour breeze to be ignored even at 60,000 feet; I'd be sliced like butter on the door frame.

The answer depended on how good an autopilot this buggy had. The better robopilots could do everything but sing hymns; some of the cheaper ones could hold course, speed, and altitude but there their talents ended. In particular I wanted to know whether or not this autopilot had an emergency circuit to deal with a case of 'fire out', for I intended to stop the ship, step out, and let the ship continue on in the direction of Hawaii by itself-if it could.

A ram jet won't operate at all except at high speed; that's why ram ships have rocket power as well, else they could never take off. If you drop below the critical speed of your jet engines your fire goes out, then you must start it again, either by rocket power or by diving to gain speed. It is a touchy business and a number of ram-jet pilots have been gathered to their heavenly reward through an unexpected case of 'fire out'.

My earlier experience with the courier Sparrow Hawk told me nothing, as you don't use autopilots in sky polo. Believe me, you don't. So I looked for the instruction manual in the glove compartment, failed to find it, then looked over the pilot itself. The data plate failed to say. No doubt, with a screwdriver and plenty of time, I could have opened it, worried out the circuits and determined the fact-say in about a day and a half; those autopilots are a mass of transistors and spaghetti.

So I pulled the personal chute out of its breakaway clips and started shrugging my way into it while sighing, 'Pal, I hope you have the necessary gimmick built into your circuits.' The autopilot didn't answer, though I wouldn't have been much surprised if it had. Then I squeezed back into place and proceeded to override the autopilot manually. I didn't have too much time; I was already over the Deseret basin and I could see the setting sun glinting on the waters of the Great Salt Lake ahead and to the right.

First I took her down some, because 60,000 feet is thin and chilly-too little partial pressure of oxygen for the human lung. Then I started up in a gentle curving climb that would neither tear her wings off nor gee me into a blackout. I had to take her fairly high, because I intended to cut out the rocket motors entirely and force my best girl to light her stovepipes by diving for speed, it being my intention to go into a vertical stall, which would create 'fire out'-and get off in a hurry at that point. For obvious reasons I did not want the rocket motors to cut loose just as I was trying to say good-by.

I kept curving her up until 1 was lying on my back with the earth behind me and sky ahead. I nursed it along, throttling her down, with the intention of stalling with the fire dead at thirty thousand feet-still thin but within jumping distance of breathable air and still high enough to give my lady a chance to go into her dive without cracking up on the Utah plateau. At about 28,000 1 got that silly, helpless feeling you get when the controls go mushy and won't bite. Suddenly a light flashed red on the instrument board and both fires were out. It was time to leave.

I almost forgot the seat bottle. I was still stuffing the mouthpiece between my teeth and snapping the nosepiece over my nose while I was trying with the other hand to get the door open-all of this greatly impeded by the fact that the ship and I together were effectively in free fall; the slight air drag at the top of the stall trajectory made me weigh a few ounces, no more.

The door would not open. I finally remembered to slap the spill valve, then it came open and I was almost snatched outside. I hung there for a second or two, while the ground spun crazily overhead, then the door slammed shut and latched-and I shoved myself away from the plane. I didn't jump-we were falling together, I shoved.

I may have banged my head against a wing. In any case there is a short blank in my memory before I found myself sitting on space about twenty-five yards from the ship. She was spinning slowly and earth and sky were revolving lazily around me. There was a thin cold wind as I fell but I was not yet aware of the cold. We stayed pretty well together for a few moments-or hours; time had stopped-then the ship straightened out into a dive and pulled away from me.

I tried to follow her down by eye and became aware of the icy wind of my fall. My eyes hurt and I remembered something I had read about frozen eyeballs; I covered them with both hands. It helped a lot.

Suddenly I became frightened, panicky at the thought I had delayed the jump too long and was about to smash into the desert floor. I uncovered my eyes and sneaked a look.

No, the ground was still a long way off, two or three miles perhaps. My guess was not worth much as it was already dark down there. I tried to catch sight of the ship, could not see it, then suddenly spotted it as her fires came on. I risked frozen eyes and watched, exultation in my heart. The autopilot did indeed have built into it the emergency circuit for 'fire out' and everything was proceeding according to plan. The little sweetheart leveled off, headed west on course, and began to climb for the altitude she had been told to use. I sent a prayer after her that she would win through and end up in the clean Pacific, rather than be shot down.

I watched her glowing tailpipes out of sight while I continued to fall.

The triumph of my little ship had made me forget to be scared, I had known when I bailed out that it would have to be a delayed jump. My own body, in leaving the ship, would make a secondary blip on the screen of anything tracking the ship; my only hope of convincing the trackers that what they had witnessed was a real emergency-'fire out'-lay in getting away from the ship quickly and then in not being spotted on the way down. That meant that I must fall rapidly right out of the picture and not pull the rip cord until I was close to the ground, in visual darkness and in ground radar shadow.

But I had never made a delayed jump before; in fact I had jumped only twice, the two easy practice jumps under a jumpmaster which are required of every cadet in order to graduate. I wasn't especially uncomfortable as long as I kept my eyes closed, but I began to get a truly overpowering urge to pull that rip cord. My hand went to the handle and gripped it. I told myself to let go but I couldn't make myself do it. I was still much too high, dead sure to be spotted if I broke out that great conspicuous bumbershoot and floated down the rest of the way.

I had intended to rip the chute out somewhere between one thousand and five hundred feet above ground, but my nerve played out and I couldn't wait that long. There was a large town almost under me-Provo, Utah, by what I remembered of the situation from higher up. I convinced myself that I had to pull the rip cord to keep from landing right in the city.

I remembered just in time to remove the oxygen face piece, thereby avoiding a mouthful of broken teeth most likely, for I had never gotten around to strapping the bottle

to me; I had been holding it in my left hand all the way down. I suppose I could have taken time even then to secure it, but what I did was to throw it in the general direction of a farm, hoping that it would land on plowed ground rather than on some honest citizen's skull. Then I pulled the handle.

For the horrible split second I thought that I had a faultily packed chute. Then it opened and knocked me out-or I fainted with fright. I came to, hanging in the harness with the ground swinging and turning slowly beneath me. I was still too high up and I seemed to be floating toward the lights of Provo. So I took a deep breath-real air tasted good after the canned stuff-gathered a double handful of shrouds and spilled some wind.

I came down fast then and managed to let go just in time to get full support for the landing. I couldn't see the ground well in the evening darkness but I knew it was close; I gathered up my knees just as it says in the manual, then took it rather unexpectedly, stumbling, falling, and getting tangled in the chute. It is supposed to be equal to a fourteen-foot free jump; all I can say is it seems like more.

Then I was sitting on my tail in a field of sugar beets, and rubbing my left ankle.

Spies always bury their parachutes so I suppose I should have buried mine. But I didn't feel up to it and I didn't have any tools; I stuffed it into a culvert I found running under the road that edged the field, then started slogging that road toward the lights of Provo. My nose and right ear had been bleeding and the blood was dry on my face. I was covered with dirt, I had split my trousers, my hat was the Lord knows where-Denver, maybe, or over Nevada-my left ankle seemed slightly sprained, my right hand was badly skinned, and I had had a childish accident. I felt swell.

I could hardly keep from whistling as I walked, I felt so good. Sure, I was still hunted, but the Prophet's proctors thought I was still high in the sky and headed for Hawaii. At least I hoped they believed that and, in any case, I was still free, alive, and reasonably intact. If one has to be hunted, Utah was a better place for it than most; it had been a center of heresy and schism ever since the suppression of the Mormon church, back in the days of the First Prophet. If I could keep out of the direct sight of the Prophet's police, it was unlikely that any of the natives would turn me in.

Nevertheless I lay flat in the ditch every time a truck or a ground car came along and I left the road and took to the fields again before it entered the city proper. I swung wide and entered by a dimly lighted side street. It lacked two hours of curfew; I needed to carry out the first part of my plan before the night patrol took to the streets.

I wandered around dark residential streets and avoided any direct encounters with people for most of an hour before finding what I wanted-some sort of a flier I could steal. It turned out to be a Ford family skycar, parked in a vacant lot. The house next to it was dark.

I sneaked up to it, keeping to the shadows, and broke my penknife jimmying the door-but I got it open. The ignition was locked, but I had not expected that sort of luck twice. I had had an extremely practical education at taxpayers' expense which included detailed knowledge of I.C. engines, and this time there was no hurry; it took me twenty minutes, working in the dark, to short around the lock.

After a quick reconnoitre of the street I got in and started the electric auxiliary and glided quietly into the street, then rounded a corner before turning on the car's lights. Then I drove away as openly as a farmer returning from prayer meeting in town. Nevertheless I was afraid of running into a police check point at the city limits, so as soon

as the houses thinned out I ran the car into the first open field and went on well away from the road-then unexpectedly dropped a front wheel into an irrigation ditch. That determined my take-off point.

The main engine coughed and took hold; the rotor unfolded its airfoils with a loud creak. She was sloppy on the take-off, being canted over into the ditch, but she made it. The ground dropped away.

Chapter 9

The car I had stolen was a jalopy, old, not properly kept up, a bad valve knock in the engine, and a vibration in the rotor that I didn't like at all. But she would run and she had better than half a tank of fuel, enough to get me to Phoenix. I couldn't complain.

Worst was a complete lack of any navigating equipment other than an old-style uncompensated Sperry robot and a bundle of last year's strip maps of the sort the major oil companies give away. There was radio, but it was out of order.

Well, Columbus got by with less. Phoenix was almost due south and almost five hundred miles away. I estimated my drift by crossing my eyes and praying, set the robot on course and set her to hold real altitude of five hundred feet. Any more might get me into the cybernetwork; any less might get some local constable annoyed with me. I decided that running lights were safer than no running lights, this being no time to pick up a ticket, so I switched them on to 'dim'. After that I took a look around.

No sign of pursuit to the north-apparently my latest theft had not been noticed as yet. As for my first-well, the sweet darling was either shot down by now or far out over the Pacific. It occurred to me that I was hanging up quite a record for a mother's boy-accessory before and after the fact in murder, perjury before the Grand Inquisitor, treason, impersonation, grand larceny twice. There was still arson, and barratry, whatever that was, and rape. I decided I could avoid rape, but barratry I might manage, if I could find out what it meant. I still felt swell even though my nose was bleeding again.

It occurred to me that marrying a holy deaconess might be considered statutory rape under the law and that made me feel better; by then I didn't want to miss anything.

I stayed at the controls, overriding the pilot and avoiding towns, until we were better than a hundred miles south Of Provo. From there south, past the Grand Canyon and almost to the ruins of the old '66' roadcity, people are awfully scarce; I decided that I could risk some sleep. So I set the pilot on eight hundred feet, ground altitude, told it firmly to watch out for trees and bluffs, went back to the after passenger bench and went at once to sleep.

I dreamt that the Grand Inquisitor was trying to break my nerve by eating juicy roast beef in my presence. 'Confess!' he said, as he stabbed a bite and chewed. 'Make it easy on yourself. Will you have some rare, or the slice off the end?' I was about to confess, too, when I woke up.

It was bright moonlight and we were just approaching the Grand Canyon. I went quickly to the controls and overrode the order about altitude-I was afraid that the simple little robot might have a nervous breakdown and start shedding capacitances in lieu of

tears if it tried to hold the ship just eight hundred feet away from that Gargantuan series of ups and downs and pinnacles.

In the meantime I was enjoying the view so much that I forgot that I was starving. If a person hasn't seen the Canyon, there is no point in describing it-but I strongly recommend seeing it by moonlight from the air.

We sliced across it in about twenty minutes and I turned the ship back to automatic and started to forage, rummaging through the instrument panel compartment and the lockers. I turned up a chocolate almond bar and a few peanuts, which was a feast as I was ready for raw skunk- I had eaten last in Kansas City. 1 polished them off and went back to sleep.

I don't recall setting the pilot alarm but must have done so for it woke me up just before dawn. Dawn over the desert was another high-priced tourist item but 1 had navigating to do and could not spare it more than a glance. I turned the crate at right angles for a few minutes to check drift and speed made good over ground to south, then figured a bit on the edge of a strip map. With luck and assuming that my guesses about wind were about right, Phoenix should show up in about half an hour.

My luck held. I passed over some mighty rough country, then suddenly, spread out to the right, was a wide flat desert valley, green with irrigated crops and with a large city in it-the Valley of the Sun and Phoenix. I made a poor landing in a boxed-in, little dry arroyo leading into the Salt River Canyon; I tore off one wheel and smashed the rotor but I didn't care-the important thing was that it wasn't likely to be found there very soon, it and my fingerprints . . . Reeves's prints, I mean. Half an hour later, after picking my way around enormous cacti and still bigger red boulders, I came out on the highway that leads down the canyon and into Phoenix.

It was going to be a long walk into Phoenix, especially with one sore ankle, but I decided not to risk hitching a ride. Traffic was light and I managed to get off the road and hide each time for the first hour. Then I was caught on a straight up-and-down piece by a freighter; there was nothing to do but give the driver a casual wave as I flattened myself to the rock wall and pretended to be nonchalant. He brought his heavy vehicle to a quick, smooth stop. 'Want a lift, bud?'

I made up my mind in a hurry. 'Yes, thanks!'

He swung a dural ladder down over the wide tread and I climbed into the cab. He looked me over. 'Brother!' he said admiringly. 'Was it a mountain lion, or a bear?'

I had forgotten how I looked. I glanced down at myself. 'Both,' I answered solemnly. 'Strangled one in each hand.'

'I believe it.'

'Fact is,' I added, 'I was riding a unicycle and bounced it off the road. On the high side, luckily, but I wrecked it.'

'A unicycle? On this road? Not all the way from Globe?'

'Well, I had to get off and push at times. It was the down grade that got me, though.'

He shook his head. 'Let's go back to the lion-and-bear theory. I like it better.' He didn't question me further, which suited me. I was beginning to realize that off-hand fictions led to unsuspected ramifications; I had never been over the road from Globe.

Nor had I ever been inside a big freighter before and I was interested to see how much it resembled, inside, the control room of an Army surface cruiser-the same port and

starboard universal oleo speed gears controlling the traction treads, much the same instrument board giving engine speed, port and starboard motor speeds, torque ratios, and so forth. I could have herded it myself.

Instead I played dumb and encouraged him to talk. 'I've never been in one of these big babies before. Tell me how it works, will you?'

That set him off and I listened with half an ear while thinking about how I should tackle Phoenix. He demonstrated how he applied both power and steering to the treads simply by tilting the two speed bars, one in each fist, and then discussed the economy of letting the diesel run at constant speed while he fed power as needed to the two sides. I let him talk-my first need was a bath and a shave and a change of clothes, that was sure; else I'd be picked up on sight for suspected vagrancy.

Presently I realized he had asked a question. 'I think I see,' I answered. 'The Waterburies drive the treads.'

'Yes and no,' he went on. 'It's a diesel-electric hook up. The Waterburies just act like a gear system, although there aren't any gears in them; they're hydraulic. Follow me?'

I said I thought so (I could have sketched them)-and filed away in my mind the idea that, if the Cabal should ever need cruiser pilots in a hurry, freighter jacks could be trained for the job in short order.

We were going downhill slightly even after we left the canyon; the miles flowed past. My host pulled off the road and ground to a stop by a roadside restaurant and oil station. 'All out,' he grunted. 'Breakfast for us and go-juice for the gobuggy.'

'Sounds good.' We each consumed a tall stack with eggs and bacon and big, sweet Arizona grapefruit. He wouldn't let me pay for his and tried to pay for mine. As we went back to the freighter he stopped at the ladder and looked me over.

'The police gate is about three-quarters of a mile on in,' he said softly. 'I suppose that's as good a spot to check in as any.' He looked at me and glanced away.

'Mmm . . . 'I said. 'I think I could stand to walk the rest of the way, to settle my breakfast. Thanks a lot for the lift.'

'Don't mention it. Uh, there's a side road about two hundred yards back. It swings south and then west again, into town. Better for walking. Less traffic.'

'Uh, thanks.'

I walked back to the side road, wondering if my criminal career was that plain to everyone. One thing sure, I had to improve my appearance before tackling the city. The side road led through ranches and I passed several ranch houses without having the nerve to stop. But I came presently to a little house occupied by a Spanish-Indian family with the usual assortment of children and dogs. I took a chance; many of these people were clandestine Catholics, I knew, and probably hated the proctors as much as I did.

The Senora was home. She was fat and kindly and mostly Indian by her appearance. We couldn't talk much as my Spanish is strictly classroom quality, but I could ask for agua, and agua I got, both to drink and to wash myself. She sewed up the rip in my trousers while I stood foolishly in my shorts with the children making comments; she brushed me off and she even let me use her husband's razor. She protested over letting me pay her but I was firm about it. I left there looking passable.

The road swung back into town as the freighter jack had said-and without benefit of police. Eventually I found a neighborhood shopping center and in it a little tailor shop. There I waited while the rest of my transformation back to respectability was completed.

With my clothes freshly pressed, the spots removed, a brand-new shirt and hat I was then able to walk down the street and exchange a blessing with any proctor I might meet while looking him calmly in the eye. A phone book gave me the address of the South Side Tabernacle; a map on the wall of the tailor shop got me oriented without asking questions. It was within walking distance.

I hurried down the street and reached the church just as eleven o'clock services were starting. Sighing with relief I slipped into a back pew and actually enjoyed the services, just as I had as a boy, before I had learned what was back of them. I felt peaceful and secure; in spite of everything I had made it safely. I let the familiar music soak into my soul while I looked forward to revealing myself to the priest afterwards and then let him do the worrying for a while.

To tell the truth I went to sleep during the sermon. But I woke up in time and I doubt if anyone noticed. Afterwards I hung around, waited for a chance to speak to the priest, and told him how much I had enjoyed his sermon. He shook hands and I gave him the recognition grip of the brethren.

But he did not return it. I was so upset by that that I almost missed what he was saying. 'Thank you, my boy. It's always good news to a new pastor to hear that his ministrations are appreciated.' I guess my face gave me away. He added, 'Something wrong?'

I stammered, 'Oh, no, reverend sir. You see, I'm a stranger myself. Then you aren't the Reverend Baird?' I was in cold panic. Baird was my only contact with the brethren short of New Jerusalem; without someone to hide me I would be picked up in a matter of hours. Even as I answered I was making wild plans to steal another ship that night and then try to run the border patrol into Mexico.

His voice cut into my thoughts as if from a great distance. 'No, I'm afraid not, my son. Did you wish to see the Reverend Baird?'

'Well, it wasn't terribly important, sir. He is an old friend of my uncle. I was to look him up while I was here and pay my respects.' Maybe that nice Indian woman would hide me until dark?

'That won't be difficult. He's here in town. I'm just supplying his pulpit while he is laid up.'

My heart made a full turn at about twelve gee; I tried to keep it out of my face. 'Perhaps if he is sick I had better not disturb him.'

'Oh, not at all. A broken bone in his foot-he'll enjoy a bit of company. Here.' The priest fumbled under his robes, found a piece of paper and a pencil and wrote out the address. 'Two streets over and half a block down. You can't miss it.'

Of course I did miss it, but I doubled back and found it, an old vine-grown house with a suggestion of New England about it. It was set well back in a large, untidy garden-eucalyptus, palms, shrubs, and flowers, all in pleasant confusion. I pressed the announcer and heard the whine of an old-style scanner; a speaker inquired: 'Yes?'

'A visitor to see the Reverend Baird, if he so pleases.'

There was a short silence while he looked me over, then: 'You'll have to let yourself in. My housekeeper has gone to the market. Straight through and out into the back garden.' The door clicked and swung itself open.

I blinked at the darkness, then went down a central hallway and out through the back door. An old man was lying in a swing there, with one foot propped up on pillows. He lowered his book and peered at me over his glasses.

'What do you want of me, son?'

'Light.'

An hour later I was washing down the last of some superb enchiladas with cold, sweet milk. As I reached for a cluster of muscatel grapes Father Baird concluded his instructions to me. 'Nothing to do until dark, then. Any questions?'

'I don't think so, sir. Sanchez takes me out of town and delivers me to certain others of the brethren who will see to it that I get to General Headquarters. My end of it is simple enough.'

'True. You won't be comfortable however.'

I left Phoenix concealed in a false bottom of a little vegetable truck. 1 was stowed like cargo, with my nose pressed against the floor boards. We were stopped at a police gate at the edge of town; I could hear brusque voices with that note of authority, and Sanchez's impassioned Spanish in reply. Someone rummaged around over my head and the cracks in the false bottom gleamed with light.

Finally a voice said, 'It's O.K., Ezra. That's Father Baird's handyman. Makes a trip out to the Father's ranch every night or so.'

'Well, why didn't he say so?'

'He gets excited and loses his English. O.K. Get going, chico. Vaya usted con Dios.'

'Gracias, senores. Buenas noches.'

At the Reverend Baird's ranch I was transferred to a helicopter, no rickety heap this time, but a new job, silent and well equipped. She was manned by a crew of two, who exchanged pass grips with me but said nothing other than to tell me to get into the passenger compartment and stay there. We took off at once.

The windows of the passenger space had been covered; I don't know which way we went, nor how far, it was a rough ride, as the pilot seemed dead set on clipping daisies the whole way. It was a reasonable precaution to avoid being spotted in a scope, but I hoped he knew what he was doing-I wouldn't want to herd a heli that way in broad daylight. He must have scared a lot of coyotes-I know he frightened me.

At last I heard the squeal of a landing beam. We slid along it, hovered, and bumped gently to a stop. When I got out I found myself staring into the maw of a tripod-mounted blaster backed up by two alert and suspicious men.

But my escort gave the password, each of the guards questioned me separately, and we exchanged recognition signals. I got the impression that they were a little disappointed that they couldn't let me have it; they seemed awfully eager. When they were satisfied, a hoodwink was slipped over my head and I was led away. We went through a door, walked maybe fifty yards, and crowded into a compartment. The floor dropped away.

My stomach caught up with me and I groused to myself because I hadn't been warned that it was an elevator, but I kept my mouth shut. We left the lift, walked a way, and I was nudged onto a platform of some sort, told to sit down and hang on-whereupon we lurched away at breakneck speed. It felt like a roller coaster-not a good thing to ride

blindfolded. Up to then I hadn't really been scared. I began to think that the hazing was intentional, for they could have warned me.

We made another elevator descent, walked several hundred paces, and my hoodwink was removed. I caught my first sight of General Headquarters.

I didn't recognize it as such; I simply let out a gasp. One of my guards smiled. 'They all do that,' he said dryly.

It was a limestone cavern so big that one felt outdoors rather than underground and so magnificently lavish in its formations as to make one think of fairyland, or the Gnome King's palace. I had assumed that we were underground from the descents we had made, but nothing had prepared me for what I saw.

I have seen photographs of what the Carlsbad Caverns used to be, before the earthquake of '96 destroyed them; General Headquarters was something like that, although I can't believe that the Carlsbad Caverns were as big or half as magnificent. I could not at first grasp the immensity of the room I was in; underground there is nothing to judge size by and the built-in range-finder of a human's two-eyed vision is worthless beyond about fifty feet without something in the distance to give him scale-a house, a man, a tree, even the horizon itself. Since a natural cave contains nothing at all that is well known, customary, the human eye can't size it.

So, while I realized that the room I stood in was big, I could not guess just how big; my brain scaled it down to fit my prejudices. We were standing higher than the main floor and at one end of the room; the whole thing was softly floodlighted. I got through craning my neck and ohing and ahing, looked down and saw a toy village some distance away below us. The little buildings seemed to be about a foot high.

Then I saw tiny people walking around among the buildings-and the whole thing suddenly snapped into scale. The toy village was at least a quarter of a mile away; the whole room was not less than a mile long and many hundreds of feet high. Instead of the fear of being shut in that people normally experience in caves I was suddenly hit by the other fear, the fear of open spaces, agoraphobia. I wanted to slink along close to the walls, like a timid mouse.

The guide who had spoken touched my arm. 'You'll have plenty of time for rubbernecking later. Let's get going.' They led me down a path which meandered between stalagmites, from baby-finger size to Egyptian pyramids, around black pools of water with lilypads of living stone growing on them, past dark wet domes that were old when man was new, under creamy translucent curtains of onyx and sharp rosy-red and dark green stalactites. My capacity to wonder began to be overloaded and presently I quit trying.

We came out on a fairly level floor of bat droppings and made good time to the village. The buildings, I saw as I got closer, were not buildings in the outdoors sense, but were mere partitions of that honeycomb plastic used for sound-deadening-space separators for efficiency and convenience. Most of them were not roofed. We stopped in front of the largest of these pens; the sign over its door read ADMINISTRATION. We entered and I was taken into the personnel office. This room almost made me homesick, so matter of fact, so professionally military was it in its ugly, efficient appointments. There was even the elderly staff clerk with the nervous sniff who seems to be general issue for such an office since the time of Caesar. The sign on his desk had described him

as Warrant Officer R. E. Giles and he had quite evidently come back to his office after working hours to check me in.

'Pleased to meet you, Mr. Lyle,' he said, shaking hands and exchanging recognition. Then he scratched his nose and sniffed. 'You're a week or so early and your quarters aren't ready. Suppose we billet you tonight with a blanket roll in the lounge of B.O.Q. and get you squared away in the morning?'

I said that would be perfectly satisfactory and he seemed relieved.

Chapter 10

I guess I had been expecting to be treated as some sort of a conquering hero on my arrival-you know, my new comrades hanging breathlessly on every word of my modest account of my adventures and hairbreadth escapes and giving thanks to the Great Architect that I had been allowed to win through with my all-important message.

I was wrong. The personnel adjutant sent for me before I had properly finished breakfast, but I didn't even see him; I saw Mr. Giles. I was a trifle miffed and interrupted him to ask how soon it would be convenient for me to pay my formal call on the commanding officer.

He sniffed. 'Oh, yes. Well, Mr. Lyle, the C.G. sends his compliments to you and asks you to consider that courtesy calls have been made, not only on him but on department heads. We're rather pushed for time right now. He'll send for you the first spare moment he has.'

I know quite well that the general had not sent me any such message and that the personnel clerk was simply following a previously established doctrine. It didn't make me feel better.

But there was nothing I could do about it; the system took me in hand. By noon I had been permanently billeted, had had my chest thumped and so forth, and had made my reports. Yes, I got a chance to tell my story-to a recording machine. Flesh-and-blood men did receive the message I carried, but I got no fun out of that; I was under hypnosis at the time, just as I had been when it was given to me.

This was too much for me; I asked the psychotechnician who operated me what the message was I carried. He answered stiffly, 'We aren't permitted to tell couriers what they carry.' His manner suggested that my question was highly improper.

I lost my temper a bit. I didn't know whether he was senior to me or not as he was not in uniform, but I didn't care. 'For pity's sake! What is this? Don't the brethren trust me? Here I risk my neck -'

He cut in on me in a much more conciliatory manner. 'No, no, it's not that at all. It's for your protection.'

'Huh?'

'Doctrine. The less you know that you don't need to know the less you can spill if you are ever captured-and the safer it is for you and for everybody. For example, do you know where you are now? Could you point it out on a map?'

'No.'

'Neither do I. We don't need to know so we weren't told. However,' he went on, '1 don't mind telling you, in a general way, what you were carrying-just routine reports, confirming stuff we already had by sensitive circuits mostly. You were coming this way, so they dumped a lot of such stuff into you. I took three spools from you.'

'Just routine stuff? Why, the Lodge Master told me I was carrying a message of vital importance. That fat old joker!'

The technician grudged a smile. 'I'm afraid he was pulling-Oh!'

'Eh?'

'I know what he meant. You were carrying a message of vital importance-to you. You carried your own credentials hypnotically. If you had not been, you would never have been allowed to wake up.'

I had nothing to say. I left quietly.

My rounds of the medical office, psych office, quartermaster, and so forth had begun to give me a notion of the size of the place. The 'toy village' I had first seen was merely the administrative group. The power plant, a packaged pile, was in a separate cavern with many yards of rock wall as secondary shielding. Married couples were quartered where they pleased-about a third of us were female-and usually chose to set up their houses (or pens) well away from the central grouping. The armory and ammo dump were located in a side passage, a safe distance from offices and quarters.

There was fresh water in abundance, though quite hard, and the same passages that carried the underground streams appeared to supply ventilation-at least the air was never stale. It stayed at a temperature of 69.6 Fahrenheit and a relative humidity of 32%, winter and summer, night and day.

By lunchtime I was hooked into the organization, and found myself already hard at work at a temporary job immediately after lunch-in the armory, repairing and adjusting blasters, pistols, squad guns, and assault guns. I could have been annoyed at being asked, or ordered, to do what was really gunnery sergeant work, but the whole place seemed to be run with a minimum of protocol-we cleared our own dishes away at mess, for example. And truthfully it felt good to sit at a bench in the armory, safe and snug, and handle calipers and feather gauges and drifts again-good, useful work.

Just before dinner that first day I wandered into the B.O.Q. lounge and looked around for an unoccupied chair. I heard a familiar baritone voice behind me: 'Johnnie! John Lyle!' I whirled around and there, hurrying toward me, was Zebadiah Jones-good old Zeb, large as life and his ugly face split with a grin.

We pounded each other on the back and swapped insults. 'When did you get here?' I finally asked him.

'Oh, about two weeks ago.'

'You did? You were still at New Jerusalem when I left. How did you do it?'

'Nothing to it. I was shipped as a corpse-in a deep trance. Sealed up in a coffin and marked "contagious".'

I told him about my own mixed-up trip and Zeb seemed impressed, which helped my morale. Then I asked him what he was doing.

'I'm in the Psych & Propaganda Bureau,' he told me, 'under Colonel Novak. Just now I'm writing a series of oh-so-respectful articles about the private life of the Prophet and his acolytes and attending priests, how many servants they have, how much it costs to run the Palace, all about the fancy ceremonies and rituals, and such junk. All of it

perfectly true, of course, and told with unctuous approval. But I lay it on a shade too thick. The emphasis is on the jewels and the solid gold trappings and how much it all costs, and keep telling the yokels what a privilege it is for them to be permitted to pay for such frippery and how flattered they should feel that God's representative on earth lets them take care of him.'

'I guess I don't get it,' I said, frowning. 'People like that circusy stuff. Look at the way the tourists to New Jerusalem scramble for tickets to a Temple ceremony.'

'Sure, sure-but we don't peddle this stuff to people on a holiday to New Jerusalem; we syndicate it to little local papers in poor farming communities in the Mississippi Valley, and in the Deep South, and in the back country of New England. That is to say, we spread it among some of the poorest and most puritanical elements of the population, people who are emotionally convinced that poverty and virtue are the same thing. It grates on their nerves; in time it should soften them up and make doubters of them.'

'Do you seriously expect to start a rebellion with picayune stuff like that?'

'It's not picayune stuff, because it acts directly on their emotions, below the logical level. You can sway a thousand men by appealing to their prejudices quicker than you can convince one man by logic. It doesn't have to be a prejudice about an important matter either. Johnnie, you savvy how to use connotation indices, don't you?'

'Well, yes and no. I know what they are; they are supposed to measure the emotional effects of words.'

'That's true, as far as it goes. But the index of a word isn't fixed like the twelve inches in a foot; it is a complex variable function depending on context, age and sex and occupation of the listener, the locale and a dozen other things. An index is a particular solution of the variable that tells you whether a particular word is used in a particular fashion to a particular reader or type of reader will affect that person favorably, unfavorably, or simply leave him cold. Given proper measurements of the group addressed it can be as mathematically exact as any branch of engineering. We never have all the data we need so it remains an art-but a very precise art, especially as we employ "feedback" through field sampling. Each article I do is a little more annoying than the last-and the reader never knows why.'

'It sounds good, but I don't see quite how it's done.'

'I'll give you a gross case. Which would you rather have? A nice, thick, juicy, tender steak-or a segment of muscle tissue from the corpse of an immature castrated bull?'

I grinned at him. 'You can't upset me. I'll take it by either name . . . not too well done. I wished they would announce chow around here; I'm starved.'

'You think you aren't affected because you were braced for it. But how long would a restaurant stay in business if it used that sort of terminology? Take another gross case, the Anglo-Saxon monosyllables that naughty little boys write on fences. You can't use them in polite company without offending, yet there are circumlocutions or synonyms for every one of them which may be used in any company.'

I nodded agreement. 'I suppose so. I certainly see how it could work on other people. But personally, I guess I'm immune to it. Those taboo words don't mean a thing to me-except that I'm reasonably careful not to offend other people. I'm an educated man, Zeb-"Sticks and stones may break my bones, et cetera." But I see how you could work on the ignorant.'

Now I should know better than to drop my guard with Zeb. The good Lord knows he's tripped me up enough times. He smiled at me quietly and made a short statement involving some of those taboo words.

'You leave my mother out of this!'

I was the one doing the shouting and I came up out of my chair like a dog charging into battle. Zeb must have anticipated me exactly and shifted his weight before he spoke, for, instead of hanging one on his chin, I found my wrist seized in his fist and his other arm around me, holding me in a clinch that stopped the fight before it started. 'Easy, Johnnie,' he breathed in my ear. 'I apologize. I most humbly apologize and ask your forgiveness. Believe me, I wasn't insulting you.'

'So you say!'

'So I say, most humbly. Forgive me?'

As I simmered down I realized that my outbreak had been very conspicuous. Although we had picked a quiet corner to talk, there were already a dozen or more others in the lounge, waiting for dinner to be announced. I could feel the dead silence and sense the question in the minds of others as to whether or not it was going to be necessary to intervene. I started to turn red with embarrassment rather than anger. 'Okay. Let me go.'

He did so and we sat down again. I was still sore and not at all inclined to forget Zeb's unpardonable breach of good manners, but the crisis was past. But he spoke quietly, 'Johnnie, believe me, I was not insulting you nor any member of your family. That was a scientific demonstration of the dynamics of connotational indices, and that is all it was.'

'Well-you didn't have to make it so personal.'

'Ah, but I did have to. We were speaking of the psychodynamics of emotion, and emotions are personal, subjective things which must be experienced to be understood. You were of the belief that you, as an educated man, were immune to this form of attack-so I ran a lab test to show you that no one is immune. Now just what did I say to you?'

'You said-Never mind. Okay, so it was a test. But I don't care to repeat it. You've made your point: I don't like it.'

'But what did I say? All I said, in fact, was that you were the legitimate offspring of a legal marriage. Right? What is insulting about that?'

'But'-I stopped and ran over in my mind the infuriating, insulting, and degrading things he had said-and, do you know, that is absolutely all they added up to. I grinned sheepishly. 'It was the way you said it.'

'Exactly, exactly! To put it technically, I selected terms with high negative indices, for this situation and for this listener. Which is precisely what we do with this propaganda, except that the emotional indices are lesser quantitatively to avoid arousing suspicion and to evade the censors-slow poison, rather than a kick in the belly. The stuff we write is all about the Prophet, lauding him to the skies. . . so the irritation produced in the reader is transferred to him. The method cuts below the reader's conscious thought and acts on the taboos and fetishes that infest his subconscious.'

I remembered sourly my own unreasoned anger. 'I'm convinced. It sounds like heap big medicine.'

'It is, chum, it is. There is magic in words, black magic-if you know how to invoke it.'

After dinner Zeb and I went to his cubicle and continued to bat the breeze. I felt warm and comfortable and very, very contented. The fact that we were part of a

revolutionary plot, a project most unlikely to succeed and which would most probably end with us both dead in battle or burned for treason, affected me not at all. Good old Zeb! What if he did get under my guard and hit me where it hurt? He was my 'family'-all the family that I had. To be with him now made me feel the way I used to feel when my mother would sit me down in the kitchen and feed me cookies and milk.

We talked about this and that, in the course of which I learned more about the organization and discovered-was very surprised to discover-that not all of our comrades were brethren. Lodge Brothers, I mean. 'But isn't that dangerous?'

'What isn't? And what did you expect, old son? Some of our most valuable comrades can't join the Lodge; their own religious faith forbids it. But we don't have any monopoly on hating tyranny and loving freedom and we need all the help we can get. Anybody going our direction is a fellow traveler. Anybody.'

I thought it over. The idea was logical, though somehow vaguely distasteful. I decided to gulp it down quickly. 'I suppose so. I imagine even the pariahs will be of some use to us, when it comes to the fighting, even if they aren't eligible for membership.'

Zeb gave me a look I knew too well. 'Oh, for Pete's sake, John! When are you going to give up wearing diapers?'

'Huh?'

'Haven't you gotten it through your head yet that the whole "pariah" notion is this tyranny's scapegoat mechanism that every tyranny requires?'

'Yes, but-'

'Shut up. Take sex away from people. Make it forbidden, evil, limit it to ritualistic breeding. Force it to back up into suppressed sadism. Then hand the people a scapegoat to hate. Let them kill a scapegoat occasionally for cathartic, release. The mechanism is ages old. Tyrants used it centuries before the word "psychology" was ever invented. It works, too. Look at yourself.'

'Look, Zeb, I don't have anything against the pariahs.'

'You had better not have. You'll find a few dozen of them in the Grand Lodge here. And by the way, forget that word "pariah". It has, shall we say, a very high negative index.'

He shut up and so did I; again I needed time to get my thoughts straight. Please understand me-it is easy to be free when you have been brought up in freedom, it is not easy otherwise. A zoo tiger, escaped, will often slink back into the peace and security of his bars. If he can't get back, they tell me he will pace back and forth within the limits of bars that are no longer there. I suppose I was still pacing in my conditioned pattern.

The human mind is a tremendously complex thing; it has compartments in it that its owner himself does not suspect. I had thought that I had given my mind a thorough housecleaning already and had rid it of all the dirty superstitions I had been brought up to believe. I was learning that the 'housecleaning' had been no more than a matter of sweeping the dirt under the rugs-it would be years before the cleansing would be complete, before the clean air of reason blew through every room.

All right, I told myself, if I meet one of these par-no, 'comrades', I'll exchange recognition with him and be polite-as long as he is polite to me! At the time I saw nothing hypocritical in the mental reservation.

Zeb lay back, smoking, and let me stew. I knew that he smoked and he knew that I disapproved. But it was a minor sin and, when we were rooming together in the Palace

barracks, I would never have thought of reporting him. I even knew which room servant was his bootlegger. 'Who is sneaking your smokes in now?' I asked, wishing to change the subject.

'Eh? Why, you buy them at the P.X., of course.' He held the dirty thing out and looked at it. 'These Mexican cigarettes are stronger than I like. I suspect that they use real tobacco in them, instead of the bridge sweepings I'm used to. Want one?'

'Huh? Oh, no, thanks!'

He grinned wryly. 'Go ahead, give me your usual lecture. It'll make you feel better.'

'Now look here, Zeb, I wasn't criticizing. I suppose it's just one of the many things I've been wrong about.'

'Oh, no. It's a dirty, filthy habit that ruins my wind and stains my teeth and may eventually kill me off with lung cancer.' He took a deep inhalation, let the smoke trickle out of the corners of his mouth, and looked profoundly contented. 'But it just happens that I like dirty, filthy habits.'

He took another puff. 'But it's not a sin and my punishment for it is here and now, in the way my mouth tastes each morning. The Great Architect doesn't give a shout in Sheol about it. Catch on, old son? He isn't even watching.'

'There is no need to be sacrilegious.'

'I wasn't being so.'

'You weren't, eh? You were scoffing at one of the most fundamental-perhaps the one fundamental-proposition in religion: the certainty that God is watching!'

'Who told you?'

For a moment all I could do was to sputter. 'Why, it isn't necessary. It's an axiomatic certainty. It's -,

'I repeat, who told you? See here, I retract what I said. Perhaps the Almighty is watching me smoke. Perhaps it is a mortal sin and I will burn for it for eons. Perhaps. But who told you? Johnnie, you've reached the point where you are willing to kick the Prophet out and hang him to a tall, tall tree. Yet you are willing to assert your own religious convictions and to use them as a touchstone to judge my conduct. So I repeat: who told you? What hill were you standing on when the lightning came down from Heaven and illuminated you? Which archangel carried the message?'

I did not answer at once. I could not. When I did it was with a feeling of shock and cold loneliness. 'Zeb . . . I think I understand you at last. You are an-atheist. Aren't you?'

Zeb looked at me bleakly. 'Don't call me an atheist,' he said slowly, 'unless you are really looking for trouble.'

'Then you aren't one?' I felt a wave of relief, although I still didn't understand him.

'No, I am not. Not that it is any of your business. My religious faith is a private matter between me and my God. What my inner beliefs are you will have to judge by my actions . . . for you are not invited to question me about them. I decline to explain them nor to justify them to you. Nor to anyone. . - not the Lodge Master. . . nor the Grand Inquisitor, if it comes to that.'

'But you do believe in God?'

'I told you so, didn't I? Not that you had any business asking me.'

'Then you must believe in other things?'

'Of course I do! I believe that a man has an obligation to be merciful to the weak - . . patient with the stupid . . . generous with the poor. I think he is obliged to lay down his life for his brothers, should it be required of him. But I don't propose to prove any of those things; they are beyond proof. And I don't demand that you believe as I do.'

I let out my breath. 'I'm satisfied, Zeb.'

Instead of looking pleased he answered, 'That's mighty kind of you, brother, mighty kind! Sorry-I shouldn't be sarcastic. But I had no intention of asking for your approval. You goaded me-accidentally, I'm sure-into discussing matters that I never intend to discuss.' He stopped to light up another of those stinking cigarettes and went on more quietly. 'John, I suppose that I am, in my own cantankerous way, a very narrow man myself. I believe very strongly in freedom of religion-but I think that that freedom is best expressed as freedom to keep quiet. From my point of view, a great deal of openly expressed piety is insufferable conceit.'

'Huh?'

'Not every case-I've known the good and the humble and the devout. But how about the man who claims to know what the Great Architect is thinking? The man who claims to be privy to His Inner Plans? It strikes me as sacrilegious conceit of the worst sort-this character probably has never been any closer to His Trestle Board than you or I. But it makes him feel good to claim to be on chummy terms with the Almighty, it builds his ego, and lets him lay down the law to you and me. Pfui! Along comes a knothead with a loud voice, an I.Q. around 90, hair in his ears, dirty underwear, and a lot of ambition. He's too lazy to be a farmer, too stupid to be an engineer, too unreliable to be a banker-but, brother, can he pray! After a while he has gathered around him other knotheads who don't have his vivid imagination and self-assurance but like the idea of having a direct line of Omnipotence. Then this character is no longer Nehemiah Scudder but the First Prophet'

I was going along with him, feeling shocked but rather pleasantly so, until he named the First Prophet. Perhaps my own spiritual state at that time could have been described as that of a 'primitive' follower of the First Prophet-that is to say, I had decided that the Prophet Incarnate was the devil himself and that all of his works were bad, but that belief did not affect the basics of the faith I had learned from my mother. The thing to do was to purge and reform the Church, not to destroy it. I mention this because my own case paralleled a very serious military problem that was to develop later.

I found that Zeb was studying my face. 'Did I get you on the raw again, Old fellow? I didn't mean to.'

'Not at all,' I answered stiffly, and went on to explain that, in my opinion, the sinfulness of the present gang of devils that had taken over the Church in no way invalidated the true faith. 'After all, no matter what you think nor how much you may like to show off your cynicism, the doctrines are a matter of logical necessity. The Prophet Incarnate and his cohorts can pervert them, but they can't destroy them-and it doesn't matter whether the real Prophet had dirty underwear or not.'

Zeb sighed as if he were very tired. 'Johnnie, I certainly did not intend to get into an argument about religion with you. I'm not the aggressive type-you know that. I had to be pushed into the Cabal.' He paused. 'You say the doctrines are a matter of logic?'

'You've explained the logic to me yourself. It's a perfect consistent structure.'

'So it is. Johnnie, the nice thing about citing God as an authority is that you can prove anything you set out to prove. It's just a matter of selecting the proper postulates, then insisting that your postulates are "inspired". Then no one can possibly prove that you are wrong.'

'You are asserting that the First Prophet was not inspired?'

'I am asserting nothing. For all you know, 1 am the First Prophet, come back to kick out the defilers of my temple.'

'Don't be-I was all wound up to kick it around further when there came a knock at Zeb's door. I stopped and he called out, 'Come in!'

It was Sister Magdalene.

She nodded at Zeb, smiled sweetly at my open-mouthed surprise and said, 'Hello, John Lyle. Welcome.' It was the first time I had ever seen her other than in the robes of a holy deaconess. She seemed awfully pretty and much younger.

'Sister Magdalene!'

'No. Staff Sergeant Andrews. "Maggie", to my friends.'

'But what happened? Why are you here?'

'Right at the moment I'm here because I heard at dinner that you had arrived. When I didn't find you in your own quarters I concluded that you would be with Zeb. As for the rest, I couldn't go back, any more than you or Zeb-and our hideout back in New Jerusalem was getting overcrowded, so they transferred me.'

'Well, it's good to see you!'

'It's good to see you, John.' She patted me on the cheek and smiled again. Then she climbed on Zeb's bed and squatted tailor-fashion, showing a rather immodest amount of limb in the process. Zeb lit another cigarette and handed it to her; she accepted it, drew smoke deep into her lungs, and let it go as if she had been smoking all her life.

I had never seen a woman smoke-never. I could see Zeb watching me, confound him!-and I most carefully ignored it. Instead I grinned and said, 'This is a wonderful reunion! If only -,

'I know,' agreed Maggie. 'If only Judith were here. Have you heard from her yet, John?'

'Heard from her? How could I?'

'That's right, you couldn't-not yet. But you can write to her now.'

'Huh? How?'

'I don't know the code number off hand, but you can drop it at my desk-I'm in G-2. Don't bother to seal it; all personal mail has to be censored and paraphrased. I wrote to her last week but I haven't had an answer yet.'

I thought about excusing myself at once and writing a letter, but I didn't. It was wonderful to be with both of them and I didn't want to cut the evening short. I decided to write before I went to bed-while realizing, with surprise, that I had been so much on the go that, so far as I could remember, I hadn't even had time to think about Judith since . . . well, since Denver, at least.

But I did not get to write to her even later that night. It was past eleven o'clock and Maggie was saying something about reveille coming early when an orderly showed up: 'The Commanding General's compliments and will Legate Lyle see him at once, sir.'

I gave my hair a quick brush with Zeb's gear and hurried away, while wishing mightily that I had something fit to report in, rather than a civilian suit much the worse for wear.

The inner sanctum was deserted and dark except for a light that I could see in the far inner office-even Mr. Giles was not at his desk. I found my way in, knocked on the door frame, stepped inside, clicked my heels and saluted. 'Legate Lyle reports to the Commanding General as ordered, sir.'

An elderly man seated at a big desk with his back to me turned and looked up, and I got another surprise. 'Ah, yes, John Lyle,' he said gently. He got up and came toward me, with his hand out. 'It's been a long time, hasn't it?'

It was Colonel Huxley, head of the Department of Applied Miracles when I was a cadet-and almost my only friend among the officers at that time. Many was the Sunday afternoon that I had relaxed in his quarters, my stock unhooked, free for the moment from the pressure of discipline.

I took his hand. 'Colonel-I mean "General", sir . I thought you were dead!'

'Dead colonel into live general, eh! No, Lyle, though I was listed as dead when I went underground. They usually do that when an officer disappears; it looks better. You're dead, too-did you know?'

'Uh, no, I didn't, sir. Not that it matters. This is wonderful, sir!'

'Good.'

'But-I mean, how did you ever-well-' I shut up.

'How did I land here and in charge at that? I've been a Brother since I was your age, Lyle. But I didn't go underground until I had to-none of us do. In my case the pressure for me to join the priesthood became a bit too strong; the Superintendent was quite restless about having a lay officer know too much about the more abstruse branches of physics and chemistry. So I took a short leave and died. Very sad.' He smiled. 'But sit down. I've been meaning to send for you all day, but it's been a busy day. They all are. It wasn't until now that I've had time to listen to the record of your report.'

We sat down and chatted, and I felt that my cup runneth over. Huxley I respected more than any officer I had ever served under. His very presence resolved any residual doubts I might have-if the Cabal was right for him, it was right for me, and never mind the subtleties of doctrine.

At last he said, 'I didn't call you in at this late hour just to chat, Lyle. I've a job for you.'

'Yes, sir?'

'No doubt you've already noticed what a raw militia we have here. This is between ourselves and I'm not criticizing our comrades-every one of them has pledged his life to our cause, a harder thing for them to do than for you and me, and they have all placed themselves under military discipline, a thing still harder. But I haven't enough trained soldiers to handle things properly. They mean well but I am tremendously handicapped in trying to turn the organization into an efficient fighting machine. I'm swamped with administrative details. Will you help me?'

I stood up. '1 shall be honored to serve with the General to the best of my ability.'

'Fine! We'll call you my personal aide for the time being. That's all for tonight, Captain. I'll see you in the morning.'

I was halfway out the door before his parting designation sunk in-then I decided that it was a slip of the tongue.

But it was not. I found my own office the next morning by the fact that a sign had been placed on it reading: 'CAPTAIN LYLE'. From the standpoint of a professional military man there is one good thing about revolutions: the opportunities for swift promotion are excellent . . . even if the pay is inclined to be irregular.

My office adjoined General Huxley's and from then on I almost lived in it-eventually I had a cot installed back of my desk. The very first day I was still fighting my way down a stack of papers in my incoming basket at ten at night. I had promised myself that I would find the bottom, then write a long letter to Judith. But it turned out to be a very short note, as there was a memorandum addressed to me personally, rather than to the General, at the bottom.

It was addressed to 'Legate J. Lyle,' then someone had scratched out 'Legate' and written 'Captain'. It went on:

MEMORANDUM FOR ALL PERSONNEL NEWLY REPORTED
SUBJECT: Personal Conversion Report
1. You are requested and directed to write out, as fully as possible, all of the events, thoughts, considerations, and incidents which led up to your decision to join our fight for freedom. This account should be as detailed as possible and as subjective as possible. A report written hastily, too briefly, or to superficially will be returned to be expanded and corrected and may be supplemented by hypno examination.
2. This report will be treated as confidential as a whole and any portion of it may be classified secret by the writer. You may substitute letters or numbers for proper names if this will help you to speak freely, but the report must be complete.
3. No time off from regular duties is allotted for this purpose, but this report must be treated as extra-duty of highest priority. A draft of your report will be expected by (here some one had written in a date and hour less than forty-eight hours away; I used some profane expressions under my breath.)
BY ORDER OF THE COMMANDING GENERAL
(s) M. Novak, Col, F.U.S.A. Chief of Psychology

I was considerably annoyed by this demand and decided to write to Judith first anyway. The note didn't go very well-how can one write a love letter when you know that one or more strangers will read it and that one of them will rephrase your tenderest words? Besides that, while writing to Judith, my thoughts kept coming back to that night on the rampart of the Palace when I had first met her. It seemed to me that my own personal conversion, as the nosy Colonel Novak called it, started then. . . although I had begun to have doubts before then. Finally I finished the note, decided not to go to bed at once but to tackle that blasted report.

After a while I noticed that it was one o'clock in the morning and I still hadn't carried my account up to the point where I was admitted to the Brotherhood. I stopped writing rather reluctantly (I found that I had grown interested) and locked it in my desk.

At breakfast the next morning I got Zebadiah aside, showed him the memorandum, and asked him about it. 'What's the big idea?' I asked. 'You work for this particular brass. Are they still suspicious of us, even after letting us in here?'

Zeb barely glanced at it. 'Oh, that-Shucks, no. Although I might add that a spy, supposing one could get this far, would be bound to be caught when his personal story went through semantic analysis. Nobody can tell a lie that long and that complicated.'

'But what's it for?'

'What do you care? Write it out-and be sure you do a thorough job. Then turn it in.'

I felt myself grow warm. 'I don't know as I will. I rather think I'll ask the General about it first.'

'Do so, if you want to make a ruddy fool of yourself. But look, John, the psychomathematicians who will read that mess of bilge you will write, won't have the slightest interest in you as an individual. They don't even want to know who you are-a girl goes through your report and deletes all personal names, including your own, if you haven't done so yourself, and substitutes numbers. . . all this before an analyst sees it. You're just data, that's all; the Chief has some heap big project on the fire-I don't know what it is myself-and he is trying to gather together a large enough statistical universe to be significant.'

I was mollified. 'Well, why don't they say so, then? This memo is just a bald order-irritating.'

Zeb shrugged. 'That is because it was prepared by the semantics division. If the propaganda division had written it, you would have gotten up early and finished the job before breakfast.' He added, 'By the way, I hear you've been promoted. Congratulations.'

'Thanks.' I grinned at him slyly. 'How does it feel to be junior to me, Zeb?'

'Huh? Did they bump you that far? I thought you were a captain.'

'I am.'

'Well, excuse me for breathing-but I'm a major.'

'Oh. Congratulations.'

'Think nothing of it. You have to be at least a colonel around here, or you make your own bed.'

I was too busy to make my bed very often. More than half the time I slept on the couch in my office and once I went a week without bathing. It was evident at once that the Cabal was bigger and had more complicated ramifications to it than I had ever dreamed and furthermore that it was building to a crescendo. I was too close to the trees to see the woods, even though everything but the utter top-secret, burn-after-reading items passed across my desk.

I simply endeavored to keep General Huxley from being smothered in pieces of paper-and found myself smothered instead. The idea was to figure out what he would do, if he had time, and then do it for him. A person who has been trained in the principles of staff or doctrinal command can do this; the trick is to make your mind work like your boss's mind in all routine matters, and to be able to recognize what is routine and what he must pass on himself. I made my share of mistakes, but apparently not too many for he didn't fire me, and three months later I was a major with the fancy title of assistant chief of staff. Chalk most of it up to the West Point ring, of course-a professional has a great advantage.

I should add that Zeb was a short-tailed colonel by then and acting chief of propaganda, his section chief having been transferred to a regional headquarters I knew only by the code name JERICHO.

But I am getting ahead of my story. I heard from Judith about two weeks later-a pleasant enough note but with the juice pressed out of it through rephrasing. I meant to answer her at once but actually delayed a week-it was so pesky hard to know what to say. I could not possibly tell her any news except that 1 was well and busy. If I had told her I loved her three times in one letter some idiot in cryptography would have examined it for 'pattern' and rejected it completely when he failed to find one.

The mail went to Mexico through a long tunnel, partly artificial but mostly natural, which led right under the international border. A little electric railroad of the sort used in mines ran through this tunnel and carried not only my daily headaches in the way of official mail but also a great deal of freight to supply our fair-sized town. There were a dozen other entrances to G.H.Q. on the Arizona side of the border, but I never knew where any of them were-it was not my pidgin. The whole area overlay a deep layer of Paleozoic limestone and it may well be honeycombed from California to Texas. The area known as G.H.Q. had been in use for more than twenty years as a hideout for refugee brethren. Nobody knew the extent of the caverns we were in; we simply lighted and used what we needed. It was a favorite sport of us troglodytes-permanent residents were 'trogs'; transients were 'bats' because they flew by night-we trogs liked to go on 'spelling bees', picnics which included a little amateur speleology in the unexplored parts.

It was permitted by regulations, but just barely and subject to stringent safety precautions, for you could break a leg awfully easily in those holes. But the General permitted it because it was necessary; we had only such recreations as we could make ourselves and some of us had not seen daylight in years.

Zeb and Maggie and I went on a number of such outings when I could get away. Maggie always brought another woman along. I protested at first but she pointed out to me that it was necessary in order to avoid gossip . . . mutual chaperonage. She assured me that she was certain that Judith would not mind, under the circumstances. It was a different girl each time and it seemed to work out that Zeb always paid a lot of attention to the other girl while I talked with Maggie. I had thought once that Maggie and Zeb would marry, but now I began to wonder. They seemed to suit each other like ham and eggs, but Maggie did not seem jealous and I can only describe Zeb, in honesty, as shameless-that is, if he thought Maggie would care.

One Saturday morning Zeb stuck his head in my sweat box and said, 'Spelling bee. Two o'clock. Bring a towel.'

I looked up from a mound of papers. 'I doubt if I can make it,' I answered. 'And why a towel?'

But he was gone. Maggie came through my office later to take the weekly consolidated intelligence report in to the Old Man, but I did not attempt to question her, as Maggie was all business during working hours-the perfect office sergeant. I had lunch at my desk, hoping to finish up, but knowing it was impossible. About a quarter of two I went in to get General Huxley's signature on an item that was to go out that night by hypnoed courier and therefore had to go at once to psycho in order that the courier might be operated. He glanced at it and signed it, then said, 'Sergeant Andy tells me you have a date.'

,'Sergeant Andrews is mistaken,' I said stiffly. 'There are still the weekly reports from Jericho, Nod, and Egypt to be gone over.'

'Place them on my desk and get out. That's an order. I can't have you going stale from overwork.'

I did not tell him that he had not even been to lodge himself in more than a month; I got out.

I dropped the message with Colonel Novak and hurried to where we always met near the women's mess. Maggie was there with the other girl-a blonde named Miriam Booth who was a clerk in Quartermaster's store. I knew her by sight but had never spoken to her. They had our picnic lunch and Zeb arrived while I was being introduced. He was carrying, as usual, the portable flood we would use when we picked out a spot and a blanket to sit on and use as a table. 'Where's your ç towel?' he demanded.

'Were you serious? I forgot it.'

'Run get it. We'll start off along Appian Way. You can catch up. Come on, kids.'

They started off, which left me with nothing but to do as I was told. After grabbing a towel from my room I dogtrotted until I had them in sight, then slowed to a walk, puffing. Desk work had ruined my wind. They heard me and waited.

We were all dressed alike, with the women in trousers and each with a safety line wrapped around the waist and torch clipped to the belt. I had gotten used to women in men's clothes, much as I disliked it-and, after all, it is impractical and quite immodest to climb around in caves wearing skirts.

We left the lighted area by taking a turn that appeared to lead into a blind wall; instead it led into a completely concealed but easily negotiated tunnel. Zeb tied our labyrinth string and started paying it out as soon as we left permanent and marked paths, as required by the standing order; Zeb was always careful about things that mattered.

For perhaps a thousand paces we could see blazes and other indications that others had been this way before, such as a place where someone had worked a narrow squeeze wider with a sledge. Then we left the obvious path and turned into a blind wall. Zeb put down the flood and turned it on. 'Sling your torches. We climb this one.'

'Where are we going?'

'A place Miriam knows about. Give me a leg up, Johnnie.' The climb wasn't much. I got Zeb up all right and the girls could have helped each other up, but we took them up roped, for safety's sake. We picked up our gear and Miriam led us away, each of us using his torch.

We went down the other side and there was another passage so well hidden that it could have been missed for ten thousand years. We stopped once while Zeb tied on another ball of string. Shortly Miriam said, 'Slow up, everybody. I think we're there.'

Zeb flashed his torch around, then set up the portable flood and switched it on. He whistled. 'Whew! This is all right!'

Maggie said softly, 'It's lovely.' Miriam just grinned triumphantly.

I agreed with them all. It was a perfect small domed cavern, perhaps eighty feet wide and much longer. How long, I could not tell, as it curved gently away in a gloom-filled turn. But the feature of the place was a quiet, inky-black pool that filled most of the floor. In front of us was a tiny beach of real sand that might have been laid down a million years ago for all I know.

Our voice echoed pleasantly and a little bit spookily in the chamber, being broken up and distorted by stalactites and curtains hanging from the roof. Zeb walked down to

the water's edge, squatted and tested it with his hand. 'Not too cold,' he announced. 'Well, the last one in is a proctor's nark.'

I recognized the old swimming hole call, even though the last time I had heard it, as a boy, it had been 'last one in is a dirty pariah'. But here I could not believe it.

Zeb was already unbuttoning his shirt. I stepped up to him quickly and said privately, 'Zeb! Mixed bathing? You must be joking?'

'Not a bit of it.' He searched my face. 'Why not? What's the matter with you, boy? Afraid someone will make you do penance? They won't, you know. That's all over with.'

'But -'

'But what?'

I could not answer. The only way I could make the words come out would have been in the terms we had been taught in the Church, and I knew that Zeb would laugh at me-in front of the women. Probably they would laugh, too, since they had known and I hadn't. 'But Zeb,' I insisted, 'I can't. You didn't tell me . . . and I don't even have a bathing outfit.'

'Neither do I. Didn't you ever go in raw as a kid-and get paddled for it?' He turned away without waiting for me to answer this enormity and said, 'Are you frail vessels waiting on something?'

'Just for you two to finish your debate,' Maggie answered, coming closer. 'Zeb, I think Mimi and I will use the other side of that boulder. All right?'

'Okay. But wait a second. No diving, you both understand. And a safety man on the bank at all times-John and I will take turns.'

'Pooh!' said Miriam. '1 dove the last time I was here.'

'You weren't with me, that's sure. No diving-or I'll warm your pants where they are tightest.'

She shrugged. 'All right, Colonel Crosspatch. Come on, Mag.' They went on past us and around a boulder half as big as a house. Miriam stopped, looked right at me, and waggled a finger. 'No peeking, now!' I blushed to my ears.

They disappeared and we heard no more of them, except for giggles. I said hurriedly, 'Look. You do as you please-and on your own head be it. But I'm not going in. I'll sit here on the bank and be safety man.'

'Suit yourself. I was going to match you for first duty, but nobody is twisting your arm. Pay out a line, though, and have it ready for heaving. Not that we'll need it; both the girls are strong swimmers.'

I said desperately, 'Zeb, I'm sure the General would forbid swimming in these underground pools.'

'That's why we don't mention it. "Never worry the C.O. unnecessarily"-standing orders in Joshua's Army, circa 1400 B.C.' He went right on peeling off his clothes.

I don't know why Miriam warned me not to peek-not that I would!-for when she was undressed she came straight out from behind that boulder, not toward us but toward the water. But the flood light was full on her and she even turned toward us for an instant, then shouted, 'Come on, Maggie! Zeb is going to be last if you hurry.'

I did not want to look and I could not take my eyes off her. I had never seen anything remotely resembling the sight she was in my life-and only once a picture, one in the possession of a boy in my parish school and on that occasion I had gotten only a glimpse and then had promptly reported him.

But I could not stop looking, burning with shame as I was.

Zeb beat Maggie into the water-I don't think she cared. He went into the water quickly, almost breaking his own injunction against diving. Sort of a surface dive I would call it, running into the water and then breaking into a racing start. His powerful crawl was soon overtaking Miriam, who had started to swim toward the far end.

Then Maggie came out from behind the boulder and went into the water. She did not make a major evolution of it, the way Miriam had, but simply walked quickly and with quiet grace into the water. When she was waist deep, she let herself sink forward and struck out in a strong breast stroke, then shifted to a crawl and followed the others, when I could hear but hardly see in the distance.

Again I could not take my eyes away if my eternal soul had depended on it. What is it about the body of a human woman that makes it the most terribly beautiful sight on earth? Is it, as some claim, simply a necessary instinct to make sure that we comply with God's will and replenish the earth? Or is it some stranger, more wonderful thing?

I found myself quoting: 'How fair and how pleasant art thou, 0 love, for delights!

'This thy stature is like to a palm tree, and thy breasts to clusters of grapes.'

Then I broke off, ashamed, remembering that the Song of Songs which is Solomon's was a chaste and holy allegory having nothing to do with such things.

I sat down on the sand and tried to compose my soul. After a while I felt better and my heart stopped pounding so hard. When they all came swimming back with Zeb in the lead, racing Miriam, I even managed to throw them a smile. It no longer seemed quite so terrible and as long as they stayed in the water the women were not shockingly exposed. Perhaps evil was truly in the eyes of the beholder-in which case the idea was to keep it out of mine.

Zeb called out, 'Ready to be relieved?'

I answered firmly, 'No. Go ahead and have your fun.'

'Okay.' He turned like a dolphin and started back the other way. Miriam followed him. Maggie came in to where it was shallow, rested her finger tips on the bottom, and held facing me, with just her head and her ivory shoulders out of the inky water, while her waist-length mane of hair floated around her.

'Poor John,' she said softly. 'I'll come out and spell you.'

'Oh, no, really!'

'Are you sure?'

'Quite sure.'

'All right.' She turned, flipped herself over, and started after the others. For one ghostly, magic instant she was partly out of the water.

Maggie came back to my end of the cavern about ten minutes later. 'I'm cold,' she said briefly, climbed out and strode quickly to the protection of the boulder. Somehow she was not naked, but merely unclothed, like Mother Eve. There is a difference-Miriam had been naked.

With Maggie out of the water and neither one of us speaking I noticed for the first time that there was no other sound. Now there is nothing so quiet as a cave; anywhere else at all there is noise, but the complete zero decibel which obtains underground if one holds still and says nothing is very different.

The point is that I should have been able to hear Zeb and Miriam swimming. Swimming need not be noisy but it can't be as quiet as a cave. I sat up suddenly and

started forward-then stopped with equal suddenness as I did not want to invade Maggie's dressing room, which another dozen steps would have accomplished.

But I was really worried and did not know what to do. Throw a line? Where? Peel down and search for them? If necessary. I called out softly, 'Maggie!'

'What is it, John?'

'Maggie, I'm worried.'

She came at once from behind the rock. She had already pulled on her trousers, but held her towel so that it covered her from the waist up; I had the impression she had been drying her hair. 'Why, John?'

'Keep very quiet and listen.'

She did so. 'I don't hear anything.'

'That's just it. We should. I could hear you all swimming even when you were down at the far end, out of my sight. Now there isn't a sound, not a splash. Do you suppose they possibly could both have hit their heads on the bottom at the same time?'

'Oh. Stop worrying, John. They're all right.'

'But I am worried.'

'They're just resting, I'm sure. There is another little beach down there, about half as big as this. That's where they are. I climbed up on it with them, then I came back. I was cold.'

I made up my mind, realizing that I had let my modesty hold me back from my plain duty. 'Turn your back. No, go behind the boulder-I want to undress.'

'What? I tell you it's not necessary.' She did not budge.

I opened my mouth to shout. Before I got it out Maggie had a hand over my mouth, which caused her towel to be disarranged and flustered us both. 'Oh, heavens!' she said sharply. 'Keep your big mouth shut.' She turned suddenly and flipped the towel; when she turned back she had it about her like a stole, covering her front well enough, I suppose, without the need to hold it.

'John Lyle, come here and sit down. Sit down by me.' She sat on the sand and patted the place by her-and such was the firmness with which she spoke that I did as I was told.

'By me,' she insisted. 'Come closer. I don't want to shout.' I inched gingerly closer until my sleeve brushed her bare arm. 'That's better,' she agreed, keeping her voice low so that it did not resound around the cavern. 'Now listen to me. There are two people down there, of their own free will. They are entirely safe-I saw them. And they are both excellent swimmers. The thing for you to do, John Lyle, is to mind your own business and restrain that nasty itch to interfere.'

'I'm afraid I don't understand you.' Truthfully, I was afraid I did.

'Oh, goodness me! See here, does Miriam mean anything to you?'

'Why, no, not especially.'

'I should think not, since you haven't addressed six words to her since we started out. Very well, then-since you have no cause to be jealous, if two people choose to be alone, why should you stick your nose in? Understand me now?'

'Uh, I guess so.'

'Then just be quiet.'

I was quiet. She didn't move. I was actually aware of her nakedness-for now she was naked, though covered-and I hoped that she was not aware that I was aware. Besides

that I was acutely aware of being almost a participant in-well, I don't know what. I told myself angrily that I had no right to assume the worst, like a morals proctor.

Presently I said, 'Maggie. .

'Yes, John?'

'I don't understand you.'

'Why not, John? Not that it is really needful.'

'Uh, you don't seem to give a hoot that Zeb is down there, with Miriam-alone.'

'Should I give a hoot?'

Confound the woman! She was deliberately misunderstanding me. 'Well . . . look, somehow I had gotten the impression that you and Zeb-I mean.. . well, I suppose I sort of expected that you two meant to get married, when you could.'

She laughed a low chuckle that had little mirth in it. 'I suppose you could have gotten that impression. But, believe me, the matter is all settled and for the best.'

'Huh?'

'Don't misunderstand me. I am very fond of Zebadiah and I know he is equally fond of me. But we are both dominant types psychologically-you should see my profile chart; it looks like the Rocky Mountains! Two such people should not marry. Such marriages are not made in Heaven, believe me! Fortunately we found it out in time.'

'Oh.'

'Oh, indeed.'

Now I don't know just how the next thing happened. I was thinking that she seemed rather forlorn-and the next thing I knew I was kissing her. She lay back in my arms and returned the kiss with a fervor I would not have believed possible. As for me, my head was buzzing and my eyeballs were knocking together and I couldn't have told you whether I was a thousand feet underground or on dress parade.

Then it was over. She looked up for a bare moment into my eyes and whispered, 'Dear John . . . ' Then she got suddenly to her feet, leaned over me, careless of the towel, and patted my cheek. 'Judith is a very lucky girl. I wonder if she knows it.'

'Maggie!' I said.

She turned away and said, without looking back. 'I really must finish dressing. I'm cold.'

She had not felt cold to me.

She came out shortly, fully dressed and toweling her hair vigorously. I got my dry towel and helped her. I don't believe I suggested it; the idea just took care of itself. Her hair was thick and lovely and I enjoyed doing it. It sent goose pimples over me.

Zeb and Miriam came back while I was doing so, not racing but swimming slowly; we could hear them laughing long before they were in sight. Miriam climbed out of the water as shamelessly as any harlot of Gomorrah, but I hardly noticed her. Zeb looked me in the eye and said aggressively, 'Ready for your swim, chum?'

I started to say that I did not believe that I would bother and was going to make some excuse about my towel already being wet-when I noticed Maggie watching me. . . not saying anything but watching. I answered, 'Why, surely! You two took long enough.' I called out, 'Miriam! Get out from behind that rock! I want to use it.'

She squealed and giggled and came out, still arranging her clothes. I went behind it with quiet dignity.

I hope I still had quiet dignity when I came out. In any case I set my teeth, walked out and straight into the water. It was bitingly cold at first, but only for a moment. I was never varsity but I swam on my class team and I've even been in the Hudson on New Year's Day. I liked that black pool, once I was in.

I just had to swim down to the other end. Sure enough, there was a little beach there. I did not go up on it.

On the way back I tried to swim down to the bottom. I could not find it, but it must have been over twenty feet down. I liked it down there-black and utterly still. Had I the breath for it, or gills, it seemed to me that it would have been a good place to stay, away from Prophets, away from Cabals, and paperwork, and worries, and problems too subtle for me.

I came up gasping, then struck out hard for our picnic beach. The girls already had the food laid out and Zeb shouted for me to hurry. Zeb and Maggie did not look up as I got out of the water, but I caught Miriam eyeing me. I don't think I blushed. I never did like blondes anyhow. I think Lilith must have been a blonde.

Chapter 11

The Supreme Council, consisting of heads of departments, General Huxley, and a few others, met weekly or oftener to advise the General, exchange views, and consider the field reports. About a month after our rather silly escapade in the underground pool they were in session and I was with them, not as a member but as a recorder. My own girl was ill and I had borrowed Maggie from G-2 to operate the voicewriter, since she was cleared for top secret. We were always terribly shorthanded of competent personnel. My nominal boss, for example, was Wing General Penoyer, who carried the title of Chief of Staff. But I hardly ever saw him, as he was also Chief of Ordnance. Huxley was his own chief of staff and I was sort of a glorified aide-'midshipmite, and bosun tite, and crew of the captain's gig'. I even tried to see to it that Huxley took his stomach medicine regularly.

This meeting was bigger than usual. The regional commanders of Gath, Canaan, Jericho, Babylon, and Egypt were present in person; Nod and Damascus were represented by deputies-every Cabal district of the United States except Eden and we were holding a sensitive hook-up to Louisville for that command, using idea code that the sensitives themselves would not understand. I could feel the pressure of something big coming up, although Huxley had not taken me into his confidence. The place was tyled so that a mouse couldn't have got in.

We droned through the usual routine reports. It was duly recorded that we now had eighty-seven hundred and nine accepted members, either lodge brethren or tested and bound members of the parallel military organization. There were listed as recruited and instructed more than ten times that number of fellow travelers who could be counted on to rise against the Prophet, but who had not been entrusted with knowledge of the actual conspiracy.

The figures themselves were not encouraging. We were always in the jaws of a dilemma; a hundred thousand men was a handful to conquer a continent-wide country whereas the less than nine thousand party to the conspiracy itself were 'way too many to

keep a secret. We necessarily relied on the ancient cell system wherein no man knew more than he had to know and could not give away too much no matter what an inquisitor did to him-no, not even if he had been a spy. But we had our weekly losses even at this passive stage.

One entire lodge had been surprised in session and arrested in Seattle four days earlier; it was a serious loss but only three of the chairs had possessed critical knowledge and all three had suicided successfully. Prayers would be said for all of them at a grand session that night, but here it was a routine report. We had lost four hatchet men that week but twenty-three assassinations had been accomplished-one of them the Elder Inquisitor for the entire lower Mississippi Valley.

The Chief of Communications reported that the brethren were prepared to disable 91% (figured on population coverage) of the radio & TV stations in the country, and that with the aid of assault groups we could reasonably hope to account for the rest-with the exception of the Voice of God station at New Jerusalem, which was a special problem.

The Chief of Combat Engineering reported readiness to sabotage the power supply of the forty-six largest cities, again with the exception of New Jerusalem, the supply of which was self-contained with the pile located under the Temple. Even there major interruption could be accomplished at distribution stations if the operation warranted the expenditure of sufficient men. Major surface transportation and freight routes could be sabotaged sufficiently with present plans and personnel to reduce traffic to 12% of normal.

The reports went on and on-newspapers, student action groups, rocket field seizure or sabotage, miracles, rumor propagation, water supply, incident incitement, counter-espionage, long-range weather prediction, weapons distribution. War is a simple matter compared with revolution. War is an applied science, with well-defined principles tested in history; analogous solutions may be found from ballista to H-bomb. But every revolution is a freak, a mutant, a monstrosity, its conditions never to be repeated and its operations carried out by amateurs and individualists.

While Maggie recorded the data I was arranging it and transmitting it to the calculator room for analysis. I was much too busy even to attempt a horse-back evaluation in my head. There was a short wait while the analysts finished programming and let the 'brain' have it-then the remote-printer in front of me chattered briefly and stopped. Huxley leaned across me and tore off the tape before I could reach it.

He glanced at it, then cleared his throat and waited for dead silence. 'Brethren,' he began, 'comrades-we agreed long ago on our doctrine of procedure. When every predictable factor, calculated, discounted for probable error, weighted and correlated with all other significant factors, gave a calculated risk of two to one in our favor, we would strike. Today's solution of the probability equation, substituting this week's data for the variables, gives an answer of two point one three. I propose to set the hour of execution. How say you?'

It was a delayed shock; no one said anything. Hope delayed too long makes reality hard to believe-and all of these men had waited for years, some for most of a lifetime. Then they were on their feet, shouting, sobbing, cursing, pounding each others' backs.

Huxley sat still until they quieted, an odd little smile on his face. Then he stood up and said quietly, 'I don't think we need poll the sentiment. I will set the hour after I have-

'General! If you please. I do not agree.' It was Zeb's boss, Sector General Novak, Chief of Psych. Huxley stopped speaking and the silence fairly ached. I was as stunned as the rest.

Then Huxley said quietly, 'This council usually acts by unanimous consent. We have long since arrived at the method for setting the date. . . but I know that you would not disagree without good reason. We will listen now to Brother Novak.'

Novak came slowly forward and faced them. 'Brethren,' he began, running his eyes over bewildered and hostile faces, 'you know me, and you know I want this thing as much as you do. I have devoted the last seventeen years to it-it has cost me my family and my home. But I can't let you go ahead without warning you, when I am sure that the time is not yet. I think-no, I know with mathematical certainty that we are not ready for revolution.' He had to wait and hold up both hands for silence; they did not want to hear him. 'Hear me out! I concede that all military plans are ready. I admit that if we strike now we have a strong probability of being able to seize the country. Nevertheless we are not ready -,

'Why not?'

'- because a majority of the people still believe in the established religion, they believe in the Divine authority of the Prophet. We can seize power but we can't hold it.'

'The Devil we won't!'

'Listen to me! No people was ever held in subjection long except through their own consent. For three generations the American people have been conditioned from cradle to grave by the cleverest and most thorough psychotechnicians in the world. They believe! If you turn them loose now, without adequate psychological preparation, they will go back to their chains . . . like a horse returning to a burning barn. We can win the revolution but it will be followed by a long and bloody civil war-which we will lose!'

He stopped, ran a trembling hand across his eyes, then said to Huxley, 'That's all.'

Several were on their feet at once. Huxley pounded for order, then recognized Wing General Penoyer.

Penoyer said, 'I'd like to ask Brother Novak a few questions.'

'Go ahead.'

'Can his department tell us what percentage of the population is sincerely devout?'

Zebadiah, present to assist his chief, looked up; Novak nodded and he answered, 'Sixty-two percent, plus-or-minus three percent.'

'And the percentage who secretly oppose the government whether we have enlisted them or not?'

'Twenty-one percent plus, proportional error. The balance can be classed as conformists, not devout but reasonably contented.'

'By what means were the data obtained?'

'Surprise hypnosis of representative types.'

'Can you state the trend?'

'Yes, sir. The government lost ground rapidly during the first years of the present depression, then the curve flattened out. The new tithing law and to some extent the vagrancy decrees were unpopular and the government again lost ground before the curve again flattened at a lower level. About that time business picked up a little but we simultaneously started our present intensified propaganda campaign; the government has been losing ground slowly but steadily the past fifteen months.'

'And what does the first derivative show?'

Zeb hesitated and Novak took over. 'You have to figure the second derivative,' he answered in a strained voice; 'the rate is accelerating.'

'Well?'

The Psych Chief answered firmly but reluctantly, 'On extrapolation, it will be three years and eight months before we can risk striking.'

Penoyer turned back to Huxley. 'I have my answer, sir. With deep respect to General Novak and his careful scientific work, I say-win while we can! We may never have another chance.'

He had the crowd with him. 'Penoyer is right! If we wait, we'll be betrayed.'-'You can't hold a thing like this together forever.'-'I've been underground ten years; I don't want to be buried here.'-'Win - . . and worry about making converts when we control communications.'-'Strike now! Strike now!'

Huxley let them carry on, his own face expressionless, until they had it out of their systems. I kept quiet myself, since I was too junior to be entitled to a voice here, but I went along with Penoyer; I couldn't see waiting nearly four years.

I saw Zeb talking earnestly with Novak. They seemed to be arguing about something and were paying no attention to the racket. But when Huxley at last held up a hand for silence Novak left his place and hurried up to Huxley's elbow. The General listened for a moment, seemed almost annoyed, then undecided. Novak crooked a finger at Zeb, who came running up. The three whispered together for several moments while the council waited.

Finally Huxley faced them again. 'General Novak has proposed a scheme which may change the whole situation. The Council is recessed until tomorrow.'

Novak's plan (or Zeb's, though he never admitted authorship) required a delay of nearly two months, to the date of the annual Miracle of the Incarnation. For what was contemplated was no less than tampering with the Miracle itself. In hindsight it was an obvious and probably essential strategem; the psych boss was right. In essence, a dictator's strength depends not upon guns but on the faith his people place in him. This had been true of Caesar, of Napoleon, of Hitler, of Stalin. It was necessary to strike first at the foundation of the Prophet's power: the popular belief that he ruled by direct authority of God.

Future generations will undoubtedly find it impossible to believe the importance, the extreme importance both to religious faith and political power, of the Miracle of Incarnation. To comprehend it even intellectually it is necessary to realize that the people literally believed that the First Prophet actually and physically returned from Heaven once each year to judge the stewardship of his Divinely appointed successor and to confirm him in his office. The people believed this-the minority of doubters dared not open their faces to dispute it for fear of being torn limb from limb. . . and I am speaking of a rending that leaves blood on the pavement, not some figure of speech. Spitting on the Flag would have been much safer.

I had believed it myself, all my life; it would never have occurred to me to doubt such a basic article of faith-and I was what is called an educated man, one who had been let into the secrets of and trained in the production of lesser miracles. I believed it.

The ensuing two months had all the endless time-stretching tension of the waiting period while coming into range and before 'Commence firing!'-yet we were so busy that each day and each hour was too short. In addition to preparing the still more-miraculous

intervention in the Miracle we used the time to whet our usual weapons to greater fineness. Zeb and his boss, Sector General Novak, were detached almost at once. Novak's orders read '- proceed to BEULAHLAND and take charge of OPERATION BEDROCK.' I cut the orders myself, not trusting them to a clerk, but no one told me where Beulahland might be found on a map.

Huxley himself left when they did and was gone for more than a week, leaving Penoyer as acting C-in-C. He did not tell me why he was leaving, of course, nor where he was going, but I could fill in. Operation Bedrock was a psychological maneuver but the means must be physical-and my boss had once been head of the Department of Applied Miracles at the Point. He may have been the best physicist in the entire Cabal; in any case I could guess with certainty that he intended at the very least to see for himself that the means were adequate and the techniques foolproof. For all I know he may actually have used soldering iron and screwdriver and electronic micrometer himself that week-the General did not mind getting his hands dirty.

I missed Huxley personally. Penoyer was inclined to reverse my decisions on minor matters and waste my time and his on details a top C.O. can't and should not cope with. But he was gone part of the time, too. There was much coming and going and more than once I had to chase down the senior department head present, tell him that he was acting, and get him to sign where I had initialed. I took to scrawling 'I. M. Dumbjohn, Wing General F.U.S.A., Acting' as indecipherably as possible on all routine internal papers-I don't think anybody ever noticed.

Before Zeb left another thing happened which really has nothing to do with the people of the United States and the struggle to regain their freedoms-but my own personal affairs are so tied into this account that I mention it. Perhaps the personal angle really is important; certainly the order under which this journal was started called for it to be 'personal' and 'subjective'-however I had retained a copy and added to it because I found it helped me to get my own confused thoughts straight while going through a metamorphosis as drastic as that from caterpillar into moth. I am typical, perhaps, of the vast majority, the sort of person who has to have his nose rubbed in a thing before he recognizes it, while Zeb and Maggie and General Huxley were of the elite minority of naturally free souls . . . the original thinkers, the leaders.

I was at my desk, trying to cope with the usual spate of papers, when I received a call to see Zeb's boss at my earliest convenience. Since he already had his orders, I left word with Huxley's orderly and hurried over.

He cut short the formalities. 'Major, I have a letter for you which Communications sent over for analysis to determine whether it should be rephrased or simply destroyed. However, on the urgent recommendation of one of my division heads I am taking the responsibility of letting you read it without paraphrasing. You will have to read it here.'

I said, 'Yes, sir,' feeling quite puzzled.

He handed it to me. It was fairly long and I suppose it could have held half a dozen coded messages, even idea codes that could come through paraphrasing. I don't remember much of it-just the impact it had on me. It was from Judith.

'My dear John . . . I shall always think of you fondly and I shall never forget what you have done for me.. . never meant for each other . . . Mr. Mendoza has been most considerate. I know you will forgive me.. . he needs me; it must have been fate that brought us together . . . if you ever visit Mexico City, you must think of our home as

yours . . . I will always think of you as my strong and wise older brother and I will always be a sister-' There was more, lots more, all of the same sort-I think the process is known as 'breaking it gently'.

Novak reached out and took the letter from me. 'I didn't intend for you to have time to memorize it,' he said dryly, then dropped it at once into his desk incinerator. He glanced back at me. 'Maybe you had better sit down, Major. Do you smoke?'

I did not sit down, but I was spinning so fast that I accepted the cigarette and let him light it for me. Then I choked on tobacco smoke and the sheer physical discomfort helped to bring me back to reality. I thanked him and got out-went straight to my room, called my office and left word where I could be found if the General really wanted me. But I told my secretary that I was suddenly quite ill and not to disturb me if it could possibly be helped.

I may have been there about an hour-I wouldn't know-lying face down and doing nothing, not even thinking. There came a gentle tap at the door, then it was pushed open; it was Zeb. 'How do you feel?' he said.

'Numb,' I answered. It did not occur to me to wonder how he knew and at the time I had forgotten the 'division head' who had prevailed upon Novak to let me see it in the clear.

He came on in, sprawled in a chair, and looked at me. I rolled over and sat on the edge of the bed. 'Don't let it throw you, Johnnie,' he said quietly. '"Men have died and worms have eaten them-but not for love."'

'You don't know!'

'No, I don't,' he agreed. 'Each man is his own prisoner, in solitary confinement for life. Nevertheless on this particular point the statistics are fairly reliable. Try something for me. Visualize Judith in your mind. See her features. Listen to her voice.'

'Huh?'

'Do it.'

I tried, I really tried-and, do you know, I couldn't. I had never had a picture of her; her face now eluded me.

Zeb was watching me. 'You'll get well,' he said firmly. 'Now look here, Johnnie. . . . I could have told you. Judith is a very female sort of woman, all gonads and no brain. And she's quite attractive. Turned loose, she was bound to find a man, as sure as nascent oxygen will recombine. But there is no use in talking to a man in love.'

He stood up. 'Johnnie, I've got to go. I hate like the mischief to walk out and leave you in the shape you are in, but I've already checked out and Grandfather Novak is ready to leave. He'll eat me out as it is, for holding him up this long. But one more word of advice before I go -,

I waited. 'I suggest,' he continued, 'that you see a lot of Maggie while I'm away. She's good medicine.'

He started to leave; I said sharply, 'Zeb-what happened to you and Maggie? Something like this?'

He looked back at me sharply. 'Huh? No. Not at all the same thing. It wasn't. . . well, it wasn't similar.'

'I don't understand you-I guess I just don't understand people. You're urging me to see a lot of Maggie-and I thought she was your girl. Uh, wouldn't you be jealous?'

He stared at me, laughed, and clapped me on the shoulder. 'She's a free citizen, Johnnie, believe me. If you ever did anything to hurt Maggie, I'd tear off your head and beat you to death with it. Not that you ever would. But jealous of her? No. It doesn't enter the picture. I think she's the greatest gal that ever trod shoe leather-but I would rather marry a mountain lioness.'

He left on that, leaving me again with my mouth open. But I took his advice, or Maggie took it for me. Maggie knew all about it-Judith, I mean-and I assumed that Zeb had told her. He hadn't; it seemed that Judith had written to her first. In any case I didn't have to look her up; she looked me up right after dinner that night. I talked with her a while and felt much better, so much so that I went back to my office and made up for time lost that afternoon.

Maggie and I made a habit thereafter of taking a walk together after dinner. We went on no more spelling bees; not only was there no time for such during those last days but also neither one of us felt like trying to work up another foursome with Zeb away. Sometimes I could spare only twenty minutes or even less before I would have to be back at my desk-but it was the high point of the day; I looked forward to it.

Even without leaving the floodlighted main cavern, without leaving the marked paths, there were plenty of wonderfully beautiful walks to take. If I could afford to be away as much as an hour, there was one place in particular we liked to go-north in the big room, a good half mile from the buildings. The path meandered among frozen limestone mushrooms, great columns, domes, and fantastic shapes that have no names and looked equally like souls in torment or great exotic flowers, depending on the mood one was in. At a spot nearly a hundred feet higher than the main floor we had found a place only a few feet off the authorized path where nature had contrived a natural stone bench. We could sit there and stare down at the toy village, talk, and Maggie would smoke. I had taken to lighting her cigarettes for her, as I had seen Zeb do. It was a little attention she liked and I had learned to avoid getting smoke caught in my throat.

About six weeks after Zeb had left and only days before M-Hour we were doing this and were talking about what it would be like after the revolution and what we would do with ourselves. I said that I supposed I would stay in the regular army, assuming that there was such and that I was eligible for it. 'What will you do, Maggie?'

She exhaled smoke slowly. 'I haven't thought that far, John. I haven't any profession-that is to say, we are trying our best to make the one I did have obsolete.' She smiled wryly. 'I'm not educated in anything useful. I can cook and I can sew and I can keep house; I suppose I should try to find a job as a housekeeper-competent servants are always scarce, they say.'

The idea of the courageous and resourceful Sister Magdalene, so quick with a vibroblade when the need arose, tramping from one employment bureau to another in search of menial work to keep her body fed was an idea at once distasteful to me-'General Housework & Cooking, live in, Thursday evenings & alternate Sundays off; references required.' Maggie? Maggie who had saved my own probably worthless life at least twice and never hesitated nor counted the cost. Not Maggie!

I blurted out, 'Look, you don't have to do that.'

'It's what I know.'

'Yes, but-well, why don't you cook and keep house for me? I'll be drawing enough to support both of us, even if I have to go back to my permanent rank. Maybe it isn't much but-shucks! you're welcome to it.'

She looked up. 'Why, John, how very generous!' She crushed out the cigarette and threw it aside. 'I do appreciate it-but it wouldn't work. I imagine there will be just as many gossips after we have won as before. Your colonel would not like it.'

I blushed red and almost shouted, 'That wasn't what I meant at all!'

'What? Then what did you mean?'

I had not really known until the words came out. Now I knew but not how to express it. 'I meant-Look, Maggie, you seem to like me well enough . . . and we get along well together. That is, why don't we-' I halted, hung up.

She stood up and faced me. 'John, are you proposing marriage-to me?'

I said gruffly, 'Uh, that was the general idea.' It bothered me to have her standing in front of me, so I stood up, too.

She looked at me gravely, searching my face, then said humbly, 'I'm honored . . - and grateful . . . and I am deeply touched. But-oh, no, John!' The tears started out of her eyes and she started to bawl. She stopped as quickly, wiping her face with her sleeve, and said brokenly, 'Now you've made me cry. I haven't cried in years.'

I started to put my arms around her; she pushed me back. 'No, John! Listen to me first. I'll accept that job as your housekeeper, but I won't marry you.'

'Why not?'

'"Why not?" Oh, my dear, my very dear-Because I am an old, tired woman, that's why.'

'Old? You can't be more than a year or two older than I am-three, at the outside. It doesn't matter.'

'I'm a thousand years older than you are. Think who I am where I've been-what I've known. First I was "bride", if you care to call it that, to the Prophet.'

'Not your fault!'

'Perhaps. Then I was mistress to your friend Zebadiah. You knew that?'

'Well . . . I was pretty sure of it.'

'That isn't all. There were other men. Some because it was needful and a woman has few bribes to offer. Some from loneliness, or even boredom. After the Prophet has tired of her, a woman doesn't seem very valuable, even to herself.'

'I don't care. I don't care! It doesn't matter!'

'You say that now. Later it would matter to you, dreadfully. I think I know you, my dear.'

'Then you don't know me. We'll start fresh.'

She sighed deeply. 'You think that you love me, John?'

'Uh? Yes, I guess that's it.'

'You loved Judith. Now you are hurt-so you think you love me.'

'But-Oh, I don't know what love is! I know I want you to marry me and live with me.'

'Neither do I know,' she said so softly that I almost missed it. Then she moved into my arms as easily and naturally as if she had always lived there.

When we had finished kissing each other I said, 'You will marry me, then?'

She threw her head back and stared as if she were frightened. 'Oh, no!'

'Huh? But I thought -'

'No, dear, no! I'll keep your house and cook your food and make your bed-and sleep in it, if you want me to. But you don't need to marry me.'

'But-Sheol! Maggie, I won't have it that way.'

'You won't? We'll see.' She was out of my arms although I had not let go. 'I'll see you tonight. About one-after everyone is asleep. Leave your door unlatched.'

'Maggie!' I shouted.

She was headed down the path, running as if she were flying.

I tried to catch up, tripped on a stalagmite and fell. When I picked myself up she was out of sight.

Here is an odd thing-I had always thought of Maggie as quite tall, stately, almost as tall as I was. But when I held her in my arms, she was short. I had to lean way over to kiss her.

Chapter 12

On the night of the Miracle all that were left of us gathered in the main communications room-my boss and myself, the chief of communications and his technical crew, a few staff officers. A handful of men and a few dozen women, too many to crowd into the comm shack, were in the main mess-hall where a relay screen had been rigged for them. Our underground city was a ghost town now, with only a skeleton crew to maintain communications for the commanding general; all the rest had gone to battle stations. We few who were left had no combat stations in this phase. Strategy had been settled; the hour of execution was set for us by the Miracle. Tactical decisions for a continent could not be made from headquarters and Huxley was too good a general to try. His troops had been disposed and his subordinate commanders were now on their own; all he could do was wait and pray.

All that we could do, too-I didn't have any fingernails left to bite.

The main screen in front of us showed, in brilliant color and perfect perspective, the interior of the Temple. The services had been going on all day-processional, hymns, prayers and more prayers, sacrifice, genuflexion, chanting, endless monotony of colorful ritual. My old regiment was drawn up in two frozen ranks, helmets shining, spears aligned like the teeth of a comb, I made out Peter van Eyck, Master of my home lodge, his belly corseted up, motionless before his platoon.

I knew, from having handled the despatch, that Master Peter had stolen a print of the film we had to have. His presence in the ceremonies was reassuring; had his theft even been suspected our plans could not possibly succeed. But there he was.

Around the other three walls of the comm room were a dozen smaller screens, scenes from as many major cities-crowds in Rittenhouse Square, the Hollywood Bowl jam-packed, throngs in local temples. In each case the eyes of all were riveted on a giant television screen showing the same scene in the Great Temple that we were watching. Throughout all America it would be the same-every mortal soul who could possibly manage it was watching some television screen somewhere-waiting, waiting, waiting for the Miracle of the Incarnation.

Behind us a psychoperator bent over a sensitive who worked under hypnosis. The sensitive, a girl about nineteen, stirred and muttered; the operator bent closer.

Then he turned to Huxley and the communications chief. 'The Voice of God Station has been secured, sir.'

Huxley merely nodded; I felt like turning handsprings, if my knees had not been so weak. This was the key tactic and one that could not possibly be executed until minutes before the Miracle. Since television moves only on line-of-sight or in its own special cable the only possible way to tamper with this nationwide broadcast was at the station of origin. I felt a wild burst of exultation at their success-followed by an equally sudden burst of sorrow, knowing that not one of them could hope to live out the night.

Never mind-if they could hold out for a few more minutes their lives would have counted. I commended their souls to the Great Architect. We had men for such jobs where needed, mostly brethren whose wives had faced an inquisitor.

The comm chief touched Huxley's sleeve. 'It's coming, sir.' The scene panned slowly up to the far end of the Temple, passed over the altar, and settled in close-up on an ivory archway above and behind the altar-the entrance to the Sanctum Sanctorum. It was closed with heavy cloth-of-gold drapes.

The pick-up camera held steady with the curtained entranceway exactly filling the screen. 'They can take over any time now, sir.'

Huxley turned his head to the psychoperator. 'Is that ours yet? See if you can get a report from the Voice of God.'

'Nothing, sir. I'll let you know.'

I could not take my eyes off the screen. After an interminable wait, the curtains stirred and slowly parted, drawn up and out on each side-and there, standing before us almost life size and so real that I felt he could step out of the screen, was the Prophet Incarnate!

He turned his head, letting his gaze rove from side to side, then looked right at me, his eyes staring right into mine. I wanted to hide. I gasped and said involuntarily, 'You mean we can duplicate that?'

The comm chief nodded. 'To the millimeter, or I'll eat the difference. Our best impersonator, prepared by our best plastic surgeons. That may be our film already.'

'But it's real.'

Huxley glanced at me. 'A little less talk, please, Lyle.' It was the nearest he had ever come to bawling me out; I shut up and studied the screen. That powerful, totally unscrupulous face, that burning gaze-an actor? No! I knew that face; I had seen it too many times in too many ceremonies. Something had gone wrong and this was the Prophet Incarnate himself. I began to sweat that stinking sweat of fear. I very much believe that had he called me by name out of that screen I would have confessed my treasons and thrown myself on his mercy.

Huxley said crossly, 'Can't you raise New Jerusalem?'

The psychoperator answered, 'No, sir. I'm sorry, sir.'

The Prophet started his invocation.

His compelling, organlike voice rolled through magnificent periods. Then he asked the blessing of Eternal God for the people this coming year. He paused, looked at me again, then rolled his eyes up to Heaven, lifted his hands and commenced his petition to the First Prophet, asking him to confer on his people the priceless bounty of seeing and

hearing him in the flesh, and offering for that purpose the flesh of the present prophet as an instrument. He waited.

The transformation started-and my hackles stood up. I knew now that we had lost; something had gone wrong. . - and God alone knew how many men had died through the error.

The features of the Prophet began to change; he stretched an inch or two in height; his rich robes darkened-and there standing in his place, dressed in a frock coat of a bygone era, was the Reverend Nehemiah Scudder, First Prophet and founder of the New Crusade. I felt my stomach tighten with fear and dread and I was a little boy again, watching it for the first time in my parish church.

He spoke to us first with his usual yearly greeting of love and concern for his people. Gradually he worked himself up, his face sweating and his hand clutching in the style that had called down the Spirit in a thousand Mississippi Valley camp meetings: my heart began to beat faster. He was preaching against sin in all its forms-the harlot whose mouth is like honey, the sins of the flesh, the sins of the spirit, the money changers.

At the height of his passion he led into a new subject in a fashion that caught me by surprise: 'But I did not return to you this day to speak to you of the little sins of little people. No! I come to tell you of a truly hellish thing and to bid you to gird on your armor and fight. Armageddon is upon you! Rise up, mine hosts, and fight you the Battle of the Lord! For Satan is upon you! He is here! Here among you! Here tonight in the flesh! With the guile of the serpent he has come among you, taking on the form of the Vicar of the Lord! Yea! He has disguised himself falsely, taken on the shape of the Prophet Incarnate!

'Smite him! Smite his hirelings! In the Name of God destroy them all!'

Chapter 13

'Bruehler from voice of God,' the psychoperator said quietly. 'The station is now off the air and demolition will take place in approximately thirty seconds. An attempt will be made to beat a retreat before the building goes up. Good luck. Message ends.'

Huxley muttered something and left the now-dark big screen. The smaller screens, monitoring scenes around the country, were confusing but heartening. There was fighting and rioting everywhere. 1 watched it, still stunned, and tried to figure out which was friend and which was foe. In the Hollywood Bowl the crowd boiled up over the stage and by sheer numbers overran and trampled the officials and clergy seated there. There were plenty of guards stationed around the edges of the howl and it should not have happened that way. But instead of the murderous enfilading fire one would have expected, there was one short blast from a tripod mounted or~ the hillside northeast of the stage, then the guard was shot-apparently by another of the guards.

Apparently the chancy tour de force against the Prophet himself was succeeding beyond all expectations. If government forces were everywhere as disorganized as they were at the Hollywood Bowl, the job would not be one of fighting but of consolidating an accomplished fact.

The monitor from Hollywood went dead and I shifted to another screen, Portland, Oregon. More fighting. I could see men with white armbands, the only uniform we had allowed ourselves for M-Hour-but not all the violence came from our brethren in the armbands. 1 saw an armed proctor go down before bare fists and not get up.

Testing messages and early reports were beginning to come in, now that it was feasible to use our own radio-now that we had at long, long last shown our hand. I stopped looking and went back to help my boss keep track of them. I was still dazed and could still see in my mind the incredible face of the Prophet-both Prophets. If I had been emotionally battered by it, what did the people think? The devout, the believers?

The first clear-cut report other than contact messages was from Lucas in New Orleans:

HAVE TAKEN CONTROL OF CITY CENTER, POWER
AND COMM STATIONS. MOP-UP SQUADS SEIZING
WARD POLICE STAT1ONS. FEDERAL GUARDS HERE
DEMORALIZED BY STEREOCAST. SPORADIC FIGHTING
BROKE OUT AMONG GUARDS THEMSELVES.
LITTLE ORGANI ZED RESISTANCE. ESTABLISHING
ORDER UNDER MARTIAL LAW. SO MOTE IT BE!
LUCAS.

Then reports started pouring in: Kansas City, Detroit, Philadelphia, Denver, Boston, Minneapolis-all the major cities. They varied but told the same story; our synthetic Prophet's call to arms, followed at once by a cutting of all regular methods of communication, had made of the government forces a body without a head, flopping around and fighting itself. The power of the Prophet was founded on superstition and fraud; we had turned superstition back on him to destroy him.

Lodge that night was the grandest I have ever attended. We tyled the communications room itself, with the comm chief sitting as secretary and passing incoming messages to General Huxley, sitting as Master in the east, as fast as they came in. I was called on to take a chair myself, Junior Warden, an honor I had never had before. The General had to borrow a hat and it was ridiculously too small for him, but it didn't matter-I have never seen ritual so grand, before or since. We all spoke the ancient words from our hearts, as if we were saying them for the first time. If the stately progress was interrupted to hear that Louisville was ours, what better interruption? We were building anew; after an endless time of building in speculation we were at last building operatively.

Chapter 14

Temporary capital was set up at St Louis, for its central location. I piloted Huxley there myself. We took over the Prophet's proctor base there, restoring to it its old name of Jefferson Barracks. We took over the buildings of the University, too, and handed back to it the name of Washington. If the people no longer recalled the true significance of those

names, they soon would and here was a good place to start. (I learned for the first time that Washington had been one of us.)

However, one of Huxley's first acts as military governor-he would not let himself be called even 'Provisional President'-was to divorce all official connection between the Lodge and the Free United States Army. The Brotherhood had served its purpose, had kept alive the hopes of free men; now it was time to go back to its ancient ways and let public affairs be handled publicly. The order was not made public, since the public had no real knowledge of us, always a secret society and for three generations a completely clandestine one. But it was read and recorded in all lodges and, so far as I know, honored.

There was one necessary exception: my home lodge at New Jerusalem and the cooperating sister order there of which Maggie had been a member. For we did not yet hold New Jerusalem although the country as a whole was ours.

This was more serious than it sounds. While we had the country under military control, with all communication centers in our hands, with the Federal Forces demoralized, routed, and largely dispersed or disarmed and captured, we did not hold the country's heart in our hands. More than half of the population were not with us; they were simply stunned, confused, and unorganized. As long as the Prophet was still alive, as long as the Temple was still a rallying point, it was still conceivably possible for him to snatch back the victory from us.

A fraud, such as we had used, has only a temporary effect; people revert to their old thinking habits. The Prophet and his cohorts were not fools; they included some of the shrewdest applied psychologists this tired planet has ever seen. Our own counterespionage became disturbingly aware that they were rapidly perfecting their own underground, using the still devout and that numerous minority, devout or not, who had waxed fat under the old regime and saw themselves growing leaner under the new. We could not stop this counterrevolution-Sheol! the Prophet had not been able to stop us and we had worked under much greater handicaps. The Prophet's spies could work almost openly in the smaller towns and the country; we had barely enough men to guard the television stations-we could not possibly put a snooper under every table.

Soon it was an open secret that we had faked the call to Armageddon. One would think that this fact in itself would show to anyone who knew it that all of the Miracles of Incarnation had been frauds-trick television and nothing more. I mentioned this to Zebadiah and got laughed at for being naïve. People believe what they want to believe and logic has no bearing on it, he assured me. In this case they wanted to believe in their old time religion as they learned it at their mothers' knees; it restored security to their hearts. I could sympathize with that, I understood it.

In any case, New Jerusalem must fall-and time was against us.

While we were worrying over this, a provisional constitutional convention was being held in the great auditorium of the university. Huxley opened it, refused again the title, offered by acclamation, of president-then told them bluntly that all laws since the inauguration of President Nehemiah Scudder were of no force, void, and that the old constitution and bill of rights were effective as of now, subject to the exigencies of temporary military control. Their single purpose, he said, was to work out orderly methods of restoring the old free democratic processes; any permanent changes in the constitution, if needed, would have to wait until after free elections.

Then he turned the gavel over to Novak and left.

I did not have time for politics, but I hid out from work and caught most of one afternoon session because Zebadiah had tipped me off that significant fireworks were coming up. I slipped into a back seat and listened. One of Novak's bright young men was presenting a film. I saw the tail end of it only, but it seemed to be more or less a standard instruction film, reviewing the history of the United States, discussing civil liberty, explaining the duties of a citizen in a free democracy-not the sort of thing ever seen in the Prophet's schools but making use of the same techniques which had long been used in every school in the country. The film ended and the bright young man-I could never remember his name, perhaps because I disliked him. Stokes? Call him Stokes, anyway, Stokes began to speak.

'This reorientation film,' he began, 'is of course utterly useless in recanalizing an adult. His habits of thought are much too set to be affected by anything as simple as this.'

'Then why waste our time with it?' someone called out.

'Please! Nevertheless this film was prepared for adults-provided the adult has been placed in a receptive frame of mind. Here is the prologue-' the screen lighted up again. It was a simple and beautiful pastoral scene with very restful music. I could not figure what he was getting at, but it was soothing; I remembered that I had not had much sleep the past four nights-come to think about it, I couldn't remember when I had had a good night's sleep. I slouched back and relaxed.

I didn't notice the change from scenery to abstract patterns. I think the music continued but it was joined by a voice, warm, soothing, monotonous. The patterns were going round and around and I was beginning to bore. . . right. . - into . . . the...screen...

Then Novak had left his chair and switched off the projector with a curse. I jerked awake with that horrid shocked feeling that makes one almost ready to cry. Novak was speaking sharply but quietly to Stokes-then Novak faced the rest of us. 'Up on your feet!' he ordered. 'Seventh inning stretch. Take a deep breath. Shake hands with the man next to you. Slap him on the back, hard!'

We did so and I felt foolish. Also irritated. I had felt so good just a moment before and now I was reminded of the mountain of work I must move if I were to have ten minutes with Maggie that evening. I thought about leaving but the b. y. m. had started talking again.

'As Dr. Novak has pointed out,' he went on, not sounding quite so sure of himself, 'it is not necessary to use the prologue on this audience, since you don't need reorientation. But this film, used with the preparatory technique and possibly in some cases with a light dose of one of the hypnotic drugs, can be depended on to produce an optimum political temperament in 83% of the populace. This has been demonstrated on a satisfactory test group. The film itself represents several years of work analyzing the personal conversion reports of almost everyone-surely everyone in this audience!-who joined our organization while it was still underground. The irrelevant has been eliminated; the essential has been abstracted. What remains will convert a devout follower of the Prophet to free manhood-provided he is in a state receptive to suggestion when he is exposed to it.'

So that was why we had each been required to bare our souls. It seemed logical to me. God knew that we were sitting on a time bomb, and we couldn't wait for every lunk to fall in love with a holy deaconess and thereby be shocked out of his groove; there

wasn't time. But an elderly man whom I did not know was on his feet on the other side of the hall-he looked like the picture of Mark Twain, an angry Mark Twain. 'Mr. Chairman!'

'Yes, comrade? State your name and district.'

'You know what my name is, Novak-Winters, from Vermont. Did you okay this scheme?'

'No.' It was a simple declarative.

'He's one of your boys.'

'He's a free citizen. I supervised the preparation of the film itself and the research which preceded it. The use of null-vol suggestion techniques came from the research group he headed. I disapproved the proposal, but agreed to schedule time to present it. I repeat, he is a free citizen, free to speak, just as you are.'

'May I speak now?'

'You have the floor.'

The old man drew himself up and seemed to swell up. 'I shall! Gentlemen . . . ladies - . . comrades! I have been in this for more than forty years-more years than that young pup has been alive. I have a brother, as good a man as 1 am, but we haven't spoken in many years-because he is honestly devout in the established faith and he suspects me of heresy. Now this cub, .with his bulging forehead and his whirling lights, would "condition" my brother to make him "politically reliable".'

He stopped to gasp asthmatically and went on. 'Free men aren't "conditioned!" Free men are free because they are ornery and cussed and prefer to arrive at their own prejudices in their own way-not have them spoon-fed by a self-appointed mind tinkerer! We haven't fought, our brethren haven't bled and died, just to change bosses, no matter how sweet their motives. I tell you, we got into the mess we are in through the efforts of those same mind tinkerers. They've studied for years how to saddle a man and ride him. They started with advertising and propaganda and things like that, and they perfected it to the point where what used to be simple, honest swindling such as any salesman might use became a mathematical science that left the ordinary man helpless.' He pointed his finger at Stokes. 'I tell you that the American citizen needs no protection from anything-except the likes of him.'

'This is ridiculous,' Stokes snapped, his voice rather high. 'You wouldn't turn high explosives over to children. That is what the franchise would be now.'

'The American people are not children.'

'They might as well be!-most of them.'

Winters turned his eyes around the hall. 'You see what I mean, friends? He's as ready to play God as the Prophet was. I say give 'em their freedom, give 'em their clear rights as men and free men and children under God. If they mess it up again, that's their doing-but we have no right to operate on their minds.' He stopped and labored again to catch his breath; Stokes looked contemptuous. 'We can't make the world safe for children, nor for men either-and God didn't appoint us to do it.'

Novak said gently, 'Are you through, Mr. Winters?'

'I'm through.'

'And you've had your say, too, Stokes. Sit down.'

Then I had to leave, so I slipped out-and missed what must have been a really dramatic event if you care for that sort of thing; I don't. Old Mr. Winters dropped dead about the time I must have been reaching the outer steps.

Novak did not let them recess on that account. They passed two resolutions; that no citizen should be subjected to hypnosis or other psychomanipulative technique without his written consent, and that no religious or political test should be used for franchise in the first elections.

I don't know who was right. It certainly would have made life easier in the next few weeks if we had known that the people were solidly behind us. Temporarily rulers we might be, but we hardly dared go down a street in uniform at night in groups of less than six.

Oh yes, we had uniforms now-almost enough for one for each of us, of the cheapest materials possible and in the standard army sizes, either too large or too small. Mine was too tight. They had been stockpiled across the Canadian border and we got our own people into uniform as quickly as possible. A handkerchief tied around the arm is not enough.

Besides our own simple powder-blue dungarees there were several other uniforms around, volunteer brigades from outside the country and some native American outfits. The Mormon Battalions had their own togs and they were all growing beards as well-they went into action singing the long forbidden 'Come, Come, Ye Saints!' Utah was one state we didn't have to worry about, now that the Saints had their beloved temple back. The Catholic Legion had its distinctive uniform, which was just as well since hardly any of them spoke English. The Onward Christian Soldiers dressed differently from us because they were a rival underground and rather resented our coup d'etat-we should have waited. Joshua's Army from the pariah reservations in the northwest (plus volunteers from all over the world) had a get-up that can only be described as outlandish.

Huxley was in tactical command of them all. But it wasn't an army; it was a rabble.

The only thing that was hopeful about it was that the Prophet's army had not been large, less than two hundred thousand, more of an internal police than an army, and of that number only a few had managed to make their way back to New Jerusalem to augment the Palace garrison. Besides that, since the United States had not had an external war for more than a century, the Prophet could not recruit veteran soldiers from the remaining devout.

Neither could we. Most of our effectives were fit only to guard communication stations and other key installations around the country and we were hard put to find enough of them to do that. Mounting an assault on New Jerusalem called for scraping the bottom of the barrel.

Which we did, while smothering under a load of paperwork that made the days in the old G.H.Q. seem quiet and untroubled. I had thirty clerks under me now and I don't know what half of them did. I spend a lot of my time just keeping Very Important Citizens who Wanted to Help from getting in to see Huxley.

I recall one incident which, while not important, was not exactly routine and was important to me. My chief secretary came in with a very odd look on her face. 'Colonel,' she said, 'your twin brother is out there.'

'Eh? I have no brothers.'

'A Sergeant Reeves,' she amplified.

He came in, we shook hands, and exchanged inanities. I really was glad to see him and told him about all the orders I had sold and then lost for him. I apologized, pled

exigency of war and added, 'I landed one new account in K.C.-Emery, Bird, Thayer. You might pick it up some day.'

'I will. Thanks.'

'I didn't know you were a soldier.'

'I'm not, really. But I've been practicing at it ever since my travel permit, uh-got itself lost.'

'I'm sorry about that.'

'Don't be. I've learned to handle a blaster and I'm pretty good with a grenade now. I've been okayed for Operation Strikeout.'

'Eh? That code word is supposed to be confo.'

'It is? Better tell the boys; they don't seem to realize it. Anyhow, I'm in. Are you? Or shouldn't I ask that?'

I changed the subject. 'How do you like soldering? Planning to make a career of it?'

'Oh, it's all right-but not that all right. But what I came in to ask you, Colonel, are you?'

'Are you staying in the army afterwards? I suppose you can make a good thing out of it, with your background-whereas they wouldn't let me shine brightwork, once the fun is over. But if by any chance you aren't, what do you think of the textile business?'

I was startled but I answered, 'Well, to tell the truth I rather enjoyed it-the selling end, at least.'

'Good. I'm out of a job where I was, of course-and I've been seriously considering going in on my own, a jobbing business and manufacturers' representative. I'll need a partner. Eh?'

I thought it over. 'I don't know,' I said slowly. 'I haven't thought ahead any further than Operation Strikeout. I might stay in the army-though soldiering does not have the appeal for me it once had . . . too many copies to make out and certify. But I don't know. I think what I really want is simply to sit under my own vine and my own fig tree.'

'"- and none shall make you afraid",' he finished. 'A good thought. But there is no reason why you shouldn't unroll a few bolts of cloth while you are sitting there. The fig crop might fail. Think it over.'

'I will. I surely will.'

Chapter 15

Maggie and I were married the day before the assault on New Jerusalem. We had a twenty-minute honeymoon, holding hands on the fire escape outside my office, then I flew Huxley to the jump-off area. I was in the flagship during the attack. I had asked permission to pilot a rocket-jet as my combat assignment but he had turned me down.

'What for, John?' he had asked. 'This isn't going to be won in the air; it will be settled on the ground.'

He was right, as usual. We had few ships and still fewer pilots who could be trusted. Some of the Prophet's air force had been sabotaged on the ground; a goodly

number had escaped to Canada and elsewhere and been interned. With what planes we had we had been bombing the Palace and Temple regularly, just to make them keep their heads down.

But we could not hurt them seriously that way and both sides knew it. The Palace, ornate as it was above ground, was probably the strongest bomb-proof ever built. It had been designed to stand direct impact of a fission bomb without damage to personnel in its deepest tunnels-and that was where the Prophet was spending his days, one could be sure. Even the part above ground was relatively immune to ordinary H.E. bombs such as we were using.

We weren't using atomic bombs for three reasons: we didn't have any; the United States was not known to have had any since the Johannesburg Treaty after World War III. We could not get any. We might have negotiated a couple of bombs from the Federation had we been conceded to be the legal government of the United States, but, while Canada had recognized us, Great Britain had not and neither had the North African Confederacy. Brazil was teetering; she had sent a chargé d'affaires to St Louis. But even if we had actually been admitted to the Federation, it is most unlikely that a mass weapon would have been granted for an internal disorder.

Lastly, we would not have used one if it had been laid in our laps. No, we weren't chicken hearted. But an atom bomb, laid directly on the Palace, would certainly have killed around a hundred thousand or more of our fellow citizens in the surrounding city-and almost as certainly would not have killed the Prophet.

It was going to be necessary to go in and dig him out, like a holed-up badger.

Rendezvous was made on the east shore of the Delaware River. At one minute after midnight we moved east, thirty-four land cruisers, thirteen of them modern battlewagons, the rest light cruisers and obsolescent craft-all that remained of the Prophet's mighty East Mississippi fleet; the rest had been blown up by their former commanders. The heavy ships would be used to breach the walls; the light craft were escort to ten armored transports carrying the shock troops-five thousand fighting men hand-picked from the whole country. Some of them had had some military training in addition to what we had been able to give them in the past few weeks; all of them had taken part in the street fighting.

We could hear the bombing at New Jerusalem as we started out, the dull Crrump!' the gooseflesh shiver of the concussion wave, the bass rumble of the ground sonic. The bombing had been continuous the last thirty-six hours; we hoped that no one in the Palace had had any sleep lately, whereas our troops had just finished twelve hours impressed sleep.

None of the battlewagons had been designed as a flagship, so we had improvised a flag plot just abaft the conning tower, tearing out the long-range televisor to make room for the battle tracker and concentration plot. I was sweating over my jury-rigged tracker, hoping to Heaven that the makeshift shock absorbers would be good enough when we opened up. Crowded in behind me was a psychoperator and his crew of sensitives, eight women and a neurotic fourteen-year-old boy. In a pinch, each would have to handle four circuits. I wondered if they could do it. One thin blonde girl had a dry, chronic cough and a big thyroid patch on her throat.

We lumbered along in approach zigzag. Huxley wandered from comm to plot and back again, calm as a snail, looking over my shoulder, reading despatches casually, watching the progress of the approach on the screens.

The pile of despatches at my elbow grew. The Cherub had fouled her starboard tread; she had dropped out of formation but would rejoin in thirty minutes. Penoyer reported his columns extended and ready to deploy. Because of the acute shortage of command talent, we were using broad-command organization; Penoyer commanded the left wing and his own battlewagon; Huxley was force commander, right wing commander, and skipper of his own flagship.

At 12:32 the televisors went out. The enemy had analyzed our frequency variation pattern, matched us and blown every tube in the circuits. It is theoretically impossible; they did it. At 12:37 radio went out.

Huxley seemed unperturbed. 'Shift to light-phone circuits,' was all he said.

The communications officer had anticipated him; our audio circuits were now on infra-red beams, ship to ship. Huxley hung over my shoulder most of the next hour, watching the position plot lines grow. Presently he said, 'I think we will deploy now, John. Some of those pilots aren't any too steady; I think we will give them time to settle down in their positions before anything more happens.'

I passed the order and cut my tracker out of circuit for fifteen minutes; it wasn't built for so many variables at such high speeds and there was no sense in overloading it. Nineteen minutes later the last transport had checked in by phone, I made a preliminary set up, threw the starting switch and let the correction data feed in. For a couple of minutes I was very busy balancing data, my hands moving among knobs and keys; then the machine was satisfied with its own predictions and I reported, 'Tracking, sir.'

Huxley leaned over my shoulder. The line was a little ragged but I was proud of them-some of those pilots had been freighter jacks not four weeks earlier.

At three a.m. we made the precautionary signal, 'Coming on the range,' and our own turret rumbled as they loaded it.

At 3:31 Huxley gave the command, 'Concentration Plan III, open fire.'

Our own big fellow let go. The first shot shook loose a lot of dust and made my eyes water. The craft rolled back on her treads to the recoil and I nearly fell out of my saddle. I had never ridden one of the big booster guns before and I hadn't expected the long recoil. Our big rifle had secondary firing chambers up the barrel, electronically synchronized with the progress of the shell; it maintained max pressure all the way up and gave a much higher muzzle velocity and striking power. It also gave a bone-shaking recoil. But the second time I was ready for it.

Huxley was at the periscope between shots, trying to observe the effects of our fire. New Jerusalem had answered our fire but did not yet have us ranged. We had the advantage of firing at a stationary target whose range we knew to the meter; on the other hand even a heavy land cruiser could not show the weight of armor that underlay the Palace's ginger-bread.

Huxley turned from the scope and remarked, 'Smoke, John.' I turned to the communications officer. 'Stand by, sensitives; all craft!'

The order never got through. Even as I gave it the comm officer reported loss of contact. But the psychoperator was already busy and I knew the same thing was happening in all the ships; it was normal casualty routine.

Of our nine sensitives, three-the boy and two women-were wide-awakes; the other six were hypnos. The technician hooked the boy first to one in Penoyer's craft. The kid established rapport almost at once and Penoyer got through a report:

'BLANKETED BY SMOKE. HAVE SHIFTED LEFT WING TO PSYCHO. WHAT HOOK-UP? - PENOYER.'

I answered, 'Pass down the line.' Doctrine permitted two types of telepathic hook-up: relay, in which a message would be passed along until it reached its destination; and command mesh, in which there was direct hook-up from flag to each ship under that flag, plus ship-to-ship for adjacent units. In the first case each sensitive carries just one circuit, that is, is in rapport with just one other telepath; in the second they might have to handle as many as four circuits. I wanted to hold off overloading them as long as possible.

The technician tied the other two wide-awakes into our flanking craft in the battle line, then turned his attention to the hypnos. Four of them required hypodermics; the other two went under in response to suggestion. Shortly we were hooked up with the transports and second-line craft, as well as with the bombers and the rocket-jet spotting the fall of shot. The jet reported visibility zero and complained that he wasn't getting anything intelligible by radar. I told him to stand by; the morning breeze might clear the smoke away presently.

We weren't dependent on him anyway; we knew our positions almost to the inch. We had taken departure from a benchmark and our dead reckoning was checked for the whole battle line every time any skipper identified a map-shown landmark. In addition, the dead reckoners of a tread-driven cruiser are surprisingly accurate; the treads literally measure every yard of ground as they pass over it and a little differential gadget compares the treads and keeps just as careful track of direction. The smoke did not really bother us and we could keep on firing accurately even if radar failed. On the other hand, if the Palace commander kept us in smoke he himself was entirely dependent on radar.

His radar was apparently working; shot was falling all around us. We hadn't been hit yet but we could feel the concussions when shells struck near us and some of the reports were not cheerful. Penoyer reported the Martyr hit; the shell had ruptured her starboard engine room. The skipper had tried to cross connect and proceed at half-speed, but the gear train was jammed; she was definitely out of action. The Archangel had overheated her gun. She was in formation but would be harmless until the turret captain got her straightened out.

Huxley ordered them to shift to Formation E, a plan which used changing speeds and apparently random courses-carefully planned to avoid collision between ships, however. It was intended to confuse the fire control of the enemy.

At 4:11 Huxley sent the bombers back to base. We were inside the city now and the walls of the Palace lay just beyond-too close to target for comfort; we didn't want to lose ships to our own bombs.

At 4:17 we were struck. The port upper tread casing was split, the barbette was damaged so that the gun would no longer .train, and the conning tower was cracked along its after surface. The pilot was killed at his controls.

I helped the psychoperator get gas helmets over the heads. of the hypnos. Huxley picked himself up off the floor plates, put on his own helmet, and studied the set-up on my battle tracker, frozen at the instant the shell hit us.

'The Benison should pass by this point in three minutes,. John. Tell them to proceed dead slow, come along starboard side, and pick us up. Tell Penoyer I am shifting my flag.'

We made the transfer without mishap, Huxley, myself, the psychoperator, and his sensitives. One sensitive was dead, killed by a flying splinter. One went into a deep trance and we could not rouse her. We left her in the disabled battlewagon; she was as safe there as she could be.

I had torn the current plot from my tracker and brought it along. It had the time-predicted plots for Formation E. We would have to struggle along with those, as the tracker could not be moved and was probably beyond casual repair in any case. Huxley studied the chart.

'Shift to full communication mesh, John. I plan to assault shortly.'

I helped the psychoperator get his circuits straightened out. By dropping the Martyr out entirely and by using 'Pass down the line' on Penoyer's auxiliaries, we made up for the loss of two sensitives. All carried four circuits now, except the boy who had five, and the. girl with the cough, who was managing six. The psychoperator was worried but there was nothing to do about it.

I turned back to General Huxley. He. had seated himself, and at first I thought he was in deep thought; then I saw that he was unconscious. It was not until I tried to rouse him and failed that I saw the blood seeping down the support column of his chair and wetting floor plates. I moved him gently and found, sticking out from between his ribs near his spine, a steel splinter.

I felt a touch at my elbow, it was the psychoperator. 'Penoyer reports that he will be within assault radius in four minutes. Requests permission to change formation and asks time of execution.'

Huxley was out. Dead or wounded, he would fight no more this battle. By all rules, command devolved on Penoyer, and I should tell him so at once. But time was pressing hard, it would involve a drastic change of set-up, and we had been forced to send Penoyer into battle with only three sensitives. It was a physical impossibility.

What should I do? Turn the flag over to the skipper of the Benison? I knew the man, stolid, unimaginative, a gunner by disposition. He was not even in his conning tower but had been fighting his ship from the fire control station in the turret. If I called him down here, he would take many minutes to comprehend the situation-and then give the wrong orders.

With Huxley out I had not an ounce of real authority. I was a brevet short-tailed colonel, only days up from major and a legate by rights; I was what I was as Huxley's flunky. Should I turn command over to Penoyer-and lose the battle with proper military protocol? What would Huxley have me do, if he could make the decision?

It seemed to me that I worried that problem for an hour. The chronograph showed thirteen seconds between reception of Penoyer's despatch and my answer:

'Change formation at will. Stand by for execution signal in six minutes.' The order given, I sent word to the forward dressing station to attend to the General.

I shifted the right wing to assault echelon, then called the transport Sweet Chariot: 'Sub-plan D; leave formation and proceed on duty assigned.' The psychoperator eyed me but transmitted my orders. Sub-plan D called for five hundred light infantry to enter the Palace through the basement of the department store that was connected with the lodge

room. From the lodge room they would split into squads and proceed on assigned tasks. All of our shock troops had all the plans of the Palace graven into their brains; these five hundred had had additional drill as to just where they were to go, what they were to do.

Most of them would be killed, but they should be able to create confusion during the assault. Zeb had trained them and now commanded them.

We were ready. 'All units, stand by to assault. Right wing, outer flank of right bastion; left wing, outer flank of left bastion. Zigzag emergency full speed until within assault distance. Deploy for full concentration fire, one salvo, and assault. Stand by to execute. Acknowledge.'

The acknowledgments were coming in and I was watching my chronometer preparatory to giving the command of execution when the boy sensitive broke off in the middle of a report and shook himself. The technician grabbed the kid's wrist and felt for his pulse; the boy shook him off.

'Somebody new,' he said. 'I don't quite get it.' Then he commenced in a sing-song, 'To commanding general from Lodge Master Peter van Eyck: assault center bastion with full force. I will create a diversion.'

'Why the center?' I asked.

'It is much more damaged.'

If this were authentic, it was crucially important. But I was suspicious. If Master Peter had been detected, it was a trap. And I didn't see how he, in his position, had been able to set up a sensitive circuit in the midst of battle.

'Give me the word,' I said.

'Nay, you give me.'

'Nay, I will not.'

'I will spell it, or halve it.'

'Spell it, then.'

We did so. I was satisfied. 'Cancel last signal. Heavy cruisers assault center bastion, left wing to left flank, right wing to right flank. Odd numbered auxiliaries make diversion assaults on right and left bastions. Even numbers remain with transports. Acknowledge.'

Ninteen seconds later I gave the command to execute, then we were off. It was like riding a rocket plane with a dirty, overheated firing chamber. We crashed through walls of masonry, lurched sickeningly on turns, almost overturned when we crashed into the basement of some large demolished building and lumbered out again. It was out of my hands now, up to each skipper.

As we slewed into firing position, I saw the psychoperator peeling back the boy's eyelids. 'I'm afraid he's gone,' he said tonelessly. 'I had to overload him too much on that last hookup.' Two more of the women had collapsed.

Our big gun cut loose for the final salvo; we waited for an interminable period-all of ten seconds. Then we were moving, gathering speed as we rolled. The Benison hit the Palace wall with a blow that I thought would wreck her, but she did not mount. But the pilot had his forward hydraulic jacks down as soon as we hit; her bow reared slowly up. We reached an angle so steep that it seemed she must turn turtle, then the treads took hold, we ground forward and slid through the breach in the wall.

Our gun spoke again, at point-blank range, right into the inner Palace. A thought flashed through my head-this was the exact spot where I had first laid eyes on Judith. I had come full circle.

The Benison was rampaging around, destroying by her very weight. I waited until the last cruiser had had time to enter, then gave the order, 'Transports, assault.' That done, I called Penoyer, informed him that Huxley was wounded and that he was now in command.

I was all through. I did not even have a job, a battle station. The battle surged around me, but I was not part of it-I, who two minutes ago had been in usurped full command.

I stopped to light a cigarette and wondered what to do with myself. I put it out after one soul-satisfying drag and scrambled up into the fire control tower of the turret and peered out the after slits. A breeze had come up and the smoke was clearing; the transport Jacob's Ladder I could see just pulling out of the breach. Her sides fell away and ranks of infantry sprang out, blasters ready. A sporadic fire met them; some fell but most returned the fire and charged the inner Palace. The Jacob's Ladder cleared the breach and the Ark took her place.

The troops commander in the Ark had orders to take the Prophet alive. I hurried down ladders from the turret, ran down the passageway between the engine rooms, and located the escape hatch in the floor plates, clear at the stern of the Benison. Somehow I got it unclamped, swung up the hatch cover, and stuck my head down. I could see men running, out beyond the treads. I drew my blaster, dropped to the ground, and tried to catch up with them, running out the stern between the big treads.

They were men from the Ark, right enough. I attached myself to a platoon and trotted along with them. We swarmed into the inner Palace.

But the battle was over; we encountered no organized resistance. We went on down and down and down and found the Prophet's bombproof. The door was open and he was there.

But we did not arrest him. The Virgins had gotten to him first; he no longer looked imperious. They had left him barely something to identify at an inquest.

"It's Great to Be Back!"

"HURRY UP, ALLAN!" Home-back to Earth again! Her heart was pounding.

"Just a second." She fidgeted while her husband checked over a bare apartment. Earth-Moon freight rates made it silly to ship their belongings; except for the bag he carried, they had converted everything to cash. Satisfied, he joined her at the lift; they went on up to the administration level and there to a door marked: LUNA CITY COMMUNITY ASSOCIATION-Anna Stone, Service Manager.

Miss Stone accepted their apartment keys grimly. "Mr. and Mrs. MacRae. So you're actually leaving us?"

Josephine bristled. "Think we'd change our minds?"

The manager shrugged. "No. I knew nearly three years ago that you would go back-from your complaints."

"From my comp- Miss Stone, I've been as patient about the incredible inconveniences of this, this pressurized rabbit warren as anyone. I don't blame you personally, but-"

"Take it easy, Jo!" her husband cautioned her.

Josephine flushed. "Sorry, Miss Stone."

"Never mind. We just see things differently. I was here when Luna City was three air-sealed Quonset huts connected by tunnels you crawled through, on your knees." She stuck out a square hand. "I hope you enjoy being groundhogs again, I honestly do. Hot jets, good luck, and a safe landing."

Back in the lift, Josephine sputtered. "'Groundhogs' indeed! Just because we prefer our native planet, where a person can draw a breath of fresh air-"

"You use the term," Allan pointed out.

"But I use it about people who've never been off Terra."

"We've both said more than once that we wished we had had sense enough never to have left Earth. We're groundhogs at heart, Jo."

"Yes, but- Oh, Allan, you're being obnoxious. This is the happiest day of my life. Aren't you glad to be going home? Aren't you?"

"Of course I am. It'll be great to be back. Horseback riding. Skiing."

"And opera. Real, live grand opera. Allan, we've simply got to have a week or two in Manhattan before we go to the country."

"I thought you wanted to feel rain on your face."

"I want that, too. I want it all at once and I can't wait. Oh, darling, it's like getting out of jail." She clung to him.

He unwound her as the lift stopped. "Don't blubber."

"Allan, you're a beast," she said dreamily. "I'm so happy." They stopped again, in bankers' row. The clerk in the National City Bank office had their transfer of account ready. "Going home, eh? Just sign there, and your print. I envy you. Hunting, fishing."

"Surf bathing is more my style. And sailing."

"I," said Jo, "simply want to see green trees and blue sky." The clerk nodded. "I know what you mean. It's long ago and far away. Well, have fun. Are you taking three months or six?"

"We're not coming back," Allan stated flatly. "Three years of living like a fish in an aquarium is enough."

"So?" The clerk shoved the papers toward him and added without expression, "Well-hot jets."

"Thanks." They went on up to the subsurface level and took the cross-town slidewalk out to the rocket port. The slidewalk tunnel broke the surface at one point, becoming a pressurized shed; a view window on the west looked out on the surface of the Moon-and, beyond the hills, the Earth.

The sight of it, great and green and bountiful, against, the black lunar sky and harsh, unwinking stars, brought quick tears to Jo's eyes. Home-that lovely planet was hers! Allan looked at it more casually, noting the Greenwich. The sunrise Line had just touched South America-must be about eight twenty; better hurry.

They stepped off the slidewalk into the arms of some of their friends, waiting to see them off. "Hey-where have you Lugs been? The Gremlin blasts off in seven minutes."

"But we aren't going in it," MacRae answered. "No, siree."

"What? Not going? Did you change your minds?"

Josephine laughed. "Pay no attention to him, Jack. We're going in the express instead; we swapped reservations. So we've got twenty minutes yet."

"Well! A couple of rich tourists, eh?"

"Oh, the extra fare isn't so much and I didn't want to make two changes and spend a week in space when we could be home in two days." She rubbed her bare middle significantly.

"She can't take free flight, Jack," her husband explained.

"Well, neither can I - I was sick the whole trip out. Still, I don't think you'll be sick, Jo; you're used to Moon weight now."

"Maybe," she agreed, "but there is a lot of difference between one-sixth gravity and no gravity."

Jack Crail's wife cut in. "Josephine MacRae, are you going to risk your life in an atomic-powered ship?"

"Why not, darling? You work in an atomics laboratory."

"Hummph! In the laboratory we take precautions. The Commerce Commission should never have licensed the expresses. I may be old-fashioned, but I'll go back the way I came, via Terminal and Supra-New York, in good old reliable fuel-rockets."

"Don't try to scare her, Emma," Crail objected. "They've worked the bugs out of those ships."

"Not to my satisfaction. I-"

"Never mind," Allan interrupted her. "The matter is settled, and we've still got to get over to the express launching site. Good-by, everybody! Thanks for the send-off. It's been grand knowing you. If you come back to God's country, look us up."

"Good-by, kids!" "Good-by, Jo-good-by, Allan." "Give my regards to Broadway!" "So long-be sure to write." "Good-by." "Aloha-hot jets!" They showed their tickets, entered the air lock, and climbed into the pressurized shuttle between Leyport proper and the express launching site. "Hang on, 'folks," the shuttle operator called back over his shoulder; Jo and Allan hurriedly settled into the cushions. The lock opened; the tunnel ahead was airless. Five minutes later they were climbing out twenty miles away, beyond the hills that shielded the lid of Luna City from the radioactive splash of the express ships.

In the Sparrowhawk they shared a compartment with a missionary family. The Reverend Doctor Simmons felt obliged to explain why he was traveling in luxury. "It's for the child," he told them, as his wife strapped the baby girl into a small acceleration couch rigged stretcher-fashion between her parents' couches. "Since she's never been in space, we daren't take a chance of her being sick for days on end." They all strapped down at the warning siren. Jo felt her heart begin to pound. At last ... at long last!

The jets took hold, mashing them into the cushions. Jo had not known she could feel so heavy. This was worse, much worse, than the trip out. The baby cried as long as acceleration lasted, in wordless terror and discomfort.

After an interminable time they were suddenly weightless, as the ship went into free flight. When the terrible binding weight was free of her chest, Jo's heart felt as light as her body. Allan threw off his upper strap and sat up. "How do you feel, kid?"

"Oh, I feel fine!" Jo unstrapped and faced him. Then she hiccoughed. "That is, I think I do."

Five minutes later she was not in doubt; she merely wished to die. Allan swam out of the compartment and located the ship's surgeon, who gave her an injection. Allan waited until she had succumbed to the drug, then left for the lounge to try his own cure for spacesickness - Mothersill's Seasick Remedy washed down with champagne. Presently he had to admit that these two sovereign remedies did not work for him-or perhaps he should not have mixed them.

Little Gloria Simmons was not spacesick. She thought being weightless was fun, and went bouncing off floorplate, overhead, and bulkhead like a dimpled balloon. Jo feebly considered strangling the child, if she floated within reach-but it was too much effort.

Deceleration, logy as it made them feel, was welcome relief after nausea-except to little Gloria. She cried again, in fear and hurt, while her mother tried to explain. Her father prayed.

After a long, long time came a slight jar and the sound of the siren. Jo managed to raise her head. "What's the matter? Is there an accident?"

"I don't think so. I think we've landed."

'We can't have! We're still braking-I'm heavy as lead."

Allan grinned feebly. "So am I. Earth gravity-remember?"

The baby continued to cry.

They said good-by to the missionary family, as Mrs. Simmons decided to wait for a stewardess from the skyport. The MacRaes staggered out of the ship, supporting each other. "It can't be just the gravity," Jo protested, her feet caught in invisible quicksand. "I've taken Earth-normal acceleration in the centrifuge at the 'Y', back home-I mean back in Luna City. We're weak from spacesickness."

Allan steadied himself. "That's it. We haven't eaten anything for two days."

"Allan-didn't you eat anything either?'

"No. Not permanently, so tospy. Are you hungry?"

"Starving."

"How about dinner at Kean's Chophouse?"

"Wonderful. Oh, Allan, we're back!" Her tears started again.

They glimpsed the Simmonses once more, after chuting down the Hudson Valley and into Grand Central Station. While they were waiting at the tube dock for their bag, Jo saw the Reverend Doctor climb heavily out of the next tube capsule, carrying his daughter and followed by his wife. He set the child down carefully. Gloria stood for a moment, trembling on her pudgy legs, then collapsed to the dock. She lay there, crying thinly.

A spaceman-pilot, by his uniform-stopped and looked pityingly at the child. "Born in the Moon?" he asked.

"Why yes, she was, sir." Simmons' courtesy transcended his troubles.

"Pick her up and carry her. She'll have to learn to walk all over again." The spaceman shook his head sadly and glided away. Simmons looked still more troubled, then sat down on the dock beside his child, careless of the dirt.

Jo felt too weak to help. She looked around for Allan, but he was busy; their bag had arrived. It was placed at his feet and he started to pick it up, and then felt suddenly silly. It seemed nailed to the dock. He knew what was in it, rolls of microfilm and colorfilm, a few souvenirs, toilet articles, various irreplaceables-fifty pounds of mass. It couldn't weigh what it seemed to.

But it did. He had forgotten what fifty pounds weigh on Earth.

"Porter, mister?' The speaker was grey-haired and thin, but he scooped up the bag quite casually. Allan called out, "Come along, Jo." and followed him, feeling foolish. The porter slowed to match Allan's labored steps.

"Just down from the Moon?" he asked.

"Why, yes."

"Got a reservation?"

"No."

"You stick with me. I've got a friend on the desk at the Commodore." He led them to the Concourse slidewalk and thence to the hotel.

They were too weary to dine out; Allan had dinner sent to their room. Afterward, Jo fell asleep in a hot tub and he had trouble getting her out-she liked the support the water gave her. But he persuaded her that a rubber-foam mattress was nearly as good. They got to sleep very early.

She woke up, struggling, about four in the morning. "Allan. Allan!"

"Huh? What's the matter?" His hand fumbled at the light switch.

"Uh . . . nothing I guess. I dreamed I was back in the ship. The jets had run away with her. Allan, what makes it so stuffy in here? I've got a splitting headache."

"Huh? It can't be stuffy. This joint is air-conditioned." He sniffed the air. "I've got a headache, too," he admitted.

"Well, do something. Open a window."

He stumbled out of bed, shivered when the outer air hit him, and hurried back under the covers. He was wondering whether he could get to sleep with the roar of the city pouring in through the window when his wife spoke again. "Allan?"

"Yes. What is it?"

"Honey, I'm cold. May I crawl in with you?"

"Sure."

The sunlight streamed in the window, warm and mellow. When it touched his eyes, he woke and found his wife awake beside him. She sighed and snuggled. "Oh, darling, look! Blue sky-we're home. I'd forgotten how lovely it is."

"It's great to be back, all right. How do you feel?"

"Much better. How are you?"

"Okay, I guess." He pushed off the covers.

Jo squealed and jerked them back. "Don't do that!"

"Huh?"

"Mama's great big boy is going to climb out and close that window while mamma stays here under the covers."

"Well-all right." He could walk more easily than the night before-but it was good to get back into bed. Once there, he faced the telephone and shouted, at it, "Service!"

"Order, please," it answered in a sweet contralto.

"Orange juice and coffee for two-extra coffee-six eggs, scrambled medium, and whole-wheat toast. And send up a Times, and the Saturday Evening Post."

"Ten minutes."

"Thank you." The delivery cupboard buzzed while he was shaving. He answered it and served Jo breakfast in bed. Breakfast over, he laid down his newspaper and said, "Can you pull your nose out of that magazine?"

"Glad to. The darn thing is too big and heavy to hold."

"Why don't you have the stat edition mailed to you from Luna City? Wouldn't cost more than eight or nine times as much."

"Don't be silly. What's on your mind?"

"How about climbing out of that frosty little nest and going with me to shop for clothes?"

"Uh-uh. No, I am not going outdoors in a moonsuit."

"'Fraid of being stared at? Getting prudish in your old age?"

"No, me lord, I simply refuse to expose myself to the outer air in six ounces of nylon and a pair of sandals. I want some warm clothes first." She squirmed further down under the covers.

"The Perfect Pioneer Woman. Going to have fitters sent up?"

"We can't afford that. Look - you're going anyway. Buy me just any old rag so long as it's warm."

MacRae looked stubborn. "I've tried shopping for you before."

"Just this once - please. Run over to Saks and pick out a street dress in a blue wool jersey, size ten. And a pair of nylons."

"Well-all right."

"That's a lamb. I won't be loafing. I've a list as long as your arm of people I've promised to call up, look 'up, have lunch with."

He attended to his own shopping first; his sensible shorts and singlet seemed as warm as a straw hat in a snowstorm. It was not really cold and was quite balmy in the sun, but it seemed cold to a man used to a never-failing seventy-two degrees. He tried to stay underground, or stuck to the roofed-over section of Fifth Avenue.

He suspected that the salesmen had outfitted him in clothes that made him look like a yokel But they were warm. They were also heavy; they added to the pain across his

chest and made him walk even more unsteadily. He wondered how long it would be before he got his ground-legs.

A motherly saleswoman took care of Jo's order and sold him a warm cape for her as well. He headed back, stumbling under his packages, and trying futilely to flag a ground-taxi. Everyone seemed in such a hurry! Once he was nearly knocked down by a teen-aged boy who said, "Watch it, Gramps!" and rushed off, before he could answer.

He got back, aching all over and thinking about a hot bath. He did not get it; Jo had a visitor. "Mrs. Appleby, my husband-Allan, this is Emma Crail's mother."

"Oh, how do you do, Doctor-or should it be 'Professor'?"

"Mister-"

"-when I heard you were in town I just couldn't wait to hear all about my poor darling. How is she? Is she thin? Does she look well? These modern girls-I've told her time and again that she must get out of doors-I walk in the Park every day-and look at me. She sent me a picture-I have it here somewhere; at least I think I have-and she doesn't look a bit well, undernourished. Those synthetic foods-"

"She doesn't eat synthetic foods, Mrs. Appleby."

"-must be quite impossible, I'm sure, not to mention the taste. What were you saying?'

"Your daughter doesn't live on synthetic foods," Allan repeated. "Fresh fruits and vegetables are one thing we have almost too much of in Luna City. The air-conditioning plant, you know."

"That's just what I was saying. I confess I don't see just how you get food out of air-conditioning machinery on the Moon-"

"In the Moon, Mrs. Appleby."

"-but it can't be healthy. Our air-conditioner at home is always breaking down and making the most horrible smells - simply unbearable, my dears-you'd think they could build a simple little thing like an air-conditioner so that-though of course if you expect them to manufacture synthetic foods as well-" "Mm. Appleby-"

"Yes, Doctor? What were you saying? Don't let me-"

"Mrs. Appleby," MacRae said desperately, "the airconditioning plant in Luna City is a hydroponic farm, tanks of growing plants, green things. The plants take the carbon dioxide out of the air and put oxygen back in."

"But- Are you quite sure, Doctor? I'm sure Emma said-"

"Quite sure."

"Well . . . I don't pretend to understand these things, I'm the artistic type. Poor Herbert often said-Herbert was Emma's father; simply wrapped up in his engineering though I always saw to it that he heard good music and saw the reviews of the best books. Emma takes after her father, I'm afraid-I do wish she would give up that silly work she is in. Hardly the sort of work for a woman, do you think, Mrs. MacRae? All those atoms and neuters and things floating around in the air. I read all about it in the Science Made Simple column in the-"

"She's quite good at it and she seems to like it."

"Well, yes, I suppose. That's the important thing, to be happy at what you are doing no matter how silly it is. But I worry about the child-buried away from civilization, no one of her own sort to talk to, no theaters, no cultural life, no society-"

"Luna City has stereo transcriptions of every successful Broadway play." Jo's voice had a slight edge.

"Oh! Really? But it's not just going to the theater, my dear; it's the society of gentlefolk. Now when I was a girl, my parents-"

Allan butted in, loudly. "One o'clock. Have you had lunch, my dear?'

Mrs. Appleby sat up with a jerk. "Oh, heavenly days - I simply must fly. My dress designer-such a tyrant, but a genius; I must give you her address. It's been charming, my dears, and I can't thank you too much for telling me all about my poor darling. I do wish she would be sensible like you two; she knows I'm always ready to make a home for her-and her husband, for that matter. Now do come and see me, often. I love to talk to people who've been on the Moon-"

"In the Moon."

"It makes me feel closer to my darling. Good-by, then."

With the door locked behind her, Jo said, "Allan, I need a drink."

"I'll join you."

Jo cut her shopping short; it was too tiring. By four o'clock they were driving in Central Park, enjoying fall scenery to the lazy clop-clop of home's hoofs. The helicopters, the pigeons, the streak in the sky where the Antipodes rocket had passed, made a scene idyllic in beauty and serenity. Jo swallowed a lump in her throat and whispered, "Allan, isn't it beautiful?"

"Sure is. It's great to be back. Say, did you notice they've torn up 42nd Street again?"

Back in their room, Jo collapsed on her bed, while Allan took off his shoes. He sat, rubbing his feet, and remarked, "I'm going barefooted all evening. Golly, how my feet hurt!"

"So do mine. But we're going to your father's, my sweet."

"Huh? Oh, damn, I forgot. Jo, whatever possessed you? Call him up and postpone it. We're still half dead from the trip."

"But, Allan, he's invited a lot of your friends."

"Balls of fire and cold mush! I haven't any real friends in New York. Make it next week."

"'Next week' . . . hmm . . . look, Allan, let's go out to the country right away." Jo's parents had left her a tiny place in Connecticut, a worn-out farm.

"I thought you wanted a couple of weeks of plays and music first. Why the sudden change?"

"I'll show you." She went to the window, open since noon. "Look at that window sill." She drew their initials in the grime. "Allan, this city is filthy."

"You can't expect ten million people not to kick up dust."

"But we're breathing that stuff into our lungs. What's happened to the smog-control laws?'

"That's not smog; that's normal city dirt."

"Luna City was never like this. I could wear a white outfit there till I got tired of it. One wouldn't last a day here."

"Manhattan doesn't have a roof-and precipitrons in every air duct."

"Well, it should have. I either freeze or suffocate."

"I thought you were anxious to feel rain on your face?'

"Don't be tiresome. I want it out in the clean, green country."

"Okay. I want to start my book anyhow. I'll call your real estate agent."

"I called him this morning. We can move in anytime; he started fixing up the place when he got my letter."

It was a stand-up supper at his father's home though Jo sat down at once and let food be fetched. Allan wanted to sit down, but his status as guest of honor forced him to stay on his aching feet. His father buttonholed him at the buffet. "Here, son, try this goose liver. It ought to go well after a diet of green cheese."

Allan agreed that it was good.

"See here, son, you really ought to tell these folks about your trip."

"No speeches, Dad. Let 'em read the National Geographic."

"Nonsense!" He turned around. "Quiet, everybody! Allan is going to tell us how the Lunatics live."

Allan bit his lip. To be sure, the citizens of Luna City used the term to each other, but it did not sound the same here. "Well, really, I haven't anything to say. Go on and eat."

"You talk and we'll eat." "Tell us about Looney City." "Did you see the Man-in-the-Moon?" "Go on, Allan, what's it like to live on the Moon?"

"Not 'on the Moon'-in the Moon."

"What's the difference?"

"Why, none, I guess." He hesitated; there was really no way to explain why the Moon colonists emphasized that they lived under the surface of the satellite planet-but it irritated him the way "Frisco" irritates a San Franciscan. "'In the Moon' is the way we say it. We don't spend much time on the surface, except for the staff at Richardson Observatory, and the prospectors, and so forth. The living quarters are underground, naturally."

"Why 'naturally'? Afraid of meteors?"

"No more than you are afraid of lightning. We go underground for insulation against heat and cold and as support for pressure sealing. Both are cheaper and easier underground. The soil is easy to work and the interstices act like vacuum in a thermos bottle. It is vacuum."

"But Mr. MacRae," a serious-looking lady inquired, "doesn't it hurt your ears to live under pressure?'

Allan fanned the air. "It's the same pressure here-fifteen pounds."

She looked puzzled, then said, "Yes, I suppose so, but it is a little hard to imagine. I think it would terrify me to be sealed up in a cave. Suppose you had a blow-out?"

"Holding fifteen pounds pressure is no problem; engineers work in thousands of pounds per square inch. Anyhow, Luna City is compartmented like a ship. It's safe enough. The Dutch live behind dikes; down in Mississippi they have levees. Subways, ocean liners, aircraft-they're all artificial ways of living. Luna City seems strange just because it's far away."

She shivered. "It scares me."

A pretentious little man pushed his way forward. "Mr. MacRae-granted that it is nice for science and all that, why should taxpayers' money be wasted on a colony on the Moon?"

"You seem to have answered yourself," Allan told him slowly.

"Then how do you justify it? Tell me that, sir."

"It isn't necessary to justify it; the Lunar colony has paid for itself several times over. The Lunar corporations are all paying propositions. Artemis Mines, Spaceways, Spaceways Provisioning Corporation, Diana Recreations, Electronics Research Company, Lunar Biological Labs, not to mention all of Rutherford - look 'em up. I'll admit the Cosmic Research Project nicks the taxpayer a little, since it's a joint enterprise of the Harriman Foundation and the government."

"Then you admit it. It's the principle of the thing."

Allan's feet were hurting him very badly indeed. "What principle? Historically, research has always paid off." He turned his back and looked for some more goose liver.

A man touched him on the arm; Allan recognized an old schoolmate. "Allan, old boy, congratulations on the way you ticked off old Beetle. He's been needing it-I think he's some sort of a radical."

Allan grinned. "I shouldn't have lost my temper."

"A good job you did. Say, Allan, I'm going to take a couple of out-of-town buyers around to the hot spots tomorrow night. Come along."

"Thanks a lot, but we're going out in the country."

"Oh, you can't afford to miss this party. After all, you've been buried on the Moon; you owe yourself some relaxation after that deadly monotony."

Allan felt his cheeks getting warm. "Thanks just the same, but-ever seen the Earth View Room in Hotel Moon Haven?'

"No. Plan to take the trip when I've made my pile, of course."'

"Well, there's a night club for you. Ever see a dancer leap thirty feet into the air and do slow rolls, on the way down? Ever try a lunacy cocktail? Ever see a juggler work in low gravity?" Jo caught his eye across the room. "Er . . . excuse me, old man. My wife wants me." He turned away, then flung back over his shoulder, "Moon Haven itself isn't just a spaceman's dive, by the way-it's recommended by the Duncan Hines Association."

Jo was very pale. "Darling, you've got to get me out of here. I'm suffocating. I'm really ill."

"Suits." They made their excuses.

Jo woke up with a stuffy cold, so they took a cab directly to her country place. There were low-lying clouds under them, but the weather was fine above. The sunshine and the drowsy beat of the rotors regained for them the joy of homecoming,

Allan broke the lazy reverie. "Here's a funny thing, Jo. You couldn't hire me to go back to the Moon-but last night I found myself defending the Loonies every time I opened my mouth."

She nodded. "I know. Honest to Heaven, Allan, some people act as if the Earth were flat. Some of them don't really believe in anything, and some of them are so matter-of-fact that you know they don't really understand-and I don't know which sort annoys me the more."

It was foggy when they landed, but the house was clean, the agent had laid a fire and had stocked the refrigerator. They were sipping hot punch and baking the weariness out of their bones' within ten minutes after the copter grounded. "This," said Allan, stretching, "is all right. It really is great to be back."

"Uh-huh. All except the highway." A new express and freight superhighway now ran not fifty yards from the house. They could hear the big diesels growling as they struck the grade.

"Forget the highway. Turn your back and you stare straight into the woods."

They regained their ground-legs well enough to enjoy short walks in the woods; they were favored with a long, warm Indian summer; the cleaning woman was efficient and taciturn. Allan worked on the results of three years research preparatory to starting his book. Jo helped him with the statistical work, got reacquainted with the delights of cooking, dreamed, and rested.

It was the day of the first frost that the toilet stopped up.

The village plumber was persuaded to show up the next day. Meanwhile they resorted to a homely little building, left over from another era and still standing out beyond the woodpile. It was spider-infested and entirely too well ventilated.

The plumber was not encouraging. "New septic tank. New sewer pipe. Pay you to get new fixtures at the same time. Fifteen, sixteen hundred dollars. Have to do some calculating."

"That's all right," Allan told him. "Can you start today?'

The man laughed. "I can see plainly, Mister, that you don't know what it is to get materials and labor these days. Next spring--soon as the frost is out of the ground."

"That's impossible, man. Never mind the cost. Get it done."

The native shrugged. "Sorry not to oblige you. Good day." When he left, Jo exploded. "Allan, he doesn't want to help us."

"Well-maybe. I'll try to get someone from Norwalk, or even from the City. You can't trudge through the snow out to that Iron Maiden all winter."

"I hope not."

"You must not. You've already had one cold." He stared morosely at the fire. "I suppose I brought it on by my misplaced sense of humor."

"How?"

"Well, you know how we've been subjected to steady kidding ever since it got noised around that we were colonials. I haven't minded much, but some of it rankled. You remember I went into the village by myself last Saturday?"

"Yes. What happened?"

"They started in on me in the barbershop. I let it ride at first, then the worm turned. I started talking about the Moon, sheer double-talk--corny old stuff like the vacuum worms and the petrified air. It was some time before they realized I was ribbing them-and when they did, nobody laughed. Our friend the rustic sanitary engineer was one of the group. I'm sorry."

"Don't be." She kissed him. "If I have to tramp through the snow, it will cheer me that you gave them back some of their sass."

The plumber from Norwalk was more helpful, but rain, and then sleet, slowed down the work. They both caught colds. On the ninth miserable day Allan was working at his desk when he heard Jo come in the back door, returning from a shopping trip. He

turned back to his work, then presently became aware that she had not come in to say "hello." He went to investigate.

He found her collapsed on a kitchen chair, crying quietly. "Darling," he said urgently, "honey baby, whatever is the matter?"

She looked up. "I didn't bead to led you doe."

"Blow your nose. Then wipe your eyes. What do you mean, 'you didn't mean to let me know'. What happened?"

She let it out, punctuated with her handkerchief. First, the grocer had said he had no cleansing tissues; then, when she pointed to them, had stated that they were "sold". Finally, he had mentioned "bringing outside labor into town and taking the bread out of the mouths of honest folk".

Jo had blown up and had rehashed the incident of Allan and the barbershop wits. The grocer had simply grown more stiff. "'Lady,' he said to me, 'I don't know whether you and your husband have been to the Moon or not, and I don't care. I don't take much stock in such things. In any case, I don't need your trade.' Oh, Allan, I'm so unhappy."

"Not as unhappy as he's going to be! Where's my hat?"

"Allan! You're not leaving this house. I won't have you fighting."

"I won't have him bullying you."

"He won't again. Oh my dear, I've tried so hard, but I can't stay here any longer. It's not just the villagers; it's the cold and the cockroaches and always having, a runny nose. I'm tired out and my feet hurt all the time." She started to cry again.

"There, there! We'll leave, honey. We'll go to Florida. I'll finish my book while you lie in the sun."

"Oh, I don't want to go to Florida. I want to go home."

"Huh? You mean-back to Luna City?"

"Yes. Oh, dearest, I know you don't want to, but I can't stand it any longer. It's not just the dirt and the cold and the comic-strip plumbing-it's not being understood. It wasn't any better in New York. These groundhogs don't know anything."

He grinned at her. "Keep sending, kid; I'm on your frequency."

"Allan!"

He nodded. "I found out I was a Loony at heart quite a while ago-but I was afraid to tell you. My feet hurt, too- and I'm damn sick of being treated like a freak. I've tried to be tolerant, but I can't stand groundhogs. I miss the folks in dear old Luna. They're civilized."

She nodded. "I guess it's prejudice, but I feel the same way."

"It's not prejudice. Let's be honest. What does it take to get to Lana City?"

"A ticket."

"Smarty pants. I don't mean as a tourist; I mean to get a job there. You know the answer: Intelligence. It costs a lot to send a man to the Moon and more to keep him there. To pay off, he has to be worth a lot. High I.Q., good compatibility index, superior education-everything that makes a person pleasant and easy and interesting to have around. We've been spoiled; the ordinary human cussedness that groundhogs take for granted, we now find intolerable, because Loonies are different. The fact that Luna City is the most comfortable environment man ever built for himself is beside the point-it's the people who count. Let's go home."

He went to the telephone-an old-fashioned, speech-only rig-and called the Foundation's New York office. While he was waiting, truncheon-like "receiver" to his ear, she said, "Suppose they won't have us?"

"That's what worries me." They knew that the Lunar companies rarely rehired personnel who had once quit; the physical examination was reputed to be much harder the second time.

"Hello . . . hello. Foundation? May I speak to the recruiting office? . . . hello-I can't turn on my view plate; this instrument is a hangover from the dark ages. This is Allan MacRae, physical chemist, contract number 1340729. And my wife, Josephine MacRae, 1340730. We want to sign up again. I said we wanted to sign up again . . . okay, I'll wait."

"Pray, darling, pray!"

"I'm praying- How's that! My appointment's still vacant? Fine, fine! How about my wife?" He listened with a worried look; Jo held her breath. Then he cupped the speaker. "Hey, Jo-your job's filled. They want to know if you'll take an interim job as a junior accountant?"

"Tell 'em 'yes!'"

"That'll be fine. When can we take our exams? That's fine, thanks. Good-by." He hung up and turned to his wife. "Physical and psycho as soon as we like; professional exams waived."

"What are we waiting for?"

"Nothing." He dialed the Norwalk Copter Service. "Can you run us into Manhattan? Well, good grief, don't you have radar? All right, all right, g'by!" He snorted. "Cabs all grounded by the weather. I'll call New York and try to get a modern cab."

Ninety minutes later they landed on top of Harriman Tower.

The psychologist was very cordial. "Might as well get this over before you have your chests thumped. Sit down. Tell me about yourselves." He drew them out, nodding from time to time. "I see. Did you ever get the plumbing repaired?"

"Well, it was being fixed."

"I can sympathize with your foot trouble, Mrs. MacRae; my arches always bother me here. That's your real reason, isn't it?"

"Oh, no!"

"Now, Mrs. MacRae-"

"Really it's not---truly. I want people to talk to who know what I mean. All that's really wrong with me is that I'm homesick for my own sort. I want to go home-and I've got to have this job to get there. - I'll steady down, I know I will."

The doctor looked grave. "How about you, Mr. MacRae?"

"Well-it's about the same story. I've been trying to write a book, but I can't work. I'm homesick. I want to go back."

Feldman suddenly smiled. "It won't be too difficult."

"You mean we're in? If we pass the physical?"

"Never mind the physical-your discharge examinations are recent enough. Of course you'll have to go out to Arizona for reconditioning and quarantine. You're probably wondering why it seems so easy when it is supposed to be so hard. It's really simple: We don't want people lured back by the high pay. We do want people who will be happy and as permanent as possible-in short, we want people who think of Luna City

as 'home.' Now that you're 'Moonstruck,' we want you back." He stood up and shoved out his hand.

Back in the Commodore that night, Jo was struck by a thought. "Allan-do you suppose we could get our own apartment back?"

"Why, I don't know. We could send old lady Stone a radio."

"Call her up instead, Allan. We can afford it."

"All right! I will!"

It took about ten minutes to get the circuit through. Miss Stone's face looked a trifle less grim when she recognized them.

"Miss Stone, we're coming home!"

There was the usual three-second lag, then-"Yes, I know. It came over the tape about twenty minutes ago."

"Oh. Say, Miss Stone, is our old apartment vacant?" They waited.

"I've held it; I knew you'd come back-after a bit. Welcome home, Loonies."

When the screen cleared, Jo said, "What did she mean, Allan?"

"Looks like we're in, kid. Members of the Lodge."

"I guess so-oh, Allan, look!" She had stepped to the window; scudding clouds had just uncovered the Moon. It was three days old and Mare Fecunditatis-the roll of hair at the back of the Lady-in-the-Moon's head-was cleared by the Sunrise line. Near the right-hand edge of that great, dark "sea" was a tiny spot, visible only to their inner eyes-Luna City.

The crescent hung, serene and silvery, over the tall buildings. "Darling, isn't it beautiful?"

"Certainly is. It'll be great to be back. Don't get your nose all runny."

A Comedy of Justice
Robert A. Heinlein
Copyright 1984

Behold, happy is the man whom God correcteth:
Therefore despise not thou the chastening of
The Almighty.
Job 5:17

Chapter 1

When thou walkest through the fire,
thou shalt not be burned.
Isaiah 43:2

THE FIRE pit was about twenty-five feet long by ten feet wide, and perhaps two feet deep. The fire had been burning for hours. The bed of coals gave off a blast of heat almost unbearable even back where I was seated, fifteen feet from the side of the pit, in the second row of tourists.

I had given up my front-row seat to one of the ladies from the ship, delighted to accept the shielding offered by her well-fed carcass. I was tempted to move still farther back... but I did want to see the fire walkers close up. How often does one get to view a miracle?

'It's a hoax,' the Well-Traveled Man said. 'You'll see.'

'Not really a hoax, Gerald,' the Authority-on-Everything denied. 'Just somewhat less than we were led to expect. It won't be the whole village - probably none of the hula dancers and certainly not those children. One or two of the young men, with calluses on their feet as thick as cowhide, and hopped up on opium or some native drug, will go down the pit at a dead run. The villagers will cheer and our kanaka friend there who is translating for us will strongly suggest that we should tip each of the fire walkers, over and above what we've paid for the luau and the dancing and this show.

'Not a complete hoax,' he went on. 'The shore excursion brochure listed a "demonstration of fire walking". That's what we'll get. Never mind the talk about a whole village of fire walkers. Not in the contract. 'The Authority looked smug.

'Mass hypnosis,' the Professional Bore announced.

I was tempted to ask for an explanation of 'mass hypnosis'- but nobody wanted to hear from me; I was junior - not necessarily in years but in the cruise ship Konge Knut. That's how it is in cruise ships: Anyone who has been in the vessel since port of departure is senior to, anyone who joins the ship later. The Medes and the Persians laid down this law and nothing can change it. I had flown down in the Count Von Zeppelin, at Papeete I

would fly home in the Admiral Moffett, so I was forever junior and should keep quiet while my betters pontificated'.

Cruise ships have the best food and, all too often, the worst conversation in the world. Despite this I was enjoying the islands; even the Mystic and the Amateur Astrologer and the Parlor Freudian and the Numerologist did not trouble me, as I did not listen.

'They do it through the fourth dimension,' the Mystic announced. 'Isn't that true, Gwendolyn!'

'Quite true, dear,' the Numerologist agreed. 'Oh, here they come now! It will be an odd number, you'll see.'

'You're so learned, dear.'

'Humph,' said the Skeptic.

The native who was assisting our ship's excursion host raised his arms and spread his palms for silence. 'Please, will you all listen! Mauruuru roa. Thank you very much. The high priest and priestess will now pray the Gods to make the fire safe for the villagers. I ask you to remember that this is a religious ceremony, very ancient; please behave as you would in your own church. Because -'

An extremely old kanaka interrupted; he and the translator exchanged words in a language not known to me Polynesian, I assumed; it had the right liquid flow to it. The younger kanaka turned back to us.

'The high priest tells me that some of the children are making their first walk through fire today, including that baby over there in her mother's arms. He asks all of you to keep perfectly silent during the prayers, to insure the safety of the children. Let me add that I am a Catholic. At this point I always ask our Holy Mother Mary to watch over our children - and I ask all of you to pray for them in your own way. Or at least keep silent and think good thoughts for them. If the high priest is not satisfied that there is a reverent attitude, he won't let the children enter the fire - I've even known him to cancel the entire ceremony.

'There you have it, Gerald,' said the Authority-on-Everything in a third-balcony whisper. 'The build-up. Now the switch, and they'll blame it on us.' He snorted.

The Authority - his name was Cheevers - had been annoying me ever since I had joined the ship. I leaned forward and said quietly into his ear, 'If those children walk through the fire, do you have the guts to do likewise?'

Let this be a lesson to you. Learn by my bad example. Never let an oaf cause you to lose your judgement. Some seconds later I found that my challenge had been turned against me and. -somehow! - all three, the Authority, the Skeptic, and the Well-Traveled Man,

had each bet me a hundred that I would not dare walk the fire pit, stipulating that the children walked first.

Then the translator was shushing us again and the priest and priestess stepped down into the fire pit and everybody kept very quiet and I suppose some of us prayed. I know I did. I found myself reciting what popped into my mind:

'Now I lay me down to sleep.
I pray the Lord my soul to keep-'

Somehow it seemed appropriate.

The priest and the priestess did not walk through the fire; they did-something quietly more spectacular and (it seemed to me) far more dangerous. They simply stood in the fire pit, barefooted, and prayed for several minutes. I could see their lips move. Every so often the old priest sprinkled something into the pit. Whatever it was, as it struck the coals it burst into sparkles.

I tried to see what they were standing on, coals or rocks, but I could not tell... and could not guess which would be worse. Yet this old woman, skinny as gnawed bones, stood there quietly, face placid, and with no precautions other than having tucked up her lava-lava so that it was almost a diaper. Apparently she fretted about burning her clothes but not about burning her legs.

Three men with poles had been straightening out the burning logs, making sure that the bed of the pit was a firm and fairly even footing for the fire walkers. I took a deep interest in this, as I expected to be walking in. that pit in a few minutes - if I didn't cave in and forfeit the bet. It seemed to me that they were making it possible to walk the length of the fire pit on rocks rather than burning coals. I hoped so!

Then I wondered what difference it would make recalling sun-scorched sidewalks that had blistered my bare feet when I was a boy in Kansas. That fire had to be at least seven hundred degrees; those rocks had been soaking in that fire for several hours. At such temperatures was there any real choice between frying pan and fire?

I Meanwhile the voice of reason was whispering in my ear that forfeiting three hundred was not much of a price to pay to get out of this bind... or would I rather walk the rest of my life on two barbecued stumps?

Would it help if I took an aspirin?

The three men finished fiddling with the burning logs and went to the end of the pit at our left; the rest of the villagers gathered behind them - including those darned kids! What were their parents thinking about, letting them risk something like this? Why weren't they in school where they belonged?

The three fire tenders led off, walking single file down the center of the fire, not hurrying, not dallying. The rest of the men of the village followed them, a* slow, steady procession. Then came the women, including the young mother with a baby on her hip.

When the blast of heat struck the infant, it started to cry. Without varying her steady pace, its mother swung it up and gave it suck; the baby shut up.

The children followed, from pubescent girls and adolescent boys down to the kindergarten level. Last was a little girl (nine? eight?) who was leading her round-eyed little, brother by, the hand. He seemed to be about four and was dressed only in his skin.

I looked at this kid and knew with mournful certainty that I was about to be served up rare; I could no longer back out. Once the baby boy stumbled; his sister kept him from falling. He went on then, short sturdy steps. At the far end someone reached down and lifted him out.

And it was my turn.

The translator said to me, 'You understand that the Polynesia Tourist Bureau takes no responsibility for your safety? That fire can burn you, it can kill you. These people can walk it safely because they have faith.'

I assured him that I had faith, while wondering how I could be such a barefaced liar. I signed a release he presented.

All too soon I was standing at one end of the pit, with my trousers rolled up to my knees. My shoes and socks and hat and wallet were at the far end, waiting on a stool. That was my goal, my prize - if I didn't make it, would they cast lots for them? Or would they ship them to my next of kin?

He was saying: 'Go right down the middle. Don't hurry but don't stand still.' The high priest spoke up; my mentor listened, then said, 'He says not to run, even if your feet burn. Because you might stumble and fall down. Then you might never get up. He means you might die. I must add that you probably would not die - unless you breathed flame. But you would certainly be terribly burned. So don't hurry and don't fall down. Now see that flat rock under you? That's your first step. Que le bon Dieu vous garde. Good luck.'

'Thanks.' I glanced over at the Authority-on-Everything, who was smiling ghoulishly, if ghouls smile. I gave him a mendaciously jaunty wave and stepped down.

I had taken three steps before I realized that I didn't feel anything at all. Then I did feel something: scared. Scared silly and wishing I were in Peoria. Or even Philadelphia. Instead of alone in this vast smoldering waste. The far end of the pit was a city block away. Maybe farther. But I kept plodding toward it while hoping that this numb paralysis would not cause me to collapse before reaching it.

I felt smothered and discovered that I had been holding my breath. So I gasped - and regretted it. Over a fire pit that vast there is blistering gas and smoke and carbon dioxide and carbon monoxide and something that may be Satan's halitosis, but not enough oxygen to matter.' I chopped off that gasp with my eyes watering and my throat raw and tried to estimate whether or not I could reach the end without breathing.

Heaven help me, I could not see the far end! The smoke had billowed up and my eyes would barely open and would not focus. So I pushed on, while trying to remember the formula by which one made a deathbed confession and then slid into Heaven on a technicality.

Maybe there wasn't any such formula. My feet felt odd and my knees were becoming unglued...

'Feeling better, Mr Graham?'

I was lying on grass and looking up into a friendly, brown face. 'I guess so,' I answered. 'What happened? Did I walk it?'

'Certainly you walked it. Beautifully. But you fainted right at the end. We were standing by and grabbed you, hauled you out. But you tell me what happened. Did you get your lungs full of smoke?'

'Maybe. Am I burned?'

'No. Oh, you may form one blister on your right foot. But you held the thought perfectly. All but that faint, which must have been caused by smoke.'

'I guess so.' I sat up with his help. 'Can you hand me my shoes and socks? Where is everybody?'

'The bus left. The high priest took your pulse and checked your breathing but he wouldn't let anyone disturb you. If you force a man to wake up when his spirit is still walking about, the spirit may not come back in. So he believes and no one dares argue with him.'

'I won't argue with him; I feel fine. Rested. But how do I get back to the ship?' Five miles of tropical paradise would get tedious after the first mile. On foot. Especially as my feet seemed to have swelled a bit. For which they, had ample excuse.

'The bus will come back to take the villagers to the boat that takes them back to the island they live on. It then could take you to your ship. But we can do better. My cousin has an automobile. He wil take you.'

'Good. How much will he charge me?' Taxis in Polynesia are always outrageous, especially when the drivers have you at their mercy, of which they have none. But it

occurred to me that I could afford to be robbed as I was bound to show a profit on this jape. Three hundred minus one taxi fare. I picked up my hat. 'Where's my wallet?'

'Your wallet?'

'My billfold. I left it in my hat. Where is it? This isn't funny; my money was in it. And my cards.'

'Your money? Oh! Votre portefeuille. I am sorry; my English is not perfect. The officer from your ship, your excursion guide, took care of it.'

'That was kind of him. But how am I to pay your cousin? I don't have a franc on me.'

We got that straightened out. The ship's excursion escort, realising that he would be leaving me strapped in rescuing my billfold, had prepaid my ride back to the ship. My kanaka friend took me to his cousin's car and introduced me to his cousin - not too effectively, as the cousin's English was limited to 'Okay, Chief!' and I never did get his name straight.

'His automobile was a triumph of baling wire and faith. We went roaring back to the dock at full throttle, frightening chickens and easily outrunning baby goats. I did not pay much attention as I was bemused by something that had happened just before we left. The villagers were waiting for their bus to return; we walked right through them. Or started to. I got kissed. I got kissed by all of them. I had already seen the Polynesian habit of kissing where we would just shake hands, but this was the first time it had happened to me.

My friend explained it to me: 'You walked through their fire, so you are an honorary member of their village. They want to kill a pig for you. Hold a feast in your honor.'

I tried to answer in kind while explaining that I had to return home across the great water but I would return someday, God willing. Eventually we got away.

But that was not what had me most bemused. Any unbiased judge would have to admit that I am reasonably sophisticated. I am aware that some places do not have America's high moral standards and are careless about indecent exposure. I know that Polynesian women used to run around naked from the waist up until civilization came along - shucks, I read the National Geographic.

But I never expected to see it.

Before I made my fire walk the villagers were dressed just as you would expect: grass skirts but with the women's bosoms covered.

But when they kissed me hello-goodbye they were not. Not covered, I mean. Just like the National Geographic.

Now I appreciate feminine beauty. Those delightful differences, seen under proper circumstances with the shades decently drawn, can be dazzling. But forty-odd (no, even) of them are intimidating. I saw more human feminine busts than I had ever seen before, total and cumulative, in my entire life. The Methodist Episcopal Society for Temperance and Morals would have been shocked right out of their wits.

With adequate warning I am sure that I could have enjoyed the experience. As it was, it was too new, too much, too fast. I could appreciate it only in retrospect.

Our tropical Rolls-Royce crunched to a stop with the aid of hand brake, foot brake, and first-gear compression; I looked up from bemused euphoria. My driver announced, 'Okay, Chief!'

I said, 'That's not my ship.'

'Okay, Chief?'

'You've taken me to the wrong dock. Uh, it looks like the right dock but it's the wrong ship.' Of that I was certain. M.V. Konge Knut has white sides and superstructure and a rakish false funnel. This ship was mostly red with four tall black stacks. Steam, it had to be - not a motor vessel. As well as years out of date. 'No. No!'

'Okay, Chief. Votre vapeur! Voila!'

'Non!'

'Okay, Chief.' He got out, came around and opened the door on the passenger Side, grabbed my arm, and pulled.

I'm in fairly good shape, but his arm had been toughened by swimming, climbing for coconuts, hauling in fishnets, and pulling tourists who don't want to go out of cars. I got out.

He jumped back in, called out, 'Okay, Chief! Merci bien! Au 'voir!' and was gone.

I went, Hobson's choice, up the gangway of the strange vessel to learn, if possible, what had become of the Konge Knut. As I stepped aboard, the petty officer on gangway watch saluted and said, 'Afternoon, sir. Mr Graham, Mr Nielsen left a package for you. One moment -'He lifted the lid of his watch desk, took out a large manila envelope. 'Here you are, sir.'

The package had written on it: A. L. Graham, cabin C109. I opened it, found a well-worn wallet.

'Is everything in order, Mr Graham?'

'Yes, thank you. Will you tell Mr Nielsen that I received it? And give him my thanks.'

'Certainly, sir.'

I noted that this was D deck, went up one flight to find cabin C109.

All was not quite in order. My name is not 'Graham'.

Chapter 2

The thing that hath been, it is that which
shall be, and that which is done is that
which shall be done, and there is
no new thing under the sun.
Ecclesiastes 1:9

THANK HEAVEN ships use a consistent numbering system. Stateroom C109 was where it should be: on C deck, starboard side forward, between C107 and C111; I reached it without having to speak to anyone. I tried the door; it was locked - Mr Graham apparently believed the warnings pursers give about locking doors, especially in port.

The key, I thought glumly, is in Mr Graham's pants pocket. But where is Mr Graham? About to catch me snooping at his door? Or is the trying my door while I am trying his door?

There is a small but not zero chance that a given key will fit a strange lock. I had in my own pocket my room key from the Konge Knut. I tried it.

Well, it was worth trying. I stood there, wondering whether to sneeze or drop dead, when I heard a sweet voice behind me:

'Oh, Mr Graham!'

A young and pretty woman in a maid's costume - Correction: stewardess' uniform. She came bustling toward me, took a pass key that was chained to her belt, opened C109, while saying, 'Margrethe asked me to watch for you. She told me that you had left your cabin key on your desk. She let it stay but told me to watch for you and let you in.'

'That's most kind, of you, Miss, uh-'

'I'm Astrid. I have the matching rooms on the port side, so Marga and I cover for each other. She's gone ashore this afternoon.' She held the door for me. 'Will that be all, sir?'

I thanked her, she left. I latched and bolted the door, collapsed in a chair and gave way to the shakes.

Ten minutes later I stood up, went into the bathroom, put cold water on my face and eyes. I had not solved anything and had not wholly calmed down, but my nerves were no longer snapping like a flag in a high wind. I had been holding myself in ever since I had begun to suspect that something was seriously wrong, which was - when? When nothing seemed quite right at the fire pit? Later? Well, with utter certainty when I saw one 20,000-ton ship substituted for another.

My father used to tell me, 'Alex, there is nothing wrong with being scared... as long as you don't let it affect you until the danger is over. Being hysterical is okay, too... afterwards and in private. Tears are not unmanly... in the bathroom with the door locked. The difference between a coward and a brave man is mostly a matter of timing.'

I'm not the man my father was but I try to follow his advice. If you can learn not to jump when the firecracker goes off - or whatever the surprise is - you stand a good chance of being able to hang tight until the emergency is over.

This emergency was not over but I had benefited by the catharsis of a good case of shakes. Now I could take stock.

Hypotheses:

a) Something preposterous has happened to the world around me, or

b) Something preposterous has happened to Alex Hergensheimer's mind; he should be locked up and sedated.

I could not think of a third hypothesis; those two seemed to cover all bases. The second hypothesis I need not waste time on. If, I were raising snakes in my hat, eventually other people would notice and come around with a straitjacket and put me in a nice padded room.

So let's assume that I am sane (or nearly so; being a little bit crazy is helpful). If I am okay, then the world is .out of joint. Let's take stock.

That wallet. Not mine. Most wallets are generally similar to each other and this one was much like mine. But carry a wallet for a few years and it fits you; it is distinctly yours. I had known at once that this one was not mine. But I did not want to say so to a ship's petty officer who insisted on, 'recognizing' me as 'Mr Graham'.

I took out Graham's wallet and opened it.

Several hundred francs - count it later.

Eighty-five dollars in paper - legal tender of 'The United States of North America'.

A driver's license issued to A. L. Graham.

There were more items but I came across a window occupied by a typed notice, one that stopped me cold:

Anyone finding this wallet may keep any money in it as a reward if he will be so kind as to return the wallet to A. L. Graham, cabin C109, S.S. KONGE KNUT, Danish American Line, or to any purser or agent of the line. Thank you. A.L.G.

So now I knew what had happened to the Konge Knut; she had undergone a sea change.

Or had I? Was there truly a changed world and therefore a changed ship? Or were there two worlds and had I somehow walked through fire into the second one? Were there indeed two men and had they swapped destinies? Or had Alex Hergensheimer metamorphized into Alec Graham while M. V. Konge Knut changed into S. S. Konge Knut? (While the North American Union melted into the United States of North America?)

Good questions. I'm glad you brought them up. Now, class, are there any more questions

When I was in middle school there was a spate of magazines publishing fantastic, stories, not alone ghost stories but weird yarns of every sort. Magic ships plying the ether to, other stars. Strange inventions. Trips to the centre of the earth. Other 'dimensions'. Flying machines. Power from burning atoms. Monsters created in secret laboratories.

I used to buy them and hide them inside copies of Youth's Companion and of Young Crusaders knowing instinctively that my parents would disapprove and confiscate. I loved them and so did my outlaw chum Bert.

It couldn't last. First there was an editorial in Youth's Companion: 'Poison to the Soul - Stamp it Out!' Then our pastor, Brother Draper, preached a sermon against such mind-corrupting trash, with comparisons to the evil effects of cigarettes and booze. Then our state outlawed such publications under the 'standards of the community' doctrine even before passage of the national law and the parallel executive order.

And a cache I had hidden 'perfectly' in our attic disappeared. Worse, the works of Mr H. G. Wells and M. Jules Verne and some others were taken out of our public library.

You have to admire the motives of our spiritual leaders and elected officials in seeking to protect the minds of the young. As Brother Draper pointed out, there are enough exciting and adventurous stories in the Good Book to satisfy the needs of every boy and girl in the world; there was simply no need for profane literature. He was not urging censorship of books for adults, just for the impressionable young. If persons of mature years wanted to

read such fantastic trash, suffer them to do so - although he, for one, could not see why any grown man would want to.

I guess I was one of the 'impressionable young' - I still miss them.

I remember particularly one by Mr Wells: Men Like Gods. These people were driving along in an automobile when an explosion happens and they find themselves in another world, much like their own but better. They meet the people who live there and there is explanation about parallel universes and the fourth dimension and such.

That was the first installment. The Protect-Our-Youth state law was passed right after that, so I never saw the later installments.

One of my English professors who was bluntly opposed to censorship once said that Mr Wells had invented every one of the basic fantastic themes, and he cited this story as the origin of the multiple-universes concept. I was intending to ask this prof if he knew where I could find a copy, but I put it off to the end of the term when I would be legally 'of mature years' - and waited too long; the academic senate committee on faith and morals voted against tenure for that professor, and he left abruptly without finishing the term.

Did something happen to me like that which Mr Wells described in Men Like Gods? Did Mr Wells have the holy gift of prophecy? For example, would men someday actually fly to the moon? Preposterous!

But was it more preposterous than what had happened to me?

As may be, here. I was in Konge Knut (even though she was not my, Konge Knut) and the sailing board at the gangway showed her getting underway at 6 p.m. It was already late afternoon and high time for me to decide.

What to do? I seemed to have mislaid my own ship, the Motor Vessel Konge Knut. But the crew (some of the crew) of the Steamship Konge Knut seemed ready to accept me as 'Mr Graham', passenger.

Stay aboard and try to brazen it out? What if Graham comes aboard (any minute now!) and demands to know what I am doing in his room?

Or go ashore (as I should) and go to the authorities with my problem?

Alex, the French colonial authorities will love you. No baggage, only the clothes on your back, no money, not a sou - no passport! Oh, they will love you so much they'll give you room and board for the rest of your life ... in an oubliette with a grill over the top.

There's money in that wallet.

So? Ever heard of the Eighth Commandment? That's his money.

But it stands to reason that he walked through the fire at the same time you did but on this side, this world or whatever - or his wallet would not have been waiting for you. Now he has your wallet. That's logical.

Listen, my retarded friend, do you think logic has anything to do with the predicament we are in?

Well

Speak up!

No, not really. Then how about this? Sit tight in this room. If Graham shows up before, the ship sails, you get kicked off the ship, that's sure. But you would be no worse off than you will be if you leave now. If he does not show up, then you take his place at least as far as Papeete. That's a big city; your chances of coping with the situation are far better there. Consuls and such.

You talked me into it.

Passenger ships usually publish a daily newspaper for the passengers - just a single or double sheet filled with thrilling items such as 'There will be a boat drill at ten o'clock this morning. All passengers are requested -' and 'Yesterday's mileage pool was won by Mrs Ephraim Glutz of Bethany, Iowa' and, usually, a few news items picked up by the wireless operator. I looked around for the ship's paper and for the 'Welcome Aboard!' This latter is a booklet (perhaps with another name) intended to make the passenger newly aboard sophisticated in the little world of the ship: names of the officers, times of meals, location of barber shop, laundry, dining room, gift shop (notions, magazines, toothpaste), and how to place a morning call, plan of the ship by decks, location of life preserver, how, to find your lifeboat station, where to get your table assignment-

'Table assignment'! Ouch! A passenger who has been aboard even one day does not have to ask how to find his table in the dining room. It's the little things that trip you. Well, I'd have to bull it through.

The welcome-aboard booklet was tucked into Graham's desk. I thumbed through it, with a mental note to memorize all key facts before I left this room - if I was still aboard when the ship sailed - then put it aside, as I had found the ship's newspaper:

The King's Skald it was headed and Graham, bless him, had saved all of them from the day he had boarded the ship... at Portland, Oregon, as I deduced from the place and date line of the, earliest issue. That suggested that Graham was ticketed for the entire cruise, which could be important to me. I had expected to go back as I had arrived, by airship - but, even if the dirigible liner Admiral Moffett existed in this world or dimension or whatever, I no longer had a ticket for it and no money with which to buy one. What do

these French colonials do to a tourist who has no money? Burn him at the stake? Or merely draw and quarter him? I did not want to find out. Graham's roundtrip ticket (if he had one) might keep me from having to find out.

(If he didn't show up in the next hour and have me kicked off the ship.)

I did not consider remaining in Polynesia. Being a penniless beachcomber on Bora-Bora or Moorea may have been practical a hundred years ago but today the only thing free in these islands is contagious disease.

It seemed likely that I would be just as broke and just as much a stranger in America but nevertheless I felt that I would be better off in my native land. Well, Graham's native land.

I read some of the wireless news items but could not make sense of them, so I put them aside for later study. What little I had learned from them was not comforting. I had cherished deep down an illogical hope that this would turn out to be just a silly mixup that would soon be straightened out (don't ask me how). But those news items ended all hoping.

I mean to say, what sort of world is it in which the 'President' of Germany visits London? In my world Kaiser Wilhelm IV rules the German Empire - A 'president' for Germany sounds as silly as a 'king' for America.

This might he a pleasant world... but it was not the world I was born into. Not by those weird news items.

As I put away. Graham's file of The King's Skald I noted on the top sheet today's prescribed dress for dinner: 'Formal'.

I was not surprised; the Konge Knut in her other incarnation as a motor vessel was quite formal. If the ship was underway, black tie was expected. If you didn't wear it, you were made to feel that you really ought to eat in your stateroom.

I don't own a tuxedo; our church does not encourage vanities. I had compromised by wearing a blue serge suit at dinners underway, with a white shirt and a snap-on black bow tie. Nobody said anything. It did not matter, as I was below the salt anyhow, having come aboard at Papeete.

I decided to see if Mr Graham owned a dark suit. And a black tie.

Mr Graham owned lots of clothes, far more than I did. I tried on a sports jacket; it fit me well enough.. Trousers? Length seemed okay; I was not sure about the waistband - and too shy to try on a pair and thereby risk being caught by Graham with one leg in his trousers, What does one say? Hi, there! I was just waiting for you and thought I would pass the time by trying on your pants. Not convincing.

He had not one but two tuxedos, one in conventional black and the other in dark red - I had never heard of such frippery.

But I did not find a snap-on bow tie.

He had black bow ties, several. But I have never learned how to tie a bow tie.

I took a deep breath and thought about it.

There came a knock at the door. I didn't jump out of my skin, just almost. 'Who's there!' (Honest, Mr Graham, I was just waiting for you!) -

'Stewardess, sir.'

'Oh. Come in, come in!'

I heard her try her key, then I jumped to turn back the bolt. 'Sorry. I had forgotten that I had used the dead bolt.
Do come in.'

Margrethe turned out to be about the age of Astrid, youngish, and even prettier, with flaxen hair and freckles across her nose. She spoke textbook-correct English with a charming lilt to it. She was carrying a short white jacket on a coat hanger. 'Your mess jacket, sir. Karl says the other one will be ready tomorrow.'

'Why, thank you, Margrethe! I had forgotten all about it.

I thought you might. So I came back aboard a little early - the laundry was just closing. I'm glad I did; it's much too hot for you to wear black.'

'You shouldn't have come back early; you're spoiling me.'

'I like to take good care of my guests. As you know.' She hung the jacket in the wardrobe, turned to leave. 'I'll be back to tie your tie. Six-thirty as usual, sir?'

'Six-thirty is fine. What time is it now?' (Tarnation, my watch was gone wherever Motor Vessel Konge Knut had vanished; I had not worn it ashore.)

'Almost six o'clock.' She hesitated. 'I'll lay out your clothes before I go; you don't have much time.'

'My dear girl! That's no part of your duties.'

'No, it's my pleasure.' She opened a drawer, took out a dress shirt, placed it on my/Graham's bunk. 'And you know why.' With the quick efficiency of a person who

knows exactly where everything is, she opened a ' small desk drawer that I had not touched, took out a leather case, from it laid out by the shirt a watch, a ring, and shirt studs, then inserted studs into the shirt, placed fresh underwear and black silk socks on the pillow, placed evening pumps by the chair with shoe horn tucked inside, took from the wardrobe that mess jacket, hung it and black dress trousers (braces attached) and dark red cummerbund on the front of the wardrobe. She glanced over and a fresh the layout, added a wing collar, a black tie, and a fresh handkerchief to the stack on the pillow - cast her eye over it again, placed the room key and the wallet by the ring and the watch - glanced again, nodded. 'I must run or I'll miss dinner. I'll be back for the tie.' And she was gone, not running but moving very fast.

Margrethe was so right. If she had not laid out everything, I would still be struggling to put myself together. That shirt alone would have stopped me; it was one of the dive-in-and-button-up-the-back sort. I had never worn one.

Thank heaven Graham used an ordinary brand of safety razor. By six-fifteen I had touched up my morning shave, showered (necessary!), and washed the smoke out of my hair.

His shoes fit me as if I had broken them in myself. His trousers were a bit tight in the waist - a Danish ship is no place to lose weight and I had been in the Motor Vessel Konge Knut for a fortnight. I was still struggling with that consarned backwards shirt when Margarethe let herself in with her pass key.

She came straight to me, said, 'Hold still,' and quickly buttoned the buttons I could not reach. Then she fitted that fiendish collar over its collar buttons, laid the tie around my neck. 'Turn around, please.'

Tying a bow tie properly involves magic. She knew the spell.

She helped me with the cummerband, held my jacket for me, looked me over and announced, 'You'll do. And I'm proud of you; at dinner the girls were talking about you.' I wish I had seen it. You are very brave.'

'Not brave. Foolish. I talked when I should have kept still.'

'Brave. I must go - I left Kristina guarding a cherry tart for me. But if I stay away too long someone will steal it.'

'You run along. And thank you loads'. Hurry and save that tart.'

'Aren't you going to pay me?'

'Oh. What payment would you like?'

'Don't tease me!' She moved a few inches closer, turned her face up. I don't know much about girls (who does?) but some signals are large print. I took her by her shoulders, kissed both cheeks, hesitated just long enough to be certain that she was neither displeased nor surprised, then placed one right in the middle'. Her lips were full and warm.

'Was that the payment you had in mind?'

'Yes, of course. But you can kiss better than that. You know you can.' She pouted her lower lip, then dropped her eyes.

'Brace. yourself.'

Yes, I can kiss lots better than that. Or could by the time we had used up that kiss. By letting Margrethe lead it and heartily cooperating in whatever way she seemed to think a better kiss should go I learned more about kissing in the next two minutes than I had learned in my entire life up to then.

My ears roared.

For a moment after we broke she held still in my arms and looked up at me most soberly. 'Alec,' she said softly, 'that's the best you've ever kissed me. Goodness. Now I'm going to run before I make you late for dinner.' She slipped out of my arms and left as she did everything, quickly.

I inspected myself in the mirror. No marks. A kiss that emphatic ought to leave marks.

What sort of person was this Graham? I could wear his clothes ... but could I cope with his woman? Or was she his? Who knows? - I did not. Was he a lecher, a womanizer? Or was I butting in on a perfectly nice if somewhat indiscreet romance?

How do you walk back- through a fire pit?

And did I want to?

Go aft to the main companionway, then down two decks and go aft again - that's what the ship's plans in the booklet showed.

No problem. A man at the door of the dining saloon, dressed much as I was but with a menu under his arm, had to be the head waiter, the chief dining-room steward. He confirmed it with a big professional smile. 'Good evening, Mr Graham.'

I paused. 'Good evening. What's this about a change in seating arrangements? Where am I to sit tonight?' (If you grab the bull by the horns, you at least confuse him.)

'It's not a permanent change, sir. Tomorrow you will be back at table fourteen. But tonight the Captain has asked that you sit at his table. If you will follow me, sir.'

He led me to an oversize table amidships, started to seat me on the Captain's right - and the Captain stood up and started to clap, the others at his table followed suit, and shortly everyone in the dining room (it seemed) was standing and clapping and some were cheering.

I learned two things at that dinner. First, it was clear that Graham had pulled the same silly stunt I had (but it still was not clear 'Whether there was one of us or two of us - I tabled that question).

Second, but of major importance: Do not drink ice-cold Aalborg akvavit on an empty stom`ach, especially if you were brought up White Ribbon as I was.

Chapter 3

Wine is a mocker, strong drink is raging
Proverbs 20:1

I Am not blaming Captain Hansen. I have heard that Scandinavians put ethanol into their blood as antifreeze, against their long hard winters, and consequently cannot understand people who cannot take strong drink. Besides that, nobody held my arms, nobody held my nose, nobody forced spirits down my throat. I did it myself.

Our church doesn't hold with the doctrine that the flesh is weak and therefore sin is humanly understandable and readily forgiven. Sin can be forgiven but just barely and you are surely going to catch it first. Sin should suffer.

I found out about some of that suffering. I'm told it is called a hangover.

That is what my drinking uncle called it. Uncle Ed maintained that no man can cope with temperance who has not had a full course of intemperance ... otherwise when temptation came his way, he would not know how to handle it.

Maybe I proved Uncle Ed's point. He was considered a bad influence around our house and, if he had not been Mother's brother, Dad would not have allowed him, in the house. As it was, he was never pressed to stay longer and was not urged to hurry back.

Before I even sat down at the table, the Captain offered me a glass of akvavit. The glasses used for this are not large; they are quite small - and that is the deceptive part of the danger.

The Captain had a glass like it in his hand. He looked me in the eye and said, 'To our hero! Skaal!' - threw his head back and tossed it down.

There were echoes of 'Skaal!' all around the table and everyone seemed to gulp it down just like the Captain.

So I did. I could say that being guest of honor laid certain obligations on me -'When in Rome' and all that. But the truth is I did not have the requisite strength of character to refuse. I told myself, 'One tiny glass can't hurt,' and gulped it down.

No trouble. It went down smoothly. One pleasant ice-cold swallow, then a spicy aftertaste with a hint of licorice. I did not know what I was drinking but I was not sure that it was alcoholic. It seemed not to be.

We sat down and somebody put food in front of me and the Captain's steward poured another glass of schnapps for me. I was about to start nibbling the food, Danish hors d'oeuvres and delicious - smorgasbord tidbits - when someone put a hand on my shoulder.

I looked up. The Well-Traveled Man -

With him were the Authority and the Skeptic.

Not the same names. Whoever (Whatever?) was playing games with my life had not gone that far. 'Gerald Fortescue' was now 'Jeremy Forsyth', for example. But despite slight differences I had no trouble recognizing each of them and their new names were close enough to show that someone, or something, was continuing the joke.

(Then why wasn't my new name something like 'Hergensheimer'? 'Hergensheimer' has dignity about it, a rolling grandeur. Graham is a so-so name.)

'Alec,' Mr Forsyth said, 'we misjudged you. Duncan and I and Pete are happy to admit it. Here's the three thousand we owe you, and -'He hauled his right hand out from behind his back, held up a large bottle. '- the best champagne in the ship as a mark of our esteem.'

'Steward!' said the Captain.

Shortly, the -wine steward was going around, filling glasses at our table. But before that, I found myself again standing up, making Skaal! in akvavit three times, once to each of the losers, while clutching three thousand dollars States of North America dollars). I did not have, lime then to wonder why three hundred had changed to three thousand - besides, it was not as odd as what had happened to the Konge Knut. Both of her. And my wonder circuits were overloaded anyhow.

Captain Hansen told his waitress to place chairs at the table for Forsyth and company, but all three insisted that their wives and table mates expected them to return. Nor was there room. Not that it would have mattered to Captain Hansen. He, is a Viking, half again as

big as a house; hand him a hammer and he would be mistaken for Thor - he has muscles where other men don't even have places. It is very hard to argue with him.

But he jovially agreed to compromise. They could go back to their tables and finish their dinners but first they must join him and me in pledging Shadrach, Meshach, and Abed-nego, guardian angels of our shipmate Alec. In fact the whole table must join in. 'Steward!'

So we said, 'Skaal!' three more times, while bouncing Danish antifreeze off our tonsils.

Have you kept count? That's seven, I think. You can stop counting, as that is where I lost track. I was beginning to feel a return of the numbness I had felt halfway through the fire pit.

The wine steward had completed pouring champagne, having renewed his supply at a gesture from the Captain. Then it was time to toast me again, and I returned ' the compliment to the three losers, then we all toasted Captain Hansen, and then we toasted the good ship
Konge Knut.

The Captain toasted the United States and the whole room stood and drank with him, so I felt it incumbent to answer by toasting the Danish Queen, and that got me toasted again and the Captain demanded a speech from, me. 'Tell us how it feels to be in the fiery furnace!'

I tried to refuse and there were shouts of 'Speech! Speech!' from all around me.

I stood up with some difficulty, tried to remember the speech I had made at the last foreign missions fund-raising dinner. It evaded me. Finally I said, 'Aw, shucks, it wasn't anything. Just put your ear to the ground and your shoulder to the wheel, and your eyes on the stars and you can do it too. Thank you, thank you all and next, time you must come to my house.'

They cheered and we skaaled again, I forget why, and the lady on the Captain's left got up and came around and kissed me, whereupon all the ladies at the Captain's table clustered around and kissed me. That seemed to inspire the other ladies in the room, for there was a steady procession coming up to claim a buss from me, and usually kissing the Captain while they were about it, or perhaps the other way around.

During this parade someone removed a steak from in front of me, one I had had plans for. I didn't miss it too much, because that endless orgy of osculation had me bewildered, plus bemusement much like that caused by the female villagers of the fire walk.

Much of this bemusement started when I first walked into the dining room. Let me put it this way: My fellow passengers, female, really should have been in the National Geographic.

Yes. Like that. Well, maybe not quite, but what they did wear made them look nakeder than those friendly villagers. I'm not going to describe those, 'formal evening dresses' because I'm not sure I could - and I am sure I shouldn't. But none of them covered more than twenty percent of what ladies usually keep covered at fancy evening affairs in the world I grew up in. Above the waist I mean. Their skirts, long, some clear to the, floor, were nevertheless cut or slit in most startling ways.

Some of the ladies had tops to their dresses that covered everything ... but the material was transparent as glass. Or almost.

And some of the youngest ladies, girls really, actually, did belong in the National Geographic, just like my villagers. Somehow, these younger ladies did not seem quite as immodest as their elders.

I had noticed this display almost the instant I walked in. But, I tried not to stare and the Captain and others kept me so busy at first that I really did not have time to sneak glances at the incredible exposure. But, look - when a lady comes up and puts her arms around you and insists on kissing you, it is difficult not to notice that she isn't wearing enough to ward off pneumonia. Or other chest complaints.

But I kept a tight rein on myself despite increasing dizziness and numbness.

Even bare skin did not startle me as much as bare words - language I had never heard in public in my life and extremely seldom even in private among men only. 'Men', I said, as gentlemen don't talk that way even with no ladies' present - in the world I knew.

The most* shocking thing that ever happened to me in my boyhood was one day crossing the town square, noticing a crowd on the penance side of the courthouse, joining it to see who was catching it and why... and finding my Scoutmaster in the stocks. I almost fainted.

His offence was profane language, so the sign on his chest told us. The accuser was his own wife; he did not dispute it and had thrown himself on the mercy of the court - the judge was Deacon Brumby, who didn't know the word.

Mr Kirk, my Scoutmaster, left town two weeks later and nobody ever saw him again - being exposed, in the stocks was likely to have that effect on a man. I don't know what the bad language was that Mr Kirk had used, but it couldn't have been too bad, as all Deacon Brumby could give him was one dawn-to-dusk.

That night at the Captain's table in the K6nge Knut I heard a sweet lady of the favorite-grandmother sort address her husband in a pattern of forbidden words involving blasphemy and certain criminal sensual acts. Had she spoken that way in public in my home town she would have received maximum exposure in stocks followed by being ridden out of town. (Our town did not use tar and feathers; that was regarded as brutal.)

Yet this dear lady in the ship was not even chided. Her husband simply- smiled and told her that she worried too much.

Between shocking speech, incredible immodest exposure, and effects of two sorts of strange and deceptive potions lavishly administered, I was utterly confused. A stranger in a strange land, I was overcome by customs new and shocking. But through it all I clung to the conviction that I must appear to be sophisticated, at home, unsurprised. I must not let anyone suspect that I was not Alec Graham, shipmate, but instead Alexander Hergensheimer, total stranger... or something terrible might happen.

Of course I was wrong; something terrible had already happened. I was indeed a total stranger in an utterly strange and confusing land... but I do not think, in retrospect, that I would have made my condition worse had I simply blurted out my predicament.

I would not have been believed.

How else? I had trouble believing it myself.

Captain Hansen, a hearty no-nonsense man, would have bellowed with laughter at my 'joke' and insisted on another toast. Had I persisted in my 'delusion' he would have had the ship's doctor talk to me.

Still, I got through that amazing evening easier by holding tight to the notion that I must concentrate on acting the part of Alec Graham while never letting anyone suspect that I was a changeling, a cuckoo's egg.

There had just been placed in front of me a slice of princess cake, a beautiful multilayered confection I recalled from the other Konge Knut, and a small cup of coffee, when the Captain stood up. 'Come, Alec! We go to the lounge now; the show is ready to start - but they can't start till I get there. So come on! You don't want all that sweet stuff; it's not good for you. You can have coffee in the lounge. But before that we have some man's drinks, henh? Not these joke drinks. You like Russian vodka?'

He linked his arm in mine. I discovered that I was going to the lounge. Volition did not enter into it.

That lounge show was much the mixture I had found earlier in M. V. Konge Knut - a magician who did improbable things but not as improbable as what I had done (or been done to?), a standup comedian who should have sat down, a pretty girl who sang, and dancers. The major differences were two I had already been exposed to: bare skin and bare words, and by then I was so numb from earlier shock and akvavit that these additional proofs of a different world had minimal effect.

The girl who sang just barely had clothes on and the lyrics of her songs would have caused her trouble even in the underworld of Newark, New Jersey. Or so I think; I have no direct experience with that notorious sink of iniquity. I paid more attention to her appearance, since here I need not avert my eyes; one is expected to stare at performers.

If one admits for the sake of argument that customs in dress can be wildly different without destroying the fabric of society (a possibility. I do not concede but will stipulate), then it helps, I think, if the person exhibiting this difference is young and healthy and comely.

The singer was young and healthy and comely. I felt a twinge of regret when she left the spotlight

The major event was a troupe of Tahitian dancers, and I was truly not surprised that they were costumed bare to the waist save for flowers or shell beads - by then I would have been surprised had they been otherwise. What was still surprising (although I suppose it should not have been) was the subsequent behaviour of my fellow passengers.

First the troupe, eight girls, two men, danced for us, much the same dancing that had preceded the fire walk today, much the same as I had seen when a troupe had come aboard M.V. Konge Knut in Papeete. Perhaps you know that the hula of Tahiti differs from the slow and graceful hula of the Kingdom of Hawaii by being at a much faster beat and is much more energetic. I'm no expert on the arts of the dance but at least I have seen both styles of hula in the lands where each was native.

I prefer the Hawaiian hula, which I had seen when the Count von Zeppelin had stopped at Hilo for a day on her way to Papeete. The Tahitian hula strikes me as an athletic accomplishment rather than an art form. But its very energy and speed make it still more startling in the dress or undress these native girls wore.

There was more to come. After a long dance sequence, which included paired dancing between girls and each of the two young men - in which they did things that would have been astonishing even among barnyard fowl (I kept expecting Captain Hansen to put a stop to it) - the ship's master of ceremonies or cruise director stepped forward.

'Ladeez and gentlemen,' he announced, 'and the rest of you intoxicated persons of irregular birth -' (I am forced to amend his language.) 'Most of you setters and even a few pointers have made good use of the four days our' dancers have been with us to add the Tahitian hula to your repertoire. Shortly you'll be given a chance to demonst rate what you've learned and to receive diplomas as authentic Papeete papayas. But what you don't know is that others in the good ole knutty Knut have been practicing, too. Maestro, strike up the band!'

Out from behind the lounge stage danced a dozen more hula dancers. But these girls were not Polynesian; these girls were Caucasian. They were dressed authentically, grass skirts

and necklaces, a flower in the hair, nothing else. But instead of warm brown, their skins were white; most of them were blondes, two were redheads.

It makes a difference. By then I was ready to concede' that Polynesian women were correctly and even modestly dressed in their native costume -. other places, other customs. Was not Mother Eve modest in her simplicity before the Fall?

I But white women are grossly out of place in South Seas garb.

However, this did not keep me from watching the dancing. I was amazed to see that these girls danced that fast and complex dance as well (to my untutored eye) as did the island girls. I remarked on it to the Captain. 'They learned to dance that precisely in only four days?'

He snorted. 'They practice every cruise, those who ship with us before. All have practiced at least since San Diego.'

At that point I recognized one of the dancers - Astrid, the sweet young woman who had let me into 'my' stateroom - and I then understood why they had had time and incentive to practice together: These girls were ship's crew. I looked at her - stared, in fact - with more interest. She caught my eye and smiled. Like a dolt, a bumpkin, instead of smiling back I looked away and blushed, and tried to cover my embarrassment by taking a big sip of the drink I found in my hand.

One of the kanaka dancers whirled out in front of the white girls and called one of them out for a pair dance. Heaven save me, it was Margrethe!

I choked up and could not breathe. She was the most blindingly beautiful sight I had ever seen in all my life.

'Behold, thou art fair, my, love; behold, thou art fair; thou hast doves' eyes within thy locks: thy hair is as a flock of goats, that appear from Mount Gilead.
'Thy navel is like a round goblet, which wanteth not liquor: thy belly is like a heap of wheat set about with lilies.
'Thy two breasts are like two young roes that are twins.
'Thou art all fair, MY love; there is no spot in thee.'

Chapter 4

Although affliction cometh not forth of the dust,
neither doth trouble spring out of the ground;
yet man is born unto trouble,
as the sparks fly upward.
Job 5:6-7

I SLOWLY became aware of myself and wished I had not; a most terrible nightmare was chasing me. I jammed my eyes shut against the light and tried to go back to sleep.

Native drums were beating in my head; I tried to shut them out by covering my ears.

They got louder.

I gave up, opened my eyes and lifted my head. A mistake - my stomach flipfiopped and my ears shook. My eyes would not track and those infernal drums were tearing my skull apart.

I finally got my eyes to track, although the focus was fuzzy. I looked around, found that I was in a strange room, lying on top of a bed and only half dressed.

That began to bring it back to me. A party aboard ship. Spirits. Lots of spirits. Noise. Nakedness. The Captain in a grass skirt, dancing heartily, and the orchestra keeping step with him. Some of the lady passengers wearing grass skirts and some wearing even less. Rattle of bamboo, boom of drums.

Drums -

Those weren't drums in my head; that was the booming of the worst headache of my life. Why in Ned did I let them -

Never mind 'them'. You did it yourself, chum.

Yes, but -

'Yes, but.' Always 'Yes, but.' All your life it's been 'Yes, but.' When are you going to straighten up and take full responsibility for your life and all that happens to you?

Yes, but this isn't my fault. I'm not A. L. Graham. That isn't my name. This isn't my ship.

It isn't? You're not?

Of course not -

I sat up to Shake off this bad dream. Sitting up was a mistake; my head did not fall off but a stabbing pain at the base of my neck added itself to the throbbing inside my skull. I was wearing black dress trousers and apparently nothing else and I was in a strange room that was rolling slowly.

Graham's trousers. Graham's room. And that long, slow roll was that of a ship with no stabilizers.

Not a dream. Or if it is, I can't shake myself out of it. My teeth itched, my feet didn't fit. Dried sweat all over me except where I was clammy. My armpits - Don't even think about armpits!

My mouth needed to have lye dumped into it.

I remembered everything now. Or almost. The fire pit. Villagers. Chickens scurrying out of the way. The ship that wasn't my ship - but was. Margrethe -

Margrethe!

'Thy two breasts are like two roes - thou art all fair, my love!'

Margrethe among the dancers, her bosom as bare as her feet. Margrethe dancing with that villainous kanaka, and shaking her -

No wonder I got drunk!

Stow it, chum! You were drunk before that. All you've got against that native lad is that it was he instead of you. You wanted to dance with her yourself. Only you can't dance.

Dancing is a snare of Satan.

And don't you wish you knew how!

'- like two roes'! Yes I do!

I heard a light tap at the door, then a rattle of keys. Margrethe stuck her head in. 'Awake? Good.' She came in, carrying a tray, closed the door, came to me. 'Drink this.'

'What is it?'

'Tomato juice, mostly. Don't argue - drink it!'

'I don't think I can.'

'Yes, you can. You must. Do it.'

I sniffed it, then I took a small sip. To my amazement it did not nauseate me. So I drank some more. After one minor quiver it went down smoothly and lay quietly inside me. Margrethe produced two pills. 'Take these. Wash them down with the rest of the tomato juice.'

'I never take medicine.'

She sighed, and said something I did not understand. Not English. Not quite. 'What did you say?'

'Just something my grandmother used to say when grandfather argued with her. Mr Graham, take those pills. They are just aspirin and you need them. If you won't cooperate, I'll stop trying to help you. I'll - I'll swap you to Astrid, that's what I'll do.'

'Don't do that.'

'I will if you keep objecting. Astrid would swap, I know she would. She likes you - she told me you were watching her dance last night.'

I accepted the pills, washed them down with the rest of the tomato juice - ice-cold and very comforting. 'I did until I spotted you. Then I watched you.'

She smiled for the first time. 'Yes? Did you like it?'

'You were beautiful.' (And your dance was obscene. Your immodest dress and your behaviour shocked me out of a year's growth. I hated it - and I wish I could see it all over again this very instant!) 'You are very graceful.'

The smile grew dimples. 'I had hoped that you would like it, sir.'

'I did. Now stop threatening me with Astrid.'

'All right. As long as you behave. Now get up and into the shower. First very hot, then very cold. Like a sauna.'

She waited. 'Up, ' I said. I'm not leaving until that shower is running and steam is pouring out.'

'I'll shower. After you leave.'

'And you'll run it lukewarm, I know. Get up, get those trousers off, get into that shower. While you're showering, I'll fetch your breakfast tray. There is just enough time before they shut down the galley to set up for lunch... so quit wasting time. Please!'

'Oh, I can't eat breakfast! Not today. No. 'Food - what a disgusting thought.

'You must eat. You drank too much last night, you know you did. If you don't eat, you will feel bad all day. Mr Graham, I've finished making up for all my other guests, so I'm off watch now. I'm fetching your tray, then I'm going to stay and see that you eat it.' She looked at me. 'I should have taken your trousers off when I put you to bed. But you were too heavy.'

'You put me to bed?'

'Ori helped me. The boy I danced with.' My face must have given me away, for she added hastily, 'Oh, I didn't let him come into your room, sir. I undressed you myself. But I did have to have help to get you up the stairs.'

'I wasn't criticizing.' (Did you go back to the party then? Was he there? Did you dance with him again? -`jealousy is cruel as the grave; the coals thereof are coals of fire -' I have no right.) 'I thank you both. I must have been a beastly nuisance.'

'Well... brave men often drink too much, after danger is over. But it's not good for you.'

'No, it's not.' I got up off the bed, went into the bathroom, said, 'I'll turn it up hot. Promise.' I closed the door and bolted it, finished undressing. (So I got so stinking, rubber-limp drunk that a native boy had to help get me to bed. Alex, you're a disgusting mess! And you haven't any right to be jealous over a nice girl. You don't own her, her behavior is not wrong by the standards of this place - wherever this place is - and all she's done is mother you and, take care of you. That does not give you a claim on her.)

I did turn it up hot, though it durn near kilt poor old Alex. But I left it hot until the nerve ends seemed cauterized - then suddenly switched it to cold, and screamed.

I let it stay cold until it no longer felt cold, then shut.It off and -dried down, having opened the door to let out the moisture-charged air. I stepped out into the room... and suddenly realized that I felt wonderful. No headache. No feeling that the world is ending at noon. No stomach queasies. Just hunger. Alex, you must never get drunk again... but if you do, you must do exactly what Margrethe tells you to. You've got a smart head on her shoulders, boy - appreciate it.

I started to whistle and opened Graham's wardrobe.

I heard a key in the door, hastily grabbed his bathrobe, managed to cover up before she got the door open. She was slow about it, being hampered by a heavy tray. When I realized this I held the door for her. She put down the tray, then arranged dishes and food on my desk.

'You were right about the sauna-type shower,' I told her. 'It was just what the doctor ordered. Or the nurse, I should say.'

'I know, it's what my grandmother used to do for my grandfather.'

'A smart woman. My, this smells good!' (Scrambled eggs, bacon, lavish amounts of Danish pastry, milk, coffee - a side dish of cheeses, fladbrod, and thin curls of ham, some tropic fruit I can't name.) 'What was that your grandmother used to say when your grandfather argued?'

'Oh, she was sometimes impatient.'

'And you never are. Tell me.'

'Well - She used to say that God created men to test the souls of women.'

'She may have a point. Do you agree with her?'

Her smile produced dimples. 'I think they have other uses as well.'

Margrethe tidied my room and cleaned my bath (okay, okay, Graham's room, Graham's bath - satisfied?) while I ate. She laid out a pair of slacks, a sport shirt in an island print, and sandals for me, then removed the tray and dishes while leaving coffee and the remaining fruit. I thanked her as she left, wondered if I should offer 'payment' and wondered, too, if she performed such valet services for other passengers. It seemed unlikely. I found I could not ask.

I bolted the door after her and proceeded to search. Graham's room.

I was wearing his clothes, sleeping in his bed, answering to his name - and now I must decide whether or not I would go whole hawg and be 'A. L. Graham'... or should I go to some authority (American consul? If not, whom?), admit the impersonation, and ask.for help?

Events were crowding me. Today's King Skald showed that S.S. Konge Knut was scheduled to dock at Papeete at 3 p.m. and sail for MazatIdn, Mexico, at 6 p.m. The purser notified all passengers wishing to change francs into dollars that a representative of the Bank of Papeete would be in the ship's square facing the purser's office from docking until fifteen minutes before sailing. The purser again wished to notify passengers that shipboard indebtedness such as bar and shop bills could be settled only in dollars, Danish crowns, or by means of validated letters of credit.

All very reasonable. And troubling. I had expected the, ship to stop at Papeete for twenty-four hours at the very least. Docking for only three hours seemed preposterous - why, they would hardly finish tying up before it would be time, to start singling up for sailing! Didn't they have to pay rent for twenty-four hours if they docked at all?

Then I reminded myself that managing the ship was not my business. Perhaps the Captain was taking advantage of a few hours between departure of one ship and arrival of another. Or there might be six other reasons. The only thing I should worry about was what I could accomplish between three and six, and' what I must accomplish between now and three.

Forty minutes of intense searching turned up the following:

Clothes, all sorts - no problem other than about five pounds at my waistline.

Money - the francs in his billfold (must change them) and the eighty-five dollars there; three thousand dollars loose in the desk drawer that held the little case for Graham's watch, ring, shirt studs, etc. Since the watch and jewelry had been returned to this case, I assumed, conclusively that Margrethe had conserved for me the proceeds of that bet that I (or Graham) had won from Forsyth and Jeeves and Henshaw. It is said that the Lord looks out for fools and drunkards; if so, in my case He operated through Margrethe.

Various impedimenta of no significance to my immediate problem - books, souvenirs, toothpaste, etc.

No passport.

When a first search failed to turn up Graham's passport, I went back and searched again. this time checking the pockets of all clothes hanging in his wardrobe as well as rechecking with care all the usual places and some unusual places that might hide a booklet the size of a passport.

No passport.

Some tourists are meticulous about keeping their passports on their persons whenever leaving a ship. I prefer not to carry my passport when I can avoid it because losing a passport is a sticky mess. I had not carried mine the day before ... so now mine was gone where the woodbine twineth, gone to Fiddler's Green, gone where Motor Vessel Konge Knut had gone. And where was that I had not had time to think about that yet; I was too busy coping with a strange new world.

If Graham had carried his passport yesterday, then it too was gone to Fiddler's Green through a crack in the fourth dimension. It was beginning to look that way.

While I fumed, someone slipped an envelope under the stateroom door.

I picked it up and opened it. Inside was the purser's billing for 'my' (Graham's) bills aboard ship. Was Graham scheduled to leave the ship at Papeete? Oh, no! If he was, I might be marooned in the islands indefinitely.

No, maybe not. This appeared to be a routine end-of-amonth billing.

The size of Graham's bar bill shocked me... until I noticed some individual items. Then I was still more shocked but for another reason. When a Coca-Cola costs two dollars it does not mean that a Coke is bigger; it means that the dollar is smaller.

I now knew why a three-hundred-dollar bet on. uh, the other side turned out to be three thousand dollars on this side.

If I was going to have to live in this world, I was going to have to readjust my thinking about all prices. Treat dollars as I would a foreign currency and convert all prices in my

head until I got used to them. For example, if these shipboard prices were representative, then a first-class dinner, steak or prime rib, in a first-class restaurant, let's say the main dining room of a hotel such as the Brown Palace or the Mark Hopkins - such a dinner could easily cost ten dollars. Whew!

With cocktails before dinner and wine with it, the tab might reach fifteen dollars! A week's wages. Thank heaven I don't drink!

You don't what?

Look - last night was a very special occasion.

So? So it was, because you lose your virginity only once. Once gone, it's gone forever. What was that you were drinking just before the lights went out? A Danish zombie? Wouldn't you like one of those about now? Just to readjust your stability?

I'll never touch one again!

See you later, chum.

Just one more chance but a good one - I hoped. The small case that Graham used for jewelry and such had in it a key, plain save for the number eighty-two stamped on its side. If fate was smiling, that was a - key to a lockbox in the purser's office.

(And if fate was sneering at me today, it was a key to a lockbox in a bank somewhere in the forty-six states, a bank I would never see. But let's not borrow trouble; I have all I need

I went down one deck and aft. 'Good morning, Purser.'

'Ah, Mr Graham! A fine party, was it not?'

'It certainly was. One more like that and I'm a corpse.'

'Oh, come now, That from a man who walks through fire. You seemed to enjoy it - and I know I did. What can we do for you, sir?'

I brought out the key I had found. 'Do I have the right key? Or does this one belong to my bank? I can never remember.'

The purser took it. 'That's one of ours. Poul! Take this and get Mr Graham's box. Mr Graham, do you want to come around behind and sit at a table?'

'Yes, thank you. Uh, do you have a sack or something that would hold the contents of a box that size? I would take it back to my desk for paper work.'

'"A sac" - Mmm... I could get one from the gift shop. But - How long do you think this desk work will take you? Can you finish it by noon?'

'Oh, certainly.'

'Then take the box itself back to your stateroom. There is a rule against it but I made the rule so we can risk breaking it. But try to be back by noon. We close from noon to thirteen - union rules - and if I have to sit here by myself with all my clerks gone to lunch, you'll have to buy me a drink.'

'I'll buy you one anyhow.'

'We'll roll for it. Here you are. Don't take it through any fires.'

Right on top was Graham's passport. A tight lump in my chest eased. I know of no more lost feeling than being outside the Union without a passport ... even though it's not truly the Union. I opened it, looked at the picture embossed inside. Do I look like that? I went into the bathroom, compared the face in the mirror' with the face in the passport.

Near enough, I guess. No one expects much of a passport picture. I tried holding the photograph up to the mirror. Suddenly it was a good resemblance. Chum, your face is lopsided... and so is yours, Mr Graham.

Brother, if I'm going to have to assume your identity permanently - and it looks more and more as if I have no choice - it's a relief to know that we look so much alike. Fingerprints? We'll cope with that when we have to. Seems the U.S. of N.A. doesn't use fingerprints on passports; that's some help. Occupation: Executive. Executive of what? A funeral parlor? Or a worldwide chain of hotels? Maybe this is not going to be difficult but merely impossible.

Address: Care of O'Hara, Rigsbee, Crumpacker, and Rigsbee, Attys at Law, Suite 7000, Smith Building, Dallas. Oh, just dandy. Merely a mail drop. No business address, no home address, no business. Why, you phony, I'd love to poke you in the snoot!

(He can't be too repulsive; Margrethe thinks well of him. Well, yes - but he should keep his hands off Margrethe; he's taking advantage of her. Unfair. Who is taking advantage of her? Watch it, boy, you'll get a split personality.)

An envelope under the passport contained the passenger's file copy of his ticket - and it was indeed round trip, Portland to Portland. Twin, unless you show up before 6 p.m., I've got a trip home. Maybe you can use my ticket in the Admiral Moffett. I wish you luck.

There were some minor items but the bulk of the metal box was occupied by ten sealed fat envelopes, business size. I opened one.

It contained thousand-dollar bills, one hundred of them.

I made a fast check with the other nine. All alike. One million dollars in cash.

Chapter 5

The wicked flee when no man pursueth:
but the righteous are bold as a lion.
Proverbs 28:1

BARELY BREATHING, I used gummed tape I found in Graham's desk to seal the envelopes. I put everything back but the passport, placed it with that three thousand that I thought of as 'mine' in the little drawer of the desk, then took the box back to the purser'~ office, carrying it carefully.

Someone else was at the front desk but the purser was in sight in his inner office; I caught his eye.

'Hi,' he called out. 'Back so soon?' He came out.

'Yes,' I agreed. 'For once, everything tallied.' I passed the box to him.

'I'd like to hire you for this office. Here, nothing ever tallies. At least not earlier than midnight. Let, s go find that drink. I need one.'

'So do I! Let's.'

The purser led me aft to an outdoor bar I had not noticed on the ship's plan. The deck above us ended and the deck we were on, D deck, continued on out as a weather deck, bright teak planks pleasant to walk on. The break on C deck formed an overhang; under it was this outdoor spread canvas. At right angles to the bar were long tables offering a lavish buffet lunch; passengers were queued up for it. Farther aft was the ship's swimming pool; I could hear splashing, squeals, and yells.

He led me on aft to a small table occupied by two junior officers. We stopped there. 'You two. Jump overboard.'

'Right away, Purser.' They stood up, picked up their beer glasses, and moved farther aft. One of them grinned at me and nodded, as if we knew each other, so I nodded and said, U.'

This table was partly shaded by awning. The purser said to me, 'Do you want to sit in the sun and watch the girls, or sit in the shade and relax?'

'Either way. Sit where you wish; I'll take the other chair.'

'Um. Let's move this table a little and both sit in the shade. There, that does it.' He sat down facing forward; perforce I sat facing the swimming pool - and confirmed something I thought I had seen at first glance: This swimming pool did not require anything as redundant as swim suits.

I should have inferred it by logic had I thought about it - but I had not. The last time I had seen it - swimming without suits - I had been about twelve and it had been strictly a male privilege for boys that age or younger.

'I said, "What will you drink, Mr Graham'

'Oh! Sorry, I wasn't listening.'

'I know. You were looking. What will it be?'

'Uh... a Danish zombie.'

He blinked at me. 'You don't want that at this time of day; that's a skull splitter. Mmm - 'He waggled his fingers at someone behind me. 'Sweetheart, come here.'

I looked up as the summoned waitress approached. I looked and then looked twice. I had seen her last through an alcoholic haze the night before, one of two redheads in the hula chorus line.

'Tell Hans I want two silver fizzes. What's your name, dear?'

'Mr Henderson, you pretend just one more time that you don't know my name and I'll pour your drink right on your bald spot.'

'Yes, dear. Now hurry up. Get those fat legs moving.'

She snorted and glided away on limbs that were slender and graceful. The purser added, 'A fine girl, that. Her parents live just across from me in Odense; I've known her since she was a baby. A smart girl, too. Bodel is studying to be a veterinary surgeon, one more year to go.'

'Really? How does she do this and go to school, too?'

'Most of our girls are at university. Some take a summer off, some take a term off - go to sea, have some fun, save up money for next term. In hiring I give preference to girls who are working their way through university; they are more dependable - and they know more languages. Take your room stewardess. Astrid?'

'No. Margrethe.'

'Oh, yes, you are in one-oh-nine; Astrid has portside forward on your deck, Margrethe is on your side. Margrethe Svensdatter Gunderson. Schoolteacher. English language and history. But knows four more languages not counting Scandinavian languages - and has certificates for two of them. On one-year leave from H. C. Andersen Middle School. I'm betting she won't go back.'

'Eh? Why?'

'She'll marry-a rich American. Are you rich?'

'Me'? Do I look rich?' (Could he possibly know what is in that lockbox? Dear God, what does one do with a million dollars that isn't yours? I can't just throw it overboard. Why would Graham be traveling with that much in cash? I could think of several reasons, all bad. Any one of them could get me in more trouble than I had ever seen.)

'Rich Americans never look it; they practice not looking rich. North Americans ' I mean; South Americans are another fish entirely. Gertrude, thank you. You are a good girl.'

'You want this drink on your bald spot?'

'You want me to throw you into the pool with your clothes on? Behave yourself, dear, or I'll tell your mother. Put them down and give me the chit.'

'No chit; Hans wanted to buy a drink for Mr Graham. So he decided to include you, this once.'

'You tell him that's the way the bar loses money. Tell him I take it out of his wages.'

That's how I happened to drink two silver fizzes instead of one... and was well on my way toward a disaster such as the night before, when Mr Henderson decided that we must eat. I wanted a third fizz. The first two had enabled me to quit worrying over that crazy box full of money while enhancing my appreciation of the poolside floor show. I was discovering that a lifetime of conditioning could wash away in only twenty-four hours. There was nothing sinful about looking at feminine loveliness unadorned. It was as sweetly innocent as looking at flowers or kittens - but far more fun.

In the meantime I wanted another drink.

Mr Henderson vetoed it, called Bodel over, spoke to her rapidly in Danish. She left, returned a few minutes later carrying a loaded tray - smorgasbord, hot meat balls, sweet pastry shells stuffed with ice cream, strong coffee, all in large quantities.

Twenty-five minutes later I still appreciated the teenagers at the pool, but I was no longer on my way to another alcoholic catastrophe. I had sobered up so much that I now realized that I not only could not solve my problems through spirits but must shun alcohol until I did solve them - as I did not know how to handle strong drink. Uncle Ed was right; vice

required training and long practice otherwise for pragmatic reasons virtue should rule even when moral instruction has ceased to bind.

My morals certainly had ceased to bind - or I could not have sat there with a glass of Devil's brew in my hand while I stared at naked female flesh.

I found that I had not even a twinge of conscience over anything. My only regret involved the sad knowledge that I could not handle the amount of alcohol I would have enjoyed. 'Easy is the descent into Hell.'

Mr Henderson stood up. 'We tie up in less than two hours and I have some figures to fudge before the agent comes aboard. Thanks for a nice time.'

'Thank you, sir! Tusind tak! Is that how you say it?'

He smiled and left. I sat there for a bit and thought. Two hours till we docked, three hours in port - what could I do with the opportunities?

Go to the American consul? Tell him what? Dear Mr Consul, I am not he whom I am presumed to be and I just happened to find this million dollars - Ridiculous!

Say nothing to anyone, grab that million, go ashore and catch the next airship for Patagonia?

Impossible. My morals had slipped - apparently they were never very strong. But I III had this prejudice against stealing. It's not only wrong; it's undignified.

Bad enough that I'm wearing his clothes.

Take the three thousand that is 'rightfully' yours, go' ashore, wait for the ship to sail, then get back to America as best you can?

Stupid ideal. You would wind up in a tropical jail and your silly gesture would not do Graham any good. It's Hobson's choice again, you knothead; you must stay aboard and wait for Graham to show up. He won't, but there might be a wireless message or something. Bite your nails until the ship sails. When it does, thank God for a trip home to God's country. While Graham does the same for his ticket home in the Admiral Moffett. I wonder how he liked being named Hergensheimer? Better than I like 'Graham' I'll bet. A proud name, Hergensheimer.

I got up, ducked around to the far side, and went up two decks to the library, found it unoccupied save for a woman, working on a crossword puzzle. Neither of us wanted to be disturbed, which made us good company. Most of the bookcases were locked, the librarian not being present, but there was a battered encyclopedia - just what I needed as a start.

Two hours later I was startled by a blast indicating that we had a line to the dock; we had arrived. I was loaded with strange history and stranger ideas and none of it digested. To start with, in this world William Jennings Bryan was never president; in I896 McKinley had been elected in his place, had served two terms and had been followed by someone named Roosevelt.

I recognised none of the twentieth-century presidents.

Instead of more than a century of peace under our traditional neutrality, the United States had repeatedly been involved in foreign wars: I899, I9I2-I7, I932 (With Japan!), I950-52, I980-84, and so on right up to the current year - or current when this encyclopedia was published; King's Skald did not report a war now going on.

Behind the glass of one of the locked cases I spotted several history books. If I was still in the ship three hours from now, I must plan on reading every history book in the ship's library during the long passage to America.

But names of presidents and dates of wars were not my most urgent need; these are not daily concerns. What I urgently needed to know, lest ignorance cause me anything from needless embarrassment to catastrophe, was the differences between my world and this world in how people lived, talked, behaved, ate, drank, played, prayed, and loved. While I was learning, I must be careful to talk as little as possible and to listen as much as possible.

I once had a neighbour whose knowledge of history seemed limited to two dates, I492 and I776, and even with those two he was mixed up as to what events each marked. His ignorance in other fields was just as profound; nevertheless he earned an excellent living as a paving contractor.

'It does not require a broad education to function as a social and economic animal... as long as you know when to rub blue mud into your bellybutton. But a mistake in local customs can get you lynched.

I wondered how Graham was doing? It occurred to me that his situation was far more. dangerous than mine... if I assumed (as apparently I must) that he and I had simply swapped places. It seemed that my background could make me appear eccentric here - but his background could get Graham into serious trouble in my world. A casual remark, an innocent act, could land him in the stocks. Or worse.

But he might find his worst trouble through attempting to fit himself fully into my role - if indeed he tried. Let me put it this way: On her birthday after we had been married a year I gave Abigail a fancy edition of The Taming of the Shrew. She never suspected that I had been making a statement; her conviction of her own righteousness did not embrace the possibility that in my heart I equated her with Kate. If Graham assumed my role as her husband, the relationship was bound to be interesting for each of them.

I would not knowingly wish Abigail on anyone. Since I had not been consulted, I did not cry crocodile tears.

(What would it be to bed with a woman who did not always refer to marital relations as 'family duties'?)

Here I have in front of me a twenty-volume encyclopedia, millions of words packed with all the major facts of this world - facts I urgently need. What can I squeeze out of it quickly? Where to start? I don't want Greek art, or Egyptian history, or geology - but what do I want?

Well, what did you first notice about this world? This ship itself. Its old-fashioned appearance compared with the sleek lines of the M.V. Konge Knut. Then, once you were aboard, the lack of a telephone in your-Graham's stateroom. The lack of passenger elevators. Little things that gave it an air of the luxury of grandfather's day.

So let's see the article on 'Ships' - volume eighteen.

Yes, sir! Three pages of pictures ... and they all have that Mauve-Decade look. S.S. Britannia, biggest and fastest North Atlantic liner, 2000 passengers, only sixteen knots! And looks it.

Let's try the general article on 'Transportation'

Well, well! We aren't too surprised, are we? No mention of airships. But let's check the index volume - Airship, nothing; dirigible, zero; aeronautics - see 'Balloon'.

Ah, yes, a good article on free ballooning, with the Montgolfiers and the other daring pioneers - even Salomon Andrée's brave and tragic attack on the North Pole. But either Count von Zeppelin never lived, or he never turned his attention to aeronautics.

Possibly, after his service in the Civil War, he returned to Germany and there never found the atmosphere receptive to the idea of air travel that he enjoyed in Ohio in my world. As may be, this world does not have air travel. Alex, if you have to live here, how would you like to 'invent' the airship? Be a pioneer, and tycoon, and get rich and famous?

What makes you think you could?

Why, I made my first airship flight when I was only twelve years old! I know all about them; I could draw plans for one right now -

You could? Draw me production drawings for a lightweight diesel, not over one pound per horsepower. Specify the alloys used, give the heat treatments, show work diagrams for the actual operating cycles, specify fuels, state procurement sources, specify lubricants

All those things can be worked out!

Yes, but can you do it? Even knowing that it can be done? Remember why you dropped out of engineering school and decided you had a call for the ministry? Comparative religion, homiletics, higher criticism, apologetics, Hebrew, Latin, Greek, all require scholarship... but the slipstick subjects require brains.

So I'm stupid, am I?

Would you have walked through that fire pit if you had brains enough to come in out of the rain?

Why didn't you stop me?

Stop you? When did you ever listen to me? Quit evading what was your final mark in thermodynamics?

All right! Assume that I can't do it myself -

Big of you.

Lay off, will you? Knowing that something can be done is two thirds of the battle. I could be director of research and guide the efforts of some really sharp young engineers. They supply the brains; I supply the unique memory of what a dirigible balloon looks like and how it works. Okay?

That's the proper division of labor: You supply memory, they supply brains. Yes, that could work. But not quickly, not cheaply. How are you going to finance it?

Uh, sell shares?

Remember the summer you sold vacuum cleaners?

Well... there's that million dollars.

Naughty, naughty!

'Mr Graham?'

I looked up from my great plans to find a yeoman from the purser's office looking at me. 'Yes?'

She handed me an envelope. 'From Mr Henderson, sir. He said you would probably have an answer.'

'Thank you.' The note read: 'Dear Mr Graham: There are three men down here in the square who claim to have an appointment with you. I don't like their looks or the way they talk - and this port has some very strange customers. If you are not expecting them or don't wish to see them, tell my messenger that she could not find you. Then I'll tell them that you've gone ashore. A.P.H.'

I remained balanced between curiosity and caution for some long, uncomfortable moments. They did not want to see me; they wanted to see Graham... and whatever it was they wanted of Graham, I could not satisfy their want.

You know what they want!

'So I suspect. But, even if they have a chit signed by Saint Peter, I can't turn over to them - or to anyone - that silly million dollars. You know that.

Certainly I know that. I wanted to be sure that you knew it. All right, since there are no circumstances under which you will turn over to a trio of strangers the contents of Graham's lockbox, then why see them?

Because I've got to know! Now shut up. I said to the yeoman, 'Please tell Mr Henderson that I will be right down. And thank you for your trouble.'

'My pleasure, sir. Uh, Mr Graham. ... I saw you walk the fire. You were wonderful!'

'I was out of my silly mind. Thanks anyhow.'

I stopped at the top of the companionway and sized up the three men waiting for me. They looked as if they had been type-cast for menace: one oversize job about six feet eight with the hands, feet, jaw, and ears of glandular giantism; one sissy type about one quarter the size of the big man; one nothing type with dead eyes. Muscles, brain, and gun - or was it my jumpy imagination?

A smart person would go quietly back up and hide.

I'm not smart.

Chapter 6

Let us eat and drink, for tomorrow we shall die.
Isaiah 22:13

I WALKED down the stairs, not looking at the three, and went directly to the desk of the purser's office. Mr Henderson was there, spoke quietly as I reached the counter. 'Those three over there. Do you know them?'

'No, I don't know them. I'll see what they want. But keep an eye on us, will you, please?'

'Right!'

I turned and started to walk past that lovable trio. The smart boy said sharply, 'Graham! Stop there! Where you going?'

I kept moving and snapped, 'Shut up, you idiot! Are you trying to blow it?' Muscles stepped into my path and hung over me like a tall building. The gun stepped in behind me. In a fake prison-yard style, from the side of my mouth, I said, 'Quit making a scene and get these apes off the ship! You and I must talk.'

'Certainly we talk. Ici! Now. Here.'

'You utter fool,' I answered softly and glanced nervously up, to left and right. 'Not here. Cows. Bugs. Come with me. But have Mutt and Jeff wait on the dock.'

Non!'

'God save us! Listen carefully.' I whispered, 'You 'are going to tell these animals to leave the ship and wait at the foot of the gangway. Then you and I are going to walk out on the weather deck where we can talk without being overheard. Otherwise we do nothing! - and I report to Number-One that you blew the deal. Understand? Right now! Or go back and tell them the deal is off.'

He hesitated, then spoke rapidly in French that I could not follow, my French being mostly of the La plume de ma tante sort. The gorilla seemed to hesitate but the gun type shrugged and started toward the gangway door. I said to the little wart, 'Come on! Don't waste time; the ship is about to sail!' I headed aft without looking to see whether or not he was following. I set a brisk pace that forced him to follow or lose me. I was as much taller than he as that ape was taller than I; he had to trot to stay at my heels.

I kept right on going aft and outside, onto the weather deck, past the open bar and the tables, clear to the swimming pool.

It was, as I expected, unoccupied, the ship being in port. There was the usual sign up, CLOSED WHILE SHIP IS IN PORT, and a nominal barrier around it of a single strand of rope, but the pool was still filled. He followed me; I held up a hand. 'Stop right there.' He stopped.

'Now we can talk,' I said. 'Explain yourself, and you'd better make it good! What do you mean, calling attention to yourself by bringing that muscle aboard? And a Danish ship at that! Mr B. is going to be very, very angry with you. What's your name?'

'Never mind my name. Where's the package?'

'What package?'

He started to sputter; I interrupted. 'Cut the nonsense; I'm not impressed. This ship is getting ready to sail; you have only minutes to tell me exactly what you want and to convince me that you should get it. Keep throwing your weight around and you'll find yourself going back to your boss and telling him you failed. So speak up! What do you want?'

'The package!'

I sighed. 'My old and stupid, you are stuck in a rut. We've been over that. What sort of a package? What's in it?'

He hesitated. 'Money.'

'Interesting. How much money?'

This time he hesitated twice as long, so again I interrupted. 'If you don't know how much money, I'll give you a couple of francs for beer and send you on your way. Is that what you want? Two francs?'

A man that skinny shouldn't have such high blood pressure. He managed to say, 'American dollars. One million.'

I laughed in his face. 'What makes you think I've got that much? And if I had, why should I give it to you? How do I know you are supposed to get it?'

'You crazy, man? You know who am I. '

'Prove it. Your eyes are funny and your voice sounds different. I think you're a ringer.

'"Ringer"?'

'A fake, a phony! An impostor.'

He answered angrily - French, I suppose. I am sure it was not complimentary. I dug into my memory, repeated carefully and with feeling the remark that a lady had made last night which had caused her husband to say that she worried too much. It was not appropriate but I intended simply to anger him.

Apparently I succeeded. He raised a hand, I grabbed his wrist, tripped myself, fell backwards into the pool, pulling him with me. As we fell I shouted, 'Help!'

We splashed. I got a firm grip on him, pulled myself up as I shoved him under again. 'Help! He's drowning me!'

Down we went again, struggling with each other. I yelled for help each time my head was above water. Just as help came I went limp and let go.

I stayed limp until they started to give me mouth-to-mouth resuscitation. At that point I snorted and opened my eyes'. 'Where am I?

Someone said, 'He's coming around. He's okay.'

I looked around. I was flat on my back alongside the pool. Someone had done a professional job of pulling me out with a dip-and-jerk; my left arm felt almost dislocated. Aside from that I was okay. 'Where is he? The man who pushed me in.'

'He got away.'

I recognized the voice, turned my head. My friend Mr Henderson, the purser.

'He did?'

That ended it. My rat-faced caller had scrambled out as I was being fished out and had streaked off the ship. By the time they had finished reviving me, Nasty and his bodyguards were long gone.

Mr Henderson had me lie still until the ship's, doctor arrived. He put a stethoscope on me and announced that I was okay. I told a couple of small, fibs, some near truths, and an evasion. By then the gangway had been removed and shortly a loud blast announced that we had left the dock.

I did not find it necessary to tell anyone that I had played water polo in school.

The next many days were very sweet, in the fashion that grapes grow sweetest on the slopes of a live volcano.

I managed to get acquainted (reacquainted?) with my table mates without, apparently, anyone noticing that I was a stranger. I picked up names just by waiting until someone else spoke to someone by name - remembered I the name and used it later. Everyone was pleasant to me - I not only was not 'below the salt', since the record showed that I had been aboard the full trip, but also I was at least a celebrity if not a hero for having walked through the fire.

I did not use the swimming pool. I was not sure what swimming Graham had done, if any, and, having been 'rescued', I did not want to exhibit a degree of skill inconsistent with that 'rescue'. Besides, while I grew accustomed to (and even appreciative of) a degree of nudity shocking in my former life, I. did not feel that I could manage with aplomb being naked in company.

Since there was nothing I could do about it, I put the mystery of Nastyface and his bodyguards out of my mind.

The same I was true of the all-embracing mystery of who I am and how I got here - nothing I could do about it, so don't worry about it. On reflection. I realized that I was in exactly the same predicament as every other human being alive: We don't know who we are, or where we came from, or why we are here. My dilemma was merely fresher, not different.

One thing (possibly the only thing) I learned in seminary was to face calmly the ancient mystery of life, untroubled by my inability to solve it. Honest priests and preachers are denied the comforts of religion; instead they must live with the austere rewards of philosophy. I never became much of a metaphysician but I did learn not to worry about that which I could not solve.

I spent much time in the library or reading in deck chairs, and each day I learned more about and felt more at home in this world. Happy, golden days slipped past like a dream of childhood.

And every day there was Margrethe.

I felt like a boy undergoing his first attack of puppy love.

It was a strange romance. We could not speak of love. Or I could not, and she did not. Every day she was my servant (shared with her other passenger guests)... and my 'mother' (shared with others? I did not. think so... but I did not know). The 'relationship was close but not intimate. Then each day, for a few moments while I 'paid' her for tying my bow tie, she was my wonderfully sweet and utterly passionate darling.

But only then.

At other times I was 'Mr Graham' to her and she called me 'sir' - warmly friendly but not intimate. She was willing to chat, standing up and with the door open; she often had ship's gossip to share with me. But her manner was always that of the perfect servant. Correction: the perfect crew member assigned to personal service. Each day I learned a little more about her. I found no fault in her.

For me the day started with my first sight of her - usually on my way to breakfast when I would meet her in the passageway or spot her through an open door of a room she was making up... just 'Good morning, Margrethe' and 'Good morning, Mr Graham,' but the sun did not rise until that moment.

I would see her from time to time during the day, peaking each day with that golden ritual after she tied my tie.

Then I would see her briefly after dinner. Immediately after dinner each evening I would return to my room for a few minutes to refresh myself before the evening's activities - lounge show, concert, games, or perhaps just a return to the' library. At that hour Margrethe would be somewhere in the starboard forward passageway of C deck, opening beds, tidying baths, and so forth -making her guests' staterooms inviting for the night. Again I would say hello, then wait in my room (whether she had yet reached it or not) because she would come in shortly, either to open my bed or simply to inquire, 'Will you need anything more this evening, sir?'

And I would. always smile and answer, 'I don't need a thing, Margreth. Thankyou.' Whereupon she would bid me good night and wish me sound sleep. That ended my day no matter what else I did before retiring.

Of course I was tempted - daily! - to answer, 'You know what I need!' I could not. Imprimis: I was a married man. True, my wife was lost somewhere in another world (or I was). But from holy matrimony there is no release this side of the grave. Item: Her love affair (if such it was) was with Graham, whom I was impersonating. I could not refuse that evening kiss I'm not that angelically perfect!) but in fairness to my beloved I could not go beyond it. Item: An honorable man must not offer less than matrimony to the object of his love . . . and that I was both legally and morally unable to offer.

So those golden days were bittersweet. Each day brought one nearer the inescapable time when I must leave Margrethe, almost certainly never to see her again.

I was not free even to tell her what that loss would mean to me.

Nor was my love for her so selfless that I hoped the Separation would not grieve her. Meanly, self-centered as an adolescent, I hoped that she would miss me as dreadfully as I was going to miss her. Childish puppy love certainly! I offer in extenuation the fact that I had known only the 'love' of a woman who loved Jesus so much that she had no real affection for any flesh-and-blood creature.

Never marry a woman who prays too much.

We were ten days out from Papeete with Mexico almost over the skyline when this precarious idyll ended. For several days Margrethe had seemed more withdrawn- each day. I could not tax her with it as there was nothing I could, put my finger on and certainly nothing of which I could complain. But it reached crisis that evening when she tied my tie.

As usual I smiled and thanked her and kissed her.

Then I stopped with her still in my arms and said' 'What's wrong? I know you can kiss better than that. Is my breath bad?'

She answered levelly, 'Mr Graham, I think we had better stop this.'

'So it's "Mr Graham", is it? Margrethe, what have I done?'

'You've done nothing!'

'Then - My dear, you're crying!'

'I'm sorry. I didn't intend to.'

I took my handkerchief, blotted her tears, and said gently, 'I have never intended to hurt you. You must tell me what's wrong so that I can change it.'

'If you don't know, sir, I don't see how I can explain it.

Won't you try? Please!' (Could it be one of those cyclic emotional disturbances women are heir to?)

'Uh... Mr Graham, I knew it could not last beyond the end of the voyage - and believe me, I did not count on any more. I suppose it means more to me than it did to you. But I never thought that you would simply end it, with no explanation, sooner than we must.'

'Margrethe... I do not understand.'

'But you do know!'

'But I don't know.'

'You must know. It's been eleven days. Each night I've asked you and each night you've turned me down. Mr Graham, aren't you ever again going to ask me to come back later?'

'Oh. So that's what you meant! Margrethe -'

'Yes, sir?'

'I'm not "Mr Graham".' 'Sir?' 'My name is "Hergensheimer". It has been exactly eleven days since I saw you for the first time in my life. I'm sorry. I'm terribly sorry. But that is the truth.'

Chapter 7

Now therefore be content, look upon me;
for it is evident unto you if I lie.
Job 6:28

MARGRETHE is both a warm comfort and a civilized adult. Never once did she gasp, or expostulate, or say, 'Oh, no or 'I can't believe it!' At my first statement she held very still, waited, then said quietly, 'I do not understand.'

'I don't understand it either,' I told her. 'Something happened when I walked through that fire pit. The world changed. This ship - 'I pounded the bulkhead beside us. '- is not the ship I was in before. And people call me "Graham"... when I know that my name is Alexander Hergensheimer. But it's not just me and this ship; it's the whole world. Different history. Different countries. No airships here.'

'Alec, what is an airship?'

'Uh, up in the air, like a balloon. It is a balloon, in a way. But it goes very fast, over a hundred knots.'

She considered it soberly. 'I think that I would find that frightening.'

I 'Not at all; it's the best way to travel. I flew down here in one, the Count von Zeppelin of North American Airlines. But this world doesn't have airships. That was the point that finally convinced me that this really is a different world - and not just some complicated hoax that someone had played on me. Air travel is so major a part of the economy of the world I knew that it changes everything else not to have it. Take - Look, do you believe me?

She answered slowly and carefully, 'I believe that you are telling the truth as you see it. But the truth I see is very different.'

'I know and that's what makes it so hard. I - See here, if you don't hurry, you're going to miss dinner, right?'

'It does not matter.'

'Yes, it does; you must not miss meals just because I made a stupid mistake and hurt your feelings. And if I don't show up, Inga will send somebody up to find out whether I'm ill or asleep or whatever; I've seen her do it with others at my table. Margrethe - my very dear! - I've wanted to tell you. I've waited to tell you. I've needed to tell you. And now I can and I must. But I can't do it in five minutes standing up. After you turn down beds tonight can you take time to listen to me?'

'Alec, I will always take all the time for you that you need.'

'All right. You go down and eat, and I'll go down and touch base at least - get Inga off my neck - and I'll meet you here after you turn down beds. All right?'

She looked thoughtful. 'All right. Alec - Will you kiss me again.'

That's how I knew she believed me. Or wanted to believe me. I quit worrying. I even ate a good dinner, although I hurried.

She was waiting for me when I returned, and stood up as I came in. I took her in my arms, pecked her on the nose, picked her up by her elbows and sat her on my bunk; then I sat down in the only chair. 'Dear one, do you think I'm crazy.

'Alec, I don't know what to tink.' (Yes, she said 'tink'. Once in a long while, under stress of emotion, Margrethe would lose the use of the theta sound. Otherwise her English accent was far better than my tall-corn accent, harsh as a rusty saw.)

'I know,' I agreed. 'I had the same problem. Only two ways to look at it. Either something incredible did happen when I walked through the fire, something that changed my whole world. Or I'm as crazy I as a pet 'coon. I've spent days checking the facts... and the world has changed. Not just airships. Kaiser Wilhelm the Fourth is missing and some silly president named "Schmidt is in his place. Things like that.'

'I would not call Herr Schmidt "silly". He is quite a good president as German presidents go.'

'That's my point, dear. To me, any German president looks silly, as Germany is - in my world - one of the last western monarchies effectively unlimited. Even the Tsar is not as powerful.'

'And that has to be my point, too, Alec. There is no Kaiser and there is no Tsar. The Grand Duke of Muscovy is a constitutional monarch and no longer claims to be suzerain over other Slavic states.'

'Margrethe, we're both saying the same thing. The world I grew up in is gone. I'm having to learn about a different world. Not a totally different world. Geography does not seem to have changed, and not all of history. The two worlds seem to be the same almost up to the beginning of the twentieth century. Call it eighteen-ninety. About a hundred years back something strange happened and the two worlds split apart... and about twelve days ago something equally strange happened to me and I got bounced into this world.' I smiled at her. 'But I'm not sorry. Do you know why? Because you are in this world.'.

'Thank you. It is important to me that you are in it, too.'

'Then you do believe me. Just as I have been forced to believe it. So much so that I've quit worrying about it. Just one thing really bothers me - What became of Alec Graham? Is he filling my place in my world? Or what?'

She did not answer at once, and when she did, the answer did not seem responsive. 'Alec, will you please take down your trousers?'

'What did you say, Margrethe?'

'Please. I am not making a joke and I am not trying to entice you. I must see something. Please lower your trousers.'

I don't see - All right.' I shut up and did as she asked not easy in evening dress. I had to take off my mess jacket, then my cummerbund, before I was peeled enough to let me slide the braces off my shoulders.

Then, reluctantly, I started unbuttoning my fly. (Another shortcoming of this retarded world - no zippers. I did not appreciate zippers until I no longer had them.)

I took a deep breath, then lowered my trousers a few inches. 'Is that enough?'

'A little more, please - and will you please turn your back to me?'

I did as she asked. Then I felt her hands, gentle and not invasive, at my right rear. She lifted a shirttail and pulled down the top of my underwear pants on the right.

A moment later she restored both garments. 'That's enough. Thank you.'

I tucked in my shirttails and buttoned up my fly, reshouldered, the braces and reached for the cummerbund. She said, 'Just a moment, Alec.'

'EM I thought you were through.'

'I am. But there is no need to get back into those formal clothes; let me get out casual trousers for you. And shirt. Unless you are going back to the lounge?'

'No. Not if you will stay.'

'I will stay; we must talk.' Quickly she took out casual trousers and a sports shirt for me, laid them on the bed. 'Excuse me, please.' She went into the bath.

I don't know whether she needed to use it or not, but she knew that I could change more comfortably in the stateroom than in that cramped shipboard bathroom.

I changed and felt better. A cummerbund and a boiled shirt are better than a straitjacket but not much. She came out, at once hung up the clothes I had taken off, all but the shirt and collar. She removed studs and collar buttons from these, put them away, and put shirt and collar into my laundry bag. I wondered what Abigail would think if she - could see these wifely attentions. Abigail did not believe in spoiling me - and did not.

'What waz that all about Margrethe?'

'I had to see something. Alec, you were wondering what had become of Alec Graham. I now know the answer.'

'Yes?'

'He's right here. You are he.'

At last I said, 'That, just from looking at a few square inches on my behind? What did you find, Margrethe? The strawberry mark that identifies the missing heir?'

'No, Alec. Your "Southern Cross".'

'My what?'

'Please, Alec. I had hoped that it would restore your, memory. I saw it the first night we -' She hesitated, then looked me square in the eye.'- made love. You turned on the light, then turned over on your belly to see what time it was. That was when I noticed the moles on your right buttock cheek. I commented on the pattern. they made, and we joked about it. You said that it was your Southern Cross and it let you know which end was up. '

Margrethe turned slightly pink but continued to look me firmly in the eye. 'And I showed you some moles on my body. Alec, I am sorry that you do not remember it but please believe me: By then we were well enough acquainted that we could be playful about such things without my being forward or rude.'

'Margrethe, I don't think you could ever be forward or rude. But you're putting too much importance on a chance arrangement of moles. I've got moles all over me; it doesn't surprise me that some of them, back where I can't see easily, are arranged in a cross shape. Or that Graham` had some that were somewhat similar.'

'Not "similar". Exactly the same.'

'Well - There is a much better way to check. In the desk there is my wallet. Graham's wallet, actually. Driver's license. His. His thumbprint on it. I haven't checked it because I have never had the slightest doubt that he was Graham and that I am Hergensheimer and that we are not the same man. But we can check. Get it out, dear. Check it yourself. I'll put a thumbprint on the mirror in the bath. Compare them. Then you will know.'

'Alec, I do know. You are the one who doesn't believe it; you check it.'

'Well -' Margrethe's counterproposal was reasonable; I agreed to it.

I got out Graham's driver's license, then placed a print on the bath mirror by first rubbing my thumb over my nose for the nose's natural oil, so much greater than that of the pad of the thumb. I found that I could not see the pattern on the glass too well, so I shook a little talcum onto my palm, blew it toward the mirror.

Worse. The powder that detectives use must be much finer than shaving talcum. Or perhaps I don't know how to use it. I placed another print without powder, looked at both prints, at my right thumb, at the print on the driver's license, then checked to see that the license did indeed designate print of right thumb. It did. 'Margrethe! Will you come look, please?'

She joined me in the bath. 'Look at this,' I said. 'Look at all four - my thumb and three prints. The pattern in all four is basically an arch - but that simply trims it down to half the thumbprints in the world. I'll bet you even money that your own thumbprints have an arch pattern. Honest, can you tell whether or not the thumbprint on the card--was made by this thumb? Or by my left thumb; they might have made a mistake.'

'I cannot tell, Alec. I have no skill in this.'

'Well - I don't think even an expert could tell in this light. We'll have to put it off till morning; we need bright sunlight out on deck. We also need glossy white paper, stamp-pad ink, and a magnifying glass ... and I'll bet Mr Henderson will have all three. Will tomorrow do?'

'Certainly. This test is not for me, Alec; I already know in my heart. And by seeing your "Southern Cross". Something has happened to your memory but you are still you... and someday we will find your memory again.'

'It's not that easy, dear. I know that I am not Graham.

Margrethe, do you have any idea what business he was in? Or why he was on this trip?'

'Must I say "him"? I did not ask your business, Alec. And you never, offered to tell me.'

'Yes, I think you must say "him", at least until we check that thumbprint. Was he married?'

'Again, he did not say and I did not ask.'

'But you implied - No, you flatly stated that you had "made love" with this man whom you believe to be me, and that you have been in bed with him.'

'Alec, are you reproaching me?'

'Oh, no, no, no!' (But I was, and she knew it.) 'Whom you go to bed with is your business. But I must tell you that I am married.'

She shut her face against me. 'Alec, I did not try to seduce you into marriage.'

'Graham, you mean. I was not there.'

'Very well. Graham. I did not entrap Alec Graham. For our mutual happiness we made love. Matrimony was not mentioned by either of us.'

'Look, I'm sorry I mentioned the matter! It seemed to have some bearing on the mystery; that's all. Margrethe, will you believe that, I would rather strike off my arm - or pluck out my eye and cast it from me - than hurt you, ever, in any way?'

'Thank you, Alec. I believe you.'

'All that Jesus ever said was: "Go, and sin no more.' Surely you do not think I would ever set myself up as more severely judgmental than was Jesus? But I was not judging you; I was seeking information about Graham. His business, in particular. Uh, did you ever suspect that he might be engaged in something illegal?'

She gave a ghost of a smile. 'Had I ever suspected anything of the sort, my loyalty to him is such that I would never express such suspicion. Since you insist that you are not he, then there it must stand.'

'Touch~!' I grinned sheepishly. Could I tell her about the lockbox? Yes, I must. I had to be frank with her and had to persuade her that she was not being disloyal to Graham/me were she to be equally frank. 'Margrethe, I was not asking idly and I was not prying where I had no business to pry. I have still more, trouble and I need your advice.'

Her turn to be startled. 'Alec... I do not often give advice. I do not like to.'

'May I tell you my trouble? You need not advise me... but perhaps you may be able to analyze it for me.' I told her quickly about that truly damning million dollars. 'Margrethe, can you think of any legitimate reason why an honest man would be carrying a million dollars in cash? Travelers checks, letters of credit, drafts for transferring monies, even bearer bonds - But cash? In that amount? I say that it is psychologically as unbelievable as what happened to me in the fire pit is physically unbelievable. Can you see any other way to look at it? For what honest reason would a man carry that much cash on a trip like this?'

'I will not pass judgment.'

'I do not ask you to judge; I ask you to stretch your imagination and tell me why a man would carry with him a million dollars in cash. Can you think of a reason? One as farfetched as you like... but a reason.'

'There could be many reasons.'

'Can you think of one?'

I waited; she remained silent. I sighed and said, 'I can't think of one, either. Plenty of criminal reasons, of course, as so-called "hot money" almost always moves as cash. This

is so common that most governments - all governments, I believe - assume that any large amount of cash being moved other than by a bank or by a government is indeed crime money until proved otherwise. Or counterfeit money, a still more depressing idea. The advice I need is this: Margrethe, what should I do with it? It's not mine; I can't take it off the ship. For the same reason I can't abandon it. I can't even throw it overboard. What can I do with it?'

My question was not rhetorical; I had to find an answer that would not cause me to wind up in jail for something Graham had done. So far, the only answer I could think of was to go to the only authority in the ship, the Captain, tell him all my troubles and ask him to take custody of that awkward million dollars.

Ridiculous. That would just give me a fresh set of bad answers, depending on whether or not the Captain believed me and on whether or not the Captain himself .was honest - and possibly on other variables. But I could not see any outcome from telling the Captain that would not end in my being locked up, either in jail or in a mental hospital.

The simplest way to resolve the situation would be to throw the pesky stuff overboard!

I had moral objections to that. I've broken some of the Commandments and bent some others, but being financially honest has never been a problem to me. Granted, lately my moral fiber did not seem to be as strong as I had thought, but nevertheless I was not tempted to
steal that million even to jettison it.

But there was a stronger objection: Do you know anyone who, having a million dollars in his hands, could bring himself to destroy it?

Maybe you do. I don't. In a pinch I might turn it over to the Captain but I would not destroy it.

Smuggle it ashore? Alex, if you ever take it out of that lockbox, you have stolen it. Will you destroy your self-respect for a million dollars? For ten million? For five dollars?

'Well, Margrethe?'

'Alec, it seems to me that the solution is evident.'

'Eh?'

'But you have been trying to solve your problems in the wrong order. First you must regain your memory. Then you will know why you are carrying that money. It will turn out to be for some innocent and logical purpose.' She smiled. 'I know you better than you know yourself. You are a good man, Alec; you are not a criminal.'

I felt a mixture of exasperation at her and of pride in what she thought of me - but more exasperation than pride. 'Confound it, dear, I have not lost my memory. I am not Alec Graham; I am. Alexander Hergensheimer, and that's been my name all my life and my memory is sharp. Want to know the name of my second-grade teacher? Miss Andrews. Or how I happened to have my first airship ride when I was twelve? For I do indeed come from a world in which airships ply every ocean and even over the North Pole, and Germany is a monarchy and the North American Union has enjoyed a century of peace and prosperity and this ship we are in tonight would be considered so out of date and so miserably equipped and slow that no one would sail in it. I asked for help; I did not ask for a psychiatric opinion. If you think I'm crazy, say so... and we'll drop the subject.'

'I did not mean to anger you.'

'My dear! You did not anger me; I simply unloaded on you some of my worry and frustration - and I should not have done so. I'm sorry. But I do have real problems and they are not solved by telling me that my memory is at fault. If it were my memory, saying so would solve nothing., my problems would still be there. But I should not have snapped at you. - Margrethe, you are all I have ... in a strange and sometimes frightening world. I'm sorry.'

She slid down off my bunk. 'Nothing to be sorry about, dear Alec. But there is no point in further discussion tonight. Tomorrow - Tomorrow we will test that thumbprint carefully, in bright sunlight. Then you will see, and it could have an immediate effect on your memory.

'Or it could have an immediate effect on your stubbornness, best of girls.'

She smiled. 'We will see. Tomorrow. Now I think I must go to bed. We have reached the point where we are each repeating the same arguments... and upsetting each other. I don't want that, Alec. That is not good.'

She turned and headed for the door, not even offering herself for a goodnight kiss.

Margrethe!'

'Yes, Alec?'

'Come back and kiss me.'

'Should I, Alec? You, a married man.'

'Uh - Well, for heaven's sake, a kiss isn't the same as adultery.'

She shook her head sadly. 'There are kisses and kisses, Alec. I would not kiss the way we have kissed unless I was happily willing to go on from there and make love. To me that would be a happy and innocent thing.. . but to you it would be adultery. You pointed out

what the Christ said to the woman taken in adultery. I have not sinned... and I will not cause you to sin.' Again she turned to leave.

'Margrethe!'

'Yes, Alec?.

'You asked me if I intended ever again to ask you to come back later. I ask you now. Tonight. Will you come back later?'

'Sin, Alec. For you it. would be sin... and that would make it sin for me, knowing how you feel about it.'

'"Sin." I'm not sure what sin is... I do know I need you... and I think you need me.'

'Goodnight, Alec.' She left quickly.

After a long while I brushed my teeth and washed my face, then decided that another shower might help. I took it lukewarm and it seemed to calm me a little. But when I went to bed, I lay awake, doing something I call thinking but probably is not.

I reviewed in my mind all the many major mistakes I have made in my life, one after another, dusting them off and bringing them up sharp in my head, right to the silly, awkward, inept, self-righteous, asinine fool I had made of myself tonight, and, in so doing, how I had wounded and humiliated the best and sweetest woman I have ever known.

I 'can keep myself uselessly occupied with selfflagellation for an entire night when my latest attack of foot-in-mouth disease is severe. This current one bid fair to keep me staring at the ceiling for days.

Some long time later, after midnight and more, I was awakened by the sound of a key in the door. I fumbled for the bunk light switch, found it just as she dropped her robe and got into bed with me. I switched off the light.

She was warm and smooth and trembling and crying. I held her gently and tried to soothe her. She did not speak and neither did I. There had been too many words earlier and most of them had been mine. Now was a time simply to cuddle and hold and speak without words.

At last her trembling slowed, then stopped. Her breathing became even. Then she sighed and said very softly, 'I could not stay away.'

'Margrethe. I love you.'

'Oh! I love you so much it hurts in my heart.'

I think we were both asleep when the collision happened. I had not intended to sleep but for the first time since the fire walk I was relaxed and untroubled; I dropped off.

First came this incredible jar that almost knocked us out of my bunk, then a grinding, crunching noise at earsplitting level. I got the bunk light on - and the skin of the ship at the foot of the bunk was bending inward.

The general alarm sounded, adding to the already deafening noise. The steel side of the ship buckled, then ruptured as something dirty white and cold pushed into the hole. As the light went out.

I got out of that bunk any which way, dragging Margrethe with me. The ship rolled heavily to port, causing us to slide down into the angle of the deck and the inboard bulkhead. I slammed against the door-handle, grabbed at it, and hung on with my right hand while I held Margrethe to me with my left arm. The ship rolled back to starboard, and wind and water poured in through the hole - we heard it and felt it, could not see it. The ship recovered, then rolled again to starboard - and I lost my grip on the door handle.

I have to reconstruct what happened next - pitch dark, mind you, and a bedlam of sound. We were falling - I never let go of her - and then we were in water.

Apparently when the ship rolled back to starboard, we were tossed out through the hole. But that is, just reconstruction; all I actually know is that we fell, together, into water, went down rather deep.

We came up and I had Margrethe under my left arm, almost in a proper lifesaver carry. j grabbed a look as I gulped air, then we went under again. The ship was right alongside us and moving. There was cold wind and rumbling noise; something high and dark was on the side away from the ship. But it was the ship that scared me - or rather its propeller, its screw. Stateroom CI09 was far forward - but if I didn't get us well away from the ship almost at once, Margrethe and I were going to be chewed into hamburger by the screw. I hung onto her and stroked hard away from the ship, kicking strongly - and exulted as I felt us getting away from the hazard of the ship... and banged my head something brutal against blackness.

Chapter 8

So they took up Jonah, and cast him
forth into the sea: and the sea ceased
from her raging.
Jonah 1: 15

I WAS comfortable and did not want to wake up. But a slight throb in my head was annoying me and, willy-nilly, I did wake. I shook my head to get rid of that throb and got a snootful of water. I snorted it out.

'Alec?' Her voice was nearby.

I was on my back in blood-warm water, salt water by the taste, with blackness all around me - about as near to a return to the womb as can be accomplished this side of death. Or was this death? 'Margrethe?'

'Oh! Oh, Alec, I am so relieved! You have been asleep a long time. How do you feel?'

I checked around, counted this and that, twitched that and this, found that I. was floating on my back between Margrethe's limbs, she being also on her back with my head in her hands, in one of the standard Red-Cross life-saving positions. She was using slow frog kicks, not so much moving us as keeping us afloat. 'I'm all right. I think. How about you?'

'I'm just fine, dearest! - now that you're awake.'

'What happened?'

'You bumped your head against the berg.'

'Berg

'The ice mountain. Iceberg.'

(Iceberg? I tried to remember what had happened.) 'What iceberg?'

'The one that wrecked the ship.'

Some of it came tumbling back, but it still did not make an understandable picture. A giant crash as if the ship had hit a reef, then we were dumped into water. A struggle to get clear - I did bump my head. 'Margrethe, we're in the tropics, as far south as Hawaii. How can there be icebergs?'

'I don't know, Alec.'

'But-' I started to say 'impossible,' then decided that, from me, that word was silly. 'This water is too warm for icebergs. Look, you can quit working so hard; in salt water I float as easily as Ivory soap.'

'All right. But do let me hold you. I almost lost you once in this darkness; I'm frightened that it might happen again. When we fell in, the water was cold. Now it's warm; so we must not be near the berg.'

'Hang onto me, sure; I don't want to lose you, either.' Yes, the water had been cold when we fell into it; I remembered. Or cold compared with a nice warm cuddle in bed. And a cold wind. 'What happened to the iceberg?'.

'Alec, I don't know. We fell into the water together. You grabbed me and got us away from the ship; I'm sure that saved us. But it was dark as December night and blowing hard and in the blackness you ran your head into the ice.

'That is when I almost lost you. It knocked you out, dear, and you let go of me. I went under and gulped water and came up and spat it out and couldn't find you.

'Alec, I have never been so frightened in all my life. You weren't anywhere. I couldn't see you; I reached out, all sides, and could not touch you; I called out, you did not answer.'

'I'm sorry.'

'I should not have panicked. But I thought you had drowned. Or were drowning and I was not stopping it. But in paddling around my hand struck you, and then I grabbed you and everything was all right - until you didn't answer. But I checked and found that your heart was steady and strong, so everything was all right after all, and I took you in the back carry so that I could hold your face out of water. After a long time you woke, up - and now everything is truly all right.'

'You didn't panic; I'd be dead if you had. Not many people could do what-you did.'

'Oh, it's not so uncommon; I was a guard at a beach north of K0benhavrt two summers - on Fridays I gave lessons. Lots of boys and girls learned.'

'Keeping your head in a crunch and doing it in pitch darkness isn't learned from lessons; don't be so modest. What about the ship? And the iceberg?'

'Alec, again I don't know. By the time I found you and made sure that you were all right and then got you into towing position - by the time I had time to look around, it was like this. Nothing. Just blackness.'

'I wonder if she sank? That was one big wallop she took! No explosion? You didn't hear anything?'

'I didn't hear an explosion. Just wind and the collision sounds you must have heard, then some shouts after we were in the water. If she sank, I did not see it, but - Alec, for the past half hour, about, I've been swimming with my head pushed against a pillow or a pad or a mattress. Does that mean the ship sank? Flotsam in the water?'

'Not necessarily but it's not encouraging. Why have you been keeping your head against it?'

'Because we may need it. If it is one of the deck cushions or sunbathing mats from the pool, then it's stuffed with kapok and is an emergency lifesaver.'

'That's what I meant. If it's a flotation cushion, why are you just keeping your head against it? Why aren't you on it, up out of the water?'

'Because I could not do that without letting go of you.'

'Oh. Margrethe, when we get out of this, will you kindly give me a swift kick? Well, I'm awake now; let's find out what you've found. By Braille.'

'All right. But I don't want to let go of you when I can't see you. I

'Honey, I'm at least as anxious not to lose track of you. Okay, like this: You hang onto me with one hand; reach behind you with the other. Get a good grip on this cushion or whatever it is. I turn over and hang onto you and track you up to the hand you are using to grip the pillow thing. Then we'll see -we'll both feel what we have and decide how we can use it.'

It was not just a pillow, or even a bench cushion; it was (by the feel of it) a large sunbathing pad, at least six feet wide and somewhat longer than that - big enough for two people, or three if they were well acquainted. Almost as good as finding a lifeboat! Better - this flotation pad included Margrethe. I was minded of a profane poem passed around privately at seminary: 'A jug 'of wine, a loaf of bread, and thou - '

Getting up onto a mat that is limp as an angleworm on a night as black as the inside of a pile of coal is not merely difficult; it is impossible. We accomplished the impossible by my hanging on to it with both hands while Margrethe slowly slithered up over me. Then she gave me a hand while I inched up and onto it.

Then I leaned on one elbow and fell off and got lost. I followed Margrethe's voice and bumped into the pad, and again got slowly and cautiously aboard.

We found that the most practical way to make best use of the space and buoyancy offered by the mat was to lie on our backs, side by side, starfished like that Leonardo da Vinci drawing, in order to spread ourselves as widely as possible over the support.

I said, 'You all right, hon?'

'Just fine!'

'Need anything?'

'Not anything we have here. I'm comfortable, and relaxed - and you are here.'

'Me, too. But what would you have if you could have -anything you want?'

'Well ... a hot fudge sundae.'

I considered it. 'No. A chocolate sundae with marshmallow syrup, and a cherry on top. And a cup of coffee.'

'A cup of chocolate. But make mine hot fudge. It's a taste I acquired in America. We Danes do lots of good things with ice cream, but putting a hot sauce on an ice-cold dish never occurred to us. A hot fudge sundae. Better make that a double.'

'All right. I'll pay for a double if that's what you want. I'm a dead game sport, I am - and you saved my life.'

Her inboard hand patted mine. 'Alec, you're fun - and I'm happy. Do you think we're going to get out of this alive?'

'I don't know, hon. The supreme irony of life is that hardly anyone gets out of it alive. But I promise you this: I'm going to do my best to get you that hot fudge sundae.'

We both woke up when it got light. Yes, I slept and I know Margrethe did, too, as I woke a little before she did, listened to her soft snores, and kept quiet until I saw her eyes open. I had not expected to be able to sleep but I am not surprised (now) that we did - perfect bed, perfect silence, perfect temperature, both of us very tired ... and absolutely nothing to worry about that was worth worrying about because there was nothing, nothing whatever, to do about our problems earlier than daylight. I think I fell asleep thinking: Yes, Margrethe was right; a hot fudge sundae was a better choice than a chocolate marshmallow sundae. I know I dreamt about such a sundae - a quasinightmare in which I would dip into it, a big bite... lift the spoon to my mouth, and find it empty. I think that woke me.

She turned her head toward me, smiled and looked about sixteen and utterly heavenly. (like two young roes that are twins. Thou art all fair, my love; there is no spot in thee.) 'Good morning, beautiful.'

She giggled. 'Good morning, Prince Charming. Did you sleep well?'

'Matter of fact, Margrethe, I haven't slept so well in a month. Odd. All I want now is breakfast in bed.'

"Right away, sir. I'll hurry!'

'Go along with you. I should not have mentioned food. I'll settle for a kiss. Think we can manage a kiss without falling into the water?'

'Yes. But let's be careful. Just turn your face this way; don't roll over.'

It was a kiss mostly symbolic rather than one of Margrethe's all-out specials. We were both quite careful not to disturb the precarious stability of our make-do life raft. We were worried about something more important than being dumped into the ocean - at least I was.

I decided to broach it, take it out where we could worry about it together. 'Margrethe, by the map just outside the dining room we should have the coast of Mexico near Mazatlán just east of us. What time did the ship sink? If it sank. I mean, what time was the collision?'

'I don't know.'

'Nor do I. After midnight, I'm sure of that. The Konge 'Knut was scheduled to arrive at eight a.m. So that coast* line could be over a hundred miles east of us. Or it could be almost on top of us. Mountains over there, we may be able to see them when this overcast clears away. As it did yesterday, so it probably will today. Sweetheart, how are you on long-distance swimming? If we can see mountains, do you want to try for it?'

She was slow in answering. 'Alec, if you wish, we will try it.'

'That wasn't quite what I asked.'

'That is true. In warm sea water I think I can swim as long as necessary. I did once swim the Great Belt, in water colder than this. But, Alec, in the Belt are no sharks. Here there are sharks. I have seen.'

I let out a sigh. 'I'm glad you said it; I didn't want to have to say it. Hon, I think we must stay right here and hold still. Not call attention to ourselves. I can skip breakfast - especially a shark's breakfast.'

'One does not starve quickly.'

'We won't starve. If you had your druthers, which would you pick? Starvation? Or death by sunburn? Sharks? Or dying of thirst? In all the lifeboat and Robinson Crusoe stories I've ever read our hero had something to work with. I don't have even a toothpick. Correction: I have you; that changes the odds. Margrethe, what do you think we ought to do?'

'I think we will be picked up.'

I thought so, too, but for a reason I did not want to discuss with Margrethe. 'I'm glad to hear you say that. But-why do you think so?'

'Alec, have you been to Mazatlán before?'

'No.

'It is an important fishing port, both commercial fishing and sport fishing. Since dawn hundreds of boats have put out to sea. The largest and fastest go many kilometers out. If we wait, they will find us.'

'May find us, you mean. There is a lot of ocean out here. But you're right; swimming for it is suicide; our best bet is to stay here and hold tight.'

'They will be looking for us, Alec.'

'They will? Why?'

'If Konge Knut did not sink, then the Captain knows when and where we were lost overboard; when he reaches port - about now - he will ask for a daylight search. But if she did sink, then they will be scouring the whole area for survivors.'

'Sounds logical.' (I had another idea, not at all logical.)

'Our problem is to stay alive till they find us, avoiding sharks and thirst and sunburn as best we can - and all of that means holding still. Quite still and all the time. Except that I think we should turn over now and then, after the sun is out, to spread the burn.'

'And pray for cloudy weather. Yes, all of that. And maybe we should not talk. Not get quite so thirsty

She kept silent so long that I thought she had started the discipline I had suggested. Then she said, 'Beloved, we may not live.'

'I know.'

'If we are to die, I would choose to hear your voice, and I would not wish to be deprived of telling. you that I love you - now that I may! - in a futile attempt to live a few. minutes longer.'

'Yes, my sweetheart. Yes.'

Despite that decision we talked very little. For me it was enough to touch her hand; it appeared to be enough for -her, too.

A long time later - three hours at a guess - I heard Margrethe gasp.

'Trouble?'

'Alec! Look there!' She pointed. I looked.

It should have been my turn to gasp, but I was somewhat braced for it: high up, a cruciform shape, somewhat like a bird gliding, but much larger and clearly artificial. A flying machine

I knew that flying machines were impossible; in engineering school I had studied Professor Simon Newcomb's well-known mathematical proof that the efforts of Professor Langley and others to build an aerodyne capable of carrying a man were doomed, useless, because scale theory proved that no such contraption large enough to carry a man could carry a heat-energy plant large enough to lift it off the ground - much less a passenger.

That was science's final word on a folly and it put a stop to wasting public monies on a will-o'-the-wisp. Research and development money went into airships, where it belonged, with enormous success.

However, in the past few days I had gained a new angle on the idea of 'impossible'. When a veritable flying machine showed up in our sky, I was not greatly surprised.

I think Margrethe held her breath until it passed over us and was far toward the horizon. I started to, then forced myself to breathe calmly - it was such a beautiful thing, silvery and sleek and fast. I could not judge its size, but if those dark spots in its side were windows, then it was enormous.

I could not see what pushed it along.

'Alec... is that an airship?'

'No. At least it is not what I meant when I told you about airships. This I would call a "flying machine ".'That's all I can say; I've never seen one before. But I can tell you -one thing, now - something very important.'

'Yes?'

'We are not going to die... and I now know why the ship was sunk.'

'Why, Alec?'

'To keep me from checking a thumbprint.'

Chapter 9

For I was an hungred, and ye gave me meat:
I was thirsty, and ye gave me drink:
I was a stranger, and ye took me in.
Matthew 25:35

'OR, TO put it more nearly exactly, the iceberg was there and the collision took place to keep me from checking my thumbprint against the thumbprint on Graham's driver's license. The ship may not have sunk; that may not have been necessary to the scheme.'

Margrethe did not say anything.

So I added gently, 'Go ahead, dear; say it. Get it off your chest; I won't mind. I'm crazy. Paranoid.'

'Alec, I did not say that. I did not think it. I would not.'

'No, you did not say it. But this time my aberration cannot be explained away as "loss of memory". That is, if we saw the same thing. What did you see?'

'I saw something strange in the sky. I heard it, too. You told me that it was a flying machine.'

'Well, I think that is what it should be called - but you can call it a, uh, a "gumpersaggle" for all of me. Something new and strange. What is this gumpersaggle? Describe it.'

'It was something moving in the sky. It came from back that way, then passed almost over us, and disappeared there.' (She pointed, a direction I had decided, was north.) 'It was shaped something like a cross, a crucifix. The crosspiece had bumps on it, four I think. The front end had eyes like a whale and the back end had flukes like a whale. A whale with wings - t hat's what it looked like, Alec; a whale flying through the sky!'

'You thought it was alive?'

'Uh, I don't know. I don't think so. I don't know what to think.'

'I don't think it was alive; I think it was a machine. A flying machine. A boat with wings on it. But, either way - a machine or a flying whale - have you- ever in your life seen anything like it?'

'Alec, it was so strange that I have trouble believing that I saw it.'

'I know. But you saw it first and pointed it out to me so I didn't trick you into thinking that you saw it.'

' You wouldn't do that.'

'No, I would not. But I'm glad you saw it first, dearest girl; that means it's real - not something dreamed up in my fevered brain. That thing did not come from the world you are used to... and I can promise you that it is not one of the airships I talked about; it is not from the world I grew up in. So we're now in still a third world.' I sighed. 'The first

time it took a twenty-thousand-ton ocean liner to prove to me that I had changed worlds. This time just one sight of something that simply could not exist in my world is all I need to know that they are at it again. They shifted worlds when I was knocked out - I think that's when they did it. As may be, I think they did it to keep me from checking that thumbprint. Paranoia. The delusion that the whole world is a conspiracy. Only it's not a delusion.'

I watched her eyes. 'Well?'

'Alec ... could it possibly be that both of us imagined it? Delirious, perhaps? We've both had a rough experience - you hit your head; I may have hit mine when the iceberg struck.'

'Margrethe, we would not each have the same delirium dream. If you wake up and find that I'm gone, that could be your answer. But I'm not gone; I'm right here. Besides, you would still have to account for an iceberg as far south as we are. Paranoia is a simpler explanation. But the conspiracy is aimed at me; you just had the misfortune to be caught in it. I'm sorry.' (I wasn't really sorry. A raft in the middle of the ocean is no- place to be alone. But with Margrethe it was 'paradise enow.')

'I still think that sharing the same dream is - Alec, there it comes again!' She pointed.

I didn't see anything at first, then I did: A dot that grew into a cruciform shape, a shape that I now identified as 'flying machine'. I watched it grow.

'Margrethe, it must have turned around. Maybe it saw us. Or they saw us. Or he saw us. Whatever.'

'Perhaps.'

As it came closer I saw that it was going to pass to our right rather than overhead. Margrethe said suddenly, 'It's not the same. one.'

'And it's not a flying whale - unless flying whales hereabouts have wide red stripes down their sides.'

'It's not a whale. I mean "it's not alive". You are right,

Alec; it is a machine. Dear, do you really think it has people inside it? That scares me.'

'I think I would be more scared if it did not have people inside it.' (I remembered a fantastic story translated from the German about a world peopled by nothing but automatic machines - not a pleasant story.) 'Actually, it's good news. We both know now that our seeing the first one was not a dream, not an illusion. That nails down the fact that we are in another world. Therefore we are going to be rescued.'

She said hesitantly, 'I don't quite follow that.'

'That's because you are still trying to avoid calling me paranoid - and thank you, dear, but my being paranoid is the simplest hypothesis. If the joker pulling the strings had intended to kill me, the easy time to do it would have been with the iceberg. Or earlier, with the fire pit. But he 's not out to kill me, at least not now. He's playing with me, cat and mouse. So I'll be rescued. So will you, because we're together. You were with me when the iceberg hit - your bad luck. You're still with me now, so you'll be rescued,your good luck. Don't fight it, dear. I've had some days to get used to it, and I find that it is all right once you relax. Paranoia is the only rational approach to a conspiracy world.'

'But, Alec, the world ought not to he that way,'

'There is no "ought" to it, my love. The essence of philosophy is to accept the universe as it-is, rather than ,try to force it into some preconceived shape.' I added, 'Wups! Don't roll off. You don't want to be a snack for a shark just after we've had proof that we are going to be picked up!'

For the next hour or so nothing happened - unless you count sighting two regal sailfish. The overcast burned away and I began to be anxious for an early rescue; I figured they owed me that much! Not let me get a third-degree sunburn. Margrethe might be able to take a bit more sun than I; she was blonde but she was tanned a warm toast color all over - lovely! But I was raw frog-belly white except for my face and hands - a full day of tropic sun could put me into hospital. Or worse.

The eastern horizon now seemed to show a gray unevenness that could be mountains - or so I kept telling myself, although there isn't much you can see when your viewpoint is about seven inches above water line. If those were indeed mountains or hills, then land was not many miles away. Boats from Mazatlán should be in sight any time now... if Mazatlán was still there in this world. If -

Then another flying machine showed up.

It was only vaguely like the other two. They had been flying parallel to the coast; the first from the south, the second from the north. This machine came out from the direction of the coast, flying mostly 'West, although it zigzagged.

It passed north of us, then turned back and circled around us. It came low enough that I could see that it did indeed have men in it, two I thought.

Its shape is hard to explain. Imagine first a giant box kite, about forty feet long, four feet wide, and about three feet between two kite surfaces.

Imagine this box kite placed at right angles to a boat shape, somewhat, like an Esquimau's kayak but larger, much larger - about as large as the box kite.

Underneath all this are two more kayak shapes, smaller, parallel to the main shape.

At one end of this shape is an engine (as I saw later) and at the front end of that is an air propeller, like a ship's water propeller -and this I saw later, also. When I first saw this unbelievable structure, the air screw was turning so extremely fast that one simply could not see it. But one could hear it! The noise made by this contraption was deafening and never stopped.

The machine turned toward us and tilted down so that it headed straight toward us - like nothing so much as a pelican gliding down to scoop up fish.

With us the fish. It was frightening. To me, at least; Margrethe never let out a peep. But she did squeeze my fingers very hard. The mere fact that we were not fish and that a machine could not eat us and would not want to did not make this dive at us less terrifying.

Despite my fright (or because of it) I now saw that this construction was at least twice as big as I had estimated when I saw it high in the sky. It had two teamsters operating it, seated side by side behind a window in the front end. The driving engine turned out to be two, mounted between the box-kite wings, one on the right of the teamsters' position, one on the left.

At the very last instant the machine lifted like a horse taking a hurdle, and barely missed us. The blast of win ' d it created almost knocked us off our raft and the blast of sound caused my ears to ring.

It went a little higher, curved back toward us, glided again but not quite toward us. The lower twin kayak shapes touched the water, creating a brave comet's tail of spume - and the thing slowed and stopped and stayed there, on the water, and did not sink!

Now the air screws moved very slowly and I saw them for the first time ... and admired the engineering ingenuity that had gone into them. Not as efficient, I suspected, as the ducted air screws used in our dirigible airships, but an elegant solution to a problem in a place where ducting would be difficult or perhaps impossible.

But those infernally noisy driving engines! How any engineer could accept that, I could not see. As one of my professors said (back before thermodynamics convinced me that I had a call for the ministry), noise is always a byproduct of inefficiency. A correctly designed engine is as silent as the grave.

The machine turned and came at us again, moving very slowly. Its teamsters handled it so that it missed us by a few feet and almost stopped. One of the two, inside it crawled out of the carriage space behind the window and was clinging by his left hand to one of the stanchions that held the two box-kite wings apart. His other hand held a coiled line.

As the flying machine passed us, he cast the line toward us. I snatched at it, got a hand on it, and did not myself go into the water because Margrethe snatched at me.

I handed the line to Margrethe. 'Let him pull you in. I'll slide into the water and be right behind you.'

'No!'

'What do you mean, "No"? This is no time to argue. Do it!'

'Alec, be quiet! He's trying to tell us something.'

I shut up, more than a little offended. Margrethe listened. (No point in my listening; my Spanish is limited to 'Gracias' and 'Por favor'. Instead I read the lettering on the side of the machine: EL GUARDA COSTAS REAL DEMEXICO.)

'Alec, he is warning us to be very careful. Sharks.'

'Ouch.'

'Yes. We are to stay where we are. He will pull gently on this rope. I think he means to get us into his machine without us going into the water.'

'A man after my own heart!'

We tried it; it did not work. A breeze had sprung up; it had much more effect on the flying machine than it had on us - that water-soaked sunbathing pad was practically nailed down, no sail area at all. Instead of being able to ,pull us to the flying machine, the man on the other end of the line was forced to let out more line to keep from pulling us off into the water.

He called out something; Margrethe answered. They shouted back and forth. She turned to me. 'He says to let loose the rope. They will go out and come back, this time directly at us, but slowly. As they come closest, we are to try to scramble up into the aeroplano. The machine.'

'All right.'

The machine left us, went out oil the water and curved back. While waiting, we were not bored; we had the dorsal fin of a huge shark to entertain us. It did not attack; apparently it had not made up its mind (what mind?) that we were good to eat. I suppose it saw only the underside of the kapok pad.

The flying machine headed directly toward us on the' water, looking like some monstrous dragonfly skimming the surface. I said, 'Darling, as it gets closest, you dive for the stanchion closest to you and I'll push you up. Then I'll come up behind you.'

'No, Alec.'

'What do you mean, "No"?' I was vexed. Margrethe was such a good comrade - then suddenly so stubborn. At the wrong time.

'You can't push me; you have no foundation to push from. And you can't stand up; you can't even sit up. Uh, you scramble to the right; I'll scramble to the left. If either of us misses, then back onto the pad - fast! The aeroplano will come around again.'

'But

'That's how he said to do it.'

There was no time left; the machine was almost on top of us. The 'legs' or stanchions joining the lower twin shapes to the body of the machine bridged the pad, one just missing me and the other just missing Margrethe. 'Now!' she cried. I lunged toward my side, got a hand on a stanchion.

And almost jerked my right arm out by the roots but I kept on moving, monkey fashion - got both hands on that undercarriage got a foot up on a horizontal kayak shape, turned my head.

Saw a hand reaching down to Margrethe - she climbed and was lifted onto the kite wing above, and disappeared. I turned to climb up my side - and suddenly levitated up and onto the wing. I do not ordinarily levitate but this time I had incentive: a dirty white fin too big for any decent fish, cutting the water right toward my foot.

I found myself alongside the little carriage house from which the teamsters directed 'their strange craft. The second man (not the one who had climbed out to help) stuck his head out a window, grinned at me, reached back and opened a little door. I crawled inside, head first. Margrethe was already there.

The space had four seats, two in front where the teamsters sat, and two behind where we were.

The teamster on my side looked around and said something, and continued - I noticed! - to look at Margrethe. Certainly she was naked, but that was not her fault, and a gentleman would not stare.

'He says,' Margrethe explained, 'that we must fasten our belts. I think he means this.' She held up a buckle on the end of a belt, the other end being secured to the frame of the carriage.

I discovered that I was sitting on a similar buckle, which was digging a hole into my sunburned backside. I hadn't noticed it up to then, too many other things demanding attention. (Why didn't he keep his eyes to himself! I felt myself ready to shout at him.

That he had, at great peril to himself, just saved her life and mine did not that moment occur to me; I was simply growing furious that he would take such advantage of a helpless lady.)

I turned my attention to that pesky belt and tried to ignore it. He spoke to the other man beside him, who responded enthusiastically. Margrethe interrupted the discussion. 'What are they saying?' I demanded.

'The poor man is about to give me the shirt off his back. I am protesting... but I'm not protesting so hard as to put a stop to it. It's very gallant of them, dear, and, while I'm not foolish about it, I do feel more at ease among strangers with some sort of clothing.' She listened, and added, 'They're arguing as to which one has the privilege.'

I shut up. In my mind I apologized to them. I'll bet even the Pope in Rome has sneaked a quick look a time or two in his life.

The one on the right apparently won the argument. He squirmed around in his seat - he could not stand up - and got his shirt off, turned and passed it back to Margrethe. 'Señorita. Por favor.' He added other remarks but they were beyond my knowledge.

Margrethe replied with dignity and grace, and chatted with them as she wiggled into his shirt. It covered her mostly. She turned to me. 'Dear, the commander is Teniente Anibal Sanz Garcia and his assistant is Sargento Roberto Dominguez Jones, both of the Royal Mexican Coast Guard. Both the Lieutenant and the Sergeant wanted to give me a shirt, but the Sergeant won a finger-guessing game, so I have his shirt.'

'It's mighty generous of him. Ask them if there is anything at all in the machine that I can wear.'

'I'll try.' She spoke several phrases; I heard my name. Then she shifted back to English. 'Gentlemen, I have the honor to present my husband, Sefior Alexandro Graham Hergensheimer.' She shifted back to Spanish.

Shortly she was answered. 'The Lieutenant is devastated to admit that they have nothing to offer you. But he promises on his mother's honor that something will be found for you just as quickly as we reach Mazatlán and the Coast Guard headquarters there. Now he urges both of us to fasten our belts. tightly as we are about to fly.. Alec, I'm scared!'

'Don't be. I'll hold your hand.'

Sergeant Dominguez turned around again, held up a canteen. 'Agua?'

'Goodness, yes!' agreed Margrethe. 'Sí sí sí!'

Water has never tasted so good.

The Lieutenant. looked around when we returned the canteen, gave a bigsmile and a thumbs-up sign old as the Colosseum, and did something that speeded up his driving engines. They had been turning over very slowly; now -they speeded up to a horrible racket. The machine turned as he headed it straight into the wind. The wind had been freshening all morning; now it showed little curls of white on the tops of the wavelets. He speeded his engines still more, to an unbelievable violence, and we went bouncing over the water, shaking everything.

Then we started hitting about every tenth wave with incredible force. I don't know why we weren't wrecked.

Suddenly we were twenty feet off the water; the bumping stopped. The vibration and the noise continued. We climbed at a sharp angle - and turned and started down again, and I almost-not-quite threw up that welcome drink of water.

The ocean was right in front of us, a solid wall. The Lieutenant turned his head and shouted something.

I wanted to tell him to keep his eyes on the road! - but I did not. 'What does he say?'

'He says to look where he points. He'll point us right at it. EI tiburón blanco grande - the great white shark that almost got us.'

(I could have done without it.) Sure enough, right in the middle of this wall of water was a gray ghost with a fin cutting the water. Just when I knew that we were going to splash right down on top of it, the wall tilted away from us, my buttocks were forced down hard against the seat, my ears roared, and I again missed throwing up on our host only by iron will.

The machine leveled off and suddenly the ride was almost comfortable, aside from the racket and the vibration.

Airships are ever so much nicer.

The rugged hills behind the shoreline, so hard to see from our raft, were clearly in sight once we were in the air, and so was the shore - a series of beautiful beaches and a town where we were headed. The Sergeant looked around, pointed down a I t the town, and spoke. 'What did he say?'

'Sergeant Roberto says that we are home just in time for lunch. Almuerzo, he said, but notes that it's breakfast - desayuno - for us.'

My stomach suddenly decided to stay awhile. 'I don't care what he calls it. Tell him not to bother to cook the horse; I'll eat it raw.'

Margrethe translated; both our hosts laughed, then the Lieutenant proceeded to swoop down and place 'his machine on the water while looking back over his shoulder to talk to Margrethe - who continued to smile while she drove her nails through the palm of my right hand.

We got down. No one was killed. But airships are much better.

Lunch! Everything was coming up roses.

Chapter 10

In the sweat of thy face shalt thou eat bread,
till thou return unto the ground -
Genesis 3:19

A HALF hour after the flying machine splashed down in the harbor of Mazatlán Margrethe and I were seated with Sergeant Dominguez in the enlisted men's mess of the Coast Guard. We were late for the midday meal but we were served. And I was clothed. Some at least - a pair of dungaree trousers. But the difference between bare naked and a pair of pants is far greater than the difference between cheap work trousers and the finest-ermine. Try it and you'll see.

A small boat had come out to the flying machine's mooring; then I had to walk across the dock where we had landed and into the headquarters building, there to wait until these pants could be found for me - with strangers staring at me the whole time, some of them women. I know now how it feels to be exposed in stocks. Dreadful! I haven't been so embarrassed since an unfortunate accident in Sunday school when I was five.

But now it was done with and there was food and drink in front of us and, for the time being, I was abundantly happy. The food was not what I was used to. Who said that hunger was the best sauce? Whoever he was, he was right; our lunch was delicious. Thin cornmeal pancakes soaked with gravy fried beans, a scorching hot stew, a bowl of little yellow tomatoes, and coffee strong, black, and bitter - what more could a man want? No gourmet ever savored a meal as much as I enjoyed that one.

(At first I had been a bit miffed that we ate in the enlisted men's mess rather than going with Lieutenant Sanz to wherever the officers ate. Much later I had it pointed out to me that I suffered from a very common civilian syndrome, i.e., a civilian with no military experience unconsciously equates his social position with that of officers, never with that of enlisted men. On examination this notion is obviously ridiculous - but it is almost universal. Oh, perhaps not universal but it obtains throughout America... where every man is 'as, good as anyone else and better than most'.)

Sergeant Dominguez now had his shirt back. While pants were being found for me, a woman - a charwoman, I believe; the Mexican Coast Guard did not seem to have female

ratings - a woman at headquarters had been sent to fetch something for Margrethe, and that something turned out to be a blouse and a full skirt, each of cotton and in bright colors. A simple and obviously cheap costume but Margrethe looked beautiful in it.

As yet, neither of us had shoes. No matter - the weather was warm and dry; shoes could wait. We were fed, we were dressed, we were safe - and all with a warm hospitality that caused me to feel that Mexicans were the finest people on earth.

After my second cup of coffee I said, 'Sweetheart, how do we excuse ourselves and leave without being rude? I think we should find the American consul as early as possible.'

'We have to go back to the headquarters building.'

'More red tape?'

'I suppose you could call it that. I think they want to question us in more detail as to how we came to be where we were found. One must admit that our story is odd.'

'I suppose so.' Our initial interview with the Commandant had been less than satisfactory. Had I been alone I think he simply would have called me a liar... but it is difficult for a male man bursting with masculine ego to talk that way to Margrethe.

The trouble was the good ship Konge Knut.

She had not sunk, she had not come into port - she had never existed.

I was only moderately surprised. Had she turned into a full-rigged ship or a quinquereme, I would not have been surprised. But I had expected some sort of vessel of that same name - I thought the rules required it. But now it was becoming clear that I did not understand the rules. If there were any.

Margrethe had pointed out to me a confirming factor: This Mazatlán was not the town she had visited before. This one was much smaller and was not a tourist town indeed the long dock where the Konge Knut should have tied up did not exist in this world. I think that this convinced her quite as much as the flying machines in proving to her that my 'paranoia' was in fact the least hypothesis. She had been here before; that dock was big and solid; it was gone. It shook her.

The Commandant had not been impressed. He spent more time questioning Lieutenant Sanz than he spent questioning us. He did not seem pleased with Sanz.

There was another factor that I did not understand at the time and have never fully understood. Sanz's boss was 'Captain' (or 'Capitán'); the Commandant also was 'Captain'. But they were not the same rank.

The Coast Guard used navy ranks. However, that small part of it that operated flying machines used army ranks. I think this trivial difference had an historical origin. As may be, there was friction at the interface; the four-stripes or seagoing Captain was not disposed to accept as gospel anything reported by a flying-machine officer.

Lieutenant Sanz had fetched in, two naked survivors with a preposterous story; the four-striper seemed inclined to blame Sanz himself for the unbelievable aspects of our story.

Sanz was not intimidated. I think he had no real respect for an officer who had never been higher off the water than a crow's nest. (Having ridden in his death trap, I understood why he was not inclined to genuflect to a sea-level type. Even among dirigible balloon pilots I have encountered this tendency to divide the world into those who fly and those who do not)

After a bit, finding himself unable to shake Sanz, unable to shake Margrethe, and unable to communicate with me except through Margrethe, the Commandant shrugged and gave instructions that resulted in us all going to lunch. I thought that ended it. But now we were going back for more, whatever it was.

Our second session with the Commandant was short. He told us that we would see the immigration judge at four that afternoon - the court with that jurisdiction; there was no separate immigration court. In the meantime here was a list of what we owed - arrange payment with the judge.

Margrethe looked startled as she accepted a piece of paper from him; I demanded to know what he had said.

She translated; I looked at that billing.

More than eight thousand pesos!

It did not take a deep knowledge of Spanish to read that bill; almost all the words were cognates. 'Tres horas' is three hours, and we were charged for three hours' use of I aeroplano'- a word I had heard earlier from Margrethe; it meant their flying machine. We were charged also for the time of Lieutenant Sanz and Sergeant Dominguez. Plus a 'multiplying factor that I decided must mean applied overhead, or near enough.

And there was fuel for the aeroplano, and service for it.

'Trousers' are 'pantalones'- and here was a bill for the pair I was wearing.

A 'faldo' was a skirt and a 'camisa' was a blouse - and Margrethe's outfit was decidedly not cheap.

One item surprised me not by its price but by being included; I had thought we were guests: two lunches, each at twelve pesos.

There was even a separate charge for the Commandant's time.

I started to ask how much eight thousand pesos came to in dollars - then shut up, realizing that I had not the slightest idea of the buying power of a dollar in this new world we had been dumped into.

Margrethe discussed the billing with Lieutenant Sartz, who looked embarrassed. There was much expostulation and waving of hands. She listened, then told me, 'Alec, it isn't Anibal's idea and it is not even the fault of the Commandant. The tariffs on these services - rescue at sea, use of the aeroplano, and so forth - are set from el Distrito Real, the Royal District - that's the same as Mexico City, I believe. Lieutenant Sanz tells me that there is an economy drive on at the top level, with great pressure on everyone to make all public services self-supporting. He says that, if the Commandant did not charge us for our rescue and the Inspector Royal ever found out about it, it would be deducted from the Commandant's pay. Plus whatever punitive measures a royal commission found appropriate. And Anibal wants you to know that he is devastated at this embarrassing situation. If he owned the aeroplano himself, we would simply be his guests. He will always look on you as his brother and me as his sister.'

'Tell him I feel the same way about him and please make it at least as flowery as he made it.'

'I will. And Roberto wants to be included.'

'And the same goes for the Sergeant. But find out where and how to get to the American consul. We've got troubles.'

Lieutenant Anibal Sanz was told to see to it that we appeared in court at four o'clock; with that we were dismissed. Sanz delegated Sergeant Roberto to escort us to the consul and back, expressed regret that his duty status kept him from escorting us personally - clicked his heels, bowed over Margrethe's hand, and, kissed it. He got a lot of mileage out of that simple gesture; I could see that Margrethe was pleased. But they don't teach that grace in Kansas. My loss.

Mazatlán is on a peninsula; the Coast Guard station is on the south shore not far from the lighthouse (tallest in the world -impressive!); the American consulate is about a mile away across town at the north shore, straight down Avenida Miguel Alemán its entire length - a pleasant walk, graced about halfway by a lovely fountain.

But Margrethe and I were barefooted.

Sergeant Dominguez did not suggest a taxi - and I could not.

At first being barefooted did not seem important. There were other bare feet on that boulevard and by no means all of them on children. (Nor did I have the only bare chest.)

As a youngster I had regarded bare feet as a luxury, a privilege. I went barefooted all summer and put on shoes most reluctantly when school opened.

After the first block I was wondering why, as a kid, I had always looked forward to going barefooted. Shortly thereafter I asked Margrethe to ask Sergeant Roberto, please, to slow down and let me pick my way for maximum shade; this pesky sidewalk is frying my feet!

(Margrethe had not complained and did not - and I was a bit vexed with her that she had not. I benefited constantly from Margrethe's angelic fortitude---and found it hard to live up to.)

From there on I gave my full attention to pampering my poor, abused, tender pink feet. I felt sorry for myself and wondered why I had ever left God's country.

'I wept that I had no shoes, until I met a man who had no feet.' I don't know who said that first, but it is part of our cultural heritage and should be.

It happened to me.

Not quite halfway, where Miguel Alemán crosses Calle Aquiles Serdan at the fountain, we encountered a street beggar. He looked up at us and grinned, held up a handful of pencils -'looked up' because he was riding a little wheeled dolly; he had no feet.

Sergeant Roberto called him by name and flipped him a coin; the beggar caught it in his teeth, flipped it into his pocket, called out, 'Gracias!'- and turned his attention to me.

I said quickly, 'Margrethe, will you please explain to him that I have no money whatever.'

'Yes, Alec.' She squatted down, spoke with him eye to Eye. Then she straightened up. 'Pepe says, to tell you, that's all right; he'll catch you someday when you are rich.'

'Please tell him that I will be back. I promise.'

She did so. Pepe grinned at me, threw Margrethe a kiss, and saluted the Sergeant and me. We went on.

And I stopped being so finicky careful to coddle my feet. Pepe had forced me to reassess my situation. Ever since I had learned that the Mexican government did not regard rescuing me as a privilege but expected me to pay for it, I had been feeling sorry for myself, abused, put upon. I had been muttering to myself that my compatriots who complained that all Mexicans were bloodsuckers, living on gringo tourists, were dead right! Not Roberto and the Lieutenant, of course - but the others. Lazy parasites, all of them! with their hands out for the Yankee dollar.

Like Pepe.

I reviewed in my mind all the Mexicans I had met that day, each one I could remember, and asked forgiveness for my snide thoughts. Mexicans were simply fellow travelers on that long journey from dark to eternal darkness. Some carried their burdens well, some did not. And some carried very heavy burdens with gallantry and grace. Like Pepe.

Yesterday I had been living in luxury; today I was broke and in debt. But I have my health, I have my brain, I have my two hands - and I have Margrethe. My burdens were light; I should carry them joyfully. Thank you, Pepe!

The door of the consulate had a small American flag over it and the Great Seal in bronze on it. I pulled the bell wire beside it.

After a considerable wait the door opened a crack and a female voice told us to go away (I needed no translation; her meaning was clear). The door started to close. Sergeant Roberto whistled loudly and called out. The crack widened; a dialogue ensued. Margrethe said, 'He's telling her to tell Don Ambrosio that two American citizens are here who must see him at once because they must appear in court at four this afternoon.'

Again we waited. After about twenty minutes the maid let us in and ushered us into a dark office. The consul came in Y fixed my eye with his, and demanded to know how I dared to interrupt his siesta?

Then he caught sight of Margrethe and slowed down. To her it was: 'How can I serve you? In the meantime will you honor my poor house by accepting a glass of wine? Or a cup of coffee?'

Barefooted and in a garish dress, Margrethe was a lady - I was riffraff. Don't ask me why this was so; it just was. The effect was most marked with men. But it worked with women, too. Try to rationalize it and you find yourself using words like 'royal', 'noble', 'gentry', and 'to the manner born' - all involving concepts anathema to the American democratic ideal. Whether this proves something about Margrethe or something about the democratic ideal I will leave as an exercise for the student.

Don Ambrosio was a pompous zero but nevertheless he was a relief because he spoke American - real American, not English; he had been born in Brownsville, Texas. I feel certain that the backs of his parents were wet. He had parlayed a talent for politics among his fellow Chicanos into a cushy sinecure, telling gringo travelers in the land of Montezuma why they could not have what they desperately needed.

Which he eventually told us.

I let Margrethe do most of the talking because she was obviously so much more successful at it than I was. She called us 'Mr and Mrs Graham' - we had agreed on that name during the walk here. When we were rescued, she had used 'Grahain Hergensheimer' and had explained to me later that this let me choose: I could select 'Hergensheimer' simply by asserting that the listener's memory had had a minor bobble;

the name had been offered as 'Hergensheimer Graham. No? Well, then I must have miscalled it - sorry.

I let it stay 'Graham Hergensheimer' and thereby used the name 'Graham' in order to keep things simple; to her I had always been 'Graham' and I had been using the name myself for almost two weeks. Before I got out of the consulate I had told a dozen more lies, trying to keep our story believable. I did not want unnecessary complication; 'Mr and Mrs Alec Graham' was easiest.

(Minor theological note: Many people seem to believe that the Ten Commandments forbid lying. Not at all! The prohibition is against bearing false witness against your neighbor - a specific, limited, and despicable sort of lie. But there is no Biblical rule forbidding simple untruth. Many theologians believe that no human social organization could stand up under the strain of absolute honesty. If you think their misgivings are unfounded, try telling your friends the ungarnished truth about what you think of their offspring - if you dare risk it.)

After endless repetitions (in which the Konge Knut shrank and became our private cruiser) Don Ambrosio said to me, 'It's no use, Mr Graham. I cannot issue you even a temporary document to substitute for your lost passport because you have offered me not one shred of proof that you are an American citizen.'

I answered, 'Don Ambrosio, I am astonished. I know that Mrs Graham has a slight accent; we told you that she was born in Denmark. But do you honestly think that anyone not born amidst the tall corn could possibly have my accent?'

He gave a most Latin. shrug. 'I'm not an expert in midwest accents. To my ear you could have been born to one of the harsher British accents, then have gone on the stage - and everybody knows that a competent actor can acquire the accent for any role. The People's Republic of England goes to any length these days to plant their sleepers in the States; you might be from Lincoln, England, rather than from somewhere near Lincoln, Nebraska.'

'Do you really believe that?'

'What I believe is not the question. The fact is that I will not sign a piece of paper saying that you are an

American citizen when I don't know that you are. I'm sorry. Is there anything more that I can do for you?'

(How can you do 'more' for me when you haven't done anything yet?) 'Possibly you can advise us.'

'Possibly. I am not a lawyer.'

I offered him our copy of the billing against us, explained it. 'Is this in order and are these charges appropriate?'

He looked it over. 'These charges are certainly legal both by their laws and ours. Appropriate? Didn't you tell me that they saved your lives?'

'No question about it. Oh, there's an outside chance that a fishing boat might have picked us up if the Coast Guard had not found us. But the Coast Guard did find us and did save us.'

'Is your life - your two lives - worth less than eight thousand pesos? Mine is worth considerably more, I assure you.'

'It isn't that, sir. We have no money, not a cent. It all went down with the boat.'

'So send for money. You can have it sent care of the consulate. I'll go that far.'

'Thank you. It will take time. In the meantime how can I get them off my neck? I was told that this judge will want cash and immediately.'

'Oh, it's not that bad. It's true that they don't permit bankruptcy the way we do, and they do have a rather old-fashioned debtors-prison law. But they don't use it just the threat of it. Instead the court will see that you get a job that will let you settle your indebtedness. Don Clemente is a humane judge; he will take care of you.'

Aside from the flowery nonsense directed at Margrethe, that ended it. We picked up Sergeant Roberto, who had been enjoying backstairs hospitality from the maid and the cook, and headed for the courthouse.

Don Clemente (Judge Ibafiez) was as pleasant as Don Ambrosio had said he would be. Since we informed the clerk at once that we stipulated the debt but did not have the cash to pay it, there was no trial. We were simply seated in the uncrowded courtroom and told to wait while the judge disposed of cases on his docket. He handled several quickly. Some were minor offenses drawing fines; some were debt cases; some were hearings for later trial. I could not tell much about what was going on and whispering was frowned on, so Margrethe could not tell me much. But he was certainly no hanging judge.

The cases at hand were finished; at a word from the clerk we went out back with the 'miscreants' - peasants, mostly - who owed fines or debts. We found ourselves lined up on a low platform, facing a group of men. Margrethe asked what this was - and was answered, 'La subasta.'

'What's that?' I asked her.

'Alec, I'm not sure. It's not a word I know.'

Settlements were made quickly on the others; I gathered that most of them had been there before. Then there was just one man left of the group off the platform, just us on the platform. The man remaining looked sleekly prosperous. He smiled and spoke to me. Margrethe answered.

'What is he saying?' I asked.

'He asked you if you can wash dishes. I told him that you do not speak Spanish.'

'Tell him that of course I can wash dishes. But that's hardly a job I want.'

Five minutes later our debt had been paid, in cash, to the clerk of the court, and we had acquired a patrón, Sehor Jaime Valera Guzman. He paid sixty pesos a day for Margrethe, thirty for me, plus our found. Court costs were twenty-five hundred pesos, plus fees for two non-resident work permits, plus war-tax stamps. The clerk figured our total indebtedness, then divided it out for us: In only a hundred and twenty-one days - four months - our obligation to our patr6n would be discharged. Unless, of course, we spent some money during that time.

He also directed us to our patrón's place of business, Restaurante Pancho. Villa. Our patrón had already left in his private car. Patrones ride; peones walk.

Chapter 11

And Jacob served seven years for Rachel;
and they seemed unto him but a few days,
for the love he had to her.
Genesis 29:20

SOMETIMES, WHILE washing dishes, I would amuse myself by calculating how high a stack of dishes I had washed since going to work for our patrón, Don Jaime. The ordinary plate used in Pancho Villa café stacked twenty plates to a foot. I arbitrarily decided that a cup and saucer, or two glasses, would count as one plate, since these items did not stack well. And so forth.

The great Mazatlán lighthouse is five hundred and fifteen feet tall, only forty feet shorter than the Washington Monument. I remember the day I completed my first 'lighthouse stack'. I had told Margrethe earlier that week that I was approaching my goal and expected to reach it by Thursday or early Friday.

And did so, Thursday evening - and left the scullery, stood in the door between the kitchen and the dining room, caught Margrethe's eye, raised my hands high and shook hands with myself like a pugilist.

Margrethe stopped what she was doing - taking orders from a family party - and applauded. This caused her to have to explain to her guests what was going on, and that resulted in her stopping by the scullery a few minutes later to pass to me a ten-peso note, a congratulatory gift from the father of that family. I asked her to thank him for me, and please tell him that I had just started my second lighthouse stack, which I was dedicating to him and his family.

Which in turn resulted in Señora Valera sending her husband, Don Jaime, to find out why Margrethe was wasting time and making a scene instead of paying attention to her work... which resulted in Don Jaime inquiring how much the diners had tipped me and then matching it.

The Señora had no reason to complain; Margrethe was not only her best waitress; she was her only bilingual waitress. The day we started to work for Sr y Sra Valera a sign painter was called in to paint a conspicuous sign: ENGLIS SPOKE HERE. Thereafter, in addition to being available for any English-speaking guests, Margrethe prepared menus in English (and the prices on the menus in English were about forty percent higher than the prices on the all-Spanish menus).

Don Jaime was not a bad boss. He was cheerful and, on the whole, kindly to his employees. When we had been there about a month he told me that he would not have bid in my debt had it not been that the judge would not permit my contract to be separated from Margrethe's contract, we being a married couple (else I could have found myself a field hand able to see my wife only on rare occasions - as Don Ambrosio had told me, Don Clemente was a humane judge).

I told him that I was happy that the package included me but it simply showed his good judgment to want to hire Margrethe.

He agreed that that was true. He had attended the Wednesday labor auctions several weeks on end in search of a bilingual woman or girl who could be trained as a waitress, then had bid me in as well to obtain Margrethe - but he wished to tell me that he had not regretted it as he had never seen the scullery so clean, the dishes so immaculate, the silverware so shiny.

I assured him that it was my happy privilege to help uphold the honor and prestige of Restaurante Pancho Villa and its distinguished patrón, el Don Jaime.

In fact it would have been difficult for me not to improve that scullery. When I took over, I thought at first that the floor was dirt. And so it was - you could have planted potatoes! - but under the filth, about a half inch down, was sound concrete. I cleaned and then kept it clean - my feet were still bare. Then I demanded roach powder.

Each morning I killed roaches and cleaned the floor. Each evening, just before quitting for the day, I sprinkled roach powder. It is impossible (I think) to conquer roaches, but it is possible to fight them to a draw, force them back and maintain a holding action.

As to the quality of my dishwashing, it could not be otherwise; my mother had a severe dirt phobia and, because of my placement in a large family, I washed or wiped dishes under her eye from age seven through thirteen (at which time I graduated through taking on a newspaper route that left me no time for dishwashing).

But just because I did it well, do not think I was enamored of dishwashing. It had bored me as a child; it bored me as a man.

Then why did I do it? Why didn't I run away?

Isn't that evident? Dishwashing kept me with Margrethe. Running away might be feasible for some debtors - I don't think much effort went into trying to track down and bring back debtors who disappeared some dark night - but running away was not feasible for a married couple, one of whom was a conspicuous blonde in a country in which any blonde, is always conspicuous and the other was a man who could not speak Spanish.

While we both worked hard - eleven to eleven each day except Tuesday, with a nominal two hours off for siesta and a half hour each for lunch and dinner - we had the other twelve hours each day to ourselves, plus all day 'Tuesday.

Niagara Falls never supplied a finer honeymoon. We had a tiny attic room at the back of the restaurant building. It was hot but we weren't there much in the heat of the day - by eleven at night it was comfortable no matter how hot the day had been. In Mazatlán most residents of our social class (zero!) did not have inside plumbing. But we worked and lived in a restaurant building; there was a flush toilet we shared with other employees during working hours and shared with no one the other twelve hours of each day. (There was also a Maw Jones out back, which I sometimes used during working hours - I don't think Margrethe ever used it.)

We had the use of a shower on the ground floor, -back to back with the employees' toilet, and the needs of the scullery were such that the building had a large water heater. Señora Valera scolded us regularly for using too much hot water ('Gas costs money!'); we listened in silence and went right on using whatever amount of hot water we needed.

Our patrón's contract with the state required him to supply us with food and shelter (and clothing, under the law, but I did not learn this until too late to matter), which is why we slept there, and of course we ate there - not the chef's specialties, but quite good food.

'Better is a dinner of herbs where love is, than a stalled ox and hatred therewith.' We had only ourselves; it was enough.

Margrethe, because she sometimes received tips, especially from gringos, was slowly accumulating cash money. We spent as little of this as possible - she bought shoes for each of us -and she saved against the day when we would be free of our peonage and able to go north. I had no illusions that the nation north of us was the land of my birth... but it

was this world's analog of it; English was spoken there and I was sure that its culture would have to be closer to what we had been used to.

Tips to Margrethe brought us into friction with Señora Valera the very first week. While Don Jaime was legally our patrõn, she owned the restaurant - or so we were told by Amanda the cook. Jaime Valera had once been head-waiter there and had married the owner's daughter. This made him permanent maitre d'hotel. When his father-in-law died, he became the owner in the eyes of the public. But his wife retained the purse strings and presided over the cash register.

(Perhaps I should add that he was 'Don Jaime' to us because he was our patrón; he was not a Don to the public.

The honorific 'Don' will not translate into English, but owning a restaurant does not make a man a Don - but, for example, being a judge does.)

The first time Margrethe was seen to receive a tip, the Señora told her to turn it over - at the end of each week she would receive her percentage.

Margrethe came straight to me in the scullery. 'Alec, what shall I do? Tips were my main income in the Konge Knut and no one ever asked me to share them. Can she do this to me?'

I told her not to turn her tips over to the Señora but to tell her that we would discuss it with her at the end of the day.

There is one advantage to being a peón: You don't get fired over a disagreement with your boss. Certainly we could be fired... but that would simply lose the Valeras some ten thousand pesos they had invested in us.

By the end of the day I knew exactly what to say and how to say it - how Margrethe must say it, as it was another month before I soaked up enough Spanish to maintain a minimum conversation:

'Sir and Madam, we do not understand this ruling about gifts to me. We want to see the judge and ask him what our contract requires.'

As I had suspected, they were not willing to see the judge about it. They were legally entitled to Margrethe's service but they had no claim on money given to her by a third party.

This did not end it. Señora Valera was so angry at being balked by a mere waitress that she had a sign posted: NO PROPINAS - NO TIPS, and the same notice was placed in the menus.

Peónes can't strike. But there were five other waitresses, two of them Amanda's daughters. The day Sefiora Valera ordered no tipping she found that she had just one waitress (Margrethe) and no one in the kitchen. She gave up. But I am sure she never forgave us.

Don Jaime treated us as employees; his wife treated us as slaves. Despite that old cliché about 'wage, slaves', there is a world of difference. Since we both tried hard to be faithful employees while paying off our debt but flatly refused to be slaves, we were bound to tangle with Señora Valera.

Shortly after the disagreement over tips Margrethe became convinced that the Señora was snooping in our bedroom. If true, there was no way to stop her; there was no lock for the door and she could enter our room without fear of being caught any day while we were working.

I gave some thought to boobytraps until Margrethe vetoed the idea. She simply thereafter kept her mo hey on her person. But it was a measure of what we thought of our 'patroness' that Margrethe considered it necessary to lake precautions against her stealing from us.

We did not let Señora Valera spoil our happiness. And we did not let our dubious status as a 'married' couple spoil our somewhat irregular honeymoon. Oh, I would have spoiled it because I always have had this unholy itch to analyze matters I really do not know how to analyze. But Margrethe is much more practical than I am and simply did not permit it. I tried to rationalize our relationship to her by pointing out that polygamy was not forbidden by Holy Writ but solely by modern law and custom - and she chopped me off briskly by saying that she had no interest in how many wives or concubines King Solomon had and did not regard him or any Old Testament character as a model for her own behavior. If I did not want to live with her, speak up! Say so!

I shut up. Some problems are best let be, not chewed over with words. This modern compulsion to 'talk it out' is a mistake at least as often as it is a solution.

But her disdain for Biblical authority concerning the legality of one man having two wives was so sharp that I asked her about it later - not about polygamy; I stayed away from that touchy subject; I asked her how she felt about the authority of Holy Writ in general. I explained that the church I was brought up in believed in strict interpretation - 'A whole Bible, not a Bible full of holes' - Scripture was the literal word of God... but that I knew that other churches felt that the spirit rather than the letter ruled... some being so liberal that they hardly bothered with the Bible. Yet all of them called themselves Christian.

'Margrethe my love, as deputy executive secretary of Churches United for Decency I was in daily contact with members of every Protestant sect in the country and in liaison association with many Roman Catholic clerics on matters where we could join in a united front. I learned that my own church did not have a monopoly on virtue. A man could be

awfully mixed up in religious fundamentals and still be a fine citizen and a devout Christian.'

I chuckled as I recalled something and went on, 'Or to put it in reverse, one of my Catholic friends, Father Mahaffey, told me that even I could squeeze into Heaven, because the Good. Lord in His infinite wisdom made allowances for the ignorance and wrongheadedness of Protestants.'

This conversation took place on a Tuesday, our day off, the one day a week the restaurant did not open, and in consequence we were on top of el Cerro de la Neveria Icebox Hill, but it sounds better in Spanish - and just finishing a picnic lunch. This hill was downtown, close to Pancho Villa café, but was a bucolic oasis; the citizens had followed the Spanish habit of turning hills into parks rather than building on them. A happy place -

'My dear, I would never try to proselytize you into my church. But I do want to know as much about you as possible. I find that I don't know much about churches in Denmark. Mostly Lutheran, I think - but does Denmark have its own established state church like some other European nations? Either way, which church is yours, and is it strict interpretationist or liberal - and again, either way, how do you feel about it? And remember what Father Mahaffey said - I agree with him. I don't think that my church has the only door into Heaven.'

I was lying stretched out; Margrethe was seated with her knees drawn up and holding them and was faced west, staring out to sea. This placed her with her face turned away from me. She did not answer my query. Presently I said gently, 'My dear, did you hear me?'

'I heard you.'

Again I waited, then added, 'If I have been prying where I should not pry, I'm sorry and I withdraw the question.'

'No. I knew that I would have to answer it some day. Alec, I am not a Christian.' She let go her knees, swung around, and looked me in the eye. 'You can have a divorce as simply as we married, just by telling me so. I won't fight it; I will go quietly away. But, Alec, when you told me that you loved me, then later when you told me that we were married in the eyes of God, you did not ask me my religion.'

'Margrethe.'

'Yes, Alec?'

'First, wash out your mouth. Then ask my pardon.'

'There may be enough wine left in the bottle to rinse out my mouth. But I cannot ask pardon for not telling you this. I would have answered truthfully at any time. You did not ask.'

'Wash out your mouth for talking about divorce. Ask my pardon for daring to think that I would ever divorce you under any circumstances whatever. If you are ever naughty enough, I may beat you. But I would never put you away. For richer, for poorer, in sickness and heath, now and forever. Woman, I love you! Get that through your head.'

Suddenly she was in my arms, weeping for only the second time, and I was doing the only thing possible, namely, kissing her.

I heard a cheer behind me and turned my head. We had had the top of the hill to ourselves, it being a work day for most people. But I found that we had an audience of two streetwise urchins, so young that sex was unclear. Catching my eye, one of them cheered again, then made loud kissing noises.

'Beat it!' I called out. 'Scram! Vaya con Dios! Is that what I wanted to say, Marga?'

She spoke to them and they did go away, after more high giggles. I needed the interruption. I had said to Margrethe what had to be said because she needed immediate reassurance after her silly, gallant speech. But nevertheless I was shaken to my depths.

I started to speak, then decided that I had said enough for one day. But Margrethe said nothing, too; the silence grew painful. I felt that matters could not be left so, balanced uncertainly on edge. 'What is your faith, dear one? Judaism? I do remember now that there are Jews in Denmark. Not all Danes are Lutheran.'

'Some Jews, yes. But barely one in a thousand. No, Alec. Uh - There are older Gods.'

'Older than Jehovah? Impossible.'

Margrethe said nothing - characteristically. If she disagreed, she usually said nothing. She seemed to have no interest in winning arguments, in which she must differ from 99 percent of the human race... many of whom appear willing to suffer any disaster rather than lose an argument.

So I found myself having to conduct both sides to keep the argument from dying through lack of nourishment. 'I retract that. I should not have said, "Impossible." I was speaking from the accepted chronology as given by Bishop Ussher. If one accepts his dating, then the world was created five thousand nine hundred and ninety-eight years ago this coming October. Of course that dating is not itself a matter of Holy Writ; Hales arrived at a different figure, uh, seven thousand four hundred and five, I think - I do better when I write figures down. And other scholars get slightly different answers.

'But they all agree that some four or five thousand years before Christ occurred the unique event, Creation. At that point Jehovah created the world and, in so doing, created time. Time cannot exist alone. As a corollary, nothing and no one and no god can be older than Jehovah, since Jehovah created time. You see?'

'I wish I'd kept quiet.'

'My dear! I am simply trying to have an intellectual discussion; I did not and do not and never do and never will intend to hurt you. I said that was the case by the orthodox way of dating. Clearly you are using another way. Will you explain it to me? - and not jump all over poor old Alex every time he opens his mouth? I was schooled as a minister in a church that emphasizes preaching; discussion comes as naturally to me as swimming does to fish. But now you preach and I'll listen. Tell me about these older gods.'

'You know of them. The oldest and greatest we celebrate tomorrow; the middle day of each week is his.'

'Today is Tuesday, tomorrow - Wednesday! Wotan! He is your God?'

'Odin. "Wotan" is a German distortion of Old Norse. Father Odin and his two brothers created the world. In the beginning there was void, nothing - then the rest of it reads much like Genesis, even to Adam and Eve - but called Askr and Embla rather than Adam and Eve.'

'Perhaps it is Genesis, Margrethe.'

'What do you mean, Alec?'

'The Bible is the Word of God, in particular the English translation known as the King James version because every word of that translation was sustained by prayer and the best efforts of the world's greatest scholars - any difference in opinion was taken directly to the Lord in prayer. So the King James Bible is the Word of God.

'But nowhere is it written that this can be the only Word of God. A sacred writing of another race at another time in another language can also be inspired history... if it is compatible with the Bible. And that is what you have just described, is it not?'

'Ah, just on Creation and on Adam and Eve, Alec. The chronology does not match at all. You said that the world was created about six thousand years ago?'

'About. Hales makes it longer. The Bible does not give dates; dating is a modern invention.'

'Even that longer time - Hales? - is much too short. A hundred thousand years would be more like it.'

I started to expostulate - after all, some things are just too much to be swallowed - then remembered that I had warned myself not to say anything that could cause Margrethe to shut up. 'Go on, dear. Do your religious writings tell what happened during all those millennia?'

'Almost all of it happened before writing was invented. Some was preserved in epic poems sung by skalds. But even that did not start until men learned to live in tribes and Odin taught them to sing. The longest period was ruled by the frost giants before mankind was more than wild animals, hunted for sport. But the real difference in the chronology is this, Alec. The Bible runs from Creation to Judgment Day, then Millennium - the Kingdom on Earth - then the War in Heaven and the end of the world. After that is the Heavenly City and Eternity - time has stopped. Is that correct?'

'Well, yes. A professional eschatologist would find that overly simplified but you have correctly described the main outlines. The details are given in Revelations - the Revelation of Saint John the Divine, I should say. Many prophets have witnessed the final things but Saint John is the only one with the complete story... because Christ Himself delivered the Revelation to John to stop the elect from being deceived by false prophets. Creation, the Fall from Grace, the long centuries of struggle and trial, then the final battle, followed by Judgment and the Kingdom. What does your faith say, my love?'

'The final battle we call Ragnarok rather than Armageddon -'

'I can't see that terminology matters.'

'Please, dear. The name does not matter but what happens does. In your Judgment Day the goats are separated from the sheep. The saved go to eternal bliss; the damned go to eternal punishment. Correct?'

'Correct - while noting for purposes of scientific accuracy that some authorities assert that, while bliss is eternal, God so loves, the world that even the damned may eventually be saved; no soul is utterly beyond redemption. Other theologians regard this as heresy - but it appeals to me; I have never liked the idea of eternal damnation. I'm a sentimentalist, my dear.'

'I know you are, Alec, and I love you for it. You should find the old religion appealing... as it does not have eternal damnation.'

'It does not?'

'No. At Ragnarok the world as we know it will be destroyed. But that is not the end. After a long time, a time of healing, a new universe will be created, one better and cleaner and free from the evils of this world. It too will last for countless millennia... until again the forces of evil and cold contend against the forces of goodness and light... and again there is a time of rest, followed by a new creation and another chance for men. Nothing is ever

finished, nothing is ever perfect, but over and over again the race of men gets another chance to do better than last time, ever and again without end.'

'And this you believe, Margrethe?'

'I find it easier to believe than the smugness of the saved and the desperate plight of the damned in the Christian faith. Jehovah is said to be all powerful. If this is true, then the poor damned souls in Hell are there because Jehovah planned it that way in every minute detail. Is this not so?'

I hesitated. The logical reconciliation of Omnipotence, Omniscience, and Omnibenevolence is the thorniest problem in theology, one causing even Jesuits to break their teeth. 'Margrethe, some of the mysteries of the Almighty are not easily explained. We mortals must accept Our Father's benevolent intention toward us, whether or not we understand His works.'

' Must a baby understand God's benevolent intention when his brains are dashed out against a rock? Does he then go straight to Hell, praising the Lord for His infinite Wisdom and Goodness?'

'Margrethe! What in the world are you talking about?'

I am talking about places in the Old Testament in which Jehovah gives direct orders to kill babies, sometimes ordering that they be killed by dashing them against rocks. See that Psalm that starts "By the rivers of Babylon -" And see the word of the Lord Jehovah in Hosea: "their infants shall be dashed in - pieces, and their women with child shall be ripped up." And there is the case of Elisha and the bears. Alec, do you believe in your heart that your. God caused bears to tear up little children merely because they made fun of an old man's bald head?' She waited.

And I waited. Presently she said, 'Is that story of she bears and the forty-two children the literal Word of God?'

'Certainly it's the Word of God! But I don't pretend to understand it fully. Margrethe, if you want detailed explanations of everything the Lord has done, pray to Him for enlightenment. But don't crowd me about it.'

'I did not intend to crowd you, Alec. I'm sorry.'

'No need to be. I've never understood about those bears but I don't let it shake my faith. Perhaps it's a parable. But look, dear, doesn't your Father Odin have a pretty bloody history Himself?'

'Not on the same scale. Jehovah destroyed city after city, every man, woman, and child, down to the youngest baby. Odin killed only in combat against opponents his own size.

But, most important difference of all, Father Odin is not all powerful and does not claim to be all wise.'

(A theology that avoids the thorniest problem - But how can you call Him 'God' if He is not omnipotent?)

She went on, 'Alec my only love, I don't want to attack your faith. I don't enjoy it and never intended to - and hope that nothing like it will ever happen again. But you did ask me point blank whether or not I accepted the authority of "Holy Writ - by which you mean your Bible. I must answer just as point blank. I do not. The Jehovah or Yahweh of the Old Testament seems to me to be a sadistic, bloodthirsty, genocidal villain. I cannot understand how He can be identified with the gentle Christ of the New Testament. Even through a mystic Trinity.'

I started to answer but she hurried on. 'Dear heart, before we leave this subject I must tell you something I have been thinking about. Does your religion offer an explanation of the weird thing that has happened to us? Once to me, twice to you - this changed world?'

(It had been endlessly on my mind, too!) 'No. I must Confess it. I wish I had a Bible to search an explanation. But I have been searching in my mind. I haven't been able to find anything that should have prepared me for this.' I sighed. 'It's a bleak feeling. But -' I smiled at her.' 'Divine Providence placed you with me. No land is strange to me that has Margrethe in it.'

'Dear Alec: I asked because the old religion does offer an explanation.'

'What?'

'Not a cheerful one. At the beginning of this cycle Loki was overcome - do you know Loki?'

'Some. The mischief maker.'

'"Mischie" is too mild a word; he works evil. For thousands of years he has been a prisoner, chained to a great rock. Alec, the end of every cycle in the story of man begins the same way. Loki manages to escape his bonds... and chaos results.'

She looked at me with great sadness. 'Alec, I am sorry... but I do believe that Loki is loose. The signs show it. Now anything can happen. We enter the Twilight of the Gods. Ragnarok comes. Our world ends.'

Chapter 12

And in the same hour was there a great earthquake,
and the tenth part of the city fell, and in the

earthquake were slain of men seven thousand:
and the remnant were affrighted, and gave glory
to the God of Heaven.
Revelation 11:13

I WASHED another lighthouse stack of dishes while I pondered the things Margrethe had said to me that beautiful afternoon on Icebox Hill - but I never again mentioned the subject to Margrethe. And she did not speak of it to me; as Margrethe never argued about anything if she could reasonably keep silent.

Did I believe her theory about Loki and Ragnarok? Of course not! Oh, I had no objection to calling Armageddon by the name 'Ragnarok'. Jesus or Joshua or Jesu; Mary or Miriam or Maryam or Maria, Jehovah or Yahweh - any verbal symbol will do as long as speaker and listener agree on meaning. But Loki? Ask me to believe that a mythical demigod of an ignorant, barbarian race has wrought changes in the whole universe? Now, really!

I am a modern man, with an open mind - but not so empty that the wind blows through it. Somewhere in Holy Writ lay a rational explanation for the upsets that had happened to us. I need not look to ghost stories of long-dead pagans for explanations.

I missed not having a Bible at hand. Oh, no doubt there were Catholic Bibles at the basilica three blocks away... in Latin or in Spanish. I wanted the King James version. Again no doubt there were copies of it somewhere in this city - but I did not know where. For the first time in my Life I envied the perfect memory of Preachin' (Rev Paul Balonius) who tramped up and down the central states the middle of last century, preaching the Word without carrying the Book with him. Brother Paul was reputed to be able to quote from memory any verse cited by book, chapter, and number of verse, or, conversely, correctly place by book, chapter, and number any verse read to him.

I was born too late to meet Preachin' Paul, so I never saw him do this - but perfect memory is a special gift God bestows not too infrequently; I have no reason to doubt that Brother Paul had it. Paul died suddenly, somewhat mysteriously, and possibly sinfully - in the words of my mission studies professor, one should exercise great prudence in praying alone with a married woman.

I don't have Paul's gift. I can quote the first few chapters of Genesis and several of the Psalms and the Christmas story according to Luke, and some other passages. But for today's problem I needed to study in exact detail all the prophets, especially the prophecy known as the Revelation of Saint John the Divine.

Was Armageddon approaching? Was the Second Coming at hand? Would I myself still be alive in the flesh when the great Trump sounds?

A thrilling thought, and not one to be discarded too quickly. Many millions will be alive on that great day; that mighty host could include Alexander Hergensheimer. Would I hear His Shout and see the dead rise up and then myself 'be caught up together with them in

the clouds, to meet the Lord in the air' and then ever be with the Lord, as promised? The most thrilling passage in the Great Book!

Not that I had any assurance that I myself would be among those saved on that great day, even if I lived in the flesh to that day. Being an ordained minister of the Gospel does not necessarily improve one's chances. Clergymen are aware of this cold truth (if they are honest with themselves) but laymen sometimes think that men of the cloth have an inside track.

Not true! For a clergyman, there are no excuses. He can never claim that 'he didn't know it was loaded', or cite youth and inexperience as a reason to ask for mercy, or claim ignorance of the law, or any of the other many excuses by which a layman might show a touch less than moral perfection but still be saved.

Knowing this, I was forced to admit that my own record lately did not suggest that I was among the saved. Certainly, I was born again. Some people seem to think that this is a permanent condition, like a college degree. Brother, don't count on it! I was only too aware that I had racked up quite a number of sins lately: Sinful pride. Intemperance. Greed. Lechery. Adultery. Doubt. And others.

Worse yet, I felt no contrition for the very worst of these.

If the record did not show that Margrethe was saved and listed for Heaven, then I had no interest in going there myself. God help me, that was the truth.

I worried about Margrethe's immortal soul.

She could not claim the second chance of all pre-Christian Era souls. She had been born into the Lutheran Church, not my church but ancestor to my church, ancestor to Al Protestant churches, the first fruit of the Diet of Worms. (When I was a lad in Sunday school, 'Diet of Worms' inspired mind pictures quite foreign to theology!)

The only way Margrethe could be saved would be by renouncing her heresy and seeking to be born again. But she must do this herself; I could not do it for her.

The most. I could possibly do would be to urge her to seek salvation. But I would have to do it most carefully. One does not persuade a butterfly to light on one's hand by brandishing a sword. Margrethe was not a heathen ignorant of Christ and needing only to be instructed. No, she had been born into Christianity and had rejected it, eyes open. She could cite Scripture as readily as I could at some time she had studied the Book most diligently, far more than most laymen. When and why I never asked, but I think it must have been at the time when she began to contemplate leaving the Christian faith. Margrethe was so serious and so good that I felt certain that she would never take such a drastic step without long, hard study.

How urgent was the problem of Margrethe? Did I have thirty years or ser to learn her mind and feel out the best approach? Or was Armageddon so close upon us that even a day's delay could doom her for eternity?

The pagan Ragnarok and the Christian Armageddon have this in common: The final battle will be preceded by great signs and portents. Were we experiencing such omens? Margrethe thought so. Myself, I found the idea that this world changing presaged Armageddon more attractive than the alternative, i.e., paranoia on my part. Could a ship be wrecked and a world changed just to keep me from checking a thumbprint? I had thought so at the time but - oh, come now, Alex, you are not that important.
(Or was I?)

I have never been a Millenarianist. I am aware how often the number one thousand appears in the Bible, especially in prophecy - but I have never believed that the Almighty was constrained to work in even millennia - or any other numbering patterns - just to please numerologists.

On the other hand I know that many thousands of sensible and devout people place enormous importance on the forthcoming end of the Second Millennium, with Judgment Day and Armageddon and all that must follow - expected at that time. They find their proofs in the Bible and claim confirmation in the lines in the Great Pyramid and in a variety of Apocrypha.

But they differ among themselves as to the end of the millennium. 2000 AD? Or 2001 AD? Or is the correct dating 3 pm Jerusalem local time April 7, 2030 AD? If indeed scholars have the time and date of the Crucifixion - and the earthquake at the moment of His death - correctly figured against mundane time reckoning. Or should it be Good Friday 2030 AD as calculated by the lunar calendar? This is no trivial matter in view of what we are attempting to date.

But, if we take the birth of Christ rather than the date of the Crucifixion as the starting point from which to count, the millennia, it is evident at once that neither the naive date of 2000 AD nor the slightly less naive date of 2001 can be the bimillenarian date because Jesus was born in Bethlehem on Christmas Day year 5 BC.

Every educated person knows this and almost no one ever thinks about it.

How could the greatest event in all history, the birth of our Lord Incarnate, have been misdated by five years? Incredible!

Very easily. A sixth-century monk made a mistake in arithmetic. Our present dating ('Anno Domini) was not used until centuries after Christ was born. Anyone who has ever tried to decipher on a cornerstone a date written in Roman numerals can sympathize with the error of Brother Dionysius Exiguus. In the sixth century there were so few who could read at all that the error went undetected for many years - and by then it was too late to change all the records. So we have the ludicrous situation that Christ was born five years

before Christ was born - an Irishism that can be resolved only by noting that one clause refers to fact and the other clause refers to a false-to-fact calendar.

For two thousand years the good monk's error was of little importance. But now it becomes of supreme importance. If the Millenarianists are correct, the end of the world can be expected Christmas Day this year.

Please note that I did not say 'December 25th'. The day and month of Christ's birth are unknown. Matthew notes that Herod was king; Luke states that Augustus was Caesar and that Cyrenius was governor of Syria, and we all know that Joseph and Mary had traveled from Nazareth - to Bethlehem to be counted and taxed.

There are no other data, neither of Holy Writ nor of Roman civil records.

So there you have it. By Millenarianist theory, the Final Judgment can be expected about thirty-five years from now... or later this afternoon!

Were it not for Margrethe this uncertainty would not keep me awake nights. But how can I sleep if my beloved is in immediate danger of being cast down into the Bottomless Pit, there to suffer throughout eternity?

What would you do?

Envision me standing barefooted on a greasy floor', washing dishes to pay off my indenture, while thinking deep thoughts of last and first things. A laughable sight! But dishwashing does not occupy all the mind; I was better off with hard bread for the mind to chew on.

Sometimes I contrasted my sorry state with what I had so recently been, while wondering if I would ever find my way back through the maze into the place I had built for myself.

Would I want to go back? Abigail was there - and, while polygamy was acceptable in the Old Testament, it was not accepted in the forty-six states. That had been settled once and for all when the Union Army's artillery had destroyed the temple of the antichrist in Salt Lake City and the Army had supervised the breaking up and diaspora of those immoral 'families'.

Giving up Margrethe for Abigail would be far too high a price to pay to resume the position of power and importance I had until recently held. Yet I had enjoyed my work and the deep satisfaction over worthwhile accomplishment that went with it. We had achieved our best year since the foundation was formed - I refer to the non-profit corporation, Churches United for Decency. 'Non-profit' does not mean that such an organization cannot pay appropriate salaries and even bonuses, and I had been taking a well-earned vacation after the best fund-raising year of our history - primarily my accomplishment because, as deputy director, my first duty was to see that our coffers were kept filled.

But I took even greater satisfaction in our labors in the vineyards, as fund raising means nothing if our programs of spiritual welfare do not meet their goals.

The past 'year' had seen the following positive accomplishments:

a) A federal law making abortion a capital offense;

b) A federal law making the manufacture, sale, possession, importation, transportation, and/or use of any contraceptive drug or device a felony carrying a mandatory prison sentence of not less than a year and a day but not more than twenty years for each offense - and eliminating the hypocritical subterfuge of 'For Prevention of Disease Only';

c) A federal law that, while it did not abolish gambling, did make the control and licensing of it a federal jurisdiction. One step at a time - having built. this foundation we could tackle those twin pits, Nevada and New Jersey, piece by piece. Divide and conquer!

d) A Supreme Court decision in which we had appeared as amicus curiae under which community standards of the typical or median-population community applied to all cities of each state (Tomkins v. Allied News Distributors);

e) Real progress in our drive to get tobacco defined as a prescription drug through the tactical device of separating snuff and chewing tobacco from the problem by inaugurating the definition 'substances intended for burning and inhaling';

f) Progress at our annual national prayer meeting on several subjects in which I was interested. One was the matter of how to remove the tax-free status of any private school not affiliated with a Christian sect. Policy on this was not yet complete because of the thorny matter of Roman Catholic schools. Should our umbrella cover them? Or was it time to strike? Whether the Catholics were allies or enemies was always a deep problem to those of us out on the firing line.

At least as difficult was the Jewish problem - was a humane solution possible? If not, then what? Should we grasp the nettle? This was debated only in camera.

Another matter was a pet project of my own: the frustrating of astronomers. Few laymen realize what mischief astronomers are up to. I first noticed it when I was still in engineering school and took a course in descriptive astronomy under the requirements for breadth in each student's program. Give an astronomer a bigger telescope and turn him loose, leave him unsupervised, and the first -thing he does is to come down with pestiferous, half-baked guesses denying the ancient truths of Genesis.

There is only one way to deal with this sort of nonsense: Hit them in the pocketbook! Redefine 'educational' to exclude those colossal white elephants, astronomical observatories. Make the Naval Observatory the only one tax free, reduce its staff, and

limit their activity to matters clearly related to navigation. (Some of the most blasphemous and subversive theories have come from tenured civil servants there who don't have enough legitimate Work to keep them busy.)

Self-styled 'scientists' are usually up to no good, but astronomers are the worst of the lot.

Another matter that comes up regularly at each annual' prayer meeting I did not favor spending time or money on: 'Votes for Women'. These hysterical females styling themselves 'suffragettes' are not a threat, can never win, and it just makes them feel self-important to pay attention to them. They should not be jailed and should not be displayed in stocks - never let them be martyrs! Ignore them.

There were other interesting and worthwhile goals that I kept off the agenda and did not suffer to be brought up from the floor in the sessions I moderated, but instead carried them on my 'Maybe next year' list:

Separate schools for boys and girls.

Restoring the death penalty for witchcraft and satanism.

The Alaska option for the Negro problem.

Federal control of prostitution.

Homosexuals - what's the answer? Punishment? Surgery? Other?

There are endless good causes commending themselves to guardians of the public morals - the question is always how to pick and choose to the greater glory of God.

But all of these issues, fascinating as they are, I might never again pursue. A sculleryman who is just learning the local language (ungrammatically, I feel sure!) is not able to be a political force. So I did not worry about such matters and concentrated on my real problems: Margrethe's heresy and more immediate but less important, getting legally free of peonage and going north.

We had served more than one hundred days when I asked Don Jaime to help me work out the exact date when we would have discharged the terms of our debt contract - a polite way of saying: Dear Boss, come the day, we are going to leave here like a scared rabbit. Plan on it.

I had figured on a total obligated time of one hundred and twenty-one days... and Don Jaime shocked me almost out of my Spanish by getting a result of one hundred and fifty-eight days.

More than six weeks to go when I figured that we would be free next week!

I protested, pointing out that our total obligation as listed by the court, divided by the auction value placed on our services (pesos sixty for Margrethe, half that for me, for each day), gave one hundred and twenty-one days... of which we had served one hundred fifteen.

Not a hundred and fifteen - ninety-nine - he handed me a calendar and invited me to count. It was at that point that I discovered that our lovely Tuesdays did not reduce our committed time. Or so said our patrón.

'And besides that, Alexandro,' he added, 'you have failed to figure the interest on the unpaid balance; you haven't multiplied by the inflation factor; you haven't allowed for taxes, or even your contribution for Our Lady of Sorrows. If you fall ill, I should support you, eh?'

(Well, yes. While I had not thought about it, I did think a patrón had that duty toward his peones.) 'Don Jaime, the day you bid in our debts, the clerk of the court figured the, contract for me. He told me our obligation was one hundred and twenty-one days. He told me!'

'Then go talk to the clerk of the court about it.' Don Jaime turned his back on me.

That chilled me. Don Jaime seemed as willing for me to take it up with the referee authority as he had been unwilling to discuss Margrethe's tips with the court. To me this meant that he had handled enough of these debt contracts to be certain how they worked and thus had no fear that the judge or his clerk might rule against him.

I was not able to speak with Margrethe about it in private until that night. 'Marga, how could I be so mistaken about this? I thought the clerk worked it out for us before he had us countersign the assignment of debt. One hundred and twenty-one days. Right?'

She did not answer me at once. I persisted, 'Isn't that what you told me?'

'Alec, despite the fact that I now usually think in English - or in Spanish, lately - when I must do arithmetic, I work it in Danish. The Danish word for sixty is 'tres'- and that is also the Spanish word for three. Do you see how easily I could get mixed up? I don't know now whether I said to you, "Ciento y veintiuno" or "Ciento y sesentiuno" - because I remember numbers in Danish, not in English, not in Spanish. I thought you did the division yourself.'

'Oh, I did. Certainly the clerk didn't say, "A hundred and twenty-one." He didn't use any English, that I recall. And at that time I did not know any Spanish. Señor Muñoz explained it to you and you translated for me and later I did the arithmetic again and it seemed to confirm what he had said. Or you had said. Oh, shucks, I don't know!'

'Then why don't we forget it until we can ask Señor Muñoz?'

'Marga, doesn't it upset you to find that we are going to, have to slave away in this dump an extra five weeks?'

'Yes, but not very much. Alec, I've always had to work. Working aboard ship was harder work than teaching school - but I got to travel and see strange places. Waiting tables here is a little harder than cleaning rooms in the Konge Knut - but I have you with me here and that more than makes up for it. I want to go with you to your homeland... but it's not my homeland, so I'm not as eager to leave here as you are. To me, today, where you are is my homeland.'

'Darling, you are so logical and reasonable and civilized that you sometimes drive me right straight up the wall.'

'Alec, I don't mean to do that. I just want us to stop worrying about it until we can see Señor Muñoz. But right this minute I want to rub your back until you relax.'

'Madame, you've convinced me! But only if I have the privilege of rubbing your poor tired feet before you rub my back.'

We did both. 'Ah, wilderness were paradise enow!'

Beggars can't be choosy. I got up early the next morning, saw the clerk's runner, was told that I could not see the clerk until court adjourned for the day, so I made a semi-appointment for close-of-court on Tuesday - 'semi' in that we were committed to show up; Señor Muñoz was not. (But would be there, Deus volent.)

So on Tuesday we went on our picnic outing as usual, as we could not see Señor Muñoz earlier than about 4 pm. But we were Sunday-go-to-meeting rather than dressed for a picnic - meaning that we both wore our shoes, both had had baths that morning, and I had shaved, and I wore my best clothes, handed down from Don Jaime but clean and fresh, rather than the tired Coast Guard work pants I wore in the scullery. Margrethe wore the colorful outfit she had acquired our first day in Mazatlán.

Then we both endeavored not to get too sweaty or dusty. Why we thought it mattered I cannot say. But somehow each of us felt that propriety called for one's best appearance in visiting a court.

As usual we walked over to the fountain to-see our friend Pepe before swinging back to climb our hill. He greeted us in the intimate mode of friends and we exchanged graceful amenities of the sort that fit so well in Spanish and are almost never encountered in English. Our weekly visit with Pepe had become an important part of our social life. We knew more about him now - from Amanda, not from him - and I respected him more than ever.

Pepe had not been born without legs (as I had once thought); he had formerly been a teamster, driving lorries over the mountains to Durango and beyond. Then there had been

an accident and Pepe had been pinned under his rig for two days before he was rescued. He was brought in to Our Lady of Sorrows apparently DOA.

Pepe was tougher than that. Four months later he was released from hospital; someone passed the hat to buy him his little cart; he received his mendicant's license, and he took up his pitch by the fountain - friend to streetwalkers, friend to Dons, and a merry grin for the worst that fate could hand him.

When, after a decent interval for, conversation and inquiries as to health and welfare and that of mutual acquaintances, we turned to leave, I offered our friend a one-peso note.

He handed it back. 'Twenty-five centavos, my friend. Do you not have change? Or did you wish me to make change?'

'Pepe our friend, it was our intention and our wish that you keep this trivial gift.'

'No no no. From tourists I take their teeth and ask for more. From you, my friend, twenty-five centavos.'

I did not argue. In Mexico a man has his dignity, or he is dead.

El Cerro de la Nevería is one hundred meters high; we climbed it very slowly, with me hanging back because I wanted to be certain not to place any strain on Margrethe. From signs I was almost certain that she was in a family way. But she had not seen fit to discuss it with me and of course I could not raise the subject if she did not.

We found our favorite place, where we enjoyed shade from a small tree but nevertheless had a full view all around, three hundred and sixty degrees - northwest into the Gulf of California', west into the ` Pacific and what might or might not be clouds on the horizon capping a peak at the tip of Baja California two hundred miles away, southwest along our own peninsula to Cerro Vigia (Lookout Hill) with beautiful Playa de las 0las Altas between us and Cerro Vigía, then beyond it Cerro Creston, the site of the giant lighthouse, the 'Faro' itself commanding the tip of the peninsula - south right across town to the Coast Guard landing. On the east and north-east were the mountains that concealed Durango a hundred and fifty miles away... but today the air was so clear that it felt as if we could reach out and touch those peaks.

Mazatlán was spread out below like a toy village. Even the basilica looked like an architect's scale model from up' here, rather than a most imposing church - for the umpteenth time I wondered how the Catholics, with their (usually) poverty-stricken congregations, could build such fine churches while their Protestant opposite numbers had such a time raising the mortgages on more modest structures.

Look, Alec!' said Margrethe. 'Anibal and Roberto have their new aeroplano!' She pointed.

Sure enough, there were now two aeroplanos at the Coast Guard mooring. One was the grotesque giant dragonfly that had rescued us; the new one was quite different. At first I thought it had sunk at its moorings; the floats on which the older craft landed on the water were missing from this structure.

Then I realized that this new craft was literally a flying boat. The body of the aeroplano itself was a float, or a boat - a watertight structure. The propelling engines of this craft were mounted above the wings.

I was not sure that I trusted these radical changes. The homely certainties of the craft we had ridden in were more to my taste.

'Alec, let's go call on them next Tuesday.'

'All right.'

'Do you suppose that Anibal would possibly offer us a ride in his new aeroplano?'

'Not if the Commandant knows about it.' I did not say that the newfangled rig did not look safe to me; Margrethe was always fearless. 'But we'll call on them and ask to see it. Lieutenant Anibal will like that. Roberto, too. Let's eat.'

'Piggy piggy,' she answered,' and spread out a servilleta, started covering it with food from a basket I had carried. Tuesdays gave Margrethe an opportunity to vary Amanda's excellent Mexican cooking with her own Danish and international cooking. Today she had elected to make Danish open-face sandwiches so much enjoyed by all Danes - and by anyone else who has ever had a chance to enjoy them. Amanda allowed Margrethe to do what she liked in the kitchen, and Señora Valera did not interfere - she never came into the kitchen, under some armed truce arrived at before we joined the staff. Amanda was a woman of firm character.

Today's sandwiches featured heavily the tender, tasty shrimp for which Mazatlán is famous, but the shrimp were just a starter. I remember ham, turkey, crumbled crisp bacon, mayonnaise, three sorts - of cheese, several sorts of pickle, little peppers, unidentified fish, thin slices of beef, fresh tomato, tomato paste, three sorts of lettuce, what I think was deep-fried eggplant. But thank goodness it is not necessary to understand food in order to enjoy it Margrethe placed it in front of me; I happily chomped away, whether I knew what I was eating or not.

An hour later I was belching and pretending not to. 'Margrethe, have I told you today that I love you?'

'Yes, but not lately.'

'I do. You are not only beautiful, fair to see and of gainly proportions, you are also a fine cook.'

'Thank you, sir. I

'Do you wish to be admired for your intellectual excellence as well?'

'Not necessarily. No.'

'As you wish. If you change your mind, let me know. Quit fiddling with the remnants; I'll tidy up later. Lie down here beside me and explain to me why you continue to live with me. It can't be for my cooking. Is it because I am the best dishwasher on the west coast of Mexico?'

'Yes.' She went right on tidying things, did not stop until our picnic site was perfectly back in order, with all that was left back in the basket, ready to be returned to Amanda.

Then she lay down beside me, slid her arm under my neck - then raised her head. 'What's that?'

'What's -' Then I heard it. A distant rumble increasing in volume, like a freight train coming 'round the bend. But the nearest railway, the line north to Chihuahua and south to Guadalajara, was distant, beyond the peninsula of Mazatlán.

The rumble grew louder; the ground started to sway. Margrethe sat up. 'Alec, I'm frightened.'

'Don't be afraid, dear; I'm here.' I reached up and pulled her down to me, held her tight while the solid ground bounced up and down under us and the roaring rumble increased to unbelievable volume.

If you've ever been in an earthquake, even a small one, you know what we were feeling better than my words can say. If you have never been in one, you won't believe me and the more accurately I describe it, the more certain you are not to believe me.

The worst part about a quake is that there is nothing solid to cling to anywhere... but the most startling thing is the noise, the infernal racket of every sort - the crash of rock grinding together under you, the ripping, rending sounds of buildings being torn apart, the screams of the frightened, the cries of the hurt and the lost, the howling and wailing of animals caught by disaster beyond their comprehension.

And none of it will stop.

This, went on for an endless time - then the main earthquake hit us and the city fell down.

I could hear it. The noise that could not increase suddenly doubled. I managed to get up on one elbow and look. The dome of the basilica broke like a soap bubble. 'Oh, Marga, look! No, don't - this is terrible.'

She half sat up, said nothing and her face was blank. I kept my arm around her and looked down the peninsula past Cerro Vigla and at the lighthouse.

It was leaning.

While I watched it broke about halfway up, then slowly and with dignity collapsed to the ground.

Past the city I caught sight of the moored aeroplanos of the Coast Guard. They were dancing around in a frenzy; the new one dipped one wing; the water caught it - then I lost sight of it as a cloud rose up from the city, a cloud of dust from thousands and thousands of tons of shattered masonry.

I looked for the restaurant, and found it: EL RESTAURANTE PANCHO VILLA. Then while I watched, the wall on which the sign was painted crumpled and fell into the street. Dust rose up and concealed where it had been.

'Margrethe! It's gone. The restaurant. El Pancho Villa.' I pointed.

'I don't see anything.'

'It's gone, I tell you. Destroyed. Oh, thank the Lord that Amanda and the girls were not there today!'

'Yes. Alec, won't it ever stop?'

Suddenly it did stop, - much more suddenly than it started. Miraculously the dust was gone; there was no racket, no screams of the hurt and dying, no howls of animals.

The lighthouse was back where it belonged.

I looked to the left of it, checking on the moored aeroplanos -nothing. Not even the driven piles to which they should be tied. I looked back at the city - all serene. The basilica was unhurt, beautiful. I looked for the Pancho Villa sign.

I could not find it. There was a building on what seemed the proper corner, but its shape was not quite right and it had different windows. 'Marg - Where's the restaurant?'

'I don't know. Alec, what is happening?'

'They're at it again,' I said bitterly. 'The world changers.

The earthquake is over but this is not the same city we were in. It looks a lot like it but it's not the same.'

I was only half right. Before we could make up our minds to start down the hill, the rumble started up again. Then the swaying... then the greatly increased noise and violent movement of the land, and this city was destroyed. Again I saw our towering lighthouse crack and fall. Again the church fell in on itself. Again the dust clouds rose and with it the screams and howls.

I raised my clenched fist and shook it at the sky. 'God damn it! Stop! Twice is too much.'

I was not blasted.

Chapter 13

I have seen all the works that are done under the sun; and,
behold, all is vanity and vexation of the spirit.
Ecclesiastes 1:14

I AM going to skip over the next three days, for there was nothing good about them. 'There was blood in the streets and dust.' Survivors, those of us who were not hurt, not prostrate with grief, not dazed or hysterical beyond action - few of us, in short - worked at the rubble here and there trying to find living creatures under the bricks and stones and plaster. But how much can you do with your naked fingers against endless tons of rock?

And how much can you do when you do dig down and discover that you were too late, that indeed it was ~too late before you started? We heard this mewling, something like a kitten, so we dug most carefully, trying not to put any pressure on whatever was underneath, trying not to let the stones we shifted dislodge anything that would cause more grief underneath - and found the source. An infant, freshly dead. Pelvis broken, one side of its head bashed. 'Happy shall he be, that taketh and dasheth thy little ones against the stones.' I turned my head away and threw up. Never will I read Psalm 137 again.

That night we spent on the lower slopes of Icebox Hill. When the sun went down, we perforce stopped trying. Not only did the darkness make it impossible to work but there was looting going on. I had a deep conviction that any looter was a potential rapist and murderer. I was prepared to die for Margrethe should it become necessary - but I had no wish to die gallantly but futilely, in a confrontation that could have been avoided.

Early the following afternoon the Mexican Army arrived. We had accomplished nothing useful in the meantime more of the same picking away at rubble. Never mind what we found. The soldiers put a stop even to that; all civilians were herded back up the peninsula, away from the ruined city, to the railroad station across the river. There we waited - new widows, husbands freshly bereaved, lost children, injured on make-do stretchers, walking wounded, some with no marks on them but with empty eyes and no speech. Margrethe and, I were of the lucky ones; we were merely hungry, thirsty, dirty, and covered with bruises from head to foot from lying on the ground during the earthquake. Correction: during two earthquakes.

Had anyone else experienced two earthquakes?

I hesitated to ask. I seemed to be the unique observer to this world-changing - save that, twice, Margrethe had come with me because I was holding her at the instant. Were there other victims around? Had there been others in Konge Knut who had kept their mouths shut about it as carefully as I had? How do you ask? Excuse me, amigo, but is this the same city it was yesterday?

When we had waited at the railroad station about two hours an army water cart came through a tin cup of water to each refugee and. a soldier with a bayonet to enforce order in the queues.

Just before sundown the cart came back with more water and with loaves of bread; Margrethe and I were rationed a quarter of a loaf between us. A train backed into the station about then and the army people started loading it even as supplies were being unloaded. Marga and I were lucky; we were pushed into a passenger car - most rode in freight cars.

The train started north. We weren't asked whether or not we wanted to go north; we weren't asked for money For fares; all of Mazatlán was being evacuated. Until Its water system could be restored, Mazatlán belonged to the rats and the dead.

No point in describing the journey. The train moved; we endured. The railway line leaves the coast at Guaymas and goes straight north across Sonora to Arizona - beautiful country but we were in no shape to appreciate it. We slept as much as we could and pretended to sleep the rest of the time. Every time the train stopped, some left it unless the police herded them back on. By the time we reached Nogales, Sonora, the train was less than half full; the rest seemed headed for Nogales, Arizona, and of course we were.

We reached the international gate early afternoon three days after the quake.

We were herded into a detention building just over the line, and a man in a uniform made a speech in Spanish: 'Welcome, amigos! The United States is happy to help its neighbors in their time of trial and the US Immigration Service has streamlined its procedures so that we can take care of all of you quickly. First we must ask you all to go through delousing. Then you'll be issued green cards outside of quota so that you can work at any job anywhere in the States. But you will find labor agents to help you as you leave the compound. And a soup kitchen! If you are hungry, stop and have your first meal here as guests of Uncle Sam. Welcome to los Estados Unidos!"

Several people had questions to ask but Margrethe and I headed for the door that led to the delousing setup. I resented the name assigned to this sanitary routine - a requirement that you take delousing is a way of saying that you are lousy. Dirty and mussed we certainly were, and I had a three-day beard. But lousy?

Well, perhaps we were. After a day of picking through the ruins and two days crowded in with other unwashed in a railroad car that was not too clean when we boarded it, could I honestly assert that I was completely free of vermin?

Delousing wasn't too bad. It was mostly a supervised shower bath with exhortations in Spanish to scrub the hairy places throughly with a medicated 9oft soap. In the meantime my clothes went through some sort of sterilization or fumigation -autoclave, I think - then I had to wait, bare naked, for twenty minutes to reclaim them, while I grew more and more angry with each passing minute.

But once I was dressed again, I got over my anger, realizing that no one was intentionally pushing me around; it was simply that any improvised procedure for handling crowds of people in an emergency is almost certain to be destructive of human dignity. (The Mexican refugees seemed to find it offensive; I heard mutterings.)

Then again I had to wait, for Margrethe.

She came out the exit door from the distaff side, caught my eye, and smiled, and suddenly everything was all right. How could she come out of a delousing chamber-and look as if she had just stepped out of a bandbox?

She came up to me and said, 'Did I keep you waiting, dear? I'm sorry. There was an ironing board in there and I seized the chance to touch up my dress. It looked a sorry sight when it came out of the washer.'

'I didn't mind waiting,' I fibbed. 'You're beautiful.' (No fib!) 'Shall we go to dinner? Soup kitchen dinner, I'm afraid.'

'Isn't there some paper work we have to go through?'

'Oh. I think we can hit the soup kitchen first. We don't want green cards; they are for Mexican nationals. Instead I must explain about our lost passports.' I had worked this* out in my head and had explained it to Margrethe on the train. This is what I would say had happened to us: We were tourists, staying in Hotel de las, Olas Altas on the beach. When the earthquake hit, we were on the beach. So we lost our clothes, our money, our passports, everything, as our hotel had been destroyed. We were lucky to be alive, and the clothes we were wearing. had been given to us by Mexican Red Cross.

This story had two advantages: Hotel de las Olas Altas had indeed been destroyed, and the rest of the story had no easy way to be checked.

I found that we had to go through the green-card queue in order to reach the soup kitchen. Eventually we got as far as the table. A man there shoved a file card in front of me, saying in Spanish: 'Print your name, last name first. List your address. If -it was destroyed in the quake, say so, and give some other address - cous * in, father, priest, somebody whose home was not destroyed.'

I started my spiel. The functionary looked up and said, 'Amigo, you're holding up the line.'

'But,' I said, 'I don't need a green card. I don't want a green card. I'm an American citizen returning from abroad and I'm trying to explain why I don't have my passport. And the same for my wife,'

He drummed on the table. 'Look,' he said, 'your accent says that you're native American. But I can't do anything about your lost passport and I've got three hundred and fifty refugees still to process, and another trainload just pulling in. I won't get to bed before two. Why don't you do us both a favor and accept a green card? It won't poison you and it'll get you in. Tomorrow you can fight with the State Department about your passport - but not with me. Okay?'

I'm stupid but not stubborn. 'Okay.' For my Mexican accommodation address I listed Don Jaime; I figured he owed me that much. His address had the advantage of being in another universe.

The soup kitchen was what you would expect from a charity operation. But it was gringo cooking, the first I had had in months - and we were hungry. The Stark's Delicious apple I had for dessert was indeed delicious. It was still short of sundown when _we were out on the streets of Nogales - free, bathed, fed, and inside the United States legally or almost. We were at least a thousand percent better off than those two naked survivors who had been picked up out of the ocean seventeen weeks ago.

But we were still orphans of fate, no money at all, no place to rest, no clothes but those we were wearing, and my three-day beard and the shape my clothes were in after going through an autoclave or whatever made me look like a skid row derelict.

The no-money situation was particularly annoying because we did have money, Margrethe's hoarded tips. But the paper money said 'Reino' where it should have read 'Republica' and the coins did not have the right faces. Some of the coins may have contained enough silver to have some minor intrinsic value. But, if so, there was no easy way to cash it in at once. And any attempt to spend any of this money would simply get us into major trouble.

How much had we lost? There are no interuniversal exchange rates. One might make a guess in terms of equivalent purchasing power - so many dozens of eggs, or so many kilos of sugar. But why bother? Whatever it was, we had lost lit.

This paralleled a futility I had run into in Mazatlán. I had attempted, while lord of the scullery, to write to a) Alexander Hergensheimer's boss, the Reverend Dr Dandy Danny Dover, DD, director of Churches United for Decency, and b) Alec Graham's lawyers in Dallas.

Neither letter was answered; neither came back. Which was what I had expected, as neither Alec nor Alexander came from a world having flying machines, aeroplanos.

I would try both again - but with small hope; I already knew that this world would feel strange both to Graham and to Hergensheimer. How? Nothing that I had noticed until we reached Nogales. But here, in that detention hall, was (hold tight to your chair) television. A handsome big box with a window in one side, and in that window living pictures of people... and sounds coming out of it of those selfsame people talking.

Either you have this invention and are used to it and take it for granted, or you live in. a world that does not have it - and you don't believe me. Learn from me, as I have been forced to believe unbelievable things. There is such an invention; there is a world where it is as common as bicycles, and its name is television - or sometimes tee-vee or telly or video or even 'idiot box' - and if you were to hear some of the purposes for which this great wonder is used, you would understand the last tag.

If you ever find yourself flat broke in a strange city and no one to turn to and you do not want to turn yourself in at a police station and don't want to be mugged, there is just one best answer for emergency help. You will usually find it in the city's tenderloin, near skid row:

The Salvation Army.

Once I laid hands on a telephone book it took me no time at all to get the address of the Salvation Army mission (although it did take me a bit of time to recognize a telephone when I saw one - warning to interworld travelers: Minor changes can be even more confusing than major changes).

Twenty minutes and one wrong turn later Margrethe and I were at the mission. Outside on the sidewalk four of them - French horn, big drum, two tambourines - were gathering a crowd. They were working on 'Rock of Ages' and doing well, but they needed a baritone and I was tempted to join them.

But a couple of store fronts before we reached the mission Margrethe stopped and plucked at my sleeve. 'Alec... must we do this?'

'Eh? What's the trouble, dear? I thought we had agreed.'

'No, sir. You simply told me.'

'Mmm - Perhaps I did. You don't want to go to the Salvation Army?'

She took a deep breath and sighed it out. 'Alec... I have not been inside a church since - since I left the Lutheran Church. To go to one now - I think it would be sinful.'

(Dear Lord, what can I do with this child? She is apostate not because she is heathen... but because her rules are even more strict than Yours. Guidance, please - and do hurry it up!) 'Sweetheart, if it feels sinful to you, we won't do it. But tell me what we are to do now; I've run out of ideas.'

'Ah - Alec, are there not other institutions to which a person in distress may turn?'

'Oh, certainly. In a city this size the Roman Catholic Church is bound to have more than one refuge. And there will be other Protestant ones. Probably a Jewish one. And -'

'I meant, "Not connected with a church".'

'Ah, so. Margrethe, we both know that this is not really my home country; you probably know as much about how it works as I do. There may be refuges for the homeless here that are totally unconnected with a church. I'm not sure, as churches tend to monopolize the field - nobody else wants it. If it were early in the day instead of getting dark, I would try to find something called united charities or community chest or the equivalent, and look over the menu; there might be something. But now - Finding a policeman and asking for help is the only other thing I can think of this time of day... and I can tell you ahead of time what a cop in this part of town would do if you told him you have nowhere to sleep. He would point you toward the mission right there. Old Sal.'

'In Kobenhavrt - or Stockholm or Oslo - I would go straight to the main police station. You just ask for a place to sleep; they give it to you.'

'I have to point out that this is not Denmark or Sweden or Norway. Here they might let us stay - by locking me in the drunk tank and locking you up in the holding pen for prostitutes. Then tomorrow morning we might or might not be charged with vagrancy. I don't know.'

'Is America really so' evil?'

'I don't know, dear - this isn't my America. But. I don't want to find out the hard way. Sweetheart... if I worked for whatever they give us, could we spend a night with the Salvation Army without your feeling sinful about it?'

She considered it solemnly - Margrethe's greatest lack was a total absence of sense of humor. Good nature - loads. A child' delight in play, yes. Sense of humor? 'Life is real and life is earnest -'

'Alec, if that can be arranged, I would not feel wrong in entering. I will work, too.'

'Not necessary, dear; it will be my profession that is involved. When they finish feeding the derelicts tonight, there will be a high stack of dirty dishes I and you are looking at the heavyweight champion dishwasher in all of Mexico and los Estados Unidos.'

So I washed dishes. I also helped spread out hymnbooks and set up the evening services. And I borrowed a safety razor and a blade from Brother Eddie McCaw, the adjutant. I told him how we happened to be there - vacationing on the Mexican Riviera, sunbathing on the beach when the big one hit - all the string of lies I had prepared for the Immigration Service and hadn't been able to use. 'Lost it, all. Cash, travelers checks, passports, clothes, ticket home, the works. But just the same, we were lucky. We're alive.'

'The Lord had His arms around you. You tell me that you are born again?'

'Years back.'

'It will do our lost sheep good to rub shoulders with you. When it comes time for witnessing, will you tell them all about it? You're the first eyewitness. Oh, we felt it here but it just rattled the dishes.'

'Glad to.'

Good. Let me get you that razor.'

So I witnessed and gave them a truthful and horrendous description of the quake, but not as horrid as it really was - I never want to see another rat - or another dead baby - and I thanked the Lord publicly that Margrethe and I had not been hurt and found that it was the most sincere prayer I had said in years.

The Reverend Eddie asked that roomful of odorous outcasts to join him in a prayer of thanks that Brother and Sister Graham had been spared, and he made it a good rousing prayer that covered everything from Jonah to the hundredth sheep, and drew shouts of 'Amen!' from around the room. One old wino came forward and said that he had at last seen God's grace and God's mercy and he was now ready to give his life to Christ.

Brother Eddie prayed over him, and invited others to come forward and two more did - a natural evangelist, he saw in our story a theme for his night's sermon and used it, hanging it on Luke fifteen, ten, and Matthew six, nineteen. I don't know that he had prepared from those two verses - probably not, as any preacher worth his salt can preach endlessly from either one of them. Either way, he could think on his feet and he made good use of our unplanned presence.

He was pleased with us, and I am sure that is why he told me, as we were cleaning up for the night, after the supper that followed the service, that while of course they didn't have separate rooms for married couples - they didn't often get married couples - still, it looked like Sister Graham would be the only one in the sisters' dormitory tonight, so why didn't I doss down in there instead of in the men's ~ dormitory? No double bed, just stacked bunks - sorry! But at least we could be in the same room.

I thanked him and we happily went to bed. Two people can share a very narrow bed if they really want to sleep together.

The next morning Margrethe cooked breakfast for the derelicts. She went into the kitchen and volunteered and soon was, doing it all as the regular cook did not cook breakfast; it was the job of whoever had the duty. Breakfast did not require a graduate chef - oatmeal porridge, bread, margarine, little valencia oranges (culls?), coffee. I left her there to wash dishes and to wait until I came back.

I went out and found a job.

I knew, from listening to wireless (called 'radio' here) while washing the dishes the night before, that there was unemployment in the United States-, enough to be a political and social problem.

There is always work in the Southwest for agricultural labor but I had dodged that sort of Work yesterday. I'm not too proud for that work; I had followed the harvest for several years from the time I was big enough to handle a pitchfork. But I could not take Margrethe into the fields.

I did not expect to find a job as a clergyman; I hadn't even told Brother Eddie that I was ordained. There is always an unemployment problem for preachers. Oh, there are always empty pulpits, true - but ones in which a church mouse would starve.

But I had a second profession.

Dishwasher.

No matter how many people are out of work, there are always dishwashing jobs going begging. Yesterday, in walking from the border gate to the Salvation Army mission, I had noticed three restaurants with 'Dishwasher Wanted' signs in their windows - noticed them because I had had plenty of time on the long ride from Mazatlán to admit to myself that I had no other salable skill.

No salable skill. I was not ordained in this world; I would not be ordained in this world as I could not show graduation from seminary or divinity school - or even the backing of a primitive sect that takes no mind of schools but depends on inspiration by the Holy Ghost.

I was certainly not an engineer.

I could not get a job teaching even those subjects I knew *Well because I no longer could show any formal preparation - I couldn't even show that I had graduated from middle school!

In general I was no salesman. True, I had shown an unexpected talent for the complex skills that make up a professional money-raiser... but here I had no record, no reputation. I might someday do this again - but we needed cash today.

What did that leave? I had looked at the help-wanted ads in a copy of the Nogales Times someone had left in the mission. I, was, not a lax accountant. I was not any sort of a mechanic. I did not know what a software designer was but I was not one, nor was I a 'computer' anything. I was not a nurse or any sort of health care professional.

I could go on indefinitely listing the things I was not, and could not learn overnight. But that is pointless. What I could do, What would feed Margrethe and me while we sized up this new world and learned the angles, was what I had been forced to do as a peón.

A competent and reliable dishwasher never starves. (He's more likely to die of boredom.)

The first place did not smell good and its kitchen looked dirty; I did not linger. The second place was a major-chain hotel, with several people in the scullery. The boss looked me over and said, 'This is a Chicano job; you wouldn't be happy here.' I tried to argue; he shut me off.

I But the third was okay, a restaurant only a little bigger than the Pancho Villa, with a clean kitchen and a manager no more than normally jaundiced.

He warned me, 'This job pays minimum wage and there are no raises. One meal a day on the house. I catch you sneaking anything, even a toothpick, and out you go that instant - no second chance. You work the hours I set and I change 'em to suit me. Right now I need you for noon to four, six to ten, five days a week. Or you can work six days but no overtime scale for it. Overtime scale if I require you to work more than eight hours in one day, or more than forty-eight hours in one week.'

'Okay.'

'All right, let's see your Social Security card.'

I handed him my green card.

He handed it-back. 'You expect me to pay you twelve dollars and a half an hour on the basis of a green card? You're no Chicano. You trying to get me in trouble with the government? Where did you get that card?'

So I gave him the song and dance I had prepared for the Immigration Service. 'Lost everything. I can't even phone and tell somebody to send me money; I have to get home first before I can shake any assets loose.'

'You could get public assistance.'

'Mister, I'm too stinkin' proud.' (I don't know how and I can't prove I'm me. Just don't quiz me and let me wash dishes.)

Glad to hear it. "Stinking proud", I mean. This country could use more like you. Go over to the Social Security office and get them to issue you a new one. They will, even if you can't recall the number of your old one. Then come back here and go to work. Mmm - I'll start you on payroll right now. But you must come back and put in a full day to collect.'

'More than fair. Where is the Social Security office?'

So I went to the Federal Building and told my lies over again, embroidering only as necessary. The serious young lady who issued the card insisted on giving me a lecture on Social Security and how it worked, a lecture she had apparently memorized. I'll bet- you she never had a 'client' (that's what she called me) who listened so carefully. It was all new to me.

I gave the name 'Alec L. Graham.' This was not a conscious decision. I had been using that name for weeks, answered with it by reflex - then was not in a good position to say, 'Sorry, Miss, my name is actually Hergensheimer.'

I started work. During my four-to-six break I went back to the mission - and learned that Margrethe had a job, too.

It was temporary, three weeks - but three weeks at just the right time. The mission cook had not had a vacation in over a year and wanted to go to Flagstaff to visit her daughter, who had just had a baby. So Margrethe had her job for the time being - and her bedroom, also for the time being.

So Brother and Sister Graham were in awfully good shape - for the time being.

Chapter 14

I returned, and saw under the sun, that the race
is not to the swift, nor the battle to the strong,
neither yet bread to the wise, nor yet riches to men of
understanding, nor yet favour to men of skill;
but time and chance happeneth to them all.
Ecclesiastes 9:11

PRAY TELL me why there is not a dishwashing school of philosophy? The conditions would seem ideal for indulging in the dear delights of attempting to unscrew the inscrutable. The work keeps the body busy while demanding almost nothing of the brain. I had eight hours every day in which to try to find answers to questions.

What questions? All questions. Five months earlier I had been a prosperous and respected professional in the most respected of professions, in a world I understood thoroughly - or so I thought. Today I was sure of nothing and had nothing.

Correction - I had Margrethe. Wealth enough for any man, I would not trade her for all the riches of Cathay. But even Margrethe represented a solemn contract I could not yet fulfill. In the eyes of the Lord I had taken her to wife... but I was not supporting her.

Yes, I had a job - but in truth she was supporting herself. When Mr Cowgirl hired me, I had not been daunted by 'minimum wage and no raises'. Twelve dollars and fifty cents per hour struck me as a dazzling sum - why, many a married man in Wichita (my Wichita, in another universe) supported a family on twelve and a half dollars per week.

What I did not realize was that here $12.50 Would not buy a tuna sandwich in that same restaurant - not a fancy restaurant, either; cheap, in fact. I would have had less trouble adjusting to the economy in this strange-but-familiar world if its money had been described in unfamiliar terms - shillings, shekels, soles, anything but dollars. I had been brought up to think of a dollar as a substantial piece of wealth; the idea that a hundred dollars a day was a poverty-level minimum wage was not one I could grasp easily.

Twelve-fifty an hour, a hundred dollars a day, five hundred a week, twenty-six thousand dollars a year Poverty level? Listen carefully. In the world in which I grew up, that was riches beyond dreams of avarice.

Getting used to price and wage levels in dollars that weren't really dollars was simply the most ubiquitous aspect of a strange economy; the main problem was how to cope, how to stay afloat, how to make a living for me and my wife (and our children, with one expected all too soon if I had guessed right) in a world in which I had no diplomas, no training, no friends, no references, no track record of any sort. Alex, what in God's truth are you good for?... other than dishwashing!

I could easily wash a lighthouse stack of dishes while worrying that problem alone. It had to be solved. Today I washed dishes cheerfully... but soon I must do better for my beloved. Minimum wage was not enough.

Now at last we come to the prime question: Dear Lord God Jehovah, what mean these signs and portents Thou has placed on me Thy servant?

There comes a time when a faithful worshiper must get up off his knees and deal with his Lord God in blunt and practical terms. Lord, tell me what to believe! Are these the deceitful great signs and wonders of which You warned, sent by antichrist to seduce the very elect?

Or are these true signs of the final days? Will we hear Your Shout?

Or am I as mad "as ':Nebudhadnezzar and all of these appearances merely vapors in my disordered mind?

If one of these be true, then the other two are false. How am I to choose? Lord God of Hosts, how have I offended Thee?

In walking back to the mission one night I saw a sign that could be construed as a direct answer to my prayers: MILLIONS NOW LIVING WILL NEVER DIE. The sign was carried by a man and with him was a small child handing out leaflets.

I contrived not to accept one. I had seen that sign many times throughout my life, but I had long tended to avoid Jehovah's Witnesses. They are so stiff-necked and stubborn that it is impossible to work with them, whereas Churches United for Decency is necessarily an ecumenical association. In fund raising and in political action one must (while of course. shunning heresy) avoid arguments on fiddling points of doctrine. Word-splitting theologians are the death of efficient organization. How can you include a sect in practical labor in the vineyards of the Lord if that sect asserts that they alone know the Truth, the whole Truth, and nothing but the Truth and all who disagree are heretics, destined for the fires of Hell?

Impossible. So we left them out of C.U.D.

Still - Perhaps this time they were right.

Which brings me to the most urgent of all questions: How to lead Margrethe back to the Lord before the Trump and the Shout.

But 'how' depends on 'when'. Premillenarian theologians differ greatly among themselves as to the date of the Last Trump.

I rely on the scientific method. On any disputed point there is always one sure answer: Look it up in the Book. And so I did, now that I was living at the Salvation Army mission and could borrow a copy of the Holy Bible. I looked it up again and again and again... and learned why premillenarians differed so on their dates.

The Bible is the literal Word of God; let there be no mistake about that. But nowhere did the Lord promise us that it would be easy to read.

Again and again Our Lord and His incarnation as the Son, Jesus of Nazareth, the Messiah, promises His disciples that their generation (i.e., first century AD) will see His return. Elsewhere, and again many times, He promises that He will return after a thousand years have passed... or is it two thousand years... or is it some other period, after the Gospel has been preached to all mankind in every country?

Which is true?

All are true, if you read them- right. Jesus did indeed return in the generation of His twelve disciples; He did so at the first Easter, His resurrection. That was His first return, the utterly necessary one, the one that proved to all that He was indeed the Son of God and God Himself. He returned again after a thousand years and, in His infinite mercy,

ruled that His children be given yet another grant of grace, a further period of trial, rather than let sinners be consigned forthwith to the fiery depths of Hell. His Mercy is infinite.

These dates are hard to read, and understandably so, as it was never His intention to encourage sinners to go on sinning because the day of reckoning had been postponed,. What is precise, exact, and unmistakable, repeated again and again, is that He expects every one of His children to live every day, every hour, every heart beat, as if this one were the last. When is the end of this age? When is the Shout and the Trump? When is* the Day of Judgment? Now! You will be given no warning whatever. No time for deathbed contrition. You must live in a state of grace... or, when the instant comes, you will be cast down into the Lake of Fire, there to burn in agony throughout all eternity.

So reads the Word of God.

And to me, so sounds the voice of doom. I had no period of grace in which to lead Margrethe back into the fold... as the Shout may come this very day.

What to do? What to do?

For mortal man, with any problem too great, there is only one thing to do: Take it to the Lord in prayer.

And so I did, again and again and again. Prayer is always answered. But it is necessary to recognize the answer... and it may not be the answer you want.

In the meantime one must render unto Caesar the things that are Caesar's. Of course I elected to work six days a week rather than five ($31,200 a year!) - as I needed every shekel I could garner. Margrethe needed everything! and so did I. Especially we needed shoes. The shoes we had been wearing when disaster struck in Mazatlán had been quite good shoes - for peasants in Mazatlán. But they had been worn during two days of digging through rubble after the quake, then had been worn continuously since then; they were ready for the trash bin. So we needed shoes, at least two pairs each, one pair for work, one for Sunday-go-to-meeting.

And many other things. I don't know what all a woman needs, but it is more complex than what a man needs. I had to put money into Margrethe's hands and encourage her to buy what she needed. I could pig it with nothing more than shoes and a pair of dungarees (to spare my one good outfit) - although I did buy a razor, and got a haircut at a barber's college near the mission, one where a haircut was only two dollars if one was willing to accept the greenest apprentice, and I was. Margrethe looked at it and said gently that she thought she could do as well herself, and save us that two dollars. Later she took scissors and straightened out what that untalented apprentice had done, to me... and thereafter I never again spent money on barbers.

I But saving two dollars did not offset a greater damage. I had honestly thought, when Mr Cowgirl hired me, that I was going to be paid a hundred dollars every day I worked.

He didn't pay me that much and he didn't cheat me. Let me explain.

I finished that first day of work tired but happy. Happier than I had been since the earthquake struck, I mean happiness is relative. I stopped at the cashier-s stand where Mr Cowgirl was working on his accounts, Ron's Grill having closed for the day. He looked up. 'How did it go, Alec?'

'Just fine, sir.'

'Luke tells me that you are doing okay.' Luke was a giant blackamoor, head cook and my nominal boss. In fact he had not supervised me other than to show me where things were and make sure that I knew what to do.

'That's pleasant to hear. Luke's a good cook.' That one-meal-a-day bonus over minimum wage I had eaten at four o'clock as breakfast was ancient history by then. Luke had explained to me that the help could order anything on the menu but steaks or chops, and that today I could have all the seconds I wanted if I chose either the stew or the meat loaf.

I chose the meat loaf because his kitchen smelled and looked clean. You can tell far more about a cook by his meat loaf than you can from the way he grills a steak. I took seconds on the meat loaf - with no catsup.

Luke was generous in the slab of cherry pie he cut for me, then he added a scoop of vanilla ice cream... which I did not rate, as it was an either/or, not both.

'Luke seldom says a good word about white boys,' my employer went on, 'and never about a Chicano. So you must be doing okay.'

'I hope so.' I was growing a mite impatient. We are all the Lord's children but it was the first time in my life that a blackamoor's opinion of my work had mattered. I simply wanted to be paid so that I could hurry home to Margrethe - to the Salvation Army mission, that is.

Mr Cowgirl folded his hands and twiddled his thumbs. 'You want to be paid, don't you?'

I controlled my annoyance. 'Yes, sir.'

-'Alec, with dishwashers I prefer to pay by the week.'

I. felt dismay ' and I am sure my face showed it.

'Don't misunderstand me,' he added. 'You're an. hourly-rate employee, so you are paid at the end of each day if that's what you choose.'

'Then I do choose. I need the money.'

'Let me finish. The reason I prefer to pay dishwashers weekly instead of daily is that, all too often, if I hire one and pay him at the end of the day, he goes straight out and buys a jug of muscatel, then doesn't show up for a couple of days.' When he does, he wants his job back. Angry at me. Ready to complain to the Labor Board. Funny part about it is that I may even be able to give him his job back - for another one-day shot at it -because the bum I've hired in his place has gone and done the same thing.

'This isn't likely to happen with Chicanos as they usually want to save money to send back to Mexico. But I've yet to see the Chicano who could handle the scullery to suit Luke ... and I need Luke more than I need a particular dishwasher. Negras -Luke can usually tell me whether a spade is going to work out, and the good ones are better than a white boy any time. But the good ones are always trying to improve themselves... and if I don't promote them to pantry boy or assistant cook or whatever, soon they go across the street to somebody who will. So it's always a problem. If I can get a week's work out of a dishwasher, I figure I've won. If I get two weeks, I'm jubilant. Once I got a full month. But that's once in a lifetime.'

'You're going to get three full weeks out of me,' I said. 'Now can I have my pay?'

'Don't rush me. If you elect to be paid once a week, I go for a dollar more on your hourly rate. That's forty, dollars more at the end of the week. What do you say?'

(No, that's forty-eight more per week, I told myself. Almost $34,000 per year just for washing dishes. Whew!) 'That's forty-eight dollars more each week,' I answered. 'Not forty. As I'm going for that six-days-a-week option. I do need the money.'

'Okay, Then I pay you once a week.'

'Just a moment. Can't we start it tomorrow? I need some cash today. My wife and I haven't anything, anything at all. I've got the clothes I'm standing in, nothing else. The same for my wife. I can sweat it out a few more days. But there are things a woman just has to have.'

He shrugged. 'Suit yourself. But you don't get the dollar-an-hour bonus for today's work. And if you are one minute late tomorrow, I'll assume you're sleeping it off and I put the sign back in the window.'

'I'm no wino, Mr Cowgirl.'

'We'll see.' He turned to his bookkeeping machine and did something to its keyboard. I don't know what because I never understood it. It was an arithmetic machine but nothing like a Babbage Numerator. It had keys on it somewhat like a typewriting machine. But-there was a window above that where numbers and letters appeared by some sort of magic.

The machine whirred and tinkled and he reached into it and brought out a card, handed it -to me. 'There you are.'

I took it and examined it, and again felt dismay.

It was a piece of pasteboard about three inches wide and seven long, with numerous little holes punched in it and with printing on it that stated that it was a draft on Nogales Commercial and Savings Bank by which Ron's Grill directed them to pay to Alec L. Graham - No, not one hundred dollars.

Fifty-one dollars and twenty-seven cents.

'Something wrong?' he asked.

'Uh, I had expected twelve-fifty an hour.'

'That's what I paid you. Eight hours at minimum wage. You can check the deductions yourself. That's not my arithmetic; this is an IBM 1990 and it's instructed by IBM software, Paymaster Plus ... and IBM has a standing offer of ten thousand dollars to any employee who can show that this model IBM and this mark of their software fouled up a pay check. Look at it. Gross pay, one hundred dollars. Deductions all listed. Add ' 'em up. Subtract them. Check your answer against IBM's answer. But don't blame me. I didn't write those laws - and I like them even less than you do. Do you realize that almost every dishwasher that comes in here, whether wetback or citizen, wants me to pay him in cash and forget the deductions? Do you know what the fine is if they catch me doing it just once? What happens if they catch me a second time? Don't look sour at me - go talk to the government.'

'I just don't understand it. It's new to me, all of it. Can you tell me what these deductions mean? This one that says "Admin", for example.'

'That stands for "administration fee" but don't ask me why you have to pay it, as I am the one who has to do the bookkeeping and I certainly don't get paid to do it.'

I tried to check the other deductions against the fine-print explanations. 'SocSec' turned out to be 'Social Security'. The young lady had explained that to me this morning... but I had told her at the time that, while it was certainly an excellent idea, I felt that I would have to wait until later before subscribing to it; I could not afford it just yet. 'MedIns' and 'HospIns' and DentIns' were simple enough but I could not afford them now, either. But what was 'PL217'? The fine print simply referred to a date and page in TubReg'. What about 'DepEduc' and 'UNESCO'?

And what in the world was 'Income Tax'?

'I still don't understand it. It's all new to me.'

'Alec, you're not the only one who doesn't understand it. But why do you say it is new to you? It has been going on all your life ... and your daddy's -and youi ,grand-daddy's, at least.'

'I'm sorry. What is "Income Tax"?'

He blinked at me. 'Are you sure you don't need to see a shrink?'

'What is a "shrink"?'

He sighed. 'Now I need to see one. Look, Alec. Just take it. Discuss the deductions with the government, not with me. You sound sincere, so maybe you were hit on the head when you got caught in the Mazatlán quake. I just want to go home and take a Miltown. So take it, please.'

'All right. I guess. But I don't know anyone who would cash this for me.'

'No problem. Endorse it back to me and I'll pay you, cash. But keep the stub, as the IRS will insist on seeing all your deductions stubs before paying you back any overpayment.'

I didn't understand that, either, but I kept the stub.

Despite the shock of learning that almost half my pay was gone before I touched it, we were better off each day, as, between us, Margrethe and I had over four hundred dollars a week that did not have to be spent just to stay alive but could be converted into clothing and other necessities. Theoretically she was being paid the same wages as had been the cook she replaced, or twenty-two dollars an hour for twenty-four hours a week, or $528/week.

In fact she had the same sort of deductions I had, which paused her net pay to come to just under $290/week. Again theoretically. But $54/week was checked off for lodging fair. enough, I decided, when I found out what rooming houses were charging. More than fair, in fact. Then we were assessed $I05/week for meals. Brother McCaw at first had put us down for $I40/week for meals and had offered to show by his books that Mrs Owens, the regular cook, had always paid, by checkoff, $I0 each day for her meals... so the two of us should be assessed $I40/week.

I agreed that that was fair (having seen the prices on the menu at Ron's Grill) - fair in theory. But I was going to have my heaviest meal of the day where I worked. We compromised on ten a day for Marga, half that for me.

So Margrethe wound up with a hundred and. thirty-one a week out of a gross- of five hundred and twenty-eight.

If she could collect it. Like most churches, the Salvation Army lives from hand to mouth... and sometimes the hand doesn't quite reach the mouth.

Nevertheless we were well off and better off each week. At the end of the first week we bought new shoes for Margrethe, first quality and quite smart, for only $279.90, on sale at J. C. Penney's, marked down from $350.

Of course she fussed at getting new shoes for her before buying shoes for me. I pointed out that we still had over a hundred dollars toward shoes for me - next week - and would she please hold it for us so that I would not be tempted to spend it. Solemnly she agreed.

So the following Monday we got shoes for me even cheaper - Army surplus, good, stout comfortable shoes that would outlast anything bought from a regular shoe store. (I would worry about dress shoes for me after I had other matters under control. There is nothing like being barefoot broke to adjust one's mundane values.) Then we went to the Goodwill retail store and bought a dress and a summer suit for her, and dungaree pants for me.

Margrethe wanted to get more clothes for me - we still had almost sixty dollars. I objected.

'Why not, Alec? You need clothes every bit as badly as I do... yet we have spent almost all that you have saved on me. It's not fair.'

I answered, 'We've spent it where it was needed. Next week, if Mrs Owens comes back on time, you'll be out of a job and we'll have to move. I think we. should move on. So let's save what we can for bus fare.'

'Move on where, dear?'

'To Kansas. This is a world strange to each of us. Yet it is familiar, too - same language, same geography, some of the same history. Here I'm just a dish washer, not earning enough to support you. But I have a strong feeling that Kansas - Kansas in this world - will be so much like the Kansas I was born in that I'll be able to cope better.'

'Whither thou goest, beloved.'

The mission was almost a mile from Ron's Grill; instead of trying to go 'home' at my four-to-six break, I usually spent my free time, after eating, at the downtown branch library getting myself oriented. That, and newspapers that customers sometimes left in the restaurant, constituted my principal means of reeducation.

In this world Mr William Jennings Bryan had indeed been President and his benign influence had' kept us out of the Great European War. He then had offered his services for a negotiated peace. The Treaty of Philadelphia had more or less restored Europe to what it had been before 1913.

I didn't recognize any of the Presidents after Bryan, either from my own world or from Margrethe's world. Then I became utterly bemused when I first ran across the name of

the current President: His Most Christian Majesty, John Edward the Second, Hereditary President of the United States and Canada, Duke of Hyannisport, Comte de Quebec, Defender of the Faith, Protector of the Poor, Marshal in Chief of the Peace Force.

I looked at a picture of him, laying a cornerstone in Alberta. He was tall and broad-shouldered and blandly handsome and was wearing a fancy uniform with enough medals on his chest to ward off pneumonia. I studied his face and asked myself, 'Would you buy a used car from this man?'

But the more I thought about it, the more logical it seemed. Americans, all during their two and a quarter centuries as a separate nation, had missed the royalty they had shucked off. They slobbered over European royalty whenever they got the chance. Their wealthiest citizens married their daughters to royalty whenever possible, even to Georgian princes - a 'prince' in Georgia being a farmer with the biggest manure pile in the neighborhood.

I did not know where they had hired this royal dude. Perhaps they had sent to Estoril for him, or even had him shipped in from the Balkans. As one of my history profs had pointed out, there are always out-of-work royalty around, looking for jobs. When a man is out of, work, he can't be fussy, as I knew too well. Laying cornerstones is probably no more boring than washing dishes. But the hours are longer. I think. I've never been a king. I'm not sure that I would take a job in the kinging business if it were offered to me; there are obvious drawbacks and not just the long hours.

On the other hand -

Refusing a crown that you know will never be offered to you is sour grapes, by definition. I searched my heart and concluded that-I probably would be able to persuade myself that it was a sacrifice I should make for my fellow men. I would pray over it until I was convinced that the Lord wanted me to accept this burden.

Truly I am not being cynical. I know how frail men can be in persuading themselves that the Lord wants them to do something they wanted to do all along - and I am no better than my brethren in this.

But the thing that stonkered me was the idea of Canada united with us. Most Americans do not know why Canadians dislike us (I do not), but they do. The idea that Canadians would ever vote to unite with us boggles the mind.

I went to the library desk and asked for a recent general history of the United States. I had just started to study it when I noted by the wall clock that it was almost four o'clock... so I had to check it back in and hustle to get back to my scullery on time. I did not have library loan privileges as I could not as yet afford the deposit required of nonresidents.

More important than the political changes were technical and cultural changes. I realized almost at once that this world was more advanced in physical science and. technology than my own. In fact I realized it almost as quickly as I saw a 'television' display device.

I never did understand how televising takes place. I tried to learn about it in the public library and at once bumped into a subject called 'electronics'. (Not 'electrics' but 'electronics'.) So I tried to study up about electronics and encountered the most amazing mathematical gibberish. Not since thermodynamics had caused me to decide that I had a call for the ministry have I seen such confusing and turgid equations. I don't think Rolla Tech could ever cope with such amphigory - at least not Rolla Tech when I was an undergraduate there.

But the superior technology of this world was evident, in many more things than television. Consider 'traffic lights'. No doubt you have seen cities so choked with traffic that it is almost impossible to cross major streets other than through intervention by police officers. Also' no doubt you have sometimes been annoyed when a policeman charged with controlling traffic has stopped the flow in your direction to accommodate some very important person from city hall, or such.

Can you imagine a situation in which traffic could be controlled in greater volume with no police officers whatever at hand - just an impersonal colored light?

Believe me, that is exactly what they had in Nogales.

Here is how it works:

At every busy intersection you place a minimum of twelve lights, four groups of three, a group facing each of the cardinal directions and so screened that each group can be seen only from its direction. Each group has one red light, one green light, one amber light. These lights are served by electrical power and each shines brightly enough to be seen at a distance of a mile, more or less, even in bright sunlight. These are not arc lights; these are very powerful Edison lamps - this is important because these lights must be turned on and off every few moments and must function without fail hours on end, even days on end, twenty-four hours a day.

These lights are placed up high on telegraph poles, or suspended over intersections, so that they may be seen by teamsters or drivers or cyclists from a distance. When the green lights shine, let us say, north and south, the red lights shine east and west - traffic may flow north and south, while east and west traffic is required to stand and wait exactly as if a police officer had blown his whistle and held up his hands, motioning traffic to move north and south while restraining traffic from moving east and west.

Is that clear? The lights replace the policeman's hand signals.

The amber lights replace the policeman's whistle; they warn of an imminent change in the situation.

But what is the advantage? - since someone, presumably a policeman, must switch the lights on and off, as needed. Simply this: The switching is done automatically from a distance (even miles!) at a central switchboard.

There are many other marvels about this system, such as electrical counting devices to decide how long each light burns for best handling of the traffic, special lights for controlling left turns or to accommodate people on foot... but the truly great marvel is this: People obey these lights.

Think about it. With no policemen anywhere around people obey these blind and dumb bits of machinery as. if they were policemen.

Are people here so sheeplike and peaceful that they can be controlled this easily? No. I wondered about it and found some statistics in the library. This world has a higher rate of violent crime than does the world in which I was born. Caused by these strange lights? I don't think so. I think that the people here, although disposed to violence against each other, accept obeying traffic lights as a logical thing to do. Perhaps.

As may be, it is passing strange.

Another conspicuous difference in technology lies in air traffic. Not the decent, cleanly, safe, and silent dirigible airships of my home world - No, no! These are more like the aeroplanos of the Mexicano world in which Margrethe and I sweated out our indentures before the great quake that destroyed Mazatlán. But they are so much bigger, faster, noisier and fly so much higher than the aeroplanos we knew that they are almost another breed - or are indeed another breed, perhaps, as they are called 'jet planes'. Can you imagine a vehicle that flies eight miles above the ground? Can you imagine a giant car that moves, faster than sound? Can you imagine a screaming whine, so loud that it makes your teeth ache?

They call this 'progress'. I long for the comfort and graciousness of LTA Count von Zeppelin. Because you can ' t get away from these behemoths. Several times a day one of these things goes screaming over the mission, fairly low down, as it approaches a grounding, at the flying field north of the city. The noise bothers me and makes Margrethe very nervous.

Still most of the enhancements in technology really are progress - better plumbing, better lighting indoors and out, better roads, better buildings, many sorts of machinery that make human labor less onerous and more productive. I am never one of those back-to-nature freaks who sneer at engineering; I have more reason than most people to respect engineering. Most people who sneer at technology would starve to- death if the engineering infrastructure were removed.

We had been in Nogales just short of three weeks when I was able to carry out a plan that I had dreamed of for nearly five months... and had actively plotted since our arrival in

Nogales (but had to delay until I could afford it). - I picked Monday to carry it out, that being my day off. I told Margrethe to dress up in her new clothes as I was taking my best girl out for a treat, and I dressed up, too - my one suit, my new shoes, and a clean shirt... and shaved and bathed and nails clean and trimmed.

It was a lovely day, sunny and not too hot. We both felt cheerful because, first, Mrs Owens had written to Brother McCaw saying that she was staying on another week if she could be spared, and second, we now had enough money for bus fares for both of us to Wichita, Kansas, although just barely - but the word from Mrs Owens meant that could squirrel away another four hundred dollars for eating money on the way and still arrive not quite broke.

I took Margrethe to a place I had spotted the day I looked for a job as a dishwasher - a nice little place outside the tenderloin, an old-fashioned ice cream parlor.

We stopped outside it. 'Best girl, see this place? Do you remember a conversation we had when we were floating on the broad Pacific on a sunbathing mat and not really expecting to live much longer? - at least I was not.'

'Beloved, how could I forget?'

'I asked you what you would have if you could have anything in the world that you wanted. Do you remember I what you answered?'

'Of course I do! It was a hot fudge sundae.'

'Right! Today is your unbirthday, dear. You are about to have that hot fudge sundae.'

'Oh, Alec!'

'Don't blubber. Can't stand a woman who cries. Or you can have a chocolate malt. Or a sawdust sundae. Whatever your heart desires. But I did, make sure that this place always has hot fudge sundaes before I brought you here.'

'We can't afford it. We should save for the trip.'

'We can afford it. A hot fudge sundae is five dollars. Two for ten dollars. And I'm going to be a dead game sport and tip the waitress a dollar. Man does not live by bread alone. Nor does woman, Woman. Come along!'

We were shown to a table by a pretty waitress (but not as pretty as my bride). I seated Margrethe with her back to the street, holding the chair for her, and then sat down opposite her. 'I'm Tammy,' the waitress said as she offered us a menu. 'What would you folks like this lovely day?'

'We won't need the menu,' I said. 'Two hot fudge sundaes, please.'

Tammy looked thoughtful. 'All right, if you don't mind waiting a few minutes. We may have to make up the hot sauce.'

'A few minutes, who cares? We've waited much longer than that.'

She smiled and went away. I looked at Marga. 'We've waited much longer. Haven't we?'

'Alec, you're a sentimentalist and that's part of why I love you.'

'I'm a sentimental slob and right now I'm slavering at the thought of hot fudge sundae. But I wanted you to see this place for another reason, too. Marga, how would you like to run such a place as this? Us, that is. Together. You'd be boss, I'd be dishwasher, janitor, handyman, bouncer, and whatever was needed.'

She looked very thoughtful. 'You are serious?'

'Quite. Of course we couldn't go into business for ourselves right away; we will have to save some money first. But not much, the way I plan it. A dinky little place, but bright and cheerful - after I paint it. A soda fountain, plus a very limited Menu. Hot dogs. Hamburgers. Danish open-face sandwiches. Nothing else. Soup, maybe. But canned soups are no problem and not much inventory.'

Margrethe looked shocked. 'Not canned soups. I can serve a real soup... cheaper and better than anything out of a tin.'

'I defer to your professional judgment, Ma'am. Kansas has half a dozen little college towns; any of them would welcome such a place. Maybe we pick a shop already existing, a mom-and-pop place - work for them a year, then buy them out. Change the name to The Hot Fudge Sundae. Or maybe Marga's Sandwiches.'

'The Hot Fudge Sundae. Alec, do you really think we can do this?'

I leaned toward her and took her hand. 'I'm sure we can, darling. And without working ourselves to death, too.' I moved my head. 'That traffic light is staring me right in the eye.'

'I know. I can see it reflected in your eye every time it changes. Want to swap seats? It won't bother me.'

'It doesn't bother me. It just has a somewhat hypnotic effect.' I looked down at. the table, looked back at the light. 'Hey, it's gone out.'

Margrethe twisted her neck to look. 'I don't see it. Where?'

'Uh... pesky thing has disappeared. Looks like.'

I heard a male voice at my elbow. 'What'll it be for you two? Beer or wine; we're not licensed for the hard stuff.'

I looked around, saw a waiter. 'Where's Tammy?'

'Who's Tammy?'

I took a deep breath, tried to slow my heart, then said, 'Sorry, brother; I shouldn't have come in here. I find I've left my wallet at home.' I stood up. 'Come, dear.'

Wide-eyed and silent, Margrethe came with me. As we walked out, I looked around, noting changes. I suppose it was a decent enough place, as beer joints go. But it was not our cheerful ice cream parlor.

And not our world.

Chapter 15

Boast not thyself of tomorrow; for
thou knowest not what a day may bring forth.
Proverbs 27:1

OUTSIDE, WITHOUT planning it, I headed us toward the Salvation Army mission. Margrethe kept quiet and held tight to my arm. I should have been frightened; instead I was boiling angry. Presently I muttered, 'Damn them! Damn them!'

'Damn who, Alec?'

'I don't know. That's the worst of it. Whoever is doing this to us. Your friend Loki, maybe.'

'He is not my friend, any more than Satan is your friend. I dread and fear what Loki is doing to our world.'

'I'm not afraid, I'm angry. Loki or Satan or whoever, this last is too much. No sense to it. Why couldn't they wait thirty minutes? That hot fudge sundae was practically under our noses - and they snatched it away! Marga, that's not right, that's not fair! That's sheer, unadulterated cruelty. Senseless. On a par with pulling wings off flies. I despise them. Whoever.'

Instead of continuing with useless talk about matters we could not settle, Margrethe said, 'Dear, where are we going?'

'Eh?' I stopped short. 'Why, to the mission, I suppose.'

'Is this the right way?'

'Why, yes, cert -' I paused to look around. 'I don't know.' I had been walking automatically, my attention fully on my anger. Now I found that I was unsure of any landmarks. 'I guess I'm lost.'

'I know I am.'

It took us another half hour to get straightened out. The neighborhood was vaguely familiar but nothing was quite right. I found the block where Ron's Grill should be, could not find Ron's Grill. Eventually a policeman directed us to the mission... which was now in a different building. To my surprise, Brother McCaw was there. But he did not recognize us, and his name was now McNabb. We left, as gracefully as possible. Not very, that is.

I walked us back the way we had come - slowly, as I wasn't going anywhere. 'Marga, we're right back where we were three weeks ago. Better shoes, that's all. A pocket full of money - but money we can't spend, as it is certain to be funny money here... good for a quiet rest behind bars if I tried to pass any of it.'

'You're probably right, dear one.'

'There is a bank on that corner just ahead. Instead of trying to spend any of it, I could walk in and simply ask whether or not it was worth anything.'

'There couldn't be any harm in that. Could there?'

'There shouldn't be. But our friend Loki could have another practical joke up his sleeve. Uh, we've got to know. Here - you take everything but one bill. If they arrest me, you pretend not to know me.'

'No!'

'What do you mean, "No"? There is no point in both of us being in jail.'

She looked stubborn and said nothing. How can you argue with a woman who wont talk? I sighed. 'Look, dear, the only other thing I can think of is to look for another job washing dishes. Maybe Brother McNabb will let us sleep in the mission tonight.'

'I'll look for a job, too. I can wash dishes. Or cook. Or something.'

'We'll see. Come inside with me, Marga; we'll go to jail together. But I think I've figured out how to handle this without going to jail.' I took out one treasury note, crumpled it, and tore one corner. Then we went into the bank together, me holding it in my hand as if

I had just picked it up. I did not go to a teller's window; instead I went to that railing behind which bark officials sit at their desks.

I leaned on the railing and spoke to the man nearest to it; his desk sign marked him as assistant manager. 'Excuse me, sir! Can you answer a question for me?'

He looked annoyed but his reply did not show it. 'I'll try. What's on your mind?'

'Is this really money? Or is it stage money, or something?'

He looked at it, then looked more closely. 'Interesting. Where did you get this?"

'My wife found it on a sidewalk. Is it money?'

'Of course it's not money. Whoever heard of a twenty-dollar note? Stage money, probably Or an advertising promotion.'

'Then it's not worth anything?'

'It's worth the paper it's printed on, that's all. I doubt that it could even be called counterfeit, since there has been no effort to make it look like the real thing. Still, the Treasury inspectors will want to see it.'

'All right. Can you take care of it?'

'Yes. But they'll want to talk to you, I'm sure. Let's get your name and address. And your wife's, of course, since she found it.'

'Okay. I want a receipt for it.' I gave our names as 'Mr and Mrs Alexander Hergensheimer' and gave the address - but not the name - of Ron's Grill. Then I solemnly accepted a receipt.

Once outside on the sidewalk I said, 'Well, we're no worse off than we thought we were. Time for me to look for some dirty dishes.'

'Alec -'

'Yes, beloved?'

'We were going to Kansas.'

'So we were. But our bus-fare money is not worth the paper it is printed on. I'll have to earn some more. I can. I did it once, I can do it again.'

'Alec. Let us now go to Kansas.'

A half hour later we were walking north on the highway Tucson. Whenever anyone passed us, I signalled our hope of being picked up.

It took us three hitches simply to reach Tucson. At Tucson it would have made equal sense to head east toward El Paso, Texas, as to continue on Route 89, as 89 swings west before it goes north to Phoenix. It was settled for us by the chance that the first lift we were able to beg out of Tucson was with a teamster who was taking a load north.

This ride we were able to pick up at a truckers' stop at the intersection of 89 and 80, and I am forced to admit that the teamster listened to our plea because Margrethe is the beauty she is - had I been alone I might still be standing there. I might as well say right now that this whole trip depended throughout on Margrethe's beauty and womanly charm quite as much as it depended on my willingness to do any honest work whatever, no matter how menial, dirty, or difficult.

I found this fact unpleasant to face. I held dark thoughts of Potiphar's wife and of the story of Susanna and the Elders. I found myself being vexed with Margrethe when her only offense lay in being her usual gracious, warm, and friendly self. I came close to telling her not to smile at strangers and to keep her eyes to herself.

That temptation hit me sharpest that first day at sundown when this same trucker stopped at a roadside oasis centered around a restaurant and a fueling facility. 'I'm going to have a couple of beers and a sirloin steak,' he announced. 'How about you, Maggie baby? Could you use a rare steak? This is the place where they just chase the cow through the kitchen.'

She smiled at, him. 'Thank you, Steve. But, I'm not hungry.'

My darling was telling an untruth. She knew it, I knew it - and I felt sure that Steve knew it. Our last meal had been breakfast at the mission, eleven hours and a universe ago. I had tried to wash dishes for a meal at the truckers' stop outside Tucson, but had been dismissed rather abruptly. So we had had nothing all day but water from a public drinking faucet.

'Don't try to kid your grandmother, Maggie. We've been on the road four hours. You're hungry.'

I spoke up quickly to keep Margrethe from persisting in an untruth - told, I felt certain, on my behalf. 'What she means, Steve, is that she doesn't accept dinner invitations from other men. She expects me to provide her dinner.' I added, 'But I thank you on her behalf and we both thank you for the ride. It's been most pleasant.'

We were still seated in the cab of his truck, Margrethe in the middle. He leaned forward and looked around her. 'Alec, you, think I'm trying to get into Maggie's pants, don't you?'

I answered stiffly that I did not think anything of the sort while thinking privately that that was exactly what I thought he had been trying to accomplish all along... and I

resented not only his unchivalrous overtures but also the gross language he had just used. But I had learned the hard way that rules of polite speech in the world in which I had grown up were not necessarily rules in another universe

'Oh, yes, you do think so. I wasn't born yesterday and a lot of my life has been spent on the road, getting my illusions knocked out. You think I'm trying to lay your woman because every stud who comes along tries to put the make on her. But let me clue you in, son. I don't knock when there's nobody at home. And I can always tell. Maggie ain't having any. I checked that out hours ago. And 'congratulations; a faithful woman is good to find. Isn't that true?'

'Yes, certainly,' I agreed grudgingly.

'So get your feathers down'. You're about to take your wife to dinner. You've already said thank you to me for the ride but why don't you really thank me by inviting me to dinner? - so I won't have to eat alone.'

I hope that I did not look dismayed and that my instant of hesitation was not noticeable. 'Certainly, Steve. We owe you that for your kindness. Uh, will you excuse me while I make some arrangements?' I started to get out of the cab.

'Alec, you don't lie any better than Maggie does.'

'Excuse me?'

'You think I'm blind? You're broke. Or, if you aren´t absolutely stony, you are so near flat you can't afford to buy me a sirloin steak. Or even the blueplate special.'

'That is true,' I answered with - I hope - dignity. 'The arrangements I must make are with the restaurant manager. I hope to exchange dishwashing for the price of three dinners.'

'I thought so. If you were just ordinary broke, you'd be riding Greyhound and you'd have some baggage. If you were broke but not yet hungry broke, you'd hitchhike to save your money for eating but you would have some sort of baggage. A kiester each, or at least a bindle. But you've got no baggage... and you're both wearing suits - in the desert, for God's sake! The signs all spell disaster.'

I remained mute.

'Now look,' he went on. 'Possibly the owner of this joint would let you wash dishes. More likely he's got three wetbacks pearl-diving this very minute and has turned down at least three more already today; this is on the main north-south route of turistas coming through holes in the Fence. In any case I can't wait while you wash dishes; I've got to herd this rig a lot of miles yet tonight. So I'll make you a deal. You take me to dinner but I lend you the money.'

'I'm a poor risk.'

'Nope, you're a good risk. What the bankers call a character loan, the very best risk there is. Sometime, this coming year, or maybe twenty years from now, you'll run across another young couple, broke and hungry. You'll buy them dinner on the same, terms. That pays me back. Then when they do the same, down the line, that pays you back. Get it?'

'I'll pay you back sevenfold!'

"Once is enough. After that you do it for your own pleasure. Come on, let's eat.'

Rimrock Restop restaurant was robust rather than fancy - about on a par with Ron's Grill in another world. It had both counter and tables. Steve led us to a table and shortly a fairly young and rather pretty waitress came over.

'Howdy, Steve! Long time.'

Hi, Babe! How'd the rabbit test come out?'

'The rabbit died. How about your blood test?' She smiled at me and at Margrethe. 'Hi, folks! What'll you have?'

I had had time to glance at the menu, first down the right-hand side, of course - and was shocked at the prices. Shocked to find them back on the scale of the world I knew best, I mean. Hamburgers for a dime, coffee at five cents, table d'hôte dinners at seventy-five to ninety cents -these prices I understood.

I looked at it and said, 'May I have a cheese superburger, medium well?'

'Sure thing, Ace. How about you, dear?'

Margrethe took the same, but medium rare.

'Steve?' the waitress inquired.

That'll be three beers - Coors - and three sirloin steaks, one rare, one medium rare, one medium. With the usual garbage. Baked potato, fried promises, whatever. The usual limp salad. Hot rolls. All the usual. Dessert later. Coffee.'

'Gotcha.'

'Wantcha to meet my friends. Maggie, this is Hazel. That's Alec, her husband.'

'You lucky man! Hi, Maggie; glad to know you. Sorry to see you in such company, though. Has Steve tried to sell you anything?'

'No,'

'Good. Don't buy anything, don't sign anything, don't bet with him. And be glad you're safely married; he's got wives in three states.'

'Four,' Steve corrected.

'Four now? Congratulations. Ladies' restroom is through the kitchen, Maggie; men go around behind.' She left moving fast, with a swish of her skirt.

'That's a fine broad,' Steve said. 'You know what they say about waitresses, especially in truckers' joints. Well, Hazel is probably the only hash-slinger on this highway who ain't sellin' it. Come on, Alec.' He got up and led me outdoors and around to the men's room. I followed him. By the time I understood what he had said, it was too late to resent his talking that way in a lady's presence. Then I was forced to admit that Margrethe had not resented it had simply treated it as information. As praise of Hazel, in fact. I think my greatest trouble with all these worrisome world changes had to do, not with economics, not with social behavior, not with technology, but simply with language, and the mores and taboos thereto.

Beer was waiting for us when we returned, and so was Margrethe, looking cool and refreshed.

Steve toasted us. 'Skoal!'

We echoed 'Skaal!' and I took a sip and then a lot more - just what I needed after a long day on a desert highway. My moral downfall in S.S. Konge Knut had included getting reacquainted with beer, something I had not touched since my days as an engineering student, and very little then - no money for vices. This was excellent beer, it seemed to me, but not as good as the Danish Tuborg served in the ship. Did you know that there is not one word against beer in the Bible? In fact the word 'beer' in the Bible means 'fountain'- or 'well'.

The steaks were delicious.'

Under the mellowing influence of beer and good food I found myself trying to explain to Steve how we happened to be down on our luck and accepting the charity of strangers... without actually saying anything. Presently Margrethe said to me, 'Alec. Tell him.'

'You think I should?'

'I think Steve is entitled to know. And I trust him.'

'Very well. Steve, we are strangers from another world.'

He neither laughed nor smiled; he just looked interested. Presently he said, 'Flying saucer?'

'No. I mean another universe, not just another planet. Although it seems like the same planet. I mean, Margrethe and I were in a state Called Arizona and a city called Nogales just earlier today. Then it changed. Nogales shrank down and nothing was quite the same. Arizona looked about the same, although I don't know this state very well.'

'Territory.'

'Excuse me?'

'Arizona is a territory, not a state. Statehood was voted down.'

'Oh. That's the way it was in my, world, too. Something about taxes. But we didn't come from my world. Nor from Marga's world. We came, from -'I stopped. 'I'm not telling this very well.' I looked across at Margrethe. 'Can you explain it?'

'I can't explain it,' she answered, because I don't understand it. But, Steve, it's true. I'm from one world, Alec is from another world, we've lived in still another world, and we were in yet again another world this morning. And now we are here. That is why we don't have any money. No, we do have money but it's not money of this world.'

Steve said, 'Could we take this one world at a time? I'm getting dizzy.'

I said, 'She left out two worlds.'

'No, dear - three. You may have forgotten the iceberg world.'

'No, I counted that. I - Excuse me, Steve. I'll try to take it one world at a time. But it isn't easy. This morning - We went into an ice cream parlor in Nogales because I wanted to buy Margrethe a hot fudge sundae. We sat down at a table, across from each other like right now, and that put me facing a set of traffic lights-'

'A set of what?'

'A set of traffic signal lights, red, green, and amber. That's how I spotted that we had changed worlds again. This world doesn't have signal lights, or at least I haven't seen any. Just traffic cops. But in the world we got up in this morning, instead of traffic cops, they do it with signal lights.'

Sounds like they do it with mirrors. What's this got to do with buying Maggie a hot fudge sundae?'

'That was because, when we were. shipwrecked and, floating around in the ocean, Margrethe wanted a hot fudge, sundae. This morning was my first chance to buy one for

her. When the traffic lights disappeared, I knew we had changed worlds again - and that meant that my money wasn't any good. So I could not buy her a hot fudge sundae. And could not buy her dinner tonight. No money. No spendable money, I mean. You see?'

'I think I fell off three turns back. What happened to your money?'

'Oh.' I dug into my pocket, hauled out our carefully hoarded bus-fare money, picked out a twenty-dollar bill, handed it to Steve. 'Nothing happened to it. Look at this.'

He looked at it carefully. ' "Lawful money for all debts public and private." That sounds okay. But who's this joker with his picture on it? And when did they start.printing twenty-dollar treasury notes?'

'Never, in your world. I guess. The picture is of William Jennings Bryan, President of the United States from 1913 to 192l.'

'Not at Horace Mann School in Akron, he wasn't. Never heard of him.'

'In my school he was elected in 1896, not sixteen years later. And in Margrethe's world Mr Bryan was never president at all. Say! Margrethe! This just might be your world!'

'Why do you think so, dear?'

'Maybe, maybe not. As we came north out of Nogales I didn't notice a flying field or any signs concerning one. And I just remembered that I haven't heard or seen a jet plane all day long. Or any sort of a flying machine. Have you?'

‚No. No, I haven't. But I haven't been thinking about them.' She added, 'I'm almost certain there haven't been any near us.'

There you have it! Or maybe this is my world. Steve, what's the situation on aeronautics here?'

'Arrow what?'

'Flying machines. Jet planes. Aeroplanes of any sort. And dirigibles - do you have dirigibles?'

'None of those things rings any bells with me. You're talking about flying, real flying, up in the air like a bird?'.

'Yes, yes!'

'No, of course not. Or do you mean balloons? I've seen a balloon.'

'Not balloons. Oh, a dirigible is a sort of a balloon. But it's long instead of round - sort of cigar-shaped. And it's propelled by engines something like our truck and goes a hundred miles an hour and more - and usually fairly high, one or two thousand feet. Higher over mountains.'

For the first time Steve showed surprise rather than interest. 'God A'mighty! You've actually seen something like that?'

'I've ridden in them. Many times. First when I was only twelve years old. You went to school in Akron? In my world Akron is world famous as the place where they build the biggest, fastest, and best dirigible airships in all the world.'

Steve shook his head. 'When the parade goes by, I'm out for a short beer. That's the story of my life. Maggie, you've seen airships? Ridden in them?'

'No. They are not in my world. But I've ridden in a flying' machine. An aeroplano. Once. It was terribly exciting. Frightening, too. But I would like to do it again.'

'I betcha would. Me, I reckon it would scare the tar out of me. But I would take a ride in one, even if it killed me. Folks, I'm beginning to believe you. You tell it so straight. That and this money. If it, is money.'

'It is money,' I insisted, 'from another world. Look at it closely, Steve. Obviously it's not money of your world. But it's not play money or stage money either. Would anybody bother to make steel engravings that perfect just for stage money? The engraver who made the plates expected that note to be accepted as money... yet it isn't even a correct denomination - that's the first thing you noticed. Wait a moment.' I dug into another pocket. 'Yup! Still here.' I took out a ten-peso note - from the Kingdom of Mexico. I had burned most of the useless money we had accumulated before the quake - Margrethe's tips at El Pancho Villa - but I had saved a few' souvenirs. 'Look at this, too. Do you know Spanish?'

'Not really. TexMex. Cantina Spanish.' He looked at the Mexican money. 'This looks okay.'

'Look more closely,' Margrethe urged him. 'Where it says 'Reino'. Shouldn't that read 'Republica'? Or is Mexico a kingdom in this world?'

'It's a republic... partly because I helped keep it that way. I was an election judge there when I was in the Marines. It's amazing what a few Marines armed to their eyebrows can do to keep an election honest. Okay, pals; you've sold 'me. Mexico is not a kingdom and hitchhikers who don't have the price of dinner on them ought not to be carrying around Mexicano money that says it is a kingdom. Maybe I'm crazy but I'm inclined to throw in with you. What's the explanation?'

'Steve',' I said soberly, 'I wish I knew. The simplest explanation is that I've gone crazy and that it's all imaginary - you, me, Marga, this restaurant, this world - all products of my brain fever.'

'You can be imaginary if you want to, but leave Maggie and me out of it. Do you have any other explanations?'

'Uh... that depends. Do you read the Bible, Steve?'

'Well, yes and no. Being on the road, lots of times I find myself wide awake in bed with nothing around to read but a Gideon Bible. So sometimes I do.'

'Do you recall Matthew twenty-four, twenty-four?'

'Huh? Should I?'

I quoted it for him. 'That's one possibility, Steve. These world changes may be signs sent by the Devil himself, intended to deceive us. On the other hand they may be portents of the end of world and the coming of Christ into His kingdom. Hear the Word:

"Immediately after the tribulation of those days shall the sun be darkened, and the moon shall not give her light, and the stars shall fall from heaven, and the powers of the heavens shall be shaken:

"And then shall appear the sign ed the Son of man in heaven: and then shall all the tribes of the earth mourn, and they shall see the Son of man coming in the clouds of heaven with power and great glory.

'"And he shall send his angels with a great sound of a trumpet, and they shall gather together his elect from the four winds, from one end of heaven to the other."

'That's what it adds up to, Steve. Maybe these are the false signs of the tribulations before the end, or maybe these wonders foretell the Parousia, the coming of Christ. But, either way, we are coming to the end of the world. Are you born again?'

'Mmm, I can't rightly say that I am. I was baptized a long time ago, when I was too young to have much say in the matter. I'm not a churchgoer, except sometimes to see my friends married or buried. If I was washed clean once, I guess I'm a little dusty by now. I don't suppose I qualify.'

'No, I'm certain that you do not. Steve, the end of the world is coming and Christ is returning soon. The most urgent business you have - that anyone has! - is to take your troubles to Jesus, be washed in His Blood, and be born again in Him. Because you will receive no warning. The Trump will sound and you will either be caught up into the arms of Jesus, safe and happy forevermore, or you will be cast down into the fire and brimstone, there to suffer agonies through all eternity. You must be ready.'

'Cripes! Alec, have you ever thought about becoming a preacher?'

'I've thought about it.'

'You should do more than think about it, you should be one. You said all that just like you believed every word of it.'

'I do.

'Thought maybe. Well, I'll pay you the respect of giving it some hard thought. But in the meantime I hope they don't hold Kingdom Come tonight because I've still got this load to deliver. Hazel! Let me have the check, dear; I've got to get the show on the road.'

Three steak dinners came to $3.90; six beers was another sixty cents, for a total of $4.50. Steve paid with a half eagle, a coin I had never seen outside a coin collection I wanted to look at this one but had no excuse.

Hazel picked it up, looked at it. 'Don't get much gold around here,? she remarked. 'Cartwheels are the usual thing. And some paper, although the boss doesn't like paper money. Sure you can spare this, Steve?'

'I found the Lost Dutchman.'

'Go along with you; I'm not going to be your fifth wife.'

'I had in mind a temporary arrangement.'

'Not that either - not for a five-dollar gold piece.' She dug into an apron pocket, took out a silver half dollar. 'Your change, dear.'

He pushed it back toward her. 'What'll you do for fifty cents?'

She picked it up, pocketed it. 'Spit in your eye. Thanks. Night, folks. Glad you came in.'

During the thirty-five miles or so on into Flagstaff Steve asked questions of us about the worlds we had seen but made no comments. He talked just enough to keep us talking. He was especially interested in my descriptions of airships, jet planes, and aeroplanos, but anything technical fascinated him. Television he found much harder to believe than flying machines - well, so did I. But Margrethe assured him that she had seen television herself, and Margrethe is hard to disbelieve. Me, I might be mistaken for a con man. But not Margrethe. Her voice and manner carry conviction.

In Flagstaff, just short of Route 66, Steve pulled over to the side and stopped, left his engine running. 'All out,' he said, 'if you insist on heading east. If you want to go north, you're welcome.

I said, 'We've got to get to Kansas, Steve.'

'Yes, I know. While you can get there either way, Sixty-Six is your best bet... though why anyone should want to go to Kansas beats me. It's that intersection ahead, there. Keep right and keep going; you can't miss it. Watch out for the Santa Fe tracks. Where you planning to sleep tonight?'

'I don't have any plans. We'll walk until we get another ride. If we don't get an all-night ride and we get too sleepy, we can sleep by the side of the road - it's warm.'

'Alec, you listen to your Uncle Dudley. You're not going to sleep on the desert tonight. It's warm now; it'll be freezing cold by morning. Maybe you haven't noticed but we've been climbing all the way from Phoenix. And if the Gila monsters don't get you, the sand fleas will. You've got to rent a cabin.'

'Steve, I can't rent a cabin.'

'The Lord will provide. You believe that, don't you?'

'Yes,' I answered stiffly, 'I believe that.' (But He also helps those who help themselves.)

'So let the Lord provide. Maggie, about this end-of-the world business, do you agree with Alec?'

"I certainly don't disagree!'

'Mmm. Alec, I'm going to give it a lot of thought... starting tonight, by reading a Gideon Bible. This time I don't want to miss the parade. You go on down Sixty-Six, look for a place saying 'cabins'. Not 'motel' ' not 'roadside inn', not a word about Simmons mattresses or private baths - just 'cabins'. If they ask more than two dollars, walk away. Keep dickering and you might get it for one.'

I wasn't listening very hard as I was growing quite angry. Dicker with what? He knew that I was utterly without funds - didn't he believe me?

'So I'll say good-bye,' Steve went on. 'Alec, can you get that door? I don't want to get out.'

'I can get it.' I opened it, stepped down, then remembered my manners. 'Steve, I want to thank you for everything. Dinner, and beer, and a long ride. May the Lord watch over you and keep you.'

'Thank you and don't mention it. Here.' He reached into a pocket, pulled out a card. 'That's my business card. Actually it's my daughter's address. When you get to Kansas, drop me a card, let me know how you made out.'

'I'll do that.' I took the card, then started to hand Margrethe down.

Steve stopped her. 'Maggie! Aren't you going to kiss Ol' Steve good-bye?'

'Why, certainly, Steve!' She turned back and half faced him on the seat.

'That's better, Alec, you'd better turn your back.'

I did not turn my back but I tried to ignore it, while watching out the corner of my eye.

If it had gone on one half-second longer, I would have dragged her out of that cab bodily. Yet I am forced to admit that Margrethe was not having attentions forced on her; she was cooperating fully, kissing him in a fashion no married woman should ever kiss another man.

I endured it.

At last it ended. I handed her down, and closed the door. Steve called out, ' 'Bye, kids!' and his truck moved forward. As it picked up speed he tooted his horn twice.

Margrethe said, 'Alec, you are angry with me.'

'No. Surprised, yes. Even shocked. Disappointed. Saddened.'

'Don't sniff at me!'

'Eh?'

'Steve drove us two hundred and fifty miles and bought us a fine dinner and didn't laugh when we told him a preposterous story. And now you get hoity-toity and holier-than-thou because I kissed him hard enough to show that I appreciated what he had done for me and my husband. I won't stand for it, do you hear?'

'I just meant that -'

'Stop it! I won't listen to explanations. Because you're wrong! And now I am angry and I shall stay angry until you realize you are wrong. So think it over!' She turned and started walking rapidly toward the intersection of 66 with 89.

I hurried to catch up. 'Margrethe!'

She did not answer and increased her pace.

'Margrethe!' Eyes straight ahead -

'Margrethe darling! I was wrong. I'm sorry, I apologize.

'She stopped abruptly, turned and threw her arms around my neck, started to cry. 'Oh, Alec, I love you so and you're such a fub!'

I did not answer at once as my mouth was busy. At last I said, 'I love you, too, and what is a fub?'

'You are.'

'Well - In that case I'm your fub and you're stuck with me. Don't walk away from me again.'

'I won't. Not ever.' We resumed what we had been doing.

After a while I pulled my face back just far enough to whisper: 'We don't have a bed to our name and I've never wanted one more.'

'Alec. Check your pockets.'

'Huh?'

'While he 'Was kissing me, Steve whispered to me to tell you to check your pockets and to say, "The Lord will provide."'

I found it in my left-hand coat pocket: a gold eagle. Never before had I held one in my hand. It felt warm and heavy.

Chapter 16

Shall mortal man be more just than God? shall a
man be more pure than his maker?
Job 4:17

Teach me, and I will hold my tongue: and cause
me to understand wherein I have erred.
Job 6:24

AT A drugstore in downtown Flagstaff I exchanged that gold eagle for nine cartwheels, ninety-five cents in change, and a bar of Ivory soap. Buying soap was Margrethe's idea. 'Alec, a druggist is not a banker; changing money is something he may not want to do other than as part of a sale. We need soap. I want to wash your underwear and mine, and we both need baths... and I suspect that, at the sort of cheap lodging Steve urged us to take, soap may not be included in the rent.'

She was right on both counts. The druggist raised his eyebrows at the ten-dollar gold piece but said nothing. He took the coin, let it ring on the glass top of a counter, then reached behind his cash register, fetched out a small bottle, and subjected the coin to the acid test.

I made no comment. Silently he counted out nine silver dollars, a half dollar, a quarter, and two dimes. Instead of pocketing the coins at once, I stood fast, and subjected each coin to the same ringing test he had used, using his glass counter. Having done so, I pushed one cartwheel back at him.

Again he made no comment - he had heard the dull ring, of that putatively silver coin as well as I. He rang up 'No Sale', handed me another cartwheel (which rang clear as a bell), and put the bogus coin somewhere in the back of the cash drawer. Then he turned his back on me.

At the outskirts of town, halfway to Winona, we found a place shabby enough to meet our standards. Margrethe conducted the dicker, in Spanish. Our host asked five dollars. Marga called on the Virgin Mary and three other saints to witness what was being done to her. Then she offered him five pesos.

I did not understand this maneuver; I knew she had no pesos on her. Surely she would not be intending to offer those unspendable 'royal' pesos I still carried?

I did not find out, as our host answered with a price of three dollars and that is final, Señora, as God is my witness.

They settled on a dollar and a half, then Marga rented clean sheets and a blanket for another fifty cents - paid for the lot with two silver dollars but demanded pillows and ' clean pillow-cases to seal the bargain. She got them but the patrón asked something for luck. Marga added a dime and he bowed deeply and assured us that his house was ours.

At seven the next morning we were on our way, rested, clean, happy and hungry. A half hour later we were in Winona and much hungrier. We cured the latter at a little trailer-coach lunchroom: a stack of wheat cakes, ten cents; coffee, five cents no charge for second cup, no limit on butter or syrup.

I Margrethe could not finish her hot cakes- they were lavish - so we swapped plates and I salvaged what she had left.

A sign on the wall read: CASH WHEN SERVED - NO TIPPING - ARE YOU READY FOR JUDGMENT DAY? The cook-waiter (and owner, I think) had a copy of The Watch Tower propped up by his range. I asked, 'Brother, do you have any late news on when to expect Judgment Day?'

'Don't joke about it. Eternity is a long time to spend in the Pit.'

I answered, 'I was not joking. By the signs and portents I think we are in the seven-year period prophesied in the eleventh chapter of Revelation, verses two and three. But I don't know how far we are into it.'

'We're already well into the second half,' he answered.

'The two witnesses are now prophesying and the antichrist is abroad in the land. Are you in a state of grace? If not, you had better get cracking.'

I answered, '"Therefore be ye also ready: for such an hour as ye think not the Son of man cometh."'

'You'd better believe it!'

'I do believe it. Thanks for a good breakfast.'

'Don't mention it. May the Lord watch over you.'

'Thank you. May He bless and keep you.' Marga and I left.

We headed ' cast again. 'How is my sweetheart?'

'Full of food and happy.'

'So am I. Something you did last night made me especially happy.'

'Me, too. But you always do, darling man. Every time.'

'Uh, yes, there's that. Me, too. Always. But I meant something you said, earlier. When Steve asked, if you agreed with me about Judgment Day and you told him you did agree. Marga, I can't tell you how much it has worried me that you have not chosen to be received back into the arms of Jesus. With Judgment Day rushing toward us and no way to know the hour - well, I've worried. I do worry. But apparently you are finding your way back to the light but had not yet discussed it with me.'

We walked perhaps twenty paces while Margrethe did not say anything.

At last she said quietly, 'Beloved, I would put your mind at rest. If I could. I cannot.'

'So? I do not understand. Will you explain?'

'I did not tell Steve that I agreed with you. I said to him that I did not disagree.'

'But that's the same thing!'

'No, darling. What I did not say to Steve but could have said, in, full honesty is that I will never publicly disagree with my husband about anything. Any disagreement with you I will discuss with you in private. Not in Steve's presence. Not anyone's.'

I chewed that over, let several possible comments go unsaid - at last said, 'Thank you, Margrethe.'

'Beloved, I do it for my own dignity as well as for yours. All my life I have hated the sight of husband and wife disagreeing - disputing - quarreling in public. If you say that the sun is covered with bright green puppy dogs, I will not disagree in public.'

Ah, but it is!'

'Sir?' She stopped, and looked startled.

'My good Marga. Whatever the problem, you always find a gentle answer. If I ever do see bright green puppy dogs on the face of the sun, I will try to remember to discuss it with you in private, not face you with hard decisions in public. I love you. I read too much into what you said to Steve because I really do worry.'

She took my hand and we walked a bit farther without talking.

'Alec?'

'Yes, my love?'

'I do not willingly worry you. If I am wrong and you are going to the Christian Heaven, I do want to go I with you. If this means a return to faith in Jesus - and it seems that it does - then that is what I want. I will try. I cannot promise it, as faith is not a matter of simple volition. But I will try.'

I stopped to kiss her, to the amusement of a carload of men passing by. 'Darling, more I cannot ask. Shall we pray together?'

'Alec, I would rather not. Let me pray alone - and I will! When it comes time to pray together, I will tell you. I

Not long after that we were picked up by a ranch couple who took us into Winslow. They dropped us there without asking any questions and without us offering any information, which must set some sort of record.

Winslow is much larger than Winona; it is a respectable town as desert communities go - seven thousand at a guess. We found there an opportunity to carry out something Steve had indirectly suggested and that we had discussed the night before.

Steve was correct; we were not dressed for the desert. True, we had had no choice, as we had been caught by a world change. But I did not see another man wearing a business suit in the desert. Nor did we see Anglo women dressed in women's suits. Indian women and Mexican women wore skirts, but Anglo women wore either shorts or trousers - slacks, jeans, cutoffs, riding pants, something. Rarely a skirt, never a suit.

Furthermore our suits were not right even as city wear. They looked as out of place as styles of the Mauve Decade would look. Don't ask me how as I am no expert on styles, especially for women. The suit that I wore had been both smart and expensive when worn by my patrón, Don Jaime, in Mazatlán in an I other world... but on me, in the Arizona desert in this world, it was something out of skid row.

In Winslow we found just the shop we needed: SECOND WIND - A Million Bargains - All Sales Cash, No Guarantees, No Returns - All Used Clothing Sterilized Before Being Offered For Sale. Above this were the same statements in Spanish.

An hour later, after much picking over of their stock and-some heavy dickering by Margrethe, we were dressed for the desert. I was wearing khaki pants, a shirt to match, and a straw hat of vaguely western style. Margrethe was wearing considerably less: shorts that were both short and tight - indecently so - and, an -upper garment that was less than a bodice but slightly more than a brassière. It was termed a 'halter'.

When I saw Marga in this outfit, I whispered to her, 'I positively will not permit you to appear in public in that shameless costume.'

She answered, 'Dear, don't be a fub so early in the day. It's too hot.'

'I'm not joking. I forbid you to buy that.'

'Alec, I don't recall asking your permission.'

'Are you defying me?'

She sighed. 'Perhaps I am. I don't want to. Did you get your razor?'

'You saw me!'

'I have your underpants and socks. Is there anything more you need now?'

'No. Margrethe! Quit evading me!'

'Darling, I told you that I will not quarrel with you in public. This outfit has a wrap-around skirt; I was about to put it on. Let me do so and settle the bill. Then we can go outside and talk in private.'

Fuming, I went along with what she proposed. I might as well admit that, under her careful management, we came out of that bazaar with more money than we had had when we came in. How? That suit from my patrón, Don Jaime, that looked so ridiculous on me, looked just right on the owner of the shop - in fact he resembled Don Jaime. He had been willing to swap, even, for what I needed - khaki shirt and pants and straw hat.

But Margrethe insisted on something to boot. She demanded five dollars, got two.

I learned, as she settled our bill, that she had wrought similar magic in getting rid of that tailored suit she no longer needed. We entered the shop with $7.55; we left it with $8.80... and desert outfits for each of us, a comb (for two), a toothbrush (also for two), a knapsack, a safety razor, plus a minimum of underwear and socks - all second hand but alleged to be sterilized.

I am not good at tactics, not with women. We were outside and down the highway to an open place where we could talk privately before Margrethe would talk to me and I did not realize that I had already lost.

Without stopping, she said, 'Well, dear? You had something to discuss.'

'Uh, with that skirt in place your clothing is acceptable. Barely. But you are not to appear in-public in those shorts. Is that understood?'

'I intended to wear just the shorts. If the weather is warm. As it is.'

'But, Margrethe, I told you not to -'She was unsnapping the skirt, taking it off. 'You are defying me!'

She folded it, up neatly. 'May I place this in the knapsack? Please?'

'You are deliberately disobeying me!'

'But, Alec, I don't have to obey you and you don't have to obey me.'

'But - Look, dear, be reasonable. You know I don't usually give orders. But a wife must obey her husband. Are you my wife?'

'You told me so. So I am until you tell me otherwise.'

'Then it is your duty to obey me.'

'No, Alec.'

'But that is a wife's first duty!'

'I don't agree.'

'But - This is madness! Are you leaving me?'

'No. Only if you divorce me.'

'I don't believe in divorce. Divorce is wrong. Against Scripture.'

She made no answer.

'Margrethe... please put your skirt on.'

She said softly, 'Almost you persuade me, dearest. Will you explain why you want me to do so?'

'What? Because those shorts, worn alone, are indecent!'

'I don't see how an article of clothing can be indecent, Alec. A person, yes. Are you saying that I am indecent?'

'Uh - You're twisting my words. When you wear those shorts - without a skirt - in public, you expose so much of yourself that the spectacle is indecent. Right now, walking this highway, your limbs are fully exposed... to the people in that car that just passed, for example. They saw you. I saw them staring!'

'Good. I hope they enjoyed it.'

'What?'

'You tell me that I am beautiful. But you could be prejudiced. I hope that my appearance is pleasing to other people as well.'

'Be serious, Margrethe; we're speaking of your naked limbs. Naked.'

'You are saying my legs are bare. So they are. I prefer them bare when the weather is warm. What are you frowning at, dear? Are my legs ugly?'

('Thou art all fair, my love; there is no spot in thee!') 'Your limbs are beautiful, my love; I have told you so many times. But I have no wish to share your beauty.'

'Beauty is not diminished by being shared. Let's get back to the subject, Alec; you were explaining how my legs are indecent. If you can explain it. I don't think you can.'

'But, Margrethe, nakedness is indecent by its very nature. It inspires lewd thoughts.'

'Really? Does seeing my legs cause you to get an erection?'

'Margrethe!'

'Alec, stop being a fub! I asked a simple question.'

'An improper question.' '

She sighed. 'I don't see how that question can possibly be improper between husband and wife. And I will never concede that my legs are indecent. Or that nakedness is indecent. I have been naked in front of hundreds of people -'

'Margrethe!'

She looked surprised. 'Surely you know that?'

'I did not know it and I am shocked to hear it.'

'Truly, dear? But you know how well I swim.'

'What's that got to do with it? I swim well, too. But I don't swim naked; I wear a bathing suit.' (But I, was remembering most sharply the pool in Konge Knut - of course my darling was used to nude swimming. I found myself out on a limb.)

'Oh. Yes. I've seen such suits, in Mazatlán. And in Spain. But, darling, we're going astray again. The problem is wider than whether or not bare legs are indecent or whether I should have kissed Steve good-bye or even whether I must obey you. You are expecting me to be what I am not. I want to be your wife for many years, for -all my life - and I hope to share Heaven with you if Heaven is your destination. But, darling, I am not a child, I am not a slave. Because I love you I wish to please you. But I will not obey an order simply because I am a wife.'

I could say that I overwhelmed her with the brilliance of my rebuttal. Yes, I could say that, but it would not be true. I was still trying to think of an answer when a car slowed down as it overtook us. I heard a whistle of the sort called 'wolf'. The car stopped beyond us and backed up. Need a ride?' a voice called out.

'Yes!' Margrethe answered, and hurried. Perforce, I did, too.

. It was a station wagon with a woman behind the wheel, a man riding with her. Both were my age or older. He reached back, opened the rear door. 'Climb in!'

I handed Margrethe in, followed her and closed the door. 'Got room enough?' he asked. 'If not, throw that junk on the floor. We never sit in the back seat, so stuff sort o' gravitates to it. We're Clyde and Bessie Bulkey.'

'He's Bulkey; I'm just well fed,' the driver added.

'You're supposed to laugh at that; I've heard it before.' He was indeed bulky, the sort of big-boned beefy man who is an athlete in school, then puts on weight later. His wife had correctly described both of them; she was not fat but carried some extra padding.

'How do you do, Mrs Bulkey, Mr Bulkey. We're Alec and Margrethe Graham. Thank you for picking us up.'

Don't be so formal, Alec,' she answered. 'How far you going?'

'Bessie, please keep one eye on the road.'

'Clyde, if you don't like the way I'm herding this heap, I'll pull over and let you drive.'

'Oh, no, no, you're doing fine!'

'Pipe down then, or I invoke rule K. Well, Alec?'

'We're going to Kansas.'

'Coo! We're not going that far; we turn north at Chambers. That's just a short piece down the road, About ninety miles. But you're welcome to that much. What are you going to do in Kansas?'

(What was I going to do in Kansas? Open an ice cream parlor... bring my dear wife back to the fold. Prepare for Judgment Day -) 'I'm going to wash dishes.'

'My husband is too modest,' Margrethe said quietly. 'We're going to open a small restaurant and soda fountain in a college town. But on our way to that goal we are likely to wash dishes. Or almost any work.'

So I explained what had happened to us, with variations and omissions to avoid what they wouldn't believe. 'The restaurant was wiped out, our Mexican partner were dead, and we lost everything we had. I said "dishwashing" because that is the one job I can almost always find. But I'll take a swing at 'most anything.'

Clyde said, 'Alec, with that attitude you'll be back on, your feet before you know it.'

'We lost some money, that's all. We're not too old to start over again.' (Dear Lord, will You hold off Judgment Day long enough for me to do it? Thy will be done. Amen.)

Margrethe reached over and squeezed my hand. Llyde noticed it. He had turned around in his seat so that he faced us as well as his wife. 'You'll make it,' he said. 'With your wife backing you, you're bound to make it.'

I think so. Thank you. 'I knew why he was turned to face us: to stare at Margrethe. I wanted to tell him to keep his eyes to himself but, under the circumstances, I could not.

Besides that, it was clear that Mr and Mrs Bulkey saw nothing wrong with the way my beloved was dressed; Mrs Bulkey was dressed the same way, only more so. Or less so. Less costume, more bare skin. I must admit, too, that,' while she was not the immortal beauty Margrethe is, she was quite comely.

At Painted Desert we stopped, got out, and stared at the truly unbelievable natural beauty. I had seen it once before; Margrethe had never seen it and was breathless. Clyde told me that they always stopped, even though they had seen it hundreds of times.

Correction: I had seen it once before in another world. Painted Desert tended to prove what I had strongly suspected: It was not Mother Earth that changed in these wild changes; it was man and his works - and even those only, in part. But the only obvious explanation seemed to lead straight to paranoia. If so, I must not surrender to it; I must take care of Margrethe.

Clyde bought us hot dogs and cold drinks and brushed aside my offer to pay. When we got back into their car, Clyde took the wheel and invited Margrethe to ride up front with him. I was not pleased but could not show it, as Bessie promptly said, 'Poor Alec! Has to put up with the old bag. Don't sulk, dear; it's only twenty-three miles to the turn-off for Chambers . . . or less than twenty-three minutes the way Clyde drives.'

This time Clyde took thirty minutes. But he waited and made sure that we had a ride to Gallup.

We reached Gallup long before dark. Despite $8.80 in our pockets, it seemed time to look for dirty dishes. Gallup has almost as many motels and cabin courts as it 'has Indians and almost half of these hostelries have restaurants. I checked a baker's dozen before I found one that needed a dishwasher.

Fourteen days later we were in Oklahoma City. If you think that is slow time, you are correct; it is less than fifty miles a day. But plenty had happened and I was feeling decidedly paranoid - world change after world change and always timed to cause me maximum trouble.

Ever seen a cat play with a mouse? The mouse never has a chance. If he has even the brains the good Lord gives a mouse, he knows that. Nevertheless the mouse keeps on trying... and is hauled back every time.

I was the mouse.

Or we were the mice, for Margrethe was with me... and she was all that kept me going. She didn't complain and she didn't quit. So I couldn't quit.

Example: I had figured out that, while paper money was never any good after a world change, hard money, gold and silver, would somehow be negotiable, as bullion if not

coin. So, when I got a chance to lay hands on hard money, I was stingy with it and refused to take paper money in change for hard money.

Smart boy. Alec, you're a real brain.

So on our third day in Gallup Marga and I took a nap in a room paid for by dishwashing (me) and by cleaning rooms (Margrethe). We didn't intend to go to sleep; we simply wanted to rest a bit before eating; it had been a long, hard day. We lay down on top of the bedspread.

I was just getting relaxed when I realized that something hard was pressing against my spine. I roused enough to figure out that our hoarded silver dollars had slipped out of my side pocket when I had turned over. So I eased my arm out from under Marga's head, retrieved the dollars, counted them, added the, loose change, and placed it all on the bedside table a foot from my head, then got horizontal again, slid my arm under Marga's head and fell right to sleep.

When I woke up it was pitch dark.

I came wide awake. Margrethe was still snoring softly on my arm. I shook her a little. 'Honey. Wake up.'

'Mrrf?'

'It's late. We may have missed dinner

She came quickly awake. 'Can you switch on the bed lamp?' '

I fumbled at the bedside table, nearly fell out of bed. 'Can't find the pesky thing. It's dark as the inside of a pile of coal.' Wait a sec, I'll get the overhead light.'

I got cautiously off the bed, headed for the door, stumbled over a chair, could not find the door - groped for it, did find it, groped some more and found a light. switch by it. The overhead light came on.

For a long, dismal moment neither of us said anything. Then I said, inanely and unnecessarily, 'They did it again.'

The room had the characterless anonymity of any cheap motel room anywhere. Nevertheless it was different in details from the room in which we had gone to sleep.

And our hoarded silver dollars were gone.

Everything but the clothes we were wearing was gone knapsack, clean socks, spare underwear, comb, safety razor, everything. I inspected, made certain.

'Well, Marga, what now?'

'Whatever you say, sir.'

'Mmm. I don't think they'll know me in the kitchen. But they still might let me wash dishes.'

'Or they may need a waitress.'

The door had a spring lock and I had no key, so I left it an inch ajar. The door led directly outdoors and looked across a parking court at the office - a corner room with a lighted sign reading OFFICE - all commonplace except that it did not match the appearance of the motel in which we had been working. In that establishment the manager's office had been in the front end of a central, building, the rest of that central building being the coffee shop.

Yes, we had missed dinner.

And breakfast. This motel did not have a coffee shop.

'Well, Marga?'

'Which way is Kansas?'

'That way... I think. But we have two choices. We can go back into the room, go to bed properly, and sleep until daylight. Or we can get out there on the highway and try to thumb a ride. In the dark.'

'Alec, I see only one choice. If we go back inside and go to bed, we'll get up at daylight, some hours hungrier and no better off. Maybe worse off, if they catch us sleeping in a room we didn't pay for

'I washed an awful lot of dishes!'

'Not here, you didn't. Here they might send for the police.'

We started walking.

That was typical of the persecution we suffered in trying to get to Kansas. Yes, I said 'persecution'. If paranoia consists in believing that the world around you is a conspiracy against you, I had become paranoid. But it was either a 'sane paranoia (if you will pardon the Irishism), or I was suffering from delusions so monumental that I should be locked up and treated.

Maybe so. If so, Margrethe was part of my delusions an answer I could not accept. It could not be folie à deux; Margrethe was sane in any world.

It was the middle of the day before we got anything to eat, and by then I was beginning to see ghosts where a healthy man would see only dust devils. My hat had gone where the woodbine twineth and the New Mexico sun on my head was not helping my state.

A carload of men from a construction site picked us up and took us into Grants, and bought us lunch before they left us there. I may be certifiably insane but I am not stupid; we owe that ride and that meal to the fact that Margrethe in shorts indecently tight, is a sight that attracts the attention of men. That gave me plenty to think about while I enjoyed (and I did enjoy it!) that lunch they bought us. But I kept my ruminations to myself.

After they left us I said, 'East?'

'Yes, sir. But first I would like to check the public library. If there is one.'

'Oh, yes! Surely.' Earlier, in the world of our friend Steve, the lack of air travel had caused me to suspect that Steve's world might be the world where Margrethe was born (and therefore the home of 'Alec Graham' as well). In Gallup we had checked on this at the public library - I had looked up American history in an encyclopedia while Marga checked on Danish history. It took us each about five minutes to determine that Steve's world was not the world Marga was born in. I found that Bryan had been elected in 1896 but had died in office, succeeded by his vice president, Arthur Sewall - and that was all I needed to know; I then simply raced through presidents and wars I had never, heard of.

Margrethe had finished her line of investigation with her nose twitching with indignation. Once outside where we didn't have to whisper I asked her what was troubling her. 'This isn't your world, dear; I made sure of that.'

'It certainly isn't!'

'But we didn't have anything but a negative to go on. There may be many worlds that have no aeronautics of any sort.'

'I'm glad this isn't my world! Alec, in this world Denmark is part of Sweden. Isn't that terrible?'

Truthfully I did not understand her upset. Both countries are Scandinavian, pretty much alike - or so it seemed to me. 'I'm sorry, dear. I don't know much about such things,' (I had been to Stockholm once, liked the place. It didn't seem a good time to tell her so.)

'And that silly book says that Stockholm is the capital and that Carl Sixteenth is king. Alec, he isn't even royal! And now they tell me he's my king!'

'But, sweetheart, he's not your king. This isn't even your world.'

'I know. Alec? If we have to settle here - if the world doesn't change again - couldn't I be naturalized?'

'Why, yes. I suppose so.'

She sighed. 'I don't want to be a Swede.'

I kept quiet. There were some things I couldn't help her with.

So in Grants we again went to a public library lo see what the latest changes had done to the world. Since we had seen no aeroplanos and no dirigibles, again it was possible that we were in Margrethe's world. This time I looked first under 'Aeronautics' - did not find, dirigibles but did find flying machines... invented by Dr Alberto Santos Dumont of Brazil early in this century - and I was bemused by the inventor's name, as, in my world, he had been a pioneer in dirigibles second only to Count von Zeppelin. Apparently the doctor's. aerodynes were primitive compared with jet planes, or even aeroplanos; they seemed to be curiosities rather than commercial vehicles. I dropped it and turned to American history, checking first on William, Jennings Bryan.

I couldn't, find him at all. Well, I had known that this was not my world.

But Marga was all smiles, could hardly wait to get outside the no-talking area to tell me about it. 'In this world Scandinavia is all one big country... and Kobenhavn is its capital!'

'Well, good!'

'Queen Margrethe's son Prince Frederik was crowned King Eric Gustav - no doubt to please the outlanders. But he is true Danish royalty and a Dane right down to his skull bone. This is as it should be!'

I tried to show her, that I was happy, too. Without a cent between us, with no idea where we would sleep that night, she was delighted as a child at Christmas... over an event that I could not see mattered at all.

Two short rides got us into Albuquerque and I decided that it was prudent to stay there a bit - it's a big place even if we had to throw ourselves On Salvation Army charity. But I quickly found a job as a dishwasher in the Coffee shop of the local Holiday Inn and Margrethe went to work as a waitress in the same shop.

We had been working there less than two hours when she came back to the scullery and slid something into my hip pocket while I was bent over a sink. 'A present for you, dear!'

I turned around. 'Hi, Gorgeous.' I checked my pocket - a safety razor of the travel sort - handle unscrews, and razor and handle' and blades, all fit into a waterproof case smaller than a pocket Testament, and intended to be carried in a pocket. 'Steal it?'

'Not quite. Tips. Got it at the lobby notions stand. Dear, at your first break I want you to shave.'

'Let me clue you, doll. You get hired for your looks. I get hired for my strong back, weak mind, and docile--disposition. They don't care how I look.'

'But I do.'

'Your slightest wish is my command. Now get out of here; you're slowing up production.'

That night Margrethe explained why she had bought me a razor ahead of anything else. 'Dear, it's not just because I like your face smooth and your hair short - although I do! These Loki tricks have kept on and each time, we have to find work at once just to eat. You say that nobody cares how a dishwasher looks... but I say looking clean and neat helps in getting hired for any job, and can't possibly hurt.

'But there is another reason. As a result of these changes, you've had to let your whiskers grow once, twice - I can count five times, once for over three days. Dearest, when you are freshly shaved, you stand tall and look happy. And that makes me happy.'

Margrethe made for me a sort of money belt - actually a cloth pocket and a piece of cloth tape - which she wanted me to wear in bed. 'Dear, we've lost anything we didn't have on us whenever a shift took place. I want you to put your razor and our hard money into this when you undress for bed.'

'I don't think we can outwit Satan that easily.'

'Maybe not. We can try. We come through each change with the clothes we are wearing at the time and with whatever we have in our pockets. This seems to fit the rules.'

'Chaos does not have rules.'

'Perhaps this is not chaos. Alec, if you won't wear this to bed, do you mind if I do?'

'Oh, I'll wear it. It won't stop Satan if he really wants to take it away from us. Nor does it really worry me. Once he dumped us mother naked into the Pacific and we pulled out of it - remember? What does worry me is - Marga, have you noticed that every time we have gone through a change we've been holding each other? At least holding hands?'

'I've noticed.'

'Change happens in the blink of an eye. What happens if we're not together, holding each other? At least touching? Tell me.'

She kept quiet so long that I knew she did not intend to answer.

I 'Uh huh,' I said. 'Me, too. But we can't be Siamese twins, touching all the time. We have to work. My darling, my life, Satan or Loki or whatever bad spirit is doing this to us, can separate us forever simply by picking any instant when we are not touching.'

'Alec.'

'Yes, my love?'

'Loki has been able to do this to us at any moment for a long time. It has not happened.'

'So it may happen the next second.'.

'Yes. But it may not happen at all.'

We moved on, and suffered more changes. Margrethe's precaution's did seem to work - although in one change they seemed to work almost too well; I barely missed a jail sentence for unlawful possession of silver coins. But a quick change (the quickest we had seen) got rid of the charge, the evidence, and the complaining witness. We found ourselves in a strange courtroom and were quickly evicted for lacking tickets entitling us to remain there.

But the razor stayed with me; no cop or sheriff or marshal seemed to want to confiscate that.

We were moving on by our usual method (my thumb and Margrethe's lovely legs; I had long since admitted to myself that I might as well enjoy the inevitable) and had been dropped in a pretty part of - Texas, it must have been - by a trucker who had turned north off 66 on 'a side road.

We had come out of the desert into low green hills. It was a beautiful day but we were tired, hungry, sweaty, and dirty, for our persecutors - Satan or whoever - had outdone themselves: three changes in thirty-six hours.

In one day I had had two dishwashing jobs in the same town at the same address... and had collected nothing. It is difficult to collect from The Lonesome Cowboy Steak House when it turns into Vivian's Grill in front of your eyes. The same was true three hours later when Vivian's Grill melted into a used-car lot. The only thing good about these shocks was that by great good fortune (or conspiracy?) Margrethe was with me each time - in one case she had come to get me and was waiting with me while my boss was figuring my time, in the other she had been working with me.

The third change did us out of a night's lodging that had already been, paid for in kind by Margrethe's labor.

So when that trucker dropped us, we were tired and hungry and dirty and my paranoia had reached a new high.

We had been walking a few hundred yards when we came to a sweet little stream, a, sight in Texas precious beyond all else.

We stopped on the culvert bridging it. 'Margrethe, how would you like to wade in that?'

'Darling, I'm going to do more than wade in it, I'm going to bathe in it.'

'Hmm - Yes, go under the fence, along the stream about fifty, seventy-five yards, and I don't think anyone could see us from the road.'

'Sweetheart, they can line up and cheer if they want to; I'm going to have a bath. And - That water looks clean. Would it be safe to drink?'

'The upstream side? Certainly. We've taken worse chances every day since the iceberg. Now if we had something to eat - Say, your hot fudge sundae. Or would you prefer scrambled eggs?' I held up the lower wire of the fence to let her crawl under. I

'Will you settle for an Oh Henry bar?'

'Make that a Milky Way,' I answered, 'if I have my druthers.'

'I'm afraid you don't, dear. An Oh Henry bar is all there is.' She held the wire for me.

'Maybe we'd better stop talking about food we don't have,' I said, and crawled under - straightened up and added, 'I'm ready to eat raw skunk.'

'Food we do have, dear man. I have an Oh Henry in my tote.'

I stopped abruptly. 'Woman, if you're joking, I'm going to beat you.'

'I'm not joking.'

'In Texas it is legal to correct a wife with a stick not ,thicker than one's thumb.' I held up my thumb. 'Do you see one about this size?'

'I'll find one.'

'Where did you get a candy bar?'

'That roadside stop where Mr Facelli treated us to coffee and doughnuts.' I

Mr Facelli had been our middle-of-the-night ride just before the truck that had dropped us. Two small cake doughnuts each and the sugar and cream for coffee had been our only calories for twenty-four hours.

'The beating can wait. Woman, if you stole it, tell me about it later. You really do have a real live Oh Henry? Or am I getting feverish?'

'Alec, do you think I would steal a candy bar? I bought it from a coin machine while you and Mr Facelli were in the men's room after we ate.'

'How? We don't have any money. Not from this world.'

'Yes, Alec. But there was a dime in my tote, from two changes back. Of course it was not a good dime, strictly speaking. But I couldn't see any real harm if the machine would take it. And it did. But I put it out of sight before you two got back... because I didn't have three dimes and could not offer a candy bar to Mr Facelli.' She added anxiously, 'Do you think I cheated? Using that dime?'

'It's a technicality I won't go into... as long as I get to share in the proceeds of the crime. And that makes me equally guilty. Uh... eat first, or bathe first?'

We ate first, a picnic banquet washed down by delicious creek water. Then we bathed, with much splashing and laughing - I remember it as one of the happiest times of my life. Margrethe had soap in her tote bag, too, and I supplied the towel, my shirt. First I wiped Margrethe with it, then I wiped me with it. The dry, warm air finished the job.

What happened immediately after was inevitable. I had never in my life made love outdoors, much less in bright daylight. If anyone had asked me, I would have said that for me it would be a psychological impossibility; I would be too inhibited, too aware of the indecency involved.

I am amazed and happy to say that, while keenly aware of the circumstances, I was untroubled at the time and quite able... perhaps because of Margrethe's bubbling, infectious enthusiasm.

I have never slept naked on grass before, either. I think we slept about an hour.

When we woke up, Margrethe insisted on shaving me. I could not shave myself very well as I had no mirror, but she could and did, with her usual efficiency. We stood knee-deep in the water; I worked up soapsuds with my hands and slathered my face. She shaved and I renewed the lather as needed.

'There,' she said at last, and gave me a sign-off kiss, 'you'll do. Rinse off now and don't forget your ears. I'll find the towel. Your shirt.' She climbed onto the bank while I leaned far over and splashed water on my face.

'Alec -'

'I can't hear you; the water's running.'

'Please, dear!'

I straightened up, wiped the water out of my eyes, looked around.

Everything we owned was gone, everything but my razor.

Chapter 17

Behold, I go forward, but he is not there;
and backward, but I cannot perceive him: On the
left hand, where he doth work, but I cannot
behold him: he hideth himself on the right hand,
that I cannot see him.
Job 23:8-10

MARGRETHE SAID, 'What did you do with the soap?'

I took a deep breath, sighed it out. 'Did I hear you correctly? You're asking what I did with the soap?'

'What would you rather I said?'

'Uh - I don't know. But not that. A miracle takes place... and you ask me about a bar of soap.'

'Alec, a miracle that takes place again and again and again is no longer a miracle; it's just a nuisance. Too many, too much. I want to scream or break into tears. So I asked about the soap.'

I had been halfway to hysteria myself when Margrethe's statement hit me like a dash of cold water. Margrethe? She who took icebergs and earthquakes in her stride, she who never whimpered in adversity... she wanted to scream?

'I'm sorry, dear. I had the soap in my hands when you were shaving me. I did not have it in my hands when I rinsed my face. I suppose I laid it on the bank. But I don't recall. Does it matter?'

'Not really, I suppose. Although that cake of Camay, used just once, would be half our worldly goods if I could find it, this razor being the other half. You may have placed it on the bank, but I don't see it.'

'Then it's gone. Marga, we've got urgent things to worry about before we'll be dirty enough to need soap again. Food, Clothing, shelter.' I scrambled up onto the bank. 'Shoes. We don't even have shoes. What do we do now? I'm stumped. If I had a wailing wall, I'd wail.'

'Steady, dear, steady.'

'Is it all right if I just whimper a little?'

She came close, put her arms around me, and kissed me. 'Whimper all you want to, dear, whimper for both of us. Then let's decide what to do.'

I can't stay depressed with Margrethe's arms around me. 'Do you have any ideas? I can't think of anything but picking our way back to the highway and trying to thumb a ride... which doesn't appeal to me in the state I'm in. Not even a fig leaf. Do you see a fig tree?'

'Does Texas have fig trees?'

'Texas has everything. What do we do now?'

'We go back to the highway and start walking.'

'Barefooted? Why not stand still and wave our thumbs? We can't go far enough barefooted to matter. My feet are tender.'

'They'll toughen up. Alec, we must keep moving. For our morale, love. If we give up, we'll die. I know it.'

Ten minutes later we were moving slowly east on the highway. But it was not the highway we had left. This one was four lanes instead of two, with wide paved shoulders. The fence marking the right of way, instead of three strands of barbed wire, was chain-link steel as high as my head. We would have had a terrible time reaching the highway had it not been for the stream. By going back into the water and holding our breaths, we managed to slither under the fence. This left us sopping wet again (and no towel-shirt) but the warm air corrected that in a few minutes.

There was much more traffic on this highway than there had been on the one we had left, both freight and what seemed to be passenger cars. And it was fast. How fast I could not guess, but it seemed at least twice as fast as any ground transportation I had ever seen. Perhaps as fast as transoceanic dirigibles.

There were big-vehicles that had to be freight movers but looked more like railroad boxcars than they looked like lorries. And even longer than boxcars. But as I stared I figured out that each one was at least three cars, articulated. I figured this out by attempting to count wheels. Sixteen per car? Six more on some sort of locomotive up front, for a total of fifty-four wheels. Was this possible?

These behemoths moved with no sound but the noise of air rushing past them, plus a whoosh of tires against pavement. My dynamics professor would have approved.

In the lane nearest us were smaller vehicles that I assumed to be passenger cars, although I could not 'see anyone inside. Where one would expect windows appeared to be mirrors or burnished steel. They were long and low and as sleekly shaped as an airship.

And now I saw that this was not one highway, but two. All the traffic on the pavement nearest us was going east; at least a hundred yards away another stream of traffic was going west. Still farther away, seen only in glimpses, was a limit fence for the northern side of the widest right of way I have ever seen.

We trudged along on the edge of the shoulder. I began to feel gloomy about the chances of being picked up. Even if they could see us (which seemed uncertain), how could they stop quickly enough to pick up someone on the highway? Nevertheless I waved the hitchhikers' sign at each car.

I kept my misgivings to myself. After we had been walking a dismal time, a car that had just passed us dropped out of the traffic lane onto the shoulder, stopped at least a quarter of a mile ahead of us, then backed toward us at a speed I would regard as too fast if I were going forward. We got hastily off the shoulder.

It stopped alongside us. A mirrored section a yard wide and at least that high lifted up like a storm-cellar door, and I found myself looking into the passenger compartment. The operator looked out at us and grinned. 'I don't believe it!'

I tried to grin back. 'I don't believe it myself. But here we are. Will you give us a ride?'

'Could be.' He looked Margrethe up and down. 'My, aren't you the purty thing! What happened?'

Margrethe answered, 'Sir, we are lost.'

'Looks like. But how did you manage to lose your clothes, too? Kidnapped? Or what? Never mind, that can wait. I'm Jerry Farnsworth.'

I answered, 'We're Alec and Margrethe Graham.'

'Good to meet you. Well, you don't look armed - except for that thing in your hand, Miz Graham. What is it?'

She held it out to him. 'A razor.'

He accepted it, looked at it, handed it back. 'Durned if it isn't. Haven't seen one like that since I was too young to shave. Well, I don't see how you can highjack me with that.

Climb in. Alec, you can have the back seat; your sister can sit up here with me.' Another section of the shell swung upward.

'Thank you,' I answered, thinking sourly about beggars and choosers. 'Marga is not my sister, she's my wife.'

'Lucky man! Do you object to your wife riding with me?'

'Oh, of course not!'

I think that answer would cause a tension meter to jingle. Dear, you'd better get back there with your husband.'

'Sir, you invited me to sit with you and my husband voiced his approval.' Margrethe slipped into the forward passenger seat. I opened my mouth and closed it, having found I had nothing to say. I climbed into the back seat, discovered that the car was bigger inside than out; the seat was roomy and comfortable. The doors closed down; the 'mirrors' now were windows.

'I'm about to put her back into the flow,' our host said, 'so don't fight the safeties. Sometimes this buggy bucks like a Brahma bull, six gees or better. No, wait a sec. Where are you two going?' He looked at Margrethe.

'We're going to Kansas, Mr Farnsworth.'

'Call me Jerry, dear. In your skin?'

'We have no clothing, sir. We lost it.'

I added, 'Mr Farnsworth - Jerry - we're in a distressed state. We lost everything. Yes, we are going to Kansas, but first we must find clothes somewhere - Red Cross, maybe, I don't know. And I've got to find a job and make us some money. Then we'll go to Kansas.'

'I see. I think I do. Some of it. How are you going to get to Kansas?'

'I had in mind continuing straight on to Oklahoma City, then north. Stick to the main highways. Since we're hitchhiking.'

'Alec, you really are lost. See that fence? Do you know the penalty for a pedestrian caught inside that fence?'

'No, I don't.'

'Ignorance is bliss. You'll be much better off on the small side roads where hitching is still legal, or at least tolerated. If you're for Oke City, I can help you along. Hang on.' He

did something at controls in front of him. He didn't touch the wheel because there wasn't any wheel to touch. Instead there were two hand grips.

The car vibrated faintly, then jumped sideways. I felt as if I had fallen into soft mush and my skin tingled as with static electricity. The car bucked like a small boat in a heavy sea, but that 'soft mush' kept me from being battered about. Suddenly it quieted down and only that faint vibration continued. The landscape was streaking past.

'Now,' said Mr Farnsworth, 'tell me about it.'

'Margrethe?'

'Of course, dearest. You must.'

'Jerry... we're from another world.'

'Oh, no!' He groaned. 'Not another flying saucer! That makes four this week. That's your story?'

'No, no!' I've never seen a flying saucer. We're from earth, but... different. We were hitchhiking on Highway Sixty-Six, trying to reach Kansas -'

'Wait a minute. You said, "Sixty-Six".'

'Yes, of course.'

'That's what they used to call this road before they re-built it. But it hasn't been called anything but Interstate Forty for, oh, over forty years, maybe fifty. Hey. Time travelers! Are you?'

'What year is this?' I asked.

'Nineteen-ninety-four.'

'That's our year, too. Wednesday the eighteenth of May. Or was this morning. Before the change.'

'It still is. But - Look, let's quit jumping around. Start at the beginning, whenever that was, and tell me how you wound up inside the fence, bare naked.'

So I told him.

Presently he said, 'That fire pit. Didn't burn you?'

'One small blister.'

'Just a blister. I reckon you would be safe in Hell.'

'Look, Jerry, they really do walk on live coals.'

'I know, I've seen it. In New Guinea. Never hankered to try it. That iceberg - Something bothers me. How does an iceberg crash into the side of a vessel? An iceberg is dead in the water, always. Certainly a ship can bump into one but damage should be to the bow. Right?'

'Margrethe?'

'I don't know, Alec. What Jerry says sounds right. But it did happen.'

'Jerry, I don't know either. We were in a forward stateroom; maybe the whole front end was crushed in. But, if Marga doesn't know, I surely do not, as I got banged on the head and went out like a light. Marga kept me afloat - I told you.'

I Farnsworth looked thoughtfully at me. He had swiveled his seat around to face both of us while I talked, and he had showed Margrethe how to unlock her chair so that it would turn, also, which brought us three into an intimate circle of conversation, knees almost touching - and left him with his back to the traffic. 'Alec, what became of this Hergensheimer?'

'Maybe I didn't make that clear - it's not too clear to me, either. It's Graham who is missing. I am Hergensheimer.

When I walked through the fire and found myself in a different world, I found myself in Graham's place, as I said. Everybody called me Graham and seemed to think that I was Graham - and Graham was missing. I guess you could say I took the easy way out... but there I was, thousands of miles from home, no money, no ticket, and nobody had ever heard of Alexander Hergensheimer.' I shrugged and spread my hands helplessly. 'I sinned. I wore
his clothes, I ate at his table, I answered to his name.'

'I still don't get the skinny of this. Maybe you look enough like, Graham to fool almost anyone... but your wife would know the difference. Margie?'

Margrethe looked into my eyes with sadness and love, and answered steadily, 'Jerry, my husband is confused. A strange amnesia. He is Alec Graham. There is no Alexander Hergensheimer. There never was.'

I was left speechless. True, Margrethe and I had not discussed this matter for many weeks; true, she had never flatly admitted that I was not Alec Graham. I was learning again (again and again!) that one never won an argument with Margrethe. Any time I thought I had won, it always turned out that- she had simply shut up.

Farnsworth said to me, 'Maybe that knock in the head, Alec?'

'Look, that knock in the head was nothing - a few minutes' unconsciousness, nothing more. And no gaps in my memory. Anyhow it happened two weeks after the fire walk. Jerry, my wife is a wonderful woman... but I must disagree with her on this. She wants to believe that I am Alec Graham because she fell in love with Graham before she ever met me. She believes it because she needs to believe it. But of course I know who I am: Hergensheimer. I admit that amnesia can have some funny effects... but there was one clue that I could not have faked, one that said emphatically that I, Alexander Hergensheimer, was not Alec Graham.'

I slapped my stomach, where a bay window had been. 'Here is the proof: I wore Graham's clothes, I told you. But his clothes did not fit me perfectly. At the time of the fire walk I was rather plump, too heavy, carrying a lot of flab right here.' I slapped my stomach again. 'Graham's clothes were too tight around the middle for me. I had to suck in hard and hold my breath to fasten the waistband on any pair of his trousers. That could not happen in the blink of an eye, while walking through a fire pit. Nor did it. Two weeks of rich food in a cruise ship gave me that bay window... and it proves that I am not Alec Graham.'

Margrethe not only kept quiet, her expression said nothing. But Farnsworth insisted. 'Margie?'

'Alec, you were having exactly that trouble with your clothes before the fire walk. For the same reason. Too much rich food.' She smiled. 'I'm sorry to contradict you, my beloved... but I'm awfully glad you're you.'

Jerry said, 'Alec, many is the man who would walk through fire to get a woman to look at him that way just once. When you get to Kansas, you had better go to see the Menningers; you've got to get that amnesia untangled. Nobody can fool a woman about her husband. When she's lived with him, slept with him, given him enemas and listened to his jokes, a substitution is impossible no matter how much the ringer may look like him. Even an identical twin could not do it. There are all those little things a wife knows and the public never sees.'

I said, 'Marga, it's up to you.'

She answered, 'Jerry, my husband is saying that I must refute that - in part - myself. At that time I did not know Alec as well as a wife knows her husband. I was not his wife then; I was his lover - and I had been such only a few days.' She smiled. 'But you're right in essence; I recognized him.'

Farnsworth frowned. 'I'm getting mixed up again. We're talking about either one man or two. This Alexander Hergensheimer - Alec, tell me about him.'

'I'm a Protestant, preacher, Jerry, ordained in the Brothers of the Apocalypse Christian Church of the One Truth - the Apocalypse Brethren as you hear us referred to. I was born on my grandfather's farm outside Wichita on May twenty-second -'

'Hey, you've got, a birthday this week!' Jerry remarked. Marga looked alert.

'So I have. I've been too busy to think about it. - in nineteen-sixty. My parents and grandparents are dead; my oldest brother is still working the family farm -'

'That's why you're going to Kansas? -To find your brother?'

'No. That farm is in another world, the one I grew up in.'

'Then why are you going to Kansas?'

I was slow in answering. 'I don't have a logical answer. Perhaps it's the homing instinct. Or it may be something like horses running back into a burning barn. I don't know, Jerry. But I have to go back and try to find my roots.'

'That's a reason I can understand. Go on.'

I told him about my schooling, not hiding the fact that I had failed to make it in engineering - my switch to the seminary and my ordination on graduation, then my association with C.U.D. I did not mention Abigail, I did not mention that I hadn't been too successful as a parson largely (in my private opinion) because Abigail did not like people and my parishioners did not like Abigail. Impossible to put all details into a short biography - but the fact is that I could not mention Abigail at all without throwing doubt on the legitimacy of Margrethe's status and this I could not do.

'That's about it. If we were in my native world, you could phone C.U.D. national headquarters in Kansas City, 'Kansas, and check on me. We had had a successful year and I was on vacation. I took a dirigible, the Count von Zeppelin of North American Airlines, from Kansas City airport to San Francisco, to Hilo, to Tahiti, and there I joined the Motor Vessel Konge Knut and that about brings us up to date, as I've told you the rest.'

'You sound kosher, you talk a good game - are you born again?'

'Certainly! I'm afraid I'm not in a state of grace now... but I'm working on it. We're in the Last Days, brother; it's urgent. Are you born again?'

"Discuss it later. What's the second law of thermodynamics?'

I made a wry face. 'Entropy always increases. That's the one that tripped me.'

'Now tell me about Alec Graham.'

'Not much I can tell. His passport showed that he was born in Texas, and he gave a law firm in Dallas as an address. For the rest you had better ask Margrethe; she knew him, I didn't.' (I did not mention an embarrassing million dollars. I could not explain it, so I left it out... and Marga had only my word for it; she had never seen it.)

'Margie? Can you fill us in on Alec Graham?'

She was slow in answering. 'I'm afraid I can't add anything to what my husband has told you.'

'Hey! You're letting me down. Your husband gave a detailed description of Dr Jekyll; can't you describe Mr Hyde? So far, he's a zero. A mail drop in Dallas, nothing more.

'Mr Farnsworth, I'm sure you've never been a shipboard stewardess -'

'Nope, I haven't. But I was room steward in a cargo liner - two trips when I was a kid.'

'Then you'll understand. A stewardess knows many things about her passengers. She knows how often they bathe. She knows, how often they change their clothes. She knows how they smell - and everyone does smell, some good, some bad. She knows what sort of books they read - or don't read. Most of all she knows whether or not they are truly gentlefolk, honest, generous, considerate, warmhearted. She knows everything one could need to know to judge a person. Yet she may not know a passenger's occupation, home town, schooling, or any of those details that a friend would know.

'Before the day of the fire walk I had been Alec Graham's stewardess for four weeks. For the last two of those weeks I was his mistress and was ecstatically in love with him. After the fire walk it was many days before his amnesia let us resume our happy relationship - and then it did, and I was happy again. And now I have been his wife for four months - months of some adversity but the happiest time of my whole life. And it still is and I think it always will be. And that is all I know about my husband Alec Graham.' She smiled at me and her eyes were brimming with tears, and I found that mine were, too.

Jerry sighed and shook his head. 'This calls for a Solomon. Which I am not. I believe both your stories - and one of them can't be correct. Never mind. My wife and I practice Muslim hospitality, something I learned in the late war. Will you accept our hospitality for a night or two? You had better say yes.'

Marga glanced at me; I said, 'Yes!'

'Good. Now to see if the boss is at home.' He swiveled around to face forward, touched something. A few moments later a light came on and something went beep! once. His face lighted up and he spoke: 'Duchess, this is your favorite husband.'

'Oh, Ronny, it's been so long.'

'No, no. Try again.'

'Albert? Tony? George, Andy, Jim -'

'Once more and get it right; I have company with me.'

'Yes, Jerry?'

'Company for dinner and overnight and possibly more.'

'Yes, my love. How many and what sexes and when will you be home?'

'Let me ask Hubert.' Again he touched something. 'Hubert says twenty-seven minutes. Two guests. The one seated by me is about twenty-three, give or take a bit, blonde, long, wavy hair, dark blue eyes, height about five seven, mass about one twenty, other basics I have not checked but about those of our daughter. Female. I am certain she is female as she is not wearing so much as a G-string.'

'Yes, dear. I'll scratch her eyes out. After I've fed her, of course.'

'Good. But she's no menace as her husband is with her and is watching her closely. Did I say that he is naked, too?'

You did not. Interesting.'

'Do you want his basic statistic? If so, do you want it relaxed or at attention?'

'My love, you are a dirty old man, I am happy to say. Quit trying to embarrass your guests.'

'There is madness in my method, Duchess. They are naked because they have no clothes at all. Yet I suspect that they do embarrass easily. So please meet us at the gate with clothing. You have her statistics, except - Margie, hand me a foot. 'Marga promptly put a foot up high, without comment. He felt it. 'A pair of your sandals will fit, I think. Zapatos for him. Of mine.'

'His other sizes? Never mind the jokes.'

'He's about my height and shoulders, but I am twenty pounds heavier, at least. So something from my skinny rack. If Sybil has a houseful of her junior barbarians, please use extreme prejudice to keep them away from the gate. These are gentle people; we'll introduce them after they have a chance to dress.'

'Roger Wilco, Sergeant Bilko. But it is time that you introduced them to me.

'Mea culpa. My love, this is Margrethe Graham, Mrs Alec Graham.'

'Hello, - Margrethe, welcome to our home.'

'Thank you, Mrs Farnsworth

'Katherine, dear. Or Kate.'

' "Katherine." I can5t tell you how much you are doing for us... when we were so miserable!' My darling started to cry.

She stopped it abruptly. 'And this is my husband, Alec Graham.'

'Howdy, Mrs Farnsworth. And thank you.'

'Alec, you bring that girl straight here. I want to welcome her. Both of you.'

Jerry cut in. 'Hubert says twenty-two minutes, Duchess.'

'Hasta la vista. Sign off and let me get busy.'

'End.' Jerry turned his seat around. 'Kate will find you a pretty to wear, Margie... although in your case there ought to be a law. Say, are you cold? I've been yacking so much I didn't think of it. I keep this buggy cool enough for me, in clothes. But Hubert can change it to suit.'

'I am a Viking, Jerry; I never get cold. Most rooms are too warm to suit me.'

'How about you, Alec?'

'I'm warm enough,' I answered, fibbing only a little.

'I believe -' Jerry started to say -

- as the heavens opened with the most brilliant light imaginable, outshining day, and I was gripped by sudden grief, knowing that I failed to lead my beloved back to grace.

Chapter 18

Then Satan answered the Lord, and said,
Doth Job fear God for nought?
Job 1:9

Canst thou by searching find out God? canst thou
find out the Almighty unto perfection?

Job 11:7

I WAITED for the Shout.

My feelings were mixed. Did I want the Rapture? Was I ready to be snatched up into the loving arms of Jesus? Yes, dear Lord. Yes! Without Margrethe? No, no! Then you choose to be cast down into the Pit? Yes - no, but Make up your mind!

Mr Farnsworth looked up. 'See that baby go!'

I looked up through the roof of the car. There was a second sun directly overhead. It seemed to shrink and lose brilliance as I watched it.

Our host went on, 'Right on time! Yesterday we had a hold, missed the window, and had to reslot. When you're sitting on the pad, and single-H is boiling away, even a hold for one orbit can kill your profit margin. And yesterday wasn't even a glitch; it was a totally worthless re-check ordered by a Nasa fatbottom. Figures.'

He seemed to be talking English.

Margrethe said breathlessly, 'Mr Farnsworth - Jerry what was it?'

'Eh? Never seen a lift-off before?'

'I don't know what a lift-off is.'

'Mm... yes. Margie, the fact that you and Alec are from another world - or worlds - hasn't really soaked through My skull yet. Your world doesn't have space travel?'

'I'm not sure what you mean but I don't think we do.'

I was fairly sure what he meant so I interrupted. 'Jerry, you're talking about flying to the moon, aren't you? Like Jules Verne.'

'Yes. Close enough.'

'That was an ethership? Going to the moon? Golly Moses!' The profanity just slipped out.

'Slow down. That was not an ethership, it was an, unmanned freight rocket. It is not going to Luna; it is going only as far as Leo - low Earth orbit. Then it comes back, ditches off Galveston, is ferried back to North Texas Port, where it will lift again sometime next week. But some of its cargo will go on to Luna City or Tycho Under - and some may go as far as the Asteroids. Clear?'

'Uh... not quite.'

'Well, in Kennedy's second term -'

'Who?'

'John F. Kennedy. President. Sixty-one to sixty-nine.'

'I'm sorry. I'm going to have to relearn history again. Jerry, the most confusing thing about being bounced around among worlds is not new technology, such as television or jet planes - or even space-travel ships. It is different history.'

'Well - When we get home, I'll find you an American history, and a history of space travel. A lot of them around the house; I'm in space up to my armpits - started with. model rockets as a kid. Now, besides Diana Freight Lines, I've got a piece of Jacob's Ladder and the Beanstalk, both - just a tax loss at present but -'

I think he caught sight of my face. 'Sorry. You skim through the books I'll dig out for you, then we'll talk.'

Farnsworth looked back at his controls, punched something, blinked at it, punched again, and, said, 'Hubert says that we'll have the sound in three minutes twenty-one seconds.'

When the sound did arrive, I was disappointed. I had expected a thunderclap to match that incredible light. Instead it was a rumble that went on and on, then faded away without a distinct end.

A few minutes later the car left the highway, swung right in a large circle and went under the highway through a tunnel and came out on a smaller highway. We stayed on this highway (83, I noted) about five minutes, then there was a repeated beeping sound and a flash of lights. 'I hear you,' Mr Farnsworth said. 'Just hold your horses.' He swung his chair around and faced forward, grasped the two hand grips.

The next several minutes were interesting. I was reminded of something the Sage of Hannibal said: 'If it warn't for the honor, I'd druther uv walked.' Mr Farnsworth seemed to regard any collision avoided by a measurable distance as less than sporting. Again and again that 'soft mush' saved us from bruises if not broken bones. Once that signal from the machinery went Bee-bee-beebeep! at him; he growled in answer: 'Pipe down! You mind your business; I'll mind mine,' and subjected us to another near miss.

We turned off onto a narrow road, private I concluded, as there was an arch over the entrance reading FARNSWORTH'S FOLLY. We went up a grade. At the top, lost among trees, was a high gate that snapped out of the way as we approached it.

There we met Katie Farnsworth.

If you have read this far in this memoir, you know that I am in love with my wife. That is a basic, like the speed of light, like the love of God the Father. Know ye now that I

learned that I could love another person, a woman, without detracting from my love for Margrethe, without wishing to take her from her lawful mate, without lusting to possess her. Or at least not much.

In meeting her I learned that five feet two inches is the perfect height for a woman, that forty is the perfect age, and that a hundred and ten pounds is the correct weight, just as for a woman's voice contralto is the right register. That my own beloved darling is none of these is irrelevant; Katie Farnsworth makes them perfect for her by being herself content with what she is.

But she startled me first by the most graceful gesture of warm hospitality I have ever encountered.

She knew from her husband that we were utterly without clothes; she knew also from him that he felt that we were embarrassed by our state. So she had fetched clothing for each of us.

And she herself was naked.

No, that's not right; I was naked, she was unclothed. That's not quite right, either. Nude? Bare? Stripped? Undressed? No, she was dressed in her own beauty, like Mother Eve before the Fall. She made it seem so utterly appropriate that I wonder how I had ever acquired the delusion that freedom from clothing equals obscenity.

Those clamshell doors lifted; I got out and handed Margrethe out. Mrs Farnsworth dropped what she was carrying, put her arms around Margrethe and kissed her. 'Margrethe! Welcome, dear.'

My darling hugged her back and sniffled again.

Then she offered me her hand. 'Welcome to you, too, Mr Graham. Alec.' I took her hand, did not shake it. Instead I handled it like rare china and bowed over it. I felt that I should kiss it but I had never learned how.

For Margrethe she had a summer dress the shade of Marga's eyes. Its styling suggested the Arcadia of myth; one could imagine a wood nymph wearing it. It hung on the left shoulder, was open all the way down on the right but wrapped around with generous overlap. Both sides of this simple garment ended in a long sash ribbon; the end that went under passed through a slot, which permitted both ends to go all the way around Marga's waist, then to tie at her right side.

It occurred to me that this was a fit-anyone dress. It would be tight or loose on any figure depending on how it was tied.

Katie had sandals for Marga in blue to match her dress.

For me she had Mexican sandals, zapatos, of lhe cutleather openwork sort that are almost as fit-anyone as that dress, simply by how they are tied. She offered me trousers and shirt that were superficially equivalent to those I had bought in Winslow at the SECOND WIND - but these were tailormade of summer-weight wool rather than mass-produced from cheap cotton. She also had for me socks that fitted themselves to my feet and knit shorts that seemed to be my size.

When she had dressed us, there was still clothing on the grass -hers. I then realized that she had walked to the gate dressed, stripped down there, and waited for us 'dressed' as we were.

That's politeness.

Dressed, we all got into the car. Mr Farnsworth waited a moment before starting up his driveway. 'Katie, our guests are Christians.'

Mrs Farnsworth seemed delighted. 'Oh, how very interesting!'

'So I thought. Alec? Verb. sap. Not many Christians in these parts. Feel free to speak your mind in front of Katie and me... but when anyone else is around, you may be more comfortable not discussing your beliefs. Understand me?'

'Uh... I'm afraid I don't.' My head was in a whirl and I felt a ringing in my ears.

'Well... being a Christian isn't against the law here; Texas has freedom of religion. Nevertheless Christians aren't at all popular and Christian worship is mostly underground. Uh, if you want to get in touch with your own people, I suppose we could manage to locate a catacomb. Kate?'

'Oh, I'm sure we could find someone who knows. I can put out some feelers.'

'If Alec says to, dear. Alec, you're in no danger of being stoned; this country isn't some ignorant redneck backwoods. Or not much danger. But I don't want you to be discriminated against or insulted.'

Katie Farnsworth said, 'Sybil.'

'Oh, oh! Yes. Alec our daughter is a good girl and as civilized as one can expect in a teenager. But she is an apprentice witch, a recent convert to the Old Religion and, being, both a convert and a teenager, dead serious about it. Sybil would not be rude to a guest - Katie brought her up properly. Besides, she knows I would skin her alive. But it would be a favor to me if you will avoid placing too much strain on her. As I'm sure you know, every teenager is a time bomb waiting to go off.'

Margrethe answered for me: 'We will be most careful. This "Old Religion" - is this the worship of Odin?'

I felt a chill... when I was already discombobulated beyond my capacity. But our host answered, 'No. Or at least I don't think so. You could ask Sybil. If you are willing to risk having your ear talked off; she'll try to convert you. Very intense.'

Katie Farnsworth added, 'I have never heard Sybil mention Odin. Mostly she speaks just of "the Goddess". Don't Druids worship Odin? Truly I don't know. I'm afraid Sybil considers us so hopelessly old-fashioned that she doesn't bother to discuss theology with us.'

'And let's not discuss it now,' Jerry added, and started us up the drive.

The Farnsworth mansion was long, low, and rambling, with a flavor of lazy opulence. Jerry swung us under a porte-cochère; we all got out. He slapped the top of his car as one might slap the neck of a horse. It moved away and turned the corner of the house as we went inside.

I'm not going to say much about their house as, while it was beautiful and Texas lavish, it would not necessarily appear any one way long enough to justify describing it; most of what we saw Jerry called 'hollow grams'. How can I describe them? Frozen dreams? Three-dimensional, pictures? Let me put it this way: Chairs were solid. So were table tops. Anything else in that house, better touch it cautiously and find out, as it might be as beautifully there as a rainbow... and just as insubstantial.

I don't know how these ghosts were produced. I think it is possible that the laws of physics in that world were somewhat different from those of the Kansas of my youth.

Katie led us into what Jerry called their 'family room' and Jerry stopped abruptly. 'Bloody Hindu whorehouse!'

It was a very large room with ceilings that seemed impossibly high for a one-storey ranch house. Every wall, arch, alcove, soffit, and beam was covered with sculptured figures. But such figures! I found myself blushing. These figures had apparently been copied from that notorious temple cavern in southern India, the one that depicts every possible vice of venery in obscene and blatant detail.

Katie said, 'Sorry, dear! The youngsters were dancing in here.' She hurried to the left, melted into one sculpture group and disappeared. 'What will you have, Gerald?'

'Uh, Remington number two.'

'Right away.'

Suddenly the obscene figures disappeared, the ceiling lowered abruptly and changed to a beam-and-plaster construction, one wall became a picture window looking out at mountains that belonged in Utah (not Texas), the wall opposite it now carried a massive

stone fireplace with a goodly fire crackling in it, the furniture changed to the style sometimes called 'mission' and the floor changed to flagstones covered with Amerindian rugs.

'That's better. Thank you, Katherine. Sit down, friends - pick a spot and squat.'

I sat down, avoiding what was obviously the 'papa' chair - massive and leather upholstered. Katie and Marga took a couch together. Jerry satin that papa chair. 'My love, what will you drink?'

'Campari and soda, please.'

'Sissy. And you, Margie?'

'Campari and soda would suit me, too.'

'Two sissies. Alec?'

'I'll go along with the ladies.'

'Son, I'll tolerate that in the weaker sex. But not from a grown man. Try again.'

'Uh, Scotch and soda.'

'I'd horsewhip you, if I had a horse. Podnuh, you have just one more chance.'

'Uh... bourbon and branch?'

'Saved yourself. Jack Daniel's with water on the side. Other day, man in Dallas tried to order Irish whisky. Rode him out o'town on a rail. Then they apologized to him. Turned out he was a Yankee and didn't know any better.' All this time our host was drumming with his fingertips on a small table at his elbow. He stopped this fretful drumming and, suddenly, at the table by my chair appeared a Texas jigger of brown liquid and a tumbler of water. I found that the others had been served, too. Jerry raised his glass. 'Save your Confederate money! Salud!'

We drank and he went on, 'Katherine, do you know where our rapscallion is hiding?'

'I think they are all in the pool, dear.'

'So.' Jerry resumed that nervous drumming. Suddenly there appeared in the air in front of our host, seated on a diving board that jutted out of nowhere, a young female. She was in bright sunlight although the room we were in was in cool shadow. Drops of water sprinkled on her. She faced Jerry, which placed her back toward me. 'Hi, Pip-squeak.'

'Hi, Daddy. Kiss kiss.'

'In a pig's eye. When was the last time I spanked you?'

'My ninth birthday. When I set fire to Aunt Minnie. What did I do now?'

'By the great golden gawdy greasy gonads of God, what do you mean by leaving that vulgar, bawdy, pornic program running in the family room?'

'Don't give me that static, Daddy doll; I've seen your books.'

'Never mind what I have in my private library; answer my question.'

'I forgot to turn it off, Daddy. I'm sorry.'

'That's what the cow said to Mrs Murphy. But the fire burned on. Look, my dear, you know you are free to use the controls to suit yourself. But when you are through, you must put the display back the way you found it. Or, if you don't know how. you must put it back to zero for the default display.'

'Yes, Daddy. I just forgot.'

'Don't go squirming around like that; I'm not through chewing you out. By the big brass balls of Koshchei, where did you get that program?'

'At campus. It was an instruction tape in my tantric yoga class.'

'"Tantric yoga"? Swivel hips, you don't need such a course. Does your mother know about this?'

Katherine moved in smoothly: 'I urged her to take it, dear one. Sybil is talented, as we know. But raw talent is not I enough; she needed tutoring.'

'So? I'll never argue with your mother on this subject, so I withdraw to a previously prepared position. That tape. How did you come by it? You are familiar with the applicable laws concerning copyrighted material; we both remember the hooraw over that Jefferson Starship tape -'

'Daddy, you're worse than an elephant! Don't you ever forget anything?'

'Never, and much worse. You are warned that anything you say may be taken down in writing and held against you at another time and place. How say you?'

'I demand to see an attorney!'

'Oh, so you did pirate it!'

'Don't you wish I had! So you could gloat. I'm sorry, Daddy, but I paid the catalog fee, in full, in cash, and the campus library service copied it for' me. So there. Smarty.'

'Smarty yourself. You wasted your money.'

'I don't think so. I like it.'

'So do I. But you wasted your money. You should have asked me for it.'

'Huh!'

'Gotcha! I thought at first you had been picking locks in my study or working a spell on 'em. Pleased to hear that you were merely extravagant. How much?'

'Uh... forty-nine fifty. That's at student's discount.'

'Sounds fair; I paid sixty-five. All right. But if it shows up on your semester billing, I'll deduct it from your allowance.

Just one thing, sugar plum - I brought two nice people home, a lady and a gentleman. We walk into the parlor. What had been the parlor. And these two gentlefolk are faced with the entire Kama Sutra, in panting, quivering color. What do you think of that?'

'I didn't mean to.'

'So we'll forget it. But it is never polite to shock people, especially guests, so let's be more careful next time. Will you be at dinner?'

'Yes. If I can be excused early and run, run, run. Date, Daddy.'

'What time will you be home?'

'Won't. All-night gathering. Rehearsal for Midsummer Night. Thirteen covens.'

He sighed. 'I suppose that I should thank the Three Crones that you are on the pill.'

'Pill shmill. Don't be a cube, Daddy; nobody ever gets pregnant at a Sabbat; everybody knows that.'

'Everybody but me. Well, let us offer thanks that you are willing to have dinner with us.' Suddenly she shrieked as she fell forward off the board. The picture followed her down.

She splashed, then came up spouting water. 'Daddy! You pushed me!'

'How could you say such a thing?' he answered in self-righteous tones. The living picture suddenly vanished.

Katie Farnsworth said conversationally, 'Gerald keeps trying to dominate his daughter. Hopelessly, of course. He should take her to bed and discharge his incestuous yearnings. But they are both too prissy for that.'

'Woman, remind me to beat you.'

'Yes, dearest. You wouldn't have to force her. Make your intentions plain and she will burst into tears and surrender. Then both of you will have the best time of your lives. Wouldn't you say so, Margrethe?'

'I would say so. '

By then I was too numb to be shocked by Margrethe's words.

'Dinner was a gourmet's delight and a social confusion. It was served in the formal dining hall, i.e., that same family room with a different program controlling the hollow grams. The ceiling was higher, the windows were tall, evenly spaced, framed by floor-length drapes, 'and they looked out on formal gardens.

One piece of furniture wheeled itself in, and was not a hollow gram - or not much so. It was a banquet table that (so far as I know) was - in itself, pantry, stove, icebox - all of a well-equipped kitchen. That's a conclusion, subject to refutation. All I can say is that I never saw a servant and never saw our hostess do any work. Nevertheless her husband congratulated her on her cooking - as well he might, and so did we.

Jerry did a little work; he carved a roast (prime rib, enough for a troop of hungry Boy Scouts) and he served the plates, serving them at his place. Once a plate was loaded, it went smoothly around to the person for whom it was intended, like a toy train on a track - but there was no train and no track. Machinery concealed by hollow grams? I suppose so. But that simply covers one mystery with another.

(I learned later that a swank Texas household in that world would have had human servants conspicuously in sight. But Jerry and Katie had simple tastes.)

There were six of us at the table, Jerry at one end, Katie at the other; Margrethe sat on Jerry's right, his daughter Sybil on his left; I was at the right of my hostess, and at her left was Sybil's young man, her date. This put him opposite me, and I had Sybil on my right.

The young man's name was Roderick Lyman Culverson III; he did not manage to catch my name. I have long suspected that the male of our species, in most cases, should be raised in a barrel and fed through the bung-hole. Then, at age eighteen, a solemn decision can be made: whether to take him out of the barrel, or to drive in the bung.

Young Culverson gave me no reason to change my opinion - and I would have voted to drive in the bung.

Early on, Sybil made clear that they were at the same campus. But he seemed to be as much a stranger to the Farnsworths as he was to us. Katie asked, 'Roderick, are you an apprentice witch, too?'

He looked as if he had sniffed something nasty, but Sybil saved him from having to answer such a crude question. 'Mothuh! Rod received his athame ages ago.'

'Sorry I goofed,' Katie said tranquilly. 'Is that a diploma you get when you finish your apprenticeship?'

'It's a sacred knife, Mama, used in ritual. It can be used to -'

'Sybil! There are gentiles present.' Culverson frowned at Sybil, then glared at me. I thought how well he would look with a black eye but I endeavored to keep my thoughts out of my face.

Jerry said, 'Then you're a graduate warlock, Rod?'

Sybil broke in again. 'Daddy! The correct word is -'

'Pipe down, sugar plum! Let him answer for himself. Rod?'

'That word is used only by the ignorant -'

'Hold it! I am uninformed on some subjects, and then I seek information, as I am now doing. But you don't sit at my table and call me ignorant. Now can you answer me without casting asparagus?'

Culverson's nostrils spread but he took a grip on himself. '"Witch" is the usual term for both male and female adepts in the Craft. "Wizard" is an acceptable term but is not technically exact; it means "sorcerer" or "magician"... but not all magicians are witches and not all witches practice magic. But "warlock" is considered to be offensive as well as incorrect because it is associated with Devil worship - and the Craft is not Devil worship - and the word itself by its derivation means "oath breaker" - and witches do not break oaths. Correction: The Craft forbids the breaking of oaths. A witch who breaks an oath, even to a gentile, is subject to discipline, even expulsion if the oath is that major. So I am not a "graduate warlock". The correct designation for my present status is "Accepted Craftsman", that is to say: "witch".'

'Well stated! Thank you. I ask forgiveness for using the term "warloc" to you and about you -' Jerry waited.

A long moment later Culverson said hastily, 'Oh, certainly! No offense meant and none taken.'

'Thank you. To add to your comments about derivations, "witch" drives from "wicca" meaning "wise", and from "wicce" meaning "woman"... which may account for most witches being female and suggests that our ancestors may have known something that we don't. In any case "the Craft" is the short way of saying "the Craft of Wisdom". Correct?'

'Eh Oh, certainly! Wisdom. That's what the Old Religion is all about.'

'Good. Son, listen to me carefully. Wisdom includes not getting angry unnecessarily. The Law ignores trifles and the wise man does, too. Such trifles as a young girl defining an athame among gentiles - knowledge that isn't all that esoteric anyhow - and an old fool using a word inappropriately. Understand me?'

Again Jerry waited. Then he said very softly, 'I said, "Do you understand me?" '

I Culverson took a deep breath. 'I understood you. A wise I man ignores trifles.'

'Good. May I offer you another slice of the roast?'

Culverson kept quiet for some time then. As did I. As did Sybil. Katie and Jerry and Margrethe kept up a flow of' polite chitchat that ignored the fact that a guest had just been thoroughly and publicly spanked. Presently Sybil said, 'Daddy, are you and Mama expecting me to attend fire worship Friday?'

'"Expect" is hardly the word,' Jerry answered, 'when you have picked another church of your own. "Hope" would be closer.'

Katie added, 'Sybil, tonight you feel that your coven is all the church you will ever need. But that could change... and I understand that the Old Religion does not forbid its members to attend other religious services.'

Culverson put In, "That reflects centuries, millennia, of persecution, Mrs Farnsworth. It is still in our laws that each member of a coven must also belong publicly to some socially approved church. But we no longer try too hard to enforce it.'

'I see,' agreed Katie. 'Thank you, Roderick. Sybil, since your new church encourages membership in another church, it might be prudent to attend fairly regularly just to protect your Brownie points. You may need them.'

'Exactly,' agreed her father. ' "Brownie points." Ever occur to you, hon, that your pop being a stalwart pillar of the congregation, with a fast checkbook, might have something to do with the fact that he also sells more Cadillacs than any other dealer in Texas?'

'Daddy, that sounds utterly shameless.'

'It sure is. It also sells Cadillacs. And don't call it fire worship; you know it is not. It is not the flame we worship, but what it stands for.'

Sybil twisted her serviette and, for the moment, looked a troubled thirteen instead of the mature woman her body showed her to be. 'Papa, that's just it. All my life that flame has meant to me healing, cleansing, life everlasting until I studied the Craft. Its history. Daddy, to a witch... fire means the way they kill us!'

I was shocked almost out of breathing. I think it had not really sunk into me emotionally that these two, obnoxious but commonplace young punk, and pretty and quite delightful young girl... daughter of Katie, daughter of Jerry, our two Good Samaritans without equal - that these two were witches.

Yes, yes, I know: Exodus twenty-two verse eighteen, 'Thou shalt not suffer a witch to live.' As solemn an injunction as the Ten Commandments, given to Moses directly by God, in the presence of all the children of Israel

What was I doing breaking bread with witches?

Mark me for a coward. I did not stand up and denounce them. I sat tight.

Katie said, 'Darling, darling! That was clear back in the middle ages! Not today, not now, not here.'

Culverson said, 'Mrs Farnsworth, every witch knows that the terror can start up again any time. Even a season of bad crops could touch it off. And Salem wasn't very long ago. Nor very far away.' He added, 'There are still Christians around. They would set the fires if they could. Just like Salem.'

This was a great chance to keep my mouth shut. I blurted out, 'No witch was burned at Salem.'

He looked at me. 'What do you know about it?'

'The burnings were in Europe, not here. In Salem witches were hanged, except one who was pressed to death.' (Fire should never have been used. The Lord God ordered us not to suffer them to live; He did not tell us to put them to death by torture.)

He eyed me again. 'So? You seem to approve of the hangings.'

'I never said anything of the sort!' (Dear God, forgive me!)

Jerry cut in. 'I rule this subject out of order! There will be no further discussion of it at the table. Sybil, we don't want you to attend if it upsets you or reminds you of tragic

occasions. Speaking of hanging, what shall we do about the backfield of the Dallas Cowboys?'

Two hours later Jerry Farnsworth and I were again seated in that room, this time it being Remington number three: a snow storm against the windows, an occasional cold draft across the floor, and once the howl of a wolf - a roaring fire felt good. He poured coffee for us, and brandy in huge snifters, big enough for goldfish. 'You hear of noble brandy,' he said. 'Napoleon, or Carlos Primero. But this is royal brandy - so royal it has hemophilia.'

I gulped; I did not like the joke. I was still queasy from thinking about witches, dying witches. With a jerk of the heels, or dancing on flames. And all of them with Sybil's sweet face.

Does the Bible define 'witch' somewhere? Could it be that these modern members of the Craft were not at all what Jehovah meant by 'witch'?

Quit dodging, Alex! Assume that 'witch' in Exodus means exactly what 'witch' means here in Texas t day. You're the judge and she has confessed. Can you sentence Katie's teenager to hang? Will you spring the trap? Don't dodge it, boy; 'You've been dodging all your life.

Pontius Pilate washed his hands.

I will not sentence a witch to die! So help me, Lord, I can do no other.

Jerry said, 'Here's to the success of your venture, yours and Margie's. Sip it slowly and it will not intoxicate; it will simply quiet your nerves while it sharpens your wits. Alec, tell me now why you expect the end of the world.'

For the next hour I went over the evidence, pointing out that it was not just one prophecy that agreed on the signs, but many: Revelations, Daniel, Ezekiel, Isaiah, Paul in writing to the Thessalonians, and again to the Corinthians, Jesus himself in all four of the Gospels, again and again in each.

To my surprise Jerry had a copy of the Book. I picked out passages easy for laymen to understand, wrote down chapter and verse so that he could study them later. One Thessalonians 4:15-17 of course, and the 24th chapter of the Gospel according to Saint Matthew, all fifty-one verses of it, and the same prophecies in Saint Luke, chapter twenty-one - and Luke 21:32 with its clue to the confusion many as to 'this generation'. What Christ actually said was that the generation which sees these signs and portents will live to see His return, hear the Shout, experience Judgment Day. The message is plain if you read all of it; the errors have arisen from picking out bits and pieces and ignoring the rest. The parable of the fig tree explains this.

I also picked out for him, in Isaiah and Daniel and elsewhere, the Old Testament prophecies that parallel the New Testament prophecies.

I handed him this list of prophecies and urged him to study them carefully, and, if he encountered difficulties, simply read more widely. And take it to God. '"Ask, and it shall be given you; seek, and ye shall find."'

He said, 'Alec, I can agree with one thing. The news for the past several months has looked to me like. Armageddon. Say tomorrow afternoon. Might as well be the end of the world and Judgment Day, as there won't be enough left to salvage after this one.' He looked sad. 'I used to worry about what kind of a world Sybil would grow up in. Now I wonder if she'll grow up.'

'Jerry. Work on it. Find your way to grace. Then lead your wife and daughter. You don't need me, you don't need anyone but Jesus. He said, "Behold, I stand at the door and knock; if anyone hears My voice, I will come in to him." Revelations three, twenty.'

'You believe.'

'I do.'

'Alec, I wish I could go along with you. It would be comforting, the world being what it is today. But I can't see proof in the dreams of long-dead prophets; you can read anything into them. Theology is never any help; it is searching in a dark cellar at midnight for a black cat that isn't there. Theologians can persuade themselves of anything. Oh, my church, too - but at least mine is honestly pantheistic. Anyone who can worship a trinity and insist that his religion is a monotheism can believe anything just give him time to rationalize it. Forgive me for being blunt.'

'Jerry, in religion bluntness is necessary. "I know that my Redeemer liveth, and that He shall stand at the latter day upon the earth." That's Job again, chapter nineteen. He's your Redeemer, too, Jerry - I pray that you find' Him.'

'Not much chance, I'm afraid.' Jerry stood up.

'You haven't found Him yet. Don't quit. I'll pray for you.'

'Thank you, and thanks for trying. How do the shoes feel?'

'Comfortable, quite.'

'If you insist on hitting the road tomorrow, you must have shoes that won't give you bunions between here and Kansas. You're sure?'

'I'm sure. And sure that we must leave. If we stayed another day, you'd have us so spoiled we would never hit the road again.' (The truth that I could not tell him was that I was so

upset by witchcraft and fire worship that I had to leave. But I could not load my weakness onto him.)

'Let me show you to your bedroom. Quietly, as Margie may be asleep. Unless our ladies have stayed up even later than we have.'

At the bedroom door he put out his hand. 'If you're right and I'm wrong, you tell me that it's possible that even you can slip.'

'True. I'm not in a state of grace, not now. I've got to work on it.'

'Well, good luck. But if you do slip, look me up in Hell, will you?'

So far as I could tell, Jerry was utterly serious. 'I don't know that it is permitted.'

'Work on it. And so will I. I promise you' - he grinned -'some hellacious hospitality. Really warm!'.

I grinned back. 'It's a date.'

Again my darling had fallen asleep without undressing. I smiled at her without making a sound, then got beside her and pillowed her head on my shoulder. I would let her wake up slowly, then undress the poor baby and put her to bed. Meanwhile I had a thousand - well, dozens - of thoughts to get untangled.

Presently I noticed that it was getting light. Then I noticed how scratchy and lumpy the bed was. The light increased and I saw that we were sprawled over bales of hay, in a barn.

Chapter 19

And Ahab said to Elijah, Hast thou found me,
0 mine enemy? And he answered, I have found thee:
because thou has sold thyself to work evil
in the sight of the Lord.
Kings 21:20

WE DID the last ninety miles down 66 from Clinton to Oklahoma City pushing hard, ignoring the fact that we were flat broke again, nothing to eat, nowhere to sleep.

We had seen a dirigible.

Of course this changed, everything. For months I had been nobody from nowhere, penniless, dishwashing my only trade, and a tramp in fact. But back in my own world - A well-paying job, a respected position in the community, a fat bank account. And an end to this truly infernal bouncing around between worlds.

We were riding into Clinton middle of the morning, guests of a farmer taking a load of produce into town. I heard Margrethe gasp. I looked where she was staring I and there she was! - silvery and sleek and beautiful. I could not make out her name, but her logo told me that she was Eastern Airlines.

'Dallas-Denver Express,' our host remarked, and hauled a watch out of his overalls. 'Six minutes late. Unusual.'

I tried to cover my excitement. 'Does Clinton have an airport?'

'Oh, no. Oklahoma City, nearest. Goin' to give up hitchhiking and take to the air?'

'Would be nice.'

'Wouldn't it, though. Beats farmin'.'

I kept the conversation on inanities until he dropped us outside the city market a few minutes later. But, once Margrethe and I were alone, I could hardly contain myself. I started to kiss her, then suddenly stopped myself. Oklahoma is every bit as moral as Kansas; most communities have stiff laws about public Iallygagging.

I wondered how, hard I was going to find it to readjust, after many weeks in many worlds not one of which had the high moral standards of my home world. It could be difficult to stay out of trouble when (admit it!) I had grown used to kissing my wife in public and to other displays, innocent in themselves, but never seen in public in moral communities. Worse, could I keep my darling out of trouble? I had been born here and could slip back into its ways... but Marga was as affectionate as a collie pup and had no sense of shame whatever about showing it.

I said, 'Sorry, dear, I was about to kiss you. But I must not.'

'Why not?'

'Uh, I can't kiss you in public. Not here. Only in private. It's - It's a case of "When in Rome, one must do as the Romans do." But never mind that now. Darling, we're home! My home, and now it's-your home. You saw the dirigible.'

'That was an airship truly?'

'Really and truly... and the happiest sight I've seen in months. Except - Don't get your hopes up too high, too fast. We know how some of these shifting worlds strongly resemble each other in many ways. I suppose there is an outside possibility that this is a world with dirigibles... but not my world. Oh, I don't believe that but let's not get too excited.'

(I did not notice that Margrethe was not at all excited.)

'How will you tell that this is your world?'

'We could check just as we have before, at public libraries. But in this case there is something faster and better. I want to find the Bell Telephone office - I'll ask at that grocery store.'

I wanted the telephone office rather than a public telephone because I wanted to consult telephone books' before making telephone calls - was it my world?

Yes, it was! The office had telephone books for all of Oklahoma and also books from major cities in, other states - including a most familiar telephone book for Kansas City, Kansas. 'See, Margrethe?' I pointed to the listing for Churches United for Decency, National Office.

'I see.'

'Isn't it exciting? Doesn't it make you want to dance and sing?'

(She made it sound like: 'Doesn't he look natural? And so many, lovely flowers.')

We had the alcove where the telephone books were to ourselves. So I whispered urgently, 'What's the trouble, dear? This is a happy occasion. Don't you understand? Once I get on that phone we'll have money. No more menial jobs, no more wondering how we will eat or where we will sleep. We'll go straight home by Pullman - no, by dirigible! You'll like that, I know you will! The ultimate in luxury. Our honeymoon, darling -the honeymoon we could never afford.'

:You will not take me to Kansas City.'

What do you mean?'

'Alec... your wife is there.'

Believe me when I say that I had not thought once about Abigail in many, many weeks. I had become convinced that I would never see her again (regaining my home world was totally unexpected) and I now had a wife, all the wife any man could ever want: Margrethe.

I wonder if that-first shovelful of dirt hits a corpse with the same shock.

I pulled out of it. Some. 'Marga, here's what we'll do. Yes, I have a problem, but we can solve it. Of course you go to Kansas City with me! You must. But there, because of Abigail, I must find a quiet place for you to stay while I get things straightened out.' (Straightened out? Abigail was going to scream bloody murder.) 'First I must get at my

money. Then I must see a lawyer.' (Divorce? In a state where there was only one legal ground and 'that one granted divorce only to the injured party? Margrethe the other woman? Impossible. Let Margrethe be exposed in stocks? Be ridden out of town on a rail if Abigail demanded it? Never mind what would be done to me, never mind that Abigail would strip me of every cent - Margrethe must not be subjected to the Scarlet Letter laws of my home world. No!)

'Then we will go to Denmark.' (No, it can't be divorce.)

'We will?'

'We will. Darling, you are my wife, now and forever. I can't leave you here while I get things worked out in Kay See; the world might shift and I would lose you. But we can't go to Denmark until I lay hands on my money. All clear?' (What if Abigail has cleaned out my bank account?)

'Yes, Alec. We will go to Kansas City.'

(That settled part of it. But it did not settle Abigail. Never mind, I would burn that bridge when I came to it.)

Thirty seconds later I had more problems. Certainly the girl in charge would place a call for me long distance collect. Kansas City? For Kansas City, either Kansas or Missouri, the fee to open the trunk line for query was twenty-five cents. Deposit it in the coin box, please, when I tell you. Booth two.

I went to the booth and dug into my pocket for coins, laid them out:

A twenty-cent piece;

Two threepenny coppers;

A Canadian quarter, with the face of the Queen (queen?);

A half dollar;

Three five-cent pieces that were not nickels, but smaller.

And not one of these coins carried the familiar 'God Is Our Fortress' motto of the North American Union.

I stared at that ragbag collection and tried to figure out when this last change had taken place. Since I last was paid evidently, which placed it later than yesterday afternoon but earlier than the hitch we had gotten just after breakfast. While we slept last night? But we had not lost our clothes, had not lost our money. I even had my razor, a lump in my breast pocket.

Never mind - any attempt to understand all the details of these changes led only to madness. The shift had indeed taken place; I was here in my native world... and it had left me with no money. With no legal money.

By Hobson's choice, that Canadian quarter looked awfully good. I did not try to tell myself that the Eighth Commandment did not apply to big corporations. Instead I did promise myself that I would pay it back. I picked it up and took the receiver off the hook.

'Number, please.'

'Please place a collect call to Churches United for Decency in Kansas City, Kansas. The number is State Line I224J. I'll speak to anyone who answers.'

'Deposit twenty-five cents, please.' I deposited that Canadian quarter and held my breath - heard it go tingthunk-thunk. Then Central said, 'Thank you. Do not hang up. Please wait.'

I waited. And waited. And waited.

'On your call to Kansas City - Churches United for Decency reports that they do not accept collect calls.'

'Hold it! Please tell them that the Reverend Alexander Hergensheimer is calling.'

'Thank you. Please deposit twenty-five cents.'

'Hey! I didn't get any use out of that first quarter. You hung up too soon.'

'We did not disconnect; the party in Kansas City hungup.'

'Well, call them back, please, and this time tell them not to hang up.'

'Yes, sir. Please deposit twenty-five cents.'

'Central, would I be calling collect if I had plenty of change on me? Get them on the line and tell them who I am. Reverend Alexander Hergensheimer, Deputy Executive Director.'

'Please wait on the line.'

So I waited again. And waited.

'Reverend? The party in Kansas City says to tell you that they do not accept-,collect calls from - I am quoting exactly - Jesus: Christ Himself.'

'That's no way to talk on the telephone. Or anywhere.'

'I quite agree. There was more. This person said to tell you that he had never heard of you.'

'Why, that -'I shut up, as I had no way to express myself within the dignity of the cloth.

'Yes, indeed. I tried to get his name. He hung up on me.'

'Young man? Old man? Bass, tenor, baritone?'

'Boy soprano. I gathered an impression that it was the office boy, answering the phone during the lunch hour.'

'I see. Well, thank you for your efforts. Above and beyond the call of duty, in my opinion.'

'A pleasure, Reverend.'

I left there, kicking myself. I did not explain to Margrethe until we were clear of the building. 'Hoist by my own petard, dear one. I wrote that "No Collect Calls" order myself. An analysis of the telephone log proved to me beyond any possible doubt that collect calls to our office were never for the benefit of the association. Nine out of ten are begging calls... and Churches United for Decency is not a charity. It collects money; it does not give it away. The tenth call is either from a troublemaker or a crank. So I set this firm rule and enforced it... and it paid off at once. Saved hundreds of dollars a year just in telephone tolls.' I managed to smile. 'Never dreamed that I would be caught in my own net.'

'What are your plans now, Alec?'

'Now? Get out on Highway Sixty-Six and start waving my thumb. I want us to reach Oklahoma City before five o'clock. It should be easy; it's not very far.'

'Yes, sir. Why five o'clock, may I ask?'

'You can always ask anything and you know it. Knock off the Patient Griselda act, sweetheart; you've been moping ever since we saw that dirigible. Because there is a district office of C.U.D. in Oklahoma City and I want to be there before they close. Wait'll you see them roll out the red carpet, hon! Get to Oke City and'our troubles are over.'

That afternoon reminded me of wading through sorghum. January sorghum. We had no trouble getting rides - but the rides were mostly short distances. We averaged about twenty miles an hour on a highway that permitted sixty miles per hour. We lost fifty-five minutes for a good reason: a free meal. For the umpteenth time a trucker bought us something to eat when he ate... for the reason that there is almost no man alive who can

stop to eat, and fail to invite Margrethe to eat if she is there. (Then I get fed, too, simply because I'm her property. I'm not complaining.)

We ate in twenty minutes, then he spent thirty minutes and endless quarters playing pinball machines... and I stood there and seethed and Margrethe stood beside him and clapped her hands and squealed when he made, a good score. But her social instincts are sound; he then drove us all the rest -of the way to Oklahoma City. There he went through town when he could have taken a bypass, and at four-twenty he dropped us at 36th and Lincoln, only two blocks from the C.U.D. district office.

I walked that two blocks whistling. Once I said, 'Smile, hon! A month from now - or sooner - we'll eat in the Tivoli.'

'Truly?'

'Truly. You've told me so much about it that I can't wait. There's the building!'

Our suite is on the second, floor. It warmed the cockles to see the door with lettering on the glass: CHURCHES UNITED FOR DECENCY - Enter.

'After you, my love!' I grabbed the knob, to open for her.

The door was locked.

I banged on it, then spotted a doorbell and rang it. Then I alternated knocking and ringing. And again.

A blackamoor carrying a mop and pail came down the corridor, started to pass us. I called, 'Hey, Uncle! DO you have a key to this suite?'

'Sure don't, Captain. Ain't nobody in there now. They most generally locked up and gone by four o'clock.'

'I see. Thanks.'

'A pleasure, Captain.'

Out on the street again, I grinned sheepishly at Margrethe. 'Red carpet treatment. Closing at four. When the cat is away, the mice will play. Some heads will roll, I promise you. I can't think of another cliché to fit the situation. Oh, yes, I can. Beggars can't be choosers. Madam, would you like to sleep in the park tonight? Warm night, no rain expected. Chiggers and mosquitoes, no extra charge.'

We slept in Lincoln Park, on the golf course, on a green that was living velvet - alive with chiggers.

It was a good night's sleep despite chiggers. We got up when the first early golfers showed up, and we got off the golf course with nothing worse than dirty looks. We made use of public washrooms in the park, and rejoined much neater, feeling fresher, me with a fresh shave, and both of us filled with free water for breakfast. On the whole I felt cheerful. It was too early to expect those self-appointed playboys at C. U. D. to show up, so, when we ran across a, policeman, I asked the location of the public library, then I added, 'By the way, where is the airport?'

'The what?'

'The dirigible flying field.'

The cop turned to Margrethe. 'Lady, is he sick?'

I did feel sick a half hour later when I checked the directory in the building we had visited the afternoon before... I felt sick but unsurprised to find no Churches United for Decency among its tenants. But to make certain I walked up to the second floor. That suite was now occupied by an insurance firm.

'Well, dear, let's go to the public library. Find out what kind of world we are in.'

'Yes, Alec.' She was looking cheerful. 'Dearest, I'm sorry you are disappointed... but I am so relieved. I - I as frightened out of my wits at the thought of meeting your wife.'

'You won't. Not ever. Promise. Uh, I'm sort of relieved, too. And hungry.'

We walked a few more steps. 'Alec. Don't be angry.'

'I'll do no more than give you a fat lip. What is it?'

'I have five quarters. Good ones.'

'At this point I am supposed to say, "Daughter, were you a good girl in Philadelphy?" Out with it. Whom did you kill? Much blood?'

'Yesterday. Those pinball games. Every time Harry won free games he gave me a quarter. "For luck," he said.'

I decided not to beat her. Of course they were not 'good quarters' but they turned out to be good enough. Good enough, that is, to fit coin machines. We had passed a penny arcade; such places usually have coin-operated food, dispensers and this one did. The prices were dreadfully high - fifty cents for a skimpy stale sandwich; twenty-five cents for a bare mouthful of chocolate. But it was better than some breakfasts we had had on the road. And we certainly did not steal, as the quarters from my world were real silver.

Then we went to the public library to find out what sort of world we must cope with now.

We found out quickly:

Marga's world.

Chapter 20

The wicked flee when no man pursueth: but the
righteous are bold as a lion.
Proverbs 28:1

MARGRETHE WAS as elated as I had been the day before. She bubbled, she smiled, she looked sixteen. I looked around for a private place - back of book stacks or somewhere - where I could kiss her without worrying about a proctor. Then I remembered that this was Margrethe's world where nobody cared... and grabbed her where she stood and bussed her properly.

And got scolded by a librarian.

No, not for what I had done, but because we had been somewhat noisy about it. Public kissing did not in itself disturb that library's decorum. Hardly. I noticed, while I was promising to keep quiet and apologizing for the breach, a display rack by that librarian's desk:

New Titles INSTRUCTIONAL PORNOGRAPHY -
Ages 6 to 12

Fifteen minutes later I was waving my thumb again on Highway 77 to Dallas.

Why Dallas? A law firm: O'Hara, Rigsbee, Crumpacker, and Rigsbee.

As soon as we were outside the library, Marga had started talking excitedly about how she could now end our troubles: her bank account in Copenhagen.

I said, 'Wait a minute, darling. Where's your checkbook? Where's your identification?'

What it, came to was that Margrethe could possibly draw on her assets in Denmark after several days at a highly optimistic best or after several weeks at a more probable estimate... and that even the longer period involved quite a bit of money up front for cablegrams. Telephone across the Atlantic? Marga did not think such a thing existed. (And even if it did, I thought it likely that cablegrams were cheaper and more certain.)

Even after all arrangements had been made, it was possible that actual payment might involve postal delivery from Europe - in a world that had no airmail.

So we headed for Dallas, I having assured Marga that, at the very worst, Alec Graham's lawyers would advance Alec Graham enough money to get him (us) off the street, and, with luck, we would come at once into major assets.

(Or they might fail to recognize me as Alec Graham and prove that I was not he - by fingerprints, by signature, by something - and thereby lay the ghost of 'Alec Graham' in Margrethe's sweet but addled mind. But I did not mention this to Margrethe.)

It is two hundred miles from Oklahoma City to Dallas; we arrived there at 2 p.m., having picked up a ride at the intersection of 66 and 77, and kept it clear into the Texas metropolis. We were dropped where 77 crosses 80 at the Trinity River, and we walked to the Smith Building; it took us half an hour.

The receptionist in suite 7000 looked like something out, of the sort of stage show that C. U. D. has spent much time and money to suppress. She was dressed but not very much, and her makeup was what Marga calls 'high style' She was nubile and pretty and, with my newly learned toleration, I simply enjoyed the sinful sight. She smiled and said, 'May I help you?'

'This is a fine day for golf. Which of the partners is still in the office?'

'Only Mr Crumpacker, I'm afraid.'

'He's the one I want to see.'

'And whom shall I say is calling?~

(First hurdle - I missed it. Or did she?) 'Don't you recognize me?'

'I'm sorry. Should I?'

'How long have you been working here?'

'Just over three months.'

'That accounts for it. Tell Crumpacker that Alec Graham is here.'

I could not hear what Crumpacker said to her but I was watching her eyes; I think they widened - I feel sure of it. But all she said was, 'Mr Crumpacker will, see you.' Then she turned to Margrethe. 'May I offer you a magazine while you wait? And would you like a reefer?'

I said, 'She's coming with me.'

'But

'Come along, Marga.' I headed quickly for the inner offices.

Crumpacker's door was easy to find; it was the one with the squawking issuing from it. This shut off as I opened the door and held it for Margrethe. As I followed her in, he was saying, 'Miss, you'll have to wait outside!'

'No,' I denied, as I closed the door behind me. 'Mrs Graham stays'.'

He looked startled. 'Mrs Graham?'

'Surprised you, didn't I? Got married since I saw you last. Darling, this is Sam Crumpacker, one of my attorneys.' (I had picked his first name off his door.)

'How do you do, Mr Crumpacker?'

'Uh, glad to meet you, Mrs Graham. Congratulations to you, Alec you always could pick 'em.'

I said, 'Thanks. Sit down, Marga.'

'Just a moment, folks! Mrs Graham can't stay - really she can't! You know that.'

'I know no such thing. This time I'm going to have a witness.' No, I did not know that he was crooked. But I had learned long ago, in dealing with legislators, that anyone who tries to keep you from having a witness is bad news. So C.U.D. always had witnesses and always stayed within the law; it was cheaper that way.

Marga was seated; I sat down beside her. Crumpacker had jumped up when we came in; he remained standing. His mouth worked nervously. 'I ought to call the Federal prosecutor.'

'Do that,' I agreed. 'Pick up the phone there and call him. Let's both of us go see him. Let's tell him everything. With witnesses. Let's call in the press. All of the press, not just the tame cats.'

(What did I know? Nothing. But when it's necessary to bluff, always bluff big. I was scared. This rat could turn and fight like a cornered mouse - a rabid one.)

'I should.'

'Do it, do it! Let's name names, and tell who did what and who got paid. I want to get everything out into the open... before somebody slips cyanide into my soup.'

'Don't talk that way.'

'Who has a better right? Who pushed me overboard? Who?'

'Don't look at me!'

'No, Sammie, I don't think you did it; you weren't there. But it could be your godson. Eh?' Then I smiled my biggest right-hand-of-fellowship smile. 'Just joking, Sam. My old friend would not want me dead. But you can tell me some things and help me out. Sam, it's not convenient to be dumped way off on the other side of the world - so you owe me.' (No, I still knew nothing... nothing save the evident fact that here was a man with a guilty conscience - so crowd him.)

'Alec, let's not do anything hasty.'

'I'm in no hurry. But I've got to have explanations. And money.'

'Alec, I tell you on my word of honor all I know about what happened to you is that this squarehead ship came into Portland and you ain't aboard. And I have to go all the way to Oregon f' God's sake to witness them breaking into your strong-box. And there's only a hundred thousand in it; the rest is missing. Who got it, Alec? Who got to you?'

He had his eyes on me; I hope my face didn't show anything. But he lad hulled me. Was this true? This shyster would lie as easily as he talked. Had my friend purser, or the purser and the captain in cahoots, looted that lockbox?

As a working hypothesis, always prefer the simpler explanation. This man was more likely to lie than the purser was to steal. And it was likely - no, certain - that the captain would have to be present before the purser would force his way into the lockbox of a missing passenger. If these two responsible officers, with careers and reputations to lose, nevertheless combined to steal, why would they leave a hundred thousand behind? Why not take it all and be blandly ignorant about the contents of my lockbox? - as indeed they should be. Something fishy here.

'What are you implying was missing?'

'Huh?' He glanced at Margrethe. 'Uh - Well, damn it there should have been nine hundred grand more. The money you didn't pass over in Tahiti.'

'Who says I didn't?'

'What? Alec, don't make things worse. Mr Z. says so. You tried to drown his bagman.'

I looked at him and laughed. 'You mean those tropical gangsters? They tried to get the boodle without identifying themselves and without giving receipts. I told them an emphatic no - so the clever boy had his muscle throw me into the pool. Hmm - Sam, I see it now. Find out who came aboard the Konge Knut in Papeele.'

'Why?'

'That's your man. He not only got the boodle; he pushed me overboard. When you know, don't bother to try to get him extradited, just tell me his name. I'll arrange the rest myself. Personally.'

'Damn it, we want that million dollars.'

'Do you think you can get it? It wound up in Mr Z's hands... but you got no receipt. And I got a lot of grief from asking for a receipt. Don't be silly, Sam; the nine hundred thousand is gone. But not my fee. So pass over that hundred grand. Now.'

'What? The Federal prosecutor in Portland kept that, impounded it as evidence.'

'Sam, Sam boy, don't try to teach your grandmother how to steal sheep. As evidence for what? Who is charged? Who is indicted? What crime is alleged? Am I charged with stealing something out of my own lockbox? What crime?'

"What crime?" Somebody stole that nine hundred grand, that's what!'

'Really? Who's the complainant? Who asserts that there ever was nine hundred thousand in that lockbox? I certainly never told anyone that - so who says? Pick up that phone, Sam; call the Federal prosecutor in Portland. Ask him why he held that money -on whose complaint? Let's get to the bottom of this. Pick it up, Sam. If that Federal clown has my money, I want to shake it loose from him.'

'You're almighty anxious to talk to prosecutors! Strange talk from you.'

'Maybe I've had an acute attack of honesty. Sam, your unwillingness to call Portland tells me all I need to know. You were called out there to act on my behalf, - as my attorney. American passenger lost overboard, ship of foreign registry, you betcha they get hold of the passenger's attorney to inventory his assets. Then they pass it all over to his attorney and he gives a receipt for it. Sam, what did you do with my clothes?'

'Eh? Gave 'em to the Red Cross. Of course.'

'You did, eh?'

'After the prosecutor released 'em, I mean.'

'Interesting. The Federal attorney keeps the money, although no one has complained that any money is missing... but lets the clothes out of his hands when the only probable crime is murder.'

'Huh?'

'Me, I mean. Who pushed me and who hired him to? Sam, we both know where the money is.' I stood up, pointed. 'In that safe. That's where it logically has to be. You wouldn't bank it; there would be a record. You' wouldn't hide it at home; your wife might find it. And you certainly didn't split with your partners Sam, open it. I want to see whether there is a hundred thousand in... or a million.'

'You're out of your mind!'

'Call the Federal prosecutor. Let him be our witness.'

I had him so angry he couldn't talk. His hands trembled. It isn't safe to get a little man too angry - and I topped him by six inches, weight and other measurements to match. He wouldn't attack me himself - he was a lawyer - but I would need to be careful going through doorways, and such.

Time to try to cool him - 'Sam, Sam, don't take it so seriously. You were leaning on me pretty heavily... so I leaned back. The good Lord alone knows why prosecutors do anything - the gonif most likely has stolen it by now... in the belief that I am dead and will never complain. So I'll go to Portland and lean on him, hard.'

'There's a paper out on you there.'

'Really? What charges?'

'Seduction under promise of marriage. A female crewman of that ship.' He had the grace to look apologetically at Margrethe. 'Sorry, Mrs Graham. But your husband asked me.'

'Quite all right,' she answered crisply.

'I do get around, don't I? What does she look like? Is she pretty? What's her name?'

'I never saw her; she wasn't there. Her name? Some Swede name. Let me think. Gunderson, that was it. Margaret S. Gunderson.'

Margrethe, bless her heart, never let out a peep - not even at being called a Swede. I said in wonderment, 'I'm accused of seducing this woman ... aboard a foreign-flag vessel, somewhere, in the South Seas. So there's a warrant out for me in Portland, Oregon. Sam, what kind of a lawyer are you? To let a client have paper slapped on him on that sort of charge,'

'I'm a smart lawyer, that's the kind I am. Just as you said, no telling what a Federal attorney will do; they take their brains out when they appoint 'em. It simply wasn't important enough to talk about, you being dead, or so we all thought. I'm just looking out for your interests, letting you know about it before you step in it. Gimme some time, I'll get it quashed - then you go to Portland.'

'Sounds reasonable. There aren't any charges outstanding on me here, are there?'

'No. Well, yes and no. You know the deal; we assured them that you would not be coming back, so they turned the blind eye when you left. But here you are, back. Alec, you can't afford to be seen here. Or elsewhere in Texas. Or anywhere in the States, actually. Word gets around, and they'll dig up those old charges.'

'I was innocent!'

He shrugged. 'Alec, all my clients are innocent. I'm talking like a father, in your own interest. Get out of Dallas. If you go as far as Paraguay, so much the better.'

'How? I'm broke. Sam, I've got to have some dough.'

'Have I ever let you down?' He got out his wallet, counted out five one-hundred-dollar bills, laid them in front of me.

I looked at them. 'What's that? A tip?' I picked them up, pocketed them. 'That won't get us to Brownsville. Now let's see some money.'

'See me tomorrow.'

'Don't play games, Sam. Open that safe and get me some real money. Or I don't come here tomorrow; I go see the Federal man and sing like the birdies. After I get square with him - and I will; the Feds love a state's witness, it's the only way they ever win a case - then I go to Oregon and pick up that hundred grand.'

'Alec, are you threatening me?'

'You play games, I play games. Sam, I need a car and I don't mean a beat-up Ford. A Cadillac. Doesn't have to be new, but a cream puff, clean, and a good engine. A Cadillac and a few grand and we'll be in Laredo by midnight, and in Monterrey by morning. I'll call you from Mexico City and give you an address. If you really want me to go to Paraguay and stay there, you send the money to D. F. for me to do it.'

It did not work out quite that way, but I settled for a used Pontiac and left with six thousand dollars in cash, and instructions to go to a particular used-car lot and accept the deal offered me - Sam would call and set it up. He agreed also to call the Hyatt and get us the bridal suite, and would see that they held it. Then I was to come back at ten the next morning.

I refused to get up that early. 'Make that eleven. We're still on our honeymoon.'

Sam chuckled, slapped me on the back, and agreed.

Out in the corridor we headed toward the elevators but went ten feet farther and I opened the door to the fire-escape trunk. Margrethe followed me without comment but once inside the staircase trunk and out of earshot of others she said, 'Alec, that man is not your friend.'

'No, he's not.'

'I am afraid for you.'

'I'm afraid for me, too.'

'Terribly afraid. I fear for your life.'

'My love, I fear for my life, too. And for yours. You are in danger as long as you are with me.'

'I will not leave you!'

'I know. Whatever this is, we are in it together.'

'Yes. What are our plans now?'

'Now we go to Kansas.'

'Oh, good! Then we are not driving to Mexico?'

'Hon, I don't even know how to drive a car.'

We came out in a basement garage and walked up a ramp to a side street. There we walked several blocks away from the Smith Building, picked up a cruising taxi, rode it to the Texas & Pacific Station, there picked up a taxi at the taxi rank, and rode it to Fort Worth, twenty-five miles west. Margrethe was very quiet on the trip. I did not ask her what she was thinking about because I knew: It can't be happy-making to discover that a person you fell in love with was mixed up in some shenanigan that smelled Of gangsters and rackets'. I made myself a solemn promise never to mention the matter to her.

In Fort Worth I had the hackie drop us on its most stylish shopping street, letting him pick it. Then I said to Marga, 'Darling, I'm about to buy you a heavy gold chain.'

'Goodness, darling! I don't need a gold chain.'

'We need it. Marga, the first time I was in this world with you, in Konge Knut - I learned that here the dollar was soft, not backed by gold, and every price I have seen today confirms that. So, if change comes again - and we never know - even the hard money of this world, quarters and half dollars and dimes, won't be worth anything because they're not really silver. As for the paper money I got from Crumpacker - waste paper!

'Unless I change it into something else. We'll start with that gold chain and from here on you wear it to bed, you even wear it to bathe - unless you hang it around my neck.'

'I see. Yes.'

'We'll buy some heavy gold jewelry for each of us, then I'm going to try to find a coin dealer - buy some silver cartwheels, maybe some gold coins. But my purpose is to get rid of most of this paper money in the next hour - all but the price of two bus tickets to Wichita, Kansas, three hundred and fifty miles north of here. Could you stand to ride a bus all night tonight? I want to get us out of Texas.

'Certainly! Oh, dear, I do want to get out of Texas! Truly, I'm still frightened.'

'Truly, you are not alone.'

'But -'

'"But" what, dear? And quit looking sad.'

'Alec, I haven't had a bath for four days.'

We found that jewelry shop, we found the coin shop; I spent about half that flat money and saved the rest for bus fare and other purposes in this world - such as dinner, which we ate as soon as the shops started to close. A hamburger we had eaten in Gainesville seemed an awfully long way off in time and space. Then I determined that there was a bus going north - Oklahoma City, Wichita, Salina - at ten o'clock that evening. I bought tickets and paid an extra dollar on each to reserve seats. Then I threw money away like a drunken sailor took a room in a hotel across from the bus station, knowing that we would be checking out in less than two hours.

It was worth it. Hot baths for each of us, taking turns, each of us remaining fully dressed and carrying the other's clothing, jewelry, and all the money while the other was naked and wet. And carrying my razor, which had become a talisman of how to outwit Loki's playful tricks.

And new, clean underwear for each of us, purchased in passing while we were converting paper money into valuta.

I had hoped for time enough for love - but no; by the time I was clean and dry we had to dress and check out to catch that bus. Never mind, there would be other times. We climbed into the bus, put the backrests back, put Marga's head on my shoulder. As the bus headed north we fell asleep.

I woke up sometime later because the road was so rough. We were seated right behind the driver, so I leaned forward and asked, 'Is this a detour?' I could not recall a rough stretch when we had ridden south on this same road about twelve hours earlier.

'No,' he said. 'We've crossed into Oklahoma, that's all. Not much pavement in Oklahoma. Some near Oke City and a little between there and Guthrie.'

The talk had wakened Margrethe; she straightened up. 'What is it, dear?'

'Nothing. Just Loki having fun with us. Go back to sleep.'

Chapter 21

What are these which are arrayed in white robes? and
whence came they? And I said unto him, Sir, thou knowest.
And he said unto me, These are they which came out
of great tribulation, and have washed their robes,
and made them white in the blood of the Lamb.
Therefore are they before the throne of God,
And serve Him day and night in His temple.
Revelation 7:13-15

I WAS driving a horse and buggy and not enjoying it. The day was hot, the dust kicked up by horse's hooves stuck to sweaty skin, flies were bad, there was no breeze. We were somewhere near the corner of Missouri, Kansas, and Oklahoma, but I was not sure where. I had not seen a map for days and the roads were no longer marked with highway signs for the guidance of automobilists - there were no automobiles.

The last two weeks (more or less - I had lost track of the days) had been endless torments of Sisyphus, one ridiculous frustration after another. Sell silver dollars to a local dealer in exchange for that world's paper? - no trouble; I did it several times. But it didn't always help. Once I had sold silver for local paper money and we had ordered dinner - when, boom, another world change and we went hungry. Another time I was cheated outrageously and when I complained, I was told: 'Neighbor, possession of that coin is illegal and you know it. I've offered you a price anyhow because I like you. Will you take it? Or shall I do my plain duty as a citizen?'

I took it. The paper money he gave us for five ounces of silver would not buy - dinner for Marga and me at a backwoods gourmet spot called 'Mom's Diner'.

That was in a charming community called (by a sign at its outskirts):

THE TEN COMMANDMENTS
A Clean Community
Blackamoors, Kikes, Papists

Keep Moving!

We kept moving. That whole two weeks had been spent trying to travel-the two hundred miles from Oklahoma City to Joplin, Missouri. I had been forced to give up the notion of avoiding Kansas City. I still had no intention of staying in or near Kansas City, not when a sudden change of worlds could land us in Abigail's lap. But I had learned in Oklahoma City that the fastest and indeed the only practical route- to Wichita was a long detour through Kansas City. We had retrogressed to the horse-and-buggy era.

When you consider the total age of the earth, from Creation in 4004 BC to the year of Our Lord I994, or 5998 years - call it 6000 - in a period of 6000 years, 80 or 90 years is nothing much. And that is how short a time it has been since the horse-and-buggy day in my world. My father was born in that day (1909) and my paternal grandfather not only never owned an automobile but refused to ride in one. He claimed that they were spawn of the Devil, and used to quote passages from Ezekiel to prove it. Perhaps he was right.

But the horse-and-buggy era does have -shortcomings. There are obvious ones such as no inside plumbing, no air conditioning, no modern medicine. But for us there was an unobvious but major one; where there are no trucks and no cars there is effectively no hitchhiking. Oh, it is sometimes possible to hitch rides on farm wagons - but the difference in speed between a human's walk and a horse's walk is not great. We rode when we could but, either way, fifteen miles was a good day's progress - too good; it left no time to work for meals and a place to sleep.

There is an old paradox, Achilles and the Tortoise, in which the remaining distance to your goal is halved at each The question is: How long does it take to reach your goal? The answer is: You can't get there from here.

That is the way we 'progressed' from Oklahoma City to Joplin.

Something else compounded my frustration: I became increasingly persuaded that we were indeed in the latter days, and we could expect the return of Jesus and the Final Judgment at any moment - and my darling, my necessary one, was not yet back in the arms of Jesus. I refrained from nagging her about it, although it took all my will power to respect her wish to handle it alone. I began to sleep badly through worrying about her.

I became a bit crazy, too (in addition to my paranoid belief that these world changes were aimed at me personally) - crazy in that I acquired an unfounded but compelling belief that finishing this journey was essential to the safety of my darling's immortal soul. Just let us get as far as Kansas, dear Lord, and I will pray without ceasing until I have converted her and brought her to grace. 0 Lord God of Israel, grant me this boon!

I continued to look for dishwashing jobs (or anything) even while we still had silver and gold to trade' for local money. But motels disappeared entirely; hotels became scarce and restaurants decreased in numbers and size to fit an economy in which travel was rare and almost all meals were eaten at home.

It became easier to find jobs cleaning stalls in livery stables. I preferred dishwashing to shoveling horse manure - especially as I had only one pair of shoes. But I stuck to the rule of take any honest work but keep moving!

You may wonder why we did not shift to hitching rides on freight trains. In the first place I did not know how, never having done it. Still more important, I could not guarantee Marga's safety. There were the hazards of mounting a moving freight car. But worse were dangers from people: railroad bulls and road kids - hobos, tramps, bindlestiffs, bums. No need to discuss those grisly dangers, -as I kept her away from rail lines and hobo jungles.

And I worried. While abiding strictly to her request not to be pressured, I did take to praying aloud every night and in her presence, on my knees. And at last, to my great joy, my darling joined me, on her knees. She did not pray aloud and I stopped vocalizing myself, save for a final: 'In Jesus' name, Amen.' We still did not talk about it.

I wound up driving this horse and buggy (goodness,' what a hot day! - 'Cyclone weather', my grandmother Hergensheimer would have called it) as a result of a job cleaning stalls in a livery stable. As, usual I had quit after one day, telling my temporary employer that my wife and I had to move on to Joplin; her mother was ill.

He told me that he had a rig that needed to be returned to the next town up the road. What he meant was that he had too many rigs and nags on hand, his own and others, or he would have waited until he could send it back by renting it to a passing drummer.

I offered to return it for one day's wages at the same extremely low rate that he had paid me to shovel manure and curry nags.

He pointed out that he was doing me a favor, since my wife and I had to get to Joplin.

He had both logic and strength of position on his side; I agreed. But his wife did put up a lunch for us, as well as giving us breakfast after we slept in their shed.

So I was not too unhappy driving that rig, despite the weather, despite the frustrations. We were getting a few miles closer to Joplin every day - and now my darling was praying. It was beginning to look like 'Home Free!' after all.

We had just reached the outskirts of this town (Lowell? Racine? I wish I could remember) when we encountered something right straight out of my childhood: a camp meeting, an old-time revival. On the left side of the road was a cemetery, well kept but the grass was drying; facing it on the right was the revival tent, pitched in a pasture. I wondered whether the juxtaposition of graveyard and Bible meeting was accidental, or planned? - if the Reverend Danny had been involved, I would know it was planned; most people cannot see gravestones without thinking about the long hereafter.

Crowded ranks of buggies and farm wagons stood near the tent, and a temporary corral lay beyond them. Picnic tables of the plank-and-sawhorse type were by the tent on the other side; I could see remains of lunch. This was a serious Bible meeting, one that started in the morning, broke for lunch, carried on in the afternoon - would no doubt break for supper, then adjourn only when the revivalist judged that there were no more souls to be saved that day.

(I despise these modern city preachers with their five minute 'inspirational messages'. They say Billy Sunday could preach for seven hours on only a glass of water then do it again in the evening and the next day. No wonder heathen cults have spread like a green bay tree!)

There was a two-horse caravan near the tent. Painted on its side was: Brother 'Bible' Barnaby. Out front was a canvas sign on guys and stays:

That Old-Time Religion!
Brother 'Bible' Barnaby
Healing Every Session
10a.m. - 2p.m. - 7p.m.
Every Day from Sunday June 5th till
!!!JUDGMENT DAY!!!

I spoke to the nag and pulled on the reins to let her know that I wanted to stop. 'Darling, look at that!'

Margrethe read the sign, made no comment.

'I admire his courage,' I said. 'Brother Barnaby is betting his reputation that Judgment Day will arrive before it's time to harvest wheat... which could be early this year, hot as it is.'

'But you think Judgment Day is soon.'

'Yes, but I'm not betting a professional reputation on it just my immortal soul and hope of Heaven. Marga, every Bible student reads the prophecies slightly differ ently. Or very differently. Most of the current crop of premillenarians don't expect the Day earlier than the year two thousand. He might have something. Do you mind if we, stay here an hour?'

'We will stay however long you wish. But - Alec, you wish me to go in? Must I?'

'Uh -' (Yes, darling, I certainly do want you to go inside.) 'You would rather wait in the buggy?'

Her silence was answer enough. 'I see. Marga, I'm not trying to twist your arm. Just one thing - We have not been separated except when utterly necessary for several weeks. And you know why. With the changes coming almost every day, I would hate to have one hit

while you were sitting out here and I was inside, quite a way off. Uh, we could stand outside the tent. I see they have the sides rolled up.'

She squared her shoulders. 'I was being silly. No, we will go inside. Alec, I do need to hold your hand; you are right: Change comes fast. But I will not ask you to stay away from a meeting of your coreligionists.'

'Thank you, Marga.'

'And, Alec - I will try!'

'Thank you. Thank you loads! Amen!'

'No need to thank me. If you go to your Heaven, I want to go, too!'

'Let's go inside, dear.'

I put the buggy at the far end of a rank, then led the mare to the corral, Marga with me. As we came back to the tent I could hear:

'- the corner where you are!
'Brighten the corner where you are!
'Someone far from harbor you may guide across the bar!
'So-'

I chimed in: '- brighten the corner where you are!'

It felt good.

Their instrumental music consisted of a foot-pumped organ and a slide trombone. The latter surprised me but Pleased me; there is no other instrument that can get right down and rassle with The Holy City the way a trombone can, and it is almost indispensable for The Son of God Goes Forth to War.

The congregation was supported by a choir in white angel robes - a scratch choir, I surmised, as the white robes were homemade, from sheets. But what. that choir may have lacked in professionalism it made up for in zeal. Church music does not have to be good as long as it is sincere - and loud.

The sawdust trail, six feet wide, led straight down the middle, benches on each side. It dead-ended against a chancel rail of two-by-fours. An usher led us down the trail in answer to my hope for seats down front. The place was crowded but he got people to squeeze over and we wound up on the aisle in the second row, me outside. Yes there were still seats in the back, but every preacher despises people - their name is legion! - who sit clear at the back when there are seats open down front.

As the music stopped, Brother Barnaby stood up and came to the pulpit, placed his hand on the Bible. 'It's all in the Book,' he said quietly, almost in a whisper. The congregation became dead still.

He stepped forward, looked around. 'Who loves you?'

'Jesus loves me!'

'Let Him hear you.'

'JESUS LOVES ME!'

'How do you know that?'

'IT'S IN THE BOOK!'

I became aware of an odor I had not smelled in a long time. My professor of homiletics pointed out to us once in a workshop session that a congregation imbued with religious fervor has a strong and distinctive odor ('stink' is the word he used) compounded of sweat and both male and female hormones. 'My sons,' he told us, 'if your assembled congregation smells too sweet, you aren't getting to them. If you can't make 'em sweat, if they don't break out in their own musk like a cat in rut, you might as 'Well quit and go across the street to the papists. Religious ecstasy is the strongest human emotion; when-it's there, you can smell it!'

Brother Barnaby got to them.

(And, I must confess, I never did. That's why I wound up as an organizer and money-raiser.)

'Yes, it's in the Book. The Bible is the Word of God, not just here and there, but every word. Not as allegory, but as literal truth. You shall know the truth and the truth will make you free. I read to you now from the Book: "For the Lord Himself will descend from Heaven with-a shout, with the voice of the archangel, and with the Trump of God: and the dead in Christ shall rise first."

'That last line is great news, my brothers and sisters:

"- the dead in Christ shall rise first." What does that say? It does not say that the dead shall rise first; it says that the dead in Christ shall rise first. Those who were washed in the blood of the Lamb, born again in Jesus, and then have died in a state of grace before His second coming, they will not be forgotten, they will be first. Their graves will open, they will be miraculously restored to life and health and physical perfection and will lead the parade to Heaven, there to dwell in happiness by the great white throne forevermore!'

Someone shouted, 'Hallelujah!'

'Bless you, sister. Ah, the good news! All the dead in Christ, every one! Sister Ellen, taken from her family by the cruel hand of cancer, but who died with the name of Jesus on her lips, she will help lead the procession. Asa's beloved wife, who died giving birth but in a state of grace, she will be there! All your dear ones who died in Christ will be gathered up and you will see them in Heaven. Brother Ben, who lived a sinful life, but found God in a foxhole before an enemy bullet cut him down, he will be there... and his case is specially good news, witnessing that God can be found anywhere. Jesus is present not only in churches - in fact there are fancy-Dan churches where His Name is rarely heard -´

'You- can say that again!'

'And I will. God is everywhere; He can hear you when you speak. He can hear you more easily when you are ploughing a field, or down on your knees by your bed, than He can in some ornate cathedral, surrounded by the painted and perfumed. He is here now, and He promises you, 'I will never desert you, nor will I ever forsake you. I stand at the door and knock, if anyone hears My voice and opens the door, I will come in to him, and will dine with him, and he with Me." That's His promise, dearly beloved, in plain words. No obscurities, no highfalutin "interpretation", no so-called "allegorical meanings". Christ Himself is waiting for you, if only you will ask.

'And if you do ask, if you are born again in Jesus, if He washes away your sins and you reach that state of grace... what then? I read you the first half of God's promise to the faithful. You will hear the Shout, you will hear the great Trumpet sounding His advent, as He promised, and t he dead in Christ shall rise again. Those dry bones will rise again and be covered with living, healthy flesh.

'Then what?

'Hear the words of the Lord: "Then we which are alive" - That's you and me, brothers and sisters; God is talking about us. "Then we which are alive and remain shall be caught up together with them in the clouds, to meet the Lord in the air and so shall we ever be with the Lord'!

'So shall we ever be! So shall we ever be! With the Lord in Heaven!'

‚Hallelujah!'

'Bless His Name!'

'Amen! Amen!'

(I found that I was one of those saying 'Amen!')

'But there's a price. There are no free tickets to Heaven. What happens if you don't ask Jesus to help you? What if you ignore. His offer to be washed free of sin and reborn in the blood of the Lamb? What then? Well? Answer me!'

The congregation was still save for heavy breathing, then a voice from the back said, not loudly, 'Hellfire.'

'Hellfire and damnation! Not for just a little while but through all eternity! Not some mystical, allegorical fire that singes only your peace of mind and burns no more than a Fourth of July sparkler. This is the real thing, a raging fire, as real as this.' Brother Barnaby slapped the pulpit with a crack that could be heard throughout the tent. 'The sort of fire that makes a baseburner glow cherry red, then white. And you are in that fire, Sinner, and the ghastly pain goes on and on, it never stops. Never! There's no hope for you. No use asking for a second chance. You've had your second chance... and your millionth chance. And more. For two thousand years sweet Jesus has been begging you, pleading with you, to accept from Him that for which He died in agony on the Cross to give you. So, once you are burning in that fiery Pit and trying to cough up the brimstone - that's sulfur, plain ordinary sulfur, burning and stinking, and it will burn your lungs and blister your sinful hide! - when you're roasting deep in the Pit for your sins, don't go whining about how dreadful it hurts and how you didn't know it would be like that. Jesus knows all about pain; He died on the Cross. He died for you. But you wouldn't listen and now you're down in the Pit and whining.

'And there you'll stay, suffering burning agony throughout eternity! Your whines can't be heard from down in the Pit; they are drowned out by the screams of billions of other sinners!'

Brother Barnaby lowered his voice to conversational level. 'Do you want ' to burn in the Pit?'

'No!' - 'Never!' - 'Jesus save us!'

'Jesus will save you, if you ask Him to. Those who died in Christ are saved, we read about them. Those alive when He returns will be saved if they are born again and remain in that state of grace. He promised us that He would return, and that Satan would be chained for- a thousand years while He rules in peace and justice here on earth. That's the Millennium, folks, that's the great day at hand. After that thousand years Satan will be loosed for a little while and the final battle will be fought. There'll be war in Heaven. The Archangel Michael will be the general for our side, leading God's angels against the Dragon - that's Satan again - and his host of fallen angels. And Satan lost - will lose, that is, a thousand years, from now. And nevermore will he be seen in Heaven.

'But that's a thousand years from now, dear friends. You will live to see it... if you accept Jesus and are born again before that Trumpet blast that signals His return. When will that be? Soon, soon! What does the Book say? In the Bible God tells you not once but many times, in Isaiah, in Daniel, in Ezekiel, and in. all four of the Gospels, that you will not be

told the exact hour of. His return. Why? So you can't sweep the dirt under the rug, that's why! If He told you that He would arrive New Year's Day the year two thousand, there are those who would spend the next five and a half years consorting with lewd women, worshiping strange gods, breaking every one of the Ten Commandments... then, sometime Christmas Week nineteen ninety-nine you would find them in church, crying repentance, trying to make a deal.

'No siree Bob! No cheap deals. It's the same price to everyone. The Shout and the Trump may be months away... or you may hear it before I can finish this sentence. It's up to you to be ready when it comes.

'But we know that it is coming soon. How? Again it's in the Book. Signs and portents. The first, without which the rest cannot happen, is the return of the Children of Israel to the Promised Land - see Ezekiel, see Matthew, see today's newspapers. They rebuild the Temple... and sure enough they have; it's in the Kansas City Star. There be other signs and portents, wonders of all sorts - but the greatest are tribulations, trials to test the souls of men the way Job was tested. Can there be a better word to describe the twentieth century than "tribulations"?

`Wars and terrorists and assassinations and fires and plagues. And more wars. Never in history has mankind been tried so bitterly. But endure as Job endured and the end is happiness and eternal peace - the peace of God, which passeth all understanding. He offers you His hand, He loves you, He will save you.'

Brother Barnaby stopped and wiped his forehead with a large handkerchief that was already soggy from such use.

The choir (perhaps at a signal. from him) started singing softly, 'We shall gather at the river, the beautiful, beautiful river, that flows by the throne of God and presently segued into:

'Just as I am, without one plea -´

Brother Barnaby got down on one knee and held out his arms to us. 'Please! Won't you answer Him? Come, accept Jesus, let Him gather you in His arms -´

The choir continued softly with:

'But that Thy blood was shed for me,
'And Thou bidd'st me come to Thee,
'0 Lamb of God, I come, I come!'

And the Holy Ghost descended.

I felt Him overpower me and the joy of Jesus filled my heart. I stood up and stepped out into the aisle. Only then did I remember that I had Margrethe with me. I turned and saw

her staring back at me, her face filled with a sweet and deeply serious look. 'Come, darling,' I whispered, and led her into the aisle. Together we went down the sawdust trail to God.

There were others ahead of us at the chancel rail. I found us a place, pushed some crutches and a truss aside, and knelt down. I placed my right hand on the rail, rested my forehead on it, while I continued to hold Marga's hand with my left. I prayed Jesus to wash away our sins and receive us into His arms.

One of Brother Barnaby's helpers was whispering inter my ear. 'How is it with you, brother?'

'I'm fine,' I said happily, 'and so is my wife. Help someone who needs it.'

'Bless you, brother.' He moved on. A sister farther down was writhing and speaking in tongues; he stopped lo comfort her.

I bowed my head again, then became aware of neighing And loud squeals of frightened horses and a great-flapping and shaking of the canvas roof above us. I looked up and saw a split start and widen, then the canvas blew away. The ground trembled, the sky was dark.

The Trump shook my bones, the Shout was the loudest ever heard, joyous and triumphant. I helped Margrethe to her feet smiled at her. 'It's now, darling!'

We were swept up.

We were tumbled head over heels and tossed about by a funnel cloud, a Kansas twister. I was wrenched away from Marga and tried to twist back, but could not. You can't swim in a twister; you go where it takes you. But I knew she was safe.

The storm turned me upside down and held me there for a long moment, about two hundred feet up. The horses had broken out of the corral, and some of the people, not caught up, were milling about. The force of the twister turned me again and I stared down at the cemetery.

The graves were opening.

Chapter 22

When the morning stars sang together,
and all the sons of God shouted for joy.
Job 38:7

THE WIND whipped me around, and I saw no more of the graves. By the time I was faced down again the ground was no longer in sight - just a boiling cloud glowing inside with a great light, amber and saffron and powder blue and green gold. I continued to search for Margrethe, but few people drifted near me and none was she. Never mind, the Lord would protect her. Her temporary absence could not dismay me; we had taken the only important hurdle together.

I thought about that hurdle. What a near thing! Suppose that old mare had thrown a shoe and the delay had caused us to reach that point on the road an hour later than we did? Answer: We would never have reached it. The Last Trump would have sounded while we were still on the road, with neither of us in a state of grace. Instead of being caught up into the Rapture, we would have gone to Judgment unredeemed, then straight to Hell.

Do I believe in predestination?

That is a good question. Let's move on to questions I can answer. I floated above those clouds for a time unmeasured by me. I sometimes saw other people but no one came close enough for talk. I began to wonder when I would see our Lord Jesus - He had promised specifically that He would meet us 'in the air'.

I had to remind myself that I was behaving like a little child who demands that Mama do it now and is answered, 'Be patient, dear. Not yet.' God's time and mine were not the same; the Bible said so. Judgment Day had to be a busy time and I had no concept of what duties Jesus had to carry out. Oh, yes, I did know of one; those graves opening up reminded me. Those who had died in Christ (millions? billions? more?) were to go first to meet our Father Who art in Heaven, and of course the Lord Jesus would be with them on that glorious occasion; He had promised them that.

Having figured out the reason for the delay, I relaxed. I was willing to wait my turn to see Jesus... and when I did see Him, I would ask Him to bring Margrethe and me together.

No longer worried, no longer hurried, utterly comfortable, neither hot nor cold, not hungry, not thirsty, floating as effortlessly as a cloud, I began to feel the bliss that had been promised. I slept.

I don't know how long I slept. A long time - I had been utterly exhausted; the last three weeks had been grinding. Running a hand across my face told me that I had slept a couple of days or more; my whiskers had reached the untidy state that meant at least two days of neglect. I touched my breast pocket - yes, my trusty Gillette, gift of Marga, was still buttoned safely inside. But I had no soap, no water, no mirror.

This irritated me as I had been awakened by a bugle call (not the Great Trumpet - probably just one wielded by an angel on duty), a call that I knew without being told meant, 'Wake up there! It is now your turn.'

It was indeed - so when the 'roll was called up yonder' I showed up with a two-day beard. Embarrassing!

Angels handled us like traffic cops, herding us into the formations they wanted. I knew they were angels; they wore wings and white robes and were heroic in size - one that flew near me was nine or ten feet tall. They did not flap their wings (I learned later that wings were worn only for ceremony, or as badges of authority). I discovered that I could move as these traffic cops directed. I had not been able to control my motions earlier; now I could move in any direction by volition alone.

They brought us first into columns, single file, stretched out for miles (hundreds of miles? thousands?). Then they brought the columns into ranks, 'twelve abreast - these were stacked in layers, twelve deep. I was, unless I miscounted, number four in my rank, which was stacked three layers down. I was about two hundred places back in my column - estimated while forming up - but I could not guess how long the column was.

And we flew past the Throne of God.

But first an angel positioned himself in the air about fifty yards off our left flank. His voice carried well. 'Now hear this! You will pass in review in this formation. Hold' your position at all times. Guide on the creature on your left, the creature under you, and the one ahead. of you. Leave ten cubits between ranks and between layers, five cubits, elbow to elbow in ranks. No crowding, no breaking out of ranks, no, slowing down as we pass the Throne. Anybody breaking flight discipline will be sent to the tail end of the flight... and I'm warning you now, the Son might be gone by then, with nobody but Peter or Paul or
some other saint to receive the parade. Any questions?'

"How much is a cubit?'

'Two cubits is one yard. Any creature in this cohort who does not know how long a yard is?'

No, one spoke up. The angel added, 'Any more questions?'

A woman to my left and above me called out, 'Yes! My. daughter didn't have her cough medicine with her. So I fetched it. Can you take it to her?'

'Creature, please accept my assurance that any cough your daughter manages to take with her to Heaven will be purely psychosomatic.'

'But her doctor said -´

'And in the meantime shut up and let's get on with this parade. Special requests can be filed after arriving in Heaven.'

There were more questions, mostly silly, confirming an opinion I had kept to myself for years: Piety does not imply horse sense.

Again the trumpet sounded; our cohort's flightmaster called out, 'Forward!' Seconds later there was a single blast; he shouted, 'Fly!' We moved forward.

(Note: I call this angel 'he' because he seemed male.

Ones that seemed to be female I refer to as 'she'. I never have been sure about sex in an angel. If any. I think they are androgynous but I never had a chance to find out. Or the courage to ask.)

(Here's another one that bothers me. Jesus had brothers and sisters; is the Virgin Mary still a virgin? I have never had the courage to ask that question, either.)

We could see His throne for many miles ahead. This was not the great white Throne of God the Father in Heaven; this was just a field job for Jesus to use on this occasion. Nevertheless it was magnificent, carved out of a single diamond with its myriad facets picking up Jesus' inner light and refracting it in a shower of fire and ice in all directions. And that is what I saw best, as the face of Jesus shines with such blazing light that, without sun glasses, you can't really see His features.

Never mind; you knew Who He was. One could not help knowing. A feeling of overpowering awe grabbed me when we were still at least twenty-five miles away. Despite my professors of theology, for the first time in my life I understood (felt) that single emotion that is described in the Bible by two words used together: love and fear. I loved/feared the Entity on that throne, and now I knew why Peter and James had abandoned their nets and followed Him.

And of course I did not make my request to Him as we passed closest (about a hundred yards). In my life on earth I had addressed (prayed to) Jesus by name thousands of times; when I saw Him in the Flesh I simply reminded myself that the angel herding us had. promised us a chance to file personal requests when we reached Heaven. Soon enough. In the meantime it pleased me to think about Margrethe, somewhere in this parade, seeing the Lord Jesus on His throne... and if I had not intervened, she might never have seen Him. It made me feel warm and good, on top of the ecstatic awe I felt in staring at His blinding light.

Some miles past the throne the column swung up and to the right, and we left the neighborhood first of earth and then of the solar system. We headed straight for Heaven and picked up speed.

Did you know that earth looks like a crescent moon when you look back at it? I wondered whether or not any flat-earthers had managed to attain the Rapture. It did not seem likely, but such ignorant superstition is not totally incompatible with believing in Christ. Some superstitions are absolutely forbidden - astrology, for example, and Darwinism. But the

flat-earth nonsense is nowhere forbidden that I know of. If there were any flat-earthers with us, how did they feel to look back and see that the earth was round as a tennis ball?

(Or would the Lord in His mercy let them perceive it as flat? Can mortal man ever understand the viewpoint of God?)

It seemed to take about two hours to reach the neighborhood of Heaven. I say 'seemed to' because it might have been any length of time; there was no human scale by which to judge. In the same vein, the total period of the Rapture seemed to me to be about two days... but I had reason later to believe that it may have been seven years - at least by some reckoning. Measures of time and space become very slippery when one lacks mundane clocks and' yardsticks.

As we approached the Holy City our guides had us slow down and then make a sightseeing sweep around it before going in through one of the gates.

This was no minor jaunt. New Jerusalem (Heaven, the Holy City, Jehovah's capital) is laid out foursquare like the District of Columbia, but it is enormously bigger, one thousand three hundred and twenty miles on a side, five thousand two hundred and eighty miles around it, and that gives an area of one million seven hundred and forty-two thousand four hundred square miles.

This makes cities like Los Angeles or New York look tiny.

In solemn truth the Holy City covers an area more than six times as big as all of Texas! At that, it's crowded. But are, expecting only a few more after us.

It's a walled city, of course, and the walls are two hundred and sixteen feet high, and the same wide. The tops of the wall are laid out in twelve traffic lanes - and no guard rails. Scary. There are twelve gates, three in each wall, the famous pearly gates (and they are); these normally stand open - will not be closed, we were told, until the Final Battle.

The wall itself is of iridescent jasper but it has a dozen footings in horizontal layers that are more dazzling than the wall itself: sapphire, chalcedony, emerald, sardonyx, chrysolite, beryl, topaz, amethyst - I may have missed some. New Jerusalem is so dazzling everywhere that it is hard for a human to grasp it - impossible to grasp it all at once.

When we finished the sweep around the Holy City, our cohort's flightmaster herded us, into a holding pattern like dirigibles at O'Hare and kept us there until he received a signal that one of the gates was free - and I was hoping to get at least a glimpse of Saint Peter, but no - his office is at the main gate, the Gate of Judah, whereas we went in by the opposite gate, named for Asher, where we were registered by angels deputized to act for Peter.

Even with all twelve gates in use and dozens of Peter deputized clerks at each gate and examination waived (since we all were caught up at the Rapture - guaranteed saved) we had to queue up quite a long time just to get registered in, receive temporary identifications, temporary bunking assignments, temporary eating assignments -

('Eating'?)

Yes, I thought so, too, and I asked the angel who booked me about it. He/she looked down at me. 'Refection is optional. It will do you no harm never to eat and not to drink. But many creatures and some angels 'enjoy eating, especially in company. Suit yourself.'

'Thank you. Now about this berthing assignment. It's a single. I want a double, for me and my wife. I want -'

'Your former wife, you mean. In Heaven there is no marriage or giving in marriage. I

'Huh? Does that mean we can't live together?'

'Not at all. But both of you must apply, together, at Berthing General. See the office of Exchange and Readjustments. Be sure, each of you, to fetch your berthing chit.'

'But that's the problem! I got separated from my wife. How do I find her?'

'Not part of my M.0.S. Ask at the information booth. In the meantime use your singles apartment in Gideon Barracks.'

'But -´

He (she?) sighed. 'Do you realize how many thousands of hours I have been sitting here? Can you guess how complex it is to provide for millions of creatures at once, some alive and never dead, others newly incarnate? This is the first time we have had to install plumbing for the use of fleshly creatures - do you even suspect how inconvenient that is? I say that, when you install plumbing, you are bound to get creatures who need plumbing - and there goes the neighborhood! But did they listen to me? Hunh! Pick up your papers, go through that door, draw a robe and a halo - harps are optional. Follow the green line to Gideon Barracks.'

'No!'

I saw his (her) lips move; she (he) may have been praying. 'Do you think it is proper to run around Heaven, looking the way you do? You are quite untidy. We aren't used to living-flesh creatures. Uh... Elijah is the last I recall, and I must say that you look almost as disreputable as he did. In addition to discarding those rags and putting on a decent white robe, if I were you I would do something about that dandruff.'

'Look,' I said tensely. 'Nobody knows the trouble I've Seen, nobody knows but Jesus. While you've been sitting around in a clean white robe and a halo in an immaculate City with streets of gold, I've been struggling with Satan himself. I know I don't look very neat but I didn't choose to come here looking this way. Uh - Where can I pick up some razor blades?'

'Some what?'

'Razor blades. Gillette double-edged blades, or that type. For this.' I took out my razor, showed it to her/him. 'Preferably stainless steel.'

'Here everything is stainless. But what in Heaven is that?'

'A safety razor. To take this untidy beard off my face.'

'Really? If the Lord in His wisdom had intended His male creations not to have hair on their faces, He would have created them with smooth features. Here, let me dispose of that.' He-she reached for my razor.

I snatched it back. 'Oh, no, you don't! Where's that information booth?'

'To your left. Six hundred and sixty miles. ' She-he sniffed.

I turned away, fuming. Bureaucrats. Even in Heaven. I didn't ask any more questions there because I spotted a veiled meaning. Six hundred and sixty miles is a figure I recalled from our sightseeing tour: the exact distance from a center gate (such as Asher Gate, where I was) to the center of Heaven, i.e., the Great White Throne of the Lord God Jehovah, God the Father. He (she) was telling me, none too gently, that if I did not like the way I was being treated, I could take my complaints to the Boss - i.e., 'Get lost!'

I picked up my papers and backed away, looked around for someone else in authority.

The one who organized this gymkhana, Gabriel or Michael or whoever, had anticipated that there would be lots of creatures milling around, each with problems that didn't quite fit the system. So scattered through the crowd were cherubs. Don't think of Michelangelo or Luca della Robbia; these were not bambinos with dimpled knees; these were people a foot and a half taller than we newcomers were like angels but with little cherub wings and each with a badge reading 'STAFF'.

Or maybe they were indeed angels; I never have been sure about the distinction between angels and cherubim and seraphim and such; the Book seems to take it for granted that you know such things without being told. The papists list nine different classes of angels! By whose authority? It's not in the Book!

I found only two distinct classes in Heaven: angels and humans. Angels consider themselves superior and do not hesitate to let you know it. And they are indeed superior

in position and power and privilege. Saved souls are second-class citizens - The notion, one that runs all through Protestant Christianity and maybe among papists as well, that, a saved soul will practically sit in the lap of God well, it ain't so! So you're saved and you go to Heaven you find at once that you are the new boy on the block, junior to everybody else.

A saved soul in Heaven occupies much the position of a blackamoor in Arkansas. And it's the angels who really rub your nose in it.

I never met an angel I liked.

And this derives from how they feel about us. Let´s look at it from the angelic viewpoint. According to Daniel there are a hundred million angels in Heaven. Before the Resurrection and the Rapture, Heaven must have been uncrowded, a nice place to live and offering a good career - some messenger work, some choral work, an occasional ritual. Fm sure the angels liked it.

Along comes a great swarm of immigrants, many millions (billions?), and some of them aren't even house-broken. All of them require nursemaiding. After untold eons of beatific living, suddenly the angels find themselves working overtime, running what amounts to an enormous orphan asylum. It's not surprising that they don't like us.

Still... I don't like them, either. Snobs!

I found a cherub (angel?) with a STAFF badge and asked the location of the nearest information booth. He hooked a thumb over his shoulder. 'Straight down the boulevard Six thousand furlongs. It's by the River that flows from the Throne.'

I stared down the boulevard. At that distance God the Father on His Throne looked like a rising sun. I said, 'Six thousand furlongs is over six hundred miles. Isn't there one in this neighborhood?'

'Creature, it was done that way on purpose. If we had placed a booth on each corner, every one of them would have crowds around it, asking silly questions. This way, a creature won't make the effort unless it has a truly important question to ask.'

Logical. And infuriating. I found that I was again possessed by unheavenly thoughts. I had always pictured Heaven as a place of guaranteed beatitude - not filled with the same silly frustration so common on earth. I counted to ten in English, then in Latin. 'Uh, what's the flight time? Is there a speed limit?'

´Surely you don't think that you would be allowed to fly there, do you?'

'Why not? Just earlier today I flew here and then all the way around the City.'

'You just thought you did. Actually, your cohort leader did it all. Creature, let me give you a tip that may keep you out of trouble. When you get your wings - if you ever do get wings - don't try to fly over the Holy City, You'll be grounded so fast your teeth will ache. And your wings stripped away.'

'Why?'

'Because you don't rate it, that's why. You Johnny-Come-Latelies show up here and think you own the place. You'd carve your initials in the Throne if you could get that close to it. So let me put you wise. Heaven operates by just one rule: R.H.I.P. Do you know what that means?'

'No,' I answered, not entirely truthfully.

'Listen and learn. You can forget the Ten Commandments. Here only two or three of them still apply and you'll find you can't break those even if you were to' try. The golden rule everywhere in Heaven is: Rank Hath Its Privileges. At this eon you are a raw recruit in. the Armies of the Lord, with the lowest rank possible. And the least privilege. In fact the only privilege I can think of that you rate is being here, just being here. The Lord in His infinite wisdom has decreed that you qualify to enter here. But that's all. Behave yourself and you will be allowed to stay. Now as to the traffic rule you asked about. Angels and nobody else fly over the Holy City. When on duty or during ceremonies. That does not mean you. Not even if you get wings. If you do. I emphasize this because a surprising number of you creatures have arrived here with the delusion that going to Heaven automatically changes a creature into an angel. It doesn't. It can't. Creatures never become angels. A saint sometimes. Though seldom. An angel, never.'

I counted ten backwards, in'Hebrew. 'If you don't mind, I'm still trying to reach that information booth. Since I am not allowed to fly, how do I get there?'

'Why didn't you say that in the first place? Take the bus.'

Sometime later I was seated in a chariot bus of the Holy City Transit Lines and we were rumbling toward the distant Throne. The chariot was open, boat-shaped, with an entrance in the rear, and had no discernible motive power and no teamster or conductor. It stopped at marked chariot stops and that is how I got aboard. I had not yet found out how to get it to stop.

Apparently everyone in the City rode these buses (except V.I.P.s who rated private chariots). Even angels. Most passengers were humans dressed in conventional white and wearing ordinary halos. But a few were humans in costumes of various eras and topped off by larger and fancier halos. I noticed that angels were fairly polite to these creatures in the fancier halos. But they did not sit with them. Angels sat in the front of the car, these privileged humans in the middle part, and the common herd (including yours truly) in the rear.

I asked one of my own sort how long it took to reach the Throne.

'I don't know,' I was answered. 'I don't go nearly that far.

This soul seemed to be female, middle-aged, and friendly, so I used a commonplace opener. 'That's a Kansas accent, is it not?'

She smiled. 'I don't think so. I was born in Flanders.'

'Really? You speak very fluent English.'

She shook her head gently. 'I never learned English.'

'But -´

'I know. You are a recent arrival. Heaven is not affected by the Curse of Babel. Here the Confusion of Tongues took place... and a good thing for me as I, have no skill in languages - a handicap before I died. Not so here. 'She looked at me with interest. 'May I ask where you died? And when?'

'I did not die,' I told her. 'I was snatched up alive in the Rapture.'

Her eyes widened. 'Oh, how thrilling! You must be very holy.

'I don't think so. Why do you say that?'

'The Rapture will come - came? - without warning. Or so I was taught.'

'That's right.'

'Then with no warning, and no time for confession, and no priest to help you... you were ready! As free from sin as Mother Mary. You came straight to Heaven. You must be holy. ' She added, 'That's what I thought when I saw your costume, since saints - martyrs especially - often dress as they did on earth. I saw too that you are not wearing your saint's halo. But that's your privilege. 'She looked suddenly shy. 'Will you bless me? Or do I presume?'.

'Sister, I am not a saint.'

'You will not grant me your blessing?'

(Dear Jesus, how did this happen to me?) 'Having heard say that, to the best of my knowledge and belief, I am ,not a saint, do you still want me to bless you?'

'If you will... holy father.'

'Very well. Turn and lower your head a little - ´Instead she turned fully and dropped to her knees. I put a hand on her head. 'By authority vested in me as an ordained minister of the one true catholic church of Jesus Christ the Son of God the Father and by the power of the Holy. Ghost, I bless this our sister in Christ. So mote it be!'

I heard echoes of 'Amen!' around us; we had had quite an audience. I felt embarrassed. I was not certain, and still am not certain, that I had any authority to bestow blessings in Heaven itself. But the dear woman had asked for it and I could not refuse.

She looked up at me with tears in her eyes. 'I knew it, I knew it!'

'Knew what?'

´That you are a saint. Now you are wearing it!'

I started to say, 'Wearing what?' when a minor miracle occurred. Suddenly I was looking at myself from outside: wrinkled and dirty khaki pants, Army-surplus shirt with dark sweat stains in the armpits and a bulge of razor in the left breast pocket, three-day growth of beard and in need of a haircut... and, floating over my head, a halo the size of a washtub, shining and sparkling!

'Up off your knees,' I said instead, 'and let's stop being conspicuous.´

'Yes, father.' She added, 'You should not be seated back here.'

'I'll be the judge of that, daughter. Now tell me about yourself.' I looked around as she resumed her seat, and happened to catch the eye of an angel seated all alone, up forward. (S)he gestured to me to come forward.

I had had my fill of the arrogance of angels; at first I ignored the signal. But everyone I was noticing and pretending not to, and my awe-struck companion was whispering urgently, 'Most holy person, the angelic one wants to see you.´

I gave in - partly because it was easier, partly because I wanted to ask the angel a question. I got up and went to the front of the bus.

'You wanted me?'

'Yes. You know the rules. Angels in front, creatures in back, saints in the middle. If you sit in back with creatures, you are teaching them bad habits. How can you expect to maintain your saintly privileges if you ignore protocol? Don't let it happen again.'

I thought of several retorts, all unheavenly. Instead I said, 'May I ask a question?'

`Ask.'

'How much longer until this bus reaches the River from the Throne?'

'Why do you ask? You have all eternity before you.´

'Does that mean that you don't know? Or that you won't tell?'

'Go sit down in your proper section. At once!'

I went back and tried to find a seat in the after space. But my fellow creatures had closed in and left me no room. No one said anything and they would not meet my eye, but it was evident that no one would aid me in defying the authority of an angel. I sighed and sat down in the mid-section, in lonely splendor, as I was the only saint aboard. If I was a saint.

I don't know how long it took to reach the Throne. In Heaven the light doesn't vary and the weather does not change and I had no watch. It was simply a boringly long time. Boring? Yes. A gorgeous palace constructed of precious stone is a wonderful sight to see. A dozen palaces constructed of jewels can be a dozen wonderful sights, each different from the other. But a hundred miles of such palaces will put you to sleep, and six hundred miles of the same is deadly dull. I began to long for a used-car lot, or a dump, or (best yet) a stretch of green and open countryside.

New Jerusalem is a city of perfect beauty; I am witness to that. But that long ride taught me the uses of ugliness.

I never have found out who designed the Holy City.

That God authorized the design and construction is axiomatic. But the Bible does not name the architect(s), or the builder(s). Freemasons speak of 'the Great Architect, meaning Jehovah - but you won't find that in the Bible. Just once I asked an angel, 'Who designed this city?' He didn't sneer at my ignorance, he didn't scold me- he appeared to be unable to conceive it as a question. But it remains a question to me: Did God create (design and build) the Holy City Himself, right down to the smallest jewel? Or did He farm it out to subordinates?

Whoever designed it, the Holy City has a major shortcoming, in my opinion - and never mind telling me that my presumption in passing judgment on God's design is blasphemous. It is a lack, a serious one.

It lacks a public library.

One reference librarian who had devoted her life to answering any and all questions, trivial and weighty, would be more use in Heaven than another cohort of arrogant angels. There must be plenty of such ladies in Heaven, as it takes a saintly disposition and the patience of Job to be a reference librarian and to stick with it for forty years. But to carry on their vocation they would need books and files and so forth, the tools of their

profession. Given a chance, I'm sure they would set up the files and catalog the books but where would they get the books? Heaven does not seem to have a book-publishing industry.

Heaven doesn't have industry. Heaven doesn't have an economy. When Jehovah decreed, after the expulsion from Eden, that we descendants of Adam must gain our bread by the sweat of our faces, He created economics and it has been operating ever since for ca. 6000 years.

But not in Heaven.

In Heaven He giveth us, our daily bread without the sweat of our faces. In truth you don't need daily bread; you can't starve, you won't even get hungry enough to matter - just hungry enough to enjoy eating if you want to amuse yourself by stopping in any of the many restaurants, refectories, and lunchrooms.' The best hamburger I ever ate in my life was in a small lunchroom off the Square of Throne on the banks of the River. But again, 'm ahead of my story.

Another lack, not as serious for my taste but serious, is gardens. No gardens, I mean, except the grove of the Tree of Life by the River near the Throne, and a few, a very few, private gardens here and there. I think I know why this is so and, if I am right, it may be self-correcting. Until we reached Heaven (the people of the Rapture and the resurrected dead-in-Christ) almost all citizens of the Holy City were angels. The million or so exceptions were martyrs for the faith, children of Israel so holy that they made it without ever having personally experienced Christ (i.e., mostly before 30 AD), and another group from unenlightened lands - souls virtuous without ever knowing of Christ. So 99 percent of the citizens of the Holy City were angels.

Angels don't seem to be interested in horticulture. I suppose that figures - I can't imagine an angel down on his/her knees, mulching the soil around a plant. They just aren't the dirty-fingernails sort needed to grow prize roses.

Now that angels are outnumbered by humans by at least ten to one I expect that we will see gardens - gardens, garden clubs, lectures on how to prepare the soil, and so forth. All the endless ritual of the devoted gardener. Now they will have time for it.

Most humans in Heaven do what they want to do without the pressure of need. That nice lady (Suzanne) who wanted my blessing was a lacemaker in Flanders; now she teaches it in a school open to anyone who is interested. I have gathered a strong impression that, for most humans, the real problem of an eternity of bliss is how to pass the time. (Query: Could there be something to this reincarnation idea so prevalent in other religions but so firmly rejected by Christianity? Could a saved soul be rewarded, eventually, by being shoved back into the conflict? If not on earth, then elsewhere? I've got to lay hands on a Bible and do some searching. To my utter amazement, here in Heaven Bibles seem to be awfully hard to come by.)

'The information booth was right where it was supposed to be, close to the bank of the River of the Water of Life that flow's from the Throne of God and winds through the grove of the Tree of Life. The Throne soars up from the, middle of the grove but you can't see it very well that close to its base. It's like looking up at the tallest of New York skyscrapers while standing on the sidewalk by it. Only more so. And of course you can't see the Face of God; you are, looking straight up one thousand four hundred and- forty cubits. What you see is, the Radiance... and you can feel the Presence.

The information booth was as crowded as that cherub had led me to expect. The inquirers weren't queued up; they were massed a hundred deep around it. I looked at that swarm and wondered how long it would take me to work my way up to the counter. Was it possible to work my way there other than by the nastiest of bargain-day tactics, stepping on corns, jabbing with elbows, all the things that make department stores so uninviting to males?

I stood back and looked at that mob and tried to figure out how to cope. Or was there some other way to locate Margrethe without stepping on corns?

I was still standing there when a STAFF cherub came up to me. 'Holy one, are you trying to reach the information booth?'

'I surely am!'

'Come with me. Stay close behind me.' He was carrying a long staff of the sort used by riot police. 'Gangway! Make way for a saint! Step lively there!' In nothing flat I reached the counter of the booth. I don't think anyone was injured but there must have been some hurt feelings. I don't approve of that sort of action; I think that treatment should be even-handed for everyone. But, where R.H.I.P. is the rule, being even a corporal is vastly better than being a private.

I turned to thank the cherub; he was gone. A voice said, 'Holy one, what do you want?' An angel back of the counter was looking down at me.

I explained that I wanted to locate my wife. He Drummed on the counter. 'That's not ordinarily a service we supply. There is a co-op run by creatures called "Find Your Friends and Loved Ones" for that sort of thing.'

'Where is it?'

'Near Asher Gate.'

'What? I just came from there. That's where I registered in.'

'You should have asked the angel who checked you in. You registered recently?'

'Quite recently; I was caught up in the Rapture. I did ask the angel who registered me... and got a fast brushoff. He, she, uh, that angel told me to come here.'

`Mrf. Lemme see your papers.'

I passed them over. The angel studied them, slowly and carefully, then called to another angel, who had stopped servicing the mob to watch. 'Tirl! Look at this.'

So the second angel looked over my papers, nodded sagely, handed them---back - glanced at me, shook his head sadly.' 'Is something wrong?' I asked.

'No. Holy one, you had the misfortune to be serviced,' if that is the word, by an angel who wouldn't help his closest friend, if he had one, which he doesn't. But I'm a bit surprised that she was so abrupt with a saint.'

'I wasn't wearing this halo at the time.'

'That accounts for it. You drew it later?'

'I did not draw it. I acquired it miraculously, on the way from Asher Gate to here.'

`I see. Holy one, it's your privilege to put Khromitycinel on the report. On the other hand I could use the farspeaker to place your inquiry for you.'

'I think that would be better.'

'So do I. In the long run. For you. If I make my meaning clear.'

'You do.'

'But before I call that co-op let's check with Saint Peter's office and make sure your wife has arrived. When did she die?'

'She didn't die. She was caught up in the Rapture, too.'

'So? That means a quick and easy check, no searching of old rolls. Full name, age, sex if any, place and date of we don't need that. Full name first.'

Margrethe Svensdatter Gunderson.'

'Better spell that.'

I did so.

'That's enough for now. If Peter's clerks can spell. You can't wait here; we don't have a waiting room. There is a little restaurant right opposite us - see the sign?'

I turned and looked. ' "The Holy Cow"?´

'That's it. Good cooking, if you eat. Wait there; I'll send word to you.'

'Thank you!'

'You are welcome -'She glanced again at my papers, then handed them back. '- Saint Alexander Hergensheimer.'

The Holy Cow was the most homey sight I had seen since the Rapture: a small, neat lunchroom that would have looked at home in Saint Louis or Denver. I went inside. A tall blackamoor whose chef's hat stuck up through his halo was at the grill with his back to me. I sat down at the counter, cleared my throat.

'Just hold your horses.' He finished what he was doing, turned around. 'What can I - Well, well! Holy man, what can I fix for you? Name it, just name it!'

'Luke! It's good to see you!' '

He stared at me. 'We have met?'

'Don't you remember me? I used to work for you. Ron's Grill, Nogales. Alec. Your dishwasher.'

He stared a-gain, gave a deep sigh. 'You sure fooled me. Saint Alec.'

'Just "Alec" to my friends. It's some sort of administrative mistake, Luke. When they catch it, I'll trade this Sunday job for an ordinary halo.'

'Beg to doubt - Saint Alec. They don't make mistakes in Heaven. Hey! Albert! Take the counter. My friend, Saint Alec and I are going to sit in the dining room. Albert's my sous-chef.'

I shook hands with a fat little man who was almost a parody of what a French chef should look like. He was wearing a Cordon Bleu hat as well as his halo. Luke and I went through a side door into a small dining room, sat down at a table. We were joined by a waitress and I got another shock.

Luke, said, 'Hazel, I want you to meet an old friend of mine, Saint Alec - he and I used to be business associates. Hazel is hostess of The Holy Cow.'

'I was Luke's dishwasher,' I told her. 'Hazel, it's wonderful to see you!' I stood up, started to shake hands, then changed my mind for the better, put my arms around her.

She smiled up at me, did not seem surprised. 'Welcome, Alec! "Saint Alec" now, I see. I'm not surprised.'

'I am. It's a mistake.'

'Mistakes don't happen in Heaven. Where is Margie? Still alive on earth?'

'No.' I explained how we had been separated. 'So I'm waiting here for word.'

'You'll find her.' She kissed me, quickly and warmly which reminded me of my four-day beard. I seated her, sat down with my friends. 'You are sure to find her quickly, because that is a promise we were made and is precisely carried out. Reunion in Heaven with friends and loved ones. "We shall gather by the River -" and sure enough, there it is, right outside the door. Steve Saint Alec, you, do remember Steve? He was with you and Margie when we met.'

'How could I forget him? He bought us dinner and gave us a gold eagle when we were stony. Do I remember Steve!'

'I'm happy to hear you say that... because Steve credits you with converting him - born-again conversion - and getting him into Heaven. You see, Steve was killed on the Plain of Meggido, and I was killed in the War, too, uh, that was about five years after we met you

'Five years?'

'Yes. I was killed fairly early in the War; Steve lasted clear to Armageddon-'

'Hazel... it hasn't been much over a month since Steve bought us that dinner at Rimrock.'

'That's logical. You were caught up in the Rapture and that touched off the War. So you spent the War years up in the air, and that makes it work out that Steve and I are here first even though you left first. You can discuss it with Steve; he'll be in soon. By the way, I'm his concubine now his wife, except that here there is no marrying or giving in marriage. Anyhow Steve went back into the Corps when war broke out and got up to captain before they killed him. His outfit landed at Haifa and Steve died battling for the Lord at the height of Armageddon. I'm real proud of him.'

'You should be. Luke, did the War get you, too?'

Luke gave a big grin. 'No, sir, Saint Alec. They hanged me.'

'You're joking!'

`No joke. They hanged me fair and square. You remember when you quit me?'

'I didn't quit you. A miracle intervened. That's how I met Hazel. And Steve.'

'Well... you know more about miracles than I do. Anyway, we had to get another dishwasher right fast, and we had to take a Chicano. Man, he was a real bad ass, that one. Pulled a knife on me. That was his mistake. Pull a knife on a cook in his own kitchen? He cut me up some, I cut him up proper. Jury mostly his cousins, I think. Anyhow the D.A. said it was time for an example. But it was all right. I had been baptized long before that; the prison chaplain helped me be born again. I spoke a sermon standing on that trap with the noose around my neck. Then I said, "You can do it now! Send me to Jesus! Hallelujah!" And they did. Happiest day of my lifel'

Albert stuck his head in. 'Saint Alec, there's an angel here looking for you.'

'Coming!'

The angel was waiting just outside for the reason that he was taller than the doorway and not inclined to stoop. 'You are Saint Alexander Hergensheimer?'

'That's me.'

"Your inquiry concerning a creature designated Margrethe Svensdatter Gunderson: The report reads: Subject was not caught up in the Rapture, and has not shown up in any subsequent draft. This creature, Margrethe Svensdatter Gunderson, is not in Heaven and is not expected. That is all.'

Chapter 23

I cry unto Thee, and Thou dost not hear me:
I stand up, and Thou regardest me not.
Job 30:20

SO OF course I eventually wound up in, Saint Peter's office at the Gate of Judah - having chased all over Heaven first. On Hazel's advice I went back to the Gate of Asher and looked up that co-op 'Find Your Friends and Loved Ones'.

'Saint Alec, angels don't pass out misinformation and the records they consult are accurate. But they may not have consulted the right records, and, in my opinion, they would not have searched as deeply as you would search if you were doing it yourself - angels being angels. Margie might be listed under her maiden name.'

'That was what I gave them!'

'Oh. I thought you asked them to search for "Margie Graham"?'

'No. Should I go back and ask them to?'

'No. Not yet. And when you do - if you must don' ask again at this information booth. Go directly to St Peter's office. There you'll get personal attention from other humans, not from angels.'

'That's for me!'

'Yes. But try first at "Find Your Friends and Loved Ones". That's not a bureaucracy; it's a co-op made up of volunteers, all of them people who really care. That's how Steve found me after he was killed. He didn't know my family name and I hadn't used it for years, anyhow. He didn't know my date and place of death. But a little old lady at "Find Your Friends" kept right on searching females named Hazel until Steve said "Bingo!" If he had just checked at the main personnel office - Saint Peter's - they would have reported "insufficient data, no identification".'

She smiled and went on, 'But the co-op uses imagination. They brought Luke and me together, even though we hadn't even met before we died. After I got tired of loafing I decided that I wanted to manage a little restaurant it's a wonderful way to meet people and make friends. So I asked the co-op and they set their computers on "cook", and after a lot of false starts and wrong numbers it got Luke and me together and we formed a partnership and set up The Holy Cow. A similar search got us Albert.'

Hazel, like Katie Farnsworth, is the sort of woman who heals just by her presence. But she's practical about it, too, like my own treasure. She volunteered to launder-my dirty clothes and lent me a robe of Steve's to wear while my clothes dried. She found me a mirror and a cake of soap; at long last I tackled a five-day (seven-year?) beard. My one razor blade was closer to being a saw than a knife by then, but a half hour's patient honing using the inside -of a glass tumbler (a trick I had learned in -seminary) restored it to temporary usefulness.

But now I needed a proper shave even though I had shaved - tried to shave - a couple of hours ago. I did not know how long I had been on this hunt but I did know that I had shaved four times... with cold water, twice without soap, and once by Braille - no mirror. Plumbing had indeed been installed for us fleshly types... but not up to American Standard quality. Hardly surprising, since angels don't use plumbing and don't need it, and since the overwhelming majority of the fleshly ones have little or no experience with inside plumbing.

The people who man the co-op were as helpful as Hazel said they would be (and I don't think my fancy halo had anything to do with it) but nothing they turned up gave me any clue to Margrethe, even though they patiently ran computer searches on every combination I could think of.

I thanked them and blessed them and headed for Judah Gate, all the way across Heaven, thirteen hundred and twenty miles away. I stopped only once, at the Square of, the Throne, for one of Luke's heaven burgers and a cup of the best coffee in New Jerusalem,

and some encouraging words from Hazel. I continued my weary search feeling, much bucked up.

The Heavenly Bureau of Personnel occupies two colossal palaces on the right as you come through the gate. The first and smaller is for BC admissions; the second is for admissions since then, and included Peter's office suite, on the second floor. I went straight there.

A big double door read SAINT PETER - Walk In, so I did. But not into his office; here was a waiting room big enough for Grand Central Station. I pushed through a turnstile that operated by pulling a ticket out of a slot, and a mechanical voice said, 'Thank you. Please sit down and wait to be called.'

My ticket read '2013' and the place was crowded; I decided, as I looked around for an empty seat, that I was going to need another shave before my number would come up.

I was still looking when a nun bustled up to me, and ducked a knee in a quick curtsy. 'Holy one, may I serve you?' I did not know enough about the costumes worn by Roman Catholic orders to know what sisterhood she belonged to, but she was dressed in what I would call 'typical' - long black dress down to her ankles and to her wrists, white, starched deal over her chest and around her neck and. covering her ears, a black headdress covering everything else and giving her the silhouette of a sphinx, a big rosary hanging around her neck... and an ageless, serene face topped off by a lopsided pince-nez. And, of course, her halo.

The thing that impressed me most was that she was here. She was the first proof I had seen that papists can be saved. In seminary we used to argue about that in late-night bull sessions... although, the official position Of my Church was that certainly they could be saved, as long as they believed, as we did and were born again Jesus. I made a mental note to ask her when and how she had been born again - it would be, I was sure, an inspiring story.

I said, 'Why, thank you, Sister! That's most kind of you. Yes, you can help me - that is, I hope you can. I'm Alexander Hergensheimer and I'm trying to find my wife. This is the place to inquire, is it not? I'm new here.'

'Yes, Saint Alexander, this is the place. But you did want to see Saint Peter, did you not?'

'I'd like to pay my respects. If he's not too busy.'

'I'm sure he will want to see you, Holy Father. Let me tell my Sister Superior.' She picked up the cross on her rosary, appeared to whisper into it, then looked up. 'Is that spelled H,E,R,G,E,N,S,H,E,I,M,E,R, Saint Alexander?'

'Correct, Sister.'

She spoke again to the rosary. Then she added, to me, 'Sister Marie Charles is secretary, to Saint Peter. I'm her assistant and general gopher.' She smiled. 'Sister Mary Rose.'

'It is good to meet you, Sister Mary Rose. Tell me about yourself. What order are you?'

'I'm a Dominican, Holy Father. In life I was a hospital administrator in Frankfurt, Germany. Here, where there is no longer a need for nursing, I do this work because I like to mingle with people. Will you come with me, sir?'

The crowd parted like the waters of the Red Sea, whether in deference to the nun or to my gaudy halo, I cannot say. Maybe both. She took me to an unmarked side door and straight in, and I found myself in the office of her boss, Sister Marie Charles. She was a tall nun, as tall as I am, and handsome - or 'beautiful' may be more accurate. She seemed younger than her assistant... but how is one to tell with nuns? She was seated at a big flattop desk piled high and with an old-style Underwood typewriter swung out from its side. She got up quickly, faced me, and dropped that odd curtsy.

`Welcome, Saint Alexander! We are honored by your call. Saint Peter will be with you soon. Will you be seated? May we offer you refreshment? A glass of wine? A Coca-Cola?'

'Say, I would really enjoy a Coca-Cola! I haven't had, one since I was on earth.'

'A Coca-Cola, right away.' She smiled. 'I'll tell you a secret. Coca-Cola is Saint Peter's one vice. So we always have them on ice here.'

A voice came out of the air above her desk - a strong' resonant baritone of the sort I think of as a good preaching voice - a voice like that of 'Bible' Barnaby, may his name be blessed. 'I heard that, Charlie. Let him have his Coke in here; I'm free now.'

'Were you eavesdropping again, Boss?'

'None of your lip, girl. And fetch one for me, too.'

Saint Peter was up and striding toward the door with his hand out as I was ushered in. I was taught in church history that he was believed to have been about ninety when he died. Or when he was executed (crucified?) by the, Romans, if he was. (Preaching has always been a chancy vocation, but in the days of Peter's ministry it was as chancy as that of a Marine platoon sergeant.)

This man looked to be a strong and hearty sixty, or possibly seventy - an outdoor man, with a permanent' suntan and the scars that come from sun damage. His hair and beard were full and seemed never to have been cut, streaked with grey but not white, and (to my surprise) he appeared to have been at one time a redhead. He was well muscled and broad shouldered, and his hands were calloused, as I learned when he gripped my hand.

He was dressed in sandals, a brown robe of coarse wool, a halo like mine, and a dinky little skullcap resting in the middle of that fine head of hair.

I liked him on sight.

He led me around to a comfortable chair near his desk chair, seated me before he sat back down. Sister Marie Charles was right behind us with two Cokes on a tray, in the familiar pinchwaist bottles and with not-so-familiar (I had not seen them for years) Coke 'glasses with the tulip tops and the registered trademark. I wondered who had the franchise in Heaven and how such business matters were handled.

He said, 'Thanks, Charlie. Hold all calls.'

'Even?'

'Don't be silly. Beat it.' He turned to me. 'Alexander, I try to greet each newly arrived saint personally. But somehow I missed you.'

'I arrived in the middle of a mob, Saint Peter. Those from the Rapture. And not at this gate. Asher Gate.'

'That accounts for it. A busy day, that one, and we still aren't straightened out. But a Saint should be escorted to the main gate... by twenty-four angels and two trumpets. I'll have to look into this.'

'To be frank, Saint Peter,' I blurted out, 'I don't think I am a saint. But I can't get this fancy halo off.'

I He shook his head. 'You are one, all right. And don't let your misgivings gnaw at you; no saint ever knows that he is one, he has to be told. It is a holy paradox that anyone who thinks he is a saint never is. Why, when I arrived here and they handed me the keys and told me I was in charge, I didn't believe it. I thought the Master was playing a joke on me in return for a couple of japes I pulled on Him back in the days when we were barnstorming around the Sea of Galilee. Oh, no! He meant it. Rabbi Simon bar Jona the old fisherman was gone and I've been' Saint Peter ever since. As you are Saint Alexander, like it or not. And you will like it, in time.'

He tapped on a fat file folder lying on his desk. 'I've been reading your record. There is no doubt about your sanctity. Once I reviewed your record I recalled your trial. Devil's Advocate against you was Thomas Aquinas; he came up to me afterwards and told me that his attack was pro forma, as there had never been, any doubt in his mind but what you qualified. Tell me, that first miracle, ordeal by fire - did your faith ever waver?'

'I guess it did. I got a blister out of it.'

Saint Peter snorted. 'One lonely blister! And you don't think you qualify. Son, if Saint Joan had had faith as firm as yours, she would have quenched the fire that martyred her'. I know of -´

Sister Marie Charles' voice announced, 'Saint Alexander's wife is here.'

'Show her in!' To me he added, 'Tell you later'.'

I hardly heard him; my heart was bursting.

The door opened; in walked Abigail.

I don't know how to describe the next few minutes. Heartbreaking disappointment coupled with embarrassment summarizes it.

Abigail looked at me and said severely, 'Alexander, what in the world are you doing wearing that preposterous halo? Take it off instantly!'

Saint Peter rumbled, 'Daughter, you are not "in the world"; you are in my private office. You will not speak to Saint Alexander that way.'

Abigail turned her gaze to him, and sniffed. 'You call him a saint? And didn't your mother teach you to stand up for ladies? Or are saints exempt from such niceties?'

'I do stand up, for ladies. Daughter, you will address me, with respect. And you will speak to your husband with the respect a wife owes her husband.'

'He's not my husband!'

'Eh?' Saint Peter looked from her to me, then back. 'Explain yourself.'

'Jesus said, "For in the resurrection they neither marry, nor are given in marriage, but are as the angels." So there! And He said it again in Mark twelve, twenty-five.'

'Yes,' agreed Saint Peter, 'I heard Him say it. To the Sadducees. By that rule you are no longer a wife.'

'Yes! Hallelujah! Years I have waited to be rid of that clod - be rid of him without sinning.'

'I'm unsure about the latter. But not being a wife does not relieve you of the duty to speak politely to this saint who was once your husband.' Peter turned again to me. 'Do You wish her to stay?'

'Me? No, no! There's been a mistake.'

`So it appears. Daughter, you may go.'

'Now you just wait! Having come all this way, I have things I've been planning to tell you. Perfectly scandalous goings-on I have seen around here. Why, without the slightest sense of decency -

`Daughter, I dismissed you. Will you walk out on your own feet? Or shall I send for two stalwart angels and have you thrown out?'

'Why, the very idea! I was just going to say -´

'You are not going to say!'

'Well, I certainly have as much right to speak my mind as anyone!'

'Not in this office. Sister Marie Charles!'

'Yes, sir!'

'Do you still remember the judo they taught you when you were working with the Detroit police?'

'I do!'

'Get this yenta out of here.'

The tall nun grinned and dusted her hands together. What happened next happened so fast that I can't describe it. But Abigail left very suddenly.

Saint Peter sat back down, sighed, and picked up his Coke. 'That woman would try the patience of Job. How long were you married to her?´

'Uh, slightly over a thousand years.'

'I understand you. Why did you send for her?'

'I didn't. Well, I didn't intend to.' I started to try to explain.

He stopped me. 'Of course! Why didn't you say that you were searching for your concubine? You misled Mary Rose. Yes, I know whom you mean: the zaftig shiksa who runs all through the latter part of your dossier. Very nice girl, she seemed to me. You are looking for her?'

'Yes, surely. The day of the Trump and the Shout we were snatched up together. But that whirlwind, a real Kansas twister, was so violent that we were separated.'

'You inquired about her before. An inquiry relayed from the information booth by the River.'

'That´s right.'

'Alexander, that inquiry is the last entry in your file. I can order the search repeated... but I can tell you ahead of time that it will be useful only to assure you. The answer, will be the same: She is not here.'

He stood up and came around to put a hand on my shoulder. 'This is a tragedy that I have seen repeated endlessly. A loving couple, confident of eternity together: One comes here, the other does not. What can I do? I wish I could do something. I can't.'

'Saint Peter, there has been a mistake!'

He did not answer.

'Listen to me! I know! She and I were side by side, kneeling at the chancel rail, praying... and just before the Trump and the Shout the Holy Ghost descended on us and we were in a perfect state of grace and were snatched up together. Ask Him! Ask Him! He will listen to you.'

Peter sighed again. 'He will listen to anyone, in any of His Aspects. But I will inquire.' He picked up a telephone instrument so old-fashioned that Alexander Graham Bell could have assembled it. 'Charlie, give me the Spook. Okay, I'll wait. Hi! This is Pete, down at the main gate. Heard any new ones? No? Neither have I Listen, I got a problem. Please run Yourself back to the day of the Shout and the Trump, when You, in Your aspect as Junior, caught up alive all those incarnate souls who were at that moment in a state of grace. Place Yourself outside a wide place in the road called Lowell, Kansas - that's in North America - and at a tent meeting, a revival under canvas. Are You there? Now, at least a few femtoseconds before the Trump, it is alleged by one Alexander Hergensheimer, now canonized, that You descended on him and is beloved concubine Margrethe. She is described as about three and a half cubits tall, blonde, freckled, eighty mina - Oh, You do? Oh. Too late, huh? I was afraid of that. I'll tell him.'

I interrupted, whispering urgently, 'Ask Him where she is!´

'Boss, Saint Alexander is in agony. He wants to know where she is. Yes, I'll tell him.' Saint Peter hung up. 'Not in Heaven, not on earth. You can figure out the answer yourself And I'm sorry.-

I, must state that Saint Peter was endlessly patient with me. He assured me that I could talk with any One of the Trinity... but reminded me that, in consulting the Holy Ghost we had consulted all of Them. Peter had fresh searches made of the Rapture list, the graves-opened list, and of the running list of all arrivals since then - while telling me that no

computer search could conceivably deny the infallible answers of God Himself speaking as the Holy Ghost... which I understood and agreed with, while welcoming new searches.

I said, 'But how about on earth? Could she be alive somewhere there? Maybe in Copenhagen?'

Peter answered, 'Alexander, He is as omniscient on earth as He is in Heaven. Can't you see that?'

I gave a deep sigh. 'I see that. I've been dodging the obvious. All right, how do I get from here to Hell?'

'Alec! Don't talk that way!'

'The hell I won't talk that way! Peter, an eternity here without her is not an eternity of bliss; it is an eternity of boredom and loneliness and grief. You think this damned gaudy halo means anything to me when I know - yes, you´ve convinced me! - that my beloved is burning in the Pit? I didn't ask much. Just to be allowed to live with her. I was willing to wash dishes forever if only I could see her smile, hear her voice, touch her hand! She's been shipped on a technicality and you know it! Snobbish, bad-tempered angels get to live here without ever doing one, lick to deserve it. But my Marga, who is a real angel if one ever lived, gets turned down and sent to Hell to everlasting torture on a childish twist in the rules. You can tell the Father and His sweet-talking Son and that sneaky Ghost, that they can take their gaudy Holy City and shove it! If Margrethe has to be in Hell, that's where I want to be!'

Peter, was saying, 'Forgive him, Father; he's feverish, with grief - he doesn't know what he is saying.'

I quieted down a little. 'Saint Peter, I know exactly what I am saying. I don't want to stay here. My beloved is in Hell, so that is where I want to be. Where I must be.'

'Alec, you'll get over this.'

'What you don't see is that I don't want to get over this. I want to be with my love and share her fate. You tell me she's in Hell -´

'No, I told you that it is certain that she is not in Heaven and not on earth.'

'Is there a fourth place? Limbo, or some such?'

'Limbo is a myth. I know of no fourth place.'

'Then I want to leave here at once and look all over Hell for her. How?'

Peter shrugged.

'Damn it, don't give me a run-around! That's all I've been handed since the day I walked through the fire - one run-around after another. Am I a prisoner?.

'No.

'Then tell me how to go to Hell.'

'Very well. You can't wear that halo to Hell. They wouldn't let you in.´

'I never wanted it. Let's go!´

'Not long after that I stood on the threshold of Judah Gate, escorted there by two angels. Peter did not say good-bye to me; I guess he was disgusted. I was sorry about that; I liked him very much. But I could not make him understand that Heaven was not Heaven to me without Margrethe.

I paused at the brink. 'I want you to take one message back to Saint Peter -´

They ignored me, grabbed me from both sides, and tossed me over.

I fell.

And fell.

Chapter 24

Oh that I knew where I might find him!
that I might come even to his seat!
I would order my cause before him,
and fill my mouth with arguments.
Job 23:3-4

AND STILL I fell.

For modern man one of the most troubling aspects of eternity lies in getting used to the slippery quality of time. With no clocks and no calendars and lacking even the alternation of day and night, or the phases of the moon, or the pageant of seasons, duration becomes subjective and 'What time is it?' is a matter of opinion, not of fact.

I think I fell longer than twenty minutes; I do not think that I fell as long as twenty years.

But don't risk any money on it either way.

There was nothing to see but the insides of my eyeballs. There was not even the Holy City receding in the distance.

Early on, I tried to entertain myself by reliving in memory the happiest times in my life - and found that happy memories made me sad. So I thought about sad occasions and that was worse. Presently I slept. Or I think I did. How can you tell when you are totally cut off from sensation? I remember reading about one of those busybody 'scientists' building something he called a 'sensory deprivation chamber'. What he achieved was a thrill-packed three-ring circus compared with the meager delights of falling from Heaven to Hell.

My first intimation that I was getting close to Hell was the stink. Rotten eggs. H2S Hydrogen, sulfide. The stench of burning brimstone.

You don't die from it, but small comfort that may be, since those who encounter this stench are dead when they whiff it. Or usually so; I am not dead. They tell of other live ones in history and literature - Dante, Aeneas, Ulysses, Orpheus. But weren't all of those cases fiction? Am I the first living man to go to Hell, despite all those yarns?

If so, how long will I stay alive and healthy? Just long enough to hit the flaming surface of the Lake? - there to go psst! and become a rapidly disappearing grease spot? Had my Quixotic gesture been just a wee bit hasty? A rapidly disappearing grease spot could not be much help to Margrethe; perhaps I should have stayed in Heaven and bargained. A saint in full-dress halo picketing the Lord in front of His Throne might have caused Him to reverse His decision... since His decision it had to be, L. G. Jehovah being omnipotent.

A bit late to think of it, boy! You can see the red glow on the clouds now. That must be boiling lava down there. How far down? Not far enough! How fast am I falling? Too fast!

I can see what the famous Pit is now: the caldera of an incredibly enormous volcano. Its walls are all around me, miles high, yet the flames and the molten lava are still a long, long way below me. But coming up fast! How are your miracle-working powers today, Saint Alec? You coped with that other fire pit with only a blister; think you can handle this one? The difference is only a matter of degree.

'With patience and plenty of saliva the elephant de-flowered the mosquito.' That job was just a matter of degree, too; can you do as well as that elephant? Saint Alec, that was not a saintly thought; what has happened to your piety? Maybe it's the influence of this wicked neighborhood. Oh, well, you no longer need worry about sinful thoughts; it is too late to worry about any sin. You no longer risk going to Hell for your sins; you are now entering Hell - you are now in Hell. In roughly three seconds you are going to be a grease spot. 'Bye, Marga my own! I'm sorry I never managed to get you that hot fudge sundae. Satan, receive my soul; Jesus is a fink -

They netted me like a butterfly. But a butterfly would have needed asbestos wings to halve been saved the way I was saved; my pants were smoldering. They threw a bucket of water over me when they had me on the bank.

'Just sign this chit.'

'What chit?' I sat up and looked out at the flames.

'This chit.' Somebody was holding a piece of paper under my nose and offering me a pen.

'Why do you want me to sign it?'

'You have to sign it. It acknowledges that we saved you from the burning Pit.'

`I want to see a lawyer. Meanwhile I won't sign anything.' The last time I was in this fix it got me tied down, washing dishes, for four months. This time I couldn't spare four months; I had to get busy at once, searching for Margrethe.

'Don't be stupid. Do you want to be tossed back into that stuff?'

A second voice said, 'Knock it off, Bert. Try telling him the truth.'

('Bert?' I thought that first voice was familiar!) 'Bert! What are you doing here?' My boyhood chum, the one who shared my taste in literature. Verne and Wells and Tom Swift - 'garbage', Brother Draper had called it.

The owner of the first voice looked at me more closely. 'Well, I'll be a buggered baboon. Stinky Hergensheimer!'

'In the flesh.'

'I'll be eternally damned. You haven't changed much. Rod, get the net spread again; this is the wrong fish. Stinky, you've cost us a nice fee; we were fishing for Saint Alexander.'

`Saint who?'

'Alexander. A Mick holy ^an who decided to go slumming. Why he didn't come in by a Seven-Forty-Seven God only knows; we don't usually get carriage trade here at the Pit. As may be, you've probably cost us a major client by getting in the way just when this saint was expected and you ought to pay us for that.'

"How about that fin you owe me?'

`Boy, do you have a memory! That's outlawed by the statute of limitations.'

'Show it, to me in Hell's law books. Anyhow, limitations can't apply; you never answered me when I tried to collect. So it's five bucks, compounded quarterly at six percent, for... how many years?'

'Discuss it later, Stinky. I've got to keep an eye out for this saint.'

'Bert.'

'Later, Stinky.'

'Do you recall my right name? The one my folks gave me?'

'Why, I suppose - Alexander! Oh no, Stinky, it can´t be! Why, you almost flunked out of that backwoods Bible college, after you did flunk out of Rolla.' His face expressed pain and disbelief. 'Life can't be that unfair.'

"The Lord moves in mysterious ways, His wonders to perform." Meet Saint Alexander, Bert. Would you like me to bless you? In lieu of a fee, I mean.

´We insist on cash. Anyhow, I don't believe it.'

'I believe it,' the second man, the one Bert had called 'Rod', put in. 'And I'd like your blessing, father; I've never, been blessed by a saint before. Bert, there's nothing showing on the distant warning screen and, as you know, only one ballistic arrival was projected for this watch so this has to be, Saint Alexander.'

Can't be. Rod, I know this character. If he's a saint, I'm a pink monkey -' There was a bolt of lightning but of a cloudless sky. When Bert picked himself up, his clothes hung on him loosely. But he did not need them, as he was now covered with pink fur.

The monkey looked up at me indignantly. 'Is that any way to treat an old pal?'

'Bert, I didn't do it. Or at least I did not intend to do it. Around me, miracles just happen; I don't do them on, purpose.´

`Excuses. If I had rabies, I'd bite you.'

Twenty minutes later, we were in a booth at a lakefront bar, drinking beer and waiting for a thaumaturgist reputed, to be expert in shapes and appearances. I had been telling them why I was in Hell. 'So I've got to find her. First I've got to check the Pit; if she's in there it's really urgent.'

'She's not in there,' said Rod.

'Huh? I hope you can prove that. How do you know?'

'There's never anyone in the Pit. That's a lot of malarkey thought up to keep the peasants in line. Sure, a lot of the hoi polloi arrive ballistically, and a percentage of them used to fall into the Pit until the manager set up this safety watch Bert and I are on. But falling into the Pit doesn't do a soul any harm... aside from scaring him silly. It burns, of course, so he comes shooting out even faster than he went in. But he's not damaged. A fire bath just cleans up his allergies, if any.'

(Nobody in the Pit! No 'burning in Hell's fires throughout eternity what a shock that was going to be to Brother 'Bible' Barnaby and a lot of others whose stock in trade depended on Hell's fires. But I was not here to discuss eschatology with two lost souls; I was here to find Marga.) 'This "manager" you speak of. Is. that a euphemism for the Old One?'

The monkey - Bert, I mean - squeaked, 'If you mean Satan, say so!'

'That's who I mean.'

'Naw. Mr Ashmedai is city manager; Satan never does any work. Why should he? He owns this planet.'

This is a planet?'

'You think maybe it's a comet? Look out that window. Prettiest planet in this galaxy. And the best kept. No snakes. No cockroaches. No chiggers. No poison ivy. No tax collectors. No rats. No cancer. No preachers. Only two lawyers.'

'You make it sound like Heaven.'

"Never been there. You say you just came from there; you tell us.'

'Well... Heaven's okay, if you're an angel. It's not a planet; it's an artificial place, like Manhattan. I'm not here to plug Heaven; I'm here to find Marga.' Should I try to see this Mr Ashmedai? Or would I be better off going directly to Satan?'

The monkey tried to whistle, produced a mouselike squeak. Rod shook his head. 'Saint Alec, you keep surprising me. I've been here since 1588, whenever that was, and I've never laid eyes on the Owner. I've never thought of trying to see him. I wouldn't know how to start. Bert, what do you think?'

'I think I need another beer.'

'Where do you put it? Since that lightning hit you, you aren't big enough to put away one can of beer, let alone, three.'

'Don't be nosy and call the waiter.'

The quality of discourse did not improve, as every question I asked turned up more questions and no answers. The thaumaturgist arrived and bore off Bert on her shoulder, Bert chattering angrily over her fee - she wanted half of all his assets and demanded a contract signed in blood before she would get to work. He wanted her to accept ten percent and wanted me to pay half of that.

When they left, Rod said it was time we found a pad for me; he would take me to a good hotel nearby.

I pointed out that I was without funds. 'No problem, Saint Alec. All our immigrants arrive broke, but American Express and Diners Club and Chase Manhattan vie for the chance to extend first credit, knowing that whoever signs an immigrant first has a strong chance of keeping his business forever and six weeks past.'

'Don't they lose a lot, extending unsecured credit that way?'

'No. Here in Hell, everybody pays up, eventually. Bear in mind that here a deadbeat can't even die to avoid his debts, So just sign in, and charge everything to room service until you set it up with one of the big three.'

The Sans Souci Sheraton is on the Plaza, straight across from the Palace. Rod took me to the desk; I signed a registration card and asked for a single with bath. The desk clerk, a small female devil with cute little horns, looked at the card I had signed and her eyes widened. 'Uh, Saint Alexander?'

'I'm Alexander Hergensheimer, just as I registered. I am sometimes called "Saint Alexander", but I don't think the title applies here.'

She was busy not listening while she thumbed through her reservations. 'Here it is, Your Holiness - the reservation for your suite.'

'Huh? I don't need a suite. And I probably couldn't pay for it.'

'Compliments of the management, sir.'

Chapter 25

And he had seven hundred wives, princesses, and
three hundred concubines: and his wives turned
away his heart.
Kings 11:3

Shall mortal man be more just than God? shall a
man be more pure than his maker?
Job 4:17

COMPLIMENTS OF the management!!' How? Nobody knew I was coming here until just before I was chucked out Judah Gate. Did Saint Peter have a hotline to Hell? Was there some sort of under-the-table cooperation with the Adversary? Brother, how that thought would scandalize the Board of Bishops back home!

Even more so, why? But I had no time to ponder it; the little devil - imp? - on duty slapped the desk bell and shouted, 'Front!'

The bellhop who responded was human, and a very attractive youngster. I wondered how he had died so young and why he had missed going to Heaven. But it was none of my business so I did not ask. I did notice one thing: While he reminded me in his appearance of a Philip Morris ad, when he walked in front of me, leading me to my suite, I was reminded of another cigarette ad - 'So round, so firm, so fully packed.' That lad had the sort of bottom that Hindu lechers write poetry about - could it have been that, sort of sin that caused him to wind up here?

I forgot the matter when I entered that suite.

The living room was too small for football but large enough for tennis. The furnishings would be described as `adequate' by any well-heeled oriental potentate. The alcove called `the buttery' had a cold-table collation laid out ample for forty guests, with a few hot dishes on the end - roast pig with apple in mouth, baked peacock with feathers restored, a few such tidbits. Facing this display was a bar that was well stocked - the chief purser of Konge Knut would have been impressed by it.

My bellhop ('Call me "Pat".') was moving around, opening drapes, adjusting windows, changing - thermostats, checking towels - all of those things bellhops do to encourage a liberal tip - while I was trying to figure out how to' tip. Was there a way to charge a tip for a bellhop to room service? Well, I would have to ask Pat. I went through the bedroom (a Sabbath Day's journey!) and tracked Pat down in the bath.

Undressing. Trousers at half-mast and about to be, kicked-off. Bare bottom facing me. I called out, 'Here, lad! No! Thanks for the thought... but boys are not my weakness.'

'The'y're my weakness,' Pat answered, 'but I'm not a boy'- and turned around, facing me.

Pat was right;_she was emphatically not a boy.

I stood there with my chin hanging down, while she took off the rest of her clothes, dumped them into a hamper. 'There!' she said, smiling. 'Am I glad to get out of that monkey suit! I've been wearing it since you were reported as spotted on radar. What happened, Saint Alec? Did you stop for a beer?'

'Well... yes. Two or three beers.'

'I thought so. Bert Kinsey had the watch, did he not? If the Lake ever overflows and covers this part of town with lava, Bert will stop for a beer before he runs for it. Say, what are you looking troubled about? Did I say something wrong?'

'Uh, Miss. You are very pretty - but I didn't ask for a girl, either.'

She stepped closer to me, looked up and patted my cheek. I could feel her breath on my chin, smell its sweetness. 'Saint Alec,' she said softly, 'I'm not trying to seduce you. Oh, I'm available, surely; a party girl, or two or three, comes with the territory for all our luxury suites. But I can do a lot more than make love to you.' She reached out, grabbed a bath towel, draped it around her hips. 'Ichiban bath girl, too. Prease, you rike me wark arong spine?' She dimpled and tossed the towel aside. 'I'm a number-one bartender, too. May I serve you a Danish zombie?'

'Who told you I liked Danish zombies?'

She had turned away to open a wardrobe. 'Every saint I've ever met liked them. Do you like this?' She held up a robe that appeared to be woven from a light blue fog.

'It's lovely. How' many saints have you met?'

'One. You. No, two, but the other one didn't drink zombies. I was just being flip. I'm sorry.'

'I'm not; it may be a clue. Did the information, come from a Danish girl? A blonde, about your size, about your weight, too. Margrethe, or Marga. Sometimes "Margie".'

'No. The scoop on you was in a printout I was given when I was assigned to you. This Margie - friend of yours?'

'Rather more than a friend. She's the reason I'm, in 'Hell. On Hell. In?'

'Either way. I'm fairly certain I've never met your Margie.'

'How does one go about finding another person here?. Directories? Voting lists? What?'

I've never seen either. Hell isn't very organized. It's an anarchy except for a touch of absolute monarchy on some points.'

'Do you suppose I could ask Satan?'

She looked dubious. 'There's no rule I know of that says you can't write a letter to His Infernal Majesty. But there is no rule that says He has to read it, either. I think it would be opened and read by some secretary; they wouldn't just dump, it into the Lake. I don't think they would.' She added, 'Shall we go into the den? Or are you ready for bed?'

`Uh, I think I need a bath. I know I do.'

'Good! I've never bathed a saint before. Fun!'

.'Oh, I don't need help. I can bathe myself.'

She bathed me.

She gave me a manicure. She gave me a pedicure, and tsk-tsked over my toenails - 'disgraceful' was the mildest term she used. She trimmed my hair. When I asked about razor blades, she showed me a cupboard in the bath stocking eight or nine different ways of coping with beards. 'I recommend that electric razor with the three rotary heads but, if you will trust me, you will learn' that I am quite competent with an old-fashioned straight razor.'

`I'm just looking for some Gillette blades.'

'I don't know that brand but there are brand-new razors here to match all these sorts of blades.'

'No, I want my own sort. Double-edged. Stainless.'

`Wilkinson Sword, double-edged lifetime?'

'Maybe. Oh, here we are! - "Gillette Stainless - Buy Two Packs, Get One Free."

`Good. I'll shave you.'

'No, I can do it.'

A half hour later I settled back against pillows in a bed for a king's honeymoon. I had a fine Dagwood in my belly a Danish zombie nightcap in my hand, and I was wearing brand new silk pajamas in maroon and old gold. Pat took off that translucent peignoir in blue smoke that she had worn except while bathing me and got in beside me, placed a drink for herself, Glenlivet on rocks, where she could reach it.

Q said to myself, 'Look, Marga, I didn't choose this. There is only this one bed. But it's a big bed and she's not trying to snuggle up. You wouldn't want me to kick her out, would you? She's a nice kid; I don't want to hurt her feelings. I'm tired; I'm going to drink this and go right to sleep.')

I didn't go right to sleep. Pat was not the least bit aggressive. But she was very cooperative. I found one part of my mind devoting itself intensely to what Pat had to offer. (plenty!) while another part of my mind was explaining to Marga that this wasn't anything serious; I don't love her; I love you and only you and always will... but I haven't been able to sleep and -

Then we slept for a while. Then we watched a living hollowgram that Pat said was 'X rated'. and I learned about things I had never heard of, but it turned out that, Pat had and could do them and could teach me, and this time I paused just long enough to tell Marga I was learning them for both of us, then I turned my whole attention to learning.

Then we napped again.

It was some time later that Pat reached out and touched my shoulder. 'Turn over this way, dear; let me see your face. I thought so. Alec, I know you're carrying the torch for your sweetheart; that's why I'm here: to make it easier. But I can't if you won't try. What did she do for you that I haven't done and can't do? Does she have that famous left-hand thread? Or what? Name it, describe it. I'll do it, or fake it, or send out for it. Please, dear. You're beginning to hurt my professional pride.'

'You're doing just fine.' I patted her hand.

'I wonder. More girls like me, maybe, in various flavors? Drown you in tits? - chocolate, vanilla, strawberry, tutti-frutti. "Tutti-frutti" -hmm... Maybe you'd like a San. Francisco sandwich? Or some other Sodom-and-Gomorrah fancy? I have a male friend from Berkeley who isn't all that male; he has a delicious, playful imagination; I've teamed with him many times. And he has on call others like him; he's a member of both Aleister Crowley Associates and Nero's Heroes and Zeroes. If you fancy a mob scene, Donny and I can cast it any way you like, and the Sans Souci will orchestrate it to suit your taste. Persian Garden, sorority house, Turkish harem, jungle drums with obscene rites, nunnery - "Nunnery" - did I tell you what I did before I died?'

`I wasn't certain had died.'

'Oh, certainly. I'm not an imp faking human; I'm human. You don't think anyone could get a job like this without human experience, do you? You have to be human right down to your toes to please a fellow human most; that stuff about the superior erotic ability of succubi is just their advertising. I was a nun, Alec, from adolescence to death, most of it spent teaching grammar and arithmetic to children who didn't want to learn.

'I soon learned that my vocation had not been a true one. What I did not know was how to get out of it. So I stayed. At about thirty I discovered just how miserably, awful my mistake had been; my sexuality reached maturity. Mean to say I got horny, Saint Alec, and stayed horny and got more so every year.

'The worst thing about my predicament was not that I was subjected to temptation but that I was not subjected to temptation - as I would have grabbed any opportunity. Fat chance! My confessor might have looked upon me with lust had I been a choir boy - as it was, he sometimes snored while I was confessing. Not surprising; my sins were dull, even to me.'

'What were your sins, Pat?'

'Carnal thoughts, most of which I did not confess. Not being forgiven, they went straight into Saint Peter's computers. Blasphemous adulterous fornication.'

Huh? Pat, you have quite an imagination.'

'Not especially, just horny. You probably don't know just how hemmed in a nun is. She is a bride of Christ; that's the contract. So even to think about the joys of sex makes of her an adulterous wife in the worst possible way.'

'Be darned. Pat, I recently met two nuns, in Heaven. Both seemed like hearty wenches, one especially. Yet there they were.'

'No inconsistency. Most nuns confess their sins regularly, are forgiven. Then they usually die in the bosom of their Family, with its chaplain or confessor at hand. So gets the last rites with her sins all forgiven and she's shipped straight to Heaven, pure as Ivory soap.

'But not me!' She grinned. 'I'm being punished for my sins and enjoying every wicked minute of it. I died a virgin in 1918, during the big flu epidemic, and so many died so fast that no priest got to me in time to grease me into Heaven. So I wound up here. At the end of my thousand year apprenticeship -´

'Hold it! You died in 1918?'

'Yes. The great Spanish Influenza epidemic. Born in 1878, died in 1918, on my fortieth birthday. Would you prefer for me to look forty? I can, you know.'

'No, you look just fine. Beautiful.'

'I wasn't sure. Some men - Lots of eager mother humpers around here and most of them never got a chance to do it while they were alive. It's one of my easier entertainments. I simply lead you into hypnotizing yourself, you supply the data. Then I look and sound exactly like your mother. Smell like her, too. Everything. Except that I am available to you in ways that your mother probably was not. -'

'Patty, I don't even like my mother!'

'Oh. Didn't that cause you trouble at Judgment Day?'

'No. That's not in the rules. It says in the Book that you must honor thy father and thy mother. Not one word about loving them. I honored her, all the full protocol. Kept her picture on my desk. A letter every week. Telephoned her on her birthday. Called on her in person as my duties permitted. Listened to her eternal bitching and to her poisonous gossip about her women friends. Never contradicted her. Paid her hospital bills. Followed

her to her grave. But weep I did not. She didn't like me and I didn't like her. Forget my mother! Pat, I asked you a question and you changed the subject.'

'Sorry, dear. Hey, look what I've found!'

'Don't change the subject again; just keep it warm in your hand while you answer my question. You said something about your "thousand-year apprenticeship".'

'Yes?'

'But you said also that you died in 1918. The Final Trump sounded in 1994 - I know; I was there. That's only seventy-six years later than your death. To me that Final Trump seems like only a few days ago, about a month, no more. I ran across something that seemed to make it seven years ago. But that still isn't over nine hundred, the best part of a thousand years. I'm not a spirit, I'm a living body. And I'm not Methuselah.' (Damn it, is Margrethe separated from me by a thousand years? This isn't fair!)

'Oh. Alec, in eternity a thousand years isn't any particular time; it is simply a long time. Long enough in this case to test whether or not I had both the talent and the disposition for the profession. That took quite a while because, while I was horny enough - and stayed that way; almost any guest can send me right through the ceiling as you noticed - I had arrived here knowing nothing about sex. Nothing! But I did learn and eventually Mary Magdalene gave me high marks and recommended me for permanent appointment.'

'Is she down here?'

'Oh. She's a visiting professor here; she's on the permanent faculty in Heaven.'

'What does she teach in Heaven?'

'I have no idea but it can't be what she teaches here. Or I don't think so. Hmm. Alec, she's one of the eternal greats; she makes her own rules. But this time you changed the subject. I was trying to tell you that I don't know how long my apprenticeship lasted because time is whatever you want it to be. How long have you and I been in bed together?'

'Uh, quite a while. But not long enough. I think it must be near midnight.'

'It's midnight if you want it to be midnight. Want me to get on top?'

The next morning, whenever that was, Pat and I had breakfast on the balcony looking out over the Lake. She was dressed in Marga's favorite costume, shorts tight and' short, and a halter with her breasts tending to overflow their bounds. I don't know when she got her clothes, but my pants and shirt had been cleaned and repaired in the night and my underwear and socks washed - in Hell there seem to be busy little imps everywhere. Besides, they could have driven a flock of geese through our bedroom the latter part of the night without disturbing me.

I looked at Pat across the table, appreciating her wholesome, girl-scout beauty, with her sprinkle of freckles across her nose, and thought how strange it was that I had ever confused sex with sin. Sex can involve sin, surely any human act can involve cruelty and injustice. But sex alone held no taint of sin. I had arrived here tired, confused, and unhappy - Pat had first made me happy, then caused me to rest, then left me happy this lovely morning.

Not any less anxious to find you, Marga my own - but in much better shape to push the search.

Would Margrethe see it that way?

Well, she had never seemed jealous of me.

How would I feel if she took a vacation, a sexual vacation, such as I had just enjoyed? That's a good question. Better think about it, boy - because sauce for the goose is not a horse of another color.

I looked out over the Lake, watched the smoke rise and the flames throwing red lights on the smoke... while right and left were green and sunny early summer sights, with snow-tipped mountains in the far distance. Pat -'

'Yes, dear?'

'The Lake bank can't be more than a furlong from here. But I can't smell any brimstone.'

'Notice how the breeze is blowing those banners? From anywhere around the Pit the wind blows toward the Pit. There it rises - incidentally slowing any soul arriving ballistically - and then on the far side of the globe there is a corresponding down draft into a cold pit where the hydrogen sulfide reacts with oxygen to form water and sulfur. The sulfur is deposited; the water comes out as water vapor, and returns. The two pits and this circulation control the weather here somewhat the way the moon acts as a control on earth weather. But gentler.'

I was never too hot at physical sciences... but that doesn't sound like the natural laws I learned in school.'

'Of course not. Different Boss here. He runs this planet to suit himself.'

Whatever I meant to answer got lost in a mellow gong played inside the suite. 'Shall I answer, sir?'

'Sure, but how dare you call me "sir"? Probably just room service. Huh?´

'No, dear Alec, room service will just come in when they see that we are through.' She got up, came back quickly with an envelope. 'Letter by Imperial courier. For 'You, dear.'

Me?' I accepted it gingerly, and opened it. An embossed seal at the top: the conventional Devil in red, horns, hooves, tail, pitchfork, and standing in flames. Below it:

Saint Alexander Hergensheimer
Sans Souci Sheraton
The Capital

Greetings:

In,response to your petition for an audience with His Infernal Majesty, Satan Mekratrig, Sovereign of Hell and His Colonies beyond, First of the Fallen Thrones, Prince of Lies, I have the honour to advise you that His Majesty requires you to substantiate your request by supplying to this office a full and frank memoir of your life. When this has been done, a decision on your request will be made.

May I add to His Majesty's message this advice: Any attempt to omit, slur over, or color in the belief that you will thereby please His Majesty will not please Him.

I have the honour to remain, Sincerely His,
(s) Beelzebub Secretary to His Majesty

I read it aloud to Pat. She blinked her eyes and whistled. 'Dear, you had better get busy!'

`I -´ The paper burst into flames; I dropped it into the dirty dishes. 'Does that always happen?'

'I don't know; it's' the first time I've ever seen a message from Number One. And the first time I've heard of anyone being even conditionally granted an audience.'

'Pat. I didn't ask for an audience. I planned to find out how to do so today. But I have not put in the request this answers.'

'Then you must put in the request at once. It wouldn't do to let it stay unbalanced. I'll help dear - I'll type it for you.'

The imps had been around again. In one corner of that vast living room I found that they had installed two desks, one a writing desk, with stacks of paper and a tumbler of pens, the other a more complex setup. Pat went straight to that one. 'Dear, it looks like I'm still assigned to you. I'm your secretary now. The latest and best Hewlett-Packard equipment - this is going to be fun! Or do you know how to type?'

'I'm, afraid not.'

'Okay, you write it longhand; I'll put it into shape... and correct your spelling and your grammar - you just whip it out. Now I know why I was picked for this job. Not my girlish smile, dear - my typing. Most of, my guild can't type. Many of them took up whoring because shorthand and typing were too much for them. Not me. Well, let's get to work; this job will run days, weeks, I don't know. Do you want me to continue to sleep here?'

'Do you want to leave?'

'Dear, that's the guest's decision. Has to be.'

'I don't want you to leave.' (Marga! Do please understand!)

'Good thing you said that, or I would have burst into tears. Besides, a good secretary should stick around in case something comes up in the night.'

'Pat, that was an old joke when I was in seminary.'

'It was an old joke before you were born, dear. Lets get to work.'

Visualize a calendar (that I don't have), its pages ripping off in the wind. This manuscript gets longer and longer but Pat insists that Prince Beelzebub's advice must be taken literally. Pat makes two copies of all that I write; one copy stacks up on my desk, the other copy disappears each night. Imps again. Pat tells me that I can assume that the vanishing copy is going to the Palace, at least as far as the Prince's desk... so what I am doing so far must be, satisfactory.

In less than two hours each day Pat types out and prints out what takes me all day to write. But I stopped driving so hard when a handwritten note came in:

You are working too hard. Enjoy yourself. Take her to the theater. Go on a picnic. Don't be so wound up.
(s)B.

The note self-destroyed, so I knew it was authentic. So I obeyed. With pleasure! But I am not going to describe the fleshpots of Satan's capital city.

This morning I finally reached that odd point where I was (am) writing now about what is going on now - and I hand my last page to Pat.

Less than an hour after I completed that line above, the gong sounded; Pat went out into the foyer, hurried back. She put her arms around me. 'This is good-bye, dear. I won't be seeing you again.'

'What!'

'Just that, dear. I was told this morning that my assignment was ending. And I have something I must tell you.

You will find, you are bound to learn, that I have been reporting on you daily. Please don't be angry about it. I am a professional, part of the Imperial security staff.'

'Be damned! So every kiss, every sigh, was a fake.'

'Not one was a fake! Not one! And, when you find your Marga, please tell her that I said she is lucky.'

'Sister Mary Patricia, is this another lie?'

'Saint Alexander, I have never lied to you. I've had to hold back some things until I was free to speak, that's all.' She took her arms from around me.

'Hey! Aren't you going to kiss me good-bye?'

'Alec, if you really want to kiss me, you won't ask.'

I didn't ask; I did it. If Pat was faking, she's a better actress than I think she is.

Two giant fallen angels were waiting to take me to the Palace. They were heavily armed and fully armored. Pat had packaged my manuscript and told me that I was expected to bring it with me. I started to leave - then stopped most suddenly. 'My razor!'

'Check your pocket, dear.'

'Huh? How'd it get there?'

'I knew you weren't coming back, dear.'

Again I learned that, in the company of angels, I could fly. Out my own balcony, around the Sans Souci Sheraton, across the Plaza, and we landed on a third-floor balcony of Satan's Palace. Then through several corridors, up a flight of stairs with lifts too high to be comfortable for humans. When I stumbled, one of my escorts caught me, then steadied me until we reached the top, but said nothing - neither ever said anything.

Great brass doors, as complex as the Ghiberti Doors, opened. I was shoved inside.

And saw Him.

A dark and smoky hall, armed guards down both sides, a high throne, a Being on it, at least twice as high as a man... a Being that was the conventional Devil such as YOU see on a Pluto bottle or a deviled-ham tin - tail and horns and fierce eyes, a pitchfork in lieu of scepter, a gleam from braziers glinting off Its dark red skin, sleek muscles. I had to

remind myself that the Prince of Lies could look any way He wished; this was probably to daunt me.

His voice rumbled out like a foghorn: 'Saint Alexander, you may approach Me.'

Chapter 26

I am a brother to dragons, and a companion to owls.
Job 30:29

I STARTED up the steps leading to the throne. Again, the lifts were too high, the treads too wide, and now I had no one to steady me. I was reduced to crawling up those confounded steps while Satan looked down at me with a sardonic smile. From all around came music from an unseen source, death music, vaguely Wagnerian but nothing I could identify. I think it was laced with that below-sonic frequency that makes dogs howl, horses run away, and causes men to think of flight or suicide.

That staircase kept stretching.

I didn't count the number of steps when I started up, but the flight looked to be about thirty steps, no more. When I had been crawling up it for several minutes, I realized that it looked as high as ever. The Prince of Lies!

So I stopped and waited.

Presently that rumbling voice said, 'Something wrong,' Saint Alexander?'

'Nothing wrong,' I answered, 'because You planned it this way. If You really want me to approach You, You will turn off the joke circuit. In the meantime there is no point in my trying to climb a treadmill.'

'You think I am doing that to you?'

'I know that You are. A game. Cat and mouse.'

'You are trying to make a fool of Me, in front of My gentlemen.'

'No, Your Majesty, I cannot make a fool of You. Only You can do that.'

`Ah so. Do you realize that I can blast you where you stand?'

'Your Majesty, I have been totally in Your power since I entered Your realm. What do You wish of me? Shall I continue trying to climb Your treadmill?'

'Yes.'

'So I did, and the staircase stopped stretching and the treads reduced to a comfortable seven inches. In seconds I reached the same level as Satan - the level of His cloven feet, that is. Which put me much too close to Him. Not only was His Presence terrifying - I had to keep a close grip on myself - but also He stank! Of filthy garbage cans, of rotting meat, of civet and skunk, of brimstone, of closed rooms and gas from diseased gut - all that and worse. I said to myself, Alex Hergensheimer, if you let Him prod you into throwing up and thereby kill any chance of getting you and Marga back together - just don't do it! Control yourself!

'The stool is for you,' said Satan. 'Be seated.'

Near the throne was a backless stool, low enough to destroy the dignity of anyone who sat on it. I sat.

Satan picked up a manuscript with a hand so big that the business-size sheets were like a deck of cards in His hand. 'I've read it. Not bad. A bit wordy but My editors will cut it - better that way than too brief. We will need an ending for it... from you or by a ghost. Probably the latter; it needs more impact than you give it. Tell me, have you ever thought of writing for a living? Rather than preaching?'

'I don't think I have the talent.'

'Talent shmalent. You should see the stuff that gets published. But you must hike up those sex scenes; today's cash customers demand such scenes wet. Never mind that now; I didn't call you here to discuss your literary style and its shortcomings. I called you in to make you an offer.'

I waited. So did He. After a bit He said, 'Aren't curious about the offer?'

'Your Majesty, certainly I am. But, if my race has learned one lesson, concerning You, it is that a human should be extremely cautious in bargaining with You.´

He I chuckled and the foundations shook. 'Poor 'little human, did you really think that I wanted to your scrawny soul?'

'I don't know what You want. But I'm not as smart as Dr Faust, and not nearly as smart as Daniel Webster. It behooves me to be cautious.'

'Oh, come! I don't want your soul. There's no for souls today; there are far too many of them and quality, is way down. I can pick them up at a nickel a bunch, like radishes. But I don't; I'm overstocked. No, Saint Alexander, I wish to retain your services. Your professional services.'

(I was suddenly alarmed. What's the catch? Alex, this is loaded! Look behind you! What's He after?) 'You need a dishwasher?'

He chuckled again, about 4.2 on the Richter scale. 'No, no, Saint Alexander! Your vocation - not the exigency to which you were temporarily reduced. I want to hire you as a gospel-shouter, a Bible-thumper. I want you to work the Jesus business, just as you were trained to. You won't have to raise money or pass the collection plate; the salary will be ample and the duties light. What do you say?'

'I say You are trying to trick me.'

'Now that's not very kind. No tricks, Saint Alexander. You will be free to preach exactly as you please, no restrictions. Your title will be personal chaplain to Me', and Primate of Hell. You can devote the rest of your time as little or as much as you wish - to saving lost souls... and there are plenty of those here. Salary to be negotiated but not less than the incumbent, Pope Alexander the Sixth, a notoriously greedy soul. You*won't be pinched, I promise you. Well? How say you?'

`(Who's crazy? The Devil, or me? Or am I having another of those nightmares that have been dogging me lately?) 'Your Majesty, You have not mentioned anything I want.´

'Ah so? Everybody needs money. You're broke; you can´t stay in that fancy suite another day without finding a job.´ He tapped the manuscript. 'This may bring in something, some day. Not soon. I'm not going to advance you anything on it; it might not sell. There, are too many I-Was-a-Prisoner-of-the-Evil-King extravaganzas on the market already these days.'

'Your Majesty, You have read my memoir; You know what I want.'

'Eh? Name it.'

'You know. My beloved. Margrethe Svensdatter Gunderson.'

He looked surprised. 'Didn't I send you a memo about that? She's not in Hell.'

I felt like a patient who has kept his chin up right up to the minute the biopsy comes back... and then can't accept the bad news. 'Are You sure?'

'Of course I am. Who do you think is in charge around here?'

(Prince of Liars, Prince of Lies!) 'How can You be sure? The way I hear it, nobody keeps track. A person could be in Hell for years and You would never know, one way or the other.'

'If that's the way you heard it, you heard wrong. Look, if you accept My offer, you'll be able to afford the best agents in history, from Sherlock Holmes to J. Edgar Hoover, to search all over Hell for you. But you'd be wasting your money; she is not in My jurisdiction. I'm telling you officially.'

I hesitated. Hell is a big place; I could search it* by myself throughout eternity and I might not find Marga. But plenty of money (how well I knew it!) made hard things easy and impossible things merely difficult.

However - Some of the things I had done as executive deputy of C.U.D. may have been a touch shoddy (meeting a budget isn't easy), but as an ordained minister I had never hired out to the Foe. Our Ancient Adversary. How can a minister of Christ be chaplain to Satan? Marga darling, I can't.

`No.´

'I can't hear you. Let Me sweeten the deal. Accept and I assign My prize female agent Sister Mary Patricia to you permanently. She'll be your slave - with the minor reservation that you must not sell her. However, you can rent her out, if you wish. How say you now.

'No.'

'Oh, come, come! You ask for one female; I offer you a better one. You can't pretend not to be satisfied with Pat; you've been shacked up with her for weeks. Shall I play back some of the sighs and moans?'

'You unspeakable cad!'

'Tut, tut, don't be rude to Me in My own house. You know and I know and we all know that there isn't any great difference between one female and another - save possibly in their cooking. I'm offering you one slightly, better in place of the one you mislaid. A year from now you'll thank Me. Two years from now you'll wonder why you ever fussed. Better accept, Saint Alexander; it is the best offer you can hope for, because, I tell you solemnly, that Danish zombie you ask for is not in Hell. Well?'

`No.´

Satan drummed on the arm of his throne and looked vexed. 'That's your last word?'

'Yes.'

`Suppose I offered you the chaplain job with your ice maiden thrown in?'

'You said she wasn't in Hell!'

'I did not say that I did not know where she is.'

'You can get her?'

'Answer My question. Will you accept service as My chaplain if the contract includes returning her to you?'

(Marga, Marga!) 'No.'

Satan said briskly, 'Sergeant General, dismiss the guard. You come with me.'

'Leftanright!... Hace! For´d!... Harp!'

Satan got down from His throne, went around behind it without further word to me. I had to hurry to catch up with His giant strides. Back of the throne was a long dark tunnel; I broke into a run when it seemed that He was getting away from me. His silhouette shrank rapidly against a dim light at the far end of the tunnel.

Then I almost stepped on His heels. He had not been receding as fast as I had thought; He had been changing in size. Or I had been. He and I were now much the same height. I skidded to a halt close behind Him as He reached doorway at the end of the tunnel. It was barely lighted by a red glow.

Satan touched something at the door; a white fan light came on above the door. He opened it and turned toward me. 'Come in, Alec.'

My heart skipped and I gasped for breath. Jerry! Jerry Farnsworth!'

Chapter 27

For in much wisdom is much grief; and he that
increaseth knowledge increaseth sorrow.
Ecclesiastes 1:18

And Job spake, and said, Let the day
perish wherein I was born, and the night
in which it was said, There is a man
child conceived.
Job 3:2-3

MY EYES dimmed, my head started to spin, my knees went rubbery. Jerry said sharply, 'Hey, none of that!' - grabbed me around the waist, dragged me inside, slammed the door.

He kept me from falling, then shook me and slapped my face. I shook my head and caught my breath. I heard Katie's voice: 'Let's get him in where he can lie down.'

My eyes focused. 'I'm okay. I was just taken all over queer for a second.' I looked around. We were in the foyer of the Farnsworth house.

'You went into syncope, that's What you did. Not surprising, you had a shock. Come into the family room.'

'All right. Hi, Katie. Gosh, it's good to see you.'

"You, too, dear.' She came closer, put her arm around me, and kissed me A learned again that, while Marga was my be-all, Katie was my kind of woman, too. And Pat. Marga, I wish you could have met Pat. (Marga!)

The family room seemed bare - unfinished furniture, no windows, no fireplace. Jerry said, `Katie, give us Remington number two', will you, please? I'm going to punch drinks.'

'Yes, dear.'

While they were busy, Sybil came tearing in, threw her arms around me (almost knocking me off my feet; the child is solid) and kissed me, a quick buss unlike Katie's benison. 'Mr Graham! You were terrific! I watched all of it. With Sister Pat. She thinks you're terrific, too.'

The left wall changed into a picture window looking out at mountains; the opposite wall now had a field-stone fireplace with a brisk fire that looked the same as the last time I saw it. The ceiling now was low; furniture and floor and fixtures were all as I recalled. 'Remington number two.' Katie turned away from the controls. 'Sybil, let him be, dear. Alec, off your feet. Rest.'

'All right.' I sat down. 'Uh... is this Texas? Or is it Hell?'

'Matter of opinion,' Jerry said.

'Is there a difference?' asked Sybil.

'Hard to tell,' said Katie. 'Don't worry about it now, Alec. I watched you, too, and I agree with the girls. I was proud of 'you.'

'He's a tough case,' Jerry put in. 'I didn't get a mite of change off him. Alec, you stubborn squarehead, I lost three bets on you.' Drinks appeared at our places. Jerry raised his glass. 'So here's to you.'

'To Alec!'

'Right!'

'Here's to me,' I agreed and took a big slug of Jack Daniel's. 'Jerry? You're not really -'

He grinned at me. The tailored ranch clothes faded; the western boots gave way to cloven hooves, horns stuck up through His hair, His skin glowed ruddy red and oily over heavy muscles; in His lap a preposterously huge phallus thrust rampantly skyward.

Katie said gently, 'I think You've convinced him, dear, and it's not one of Your prettier guises.'

Quickly the conventional Devil-faded and the equally convenntional Texas millionaire returned. 'That's better,' said Sybil. 'Daddy, why do You use that corny one?'

'It's an emphatic symbol. But what I'm wearing now is appropriate here. And you should be in Texas clothes, too.'

'Must I? I think Patty has Mr Graham used to skin by now.'

'Her skin, not your skin. Do it before I fry you for lunch.'

'Daddy, You're a fraud.' Sybil grew blue jeans and a halter without moving out of her chair. 'And I'm tired of being a teenager and see no reason to continue the charade. Saint Alec knows he was hoaxed.'

'Sybil, you talk too much.'

Dear One, she may be right,' Katie put in quietly.

Jerry shook His head. I sighed and said what I had to say. 'Yes, Jerry, I know I've been hoaxed. By those who I thought were my friends. And Marga's friends, too. You have been behind it all? Then who am I? Job?'

'Yes and no.'

`What does that mean... Your Majesty?'

'Alec, you need not call Me that. We met as friends. I hope we will stay friends.'

'How can we be friends? If I am Job. Your Majesty... where is my wife!'

'Alec, I wish I knew. Your memoir gave Me some clues and I have been following them. But I don't know as yet. You must be patient.'

'Uh... damn it, patient I'm not! What clues? Set me on the trail! Can't You see that I'm going out of my mind?'

'No, I can't, because you're not. I've just been grilling you. I pushed you to what should have been your breaking point, You can't be broken. However, you can't help Me search for her, not at this point. Alec, you've got to remember that you are human... and I am

not. I have powers that you can't imagine. I have limitations that you cannot imagine, too. So hold your peace and listen.

'I am your friend. If you don't believe that I am, you are free to leave My house and fend for yourself. There are jobs to be had down at the Lake front - if you can stand the reek of brimstone. You can search for Marga your own way. I don't owe you two anything as I am not behind your troubles. Believe Me.'

'Uh... I want to believe You.'

`Perhaps you'll believe Katie.'

Katie said, 'Alec, the Old One speaks sooth to you. He did not compass your troubles. Dear, did you ever bandage a wounded dog... and have the poor beastie, in its ignorance, gnaw away the dressing and damage itself still more?'

'Uh, yes.' (My dog Brownie. I was twelve. Brownie died.)

'Don't be like that poor dog. Trust Jerry. If He is to help you, He must do things beyond your ken. Would you try to direct a brain surgeon? Or attempt to hurry one?'

I smiled ruefully and reached out to pat her hand. 'I'll be good, Katie. I'll try.'

'Yes, do try, for Marga's sake.'

'I will. Uh, Jerry - stipulating that I'm merely human and can't understand everything, can You tell me anything?'

'What I can, I will. Where shall I start?'

'Well, when lasked if I was Job, You said, "Yes and no." What did You mean?'

'You are indeed another Job. With the original Job I was, I confess, one of the villains. This time I'm not.

'I'm not proud of the fashion in which I bedeviled Job. I'm not proud of the fashion in which I have so often let My Brother Yahweh maneuver Me into doing His dirty work - starting clear back with Mother Eve - and before that, in ways I cannot explain. And I've always been a sucker for a bet, any sort of a bet... and I'm not proud of that weakness, either.'

Jerry looked at the fire and brooded. 'Eve was a pretty one. As soon as I laid eyes on her I knew that Yahweh had finally cooked up a creation worthy of an Artist. Then I found out He had copied most of the design.'

'Huh? But -'

'Man, do not interrupt. Most of your errors - this MY brother actively encourages - arise from believing that your God is solitary and all powerful. In fact My Brother - and I, too, of course - is no more than a corporal in the T.O. of the Commander in Chief. And, I must add, the Great One I think of as the C-in-C, the Chairman, the Final Power, may be a mere private to some higher Power I cannot comprehend.

'Behind every mystery lies another mystery. Infinite recession. But you don't need to know final answers - if there be such - and neither do I. You want to know what happened to you... and to Margrethe. Yahweh came to Me and offered the same wager We had made over Job, asserting that He had a follower who was even more stubborn than Job. I turned Him down. That bet over Job had not been much fun; long before it was concluded I grew tired of clobbering the poor schmo. So this time I told My Brother to take His shell games elsewhere.

'It was not until I saw you and Marga trudging along Interstate Forty, naked as kittens and just as helpless, that I realized that Yahweh had found someone else with whom to play His nasty games. So I fetched you here and kept you for a week or so -'

'What? Just one night!'

'Don't quibble. Kept you long enough to wring you dry, then sent you on your way... armed with some tips on how to cope, yes, but in fact you were doing all right on your own. You're a tough son of a bitch, Alec, so much so that I looked up the bitch you are the son of. A bitch she is and tough she was and the combo of that vixen and your sweet and gentle sire produced a creature able to survive. So I let you alone.

'I was notified that you were coming here; My spies are everywhere. Half of My Brother's personal staff are double agents.'

'Saint Peter?' -

'Eh? No, not Pete. Pete is a good old Joe, the most perfect Christian in Heaven or on earth. Denied his Boss thrice, been making up for it ever since. Utterly delighted to be on nickname terms with his Master in all three of His conventional Aspects. I like Pete. If he ever has a falling out with My Brother, hes got a job here.

`Then you showed up in Hell. Do you recall an invitation I extended to you concerning Hell?'

('- look me up. I promise you some hellacious hospitality.-´) 'Yes!'

Did I deliver? Careful how you answer; Sister Pat is listening.'

'She's not listening,' Katie denied. 'Pat is a lady. Not much like some people. Darling, I can shorten this. What Alec wants to know is why he was persecuted, how he was

persecuted, and what he can do about it now. Meaning Marga. Alec, the why is simple; you were picked for the same reason that a pit bull is picked to go into the pit and be torn to ribbons: because Yahweh thought you could win. The how is equally simple. You guessed right when you thought you were paranoid. Paranoid but not crazy; were indeed conspiring against you. Every time you got close to the answer the razzle-dazzle started over again. That million dollars. Minor razzle-dazzle, that money existed only long enough to confuse you- I think that covers everything but what you can do. What you can do and all that you can do is to trust Jerry. He may fail - it's very dangerous - but He will try.'

I looked at Katie with increased respect, and some trepidation. She had referred to matters I had never mentioned to Jerry. 'Katie? Are you human? Or are you, uh, a fallen throne or something like that?'

She giggled. 'First time anyone has suspected that. I'm human, all too human, Alec love. Furthermore I'm no stranger to you; you know lots about me.'

'I do?'

'Think back. April of the year one thousand four hundred and forty-six years before the birth of Yeshua of Nazareth.'

'I should be able to identify it that way? I'm sorry; I can't.'

'Then try it this way: exactly forty years after the exodus from Egypt of the Children of Israel.'

The conquest of Canaan.

'Oh, pshaw! Try the Book of Joshua,, chapter What's my name, what's my trade; was I mother, wife, or, maid?'

(One of the best-known stories in the Bible. Her? I'm talking to her?) 'Uh . . . Rahab?'

'The harlot of Jericho. That's me. I hid General Joshua's spies, in my house... and thereby saved my parents and my brothers and sisters from the massacre. Now tell me I'm "well preserved".'

Sybil snickered. 'Go ahead. I dare you.'

'Gosh, Katie, you're well preserved! That's been over three thousand years, about thirty-four hundred. Hardly a wrinkle. Well, not many.'

"Not many"! No breakfast for you, young man!'

'Katie, you're beautiful and you know it. You and Margrethe tie for first place.'

'Have you looked at me?' demanded Sybil. 'I have my fans. Anyhow, Mom is over four thousand years old. A hag.'

'No, Sybil, the parting of the Red Sea was in fourteen-ninety-one BC. Add that to the date of the Rapture, nineteen-ninety-four AD. Then add seven years -´

"Alec.'

'Yes, Jerry?'

'Sybil is right. You just haven't noticed it. The thousand years of peace between Armageddon and the War in Heaven is half over. My Brother, wearing his Jesus hat, is now ruling on earth, and I am chained and cast down into the Pit for this entire thousand years.'

'You don't look chained from here. Could I have some more Jack Daniel's? - I'm confused.'

'I'm chained enough for this purpose; I've ceased "going to and fro in the earth and walking up and down in it. " Yaliweh has it all to Himself for the short time remaining before He destroys it. I won't bother His games.' Jerry shrugged. 'I declined to take part in Armageddon - I pointed out to Him that He had plenty of homegrown villains for it. Alec, with My Brother writing the scripts, I was always supposed to fight fiercely, like Harvard, then lose. It got monotonous. He's got me scheduled to take another dive at the end of this Millennium, to fulfill His prophecies. That "War in Heaven" He predicted in the so-called Book of Revelation. I'm not going to go. I've told My angels that they can form a foreign legion if they want to, but I'm sitting this one out. What's the point in a battle if the outcome is predetermined thousands of years before the whistle?'

He was watching me while He talked. He stopped abruptly. 'What's eating on you now?'

'Jerry... if it has been five hundred years since I lost Margrethe, it's hopeless. Isn't it?'

I 'Hey! Damnation, boy, haven't I told you not to try to understand things you can't understand? Would I be working on it if it were hopeless?'

Katie said, 'Jerry, I had Alec all quieted down... and You got him upset again.'

'I'm sorry.'

'You didn't mean to. Alec, Jerry is blunt, but He's right. For you, acting alone, the search was always hopeless. But with Jerry's help, you may find her. Not certain, but a hope worth pursuing. But time isn't relevant, five hundred years or five seconds. You don't have to understand it, but do please believe it.'

'All right. I will. Because otherwise there would be no hope, none.'

'But there is hope; all you have to do now is be patient.'

'I'll try. But I guess Marga and I will never have our soda fountain and lunch counter in Kansas.'

'Why not?' asked Jerry.

'Five centuries? They won't even speak the same language. There will be no one who knows a hot fudge sundae, from curried goat. Customs change.'

'So you reinvent the hot fudge sundae and make a killing. Don't be a pessimist, son.'

'Would you like one right now?' asked Sybil.

'I don't think he had better mix it with Jack Daniel's,' Jerry advised.

`Thanks, Sybil... but I´d probably cry in it. I associate it with Marga.´

So don't. Son, crying in your drink is bad enough crying into a hot fudge sundae is disgusting.'

'Do I get to finish the story of my scandalous youth, or won't anybody listen?'

I sai 'Katie, I'm listening. You made a deal with Joshua.'

'With his spies. Alec love, to anyone whose love and respect I want - you, I mean I need to explain something. Some people who know who I am - and even more who don't - class Rahab the harlot as a traitor. Treason in time of war, betrayal of fellow citizens, all that. I -´

'I never thought so, Katie. Jehovah had decreed that Jericho', would fall. Since it was ordained, you couldn't change it. What you did was to save your father and mother and the other kids.'

'Yes, but there is more to it, Alec. Patriotism is a fairly late concept. Back then, in the land of Canaan, any loyalty other than to one's family was personal loyalty to a chief of some sort - usually a successful warrior who dubbed himself "king". Alec, a whore doesn't - didn't - have that sort of loyalty.'

'So? Katie, in spite of studying at seminary I don't really have any sharp concept of what life was like back then. I keep trying to see it in terms of Kansas.'

'Not too different. A whore at that time and place was, either a temple prostitute, or a slave, or a self-owned private contractor. I was a free woman. Oh, yeah? Whores don't

fight city hall, they can't. An officer of the king comes in, he expects free tail and free drinks, same for the civic patrol - the cops. Same for any sort of politician. Alec, I tell you the truth; I gave away more tail than I sold - and often got a black eye as a bonus. No, I did not feel loyalty to Jericho; the Jews weren't any more cruel and they were much cleaner!'

`Katie, I don't know of any Protestant Christian who thinks anything bad of Rahab. But I have long wondered about one detail in her - your - story. Your house, was on the city wall?"

'Yes. It was inconvenient for housekeeping - carrying water up all those steps - but convenient for business, and the rent was low. It was the fact that I lived on the wall that let me save General Joshua's agents. Used a clothesline; they went out the window. Didn't get my clothesline back, either.'

'How high was that wall?'

'Hunh? Goodness, I don't know. It was high.'

'Twenty cubits.'

'Was it, Jerry?'

I was there. Professional interest. First use of nerve warfare in combination with sonic weapons.'

'The reason I ask about the height, Katie, is because it states in the Book that you gathered all your family into your house and stayed there, all during the siege.'

'We surely did, seven horrid days. My contract with the Israelite spies required it. My place was only two little rooms, not big enough for three adults and seven kids. We ran out of food, we ran out of water, the kids cried, my father complained. He happily took the money I brought in; with seven kids he needed it. But he resented having to stay under the same roof where I entertained johns, and he was especially bitter about having to use my bed. My workbench. But use it he did, and I slept on the floor.'

'Then your family were all in your house when the walls came tumbling down.'

'Yes, surely. We didn't dare leave it until they came for us, the two spies. My house was marked at the window with red string.'

'Katie, your house was on the wall, thirty feet up. The Bible says the wall fell down flat. Wasn't anyone hurt?'

She looked startled. 'Why, no.'

'Didn't the house collapse?'

'No. Alec, it's been a long time. But I remember the trumpets and the shout, and then the earthquake rumble as the city wall fell. But my house wasn't hurt.'

`Saint Alec!´

'Yes, Jerry?'

'You should know; you're a saint. A miracle. If Yahweh hadn't been throwing miracles right and left, the - Israelites would never have conquered the Canaanites. Here this ragged band of Okies comes into a rich country of walled cities - and they never lose a battle. Miracles. Ask the Canaanites. If you can find one. My Brother pretty regularly had them all put to the sword, except some few cases, where the young and pretty ones were saved as slaves.'

'But it was the Promised Land, Jerry, and they were His Chosen People.'

'They are indeed the Chosen People. Of course, being chosen by Yahweh is no great shakes. Do you know your Book well enough to know how many times He crossed them up? My Brother is a bit of a jerk.'

I had had too much Jack Daniel's and too many shocks. But Jerry's casual blasphemy triggered me. 'The Lord God Jehovah is a just God!'

'You never played marbles with Him. Alec, "justice" is not a divine concept; it is a human illusion. The very basis of the Judeo-Christian code is injustice, the scapegoat system. The scapegoat sacrifice runs all through the Old Testament, then it reaches its height in the New Testament with the notion of the Martyred Redeemer. How can justice possibly be served by loading your sins on another? Whether it be a lamb having its throat cut ritually, or a Messiah nailed to a cross and "dying for your sins". Somebody should tell all of Yahweh's followers, Jews and Christians, that there is no such thing as a free lunch.

'Or maybe there is. Being in that catatonic condition called "grace" at the exact moment of death - or at the final Trump - will get you into Heaven. Right? You got to Heaven that way, did you not?'

'That's correct. I hit it lucky. For I had racked up quite a list of sins before then.'

'A long and wicked life followed by five minutes of perfect grace gets you into Heaven. An equally long life of decent living and good works followed by one outburst Of taking the name o Lord in vain - then have a heart attack at that moment and be damned for eternity. Is that the system?'

I answered stiffly, 'If you read the words of the Bible literally, that is the system. But the Lord moves in mysterious -´

'Not mysterious to Me, bud: I've known Him too long. It's His world, His rules, His doing. His rules are exact and anyone can follow them and reap the reward. But "Just" they are not. What do you think of what He has done to you and your Marga? Is that justice?'

I took a deep breath. 'I've been trying to figure that out ever since Judgment Day... and Jack Daniel's isn't helping. No, I don't think it's what I signed up for.'

'Ah, but you did!'

'How?'

'My Brother Yahweh, wearing His Jesus face, said: "After this manner therefore pray ye: " Go ahead, say it.'

"Our Father, which art in heaven, Hallowed be thy name. Thy kingdom come. Thy will be done -´

'Stop! Stop right there. "Thy will be done -" No Muslim claiming to be a "slave of God" ever gave a more sweeping consent than that. In that prayer you invite Him to do His worst. The perfect masochist. That's the test of Job, boy. Job was treated unjustly in every way day after day for years - I know, I know, I was there; I did it - and My dear Brother stood by and let Me do it. Let Me? He urged Me, He connived in it, accessory ahead of the fact.

Now it's your turn. Your God did it to you. Will you curse Him? Or will you come wiggling back on your belly like a whipped dog?'

Chapter 28

Ask, and it shall be given you; seek, and ye shall find;
knock, and it shall be opened unto you.
Matthew 7:7

I WAS saved from answering that impossible question by an interruption - and was I glad! I suppose every man has doubts at times about God's justice. I admit that I had been much troubled lately and had been forced to remind myself again and again that God's ways are not man's ways, and that I could not expect always to understand the purposes of the Lord.

But I could not speak my misgivings aloud, and least of all to the Lord's Ancient Adversary. It was especially upsetting that Satan chose at this moment to have the shape and the voice of my only friend.

Debating with the Devil is a mug's game at best.

The interruption was mundane: a telephone ringing. Accidental interruption? I don't think Satan tolerates `accidents'. As may be, I did not have to answer the question that I could not answer.

Katie said, 'Shall I get it, dear?'

'Please.'

A telephone handset appeared in Katie's hand. 'Lucifer's office, Rahab speaking. Repeat, please. I will inquire.' She looked at Jerry.

'I'll take it.' Jerry operated without a visible telephone instrument. 'Speaking. No. I said, no. No, damn it! Refer that to Mr Ashmedai. Let Me have the other call.' He muttered something about the impossibility of getting competent help, then said, 'Speaking. Yes, Sir!' Then He said nothing for quite a long time. At last He said, 'At once, Sir. Thank you.'

Jerry stood up. 'Please excuse Me, Alec; I have work to do. I can't say when I will be back. Try' to treat this waiting as a vacation. and My house is yours. Katie, take care of him. Sybil, keep him amused.' Jerry vanished.

`Will I keep him amused!' Sybil got up and stood in front of me, rubbed her hands together. Her western clothes faded out, leaving Sybil. She grinned.

Katie said mildly, 'Sybil, stop that. Grow more clothes at once or I'll send you home.'

'Spoilsport.' Sybil developed a skimpy bikini. 'I plan to make Saint Alec forget that Danish baggage.'

'What'll you bet, dear? I've been talking to Pat.'

'So? What did Pat say?'

'Margrethe can cook.'

Sybil looked disgusted. 'A girl spends fifty years on her back, studying hard. Along comes some slottie who can make chicken and dumplings. It's not fair.'

I decided to change the subject. 'Sybil, those tricks you do with clothes are fascinating. Are you a graduate witch now?'

Instead of answering me at once, Sybil glanced at Katie, who said to her: 'All over with, dear. Speak freely.'

'Okay. Saint Alec, I'm no witch. Witchcraft is poppycock. You know that verse in the Bible about not suffering witches to live?'

'Exodus twenty-two, eighteen.'

'That's the one. The Old Hebrew word translated there as "witch" actually means "poisoner". Not letting a poisoner continue to breathe strikes me as a good idea. But I wonder how many friendless old women have been hanged or burned as a result of a sloppy translation?'

(Could this really be true? What about the 'literal word of God' concept on which I had been reared? Of course the word 'witch' is English, not the original Hebrew... but the translators of the King James, version were sustained by God - that's why that version of the Bible [and only that one] can be taken literally. But - No! Sybil must be mistaken. The Good Lord would not let hundreds, thousands, of innocent people be tortured to death over a mistranslation He could so easily have corrected.)

'So you did not attend a Sabbat that night. What did you do?'

'Not what you think; Israfel and I aren't quite that chummy. Chums, yes; buddies, no.'

"Israfel"? I thought he was in Heaven.'

`That's his godfather. The trumpeter. This Israfel can't play a note. But he did ask me to tell you, if I ever got a chance, that he really isn't the pimple he pretended to be as "Roderick Lyman Culverson, Third".'

'I'm glad to hear that. As he certainly did a good job of portraying an unbearable young snot. I didn't see how a daughter of Katie and Jerry - or is it just of Katie? - could have such poor taste as to pick that boor as a pal. Not Israfel, of course, but the part he was playing.'

'Oh. Better fix that, too. Katie, what relation are we?'

'I don't think even Dr Darwin could find any genetic relationship, dear. But I am every bit as proud of you as. I would be were you my own daughter.'

'Thank you, Mom!'

'But we are all related,' I objected, 'through Mother Eve. Since Katie, wrinkles and all, was born while the Children of Israel were wandering in the wilderness, there are only about eighty begats from Eve to Katie. With your birthdate and simple arithmetic we could make a shrewd guess at how close your blood relationship is.'

'Oh, oh! Here we go again. Saint Alec, Mama Kate is descended from Eve; I am not. Different species. I'm an imp. An afrit, if you want to get technical.'

She again vanished her clothes and did a body transformation. 'See?'

I said, 'Say! Weren't you managing the desk at the Sans Souci Sheraton the evening I arrived in Hell?'

'I certainly was. And I'm flattered that you remember me, in my own shape.' She resumed her human appearance, plus the tiny bikini. 'I was there because I knew you by sight. Pop didn't want anything to go wrong.'

Katie stood up. 'Let's continue this dip before dinner'

'I'm busy seducing Saint Alec.´

'Dreamer. Continue it outdoors.'

Outside it was a lovely Texas late afternoon, with lengthening shadows. 'Katie, a straight answer, please. Is, Hell? Or is this Texas?'

'Both.'

'I withdraw the question.'

I must have let my annoyance show in my voice, for she turned and put a hand on my chest. 'Alec, I was not jesting. For many centuries Lucifer has maintained pieds-à-terre here and there on earth. In each He had an established personality, a front. After Armageddon, when His Brother set Himself up as king of earth for the Millennium, He quit visiting earth. But some of these place's were home to Him, so He pinched them off and took them with, Him. You see?'

'I suppose I do. About as well as a cow understands calculus.'

'I don't understand the mechanism; it's on the God level. But those numerous changes you and Marga underwent during your persecution: How deep did each change go? Do you think the entire planet was involved each time?'

Reality tumbled in my mind in a fashion it had not-since the last of those 'changes'. 'Katie, I don't know! I was always too busy surviving. Wait a moment. Each change did cover the whole planet earth, and about a century of its history. Because I always checked the history and memorized as much as I could. Cultural. changes, too. The whole complex.'

'Each change stopped not far beyond the end of your nose, Alec, and no one but you - you two - was aware of any change. You didn't check history; you checked history books. At least this is the way Lucifer would have handled it, had He been arranging the deception.'

'Uh - Katie, do you realize how long it would take to revise, rewrite, and print an entire encyclopedia? That's what I usually consulted.'

`But Alec, you have already been told that time is never a problem on the God level. Or space. Whatever needed to deceive you was provided. But no more than that. That is the conservative principle in art at the God level. While I can't do it, not being at that level, I have seen a lot of it done. A skillful Artist in shapes and appearances does no more than necessary to create His effect.'

Rghab sat down on the edge of the pool, paddled her feet in the water. 'Come sit beside me. Consider the edge of the "big bang". What is there out beyond that limit where the red shift has the magnitude that means that the expansion of the universe equals the speed of light - what is beyond?'

I answered rather stiffly, 'Katie, your hypothetical question lacks meaning. I've kept up, more or less, with such silly notions as the "big bang" and the "expanding universe" because a preacher of the Gospel must keep track of such theories in order to be able to refute them. The two you mention imply an impossible length of time impossible because the world was created about six thousand years ago. "About" because the exact date of Creation is hard to calculate, and also because I am uncertain as to the present date. But around six thousand years not the billion years or so the big-bangers need.'

'Alec... your universe is about twenty-three billion years old.' '

I started to retort, closed my mouth. I will not flatly contradict my hostess.

She added, 'And your universe was created in four thousand and four BC.'

I stared at the water long enough for Sybil to surface and splash us.

'Well, Alec?´

'You've left me with nothing to say.'

'But notice carefully what I did say. I did not say that the world was created twenty-three billion years ago; I said that was its age. It was created old. Created with fossils in the ground and craters on the moon, all speaking of great age. Created that way by Yahweh, because it amused Him to do so. One of those scientists said, "God does not roll dice with the universe." Unfortunately not true. Yahweh rolls loaded dice with His universe... to deceive His creatures.'

'Why would He do that?'

'Lucifer says that it is because He is a poor Artist, the sort who is always changing his mind and scraping the canvas. And a practical joker. But I'm really not entitled to an

opinion; I'm not at that level. And Lucifer is prejudiced where His Brother is concerned; I think that is obvious. You haven't remarked on the greatest wonder.'

'Maybe I missed it.'

'No, I think you were being polite. How an old whore happened to have opinions about cosmogony and teleology and eschatology and other long words of Greek derivation; that's the greatest wonder. Not?'

`Why, Rahab honey, I was just so busy counting your wrinkles that I wasn't lis´

This got me shoved into the water. I came up sputtering and spouting and found both women laughing at me. So I placed both hands on the edge of the pool with Katie captured inside the circle. She did not seem to mind being captive; she leaned against me like a cat. 'You were about to say?' I asked.

'Alec, to be able to read and write is as wonderful as sex. Or almost. You may not fully appreciate what a, blessing it is because you probably learned how as a baby and have been doing it casually ever since. But when I was a whore in Canaan almost four millennia ago, I did not know how to read and write. I learned by listening... to johns, to neighbors, to gossip in the market. But that's not a way to learn much, and even scribes and judges were ignorant then.

'I had been dead nearly three centuries before I learned to read and write, and when I did learn, I was taught by the ghost of a harlot from what later became the great Cretan civilization. Saint Alec, this may startle you but, An general throughout history, whores learned to read and write long before respectable women took up the dangerous practice. When I did learn, brother. For a while it crowded sex out of my life.'

She grinned up at me. 'Almost, anyhow. Presently I went back to a more healthy balance, reading and sex, in equal amounts.'

'I don't have the strength for that ratio.'

`Women are different. My best education started with the burning of the Library at Alexandria. Yahweh didn't want it, so Lucifer grabbed the ghosts of all those thousands of codices, took them to, Hell, regenerated them carefully - and Rahab had a picnic! And let me add: Lucifer has His eye on the Vatican Library, since it will be up for salvage soon. Instead of having to regenerate ghosts, in the case of the Vatican Library, Lucifer plans to pinch it off intact just before Time Stop, and take it unhurt to Hell. Won't that be grand?'

'Sounds as if it would be. The only thing about which I've ever envied the papists is their library. But... "regenerated ghosts"?'

'Slap my back.'

'Huh?'

'Slap it. No, harder than that; I'm not a fragile little butterfly. Harder. That's more like it. What you just, slapped is a regenerated ghost.'

'Felt solid.'

'Should be, I paid list price for the job. It was before Lucifer noticed me and made me a bird in a gilded cage, a pitiful sight to see. I understand that, if you are saved and go to Heaven, regeneration goes with salvation... but here you buy it on credit, then work your arse off to pay for it. That being exactly how I paid for it. Saint Alec, you didn't die, I know. A regenerated body is just like the one a person has before death, but better. No contagious diseases, no allergies, no old-age wrinkles - and "wrinkles" my foot! I wasn't wrinkled the day I died... or at least not much. How did you get me talking about wrinkles? We were discussing relativity and the expanding universe, high-type intellectual conversation.'

That night Sibil made a strong effort to get into my bed, an effort that Katie firmly thwarted - the went to bed with me herself. 'Pat said that you were not to be allowed to sleep alone.'

Pat thinks I'm sick. I'm not.'

'I won't argue it. And don't quiver your chin, dear; Mother Rahab will let you sleep.'

Sometime in the night I woke up sobbing, and Katie was there. She comforted me. I'm sure Pat told her about my nightmares. With Katie there to quiet me down I got back to sleep rather quickly.

It was a sweet Arcadian interlude... save for the absence of Margrethe. But Katie had me convinced that I owed it to Jerry (and to her) to be patient and not brood over my loss. So I did not, or not much, in the daytime, and, while night could be bad, even lonely nights are not too lonely with Mother Rahab to soothe one after waking up emotionally defenceless. She was always there except one night she had to be away. Sybil took that watch, carefully instructed by Katie, and carried it out the same way.

I discovered one amusing thing about Sybil. In sleep she slips back into her natural shape, imp or afrit, without knowing it. This makes her about six inches shorter and she has those cute little horns that were the first thing I had noticed about her, at the Sans Souci.

Daytimes we swam and sunbathed and rode horseback and picnicked out in the hills. In making this enclave Jerry had apparently pinched off many square miles; we appeared to be able to go as far as we liked in any direction.

Or perhaps I don't understand at all how such things are done.

Strike out 'perhaps' - I know as much about operations On the God level as a frog knows about Friday.

Jerry had been gone about a week when Rahab showed up at the breakfast table with my memoir manuscript. Saint Alec, Lucifer sent instructions that you are to bring up to date and keep it up to date.-

`All right. Will longhand do? Or, if there is a typewriter around, I guess I could hunt and peck.´

'You do it longhand; I'll do a smooth draft. I've done lots of secretarial work for Prince Lucifer.'

'Katie, sometimes you call Him Jerry, sometimes Lucifer, never Satan.'

'Alec, He prefers "Lucifer" but He answers to anything. "Jerry" and "Katie" were names invented for you and Marga -´

'And "Sybil",' Sybil amended.

'And "Sybil". Yes, Egret. Do you want your own name back now?'

'No, I think it's nice that Alec - and Marga - have names for us that no one else knows.'

`Just a minute,' I put in. 'The day I met you, all three of you responded to those names as if you had worn them all your lives.'

'Mom and I are pretty fast at extemporaneous drama,' Sybil-Egret said. 'They didn't know they were fire-worshipers until I slipped it into the conversation. And I didn't know I was a witch until Mom tipped me off. Israfel is pretty sharp, too. But he did have more time to think about his role.'

'So we were snookered in all directions. A couple of country cousins.'

'Alec,' Katie said to me earnestly, 'Lucifer always has reasons for what He does. He rarely explains. His intentions are malevolent only toward malicious people which you are not.'

.We three were sunbathing by the pool when Jerry returned suddenly. He said abruptly to me, not even stopping first to speak to Katie: 'Get your clothes on. We're leaving at once.

Katie bounced up, rushed in and got my clothes. The women had me dressed as fast as a fireman answering an alarm. Katie shoved my razor into my pocket, buttoned it. I announced, 'I'm ready!'

`Where's his manuscrip?´

Again Katie rushed in, out again fast. 'Here!'

In that brief time Jerry had grown twelve feet tall - and changed. He was still Jerry, but I now knew why Lucifer was known as the most beautiful of all the angels. 'So long!' he said. 'Rahab, I'll call you if I can.' He started to pick me up.

'Wait! Egret and I must kiss him good-bye!'

'Oh. Make it snappy!´

They did, ritual pecks only, given simultaneously. Jerry grabbed me, held me like a child, and we went straight up. I had a quick glimpse of Sans Souci, the Palace, and the Plaza, then smoke and flame from the Pit covered them. We went on out of this world.

How we traveled, how long we traveled, where we traveled I do not know. It was like that endless fall to Hell, but made much more agreeable by Jerry's arms. It reminded me of times when I was very young, two or three years old, when my father would sometimes pick me up after supper and hold me until I fell asleep.

I suppose I did sleep. After a long time I became alert by feeling Jerry sweeping in for a landing. He put me down, set me on my feet.

There was gravity here; I felt weight and 'down' again had meaning. But I do not think we were on a planet. We seemed to be on a platform or a porch of some immensely large building. I could not see it because we were right up against it. Elsewhere there was nothing to see, just an amorphous twilight.

Jerry said, 'Are you all right?'

'Yes. Yes, I think so.'

'Good. Listen carefully. I am about to take you in to see - no, for you to be seen by - an Entity who is to me, and to my brother your god Yahweh, as Yahweh is to you. Understand me?'

'Uh... maybe. I'm not sure.'

`A is to B as B is to C. To this Entity your lord god jehoyah is equivalent to a child building sand castles at a beach, then destroying them in childish tantrums. To Him, I am a child, too. I look up to Him as you look up to your triple deity - father, son, and holy ghost. I don't worshipe this Entity as God; He does not demand, does not expect, does not want, that sort of bootlicking. Yahweh may be the, only god who ever thought up that curious vice - at least I do not know of another planet or place in any universe where god-worship is practiced. But I am young and not much traveled.'

Jerry was watching me closely. He appeared to be troubled. 'Alec, maybe this analogy will explain it. When you were growing up, did you ever have to take a pet to a veterinarian?'

'Yes. I didn't like it because they always hated it so.'

'I don't like it, either. Very well, you know what it is to take a sick or damaged animal to the vet. Then you had lo wait while the doctor decided whether or not your pet could be made well. Or whether the kind and gentle thing to do was to put the little creature out of its misery. Is this not true?'

'Yes. Jerry, you're telling me that things are dicey. Uncertain.'

'Utterly uncertain. No precedent. A human being has never been taken to this level before. I don't know what He will do.'

'Okay. You told me before that there would be a risk.'

'Yes. You are in great danger. And so am I, although I think your danger is much greater than mine. But, Alec, I can assure you of this: If It. decided to extinguish you, you will never know it. It is not a sadistic God.'

`"It" - is it "It" or "He"?´

'Uh... use "he". If It embodies, It will probably use a human appearance. If so, you can address Him as "Mr Chairman" or "Mr Koshchei". Treat Him as you would a man much older than you are and one you respect highly. Don't bow down or offer worship. Just stand your ground and tell the truth. If you die, die with dignity.'

The guard who stopped us at the door was not human, - until I looked again and then he was human. And that Characterizes the uncertainty of everything I saw at the place Jerry referred to as 'The Branch Office'.

The guard said to me, 'Strip down, please. Leave your clothes with me; you can pick them up later, What is that metal object?'

I explained that it was just a safety razor.

'And what is it for?'

'It's a... a knife for cutting hair off the face.

'You grow hair on your face?'

I tried to explain shaving.

'If you don't want hair there, why do you grow it there?' Is it a material of economic congress?'

'Jerry, I think I'm out of my depth.'

'I'll handle it.' I suppose he then talked to the guard but I didn't hear anything. Jerry said to me, 'Leave your razor with your clothes. He thinks you are crazy but he thinks I am crazy, too. It doesn't matter.'

Mr Koshchei may be 'an 'It' but to me He looked like a twin brother of Dr Simmons, the vet back home in Kansas to whom I used to take cats and dogs, and once, a turtle - the procession of small animals who shared my childhood. And the Chairman's office looked exactly like Dr Simmons' office, even to the rlolltop desk the doctor must have inherited from his grandfather. There was a well-remembered Seth Thomas eight-day clock on a little shelf over the doctor's desk.

I realized (being cold sober and rested) that this was not Dr Simmons and that the semblance was intentional but not intended to deceive. The Chairman, whatever He or It or She may be, had reached into my mind with some sort of hypnosis to create an ambience in which I could relax. Dr Simmons used to pet an animal and talk to it, before he got down to the uncomfortable, unfamiliar, and often painful things that he had to do to that animal.

It had worked. It worked with me, too. I knew that Mr Koshchei was not the old veterinary surgeon of my childhood... but this simulacrum brought out in me the same feeling of trust.

Mr Koshchei looked up as we came in. He nodded to Jerry, glanced at me. 'Sit down.'

We sat down. Mr Koshchei turned back to His desk. My manuscript was on it. He picked it up, jogged the sheets - straight, put them down. 'How are things in your bailiwick, Lucifer? Any problems?'

'No, Sir. Oh, the usual gripes about the air conditioning. Nothing I can't handle.'

'Do you want to rule earth this millennium?'

'Hasn't my brother claimed it?'

'Yahweh has claimed it, yes - he has pronounced Time Stop and torn it down. But I am not bound to let him rebuild. Do you want it? Answer Me.'

"Sir, I would much rather start with all-new materials.'

'All your guild prefer to start fresh. With no thought of the expense, of course. I could assign you to the Glaroon for a few cycles. How say you?'

Jerry was slow in answering. 'I must leave it to the Chairman's judgment.'

,'You are quite right; you must. So we will discuss it later. Why have you interested yourself in this creature of your brother´s?'

I must have dropped off to sleep, for I saw puppies and kittens playing in a courtyard - and there was nothing of that sort there. I heard Jerry saying, 'Mr Chairman, almost everything about a human creature is ridiculous, except its ability to suffer bravely and die gallantly for whatever it loves and believes in. The validity of that belief, the appropriateness of that love, is irrelevant; it is the bravery and the gallantry that count. These are uniquely human qualities, independent of mankind's creator, who has none of them himself - as I know, since he is my brother... and I lack them, too.

'You ask, why this animal, and why me? This one I picked up beside a road, a stray - and, putting aside its own troubles - much too big for it! - it devoted itself to a (and fruitless) attempt to save my "soul" by the rules it had been taught. That its attempt was misguided and useless does not matter; it tried hard on my behalf when it believed me to be in extreme danger. Now that it is in trouble I owe it an equal effort.'

Mr Koshchei pushed his spectacles down His nose and looked over them. 'You offer no reason why I should interfere with local authority.'

'Sir, is there not a guild rule requiring artists to be kind in their treatment of their volitionals?'

'No.

Jerry looked daunted. 'Sir, I must have misunderstood my training.'

'Yes, I think you have. There is an artistic principle not a rule - that volitionals should be treated consistently. But to insist on kindness would be to eliminate that degree of freedom for which volition in creatures was invented. Without the possibility of tragedy the volitionals might as well be golems.'

'Sir, I think I understand that. But would the Chairman please amplify the artistic principle of consistent treatment?'

'Nothing- complex about it, Lucifer. For a creature to act out its own minor part, the rules under which it acts must be either known to it or be such that the rules can become known through trial and error - with error not always fatal. In short the creature must be able to learn and to benefit by its experience.'

'Sir, that is exactly my complaint about my brother. See that record before You. Yahweh baited a trap and thereby lured this creature into a contest that it could not win then declared the game over and took the prize from it. And, although this is an extreme case,

a destruction test, this nevertheless is typical of his treatment of all his volitionals. Games so rigged that his creatures cannot win. For six millennia I got his losers... and many of them arrived in Hell catatonic with fear - fear of me, fear of an eternity of torture. They can't believe they've been lied to. My therapists have to work hard to reorient the poor slobs. It's not funny.'

Mr Koshchei did not appear to listen. He leaned back in His old wooden swivel chair, making it creak - and, yes, I do not know that the creak came out of my memories - and looked again at my memoir. He scratched the grey fringe around His bald pate and made an irritating noise, half whistle, half hum - also out of my buried memories of Doc Simmons, but utterly real.

This female creature, the bait. A volitional?'

'In my opinion, yes, Mr Chairman.'

(Good heavens, Jerry! Don't you know?)

'Then I think we may assume that this one would not be satisfied with a simulacrum.' He hummed and whistled through His teeth. 'So let us look deeper.'

Mr Koshchei's office seemed small when we were admitted; now there were several others present: another angel who looked a lot like Jerry but older and with a pinched expression unlike Jerry's expansive joviality, another older character who wore a long coat, a big broad-brimmed hat, a patch over one eye, and had a crow sitting on his shoulder, and - why, confound his arrogance! - Sam Crumpacker, that Dallas shyster.

Back of Crumpacker three men were lined up, well-fed types, and all vaguely familiar. I knew I had seen them before.

Then I got it. I had won a hundred (or was it a thousand?) from each of them on a most foolhardy bet.

I looked back at Crumpacker, and was angrier than ever - the scoundrel was now wearing my face!

I turned to Jerry and started to whisper urgently. 'See lhat man over there? The one -´

'Shut up.'

`But -´
`Be quiet and listen.'

Jerry's brother was speaking. 'So who's complaining? You want I should put on my Jesus hat and prove it? The fact that some of them make it proves it ain't too hard - Seven point one percent in this last batch, not counting golems, Not good enough? Who says?´

The old boy in the black hat said, 'I count anything less' than fifty percent a failure.'

'So who's talking? Who lost ground to me every year for a millennium? How you handle your creatures; that's your business. What I do with mine; that's my business.

'That's why I'm here,' the big hat replied. 'You grossly interfered with one of mine.'

'Not, me!' Yahweh hooked a thumb at the man who man who managed to look like both me and Sam Crumpacker. 'That one! My Shabbes goy. A little rough? So whose boy is he? Answer that!'

Mr Koshchei tapped my memoir, spoke to the man with my face. 'Loki, how many places do you figure in this story?'

'Depends on how You figure it, Chief. Eight or nine places, if You count the walk-ons. All through it, when You consider that I spent four solid weeks softening up this foxy schoolteacher so that she would roll over and pant when Joe Nebbish came along.'

Jerry had a big fist around my upper ~ left arm. 'Keep quiet!'

Loki went on: 'And Yahweh didn't pay up.

'So why should I? Who won?'

'You cheated. I had your champion, your prize bigot, ready to crack when you pulled Judgment Day early. There he sits. Ask him. Ask him if he still swears by you. Or at you? Ask him. Then pay up. I have munition bills to meet.'

Mr Koshchei stated, 'I declare this discussion out of order. This office is not a collection agency. Yahweh, the principal complaint against you seems to be that you are not consistent in your rules for your creatures.'

'Should I kiss them? For omelets you break eggs.'

'Speak to the case in point. You ran a destruction lit test. Whether it was artistically necessary is moot. But, at the end of the test, you took one to Heaven, left the other behind, - and thereby punished both of them. Why?´

'One rule for all. She didn't make it.'

'Aren't you the god that announced the rule concerning binding the mouths of the kine that tread the grain?'

The next thing I knew I was standing on Mr Koshchei's desk, staring right into His enormous face. I suppose Jerry put me there. He was saying, 'This is yours?'

I looked in the direction He indicated - and had to keep from fainting. Marga!

Margrethe cold and dead and encased in a coffin shaped cake of ice. It occupied much of the desktop and was beginning to melt onto it.

'I tried to throw myself onto it, found I could not move.

"I think that answers Me,' Mr Koshchei went on. 'Odin, what is its destiny?'

'She died fighting, at Ragnarok. She has earned a cycle in Valhalla.'

'Listen to him!' Loki sneered. 'Ragnarok is not over. And this time I'm winning. This pige is mine! All Danish broads are willing... but this one is explosive!' He smirked and winked at me. 'Isn't She?'

The Chairman said quietly, 'Loki, you weary Me'- and suddenly, Loki was missing. Even his chair was gone. 'Odin, will you spare her for part of that cycle?'

'For how long? She has earned the right to Valhalla.'

'An indeterminate time. This creature had stated its willingness to wash dishes "forever" in order to take care of her. One may doubt that it realizes just how long a period, "forever" is... yet its story does show earnestness of purpose.'

'Mr Chairman, my warriors, male and female, dead in honorable combat, are my equals, not my slaves - I am to be first among such equals. I raise no objections... if she consents.

My heart soared. Then Jerry, from clear across the room, wispered in my ear, 'Don't get your hopes up. To her it may be as long as a thousand years. Woman do forget.´

The Chairman was saying, 'The web patterns are intact, are they not?'

Yahweh answered, 'So who destroys file copies?'

'Regenerate as necessary.'

'And who is paying for this?'

'You are. A fine to teach you to pay attention to consistency.´

'Oy! Every prophecy I fulfilled! And now He tells me consistent I am not! This is justice?'

'No. It is Art. Alexander. Look at Me.'

I looked at that great face; Its eyes held me. They got bigger, and bigger, and bigger. I slumped forward and fell into them.

Chapter 29

There is, no remembrance of former things; neither shall
there be any remembrance of things that are to come
with those that shall come after.
Ecclesiastes 1: 11

THIS WEEK Margrethe and I, with help from our daughter Gerda, are giving our house and our shop a real Scandahoovian cleaning, because the Farnsworths, our friends from Texas - our best friends anywhere - are coming to see us. To Marga and me, a visit from Jerry and Katie is Christmas and the Fourth of July rolled into one. And for our kids, too; Sybil Farnsworth is Inga's age; the girls are chums.

This time will be extra special; they are bringing Patricia Marymount with them. Pat is almost as old a friend as the Farnsworths and the sweetest person in the world - an old-maid schoolmarm but not a bit prissy.

'The Farnsworths changed our luck. Marga and I were down in Mexico on our honeymoon when the earthquake that destroyed Mazatlán hit. We weren't hurt but we had a bad time getting out - passports, money, and travelers checks gone. Halfway home we met the Farnsworths and that changed everything - no more trouble. Oh, I got back to Kansas with no baggage but a razor (sentimental value, Marga gave it to me on our honeymoon; I've used it ever since).

When we reached my home state, we found just the mom-and-pop shop we wanted - a lunchroom in this little college town, Eden, Kansas, southeast of Wichita. The shop was owned by Mr and Mrs A. S. Modeus; they Wanted to retire. We started as their employees; in less than a month we were their tenants. Then I went into hock to the bank up to my armpits and that made us owners-of-record of MARGA'S HOT FUDGE SUNDAE soda fountain, hot dogs, hamburgers, and Marga's heavenly Danish open-face sandwiches.

Margrethe wanted to name it Marga-and-Alex's Hot Fudge Sundae - I vetoed that; it doesn't scan. Besides, she is the one who meets the public; she's our best advertising. I work back where I'm not seen - dishwasher, janitor, porter, you name it. Margrethe handles the front, with help from Astrid. And from me; all of us can cook or concoct anything on our menu, even the open-face sandwiches. However, with the latter we follow Marga's color Photographs and lists of ingredients; in fairness to our customers only Margrethe is allowed to be creative.

Our namesake item, the hot fudge sundae, is ready at all times and I have kept the price at ten cents, although that allows only one-and-a-half cent gross profit. Any customer

having a birthday gets one free, along with our Singing Happy Birthday! with loud banging on a drum, and a kiss. College boys appreciate kissing Margrethe more than they do the free sundae. Understandable. But Pop Graham doesn't do too badly with the co-eds, either. (I don't force kisses on a 'birthday girl'.)

Our shop was a success from day one. The location is good - facing Elm Street gate and Old Main. Plentiful good trade was guaranteed by low prices and Margrethe's magic touch with food... and her beauty and her sweet personality; we aren't selling calories, we're selling happiness. She piles a lavish serving of happiness on each plate; she has it to spare.

With me to watch the pennies, our team could not lose. And I do watch pennies; if the cost of ingredients ever kills that narrow margin on a hot fudge sundae, the price goes up. Mr Belial, president of our bank, says that the country is in a long, steady period of gentle prosperity. I hope he is right; meanwhile I watch the gross profit.

The town is enjoying a real estate boom, caused by, the, Farnsworths plus the change in climate it used to be that the typical wealthy Texan had a summer home in Colorado Springs, but now that we no longer fry eggs on our sidewalks, Texans are beginning to see the charms of Kansas. They say it's a change in the Jet Stream. (Or is it the Gulf Stream? I never was strong in science.) Whatever, our summers now are balmy and our winters are mild; many, of Jerry's friends or associates are buying land in Eden and building summer homes. Mr Ashmedai, manager of some of Jerry's interests, now lives here year round - and Dr Adramelech, chancellor of Eden College, caused him to be elected to the board of trustees, along with an honorary doctorate - as a former money-raiser I can see why.

We welcome them all and not just for their money... but I would not want Eden to grow as crowded as Dallas.

Not that it could. This is a bucolic place; the college is our only 'industry'. One community church serves all sects, The Church of the Divine Orgasm - Sabbath school at 9:30 a.m., church services at 11, picnic and orgy immediately following.

We don't believe in shoving religion down a kid's throat, but the truth is that young people like our community church - thanks to our pastor, the Reverend Dr M. 0. Loch. Malcolm is a Presbyterian, I think; he still has a Scottish burr in his speech. But there is nothing of the dour Scot about him and kids love him. He leads the revels and directs the rituals - our daughter Elise is a Novice Ecdysiast under him and she talks of having a vocation. (Piffle. She'll marry right out of high school; I could name the young man - though I can't see what she sees in him.)

Margrethe serves in the Altar Guild; I pass the plate on the Sabbath and serve on the finance board. I've never, given up my membership in the Apocalypse Brethren but I must admit that we Brethren read it wrong; the end of the millennium came and went and the Shout was never heard.

A man who is happy at home doesn't lie awake nights worrying about the hereafter.

What is success? My classmates at Rolla Tech, back when, may think that I've settled for too little, owner with-the-bank of a tiny restaurant in a nowhere town. But I have what I want. I would not want to be a saint in Heaven if Margrethe was not with me; I wouldn't fear going to Hell if she was there - not that I believe in Hell or ever stood a chance of being a saint in Heaven.

Samuel Clemens put it: 'Where she was, there was Eden. 'Omar phrased it: '- thou beside me in the wilderness, ah wilderness were paradise enow.' Browning termed it: 'Summum Bonum'. All were asserting the same great truth, which is for me:

Heaven is where Margrethe is.

“Let There Be Light”
by
Robert A Heinlein

ARCHIBALD DOUGLAS, Sc.D., Ph.D., B.S., read the telegram with unconcealed annoyance.

“ARRIVING CITY LATE TODAY STOP DESIRE CONFERENCE COLD LIGHT YOUR LABORATORY TEN P M (signed) DR. M. L MARTIN”

He was, was he? He did, did he? What did he think this lab was; a hotel? And did Martin think that his time was at the disposal of any Joe Doakes who had the price of a telegram? He had framed in his mind an urbanely discouraging reply when he noticed that the message had been filed at a mid-western airport. Very well, let him arrive. Douglas had no intention of meeting him.

Nevertheless, his natural curiosity caused him to take down his copy of Who’s Who in Science and look up the offender. There it was: Martin, M. L., bio-chemist and ecologist, P.D.Q., X.Y.Z., N.R.A., C.I.O.—enough degrees for six men. Hmmm...—Director Guggenheim Orinoco Fauna Survey, Author; Co-Lateral Symbiosis of the Boll Weevil, and so on, through three inches of fine print The old boy seemed to be a heavyweight.

A little later Douglas surveyed himself in the mirror of the laboratory washroom. He took off a dirty laboratory smock, removed a comb from his vest pocket, and put a careful polish on his sleek black hair. An elaborately tailored checked jacket, a snap-brim hat and he was ready for the street. He fingered the pale scar that stenciled the dark skin of one cheek. Not bad, he thought, in spite of the scar. If it weren’t for the broken nose he would look O.K.

The restaurant where he dined alone was only partly filled. It wouldn’t become lively until after the theatres were out, but Douglas apprecIated the hot swing band and the good food. Toward the end of his meal, a young woman walked past his table and sat down, facing him, one table away. He sized her up with care. Pretty fancy!
Figure like a strip dancer, lots of corn-colored hair, nice complexion, and great big soft blue eyes. Rather dumb pan, but what could you expect?

He decided to invite her over for a drink. If things shaped up, Dr. Martin could go to the devil. He scribbled a note on the back of a menu, and signalled the wafter.

“Who is she, Leo? One of the entertainers?”

“No, m’sieur, I have not seen her before.”

Douglas relaxed, and waited for results. He knew the come-hither look when he saw it, and he was sure of the outcome. The girl read his note and glanced over at him with a little smile. He returned it with interest. She borrowed a pencil from the waiter, and wrote on the menu. Presently Leo handed it to him.

“Sorry,”—it read—”and thanks for the kind offer, but I am otherwise engaged.”

Douglas paid his bill, and returned to the laboratory.

His laboratory was located on the top floor of his father’s factory. He left the outer door open and the elevator down in anticipation of Doctor Marth’s arrival, then he

busied himself by tryTag to locate the cause of an irritating vibration in his centrifuge. Just at ten o'clock he heard the whir of the elevator. Ije reached the outer door of his office just as his visitor arrived.

Facing him was the honey-colored babe be had tried to pick up in the restaurant

He was immediately indignant "How the hell did you get here? Follow me?"

She froze up at onëe. "I have an appointment with Doctor Douglas. Please tell him that I am here."

"The hell you have. What kind of a game is this?"

She c~ntrolled herself, but her face showed the effort

"I think Doctor Douglas is the best judge of that. Tell him Fm here—at once."

"You're looking at him. Fm Doctor Douglas."

"You! I don't believe it. You look more like a—a gangster."

"I am, nevertheless. Now cut out the clowning, sister, and tell me what the racket is. What's your name?"

"I am Doctor M. L. Martin."

He looked completely astounded, then bellowed his amusement. "No foolin'? You wouldn't kid your country cousin, would you? Come in, doe, come in."

She followed him, suspicious as a strange dog; ready to fight at any provocation. She accepted a chair, then addressed him again. "Are you really Doctor Douglas?"

He grinned at her. "In the flesh—and~ I can prove it. How about you? I still think this is some kind of a badger game."

She froze up again. "What do you want—my birth certificate?"

"You probably murdered Dr. Martin in the elevator, and stuffed the old boy's body down the shaft"

She arose, gathered up her gloves and purse, and prepared to leave. "I caine fifteen hundred miles for this meeting. I am sorry I bothered. Good evening, Doctor Douglas."

He was instantly soothing. "Aw, don't get sore—I was just needling you. It just tickled me that the distinguished Doctor Martin should look so much like Betty Grable. Now sit back down"—he gently disengaged her hands from her gloves—"and let me buy you that drink you turned down earlier."

She hesitated, still determined to be angry, then her natural good nature came to his aid, and she relaxed.

"O.K., Butch."

"That's better. What'll it be; Scotch or Bourbon?"

"Make mine Bourbon—and not too much water."~

By the time the drinks were fixed and cigarets lighted the tension was lifted. "Tell me," he began, "to what do I owe this visit? I don't know a damn thing about biology."

She blew a smoke ring 'and poked a carmine finger nail through it. "You remember that article you had in the April Physical Review? The one about cold light, and possible ways~of achieving it?"

He nodded. "Electroluminescence vs. Chemiluminescence: not much in that to interest a biologist."

"Nevertheless I've been working on the same problem."

'From what angle?"

"I've been trying to find out how a lightning bug does the trick. I saw some gaudy ones down in South America, and it got me to thinking."

"11mm— Maybe you got something. What have you found out?"

"Not much that wasn't already known. As you probably know, the firefly is an almost incredibly efficient source of light—at least 96% efficient Now how efficient would you say the ordinary commercial tungsten-filament incandescent lamp is?"

"Not over two percent at the best."

"That's fair enough. And a stupid little beetle does fifty times as well without turning a hair. We don't look so hot, do we?"

"Not very," he acknowledged. "Go on about the bug."

"Well, the firefly has in his tummy an active organic compound—very complex—called luciferin. When this oxydizes in the presence of a catalyst, luciferase, the entire energy of oxydation is converted into green light— no heat. Reduce it with hydrogen and it's ready to go again. I've learned how to do it in the laboratory."

"The hell you have! Congratulations! You don't need mc. I can close up shop."

"Not so fast. It isn't commercially feasible; it takes too much gear to make it work; it's too messy; and I can't get an intense light. Now I came to see you to see if we might combine forces, pool our information, and work out something practical."

Three weeks later at four in the morning Doctor M. L. Martin—Mary Lou to her friends—was frying an egg over a bunsen burner. She was dressed in a long rubber shop apron over shorts and a. sweater. Her long corncolored hair hung in loose ripples. The expanse of shapely leg made her look like something out of a cheesecake magazine.

She turned to where Douglas lay sprawled, a wretched exhausted heap, in a big arm chair. "Listen, Ape, the percolator seems to have burnt out Shall I make the coffee in the fractional distillator?"

"I thought you had snake venom in it."

"So I have. I'll rinse it out."

"Good God, woman! Don't you care what chances you take with yourself?—or with me?" -

"Pooh—snake venom wouldn't hurt you even if you did drink it—unless that rotgut you drink has given your stomach ulcers. Soup's on!"

She chucked aside the apron, sat down and crossed her legs. He automatically took in the display.

"Mary Lou, you lewd wench, whjr don't you wear some clothes around the shop? You arouse my romantic nature."

"Nuts. You haven't any. Let's get down to cases. Where do we stand?"

He ran a hand through his hair and chewed his lip. "Up against a stone wall, I think. Nothing we've tried so far seems to offer any promise."

"The problem seems to be essentially one of confining radiant energy to the visible band of frequency."

"You make it sound so simple, bright eyes."

"Stow the sarcasm. That is, nevertheless, where the loss comes in with ordinary electric light. The filament is white hot, maybe two percent of the power is turned into light, the rest goes into infra-red and ultra-violet"

"So beautiful. So true."

"Pay attention, you big ape I know you're tired, but listen to mama. There should be some way of sharply tuning the wave length. How about the way they doit in radio?"

He perked up a little. "Wouldn't apply to the case.
Even if you could manage to work out an Inductancecapacitance circuit with a natural resonant frequency within the visual band, It would require too much gear for each lighting unit, and if it got out of tune, it ~wouldn't give any light at all."

'Is that the only way frequency is controlled?"

"Yes—well, practically. Some transmitting stations, especially amateurs, use a specially cut quartz crystal that has a natural frequency of its own to control wave length."

"Then why can't we cut a crystal that would have a natural frequency in the octave of visible light?"

He sat up very straight. "Great Scott, kid!—I think you've hit it."

He got up; and strode up and down, talking as he went.

"They use ordinary quartz crystal for the usual frequencies, and tourmaline for short wave broadcasting. The frequency of vibration depends directly on the way the crystal is cut. There is a simple formula—" He stopped, and took down a thick India-paper handbook "Hmm—yes, here it is. For quartz, every millimetre of thickness of the crystal gives one hundred metres of wave length. Frequency is, of course, the reciprocal of wave length. Tourmaline has a similar formula for shorter wave lengths."

He continued to read. "These crystals have the property of flexing when electric charges are applied to h them, and, vice versa, show an electric charge when flexed. The period of flexure is an inherent quality of the crystal, depending on its geometrical proportions. Hooked Into a radio transmitting circuit, such a crystal requires the circuit to operate at one, and only one, frequency, that of the crystaL' That's it, kid, that's it! Now if we can find a crystal that can be cut to vibrate at the frequency of visible light, we've got it—a way to turn electrical energy into light without heat losses!"

Mary Lou cluck-clucked admiringly. "Mama's good boy. Mama knew he could do it, if he would only try."

Nearly six months later Douglas invited his father up to the laboratory to see the results. He ushered the mild, silver-haired old gentleman into the sanctum sanctorum and waved to Mary Lou to draw the shades. Then he pointed to the ceiling.

"There it is, Dad—cold light—at a bare fraction of the cost of ordinary lighting."

The elder man looked up and saw, suspended frém the ceiling. a grey screen, about the size and shape of the top of a card table. Then Mary Lou threw a switch. The screen glowed brilliantly, but not da7zIingly, and exhibited a mother-of-pearl iridescence. The room was illuminated by strong white light without noticeable glare.

The young scientist grinned at his father, as pleased as a puppy who expects a pat "How do you like it, Dad?
One hundred candle power—that'ud .take about a hundred watts with ordinary bulbs, and we're doing it with two watts—half an ampere at four volts."

The old man blinked absent-mindedly at the dispily. "Very nice, son, very nice indeed. Fm pleased that you have perfected it."

"Look, Dad—do you know what that screen up there is made out of? Common, ordinary clay. It's a form of aluminum silicate; cheap and easy to make from any clay, or

ore, that contains aluminum. I can use bauxite, or cryolite, or most anything. You can gather up the raw materials with a steam shovel in any state in the union."

"Is your process all finished, son, and ready to be patented?"

"Why, yes, I think so, Dad."

"Then let's go into your office, and sit down. Fve something I must discuss with you. Ask your young lady to come, too."

Young Douglas did as he was told, his mood subdued by his father's solemn manner. When they were seated, he spoke up.

"What's the trouble, Dad? Can 1 help?"

"I wish you could, Archie, but Fm afraid not. Fm go.. ing to have to ask you to close your laboratory."

The younger man took it without flinching. "Yes, Dad?"

"You know Fve always been proud of your work, and since your mother passed on my major purpose has been to supply you with the money and equipment you needed for your work."

"You've been very generous, Dad."

"I wanted to do it. But now a time has come when the factory won't support your research any longer. In fact, I may have to close the doors of the plant"

"As bad as that, Dad? I thought that orders had picked up this last quarter."

"We do have plenty of orders, but the business isn't making a profit on them. Do you remember I mentioned sofnething to you about the public utilities bifi that passed at the last session of the legislature?"

"I remember- it vaguely, but I thought the Governor vetoed it."

"He did, but they passed it over his veto. It was as bold a case of corruption as this state has ever seen—the power lobbyists had both houses bought, body and soul." The old man's voice trembled with impotent auger.

"And just how does it affect us, Dad?"

"This bill pretended to equalize power rates according to circumstances. What it actually did was to permit the commission to discriminate among consumers as they saw fit. You know what that commission is—I've always been on the wrong side of the fence politically. Now they are forcing me to the wall with power rates that prevent me from competing."

"But good heavens, Dad— They can't do that Get an injunction!"

"In this state, son?" His white eyebrows raised.

"No, I guess not." He got to his feet and started walking the floor. "There i~zust be something we can do."

His father shook his head. "The thing that really makes me bitter is that they can do this with power that actually belongs to the people. The federal government's program has made plenty of cheap power possible—the country
should be rich from it—but these local pirates have gotten hold of it, and use it as a club to intimidate free citizens."

After the old gentleman had left, Mary Lou slipped over and laid a hand on Douglas' shoulder and looked down into his face. -

"You poor boy!"

His face showed the upset he had concealed from his father. “Cripes, Mary Lou. Just when we were going good. But I mind it most for Dad.”

“Yes, I know.”-

“And not a damn thing I can do about it. It’s politics, and those pot-bellied racketeers own this state.”

She looked disappointed and faintly scornfuL “Why, Archie Douglas, you great big panty-waist! You aren’t going to let those mugs get away with this without a fight, are you?”

He looked up at her dully. “No, of course not. I’ll fight. But I know when I'm licked. This is way out of my field.”

She flounced across the room. “Fm surprised at you. You’ve invented one of the greatest things since the dynamo, and you talk about being licked.”

“Your invention, you mean.”

“Nuts! Who worked out the special forms? Who blended them to get the whole spectrum? And besides, you aren’t out of your field. What’s the problem?— Power! They’re squeezing you for power. You’re a physicist. Dope out some way to get power without buying from them.”

“What would you like? Atomic power?” -

“Be practical. You aren’t the Atomic Energy Commission.,,

“I might stick a windmill on the roof.”

“That’s better, but still not good. Now get busy with that knot in the end of your spinal cord. TB start some coffee. This is going to be another all night job.”

He grinned at her. “O.K., Carrie Nation. Fm coming.”

She smiled happily at him. “That’s the way to talk.”

He rose and went over to her, slipped an arm abouther
waist and kissed her. She relaxed to his embrace, but when their lips parted, she pushed him away.

“Archie, you remind me of the Al G. Barnes Circus; ‘Every Act an Animal Act.’”

As the first light of dawn turned their faces pale and sickly, they were rigging two cold light screens face to face. Archie adjusted them until they were an inch apart.

“There now—practically all the light from the first screen should strike the second. Turn the power on the first screen, Sex Appeal.”

She threw the switch. The first screen glowed with light, and shed its radiance on the second.

“Now to see if our beautiful theory is correct.” He fastened a voltmeter across the terminals of the second screen and pressed the little black button in the base of the voltmeter. The needle sprang over to two volts.

She glanced anxiously over his shoulder. “How ~bout it, guy?”

“It works! There’s no doubt about it.”These screens work both ways. Put juice in ~em; out comes light. Put light in ‘em; out comes electricity.”

“What’s the power loss, Archie?”

“Just a moment.” He hooked in an ammeter, read it, and picked up his slide rule. “Let me see— Loss is about thirty percent. Most of that would be the leakage of light around the edges of the screens.”

"The sun's coming up, Archie. Let's take screen number two up on the roof, and try it out in the sunlight."

Some minutes later they had the second screen and the electrical measuring instruments on the roof. Archie propped the screen up against a sky-light so that it faced the rising sun, fastened the voltmeter across its terminals and took a reading. The needle sprang at once to two volts.

Mary Lou jumped up and down. "It works!" -

"Had to work," commented Archie. "If the light from another screen will make it pour out juice, then sunlight is bound to. Hook in the ammeter. Let's see how much power we get."

The ammeter showed 18.7 amperes.

Mary Lou worked out the ~resu1t on the slide rule.
"Eighteen-point-seven times two gives thirty-seven-pointfour watts or about five hundredths of a horsepower.. That doesn't seem like very much. I had hoped for more."

"That's as it should be, kid. We are using only the visible light rays. As a light source the sun is about fifteen percent efficient; the other eighty-five percent are infrared and ultra-violet. Gimme that slipstick." She passed him., the slide rule. "The sun pours. out about a horsepower and a half, or one and one eighth kilowatts on every square yard of surface on the earth that is faced directly towards the sun. Atmospheric absorption cuts that down about a third, even at high noon over the Sabarn desert. That would give one horsepower per square yard. With the sun just rising we might not get more than one-third horsepowerper square yard here. At fifteen percent efficiency that would be about five hundredths of a horsepower. It checks—Q.ED.— What are you looking so glum about?"

"Well—I had hoped that we could get enough sunpower off the roof to run the factory, but if it takes twenty square yards to~ get one horsepower, it won't be enough."

"Cheer up, Baby Face. We doped out a screen that would vibrate only in the band of visible light; I guess we can dope out another that will be atonic—one that will vibrate to any wave length. Then it will soak up any radiant energy that hits it, and give it up again as electrical power. With this roof surface we can get maybe a thousand horsepower at high noon. Then we'll have to set tip banks of storage batteries so that we can store power for cloudy days and night shifts."

She blinked her big blue eyes at him. "Archie, does your head ever ache?"

Twenty minutes later he was back at his desk, deep in the preliminary calculations, while Mary Lou threw together a scratch breakfast She interrupted his study to ask:

"Where'd'ja hide that bottle, Lug?"

He looked up and replied, "It's immoral for little girls to drink in broad daylight."

"Come out of the gutter, chum. I want to turn these hotcakes into crepes Suzette, using corn liquor instead of brandy."

"Never mind the creative cookery, Dr. Martin. I'll take mine straight I need my health to finish this job."

She turned around and brandished the skillet at him. "To hear is to obey, my Lord. However, Archie, you are an over-educated Neanderthal, with no feeling for the higher things Of life."

"I won't argue the point, Blonde Stuff~b~it take a gander at this. I've got the answer—a screen that vibrates all down the scale."

"No foolin', Archie?"

"No foolin', kid. It was already implied in our earlier experiments, but we were so busy trying to build a screen that wouldn't vibrate at random, -we missed it. I ran into something else, too."

"Tell mama!"

"We can build screens to radiate in the infra-red just as easily as cold light screens. Get it? Heating units of any convenient size or shape, economical and with no high wattage or extreme temperatures to make 'em fire hazards or dangerous to children. As I see it, we can design these screens to, one—" he ticked the points off on his fingers—"take power from the sun at nearly one hundred percent efficiency; two, deliver it as cold light; or three, as heat; or fQur, as electrical power. We can bank 'em in series to get any required voltage; we can bankin parallel to get any required current, and the power is absolutely free, except for the installation costs."

She stood and watched him in silence for several seconds before speaking. "All that from trying to make a cheaper light. Come eat your breakfast, Steinmetz. You men can't do your work on mush."

They ate in silence, each busy with new thoughts. Finally Douglas spoke. "Mary Lou, do you realize just how big a thing this is?"

"I've been thinking about it."

"It's enormous. Look, the power that can be tapped is incredible. The sun pours over two hundred and thirty trillion horsepower onto the earth all the time and we use almost none of it."

"As much as that, Archie?"

"I didn't believe my own figures when I worked it out, so I looked it up in Richardson's Astronomy. Why, we could recover more than twenty thousand horsepower in any city block. Do you know what that means? Free power! Riches for everybody! It's the greatest thing since the steam engine." He stopped suddenly, noticing her glum face. "What's the matter, kid, am I wrong someplace?"

She fiddled with her fork before replying. "No, Archie—you're not wrong. I've been thinking about it, too. Decentralized cities, labor-saving machinery for everybody, luxuries—it's all possibl~, but I've a feeling that we're staring right into a mess of trouble. Did you ever hear of 'Breakages Ltd.'?'

"What is it, a salvage concern?"

"Not by a hell of a sight. You ought to read something besides the 'Proceedings of the American Society of Physical Engineers.' George Bernard Shaw, for instance. It's from the preface of Back to Methuselah, and is a sardonic way of describing the combined power of corporate industry to resist any change that might threaten their dividends. You threaten the whole industrial set-up, son, and you're in danger right where you're sitting. What do
you think happened to atomic power?"

He pushed back his chair. '~Oh,~ surely not. You're just tired and jumpy. Industry welcomes invention. Why, all the big corporations have their research departments with some of the best minds in the country working in them.
And they are in atomics up to their necks."

"Sure—and any bright young inventor can get a job with them. And then he's a kept man—the inventions belong to the corporation, and only those that fit into the pattern of the powers-that-be ever see light. The rest are shelved. Do you really think that they'd let a free lance like you upset investments of billions of dollars?"

He frowned, then relaxed and laughed. "Oh, forget it, kid, it's not that serious."

"That's what you think. Did you ever hear of celanese voile? Probably not. It's a synthetic dress material used in place of chiffon. But it wore better and was washable, and it only cost about forty cents a yard, while chiffon costs four times as much. You can't buy it any more.

"And take razor blades. My brother bought one about five years ago that never had to be re-sharpened. He's still using it, but if he ever loses it, hell have to go back to the old kind. They took 'em off the market.

"Did you ever hear of guys who had found a better, cheaper fuel than gasoline? One showed up about four years ago and proved his claims—but he drowned a couple of weeks later in a swimming accident. I don't say that he was murdered, but it's damn funny that they never found his formula.

"And that reminds me—I once saw a clipping from the Los Angeles Daily News. A man bought a heavy standard make car in San Diego, filled her up and drove her to Los Angeles. He only used two gallons. Then he drove to Agua Caliente and back to San Diego, and only used three gallons. About a week later the sales company found him and bribed him to make an exchange. By mistake they had let him have a car that wasn't to be sold— one with a trick carburetor.

"Do you know any big heavy cars that get seventy miles to the gallon? You're not likely to—not while 'Breakages Ltd.' rules the roost. But the story is absolutely kosher—you can look it up in the files.

"And of course, everybody knows that automol~iles aren't built to wear, they're built to wear out, so you will buy a new one. They build 'em just as bad as the market will stand. Steamships iake a worse beating than a car, and they last thirty years or more."

Douglas laughed it off. "Cut 'out the gloom, Sweetle Pie. You've got a persecution c9mplex. Let's talk about something more cheerful—you and me, for instance. You make pretty good coffee. How about us taking out a license to live together?"

She ignored him.

'Well, why not. I'm young and healthy. You could do worse."

"Archie, did I ever tell you about the native chief that got a yen for me down in South America?"

"I don't think so. What about him?"

"He wanted me to marry him. He even offered to kill off his seventeen current wives and have them served up for the bridal feast."

"What's that got to do with my proposition?"

"I should have taken him up. A girl can't afford to turn down a good offer these days."

Archie walked up and down the laboratory, smoking furiously. Mary Lou perched on a workbench and watched him with troubled eyes. When he stopped to light another cigaret from the butt of the last, she bid for attention.

"Well, Master Mind, how does itlook to you now?"

He finished lighting his cigaret, burned himself, cursed in a monotone, then replied, "oh, you were right, Cassandra. We're in more trouble than I ever knew existed. First when we build an electric runabout that gets its power from the sun while it's parked at the curb, somebody pours kerosene over it and burns it up. I didn't mind that so much—it was just a side issue. But when I refuse to sell out to them, they slap all those phoney law suits on us, and tie us up like a kid with the colic."

"They haven't a legal leg to stand on."

"I know that, but they've got unlimited money and we haven't. They can run these suits Out for months—maybe years—only we can't last that long."

"What's our next move? Do you keep this appointment?"

"I don't want to. They'll try to buy me off again, and probably threaten me, in a refined way. I'd tell 'em to go to hell, if it wasn't for Dad. Somebody's broken into his house twice now, and he's too old to stand that sort of thing."

"I suppose all this labor trouble in the plant worries him, too."

"Of course it does. And since it dates from the time we started manufacturing the screens on a commercial scale, I'm sure it's part of the frame-up. Dad never had any labor trouble before. He always ran a union shop and treated his men like members of his own family. I don't blame him for being nervous. I'm getting tired of being followed everywhere I go, myself. It makes me jumpy."

Mary Lou puffed out a cloud of smoke. "I've been tailed the past couple of weeks."

"The hell you have! Mary Lou, that tears it. I'm going to settle this thing today."

"Going to sell out?"

"No." He walked over to his desk, opened a side drawer, took out a .38 automatic, and slipped it in his pocket. Mary Lou jumped down from the bench and ran to him. She put her hands on his shoulders, and looked up at him, fear in her face.

"Arch.iel"

He answered gently. "Yes, kid."

"Archie, don't do anything rash. If anything happened to you, you know damn well I couldn't get along with a normal man."

He patted her hair. "Those are the best words I've heard in weeks, kid."

Douglas returned about one P.M. Mary Lou met him at the elevator. "Well?"

"Same old song-and-dance. Nothing done in spite of my brave promises."

"Did they threaten you?"

"Not exactly. They asked me how much life insurance I carried."

'What did you telL them?'!.

"Nothing. I reached for my handkerchief and let them see that I was cirrying a gun. I thought it might cause them to revise any immediate plans they might have in mind. After that the interview sort of fizzled out and I left. Mary's little lamb followed me home, ~as usual."

"Same plug-ugly that shadowed you yesterday?"

"Him, or his twin. He couldn't be a twin, though, come to think about it. They'd have both died of fright at birth."

"True enough. Have you had lunch?"

"Not yet. Let's ease down to the shop lunch room and take on some groceries. We can do our worrying later."

The lunch room was deserted. They talked very little. Mary Lou's blue eyes stared vacantly over his head. At the second cup of coffee she reached out and touched him.

"Archie, do you know the ancient Chinese advice to young ladies about to undàrgo criminal assault?"

"No, what is it?"

"Just one word: 'Relax.' That's what we've got to do.!'

"Speak English."

"I'll give you a blueprint Why are we under attack?"

"We've got something they want."

"Not at all. We've got something they want to quarantine—they don't want anyone else to have it. So they try to buy you off~, or scare you into quitting. If these don't work, they'll try something stronger. Now you're danger.. ous to them and in danger from them because you've got a secret. What happens if it isn't a secret? Suppose everybody knows it?"

"They'd be sore as hell."

"Yes, but what would they do? Nothing. Those big tycoons are practical men. They won't waste a dime on heckling you if It no longer serves their pocketbooks."

"What do you propose that we do?"

"Give away the secret. Tell the world bow it's done.
Let anybody manufacture power screens and light screens who wants to. The heat process on the mix is so simple that any commercial chemist can duplicate it once you tell 'em how, and there must be a thousand factories, at least, that could manufacture them with their present machinery from materials at their very doorsteps."

"But, good Lord, Mary Lou, we'd be left in the lurch."

"What can you lose? We've made a measly couple of
thousand dollars so far, keeping the process secret. If you turn it loose, you still hold the paten, and you could charge a nominal royalty—one that it wouldn't be worth while trying to beat, say ten cents a square yard on each screen manufactured. There would be millions of square yards turned out the fist year—hundreds of thousands of dollars to you the first year, and a big income for life. You can have the finest research laboratory in the' country."

He slammed his napkin down on the table. "Kid, I believe you're right."

"Don't. forget, too, what you'll be doing for the country. There'll be factories springing up right away all over the Southwest—every place where there's iota of sunshine. Free power! You'll be the new emancipator."

He stood up, his eyes shining. "Kid, we'll do it! Half a minute while I tell Dad our decision, then we'll beat it for town."

Two hours later the teletype In every news service office in the country was clicking out the story. Douglas insisted that the story include the technical details of the process as a condition of releasing it. By the time he and Mary Lou walked out of the

Associated Press building the first extra was on the street: “GENIUS GRANTS GRATIS POWER TO PUBLIC.” Archie bought one and beckoned to the muscle man who was shadowing him.

“Come here, Sweetheart. You can quit pretending to be a fireplug. I’ve an errand for you.” He handed the lunk the newspaper. It was accepted uneasily. In all his long and unsavory career he had never had the etiquette of shadowing treated in so cavalier a style. “Take this paper to your boss and tell him Archie Douglas sent him a valentine. Don’t stand there staring at me! Beat it, before I break your fat head!”

As Archie watched him disap~ar in the crowd, Mary Lou slipped a hand in his. “Feel better, son?”

“Lots.”

“All your worries over?”

“All but one.” He grabbed her shoulders and swung her ‘around. “I’ve got an argument to settle with you. Come along!” He grabbed her wrist and pulled her out into the crosswalk.

“What the hell, Archie! Let go my wrist.”

“Not likely. You see that building over there? That’s the court house. Right next to the window where they issue dog licenses, there’s one where we can get a wedding permit.”

“I’m not going to marry you!”

“The’ hell you aren’t. You’ve stayed all night in mylaboratory a dozen times. I’m compromised. You’ve got to make an honest man of me—or I’ll start to scream right here in the street.”

“This is blackmail!”

As they entered the building, she was still dragging her feet—but not too hard.

Life-Line

THE chairman rapped loudly for order. Gradually the catcalls and boos died away as several self-appointed sergeants-at-arms persuaded a few hot-headed individuals to sit down. The speaker on the rostrum by the chairman seemed unaware of the disturbance. His bland, faintly insolent face was impassive. The chairman turned to the speaker, and addressed him, in a voice in which anger and annoyance were barely restrained.

"Doctor Pinero," - the "Doctor" was faintly stressed - "I must apologize to you for the unseemly outburst during your remarks. I am surprised that my colleagues should so far forget the dignity proper to men of science as to interrupt a speaker, no matter," he paused and set his mouth, "no matter how great the provocation." Pinero smiled in his face, a smile that was in some way an open insult. The chairman visibly controlled his temper and continued, "I am anxious that the program be concluded decently and in order. I want you to finish your remarks. Nevertheless, I must ask you to refrain from affronting our intelligence with ideas that any educated man knows to be fallacious. Please confine yourself to your discovery - if you have made one."

Pinero spread his fat white hands, palms down. "How can I possibly put a new idea into your heads, if I do not first remove your delusions?"

The audience stirred and muttered. Someone shouted from the rear of the hail, "Throw the charlatan out! We've had enough." The chairman pounded his gavel.

"Gentlemen! Please!" Then to Pinero, "Must I remind you that you are not a member of this body, and that we did not invite you?"

Pinero's eyebrows lifted. "So? I seem to remember an invitation on the letterhead of the Academy?"

The chairman chewed his lower lip before replying. "True. I wrote that invitation myself. But it was at the request of one of the trustees - a fine public-spirited gentleman, but not a scientist, not a member of the Academy."

Pinero smiled his irritating smile. "So? I should have guessed. Old Bidwell, not so, of Amalgamated Life Insurance? And he wanted his trained seals to expose me as a fraud, yes? For if I can tell a man the day of his own death, no one will buy his pretty policies. But how can you expose me, if you will not listen to me first? Even supposing you had the wit to understand me? Bah! He has sent jackals to tear down a lion." He deliberately turned his back on them. The muttering of the crowd swelled and took on a vicious tone. The chairman cried vainly for order. There arose a figure in the front row.

"Mister Chairman!"

The chairman grasped the opening and shouted, "Gentlemen! Doctor Van RheinSmitt has the floor." The commotion died away.

The doctor cleared his throat, smoothed the forelock of his beautiful white hair, and thrust one hand into a side pocket of his smartly tailored trousers. He assumed his women's club manner.

"Mister Chairman, fellow members of the Academy of Science, let us have tolerance. Even a murderer has the right to say his say before the state exacts its tribute. Shall we do less? Even though one may be intellectually certain of the verdict? I grant Doctor Pinero every consideration that should be given by this august body to any unaffiliated colleague, even though" - he bowed slightly in Pinero's direction - "we may

not be familiar with the university which bestowed his degree. If what he has to say is false, it can not harm us. If what he has to say is true, we should know it." His mellow cultivated voice rolled on, soothing and calming. "If the eminent doctor's manner appears a trifle in urbane for our tastes, we must bear in mind that the doctor may be from a place, or a stratum, not so meticulous in these little matters. Now our good friend and benefactor has asked us to hear this person and carefully assess the merit of his claims. Let us do so with dignity and decorum."

He sat down to a rumble of applause, comfortably aware that he had enhanced his reputation as an intellectual leader. Tomorrow the papers would again mention the good sense and persuasive personality of "America's handsomest University President". Who knew? Perhaps old Bidwell would come through with that swimming pool donation.

When the applause had ceased, the chairman turned to where the center of the disturbance sat, hands folded over his little round belly, face serene.

"Will you continue, Doctor Pinero?"

"Why should I?"

The chairman shrugged his shoulders. "You came for that purpose."

Pinero arose. "So true. So very true. But was I wise to come? Is there anyone here who has an open mind who can stare a bare fact in the face without blushing? I think not. Even that so beautiful gentleman who asked you to hear me out has already judged me and condemned me. He seeks order, not truth. Suppose truth defies order, will he accept it? Will you? I think not. Still, if I do not speak, you will win your point by default. The little man in the street will think that you little men have exposed me, Pinero, as a hoaxer, a pretender. That does not suit my plans. I will speak."

"I will repeat my discovery. In simple language I have invented a technique to tell how long a man will live. I can give you advance billing of the Angel of Death. I can tell you when the Black Camel will kneel at your door. In five minutes time with my apparatus I can tell any of you how many grains of sand are still left in your hourglass." He paused and folded his arms across his chest. For a moment no one spoke. The audience grew restless. Finally the chairman intervened.

"You aren't finished, Doctor Pinero?"

"What more is there to say?"

"You haven't told us how your discovery works."

Pinero's eyebrows shot up. "You suggest that I should turn over the fruits of my work for children to play with. This is dangerous knowledge, my friend. I keep it for the man who understands it, myself." He tapped his chest.

"How are we to know that you have anything back of your wild claims?"

"So simple. You send a committee to watch me demonstrate. If it works, fine. You admit it and tell the world so. If it does not work, I am discredited, and will apologize. Even I, Pinero, will apologize."

A slender stoop-shouldered man stood up in the back of the hail. The chair recognized him and he spoke:

"Mr. Chairman, how can the eminent doctor seriously propose such a course? Does he expect us to wait around for twenty or thirty years for some one to die and prove his claims?"

Pinero ignored the chair and answered directly:

"Pfui! Such nonsense! Are you so ignorant of statistics that you do not know that in any large group there is at least one who will die in the immediate future? I make you a proposition; let me test each one of you in this room and I will name the man who will die within the fortnight, yes, and the day and hour of his death." He glanced fiercely around the room. "Do you accept?"

Another figure got to his feet, a portly man who spoke in measured syllables. "I, for one, can not countenance such an experiment. As a medical man, I have noted with sorrow the plain marks of serious heart trouble in many of our elder colleagues. If Doctor Pinero knows those symptoms, as he may, and were he to select as his victim one of their number, the man so selected would be likely to die on schedule, whether the distinguished speaker's mechanical egg-timer works or not."

Another speaker backed him up at once. "Doctor Shepard is right. Why should we waste time on voodoo tricks? It is my belief that this person who calls himself Doctor Pinero wants to use this body to give his statements authority. If we participate in this farce, we play into his hands. I don't know what his racket is, but you can bet that he has figured out some way to use us for advertising for his schemes. I move, Mister Chairman, that we proceed with our regular business."

The motion carried by acclamation, but Pinero did not sit down. Amidst cries of "Order! Order!" he shook his untidy head at them, and had his say:

"Barbarians! Imbeciles! Stupid dolts! Your kind have blocked the recognition of every great discovery since time began. Such ignorant canaille are enough to start Galileo spinning in his grave. That fat fool down there twiddling his elk's, tooth calls himself a medical man. Witch doctor would be a better term! That little baldheaded runt over there - You! You style yourself a philosopher, and prate about life and time in your neat categories. What do you know of either one? How can you ever learn when you won't examine the truth when you have a chance? Bah!" He spat upon the stage. "You call this an Academy of Science. I call it an undertaker's convention, interested only in embalming the ideas of your red-blooded predecessors."

He paused for breath and was grasped on each side by two members of the platform committee and rushed out the wings. Several reporters arose hastily from the press table and followed him. The chairman declared the meeting adjourned.

The newspapermen caught up with him as he was going out by the stage door. He walked with a light springy step, and whistled a little tune. There was no trace of the belligerence he had shown a moment before. They crowded about him. "How about an interview, doe?" "What dyu think of Modem Education?" "You certainly told 'em. What are your views on Life after Death?" "Take off your hat, doe, and look at the birdie."

He grinned at them all. "One at a time, boys, and not so fast. I used to be a newspaperman myself. How about coming up to my place, and we'll talk about it?"

A few minutes later they were trying to find places to sit down in Pinero's messy bed-living-room, and lighting his cigars. Pinero looked around and beamed. "What'll it be, boys? Scotch, or Bourbon?" When that was taken care of he got down to business. "Now, boys, what do you want to know?"

"Lay it on the line, doe. Have you got something, or haven't you?"

"Most assuredly I have something, my young friend."

"Then tell us how it works. That guff you handed the profs won't get you anywhere now."

"Please, my dear fellow. it is my invention. I expect to make some money with it. Would you have me give it away to the first person who asks for it?"

"See here, doe, you've got to give us something if you expect to get a break in the morning papers. What do you use? A crystal ball?"

"No, not quite. Would you like to see my apparatus?"

"Sure. Now we are getting somewhere."

He ushered them into an adjoining room, and waved his hand. "There it is, boys." The mass of equipment that met their eyes vaguely resembled a medico's office x-ray gear. Beyond the obvious fact that it used electrical power, and that some of the dials were calibrated in familiar terms, a casual inspection gave no clue to its actual use.

"What's the principle, doe?"

Pinero pursed his lips and considered. "No doubt you are all familiar with the truism that life is electrical in nature? Well, that truism isn't worth a damn, but it will help to give you an idea of the principle. You have also been told that time is a fourth dimension. Maybe you believe it, perhaps not. It has been said so many times that it has ceased to have any meaning. It is simply a cliché that windbags use to impress fools. But I want you to try to visualize it now and try to feel it emotionally."

He stepped up to one of the reporters. "Suppose we, take you as an example. Your name is Rogers, is it not? Very well, Rogers, you are a space-time event having duration four ways. You are not quite six feet tall, you are about twenty inches wide and perhaps ten inches thick. In time, there stretches behind you more of this space-time event reaching to perhaps nineteen-sixteen, of which we see a cross-section here at right angles to the time axis, and as thick as the present. At the far end is a baby, smelling of sour milk and drooling its breakfast on its bib. At the other end lies, perhaps, an old man someplace in the nineteen-eighties. Imagine this space-time event which we call Rogers as a long pink worm, continuous through the years, one end at his mother's womb, the other at the grave. It stretches past us here and the cross-section we see appears as a single discrete body. But that is illusion. There is physical continuity to this pink worm, enduring through the years. As a matter of fact there is physical continuity in, this concept to the entire race, for these pink worms branch off from other pink worms. In this fashion the race is like a vine whose branches intertwine and send Out shoots. Only by taking a cross-section of the vine would we fall into the error of believing that the shootlets were discrete individuals."

He paused and looked around at their faces. One of them, a dour hard-bitten chap, put in a word.

"That's all very pretty, Pinero; if true, but where does that get you?"

Pinero favored him with an unresentful smile. "Patience, my friend. I asked you to think of life as electrical. Now think of our long pink worm as a conductor of electricity. You have heard, perhaps, of the fact that electrical engineers can, by certain measurements, predict the exact location of a break in a trans-Atlantic cable without ever leaving the shore. I do the same with our pink worms. By applying my instruments to the cross-section here in this room I can tell where the break occurs, that is to say, when death takes place. Or, if you like, I can reverse the connections and tell you the date of your birth. But that is uninteresting; you already know it."

The dour individual sneered. "I've caught you, doe. If what you said about the race being like a vine of pink worms is true, you can't tell birthdays because the

connection with the race is continuous at birth. Your electrical. conductor reaches on back through the mother into a man's remotest ancestors."

Pinero beamed, "True, and clever, my friend. But you have pushed the analogy too far. It is not done in the precise manner in which one measures the length of an electrical conductor. In some ways it is more like measuring the length of a long corridor by bouncing an echo off the far end. At birth there is a sort of twist in the corridor, and, by proper calibration, I can detect the echo from that twist. There is just one case in which I can get no determinant reading; when a woman is actually carrying a child, I can't sort out her life-line from that of the unborn infant."

"Let's see you prove it."

"Certainly, my dear friend. Will you be a subject?"

One of the others spoke up. "He's called your bluff, Luke. Put up, or shut up."

"I'm game. What do I do?"

"First write the date of your birth on a sheet of paper, and hand it to one of your colleagues."

Luke complied. "Now what?"

"Remove your outer clothing and step upon these scales. Now tell me, were you ever very much thinner, or very much fatter, than you are now. No? What did you weigh at birth? Ten pounds? A fine bouncing baby boy. They don't come so big any more."

"What is all this flubdubbery?"

"I am trying to approximate the average cross-section of our long pink conductor, my dear Luke. Now will you seat yourself here. Then place this electrode in your mouth. No, it will not hurt you; the voltage is quite low, less than one micro-volt, but I must have a good connection." The doctor left him and went behind his apparatus, where he lowered a hood over his head before touching his controls. Some of the exposed dials came to life and a low humming came from the machine. It stopped and the doctor popped out of his little hide-away.

"I get sometime in February, nineteen-twelve. Who has the piece of paper with the date?"

It was produced and unfolded. The custodian read, "February 22nd, 1912."

The stillness that followed was broken by a voice from the edge of the little group. "Doe, can I have another drink?"

The tension relaxed, and several spoke at once, "Try it on me, doe." "Me first, doe, I'm an orphan and really want to know." "How about it, doe. Give us all a little loose play."

He smilingly complied, ducking in and out of the hood like a gopher from its hole. When they all had twin slips of paper to prove the doctor's skill, Luke broke a long silence.

"How about showing how you predict death, Pinero."

"If you wish. Who will try it?"

No one answered. Several of them nudged Luke forward. "Go ahead, smart guy. You asked for it." He allowed himself to be seated in the chair. Pinero changed some of the switches, then entered the hood. When the humming ceased, he came out, rubbing his hands briskly together.

"Well, that's all there is to see, boys. Got enough for a story?"

"Hey, what about the prediction? When does Luke get his 'thirty'?"

Luke faced him. "Yes, how about it? What's your answer?"

Pinero looked pained. "Gentlemen, I am surprised at you. I give that information for a fee. Besides, it is a professional confidence. I never tell anyone but the client who consults me."

"I don't mind. Go ahead and tell them."

"I am very sorry. I really must refuse. I agreed only to show you how, not to give the results."

Luke ground the butt of his cigarette into the floor. "It's a hoax, boys. He probably looked up the age of every reporter in town just to be ready to pull this. It won't wash, Pinero."

Pinero gazed at him sadly. "Are you married, my friend?"

"Do you have any one dependent on you? Any close relatives?"

"No. WHY, do you want to adopt me?"

Pinero shook his head sadly. "I am very sorry for you, my dear Luke. You will die before tomorrow."

"SCIENCE MEET ENDS IN RIOT"
"SAVANTS SAPS SAYS SEER"
"DEATH PUNCHES TIMECLOCK"
"SCRIBE DIES PER DOC'S DOPE"
"HOAX' CLAIMS SCIENCE HEAD"

"... within twenty minutes of Pinero's strange prediction, Timons was struck by a falling sign while walking down Broadway toward the offices of the Daily Herald where he was employed.

"Doctor Pinero declined to comment but confirmed the story that he had predicted Timons' death by means of his so-called chronovitameter. Chief of Police Roy..."

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- Legal Notice

To whom it may concern, greetings; I, John Cabot Winthrop III, of the firm Winthrop, Winthrop, Ditmars & Winthrop, Attorneys-at-Law, do affirm that Hugo Pinero of this city did hand to me ten thousand dollars in lawful money of the United States, and instruct me to place it in escrow with a chartered bank of my selection with escrow instructions as follows:.

The entire bond shall be forfeit, and shall forthwith be paid to the first client of Hugo Pinero and/or Sands of Time, Inc. who shall exceed his life tenure as predicted by Hugo Pinero by one per centurn, or to the estate of the first client who shall fail of such predicted tenure in a like amount, whichever occurs first in point of time.

I do further affirm that I have this day placed this bond in escrow with the above related instructions with the Equitable-First National Bank of this city.

Subscribed--and sworn,
John Cabot Winthrop Ill

Subscribed and sworn to before me
this 2nd day of April, 1951.
Albert M. Swanson
Notary Public in and for this county and state
My commission expires June 17, 1951.

"Good evening Mr. and Mrs. Radio Audience, let's go to Press! Flash! Hugo Pinero, The Miracle Man from Nowhere, has made his thousandth death prediction without a claimant for the reward he posted for anyone who catches him failing to call the turn. With thirteen of his clients already dead it is mathematically certain that - he has a private line to the main office of the Old Man with the Scythe. That is one piece of news I don't want to know before it happens. Your Coast-to-Coast Correspondent will not be a client of Prophet Pinero. . ."

The judge's watery baritone cut through the stale air of the courtroom. "Please, Mr. Weeds, let us return to our muttons. This court granted your prayer for a temporary restraining order, and now you ask that it be made permanent. In rebuttal, Mr. Pinero claims that you have presented no cause and asks that the injunction be lifted, and that I order your client to cease from attempts to interfere with what Pinero describes as a simple - lawful business. As you are not addressing a jury, please omit the rhetoric and tell me in plain language why I should not grant his prayer."

Mr. Weeds jerked his chin nervously, making his flabby Grey dewlap drag across his high stiff collar, and resumed:

"May it please the honorable court, I represent the public-"

"Just a moment. I thought you were appearing for Amalgamated Life Insurance."

"I am, Your Honor, in a formal sense. In a wider sense I represent several other major assurance, fiduciary, and financial institutions; their stockholders, and policy holders, who constitute a majority of the citizenry. In addition we feel that we protect the interests of the entire population; unorganized, inarticulate, and otherwise unprotected."

"I thought that I represented the public," observed the judge dryly. "I am afraid I must regard you as appearing for your client-of-record. But continue; what is your thesis?"

The elderly barrister attempted to swallow his Adam's apple, then began again. "Your Honor, we contend that there are two separate reasons why this injunction should be made permanent, and, further, that each reason is sufficient alone. In the first place, this person is engaged in the practice of soothsaying, an occupation proscribed both in common law and statute. He is a common fortune teller, a vagabond charlatan who preys on the gullibility of the public. He is cleverer than the ordinary gypsy palm-reader,

astrologer, or table tipper, and to the same extent more dangerous. He makes false claims of modern scientific methods to give a spurious dignity to his thaumaturgy. We have here in court leading representatives of the Academy of Science to give expert witness as to the absurdity of his claims.

"In the second place, even if this person's claims were true-granting for the sake of argument such an absurdity" - Mr. Weems permitted himself a thin-lipped smile - "we contend that his activities are contrary to the public interest in general, and unlawfully injurious to the interests of my client in particular. We are prepared to produce numerous exhibits with the legal custodians to prove that this person did publish, or cause to have published, utterances urging the public to dispense with the priceless boon of life insurance to the great detriment of their welfare and to the financial damage of my client."

Pinero arose in his place. "Your Honor, may I say a few words?"

"What is it?"

"I believe I can simplify the situation if permitted to make a brief analysis."

"Your Honor," cut in Weems, "this is most irregular."

"Patience, Mr. Weems. Your interests will be protected. It seems to me that we need more light and less noise in this matter. If Dr. Pinero can shorten the proceedings by speaking at this time, I am inclined to let him. Proceed, Dr. Pinero."

"Thank you, Your Honor. Taking the last of Mr. Weems' points first, I am prepared to stipulate that I published the utterances he speaks of"

"One moment, Doctor. You have chosen to act as your own attorney. Are you sure you are competent to protect your own interests?"

"I am prepared to chance it, Your Honor. Our friends here can easily prove what I stipulate."

"Very well. You may proceed."

"I will stipulate that many persons have cancelled life insurance policies as a result thereof, but I challenge them to show that anyone so doing has suffered any loss or damage there from. It is true that the Amalgamated has lost business through my activities, but that is the natural result of my discovery, which has made their policies as obsolete as the bow and arrow. If an injunction is granted on that ground, I shall set up a coal oil lamp factory, then ask for an injunction against the Edison and General Electric companies to forbid them to manufacture incandescent bulbs."

"I will stipulate that I am engaged in the business of making predictions of death, but I deny that I am practicing magic, black, white, or rainbow colored. If to make predictions by methods of scientific accuracy is illegal, then the actuaries of the Amalgamated have been guilty for years in that they predict the exact percentage that will die each year in any given large group. I predict death retail; the Amalgamated predicts it wholesale. If their actions are legal, how can mine be illegal?"

"I admit that it makes a difference whether I can do what I claim, or not; and I will stipulate that the so-called expert witnesses from the Academy of Science will testify that I cannot. But they know nothing of my method and cannot give truly expert testimony on it."

"Just a moment, Doctor. Mr. Weems, is it true that your expert witnesses are not conversant with Dr. Pinero's theory and methods?"

Mr. Weems looked worried. He drummed on the table top, then answered, "Will the Court grant me a few moments indulgence?"

"Certainly."

Mr. Weems held a hurried whispered consultation with his cohorts, then faced the bench. "We have a procedure to suggest, Your Honor. If Dr. Pinero will take the stand and explain the theory and practice of his alleged method, then these distinguished scientists will be able to advise the Court as to the validity of his claims."

The judge looked inquiringly at Pinero, who responded, "I will not willingly agree to that. Whether my process is true or false, it would be dangerous to let it fall into the hands of fools and quacks" he waved his hand at the group of professors seated in the front row, paused and smiled maliciously "as these gentlemen know quite well. Furthermore it is not necessary to know the process in order to prove that it will work. Is it necessary to understand the complex miracle of biological reproduction in order to observe that a hen lays eggs? Is it necessary for me to reeducate this entire body of self-appointed custodians of wisdom - cure them of their ingrown superstitions - in order to prove that my predictions are correct? There are but two ways of forming an opinion in science. One is the scientific method; the other, the scholastic. One can judge from experiment, or one can blindly accept authority. To the scientific mind, experimental proof is all important and theory is merely a convenience in description, to be junked when it no longer fits. To the academic mind, authority is everything and facts are junked when they do not fit theory laid down by authority."

"It is this point of view-academic minds clinging like oysters to disproved theories-that has blocked every advance of knowledge in history. I am prepared to prove my method by experiment, and, like Galileo in another court, I insist, 'It still moves!'"

"Once before I offered such proof to this same body of self-styled experts, and they rejected it. I renew my offer; let me measure the life lengths of the members of the Academy of Science. Let them appoint a committee to judge the results. I will seal my findings in two sets of envelopes; on the outside of each envelope in one set will appear the name of a member, on the inside the date of his death. In the other envelopes I will place names, on the outside I will place dates. Let the committee place the envelopes in a vault, then meet from time to time to open the appropriate envelopes. In such a large body of men some deaths may be expected, if Amalgamated actuaries can be trusted, every week or two. In such a fashion they will accumulate data very rapidly to prove that Pinero is a liar, or no."

He stopped, and pushed out his little chest until it almost caught up with his little round belly. He glared at the sweating savants. "Well?"

The judge raised his eyebrows, and caught Mr. Weems' eye. "Do you accept?"

"Your Honor, I think the proposal highly improper-"

The judge cut him short. "I warn you that I shall rule against you if you do not accept, or propose an equally reasonable method of arriving at the truth."

Weems opened his mouth, changed his mind, looked up and down the faces of learned witnesses, and faced the bench. "We accept, Your Honor."

"Very well. Arrange the details between you. The temporary injunction is lifted, and Dr. Pinero must not be molested in the pursuit of his business. Decision on the petition for permanent injunction is reserved without prejudice pending the accumulation of evidence. Before we leave this matter I wish to comment on the theory implied by you,

Mr. Weems, when you claimed damage to your client. There has grown up in the minds of certain groups in this country the notion that because a man or corporation has made a profit out of the public for a number of years, the government and the courts are charged with the duty of guaranteeing such profit in the future, even in the face of changing circumstances and contrary public interest. This strange doctrine is not supported by statute nor common law. Neither individuals nor corporations have any right to come into court and ask that the clock of history be stopped, or turned back, for their private benefit. That is all."

Bidwell grunted in annoyance. "Weems, if you can't think up anything better than that, Amalgamated is going to need a new chief attorney. It's been ten weeks since you lost the injunction, and that little wart is coining money hand over fist. Meantime every insurance firm in the country is going broke. Hoskins, what's our loss ratio?"

"It's hard to say, Mr. Bidwell. It gets worse every day. We've paid off thirteen big policies this week; all of them taken out since Pinero started operations."

A spare little man spoke up. "I say, Bidwell, we aren't accepting any new applications for United until we have time to check and be sure that they have not consulted Pinero. Can't we afford to wait until the scientists show him up?"

Bidwell snorted. "You blasted optimist! They won't show him up. Aldrich, can't you face a fact? The fat little blister has got something; how I don't know. This is a fight to the finish. If we wait, we're licked." He threw his cigar into a cuspidor, and bit savagely into a fresh one. "Clear out of here, all of you! I'll handle this my own way. You too, Aldrich. United may wait, but Amalgamated won't."

Weems cleared his throat apprehensively. "Mr. Bidwell, I trust you will consult with me before embarking on any major change in policy?"

Bidwell grunted. They filed out. When they were all gone and the door closed, Bidwell snapped the switch of the inter-office announcer. "O.K.; send him in."

The outer door opened; a slight dapper figure stood for a moment at the threshold. His small dark eyes glanced quickly about the room before he entered, then he moved up to Bidwell with a quick soft tread. He spoke to Bidwell in a flat emotionless voice. His face remained impassive except for the live animal eyes. "You wanted to talk to me?"

"Yes."

"What's the proposition?"

"Sit down, and we'll talk."

Pinero met the young couple at the door of his inner office.

"Come in, my dears, come in. Sit down. Make yourselves at home. Now tell me, what do you want of Pinero? Surely such young people are not anxious about the final roll call?"

The boy's honest young face showed slight confusion. "Well, you see, Dr. Pinero, I'm Ed Harley and this is my wife, Betty. We're going to have-that is, Betty is expecting a baby and, well-"

Pinero smiled benignly. "I understand. You want to know how long you will live in order to make the best possible provision for the youngster. Quite wise. Do you both want readings, or just yourself?"

The girl answered, "Both of us, we think."

Pinero beamed at her. "Quite so. I agree. Your reading presents certain technical difficulties at this time, but I can give you some information now, and more later after

your baby arrives. Now come into my laboratory, my dears, and we'll commence." He rang for their case histories, then showed them into his workshop. "Mrs. Harley first, please. If you will go behind that screen and remove your shoes and your outer clothing, please. Remember, I am an old man, whom you are consulting as you would a physician."

He turned away and made some minor adjustments of his apparatus. Ed nodded to his wife who slipped behind the screen and reappeared almost at once, clothed in two wisps of silk. Pinero glanced up, noted her fresh young prettiness and her touching shyness.

"This way, my dear. First we must weigh you. There. Now take your place on the stand. This electrode in your mouth. No, Ed, you mustn't touch her while she is in the circuit. It won't take a minute. Remain quiet."

He dove under the machine's hood and the dials sprang into life. Very shortly he came out with a perturbed look on his face. "Ed, did you touch her?"

"No, Doctor." Pinero ducked back again, remained a little longer. When he came out this time, he told the girl to get down and dress. He turned to her husband.

"Ed, make yourself ready."

"What's Betty's reading, Doctor?"

"There is a little difficulty. I want to test you first."

When he came out from taking the youth's reading, his face was more troubled than ever. Ed inquired as to his trouble. Pinero shrugged his shoulders, and brought a smile to his lips.

"Nothing to concern you, my boy. A little mechanical misadjustment, I think. But I shan't be able to give you two your readings today. I shall need to overhaul my machine. Can you come back tomorrow?"

"Why, I think so. Say, I'm sorry about your machine. I hope it isn't serious."

"It isn't, I'm sure. Will you come back into my office, and visit for a bit?"

"Thank you, Doctor. You are very kind."

"But Ed, I've got to meet Ellen."

Pinero turned the full force of his personality on her.

"Won't you grant me a few moments, my dear young lady? I am old and like the sparkle of young folk's company. I get very little of it. Please." He nudged them gently into his office, and seated them. Then he ordered lemonade and cookies sent in, offered them cigarettes, and lit a cigar.

Forty minutes later Ed listened entranced, while Betty was quite evidently acutely nervous and anxious to leave, as the doctor spun out a story concerning his adventures as a young man in Tierra del Fuego. When the doctor stopped to relight his cigar, she stood up.

"Doctor, - we really must leave. Couldn't we hear the rest tomorrow?"

"Tomorrow? There will not be time tomorrow."

"But you haven't time today either. Your secretary has rung five times."

"Couldn't you spare me just a few more minutes?"

"I really can't today, doctor. I have an appointment. There is someone waiting for me."

"There is no way to induce you?"

"I'm afraid not. Come, Ed."

After they had gone, the doctor stepped to the window and stared out over the city. Presently he picked out two tiny figures as they left the office building. He watched them hurry to the corner, wait for the lights to change, then start across the street. When they were part way across, there came the scream of a siren. The two little figures hesitated, started back, stopped, and turned. Then the car was upon them. As the car slammed to a stop, they showed up from beneath it, no longer two figures, but simply a limp unorganized heap of clothing.

Presently the doctor turned away - from the window. Then he picked up his phone, and spoke to his secretary.

"Cancel my appointments for the rest of the day.... No... No one... I don't care; cancel them." Then he sat down in his chair. His cigar went out. Long after dark he held it, still unlighted.

Pinero sat down at his dining table and contemplated the gourmet's luncheon spread before him. He had ordered this meal with particular care, and had come home a little early in order to enjoy it fully.

Somewhat later he let a few drops of fiori d'Alpini roll around his tongue and trickle down his throat. The heavy fragrant syrup warmed his mouth, and reminded him of the little mountain flowers for which it was named. He sighed. It - had been a good meal, an exquisite meal and had justified the exotic liqueur. His musing was interrupted by a disturbance at the front door. The voice of his elderly maidservant was raised in remonstrance. A heavy male voice interrupted her. The commotion moved down the hail and the dining room door was pushed open.

"Madonna! Non si puo entrare! The Master is eating!"

"Never mind, - Angela. I have time to see these gentlemen. You ..may go." Pinero faced the surly-faced spokesman of the intruders. "You have business with me; yes?"

"You bet we have. Decent people have had enough of your damned nonsense."

"And so?"

The caller did not answer at once. A smaller dapper individual moved out from behind him and faced Pinero.

"We might as well begin." The chairman of the committee placed a key in the lock-box and opened it. "Wenzell, will you help me pick out today's envelopes?" He was interrupted by a touch on his arm. - "Dr. Baird, you are wanted on the telephone."

"Very well. Bring the instrument here."

When it was fetched he placed the receiver to his ear. "Hello.... Yes; speaking.... What? .. No, we have beard nothing... Destroyed the machine, you say.... Dead! How?.... No! No statement. None at all.... Call me later...."

He slammed the instrument down - and pushed it from him.

"What's up? Who's dead now?"

Baird held up one hand. "Quiet, gentlemen, please!

Pinero was murdered a few moments ago at his home."

"Murdered?!"

"That isn't all. About the same time vandals broke into his office and smashed his apparatus." -

No one spoke at first. The committee members glanced around at each other. No one seemed anxious to be the first to comment.

Finally one spoke up. "Get it out."

"Get what out?"

"Pinero's envelope. It's in there too. I've seen it."

Baird located it and slowly tore it open. He unfolded the single sheet of paper, and scanned it.

"Well? Out with it!"

"One thirteen p.m. - today."

They took this in silence.

Their dynamic calm was broken by a member across the table from Baird reaching for the lock-box. Baud interposed a hand.

"What do you want?"

"My prediction-it's in there-we're all in there."

"Yes, yes. We're all in here. Let's have them."

Baird placed both hands over the box. He held the eye of the man opposite him but did not speak. He licked his lips. The corner of his mouth twitched. His hands shook. Still he did not speak. The man opposite relaxed back into his chair.

"You're right, of course," he said.

"Bring me that waste basket." Baird's voice was low and strained but steady.

He accepted it and dumped the litter on the rug. He placed the tin basket on the table before him. He tore half a dozen envelopes across, set a match to them, and dropped them in the basket. Then he started tearing a double handful at a time, and fed the fire steadily. The smoke made him cough, and tears ran out of his smarting eyes. Someone got up and opened a window. When he was through, he pushed the basket away from him, looked down, and spoke.

"I'm afraid I've ruined this table top."

Logic of Empire

'Don't be a sentimental fool, Sam!'

'Sentimental, or not,' Jones persisted, 'I know human slavery when I see it. That's what you've got on Venus.'

Humphrey Wingate snorted. 'That's utterly ridiculous. The company's labor clients are employees, working under legal contracts, freely entered into.'

Jones' eyebrows raised slightly. 'So? What kind of a contract is it that throws a man into jail if he quits his job?'

'That's not the case. Any client can quit his job on the usual two weeks notice-I ought to know; I -'

'Yes, I know,' agreed Jones in a tired voice. 'You're a lawyer. You know all about contracts. But the trouble with you, you dunderheaded fool, is that all you understand is legal phrases. Free contract-nuts! What I'm talking about is facts, not legalisms. I don't care what the contract says-those people are slaves!'

Wingate emptied his glass and set it down. 'So I'm a dunderheaded fool, am I? Well, I'll tell you what you are, Sam Houston Jones-you are a half-baked parlor pink. You've never had to work for a living in your life and you think it's just too dreadful that anyone else should have to. No, wait a minute,' he continued, as Jones opened his mouth, 'listen to me. The company's clients on Venus are a damn sight better off than most people of their own class here on Earth. They are certain of a job, of food, and a place to sleep. If they get sick, they're certain of medical attention. The trouble with people of that class is that they don't want to work -,

'Who does?'

'Don't be funny. The trouble is, if they weren't under a fairly tight contract, they'd throw up a good job the minute they got bored with it and expect the company to give 'em a free ride back to Earth. Now it may not have occurred to your fine, free charitable mind, but the company has obligations to its stockholders-you, for instance!-and it can't afford to run an interplanetary ferry for the benefit of a class of people that feel that the world owes them a living.'

'You got me that time, pal,' Jones acknowledged with a wry face, '-that crack about me being a stockholder. I'm ashamed of it.'

'Then why don't you sell?'

Jones looked disgusted. 'What kind of a solution is that? Do you think I can avoid the responsibility of knowing about it just unloading my stock?'

'Oh, the devil with it,' said Wingate. 'Drink up.'

'Righto,' agreed Jones. It was his first night aground after a practice cruise as a reserve officer; he needed to catch up on his drinking. Too bad, thought Wingate, that the cruise should have touched at Venus-'All out! All out! Up aaaall you idlers! Show a leg there! Show a leg and grab a sock!' The raucous voice sawed its way through Wingate's aching head. He opened his eyes, was blinded by raw white light, and shut them hastily. But the voice would not let him alone. 'Ten minutes till breakfast,' it rasped. 'Come and get it, or we'll throw it out!'

He opened his eyes again, and with trembling willpower forced them to track. Legs moved past his eyes, denim clad legs mostly, though some were bare-repulsive hairy nakedness. A confusion of male voices, from which he could catch words but not

sentences, was accompanied by an obbligato of metallic sounds, muffled but pervasive-shrrg, shrrg, thump! Shrrg, shrrg, thump! The thump with which the cycle was completed hurt his aching head but was not as nerve stretching as another noise, a toneless whirring sibilance which he could neither locate nor escape.

The air was full of the odor of human beings, too many of them in too small a space. There was nothing so distinct as to be fairly termed a stench, nor was the supply of oxygen inadequate. But the room was filled with the warm, slightly musky smell of bodies still heated by bedclothes, bodies not dirty but not freshly washed. It was oppressive and unappetizing-in his present state almost nauseating.

He began to have some appreciation of the nature of his surroundings; he was in a bunkroom of some sort. It was crowded with men, men getting up, shuffling about, pulling on clothes. He lay on the bottom-most of a tier of four narrow bunks. Through the interstices between the legs which crowded around him and moved past his face he could see other such tiers around the walls and away from the walls, stacked floor to ceiling and supported by stanchions.

Someone sat down on the foot of Wingate's bunk, crowding his broad fundamental against Wingate's ankles while he drew on his socks. Wingate squirmed his feet away from the intrusion. The stranger turned his face toward him. 'Did I crowd 'ja, bud? Sorry.' Then he added, not unkindly, 'Better rustle out of there. The Master-at-Arms'll be riding you to get them bunks up.' He yawned hugely, and started to get up, quite evidently having dismissed Wingate and Wingate's affairs from his mind.

'Wait a minute!' Wingate demanded hastily.

'Huh?'

'Where am I? In jail?'

The stranger studied Wingate's bloodshot eyes and puffy, unwashed face with detached but unmalicious interest. 'Boy, oh boy, you must 'a' done a good job of drinking up your bounty money.'

'Bounty money? What the hell are you talking about?'

'Honest to God, don't you know where you are?'

'No.'

'Well . . . ' The other seemed reluctant to proclaim a truth made silly by its self-evidence until Wingate's expression convinced him that he really wanted to know. 'Well, you're in the Evening Star, headed for Venus.'

A couple of minutes later the stranger touched him on the arm. 'Don't take it so hard, bud. There's nothing to get excited about.'

Wingate took his hands from his face and pressed them against his temples. 'It's not real,' he said, speaking more to himself than to the other. 'It can't be real -,

'Stow it. Come and get your breakfast.'

'I couldn't eat anything.'

'Nuts. Know how you feel . . . felt that way sometimes myself. Food is just the ticket.' The Master-at-Arms settled the issue by coming up and prodding Wingate in the ribs with his truncheon.

'What d'yuh think this is-sickbay, or first class? Get those bunks hooked up.'

'Easy, mate, easy,' Wingate's new acquaintance conciliated, 'our pal's not himself this morning.' As he spoke he dragged Wingate to his feet with one massive hand, then

with the other shoved the tier of bunks up and against the wall. Hooks clicked into their sockets, and the tier stayed up, flat to the wall.

'He'll be a damn sight less himself if he interferes with my routine,' the petty officer predicted. But he moved on. Wingate stood barefooted on the floorplates, immobile and overcome by a feeling of helpless indecision which was re-inforced by the fact that he was dressed only in his underwear. His champion studied him.

'You forgot your pillow. Here-' He reached down into the pocket formed by the lowest bunk and the wall and hauled out a flat package covered with transparent plastic. He broke the seal and shook out the contents, a single coverall garment of heavy denim. Wingate put it on gratefully. 'You can get the squeezer to issue you a pair of slippers after breakfast,' his friend added. 'Right now we gotta eat.'

The last of the queue had left the galley window by the time they reached it and the window was closed. Wingate's companion pounded on it. 'Open up in there!'

It slammed open. 'No seconds,' a face announced.

The stranger prevented the descent of the window with his hand. 'We don't want seconds, shipmate, we want firsts.'

'Why the devil can't you show up on time?' the galley functionary groused. But he slapped two ration cartons down on the broad sill of the issuing window. The big fellow handed one to Wingate, and sat down on the floor-plates, his back supported by the galley bulkhead.

'What's your name, bud?' he enquired, as he skinned the cover off his ration. 'Mine's Hartley-"Satchel" Hartley.'

'Mine is Humphrey Wingate.'

'Okay, Hump. Pleased to meet 'cha. Now what's all this song and dance you been giving me?' He spooned up an impossible bite of baked eggs and sucked coffee from the end of his carton.

'Well,' said Wingate, his face twisted with worry, 'I guess I've been shanghaied.' He tried to emulate Hartley's method of drinking, and got the brown liquid over his face.

'Here-that's no way to do,' Hartley said hastily. 'Put the nipple in your mouth, then don't squeeze any harder than you suck. Like this.' He illustrated. 'Your theory don't seem very sound to me. The company don't need crimps when there's plenty of guys standing in line for a chance to sign up. What happened? Can't you remember?'

Wingate tried. 'The last thing I recall,' he said, 'is arguing with a gyro driver over his fare.'

Hartley nodded. 'They'll gyp you every time. D'you think he put the slug on you?'

'Well . . . no, I guess not. I seem to be all right, except for the damndest hangover you can imagine.'

'You'll feel better. You ought to be glad the Evening Star is a high-gravity ship instead of a trajectory job. Then you'd really be sick, and no foolin'.'

'How's that?'

'I mean that she accelerates or decelerates her whole run. Has to, because she carries cabin passengers. If we had been sent by a freighter, it'd be a different story. They gun 'em into the right trajectory, then go weightless for the rest of the trip. Man, how the new chums do suffer!' He chuckled.

Wingate was in no condition to dwell on the hardships of space sickness. 'What T can't figure out,' he said, 'is how I landed here. Do you suppose they could have brought me aboard by mistake, thinking I was somebody else?'

'Can't say. Say, aren't you going to finish your breakfast?'

'I've had all I want.' Hartley took his statement as an invitation and quickly finished off Wingate's ration. Then he stood up, crumpled the two cartons into a ball, stuffed them down a disposal chute, and said,

'What are you going to do about it?'

'What am I going to do about it?' A look of decision came over Wingate's face. 'I'm going to march right straight up to the Captain and demand an explanation, that's what I'm going to do!'

'I'd take that by easy stages, Hump,' Hartley commented doubtfully.

'Easy stages, hell!' He stood up quickly. 'Ow! My head!'

The Master-at-Arms referred them to the Chief Master-at-Arms in order to get rid of them. Hartley waited with Wingate outside the stateroom of the Chief Master-at-Arms to keep him company. 'Better sell 'em your bill of goods pretty pronto,' he advised.

'Why?'

'We'll ground on. the Moon in a few hours. The stop to refuel at Luna City for deep space will be your last chance to get out, unless you want to walk back.'

'I hadn't thought of that,' Wingate agreed delightedly. 'I thought I'd have to make the round trip in any case.'

'Shouldn't be surprised but what you could pick up the Morning Star in a week or two. If it's their mistake, they'll have to return you.'

'I can beat that,' said Wingate eagerly. 'I'll go right straight to the bank at Luna City, have them arrange a letter of credit with my bank, and buy a ticket on the Earth-Moon shuttle.'

Hartley's manner underwent a subtle change. He had never in his life 'arranged a letter of credit'. Perhaps such a man could walk up to the Captain and lay down the law.

The Chief Master-at-Arms listened to Wingate's story with obvious impatience, and interrupted him in the middle of it to consult his roster of emigrants. He thumbed through it to the Ws, and pointed to a line. Wingate read it with a sinking feeling. There was his own name, correctly spelled. 'Now get out,' ordered the official, 'and quit wasting my time.'

But Wingate stood up to him. 'You have no authority in this matter-none whatsoever. I insist that you take me to the Captain.'

'Why, you-' Wingate thought momentarily that the man was going to strike him. He interrupted.

'Be careful what you do. You are apparently the victim of an honest mistake-but your legal position will be very shaky indeed, if you disregard the requirements of spacewise law under which this vessel is licensed. I don't think your Captain would be pleased to have to explain such actions on your part in federal court.'

That he had gotten the man angry was evident. But a man does not get to be chief police officer of a major transport by jeopardizing his superior officers. His jaw muscles twitched but he pressed a button, saying nothing. A junior master-at-arms appeared. 'Take this man to the Purser.' He turned his back in dismissal and dialed a number on the ship's intercommunication system.

Wingate was let in to see the Purser, ex-officio company business agent, after only a short wait. 'What's this all about?' that officer demanded. 'If you have a complaint, why can't you present it at the morning hearings in the regular order?'

Wingate explained his predicament as clearly, convincingly, and persuasively as he knew how. 'And so you see,' he concluded, 'I want to be put aground at Luna City. I've no desire to cause the company any embarrassment over what was undoubtedly an unintentional mishap-particularly as I am forced to admit that I had been celebrating rather freely and, perhaps, in some manner, contributed to the mistake.'

The Purser, who had listened noncommittally to his recital, made no answer. He shuffled through a high stack of file folders which rested on one corner of his deck, selected one, and opened it. It contained a sheaf of legal-size papers clipped together at the top. These he studied leisurely for several minutes, while Wingate stood waiting.

The Purser breathed with an asthmatic noisiness while he read, and, from time to time, drummed on his bared teeth with his fingernails. Wingate had about decided, in his none too steady nervous condition, that if the man approached his hand to his mouth just once more that he, Wingate, would scream and start throwing things. At this point the Purser chucked the dossier across the desk toward Wingate. 'Better have a look at these,' he said.

Wingate did so. The main exhibit he found to be a contract, duly entered into, between Humphrey Wingate and the Venus Development Company for six years of indentured labor on the planet Venus.

'That your signature?' asked the Purser.

Wingate's professional caution stood him in good stead. He studied the signature closely in order to gain time while he tried to collect his wits. 'Well,' he said at last, 'I will stipulate that it looks very much like my signature, but I will not concede that it is my signature-I'm not a handwriting expert.' The Purser brushed aside the objection with an air of annoyance. 'I haven't time to quibble with you. Let's check the thumbprint. Here.' He shoved an impression pad across his desk. For a moment Wingate considered standing on his legal rights by refusing, but no, that would prejudice his case. He had nothing to lose; it couldn't be his thumbprint on the contract. Unless-But it was. Even his untrained eye could see that the two prints matched. He fought back a surge of panic. This was probably a nightmare, inspired by his argument last night with Jones. Or, if by some wild chance it were real, it was a frame-up in which he must find the flaw. Men of his sort were not framed; the whole thing was ridiculous. He marshaled his words carefully.

'I won't dispute your position, my dear sir. In some fashion both you and I have been made the victims of a rather sorry joke. It seems hardly necessary to point out that a man who is unconscious, as I must have been last night, may have his thumbprint taken without his knowledge. Superficially this contract is valid and I assume naturally your good faith in the matter. But, in fact, the instrument lacks one necessary element of a contract.'

'Which is?'

'The intention on the part of both parties to enter into a contractual relationship. Notwithstanding signature and thumbprint I had no intention of contracting which can easily be shown by other factors. I am a successful lawyer with a good practice, as my tax returns will show. It is not reasonable to believe-and no court will believe-that I

voluntarily gave up my accustomed life for six years of indenture at a much lower income.'

'So you're a lawyer, eh? Perhaps there has been chicanery-on your part. How does it happen that you represent yourself here as a radio technician?'

Wingate again had to steady himself at this unexpected flank attack. He was in truth a radio expert-it was his cherished hobby-but how had they known? Shut up, he told himself. Don't admit anything. 'The whole thing is ridiculous,' he protested. 'I insist that 1 be taken to see the Captain-I can break that contract in ten minutes time.'

The Purser waited before replying. 'Are you through speaking your piece?'

'Yes.'

'Very well. You've had your say, now I'll have mine. You listen to me, Mister Spacelawyer. That contract was drawn up by some of the shrewdest legal minds in two planets. They had specifically in mind that worthless bums would sign it, drink up their bounty money, and then decide that they didn't want to go to work after all. That contract has been subjected to every sort of attack possible and revised so that it can't be broken by the devil himself.

'You're not peddling your curbstone law to another stumblebum in this case; you are talking to a man who knows just where he stands, legally. As for seeing the Captain-if you think the commanding officer of a major vessel has nothing more to do than listen to the rhira-dreams of a self-appointed word artist, you've got another think coming! Return to your quarters!'

Wingate started to speak, thought better of it, and turned to go. This would require some thought. The Purser stopped him. 'Wait. Here's your copy of the contract.' He chucked it, the flimsy white sheets riffled to the deck. Wingate picked them up and left silently.

Hartley was waiting for him in the passageway. 'How d'ja make out, Hump?'

'Not so well. No, I don't want to talk about it. I've got to think.' They walked silently back the way they had come toward the ladder which gave access to the lower decks. A figure ascended from the ladder and, came toward them. Wingate noted it without interest.

He looked again. Suddenly the whole preposterous chain of events fell into place; he shouted in relief. 'Sam!' he called out. 'Sam-you cockeyed old so-and-so. I should have spotted your handiwork.' It was all clear now; Sam had framed him with a phony shanghai. Probably the skipper was a pal of Sam's-a reserve officer, maybe-and they had cooked it up between them. It was a rough sort of a joke, but he was too relieved to be angry. Just the same he would make Jones pay for his fun, somehow, on the jump back from Luna City.

It was then that he noticed that Jones was not laughing.

Furthermore he was dressed-most unreasonably-in the same blue denim that the contract laborers were. 'Hump,' he was saying, 'are you still drunk?'

'Me? No. What's the-'

'Don't you realize we're in a jam?'

'Oh hell, Sam, a joke's a joke, but don't keep it up any longer. I've caught on, I tell you. I don't mind-it was a good gag.'

'Gag, eh?' said Jones bitterly. 'I suppose it was just a gag when you talked me into signing up.'

'I persuaded you to sign up?'

'You certainly did. You were so damn sure you knew what you were talking about. You claimed that we could sign up, spend a month or so, on Venus, and come home. You wanted to bet on it. So we went around to the docks and signed up. It seemed like a good idea then-the only way to settle the argument.'

Wingate whistled softly. 'Well, I'll be-Sam, I haven't the slightest recollection of it. I must have drawn a blank before I passed out.'

'Yeah, I guess so. Too bad you didn't pass out sooner. Not that I'm blaming you; you didn't drag me. Anyhow, I'm on my way up to try to straighten it out.'

'Better wait a minute till you hear what happened to me. Oh yes-Sam, this is, uh, Satchel Hartley. Good sort.' Hartley had been waiting uncertainly near them; he stepped forward and shook hands.

Wingate brought Jones up to date, and added, 'So you see your reception isn't likely to be too friendly. I guess I muffed it. But we are sure to break the contract as soon as we can get a hearing on time alone.'

'How do you mean?'

'We were signed up less than twelve hours before ship lifting. That's contrary to the Space Precautionary Act.'

'Yes-yes, I see what you mean. The Moon's in her last quarter; they would lift ship some time after midnight to take advantage of favorable earthswing. I wonder what time it was when we signed on?'

Wingate took out his contract copy. The notary's stamp showed a time of eleven thirty-two. 'Great Day!' he shouted. 'I knew there would be a flaw in it somewhere. This contract is invalid on its face. The ship's log will prove it.'

Jones studied it. 'Look again,' he said. Wingate did so. The stamp showed eleven thirty-two, but A.M., not P.M.

'But that's impossible,' he protested.

'Of course it is. But it's official. I think we will find that the story is that we were signed on in the morning, paid our bounty money, and had one last glorious luau before we were carried aboard. I seem to recollect some trouble in getting the recruiter to sign us up. Maybe we convinced, him by kicking in our bounty money.'

'But we didn't sign up in the morning. It's not true and I can prove it.'

'Sure you can prove it-but how can you prove it without going back to Earth first!'

'So you see it's this way,' Jones decided after some minutes of somewhat fruitless discussion, 'there is no sense in trying to break our contracts here and now; they'll laugh at us. The thing to do is to make money talk, and talk loud. The only way I can see to get us off at Luna City is to post non-performance bonds with the company bank there-cash, and damn big ones too.'

'How big?'

'Twenty thousand credits, at least, I should guess.'

'But that's not equitable-it's all out of proportion.'

'Quit worrying about equity, will you? Can't you realize that they've got us where the hair is short? This won't be a bond set by a court ruling; it's got to be big enough to make a minor company official take a chance on doing something that's not in the book.'

'I can't raise such a bond.'

'Don't worry about that. I'll take care of it.'

Wingate wanted to argue the point, but did not. There are times when it is very convenient to have a wealthy friend.

'I've got to get a radiogram off to my sister,' Jones went on, 'to get this done -,

'Why your sister? Why not your family firm?'

'Because we need fast action, that's why. The lawyers that handle our family finances would fiddle and fume around trying to confirm the message. They'd send a message back to the Captain, asking if Sam Houston Jones were really aboard, and he would answer "No", as I'm signed up as Sam Jones. I had some silly idea of staying out of the news broadcasts, on account of the family.'

'You can't blame them,' protested Wingate, feeling an obscure clannish loyalty to his colleague in law, 'they're handling other people's money.'

'I'm not blaming them. But I've got to have fast action and Sis'll do what I ask her. I'll phrase the message so she'll know it's me. The only hurdle now is to persuade the Purser to let me send a message on tick.'

He was gone for a long time on this mission. Hartley waited with Wingate, both to keep him company and because of a strong human interest in unusual events. When Jones finally appeared he wore a look of tight-lipped annoyance. Wingate, seeing the expression, felt a sudden, chilling apprehension. 'Couldn't you send it? Wouldn't he let you?'

'Oh, he let me-finally,' Jones admitted, 'but that Purser-man, is he tight!'

Even without the alarm gongs Wingate would have been acutely aware of the grounding at Luna City. The sudden change from the high gravity deceleration of their approach to the weak surface gravity-one-sixth earth normal-of the Moon took immediate toll on his abused stomach. It was well that he had not eaten much. Both Hartley and Jones were deep-space men and regarded enough acceleration to permit normal swallowing as adequate for any purpose. There is a curious lack of sympathy between those who are subject to space sickness and those who are immune to it. Why the spectacle of a man regurgitating, choked, eyes streaming with tears, stomach knotted with pain, should seem funny is difficult to see, but there it is. It divides the human race into two distinct and antipathetic groups-amused contempt on one side, helpless murderous hatred on the other.

Neither Hartley nor Jones had the inherent sadism which is too frequently evident on such occasions-for example the great wit who suggests salt pork as a remedy-but, feeling no discomfort themselves, they were simply unable to comprehend (having forgotten the soul-twisting intensity of their own experience as new chums) that Wingate was literally suffering 'a fate worse than death'-much worse, for it was stretched into a sensible eternity by a distortion of the time sense known only to sufferers from space sickness, seasickness, and (we are told) smokers of hashish.

As a matter of fact, the stop on the Moon was less than four hours long. Toward the end of the wait Wingate had quieted down sufficiently again to take an interest in the expected reply to Jones' message, particularly after Jones had assured him that he would

be able to spend the expected lay-over under bond at Luna City in a hotel equipped with a centrifuge.

But the answer was delayed. Jones had expected to hear from his sister within an hour, perhaps before the Evening Star grounded at the Luna City docks. As the hours stretched out he managed to make himself very unpopular at the radio room by his repeated inquiries. An over-worked clerk had sent him brusquely about his business for the seventeenth time when he heard the alarm sound preparatory to raising ship; he went back and admitted to Wingate that his scheme had apparently failed.

'Of course, we've got ten minutes yet,' he finished unhopefully, 'if the message should arrive before they raise ship, the Captain could still put us aground at the last minute. We'll go back and haunt 'em some more right up to the last. But it looks like a thin chance.'

'Ten minutes-'said Wingate, 'couldn't we manage somehow to slip outside and run for it?'

Jones looked exasperated. 'Have you ever tried running in a total vacuum?'

Wingate had very little time in which to fret on the passage from Luna City to Venus. He learned a great deal about the care and cleaning of washrooms, and spent ten hours a day perfecting his new skill. Masters-at-Arms have long memories.

The Evening Star passed beyond the limits of ship-to-Terra radio communication shortly after leaving Luna City; there was nothing to do but wait until arrival at Adonis, port of the north polar colony. The company radio there was strong enough to remain in communication at all times except for the sixty days bracketing superior conjunction and a shorter period of solar interference at inferior conjunction. 'They will probably be waiting for us with a release order when we ground,' Jones assured Wingate, 'and we'll go back on the return trip of the Evening Star-first class, this time. Or, at the very Worst, we'll have to wait over for the Morning Star. That wouldn't be so bad, once I get some credit transferred; we could spend it at Venusburg.'

'I suppose you went there on your cruise,' Wingate said, curiosity showing in his voice. He was no Sybarite, but the lurid reputation of the most infamous, or famous-depending on one's evaluations-pleasure city of three planets was enough to stir the imagination of the least hedonistic.

'No-worse luck!' Jones denied. 'I was on a hull inspection board the whole time. Some of my messmates went, though boy!' He whistled softly and shook his head.

But there was no one awaiting their arrival, nor was there any message. Again they stood around the communication office until told sharply and officially to get on back to their quarters and stand by to disembark, '- and be quick about it!'

'I'll see you in the receiving barracks, Hump,' were Jones' last words before he hurried off to his own compartment.

The Master-at-Arms responsible for the compartment in which Hartley and Wingate were billeted lined his charges up in a rough column of two's and, when ordered to do so by the metallic bray of the ship's loudspeaker, conducted them through the central passageway and down four decks to the lower passenger port. It stood open; they shuffled through the lock and out of the ship-not into the free air of Venus, but into a sheet metal tunnel which joined it, after some fifty yards, to a building.

The air within the tunnel was still acrid from the atomized antiseptic with which it had been flushed out, but to Wingate it was nevertheless fresh and stimulating after the

stale flatness of the repeatedly reconditioned air of the transport. That, plus the surface gravity of Venus, five-sixths of earth-normal, strong enough to prevent nausea yet low enough to produce a feeling of lightness and strength-these things combined to give him an irrational optimism, an up-and-at-'em frame of mind.

The exit from the tunnel gave into a moderately large room, windowless but brilliantly and glarelessly lighted from concealed sources. It contained no furniture.

'Squaaad-HALT!' called out the Master-at-Arms, and handed papers to a slight, clerkish-appearing man who stood near an inner doorway. The man glanced at the papers, counted the detachment, then signed one sheet, which he handed back to the ship's petty officer who accepted it and returned through the tunnel.

The clerkish man turned to the immigrants. He was dressed, Wingate noted, in nothing but the briefest of shorts, hardly more than a strap, and his entire body, even his feet, was a smooth mellow tan. 'Now men,' he said in a mild voice, 'strip off your clothes and put them in the hopper.' He indicated a fixture set in one wall.

'Why?' asked Wingate. His manner was uncontentious but he made no move to comply.

'Come now,' he was answered, still mildly but with a note of annoyance, 'don't argue. It's for your own protection. We can't afford to import disease.'

Wingate checked a reply and unzipped his coverall. Several who had paused to hear the outcome followed his example. Suits, shoes, underclothing, socks, they all went into the hopper. 'Follow me,' said their guide.

In the next room the naked herd were confronted by four 'barbers' armed with electric clippers and rubber gloves who proceeded to clip them smooth. Again Wingate felt disposed to argue, but decided the issue was not worth it. But he wondered if the female labor clients were required to submit to such drastic quarantine precautions. It would be a shame, it seemed to him, to sacrifice a beautiful head of hair that had been twenty years in growing.

The succeeding room was a shower room. A curtain of warm spray completely blocked passage through the room. Wingate entered it unreluctantly, even eagerly, and fairly wallowed in the first decent bath he had been able to take since leaving Earth. They were plentifully supplied with liquid green soap, strong and smelly, but which lathered freely. Half a dozen attendants, dressed as skimpily as their guide, stood on the far side of the wall of water and saw to it that the squad remained under the shower a fixed time and scrubbed. In some cases they made highly personal suggestions to insure thoroughness. Each of them wore a red cross on a white field affixed to his belt which lent justification to their officiousness.

Blasts of warm air in the exit passageway dried them quickly and completely.

'Hold still.' Wingate complied, the bored hospital orderly who had spoken dabbed at Wingate's upper arm with a swab which felt cold to touch, then scratched the spot. 'That's all, move on.' Wingate added himself to the queue at the next table. The experience was repeated on the other arm. By the time he had worked down to the far end of the room the outer sides of each arm were covered with little red scratches, more than twenty of them.

'What's this all about?' he asked the hospital clerk at the end of the line, who had counted his scratches and checked his name off a list.

'Skin tests.. . to check your resistances and immunities.'

'Resistance to what?'

'Anything. Both terrestrial and Venerian diseases. Fungoids, the Venus ones are, mostly. Move on, you're holding up the line.' He heard more about it later. It took from two to three weeks to recondition the ordinary terrestrial to Venus conditions. Until that reconditioning was complete and immunity was established to the new hazards of another planet it was literally death to an Earth man to expose his skin and particularly his mucous membranes to the ravenous invisible parasites of the surface of Venus.

The ceaseless fight of life against life which is the dominant characteristic of life anywhere proceeds with special intensity, under conditions of high metabolism, in the steamy jungles of Venus. The general bacteriophage which has so nearly eliminated disease caused by pathogenic micro-organisms on Earth was found capable of a subtle modification which made it potent against the analogous but different diseases of Venus. The hungry fungi were another matter.

Imagine the worst of the fungoid-type skin diseases you have ever encountered-ringworm, dhobie itch, athlete's foot, Chinese rot, saltwater itch, seven year itch. Add to that your conception of mold of damp rot, of scale, of toadstools feeding on decay. Then conceive them speeded up in their processes, visibly crawling as you watch-picture them attacking your eyeballs, your armpits, the soft wet tissues inside your mouth, working down into your lungs.

The first Venus expedition was lost entirely. The second had a surgeon with sufficient imagination to provide what seemed a liberal supply of salicylic acid and mercury salicylate as well as a small ultraviolet radiator. Three of them returned.

But permanent colonization depends on adaptation to environment, not insulating against it. Luna City might be cited as a case which denies this proposition but it is only superficially so. While it is true that the 'lunatics' are absolutely dependent on their citywide hermetically-sealed air bubble, Luna City is not a self-sustaining colony; it is an outpost, useful as a mining station, as an observatory, as a refueling stop beyond the densest portion of Terra's gravitational field.

Venus is a colony. The colonists breathe the air of Venus, eat its food, and expose their skins to its climate and natural hazards. Only the cold polar regions-approximately equivalent in weather conditions to an Amazonian jungle on a hot day in the rainy season-are tenable by terrestrials, but here they slop barefooted on the marshy soil in a true ecological balance.

Wingate ate the meal that was offered him-satisfactory but roughly served and dull, except for Venus sweet-sour melon, the portion of which he ate would have fetched a price in a Chicago gourmets' restaurant equivalent to the food budget for a week of a middle-class family-and located his assigned sleeping billet. Thereafter he attempted to locate Sam Houston Jones. He could find no sign of him among the other labor clients, nor any one who remembered having seen him. He was advised by one of the permanent staff of the conditioning station to enquire of the factor's clerk. This he did, in the ingratiating manner he had learned it was wise to use in dealing with minor functionaries.

'Come back in the morning. The lists will be posted.'

'Thank you, sir. Sorry to have bothered you, but I can't find him and I was afraid he might have taken sick or something. Could you tell me if he is on the sick list.'

'Oh, well-Wait a minute.' The clerk thumbed through his records. 'Hmmm.. . you say he was in the Evening Star?'

'Yes, sir.'

'Well, he's not. . . Mmmm, no-Oh, yes, here he is. He didn't disembark here.'

'What did you say!?'

'He went on with the Evening Star to New Auckland, South Pole. He's stamped in as a machinist's helper. If you had told me that, I'd 'a' known. All the metal workers in this consignment were sent to work on the new South Power Station.'

After a moment Wingate pulled himself together enough to murmur, 'Thanks for your trouble.'

"S all right. Don't ~mention it.' The clerk turned away.

South Pole Colony! He muttered it to himself. South Pole Colony, his only friend twelve thousand miles away. At last Wingate felt alone, alone and trapped, abandoned. During the short interval between waking up aboard the transport and finding Jones also aboard he had not had time fully to appreciate his predicament, nor had he, then, lost his upper class arrogance, the innate conviction that it could not be serious-such things just don't' happen to people, not to people one knows!

But in the meantime he had suffered such assaults to his human dignity (the Chief Master-at-Arms had seen to some of it) that he was no longer certain of his essential inviolability from unjust or arbitrary treatment. But now, shaved and bathed without his consent, stripped of his clothing and attired in a harness like breechclout, transported millions of miles from his social matrix, subject to the orders of persons indifferent to his feelings and who claimed legal control over his person and actions, and now, most bitterly, cut off from the one human contact which had given him support and courage and hope, he realized at last with chilling thoroughness that anything could happen to him, to him, Humphrey Belmont Wingate, successful attorney-at-law and member of all the night clubs.

'Wingate!'

'That's you, Jack. Go on in, don't keep them waiting.' Wingate pushed through the doorway and found himself in a fairly crowded room. Thirty-odd men were seated around the sides of the room. Near the door a clerk sat at a desk, busy with papers. One brisk-mannered individual stood in the cleared space between the chairs near a low platform on which all the illumination of the room was concentrated. The clerk at the door looked up to say, 'Step up where they can see you.' He pointed a stylus at the platform.

Wingate moved forward and did as he was bade, blinking at the brilliant light. 'Contract number 482-23-06,' read the clerk, 'client Humphrey Wingate, six years, radio technician non-certified, pay grade six-D, contract now available for assignment.' Three weeks it had taken them to condition him, three weeks with no word from Jones. He had passed his exposure test without infection; he was about to enter the active period of his indenture. The brisk man spoke up close on the last words of the clerk:

'Now here, patrons, if you please-we have an exceptionally promising man. I hardly dare tell you the ratings he received on his intelligence, adaptability, and general information tests. In fact I won't, except to tell you that Administration has put in a protective offer of a thousand credits. But it would be a shame to use any such client for the routine work of administration when we need good men so badly to wrest wealth from the wilderness. I venture to predict that the lucky bidder who obtains the services of

this client will be using him as a foreman within a month. But look him over for yourselves, talk to him, and see for yourselves.'

The clerk whispered something to the speaker. He nodded and added, 'I am required to notify you, gentlemen and patrons, that this client has given the usual legal notice of two weeks, subject of course to liens of record.' He laughed jovially, and cocked one eyebrow as if there were some huge joke behind his remarks. No one paid attention to the announcement; to a limited extent Wingate appreciated wryly the nature of the jest. He had given notice the day after he found out that Jones had been sent to South Pole Colony, and had discovered that while he was free theoretically to quit, it was freedom to starve on Venus, unless he first worked out his bounty, and his. passage both ways.

Several of the patrons gathered around the platform and looked him over, discussing him as they did so. 'Not too well muscled.' 'I'm not over-eager to bid on these smart boys; they're trouble-makers.' 'No, but a stupid client isn't worth his keep.' 'What can he do? I'm going to have a look at his record.' They drifted over to the clerk's desk and scrutinized the results of the many tests and examinations that Wingate had undergone during his period of quarantine. All but one beady-eyed individual who sidled up closer to Wingate, and, resting one foot on the platform so that he could bring his face nearer, spoke in confidential tones.

'I'm not interested in those phony puff-sheets, bub. Tell me about yourself.'

'There's not much to tell.'

'Loosen up. You'll like my place. Just like a home - I run a free crock to Venusburg for my boys. Had any experience handling niggers?'

'No.'

'Well, the natives ain't niggers anyhow, except in a manner of speaking. You look like you could boss a gang. Had any experience?'

'Not much.'

'Well . . . maybe you're modest. I like a man who keeps his mouth shut. And my boys like me. I never let my pusher take kickbacks.'

'No,' put in another patron who had returned to the side of the platform, 'you save that for yourself, Rigsbee.'

'You stay out o' this, Van Huysen!'

The newcomer, a heavy-set, middle-aged man, ignored the other and addressed Wingate himself. 'You have given notice. Why?'

'The whole thing was a mistake. I was drunk.'

'Will you do honest work in the meantime?'

Wingate considered this. 'Yes,' he said finally. The heavy-set man nodded and walked heavily back to his chair, settling his broad girth with care and giving his harness a hitch.

When the others were seated the spokesman announced cheerfully, 'Now, gentlemen, if you are quite through-Let's hear an opening offer for this contract. I wish I could afford to bid him in as my assistant, by George, I do! Now . . . do I hear an offer?'

'Six hundred.'

'Please, patrons! Did you not hear me mention a protection of one thousand?'

'1 don't think you mean it. He's a sleeper.'

The company agent raised his eyebrows. 'I'm sorry. I'll have to ask the client to step down from the platform.'

But before Wingate could do so another voice said, 'One thousand.'

'Now that's better!' exclaimed the agent. 'I should have known that you gentlemen wouldn't let a real opportunity escape you. But a ship can't fly on one jet. Do I hear eleven hundred? Come, patrons, you can't make your fortunes without clients. Do I hear -'

'Eleven hundred.'

'Eleven hundred from Patron Rigsbee! And a bargain it would be at that price. But I doubt if you will get it. Do I hear twelve?'

The heavy-set man flicked a thumb upward. 'Twelve hundred from Patron van Huysen. I see I've made a mistake and am wasting your time; the intervals should be not less than two hundred. Do I hear fourteen? Do I hear fourteen? Going once for twelve.. . going twi-'

'Fourteen,' Rigsbee said suddenly.

'Seventeen,' Van Huysen added at once.

'Eighteen,' snapped Rigsbee.

'Nooo,' said the agent, 'no interval of less than two, please.'

'All right, dammit, nineteen!'

'Nineteen I hear. It's a hard number to write; who'll make it twenty-one?' Van Huysen's thumb flicked again. 'Twentyone it is. It takes money to make money. What do I hear? What do I hear?' He paused. 'Going once for twenty-one going twice for twenty-one. Are you giving up so easily, Patron Rigsbee?'

'Van Huysen is a-' The rest was muttered too indistinctly to hear.

'One more chance, gentlemen. Going, going . . . GONE!-He smacked his palms sharply together. '-and sold to Patron van Huysen for twenty-one hundred credits. My congratulations, sir, on a shrewd deal.'

Wingate followed his new master out the far door. They were stopped in the passageway by Rigsbee. 'All right, Van, you've had your fun. I'll cut your loses for two thousand.'

'Out of my way.'

'Don't be a fool. He's no bargain. You don't know how to sweat a man-I do.' Van Huysen ignored him, pushing on past. Wingate followed him out into warm winter drizzle to the parking lot where steel crocodiles were drawn up in parallel rows. Van Huysen paused beside a thirty-foot Remington. 'Get in.'

The long boxlike body of the crock was stowed to its load line with supplies Van Huysen had purchased at the base. Sprawled on the tarpaulin which covered the cargo were half a dozen men. One of them stirred as Wingate climbed over the side. 'Hump! Oh, Hump!'

It was Hartley. Wingate was surprised at his own surge of emotion. He gripped Hartley's hand and exchanged friendly insults. 'Chums,' said Hartley, 'meet Hump Wingate. He's a right guy. Hump, meet the gang. That's Jimmie right behind you. He rassles this velocipede.'

The man designated gave Wingate a bright nod and moved forward into the operator's seat. At a wave from Van Huysen, who had seated his bulk in the little sheltered cabin aft, he pulled back on both control levers and the crocodile crawled away, its caterpillar treads clanking and chunking through the mud.

Three of the six were old-timers, including Jimmie, the driver. They had come along to handle cargo, the ranch products which the patron had brought in to market and

the supplies he had purchased to take back. Van Huysen had bought the contracts of two other clients in addition to Wingate and Satchel Hartley. Wingate recognized them as men he had known casually in the Evening Star and at the assignment and conditioning station. They looked a little woebegone, which Wingate could thoroughly understand, but the men from the ranch seemed to be enjoying themselves. They appeared to regard the opportunity to ride a load to and from town as an outing. They sprawled on the tarpaulin and passed the time gossiping and getting acquainted with the new chums.

But they asked no personal questions. No labor client on Venus ever asked anything about what he had been before he shipped with the company unless he first volunteered information. It 'wasn't done'.

Shortly after leaving the outskirts of Adonis the car slithered down a sloping piece of ground, teetered over a low bank, and splashed logily into water. Van Huysen threw up a window in the bulkhead which separated the cabin from the hold and shouted, 'Dumkopf! How many times do I tell you to take those launchings slowly?'

'Sorry, Boss,' Jimmie answered. 'I missed it.'

'You keep your eyes peeled, or I get me a new crocker!' He slammed the port. Jimmie glanced around and gave the other clients a sly wink. He had his hands full; the marsh they were traversing looked like solid ground, so heavily was it overgrown with rank vegetation. The crocodile now functioned as a boat, the broad flanges of the treads acting as paddle wheels. The wedge-shaped prow pushed shrubs and marsh grass aside, air struck and ground down small trees. Occasionally the lugs would bite into the mud of a shoal bottom, and, crawling over a bar, return temporarily to the status of a land vehicle. Jimmie's slender, nervous hands moved constantly over the controls, avoiding large trees and continually seeking the easiest, most nearly direct route, while he split his attention between the terrain and the craft's compass.

Presently the conversation lagged and one of the ranch hands started to sing. He had a passable tenor voice and was soon joined by others. Wingate found himself singing the choruses as fast as he learned them. They sang Pay Book and Since the Pusher Met My Cousin and a mournful thing called They Found Him in the Bush. But this was followed by a light number, The Night the Rain Stopped, which seemed to have an endless string of verses recounting various unlikely happenings which occurred on that occasion. ('The Squeezer bought a round-a-drinks -')

Jimmie drew applause and enthusiastic support in the choruses with a ditty entitled That Redheaded Venusburg Gal, but Wingate considered it inexcusably vulgar. He did not have time to dwell on the matter; it was followed by a song which drove it out of his mind.

The tenor started it, slowly and softly. The others sang the refrains while he rested-all but Wingate; he was silent and thoughtful throughout. In the triplet of the second verse the tenor dropped out and the others sang in his place.

'Oh, you stamp your paper and you sign your name, ('Come away! Come away!)
'They pay your bounty and you drown your shame.
('Rue the day! Rue the day!)
'They land you down at Ellis Isle and put you in a pen;
'There you see what happens to the Six-Year men-'They haven't paid their bounty and they sign 'em up again!

('Here to stay! Here to stay!)
'But me I'll save my bounty and a ticket on the ship, ('So you say! So you say!)
'And then you'll see me leavin' on the very next trip. ('Come the day! Come the day!)
'Oh, we've heard that kinda story just a thousand times and one.
'Now we wouldn't say you're lyin' but we'd like to see it done.
'We'll see you next at Venusburg apayin' for your fun! And you'll never meet your bounty on this hitch!
('Come away!')

It left Wingate with a feeling of depression not entirely accounted for by the tepid drizzle, the unappetizing landscape, nor by the blanket of pale mist which is the invariable Venerian substitute for the open sky. He withdrew to one corner of the hold and kept to himself, until, much later, Jimmie shouted, 'Lights ahead!'

Wingate leaned out and peered eagerly towards his new home.

Four weeks and no word from Sam Houston Jones. Venus had turned once on its axis, the fortnight long Venerian 'winter' had given way to an equally short 'summer'-indistinguishable from 'winter' except that the rain was a trifle heavier and a little hotter-and now it was 'winter' again. Van Huysen's ranch, being near the pole, was, like most of the tenable area of Venus, never in darkness. The miles-thick, ever present layer of clouds tempered the light of the low-hanging sun during the long day, and, equally, held the heat and diffused the light from a sun just below the horizon to produce a continuing twilight during the two-week periods which were officially 'night', or 'winter'.

Four weeks and no word. Four weeks and no sun, no moon, no stars, no dawn. No clean crisp breath of morning air, no life-quickening beat of noonday sun, no welcome evening shadows, nothing, nothing at all to distinguish one sultry, sticky hour from the next but the treadmill routine of sleep and work and food and sleep again-nothing but the gathering ache in his heart for the cool blue skies of Terra.

He had acceded to the invariable custom that new men should provide a celebration for the other clients and had signed the Squeezer's chits to obtain happywater-rhira-for the purpose-to discover, when first he signed the pay book, that his gesture of fellowship had cost him another four months of delay before he could legally quit his 'job'. Thereupon he had resolved never again to sign a chit, had foresworn the prospect of brief holidays at Venusburg, had promised himself to save every possible credit against his bounty and transportation liens.

Whereupon he discovered that the mild alcoholoid drink was neither a vice nor a luxury, but a necessity, as necessary to human life on Venus as the ultraviolet factor present in all colonial illuminating systems. it produces, not drunkenness, but lightness of heart, freedom from worry, and without it he could not get to sleep. Three nights of self-recrimination and fretting, three days of fatigue-drugged uselessness under the unfriendly eye of the Pusher, and he had signed for his bottle with the rest, even though dully aware that the price of the bottle had washed out more than half of the day's microscopic progress toward freedom.

Nor had he been assigned to radio operation. Van Huysen had an operator. Wingate, although listed on the books as standby operator, went to the swamps with the rest. He discovered on rereading his contract a clause which permitted his patron to do

this, and he admitted with half his mind-the detached judicial and legalistic half-that the clause was reasonable and proper, not inequitable.

He went to the swamps. He learned to wheedle and bully the little, mild amphibian people into harvesting the bulbous underwater growth of Hyacinthus veneris johnsoni-Venus swamproot-and to bribe the co-operation of their matriarchs with promises of bonuses in the form of 'thigarek', a term which meant not only cigarette, but tobacco in any form, the staple medium in trade when dealing with the natives.

He took his turn in the chopping sheds and learned, clumsily and slowly, to cut and strip the spongy outer husk from the pea-sized kernel which alone had commercial value and which must be removed intact, without scratch or bruise. The juice from the pods made his hands raw and the odor made him cough and stung his eyes, but he enjoyed it more than the work in the marshes, for it threw him into the company of the female labor clients. Women were quicker at the work than men and their smaller fingers more dextrous in removing the valuable, easily damaged capsule. Men were used for such work only when accumulated crops required extra help.

He learned his new trade from a motherly old person whom the other women addressed as Hazel. She talked as she worked, her gnarled old hands moving steadily and without apparent direction or skill. He could close his eyes and imagine that he was back on Earth and a boy again, hanging around his grandmother's kitchen while she shelled peas and rambled on. 'Don't you fret yourself, boy,' Hazel told him. 'Do your work and shame the devil. There's a great day coming.'

'What kind of great day, Hazel?'

'The day when the Angels of the Lord will rise up and smite the powers of evil. The day when the Prince of Darkness will be cast down into the pit and the Prophet shall reign over the children of Heaven. So don't you worry; it doesn't matter whether you are here or back home when the great day comes; the only thing that matters is your state of grace.'

'Are you sure we will live long enough to see the day?'

She glanced around, then leaned over confidentially. 'The day is almost upon us. Even now the Prophet moves up and down the land gathering his forces. Out of the clean farm country of the Mississippi Valley there comes the Man, known in this world'-she lowered her voice still more-'as Nehemiah Scudder!'

Wingate hoped that his start of surprise and amusement did not show externally. He recalled the name. It was that of a pipsqueak, backwoods evangelist, an unimportant nuisance back on Earth, but the butt of an occasional guying news story, but a man of no possible consequence.

The chopping shed Pusher moved up to their bench. 'Keep your eyes on your work, you! You're way behind now.' Wingate hastened to comply, but Hazel came to his aid.

'You leave him be, Joe Tompson. It takes time to learn chopping.'

'Okay, Mom,' answered the Pusher with a grin, 'but keep him pluggin'. See?'

'I will. You worry about the rest of the shed. This bench'll have its quota.' Wingate had been docked two days running for spoilage. Hazel was lending him poundage now and the Pusher knew it, but everybody liked her, even pushers, who are reputed to like no one, not even themselves.

Wingate stood just outside the gate of the bachelors' compound. There was yet fifteen minutes before lock-up roll call; he had walked out in a subconscious attempt to rid himself of the pervading feeling of claustrophobia which he had had throughout his stay. The attempt was futile; there was no 'outdoorness' about the outdoors on Venus, the bush crowded the clearing in on itself, the leaden misty sky pressed down on his head, and the steamy heat sat on his bare chest. Still, it was better than the bunkroom in spite of the dehydrators.

He had not yet obtained his evening ration of rhira and felt, consequently, nervous and despondent, yet residual self-respect caused him to cherish a few minutes clear thinking before he gave in to cheerful soporific. It's getting me, he thought, in a few more months I'll be taking every chance to get to Venusburg, or worse yet, signing a chit for married quarters and condemning myself and my kids to a life-sentence. When he first arrived the women clients, with their uniformly dull minds and usually commonplace faces, had seemed entirely unattractive. Now, he realized with dismay, he was no longer so fussy. Why, he was even beginning to lisp, as the other clients did, in unconscious imitation of the amphibians.

Early, he had observed that the clients could be divided roughly into two categories, the child of nature and the broken men. The first were those of little imagination and simple standards. In all probability they had known nothing better back on Earth; they saw in the colonial culture, not slavery, but freedom from responsibility, security, and an occasional spree. The others were the broken men, the outcasts, they who had once been somebody, but, through some defect of character, or some accident, had lost their places in society. Perhaps the judge had said, 'Sentence suspended if you ship for the colonies.'

He realized with sudden panic that his own status was crystallizing; he was becoming one of the broken men. His background on Earth was becoming dim in his mind; he had put off for the last three days the labor of writing another letter to Jones; he had spent all the last shift rationalizing the necessity for taking a couple of days holiday at Venusburg. Face it, son, face it, he told himself. You're slipping, you're letting your mind relax into slave psychology. You've unloaded the problem of getting out of this mess onto Jones - how do you know he can help you? For all you know he may be dead. Out of the dimness of his memory he recaptured a phrase which he had read somewhere, some philosopher of history: 'No slave is ever freed, save he free himself.'

All right, all right-pull up your socks, old son. Take a brace. No more rhira-no, that wasn't practical; a man had to have sleep. Very well, then, no rhira until lights-out, keep your mind clear in the evenings and plan. Keep your eyes open, find out all you can, cultivate friendships, and watch for a chance.

Through the gloom he saw a human figure approaching the gate of the compound. As it approached he saw that it was a woman and supposed it to be one of the female clients. She came closer, he saw that he was mistaken. It was Annek van Huysen, daughter of the patron.

She was a husky, overgrown blond girl with unhappy eyes. He had seen her many times, watching the clients as they returned from their labor, or wandering alone around the ranch clearing. She was neither unsightly, nor in anywise attractive; her heavy adolescent figure needed more to flatter it than the harness which all colonists wore as the maximum tolerable garment.

She stopped before him, and, unzipping the pouch at her waist which served in lieu of pockets, took out a package of cigarettes. 'I found this back there. Did you lose it?'

He knew that she lied; she had picked up nothing since she had come into sight. And the brand was one smoked on Earth and by patrons; no client could afford such. What was she up to?

He noted the eagerness in her face and the rapidity of her breathing, and realized, with confusion, that this girl was trying indirectly to make him a present. Why?

Wingate was not particularly conceited about his own physical beauty, or charm, nor had he any reason to be. But what he had not realized was that among the common run of the clients he stood out like a cock pheasant in a barnyard. But that Annek found him pleasing he was forced to admit; there could be no other explanation for her trumped-up story and her pathetic little present.

His first impulse was to snub her. He wanted nothing of her and resented the invasion of his privacy, and he was vaguely aware that the situation could be awkward, even dangerous to him, involving, as it did, violations of custom which jeopardized the whole social and economic structure. From the viewpoint of the patrons, labor clients were almost as much beyond the pale as the amphibians. A liaison between a labor client and one of the womenfolk of the patrons could easily wake up old Judge Lynch.

But he had not the heart to be brusque with her. He could see the dumb adoration in her eyes; it would have required cold, heartlessness to have repulsed her. Besides, there was nothing coy or provocative in her attitude; her manner was naive, almost childlike in its unsophistication. He recalled his determination to make friends; here was friendship offered, a dangerous friendship, but one which might prove useful in Winning free.

He felt a momentary wave of shame that he should be weighing the potential usefulness of this defenseless child, but he suppressed it by affirming to himself that he would do her no harm, and, anyhow, there was the old saw about the vindictiveness of a woman scorned.

'Why, perhaps I did lose it,' he evaded, then added, 'It's my favorite brand.'

'Is it?' she said happily. 'Then do take it, in any case.'

'Thank you. Will you smoke one with me? No, I guess that wouldn't do; your father would not want you to stay here that long.'

'Oh, he's busy with his accounts. I saw that before I came out,' she answered, and seemed unaware that she had given away her pitiful little deception. 'But go ahead, I-I hardly ever smoke.'

'Perhaps you prefer a meerschaum pipe, like your father.'

She laughed more than the poor witticism deserved. After that they talked aimlessly, both agreeing that the crop was coming in nicely, that the weather seemed a little cooler than last week, and that there was nothing like a little fresh air after supper.

'Do you ever walk for exercise after supper?' she asked.

He did not say that a long day in the swamps offered more than enough exercise, but agreed that he did.

'So do I,' she blurted out. 'Lots of times up near the water tower.'

He looked at her. 'Is that so? I'll remember that.' The signal for roll call gave him a welcome excuse to get away; three more minutes, he thought, and I would have had to make a date with her.

Wingate found himself called for swamp work the next day, the rush in the chopping sheds having abated. The crock lumbered and splashed its way around the long, meandering circuit, leaving one or more Earthmen at each supervision station. The car was down to four occupants, Wingate, Satchel, the Pusher, and Jimmie the Crocker, when the Pusher signaled for another stop. The flat, bright-eyed heads of amphibian natives broke water on three sides as soon as they were halted. 'All right, Satchel,' ordered the Pusher, 'this is your billet. Over the side.'

Satchel looked around. 'Where's my skiff?' The ranchers used small flat-bottomed duralumin skiffs in which to collect their day's harvest. There was not one left in the crock.

'You won't need one. You goin' to clean this field for planting.'

'That's okay. Still-I don't see nobody around, and I don't see no solid ground.' The skiffs had a double purpose; if a man were working out of contact with other Earthmen and at some distance from safe dry ground, the skiff became his life boat. If the crocodile which was supposed to collect him broke down, or if for any other reason he had need to sit down or lie down while on station, the skiff gave him a place to do so. The older clients told grim stories of men who had stood in eighteen inches of water for twenty-four, forty-eight, seventy-two hours, and then drowned horribly, out of their heads from sheer fatigue.

'There's dry ground right over there.' The Pusher waved his hand in the general direction of a clump of trees which lay perhaps a quarter of a mile away.

'Maybe so,' answered Satchel equably. 'Let's go see.' He grinned at Jimmie, who turned to the Pusher for instructions.

'Damnation! Don't argue with me! Get over the side!'

'Not,' said Satchel, 'until I've seen something better than two feet of slime to squat on in a pinch.'

The little water people had been following the argument with acute interest. They clucked and lisped in their own language; those who knew some pidgin English appeared to be giving newsy and undoubtedly distorted explanations of the events to their less sophisticated brethren. Fuming as he was, this seemed to add to the Pusher's anger.

'For the last time-get out there!'

'Well,' said Satchel, settling his gross frame more comfortably on the floorplates, 'I'm glad we've finished with that subject.'

Wingate was behind the Pusher. This circumstance probably saved Satchel Hartley at least a scalp wound, for he caught the arm of the Pusher as he struck. Hartley closed in at once; the three wrestled for a few seconds on the bottom of the craft.

Hartley sat on the Pusher's chest while Wingate pried a blackjack away from the clenched fingers of the Pusher's right fist. 'Glad you saw him reach for that, Hump,' Satchel acknowledged, 'or I'd be needin' an aspirin about now.'

'Yeah, I guess so,' Wingate answered, and threw the weapon as far as he could out into the marshy waste. Several of the amphibians streaked after it and dived. 'I guess you can let him up now.'

The Pusher said nothing to them as he brushed himself off, but he turned to the Crocker who had remained quietly in his saddle at the controls the whole time. 'Why the hell didn't you help me?'

'I supposed you could take care of yourself, Boss,' Jimmie answered noncommittally.

Wingate and Hartley finished that 'work period as helpers to labor clients already stationed. The Pusher had completely ignored them except for curt orders necessary to station them. But while they were washing up for supper back at the compound they received word to report to the Big House.

When they were ushered into the Patron's office they found the Pusher already there with his employer and wearing a self-satisfied smirk while Van Huysen's expression was black indeed.

'What's this I hear about you two?' he burst out. 'Refusing work. Jumping my foreman. By Joe, I show you a thing or two!'

'Just a moment, Patron van Huysen,' began Wingate quietly, suddenly at home in the atmosphere of a trial court, 'no one refused duty. Hartley simply protested doing dangerous work without reasonable safeguards. As for the fracas, your foreman attacked us; we acted simply in self-defense, and desisted as soon as we had disarmed him.'

The Pusher leaned over Van Huysen and whispered in his ear. The Patron looked more angry than before. 'You did this with natives watching. Natives! You know colonial law? I could send you to the mines for this.'

'No,' Wingate denied, 'your foreman did it in the presence of natives. Our role was passive and defensive throughout -'

'You call jumping my foreman peaceful? Now you listen to me-Your job here is to work. My foreman's job is to tell you where and how to work. He's not such a dummy as to lose me my investment in a man. He judges what work is dangerous, not you.' The Pusher whispered again to his chief. Van Huysen shook his head. The other persisted, but the Patron cut him off with a gesture, and turned back to the two labor clients.

'See here-I give every dog one bite, but not two. For you, no supper tonight and no rhira. Tomorrow we see how you behave.'

'But Patron van Huys -'

'That's all. Get to your quarters.'

At lights out Wingate found, on crawling into his bunk, that someone had hidden therein a food bar. He munched it gratefully in the dark and wondered who his friend could be. The food stayed the complaints of his stomach but was not sufficient, in the absence of rhira, to permit him to go to sleep. He lay there, staring into the oppressive blackness of the bunkroom and listening to the assorted irritating noises that men can make while sleeping, and considered his position. It had been bad enough but barely tolerable before; now, he was logically certain, it would be as near hell as a vindictive overseer could make it. He was prepared to believe, from what he had seen and the tales he had heard, that it would be very near indeed!

He had been nursing his troubles for perhaps an hour when he felt a hand touch his side. 'Hump! Hump!' came a whisper, 'come outside. Something's up.' It was Jimmie.

He felt his way cautiously through the stacks of bunks and slipped out the door after Jimmie. Satchel was already outside and with him a fourth figure.

It was Annek van Huysen. He wondered how she had been able to get into the locked compound. Her eyes were puffy, as if she had been crying.

Jimmie started to speak at once, in cautious, low tones. 'The kid tells us that I am scheduled to haul you two lugs back into Adonis tomorrow.'

'What for?'

'She doesn't know. But she's afraid it's to sell you South. That doesn't seem likely. The Old Man has never sold anyone South-but then nobody ever jumped his pusher before. I don't know.'

They wasted some minutes in fruitless discussion, then, after a bemused silence, Wingate asked Jimmie, 'Do you know where they keep the keys to the crock?'

'No. Why do y-'

'I could get them for you,' offered Annek eagerly.

'You can't drive a crock.'

'I've watched you for some weeks.'

'Well, suppose you can,' Jimmie continued to protest, 'suppose you run for it in the crock. You'd be lost in ten miles. If you weren't caught, you'd starve.'

Wingate shrugged. 'I'm not going to be sold South.'

'Nor am I,' Hartley added.

'Wait a minute.'

'Well, I don't see any bet-'

'Wait a minute,' Jimmie reiterated snappishly. 'Can't you see I'm trying to think'?'

The other three kept silent for several long moments. At last Jimmie said, 'Okay. Kid, you'd better run along and let us talk. The less you know about this the better for you.' Annek looked hurt, but complied docilely to the extent of withdrawing out of earshot. The three men conferred for some minutes. At last Wingate motioned for her to rejoin them.

'That's all, Annek,' he told her. 'Thanks a lot for everything you've done. We've figured a way out.' He stopped, and then said awkwardly, 'Well, good night.'

She looked up at him.

Wingate wondered what to do or say next. Finally he led her around the corner of the barracks and bade her good night again. He returned very quickly, looking shame-faced. They re-entered the barracks.

Patron van Huysen also was having trouble getting to sleep. He hated having to discipline his people. By damn, why couldn't they all be good boys and leave him in peace? Not but what there was precious little peace for a rancher these days. It cost more to make a crop than the crop fetched in Adonis-at least it did after the interest was paid.

He had turned his attention to his accounts after dinner that night to try to get the unpleasantness out of his mind, but he found it hard to concentrate on his figures. That man Wingate, now . . . he had bought him as much to keep him away from that slave driver Rigsbee as to get another hand. He had too much money invested in hands as it was in spite of his foreman always complaining about being short of labor. He would either have to sell some, or ask the bank to refinance the mortgage again.

Hands weren't worth their keep any more. You didn't get the kind of men on Venus that used to come when he was a boy. He bent over his books again. If the market went up even a little, the bank should be willing to discount his paper for a little more than last season. Maybe that would do it.

He had been interrupted by a visit from his daughter. Annek he was always glad to see, but this time what she had to say, what she finally blurted out. had only served to make him angry. She, preoccupied with her own thoughts, could not know that she hurt her father's heart, with a pain that was actually physical.

But that had settled the matter insofar as Wingate was concerned. He would get rid of the trouble-maker. Van Huysen ordered his daughter to bed with a roughness he had never before used on her.

Of course it was all his own fault, he told himself after he had gone to bed. A ranch on Venus was no place to raise a motherless girl. His Annekchen was almost a woman grown now; how was she to find a husband here in these outlands? What would she do if he should die? She did not know it, but there would be nothing left, nothing, not even a ticket to Terra. No, she would not become a labor client's vrouw; no, not while there was a breath left in his old tired body.

Well, Wingate would have to go, and the one they called Satchel, too. But he would not sell them South. No, he had never done that to one of his people. He thought with distaste of the great, factory like plantations a few hundred miles further from the pole, where the temperature was always twenty to thirty degrees higher than it was in his marshes and mortality among labor clients was a standard item in cost accounting. No, he would take them in and trade them at the assignment station; what happened to them at auction there would be none of his business. But he would not sell them directly South.

That gave him an idea; he did a little computing in his head and estimated that he might be able to get enough credit on the two unexpired labor contracts to buy Annek a ticket to Earth. He was quite sure that his sister would take her in, reasonably sure anyway, even though she had quarreled with him over marrying Annek's mother. He could send her a little money from time to time. And perhaps she could learn to be a secretary, or one of those other fine jobs a girl could get on Earth.

But what would the ranch be like without Annekchen?

He was so immersed in his own troubles that he did not hear his daughter slip out of her room and go outside.

Wingate and Hartley tried to appear surprised when they were left behind at muster for work. Jimmie was told to report to the Big House; they saw him a few minutes later, backing the big Remington out of its shed. He picked them up, then trundled back to the Big House and waited for the Patron to appear. Van Huysen came out shortly and climbed into his cabin with neither word nor look for anyone.

The, crocodile started toward Adonis, lumbering a steady ten miles an hour. Wingate and Satchel conversed in subdued voices, waited, and wondered. After an interminable time the crock stopped. The cabin window flew open. 'What's the matter?' Van Huysen demanded. 'Your engine acting up?'

Jimmie grinned at him. 'No, I stopped it.'

'For what?'

'Better come up here and find out.'

'By damn, I do!' The window slammed; presently Van Huysen reappeared, warping his ponderous bulk around the side of the little cabin. 'Now what this monkeyshines?'

'Better get out and walk, Patron. This is the end of the line.' Van Huysen seemed to have no remark suitable in answer, but his expression spoke for him.

'No, I mean it,' Jimmie went on. 'This is the end 'of the line for you. I've stuck to solid ground the whole way, so you could walk back. You'll be able to follow the trail I broke; you ought to be able to make it in three or four hours, fat as you are.'

The Patron looked from Jimmie to the others. Wingate and Satchel closed in slightly, eyes unfriendly. 'Better get goin', Fatty,' Satchel said softly, 'before you get chucked out headfirst.'

Van Huysen pressed back against the rail of the crock, his hands gripping it. 'I won't get out of my own crock,' he said tightly.

Satchel spat in the palm of one hand, then rubbed the two together. 'Okay, Hump. He asked for it -'

'Just a second.' Wingate addressed Van Huysen, 'See here, Patron van Huysen-we don't want to rough you up unless we have to. But there are three of us and we are determined. Better climb out quietly.'

The older man's face was dripping with sweat which was not entirely due to the muggy heat. His chest heaved, he seemed about to defy them. Then something went out inside him. His figure sagged, the defiant lines in his face gave way to a whipped expression which was not good to see.

A moment later he climbed quietly, listlessly, over the side into the ankle-deep mud and stood there, stooped, his legs slightly bent at the knees.

When they were out of sight of the place where they had dropped their patron Jimmie turned the crock off in a new direction. 'Do you suppose he'll make it?' asked Wingate.

'Who?' asked Jimmie. 'Van Huysen? Oh, sure, he'll make it-probably.' He was very busy now with his driving; the crock crawled down a slope and lunged into navigable water. In a few minutes the marsh grass gave way to open water. Wingate saw that they were in a broad lake whose further shores were lost in the mist. Jimmie set a compass course.

The far shore was no more than a strand; it concealed an overgrown bayou. Jimmie followed it a short distance, stopped the crock, and said, 'This must be just about the place,' in an uncertain voice. He dug under the tarpaulin folded up in one corner of the empty hold and drew out a broad flat paddle. He took this to the rail, and, leaning out, he smacked the water loudly with the blade: Slap! . . . slap, slap. . . . Slap!

He waited.

The flat head of an amphibian broke water near the side; it studied Jimmie with bright, merry eyes. 'Hello,' said Jimmie.

it answered in its own language. Jimmie replied in the same tongue, stretching his mouth to reproduce the uncouth clucking syllables. The native listened, then slid underwater again.

He-or, more probably, she-was back in a few minutes, another with her. 'Thigarek?' the newcomer said hopefully.

'Thigarek when we get there, old girl,' Jimmie temporized. 'Here . . . climb aboard.' He held out a hand, which the native accepted and wriggled gracefully inboard. It perched its unhuman, yet oddly pleasing, little figure on the rail near the driver's seat. Jimmie got the car underway.

How long they were guided by their little pilot Wingate did not know, as the timepiece on the control panel was out of order, but his stomach informed him that it was too long. He rummaged through the cabin and dug out an iron ration which he shared with Satchel and Jimmie. He offered some to the native, but she smelled at it and drew her head away.

Shortly after that there was a sharp hissing noise and a column of steam rose up ten yards ahead of them. Jimmie halted the crock at once. 'Cease firing!' he called out. 'It's just us chickens.'

'Who are you?' came a disembodied voice.

'Fellow travelers.'

'Climb out where we can see you.'

'Okay.'

The native poked Jimmie in the ribs. 'Thigarek,' she stated positively.

'Huh? Oh, sure.' He parceled out trade tobacco until she acknowledged the total, then added one more package for good will. She withdrew a piece of string from her left cheek pouch, tied up her pay, and slid over the side. They saw her swimming away, her prize carried high out of the water.

'Hurry up and show yourself!'

'Coming!' They climbed out into waist-deep water and advanced holding their hands overhead. A squad of four broke cover and looked them over, their weapons lowered but ready. The leader searched their harness pouches and sent one of his men on to look over the crocodile.

'You keep a close watch,' remarked Wingate.

The leader glanced at him. 'Yes,' he said, 'and no. The little people told us you were coming. They're worth all the watch dogs that were ever littered.'

They got underway again with one of the scouting party driving. Their captors were not unfriendly but not disposed to talk. 'Wait till you see the Governor,' they said.

Their destination turned out to be a wide stretch of moderately high ground. Wingate was amazed at the number of buildings and the numerous population. 'How in the world can they keep a place like this a secret?' he asked Jimmie.

'If the state of Texas were covered with fog and had only the population of Waukegan, Illinois, you could hide quite a lot of things.'

'But wouldn't it show on a map?'

'How well mapped do you think Venus is? Don't be a dope.' On the basis of the few words he had had with Jimmie beforehand Wingate had expected no more than a camp where fugitive clients lurked in the bush while squeezing a precarious living from the country. What he found was a culture and a government. True, it was a rough frontier culture and a simple government with few laws and an unwritten constitution, but a framework of customs was in actual operation and its gross offenders were punished-with no higher degree of injustice than one finds anywhere.

It surprised Humphrey Wingate that fugitive slaves, the scum of Earth, were able to develop an integrated society. It had surprised his ancestors that the transported criminals of Botany Bay should develop a high civilization in Australia. Not that Wingate found the phenomenon of Botany Bay surprising-that was history, and history is never surprising-after it happens.

The success of the colony was more credible to Wingate when he came to know more of the character of the Governor, who was also generalissimo, and administrator of the low and middle justice. (High justice was voted on by the whole community, a procedure that Wingate considered outrageously sloppy, but which seemed to satisfy the community.) As magistrate the Governor handed out decisions with a casual contempt for rules of evidence and legal theory that reminded Wingate of stories 'he had heard of the

apocryphal Old Judge Bean. 'The Law West of Pecos', but again the people seemed to like it.

The great shortage of women in the community (men outnumbered them three to one) caused incidents which more than anything else required the decisions of the Governor. Here, Wingate was forced to admit, was a situation in which traditional custom would have been nothing but a source of trouble; 'he admired the shrewd common sense and understanding of human nature with which the Governor sorted out conflicting strong human passions and suggested modus operandi for getting along together. A man who could maintain a working degree of peace in such matters did not need a legal education.

The Governor held office by election and was advised by an elected council. It was Wingate's private opinion that the Governor would have risen to the top in any society. The man had boundless energy, great gusto for living, a ready thunderous laugh- and the courage and capacity for making decisions. He was a 'natural'.

The three runaways were given a couple of weeks in which to get their bearings and find some job in which they could make themselves useful and self-supporting. Jimmie stayed with his crock, now confiscated for the community, but which still required a driver. There were other crockers available who probably would have liked the job, but there was tacit consent that the man who brought it in should drive it, if he wished. Satchel found a billet in the fields, doing much the same work he had done for Van Huysen. He told Wingate that he was 'actually having to work harder; nevertheless he liked it better because the conditions were, as he put it. 'looser'.

Wingate detested the idea of going back to agricultural work. He had no rational excuse, it was simply that he hated it. His radio experience at last stood him in good stead. The community had a jury-rigged, low-power radio on which a constant listening watch was kept, but which was rarely used for transmission because of the danger of detection. Earlier runaway slave camps had been wiped out by the company police through careless use of radio. Nowadays they hardly dared use it, except in extreme emergency.

But they needed radio. The grapevine telegraph maintained through the somewhat slap-happy help of the little people enabled them to keep some contact with the other fugitive communities with which they were loosely confederated, but it was not really fast, and. any but the simplest of messages were distorted out of recognition.

Wingate was assigned to the community radio when it was discovered that he had appropriate technical knowledge. The previous operator had been lost in the bush. His opposite number was a pleasant old codger, known as Doc, who could listen for signals but who knew nothing of upkeep and repair.

Wingate threw himself into the job of overhauling the antiquated installation. The problems presented by lack of equipment, the necessity of 'making do', gave him a degree of happiness he had not known since he was a boy, but was not aware of it.

He was intrigued by the problem of safety in radio communication. An idea, derived from some account of the pioneer days in radio, gave him a lead. His installation, like all others, communicated by frequency modulation. Somewhere he had seen a diagram for a totally obsolete type of transmitter, an amplitude modulator. He did not have much to go on, but he worked out a circuit which he believed would oscillate in that fashion and which could be hooked up from the gear at hand.

He asked the Governor for permission to attempt to build it. 'Why not? Why not?' the Governor roared at him. 'I haven't the slightest idea what you are talking about son, but if you think you can build a radio that the company can't detect, go right ahead. You don't have to ask me; it's your pigeon.'

'I'll have to put the station out of commission for sending.'

'Why not?'

The problem had more knots in it than he had thought. But he labored at it with the clumsy but willing assistance of Doc. His first hookup failed; his forty-third attempt five weeks later worked. Doc, stationed some miles out in the bush, reported himself able to hear the broadcast via a small receiver constructed for the purpose, whereas Wingate picked up nothing whatsoever on the conventional receiver located in the same room with the experimental transmitter.

In the meantime he worked on his book.

Why he was writing a book he could not have told you. Back on Earth it could have been termed a political pamphlet against the colonial system. Here there was no one to convince of his thesis, nor had he any expectation of ever being able to present it to a reading public. Venus was his home. He knew that there was no chance for him ever to return: the only way lay through Adonis, and there, waiting for him, were warrants for half the crimes in the calendar, contract-jumping, theft, kidnapping, criminal abandonment, conspiracy, subverting government. If the company police ever laid hands on him, they would jail him and lose the key.

No, the book arose, not from any expectation of publication, but from a half-subconscious need to arrange his thoughts. He had suffered a complete upsetting of all the evaluations by which he had lived; for his mental health it was necessary that he formulate new ones. It was natural to his orderly, if somewhat unimaginative, mind that he set his reasons and conclusions forth in writing.

Somewhat diffidently he offered the manuscript to Doc. He had learned that the nickname title had derived from the man's former occupation on Earth; he had been a professor of economics and philosophy in one of the smaller universities. Doc had even offered a partial explanation of his presence on Venus. 'A little matter involving one of my women students,' he confided. 'My wife took an unsympathetic view of the matter and so did the board of regents. The board had long considered my opinions a little too radical.'

'Were they?'

'Heavens, no! I was a rockbound conservative. But I had an unfortunate tendency to express conservative principles in realistic rather than allegorical language.'

'I suppose you're a radical now.'

Doc's eyebrows lifted slightly. 'Not at all. Radical and conservative are terms of emotional attitudes, not sociological opinions.'

Doc accepted the manuscript, read it through, and returned it without comment. But Wingate pressed him for an opinion. 'Well, my boy, if you insist-'

'I do.'

'I would say that you have fallen into the commonest fallacy of all in dealing with social and economic subjects-the "devil theory".'

'Huh?'

'You have attributed conditions of villainy that simply result from stupidity. Colonial slavery is nothing new; it is the inevitable result of imperial expansion, the automatic result of an antiquated financial structure -,

'I pointed out the part the banks played in my book.'

'No, no, no! You think bankers are scoundrels. They are not. Nor are company officials, nor patrons, nor the governing classes back on Earth. Men are constrained by necessity and build up rationalizations to account for their acts. It is not even cupidity. Slavery is economically unsound, nonproductive, but men drift into it whenever the circumstances compel it. A different financial system-but that's another story.'

'I still think it's rooted in human cussedness,' Wingate said stubbornly.

'Not cussedness-simply stupidity. I can't prove it to you, but you will learn.'

The success of the 'silent radio' caused the Governor to send Wingate on a long swing around the other camps of the free federation to help them rig new equipment and to teach them how to use it. He spent four hard-working and soul-satisfying weeks, and finished with the warm knowledge that he had done more to consolidate the position of the free men against their enemies than could be done by winning a pitched battle.

When he returned to his home community, he found Sam Houston Jones waiting there.

Wingate broke into a run. 'Sam!' he shouted. 'Sam! Sam!' He grabbed his hand, pounded him on the back, and yelled at him the affectionate insults that sentimental men use in attempting to cover up their weakness. 'Sam, you old scoundrel! When did you get here? How did you escape? And how the devil did you manage to come all the way from South Pole? Were you transferred before you escaped?'

'Howdy, Hump,' said Sam. 'Now one at a time, and not so fast.'

But Wingate bubbled on. 'My, but it's good to see your ugly face, fellow. And am 1 glad you came here-this is a great place. We've got the most up-and-coming little state in the Whole federation. You'll like it. They're a great bunch -'

'What are you?' Jones asked, eyeing him. 'President of the local chamber of commerce?'

Wingate looked at him, and then laughed. 'I get it. But seriously, you will like it. Of course, it's a lot different from what you were used to back on Earth-but that's all past and done with. No use crying over spilt milk, eh?'

'Wait a minute. You are under a misapprehension, Hump. Listen. I'm not an escaped slave. I'm here to take you back.'

Wingate opened his mouth, closed it, then opened it again. 'But Sam,' he said, 'that's impossible. You don't know.'

'I think I do.'

'But you don't. There's no going back for me. If I did, I'd have to face trial, and they've got me dead to rights. Even if I threw myself on the mercy of the court and managed to get off with a light sentence, it would be twenty years before I'd be a free man. No, Sam, it's impossible. You don't know the things I'm charged with.'

'I don't, eh? It's cost me a nice piece of change to clear them up.'

'Huh?'

'I know how you escaped. I know you stole a crock and kidnapped your patron and got two other clients to run with you. It took my best blarney and plenty of folding money to fix it. So help me, Hump-Why didn't you pull something mild, like murder, or rape, or robbing a post office?'

'Well, now, Sam-I didn't do any of those things to cause you trouble. I had counted you out of my calculations. I was on my own. I'm sorry about the money.'

'Forget it. Money isn't an item with me. I'm filthy with the stuff. You know that. It comes from exercising care in the choice of parents. I was just pulling your leg and it came off in my hand.'

'Okay. Sorry.' Wingate's grin was a little forced. Nobody likes charity. 'But tell me what happened. I'm still in the dark.'

'Right.' Jones had been as much surprised and distressed at being separated from Wingate on grounding as Wingate had been. But there had been nothing for him to do about it until he received assistance from Earth. He had spent long weeks as a metal worker at South Pole, waiting and wondering why 'his sister did not answer his call for help. He had written letters to her to supplement his first radiogram, that being the only type of communication he could afford, but the days crept past with no answer.

When a message did arrive from her the mystery was cleared up. She had not received his radio to Earth promptly, because she, too, was aboard the Evening Star-in the first class cabin, traveling, as was her custom, in a stateroom listed under her maid's name. 'It was the family habit of avoiding publicity that stymied us,' Jones explained. 'If I hadn't sent the radio to her rather than the family lawyers, or if she had been known by name to the purser, we would have gotten together the first day.' The message had not been relayed to her on Venus because the bright planet had by that time crawled to superior opposition on the far side of the sun from the Earth. For a matter of sixty earth days there was no communication, Earth to Venus. The message had rested, recorded but still scrambled, in the hands of the family firm, until she could be reached.

When she received it, she started a small tornado. Jones had been released, the liens against his contract paid, and ample credit posted to his name on Venus, in less than twenty-four hours. 'So that was that,' concluded Jones, 'except that I've got to explain to big sister when I get home just how I got into this mess. She'll burn my ears.'

Jones had charted a rocket for North Pole and had gotten on Wingate's trail at once. 'If you had held on one more day, I would have picked you up. We retrieved your ex-patron about a mile from his gates.'

'So the old villain made it. I'm glad of that.'

'And a good job, too. If he hadn't I might never have been able ~o square you. He was pretty well done in, and his heart was kicking up plenty. Do you know that abandonment is a capital offence on this planet-with a mandatory death sentence if the victim dies?'

Wingate nodded. 'Yeah, I know. Not that I ever heard of a patron being gassed for it, if the corpse was a client. But that's beside the point. Go ahead.'

'Well, he was plenty sore. I don't blame him, though I don't blame you, either. Nobody wants to be sold South, and I gather that was what you expected. Well, I paid him for his crock, and I paid him for your contract-take a look at me, I'm your new owner!-and I paid for the contracts of your two friends as well. Still he wasn't satisfied. I finally had to throw in a first-class passage for his daughter back to Earth, and promise to

find her a job. She's a big dumb ox, but I guess the family can stand another retainer. Anyhow, old son, you're a free man. The only remaining question is whether or not the Governor will let us leave here. It seems it's not done.'

'No, that's a point. Which reminds me-how did you locate the place?'

'A spot of detective work too long to go into now. That's what took me so long. Slaves don't like to talk. Anyhow, we've a date to talk to the Governor tomorrow.'

Wingate took a long time to get to sleep. After his first burst of jubilation he began to wonder. Did he want to go back? To return to the law, to citing technicalities in the interest of whichever side employed him, to meaningless social engagements, to the empty, sterile, bunkum-fed life of the fat and prosperous class he had moved among and served-did he want that, he, who had fought and worked with men? It seemed to him that his anachronistic little 'invention' in radio had been of more worth than all he had ever done on Earth.

Then he recalled his book.

Perhaps he could get it published. Perhaps he could expose this disgraceful, inhuman system which sold men into legal slavery. He was really wide awake now. There was a thing to do! That was his job-to go back to Earth and plead the cause of the colonists. Maybe there was destiny that shapes men's lives after all. He was just the man to do it, the right social background, the proper training. He could make himself heard.

He fell asleep, and dreamt of cool, dry breezes, of clear blue sky. Of moonlight...

Satchel and Jimmie decided to stay, even though Jones had been able to fix it up with the Governor. 'It's like this,' said Satchel. 'There's nothing for us back on Earth, or we wouldn't have shipped in the first place. And you can't undertake to support a couple of deadheads. And this isn't such a bad place. It's going to be something someday. We'll stay and grow up with it.'

They handled the crock which carried Jones and Wingate to Adonis. There was no hazard in it, as Jones was now officially their patron. What the authorities did not know they could not act on. The crock returned to the refugee community loaded with a cargo which Jones insisted on calling their ransom. As a matter of fact, the opportunity to send an agent to obtain badly needed supplies-one who could do so safely and without arousing the suspicions of the company authorities-had been the determining factor in the Governor's unprecedented decision to risk compromising the secrets of his constituency. He had been frankly not interested in Wingate's plans to agitate for the abolishment of the slave trade.

Saying good-bye to Satchel and Jimmie was something Wingate found embarrassing and unexpectedly depressing.

For the first two weeks after grounding on Earth both Wingate and Jones were too busy to see much of each other. Wingate had gotten his manuscript in shape on the return trip and had spent the time getting acquainted with the waiting rooms of publishers. Only one had shown any interest beyond a form letter of rejection.

'I'm sorry, old man,' that one had told him. 'I'd like to publish your book, in spite of its controversial nature, if it stood any chance at all of success. But it doesn't. Frankly, it has no literary merit whatsoever. I would as soon read a brief.'

'I think I understand,' Wingate answered sullenly. 'A big publishing house can't afford to print anything which might offend the powers-that-be.'

The publisher took his cigar from his mouth and looked at the younger man before replying. 'I suppose I should resent that,' he said quietly, 'but I won't. That's a popular misconception. The powers-that-be, as you call them, do not resort to suppression in this country. We publish what the public will buy. We're in business for that purpose.

'I was about to suggest, if you will listen, a means of making your book saleable. You need a collaborator, somebody that knows the writing game and can put some guts in it.'

Jones called the day that Wingate got his revised manuscript back from his ghost writer. 'Listen to this, Sam,' he pleaded. 'Look, what the dirty so-and-so has done to my book. Look.

- I heard again the crack of the overseer's whip. The frail body of my mate shook under the lash. He gave one cough and slid slowly under the waist-deep water, dragged down by his chains." Honest, Sam, did you ever see such drivel? And look at the new title: "I Was a Slave on Venus". It sounds like a confession magazine.'

Jones nodded without replying. 'And listen to this,' Wingate went on, '"-crowded like cattle in the enclosure, their naked bodies gleaming with sweat, the women slaves shrank from the-"Oh, hell, I can't go on!'

'Well, they did wear nothing but harness.'

'Yes, yes-but that has nothing to do with the case. Venus costume is a necessary concomitant of the weather. There's no excuse to leer about it. He's turned my book into a damned sex show. And he had the nerve to defend his actions. He claimed that social pamphleteering is dependent on extravagant language.'

'Well, maybe he's got something. Gulliver's Travels certainly has some racy passages, and the whipping scenes in Uncle Tom's Cabin aren't anything to hand a kid to read. Not to mention Grapes of Wrath.'

'Well, I'm damned if I'll resort to that kind of cheap sensationalism. I've got a perfectly straightforward case that anyone can understand.'

'Have you now?' Jones took his pipe out of his mouth. 'I've been wondering how long it would take you to get your eyes opened. What is your case? It's nothing new; it happened in the Old South, it happened again in California, in Mexico, in Australia, in South Africa. Why? Because in any expanding free-enterprise economy which does not have a money system designed to fit its requirements the use of mother-country capital to develop the colony inevitably results in subsistence level wages at home and slave labor in the colonies. The rich get richer and the poor get poorer, and all the good will in the world on the part of the so-called ruling classes won't change it, because the basic problem is one requiring scientific analysis and a mathematical mind. Do you think you can explain those issues to the general public?'

'I can try.'

'How far did I get when I tried to explain them to you-before you had seen the results? And you are a smart hombre. No, Hump, these things are too difficult to explain to people and too abstract to interest them. You spoke before a women's club the other day, didn't you?'

'Yes.'

'How did you make out?'

'Well. . . the chairwoman called me up beforehand and asked me to hold my talk down to ten minutes, as their national president was to be there and they would be crowded for time.'

'Hmm . . . you see where your great social message rates in competition. But never mind. Ten minutes is long enough to explain the issue to a person if they have the capacity to understand it. Did you sell anybody?'

'Well.. . I'm not sure.'

'You're darn tootin' you're not sure. Maybe they clapped for you but how many of them came up afterwards and wanted to sign checks? No, Hump, sweet reasonableness won't get you anywhere in this racket. To make yourself 'heard you have to be a demagogue, or a rabble-rousing political preacher like this fellow Nehemiah Scudder. We're going merrily to hell and it won't stop until it winds up in a crash.'

'But-Oh, the devil! What can we do about it?'

'Nothing. Things are bound to get a whole lot worse before they can get any better. Let's have a drink.'

The Long Watch

"Nine ships blasted off from Moon Base. Once in space, eight of them formed a globe around the smallest. They held this formation all the way to Earth.
"The small ship displayed the insignia of an admiral-yet there was no living thing of any sort in her. She was not even a passenger ship, but a drone, a robot ship intended for radioactive cargo. This trip she carried nothing but a lead coffin - and a Geiger counter that was never quiet." -from the editorial After Ten Years, film 38, 17 June 2009, Archives of the N.Y. Times

JOHNNY DAHLQUIST blew smoke at the Geiger counter. He grinned wryly and tried it again. His whole body was radioactive by now. Even his breath, the smoke from his cigarette, could make the Geiger counter scream. How long had he been here? Time doesn't mean much on the Moon. Two days? Three? A week? He let his mind run back: the last clearly marked time in his mind was when the Executive Officer had sent for him, right after breakfast - "Lieutenant Dahlquist, reporting to the Executive Officer."

Colonel Towers looked up. "Ah, John Ezra. Sit down, Johnny. Cigarette?"

Johnny sat down, mystified but flattered. He admired Colonel Towers, for his brilliance, his ability to dominate, and for his battle record. Johnny had no battle record; he had been commissioned on completing his doctor's degree in nuclear physics and was now junior bomb officer of Moon Base.

The Colonel wanted to talk politics; Johnny was puzzled. Finally Towers had come to the point; it was not safe (so he said) to leave control of the world in political hands; power must be held by a scientifically selected group. In short - The Patrol.

Johnny was startled rather than shocked. As an abstract idea, Towers' notion sounded plausible. The League of Nations had folded up; what would keep the United Nations from breaking up, too, and thus lead to another World War. "And you know how bad such a war would be, Johnny."

Johnny agreed. Towers said he was glad that Johnny got the point. The senior bomb officer could handle the work, but it was better to have both specialists.

Johnny sat up with a jerk. "You are going to do something about it?" He had thought the Exec was just talking.

Towers smiled. "We're not politicians; we don't just talk. We act."

Johnny whistled. "When does this start?"

Towers flipped a switch. Johnny was startled to hear his own voice, then identified the recorded conversation as having taken place in the junior officers' messroom. A political argument he remembered, which he had walked out on... a good thing, too! But being spied on annoyed him.

Towers switched it off. "We have acted," he said. "We know who is safe and who isn't. Take Kelly-" He waved at the loudspeaker. "Kelly is politically unreliable. You noticed he wasn't at breakfast?"

"Huh? I thought he was on watch."

"Kelly's watch-standing days are over. Oh, relax; he isn't hurt."

Johnny thought this over. "Which list am I on?" he asked. "Safe or unsafe?"

"Your name has a question mark after it. But I have said all along that you could be depended on." He grinned engagingly. "You won't make a liar of me, Johnny?"

Dahlquist didn't answer; Towers said sharply, "Come now - what do you think of it? Speak up."

"Well, if you ask me, you've bitten off more than you can chew. While it's true that Moon Base controls the Earth, Moon Base itself is a sitting duck for a ship. One bomb - blooie!"

Towers picked up a message form and handed it over; it read: I HAVE YOUR CLEAN LAUNDRY-ZACK. "That means every bomb in the Trygve Lie has been put out of commission. I have reports from every ship we need worry about." He stood up. "Think it over and see me after lunch. Major Morgan needs your help right away to change control frequencies on the bombs."

"The control frequencies?"

"Naturally. We don't want the bombs jammed before they reach their targets."

"What? You said the idea was to prevent war."

Towers brushed it aside. "There won't, be a war-just a psychological demonstration, an unimportant town or two. A little bloodletting to save an all-out war. Simple arithmetic."

He put a hand on Johnny's shoulder. "You aren't squeamish, or you wouldn't be a bomb officer. Think of it as a surgical operation. And think of your family."

Johnny Dahlquist had been thinking of his family. "Please, sir, I want to see the Commanding Officer."

Towers frowned. "The Commodore is not available. As you know, I speak for him. See me again-after lunch."

The Commodore was decidedly not available; the Commodore was dead. But Johnny did not know that.

Dahlquist walked back to the messroom, bought cigarettes, sat down and had a smoke. He got up, crushed out the butt, and headed for the Base's west airlock. There he got into his space suit and went to the lockmaster. "Open her up, Smitty."

The marine looked surprised. "Can't let anyone out on the surface without word from Colonel Towers, sir. Hadn't you heard?"

"Oh, yes! Give me your order book." Dahlquist took it, wrote a pass for himself, and signed it "by direction of Colonel Towers." He added, "Better call the Executive Officer and check it."

The lockmaster read it and stuck the book in his pocket. "Oh, no, Lieutenant. Your word's good."

"Hate to disturb the Executive Officer, eh? Don't blame you." He stepped in, closed the inner door, and waited for the air to be sucked out.

Out on the Moon's surface he blinked at the light and hurried to the track-rocket terminus; a car was waiting. He squeezed in, pulled down the hood, and punched the starting button. The rocket car flung itself at the hills dived through and came out on a plain studded with projectile rockets, like candles on a cake. Quickly it dived into a second tunnel through more hills. There was a stomach-wrenching deceleration and the car stopped at the underground atom-bomb armory.

As Dahlquist climbed out he switched on his walkie-talkie. The space-suited guard at the entrance came to port-arms. Dahlquist said, "Morning, Lopez," and walked by him to the airlock. He pulled it open. . .

The guard motioned him back. "Hey! Nobody goes in without the Executive Officer's say-so." He shifted his gun, fumbled in his pouch and got out a paper. "Read it, Lieutenant."

Dahlquist waved it away. "I drafted that order myself. You read it; you've misinterpreted it."

"I don't see how, Lieutenant."

Dahlquist snatched the paper, glanced at it, then pointed to a line. "See? '-except persons specifically designated by the Executive Officer.' That's the bomb officers, Major Morgan and me."

The guard looked worried. Dahlquist said, "Damn it, look up 'specifically designated' - it's under 'Bomb Room, Security, Procedure for' in your standing orders. Don't tell me you left them in the barracks!"

"Oh, no, sir! I've got 'em." The guard reached into his pouch. Dahlquist gave him back the sheet; the guard took it, hesitated, then leaned his weapon against his hip, shifted the paper to his left hand, and dug into his pouch with his right.

Dahlquist grabbed the gun, shoved it between the guard's legs, and jerked. He threw the weapon away and ducked into the airlock. As he slammed the door he saw the guard struggling to his feet and reaching for his side arm. He dogged the outer door shut and felt a tingle in his fingers as a slug struck the door.

He flung himself at the inner door, jerked the spill lever, rushed back to the outer door and hung his weight on the handle. At once he could feel it stir. The guard was lifting up; the lieutenant was pulling down, with only his low Moon weight to anchor him. Slowly the handle raised before his eyes.

Air from the bomb room rushed into the lock through the spill valve. Dahlquist felt his space suit settle on his body as the pressure in the lock began to equal the pressure in the suit. He quit straining and let the guard raise the handle. It did not matter; thirteen tons of air pressure now held the door closed.

He latched open the inner door to the bomb room, so that it could not swing shut. As long as it was open, the airlock could not operate; no one could enter.

Before him in the room, one for each projectile rocket, were the atom bombs, spaced in rows far enough apart to defeat any faint possibility of spontaneous chain reaction. They were the deadliest things in the known universe, but they were his babies. He had placed himself between them and anyone who would misuse them.

But, now that he was here, he had no plan to use his temporary advantage.

The speaker on the wall sputtered into life. "Hey! Lieutenant! What goes on here? You gone crazy?" Dahlquist did not answer. Let Lopez stay confused-it would take him that much longer to make up his mind what to do. And Johnny Dahlquist needed as many minutes as he could squeeze. Lopez went on protesting. Finally he shut up.

Johnny had followed a blind urge not to let the bombs - his bombs! - be used for "demonstrations on unimportant towns." But what to do next? Well, Towers couldn't get through the lock. Johnny would sit tight until hell froze over.

Don't kid yourself, John Ezra! Towers could get in. Some high explosive against the outer door-then the air would whoosh out, our boy Johnny would drown in blood from his burst lungs-and the bombs would be sitting there, unhurt. They were built to stand the jump from Moon to Earth; vacuum would not hurt them at all.

He decided to stay in his space suit; explosive decompression didn't appeal to him. Come to think about it, death from old age was his choice.

Or they could drill a hole, let out the air, and open, the door without wrecking the lock. Or Towers might even have a new airlock built outside the old. Not likely, Johnny thought; a coup d'etat depended on speed. Towers was almost sure to take the quickest way-blasting. And Lopez was probably calling the Base right now. Fifteen minutes for Towers to suit up and get here, maybe a short dicker-then whoosh! the party is over.

Fifteen minutes - In fifteen minutes the bombs might fall back into the hands of the conspirators; in fifteen minutes he must make the bombs unusable.

An atom bomb is just two or more pieces of fissionable metal, such as plutonium. Separated, they are no more explosive than a pound of butter; slapped together, they explode. The complications lie in the gadgets and circuits and gun used to slap them together in the exact way and at the exact time and place required.

These circuits, the bomb's "brain," are easily destroyed - but the bomb itself is hard to destroy because of its very simplicity. Johnny decided to smash the "brains" - and quickly!

The only tools at hand were simple ones used in handling the bombs. Aside from a Geiger counter, the speaker on the walkie-talkie circuit, a television rig to the base, and the bombs themselves, the room was bare. A bomb to be worked on was taken elsewhere-not through fear of explosion, but to reduce radiation exposure for personnel. The radioactive material in a bomb is buried in a "tamper" - in these bombs, gold. Gold stops alpha, beta, and much of the deadly gamma radiation - but not neutrons.

The slippery, poisonous neutrons which plutonium gives off had to escape, or a chain reaction - explosion! - would result. The room was bathed in an invisible, almost undetectable rain of neutrons. The place was unhealthy; regulations called for staying in it as short a time as possible.

The Geiger counter clicked off the "background" radiation, cosmic rays, the trace of radioactivity in the Moon's crust, and secondary radioactivity set up all through the room by neutrons. Free neutrons have the nasty trait of infecting what they strike, making it radioactive, whether it be concrete wall or human body. In time the room would have to be abandoned.

Dahlquist twisted a knob on the Geiger counter; the instrument stopped clicking. He had used a suppressor circuit to cut out noise of "background" radiation at the level then present. It reminded him uncomfortably of the danger of staying here. He took out the radiation exposure film all radiation personnel carry; it was a direct-response type and had been fresh when he arrived. The most sensitive end was faintly darkened already. Half way down the film a red line crossed it. Theoretically, if the wearer was exposed to enough radioactivity in a week to darken the film to that line, he was, as Johnny reminded himself, a "dead duck".

Off came the cumbersome space suit; what he needed was speed. Do the job and surrender-better to be a prisoner than to linger in a place as "hot" as this.

He grabbed a ball hammer from the tool rack and got busy, pausing only to switch off the television pick-up. The first bomb bothered him. He started to smash the covet plate of the "brain," then stopped, filled with reluctance. All his life he had prized fine apparatus.

He nerved himself and swung; glass tinkled, metal creaked. His mood changed; he began to feel a shameful pleasure in destruction. He pushed on with enthusiasm, swinging, smashing, destroying!

So intent was he that he did not at first hear his name called. "Dahlquist! Answer me! Are you there?"

He wiped sweat and looked at the TV screen. Towers' perturbed features stared out.

Johnny was shocked to find that he had wrecked only six bombs. Was he going to be caught before he could finish? Oh, no! He had to finish. Stall, son, stall! "Yes, Colonel? You called me?"

"I certainly did! What's the meaning of this?"

"I'm sorry, Colonel."

Towers' expression relaxed a little. "Turn on your pick-up, Johnny, I can't see you. What was that noise?"

"The pick-up is on," Johnny lied. "It must be out of order. That noise-uh, to tell the truth, Colonel, I was fixing things so that nobody could get in here."

Towers hesitated, then said firmly, "I'm going to assume that you are sick and send you to the Medical Officer. But I want you to come out of there, right away. That's an order, Johnny."

Johnny answered slowly. "I can't just yet, Colonel. I came here to make up my mind and I haven't quite made it up. You said to see you after lunch."

"I meant you to stay in your quarters."

"Yes, sir. But I thought I ought to stand watch on the bombs, in case I decided you were wrong."

"It's not for you to decide, Johnny. I'm your superior officer. You are sworn to obey me."

"Yes, sir." This was wasting time; the old fox might have a squad on the way now. "But I swore to keep the peace, too. Could you come out here and talk it over with me? I don't want to do the wrong thing."

Towers smiled. "A good idea, Johnny. You wait there. I'm sure you'll see the light." He switched off.

"There," said Johnny. "I hope you're convinced that I'm a half-wit-you slimy mistake!" He picked up the hammer, ready to use the minutes gained.

He stopped almost at once; it dawned on him that wrecking the "brains" was not enough. There were no spare "brains," but there was a well-stocked electronics shop. Morgan could jury-rig control circuits for bombs. Why, he could himself - not a neat job, but one that would work. Damnation! He would have to wreck the bombs themselves - and in the next ten minutes.

But a bomb was solid chunks of metal, encased in a heavy tamper, all tied in with a big steel gun. It couldn't be done - not in ten minutes.

Damn!

Of course, there was one way. He knew the control circuits; he also knew how to beat them. Take this bomb: if he took out the safety bar, unhooked the proximity circuit, shorted the delay circuit, and cut in the arming circuit by hand - then unscrewed that and reached in there, he could, with just a long, stiff wire, set the bomb off.

Blowing the other bombs and the valley itself to Kingdom Come.

Also Johnny Dahlquist. That was the rub.

All this time he was doing what he had thought out, up to the step of actually setting off the bomb. Ready to go, the bomb seemed to threaten, as if crouching to spring. He stood up, sweating.

He wondered if he had the courage. He did not want to funk - and hoped that he would. He dug into his jacket and took out a picture of Edith and the baby. "Honeychild," he said, "if I get out of this, I'll never even try to beat a red light." He kissed the picture and put it back. There was nothing to do but wait.

What was keeping Towers? Johnny wanted to make sure that Towers was in blast range. What a joke on the jerk! Me sitting here, ready to throw the switch on him. The idea tickled him; it led to a better: why blow himself up - alive?

There was another way to rig it - a "dead man" control. Jigger up some way so that the last step, the one that set off the bomb, would not happen as long as he kept his hand on a switch or a lever or something. Then, if they blew open the door, or shot him, or anything - up goes the balloon!

Better still, if he could hold them off with the threat of it, sooner or later help would come - Johnny was sure that most of the Patrol was not in this stinking conspiracy - and then: Johnny comes marching home! What a reunion! He'd resign and get a teaching job; he'd stood his watch.

All the while, he was working. Electrical? No, too little time. Make it a simple mechanical linkage. He had it doped out but had hardly begun to build it when the loudspeaker called him. "Johnny?"

"That you, Colonel?" His hands kept busy.

"Let me in."

"Well, now, Colonel, that wasn't in the agreement." Where in blue blazes was something to use as a long lever?

"I'll come in alone, Johnny, I give you my word. We'll talk face to face."

His word! "We can talk over the speaker, Colonel." Hey, that was it-a yardstick, hanging on the tool rack.

"Johnny, I'm warning you. Let me in, or I'll blow the door off."

A wire-he needed a wire, fairly long and stiff. He tore the antenna from his suit. "You wouldn't do that, Colonel. It would ruin the bombs."

"Vacuum won't hurt the bombs. Quit stalling."

"Better check with Major Morgan. Vacuum won't hurt them; explosive decompression would wreck every circuit." The Colonel was not a bomb specialist; he shut up for several minutes. Johnny went on working.

"Dahlquist," Towers resumed, "that was a clumsy, lie. I checked with Morgan. You have sixty seconds to get into your suit, if you aren't already. I'm going to blast the door."

"No, you won't," said Johnny. "Ever hear of a 'dead man' switch?" Now for a counterweight-and a sling.

"Eh? What do you mean?"

"I've rigged number seventeen to set off by hand. But I put in a gimmick. It won't blow while I hang on to a strap I've got in my hand. But if anything happens to me - up she goes! You are about fifty feet from the blast center. Think it over."

There was a short silence. "I don't believe you."

"No? Ask Morgan. He'll believe me. He can inspect it, over the TV pickup." Johnny lashed the belt of his space suit to the end of the yardstick.

"You said the pick-up was out of order."

"So I lied. This time I'll prove it. Have Morgan call me."

Presently Major Morgan's face appeared. "Lieutenant Dahlquist?"

"Hi, Stinky. Wait a sec." With great care Dahlquist made one last connection while holding down the end of the yardstick. Still careful, he shifted his grip to the belt, sat down on the floor, stretched an arm and switched on the TV pick-up, "Can you see me, Stinky?"

"I can see you," Morgan answered stiffly. "What is this nonsense?"

"A little surprise I whipped up." He explained it-what circuits he had cut out, what ones had been shorted, just how the jury-rigged mechanical sequence fitted in.

Morgan nodded. "But you're bluffing, Dahlquist. I feel sure that you haven't disconnected the 'K' circuit. You don't have the guts to blow yourself up."

Johnny chuckled. "I sure haven't. But that's the beauty of it. It can't go off, so long as I am alive. If your greasy boss, ex-Colonel Towers, blasts the door, then I'm dead and the bomb goes off. It won't matter to me, but it will to him. Better tell him." He switched off.

Towers came on over the speaker shortly. "Dahlquist?"

"I hear you."

"There's no need to throw away your life. Come out and you will be retired on full pay. You can go home to your family. That's a promise."

Johnny got mad. "You keep my family out of this!"

"Think of them, man."

"Shut up. Get back to your hole. I feel a need to scratch and this whole shebang might just explode in your lap."

2

JOHNNY SAT UP with a start. He had dozed, his hand hadn't let go the sling, but he had the shakes when he thought about it.

Maybe he should disarm the bomb and depend on their not daring to dig him out? But Towers' neck was already in hock for treason; Towers might risk it. If he did and the bomb were disarmed, Johnny would be dead and Towers would have the bombs. No, he had gone this far; he wouldn't let his baby girl grow up in a dictatorship just to catch some sleep.

He heard the Geiger counter clicking and remembered having used the suppressor circuit The radioactivity in the room must be increasing, perhaps from scattering the "brain" circuits-the circuits were sure to be infected; they had lived too long too close to plutonium. He dug out his film.

The dark area was spreading toward the red line.

He put it back and said, "Pal, better break this deadlock or you are going to shine like a watch dial." It was a figure of speech; infected animal tissue does not glow-it simply dies, slowly.

The TV screen lit up; Towers' face appeared. "Dahlquist? I want to talk to you."

"Go fly a kite."

"Let's admit you have us inconvenienced."

"Inconvenienced, hell-I've got you stopped."

"For the moment I'm arranging to get more bombs-"

"Liar."

"-but you are slowing us up. I have a proposition."

"Not interested."

"Wait. When this is over I will be chief of the world government. If you cooperate, even now, I will make you my administrative head."

Johnny told him what to do with it. Towers said, "Don't be stupid. What do you gain by dying?"

Johnny grunted. "Towers, what a prime stinker you are. You spoke of my family. I'd rather see them dead than living under a two-bit Napoleon like you. Now go away-I've got some thinking to do."

Towers switched off.

Johnny got out his film again. It seemed no darker but it reminded, him forcibly that time was running out. He was hungry and thirsty-and he could not stay awake forever. It took four days to get a ship up from Earth; he could not expect rescue any sooner. And he wouldn't last four days-once the darkening spread past the red line he was a goner.

His only chance was to wreck the bombs beyond repair, and get out-before that film got much darker.

He thought about ways, then got busy. He hung a weight on the sling, tied a line to it. If Towers blasted the door, he hoped to jerk the rig loose before he died.

There was a simple, though arduous, way to wreck the bombs beyond any capacity of Moon Base to repair them. The heart of each was two hemispheres of plutonium, their flat surfaces polished smooth to permit perfect contact when slapped together. Anything less would prevent the chain reaction on which atomic explosion depended.

Johnny started taking apart one of the bombs.

He had to bash off four lugs, then break the glass envelope around the inner assembly. Aside from that the bomb came apart easily. At last he had in front of him two gleaming, mirror-perfect half globes.

A blow with the hammer-and one was no longer perfect. Another blow and the second cracked like glass; he had tapped its crystalline structure just right.

Hours later, dead tired, he went back to the armed bomb. Forcing himself to steady down, with extreme care he disarmed it. Shortly its silvery hemispheres too were useless. There was no longer a usable bomb in the room-but huge fortunes in the most valuable, most poisonous, and most deadly metal in the known world were spread around the floor.

Johnny looked at the deadly stuff. "Into your suit and out of here, son," he said aloud. "I wonder what Towers will say?"

He walked toward the rack, intending to hang up the hammer. As he passed, the Geiger counter chattered wildly.

Plutonium hardly affects a Geiger counter; secondary infection from plutonium does. Johnny looked at the hammer, then held it closer to the Geiger counter. The counter screamed...

Johnny tossed it hastily away and started back toward his suit.

As he passed the counter it chattered again. He stopped short.

He pushed one hand close to the counter. Its clicking picked up to a steady roar. Without moving he reached into his pocket and took out his exposure film.

It was dead black from end to end.

3

PLUTONIUM TAKEN into the body moves quickly to bone marrow. Nothing can be done; the victim is finished. Neutrons from it smash through the body, ionizing tissue, transmuting atoms into radioactive isotopes, destroying and killing. The fatal dose is unbelievably small; a mass a tenth the size of a grain of table salt is more than enough- a dose small enough to enter through the tiniest scratch. During the historic "Manhattan Project" immediate high amputation was considered the only possible first-aid measure.

Johnny knew all this but it no longer disturbed him. He sat on the floor, smoking a hoarded cigarette, and thinking. The events of his long watch were running through his mind.

He blew a puff of smoke at the Geiger counter and smiled without humor to hear it chatter more loudly. By now even his breath was "hot" carbon-14, he supposed, exhaled from his blood stream as carbon dioxide. It did not matter.

There was no longer any point in surrendering, nor would he give Towers the satisfaction-he would finish out this watch right here. Besides, by keeping up the bluff that one bomb was ready to blow, he could stop them from capturing the raw material from which bombs were made. That might be important in the long run.

He accepted, without surprise, the fact that he was not unhappy. There was a sweetness about having no further worries of any sort. He did not hurt, he was not uncomfortable, he was no longer even hungry. Physically he still felt fine and his mind was at peace. He was dead - he knew that he was dead; yet for a time he was able to walk and breathe and see and feel.

He was not even lonesome. He was not alone; there were comrades with him - the boy with his finger in the dike, Colonel Bowie, too ill to move but insisting that he be carried across the line, the dying Captain of the Chesapeake still with deathless challenge on his lips, Rodger Young peering into the gloom. They gathered about him in the dusky bomb room.

And of course there was Edith. She was the only one he was aware of. Johnny wished that he could see her face more clearly. Was she angry? Or proud and happy?

Proud though unhappy - he could see her better now and even feel her hand. He held very still.

Presently his cigarette burned down to his fingers. He took a final puff, blew it at the Geiger counter, and put it out. It was his last. He gathered several butts and fashioned a roll-your-own with a bit of paper found in a pocket. He lit it carefully and settled back to wait for Edith to show up again. He was very happy.

He was still propped against the bomb case, the last of his salvaged cigarettes cold at his side, when the speaker called out again. "Johnny? Hey, Johnny! Can you hear me? This is Kelly. It's all over. The Lafayette landed and Towers blew his brains out. Johnny? Answer me."

When they opened the outer door, the first man in carried a Geiger counter in front of him on the end of a long pole. He stopped at the threshold and backed out hastily. "Hey, chief!" he called. "Better get some handling equipment - uh, and a lead coffin, too."

"Four days it took the little ship and her escort to reach Earth. Four days while all of Earth's people awaited her arrival. For ninety-eight hours all commercial programs were off television; instead there was an endless dirge - the Dead March from Saul, the Valhalla theme, Going Home, the Patrol's own Landing Orbit.

"The nine ships landed at Chicago Port. A drone tractor removed the casket from the small ship; the ship was then refueled and blasted off in an escape trajectory, thrown away into outer space, never again to be used for a lesser purpose.

"The tractor progressed to the Illinois town where Lieutenant Dahlquist had been born, while the dirge continued. There it placed the casket on a pedestal, inside a barrier marking the distance of safe approach. Space marines, arms reversed and heads bowed, stood guard around it; the crowds stayed outside this circle. And still the dirge continued.

"When enough time had passed, long, long after the heaped flowers had withered, the lead casket was enclosed in marble, just as you see it today."

Lost Legacy

By Robert A. Heinlein

Lost Legacy 1
Chapter One "Ye Have Eyes to See With!" 3
Chapter Two Three Blind Mice 7
Chapter Three "Every Man His Own Genius" 14
Chapter Four Holiday 19
Chapter Five "-Through a Glass, Darkly" 27
Chapter Six Ichabod! 32
Chapter Seven "The Fathers Have Eaten Sour Grapes, and the Children's Teeth Are Set on Edge" 36
Chapter Eight "Precept Upon Precept . . ." 39
Chapter Nine Fledglings Fly 42
Chapter Ten Lions Mouth 45
Chapter Eleven "A Little Child Shall Lead Them" 52
Chapter Twelve "Ye Shall Know the Truth- " 56
Chapter Thirteen "-and the Truth Shall Make You Free!" 66

Chapter One "Ye Have Eyes to See With!"

"Hi-yah, Butcher!" Doctor Philip Huxley put down the dice cup he had been fiddling with as he spoke, and shoved out a chair with his foot. "Sit down."

The man addressed ostentatiously ignored the salutation while handing a yellow slicker and soggy felt hat to the Faculty Clubroom attendant, but accepted the chair. His first words were to the negro attendant.

"Did you hear that, Pete? A witch doctor, passing himself off as a psychologist, has the effrontery to refer to me-to me, a licensed physician and surgeon, as a butcher." His voice was filled with gentle reproach.

"Don't let him kid you, Pete. If Doctor Coburn ever got you into an operating theatre, he'd open up your head just to see what makes you tick. He'd use your skull to make an ashtray."

The man grinned as he wiped the table, but said nothing.

Coburn clucked and shook his head. "That from a witch doctor. Still looking for the Little Man Who Wasn't There, Phil?"

"If you mean parapsychology, yes."

"How's the racket coming?"

"Pretty good. I've got one less lecture this semester, which is just as well-I get awfully tired of explaining to the wide-eyed innocents how little we really know about what goes on inside their think-tanks. I'd rather do research."

"Who wouldn't? Struck any pay dirt lately?"

"Some. I'm having a lot of fun with a law student just now, chap named Valdez."

Coburn lifted his brows. "So? E.S.P.?"

"Kinda. He's sort of a clairvoyant; if he can see one side of an object, he can see the other side, too."

"Nuts!"

" 'If you're so smart, why ain't you rich?' I've tried him out under carefully controlled conditions, and he can do it-see around comers."

"Hmmmm-well, as my Grandfather Stonebender used to say, 'God has more aces up his sleeve than were ever dealt in the game.' He would be a menace at stud poker."

"Matter of fact, he made his stake for law school as a professional gambler."

"Found out how he does it?"

"No, damn it." Huxley drummed on the table top, a worried look on his face. "If I just had a little money for research I might get enough data to make this sort of thing significant. Look at what Rhine accomplished at Duke."

"Well, why don't you holler? Go before the Board and bite 'em in the ear for it. Tell 'em how you're going to make Western University famous."

Huxley looked still more morose. "Fat chance. I talked with my dean and he wouldn't even let me take it up with the President. Scared that the old fathead will clamp down on the.department even more than he has. You see, officially, we are supposed to be behaviorists. Any suggestion that there might be something to consciousness that can't be explained in terms of physiology and mechanics is about as welcome as a Saint Bernard in a telephone booth."

The telephone signal glowed red back of the attendant's counter. He switched off the newscast and answered the call. "Hello . . . Yes, ma'am, he is. I'll call him. Telephone for you, Doctuh Coburn."

"Switch it over here." Coburn turned the telephone panel at the table around so that it faced him; as he did so it lighted up with the face of a young woman. He picked up the handset.

"What is it? . . . What's that? How long ago did it happen? . . . Who made the diagnosis? . . .

Read that over again . . . Let me see the chart." He inspected its image reflected in the panel, then added, "Very well. I'll be right over. Prepare the patient for operating." He switched off the instrument and turned to Huxley. "Got to go, Phil-emergency."

"What sort?"

"It'll interest you. Trephining. Maybe some cerebral excision. Car accident. Come along and watch it, if you have time." He was putting on his slicker as he spoke. He turned and swung out the west door with a long, loose-limbed stride. Huxley grabbed his own raincoat and hurried to catch up with him.

"How come," he asked as he came abreast, "they had to search for you?"

"Left my pocketphone in my other suit," Coburn returned briefly. "On purpose-I wanted a little peace and quiet. No luck."

They worked north and west through the arcades and passages that connected the Union with the Science group, ignoring the moving walkways as being too slow. But when they came to the conveyor subway under Third Avenue opposite the Pottenger Medical School, they found it flooded, its machinery stalled, and were forced to detour west to the Fairfax Avenue conveyor.

Coburn cursed impartially the engineers and the planning commission for the fact that spring brings torrential rains to Southern California, Chamber of Commerce or no.

They got rid of their wet clothes in the Physicians' Room and moved on to the gowning room for surgery. An orderly helped Huxley into white trousers and cotton shoe covers, and they moved to the next room to scrub. Coburn invited Huxley to scrub also in order that he might watch the operation close up. For three minutes by the little sand glass they scrubbed away with strong green soap, then stepped through a door and were gowned and gloved by silent, efficient nurses. Huxley felt rather silly to be helped on with his clothes by a nurse who had to stand on tip-toe to get the sleeves high enough. They were ushered through the glass door into Surgery III, rubber-covered hands held out, as if holding a skein of yarn.

The patient was already in place on the table, head raised up and skull clamped immobile.

Someone snapped a switch and a merciless circle of blue-white lights beat down on the only portion of him that was exposed, the right side of his skull. Coburn glanced quickly around the room, Huxley following his glance-light green walls, two operating nurses, gowned, masked, and hooded into sexlessness, a 'dirty' nurse, busy with something in the corner, the anesthetist, the instruments that told Coburn the state of the patient's heart action and respiration.

A nurse held the chart for the surgeon to read. At a word from Coburn, the anesthetist uncovered the patient's face for a moment. Lean brown face, acquiline nose, closed sunken eyes.

Huxley repressed an exclamation. Coburn raised his eyebrows at Huxley.

"What's the trouble?"

"It's Juan Valdez!"

"Who's he?"."The one I was telling you about-the law student with the trick eyes."

"Hmm-Well, his trick eyes didn't see around enough corners this time. He's lucky to be alive. You'll see better, Phil, if you stand over there."

Coburn changed to impersonal efficiency, ignored Huxley's presence and concentrated the whole of his able intellect on the damaged flesh before him. The skull had been crushed, or punched, apparently by coming into violent contact with some hard object with moderately sharp edges. The wound lay above the right ear, and was, superficially, two inches, or more, across. It was impossible, before exploration, to tell just how much damage had been suffered by the bony structure and the grey matter behind.

Undoubtedly there was some damage to the brain itself. The wound had been cleaned up on the surface and the area around it shaved and painted. The trauma showed up as a definite hole in the cranium. It was bleeding slightly and was partly filled with a curiously nauseating conglomerate of clotted purple blood, white tissue, grey tissue, pale yellow tissue.

The surgeon's lean slender fingers, unhuman in their pale orange coverings, moved gently, deftly in the wound, as if imbued with a separate life and intelligence of their own. Destroyed tissue, too freshly dead for the component cells to realize it, was cleared away-chipped fragments of bone, lacerated mater dura, the grey cortical tissue of the cerebrum itself.

Huxley became fascinated by the minuscule drama, lost track of time, and of the sequence of events. He remembered terse orders for assistance, "Clamp!" "Retractor!" "Sponge!" The sound of the tiny saw, a muffled whine, then the toothtingling grind it

made in cutting through solid living bone. Gently a spatulate instrument was used to straighten out the tortured convolutions.

Incredible and unreal, he watched a scalpel whittle at the door of the mind, shave the thin wall of reason.

Three times a nurse wiped sweat from the surgeon's face.

Wax performed its function. Vitallium alloy replaced bone, dressing shut out infection.

Huxley had watched uncounted operations, but felt aga in that almost insupportable sense of relief and triumph that comes when the surgeon turns away, and begins stripping off his gloves as he heads for the gowning room.

When Huxley joined Coburn, the surgeon had doused his mask and cap, and was feeling under his gown for cigarets. He looked entirely human again. He grinned at Huxley and inquired, "Well, how did you like it?"

"Swell. It was the first time I was able to watch that type of thing so closely. You can't see so well from behind the glass, you know. Is he going to be all right?"

Coburn's expression changed. "He is a friend of yours, isn't he? That had slipped my mind for the moment. Sorry. He'll be all right, I'm pretty sure. He's young and strong, and he came through the operation very nicely. You can come see for yourself in a couple of days."

"You excised quite a lot of the speech center, didn't you? Will he be able to talk when he gets well? Isn't he likely to have aphasia, or some other speech disorder?"

"Speech center? Why, I wasn't even close to the speech centers."

"Huh?"

"Put a rock in your right hand, Phil, so you'll know it next time. You're turned around a hundred and eighty degrees. I was working in the right cerebral lobe, not the left lobe."

Huxley looked puzzled, spread both hands out in front of him, glanced from one to the other, then his face cleared and he laughed. "You're right. You know, I have the damndest time with that. I never can remember which way to deal in a bridge game. But wait a minute-I had it so.firmly fixed in my mind that you were on the left side in the speech centers that I am confused.

What do you think the result will be on his neurophysiology?"

"Nothing-if past experience is any criterion. What I took away he'll never miss. I was working in terra incognito, pal-No Man's Land. If that portion of the brain that I was in has any function, the best physiologists haven't been able to prove it."

Chapter Two Three Blind Mice

BRRRNNG!

Joan Freeman reached out blindly with one hand and shut off the alarm clock, her eyes jammed shut in the vain belief that she could remain asleep if she did. Her mind wondered.

Sunday. Don't have to get up early on Sunday. Then why had she set the alarm? She remembered suddenly and rolled out of bed, warm feet on a floor cold in the morning air. Her pajamas landed on that floor as she landed in the shower, yelled, turned the shower to warm, then back to cold again.

The last item from the refrigerator had gone into a basket, and a thermos jug was filled by the time she beard the sound of a car on the hill outside, the crunch of tires on granite in the driveway. She hurriedly pulled on short boots, snapped the loops of her jodphurs under them, and looked at herself in the mirror. Not bad, she thought. Not Miss America, but she wouldn't frighten any children.

A banging at the door was echoed by the doorbell, and a baritone voice, "Joan! Are you decent?"

"Practically. Come on in, Phil."

Huxley, in slacks and polo shirt, was followed by another figure. He turned to him. "Joan, this is Ben Coburn, Doctor Ben Coburn. Doctor Coburn, Miss Freeman."

"Awfully nice of you to let me come, Miss Freeman."

"Not at all, Doctor. Phil had told me so much about you that I have been anxious to meet you." The conventionalities flowed with the ease of all long-established tribal taboo.

"Call him Ben, Joan. It's good for his ego."

While Joan and Phil loaded the car Coburn looked over the young woman's studio house. A single large room, panelled in knotty pine and dominated by a friendly field-stone fireplace set about with untidy bookcases, gave evidence of her personality. He had stepped through open french doors into a tiny patio, paved with mossy bricks and fitted with a barbecue pit and a little fishpond, brilliant in the morning sunlight, when he heard himself called.

"Doc! Stir your stumps! Time's awastin'!"

He glanced again around the patio, and rejoined the others at the car. "I like your house. Miss Freeman. Why should we bother to leave Beachwood Drive when Griffith Park can't be any pleasanter?"

"That's easy. If you stay at home, it's not a picnic-it's just breakfast. My name's Joan."

"May I put in a request for 'just breakfast' here some morning-Joan?"

"Lay off o' that mug, Joan," advised Phil in a stage whisper. "His intentions ain't honorable."

Joan straightened up the remains of what had recently been a proper-sized meal. She chucked into the fire three well-picked bones to which thick sirloin steaks were no longer attached, added.some discarded wrapping paper and one lonely roll. She shook the thermos jug. It gurgled slightly. "Anybody want some more grapefruit juice?" she called.

"Any more coffee?" asked Coburn, then continued to Huxley, "His special talents are gone completely?"

"Plenty," Joan replied. "Serve yourselves."

The Doctor filled his own cup and Huxley's. Phil answered, "Gone entirely, I'm reasonably certain. I thought it might be hysterical shock from the operation, but I tried him under hypnosis, and the results were still negative-completely. Joan, you're some cook. Will you adopt me?"

"You're over twenty-one."

"I could easily have him certified as incompetent," volunteered Coburn.

"Single women aren't favored for adoption."

"Marry me, and it will be all right-we can both adopt him and you can cook for all of us."

"Well, I won't say that I won't and I won't say that I will, but I will say that it's the best offer I've had today. What were you guys talking about?"

"Make him put it in writing, Joan. We were talking about Valdez."

"Oh! You were going to run those last tests yesterday, weren't you? How did you come out?"

"Absolutely negative insofar as his special clairvoyance was concerned. It's gone."

"Hmm-How about the control tests?"

"The Humm-Wadsworth Temperament Test showed exactly the same profile as before the accident, within the inherent limits of accuracy of the technique. His intelligence quotient came within the technique limit, too. Association tests didn't show anything either. By all the accepted standards of neuropsychology he is the same individual, except in two respects; he's minus a chunk of his cortex, and he is no longer able to see around corners. Oh, yes, and he's annoyed at losing that ability."

After a pause she answered, "That's pretty conclusive, isn't it?"

Huxley turned to Coburn. "What do you think, Ben?"

"Well, I don't know. You are trying to get me to admit that that piece of grey matter I cut out of his head gave him the ability to see in a fashion not possible to normal sense organs and not accounted for by orthodox medical theory, aren't you?"

"I'm not trying to make you admit anything. I'm trying to find out something."

"Well, since you put it that way, I would say if we stipulate that all your primary data were obtained with care under properly controlled conditions-"

"They were."

"-and that you have exercised even greater care in obtaining your negative secondary data."

"I have. Damn it, I tried for three weeks under all conceivable conditions."

"Then we have the inescapable conclusions, first-" He ticked them off on his fingers. "that this subject could see without the intervention of physical sense organs; and second, that this unusual, to put it mildly, ability was in some way related to a portion of his cerebrum in the dexter lobe."

"Bravo!" This was Joan's contribution.

"Thanks, Ben," acknowledged Phil. "I had reached the same conclusions, of course, but it's very encouraging to have someone else agree with me."

"Well, now that you are there, where are you?"

"I don't know exactly. Let me put it this way; I got into psychology for the same reason a person joins a church-because he feels an overpowering need to understand himself and the world around him. When I was a young student, I thought modern psychology could tell me the.answers, but I soon found out that the best psychologists didn't know a damn thing about the real core of the matter. Oh, I am not disparaging the work that has been done; it was badly needed and has been very useful in its way. None of 'em know what life is, what thought is, whether free will is a reality or an illusion, or whether that last question means anything. The best of 'em admit their ignorance; the worst of them make dogmatic assertions that are obvio us absurdities- for example some of the mechanistic behaviorists that think just because Pavlov could condition a dog to drool at the sound of a bell that, therefore, they knew all about how Paderewski made music!"

Joan, who had been lying quietly in the shade of the big liveoaks and listening, spoke up.

"Ben, you are a brain surgeon, aren't you?"

"One of the best," certified Phil.

"You've seen a lot of brains, furthermore you've seen 'em while they were alive, which is more than most psychologists have. What do you believe thought is? What do you think makes us tick?"

He grinned at her. "You've got me, kid. I don't pretend to know. It's not my business; I'm just a tinker."

She sat up. "Give me a cigaret, Phil. I've arrived just where Phil is, but by a different road.

My father wanted me to study law. I soon found out that I was more interested in the principles behind law and I changed over to the School of Philosophy. But philosophy wasn't the answer.

There really isn't anything to philosophy. Did you ever eat that cotton-candy they sell at fairs?

Well, philosophy is like that-it looks as if it were really something, and it's awfully pretty, and it tastes sweet, but when you go to bite it you can't get your teeth into it, and when you try to swallow, there isn't anything there. Philosophy is word-chasing, as significant as a puppy chasing its tail."

"I was about to get my Ph.D. in the School of Philosophy, when I chucked it and came to the science division and started taking courses in psyc hology. I thought that if I was a good little girl and patient, all would be revealed to me. Well, Phil has told us what that leads to. I began to think about studying medicine, or biology. You just gave the show away on that. Maybe it was a mistake to teach women to read and write."

Ben laughed. "This seems to be experience meeting at the village church; I might as well make my confession. I guess most medical men start out with a desire to know all about man and what makes him tick, but it's a big field, the final answers are elusive and there is always so much work that needs to be done right now, that we quit worrying about the final problems. I'm as interested as I ever was in knowing what life, and thought, and so forth, really are, but I have to have an attack of insomnia to find time to worry about them. Phil, are you seriously proposing to tackle such things?"

"In a way, yes. I've been gathering data on all sorts of phenomena that run contrary to orthodox psychological theory-all the junk that goes under the general name of metapsychics- telepathy, clairvoyance, so-called psychic manifestations, clair-audience, levitation, yoga stuff, stigmata, anything of that sort I can find."

"Don't you find that most of that stuff can be explained in an ordinary fashion?"

"Quite a lot of it, sure. Then you can strain orthodox theory all out of shape and ignore the statistical laws of probability to account for most of the rest. Then by attributing anything that is left over to charlatanism, credulity, and self- hypnosis, and refuse to investigate it, you can go peacefully back to sleep."

"Occam's razor," murmured Joan.."Huh?"

"William of Occam's Razor. It's a name for a principle in logic; whenever two hypotheses both cover the facts, use the simpler of the two. When a conventional scientist has to strain his orthodox theories all out of shape, 'til they resemble something thought up by Rube Goldberg, to account for unorthodox phenomena, he's ignoring the principle

of Occam's Razor. It's simpler to draw up a new hypothesis to cover all the facts than to strain an old one that was never intended to cover the non-conforming data. But scientists are more attached to their theories than they are to their wives and families."

"My," said Phil admiringly, "to think that that came out from under a permanent wave."

"If you'll hold him, Ben, I'll beat him with this here thermos jug."

"I apologize. You're absolutely right, darling. I decided to forget about theories, to treat these outcast phenomena like any ordinary data, and to see where it landed me."

"What sort of stuff," put in Ben, "have you dug up, Phil?"

"Quite a variety, some verified, some mere rumor, a little of it carefully checked under laboratory conditions, like Valdez. Of course, you've heard of all the stunts attributed to Yoga.

Very little of it has been duplicated in the Western Hemisphere, which counts against it, nevertheless a lot of odd stuff in India has been reported by competent, cool-minded observers- telepathy, accurate soothsaying, clairvoyance, fire walking, and so forth."

"Why do you include fire walking in metapsychics?"

"On the chance that the mind can control the body and other material objects in some esoteric fashion."

"Hmm."

"Is the idea any more marvelous than the fact that you can cause your hand to scratch your head? We haven't any more idea of the actual workings of volition on matter in one case than in the other. Take the Tierra del Fuegans. They slept on the ground, naked, even in zero weather.

Now the body can't make any such adjustment in its economy. It hasn't the machinery; any physiologist will tell you so. A naked human being caught outdoors in zero weather must exercise, or die. But the Tierra del Fuegans didn't know about metabolic rates and such. They just slept-nice, and warm, and cozy."

"So far you haven't mentioned anything close to home. If you are going to allow that much latitude, my Grandfather Stonebender had much more wonderful experiences."

"I'm coming to them. Don't forget Valdez."

"What's this about Ben's grandfather?" asked Joan.

"Joan, don't ever boast about anything in Ben's presence. You'll find that his Grandfather Stonebender did it faster, easier, and better."

A look of more- in-sorrow-than-in-anger shone out of Coburn's pale blue eyes. "Why, Phil, I'm surprised at you. If I weren't a Stonebender myself, and tolerant, I'd be inclined to resent that remark. But your apology is accepted."

"Well, to bring matters closer home, besides Valdez, there was a man in my home town, Springfield, Missouri, who had a clock in his head."

"What do you mean?"

"I mean he knew the exact time without looking at a clock. If your watch disagreed with him, your watch was wrong. Besides that, he was a lightning calculator-knew the answer instantly to the most complicated problems in arithmetic you cared to put to him. In other ways he was feeble- minded."

Ben nodded. "It's a common phenomenon-idiots savant."."But giving it a name doesn't explain it. Besides which, while a number of the people with erratic talents are

feeble- minded, not all of them are. I believe that by far the greater per cent of them are not, but that we rarely hear of them because the intelligent ones are smart enough to know that they would be annoyed by the crowd, possibly persecuted, if they let the rest of us suspect that they were different."

Ben nodded again. "You got something there, Phil. Go ahead."

"There have been a lot of these people with impossible talents who were not subnormal in other ways and who were right close to home. Boris Sidis, for example-"

"He was that child prodigy, wasn't he? I thought he played out?"

"Maybe. Personally, I think he grew cagy and decided not to let the other monkeys know that he was different. In any case he had a lot of remarkable talents, in intensity, if not in kind. He must have been able to read a page of print just by glancing at it, and he undoubtedly had complete memory. Speaking of complete memory, how about Blind Tom, the negro pianist who could play any piece of music he had ever heard once? Nearer home, there was this boy right here in Los Angeles County not so very many years ago who could play ping-pong blindfolded, or anything else, for which normal people require eyes. I checked him myself, and he could do it. And there was the Instantaneous Echo."

"You never told me about him, Phil," commented Joan. "What could he do?"

"He could talk along with you, using your words and intonations, in any language whether he knew the language or not. And he would keep pace with you so accurately that anyone listening wouldn't be able to tell the two of you apart. He could imitate your speech and words as immediately, as accurately, and as effortlessly as your shadow follows the movements of your body."

"Pretty fancy, what? And rather difficult to explain by behaviorist theory. Ever run across any cases of levitation, Phil?"

"Not of human beings. However I have seen a local medium-a nice kid, non-professional, used to live next door to me-make articles of furniture in my own house rise up off the floor and float. I was cold sober. It either happened or I was hypnotized; have it your own way.

Speaking of levitating, you know the story they tell about Nijinsky?"

"Which one?"

"About him floating. There are thousands of people here and in Europe (unless they died in the Collapse) who testify that in Le Spectre de la Rose he used to leap up into the air, pause for a while, then come down when he got ready. Call it mass hallucination-I didn't see it."

"Occam's Razor again," said Joan.

"So?"

"Mass hallucination is harder to explain than one man floating in the air for a few seconds.

Mass hallucination not proved-mustn't infer it to get rid of a troublesome fact. It's comparable to the 'There aint no sech animal' of the yokel who saw the rhinoceros for the first time."

"'Maybe so. Any other sort of trick stuff you want to hear about, Ben? I got a million of'em."

"How about forerunners, and telepathy?"

"Well, telepathy is positively proved, though still unexplained, by Dr. Rhine's experiments.

Of course a lot of people had observed it before then, with such frequency as to make questioning it unreasonable. Mark Twain, for example. He wrote about it fifty years before Rhine, with documentation and circumstantial detail. He wasn't a scientist, but he had hard common sense and shouldn't have been ignored. Upton Sinclair, too. Forerunners are a little harder. Every one has heard dozens of stories of hunches that came true, but they are hard to.follow up in most cases. You might try J. W. Dunne's Experiment with Time for a scientific record under controlled conditions of forerunners in dreams."

"Where does all this get you, Phil? You aren't just collecting Believe-It-Or-Nots?"

"No, but I had to assemble a pile of data-you ought to look over my notebooks-before I could formulate a working hypothesis. I have one now."

"Well?"

"You gave it to me-by operating on Valdez. I had begun to suspect sometime ago that these people with odd and apparently impossible mental and physical abilities were no different from the rest of us in any sense of abnormality, but that they had stumbled on potentialities inherent in all of us. Tell me, when you had Valdez' cranium open did you notice anything abnormal in its appearance?"

"No. Aside from the wound, it presented no special features."

"Very well. Yet when you excised that damaged portion, he no longer possessed his strange clairvoyant power. You took that chunk of his brain out of an uncharted area-no known function. Now it is a primary datum of psychology and physiology that large areas of the brain have no known function. It doesn't seem reasonable that the most highly developed and highly specialized part of the body should have large areas with no function; it is more reasonable to assume that the functions are unknown. And yet men have had large pieces of their cortices cut out without any apparent loss in their mental powers-as long as the areas controlling the normal functions of the body were left untouched.

"Now in this one case, Valdez, we have established a direct connection between an uncharted area of the brain and an odd talent, to wit, clairvoyance. My working hypothesis comes directly from that: All normal people are potentially able to exercise all (or possibly most) of the odd talents we have referred to-telepathy, clairvoyance, special mathematical ability, special control over the body and its functions, and so forth. The potential ability to do these things is lodged in the unassigned areas of the brain."

Coburn pursed his lips. "Mmm-I don't know. If we all have these wonderful abilities, which isn't proved, how is it that we don't seem able to use them?"

"I haven't proved anything-yet. This is a working hypothesis. But let me give you an analogy. These abilities aren't like sight, hearing, and touch which we can't avoid using from birth; they are more like the ability to talk, which has its own special centers in the brain from birth, but which has to be trained into being. Do you think a child raised exclusively by deaf-mutes would ever learn to talk? Of course not. To outward appearance he would be a deaf-mute."

"I give up," conceded Coburn. "You set up an hypothesis and made it plausible. But how are you going to check it? I don't see any place to get hold of it. It's a very pretty speculation, but without a working procedure, it's just fantasy."

Huxley rolled over and stared unhappily up through the branches. "That's the rub. I've lost my best wild talent case. I don't know where to begin."

"But, Phil," protested Joan. "You want normal subjects, and then try to develop special abilities in them. I think it's wonderful. When do we start?"

"When do we start what?"

"On me, of course. Take that ability to do lightning calculations, for example. If you could develop that in me, you'd be a magician. I got bogged down in first year algebra. I don't know the multiplication tables even now!"

Chapter Three "Every Man His Own Genius"

"Shall we get busy?" asked Phil.

"Oh, let's not," Joan objected. "Let's drink our coffee in peace and let dinner settle. We haven't seen Ben for two weeks. I want to hear what he's been doing up in San Francisco."

"Thanks, darling," the doctor answered, "but I'd much rather hear about the Mad Scientist and his Trilby."

"Trilby, hell," Huxley protested, "She's as independent as a hog on ice. However, we've got something to show you this time, Doc."

"Really? That's good. What?"

"Well, as you know, we didn't make much progress for the first couple of months. It was all up hill. Joan developed a fair telepathic ability, but it was erratic and unreliable. As for mathematical ability, she had learned her multiplication tables, but as for being a lightning calculator, she was a washout."

Joan jumped up, crossed between the men and the fireplace, and entered her tiny Pullman kitchen. "I've got to scrape these dishes and put them to soak before the ants get at 'em. Talk loud, so I can hear you.

"What can Joan do now, Phil?"

"I'm not going to tell you. You wait and see. Joan! Where's the card table?"

"Back of the couch. No need to shout. I can hear plainly since I got my Foxy Grandma Stream- lined Ear Trumpet."

"Okay, wench, I found it. Cards in the usual place?"

"Yes, I'll be with you in a moment." She reappeared whisking off a giddy kitchen apron, and sat down on the couch, hugging her knees. "The Great Gaga, the Ghoul of Hollywood is ready.

Sees all, knows all, and tells a darnsight more. Fortunetelling, teethpulling, and refined entertainment for the entire family."

"Cut out the clowning. We'll start out with a little straight telepathy. Throw every thing else out of gear. Shuffle the cards, Ben."

Coburn did so. "Now what?"

"Deal 'em off, one at a time, letting you and me see 'em, but not Joan. Call 'em off, kid."

Ben dealt them out slowly. Joan commenced to recite in a sing-song voice, "Seven of diamonds; jack of hearts; ace of hearts; three of spades; ten of diamonds; six of clubs; nine of spades; eight of clubs-"

"Ben, that's the first time I've ever seen you look amazed."

"Right through the deck without a mistake. Grandfather Stonebender couldn't have done better."

"That's high praise, chum. Let's try a variation. and sit out this one. Don't let me see them. I don't know how it will work, as we never worked with anyone else. Try it."

A few minutes later Coburn put down the last card. "Perfect! Not a mistake.".Joan got up and came over to the table. "How come this deck has two tens of hearts in it?"

She riffled through the deck, and pulled out one card. "Oh! You thought the seventh card was the ten of hearts; it was the ten of diamonds. See?"

"I guess I did," Ben admitted, "I'm sorry I threw you a curve. The light isn't any too good."

"Joan prefers artistic lighting effects to saving her eyes," explained Phil. "I'm glad it happened; it shows she was using telepathy, not clairvoyance. Now for a spot of mathematics. We'll skip the usual stunts like cube roots, instantaneous addition, logarithms of hyperbolic functions, and stuff. Take my word for it; she can do 'em. You can try her later on those simple tricks. Here's a little honey I shot in my own kitchen. It involves fast reading, complete memory, handling of unbelievable number of permutations and combinations, and mathematical investigation of alternatives. You play solitaire, Ben?"

"Sure."

"I want you to shuffle the cards thoroughly, then lay out a Canfield solitaire, dealing from left to right, then play it out, three cards at a time, going through the deck again and again, until you are stuck and can't go any farther."

"Okay. What's the gag?"

"After you have shuffled and cut, I want you to riffle the cards through once, holding them up so that Joan gets a quick glimpse of the index on each card. Then wait a moment.' Silently he did what he had been asked to do. Joan checked him. "You'll have to do it again, Ben. I saw only fifty-one cards."

"Two of them must have stuck together. I'll do it more carefully." He repeated it.

"Fifty-two that time. That's fine."

"Are you ready, Joan?"

"Yes, Phil. Take it down; hearts to the six, diamonds to the four, spades to the deuce, no clubs."

Coburn looked incredulous. "Do you mean that is the way this game is going to come out?"

"Try it and see."

He dealt the cards out from left to right, then played the game out slowly. Joan stopped him at one point. "No, play the king of hearts' stack into that space, rather than the king of spades.

The king of spades play would have gotten the ace of clubs out, but three less hearts would play out if you did so." Coburn made no comment, but did as she told him to do. Twice more she stopped him and indicated a different choice of alternatives.

The game played out exactly as she had predicted.

Coburn ran his hand through his hair and stared at the cards. "Joan," he said meekly, "does your head ever ache?"

"Not from doing that stuff. It doesn't seem to be an effort at all."

"You know," put in Phil, seriously, "there isn't any real reason why it should be a strain. So far as we know, thinking requires no expenditure of energy at all. A person ought to be able to think straight and accurately with no effort. I've a notion that it is faulty thinking that makes headaches."

"But how in the devil does she do it, Phil? It makes my head ache just to try to imagine the size of that problem, if it were worked out long hand by conventional mathematics."

"I don't know how she does it. Neither does she."

"Then how did she learn to do it?"

"We'll take that up later. First, I want to show you our piece de resistance."

"I can't take much more. I'm groggy now."."You'll like this."

"Wait a minute, Phil. I want to try one of my own. How fast can Joan read?"

"As fast as she can see."

"Hmm-". The doctor hauled a sheaf of typewritten pages out of his inside coat pocket. "I've got the second draft of a paper I've been working on. Let's try Joan on a page of it. Okay, Joan?"

He separated an inner page from the rest and handed it to her. She glanced at it and handed it back at once. He looked puzzled and said: "What's the matter?"

"Nothing. Check me as I read back." She started in a rapid singsong, "page four.-now according to Cunningham, fifth edition, page 547: "Another strand of fibres, videlicet, the fasciculus spinocerebellaris (posterior), prolonged upwards in the lateral fumiculus of the medulla spinallis, gradually leaves this portion of the medulla oblongata. This tract lies on the surface, and is-"

"That's enough, Joan, hold it. God knows how you did it, but you read and memorized that page of technical junk in a split second." He grinned slyly. "But your pronunciation was a bit spotty. Grandfather Stonebender's would have been perfect."

"What can you expect? I don't know what half of the words mean."

"Joan, how did you learn to do all this stuff?"

"Truthfully, Doctor, I don't know. It's something like learning to ride a bicycle-you take one spill after another, then one day you get on and just ride away, easy as you please. And in a week you are riding without handle-bars and trying stunts. It's been like that-I knew what I wanted to do, and one day I could. Come on, Phil's getting impatient."

Ben maintained a puzzled silence and permitted Phil to lead him to a little desk in the corner.

"Joan, can we use any drawer? OK. Ben, pick out a drawer in this desk, remove any articles you wish, add anything you wish. Then, without looking into the drawer, stir up the contents and remove a few articles and drop them into another drawer. I want to eliminate the possibility of telepathy."

"Phil, don't worry about my housekeeping. My large staff of secretaries will be only too happy to straighten out that desk after you get through playing with it."

"Don't stand in the way of science, little one. Besides," he added, glancing into a drawer, "this desk obviously hasn't been straightened for at least six months. A little more stirring up won't hurt it."

"Humph! What can you expect when I spend all my time learning parlor tricks for you?

Besides, I know where everything is."

"That's just what I am afraid of, and why I want Ben to introduce a little more of the random element-if possible. Go ahead, Ben."

When the doctor had complied and closed the drawer, Phil continued, "Better use pencil and paper on this one, Joan. First list everything you see in the drawer, then draw a little sketch to show approximate locations and arrangement."

"OK." She sat down at the desk and commenced to write rapidly: One large black leather handbag, six- inch ruler... Ben stopped her. "Wait a minute. This is all wrong. I would have noticed anything as big as a handbag."

She wrinkled her brow. "Which drawer did you say?"

'The second on the right."

"I thought you said the top drawer."."Well, perhaps I did." She started again: Brass paper knife, six assorted pencils and a red pencil, thirteen rubber bands, pearl-handled penknife... 'That must be your knife, Ben. It's very pretty; why haven't I seen it before?"

"I bought it in San Francisco. Good God, girl. You haven't seen it yet."

One paper of matches, advertising the Sir Francis Drake Hotel, eight letters and two bills, two ticket stubs, the Follies Burlesque Theatre-"Doctor, I'm surprised at you."

"Get on with your knitting."

"Provided you promise to take me the next time you go."

One fever thermometer with a pocket clip, art gum and a typewriter eraser, three keys, assorted, one lipstick. Max Factor #3, a scratch pad and some file cards, used on one side, one small brown paper sack containing one pair stockings, size nine, shade Creole.-"I'd forgotten that I had bought them; I searched all through the house for a decent pair this morning."

"Why didn't you just use your X-ray eyes, Mrs. Houdini?"

She looked startled. "Do you know, it just didn't occur to me. I haven't gotten around to trying to use this stuff yet."

"Anything else in the drawer?"

"Nothing but a box of notepaper. Just a sec: I'll make the sketch." She sketched busily for a couple of minutes, her tongue between her teeth, her eyes darting from the paper toward the closed drawer and back again. Ben inquired, "Do you have to look in the direction of the drawer to see inside it?"

"No, but it helps. It makes me dizzy to see a thing when I am looking away from it."

The contents and arrangement of the drawer were checked and found to be exactly as Joan had stated they were. Doctor Coburn sat quietly, making no comment, when they had finished.

Phil, slightly irked at his lack of demonstrativeness, spoke to him.

"Well, Ben, what did you think of it? How did you like it?"

"You know what I thought of it. You've proved your theory up to the hilt-but I'm thinking about the implications, some of the possibilities. I think we've just been handed the greatest boon a surgeon ever had to work with. Joan, can you see inside a human body?"

"I don't know. I've never-"

"Look at me."

She stared at him for a silent moment. "Why- why, I can see your heart beat! I can see-"

"Phil, can you teach me to see the way she does?"

Huxley rubbed his nose. "I don't know. Maybe-"

Joan bent over the big chair in which the doctor was seated. "Won't he go under, Phil?"

"Hell, no. I've tried everything but tapping his skull with a bungstarter. I don't believe there's any brain there to hypnotize."

"Don't be pettish. Let's try again. How do you feel, Ben?"

"All right, but wide awake." I'm going out of the room this time. Maybe I'm a distracting factor. Now be a good boy and go sleepy-bye." She left them.

Five minutes later Huxley called out to her, "Come on back in, kid. He's under." She came in and looked at Coburn where he lay sprawled in her big easy chair, quiet, eyes half closed.

"Ready for me?" she asked, turning to Huxley.

"Yes. Get ready." She lay down on the couch. "You know what I want; get in rapport with Ben as soon as you go under. Need any persuasion to get to sleep?".No.

"Very well, then-Sleep!"

She became quiet, lax.

"Are you under, Joan?"

"Yes, Phil."

"Can you reach Ben's mind?"

A short pause: "Yes."

"What do you find?"

"Nothing. It's like an empty room, but friendly. Wait a moment-he greeted me."

"Just a greeting. It wasn't in words."

"Can you hear me, Ben?"

"Sure, Phil."

"You two are together?"

"Yes. Yes, indeed."

"Listen to me, both of you, I want you to wake up slowly, remaining in rapport. Then Joan is to teach Ben how to perceive that which is not seen. Can you do it?"

"Yes, Phil, we can." It was as if one voice had spoken.

Chapter Four Holiday

"Frankly, Mr. Huxley, I can't understand your noncooperative attitude." The President of Western University let the stare from his slightly bulging eyes rest on the second button of Phil's vest. "You have been given every facility for sound useful research along lines of proven worth. Your program of instructing has been kept light in order that you might make use of your undoubted ability. You have been acting chairman of your sub-department this past semester.

Yet instead of profiting by your unusual opportunities, you have, by your own admission, been, shall we say, frittering away your time in the childish pursuit of old wives' tales and silly superstitions. Bless me, man, I don't understand it!"

Phil answered, with controlled exasperation, "But Doctor Brinckley, if you would permit me to show you-"

The president interposed a palm. "Please, Mr. Huxley. It is not necessary to go over that ground again. One more thing, it has come to my attention that you have been interfering in the affairs of the medical school."

"The medical school! I haven't set foot inside it in weeks."

"It has come to me from unquestioned authority that you have influenced Doctor Coburn to disregard the advice of the staff diagnosticians in performing surgical operations-the best diagnosticians, let me add, on the West Coast."

Huxley maintained his voice at toneless politeness. "Let us suppose for the moment that I have influenced Doctor Coburn-I do not concede the point-has there been any case in which Coburn's refusal to follow diagnosis has failed to be justified by the subsequent history of the case?"

'That is beside the point. The point is-I can't have my staff from one school interfering in the affairs of another school. You see the justice of that, I am sure."

"I do not admit that I have interfered. In fact, I deny it."

"I am afraid I shall have to be the judge of that." Brinckley rose from his desk and came around to where Huxley stood. "Now Mr. Huxley-may I call you Philip? I like to have my juniors in our institutio n think of me as a friend. I want to give you the same advice that I would give to my son. The semester will be over in a day or two. I think you need a vacation. The Board has made some little difficulty over renewing your contract inasmuch as you have not yet completed your doctorate. I took the liberty of assuring them that you would submit a suitable thesis this coming academic year-and I feel sure that you can if you will only devote your efforts to sound, constructive work. You take your vacatio n, and when you come back you can outline your proposed thesis to me. I am quite sure the Board will make no difficulty about your contract then."

"I had intended to write up the results of my current research for my thesis.".Brinckley's brows raised in polite surprise. "Really? But that is out of the question, my boy, as you know. You do need a vacation. Good-bye then; if I do not see you again before commencement, let me wish you a pleasant holiday now."

When a stout door separated him from the president, Huxley dropped his pretense of good manners and hurried across the campus, ignoring students and professors alike. He found Ben and Joan waiting for him at their favorite bench, looking across the La Brea Tar Pits toward Wilshire Boulevard.

He flopped down on the seat beside them. Neither of the men spoke, but Joan was unable to control her impatience. "Well, Phil? What did the old fossil have to say?"

"Gimme a cigaret." Ben handed him a pack and waited. "He didn't say much-just threatened me with the loss of my job and the ruination of my academic reputation if I didn't knuckle under and be his tame dog-all in the politest of terms of course."

"But Phil, didn't you offer to bring me in and show him the progress you had already made?"

"I didn't bring your name into it; it was useless. He knew who you were well enough-he made a sidelong reference to the inadvisability of young instructors seeing female students socially except under formal, fully chaperoned conditions-talked about the high moral tone of the university, and our obligation to the public!"

"Why, the dirty minded old so-and-so! I'll tear him apart for that!"

"Take it easy, Joan." Ben Coburn's voice was mild and thoughtful. "Just how did he threaten you, Phil?"

"He refused to renew my contract at this time. He intends to keep me on tenterhooks all summer, then if I come back in the fall and make a noise like a rabbit, he might renew-if he feels like it. Damn him! The thing that got me the sorest was a suggestion that I was slipping and needed a rest."

"What are you going to do?"

"Look for a job, I guess. I've got to eat."

"Teaching job?"

"I suppose so, Ben."

"Your chances aren't very good, are they, without a formal release from Western? They can blacklist you pretty effectively. You've actually got about as much freedom in the matter as a professional ballplayer."

Phil looked glum and said nothing. Joan sighed and looked out across the marshy depression surrounding the tar pits. Then she smiled and said, "We could lure old Picklepuss down here and push him in."

Both men smiled but did not answer. Joan muttered to herself something about sissies. Ben addressed Phil. "You know, Phil, the old boy's idea about a vacation wasn't too stupid; I could do with one myself."

"Anything in particular in mind?"

"Why, yes, more or less. I've been out here seven years and never really seen the state. I'd like to start out and drive, with no particular destination in mind.

Then we could go on up past Sacramento and into northern California. They say it's magnificent country up there. We could take in the High Sierras and the Big Trees on the way back."

"That certainly sounds inviting."

"You could take along your research notes and we could talk about your ideas as we drove. If you decided you wanted to write up some phase, we could just lay over while you did it.".Phil stuck out his hand. "It's a deal, Ben. When do we start?"

"As soon as the term closes."

"Let's see-we ought to be able to get underway late Friday afternoon then. Which car will we use, yours or mine?"

"My coupe ought to be about right. It has lots of baggage space."

Joan, who had followed the conversation with interest, broke in on them. "Why use your car, Ben? Three people can't be comfortable in a coupe."

"Three people? Wha' d'yu mean, three people? You aren't going, bright eyes."

"So? That's what you think. You can't get rid of me at this point; I'm the laboratory case. Oh no, you can't leave me behind."

"But Joan, this is a stag affair."

"Oh, so you want to get rid of me?"

"Now Joan, we didn't say that. It just would look like the devil for you to be barging about the country with a couple of men-"

"Sissies! Tissyprissles! Pantywaists! Worried about your reputations."

"No, we're not. We're worried about yours."

"It won't wash. No girl who lives alone has any reputation. She can be as pure as Ivory soap and the cats on the campus, both sexes, will take her to pieces anyway. What

are you so scared of? We aren't going to cross any state lines." Coburn and Huxley exchanged the secret look that men employ when confronted by the persistence of an unreasonable woman.

"Look out, Joan!" A big red Santa Fe bus took the shoulder on the opposite side of the highway and slithered past. Joan switched the tail of the grey sedan around an oil tanker truck and trailer on their own side of the road before replying. When she did, she turned her head to speak directly to Phil who was riding in the back seat.

"What's the matter, Phil?"

"You darn near brought us into a head on collision with about twenty tons of the Santa Fe's best rolling stock!"

"Don't be nervous; I've been driving since I was sixteen and I've never had an accident."

"I'm not surprised; you'll never have but one. Anyhow," Phil went on, "can't you keep your eyes on the road? That's not too much to ask, is it?"

"I don't need to watch the road. Look." She turned her head far around and showed him that her eyes were jammed shut. The needle of the speedometer hovered around ninety.

"Joan! Please!"

She opened her eyes and faced front once more. "But I don't have to look in order to see.

You taught me that yourself, Smarty. Don't you remember?"

"Yes, yes, but I never thought you'd apply it to driving a car!"

"Why not? I'm the safest driver you ever saw; I can see everything that's on the road, even around a blind curve. If I need to, I read the other drivers' minds to see what they are going to do next."

"She's right, Phil. The few times I've paid attention to her driving she's been doing just exactly what I would have done in the same circumstances. That's why I haven't been nervous."

"All right. All right," Phil answered, "but would you two supermen keep in mind that there is a slightly nervous ordinary mortal in the back seat who can't see around corners?"

"I'll be good," said Joan soberly. "I didn't mean to scare you, Phil."."I'm interested," resumed Ben, "in what you said about not looking toward anything you wanted to see. I can't do it too satisfactorily. I remember once you said it made you dizzy to look away and still use direct perception."

"It used to, Ben, but I got over it, and so will you. It's just a matter of breaking old habits. To me, every direction is in 'front'-all around and up and down. I can focus my attention in any direction, or two or three directions at once. I can even pick a point of away from where I am physically, and look at the other side of things-but that is harder."

"You two make me feel like the mother of the Ugly Duckling," said Phil bitterly. "Will you still think of me kindly when you have passed beyond human communication?"

"Poor Phil!" exclaimed Joan, with sincere sympathy in her voice. "You taught us, but no one has bothered to teach you. Tell you what, Ben, let's stop tonight at an auto camp-pick a nice quiet one on the outskirts of Sacramento-and spend a couple of days doing for Phil what he has done for us."

"Okay by me. It's a good idea."

"That's mighty white of you, pardner," Phil conceded, but it was obvious that he was pleased and mollified. "After you get through with me will I be able to drive a car on two wheels, too?"

"Why not learn to levitate?" Ben suggested. "It's simpler-less expensive and nothing to get out of order."

"Maybe we will some day," returned Phil, quite seriously, "there's no telling where this line of investigation may lead."

"Yeah, you're right," Ben answered him with equal sobriety. "I'm getting so that I can believe seven impossible things before breakfast. What were you saying just before we passed that oil tanker?"

"I was just trying to lay before you an idea I've been mulling over in my mind the past several weeks. It's a big idea, so big that I can hardly believe it myself."

"Well, spill it."

Phil commenced checking points off on his fingers. "We've proved, or tended to prove, that the normal human mind has powers previously unsuspected, haven't we?"

"Tentatively-yes. It looks that way."

"Powers way beyond any that the race as a whole makes regular use of."

"Yes, surely. Go on."

"And we have reason to believe that these powers exist, have their being, by virtue of certain areas of the brain to which functions were not previously assigned by physiologists? That is to say, they have organic basis, just as the eye and the sight centers in the brain are the organic basis for normal sight?"

"Yes, of course."

"You can trace the evolution of any organ from a simple beginning to a complex, highly developed form. The organ develops through use. In an evolutiona ry sense function begets organ."

"Yes. That's elementary."

"Don't you see what that implies?"

Coburn looked puzzled, then a look of comprehension spread over his face. Phil continued, with delight in his voice, "You see it, too?" The conclusion is inescapable: there must have been a time when the entire race used these strange powers as easily as they heard, or saw, or smelled.

And there must have been a long, long period-hundreds of thousands, probably millions of years-during which these powers were developed as a race. Individuals couldn't do it, any.more than I could grow wings. It had to be done racially, over a long period of time. Mutation theory is no use either-mutation goes by little jumps, with use confirming the change. No indeed-these strange powers are vestigial-hangovers from a time when the whole race had 'em and used 'em."

Phil stopped talking, and Ben did not answer him, but sat in a brown study while some ten miles spun past. Joan started to speak once, then thought better of it. Finally Ben commenced to speak slowly.

"I can't see any fault in your reasoning. It's not reasonable to assume that whole areas of the brain with complex functions 'jest growed'. But, brother, you've sure raised hell with modern anthropology."

"That worried me when I first got the notion, and that's why I kept my mouth shut. Do you know anything about anthropology?"

"Nothing except the casual glance that any medical student gets."

"Neither did I, but I had quite a lot of respect for it. Professor Whoosistwitehell would reconstruct one of our great grand-daddies from his collar bone and his store teeth and deliver a long dissertation on his most intimate habits, and I would swallow it, hook, line, and sinker, and be much impressed. But I began to read up on the subject. Do you know what I found?"

"Go ahead."

"In the first place there isn't a distinguished anthropologist in the world but what you'll find one equally distinguished who will call him a diamond-studded liar. They can't agree on the simplest elements of their alleged science. In the second place, there isn't a corporal's guard of really decent exhibits to back up their assertions about the ancestry of mankind. I never saw so much stew from one oyster. They write book after book and what have they got to go on?-The Dawson Man, the Pelkin Man, the Heidelberg Man and a couple of others. And those aren't complete skeletons, a damaged skull, a couple of teeth, maybe another bone or two."

"Oh now, Phil, there were lots of specimens found of Cro-Magnon men."

"Yes, but they were true men. I'm talking about submen, our evolutionary predecessors. You see, I was trying to prove myself wrong. If man's ascent had been a long steady climb, submen into savages, savages to barbarians, barbarians perfecting their cultures into civilization ... all this with only minor setbacks of a few centuries, or a few thousand years at the most ... and with our present culture the highest the race had ever reached ... If all that was true, then my idea was wrong.

"You follow me, don't you? The internal evidence of the brain proves that mankind, sometime in its lost history, climbed to heights undreamed of today. In some fashion the race slipped back. And this happened so long ago that we have found no record of it anywhere.

These brutish submen, that the anthropologists set such store by, can't be our ancestors; they are too new, too primitive, too young. They are too recent; they allow for no time for the race to develop these abilities whose existence we have proved. Either anthropology is all wet, or Joan can't do the things we have seen her do."

The center of the controversy said nothing. She sat at the wheel, as the big car sped along, her eyes closed against the slanting rays of the setting sun, seeing the road with an inner impossible sight.

Five days were spent in coaching Huxley and a sixth on the open road. Sacramento lay far behind them. For the past hour Mount Shasta had been visible from time to time through.openings in the trees. Phil brought the car to a stop on a view point built out from the pavement of U.S. Highway 99. He turned to his passengers. "All out, troops," he said. "Catch a slice of scenery."

The three stood and stared over the canyon of the Sacramento River at Mount Shasta, thirty miles away.

It was sweater weather and the air was as clear as a child's gaze. The peak was framed by two of the great fir trees which marched down the side of the canyon. Snow still lay on the slopes of the cone and straggled down as far as the timberline.

Joan muttered something. Ben turned his head, "What did you say, Joan?"

"Me? Nothing-I was saying over a bit of poetry to myself."

"What was it?"

"Tietjens' Most Sacred Mountain: " 'Space and the twelve clean winds are here; And with them broods eternity-a swift white peace, a presence manifest. The rhythm ceases here. Time has no place. This is the end that has no end.' "

Phil cleared his throat and self-consciously broke the silence. "I think I see what you mean."

Joan faced them. "Boys," she stated, "I am going to climb Mount Shasta."

Ben studied her dispassionately. "Joan," he pronounced, "You are full of hop."

"I mean it. I didn't say you were going to-I said I was.

"But we are responsible for your safety and welfare-and I for one don't relish the thought of a fourteen-thousand foot climb."

"You are not responsible for my safety; I'm a free citizen. Anyhow a climb wouldn't hurt you any; it would help to get rid of some of that fat you've been storing up against winter."

"Why," inquired Phil, "are you so determined so suddenly to make this climb?"

"It's really not a sudden decision, Phil. Ever since we left Los Angeles I've had a recurring dream that I was climbing, climbing, up to some high place ... and that I was very happy because of it. Today I know that it was Shasta I was climbing."

"How do you know it?"

"I know it."

"Ben, what do you think?"

The doctor picked up a granite pebble and shied it out in the general direction of the river. He waited for it to come to rest several hundred feet down the slope. "I guess," he said, "we'd better buy some hobnailed boots."

Phil paused and the two behind him on the narrow path were forced to stop, too. "Joan," he asked, with a worried tone, "is this the way we came?"

They huddled together, icy wind cutting at their faces like rusty razor blades and gusts of snow eddying about them and stinging their eyes, while Joan considered her answer. "I think so," she ventured at last, "but even with my eyes closed this snow makes everything look different."

"That's my trouble, too. I guess we pulled a boner when we decided against a guide . . . but who would have thought that a beautiful summer day could end up in a snow storm?"

Ben stamped his feet and clapped his hands together. "Let's get going," he urged. "Even if this is the right road, we've got the worst of it ahead of us before we reach the rest cabin. Don't forget that stretch of glacier we crossed."."I wish I could forget it," Phil answered him soberly. "I don't fancy the prospect of crossing it in this nasty weather."

"Neither do I, but if we stay here we freeze." With Ben now in the lead they resumed their cautious progress, heads averted to the wind, eyes half closed. Ben checked them again after a couple of hundred yards. "Careful, gang," he warned, "the path is almost gone here, and it's slippery," He went forward a few steps. "It's rather-" They heard him make a violent effort to recover his balance, then fall heavily. "Ben! Ben!," Phil called out, "are you all right?"

"I guess so," he gasped. "I gave my left leg an awful bang. Be careful."

They saw that he was on the ground, hanging part way over the edge of the path. Cautiously they approached until they were alongside him. "Lend me a hand, Phil. Easy, now,"

Phil helped him wiggle back onto the path. "Can you stand up?"

"I'm afraid not. My left leg gave me the devil when I had to move just now. Take a look at it, Phil. No, don't bother to take the boot off; look right through it."

"Of course. I forgot." Phil studied the limb for a moment. "It's pretty bad, fella-a fracture of the shin bone about four inches below the knee."

Coburn whistled a couple of bars of Suwannee River, then said, "Isn't that just too, too lovely?

Simple or compound fracture, Phil?"

"Seems like a clean break, Ben."

"Not that it matters much one way or the other just now. What do we do next?"

Joan answered him. "We must build a litter and get you down the mountain!"

"Spoken like a true girl scout, kid. Have you figured how you and Phil can maneuver a litter, with me in it, over that stretch of ice?"

"We'll have to-somehow." But her voice lacked confidence.

"It won't work, kid. You two will have to straighten me out and bed me down, then go on down the mountain and stir out a rescue party with proper equipment. I'll get some sleep while you're gone. I'd appreciate it if you'd leave me some cigarets."

"No!" Joan protested. "We won't leave you here alone."

Phil added his objections. "Your plan is as bad as Joan's, Ben. It's all very well to talk about sleeping until we get back, but you know as well as I do that you would die of exposure if you spent a night like this on the ground with no protection."

"I'll just have to chance it. What better plan can you suggest"

"Wait a minute. Let me think." He sat down on the ledge beside his friend and pulled at his left ear. This is the best I can figure out: We'll have to get you to some place that is a little more sheltered, and build a fire to keep you warm. Joan can stay with you and keep the fire going while I go down after help."

"That's all right," put in Joan, "except that I will be the one to go after help. You couldn't find your way in the dark and the snow, Phil. You know yourself that your direct perception isn't reliable as yet- you'd get lost."

Both men protested. "Joan, you're not going to start off alone."-"We can't permit that, Joan."

"That's a lot of gallant nonsense. Of course I'm going."

"No." It was a duet.

"Then we all stay here tonight, and huddle around a fire. I'll go down in the morning."

"That might do," Ben conceded, "if-"."Good evening, friends." A tall, elderly man stood on the ledge behind them. Steady blue eyes regarded them from under shaggy white eyebrows. He was smooth shaven but a mane of white hair matched the eyebrows. Joan thought he looked like Mark Twain.

Coburn recovered first. "Good evening," he answered, "if it is a good evening-which I doubt."

The stranger smiled with his eyes. "My name is Ambrose, ma'am. But your friend is in need of some assistance. If you will permit me, sir-" He knelt down and examined

Ben's leg, without removing the boot. Presently he raised his head. "This will be somewhat painful. I suggest, son, that yo u go to sleep." Ben smiled at him, closed his eyes, and gave evidence by his slow, regular breathing that he was asleep.

The man who called himself Ambrose slipped away into the shadows. Joan tried to follow him with perception, but this she found curio usly hard to do. He returned in a few minutes with several straight sticks which he broke to a uniform length of about twenty inches. These he proceeded to bind firmly to Ben's left shin with a roll of cloth which he had removed from his trouser pocket.

When he was satisfied that the primitive splint was firm, he picked Coburn up in his arms, handling the not inconsiderable mass as if it were a child. "Come," he said.

They followed him without a word, back the way they had come, single file through the hurrying snowflakes. Five hundred yards, six hundred yards, then he took a turn that had not been on the path followed by Joan and the two men, and strode confidently away in the gloom.

Joan noticed that he was wearing a light cotton shirt with neither coat nor sweater, and wondered that he had come so far with so little protection against the weather. He spoke to her over his shoulder, "I like cold weather, ma'am."

He walked between two large boulders, apparently disappeared into the side of the mount ain.

They followed him and found themselves in a passageway which led diagonally into the living rock. They turned a corner and were in an octagonal living room, high ceilinged and panelled in some mellow, light-colored wood. It was softly illuminated by indirect lighting, but possessed no windows. One side of the octagon was a fireplace with a generous hearth in which a wood fire burned hospitably. There was no covering on the flagged floor, but it was warm to the feet.

The old man paused with his burden and indicated the comfortable fittings of the room-three couches.

Chapter Five "-Through a Glass, Darkly"

When Phil entered the living room the next morning he found a small table set with a very sound breakfast for three. While he was lifting plate covers and wondering whether good manners required him to wait until joined by others, Joan entered the room. He looked up.

"Oh! It's you. Good morning, and stuff. They set a proper table here. Look." He lifted a plate cover. "Did you sleep well?"

"Like a corpse." She joined his investigations. "They do understand food, don't they? When do we start?"

"When number three gets here, I guess. Those aren't the clothes you had on last night."

"Like it?" She turned around slowly with a swaying mannequin walk. She had on a pearl grey gown that dropped to her toes. It was high waisted; two silver cords crossed between her breasts and encircled her waist, making a girdle. She was shod in silver sandals. There was an air of ancient days about the whole costume.

"It's swell. Why is it a girl always looks prettier in simple clothes?"

"Simple-hmmf! If you can buy this for three hundred dollars on Wilshire Boulevard, I'd like to have the address of the shop."

"Hello, troops." Ben stood in the doorway. They both stared at him. "What's the trouble?"

Phil ran his eye down Ben's frame. "How's your leg, Ben?"

"I wanted to ask you about that. How long have I been out? The leg's all well. Wasn't it broken after all?"

"How about it, Phil?" Joan seconded. "You examined it, I didn't."

Phil pulled his ear. "It was broken-or I've gone completely screwy. Let's have a look at it."

Ben was dressed in pajamas and bathrobe. He slid up the pajama leg, and exposed a shin that was pink and healthy. He pounded it with his fist. "See that? Not even a bruise."

"Hmm-You haven't been out long, Ben. Just since last night. Maybe ten or eleven hours."

"Huh?"

"That's right."

"Impossible."

"Maybe so. Let's eat breakfast."

They ate in thoughtful silence, each under pressing necessity of taking stock and reaching some reasonable reorientation. Toward the end of the meal they all happened to look up at once.

Phil broke the silence, "Well . . . How about it?"

"I've just doped it out," volunteered Joan. "We all died in the snow storm and went to Heaven. Pass the marmalade, will you, please?"

"That can't be right," objected Phil, as he complied, "else Ben wouldn't be here. He led a sinful life. But seriously, things have happened which require explanation. Let's tick 'em off: One; Ben breaks a leg last night, it's all healed this morning."."Wait a minute-are we sure he broke his leg?"

"I'm sure. Furthermore, our host acted as if he thought so too-else why did he bother to carry him? Two; our host has direct perception, or an uncanny knowledge of the mountainside."

"Speaking of direct perception," said Joan, "have either of you tried to look around you and size up the place?"

"No, why?"

"Neither have I."

"Don't bother to. I tried, and it can't be done. I can't perceive past the walls of the room."

"Hmm-we'll put that down as point three. Four, our host says that his name is Ambrose Bierce. Does he mean that he is the Ambrose Bierce? You know who Ambrose Bierce was, Joan?"

"Of course I do-I got eddication. He disappeared sometime before I was born."

"That's right-at the time of the outbreak of the first World War. If this is the same man, he must be over a hundred years old."

"He didn't look that old by forty years."

"Well, we'll put it down for what it's worth. Point five-We'll make this one an omnibus point-why does our host live up here? How come this strange mixture of luxury hotel and cliff dwellers cave anyhow? How can one old man run such a joint? Say, have either of you seen anyone else around the place?"

"I haven't,' said Ben. "Someone woke me, but I think it was Ambrose."

"I have," offered Joan. "It was a woman who woke me. She offered me this dress."

"Mrs. Bierce, maybe?"

"I don't think so-she wasn't more than thirty- five. I didn't really get acquainted-she was gone before I was wide awake."

Phil looked from Joan to Ben. "Well, what have we got? Add it up and give us an answer."

"Good morning, young friends!" It was Bierce, standing in the doorway, his rich, virile voice resounding around the many-sided room. The three started as if caught doing something improper.

Coburn recovered first. He stood up and bowed. "Good morning, sir. I believe that you saved my life. I hope to be able to show my gratitude."

Bierce bowed formally. "What service I did I enjoyed doing, sir. I hope that you are all rested?"

"Yes, thank you, and pleasantly filled from your table."

"That is good. Now, if I may join you, we can discuss what you wish to do next. Is it your pleasure to leave, or may we hope to have your company for a while longer?'"

"I suppose, said Joan, rather nervously, that we should get started down as soon as possible.

How is the weather?"

"The weather is fair, but you are welcome to remain here as lo ng as you like. Perhaps you would like to see the rest of our home and meet the other members of our household?"

"Oh, I think that would be lovely!"

"It will be my pleasure, ma'am."

"As a matter of fact, Mr. Bierce-" Phil leaned forward a little, his face and manner serious.

"-we are quite anxious to see more of your place here and to know more about you. We were speaking of it when you came in."

"Curiosity is natural and healthy. Please ask any question you wish."."Well-" Phil plunged in. "Ben had a broken leg last night. Or didn't he? It's well this morning."

"He did indeed have a broken leg. It was healed in the night."

Coburn cleared his throat. "Mr. Bierce, my name is Coburn I am a physician and surgeon, but my knowledge does not extend to such healing as that. Will you tell me more about it?"

"Certainly. You are familiar with regeneration as practiced by the lower life forms. The principle used is the same, but it is consciously controlled by the will and the rate of healing is accelerated. I placed you in hypnosis last night, then surrendered control to one of our surgeons who directed your mind in exerting its own powers to heal its body."

Coburn looked baffled. Bierce continued, "There is really nothing startling about it. The mind and will have always the possibility of complete domination over the body. Our operator simply directs your will to master its body. The technique is simple; you may learn it, if you wish. I assure you that to learn it is easier than to explain it in our cumbersome and imperfect language. I spoke of mind and will as if they were separate. Language forced me to that ridiculous misstatement. There is neither mind, nor will, as entities; there is only-" His voice stopped. Ben felt a blow within his mind like the shock of a sixteen inch rifle, yet it was painless and gentle. What ever it was, it was as alive as a hummingbird, or a struggling kitten, yet it was calm and untroubled.

He saw Joan nodding her head in agreement, her eyes on Bierce.

Bierce went on in his gentle, resonant voice. "Was there any other matter troubling any one of you?"

"Why, yes, Mr. Bierce," replied Joan, "several things. What is this place where we are?"

"It is my home, and the home of several of my friends. You will understand more about us as you become better acquainted with us."

"Thank you. It is difficult for me to understand how such a community could exist on this mountain-top without its being a matter of common knowledge."

"We have taken certain precautions, ma'am, to avoid notoriety. Our reasons, and the precautions they inspired will become evident to you."

"One more question; this is rather personal; you may ignore it if you like. Are you the Ambrose Bierce who disappeared a good many years ago?"

"I am. I first came up here in 1880 in search of a cure for asthma. I retired here in 1914 because I wished to avoid direct contact with the tragic world events which I saw coming and was powerless to stop." He spoke with some reluctance, as if the subject were distasteful, and turned the conversation.

"Perhaps you would like to meet some of my friends now?"

The apartments extended for a hundred yards along the face of the mountain and for unmeasured distances into the mountain. The thirty-odd persons in residence were far from crowded; there were many rooms not in use. In the course of the morning Bierce introduced them to most of the inhabitants.

They seemed to be of all sorts and ages and of several nationalities. Most of them were occupied in one way, or another, usually with some form of research, or with creative art. At least Bierce assured them in several cases that research was in progress-cases in which no apparatus, no recording device, nothing was evident to indicate scientific research.

Once they were introduced to a group of three, two women and a man, who were surrounded by the physical evidence of their work-biological research. But the circumstances were still confusing; two of the trio sat quietly by, doing nothing, while the third labored at a bench..Bierce explained that they were doing some delicate experiments in the possibility of activating artificial colloids. Ben inquired, "Are the other two observing the work?" Bierce shook his head. "Oh, no. They are all three engaged actively in the work, but at this particular stage they find it expedient to let three brains in rapport direct one set of hands."

Rapport, it developed, was the usual method of collaboration. Bierce had led them into a room occupied by six persons. One or two of them looked up and nodded, but did not speak.

Bierce motioned for the three to come away. "They were engaged in a particularly difficult piece of reconstruction; it would not be polite to disturb them."

"But Mr. Bierce," Phil commented, "two of them were playing chess."

"Yes. They did not need that part of their brains, so they left it out of rapport. Nevertheless they were very busy."

It was easier to see what the creative artists were doing. In two instances, however, their methods were startling. Bierce had taken them to the studio of a little gnome of a man, a painter in oil, who was introduced simply as Charles. He seemed glad to see them and chatted vivaciously, without ceasing his work. He was doing, with meticulous realism but with a highly romantic effect, a study of a young girl dancing, a wood nymph, against a pine forest background.

The young people each made appropriate appreciative comments. Coburn commented that it was remarkable that he should be able to be so accurate in his anatomical detail without the aid of a model.

"But I have a model," he answered. "She was here last week. See?" He glanced toward the empty model's throne. Coburn and his companions followed the glance, and saw, poised on the throne, a young girl, obviously the model for the picture, frozen in the action of the painting.

She was as real as bread and butter.

Charles glanced away. The model's throne was again vacant.

The second instance was not so dramatic, but still less comprehensible. They had met, and chatted with, a Mrs. Draper, a comfortable, matronly soul, who knitted and rocked as they talked.

After they had left her Phil inquired about her.

"She is possibly our most able and talented artist," Bierce told him.

"In what field?"

Bierce's shaggy eyebrows came together as he chose his words. "I don't believe I can tell you adequately at this time. She composes moods-arranges emotional patterns in harmonic sequences. It's our most advanced and our most completely human form of art, and yet, until you have experienced it, it is very difficult for me to tell you about it."

"How is it possible to arrange emotions?"

"Your great grandfather no doubt thought it impossible to record music. We have a technique for it. You will understand later."

"Is Mrs. Draper the only one who does this?"

"Oh no. Most of us try our hand at it. It's our favorite art form. I work at it myself but my efforts aren't popular-too gloomy."

The three talked it over that night in the living room they had first entered. This suite had been set aside for their use, and Bierce had left them with the simple statement that he would call on them on the morrow.

They felt a pressing necessity to exchange views, and yet each was reluctant to express opinion. Phil broke the silence.."What kind of people are these? They make me feel as if I were a child who had wandered in where adults were working, but that they were too polite to put me out."

"Speaking of working-there's something odd about the way they work. I don't mean what it is they do-that's odd, too, but it's something else, something about their attitude, or the tempo at which they work."

"I know what you mean, Ben," Joan agreed, "they are busy all the time, and yet they act as if they had all eternity to finish it. Bierce was like that when he was strapping up your leg. They never hurry." She turned to Phil. "What are you frowning about?"

"I don't know. There is something else we haven't mentioned yet. They have a lot of special talents, sure, but we three know something about special talents-that ought not to confuse us.

But there is something else about them that is different."

The other two agreed with him but could offer no help. Sometime later Joan said that she was going to bed and left the room. The two men stayed for a last cigaret.

Joan stuck her head back in the room. "I know what it is that is so different about these people," she anounced,-"They are so alive."

Chapter Six Ichabod!

Philip Huxley went to bed and to sleep as usual. From there on nothing was usual.

He became aware that he was inhabiting another's body, thinking with another's mind. The Other was aware of Huxley, but did not share Huxley's thoughts.

The Other was at home, a home never experienced by Huxley, yet familiar. It was on Earth, incredibly beautiful, each tree and shrub fitting into the landscape as if placed there in the harmonic scheme of an artist. The house grew out of the ground.

The Other left the house with his wife and prepared to leave for the capital of the planet.

Huxley thought of the destination as a "capital" yet he knew that the idea of government imposed by force was foreign to the nature of these people. The "capital" was merely the accustomed meeting place of the group whose advice was followed in matters affecting the entire race.

The Other and his wife, accompanied by Huxley's awareness, stepped into the garden, shot straight up into the air, and sped over the countryside, flying hand in hand. The country was green, fertile, park- like, dotted with occasional buildings, but nowhere did Huxley see the jammed masses of a city.

They passed rapidly over a large body of water, perhaps as large as the modern Mediterranean, and landed in a clearing in a grove of olive trees.

The Young Men-so Huxley thought of them- demanded a sweeping change in custom, first, that the ancient knowledge should henceforth be the reward of ability rather than common birthright, and second, that the greater should rule the lesser. Loki urged their case, his arrogant face upthrust and crowned with bright red hair. He spoke in words, a method which disturbed Huxley's host, telepathic rapport being the natural method of mature discussion. But Loki had closed his mind to it.

Jove answered him, speaking for all: "My son, your words seem vain and without serious meaning. We can not tell your true meaning, for you and your brothers have decided to shut your minds to us. You ask that the ancient knowledge be made the reward of ability. Has it not always been so? Does our cousin, the ape, fly through the air? Is not the infant soul bound by hunger, and sleep, and the ills of the flesh? Can the oriole level

the mountain with his glance? The powers of our kind that set us apart from the younger spirits on this planet are now exercised by those who possess the ability, and none other. How can we make that so which is already so?

"You demand that the greater shall rule the lesser. Is it not so now? Has it not always been so? Are you ordered about by the babe at the breast? Does the waving of the grass cause the wind? What dominion do you desire other than over yourself? Do you wish to tell your brother when to sleep and when to eat? If so, to what purpose?"

Vulcan broke in while the old man was still speaking. Huxley felt a stir of shocked repugnance go through the council at this open disregard of good manners.."Enough of this playing with words. We know what we want; you know what we want. We are determined to take it, council or no. We are sick of this sheeplike existence. We are tired of this sham equality. We intend to put on end to it. We are the strong and the able, the natural leaders of mankind. The rest shall follow us and serve us, as is the natural order of things."

Jove's eyes rested thoughtfully on Vulcan's crooked leg. "You should let me heal that twisted limb, my son.

"No one can heal my limb!"

"No. No one but yourself. And until you heal the twist in your mind, you can not heal the twist in your limb."

"There is no twist in my mind!"

"Then heal your limb."

The young man stirred uneasily. They could see that Vulcan was making a fool of himself.

Mercury separated himself from the group and came forward.

"Hear me. Father. We do not purpose warring with you. Rather it is our intention to add to your glory. Declare yourself king under the sun. Let us be your legates to extend your rule to every creature that walks, or crawls, or swims. Let us create for you the pageantry of dominion, the glory of conquest. Let us conserve the ancient knowledge for those who understand it, and provide instead for lesser beings the drama they need. There is no reason why every way should be open to everyone. Rather, if the many serve the few, then will our combined efforts speed us faster on our way, to the profit of master and servant alike. Lead us. Father! Be our King!"

Slowly the elder man shook his head. "Not so. There is no knowledge, other than knowledge of oneself, and that should be free to every man who has the wit to learn. There is no power, other than the power to rule oneself, and that can be neither given, nor taken away. As for the poetry of empire, that has all been done before. There is no need to do it again. If such romance amuses you, enjoy it in the records-there is no need to bloody the planet again."

"That is the final word of the council. Father?"

"That is our final word." He stood up and gathered his robe about him, signifying that the session had ended. Mercury shrugged his shoulders and joined his fellows.

There was one more session of the council-the last-called to decide what to do about the ultimatum of the Young Men. Not every member of the council thought alike; they were as diverse as any group of human beings. They were human beings- not supermen. Some held out for opposing the Young Men with all the forces at their

command-translate them to another dimension, wipe their minds clean, even crush them by major force.

But to use force on the Young Men was contrary to their whole philosophy. "Free will is the primary good of the Cosmos. Shall we degrade, destroy, all that we have worked for by subverting the will of even one man?"

Huxley became aware that these Elders had no need to remain on Earth. They were anxious to move on to another place, the nature of which escaped Huxley, save that it was not of the time and space he knew.

The issue was this: Had they done what they could to help the incompletely developed balance of the race? Were they justified in abdicating?

The decision was yes, but a female member of the council, whose name, it seemed to Huxley, was Demeter, argued that records should be left to help those who survived the inevitable collapse. "It is true that each member of the race must make himself strong, must make himself wise. We cannot make them wise. Yet, after famine and war and hatred have stalked the earth, should there not be a message, telling them of their heritage?".The council agreed, and Huxley's host, recorder for the council, was ordered to prepare records and to leave them for those who would come after. Jove added an injunction: "Bind the force patterns so that they shall not dissipate while this planet endures. Place them where they will outlast any local convulsions of the crust, so that some at least will carry down through time."

So ended that dream. But Huxley did not wake-he started at once to dream another dream, not through the eyes of another, but rather as if he watched a stereo-movie, every scene of which was familiar to him.

The first dream, for all its tragic content, had not affected him tragically; but throughout the second dream he was oppressed by a feeling of heartbreak and overpowering weariness.

After the abdication of the Elders, the Young Men carried out their purpose, they established their rule. By fire and sword, searing rays and esoteric forces, chicanery and deception.

Convinced of their destiny to rule, they convinced themselves that the end justified the means.

The end was empire-Mu, mightiest of empires and mother of empires.

Huxley saw her in her prime and felt almost that the Young Men had been right-for she was glorious! The heart-choking magnificence filled his eyes with tears; he mourned for the glory, the beautiful breathtaking glory that was hers, and is no more.

Gargantuan silent liners in her skies, broadbeamed vessels at her wharves, loaded with grain and hides and spices, procession of priest and acolyte and humble believer, pomp and pageantry of power-he saw her intricate patterns of beauty and mourned her passing.

But in her swelling power there was decay. Inevitably Atlantis, her richest colony, grew to political maturity and was irked by subordinate status. Schism and apostasy, disaffection and treason, brought harsh retaliation-and new rebellion.

Rebellions rose, were crushed. At last one rose that was not crushed. In less than a month two-thirds of the people of the globe were dead; the remainder were racked by disease and hunger, and left with germ plasm damaged by the forces they had loosed. But priests still held the ancient knowledge.

Not priests secure in mind and proud of their trust, but priests hunted and fearful, who had seen their hierarchy totter. There were such priests on both sides-and they unchained forces compared with which the previous fighting had been gentle.

The forces disturbed the isostatic balance of the earth's crust.

Mu shuddered and sank some two thousand feet. Tidal waves met at her middle, broke back, surged twice around the globe, climbed the Chinese plains, lapped the feet of Alta Himalaya.

Atlantis shook and rumbled and split for three days before the water covered it. A few escaped by air, to land on ground still wet with the ooze of exposed seabottom, or on peaks high enough to fend off the tidal waves. There they had still to wring a living from the bare soil, with minds unused to primitive art-but some survived.

Of Mu there was not a trace. As for Atlantis, a few islands, mountaintops short days before, marked the spot. Waters rolled over the twin Towers of the Sun and fish swam through the gardens of the viceroy.

The woebegone feeling which had pursued Huxley now overwhelmed him. He seemed to hear a voice in his head: "Woe! Cursed be Loki! Cursed be Venus! Cursed be Vulcan! Thrice cursed am I, their apostate servant, Orab, Archpriest of the Isles of the Blessed. Woe is me! Even as I curse I long for Mu, mighty and sinful. Twenty-one years ago, seeking a place to die, on this mountaintop I stumbled on this record of the mighty ones who were before us. Twenty-one years I have.labored to make the record complete, searching the dim recesses of my mind for knowledge long unused, roaming the other planes for knowledge I never had. Now in the eight hundred and ninety-second year of my life, and of the destruction of Mu the three hundred and fifth, I, Orab, return to my fathers." Huxley was very happy to wake up.

Chapter Seven "The Fathers Have Eaten Sour Grapes, and the Children's Teeth Are Set on Edge"

Ben was in the living room when Phil came in to breakfast. Joan arrived almost on Phil's heels. There were shadows under her eyes and she looked unhappy. Ben spoke in a tone that was almost surly, "What's troubling you, Joan? You look like the wrath to come."

"Please, Ben," she answered, in a tired voice, "don't heckle me. I've had bad dreams all night,"

"That so? Sorry-but if you think you had bad dreams all night, you should have seen the cute little nightmares I've been riding."

Phil looked at the two of them. "Listen-have you both had odd dreams all night?"

"Wasn't that what we were just saying?" Ben sounded exasperated.

"What did you dream about?"

Neither one answered him.

"Wait a minute. I had some very strange dreams myself." He pulled his notebook out of a pocket and tore out three sheets. "I want to find out something. Will you each write down what your dreams were about, before anyone says anything more? Here's a pencil, Joan."

They balked a little, but complied.

"Read them aloud, Joan."

She picked up Ben's slip and read, " 'I dreamed that your theory about the degeneracy of the human race was perfectly correct.' "

She put it down and picked up Phil's slip. " 'dreamt that I was present at the Twilight of the Gods, and that I saw the destruction of Mu and Atlantis.' "

There was dead silence as she took the last slip, her own.

"My dream was about how the people destroyed themselves by rebelling against Odin."

Ben was first to commit himself. "Anyone of those slips could have applied to my dreams."

Joan nodded. Phil got up again, went out, and returned at once with his diary. He opened it and handed it to Joan.

"Kid, will you read that aloud-starting with 'June sixteenth'?"

She read it through slowly, without looking up from the pages. Phil waited until she had finished and closed the book before speaking. "Well," he said, "well?"

Ben crushed out a cigaret which had burned down to his fingers. "It's a remarkably accurate description of my dream, except that the elder you call Jove, I thought of as Ahuramazda."

"And I thought Loki was Lucifer."

"You're both right," agreed Phil. "I don't remember any spoken names for any of them. It just seemed that I knew what their names were."

"Me, too."."Say," interjected Ben, "we are talking as if these dreams were real-as if we had all been to the same movie."

Phil turned on him. "Well, what do you think?"

"Oh, the same as you do, I guess. I'm stumped. Does anybody mind if I eat breakfast-or drink some coffee, at least?"

Bierce came in before they had a chance to talk it over after breakfast-by tacit consent they had held their tongues during a sketchy meal.

"Good morning, ma'am. Good morning, gentlemen."

"Good morning, Mr. Bierce."

"I see," he said, searching their faces, "that none of you look very happy this morning. That is not surprising; no one does immediately after experiencing the records."

Ben pushed back his chair and leaned across the table at Bierce. "Those dreams were deliberately arranged for us?"

"Yes, indeed-but we were sure that yo u were ready to profit by them. But I have come to ask you to interview the Senior. If you can hold your questions for him, it will be simpler."

"The Senior?"

"You haven't met him as yet. It is the way we refer to the one we judge best fitted to coordinate our activities."

Ephraim Howe had the hills of New England in his face, lean gnarled cabinet-maker's hands.

He was not young. There was courtly grace in his lanky figure. Everything about him-the twinkle in his pale blue eyes, the clasp of his hand, his drawl-bespoke integrity.

"Sit yourselves down," he said, "I'll come straight to the point"-he called it 'pint.' "You've been exposed to a lot of curious things and you've a right to know why. You've

seen the Ancient Records now-part of 'em. I'll tell you how this institution came about, what it's for, and why you are going to be asked to join us."

"Wait a minute, Waaaait a minute," he added, holding up a hand. "Don't say anything just yet..."

When Fra Junipero Serra first laid eyes on Mount Shasta in 1781, the Indians told him it was a holy place, only for medicine men. He assured them that he was a medicine man, serving a greater Master, and to keep face, dragged his sick, frail old body up to the snow line, where he slept before returning.

The dream he had there-of the Garden of Eden, the Fall, and the Deluge-convinced him that it was indeed a holy place. He returned to San Francisco, planning to found a mission at Shasta. But there was too much for one old man to do-so many souls to save, so many mouths to feed. He surrendered his soul to rest two years later, but laid an injunction on a fellow monk to carry out his intention, It is recorded that this friar left the northernmost mission in 1785 and did not return.

The Indians fed the holy man who lived on the mountain until 1843, by which time he had gathered about him a group of neophytes, three Indians, a Russian, a Yankee mountainman. The Russian carried on after the death of the friar until joined by a Chinese, fled from his indenture.

The Chinese made more progress in a few weeks than the Russian had in half of a lifetime; the Russian gladly surrendered first place to him.

The Chinese was still there over a hundred years later, though long since retired from administration. He tutored in esthetics and humor.."And this establishment has just one purpose," continued Ephraim Howe. "We aim to see to it that Mu and Atlantis don't happen again. Everything that the Young Men stood for, we are against.

"We see the history of the world as a series of crises in a conflict between two opposing philosophies. Ours is based on the notion that life, consciousness, intelligence, ego is the important thing in the world." For an instant only he touched them telepathically; they felt again the vibrantly alive thing that Ambrose Bierce had showed them and been unable to define in words. "That puts us in conflict with every force that tends to destroy, deaden, degrade the human spirit, or to make it act contrary to its nature. We see another crisis approaching; we need recruits. You've been selected.

"This crisis has been growing on us since Napoleon. Europe has gone, and Asia-surrendered to authoritarianism, nonsense like the 'leader principle,' totalitarianism, all the bonds placed on liberty which treat men as so many economic and political units with no importance as individuals. No dignity-do what you're told, believe what you are told and shut your mouth!

Workers, soldiers, breeding units . . . "

"If that were the object of life, the re would have been no point in including consciousness in the scheme at all!"

"This continent," Howe went on, "has been a refuge of freedom, a place where the soul could grow. But the forces that killed enlightenment in the rest of the world are spreading here. Little by little they have whittled away at human liberty and human dignity. A repressive law, a bullying school board, a blind dogma to be accepted under pain of persecution-doctrines that will shackle men and put blinders on their eyes so that they will never regain their lost heritage."

"We need help to fight it."

Huxley stood up. "You can count on us."

Before Joan and Coburn could speak the Senior interposed. "Don't answer yet. Go back to your chambers and think about it. Sleep on it. We'll talk again."

Chapter Eight "Precept Upon Precept . . ."

Had the place on Mount Shasta been a university and possessed a catalog (which it did not), the courses offered therein might have included the following;

TELEPATHY. Basic course required of all students not qualified by examination. Practical instruction up to and including rapport. Prerequisite in all departments. Laboratory.

RATIOCINATION, I, II, III, IV. R.I. Memory. R.II. Perception; clairvoyance, clairaudience, discretion of mass, -time, -and-space, non-mathematical relation, order, and structure, harmonic form and interval. R.III. Dual and parallel thought processes. Detachment. R.IV. Meditation (seminar) AUTOKINETICS. Discrete kinesthesia. Endocrine control with esp. application to the affective senses and to suppression of fatigue, regeneration, transformation (clinical aspects of lycanthropy), sex determination, inversion, autoanaesthesia, rejuvenation.

TELEKINETICS. Life-mass-space-time continua. Prerequisite; autokinetics. Teleportation and general action at a distance. Projection. Dynamics. Statics. Orientation.

HISTORY. Courses by arrangement. Special discussions of psychometry with reference to telepathic records, and of metempsychosis. Evaluation is a prerequisite for all courses in this department.

HUMAN ESTHETICS. Seminar. Autokinetics and technique of telepathic recording (psychometry) a prerequisite.

HUMAN ETHICS. Seminar. Given concurrently with all other courses. Consult with instructor.

Perhaps some of the value of the instruction would have been lost had it been broken up into disjointed courses as outlined above. In any case the adepts on Mount Shasta could and did instruct in all these subjects. Huxley, Coburn, and Joan Freeman learned from tutors who led them to teach themselves, and they took it as an eel seeks the sea, with a sense of returning home after a long absence.

All three made rapid progress; being possessed of rudimentary perception and some knowledge of telepathy, their instructors could teach them directly. First they learned to control their bodies. They regained the control over each function, each muscle each tissue, each gland, that a man should possess but has largely forgotten-save a few obscure students in the far east.

There was a deep, welling delight in willing the body to obey and having it comply. They became intimately aware of their bodies, but their bodies no longer tyrannized them. Fatigue, hunger, cold, pain-these things no longer drove them, but rather were simply useful signals that a good engine needed attention.

Nor did the engine need as much attention as before; the body was driven by a mind that knew precisely both the capacity and its limitations. Furthermore, through understanding their bodies, they were enabled to increase those capacities to their full potential. A week of sustained activity, without rest, or food, or water, was as easy as a

morning's work had been. As for.mental labor, it did not cease at all, save when they willed it-despite sleep, digestive languor, ennui, external stimuli, or muscular activity.

The greatest delight was levitation.

To fly through the air, to hang suspended in the quiet heart of a cloud, to sleep, like Mohamet, floating between ceiling and floor-these were sensuous delights unexpected, and never before experienced, except in dreams, dimly. Joan in particular drank this new joy with lusty abandon.

Once she remained away two days, never setting foot to ground, sharing the sky and wind and swallow, the icy air of the heights smoothing her bright body. She dove and soared, looped and spiralled, and dropped, a dead weight, knees drawn up to forehead, from stratosphere to treetop.

During the night she paced a transcontinental plane, flying unseen above it for a thousand miles. When she grew bored with this, she pressed her face for a moment against the one lighted port of the plane, and looked inside. The startled wholesale merchant who stared back into her eyes thought that he had been vouchsafed a glimpse of an angel. He went promtly from the airport of his destination to the office of his lawyer, who drew up for him a will establishing scholarships for divinity students.

Huxley found it difficult to learn to levitate. His inquiring mind demanded a reason why the will should apparently be able to set at naught the inexorable "law" of gravitation, and his doubt dissipated his volition. His tutor reasoned with him patiently.

"You know that intangible will can affect the course of mass in the continuum; you experience it whenever you move your hand. Are you powerless to move your hand because you can not give a full rational explanation of the mystery? Life has power to affect matter; you know that-you have experienced it directly. It is a fact. Now there is no 'why' about any fact in the unlimited sense in which you ask the question. There it stands, serene, demonstrating itself.

One may observe relations between facts, the relations being other facts, but to pursue those relations back to final meanings is not possible to a mind which is itself relative. First you tell me why you are . . .then I will tell you why levitation is possible.

"Now come," he continued, "place yourself in rapport with me, and try to feel how I do, as I levitate."

Phil tried again. "I don't get it," he concluded miserably.

"Look down."

Phil did so, gasped, and fell three feet to the floor. That night he joined Ben and Joan in a flight over the High Sierras.

Their tutor enjoyed with quiet amusement the zest with which they entered into the sport made possible by the newly acquired mastery of their bodies. He knew that their pleasure was natural and healthy, suited to their stage of development, and he knew that they would soon learn, of themselves, its relative worth, and then be ready to turn their minds to more serious work.

"Oh, no. Brother Junipero wasn't the only man to stumble on the records," Charles assured them, talking as he painted. "You must have noticed how high places have significance in the religions of every race. Some of them must be repositories of the ancient records."

"Don't you know for certain?" asked Phil.

"Indeed yes, in many cases-Alta Himalaya, for example. I was speaking of what an intelligent man might infer from matters of common knowledge. Consider how many mountains are of prime importance in as many different religions. Mount Olympus, Popocatepetl, Mauna.Loa, Everest, Sinai, Tai Shan, Ararat, Fujiyama, several places in the Andes. And in every religion there are accounts of a teacher bringing back inspired messages from high places- Gautama, Jesus, Joseph Smith, Confucius, Moses. They all come down from high places and tell stories of creation, and downfall, and redemption.

"Of all the old accounts the best is found in Genesis. Making allowance for the fact that it was first written in the language of uncivilized nomads, it is an exact, careful account."

Huxley poked Coburn in the ribs. "How do you like that, my skeptical friend?" Then to Charles, "Ben has been a devout atheist since he first found out that Santa Claus wore false whiskers; it hurts him to have his fondest doubts overturned."

Coburn grinned, unperturbed. "Take it easy, son, I can express my own doubts, unassisted.

You've brought to mind another matter, Charles. Some of these mountains don't seem old enough to have been used for the ancient records-Shasta, for example. It's volcanic and seems a little new for the purpose.

Charles went rapidly ahead with his painting as he replied. "You are right. It seems likely that Orab made copies of the original record which he found, and placed the copies with his supplement on several hiding places around the globe. And it is possible that others after Orab, but long before our time, read the records and moved them for safekeeping. The copy that Junipero Serra found may have been here a mere twenty thousand years, or so."

Chapter Nine Fledglings Fly

"We could hang around here for fifty years, learning new things, but in the mean time we wouldn't be getting anywhere. I, for one, am ready to go back." Phil crushed out a cigaret and looked around at his two friends.

Coburn pursed his lips and slowly nodded his head. "I feel the same way, Phil. There is no limit to what we could learn here, of course, but there comes a time when you just have to use some of the things you leam, or it just boils up inside. I think we had better tell the Senior, and get about doing it."

Joan nodded vigorously. "Uh huh. I think so, too. There's work to be done, and the place to do it is Western U.-not up here in Never-Never land. Boy, I can hardly wait to see old Brinckley's face when we get through with him!"

Huxley sought out the mind of Ephraim Howe. The other two waited for him to confer, courteously refraining from attempting to enter the telepathic conversation. "He says he had been expecting to hear from us, and that he intends to make it a full conference. He'll meet us here."

"Full conference? Everybody on the mountain?"

"Everybody-on the mountain, or not. I gather it's customary when new members decide what their work will be."

"Whew!" exclaimed Joan, "that gives me stage fright just to think about it. Who's going to speak for us? It won't be little Joan."

"How about you, Ben?"

"Well. . . if you wish."

"Take over."

They meshed into rapport. As long as they remained so, Ben's voice would express the combined thought of the trio. Ephraim Howe entered alone but they were aware that he was in rapport with, and spokesman for, not only the adepts on the mountainside, but also the two-hundred- odd full- geniuses scattered about the country.

The conference commenced with direct mind-to- mind exchange: -"We feel that it is time we were at work. We have not learned all that there is to learn, it is true; ne vertheless, we need to use our present knowledge."

-"That is well and entirely as it should be, Benjamin. You have learned all that we can teach you at this time. Now you must take what you have learned out into the world, and use it, in order that knowledge may mature into wisdom."

-"Not only for that reason do we wish to leave, but for another more urgent. As you yourself have taught us, the crisis approaches. We want to fight it"

-"How do you propose to fight the forces bringing on the crisis?"

-"Well . . ." Ben did not use the word, but the delay in his thought produced the impression.

"As we see it, in order to make men free, free so that they may develop as men and not as.animals; it is necessary that we undo what the Young Men did. The Young Men refused to permit any but their own select few to share in the racial heritage of ancient knowledge. For men again to become free and strong and independent it is necessary to return to each man his ancient knowledge and his ancient powers."

-"That is true; what do you intend to do about it?"

-"We will go out and tell about it. We all three are in the educational system; we can make ourselves heard-I, in the medical school at Western; Phil and Joan in the department of psychology. With the training you have given us we can overturn the traditional ideas in short order. We can start a renaissance in education that will prepare the way for everyone to receive the wisdom that you, our elders, can offer them."

-"Do you think that it will be as simple as that?"

-"Why not? Oh, we don't expect it to be simple. We know that we will run head on into some of the most cherished misconceptions of everyone, but we can use that very fact to help. It will be spectacular; we can get publicity through it that will call attention to our work. You have taught us enough that we can prove that we are right. For example-suppose we put on a public demonstration of levitation, and proved before thousands of people that human mind could do the things we know it can? Suppose we said that anyone could learn such things who first learned the techniques of telepathy? Why, in a year, or two, the whole nation could be taught telepathy, and be ready for the reading of the records, and all that that implies!"

Howe's mind was silent for several long minutes-no message reached them. The three stirred uneasily under his thoughtful, sober gaze. Finally,-"If it were as simple as that, would we not have done it before?"

It was the turn of the three to be silent. Howe continued kindly,-"Speak up, my children.

Do not be afraid. Tell us your thoughts freely. You will not offend us.

The thought that Coburn sent in answer was hesitant-"If is difficult . . . Many of you are very old, and we know that all of you are wise. Nevertheless, it seems to us, in our youth, that you have waited overly long in acting. We feel-we feel that you have allowed the pursuit of understanding to son your will to action. From our standpoint, you have waited from year to year, perfecting an organization that will never be perfected, while the storm that overturns the world is gathering its force."

The elders pondered before Ephraim Howe answered.-"It may be that you are right, dearly beloved children, yet it does not seem so to us. We have not attempted to place the ancient knowledge in the hands of all men because few are ready for it. It is no more safe in childish minds than matches in childish hands.

-"And yet . . . you may be right. Mark Twain thought so, and was given permission to tell all that he had learned. He did so, writing so that anyone ready for the knowledge could understand. No one did. In desperation he set forth specifically how to become telepathic. Still no one took him seriously. The more seriously he spoke, the more his readers laughed. He died embittered.

-"We would not have you believe that we have done nothing. This republic, with its uncommon emphasis on personal freedom and human dignity, would not have endured as long as it has had we not helped. We chose Lincoln. Oliver Wendell Holmes was one of us. Walt Whitman was our beloved brother. In a thousand ways we have supplied help, when needed, to avert a setback toward slavery and darkness."

The thought paused, then continued.-"Yet each must act as he sees it. It is still your decision to do this?".Ben spoke aloud, in a steady voice, "It is!"

-"So let it be! Do you remember the history of Salem?"

-"Salem? Where the witchcraft trials were held? ... Do you mean to warn us that we may be persecuted as witches?"

-"No. There are no laws against witchcraft today, of course. It would be better if there were. We hold no monopoly on the power of knowledge; do not expect an easy victory. Beware of those who hold, some portion of the ancient knowledge and use it to a base purpose-witches -black magicians!"

The conference concluded and rapport loosed, Ephraim Howe shook hands solemnly all around and bade them goodby.

"I envy you kids," he said, "going off like Jack the Giant Killer to tackle the whole educatio nal system. You've got your work cut out for you. Do you remember what Mark Twain said? 'God made an idiot for practice, then he made a school board.' Still, I'd like to come along."

"Why don't you, sir?"

"Eh? No, 'twouldn't do. I don't really believe in your plan. F'r instance-it was frequently a temptation during the years I spent peddlin' hardware in the State of Maine to show people better ways of doing things. But I didn't do it; people are used to paring knives and ice cream freezers, and they won't thank you to show them how to get along without them, just by the power of the mind. Not all at once, anyhow. They'd read you out of meetin'-and lynch you, too, most probably.

"Still, I'll be keeping an eye on you."

Joan reached up and kissed him good-bye. They left.

Chapter Ten Lions Mouth

PHIL PICKED HIS LARGEST CLASS to make the demonstration which was to get the newspapers interested in them.

They had played safe to the extent of getting back to Los Angeles and started with the fall semester before giving anyone cause to suspect that they possessed powers out of ordinary. Joan had been bound over not to levitate, not to indulge in practical jokes involving control over inanimate objects, not to startle strangers with weird abilities of any sort. She had accepted the injunctions meekly, so meekly that Coburn claimed to be worried.

"It's not normal," he objected. "She can't grow up as fast as all that. Let me see your tongue, my dear."

'Pooh," she answered, displaying that member in a most undiagnostic manner, "Master Ling said I was further advanced along the Way than either one of you."

"The heathen Chinee is peculiar. He was probably just encouraging you to grow up.

Seriously, Phil, hadn't we better put her into a deep hypnosis and scoot her back up the mountain for diagnosis and readjustment?"

"Ben Coburn, you cast an eye in my direction and I'll bung it out!"

Phil built up to his key demonstration with care. His lectures were sufficiently innocuous that he could afford to have his head of department drop in without fear of reprimand or interference.

But the combined effect was to prepare the students emotionally for what was to come.

Carefully selected assignments for collateral reading heightened his chances.

"Hypnosis is a subject but vaguely understood," he began his lecture on the selected day, "and formerly classed with witchcraft, magic, and so forth, as silly superstition. But it is a commonplace thing today and easily demonstrated. Consequently the most conservative psychologists must recognize its existence and try to observe its characteristics." He went on cheerfully uttering bromides and common-places, while he sized up the emotional attitude of the class.

When he felt that they were ready to accept the ordinary phenomena of hypnosis without surprise, he called Joan, who had attended for the purpose, up to the front of the room. She went easily into a state of light hypnosis. They ran quickly through the small change of hypnotic phenomena-catalepsy, compulsion, post-hypnotic suggestion-while he kept up a running chatter about the relation between the minds of the operator and the subject, the possibility of direct telepathic control, the Rhine experiments, and similar matters, orthodox in themselves, but close to the borderline of heterodox thought.

Then he offered to attempt to reach the mind of the subject telepathically.

Each student was invited to write something on a slip of paper. A volunteer floor committee collected the slips, and handed them to Huxley one at a time. He solemnly went through the hocus-pocus of glancing at each one, while Joan read them off as his eyes rested on them. She stumbled convincingly once or twice.-"Nice work, kid."-"Thanks, pal. Can't I pep it up a.little?"-"None of your bright ideas. Just keep on as you are. They're eating out of our hands now."

By such easy stages he led them around to the idea that mind and will could exercise control over the body much more complete than that ordinarily encountered. He

passed lightly over the tales of Hindu holy men who could lift themselves up into the air and even travel from place to place.

"We have an exceptional opportunity to put such tales to practical test," he told them. "The subject believes fully any statement made by the operator. I shall tell Miss Freeman that she is to exert her will power, and rise up off the floor. It is certain that she will believe that she can do it.

Her will will be in an optimum condition to carry out the order, if it can be done. Miss Freeman!"

"Yes, Mr. Huxley."

"Exert your will. Rise up in the air!"

Joan rose straight up into the air, some six feet-until her head nearly touched the high ceiling.

-"How'm doin,' pal?"

-Swell, kid, you're wowin 'em. Look at 'em stare!"

At that moment Brinkley burst into the room, rage in his eyes.

"Mr. Huxley, you have broken your word to me, and disgraced this university!"

It was some ten minutes after the fiasco ending the demonstration. Huxley faced the president in Brinkley's private office.

"I made you no promise. I have not disgraced the school," Phil answered with equal pugnacity.

"You have indulged in cheap tricks of fake magic to bring your department into disrepute."

"So I'm a faker, am I? You stiff- necked old fossil-explain this one!" Huxley levitated himself until he floated three feet above the rug.

"Explain what?" To Huxley's amazement Brinckley seemed unaware that anything unusual was going on. He continued to stare at the point where Phils head had been. His manner showed nothing but a slight puzzlement and annoyance at Huxley's apparently irrelevant remark.

Was it possible that the doddering old fool was so completely self-deluded that he could not observe anything that ran counter to his own preconceptions even when it happened directly under his eyes? Phil reached out with his mind and attempted to see what went on inside Brinckley's head. He got one of the major surprises of his life. He expected to find the floundering mental processes of near senility; he found cold calculation, keen ability, set in a matrix of pure evil that sickened him.

It was just a glimpse, then he was cast out with a wrench that numbed his brain. Brinckley had discovered his spying and thrown up his defences-the hard defences of a disciplined mind.

Phil dropped back to the floor, and left the room, without a word, nor a backward glance.

From THE WESTERN STUDENT, October 3rd: PSYCH PROF FIRED FOR FRAUD . . . students' accounts varied, but all agreed that it had been a fine show. Fullback 'Buzz' Arnold told your reporter, "I hated to see it happen; Prof Huxley is a nice guy and he certainly.put on a clever skit with some good deadpan acting. I could see how it was done, of course-it was the same the Great Arturo used in his turn at the Orpheum last spring. But I can see Doctor Brinckley's viewpoint; you can't permit monkey shines at a serious center of learning."

President Brinckley gave the STUDENT the following official statement: "It is with real regret that I announce the termination of Mr. Huxley's association with the institution-for the good of the University. Mr. Huxley had been repeatedly warned as to where his steps were leading him. He is a young man of considerable ability. Let us devoutly hope that this experience will serve as a lesson to him in whatever line of endeavor-"

Coburn handed the paper back to Huxley. "You know what happened to me?" he inquired.

"Something new?"

"Invited to resign-No publicity-just a gentle hint. My patients got well too fast; I'd quit using surgery, you know."

"How perfectly stinking!" This from Joan.

"Well," Ben considered, "I don't blame the medical director; Brinckley forced his hand. I guess we underrated the old cuss."

"Rather! Ben, he's every bit as capable as any one of us, and as for his motives-I gag when I think about it."

"And I thought he was just a were-mouse," grieved Joan. "We should have pushed him into the tar pits last spring. I told you to. What do we do now?"

"Go right ahead." Phil's reply was grim. "Well turn the situation to our own advantage; we've gotten some publicity-we'll use it."

"What's the gag?"

"Levitation again. It's the most spectacular thing we've got for a crowd. Call in the papers, and tell 'em that we will publicly demonstrate levitation at noon tomorrow in Pershing Square."

"Won't the papers fight shy of sticking their necks out on anything that sounds as fishy as that?"

"Probably they would, but here's how we'll handle that: Make the whole thing just a touch screwball and give 'em plenty of funny angles to write up. Then they can treat it as a feature rather than as straight news. The lid's off, Joan-you can do anything you like; the screwier the better. Let's get going, troops-I'll call the News Service. Ben, you and Joan split up the dailies between you."

The reporters were interested, certainly. They were interested in Joan's obvious good looks, cynically amused by Phil's flowing tie and bombastic claims, and seriously impressed by his taste in whiskey. They began to take notice when Coburn courteously poured drinks for them without bothering to touch the bottle.

But when Joan floated around the room while Phil rode a non-existent bicycle across the ceiling, they balked. "Honest, doc," as one of them put it, "we've got to eat-you don't expect us to go back and tell a city editor anything like this. Come clean; is it the whiskey, or just plain hypnotism?"

"Put it any way you like, gentlemen. Just be sure that you say that we will do it all over again in Pershing Square at noon tomorrow.".Phil's diatribe against Brinckley came as an anticlimax to the demonstration, but the reporters obligingly noted it.

Joan got ready for bed that night with a feeling of vague depression. The exhilaration of entertaining the newspaper boys had worn off. Ben had proposed supper and dancing to mark their last night of private life, but it had not been a success. To start with, they had blown a tire while coming down a steep curve on Beachwood Drive, and

Phil's gray sedan had rolled ove r and over. They would have all been seriously injured had it not been for the automatic body control which they possessed.

When Phil examined the wreck, he expressed puzzlement as to its cause. "Those tires were perfectly all right, he maintained. "I had examined them all the way through this morning." But he insisted on continuing with their evening of relaxation.

The floor show seemed dull, the jokes crude and callous after the light, sensitive humor they had learned to enjoy through association with Master Ling. The ponies in the chorus were young and beautiful. Joan had enjoyed watching them, but she made the mistake of reaching out to touch their minds. The incongruity of the vapid, insensitive spirits she found -almost every instance-added to her malaise.

She was relieved when the floor show ended and Ben asked her to dance. Both of the men were good dancers, especially Coburn, and she fitted herself into his arms contentedly. Her pleasure didn't last; a drunken couple bumped into them repeatedly. The man was quarrelsome, the woman shrilly vitriolic. Joan asked her escorts to take her home.

These things bothered her as she prepared for bed. Joan, who had never known acute physical fear in her life, feared just one thing-the corrosive, dirty emotions of the poor in spirit. Malice, envy, spite, the snide insults of twisted, petty minds; these things could hurt her, just by being in her presence, even if she were not the direct object of the attack. She was not yet sufficiently mature to have acquired a smooth armor of indifference to the opinions of the unworthy.

After a summer in the company of men of good will, the incident with the drunken couple dismayed her. She felt dirtied by the contact. Worse still, she felt an outlander, a stranger in a strange land.

She awakened sometime in the night with the sense of loneliness increased to overwhelming proportions. She was acutely aware of the three- million-odd living beings around her, but the whole city seemed alive only with malignant entities, jealous of her, anxious to drag her down to their own ignoble status. This attack on her spirit, this attempt to despoil the sanctity of her inner being, assumed an almost corporate nature. It seemed to her that it was nibbling at the edges of her mind, snuffling at her defences.

Terrified, she called out to Ben and Phil. There was no answer; her mind could not find them.

The filthy thing that threatened her was aware of her failure; she could feel it leer. In open panic she called to the Senior.

No answer. This time the thing spoke-"That way, too, is closed."

As hysteria claimed her, as her last defences crumbled, she was caught in the arms of a stronger spirit, whose calm, untroubled goodness encysted her against the evil thing that stalked her.

"Ling!" she cried, "Master Ling!" before racking sobs claimed her.

She felt the quiet, reassuring humor of his smile while the fingers of his mind reached out and smoothed away the tensions of her fear. Presently she slept.

His mind stayed with her all through the night, and talked with her, until she awakened..Ben and Phil listened to her account of the previous night with worried faces. "That settles it, Phil decided. "We've been too careless. From now on until this thing is finished, we stay in rapport day and night, awake and asleep. As a matter of fact, I had a bad time of it myself last night, though nothing equal to what happened to Joan."

"So did I, Phil. What happened to you?"

"Nothing very much-just a long series of nightmares in which I kept losing confidence in my ability to do any of the things we learned on Shasta. What about you?"

"Same sort of thing, with variations. I operated all night long, and all of my patients died on the table. Not very pleasant-but something else happened that wasn't a dream. You know I still use an old- fashioned straight-razor; I was shaving away, paying no attention to it, when it jumped in my hand and cut a big gash in my throat. See? It's not entirely healed yet." He indicated a thin red line which ran diagonally down the right side of his neck.

"Why, Ben!" squealed Joan, "you might have been killed."

"That's what I thought," he agreed dryly.

"You know, kids," Phil said slowly, "these things aren't accidental-"

Open up in there!" The order was bawled from the other side of the door. As one mind, their senses of direct perception jumped through solid oak and examined the speaker. Plainclothes did not conceal the profession of the over-size individual waiting there even had they not been able to see the gold shield on his vest. A somewhat smaller, but equally officious, man waited with him.

Ben opened the door and inquired gently, "What do you want?"

The larger man attempted to come in. Coburn did not move.

"I asked you your business."

"Smart guy, eh? I'm from police headquarters. You Huxley?"

No.

"Coburn?" Ben nodded.

"You'll do. That Huxley behind you? Don't either of you ever stay home? Been here all night?"

"No," said Coburn frostily, "not that it is any of your business."

"I'll decide about that. I want to talk to you two. I'm from the bunco squad. What's this game you were giving the boys yesterday?"

"No game, as you call it. Come down to Pershing Square at noon today, and see for yourself."

"You won't be doing anything in Pershing Square today, Bud."

"Why not?"

"Park Commission's orders."

"What authority?"

"Huh?"

"By what act, or ordinance, do they deny the right of private citizens to make peaceful use of a public place? Who is that with you?"

The smaller man identified himself. "Name's Ferguson, D.A.'s office. I want your pal Huxley on a criminal libel complaint. I want you two's witnesses.

Ben's stare became colder, if possible. "Do either of you," he inquired, in gently snubbing tones, "have a warrant?"

They looked at each other and failed to reply. Ben continued, "Then it is hardly profitable to continue this conversation, is it?" and closed the door in their faces..He turned around to his companions and grinned. "Well, they are closing in. Let's see what the papers gave us."

They found just one story. It said nothing about their proposed demonstration, but related that Doctor Brinckley had sworn a complaint charging Phil with criminal libel. "That's the first time I ever heard of four metropolitan papers refusing a juicy news story," was Ben's comment, "what are you going to do about Brinckley's charge?"

"Nothing," Phil told him, "except possibly libel him again. If he goes through with it, it will be a beautiful opportunity to prove our claims in court. Which reminds me-we don't want our plans interfered with today; those bird dogs may be back with warrants most any time. Where'll we hide out?"

On Ben's suggestion they spent the morning buried in the downtown public library. At five minutes to twelve, they flagged a taxi, and rode to Pershing Square.

They stepped out of the cab into the arms of six sturdy policemen.

-"Ben, Phil, how much longer do I have to put up with this?"

-"Steady, kid. Don't get upset."

-"I'm not, but why should we stay pinched when we can duck out anytime?"

-"That's the point; we can escape anytime. We've never been arrested before; let's see what it's like"

They were gathered that night late around the fireplace in Joan's house. Escape had presented no difficulties, but they had waited until an hour when the jail was quiet to prove that stone walls do not a prison make for a person adept in the powers of the mind.

Ben was speaking, "I'd say we had enough data to draw a curve now.' "Which is?"

"You state it."

"All right. We came down from Shasta thinking that all we had to overcome was stupidity, ignorance and a normal amount of human contrariness and cussedness. Now we know better.

Any attempt to place the essentials of the ancient knowledge in the hands of the common people is met by a determined, organized effort to prevent it, and to destroy, or disable the one who tries it."

"It's worse than that," amended Ben, "I spent our rest in the clink looking over the city. I wondered why the district attorney should take such an interest in us, so I took a look into his mind. I found out who his boss was, and took a look at his mind. What I found there interested me so much that I had to run up to the state capital and see what made things tick there. That took me back to Spring Street and the financial district. Believe it or not, from there I had to look up some of the most sacred cows in the community-clergymen, clubwomen, business leaders, and stuff." He paused.

"Well, what about it? Don't tell me everybody is out of step but Willie-I'll break down and cry."

"No-that was the odd part about it. Nearly all of these heavyweights were good Joes, people you'd like to know. But usually-not always, but usually- the good Joes were dominated by someone they trusted, someone who had helped them to get where they were, and these dominants were not good Joes, to state it gently. I couldn't get into all of their minds, but where I was able to get in, I found the same sort of thing that Phil found in Brinckle y-cold calculated awareness that their power lay in keeping the people in ignorance."

Joan shivered. "That's a sweet picture you paint, Ben-just the right thing for a bed-time story. What's our next move?."What do you suggest?

"Me? I haven't reached any conclusion. Maybe we should take on these tough babies one at a time, and smear em"

"How about you, Phil-?"

"I haven't anything better to offer. We'll have to plan a shrewd campaign, however."

"Well, I do have something to suggest myself."

"Let's have it."

"Admit that we blindly took on more than we could handle. Go back to Shasta and ask for help."

"Why, Ben!" Joan's dismay was matched by Phil's unhappy face. Ben went on stubbornly, "Sure, I know it's grovelling, but pride is too expensive and the job is too-"

He broke off when he noticed Joan's expression. "What is it kid?"

"We'll have to make some decision quickly-that is a police car that just stopped out in front."

Ben turned back to Phil. "What'll it be; stay and fight, or go back for reinforcements?"

"Oh, you're right. I've known it ever since I got a look at Brinckley's mind-but I hated to admit it."

The three stepped out into the patio, joined hands, and shot straight up into the air.

Chapter Eleven "A Little Child Shall Lead Them"

"Welcome home!" Ephraim Howe met them when they landed. "Glad to have you back." He led them into his own private apartment. "Rest yourselves while I stir up the fire a mite." He chucked a wedge of pinewood into the wide grate, pulled his homely old rocking chair around so that it faced the fire and his guests, and settled down. "Now suppose you tell me all about it. No, I'm not hooked in with the others-you can make a full report to the council when you're ready."

"As a matter of fact, don't you already know everything that happened to us, Mr. Howe?"

Phil looked directly at the Senior as he spoke.

"No, I truly don't. We let you go at it your own way, with Ling keeping an eye out to see that you didn't get hurt. He has made no report to me."

"Very well, sir." They took turns telling him all that had happened to them, occasionally letting him see directly through their minds the events they had taken part in.

When they were through Howe gave them his quizzical smile and inquired, "So you've come around to the viewpoint of the council?"

"No, sir!" It was Phil who answered him. "We are more convinced of the need for positive, immediate action than we were when we left-but we are convinced, too, that we aren't strong enough nor wise enough to handle it alone. We've come back to ask for help, and to urge the council to abandon its policy of teaching only those who show that they are ready, and, instead, to reach out and teach as many minds as can accept your teachings.

"You see, sir, our antagonists don't wait. They are active all the time. They've won in Asia, they are in the ascendancy in Europe, they may win here in America, while we wait for an opportunity."

"Have you any method to suggest for tackling the problem?"

"No, that's why we came back. When we tried to teach others what we knew, we were stopped."

"That's the rub," Howe agreed. "I've been pretty much of your opinion for a good many years, but it is hard to do. What we have to give can't be printed in a book, nor broadcast over the air.

It must be passed directly from mind to mind, wherever we find a mind ready to receive it."

They finished the discussion without finding a solution. Howe told them not to worry. "Go along," he said, "and spend a few weeks in meditation and rapport. When you get an idea that looks as if it might work, bring it in and we'll call the council together to consider it."

"But, Senior," Joan protested for the trio, "you see-Well, we had hoped to have the advice of the council in working out a plan. We don't know where to start, else we wouldn't have come back."

He shook his head. "You are the newest of the brethren, the youngest, the least experienced.

Those are your virtues, not your disabilities. The very fact that you have not spent years of this.life in thinking in terms of eons and races gives you an advantage. Too broad a viewpoint, too philosophical an outlook paralyzes the will. I want you three to consider it alone."

They did as he asked. For weeks they discussed it; in rapport as a single mind, hammered at it in spoken conversation, meditated its ramifications. They roamed the nation with their minds, examining the human spirits that lay behind political and social action. With the aid of the archives they learned the techniques by which the brotherhood of adepts had interceded in the past when freedom of thought and action in America had been threatened. They proposed and rejected dozens of schemes.

"We should go into politics," Phil told the other two, "as our brothers did in the past. If we had a Secretary of Education, appointed from among the elders, he could found a national academy in which freedom of thought would really prevail, and it could be the source from which the ancient knowledge could spread."

Joan put in an objection.

"Suppose you lose the election?"

"Huh?"

"Even with all the special powers that the adepts have, it 'ud be quite a chore to line up delegates for a national convention to get our candidate nominated, then get him elected in the face of all the political machines, pressure groups, newspapers, favorite sons, et cetera, et cetera, et cetera.

"And remember this, the opposition can fight as dirty as it pleases, but we have to fight fair, or we defeat our own aims."

Ben nodded. "I am afraid she is right, Phil. But you are absolutely right in one thing, this is a problem of education." He stopped to meditate, his mind turned inward.

Presently he resumed. "I wonder if we have been tackling this job from the right end? We've been thinking of reeducating adults, already set in their ways. How about the children? They haven't crystallized, wouldn't they be easier to teach?"

Joan sat up, her eyes bright. "Ben, you've got it!"

Phil shook his head doggedly. "No. I hate to throw cold water, but there is no way to go about it. Children are constantly in the care of adults; we couldn't get to them. Don't think for a moment that you could get past local school boards; they are the tightest little oligarchies in the whole political system."

They were sitting in a group of pine trees on the lower slopes of Mount Shasta. A little group of human figures came into view below them and climbed steadily toward the spot where the three rested. The discussion was suspended until the group moved beyond earshot. The trio watched them with casual, friendly interest.

They were all boys, ten to fifteen years old, except the leader, who bore his sixteen years with the serious dignity befitting one who is responsible for the safety and wellbeing of younger charges. They were dressed in khaki shorts and shirts, campaign hats, neckerchiefs embroidered with a conifer and the insignia ALPINE PATROL, TROOP I. Each carried a staff and a knapsack.

As the procession came abreast of the adults, the patrol leader gave them a wave in greeting, the merit badges on his sleeve flashing in the sun. The three waved back and watched them trudge out of sight up the slope..Phil watched them with a faraway look. "Those were the good old days," he said, "I almost envy them."

"Were you one?" Ben said, his eyes still on the boys. "I remember how proud I was the day I got my merit badge in first aid."

"Born to be a doctor, eh, Ben?" commented Joan, her eyes maternal, approving. "I didn't- say!"

"What's up?"

"Phil! That's your answer! That's how to reach the children in spite of parents and school boards."

She snapped into telepathic contact, her ideas spilling excitedly into their minds. They went into rapport and ironed out the details. After a time Ben nodded and spoke aloud.

"It might work," he said, "let's go back and talk it over with Ephraim."

"Senator Moulton, these are the young people I was telling you about." Almost in awe, Joan looked at the face of the little white-haired, old man whose name had become a synonym for integrity. She felt the same impulse to fold her hands across her middle and bow which Master Ling inspired. She noted that Ben and Phil were having trouble not to seem gawky and coltish.

Ephraim Howe continued, "I have gone into their scheme and I think it is practical. If you do too, the council will go ahead with it. But it largely depends on you.

The Senator took them to himself with a smile, the smile that had softened the hearts of two generations of hard politicians. "Tell me about it," he invited.

They did so-how they had tried and failed at Western University, how they had cudgeled their brains for a way, how a party of boys on a hike up the mountain had given them an inspiration. "You see Senator, if we could just get enough boys up here all at once, boys too young to have been corrupted by their environment, and already trained, as these boys are, in the ideals of the ancients-human dignity, helpfulness, self-reliance,

kindness, all those things set forth in their code-if we could get even five thousand such boys up here all at once, we could train them in telepathy, and how to impart telepathy to others.

"Once they were taught, and sent back to their homes, each one would be a center for spreading the knowledge. The antagonists could never stop it; it would be too wide spread, epidemic. In a few years every child in the country would be telepathic, and they would even teach their elders-those that haven't grown too calloused to learn.

"And once a human being is telepathic, we can lead him along the path of the ancient wisdom!"

Moulton was nodding, and talking to himself. "Yes. Yes indeed. It could be done.

Fortunately Shasta is a national park. Let me see, who is on that committee? It would take a joint resolution and a small appropriation. Ephraim, old friend, I am afraid I shall have to practice a little logrolling to accomplish this, will you forgive me?"

Howe grinned broadly.

"Oh, I mean it," Moulton continued, "people are so cynical, so harsh, about political expediency-even some of our brothers. Let me see, this will take about two years, I think, before the first camp can be held-"

"As long as that?" Joan was disappointed.

"Oh, yes, my dear. There are two bills to get before Congress, and much arranging to do to get them passed in the face of a full legislative calendar. There are arrangements to be made with.the railroads and bus companies to give the boys special rates so that they can afford to come.

We must start a publicity campaign to make the idea popular. Then there must be time for as many of our brothers as possible to get into the administration of the movement in order that the camp executives may be liberally interspersed with adepts. Fortunately I am a national trustee of the organization. Yes, I can manage it in two years' time, I believe."

"Good heavens!" protested Phil, "why wouldn't it be more to the point to teleport them here, teach them, and teleport them back?"

"You do not know what you are saying, my son. Can we abolish force by using it? Every step must be voluntary, accomplished by reason and persuasion. Each human being must free himself; freedom cannot be thrust on him. Besides, is two years long to wait to accomplish a job that has been waiting since the Deluge?"

"I'm sorry, sir."

"Do not be. Your youthful impatience has made it possible to do the job at all."

Chapter Twelve "Ye Shall Know the Truth- "

On the lower slopes of Mount Shasta, down near McCloud, the camp grew up. When the last of the spring snow was still hiding in the deeper gullies and on the north sides of ridges, U.S. Army Quartermaster trucks came lumbering over a road built the previous fall by the army engineers. Pyramid tents were broken out and were staked down in rows on the bosom of a gently rolling alp. Cook shacks, an infirmary, a headquarters building took shape. Camp Mark Twain was changing from blueprint to actuality Senator Moulton, his toga laid aside for breeches leggings, khaki shirt, and a hat marked CAMP DIRECTOR, puttered around the field, encouraging, making decisions

for the straw bosses, and searching. ever searching the minds of all who came into or near the camp for any purpose. Did anyone suspect? Had anyone slipped in who might be associated with partial adepts who opposed the real purpose of the camp? Too late to let anything slip now-too late and too much at stake.

In the middle west, in the deep south, in New York City and New England, in the mountains and on the coast, boys were packing suitcases, buying special Shasta Camp roundtrip tickets, talking about it with their envious contemporaries.

And all over the country the antagonists of human liberty, of human dignity-the racketeers, the crooked political figures, the shysters, the dealers in phony religions, the sweat-shoppers, the petty authoritarians, all of the key figures among the traffickers in human misery and human oppression, themselves somewhat adept in the arts of the mind and acutely aware of the danger of free knowledge-all of this unholy breed stirred uneasily and wondered what was taking place. Moulton had never been associated with anything but ill for them; Mount Shasta was one place they had never been able to touch-they hated the very name of the place. They recalled old stories, and shivered.

They shivered, but they acted. Special transcontinental buses loaded with the chosen boys- could the driver be corrupted? Could his mind be taken over? Could tires, or engine, be tampered with? Trains were taken over by the youngsters. Could a switch be thrown? Could the drinking water be polluted? Other eyes watched. A trainload of boys moved westward; in it, or flying over it, his direct perception blanketing the surrounding territory, and checking the motives of every mind within miles of his charges, was stationed at least one adept whose single duty it was to see that those boys reached Shasta safely.

Probably some of the boys would never have reached there had not the opponents of human freedom been caught off balance, doubtful, unorganized. For vice has this defect; it cannot be truly intelligent. Its very motives are its weakness. The attempts made to prevent the boys reaching Shasta were scattered and abortive. The adepts had taken the offensive for once, and their moves were faster and more rationally conceived than their antagonists.

Once in camp a tight screen surrounded the whole of Mount Shasta National Park. The Senior detailed adepts to point patrol night and day to watch with every sense at their command.for mean or malignant spirits. The camp itself was purged. Two of the councilors, and some twenty of the boys, were sent home when examination showed them to be damaged souls. The boys were not informed of their deformity, but plausible excuses were found for the necessary action.

The camp resembled superficially a thousand other such camps. The courses in woodcraft were the same. The courts of honor met as usual to examine candidates. There were the usual sings around the camp-fire in the evening, the same setting-up exercises before breakfast. The slightly greater emphasis on the oath and the law of the organization was not noticeable.

Each one of the boys made at least one overnight hike in the course of the camp. In groups of fifteen or twenty they would set out in the morning in company of a councilor. That each councilor supervising such hikes was an adept was not evident, but it so happened. Each boy carried his blanket roll, and knapsack of rations, his canteen, knife, compass and hand axe.

They camped that night on the bank of a mountain stream, fed by the glaciers, whose rush sounded in their ears as they ate supper.

Phil started out with such a group one morning during the first week of the camp. He worked around the mountain to the east in order to keep well away from the usual tourist haunts.

After supper they sat around the campfire. Phil told them stories of the holy men of the east and their reputed powers, and of Saint Francis and the birds. He was in the middle of one of his yarns when a figure appeared within the circle of firelight.

Or rather figures. They saw an old man, in clothes that Davy Crockett might have worn, flanked by two beasts, on his left side a mountain lion, who purred when he saw the fire, on his right a buck of three points, whose soft brown eyes stared calmly into theirs. Some of the boys were alarmed at first, but Phil told them quietly to widen their circle and make room for the strangers. They sat in decent silence for a while, the boys getting used to the presence of the animals. In time one of the boys timidly stroked the big cat, who responded by rolling over and presenting his soft belly. The boy looked up at the old man and asked, "What is his name, Mister-"

"Ephraim. His name is Freedom."

"My, but he's tame! How do you get him to be so tame?"

"He reads my thoughts and trusts me. Most things are friendly when they know you-and most people."

The boy puzzled for moment. "How can he read your thoughts?"

"It's simple. You can read his, too. Would you like to learn how?"

"Jiminy!"

"Just look into my eyes for a moment. There! Now look into his."

"Why-Why-I really believe I can!"

-"Of course you can. And mine too. I'm not talking out loud. Had you noticed?"

-"Why, so you're not. I'm reading your thoughts!"

-"And I'm reading yours. Easy, isn't it?"

With Phil's help Howe had them all conversing by thought transference inside an hour. Then to calm them down he told them stories for another hour, stories that constituted an important part of their curriculum. He helped Phil get them to sleep, then left, the animals following after him. The next morning Phil was confronted at once by a young sceptic. "Say, did I dream all that about an old man and a puma and a deer?"

-'Did you?"

-"You're doing it now!".-"Certainly I am. And so are you. Now go tell the other boys the same thing."

Before they got back to camp, he advised them not to speak about it to any other of the boys who had not as yet had their overnight hike, but that they test their new powers by trying it on any boy who had had his first all- night hike.

All was well until one of the boys had to return home in answer to a message that his father was ill. The elders would not wipe his mind clean of his new knowledge; instead they kept careful track of him. In time he talked, and the word reached the antagonists almost at once.

Howe ordered the precautions of the telepathic patrol redoubled.

The patrol was able to keep out malicious persons, but it was not numerous enough to keep everything out. Forest fire broke out on the windward side of the camp

late one night. No human being had been close to the spot; telekinetics was the evident method.

But what control over matter from a distance can do, it can also undo. Moulton squeezed the flame out with his will, refused it permisson to burn, bade its vibrations to stop.

For the time being the enemy appeared to cease attempts to do the boys physical harm. But the enemy had not given up. Phil received a frantic call from one of the younger boys to come at once to the tent the boy lived in; his patrol leader was very sick. Phil found the lad in a state of hysteria, and being restrained from doing himself an injury by the other boys in the tent. He had tried to cut his throat with his jack knife and had gone berserk when one of the other boys had grabbed his hand.

Phil took in the situation quickly and put in a call to Ben.

-"Ben! Come at once. I need you." Ben did so, zipping through the air and flying in through the door of the tent almost before Phil had time to lay the boy on his cot and start forcing him into a trance. The lad's startled tent mates did not have time to decide that Dr. Ben had been flying before he was standing in a normal fashion alongside their councilor.

Ben greeted him with tight communication, shutting the boys out of the circuit.-"What's up?"

-"They've gotten to him . . . and damn near wrecked him."

-"How?"

-"Preyed on his mind. Tried to make him suicide-But I tranced back the hookup. Who do you think tried to do him in?-Brinckley!"

-"No!"

-"Definitely. You take over here; I'm going after Brinckley. Tell the Senior to have a watch put on all the boys who have been trained to be sensitive to telepathy. I'm afraid that any of them may be gotten at before we can teach them how to defend themselves." With that he was gone, leaving the boys half convinced of levitation.

He had not gone very far, was still gathering speed, when he heard a welcome voice in his head, -"Phil! Phil! Wait for me."

He slowed down for a few seconds. A smaller figure flashed alongside his and grasped his hand. "It's a good thing I stay hooked in with you two. You'd have gone off to tackle that dirty old so-and-so without me."

He tried to maintain his dignity. "If I had thought that you should be along on this job, I'd have called you, Joan."

"Nonsense! And also fiddlesticks! You might get hurt, tackling him all alone. Besides, I'm going to push him into the tar pits."

He sighed and gave up. "Joan, my dear, you are a bloodthirsty wench with ten thousand incarnations to go before you reach beatitude."."I don't want to reach beatitude; I want to do old Brinckley in."

"Come along, then. Let's make some speed."

They were south of the Tehachapi by now and rapidly approaching Los Angeles. They flitted over the Sierra Madre range, shot across San Fernando Valley, clipped the top of Mount Hollywood, and landed on the lawn of the President's Residence at Western University.

Brinckley saw, or felt, them coming and tried to run for it, but Phil grappled with him.

He shot one thought to Joan.-"You stay out of this, kid, unless I yell for help."

Brinckley did not give up easily. His mind reached out and tried to engulf Phil's. Huxley felt himself slipping, giving way before the evil onslaught. It seemed as though he were being dragged down, drowned, in filthy quicksand.

But he steadied himself and fought back.

When Phil had finished that which was immediately necessary with Brinckley, he stood up and wiped his hands, as if to cleanse himself of the spiritual slime he had embraced. "Let's get going," he said to Joan, "we're pushed for time."

"What did you do to him, Phil?" She stared with fascinated disgust at the thing on the ground.

"Little enough. I placed him in stasis. I've got to save him for use-for a time. Up you go, girl. Out of here-before we're noticed."

Up they shot, with Brinckley's body swept along behind by tight telekinetic bond. They stopped above the clouds. Brinckley floated beside them, starfished eyes popping, mouth loose, his smooth pink face expressionless.

-"Ben!" Huxley was sending, "Ephraim Howe! Ambrose! To me! To me! Hurry!"

-"Coming, Phil!" came Coburn's answer.

-"I hear." The strong calm thought held the quality of the Senior. "What is it, son? Tell me."

-"No time!" snapped Phil. "Yourself, Senior, and all others that can. Rendezvous! Hurry!"

-"We come." The thought was still calm, unhurried. But there were two ragged holes in the roof of Moulton's tent. Moulton and Howe were already out of sight of Camp Mark Twain.

Slashing, slicing through the air they came, the handful of adepts who guarded the fire. From five hundred miles to the north they came, racing pigeons hurrying home. Camp councilors, two-thirds of the small group of camp matrons, some few from scattered points on the continent, they came in response to Huxley's call for help and the Senior's unprecedented tocsin. A housewife turned out the fire in the oven and disappeared into the sky. A taxi driver stopped his car and left his fares without a word. Research groups on Shasta broke their tight rapport, abandoned their beloved work, and came-fast!

"And now, Philip?" Howe spoke orally as he arrested his trajectory and hung beside Huxley.

Huxley flung a hand toward Brinckley. "He has what we need to know to strike now! Where's Master Ling?

"He and Mrs. Draper guard the Camp."

"I need him. Can she do it alone?" Clear and mellow, her voice rang in his head from half a state away.

-"I can!"

-"The tortoise flies." The second thought held the quality of deathless merriment which was the unmistakable characteristic of the ancient Chinese..Joan felt a soft touch at her mind, then Master Ling was among them, seated carefully tailor-fashion on nothingness. "I attend; my body follows," he announced. "Can we not proceed?"

Whereupon Joan realized that he had borrowed the faculties of her mind to project himself into their presence more quickly than he could levitate the distance. She felt unreasonably flattered by the attention.

Huxley commenced at once. "Through his mind -" He indicated Brinckley, "I have learned of many others with whom there can be no truce. We must search them out, deal with them at once, before they can rally from what has happened to him. But I need help. Master, will you extend the present and examine him?"

Ling had tutored them in discrimination of time and perception of the present, taught them to stand off and perceive duration from eternity. But he was incredibly more able than his pupils.

He could split the beat of a fly's wing into a thousand discrete instants, or grasp a millenium as a single flash of experience. His discrimination of time and space was bound neither by his metabolic rate nor by his molar dimensions.

Now he poked gingerly at Brinckley's brain like one who seeks a lost jewel in garbage. He felt out the man's memory patterns and viewed his life as one picture. Joan, with amazement, saw his ever-present smile give way to a frown of distaste. His mind had been left open to any who cared to watch. She peered through his mind, then cut off. If there were that many truly vicious spirits in the world she preferred to encounter them one at a time, as necessary, not experience them all at once.

Master Ling's body joined the group, melted into his projection.

Huxley, Howe, Moulton, and Bierce followed the Chinese's delicate work with close attention. Howe's face was bleakly impassive; Moulton's face, aged to androgynous sensitivity, moved from side to side while he clucked disapproval of such wickedness. Bierce looked more like Mark Twain than ever. Twain in an implacable, lowering rage. Master Ling looked up.

"Yes, yes," said Moulton, "I suppose we must act, Ephraim."

"We have no choice," Huxley stated, with a completely unconscious disregard of precedent.

"Will you assign the tasks, Senior?"

Howe glanced sharply at him. "No, Philip. No. Go ahead. Carry on."

Huxley checked himself in surprise for the briefest instant, then took his cue. "You'll help me. Master Ling. Ben!"

"Waiting!" He meshed mind to mind, had Ling show him his opponent and the data he needed.-"Got it? Need any help?"

-"Grandfather Stonebender is enough."

-"Okay. Nip off and attend to it."

-"Chalk it up." He was gone, a rush of air in his wake.

-"This one is yours, Senator Moulton"

-"I know." And Moulton was gone. By ones and twos he gave them their assignments, and off they went to do that which must be done.

There was no argument. Many of them had been aware long before Huxley was that a day of action must inevitably come to pass, but they had waited with quiet serenity, busy with the work at hand, till time should incubate the seed.

In a windowless study of a mansion on Long Island, soundproofed, cleverly locked and guarded, ornately furnished, a group of five was met-three men, one woman,

and a thing in a.wheel chair. It glared at the other four in black fury, glared without eyes, for its forehead dropped unbroken to its cheekbones, a smooth sallow expanse.

A lap robe, tucked loosely across the chair masked, but did not hide, the fact that the creature had no legs.

It gripped the arms of the chair. "Must I do all the thinking for you fools?" it asked in a sweet gentle voice. "You, Arthurson-you let Moulton slip that Shasta Bill past the Senate. Moron."

The epithet was uttered caressingly.

Arthurson shifted in his chair. "I examined his mind. The bill was harmless. It was a swap on the Missouri Valley deal. I told you."

"You examined his mind, eh? Hmm-he led you on a personally conducted tour, you fool. A Shasta bill! When will you mindless idiots learn that no good ever came out of Shasta?" It smiled approvingly.

"Well, how was I to know? I thought a camp near the mountain might confuse . . . them. "

"Mindless idiot. The time will come when I will find you dispensable." The thing did not wait for the threat to sink in, but continued, "Enough of that now. We must move to repair the damage. They are on the offensive now. Agnes-"

"Yes." The woman answered.

"Your preaching has got to pick up-"

I've done my best." Not good enough. I've got to have a wave of religious hysteria that will wash out the Bill of Right before the Shasta camp breaks up for the summer. We will have to act fast before that time and we can't be hampered by a lot of legalisms."

"It can't be done."

"Shut up. It can be done. Your temple will receive endowments this week which you are to use for countrywide television hookups. At the proper time you will discover a new messiah."

"Who?"

"Brother Artemis."

"That cornbelt pipsqueak? Where do I come in on this?"

"You'll get yours. But you can't head this movement; the country won't take a woman in the top spot. The two of you will lead a march on Washington and take over. The Sons of '76 will fill out your ranks and do the street fighting. Weems, that's your job.

The man addressed demurred. "It will take three, maybe four months to indoctrinate them."

"You have three weeks. It would be well not to fail."

The last of the three men broke his silence. "What's the hurry. Chief? Seems to me that you are getting yourself in a panic over a few kids."

"I'll be the judge. Now you are to time an epidemic of strikes to tie the country up tight at the time of the march on Washington."

"I'll need some incidents."

"You'll get them. You worry about the unions; I'll take care of the Merchants' and Commerce League myself. You give me one small strike tomorrow. Get your pickets out and I will have four or five of them shot. The publicity will be ready. Agnes, you preach a sermon about it."

"Slanted which way?"

It rolled its non-existent eyes up to the ceiling.

"Must I think of everything? It's elementary. Use your minds."

The last man to speak laid down his cigar carefully and said, "What's the real rush, Chief?"

"I've told you."."No, you haven't. You've kept your mind closed and haven't let us read your thoughts once.

You've known about the Shasta camp for months. Why this sudden excitement? You aren't slipping, are you? Come on, spill it. You can't expect us to follow if you are slipping."

The eyeless one looked him over carefully. "Hanson," he said, in still sweeter tones, "you have been feeling your size for months. Would you care to match your strength with mine?"

The other looked at his cigar. "I don't mind if I do."

"You will. But not tonight. I haven't time to select and train new lieutenants. Therefore I will tell you what the urgency is. I can't raise Brinckley. He's fallen out of communication.

There is no time-"

"You are correct," said a new voice. "There is no time."

The five jerked puppetlike to face its source. Standing side by side in the study were Ephraim Howe and Joan Freeman.

Howe looked at the thing. "I've waited for this meeting," he said cheerfully, "and I've saved you for myself."

The creature got out of its wheelchair and moved through the air at Howe. Its height and position gave an unpleasant sensation that it walked on invisible legs. Howe signalled to Joan- "It starts. Can you hold the others, my dear?"

-"I think so."

-"Now!" Howe brought to bear everything he had learned in one hundred and thirty busy years, concentrated on the single problem of telekinetic control. He avoided, refused contact with the mind of the evil thing before him and turned his attention to destroying its physical envelope.

The thing stopped.

Slowly, slowly, like a deepsea diver caught in an implosion, like an orange in a squeezer, the spatial limits in which it existed were reduced. A spherical locus in space enclosed it, diminished.

The thing was drawn in and in. The ungrown stumps of its legs folded against its thick torso.

The head ducked down against the chest to escape the unrelenting pressure. For a single instant it gathered its enormous perverted power and fought back. Joan was disconcerted, momentarily nauseated, by the backwash of evil.

But Howe withstood it without change of expression; the sphere shrank again. The eyeless skull split. At once, the sphere shrank to the least possible dimension. A twenty-inch ball hung in the air, a ball whose repulsive superficial details did not invite examination.

Howe held the harmless, disgusting mess in place with a fraction of his mind, and inquired- "Are you all right, my dear?"

-"Yes, Senior. Master Ling helped me once when I needed it."

-"That I anticipated. Now for the others." Speaking aloud he said, "Which do you prefer: To join your leader, or to forget what you know?" He grasped air with his fingers and made a squeezing gesture.

The man with the cigar screamed.

"I take that to be an answer," said Howe. "Very well, Joan, pass them to me, one at a time."

He operated subtly on their minds, smoothing out the patterns of colloidal gradients established by their corporal experience.

A few minutes later the room contained four sane, but infant adults-and a gory mess on the rug..Coburn stepped into a room to which he had not been invited. "School's out, boys," he announced cheerfully. He pointed a finger at one occupant. "That goes for you." Flame crackled from his finger tip, lapped over his adversary. "Yes, and for you." The flames spouted forth a second time. "And for you." A third received his final cleansing.

Brother Artemis, "God's Angry Man," faced the television pick- up. "And if these things be not true," he thundered, "then may the Lord strike me down dead!"

The coroner's verdict of heart failure did not fully account for the charred condition of his remains.

A political rally adjourned early because the principal speaker failed to show up. An anonymous beggar was found collapsed over his pencils and chewing gum. A director of nineteen major corporatons caused his secretary to have hysterics by breaking off in the midst of dictating to converse with the empty air before lapsing into cheerful idiocy. A celebrated stereo and television star disappeared. Obituary stories were hastily dug out and completed for seven members of Congress, several judges, and two governors.

The usual evening sing at Camp Mark Twain took place that night without the presence of Camp Director Moulton. He was attending a full conference of the adepts, assembled all in the flesh for the first time in many years.

Joan looked around as she entered the hall. "Where is Master Ling?" she inquired of Howe.

He studied her face for a moment. For the first time since she had first met him nearly two years before she thought he seemed momentarily at a loss. My dear," he said gently, "you must have realized that Master Ling remained with us, not for his own benefit, but for ours. The crisis for which he waited has been met; the rest of the work we must do alone."

A hand went to her throat. "You-you mean-?"

"He was very old and very weary. He had kept his heart beating, his body functioning, by continuous control for these past forty-odd years."

"But why did he not renew and regenerate?"

"He did not wish it. We could not expect him to remain here indefinitely after he had grown up."

"No." She bit her trembling lip. "No. That is true. We are children and he has other things to do-but-Oh, Ling! Ling! Master Ling!" She buried her head on Howe's shoulder.

-"Why are you weeping, Little Flower?" Her head jerked up.-"Master Ling!"

-"Can that not be which has been? Is there past or future? Have you learned my lessons so poorly? Am I not now with you, as always?"

She felt in the thought the vibrant timeless merriment, the gusto for living which was the hallmark of the gentle Chinese. With a part of her mind she squeezed Howe's hand. "Sorry," she said. "I was wrong." She relaxed as Ling had taught her, let her consciousness flow in the revery which encompasses time in a single deathless now.

Howe, seeing that she was at peace, turned his attention to the meeting.

He reached out with his mind and gathered them together into the telepathic network of full conference..-"I think that you all know why we meet," he thought.-"I have served my time; we enter another and more active period when other qualities than mine are needed. I have called you to consider and pass on my selection of a successor."

Huxley was finding the thought messages curiously difficult to follow. I must be exhausted from the effort, he thought to himself.

But Howe was thinking aloud again.-"So be it; we are agreed." He looked at Huxley.

"Philip, will you accept the trust?"

"What?!!"

"You are Senior now-by common consent"

"But. . . but-I am not ready."

"We think so," answered Howe evenly. "Your talents are needed now. You will grow under responsibility."

-"Chin up, pal!" It was Coburn, in private message.

-"It's all right, Phil." Joan, that time.

For an instant he seemed to hear Ling's dry chuckle, his calm acceptance.

"I will try!" he answered.

On the last day of camp Joan sat with Mrs. Draper on a terrace of the Home on Shasta, overlooking the valley. She sighed. Mrs. Draper looked up from her knitting and smiled. "Are you sad that the camp is over?"

"Oh, no! I'm glad it is."

"What is it, then?"

"I was just thinking . . . we go to all this effort and trouble to put on this camp. Then we have to fight to keep it safe. Tomorrow those boys go home-then they must be watched, each one of them, while they grow strong enough to protect themselves against all the evil things there are still in the world. Next year there will be another crop of boys, and then another, and then another. Isn't there any end to it?"

"Certainly there is an end to it. Don't you remember, in the ancient records, what became of the elders? When we have done what there is for us to do here, we move on to where there is more to do. The human race was not meant to stay here forever."

It still seems endless."

"It does, when you think of it that way, my dear. The way to make it seem short and interesting is to think about what you are going to do next. For example, what are you going to do next?"

"Me?" Joan looked perplexed. Her face cleared, "Why . . . why I'm going to get married!"

"I thought so. " Mrs. Draper's needles clicked away.

Chapter Thirteen "-and the Truth Shall Make You Free!"

The globe still swung around the sun. The seasons came and the seasons went. The sun still shone on the mountainsides, the hills were green, and the valleys lush. The river sought the bosom of the sea, then rode the cloud, and found the hills as rain. The cattle cropped in the brown plains, the fox stalked the hare through the brush. The tides answered the sway of the moon, and the gulls picked at the wet sand in the wake of the tide. The earth was fair and the earth was full; it teemed with life, swarmed with life, overflowed with life-a stream in spate.

Nowhere was man. Seek the high hills; search him in the plains. Hunt for his spoor in the green jungles; call for him; shout for him. Follow where he has been in the bowels of the earth; plumb the dim deeps of the sea.

Man is gone; his house stands empty; the door open.

A great ape, with a brain too big for his need and a spirit that troubled him, left his tribe and sought the quiet of the high place that lay above the jungle. He climbed it, hour after hour, urged on by a need that he half understood. He reached a resting place, high above the green trees of his home, higher than any of his tribe had ever climbed. There he found a broad flat stone, warm in the sun. He lay down upon it and slept. But his sleep was troubled. He dreamed strange dreams, unlike anything he knew. They woke him and left him with an aching head.

It would be many generations before one of his line could understand what was left there by those who had departed.

Fin

by Robert Heinlein
Version 1.0
MAGIC, INC

'Whose spells are you using, buddy?' That was the first thing this bird said after coming into my place of business, He had hung around maybe twenty minutes, until I was alone, looking at samples of waterproof pigment, fiddling with plumbing catalogues, and monkeying with the hardware display. I didn't like his manner. I don't mind a legitimate business inquiry from a customer_ but I resent gratuitus snooping.
Various of the local licensed practitioners of thaumaturgy,' I told him in a tone that was chilly but polite. Why do you ask?'
You didn't answer my question,' he pointed out. Come on - speak up. I ain't got all day.'
I restrained myself. I require my clerks to he polite, and, while I was pretty sure this chap would never be a customer, I didn't want to break my own rules.
If you are thinking of buying anything,' I said, I will be happy to tell you what magic, if any, is used in producing it, and who the magician is.
Now you're not being cooperative,' he complained. We like for people to be cooperative. You never can tell what bad luck you may run into not cooperating.'

Who d'you mean by we, I snapped, dropping all pretence of politeness, and what do you mean by bad luck?'
'Now we're getting somewhere,' he said with a nasty grin, and settled himself on the edge of the counter so that he breathed into my face He was short and swarthy - Sicilian, I judged and dressed in a suit that was overtailered. His clothes and haberdashery matched perfectly in a color scheme that I didn't like.
'I'll tell you what I mean by "we"; I'm a field representatve for an organisation that protects people. from bad luck - if they're smart, and cooperative. That's why I asked you whose charms you're usin'. Some of the magicians around here aren't cooperative; it spoils their luck, and that bad luck follows their products.
'Go on.' I said. I wanted him to commit himself as far as he would.
I knew you were smart,' he answered. F'rinstance - how would you like for a salamander to get loose in your shop, setting fire to your goods and maybe scaring your customers? Or you sell the materials to build a house, and it turns out there's a Poltergeist living in it, breaking the dishes and souring the milk and kicking the furniture around. That's what can come of dealing with the wrong magicians. A little of that and your business is ruined. We wouldn't want that to happen, would we?' He favoured me with another leer.
I said nothing; he went on, Now, we maintain a staff of the finest demonologists in the business, expert magicians themselves, who can report on how a magician conducts himself in the Half World, and whether or not he's likely to bring his clients bad luck. Then we advise our clients whom to deal with, and keep them

from having bad luck. See?'
I saw all right. I wasn't born yesterday. The magicians I dealt with were local men that I had known for years, men with established reputations both here and in the Half World. They didn't do anything to stir up the elementals against them, and they did not have bad luck.
What this slimy item meant was that I should deal only with the magicians they selected at whatever fees they chose to set, and they would take a cut on the fees and also on the profits of my business. If I didn't choose to cooperate', I'd be persecuted by elementals they had an arrangement with - renegades, probably, with human vices - my stock in trade spoiled and my customers frightened away. If I still held out, I could expect some really dangerous black magic that would injure or kill me. All this under the pretence of selling me protection from men I knew and liked.
A neat racket!
I had heard of something of the sort back East, but had not expected it in a city as small as ours. He sat there, smirking at me, waiting for my reply, and twisting his neck in his collar, which was too tight. That caused me to notice something. In spite of his foppish clothes a thread showed on his neck just above the collar in back. It seemed likely that it was there to support something next to his skin - an amulet. If so, he was superstitious, even in this day and age.
There's something you've omitted,' I told him. I'm a seventh son, born under a caul, and I've got second sight. My luck's all right, but I can see bad luck hovering over you like cypress over a grave!' I reached out and snatched at the thread. It snapped and came loose in my hand. There was an amulet on it, rght enough, an unsavoury little wad of nothing in particular and about as appetizing as the bottom of a bird cage. I dropped it on the floor and ground it into the dirt.
He had jumped off the counter and stood facing me, breathing hard. A knife showed up in his right hand; with his left hand he was warding off the evil eye, the first and little fingers pointed at me, making the horns of Asmodeus. I knew I had him - for the time being.
Here's some magic you may not have heard of,' I rapped out, and reached into a drawer behind the counter. I hauled Out a pistol and pointed it at his face. Cold iron! Now go back to your owner and tell him there's cold iron waiting for him, too - both ways!'
He backed away, never taking his eyes off my face. If looks could kill, and so forth. At the door he paused and spat on the doorsill, then got out of sight very quickly.
I put the gun away and went about my work, waiting on two customers who came in just as Mr Nasty Business left. But I will admit that I was worried. A man's reputation is his most valuable asset. I've built up a name, while still a young man, for dependable products. It was certain that this bird and his pals would do all they could to destroy that name - which might be plenty if they were hooked in with black magicians!
Of course the building-materials game does not involve as much magic as other

lines dealing in less durable goods. People like to know, when they are building a home, that the bed won't fall into the basement some night, or the roof disappear and leave them out in the rain.
Besides, building involves quite a lot of iron, and there are very few commercial sorcerers who can cope with cold iron. The few that can are so expensive it isn't economical to use them in building. Of course if one of the café-society crowd, or somebody like that, wants to boast that they have a summerhouse or a swimming pool built entirely by magic, I'll accept the contract, charging accordingly, and sublet it to one of the expensive, first-line magicians. But by and large my business uses magic only in the side issues - perishable items and doodads which people like to buy cheap and change from time to time.
So I was not worried about magic in my business, but about what magic could do to my business - if someone set out deliberately to do me mischief. I had the subject of magic on my mind, anyhow, because of an earlier call from a chap named Ditworth - not a matter of vicious threats, just a business proposition that I was undecided about. But it worried me, just the same,
I closed up a few minutes early and went over to see Jedson - a friend of mine in the cloak-and-suit business. He is considerably older than I am, and quite a student, without holding a degree, in all forms of witchcraft, white and black magic, necrology, demonology, spells, charms, and the more practical forms of divination. Besides that, Jedson is a shrewd, capable man in every way, with a long head on him. I set a lot of store by his advice.
I expected to find him in his office, and more or less free, at that hour, but he wasn't. His office boy directed me up to a room he used for sales conferences. I knocked and then pushed the door.
Hello, Archie,' he called out as soon as he saw who it was. Come on in. I've got something.' And he turned away.
I came in and looked around. Besides Joe Jedson there was a handsome, husky woman about thirty years old in a nurse's uniform, and a fellow named August Welker, Jedson's foreman. He was a handy all-around man with a magician's licence, third class. Then I noticed a fat little guy, Zadkiel Feldstein, who was agent for a good many of the second-rate magicians along the street, and some few of the first-raters. Naturally, his religion prevented him from practising magic himself, but, as I understand it, there was no theological objection to his turning an honest commission. I had had dealings with him; he was all right.
This ten-percenter was clutching a cigar that had gone out, and watching intently Jedson and another party, who was slumped in a chair.
This other party was a girl, not over twenty-five, maybe not that old. She was blonde, and thin to the point that you felt that light would shine through her. She had big, sensitive hands with long fingers, and a big, tragic mouth. Her hair was silver-white, but she was not an albino. She lay back in the chair, awake but apparently done in. The nurse was chafing her wrists.
What's up?' I asked. The kid faint?'
Oh no,' Jedson assured me, turning around. She's a white witch - works in a

trance. She's a little tired now, that's all.'
What's her speciality?' I inquired.
Whole garments.'
Huh?' I had a right to be surprised. It's one thing to create yard goods; another thing entirely to turn out a dress, or a suit, all finished and ready to wear. Jedson produccd and merchandised a full line of garments in which magic was used throughout. They were mostly sportswear, novelty goods, ladies' fashions, and the like, in which style, rather than wearing qualities, was the determining factor. Usually they were marked One Season Only', but they were perfectly satisfactory for that one season, being backed up by the consumers' groups.
But they were not turned out in one process. The yard goods involved were made first, usually by Welker. Dyes and designs were added separately. Jedson had some very good connexions among the Little People, and could obtain shades and patterns from the Half World that were exclusive with him. He used both the old methods and magic in assembling garments, and employed some of the most talented artists in the business. Several of his dress designers free-lanced their magic in Hollywood under an arrangement with him. All he asked for was screen credit.
But to get back to the blonde girl- That's what I said,' Jedson answered, whole garments, with good wearing qualities too. There's no doubt that she is the real McCoy; she was under contract to a textile factory in Jersey City. But I'd give a thousand dollars to see her do that whole-garment stunt of hers just once. We haven't had any luck, though I've tried everything but red-hot pincers.'
The kid looked alarmed at this, and the nurse looked indignant. Feldstein started to expostulate, but Jedson cut him short. That was just a figure of speech; you know I don't hold with black magic. Look, darling,' he went on, turning back to the girl, do you feel like trying again?' She nodded, and he added, All right - sleepy time now!'
And she tried again, going into her act with a minimum of groaning and spitting. The ectoplasm came out freely and, sure enough, it formed into a complete dress instead of yard goods. It was a neat- little dinner frock, about a size sixteen, sky blue in a watered silk. It had class in a refined way, and I knew that any jobber who saw it would be good for a sizeable order.
Jedson grabbed it, cut off a swatch of cloth and applied his usual tests, finishing by taking the swatch out of the microscope and touching a match to it.

He swore. Damn it,' he said, there's no doubt about it. It's not a new integration at all; she's just reanimated an old rag!'
Come again,' I said. What of it?'
huh? Archie, you really ought to study up a bit. What she just did isn't really creative magic at all. This dress' - he picked it up and shook it - had a real existence someplace at some time. She's gotten hold of a piece of it, a scrap or maybe just a button, and applied the laws of homeopathy and contiguity to produce a simulacrum of it.'
I understood him, for I had used it in my own business. I had once had a section of bleachers, suitable for parades and athletic events, built on my own grounds

by old methods, using skilled master mechanics and the best materials - no iron, of course. Then I cut it to pieces. Under the law of contiguity, each piece remained part of the structure it had once been in. Under the law of homeopathy, each piece was potentially the entire structure. I would contract to handle a Fourth of July crowd, or the spectators for a circus parade, and send out a couple of magicians armed with as many fragments of the original stands as we needed sections of bleachers. They .vould bind a spell to last twenty-four hours around each piece. That way the stands cleared themselves away automatically.
I had had only one mishap with it; an apprentice magician, who had the chore of being on hand as each section vanished and salvaging the animated fragment for further use, happened one day to pick up the wrong piece of wood from where one section had stood. The next time we used it, for the Shrine convention, we found we had thrown up a brand-new four- room bungalow at the corner of Fourteenth and Vine instead of a section of bleachers. It could have been embarrassing, but I stuck a sign on it
MODEL HOME NOW ON DISPLAY
and ran up another section on the end.
An out-of-town concern tried to chisel me out of the business one season, but one of their units fell, either through faulty workmanship on the pattern or because of unskilled magic, and injured several people. Since then I've had the field pretty much to myself.
I could not understand Joe Jedson's objection to reanimation. What difference does it make?' I persisted. It's a dress, isn't it?'
Sure, it's a dress, hut it's not a new one. That style is registered somewhere and doesn't belong to me. And even if it were one of my numbers she had used, reanimation isn't what I'm after. I can make better merchandise cheaper without it; otherwise I'd be using it now.'
The blonde girl came to, saw the dress, and said, Oh, Mr Jedson, did I do it?'
He explained what had happened. Her face fell, and the dress melted away at once. Don't you feel bad about it, kid,' he added, patting her on the shoulder, you were tired. We'll try again tomorrow. I know you can do it when you're not nervous and overwrought.'
She thanked him and left with the nurse. Feldstein was full of explanations, but Jedson told him to forget it, and to have them all back there at the same time tomorrow. When we were alone I told him what had happened to me.
He listened in silence, his face serious, except when I told him how I had kidded my visitor into thinking I had second sight. That seemed to amuse him.
You may wish that you really had it - second sight, I mean,' he said at last, becoming solemn again. This is an unpleasant prospect. Have you notified the Better Business Bureau?'
I told him I hadn't.
Very well then. I'll give them a ring and the Chamber of Commerce too. They probably can't help much, but they are entitled to notification, so they can be on the lookout for it.'
I asked him if he thought I ought to notify the police. He shook his head. Not just yet. Nothing illegal has been done, and, anyhow, all the chief could think

of to cope with the situation would be to haul in all the licensed magicians in town and sweat them. That wouldn't do any good, and would just cause hard feeling to be directed against you by the legitimate members of the profession. There isn't a chance in ten that the sorcerers connected with this outfit are licensed to perform magic; they are almost sure to be clandestine. If the police know about them, it's because they are protected. If they don't know about them, then they probably can't help you.'
What do you think I ought to do?'
Nothing just yet. Go home and sleep on it. This Charlie may be playing a lone hand, making small-time shakedowns purely on bluff. I don't really think so; his type sounds like a mobster. But we need more data; we can't do anything until they expose their hand a little more.'
We did not have long to wait. When I got down to my place of business the next morning I found a surprise waiting for me - several of them, all unpleasant.
It was as if it had been ransacked by burglars, set fire to, then gutted by a flood. I called up Jedson at once. He came right over. He didn't have anything to say at first, but went poking through the ruins, examining a number of things. He stopped at the point where the hardware storeroom had stood, reached down and gathered up a handful of the wet ashes and muck. Notice anything?' he asked, working his fingers so that the debris sloughed off and left in his hand some small metal objects - nails, screws, and the like.
Nothing in particular. This is where the hardware bins were located; that's some of the stuff that didn't burn.'
Yes, I know,' he said impatiently, but don't you see anything else? Didn't you stock a lot of brass fittings?'
Yes.'
Well, find one!'
I poked around with my toe in a spot where there should have been a lot of brass hinges and drawer pulls mixed in with the ashes. I did not find anything but the nails that had held the bins together. I oriented myself by such landmarks as I could find, and tried again. There were plenty of nuts and bolts, casement hooks, and similar junk, but no brass.
Jedson watched me with a sardonic grin on his face.
Well?' I said, somewhat annoyed at his manner.
Don't you see?' he answered. It's magic, all right. In this entire yard there is not one scrap of metal left, except cold iron!'
It was plain enough. I should have seen it myself.
He messed around awhile longer. Presently we came across an odd thing. It was a slimy, wet track that meandered through my property, and disappeared down one of the drains. It looked as if a giant slug, about the size of a Crosley car, had wandered through the place.
Undine,' Jedson announced, and wrinklcd his nose at the smell. I once saw a movie, a Megapix super production called the Water King's Daughter. According to it undines were luscious enough to have interested Earl Carroll, but if they left trails like that I wanted none of them.
He took out his handkerchief and spread it for a clean place to sit down on what

had been sacks of cement - a fancy, quick- setting variety, with a trade name of Hydrolith. I had been getting eighty cents a sack for the stuff; now it was just so many big boulders.

He ticked the situation off on his fingers. Archie, you've been kicked in the teeth by at least three of the four different types of elementals - earth, fire, and water. Maybe there was a sylph of the air in on it, too, but I can't prove it. First the gnomes came and cleaned out everything you had that came out of the ground, except cold iron. A salamander followed them and set fire to the place, burning everything that was burnable, and scorching and smoke-damaging the rest. Then the undine turned the place into a damned swamp, ruining anything that wouldn't burn, like cement and lime. You're insured?'

Naturally.' But then I starred to think. I carried the usual fire, theft, and flood insurance, but business-risk insurance comes pretty high; I was not covered against the business I would lose in the meantime, nor did I have any way to complete current contracts. It was going to cost me quite a lot to cover those contracts; if I let them slide it would ruin the good will of my business, and lay me open to suits for damage.

The situation was worse than I had thought, and looked worse still the more I thought about it. Naturally I could not accept any new business until the mess was cleaned up, the place rebuilt, and new stock put in. Luckily most of my papers were in a fireproof steel safe; but not all, by any means. There would be accounts receivable that I would never collect because I had nothing to show for them. I work on a slim margin of profit, with all of my capital at work. It began to look as if the firm of Archibald Fraser, Merchant and Contractor, would go into involuntary bankruptcy.

I explained the situation to Jedson.

Don't get your wind up too fast,' he reassured me. What magic can do, magic can undo. What we need is the best wizard in town.'

Who's going to pay the fee?' I objected. Those boys don't work for nickels, and I'm cleaned out.'

Take it easy, son,' he advised, the insurance outfit that carries your risks is due to take a bigger loss than you are. If we can show them a way to save money on this, we can do business. Who represents them here?'

I told him - a firm of lawyers downtown in the Professional Building.

I got hold of my office girl and told her to telephone such of our customers as were due for deliveries that day. She was to stall where possible and pass on the business that could not wait to a firm that I had exchanged favours with in the past. I sent the rest of my help home - they had been standing around since eight o'clock, making useless remarks and getting in the way - and told them not to come back until I sent for them. Luckily it was Saturday; we had the best part of forty- eight hours to figure out some answer.

We flagged a magic carpet that was cruising past and headed for the Professional Building. I settled back and determined to enjoy the ride and forget my troubles. I like taxicabs - they give me a feeling of luxury - and I've liked them even better since they took the wheels off them. This happened to be one of the new Cadillacs with the teardrop shape and air cushions. We went scooting

down the boulevard, silent as thought, not six inches off the ground.
Perhaps I should explain that we have a local city ordinance against apportation unless it conforms to traffic regulations - ground traffic, I mean, not air.
That may surprise you, but it came about as a result of a mishap to a man in my own line of business. He had an order for eleven-odd tonsof glass brick to be delivered to a restaurant being remodelled on the other side of town from his yard. He employed a magician with a common carrier's licence to deliver for him.
I don't know whether he was careless or just plain stupid, but he dropped those eleven tons of brick through the roof of the Prospect Boulevard Baptist Church. Anybody knows that magic won't work over consecrated ground; if he had consulted a map he would have seen that the straight-line route took his load over the church. Anyhow, the janitor was killed, and it might just as well have been the whole congregation. It caused such a commotion that apportation was limited to the streets, near the ground.
It's people like that who make it inconvenient for everybody else.
Our man was in - Mr Wiggin, of the firm of Wiggin, Snead, McClatchey & Wiggin. He had already heard about my fire', but when Jedson explained his conviction that magic was at the bottom of it he baulked. It was, he said, most irregular.
Jedson was remarkably patient.
Are you an expert in magic, Mr Wiggin?' he asked.
I have not specialized in thaumaturgic jurisprudence, if that is what you mean, sir.'
Well, I don't hold a licence myself, but it has been my hobby for a good many years. I'm sure of what I say in this case; you can call in all the independent experts you wish - they'll confirm my opinion. Now suppose we stipulate, for the sake of argument, that this damage was caused by magic. If that is true, there is a possibility that we may be able to save much of the loss. You have authority to settle claims, do you not?'
Well, I think I may say yes to that - bearing in mind the legal restrictions and the terms of the contract.' I don't believe he would have conceded that he had five fingers on his right hand without an auditor to back him up.
Then it is your business to hold your company's losses down to a minimum. If I find a wizard who can undo a part, or all, of the damage, will you guarantee the fee, on behalf of your company, up to a reasonable amount, say twenty-five per cent of the indemnity?'
He hemmed and hawed some more, and said he did not see how he could possibly do it, and that if the fire had been magic, then to restore by magic might be compounding a felony, as we could not be sure what the connexions of the magicians involved might be in the Half World. Besides that, my claim had not been allowed as yet; I had failed to notify the company of my visitor of the day before, which possibly might prejudice my claim. In any case, it was a very serious precedent to set; he must consult the home office.
Jedson stood up. I can see that we are simply wasting each other's time, Mr Wiggin. Your contention about Mr Fraser's possible responsibility is ridiculous, and you know it. There is no reason under the contract to notify you, and even if there were, he is within the twenty-four hours allowed for any notification.

I think it best that we consult the home office ourselves.' He reached for his hat.
Wiggin put up his hand. Gentlemen, gentlemen, please! Let's not be hasty. Will Mr Fraser agree to pay half of the fee?'
No. Why should he? It's your loss, not his. You insured him.
Wiggin tapped his teeth with his spectacles, then said, We must make the fee contingent on results.'
Did you ever hear of anyone in his right mind dealing with a wizard on any other basis?'
Twenty minutes later we walked out with a document which enabled us to hire any witch or wizard to salvage my place of business on a contingent fee not to exceed twenty-five per cent of the value reclaimed. I thought you were going to throw up the whole matter,' I told Jedson with a sigh of relief.
He grinned. Not in the wide world, old son. He was simply trying to horse you into paying the cost of saving them some money. I just let him know that I knew.'
It took some time to decide whom to consult. Jedson admitted frankly that he did not know of a man nearer than New York who could, with certainty, be trusted to do the job, and that was out of the question for the fee involved. We stopped in a bar, and he did some telephoning while I had a beer. Presently he came back and said, I think I've got the man. I've never done business with him before, but he has the reputation and the training, and everybody I talked to seemed to think that he was the one to see.'
Who is it?' I wanted to know.
Dr Fortescue Biddle. He's just down the street - the Railway Exchange Building. Come on, we'll walk it.'
I gulped down the rest of my beer and followed him.
Dr Biddle's place was impressive. He had a corner suite on the fourteenth floor, and he had not spared expense in furnishing and decorating it. The style was modern; it had the austere elegance of a society physician's layout. There was a frieze around the wall of the signs of the zodiac done in intaglio glass, backed up by aluminium. That was the only decoration of any sort, the rest of the furnishing being very plain, but rich, with lots of plate glass and chromium.
We had to wait about thirty minutes in the outer office; I spent the time trying to estimate what I could have done the suite for, subletting what I had to and allowing ten per cent. Then a really beautiful girl with a hushed voice ushered us in. We found ourselves in another smaller room, alone, and had to wait about ten minutes more. It was much like the waiting room, but had some glass bookcases and an old print of Aristotle. I looked at the bookcases with Jedson to kill time. They were filled with a lot of rare old classics on magic. Jedson had just pointed out the Red Grimoire when we heard a voice behind us.
Amusing, aren't they? The ancients knew a surprising amount. Not scientific, of course, but remarkably clever-' The voice trailed off. We turned around; he introduced him- sell as Dr Biddle.
He was a nice enough looking chap, really handsome in a spare, dignified fashion. He was about ten years older than I am - fortyish, maybe - with

iron-grey hair at the temples and a small, stiff, British major's moustache. His clothes could have been out of the style pages of Esquire. There was no reason for me not to like him; his manners were pleasant enough. Maybe it was the supercilious twist of his expression.
He led us into his private office, sat us down, and offered us cigarettes before business was mentioned. He opened up with, You're Jedson, of course. I suppose Mr Ditworth sent you?'
I cocked an ear at him; the name was familiar. But Jedson simply answered, Why, no. Why would you think that he had?'
Biddle hesitated for a moment, then said, half to himself, That's strange. I was certain that I had heard him mention your name. Do either one of you,' he added, know Mr Ditworth?'
We both nodded at once and surprised each other, Biddle seemed relieved and said, No doubt that accounts for it. Still - I need some more information. Will you gentlemen excuse me while I call him?'
With that he vanished. I had never seen it done before. Jedson says there are two ways to do it, one is hallucination, the other is an actual exit through the Half World. Whichever way it's done, I think it's bad manners.
About this chap Ditworth,' I started to say to Jedson. I had intended to ask you-'
Let it wait,' he cut me off, there's not time now.'
At this Biddle reappeared. It's all right,' he announced, speaking directly to me. I can take your case. I suppose you've come about the trouble you had last night with your establishment?'
Yes,' I agreed. How did you know?'
Methods,' he replied, with a deprecatory little smile. My profession has its means. Now, about your problem. What is it you desire?'
I looked at Jedson; he explained what he thought had taken place and why he thought so. Now I don't know whether you specialize in demonology or not,' he concluded, but it seems to me that it should be possible to evoke the powers responsible and force them to repair the damage. If you can do it, we are prepared to pay any reasonable fee.'
Biddle smiled at this and glanced rather self-consciously at the assortment of diplomas hanging on the walls of his office. I feel that there should be reason to reassure you,' he purred. Permit me to look over the ground-' And he was gone again.
I was beginning to be annoyed. It's all very well for a man to be good at his job, but there is no reason to make a side show out of it. But I didn't have time to grouse about it before he was back.
Examination seems to confirm Mr Jedson's opinion; there should be no unusual difficulties,' he said. Now as to the .
ah . . . business arrangements-' He coughed politely and gave a little smile, as if he regretted having to deal with such vulgar matters.
Why do some people act as if making money offended their delicate minds? I am out for a legitimate profit, and not ashamed of it; the fact that people will pay money for my goods and services shows that my work is useful.

However, we made a deal without much trouble, then Biddle told us to meet him at my place in about fifteen minutes. Jedson and I left the building and flagged another cab. Once inside I asked him about Ditworth.
Where'd you run across him?' I said.
Came to me with a proposition.
Hm-m-m-' This interested me; Ditworth had made me a proposition, too, and it had worried me. What kind of a proposition?'
Jedson screwed up his forehead. Well, that's hard to say - there was so much impressive sales talk along with it. Briefly, he said he was the local executive secretary of a nonprofit association which had as its purpose the improvement of standards of practising magicians.'
I nodded. It was the same story I had heard. Go ahead.'
He dwelt on the inadequacy of the present licensing laws and pointed out that anyone could pass the examinations and hang out his shingle after a couple of weeks' study of a grimoire or black book without any fundamental knowledge of the arcane laws at all. His organization would be a sort of bureau of standards to improve that, like the American Medical Association, or the National Conference of Universities and Colleges, or the Bar Association. If I signed an agreement to patronize only those wizards who complied with their requirements. I could display their certificate of quality and put their seal of approval on my goods.'
Joe, I've heard the same story.' I cut in. and I didn't know quite what to make of it. It sounds all right, but I wouldn't want to stop doing business with men who have given me good value in the past, and I've no way of knowing that the association would approve them.'
What answer did you give him?'
I stalled him a bit - told him that I couldn't sign anything as binding as that without discussing it with my attorney.'
Good boy! What did he say to that?'
Well, he was really quite decent about it, and honestly seemed to want to be helpful. Said he thought I was wise and left me some stuff to look over. Do you know anything about him? Is he a wizard himself?'
No, he's not. But I did find out some things about him. I knew vaguely that he was something in the Chamber of Commerce; what I didn't know is that he is on the board of a dozen or more blue-ribbon corporations. He's a lawyer, but not in practice. Seems to spend all his time on his business interests.
He sounds like a responsible man.'
I would say so. He seems to have had considerably less publicity than you would expect of a man of his business importance - probably a retiring sort. I ran across something that seemed to confirm that.'
What was it?' I asked.
I looked up the incorporation papers for his association on file with the Secretary of State. There were just three names, his own and two others. I found that both of the others were employed in his office - his secretary and his receptionist.
Dummy setup?'

Undoubtedly. But there is nothing unusual about that. What interested me was this: I recognized one of the names.'
Huh?'
You know, I'm on the auditing committee for the state committee of my party. I looked up the name of his secretary where I thought I had seen it. It was there all right. His secretary, a chap by the name of Mathias, was down for a whopping big contribution to the governor's personal campaign fund.'
We did not have any more time to talk just then, as the cab had pulled up at my place. Dr Biddle was there before us and had already started his preparations. He had set up a little crystal pavilion, about ten feet square, to work in. The entire lot was blocked off from spectators on the front by an impalpable screen. Jedson warned me not to touch it.
I must say he worked without any of the usual hocus-pocus. He simply greeted us and entered the pavilion, where he sat down on a chair and took a loose-leaf notebook from a pocket and commenced to read. Jedson says he used several pieces of paraphernalia too. If so, I didn't see them. He worked with his clothes on.
Nothing happened for a few minutes. Gradually the walls of the shed became cloudy, so that everything inside was indistinct. It was about then that I became aware that there was something else in the pavilion besides Biddle. I could not see clearly what it was, and, to tell the truth, I didn't want to.
We could not hear anything that was said on the inside, but there was an argument going on - that was evident. Biddle stood up and began sawing the air with his hands. The thing threw back its head and laughed. At that Biddle threw a worried look in our direction and made a quick gesture with his right hand. The walls of the pavilion became opaque at once and we didn't see any more.
About five minutes later Biddle walked out of his workroom, which promptly disappeared behind him. He was a sight -, his hair all mussed, sweat dripping from his face, and his collar wrinkled and limp. Worse than that, his aplomb was shaken.
Well?' said Jedson.
There is nothing to be done about it, Mr Jedson - nothing at all.'
Nothing you can do about it, eh?'
He stiffened a bit at this. Nothing anyone can do about it, gentlemen. Give it up. Forget about it. That is my advice.'
Jedson said nothing, just looked at him speculatively. I kept quiet. Biddle was beginning to regain his self-possession. He straightened his hat, adjusted his necktie, and added, I must return to my office. The survey fee will be five hundred dollars.
I was stonkered speechless at the barefaced gall of the man, but Jedson acted as if he hadn't understood him. No doubt it would be,' he observed. Too bad you didn't earn it. I'm sorry.
Biddle turned red, but preserved his urbanity. Apparently you misunderstand me, sir. Under the agreement I have signed with Mr Ditworth, thaumaturgists approved by the association are not permitted to offer free consultation. It lowers the standards of the profession. The fee I mentioned is the minimum fee for a magician of my classification, irrespective of services rendered.'

I see,' Jedson answered calmly; that's what it costs to step inside your office. But you didn't tell us that, so it doesn't apply. As for Mr Ditworth, an agreement you sign with him does not bind us in any way. I advise you to return to your office and reread our contract. We owe you nothing.'

I thought this time that Biddle would lose his temper, but all he answered was, I shan't bandy words with you. You will hear from me later.' He vanished then without so much as a by-your-leave.

I heard a snicker behind me and whirled around, ready to bite somebody's head off. I had had an upsetting day and didn't like to be laughed at behind my back. There was a young chap there, about my own age. Who are you, and what are you laughing at?' I snapped. This is private property.'

Sorry, bud,' he apologized with a disarming grin. I wasn't laughing at you; I was laughing at the stuffed shirt. Your friend ticked him off properly.'

What are you doing here?' asked Jedson.

Me? I guess I owe you an explanation. You see, I'm in the business myself-'

Building?'

No - magic. Here's my card.' He handed it to Jedson, who glanced at it and passed it onto me. It read:

JACK BODIE
LICENSED MAGICIAN, 1ST CLASS
TELEPHONE CREST 3840

You see, I heard a rumour in the Half World that one of the big shots was going to do a hard one here today. I just stopped in to see the fun. But how did you happen to pick a false alarm like Biddle? He's not up to this sort of thing.'

Jedson reached over and took the card back. Where did you take your training, Mr Bodie?'

Huh? I took my bachelor's degree at Harvard and finished up postgraduate at Chicago. But that's not important; my old man taught me everything I know, but he insisted on my going to college because he said a magician can't get a decent job these days without a degree. He was right.'

Do you think you could handle this job?' I asked. Probably not, but I wouldn't have made the fool of myself that Biddle did. Look here - you want to find somebody who can do this job?'

Naturally,' I said. What do you think we're here for?'

Well, you've gone about it the wrong way. Biddle's got a reputation simply because he's studied at Heidelberg and Vienna. That doesn't mean a thing. I'll bet it never occurred to you to look up an old-style witch for the job.'

Jedson answered this one. That's not quite true. I inquired around among my friends in the business, but didn't find anyone who was willing to take it on. But I'm willing to learn; whom do you suggest?'

Do you know Mrs Amanda Todd Jennings? Lives over in the old part of town, beyond the Congregational cemetery.'

Jennings ... Jennings. Hm-m-m - no, can't say that I do. Wait a minute! Is she the old girl they call Granny Jennings? Wears Queen Mary hats and does her own marketing?'

That's the one.'

But she's not a witch; she's a fortune-teller.'
That's what you think. She's not in regular commercial practice, it's true, being ninety years older than Santa Claus, and feeble to boot. But she's got more magic in her little finger than you'll find in Solomon's Book.'
Jedson looked at me. I nodded, and he said:
Do you think you could get her to attempt this case?'
Well, I think she might do it, if she liked you.'
What arrangement do you want?' I asked. Is ten per cent satisfactory?'
He seemed rather put out at this. Hell,' he said, I couldn't take a cut; she's been good to me all my life.'
If the tip is good, it's worth paying for.' I insisted. Oh, forget it. Maybe you boys will have some work in my line someday. That's enough.'
Pretty soon we were off again, without Bodie. He was tied up elsewhere, but promised to let Mrs Jennings know that we were coming.

The place wasn't too hard to find. It was on an old street, arched over with elms, and the house was a one-storey cottage, set well back. The veranda had a lot of that old scroll-saw gingerbread. The yard was not very well taken care of, but there was a lovely old climbing rose arched over the steps.
Jedson gave a twist to the hand bell set in the door, and we waited for several minutes. I studied the coloured-glass tri- angles set in the door's side panels and wondered if there was anyone left who could do that sort of work.
Then she let us in. She really was something incredible. She was so tiny that I found myself staring down at the crown of her head, and noting that the clean pink scalp showed plainly through the scant, neat threads of hair. She couldn't have weighed seventy pounds dressed for the street, but stood proudly erect in lavender alpaca and white collar, and sized us up with lively black eyes that would have fitted Catherine the Great or Calamity Jane.
Good morning to you,' she said. Come in.'
She led us through a little hall, between beaded portieres, said, Scat, Seraphin!' to a cat on a chair, and sat us down in her parlour. The cat jumped down, walked away with an un- hurried dignity, then sat down, tucked his tail neatly around his carefully placed feet, and stared at us with the same calm appraisal as his mistress.
My boy Jack told me that you were coming,' she began. You are Mr Fraser and you are Mr Jedson,' getting us sorted out correctly. It was not a question; it was a statement. You want your futures read, I suppose. What method do you prefer - your palms, the stars, the sticks?'
I was about to correct her misapprehension when Jedson cut in ahead of me. I think we'd best leave the method up to you, Mrs Jennings.'
All right, we'll make it tea leaves then. I'll put the kettle on; twon't take a minute.' She bustled out. We could hear her in the kitchen, her light footsteps clicking on the linoleum, utensils scraping and clattering in a busy, pleasant disharmony.
When she returned I said, I hope we aren't putting you out, Mrs Jennings.'
Not a bit of it,' she assured me. I like a cup of tea in the morning; it does a

body comfort. I just had to set a love philter off the fire.- that's what took me so long.'
I'm sorry-'
Twon't hurt it to wait.'
The Zekerboni formula?' Jedson inquired.
My goodness gracious, no!' She was plainly upset by the suggestion. I wouldn't kill all those harmless little creatures. Hares and swallows and doves - the very idea! I don't know what Pierre Mora was thinking about when he set that recipe down. I'd like to box his cars!
No, I use Emula campana, orange, and ambergris. It's just as effective.'
Jedson then asked if she had ever tried the juice of vervain. She looked closely into his face before replying, You have the sight yourself, son. Am I not right?'
A little, mother,' he answered soberly, a little, perhaps.'
It will grow. Mind how you use it. As for vervain, it is efficacious, as you know.'
Wouldn't it be simpler?'
Of course it would. But if that easy a method became generally known, anyone and everyone would be making it and using it promiscuously - a bad thing. And witches would starve for want of clients - perhaps a good thing!' She flicked up one white eyebrow. But if it is simplicity you want, there is no need to bother even with vervain. Here-' She reached out and touched me on the hand. "Bestarberto corrum pit viscera e)us virilis. ' That is as near as I can reproduce her words. I may have misquoted it.
But I had no time to think about the formula she had pronounced. I was fully occupied with the startling thing that had come over me. I was in love, ecstatically, deliciously in love - with Granny Jennings! I don't mean that she suddenly looked like a beautiful young girl - she didn't. I still saw her as a little, old, shrivelled-up woman with the face of a shrewd monkey, and ancient enough to be my great-grandmother. It didn't matter. She was she - the Helen that all men desire, the object of romantic adoration.
She smiled into my face with a smile that was warm and full of affectionate understanding. Everything was all right, and I was perfectly happy. Then she said, I would not mock you, boy,' in a gentle voice, and touched my hand a second time while whispering something else.
At once it was all gone. She was just any nice old woman, the sort that would bake a cake for a grandson or sit up with a sick neighbour. Nothing was changed, and the cat had not even blinked. The romantic fascination was an emotionless memory. But I was poorer for the difference.
The kettle was boiling. She trotted out to attend to it, and returned shortly with a tray of things, a plate of seed cake, and thin slices of homemade bread spread with sweet butter.
When we had drunk a cup apiece with proper ceremony, she took Jedson's cup from him and examined the dregs. Not much money there,' she announced, but you shan't need much; it's a fine full life.' She touched the little pool of tea with the tip of her spoon and sent tiny ripples across it. Yes, you have the sight, and

the need for understanding that should go with it, but I find you in business instead of pursuing the great art, or even the lesser arts. Why is that?'
Jedson shrugged his shoulders and answered half apologetically, There is work at hand that needs to be done. I do it.
She nodded. That is well. There is understanding to be gained in any job, and you will gain it. There is no hurry; time is long. When your own work comes you will know it and be ready for it. Let me see your cup,' she finished, turning to me.
I handed it to her. She studied it for a moment and said, Well, you have not the clear sight such as your friend has, but you have the insight you need for your proper work. Any more would make you dissatisfied, for I see money here. You will make much money, Archie Fraser.'
Do you see any immediate setback in my business?' I said quickly.
No. See for yourself.' She motioned towards the cup. I leaned forward and stared at it. For a matter of seconds it seemed as if I looked through the surface of the dregs into a living scene beyond. I recognized it readily enough. It was my own place of business, even to the scars on the driveway gate- posts where clumsy truck drivers had clipped the corner too closely.
But there was a new annex wing on the east side of the lot, and there were two beautiful new five-ton dump trucks drawn up in the yard with my name painted on them!
While I watched I saw myself step out of the office door and go walking down the street. I was wearing a new hat, but the suit was the one I was wearing in Mrs Jennings's parlour, and so was the necktie - a plaid one from the tartan of my clan. I reached up and touched the original.
Mrs Jennings said, That will do for now,' and I found myself staring at the bottom of the teacup. You have seen,' she went on, your business need not worry you. As for love and marriage and children, sickness and health and death - let us look.' She touched the surface of the dregs with a fingertip; the tea leaves moved gently. She regarded them closely for a moment. Her brow puckered; she started to speak, apparently thought better of it, and looked again. Finally she said, I do not fully understand this. It is not clear; my own shadow falls across it.
Perhaps I can see,' offered Jedson.
Keep your peace!' She surprised me by speaking tartly, and placed her hand over the cup. She turned back to me with compassion in her eyes. It is not clear. You have two possible futures. Let your head rule your heart, and do not fret your soul with that which cannot be. Then you will marry, have children, and be content.' With that she dismissed the matter, for she said at once to both of us, You did not come here for divination; you came here for help of another sort.' Again it was a statement, not a question.
What sort of help, mother?' Jedson inquired.
For this.' She shoved my cup under his nose.
He looked at it and answered, Yes, that is true. Is there help?' I looked into the cup, too, but saw nothing but tea leaves.
She answered, I think so. You should not have employed Biddle, but the mistake

was natural. Let us be going.' Without further parley she fetched her gloves and purse and coat, perched a ridiculous old hat on the top of her head, and bustled us out of the house. There was no discussion of terms; it didn't seem necessary.

When we got back to the lot her workroom was already up. It was not anything fancy like Biddle's, but simply an old, square tent, like a gypsy's pitch, with a peaked top and made in several gaudy colours. She pushed aside the shawl that closed the door and invited us inside.

It was gloomy, but she took a big candle, lighted it and stuck it in the middle of the floor. By its light she inscribed five circles on the ground .- first a large one, then a somewhat smaller one in front of it. Then she drew two others, one on each side of the first and biggest circle. These were each big enough for a man to stand in, and she told us to do so. Finally she made one more circle off to one side and not more than a foot across.

I've never paid much attention to the methods of magicians, feeling about them the way Thomas Edison said he felt about mathematicians - when he wanted one he could hire one. but Mrs Jennings was different. I wish I could understand the things she did - and why.

I know she drew a lot of cabalistic signs in the dirt within the circles. There were pentacles of various shapes, and some writing in what I judged to be Hebraic script, though Jedson says not. In particular there was, I remember, a sign like a long flat Z, with a loop in it, woven in and out of a Maltese cross. Two more candles were lighted and placed on each side of this.

Then she jammed the dagger - arthame, Jedson called it - with which she had scribed the figures into the ground at the top of the big circle so hard that it quivered. It continued to vibrate the whole time.

She placed a little folding stool in the centre of the biggest circle, sat down on it, drew out a small book, and commenced to read aloud in a voiceless whisper. I could not catch the words, and presume I was not meant to. This went on for some time. I glanced around and saw that the little circle off to one side was now occupied - by Seraphin, her cat. We had left him shut up in her house. He sat quietly, watching everything that took place with dignified interest.

Presently she shut the book and threw a pinch of powder into the flame of the largest candle. It flared up and threw out a great puff of smoke. I am not quite sure what happened next, as the smoke smarted my eyes and made me blink, besides which, Jedson says I don't understand the purpose of fumigations at all. But I prefer to believe my eyes. Either that cloud of smoke solidified into a body or it covered up an entrance, one or the other.

Standing in the middle of the circle in front of Mrs Jennings was a short, powerful man about four feet high or less. His shoulders were inches broader than mine, and his upper arms were thick as my thighs, knotted and bowed with muscle. He was dressed in a breechcloth, buskins, and a little hooded cap. His skin was hairless, but rough and earthy in texture. It was dull, lustreless. Everything about him was the same dull monotone, except his eyes, which shone green with repressed fury.

Well!' said Mrs Jennings crisply, you've been long enough getting here! What have you to say for yourself?'
He answered sullenly, like an incorrigible boy caught but not repentant, in a language filled with rasping gutturals and sibilants. She listened awhile, then cut him off.
I don't care who told you to; you'll account to me! I require this harm repaired - in less time than it takes to tell it!'
He answered back angrily, and she dropped into his language, so that I could no longer follow the meaning. But it was clear that I was concerned in it; he threw me several dirty looks, and finally glared and spat in my direction.
Mrs Jennings reached out and cracked him across the mouth with the back of her hand. He looked at her, killing in his eye, and said something.
So?' she answered, put out a hand and grabbed him by the nape of the neck and swung him across her lap, face down. She snatched off a shoe and whacked him soundly with it. He let out one yelp, then kept silent, but jerked every time she struck him.
When she was through she stood up, spilling him to the ground. He picked himself up and hurriedly scrambled back into his own circle, where he stood, rubbing himself. Mrs Jennings's eyes snapped and her voice crackled; there was nothing feeble about her now. You gnomes are getting above yourselves,' she scolded. I never heard of such a thing! One more slip on your part and I'll fetch your people to see you spanked! Get along with you. Fetch your people for your task, and summon your brother and your brother's brother. By the great Tetragrammaton, get hence to the place appointed for you!'
He was gone.
Our next visitant came almost at once. It appeared first as a tiny spark hanging in the air. It grew into a living flame, a fireball, six inches or more across.
It floated above the centre of the second circle at the height of Mrs Jennings's eyes. It danced and whirled and flamed, feeding on nothing. Although I had never seen one, I knew it to be a salamander. It couldn't be anything else.
Mrs Jennings watched it for a little time before speaking. I could see that she was enjoying its dance, as I was. It was a perfect and beautiful thing, with no fault in it. There was life in it, a singing joy, with no concern for - with no relation to - matters of right and wrong, or anything human. Its harmonies of colour and curve were their own reason for being.
I suppose I'm pretty matter-of-fact. At least I've always lived by the principle of doing my job and letting other things take care of themselves. But here was something that was worth while in itself, no matter what harm it did by my standards. Even the cat was purring.
Mrs Jennings spoke to it in a clear, singing soprano that had no words to it. It answered back in pure liquid notes while the colours of its nucleus varied to suit the pitch. She turned to me and said, It admits readily enough that it burned your place, but it was invited to do so and is not capable of appreciating your point of view. I dislike to compel it against its own nature. Is there any boon you can offer it?'
I thought for a moment. Tell it that it makes me happy to watch it dance.' She

sang again to it. It spun and leaped, its flame tendrils whirling and floating in intricate, delightful patterns.
That was good, but not sufficient. Can you think of anything else?'
I thought hard. Tell it that if it likes, I will build a fireplace in my house where it will be welcome to live whenever it wishes.'
She nodded approvingly and spoke to it again. I could almost understand its answer, but Mrs Jennings translated. It likes you. Will you let it approach you?'
Can it hurt me?'
Not here.'
All right then.'
She drew a T between our two circles. It followed closely behind the arthame, like a cat at an opening door. Then it swirled about me and touched me lightly on my hands and face. Its touch did not burn, but tingled, rather, as if I felt its vibrations directly instead of sensing them as heat. It flowed over my face. I was plunged into a world of light, like the heart of the aurora borealis. I was afraid to breathe at first, but finally had to. No harm came to me, though the tingling was increased.
It's an odd thing, but I have not had a single cold since the salamander touched me. I used to sniffle all winter.
Enough, enough,' I heard Mrs Jennings saying. The cloud of flame withdrew from me and returned to its circle. The musical discussion resumed, and they reached an agreement almost at once, for Mrs Jennings nodded with satisfaction and said:

Away with you then, fire child, and return when you are needed. Get hence-' She repeated the formula she had used on the gnome king.
The undine did not show up at once. Mrs Jennings took out her book again and read from it in a monotonous whisper. I was beginning to be a bit sleepy - the tent was stuffy - when the cat commenced to spit. It was glaring at the centre circle, claws out, back arched, and tail made big.
There was a shapeless something in that circle, a thing that dripped and spread its slimy moisture to the limit of the magic ring. It stank of fish and kelp and iodine, and shone with a wet phosphorescence.
You're late,' said Mrs Jennings. You got my message; why did you wait until I compelled you?'
It heaved with a sticky, sucking sound, but made no answer.
Very well,' she said firmly, I shan't argue with you. You know what I want. You will do it!' She stood up and grasped the big centre candle. Its flame flared up into a torch a yard high, and hot. She thrust it past her circle at the undine. There was a hiss, as when water strikes hot iron, and a burbling scream. She jabbed at it again and again. At last she stopped and stared down at it, where it lay, quivering and drawing into itself. That will do,' she said. Next time you will heed your mistress. Get hence!' It seemed to sink into the ground, leaving the dust dry behind it.
When it was gone she motioned for us to enter her circle, breaking our own with the dagger to permit us. Seraphin jumped lightly from his little circle to the

big one and rubbed against her ankles, buzzing loudly. She repeated a meaningless series of syllables and clapped her hands smartly together.
There was a rushing and roaring. The sides of the tent billowed and cracked. I heard the chuckle of water and the crackle of flames, and, through that, the bustle of hurrying footsteps. She looked from side to side, and wherever her gaze fell the wall of the tent became transparent. I got hurried glimpses of unintelligible confusion.
Then it all ceased with a suddenness that was startling. The silence rang in our ears. The tent was gone; we stood in the loading yard outside my main warehouse.

It was there! It was back - back unharmed, without a trace of damage by fire or water. I broke away and ran out the main gate to where my business office had faced on the street. It was there, just as it used to be, the show windows shining in the sun, the Rotary Club emblem in one corner, and up on the roof my big two-way sign:
ARCHIBALD FRASER
BUILDING MATERIALS & GENERAL CONTRACTING
Jedson strolled out presently and touched me on the arm. What are you bawling about, Archie?'
I stared at him. I wasn't aware that I had been.
We were doing business as usual on Monday morning. I thought everything was back to normal and that my troubles were over. I was too hasty in my optimism.
It was nothing you could put your finger on at first - just the ordinary vicissitudes of business, the little troubles that turn up in any line of work and slow up production. You expect them and charge them off to overhead. No one of them would be worth mentioning alone, except for one thing: they were happening too frequently.
You see, in any business run under a consistent management policy the losses due to unforeseen events should average out in the course of a year to about the same percentage of total cost. You allow for that in your estimates. But I started having so many small accidents and little difficulties that my margin of profit was eaten up.
One morning two of my trucks would not start. We could not find the trouble; I had to put them in the shop and rent a truck for the day to supplement my one remaining truck. We got our deliveries made, but I was out the truck rent, the repair bill, and four hours' overtime for drivers at time and a half. I had a net loss for the day.
The very next day I was just closing a deal with a man I had been trying to land for a couple of years. The deal was not important, but it would lead to a lot more business in the future, for he owned quite a bit of income property - some courts and an apartment house or two, several commercial corners, and held title or options on well-located lots all over town. He always had repair jobs to place and very frequently new building jobs. If I satisfied him, he would be a steady customer with prompt payment, the kind you can afford to deal with on a small margin of profit.
We were standing in the showroom just outside my office, and talking, having

about reached an agreement. There was a display of Sunprufe paint about three feet from us, the cans stacked in a neat pyramid. I swear that neither one of us touched it, but it came crashing to the floor, making a din that would sour milk.

That was nuisance enough, but not the pay-off. The cover flew off one can, and my prospect was drenched with red paint. He let out a yelp; I thought he was going to faint. I managed to get him back into my office, where I dabbed futilely at his suit with my handkerchief, while trying to calm him down.

He was in a state, both mentally and physically. Fraser,' he raged, you've got to fire the clerk that knocked over those cans! Look at me! Eighty-five dollars' worth of suit ruined!'

Let's not be hasty,' I said soothingly, while holding my own temper in. I won't discharge a man to suit a customer, and don't like to be told to do so. There wasn't anyone near those cans but ourselves.'

I suppose you think I did it?'

Not at all. I know you didn't.' I straightened up, wiped my hands, and went over to my desk and got out my chequebook.

Then you must have done it!'

I don't think so,' I answered patiently. How much did you say your suit was worth?'

Why?'

I want to write you a cheque for the amount.' I was quite willing to; I did not feel to blame, but it had happened through no fault of his in my shop.

You can't get out of it as easily as that!' he answered unreasonably. It isn't the cost of the suit I mind-' He jammed his hat on his head and stumped out. I knew his reputation; I'd seen the last of him.

That is the sort of thing I mean. Of course it could have been an accident caused by clumsy stacking of the cans. But it might have been a Poltergeist. Accidents don't make themselves.

Ditworth came to see me a day or so later about Biddle's phony bill. I had been subjected night and morning to this continuous stream of petty annoyances, and my temper was wearing thin. Just that day a gang of coloured bricklayers had quit one of my jobs because some moron had scrawled some chalk marks on some of the bricks. Voodoo marks,' they said they were, and woi.ìld not touch a brick. I was in no mood to be held up by Mr Ditworth; I guess I was pretty short with him.

Good day to you, Mr Fraser,' he said quite pleasantly, can you spare me a few minutes?'

Ten minutes, perhaps,' I conceded, glancing at my wristwatch.

He settled his briefcase against the legs of his chair and took out some papers. I'll come to the point at once then. It's about Dr Biddle's claim against you. You and I are both fair men; I feel sure that we can come to some equitable agreement.'

Biddle has no claim against me.'

He nodded. I know just how you feel. Certainly there is nothing in the written contract obligating you to pay him. But there can be implied contracts just as

binding as written contracts.'
I don't follow you. All my business is done in writing'
Certainly,' he agreed; that's because you are a businessman. In the professions the situation is somewhat different. If you go to a dental surgeon and ask him to pull an aching tooth, and he does, you are obligated to pay his fee, even though a fee has never been mentioned-'
That's true,' I interrupted, but there is no parallel. Biddle didn't "pull the tooth .'
In a way he did:' Ditworth persisted. The claim against you is for the survey, which was a service rendered you before this contract was written.
But no mention was made of a. service fee.'
That is where the implied obligation comes in, Mr Fraser; you told Dr Biddle that you had talked with me. He assumed quite correctly that I had previously explained to you the standard system of fees under the association-'
But I did not join the association!'
I know, I know. And I explained that to the other directors, but they insist that some sort of an adjustment must be made. I don't feel myself that you are fully to blame: but you will understand our position, I am sure. We are unable to accept you for membership in the association until this matter is adjusted - in fairness to Dr Biddle.'
What makes you think I intend to join the association?'
He looked hurt. I had not expectcd you to take that attitude, Mr Fraser. The association needs men of your calibre. But in your own interest, you will necessarily join, for presently it will be very difficult to get efficient thaumaturgy except from members of the association. We want to help you. Please don't make it difficult for us.'
I stood up. I am afraid you had better sue me and let a court decide the matter, Mr Ditworth. That seems to be the only satisfactory solution.'
I am sorry,' he said, shaking his head. It will prejudice your position when you come up for membership.'
Then it will just have to do so,' I said shortly, and showed him out.
After he had gone I crabbed at my office girl for doing something I told her to do the day before, and then had to apologize. I walked up and down a bit, stewing, although there was plenty of work I should have been doing. I was nervous; things had begun to get my goat - a dozen things that I haven't mentioned - and this last unreasonable demand from Ditworth seemed to be the last touch needed to upset me completely. Not that he could collect by suing me - that was preposterous - but it was an annoyance just the same. They say the Chinese have a torture that consists in letting one drop of water fall on the victim every few minutes. That's the way I felt.
Finally I called up Jedson and asked him to go to lunch with me.
I felt better after lunch. Jedson soothed me down, as he always does, and I was able to forget and put in the past most of the things that had been annoying me simply by telling him about them. By the time I had had a second cup of coffee and smoked a cigarette I was almost fit for polite society.
We strolled back towards my shop, discussing his problems for a change. It seems

the blonde girl, the white witch from Jersey City, had finally managed to make her synthesis stunt work on footgear. But there was still a hitch; she had turned out over eight hundred left shoes - and no right ones.
We were just speculating as to the probable causes of such a contretemps when Jedson said, Look, Archie. The candidcamera fans are beginning to take an interest in you.'
I looked. There was a chap standing at the kerb directly across from my place of business and focusing a camera on the shop. Then I looked again. Joe,' I snapped, that's the bird I told you about, the one that came into my shop and started the trouble!'
Are you sure?' he asked, lowering his voice.
Positive.' There was no doubt about it; he was only a short distance away on the same side of the street that we were. It was the same racketeer who had tried to blackmail me into buying protection', the same Mediterranean look to him, the same flashy clothes.
We've got to grab him,' whispered Jedson.
But I had already thought of that. I rushed at him and had grabbed him by his coat collar and the slack of his pants before he knew what was happening, and pushed him across the street ahead of me. We were nearly run down, but I was so mad I didn't care. Jedson came pounding after us.
The yard door of my office was opcn. I gave the mug a final heave that lifted him over the threshold and sent him sprawling on the floor, Jedson was right behind; I bolted the door as soon as we were both inside.
Jedson strode over to my desk, snatched open the middle drawer, and rummaged hurriedly through the stuff that accumulates in such places. He found what he wanted, a carpenter's blue pencil, and was back alongside our gangster before he had collected himself sufficiently to scramble to his feet. Jedson drew a circle around him on the floor, almost tripping over his own feet in his haste, and closed the circle with an intricate flourish.
Our unwilling guest screeched when he saw what Joe was doing, and tried to throw himself out of the circle before it could be finished. But Jedson had been too fast for him - the circle was closed and sealed; he bounced back from the boundary as if he had struck a glass wall, and stumbled again to his knees. He remained so for the time, and cursed steadily in a language that I judged to be Italian, although. I think there were bad words in it from several other languages - certainly some English ones.
He was quite fluent.
Jedson pulled out a cigarette, lighted it, and handed me one. Let's sit down, Archie,' he said, and rest ourselves until our boy friend composes himself enough to talk business.'
I did so, and we smoked for several minutes while the flood of invective continued. Presently Jedson cocked one eyebrow at the chap and said, Aren't you beginning to repeat yourself?'
That checked him. He just sat and glared. Well,' Jedson continued, haven't you anything to say for yourself?'
He growled under his breath and said, I want to call my lawyer.'

Jedson looked amused. You don't understand the situation,' he told him. You're not under arrest, and we don't give a damn about your legal rights. We might just conjure up a hole and drop you in it, then let it relax.' The guy paled a little under his swarthy skin. Oh yes,' Jedson went on, we are quite capable of doing that - or worse. You see, we don't like you.
Of course,' he added meditatively, we might just turn you over to the police. I get a soft streak now and then.' The chap looked sour. You don't like that either? Your fingerprints, maybe?' Jedson jumped to his feet and in two quick strides was standing over him, just outside the circle. All right then,' he rapped, answer up and make em good! Why were you taking photographs?'
The chap muttered something, his eyes lowered. Jedson brushed it aside. Don't give me that stuff - we aren't children! Who told you to do it?'
He looked utterly panic-stricken at that and shut up completely.
Very well,' said Jedson, and turned to me. Have you some wax, or modelling clay, or anything of the sort?'
How would putty do?' I suggested.
Just the thing.' I slid out to the shed where we stow glaziers' supplies and came back with a five-pound can. Jedson prised it open and dug out a good big handful, then sat at my desk and worked the linseed oil into it until it was soft and workable. Our prisoner watched him with silent apprehension.
There! That's about right,' jedson announced at length, and slapped the soft lump down on my blotter pad. He commenced to fashion it with his fingers, and it took shape slowly as a little doll about ten inches high. It did not look like much of anything or anybody - Jedson is no artist - but Jedson kept glancing from the figurine to the man in the circle and back again, like a sculptor making a clay sketch directly from a model. You could see the chap's nervous terror increase by the minute.
Now!' said Jedson, looking once more from the putty figure to his model. It's just as ugly as you are. Why did you take that picture?'
He did not answer, but slunk farther back in the circle, his face nastier than ever.
Talk!' snorted Jedson, and twisted a foot of the doll between a thumb and forefinger. The corresponding foot of our prisoner jerked out from under him and twisted violently. He fell heavily to the floor with a yelp of pain.
You were going to cast a spell on this place, weren't you?' He made his first coherent answer. No, no, mister! Not me!' Not you? I see. You were just the errand boy. Who was to do the magic?'
I don't know- Ow! Oh, God!' He grabbed at his left calf and nursed it. Jedson had jabbed a pen point into the leg of the doll. I really don't know. Please, please!'
Maybe you don't,' jedson grudged, but at least you know who gives you your orders, and who some of the other members of your gang are. Start talking.'
He rocked back and forth and covered his face with his hands. I don't dare, mister,' he groaned. Please don't try to make me-' Jedson jabbed the doll with the pen again; he jumped and flinched, but this time he bore it silently with a look of grey determination.

OK,' said Jedson, if you insist-' He took another drag from his cigarette, then brought the lighted end slowly towards the face of the doll. The man in the circle tried to shrink away from it, his hands up to protect his face, but his efforts were futile. I could actually see the skin turn red and angry and the blisters blossom under his hide. It made me sick to watch it, and, while I didn't feel any real sympathy for the rat, I turned to Jedson and was about to ask him to stop when he took the cigarette away from the doll's face.
Ready to talk?' he asked. The man nodded feebly, tears pouring down his scorched cheeks. He seemed about to collapse. Here - don't faint,' Jedson added, and slapped the face of the doll with a finger tip. I could hear the smack land, and the chap's head rocked to the blow, but he seemed to take a brace from it.
All right, Archie, you take it down.' He turned back. And you, my friend, talk - and talk lots. Tell us everything you know. If you find your memory failing you, stop to think how you would like my cigarette poked into dolly's eyes!'
And he did talk - babbled, in fact. His spirit seemed to be completely broken, and he even seemed anxious to talk, stopping only occasionally to sniffle, or wipe at his eyes. Jedson questioned him to bring out points that were not clear.

There were five others in the gang that he knew about, and the setup was roughly as we had guessed. It was their object to levy tribute on everyone connected with magic in this end of town, magicians and their customers alike. No, they did not have any real protection to offer except from their own mischief. Who was his boss? He told us. Was his boss the top man in the racket? No, but he did not know who the top man was. He was quite sure that his boss worked for someone else, but he did not know who. Even if we burned him again he could not tell us. But it was a big organization - he was sure of that. He himself had been brought from a city in the East to help organize here.
Was he a magician? So help him, no! Was his section boss one? No - he was sure; all that sort of thing was handled from higher up. That was all he knew, and could he go now? Jedson pressed him to remember other things; he added a number of details, most of them insignificant, but I took them all down. The last thing he said was that he thought both of us had been marked down for special attention because we had been successful in overcoming our first lesson'.
Finally Jedson let up on him. I'm going to let you go now,' he told him. You'd better get out of town. Don't let me see you hanging around again. But don't go too far; I may want you again. See this?' He held up the doll and squeezed it gently around the middle. The poor devil immediately commenced to gasp for breath as if he were being compressed in a strait jacket. Don't forget that I've got you any time I want you.' He let up on the pressure, and his victim panted his relief. I'm going to put your alter ego - doll to you! - where it will be safe, behind cold iron. When I want you, you'll feel a pain like that' - he nipped the doll's left shoulder with his fingernails; the man yelped - then you telephone me, no matter where you are.'
Jedson pulled a penknife from his vest pocket and cut the circle three times, then joined the cuts. Now get Out!'
I thought he would bolt as soon as he was released, but he did not. He stepped

hesitantly over the pencil mark, stood still for a moment, and shivered. Then he stumbled towards the door. He turned just before he went through it and looked back at us, his eyes wide with fear. There was a look of appeal in them, too, and he seemed about to speak. Evidently he thought better of it, for he turned and went on out.
When he was gone I looked back at Jedson. He had picked up my notes and was glancing through them. I don't know,' he mused, whether it would be better to turn this stuff at once over to the Better Business Bureau and let them handle it, or whether to have a go at it ourselves. It's a temptation.'
I was not interested just then. Joe,' I said, I wish you hadn't burned him!'
Eh? How's that?' He seemed surprised and stopped scratchin' his chin. I didn't burn him.'
Don't quibble,' I said, somewhat provoked. You burned him through the doll, I mean with magic.'
But I didn't, Archie. Really I didn't. He did that to himself - and it wasn't magic. I didn't do a thing!'
What the hell do you mean?'
Sympathetic magic isn't really magic at all, Archie. It's just an application of neuropsychology and colloidal chemistry. He did all that to himself, because he believed in it. I simply correctly judged his mentality.'
The discussion was cut short; we heard an agony-loaded scream from somewhere outside the building. It broke off sharply, right at the top. What was that?' I said, and gulped.
I don't know,' Jedson answered, and stepped to the door. He looked up and down before continuing. It must be some distance away. I didn't see anything.' He came back into the room. As I was saying, it would be a lot of fun to-'
This time it was a police siren. We heard it from far away, but it came rapidly nearer, turned a corner, and yowled down our street. We looked at each other.
Maybe we'd better go see,' we both said, right together, then laughed nervously.

It was our gangster acquaintance. We found him half a block down the street, in the middle of a little group of curious passers-by who were being crowded back by cops from the squad car at the kerb.
He was quite dead.
He lay on his back, but there was no repose in the position. He had been raked from forehead to waist, laid open to the bone in three roughly parallel scratches, as if slashed by the talons of a hawk or an eagle. But the bird that made those wounds must have been the size of a five-ton truck.
There was nothing to tell from his expression. His face and throat were covered by, and his mouth choked with, a yellowish substance shot with purple. It was about the consistency of thin cottage cheese, but it had the most sickening smell I have ever run up against.
I turned to Jedson, who was not looking any too happy himself, and said, Let's get back to the office.'
We did.
We decided at last to do a little investigating on our own before taking up what

we had learned with the Better Business Bureau or with the police. It was just as well that we did; none of the gang whose names we had obtained was any longer to be found in the haunts which we had listed. There was plenty of evidence that such persons had existed and that they had lived at the addresses which Jedson had sweated out of their pal. But all of them, without exception, had done a bunk for parts unknown the same afternoon that their accomplice had been killed.

We did not go to the police, for we had no wish to be associated with an especially unsavoury sudden death. Instead, Jedson made a cautious verbal report to a friend of his at the Better Business Bureau, who passed it on secondhand to the head of the racket squad and elsewhere, as his judgement indicated.

I did not have any trouble with my business for some time thereafter, and I was working very hard, trying to show a profit for the quarter in spite of setbacks.

I had put the whole matter fairly well out of my mind, except that I dropped over to call on Mrs Jennings occasionally and that I had used her young friend Jack Bodie once or twice in my business, when I needed commercial magic. He was a good workman - no monkey business and value received.

I was beginning to think I had the world on a leash when I ran into another series of accidents. This time they did not threaten my business; they threatened me - and I'm just as fond of my neck as the next man.

In the house where I live the water heater is installed in the kitchen. It is a storage type, with a pilot light and a thermostatically controlled main flame. Right alongside it is a range with a pilot light.

I woke up in the middle of the night and decided that I wanted a drink of water. When I stepped into the kitchen - don't ask me why I did not look for a drink in the bathroom, because I don't know - I was almost gagged by the smell of gas. I ran over and threw the window wide open, then ducked back out the door and ran into the living room, where I opened a big window to create a cross draught.

At that point there was a dull whoosh and a boom, and I found myself sitting on the living room rug.

I was not hurt, and there was no damage in the kitchen except for a few broken dishes. Opening the windows had released the explosion, cushioned the effect.

Natural gas is not an explosive unless it is confined. What had happened was clear enough when I looked over the scene. The pilot light on the heater had gone out; when the water in the tank cooled, the thermostat turned on the main gas jet, which continued inde- finitely to pour gas into the room. When an explosive mixture was reached, the pilot light of the stove was waiting, ready to set it off.

Apparently I wandered in at the zero hour.

I fussed at my landlord about it, and finally we made a dicker whereby he installed one of the electrical water heaters which I supplied at cost and for which I donated the labour.

No magic about the whole incident, eh? That is what I thought. Now I am not so sure.

The next thing that threw a scare into me occurred the same week, with no apparent connexion. I keep a dry mix - sand, rock, gravel - in the usual big

bins set up high on concrete stanchions, so that the trucks can drive under the hoppers for loading. One evening after closing time I was walking past the bins when I noticed that someone had left a scoop shovel in the driveway pit under the hoppers.

I have had trouble with my men leaving tools out at night; I decided to put this one in my car and confront someone with it in the morning. I was about to jump down into the pit when I heard my name called.

Archibald!' it said - and it sounded remarkably like Mrs Jennings's voice.

Naturally I looked around. There was no one there. I turned back to the pit in time to hear a cracking sound and to see that scoop covered with twenty tons of medium gravel.

A man can live through being buried alive, but not when he has to wait overnight for someone to miss him and dig him out. Acrystallized steel forging was the prima-facie cause of the mishap. I suppose that will do.

There was never anything to point to but natural causes, yet for about two weeks I stepped on banana peels both figuratively and literally. I saved my skin with a spot of fast footwork at least a dozen times. I finally broke down and told Mrs Jennings about it.

Don't worry too much about it, Archie,' she reassured me. It is not too easy to kill a man with magic unless he himself is involved with magic and sensitive to it.'

Might as well kill a man as scare him to death!' I protested.

She smiled that incredible smile of hers and said, I don't think you have been really frightened, lad. At least you have not shown it.'

I caught an implication in that remark and taxed her with it. You've been watching me and pulling me out of jams, haven't you?'

She smiled more broadly and replied, That's my business, Archie. It is not well for the young to depend on the old for help. Now get along with you. I want to give this matter more thought.'

A couple of days' later a note came in the mail addressed to me in a spidery, Spencerian script. The penmanship had the dignified flavour of the last century, and was the least bit shaky, as if the writer were unwell or very elderly. I had never seen the hand before, but guessed who it was before I opened it. It read:

My dear Archibald: This is to introduce my esteemed friend, Dr Royce Worthington. You will find him staying at the Belmont Hotel; he is expecting to hear from you. Dr Worthington is exceptionally well qualified to deal with the matters that have been troubling you these few weeks past. You may repose every confidence in his judgement, especially where unusual measures are required. Please to include your friend, Mr Jedson, in this introduction, if you wish.

I am, sir,

Very sincerely yours,

Amanda Todd Jennings

I rang up Joe Jedson and read the letter to him. He said that he would be over at once, and for me to telephone Worthington.

Is Dr Worthington there?' I asked as soon as the room clerk had put me through.

Speaking,' answered a cultured British voice with a hint of Oxford in it.

This is Archibald Fraser, Doctor. Mrs Jennings has written to me, suggesting that I look you up.'
Oh, yes!' he replied, his voice warming considerably. I shall be delighted. When will be a convenient time?'
If you are free, I could come right over.'
Let me see-' He paused about long enough to consult a watch. I have occasion to go to your side of the city. Might I stop by your office in thirty minutes, or a little later?'
That will be fine, Doctor, if it does not discommode you-'
Not at all. I will be there.'
Jedson arrived a little later and asked me at once about Dr Worthington. I haven't seen him yet,' I said, but he sounds like something pretty swank in the way of an English-university don. He'll be here shortly.'
My office girl brought in his card a half hour later. I got up to greet him and saw a tall, heavy-set man with a face of great dignity and evident intelligence. He was dressed in rather conservative, expensively tailored clothes and carried gloves, stick, and a large briefcase. But he was black as draftsman's ink!
I tried not to show surprise. I hope I did not, for I have an utter horror of showing that kind of rudeness. There was no reason why the man should not be a Negro. I simply had not been expecting it.
Jedson helped me out. I don't believe he would show surprise if a fried egg winked at him. He took over the conversadon for the first couple of minutes after I introduced him; we all found chairs, settled down, and spent a few minutes in the polite, meaningless exchanges that people make when they are sizing up strangers.
Worthington opened the matter. Mrs Jennings gave me to believe,' he observed, that there was some fashion in which I might possibly be of assistance to one, or both, of you-'
I told him that there certainly was, and sketched out the background for him from the time the racketeer contact man first showed up at my shop. He asked a few questions, and Jedson helped me out with some details. I got the impression that Mrs Jennings had already told him most of it, and that he was simply checking.
Very well,' he said at last, his voice a deep, mellow rumble that seemed to echo in his big chest before it reached the air, I am reasonably sure that we will find a way to cope with your problems, but first I must make a few examinations before we can complete the diagnosis.' He leaned over and commenced to unstrap his briefcase.
Uh . . . Doctor,' I suggested, hadn't we better complete our arrangements before you start to work?'
Arrangements?' He looked momentarily puzzled, then smiled broadly. Oh, you mean payment. My dear sir, it is a privilege to do a favour for Mrs Jennings.'
But . . . but . . . see here, Doctor, I'd feel better about it. I assure you I am quite in the habit of paying for magic-'
He held up a hand. It is not possible, my young friend, for two reasons: In the first place, I am not licensed to practise in your state. In the second place, I

am not a magician.'
I suppose I looked as inane as I sounded. Huh? What's that? Oh! Excuse me, Doctor. I guess I just naturally assumed that since Mrs Jennings had sent you, and your title, and all-'
He continued to smile, but it was a smile of understanding rather than amusement at my discomfiture. That is not surprising; even some of your fellow citizens of my blood make that mistake. No, my degree is an honorary doctor of laws of Cambridge University. My proper pursuit is anthropology, which I sometimes teach at the University of South Africa. But anthropology has some odd bypaths; I am here to exercise one of them.'
Well, then, may I ask-'
Certainly, sir. My avocation, freely translated from its quite unpronounceable proper name, is "witch smeller .'
I was still puzzled. But doesn't that involve magic?'
Yes and no. In Africa the hierarchy and the categories in these matters are not the same as in this continent. I am not considered a wizard, or witch doctor, but rather an antidote for such.'
Something had been worrying Jedson. Doctor,' he inquired, you were not originally from South Africa?'
Worthington gestured towards his own face. I suppose that Jedson read something there that was beyond my knowledge. As you have discerned. No, I was born in a bush tribe south of the Lower Congo.'
From there, eh? That's interesting. By any chance, are you nganga?'
Of the Ndembo, but not by chance.' He turned to me and explained courteously. Your friend asked me if I was a member of an occult fraternity which extends throughout Africa, but which has the bulk of its members in my native territory. Initiates are called nganga.'
Jedson persisted in his interest. It seems likely to me, Doctor, that Worthington is a name of convenience - that you have another name.'
You are again right - naturally. My tribal name - do you wish to know it?'
If you will.'
It is' - I cannot reproduce the odd clicking, lip-smacking noise he uttered - or it is just as proper to state it in English, as the meaning is what counts - Man-Who-Asks-Inconvenient- Questions. Prosecuting attorney is another reasonably idiomatic, though not quite literal, translation, because of the tribal functions implied. But it seems to me,' he went on, with a smile of unmalicious humour, that the name fits you even better than it does me. May I give it to you?'
Here occurred something that I did not understand, except that it must have its basis in some African custom completely foreign to our habits of thought. I was prepared to laugh at the doctor's witticism, and I am sure he meant it to be funny, but Jedson answered him quite seriously:
I am deeply honoured to accept.'
It is you who honour me, brother.'
From then on, throughout our association with him, Dr Worthington invariably addressed Jedson by the African name he had formerly claimed as his own, and

Jedson called him brother' or Royce'. Their whole attitude towards each other underwent a change, as if the offer and acceptance of a name had in fact made them brothers, with all of the privileges and obligations of the relationship.
I have not left you without a name,' Jedson added. You had a third name, your real name?'
Yes, of course,' Worthington acknowledged, a name which we need not mention.'
Naturally,' Jedson agreed, a name which must not be mentioned. Shall we get to work, then?'
Yes, let us do so.' He turned to me. Have you some place here where I may make my preparations? It need not be large-'
Will this do?' I offered, getting up and opening the door of a cloak- and washroom which adjoins my office.
Nicely, thank you,' he said, and took himself and his briefcase inside, closing the door after him. He was gone ten minutes at least.
Jedson did not seem disposed to talk, except to suggest that I caution my girl not to disturb us or let anyone enter from the outer office. We sat and waited.
Then he came out of the cloakroom, and I got my second big surprise of the day. The urbane Dr Worthington was gone. In his place was an African personage who stood over six feet tall in his bare black feet, and whose enormous, arched chest was overlaid with thick, sleek muscles of polished obsidian. He was dressed in a loin skin of leopard, and carried certain accoutrements, notably a pouch, which hung at his waist.
But it was not his equipment that held me, nor yet the John Henrylike proportions of that warrior frame, but the face. The eyebrows were painted white and the hairline had been outlined in the same colour, but I hardly noticed these things. It was the expression - humourless, implacable, filled with a dignity and strength which must be felt to be appreciated. The eyes gave a conviction of wisdom beyond my comprehension, and there was no pity in them - only a stem justice that I myself would not care to face.
We white men in this country are inclined to underestimate the black man - I know I do - because we see him out of his cultural matrix. Those we know have had their own culture wrenched from them some generations back and a servile pseudo culture imposed on them by force. We forget that the black man has a culture of his own, older than ours and more solidly grounded, based on character and the power of the mind rather than the cheap, ephemeral tricks of mechanical gadgets. But it is a stern, fierce culture with no sentimental concern for the weak and the unfit, and it never quite dies out.
I stood up in involuntary respect when Dr Worthington entered the room.
Let us begin,' he said in a perfectly ordinary voice, and squatted down, his great toes spread and grasping the floor. He took several things out of the pouch - a dog's tail, a wrinkled black object the size of a man's fist, and other things hard to identify. He fastened the tail to his waist so that it hung down behind. Then he picked up one of the things that he had taken from the pouch - a small item, wrapped and tied in red silk - and said to me, Will you open your safe?'
I did so, and stepped back out of his way. He thrust the little bundle inside,

clanged the door shut, and spun the knob. I looked inquiringly at Jedson.
He has his . . . well .. . soul in that package, and has sealed it away behind cold iron. He does not know what dangers he may encounter,' Jedson whispered. See?' I looked and saw him pass his thumb carefully all around the crack that joined the safe to its door.
He returned to the middle of the floor and picked up the wrinkled black object and rubbed it affectionately. This is my mother's father,' he announced. I looked at it more closely and saw that it was a mummified human head with a few wisps of hair still clinging to the edge of the scalp! He is very wise,' he continued in a matter-of-fact voice, and I shall need his advice. Grandfather, this is your new son and his friend.' Jedson bowed, and I found myself doing so. They want our help.'
He started to converse with the head in his own tongue, listening from time to time, and then answering. Once they seemed to get into an argument, but the matter must have been settled satisfactorily, for the palaver soon quieted down. After a few minutes he ceased talking and glanced around the room. His eye lit on a bracket shelf intended for an electric fan, which was quite high off the floor.
There!' he said. That will do nicely. Grandfather needs a high place from which to watch.' He bent over and placed the little head on the bracket so that it faced out into the room.
When he returned to his place in the middle of the room he dropped to all fours and commenced to cast around with his nose like a hunting dog trying to pick up a scent. He ran back and forth, snuffling and whining, exactly like a pack leader worried by mixed trails. The tail fastened to his waist stood up tensely and quivered, as if still part of a live animal. His gait and his mannerisms mimicked those of a hound so convincingly that I blinked my eyes when he sat down suddenly and announced:
I've never seen a place more loaded with traces of magic. I can pick out Mrs Jennings's very strongly and your own business magic. But after I eliminate them the air is still crowded. You must have had everything but a rain dance and a sabbat going on around you!'
He dropped back into his character of a dog without giving us a chance to reply, and started making his casts a little wider. Presently he appeared to come to some sort of an impasse, for he settled back, looked at the head, and whined vigorously. Then he waited.
The reply must have satisfied him; he gave a sharp bark and dragged open the bottom drawer of a file cabinet, working clumsily, as if with paws instead of hands. He dug into the back of the drawer eagerly and hauled out something which he popped into his pouch.
After that he trotted very cheerfully around the place for a short time, until he had poked his nose into every odd corner. When he had finished he returned to the middle of the floor, squatted down again, and said, That takes care of everything here for the present. This place is the centre of their attack, so grandfather has agreed to stay and watch here until I can bind a cord around your place to keep witches out.'

I was a little perturbed at that. I was sure the head would scare my office girl half out of her wits if she saw it. I said so as diplomatically as possible.
How about that?' he asked the head, then turned back to me after a moment of listening. Grandfather says it's all right; he won't let anyone see him he has not been introduced to.' It turned out that he was perfectly correct; nobody noticed it, not even the scrubwoman.
Now then,' he went on, I want to check over my brother's place of business at the earliest opportunity, and I want to smell out both of your homes and insulate them against mischief. In the meantime, here is some advice for each of you to follow carefully: Don't let anything of yourself fall into the hands of strangers - nail parings, spittle, hair cuttings - guard it all. Destroy them by fire, or engulf them in running water. It will make our task much simpler. I am finished.' He got up and strode back into the cloakroom.
Ten minutes later the dignified and scholarly Dr Worthington was smoking a cigarette with us. I had to look up at his grandfather's head to convince myself that a jungle lord had actually been there.
Business was picking up at that time, and I had no more screwy accidents after Dr Worthington cleaned out the place. I could see a net profit for the quarter and was beginning to feel cheerful again. I received a letter from Ditworth, dunning me about Biddle's phony claim, but I filed it in the wastebasket without giving it a thought.
One day shortly before noon Feldstein, the magicians' agent, dropped into my place. Hi, Zack!' I said cheerfully when he walked in. How's business?'
Mr Fraser, of all questions, that you should ask me that one,' he said, shaking his head mournfully from side to side. Business - it is terrible.'
Why do you say that?' I asked. I see lots of signs of activity around-'
Appearances are deceiving,' he insisted, especially in my business. Tell me - have you heard of a concern calling themselves "Magic, Incorporated ?'
That's funny,' I told him. I just did, for the first time. This just came in the mail' - and I held up an unopened letter. It had a return address on it of Magic, Incorporated, Suite 700, Commonwealth Building'.
Feldstein took it gingerly, as if he thought it might poison him, and inspected it. That's the parties I mean,' he confirmed. The gonophs!'
Why, what's the trouble, Zack?'
They don't want that a man should make an honest living
- Mr Fraser,' he interrupted himself anxiously, you wouldn't quit doing business with an old friend who had always done right by you?'
Of course not, Zack, but what's it all about?'
Read it. Go ahead.' He shoved the letter back at me.
I opened it. The paper was a fine quality, watermarked, rag bond, and the letterhead was chaste and dignified. I glanced over the stuffed-shirt committee and was quite agreeably impressed by the calibre of men they had as officers and directors - big men, all of them, except for a couple of names among the executives that I did not recognize.
The letter itself amounted to an advertising prospectus. It was a new idea; I suppose you could call it a holding company for magicians. They offered to

provide any and all kinds of magical service. The customer could dispense with shopping around; he could call this one number, state his needs, and the company would supply the service and bill him. It seemed fair enough - no more than an incorporated agency.
I glanced on down. -fully guaranteed service, backed by the entire assets of a responsible company--' -surprisingly low standard fees, made possible by elimination of fee splitting with agents and by centralized administration-' The gratifying response from the members of the great profession enables us to predict that Magic, Incorporated, will be the natural source to turn to for competent thaumaturgy in any line - probably the only source of truly first-rate magic-'
I put it down. Why worry about it, Zack? It's just another agency. As for their claims - I've heard you say that you have all the best ones in your stable. You didn't expect to be believed, did you?'
No,' he conceded, not quite, maybe - among us two. But this is really serious, Mr Fraser. They've hired away most of my really first-class operators with salaries and bonuses I can't match. And now they offer magic to the public at a price that undersells those I've got left. It's ruin, I'm telling you.'
It was hard lines. Feldstein was a nice little guy who grabbed the nickels the way he did for a wife and five beady- eyed kids, to whom he was devoted. But I felt he was exaggerating; he has a tendency to dramatize himself. Don't worry,' I said, I'll stick by you, and so, I imagine, will most of your customers. This outfit can't get all the magicians together; they're too independent. Look at Ditworth. He tried with his association. What did it get him?'
Ditworth - aagh!' He started to spit, then remembered he was in my office. This is Ditworth - this company!'
How do you figure that? He's not on the letterhead.'
I found out. You think he wasn't successful because you held out. They held a meeting of the directors of the association - that's Ditworth and his two secretaries - and voted the contracts over to the new corporation. Then Ditworth resigns and his stooge steps in as front for the nonprofit association, and Ditworth runs both companies. You will see! If we could open the books of Magic, Incorporated, you will find he has voting control. I know it!'
It seems unlikely,' I said slowly.
You'll see! Ditworth with all his fancy talk about a nonprofit service for the improvement of standards shouldn't be any place around Magic, Incorporated, should he, now? You call up and ask for him-'
I did not answer, but dialled the number on the letterhead. When a girl's voice said, Good morning - Magic, Incorporated,' I said:
Mr Ditworth, please.'
She hesitated quite a long time, then said, Who is calling, please?'
That made it my turn to hesitate. I did not want to talk to Ditworth; I wanted to establish a fact. I finally said, Tell him it's Dr Biddle's office.'
Whereupon she answered readily enough, but with a trace of puzzlement in her voice, But Mr Ditworth is not in the suite just now; he was due in Dr Biddle's office half an hour ago. Didn't he arrive?'

Oh,' I said, perhaps he's with the chief and I didn't see him come in. Sorry.'
And I rang off.
I guess you are right,' I admitted, turning back to Feldstein.
He was too worried to be pleased about it. Look,' he said, I want you should have lunch with me and talk about it some more.'
I was just on my way to the Chamber of Commerce luncheon. Come along and we'll talk on the way. You're a member.'
All right,' he agreed dolefully. Maybe I can't afford it much longer.'
We were a little late and had to take separate seats. The treasurer stuck the kitty under my nose and twisted her tail'. He wanted a ten-cent fine from me for being late. The kitty is an ordinary frying pan with a mechanical bicycle bell mounted on the handle. We pay all fines on the spot, which is good for the treasury and a source of innocent amusement. The treasurer shoves the pan at you and rings the bell until you pay up.
I hastily produced a dime and dropped it in. Steve Harris, who has an automobile agency, yelled, That's right! Make the Scotchman pay up!' and threw a roll at me.
Ten cents for disorder,' announced our chairman, Norman Somers, without looking up. The treasurer put the bee on Steve. I heard the coin clink into the pan, then the bell was rung again.
What's the trouble?' asked Somers.
More of Steve's tricks,' the treasurer reported in a tired voice. Fairy gold, this time.' Steve had chucked in a synthetic coin that some friendly magician had made up for him. Naturally, when it struck cold iron it melted away.
Two bits more for counterfeiting,' decided Somers, then handcuff him and ring up the United States attorney.' Steve is quite a card, but he does not put much over on Norman.
Can't I finish my lunch first?' asked Steve, in tones that simply dripped with fake self-pity. Norman ignored him and he paid up.
Steve, better have fun while you can,' commented Al Donahue, who runs a string of drive-in restaurants. When you sign up with Magic, Incorporated, you will have to cut out playing tricks with magic.' I sat up and listened.
Who said I was going to sign up with them?'
Huh? Of course you are. It's the logical thing to do. Don't be a dope.'
Why should I?'
Why should you? Why, it's the direction of progress, man. Take my case: I put out the fanciest line of vanishing desserts of any eating place in town. You can eat three of them if you like, and not feel full and not gain an ounce. Now I've been losing money on them, but kept them for advertising because of the way they bring in the women's trade. Now Magic, Incorporated, comes along and offers me the same thing at a price I can make money with them too. Naturally, I signed up.
You would. Suppose they raise the prices on you after they have hired, or driven out of business, every competent wizard in town?'
Donahue laughed in a superior, irritating way. I've got a contract.'
So? How long does it run? And did you read the cancellation clause?'

I knew what he was talking about, even if Donahue didn't; I had been through it. About five years ago a Portland cement firm came into town and began buying up the little dealers and cutting prices against the rest. They ran sixty-cent cement down to thirty-five cents a sack and broke their competitors. Then they jacked it back up by easy stages until cement sold for a dollar twenty-five. The boys took a whipping before they knew what had happened to them.

We all had to shut up about then, for the guest speaker, old B. J. Timken, the big subdivider, started in. He spoke on Cooperation and Service'. Although he is not exactly a scintillating speaker, he had some very inspiring things to say about how businessmen could serve the community and help each other; I enjoyed it.

After the clapping died down, Norman Somers thanked B. J. and said, That's all for today, gentlemen, unless there is some new business to bring before the house-'

Jedson got up. I was sitting with my back to him, and had not known he was present. I think there is, Mr Chairman - a very important matter. I ask the indulgence of the Chair for a few minutes of informal discussion.

Somers answered, Certainly, Joe, if you've got something important.'

Thanks. I think it is. This is really an extension of the discussion between Al Donahue and Steve Harris earlier in the meeting. I think there has been a major change in business conditions going on in this city right under our noses and we haven't noticed it, except where it directly affected our own businesses. I refer to the trade in commercial magic. How many of you use magic in your business? Put your hands up.' All the hands went up, except for a couple of lawyers'. Personally, I had always figured they were magicians themselves.

OK,' Jedson went on, put them down. We knew that; we all use it. I use it for textiles. Hank Manning here uses nothing else for cleaning and pressing, and probably uses it for some of his dye jobs too. Wally Haight's Maple Shop uses it to assemble and finish fine furniture. Stan Robertson will tell you that Le Bon Marché's slick window displays are thrown together with spells, as well as two thirds of the merchandise in his store, especially in the kids' toy department. Now I want to ask you another question: In how many cases is the percentage of your cost charged to magic greater than your margin of profits? Think about it for a moment before answering.' He paused, then said: All right - put up your hands.'

Nearly as many hands went up as before.

That's the point of the whole matter. We've got to have magic to stay in business. If anyone gets a strangle hold on magic in this community, we are all at his mercy. We would have to pay any prices that are handed us, charge the prices we are told to, and take what profits we are allowed to - or go out of business!'

The chairman interrupted him. Just a minute, Joe. Granting that what you say is true - it is, of course - do you have any reason to feel that we are confronted with any particular emergency in the matter?'

Yes, I do have.' Joe's voice was low and very serious. Little reasons, most of them, but they add up to convince me that someone is engaged in a conspiracy in

restraint of trade.' Jedson ran rapidly over the history of Ditworth's attempt to organize magicians and their clients into an association, presumably to raise the standards of the profession, and how alongside the nonprofit association had suddenly appeared a capital corporation which was already in a fair way to becoming a monopoly.

Wait a second, Joe,' put in Ed Parmelee, who has a produce jobbing business. I think that association is a fine idea. I was threatened by some rat who tried to intimidate me into letting him pick my magicians. I took it up with the association, and they took care of it; I didn't have any more trouble. I think an organization which can clamp down on racketeers is a pretty fine thing.'

You had to sign with the association to get their help, didn't you?'

Why, yes, but that's entirely reasonable-'

Isn't it possible that your gangster got what he wanted when you signed up?'

Why, that seems pretty farfetched.'

I don't say,' persisted Joe, that is the explanation, but it is a distinct possibility. It would not be the first time that monopolists used goon squads with their left hands to get by coercion what their right hands could not touch. I wonder whether any of the rest of you have had similar experiences?'

It developed that several of them had. I could see them beginning to think.

One of the lawyers present formally asked a question through the chairman. Mr Chairman, passing for the moment from the association to Magic, Incorporated, is this corporation anything more than a union of magicians? If so, have they a legal right to organize?'

Norman turned to Jedson. Will you answer that, Joe?'

Certainly. It is not a union at all. It is a parallel to a situation in which all the carpenters in town are employees of one contractor; you deal with that contractor or you don't build.'

Then it's a simple case of monopoly - if it is a monopoly. This state has a Little Sherman Act; you can prosecute.~

I think you will find that it is a monopoly. Have any of you noticed that there are no magicians present at today's meet? We all looked around. It was perfectly true. I think you can expect,' he added, to find magicians represented hereafter in this chamber by some executive of Magic, Incorporated. With respect to the possibility of prosecution' - he hauled a folded newspaper out of his hip pocket - have any of you paid any attention to the governor's call for a special session of the legislature?'

Al Donahue remarked superciliously that he was too busy making a living to waste any time on the political game. It was a deliberate dig at Joe, for everybody knew that he was a committee-man, and spent quite a lot of time on civic affairs. The dig must have gotten under Joe's skin, for he said pityingly, Al, it's a damn good thing for you that some of us are willing to spend a little time on government, or you would wake up some morning to find they had stolen the sidewalks in front of your house.'

The chairman rapped for order; Joe apologized. Donahue muttered something under his breath about the whole political business being dirty, and that anyone associated with it was bound to turn crooked. I reached out for an ashtray and

knocked over a glass of water, which spilled into Donahue's lap. It diverted his mind. Joe went on talking.
Of course we knew a special session was likely for several reasons, but when they published the agenda of the call last night, I found tucked away towards the bottom an item "Regulation of Thaumaturgy . I couldn't believe that there was any reason to deal with such a matter in a special session unless something was up. I got on the phone last night and called a friend of mine at the capitol, a fellow committee member. She did not know anything about it, but she called me back later. Here's what she found out: The item was stuck into the agenda at the request of some of the governor's campaign backers; he has no special interest in it himself. Nobody seems to know what it is all about, but one bill on the subject has already been dropped in the hopper-' There was an interruption; somebody wanted to know what the bill said.
I'm trying to tell you,' Joe said patiently. The bill was submitted by title alone; we won't be likely to know its contents until it is taken up in committee. But here is the title: "A Bill to Establish Professional Standards for Thaumaturgists, Regulate the Practice of the Thaumaturgic Profession, Provide for the Appointment of a Commission to Examine, License, and Administer- and so on. As you can see, it isn't even a proper title; it's just an omnibus on to which they can hang any sort of legislation regarding magic, including an abridgement of anti- monopoly regulation if they choose.'
There was a short silence after this. I think all of us were trying to make up our minds on a subject that we were not really conversant with - politics. Presently someone spoke up and said, What do you think we ought to do about it?'

Well,' he answered, we at least ought to have our own representative at the capitol to protect us in the clinches. Besides that, we at least ought to be prepared to submit our own bill, if this one has any tricks in it, and bargain for the best compromise we can get. We should at least get an implementing amendment out of it that would put some real teeth into the state anti-trust act, at least in so far as magic is concerned.' He grinned. That's four "at leasts , I think.'
Why can't the state Chamber of Commerce handle it for us? They maintain a legislative bureau.'
Sure, they have a lobby, but you know perfectly well that the state chamber doesn't see eye to eye with us little businessmen. We can't depend on them; we may actually be fighting them.'
There was quite a powwow after Joe sat down. Everybody had his own ideas about what to do and tried to express them all at once. It became evident that there was no general agreement, whereupon Somers adjourned the meeting with the announcement that those interested in sending a representative to the capitol should stay. A few of the diehards like Donahue left, and the rest of us reconvened with Somers again in the chair. It was suggested that Jedson should be the one to go, and he agreed to do it.
Feldstein got up and made a speech with tears in his eyes. He wandered and did not seem to be getting anyplace, but finally he managed to get out that Jedson

would need a good big war chest to do any good at the capitol, and also should be compensated for his expenses and loss of time. At that he astounded us by pulling out a roll of bills, counting out one thousand dollars, and shoving it over in front of Joe.

That display of sincerity caused him to be made finance chairman by general consent, and the subscriptions came in very nicely. I held down my natural impulses and matched Feldstein's donation, though I did wish he had not been quite so impetuous. I think Feldstein had a slight change of heart a little later, for he cautioned Joe to be economical and not to waste a lot of money buying liquor for those schlemiels at the capitol'.

Jedson shook his head at this, and said that while he intended to pay his own expenses, he would have to have a free hand in the spending of the fund, particularly with respect to entertainment. He said the time was too short to depend on sweet reasonableness and disinterested patriotism alone - that some of those lunkheads had no more opinions than a weather vane and would vote to favour the last man they had had a drink with.

Somebody made a shocked remark about bribery. I don't intend to bribe anyone,' Jedson answered with a brittle note in his voice. If it comes to swapping bribes, we're licked to start with. I am just praying that there are still enough unpledged votes up there to make a little persuasive talking and judicious browbeating worth while.'

He got his own way, but I could not help agreeing privately with Feldstein. And I made a resolution to pay a little more attention to politics thereafter; I did not even know the name of my own legislator. How did I know whether or not he was a high-calibre man or just a cheap opportunist?

And that is how Jedson, Bodie, and myself happened to find ourselves on the train, headed for the capitol.

Bodie went along because Jedson wanted a first-rate magician to play bird dog for him. He said he did not know what might turn up. I went along because I wanted to. I had never been to the capitol before, except to pass through, and was interested to see how this law-making business is done.

Jedson went straight to the Secretary of State's office to register as a lobbyist, while Jack and I took our baggage to the Hotel Constitution and booked some rooms. Mrs Logan, Joe's friend the committee-woman, showed up before he got back.

Jedson had told us a great deal about Sally Logan during the train trip. He seemed to feel that she combined the shrewdness of Machiavelli with the greathearted integrity of Oliver Wendell Holmes. I was surprised at his enthusiasm, for I have often heard him grouse about women in politics.

But you don't understand, Archie,' he elaborated. Sally isn't a woman politician, she is simply a politician, and asks no special consideration because of her sex. She can stand up and trade punches with the toughest manipulators on the Hill. What I said about women politicians is perfectly true, as a statistical generalization, but it proves nothing about any particular woman.

It's like this: Most women in the United States have a short-sighted, peasant

individualism resulting from the male- created romantic tradition of the last century. They were told that they were superior creatures, a little nearer to the angels than their menfolks. They were not encouraged to think, nor to assume social responsibility. It takes a strong mind to break out of that sort of conditioning, and most minds simply aren't up to it, male or female. Consequently, women as electors are usually suckers for romantic nonsense. They can be flattered into misusing their ballot even more easily than men. In politics their self-righteous feeling of virtue, combined with their essentially peasant training, resulted in their introducing a type of cut-rate, petty chiselling that should make Boss Tweed spin in his coffin.
But Sally's not like that. She's got a tough mind which could reject the hokum.'

You're not in love with her, are you?'
Who, me? Sally's happily married and has two of the best kids I know.'
What does her husband do?'
Lawyer. One of the governor's supporters. Sally got started in politics through pinch-hitting for her husband one campaign.'
What is her official position up here?'
None. Right hand for the governor. That's her strength. Sally has never held a patronage job, nor been paid for her services.'
After this build-up I was anxious to meet the paragon. When she called I spoke to her over the house phone and was about to say that I would come down to the lobby when she announced that she was coming up, and hung up. I was a little startled at the informality, not yet realizing that politicians did not regard hotel rooms as bedrooms, but as business offices.
When I let her in she said, You're Archie Fraser, aren't you? I'm Sally Logan. Where's Joe?'
He'll be back soon. Won't you sit down and wait?'
Thanks.' She plopped herself into a chair, took off her hat and shook out her hair. I looked her over.
I had unconsciously expected something pretty formidable in the way of a mannish matron. What I saw was a young, plump, cheerful-looking blonde, with an untidy mass of yellow hair and frank blue eyes. She was entirely feminine, not over thirty at the outside, and there was something about her that was tremendously reassuring.
She made me think of county fairs and well water and sugar cookies.
I'm afraid this is going to be a tough proposition,' she began at once. I didn't think there was much interest in the matter, and I still don't think so, but just the same someone has a solid bloc lined up for Assembly Bill 22 - that's the bill I wired Joe about. What do you boys plan to do, make a straight fight to kill it or submit a substitute bill?'
Jedson drew up a fair-practices act with the aid of some of our Half World friends and a couple of lawyers. Would you like to see it?'
Please. I stopped by the State Printing Office and got a few copies of the bill you are against - AB 22. We'll swap.'
I was trying to translate the foreign language lawyers use when they write

statutes when Jedson came in. He patted Sally's cheek without speaking, and she reached up and squeezed his hand and went on with her reading. He commenced reading over my shoulder. I gave up and let him have it. It made a set of building specifications look simple.
Sally asked, What do you think of it, Joe?'
Worse than I expected,' he replied. Take Paragraph 7-'
I haven't read it yet.'
So? Well, in the first place it recognizes the association as a semipublic body like the Bar Association or the Community Chest, and permits it to initiate actions before the commission. That means that every magician had better by a damn sight belong to Ditworth's association and be careful not to offend it.,
But how can that be legal?' I asked. It sounds unconstitutional to me - a private association like that-'
Plenty of precedent, son. Corporations to promote world's fairs, for example. They're recognized, and even voted tax money. As for unconstitutionality, you'd have to prove that the law was not equal in application - which it isn't! - but awfully hard to prove.'
But, anyhow, a witch gets a hearing before the commission?'
Sure, but there is the rub. The commission has very broad powers, almost unlimited powers over everything connected with magic. The bill is filled with phrases like "reasonable and proper , which means the sky's the limit, with nothing but the good sense and decency of the commissioners to restrain them. That's my objection to commissions in government - the law can never be equal in application under them. They have delegated legislative powers, and the law is what they say it is. You might as well face a drumhead court- martial.
There are nine commissioners provided for in this case, six of which must be licensed magicians, first-class. I don't suppose it is necessary to point out that a few ill-advised appointments to the original commission will turn it into a tight little self-perpetuating oligarchy - through its power to license.'
Sally and Joe were going over to see a legislator whom they thought might sponsor our bill, so they dropped me off at the capitol. I wanted to listen to some of the debate.
It gave me a warm feeling to climb up the big, wide steps of the statehouse. The old, ugly mass of masonry seemed to represent something tough in the character of the American people, the determination of free men to manage their own affairs. Our own current problem seemed a little smaller, not quite so overpoweringly important - still worth working on, but simply one example in a long history of the general problem of self-government.
I noticed something else as I was approaching the great bronze doors; the contractor for the outer construction of the building must have made his pile; the mix for the mortar was not richer than one to six!
I decided on the Assembly rather than the Senate because Sally said they generally put on a livelier show. When I entered the hall they were discussing a resolution to investigate the tarring and feathering the previous month of three agricultural-worker organizers up near the town of Six Points. Sally had remarked that it was on the calendar for the day, but that it would not take

long because the proponents of the resolution did not really want it. However, the Central Labour Council had passed a resolution demanding it, and the labour-supported members were stuck with it.

The reason why they could only go through the motions of asking for an investigation was that the organizers were not really human beings at all, but mandrakes, a fact that the state council had not been aware of when they asked for an investigation. Since the making of mandrakes is the blackest kind of black magic, and highly illegal, they needed some way to drop it quietly. The use of mandrakes has always been opposed by organized labour, because it displaces real men - men with families to support. For the same reasons they oppose synthetic facsimiles and homunculi. But it is well known that the unions are not above using mandrakes, or mandragoras, as well as facsimiles, when it suits their purpose, such as for pickets, pressure groups, and the like. I suppose they feel justified in fighting fire with fire. Homunculi they can't use on account of their size, since they are too small to be passed off as men.

If Sally had not primed me, I would not have understood what took place. Each of the labour members got up and demanded in forthright terms a resolution to investigate. When they were all through, someone proposed that the matter be tabled until the grand jury of the county concerned held its next meeting. This motion was voted on without debate and without a roll call; although practically no members were present except those who had spoken in favour of the original resolution, the motion passed easily.

There was the usual crop of oil-industry bills on the agenda, such as you read about in the newspapers every time the legislature is in session. One of them was the next item on the day's calendar - a bill which proposed that the governor negotiate a treaty with the gnomes, under which the gnomes would aid the petroleum engineers in prospecting and, in addition, would advise humans in drilling methods so as to maintain the natural gas pressure underground needed to raise the oil to the surface. I think that is the idea, but I am no petroleum engineer.

The proponent spoke first. Mr Speaker,' he said, I ask for a "Yes vote on this bill, A B 79. Its purpose is quite simple and the advantages obvious. A very large part of the overhead cost of recovering crude oil from the ground lies in the uncertainties of prospecting and drilling. With the aid of the Little People this item can be reduced to an estimated 7 per cent of its present dollar cost, and the price of gasoline and other petroleum products to the people can be greatly lessened.

The matter of underground gas pressure is a little more technical, but suffice it to say that it takes, in round numbers, a thousand cubic feet of natural gas to raise one barrel of oil to the surface. If we can get intelligent supervision of drilling operations far underground, where no human being can go, we can make the most economical use of this precious gas pressure.

The only rational objection to this bill lies in whether or not we can deal with the gnomes on favourable terms. I believe that we can, for the Administration has some excellent connexions in the Hall World. The gnomes are willing to negotiate in order to put a stop to the present condition of chaos in which

human engineers drill blindly, sometimes wrecking their homes and not infrequently violating their sacred places. They not unreasonably claim everything under the surface as their kingdom, but are willing to make any reasonable concession to abate what is to them an intolerable nuisance.
If this treaty works out well, as it will, we can expect to arrange other treaties which will enable us to exploit all of the metal and mineral resources of this state under conditions highly advantageous to us and not hurtful to the gnomes. Imagine, if you please, having a gnome with his X-ray eyes peer into a mountainside and locate a rich vein of gold for you!'
It seemed very reasonable, except that, having once seen the king of the gnomes, I would not trust him very far, unless Mrs Jennings did the negotiating.
As soon as the proponent sat down, another member jumped up and just as vigorously denounced it. He was older than most of the members, and I judged him to be a country lawyer. His accent placed him in the northern part of the state, well away from the oil country. Mr Speaker,' he bellowed, I ask for a vote of "No! . Who would dream that an American legislature would stoop to such degrading nonsense? Have any of you ever seen a gnome? Have you any reason to believe that gnomes exist? This is just a cheap piece of political chicanery to do the public out of its proper share of the natural resources of our great state-'
He was interrupted by a question. Does the honourable member from Lincoln County mean to imply that he has no belief in magic? Perhaps he does not believe in the radio or the telephone either.'
Not at all. If the Chair will permit, I will state my position so clearly that even my respected colleague on the other side of the house will understand it. There are certain remarkable developments in human knowledge in general use which are commonly referred to by the laity as magic. These principles are well understood and are taught, I am happy to say, in our great publicly owned institutions for higher learning. I have every respect for the legitimate practitioners thereof. But, as I understand it, although I am not myself a practitioner of the great science, there is nothing in it that requires a belief in the Little People.
But let us stipulate, for the sake of argument, that the Little People do exist. Is that any reason to pay them blackmail? Should the citizens of this commonwealth pay cumshaw to the denizens of the underworld-' He waited for his pun to be appreciated. It wasn't. -for that which is legally and rightfully ours? If this ridiculous principle is pushed to its logical conclusion, the farmers and dairymen I am proud to number among my constituents will be required to pay toll to the elves before they can milk their cows!'
Someone slid into the seat beside me. I glanced around, saw that it was Jedson, and questioned him with my eyes. Nothing doing now,' he whispered. We've got some time to kill and might as well do it here' - and he turned to the debate.
Somebody had gotten up to reply to the old duck with the Daniel Webster complex. Mr Speaker, if the honoured member is quite through with his speech - I did not quite catch what office he is running for! - I would like to invite the attention of this body to the precedented standing in jurisprudence of elements

of every nature, not only in Mosaic law, Roman law, the English common law, but also in the appellate court of our neighbouring state to the south. I am confident that anyone possessing even an elementary knowledge of the law will recognize the case I have in mind without citation, but for the benefit of-'
Mr Speaker! I move to amend by striking out the last word.'
A stratagem to gain the floor,' Joe whispered.
Is it the purpose of the honourable member who preceded me to imply-'
It went on and on. I turned to Jedson and asked, I can't figure out this chap who is speaking; a while ago he was hollering about cows. What's he afraid of, religious prejudices?'
Partly that; he's from a very conservative district. But he's lined up with the independent oilmen. They don't want the state setting the terms; they think they can do better dealing with the gnomes directly.'
But what interest has he got in oil? There's no oil in his district.'
No, but there is outdoor advertising. The same holding company that controls the so-called independent oilmen holds a voting trust in the Countryside Advertising Corporation. And that can be awfully important to him around election time.
The Speaker looked our way, and an assistant sergeant at arms threaded his way towards us. We shut up. Someone moved the order of the day, and the oil bill was put aside for one of the magic bills that had already come out of committee.
This was a bill to outlaw every sort of magic, witchcraft, thaumaturgy.
No one spoke for it but the proponent, who launched into a diatribe that was more scholarly than logical. He quoted extensively from Blackstone's Commentaries and the records of the Massachusetts trials, and finished up with his head thrown back, one finger waving wildly to heaven and shouting,' "Thou shalt not suffer a witch to live! '
No one bothered to speak against it; it was voted on immediately without roll call, and, to my complete bewilderment, passed without a single nay! I turned to Jedson and found him smiling at the expression on my face.
It doesn't mean a thing, Archie,' he said quietly.
Huh?'
He's a party wheel horse who had to introduce that bill to please a certain bloc of his constituents.'
You mean he doesn't believe in the bill himself?'
Oh no, he believes in it all right, but he also knows it is hopeless. It has evidently been agreed to let him pass it over here in the Assembly this session so that he would have something to take home to his people. Now it will go to the senate committee and die there; nobody will ever hear of it again.'
I guess my voice carries too well, for my reply got us a really dirty look from the Speaker. We got up hastily and left.
Once outside I asked Joe what had happened that he was back so soon. He would not touch it,' he told me. Said that he couldn't afford to antagonize the association.'
Does that finish us?'
Not at all. Sally and I are going to see another member right after lunch. He's tied up in a committee meeting at the moment.'

We stopped in a restaurant where Jedson had arranged to meet Sally Logan. Jedson ordered lunch, and I had a couple of cans of devitalized beer, insisting on their bringing it to the booth in the unopened containers. I don't like to get even a little bit tipsy, although I like to drink. On another occasion I had paid for wizard-processed liquor and had received intoxicating liquor instead. Hence the unopened containers.

I sat there, staring into my glass and thinking about what I had heard that morning, especially about the bill to outlaw all magic. The more I thought about it the better the notion seemed. The country had gotten along all right in the old days before magic had become popular and commercially widespread. It was unquestionably a headache in many ways, even leaving out our present troubles with racketeers and monopolists. Finally I expressed my opinion to Jedson.

But he disagreed. According to him prohibition never does work in any field. He said that anything which can be supplied and which people want will he supplied - law or no law. To prohibit magic would simply be to turn over the field to the crooks and the black magicians.

I see the drawbacks of magic as well as you do,' he went on, but it is like firearms. Certainly guns made it possible for almost anyone to commit murder and get away with it. But once they were invented the damage was done. All you can do is to try to cope with it. Things like the Sullivan Act - they didn't keep the crooks from carrying guns and using them; they simply took guns out of the hands of honest people.

It's the same with magic. If you prohibit it, you take from decent people the enormous boons to be derived from a knowledge of the great arcane laws, while the nasty, harmful secrets hidden away in black grimoires and red grimoires will still be bootlegged to anyone who will pay the price and has no respect for law.

Personally, I don't believe there was any less black magic practised between, say, 1750 and 1950 than there is now, or was before then. Take a look at Pennsylvania and the hex country. Take a look at the Deep South. But since that time we have begun to have the advantages of white magic too.'

Sally came in, spotted us, and slid into one side of the booth. My,' she said with a sigh of relaxation, I've just fought my way across the lobby of the Constitution. The "third house" is certainly out in full force this trip. I've never seen em so thick, especially the women.'

She means lobbyists, Archie,' Jedson explained. Yes, I noticed them. I'd like to make a small bet that two thirds of them are synthetic.'

I thought I didn't recognize many of them,' Sally commented. Are you sure, Joe?'

Not entirely. But Bodie agrees with me. He says that the women are almost all mandrakes, or androids of some sort. Real women are never quite so perfectly beautiful - nor so tractable. I've got him checking on them now.'

In what way?'

He says he can spot the work of most of the magicians capable of that high-powered stuff. If possible we want to prove that all these androids were made by Magic, Incorporated - though I'm not sure just what use we can make of

the fact.
Bodie has even located some zombies,' he added.
Not really!' exclaimed Sally. She wrinkled her nose and looked disgusted. Some people have odd tastes.'
They started discussing aspects of politics that I know nothing about, while Sally put away a very sizeable lunch topped off by a fudge ice-cream cake slice. But I noticed that she ordered from the left-hand side of the menu - all vanishing items, like the alcohol in my beer.
I found out more about the situation as they talked. When a bill is submitted to the legislature, it is first referred to a committee for hearings. Ditworth's bill, A B 22, had been referred to the Committee on Professional Standards. Over in the Senate an identical bill had turned up and had been referred by the lieutenant governor, who presides in the Senate, to the Committee on Industrial Practices.
Our immediate object was to find a sponsor for our bill; if possible, one for each house, and preferably sponsors who were members, in their respective houses, of the committees concerned. All of this needed to be done before Ditworth's bills came up for hearing.
I went with them to see their second-choice sponsor for the Assembly. He was not on the Professional Standards Committee, but he was on the Ways and Means Committee, which meant that he carried a lot of weight in any committee.
He was a pleasant chap named Spence - Luther B. Spence - and I could see that he was quite anxious to please Sally - for past favours, I suppose. But they had no more luck with him than with their first-choice man. He said that he did not have time to fight for our bill, as the chairman of the Ways and Means Committee was sick and he was chairman pro tem.
Sally put it to him flatly. Look here, Luther, when you have needed a hand in the past, you've got it from me. I hate to remind a man of obligations, but you will recall that matter of the vacancy last year on the Fish and Game Commission. Now I want action on this matter, and not excuses!'
Spence was plainly embarrassed. Now, Sally, please don't feel like that. You're getting your feathers up over nothing. You know I'll always do anything I can for you, but you don't really need this, and it would necessitate my neglecting things that I can't afford to neglect.'
What do you mean, I don't need it?'
I mean you should not worry about A B 22. It's a cinch bill.'
Jedson explained that term to me later. A cinch bill, he said, was a bill introduced for tactical reasons. The sponsors never intended to try to get it enacted into law, but simply used it as a bargaining point. It's like an asking price' in a business deal.
Are you sure of that?'
Why, yes, I think so. The word has been passed around that there is another bill coming up that won't have the bugs in it that this bill has.'
After we left Spence's office, Jedson said, Sally, I hope Spence is right, but I don't trust Ditworth's intentions. He's out to get a stranglehold on the industry. I know it!'

Luther usually has the correct information, Joe.'
Yes, that is no doubt true, but this is a little out of his line. Anyhow, thanks, kid. You did your best.'
Call on me if there is anything else, Joe. And come Out to dinner before you go; you haven't seen Bill or the kids yet.'
I won't forget.'
Jedson finally gave up as impractical trying to submit our bill, and concentrated on the committees handling Ditworth's bills. I did not see much of him. He would go out at four in the afternoon to a cocktail party and get back to the hotel at three in the morning, bleary-eyed, with progress to report.
He woke me up the fourth night and announced jubilantly, It's in the bag, Archie!'
You killed those bills?'
Not quite. I couldn't manage that. But they will be reported out of committee so amended that we won't care if they do pass. Furthermore, the amendments are different in each committee.
Well, what of that?'
That means that even if they do pass their respective houses they will have to go to conference committee to have their differences ironed out, then back for final passage in each house. The chances of that this late in a short session are negligible. Those bills are dead.'
Jedson's predictions were justified. The bills came out of committee with a do pass' recommendation late Saturday evening. That was the actual time; the statehouse clock had been stopped forty-eight hours before to permit first and second readings of an administration must' bill. Therefore it was officially Thursday. I know that sounds cockeyed, and it is, but I am told that every legislature in the country does it towards the end of a crowded session.
The important point is that, Thursday or Saturday, the session would adjourn sometime that night. I watched Ditworth's bill come up in the Assembly. It was passed, without debate, in the amended form. I sighed with relief. About midnight Jedson joined me and reported that the same thing had happened in the Senate. Sally was on watch in the conference committee room, just to make sure that the bills stayed dead.
Joe and I remained on watch in our respective houses. There was probably no need for it, but it made us feel easier. Shortly before two in the morning Bodie came in and said we were to meet Jedson and Sally outside the conference committee room.
What's that?' I said, immediately all nerves. Has something slipped?'
No, it's all right and it's all over. Come on.'
Joe answered my question, as I hurried up with Bodie trailing, before I could ask it. It's OK, Archie. Sally was present when the committee adjourned sine die, without acting on those bills. It's all over; we've won!'
We went over to the bar across the street to have a drink in celebration.
In spite of the late hour the bar was moderately crowded. Lobbyists, local politicians, legislative attaches, all the swarm of camp followers who throng the capitol whenever the legislature is sitting - all such were still up and

around, and many of them had picked this bar as a convenient place to wait for news of adjournment.
We were lucky to find a stool at the bar for Sally. We three men made a tight little cluster around her and tried to get the attention of the overworked bartender. We had just managed to place our orders when a young man tapped on the shoulder of the customer on the stool to the right of Sally. He immediately got down and left. I nudged Bodie to tell him to take the seat.
Sally turned to Joe. Well, it won't be long now. There go the sergeants at arms.' She nodded towards the young man, who was repeating the process farther down the line.
What does that mean?' I asked Joe.
It means they are getting along towards the final vote on the bill they were waiting on. They've gone to "call of the house now, and the Speaker has ordered the sergeant at arms to send his deputies out to arrest absent members.'
Arrest them?' I was a little bit shocked.
Only technically. You see, the Assembly has had to stall until the Senate was through with this bill, and most of the members have wandered out for a bite to eat, or a drink. Now they are ready to vote, so they round them up.'
A fat man took a stool near us which had just been vacated by a member. Sally said, Hello, Don.'
He took a cigar from his mouth and said, How are yuh, Sally? What's new? Say, I thought you were interested in that bill on magic?'
We were all four alert at once. I am,' Sally admitted. What about it?'
Well, then, you had better get over there. They're voting on it right away. Didn't you notice the "call of the house ?'
I think we set a new record getting across the street, with Sally leading the field in spite of her plumpness. I was asking Jedson how it could be possible, and he shut me up with, I don't know, man! We'll have to see.'
We managed to find seats on the main floor back of the rail. Sally beckoned to one of the pages she knew and sent him up to the clerk's desk for a copy of the bill that was pending. In front of the rail the Assembly men gathered in groups. There was a crowd around the desk of the administration floor leader and a smaller cluster around the floor leader of the opposition. The whips had individual members buttonholed here and there, arguing with them in tense whispers.
The page came back with the copy of the bill. It was an appropriation bill for the Middle Counties Improvement Project - the last of the must' bills for which the session had been called - but pasted to it, as a rider, was Ditworth's bill in its original, most damnable form!
It had been added as an amendment in the Senate, probably as a concession to Ditworth's stooges in order to obtain their votes to make up the two-thirds majority necessary to pass the appropriation bill to which it had been grafted.
The vote came almost at once. It was evident, early in the roll call, that the floor leader had his majority in hand and that the bill would pass. When the clerk announced its passage, a motion to adjourn sine die was offered by the opposition floor leader and it was carried unanimously. The Speaker called the

two floor leaders to his desk and instructed them to wait on the governor and the presiding officer of the Senate with notice of adjournment.
The crack of his gavel released us from stunned immobility. We shambled out.
We got in to see the governor late the next morning. The appointment, squeezed into an overcrowded calendar, was simply a concession to Sally and another evidence of the high regard in which she was held around the capitol. For it was evident that he did not want to see us and did not have time to see us. But he greeted Sally affectionately and listened, patiently while Jedson explained in a few words why we thought the combined Ditworth-Middle Counties bill should be vetoed.
The circumstances were not favourable to reasoned expostulation. The governor was interrupted by two calls that he had to take, one from his director of finance and one from Washington. His personal secretary came in once and shoved a memorandum under his eyes, at which the old man looked worried, then scrawled something on it and handed it back. I could tell that his attention was elsewhere for some minutes after that.
When Jedson stopped talking, the governor sat for a moment, looking down at his blotter pad, an expression of deep- rooted weariness on his face. Then he answered in slow words, No, Mr Jedson, I can't see it. I regret as much as you do that this business of the regulation of magic has been tied in with an entirely different matter. But I cannot veto part of a bill and sign the rest - even though the bill includes two widely separated subjects.
I appreciate the work you did to help elect my administration' - I could see Sally's hand in that remark - and wish that we could agree on this. But the Middle Counties Project is something that I have worked towards since my inauguration. I hope and believe that it will be the means whereby the most depressed area in our state can work out its economic problems without further grants of public money. If I thought that the amendment concerning magic would actually do a grave harm to the state-'
He paused for a moment. But I don't. When Mrs Logan called me this morning I had my legislative counsel analyse the bill. I agree that the bill is unnecessary, but it seems to do nothing more than add a little more bureaucratic red tape. That's not good, but we manage to do business under a lot of it; a little more can't wreck things.'
I butted in - rudely, I suppose - but I was all worked up. But, Your Excellency, if you would just take time to examine this matter yourself, in detail, you would see how much damage it will do!'
I would not have been surprised if he had flared back at me. Instead, he indicated a file basket that was stacked high and spilling over. Mr Fraser, there you see fifty-seven bills passed by this session of the legislature. Every one of them has some defect. Every one of them is of vital importance to some, or all of the people of this state. Some of them are as long to read as an ordinary novel. In the next nine days I must decide what ones shall become law and' what ones must wait for revision at the next regular session. During that nine days at least a thousand people will want me to see them about some one of those bills-'

His aide stuck his head in the door. Twelve-twenty, chief! You're on the air in forty minutes.'
The governor nodded absently and stood up. You will excuse me? I'm expected at a luncheon.' He turned to his aide, who was getting out his hat and gloves from a closet. You have the speech, Jim?'
Of course, sir.
Just a minute!' Sally had cut in. Have you taken your tonic?'
Not yet.'
You're not going off to one of those luncheons without it!' She ducked into his private washroom and came out with a medicine bottle. Joe and I bowed out as quickly as possible.
Outside I started fuming to Jedson about the way we had been given the run-around, as I saw it. I made some remark about dunderheaded, compromising politicians when Joe cut me short.
Shut up, Archie! Try running a state sometime instead of a small business and see how easy you find it!'
I shut up.
Bodie was waiting for us in the lobby of the capitol. I could see that he was excited about something, for he flipped away a cigarette and rushed towards us.
Look!' he commanded. Down there!'
We followed the direction of his finger and saw two figures just going out of the big doors. One was Ditworth, the other was a well-known lobbyist with whom he had worked. What about it?' Joe demanded.
I was standing here behind this phone booth, leaning against the wall and catching a cigarette. As you can see, from here that big mirror reflects the bottom of the rotunda stairs. I kept an eye on it for you fellows. I noticed this lobbyist, Sims, coming downstairs by himself, but he was gesturing as if he were talking to somebody. That made me curious, so I looked around the corner of the booth and saw him directly. He was not alone; he was with Ditworth. I looked back at the mirror and he appeared to be alone. Ditworth cast no reflection in the mirror!'
Jedson snapped his fingers. A demon!' he said in an amazed voice. And I never suspected it!'
I am surprised that more suicides don't occur on trains. When a man is down, I know of nothing more depressing than staring at the monotonous scenery and listening to the maddening lickety-tock of the rails. In a way I was glad to have this new development of Ditworth's inhuman status to think about; it kept my mind off poor old Feldstein and his thousand dollars.
Startling as it was to discover that Ditworth was a demon, it made no real change in the situation except to explain the efficiency and speed with which we had been outmanoeuvred and to confirm as a certainty our belief that the racketeers and Magic, Incorporated, were two heads of the same beast. But we had no way of proving that Ditworth was a Half World monster. If we tried to haul him into court for a test, he was quite capable of lying low and sending out a facsimile, or a mandrake, built to look like him and immune to the mirror test.
We dreaded going back and reporting our failure to the committee - at least I

did. But at least we were spared that. The Middle Counties Act carried an emergency clause which put it into effect the day it was signed. Ditworth's bill, as an amendment, went into action with the same speed. The newspapers on sale at the station when we got off the train carried the names of the new commissioners for thaumaturgy.

Nor did the commission waste any time in making its power felt. They announced their intention of raising the standards of magical practice in all fields, and stated that new and more thorough examinations would be prepared at once. The association formerly headed by Ditworth opened a coaching school in which practising magicians could take a refresher course in thaumaturgic principles and arcane law. In accordance with the high principles set forth in their charter, the school was not restricted to members of the association.

That sounds bighearted of the association. It wasn't. They managed to convey a strong impression in their classes that membership in the association would be a big help in passing the new examinations. Nothing you could put your finger on to take into court - just a continuous impression. The association grew.

A couple of weeks later all licences were cancelled and magicians were put on a day-to-day basis in their practice, subject to call for re-examination at a day's notice. A few of the outstanding holdouts against signing up with Magic, Incorporated, were called up, examined, and licences refused them. The squeeze was on. Mrs Jennings quietly withdrew from any practice. Bodie came around to see me; I had an uncompleted contract with him involving some apartment houses.

Here's your contract, Archie,' he said bitterly. I'll need some time to pay the penalties for noncompletion; my bond was revoked when they cancelled the licences.'

I took the contract and tore it in two. Forget that talk about penalties,' I told him. You take your examinations and we'll write a new contract.~

He laughed unhappily. Don't be a Pollyanna.'

I changed my tack. What are you going to do? Sign up with Magic, Incorporated?'

He straightened himself up. I've never temporized with demons; I won't start now.'

Good boy,' I said. Well, if the eating gets uncertain, I reckon we can find a job of some sort here for you.'

It was a good thing that Bodie had some money saved, for I was a little too optimistic in my offer. Magic, Incorporated, moved quickly into the second phase of their squeeze, and it began to be a matter of speculation as to whether I myself would eat regularly. There were still quite a number of licensed magicians in town who were not employed by Magic, Incorporated - it would have been an evident, actionable frame-up to freeze out everyone - but those available were all incompetent bunglers, not fit to mix a philter. There was no competent, legal magical assistance to be got at any price - except through Magic, Incorporated.

I was forced to fall back on old-fashioned methods in every respect. Since I don't use much magic in any case, it was possible for me to do that, but it was the difference between making money and losing money.

I had put Feldstein on as a salesman after his agency folded up under him. He

turned out to be a crackajack and helped to reduce the losses. He could smell a profit even farther than I could - farther than Dr Worthington could smell a witch.

But most of the other businessmen around me were simply forced to capitulate. Most of them used magic in at least one phase of their business; they had their choice of signing a contract with Magic, Incorporated, or closing their doors. They had wives and kids - they signed.

The fees for thaumaturgy were jacked up until they were all the traffic would bear, to the point where it was just cheaper to do business with magic than without it. The magicians got none of the new profits; it all stayed with the corporation. As a matter of fact, the magicians got less of the proceeds than when they had operated independently, but they took what they could get and were glad of the chance to feed their families.

Jedson was hard hit - disastrously hit. He held out, naturally, preferring honourable bankruptcy to dealing with demons, but he used magic throughout his business. He was through. They started by disqualifying August Welker, his foreman, then cut off the rest of his resources. It was intimated that Magic, Incorporated, did not care to deal with him, even had he wished it.

We were all over at Mrs Jennings's late one afternoon for tea - myself, Jedson, Bodie, and Dr Royce Worthington, the witch smeller. We tried to keep the conversation away from our troubles, but we just could not do it. Anything that was said led back somehow to Ditworth and his damnable monopoly.

After Jack Bodie had spent ten minutes explaining carefully and mendaciously that he really did not mind being out of witchcraft, that he did not have any real talent for it, and had only taken it up to please his old man, I tried to change the subject. Mrs Jennings had been listening to Jack with such pity and compassion in her eyes that I wanted to bawl myself.

I turned to Jedson and said inanely, How is Miss Megeath?'

She was the white witch from Jersey City, the one who did creative magic in textiles. I had no special interest in her welfare.

He looked up with a start. Ellen? She's ... she's all right. They took her licence away a month ago,' he finished lamely.

That was not the direction I wanted the talk to go. I turned it again. Did she ever manage to do that whole-garment stunt?'

He brightened a little. Why, yes, she did - once. Didn't I tell you about it?'

Mrs Jennings showed polite curiosity, for which I silently thanked her. Jedson explained to the others what they had been trying to accomplish. She really succeeded too well,' he continued. Once she had started, she kept right on, and we could not bring her out of her trance. She turned out over thirty thousand little striped sports dresses, all the same size and pattern. My lofts were loaded with them. Nine tenths of them will melt away before I dispose of them. But she won't try it again,' he added. Too hard on her health.'

How?' I inquired.

Well, she lost ten pounds doing that one stunt. She's not hardy enough for magic. What she really needs is to go out to Arizona and lie around in the sun for a year. I wish to the Lord I had the money. I'd send her.'

I cocked an eyebrow at him. Getting interested, Joe?' Jedson is an inveterate bachelor, but it pleases me to pretend otherwise. He generally plays up, but this time he was downright surly. It showed the abnormal state of nerves he was in.
Oh, for cripes' sake, Archie! Excuse me, Mrs Jennings! But can't I take a normal humane interest in a person without you seeing an ulterior motive in it?'
Sorry.'
That's all right.' He grinned. I shouldn't be so touchy. Anyhow, Ellen and I have cooked up an invention between us that might be a solution for all of us. I'd been intending to show it to all of you just as soon as we had a working model. Look, folks!' He drew what appeared to be a fountain pen Out of a vest pocket and handed it to me.
What is it? A pen?'
No.'
A fever thermometer?'
No. Open it up.'
I unscrewed the cap and found that it contained a miniature parasol. It opened and closed like a real umbrella, and was about three inches across when opened. It reminded me of one of those clever little Japanese favours one sometimes gets at parties, except that it seemed to be made of oiled silk and metal instead of tissue paper and bamboo.
Pretty,' I said, and very clever. What's it good for?'
Dip it in water.'
I looked around for some. Mrs Jennings poured some into an empty cup, and I dipped it in.
It seemed to crawl in my hands.
In less than thirty seconds I was holding a full-sized umbrella in my hands and looking as silly as I felt. Bodie smacked a palm with a fist.
It's a lulu, Joe! I wonder why somebody didn't think of it before.'
Jedson accepted congratulations with a fatuous grin, then added, That's not all - look.' He pulled a small envelope out of a pocket and produced a tiny transparent raincoat, suitable for a six-inch doll. This is the same gag. And this.' He hauled out a pair of rubber overshoes less than an inch long. A man could wear these as a watch fob, or a woman could carry them on a charm bracelet. Then, with either the umbrella or the raincoat, one need never be caught in the rain. The minute the rain hits them, presto! - full size. When they dry out they shrink up.'
We passed them around from hand to hand and admired them. Joe went on. Here's what I have in mind. This business needs a magician - that's you, Jack - and a merchandiser - that's you, Archie. It has two major stockholders: that's Ellen and me. She can go take the rest cure she needs, and I'll retire and resume my studies, same as I always wanted to.'
My mind immediately started turning over the commercial possibilities, then I suddenly saw the hitch. Wait a minute, Joe. We can't set up business in this state.'
No.'

It will take some capital to move out of the state. How are you fixed? Frankly, I don't believe I could raise a thousand dollars if I liquidated.'
He made a wry face. Compared with me you are rich.'
I got up and began wandering nervously around the room. We would just have to raise the money somehow. It was too good a thing to be missed, and would rehabilitate all of us. It was clearly patentable, and I could see commercial possibilities that would never occur to Joe. Tents for camping, canoes, swimming suits, travelling gear of every sort. We had a gold mine.
Mrs Jennings interrupted in her sweet and gentle voice. I am not sure it will be too easy to find a state in which to operate.'
Excuse me, what did you say?'
Dr Royce and I have been making some inquiries. I am afraid you will find the rest of the country about as well sewed up as this state.'
What! Forty-eight states?'
Demons don't have the same limitations in time that we have.'
That brought me up short. Ditworth again.
Gloom settled down on us like fog. We discussed it from every angle and came right back to where we had started. It was no help to have a clever, new business; Ditworth had us shut out of every business. There was an awkward silence.
I finally broke it with an outburst that surprised myself. Look here!' I exclaimed. This situation is intolerable. Let's quit kidding ourselves and admit it. As long as Ditworth is in control we're whipped. Why don't we do something?'

Jedson gave me a pained smile. God knows I'd like to, Archie, if I could think of anything useful to do.'
But we know who our enemy is - Ditworth! Let's tackle him - legal or not, fair means or dirty!'
But that is just the point. Do we know our enemy? To be sure, we know he is a demon, but what demon, and where? Nobody has seen him in weeks.'
Huh? But I thought just the other day-'
Just a dummy, a hollow shell. The real Ditworth is somewhere out of sight.'
But, look, if he is a demon, can't he be invoked, and compelled-'
Mrs Jennings answered this time. Perhaps - though it's uncertain and dangerous. But we lack one essential - his name. To invoke a demon you must know his real name, otherwise he will not obey you, no matter how powerful the incantation. I have been searching the Half World for weeks, but I have not learned that necessary name.'
Dr Worthington cleared his throat with a rumble as deep as a cement mixer, and volunteered, My abilities are at your disposal, if I can help to abate this nuisance-'
Mrs Jennings thanked him. I don't see how we can use you as yet, Doctor. I knew we could depend on you.'
Jedson said suddenly, White prevails over black.'
She answered, Certainly.'
Everywhere?'

Everywhere, since darkness is the absence of light.'
He went on, It is not good for the white to wait on the black.'
It is not good.'
With my brother Royce to help, we might carry light into darkness.'
She considered this. It is possible, yes. But very dangerous.'
You have been there?'
On occasion. But you are not I, nor are these others.'
Everyone seemed to be following the thread of the conversation but me. I interrupted with, Just a minute, please. Would it be too much to explain what you are talking about?'
There was no rudeness intended, Archibald,' said Mrs Jennings in a voice that made it all right. Joseph has suggested that, since we are stalemated here, we make a sortie into the Half World, smell out this demon, and attack him on his home ground.'
It took me a moment to grasp the simple audacity of the scheme. Then I said, Fine! Let's get on with it. When do we start?'
They lapsed back into a professional discussion that I was unable to follow. Mrs Jennings dragged out several musty volumes and looked up references on points that were sheer Sanskrit to me. Jedson borrowed her almanac, and he and the doctor stepped out into the back yard to observe the moon.
Finally it settled down into an argument - or rather discussion; there could be no argument, as they all deferred to Mrs Jennings's judgement concerning liaison. There seemed to be no satisfactory way to maintain contact with the real world, and Mrs Jennings was unwilling to start until it was worked out. The difficulty was this: not being black magicians, not having signed a compact with Old Nick, they were not citizens of the Dark Kingdom and could not travel through it with certain impunity.
Bodie turned to Jedson. How about Ellen Megeath?' he inquired doubtfully.
Ellen? Why, yes, of course. She would do it. I'll telephone her. Mrs Jennings, do any of your neighbours have a phone?'
Never mind,' Bodie told him, just think about her for a few minutes so that I can get a line-' He stared at Jedson's face for a moment, then disappeared suddenly.
Perhaps three minutes later Ellen Megeath dropped lightly out of nothing. Mr Bodie will be along in a few minutes,' she said. He stopped to buy a packet of cigarettes.' Jedson took her over and presented her to Mrs Jennings. She did look sickly, and I could understand Jedson's concern. Every few minutes she would swallow and choke a little, as if bothered by an enlarged thyroid.
As soon as Jack was back they got right down to details. He had explained to Ellen what they planned to do, and she was entirely willing. She insisted that one more session of magic would do her no harm. There was no advantage in waiting; they prepared to depart at once. Mrs Jennings related the marching orders. Ellen, you will need to follow me in trance, keeping in close rapport. I think you will find that couch near the fireplace a good place to rest your body. Jack, you will remain here and guard the portal.' The chimney of Mrs Jennings's living room fireplace was to be used as most convenient. You will

keep in touch with us through Ellen.'
But, Granny, I'll be needed in the Half-'
No, Jack.' She was gently firm. You are needed here much more. Someone has to guard the way and help us back, you know. Each to his task.'
He muttered a bit, but gave in. She went on, I think that is all. Ellen and Jack here; Joseph, Royce, and myself to make the trip. You will have nothing to do but wait, Archibald, but we won't be longer than ten minutes, world time, if we are to come back.' She bustled away towards the kitchen, saying something about the unguent and calling back to Jack to have the candles ready. I hurried after her.
'What do you mean, I demanded, about me having nothing to do but wait? I'm going along!'
She turned and looked at me before replying, troubled concern in her magnificent eyes. I don't see how that can be, Archibald.'
Jedson had followed us and now took me by the arm. See here, Archie, do be sensible. It's utterly out of the question. You're not a magician.'
I pulled away from him. Neither are you.'
Not in a technical sense, perhaps, but I know enough to be useful. Don't be a stubborn fool, man; if you come, you'll simply handicap us.'
That kind of an argument is hard to answer and manifestly unfair. How?' I persisted.
Hell's bells, Archie, you're young and strong and willing, and there is no one I would rather have at my back in a roughhouse, but this is not a job for courage, or even intelligence alone. It calls for special knowledge and experience.'
Well,' I answered, Mrs Jennings has enough of that for a regiment. But - if you'll pardon me, Mrs Jennings! - she is old and feeble. I'll be her muscles if her strength fails.'
Joe looked faintly amused, and I could have kicked him. But that is not what is required in-'
Dr Worthington's double-bass rumble interrupted him from somewhere behind us. It occurs to me, brother, that there may possibly be a use for our young friend's impetuous ignorance. There are times when wisdom is too cautious.'
Mrs Jennings put a stop to it. Wait - all of you,' she commanded, and trotted over to a kitchen cupboard. This she opened, moved aside a package of rolled oats, and took down a small leather sack. It was filled with slender sticks.
She cast them on the floor, and the three of them huddled around the litter, studying the patterns. Cast them again,' Joe insisted. She did so.
I saw Mrs Jennings and the doctor nod solemn agreement to each other. Jedson shrugged and turned away. Mrs Jennings addressed me, concern in her eyes. You will go,' she said softly. It is not safe, but you will go.'
We wasted no more time. The unguent was heated and we took turns rubbing it on each other's backbone. Bodie, as gatekeeper, sat in the midst of his pentacles, mekagrans, and runes, and intoned monotonously from the great book. Worthington elected to go in his proper person, ebony in a breechcloth, parasymbols scribed on him from head to toe, his grandfather's head cradled in an elbow.
There was some discussion before they could decide on a final form for Joe, and

the metamorphosis was checked and changed several times. He finished up with paper-thin grey flesh stretched over an obscenely distorted skull, a sloping back, the thin flanks of an animal, and a long, boy tail, which he twitched incessantly. But the whole composition was near enough to human to create a revulsion much greater than would be the case for a more outlandish shape. I gagged at the sight of him, but he was pleased. There!' he exclaimed in a voice like scratched tin. You've done a beautiful job, Mrs Jennings. Asmodeus would not know me from his own nephew.'

I trust not,' she said. Shall we go?'

How about Archie?'

It suits me to leave him as he is.'

Then how about your own transformation?'

I'll take care of that,' she answered, somewhat tartly. Take your places.'

Mrs Jennings and I rode double on the same broom, with me in front, facing the candle stuck in the straws. I've noticed All Hallow's Eve decorations which show the broom with the handle forward and the brush trailing. That is a mistake. Custom is important in these matters. Royce and Joe were to follow close behind us. Seraphin leaped quickly to his mistress' shoulder and settled himself, his whiskers quivering with eagerness.

Bodie pronounced the word, our candle flared up high, and we were off. I was frightened nearly to panic, but tried not to show it as I clung to the broom.

The fireplace gaped at us, and swelled to a monster arch. The fire within roared up like a burning forest and swept us along with it. As we swirled up I caught a glimpse of a salamander dancing among the flames, and felt sure that it was my own - the one that had honoured me with its approval and sometimes graced my new fireplace. It seemed a good omen.

We had left the portal far behind - if the word behind' can be used in a place where directions are symbolic - the shrieking din of the fire was no longer with us, and I was beginning to regain some part of my nerve. I felt a reassuring hand at my waist, and turned my head to speak to Mrs Jennings.

I nearly fell off the broom.

When we left the house there had mounted behind me an old, old woman, a shrunken, wizened body kept alive by an indomitable spirit. She whom I now saw was a young woman, strong, perfect, and vibrantly beautiful. There is no way to describe her; she was without defect of any sort, and imagination could suggest no improvement.

Have you ever seen the bronze Diana of the Woods? She was something like that, except that metal cannot catch the live dynamic beauty that I saw.

But it was the same woman!

Mrs Jennings - Amanda Todd, that was - at perhaps her twenty-fifth year, when she had reached the full maturity of her gorgeous womanhood, and before time had softened the focus of perfection.

I forgot to be afraid. I forgot everything except that I was in the presence of the most compelling and dynamic female had ever known. I forgot that she was at least sixty years older than myself, and that her present form was simply a triumph of sorcery. I suppose if anyone had asked me at that time if I were in

love with Amanda Jennings, I would have answered, Yes!' But at the time my thoughts were much too confused to be explicit. She was there, and that was sufficient.

She smiled, and her eyes were warm with understanding. She spoke, and her voice was the voice I knew, even though it was rich contralto in place of the accustomed clear, thin soprano. Is everything all right, Archie?'

Yes,' I answered in a shaky voice. Yes, Amanda, everything is all right!'

As for the Half World- How can I describe a place that has no single matching criterion with what I have known? How can I speak of things for which no words have been invented? One tells of things unknown in terms of things which are known. Here there is no relationship by which to link; all is irrelevant. All I can hope to do is tell how matters affected my human senses, how events influenced my human emotions, knowing that there are two falsehoods involved - the falsehood I saw and felt, and the falsehood that I tell.

I have discussed this matter with Jedson, and he agrees with me that the difficulty is insuperable, yet some things may be said with a partial element of truth - truth of a sort, with respect to how the Half World impinged on me.

There is one striking difference between the real world and the Half World. In the real world there are natural laws which persist through changes of custom and culture; in the Half World only custom has any degree of persistence, and of natural law there is none. Imagine, if you please, a condition in which the head of a state might repeal the law of gravitation and have his decree really effective - a place where King Canute could order back the sea and have the waves obey him. A place where up' and down' were matters of opinion, and directions might read as readily in days or colours as in miles. And yet it was not a meaningless anarchy, for they were constrained to obey their customs as unavoidably as we comply with the rules of natural phenomena.

We made a sharp turn to the left in the formless greyness that surrounded us in order to survey the years for a sabbat meeting. It was Amanda's intention to face the Old One with the matter directly rather than to search aimlessly through ever changing mazes of the Half World for a being hard to identify at best.

Royce picked Out the sabbat, though I could see nothing until we let the ground come up to meet us and proceeded on foot. Then there was light and form. Ahead of us, perhaps a quarter of a mile away, was an eminence surmounted by a great throne which glowed red through the murky air. I could not make out clearly the thing seated there, but I knew it was himself' - our ancient enemy.

We were no longer alone. Life - sentient, evil undeadness - boiled around us and fogged the air and crept out of the ground. The ground itself twitched and pulsated as we walked over it. Faceless things sniffed and nibbled at our heels. We were aware of unseen presences about us in the fog-shot gloom: beings that squeaked, grunted, and sniggered; voices that were slobbering whimpers, that sucked and retched and bleated.

They seemed vaguely disturbed by our presence - Heaven knows that I was terrified by them! - for I could hear them flopping and shuffling out of our path, then closing cautiously in behind, as they bleated warnings to one

another.
A shape floundered into our path and stopped, a shape with a great bloated head and moist, limber arms. Back!' it wheezed. Go back! Candidates for witchhood apply on the lower level.' It did not speak English, but the words were clear. Royce smashed it in the face and we stamped over it, its chalky bones crunching underfoot. It pulled itself together again, whining its submission, then scurried out in front of us and thereafter gave us escort right up to the great throne.
That's the only way to treat these beings,' Joe whispered in my ear. Kick em in the teeth first, and they'll respect you.' There was a clearing before the throne which was crowded with black witches, black magicians, demons in every foul guise, and lesser unclean things. On the left side the cauldron boiled. On the right some of the company were partaking of the witches' feast. I turned my head away from that. Directly before the throne, as custom calls for, the witches' dance was being performed for the amusement of the Goat. Some dozens of men and women, young and old, comely and hideous, cavorted and leaped in impossible acrobatic adagio.
The dance ceased and they gave way uncertainly before us as we pressed up to the throne. What's this? What's this?' came a husky, phlegm-filled voice. It's my little sweetheart! Come up and sit beside me, my sweet! Have you come at last to sign my compact?'
Jedson grasped my arm; I checked my tongue.
I'll stay where I am,' answered Amanda in a voice crisp with contempt. As for your compact, you know better.'
Then why are you here? And why such odd companions.' He looked down at us from the vantage of his throne, slapped hairy thigh and laughed immoderately. Royce stirred and muttered; his grandfather's head chattered in wrath. Seraphhi spat. Jedson and Amanda put their heads together for a moment, then she answered, By the treaty with Adam, I claim the right to examine.
He chuckled, and the little devils around him covered their ears. You claim privileges here? With no compact?'
Your customs,' she answered sharply.
Ah yes, the customs! Since you invoke them, so let it be. And whom would you examine?'
I do not know his name. He is one of your demons who has taken improper liberties outside your sphere.'
One of my demons, and you know not his name? I have seven million demons, my pretty. Will you examine them one by one, or all together?' His sarcasm was almost the match of her contempt.
All together.'
Never let it be said that I would not oblige a guest. If you will go forward - let me see - exactly five months and three days, you will find my gentlemen drawn up for inspection.'
I do not recollect how we got there. There was a great, brown plain, and no sky. Drawn up in military order for review by their evil lord were all the fiends of the Half World, legion on legion, wave after wave. The Old One was attended by

his cabinet; Jedson pointed them out to me - Lucifugé, the prime minister; Sataniacha, field marshal; Beelzebub and Leviathan, wing commanders; Ashtoreth, Abaddon, Mammon, Theutus, Asmodeus, and Incubus, the Fallen Thrones. The seventy princes each commanded a division, and each remained with his command, leaving only the dukes and the thrones to attend their lord, Satan Mekratrig.

He himself still appeared as the Goat, but his staff took every detestable shape they fancied. Asmodeus sported three heads, each evil and each different, rising out of the hind quarters of a swollen dragon. Mammon resembled, very roughly, a particularly repulsive tarantula. Ashtoreth I cannot describe at all. Only the Incubus affected a semblance of human form, as the only vessel adequate to display his lecherousness.

The Goat glanced our way. Be quick about it,' he demanded. We are not here for your amusement.'

Amanda ignored him, but led us towards the leading squadron. Come back!' he bellowed. And indeed we were back; our steps had led us no place. You ignore the custom. Hostages first!'

Amanda bit her lip. Admitted,' she retorted, and consulted briefly with Royce and Jedson. I caught Royce's answer to some argument.

Since I am to go,' he said, it is best that I choose my companion, for reasons that are sufficient to me. My grandfather advises me to take the youngest. That one, of course, is Fraser.'

What's this?' I said when my name was mentioned. I had been rather pointedly left out of all the discussions, but this was surely my business.

Royce wants you to go with him to smell out Ditworth,' explained Jedson.

And leave Amanda here with these fiends? I don't like it.'

I can look out for myself, Archie,' she said quietly. If Dr Worthington wants you, you can help me most by going with him.'

What is this hostage stuff?'

Having demanded the right of examination,' she explained, you must bring back Ditworth - or the hostages are forfeit.'

Jedson spoke up before I could protest. Don't be a hero, son. This is serious. You can serve us all best by going. If you two don't come back, you can bet that they'll have a fight on their hands before they claim their forfeit!'

I went. Worthington and I had hardly left them before I realized acutely that what little peace of mind I had came from the nearness of Amanda. Once out of her immediate influence the whole mind-twisting horror of the place and its grisly denizens hit me. I felt something rub against my ankles and nearly jumped out of my shoes. But when I looked down I saw that Seraphin, Amanda's cat, had chosen to follow me. After that things were better with me.

Royce assumed his dog pose when we came to the first rank of demons. He first handed me his grandfather's head. Once I would have found that mummified head repulsive to touch; it seemed a friendly, homey thing here. Then he was down on all fours, scalloping in and out of the ranks of infernal warriors. Seraphin scampered after him, paired up and hunted with him. The hound seemed quite content to let the cat do half the work, and I have no doubt he was justified. I walked as rapidly as possible down the aisles between adjacent squadrons while

the animals cast out from side to side.
It seems to me that this went on for many hours, certainly so long that fatigue changed to a wooden automatism and horror died down to a dull unease. I learned not to look at the eyes of the demons, and was no longer surprised at any outre shape.
Squadron by squadron, division by division, we combed them, until at last, coming up the left wing, we reached the end. The animals had been growing increasingly nervous. When they had completed the front rank of the leading squadron, the hound trotted up to me and whined. I suppose he sought his grandfather, but I reached down and patted his head.
Don't despair, old friend,' I said, we have still these.' I motioned towards the generals, princes all, who were posted before their divisions. Coming up from the rear as we had, we had yet to examine the generals of the leading divisions on the left wing. But despair already claimed me; what were half a dozen possibilities against an eliminated seven million?
The dog trotted away to the post of the nearest general, the cat close beside him, while I followed as rapidly as possible. He commenced to yelp before he was fairly up to the demon, and I broke into a run. The demon stirred and commenced to metamorphose. But even in this strange shape there was something familiar about it. Ditworth!' I yelled, and dived for him.
I felt myself buffeted by leather wings, raked by claws. Royce came to my aid, a dog no longer, but two hundred pounds of fighting Negro. The cat was a ball of fury, teeth, and claws. Nevertheless, we would have been lost, done in completely, had not an amazing thing happened. A demon broke ranks and shot towards us. I sensed him rather than saw him, and thought that he had come to succour his master, though I had been assured that their customs did not permit it. But he helped us - us, his natural enemies - and attacked with such vindictive violence that the gauge was turned to our favour.
Suddenly it was all over. I found myself on the ground, clutching at not a demon prince but Ditworth in his pseudo- human form - a little mild businessman, dressed with restrained elegance, complete to briefcase, spectacles, and thinning hair.
Take that thing off me,' he said testily. That thing' was grandfather, who was clinging doggedly with toothless gums to his neck.
Royce spared a hand from the task of holding Ditworth and resumed possession of his grandfather. Seraphin stayed where he was, claws dug into our prisoner's leg.
The demon who had rescued us was still with us. He had Ditworth by the shoulders, talons dug into their bases. I cleared my throat and said, I believe we owe this to you-' I had not the slightest notion of the proper thing to say. I think the situation was utterly without precedent.
The demon made a grimace that may have been intended to be friendly, but which I found frightening. Let me introduce myself,' he said in English. I'm Federal Agent William Kane, Bureau of Investigation.'
I think that was what made me faint.
I came to, lying on my back. Someone had smeared a salve on my wounds and they

were hardly stiff, and not painful in the least, but I was mortally tired. There was talking going on somewhere near me. I turned my head and saw all the members of my party gathered together. Worthington and the friendly demon who claimed to be a G-man held Ditworth between them, facing Satan. Of all the mighty infernal army I saw no trace.

So it was my nephew Nebiros,' mused the Goat, shaking his head and clucking. Nebiros, you are a bad lad and I'm proud of you. But I'm afraid you will have to try your strength against their champion now that they have caught you.' He addressed Amanda. Who is your champion, my dear?'

The friendly demon spoke up. That sounds like my job.'

I think not,' countered Amanda. She drew him to one side and whispered intently. Finally he shrugged his wings and gave in.

Amanda rejoined the group. I struggled to my feet and came up to them. A trial to the death, I think,' she was saying. Are you ready, Nebiros?' I was stretched between heart-stopping fear for Amanda and a calm belief that she could do anything she attempted. Jedson saw my face and shook his head. I was not to interrupt.

But Nebiros had no stomach for it. Still in his Ditworth form and looking ridiculously human, he turned to the Old One. I dare not, Uncle. The outcome is certain. Intercede for me.'

Certainly, Nephew. I had rather hoped she would destroy you. You'll trouble me someday.' Then to Amanda, Shall we say... ah.. . ten thousand thousand years?' Amanda gathered our votes with her eyes, including me, to my proud pleasure, and answered, So be it.' It was not a stiff sentence as such things go, I'm told - about equal to six months in jail in the real world - but he had not offended their customs; he had simply been defeated by white magic.

Old Nick brought down one arm in an emphatic gesture. There was a crashing roar and a burst of light and DitworthNebiros was spread-eagled before us on a mighty boulder, his limbs bound with massive iron chains. He was again in demon form. Amanda and Worthington examined the bonds. She pressed a seal ring against each hasp and nodded to the Goat. At once the boulder receded with great speed into the distance until it was gone from sight.

That seems to be about all, and I suppose you will be going now,' announced the Goat. All except this one-' He smiled at the demon G-man. I have plans for him.'

No.' Amanda's tone was flat.

What's that, my little one? He has not the protection of your party, and he has offended our customs.'

No!'

Really, I must insist.'

Satan Mekratrig,' she said slowly, do you wish to try your strength with me?'

With you, madame?' He looked at her carefully, as if inspecting her for the first time. Well, it's been a trying day, hasn't it? Suppose we say no more about it. Till another time, then-'

He was gone.

The demon faced her. Thanks,' he said simply. I wish I had a hat to take off.'

He added anxiously, Do you know your way out of here?'
Don't you?'
No, that's the trouble. Perhaps I should explain myself. I'm assigned to the antimonopoly division; we got a line on this chap Ditworth, or Nebiros. I followed him in here, thinking he was simply a black wizard and that I could use his portal to get back. By the time I knew better it was too late, and I was trapped. I had about resigned myself to an eternity as a fake demon.'
I was very much interested in his story. I knew, of course, that all G-men are either lawyers, magicians, or accountants, but all that I had ever met were accountants. This calm assumption of incredible dangers impressed me and increased my already high opinion of Federal agents.
You may use our portal to return,' Anianda said. Stick close to us.' Then to the rest of us, Shall we go now?'
Jack Bodie was still intoning the lines from the book when we landed. Eight and a half minutes,' he announced, looking at his wrist watch. Nice work. Did you turn the trick?'
Yes, we did,' acknowledged Jedson, his voice muffled by the throes of his remetamorphosis. Everything that-'
But Bodie interrupted. Bill Kane - you old scoundrel!' he shouted. How did you get in on this party?' Our demon had shucked his transformation on the way and landed in his natural form - lean, young, and hard-bitten, in a quiet grey suit and snap-brim hat.
Hi, Jack,' he acknowledged. I'll look you up tomorrow and tell you all about it. Got to report in now.' With which he vanished.
Ellen was out of her trance, and Joe was bending solicitously over her to see how she had stood up under it. I looked around for Amanda.
Then I heard her out in the kitchen and hurried out there. She looked up and smiled at me, her lovely young face serene and coolly beautiful. Amanda,' I said, Amanda-'
I suppose I had the subconscious intention of kissing her, making love to her. But it is very difficult to start anything of that sort unless the woman in the case in some fashion indicates her willingness. She did not. She was warmly friendly, but there was a barrier of reserve I could not cross. Instead, I followed her around the kitchen, talking inconsequentially, while she made hot cocoa and toast for all of us.
When we rejoined the others I sat and let my cocoa get cold, staring at her with vague frustration in my heart while Jedson told Ellen and Jack about our experiences. He took Ellen home shortly thereafter, and Jack followed them out.
When Amanda came back from telling them goodnight at the door, Dr Royce was stretched out on his back on the hearthrug, with Seraphin curled up on his broad chest. They were both snoring softly. I realized suddenly that I was wretchedly tired. Amanda saw it, too, and said, Lie down on the couch for a little and nap if you can.'
I needed no urging. She came over and spread a shawl over me and kissed me tenderly. I heard her going upstairs as I fell asleep.
I was awakened by sunlight striking my face. Seraphin was sitting in the window,

cleaning himself. Dr Worthington was gone, but must have just left, for the nap on the hearthrug had not yet straightened up. The house seemed deserted. Then I heard her light footsteps in the kitchen. I was up at once and quickly out there.

She had her back towards me and was reaching up to the old-fashioned pendulum clock that hung on her kitchen wall. She turned as I came in - tiny, incredibly aged, her thin white hair brushed neatly into a bun.

It was suddenly clear to me why a motherly goodnight kiss was all that I had received the night before; she had had enough sense for two of us, and had refused to permit me to make a fool of myself.

She looked up at me and said in a calm, matter-of-fact voice, See, Archie, my old clock stopped yesterday' - she reached up and touched the pendulum - but it is running again this morning.'

There is not anything more to tell. With Ditworth gone, and Kane's report, Magic, Incorporated, folded up almost overnight. The new licensing laws were an unenforced dead letter even before they were repealed.

We all hang around Mrs Jennings's place just as much as she will let us. I'm really grateful that she did not let me get involved with her younger self, for our present relationship is something solid, something to tie to. Just the same, if I had been born sixty years sooner, Mr Jennings would have had some rivalry to contend with.

I helped Ellen and Joe organize their new business, then put Bodie in as manager, for I decided that I did not want to give up my old line. I've built the new wing and bought those two trucks, just as Mrs Jennings predicted. Business is good.

by Robert Heinlein
Version 1.1

MAGIC, INC

'Whose spells are you using, buddy?' That was the first thing this bird said after coming into my place of business, He had hung around maybe twenty minutes, until I was alone, looking at samples of waterproof pigment, fiddling with plumbing catalogues, and monkeying with the hardware display. I didn't like his manner. I don't mind a legitimate business inquiry from a customer- but I resent gratuitous snooping.

'Various of the local licensed practitioners of thaumaturgy,' I told him in a tone that was chilly but polite. Why do you ask?'

'You didn't answer my question,' he pointed out. Come on - speak up. I ain't got all day.'

I restrained myself. I require my clerks to he polite, and, while I was pretty sure this chap would never be a customer, I didn't want to break my own rules. If you are thinking of buying anything,' I said, 'I will be happy to tell you what magic, if any, is used in producing it, and who the magician is.'

'Now you're not being cooperative,' he complained. 'We like for people to be cooperative. You never can tell what bad luck you may run into not cooperating.'

'Who d'you mean by we,' I snapped, dropping all pretence of politeness, 'and what do you mean by bad luck?'

'Now we're getting somewhere,' he said with a nasty grin, and settled himself on the edge of the counter so that he breathed into my face. He was short and swarthy - Sicilian, I judged, and dressed in a suit that was overtailored. His clothes and haberdashery matched perfectly in a color scheme that I didn't like. 'I'll tell you what I mean by "we"; I'm a field representatve for an organisation that protects people. from bad luck - if they're smart, and cooperative. That's why I asked you whose charms you're usin'. Some of the magicians around here aren't cooperative; it spoils their luck, and that bad luck follows their products.'

'Go on.' I said. I wanted him to commit himself as far as he would.

'I knew you were smart,' he answered. 'F'rinstance - how would you like for a salamander to get loose in your shop, setting fire to your goods and

maybe scaring your customers? Or you sell the materials to build a house, and it turns out there's a Poltergeist living in it, breaking the dishes and souring the milk and kicking the furniture around. That's what can come of dealing with the wrong magicians. A little of that and your business is ruined. We wouldn't want that to happen, would we?' He favoured me with another leer.

I said nothing; he went on, 'Now, we maintain a staff of the finest demonologists in the business, expert magicians themselves, who can report on how a magician conducts himself in the Half World, and whether or not he's likely to bring his clients bad luck. Then we advise our clients whom to deal with, and keep them from having bad luck. See?'

I saw all right. I wasn't born yesterday. The magicians I dealt with were local men that I had known for years, men with established reputations both here and in the Half World. They didn't do anything to stir up the elementals against them, and they did not have bad luck.

What this slimy item meant was that I should deal only with the magicians they selected at whatever fees they chose to set, and they would take a cut on the fees and also on the profits of my business. If I didn't choose to 'cooperate', I'd be persecuted by elementals they had an arrangement with - renegades, probably, with human vices - my stock in trade spoiled and my customers frightened away. If I still held out, I could expect some really dangerous black magic that would injure or kill me. All this under the pretence of selling me protection from men I knew and liked.

A neat racket!

I had heard of something of the sort back East, but had not expected it in a city as small as ours. He sat there, smirking at me, waiting for my reply, and twisting his neck in his collar, which was too tight. That caused me to notice something. In spite of his foppish clothes a thread showed on his neck just above the collar in back. It seemed likely that it was there to support something next to his skin - an amulet. If so, he was superstitious, even in this day and age.

'There's something you've omitted,' I told him. 'I'm a seventh son, born under a caul, and I've got second sight. My luck's all right, but I can see bad luck hovering over you like cypress over a grave!' I reached out and snatched at the thread. It snapped and came loose in my hand. There was an amulet on it, rght enough, an unsavoury little wad of nothing in particular and about as appetizing as the bottom of a bird cage. I dropped it on the floor and ground it into the dirt.

He had jumped off the counter and stood facing me, breathing hard. A knife

showed up in his right hand; with his left hand he was warding off the evil eye, the first and little fingers pointed at me, making the horns of Asmodeus. I knew I had him - for the time being.

Here's some magic you may not have heard of,' I rapped out, and reached into a drawer behind the counter. I hauled Out a pistol and pointed it at his face. Cold iron! Now go back to your owner and tell him there's cold iron waiting for him, too - both ways!'

He backed away, never taking his eyes off my face. If looks could kill, and so forth. At the door he paused and spat on the doorsill, then got out of sight very quickly.

I put the gun away and went about my work, waiting on two customers who came in just as Mr Nasty Business left. But I will admit that I was worried. A man's reputation is his most valuable asset. I've built up a name, while still a young man, for dependable products. It was certain that this bird and his pals would do all they could to destroy that name - which might be plenty if they were hooked in with black magicians!

Of course the building-materials game does not involve as much magic as other lines dealing in less durable goods. People like to know, when they are building a home, that the bed won't fall into the basement some night, or the roof disappear and leave them out in the rain.

Besides, building involves quite a lot of iron, and there are very few commercial sorcerers who can cope with cold iron. The few that can are so expensive it isn't economical to use them in building. Of course if one of the café-society crowd, or somebody like that, wants to boast that they have a summerhouse or a swimming pool built entirely by magic, I'll accept the contract, charging accordingly, and sublet it to one of the expensive, first-line magicians. But by and large my business uses magic only in the side issues - perishable items and doodads which people like to buy cheap and change from time to time.

So I was not worried about magic in my business, but about what magic could do to my business - if someone set out deliberately to do me mischief. I had the subject of magic on my mind, anyhow, because of an earlier call from a chap named Ditworth - not a matter of vicious threats, just a business proposition that I was undecided about. But it worried me, just the same,

I closed up a few minutes early and went over to see Jedson - a friend of mine in the cloak-and-suit business. He is considerably older than I am, and quite a student, without holding a degree, in all forms of witchcraft, white and black magic, necrology, demonology, spells, charms, and the more

practical forms of divination. Besides that, Jedson is a shrewd, capable man in every way, with a long head on him. I set a lot of store by his advice.

I expected to find him in his office, and more or less free, at that hour, but he wasn't. His office boy directed me up to a room he used for sales conferences. I knocked and then pushed the door.

Hello, Archie,' he called out as soon as he saw who it was. Come on in. I've got something.' And he turned away.

I came in and looked around. Besides Joe Jedson there was a handsome, husky woman about thirty years old in a nurse's uniform, and a fellow named August Welker, Jedson's foreman. He was a handy all-around man with a magician's licence, third class. Then I noticed a fat little guy, Zadkiel Feldstein, who was agent for a good many of the second-rate magicians along the street, and some few of the first-raters. Naturally, his religion prevented him from practising magic himself, but, as I understand it, there was no theological objection to his turning an honest commission. I had had dealings with him; he was all right.

This ten-percenter was clutching a cigar that had gone out, and watching intently Jedson and another party, who was slumped in a chair.

This other party was a girl, not over twenty-five, maybe not that old. She was blonde, and thin to the point that you felt that light would shine through her. She had big, sensitive hands with long fingers, and a big, tragic mouth. Her hair was silver-white, but she was not an albino. She lay back in the chair, awake but apparently done in. The nurse was chafing her wrists.

What's up?' I asked. The kid faint?'

Oh no,' Jedson assured me, turning around. She's a white witch - works in a trance. She's a little tired now, that's all.'

What's her speciality?' I inquired.

Whole garments.'

Huh?' I had a right to be surprised. It's one thing to create yard goods; another thing entirely to turn out a dress, or a suit, all finished and ready to wear. Jedson produccd and merchandised a full line of garments in which magic was used throughout. They were mostly sportswear, novelty goods, ladies' fashions, and the like, in which style, rather than wearing qualities, was the determining factor. Usually they were marked One Season

Only', but they were perfectly satisfactory for that one season, being backed up by the consumers' groups.

But they were not turned out in one process. The yard goods involved were made first, usually by Welker. Dyes and designs were added separately. Jedson had some very good connexions among the Little People, and could obtain shades and patterns from the Half World that were exclusive with him. He used both the old methods and magic in assembling garments, and employed some of the most talented artists in the business. Several of his dress designers free-lanced their magic in Hollywood under an arrangement with him. All he asked for was screen credit.
But to get back to the blonde girl- That's what I said,' Jedson answered, whole garments, with good wearing qualities too. There's no doubt that she is the real McCoy; she was under contract to a textile factory in Jersey City. But I'd give a thousand dollars to see her do that whole-garment stunt of hers just once. We haven't had any luck, though I've tried everything but red-hot pincers.'

The kid looked alarmed at this, and the nurse looked indignant. Feldstein started to expostulate, but Jedson cut him short. That was just a figure of speech; you know I don't hold with black magic. Look, darling,' he went on, turning back to the girl, do you feel like trying again?' She nodded, and he added, All right - sleepy time now!'

And she tried again, going into her act with a minimum of groaning and spitting. The ectoplasm came out freely and, sure enough, it formed into a complete dress instead of yard goods. It was a neat- little dinner frock, about a size sixteen, sky blue in a watered silk. It had class in a refined way, and I knew that any jobber who saw it would be good for a sizeable order.

Jedson grabbed it, cut off a swatch of cloth and applied his usual tests, finishing by taking the swatch out of the microscope and touching a match to it.

He swore. Damn it,' he said, there's no doubt about it. It's not a new integration at all; she's just reanimated an old rag!'

Come again,' I said. What of it?'

huh? Archie, you really ought to study up a bit. What she just did isn't really creative magic at all. This dress' - he picked it up and shook it - had a real existence someplace at some time. She's gotten hold of a piece of it, a scrap or maybe just a button, and applied the laws of homeopathy and contiguity to produce a simulacrum of it.'

I understood him, for I had used it in my own business. I had once had a section of bleachers, suitable for parades and athletic events, built on my own grounds by old methods, using skilled master mechanics and the best materials - no iron, of course. Then I cut it to pieces. Under the law of contiguity, each piece remained part of the structure it had once been in. Under the law of homeopathy, each piece was potentially the entire structure. I would contract to handle a Fourth of July crowd, or the spectators for a circus parade, and send out a couple of magicians armed with as many fragments of the original stands as we needed sections of bleachers. They .vould bind a spell to last twenty-four hours around each piece. That way the stands cleared themselves away automatically.

I had had only one mishap with it; an apprentice magician, who had the chore of being on hand as each section vanished and salvaging the animated fragment for further use, happened one day to pick up the wrong piece of wood from where one section had stood. The next time we used it, for the Shrine convention, we found we had thrown up a brand-new four- room bungalow at the corner of Fourteenth and Vine instead of a section of bleachers. It could have been embarrassing, but I stuck a sign on it

MODEL HOME NOW ON DISPLAY

and ran up another section on the end.

An out-of-town concern tried to chisel me out of the business one season, but one of their units fell, either through faulty workmanship on the pattern or because of unskilled magic, and injured several people. Since then I've had the field pretty much to myself.

I could not understand Joe Jedson's objection to reanimation. What difference does it make?' I persisted. It's a dress, isn't it?'

Sure, it's a dress, hut it's not a new one. That style is registered somewhere and doesn't belong to me. And even if it were one of my numbers she had used, reanimation isn't what I'm after. I can make better merchandise cheaper without it; otherwise I'd be using it now.'

The blonde girl came to, saw the dress, and said, Oh, Mr Jedson, did I do it?'

He explained what had happened. Her face fell, and the dress melted away at once. Don't you feel bad about it, kid,' he added, patting her on the shoulder, you were tired. We'll try again tomorrow. I know you can do it when you're not nervous and overwrought.'

She thanked him and left with the nurse. Feldstein was full of

explanations, but Jedson told him to forget it, and to have them all back there at the same time tomorrow. When we were alone I told him what had happened to me.

He listened in silence, his face serious, except when I told him how I had kidded my visitor into thinking I had second sight. That seemed to amuse him.

You may wish that you really had it - second sight, I mean,' he said at last, becoming solemn again. This is an unpleasant prospect. Have you notified the Better Business Bureau?'

I told him I hadn't.

Very well then. I'll give them a ring and the Chamber of Commerce too. They probably can't help much, but they are entitled to notification, so they can be on the lookout for it.'

I asked him if he thought I ought to notify the police. He shook his head. Not just yet. Nothing illegal has been done, and, anyhow, all the chief could think of to cope with the situation would be to haul in all the licensed magicians in town and sweat them. That wouldn't do any good, and would just cause hard feeling to be directed against you by the legitimate members of the profession. There isn't a chance in ten that the sorcerers connected with this outfit are licensed to perform magic; they are almost sure to be clandestine. If the police know about them, it's because they are protected. If they don't know about them, then they probably can't help you.'

What do you think I ought to do?'

Nothing just yet. Go home and sleep on it. This Charlie may be playing a lone hand, making small-time shakedowns purely on bluff. I don't really think so; his type sounds like a mobster. But we need more data; we can't do anything until they expose their hand a little more.'

We did not have long to wait. When I got down to my place of business the next morning I found a surprise waiting for me - several of them, all unpleasant.

It was as if it had been ransacked by burglars, set fire to, then gutted by a flood. I called up Jedson at once. He came right over. He didn't have anything to say at first, but went poking through the ruins, examining a number of things. He stopped at the point where the hardware storeroom had stood, reached down and gathered up a handful of the wet ashes and muck. Notice anything?' he asked, working his fingers so that the debris sloughed

off and left in his hand some small metal objects - nails, screws, and the like.

Nothing in particular. This is where the hardware bins were located; that's some of the stuff that didn't burn.'

Yes, I know,' he said impatiently, but don't you see anything else? Didn't you stock a lot of brass fittings?'

Yes.'

Well, find one!'

I poked around with my toe in a spot where there should have been a lot of brass hinges and drawer pulls mixed in with the ashes. I did not find anything but the nails that had held the bins together. I oriented myself by such landmarks as I could find, and tried again. There were plenty of nuts and bolts, casement hooks, and similar junk, but no brass.

Jedson watched me with a sardonic grin on his face.

Well?' I said, somewhat annoyed at his manner.

Don't you see?' he answered. It's magic, all right. In this entire yard there is not one scrap of metal left, except cold iron!'

It was plain enough. I should have seen it myself.

He messed around awhile longer. Presently we came across an odd thing. It was a slimy, wet track that meandered through my property, and disappeared down one of the drains. It looked as if a giant slug, about the size of a Crosley car, had wandered through the place.

Undine,' Jedson announced, and wrinklcd his nose at the smell. I once saw a movie, a Megapix super production called the Water King's Daughter. According to it undines were luscious enough to have interested Earl Carroll, but if they left trails like that I wanted none of them.

He took out his handkerchief and spread it for a clean place to sit down on what had been sacks of cement - a fancy, quick- setting variety, with a trade name of Hydrolith. I had been getting eighty cents a sack for the stuff; now it was just so many big boulders.

He ticked the situation off on his fingers. Archie, you've been kicked in the teeth by at least three of the four different types of elementals - earth, fire, and water. Maybe there was a sylph of the air in on it, too,

but I can't prove it. First the gnomes came and cleaned out everything you had that came out of the ground, except cold iron. A salamander followed them and set fire to the place, burning everything that was burnable, and scorching and smoke-damaging the rest. Then the undine turned the place into a damned swamp, ruining anything that wouldn't burn, like cement and lime. You're insured?'

Naturally.' But then I starred to think. I carried the usual fire, theft, and flood insurance, but business-risk insurance comes pretty high; I was not covered against the business I would lose in the meantime, nor did I have any way to complete current contracts. It was going to cost me quite a lot to cover those contracts; if I let them slide it would ruin the good will of my business, and lay me open to suits for damage.

The situation was worse than I had thought, and looked worse still the more I thought about it. Naturally I could not accept any new business until the mess was cleaned up, the place rebuilt, and new stock put in. Luckily most of my papers were in a fireproof steel safe; but not all, by any means. There would be accounts receivable that I would never collect because I had nothing to show for them. I work on a slim margin of profit, with all of my capital at work. It began to look as if the firm of Archibald Fraser, Merchant and Contractor, would go into involuntary bankruptcy.

I explained the situation to Jedson.

Don't get your wind up too fast,' he reassured me. What magic can do, magic can undo. What we need is the best wizard in town.'

Who's going to pay the fee?' I objected. Those boys don't work for nickels, and I'm cleaned out.'

Take it easy, son,' he advised, the insurance outfit that carries your risks is due to take a bigger loss than you are. If we can show them a way to save money on this, we can do business. Who represents them here?'

I told him - a firm of lawyers downtown in the Professional Building.

I got hold of my office girl and told her to telephone such of our customers as were due for deliveries that day. She was to stall where possible and pass on the business that could not wait to a firm that I had exchanged favours with in the past. I sent the rest of my help home - they had been standing around since eight o'clock, making useless remarks and getting in the way - and told them not to come back until I sent for them. Luckily it was Saturday; we had the best part of forty- eight hours to figure out some answer.

We flagged a magic carpet that was cruising past and headed for the Professional Building. I settled back and determined to enjoy the ride and forget my troubles. I like taxicabs - they give me a feeling of luxury - and I've liked them even better since they took the wheels off them. This happened to be one of the new Cadillacs with the teardrop shape and air cushions. We went scooting down the boulevard, silent as thought, not six inches off the ground.

Perhaps I should explain that we have a local city ordinance against apportation unless it conforms to traffic regulations - ground traffic, I mean, not air. That may surprise you, but it came about as a result of a mishap to a man in my own line of business. He had an order for eleven-odd tonsof glass brick to be delivered to a restaurant being remodelled on the other side of town from his yard. He employed a magician with a common carrier's licence to deliver for him. I don't know whether he was careless or just plain stupid, but he dropped those eleven tons of brick through the roof of the Prospect Boulevard Baptist Church. Anybody knows that magic won't work over consecrated ground; if he had consulted a map he would have seen that the straight-line route took his load over the church. Anyhow, the janitor was killed, and it might just as well have been the whole congregation. It caused such a commotion that apportation was limited to the streets, near the ground.

It's people like that who make it inconvenient for everybody else.

Our man was in - Mr Wiggin, of the firm of Wiggin, Snead, McClatchey & Wiggin. He had already heard about my fire', but when Jedson explained his conviction that magic was at the bottom of it he baulked. It was, he said, most irregular. Jedson was remarkably patient.

Are you an expert in magic, Mr Wiggin?' he asked.

I have not specialized in thaumaturgic jurisprudence, if that is what you mean, sir.'

Well, I don't hold a licence myself, but it has been my hobby for a good many years. I'm sure of what I say in this case; you can call in all the independent experts you wish - they'll confirm my opinion. Now suppose we stipulate, for the sake of argument, that this damage was caused by magic. If that is true, there is a possibility that we may be able to save much of the loss. You have authority to settle claims, do you not?'

Well, I think I may say yes to that - bearing in mind the legal restrictions and the terms of the contract.' I don't believe he would have conceded that he had five fingers on his right hand without an auditor to back him up.

Then it is your business to hold your company's losses down to a minimum. If I find a wizard who can undo a part, or all, of the damage, will you guarantee the fee, on behalf of your company, up to a reasonable amount, say twenty-five per cent of the indemnity?'

He hemmed and hawed some more, and said he did not see how he could possibly do it, and that if the fire had been magic, then to restore by magic might be compounding a felony, as we could not be sure what the connexions of the magicians involved might be in the Half World. Besides that, my claim had not been allowed as yet; I had failed to notify the company of my visitor of the day before, which possibly might prejudice my claim. In any case, it was a very serious precedent to set; he must consult the home office.

Jedson stood up. I can see that we are simply wasting each other's time, Mr Wiggin. Your contention about Mr Fraser's possible responsibility is ridiculous, and you know it. There is no reason under the contract to notify you, and even if there were, he is within the twenty-four hours allowed for any notification. I think it best that we consult the home office ourselves.' He reached for his hat.

Wiggin put up his hand. Gentlemen, gentlemen, please! Let's not be hasty. Will Mr Fraser agree to pay half of the fee?'

No. Why should he? It's your loss, not his. You insured him.

Wiggin tapped his teeth with his spectacles, then said, We must make the fee contingent on results.'

Did you ever hear of anyone in his right mind dealing with a wizard on any other basis?'

Twenty minutes later we walked out with a document which enabled us to hire any witch or wizard to salvage my place of business on a contingent fee not to exceed twenty-five per cent of the value reclaimed. I thought you were going to throw up the whole matter,' I told Jedson with a sigh of relief.

He grinned. Not in the wide world, old son. He was simply trying to horse you into paying the cost of saving them some money. I just let him know that I knew.'

It took some time to decide whom to consult. Jedson admitted frankly that he did not know of a man nearer than New York who could, with certainty, be trusted to do the job, and that was out of the question for the fee involved. We stopped in a bar, and he did some telephoning while I had a

beer. Presently he came back and said, I think I've got the man. I've never done business with him before, but he has the reputation and the training, and everybody I talked to seemed to think that he was the one to see.'

Who is it?' I wanted to know.

Dr Fortescue Biddle. He's just down the street - the Railway Exchange Building. Come on, we'll walk it.'

I gulped down the rest of my beer and followed him.

Dr Biddle's place was impressive. He had a corner suite on the fourteenth floor, and he had not spared expense in furnishing and decorating it. The style was modern; it had the austere elegance of a society physician's layout. There was a frieze around the wall of the signs of the zodiac done in intaglio glass, backed up by aluminium. That was the only decoration of any sort, the rest of the furnishing being very plain, but rich, with lots of plate glass and chromium.

We had to wait about thirty minutes in the outer office; I spent the time trying to estimate what I could have done the suite for, subletting what I had to and allowing ten per cent. Then a really beautiful girl with a hushed voice ushered us in. We found ourselves in another smaller room, alone, and had to wait about ten minutes more. It was much like the waiting room, but had some glass bookcases and an old print of Aristotle. I looked at the bookcases with Jedson to kill time. They were filled with a lot of rare old classics on magic. Jedson had just pointed out the Red Grimoire when we heard a voice behind us.

Amusing, aren't they? The ancients knew a surprising amount. Not scientific, of course, but remarkably clever-' The voice trailed off. We turned around; he introduced him- sell as Dr Biddle.

He was a nice enough looking chap, really handsome in a spare, dignified fashion. He was about ten years older than I am - fortyish, maybe - with iron-grey hair at the temples and a small, stiff, British major's moustache. His clothes could have been out of the style pages of Esquire. There was no reason for me not to like him; his manners were pleasant enough. Maybe it was the supercilious twist of his expression.

He led us into his private office, sat us down, and offered us cigarettes before business was mentioned. He opened up with, You're Jedson, of course. I suppose Mr Ditworth sent you?'

I cocked an ear at him; the name was familiar. But Jedson simply answered, Why, no. Why would you think that he had?'

Biddle hesitated for a moment, then said, half to himself, That's strange. I was certain that I had heard him mention your name. Do either one of you,' he added, know Mr Ditworth?'

We both nodded at once and surprised each other, Biddle seemed relieved and said, No doubt that accounts for it. Still - I need some more information. Will you gentlemen excuse me while I call him?'

With that he vanished. I had never seen it done before. Jedson says there are two ways to do it, one is hallucination, the other is an actual exit through the Half World. Whichever way it's done, I think it's bad manners.

About this chap Ditworth,' I started to say to Jedson. I had intended to ask you-'

Let it wait,' he cut me off, there's not time now.'

At this Biddle reappeared. It's all right,' he announced, speaking directly to me. I can take your case. I suppose you've come about the trouble you had last night with your establishment?'

Yes,' I agreed. How did you know?'

Methods,' he replied, with a deprecatory little smile. My profession has its means. Now, about your problem. What is it you desire?'

I looked at Jedson; he explained what he thought had taken place and why he thought so. Now I don't know whether you specialize in demonology or not,' he concluded, but it seems to me that it should be possible to evoke the powers responsible and force them to repair the damage. If you can do it, we are prepared to pay any reasonable fee.'

Biddle smiled at this and glanced rather self-consciously at the assortment of diplomas hanging on the walls of his office. I feel that there should be reason to reassure you,' he purred. Permit me to look over the ground-' And he was gone again.

I was beginning to be annoyed. It's all very well for a man to be good at his job, but there is no reason to make a side show out of it. But I didn't have time to grouse about it before he was back.

Examination seems to confirm Mr Jedson's opinion; there should be no unusual difficulties,' he said. Now as to the .

ah . . . business arrangements-' He coughed politely and gave a little

smile, as if he regretted having to deal with such vulgar matters.

Why do some people act as if making money offended their delicate minds? I am out for a legitimate profit, and not ashamed of it; the fact that people will pay money for my goods and services shows that my work is useful.

However, we made a deal without much trouble, then Biddle told us to meet him at my place in about fifteen minutes. Jedson and I left the building and flagged another cab. Once inside I asked him about Ditworth.

Where'd you run across him?' I said.

Came to me with a proposition.

Hm-m-m-' This interested me; Ditworth had made me a proposition, too, and it had worried me. What kind of a proposition?'

Jedson screwed up his forehead. Well, that's hard to say - there was so much impressive sales talk along with it. Briefly, he said he was the local executive secretary of a nonprofit association which had as its purpose the improvement of standards of practising magicians.'

I nodded. It was the same story I had heard. Go ahead.'

He dwelt on the inadequacy of the present licensing laws and pointed out that anyone could pass the examinations and hang out his shingle after a couple of weeks' study of a grimoire or black book without any fundamental knowledge of the arcane laws at all. His organization would be a sort of bureau of standards to improve that, like the American Medical Association, or the National Conference of Universities and Colleges, or the Bar Association. If I signed an agreement to patronize only those wizards who complied with their requirements. I could display their certificate of quality and put their seal of approval on my goods.'

Joe, I've heard the same story.' I cut in. and I didn't know quite what to make of it. It sounds all right, but I wouldn't want to stop doing business with men who have given me good value in the past, and I've no way of knowing that the association would approve them.'

What answer did you give him?'

I stalled him a bit - told him that I couldn't sign anything as binding as that without discussing it with my attorney.'

Good boy! What did he say to that?'

Well, he was really quite decent about it, and honestly seemed to want to be helpful. Said he thought I was wise and left me some stuff to look over. Do you know anything about him? Is he a wizard himself?'

No, he's not. But I did find out some things about him. I knew vaguely that he was something in the Chamber of Commerce; what I didn't know is that he is on the board of a dozen or more blue-ribbon corporations. He's a lawyer, but not in practice. Seems to spend all his time on his business interests.

He sounds like a responsible man.'

I would say so. He seems to have had considerably less publicity than you would expect of a man of his business importance - probably a retiring sort. I ran across something that seemed to confirm that.'

What was it?' I asked.

I looked up the incorporation papers for his association on file with the Secretary of State. There were just three names, his own and two others. I found that both of the others were employed in his office - his secretary and his receptionist.

Dummy setup?'

Undoubtedly. But there is nothing unusual about that. What interested me was this: I recognized one of the names.'

Huh?'

You know, I'm on the auditing committee for the state committee of my party. I looked up the name of his secretary where I thought I had seen it. It was there all right. His secretary, a chap by the name of Mathias, was down for a whopping big contribution to the governor's personal campaign fund.'

We did not have any more time to talk just then, as the cab had pulled up at my place. Dr Biddle was there before us and had already started his preparations. He had set up a little crystal pavilion, about ten feet square, to work in. The entire lot was blocked off from spectators on the front by an impalpable screen. Jedson warned me not to touch it.

I must say he worked without any of the usual hocus-pocus. He simply greeted us and entered the pavilion, where he sat down on a chair and took a loose-leaf notebook from a pocket and commenced to read. Jedson says he used several pieces of paraphernalia too. If so, I didn't see them. He worked with his clothes on.

Nothing happened for a few minutes. Gradually the walls of the shed became cloudy, so that everything inside was indistinct. It was about then that I became aware that there was something else in the pavilion besides Biddle. I could not see clearly what it was, and, to tell the truth, I didn't want to.

We could not hear anything that was said on the inside, but there was an argument going on - that was evident. Biddle stood up and began sawing the air with his hands. The thing threw back its head and laughed. At that Biddle threw a worried look in our direction and made a quick gesture with his right hand. The walls of the pavilion became opaque at once and we didn't see any more.

About five minutes later Biddle walked out of his workroom, which promptly disappeared behind him. He was a sight -, his hair all mussed, sweat dripping from his face, and his collar wrinkled and limp. Worse than that, his aplomb was shaken.

Well?' said Jedson.

There is nothing to be done about it, Mr Jedson - nothing at all.'

Nothing you can do about it, eh?'

He stiffened a bit at this. Nothing anyone can do about it, gentlemen. Give it up. Forget about it. That is my advice.'

Jedson said nothing, just looked at him speculatively. I kept quiet. Biddle was beginning to regain his self-possession. He straightened his hat, adjusted his necktie, and added, I must return to my office. The survey fee will be five hundred dollars.

I was stonkered speechless at the barefaced gall of the man, but Jedson acted as if he hadn't understood him. No doubt it would be,' he observed. Too bad you didn't earn it. I'm sorry.

Biddle turned red, but preserved his urbanity. Apparently you misunderstand me, sir. Under the agreement I have signed with Mr Ditworth, thaumaturgists approved by the association are not permitted to offer free consultation. It lowers the standards of the profession. The fee I mentioned is the minimum fee for a magician of my classification, irrespective of services rendered.'

I see,' Jedson answered calmly; that's what it costs to step inside your office. But you didn't tell us that, so it doesn't apply. As for Mr

Ditworth, an agreement you sign with him does not bind us in any way. I advise you to return to your office and reread our contract. We owe you nothing.'

I thought this time that Biddle would lose his temper, but all he answered was, I shan't bandy words with you. You will hear from me later.' He vanished then without so much as a by-your-leave.

I heard a snicker behind me and whirled around, ready to bite somebody's head off. I had had an upsetting day and didn't like to be laughed at behind my back. There was a young chap there, about my own age. Who are you, and what are you laughing at?' I snapped. This is private property.'

Sorry, bud,' he apologized with a disarming grin. I wasn't laughing at you; I was laughing at the stuffed shirt. Your friend ticked him off properly.'

What are you doing here?' asked Jedson.

Me? I guess I owe you an explanation. You see, I'm in the business myself-'

Building?'

No - magic. Here's my card.' He handed it to Jedson, who glanced at it and passed it onto me. It read:

JACK BODIE

LICENSED MAGICIAN, 1ST CLASS

TELEPHONE CREST 3840

You see, I heard a rumour in the Half World that one of the big shots was going to do a hard one here today. I just stopped in to see the fun. But how did you happen to pick a false alarm like Biddle? He's not up to this sort of thing.'

Jedson reached over and took the card back. Where did you take your training, Mr Bodie?'

Huh? I took my bachelor's degree at Harvard and finished up postgraduate at Chicago. But that's not important; my old man taught me everything I know, but he insisted on my going to college because he said a magician can't get a decent job these days without a degree. He was right.'
Do you think you could handle this job?' I asked. Probably not, but I wouldn't have made the fool of myself that Biddle did. Look here - you want to find somebody who can do this job?'

Naturally,' I said. What do you think we're here for?'
Well, you've gone about it the wrong way. Biddle's got a reputation simply because he's studied at Heidelberg and Vienna. That doesn't mean a thing. I'll bet it never occurred to you to look up an old-style witch for the job.'
Jedson answered this one. That's not quite true. I inquired around among my friends in the business, but didn't find anyone who was willing to take it on. But I'm willing to learn; whom do you suggest?'
Do you know Mrs Amanda Todd Jennings? Lives over in the old part of town, beyond the Congregational cemetery.'
Jennings ... Jennings. Hm-m-m - no, can't say that I do. Wait a minute! Is she the old girl they call Granny Jennings? Wears Queen Mary hats and does her own marketing?'
That's the one.'
But she's not a witch; she's a fortune-teller.'
That's what you think. She's not in regular commercial practice, it's true, being ninety years older than Santa Claus, and feeble to boot. But she's got more magic in her little finger than you'll find in Solomon's Book.'
Jedson looked at me. I nodded, and he said:
Do you think you could get her to attempt this case?'
Well, I think she might do it, if she liked you.'
What arrangement do you want?' I asked. Is ten per cent satisfactory?'
He seemed rather put out at this. Hell,' he said, I couldn't take a cut; she's been good to me all my life.'
If the tip is good, it's worth paying for.' I insisted. Oh, forget it.
Maybe you boys will have some work in my line someday. That's enough.'
Pretty soon we were off again, without Bodie. He was tied up elsewhere, but promised to let Mrs Jennings know that we were coming.

The place wasn't too hard to find. It was on an old street, arched over with elms, and the house was a one-storey cottage, set well back. The veranda had a lot of that old scroll-saw gingerbread. The yard was not very well taken care of, but there was a lovely old climbing rose arched over the steps.

Jedson gave a twist to the hand bell set in the door, and we waited for several minutes. I studied the coloured-glass tri- angles set in the door's side panels and wondered if there was anyone left who could do that sort of work.

Then she let us in. She really was something incredible. She was so tiny that I found myself staring down at the crown of her head, and noting that the clean pink scalp showed plainly through the scant, neat threads of hair. She couldn't have weighed seventy pounds dressed for the street, but stood proudly erect in lavender alpaca and white collar, and sized us up with lively black eyes that would have fitted Catherine the Great or

Calamity Jane.

Good morning to you,' she said. Come in.'

She led us through a little hall, between beaded portieres, said, Scat, Seraphin!' to a cat on a chair, and sat us down in her parlour. The cat jumped down, walked away with an un- hurried dignity, then sat down, tucked his tail neatly around his carefully placed feet, and stared at us with the same calm appraisal as his mistress.

My boy Jack told me that you were coming,' she began. You are Mr Fraser and you are Mr Jedson,' getting us sorted out correctly. It was not a question; it was a statement. You want your futures read, I suppose. What method do you prefer - your palms, the stars, the sticks?'

I was about to correct her misapprehension when Jedson cut in ahead of me. I think we'd best leave the method up to you, Mrs Jennings.'

All right, we'll make it tea leaves then. I'll put the kettle on; twon't take a minute.' She bustled out. We could hear her in the kitchen, her light footsteps clicking on the linoleum, utensils scraping and clattering in a busy, pleasant disharmony.

When she returned I said, I hope we aren't putting you out, Mrs Jennings.'

Not a bit of it,' she assured me. I like a cup of tea in the morning; it does a body comfort. I just had to set a love philter off the fire.- that's what took me so long.'

I'm sorry-'

Twon't hurt it to wait.'

The Zekerboni formula?' Jedson inquired.

My goodness gracious, no!' She was plainly upset by the suggestion. I wouldn't kill all those harmless little creatures. Hares and swallows and doves - the very idea! I don't know what Pierre Mora was thinking about when he set that recipe down. I'd like to box his cars!

No, I use Emula campana, orange, and ambergris. It's just as effective.'

Jedson then asked if she had ever tried the juice of vervain. She looked closely into his face before replying, You have the sight yourself, son. Am I not right?'

A little, mother,' he answered soberly, a little, perhaps.'

It will grow. Mind how you use it. As for vervain, it is efficacious, as you know.'

Wouldn't it be simpler?'

Of course it would. But if that easy a method became generally known, anyone and everyone would be making it and using it promiscuously - a bad thing. And witches would starve for want of clients - perhaps a good thing!' She flicked up one white eyebrow. But if it is simplicity you want, there is no need to bother even with vervain. Here-' She reached out and touched me on the hand. "Bestarberto corrum pit viscera e)us virilis. ' That is as near as I can reproduce her words. I may have misquoted it.

But I had no time to think about the formula she had pronounced. I was fully occupied with the startling thing that had come over me. I was in love, ecstatically, deliciously in love - with Granny Jennings! I don't mean that she suddenly looked like a beautiful young girl - she didn't. I still saw her as a little, old, shrivelled-up woman with the face of a shrewd monkey, and ancient enough to be my great-grandmother. It didn't matter. She was she - the Helen that all men desire, the object of romantic adoration.

She smiled into my face with a smile that was warm and full of affectionate understanding. Everything was all right, and I was perfectly happy. Then she said, I would not mock you, boy,' in a gentle voice, and touched my hand a second time while whispering something else.

At once it was all gone. She was just any nice old woman, the sort that would bake a cake for a grandson or sit up with a sick neighbour. Nothing was changed, and the cat had not even blinked. The romantic fascination was an emotionless memory. But I was poorer for the difference.

The kettle was boiling. She trotted out to attend to it, and returned shortly with a tray of things, a plate of seed cake, and thin slices of homemade bread spread with sweet butter.

When we had drunk a cup apiece with proper ceremony, she took Jedson's cup from him and examined the dregs. Not much money there,' she announced, but you shan't need much; it's a fine full life.' She touched the little pool of tea with the tip of her spoon and sent tiny ripples across it. Yes, you have the sight, and the need for understanding that should go with it, but I find you in business instead of pursuing the great art, or even the lesser arts. Why is that?'

Jedson shrugged his shoulders and answered half apologetically, There is work at hand that needs to be done. I do it.

She nodded. That is well. There is understanding to be gained in any job, and you will gain it. There is no hurry; time is long. When your own work comes you will know it and be ready for it. Let me see your cup,' she finished, turning to me.

I handed it to her. She studied it for a moment and said, Well, you have not the clear sight such as your friend has, but you have the insight you need for your proper work. Any more would make you dissatisfied, for I see money here. You will make much money, Archie Fraser.'

Do you see any immediate setback in my business?' I said quickly.

No. See for yourself.' She motioned towards the cup. I leaned forward and stared at it. For a matter of seconds it seemed as if I looked through the surface of the dregs into a living scene beyond. I recognized it readily enough. It was my own place of business, even to the scars on the driveway gate- posts where clumsy truck drivers had clipped the corner too closely.

But there was a new annex wing on the east side of the lot, and there were two beautiful new five-ton dump trucks drawn up in the yard with my name painted on them!

While I watched I saw myself step out of the office door and go walking down the street. I was wearing a new hat, but the suit was the one I was wearing in Mrs Jennings's parlour, and so was the necktie - a plaid one from the tartan of my clan. I reached up and touched the original.

Mrs Jennings said, That will do for now,' and I found myself staring at the bottom of the teacup. You have seen,' she went on, your business need not worry you. As for love and marriage and children, sickness and health and death - let us look.' She touched the surface of the dregs with a fingertip; the tea leaves moved gently. She regarded them closely for a moment. Her brow puckered; she started to speak, apparently thought better of it, and looked again. Finally she said, I do not fully understand this. It is not clear; my own shadow falls across it.

Perhaps I can see,' offered Jedson.

Keep your peace!' She surprised me by speaking tartly, and placed her hand over the cup. She turned back to me with compassion in her eyes. It is not clear. You have two possible futures. Let your head rule your heart, and do not fret your soul with that which cannot be. Then you will marry, have children, and be content.' With that she dismissed the matter, for she said

at once to both of us, You did not come here for divination; you came here for help of another sort.' Again it was a statement, not a question.

What sort of help, mother?' Jedson inquired.

For this.' She shoved my cup under his nose.

He looked at it and answered, Yes, that is true. Is there help?' I looked into the cup, too, but saw nothing but tea leaves.

She answered, I think so. You should not have employed Biddle, but the mistake was natural. Let us be going.' Without further parley she fetched her gloves and purse and coat, perched a ridiculous old hat on the top of her head, and bustled us out of the house. There was no discussion of terms; it didn't seem necessary.

When we got back to the lot her workroom was already up. It was not anything fancy like Biddle's, but simply an old, square tent, like a gypsy's pitch, with a peaked top and made in several gaudy colours. She pushed aside the shawl that closed the door and invited us inside.

It was gloomy, but she took a big candle, lighted it and stuck it in the middle of the floor. By its light she inscribed five circles on the ground .- first a large one, then a somewhat smaller one in front of it. Then she drew two others, one on each side of the first and biggest circle. These were each big enough for a man to stand in, and she told us to do so. Finally she made one more circle off to one side and not more than a foot across.

I've never paid much attention to the methods of magicians, feeling about them the way Thomas Edison said he felt about mathematicians - when he wanted one he could hire one. but Mrs Jennings was different. I wish I could understand the things she did - and why.

I know she drew a lot of cabalistic signs in the dirt within the circles. There were pentacles of various shapes, and some writing in what I judged to be Hebraic script, though Jedson says not. In particular there was, I remember, a sign like a long flat Z, with a loop in it, woven in and out of a Maltese cross. Two more candles were lighted and placed on each side of this.

Then she jammed the dagger - arthame, Jedson called it - with which she had scribed the figures into the ground at the top of the big circle so hard that it quivered. It continued to vibrate the whole time.

She placed a little folding stool in the centre of the biggest circle, sat

down on it, drew out a small book, and commenced to read aloud in a voiceless whisper. I could not catch the words, and presume I was not meant to. This went on for some time. I glanced around and saw that the little circle off to one side was now occupied - by Seraphin, her cat. We had left him shut up in her house. He sat quietly, watching everything that took place with dignified interest.

Presently she shut the book and threw a pinch of powder into the flame of the largest candle. It flared up and threw out a great puff of smoke. I am not quite sure what happened next, as the smoke smarted my eyes and made me blink, besides which, Jedson says I don't understand the purpose of fumigations at all. But I prefer to believe my eyes. Either that cloud of smoke solidified into a body or it covered up an entrance, one or the other.

Standing in the middle of the circle in front of Mrs Jennings was a short, powerful man about four feet high or less. His shoulders were inches broader than mine, and his upper arms were thick as my thighs, knotted and bowed with muscle. He was dressed in a breechcloth, buskins, and a little hooded cap. His skin was hairless, but rough and earthy in texture. It was dull, lustreless. Everything about him was the same dull monotone, except his eyes, which shone green with repressed fury.

Well!' said Mrs Jennings crisply, you've been long enough getting here! What have you to say for yourself?'

He answered sullenly, like an incorrigible boy caught but not repentant, in a language filled with rasping gutturals and sibilants. She listened awhile, then cut him off.

I don't care who told you to; you'll account to me! I require this harm repaired - in less time than it takes to tell it!'

He answered back angrily, and she dropped into his language, so that I could no longer follow the meaning. But it was clear that I was concerned in it; he threw me several dirty looks, and finally glared and spat in my direction.

Mrs Jennings reached out and cracked him across the mouth with the back of her hand. He looked at her, killing in his eye, and said something.

So?' she answered, put out a hand and grabbed him by the nape of the neck and swung him across her lap, face down. She snatched off a shoe and whacked him soundly with it. He let out one yelp, then kept silent, but jerked every time she struck him.

When she was through she stood up, spilling him to the ground. He picked himself up and hurriedly scrambled back into his own circle, where he stood, rubbing himself. Mrs Jennings's eyes snapped and her voice crackled; there was nothing feeble about her now. You gnomes are getting above yourselves,' she scolded. I never heard of such a thing! One more slip on your part and I'll fetch your people to see you spanked! Get along with you. Fetch your people for your task, and summon your brother and your brother's brother. By the great Tetragrammaton, get hence to the place appointed for you!'

He was gone.

Our next visitant came almost at once. It appeared first as a tiny spark hanging in the air. It grew into a living flame, a fireball, six inches or more across. It floated above the centre of the second circle at the height of Mrs Jennings's eyes. It danced and whirled and flamed, feeding on nothing. Although I had never seen one, I knew it to be a salamander. It couldn't be anything else.

Mrs Jennings watched it for a little time before speaking. I could see that she was enjoying its dance, as I was. It was a perfect and beautiful thing, with no fault in it. There was life in it, a singing joy, with no concern for - with no relation to - matters of right and wrong, or anything human. Its harmonies of colour and curve were their own reason for being.

I suppose I'm pretty matter-of-fact. At least I've always lived by the principle of doing my job and letting other things take care of themselves. But here was something that was worth while in itself, no matter what harm it did by my standards. Even the cat was purring.

Mrs Jennings spoke to it in a clear, singing soprano that had no words to it. It answered back in pure liquid notes while the colours of its nucleus varied to suit the pitch. She turned to me and said, It admits readily enough that it burned your place, but it was invited to do so and is not capable of appreciating your point of view. I dislike to compel it against its own nature. Is there any boon you can offer it?'

I thought for a moment. Tell it that it makes me happy to watch it dance.' She sang again to it. It spun and leaped, its flame tendrils whirling and floating in intricate, delightful patterns.

That was good, but not sufficient. Can you think of anything else?'

I thought hard. Tell it that if it likes, I will build a fireplace in my house where it will be welcome to live whenever it wishes.'

She nodded approvingly and spoke to it again. I could almost understand its answer, but Mrs Jennings translated. It likes you. Will you let it approach you?'

Can it hurt me?'

Not here.'

All right then.'

She drew a T between our two circles. It followed closely behind the arthame, like a cat at an opening door. Then it swirled about me and touched me lightly on my hands and face. Its touch did not burn, but tingled, rather, as if I felt its vibrations directly instead of sensing them as heat. It flowed over my face. I was plunged into a world of light, like the heart of the aurora borealis. I was afraid to breathe at first, but finally had to. No harm came to me, though the tingling was increased.

It's an odd thing, but I have not had a single cold since the salamander touched me. I used to sniffle all winter.

Enough, enough,' I heard Mrs Jennings saying. The cloud of flame withdrew from me and returned to its circle. The musical discussion resumed, and they reached an agreement almost at once, for Mrs Jennings nodded with satisfaction and said:

Away with you then, fire child, and return when you are needed. Get hence-' She repeated the formula she had used on the gnome king.

The undine did not show up at once. Mrs Jennings took out her book again and read from it in a monotonous whisper. I was beginning to be a bit sleepy - the tent was stuffy - when the cat commenced to spit. It was glaring at the centre circle, claws out, back arched, and tail made big.

There was a shapeless something in that circle, a thing that dripped and spread its slimy moisture to the limit of the magic ring. It stank of fish and kelp and iodine, and shone with a wet phosphorescence.

You're late,' said Mrs Jennings. You got my message; why did you wait until I compelled you?'

It heaved with a sticky, sucking sound, but made no answer.

Very well,' she said firmly, I shan't argue with you. You know what I want. You will do it!' She stood up and grasped the big centre candle. Its flame flared up into a torch a yard high, and hot. She thrust it past her circle

at the undine.

There was a hiss, as when water strikes hot iron, and a burbling scream. She jabbed at it again and again. At last she stopped and stared down at it, where it lay, quivering and drawing into itself. That will do,' she said. Next time you will heed your mistress. Get hence!' It seemed to sink into the ground, leaving the dust dry behind it.

When it was gone she motioned for us to enter her circle, breaking our own with the dagger to permit us. Seraphin jumped lightly from his little circle to the big one and rubbed against her ankles, buzzing loudly. She repeated a meaningless series of syllables and clapped her hands smartly together.

There was a rushing and roaring. The sides of the tent billowed and cracked. I heard the chuckle of water and the crackle of flames, and, through that, the bustle of hurrying footsteps. She looked from side to side, and wherever her gaze fell the wall of the tent became transparent. I got hurried glimpses of unintelligible confusion.

Then it all ceased with a suddenness that was startling. The silence rang in our ears. The tent was gone; we stood in the loading yard outside my main warehouse.

It was there! It was back - back unharmed, without a trace of damage by fire or water. I broke away and ran out the main gate to where my business office had faced on the street. It was there, just as it used to be, the show windows shining in the sun, the Rotary Club emblem in one corner, and up on the roof my big two-way sign:

ARCHIBALD FRASER

BUILDING MATERIALS & GENERAL CONTRACTING

Jedson strolled out presently and touched me on the arm. What are you bawling about, Archie?'

I stared at him. I wasn't aware that I had been.

We were doing business as usual on Monday morning. I thought everything was back to normal and that my troubles were over. I was too hasty in my optimism.

It was nothing you could put your finger on at first - just the ordinary vicissitudes of business, the little troubles that turn up in any line of work and slow up production. You expect them and charge them off to

overhead. No one of them would be worth mentioning alone, except for one thing: they were happening too frequently.

You see, in any business run under a consistent management policy the losses due to unforeseen events should average out in the course of a year to about the same percentage of total cost. You allow for that in your estimates. But I started having so many small accidents and little difficulties that my margin of profit was eaten up.

One morning two of my trucks would not start. We could not find the trouble; I had to put them in the shop and rent a truck for the day to supplement my one remaining truck. We got our deliveries made, but I was out the truck rent, the repair bill, and four hours' overtime for drivers at time and a half. I had a net loss for the day.

The very next day I was just closing a deal with a man I had been trying to land for a couple of years. The deal was not important, but it would lead to a lot more business in the future, for he owned quite a bit of income property - some courts and an apartment house or two, several commercial corners, and held title or options on well-located lots all over town. He always had repair jobs to place and very frequently new building jobs. If I satisfied him, he would be a steady customer with prompt payment, the kind you can afford to deal with on a small margin of profit.

We were standing in the showroom just outside my office, and talking, having about reached an agreement. There was a display of Sunprufe paint about three feet from us, the cans stacked in a neat pyramid. I swear that neither one of us touched it, but it came crashing to the floor, making a din that would sour milk.

That was nuisance enough, but not the pay-off. The cover flew off one can, and my prospect was drenched with red paint. He let out a yelp; I thought he was going to faint. I managed to get him back into my office, where I dabbed futilely at his suit with my handkerchief, while trying to calm him down.

He was in a state, both mentally and physically. Fraser,' he raged, you've got to fire the clerk that knocked over those cans! Look at me! Eighty-five dollars' worth of suit ruined!'

Let's not be hasty,' I said soothingly, while holding my own temper in. I won't discharge a man to suit a customer, and don't like to be told to do so. There wasn't anyone near those cans but ourselves.'

I suppose you think I did it?'

Not at all. I know you didn't.' I straightened up, wiped my hands, and went over to my desk and got out my chequebook.

Then you must have done it!'

I don't think so,' I answered patiently. How much did you say your suit was worth?'

Why?'

I want to write you a cheque for the amount.' I was quite willing to; I did not feel to blame, but it had happened through no fault of his in my shop.

You can't get out of it as easily as that!' he answered unreasonably. It isn't the cost of the suit I mind-' He jammed his hat on his head and stumped out. I knew his reputation; I'd seen the last of him.

That is the sort of thing I mean. Of course it could have been an accident caused by clumsy stacking of the cans. But it might have been a Poltergeist. Accidents don't make themselves.

Ditworth came to see me a day or so later about Biddle's phony bill. I had been subjected night and morning to this continuous stream of petty annoyances, and my temper was wearing thin. Just that day a gang of coloured bricklayers had quit one of my jobs because some moron had scrawled some chalk marks on some of the bricks. Voodoo marks,' they said they were, and woi.ìld not touch a brick. I was in no mood to be held up by Mr Ditworth; I guess I was pretty short with him.

Good day to you, Mr Fraser,' he said quite pleasantly, can you spare me a few minutes?'

Ten minutes, perhaps,' I conceded, glancing at my wristwatch.

He settled his briefcase against the legs of his chair and took out some papers. I'll come to the point at once then. It's about Dr Biddle's claim against you. You and I are both fair men; I feel sure that we can come to some equitable agreement.'

Biddle has no claim against me.'

He nodded. I know just how you feel. Certainly there is nothing in the written contract obligating you to pay him. But there can be implied contracts just as binding as written contracts.'

I don't follow you. All my business is done in writing'

Certainly,' he agreed; that's because you are a businessman. In the professions the situation is somewhat different. If you go to a dental surgeon and ask him to pull an aching tooth, and he does, you are obligated to pay his fee, even though a fee has never been mentioned-'

That's true,' I interrupted, but there is no parallel. Biddle didn't "pull the tooth .'

In a way he did:' Ditworth persisted. The claim against you is for the survey, which was a service rendered you before this contract was written.

But no mention was made of a. service fee.'

That is where the implied obligation comes in, Mr Fraser; you told Dr Biddle that you had talked with me. He assumed quite correctly that I had previously explained to you the standard system of fees under the association-'

But I did not join the association!'

I know, I know. And I explained that to the other directors, but they insist that some sort of an adjustment must be made. I don't feel myself that you are fully to blame: but you will understand our position, I am sure. We are unable to accept you for membership in the association until this matter is adjusted - in fairness to Dr Biddle.'

What makes you think I intend to join the association?'

He looked hurt. I had not expectcd you to take that attitude, Mr Fraser. The association needs men of your calibre. But in your own interest, you will necessarily join, for presently it will be very difficult to get efficient thaumaturgy except from members of the association. We want to help you. Please don't make it difficult for us.'

I stood up. I am afraid you had better sue me and let a court decide the matter, Mr Ditworth. That seems to be the only satisfactory solution.'

I am sorry,' he said, shaking his head. It will prejudice your position when you come up for membership.'

Then it will just have to do so,' I said shortly, and showed him out.

After he had gone I crabbed at my office girl for doing something I told her to do the day before, and then had to apologize. I walked up and down a bit, stewing, although there was plenty of work I should have been doing. I

was nervous; things had begun to get my goat - a dozen things that I haven't mentioned - and this last unreasonable demand from Ditworth seemed to be the last touch needed to upset me completely. Not that he could collect by suing me - that was preposterous - but it was an annoyance just the same. They say the Chinese have a torture that consists in letting one drop of water fall on the victim every few minutes. That's the way I felt.

Finally I called up Jedson and asked him to go to lunch with me.

I felt better after lunch. Jedson soothed me down, as he always does, and I was able to forget and put in the past most of the things that had been annoying me simply by telling him about them. By the time I had had a second cup of coffee and smoked a cigarette I was almost fit for polite society.

We strolled back towards my shop, discussing his problems for a change. It seems the blonde girl, the white witch from Jersey City, had finally managed to make her synthesis stunt work on footgear. But there was still a hitch; she had turned out over eight hundred left shoes - and no right ones.

We were just speculating as to the probable causes of such a contretemps when Jedson said, Look, Archie. The candidcamera fans are beginning to take an interest in you.'

I looked. There was a chap standing at the kerb directly across from my place of business and focusing a camera on the shop. Then I looked again. Joe,' I snapped, that's the bird I told you about, the one that came into my shop and started the trouble!'

Are you sure?' he asked, lowering his voice.

Positive.' There was no doubt about it; he was only a short distance away on the same side of the street that we were. It was the same racketeer who had tried to blackmail me into buying protection', the same Mediterranean look to him, the same flashy clothes.

We've got to grab him,' whispered Jedson.

But I had already thought of that. I rushed at him and had grabbed him by his coat collar and the slack of his pants before he knew what was happening, and pushed him across the street ahead of me. We were nearly run down, but I was so mad I didn't care. Jedson came pounding after us.

The yard door of my office was opcn. I gave the mug a final heave that lifted him over the threshold and sent him sprawling on the floor, Jedson

was right behind; I bolted the door as soon as we were both inside.

Jedson strode over to my desk, snatched open the middle drawer, and rummaged hurriedly through the stuff that accumulates in such places. He found what he wanted, a carpenter's blue pencil, and was back alongside our gangster before he had collected himself sufficiently to scramble to his feet. Jedson drew a circle around him on the floor, almost tripping over his own feet in his haste, and closed the circle with an intricate flourish.

Our unwilling guest screeched when he saw what Joe was doing, and tried to throw himself out of the circle before it could be finished. But Jedson had been too fast for him - the circle was closed and sealed; he bounced back from the boundary as if he had struck a glass wall, and stumbled again to his knees. He remained so for the time, and cursed steadily in a language that I judged to be Italian, although. I think there were bad words in it from several other languages - certainly some English ones.

He was quite fluent.

Jedson pulled out a cigarette, lighted it, and handed me one. Let's sit down, Archie,' he said, and rest ourselves until our boy friend composes himself enough to talk business.'

I did so, and we smoked for several minutes while the flood of invective continued. Presently Jedson cocked one eyebrow at the chap and said, Aren't you beginning to repeat yourself?'

That checked him. He just sat and glared. Well,' Jedson continued, haven't you anything to say for yourself?'

He growled under his breath and said, I want to call my lawyer.'

Jedson looked amused. You don't understand the situation,' he told him. You're not under arrest, and we don't give a damn about your legal rights. We might just conjure up a hole and drop you in it, then let it relax.' The guy paled a little under his swarthy skin. Oh yes,' Jedson went on, we are quite capable of doing that - or worse. You see, we don't like you.

Of course,' he added meditatively, we might just turn you over to the police. I get a soft streak now and then.' The chap looked sour. You don't like that either? Your fingerprints, maybe?' Jedson jumped to his feet and in two quick strides was standing over him, just outside the circle. All right then,' he rapped, answer up and make em good! Why were you taking photographs?'

The chap muttered something, his eyes lowered. Jedson brushed it aside. Don't give me that stuff - we aren't children! Who told you to do it?'

He looked utterly panic-stricken at that and shut up completely.

Very well,' said Jedson, and turned to me. Have you some wax, or modelling clay, or anything of the sort?'

How would putty do?' I suggested.

Just the thing.' I slid out to the shed where we stow glaziers' supplies and came back with a five-pound can. Jedson prised it open and dug out a good big handful, then sat at my desk and worked the linseed oil into it until it was soft and workable. Our prisoner watched him with silent apprehension.

There! That's about right,' jedson announced at length, and slapped the soft lump down on my blotter pad. He commenced to fashion it with his fingers, and it took shape slowly as a little doll about ten inches high. It did not look like much of anything or anybody - Jedson is no artist - but Jedson kept glancing from the figurine to the man in the circle and back again, like a sculptor making a clay sketch directly from a model. You could see the chap's nervous terror increase by the minute.

Now!' said Jedson, looking once more from the putty figure to his model. It's just as ugly as you are. Why did you take that picture?'

He did not answer, but slunk farther back in the circle, his face nastier than ever.

Talk!' snorted Jedson, and twisted a foot of the doll between a thumb and forefinger. The corresponding foot of our prisoner jerked out from under him and twisted violently. He fell heavily to the floor with a yelp of pain.

You were going to cast a spell on this place, weren't you?' He made his first coherent answer. No, no, mister! Not me!' Not you? I see. You were just the errand boy. Who was to do the magic?'

I don't know- Ow! Oh, God!' He grabbed at his left calf and nursed it. Jedson had jabbed a pen point into the leg of the doll. I really don't know. Please, please!'

Maybe you don't,' jedson grudged, but at least you know who gives you your orders, and who some of the other members of your gang are. Start talking.'

He rocked back and forth and covered his face with his hands. I don't dare, mister,' he groaned. Please don't try to make me-' Jedson jabbed the doll with the pen again; he jumped and flinched, but this time he bore it silently with a look of grey determination.

OK,' said Jedson, if you insist-' He took another drag from his cigarette, then brought the lighted end slowly towards the face of the doll. The man in the circle tried to shrink away from it, his hands up to protect his face, but his efforts were futile. I could actually see the skin turn red and angry and the blisters blossom under his hide. It made me sick to watch it, and, while I didn't feel any real sympathy for the rat, I turned to Jedson and was about to ask him to stop when he took the cigarette away from the doll's face.

Ready to talk?' he asked. The man nodded feebly, tears pouring down his scorched cheeks. He seemed about to collapse. Here - don't faint,' Jedson added, and slapped the face of the doll with a finger tip. I could hear the smack land, and the chap's head rocked to the blow, but he seemed to take a brace from it.

All right, Archie, you take it down.' He turned back. And you, my friend, talk - and talk lots. Tell us everything you know. If you find your memory failing you, stop to think how you would like my cigarette poked into dolly's eyes!'

And he did talk - babbled, in fact. His spirit seemed to be completely broken, and he even seemed anxious to talk, stopping only occasionally to sniffle, or wipe at his eyes. Jedson questioned him to bring out points that were not clear.

There were five others in the gang that he knew about, and the setup was roughly as we had guessed. It was their object to levy tribute on everyone connected with magic in this end of town, magicians and their customers alike. No, they did not have any real protection to offer except from their own mischief. Who was his boss? He told us. Was his boss the top man in the racket? No, but he did not know who the top man was. He was quite sure that his boss worked for someone else, but he did not know who. Even if we burned him again he could not tell us. But it was a big organization - he was sure of that. He himself had been brought from a city in the East to help organize here.

Was he a magician? So help him, no! Was his section boss one? No - he was sure; all that sort of thing was handled from higher up. That was all he knew, and could he go now? Jedson pressed him to remember other things; he added a number of details, most of them insignificant, but I took them all down. The last thing he said was that he thought both of us had been marked

down for special attention because we had been successful in overcoming our first lesson'.

Finally Jedson let up on him. I'm going to let you go now,' he told him. You'd better get out of town. Don't let me see you hanging around again. But don't go too far; I may want you again. See this?' He held up the doll and squeezed it gently around the middle. The poor devil immediately commenced to gasp for breath as if he were being compressed in a strait jacket. Don't forget that I've got you any time I want you.' He let up on the pressure, and his victim panted his relief. I'm going to put your alter ego - doll to you! - where it will be safe, behind cold iron. When I want you, you'll feel a pain like that' - he nipped the doll's left shoulder with his fingernails; the man yelped - then you telephone me, no matter where you are.'

Jedson pulled a penknife from his vest pocket and cut the circle three times, then joined the cuts. Now get Out!'

I thought he would bolt as soon as he was released, but he did not. He stepped hesitantly over the pencil mark, stood still for a moment, and shivered. Then he stumbled towards the door. He turned just before he went through it and looked back at us, his eyes wide with fear. There was a look of appeal in them, too, and he seemed about to speak. Evidently he thought better of it, for he turned and went on out.

When he was gone I looked back at Jedson. He had picked up my notes and was glancing through them. I don't know,' he mused, whether it would be better to turn this stuff at once over to the Better Business Bureau and let them handle it, or whether to have a go at it ourselves. It's a temptation.'

I was not interested just then. Joe,' I said, I wish you hadn't burned him!'

Eh? How's that?' He seemed surprised and stopped scratchin' his chin. I didn't burn him.'

Don't quibble,' I said, somewhat provoked. You burned him through the doll, I mean with magic.'

But I didn't, Archie. Really I didn't. He did that to himself - and it wasn't magic. I didn't do a thing!'

What the hell do you mean?'

Sympathetic magic isn't really magic at all, Archie. It's just an application of neuropsychology and colloidal chemistry. He did all that to

himself, because he believed in it. I simply correctly judged his mentality.'

The discussion was cut short; we heard an agony-loaded scream from somewhere outside the building. It broke off sharply, right at the top. What was that?' I said, and gulped.

I don't know,' Jedson answered, and stepped to the door. He looked up and down before continuing. It must be some distance away. I didn't see anything.' He came back into the room. As I was saying, it would be a lot of fun to-'

This time it was a police siren. We heard it from far away, but it came rapidly nearer, turned a corner, and yowled down our street. We looked at each other. Maybe we'd better go see,' we both said, right together, then laughed nervously.

It was our gangster acquaintance. We found him half a block down the street, in the middle of a little group of curious passers-by who were being crowded back by cops from the squad car at the kerb.

He was quite dead.

He lay on his back, but there was no repose in the position. He had been raked from forehead to waist, laid open to the bone in three roughly parallel scratches, as if slashed by the talons of a hawk or an eagle. But the bird that made those wounds must have been the size of a five-ton truck.

There was nothing to tell from his expression. His face and throat were covered by, and his mouth choked with, a yellowish substance shot with purple. It was about the consistency of thin cottage cheese, but it had the most sickening smell I have ever run up against.

I turned to Jedson, who was not looking any too happy himself, and said, Let's get back to the office.'

We did.

We decided at last to do a little investigating on our own before taking up what we had learned with the Better Business Bureau or with the police. It was just as well that we did; none of the gang whose names we had obtained was any longer to be found in the haunts which we had listed. There was plenty of evidence that such persons had existed and that they had lived at the addresses which Jedson had sweated out of their pal. But all of them, without exception, had done a bunk for parts unknown the same afternoon

that their accomplice had been killed.

We did not go to the police, for we had no wish to be associated with an especially unsavoury sudden death. Instead, Jedson made a cautious verbal report to a friend of his at the Better Business Bureau, who passed it on secondhand to the head of the racket squad and elsewhere, as his judgement indicated.

I did not have any trouble with my business for some time thereafter, and I was working very hard, trying to show a profit for the quarter in spite of setbacks. I had put the whole matter fairly well out of my mind, except that I dropped over to call on Mrs Jennings occasionally and that I had used her young friend Jack Bodie once or twice in my business, when I needed commercial magic. He was a good workman - no monkey business and value received.

I was beginning to think I had the world on a leash when I ran into another series of accidents. This time they did not threaten my business; they threatened me - and I'm just as fond of my neck as the next man.

In the house where I live the water heater is installed in the kitchen. It is a storage type, with a pilot light and a thermostatically controlled main flame. Right alongside it is a range with a pilot light.

I woke up in the middle of the night and decided that I wanted a drink of water. When I stepped into the kitchen - don't ask me why I did not look for a drink in the bathroom, because I don't know - I was almost gagged by the smell of gas. I ran over and threw the window wide open, then ducked back out the door and ran into the living room, where I opened a big window to create a cross draught.

At that point there was a dull whoosh and a boom, and I found myself sitting on the living room rug.

I was not hurt, and there was no damage in the kitchen except for a few broken dishes. Opening the windows had released the explosion, cushioned the effect. Natural gas is not an explosive unless it is confined. What had happened was clear enough when I looked over the scene. The pilot light on the heater had gone out; when the water in the tank cooled, the thermostat turned on the main gas jet, which continued inde- finitely to pour gas into the room. When an explosive mixture was reached, the pilot light of the stove was waiting, ready to set it off.

Apparently I wandered in at the zero hour.

I fussed at my landlord about it, and finally we made a dicker whereby he

installed one of the electrical water heaters which I supplied at cost and for which I donated the labour.

No magic about the whole incident, eh? That is what I thought. Now I am not so sure.

The next thing that threw a scare into me occurred the same week, with no apparent connexion. I keep a dry mix - sand, rock, gravel - in the usual big bins set up high on concrete stanchions, so that the trucks can drive under the hoppers for loading. One evening after closing time I was walking past the bins when I noticed that someone had left a scoop shovel in the driveway pit under the hoppers.

I have had trouble with my men leaving tools out at night; I decided to put this one in my car and confront someone with it in the morning. I was about to jump down into the pit when I heard my name called.

Archibald!' it said - and it sounded remarkably like Mrs Jennings's voice. Naturally I looked around. There was no one there. I turned back to the pit in time to hear a cracking sound and to see that scoop covered with twenty tons of medium gravel.

A man can live through being buried alive, but not when he has to wait overnight for someone to miss him and dig him out. Acrystallized steel forging was the prima-facie cause of the mishap. I suppose that will do.

There was never anything to point to but natural causes, yet for about two weeks I stepped on banana peels both figuratively and literally. I saved my skin with a spot of fast footwork at least a dozen times. I finally broke down and told

Mrs Jennings about it.

Don't worry too much about it, Archie,' she reassured me. It is not too easy to kill a man with magic unless he himself is involved with magic and sensitive to it.'

Might as well kill a man as scare him to death!' I protested.

She smiled that incredible smile of hers and said, I don't think you have been really frightened, lad. At least you have not shown it.'

I caught an implication in that remark and taxed her with it. You've been watching me and pulling me out of jams, haven't you?'

She smiled more broadly and replied, That's my business, Archie. It is not

well for the young to depend on the old for help. Now get along with you. I want to give this matter more thought.'

A couple of days' later a note came in the mail addressed to me in a spidery, Spencerian script. The penmanship had the dignified flavour of the last century, and was the least bit shaky, as if the writer were unwell or very elderly. I had never seen the hand before, but guessed who it was before I opened it. It read:

My dear Archibald: This is to introduce my esteemed friend, Dr Royce Worthington. You will find him staying at the Belmont Hotel; he is expecting to hear from you. Dr Worthington is exceptionally well qualified to deal with the matters that have been troubling you these few weeks past. You may repose every confidence in his judgement, especially where unusual measures are required.

Please to include your friend, Mr Jedson, in this introduction, if you wish.

I am, sir,

Very sincerely yours,

Amanda Todd Jennings

I rang up Joe Jedson and read the letter to him. He said that he would be over at once, and for me to telephone Worthington.

Is Dr Worthington there?' I asked as soon as the room clerk had put me through.

Speaking,' answered a cultured British voice with a hint of Oxford in it.

This is Archibald Fraser, Doctor. Mrs Jennings has written to me, suggesting that I look you up.'

Oh, yes!' he replied, his voice warming considerably. I shall be delighted. When will be a convenient time?'

If you are free, I could come right over.'

Let me see-' He paused about long enough to consult a watch. I have occasion to go to your side of the city. Might I stop by your office in thirty minutes, or a little later?'

That will be fine, Doctor, if it does not discommode you-'

Not at all. I will be there.'

Jedson arrived a little later and asked me at once about Dr Worthington. I haven't seen him yet,' I said, but he sounds like something pretty swank in the way of an English-university don. He'll be here shortly.'

My office girl brought in his card a half hour later. I got up to greet him and saw a tall, heavy-set man with a face of great dignity and evident intelligence. He was dressed in rather conservative, expensively tailored clothes and carried gloves, stick, and a large briefcase. But he was black as draftsman's ink!

I tried not to show surprise. I hope I did not, for I have an utter horror of showing that kind of rudeness. There was no reason why the man should not be a Negro. I simply had not been expecting it.

Jedson helped me out. I don't believe he would show surprise if a fried egg winked at him. He took over the conversadon for the first couple of minutes after I introduced him; we all found chairs, settled down, and spent a few minutes in the polite, meaningless exchanges that people make when they are sizing up strangers.

Worthington opened the matter. Mrs Jennings gave me to believe,' he observed, that there was some fashion in which I might possibly be of assistance to one, or both, of you-'

I told him that there certainly was, and sketched out the background for him from the time the racketeer contact man first showed up at my shop. He asked a few questions, and Jedson helped me out with some details. I got the impression that Mrs Jennings had already told him most of it, and that he was simply checking.

Very well,' he said at last, his voice a deep, mellow rumble that seemed to echo in his big chest before it reached the air, I am reasonably sure that we will find a way to cope with your problems, but first I must make a few examinations before we can complete the diagnosis.' He leaned over and commenced to unstrap his briefcase.

Uh . . . Doctor,' I suggested, hadn't we better complete our arrangements before you start to work?'

Arrangements?' He looked momentarily puzzled, then smiled broadly. Oh, you mean payment. My dear sir, it is a privilege to do a favour for Mrs Jennings.'

But . . . but . . . see here, Doctor, I'd feel better about it. I assure you I am quite in the habit of paying for magic-'

He held up a hand. It is not possible, my young friend, for two reasons: In the first place, I am not licensed to practise in your state. In the second place, I am not a magician.'

I suppose I looked as inane as I sounded. Huh? What's that? Oh! Excuse me, Doctor. I guess I just naturally assumed that since Mrs Jennings had sent you, and your title, and all-'

He continued to smile, but it was a smile of understanding rather than amusement at my discomfiture. That is not surprising; even some of your fellow citizens of my blood make that mistake. No, my degree is an honorary doctor of laws of Cambridge University. My proper pursuit is anthropology, which I sometimes teach at the University of South Africa. But anthropology has some odd bypaths; I am here to exercise one of them.'

Well, then, may I ask-'

Certainly, sir. My avocation, freely translated from its quite unpronounceable proper name, is "witch smeller .'

I was still puzzled. But doesn't that involve magic?'

Yes and no. In Africa the hierarchy and the categories in these matters are not the same as in this continent. I am not considered a wizard, or witch doctor, but rather an antidote for such.'

Something had been worrying Jedson. Doctor,' he inquired, you were not originally from South Africa?'

Worthington gestured towards his own face. I suppose that Jedson read something there that was beyond my knowledge. As you have discerned. No, I was born in a bush tribe south of the Lower Congo.'

From there, eh? That's interesting. By any chance, are you nganga?'

Of the Ndembo, but not by chance.' He turned to me and explained courteously. Your friend asked me if I was a member of an occult fraternity which extends throughout Africa, but which has the bulk of its members in my native territory. Initiates are called nganga.'

Jedson persisted in his interest. It seems likely to me, Doctor, that Worthington is a name of convenience - that you have another name.'

You are again right - naturally. My tribal name - do you wish to know it?'

If you will.'

It is' - I cannot reproduce the odd clicking, lip-smacking noise he uttered - or it is just as proper to state it in English, as the meaning is what counts - Man-Who-Asks-Inconvenient- Questions. Prosecuting attorney is another reasonably idiomatic, though not quite literal, translation, because of the tribal functions implied. But it seems to me,' he went on, with a smile of unmalicious humour, that the name fits you even better than it does me. May I give it to you?'

Here occurred something that I did not understand, except that it must have its basis in some African custom completely foreign to our habits of thought. I was prepared to laugh at the doctor's witticism, and I am sure he meant it to be funny, but Jedson answered him quite seriously:

I am deeply honoured to accept.'

It is you who honour me, brother.'

From then on, throughout our association with him, Dr Worthington invariably addressed Jedson by the African name he had formerly claimed as his own, and Jedson called him brother' or Royce'. Their whole attitude towards each other underwent a change, as if the offer and acceptance of a name had in fact made them brothers, with all of the privileges and obligations of the relationship.

I have not left you without a name,' Jedson added. You had a third name, your real name?'

Yes, of course,' Worthington acknowledged, a name which we need not mention.'

Naturally,' Jedson agreed, a name which must not be mentioned. Shall we get to work, then?'

Yes, let us do so.' He turned to me. Have you some place here where I may make my preparations? It need not be large-'

Will this do?' I offered, getting up and opening the door of a cloak- and washroom which adjoins my office.

Nicely, thank you,' he said, and took himself and his briefcase inside, closing the door after him. He was gone ten minutes at least.

Jedson did not seem disposed to talk, except to suggest that I caution my girl not to disturb us or let anyone enter from the outer office. We sat and waited.

Then he came out of the cloakroom, and I got my second big surprise of the day. The urbane Dr Worthington was gone. In his place was an African personage who stood over six feet tall in his bare black feet, and whose enormous, arched chest was overlaid with thick, sleek muscles of polished obsidian. He was dressed in a loin skin of leopard, and carried certain accoutrements, notably a pouch, which hung at his waist.

But it was not his equipment that held me, nor yet the John Henrylike proportions of that warrior frame, but the face. The eyebrows were painted white and the hairline had been outlined in the same colour, but I hardly noticed these things. It was the expression - humourless, implacable, filled with a dignity and strength which must be felt to be appreciated. The eyes gave a conviction of wisdom beyond my comprehension, and there was no pity in them - only a stem justice that I myself would not care to face.

We white men in this country are inclined to underestimate the black man - I know I do - because we see him out of his cultural matrix. Those we know have had their own culture wrenched from them some generations back and a servile pseudo culture imposed on them by force. We forget that the black man has a culture of his own, older than ours and more solidly grounded, based on character and the power of the mind rather than the cheap, ephemeral tricks of mechanical gadgets. But it is a stern, fierce culture with no sentimental concern for the weak and the unfit, and it never quite dies out.

I stood up in involuntary respect when Dr Worthington entered the room.

Let us begin,' he said in a perfectly ordinary voice, and squatted down, his great toes spread and grasping the floor. He took several things out of the pouch - a dog's tail, a wrinkled black object the size of a man's fist, and other things hard to identify. He fastened the tail to his waist so that it hung down behind. Then he picked up one of the things that he had taken from the pouch - a small item, wrapped and tied in red silk - and said to me, Will you open your safe?'

I did so, and stepped back out of his way. He thrust the little bundle inside, clanged the door shut, and spun the knob. I looked inquiringly at Jedson.

He has his . . . well .. . soul in that package, and has sealed it away behind cold iron. He does not know what dangers he may encounter,' Jedson whispered. See?' I looked and saw him pass his thumb carefully all around

the crack that joined the safe to its door.

He returned to the middle of the floor and picked up the wrinkled black object and rubbed it affectionately. This is my mother's father,' he announced. I looked at it more closely and saw that it was a mummified human head with a few wisps of hair still clinging to the edge of the scalp! He is very wise,' he continued in a matter-of-fact voice, and I shall need his advice. Grandfather, this is your new son and his friend.' Jedson bowed, and I found myself doing so. They want our help.'

He started to converse with the head in his own tongue, listening from time to time, and then answering. Once they seemed to get into an argument, but the matter must have been settled satisfactorily, for the palaver soon quieted down. After a few minutes he ceased talking and glanced around the room. His eye lit on a bracket shelf intended for an electric fan, which was quite high off the floor.

There!' he said. That will do nicely. Grandfather needs a high place from which to watch.' He bent over and placed the little head on the bracket so that it faced out into the room.

When he returned to his place in the middle of the room he dropped to all fours and commenced to cast around with his nose like a hunting dog trying to pick up a scent. He ran back and forth, snuffling and whining, exactly like a pack leader worried by mixed trails. The tail fastened to his waist stood up tensely and quivered, as if still part of a live animal. His gait and his mannerisms mimicked those of a hound so convincingly that I blinked my eyes when he sat down suddenly and announced:

I've never seen a place more loaded with traces of magic. I can pick out Mrs Jennings's very strongly and your own business magic. But after I eliminate them the air is still crowded. You must have had everything but a rain dance and a sabbat going on around you!'

He dropped back into his character of a dog without giving us a chance to reply, and started making his casts a little wider. Presently he appeared to come to some sort of an impasse, for he settled back, looked at the head, and whined vigorously. Then he waited.

The reply must have satisfied him; he gave a sharp bark and dragged open the bottom drawer of a file cabinet, working clumsily, as if with paws instead of hands. He dug into the back of the drawer eagerly and hauled out something which he popped into his pouch.

After that he trotted very cheerfully around the place for a short time, until he had poked his nose into every odd corner. When he had finished he

returned to the middle of the floor, squatted down again, and said, That takes care of everything here for the present. This place is the centre of their attack, so grandfather has agreed to stay and watch here until I can bind a cord around your place to keep witches out.'

I was a little perturbed at that. I was sure the head would scare my office girl half out of her wits if she saw it. I said so as diplomatically as possible.

How about that?' he asked the head, then turned back to me after a moment of listening. Grandfather says it's all right; he won't let anyone see him he has not been introduced to.' It turned out that he was perfectly correct; nobody noticed it, not even the scrubwoman.

Now then,' he went on, I want to check over my brother's place of business at the earliest opportunity, and I want to smell out both of your homes and insulate them against mischief. In the meantime, here is some advice for each of you to follow carefully: Don't let anything of yourself fall into the hands of strangers - nail parings, spittle, hair cuttings - guard it all. Destroy them by fire, or engulf them in running water. It will make our task much simpler. I am finished.' He got up and strode back into the cloakroom.

Ten minutes later the dignified and scholarly Dr Worthington was smoking a cigarette with us. I had to look up at his grandfather's head to convince myself that a jungle lord had actually been there.

Business was picking up at that time, and I had no more screwy accidents after Dr Worthington cleaned out the place. I could see a net profit for the quarter and was beginning to feel cheerful again. I received a letter from Ditworth, dunning me about Biddle's phony claim, but I filed it in the wastebasket without giving it a thought.

One day shortly before noon Feldstein, the magicians' agent, dropped into my place. Hi, Zack!' I said cheerfully when he walked in. How's business?'

Mr Fraser, of all questions, that you should ask me that one,' he said, shaking his head mournfully from side to side. Business - it is terrible.'

Why do you say that?' I asked. I see lots of signs of activity around-'

Appearances are deceiving,' he insisted, especially in my business. Tell me - have you heard of a concern calling themselves "Magic, Incorporated ?'

That's funny,' I told him. I just did, for the first time. This just came in the mail' - and I held up an unopened letter. It had a return address on

it of Magic, Incorporated, Suite 700, Commonwealth Building'.

Feldstein took it gingerly, as if he thought it might poison him, and inspected it. That's the parties I mean,' he confirmed. The gonophs!'

Why, what's the trouble, Zack?'

They don't want that a man should make an honest living

- Mr Fraser,' he interrupted himself anxiously, you wouldn't quit doing business with an old friend who had always done right by you?'

Of course not, Zack, but what's it all about?'

Read it. Go ahead.' He shoved the letter back at me.

I opened it. The paper was a fine quality, watermarked, rag bond, and the letterhead was chaste and dignified. I glanced over the stuffed-shirt committee and was quite agreeably impressed by the calibre of men they had as officers and directors - big men, all of them, except for a couple of names among the executives that I did not recognize.

The letter itself amounted to an advertising prospectus. It was a new idea; I suppose you could call it a holding company for magicians. They offered to provide any and all kinds of magical service. The customer could dispense with shopping around; he could call this one number, state his needs, and the company would supply the service and bill him. It seemed fair enough - no more than an incorporated agency.

I glanced on down. -fully guaranteed service, backed by the entire assets of a responsible company--' -surprisingly low standard fees, made possible by elimination of fee splitting with agents and by centralized administration-' The gratifying response from the members of the great profession enables us to predict that Magic, Incorporated, will be the natural source to turn to for competent thaumaturgy in any line - probably the only source of truly first-rate magic-'

I put it down. Why worry about it, Zack? It's just another agency. As for their claims - I've heard you say that you have all the best ones in your stable. You didn't expect to be believed, did you?'

No,' he conceded, not quite, maybe - among us two. But this is really serious, Mr Fraser. They've hired away most of my really first-class operators with salaries and bonuses I can't match. And now they offer magic to the public at a price that undersells those I've got left. It's ruin, I'm telling you.'

It was hard lines. Feldstein was a nice little guy who grabbed the nickels the way he did for a wife and five beady- eyed kids, to whom he was devoted. But I felt he was exaggerating; he has a tendency to dramatize himself. Don't worry,' I said, I'll stick by you, and so, I imagine, will most of your customers. This outfit can't get all the magicians together; they're too independent. Look at Ditworth. He tried with his association. What did it get him?'

Ditworth - aagh!' He started to spit, then remembered he was in my office. This is Ditworth - this company!'

How do you figure that? He's not on the letterhead.'

I found out. You think he wasn't successful because you held out. They held a meeting of the directors of the association - that's Ditworth and his two secretaries - and voted the contracts over to the new corporation. Then Ditworth resigns and his stooge steps in as front for the nonprofit association, and Ditworth runs both companies. You will see! If we could open the books of Magic, Incorporated, you will find he has voting control. I know it!'

It seems unlikely,' I said slowly.

You'll see! Ditworth with all his fancy talk about a nonprofit service for the improvement of standards shouldn't be any place around Magic, Incorporated, should he, now? You call up and ask for him-'

I did not answer, but dialled the number on the letterhead. When a girl's voice said, Good morning - Magic, Incorporated,' I said:

Mr Ditworth, please.'

She hesitated quite a long time, then said, Who is calling, please?'

That made it my turn to hesitate. I did not want to talk to Ditworth; I wanted to establish a fact. I finally said, Tell him it's Dr Biddle's office.'

Whereupon she answered readily enough, but with a trace of puzzlement in her voice, But Mr Ditworth is not in the suite just now; he was due in Dr Biddle's office half an hour ago. Didn't he arrive?'

Oh,' I said, perhaps he's with the chief and I didn't see him come in. Sorry.' And I rang off.

I guess you are right,' I admitted, turning back to Feldstein.

He was too worried to be pleased about it. Look,' he said, I want you should have lunch with me and talk about it some more.'

I was just on my way to the Chamber of Commerce luncheon. Come along and we'll talk on the way. You're a member.'

All right,' he agreed dolefully. Maybe I can't afford it much longer.'

We were a little late and had to take separate seats. The treasurer stuck the kitty under my nose and twisted her tail'. He wanted a ten-cent fine from me for being late. The kitty is an ordinary frying pan with a mechanical bicycle bell mounted on the handle. We pay all fines on the spot, which is good for the treasury and a source of innocent amusement. The treasurer shoves the pan at you and rings the bell until you pay up.

I hastily produced a dime and dropped it in. Steve Harris, who has an automobile agency, yelled, That's right! Make the Scotchman pay up!' and threw a roll at me.

Ten cents for disorder,' announced our chairman, Norman Somers, without looking up. The treasurer put the bee on Steve. I heard the coin clink into the pan, then the bell was rung again.

What's the trouble?' asked Somers.

More of Steve's tricks,' the treasurer reported in a tired voice. Fairy gold, this time.' Steve had chucked in a synthetic coin that some friendly magician had made up for him. Naturally, when it struck cold iron it melted away.

Two bits more for counterfeiting,' decided Somers, then handcuff him and ring up the United States attorney.' Steve is quite a card, but he does not put much over on Norman.

Can't I finish my lunch first?' asked Steve, in tones that simply dripped with fake self-pity. Norman ignored him and he paid up.

Steve, better have fun while you can,' commented Al Donahue, who runs a string of drive-in restaurants. When you sign up with Magic, Incorporated, you will have to cut out playing tricks with magic.' I sat up and listened.

Who said I was going to sign up with them?'

Huh? Of course you are. It's the logical thing to do. Don't be a dope.'

Why should I?'

Why should you? Why, it's the direction of progress, man. Take my case: I put out the fanciest line of vanishing desserts of any eating place in town. You can eat three of them if you like, and not feel full and not gain an ounce. Now I've been losing money on them, but kept them for advertising because of the way they bring in the women's trade. Now Magic, Incorporated, comes along and offers me the same thing at a price I can make money with them too. Naturally, I signed up.

You would. Suppose they raise the prices on you after they have hired, or driven out of business, every competent wizard in town?'

Donahue laughed in a superior, irritating way. I've got a contract.'

So? How long does it run? And did you read the cancellation clause?'

I knew what he was talking about, even if Donahue didn't; I had been through it. About five years ago a Portland cement firm came into town and began buying up the little dealers and cutting prices against the rest. They ran sixty-cent cement down to thirty-five cents a sack and broke their competitors. Then they jacked it back up by easy stages until cement sold for a dollar twenty-five. The boys took a whipping before they knew what had happened to them.

We all had to shut up about then, for the guest speaker, old B. J. Timken, the big subdivider, started in. He spoke on Cooperation and Service'. Although he is not exactly a scintillating speaker, he had some very inspiring things to say about how businessmen could serve the community and help each other; I enjoyed it.

After the clapping died down, Norman Somers thanked B. J. and said, That's all for today, gentlemen, unless there is some new business to bring before the house-'

Jedson got up. I was sitting with my back to him, and had not known he was present. I think there is, Mr Chairman - a very important matter. I ask the indulgence of the Chair for a few minutes of informal discussion.

Somers answered, Certainly, Joe, if you've got something important.'

Thanks. I think it is. This is really an extension of the discussion between Al Donahue and Steve Harris earlier in the meeting. I think there has been a major change in business conditions going on in this city right under our noses and we haven't noticed it, except where it directly

affected our own businesses. I refer to the trade in commercial magic. How many of you use magic in your business? Put your hands up.' All the hands went up, except for a couple of lawyers'. Personally, I had always figured they were magicians themselves.

OK,' Jedson went on, put them down. We knew that; we all use it. I use it for textiles. Hank Manning here uses nothing else for cleaning and pressing, and probably uses it for some of his dye jobs too. Wally Haight's Maple Shop uses it to assemble and finish fine furniture. Stan Robertson will tell you that Le Bon Marché's slick window displays are thrown together with spells, as well as two thirds of the merchandise in his store, especially in the kids' toy department. Now I want to ask you another question: In how many cases is the percentage of your cost charged to magic greater than your margin of profits? Think about it for a moment before answering.' He paused, then said: All right - put up your hands.'

Nearly as many hands went up as before.

That's the point of the whole matter. We've got to have magic to stay in business. If anyone gets a strangle hold on magic in this community, we are all at his mercy. We would have to pay any prices that are handed us, charge the prices we are told to, and take what profits we are allowed to - or go out of business!'

The chairman interrupted him. Just a minute, Joe. Granting that what you say is true - it is, of course - do you have any reason to feel that we are confronted with any particular emergency in the matter?'

Yes, I do have.' Joe's voice was low and very serious. Little reasons, most of them, but they add up to convince me that someone is engaged in a conspiracy in restraint of trade.' Jedson ran rapidly over the history of Ditworth's attempt to organize magicians and their clients into an association, presumably to raise the standards of the profession, and how alongside the nonprofit association had suddenly appeared a capital corporation which was already in a fair way to becoming a monopoly.

Wait a second, Joe,' put in Ed Parmelee, who has a produce jobbing business. I think that association is a fine idea. I was threatened by some rat who tried to intimidate me into letting him pick my magicians. I took it up with the association, and they took care of it; I didn't have any more trouble. I think an organization which can clamp down on racketeers is a pretty fine thing.'

You had to sign with the association to get their help, didn't you?'

Why, yes, but that's entirely reasonable-'

Isn't it possible that your gangster got what he wanted when you signed up?'

Why, that seems pretty farfetched.'

I don't say,' persisted Joe, that is the explanation, but it is a distinct possibility. It would not be the first time that monopolists used goon squads with their left hands to get by coercion what their right hands could not touch. I wonder whether any of the rest of you have had similar experiences?'

It developed that several of them had. I could see them beginning to think.

One of the lawyers present formally asked a question through the chairman. Mr Chairman, passing for the moment from the association to Magic, Incorporated, is this corporation anything more than a union of magicians? If so, have they a legal right to organize?'

Norman turned to Jedson. Will you answer that, Joe?'

Certainly. It is not a union at all. It is a parallel to a situation in which all the carpenters in town are employees of one contractor; you deal with that contractor or you don't build.'

Then it's a simple case of monopoly - if it is a monopoly. This state has a Little Sherman Act; you can prosecute.~

I think you will find that it is a monopoly. Have any of you noticed that there are no magicians present at today's meet? We all looked around. It was perfectly true. I think you can expect,' he added, to find magicians represented hereafter in this chamber by some executive of Magic, Incorporated. With respect to the possibility of prosecution' - he hauled a folded newspaper out of his hip pocket - have any of you paid any attention to the governor's call for a special session of the legislature?'

Al Donahue remarked superciliously that he was too busy making a living to waste any time on the political game. It was a deliberate dig at Joe, for everybody knew that he was a committee-man, and spent quite a lot of time on civic affairs. The dig must have gotten under Joe's skin, for he said pityingly, Al, it's a damn good thing for you that some of us are willing to spend a little time on government, or you would wake up some morning to find they had stolen the sidewalks in front of your house.'

The chairman rapped for order; Joe apologized. Donahue muttered something under his breath about the whole political business being dirty, and that

anyone associated with it was bound to turn crooked. I reached out for an ashtray and knocked over a glass of water, which spilled into Donahue's lap. It diverted his mind. Joe went on talking.

Of course we knew a special session was likely for several reasons, but when they published the agenda of the call last night, I found tucked away towards the bottom an item "Regulation of Thaumaturgy . I couldn't believe that there was any reason to deal with such a matter in a special session unless something was up. I got on the phone last night and called a friend of mine at the capitol, a fellow committee member. She did not know anything about it, but she called me back later. Here's what she found out: The item was stuck into the agenda at the request of some of the governor's campaign backers; he has no special interest in it himself. Nobody seems to know what it is all about, but one bill on the subject has already been dropped in the hopper-' There was an interruption; somebody wanted to know what the bill said.

I'm trying to tell you,' Joe said patiently. The bill was submitted by title alone; we won't be likely to know its contents until it is taken up in committee. But here is the title: "A Bill to Establish Professional Standards for Thaumaturgists, Regulate the Practice of the Thaumaturgic Profession, Provide for the Appointment of a Commission to Examine, License, and Administer- and so on. As you can see, it isn't even a proper title; it's just an omnibus on to which they can hang any sort of legislation regarding magic, including an abridgement of anti- monopoly regulation if they choose.'

There was a short silence after this. I think all of us were trying to make up our minds on a subject that we were not really conversant with - politics. Presently someone spoke up and said, What do you think we ought to do about it?'

Well,' he answered, we at least ought to have our own representative at the capitol to protect us in the clinches. Besides that, we at least ought to be prepared to submit our own bill, if this one has any tricks in it, and bargain for the best compromise we can get. We should at least get an implementing amendment out of it that would put some real teeth into the state anti-trust act, at least in so far as magic is concerned.' He grinned. That's four "at leasts , I think.'

Why can't the state Chamber of Commerce handle it for us? They maintain a legislative bureau.'

Sure, they have a lobby, but you know perfectly well that the state chamber doesn't see eye to eye with us little businessmen. We can't depend on them; we may actually be fighting them.'

There was quite a powwow after Joe sat down. Everybody had his own ideas about what to do and tried to express them all at once. It became evident that there was no general agreement, whereupon Somers adjourned the meeting with the announcement that those interested in sending a representative to the capitol should stay. A few of the diehards like Donahue left, and the rest of us reconvened with Somers again in the chair. It was suggested that Jedson should be the one to go, and he agreed to do it.

Feldstein got up and made a speech with tears in his eyes. He wandered and did not seem to be getting anyplace, but finally he managed to get out that Jedson would need a good big war chest to do any good at the capitol, and also should be compensated for his expenses and loss of time. At that he astounded us by pulling out a roll of bills, counting out one thousand dollars, and shoving it over in front of Joe.

That display of sincerity caused him to be made finance chairman by general consent, and the subscriptions came in very nicely. I held down my natural impulses and matched Feldstein's donation, though I did wish he had not been quite so impetuous. I think Feldstein had a slight change of heart a little later, for he cautioned Joe to be economical and not to waste a lot of money buying liquor for those schlemiels at the capitol'.

Jedson shook his head at this, and said that while he intended to pay his own expenses, he would have to have a free hand in the spending of the fund, particularly with respect to entertainment. He said the time was too short to depend on sweet reasonableness and disinterested patriotism alone - that some of those lunkheads had no more opinions than a weather vane and would vote to favour the last man they had had a drink with.

Somebody made a shocked remark about bribery. I don't intend to bribe anyone,' Jedson answered with a brittle note in his voice. If it comes to swapping bribes, we're licked to start with. I am just praying that there are still enough unpledged votes up there to make a little persuasive talking and judicious browbeating worth while.'

He got his own way, but I could not help agreeing privately with Feldstein. And I made a resolution to pay a little more attention to politics thereafter; I did not even know the name of my own legislator. How did I know whether or not he was a high-calibre man or just a cheap opportunist?

And that is how Jedson, Bodie, and myself happened to find ourselves on the train, headed for the capitol.

Bodie went along because Jedson wanted a first-rate magician to play bird dog for him. He said he did not know what might turn up. I went along

because I wanted to. I had never been to the capitol before, except to pass through, and was interested to see how this law-making business is done.

Jedson went straight to the Secretary of State's office to register as a lobbyist, while Jack and I took our baggage to the Hotel Constitution and booked some rooms. Mrs Logan, Joe's friend the committee-woman, showed up before he got back.

Jedson had told us a great deal about Sally Logan during the train trip. He seemed to feel that she combined the shrewdness of Machiavelli with the greathearted integrity of Oliver Wendell Holmes. I was surprised at his enthusiasm, for I have often heard him grouse about women in politics.

But you don't understand, Archie,' he elaborated. Sally isn't a woman politician, she is simply a politician, and asks no special consideration because of her sex. She can stand up and trade punches with the toughest manipulators on the Hill. What I said about women politicians is perfectly true, as a statistical generalization, but it proves nothing about any particular woman.

It's like this: Most women in the United States have a short-sighted, peasant individualism resulting from the male- created romantic tradition of the last century. They were told that they were superior creatures, a little nearer to the angels than their menfolks. They were not encouraged to think, nor to assume social responsibility. It takes a strong mind to break out of that sort of conditioning, and most minds simply aren't up to it, male or female.

Consequently, women as electors are usually suckers for romantic nonsense. They can be flattered into misusing their ballot even more easily than men. In politics their self-righteous feeling of virtue, combined with their essentially peasant training, resulted in their introducing a type of cut-rate, petty chiselling that should make Boss Tweed spin in his coffin.

But Sally's not like that. She's got a tough mind which could reject the hokum.'

You're not in love with her, are you?'

Who, me? Sally's happily married and has two of the best kids I know.'

What does her husband do?'

Lawyer. One of the governor's supporters. Sally got started in politics through pinch-hitting for her husband one campaign.'

What is her official position up here?'

None. Right hand for the governor. That's her strength. Sally has never held a patronage job, nor been paid for her services.'

After this build-up I was anxious to meet the paragon. When she called I spoke to her over the house phone and was about to say that I would come down to the lobby when she announced that she was coming up, and hung up. I was a little startled at the informality, not yet realizing that politicians did not regard hotel rooms as bedrooms, but as business offices.

When I let her in she said, You're Archie Fraser, aren't you? I'm Sally Logan. Where's Joe?'

He'll be back soon. Won't you sit down and wait?'

Thanks.' She plopped herself into a chair, took off her hat and shook out her hair. I looked her over.

I had unconsciously expected something pretty formidable in the way of a mannish matron. What I saw was a young, plump, cheerful-looking blonde, with an untidy mass of yellow hair and frank blue eyes. She was entirely feminine, not over thirty at the outside, and there was something about her that was tremendously reassuring.

She made me think of county fairs and well water and sugar cookies.

I'm afraid this is going to be a tough proposition,' she began at once. I didn't think there was much interest in the matter, and I still don't think so, but just the same someone has a solid bloc lined up for Assembly Bill 22 - that's the bill I wired Joe about. What do you boys plan to do, make a straight fight to kill it or submit a substitute bill?'

Jedson drew up a fair-practices act with the aid of some of our Half World friends and a couple of lawyers. Would you like to see it?'

Please. I stopped by the State Printing Office and got a few copies of the bill you are against - AB 22. We'll swap.'

I was trying to translate the foreign language lawyers use when they write statutes when Jedson came in. He patted Sally's cheek without speaking, and she reached up and squeezed his hand and went on with her reading. He commenced reading over my shoulder. I gave up and let him have it. It made a set of building specifications look simple.

Sally asked, What do you think of it, Joe?'

Worse than I expected,' he replied. Take Paragraph 7-'

I haven't read it yet.'

So? Well, in the first place it recognizes the association as a semipublic body like the Bar Association or the Community Chest, and permits it to initiate actions before the commission. That means that every magician had better by a damn sight belong to Ditworth's association and be careful not to offend it.,

But how can that be legal?' I asked. It sounds unconstitutional to me - a private association like that-'

Plenty of precedent, son. Corporations to promote world's fairs, for example. They're recognized, and even voted tax money. As for unconstitutionality, you'd have to prove that the law was not equal in application - which it isn't! - but awfully hard to prove.'

But, anyhow, a witch gets a hearing before the commission?'

Sure, but there is the rub. The commission has very broad powers, almost unlimited powers over everything connected with magic. The bill is filled with phrases like "reasonable and proper , which means the sky's the limit, with nothing but the good sense and decency of the commissioners to restrain them. That's my objection to commissions in government - the law can never be equal in application under them. They have delegated legislative powers, and the law is what they say it is. You might as well face a drumhead court- martial.

There are nine commissioners provided for in this case, six of which must be licensed magicians, first-class. I don't suppose it is necessary to point out that a few ill-advised appointments to the original commission will turn it into a tight little self-perpetuating oligarchy - through its power to license.'

Sally and Joe were going over to see a legislator whom they thought might sponsor our bill, so they dropped me off at the capitol. I wanted to listen to some of the debate.

It gave me a warm feeling to climb up the big, wide steps of the statehouse. The old, ugly mass of masonry seemed to represent something tough in the character of the American people, the determination of free men to manage their own affairs. Our own current problem seemed a little smaller, not quite so overpoweringly important - still worth working on,

but simply one example in a long history of the general problem of self-government.

I noticed something else as I was approaching the great bronze doors; the contractor for the outer construction of the building must have made his pile; the mix for the mortar was not richer than one to six!

I decided on the Assembly rather than the Senate because Sally said they generally put on a livelier show. When I entered the hall they were discussing a resolution to investigate the tarring and feathering the previous month of three agricultural-worker organizers up near the town of Six Points. Sally had remarked that it was on the calendar for the day, but that it would not take long because the proponents of the resolution did not really want it. However, the Central Labour Council had passed a resolution demanding it, and the labour- supported members were stuck with it.

The reason why they could only go through the motions of asking for an investigation was that the organizers were not really human beings at all, but mandrakes, a fact that the state council had not been aware of when they asked for an investigation. Since the making of mandrakes is the blackest kind of black magic, and highly illegal, they needed some way to drop it quietly. The use of mandrakes has always been opposed by organized labour, because it displaces real men - men with families to support. For the same reasons they oppose synthetic facsimiles and homunculi. But it is well known that the unions are not above using mandrakes, or mandragoras, as well as facsimiles, when it suits their purpose, such as for pickets, pressure groups, and the like. I suppose they feel justified in fighting fire with fire. Homunculi they can't use on account of their size, since they are too small to be passed off as men.

If Sally had not primed me, I would not have understood what took place. Each of the labour members got up and demanded in forthright terms a resolution to investigate. When they were all through, someone proposed that the matter be tabled until the grand jury of the county concerned held its next meeting. This motion was voted on without debate and without a roll call; although practically no members were present except those who had spoken in favour of the original resolution, the motion passed easily.

There was the usual crop of oil-industry bills on the agenda, such as you read about in the newspapers every time the legislature is in session. One of them was the next item on the day's calendar - a bill which proposed that the governor negotiate a treaty with the gnomes, under which the gnomes would aid the petroleum engineers in prospecting and, in addition, would advise humans in drilling methods so as to maintain the natural gas pressure underground needed to raise the oil to the surface. I think that

is the idea, but I am no petroleum engineer.

The proponent spoke first. Mr Speaker,' he said, I ask for a "Yes vote on this bill, A B 79. Its purpose is quite simple and the advantages obvious. A very large part of the overhead cost of recovering crude oil from the ground lies in the uncertainties of prospecting and drilling. With the aid of the Little People this item can be reduced to an estimated 7 per cent of its present dollar cost, and the price of gasoline and other petroleum products to the people can be greatly lessened.

The matter of underground gas pressure is a little more technical, but suffice it to say that it takes, in round numbers, a thousand cubic feet of natural gas to raise one barrel of oil to the surface. If we can get intelligent supervision of drilling operations far underground, where no human being can go, we can make the most economical use of this precious gas pressure.

The only rational objection to this bill lies in whether or not we can deal with the gnomes on favourable terms. I believe that we can, for the Administration has some excellent connexions in the Hall World. The gnomes are willing to negotiate in order to put a stop to the present condition of chaos in which human engineers drill blindly, sometimes wrecking their homes and not infrequently violating their sacred places. They not unreasonably claim everything under the surface as their kingdom, but are willing to make any reasonable concession to abate what is to them an intolerable nuisance.

If this treaty works out well, as it will, we can expect to arrange other treaties which will enable us to exploit all of the metal and mineral resources of this state under conditions highly advantageous to us and not hurtful to the gnomes. Imagine, if you please, having a gnome with his X-ray eyes peer into a mountainside and locate a rich vein of gold for you!'

It seemed very reasonable, except that, having once seen the king of the gnomes, I would not trust him very far, unless Mrs Jennings did the negotiating.

As soon as the proponent sat down, another member jumped up and just as vigorously denounced it. He was older than most of the members, and I judged him to be a country lawyer. His accent placed him in the northern part of the state, well away from the oil country. Mr Speaker,' he bellowed, I ask for a vote of "No! . Who would dream that an American legislature would stoop to such degrading nonsense? Have any of you ever seen a gnome? Have you any reason to believe that gnomes exist? This is just a cheap piece of political chicanery to do the public out of its

proper share of the natural resources of our great state-'

He was interrupted by a question. Does the honourable member from Lincoln County mean to imply that he has no belief in magic? Perhaps he does not believe in the radio or the telephone either.'

Not at all. If the Chair will permit, I will state my position so clearly that even my respected colleague on the other side of the house will understand it. There are certain remarkable developments in human knowledge in general use which are commonly referred to by the laity as magic. These principles are well understood and are taught, I am happy to say, in our great publicly owned institutions for higher learning. I have every respect for the legitimate practitioners thereof. But, as I understand it, although I am not myself a practitioner of the great science, there is nothing in it that requires a belief in the Little People.

But let us stipulate, for the sake of argument, that the Little People do exist. Is that any reason to pay them blackmail? Should the citizens of this commonwealth pay cumshaw to the denizens of the underworld-' He waited for his pun to be appreciated. It wasn't. -for that which is legally and rightfully ours? If this ridiculous principle is pushed to its logical conclusion, the farmers and dairymen I am proud to number among my constituents will be required to pay toll to the elves before they can milk their cows!'

Someone slid into the seat beside me. I glanced around, saw that it was Jedson, and questioned him with my eyes. Nothing doing now,' he whispered. We've got some time to kill and might as well do it here' - and he turned to the debate.

Somebody had gotten up to reply to the old duck with the Daniel Webster complex. Mr Speaker, if the honoured member is quite through with his speech - I did not quite catch what office he is running for! - I would like to invite the attention of this body to the precedented standing in jurisprudence of elements of every nature, not only in Mosaic law, Roman law, the English common law, but also in the appellate court of our neighbouring state to the south. I am confident that anyone possessing even an elementary knowledge of the law will recognize the case I have in mind without citation, but for the benefit of-'

Mr Speaker! I move to amend by striking out the last word.'

A stratagem to gain the floor,' Joe whispered.

Is it the purpose of the honourable member who preceded me to imply-'

It went on and on. I turned to Jedson and asked, I can't figure out this chap who is speaking; a while ago he was hollering about cows. What's he afraid of, religious prejudices?'

Partly that; he's from a very conservative district. But he's lined up with the independent oilmen. They don't want the state setting the terms; they think they can do better dealing with the gnomes directly.'

But what interest has he got in oil? There's no oil in his district.'

No, but there is outdoor advertising. The same holding company that controls the so-called independent oilmen holds a voting trust in the Countryside Advertising Corporation. And that can be awfully important to him around election time.

The Speaker looked our way, and an assistant sergeant at arms threaded his way towards us. We shut up. Someone moved the order of the day, and the oil bill was put aside for one of the magic bills that had already come out of committee. This was a bill to outlaw every sort of magic, witchcraft, thaumaturgy.

No one spoke for it but the proponent, who launched into a diatribe that was more scholarly than logical. He quoted extensively from Blackstone's Commentaries and the records of the Massachusetts trials, and finished up with his head thrown back, one finger waving wildly to heaven and shouting,' "Thou shalt not suffer a witch to live! '

No one bothered to speak against it; it was voted on immediately without roll call, and, to my complete bewilderment, passed without a single nay! I turned to Jedson and found him smiling at the expression on my face.

It doesn't mean a thing, Archie,' he said quietly.

Huh?'

He's a party wheel horse who had to introduce that bill to please a certain bloc of his constituents.'

You mean he doesn't believe in the bill himself?'

Oh no, he believes in it all right, but he also knows it is hopeless. It has evidently been agreed to let him pass it over here in the Assembly this session so that he would have something to take home to his people. Now it will go to the senate committee and die there; nobody will ever hear of it again.'

I guess my voice carries too well, for my reply got us a really dirty look from the Speaker. We got up hastily and left.

Once outside I asked Joe what had happened that he was back so soon. He would not touch it,' he told me. Said that he couldn't afford to antagonize the association.'

Does that finish us?'

Not at all. Sally and I are going to see another member right after lunch. He's tied up in a committee meeting at the moment.'

We stopped in a restaurant where Jedson had arranged to meet Sally Logan. Jedson ordered lunch, and I had a couple of cans of devitalized beer, insisting on their bringing it to the booth in the unopened containers. I don't like to get even a little bit tipsy, although I like to drink. On another occasion I had paid for wizard-processed liquor and had received intoxicating liquor instead. Hence the unopened containers.

I sat there, staring into my glass and thinking about what I had heard that morning, especially about the bill to outlaw all magic. The more I thought about it the better the notion seemed. The country had gotten along all right in the old days before magic had become popular and commercially widespread. It was unquestionably a headache in many ways, even leaving out our present troubles with racketeers and monopolists. Finally I expressed my opinion to Jedson.

But he disagreed. According to him prohibition never does work in any field. He said that anything which can be supplied and which people want will he supplied - law or no law. To prohibit magic would simply be to turn over the field to the crooks and the black magicians.

I see the drawbacks of magic as well as you do,' he went on, but it is like firearms. Certainly guns made it possible for almost anyone to commit murder and get away with it. But once they were invented the damage was done. All you can do is to try to cope with it. Things like the Sullivan Act - they didn't keep the crooks from carrying guns and using them; they simply took guns out of the hands of honest people.

It's the same with magic. If you prohibit it, you take from decent people the enormous boons to be derived from a knowledge of the great arcane laws, while the nasty, harmful secrets hidden away in black grimoires and red grimoires will still be bootlegged to anyone who will pay the price and has no respect for law.

Personally, I don't believe there was any less black magic practised

between, say, 1750 and 1950 than there is now, or was before then. Take a look at Pennsylvania and the hex country. Take a look at the Deep South. But since that time we have begun to have the advantages of white magic too.'

Sally came in, spotted us, and slid into one side of the booth. My,' she said with a sigh of relaxation, I've just fought my way across the lobby of the Constitution. The "third house" is certainly out in full force this trip. I've never seen em so thick, especially the women.'

She means lobbyists, Archie,' Jedson explained. Yes, I noticed them. I'd like to make a small bet that two thirds of them are synthetic.'

I thought I didn't recognize many of them,' Sally commented. Are you sure, Joe?'

Not entirely. But Bodie agrees with me. He says that the women are almost all mandrakes, or androids of some sort. Real women are never quite so perfectly beautiful - nor so tractable. I've got him checking on them now.'

In what way?'

He says he can spot the work of most of the magicians capable of that high-powered stuff. If possible we want to prove that all these androids were made by Magic, Incorporated - though I'm not sure just what use we can make of the fact.

Bodie has even located some zombies,' he added.

Not really!' exclaimed Sally. She wrinkled her nose and looked disgusted. Some people have odd tastes.'

They started discussing aspects of politics that I know nothing about, while Sally put away a very sizeable lunch topped off by a fudge ice-cream cake slice. But I noticed that she ordered from the left-hand side of the menu - all vanishing items, like the alcohol in my beer.

I found out more about the situation as they talked. When a bill is submitted to the legislature, it is first referred to a committee for hearings. Ditworth's bill, A B 22, had been referred to the Committee on Professional Standards. Over in the Senate an identical bill had turned up and had been referred by the lieutenant governor, who presides in the Senate, to the Committee on Industrial Practices.

Our immediate object was to find a sponsor for our bill; if possible, one for each house, and preferably sponsors who were members, in their

respective houses, of the committees concerned. All of this needed to be done before Ditworth's bills came up for hearing.

I went with them to see their second-choice sponsor for the Assembly. He was not on the Professional Standards Committee, but he was on the Ways and Means Committee, which meant that he carried a lot of weight in any committee.

He was a pleasant chap named Spence - Luther B. Spence - and I could see that he was quite anxious to please Sally - for past favours, I suppose. But they had no more luck with him than with their first-choice man. He said that he did not have time to fight for our bill, as the chairman of the Ways and Means Committee was sick and he was chairman pro tem.

Sally put it to him flatly. Look here, Luther, when you have needed a hand in the past, you've got it from me. I hate to remind a man of obligations, but you will recall that matter of the vacancy last year on the Fish and Game Commission. Now I want action on this matter, and not excuses!'

Spence was plainly embarrassed. Now, Sally, please don't feel like that. You're getting your feathers up over nothing. You know I'll always do anything I can for you, but you don't really need this, and it would necessitate my neglecting things that I can't afford to neglect.'

What do you mean, I don't need it?'

I mean you should not worry about A B 22. It's a cinch bill.'

Jedson explained that term to me later. A cinch bill, he said, was a bill introduced for tactical reasons. The sponsors never intended to try to get it enacted into law, but simply used it as a bargaining point. It's like an asking price' in a business deal.

Are you sure of that?'

Why, yes, I think so. The word has been passed around that there is another bill coming up that won't have the bugs in it that this bill has.'

After we left Spence's office, Jedson said, Sally, I hope Spence is right, but I don't trust Ditworth's intentions. He's out to get a stranglehold on the industry. I know it!'

Luther usually has the correct information, Joe.'

Yes, that is no doubt true, but this is a little out of his line. Anyhow, thanks, kid. You did your best.'

Call on me if there is anything else, Joe. And come Out to dinner before you go; you haven't seen Bill or the kids yet.'

I won't forget.'

Jedson finally gave up as impractical trying to submit our bill, and concentrated on the committees handling Ditworth's bills. I did not see much of him. He would go out at four in the afternoon to a cocktail party and get back to the hotel at three in the morning, bleary-eyed, with progress to report.

He woke me up the fourth night and announced jubilantly, It's in the bag, Archie!'

You killed those bills?'

Not quite. I couldn't manage that. But they will be reported out of committee so amended that we won't care if they do pass. Furthermore, the amendments are different in each committee.

Well, what of that?'

That means that even if they do pass their respective houses they will have to go to conference committee to have their differences ironed out, then back for final passage in each house. The chances of that this late in a short session are negligible. Those bills are dead.'

Jedson's predictions were justified. The bills came out of committee with a do pass' recommendation late Saturday evening. That was the actual time; the statehouse clock had been stopped forty-eight hours before to permit first and second readings of an administration must' bill. Therefore it was officially Thursday. I know that sounds cockeyed, and it is, but I am told that every legislature in the country does it towards the end of a crowded session.

The important point is that, Thursday or Saturday, the session would adjourn sometime that night. I watched Ditworth's bill come up in the Assembly. It was passed, without debate, in the amended form. I sighed with relief. About midnight Jedson joined me and reported that the same thing had happened in the Senate. Sally was on watch in the conference committee room, just to make sure that the bills stayed dead.

Joe and I remained on watch in our respective houses. There was probably no need for it, but it made us feel easier. Shortly before two in the morning Bodie came in and said we were to meet Jedson and Sally outside the

conference committee room.

What's that?' I said, immediately all nerves. Has something slipped?'

No, it's all right and it's all over. Come on.'

Joe answered my question, as I hurried up with Bodie trailing, before I could ask it. It's OK, Archie. Sally was present when the committee adjourned sine die, without acting on those bills. It's all over; we've won!'

We went over to the bar across the street to have a drink in celebration.

In spite of the late hour the bar was moderately crowded. Lobbyists, local politicians, legislative attaches, all the swarm of camp followers who throng the capitol whenever the legislature is sitting - all such were still up and around, and many of them had picked this bar as a convenient place to wait for news of adjournment.

We were lucky to find a stool at the bar for Sally. We three men made a tight little cluster around her and tried to get the attention of the overworked bartender. We had just managed to place our orders when a young man tapped on the shoulder of the customer on the stool to the right of Sally. He immediately got down and left. I nudged Bodie to tell him to take the seat.

Sally turned to Joe. Well, it won't be long now. There go the sergeants at arms.' She nodded towards the young man, who was repeating the process farther down the line.

What does that mean?' I asked Joe.

It means they are getting along towards the final vote on the bill they were waiting on. They've gone to "call of the house now, and the Speaker has ordered the sergeant at arms to send his deputies out to arrest absent members.'

Arrest them?' I was a little bit shocked.

Only technically. You see, the Assembly has had to stall until the Senate was through with this bill, and most of the members have wandered out for a bite to eat, or a drink. Now they are ready to vote, so they round them up.'

A fat man took a stool near us which had just been vacated by a member. Sally said, Hello, Don.'

He took a cigar from his mouth and said, How are yuh, Sally? What's new? Say, I thought you were interested in that bill on magic?'

We were all four alert at once. I am,' Sally admitted. What about it?'

Well, then, you had better get over there. They're voting on it right away. Didn't you notice the "call of the house ?'

I think we set a new record getting across the street, with Sally leading the field in spite of her plumpness. I was asking Jedson how it could be possible, and he shut me up with, I don't know, man! We'll have to see.'

We managed to find seats on the main floor back of the rail. Sally beckoned to one of the pages she knew and sent him up to the clerk's desk for a copy of the bill that was pending. In front of the rail the Assembly men gathered in groups. There was a crowd around the desk of the administration floor leader and a smaller cluster around the floor leader of the opposition. The whips had individual members buttonholed here and there, arguing with them in tense whispers.

The page came back with the copy of the bill. It was an appropriation bill for the Middle Counties Improvement Project - the last of the must' bills for which the session had been called - but pasted to it, as a rider, was Ditworth's bill in its original, most damnable form!

It had been added as an amendment in the Senate, probably as a concession to Ditworth's stooges in order to obtain their votes to make up the two-thirds majority necessary to pass the appropriation bill to which it had been grafted.

The vote came almost at once. It was evident, early in the roll call, that the floor leader had his majority in hand and that the bill would pass. When the clerk announced its passage, a motion to adjourn sine die was offered by the opposition floor leader and it was carried unanimously. The Speaker called the two floor leaders to his desk and instructed them to wait on the governor and the presiding officer of the Senate with notice of adjournment.

The crack of his gavel released us from stunned immobility. We shambled out.

We got in to see the governor late the next morning. The appointment, squeezed into an overcrowded calendar, was simply a concession to Sally and another evidence of the high regard in which she was held around the capitol. For it was evident that he did not want to see us and did not have

time to see us. But he greeted Sally affectionately and listened, patiently while Jedson explained in a few words why we thought the combined Ditworth-Middle Counties bill should be vetoed.

The circumstances were not favourable to reasoned expostulation. The governor was interrupted by two calls that he had to take, one from his director of finance and one from Washington. His personal secretary came in once and shoved a memorandum under his eyes, at which the old man looked worried, then scrawled something on it and handed it back. I could tell that his attention was elsewhere for some minutes after that.

When Jedson stopped talking, the governor sat for a moment, looking down at his blotter pad, an expression of deep- rooted weariness on his face. Then he answered in slow words, No, Mr Jedson, I can't see it. I regret as much as you do that this business of the regulation of magic has been tied in with an entirely different matter. But I cannot veto part of a bill and sign the rest - even though the bill includes two widely separated subjects.

I appreciate the work you did to help elect my administration' - I could see Sally's hand in that remark - and wish that we could agree on this. But the Middle Counties Project is something that I have worked towards since my inauguration. I hope and believe that it will be the means whereby the most depressed area in our state can work out its economic problems without further grants of public money. If I thought that the amendment concerning magic would actually do a grave harm to the state-'

He paused for a moment. But I don't. When Mrs Logan called me this morning I had my legislative counsel analyse the bill. I agree that the bill is unnecessary, but it seems to do nothing more than add a little more bureaucratic red tape. That's not good, but we manage to do business under a lot of it; a little more can't wreck things.'

I butted in - rudely, I suppose - but I was all worked up. But, Your Excellency, if you would just take time to examine this matter yourself, in detail, you would see how much damage it will do!'

I would not have been surprised if he had flared back at me. Instead, he indicated a file basket that was stacked high and spilling over. Mr Fraser, there you see fifty-seven bills passed by this session of the legislature. Every one of them has some defect. Every one of them is of vital importance to some, or all of the people of this state. Some of them are as long to read as an ordinary novel. In the next nine days I must decide what ones shall become law and' what ones must wait for revision at the next regular session. During that nine days at least a thousand people will want me to see them about some one of those bills-'

His aide stuck his head in the door. Twelve-twenty, chief! You're on the air in forty minutes.'

The governor nodded absently and stood up. You will excuse me? I'm expected at a luncheon.' He turned to his aide, who was getting out his hat and gloves from a closet. You have the speech, Jim?'

Of course, sir.

Just a minute!' Sally had cut in. Have you taken your tonic?'

Not yet.'

You're not going off to one of those luncheons without it!' She ducked into his private washroom and came out with a medicine bottle. Joe and I bowed out as quickly as possible.

Outside I started fuming to Jedson about the way we had been given the run-around, as I saw it. I made some remark about dunderheaded, compromising politicians when Joe cut me short.

Shut up, Archie! Try running a state sometime instead of a small business and see how easy you find it!'

I shut up.

Bodie was waiting for us in the lobby of the capitol. I could see that he was excited about something, for he flipped away a cigarette and rushed towards us. Look!' he commanded. Down there!'

We followed the direction of his finger and saw two figures just going out of the big doors. One was Ditworth, the other was a well-known lobbyist with whom he had worked. What about it?' Joe demanded.

I was standing here behind this phone booth, leaning against the wall and catching a cigarette. As you can see, from here that big mirror reflects the bottom of the rotunda stairs. I kept an eye on it for you fellows. I noticed this lobbyist, Sims, coming downstairs by himself, but he was gesturing as if he were talking to somebody. That made me curious, so I looked around the corner of the booth and saw him directly. He was not alone; he was with Ditworth. I looked back at the mirror and he appeared to be alone. Ditworth cast no reflection in the mirror!'

Jedson snapped his fingers. A demon!' he said in an amazed voice. And I never suspected it!'

I am surprised that more suicides don't occur on trains. When a man is down, I know of nothing more depressing than staring at the monotonous scenery and listening to the maddening lickety-tock of the rails. In a way I was glad to have this new development of Ditworth's inhuman status to think about; it kept my mind off poor old Feldstein and his thousand dollars.

Startling as it was to discover that Ditworth was a demon, it made no real change in the situation except to explain the efficiency and speed with which we had been outmanoeuvred and to confirm as a certainty our belief that the racketeers and Magic, Incorporated, were two heads of the same beast. But we had no way of proving that Ditworth was a Half World monster. If we tried to haul him into court for a test, he was quite capable of lying low and sending out a facsimile, or a mandrake, built to look like him and immune to the mirror test.

We dreaded going back and reporting our failure to the committee - at least I did. But at least we were spared that. The Middle Counties Act carried an emergency clause which put it into effect the day it was signed. Ditworth's bill, as an amendment, went into action with the same speed. The newspapers on sale at the station when we got off the train carried the names of the new commissioners for thaumaturgy.

Nor did the commission waste any time in making its power felt. They announced their intention of raising the standards of magical practice in all fields, and stated that new and more thorough examinations would be prepared at once. The association formerly headed by Ditworth opened a coaching school in which practising magicians could take a refresher course in thaumaturgic principles and arcane law. In accordance with the high principles set forth in their charter, the school was not restricted to members of the association.

That sounds bighearted of the association. It wasn't. They managed to convey a strong impression in their classes that membership in the association would be a big help in passing the new examinations. Nothing you could put your finger on to take into court - just a continuous impression. The association grew.

A couple of weeks later all licences were cancelled and magicians were put on a day-to-day basis in their practice, subject to call for re-examination at a day's notice. A few of the outstanding holdouts against signing up with Magic, Incorporated, were called up, examined, and licences refused them. The squeeze was on. Mrs Jennings quietly withdrew from any practice. Bodie came around to see me; I had an uncompleted contract with him involving some apartment houses.

Here's your contract, Archie,' he said bitterly. I'll need some time to pay the penalties for noncompletion; my bond was revoked when they cancelled the licences.'

I took the contract and tore it in two. Forget that talk about penalties,' I told him. You take your examinations and we'll write a new contract.~

He laughed unhappily. Don't be a Pollyanna.'

I changed my tack. What are you going to do? Sign up with Magic, Incorporated?'

He straightened himself up. I've never temporized with demons; I won't start now.'

Good boy,' I said. Well, if the eating gets uncertain, I reckon we can find a job of some sort here for you.'

It was a good thing that Bodie had some money saved, for I was a little too optimistic in my offer. Magic, Incorporated, moved quickly into the second phase of their squeeze, and it began to be a matter of speculation as to whether I myself would eat regularly. There were still quite a number of licensed magicians in town who were not employed by Magic, Incorporated - it would have been an evident, actionable frame-up to freeze out everyone - but those available were all incompetent bunglers, not fit to mix a philter. There was no competent, legal magical assistance to be got at any price - except through Magic, Incorporated.

I was forced to fall back on old-fashioned methods in every respect. Since I don't use much magic in any case, it was possible for me to do that, but it was the difference between making money and losing money.

I had put Feldstein on as a salesman after his agency folded up under him. He turned out to be a crackajack and helped to reduce the losses. He could smell a profit even farther than I could - farther than Dr Worthington could smell a witch.

But most of the other businessmen around me were simply forced to capitulate. Most of them used magic in at least one phase of their business; they had their choice of signing a contract with Magic, Incorporated, or closing their doors. They had wives and kids - they signed.

The fees for thaumaturgy were jacked up until they were all the traffic would bear, to the point where it was just cheaper to do business with

magic than without it. The magicians got none of the new profits; it all stayed with the corporation. As a matter of fact, the magicians got less of the proceeds than when they had operated independently, but they took what they could get and were glad of the chance to feed their families.

Jedson was hard hit - disastrously hit. He held out, naturally, preferring honourable bankruptcy to dealing with demons, but he used magic throughout his business. He was through. They started by disqualifying August Welker, his foreman, then cut off the rest of his resources. It was intimated that Magic, Incorporated, did not care to deal with him, even had he wished it.

We were all over at Mrs Jennings's late one afternoon for tea - myself, Jedson, Bodie, and Dr Royce Worthington, the witch smeller. We tried to keep the conversation away from our troubles, but we just could not do it. Anything that was said led back somehow to Ditworth and his damnable monopoly.

After Jack Bodie had spent ten minutes explaining carefully and mendaciously that he really did not mind being out of witchcraft, that he did not have any real talent for it, and had only taken it up to please his old man, I tried to change the subject. Mrs Jennings had been listening to Jack with such pity and compassion in her eyes that I wanted to bawl myself.

I turned to Jedson and said inanely, How is Miss Megeath?'

She was the white witch from Jersey City, the one who did creative magic in textiles. I had no special interest in her welfare.

He looked up with a start. Ellen? She's ... she's all right. They took her licence away a month ago,' he finished lamely.

That was not the direction I wanted the talk to go. I turned it again. Did she ever manage to do that whole-garment stunt?'

He brightened a little. Why, yes, she did - once. Didn't I tell you about it?' Mrs Jennings showed polite curiosity, for which I silently thanked her. Jedson explained to the others what they had been trying to accomplish. She really succeeded too well,' he continued. Once she had started, she kept right on, and we could not bring her out of her trance. She turned out over thirty thousand little striped sports dresses, all the same size and pattern. My lofts were loaded with them. Nine tenths of them will melt away before I dispose of them.

But she won't try it again,' he added. Too hard on her health.'

How?' I inquired.

Well, she lost ten pounds doing that one stunt. She's not hardy enough for magic. What she really needs is to go out to Arizona and lie around in the sun for a year. I wish to the Lord I had the money. I'd send her.'

I cocked an eyebrow at him. Getting interested, Joe?' Jedson is an inveterate bachelor, but it pleases me to pretend otherwise. He generally plays up, but this time he was downright surly. It showed the abnormal state of nerves he was in.

Oh, for cripes' sake, Archie! Excuse me, Mrs Jennings! But can't I take a normal humane interest in a person without you seeing an ulterior motive in it?'

Sorry.'

That's all right.' He grinned. I shouldn't be so touchy. Anyhow, Ellen and I have cooked up an invention between us that might be a solution for all of us. I'd been intending to show it to all of you just as soon as we had a working model. Look, folks!' He drew what appeared to be a fountain pen Out of a vest pocket and handed it to me.

What is it? A pen?'

No.'

A fever thermometer?'

No. Open it up.'

I unscrewed the cap and found that it contained a miniature parasol. It opened and closed like a real umbrella, and was about three inches across when opened. It reminded me of one of those clever little Japanese favours one sometimes gets at parties, except that it seemed to be made of oiled silk and metal instead of tissue paper and bamboo.

Pretty,' I said, and very clever. What's it good for?'

Dip it in water.'

I looked around for some. Mrs Jennings poured some into an empty cup, and I dipped it in.

It seemed to crawl in my hands.

In less than thirty seconds I was holding a full-sized umbrella in my hands and looking as silly as I felt. Bodie smacked a palm with a fist.

It's a lulu, Joe! I wonder why somebody didn't think of it before.'

Jedson accepted congratulations with a fatuous grin, then added, That's not all - look.' He pulled a small envelope out of a pocket and produced a tiny transparent raincoat, suitable for a six-inch doll. This is the same gag. And this.' He hauled out a pair of rubber overshoes less than an inch long. A man could wear these as a watch fob, or a woman could carry them on a charm bracelet. Then, with either the umbrella or the raincoat, one need never be caught in the rain. The minute the rain hits them, presto! - full size. When they dry out they shrink up.'

We passed them around from hand to hand and admired them. Joe went on. Here's what I have in mind. This business needs a magician - that's you, Jack - and a merchandiser - that's you, Archie. It has two major stockholders: that's Ellen and me. She can go take the rest cure she needs, and I'll retire and resume my studies, same as I always wanted to.'

My mind immediately started turning over the commercial possibilities, then I suddenly saw the hitch. Wait a minute, Joe. We can't set up business in this state.'

No.'

It will take some capital to move out of the state. How are you fixed? Frankly, I don't believe I could raise a thousand dollars if I liquidated.'

He made a wry face. Compared with me you are rich.'

I got up and began wandering nervously around the room. We would just have to raise the money somehow. It was too good a thing to be missed, and would rehabilitate all of us. It was clearly patentable, and I could see commercial possibilities that would never occur to Joe. Tents for camping, canoes, swimming suits, travelling gear of every sort. We had a gold mine.

Mrs Jennings interrupted in her sweet and gentle voice. I am not sure it will be too easy to find a state in which to operate.'

Excuse me, what did you say?'

Dr Royce and I have been making some inquiries. I am afraid you will find the rest of the country about as well sewed up as this state.'

What! Forty-eight states?'

Demons don't have the same limitations in time that we have.'

That brought me up short. Ditworth again.

Gloom settled down on us like fog. We discussed it from every angle and came right back to where we had started. It was no help to have a clever, new business; Ditworth had us shut out of every business. There was an awkward silence.

I finally broke it with an outburst that surprised myself. Look here!' I exclaimed. This situation is intolerable. Let's quit kidding ourselves and admit it. As long as Ditworth is in control we're whipped. Why don't we do something?'

Jedson gave me a pained smile. God knows I'd like to, Archie, if I could think of anything useful to do.'

But we know who our enemy is - Ditworth! Let's tackle him - legal or not, fair means or dirty!'

But that is just the point. Do we know our enemy? To be sure, we know he is a demon, but what demon, and where? Nobody has seen him in weeks.'

Huh? But I thought just the other day-'

Just a dummy, a hollow shell. The real Ditworth is somewhere out of sight.'

But, look, if he is a demon, can't he be invoked, and compelled-'

Mrs Jennings answered this time. Perhaps - though it's uncertain and dangerous. But we lack one essential - his name. To invoke a demon you must know his real name, otherwise he will not obey you, no matter how powerful the incantation. I have been searching the Half World for weeks, but I have not learned that necessary name.'

Dr Worthington cleared his throat with a rumble as deep as a cement mixer, and volunteered, My abilities are at your disposal, if I can help to abate this nuisance-'

Mrs Jennings thanked him. I don't see how we can use you as yet, Doctor. I knew we could depend on you.'

Jedson said suddenly, White prevails over black.'

She answered, Certainly.'

Everywhere?'

Everywhere, since darkness is the absence of light.'

He went on, It is not good for the white to wait on the black.'

It is not good.'

With my brother Royce to help, we might carry light into darkness.'

She considered this. It is possible, yes. But very dangerous.'

You have been there?'

On occasion. But you are not I, nor are these others.'

Everyone seemed to be following the thread of the conversation but me. I interrupted with, Just a minute, please. Would it be too much to explain what you are talking about?'

There was no rudeness intended, Archibald,' said Mrs Jennings in a voice that made it all right. Joseph has suggested that, since we are stalemated here, we make a sortie into the Half World, smell out this demon, and attack him on his home ground.'

It took me a moment to grasp the simple audacity of the scheme. Then I said, Fine! Let's get on with it. When do we start?'

They lapsed back into a professional discussion that I was unable to follow. Mrs Jennings dragged out several musty volumes and looked up references on points that were sheer Sanskrit to me. Jedson borrowed her almanac, and he and the doctor stepped out into the back yard to observe the moon.

Finally it settled down into an argument - or rather discussion; there could be no argument, as they all deferred to Mrs Jennings's judgement concerning liaison. There seemed to be no satisfactory way to maintain contact with the real world, and Mrs Jennings was unwilling to start until it was worked out. The difficulty was this: not being black magicians, not having signed a compact with Old Nick, they were not citizens of the Dark Kingdom and could not travel through it with certain impunity.

Bodie turned to Jedson. How about Ellen Megeath?' he inquired doubtfully.

Ellen? Why, yes, of course. She would do it. I'll telephone her. Mrs

Jennings, do any of your neighbours have a phone?'

Never mind,' Bodie told him, just think about her for a few minutes so that I can get a line-' He stared at Jedson's face for a moment, then disappeared suddenly.

Perhaps three minutes later Ellen Megeath dropped lightly out of nothing. Mr Bodie will be along in a few minutes,' she said. He stopped to buy a packet of cigarettes.' Jedson took her over and presented her to Mrs Jennings. She did look sickly, and I could understand Jedson's concern. Every few minutes she would swallow and choke a little, as if bothered by an enlarged thyroid.

As soon as Jack was back they got right down to details. He had explained to Ellen what they planned to do, and she was entirely willing. She insisted that one more session of magic would do her no harm. There was no advantage in waiting; they prepared to depart at once. Mrs Jennings related the marching orders. Ellen, you will need to follow me in trance, keeping in close rapport. I think you will find that couch near the fireplace a good place to rest your body. Jack, you will remain here and guard the portal.' The chimney of Mrs Jennings's living room fireplace was to be used as most convenient. You will keep in touch with us through Ellen.'

But, Granny, I'll be needed in the Half-'

No, Jack.' She was gently firm. You are needed here much more. Someone has to guard the way and help us back, you know. Each to his task.'

He muttered a bit, but gave in. She went on, I think that is all. Ellen and Jack here; Joseph, Royce, and myself to make the trip. You will have nothing to do but wait, Archibald, but we won't be longer than ten minutes, world time, if we are to come back.' She bustled away towards the kitchen, saying something about the unguent and calling back to Jack to have the candles ready. I hurried after her.

'What do you mean, I demanded, about me having nothing to do but wait? I'm going along!'

She turned and looked at me before replying, troubled concern in her magnificent eyes. I don't see how that can be, Archibald.'

Jedson had followed us and now took me by the arm. See here, Archie, do be sensible. It's utterly out of the question. You're not a magician.'

I pulled away from him. Neither are you.'

Not in a technical sense, perhaps, but I know enough to be useful. Don't be a stubborn fool, man; if you come, you'll simply handicap us.'

That kind of an argument is hard to answer and manifestly unfair. How?' I persisted.

Hell's bells, Archie, you're young and strong and willing, and there is no one I would rather have at my back in a roughhouse, but this is not a job for courage, or even intelligence alone. It calls for special knowledge and experience.'

Well,' I answered, Mrs Jennings has enough of that for a regiment. But - if you'll pardon me, Mrs Jennings! - she is old and feeble. I'll be her muscles if her strength fails.'

Joe looked faintly amused, and I could have kicked him. But that is not what is required in-'

Dr Worthington's double-bass rumble interrupted him from somewhere behind us. It occurs to me, brother, that there may possibly be a use for our young friend's impetuous ignorance. There are times when wisdom is too cautious.'

Mrs Jennings put a stop to it. Wait - all of you,' she commanded, and trotted over to a kitchen cupboard. This she opened, moved aside a package of rolled oats, and took down a small leather sack. It was filled with slender sticks.

She cast them on the floor, and the three of them huddled around the litter, studying the patterns. Cast them again,' Joe insisted. She did so.

I saw Mrs Jennings and the doctor nod solemn agreement to each other. Jedson shrugged and turned away. Mrs Jennings addressed me, concern in her eyes. You will go,' she said softly. It is not safe, but you will go.'

We wasted no more time. The unguent was heated and we took turns rubbing it on each other's backbone. Bodie, as gatekeeper, sat in the midst of his pentacles, mekagrans, and runes, and intoned monotonously from the great book. Worthington elected to go in his proper person, ebony in a breechcloth, parasymbols scribed on him from head to toe, his grandfather's head cradled in an elbow.

There was some discussion before they could decide on a final form for Joe, and the metamorphosis was checked and changed several times. He finished up with paper-thin grey flesh stretched over an obscenely distorted skull, a sloping back, the thin flanks of an animal, and a long, boy tail, which he

twitched incessantly. But the whole composition was near enough to human to create a revulsion much greater than would be the case for a more outlandish shape. I gagged at the sight of him, but he was pleased. There!' he exclaimed in a voice like scratched tin. You've done a beautiful job, Mrs Jennings. Asmodeus would not know me from his own nephew.'

I trust not,' she said. Shall we go?'

How about Archie?'

It suits me to leave him as he is.'

Then how about your own transformation?'

I'll take care of that,' she answered, somewhat tartly. Take your places.'

Mrs Jennings and I rode double on the same broom, with me in front, facing the candle stuck in the straws. I've noticed All Hallow's Eve decorations which show the broom with the handle forward and the brush trailing. That is a mistake. Custom is important in these matters. Royce and Joe were to follow close behind us. Seraphin leaped quickly to his mistress' shoulder and settled himself, his whiskers quivering with eagerness.

Bodie pronounced the word, our candle flared up high, and we were off. I was frightened nearly to panic, but tried not to show it as I clung to the broom. The fireplace gaped at us, and swelled to a monster arch. The fire within roared up like a burning forest and swept us along with it. As we swirled up I caught a glimpse of a salamander dancing among the flames, and felt sure that it was my own - the one that had honoured me with its approval and sometimes graced my new fireplace. It seemed a good omen.

We had left the portal far behind - if the word behind' can be used in a place where directions are symbolic - the shrieking din of the fire was no longer with us, and I was beginning to regain some part of my nerve. I felt a reassuring hand at my waist, and turned my head to speak to Mrs Jennings.

I nearly fell off the broom.

When we left the house there had mounted behind me an old, old woman, a shrunken, wizened body kept alive by an indomitable spirit. She whom I now saw was a young woman, strong, perfect, and vibrantly beautiful. There is no way to describe her; she was without defect of any sort, and imagination could suggest no improvement.

Have you ever seen the bronze Diana of the Woods? She was something like that, except that metal cannot catch the live dynamic beauty that I saw.

But it was the same woman!

Mrs Jennings - Amanda Todd, that was - at perhaps her twenty-fifth year, when she had reached the full maturity of her gorgeous womanhood, and before time had softened the focus of perfection.

I forgot to be afraid. I forgot everything except that I was in the presence of the most compelling and dynamic female had ever known. I forgot that she was at least sixty years older than myself, and that her present form was simply a triumph of sorcery. I suppose if anyone had asked me at that time if I were in love with Amanda Jennings, I would have answered, Yes!' But at the time my thoughts were much too confused to be explicit. She was there, and that was sufficient.

She smiled, and her eyes were warm with understanding. She spoke, and her voice was the voice I knew, even though it was rich contralto in place of the accustomed clear, thin soprano. Is everything all right, Archie?'

Yes,' I answered in a shaky voice. Yes, Amanda, everything is all right!'

As for the Half World- How can I describe a place that has no single matching criterion with what I have known? How can I speak of things for which no words have been invented? One tells of things unknown in terms of things which are known. Here there is no relationship by which to link; all is irrelevant. All I can hope to do is tell how matters affected my human senses, how events influenced my human emotions, knowing that there are two falsehoods involved - the falsehood I saw and felt, and the falsehood that I tell.

I have discussed this matter with Jedson, and he agrees with me that the difficulty is insuperable, yet some things may be said with a partial element of truth - truth of a sort, with respect to how the Half World impinged on me.

There is one striking difference between the real world and the Half World. In the real world there are natural laws which persist through changes of custom and culture; in the Half World only custom has any degree of persistence, and of natural law there is none. Imagine, if you please, a condition in which the head of a state might repeal the law of gravitation and have his decree really effective - a place where King Canute could order back the sea and have the waves obey him. A place where up' and down' were matters of opinion, and directions might read as readily in days or colours as in miles. And yet it was not a meaningless anarchy, for they were constrained to obey their customs as unavoidably as we comply with the rules of natural phenomena.

We made a sharp turn to the left in the formless greyness that surrounded us in order to survey the years for a sabbat meeting. It was Amanda's intention to face the Old One with the matter directly rather than to search aimlessly through ever changing mazes of the Half World for a being hard to identify at best.

Royce picked Out the sabbat, though I could see nothing until we let the ground come up to meet us and proceeded on foot. Then there was light and form. Ahead of us, perhaps a quarter of a mile away, was an eminence surmounted by a great throne which glowed red through the murky air. I could not make out clearly the thing seated there, but I knew it was himself' - our ancient enemy.

We were no longer alone. Life - sentient, evil undeadness - boiled around us and fogged the air and crept out of the ground. The ground itself twitched and pulsated as we walked over it. Faceless things sniffed and nibbled at our heels. We were aware of unseen presences about us in the fog-shot gloom: beings that squeaked, grunted, and sniggered; voices that were slobbering whimpers, that sucked and retched and bleated.

They seemed vaguely disturbed by our presence - Heaven knows that I was terrified by them! - for I could hear them flopping and shuffling out of our path, then closing cautiously in behind, as they bleated warnings to one another.

A shape floundered into our path and stopped, a shape with a great bloated head and moist, limber arms. Back!' it wheezed. Go back! Candidates for witchhood apply on the lower level.' It did not speak English, but the words were clear.

Royce smashed it in the face and we stamped over it, its chalky bones crunching underfoot. It pulled itself together again, whining its submission, then scurried out in front of us and thereafter gave us escort right up to the great throne.

That's the only way to treat these beings,' Joe whispered in my ear. Kick em in the teeth first, and they'll respect you.' There was a clearing before the throne which was crowded with black witches, black magicians, demons in every foul guise, and lesser unclean things. On the left side the cauldron boiled. On the right some of the company were partaking of the witches' feast. I turned my head away from that. Directly before the throne, as custom calls for, the witches' dance was being performed for the amusement of the Goat. Some dozens of men and women, young and old, comely and hideous, cavorted and leaped in impossible acrobatic adagio.

The dance ceased and they gave way uncertainly before us as we pressed up to the throne. What's this? What's this?' came a husky, phlegm-filled voice. It's my little sweetheart! Come up and sit beside me, my sweet! Have you come at last to sign my compact?'

Jedson grasped my arm; I checked my tongue.

I'll stay where I am,' answered Amanda in a voice crisp with contempt. As for your compact, you know better.'

Then why are you here? And why such odd companions.' He looked down at us from the vantage of his throne, slapped hairy thigh and laughed immoderately. Royce stirred and muttered; his grandfather's head chattered in wrath. Seraphhi spat.

Jedson and Amanda put their heads together for a moment, then she answered, By the treaty with Adam, I claim the right to examine.

He chuckled, and the little devils around him covered their ears. You claim privileges here? With no compact?'

Your customs,' she answered sharply.

Ah yes, the customs! Since you invoke them, so let it be. And whom would you examine?'

I do not know his name. He is one of your demons who has taken improper liberties outside your sphere.'

One of my demons, and you know not his name? I have seven million demons, my pretty. Will you examine them one by one, or all together?' His sarcasm was almost the match of her contempt.

All together.'

Never let it be said that I would not oblige a guest. If you will go forward - let me see - exactly five months and three days, you will find my gentlemen drawn up for inspection.'

I do not recollect how we got there. There was a great, brown plain, and no sky. Drawn up in military order for review by their evil lord were all the fiends of the Half World, legion on legion, wave after wave. The Old One was attended by his cabinet; Jedson pointed them out to me - Lucifugé, the prime minister; Sataniacha, field marshal; Beelzebub and Leviathan, wing commanders; Ashtoreth, Abaddon, Mammon, Theutus, Asmodeus, and Incubus, the Fallen Thrones. The seventy princes each commanded a division, and each

remained with his command, leaving only the dukes and the thrones to attend their lord, Satan Mekratrig.

He himself still appeared as the Goat, but his staff took every detestable shape they fancied. Asmodeus sported three heads, each evil and each different, rising out of the hind quarters of a swollen dragon. Mammon resembled, very roughly, a particularly repulsive tarantula. Ashtoreth I cannot describe at all. Only the Incubus affected a semblance of human form, as the only vessel adequate to display his lecherousness.

The Goat glanced our way. Be quick about it,' he demanded. We are not here for your amusement.'

Amanda ignored him, but led us towards the leading squadron. Come back!' he bellowed. And indeed we were back; our steps had led us no place. You ignore the custom. Hostages first!'

Amanda bit her lip. Admitted,' she retorted, and consulted briefly with Royce and Jedson. I caught Royce's answer to some argument.

Since I am to go,' he said, it is best that I choose my companion, for reasons that are sufficient to me. My grandfather advises me to take the youngest. That one, of course, is Fraser.'

What's this?' I said when my name was mentioned. I had been rather pointedly left out of all the discussions, but this was surely my business.

Royce wants you to go with him to smell out Ditworth,' explained Jedson.

And leave Amanda here with these fiends? I don't like it.'

I can look out for myself, Archie,' she said quietly. If Dr Worthington wants you, you can help me most by going with him.'

What is this hostage stuff?'

Having demanded the right of examination,' she explained, you must bring back Ditworth - or the hostages are forfeit.'

Jedson spoke up before I could protest. Don't be a hero, son. This is serious. You can serve us all best by going. If you two don't come back, you can bet that they'll have a fight on their hands before they claim their forfeit!'

I went. Worthington and I had hardly left them before I realized acutely that what little peace of mind I had came from the nearness of Amanda. Once

out of her immediate influence the whole mind-twisting horror of the place and its grisly denizens hit me. I felt something rub against my ankles and nearly jumped out of my shoes. But when I looked down I saw that Seraphin, Amanda's cat, had chosen to follow me. After that things were better with me.

Royce assumed his dog pose when we came to the first rank of demons. He first handed me his grandfather's head. Once I would have found that mummified head repulsive to touch; it seemed a friendly, homey thing here. Then he was down on all fours, scalloping in and out of the ranks of infernal warriors. Seraphin scampered after him, paired up and hunted with him. The hound seemed quite content to let the cat do half the work, and I have no doubt he was justified. I walked as rapidly as possible down the aisles between adjacent squadrons while the animals cast out from side to side.

It seems to me that this went on for many hours, certainly so long that fatigue changed to a wooden automatism and horror died down to a dull unease. I learned not to look at the eyes of the demons, and was no longer surprised at any outre shape.

Squadron by squadron, division by division, we combed them, until at last, coming up the left wing, we reached the end. The animals had been growing increasingly nervous. When they had completed the front rank of the leading squadron, the hound trotted up to me and whined. I suppose he sought his grandfather, but I reached down and patted his head.

Don't despair, old friend,' I said, we have still these.' I motioned towards the generals, princes all, who were posted before their divisions. Coming up from the rear as we had, we had yet to examine the generals of the leading divisions on the left wing. But despair already claimed me; what were half a dozen possibilities against an eliminated seven million?

The dog trotted away to the post of the nearest general, the cat close beside him, while I followed as rapidly as possible. He commenced to yelp before he was fairly up to the demon, and I broke into a run. The demon stirred and commenced to metamorphose. But even in this strange shape there was something familiar about it. Ditworth!' I yelled, and dived for him.

I felt myself buffeted by leather wings, raked by claws. Royce came to my aid, a dog no longer, but two hundred pounds of fighting Negro. The cat was a ball of fury, teeth, and claws. Nevertheless, we would have been lost, done in completely, had not an amazing thing happened. A demon broke ranks and shot towards us. I sensed him rather than saw him, and thought that he had come to succour his master, though I had been assured that their customs did not permit it. But he helped us - us, his natural enemies - and

attacked with such vindictive violence that the gauge was turned to our favour.

Suddenly it was all over. I found myself on the ground, clutching at not a demon prince but Ditworth in his pseudo- human form - a little mild businessman, dressed with restrained elegance, complete to briefcase, spectacles, and thinning hair.

Take that thing off me,' he said testily. That thing' was grandfather, who was clinging doggedly with toothless gums to his neck.

Royce spared a hand from the task of holding Ditworth and resumed possession of his grandfather. Seraphin stayed where he was, claws dug into our prisoner's leg.

The demon who had rescued us was still with us. He had Ditworth by the shoulders, talons dug into their bases. I cleared my throat and said, I believe we owe this to you-' I had not the slightest notion of the proper thing to say. I think the situation was utterly without precedent.

The demon made a grimace that may have been intended to be friendly, but which I found frightening. Let me introduce myself,' he said in English. I'm Federal Agent William Kane, Bureau of Investigation.'

I think that was what made me faint.

I came to, lying on my back. Someone had smeared a salve on my wounds and they were hardly stiff, and not painful in the least, but I was mortally tired. There was talking going on somewhere near me. I turned my head and saw all the members of my party gathered together. Worthington and the friendly demon who claimed to be a G-man held Ditworth between them, facing Satan. Of all the mighty infernal army I saw no trace.

So it was my nephew Nebiros,' mused the Goat, shaking his head and clucking. Nebiros, you are a bad lad and I'm proud of you. But I'm afraid you will have to try your strength against their champion now that they have caught you.' He addressed Amanda. Who is your champion, my dear?'

The friendly demon spoke up. That sounds like my job.'

I think not,' countered Amanda. She drew him to one side and whispered intently. Finally he shrugged his wings and gave in.

Amanda rejoined the group. I struggled to my feet and came up to them. A trial to the death, I think,' she was saying. Are you ready, Nebiros?' I was stretched between heart-stopping fear for Amanda and a calm belief that

she could do anything she attempted. Jedson saw my face and shook his head. I was not to interrupt.

But Nebiros had no stomach for it. Still in his Ditworth form and looking ridiculously human, he turned to the Old One. I dare not, Uncle. The outcome is certain. Intercede for me.'

Certainly, Nephew. I had rather hoped she would destroy you. You'll trouble me someday.' Then to Amanda, Shall we say... ah.. . ten thousand thousand years?'

Amanda gathered our votes with her eyes, including me, to my proud pleasure, and answered, So be it.' It was not a stiff sentence as such things go, I'm told - about equal to six months in jail in the real world - but he had not offended their customs; he had simply been defeated by white magic.

Old Nick brought down one arm in an emphatic gesture. There was a crashing roar and a burst of light and DitworthNebiros was spread-eagled before us on a mighty boulder, his limbs bound with massive iron chains. He was again in demon form. Amanda and Worthington examined the bonds. She pressed a seal ring against each hasp and nodded to the Goat. At once the boulder receded with great speed into the distance until it was gone from sight.

That seems to be about all, and I suppose you will be going now,' announced the Goat. All except this one-' He smiled at the demon G-man. I have plans for him.'

No.' Amanda's tone was flat.

What's that, my little one? He has not the protection of your party, and he has offended our customs.'

No!'

Really, I must insist.'

Satan Mekratrig,' she said slowly, do you wish to try your strength with me?'

With you, madame?' He looked at her carefully, as if inspecting her for the first time. Well, it's been a trying day, hasn't it? Suppose we say no more about it. Till another time, then-'

He was gone.

The demon faced her. Thanks,' he said simply. I wish I had a hat to take off.' He added anxiously, Do you know your way out of here?'

Don't you?'

No, that's the trouble. Perhaps I should explain myself. I'm assigned to the antimonopoly division; we got a line on this chap Ditworth, or Nebiros. I followed him in here, thinking he was simply a black wizard and that I could use his portal to get back. By the time I knew better it was too late, and I was trapped. I had about resigned myself to an eternity as a fake demon.'

I was very much interested in his story. I knew, of course, that all G-men are either lawyers, magicians, or accountants, but all that I had ever met were accountants. This calm assumption of incredible dangers impressed me and increased my already high opinion of Federal agents.

You may use our portal to return,' Anianda said. Stick close to us.' Then to the rest of us, Shall we go now?'

Jack Bodie was still intoning the lines from the book when we landed. Eight and a half minutes,' he announced, looking at his wrist watch. Nice work. Did you turn the trick?'

Yes, we did,' acknowledged Jedson, his voice muffled by the throes of his remetamorphosis. Everything that-'

But Bodie interrupted. Bill Kane - you old scoundrel!' he shouted. How did you get in on this party?' Our demon had shucked his transformation on the way and landed in his natural form - lean, young, and hard-bitten, in a quiet grey suit and snap-brim hat.

Hi, Jack,' he acknowledged. I'll look you up tomorrow and tell you all about it. Got to report in now.' With which he vanished.

Ellen was out of her trance, and Joe was bending solicitously over her to see how she had stood up under it. I looked around for Amanda.

Then I heard her out in the kitchen and hurried out there. She looked up and smiled at me, her lovely young face serene and coolly beautiful. Amanda,' I said, Amanda-'

I suppose I had the subconscious intention of kissing her, making love to her. But it is very difficult to start anything of that sort unless the woman in the case in some fashion indicates her willingness. She did not. She was warmly friendly, but there was a barrier of reserve I could not

cross. Instead, I followed her around the kitchen, talking inconsequentially, while she made hot cocoa and toast for all of us.

When we rejoined the others I sat and let my cocoa get cold, staring at her with vague frustration in my heart while Jedson told Ellen and Jack about our experiences. He took Ellen home shortly thereafter, and Jack followed them out.

When Amanda came back from telling them goodnight at the door, Dr Royce was stretched out on his back on the hearthrug, with Seraphin curled up on his broad chest. They were both snoring softly. I realized suddenly that I was wretchedly tired. Amanda saw it, too, and said, Lie down on the couch for a little and nap if you can.'

I needed no urging. She came over and spread a shawl over me and kissed me tenderly. I heard her going upstairs as I fell asleep.

I was awakened by sunlight striking my face. Seraphin was sitting in the window, cleaning himself. Dr Worthington was gone, but must have just left, for the nap on the hearthrug had not yet straightened up. The house seemed deserted. Then I heard her light footsteps in the kitchen. I was up at once and quickly out there.

She had her back towards me and was reaching up to the old-fashioned pendulum clock that hung on her kitchen wall. She turned as I came in - tiny, incredibly aged, her thin white hair brushed neatly into a bun.

It was suddenly clear to me why a motherly goodnight kiss was all that I had received the night before; she had had enough sense for two of us, and had refused to permit me to make a fool of myself.

She looked up at me and said in a calm, matter-of-fact voice, See, Archie, my old clock stopped yesterday' - she reached up and touched the pendulum - but it is running again this morning.'

There is not anything more to tell. With Ditworth gone, and Kane's report, Magic, Incorporated, folded up almost overnight. The new licensing laws were an unenforced dead letter even before they were repealed.

We all hang around Mrs Jennings's place just as much as she will let us. I'm really grateful that she did not let me get involved with her younger self, for our present relationship is something solid, something to tie to. Just the same, if I had been born sixty years sooner, Mr Jennings would have had some rivalry to contend with.

I helped Ellen and Joe organize their new business, then put Bodie in as

manager, for I decided that I did not want to give up my old line. I've built the new wing and bought those two trucks, just as Mrs Jennings predicted. Business is good.

The Man Who Sold the Moon
by Robert A. Heinlein

CHAPTER ONE

"YOU'VE GOT TO BE A BELIEVER!"

George Strong snorted at his partner's declaration. "Delos, why don't you give up? You've been singing this tune for years. Maybe someday men will get to the Moon, though I doubt it. In any case, you and I will never live to see it. The loss of the power satellite washes the matter up for our generation."

D. D. Harriman grunted. "We won't see it if we sit on our fat behinds and don't do anything to make it happen. But we can make it happen."

"Question number one: how? Question number two: why?"

"'Why?' The man asks 'why.' George, isn't there anything in your soul but discounts, and dividends? Didn't you ever sit with a girl on a soft summer night and stare up at the Moon and wonder what was there?"

"Yeah, I did once. I caught a cold."

Harriman asked the Almighty why he had been delivered into the hands of the Philistines. He then turned back to his partner. "I could tell you why, the real 'why,' but you wouldn't understand me. You want to know why in terms of cash, don't you? You want to know how Harriman & Strong and Harriman Enterprises can show a profit, don't you?"

"Yes," admitted Strong, "and don't give me any guff about tourist trade and fabulous lunar jewels. I've had it."

"You ask me to show figures on a brand-new type of enterprise, knowing I can't. It's like asking the Wright brothers at Kitty Hawk to estimate how much money Curtiss-Wright Corporation would someday make out of building airplanes. I'll put it another way, You didn't want us to go into plastic houses, did you? If you had had your way we would still be back in Kansas City, subdividing cow pastures and showing rentals."

Strong shrugged.

"How much has New World Homes made to date?"

Strong looked absent-minded while exercising the talent he brought to the partnership. "Uh . . . $172,946,004.62, after taxes, to the end of the last fiscal year. The running estimate to date is-"

"Never mind. What was our share in the take?"

"Well, uh, the partnership, exclusive of the piece you took personally and then sold to me later, has benefited from New World Homes during the same period by $1 3,010,437.20, ahead of personal taxes. Delos, this double taxation has got to stop. Penalizing thrift is a sure way to run this country straight into-"

"Forget it, forget it! How much have we made out of Skyblast Freight and Antipodes Transways?"

Strong told him.

"And yet I had to threaten you with bodily harm to get you to put up a dime to buy control of the injector patent. You said rockets were a passing fad."

"We were lucky," objected Strong. "You had no way of knowing that there would be a big uranium strike in Australia. Without it, the Skyways group would have left us in the red. For that matter New World Homes would have failed, too, if the roadtowns hadn't come along and given us a market out from under local building codes."

"Nuts on both points. Fast transportation will pay; it always has. As for New World, when ten million families need new houses and we can sell 'em cheap, they'll buy. They won't let building codes stop them, not permanently. We gambled on a certainty. Think back, George: what ventures have we lost money on and what ones have paid off? Everyone of my crack-brain ideas has made money, hasn't it? And the only times we've lost our ante was on conservative, blue-chip investments."

"But we've made money on some conservative deals, too," protested Strong.

"Not enough to pay for your yacht. Be fair about it, George; the Andes Development Company, the integrating pantograph patent, every one of my wildcat schemes I've had to drag you into-and every one of them paid."

"I've had to sweat blood to make them pay," Strong grumbled.

"That's why we are partners. I get a wildcat by the tail; you harness him and put him to work. Now we go to the Moon-and you'll make it pay."

"Speak for yourself. I'm not going to the Moon."

"I am."

"Hummph! Delos, granting that we have gotten rich by speculating on your hunches, it's a steel-clad fact that if you keep on gambling you lose your shirt. There's an old saw about the pitcher that went once too often to the well."

"Damn it, George-I'm going to the Moon! If you won't back me up, let's liquidate and I'll do it alone."

Strong drummed on his desk top. "Now, Delos, nobody said anything about not backing you up."

"Fish or cut bait. Now is the opportunity and my mind's made up. I'm going to be the Man in the Moon."

"Well . . . let's get going. We'll be late to the meeting."

As they left their joint office, Strong, always penny conscious, was careful to switch off the light. Harriman had seen him do so a thousand times; this time he commented. "George, how about a light switch that turns off automatically when you leave a room?"

"Hmm-but suppose someone were left in the room?"

"Well. . . hitch it to stay on only when someone was in the room-key the switch to the human body's heat radiation, maybe."

"Too expensive and too complicated."

"Needn't be. I'll turn the idea over to Ferguson to fiddle with. It should be no larger than the present light switch and cheap enough so that the power saved in a year will pay for it."

"How would it work?" asked Strong.

"How should I know? I'm no engineer; that's for Ferguson and the other educated laddies."

Strong objected, "It's no good commercially. Switching off a light when you leave a room is a matter of temperament. I've got it; you haven't. If a man hasn't got it, you can't interest him in such a switch."

"You can if power continues to be rationed. There is a power shortage now; and there will be a bigger one."

"Just temporary. This meeting will straighten it out."

"George, there is nothing in this world so permanent as a temporary emergency. The switch will sell."

Strong took out a notebook and stylus. "I'll call Ferguson in about it tomorrow."

Harriman forgot the matter, never to think of it again. They had reached the roof; he waved to a taxi, then turned to Strong. "How much could we realize if we unloaded our holdings in Roadways and in Belt Transport Corporation-yes, and in New World Homes?"

"Huh? Have you gone crazy?"

"Probably. But I'm going to need all the cash you can shake loose for me. Roadways and Belt Transport are no good anyhow; we should have unloaded earlier."

"You are crazy! It's the one really conservative venture you've sponsored."

"But it wasn't conservative when I sponsored it. Believe me, George, roadtowns are on their way out. They are growing moribund, just as the railroads did. In a hundred years there won't be a one left on the continent. What's the formula for making money, George?"

"Buy low and sell high."

"That's only half of it. . . your half. We've got to guess which way things are moving, give them a boost, and see that we are cut in on the ground floor. Liquidate that stuff, George; I'll need money to operate." The taxi landed; they got in and took off.

The taxi delivered them to the roof of the Hemisphere Power Building they went to the power syndicate's board room, as far below ground as the landing platform was above-in those days, despite years of peace, tycoons habitually came to rest at spots relatively immune to atom bombs. The room did not seem like a bomb shelter; it appeared to be a chamber in a luxurious penthouse, for a "view window" back of the chairman's end of the table looked out high above the city, in convincing, live stereo, relayed from the roof.

The other directors were there before them. Dixon nodded as they came in, glanced at his watch finger and said, "Well, gentlemen, our bad boy is here, we may as well begin." He took the chairman's seat and rapped for order.

"The minutes of the last meeting are on your pads as usual. Signal when ready." Harriman glanced at the summary before him and at once flipped a switch on the table top; a small green light flashed on at his place. Most of the directors did the same.

"Who's holding up the procession?" inquired Harriman, looking around. "Oh-you, George. Get a move on."

"I like to check the figures," his partner answered testily, then flipped his own switch. A larger green light showed in front of Chainnan Dixon, who then pressed a button; a transparency, sticking an inch or two above the table top in front of him lit up with the word RECORDING.

"Operations report," said Dixon and touched another switch. A female voice came out from nowhere. Harriman followed the report from the next sheet of paper at his place.

Thirteen Curie-type power piles were now in operation, up five from the last meeting. The Susquehanna and Charleston piles had taken over the load previously borrowed from Atlantic Roadcity and the roadways of that city were now up to normal speed. It was expected that the Chicago-Angeles road could be restored to speed during the next fortnight. Power would continue to be rationed but the crisis was over.

All very interesting but of no direct interest to Harriman. The power crisis that had been caused by the explosion of the power satellite was being satisfactorily met-very good, but Harriman's interest in it lay in the fact that the cause of interplanetary travel had thereby received a setback from which it might not recover.

When the Harper-Erickson isotopic artificial fuels had been developed three years before it had seemed that, in addition to solving the dilemma of an impossibly dangerous power source which was also utterly necessary to the economic life of the continent, an easy means had been found to achieve interplanetary travel.

The Arizona power pile had been installed in one of the largest of the Antipodes rockets, the rocket powered with isotopic fuel created in the power pile itself, and the whole thing was placed in an orbit around the Earth. A much smaller rocket had shuttled between satellite and Earth, carrying supplies to the staff of the power pile, bringing back synthetic radioactive fuel for the power-hungry technology of Earth.

As a director of the power syndicate Harriman had backed the power satellite-with a private ax to grind: he expected to power a Moon ship with fuel manufactured in the power satellite and thus to achieve the first trip to the Moon almost at once. He had not even attempted to stir the Department of Defense out of its sleep; he wanted no government subsidy-the job was a cinch; anybody could do it-and Harriman would do it. He had the ship; shortly he would have the fuel.

The ship had been a freighter of his own Antipodes line, her chem-fuel motors replaced, her wings removed. She still waited, ready for fuel-the recommissioned Santa Maria, nee City of Brisbane.

But the fuel was slow in coming. Fuel had to be eannarked for the shuttle rocket; the power needs of a rationed continent came next-and those needs grew faster than the power satellite could turn out fuel. Far from being ready to supply him for a "useless" Moon trip, the syndicate had seized on the safe but less efficient low temperature uranium-salts and heavy water, Curie-type power piles as a means of using uranium directly to meet the ever growing need for power, rather than build and launch more satellites.

Unfortunately the Curie piles did not provide the fierce star-interior conditions necessary to breeding the isotopic fuels needed for an atomic-powered rocket. Harriman had reluctantly come around to the notion that he would have to use political pressure to squeeze the necessary priority for the fuels he wanted for the Santa Maria.

Then the power satellite had blown up.

Harriman was stirred out of his brown study by Dixon's voice. "The operations report seems satisfactory, gentlemen. If there is no objection, it will be recorded as accepted. You will note that in the next ninety days we will be back up to the power level which existed before we were forced to close down the Arizona pile."

"But with no provision for future needs," pointed out Harriman. "There have been a lot of babies born while we have been sitting here."

"Is that an objection to accepting the report, D.D.?"

"No."

"Very well. Now the public relations report-let me call attention to the first item, gentlemen. The vice-president in charge recommends a schedule of annuities, benefits, scholarships and so forth for dependents of the staff of the power satellite and of the pilot of the Charon: see appendix 'C'."

A director across from Harriman-Phineas Morgan, chairman of the food trust, Cuisine, Incorporated-protested, "What is this, Ed? Too bad they were killed of course, but we paid them skyhigh wages and carried their insurance to boot. Why the charity?"

Harriman grunted. "Pay it-I so move. It's peanuts. 'Do not bind the mouths of the kine who tread the grain.'"

"I wouldn't call better than nine hundred thousand 'peanuts,'" protested Morgan.

"Just a minute, gentlemen-" It was the vice-president in charge of public relations, himself a director. "If you'll look at the breakdown, Mr. Morgan, you will see that eighty-five percent of the appropriation will be used to publicize the gifts."

Morgan squinted at the figures. "Oh-why didn't you say so? Well, I suppose the gifts can be considered unavoidable overhead, but it's a bad precedent."

"Without them we have nothing to publicize."

"Yes, but-"

Dixon rapped smartly. "Mr. Harriman has moved acceptance. Please signal your desires." The tally board glowed green; even Morgan, after hesitation, okayed the allotment. "We have a related item next," said Dixon. "A Mrs.-uh, Garfield, through her attorneys, alleges that we are responsible for the congenital crippled condition of her fourth child. The putative facts are that her child was being born just as the satellite exploded and that Mrs. Garfield was then on the meridian underneath the satellite. She wants the court to award her half a million."

Morgan looked at Harriman. "Delos, I suppose that you will say to settle out of court."

"Don't be silly. We fight it."

Dixon looked around, surprised. "Why, D.D.? It's my guess we could settle for ten or fifteen thousand-and that was what I was about to recommend. I'm surprised that the legal department referred it to publicity."

"It's obvious why; it's loaded with high explosive. But we should fight, regardless of bad publicity. It's not like the last case; Mrs. Garfield and her brat are not our people. And any dumb fool knows you can't mark a baby by radioactivity at birth; you have to get at the germ plasm of the previous generation at least. In the third place, if we let this get by, we'll be sued for every double-yolked egg that's laid from now on. This calls for an open allotment for defense and not one damned cent for compromise."

"It might be very expensive," observed Dixon.

"It'll be more expensive not to fight. If we have to, we should buy the judge."

The public relations chief whispered to Dixon, then announced, "I support Mr. Harriman's view. That's my department's recommendation."

It was approved. "The next item," Dixon went on, "is a whole sheaf of suits arising out of slowing down the roadcities to divert power during the crisis. They alleged loss of business, loss of time, loss of this and that, but they are all based on the same issue. The most touchy, perhaps, is a stockholder's suit which claims that Roadways and

this company are so interlocked that the decision to divert the power was not done in the interests of the stockholders of Roadways. Delos, this is your pidgin; want to speak on it?"

"Forget it."

"Why?"

"Those are shotgun suits. This corporation is not responsible; I saw to it that Roadways volunteered to sell the power because I anticipated this. And the directorates don't interlock; not on paper, they don't. That's why dummies were born. Forget it-for every suit you've got there, Roadways has a dozen. We'll beat them."

"What makes you so sure?"

"Well-" Harriman lounged back and hung a knee over the arm of his chair. "-a good many years ago I was a Western Union messenger boy. While waiting around the office I read everything I could lay hands on, including the contract on the back of the telegram forms. Remember those? They used to come in big pads of yellow paper; by writing a message on the face of the form you accepted the contract in the fine print on the backT only most people didn't realize that. Do you know what that contract obhgated the company to do?"

"Send a telegram, I suppose."

"It didn't promise a durn thing. The company offered to attempt to deliver the message, by camel caravan or snail back, or some equally streamlined method, if convenient, but in event of failure, the company was not responsible. I read that fine print until I knew it by heart. It was the loveliest piece of prose I had ever seen. Since then all my contracts have been worded on the same principle. Anybody who sues Roadways will find that Roadways can't be sued on the element of time, because time is not of the essence. In the event of complete non-performance-which hasn't happened yet-Roadways is financially responsible only for freight charges or the price of the personal transportation tickets. So forget it."

Morgan sat up. "D.D., suppose I decided to run up to my country place tonight, by the roadway, and there was a failure of some sort so that I didn't get there until tomorrow? You mean to say Roadways is not liable?"

Harriman grinned. "Roadways is not liable even if you starve to death on the trip. Better use your copter." He turned back to Dixon. "I move that we stall these suits and let Roadways carry the ball for us."

"The regular agenda being completed," Dixon announced later, "time is allotted for our colleague, Mr. Harriman, to speak on a subject of his own choosing. He has not listed a subject in advance, but we will listen until it is your pleasure to adjourn."

Morgan looked sourly at Harriman. "I move we adjourn."

Harriman grinned. "For two cents I'd second that and let you die of curiosity." The motion failed for want of a second. Harriman stood up.

"Mr. Chairman, friends-" He then looked at Morgan. "-and associates. As you know, I am interested in space travel."

Dixon looked at him sharply. "Not that again, Delos! If I weren't in the chair, I'd move to adjourn myself."

"'That again'," agreed Harriman. "Now and forever. Hear me out. Three years ago, when we were crowded into moving the Arizona power pile out into space, it looked as if

we had a bonus in the shape of interplanetary travel. Some of you here joined with me in forming Spaceways, Incorporated, for experimentation, exploration-and exploitation.

"Space was conquered; rockets that could establish orbits around the globe could be modified to get to the Moon-and from there, anywhere! It was just a matter of doing it. The problems remaining were financial-and political.

"In fact, the real engineering problems of space travel have been solved since World World II. Conquering space has long been a matter of money and politics. But it did seem that the Harper-Erickson process, with its concomitant of a round-the-globe rocket and a practical economical rocket fuel, had at last made it a very present thing, so close indeed that I did not object when the early allotments of fuel from the satellite were earmarked for industrial power."

He looked around. "I shouldn't have kept quiet. I should have squawked and brought pressure and made a hairy nuisance of myself until you allotted fuel to get rid of me. For now we have missed our best chance. The satellite is gone; the source of fuel is gone. Even the shuttle rocket is gone. We are back where we were in 19 50. Therefore-"

He paused again. "Therefore-I propose that we build a space ship and send it to the Moon!"

Dixon broke the silence. "Delos, have you come unzipped? You just said that it was no longer possible. Now you say to build one."

"I didn't say it was impossible; I said we had missed our best chance. The time is overripe for space travel. This globe grows more crowded every day. In spite of technical advances the daily food intake on this planet is lower than it was thirty years ago-and we get 46 new babies every minute, 6;,ooo every day, 25,ooo,ooo every year. Our race is about to burst forth to the planets; if we've got the initiative Cod promised an oyster we will help it along!

"Yes, we missed our best chance-but the engineering details can be solved. The real question is who's going to foot the bill? That is why I address you gentlemen, for right here in this room is the financial capital of this planet."

Morgan stood up. "Mr. Chairman, if all company business is finished, I ask to be excused."

Dixon nodded. Harriman said, "So long, Phineas. Don't let me keep you. Now, as I was saying, it's a money problem and here is where the money is. I move we finance a trip to the Moon."

The proposal produced no special excitement; these men knew Harriman. Presently Dixon said, "Is there a second to D.D.'s proposal?"

"Just a minute, Mr. Chairman-" It was Jack Entenza, president of Two-Continents Amusement Corporation. "I want to ask Delos some questions." He turned to Harriman. "D.D., you know I strung along when you set up Spaceways. It seemed like a cheap venture and possibly profitable in educational and scientific values-I never did fall for space liners plying between planets; that's fantastic. I don't mind playing along with your dreams to a moderate extent, but how do you propose to get to the Moon? As you say, you are fresh out of fuel."

Harriman was still grinning. "Don't kid me, Jack, I know why you came along. You weren't interested in science; you've never contributed a dime to science. You expected a monopoly on pix and television for your chain. Well, you'll get 'em, if you

stick with me-otherwise I'll sign up 'Recreations, Unlimited'; they'll pay just to have you in the eye."

Entenza looked at him suspiciously. "What will it cost me?"

"Your other shirt, your eye teeth, and your wife's wedding ring-unless 'Recreations' will pay more."

"Damn you, Delos, you're crookeder than a dog's hind leg."

"From you, Jack, that's a compliment. We'll do business. Now as to how I'm going to get to the Moon, that's a silly question. There's not a man in here who can cope with anything more complicated in the way of machinery than a knife and fork. You can't tell a left-handed monkey wrench from a reaction engine, yet you ask me for blue prints of a space ship.

"Well, I'll tell you how I'll get to the Moon. I'll hire the proper brain boys, give them everything they want, see to it that they have all the money they can use, sweet talk them into long hours-then stand back and watch them produce. I'll run it like the Manhattan Project-most of you remember the A-bomb job; shucks, some of you can remember the Mississippi Bubble. The chap that headed up the Manhattan Project didn't know a neutron from Uncle George-but he got results. They solved that trick four ways. That's why I'm not worried about fuel; we'll get a fuel. We'll get several fuels."

Dixon said, "Suppose it works? Seems to me you're asking us to bankrupt the company for an exploit with no real value, aside from pure science, and a one-shot entertainment exploitation. I'm not against you-I wouldn't mind putting in ten, fifteen thousand to support a worthy venture-but I can't see the thing as a business proposition."

Harriman leaned on his fingertips and stared down the long table. "Ten or fifteen thousand gum drops! Dan, I mean to get into you for a couple of megabucks at least-and before we're through you'll be hollering for more stock. This is the greatest real estate venture since the Pope carved up the New World. Don't ask me what we'll make a profit on; I can't itemize the assets-but I can lump them. The assets are a planet-a whole planet, Dan, that's never been touched. And more planets beyond it. If we can't figure out ways to swindle a few fast bucks out of a sweet set-up like that then you and I had better both go on relief. It's like having Manhattan Island offered to you for twenty-four dollars and a case of whiskey."

Dixon grunted. "You make it sound like the chance of a lifetime."

"Chance of a lifetime, nuts! This is' the greatest chance in all history. It's raining soup; grab yourself a bucket."

Next to Entenza sat Gaston P. Jones, director of Trans-America and half a dozen other banks, one of the richest men in the room. He carefully removed two inches of cigar ash, then said dryly, "Mr. Harriman, I will sell you all of my interest in the Moon, present and future, for fifty cents."

Harriman looked delighted. "Sold!"

Entenza had been pulling at his lower lip and listening with a brooding expression on his face. Now he spoke up. "Just a minute, Mr. Jones-I'll give you a dollar for it."

"Dollar fifty," answered Harriman.

"Two dollars," Entenza answered slowly.

"Five!"

They edged each other up. At ten dollars Entenza let Harriman have it and sat back, still looking thoughtful. Harriman looked happily around. "Which one of you

thieves is a lawyer?" he demanded. The remark was rhetorical; out of seventeen directors the normal percentage-eleven, to be exact-were lawyers. "Hey, Tony," he continued, "draw me up an instrument right now that will tie down this transaction so that it couldn't be broken before the Throne of God. All of Mr. Jones' interests, rights, title, natural interest, future interests, interests held directly or through ownership of stock, presently held or to be acquired, and so forth and so forth. Put lots of Latin in it. The idea is that every interest in the Moon that Mr. Jones now has or may acquire is mine-for a ten spot, cash in hand paid." Harriman slapped a bill down on the table. "That right, Mr. Jones?"

Jones smiled briefly. "That's right, young fellow." He pocketed the bill. "I'll frame this for my grandchildren-to show them how easy it is to make money." Entenza's eyes darted from Jones to Harriman.

"Good!" said Harriman. "Gentlemen, Mr. Jones has set a market price for one human being's interest in our satellite. With around three billion persons on this globe that sets a price on the Moon of thirty billion dollars." He hauled out a wad of money. "Any more suckers? I'm buying every share that's offered, ten bucks a copy."

"I'll pay twenty!" Entenza rapped out.

Harriman looked at him sorrowfully. "Jack-don't do that! We're on the same team. Let's take the shares together, at ten."

Dixon pounded for order. "Gentlemen, please conduct such transactions after the meeting is adjourned. Is there a second to Mr. Harriman's motion?"

Gaston Jones said, "I owe it to Mr. Harriman to second his motion, without prejudice. Let's get on with a vote."

No one objected; the vote was taken. It went eleven to three against Harriman-Harriman, Strong, and Entenza for; all others against. Harriman popped up before anyone could move to adjourn and said, "I expected that. My real purpose is this: since the company is no longer interested in space travel, will it do me the courtesy of selling me what I may need of patents, processes, facilities, and so forth now held by the company but relating to space travel and not relating to the production of power on this planet? Our brief honeymoon with the power satellite built up a backlog; I want to use it. Nothing formal-just a vote that it is the policy of the company to assist me in any way not inconsistent with the primary interest of the company. How about it, gentlemen? It'll get me out of your hair."

Jones studied his cigar again. "I see no reason why we should not accommodate him, gentlemen . . . and I speak as the perfect disinterested party."

"I think we can do it, Delos," agreed Dixon, "only we won't sell you anything, we'll lend it to you. Then, if you happen to hit the jackpot, the company still retains an interest. Has anyone any objection?" he said to the room at large.

There was none; the matter was recorded as company policy and the meeting was adjourned. Harriman stopped to whisper with Entenza and, finally, to make an appointment. Gaston Jones stood near the door, speaking privately with Chairman Dixon. He beckoned to Strong, Harriman's partner. "George, may I ask a personal question?"

"I don't guarantee to answer. Go ahead."

"You've always struck me as a level-headed man. Tell me-why do you string along with Harriman? Why, the man's mad as a hatter."

Strong looked sheepish. "I ought to deny that, he's my friend . . . but I can't. But dawggone it! Every time Delos has a wild hunch, it turns out to be the real thing. I hate to

string along-it makes me nervous-but I've learned to trust his hunches rather than another man's sworn financial report."

Jones cocked one brow. "The Midas touch, eh?"

"You could call it that."

"Well, remember what happened to King Midas-in the long run. Good day, gentlemen."

Harriman had left Entenza; Strong joined him. Dixon stood staring at them, his face very thoughtful.

CHAPTER TWO

HARRIMAN'S HOME had been built at the time when everyone who could was decentralizing and going underground. Above ground there was a perfect little Cape Cod cottage-the clapboards of which concealed armor plate- and most delightful, skillfully landscaped grounds; below ground there was four or five times as much floorspace, immune to anything but a direct hit and possessing an independent air supply with reserves for one thousand hours. During the Crazy Years the conventional wall surrounding the grounds had been replaced by a wall which looked the same but which would stop anything short of a broaching tank-nor were the gates weak points; their gadgets were as personally loyal as a well-trained dog.

Despite its fortress-like character the house was comfortable. It was also very expensive to keep up.

Harriman did not mind the expense; Charlotte liked the house and it gave her something to do. When they were first married she had lived uncomplainingly in a cramped flat over a grocery store; if Charlotte now liked to play house in a castle, Harriman did not mind.

But he was again starting a shoe-string venture; the few thousand per month of ready cash represented by the household expenses might, at some point in the game, mean the difference between success and the sheriff's bailiffs. That night at dinner, after the servants fetched the coffee, and port, he took up the matter.

"My dear, I've been wondering how you would like a few months in Florida."

His wife stared at him. "Florida? Delos, is your mind wandering? Florida is unbearable at this time of the year."

"Switzerland, then. Pick your own spot. Take a real vacation, as long as you like."

"Delos, you are up to something."

Harriman sighed. Being "up to something" was the unnameable and unforgivable crime for which any American male could be indicted, tried, convicted, and sentenced in one breath. He wondered how things had gotten rigged so that the male half of the race must always behave to suit feminine rules and feminine logic, like a snotty-nosed school boy in front of a stern teacher.

"In a way, perhaps. We've both agreed that this house is a bit of a white elephant. I was thinking of closing it, possibly even of disposing of the land- it's worth more now

than when we bought it. Then, when we get around to it, we could build something more modern and a little less like a bombproof."

Mrs. Harriman was temporarily diverted. "Well, I have thought it might be nice to build another place, Delos-say a little chalet tucked away in the mountains, nothing ostentatious, not more than two servants, or three. But we won't close this place until it's built, Delos-after all, one must live somewhere."

"I was not thinking of building right away," he answered cautiously. "Why not? We're not getting any younger, Delos; if we are to enjoy the good things of life we had better not make delays. You needn't worry about it; I'll manage everything."

Harriman turned over in his mind the possibility of letting her build to keep her busy. If he earmarked the cash for her "little chalet," she would live in a hotel nearby wherever she decided to build it-and he could sell this monstrosity they were sitting in. With the nearest roadcity now less than ten miles away, the land should bring more than Charlotte's new house would cost and he would be rid of the monthly drain on his pocketbook.

"Perhaps you are right," he agreed. "But suppose you do build at once; you won't be living here; you'll be supervising every detail of the new place. I say we should unload this place; it's eating its head off in taxes, upkeep, and running expenses."

She shook her head. "Utterly out of the question, Delos. This is my home." He ground out an almost unsmoked cigar. "I'm sorry, Charlotte, but you can't have it both ways. If you build, you can't stay here. If you stay here, we'll close these below-ground catacombs, fire about a dozen of the parasites I keep stumbling over, and live in the cottage on the surface. I'm cutting expenses."

"Discharge the servants? Delos, if you think that I will undertake to make a home for you without a proper staff, you can just-"

"Stop it." He stood up and threw his napkin down. "It doesn't take a squad of servants to make a home. When we were first married you had no servants-and you washed and ironed my shirts in the bargain. But we had a home then. This place is owned by that staff you speak of. Well, we're getting rid of them, all but the cook and a handy man."

She did not seem to hear. "Delos! sit down and behave yourself. Now what's all this about cutting expenses? Are you in some sort of trouble? Are you? Answer me!"

He sat down wearily and answered, "Does a man have to be in trouble to want to cut out unnecessary expenses?"

"In your case, yes. Now what is it? Don't try to evade me."

"Now see here, Charlotte, we agreed a long time ago that I would keep business matters in the office. As for the house, we simply don't need a house this size. It isn't as if we had a passel of kids to fill up-"

"Oh! Blaming me for that again!"

"Now see here, Charlotte," he wearily began again, "I never did blame you and I'm not blaming you now. All I ever did was suggest that we both see a doctor and find out what the trouble was we didn't have any kids. And for twenty years you've been making me pay for that one remark. But that's all over and done with now; I was simply making the point that two people don't fill up twenty-two rooms. I'll pay a reasonable price for a new house, if you want it, and give you an ample household allowance." He

started to say how much, then decided not to. "Or you can close this place and live in the cottage above. It's just that we are going to quit squandering money-for a while."

She grabbed the last phrase. "'For a while.' What's going on, Delos? What are you going to squander money on?" When he did not answer she went on. "Very well, if you won't tell me, I'll call George. He will tell me."

"Don't do that, Charlotte. I'm warning you. I'll-"

"You'll what!" She studied his face. "I don't need to talk to George; I can tell by looking at you. You've got the same look on your face you had when you came home and told me that you had sunk all our money in those crazy rockets."

"Charlotte, that's not fair. Skyways paid off. It's made us a mint of money."

"That's beside the point. I know why you're acting so strangely; you've got that old trip-to-the-Moon madness again. Well, I won't stand for it, do you hear? I'll stop you; I don't bave to put up with it. I'm going right down in the morning and see Mr. Kamens and find out what has to be done to make you behave yourself." The cords of her neck jerked as she spoke.

He waited, gathering his temper before going on. "Charlotte, you have no real cause for complaint. No matter what happens to me, your future is taken care of."

"Do you think I want to be a widow?"

He looked thoughtfully at her. "I wonder."

"Why- Why, you heartless beast." She stood up. "We'll say no more about it; do you mind?" She left without waiting for an answer.

His "man" was waiting for him when he got to his room. Jenkins got up hastily and started drawing Harriman's bath. "Beat it," Harriman grunted. "I can undress myself."

"You require nothing more tonight, sir?"

"Nothing. But don't go unless you feel like it. Sit down and pour yourself a drink. Ed, how long you been married?"

"Don't mind if I do." The servant helped himself. "Twenty-three years, come May, sir."

"How's it been, if you don't mind me asking?" -

"Not bad. Of course there have been times-"

"I know what you mean. Ed, if you weren't working for me, what would you be doing?"

"Well, the wife and I have talked many times of opening a little restaurant, nothing pretentious, but good. A place where a gentleman could enjoy a quiet meal of good food."

"Stag, eh?"

"No, not entirely, sir-but there would be a parlor' for gentlemen only. Not even waitresses, I'd tend that room myself."

"Better look around for locations, Ed. You're practically in business."

CHAPTER THREE

STRONG ENTERED THEIR JOINT OFFICES the next morning at a precise nine o'clock, as usual. He was startled to find Harriman there before him. For Harriman to fail to show up at all meant nothing; for him to beat the clerks in was significant.

Harriman was busy with a terrestrial globe and a book-the current Nautical Almanac, Strong observed. Harriman barely glanced up. "Morning, George. Say, who've we got a line to in Brazil?"

"Why?"

"I need some trained seals who speak Portuguese, that's why. And some who speak Spanish, too. Not to mention three or four dozen scattered around in this country. I've come across something very, very interesting. Look here. . . according to these tables the Moon only swings about twentyeight, just short of twenty-nine degrees north and south of the equator." He held a pencil against the globe and spun it. "Like that. That suggest anything?"

"No. Except that you're getting pencil marks on a sixty dollar globe."

"And you an old real estate operator! What does a man own when he buys a parcel of land?"

"That depends on the deed. Usually mineral rights and other subsurface rights are-"

"Never mind that. Suppose he buys the works, without splitting the rights: how far down does he own? How far up does he own?"

"Well, he owns a wedge down to the center of the Earth. That was settled in the slant-drilling and off-set oil lease cases. Theoretically he used to own the space above the land, too, out indefinitely, but that was modified by a series of cases after the commercial airlines came in-and a good thing, for us, too, or we would have to pay tolls every time one of our rockets took off for Australia."

"No, no, no, George! you didn't read those cases right. Right of passage was established-but ownership of the space above the land remained unchanged. And even right of passage was not absolute; you can build a thousand-foot tower on your own land right where airplanes, or rockets, or whatever, have been in the habit of passing and the ships will thereafter have to go above it, with no kick back on you. Remember how we had to lease the air south of Hughes Field to insure that our approach wasn't built up?"

Strong looked thoughtful. "Yes. I see your point. The ancient principle of land ownership remains undisturbed-down to the center of the Earth, up to infinity. But what of it? It's a purely theoretical matter. You're not planning to pay tolls to operate those spaceships you're always talking about, are you?" He grudged a smile at his own wit.

"Not on your tintype. Another matter entirely. George-who owns the Moon?"

Strong's jaw dropped, literally. "Delos, you're joking."

"I am not. I'll ask you again: if basic law says that a man owns the wedge of sky above his farm out to infinity, who owns the Moon? Take a look at this globe and tell me."

Strong looked. "But it can't mean anything, Delos. Earth laws wouldn't apply to the Moon."

"They apply here and that's where I am worrying about it. The Moon stays constantly over a slice of Earth bounded by latitude twenty-nine north and the same distance south; if one man owned all that belt of Earth-it's roughly the tropical zone-then he'd own the Moon, too, wouldn't he? By all the theories of real property ownership that

our courts pay any attention to. And, by direct derivation, according to the sort of logic that lawyers like, the various owners of that belt of land have title-good vendable title-to the Moon somehow lodged collectively in them. The fact that the distribution of the title is a little vague wouldn't bother a lawyer; they grow fat on just such distributed titles every time a will is probated."

"It's fantastic!"

"George, when are you going to learn that 'fantastic' is a notion that doesn't bother a lawyer?"

"You're not planning to try to buy the entire tropical zone-that's what you would have to do."

"No," Harriman said slowly, "but it might not be a bad idea to buy right, title and interest in the Moon, as it may appear, from each of the sovereign countries in that belt. If I thought I could keep it quiet and not run the market up, I might try it. You can buy a thing awful cheap from a man if he thinks it's worthless and wants to sell before you regain your senses.

"But that's not the plan," he went on. "George, I want corporations- local corporations-in every one of those countries. I want the legislatures of each of those countries to grant franchises to its local corporation for lunar exploration, exploitation, et cetera, and the right to claim lunar soil on behalf of the country-with fee simple, naturally, being handed on a silver platter to the patriotic corporation that thought up the idea. And I want all this done quietly, so that the bribes won't go too high. We'll own the corporations, of course, which is why I need a flock of trained seals. There is going to be one hell of a fight one of these days over who owns the Moon; I want the deck stacked so that we win no matter how the cards are dealt."

"It will be ridiculously expensive, Delos. And you don't even know that you will ever get to the Moon, much less that it will be worth anything after you get there."

"We'll get there! It'll be more expensive not to establish these claims. Anyhow it need not be very expensive; the proper use of bribe money is a homoeopathic art-you use it as a catalyst. Back in the middle of the last century four men went from California to Washington with $40,000; it was all they had. A few weeks later they were broke-but Congress had awarded them a billion dollars' worth of railroad right of way. The trick is not to run up the market."

Strong shook his head. "Your title wouldn't be any good anyhow. The Moon doesn't stay in one place; it passes over owned land certainly-but so does a migrating goose."

"And nobody has title to a migrating bird. I get your point-but the Moon always stays over that one belt. If you move a boulder in your garden, do you lose title to it? Is it still real estate? Do the title laws still stand? This is like that group of real estate cases involving wandering islands in the Mississippi, George-the land moved as the river cut new channels, but somebody always owned it. In this case I plan to see to it that we are the 'somebody.'"

Strong puckered his brow. "I seem to recall that some of those island-andriparian cases were decided one way and some another."

"We'll pick the decisions that suit us. That's why lawyers' wives have mink coats. Come on, George; let's get busy."

"On what?"

"Raising the money."

"Oh." Strong looked relieved. "I thought you were planning to use our money."

"I am. But it won't be nearly enough. We'll use our money for the senior financing to get things moving; in the meantime we've got to work out ways to keep the money rolling in." He pressed a switch at his desk; the face of Saul Kamens, their legal chief of staff, sprang out at him. "Hey, Saul, can you slide in for a p0w-wow?"

"WThatever it is, just tell them 'no,'" answered the attorney. "I'll fix it."

"Good. Now come on in-they're moving Hell and I've got an option on the first ten loads."

Kamens showed up in his own good time. Some minutes later Harriman had explained his notion for claiming the Moon ahead of setting foot on it. "Besides those dummy corporations," he went on, "we need an agency that can receive contributions without having to admit any financial interest on the part of the contributor-like the National Geographic Society."

Kamens shook his head. "You can't buy the National Geographic Society."

"Damn it, who said we were going to? We'll set up our own."

"That's what I started to say."

"Good. As I see it, we need at least one tax-free, non-profit corporation headed up by the right people-we'll hang on to voting control, of course. We'll probably need more than one; we'll set them up as we need them. And we've got to have at least one new ordinary corporation, not tax-free- but it won't show a profit until we are ready. The idea is to let the nonprofit corporations have all of the prestige and all of the publicity-and the other gets all of the profits, if and when. We swap assets around between corporations, always for perfectly valid reasons, so that the non-profit corporations pay the expenses as we go along. Come to think about it, we had better have at least two ordinary corporations, so that we can let one of them go through bankruptcy if we find it necessary to shake out the water. That's the general sketch. Get busy and fix it up so that it's legal, will you?"

Kamens said, "You know, Delos, it would be a lot more honest if you did it at the point of a gun."

"A lawyer talks to me of honesty! Never mind, Saul; I'm not actually going to cheat anyone-"

"Humph!"

"-and I'm just going to make a trip to the Moon. That's what everybody will be paying for; that's what they'll get. Now fix it up so that it's legal, that's a good boy."

"I'm reminded of something the elder Vanderbilt's lawyer said to the old man under similar circumstances: 'It's beautiful the way it is; why spoil it by making it legal?' Okeh, brother gonoph, I'll rig your trap. Anything else?"

"Sure. Stick around, you might have some ideas. George, ask Montgomery to come in, will you?" Montgomery, Harriman's publicity chief, had two virtues in his employer's eyes: he was personally loyal to Harriman, and, secondly, he was quite capable of planning a campaign to convince the public that Lady Godiva wore a Caresse-brand girdle during her famous ride

or that Hercules attributed his strength to Crunchies for breakfast. He arrived with a large portfolio under his arm. "Glad you sent for me, Chief. Get a load of this-" He

spread the folder open on Harriman's desk and began displaying sketches and layouts. "Kinsky's work-is that boy hot!" Harriman closed the portfolio. "What outfit is it for?"

"Huh? New World Homes."

"I don't want to see it; we're dumping New World Homes. Wait a minute-don't start to bawl. Have the boys go through with it; I want the price kept up while we unload. But open your ears to another matter." He explained rapidly the new enterprise.

Presently Montgomery was nodding. "When do we start and how much do we spend?"

"Right away and spend what you need to. Don't get chicken about expenses; this is the biggest thing we've ever tackled." Strong flinched; Harriman went on, "Have insomnia over it tonight; see me tomorrow and we'll kick it around."

"Wait a see, Chief. How are you going to sew up all those franchises from the, uh-the Moon states, those countries the Moon passes over, while a big publicity campaign is going on about a trip to the Moon and how big a thing it is for everybody? Aren't you about to paint yourself into a corner?"

"Do I look stupid? We'll get the franchise before you hand out so much as a filler-you'll get 'em, you and Kamens. That's your first job."

"Hmmm. . . ." Montgomery chewed a thumb nail. "Well, all right-I can see some angles. How soon do we have to sew it up?"

"I give you six weeks. Otherwise just mail your resignation in, written on the skin off your back."

"I'll write it right now, if you'll help me by holding a mirror."

"Damn it, Monty, I know you can't do it in six weeks. But make it fast; we can't take a cent in to keep the thing going until you sew up those franchises. If you dilly-dally, we'll all starve-and we won't get to the Moon, either."

Strong said, "D.D., why fiddle with those trick claims from a bunch of moth-eaten tropical countries? If you are dead set on going to the Moon, let's call Ferguson in and get on with the matter."

"I like your direct approach, George," Harriman said, frowning. "Mmmm back about i 84; or '46 an eager-beaver American army officer captured California. You know what the State Department did?"

"They made him hand it back. Seems he hadn't touched second base, or something. So they had to go to the trouble of capturing it all over again a few months later. Now I don't want that to happen to us. It's not enough just to set foot on the Moon and claim it; we've got to validate that claim in terrestrial courts-or we're in for a peck of trouble. Eh, Saul?"

Kamens nodded. "Remember what happened to Columbus."

"Exactly. We aren't going to let ourselves be rooked the way Columbus was."

Montgomery spat out some thumb nail. "But, Chief-you know damn well those banana-state claims won't be worth two cents after I do tie them up. Why not get a franchise right from the U.N. and settle the matter? I'd as lief tackle that as tackle two dozen cockeyed legislatures. In fact I've got an angle already-we work it through the Security Council and-"

"Keep working on that angle; we'll use it later. You don't appreciate the full mechanics of the scheme, Monty. Of course those claims are worth nothing-except

nuisance value. But their nuisance value is all important. Listen: we get to the Moon, or appear about to. Every one of those countries puts up a squawk; we goose them into it through the dummy corporations they have enfranchised. Where do they squawk? To the U.N., of course. Now the big countries on this globe, the rich and important ones, are all in the northern temperate zone. They see what the claims are based on and they take a frenzied look at the globe. Sure enough, the Moon does not pass over a one of them. The biggest country of all-Russia-doesn't own a spadeful of dirt south of twenty-nine north. So they reject all the claims.

"Or do they?" Harriman went on. "The U.S. balks. The Moon passes over Florida and the southern part of Texas. Washington is in a tizzy. Should they back up the tropical countries and support the traditional theory of land title or should they throw their weight to the idea that the Moon belongs to everyone? Or should the United States try to claim the whole thing, seeing as how it was Americans who actually got there first?

"At this point we creep out from under cover. It seems that the Moon ship was owned and the expenses paid by a non-profit corporation chartered by the U.N. itself-"

"Hold it," interrupted Strong. "I didn't know that the U.N. could create corporations?"

"You'll find it can," his partner answered. "How about it, Saul?" Kamens nodded. "Anyway," Harriman continued, "I've already got the corporation. I had it set up several years ago. It can do most anything of an educational or scientific nature-and brother, that covers a lot of ground! Back to the point-this corporation, the creature of the U.N., asks its parent to declare the lunar colony autonomous territory, under the protection of the U.N. We won't ask for outright membership at first because we want to keep it simple-"

"Simple, he calls it!" said Montgomery.

"Simple. This new colony will be a de facto sovereign state, holding title to the entire Moon, and-listen closely!-capable of buying, selling, passing laws, issuing title to land, setting up monopolies, collecting tariffs, et cetera without end. And we own it."

"The reason we get all this is because the major states in the U.N. can't think up a claim that sounds as legal as the claim made by the tropical states, they can't agree among themselves as to how to split up the swag if they were to attempt brute force and the other major states aren't willing to see the United States claim the whole thing. They'll take the easy way out of their dilemma by appearing to retain title in the U.N. itself. The real title, the title controlling all economic and legal matters, will revert to us. Now do you see my point, Monty?"

Montgomery grinned. "Damned if I know if it's necessary, Chief, but I love it. It's beautiful."

"Well, I don't think so," Strong grumbled. "Delos, I've seen you rig some complicated deals-some of them so devious that they turned even my stomach-but this one is the worst yet. I think you've been carried away by the pleasure you get out of cooking up involved deals in which somebody gets double-crossed."

Harriman puffed hard on his cigar before answering, "I don't give a damn, George. Call it chicanery, call it anything you want to. I'm going to the Moon! If I have to manipulate a million people to accomplish it, I'll do it."

"But it's not necessary to do it this way."

"Well, how would you do it?"

"Me? I'd set up a straightforward corporation. I'd get a resolution in Congress making my corporation the chosen instrument of the United States-"

"Bribery?"

"Not necessarily. Influence and pressure ought to be enough. Then I would set about raising the money and make the trip."

"And the United States would then own the Moon?"

"Naturally," Strong answered a little stiffly.

Harriman got up and began pacing. "You don't see it, George, you don't see it. The Moon was not meant to be owned by a single country, even the United States."

"It was meant to be owned by you, I suppose."

"Well, if I own it-for a short while-I won't misuse it and I'll take care that others don't. Damnation, nationalism should stop at the stratosphere. Can you see what would happen if the United States lays claim to the Moon? The other nations won't recognize the claim. It will become a permanent bone of contention in the Security Council-just when we were beginning to get straightened out to the point where a man could do business planning without having his elbow jogged by a war every few years. The other nations-quite rightfully-will be scared to death of the United States. They will be able to look up in the sky any night and see the main atom-bomb rocket base of the United States staring down the backs of their necks. Are they going to hold still for it? No, sirree-they are going to try to clip off a piece of the Moon for their own national use. The Moon is too big to hold, all at once. There will be other bases established there and presently there will be the worst war this planet has ever seen-and we'll be to blame.

"No, it's got to be an arrangement that everybody will hold still for-and that's why we've got to plan it, think of all the angles, and be devious about it until we are in a position to make it work.

"Anyhow, George, if we claim it in the name of the United States, do you know where we will be, as business men?"

"In the driver's seat," answered Strong.

"In a pig's eye! We'll be dealt right out of the game. The Department of National Defense will say, 'Thank you, Mr. Harriman. Thank you, Mr. Strong. We are taking over in the interests of national security; you can go home now.' And that's just what we would have to do-go home and wait for the next atom war.

"I'm not going to do it, George. I'm not going to let the brass hats muscle in. I'm going to set up a lunar colony and then nurse it along until it is big enough to stand on its own feet. I'm telling you-all of you!-this is the biggest thing for the human race since the discovery of fire. Handled right, it can mean a new and braver world. Handle it wrong and it's a one-way ticket to Armageddon. It's coming, it's coming soon, whether we touch it or not. But I plan to be the Man in the Moon myself-and give it my personal attention to see that it's handled right."

He paused. Strong said, "Through with your sermon, Delos?"

"No, I'm not," Harriman denied testily. "You don't see this thing the right way. Do you know what we may find up there?" He swung his arm in an arc toward the ceiling. "People!"

"On the Moon?" said Kamens.

"Why not on the Moon?" whispered Montgomery to Strong.

"No, not on the Moon-at least I'd be amazed if we dug down and found anybody under that airless shell. The Moon has had its day; I was speaking of the other planets-Mars and Venus and the satellites of Jupiter. Even maybe out at the stars themselves. Suppose we do find people? Think what it will mean to us. We've been alone, all alone, the only intelligent race in the only world we know. We haven't even been able to talk with dogs or apes. Any answers we got we had to think up by ourselves, like deserted orphans. But suppose we find people, intelligent people, who have done some thinking in their own way. We wouldn't be alone any more! We could look up at the stars and never be afraid again."

He finished, seeming a little tired and even a little ashamed of his outburst, like a man surprised in a private act. He stood facing them, searching their faces.

"Gee whiz, Chief," said Montgomery, "I can use that. How about it?"

"Think you can remember it?"

"Don't need to-I flipped on your 'silent steno."

"Well, damn your eyes!"

"We'll put it on video-in a play I think."

Harriman smiled almost boyishly. "I've never acted, but if you think it'll do any good, I'm game."

"Oh, no, not you, Chief," Montgomery answered in horrified tones. "You're not the type. I'll use Basil Wilkes-Booth, I think. With his organlike voice and that beautiful archangel face, he'll really send 'em."

Harriman glanced down at his paunch and said gruffly, "O.K.-back to business. Now about money. In the first place we can go after straight donations to one of the non-profit corporations, just like endowments for colleges. Hit the upper brackets, where tax deductions really matter. How much do you think we can raise that way?"

"Very little," Strong opined. "That cow is about milked dry."

"It's never milked dry, as long as there are rich men around who would rather make gifts than pay taxes. How much will a man pay to have a crater on the Moon named after him?"

"I thought they all had names?" remarked the lawyer.

"Lots of them don't-and we have the whole back face that's not touched yet. We won't try to put down an estimate today; we'll just list it. Monty, I want an angle to squeeze dimes out of the school kids, too. Forty million school kids 'at a dime a head is $4,000,000.00-we can use that."

"Why stop at a dime?" asked Monty. "If you get a kid really interested he'll scrape together a dollar."

"Yes, but what do we offer him for it? Aside from the honor of taking part in a noble venture and so forth?"

"Mmmm. . . ." Montgomery used up more thumb nail. "Suppose we go after both the dimes and the dollars. For a dime he gets a card saying that he's a member of the Moonbeam club-"

"No, the 'Junior Spacemen'."

"O.K., the Moonbeams will be girls-and don't forget to rope the Boy Scouts and Girl Scouts into it, too. We give each kid a card; when he kicks in another dime, we punch it. When he's punched out a dollar, we give him a certificate, suitable for framing, with his name and some process engraving, and on the back a picture of the Moon."

"On the front," answered Harriman. "Do it in one print job; it's cheaper and it'll look better. We give him something else, too, a steelclad guarantee that his name will be on the rolls of the Junior Pioneers of the Moon, which same will be placed in a monument to be erected on the Moon at the landing site of the first Moon ship-in microfilm, of course; we have to watch weight."

"Fine!" agreed Montgomery. "Want to swap jobs, Chief? V/hen he gets up to ten dollars we give him a genuine, solid gold-plated shooting star pin ~nd he's a senior Pioneer, with the right to vote or something or other. And his name goes outside of the monument-microengraved on a platinum strip."

Strong looked as if he had bitten a lemon. "What happens when he reaches a hundred dollars?" he asked.

"Why, then," Montgomery answered happily, "we give him another card and he can start over. Don't worry about it, Mr. Strong-if any kid goes that high, he'll have his reward. Probably we will take him on an inspection tour of the ship before it takes off and give him, absolutely free, a picture of himself standing in front of it, with the pilot's own signature signed across the bottom by some female clerk."

"Chiseling from kids. Bah!"

"Not at all," answered Montgomery in hurt tones. "Intangibles are the most honest merchandise anyone can sell. They are always worth whatever you are willing to pay for them and they never wear out. You can take them to your grave untarnished."

"Hmmmph!"

Harriman listened to this, smiling and saying nothing. Kamens cleared his throat. "If you two ghouls are through cannibalizing the youth of the land, I've another idea."

"Spill it."

"George, you collect stamps, don't you?"

"Yes."

"How much would a cover be worth which had been to the Moon and been cancelled there?"

"Huh? But you couldn't, you know."

"I think we could get our Moon ship declared a legal post office substation without too much trouble. What would it be worth?"

"Uh, that depends on how rare they are."

"There must be some optimum number which will fetch a maximum return. Can you estimate it?"

Strong got a faraway look in his eye, then took out an old-fashioned pencil and commenced to figure. Harriman went on, "Saul, my minor success in buying a share in the Moon from Jones went to my head. How about selling building lots on the Moon?"

"Let's keep this serious, Delos. You can't do that until you've landed there."

"I am serious. I know you are thinking of that ruling back in the 'forties that such land would have to be staked out and accurately described. I want to sell land on the Moon. You figure out a way to make it legal. I'll sell the whole Moon, if I can-surface rights, mineral rights, anything."

"Suppose they want to occupy it?"

"Fine. The more the merrier. I'd like to point out, too, that we'll be in a position to assess taxes on what we have sold. If they don't use it and won't pay taxes, it reverts to us.

Now you figure out how to offer it, without going to jail. You may have to advertise it abroad, then plan to peddle it personally in this country, like Irish Sweepstakes tickets."

Kamens looked thoughtful. "We could incorporate the land company in Panama and advertise by video and radio from Mexico. Do you really think you can sell the stuff?"

"You can sell snowballs in Greenland," put in Montgomery. "It's a matter of promotion."

Harriman added, "Did you ever read about the Florida land boom, Saul? People bought lots they had never seen and sold them at tripled prices without ever having laid eyes on them. Sometimes a parcel would change hands a dozen times before anyone got around to finding out that the stuff was ten-foot deep in water. We can offer bargains better than that-an acre, a guaranteed dry acre with plenty of sunshine, for maybe ten dollars-or a thousand acres at a dollar an acre. Who's going to turn down a bargain like that? Particularly after the rumor gets around that the Moon is believed to be loaded with uranium?"

"Is it?"

"How should I know? When the boom sags a little we will announce the selected location of Luna City-and it will just happen to work out that the land around the site is still available for sale. Don't worry, Saul, if it's real estate, George and I can sell it. Why, down in the Ozarks, where the land stands on edge, we used to sell both sides of the same acre." Harriman looked thoughtful. "I think we'll reserve mineral rights-there just might actually be uranium there!"

Kamens chuckled. "Delos, you are a kid at heart. Just a great big, overgrown, lovable-juvenile delinquent."

Strong straightened up. "I make it half a million," he said.

"Half a million what?" asked Harriman.

"For the cancelled philatelic covers, of course. That's what we were talking about. Five thousand is my best estimate of the number that could be placed with serious collectors and with dealers. Even then we will have to discount them to a syndicate and hold back until the ship is built and the trip looks like a probability."

"Okay," agreed Harriman. "You handle it. I'll just note that we can tap you for an extra half million toward the end."

"Don't I get a commission?" asked Kamens. "I thought of it."

"You get a rising vote of thanks-and ten acres on the Moon. Now what other sources of revenue can we hit?"

"Don't you plan to sell stock?" asked Kamens.

"I was coming to that. Of course-but no preferred stock; we don't want to be forced through a reorganization. Participating common, non-voting-"

"Sounds like another banana-state corporation to me."

"Naturally-but I want some of it on the New York Exchange, and you'll have to work that out with the Securities Exchange Commission somehow. Not too much of it-that's our show case and we'll have to keep it active and moving up."

"Wouldn't you rather I swam the Hellespont?"

"Don't be like that, Saul. It beats chasing ambulances, doesn't it?"

"I'm not sure."

"Well, that's what I want you-wups!" The screen on Harriman's desk had come to life. A girl said, "Mr. Harriman, Mr. Dixon is here. He has no appointment but he says that you want to see him."

"I thought I had that thing shut off," muttered Harriman, then pressed his key and said, "O.K., show him in."

"Very well, sir-oh, Mr. Harriman, Mr. Entenza came in just this second."

"Look who's talking," said Kamens.

Dixon came in with Entenza behind him. He sat down, looked around, started to speak, then checked himself. He looked around again, especially at Entenza.

"Go ahead, Dan," Harriman encouraged him. "'Tain't nobody here at all but just us chickens."

Dixon made up his mind. "I've decided to come in with you, D.D.," he announced. "As an act of faith I went to the trouble of getting this." He took a formal-looking instrument from his pocket and displayed it. It was a sale of lunar rights, from Phineas Morgan to Dixon, phrased in exactly the same fashion as that which Jones had granted to Harriman.

Entenza looked startled, then dipped into his own inner coat pocket. Out came three more sales contracts of the same sort, each from a director of the power syndicate. Harriman cocked an eyebrow at them. "Jack sees you and raises you two, Dan. You want to call?"

Dixon smiled ruefully. "I can just see him." He added two more to the pile, grinned and offered his hand to Entenza.

"Looks like a stand off." Harriman decided to say nothing just yet about seven telestated contracts now locked in his desk-after going to bed the night before he had been quite busy on the phone almost till midnight. "Jack, how much did you pay for those things?"

"Standish held out for a thousand; the others were cheap."

"Damn it, I warned you not to run the price up. Standish will gossip. How about you, Dan?"

"I got them at satisfactory prices."

"So you won't talk, eh? Never mind-gentlemen, how serious are you about this? How much money did you bring with you?"

Entenza looked to Dixon, who answered, "How much does it take?"

"How much can you raise?" demanded Harriman.

Dixon shrugged. "We're getting no place. Let's use figures. A hundred thousand."

Harriman sniffed. "I take it what you really want is to reserve a seat on the first regularly scheduled Moon ship. I'll sell it to you at that price."

"Let's quit sparring, Delos. How much?"

Harriman's face remained calm but he thought furiously. He was caught short, with too little information-he had not even talked figures with his chief engineer as yet. Confound it! Why had he left that phone hooked in? "Dan, as I warned you, it will cost you at least a million just to sit down in this game."

"So I thought. How much will it take to stay in the game?"

"All you've got."

"Don't be silly, Delos. I've got more than you have."

Harriman lit a cigar, his only sign of agitation. "Suppose you match us, dollar for dollar."

"For which I get two shares?"

"Okay, okay, you chuck in a buck whenever each of us does-share and share alike. But I run things."

"You run the operations," agreed Dixon. "Very well, I'll put up a million now and match you as necessary. You have no objection to me having my own auditor, of course."

"When have I ever cheated you, Dan?"

"Never and there is no need to start."

"Have it your own way-but be damned sure you send a man who can keep his mouth shut."

"He'll keep quiet. I keep his heart in a jar in my safe."

Harriman was thinking about the extent of Dixon's assets. "We just might let you buy in with a second share later, Dan. This operation will be expensive."

Dixon fitted his finger tips carefully together. "We'll meet that question when we come to it. I don't believe in letting an enterprise fold up for lack of capital."

"Good." Harriman turned to Entenza. "You heard what Dan had to say, Jack. Do you like the terms?"

Entenza's forehead was covered with sweat. "I can't raise a million that fast."

"That's all right, Jack. We don't need it this morning. Your note is good; you can take your time liquidating."

"But you said a million is just the beginning. I can't match you indefinitely; you've got to place a limit on it. I've got my family to consider."

"No annuities, Jack? No monies transferred in an irrevocable trust?"

"That's not the point. You'll be able to squeeze me-freeze me out."

Harriman waited for Dixon to say something. Dixon finally said, "We wouldn't squeeze you, Jack-as long as you could prove you had converted every asset you hold. We would let you stay in on a pro rata basis."

Harriman nodded. "That's right, Jack." He was thinking that any shrinkage in Entenza's share would give himself and Strong a clear voting majority.

Strong had been thinking of something of the same nature, for he spoke up suddenly, "I don't like this. Four equal partners-we can be deadlocked too easily."

Dixon shrugged. "I refuse to worry about it. I am in this because I am betting that Delos can manage to make it profitable."

"We'll get to the Moon, Dan!"

"I didn't say that. I am betting that you will show a profit whether we get to the Moon or not. Yesterday evening I spent looking over the public records of several of your companies; they were very interesting. I suggest we resolve any possible deadlock by giving the Director-that's you, Delos- the power to settle ties. Satisfactory, Entenza?"

"Oh, sure!"

Harriman was worried but tried not to show it. He did not trust Dixon, even bearing gifts. He stood up suddenly. "I've got to run, gentlemen. I leave you to Mr. Strong and Mr. Kamens. Come along, Monty." Kamens, he was sure, would not spill anything prematurely, even to nominal full partners. As for Strong-George, he knew, had not even let his left hand know how many fingers there were on his right.

He dismissed Montgomery outside the door of the partners' personal office and went across the hall. Andrew Ferguson, chief engineer of Harriman Enterprises, looked up as he came in. "Howdy, Boss. Say, Mr. Strong gave me an interesting idea for a light switch this morning. It did not seem practical at first but-"

"Skip it. Let one of the boys have it and forget it. You know the line we are on now."

"There have been rumors," Ferguson answered cautiously.

"Fire the man that brought you the rumor. No-send him on a special mission to Tibet and keep him there until we are through. Well, let's get on with it. I want you to build a Moon ship as quickly as possible."

Ferguson threw one leg over the arm of his chair, took out a pen knife and began grooming his nails. "You say that like it was an order to build a privy."

"Why not? There have been theoretically adequate fuels since way back in '49. You get together the team to design it and the gang to build it; you build it-I pay the bills. What could be simpler?"

Ferguson stared at the ceiling. "'Adequate fuels-'" he repeated dreamily.

"So I said. The figures show that hydrogen and oxygen are enough to get a step rocket to the Moon and back-it's just a matter of proper design."

"'Proper design,' he says," Ferguson went on ifl the same gentle voice, then suddenly swung around, jabbed the knife into the scarred desk top and bellowed, "What do you know about proper design? Where do I get the steels? What do I use for a throat liner? How in the hell do I burn enough tons of your crazy mix per second to keep from wasting all my power breaking loose? How can I get a decent mass-ratio with a step rocket? Why in the hell didn't you let me build a proper ship when we had the fuel?"

Harriman waited for him to quiet down, then said, "What do we do about it, Andy?"

"Hmmm. . . . I was thinking about it as I lay abed last night-and my old lady is sore as hell at you; I had to finish the night on the couch. In the first place, Mr. Harriman, the proper way to tackle this is to get a research appropriation from the Department of National Defense. Then you-"

"Damn it, Andy, you stick to engineering and let me handle the political and financial end of it. I don't want your advice."

"Damn it, Delos, don't go off half-cocked. This is engineering I'm talking about. The government owns a whole mass of former art about rocketry-all classified. Without a government contract you can't even get a peek at it."

"It can't amount to very much. What can a government rocket do that a Skyways rocket can't do? You told me yourself that Federal rocketry no longer amounted to anything."

Ferguson looked supercilious. "I am afraid I can't explain it in lay terms. You will have to take it for granted that we need those government research reports. There's no sense in spending thousands of dollars in doing work that has already been done."

"Spend the thousands."

"Maybe millions."

"Spend the millions. Don't be afraid to spend money. Andy, I don't want this to be a military job." He considered elaborating to the engineer the involved politics back of his decision, thought better of it. "How bad do you actually need that government stuff?

Can't you get the same results by hiring engineers who used to work for the government? Or even hire them away from the government right now?"

Ferguson pursed his lips. "If you insist on hampering me, how can you expect me to get results?"

"I am not hampering you. I am telling you that this is not a government project. If you won't attempt to cope with it on those terms, let me know now, so that I can find somebody who will."

Ferguson started playing mumblety-peg on his desk top. When he got to "noses"-and missed-he said quietly, "I mind a boy who used to work for the government at White Sands. He was a very smart lad indeed-design chief of section."

"You mean he might head up your team?"

"That was the notion."

"What's his name? Where is he? Who's he working for?"

"Well, as it happened, when the government closed down White Sands, it seemed a shame to me that a good boy should be out of a job, so I placed him with Skyways. He's maintenance chief engineer out on the Coast."

"Maintenance? What a hell of a job for a creative man! But you mean he's working for us now? Get him on the screen. No-call the coast and have them send him here in a special rocket; we'll all have lunch together."

"As it happens," Ferguson said quietly, "I got up last night and called him-that's what annoyed the Missus. He's waiting outside. Coster-Bob Coster."

A slow grin spread over Harriman's face. "Andy! You black-hearted old scoundrel, why did you pretend to balk?"

"I wasn't pretending. I like it here, Mr. Harriman. Just as long as you don't interfere, I'll do my job. Now my notion is this: we'll make young Coster chief engineer of the project and give him his head. I won't joggle his elbow; I'll just read the reports. Then you leave him alone, d'you hear me? Nothing makes a good technical man angrier than to have some incompetent nitwit with a check book telling him how to do his job."

"Suits. And I don't want a penny-pinching old fool slowing him down, either. Mind you don't interfere with him, either, or I'll jerk the rug out from under you. Do we understand each other?"

"I think we do."

"Then get him in here."

Apparently Ferguson's concept of a "lad" was about age thirty-five, for such Harriman judged Coster to be. He was tall, lean, and quietly eager. Harriman braced him immediately after shaking hands with, "Bob, can you build a rocket that will go to the Moon?"

Coster took it without blinking. "Do you have a source of X-fuel?" he countered, giving the rocket man's usual shorthand for the isotope fuel formerly produced by the power satellite.

Coster remained perfectly quiet for several seconds, then answered, "I can put an unmanned messenger rocket on the face of the Moon."

"Not good enough. I want it to go there, land, and come back. Whether it lands here under power or by atmosphere braking is unimportant."

It appeared that Coster never answered promptly; Harriman had the fancy that he could hear wheels turning over in the man's head. "That would be a very expensive job."

"Who asked you how much it would cost? Can you do it?"

"I could try."

"Try, hell. Do you think you can do it? Would you bet your shirt on it? Would you be willing to risk your neck in the attempt? If you don't believe in yourself, man, you'll always lose."

"How much will you risk, sir? I told you this would be expensive-and I doubt if you have any idea how expensive."

"And I told you not to worry about money. Spend what you need; it's my job to pay the bills. Can you do it?"

"I can do it. I'll let you know later how much it will cost and how long it will take."

"Good. Start getting your team together. Where are we going to do this, Andy?" he added, turning to Ferguson. "Australia?"

"No." It was Coster who answered. "It can't be Australia; I want a mountain catapult. That will save us one step-combination."

"How big a mountain?" asked Harriman~ "Will Pikes Peak do?"

"It ought to be in the Andes," objected Ferguson. "The mountains are taller and closer to the equator. After all, we own facilities there-or the Andes Development Company does."

"Do as you like, Bob," Harriman told Coster. "I would prefer Pikes Peak, but it's up to you." He was thinking that there were tremendous business advantages to locating Earth's space port ~ i inside the United States-and he could visualize the advertising advantage of having Moon ships blast off from the top of Pikes Peak, in plain view of everyone for hundreds of miles to the East.

"I'll let you know."

"Now about salary. Forget whatever it was we were paying you; how much do you want?"

Coster actually gestured, waving the subject away. "I'll work for coffee and cakes."

"Don't be silly."

"Let me finish. Coffee and cakes and one other thing: I get to make the trip.

Harriman blinked. "Well, I can understand that," he said slowly. "In the meantime I'll put you on a drawing account." He added, "Better calculate for a three-man ship, unless you are a pilot."

"I'm not."

"Three men, then. You see, I'm going along, too."

CHAPTER FOUR

"A GOOD THING YOU DECIDED to come in, Dan," Harriman was saying, "or you would find yourself out of a job. I'm going to put an awful crimp in the power company before I'm through with this."

Dixon buttered a roll. "Really? How?"

"We'll set up high-temperature piles, like the Arizona job, just like the one that blew up, around the corner on the far face of the Moon. We'll remote-control them; if one explodes it won't matter. And I'll breed more X-fuel in a week than the company turned out in three months. Nothing personal about it; it's just that I want a source of fuel for interplanetary liners. If we can't get good stuff here, we'll have to make it on the Moon."

"Interesting. But where do you propose to get the uranium for six piles? The last I heard the Atomic Energy Commission had the prospective supply earmarked twenty years ahead."

"Uranium? Don't be silly; we'll get it on the Moon."

"On the Moon? Is there uranium on the Moon?"

"Didn't you know? I thought that was why you decided to join up with me?"

"No, I didn't know," Dixon said deliberately. "What proof have you?"

"Me? I'm no scientist, but it's a well-understood fact. Spectroscopy, or something. Catch one of the professors. But don't go showing too much interest; we aren't ready to show our hand." Harriman stood up. "I've got to run, or I'll miss the shuttle for Rotterdam. Thanks for the lunch." He grabbed his hat and left.

Harriman stood up. "Suit yourself, Mynheer van der Velde. I'm giving you and your colleagues a chance to hedge your bets. Your geologists all agree that diamonds result from volcanic action. What do you think we will find there?" He dropped a large photograph of the Moon on the Hollander's desk.

The diamond merchant looked impassively at the pictured planet, pockmarked by a thousand giant craters. "If you get there, Mr. Harriman."

Harriman swept up the picture. "We'll get there. And we'll find diamonds-though I would be the first to admit that it may be twenty years or even forty before there is a big enough strike to matter. I've come to you because I believe that the worst villain in our social body is a man who introduces a major new economic factor without planning his innovation in such a way as to permit peaceful adjustment. I don't like panics. But all I can do is warn you. Good day."

"Sit down, Mr. Harriman. I'm always confused when a man explains how he is going to do me good. Suppose you tell me instead how this is going to do you good? Then we can discuss how to protect the world market against a sudden influx of diamonds from the Moon."

Harriman sat down.

Harriman liked the Low Countries. He was delighted to locate a dog-drawn milk cart whose young master wore real wooden shoes; he happily took pictures and tipped the child heavily, unaware that the set-up was arranged for tourists. He visited several other diamond merchants but without speaking of the Moon. Among other purchases he found a brooch for Charlotte- a peace offering.

Then he took a taxi to London, planted a story with the representatives of the diamond syndicate there, arranged with his London solicitors to be insured by Lloyd's of London through a dummy, against a successful Moon flight, and called his home office. He listened to numerous reports, especially those concerning Montgomery, and found that Montgomery was in New Delhi. He called him there, spoke with him at length, then hurried to the port just in time to catch his ship. He was in Colorado the next morning.

At Peterson Field, east of Colorado Springs, he had trouble getting through the gate, even though it was now his domain, under lease. Of course he could have called

Coster and gotten it straightened out at once, but he wanted to look around before seeing Coster. Fortunately the head guard knew him by sight; he got in and wandered around for an hour or more, a tn-colored badge pinned to his coat to give him freedom.

The machine shop was moderately busy, so was the foundry . . . but most of the shops were almost deserted. Harriman left the shops, went into the main engineering building. The drafting room and the loft were fairly active, as was the computation section. But there were unoccupied desks in the structures group and a churchlike quiet in the metals group and in the adjoining metallurgical laboratory. He was about to cross over into the chemicals and materials annex when Coster suddenly showed up.

"Mr. Harriman! I just heard you were here."

"Spies everywhere," remarked Harriman. "I didn't want to disturb you."

"Not at all. Let's go up to my office."

Settled there a few moments later Harriman asked, "Well-how's it going?"

Coster frowned. "All right, I guess."

Harriman noted that the engineer's desk baskets were piled high with papers which spilled over onto the desk. Before Harriman could answer, Coster's desk phone lit up and a feminine voice said sweetly, "Mr. Coster- Mr. Morgenstern is calling."

"Tell him I'm busy."

After a short wait the girl answered in a troubled voice, "He says he's just got to speak to you, sir."

Coster looked annoyed. "Excuse me a moment, Mr. Harriman-O.K., put him on."

The girl was replaced by a man who said, "Oh there you are-what was the hold up? Look, Chief, we're in a jam about these trucks. Every one of them that we leased needs an overhaul and now it turns out that the White Fleet company won't do anything about it-they're sticking to the fine print in the contract. Now the way I see it, we'd do better to cancel the contract and do business with Peak City Transport. They have a scheme that looks good to me. They guarantee to-"

"Take care of it," snapped Coster. "You made the contract and you have authority to cancel. You know that."

"Yes, but Chief, I figured this would be something you would want to pass on personally. It involves policy and-"

"Take care of it! I don't give a damn what you do as long as we have transportation when we need it." He switched off.

"Who is that man?" inquired Harriman.

"Who? Oh, that's Morgenstern, Claude Morgenstem."

"Not his name-what does he do?"

"He's one of my assistants-buildings, grounds, and transportation."

"Fire him!"

Coster looked stubborn. Before he could answer a secretary came in and stood insistently at his elbow with a sheaf of papers. He frowned, initialed them, and sent her out.

"Oh, I don't mean that as an order," Harriman added, "but I do mean it as serious advice. I won't give orders in your backyard,-but will you listen to a few minutes of advice?"

"Naturally," Coster agreed stiffly.

"Mmm . . . this your first job as top boss?"

Coster hesitated, then admitted it.

"I hired you on Ferguson's belief that you were the engineer most likely to build a successful Moon ship. I've had no reason to change my mind. But top administration ain't engineering, and maybe I can show you a few tricks there, if you'll let me." He waited. "I'm not criticizing," he added. "Top bossing is like sex; until you've had it, you don't know about it." Harriman had the mental reservation that if the boy would not take advice, he would suddenly be out of a job, whether Ferguson liked it or not.

Coster drummed on his desk. "I don't know what's wrong and that's a fact. It seems as if I can't turn anything over to anybody and have it done properly. I feel as if I were swimming in quicksand."

"Done much engineering lately?"

"I try to." Coster waved at another desk in the corner. "I work there, late at night."

"That's no good. I hired you as an engineer. Bob, this setup is all wrong. The joint ought to be jumping-and it's not. Your office ought to be quiet as a grave. Instead your office is jumping and the plant looks like a graveyard."

Coster buried his face in his hands, then looked up. "I know it. I know what needs to be done-but every time I try to tackle a technical problem some bloody fool wants me to make a decision about trucks-or telephones-or some damn thing. I'm sorry, Mr. Harriman. I thought I could do it." Harriman said very gently, "Don't let it throw you, Bob. You haven't had much sleep lately, have you? Tell you what-we'll put over a fast one on Ferguson. I'll take that desk you're at for a few days and build you a set-up to protect you against such things. I want that brain of yours thinking about reaction vectors and fuel efficiencies and design stresses, not about contracts for trucks." Harriman stepped to the door, looked around the outer office and spotted a man who might or might not be the office's chief clerk. "Hey, you! C'mere."

The man looked startled, got up, came to the door and said, "Yes?"

"I want that desk in the corner and all the stuff that's on it moved to an empty office on this floor, right away."

The clerk raised his eyebrows. "And who are you, if I may ask?"

"Damn it-"

"Do as he tells you, Weber," Coster put in.

"I want it done inside of twenty minutes," added Harriman. "Jump!" He turned back to Coster's other desk, punched the phone, and presently was speaking to the main offices of Skyways. "Jim, is your boy Jock Berkeley around? Put him on leave and send him to me, at Peterson Field, right away, special trip. I want the ship he comes in to raise ground ten minutes after we sign off. Send his gear after him." Harriman listened for a moment, then answered, "No, your organization won't fall apart if you lose Jock- or, if it does, maybe we've been paying the wrong man the top salary .

"Okay, okay, you're entitled to one swift kick at my tail the next time you catch up with me but send Jock. So long."

He supervised getting Coster and his other desk moved into another office, saw to it that the phone in the new office was disconnected, and, as an afterthought, had a couch moved in there, too. "We'll install a projector, and a drafting machine and bookcases and other junk like that tonight," he told Coster. "Just make a list of anything you need-to work on engineering. And call me if you want anything." He went back to the nominal

chiefengineer's office and got happily to work trying to figure where the organization stood and what was wrong with it.

Some four hours later he took Berkeley in to meet Coster. The chief engineer was asleep at his desk, head cradled on his arms. Harriman started to back out, but Coster roused. "Oh! Sorry," he said, blushing, "I must have dozed off."

"That's why I brought you the couch," said Harriman. "It's more restful. Bob, meet Jock Berkeley. He's your new slave. You remain chief engineer and top, undisputed boss. Jock is Lord High Everything Else. From now on you've got absolutely nothing to worry about-except for the little detail of building a Moon ship."

They shook hands. "Just one thing I ask, Mr. Coster," Berkeley said seriously, "bypass me all you want to-you'll have to run the technical show-but for God's sake record it so I'll know what's going on. I'm going to have a switch placed on your desk that will operate a sealed recorder at my desk."

"Fine!" Coster was looking, Harriman thought, younger already.

"And if you want something that is not technical, don't do it yourself. Just flip a switch and whistle; it'll get done!" Berkeley glanced at Harriman. "The Boss says he wants to talk with you about the real job. I'll leave you and get busy." He left.

Harriman sat down; Coster followed suit and said, "Whew!"

"Feel better?"

"I like the looks of that fellow Berkeley."

"That's good; he's your twin brother from now on. Stop worrying; I've used him before. You'll think you're living in a well-run hospital. By the way, where do you live?"

"At a boarding house in the Springs."

"That's ridiculous. And you don't even have a place here to sleep?" Harriman reached over to Coster's desk, got through to Berkeley. "Jock-get a suite for Mr. Coster at the Broadmoor, under a phony name."

"Right."

"And have this stretch along here adjacent to his office fitted out as an apartment."

"Right. Tonight."

"Now, Bob, about the Moon ship. Where do we stand?"

They spent the next two hours contentedly running over the details of the problem, as Coster had laid them out. Admittedly very little work had been done since the field was leased but Coster had accomplished considerable theoretical work and computation before he had gotten swamped in administrative details. Harriman, though no engineer and certainly not a mathematician outside the primitive arithmetic of money, had for so long devoured everything he could find about space travel that he was able to follow most of what Coster showed him.

"I don't see anything here about your mountain catapult," he said presently.

Coster looked vexed. "Oh, that! Mr. Harriman, I spoke too quickly."

"Huh? How come? I've had Montgomery's boys drawing up beautiful pictures of what things will look like when we are running regular trips. I intend to make Colorado Springs the spaceport capital of the world. We hold the franchise of the old cog railroad now; what's the hitch?"

"Well, it's both time and money."

"Forget money. That's my pidgin."

"Time then. I still think an electric gun is the best way to get the initial acceleration for a chem-powered ship. Like this-" He began to sketch rapidly. "It enables you to omit the first step-rocket stage, which is bigger than all the others put together and is terribly inefficient, as it has such a poor mass-ratio. But what do you have to do to get it? You can't build a tower, not a tower a couple of miles high, strong enough to take the thrusts-not this year, anyway. So you have to use a mountain. Pikes Peak is as good as any; it's accessible, at least.

"But what do you have to do to use it? First, a tunnel in through the side, from Manitou to just under the peak, and big enough to take the loaded ship-"

"Lower it down from the top," suggested Harriman.

Coster answered, "I thought of that. Elevators two miles high for loaded space ships aren't exactly built out of string, in fact they aren't built out of any available materials. It's possible to gimmick the catapult itself so that the accelerating coils can be reversed and timed differently to do the job, but believe me, Mr. Harrima; it will throw you into other engineering problems quite as great . . . such as a giant railroad up to the top of the ship. And it still leaves you with the shaft of the catapult itself to be dug. It can't be as small as the ship, not like a gun barrel for a bullet. It's got to be considerably larger; you don't compress a column of air two miles high with impunity. Oh, a mountain catapult could be built, but it might take ten years-or longer."

"Then forget it. We'll build it for the future but not for this flight. No, wait-how about a surface catapult. We scoot up the side of the mountain and curve it up at the end?"

"Quite frankly, I think something like that is what will eventually be used. But, as of today, it just creates new problems. Even if we could devise an electric gun in which you could make that last curve-we can't, at present- the ship would have to be designed for terrific side stresses and all the additional weight would be parasitic so far as our main purpose is concerned, the design of a rocket ship."

"Well, Bob, what is your solution?"

Coster frowned. "Go back to what we know how to do-build a step rocket."

CHAPTER FIVE

"MONTY-"

"Yeah, Chief?"

"Have you ever heard this song?" Harriman hummed, "The Moon belongs to everyone; the best things in life are free-," then sang it, badly off key.

"Can't say as I ever have."

"It was before your time. I want it dug out again. I want it revivçd, plugged until Hell wouldn't have it, and on everybody's lips."

"O.K." Montgomery took out his memorandum pad. "When do you want it to reach its top?"

Harriman considered. "In, say, about three months. Then I want the first phrase picked up and used in advertising slogans."

"A cinch."

"How are things in Florida, Monty?"

"I thought we were going to have to buy the whole damned legislature until we got the rumor spread around that Los Angeles had contracted to have a City-Limits-of-Los-Angeles sign planted on the Moon for publicity pix. Then they came around."

"Good." Harriman pondered. "You know, that's not a bad idea. How much do you think the Chamber of Commerce of Los Angeles would pay for such a picture?"

Montgomery made another note. "I'll look into it."

"I suppose you are about ready to crank up Texas, now that Florida is loaded?"

"Most any time now. We're spreading a few snide rumors first."

Headline from Dallas-Fort Worth Banner:

"THE MOON BELONGS TO TEXAS!!!"

"-and that's all for tonight, kiddies. Don't forget to send in those box tops, or reasonable facsimiles. Remember-first prize is a thousand-acre ranch on the Moon itself, free and clear; the second prize is a six-foot scale model of the actual Moon ship, and there are fifty, count them, fifty third prizes, each a saddle-trained Shetland pony. Your hundred word composition 'Why I want to go to the Moon' will be judged for sincerity and originality, not on literary merit. Send those boxtops to Uncle Taffy, Box 214, Juarez, Old Mexico."

Harriman was shown into the office of the president of the Moka-Coka Company ("Only a Moke is truly a coke"-~ "Drink the Cola drink with the Lift"). He paused at the door, some twenty feet from the president's desk and quickly pinned a two-inch wide button to his lapel.

Patterson Griggs looked up. "Well, this is really an honor, D.D. Do come in and-" The soft-drink executive stopped suddenly, his expression changed. "What are you doing wearing that?" he snapped. "Trying to annoy me?"

"That" was the two-inch disc; Harriman unpinned it and put it in his pocket. It was a celluloid advertising pin, in plain yellow; printed on it in black, almost covering it, was a simple 6+, the trademark of Moka-Coka's only serious rival.

"No," answered Harriman, "though I don't blame you for being irritated. I see half the school kids in the country wearing these silly buttons. But I came to give you a friendly tip, not to annoy you."

"What do you mean?"

"When I paused at your door that pin on my lapel was just the size-to you, standing at your desk-as the full Moon looks when you are standing in your garden, looking up at it. You didn't have any trouble reading what was on the pin, did you? I know you didn't; you yelled at me before either one of us stirred."

"What about it?"

"How would you feel-and what would the effect be on your sales-if there was 'six-plus' written across the face of the Moon instead of just on a school kid's sweater?"

Griggs thought about it, then said, "D.D., don't make poor jokes. I've had a bad day."

"I'm not joking. As you have probably heard around the St~reet, I'm behind this Moon trip venture. Between ourselves, Pat, it's quite an expensive undertaking, even for me. A few days ago a man came to me-you'll pardon me if I don't mention names? You can figure it out. Anyhow, this man represented a client who wanted to buy the advertising concession for the Moon. He knew we weren't sure of success; but he said his client would take the risk.

"At first I couldn't figure out what he was talking about; he set me straight. Then I thought he was kidding. Then I was shocked. Look at this-" Harriman took out a large sheet of paper and spread it on Griggs' desk. "You see the equipment is set up anywhere near the center of the Moon, as we see it. Eighteen pyrotechnics rockets shoot out in eighteen directions, like the spokes of a wheel, but to carefully calculated distances. They hit and the bombs they carry go off, spreading finely divided carbon black for calculated distances. There's no air on the Moon, you know, Pat-a fine powder will throw just as easily as a javelin. Here's your result." He turned the paper over; on the back there was a picture of the Moon, printed lightly. Overlaying it, in black, heavy print was:

"So it is that outfit-those poisoners!"

"No, no, I didn't say so! But it illustrates the point; six-plus is only two symbols; it can be spread large enough to be read on the face of the Moon."

Griggs stared at the horrid advertisement. "I don't believe it will work!"

"A reliable pyrotechnics firm has guaranteed that it will-provided I can deliver their equipment to the spot. After all, Pat, it doesn't take much of a pyrotechnics rocket to go a long distance on the Moon. Why, you could throw a baseball a couple of miles yourself-low gravity, you know."

"People would never stand for it. It's sacrilege!"

Harriman looked sad. "I wish you were right. But they stand for skywriting-and video commercials."

Griggs chewed his lip. "Well, I don't see why you come to me with it," he exploded. "You know damn well the name of my product won't go on the face of the Moon. The letters would be too small to read."

Harriman nodded. "That's exactly why I came to you. Pat, this isn't just a business venture to me; it's my heart and soul. It just made me sick to think of somebody actually wanting to use the face of the Moon for advertising. As you say, it's sacrilege. But somehow, these jackals found out I was pressed for cash. They came to me when they knew I would have to listen.

"I put them off. I promised them an answer on Thursday. Then I went home and lay awake about it. After a while I thought of you."

"Me?"

"You. You and your company. After all, you've got a good product and you need legitimate advertising for it. It occurred to me that there are more ways to use the Moon in advertising than by defacing it. Now just suppose that your company bought the same concession, but with the public-spirited promise of never letting it be used. Suppose you featured that fact in your ads? Suppose you ran pictures of a boy and girl, sitting out under the Moon, sharing a bottle of Moke? Suppose Moke was the only soft drink carried on the first trip to the Moon? But I don't have to tell you how to do it." He glanced at his watch finger. "I've got to run and I don't want to rush you. If you want to do business just

leave word at my office by noon tomorrow and I'll have our man Montgomery get in touch with your advertising chief."

The head of the big newspaper chain kept him waiting the minimum time reserved for tycoons and cabinet members. Again Harriman stopped at the threshold of a large office and fixed a disc to his lapel.

"Howdy, Delos," the publisher said, "how's the traffic in green cheese today?" He then caught sight of the button and frowned. "If that is a joke, it is in poor taste."

Harriman pocketed the disc; it displayed not 6+, but the hammer-and-sickle.

"No," he said, "it's not a joke; it's a nightmare. Colonel, you and I are among the few people in this country who realize that communism is still a menace."

Sometime later they were talking as chummily as if the Colonel's chain had not obstructed the Moon venture since its inception. The publisher waved a cigar at his desk. "How did you come by those plans? Steal them?"

"They were copied," Harriman answered with narrow truth. "But they aren't important. The important thing is to get there first; we can't risk having an enemy rocket base on the Moon. For years I've had a recurrent nightmare of waking up and seeing headlines that the Russians had landed on the Moon and declared the Lunar Soviet-say thirteen men and two female scientists-and had petitioned for entrance into the U.S.S.R.-and the petition had, of course, been graciously granted by the Supreme Soviet. I used to wake up and tremble. I don't know that they would actually go through with painting a hammer and sickle on the face of the Moon, but it's consistent with their psychology. Look at those enormous posters they are always hanging up."

The publisher bit down hard on his cigar. "We'll see what we can work out. Is there any way you can speed up your take-off?"

CHAPTER SIX

"MR. HARRIMAN?"

"Yes?"

"That Mr. LeCroix is here again."

"Tell him I can't see him."

"Yes, sir-uh, Mr. Harriman, he did not mention it the other day but he says he is a rocket pilot."

"Send him around to Skyways. I don't hire pilots."

A man's face crowded into the screen, displacing Harriman's reception secretary. "Mr. Harriman-I'm Leslie LeCroix, relief pilot of the Charon."

"I don't care if you are the Angel Gab- Did you say Charon?"

"I said Charon. And I've got to talk to you."

"Come in."

Harriman greeted his visitor, offered him tobacco, then looked him over with interest. The Charon, shuttle rocket to the lost power satellite, had been the nearest thing to a space ship the world had yet seen. Its pilot, lost in the same explosion that had

destroyed the satellite and the Charon had been the first, in a way, of the coming breed of spacemen.

Harriman wondered how it had escaped his attention that the Charon had alternating pilots. He had known it, of course-but somehow he had forgotten to take the fact into account. He had written off the power satellite, its shuttle rocket and everything about it, ceased to think about them. He now looked at LeCroix with curiosity.

He saw a small, neat man with a thin, intelligent face, and the big, competent hands of a jockey. LeCroix returned his inspection without embarrassment. He seemed calm and utterly sure of himself.

"Well, Captain LeCroix?"

"You are building a Moon ship."

"Who says so?"

"A Moon ship is being built. The boys all say you are behind it."

"Yes?"

"I want to pilot it."

"Why should you?"

"I'm the best man for it."

Harriman paused to let out a cloud of tobacco smoke. "If you can prove that, the billet is yours."

"It's a deal." LeCroix stood up. "I'll leave my nameand address outside."

"Wait a minute. I said 'if.' Let's talk. I'm going along on this trip myself; I want to know more about you before I trust my neck to you."

They discussed Moon flight, interplanetary travel, rocketry, what they might find on the Moon. Gradually Harriman warmed up, as he found another spirit so like his own, so obsessed with the Wonderful Dream. Subconsciously he had already accepted LeCroix; the conversation began to assume that it would be a joint venture.

After a long time Harriman said, "This is fun, Les, but I've got to do a few chores yet today, or none of us will get to the Moon. You go on out to Peterson Field and get acquainted with Bob Coster-I'll call him. If the pair of you can manage to get along, we'll talk contract." He scribbled a chit and handed it to LeCroix. "Give this to Miss Perkins as you go out and she'll put you on the payroll."

"That can wait."

"Man's got to eat."

LeCroix accepted it but did not leave. "There's one thing I don't understand, Mr. Harriman."

"Huh?"

"Why are you planning on a chemically powered ship? Not that I object; I'll herd her. But why do it the hard way? I know you had the City of Brisbane refitted for X-fuel-"

Harriman stared at him. "Are you off your nut, Les? You're asking why pigs don't have wings-there isn't any X-fuel and there won't be any more until we make some ourselves-on the Moon."

"Who told you that?"

"What do you mean?"

"The way I heard it, the Atomic Energy Commission allocated X-fuel, under treaty, to several other countries-and some of them weren't prepared to make use of it. But they got it just the same. What happened to it?"

"Oh, that! Sure, Les, several of the little outfits in Central America and South America were cut in for a slice of pie for political reasons, even though they had no way to eat it. A good thing, too-we bought it back and used it to ease the immediate power shortage." Harriman frowned. "You're right, though. I should have grabbed some of the stuff then."

"Are you sure it's all gone?"

"Why, of course, I'm- No, I'm not. I'll look into it. G'bye, Les."

His contacts were able to account for every pound of X-fuel in short order-save for Costa Rica's allotment. That nation had declined to sell back its supply because its power plant, suitable for X-fuel, had been almost finished at the time of the disaster. Another inquiry disclosed that the power plant had never been finished.

Montgomery was even then in Managua; Nicaragua had had a change in administration and Montgomery was making certain that the special position of the local Moon corporation was protected. Harriman sent him a coded message to proceed to San José, locate X-fuel, buy it and ship it back-at any cost. He then went to see the chairman of the Atomic Energy Commission.

That official was apparently glad to see him and anxious to be affable. Harriman got around to explaining that he wanted a license to do experimental work in isotopes-X-fuel, to be precise.

"This should be brought up through the usual channels, Mr. Harriman."

"It will be. This is a preliminary inquiry. I want to know your reactions."

"After all, I am not the only commissioner . . . and we almost always follow the recommendations of our technical branch."

"Don't fence with me, Carl. You know dern well you control a working majority. Off the record, what do you say?"

"Well, D.D.-off the record-you can't get any X-fuel, so why get a license?"

"Let me worry about that."

"Mmmm . . we weren't required by law to follow every millicurie of X-fuel, since it isn't classed as potentially suitable for mass weapons. Just the same, we knew what happened to it. There's none available."

Harriman kept quiet.

"In the second place, you can have an X-fuel license, if you wish-for any purpose but rocket fuel."

"Why the restriction?"

"You are building a Moon ship, aren't you?"

"Me?"

"Don't you fence with me, D.D. It's my business to know things. You can't use X-fuel for rockets, even if you can find it-which you can't." The chairman went to a vault back of his desk and returned with a quarto volume, which he laid in front of Harriman. It was titled: Theoretical Investigation into the Stability of Several Radioisotopic Fuels-With Notes on the Charon-Power-Satellite Disaster. The cover had a serial number and was stamped: SECRET.

Harriman pushed it away. "I've got no business looking at that-and I wouldn't understand it if I did."

The chairman grinned. "Very well, I'll tell you what's in it. I'm deliberately tying your hands, D.D., by trusting you with a defense secret-"

"I won't have it, I tell you!"

"Don't try to power a space ship with X-fuel, D.D. It's a lovely fuel- but it may go off like a firecracker anywhere out in space. That report tells why."

"Confound it, we ran the Charon for nearly three years!"

"You were lucky. It is the official-but utterly confidential-opinion of the government that the Charon set off the power satellite, rather than the satellite setting off the Charon. We had thought it was the other way around at first, and of course it could have been, but there was the disturbing matter of the radar records. It seemed as if the ship had gone up a split second before the satellite. So we made an intensive theoretical investigation. X-fuel is too dangerous for rockets."

"That's ridiculous! For every pound burned in the Charon there were at least a hundred pounds used in power plants on the surface. How come they didn't explode?"

"It's a matter of shielding. A rocket necessarily uses less shielding than a stationary plant, but the worst feature is that it operates out in space. The disaster is presumed to have been triggered by primary cosmic radiation. If you like, I'll call in one of the mathematical physicists to elucidate."

Harriman shook his head. "You know I don't speak the language." He considered. "I suppose that's all there is to it?"

"I'm afraid so. I'm really sorry." Harriman got up to leave. "Uh, one more thing, D.D.-you weren't thinking of approaching any of my subordinate colleagues, were you?"

"Of course not. Why should I?"

"I'm glad to hear it. You know, Mr. Harriman, some of our staff may not be the most brilliant scientists in the world-it's very hard to keep a first-class scientist happy in the conditions of government service. But there is one thing I am sure of; all of them are utterly incorruptible. Knowing that, I would take it as a personal affront if anyone tried to influence one of my people-a very personal affront."

"So?"

"Yes. By the way, I used to box light-heavyweight in college. I've kept it up."

"Hmmm . . . well, I never went to college. But I play a fair game of poker." Harriman suddenly grinned. "I won't tamper with your boys, Carl. It would be too much like offering a bribe to a starving man. Well, so long."

When Harriman got back to his office he called in one of his confidential clerks. "Take another coded message to Mr. Montgomery. Tell him to ship the stuff to Panama City, rather than to the States." He started to dictate another message to Coster, intending to tell him to stop work on the Pioneer, whose skeleton was already reaching skyward on the Colorado prairie, and shift to the Santa Maria, formerly the City of Brisbane.

He thought better of it. Take-off would have to be outside the United States; with the Atomic Energy Commission acting stuffy, it would not do to try to move the Santa Maria: it would give the show away.

Nor could she be moved without refitting her for chem-powered flight. No, he would have another ship of the Brisbane class taken out of service and sent to Panama, and the power plant of the Santa Maria could be disassembled and shipped there, too.

Coster could have the new ship ready in six weeks, maybe sooner . . . and he, Coster, and LeCroix would start for the Moon!

The devil with worries over primary cosmic rays! The Charon operated for three years, didn't she? They would make the trip, they would prove it could be done, then, if safer fuels were needed, there would be the incentive to dig them out. The important thing was to do it, make the trip. If Columbus had waited for decent ships, we'd all still be in Europe. A man had to take some chances or he never got anywhere.

Contentedly he started drafting the messages that would get the new scheme underway.

He was interçupted by a secretary. "Mr. Harriman, Mr. Montgomery wants to speak to you."

"Eh? Has he gotten my code already?"

"I don't know, sir."

"Well, put him on."

Montgomery had not received the second message. But he had news for Harriman:Costa Rica had sold all its X-fuel to the English Ministry of Power, soon after the disaster. There was not an ounce of it left, neither in Costa Rica, nor in England.

Harriman sat and moped for several minutes after Montgomery had cleared the screen. Then he called Coster. "Bob? Is LeCroix there?"

"Right here-we were about to go out to dinner together. Here he is, now."

"Howdy, Les. Les, that was a good brain storm of yours, but it didn't work. Somebody stole the baby."

"Eh? Oh, I get you. I'm sorry."

"Don't ever waste time being sorry. We'll go ahead as originally planned. We'll get there!"

"Sure we will."

CHAPTER SEVEN

FROM THE JUNE ISSUE of Popular Technics magazine: "URANIUM PROSPECTING ON THE MOON-A Fact Article about a soon-to-come Major Industry."

From HOLIDAY: "Honeymoon on the Moon-A Discussion of the Miracle Resort that your children will enjoy, as told to our travel editor."

From the American Sunday Magazine: "DIAMONDS ON THE MOON?-A World Famous Scientist Shows Why Diamonds Must Be Common As Pebbles in the Lunar Craters."

"Of course, Clem, I don't know anything about electronics, but here is the way it was explained to me. You can hold the beam of a television broadcast down to a degree or so these days, can't you?"

"Yes-if you use a big enough reflector."

"You'll have plenty of elbow room. Now Earth covers a space two degrees wide, as seen from the Moon. Sure, it's quite a distance away, but you'd have no power losses and absolutely perfect and unchanging conditions for transmission. Once you made your set-up, it wouldn't be any more expensive than broadcasting from the top of a mountain here, and a derned sight less expensive than keeping copters in the air from coast to coast, the way you're having to do now."

"It's a fantastic scheme, Delos."

"What's fantastic about it? Getting to the Moon is my worry, not yours. Once we are there, there's going to be television back to Earth, you can bet your shirt on that. It's a natural set-up for line-of-sight transmission. If you aren't interested, I'll have to find someone who is."

"I didn't say I wasn't interested."

"Well, make up your mind. Here's another thing, Clem-I don't want to go sticking my nose into your business, but haven't you had a certain amount of trouble since you lost the use of the power satellite as a relay station?"

"You know the answer; don't needle me. Expenses have gone out of sight without any improvement in revenue."

"That wasn't quite what I meant. How about censorship?"

The television executive threw up his hands. "Don't say that word! How anybody expects a man to stay in business with every two-bit wowser in the country claiming a veto over wLhat we can say and can't say and what we can show and what we can't show-it's enough to make you throw up. The whole principle is wrong; it's like demanding that grown men live on skim milk because the baby can't eat steak. If I were able to lay my hands on those confounded, prurient-minded, slimy-"

"Easy! Easy!" Harriman interrupted. "Did it ever occur to you that there is absolutely no way to interfere with a telecast from the Moon-and that boards of censorship on Earth won't have jurisdiction in any case?"

"What? Say that again."

"LIFE goes to the Moon.' LIFE-TIME Inc. is proud to announce that arrangements have been completed to bring LIFE'S readers a personally conducted tour of the first trip to our satellite. In place of the usual weekly feature 'LIFE Goes to a Party' there will commence, immediately after the return of the first successful-"

"ASSURANCE FOR THE NEW AGE"

(An excerpt from an advertisement of the North Atlantic Mutual Insurance and Liability Company)

"-the same looking-to-the-future that protected our policy-holders after the Chicago Fire, after the San Francisco Fire, after every disaster since the War of 1812, now reaches out to insure you from unexpected loss even on the Moon-"

"THE UNBOUNDED FRONTIERS OF TECHNOLOGY"

"When the Moon ship Pioneer climbs skyward on a ladder of flame, twenty-seven essential devices in her 'innards' will be powered by especiallyengineered DELTA batteries-"

"Mr. Harriman, could you come out to the field?"

"What's up, Bob?"

"Trouble," Coster answered briefly.

"What sort of trouble?"

Coster hesitated. "I'd rather not talk about it by screen. If you can't come, maybe Les and I had better come there."

"I'll be there this evening."

When Harriman got there he saw that LëCroix's impassive face concealed bitterness, Coster looked stubborn and defensive. He waited until the three were alone in Coster's workroom before he spoke. "Let's have it, boys."

LeCroix looked at Coster. The engineer chewed his lip and said, "Mr. Harriman, you know the stages this design has been through."

"More or less."

"We had to give up the catapult idea. Then we had this-" Coster rummaged on his desk, pulled out a perspective treatment of a four-step rocket, large but rather graceful."Theoretically it was a possibility; practically it cut things too fine. By the time the stress group boys and the auxiliary group and the control group got through adding things we were forced to come to this-" He hauled out another sketch; it was basically like the first, but squattier, almost pyramidal. "We added a fifth stage as a ring around the fourth stage. We even managed to save some weight by using most of the auxiliary and control equipment for the fourth stage to control the fifth stage. And it still had enough sectional density to punch through the atmosphere with no important drag, even if it was clumsy."

Harriman nodded. "You know, Bob, we're going to have to get away from the step rocket idea before we set up a schedule run to the Moon."

"I don't see how you can avoid it with chem-powered rockets."

"If you had a decent catapult you could put a single-stage chem-powered rocket into an orbit around the Earth, couldn't you?"

"Sure."

"That's what we'll do. Then it will refuel in that orbit."

"The old space-station set-up. I suppose that makes sense-in fact I know it does. Only the ship wouldn't refuel and continue on to the Moon. The economical thing would be to have special ships that never landed anywhere make the jump from there to another fueling station around the Moon. Then-"

LeCroix displayed a most unusual impatience. "AJ1 that doesn't mean anything now. Get on with the story, Bob."

"Right," agreed Harriman.

"Well, this model should have done it. And, damn it, it still should do it." Harriman looked puzzled. "But, Bob, that's the approved design, isn't it? That's what you've got two-thirds built right out there on the field."

"Yes." Coster looked stricken. "But it won't do it. It won't work."

"Why not?"

"Because I've had to add in too much dead weight, that's why. Mr. Harriman, you aren't an engineer; you've no idea how fast the performance falls off when you have to clutter up a ship with anything but fuel and power plant. Take the landing arrangements for the fifth-stage power ring. You use that stage for a minute and a half, then you throw

it away. But you don't dare take a chance of it falling on Wichita or Kansas City. We have to include a parachute sequence. Even then we have to plan on tracking it by radar and cutting the shrouds by radio control when it's over empty countryside and not too high. That means more weight, besides the parachute. By the time we are through, we don't get a net addition of a mile a second out of that stage. It's not enough."

Harriman stirred in his chair. "Looks like we made a mistake in trying to launch it from the States. Suppose we took off from someplace unpopulated, say the Brazil coast, and let the booster stages fall in the Atlantic; how much would that save you?"

Coster looked off in the distance, then took out a slide rule. "Might work."

"How much of a chore will it be to move the ship, at this stage?"

"Well . . . it would have to be disassembled completely; nothing less would do. I can't give you a cost estimate off hand, but it would be expensive."

"How long would it take?"

"Hmm. . .shucks, Mr. Harriman, I can't answer off hand. Two years- eighteen months, with luck. We'd have to prepare a site. We'd have to build shops."

Harriman thought about it, although he knew the answer in his heart. His shoe string, big as it was, was stretched to the danger point. He couldn't keep up the promotion, on talk alone, for another two years; he had to have a successful flight and soon-or the whole jerry-built financial structure would burst. "No good, Bob."

"I was afraid of that. Well, I tried to add still a sixth stage." He held up another sketch. "You see that monstrosity? I reached the point of diminishing returns. The final effective velocity is actually less with this abortion than with the five-step job."

"Does that mean you are whipped, Bob? You can't build a Moon ship?"

"No, I-"

LeCroix said suddenly, "Clear out Kansas."

"Eh?" asked Harriman.

"Clear everybody out of Kansas and Eastern Colorado. Let the fifth and fourth sections fall anywhere in that area. The third section falls in the Atlantic; the second section goes into a permanent orbit-and the ship itself goes on to the Moon. You could do it if you didn't have to waste weight on the parachuting of the fifth and fourth sections. Ask Bob."

"So? How about it, Bob?"

"That's what I said before. It was the parasitic penalties that whipped us. The basic design is all right."

"Hmmm. . . somebody hand me an Atlas." Harriman looked up Kansas and Colorado, did some rough figuring. He stared off into space, looking surprisingly, for the moment, as Coster did when the engineer was thinking about his own work. Finally he said, "It won't work."

"Why not?"

"Money. I told you not to worry about money-for the ship. But it would cost upward of six or seven million dollars to evacuate that area even for a day. We'd have to settle nuisance suits out of hand; we couldn't wait. And there would be a few diehards who just couldn't move anyhow."

LeCroix said savagely, "If the crazy fools won't move, let them take their chances."

"I know how you feel, Les. But this project is too big to hide and too big to move. Unless we protect the bystanders we'll be shut down by court order and force. I can't buy all the judges in two states. Some of them wouldn't be for sale."

"It was a nice try, Les," consoled Coster.

"I thought it might be an answer for all of us," the pilot answered.

Harriman said, "You were starting to mention another solution, Bob?" Coster looked embarrassed. "You know the plans for the ship itself-a three-man job, space and supplies for three."

"Yes. What are you driving at?"

"It doesn't have to be three men. Split the first step into two parts, cut the ship down to the bare minimum for one man and jettison the remainder. That's the only way I see to make this basic design work." He got out another sketch. "See? One man and supplies for less than a week. No airlock- the pilot stays in his pressure suit. No galley. No bunks. The bare minimum to keep one man alive for a maximum of two hundred hours. It will work."

"It will work," repeated LeCroix, looking at Coster.

Harriman looked at the sketch with an odd, sick feeling at his stomach. Yes, no doubt it would work-and for the purposes of the promotion it did not matter whether one man or three went to the Moon and returned. Just to do it was enough; he was dead certain that one successful flight would cause money to roll in so that there would be capital to develop to the point of practical, passenger-carrying ships.

The Wright brothers had started with less.

"If that is what I have to put up with, I suppose I have to," he said slowly. Coster looked relieved. "Fine! But there is one more hitch. You know the conditions under which I agreed to tackle this job-I was to go along. Now Les here waves a contract under my nose and says he has to be the pilot."

"It's not just that," LeCroix countered. "You're no pilot, Bob. You'll kill yourself and ruin the whole enterprise, just through bull-headed stubbornness."

"I'll learn to fly it. After all, I designed it. Look here, Mr. Harriman, I hate to let you in for a suit-Les says he will sue-but my contract antedates his. I intend to enforce it."

"Don't listen to him, Mr. Harriman. Let him do the suing. I'll fly that ship and bring her back. He'll wreck it."

"Either I go or I don't build the ship," Coster said flatly.

Harriman motioned both of them to keep quiet. "Easy, easy, both of you. You can both sue me if it gives you any pleasure. Bob, don't talk nonsense; at this stage I can hire other engineers to finish the job. You tell me it has to be just one man."

"That's right."

"You're looking at him."

They both stared.

"Shut your jaws," Harriman snapped. "What's funny about that? You both knew I meant to go. You don't think I went to all this trouble just to give you two a ride to the Moon, do you? I intend to go. What's wrong with me as a pilot? I'm in good health, my eyesight is all right, I'm still smart enough to learn what I have to learn. If I have to drive my own buggy, I'll do it. I won't step aside for anybody, not anybody, d'you hear me?"

Coster got his breath first. "Boss, you don't know what you are saying." Two hours later they were still wrangling. Most of the time Harriman had stubbornly sat still,

refusing to answer their arguments. At last he went out of the room for a few minutes, on the usual pretext. When he came back in he said, "Bob, what do you weigh?"

"Me? A little over two hundred."

"Close to two twenty, I'd judge. Les, what do you weigh?"

"One twenty-six."

"Bob, design the ship for a net load of one hundred and twenty-six pounds."

"Huh? Now wait a minute, Mr. Harriman-"

"Shut up! If I can't learn to be a pilot in six weeks, neither can you."

"But I've got the mathematics and the basic knowledge to-"

"Shut up I said! Les has spent as long learning his profession as you have learning yours. Can he become an engineer in six weeks? Then what gave you the conceit to think that you can learn his job in that time? I'm not going to have you wrecking my ship to satisfy your swollen ego. Anyhow, you gave out the real key to it when you were discussing the design. The real limiting factor is the actual weight of the passenger or passengers, isn't it? Everything-everything works in proportion to that one mass. Right?"

"Yes, but-"

"Right or wrong?"

"Well . . . yes, that's right. I just wanted-"

"The smaller man can live on less water, he breathes less air, he occunies less space. Les goes." Harriman walked over and put a hand on Coster's shoulder. "Don't take it hard, son. It can't be any worse on you than it is on me. This trip has got to succeed-and that means you and I have got to give up the honor of being the first man on the Moon. But I promise you this: we'll go on the second trip, we'll go with Les as our private chauffeur. It will be the first of a lot of passenger trips. Look, Bob-you can be a big man in this game, if you'll play along now. How would you like to be chief engineer of the first lunar colony?"

Coster managed to grin. "It might not be so bad."

"You'd like it. Living on the Moon will be an engineering problem; you and I have talked about it. How'd you like to put your theories to work? Build the first city? Build the big observatory we'll found there? Look around and know that you were the man who had done it?"

Coster was definitely adjusting himself to it. "You make it sound good. Say, what will you be doing?"

"Me? Well, maybe I'll be the first mayor of Luna City." It was a new thought to him; he savored it. "The Honorable Delos David Harriman, Mayor of Luna City. Say, I like that! You know, I've never held any sort of public office; I've just owned things." He looked around. "Everything settled?"

"I guess so," Coster said slowly. Suddenly he stuck his hand out at LeCroix. "You fly her, Les; I'll build her."

LeCroix grabbed his hand. "It's a deal. And you and the Boss get busy and start making plans for the next job-big enough for all of us."

"Right!"

Harriman put his hand on top of theirs. "That's the way I like to hear you talk. We'll stick together and we'll found Luna City together."

"I think we ought to call it "Harriman," LeCroix said seriously.

"Nope, I've thought of it as Luna City ever since I was a kid; Luna City it's going to be. Maybe we'll put Harriman Square in the middle of it," he added.

"I'll mark it that way in the plans," agreed Coster.

Harriman left at once. Despite the solution he was terribly depressed and did not want his two colleagues to see it. It had been a Pyrrhic victory; he had saved the enterprise but he felt like an animal who has gnawed off his own leg to escape a trap.

CHAPTER EIGHT

STRONG WAS ALONE in the offices of the partnership when he got a call from Dixon. "George, I was looking for D.D. Is he there?"

"No, he's back in Washington-something about clearances. I expect him back soon."

"Hmmm. . . . Entenza and I want to see him. We're coming over." They arrived shortly. Entenza was quite evidently very much worked up over something; Dixon looked sleekly impassive as usual. After greetings Dixon waited a moment, then said, "Jack, you had some business to transact, didn't you?"

Entenza jumped, then snatched a draft from his pocket.

"Oh, yes! George, I'm not going to have to pro-rate after all. Here's my payment to bring my share up to full payment to date."

Strong accepted it. "I know that Delos will be pleased." He tucked it in a drawer.

"Well," said Dixon sharply, "aren't you going to receipt for it?"

"If Jack wants a receipt. The cancelled draft will serve." However, Strong wrote out a receipt without further comment; Entenza accepted it.

They waited a while. Presently Dixon said, "George, you're in this pretty deep, aren't you?"

"Possibly."

"Want to hedge your bets?"

"How?"

"Well, candidly, I want to protect myself. Want to sell one half of one. percent of your share?"

Strong thought about it. In fact he was worried-worried sick. The presence of Dixon's auditor had forced them to keep on a cash basis-and only Strong knew how close to the line that had forced the partners. "Why do you want it?"

"Oh, I wouldn't use it to interfere with Delos's operations. He's our man; we're backing him. But I would feel a lot safer if I had the right to call a halt if he tried to commit us to something we couldn't pay for. You know Delos; he's an incurable optimist. We ought to have some sort of a brake on him."

Strong thought about it. The thing that hurt him was that he agreed with everything Dixon said; he had stood by and watched while Delos dissipated two fortunes, painfully built up through the years. D.D. no longer seemed to care. Why, only this

morning he had refused even to look at a report on the H & S automatic household switch-after dumping it on Strong.

Dixon leaned forward. "Name a price, George. I'll be generous."

Strong squared his stooped shoulders. "I'll sell-"

"Good!"

"-if Delos okays it. Not otherwise."

Dixon muttered something. Enteuza snorted. The conversation might have gone acrimoniously further, had not Harriman walked in.

No one said anything about the proposal to Strong. Strong inquired about the trip; Harriman pressed a thumb and finger together. "All in the groove! But it gets more expensive to do business in Washington every day." He turned to the others. "How's tricks? Any special meaning to the assemblage? Are we in executive session?"

Dixon turned to Entenza. "Tell him, Jack."

Entenza faced Harriman. "What do you mean by selling television rights?"

Harriman cocked a brow. "And why not?"

"Because you promised them to me, that's why. That's the original agreement; I've got it in writing."

"Better take another look at the agreement, Jack. And don't go off halfcocked. You have the exploitation rights for radio, television, and other amusement and special feature ventures in connection with the first trip to the Moon. You've still got 'em. Including broadcasts from the ship, provided we are able to make any." He decided that this was not a good time to mention that weight considerations had already made the latter impossible; the Pioneer would carry no electronic equipment of any sort not needed in astrogation. "What I sold was the franchise to erect a-television station on the Moon, later. By the way, it wasn't even an exclusive franchise, although Clem Haggerty thinks it is. If you want to buy one yourself, we can accommodate you."

"Buy it! Why you-"

"Wups! Or you can have it free, if you can get Dixon and George to agree that you are entitled to it. I won't be a tightwad. Anything else?"

Dixon cut in. "Just where do we stand now, Delos?"

"Gentlemen, you can take it for granted that the Pioneer will leave on schedule-next Wednesday. And now, if you will excuse me, I'm on my way to Peterson Field."

After he had left his three associates sat in silence for some time, Entenza muttering to himself, Dixon apparently thinking, and Strong just waiting. Presently Dixon said, "How about that fractional share, George?"

"You didn't see fit to mention it to Delos."

"I see." Dixon carefully deposited an ash. "He's a strange man, isn't he?" Strong shifted around. "Yes."

"How long have you known him?"

"Let me see-he came to work for me in-"

"He worked for you?"

"For several months. Then we set up our first company." Strong thought back about it. "I suppose he had a power complex, even then."

"No," Dixon said carefully. "No, I wouldn't call it a power complex. It's more of a Messiah complex."

Entenza looked up. "He's a crooked son of a bitch, that's what he is!"

Strong looked at him mildly. "I'd rather you wouldn't talk about him that way. I'd really rather you wouldn't."

"Stow it, Jack," ordered Dixon. "You might force George to take a poke at you. One of the odd things about him," went on Dixon, "is that he seems to be able to inspire an almost feudal loyalty. Take yourself. I know you are cleaned out, George-yet you won't let me rescue you. That goes beyond logic; it's personal."

Strong nodded. "He's an odd man. Sometimes I think he's the last of the Robber Barons."

Dixon shook his head. "Not the last. The last of them opened up the American West. He's the first of the new Robber Barons-and you and I won't see the end of it. Do you ever read Carlyle?"

Strong nodded again. "I see what you mean, the 'Hero' theory, but I don't necessarily agree with it."

"There's something to it, though," Dixon answered. "Truthfully, I don't think Delos knows what he is doing. He's setting up a new imperialism.

There'll be the devil to pay before it's cleaned up." He stood up. "Maybe we should have waited. Maybe we should have balked him-if we could have. Well, it's done. We're on the merry-go-round and we can't get off. I hope we enjoy the ride.. Come on, Jack."

CHAPTER NINE

THE COLORADO p~ArRIE was growin'~ dusky. The Sun was behind the peak and the broad white face of Luna, full and round, was rising in the east. In the middle of Peterson Field the Pioneer thrust toward the sky. A barbedwire fence, a thousand yards from its base in all directions, held back the crowds. Just inside the barrier guards patrolled restlessly. More guards circulated through the crowd. Inside the fence, close to it, trunks and trailers for camera, sound, and television equipment were parked and, at the far ends of cables, remote-control pick-ups were located both near and far from the ship on all sides. There were other trucks near the ship and a stir of organized activity.

Harriman waited in Coster's office; Coster himself was out on the field, and Dixon and Entenza had a room to themselves. LeCroix, still in a drugged sleep, was in the bedroom of Coster's on-the-job living quarters.

There was a stir and a challenge outside the door. Harriman opened it a crack. "If that's another reporter, tell him 'no.' Send him to Mr. Montgomery across the way. Captain LeCroix will grant no unauthorized interviews."

"Delos! Let me in."

"Oh-you, George. Come in. We've been hounded to death."

Strong came in and handed Harriman a large and heavy handbag. "Here it is."

"Here is what?"

"The cancelled covers for the philatelic syndicate. You forgot them. That's half a million dollars, Delos," he complained. "If I hadn't noticed them in your coat locker we'd have been in the soup."

Harriman composed his features. "George, you're a brick, that's what you are."

"Shall I put them in the ship myself?" Strong said anxiously.

"Huh? No, no. Les will handle them." He glanced at his watch. "We're about to waken him. I'll take charge of the covers." He took the bag and added, "Don't come in now. You'll have a chance to say goodbye on the field."

Harriman went next door, shut the door behind him, waited for the nurse to give the sleeping pilot a counteracting stimulant by injection, then chased her out. When he turned around the pilot was sitting up, rubbing his eyes. "How do you feel, Les?"

"Fine. So this is it."

"Yup. And we're all rooting for you, boy. Look, you've got to go out and face them in a couple of minutes. Everything is ready-but I've got a couple of things I've got to say to you."

"Yes?"

"See this bag?" Harriman rapidly explained what it was and what it signified.

LeCroix looked dismayed. "But I can't take it, Delos; It's all figured to the last ounce."

"Who said you were going to take it? Of course you can't; it must weigh sixty, seventy pounds. I just plain forgot it. Now here's what we do: for the time being I'll just hide it in here-" Harriman stuffed the bag far back into a clothes closet. "When you land, I'll be right on your tail. Then we pull a sleight-of-hand trick and you fetch it out of the ship."

LeCroix shook his head ruefully. "Delos, you beat me. Well, I'm in no mood to argue."

"I'm glad you're not; otherwise I'd go to jail for a measly half million dollars. We've already spent that money. Anyhow, it doesn't matter," he went on. "Nobody but you and me will know it-and the stamp collectors will get their money's worth." He looked at the younger man as if anxious for his approval.

"Okay, okay," LeCroix answered. "Why should I care what happens to a stamp collector-tonight? Let's get going."

"One more thing," said Harriman and took out a small cloth bag. "This you take with you-and the weight has been figured in. I saw to it. Now here is what you do with it." He gave detailed and very earnest instructions.

LeCroix was puzzled. "Do I hear you straight? I let it be found-then I tell the exact truth about what happened?"

"That's right."

"Okay." LeCroix zipped the little bag into a pocket of his coveralls. "Let's get out to the field. H-hour minus twenty-one minutes already."

Strong joined Harriman in the control blockhouse after LeCroix had gone up inside the ship. "Did they get aboard?" he demanded anxiously. "LeCroix wasn't carrying anything."

"Oh, sure," said Harriman. "I sent them ahead. Better take your place. The ready flare has already gone up."

Dixon, Entenza, the Governor of Colorado, the Vice-President of the United States, and a round dozen of V.I.P.'s were already seated at periscopes, mounted in slits, on a balcony above the control level. Strong and Harriman climbed a ladder and took the two remaining chairs.

Harriman began to sweat and realized he was trembling. Through his periscope out in front he could see the ship; from below he could hear Coster's voice, nervously checking departure station reports. Muted through a speaker by him was a running commentary of one of the newscasters reporting the show. Harriman himself was the-well, the admiral, he decided-of the operation, but there was nothing more he could do, but wait, watch, and try to pray.

A second flare arched up in the sky, burst into red and green. Five minutes.

The seconds oozed away. At minus two minutes Harriman realized that he could not stand to watch through a tiny slit; he had to be outside, take part in it himself-he had to. He climbed down, hurried to the exit of the blockhouse. Coster glanced around, looked startled, but did not try to stop him; Coster could not leave his post no matter what happened. Harriman elbowed the guard aside and went outdoors.

To the east the ship towered skyward, her slender pyramid sharp black against the full Moon. He waited.

And waited.

What had gone wrong? There had remained less than two minutes when he had come out; he was sure of that-yet there she stood, silent, dark, unmoving. There was not a sound, save the distant ululation of sirens warning the spectators behind the distant fence. Harriman felt his own heart stop, his breath dry up in his throat. Something had failed. Failure.

A single flare rocket burst from the top of the blockhouse; a flame licked at the base of the ship.

It spread, there was a pad of white fire around the base. Slowly, almost lumberingly, the Pioneer lifted, seemed to hover for a moment, balanced on a pillar of fire-then reached for the sky with acceleration so great that she was above him almost at once, overhead at the zenith, a dazzling circle of flame. So quickly was she above, rather than out in front, that it seemed as if she were arching back over him and must surely fall on him. Instinctively and futilely he threw a hand in front of his face.

The sound reached him.

Not as sound-it was a white noise, a roar in all frequencies, sonic, subsonic, supersonic, so incredibly loaded with energy that it struck him in the chest. He heard it with his teeth and with his bones as well as with his ears. He crouched his knees, bracing against it.

Following the sound at the snail's pace of a hurricane came the backwash of the splash. It ripped at his clothing, tore his breath from his lips. He stumbled blindly back, trying to reach the lee of the concrete building, was knocked down.

He picked himself up coughing and strangling and remembered to look at the sky. Straight overhead was a dwindling star. Then it was gone.

He went into the blockhouse.

The room was a babble of high-tension, purposeful confusion. Harriman's ears, still ringing, heard a speaker blare, "Spot One! Spot One to blockhouse! Step five loose on schedule-ship and step five showing separate blips-" and Coster's voice, high and

angry, cutting in with, "Get Track One! Have they picked up step five yet? Are they tracking it?"

In the background the news commentator was still blowing his top. "A great day, folks, a great day! The mighty Pioneer, climbing like an angel of the Lord, flaming sword at hand, is even now on her glorious way to our sister planet. Most of you have seen her departure on your screens; I wish you could have seen it as I did, arching up into the evening sky, bearing her precious load of-"

"Shut that thing off!" ordered Coster, then to the visitors on the observation platform, "And pipe down up there! Quiet!"

The Vice-President of the United States jerked his head around, closed his mouth. He remembered to smile. The other V.I.P.'s shut up, then resumed again in muted whispers. A girl's voice cut through the silence, "Track One to Blockhouse-step five tracking high, plus two." There was a stir in the corner. There a large canvas hood shielded a heavy sheet of Plexiglass from direct light. The sheet was mounted vertically and was edge-lighted; it displayed a coordinate map of Colorado and Kansas in fine white lines; the cities and towns glowed red. Unevacuated farms were tiny warning dots of red light.

A man behind the transparent map touched it with a grease pencil; the reported location of step five shone out. In front of the map screen a youngish man sat quietly in a chair, a pear-shaped switch in his hand, his thumb lightly resting on the button. He was a bombardier, borrowed from the Air Forces; when he pressed the switch, a radio-controlled circuit in step five should cause the shrouds of step five's landing 'chute to be cut and let it plummet to Earth. He was working from radar reports aloi~e with no fancy computing bombsight to think for him. He was working almost by instinct- or, rather, by the accumulated subconscious knowledge of his trade, integrating in his brain the meager data spread before him, deciding where the tons of step five would land if he were to press his switch at any particular instant. He seemed unworried.

"Spot One to Blockhouse!" came a man's voice again. "Step four free on schedule," and almost immediately following, a deeper voice echoed, "Track Two, tracking step four, instantaneous altitude nine-five-one miles, predicted vector."

No one paid any attention to Harriman.

Under the hood the observed trajectory of step five grew in shining dots of grease, near to, but not on, the dotted line of its predicted path. Reaching out from each location dot was drawn a line at right angles, the reported altitude for that location.

The quiet man watching the display suddenly pressed down hard on his switch. He then stood up, stretched, and said, "Anybody got a cigaret?" "Track Two!" he was answered. "Step four-first impact prediction-forty miles west of Charleston, South Carolina."

"Repeat!" yelled Coster.

The speaker blared out again without pause, "Correction, correction- forty miles east, repeat east."

Coster sighed. The sigh was cut short by a report. "Spot One to Blockhouse-step three free, minus five seconds," and a talker at Coster's control desk called out, "Mr. Coster, Mister Coster-Palomar Observatory wants to talk to you."

"Tell 'em to go-no, tell 'em to wait." Immediately another voice cut in with, "Track One, auxiliary range Fox-Step one about to strike near Dodge City, Kansas~"

"How near?"

There was no answer. Presently the voice of Track One proper said, "Impact reported approximately fifteen miles southwest of Dodge City."

"Casualties?"

Spot One broke in before Track One could answer, "Step two free, step two free-the ship is now on its own."

"Mr. Coster-please, Mr. Coster-"

And a totally new voice: "Spot Two to Blockhouse-we are now tracking the ship. Stand by for reported distances and bearings. Stand by-"

"Track Two to Blockhouse-step four will definitely land in Atlantic, estimated point of impact oh-five-seven miles east of Charleston bearing ohnine-three. I will repeat-"

Coster looked around irritably. "Isn't there any drinking water anywhere in this dump?"

"Mr. Coster, please-Palomar says they've just got to talk to you."

Harriman eased over to the door and stepped out. He suddenly felt very much let down, utterly weary, and depressed.

The field looked strange without the ship. He had watched it grow; now suddenly it was gone. The Moon, still rising, seemed oblivious-and space travel was as remote a dream as it had been in his boyhood.

There were several tiny figures prowling around, the flash apron where the ship had stood-souvenir hunters, he thought contemptuously. Someone came up to him in the gloom. "Mr. Harriman?"

"Eh?"

"Hopkins-with the A.P. How about a statement?"

"Uh? No, no comment. I'm bushed."

"Oh, now, just a word. How does it feel to have backed the first successful Moon flight-if it is successful."

"It will be successful." He thought a moment, then squared his tired shoulders and said, "Tell them that this is the beginning of the human race's greatest era. Tell them that every one of them will have a chance to follow in Captain LeCroix's footsteps, seek out new planets, wrest a home for themselves in new lands. Tell them that this means new frontiers, a shot in the arm for prosperity. It means-" He ran down. "That's all tonight. I'm whipped, son. Leave me alone, will you?"

Presently Côster came out, followed by the V.I.P.'s. Harriman went up to Coster. "Everything all right?"

"Sure. Why shouldn't it be? Track three followed him out to the limit of range-all in the groove." Coster added, "Step five killed a cow when it grounded."

"Forget it-we'll have steak for breakfast." Harriman then had to make conversation with the Governor and the Vice-President, had to escort them out to their ship. Dixon and Entenza left together, less formally; at last Coster and Harriman were alone save for subordinates too junior to constitute a strain and for guards to protect them from the crowds. "Where you headed, Bob?"

"Up to the Broadmoor and about a week's sleep. How about you?"

"if you don't mind, I'll doss down in your apartment."

"Help yourself. Sleepy pills in the bathroom."

"I won't need them." They had a drink together in Coster's quarters, talked aimlessly, then Coster ordered a copter cab and went to the hotel. Harriman went to bed, got up, read a day-old copy of the Denver Post filled with pictures of the Pioneer, finally gave up and took two of Coster's sleeping capsules.

CHAPTER TEN

SOMEONE WAS SHAKING HIM. "Mr. Harriman! Wake up-Mr. Caster is on the screen."

"Huh? Wazza? Oh, all right." He got up and padded to the phone. Caster was :ooking tousie-headea and excited. "Hey, Boss-he made it!"

"Huh? What do you mean?"

"Palomar just called me. They saw the mark and now they've spotted the ship itself. He-"

"Wait a minute, Bob. Slow up. He can't be there yet. He just left last night."

Coster looked disconcerted. "What's the matter, Mr. Harriman? Don't you feel well? He left Wednesday."

Vaguely, Harriman began to be oriented. No, the take-off had not been the night before-fuzzily he recalled a drive up into the mountains, a day spent dozing in the sun, some sort of a party at which he had drunk too much. What day was today? He didn't know. If LeCroix had landed on the Moon, then-never mind. "It's all right, Bob-I was half asleep. I guess I dreamed the take-off all over again. Now tell me the news, slowly."

Coster started over. "LeCroix has landed, just west of Archimedes crater. They can see his ship, from Palomar. Say that was a great stunt you thought up, marking the spot with carbon black. Les must have covered two acres with it. They say it shines out like a billboard, through the Big Eye."

"Maybe we ought to run down and have a look. No-later," he amended. "We'll be busy."

"I don't see what more we can do, Mr. Harriman. We've got twelve of our best ballistic computers calculating possible routes for you now."

Harriman started to tell the man to put on another twelve, switched off the screen instead. He was still at Peterson Field, with one of Skyways' best stratoships waiting for him outside, waiting to take him to whatever point on the globe LeCroix might ground. LeCroix was in the upper stratosphere, had been there for more than twenty-four hours. The pilot was slowly, cautiously wearing out his terminal velocity, dissipating the incredible kinetic energy as shock wave and radiant heat.

They had tracked him by radar around the globe and around again-and again . . . yet there was no way of knowing just where and what sort of landing the pilot would choose to risk. Harriman listened to the running radar reports and cursed the fact that they had elected to save the weight of radio equipment.

The radar figures started coming closer together. The voice broke off and started again: "He's in his landing glide!"

"Tell the field to get ready!" shouted Harriman. He held his breath and waited. After endless seconds another voice cut in with, "The Moon ship is now landing. It will ground somewhere west of Chihuahua in Old Mexico."

Harriman started for the door at a run.

Coached by radio en route, Harriman's pilot spotted the Pioneer incredibly small against the desert sand. He put his own ship quite close to it, in a beautiful landing. Harriman was fumbling at the cabin door before the ship was fairly stopped.

LeCroix was sitting on the ground, resting his back against a skid of his ship and enjoying the shade of its stubby triangular wings. A paisano sheepherder stood facing him, open-mouthed. As Harriman trotted out and lumbered toward him LeCroix stood up, flipped a cigaret butt away and said, "Hi, Boss!"

"Les!" The older man threw his arms around the younger. "It's good to see you, boy."

"It's good to see you. Pedro here doesn't speak my language." LeCroix glanced around; there was no one else nearby but the pilot of Harriman's ship. "Where's the gang? Where's Bob?"

"I didn't wait. They'll surely be along in a few minutes-hey, there they come now!" It was another stratoship, plunging in to a landing. Harriman turned to his pilot. "Bill-go over and meet them."

"Huh? They'll come, never fear."

"Do as I say."

"You're the doctor." The pilot trudged through the sand, his back expressing disapproval. LeCroix looked puzzled. "Quick, Les-help me with this."

"This" was the five thousand cancelled envelopes which were supposed to have been to the Moon. They got them out of Harriman's stratoship and into the Moon ship, there to be stowed in an empty food locker, while their actions were still shielded from the later arrivals by the bulk of the strataship. "Whew!" said Harriman. "That was close. Half a million dollars. We need it, Les."

"Sure, but look, Mr. Harriman, the di-"

"Sssh! The others are coming. How about the other business? Ready with your act?"

"Yes. But I was trying to tell you-"

"Quiet!"

It was not their colleagues; it was a shipload of reporters, camera men, mike men, commentators, technicians. They swarmed over them.

Harriman waved to them jauntily. "Help yourselves, boys. Get a lot of pictures. Climb through the ship. Make yourselves at home. Look at anything you want to. But go easy on Captain LeCroix-he's tired."

Another ship had landed, this time with Caster, Dixon and Strong. Entenza showed up in his own chartered ship and began bossing the TV, pix, and radio men, in the course of which he almost had a fight with an unauthorized camera crew. A large copter transport grounded and spilled out nearly a platoon of khaki-clad Mexican troops. Fom somewhere-out of the sand apparently-several dozen native peasants showed up. Harriman broke away from reporters, held a quick and expensive discussion with the

captain of the local troops and a degree of order was restored in time to save the Pioneer from being picked to pieces.

"Just let that be!" It was LeCroix's voice, from inside the Pioneer. Harriman waited and listened. "None of your business!" the pilot's voice went on, rising higher, "and put them back!"

Harriman pushed his way to the door of the ship. "What's the trouble, Les?"

Inside the cramped cabin, hardly large enough for a TV booth, three men stood, LeCroix and two reporters. All three men looked angry. "What's the trouble, Les?" Harriman repeated.

LeCroix was holding a small cloth bag which appeared to be empty. Scattered on the pilot's acceleration rest between him and the reporters were several small, dully brilliant stones. A reporter held one such stone up to the light.

"These guys were poking their noses into things that didn't concern them," LeCroix said angrily.

The reporter looked at the stone said, "You told us to look at what we liked, didn't you, Mr. Harriman?"

"Yes."

"Your pilot here-" He jerked a thumb at LeCroix. "-apparently didn't expect us to find these. He had them hidden in the pads of his chair."

"What of it?"

"They're diamonds."

"What makes you think so?"

"They're diamonds all right."

Harriman stopped and unwrapped a cigar. Presently he said, "Those diamonds were where you found them because I put them there."

A flashlight went off behind Harriman; a voice said, "Hold the rock up higher, Jeff."

The reporter called Jeff obliged, then said, "That seems an odd thing to do, Mr. Harriman."

"I was interested in the effect of outer space radiations on raw diamonds. On my orders Captain LeCroix placed that sack of diamonds in the ship."

Jeff whistled thoughtfully. "You know, Mr. Harriman, if you did not have that explanation, I'd think LeCroix had found the rocks on the Moon and was trying to hold out on you."

"Print that and you will be sued for libel. I have every confidence in Captain LeCroix. Now give me the diamonds."

Jeff's eyebrows went up. "But not confidence enough in him to let him keep them,.maybe?"

"Give me the stones. Then get out."

Harriman got LeCroix away from the reporters as quickly as possible and into Harriman's own ship. "That's all for now," he told the news and pictures people. "See us at Peterson Field."

Once the ship raised ground he turned to LeCroix. "You did a beautiful job, Les."

"That reporter named Jeff must be sort of confused."

"Eh? Oh, that. No, I mean the flight. You did it. You're head man on this planet."

LeCroix shrugged it off. "Bob built a good ship. It was a cinch. Now about those diamonds-"

"Forget the diamonds. You've done your part. We placed those rocks in the ship; now we tell everybody we did-truthful as can be. It's not our fault if they don't believe us."

"But Mr. Harriman-"

"What?"

LeCroix unzipped a pocket in his coveralls, hauled out a soiled handkerchief, knotted into a bag. He untied it-and spilled into Harriman's hands many more diamonds than had been displayed in the ship-larger, finer diamonds.

Harriman stared at them. He began to chuckle.

Presently he shoved them back at LeCroix. "Keep them."

"I figure they belong to all of us."

"Well, keep them for us, then. And keep your mouth shut about them. No, wait." He picked out two large stones. "I'll have rings made from these two, one for you, one for me. But keep your mouth shut, or they won't be worth anything, except as curiosities."

It was quite true, he thought. Long ago the diamond syndicate had realized that diamonds in plentiful supply were worth little more than glass, except for industrial uses. Earth had more than enough for that, more than enough for jewels. If Moon diamonds were literally "common as pebbles" then they were just that-pebbles.

Not worth the expense of bringing them to earth. But now take uranium. If that were plentiful- Harriman sat back and indulged in daydreaming. Presently LeCroix said softly, "You know, Boss, it's wonderful there."

"Eh? Where?"

"Why, on the Moon of course. I'm going back. I'm going back just as soon as I can. We've got to get busy on the new ship."

"Sure, sure! And this time we'll build one big enough for all of us. This time I go, too!"

"You bet."

"Les-" The older man spoke almost diffidently. "What does it look like when you look back and see the Earth?"

"Huh? It looks like- It looks-" LeCroix stopped. "Hell's bells, Boss, there isn't any way to tell you. It's wonderful, that's all. The sky is black and-well, wait until you see the pictures I took. Better .yet, wait and see it yourself."

Harriman nodded. "But it's hard to wait."

CHAPTER ELEVEN

"FIELDS OF DIAMONDS ON THE MOONU!"
"BILLIONAIRE BACKER DENIES DIAMOND STORY Says Jewels Taken Into Space for Science Reasons"
"MOON DIAMONDS: HOAX OR FACT?"

"-but consider this, friends of the invisible audience: why would anyone take diamonds to the moon? Every ounce of that ship and its cargo was calculated; diamonds would not be taken along without reason. Many scientific authorities have pronounced Mr. Harriman's professed reason an absurdity. It is easy to guess that diamonds might be taken along for the purpose of 'salting' the Moon, so to speak, with earthly jewels, with the intention of convincing us that diamonds exist on the Moon-but Mr. Harriman, his pilot Captain LeCroix, and everyone connected with the enterprise have sworn from the beginning that the diamonds did not come from the Moon. But it is an absolute certainty that the diamonds were in the space ship when it landed. Cut it how you will; this reporter is going to try to buy some lunar diamond mining stock-"

Strong was, as usual, already in the office when Harriman came in. Before the partners could speak, the screen called out, "Mr. Harriman, Rotterdam calling."

"Tell them to go plant a tulip."

"Mr. van der Velde is waiting, Mr. Harriman."

"Okay."

Harriman let the Hollander talk, then said, "Mr. van der Velde, the statements attributed to me are absolutely correct. I put those diamonds the reporters saw into the ship before it took off. They were mined right here on Earth. In fact I bought them when I came over to see you; I can prove it."

"But Mr. Harriman-"

"Suit yourself. There may be more diamonds on the Moon than you can run and jump over. I don't guarantee it. But I do guarantee that those diamonds the newspapers are talking about came from Earth."

"Mr. Harriman, why would you send diamonds to the Moon? Perhaps you intended to fool us, no?"

"Have it your own way. But I've said all along that those diamonds came from Earth. Now see here: you took an option-an option on an option, so to speak. If you want to make the second payment on that option and keep it in force, the deadline is nine o'clock Thursday, New York time, as specified in the contract. Make up your mind."

He switched off and found his partner looking at him sourly. "What's eating you?"

"I wondered about those diamonds, too, Delos. So I've been looking through the weight schedule of the Pioneer."

"Didn't know you were interested in engineering."

"I can read figures."

"Well, you found it, didn't you? Schedule F-i 7-c, two ounces, allocated to me personally."

"I found it. It sticks out like a sore thumb. But I didn't find something else."

Harriman felt a 'cold chill in his stomach. "What?"

"I didn't find a schedule for the cancelled covers." Strong stared at him.

"It must be there. Let me see that weight schedule."

"It's not there, Delos. You know, I thought it was funny when you insisted on going to meet Captain LeCroix by yourself. What happened, Delos? Did you sneak them aboard?" He continued to stare while Harriman fidgeted. "We've put over some sharp business deals-but this will be the first time that anyone can say that the firm of Harriman and Strong has cheated."

"George-I would cheat, lie, steal, beg, bribe-do anything to accomplish what we have accomplished."

Harriman got up and paced the room. "We had to have that money, or the ship would never have taken off. We're cleaned out. You know that, don't you?"

Strong nodded. "But those covers should have gone to the Moon. That's what we contracted to do."

"I just forgot it. Then it was too late to figure the weight in. But it doesn't matter. I figured that if the trip was a failure, if LeCroix cracked up, nobody would know or care that the covers hadn't gone. And I knew if he made it, it wouldn't matter; we'd have plenty of money. And we will, George, we will!"

"We've got to pay the money back."

"Now? Give me time, George. Everybody concerned is 'happy the way it is. Wait until we recover our stake; then I'll buy every one of those covers back-out of my own pocket. That's a promise."

Strong continued to sit. Harriman stopped in front of him. "I ask you, George, is it worth while to wreck an enterprise of this size for a purely theoretical point?"

Strong sighed and said, "When the time comes, use the firm's money."

"That's the spirit! But I'll use my own, I promise you."

"No, the firm's money. If we're in it together, we're in it together."

"O.K., if that's the way you want it."

Harriman turned back to his desk. Neither of the two partners had anything to say for a long while. Presently Dixon and Entenza were announced.

"Well, Jack," said Harriman. "Feel better now?"

"No thanks to you. I had to fight for what I did put on the air-and some of it was pirated as it was. Delos, there should have been a television pick-up in the ship."

"Don't fret about it. As I told you, we couldn't spare the weight this time. But there will be the next trip, and the next. Your concession is going to be worth a pile of money."

Dixon cleared his throat. "That's what we came to see you about, Delos. What are your plans?"

"Plans? We go right ahead. Les and Coster and I make the next trip. We set up a permanent base. Maybe Coster stays behind. The third trip we send a real colony-nuclear engineers, miners, hydroponics experts, communications engineers. We'll found Luna City, first city on another planet."

Dixon looked thoughtful. "And when does this begin to pay off?"

"What do you mean by 'pay off'? Do you want your capital back, or do you want to begin to see some return on your investment? I can cut it either way."

Entenza was about to say that he wanted his investment back; Dixon cut in first, "Profits, naturally. The investment is already made."

"Fine!"

"But I don't see how you expect profits. Certainly, LeCroix made the trip and got back safely. There is honor for all of us. But where are the royalties?"

"Give the crop time to ripen, Dan. Do I look worried? What are our assets?" Harriman ticked them off on his fingers. "Royalties on pictures, television, radio-."

"Those things go to Jack."

"Take a look at the agreement. He has the concession, but he pays the firm-that's all of us-for them."

Dixon said, "Shut up, Jack!" before Entenza could speak, then added, "What else? That won't pull us out of the red."

"Endorsements galore. Monty's boys are working on that. Royalties from the greatest best seller yet-I've got a ghost writer and a stenographer following LeCroix around this very minute. A franchise for the first and only space line-"

"From whom?"

"We'll get it. Kamens and Montgomery are in Paris now, working on it. I'm joining them this afternoon. And we'll tie down that franchise with a franchise from the other end, just as soon as we can get a permanent colony there, no matter how small. It will be the autonomous state of Luna, under the protection of the United Nations-and no ship will land or take off in its territory without its permission. Besides that we'll have the right to franchise a dozen other companies for various purposes-and tax them, too-just as soon as we set up the Municipal Corporation of the City of Luna under the laws of the State of Luna. We'll sell everything but vacuum- we'll even sell vacuum, for experimental purposes. And don't forgct-we'll still have a big chunk of real estate, sovereign title in us-as a state-and not yet sold. The Moon is big."

"Your ideas are rather big, too, Delos," Dixon said dryly. "But what actually happens next?"

"First we get title confirmed by the U.N. The Security Council is now in secret session; the Assembly meets tonight. Things will be popping; that's why I've got to be there. When the United Nations decides-as it will!- that its own non-profit corporation has the only real claim to the Moon, then I get busy. The poor little weak non-profit corporation is going to grant a number of things to some real honest-to-god corporations with hair on their chests-in return for help in setting up a physics research lab, an astronomical observatory, a lunography institute and some other perfectly proper nonprofit enterprises. That's our interim pitch until we get a permanent colony with its own laws. Then we-"

Dixon gestured impatiently. "Never mind the legal shenanigans, Delos. I've known you long enough to know that you can figure out such angles. What do we actually have to do next?"

"Huh? We've got to build another ship, a bigger one. Not actually bigger, but effectively bigger. Coster has started the design of a surface catapult- it will reach from Manitou Springs to the top of Pikes Peak. With it we can put a ship in free orbit around the Earth. Then we'll use such a ship to fuel more ships-it amounts to a space station, like the power station. It adds up to a way to get there on chemical power without having to throw away nine-tenths of your ship to do it."

"Sounds expensive."

"It will be. But don't worry; we've got a couple of dozen piddling little things to keep the money coming in while we get set up on a commercial basis, then we sell stock. We- sold stock before; now we'll sell a thousand dollars' worth where we sold ten before."

"And you think that will carry you through until the enterprise as a whole is on a paying basis? Face it, Delos, the thing as a whole doesn't pay off until you have ships plying between here and the Moon on a paying basis, figured in freight and passenger

charges. That means customers, with cash. What is there on the Moon to ship-and who pays for it?"

"Dan, don't you believe there will be? If not, why are you here?"

"I believe in it, Delos-or I believe in you. But what's your time schedule? What's your budget? What's your prospective commodity? And please don't mention diamonds; I think I understand that caper."

Harriman chewed his cigar for a few moments. "There's one valuable commodity we'll start shipping at once."

"What?"

"Knowledge."

Entenza snorted. Strong looked puzzled. Dixon nodded. "I'll buy that. Knowledge is always worth something-to the man who knows how to exploit it. And I'll agree that the Moon is a place to find new knowledge. I'll assume that you can make the next trip pay off. What's your budget and your time table for that?"

Harriman did not answer. Strong searched his face closely. To him Harriman's poker face was as revealing as large print-he decided that his partner had been crowded into a corner. He waited, nervous but ready to back Harriman's play. Dixon went on, "From the way you describe it, Delos, I judge that you don't have money enough for your next step-and you don't know where you will get it. I believe in you, Delos-and I told you at the start that I did not believe in letting a new business die of anemia. I'm ready to buy in with a fifth share."

Harriman stared. "Look," he said bluntly, "you own Jack's share now, don't you?"

"I wouldn't say that."

"You vote it. It sticks out all over."

Entenza said, "That's not true. I'm independent. I-"

"Jack, you're a damn liar," Harriman said dispassionately. "Dan, you've got fifty percent now. Under the present rules I decide deadlocks, which gives me control as long as George sticks by me. If we sell you another share, you vote three-fifths-and are boss. Is that the deal you are looking for?"

"Delos, as I told you, I have confidence in you."

"But you'd feel happier with the whip hand. Well, I won't do it. I'll let space travel-real space travel, with established runs-wait another twenty years before I'll turn loose. I'll let us all go broke and let us live on glory before I'll turn loose. You'll have to think up another scheme."

Dixon said nothing. Harriman got up and began to pace. He stopped in front of Dixon. "Dan, if you really understood what this is all about, I'd let you have control. But you don't. You see this is just another way to money and to power. I'm perfectly willing to let you vultures get rich-but I keep control. I'm going to see this thing developed, not milked. The human race is heading out to the stars-and this adventure is going to present new problems compared with which atomic power was a kid's toy. Unless the whole matter is handled carefully, it will be fouled up. You'll foul it up, Dan, if I let you have the deciding vote in it-because you don't understand it."

He caught his breath and went on, "Take safety for instance. Do you know why I let LeCroix take that ship out instead of taking it myself? Do you think I was afraid? No! I wanted it to come back-safely. I didn't want space travel getting another set-back. Do you know why we have to have a monopoly, for a few years at least? Because every so-

and-so and his brother is going to want to build a Moon ship, now that they know it can be done. Remember the first days of ocean flying? After Lindbergh did it, every so-called pilot who could lay hands on a crate took off for some over-water point. Some of them even took their kids along. And most of them landed in the drink. Airplanes get a reputation for being dangerous. A few years after that the airlines got so hungry for quick money in a highly competitive field that you couldn't pick up a paper without seeing headlines about another airliner crash.

"That's not going to happen to space travel! I'm not going to let it happen.

Space ships are too big and too expensive; if they get a reputation for being unsafe as well, we might as well have stayed in bed. I run things."

He stopped. Dixon waited and then said, "I said I believed in you, Delos. How much money do you need?"

"Eh? On what terms?"

"Your note."

"My note? Did you say my note?"

"I'd want security, of course."

Harriman swore. "I knew there was a hitch in it. Dan, you know everything I've got is tied up in this venture."

"You have insurance. You have quite a lot of insurance, I know."

"Yes, but that's all made out to my wife."

"I seem to have heard you say something about that sort of thing to Jack Entenza," Dixon said. "Come, now-if I know your tax-happy sort, you have at least one irrevocable trust, or paid-up annuities, or something, to keep Mrs. Harriman out of the poor house."

Harriman thought fiercely about it. "When's the call date on this note?"

"In the sweet bye and bye. I want a no-bankruptcy clause, of course."

"Why? Such a clause has no legal validity."

"It would be valid with you, wouldn't it?"

"Mmm . . . yes. Yes, it would."

"Then get out your policies and see how big a note you can write." Harriman looked at him, turned abruptly and went to his safe. He came back with quite a stack of long, stiff folders. They added them up together; it was an amazingly large sum-for those days. Dixon then consulted a memorandum taken from his pocket and said, "One seems to be missing- a rather large one. A North Atlantic Mutual policy, I think."

Harriman glared at him. "Am I going to have to fire every confidential clerk in my force?"

"No," Dixon said mildly, "I don't get my information from your staff. Harriman went back to the safe, got the policy and added it to the pile. Strong spoke up, "Do you want mine, Mr. Dixon?"

"No," answered Dixon, "that won't be necessary." He started stuffing the policies in his pocket. "I'll keep these, Delos, and attend to keeping up the premiums. I'll bill you of course. You can send the note and the changeof-beneficiary forms to my office. Here's your draft." He took out another slip of paper; it was the draft-already made out in the amount of the policies.

Harriman looked at it. "Sometimes," he said slowly, "I wonder who's kidding who?" He tossed the draft over to Strong. "O.K., George, take care of it. I'm off to Paris, boys. Wish me luck." He strode out as jauntily as a fox terrier.

Strong looked from the closed door to Dixon, then at the note. "I ought to tear this thing up!"

"Don't do it," advised Dixon. "You see, I really do believe in him." He added, "Ever read Carl Sandburg, George?"

"I'm not much of a reader."

"Try him some time. He tells a story about a man who started a rumor that they had struck oil in hell. Pretty soon everybody has left for hell, to get in on the boom. The man who started the rumor watches them all go, then scratches his head and says to himself that there just might be something in it, after all. So he left for hell, too."

Strong waited, finally said, "I don't get the point."

"The point is that I just want to be ready to protect myself if necessary, George-and so should you. Delos might begin believing his own rumors. Diamonds! Come, Jack."

CHAPTER TWELVE

THE ENSUING MONTHS were as busy as the period before the flight of the Pioneer (now honorably retired to the Smithsonian Institution). One engineering staff and great gangs of men were working on the catapult, two more staffs were busy with two new ships; the Mayflower, and the Colonial; a third ship was on the drafting tables. Ferguson was chief engineer for all of this; Coster, still buffered by Jock Berkeley, was engineering consultant, working where and as he chose. Colorado Springs was a boom town; the Denver-Trinidad roadcity settlements spread out at the Springs until they surrounded Peterson Field.

Harriman was as busy as a cat with two tails. The constantly expanding exploitation and promotion took eight full days a week of his time, but, by working Kamens and Montgomery almost to ulcers and by doing without sleep himself, he created frequent opportunities to run out to Colorado and talk things over with Caster.

Luna City, it was decided, would be founded on the very next trip. The Mayflower was planned for a pay-load not only of seven passengers, but with air, water and food to carry four of them over to the next trip; they would live in an aluminum Quonset-type hut, sealed, pressurized, and buried under the loose soil of Luna until-and assuming-they were succored.

The choice of the four extra passengers gave rise to another contest, another publicity exploitation-and more sale of stock. Harriman insisted that they be two married couples, over the united objections of scientific organizations everywhere. He gave in only to the extent of agreeing that there was no objection to all four being scientists, providing they constituted two married couples. This gave rise to several hasty marriages-and some divorces, after the choices were announced.

The Mayflower was the maximum size that calculations showed would be capable of getting into a free orbit around the Earth from the boost of the catapult, plus the blast of her own engines. Before she took off, four other ships, quite as large, would precede her. But they were not space ships; they were mere tankers-nameless. The most finicky of

ballistic calculations, the most precise of launchings, would place them in the same orbit at the same spot. There the Mayflower would rendezvous and accept their remaining fuel.

This was the trickiest part of the entire project. If the four tankers could be placed close enough together, LeCroix, using a tiny maneuvering reserve, could bring his new ship to them. If not-well, it gets very lonely out in Space.

Serious thought was given to placing pilots in the tankers and accepting as a penalty the use of enough fuel from one tanker to permit a get-away boat, a life boat with wings, to decelerate, reach the atmosphere and brake to a landing. Caster found a cheaper way.

A radar pilot, whose ancestor was the proximity fuse and whose immediate parents could be found in the homing devices of guided missiles, was given the task of bringing the tankers together. The first tanker would not be so equipped, but th~ second tanker through its robot would smell out the first and home on it with a pint-sized rocket engine, using the smallest of vectors to bring them together. The third would home on the first two and the fourth on the group.

LeCroix shouid have no trouble-if the scheme worked.

CHAPTER THIRTEEN

STRONG WANTED TO SHOW HARRIMAN the sales reports on the H & S automatic household switch; Harriman brushed them aside.

Strong shoved them back under his nose. "You'd better start taking an interest in such things, Delos. Somebody around this office had better start seeing to it that some money comes in-some money that belongs to us, personally-or you'll be selling apples on a street corner."

Harriman leaned back and clasped his hands back of his head. "George, how can you talk that way on a day like this? Is there no poetry in your soul? Didn't you hear what I said when I came in? The rendezvous worked. Tankers one and two are as close together as Siamese twins. We'll be leaving within the week."

"That's as may be. Business has to go on."

"You keep it going; I've got a date. When did Dixon say he would be over?"

"He's due now."

"Good!" Harriman bit the end off a cigar and went on, "You know, George, I'm not sorry I didn't get to make the first trip. Now I've still got it t~ do. I'm as expectant as a bridegroom-and as happy." He started to hum.

Dixon came in without Entenza, a situation that had obtained since the day Dixon had dropped the pretence that he controlled only one share. He shook hands. "You heard the news, Dan?"

"George told me."

"This is it-or almost. A week from now, more or less, I'll be on the Moon. I can hardly believe it."

Dixon sat down silently. Harriman went on, "Aren't you even going to congratulate me? Man, this is a great dayl"

Dixon said, "D.D., why are you going?"

"Huh? Don't ask foolish questions. This is what I ~have been working toward."

"It's not a foolish question. I asked why you were going. The four colonists have an obvious reason, and each is a selected specialist observer as well. LeCroix is the pilot. Coster is the man who is designing the permanent colony. But why are you going? What's your function?"

"My function? Why, I'm the guy who runs things. Shucks, I'm going to run for mayor when I get there. Have a cigar, friend-the name's Harriman. Don't forget to vote." He grinned.

Dixon did not smile. "I did not know you planned on staying."

Harriman looked sheepish. "Well, that's still up in the air. If we get the shelter built in a hurry, we may save enough in the way of supplies to let me sort of lay over until the next trip. You wouldn't begrudge me that, would you?"

Dixon looked him in the eye. "Delos, I can't let you go at all."

Harriman was too startled to talk at first. At last he managed to say, "Don't joke, Dan. I'm going. You can't stop me. Nothing on Earth can stop me."

Dixon shook his head. "I can't permit it, Delos. I've got too much sunk in this. If you go and anything happens to you, I lose it all."

"That's silly. You and George would just carry on, that's all."

"Ask George."

Strong had nothing to say. He did not seem anxious to meet Harriman's eyes. Dixon went on, "Don't try to kid your way out of it, Delos. This venture is you and you are this venture. If you get killed, the whole thing folds up. I don't say space travel folds up; I think you've already given that a boost that will carry it along even with lesser men in your shoes. But as for this venture-our company-it will fold up. George and I will have to liquidate at about half a cent on the dollar. It would take sale of patent rights to get that much. The tangible assets aren't worth anything."

"Damn it, it's the intangibles we sell. You knew that all along."

"You are the intangible asset, Delos. You are the goose that lays the golden eggs. I want you to stick around until you've laid them. You must not risk your neck in space flight until you have this thing on a profit-making basis, so that any competent manager, such as George or myself, thereafter can keep it solvent. I mean it, Delos. I've got too much in it to see you risk it in a joy ride."

Harriman stood up and pressed his fingers down on the edge of his desk. He was breathing hard. "You can't stop me!" he said slowly and forcefully. "Not all the forces of heaven or hell can stop me."

Dixon answered quietly, "I'm sorry, Delos. But I can stop you and I will. I can tie up that ship out there."

"Try it! I own as many lawyers as you do-and better ones!"

"I think you will find that you are not as popular in American courts as you once were-not since the United States found out it didn't own the Moon after all."

"Try it, I tell you. I'll break you and I'll take your shares away from you, too."

"Easy, Delos! I've no doubt you have some scheme whereby you could milk the basic company right away from George and me if you decided to. But it won't be necessary. Nor will it be necessary to tie up the ship. I want the flight to take place as much as you do. But you won't be on it, because you will decide not to go."

"I will, eh? Do I look crazy from where you sit?"

"No, on the contrary."

"Then why won't I go?"

"Because of your note that I hold. I want to collect it."

"What? There's no due date."

"No. But I want to be sure to collect it."

"Why, you dumb fool, if I get killed you collect it sooner than ever."

"Do I? You are mistaken, Delos. If you are killed-on a flight to the Moon-I collect nothing. I know; I've checked with every one of the companies underwriting you. Most of them have escape clauses covering experimental vehicles that date back to early aviation. In any case all of them will cancel and fight it out in court if you set foot inside that ship."

"You put them up to this!"

"Calm down, Delos. You'll be bursting a blood vessel. Certainly I queried them, but I was legitimately looking after my own interests. I don't want to collect on that note-not now, not by your death. I want you to pay it back out of your own earnings, by staj'ing here and nursing this company through till it's stable."

Harriman chucked his cigar, almost unsmoked and badly chewed, at a waste basket. He missed. "I don't give a hoot if you lose on it. If you hadn't stirred them up, they'd have paid without a quiver."

"But it did dig up a weak point in your plans, Delos. If space travel is to be a success, insurance will have to reach out and cover the insured anywhere."

"Confound it, one of them does now-N. A. Mutual."

"I've seen their ad and I've looked over what they claim to offer. It's just window dressing, with the usual escape clause. No, insurance will have to be revamped, all sorts of insurance."

Harriman looked thoughtful. "I'll look into it. George, call Kamens. Maybe we'll have to float our own company."

"Never mind Kamens," objected Dixon. "The point is you can't go on this trip. You have too many details of that sort to watch and plan for and nurse along."

Harriman looked back at him. "You haven't gotten it through your head, Dan, that I'm going! Tie up the ship if you can. If you put sheriffs around it, I'll have goons there to toss them aside."

Dixon looked pained. "I hate to mention this point, Delos, but I am afraid you will be stopped even if I drop dead."

"How?"

"Your wife."

"What's she got to do with it?"

"She's ready to sue for separate maintenance right now-she's found out about this insurance thing. When she hears about this present plan, she'll force you into court and force an accounting of your assets."

"You put her up to it!"

Dixon hesitated. He knew that Entenza had spilled the beans to Mrs. Harriman-maliciously. Yet there seemed no point in adding to a personal feud. "She's bright enough to have done some investigating on her own account. I won't deny I've talked to her-but she sent for me."

"I'll fight both of you!" Harriman stomped to a window, stood looking out-it was a real window; he liked to look at the sky.

Dixon came over and put a hand on his shoulder, saying softly, "Don't take it this way, Delos. Nobody's trying to keep you from your dream. But you can't go just yet; you can't let us down. We've stuck with you this far; you owe it to us to stick with us until it's done."

Harriman did not answer; Dixon went on, "If you don't feel any loyalty toward me, how about George? He's stuck with you against me, when it hurt him, when he thought you were ruining him-and you surely were, unless you finish this job. How about George, Delos? Are you going to let him down, too?"

Harriman swung around, ignoring Dixon and facing Strong. "What about it, George? Do you think I should stay behind?"

Strong rubbed his hands and chewed his lip. Finally he looked up. "It's all right with me, Delos. You do what you think is best."

Harriman stood looking at him for a long moment, his face working as if he were going to cry. Then he said huskily, "Okay, you rats. Okay. I'll stay behind."

CHAPTER FOURTEEN

IT WAS ONE OF THOSE GLORIOUS EVENINGS so common in the Pikes Peak region, after a day in which the sky has been well scrubbed by thunderstorms. The track of the catapult crawled in a straight line up the face of the mountain, whole shoulders having been carved away to permit it. At the temporary space port, still raw from construction, Harriman, in company with visiting notables, was saying good-bye to the passengers and crew of the Mayflower.

The crowds came right up to the rail of the catapult. There was no need to keep them back from the ship; the jets would not blast until she was high over the peak. Only the ship itself was guarded, the ship and the gleaming rails.

Dixon and Strong, together for company and mutual support, hung back at the edge of the area roped off for passengers and officials. They watched Harriman jollying those about to leave: "Good-bye, Doctor. Keep an eye on him, Janet. Don't let him go looking for Moon Maidens." They saw him engage Coster in private conversation, then clap the younger man on the back.

"Keeps his chin up, doesn't he?" whispered Dixon.

"Maybe we should have let him go," answered Strong.

"Eh? Nonsense! We've got to have him. Anyway, his place in history is secure."

"He doesn't care about history," Strong answered seriously, "he just wants to go to the Moon."

"Well, confound it-he can go to the Moon . . . as soon as he gets his job done. After all, it's his job. He made it."

"I know."

Harriman turned around, saw them, started toward them. They shut up. "Don't duck," he said jovially. "It's all right. I'll go on the next trip. By then I plan to have it

running itself. You'll see." He turned back toward the Mayflower. "Quite a sight, isn't she?"

The outer door was closed; ready lights winked along the track and from the control tower. A siren sounded.

Harriman moved a step or two closer.

"There she goes!"

It was a shout from the whole crowd. The great ship started slowly, softly up the track, gathered speed, and shot toward the distant peak. She was already tiny by the time she curved up the face and burst into the sky.

She hung there a split second, then a plume of light exploded from her tail. Her jets had fired.

Then she was a shining light in the sky, a ball of flame, then-nothing. She was gone, upward and outward, to her rendezvous with her tankers.

The crowd had pushed to the west end of the platform as the ship swarmed up the mountain. Harriman had stayed where he was, nor had Dixon and Strong followed the crowd. The three were alone, Harriman most alone for he did not seem aware that the others were near him. He was watching the sky.

Strong was watching him. Presently Strong barely whispered to Dixon, "Do you read the Bible?"

"Some."

"He looks as Moses must have looked, when he gazed out over the promised land."

Harriman dropped his eyes from the sky and saw them. "You guys still here?" he said. "Come on-there's work to be done."

The Menace from Earth

My name is Holly Jones and I'm fifteen. I'm very intelligent but it doesn't show, because I look like an underdone angel. Insipid.

I was born right here in Luna City, which seems to surprise Earthside types. Actually, I'm third generation; my grandparents pioneered in Site One, where the Memorial is. I live with my parents in Artemis Apartments, the new co-op in Pressure Five, eight hundred feet down near City Hall. But I'm not there much; I'm too busy.

Mornings I attend Tech High and afternoons I study or go flying with Jeff Hardesty -- he's my partner -- or whenever a tourist ship is in I guide groundhogs. This day the Gripsholm grounded at noon so I went straight from school to American Express.

The first gaggle of tourists was trickling in from Quarantine but I didn't push forward as Mr. Dorcas, the manager, knows I'm the best. Guiding is just temporary (I'm really a spaceship designer), but if you're doing a job you ought to do it well.

Mr. Dorcas spotted me. "Holly! Here, please. Miss Brentwood, Holly Jones will be your guide."

"'Holly,'" she repeated. "What a quaint name. Are you really a guide, dear?"

I'm tolerant of groundhogs -- some of my best friends are from Earth. As Daddy says, being born on Luna is luck, not judgment, and most people Earthside are stuck there. After all, Jesus and Gautama Buddha and Dr. Einstein were all groundhogs.

But they can be irritating. If high school kids weren't guides, whom could they hire? "My license says so," I said briskly and looked her over the way she was looking me over.

Her face was sort of familiar and I thought perhaps I had seen her picture in those society things you see in Earthside magazines -- one of the rich playgirls we get too many of. She was almost loathsomely lovely. . . nylon skin, soft, wavy, silverblond hair, basic specs about 35-24-34 and enough this and that to make me feel like a matchstick drawing, a low intimate voice and everything necessary to make plainer females think about pacts with the Devil. But I did not feel apprehensive; she was a groundhog and groundhogs don't count.

"All city guides are girls," Mr. Dorcas explained. "Holly is very competent."

"Oh, I'm sure," she answered quickly and went into tourist routine number one: surprise that a guide was needed just to find her hotel, amazement at no taxicabs, same for no porters, and raised eyebrows at the prospect of two girls walking alone through "an underground city."

Mr. Dorcas was patient, ending with: "Miss Brentwood, Luna City is the only metropolis in the Solar System where a woman is really safe -- no dark alleys, no deserted neighborhoods, no criminal element."

I didn't listen; I just held out my tariff card for Mr. Dorcas to stamp and picked up her bags. Guides shouldn't carry bags and most tourists are delighted to experience the fact that their thirty-pound allowance weighs only five pounds. But I wanted to get her moving.

We were in the tunnel outside and me with a foot on the slidebelt when she stopped. "I forgot! I want a city map."

"None available."

"Really?"

"There's only one. That's why you need a guide."

"But why don't they supply them? Or would that throw you guides out of work?"

See? "You think guiding is makework? Miss Brentwood, labor is so scarce they'd hire monkeys if they could."

"Then why not print maps?"

"Because Luna City isn't flat like--" I almost said, "--groundhog cities," but I caught myself.

"--like Earthside cities," I went on. "All you saw from space was the meteor shield. Underneath it spreads out and goes down for miles in a dozen pressure zones."

"Yes, I know, but why not a map for each level?"

Groundhogs always say, "Yes, I know, but--"

"I can show you the one city map. It's a stereo tank twenty feet high and even so all you see clearly are big things like the Hall of the Mountain King and hydroponics farms and the Bats' Cave."

"'The Bats' Cave,'" she repeated. "That's where they fly, isn't it?"

"Yes, that's where we fly."

"Oh, I want to see it!"

"OK. It first. . . or the city map?"

She decided to go to her hotel first. The regular route to the Zurich is to slide up the west through Gray's Tunnel past the Martian Embassy, get off at the Mormon Temple, and take a pressure lock down to Diana Boulevard. But I know all the shortcuts; we got off at Macy-Gimbel Upper to go down their personnel hoist. I thought she would enjoy it.

But when I told her to grab a hand grip as it dropped past her, she peered down the shaft and edged back. "You're joking."

I was about to take her back the regular way when a neighbor of ours came down the hoist. I said, "Hello, Mrs. Greenberg," and she called back, "Hi, Holly. How are your folks?"

Susie Greenberg is more than plump. She was hanging by one hand with young David tucked in her other arm and holding the _Daily Lunatic_, reading as she dropped. Miss Brentwood stared, bit her lip, and said, "How do I do it?"

I said, "Oh, use both hands; I'll take the bags." I tied the handles together with my hanky and went first.

She was shaking when we got to the bottom. "Goodness, Holly, how do you stand it? Don't you get homesick?"

Tourist question number six . . . I said, "I've been to Earth," and let it drop. Two years ago Mother made me visit my aunt in Omaha and I was _miserable_ -- hot and cold and dirty and beset by creepy-crawlies. I weighed a ton and I ached and my aunt was always chivvying me to go outdoors and exercise when all I wanted was to crawl into a tub and be quietly wretched. And I had hay fever. Probably you've never heard of hay fever -- you don't die but you wish you could.

I was supposed to go to a girls' boarding school but I phoned Daddy and told him I was desperate and he let me come home. What groundhogs can't understand is that they live in savagery. But groundhogs are groundhogs and loonies are loonies and never the twain shall meet.

Like all the best hotels the Zurich is in Pressure One on the west side so that it can have a view of Earth. I helped Miss Brentwood register with the roboclerk and found her room; it had its own port. She went straight to it, began staring at Earth and going _ooh!_ and _ahh!_

I glanced past her and saw that it was a few minutes past thirteen; sunset sliced straight down the tip of India -- early enough to snag another client. "Will that be all, Miss Brentwood?"

Instead of answering she said in an awed voice, "Holly, isn't that the most beautiful sight you ever saw?"

"It's nice," I agreed. The view on that side is monotonous except for Earth hanging in the sky -- but Earth is what tourists always look at even though they've just left it. Still, Earth is pretty. The changing weather is interesting if you don't have to be in it. Did you ever endure a summer in Omaha?

"It's gorgeous," she whispered.

"Sure," I agreed. "Do you want to go somewhere? Or will you sign my card?"

"What? Excuse me, I was daydreaming. No, not right now -- yes, I do! Holly, I want to go out _there_! I must! Is there time? How much longer will it be light?"

"Huh? It's two days to sunset."

She looked startled. "How quaint. Holly, can you get us space suits? I've got to go outside."

I didn't wince -- I'm used to tourist talk. I suppose a pressure suit looked like a space suit to them. I simply said, "We girls aren't licensed outside. But I can phone a friend."

Jeff Hardesty is my partner in spaceship designing, so I throw business his way. Jeff is eighteen and already in Goddard Institute, but I'm pushing hard to catch up so that we can set up offices for our firm: "Jones & Hardesty, Spaceship Engineers." I'm very bright in mathematics, which is everything in space engineering, so I'll get my degree pretty fast. Meanwhile we design ships anyhow.

I didn't tell Miss Brentwood this, as tourists think that a girl my age can't possibly be a spaceship designer.

Jeff has arranged his class to let him guide on Tuesdays and Thursdays; he waits at West City Lock and studies between clients. I reached him on the lockmaster's phone. Jeff grinned and said, "Hi, Scale Model."

"Hi, Penalty Weight. Free to take a client?"

"Well, I was supposed to guide a family party, but they're late."

"Cancel them; Miss Brentwood . . . step into pickup, please. This is Mr. Hardesty."

Jeff's eyes widened and I felt uneasy. But it did not occur to me that Jeff could be attracted by a groundhog. . . even though it is conceded that men are robot slaves of their body chemistry in such matters. I knew she was exceptionally decorative, but it was unthinkable that Jeff could be captivated by any groundhog, no matter how well designed. They don't speak our language!

I am not romantic about Jeff; we are simply partners. But anything that affects Jones & Hardesty affects me.

When we joined him at West Lock he almost stepped on his tongue in a disgusting display of adolescent rut. I was ashamed of him and, for the first time, apprehensive. Why are males so childish?

Miss Brentwood didn't seem to mind his behavior. Jeff is a big hulk; suited up for outside he looks like a Frost Giant from _Das Rheingold_; she smiled up at him and thanked him for changing his schedule. He looked even sillier and told her it was a pleasure.

I keep my pressure suit at West Lock so that when I switch a client to Jeff he can invite me to come along for the walk. This time he hardly spoke to me after that platinum menace was in sight. But I helped her pick out a suit and took her into the dressing room and fitted it. Those rental suits take careful adjusting or they will pinch you in tender places once out in vacuum. . . besides there are things about them that one girl ought to explain to another.

When I came out with her, not wearing my own, Jeff didn't even ask why I hadn't suited up -- he took her arm and started toward the lock. I had to butt in to get her to sign my tariff card.

The days that followed were the longest of my life. I saw Jeff only once . . . on the slidebelt in Diana Boulevard, going the other way. She was with him.

Though I saw him but once, I knew what was going on. He was cutting classes and three nights running he took her to the Earthview Room of the Duncan Hines. None of my business! -- I hope she had more luck teaching him to dance than I had. Jeff is a free citizen and if he wanted to make an utter fool of himself neglecting school and losing sleep over an upholstered groundhog that was his business.

But he should not have neglected the firm's business!

Jones & Hardesty had a tremendous backlog, because we were designing Starship _Prometheus_. This project we had been slaving over for a year, flying not more than twice a week in order to devote time to it -- and that's a sacrifice.

Of course you can't build a starship today, because of the power plant. But Daddy thinks that there will soon be a technological break-through and mass-conversion power plants will be built -- which means starships. Daddy ought to know -- he's Luna Chief Engineer for Space Lanes and Fermi Lecturer at Goddard Institute. So Jeff and I are designing a self-supporting interstellar ship on that assumption: quarters, auxiliaries, surgery, labs -- everything.

Daddy thinks it's just practice but Mother knows better -- Mother is a mathematical chemist for General Synthetics of Luna and is nearly as smart as I am. She realizes that Jones & Hardesty plans to be ready with a finished proposal while other designers are still floundering.

Which was why I was furious with Jeff for wasting time over this creature. We had been working every possible chance. Jeff would show up after dinner, we would finish our homework, then get down to real work, the _Prometheus_. . . checking each other's computations, fighting bitterly over details, and having a wonderful time. But the very day I introduced him to Ariel Brentwood, he failed to appear. I had finished my lessons and was wondering whether to start or wait for him -- we were making a radical change in power plant shielding -- when his mother phoned me. "Jeff asked me to call you, dear. He's having dinner with a tourist client and can't come over."

Mrs. Hardesty was watching me so I looked puzzled and said, "Jeff thought I was expecting him? He has his dates mixed." I don't think she believed me; she agreed too quickly.

All that week I was slowly convinced against my will that Jones & Hardesty was being liquidated. Jeff didn't break any more dates -- how can you break a date that hasn't been made? -- but we always went flying Thursday afternoons unless one of us was guiding. He didn't call. Oh, I know where he was; he took her iceskating in Fingal's Cave.

I stayed home and worked on the _Prometheus_, recalculating masses and moment arms for hydroponics and stores on the basis of the shielding change. But I made mistakes and twice I had to look up logarithms instead of remembering . . . I was so used to wrangling with Jeff over everything that I just couldn't function.

Presently I looked at the name place of the sheet I was revising. "Jones & Hardesty" it read, like all the rest. I said to myself, "Holly Jones, quit bluffing; this may be The End. You know that someday Jeff would fall for somebody."

"Of course. . . but not a _groundhog_."

"But he _did_. What kind of an engineer are you if you can't face facts? She's beautiful and rich -- she'll get her father to give him a job Earthside. You hear me? _Earthside!_ So you look for another partner. . . or go into business on your own."

I erased "Jones & Hardesty" and lettered "Jones & Company" and stared at it. Then I started to erase that, too -- but it smeared; I had dripped a tear on it. Which was ridiculous!

The following Tuesday both Daddy and Mother were home for lunch which was unusual as Daddy lunches at the spaceport. Now Daddy can't even see you unless you're a spaceship but that day he picked to notice that I had dialed only a salad and hadn't finished it. "That plate is about eight hundred calories short," he said, peering at it. "You can't boost without fuel -- aren't you well?"

"Quite well, thank you," I answered with dignity.

"Mmm . . . now that I think back, you've been moping for several days. Maybe you need a checkup." He looked at Mother.

"I do not either need a checkup!" I had _not_ been moping -- doesn't a woman have a right not to chatter?

But I hate to have doctors poking at me so I added, "It happens I'm eating lightly because I'm going flying this afternoon. But if you insist, I'll order pot roast and potatoes and sleep insead!"

"Easy, punkin'," he answered gently. "I didn't mean to intrude. Get yourself a snack when you're through . . . and say hello to Jeff for me."

I simply answered, "OK," and asked to be excused; I was humiliated by the assumption that I couldn't fly without Mr. Jefferson Hardesty but did not wish to discuss it.

Daddy called after me, "Don't be late for dinner," and Mother said, "Now, Jacob--" and to me, "Fly until you're tired, dear; you haven't been getting much exercise. I'll leave your dinner in the warmer. Anything you'd like?"

"No, whatever you dial for yourself." I just wasn't interested in food, which isn't like me. As I headed for Bats' Cave I wondered if I had caught something. But my cheeks didn't feel warm and my stomach wasn't upset even if I wasn't hungry.

Then I had a horrible thought. Could it be that I was jealous? _Me?_

It was unthinkable. I am not romantic; I am a career woman. Jeff had been my partner and pal, and under my guidance he could have become a great spaceship designer, but our relationship was straightforward . . . a mutual respect for each other's abilities, with never any of that lovey-dovey stuff. A career woman can't afford such things -- why look at all the professional time Mother had lost over having me!

No, I couldn't be jealous; I was simply worried sick because my partner had become involved with a groundhog. Jeff isn't bright about women and, besides, he's never been to Earth and has illusions about it. If she lured him Earthside, Jones & Hardesty was finished.

And somehow, "Jones & Company" wasn't a substitute: the _Prometheus_ might never be built.

I was at Bats' Cave when I reached this dismal conclusion. I didn't feel like flying but I went to the locker room and got my wings anyhow.

Most of the stuff written about Bats' Cave gives a wrong impression. It's the air storage tank for the city, just like all the colonies have -- the place where the scavenger pumps, deep down, deliver the air until it's needed. We just happen to be lucky enough to have one big enough to fly in. But it never was built, or anything like that; it's just a big volcanic bubble, two miles across, and if it had broken through, way back when, it would have been a crater.

Tourists sometimes pity us loonies because we have no chance to swim. Well, I tried it in Omaha and got water up my nose and scared myself silly. Water is for drinking, not playing in; I'll take flying. I've heard groundhogs say, oh yes, they had "flown" many times. But that's not _flying_. I did what they talk about, between White Sands and Omaha. I felt awful and got sick. Those things aren't safe.

I left my shoes and skirt in the locker room and slipped my tail surfaces on my feet, then zipped into my wings and got someone to tighten the shoulder straps. My wings aren't readymade condors; they are Storer-Gulls, custom-made for my weight distribution and dimensions. I've cost Daddy a pretty penny in wings, outgrowing them so often, but these latest I bought myself with guide fees.

They're lovely -- titanalloy struts as light and strong as bird bones, tension-compensated wrist-pinion and shoulder joints, natural action in the alula slots, and automatic flap action in stalling. The wing skeleton is dressed in styrene feather-foils with individual quilling of scapulars and primaries. They almost fly themselves.

I folded my wings and went into the lock. While it was cycling I opened my left wing and thumbed the alula control -- I had noticed a tendency to sideslip the last time I was airborne. But the alula opened properly and I decided I must have been overcontrolling, easy to do with Storer-Gulls; they're extremely maneuverable. Then the door showed green and I folded the wing and hurried out, while glancing at the barometer. Seventeen pounds -- two more than Earth sea-level and nearly twice what we use in the city; even an ostrich could fly in that. I perked up and felt sorry for all groundhogs, tied down by six times proper weight, who never, never, never could fly.

Not even I could, on Earth. My wing loading is less than a pound per square foot, as wings and all I weigh less than twenty pounds. Earthside that would be over a hundred pounds and I could flap forever and never get off the ground.

I felt so good that I forgot about Jeff and his weakness. I spread my wings, ran a few steps, warped for lift and grabbed air -- lifted my feet and was airborne.

I sculled gently and let myself glide towards the air intake at the middle of the floor -- the Baby's Ladder, we call it, because you can ride the updraft clear to the roof, half a mile above, and never move a wing. When I felt it I leaned right, spoiling with right primaries, corrected, and settled in a counterclockwise soaring glide and let it carry me toward the roof.

A couple of hundred feet up, I looked around. The cave was almost empty, not more than two hundred in the air and half that number perched or on the ground -- room enough for didoes. So as soon as I was up five hundred feet I leaned out of the updraft and began to beat. Gliding is no effort but flying is as hard work as you care to make it. In gliding I support a mere ten pounds on each arm -- shucks, on Earth you work harder than that lying in bed. The lift that keeps you in the air doesn't take any work; you get it free from the shape of your wings just as long as there is air pouring past them.

Even without an updraft all a level glide takes is gentle sculling with your finger tips to maintain air speed; a feeble old lady could do it. The lift comes from differential air pressures but you don't have to understand it; you just scull a little and the air supports you, as if you were lying in an utterly perfect bed. Sculling keeps you moving forward just like sculling a rowboat. . . or so I'm told; I've never been in a rowboat. I had a chance to in Nebraska but I'm not that foolhardy.

But when you're really flying, you scull with forearms as well as hands and add power with your shoulder muscles. Instead of only the outer quills of your primaries changing pitch (as in gliding), now your primaries and secondaries clear back to the joint warp sharply on each downbeat and recovery; they no longer lift, they force you forward -- while your weight is carried by your scapulars, up under your armpits.

So you fly faster, or climb, or both, through controlling the angle of attack with your feet -- with the tail surfaces you wear on your feet, I mean.

Oh dear, this sounds complicated and isn't -- you just do it. You fly exactly as a bird flies. Baby birds can learn it and they aren't very bright. Anyhow, it's easy as breathing after you learn.. . and more fun than you can imagine!

I climbed to the roof with powerful beats, increasing my angle of attack and slotting my alulae for lift without burble -- climbing at an angle that would stall most fliers. I'm little but it's all muscle and I've been flying since I was six. Once up there I glided and looked around. Down at the floor near the south wall tourists were trying glide wings -- if you call those things "wings." Along the west wall the visitors' gallery was loaded with goggling tourists. I wondered if Jeff and his Circe character were there and decided to go down and find out.

So I went into a steep dive and swooped toward the gallery, leveled off and flew very fast along it. I didn't spot Jeff and his groundhoggess but I wasn't watching where I was going and overtook another flier, almost collided. I glimpsed him just in time to stall and drop under, and fell fifty feet before I got control. Neither of us was in danger as the gallery is two hundred feet up, but I looked silly and it was my own fault; I had violated a safety rule.

There aren't many rules but they are necessary; the first is that orange wings always have the right of way -- they're beginners. This flier did not have orange wings

but I was overtaking. The flier underneath -- or being overtaken -- or nearer to wall -- or turning counterclockwise, in that order, has the right of way.

I felt foolish and wondered who had seen me, so I went all the way back up, made sure I had clear air, then stooped like a hawk toward the gallery, spilling wings, lifting tail, and letting myself fall like a rock.

I completed my stoop in front of the gallery, lowering and spreading my tail so hard I could feel leg muscles knot and grabbing air with both wings, alulae slotted. I pulled level in an extremely fast glide along the gallery. I could see their eyes pop and thought smugly, "There! That'll show 'em!"

When darn if somebody didn't stoop on me! The blast from a flier braking right over me almost knocked me out of control. I grabbed air and stopped a sideslip, used some shipyard words and looked around to see who had blitzed me. I knew the black-and-gold wing pattern -- Mary Muhlenburg, my best girl friend. She swung toward me, pivoting on a wing tip. "Hi, Holly! Scared you, didn't I?"

"You did not! You better be careful; the flightmaster'll ground you for a month."

"Slim chance! He's down for coffee."

I flew away, still annoyed, and started to climb. Mary called after me, but I ignored her, thinking, "Mary my girl, I'm going to get over you and fly you right out of the air."

That was a foolish thought as Mary flies every day and has shoulders and pectoral muscles like Mrs. Hercules. By the time she caught up with me I had cooled off and we flew side by side, still climbing. "Perch?" she called out.

"Perch," I agreed. Mary has lovely gossip and I could use a breather. We turned toward our usual perch, a ceiling brace for flood lamps -- it isn't supposed to be a perch but the flightmaster hardly ever comes up there.

Mary flew in ahead of me, braked and stalled dead to a perfect landing. I skidded a little but Mary stuck out a wing and steadied me. It isn't easy to come into a perch, especially when you have to approach level. Two years ago a boy who had just graduated from orange wings tried it . . . knocked off his left alula and primaries on a strut -- went fluttering and spinning down two thousand feet and crashed. He could have saved himself -- you can come in safely with a badly damaged wing if you spill air with the other and accept the steeper glide, then stall as you land. But this poor kid didn't know how; he broke his neck, dead as Icarus. I haven't used that perch since.

We folded our wings and Mary sidled over. "Jeff is looking for you," she said with a sly grin.

My insides jumped but I answered coolly, "So? I didn't know he was here."

"Sure. Down there," she added, pointing with her left wing. "Spot him?"

Jeff wears striped red and silver, but she was pointing at the tourist guide slope, a mile away. "No."

"He's there all right." She looked at me sidewise. "But I wouldn't look him up if I were you."

"Why not? Or for that matter, why should I?" Mary can be exasperating.

"Huh? You always run when he whistles. But he has that Earthside siren in tow again today; you might find it embarrasing?"

"Mary, whatever are you talking about?"

"Huh? Don't kid me, Holly Jones; you know what I mean."

"I'm sure I don't," I answered with cold dignity.

"Humph! Then you're the only person in Luna City who doesn't. Everybody knows you're crazy about Jeff; everybody knows she's cut you out. . . and that you are simply simmering with jealousy."

Mary is my dearest friend but someday I'm going to skin her for a rug. "Mary, that's preposterously ridiculous! How can you even think such a thing?"

"Look, darling, you don't have to pretend. I'm for you." She patted my shoulders with her secondaries.

So I pushed her over backwards. She fell a hundred feet, straightened out, circled and climbed, and came in beside me, still grinning. It gave me time to decide what to say.

"Mary Muhlenburg, in the first place I am not crazy about anyone, least of all Jeff Hardesty. He and I are simply friends. So it's utterly nonsensical to talk about me being 'jealous.' In the second place Miss Brentwood is a lady and doesn't go around 'cutting out' anyone, least of all me. In the third place she is simply a tourist Jeff is guiding -- business, nothing more."

"Sure, sure," Mary agreed placidly. "I was wrong. Still--" She shrugged her wings and shut up.

"'Still' what? Mary, dont be mealy-mouthed."

"Mmm. . . I was wondering how you knew I was talking about Ariel Brentwood -- since there isn't anything to it."

"Why, you mentioned her name."

"I did not."

I thought frantically. "Uh, maybe not. But it's perfectly simple. Miss Brentwood is a client I turned over to Jeff myself, so I assumed that she must be the tourist you meant."

"So? I don't recall even saying she was a tourist. But since she is just a tourist you two are splitting, why aren't you doing the inside guiding while Jeff sticks to outside work? I thought you guides had an agreement?"

"Huh? If he has been guiding her inside the city, I'm not aware of it--"

"You're the only one who isn't."

"--and I'm not interested; that's up to the grievance committee. But Jeff wouldn't take a fee for inside guiding in any case."

"Oh, sure! -- not one he could _bank_. Well, Holly, seeing I was wrong, why don't you give him a hand with her? She wants to learn to glide."

Butting in on that pair was farthest from my mind. "If Mr. Hardesty wants my help, he will ask me. In the meantime I shall mind my own business . . . a practice I recommend to you!"

"Relax, shipmate," she answered, unruffled. "I was doing you a favor."

"Thank you, I don't need one."

"So I'll be on my way -- got to practice for the gymkhana." She leaned forward and dropped off. But she didn't practice aerobatics; she dived straight for the tourist slope.

I watched her out of sight, then sneaked my left hand out the hand slit and got at my hanky -- awkward when you are wearing wings but the floodlights had made my eyes water. I wiped them and blew my nose and put my hanky away and wiggled my hand back into place, then checked everything thumbs, toes, and fingers, preparatory to dropping off.

But I didn't. I just sat there, wings drooping, and thought. I had to admit that Mary was partly right; Jeff's head was turned completely. . . over a _groundhog_. So sooner or later he would go Earthside and Jones & Hardesty was finished.

Then I reminded myself that I had been planning to be a spaceship designer like Daddy long before Jeff and I teamed up. I wasn't dependent on anyone; I could stand alone, like Joan of Arc, or Lise Meitner.

I felt better. . . a cold, stern pride, like Lucifer in _Paradise Lost_.

I recognized the red and silver of Jeff's wings while he was far off and I thought about slipping quietly away. But Jeff can overtake me if he tries, so I decided, "Holly, don't be a fool! You've no reason to run. . . just be coolly polite."

He landed by me but didn't sidle up. "Hi, Decimal Point."

"Hi, Zero. Uh, stolen much lately?"

"Just the City Bank but they made me put it back." He frowned and added, "Holly, are you mad at me."

"Why, Jeff, whatever gave you such a silly notion?"

"Uh. . . something Mary the Mouth said."

"Her? Don't pay any attention to what she says. Half of it's always wrong and she doesn't mean the rest."

"Yeah, a short circuit between her ears. Then you aren't mad?"

"Of _course_ not. Why should I be?"

"No reason I know of. I haven't been around to work on the ship for a few days.. . but I've been awfully busy."

"Think nothing of it. I've been terribly busy myself."

"Uh, that's fine. Look, Test Sample, do me a favor. Help me out with a friend -- a client, that is -- we'll she's a friend, too. She wants to learn to use glide wings."

I pretended to consider it. "Anyone I know?"

"Oh, yes. Fact is, you introduced us. Ariel Brentwood."

"'Brentwood?' Jeff, there are so many tourists. Let me think. Tall girl? Blonde? Extremely pretty?"

He grinned like a goof and I almost pushed him off. "That's Ariel!"

"I recall her . . . she expected me to carry her bags. But you don't need help, Jeff. She seemed very clever. Good sense of balance."

"Oh, yes, sure, all of that. Well, the fact is, I want you two to know each other. She's. . . well, she's just wonderful, Holly. A real person all the way through. You'll love her when you know her better. Uh... this seemed like a good chance."

I felt dizzy. "Why, that's very thoughtful, Jeff, but I doubt if she wants to know me better. I'm just a servant she hired -- you know groundhogs."

"But she's not at all like the ordinary groundhog. And she does want to know you better -- she _told_ me so!"

After you told her to think so! I muttered. But I had talked myself into a corner. If I had not been hampered by polite upbringing I would have said, "On your way, vacuum skull! I'm not interested in your groundhog friends" -- but what I did say was, "OK, Jeff," then gathered the fox to my bosom and dropped off into a glide.

So I taught Ariel Brentwood to "fly." Look, those so-called wings they let tourists wear have fifty square feet of lift surface, no controls except warp in the primaries, a built-in dihedral to make them stable as a table, and a few meaningless degrees of hinging

to let the wearer think that he is "flying" by waving his arms. The tail is rigid, and canted so that if you stall (almost impossible) you land on your feet. All a tourist does is run a few yards, lift up his feet (he can't avoid it) and slide down a blanket of air. Then he can tell his grandchildren how he flew, really _flew_, "just like a bird."

An ape could learn to "fly" that much.

I put myself to the humiliation of strapping on a set of the silly things and had Ariel watch while I swung into the Baby's Ladder and let it carry me up a hundred feet to show her that you really and truly could "fly" with them. Then I thankfully got rid of them, strapped her into a larger set, and put on my beautiful Storer-Gulls. I had chased Jeff away (two instructors is too many), but when he saw her wing up, he swooped down and landed by us.

I looked up. "You again."

"Hello, Ariel. Hi, Blip. Say, you've got her shoulder straps too tight."

"Tut, tut," I said. "One coach at a time, remember? If you want to help, shuck those gaudy fins and put on some gliders then I'll use you to show how not to. Otherwise get above two hundred feet and stay there; we don't need any dining lounge pilots."

Jeff pouted like a brat but Ariel backed me up. "Do what teacher says, Jeff. That's a good boy."

He wouldn't put on gliders but he didn't stay clear, either. He circled around us, watching, and got bawled out by the flightmaster for cluttering the tourist area.

I admit Ariel was a good pupil. She didn't even get sore when I suggested that she was rather mature across the hips to balance well; she just said that she had noticed that I had the slimmest behind around there and she envied me. So I quit trying to get her goat, and found myself almost liking her as long as I kept my mind firmly on teaching. She tried hard and learned fast -- good reflexes and (despite my dirty crack) good balance. I remarked on it and she admitted diffidently that she had had ballet training.

About mid-afternoon she said, "Could I possibly try real wings?"

"Huh? Gee, Ariel, I don't think so."

"Why not?"

There she had me. She had already done all that could be done with those atrocious gliders. If she was to learn more, she had to have real wings. "Ariel, it's dangerous. It's not what you've been doing, believe me. You might get hurt, even killed."

"Would you be held responsible?"

"No. You signed a release when you came in."

"Then I'd like to try it."

I bit my lip. If she had cracked up without my help, I wouldn't have shed a tear -- but to let her do something too dangerous while she was my pupil. . . well, it smacked of David and Uriah. "Ariel, I can't stop you . . . but I should put my wings away and not have anything to do with it."

It was her turn to bite her lip. "If you feel that way, I can't ask you to coach me. But I still want to. Perhaps Jeff will help me."

"He probably will," I blurted out, "if he is as big a fool as I think he is!"

Her company face slipped but she didn't say anything because just then Jeff stalled in beside us. "What's the discussion?"

We both tried to tell him and confused him for he got the idea I had suggested it, and started bawling me out. Was I crazy? Was I trying to get Ariel hurt? Didn't I have any sense?

"_Shut up!_" I yelled, then added quietly but firmly, "Jefferson Hardesty, you wanted me to teach your girl friend, so I agreed. But don't butt in and don't think you can get away with talking to me like that. Now beat it! Take wing. Grab air!"

He swelled up and said slowly, "I absolutely forbid it."

Silence for five long counts. Then Ariel said quietly, "Come, Holly. Let's get me some wings."

"Right, Ariel."

But they don't rent real wings. Fliers have their own; they have to. However, there are second-hand ones for sale because kids outgrow them, or people shift to custom-made ones, or something. I found Mr. Schultz who keeps the key, and said that Ariel was thinking of buying but I wouldn't let her without a tryout. After picking over forty-odd pairs I found a set which Johnny Queveras had outgrown but which I knew were all right. Nevertheless I inspected them carefully. I could hardly reach the finger controls but they fitted Ariel.

While I was helping her into the tail surfaces I said, "Ariel? This is still a bad idea."

"I know. But we can't let men think they own us."

"I suppose not."

"They do own us, of course. But we shouldn't let them know it." She was feeling out the tail controls. "The big toes spread them?"

"Yes. But don't do it. Just keep your feet together and toes pointed. Look, Ariel, you really aren't ready. Today all you will do is glide, just as you've been doing. Promise?"

She looked me in the eye. "I'll do exactly what you say. not even take wing unless you OK it."

"OK. Ready?"

"I'm ready."

"All right. Wups! I goofed. They aren't orange."

"Does it matter?"

"It sure does." There followed a weary argument because Mr. Schultz didn't want to spray them orange for a tryout. Ariel settled it by buying them, then we had to wait a bit while the solvent dried.

We went back to the tourist slope and I let her glide, cautioning her to hold both alulae open with her thumbs for more lift at slow speeds, while barely sculling with her fingers. She did fine, and stumbled in landing only once. Jeff stuck around, cutting figure eights above us, but we ignored him. Presently I taught her to turn in a wide, gentle bank -- you can turn those awful glider things but it takes skill; they're only meant for straight glide.

Finally I landed by her and said, "Had enough?"

"I'll never have enough! But I'll unwing if you say."

"Tired?"

"No." She glanced over her wing at the Baby's Ladder; a dozen fliers were going up it, wings motionless, soaring lazily. "I wish I could do that just once. It must be heaven."

I chewed it over. "Actually, the higher you are, the safer you are."

"Then why not?"

"Mmm . . . safer _provided_ you know what you're doing. Going up that draft is just gliding like you've been doing. You lie still and let it lift you half a mile high. Then you come down the same way, circling the wall in a gentle glide. But you're going to be tempted to do something you don't understand yet -- flap your wings, or cut some caper."

She shook her head solemnly. "I won't do anything you haven't taught me."

I was still worried. "Look, it's only half a mile up but you cover five miles going there and more getting down. Half an hour at least. Will your arms take it?"

"I'm sure they will."

"Well. . . you can start down anytime; you don't have to go all the way. Flex your arms a little now and then, so they won't cramp. Just don't flap your wings."

"I won't."

"OK." I spread my wings. "Follow me."

I led her into the updraft, leaned gently right, then back left to start the counterclockwise climb, all the while sculling very slowly so that she could keep up. Once we were in the groove I called out, "Steady as you are!" and cut out suddenly, climbed and took station thirty feet over and behind her. "Ariel?"

"Yes, Holly?"

"I'll stay over you. Don't crane your neck; you don't have to watch me, I have to watch you. You're doing fine."

"I feel fine!"

"Wiggle a little. Don't stiffen up. It's a long way to the roof. You can scull harder if you want to."

"Aye aye, Cap'n!"

"Not tired?"

"Heavens, no! Girl, I'm living!" She giggled. "And mama said I'd never be an angel!"

I didn't answer because red-and-silver wings came charging at me, braked suddenly and settled into the circle between me and Ariel. Jeff's face was almost as red as his wings. "What the devil do you think you are doing?"

"Orange wings!" I yelled. "Keep clear!"

"Get down out of here! Both of you!"

"Get out from between me and my pupil. You know the rules."

"Ariel!" Jeff shouted. "Lean out of the circle and glide down. I'll stay with you."

"Jeff Hardesty," I said savagely, "I give you three seconds to get out from between us -- then I'm going to report you for violation of Rule One. For the third time -- Orange Wings!"

Jeff growled something, dipped his right wing and dropped out of formation. The idiot sideslipped within five feet of Ariel's wing tip. I should have reported him for that; all the room you can give a beginner is none too much.

I said, "OK, Ariel?"

"OK, Holly. I'm sorry Jeff is angry."

"He'll get over it. Tell me if you feel tired."

"I'm not. I want to go all the way up. How high are we?"

"Four hundred feet, maybe."

Jeff flew below us a while, then climbed and flew over us. . . probably for the same reason I did: to see better. It suited me to have two of us watching her as long as he didn't interfere; I was beginning to fret that Ariel might not realize that the way down was going to be as long and tiring as the way up. I was hoping she would cry uncle. I knew I could glide until forced down by starvation. But a beginner gets tense.

Jeff stayed generally over us, sweeping back and forth -- he's too active to glide very long -- while Ariel and I continued to soar, winding slowly up toward the roof. It finally occurred to me when we were about halfway up that I could cry uncle myself; I didn't have to wait for Ariel to weaken. So I called out, "Ariel? Tired now?"

"No."

"Well, I am. Could we go down, please?"

She didn't argue, she just said, "All right. What am I to do?"

"Lean right and get out of the circle." I intended to have her move out five or six hundred feet, get into the return down draft, and circle the cave down instead of up. I glanced up, looking for Jeff. I finally spotted him some distance away and much higher but coming toward us. I called out, "Jeff! See you on the ground." He might not have heard me but he would see if he didn't hear; I glanced back at Ariel.

I couldn't find her.

Then I saw her, a hundred feet below -- flailing her wings and falling, out of control.

I didn't know how it happened. Maybe she leaned too far, went into a sideslip and started to struggle. But I didn't try to figure it out; I was simply filled with horror. I seemed to hang there frozen for an hour while I watched her.

But the fact appears to be that I screamed "Jeff!" and broke into a stoop.

But I didn't seem to fall, couldn't overtake her. I spilled my wings completely -- but couldn't manage to fall; she was as far away as ever.

You do start slowly, of course; our low gravity is the only thing that makes human flying possible. Even a stone falls a scant three feet in the first second. But the first second seemed endless.

Then I knew I was falling. I could feel rushing air -- but I still didn't seem to close on her. Her struggles must have slowed her somewhat, while I was in an intentional stoop, wings spilled and raised over my head, falling as fast as possible. I had a wild notion that if I could pull even with her, I could shout sense into her head, get her to dive, then straighten out in a glide. But I couldn't _reach_ her.

This nightmare dragged on for hours.

Actually we didn't have room to fall for more than twenty seconds; that's all it takes to stoop a thousand feet. But twenty seconds can be horribly long . . . long enough to regret every foolish thing I had ever done or said, long enough to say a prayer for us both.. . and to say good-bye to Jeff in my heart. Long enough to see the floor rushing toward us and know that we were both going to crash if I didn't overtake her mighty quick.

I glanced up and Jeff was stooping right over us but a long way up. I looked down at once.. . and I was overtaking her... I was passing her -- _I was under her!_

Then I was braking with everything I had, almost pulling my wings off. I grabbed air, held it, and started to beat without ever going to level flight. I beat once, twice, three times. . . and hit her from below, jarring us both.

Then the floor hit us.

I felt feeble and dreamily contented. I was on my back in a dim room. I think Mother was with me and I know Daddy was. My nose itched and I tried to scratch it, but my arms wouldn't work. I fell asleep again.

I woke up hungry and wide awake. I was in a hospital bed and my arms still wouldn't work, which wasn't surprising as they were both in casts. A nurse came in with a tray. "Hungry?" she asked.

"Starved," I admitted.

"We'll fix that." She started feeding me like a baby.

I dodged the third spoonful and demanded, "What happened to my arms?"

"Hush," she said and gagged me with a spoon.

But a nice doctor came in later and answered my question. "Nothing much. Three simple fractures. At your age you'll heal in no time. But we like your company so I'm holding you for observation of possible internal injury."

"I'm not hurt inside," I told him. "At least, I don't hurt."

"I told you it was just an excuse."

"Uh, Doctor?"

"Well?"

"Will I be able to fly again?" I waited, scared.

"Certainly. I've seen men hurt worse get up and go three rounds."

"Oh. Well, thanks. Doctor? What happened to the other girl? Is she. . . did she...?"

"Brentwood? She's here."

"She's right here," Ariel agreed from the door. "May I come in?"

My jaw dropped, then I said, "Yeah. Sure. Come in."

The doctor said, "Don't stay long," and left. I said, "Well, sit down."

"Thanks." She hopped instead of walked and I saw that one foot was bandaged. She got on the end of the bed.

"You hurt your foot."

She shrugged. "Nothing. A sprain and a torn ligament. Two cracked ribs. But I would have been dead. You know why I'm not?"

I didn't answer. She touched one of my casts. "That's why. You broke my fall and I landed on top of you. You saved my life and I broke both your arms."

"You don't have to thank me. I would have done it for anybody."

"I believe you and I wasn't thanking you. You can't thank a person for saving your life. I just wanted to make sure you knew that I knew it."

I didn't have an answer so I said, "Where's Jeff? Is he all right?"

"He'll be along soon. Jeff's not hurt . . . though I'm surprised he didn't break both ankles. He stalled in beside us so hard that he should have. But Holly . . . Holly my very dear . . . I slipped in so that you and I could talk about him before he got here."

I changed the subject quickly. Whatever they had given me made me feel dreamy and good, but not beyond being embarrassed. "Ariel, what happened? You were getting along fine -- then suddenly you were in trouble."

She looked sheepish. "My own fault. You said we were going down, so I looked down. Really looked, I mean. Before that, all my thoughts had been about climbing to the roof; I hadn't thought about how far down the floor was. Then I looked down and got dizzy and panicky and went all to pieces." She shrugged. "You were right. I wasn't ready."

I thought about it and nodded. "I see. But don't worry -- when my arms are well, I'll take you up again."

She touched my foot. "Dear Holly. But I won't be flying again; I'm going back where I belong."

"Earthside?"

"Yes. I'm taking the _Billy Mitchell_ on Wednesday."

"Oh. I'm sorry."

She frowned slightly. "Are you? Holly, you don't like me, do you?"

I was startled silly. What can you say? Especially when it's true? "Well," I said slowly, "I don't dislike you. I just don't know you very well."

She nodded. "And I don't know you very well . . . even though I got to know you a lot better in a very few seconds. But Holly listen please and don't get angry. It's about Jeff. He hasn't treated you very well the last few days -- while I've been here, I mean. But don't be angry with him. I'm leaving and everything will be the same."

That ripped it open and I couldn't ignore it, because if I did, she would assume all sorts of things that weren't so. So I had to explain. . . about me being a career woman.. . how, if I had seemed upset, it was simply distress at breaking up the firm of Jones & Hardesty before it even finished its first starship . how I was not in love with Jeff but simply valued him as a friend and associate. . . but if Jones & Hardesty couldn't carry on, then Jones & Company would. "So you see, Ariel, it isn't necessary for you to give up Jeff. If you feel you owe me something, just forget it. It isn't necessary."

She blinked and I saw with amazement that she was holding back tears. "Holly, Holly. . . you don't understand at all."

"I understand all right. I'm not a child."

"No, you're a grown woman. . . but you haven't found it out." She held up a finger. "One -- Jeff doesn't love me."

"I don't believe it."

"Two. . . I don't love him."

"I don't believe that, either."

"Three . . . you say you don't love him -- but we'll take that up when we come to it. Holly, am I beautiful?"

Changing the subject is a female trait but I'll never learn to do it that fast. "Huh?"

"I said, 'Am I beautiful?'"

"You know darn well you are!"

"Yes. I can sing a bit and dance, but I would get few parts if I were not, because I'm no better than a third-rate actress. So I have to be beautiful. How old am I?"

I managed not to boggle. "Huh? Older than Jeff thinks you are. Twenty-one, at least. Maybe twenty-two."

She sighed. "Holly, I'm old enough to be your mother."

"Huh? I don't believe that, either."

"I'm glad it doesn't show. But that's why, though Jeff is a dear, there never was a chance that I could fall in love with him. But how I feel about him doesn't matter; the important thing is that he loves you."

"What? That's the silliest thing you've said yet! Oh, he likes me -- or did. But that's all." I gulped. "And it's all I want. Why, you should hear the way he talks to me."

"I have. But boys that age can't say what they mean; they get embarrassed."

"But--"

"Wait, Holly. I saw something you didn't because you were knocked cold. When you and I bumped, do you know what happened?"

"Uh, no."

"Jeff arrived like an avenging angel, a split second behind us. He was ripping his wings off as he hit, getting his arms free. He didn't even look at me. He just stepped across me and picked you up and cradled you in his arms, all the while bawling his eyes out."

"He did?"

"He did."

I mulled it over. Maybe the big lunk did kind of like me, after all.

Ariel went on, "So you see, Holly, even if you don't love him, you must be very gentle with him, because he loves you and you can hurt him terribly."

I tried to think. Romance was still something that a career woman should shun . . . but if Jeff really did feel that way -- well. . . would it be compromising my ideals to marry him just to keep him happy? To keep the firm together? Eventually, that is?

But if I did, it wouldn't be Jones & Hardesty; it would be Hardesty & Hardesty.

Ariel was still talking: "--you might even fall in love with him. It does happen, hon, and if it did, you'd be sorry if you had chased him away. Some other girl would grab him; he's awfully nice."

"But," I shut up for I heard Jeff's step -- I can always tell it. He stopped in the door and looked at us, frowning.

"Hi, Ariel."

"Hi, Jeff."

"Hi, Fraction." He looked me over. "My, but you're a mess."

"You aren't pretty yourself. I hear you have flat feet."

"Permanently. How do you brush your teeth with those things on your arms?"

"I don't."

Ariel slid off the bed, balanced on one foot. "Must run. See you later, kids."

"So long, Ariel."

"Good-bye, Ariel. Uh. . . thanks."

Jeff closed the door after she hopped away, came to the bed and said gruffly, "Hold still."

Then he put his arms around me and kissed me.

Well, I couldn't stop him, could I? With both arms broken? Besides, it was consonant with the new policy of the firm. I was startled speechless because Jeff never kisses me, except birthday kisses, which don't count. But I tried to kiss back and show that I appreciated it.

I don't know what the stuff was they had been giving me but my ears began to ring and I felt dizzy again.

Then he was leaning over me. "Runt," he said mournfully, "you sure give me a lot of grief."

"You're no bargain yourself, flathead," I answered with dignity.

"I suppose not." He looked me over sadly. "What are you crying for?"

I didn't know that I had been. Then I remembered why. "Oh, Jeff -- I busted my pretty wings!"

"We'll get you more. Uh, brace yourself. I'm going to do it again."

"All right." He did.

I suppose Hardesty & Hardesty has more rhythm than Jones & Hardesty.

It really sounds better.

Methuselah's Children

PART I

"MARY SPERLING, you're a fool not to marry him!"

Mary Sperling added up her losses and wrote a check before answering, "There's too much difference in age." She passed over her credit voucher. "I shouldn't gamble with you-sometimes I think you're a sensitive."

"Nonsense! You're just trying to change the subject. You must be nearly thirty and you won't be pretty forever."

Mary smiled wryly. "Don't I know it!"

"Bork Vanning can't be much over forty and he's a plus citizen. You should jump at the chance."

"You jump at it. I must run now. Service, Ven."

"Service," Ven answered, then frowned at the door as it contracted after Mary Sperling. She itched to know why Mary would not marry a prime catch like the Honorable Bork Vanning and was almost as curious as to why and where Mary was going, but the custom of privacy stopped her.

Mary had no intention of letting anyone know where she was going. Outside her friend's apartment she dropped down a bounce tube to the basement, claimed her car from the robopark, guided it up the ramp and set the controls for North Shore. The car waited for a break in the traffic, then dived into the high-speed stream and hurried north. Mary settled back for a nap.

When its setting was about to run out, the car beeped for instructions; Mary woke up and glanced out. Lake Michigan was a darker band of darkness on her right. She signaled traffic control to let her enter the local traffic lane; it sorted out her car and placed her there, then let her resume manual control. She fumbled in the glove compartment.

The license number which traffic control automatically photographed as she left the controlways was not the number the car had been wearing.

She followed a side road uncontrolled for several miles, turned into a narrow dirt road which led down to the shore, and stopped. There she waited, lights out, and listened. South of her the lights of Chicago glowed; a few hundred yards inland the controlways whined, but here there was nothing but the little timid noises of night creatures. She reached into the glove compartment, snapped a switch; the instrument panel glowed, uncovering other dials behind it. She studied these while making adjustments. Satisfied that no radar watched her and that nothing was moving near her, she snapped off the instruments, sealed the window by her and started up again.

What appeared to be a standard Camden speedster rose quietly up, moved out over the lake, skimming it-dropped into the water and sank. Mary waited until she was a quarter mile off shore in fifty feet of water, then called a station. "Answer," said a voice.

"'Life is short--'"

"'-but the years are long.'"

"'Not,'" Mary responded, "'while the evil days come not.'"

"I sometimes wonder," the voice answered conversationally. "Okay, Mary. I've checked you."

"Tommy?"

"No-Cecil Hedrick. Are your controls cast loose?"

"Yes. Take over."

Seventeen minutes later the car surfaced in a pool which occupied much of an artificial cave. When the car was beached, Mary got out, said hello to the guards and went on through a tunnel into a large underground room where fifty or sixty men and women were seated. She chatted until a clock announced midnight, then she mounted a rostrum and faced them.

"I am," she stated, "one hundred and eighty-three years old. Is there anyone here who is older?"

No one spoke. After a decent wait she went on, "Then in accordance with our customs I declare this meeting opened. Will you choose a moderator?"

Someone said, "Go ahead, Mary." When no one else spoke up, she said, "Very well." She seemed indifferent to the honor and the group seemed to share her casual attitude-an air of never any hurry, of freedom from the tension of modern life.

"We are met as usual," she announced, "to discuss our welfare and that of our sisters and brothers. Does any Family representative have a message from his family? Or does anyone care to speak for himself?"

A man caught her eye and spoke up. "Ira Weatheral, speaking for the Johnson Family. We've met nearly two months early. The trustees must have a reason. Let's hear it."

She nodded and turned to a prim little man in the first row. "Justin . . . if you will, please."

The prim little man stood up and bowed stiffly. Skinny legs stuck out below his badly-cut kilt. He looked and acted like an elderly, dusty civil servant, but his black hair and the firm, healthy tone of his skin said that he was a man in his prime. "Justin Foote," he said precisely, "reporting for the trustees. It has been eleven years since the Families decided on the experiment of letting the public know that there were, living among them, persons who possessed a probable, life expectancy far in excess of that anticipated by the average man, as well as other persons who had proved the scientific truth of such expectation by having lived more than twice the normal life span of human beings."

Although he spoke without notes he sounded as if he were reading aloud a prepared report. What he was saying they all knew but no one hurried him; his audience had none of the febrile impatience so common elsewhere. "In deciding," he droned on, "to reverse the previous long-standing policy of silence and concealment as to the peculiar aspect in which we differ from the balance of the human race, the Families were moved by several considerations. The reason for the original adoption of the policy of concealment should be noted:

"The first offspring resulting from unions assisted by the Howard Foundation were born in 1875. They aroused no comment, for they were in no way remarkable. The Foundation was an openly-chartered non-profit corporation--"

On March 17, 1874, Ira Johnson, medical student, sat in the law offices of Deems, Wingate, Alden, & Deems and listened to an unusual proposition. At last he interrupted

the senior partner. "Just a moment! Do I understand that you are trying to hire me to marry one of these women?"

The lawyer looked shocked. "Please, Mr. Johnson. Not at all"

"Well, it certainly sounded like it."

"No, no, such a contract would be void, against public policy. We are simply informing you, as administrators of a trust, that should it come about that you do marry one of the young ladies on this list it would then be our pleasant duty to endow each child of such a union according to the scale here set forth. But there would be no Contract with us involved, nor is there any 'proposition' being made to you-and we certainly do not urge any course of action on you. We are simply informing you of certain facts."

Ira Johnson scowled and shuffled his feet. "What's it all about? Why?"

"That is the business of the Foundation. One might put it that we approve of your grandparents."

"Have you discussed me with them?" Johnson said sharply.

He felt no affection for his grandparents. A tight-fisted foursome-if any one of them had had the grace to die at a reasonable age he would not now be worried about money enough to finish medical school.

"We have talked with them, yes. But not about you."

The lawyer shut off further discussion and young Johnson accepted gracelessly a list of young women, all strangers, with the intention of tearing it up the moment he was outside the office. Instead, that night he wrote seven drafts before he found the right words in which to start cooling off the relation between himself and his girl back home. He was glad that he had never actually popped the question to her-it would have been deucedly awkward.

When he did marry (from the list) it seemed a curious but not too remarkable coincidence that his wife as well as himself had four living, healthy, active grandparents.

"-an openly chartered non-profit corporation," Foote continued, "and its avowed purpose of encouraging births among persons of sound American stock was consonant with the customs of that century. By the simple expedient of being closemouthed about the true purpose of the Foundation no unusual methods of concealment were necessary until late in that period during the World Wars sometimes loosely termed 'The Crazy Years--'"

Selected headlines April to June 1969:

BABY BILL BREAKS BANK
2-year toddler youngest winner $1,000,000 TV jackpot
White House phones congrats

COURT ORDERS STATEHOUSE SOLD
Colorado Supreme Bench Rules State Old Age Pension Has
First Lien All State Property

N.Y. YOUTH MEET DEMANDS UPPER LIMIT ON FRANCHISE

"U.S. BIRTH RATE 'TOP SECRET!'"-DEFENSE SEC

CAROLINA CONGRESSMAN COPS BEAUTY CROWN
"Available for draft for President" she announces while
starting tour to show her qualifications

IOWA RAISES VOTING AGE TO FORTY-ONE
Rioting on Des Moines Campus

EARTH-EATING FAD MOVES WEST: CHICAGO PARSON EATS CLAY SANDWICH IN PULPIT
"Back to simple things," he advises flock.

LOS ANGELES HI-SCHOOL MOB DEFIES SCHOOL BOARD
"Higher Pay, Shorter hours, no Homework-We Demand
Our Right to Elect Teachers, Coaches."

SUICIDE RATE UP NINTH SUCCESSIVE YEAR
AEC Denies Fall-Out to Blame

"'-The Crazy Years.' The trustees of that date decided-correctly, we now believe-that any minority during that period of semantic disorientation and mass hysteria was a probable target for persecution, discriminatory legislation, and even of mob violence. Furthermore the disturbed financial condition of the country and in particular the forced exchange of trust securities for government warrants threatened the solvency of the trust.

"Two courses of action were adopted: the assets of the Foundation were converted into real wealth and distributed widely among members of the Families to be held by them as owners-of-record; and the so-called 'Masquerade' was adopted as a permanent policy. Means were found to simulate the death of any member of the Families who lived to a socially embarrassing age and to provide him with a new identity in another part of the country.

"The wisdom of this later policy, though irksome to some, became evident at once during the Interregnum of the Prophets. The Families at the beginning of the reign of the First Prophet had ninety-seven per cent of their members with publicly avowed ages of less than fifty years. The close public registration enforced by the secret police of the Prophets made changes of public identity difficult, although a few were accomplished with the aid of the revolutionary Cabal.

"Thus, a combination of luck and foresight saved our Secret from public disclosure. This was well-we may be sure that things would have gone harshly at that time for any group possessing a prize beyond the power of the Prophet to confiscate.

"The Families took no part as such in the events leading up to the Second American Revolution, but many members participated and served with credit in the Cabal and in the fighting which preceded the fall of New Jerusalem. We took advantage of the period of disorganization which followed to readjust the ages of our kin who had grown

conspicuously old. In this we were aided by certain members of the Families who, as members of the Cabal, held key posts in the Reconstruction.

"It was argued by many at the Families' meeting of 2075, the year of the Covenant, that we should reveal ourselves, since civil liberty was firmly reestablished. The majority did not agree at that time . . . perhaps through long habits of secrecy and caution. But the renascence of culture in the ensuing fifty years, the steady growth of tolerance and good manners, the semantically sound orientation of education, the increased respect for the custom of privacy and for the dignity of the individual-all of these things led us to believe that the time had at last come when it was becoming safe to reveal ourselves and to take our rightful place as an odd but nonetheless respected minority in society.

"There were compelling reasons to do so. Increasing numbers of us were finding the 'Masquerade' socially intolerable in a new and better society. Not only was it upsetting to pull up roots and seek a new background every few years but also it grated to have to live a lie in a society where frank honesty and fair dealing were habitual with most people. Besides that, the Families as a group had learned many things through our researches in the bio-sciences, things which could be of great benefit to our poor short-lived brethren. We needed freedom to help them.

"These and similar reasons were subject to argument. But the resumption of the custom of positive physical identification made the 'Masquerade' almost untenable. Under the new orientation a sane and peaceful citizen welcomes positive identification under appropriate circumstances even though jealous of his right of privacy at all other times-so we dared not object; it would have aroused curiosity, marked us as an eccentric group, set apart, and thereby have defeated the whole purpose of the 'Masquerade.'

"We necessarily submitted to personal identification. By the time of the meeting of 2125, eleven years ago, it had become extremely difficult to counterfeit new identities for the ever-increasing number of us holding public ages incompatible with personal appearance; we decided on the experiment of letting volunteers from this group up to ten per cent of the total membership of the Families reveal themselves for what they were and observe the consequences, while maintaining all other secrets of the Families' organization.

"The results were regrettably different from our expectations."

Justin Foote stopped talking. The silence had gone on for several moments when a solidly built man of medium height spoke up. His hair was slightly grizzled-unusual in that group-and his face looked space tanned. Mary Sperling had noticed him and had wondered who he was-his live face and gusty laugh had interested her. But any member was free to attend the conclaves of the Families' council; she had thought no more of it.

He said, "Speak up, Bud. What's your report?"

Foote made his answer to the chair. "Our senior psychometrician should give the balance of the report. My remarks were prefatory."

"For the love o'--" the grizzled stranger exclaimed. "Bud, do you mean to stand there and admit that all you had to say were things we already knew?"

"My remarks were a foundation . . . and my name is Justin Foote, not Bud.'"

Mary Sperling broke in firmly. "Brother," she said to the stranger, "since you are addressing the Families, will you please name yourself? I am sorry to say that I do not recognize you."

"Sorry, Sister. Lazarus Long, speaking for myself."

Mary shook her head. "I still don't place you."

"Sorry again-that's a 'Masquerade' name I took at the time of the First Prophet . . . it tickled me. My Family name is Smith . . . Woodrow Wilson Smith."

"'Woodrow Wilson Sm--' How old are you?"

"Eh? Why, I haven't figured it lately. One hun . . . no, two hundred and-thirteen years. Yeah, that's right, two hundred and thirteen."

There was a sudden, complete silence. Then Mary said quietly, "Did you hear me inquire for anyone older than myself?"

"Yes. But shucks, Sister, you were doing all right. I ain't attended a meeting of the Families in over a century. Been some changes."

"I'll ask you to carry on from here." She started to leave the platform.

"Oh no!" he protested. But she paid no attention and found a seat. He looked around, shrugged and gave in. Sprawling one hip over a corner of the speaker's table he announced, "All right, let's get on with it. Who's next?"

Ralph Schultz of the Schultz Family looked more like a banker than a psychometrician. He was neither shy nor absent-minded and he had a flat, underemphasized way of talking that carried authority. "I was part of the group that proposed ending the 'Masquerade.' I was wrong. I believed that the great majority of our fellow citizens, reared under modern educational methods, could evaluate any data without excessive emotional disturbance. I anticipated that a few abnormal people would dislike us, even hate us; I even predicted that most people would envy us-everybody who enjoys life would like to live a long time. But I did not anticipate any serious trouble. Modern attitudes have done away with interracial friction; any who still harbor race prejudice are ashamed to voice it. I believed that our society was so tolerant that we could live peacefully and openly with the short-lived.

"I was wrong.

"The Negro hated and envied the white man as long as the white man enjoyed privileges forbidden the Negro by reason of color. This was a sane, normal reaction. When discrimination was removed, the problem solved itself and cultural assimilation took place. There is a similar tendency on the part of the short-lived to envy the long-lived. We assumed that this expected reaction would be of no social importance in most people once it was made clear that we owe our peculiarity to our genes-no fault nor virtue of our own, just good luck in our ancestry.

"This was mere wishful thinking. By hindsight it is easy to see that correct application of mathematical analysis to the data would have given a different answer, would have spotlighted the false analogy. I do not defend the misjudgment, no defense is possible. We were led astray by our hopes.

"What actually happened was this: we showed our shortlived cousins the greatest boon it is possible for a man to imagine . . . then we told them it could never be theirs. This faced them with an unsolvable dilemma. They have rejected the unbearable facts, they refuse to believe us. Their envy now turns to hate, with an emotional conviction that we are depriving them of their rights . . . deliberately, maliciously.

"That rising hate has now swelled into a flood which threatens the welfare and even the lives of all our revealed brethren . . . and which is potentially as dangerous to the rest of us. The danger is very great and very pressing." He sat down abruptly.

They took it calmly, with the unhurried habit of years. Presently a female delegate stood up. "Eve Barstow, for the Cooper Family. Ralph Schultz, I am a hundred and nineteen years old, older, I believe, than you are. I do not have your talent for mathematics or human behavior but I have known a lot of people. Human beings are inherently good and gentle and kind. Oh, they have their weaknesses but most of them are decent enough if you give them half a chance. I cannot believe that they would hate me and destroy me simply because I have lived a long time. What have you to go on? You admit one mistake-why not two?"

Schultz looked at her soberly and smoothed his kilt. "You're right, Eve. I could easily be wrong again. That's the trouble with psychology; it is a subject so terribly complex, so many unknowns, such involved relationships, that our best efforts sometimes look silly in the bleak light of later facts." He stood up again, faced the others, and again spoke with flat authority. "But I am not making a long-range prediction this time; I am talking about facts, no guesses, not wishful thinking-and with those facts a prediction so short-range that it is like predicting that an egg will break when you see it already on its way to the floor. But Eve is right . . . as far as she went. Individuals are kind and decent . . . as individuals and to other individuals. Eve is in no danger from her neighbors and friends, and I am in no danger from mine. But she is in danger from my neighbors and friends -and I from hers. Mass psychology is not simply a summation of individual psychologies; that
is a prime theorem of social psychodynamics -not just my opinion; no exception has ever been found to this theorem. It is the social mass-action rule, the mob-hysteria law, known and used by military, political, and religious leaders, by advertising men and prophets and propagandists, by rabble rousers and actors and gang leaders, for generations before it was formulated in mathematical symbols. It works. It is working now.

"My colleagues and I began to suspect that a mob-hysteria trend was building up against us several years ago. We did not bring our suspicions to the council for action because we could not prove anything. What we observed then could have been simply the mutterings of the crackpot minority present in even the healthiest society. The trend was at first so minor that we could not be sure it existed, for all social trends are intermixed with other social trends, snarled together like a plate of spaghetti-worse than that, for it takes an abstract topological space of many dimensions (ten or twelve are not uncommon and hardly adequate) to describe mathematically the interplay of social forces. I cannot overemphasize the complexity of the problem.

"So we waited and worried and tried statistical sampling, setting up our statistical universes with great care.

"By the time we were sure, it was almost too late. Socio-psychological trends grow or die by a 'yeast growth' law, a complex power law. We continued to hope that other favorable factors would reverse the trend-Nelson's work in symbiotics, our own contributions to geriatrics, the great public interest in the opening of the Jovian satellites to immigration. Any major break-through offering longer life, and greater hope to the short-lived could end the smouldering resentment against us.

"Instead the smouldering has burst into flame, into an uncontrolled forest fire. As nearly as we can measure it, the rate has doubled in the past thirty-seven days and the rate itself is accelerated. I can't guess how far or how fast it will go-and that's why we asked

for this emergency session. Because we can expect trouble at any moment." He sat down hard, looking tired.

Eve did not argue with him again and no one else argued with him at all; not only was Ralph Schultz considered expert in his own field but also every one of them, each from his own viewpoint, had seen the grosser aspects of the trend building up against their revealed kin. But, while the acceptance of the problem was unanimous, there were as many opinions about what to do about it as there were people present. Lazarus let the discussion muddle along for two hours before he held up a hand. "We aren't getting anywhere," he stated, "and it looks like we won't get anywhere tonight. Let's take an over-all look at it, hitting just the high spots:

"We can--" He started ticking plans off on his fingers- "do nothing, sit tight, and see what happens.

"We can junk the 'Masquerade' entirely, reveal our full numbers, and demand our rights politically.

"We can sit tight on the surface and use our organization and money to protect our revealed brethren, maybe haul 'em back into the 'Masquerade.'

"We can reveal ourselves and ask for a place to colonize where we can live by ourselves.

"Or we can do something else. I suggest that you sort yourselves out according to those four major points of view-say in the corners of the room, starting clockwise in that far right hand corner-each group hammer out a plan and get it ready to submit to the Families. And those of you who don't favor any of those four things gather in the middle of the room and start scrappin' over just what it is you do think. Now, if I hear no objection, I am going to declare this lodge recessed until midnight tomorrow night. How about it?"

No one spoke up. Lazarus Long's streamlined version of parliamentary procedure had them somewhat startled; they were used to long, leisurely discussions until it became evident that one point of view had become unanimous. Doing things in a hurry was slightly shocking.

But the man's personality was powerful, his years gave him prestige, and his slightly archaic way of speaking added to his patriarchal authority; nobody argued.

"Okay," Lazarus announced, clapping his hands once. "Church is out until tomorrow night." He stepped down from the platform.

Mary Sperling came up to him. "I would like to know you better," she said, looking him in the eyes.

"Sure, Sis. Why not?"

"Are you staying for discussion?"

"Could you come home with me?"

"Like to. I've no pressing business elsewhere."

"Come then." She led him through the tunnel to the underground pool connecting with Lake Michigan. He widened his eyes at the pseudo-Camden but said nothing until they were submerged.

"Nice little car you've got."

"Yes."

"Has some unusual features."

She smiled. "Yes. Among other things, it blows up-quite thoroughly-if anyone tries to investigate it."

"Good." He added, "You a designing engineer, Mary?"

"Me? Heavens, no! Not this past century, at least, and I no longer try to keep up with such things. But you can order a car modified the way this one is through the Families, if you want one. Talk to-"

"Never mind, I've no need for one. I just like gadgets that do what they were designed to do and do it quietly and efficiently. Some good skull sweat in this one."

"Yes." She was busy then, surfacing, making a radar check, and getting them back ashore without attracting notice.

When they reached her apartment she put tobacco and drink close to him, then went to her retiring room, threw off her street clothes and put on a soft loose robe that made her look even smaller and younger than she had looked before. When she rejoined Lazarus, he stood up, struck a cigarette for her, then paused as he handed it to her and gave a gallant and indelicate whistle.

She smiled briefly, took the cigarette, and sat down in a large chair, pulling her feet under her. "Lazarus, you reassure me."

"Don't you own a mirror, girl?"

"Not that," she said impatiently. "You yourself. You know that I have passed the reasonable life expectancy of our people-I've been expecting to die, been resigned to it, for the past ten years. Yet there you sit . . . years and years o1der than I am. You give me hope."

He sat up straight. "You expecting to die? Good grief, girl-you look good for another century."

She made a tired gesture. "Don't try to jolly me. You know that appearance has nothing to do with it. Lazarus, I don't want to die!"

Lazarus answered soberly, "I wasn't trying to kid you, Sis. You simply don't look like a candidate for corpse."

She shrugged gracefully. "A matter of biotechniques. I'm holding my appearance at the early thirties."

"Or less, I'd say. I guess I'm not up on the latest dodges, Mary. You heard me say that I had not attended a get-together for more than a century. As a matter of fact I've been completely out of touch with the Families the whole time."

"Really? May I ask why?"

"A long story and a dull one. What it amounts to is that I got bored with them. I used to be a delegate to the annual meetings. But they got stuffy and set in their ways-or so it seemed to me. So I wandered off. I spent the Interregnum on Venus, mostly. I came back for a while after the Covenant was signed but I don't suppose I've spent two years on Earth since then. I like to move around."

Her eyes lit up. "Oh, tell me about it! I've never been out in-deep space. Just Luna City, once."

"Sure," he agreed. "Sometime. But I want to hear more about this matter of your appearance. Girl, you sure don't look your age."

"I suppose not. Or, rather, of course I don't. As to how it's done, I can't tell you much. Hormones and symbiotics and gland therapy and some psychotherapy-things like that. What it adds up to is that, for members of the Families, senility is postponed and that

senescence can be arrested at least cosmetically." She brooded for a moment. "Once they thought they were on the track of the secret of immortality, the true Fountain of Youth. But it was a mistake. Senility is simply postponed . . . and shortened. About ninety days from the first clear warning-then death from old age." She shivered. "Of course, most of our cousins don't wait-a couple of weeks to make certain of the diagnosis, then euthanasia."

"The hell you say! Well, I won't go that way. When the Old Boy comes to get me, he'll have to drag me-and I'll be kicking and gouging eyes every step of the way!"

She smiled lopsidedly. "It does me good to hear you talk that way. Lazarus, I wouldn't let my guards down this way with anyone younger than myself. But your example gives me courage."

"We'll outlast the lot of 'em, Mary, never you fear. But about the meeting tonight: I haven't paid any attention to the news and I've only recently come earthside-does this chap Ralph Schultz know what he is talking about?"

"I think he must. His grandfather was a brilliant man and so is his father."

"I take it you know Ralph."

"Slightly. He is one of my grandchildren."

"That's amusing. He looks older than you do."

"Ralph found it suited him to arrest his appearance at about forty, that's all. His father was my twenty-seventh child. Ralph must be-let me see-oh, eighty or ninety years younger than I am, at least. At that, he is older than some of my children."

"You've done well by the Families, Mary."

"I suppose so. But they've done well by me, too. I've enjoyed having children and the trust benefits for my thirty-odd come to quite a lot. I have every luxury one could want." She shivered again. "I suppose that's why I'm in such a funk-I enjoy life."

"Stop it! I thought my sterling example and boyish grin had cured you of that nonsense."

"Well you've helped."

"Mmm . . . look, Mary, why don't you marry again and have some more squally brats? Keep you too busy to fret."

"What? At my age? Now, really, Lazarus!"

"Nothing wrong with your age. You're younger than I am." She studied him for a moment. "Lazarus, are you proposing a contract? If so, I wish you would speak more plainly."

His mouth opened and he gulped. "Hey, wait a minute! Take it easy! I was speaking in general terms . . . I'm not the domestic type. Why, every time I've married my wife has grown sick of the sight of me inside of a few years. Not but what I-well, I mean you're a very pretty girl and a man ought to-"

She shut him off by leaning forward and putting a hand over his mouth, while grinning impishly. "I didn't mean to panic you, cousin. Or perhaps I did-men are so funny when they think they are about to be trapped."

"Well-" he said glumly.

"Forget it, dear. Tell me, what plan do you think they will settle on?"

"That bunch tonight?'

"Yes."

"None, of course. They won't get anywhere. Mary, a committee is the only known form of life with a hundred bellies and no brain. But presently somebody with a mind of his own will bulldoze them into accepting his plan. I don't know what it will be."

"Well . . . what course of action do you favor?"

"Me? Why, none. Mary, if there is any one thing I have learned in the past couple of centuries, it's this: These things pass. Wars and depressions and Prophets and Covenants- they pass. The trick is to stay alive through them."

She nodded thoughtfully. "I think you are right."

"Sure I'm right. It takes a hundred years or so to realize just how good life is." He stood up and stretched. "But right now this growing boy could use some sleep."

"Me, too."

Mary's flat was on the top floor, with a sky view. When she had come back to the lounge she had cut the inside lighting and let the ceiling shutters fold back; they had been sitting, save for an invisible sheet of plastic, under the stars. As Lazarus raised his head in stretching, his eye had rested on his favorite constellation. "Odd," he commented. "Orion seems to have added a fourth star to his belt."

She looked up. "That must be the big ship for the Second Centauri Expedition. See if you can see it move."

"Couldn't tell without instruments."

"I suppose not," she agreed. "Clever of them to build it out in space, isn't it?"

"No other way to do it. It's too big to assemble on Earth. I can doss down right here, Mary. Or do you have a spare room?"

"Your room is the second door on the right. Shout if you can't find everything you need." She put her face up and kissed him goodnight, a quick peck. "'Night."

Lazarus followed her and went into his own room.

Mary Sperling woke at her usual hour the next day. She got up quietly to keep from waking Lazarus, ducked into her 'fresher, showered and massaged, swallowed a grain of sleep surrogate to make up for the short night, followed it almost as quickly with all the breakfast she permitted her waistline, then punched for the calls she had not bothered to take the night before. The phone played back several calls which she promptly forgot, then she recognized the voice of Bork Vanning. "'Hello,'" the instrument said. "'Mary, this is Bork, calling at twenty-one o'clock. I'll be by at ten o'clock tomorrow morning, for a dip in the lake and lunch somewhere. Unless I hear from you it's a date. 'Bye, my dear. Service.'"

"Service," she repeated automatically. Drat the man! Couldn't he take no for an answer? Mary Sperling, you're slipping!-a quarter your age and yet you can't seem to handle him. Call him and leave word that-no, too late; he'd be here any minute. Bother!

Chapter 2

WHEN LAZARUS went to bed he stepped out of his kilt and chucked it toward a wardrobe which snagged it, shook it out, and hung it up neatly. "Nice catch," he commented, then glanced down at his hairy thighs and smiled wryly; the kilt had

concealed a blaster strapped to one thigh, a knife to the other. He was aware of the present gentle custom against personal weapons, but he felt naked without them. Such customs were nonsense anyhow, foolishment from old women-there was no such thing as a "dangerous weapon," there were only dangerous men.

When he came out of the 'fresher, he put his weapons where he could reach them before sprawling in sleep.

He came instantly wide awake with a weapon in each hand . . . then remembered where he was, relaxed, and looked around to see what had wakened him.

It was a murmur of voices through the air duct. Poor soundproofing he decided, and Mary must be entertaining callers-in which case he should not be slug-a-bed. He got up, refreshed himself, strapped his best friends back on his thighs, and went looking for his hostess.

As the door to the lounge dilated noiselessly in front of him the sound of voices became loud and very interesting. The lounge was el-shaped and he was out of sight; he hung back and listened shamelessly. Eavesdropping had saved his skin on several occasions; it worried him not at all-he enjoyed it. A man was saying, "Mary, you're completely unreasonable! You know you're fond of me, you admit that marriage to me would be to your advantage. So why won't you?"

"I told you, Bork. Age difference."

"That's foolish. What do you expect? Adolescent romance? Oh, I admit that I'm not as young as you are . . . but a woman needs an older man to look up to and keep her steady. I'm not too old for you; I'm just at my prime."

Lazarus decided that he already knew this chap well enough to dislike him. Sulky voice.

Mary did not answer. The man went on: "Anyhow, I have a surprise for you on that point. I wish I could tell you now, but . . . well, it's a state secret."

"Then don't tell me. It can't change my mind in any case, Bork."

"Oh, but it would! Mmm . . . I will tell you-I know you can be trusted."

"Now, Bork, you shouldn't assume that-"

"It doesn't matter; it will be public knowledge in a few days anyhow. Mary . . . I'll never grow old on you!"

"What do you mean?" Lazarus decided that her tone was suddenly suspicious.

"Just what I said. Mary, they've found the secret of eternal youth!"

"What? Who? How? When?"

"Oh, so now you're interested, eh? Well, I won't keep you waiting. You know these old Johnnies that call themselves the Howard Families?'

"Yes . . . I've heard of them, of course," she admitted slowly. "But what of it? They're fakes."

"Not at all. I know. The Administration has been quietly investigating their claims. Some of them are unquestionably more than a hundred years old-and still young!"

"That's very hard to believe."

"Nevertheless it's true."

"Well . . . how do they do it?"

"Ah! That's the point. They claim that it is a simple matter of heredity, that they live a long time because they come from long lived stock. But that's preposterous,

scientifically incompatible with the established facts. The Administration checked most carefully and the answer is certain: they have the secret of staying young."

"You can't be sure of that."

"Oh, come, Mary! You're a dear girl but you're questioning the expert opinion of the best scientific brains in the world. Never mind. Here's the part that is confidential. We don't have their secret yet-but we will have it shortly. Without any excitement or public notice, they are to be picked up and questioned. We'll get the secret-and you and I will never grow old! What do you think of that? Eh?"

Mary answered very slowly, almost inaudibly, "It would be nice if everyone could live a long time."

"Huh? Yes, I suppose it would. But in any case you and I will receive the treatment, whatever it is. Think about us, dear. Year after year after year of happy, youthful marriage. Not less than a century. Maybe even--"

"Wait a moment, Bork. This 'secret' It wouldn't be for everybody?"

"Well, now . . . that's a matter of high policy. Population pressure is a pretty unwieldy problem even now. In practice it might be necessary to restrict it to essential personnel-and their wives. But don't fret your lovely head about it; you and I will have it."

"You mean I'll have it if I marry you."

"Mmm . . . that's a nasty way to put it, Mary. I'd do anything in the world for you that I could-because I love you. But it would be utterly simple if you were married to me. So say you will."

"Let's let that be for the moment. How do you propose to get this 'secret' out of them?"

Lazarus could almost hear his wise nod. "Oh, they'll talk!"

"Do you mean to say you'd send them to Coventry if they didn't?"

"Coventry? Hm! You don't understand the situation at all, Mary; this isn't any minor social offense. This is treason- treason against the whole human race. We'll use means! Ways that the Prophets used . . . if they don't cooperate willingly."

"Do you mean that? Why, that's against the Covenant!"

"Covenant be damned! This is a matter of life and death- do you think we'd let a scrap of paper stand in our way? You can't bother with petty legalities in the fundamental things: men live by-not something they will fight to the death for. And that is precisely what this is. These . . . these dog-in-the-manger scoundrels are trying to keep life itself from us. Do you think we'll bow to 'custom' in an emergency like this?"

Mary answered in a hushed and horrified voice: "Do you really think the Council will violate the Covenant?"

"Think so? The Action-in-Council was recorded last night. We authorized the Administrator to use 'full expediency.'"

Lazarus strained his ears through a long silence. At last Mary spoke. "Bork-"

"Yes, my dear?"

"You've got to do something about this. You must stop it." "Stop it? You don't know what you're saying. I couldn't and I would not if I could."

"But you must. You must convince the Council. They're making a mistake, a tragic mistake. There is nothing to be gained by trying to coerce those poor people. There is no secret!"

"What? You're getting excited, my dear. You're setting your judgment up against some of the best and wisest men on the planet. Believe me, we know what we are doing. We don't relish using harsh methods any more than you do, but it's for the general welfare. Look, I'm sorry I ever brought it up. Naturally you are soft and gentle and warmhearted and I love you for it. Why not marry me and not bother your head about matters of public policy?"

"Marry you? Never!"

"Aw, Mary-you're upset. Give me just one good reason why not?"

"I'll tell you why! Because I am one of those people you want to persecute!"

There was another pause. "Mary . . . you're not well."

"Not well, am I? I am as well as a person can be at my age. Listen to me, you fool! I have grandsons twice your age. I was here when the First Prophet took over the country. I was here when Harriman launched the first Moon rocket. You weren't even a squalling brat-your grandparents hadn't even met, when I was a woman grown and married. And you stand there and glibly propose to push around, even to torture, me and my kind. Marry you? I'd rather marry one of my own grandchildren!"

Lazarus shifted his weight and slid his right hand inside the flap of his kilt; he expected trouble at once. You can depend on a woman, he reflected, to blow her top at the wrong moment.

He waited. Bork's answer was cool; the tones of the experienced man of authority replaced those of thwarted passion. "Take it easy, Mary. Sit down, I'll look after you. First I want you to take a sedative. Then I'll get the best psychotherapist in the city-in the whole country. You'll be all right."

"Take your hands off me!"

"Now, Mary . . .

Lazarus stepped out into the room and pointed at Vanning with his blaster. "This monkey giving you trouble, Sis?"

Vanning jerked his head around. "Who are you?" he demanded indignantly. "What are you doing here?"

Lazarus still addressed Mary. "Say the word, Sis, and I'll cut him into pieces small enough to hide."

"No, Lazarus," she answered with her voice now under control. "Thanks just the same. Please put your gun away. I wouldn't want anything like that to happen."

"Okay." Lazarus holstered the gun but let his hand rest on the grip.

"Who are you?" repeated Vanning. "What's the meaning of this intrusion?"

"I was just about to ask you that, Bud," Lazarus said mildly, "but we'll let it ride. I'm another one of those old Johnnies you're looking for . . . like Mary here."

Vanning looked at him keenly. "I wonder-" he said. He looked back at Mary. "It can't be, it's preposterous. Still it won't hurt to investigate your story. I've plenty to detain you on, in any event, I've never seen a clearer case of antisocial atavism." He moved toward the videophone.

"Better get away from that phone, Bud," Lazarus said quickly, then added to Mary, "I won't touch my gun, Sis. I'll use my knife."

Vanning stopped. "Very well," he said in annoyed tones, "put away that vibroblade. I won't call from here."

"Look again, it ain't a vibroblade. It's steel. Messy."

Vanning turned to Mary Sperling. "I'm leaving. If you are wise, you'll come with me." She shook her head. He looked annoyed, shrugged, and faced Lazarus Long. "As for you, sir, your primitive manners have led you into serious trouble. You will be arrested shortly."

Lazarus glanced up at the ceiling shutters. "Reminds me of a patron in Venusburg who wanted to have me arrested."

"Well?"

"I've outlived him quite a piece."

Vanning opened his mouth to answer-then turned suddenly and left so quickly that the outer door barely had time to clear the end of his nose. As the door snapped closed Lazarus said musingly, "Hardest man to reason with I've met in years. I'll bet he never used an unsterilized spoon in his life."

Mary looked startled, then giggled. He turned toward her. "Glad to see you sounding perky, Mary. Kinda thought you were upset."

"I was. I hadn't known you were listening. I was forced to improvise as I went along."

"Did I queer it?"

"No. I'm glad you came in-thanks. But we'll have to hurry now."

"I suppose so. I think he meant it-there'll be a proctor looking for me soon. You, too, maybe."

"That's what I meant. So let's get out of here."

Mary was ready to leave in scant minutes but when they stepped out into the public hall they met a man whose brassard and hypo kit marked him as a proctor. "Service," he said. "I'm looking for a citizen in company with Citizen Mary Sperling. Could you direct me?"

"Sure," agreed Lazarus. "She lives right down there." He pointed at the far end of the corridor. As the peace officer looked in that direction, Lazarus tapped him carefully on the back of the head, a little to the left, with the butt of his blaster, and caught him as be slumped.

Mary helped Lazarus wrestle the awkward mass into her apartment. He knelt over the cop, pawed through his hypo kit, took a loaded injector and gave him a shot. "There," he said, "that'll keep him sleepy for a few hours." Then he blinked thoughtfully at the hypo kit, detached it from the proctor's belt. "This might come in handy again. Anyhow, it won't hurt to take it." As an afterthought he removed the proctor's peace brassard and placed it, too, in his pouch.

They left the apartment again and dropped to the parking level. Lazarus noticed as they rolled up the ramp that Mary had set the North Shore combination. "Where are we going?" he asked.

"The Families' Seat. No place else to go where we won't be checked on. But we'll have to hide somewhere in the country until dark."

Once the car was on beamed control headed north Mary asked to be excused and caught a few minutes sleep. Lazarus watched a few miles of scenery, then nodded himself.

They were awakened by the jangle of the emergency alarm and by the speedster slowing to a stop. Mary reached up and shut off the alarm. "All cars resume local

control," intoned a voice. "Proceed at speed twenty to the nearest traffic control tower for inspection. All cars resume local control. Proceed at-"

She switched that off, too. "Well, that's us," Lazarus said cheerfully. "Got any ideas?"

Mary did not answer. She peered out and studied their surroundings. The steel fence separating the high-speed controlway they were on from the uncontrolled local-traffic strip lay about fifty yards to their right but no changeover ramp broke the fence for at least a mile ahead-where it did, there would be, of course, the control tower where they were ordered to undergo inspection. She started the car again, operating it manually, and wove through stopped or slowly moving traffic while speeding up. As they got close to the barrier Lazarus felt himself shoved into the cushions; the car surged and lifted, clearing the barrier by inches. She set it down rolling on the far side.

A car was approaching from the north and they were slashing across his lane. The other car was moving no more than ninety but its driver was taken by surprise-he had no reason to expect another car to appear out of nowhere against him on a clear road: Mary was forced to duck left, then right, and left again; the car slewed and reared up on its hind wheel, writhing against the steel grip of its gyros. Mary fought it back into control to the accompaniment of a teeth-shivering grind of herculene against glass as the rear wheel fought for traction.

Lazarus let his jaw muscles relax and breathed out gustily. "Whew!" he sighed. "I hope we won't have to do that again."

Mary glanced at him, grinning. "Women drivers make you nervous?"

"Oh, no, no, not at all! I just wish you would warn me when something like that is about to happen."

"I didn't know myse1f," she admitted, then went on worriedly, "I don't know quite what to do now. I thought we could lie quiet out of town until dark . . . but I had to show my hand a Little when I took that fence. By now somebody will be reporting it to the tower. Mmm.

"Why wait until dark?" he asked. "Why not just bounce over to the lake in this Dick Dare contraption of yours and let it swim us home?"

"I don't like to," she fretted. "I've attracted too much attention already. A trimobile faked up to look like a groundster is handy, but . . . well, if anyone sees us taking it under water and the proctors hear of it, somebody is going to guess the answer. Then they'll start fishing-everything from seismo to sonar and Heaven knows what else."

"But isn't the Seat shielded?"

"Of course. But anything that big they can find-if they know what they're looking for and keep looking."

"You're right, of course," Lazarus admitted slowly. "Well, we certainly don't want to lead any nosy proctors to the Families' Seat. Mary, I think we had better ditch your car and get lost." He frowned. "Anywhere but the Seat."

"No, it has to be the Seat," she answered sharply.

"Why? If you chase a fox, he-"

"Quiet a moment! I want to try something." Lazarus shut up; Mary drove with one hand while she fumbled in the glove compartment.

"Answer," a voice said.

"Life is short-" Mary replied.

They completed the formula. "Listen," Mary went on hurriedly, "I'm in trouble-get a fix on me."

"Okay."

"Is there a sub in the pool?"

"Yes."

"Good! Lock on me and home them in." She explained hurriedly the details of what she wanted, stopping once to ask Lazarus if he could swim. "That's all," she said at last, "but move! We're short on minutes."

"Hold it, Mary!" the voice protested. "You know I can't send a sub out in the daytime, certainly not on a calm day. It's too easy to-"

"Will you, or won't you!"

A third voice cut in. "I was listening, Mary-Ira Barstow. We'll pick you up."

"But-" objected the first voice.

"Stow it, Tommy. Just mind your burners and home me in. See you, Mary."

"Right, Ira!"

While she had been talking to the Seat, Mary had turned off from the local-traffic strip into the unpaved road she had followed the night before, without slowing and apparently without looking. Lazarus gritted his teeth and hung on. They passed a weathered sign reading CONTAMINATED AREA-PROCEED AT YOUR OWN RISK and graced with the conventional purple trefoil. Lazarus blinked at it and shrugged-he could not see how, at the moment, his hazard could be increased by a neutron or so.

Mary slammed the car to a stop in a clump of stunted trees near the abandoned road. The lake lay at their feet, just beyond a low bluff. She unfastened her safety belt, struck a cigarette, and relaxed. "Now we wait. It'll take at least half an hour for them to reach us no matter how hard Ira herds it. Lazarus, do you think we were seen turning off into here?"

"To tell the truth, Mary, I was too busy to look."

"Well nobody ever comes here, except a few reckless boys."

("-and girls," Lazarus added to himself.) Then he went on aloud, "I noted a 'hot' sign back there. How high is the count?"

"That? -Oh, pooh. Nothing to worry about unless you decided to build a house here. We're the ones who are hot. If we didn't have to stay close to the communicator, we-"

The communicator spoke. "Okay, Mary. Right in front of you."

She looked startled. "Ira?"

"This is Ira speaking but I'm still at the Seat. Pete Hardy was available in the Evanston pen, so we homed him in on you. Quicker."

"Okay-thanks!" She was turning to speak to Lazarus when he touched her arm.

"Look behind us."

A helicopter was touching down less than a hundred yards from them. Three men burst out of it. They were dressed as proctors.

Mary jerked open the door of the car and threw off her gown in one unbroken motion. She turned and called, "Come on!" as she thrust a hand back inside and tore a stud loose from the instrument panel. She ran.

Lazarus unzipped the belt of his kilt and ran out of it as he followed her to the bluff. She went dancing down it; he came after with slightly more caution, swearing at sharp stones. The blast shook them as the car exploded, but the bluff saved them.

They hit the water together.

The lock in the little submarine was barely big enough for one at a time; Lazarus shoved Mary into it first and tried to slap her when she resisted, and discovered that slapping will not work under water. Then he spent an endless time, or so it seemed, wondering whether or not he could breathe water. "What's a fish got that I ain't got?" he was telling himself, when the outer latch moved under his hand and he was able to wiggle in.

Eleven dragging seconds to blow the lock clear of water and he had a chance to see what damage, if any, the water had done to his blaster.

Mary was speaking urgently to the skipper. "Listen, Pete- there are three proctors back up there with a whiny. My car blew up in their faces just as we hit the water. But if they aren't all dead or injured, there will be a smart boy who will figure out that there was only one place for us to go-under water. We've got to be away from here before they take to the air to look for us."

"It's a losing race," Pete Hardy complained, slapping his controls as he spoke. "Even if it's only a visual search, I'll have to get outside and stay outside the circle of total reflection faster than he can gain altitude-and I can't." But the little sub lunged forward reassuringly.

Mary worried about whether or not to call the Seat from the sub. She decided not to; it would just increase the hazard both to the sub and to the Seat itself. So she calmed herself and waited, huddled small in a passenger seat too cramped for two. Peter Hardy swung wide into deep water, hugging the bottom, picking up the Muskegon-Gary bottom beacons and conned himself in blind.

By the time they surfaced in the pool inside the Seat she had decided against any physical means of communication, even the carefully shielded equipment at the Seat. Instead she hoped to find a telepathic sensitive ready and available among the Families' dependents cared for there. Sensitives were scarce among healthy members of the Howard Families as they were in the rest of the population, but the very inbreeding which had conserved and reinforced their abnormal longevity had also conserved and reinforced bad genes as well as good; they had an unusually high percentage of physical and mental defectives. Their board of genetic control plugged away at the problem of getting rid of bad strains while conserving the longevity strain, but for many generations they would continue to pay for their long lives with an excess of defectives.

But almost five per cent of these defectives were telepathically sensitive.

Mary went straight to the sanctuary in the Seat where some of these dependents were cared for, with Lazarus Long at her heels. She braced the matron. "Where's Little Stephen? I need him."

"Keep your voice down," the matron scolded. "Rest hour-you can't."

"Janice, I've got to see him," Mary insisted. "This won't wait. I've got to get a message out to all the Families-at once."

The matron planted her hands on her hips. "Take it to the communication office. You can't come here disturbing my children at all hours. I won't have it."

"Janice, please! I don't dare use anything but telepathy. You know I wouldn't do this unnecessarily. Now take me to Stephen."

"It wouldn't do you any good if I did. Little Stephen has had one of his bad spells today."

"Then take me to the strongest sensitive who can possibly work. Quickly, Janice! The safety of every member may depend on it."

"Did the trustees send you?"

"No, no! There wasn't time!"

The matron still looked doubtful. While Lazarus was trying to recall how long it had been since he had socked a lady, she gave in. "All right-you can see Billy, though I shouldn't let you. Mind you, don't tire him out." Still bristling, she led them along a corridor past a series of cheerful rooms and into one of them. Lazarus looked at the thing on the bed and looked away.

The matron went to a cupboard and returned with a hypodermic injector. "Does he work under a hypnotic?" Lazarus asked.

"No," the matron answered coldly, "he has to have a stimulant to be aware of us at all." She swabbed skin on the arm of the gross figure and made the injection. "Go ahead," she said to Mary and lapsed into grim-mouthed silence.

The figure on the bed stirred, its eyes rolled loosely, then seemed to track. It grinned. "Aunt Mary!" it said. "Oooh! Did you bring Billy Boy something?'

"No," she said gently. "Not this time, hon. Aunt Mary was in too much of a hurry. Next time? A surprise? Will that do?'

"All right," it said docilely.

"That's a good boy." She reached out and tousled its hair; Lazarus looked away again. "Now will Billy Boy do something for Aunt Mary? A big, big favor?"

"Sure."

"Can you hear your friends?"

"Oh, sure."

"All of them?"

"Uh huh. Mostly they don't say anything," it added.

"Call to them."

There was a very short silence. "They heard me."

"Fine! Now listen carefully, Billy Boy: All the Families- urgent warning! Elder Mary Sperling speaking. Under an Action-in-Council the Administrator is about to arrest every revealed member. The Council directed him to use 'full expedience'-and it is my sober judgment that they are determined to use any means at all, regardless of the Covenant, to try to squeeze out of us the so-called secret of our long lives. They even intend to use the tortures developed by the inquisitors of the Prophets!" Her voice broke. She stopped and pulled herself together. "Now get busy! Find them, warn them, hide them! You may have only minutes left to save them!"

Lazarus touched her arm and whispered; she nodded and went on:

"If any cousin is arrested, rescue him by any means at all! Don't try to appeal to the Covenant, don't waste time arguing about justice rescue him! Now move!"

She stopped and then spoke in a tired, gentle voice, "Did they hear us, Billy Boy?"

"Sure."

"Are they telling their folks?"

"Uh huh. All but Jimmie-the-Horse. He's mad at me," it added confidentially.

"'Jimmie-the-Horse'? Where is he?"

"Oh, where he lives."

"In Montreal," put in the matron. "There are two other sensitives there-your message got through. Are you finished?"

"Yes . . ." Mary said doubtfully. "But perhaps we had better have some other Seat relay it back."

"No!" "But, Janice-"

"I won't permit it. I suppose you had to send it but I want to give Billy the antidote now. So get out."

Lazarus took her arm. "Come on, kid. It either got through or it didn't; you've done your best. A good job, girl."

Mary went on to make a full report to the Resident Secretary; Lazarus left her on business of his own. He retraced his steps, looking for a man who was not too busy to help him; the guards at the pool entrance were the first he found. "Service-" be began.

"Service to you," one of them answered. "Looking for someone?" He glanced curiously at Long's almost complete nakedness, glanced away again-how anybody dressed, or did not dress, was a private matter.

"Sort of," admitted Lazarus. "Say, Bud, do you know of anyone around here who would lend me a kilt?"

"You're looking at one," the guard answered pleasantly. "Take over, Dick-back in a minute." He led Lazarus to bachelors' quarters, outfitted him, helped him to dry his pouch and contents, and made no comment about the arsenal strapped to his hairy thighs. How elders behaved was no business of his and many of them were even touchier about their privacy than most people. He had seen Aunt Mary Sperling arrive stripped for swimming but had not been surprised as he had heard Ira Barstow briefing Pete for the underwater pickup; that the elder with her chose to take a dip in the lake weighed down by the hardware did surprise him but not enough to make him forget his manners.

"Anything else you need?' he asked. "Do those shoes fit?

"Well enough. Thanks a lot, Bud." Lazarus smoothed the borrowed kilt. It was a little too long for him but it comforted him. A loin strap was okay, he supposed-if you were on Venus. But he had never cared much for Venus customs. Damn it, a man liked to be dressed. "I feel better," he admitted. "Thanks again. By the way, what's your name?"

"Edmund Hardy, of the Foote Family."

"That so? What's your line?"

"Charles Hardy and Evelyn Foote. Edward Hardy-Alice Johnson and Terence Briggs-Eleanor Weatheral. Oliver-"

"That's enough. I sorta thought so. You're one of my great-great-grandsons."

"Why, that's interesting," commented Hardy agreeably. "Gives us a sixteenth of kinship, doesn't it-not counting convergence. May I ask your name?

"Lazarus Long."

Hardy shook his head. "Some mistake. Not in my line."

"Try Woodrow Wilson Smith instead. It was the one I started with."

"Oh, that one! Yes, surely. But I thought you were . . . uh--"

"Dead? Well, I ain't."

"Oh, I didn't mean that at all," Hardy protested, blushing at the blunt Anglo-Saxon monosyllable. He hastily added, "I'm glad to have run across you, Gran'ther. I've always wanted to hear the straight of the story about the Families' Meeting in 2012."

"That was before you were born, Ed," Lazarus said gruffly, "and don't call me 'Gran'ther.'"

"Sorry, sir-I mean 'Sorry, Lazarus.' Is there any other service I can do for you?"

"I shouldn't have gotten shirty. No-yes, there is, too. Where can I swipe a bite of breakfast? I was sort of rushed this morning."

"Certainly." Hardy took him to the bachelors' pantry, operated the autochef for him, drew coffee for his watch mate and himself, and left. Lazarus consumed his "bite of breakfast"-about three thousand calories of sizzling sausages, eggs, jam, hot breads, coffee with cream, and ancillary items, for he worked on the assumption of always topping off his reserve tanks because you never knew how far you might have to lift before you had another chance to refuel. In due time he sat back, belched, gathered up his dishes and shoved them in the incinerator, then went looking for a newsbox.

He found one in the bachelors' library, off their lounge. The room was empty save for one man who seemed to be about the same age as that suggested by Lazarus' appearance. There the resemblance stopped; the stranger was slender, mild in feature, and was topped off by finespun carroty hair quite unlike the grizzled wiry bush topping Lazarus. The stranger was bending over the news receiver with his eyes pressed to the microviewer.

Lazarus cleared his throat loudly and said, "Howdy."

The man jerked his head up and exclaimed, "Oh! Sorry-I was startled. Do y' a service?"

"I was looking for the newsbox. Mind if we throw it on the screen?"

"Not at all." The smaller man stood up, pressed the rewind button, and set the controls for projection. "Any particular subject?"

"I wanted to see," said Lazarus, "if there was any news about us-the Families."

"I've been watching for that myself. Perhaps we had better use the sound track and let it hunt."

"Okay," agreed Lazarus, stepping up and changing the setting to audio. "What's the code word?'

"'Methuselah.'"

Lazarus punched in the setting; the machine chattered and whined as it scanned and rejected the track speeding through it, then it slowed with a triumphant click. "The DAILY DATA," it announced. "The only midwest news service subscribing to every major grid. Leased videochannel to Luna City. Tri-S correspondents throughout the System. First, Fast, and Most! Lincoln, Nebraska-Savant Denounces Oldsters! Dr. Witweli Oscarsen, President Emeritus of Bryan Lyceum, calls for official reconsideration of the status of the kin group styling themselves the 'Howard Families.' 'It is proved,' he says. 'that these people have solved the age-old problem of extending, perhaps indefinitely, the span of human life. For that they are to be commended; it is a worthy and potentially fruitful research. But their claim that their solution is no more than hereditary predisposition defies both science and common sense. Our modern knowledge of the established laws of generics enables us to deduce with

certainty that they are withholding from the public some secret technique or techniques whereby they accomplish their results.

"'It is contrary to our customs to permit scientific knowledge to be held as a monopoly for the few. When concealing such knowledge strikes at life itself, the action becomes treason to the race. As a citizen, I call on the Administration to act forcefully in this matter and I remind them that the situation is not one which could possibly have been foreseen by the wise men who drew up the Covenant and codified our basic customs. Any custom is man-made and is therefore a finite attempt to describe an infinity of relationships. It follows as the night from day that any custom necessarily has its exceptions. To be bound by them in the face of new--'"

Lazarus pressed the hold button. "Had enough of that guy?

"Yes, I had already heard it." The stranger sighed. "I have rarely heard such complete lack of semantic rigor. It surprises me-Dr. Oscarsen has done sound work in the past."

"Reached his dotage," Lazarus stated, as he told the machine to try again. "Wants what he wants when he wants it- and thinks that constitutes a natural law."

The machine hummed and clicked and again spoke up. "The DAILY DATA, the only midwest news-"

"Can't we scramble that commercial?" suggested Lazarus. His companion peered at the control panel. "Doesn't seem to be equipped for it."

"Ensenada, Baja California. Jeffers and Lucy Weatheral today asked for special proctor protection, alleging that a group of citizens had broken into their home, submitted them to personal indignity and committed other asocial acts. The Weatherals are, by their own admission, members of the notorious Howard Families and claim that the alleged incident could be traced to that supposed fact. The district provost points out that they have offered no proof and has taken the matter under advisement. A town mass meeting has been announced for tonight which will air-"

The other man turned toward Lazarus. "Cousin, did we hear what I thought we heard? That is the first case of asocial group violence in more than twenty years . . . yet they reported it like a breakdown in a weather integrator."

"Not quite," Lazarus answered grimly. "The connotations of the words used in describing us were loaded."

"Yes, true, but loaded cleverly. I doubt if there was a word in that dispatch with an emotional index, taken alone, higher than one point five. The newscasters are allowed two zero, you know."

"You a psychometrician?"

"Uh, no. I should have introduced myself. I'm Andrew Jackson Libby."

"Lazarus Long."

"I know. I was at the meeting last night."

"'Libby . . . Libby," Lazarus mused. "Don't seem to place it in the Families. Seems familiar, though."

"My case is a little like yours-"

"Changed it during the Interregnum, eh?"

"Yes and no. I was born after the Second Revolution. But my people had been converted to the New Crusade and had broken with the Families and changed their name. I was a grown man before I knew I was a Member."

"The deuce you say! That's interesting-how did you come to be located . . . if you don't mind my asking?"

"Well, you see I was in the Navy and one of my superior officers-"

"Got it! Got it! I thought you were a spaceman. You're Slipstick Libby, the Calculator."

Libby grinned sheepishly. "I have been called that."

"Sure, sure. The last can I piloted was equipped with your paragravitic rectifier. And the control bank used your fractional differential on the steering jets. But I installed that myself-kinda borrowed your patent."

Libby seemed undisturbed by the theft. His face lit up. "You are interested in symbolic logic?"

"Only pragmatically. But look, I put a modification on your gadget that derives from the rejected alternatives in your thirteenth equation. It helps like this: suppose you are cruising in a field of density 'x' with an n-order gradient normal to your course and you want to set your optimum course for a projected point of rendezvous capital 'A' at matching-in vector 'rho' using automatic selection the entire jump, then if-"

They drifted entirely away from Basic English as used by earthbound laymen. The newsbox beside them continued to hunt; three times it spoke up, each time Libby touched the rejection button without consciously hearing it.

"I see your point," he said at last. "I had considered a somewhat similar modification but concluded that it was not commercially feasible, too expensive for anyone but enthusiasts such as yourself. But your solution is cheaper than mine."

"How do you figure that?"

"Why, it's obvious from the data. Your device contains sixty-two moving parts, which should require, if we assume standardized fabrication processes, a probable-" Libby hesitated momentarily as if he were programming the problem. "-a probable optimax of five thousand two hundred and eleven operation in manufacture assuming null-therblig automation, whereas mine-"

Lazarus butted in. "Andy," he inquired solicitously, "does your head ever ache?"

Libby looked sheepish again. "There's nothing abnormal about my talent," he protested. "It is theoretically possible to develop it in any normal person."

"Sure," agreed Lazarus, "and you can teach a snake to tap dance once you get shoes on him. Never mind, I'm glad to have fallen in with you. I heard stories about you way back when you were a kid. You were in the Cosmic Construction Corps, weren't you?"

Libby nodded. "Earth-Mars Spot Three."

"Yeah, that was it-chap on Mars gimme the yarn. Trader at Drywater. I knew your maternal grandfather, too. Stiffnecked old coot."

"I suppose he was."

"He was, all right. I had quite a set-to with him at the Meeting in 2012. He had a powerful vocabulary." Lazarus frowned slightly. "Funny thing, Andy . . . I recall that vividly, I've always had a good memory-yet it seems to be getting harder for me to keep things straight. Especially this last century."

"Inescapable mathematical necessity," said Libby.

"Huh? Why?"

"Life experience is linearly additive, but the correlation of memory impressions is an unlimited expansion. If mankind lived as long as a thousand years, it would be necessary to invent some totally different method of memory association in order to be eclectively time-binding. A man would otherwise flounder helplessly in the wealth of his own knowledge, unable to evaluate. Insanity, or feeble-mindedness."

"That so?" Lazarus suddenly looked worried. "Then we'd better get busy on it."

"Oh, it's quite possible of solution." "Let's work on it. Let's not get caught short."

The newsbox again demanded attention, this time with the buzzer and flashing light of a spot bulletin: "Hearken to the DATA, flash! Nigh Council Suspends Covenant! Under the Emergency Situation clause of the Covenant an unprecedented Action-in-Council was announced today directing the Administrator to detain and question all members of the so-called Howard Families-by any means expedient! The Administrator authorized that the following statement be released by all licensed news outlets: (I quote) 'The suspension of the Covenant's civil guarantees applies only to the group known as the Howard Families except that government agents are empowered to act as circumstances require to apprehend speedily the persons affected by the Action-in-Council. Citizens are urged to tolerate cheerfully any minor inconvenience this may cause them; your right of privacy will be respected in every way possible; your right of free movement may be interrupted temporarily, but full economic
restitution will be made."

"Now, Friends and Citizens, what does this mean?-to you and you and also you! The DAILY DATA brings you now your popular commentator, Albert Reifsnider:

"Reifsnider reporting: Service, Citizens! There is no cause for alarm. To the average free citizen this emergency will be somewhat less troublesome than a low-pressure minimum too big for the weather machines. Take it easy! Relax! Help the proctors when requested and tend to your private affairs. If inconvenienced, don't stand on custom-cooperate with Service!

"That's what it means today. What does it mean tomorrow and the day after that? Next year? It means that your public servants have taken a forthright step to obtain for you the boon of a longer and happier life! Don't get your hopes too high . . . but it looks like the dawn of a new day. Ah, indeed it does! The jealously guarded secret of a selfish few will soon--"

Long raised an eyebrow at Libby, then switched it off.

"I suppose that," Libby said bitterly, "is an example of 'factual detachment in news reporting.'"

Lazarus opened his pouch and struck a cigarette before replying. "Take it easy, Andy. There are bad times and good times. We're overdue for bad times. The people are on the march again . . . this time at us."

Chapter 3

THE BURROW KNOWN as the Families' Seat became jammed as the day wore on. Members kept trickling in, arriving by tunnels from downstare and from Indiana. As soon as it was dark a traffic jam developed at the underground pool entrance-sporting

subs, fake ground cars such as Mary's, ostensible surface cruisers modified to dive, each craft loaded with refugees some half suffocated from lying in hiding on deep bottom most of the day while waiting for a chance to sneak in.

The usual meeting room was much too small to handle the crowd; the resident staff cleared the largest room, the refectory, and removed partitions separating it from the main lounge. There at midnight Lazarus climbed onto a temporary rostrum. "Okay," he announced, "let's pipe it down. You down in front sit on the floor so the rest can see. I was born in 1912. Anybody older?"

He paused, then added, "Nominations for chairman speak up."

Three were proposed; before a fourth could be offered the last man nominated got to his feet. "Axel Johnson, of the Johnson Family. I want my name withdrawn and I suggest that the others do likewise. Lazarus cut through the fog last night; let him handle it. This is no time for Family politics."

The other names were withdrawn; no more were offered. Lazarus said, "Okay if that's the way you want it. Before we get down to arguing I want a report from the Chief Trustee. How about it, Zack? Any of our kinfolk get nabbed?'

Zaccur Barstow did not need to identify himself; he simply said, "Speaking for the Trustees: our report is not complete, but we do not as yet know that any Member has been arrested. Of the nine thousand two hundred and eighty-five revealed Members, nine thousand one hundred and six had been reported, when I left the communication office ten minutes ago, as having reached hiding, in other Family strongholds, or in the homes of unrevealed Members, or elsewhere. Mary Sperling's warning was amazingly successful in view of how short the time was from the alarm to the public execution of the Action-in-Council-but we still have one hundred and seventy-nine revealed cousins unreported. Probably most of these will trickle in during the next few days. Others are probably safe but unable to get in touch with us."

"Get to the point, Zack," Lazarus insisted. "Any reasonable chance that all of them will make it home safe?"

"Absolutely none."

"Why?"

"Because three of them are known to be in public conveyances between here and the Moon, traveling under their revealed identities. Others we don't know about are almost certainly caught in similar predicaments."

"Question!" A cocky little man near the front stood up and pointed his finger at the Chief Trustee. "Were all those Members now in jeopardy protected by hypnotic injunction?"

"No. There was no--"

"I demand to know why not!"

"Shut up!" bellowed Lazarus. "You're out of order. Nobody's on trial here and we've got no time to waste on spilled milk. Go ahead, Zack."

"Very well. But I will answer the question to this extent: everyone knows that a proposal to protect our secrets by hypnotic means was voted down at the Meeting which relaxed the 'Masquerade.' I seem to recall that the cousin now objecting helped then to vote it down."

"That is not true! And I insist that--"

"PIPE DOWN!" Lazarus glared at the heckler, then looked him over carefully. "Bud, you strike me as a clear proof that the Foundation should 'a' bred for brains instead of age." Lazarus looked around at the crowd. "Everybody will get his say, but in order as recognized by the chair. If he butts in again, I'm going to gag him with his own teeth-is my ruling sustained?"

There was a murmur of mixed shock and approval; no one objected. Zaccur Barstow went on, "On the advice of Ralph Schultz the trustees have been proceeding quietly for the past three months to persuade revealed Members to undergo hypnotic instruction. We were largely successful." He paused.

"Make it march, Zack," Lazarus urged. "Are we covered? Or not?"

"We are not. At least two of our cousins certain to be arrested are not so protected."

Lazarus shrugged. "That tears it. Kinfolk, the game's over. One shot in the arm of babble juice and the 'Masquerade' is over. It's a new situation-or will be in a few hours. What do you propose to do about it?"

In the control room of the Antipodes Rocket Wallaby, South Flight, the telecom hummed, went spung! and stuck out a tab like an impudent tongue. The copilot rocked forward in his gymbals, pulled out the message and tore it off.

He read it, then reread it. "Skipper, brace yourself."

"Trouble?"

"Read it."

The captain did so, and whistled. "Bloody! I've never arrested anybody. I don't believe I've even seen anybody arrested. How do we start?"

"I bow to your superior authority."

"That so?" the captain said in nettled tones. "Now that you're through bowing you can tool aft and make the arrest."

"Uh? That's not what I meant. You're the bloke with the authority. I'll relieve you at the conn."

"You didn't read me. I'm delegating the authority. Carry out your orders."

"Just a moment, Al, I didn't sign up for--"

"Carry out your orders!"

"Aye aye, sir!"

The copilot went aft. The ship had completed its reentry, was in its long, flat, screaming approach-glide; he was able to walk-he wondered what an arrest in free-fall would be like? Snag him with a butterfly net? He located the passenger by seat check, touched his arm. "Service, sir. There's been a clerical error. May I see your ticket?"

"Why, certainly."

"Would you mind stepping back to the reserve stateroom? It's quieter there and we can both sit down."

"Not at all."

Once they were in the private compartment the chief officer asked the passenger to sit down, then looked annoyed. "Stupid of me!-I've left my lists in the control room." He turned and left. As the door slid to behind him, the passenger heard an unexpected click. Suddenly suspicious, he tried the door. It was locked.

Two proctors came for him at Melbourne. As they escorted him through the skyport he could hear remarks from a curious and surprisingly unfriendly crowd: "There's one of the laddies now!" "Him? My word, he doesn't look old." "What price ape glands?" "Don't stare, Herbert." "Why not? Not half bad enough for him."

They took him to the office of the Chief Provost, who invited him to sit down with formal civility. "Now then, sir," the Provost said with a slight local twang, "if you will help us by letting the orderly make a slight injection in your arm--"

"For what purpose?"

"You want to be socially cooperative, I'm sure. It won't hurt you."

"That's beside the point. I insist on an explanation. I am a citizen of the United States."

"So you are, but the Federation has concurrent jurisdiction in any member state-and I am acting under its authority. Now bare your arm, please."

"I refuse. I stand on my civil rights."

"Grab him, lads."

It took four men to do it. Even before the injector touched his skin, his jaw set and a look of sudden agony came into his face. He then sat quietly, listlessly, while the peace officers waited for the drug to take effect. Presently the Provost gently rolled back one of the prisoner's eyelids and said, "I think he's ready. He doesn't weigh over ten stone; it has hit him rather fast. Where's that list of questions?"

A deputy handed it to him; he began, "Horace Foote, do you hear me?'

The man's lips twitched, he seemed about to speak. His mouth opened and blood gushed down his chest.

The Provost bellowed and grabbed the prisoner's head, made quick examination. "Surgeon! He's bitten his tongue half out of his head!"

The captain of the Luna City Shuttle Moonbeam scowled at the message in his hand. "What child's play is this?" He glared at his third officer. "Tell me that, Mister."

The third officer studied the overhead. Fuming, the captain held the message at arm's length, peered at it and read aloud: "-imperative that subject persons be prevented from doing themselves injury. You are directed to render them unconscious without warning them." He shoved the flimsy away from him. "What do they think I'm running? Coventry? Who do they think they are?-telling me in my ship what I must do with my passengers! I won't-so help me, I won't! There's no rule requiring me to . . . is there, Mister?"

The third officer went on silently studying the ship's structure.

The captain stopped pacing. "Purser! Purser! Why is that man never around when I want him?"

"I'm here, Captain."

"About time!"

"I've been here all along, sir."

"Don't argue with me. Here-attend to this." He handed the dispatch to the purser and left.

A shipfitter, supervised by the purser, the hull officer, and the medical officer, made a slight change in the air-conditioning ducts to one cabin; two worried passengers sloughed off their cares under the influence of a nonlethal dose of sleeping gas.

"Another report, sir."

"Leave it," the Administrator said in a tired voice.

"And Councilor Bork Vanning presents his compliments and requests an interview."

"Tell him that I regret that I am too busy."

"He insists on seeing you, sir."

Administrator Ford answered snappishly, "Then you may tell the Honorable Mr. Vanning that be does not give orders in this office!" The aide said nothing; Administrator Ford pressed his fingertips wearily against his forehead and went on slowly, "Na, Gerry, don't tell him that. Be diplomatic but don't let him in."

"Yes, sir."

When he was alone, the Administrator picked up the report. His eye skipped over official heading, date line, and file number: "Synopsis of Interview with Conditionally Proscribed Citizen Arthur Sperling, full transcript attached. Conditions of Interview: Subject received normal dosage of neosco., having previously received unmeasured dosage of gaseous hypnotal. Antidote--"How the devil could you cure subordinates of wordiness? Was there something in the soul of a career civil servant that cherished red tape? His eye skipped on down:

"-stated that his name was Arthur Sperling of the Foote Family and gave his age as one hundred thirty-seven years. (Subject's apparent age is forty-five plus-or-minus four: see bio report attached.) Subject admitted that he was a member of the Howard Families. He stated that the Families numbered slightly more than one hundred thousand members. He was asked to correct this and it was suggested to him that the correct number was nearer ten thousand. He persisted in his original statement."

The Administrator stopped and reread this part.

He skipped on down, looking for the key part: "-insisted that his long life was the result of his ancestry and had no other cause. Admitted that artificial means had been used to preserve his youthful appearance but maintained firmly that his life expectancy was inherent, not acquired. It was suggested to him that his elder relatives had subjected him without his knowledge to treatment in his early youth to increase his life span. Subject admitted possibility. On being pressed for names of persons who might have performed, or might be performing, such treatments he returned to his original statement that no such treatments exist.

"He gave the names (surprise association procedure) and in some cases the addresses of nearly two hundred members of his kin group not previously identified as such in our records. (List attached) His strength ebbed under this arduous technique and he sank into full apathy from which he could not be roused by any stimuli within the limits of his estimated tolerance (see Bio Report).

"Conclusions under Expedited Analysis, Kelly-Holmes Approximation Method: Subject does not possess and does not believe in the Search Object. Does not remember experiencing Search Object but is mistaken. Knowledge of Search Object is limited to a small group, of the order of twenty. A member of this star group will be located through not more than triple-concatenation elimination search. (Probability of unity, subject to assumptions: first, that topologic social space is continuous and is included in the physical space of the Western Federation and, second, that at least one concatenative path

exists between apprehended subjects and star group. Neither assumption can be verified as of this writing, but the first assumption is strongly supported by statistical analysis of the list of names supplied by Subject of previously unsuspected members of Howard kin group, which analysis also supports Subject's estimate of total size of group, and second assumption when taken negatively
postulates that star group holding Search Object has been able to apply it with no social-space of contact, an absurdity.)

"Estimated Time for Search: 71 hrs, plus-or-minus 20 hrs. Prediction but not time estimate vouched for by cognizant bureau. Time estimate will be re--"

Ford slapped the report on a stack cluttering his old-fashioned control desk. The dumb fools! Not to recognize a negative report when they saw one-yet they called themselves psychographers!

He buried his face in his hands in utter weariness and frustration.

Lazarus rapped on the table beside him, using the butt of his blaster as a gavel. "Don't interrupt the speaker," he boomed, then added, "Go ahead but cut it short."

Bertram Hardy nodded curtly. "I say again, these mayflies we see around us have no rights that we of the Families are bound to respect. We should deal with them with stea1th, with cunning, with guile, and when we eventually consolidate our position . . . with force! We are no more obligated to respect their welfare than a hunter is obliged to shout a warning at his quarry. The--"

There was a catcall from the rear of the room. Lazarus again banged for order and tried to spot the source. Hardy ploughed steadily on. "The so-called human race has split in two; it is time we admitted it. On one side, Homo vivens, ourselves . . . on the other-Homo moriturus! With the great lizards, with the sabertooth tiger and the bison, their day is done. We would no more mix our living blood with theirs than we would attempt to breed with apes. I say temporize with them, tell them any tale, assure them that we will bathe them in the fountain of youth-gain time, so that when these two naturally antagonistic races join battle, as they inevitably must, the victory will be ours!"

There was no applause but Lazarus could see wavering uncertainty in many faces. Bertram Hardy's ideas ran counter to thought patterns of many years of gentle living yet his words seemed to ring with destiny. Lazarus did not believe in destiny; he believed in . . . well, never mind-but he wondered how Brother Bertram would look with both arms broken.

Eve Barstow got up. "If that is what Bertram means by the survival of the fittest," she said bitterly, "I'll go live with the asocials in Coventry. However, he has offered a plan; I'll have to offer another plan if I won't take his. I won't accept any plan which would have us live at the expense of our poor transient neighbors. Furthermore it is clear to me now that our mere presence, the simple fact of our rich heritage of life, is damaging to the spirit of our poor neighbor. Our longer years and richer opportunities make his best efforts seem futile to him-any effort save a hopeless struggle against an appointed death. Our mere presence saps his strength, ruins his judgment, fills him with panic fear of death.

"So I propose a plan. Let's disclose ourselves, tell all the truth, and ask for our share of the Earth, some little corner where we may live apart. If our poor friends wish to

surround it with a great barrier like that around Coventry, so be it-it is better that we never meet face to face."

Some expressions of doubt changed to approval. Ralph Schultz stood up. "Without prejudice to Eve's basic plan, I must advise you that it is my professional opinion that the psychological insulation she proposes cannot be accomplished that easily. As long as we're on this planet they won't be able to put us out of their minds. Modern communications-"

"Then we must move to another planet!" she retorted.

"Where?" demanded Bertram Hardy. "Venus? I'd rather live in a steam bath. Mars? Worn-out and worthless."

"We will rebuild it," she insisted.

"Not in your lifetime nor mine. No, my dear Eve, your tenderheartedness sounds well but it doesn't make sense. There is only one planet in the System fit to live on-we're standing on it." Something in Bertram Hardy's words set off a response in Lazarus Long's brain, then the thought escaped him. Something . . . something that he had heard of said just a day or two ago . . . or was it longer than? Somehow it seemed to be associated with his first trip out into space, too, well over a century ago. Thunderation! it was maddening to have his memory play tricks on him like that--

Then he had it-the starship! The interstellar ship they were putting the finishing touches on out there between Earth and Luna. "Folks," he drawled, "before we table this idea of moving to another planet, let's consider all the possibilities." He waited until he had their full attention. "Did you ever stop to think that not all the planets swing around this one Sun?"

Zaccur Barstow broke the silence. "Lazarus . . . are you making a serious suggestion?"

"Dead serious."

"It does not sound so. Perhaps you had better explain."

"I will." Lazarus faced the crowd. "There's a spaceship hanging out there in the sky, a roomy thing, built to make the long jumps between stars. Why don't we take it and go looking for our own piece of real estate?"

Bertram Hardy was first to recover. "I don't know whether our chairman is lightening the gloom with another of his wisecracks or not, but, assuming that he is serious, I'll answer. My objection to Mars applies to this wild scheme ten times over. I understand that the reckless fools who are actually intending to man that ship expect to make the jump in about a century -then maybe their grandchildren will find something, or maybe they won't. Either way, I'm not interested. I don't care to spend a century locked up in a steel tank, nor do I expect to live that long. I won't buy it."

"Hold it," Lazarus told him. "Where's Andy Libby?"

"Here," Libby answered! standing up.

"Come on down front. Slipstick, did you have anything to do with designing the new Centarus ship?"

"No. Neither this one nor the first one."

Lazarus spoke to the crowd. "That settles it. If that ship didn't have Slipstick's finger in the drive design, then she's not as fast as she could be, not by a good big coefficient. Slipstick, better get busy on the problem, son. We're likely to need a solution."

"But, Lazarus, you mustn't assume that--"

"Aren't there theoretical possibilities?"

"Well, you know there are, but--"

"Then get that carrot top of yours working on it."

"Well . . . all right." Libby blushed as pink as his hair.

"Just a moment, Lazarus." It was Zaccur Barstow. "I like this proposal and I think we should discuss it at length not let ourselves be frightened off by Brother Bertram's distaste for it. Even if Brother Libby fails to find a better means of propulsion-and frankly, I don't think he will; I know a little something of field mechanics-even so, I shan't let a century frighten me. By using cold-rest and manning the ship in shifts, most of us should be able to complete one hop. There is--"

"What makes you think," demanded Bertram Hardy, "that they'll let us man the ship anyhow?"

"Bert," Lazarus said coldly, "address the chair when you want to sound off. You're not even a Family delegate. Last warning."

"As I was saying," Barstow continued, "there is an appropriateness in the long-lived exploring the stars. A mystic might call it our true vocation." He pondered. "As for the ship Lazarus suggested; perhaps they will not let us have that . . . but the Families are rich. If we need a starship-or ships-we can build them, we can pay for them. I think we had better hope that they will let us do this . . . for it may be that there is no way, not another way of any sort, out of our dilemma which does not include our own extermination."

Barstow spoke these last words softly and slowly, with great sadness. They bit into the company like damp chill. To most of them the problem was so new as not yet to be real; no one had voiced the possible consequence of failing to find a solution satisfactory to the short-lived majority. For their senior trustee to speak soberly of his fear that the Families might be exterminated-hunted down and killed-stirred up in each one the ghost they never mentioned.

"Well," Lazarus said briskly when the silence had grown painful, "before we work this idea over, let's hear what other plan anyone has to offer. Speak up."

A messenger hurried in and spoke to Zaccur Barstow. He looked startled and seemed to ask to have the message repeated. He then hurried across the rostrum to Lazarus, whispered to him. Lazarus looked startled. Barstow hurried out.

Lazarus looked back at the crowd. "We'll take a recess," he announced. "Give you time to think about other plans and time for a stretch and a smoke." He reached for his pouch.

"What's up?" someone called out.

Lazarus struck a cigarette, took a long drag, let it drift out. "We'll have to wait and see," he said. "I don't know. But at least half a dozen of the plans put forward tonight we won't have to bother to vote on. The situation has changed again-how much, I couldn't say."

"What do you mean?"

"Well," Lazarus drawled, "it seems the Federation Administrator wanted to talk to Zack Barstow right away. He asked for him by name . . . and he called over our secret Families' circuit."

"Huh? That's impossible!"

"Yep. So is a baby, son."

Chapter 4

ZACCUR BARSTOW TRIED to quiet himself down as he hurried into the phone booth.

At the other end of the same videophone circuit the Honorable Slayton Ford was doing the same thing-trying to calm his nerves. He did not underrate himself. A long and brilliant public career crowned by years as Administrator for the Council and under the Covenant of the Western Administration had made Ford aware of his own superior ability and unmatched experience; no ordinary man could possibly make him feel at a disadvantage in negotiation.

But this was different.

What would a man be like who had lived more than two ordinary lifetimes? Worse than that-a man who had had four or five times the adult experience that Ford himself had had? Slayton Ford knew that his own opinions had changed and changed again since his own boyhood; he knew that the boy he had been, or even the able young man he had been, would be no match for the mature man he had become. So what would this Barstow be like? Presumably he was the most able, the most astute, of a group all of whom had had much more experience than Ford could possibly have-how could he guess such a man's evaluations, intentions, ways of thinking, his possible resources?

Ford was certain of only one thing: he did not intend to trade Manhattan Island for twenty-four dollars and a case of whisky, nor sell humanity's birthright for a mess of pottage.

He studied Barstow's face as the image appeared in his phone. A good face and strong . . . it would be useless to try to bully this man. And the man looked young-why, he looked younger than Ford himself! The subconscious image of the Administrator's own stern and implacable grandfather faded out of his mind and his tension eased off. He said quietly, "You are Citizen Zaccur Barstow?"

"Yes, Mister Administrator."

"You are chief executive of the Howard Families?"

"I am the current speaker trustee of our Families' Foundation. But I am responsible to my cousins rather than in authority over them."

Ford brushed it aside. "I assume that your position carries with it leadership. I can't negotiate with a hundred thousand people."

Barstow did not blink. He saw the power play in the sudden admission that the administration knew the true numbers of the Families and discounted it. He had already adjusted himself to the shock of learning that the Families' secret headquarters was no longer secret and the still more upsetting fact that the Administrator knew how to tap into their private communication system; it simply proved that one or more Members had been caught and forced to talk.

So it was now almost certain that the authorities already knew every important fact about the Families.

Therefore it was useless to try to bluff-just the same, don't volunteer any information; they might not have all the facts this soon.

Barstow answered without noticeable pause. "What is it you wish to discuss with me, sir?"

"The policy of the Administration toward your kin group. The welfare of yourself and your relatives."

Barstow shrugged. "What can we discuss? The Covenant has been tossed aside and you have been given power to do as you like with us-to squeeze a secret out of us that we don't have. What can we do but pray for mercy?"

"Please!" The Administrator gestured his annoyance. "Why fence with me? We have a problem, you and I. Let's discuss it openly and try to reach a solution. Yes?"

Barstow answered slowly, "I would like to . . . and I believe that you would like to, also. But the problem is based on a false assumption, that we, the Howard Families, know how to lengthen human life. We don't."

"Suppose I tell you that I know there is no such secret?"

"Mmm . . . I would like to believe you. But how can you reconcile that with the persecution of my people? You've been harrying us like rats."

Ford made a wry face. "There is an old, old story about a theologian who was asked to reconcile the doctrine of Divine mercy with the doctrine of infant damnation. 'The Almighty,' he explained, 'finds it necessary to do things in His official and public capacity which in His private and personal capacity He deplores.'"

Barstow smiled in spite of himself. "I see the analogy. Is it actually pertinent?"

"I think it is."

"So. You didn't call me simply to make a headsman's apology?"

"No. I hope not. You keep in touch with politics? I'm sure you must; your position would require it." Barstow nodded; Ford explained at length:

Ford's administration had been the longest since the signing of the Covenant; he had lasted through four Councils. Nevertheless his control was now so shaky that he could not risk forcing a vote of confidence-certainly not over the Howard Families. On that issue his nominal majority was already a minority. If he refused the present decision of the Council, forced it to a vote of confidence, Ford would be out of office and the present minority leader would take over as administrator. "You follow me? I can either stay in office and try to cope with this problem while restricted by a Council directive with which I do not agree . . . or I can drop out and let my successor handle it."

"Surely you're not asking my advice?"

"No, no! Not on that. I've made my decision. The Action-in-Council would have been carried out in any case, either by me or by Mr. Vanning-so I decided to do it. The question is: will I have your help, or will I not?"

Barstow hesitated, while rapidly reviewing Ford's political career in his mind. The earlier part of Ford's long administration had been almost a golden age of statesmanship. A wise and practical man, Ford had shaped into workable rules the principles of human freedom set forth by Novak in the language of the Covenant. It had been a period of good will, of prosperous expansion, of civilizing processes which seemed to be permanent, irreversible.

Nevertheless a setback had come and Barstow understood the reasons at least as well as Ford did. Whenever the citizens fix their attention on one issue to the exclusion of

others, the situation is ripe for scalawags, demagogues, ambitious men on horseback. The Howard Families, in all innocence, had created the crisis in public morals from which they now suffered, through their own action, taken years earlier, in letting the short-lived learn of their existence. It mattered not at all that the "secret" did not exist; the corrupting effect did exist. Ford at least understood the true situation- "We'll help," Barstow answered suddenly. "Good. What do you suggest?"

Barstow chewed his lip. "Isn't there some way you can stall off this drastic action, this violation of the Covenant itself?"

Ford shook his head. "It's too late."

"Even if you went before the public and told the citizens, face to face, that you knew that-"

Ford cut him short. "I wouldn't last in office long enough to make the speech. Nor would I be believed. Besides that- understand me clearly, Zaccur Barstow-no matter what sympathy I may have personally for you and your people, I would not do so if I could. This whole matter is a cancer eating into vitals of our society; it must be settled. I have had my hand forced, true . . . but there is no turning back. It must be pressed on to a solution."

In at least one respect Barstow was a wise man; he knew that another man could oppose him and not be a villain. Nevertheless he protested, "My people are being persecuted."

"Your people," Ford said forcefully, "are a fraction of a tenth of one per cent of all the people . . . and I must find a solution for all! I've called on you to find out if you have any suggestions toward a solution for everyone. Do you?"

"I'm not sure," Barstow answered slowly. "Suppose I concede that you must go ahead with this ugly business of arresting my people, of questioning them by unlawful means-I suppose I have no choice about that-"

"You have no choice. Neither have I." Ford frowned. "It will be carried out as humanely as I can manage it-I am not a free agent."

"Thank you. But, even though you tell me it would be useless for you yourself to go to the people, nevertheless you have enormous propaganda means at your disposal. Would it be possible, while we stall along, to build up a campaign to convince the people of the true facts? Prove to them that there is no secret?" Ford answered, "Ask yourself: will it work?"

Barstow sighed. "Probably not."

"Nor would I consider it a solution even if it would! The people-even my trusted assistants-are clinging to their belief in a fountain of youth because the only alternative is too bitter to think about. Do you know what it would mean to them? For them to believe the bald truth?"

"Go on?'

"Death has been tolerable to me only because Death has been the Great Democrat, treating all alike. But now Death plays favorites. Zaccur Barstow, can you understand the bitter, bitter jealousy of the ordinary man of-oh, say 'fifty'- who looks on one of your sort? Fifty years . . . twenty of them he is a child, he is well past thirty before he is skilled in his profession. He is forty before he is established and respected. For not more than the last ten years of his fifty he has really amounted to something."

Ford leaned forward in the screen and spoke with sober emphasis: "And now, when he has reached his goal, what is his prize? His eyes are failing him, his bright young strength is gone, his heart and wind are 'not what they used to be.' He is not senile yet . . . but he feels the chill of the first frost. He knows what is in store for him. He knows-he knows!

"But it was inevitable and each man learned to be resigned to it."

"Now you come along," Ford went on bitterly. "You shame him in his weakness, you humble him before his children. He dares not plan for the future; you blithely undertake plans that will not mature for fifty years-for a hundred. No matter what success he has achieved, what excellence he has attained, you will catch up with him, pass him-outlive him. In his weakness you are kind to him.

"Is it any wonder that he hates you?"

Barstow raised his head wearily. "Do you hate me, Slayton Ford?"

"No. No, I cannot afford to hate anyone. But I can tell you this," Ford added suddenly, "had there been a secret, I would have it out of you if I had to tear you to pieces!"

"Yes. I understand that." Barstow paused to think. "There is little that we of the Howard Families can do. We did not plan it this way; it was planned for us. But there is one thing we can offer."

"Yes?"

Barstow explained.

Ford shook his head. "Medically what you suggest is feasible and I have no doubt that a half interest in your heritage would lengthen the span of human life. But even if women were willing to accept the germ plasm of your men-I do not say that they would-it would be psychic death for all other men. There would be an outbreak of frustration and hatred that would split the human race to ruin. No, no matter what we wish, our customs are what they are. We can't breed men like animals; they won't stand for it."

"I know it," agreed Barstow, "but it is all we have to offer . . . a share in our fortune through artificial impregnation."

"Yes. I suppose I should thank you but I feel no thanks and I shan't. Now let's be practical. Individually you old ones are doubtless honorable, lovable men. But as a group you are as dangerous as carriers of plague. So you must be quarantined."

Barstow nodded. "My cousins and I had already reached that conclusion."

Ford looked relieved. "I'm glad you're being sensible about it."

"We can't help ourselves. Well? A segregated colony? Some remote place that would be a Coventry of our own? Madagascar, perhaps? Or we might take the British Isles, build them up again and spread from there into Europe as the radioactivity died down."

Ford shook his head. "Impossible. That would simply leave the problem for my grandchildren to solve. By that time you and yours would have grown in strength; you might defeat us. No, Zaccur Barstow, you and your kin must leave this planet entirely!"

Barstow looked bleak. "I knew it would come to that. Well where shall we go?"

"Take your choice of the Solar System. Anywhere you like."

"But where? Venus is no prize, but even if we chose it, would they accept us? The Venerians won't take orders from Earth; that was settled in 2020. Yes, they now accept

screened immigrants under the Four Planets Convention but would they accept a hundred thousand whom Earth found too dangerous to keep? I doubt it."

"So do I. Better pick another planet."

"What planet? In the whole system there is not another body that will support human life as it is. It would take almost superhuman effort, even with unlimited money and the best of modern engineering, to make the most promising of them fit for habitation."

"Make the effort. We will be generous with help."

"I am sure you would. But is that any better solution in the long run than giving us a reservation on Earth? Are you going to put a stop to space travel?"

Ford sat up suddenly. "Oh! I see your thought. I had not followed it through, but let's face it. Why not? Would it not be better to give up space travel than to let this situation degenerate into open war? It was given up once before."

"Yes, when the Venerians threw off their absentee landlords. But it started up again and Luna City is rebuilt and ten times more tonnage moves through the sky than ever did before. Can you stop it? If you can, will it stay stopped?"

Ford turned it over and over in his mind. He could not stop space travel, no administration could. But could an interdict be placed on whatever planet these oldsters were shipped to? And would it help? One generation, two, three . . . what difference would it make? Ancient Japan had tried some solution like that; the foreign devils had come sailing in anyhow. Cultures could not be kept apart forever, and when they did come in contact, the hardier displaced the weaker; that was a natural law.

A permanent and effective quarantine was impossible. That left only one answer-an ugly one. But Ford was toughminded; he could accept what was necessary. He started making plans, Barstow's presence in the screen forgotten. Once he gave the Chief Provost the location of the Howard Families headquarters it should be reduced in an hour, two at the most unless they had extraordinary defenses-but anywise it was just a matter of time. From those who would be arrested at their headquarters it should be possible to locate and arrest every other member of their group. With luck he would have them all in twenty-four to forty-eight hours.

The only point left undecided in his mind was whether to liquidate them all, or simply to sterilize them. Either would be a final solution and there was no third solution. But which was the more humane?

Ford knew that this would end his career. He would leave office in disgrace, perhaps be sent to Coventry, but he gave it no thought; he was so constituted as to be unable to weigh his own welfare against his concept of his public duty.

Barstow could not read Ford's mind but he did sense that Ford had reached a decision and he surmised correctly how bad that decision must be for himself and his kin. Now was the time, he decided, to risk his one lone trump.

"Mister Administrator---"

"Eh? Oh, sorry! I was preoccupied." That was a vast understatement; he was shockingly embarrassed to find himself still facing a man he had just condemned to death. He gathered formality about him like a robe. "Thank you, Zaccur Barstow, for talking with me. I am sorry that-"

"Mister Administrator!"

"Yes?"

"I propose that you move us entirely out of the Solar System."

"What?" Ford blinked. "Are you speaking seriously?"

Barstow spoke rapidly, persuasively, explaining Lazarus Long's half-conceived scheme, improvising details as he went along, skipping over obstacles and emphasizing advantages.

"It might work," Ford at last said slowly. "There are difficulties you have not mentioned, political difficulties and a terrible hazard of time. Still, it might." He stood up. "Go back to your people. Don't spring this on them yet. I'll talk with you later."

Barstow walked back slowly while wondering what he could tell the Members. They would demand a full report; technically he had no right to refuse. But he was strongly inclined to cooperate with the Administrator as long as there was any chance of a favorable outcome. Suddenly making up his mind, he turned, went to his office, and sent for Lazarus.

"Howdy, Zack," Long said as he came in. "How'd the palaver go?"

"Good and bad," Barstow replied. "Listen-" He gave him a brief, accurate résumé. "Can you go back in there and tell them something that will hold them?"

"Mmm . . . reckon so."

"Then do it and hurry back here."

They did not like the stall Lazarus gave them. They did not want to keep quiet and they did not want to adjourn the meeting. "Where is Zaccur?"-"We demand a report!"-"Why all the mystification?"

Lazarus shut them up with a roar. "Listen to me, you damned idiots! Zack'll talk when he's ready-don't joggle his elbow. He knows what he's doing."

A man near the back stood up. "I'm going home!"

"Do that," Lazarus urged sweetly. "Give my love to the proctors."

The man looked startled and sat down.

"Anybody else want to go home?" demanded Lazarus. "Don't let me stop you. But it's time you bird-brained dopes realized that you have been outlawed. The only thing that stands between you and the proctors is Zack Barstow's ability to talk sweet to the Administrator. So do as you like the meeting's adjourned."

"Look, Zack," said Lazarus a few minutes later, "let's get this straight. Ford is going to use his extraordinary powers to help us glom onto the big ship and make a getaway. Is that right?"

"He's practically committed to it."

"Hmmm- He'll have to do this while pretending to the Council that everything he does is just a necessary step in squeezing the 'secret' out of us-he's going to double-cross 'em. That right?"

"I hadn't thought that far ahead. I-"

"But that's true, isn't it?"

"Well . . . yes, it must be true."

"Okay. Now, is our boy Ford bright enough to realize what he is letting himself in for and tough enough to go through with it?"

Barstow reviewed what he knew of Ford and added his impressions from the interview. "Yes," he decided, "he knows and he's strong enough to face it."

"All right. Now how about you, pal? Are you up to it, too?" Lazarus' voice was accusing.

"Me? What do you mean?"

"You're planning on double-crossing your crowd, too, aren't you? Have you got the guts to go through with it when the going gets tough?"

"I don't understand you, Lazarus," Barstow answered worriedly. "I'm not planning to deceive anyone-at least, no member of the Families."

"Better look at your cards again," Lazarus went on remorselessly. "Your part of the deal is to see to it that every man, woman and child takes part in this exodus. Do you expect to sell the idea to each one of them separately and get a hundred thousand people to agree? Unanimously? Shucks, you couldn't get that many to whistle 'Yankee Doodle' unanimously."

"But they will have to agree," protested Barstow. "They have no choice. We either emigrate, or they hunt us down and kill us. I'm certain that is what Ford intends to do. And he will."

"Then why didn't you walk into the meeting and tell 'em that? Why did you send me in to give 'em a stall?"

Barstow rubbed a hand across his eyes. "I don't know."

"I'll tell you why," continued Lazarus. "You think better with your hunches than most men do with the tops of their minds. You sent me in there to tell 'em a tale because you knew damn well the truth wouldn't serve. If you told 'em it was get out or get killed, some would get panicky and some would get stubborn. And some old-woman-in-kilts would decide to go home and stand on his Covenant rights. Then he'd spill the scheme before it ever dawned on him that the government was playing for keeps. That's right, isn't it?"

Barstow shrugged and laughed unhappily. "You're right. I didn't have it figured out but you're absolutely right."

"But you did have it figured out," Lazarus assured him. "You had the right answers. Zack, I like your hunches; that's why I'm stringing along. All right, you and Ford are planning to pull a whizzer on every man jack on this globe-I'm asking you again: have you got the guts to see it through?"

Chapter 5

THE MEMBERS STOOD AROUND in groups, fretfully. "I can't understand it," the Resident Archivist was saying to a worried circle around her. "The Senior Trustee never interfered in my work before. But he came bursting into my office with that Lazarus Long behind him and ordered me out."

"What did he say?" asked one of her listeners.

"Well, I said, 'May I do you a service, Zaccur Barstow? and be said, 'Yes, you may. Get out and take your girls with you.' Not a word of ordinary courtesy!"

"A lot you've got to complain about," another voice added gloomily. It was Cecil Hedrick, of the Johnson Family, chief communications engineer. "Lazarus Long paid a call on me, and he was a damned sight less polite."

"What did he do?"

"He walks into the communication cell and tells me he is going to take over my board-Zaccur's orders. I told him that nobody could touch my burners but me and my operators, and anyhow, where was his authority? You know what he did? You won't believe it but he pulled a blaster on me."

"You don't mean it!"

"I certainly do. I tell you, that man is dangerous. He ought to go for psycho adjustment. He's an atavism if I ever saw one."

Lazarus Long's face stared out of the screen into that of the Administrator. "Got it all canned?" he demanded.

Ford cut the switch on the facsimulator on his desk. "Got it all," he confirmed.

"Okay," the image of Lazarus replied. "I'm clearing." As the screen went blank Ford spoke into his interoffice circuit.

"Have the High Chief Provost report to me at once-in corpus."

The public safety boss showed up as ordered with an expression on his lined face in which annoyance struggled with discipline. He was having the busiest night of his career, yet the Old Man had sent orders to report in the flesh. What the devil were viewphones for, anyway, he thought angrily-and asked himself why he had ever taken up police work. He rebuked his boss by being coldly formal and saluting unnecessarily. "You sent for me, sir."

Ford ignored it. "Yes, thank you. Here." He pressed a stud a film spool popped out of the facsimulator. "This is a complete list of the Howard Families. Arrest them."

"Yes, sir." The Federation police chief stared at the spool and debated whether or not to ask how it had been obtained-it certainly hadn't come through his office . . . did the Old Man have an intelligence service he didn't even know about?

"It's alphabetical, but keyed geographically," the Administrator was saying. "After you put it through sorters, send the-no, bring the original back to me. You can stop the psycho interviews, too," he added. "Just bring them in and hold them. I'll give you more instructions later."

The High Chief Provost decided that this was not a good time to show curiosity. "Yes, sir." He saluted stiffly and left.

Ford turned back to his desk controls and sent word that he wanted to see the chiefs of the bureaus of land resources and of transportation control. On afterthought he added the chief of the bureau of consumption logistics.

Back in the Families' Seat a rump session of the trustees was meeting; Barstow was absent. "I don't like it," Andrew Weatherall was saying. "I could understand Zaccur deciding to delay reporting to the Members but I had supposed that he simply wanted to talk to us first. I certainly did expect him to consult us. What do you make of it, Philip?"

Philip Hardy chewed his lip. "I don't know. Zaccur's got a head on his shoulders . . . but it certainly seems to me that he should have called us together and advised with us. Has he spoken with you, Justin?"

"No, he has not," Justin Foote answered frigidly.

"Well, what should we do? We can't very well call him in and demand an accounting unless we are prepared to oust him from office and if he refuses. I, for one, am reluctant to do that."

They were still discussing it when the proctors arrived.

Lazarus heard the commotion and correctly interpreted it-no feat, since he had information that his brethren lacked. He was aware that he should submit peacefully and conspicuously to arrest-set a good example. But old habits die hard; he postponed the inevitable by ducking into the nearest men's 'fresher.

It was a dead end. He glanced at the air duct-no, too small. While thinking he fumbled in his pouch for a cigarette; his hand found a strange object, he pulled it out. It was the brassard he bad "borrowed" from the proctor in Chicago.

When the proctor working point of the mop-squad covering that wing of the Seat stuck his head into that 'fresher, he found another "proctor" already there. "Nobody in here," announced Lazarus. "I've checked it."

"How the devil did you get ahead of me?'

"Around your flank. Stoney Island Tunnel and through their air vents." Lazarus trusted that the real cop would be unaware that there was no Stoney Island Tunnel "Got a cigarette on you?"

"Huh? This is no time to catch a smoke."

"Shucks," said Lazarus, "my legate is a good mile away."

"Maybe so," the proctor replied, "but mine is right behind us."

"So? Well, skip it-I've got something to tell him anyhow." Lazarus started to move past but the proctor did not get out of his way. He was glancing curiously at Lazarus' kilt. Lazarus had turned it inside out and its blue lining made a fair imitation of a proctor's service uniform-if not inspected closely.

"What station did you say you were from?" inquired the proctor.

"This one," answered Lazarus and planted a short jab under the man's breastbone. Lazarus' coach in rough-and-tumble had explained to him that a solar plexus blow was harder to dodge than one to the jaw; the coach bad been dead since the roads strike of 1966, his skill lived on.

Lazarus felt more like a cop with a proper uniform kilt and a bandolier of paralysis bombs slung under his left arm. Besides, the proctor's kilt was a better fit. To the right the passage outside led to the Sanctuary and a dead end; he went to the left by Hobson's choice although he knew he would run into his unconscious benefactor's legate. The passage gave into a hall which was crowded with Members herded into a group of proctors. Lazarus ignored his kin and sought out the harassed officer in charge. "Sir," he reported, saluting smartly, "There's sort of a hospital back there. You'll need fifty or sixty stretchers."

"Don't bother me, tell your legate. We've got our hands full."

Lazarus almost did not answer; he had caught Mary Sperling's eye in the crowd-she stared at him and looked away. He caught himself and answered, "Can't tell him, sir. Not available."

"Well, go on outside and tell the first-aid squad."

"Yes, sir." He moved away, swaggering a little, his thumbs hooked in the band of his kilt. He was far down the passage leading to the transbelt tunnel serving the

Waukegan outlet when he heard shouts behind him. Two proctors were running to overtake him.

Lazarus stopped in the archway giving into the transbelt tunnel and waited for them. "What's the trouble?' he asked easily as they came up.

"The legate--"began one. He got no further; a paralysis bomb tinkled and popped at his feet. He looked surprised as the radiations wiped all expression from his face; his mate fell across him.

Lazarus waited behind a shoulder of the arch, counted seconds up to fifteen: "Number one jet fire! Number two jet fire! Number three jet fire!"-added a couple to be sure the paralyzing effect had died away. He had cut it finer than he liked. He had not ducked quite fast enough and his left foot tingled from exposure.

He then checked. The two were unconscious, no one else was in sight. He mounted the transbelt. Perhaps they had not been looking for him in his proper person, perhaps no one had given him away. But he did not hang around to find out. One thing he was damn' well certain of, he told himself, if anybody had squealed on him, it wasn't Mary Sperling.

It took two more parabombs and a couple of hundred words of pure fiction to get him out into the open air. Once he was there and out of immediate observation the brassard and the remaining bombs went into his pouch and the bandolier ended up behind some bushes; he then looked up a clothing store in Waukegan.

He sat down in a sales booth and dialed the code for kilts. He let cloth designs flicker past in the screen while he ignored the persuasive voice of the catalogue until a pattern showed up which was distinctly unmilitary and not blue, whereupon he stopped the display and punched an order for his size. He noted the price, tore an open-credit voucher from his wallet, stuck it into the machine and pushed the switch. Then he enjoyed a smoke while the tailoring was done.

Ten minutes later he stuffed the proctor's kilt into the refuse hopper of the sales booth and left, nattily and loudly attired. He had not been in Waukegan the past century but he found a middle-priced autel without drawing attention by asking questions, dialed its registration board for a standard suite and settled down for seven hours of sound sleep.

He breakfasted in his suite, listening with half an ear to the news box; he was interested, in a mild way, in hearing what might be reported concerning the raid on the Families. But it was a detached interest; he had already detached himself from it in his own mind. It had been a mistake, he now realized, to get back in touch with the Families-a darn good thing he was clear of it all with his present public identity totally free of any connection with the whing-ding.

A phrase caught his attention: "-including Zaccur Barstow, alleged to be their tribal chief.

"The prisoners are being shipped to a reservation in Oklahoma, near the ruins of the Okla-Orleans road city about twenty-five miles east of Harriman Memorial Park. The Chief Provost describes it as a 'Little Coventry,' and has ordered all aircraft to avoid it by ten miles laterally. The Administrator could not be reached for a statement but a usually reliable source inside the administration informs us that the mass arrest was accomplished in order to speed up the investigations whereby the administration expects to obtain the 'Secret of the Howard Families'-their techniques for indefinitely prolonging life. This

forthright action in arresting and transporting every member of the outlaw group is expected to have a salutary effect in breaking down the resistance of their leaders to the legitimate demands of society. It will bring home forcibly to them that the civil rights enjoyed by decent citizens must not be used as a cloak behind which to damage society as a whole.

"The chattels and holdings of the members of this criminal conspiracy have been declared subject to the Conservator General and will be administered by his agents during the imprisonment of-"

Lazarus switched it off. "Damnation!" he thought. "Don't fret about things you can't help." Of course, he had expected to be arrested himself . . . but he had escaped. That was that. It wouldn't do the Families any good for him to turn himself in-and besides, he owed the Families nothing, not a tarnation thing.

Anyhow, they were better off all arrested at once and quickly placed under guard. If they had been smelled out one at a time, anything could have happened-lynchings, even pogroms. Lazarus knew from hard experience how close under the skin lay lynch law and mob violence in the most sweetly civilized; that was why he had advised Zack to rig it-that and the fact that Zack and the Administrator had to have the Families in one compact group to stand a chance of carrying out their scheme. They were well off . . . and no skin off his nose.

But he wondered how Zack was getting along, and what he would think of Lazarus' disappearance. And what Mary Sperling thought-it must have been a shock to her when he turned up making a noise like a proctor. He wished he could straighten that out with her.

Not that it mattered what any of them thought. They would all either be light-years away very soon . . . or dead. A closed book.

He turned to the phone and called the post office. "Captain Aaron Sheffield," he announced, and gave his postal number. "Last registered with Goddard Field post office. Will you please have my mail sent to-" He leaned closer and read the code number from the suite's mail receptacle.

"Service," assented the voice of the clerk. "Right away, Captain."

"Thank you."

It would take a couple of hours, he reflected, for his mail to catch up with him-a half hour in trajectory, three times that in fiddle-faddle. Might as well wait here . . . no doubt the search for him had lost itself in the distance but there was nothing in Waukegan he wanted. Once the mail showed up he would hire a U-push-it and scoot down to--

To where? What was he going to do now?

He turned several possibilities over in his mind and came at last to the blank realization that there was nothing, from one end of the Solar System to the other, that he really wanted to do.

It scared him a little. He had once heard, and was inclined to credit, that a loss of interest in living marked the true turning point in the battle between anabolisim and catabolism-old age. He suddenly envied normal short-lived people-at least they could go make nuisances of themselves to their children. Filial affection was not customary among Members of the Families; it was not a feasible relationship to maintain for a century or more. And friendship, except between Members, was bound to be regarded as a passing and shallow matter. There was no one whom Lazarus wanted to see.

Wait a minute . . . who was that planter on Venus? The one who knew so many folk songs and who was so funny when he was drunk? He'd go look him up. It would make a nice hop and it would be fun, much as he disliked Venus.

Then he recalled with cold shock that he had not seen the man for-how long? In any case, he was certainly dead by now.

Libby had been right, he mused glumly, when he spoke of the necessity for a new type of memory association for the long-lived. He hoped the lad would push ahead with the necessary research and come up with an answer before Lazarus was reduced to counting on his fingers. He dwelt on the notion for a minute or two before recalling that he was most unlikely ever to see Libby again.

The mail arrived and contained nothing of importance. He was not surprised; he expected no personal letters. The spools of advertising went into the refuse chute; he read only one item, a letter from Pan-Terra Docking Corp. telling him that his convertible cruiser I Spy had finished her overhaul and had been moved to a parking dock, rental to start forthwith. As instructed, they had not touched the ship's astrogational controls-was that still the Captain's pleasure?

He decided to pick her up later in the day and head out into space. Anything was better than sitting Earthbound and admitting that he was bored.

Paying his score and finding a jet for hire occupied less than twenty minutes. He took off and headed for Goddard Field, using the low local-traffic level to avoid entering the control pattern with a flight plan. He was not consciously avoiding the police because he had no reason to think that they could be looking for "Captain Sheffield"; it was simply habit, and it would get him to Goddard Field soon enough.

But long before he reached there, while over eastern Kansas, he decided to land and did so.

He picked the field of a town so small as to be unlikely to rate a full-time proctor and there he sought out a phone booth away from the field. Inside it, he hesitated. How did you go about calling up the head man of the entire Federation-and get him? If he simply called Novak Tower and asked for Administrator Ford, he not only would not be put through to him but his call would be switched to the Department of Public Safety for some unwelcome inquiries, sure as taxes.

Well, there was only one way to beat that, and that was to call the Department of Safety himself and, somehow, get the Chief Provost on the screen-after that he would play by ear.

"Department of Civil Safety," a voice answered. "What service, citizen?"

"Service to you," he began in his best control-bridge voice. "I am Captain Sheffield. Give me the Chief." He was not overbearing; his manner simply assumed obedience.

Short silence-- "What is it about, please?"

"I said I was Captain Sheffield." This time Lazarus' voice showed restrained annoyance.

Another short pause-- "I'll connect you with Chief Deputy's office," the voice said doubtfully.

This time the screen came to life. "Yes?" asked the Chief Deputy, looking him over.

"Get me the Chief-hurry."

"What's it about?"

"Good Lord, man-get me the Chief! I'm Captain Sheffield!"

The Chief Deputy must be excused for connecting him; he had had no sleep and more confusing things had happened in the last twenty-four hours than he had been able to assimilate. When the High Chief Provost appeared in the screen, Lazarus spoke first. "Oh, there you are! I've had the damnedest time cutting through your red tape. Get me the Old Man and move! Use your closed circuit."

"What the devil do you mean? Who are you?"

"Listen, brother," said Lazarus in tones of slow exasperation, "I would not have routed through your damned hidebound department if I hadn't been in a jam. Cut me in to the Old Man. This is about the Howard Families."

The police chief was instantly alert. "Make your report."

"Look," said Lazarus in tired tones, "I know you would like to look over the Old Man's shoulder, but this isn't a good time to try. If you obstruct me and force me to waste two hours by reporting in corpus, I will. But the Old Man will want to know why and you can bet your pretty parade kit, I'll tell him."

The Chief Provost decided to take a chance-cut this character in on a three-way; then, if the Old Man didn't burn this joker off the screen in about three seconds, he'd know he had played safe and guessed lucky. If he did-well, you could always blame it on a cross-up in communications. He set the combo.

Administrator Ford looked flabbergasted when he recognized Lazarus in the screen. "You?' he exclaimed. "How on Earth--Did Zaccur Barstow--"

"Seal your circuit!" Lazarus cut in.

The Chief Provost blinked as his screen went dead and silent. So the Old Man did have secret agents outside the department . . . interesting-and not to be forgotten.

Lazarus gave Ford a quick and fairly honest account of how he happened to be at large, then added, "So you see, I could have gone to cover and escaped entirely. In fact I still can. But I want to know this: is the deal with Zaccur Barstow to let us emigrate still on?"

"Yes, it is."

"Have you figured out how you are going to get a hundred thousand people inboard the New Frontiers without tipping your hand? You can't trust your own people, you know that."

"I know. The present situation is a temporary expedient while we work it out."

"And I'm the man for the job. I've got to be, I'm the only agent on the loose that either one of you can afford to trust. Now listen-"

Eight minutes later Ford was nodding his head slowly and saying, "It might work. It might. Anyway, you start your preparations. I'll have a letter of credit waiting for you at Goddard."

"Can you cover your tracks on that? I can't flash a letter of credit from the Administrator; people would wonder."

"Credit me with some intelligence. By the time it reaches you it will appear to be a routine banking transaction."

"Sorry. Now how can I get through to you when I need to?"

"Oh, yes-note this code combination." Ford recited it slowly. "That puts you through to my desk without relay. No, don't write it down; memorize it."

"And how can I talk to Zack Barstow?

"Call me and I'll hook you in. You can't call him directly unless you can arrange a sensitive circuit."

"Even if I could, I can't cart a sensitive around with me. Well, cheerio-I'm clearing."

"Good luck!"

Lazarus left the phone booth with restrained haste and hurried back to reclaim his hired ship. He did not know enough about current police practice to guess whether or not the High Chief Provost had traced the call to the Administrator; he simply took it for granted because he himself would have done so in the Provosts' shoes. Therefore the nearest available proctor was probably stepping on his heels-time to move, time to mess up the trail a little.

He took off again and headed west, staying in the local, uncontrolled low level until he reached a cloud bank that walled the western horizon. He then swung back and cut air for Kansas City, staying carefully under the speed limit and flying as low as local traffic regulations permitted. At Kansas City he turned his ship in to the local U-push-it agency and flagged a ground taxi, which carried him down the controlway to Joplin. There he boarded a local jet bus from St. Louis without buying a ticket first, thereby insuring that his flight would not be recorded until the bus's trip records were turned in on the west coast.

Instead of worrying he spent the time making plans.

One hundred thousand people with an average mass of a hundred and fifty-no, make it a hundred and sixty pounds, Lazarus reconsidered-a hundred and sixty each made a load of sixteen million pounds, eight thousand tons. The I Spy could boost such a load against one gravity but she would be as logy as baked beans, It was out of the question anyhow; people did not stow like cargo; the I Spy could lift that dead weight-but "dead" was the word, for that was what they would be.

He needed a transport.

Buying a passenger ship big enough to ferry the Families from Earth up to where the New Frontiers hung in her construction orbit was not difficult; Four Planets Passenger Service would gladly unload such a ship at a fair price. Passenger trade competition being what it was, they were anxious to cut their losses on older ships no longer popular with tourists. But a passenger ship would not do; not only would there be unhealthy curiosity in what he intended to do with such a ship, but-and this settled it-he could not pilot it single-handed. Under the Revised Space Precautionary Act, passenger ships were required to be built for human control throughout on the theory that no automatic safety device could replace human judgment in an emergency.

It would have to be a freighter.

Lazarus knew the best place to find one. Despite efforts to make the Moon colony ecologically self-sufficient, Luna City still imported vastly more tonnage than she exported. On Earth this would have resulted in "empties coming back"; in space transport it was sometimes cheaper to let empties accumulate, especially on Luna where an empty freighter was worth more as metal than it had cost originally as a ship back Earthside.

He left the bus when it landed at Goddard City, went to the space field, paid his bills, and took possession of the I Spy, filed a request for earliest available departure for Luna. The slot he was assigned was two days from then, but Lazarus did not let it worry

him; he simply went back to the docking company and indicated that he was willing to pay liberally for a swap, in departure time. In twenty minutes he had oral assurance that he could boost for Luna that evening.

He spent the remaining several hours in the maddening red tape of interplanetary clearance. He first picked up the letter of credit Ford had promised him and converted it into cash. Lazarus would have been quite willing to use a chunk of the cash to speed up his processing just as he had paid (quite legally) for a swap in slot with another ship. But he found himself unable to do so. Two centuries of survival had taught him that a bribe must be offered as gently and as indirectly as a gallant suggestion is made to a proud lady; in a very few minutes he came to the glum conclusion that civic virtue and public honesty could be run into the ground-the functionaries at Goddard Field seemed utterly innocent of the very notion of cumshaw, squeeze, or the lubricating effect of money in routine transactions. He admired their incorruptibility; he did not have to like it-most especially when filling out useless forms cost him the time he had intended to devote to a gourmet's feast in
the Skygate Room.

He even let himself be vaccinated again rather than go back to the I Spy and dig out the piece of paper that showed he had been vaccinated on arrival Earthside a few weeks earlier.

Nevertheless, twenty minutes before his revised slot time, he lay at the controls of the I Spy, his pouch bulging with stamped papers and his stomach not bulging with the sandwich he had managed to grab. He had worked out the "Hohmann's-S" trajectory he would use; the results had been fed into the autopilot. All the lights on his board were green save the one which would blink green when field control started his count down. He waited in the warm happiness that always filled him when about to boost.

A thought hit him and he raised up against his straps. Then he loosened the chest strap and sat up, reached for his copy of the current Terra Pilot and Traffic Hazards Supplement. Mmm...

New Frontiers hung in a circular orbit of exactly twenty-four hours, keeping always over meridian 106 degrees west at declination zero at a distance from Earth center of approximately twenty-six thousand miles.

Why not pay her a call, scout out the lay of the land?

The I Spy, with tanks topped off and cargo spaces empty, had many mile-seconds of reserve boost. To be sure, the field had cleared him for Luna City, not for the interstellar ship . . . but, with the Moon in its present phase, the deviation from his approved flight pattern would hardly show on a screen, probably would not be noticed until the film record was analyzed at some later time-at which time Lazarus would receive a traffic citation, perhaps even have his license suspended. But traffic tickets had never worried him . . . and it was certainly worthwhile to reconnoitre.

He was already setting up the problem in his ballistic calculator. Aside from checking the orbit elements of the New Frontiers in the Terra Pilot Lazarus could have done it in his sleep; satellite-matching maneuvers were old hat for any pilot and a doubly-tangent trajectory for a twenty-four hour orbit was one any student pilot knew by heart.

He fed the answers into his autopilot during the count down, finished with three minutes to spare, strapped himself down again and relaxed as the acceleration hit him. When the ship went into free fall, he checked his position and vector via the field's

transponder. Satisfied, he locked his board, set the alarm for rendezvous, and went to sleep.

Chapter 6

ABOUT FOUR HOURS LATER the alarm woke him. He switched it off; it continued to ring-a glance at his screen showed him why. The Gargantuan cylindrical body of the New Frontiers lay close aboard. He switched off the radar alarm circuit as well and completed matching with her by the seat of his pants, not bothering with the ballistic calculator. Before he had completed the maneuver the communications alarm started beeping. He slapped a switch; the rig hunted frequencies and the vision screen came to life. A man looked at him. "New Frontiers calling: what ship are you?"

"Private vessel I Spy, Captain Sheffield. My compliments to your commanding officer. May I come onboard to pay a call?"

They were pleased to have visitors. The ship was completed save for inspection, trials, and acceptance; the enormous gang which had constructed her had gone to Earth and there was no one aboard but the representatives of the Jordan Foundation and a half dozen engineers employed by the corporation which had been formed to build the ship for the foundation. These few were bored with inactivity, bored with each other, anxious to quit marking time and get back to the pleasures of Earth; a visitor was a welcome diversion.

When the I Spy's airlock had been sealed to that of the big ship, Lazarus was met by the engineer in charge-technically "captain" since the New Frontiers was a ship under way even though not under power. He introduced himself and took Lazarus on a tour of the ship. They floated through miles of corridors, visited laboratories, storerooms, libraries containing hundreds of thousands of spools, acres of hydroponic tanks for growing food and replenishing oxygen, and comfortable, spacious, even luxurious quarters for a crew colony of ten thousand people. "We believe that the Vanguard expedition was somewhat undermanned," the skipper-engineer explained. "The socio-dynamicists calculate that this colony will be able to maintain the basics of our present level of culture."

"Doesn't sound like enough," Lazarus commented. "Aren't there more than ten thousand types of specialization?"

"Oh, certainly! But the idea is to provide experts in all basic arts and indispensable branches of knowledge. Then, as the colony expands, additional specializations can be added through the aid of the reference libraries-anything from tap-dancing to tapestry weaving. That's the general idea though it's out of my line. Interesting subject, no doubt, for those who like it."

"Are you anxious to get started?" asked Lazarus.

The man looked almost shocked. "Me? D'you mean to suggest that I would go in this thing? My dear sir, I'm an engineer, not a damn' fool."

"Sorry."

"Oh, I don't mind a reasonable amount of spacing when there's a reason for it-I've been to Luna City more times than I can count and I've even been to Venus. But you don't

think the man who built the Mayflower sailed in her, do you? For my money the only thing that will keep these people who signed up for it from going crazy before they get there is that it's a dead cinch they're all crazy before they start."

Lazarus changed the subject. They did not dally in the main drive space, nor in the armored cell housing the giant atomic converter, once Lazarus learned that they were unmanned, fully-automatic types. The total absence of moving parts in each of these divisions, made possible by recent developments in parastatics, made their inner workings of intellectual interest only, which could wait. What Lazarus did want to see was the control room, and there he lingered, asking endless questions until his host was plainly bored and remaining only out of politeness.

Lazarus finally shut up, not because he minded imposing on his host but because he was confident that he had learned enough about the controls to be willing to chance conning the ship.

He picked up two other important data before he left the ship: in nine Earth days the skeleton crew was planning a weekend on Earth, following which the acceptance trials would be held. But for three days the big ship would be empty, save possibly for a communications operator-Lazarus was too wary to be inquisitive on this point. But there would be no guard left in her because no need for a guard could be imagined. One might as well guard the Mississippi River.

The other thing he learned was how to enter the ship from the outside without help from the inside; he picked that datum up through watching the mail rocket arrive just as he was about to leave the ship.

At Luna City, Joseph McFee, factor for Diana Terminal Corp., subsidiary of Diana Freight Lines, welcomed Lazarus warmly. "Well! Come in, Cap'n, and pull up a chair. What'll you drink?" He was already pouring as he talked-tax-free paint remover from his own amateur vacuum still. "Haven't seen you in . . . well, too long. Where d'you raise from last and what's the gossip there? Heard any new ones?"

"From Goddard," Lazarus answered and told him what the skipper had said to the V.I.P. McFee answered with the one about the old maid in free fall, which Lazarus pretended not to have heard. Stories led to politics, and McFee expounded his notion of the "only possible solution" to the European questions, a solution predicated on a complicated theory of McFee's as to why the Covenant could not be extended to any culture below a certain level of industrialization. Lazarus did not give a hoot either way but he knew better than to hurry McFee; he nodded at the right places, accepted more of the condemned rocket juice when offered, and waited for the right moment to come to the point.

"Any company ships for sale now, Joe?"

"Are there? I should hope to shout. I've got more steel sitting out on that plain and cluttering my inventory than I've had in ten years. Looking for some? I can make you a sweet price."

"Maybe. Maybe not. Depends on whether you've got what I want."

"You name it, I've got it. Never saw such a dull market. Some days you can't turn an honest credit." McFee frowned. "You know what the trouble is? Well, I'll tell you-it's this Howard Families commotion. Nobody wants to risk any money until he knows where he stands. How can a man make plans when he doesn't know whether to plan for ten

years or a hundred? You mark my words: if the administration manages to sweat the secret loose from those babies, you'll see the biggest boom in long-term investments ever. But if not well, long-term holdings won't be worth a peso a dozen and there will be an eat-drink-and-be-merry craze that will make the Reconstruction look like a tea party."

He frowned again. "What kind of metal you looking for?"

"I don't want metal, I want a ship."

McFee's frown disappeared, his eyebrows shot up. "So? What sort?"

"Can't say exactly. Got time to look 'em over with me?"

They suited up and left the dome by North Tunnel, then strolled around grounded ships in the long, easy strides of low gravity. Lazarus soon saw that just two ships had both the lift and the air space needed. One was a tanker and the better buy, but a mental calculation showed him that it lacked deck space, even including the floor plates of the tanks, to accommodate eight thousand tons of passengers. The other was an older ship with cranky piston-type injection meters, but she was fitted for general merchandise and had enough deck space. Her pay load was higher than necessary for the job, since passengers weigh little for the cubage they clutter-but that would make her lively, which might be critically important.

As for the injectors, he could baby them-he had herded worse junk than this.

Lazarus haggled with McFee over terms, not because he wanted to save money but because failure to do so would have been out of character. They finally reached a complicated three-cornered deal in which McFee bought the I Spy for himself, Lazarus delivered clear title to it unmortgaged and accepted McFee's unsecured note in payment, then purchased the freighter by endorsing McFee's note back to him and adding cash. McFee in turn would be able to mortgage the I Spy at the Commerce Clearance Bank in Luna City, use the proceeds plus cash or credit of his own to redeem his own paper-presumably before his accounts were audited, though Lazarus did not mention that.

It was not quite a bribe. Lazarus merely made use of the fact that McFee had long wanted a ship of his own and regarded the I Spy as the ideal bachelor's go-buggy for business or pleasure; Lazarus simply held the price down to where McFee could swing the deal. But the arrangements made certain that McFee would not gossip about the deal, at least until he had had time to redeem his note. Lazarus further confused the issue by asking McFee to keep his eyes open for a good buy in trade tobacco . . . which made McFee sure that Captain Sheffield's mysterious new venture involved Venus, that being the only major market for such goods. Lazarus got the freighter ready for space in only four days through lavish bonuses and overtime payments. At last he dropped Luna City behind him, owner and master of the City of Chillicothe. He shortened the name in his mind to Chili in honor of a favorite dish he had not tasted in a long time-fat red beans, plenty of chili powder, chunks of meat . .
. real meat, not the synthetic pap these youngsters called "meat." He thought about it and his mouth watered. He had not a care in the world.

As he approached Earth, he called traffic control and asked for a parking orbit, as he did not wish to put the Chili down; it would waste fuel and attract attention. He had no scruples about orbiting without permission but there was a chance that the Chili might be spotted, charted, and investigated as a derelict during his absence; it was safer to be legal.

They gave him an orbit; he matched in and steadied down, then set the Chili's identification beacon to his own combination, made sure that the radar of the ship's gig

could trip it, and took the gig down to the auxiliary small-craft field at Goddard. He was careful to have all necessary papers with him this time; by letting the gig be sealed in bond he avoided customs and was cleared through the space port quickly. He had no destination in mind other than to find a public phone and check in with Zack and Ford-then, if there was time, try to find some real chili. He had not called the Administrator from space because ship-to-ground required relay, and the custom of privacy certainly would not protect them if the mixer who handled the call overheard a mention of the Howard Families.

The Administrator answered his call at once, although it was late at night in the longitude of Novak Tower. From the puffy circles under Ford's eyes Lazarus judged that he had been living at his desk. "Hi," said Lazarus, "better get Zack Barstow on a three-way. I've got things to report."

"So it's you," Ford said grimly. "I thought you had run out on us. Where have you been?"

"Buying a ship," Lazarus answered. "As you knew. Let's get Barstow."

Ford frowned, but turned to his desk. By split screen, Barstow joined them. He seemed surprised to see Lazarus and not altogether relieved. Lazarus spoke quickly:

"What's the matter, pal? Didn't Ford tell you what I was up to?"

"Yes, he did," admitted Barstow, "but we didn't know where you were or what you were doing. Time dragged on and you didn't check in . . . so we decided we had seen the last of you."

"Shucks," complained Lazarus, "you know I wouldn't ever do anything like that. Anyhow, here I am and here's what I've done so far-" He told them of the Chili and of his reconnaissance of the New Frontiers. "Now here's how I see it: sometime this weekend, while the New Frontiers is sitting out there with nobody inboard her, I set the Chili down in the prison reservation, we load up in a hurry, rush out to the New Frontiers, grab her, and scoot. Mr. Administrator, that calls for a lot of help from you. Your proctors will have to look the other way while I land and load. Then we need to sort of slide past the traffic patrol. After that it would be a whole lot better if no naval craft was in a position to do anything drastic about the New Frontiers-if there is a communication watch left in her, they may be able to holler for help before we can silence them."

"Give me credit for some foresight," Ford answered sourly. "I know you will have to have a diversion to stand any chance of getting away with it. The scheme is fantastic at the best."

"Not too fantastic," Lazarus disagreed, "if you are willing to use your emergency powers to the limit at the last minute."

"Possibly. But we can't wait four days." "Why not?'

"The situation won't hold together that long."

"Neither will mine," put in Barstow.

Lazarus looked from one to the other. "Huh? What's the trouble? What's up?"

They explained:

Ford and Barstow were engaged in a preposterously improbable task, that of putting over a complex and subtle fraud; a triple fraud with a different face for the Families, for the public, and for the Federation Council. Each aspect presented unique and apparently insurmountable difficulties.

Ford had no one whom he dared take into his confidence, for even his most trusted personal staff member might be infected with the mania of the delusional Fountain of Youth . . . or might not be, but there was no way to know without compromising the conspiracy. Despite this, he had to convince the Council that the measures he was taking were the best for achieving the Council's purpose.

Besides that, he had to hand out daily news releases to convince the citizens that their government was just about to gain for them the "secret" of living forever. Each day the statements had to be more detailed, the lies more tricky. The people were getting restless at the delay; they were sloughing off the coat of civilization, becoming mob.

The Council was feeling the pressure of the people. Twice Ford had been forced to a vote of confidence; the second he had won by only two votes. "I won't win another one-we've got to move."

Barstow's troubles were different but just as sticky. He had to have confederates, because his job was to prepare all the hundred thousand members for the exodus. They had to know, before the time came to embark, if they were to leave quietly and quickly. Nevertheless he did not dare tell them the truth too soon because among so many people there were bound to be some who were stupid and stubborn . . . and it required just one fool to wreck the scheme by spilling it to the proctors guarding them.

Instead he was forced to try to find leaders who he could trust, convince them, and depend on them to convince others. He needed almost a thousand dependable "herdsmen" to be sure of getting his people to follow him when the time came. Yet the very number of confederates he needed was so great as to make certain that somebody would prove weak.

Worse than that, he needed other confederates for a still touchier purpose. Ford and he had agreed on a scheme, weak at best, for gaining time. They were doling out the techniques used by the Families in delaying the symptoms of senility under the pretense that the sum total of these techniques was the "secret." To put over this fraud Barstow had to have the help of the biochemists, gland therapists, specialists in symbiotics and in metabolism, and other experts among the Families, and these in turn had to be prepared for police interrogation by the Families' most skilled psychotechnicians . . . because they had to be able to put over the fraud even under the influence of babble drugs. The hypnotic false indoctrination required for this was enormously more complex than that necessary for a simple block against talking. Thus far the swindle had worked . . . fairly well. But the discrepancies became more hard to explain each day.

Barstow could not keep these matters juggled much longer. The great mass of the Families, necessarily kept in ignorance, were getting out of hand even faster than the public outside. They were rightfully angry at what had been done to them; they expected anyone in authority to do something about it-and do it now!

Barstow's influence over his kin was melting away as fast as that of Ford over the Council.

"It can't be four days," repeated Ford. "More like twelve hours . . . twenty-four at the outside. The Council meets again tomorrow afternoon."

Barstow looked worried. "I'm not sure I can prepare them in so short a time. I may have trouble getting them aboard."

"Don't worry about it," Ford snapped.

"Why not?"

"Because," Ford said bluntly, "any who stay behind will be dead-if they're lucky."

Barstow said nothing and looked away. It was the first time that either one of them had admitted explicitly that this was no relatively harmless piece of political chicanery but a desperate and nearly hopeless attempt to avoid a massacre and that Ford himself was on both sides of the fence.

"Well," Lazarus broke in briskly, "now that you boys have settled that, let's get on with it. I can ground the Chili in-" He stopped and estimated quickly where she would be in orbit, how long it would take him to rendezvous. "-well, by twenty-two Greenwich. Add an hour to play safe. How about seventeen o'clock Oklahoma time tomorrow afternoon? That's today, actually."

The other two seemed relieved. "Good enough," agreed Barstow. "I'll have them in the best shape I can manage."

"All right," agreed Ford, "if that's the fastest it can be done." He thought for a moment. "Barstow, I'll withdraw at once all proctors and government personnel now inside the reservation barrier and shut you off. Once the gate contracts, you can tell them all."

"Right. I'll do my best."

"Anything else before we clear?" asked Lazarus. "Oh, yes-Zack, we'd better pick a place for me to land, or I may shorten a lot of lives with my blast."

"Uh, yes. Make your approach from the west. I'll rig a standard berth marker. Okay?"

"Okay."

"Not okay," denied Ford. "We'll have to give him a pilot beam to come in on."

"Nonsense," objected Lazarus. "I could set her down on top of the Washington Monument."

"Not this time, you couldn't. Don't be surprised at the weather."

As Lazarus approached his rendezvous with the Chili he signaled from the gig; the Chili's transponder echoed, to his relief-he had little faith in gear he had not personally overhauled and a long search for the Chili at this point would have been disastrous.

He figured the relative vector, gunned the gig, flipped, and gunned to brake-homed-in three minutes off estimate, feeling smug. He cradled the gig, hurried inside, and took her down.

Entering the stratosphere and circling two-thirds of the globe took no longer than he had estimated. He used part of the hour's leeway he had allowed himself by being very stingy in his maneuvers in order to spare the worn, obsolescent injection meters. Then he was down in the troposphere and making his approach, with skin temperatures high but not dangerously so. Presently he realized what Ford had meant about the weather. Oklahoma and half of Texas were covered with deep, thick clouds. Lazarus was amazed and somehow pleased; it reminded him of other days, when weather was something experienced rather than controlled. Life had lost some flavor, in his opinion, when the weather engineers had learned how to harness the elements. He hoped that their planet-if they found one!-would have some nice, lively weather.

Then he was down in it and too busy to meditate. In spite of her size the freighter bucked and complained. Whew! Ford must have ordered this little charivari the minute

the time was set-and, at that, the integrators must have had a big low-pressure area close at hand to build on.

Somewhere a pattern controlman was shouting at him; he switched it off and gave all his attention to his approach radar and the ghostly images in the infra-red rectifier while comparing what they told him with his inertial tracker. The ship passed over a miles-wide scar on the landscape-the ruins of the Okla-Orleans Road City. When Lazarus had last seen it, it had been noisy with life. Of all the mechanical monstrosities the human race had saddled themselves with, he mused, those dinosaurs easily took first prize.

Then the thought was cut short by a squeal from his board; the ship had picked up the pilot beam.

He wheeled her in, cut his last jet as she scraped, and slapped a series of switches; the great cargo ports rumbled open and rain beat in.

Eleanor Johnson huddled into herself, half crouching against the storm, and tried to draw her cloak more tightly about the baby in the crook of her left arm. When the storm had first hit, the child had cried endlessly, stretching her nerves taut. Now it was quiet, but that seemed only new cause for alarm.

She herself had wept, although she had tried not to show it. In all her twenty-seven years she had never been exposed to weather like this; it seemed symbolic of the storm that had overturned her life, swept her away from her cherished first home of her own with its homey old-fashioned fireplace, its shiny service cell, its thermostat which she could set to the temperature she liked without consulting others-a tempest which had swept her away between two grim proctors, arrested like some poor psychotic, and landed her after terrifying indignities here in the cold sticky red clay of this Oklahoma field.

Was it true? Could it possibly be true? Or had she not yet borne her baby at all and this was another of the strange dreams she had while carrying it?

But the rain was too wetly cold, the thunder too loud; she could never have slept through such a dream. Then what the Senior Trustee had told them must be true, too-it had to be true; she had seen the ship ground with her own eyes, its blast bright against the black of the storm. She could no longer see it but the crowd around her moved slowly forward; it must in front of her. She was close to the outskirts of the crowd she would be one of the last to get aboard.

It was very necessary to board the ship-Elder Zaccur Barstow had told them with deep solemnness what lay in store for them if they failed to board. She had believed earnestness; nevertheless she wondered how it could possibly be true-could anyone be so wicked, so deeply and terribly wicked as to want to kill anyone as harmless and helpless as herself and her baby?

She was struck by panic terror-suppose there was no room left by the time she got up to the ship? She clutched her baby more tightly; the child cried again at the pressure.

A woman in the crowd moved closer and spoke to her "You must be tired. May I carry the baby for a while?"

"No. No, thank you. I'm all right." A flash of lightning showed the woman's face; Eleanor Johnson recognized her Elder Mary Sperling.

But the kindness of the offer steadied her. She knew now what she must do. If they were filled up and could take no more, she must pass her baby forward, hand to hand over the heads of the crowd. They could not refuse space to anything as little as her baby.

Something brushed her in the dark. The crowd was moving forward again.

When Barstow could see that loading would be finished in a few more minutes he left his post at one of the cargo doors and ran as fast as he could through the splashing sticky mud to the communications shack. Ford had warned him to give notice just before they raised ship; it was necessary to Ford's plan for diversion. Barstow fumbled with an awkward un-powered door, swung it open and rushed up. He set the private combination which should connect him directly to Ford's control desk and pushed the key.

He was answered at once but it was not Ford's face on the screen. Barstow burst out with, "Where is the Administrator? I want to talk with him," before he recognized the face in front of him.

It was a face well known to all the public-Bork Vanning, Leader of the Minority in the Council. "You're talking to the Administrator," Vanning said and grinned coldly. "The new Administrator. Now who the devil are you and why are you calling?"

Barstow thanked all gods, past and present, that recognition was onesided. He cut the connection with one unaimed blow and plunged out of the building.

Two cargo ports were already closed; stragglers were moving through the other two. Barstow hurried the last of them inside with curses and followed them, slammed pell-mell to the control room. "Raise ship!" he shouted to Lazarus. "Fast!"

"What's all the shoutin' fer?" asked Lazarus, but he was already closing and sealing the ports. He tripped the acceleration screamer, waited a scant ten seconds . . . and gave her power.

"Well," he said conversationally six minutes later, "I hope everybody was lying down. If not, we've got some broken bones on our hands. What's that you were saying?"

Barstow told him about his attempt to report to Ford.

Lazarus blinked and whistled a few bars of Turkey in the Straw. "It looks like we've run out of minutes. It does look like it." He shut up and gave his attention to his instruments, one eye on his ballistic track, one on radar-aft.

Chapter 7

LAZARUS HAD his hands full to jockey the Chili into just the right position against the side of the New Frontiers; the overstrained meters made the smaller craft skittish as a young horse. But he did it. The magnetic anchors clanged home; the gas-tight seals slapped into place; and their ears popped as the pressure in the Chili adjusted to that in the giant ship. Lazarus dived for the drop hole in the deck of the control room, pulled himself rapidly hand over hand to the port of contact, and reached the passenger lock of the New Frontiers to find himself facing the skipper-engineer.

The man looked at him and snorted. "You again, eh? Why the deuce didn't you answer our challenge? You can't lock onto us without permission; this is private property. What do you mean by it?"

"It means," said Lazarus, "that you and your boys are going back to Earth a few days early-in this ship."

"Why, that's ridiculous!"

"Brother," Lazarus said gently, his blaster suddenly growing out his left fist, "I'd sure hate to hurt you after you were so nice to me . . . but I sure will, unless you knuckle under awful quick."

The official simply stared unbelievingly. Several of his juniors had gathered behind him; one of them sunfished in the air, started to leave. Lazarus winged him in the leg, at low power; he jerked and clutched at nothing. "Now you'll have to take care of him," Lazarus observed.

That settled it. The skipper called together his men from the announcing system microphone at the passenger lock; Lazarus counted them as they arrived-twenty-nine, a figure he had been careful to learn on his first visit. He assigned two men to hold each of them. Then he took a look at the man he had shot.

"You aren't really hurt, bub," he decided shortly and turned to the skipper-engineer. "Soon as we transfer you, get some radiation salve on that burn. The Red Cross kit's on the after bulkhead of the control room."

"This is piracy! You can't get away with this."

"Probably not," Lazarus agreed thoughtfully. "But I sort of hope we do." He turned his attention back to his job. "Shake it up there! Don't take all day."

The Chili was slowly being emptied. Only the one exit could be used but the pressure of the half hysterical mob behind them forced along those in the bottleneck of the trunk joining the two ships; they came boiling out like bees from a disturbed hive.

Most of them had never been in free fall before this trip; they burst out into the larger space of the giant ship and drifted helplessly, completely disoriented. Lazarus tried to bring order into it by grabbing anyone he could see who seemed to be able to handle himself in zero gravity, ordered him to speed things up by shoving along the helpless ones-shove them anywhere, on back into the big ship, get them out of the way, make room for the thousands more yet to come. When he had conscripted a dozen or so such herdsmen he spotted Barstow in the emerging throng, grabbed him and put him in charge. "Keep 'em moving, just anyhow. I've got to get for'ard to the control room. If you spot Andy Libby, send him after me."

A man broke loose, from the stream and approached Barstow. "There's a ship trying to lock onto ours. I saw it through a port."

"Where?" demanded Lazarus.

The man was handicapped by slight knowledge of ships and shipboard terms, but he managed to make himself understood. "I'll be back," Lazarus told Barstow. "Keep 'em moving-and don't let any of those babies get away-our guests there." He holstered his blaster and fought his way back through the swirling mob in the bottleneck.

Number three port seemed to be the one the man had meant. Yes, there was something there. The port had an armor-glass bull's-eye in it, but instead of stars beyond Lazarus saw a lighted space. A ship of some sort had locked against it.

Its occupants either had not tried to open the Chili's port or just possibly did not know how. The port was not locked from the inside; there had been no reason to bother. It should have opened easily from either side once pressure was balanced . . . which the tell-tale, shining green by the latch, showed to be the case.

Lazarus was mystified.

Whether it was a traffic control vessel, a Naval craft, or something else, its presence was bad news. But why didn't, they simply open the door and walk in? He was tempted to lock the port from the inside, hurry and lock all the others, finish loading and try to run for it.

But his monkey ancestry got the better of him; he could not leave alone something he did not understand. So he compromised by kicking the blind latch into place that would keep them from opening the port from outside, then slithered cautiously alongside the bull's-eye and sneaked a peep with one eye.

He found himself staring at Slayton Ford.

He pulled himself to one side, kicked the blind latch open, pressed the switch to open the port. He waited there, a toe caught in a handihold, blaster in one hand, knife in the other.

One figure emerged. Lazarus saw that it was Ford, pressed the switch again to close the port, kicked the blind latch into place, while never taking his blaster off his visitor. "Now what the hell?" he demanded. "What are you doing here? And who else is here? Patrol?"

"I'm alone."

"Huh?"

"I want to go with you . . . if you'll have me."

Lazarus looked at him and did not answer. Then he went back to the bull's-eye and inspected all that he could see. Ford appeared to be telling the truth, for no one else was in sight. But that was not what held Lazarus' eye.

Why the ship wasn't a proper deep-space craft at all. It did not have an air1ock but merely a seal to let it fasten to a larger ship; Lazarus was staring right into the body of the craft. It looked like-yes, it was a "Joy-boat Junior," a little private strato-yacht, suitable only for point-to-point trajectory, or at the most for rendezvous with a satellite provided the satellite could refuel it for the return leg.

There was no fuel for it here. A lightning pilot possibly could land that tin toy without power and still walk away from it provided he had the skill to play Skip-to-M'Lou in and out of the atmosphere while nursing his skin temperatures-but Lazarus wouldn't want to try it. No, sir! He turned to Ford. "Suppose we turned you down. How did you figure on getting back?"

"I didn't figure on it," Ford answered simply.

"Mmm-- Tell me about it, but make it march; we're minus on minutes."

Ford had burned all bridges. Turned out of office only hours earlier, he had known that, once all the facts came out, life-long imprisonment in Coventry was the best he could hope for-if he managed to avoid mob violence or mindshattering interrogation.

Arranging the diversion was the thing that finally lost him his thin margin of control. His explanations for his actions were not convincing to the Council. He had excused the storm and the withdrawing of proctors from the reservation as a drastic attempt to break the morale of the Families-a possible excuse but not too plausible. His orders to Naval craft, intended to keep them away from the New Frontiers, had apparently not been associated in anyone's mind with the Howard Families affair; nevertheless the apparent lack of sound reason behind them had been seized on by the opposition as another weapon to bring him down. They were watching for anything to

catch him out-one question asked in Council concerned certain monies from the Administrator's discretionary fund which had been paid indirectly to one Captain Aaron Sheffield; were these monies in fact expended in the public interest?

Lazarus' eyes widened. "You mean they were onto me?"

"Not quite. Or you wouldn't be here. But they were close behind you. I think they must have had help from a lot of my people at the last."

"Probably. But we made it, so let's not fret. Come on. The minute everybody is out of this ship and into the big girl, we've got to boost." Lazarus turned to leave.

"You're going to let me go along?"

Lazarus checked his progress, twisted to face Ford. "How else?" He had intended at first to send Ford down in the Chili. It was not gratitude that changed his mind, but respect. Once he had lost office Ford had gone straight to Huxley Field north of Novak Tower, cleared for the vacation satellite Monte Carlo, and had jumped for the New Frontiers instead. Lazarus liked that. "Go for broke" took courage and character that most people didn't have. Don't grab a toothbrush, don't wind the cat-just do it! "Of course you're coming along," he said easily: "You're my kind of boy, Slayton."

The Chili was more than half emptied now but the spaces near the interchange were still jammed with frantic mobs. Lazarus cuffed and shoved his way through, trying not to bruise women and children unnecessarily but not letting the possibility slow him up. He scrambled through the connecting trunk with Ford hanging onto his belt, pulled aside once they were through and paused in front of Barstow.

Barstow stared past him. "Yeah, it's him," Lazarus confirmed. "Don't stare-it's rude. He's going with us. Have you seen Libby?"

"Here I am, Lazarus." Libby separated himself from the throng and approached with the ease of a veteran long used to free fall. He had a small satchel strapped to one wrist.

"Good. Stick around. Zack, how long till you're all loaded?"

"God knows. I can't count them. An hour, maybe."

"Make it less. If you put some husky boys on each side of the hole, they can snatch them through faster than they are coming. We've got to shove out of here a little sooner than is humanly possible. I'm going to the control room. Phone me there the instant you have everybody in, our guests here out, and the Chili broken loose. Andy! Slayton! Let's go."

"Later, Andy. We'll talk when we get there?'

Lazarus took Slayton Ford with him because he did not know what else to do with him and felt it would be better to keep him out of sight until some plausible excuse could be dreamed up for having him along. So far no one seemed to have looked at him twice, but once they quieted down, Ford's well-known face would demand explanation.

The control room was about a half mile forward of where they had entered the ship. Lazarus knew that there was a passenger belt leading to it but he didn't have time to look for it; he simply took the first passageway leading forward. As soon as they got away from the crowd they made good time even though Ford was not as skilled in the fishlike maneuvers of free fall as were the other two.

Once there, Lazarus spent the enforced wait in explaining to Libby the extremely ingenious but unorthodox controls of the starship. Libby was fascinated and soon was

putting himself through dummy runs. Lazarus turned to Ford. "How about you, Slayton? Wouldn't hurt to have a second relief pilot."

Ford shook his head. "I've been listening but I could never learn it. I'm not a pilot"

"Huh? How did you get here?"

"Oh. I do have a license, but I haven't had time to keep in practice. My chauffeur always pilots me. I haven't figured a trajectory in many years."

Lazarus looked him over. "And yet you plotted an orbit rendezvous? With no reserve fuel?"

"Oh, that. I had to."

"I see. The way the cat learned to swim. Well, that's one way." He turned back to speak to Libby, was interrupted by Barstow's voice over the announcing system:

"Five minutes, Lazarus! Acknowledge."

Lazarus found the microphone, covered the light under it with his hand and answered, "Okay, Zack! Five minutes." Then he said, "Cripes, I haven't even picked a course. What do you think, Andy? Straight out from Earth to shake the busies off our tail? Then pick a destination? How about it, Slayton? Does that fit with what you ordered Navy craft to do? "No, Lazarus, no!" protested Libby. "Huh? Why not?"

"You should head right straight down for the Sun."

"For the Sun? For Pete's sake, why?"

"I tried to tell you when I first saw you. It's because of the space drive you asked me to develop."

"But, Andy, we haven't got it."

"Yes, we have. Here." Libby shoved the satchel he had been carrying toward Lazarus.

Lazarus opened it.

Assembled from odd bits of other equipment, looking more like the product of a boy's workshop than the output of a scientist's laboratory, the gadget which Libby referred to as a "space drive" underwent Lazarus' critical examination. Against the polished sophisticated perfection of the control room it looked uncouth, pathetic, ridiculously inadequate.

Lazarus poked at it tentatively. "What is it?' he asked. "Your model?"

"No, no. That's it. That's the space drive."

Lazarus looked at the younger man not unsympathetically. "Son," he asked slowly, "have you come unzipped?"

"No, no, no!" Libby sputtered. "I'm as sane as you are. This is a radically new notion. That's why I want you to take us down near the Sun. If it works at all, it will work best where light pressure is strongest."

"And if it doesn't work," inquired Lazarus, "what does that make us? Sunspots?"

"Not straight down into the Sun. But head for it now and as soon as I can work out the data, I'll give you corrections to warp you into your proper trajectory. I want to pass the Sun in a very fiat hyperbola, well inside the orbit of Mercury, as close to the photosphere as this ship can stand. I don't know how close that is, so I couldn't work it out ahead of time. But the data will be here in the ship and there will be time to correlate them as we go."

Lazarus looked again at the giddy little cat's cradle of apparatus. "Andy . . . if you are sure that the gears in your head are still meshed, I'll take a chance. Strap down, both

of you." He belted himself into the pilot's couch and called Barstow. "How about it, Zack?" "Right now!"

"Hang on tight!" With one hand Lazarus covered a light in his leftside control panel; acceleration warning shrieked throughout the ship. With the other he covered another; the hemisphere in front of them was suddenly spangled with the starry firmament, and Ford gasped.

Lazarus studied it. A full twenty degrees of it was blanked out by the dark circle of the nightside of Earth. "Got to duck around a corner, Andy. We'll use a little Tennessee windage." He started easily with a quarter gravity, just enough to shake up his passengers and make them cautious, while he started a slow operation of precessing the enormous ship to the direction he needed to shove her in order to get out of Earth's shadow. He raised acceleration to a half gee, then to a gee.

Earth changed suddenly from a black silhouette to a slender silver crescent as the half-degree white disc of the Sun came out from behind her. "I want to clip her about a thousand miles out, Slipstick," Lazarus said tensely, "at two gees. Gimme a temporary vector." Libby hesitated only momentarily and gave it to him. Lazarus again sounded acceleration warning and boosted to twice Earth-normal gravity. Lazarus was tempted to raise the boost to emergency-full but he dared not do so with a shipload of groundlubbers; even two gees sustained for a long period might be too much of a strain for some of them. Any Naval pursuit craft ordered to intercept them could boost at much higher gee and their selected crews could stand it. But it was just a chance they would have to take . . . and anyhow, he reminded himself, a Navy ship could not maintain a high boost for long; her mile-seconds were strictly limited by her reaction-mass tanks.

The New Frontiers had no such old-fashioned limits, no tanks; her converter accepted any mass at all, turned it into pure radiant energy. Anything would serve-meteors, cosmic dust, stray atoms gathered in by her sweep field, or anything from the ship herself, such as garbage, dead bodies, deck sweepings, anything at all. Mass was energy. In dying, each tortured gram gave up nine hundred million trillion ergs of thrust. The crescent of Earth waxed and swelled and slid off toward the left edge of the hemispherical screen while the Sun remained dead ahead. A little more than twenty minutes later, when they were at closest approach and the crescent, now at half phase, was sliding out of the bowl screen, the ship-to-ship circuit came to life. "New Frontiers!" a forceful voice sounded. "Maneuver to orbit and lay to! This is an official traffic control order."

Lazarus shut it off. "Anyhow," he said cheerfully, "if they try to catch us, they won't like chasing us down into the Sun! Andy, it's a clear road now and time we corrected, maybe; You want to compute it? Or will you feed me the data?"

"I'll compute it," Libby answered. He had already discovered that the ship's characteristics pertinent to astrogation, including her "black body" behavior, were available at both piloting stations. Armed with this and with the running data from instruments he set out to calculate the hyperboloid by which he intended to pass the Sun. He made a half-hearted attempt to use the ship's ballistic calculator but it baffled him; it was a design he was not used to, having no moving parts of any sort, even in the exterior controls. So he gave it up as a waste of time and fell back on the strange talent for figures lodged in his brain. His brain had no moving parts, either, but he was used to it.

Lazarus decided to check on their popularity rating. He switched on the ship-to-ship again, found that it was still angrily squawking, although a little more faintly. They knew his own name now-one of his names-which caused him to decide that the boys in the Chili must have called traffic control almost at once. He tut-tutted sadly when he learned that "Captain Sheffield's" license to pilot had been suspended. He shut it off and tried the Naval frequencies . . . then shut them off also when he was able to raise nothing but code and scramble, except that the words "New Frontiers" came through once in clear.

He said something about "sticks and stones may break my bones-" and tried another line of investigation. Both by long-range radar and by paragravitic detector he could tell that there were ships in their neighborhood but this alone told him very little; there were bound to be ships this close to Earth and he had no easy way to distinguish, from these data alone, an unarmed liner or freighter about her lawful occasions from a Naval cruiser in angry pursuit.

But the New Frontiers had more resources for analyzing what was around her than had an ordinary ship; she had been specially equipped to cope unassisted with any imaginable strange conditions. The hemispherical control room in which they lay was an enormous multi-screened television receiver which could duplicate the starry heavens either in view-aft or view-forward at the selection of the pilot. But it also had other circuits, much more subtle; simultaneously or separately it could act as an enormous radar screen as well, displaying on it the blips of any body within radar range.

But that was just a starter. Its inhuman senses could apply differential analysis to doppler data and display the result in a visual analog. Lazarus studied his lefthand control bank, tried to remember everything be had been told about it, made a change in the set up.

The simulated stars and even the Sun faded to dimness; about a dozen lights shined brightly.

He ordered the board to check them for angular rate; the bright lights turned cherry red, became little comets trailing off to pink tails-all but one, which remained white and grew no tail. He studied the others for a moment, decided that their vectors were such that they would remain forever strangers, and ordered the board to check the line-of-sight doppler on the one with a steady bearing.

It faded to violet, ran halfway through the spectrum and held steady at blue-green. Lazarus thought a moment, subtracted from the inquiry their own two gees of boost; it turned white again. Satisfied he tried the same tests with view-aft.

"Lazarus-"

"Yeah, Lib?"

"Will it interfere with what you are doing if I give you the corrections now?"

"Not at all. I was just taking a look-see. If this magic lantern knows what it's talking about, they didn't manage to get a pursuit job on our tail in time."

"Good. Well, here are the figures . . ."

"Feed 'em in yourself, will you? Take the conn for a while. I want to see about some coffee and sandwiches. How about you? Feel like some breakfast?"

Libby nodded absent-mindedly, already starting to revise the ship's trajectory. Ford spoke up eagerly, the first word he had uttered in a long, time. "Let me get it. I'd be glad to." He seemed pathetically anxious to be useful.

"Mmm . . . you might get into some kind of trouble, Slayton. No matter what sort of a selling job Zack did, your name is probably 'Mud' with most of the members. I'll phone aft and raise somebody."

"Probably nobody would recognize me under these circumstances," Ford argued. "Anyway, it's a legitimate errand-I can explain that."

Lazarus saw from his face that it was necessary to the man's morale. "Okay . . . if you can handle yourself under two gees."

Ford struggled heavily up out of the acceleration couch he was in. "I've got space legs. What kind of sandwiches?"

"I'd say corned beef, but it would probably be some damned substitute. Make mine cheese, with rye if they've got it, and use plenty of mustard. And a gallon of coffee. What are you having, Andy?"

"Me? Oh, anything that is convenient,"

Ford started to leave, bracing himself heavily against double weight, then he added, "Oh-it might save time if you could tell me where to go." -

"Brother," said Lazarus, "if this ship isn't pretty well crammed with food, we've all made a terrible mistake. Scout around. You'll find some."

Down, down, down toward the Sun, with speed increasing by sixty-four feet per second for every second elapsed. Down and still down for fifteen endless hours of double weight. During this time they traveled seventeen million miles and reached the inconceivable speed of six hundred and forty miles per second. The figures mean little-think instead of New York to Chicago, a half hour's journey even by stratomail, done in a single heartbeat.

Barstow had a rough time during heavy weight. For all of the others it was a time to lie down, try hopelessly to sleep, breathe painfully and seek new positions in which to rest from the burdens of their own bodies. But Zaccur Barstow was driven by his sense of responsibility; he kept going though the Old Man of the Sea sat on his neck and raised his weight to three hundred and fifty pounds.

Not that he could do anything for them, except crawl wearily from one compartment to another and ask about their welfare. Nothing could be done, no organization to relieve their misery was possible, while high boost continued. They lay where they could, men, women, and children crowded together like cattle being shipped, without even room to stretch out, in spaces never intended for such extreme overcrowding.

The only good thing about it, Barstow reflected wearily, was that they were all too miserable to worry about anything but the dragging minutes. They were too beaten down to make trouble. Later on there would be doubts raised, he was sure, about the wisdom of fleeing; there would be embarrassing questions asked about Ford's presence in the ship, about Lazarus' peculiar and sometimes shady actions, about his own contradictory role. But not yet.

He really must, he decided reluctantly, organize a propaganda campaign before trouble could grow. If it did-and it surely would if he didn't move to offset it, and . . . well, that would be the last straw. It would be.

He eyed a ladder in front of him, set his teeth, and struggled up to the next deck. Picking his way through the bodies there he almost stepped on a woman who was

clutching a baby too tightly to her. Barstow noticed that the infant was wet and soiled and he thought of ordering its mother to take care of the matter, since she seemed to be awake. But he let it go-so far as he knew there was not a clean diaper in millions of miles. Or there might be ten thousand of them on the deck above . . . which seemed almost as far away.

He plodded on without speaking to her. Eleanor Johnson had not been aware of his concern. After the first great relief at realizing that she and her baby were safe inside the ship she had consigned all her worries to her elders and now felt nothing but the apathy of emotional reaction and of inescapable weight. Baby had cried when that awful weight had hit them, then had become quiet, too quiet. She had roused herself enough to listen for its heartbeat; then, sure that he was alive, she had sunk back into stupor.

Fifteen hours out, with the orbit of Venus only four hours away, Libby cut the boost. The ship plunged on, in free fall, her terrific speed still mounting under the steadily increasing pull of the Sun. Lazarus was awakened by no weight. He glanced at the copilot's couch and said, "On the curve?"

"As plotted."

Lazarus looked him over. "Okay, I've got it. Now get out of here and get some sleep. Boy, you look like a used towel."

"I'll just stay here and rest."

"You will like hell. You haven't slept even when I had the com; if you stay here, you'll be watching instruments and figuring. So beat it! Slayton, chuck him out."

Libby smiled shyly and left. He found the spaces abaft the control room swarming with floating bodies but he managed to find an unused corner, passed his kilt belt through a handihold, and slept at once.

Free fall should have been as great a relief to everyone else; it was not, except to the fraction of one per cent who were salted spacemen. Free-fall nausea, likes seasickness, is a joke only to those not affected; it would take a Dante to describe a hundred thousand cases of it. There were anti-nausea drugs aboard, but they were not found at once; there were medical men among the Families, but they were sick, too. The misery went on.

Barstow, himself long since used to free flight, floated forward to the control room to pray relief for the less fortunate. "They're in bad shape," he told Lazarus. "Can't you put spin on the ship and give them some let-up? It would help a lot."

"And it would make maneuvering difficult, too. Sorry. Look, Zack, a lively ship will be more important to them in a pinch than just keeping their suppers down. Nobody dies from seasickness anyhow . . . they just wish they could."

The ship plunged on down, still gaining speed as it fell toward the Sun. The few who felt able continued slowly to assist the enormous majority who were ill.

Libby continued to sleep, the luxurious return-to-the-womb sleep of those who have learned to enjoy free fall. He had had almost no sleep since the day the Families had been arrested; his overly active mind had spent all its time worrying the problem of a new space drive.

The big ship precessed around him; he stirred gently and did not awake. It steadied in a new attitude and the acceleration warning brought him instantly awake. He oriented himself, placed himself flat against the after bulkhead, and waited; weight hit him almost at once-three gees this time and he knew that something was badly wrong. He

had gone almost a quarter mile aft before he found a hide-away; nevertheless he struggled to his feet and started the unlikely task of trying to climb that quarter mile-now straight up-at three times his proper weight, while blaming himself for having let Lazarus talk him into leaving the control room.

He managed only a portion of the trip . . . but an heroic portion, one about equal to climbing the stairs of a ten-story building while carrying a man on each shoulder . . . when resumption of free fall relieved him. He zipped the rest of the way like a salmon returning home and was in the control room quickly. "What happened?"

Lazarus said regretfully, "Had to vector, Andy." Slayton Ford said nothing but looked worried.

"Yes, I know. But why?' Libby was already strapping himself against the copilot's couch while studying the astrogational situation.

"Red lights on the screen." Lazarus described the display, giving coordinates and relative vectors.

Libby nodded thoughtfully. "Naval craft. No commercial vessels would be in such trajectories. A minelaying bracket."

"That's what I figured. I didn't have time to consult you; I had to use enough mile-seconds to be sure they wouldn't have boost enough to reposition on us."

"Yes, you had to." Libby looked worried. "I thought we were free of any possible Naval interference."

"They're not ours," put in Slayton Ford. "They can't be ours no matter what orders have been given since I-uh, since I left. They must be Venerian craft."

"Yeah," agreed Lazarus, "they must be. Your pal, the new Administrator, hollered to Venus for help and they gave it to him-just a friendly gesture of interplanetary good will."

Libby was hardly listening. He was examining data and processing it through the calculator inside his skull. "Lazarus. . . this new orbit isn't too good."

"I know," Lazarus agreed sadly. "I had to duck . . . so I ducked the only direction they left open to me-closer to the Sun."

"Too close, perhaps."

The Sun is not a large star, nor is it very hot. But it is hot with reference to men, hot enough to strike them down dead if they are careless about tropic noonday ninety-two million miles away from it, hot enough that we who are reared under its rays nevertheless dare not look directly at it.

At a distance of two and a half million miles the Sun beats out with a flare fourteen hundred times as bright as the worst ever endured in Death Valley, the Sahara, or Aden. Such radiance would not be perceived as heat or light; it would be death more sudden than the full power of a blaster. The Sun is a hydrogen bomb, a naturally occurring one; the New Frontiers was skirting the limits of its circle of total destruction.

It was hot inside the ship. The Families were protected against instant radiant death by the armored walls but the air temperature continued to mount. They were relieved of the misery of free fall but they were doubly uncomfortable, both from heat and from the fact that the bulkheads slanted crazily; there was no level place to stand or lie, The ship was both spinning on its axis and accelerating now; it was never intended to do both at once and the addition of the two accelerations, angular and linear, met "down" the direction where outer and after bulkheads met. The ship was being spun through

necessity to permit some of the impinging radiant energy to re-radiate on the "cold" side. The forward acceleration was equally from necessity, a forlorn-hope maneuver to pass the Sun as far out as possible and as fast as possible, in order to spend least time at perihelion, the point of closest approach.

It was hot in the control room. Even Lazarus had voluntarily shed his kilt and shucked down to Venus styles. Metal was hot to the touch. On the great stellarium screen an enormous circle of blackness marked where the Sun's disc should have been; the receptors had cut out automatically at such a ridicubus demand.

Lazarus repeated Libby's last words. "'Thirty-seven minutes to perihelion.' We can't take it, Andy. The ship can't take it."

"I know. I never intended us top this close."

"Of course you didn't. Maybe I shouldn't have maneuvered. Maybe we would have missed the mines anyway. Oh, well-" Lazarus squared his shoulders and filed it with the might-have-beens. "It looks to me, son, about time to try out your gadget." He poked a thumb at Libby's uncouth-looking "space drive." "You say that all you have to do is to hook up that one connection?"

"That is what is intended. Attach that one lead to any portion of the mass to be affected. Of course I don't really know that it will work," Libby admitted. "There is no way to test it."

"Suppose it doesn't?'

"There are three possibilities." Libby answered methodically. "In the first place, nothing may happen."

"In which case we fry."

"In the second place, we and the ship may cease to exist as mattei as we know it."

"Dead, you mean. But probably a pleasanter way."

"I suppose so. I don't know what death is. In the third place, if my hypotheses are correct, we will recede from the Sun at a speed just under that of light."

Lazarus eyed the gadget and wiped sweat from his shoulders. "It's getting hotter, Andy. Hook it up-and it has better be good!"

Andy hooked it up.

"Go ahead," urged Lazarus. "Push the button, throw the switch, cut the beam. Make it march."

"I have," Libby insisted. "Look at the Sun."

"Huh? Oh!"

The great circle of blackness which had marked the position of the Sun on the star-speckled stellarium was shrinking rapidly. In a dozen heartbeats it lost half its diameter; twenty seconds later it had dwindled to a quarter of its original width.

"It worked," Lazarus said softly. "Look at it, Slayton! Sign me up as a purple baboon-it worked!"

"I rather thought it would," Libby answered seriously. "It should, you know."

"Hmm- That may be evident to you, Andy. It's not to me. How fast are we going?"

"Relative to what?"

"Uh, relative to the Sun."

"I haven't had opportunity to measure it, but it seems to be just under the speed of light. It can't be greater."

"Why not? Aside from theoretical considerations."

"We still see." Libby pointed at the stellarium bowl.

"Yeah, so we do," Lazarus mused. "Hey! We shouldn't be able to. I ought to doppler out."

Libby looked blank, then smiled. "But it dopplers right back in. Over on that side, toward the Sun, we're seeing by short radiations stretched to visibility. On the opposite side we're picking up something around radio wavelengths dopplered down to light."

"And in between?"

"Quit pulling my leg, Lazarus. I'm sure you can work out relatively vector additions quite as well as I can."

"You work it out," Lazarus said firmly. "I'm just going to sit here and admire it. Eh, Slayton?"

"Yes. Yes indeed."

Libby smiled politely. "We might as well quit wasting mass on the main drive." He sounded the warner, then cut the drive. "Now we can return to normal conditions." He started to disconnect his gadget.

Lazarus said hastily, "Hold it, Andy! We aren't even outside the orbit of Mercury yet. Why put on the brakes?"

'Why, this won't stop us. We have acquired velocity; we will keep it."

Lazarus pulled at his cheek and stared. "Ordinarily I would agree with you. First Law of Motion. But with this pseudospeed I'm not so sure. We got it for nothing and we haven't paid for it-in energy, I mean. You seem to have declared a holiday with respect to inertia; when the holiday is over, won't all that free speed go back where it came from?"

"I don't think so," Libby answered. "Our velocity isn't 'pseudo' anything; it's as real as velocity can be. You are attempting to apply verbal anthropomorphic logic to a field in which it is not pertinent. You would not expect us to be transported instantaneously back to the lower gravitational potential from which we started, would you?"

"Back to where you hooked in your space drive? No, we've moved."

"And we'll keep on moving. Our newly acquired gravitational potential energy of greater height above the Sun is no more real than our present kinetic energy of velocity. They both exist."

Lazarus looked baffled. The expression did not suit him. '~I guess you've got me, Andy. No matter how I slice it, we seemed to have picked up energy from somewhere. But where? When I went to school, they taught me to honor the Flag, vote the straight party ticket, and believe in the law of conservation of energy. Seems like you've violated it. How about it?"

"Don't worry about it," suggested Libby. "The so-called law of conservation of energy was merely a working hypothesis, unproved and unprovable, used to describe gross phenomena. Its terms apply only to the older, dynamic concept of the world. In a plenum conceived as a static grid of relationships, a 'violation' of that 'law' is nothing more startling than a discontinuous function, to be noted and described. That's what I did. I saw a discontinuity in the mathematical model of the aspect of mass-energy called inertia. I applied it. The mathematical model turned out to be similar to the real world. That was the only hazard, really-one never knows that a mathematical model is similar to the real world until you try it."

"Yeah, yeah, sure, you can't tell the taste till you bite it- but, Andy, I still don't see what caused it!" He turned toward Ford. "Do you, Slayton?"

Ford shook his head. "No. I would like to know . . . but I doubt if I could understand it."

"You and me both. Well, Andy?"

Now Libby looked baffled. ~'But, Lazarus, causality has nothing to do with the real plenum. A fact simply is. Causality is merely an old-fashioned-postulate of a pre-scientific philosophy."

"I guess," Lazarus said slowly, "I'm old-fashioned."

Libby said nothing. He disconnected his apparatus.

The disc of black continued to shrink. When it had shrunk to about one sixth its greatest diameter, it changed suddenly from black to shining white, as the ship's distance from the Sun again was great enough to permit the receptors to manage the load.

Lazarus tried to work out in his head the kinetic energy of the ship-one half the square of the velocity of light (minus a pinch, he corrected) times the mighty tonnage of - the New Frontiers. The answer did not comfort him, whether he called it ergs or apples.

Chapter 8

"FIRST THINGS FIRST," interrupted Barstow. "I'm as fascinated by the amazing scientific aspects of our present situation as any of you, but we've got work to do. We've got to plan a pattern for daily living at once. So let's table mathematical physics and talk about organization."

He was not speaking to the trustees but to his own personal lieutenants, the key people in helping him put over the complex maneuvers which had made their escape possible-Ralph Schultz, Eve Barstow, Mary Sperling, Justin Foote, Clive Johnson, about a dozen others.

Lazarus and Libby were there. Lazarus had left Slayton Ford to guard the control room, with orders to turn away all visitors and, above all, not to let anyone touch the controls. It was a make-work job, it being Lazarus' notion of temporary occupational therapy. He bad sensed in Ford a mental condition that he did not like. Ford seemed to have withdrawn into himself. He answered when spoken to, but that was all. It worried Lazarus.

"We need an executive," Barstow went on, "someone who, for the time being will have very broad powers to give orders and have them carried out. He'll have to make decisions, organize us, assign duties and responsibilities, get the internal economy of the ship working. It's a big job and I would like to have our brethren hold an election and do it democratically. That'll have to wait; somebody has to give orders now. We're wasting food and the ship is-well, I wish you could have seen the ***'fre$ier*** I tried to use today."

"Zaccur . . .

"Yes, Eve?"

"It seems to me that the thing to do is to put it up to the trustees. We haven't any authority; we were just an emergency group for something that is finished now."

"Ahrruniph-" It was Justin Foote, in tones as dry and formal as his face. "I differ somewhat from our sister. The trustees are not conversant with the full background; it would take time we can ill afford to put them into the picture, as it were, before they would be able to judge the matter. Furthermore, being one of the trustees myself, I am able to say without bias that the trustees, as an organized group, can have no jurisdiction because legally they no longer exist."

Lazarus looked interested. "How do you figure that, Justin?"

"Thusly: the board of trustees were the custodians of a foundation which existed as a part of and in relation to a society. The trustees were never a government; their sole duties had to do with relations between the Families and the rest of that society. With the ending of relationship between the Families and terrestrial society, the board of trustees, ipso facto, ceases to exist. it is one with history. Now we in this ship are not yet a society, we are an anarchistic group. This present assemblage has as much-or as little-authority to initiate a society as has any part group.

Latarus cheered and clapped. "Justin," he applauded, "that is the neatest piece of verbal juggling I've heard in a century. Let's get together sometime and have a go at solipsism."

Justin Foote looked pained. "Obviously-" he began.

"Nope! Not another word! You've convinced me, don't spoil it. If that's how it is, let's get busy and pick a bull moose. How about you, Zack? You look like the logical candidate."

Barstow shook his head. "I know my limitations. I'm an engineer, not a political executive; the Families were just a hobby with me. We need an expert in social administration."

When Barstow had convinced them that he meant it, other names were proposed and their qualifications debated at length. In a group as large as the Families there were many who had specialized in political science, many who had served in public office with credit.

Lazarus listened; he knew four of the candidates. At last he got Eve Barstow aside and whispered with her. She looked startled, then thoughtful, finally nodded.

She asked for the floor. "I have a candidate to propose," she began in her always gentle tones, "who might not ordinarily occur to you, but who is incomparably better fitted, by temperament, training, and experience, to do this job than is anyone as yet proposed. For civil administrator of the ship I nominate Slayton Ford."

They were flabbergasted into silence, then everybody tried to talk at once. "Has Eve lost her mind? Ford is back on Earth!"-"No, no, he's not. I've seen him-here-in the ship."-"But it's out of the question!"-"Him? The Families would never accept him!"-"Even so, he's not one of us."

Eve patiently kept the floor until they quieted. "I know my nomination sounds ridiculous and I admit the difficulties. But consider the advantages. We all know Slayton Ford by reputation and by performance. You know, every member of the Families knows, that Ford is a genius in his field. It is going to be hard enough to work out plans for living together in this badly overcrowded ship; the best talent we can draw on will be no more than enough."

Her words impressed them because Ford was that rare thing in history, a statesman whose worth was almost universally acknowledged in his own lifetime.

Contemporary historians credited him with having saved the Western Federation in at least two of its major development crises; it was his misfortune rather than his personal failure that his career was wrecked on a crisis not solvable by ordinary means.

"Eve," said Zaccur Barstown "1 agree with your opinion of Ford and I myself would be glad to have him as our executive. But how about all of the others? To the Families-everyone except ourselves here present-Mr. Administrator Ford symbolizes the persecution they have suffered. I think that makes him an impossible candidate."

Eve was gently stubborn. "I don't think so. We've already agreed that we will have to work up a campaign to explain away a lot of embarrassing facts about the last few days. Why don't we do it thoroughly and convince them that Ford is a martyr who sacrificed himself to save them? He is, you know."

"Mmm . . . yes, he is. He didn't sacrifice himself primarily on our account, but there is no doubt in my mind that his personal sacrifice saved us. But whether or not we can convince the others, convince them strongly enough that they will accept him and take orders from him . . . when he is now a sort of personal devil to them-well, I just don't know. I think we need expert advice. How about it, Ralph? Could it be done?'

Ralph Schultz hesitated. "The truth of a proposition has little or nothing to do with its psychodynamics. The notion that 'truth will prevail' is merely a pious wish; history doesn't show it. The fact that Ford really is a martyr to whom we owe gratitude is irrelevant to the purely technical question you put to me." He stopped to think. "But the proposition per se has certain sentimentally dramatic aspects which lend it to propaganda manipulation, even in the face of the currently accepted strong counterproposition. Yes . . . yes, I think it could be sold."

"How long would it take you to put it over?"

"Mmm . . . the social space involved is both 'tight' and 'hot' in the jargon we use; I should be able to get a high positive 'k' factor on the chain reaction-if it works at all. But it's an unsurveyed field and I don't know what spontaneous rumors are running around the ship. If you decide to do this, I'll want to prepare some rumors before we adjourn, rumors to repair Ford's reputation-then about twelve hours from now I can release another one that Ford is actually aboard . Because he intended from the first to throw his lot in with us."

"Ub, I hardly think he did, Ralph." -

"Are you sure, Zaccur?"

"No, but- Well . . .

"You see? The truth about his original intentions is a secret between him - and his God. You don't know and neither do I. But the dynamics of the proposition are a separate matter. Zaccur, by the time my rumor gets back to you three or four times, even you will begin to wonder." The psychornetrician paused to stare at nothing while he consulted an intuition refined by almost a century of mathematical study of human behavior. "Yes, it will work. If you all want to do it, you will be able to make a public announcement inside of twenty-four hours."

"I so move!" someone called out.

A few minutes later Barstow had Lazarus fetch Ford to the meeting place. Lazarus did not explain to him why his presence was required; Ford entered the compartment like

a man come to judgment, one with a bitter certainty that the outcome will be against him. His manner showed fortitude but not hope. His eyes were unhappy.

Lazarus had studied those eyes during the long hours they had been shut up together in the control room. They bore an expression Lazarus had seen many times before in his long life. The condemned man who has lost his final appeal, the fully resolved suicide, little furry things exhausted and defeated by struggle with the unrelenting steel of traps-the eyes of each of these hold a single expression, born of hopeless conviction that his time has run out.

Ford's eyes had it.

Lazarus had seen it grow and had been puzzled by it. To be sure, they were all in a dangerous spot, but Ford no more I than the rest. Besides, awareness of danger brings a live expression; why should Ford's eyes hold the signal of death? Lazarus finally decided that it could only be because Ford had reached the dead-end state of mind where suicide is necessary. But why? Lazarus mulled it over during the long watches in the control room and reconstructed the logic of it to his own satisfaction. Back on Earth, Ford had been important among his own kind, the short-lived. His paramount position had rendered him then almost immune to the feeling of defeated inferiority which the long-lived stirred up in normal men. But now he was the only ephemeral in a race of Methuselas.

Ford had neither the experience of the elders nor the expectations of the young; he felt inferior to them both, hopelessly outclassed. Correct or not, he felt himself to be a useless pensioner, an impotent object of charity.

To a person of Ford's busy useful background the situation was intolerable. His very pride and strength of character were driving him to suicide.

As he came into the conference room Ford's glance sought out Zaccur Barstow.

"You sent for me, sir?'

"Yes, Mr. Administrator." Barstow explained briefly the situation and the responsibility thel wanted him to assume. "You are under no compulsion," he concluded, "but we need your services if you are willing to serve. Will you?"

Lazarus' heart felt light as he watched Ford's expression change to amazement. "Do you really mean that?" Ford answered slowly. "You're not joking with me?"

"Most certainly we mean it!"

Ford did not answer at once and when he did, his answer seemed irrelevant.

"May I sit down?"

A place was found for him; he settled heavily into the chair and covered his face with his hands. No one spoke. Presently he raised his head and said in a steady voice, "If that is your will, I will do my best to carry out your wishes."

The ship required a captain as well as a civil administrator. Lazarus had been, up to that time, her captain in a very practical, piratical sense but he balked when Barstow proposed that it be made a formal title. "Huh uh! Not me. I may just spend this trip playing checkers. Libby's your man. Seriousminded, conscientious, former naval officer-just the type for the job."

Libby blushed as eyes turned toward him. "Now, really," he protested, "while it is true that I have had to command ships in the course of my duties, it has never suited me. I am a staff officer by temperament. I don't feel like a commanding officer."

"Don't see how you can duck out of it," Lazarus persisted. "You invented the go-fast gadget and you are the only one who understands how it works. You've got yourself a job, boy."

"But that does not follow at all," pleaded Libby. "1 am perfectly willing to be astrogator, for that is consonant with my talents. But I very much prefer to serve under a commanding officer."

Lazarus was smugly pleased then to see how Slayton Ford immediately moved in and took charge; the sick man was gone, here again was the executive. "It isn't a matter of your personal preference, Commander Libby; we each must do what we can. I have agreed to direct social and civil organization; that is consonant with my training. But I can't command the ship as a ship; I'm not trained for it. You are. You must do it."

Libby blushed pinker and stammered. "I would if I were the only one. But there are hundreds of spacemen among the Families and dozens of them certainly have more experience; and talent for command than I have. If you'll look for him, you'll find the right man."

Ford said, "What do you think, Lazarus?"

"Um. Andy's got something. A captain puts spine into his ship . . . or doesn't, as the case may be. If Libby doesn't hanker to command, maybe we'd better look around."

Justin Foote had a microed roster with him but there was no scanner at hand with which to sort it. Nevertheless the memories of the dozen and more present produced many candidates. They finally settled on Captain Rufus "Ruthless" King.

Libby was explaining the consequences of his light-pressure drive to his new commanding officer. "The loci of our attainable destinations is contained in a sheaf of paraboloids having their apices tangent to our present course. This assumes that acceleration by means of the ship's normal drive will always be applied so that the magnitude our present vector, just under the speed of light, will be held constant. This will require that the ship be slowly precessed during the entire maneuvering acceleration. But it will not be too fussy because of the enormous difference in magnitude between our present vector and the maneuvering vectors being impressed on it. One may think of it roughly as accelerating at right angles to Our course."

"Yes, yes, I see that," Captain King cut in, "but why do you assume that the resultant vectors must always be equal to our present vector?"

"Why, it need not be if the Captain decides otherwise," Libby answered, looking puzzled, "but to apply a component that would reduce the resultant vector below our present speed would simply be to cause us to backtrack a little without increasing the scope of our present loci of possible destinations. The effect would only increase our flight time, to generations, even to centuries, if the resultant-"

"Certainly, certainly! I understand basic ballistics, Mister. But why do you reject the other alternative? Why not increase our speed? Why can't I accelerate directly along my present course if I choose?"

Libby looked worried. "The Captain may, if he so orders. But it would be an attempt to exceed the speed of light. That has been assumed to be impossible-"

"That's exactly what I was driving at: 'Assumed.' I've always wondered if that assumption was justified. Now seems like a good time to find out."

Libby hesitated, his sense of duty struggling against the ecstatic temptations of scientific curiosity. "If this were a research ship, Captain, I would be anxious to try it. I can't visualize what the conditions would be if we did pass the speed of light, but it seems to me that we would be cut off entirely from the electromagnetic spectrum insofar as other bodies are concerned. How could we see to astrogate?"

Libby had more than theory to worry him; they were "seeing" now only by electronic vision. To the human eye itself the hemisphere behind them along their track was a vasty black; the shortest radiations had dopplered to wavelengths too long for the eye. In the forward direction stars could still be seen but their visible "light" was made up of longest Hertzian waves crowded in by the ship's incomprehensible speed. Dark "radio stars" shined at first magnitude; stars poor in radio wavelengths had faded to obscurity. The familiar constellations were changed beyond easy recognition. The fact that they were seeing by vision distorted by Doppler's effect was confirmed by spectrum analysis; Fraunhofer's lines had not merely shifted toward the violet end, they had passed beyond, out of sight, and previously unknown patterns replaced them.

"Hmm . . ." King replied. "I see what you mean. But I'd certainly like to try it, damn if I wouldn't! But I admit it's out of the question with passengers inboard. Very well, prepare for me roughed courses to type '0' stars lying inside this trumpet-flower locus of yours and not too far away. Say ten light-years for your first search."

"Yes, sir. I have. I can't offer anything in that range in the '0' types."

"So? Lonely out here, isn't it? Well?'

"We have Tau Ceti inside the locus at eleven light-years." -

"A 05, eh? Not too good."

"No, sir. But we have a true Sol type, a 02-catalog ZD9817. But it's more than twice as far away."

Captain King chewed a knuckle. "I suppose I'll have to put it up to the elders. How much subjective time advantage are we enjoying?"

"I don't know, sir."

"Eh? Well~ work it out! Or give me the data and I will. I don't claim to be the mathematician you are, but any cadet could solve that one. The equations are simple enough." -

"So they are, sir. But I don't have the data to substitute in the time-contraction equation . . -. because I have no way now to measure the ship's speed. The violet shift is useless to use; we don't know what the lines mean. I'm afraid we must wait until we have worked up a much longer baseline."

King sighed. "Mister, I sometimes wonder why I got into this business. Well, are you willing to venture a best guess? Long time? Short time?"

"Uh . . . a long time, sir. Years."

"So? Well, I've sweated it out in worse ships. Years, eh? Play any chess?"

"I have, sir." Libby did not mention that he had given up the game long ago for lack of adequate competition.

"Looks like we'd have plenty of time to play. King's pawn;to king four."

"King's knight to bishop three."

"An unorthodox player, eh? Well, I'll answer you later. I suppose I'd better try to sell them the 02 eyen though it takes longer . . . and I suppose I'd better caution Ford to start some contests and things. Can't have 'em getting coffin fever."

"Yes, sir. Did I mention deceleration time? It works out to just under one Earth year, subjective, at a negative one-gee, to slow us to stellar speeds."

"Eh? We'll decelerate the same way we accelerated-with your light-pressure drive."

Libby shook his head. "I'm sorry, sir. The drawback of the light-pressure drive is that it makes no difference what your previous course and speed may be; if you go inertialess in the near neighborhood of a star, its light pressure kicks you away from it like a cork hit by a stream of water. Your previous momentum is canceled out when you cancel your inertia."

"Well," King conceded, "let's assume that we will follow your schedule. I can't argue with you yet; there are still some things about that gadget of yours that I don't understand."

"There are lots of things about it," Libby answered seriously, "that I don't understand either."

The ship had flicked by Earth's orbit less than ten minutes after Libby cut in his space drive. Lazarus and he had discussed the esoteric physical aspects of it all the way to the orbit of Mars-less than a quarter hour. Jupiter's path was far distant when Barstow called the organization conference. But it killed an hour to find them all in the crowded ship; by the time he called them to order they were a billion miles out beyond the orbit of Saturn-elapsed time from "Go!" less than an hour and a half.

But the blocks get longer after Saturn. Uranus found them still in discussion. Nevertheless Ford's name was agreed on and he had accepted before the ship was as far from the Sun as is Neptune. King had been named captain, had toured his new command with Lazarus as guide, and was already in conference with his astrogator when the ship passed the orbit of Pluto nearly four billion miles deep into space, but still less than six hours after the Sun's light had blasted them away.

Even then they were not outside the Solar System, but between them and the stars lay nothing but the winter homes of Sol's comets and hiding places of hypothetical trans-Plutonian planets-space in which the Sun holds options but can hardly be said to own in fee simple. But even the nearest stars were still light-years away. New Frontiers was headed for them at a pace which crowded the heels of light-weather cold, track fast.

Out, out, and still farther out . . . out to the lonely depths where world lines are almost straight, undistorted by gravitation. Each day, each month . . . each year . . . their headlong flight took them farther from all humanity.

PART TWO

The ship lunged on, alone in the desert of night, each lightyear as empty as the last. The Families built up a way of life in her.

The New Frontiers was approximately cylindrical. When not under acceleration, she was spun on her axis to give pseudo-weight to passengers near the outer skin of the ship; the outer or "lower" compartments were living quarters while the innermost or "upper" compartments were store-rooms and so forth. Between compartments were shops, hydroponic farms and such. Along the axis, fore to aft, were the control room, the converter, and the main drive.

The design will be recognized as similar to that of the larger free-flight interplanetary ships in use today, but it is necessary to bear in mind her enormous size. She was a city, with ample room for a colony of twenty thousand, which would have allowed the planned complement of ten thousand to double their numbers during the long voyage to Proxima Centauri.

Thus, big as she was, the hundred thousand and more of the Families found themselves overcrowded fivefold.

They put up with it only long enough to rig for cold-sleep. By converting some recreation space on the lower levels to storage, room was squeezed out for the purpose. Somnolents require about one per cent the living room needed by active, functioning humans; in time the ship was roomy enough for those still awake. Volunteers for cold-sleep were not numerous at first-these people were more than commonly aware of death because of their unique heritage; cold-sleep seemed too much like the Last Sleep. But the great discomfort of extreme overcrowding combined with the equally extreme monotony of the endless voyage changed their minds rapidly enough to provide a steady supply for the little death as fast as they could be accommodated.

Those who remained awake were kept humping simply to get the work done-the ship's houskeeping, tending the hydroponic farms and the ship's auxiliary machinery and, most especially, caring for the somnolents themselves. Biomechanicians have worked out complex empirical formulas describing body deterioration and the measures which must be taken to offset it under various conditions of impressed acceleration, ambient temperature, the drugs used, and other factors such as metabolic age, body mass, sex, and so forth. By using the upper, low-weight compartments, deterioration caused by acceleration (that is to say, the simple weight of body tissues on themselves, the wear that leads to flat feet or bed sores) could be held to a minimum. But all the care of the somnolents had to be done by hand-turning them, massaging them, checking on blood sugar, testing the slow-motion heart actions, all the tests and services necessary to make sure that extremely reduced metabolism does not
slide over into death. Aside from a dozen stalls in the ship's infirmary she had not been designed for cold-sleep passengers; no automatic machinery had been provided. All this tedious care of tens of thousands of somnolents had to be done by hand.

Eleanor Johnson ran across her friend, Nancy Weatheral, in Refectory 9-D--called "The Club" by its habitués, less flattering things by those who avoided it. Most of its frequenters were young and noisy. Lazarus was the only elder who ate there often. He did not mind noise, he enjoyed it.

Eleanor swooped down on her friend and kissed the back of her neck. "Nancy! So you are awake again! My, I'm glad to see you!"

Nancy disentangled herself. "H'lo, b~e. Don't spill my coffee."

"Well! Aren't you glad to see me?"

"Of course I am. But you forget that while it's been a year to you, it's only yesterday to me. And I'm still sleepy."

"How long have you been awake, Nancy?"

"A couple of hours. How's that kid of yours?"

"Oh, he's fine!" Eleanor Johnson's face brightened. "You wouldn't know him-he's shot up fast this past year. Almost up to my shoulder and looking more like his father every day."

Nancy changed the subject. Eleanor's friends made a point of keeping Eleanor's deceased husband out of the conversation. "What have you been doing while I was snoozing? Still teaching primary?" -

"Yes. Or rather 'No.' I stay with the age group my Hubert is in. He's in junior secondary now."

"Why don't you catch a few months' sleep and skip some of that drudgery, Eleanor? You'll make an old woman out of yourself if you keep it up;" - -

"No," Eleanor refused, "not until Hubert is old enough not to need me."

"Don't be sentimental. Half the female volunteers are women with young children. I don't blame 'em a bit. Look at me-from my point of view the trip so far has lasted only seven months. I could do the rest of it standing on my head."

Eleanor looked stubborn. "No, thank you. That may be all right for you, but I am doing very nicely as I am."

Lazarus had been sitting at the same counter doing drastic damage to a sirloin steak surrogate. "She's afraid she'll miss something," he explained. "I don't blame her. So am I."

Nancy changed her tack. "Then have another child, Eleanor. That'll get you relieved from routine duties."

"It takes two to arrange that," Eleanor pointed out.

"That's no hazard. Here's Lazarus, for example. He'd make a A plus father."

Eleanor dimpled. Lazarus blushed under his permanent tan. "As a matter of fact," Eleanor stated evenly, "I proposed to him and was turned down."

Nancy sputtered into her coffee and looked quickly from Lazarus to Eleanor.

"Sorry. I didn't know."

"No harm," answered Eleanor. "It's simply because I am one of his granddaughters, four times removed."

"But . . ." Nancy fought a losing fight with the custom of privacy. "Well, goodness me, that's well within the limits of permissible consanguinity. What's the hitch? Or should I shut up?"

"You should," Eleanor agreed.

Lazarus shifted uncomfortably. "I know I'm oldfashioned," he admitted, "but I soaked up some of my ideas a long time ago. Genetics or no genetics, I just wouldn't feel right marrying one of my own grandchildren."

Nancy looked amazed. "I'll say you're old-fashioned!" She added, "Or maybe you're just shy. I'm tempted to propose to you myself and find out."

Lazarus glared at her. "Go ahead and see what a surprise you get!"

Nancy looked him over coolly. "Mmn . . ." she meditated.

Lazarus tried to outstare her, finally dropped his eyes: "I'll have to ask you ladies to excuse me," he said nervously. "Work to do."

Eleanor laid a gentle hand on his arm. "Don't go, Lazarus. Nancy is a cat and can't help it. Tell her about the plans for landing."

"What's that? Are we going to land? When? Where?"

Lazarus, willing to be mollified, told her. The type G2, or Sol-type star, toward which they had bent their course years earlier was now less than a light-year away-a little over seven light-months-and it was now possible to infer by parainterferometric methods that the star (ZD9817, or simply "our" star) had planets of some sort.

In another month, when the star would be a half light-year away, deceleration would commence. Spin would be taken off the ship and for one year she would boost backwards at one gravity, ending near the star at interplanetary rather than interstellar speed, and a search would be made for a planet fit to support human life. The search would be quick and easy as the only planets they were interested in would shine out brilliantly then, like Venus from Earth; they were not interested in elusive cold planets, like Neptune or Pluto, lurking in distant shadows, nor in scorched cinders ilke Mercury, hiding in the flaming skirts of the mother star.

If no Earthlike planet was to be had, then they must continue on down really close to the strange sun and again be kicked away by light pressure, to resume hunting for a home elsewhere-with the difference that this time, not harassed by police, they could select a new course with care.

Lazarus explained that the New Frontiers would not actually land in either case; she was too big to land, her weight would wreck her. Instead, if they found a planet, she would be thrown into a parking orbit around her and exploring parties would be sent down in ship's boats. - -

As soon as face permitted Lazarus left the two young women and went to the laboratory where the Families continued their researches in metabolism and gerontology. He expected to find Mary Sperling there; the brush with Nancy Weatheral had made him feel a need for her company. If he ever did marry again, he thought to himself, Mary was more his style. Not that he seriously considered it; he felt that a iiaison between Mary and himself would have a ridiculous flavor of lavender and old lace.

Mary Sperling, finding herself cooped up in the ship and not wishing to accept the symbolic death of cold-sleep, had turned her fear of death into constructive channels by volunteering to be a laboratory assistant in the continuing research into longevity. She was not a trained biologist but she had deft fingers and an agile mind; the patient years of the trip had shaped her into a valuable assistant to Dr. Gordon Hardy, chief of the research.

Lazarus found her servicing the deathless tissue of chicken heart known to the laboratory crew as "Mrs. 'Avidus." Mrs. 'Avidus was older than any member of the Families save possibly Lazarus himself; she was a growing piece of the original tissue obtained by the Families from the Rockefeller Institute in the twentieth century, and the tissues had been alive since early in the twentieth century even then. Dr. Hardy and his predecessors had kept their bit of it alive for more than two centuries now, using the Carrel-Lindbergh-O'Shaug techniques and still Mrs. 'Avidus flourished.

Gordon Hardy had insisted on taking the tissue and the apparatus which cherished it with him to the reservation when he was arrested; he had been equally stubborn about taking the living tissue along during the escape in the Chili. Now Mrs. 'Avidus still lived and grew in the New Frontiers, fifty or sixty pounds of her-blind, deaf, and brainless, but still alive.

Mary Sperling was reducing her size. "Hello, Lazarus," she greeted him. "Stand back. I've got the tank open."

He watched her slice off excess tissue. "Mary," he mused, "what keeps that silly thing alive?"

"You've got the question inverted," she answered, not looking up; "the proper form is: why should it die? Why shouldn't it go on forever?" -

"I wish to the Devil it would die!" came the voice of Dr. Hardy from behind them. "Then we could observe and find out why." - -

"You'll never find out why from Mrs. 'Avidus, boss," Mary answered, hands and eyes still busy. "The key to the matter is in the gonads-she hasn't any."

'Hummph! What do you know about it?"

"A woman's intuition. What do you know about it?"

"Nothing, -absolutely nothing!-which puts me ahead of you and your intuition."

"Maybe. At least," Mary added slyly, "1 knew you before you were housebroken."

"A typical female argument. Mary, that lump of muscle cackled and laid eggs before either one of us was born, yet it doesn't know anything." He scowled at it. "Lazarus, I'd gladly trade it for one pair of carp. male and female." -

"Why carp?" asked Lazarus.

"Because carp don't seem to die. They get killed, or eaten, or starve to death, or succumb to infection, but so far as we know they don't die."

"Why not?"

"That's what I was trying to find out when we were rushed off on this damned safari. They have unusual intestinal flora and it may have something to do with that. But I think it has to do with the fact that they never stop growing."

Mary said something inaudibly. Hardy said, "What are you muttering about? Another intuition?"

"I said, 'Amoebas don't die.' You said yourself that every amoeba now alive has been alive for, oh, fifty million years or so. Yet they don't grow indefinitely larger and they certainly can't have intestinal flora."

"No guts," said Lazarus and blinked.

"What a terrible pun, Lazarus. But what I said is true. They don't die. They just twin and keep on living."

"Guts or no guts," Hardy said impatiently, "there may be a structural parallel. But I'm frustrated for lack of experimental subjects. Which reminds me: Lazarus, I'm glad you dropped in. I want you to do me a favor."

"Speak up. I might be feeling mellow."

"You're an interesting case yourself, you know. You didn't follow our genetic pattern; you anticipated it. I don't want your body to go into the converter; I want to examine it."

Lazarus snorted. "'Sail right with me, bud. But you'd better tell your successor what to look for-you may not live that long. And I'll bet you anything that you like that nobody'll find it by poking around in my cadaver!"

The planet they had hoped for was there when they looked for it, green, lush, and young, and looking as much like Earth as another planet could. Not only was it Earthlike but the rest of the system duplicated roughly the pattern of the Solar System-small terrestrial planets near this sun, large Jovian planets farther out. Cosmologists had never

been able to account for the Solar System; they had alternated between theories of origin which had failed to stand up and sound mathematico-physical "proofs" that such a system could never have originated in the first place. Yet here was another enough like it to suggest that its paradoxes were not unique, might even be common.

But more startling and even more stimulating and certainly more disturbing was another fact brought out by telescopic observation as they got close to the planet. The planet held life . . , intelligent life . . . civilized life.

Their cities could be seen. Their engineering works, strange in form and purpose, were huge enough to be seen from space just as ours can be seen.

Nevertheless, though it might mean that they must again pursue their weary hegira, the dominant race did not appear to have crowded the available living space. There might be room for their little colony on those broad continents. If a colony was welcome. . .

"To tell the truth," Captain King fretted, "I hadn't expected anything like this. Primitive aborigines perhaps, and we certainly could expect dangerous animals, but I suppose I unconsciously assumed that man was the only really civilized race. We're going to have to be very cautious."

King made up a scouting party headed by Lazatus; he had come to have confidence in Lazarus' practical sense and will to survive. King wanted to head the party himself, but his concept of his duty as a ship's captain forced him to forego it. But Slayton Ford could go; Lazarus chose him and Ralph Schultz and his lieutenants. The rest of the party were specialists-biochemist, geologist, ecologist, stereographer, several sorts of psychologists and sociologists to study the natives including one authority in McKelvy's structural theory of communication whose task would be to find some way to talk with the natives.

No weapons.

King flatly refused to arm them. "Your scouting party is expendable, he told Lazarus bluntly; "for we can not risk offending them by any sort of fighting for any reason, even in self-defense. You are ambassadors, not soldiers. Don't forget it."

Lazarus returned to his stateroom, came back and gravely delivered to King one blaster. He neglected to mention the one still strapped to his leg under his kilt.

As King was about to tell them to man the boat and carry out their orders they were interrupted by Janice Schmidt, chief nurse to the Families' congenital defectives. She pushed her way past and demanded the Captain's attention. -

Only a nurse could have obtained it at that moment; she had professional stubbornness to match his and half a century more practice at being balky. He glared at her. "What's the meaning of this interruption?"

"Captain, I must speak with you about one of my children."

"Nurse, you are decidedly out of order. Get out. See me in my office-after taking it up with the Chief Surgeon."

She put her hands on her hips. "You'll see me now. This is the landing party, isn't it? I've got something you have to hear before they leave."

King started to speak, changed his mind, merely said, "Make it brief."

She did so. Hans Weatheral, a youth of some ninety years and still adolescent in appearance through a hyper-active thymus gland, was one of her charges. He had inferior

but not moronic mentality, a chronic apathy, and a neuro-muscular deficiency which made him too weak to feed himself-and an acute sensitivity to telepaths.

He had told Janice that he knew all about the planet around which they orbited. His friends on the planet had told him about it . . . and they were expecting him.

The departure of the landing boat was delayed while King and Lazarus investigated. Hans was matter of fact about his information and what little they could check of what he said was correct. But he was not too helpful about his "friends." "Oh, just people," he said, shrugging at their stupidity. "Much like back home. Nice people. Go to work, go to school, go to church. Have kids and enjoy themselves. You'll like them."

But he was quite clear about one point: his friends were expecting-him; therefore he must go along.

Against his wishes and his better judgment Lazarus saw added to his party Hans Weatheral, Janice Schmidt, and a stretcher for Hans.

When the party returned three days later Lazarus made a long private report to King while the specialist reports were being analyzed and combined. "It's amazingly like Earth, Skipper, enough to make you homesick. But it's also different enough to give you the willies-llke looking at your own face in the mirror and having it turn out to have three eyes and no nose. Unsettling."

"But how about the natives?"

"Let me tell it. We made a quick swing of the day side, for a bare eyes look. Nothing you haven't seen through the 'scopes. Then I put her down where Hans told me to, in a clearing near the center of one of their cities. I wouldn't have picked the place myself; I would have preferred to land in the bush and reconnoitre. But you told me to play Hans' hunches."

"You were free to use your judgment," King reminded

"Yes, yes. Anyhow we did it. By the time the techs had sampled the air and checked for hazards there was quite a crowd around us. They-well, you've seen the stereographs."

"Yes. Incredibly android."

"Android, hell! They're men. Not humans, but men just the same." Lazarus looked puzzled. "I don't like it."

King did not argue. The pictures had shown bipeds seven to eight feet tall, bilaterally symmetric, possessed of internal skeletal framework, distinct heads, lens-and-camera eyes. Those eyes were their most human and appealing features; they were large, limpid, and tragic, like those of a Saint Bernard dog.

It was well to concentrate on the eyes; their other features were not as tolerable. King looked away from the loose, toothless mouths, the bifurcated upper lips. He decided that it might take a long, long time to learn to be fond of these creatures. "Go ahead," he told Lazarus.

"We opened up and I stepped out alone, with my hands empty and. trying to look friendly and peaceable. Three of them stepped forward-eagerly, I would say. But they lost interest in me at once; they seemed to be waiting for somebody else to come out. So I gave orders to carry Hans out.

"Skipper, you wouldn't believe it. They fawned over Hans like a long lost brother. No, that doesn't describe it. More like a king returning home in triumph. They were polite enough with the rest of us, in an offhand way, but they fairly slobbered over Hans." Lazarus hesitated. "Skipper? Do you believe in reincarnation?"

"Not exactly. I'm open-minded about it. I've read the report of the Frawling Committee, of course." -

"I've never had any use for the notion myself. But how else could you account for the reception they gave Hans?"

"I don't account for it. Get on with your report. Do you think it is going to be possible for us to colonize here?"

"Oh," ~'üd Lazarus, "they left no doubt on that point. You see, Hans really can talk to them, telepathically. Hans tells us that - their gods have authorized us to live here- and the natives have already made plans to receive us."

"That's right. They want us." -

"Well! That's a relief."

"Is it?"

King studied Lazarus' glum features. "You've made a report favorable on every point. Why the sour look?"

"I don't know. I'd just rather we found a planet of our own. Skipper, anything this easy has a hitch in it."

Chapter 2

THE Jockaira (or Zhacheira, as some prefer) turned an entire city over to the colonists.

Such astounding cooperation, plus the sudden discovery by almost every member of the Howard Families that he was sick for the feel of dirt under foot and free air in his lungs, greatly speeded the removal from ship to ground. It had been anticipated that at least an Earth year would be needed for such transition and that somnolents would be waked only as fast as they could be accommodated dirtside, But the limiting factor now was the scanty ability of the ship's boats to transfer a hundred thousand people as they were roused.

The Jockaira city was not designed to fit the needs of human beings. The Jockaira were not human beings, their physical requirements were somewhat different, and their cultural needs as expressed in engineering were vastly different. But a city, any city, is a machine to accomplish certain practical ends: shelter, food supply, sanitation, communication; the internal logic of these prime requirements. as applied by diiferent creatures to different environments, will produce an unlimited number of answers. But, as applied by any race of warm-blooded, oxygen-breathing androidal creatures to a particular environment, the results, although strange, are necessarily such that Terran humans can use them. In some ways the Jockaira city looked as wild as a pararealist painting, but humans have lived in igloos, grass shacks, and even in the cybernautomated burrow under Antarctina; these humans could and did move into the Jockaira city-and of course at once set about reshaping it to suit

them better.

It was not difficult even though there was much to be done. There were buildings already standing-shelters with roofs on them, the artificial cave basic to all human shelter requirements. It did not matter what the Jockaira had used such a structure for; humans could use it for almost anything: sleeping, recreation, eating, storage, production. There were actual "caves" as well, for the Jockaira dig in more than we do. But humans easily turn troglodyte on occasion, in New York as readily as in Antarctica.

There was fresh potable water piped in for drinking and for limited washing. A major lack lay in plumbing; the city had no overall drainage system. The "Jocks" did not waterbathe and their personal sanitation requirements differed from ours and were taken care of differently. A major effort had to be made to jury-rig equivalents of shipboard refreshers and adapt them to hook in with Jockaira disposal arrangements. Minimum necessity ruled; baths would remain a rationed luxury until water supply and disposal could be increased at least tenfold. But baths are not a necessity.

But such efforts at modification were minor compared with the crash program to set up hydroponic farming, since most of the somnolents could not be waked until a food supply was assured. The do-it-now crowd wanted to tear out every bit of hydroponic equipment in the New Frontiers at once, ship it down dirtside, set it up and get going, while depending on stored supplies during the change-over; a more cautious minority wanted to move only a pilot plant while continuing to grow food in the ship; they pointed out that unsuspected fungus or virus on the strange planet could result in disaster . . .starvation.

The minority, strongly led by Ford and Barstow and supported by Captain King, prevailed; one of the ship's hydroponic farms was drained and put out of service. Its machinery was broken down into parts small enough to load into ship's boats.

But even this never reached dirtside. The planet's native farm products turned out to be suitable for human food and the Jockaira seemed almost pantingly anxious to give them away. Instead, efforts were turned to establishing Earth crops in native soil in order to supplement Jockaira foodstuffs with sorts the humans were used to. The Jockaira moved in and almost took over that effort; they were superb "natural" farmers (they had no need for synthetics on their undepleted planet) and seemed delighted to attempt to raise anything their guests wanted.

Ford transferred his civil headquarters to the city as soon as a food supply for more than a pioneer group was assured, while King remained in the ship. Sleepers were awakened and ferried to the ground as fast as facilities were made ready for them and their services could be used. Despite assured food, shelter, and drinking water, much needed to be done to provide minimum comfort and decency. The two cultures were basicially different. The Jockaira seemed always anxious to be endlessly helpful but they were often obviously baffled at what the humans tried to do. The Jockaira culture did not seem to include the idea of privacy; the buildings of the city had no partitions in them which were not loadbearing-and few that were; they tended to use columns or posts. They could not understand why the humans would break up these lovely open spaces into cubicles and passageways; they simply could not comprehend why any individual would ever wish to be alone for any purpose whatsoever.

Apparently (this is not certain, for abstract communication with them never reached a subtle level) they decided eventually that being alone held a religious significance for Earth people. In any case they were again helpful; they provided thin sheets of material which could be shaped into partitions-with their tools and only with their tools. The stuff frustrated human engineers almost to nervous collapse. No corrosive known to our technology affected it; even the reactions that would break down the rugged fluorine plastics used in handling uranium compounds had no effect on it. Diamond saws went to pieces on it, heat did not melt it, cold did not make it brittle. It stopped light, sound, and all radiation they were equipped to try on it. Its tensile strength could not be defined because they could not break it. Yet Jockaira tools, even when handled by humans, could cut it, shape it, reweld it.

The human engineers simply had to get used to such frustrations. From the criterion of control over environment through technology the Jockaira were as civilized as humans. But their developments had been along other lines.

The important differences between the two cultures went much deeper than engineering technology. Although ubiquitously friendly and helpful the Jockaira were not human. They thought differently, they evaluated differently; their social structure and language structure reflected their unhuman quality and both were incomprehensible to human beings.

Oliver Johnson, the semantician who had charge of developing a common language, found his immediate task made absurdly easy by the channel of communication through Hans Weatheral. "Of course," he explained to Slayton Ford and to Lazarus, "Hans isn't exactly a genius; he just misses being a moron. That limits the words I can translate through him to ideas he can understand. But it does give me a basic vocabulary to build on."

"Isn't that enough?" asked Ford. "It seems to me that - I have heard that eight hundred words will do to convey any idea."

"There's some truth in that," admitted Johnson. "Less than a thousand words will cover all ordinary situations. I have selected not quite seven hundred of their terms, operationals and substantives, to give us a working lingua franca. But subtle distinctions and fine discriminations will have to wait until we know them better and understand them. A short vocabulary cannot handle high abstractions."

"Shucks," said Lazarus, "seven hundred words ought to be enough. Me, I don't intend to make love to 'em, or try to discuss poetry."

This opinion seemed to be justified; most of the members picked up basic Jockairan in two weeks to a month after being ferried down and chattered in it with their hosts as if they had talked it all their lives. All of the Earthmen had had the usual sound grounding in mnemonics and semantics; a short-vocabulary auxiliary language was quickly learned under the stimulus of need and the circumstance of plenty of chance to practice-except, of course, by the usual percentage of unshakable provincials who felt that it was up to "the natives" to learn English.

The Jockaira did not learn English. In the first place not one of them showed the slightest interest. Nor was it reasonable to expect their millions to learn the language of a few thousand. But in any case the split upper lip of a Jockaira could not cope with "m," "p," and "b," whereas the gutturals, sibilants, dentals, and clicks they did use could be approximated by the human throat.

Lazarus was forced to revise his early bad impression of the Jockaira. It was impossible not to like them once the strangeness of their appearance had worn off. They were so hospitable, so generous, so friendly, so anxious to please. He became particularly attached to Kreei Sarloo, who acted as a sort of liaison officer between the Families and the Jockaira. Sarloo held a position among his own people which could be trans1ated roughly as "chief," "father," "priest," or "leader" of the Kreel family or tribe. He invited Lazarus to visit him in the Jockaira city nearest the colony. "My people will like to see you and smell your skin," he said. "It will be a happymaking thing. The gods will be pleased."

Sarloo seemed almost unable to form a sentence without making reference to his gods. Lazarus did not mind; to another's religion he was tolerantly indifferent. "I will come, Sarloo, old bean. It will be a happy-making thing for me, too."

Sarloo took him in the common vehicle of the Jockaira, a wheelless wain shaped much like a soup bowl, which moved quietly and rapidly over the ground, skimming the surface in apparent contact. Lazarus squatted on the floor of the vessel while Sarloo caused it to speed along at a rate that made Lazarus' eyes water.

"Sasloo," Lazarus asked, shouting to make himself heard against the wind, "how does this thing work? What moves it?'

"The gods breathe on the-" Sarloo used a word not in their common language. "-and cause it to need to change its place."

Lazarus started to ask for a fuller explanation, then shut up. There had been something familiar about that answer and he now placed it; he had once given a very similar answer to one of the water people of Venus when he was asked to explain the diesel engine used in an early type of swamp tractor. Lazarus had not meant to be mysterious; he had simply been tongue-tied by inadequate common language. Well, there was a way to get around that- "Sarloo, I want to see pictures of what happens inside," Lazarus persisted, pointing. "You have pictures?"

"Pictures are," Sarloo acknowledged, "in the temple. You must not enter the temple." His great eyes looked mournfully at Lazarus, giving him a strong feeling that the Jockaira chief grieved over his friend's lack of grace. Lazarus hastily dropped the subject.

But the thought of Venerians brought another puzzler to mind. The water people, cut off from the outside world by the eternal clouds of Venus, simply did not believe in astronomy. The arrival of Earthmen had caused them to readjust their concept of the cosmos a little, but there was reason to believe that their revised explanation was no closer to the truth. Lazarus wondered what the Jackaira thought about visitors from space. They had shown no surprise-~-or had they? -

"Sarloo," he asked, "do you know where my brothers and I come from?'

"I know," Sarloo answered. "You come from a distant sun -so distant that many seasons would come and go while light traveled that long journey." -

Lazarus felt mildly astonished. "Who told you that?'

"The gods tell us. Your brother Libby spoke on it."

Lazarus was willing to lay odds that the gods had not got around to mentioning it until after Libby explained it to Kreel Sarloo. But he held his peace. He still wanted to ask Sarloo if he had been surprised to have visitors arrive from the skies but he could think of no Jockairan term for surprise or wonder. He was still trying to phrase the question when Sarloo spoke again:

"The fathers of my people flew through the skies as you did, but that was before the coming of the gods. The gods, in their wisdom, bade us stop."

And that, thought Lazarus, is one damn big lie, from pure panic. There was not the slightest indication that the Jockaira had ever been off the surface of their planet.

At Sarloo's home that evening Lazarus sat through a long session of what he assumed was entertainment for the guest of honor, himself. He squatted beside Sarloo on a raised portion of the floor of the vast common room of the clan Kreel and listened to two hours of howling that might have been intended as singing. Lazarus felt that better music would result from stepping on the tails of fifty assorted dogs but he tried to take it in the spirit in which it seemed to be offered.

Libby, Lazarus recalled, insisted that this mass howling which the Jockaira were wont to indulge in was, in fact,he had to sdmit that Llbby ~ the ***$ork***~ ***$ttsr*** than he did in some ways~ Libby had been delighted to discover that the Jockaira were excellent and subtle mathematicians. In particular they had a grasp of number that ***pi 1/4$Ileled j~ own w~d-'ta1~,fl~r -arithmetics irene lnoredl~ ~pv~ved for ncnnal human***. A number, any number ***I*ip ~*** to them a unique entity, to be grasped in itself ***si net id~Iy as ft*** grouping of smaller numbers. In consequence they used any convenient positional or exponential notation with any base, rational irrational, or variable-~,***-~ st-a***. It was supreme luck, Lazarus mused, that Libby was available to act as mathematical interpreter between the Jockaira and the Families, else it would have been impossible to grasp a lot of the new technologies the Jockaira were showing them.

He wondered why the Jockaira showed no interest in learning human technologies they were offered in return?

The howling discord died away and Lazarus brought his thoughts back to the scene around him. Food was brought; the Kreel family tackled it with the same jostling enthusiasm with which Jockaira did everything. Dignity, thought Lazarus--lean idea which never caught on here. A large bowl, full two feet across and brimful of an amorpheous meal, was placed in front of Kreel Sarloo. A dozen Kreels crowded atound it and started grabbing~giving no precedence to their senior. But Sadoo casually slapped a few of them out of the way and plunged a hand into the dish, brought forth a gob of the ration and rapidly kneaded it into a ball in the palm of his double-thumbed hand. Done, he shoved it towards Lazarus' mouth.

Lmarus war not squeamish-but he had to remind bimself first, that food for Jockaira was food for men, and second that he could not catch anything from them anyhow, before he could bring himself to try the proffered morsel.

He took a large bite. Mmmm. . . not too bad-bland and sticky, no particular flavor. Not good eithet~but could be swallowed. Grimly determined to uphold the hon of his race, he ate on, while promising himself a proper meal in the near future. When lie' (cit that to swallow another mouthful would be to invite physical and social diaaster.

$~ed Up sl.~Ze h**dM st~ha *m~ uite$bmsndc~d IttoSssfoo ,kWasIn.pired dljdmflitey For Ike zest of the mast Lazarus fe4 Sexton, fed bun until bin anne were tired until he m~ at ha host's ability ~o tuck it away

After eating they slept and Lazarus slept with the famiy *** lIte**ly~*** They slept where they had eaten, without beds, disposed as casually as leaves on a path or puppies. To his aurprise, Lazarus slept well and did not awoke until false suns in the

cavern roof glowed in ***mysse,~âs s~rmpath~c to-***new dawn. Sarloo was still asleep near him and giving out most humanlike snores. Lazarus found that one infant Jockaira was cuddled spoon fashion against his own stomach. He felt a movement behind his back~ a rustle at his thigh. He turned cautiously and found that another Jockaira-a six-year-old in human equivalence- had extracted his blaster from its holster and was now gazing curiously into its muzzle.

With hasty caution Lazarus removed the deadly toy from the child's unwilling fingers, noted with relief that the safety was still on and reholstered it. Lazarus received a reproach for look; the kid seemed about to cry. "Hush," whispered Lazarus, "you'll wake your o1d man. Here--"- He gathered the child into his left arm, and cradled it against his side. The little Jockaira snuggled up to him, laid a soft moist mouth against his side, and promptly went to sleep.

Lazarus looked down at him. "You're a cute little devil," he said softly. "I-could grow right fond of you if 1 could ever get used to your smell."

Some of the incidents between the two races would bave been funny bad they not been charged with potential trouble: for example, the case of Eleanor Johnson's son Hubert This gangling adolescent was a confirmed sidewalk-superintendent. One day he was watching two technicians, one human and one Jockaira, adapt a Jockaira power source to the feed of Earth-type machinery. Tbe Jockaira was apparently amused by the boy and, in an obviously friendly spirit, picked him up.

Hubert began to scream.

His mother, never far from him, joined battle. She lacked strength and skill to do the utter destruction she was bent on; the big nonhuman was unhurt, but it created a nasty situation.

Administrator Ford and Oliver Johnson tried very hard to explain the incident to the amazed Jockaira. Fortunately, they seemed grieved rather than vengeful.

Ford then called in Eleanor Johnson. "You have endangered the entire colony by your stupidity-"

"But I-"

"Keep quiet! If you hadn't spoiled the boy rotten, he would have behaved himself. If you weren't a maudlin fool. you would have kept your hands to yourself. The boy goes to the regular development classes henceforth and you are to let him alone. At the lightest sign of animosity on your part toward any of the natives, I'll have you subjected to a few years' cold-rest. Now get out!"

Ford was forced to use almost as strong measures on Janice Schmidt. The interest shown in Hans Weatheral by the Jockaira extended to all the telepathic defectives. The natives seemed to be reduced to a state of quivering adoration by the mere fact that these could communicate with them directly. Kreel Sarloo informed Ford that he wanted the sensitives to be housed separately from the other defectives in the evacuated temple of the Earthmen's city and that the Jockaira wished to wait on them personally. It was more of an order than a request.

Janice Schmidt submitted ungracefully to Ford's insistence that the Jockaira be humored in the matter in return for all that they had done, and Jockaira nurses took over under her jealous eyes.

Every sensitive of intelligence level higher than the semimoronic Hans Weatheral promptly developed spontaneous and extreme psychoses while being attended by Jockaira.

So Ford had another headache to straighten out. Janice Schmidt was more powerfully and more intelligently vindictive than was Eleanor Johnson. Ford was s-tpr~d to bind Janice over to keep the peace under the threat of retiring her completely from the care of her beloved "children." Kreel Sarloo, distressed and apparently shaken to his core, accepted a compromise whereby Janice and her junior nurses resumed care of the poor psychotics while Jockaira continued to minister to sensitives of moron level and below.

But the greatest difficulty arose over . . . surnames. Jockaira each had an individual name and a surname. Surnames were limited in number, much as they were in the Families. A native's surname referrect equally to his tribe and to the temple in which he worshipped.

Kreel Sarloo took up the matter with Ford. "High Father of the Strange Brothers," he said, "the time has come for you and your children to choose your surnames." (The rendition of Sarloo's speech into English necessarily contains inherent errors.)

Ford was used to difficulties in understanding the Jockaira. "Sarloo, brother and friend," he answered, "I hear your words but I do not understand. Speak more fully."

Sarloo began over. "Strange brother, the seasons come and the seasons go and there is a time of ripening. The gods tell us that you, the Strange Brothers, have reached the time in your education (?) when you must select your tribe and your temple. I have come to arrange with you the preparations (ceremonies?) by which each will choose his surname. I speak for the gods in this. But let me say for myself that it would make me happy if you, my brother Ford, were to choose the temple Kreel."

Ford stalled while he tried to understand what was implied. "I am happy that you wish me to have your surname. But my people already have their own surnames."

Sarloo dismissed that with a flip of his lips. "Their present surnames are words and nothing more. Now they must choose their real surnames, each the name of his temple and of the god whom he will worship. Children grow up and are no longer children."

Ford decided that he needed advice. "Must this be done at once?"

"Not today, but in the near future. The gods are patient."

Ford called in Zaccur Barstow, Oliver Johnson, Lazarus Long, and Ralph Schultz, and described the interview. Johnson played back the recording of the conversation and strained to catch the sense of the words. He prepared several possible translations but failed to throw any new light on the matter.

"It looks," said Lazarus, "like a case of join the church or get out."

"Yes," agreed Zaccur Barstow, "that much seems to come through plainly. Well, I think we can afford to go through the motions. Very few of our people have religious prejudices strong enough to forbid their paying lip service to the native gods in the interests of the general welfare."

"I imagine you are correct," Ford said. "I, for one, have no objection to adding Kreel to my name and taking part in their genuflections if it will help us to live in peace." He frowned. "But I would not want to see our culture submerged in theirs."

"You can forget that," Ralph Schultz assured him. "No matter what we have to do to please them, there is absolutely no chance of any real cultural assimilation. Our brains are not like theirs-just how different I am only beginning to guess."

"Yeah," said Lazarus, " 'just how different.'"

Ford turned to Lazarus. "What do you mean by that? What's troubling you?"

"Nothing. Only," he added, "I never did share the general enthusiasm for this place."

They agreed that one man should take the plunge first, then report back. Lazarus tried to grab the assignment on seniority, Schultz claimed it as a professional right; Ford overruled them and appointed himself, asserting that it was his duty as the responsible executive. -

Lazarus went with him to the doors of the temple where the induction was to take place. Ford was as bare of clothing as the Jockaira, but Lazarus, since he was not to enter the temple, was able to wear his kilt. Many of the colonists, sunstarved after years in the ship, went bare when it suited them, just as the Jockaira did. But Lazarus never did. Not only did his habits run counter to it, but a blaster is an extremely conspicuous object on a bare thigh.

Kreel Sarloo greeted them and escorted Ford inside. Lazarus called out after them, "Keep your chin up, pal!"

He waited. He struck a cigarette and smoked it. He walked up and down. He had no way to judge how long it would be; it seemed, in consequence, much longer than it was.

At last the doors slid back and natives crowded out through them. They seemed curiously worked up about something and none of them came near Lazarus. The press that still existed in the great doorway separated, formed an aisle, and a figure came running headlong through it and out into the open.

Lazarus recognized Ford.

Ford did not stop where Lazarus waited but plunged blindly on past. He tripped and fell down. Lazarus hurried to him.

Ford made no effort to get up. He lay sprawled face down, his shoulders heaving violently, his frame shaking with sobs. Lazarus knelt by him and shook him. "Slayton," he demanded, "what's happened? What's wrong with you?" Ford turned wet and horror-stricken eyes to him, checking his sobs momentarily. He did not speak but he seemed to recognize Lazarus. He flung himself on Lazarus, clung to him, wept more violently than before.

Lazarus wrenched himself free and slapped Ford hard. "Snap out of it!" he ordered. "Tell me what's the matter."

Ford jerked his head at the slap and stopped his outcries but he said nothing. His eyes looked dazed. A shadow fell across Lazarus' line of sight; he spun around, covering with his blaster. Kreel Sarloo stood a few feet away and did not come closer-not because of the weapon; he had never seen one before.

"You!" said Lazarus. "For the- What did you do to him?"

He checked himself and switched to speech that Sarloo could understand. "What has happened to my brother Ford?"

"Take him away," said Sarloo, his lips twitching. "This is a bad thing. This is a very bad thing."

"You're telling me!" said Lazarus. He did not bother to translate.

Chapter 3

THE SAME CONFERENCE as before, minus its chairman, met as quickly as possible. Lazarus told his story, Shultz reported on Ford's condition. "The medical staff can't find anything wrong with him. All I can say with certainty is that the Administrator is suffering from an undiagnosed extreme psychosis. We can't get into communication with him."

"Won't he talk at all?" asked Barstow.

"A word or two, on subjects as simple as food or water. Any attempt to reach the cause of his trouble drives him into incoherent hysteria."

"No diagnosis?"

"Well, if you want an unprofessional guess in loose language, I'd say he was scared out of his wits. But," Schultz added, "I've seen fear syndromes before. Never anything like this."

"I have," Lazarus said suddenly.

"You have? Where? What were the circumstances?'

"Once," said Lazarus, "when I was a kid, a couple of hundred years back, I caught a grown coyote and penned him up. I had a notion I could train him to be a hunting dog. It didn't work.

"Ford acts just the way that coyote did."

An unpleasant silence followed. Schultz broke it with, "I don't quite see what you mean. What is the parallel?'

"Well," Lazarus answered slowly, "this is just my guess. Slayton is the only one who knows the true answer and he can't talk. But here's my opinion: we've had these Jockaira doped out all wrong from scratch. We made the mistake of thinking that because they looked like us, in a general way, and were about as civilized as we are, that they were people. But they aren't people at all. They are . . . domestic animals.

"Wait a minute now!" he added. "Don't get in a rush. There are people on this planet, right enough. Real people. They lived in the temples and the Jockaira called them gods. They are gods!"

Lazarus pushed on before anyone could interrupt. "I know what you're thinking. Forget it. I'm not going metaphysical on you; I'm just putting it the best I can. I mean that there is something living in those temples and whatever it is, it is such heap big medicine that it can pinch-hit for gods, so you might as well call 'em that. Whatever they are, they are the true dominant race on this planet-its people! To them, the rest of us, Jocks or us, are just animals, wild or tame. We made the mistake of assuming that a local religion was merely superstition. It ain't."

Barstow said slowly, "And you think this accounts for what happened to Ford?'

"I do. He met one, the one called Kreel, and it drove him crazy."

"I take it," said Schultz, "that it is your theory that any man exposed to this . . . this presence . . . would become psychotic?"

"Not exactly," answered Lazarus. "What scares me a damn' sight more is the fear that I might not go crazy!"

That same day the Jockaira withdrew all contact with the Earthmen. It was well that they did so, else there would have been violence. Fear hung over the city, fear of horror worse than death, fear of some terrible nameless thing, the mere knowledge of which would turn a man into a broken mindless animal. The Jockaira no longer seemed harmless friends, rather clownish despite their scientific attainments, but puppets, decoys, bait for the unseen potent beings who lurked in the "temples."

There was no need to vote on it; with the single-mindedness of a crowd stampeding from a burning building the Earthmen wanted to leave this terrible place. Zaccur Barstow assumed command. "Get King on the screen. Tell him to send down every boat at once. We'll get out of here as fast as we can." He ran his fingers worriedly through his hair. "What's the most we can load each trip, Lazarus? How long will the evacuation take?"

Lazarus muttered.

"What did you say?

"I said, 'It ain't a case of how long; it's a case of will we be let.' Those things in the temples may want more domestic animals-us!"

Lazarus was needed as a boat pilot but he was needed more urgently for his ability to manage a crowd. Zaccur Barstow was telling him to conscript a group of emergency police when Lazarus looked past Zaccur's shoulder and exclaimed, "Oh oh! Hold it, Zack-school's out."

Zaccur turned his head quickly an4 saw, approaching with stately dignity across the council hail, Kreel Sarloo. No one got in his way.

They soon found out why. Zaccur moved forward to greet him, found himself stopped about ten feet from the Jockaira. No clue to the cause; just that-stopped.

"I greet you, unhappy brother," Sarloo began.

"I greet you, Krecl Sarloo."

"The gods have spoken. Your kind can never be civilized (?).You and your brothers are to leave this world."

Lazarus let out a deep sigh of relief. -

"We are leaving, Kreel Sarloo," Zaccur answered soberly.

"The gods require that you leave. Send your bother Libby to me."

Zaccur sent for Libby, then turned back to Sarloo. But the Jockaira had nothing more to say to them; he seemed indifferent to their presence. They waited.

Libby arrived. Sarloo held him in a long conversation. Barstow and Lazarus were both in easy earshot and could see their lips move, but heard nothing. Lazarus found the circumstance very disquieting. Damn my eyes, he thought, I could figure several ways to pull that trick with the right equipment but I'll bet none of 'em is the right answer-and I don't see any equipment.

The silent discussion ended, Sarloo stalked off without farewell. Libby turned to the others and spoke; now his voice could be heard. "Sarloo tells me," he began, brow wrinkled in puzzlement, "that we are to go to a planet, uh, over thirtytwo light-years from here. The gods have decided it." He stopped and bit his lip.

"Don't fret about it," advised Lazarus. "Just be glad they want us to leave. My guess is that they could have squashed us flat just as easily. Once we're out in space we'll pick our. own destination."

"I suppose so. But the thing that puzzles me is that he mentioned a time about three hours~away as being our departure from this system."

"Why, that's utterly unreasonable," protested Barstow. "Impossible. We haven't the boats to do it."

Lazarus said nothing. He was ceasing to have opinions.

Zaccur changed his opinion quickly. Lazarus acquired one, born of experience. While urging his cousins toward the field where embarkation was proceeding, he found himself lifted up, free of the ground. He struggled, his arms and legs met no resistance but the ground dropped away. He closed his eyes, counted ten jets, opened them again. He was at least two miles in the air.

Below him, boiling up from the city like bats from a cave, were uncountable numbers of dots and shapes, dark against the sunlit ground. Some were close enough for him to see that they were men, Earthmen, the Families.

The horizon dipped down, the planet became a sphere, the sky turned black. Yet his breathing seemed normal, his blood vessels did not burst.

They were sucked into clusters around the open ports of the New Frontiers like bees swarming around a queen. Once inside the ship Lazarus gave himself over to a case of the shakes. Whew! he sighed to himself, watch that first step-it's a honey!

Libby sought out Captain King as soon as he was inboard and had recovered his nerve. He delivered Sarloo's message.

King seemed undecided. "I don't know," he said. "You know more about the natives than I do, inasmuch as I have hardly put foot to ground. But between ourselves, Mister, the way they sent my passengers back has me talking to myself. That was the most remarkable evolution I have ever seen performed."

"I might add that it was remarkable to experience, sir," Libby answered unhumorously. "Personally I would prefer to take up ski jumping. I'm glad you had the ship's access ports open."

"I didn't," said King tersely. "They were opened for me."

They went to the control room with the intention of getting the ship under boost and placing a long distance between it and the planet from which they had been evicted; thereafter they would consider destination and course. "This planet that Sarloo described to you," said King, "does it belong to a G-type star?"

"Yes," Libby confirmed, "an Earth-type planet accompanying a Sol-type star. I have its coordinates and could. identify from the catalogues. But we can forget it; it is too far away.'

"So . . ." King activated the vision system for the stellarium. Then neither of them said anything for several long moments. The images of the heavenly bodies told their own story.

With no orders from King, with no hands at the controls, the New Frontiers was on her long way again, headed out, as if she had a mind of her own.

"I can't tell you much," admitted Libby some hours later to a group consisting of King, Zaccur Barstow, and Lazarus Long. "I was able to determine, before we passed the speed of light-or appeared to-that our course then was compatible with the idea that we have been headed toward the star named by Kreel Sarloo as the destination ordered for us by his gods. We continued to accelerate and the stars faded out. I no longer have any astrogational reference points and I am unable to say where we are or where we are going,"

"Loosen up, Andy," suggested Lazarus. "Make a guess."

"Well . . . if our world line is a smooth function-if it is, and I have no data-then we may arrive in the neighborhood of star PK3722, where Kreel Sarloo said we were going."

"Rummph!" Lazarus turned to King. "Have you tried slowing down?"

"Yes," King said shortly. "The controls are dead."

"Mmmm . . . Andy, when do we get there?"

Libby shrugged helplessly. "I have no frame of reference. What is time without a space reference?"

Time and space, inseparable and one- Libby thought about it long after the others had left. To be sure, he had the space framework of the ship itself and therefore there necessarily was ship's time. Clocks in the ship ticked or hummed or simply marched; people grew hungry, fed themselves, got tired, rested. Radioactives deteriorated, physio-chemical processes moved toward states of greater entropy, his own consciousness perceived duration.

But the background of the stars, against which every timed function in the history of man had been measured, was gone. So far as his eyes or any instrument in the ship could tell him, they had become unrelated to the rest of the universe.

What universe?

There was no universe. It was gone.

Did they move? Can there be motion when there is nothing to move past?

Yet the false weight achieved by the spin of the ship persisted. Spin with reference to what? thought Libby. Could it be that space held a true, absolute, nonrelational texture of its own, like that postulated for the long-discarded "ether" thatthe classic Michelson-Morley experiments had failed to detect? No, more than that-had denied the very possibility of its existence? -had for that matter denied the possibility of speed greater than light. Had the ship actually passed the speed of light? Was it not more likely that this was a coffin, with ghosts as passengers, going nowhere at no time?

But Libby itched between his shoulder blades and was forced to scratch; his left leg had gone to sleep; his stomach was beginning to speak insistently for food-if this was death, he decided, it did not seem materially different from life.

With renewed tranquility, he left the control room and headed for his favorite refectory, while starting to grapple with the problem of inventing a new mathematics which would include all the new phenomena. The mystery of how the hypothetical gods of the Jockaira had teleported the Families from ground to ship he discarded. There had been no opportunity to obtain significant data, measured data; the best that any honest scientist could do, with epistemological rigor, was to include a note that recorded the fact and stated that it was unexplained. It was a fact; here he was who shortly before had been on the planet; even now Schultz's assistants were overworked trying to administer depressant drugs to the thousands who had gone to pieces emotionally under the

outrageous experience. But Libby could not explain it and, lacking data, felt no urge to try. What he did want to do was to deal with world lines in a plenum, the basic problem of field physics.

Aside from his penchant for mathematics Libby was a simple person. He preferred the noisy atmosphere of the "Club," refectory 9-D, for reasons different from those of Lazarus. The company of people younger than himself reassured him; Lazarus was the only elder he felt easy with.

Food, he learned, was not immediately available at the Club; the commissary was still adjusting to the sudden change. But Lazarus was there and others whom he knew; Nancy Weatheral scrunched over and made room for him. "You're just the man I want to see," she said. "Lazarus is being most helpful. Where are we going this time and when do we get there?" -

Libby explained the dilemma as well as he could. Nancy wrinkled her nose. "That's a pretty prospect, I must say! Well, I guess that means back to the grind for little Nancy."

"What do you mean?"

"Have you ever taken care of a somnolent? No, of course you haven't. It gets tiresome. Turn them over, bend their arms, twiddle their tootsies, move their heads, close the tank and move on to the next one. I get so sick of human bodies that I'm tempted to take a vow of chastity."

"Don't commit yourself too far," advised Lazarus. "Why would you care, you old false alarm?"

Eleanor Johnson spoke up. "Fm glad to be in the ship again. Those slimy Jockaira-ugh!"

Nancy shrugged. "You're prejudiced, Eleanor. The Jocks are okay, in their way. Sure, they aren't exactly like us, but neither are dogs. You don't dislike dogs, do you?'

"That's what they are," Lazarus said soberly. "Dogs."

"Huh?"

"I don't mean that they are anything like dogs in most ways-they aren't even vaguely canine and they certainly are our equals and possibly our superiors in some things . . . but they are dogs just the same. Those things they call their 'gods' are simply their masters, their owners. We couldn't be domesticated, so the owners chucked us out."

Libby was thinking of the inexplicable telekinesis the Jockaira-or their masters-had used. "I wonder what it would have been like," he said thoughtfully, "if they had been able to domesticate us. They could have taught us a lot of wonderful things"

"Forget it," Lazarus said sharply. "It's not a man's place to be property."

"What is a man's place?"

"It's a man's business to be what he is . . . and be it in style!" Lazarus got up. "Got to go."

Libby started to leave also, but Nancy stopped him. "Don't go. I want to ask you some questions. What year is it back on~ Earth?"

Libby started to answer, closed his mouth. He started to answer a second time, finally said, "I don't know how to answer that question. It's like saying, 'How high is up?"

"I know I probably phrased it wrong," admitted Nancy. '1 didn't do very well in basic physics, but I did gather the idea that time is relative and simultaneity is an idea which applies only to two points close together in the same framework. But just the same,

I want to know something. We've traveled a lot faster and farther than anyone ever did before, haven't we? Don't our clocks slow down, or something?"

Libby got that completely baffled look which mathematical-physicists wear whenever laymen try to talk about physics in nonmathematical language. "You're referring to the Lorentz-2 FitzGerald contraction. But, if you'll pardon me, anything one says about it in words is necessarily nonsense."

"Why?" she insisted.

"Because . . . well, because the language is inappropriate. The formulae used to describe the effect loosely called a contraction presuppose that the observer is part of the phenomenon. But verbal language contains the implicit assumption that we can stand outside the whole business and watch what goes on. The mathematical language denies the very possibility of any such outside viewpoint. Every observer has his own world line; he can't get outside it for a detached viewpoint."

"But suppose he did? Suppose we could see Earth right now?"

'~There I go again," Libby said miserably. "I tried to talk about it in words and all I did was to add to the confusion. There is no way to measure time in any absolute sense when two events are separated in a continuum. All you can measure is interval."

"Well, what is interval? So much space and so much time."

"No, no, no! It isn't that at all. Interval is . . . well, it's interval. I can write down formulae about it and show you how we use it, but it can't be defined in words. Look, Nancy, can you write the score for a full orchestration of a symphony in words?" -

"No. Well, maybe you could but it wonld take thousands of times as long."

"And musicians still could not play it until you put it back into musical notation. That's what I meant," Libby went on, "when I said that the language was inappropriate. I got into a difficulty like this once before in trying to describe the lightpressure drive. I was asked why, since the drive depends on loss of inertia, we people inside the ship had felt no loss of inertia. There was no answer, in words. Inertia isn't a word; it is a mathematical concept used in mathematically certain aspects of a plenum. I was stuck."

Nancy looked baffled but persisted doggedly. "My question still means something, even if I didn't phrase it right. You can't just tell me to run along and play. Suppose we turned around and went back the way we came, all the way to Earth, exactly the same trip but in reverse-just double the ship's time it has been so far. All right, what year would it be on Earth when we got there?'

"It would be . . . let me see, now-" The almost automatic processes of Libby's brain started running off the unbelievably huge and complex problem in accelerations, intervals, difform motion. He was approaching the answer in a warm glow of mathematical revery when the problem suddenly fell to pieces on him, became indeterminate. He abruptly realized that the problem had an unlimited number of equally valid answers.

But that was impossible. In the real world, not the fantasy world of mathematics, such a situation was absurd. Nancy's question had to have just one answer, unique and real.

Could the whole beautiful structure of relativity be an absurdity? Or did it mean that it was physically impossible ever to backtrack an interstellar distance?

"I'll have to give some thought to that one," Libby said hastily and left before Nancy could object.

But solitude and contemplation gave him no clue to the problem. It was not a failure of his mathematical ability; he was capable, he knew, of devising a mathematical description of any group of facts, whatever they might be. His difficulty lay in having too few facts. Until some observer traversed interstellar distances at speeds approximating the speed of light and returned to the planet from which he had started there could be no answer. Mathematics alone has no content, gives no answers.

Libby found himself wondering if the hills of his native Ozarks were still green, if the smell of wood smoke still clung to the trees in the autumn, then he recalled that the question lacked any meaning by any rules he knew of. He surrendered to an attack of homesickness such as he had not experienced since he was a youth in the Cosmic Construction Corps, making his first deep-space jump.

This feeling of doubt and uncertainty, the feeling of lostness and nostalgia, spread throughout the ship. On the first leg of their journey the Families had had the incentive that had kept the covered wagons crawling across the plains. But now they were going nowhere, one day led only to the next. Their long lives were become a meaningless burden.

Ira Howard, whose fortune established the Howard Foundation, was born in 1825 and died in 1873-of old age. He sold groceries to the Forty-niners in San Francisco, became a wholesale sutler in the American War of the Secession, multiplied his fortune during the tragic Reconstruction.

Howard was deathly afraid of dying. He hired the best doctors of his time to prolong his life. Nevertheless old age plucked him when most men are still young. But his will commanded that his money be used to lengthen human life. The administrators of the trust found no way to carry out his wishes other than by seeking out persons whose family trees showed congenital predispositions toward long life and then inducing them to reproduce in kind. Their method anticipated the work of Burbank; they may or may not have known of the illuminating researches of the Monk Gregor Mendel.

Mary Sperling put down the book she had been reading when Lazarus entered her stateeoom. He picked it up. "What are you reading, Sis? 'Ecclesiastes.' Hmm . . . I didn't know you were religious." He read aloud:

"'Yea, though he live a thousand years twice told, yet hath he seen no good: do not all go to one place?'

"Pretty grim stuff, Mary. Can't you find something more cheerful? Even in The Preacher?' His eyes skipped on down. "How about this one? 'For to him that is joined to all the living there is hope-' Or . . . mnunm, not too many cheerful spots. Try this: 'Therefore remove sorrow from thy heart, and put away evil from thy flesh: for childhood and youth are vanity.' That's more my style; I wouldn't be young again for overtime wages."

"I would."

"Mary, what's eating you? I find you sitting here, reading the most depressing book in the Bible, nothing but death and funerals. Why?"

She passed a hand wearily across her eyes. "Lazarus, I'm getting old. What else is there to think about?'

"You? Why, you're fresh as a daisy!"

She looked at him. She knew that he lied; her mirror showed her the greying hair, the relaxed skin; she felt it in her bones. Yet Lazarus was older than she . . . although she knew, from what she had learned of biology during the years she had assisted in the longevity research, that Lazarus should never have lived to be as old as he was now. When he was born the program had reached only the third generation, too few generations to eliminate the less durable strains-except through some wildly unlikely chance shuffling of genes.

But there he stood. "Lazarus," she asked, "how long do you expect to live?"

"Me? Now that's an odd question. I mind a time when I asked a chap that very same question-about me, I mean, not about him. Ever hear of Dr. Hugo Pinero?"

"'Pinero... Pinero.. .' Oh, yes, 'Pinero the Charlatan.'"

"Mary, he was no charlatan. He could do it, no foolin'. He could predict accurately when a man would die."

"But- Go ahead. What did he tell you?"

"Just a minute. I want you to realize that he was no fake. His predictions checked out right on the button-if he hadn't died, the life insurance companies would have been ruined. That was before you were born, but I was there and I know. Anyhow, Pinero took my reading and it seemed to bother him. So he took it again. Then he returned my money."

"What did he say?"

"Couldn't get a word out of him. He looked at me and he looked at his machine and he just frowned and clammed up. So I can't rightly answer your question."

"But what do you think about it, Lazarus? Surely you don't expect just to go on forever?"

"Mary," he said softly, "Fm not planning on dying. I'm not giving it any thought at all."

There was silence. At last she said, "Lazarus, I don't want to die. But what is the purpose of our long lives? We don't seem to grow wiser as we grow older. Are we simply hanging on after our tune has passed? Loitering in the kindergarten when we should be moving on? Must we die and be born again?"

"I don't know," said Lazarus, "and I don't have any way to find out. . . and I'm damned if I see any sense in my worrying about it. Or you either. I propose to hang onto this life as long as I can and learn as much as I can. Maybe wishing and understanding are reserved for a later existence and maybe they aren't for us at all, ever. Either way, I'm satisfied to be living and enjoying it. Mary my sweet, carpe that old diem! It's the only game in town."

The ship slipped back into the same monotonous routine that had obtained during the weary years of the first jump. Most of the Members went into cold-rest; the others tended them, tended the ship, tended the hydroponds. Among the somnolents was Slayton Ford; cold-rest was a common last resort therapy for functional psychoses.

The flight to star PK3722 took seventeen months and three days, ship's time.

The ship's officers had as little choice about the journey's end as about its beginning. A few hours before their arrival star images flashed back into being in the stellarium screens and the ship rapidly decelerated to interplanetary speeds. No feeling of slowing down was experienced; whatever mysterious forces were acting on them acted

on all masses alike. The New Frontiers slipped into an orbit around a live green planet some hundred million miles from its sun; shortly Libby reported to Captain King that they were in a stable parking orbit.

Cautiously King tried the controls, dead since their departure. The ship surged; their ghostly pilot had left them.

Libby decided that the simile was incorrect; this trip had undoubtedly been planned for them but it was not necessary to assume that anyone or anything had shepherded them here. Libby suspected that the "gods" of the dog-people saw the plenum as static; their deportation was an accomplished fact to them before it happened-a concept regrettably studded with unknowns-but there were no appropriate words. Inadequately and incorrectly put into words, his concept was that of a "cosmic cam," a world line shaped for them which ran out of normal space and back into it; when the ship reached the end of its "cam" it returned to normal operation.

He tried to explain his concept to Lazarus and to the Captain, but he did not do well. He lacked data and also had not had time to refine his mathematical description into elegance; it satisfied neither him nor them.

Neither King nor Lazarus had time to give the matter much thought. Barstow's face appeared on an interstation viewscreen. "Captain!" he called out. "Can you come aft to lock seven? We have visitors!"

Barstow had exaggerated; there was only one. The creature reminded Lazarus of a child in fancy dress, masqueraded as a rabbit. The little thing was more android than were the Jockaira, though possibly not mammalian. It was unclothed but not naked, for its childlike body was beautifully clothed in short sleek golden fur. Its eyes were bright and seemed both merry and intelligent.

But King was too bemused to note such detail. A voice, a thought, was ringing in his head: ". . . so you are the group leader . . ." it said. ". . . welcome to our world . . . we have been expecting you . . . the (blank.) told us of your coming..."

Controlled telepathy. A creature, a race, so gentle, so civilized, so free from enemies, from all danger and strife that they could afford to share their thoughts with others-to share more than their thoughts; these creatures were so gentle and so generous that they were offering the humans a homestead on their planet. This was why this messenger had come: to make that offer.

To King's mind this seemed remarkably like the prize package that had been offered by the Jockaira; he wondered what the boobytrap might be in this proposition.

The messenger seemed to read his thought". . . look into our hearts. . . we hold no malice toward you . . . we share your love of life and we love the life in you . . .

"We thank you," King answered formally and aloud. "We will have to confer." He turned to speak to Barstow, glanced back. The messenger was gone.

The Captain said to Lazarus, "Where did he go?"

"Huh? Don't ask me."

"But you were in front of the lock."

"I was checking the tell-tales. There's no boat sealed on outside this lock-so they show. I was wondcring if they were working right. They are. How did he get into the ship? Where's his rig?'

"How did he leaver'

"Not past me!"

"Zaccur, he came in through this lock, didn't he?

"I don't know."

"But he certainly went out through it"

"Nope," denied Lazarus. "This lock hasn't been opened. The deep-space seals are still in place. See for yourself."

King did. "You don't suppose," he said slowly, "that he can pass through-"

"Don't look at me," said Lazarus. "I've got no more prejudices in the matter than the Red Queen. Where does a phone image go when you cut the circuit?" He left, whistling softly to himself. King did not recognize the tune. Its words, which Lazarus did not sing, started with:

"Last night I saw upon the stair
A little man who wasn't there-"

Chapter 4

THERE WAS NO CATCH to the offer. The people of the planet-they had no name since they had no spoken language and the Earthmen simply called them "The Little People"-the little creatures really did welcome them and help them. They convinced the Families of this without difficulty for there was no trouble in communication such as there had been with the Jockaira. The Little People could make even subtle thoughts kndwn directly to the Earthmen and in turn could sense correctly any thought directed at them. They appeared either to ignore or not to be able to read any thought not directed at them; communicatibn with them was as controlled as spoken speech. Nor did the Earthmen acquire any telepathic powers among themselves.

Their planet was even more like Earth than was the planet of the Jockaira. It was a little larger than Earth but had a slightly lower surface gravitation, suggesting a lower average density-the Little People made slight use of metals in their culture, which may be indicative.

The planet rode upright in its orbit; it had not the rakish tilt of Earth's axis. Its orbit was nearly circular; aphelion differed from perihelion by less than one per cent. There were no seasons. Nor was there a great heavy moon, such as Earth has, to wrestle its oceans about and to disturb the isostatic balance of its crust. Its hills were low, its winds were gentle, its seas were placid. To Lazarus' disappointment, their new home, had no lively weather; it hardly had weather at all; it had climate, and that of the sort that California patriots would have the rest of the Earth believe exists in their part of the globe.

But on the planet of the Little People it really exists.

They indicated to the Earth people where they were to land, a wide sandy stretch of beach running down to the sea. Back of the low break of the bank lay mile on mile of lush meadowland, broken by irregular clumps of bushes and trees. The landscape had a careless neatness, as if it were a planned park, although there was no evidence of cultivation. It was here, a messenger told the first scouting party, that they were welcome to live.

There seemed always to be one of the Little People present when his help might be useful-not with the jostling inescapable overhelpfulness of the Jockaira, but with the unobtrusive readiness to hand of a phone or a pouch knife. The one who accompanied the first party of explorers confused Lazarus and Barstow by assuming casually that he had met them before, that he had visited them in the ship. Since his fur was rich mahogany rather than golden, Barstow attributed the error to misunderstanding, with a mental reservation that these people might possibly be capable of chameleonlike changes in color. Lazarus reserved his judgment.

Barstow asked their guide whether or not his people had any preferences as to where and how the Earthmen were to erect buildings. The question had been bothering him because a preliminary survey from the ship had disclosed no cities. It seemed likely that the natives lived underground-in which case he wanted to avoid getting off on the wrong foot by starting something which the local government might regard as a slum.

He spoke aloud in words directed at their guide, they having learned already that such was the best way to insure that the natives would pick up the thought.

In the answer that the little being flashed back Barstow caught the emotion of surprise. ". . . must you sully the sweet countryside with interruptions? . . . to what purpose do you need to form buildings? . .

"We need buildings for many purposes," Barstow explained. "We need them as daily shelter, as places to sleep at night. We need them to grow our food and prepare it for eating." He considered trying to explain the processes of hydroponic farming, of food processing, and of cooking, then dropped it, trusting to the subtle sense of telepathy to let his "listener" understand. "We need buildings for many other uses, for workshops and laboratories, to house the machines whereby we communicate, for almost everything we do in our everyday life."

"Be patient with me . . ." the thought came, since I know so little of your ways . . . but tell me do you prefer to sleep in such as that? . . ." He gestured toward the ship's boats they had come down in, where their bulges showed above the low bank. The thought he used for the boats was too strong to be bound by a word; to Lazarus' mind came a thought of a dead, constricted space-a jail that had once harbored him, a smelly public phone booth.

"It is our custom."

The creature leaned down and patted the turf. ". . . is this not a good place to sleep? . . ."

Lazarus admitted to himself that it was. The ground was covered with a soft spring turf, grasslike but finer than grass, softer, more even, and set more closely together. Lazarus took off his sandals and let his bare feet enjoy it, toes spread and working. It was, he decided, more like a heavy fur rug than a lawn. -

"As for food . . .”" their guide went on, ". . . why struggle for that which the good soil gives freely? . . come with me. . ."

He took them across a reach of meadow to where low bushy trees hung over aT meandering brook. The "leaves" were growths the size of a man's hand, irregular in shape, and an inch or more in thickness. The little person broke off one and nibbled at it daintily.

Lazarus plucked one and examined it. It broke easily, like a well-baked cake. The inside was creamy yellow, spongy but crisp, and had a strong pleasant odor, reminiscent of mangoes.

"Lazarus, don't, eat that!" warned Barstow. "It hasn't been analyzed~"

". . . it is harmonious with your body . .

Lazarus sniffed it again. "I'm willing to be a test case, Zack."

"Oh, well-" Barstow shrugged. "I warned you. You will anyhow."

Lazarus did. The stuff was oddly pleasing, firm enough to suit the teeth, piquant though elusive in flavor. It settled down happily in his stomach and made itself at home.

Barstow refused to let anyone else try the fruit until its effect on Lazarus was established. Lazarus took advantage of his exposed and privileged position to make a full meal-the best, he decided, that he had had in years.

". . . will you tell me what you are in the habit of eating? . . ." inquired their little friend. Barstow started to reply but was checked by the creature's thought: ". . . all of you think about it . ." no further thought message came from him for a few moments, then he flashed, ". . . that is enough . . -. my wives will take care of it . . ."

Lazarus was not sure the image meant "wives" but some similar close relationship was implied. It had not yet been established that the Little People were bisexual-or what.

Lazarus slept that night out under the stars and let their clean impersonal light rinse from him the claustrophobia of the ship. The constellations here were distorted out of easy recognition, although he could recognize, he decided, the cool blue of Vega and the orange glow of Antares. -The one certainty was the Milky Way, spilling its cloudy arch across the sky just as at home. The Sun, he knew, could not be visible to the naked eye even if he knew where to look for it; its low absolute magnitude would not show up across the light-years. Have to get hold of Andy, he thought sleepily, work out its coordinates and pick it out with instruments. He fell asleep before it could occur to him to wonder why he should bother.

Since no shelter was needed at night they landed everyone as fast as boats could shuttle them down. The crowds were dumped on the friendly soil and allowed to rest, picnic fashion, until the colony could be organized. At first they ate supplies brought down from the ship, but Lazarus' continued good health caused the rule against taking chances with natural native foods to be re1axed shortly. After that they ate mostly of the boundlein rai'gesse of the plants and used ship's food only to vary their diets.

Several days after the last of them had been landed Lazarus was exploring alone some distance from the camp. He came across one of the Little People; the native greeted him with the same assumption of earlier acquaintance which all of them seemed to show and led Lazarus to a grove of low trees still farther from base. He indicated to Lazarus that he wanted him to eat.

Lazarus was not particularly hungry but he felt compelled to humor such friendliness, so he plucked and ate.

He almost choked in his astonishment. Mashed potatoes and brown gravy!

". . . didn't we get it right? - . ." came an anxious thought.

"Bub," Lazarus said solemnly, "I don't know what you planned to do, but this is just fine!"

A warm burst of pleasure invaded his mind. ". . . try the next tree . .

Lazarus did so, with cautious eagerness. Fresh brown bread and sweet butter seemed to be the combination, though a dash of ice cream seemed to have crept in from somewhere.

He was hardly surprised when the third tree gave strong evidence of having both mushrooms and charcoal-broiled steak in its ancestry. ". . . we used your thought images almost entirely . . ." explained his companion. ". . . they were much stronger than those of any of your wives . . ."

Lazarus did not bother to explain that he was not married. The little person added, ". . . there has not yet been time to simulate the appearances and colors your thoughts showed does it matter much to you? .

Lazarus gravely assured him that it mattered very little.

When he returned to the base, he had considerable difficulty in convincing others of the seriousness of his report.

One who benefited greatly from the easy, lotus-land quality of their new home was Slayton Ford. He had awakened from cold rest apparently recovered from his breakdown except in one respect: he had no recollection of whatever it was he had experienced in the temple of Kreel. Ralph Schultz considered this a healthy adjustment to an intolerable experience and dismissed him as a patient.

Ford seemed younger and happier than he had appeared before his breakdown. He no longer held formal office among the Members-indeed there was little government of any sort; the Families lived in cheerful easy-going anarchy on this favored planet-but he was still addressed by his title and continued to be treated as an elder, one whose advice was sought, whose judgment was deferred to, along with Zaccur Barstow, Lazarus, Captain King, and others. The Families paid little heed to calendar ages; close friends might differ by a century. For years they had benefited from his skilled administration; now they continued to treat him as an elder statesman, even though two-thirds of them were older than was he.

The endless picnic stretched into weeks, into months. After being long shut up in the ship, sleeping or working, the temptation to take a long vacation was too strong to resist and there was nothing to forbid it. Food in abundance, ready to eat and easy to handle, grew almost everywhere; the water in the numerous streams was clean and potable. As for clothing, they had plenty if they wanted to dress but the need was esthetic rather, than utilitarian; the Elysian climate made clothing for protection as silly as suits for swimming. Those who liked clothes wore them; bracelets and beads and flowers in the hair were quite enough for most of them and not nearly so much nuisance if one chose to take a dip in the sea.

Lazarus stuck to his kilt.

The culture and degree of enlightenment of the Little People was difficult to understand all at once, because their ways were subtle. Since they lacked outward signs, in Earth terms, of high scientific attainment-no great buildings, no complex mechanical transportation machines, no throbbing power plants-it was easy to mistake them for Mother Nature's children, living in a Garden of Eden.

Only one-eighth of an iceberg shows above water.

Their knowledge of physical science was not inferior to that of the colonists; it was incredibly superior. They toured the ship's boats with polite interest, but confounded their guides by inquiring why things were done this way rather than that?-and the way

suggested invariably proved to be simpler and more efficient than Earth technique. . . when the astounded human technicians managed to understand what they were driving at.

The Little Pedple understood machinery and all that machinery implies, but they simply had little use for it. They obviously did not need it for communication and had little need for it for transportation (although the full reason for that was not at once evident), and they had very little need for machinery in any of their activities. But when they had a specific need for a mechanical device they were quite capable of inventing, building it, using it once, and destroying it, performing the whole process with a smooth cooperation quite foreign to that of men.

But in biology their preeminence was the most startling. The Little People were masters in the manipulation of life forms. Developing plants in a matter of days which bore fruit duplicating not only in flavor but in nutrition values the foods humans were used to was not a miracle to them but a routine task any of their biotechnicians could handle. They did it more easily than an Earth horticulturist breeds for a certain strain of color or shape in a flower.

But their methods were different from those of any human plant breeder. Be it said for them that they did try to explain their methods, but the explanations simply did not come through. In our terms, they claimed to "think" a plant into the shape and character they desired. Whatever they meant by that, it is certainly true that they could take a dormant seedling plant and, without touching it or operating on it in any way perceptible to their human students, cause it to bloom and burgeon into maturity in the space of a few hours-with new characteristics not found in the parent line . . and which bred true thereafter.

However the Little People differed from Earthmen only in degree with respect to scientific attainments. In an utterly basic sense they differed from humans in kind.

They were not individuals.

No single body of a native housed a discrete individual. Their individuals were multi-bodied; they had group "souls." The basic unit of their society was a telepathic rapport group of many parts. The number of bodies and brains housing one individual ran as high as ninety or more and was never less than thirty-odd.

The colonists began to understand much that had been utterly puzzling about the Little People only after they learned this fact. There is much reason to believe that the Little People found the Earthmen equally puzzling, that they, too, had assumed that their pattern of existence must be mirrored in others. The eventual discovery of the true facts on each side, brought about mutual misunderstandings over identity, seemed to arouse horror in the minds of the Little People. They withdrew themselves from the neighborhood of the Families' settlement and remained away for several days.

At length a messenger entered the camp site and sought out Barstow. ". . .We are sorry we shunned you . . . in our haste we mistook your fortune for your fault . . . we wish to help you . . . we offer to teach you that you may become like ourselves . . ."

Barstow pondered how to answer this generous overture. "We thank you for your wish to help us," he said at last, "but what you call our misfortune seems to be a necessary part of our makeup. Our ways are not your ways. I do not think we could understand your ways."

The thought that came back to him was very troubled. "We have aided the beasts of the air and of the ground to cease their strife . . . but if~you do not wish our help we will not thrust it on you . . ."

The messenger went away, leaving Zaccur Barstow troubled in his mind. Perhaps, he thought, ha had been hasty in answering without taking time to consult the elders. Telepathy was certainly not a gift to be scorned; perhaps the Little People could train them in telepathy without any loss of human individualism. But what he knew of the sensitives among the Families did not encourage such hope; there was not a one of them who was emotionally healthy, many of them were mentally deficient as well-it did not seem like a safe path for humans.

It could be discussed later, he decided; no need to hurry. "No need to hurry" was the spirit throughout the settlement. There was no need to strive, little that had to be done and rarely any rush about that little. The sun was warm and pleasant, each day was much like the next, and there was always the day after that. The Members, predisposed by their inheritance to take a long view of things, began to take an eternal view. Time no longer mattered. Even the longevity research, which had continued throughout their memories, languished. Gordon Hardy tabled his current experimentation to pursue the vastly more fruitful occupation of learning what the Little People knew of the nature of life. He was forced to take it slowly, spending long hours in digesting new knowledge. As time trickled on, he was hardly aware that his hours of contemplation were becoming longer, his bursts of active study less frequent.

One thing he did learn, and its implications opened up whole new fields of thought: the Little People had, in one sense, conquered death.

Since each of their egos was shared among many bodies, the death of one body involved no death for the ego. All memory experiences of that body remained intact, the personality associated with it was not lost, and the physical loss could be made up by letting a young native "marry" into the group. But a group ego, one of the personalities which spoke to the Earthmen, could not die, save possibly by the destruotion of every body it lived in. They simply went on, apparently forever.

Their young, up to the time of "marriage" or group assimilation, seemed to have little personality and only rudimentary or possibly instinctive mental processes. Their elders expected no more of them in the way of intelligent behavior than a human expects of a child still in the womb. There were always many such uncompleted persons attached to any ego group; they were cared for like dearly beloved pets or helpless babies, although they were often as large and as apparently mature to Earth eyes as were their elders.

Lazarus grew bored with paradise more quickly than did the majority of his cousins. "It can't always," he complained to Libby, who was lying near him on the fine grass, "be time for tea."

"What's fretting you, Lazarus?"

"Nothing in particular." Lazarus set the point of his knife on his right elbow, flipped it with his other hand, watched it bury its point in the ground. "It's just that -this place reminds me of a well-run zoo. It's got about as much future." He grunted scornfully. "It's 'Never-Never Land."

"But what in particular is worrying you?"

"Nothing. That's what worries me. Honest to goodness, Andy, don't you see anything wrong in being turned out to pasture like this?"

Libby grinned sheepishly. "I guess it's my hillbilly blood. 'When it don't rain, the roof don't leak; when it rains, I cain't fix it nohow," he quoted. "Seems to me we're doing tolerably well. What irks you?"

"Well-" Lazarus' pale-blue eyes stared far away; he paused in his idle play with his knife. "When I was a young man a long time ago, I was beached in the South Seas-"

"Hawaii?'

"No. Farther south. Damned if I know what they call it today. I got hard up, mighty hard up, and sold my sextant. Pretty soon-or maybe quite a while-I could have passed for a native. I lived like one. It didn't seem to matter. But one day I caught a look at myself in a mirror." Lazarus sighed gustily. "I beat my way out of that place shipmate to a cargo of green hides, which may give you some idea how. scared and desperate I was!"

Libby did not comment. "What do you do with your time, Lib?" Lazarus persisted.

"Me? Same as always. Think about mathematics. Try to figure out a dodge for a space drive like' the one that got us here."

"Any luck on that?" Lazarus was suddenly alert.

"Not yet. Gimme time. Or I just watch the clouds integrate. There are amusing mathematical relationships everywhere if you are on the lookout for them. In the ripples on the water, or the shapes of busts-elegant fifth-order functions."

"Huh? You mean 'fourth order."

"Fifth order. You omitted the time variable. I like fifth-order equations," Libby said dreamily. "You find 'em in fish, too."

"Huinmph!" said Lazarus, and stood up suddenly. "That may be all right for you, but it's not my pidgin."

"Going some place?"

"Goin' to take a walk."

Lazarus walked north. He walked the rest of that day, slept on the ground as usual that night, and was up and moving, still to the north, at dawn. The next day was followed by another like it, and still another. The going"was easy, much like strolling in a park . . . too easy, in Lazarus' opinion. For the sight of a volcano, or a really worthwhile waterfall, he felt willing to pay four bits and throw in a jackknife.

The food plants were sometimes strange, but abundant and satisfactory. He occasionally met one or more of the Little People going about their mysterious affairs: they never bothered him nor asked why he was traveling but simply greeted him with the usual assumption of previous acquaintanceship. He began to long for one who would turn out to be a stranger; he felt watched.

Presently the nights grew colder, the days less balmy, and the Little People less numerous. When at last he had not seen one for an entire day, he camped for the night, remained there the next day-took out his soul and examined it.

He had to admit that he could find no reasonable fault with the planet nor its inhabitants. But just as definitely it was not to his taste. No philosophy that he had ever heard or read gave any reasonable purpose for man's existence, nor any rational clue to his proper conduct. Basking in the sunshine might be as good a thing to do with one's life

as any other- but it was not for him and he knew it, even if he could not define how he knew it.

The hegira of the Families had been a mistake. It would have been a more human, a mqre mature and manly thing, to have stayed and fought for their rights, even if they had died insisting on them. Instead they had fled across half a universe (Lazarus was reckless about his magnitudes) looking for a place to light. They had found one, a good one-but already occupied by beings so superior as to make them intolerable for men. . . yet so supremely indifferent in their superiority to men that they had not even bothered to wipe them out, but had whisked them away to this-this -over-manicured country club.

And that in itself was the unbearable humiliation. The New Frontiers was the culmination of five hundred years of human scientific research, the best that men could do-but it had been flicked across the deeps of space as casually as a man might restore a baby bird to its nest.

The Little People did not seem to want to kick them out but the Little People, in their own way, were as demoralizing to men as were the gods of the Jockaira. One at a time they might be morons - but taken as groups each rapport group was a genius that threw the best minds that men could offer into the shade. Even Andy. Human beings could not hope to compete with that type of organization any more than a backroom shop could compete with an automated cybernated factory. Yet to form any such group identities, even if they could which he doubted, would be, Lazarus felt very sure, to give up whatever it was that made them men.

He admitted that he was prejudiced in favor of men. He was a man.

The uncounted days slid past while he argued with himself over the things that bothered him-problems that had made sad the soul of his breed since the first apeman had risen to self-awareness, questions never solved by full belly nor fine machinery. And the endless quiet days did no more to give him final answers than did all the soul searchings of his ancestors. Why? What shall it profit a man? No answer came back -save one: a firm unreasoned conviction that he was not intended for, or not ready for, this timeless snug harbor of ease.

His troubled reveries were interrupted by the appearance of one of the Little People. ". . . greetings, old friend your wife King wishes you to return to your home . . . he has need of your advice . . ."

"What's the trouble?" Lazarus demanded.

But the little creature either could or would not tell him. Lazarus gave his belt a hitch and headed south. ". . . there is no need to go slowly . . ." a thought came after him.

Lazarus let himself be led to a clearing beyond a clump of trees. There he found an egg-shaped object about six feet long, featureless except for a door in the side. The native went in through the door, Lazarus squeezed his larger bulk in after him; the door closed.

It opened almost at once and Lazarus saw that they were on the beach just below the human settlement. He had to admit that it was a good trick.

Lazarus hurried to the ship's boat parked on the beach in which Captain King shared with Barstow a semblance of community headquarters. "You sent for me, Skipper. What's up?"

King's austere face was grave. "It's about Mary Sperling."

Lazarus felt a sudden cold tug at his heart. "Dead?"

"No. Not exactly. She's gone over to the Little People. 'Married' into one of their groups."

"What? But that's impossible!"

Lazarus was wrong. There was no faint possibility of interbreeding between Earthmen and natives but there was no barrier, if sympathy existed, to a human merging into one of their rapport groups, drowning his personality in the ego of the many.

Mary Sperling, moved by conviction of her own impending death, saw in the deathless group egos a way out. Faced with the eternal problem of life and death, she had escaped the problem by choosing neither . . . selflessness. She had found a group willing to receive her, she had crossed over.

"It raises a lot of new problems," concluded King. "Slayton and Zaccur and I all felt that you had better be here."

"Yes, yes, sure-but where is Mary?" Lazarus demanded and then ran out of the room without waiting for an answer. He charged through the settlement ignoring both greetings and attempts to stop him. A short distance oustide the camp he ran across a native He skidded to a stop. "Where is Mary Sperling?"

". . . I am Mary Sperling . .

"For the love of- You can't be."

"I am Mary Sperling and Mary Sperling is myself do you not know me, Lazarus? . . . I know you.

Lazarus waved his hands. "No! I want to see Mary Sperling who looks like an Earthman-Iike me!"

The native hesitated.". . . follow me, then . . .

Lazarus found her a long way from the camp; it was obvious that she had been avoiding the other colonists. "Mary!"

She answered him mind to mind: ". . I am sorry to see you troubled . . . Mary Sperling is gone except in that she is part of us . . ."

"Oh, come off it, Mary! Don't give me that stuff! Don't you know me?"

". . . of course I know you, Lazarus . . . it is you who do not know me . . . do not trouble your soul or grieve your heart with the sight of this body in front of you . . . I am not one of your kind . . . I am native to this planet.

"Mary," he insisted, "you've got to undo this. You've got to come out of there!"

She shook her head, an oddly human gesture, for the face no longer held any trace of human expression; it was a mask of otherness. ". . . that is impossible . . .Mary Sperling is gone . . . the one who speaks with you is inextricably myself and not of your kind." The creature who had been Mary Sperling turned and walked away.

"Mary!" he cried. His heart leapt across the span of centuries to the night his mother had died. He covered his face with his hands and wept the unconsolable grief of a child,

Chapter S

LAZAIWS found both King and Barstow waiting for him when he returned. King looked at his face. "I could have told you," he said soberly, "but you wouldn't wait."

"Forget it," Lazatus said harshly. "What now?"

"Lazarus, there is something else you have to see before we discuss anything," Zaccur Barstow answered.

"Okay. What?"

"Just come and, see." They led him to a compartment in the ship's boat which was used as a headquarters. Contrary to Families' custom it was locked; King let them in. There was a woman inside, who, when she saw the three, quietly withdrew, locking the door again as she went out.

"Take a look at that," directed Barstow.

It was a living creature in an incubator-a child, but no such child as had ever been seen before. Lazarus stared at it, then said angrily, "What the devil is it?"

"See for yourself. Pick it up. You won't hurt it."

Lazarus did so, gingerly at first, then without shrinking from the contact as his curiosity increased. What it was, he could not say. It was not human; it was just as certainly not offspring of the Little People. Did this planet, like the last, contain some previously unsuspected race? It was manlike, yet certainly not a man child. It lacked even the button nose of a baby, nor were there evident external ears. There were organs in the usual locations of each but flush with the skull and protected with many ridges. Its hands had too many fingers and there was an extra large one near each wrist which ended in a cluster of pink worms.

There was something odd about the torso of the infant which Lazarus could not define. But two other gross facts were evident: the legs ended not in human feet but in horny, toeless pediments-hoofs. And the creature was hermaphroditic-not in deformity but in healthy development, an androgyne.

"What is it?" he repeated, his mind filled with lively suspicion.

"That," said Zaccur, "is Marion Schmidt, born three weeks ago."

"Huh? What do you mean?"

"It means that the Little People are just as clever in manipulating us as they are in manipulating plants."

"What? But they agreed to leave us alone!"

"Don't blame them too quickly. We let ourselves in for it. The origihal idea was simply a few improvements."

"Improvements!' That thing's an obscenity."

"Yes and no. My stomach turns whenever I have to took at it . . . but actually-well, it's sort of a superman. Its body architecture has been redesigned for greater efficiency, our useless simian hangovers have been left out, and its organs have been rearranged in a more sensible fashion. You can't say it's not human, for it is . . - an improved model. Take that extra appendage at the wrist. That's another hand, a miniature one . . - backed up by a microscopic eye. You can see how useful that would be, once you get used to the idea." Barstow stared at it. "But it looks horrid, to me~'

"It'd look horrid to anybody," Lazarus stated. "It may be an improvement, but damn it, I say it ain't humans"

"In any case it creates a problem."

"I'll say it does!" Lazarus looked at it again. "You say it has a second set of eyes in those tiny bands? That doesn't seem possible."

Barstow shrugged. "I'm no biologist. But every cell in the body contains a full bundle of chromosomes. I suppose that you could grow eyes, or bones, or anything you liked anywhere, if you knew how to manipulate the genes in the chromosomes. And they know."

"I don't want to be manipulated!"

"Neither do I."

Lazarus stood on the bank and stared out over the broad beach at a full meeting of- the Families. "I am-" he started formally, then looked puzzled. "Come here a moment, Andy." He whispered to Libby; Libby looked pained and whispered back. Lazarus looked exasperated and whispered again. Finally he straightened up and started over.

"I am two hundred and forty-one years old-at least," he stated. "Is there anyone here who is older?" It was empty formality; he knew that he was the eldest; he felt twice that old. "The meeting is opened,~' he went on, his big voice rumbling on down the beach assisted by speaker systems from the ship's boats. "Who is your chairman?"

"Get on with it," someone called from the crowd.

"Very well," said Lazarus. "Zaccur Barstow!"

Behind Lazarus a technician aimed a directional pickup at Barstow. "Zaccur Barstow," his voice boomed out, "speaking for myself. Some of us have come to believe that this planet, pleasant as it is, is not the place for us. You all know about Mary Sperling, you've seen stereos of Marion Schmidt; there have been other things and I won't elaborate. But emigrating again poses another question, the question of where? Lazarus Long proposes that we return to Earth. In such a-" His words were drowned by noise from the crowd.

Lazarus shouted them down. "Nobody is going to be forced to leave. But if enough of us want to leave to justify taking the ship, then we can. I say go back to Earth. Some say look for another planet. That'll have to be decided. But first-how many of you think as I do about leaving here?"

"I do!" The shout was echoed by many others. Lazarus peered toward the first man to answer, tried to spot him, glanced over his shoulder at the tech, then pointed. "Go ahead, bud," he ruled. "The rest of you pipe down."

"Name of Oliver Schmidt. I've been waiting for months for somebody to suggest this. I thought I was the only sorehead in the Families. I haven't any real reason for leaving-I'm not scared out by the Mary Sperling matter, nor Marion Schmidt. Anybody who likes such things is welcome to them-live and let live. But I've got a deep down urge to see Cincinnati again. I'm fed up with this place. I'm tired of being a lotus eater. Damn it, I want to work for my living! According to the Families' geneticists I ought to be good for another century at least. I can't see spending that much time lying in the inn and daydreaming."

When he shut up, at least a thousand more tried to get the floor. "Easy! Easy!" bellowed Lazarus. "If everybody wants to talk, I'm going to have to channel it through your Family representatives. But let's get a sample here and there." He picked out another man, told him to sound off.

"I won't take long," the new speaker said, "as I agree with Oliver Schmidt I just wanted to mention my own reason. Do any of you miss the Moon? Back home I used to

sit out on my balcony on warm summer nights and smoke and look at the Moon. I didn't know it was important to me, but it is. I want a planet with a moon."

The next speaker said only, "This case of Mary Sperling has given me a case of nerves. I get nightmares that I've gone over myself."

The arguments went on and on. Somebody pointed out that they had been chased off Earth; what made anybody think that they would be allowed to return? Lazarus answered that himself. "We learned a lot from the Jockaira and now we've learned a lot more from the Little People-things that put us way out ahead of anything scientists back on Earth had even dreamed of. We can go back to Earth loaded for bear. We'll be in shape to demand our rights, strong enough to defend them."

"Lazarus Long-" came another voice.

"Yes," acknowledged Lazarus.

"You over there, go ahead."

"I am too old to make any more jumps from star to star and much too old to fight at the end of such a jump. Whatever the rest of you do, I'm staying."

"In that case," said Lazarus, "there is no need to discuss it, is there?"

"I am entitled to speak." -

"All right, you've spoken. Now give sotheone else a chance."

The sun set and the stars came out and still the talk went on. Lazarus knew that it would never end unless he moved to end it. "All right," he shouted, ignoring the many who still, wanted to speak. "Maybe we'll have to turn this back to the Family councils, but let's take a trial vote and see where we are. Everybody who wants to go back to Earth move way over to my right. Everybody who wants to stay here move down the beach to my left. Everybody who wants to go exploring for still another planet gather right here in front of me." He dropped back and said to the sound tech, "Give them some music to speed 'em up."

The tech nodded and the homesick strains of Valse Triste sighed over the beach. It was followed by The Green Hills of Earth. Zaccur Barstow turned toward Lazarus. "You picked that music."

"Me?" Lazarus answered with bland innocence. "You know I ain't musical, Zack."

Even with music the separation took a long time. The last movement of the immortal Fifth had died away long before they at last had sorted themselves into three crowds.

On the left about a tenth of the total number were gathered, showing thereby their intention of staying. They were mostly the old and the tired, whose sands had run low. With them were a few youngsters who had never seen Earth, plus a bare sprinkling of other ages.

In the center was a very small group, not over three hundred, mostly men and a few younger women, who voted thereby for still newer frontiers.

But the great mass was on Lazarus' right. He looked at them and saw new animation in their faces; it lifted his heart, for he had been bitterly afraid that he was almost alone in his wish to leave.

He looked back at the small group nearest him. "It looks like you're outvoted," he said to them alone, his voice unamplifled. "But never mind, there always comes another day." He waited.

Slowly the group in the middle began to break up. By ones and twos and threes they moved away. A very few drifted over to join those who were staying; most of them merged with the group on the right.

When this secondary division was complete Lazarus spoke to the smaller group on his left. "All right," he said very gently, "You . . . you old folks might as well go back up to the meadows and get your sleep. The rest of us have things to make."

Lazarus then gave Libby the floor and let him explain to the majority crowd that the trip home would not be the weary journey the flight from Earth had been, nor even the tedious second jump. Libby placed all of the credit where most of it belonged, with the Little People. They had straightened him out with his difficulties in dealing with the problem of speeds which appeared to exceed the speed of light. If the Little People knew what they were talking about -and Libby was sure that they did-there appeared to be no limits to what Libby chose to call "para-acceleration"-"para-" because, like Libby's own light-pressure drive, it acted on the whole mass uniformly and could no more be perceived by the senses than can gravitation, and "para-" also because the ship would not go "through" but rather around or "beside" normal space. "it is not so much a matter of driving the ship as it is a selection of appropriate potential level in an n-dimensional hyperplenum of n-plus-one
possible-"

Lazarus firmly cut him off. "That's your department, son, and everybody trusts you in it. We ain't qualified to discuss the fine points."

"I was only going to add-"

"I know. But you were already out of the world when I stopped you."

Someone from the crowd shouted one more question. "When do we get there?"

"I don't know," Libby admitted, thinking of the question the way Nancy Weatheral had put it to him long ago. "I can't say what year it will be . . . but it will seem like about three weeks from now."

The preparations consumed days simply because many round trips of the ship's boats were necessary to embark them. There was a marked lack of ceremonious farewell because those remaining behind tended to avoid those who were leaving. Coolness had sprung up between the two groups; the division on the beach had split friendships, had even broken up contemporary marriages, had caused many hurt feelings, unresolvable bitterness. Perhaps the only desirable aspect of the division was that the parents of the mutant Marion Schmidt had elected to remain behind.

Lazarus was in charge of the last boat to leave. Shortly before he planned to boost he felt a touch at his elbow. "Excuse me," a young man said. "My name's Hubert Johnson. 1 want to go along but I've had to stay back with the other crowd to keep my mother from throwing fits. If I show up at the last minute, can 1 still go along?"

Lazirus looked him over. "You look old enough to decide without asking me."

"You don't understand. I'm an only child and my mother tags me around. I've got to sneak back before she misses me. How much longer-"

"I'm not holding this boat for anybody. And you'll never break away any younger. Get into the boat"

"But. . ."

"Oft!" The young man did so, with one worried backward glance at the bank. There was a lot, thought Lazarus, to be said for ectogenesis.

Once inboard the New Frontiers Lazarus reported to Captain King in the control room. "All inboard?" asked King.

"Yeah. Some late deciders, pro and con, and one more passenger at the last possible split second-woman named Eleanor Johnson. Let's go!"

King turned to Libby. "Let's go, Mister."

The stars blinked out.

They flew blind, with only Libby's unique talent to guide them. If he had doubts as to his ability to lead them through the featureless blackness of other space he kept them to himself. On the twenty-third ship's day of the reach and the eleventh day of para-deceleration the stars reappeared, all in their old familiar ranges-the Big Dipper, giant Orion, lopsidecL Crux, the fairy Pleiades, and dead ahead of them, blazing against the frosty backdrop of the Milky Way, was a golden light that had to be the Sun.

Lazarus had tears in his eyes for the second time in a month.

They could not simply rendezvous with Earth, set a parking orbit, and disembark; they had-to throw their hats in first. Besides that, they needed first to know what time it was.

Libby was able to establish quickly, through proper motions of nearest stars, that it was not later than about 3700 A.D.; without precise observatory instruments he refused to commit himself further. But once they were close enough to see the Solar planets he had another clock to read; the planets themselves make a clock with nine hands.

For any date there is a unique configuration of those "hands" since no planetary period is exactly commensurate with another. Pluto marks off an "hour" of a quarter of a millennium; Jupiter's clicks a cosmic minute of twelve years; Mercury whizzes a "second" of about ninety days. The other "hands" can refine these readings-Neptune's period is so cantankerously different from that of Pluto that the two fall into approximately repeated configuration only once in seven hundred and fifty-eight years. The great clock can be read with any desired degree of accuracy over any period-but it is not easy to read.

Libby started to read it as soon as any of the planets could be picked out. He muttered over the problem. "There's not a chance that we'll pick up Pluto," he complained to Lazarus, "and I doubt if we'll have Neptune. The inner planets give me an infinite series of approximations-you know as well as I do that "infinite" is a question-begging term. Annoying!"

"Aren't you looking at it the hard way, son? You can get a practical answer. Or move over and I'll get one." -

"Of course I can get a practical answer," Libby said petulantly, "if you're satisfied with that But-"

"But me no 'buts'-what year is it, man!"

"Eh? Let's put it this way. The time rate in the ship and duration on Earth have been unrelated three times. But now they are effectively synchronous again, such that slightly over seventy-four years have passed since we 1eft.'

Lazarus heaved a sigh. "Why didn't you say so?" He had been fretting that Earth might - not be recognizable . . . they might have torn down New York or something like that.

"Shucks, Andy, you shouldn't have scared me like that."

"Mmm . . ." said Libby. It was one of no further interest to him. There remained only the delicious problem of inventing a mathematics which would describe elegantly two apparently irreconcilable groups of facts: the Michelson-Morley experiments and the log of the New Frontiers. He set happily about it. Mmm . . . what was the least number of pamdimensions indispeMably necessary to contain the augmented plenum using a sheaf of postulates affirming- It kept him contented for a considerable time-subjective time, of course.

The ship was placed in a temporary orbit half a billion miles from the Sun with a radius vector normal to the plane of the ecliptic. Parked thus at right angles to and far outside the flat pancake of the Solar System they were safe from any long chance of being discovered. A ship's boat had been fitted with thç neo-Libby drive during the jump and a negotiating party was sent down.

Lazarus wanted to go along; King refused to let him, which sent Lazarus into sulks. King had said curtly, "This isn't a raiding party, Lazarus; this is a diplomatic mission."

"Hell, man, I can be diplomatic when it pays!"

"No doubt But we'll send a man who doesn't go armed to the 'fresher."

Ralph Schultz headed the party, since psychodynamic factors back on Earth were of first importance, but he was aided by legal voluntary and technical specialists. If the Families were going to have to fight for living room it was necessary to know what sort of technology, what sort of weapons, they would have to meet-but it was even more necessary to find out whether or not a peaceful landing could be arranged.

Schultz had been authorized by the elders to offer a plan under which the Families would colonize the thinly settled and retrograded European continent. But it was possible, even likely, that this had already been done in their absence, in view of the radioactive half-lifes involved. Schultz would probably have to improvise some other compromise, depending on the conditions he found.

Again there was nothing to do but wait.

Lazarus endured it in nail-chewing uncertainty. He had claimed publicly that the Families had such great scientific advantage that they could meet and defeat the best that Earth could offer. Privately, he knew that this was sophistry and so did any other Member competent to judge the matter. Knowledge alone did not win wars. The ignorant fanatics of Europe's Middle Ages had defeated the incomparably higher Islamic culture; Archimedes had been struck down by a common soldier; barbarians had sacked Rome. Libby, or some one, might devise an unbeatable, weapon from their mass of new knowledge-or might not and who knew what strides military art had made on earth in three quarters of a century?

King, trained in military art, was worried by the same thing and still more worried by the personnel he would have to work with. The Families were anything but trained legions; the prospect of trying to whip those cranky individualists into some semblance of a disciplined fighting machine ruined his sleep.

These doubts and fears King and Lazarus did not mention even to each other; each was afraid that to mention such things would be to spread a poison of fear through the ship. But they were not alone in their worries; half of the ship's company realized the weaknesses of their position and kept silent only because a bitter resolve to go home, no matter what, made them willing to accept the dangers..

"Skipper,". Lazarus said to King two weeks after Schultz's party had headed Earthside, "have you wondered how they're going to feel about the New Frontiers herself?"

"Eh? What do you mean?'

"Well, we hijacked her. Piracy."

King looked astounded. "Bless me, so we did! Do you know, it's been so long ago that it is hard for me to realize that she was ever anything but my ship . . . or to recall that I first came into her through an act of piracy." He looked thoughtful, then smiled grimly. "I wonder how conditions are in Coventry these days?"

"Pretty thin rations, I imagine," said Lazarus. "But we'll team up and make out. Never mind-they haven't caught us yet."

"Do you suppose that Slayton Ford will be connected with the matter? That would be hard lines after all he has gone through."

"There may not be any trouble about it at all," Lazarus answered soberly. "While the way we got this ship was kind of irregular, we have used it for the purpose for which it was built-to explore the stars. And we're returning it intact, long before they could have expected any results, and with a slick new space drive to boot. It's more for their money than they had any reason to expect-so they may just decide to forget it and trot out the fatted calf."

"I hope so," King answered doubtfully.

The scouting party was two days late. No signal was received from them until they emerged into normal spacetime, just before rendezvous, as no method had yet been devised for signalling from para-space to ortho-space. While they were maneuvering to rendezvous, King received Ralph Schultz's face on the control-room screen. "Hello, Captain! We'll be boarding shortly to report."

"Give me a summary now!"

"I wouldn't know where to start. But it's all right-we can go home!"

"Huh? How's that? Repeat!"

"Everything's all right. We are restored to the Covenant. You see, there isn't any difference any more. Everybody is a member of the Families now."

"What do you mean?" King demanded.

"They've got it."

"Got what?"

"Got the secret of longevity."

"Huh? Talk sense. There isn't any secret. There never was any secret."

"We didn't have any secret-but they thought we had. So they found it."

"Expiain yourself," insisted Captain King.

"Captain, can't this wait until we get back into the ship?' Ralph Schultz protested. "I'm no biologist. We've brought along a government reptesentative-you can quiz him, instead?

Chapter 6

KING RECEWED Terra's representative in his cabin. He had notified Zaccur Barstow and Justin Foote to be present for the Families and had invited Doctor Gordon Hardy because the nature of the startling news was the biologist's business. Libby was there as the ship's chief officer; Slayton Ford was invited because of his unique status, although he had held no public office in the Families since his breakdown in the temple of Kreel.

Lazarus was there because Lazarus wanted to be there, in his own strictly private capacity. He had not been invited, but even Captain King was somewhat diffident about interfering with the assumed prerogatives of the eldest Member.

Ralph Schultz introduced Earth's ambassador to the assembled company. "This is Captain King, our commanding officer and this is Miles Rodney, representing the Federation Council-minister plenipotentiary and ambassador extraordinary, I guess you would call him."

"Hardly that," said Rodney; "although I can agree to the 'extraordinary' part. This situation is quite without preccdent. it is an honor to know you, Captain."

"Glad to have you inboard, sir."

"And this is Zaccur Barstow, representing the trustees of the Howard Families, and Justin Foote, secretary tO the trustees-"

"Service."

"Service to you, gentlemen."

"Andrew Jackson Libby, chief astrogational officer, Doctor Gordon Hardy, biologist in charge of our research into the causes of old age and death."

"May I do you a service?" Hardy acknowledged formally."Service to you, sir. So you are the chief biologist-there was a time when you could have done a service to the whole human race. Think of it, sir-think how different things could have been. But, happily, the human race was able to worry out the secret of extending life without the aid of the Howard Families."

Hardy looked vexed. "What do you mean, sir? Do you mean to say that you are still laboring under the delusion that we had some miraculous secret to impart, if we chose?"

Rodney shrugged and spread his hands. "Really, now, there is no need to keep up the pretense, is there? Your results have been duplicated, independently."

Captain King cut in. "Just a moment-Ralph Schultz, is the Federation still under the impression that there is some 'secret' to our long lives? Didn't you tell them?"

Schultz was looking bewildered. "Uh-this is ridiculous. The subject hardly came up. They themselves had achieved controlled longevity; they were no longer interested in us in that respect. It is true that there still existed a belief that our long lives derived from manipulation rather than from heredity, but I corrected that impression."

"Apparently not very thoroughly, from what Miles Rodney has just said."

"Apparently not. I did not spend much effort on it; it was beating a dead dog. The Howard Families add their long lives are no longer an issue on Earth. Interest, both

public and official, is centered on the fact that we have accomplished a successful interstellar jump."

"I can confirm that," agreed Miles Rodney. "Every official, every news service, every citizen, every scientist in the system is waiting with utmost eagerness the arrival of the New Frontiers. It's the greatest, most sensational thing that has happened since the first trip to the Moon. You are famous, gentlemen-all of you."

Lazarus pulled Zaccur Barstow aside and whispered to him. Barstow looked perturbed, then nodded thoughtfully. "Captain---" Barstow said to King.

"Yes, Zack?"

"I suggest that we ask our guest to excuse us while we receive Ralph Schultz' report."

"Why?"

Barstow glanced at Rodney. "I think we will be better prepared to discuss matters if we are brief by our own representative."

King turned to Rodney. "Will you excuse us~~ sir?"

Lazarus broke in. "Never mind, Skipper. Zack means well but he's too polite. Might as well let Comrade Rodney stick around and we'll lay it on the line. Tell me this, Miles; what proof have you got that you and your pals have figured out a way to live as long as we do?'

"Proof?' Rodney seemed dumbfounded. "Why do you ask - Whom am I addressing? Who are you, sir?"

Ralph Schultz intervened. "Sorry-I didn't get a chance to finish the introductions. Miles Rodney, this is Lazarus Long, the Senior."

"Service. 'The Senior' what?'

"He just means 'The Senior,' period," answered Lazarus. "I'm the-oldest Member. Otherwise I'm a private citizen."

"The oldest one of the Howard Families! Why-why, you must be the oldest man alive-think of that!"

"You think about it," retorted Lazarus. "I quit worrying about it a couple of centuries ago. How about answering my question?'

"But I can't help being impressed. You make me feel like an infant-and I'm not a young man myself; I'll be a hundred and five this coming June."

"If you can prove that's your age, you can answer my question. I'd say you were about forty. How about it?"

'Well, - dear me, I hardly expected to be interrogated on this point. Do you wish to see my identity card?"

"Are you kidding? I've had fifty-odd identity cards in my time, all with phony birth dates. What else can you offer?'

"Just a minute, Lazarus," put in Captain King. 'What is the purpose of your question?"

Lazarus Long turned away from Rodney. "It's like this, Skipper-we hightailed it out of the Solar System to save our necks, because the rest of the yokels thought we had invented some way to live forever and proposed to squeeze it out of us if they had to kill every one of us. Now everything is sweetness and light~-so they say. But it seems mighty funny that the bird they send up to smoke the pipe of peace with us should still be convinced that we have that so-called secret.

"It got me to wondering.

"Suppose they hadn't figured out a way to keep from dying from old age but were still clinging to the idea that we had? What better way to keep us calmed down and unsuspicious than to tell us they had until they could get us where they wanted us in order to put the question to us again?"

Rodney snorted. "A preposterous ideal Captain, I don't think I'm called on to put up with this."

Lazarus stared coldly. "It was preposterous the first time, but-but it happened. The burnt child is likely to be skittish."

"Just a moment, both of you," ordered King. "Ralph, how about it? Could you have been taken in by a put-up job?"

Schultz thought about it, painfully. "I don't think so." He paused. "It's rather difficult to say. I couldn't tell from appearance of course, any more than our own Members could be picked out from a crowd of normal persons."

"But you are a psychologist. Surely you could have detected indications of fraud, if there had been one."

"I may be a psychologist, but I'm not a miracle man and I'm not telepathic. I wasn't looking for fraud." He grinned I sheepishly. "There was another factor. I was so excited over being home that I was not in the best emotional condition to note discrepancies, if there were any."

"Then you aren't sure?" -'

"No. I am emotionally convinced that Miles Rodney is telling the truth-"

"Lam!"

"-and I believe that a few questions could clear the matter up. He claims to be one hundred and five years old. We can test that."

"I see," agreed King. "Hmm . . . you put the questions, Ralph?"

"Very well. You will permit, Miles Rodney?"

"Go ahead," Rodney answered stiffly.

"You must have been about thirty years old when we left Earth, since we have been gone nearly seventy-five years, Earth time. Do you remember the event?"

"Quite clearly. I was a clerk in Novak Tower at the time, I in the offices of the Administrator."

Slayton Ford had remained in the background throughout the discussion, and had done nothing to call attention to himself. At Rodney's answer he sat up. "Just a moment, Captain-"

"Eh? Yes?"

"Perhaps I can cut this short. You'll pardon me, Ralph?" He turned to Terra's representative. "Who am I?"

Rodney looked at him in some puzzlement. His expression changed from one of simple surprise at the odd question to complete and unbelieving bewilderment. "Why, you . . . you are Administrator Ford!"

Chapter 7

"ONE AT A TIME! One at a time," Captain King was saying. "Don't everybody try to talk at once. Go on, Slayton; you have the floor. You know this man?" Ford looked Rodney over. "No, I can't say that I do."

"Then it is a frame up." King turned to Rodney."Suppose you recognized Ford from historical stereos-is that right?" -

Rodney seemed about to burst. "No! I recognized him. He's changed but I knew him. Mr. Administrator-look at me, please! Don't you know me? I worked for you!"

"It seems fairly obvious that he doesn't," King said dryly.

Ford shook his head. "It doesn't prove anything, one way or the other, Captain. There were over two thousand civil service employes in my office. Rodney might have been one of them. His face looks vaguely familiar, but so do most faces."

"Captain-" Master Gordon Hardy was speaking. "If I can question Miles Rodney I might be able to give an opinion as to whether or not they actually have discovered anything new about the causes of old age and death."

Rodney shook his head. "I am not a biologist. You could trip me up in no time. Captain King, I ask you to arrange my return to Earth as quickly as possible. I'll not be subjected to any more of this. And let me add that I do not care a minim whether you and your-your pretty crew ever get back to civilization or not. I came here to help you, but I'm disgusted." He stood up.

Slayton Ford went toward him. "Easy, Miles Rodney, please! Be patient. Put yourself in their place. You would be just as cautious if you had been through what they have been through."

Rodney hesitated. "Mr. Administrator, what are you doing here?"

"It's a long and complicated story. I'll tell you later."

"You are a member of the Howard Families-you must be. That accounts for a lot of odd things."

Ford shook his head. "No, Miles Rodney, I am not. Later, please-I'll explain it. You -worked for me once-when?"

"From 2109 until you, uh, disappeared."

"What was your job?"

"At the time of the crisis of 2113 I was an assistant correlation clerk in the Division of Economic Statistics, Control Section."

"Who was your section chief?"

"Leslie Waldron."

"Old Waldron, eh? What was the color of his hair?"

"His hair? The Walrus was bald as an egg."

Lazarus whispered to Zaccur Barstow, "Looks like I was off base, Zack."

"Wait a moment," Barstow whispered back. "It still could be thorough preparation-they may have known that Ford escaped with us."

Ford was continuing, "What was The Sacred Cow?'

"The Sacred- Chief, you weren't even supposed to know that there was such a publication!"

"Give my intelligence staff credit for some activity, at least," Ford said dryly. "I got my copy every week."

"But what was it?" demanded Lazarus.

Rodney answered, "An office comic and gossip sheet that was passed from hand to hand."

"Devoted to ribbing the bosses," Ford added, "especially me." He put an arm around Rodney's shoulders. "Friends, there is no doubt about it. Miles and I were fellow workers."

"I still want to find out about the new rejuvenation process," insisted Master Hardy some time later.

"I think we all do," agreed King. He reached out and refilled their guest's wine glass. "Will you tell us about it, sir?'

"I'll try," Miles Rodney answered, "though I must ask Master Hardy to bear with me. It's not one process, but several-one basic process and several dozen others, some of them purely cosmetic, especially for women. Nor is the basic process truly a rejuvenation process. You can arrest the progress of old age, but you can't reverse it to any significant degree-you can't turn a senile old man into a boy."

"Yes, yes," agreed Hardy. "Naturally-but what is the basic process?"

"It consists largely in replacing the entire blood tissue in an old person with new, young blood. Old age, so they tell me, is primarily a matter of the progressive accumulation of the waste poisons of metabolism. The blood is supposed to carry them away, but presently the blood gets so clogged with the poisons that the scavenging process doesn't take place properly. Is that right, Doctor Hardy?'

"That's an odd way of putting it, but-"

"I told you I was no biotechnician."

"-essentially correct. It's a matter of diffusion pressure deficit-the d.p.d. on the blood side of a cell wall must be such as to maintain a fairly sharp gradient or there will occur progressive autointoxication of the individual cells. But I must say that I feel somewhat disappointed, Miles Rodney. The basic idea of holding off death by insuring proper scavenging of waste products is not new-I have a bit of chicken heart which has been alive for two and one half centuries through equivalent techniques. As to the use of young blood-yes, that will work. I've kept experimental animals alive by such blood donations to about twice their normal span-" He stopped and looked troubled.

"Yes, Doctor Hardy?"

Hardy chewed his lip. "I gave up that line of research. I found it necessary to have several young donors in order to keep one beneficiary from growing any older. There was a small, but measurable, unfavorable effect on each of the donors. Racially it was self-defeating; there would never be enough donors to go around. Am I to understand, sir that this method is thereby limited to a small, select part of the population?"

"Oh, no! I did not make myself clear, Master Hardy. There are no donors."

"Huh?'

"New blood, enough for everybody, grown outside the body-the Public Health and Longevity Service can provide any amount of it, any type."

Hardy looked startled. "To think we came so close . . . so that's it." He paused, then went on. "We tried tissue culture of bone marrow in vitro. We should have persisted."

"Don't feel badly about it. Billions of credits and tens of thousands of technicians engaged in this project before there were any significant results. I'm told that the mass of

accumulated art in this field represents more effort than even the techniques of atomic engineering." Rodney smiled. "You see, they had to get some results; it was politically necessary-so there was an all-out effort." Rodney turned to Ford. 'When the news about the escape of the Howard Families reached the public, Chief, your precious successor had to be protected from the mobs."

Hardy persisted with questions about subsidiary techniques -tooth budding, growth inhibiting, hormone therapy, many others-until King came to Rodney's rescue by pointing out that the prime purpose of the visit was to arrange details of the return of the Families to Earth.

Rodney nodded. "I think we should get down to business. As I understand it, Captain, a large proportion of your people are now in reduced-temperature somnolence?"

("Why can't he say 'cold-rest'?" Lazarus said to Libby.)

"Yes, that is so."

"Then it would be no hardship on them to remain in that state for a time."

"Eh? Why do you say that, sir?"

Rodney spread his hands. "The administration finds itself in a somewhat embarrassing position. To put it bluntly, there is a housing shortage. Absorbing one hundred and ten thousand displaced persons can't be done overnight."

Again King had to hush them. He then nodded to Zaccur Barstow, who addressed himself to Rodney. "I fail to see the problem, sir. What is the present population of the North American continent?"

"Around seven hundred million."

"And you can't find room to tuck away one-seventieth of one per cent of that number? It sounds preposterous."

"You don't understand, sir," Rodney protested. "Population pressure has become our major problem. Co-incident with it, the right to remain undisturbed in the enjoyment of one's own homestead, or one's apartment, has become the most jealously guarded of all civil rights. Before we can find you adequate living room we must make over some stretch of desert, or make other major arrangements."

"I get it," said Lazarus. "Politics. You don't dare disturb anybody for fear they will squawk."

"That's hardly an adequate statement of the case."

"It's not, eh? could be you've got a general election coming up, maybe?'

"As a matter of fact we have, but that has nothing to do with the case."

Lazarus snorted.

Justin Foote spoke up. "It seems to me that the administration has looked at this problem in the most superficial light. It is not as if we were homeless immigrants. Most of the Members own their own homes. As you doubtless know, the Families were well-to-do; even wealthy, and for obvious reasons we built our homes to endure. I feel sure that most of those structures are still standing."

"No doubt," Rodney conceded, "but you will find them occupied."

Justin Foote shrugged. "What has that to do with us? That is a problem for the government to settle with the persons it has allowed illegally to occupy our homes. As for myself, I shall land as soon as possible, obtain an eviction ørder from the nearest court, and repossess my home."

"It's not that easy. You can make omelet from eggs, but not eggs from omelet. You have been legally dead for many years; the present oácupant of your house holds a good title."

Justin Foote stood up and glared at the Federation's envoy, looking, as Lazarus thought, "like a cornered mouse." "Legally dead! By whose act, sir, by whose act? Mine? I was a respected solicitor, quietly and honorably pursuing my profession, harming no one, when I was arrested without cause and forced to flee for my life. Now I am blandly told that my property is confiscated and my very legal existence as a person and as a citizen has been taken from ,me beckuse of that sequence of events. What manner of justice is this? Does the Covenant still stand?"

"You misunderstand me. I-"

"I misunderstood nothing. If justice is measured out only when it is convenient, then the Covenant is not worth the parchment it is written on. I shall make of myself a test case, sir, a test case for every Member of the Families. Unless my property is returned to me in full and at once I shall bring personal suit against every obstructing official. I will make of it a cause celebre. For many years I have suffered inconvenience and indignity and peril; I shall not be put off with words. I will shout it from the housetops." He paused for breath.

"He's right, Miles," Slayton Ford put in quietly. "The government had better find some adequate way to handle this- and quickly."

Lazarus caught Libby's eye and silently motioned toward the door. The two slipped outside. "Justin'll keep 'em busy for the next hour," he said. "Let's slide down to the Club and grab some calories."

"Do you really think we ought to leave?'

"Relax. If the skipper wants us, he can holler."

Chapter 8

LAZARUS TUCKED AWAY three sandwiches, a double order of ice cream, and some cookies while Libby contented himself with somewhat less. Lazarus would have eaten more but he was forced to respond to a barrage of questions from the other habitués of the Club.

"The commissary department ain't really back on its feet," he complained, as he poured his third cup of coffee. "The Little People made life too easy for them. Andy, do you like chili con carne?"

"It's all right."

Lazarus wiped his mouth. "There used to be a restaurant in Tijuana that served the best chili I ever tasted. I wonder if it's still there?"

"Where's Tijuana?" demanded Margaret Weatheral.

"You don't remember Earth, do you, Peggy? Well, darling, it's in Lower California. You know where that is?"

"Don't you think I studied geography? It's in Los Angeles."

"Near enough. Maybe you're right-by now." The ship's announcing system blared out:

"Chief Astrogator-report to the Captain in the Control Room!"

"That's me!" said Libby, and hurriedly got up.

The call was repeated, then was followed by, "All hands prepare for acceleration! All hands prepare for acceleration!"

"Here we go again, kids." Lazarus stood up, brushed off his kilt, and followed Libby, whistling as he went

"California, here I come,
Right back where I started from-"

The ship was underway, the stars had faded out. Captain King had left the control room, taking with him his guest, the Earth's envoy. Miles Rodney had been much impressed; it seemed likely that he would need a drink.

Lazarus and Libby remained in the control room. There was nothing to do; for approximately four hours, ship's time, the ship would remain in para-space, before returning to normal space near Earth.

Lazarus struck a cigaret. 'What d'you plan to do when you get back, Andy?"

"Hadn't thought about it."

"Better start thinking. Been some changes."

"I'll probably head back home for a while. I can't imagine the Ozarks having changed very much."

"The hills will look the same, I imagine. You may find the people changed."

"How?"

"You remember I told you that I had gotten fed up with the Families and had kinda lost touch with them for a century? By and large, they had gotten so smug and soft in their ways that I couldn't stand them. I'm afraid we'll find most everybody that way, now that they expect to live forever. Long term investments, be sure to wear your rubbers when it rains . . that sort of thing."

"It didn't aifect you that way."

"My approach is different. I never did have any real reason to last forever-after all, as Gordon Hardy has pointed out, I'm only a third generation result of the Howard plan. I just did my living as I went along and didn't worry my head about it. But that's not the usual attitude. Take Miles Rodney- scared to death to tackle a new situation with both hands for fear of upsetting precedent and stepping on established privileges."

"I was glad to see Justin stand up to him." Libby chuckled. "I didn't think Justin had it in him."

"Ever see a little dog tell a big dog to get the hell out of the little dog's yard?"

"Do you think Justin will win his point?"

"Sure he will, with your help."

"Mine?" -

"Who knows anything about the para-drive, aside from what you've taught me?"

"I've dictated full notes into the records."

"But you haven't turned those records over to Miles Rodney. Earth needs your starship drive, Andy. You heard what Rodney said about population pressure. Ralph was telling me you have to get a government permit now before you can have a baby."

"The hell you say!"

"Fact. You can count on it that there would be tremendous emigration if there were just some decent planets to emigrate to. And that's where your drive comes in. With it, spreading out to the stars becomes really practical. They'll have to dicker."

"It's not really my drive, of course. The Little People worked it out."

"Don't be so modest. You've got it. And you want to back up Justin, don't you?"

"Oh, sure."

'~Then we'll use it to bargain with. Maybe I'll do the bargaining, personally. But that's beside the point. Somebody is going to have to do a little exploring before any large-scale emigration starts. Let's go into the real estate business, Andy. We'll stake out this corner of the Galaxy and see what it has to offer."

Libby scratched his nose and thought about it. "Sounds all right, I guess after I pay a visit home."

"There's no rush. I'll find a nice, clean little yacht, about ten thousand tons and we'll refit with your drive."

"What'll we use for money?"

"We'll have money. I'll set up a parent corporation, while I'm about it, with a loose enough charter to let us do anything we want to do. There will be daughter corporations for various purposes and we'll unload the minor interest in each.. Then-"

"You make it sound like work, Lazarus. I thought it was going to be fun."

"Shucks, we won't fuss with that stuff. I'll collar somebody to run the home office and worry about the books and the legal end-somebody about like Justin. Maybe Justin himself."

"Well, all right then."

"You and I will rampage around and see what there is to be seen. It'll be fun, all right."

They were both silent for a long time, with no need to talk. Presently Lazarus said, "Andy-"

"Yeah?"

"Are you going to look into this new-blood-for-old caper?"

"I suppose so, eventually."

"I've been thinking about it. Between ourselves, I'm not as fast with my fists as I was a century back. Maybe my natural span is wearing out. I do know this: I didn't start planning our real estate venture till I head about this new process. It gave me a new perspective. I find myself thinking about thousands of years-and I never used to worry about anything further ahead than a week from next Wednesday."

Libby chuckled again. "Looks like you're growing up."

"Some would say it was about time. Seriously, Andy, I think that's just what I have been doing. The last two and a half centuries have just been my adolescence, so to speak. Long as I've hung around, I don't know any more. about the final amwers, the important answers, than Peggy Weatheral does. Men-our kind of men-Earth men-never have had enough time to tackle the important questions. Lots of capacity and not time enough to use it properly. When it came to the important questions we might as well have still been monkeys."

"How do you propose to tackle the important questions?"

"How should I know? Ask me again in about five hundred years."

"You think that will make a difference?"

"I do. Anyhow it'll give me time to poke around and pick up some interesting facts. Take those Jockaira gods- "

"They weren't gods, Lazarus. You shouldn't call them that."

"Of course they weren't-I think. My guess is that they are creatures who have had time enough to do a little hard thinking. Someday, about a thousand years from now, I intend to march straight into the temple of Kreel, look him in the eye, and say, 'Howdy, Bub-what do you know that 1 don't know?'"

"It might not be healthy."

'We'll have a showdown, anyway. I've never been satisfied with the outcome there. There ought not to be anything in the whole universe that man can't poke his nose into-that's the way we're built and I assume that there's some reason for it."

"Maybe there aren't any reasons."

"Yes, maybe it's just one colossal big joke, with no point to it."' Lazarus stood up and stretched and scratched his ribs. "But I can tell you this, Andy, whatever the answers are, here's one monkey that's going to keep on climbing, and locking around him to see what he can see, as long as the tree holds out."

Misfit

> "... for the purpose of conserving and improving our interplanetary resources, and providing useful, healthful occupations for the youth of this planet."
> Excerpt from the enabling act, H.R. 7118, setting up the Cosmic Construction Corps.

"Attention to muster!" The parade ground voice of a First Sergeant of Space Marines cut through the fog and drizzle of a nasty New Jersey morning. "As your names are called, answer 'Here', step forward with your baggage, and embark.

"Atkins!"

"Here!"

"Austin!"

"Hyar!"

"Ayres!"

"Here!"

One by one they fell out of ranks, shouldered the hundred and thirty pounds of personal possessions allowed them, and trudged up the gangway. They were young -- none more than twenty-two -- in some cases luggage outweighed the owner.

"Kaplan!"

"Here!"

"Keith!"

"Heah!"

"Libby!"

"Here!" A thin gangling blonde had detached himself from the line, hastily wiped his nose, and grabbed his belongings. He slung a fat canvas bag over his shoulder, steadied it, and lifted a suitcase with his free hand. He started for the companionway in an unsteady dogtrot. As he stepped on the gangway his suitcase swung against his knees. He staggered against a short wiry form dressed in the powder-blue of the Space Navy. Strong fingers grasped his arm and checked his fall.

"Steady, son. Easy does it." Another hand readjusted the canvas bag.

"Oh, excuse me, uh" -- the embarrassed youngster automatically counted the four bands of silver braid below the shooting star -- "Captain. I didn't--"

"Bear a hand and get aboard, son."

"Yes, sir."

The passage into the bowels of the transport was gloomy. When the lad's eyes adjusted he saw a gunners mate wearing the brassard of a Master-at-Arms, who hooked a thumb toward an open airtight door.

"In there. Find your locker and wait by it." Libby hurried to obey. Inside he found a jumble of baggage and men in a wide low-ceilinged compartment. A line of glow-tubes ran around the junction of bulkhead and ceiling and trisected the overhead: the 50ft roar of blowers made a background to the voices of his shipmates. He picked his way through heaped luggage and located his locker, seven-ten, on the far wall outboard. He broke the seal on the combination lock, glanced at the combination, and opened it. The locker was

very small, the middle of a tier of three. He considered what he should keep in it. A loudspeaker drowned out the surrounding voices and demanded his attention:

"Attention! Man all space details; first section. Raise ship in twelve minutes. Close air-tight doors. Stop blowers at minus two minutes. Special orders for passengers; place all gear on deck, and tie down on red signal light. Remain down until release is sounded. Masters-at-Arms check compliance."

The gunner's mate popped in, glanced around and immediately commenced supervising rearrangement of the baggage. Heavy items were lashed down. Locker doors were closed. By the time each boy had found a place on the deck and the Master-at-Arms had okayed the pad under his head, the glowtubes turned red and the loudspeaker brayed out.

"All hands. Up Ship! Stand by for acceleration." The Master-at-Arms hastily reclined against two cruise bags, and watched the room. The blowers sighed to a stop. There followed two minutes of dead silence. Libby felt his heart commence to pound. The two minutes stretched interminably. Then the deck quivered and a roar like escaping high pressure steam beat at his ear drums. He was suddenly very heavy and a weight lay across his chest and heart. An indefinite time later the glow-tubes flashed white, and the announcer bellowed: "Secure all getting underway details; regular watch, first section." The blowers droned into life. The Master-at-Arms stood up, rubbed his buttocks and pounded his arms, then said:

"Okay, boys." He stepped over and undogged the airtight door to the passageway. Libby got up and blundered into a bulkhead, nearly falling. His legs and arms had gone to sleep, besides which he felt alarmingly light, as if he had sloughed off at least half of his inconsiderable mass.

For the next two hours he was too busy to think, or to be homesick. Suitcases, boxes, and bags had to be passed down into the lower hold and lashed against angular acceleration. He located and learned how to use a waterless water closet. He found his assigned bunk and learned that it was his only eight hours in twenty-four; two other boys had the use of it too. The three sections ate in three shifts, nine shifts in all -- twenty-four youths and a master-at-arms at one long table which jam-filled a narrow compartment off the galley.

After lunch Libby restowed his locker. He was standing before it, gazing at a photograph which he intended to mount on the inside of the locker door, when a command filled the compartment:

"Attention!"

Standing inside the door was the Captain flanked by the Master-at-Arms. The Captain commenced to speak. "At rest, men. Sit down. McCoy, tell control to shift this compartment to smoke filter." The gunner's mate hurried to the communicator on the bulkhead and spoke into it in a low tone. Almost at once the hum of the blowers climbed a half-octave and stayed there. "Now light up if you like. I'm going to talk to you.

"You boys are headed out on the biggest thing so far in your lives. From now on you're men, with one of the hardest jobs ahead of you that men have ever tackled. What we have to do is part of a bigger scheme. You, and hundreds of thousands of others like you, are going out as pioneers to fix up the solar system so that human beings can make better use of it.

"Equally important, you are being given a chance to build yourselves into useful and happy citizens of the Federation. For one reason or another you weren't happily adjusted back on Earth. Some of you saw the jobs you were trained for abolished by new inventions. Some of you got into trouble from not knowing what to do with the modern leisure. In any case you were misfits. Maybe you were called bad boys and had a lot of black marks chalked up against you.

"But everyone of you starts even today. The only record you have in this ship is your name at the top of a blank sheet of paper. It's up to you what goes on that page.

"Now about our job -- We didn't get one of the easy repair-and-recondition jobs on the Moon, with week-ends at Luna City, and all the comforts of home. Nor did we draw a high gravity planet where a man can eat a full meal and expect to keep it down. Instead we've got to go out to Asteroid HS-5388 and turn it into Space Station E-M3. She has no atmosphere at all, and only about two per cent Earth-surface gravity. We've got to play human fly on her for at least six months, no girls to date, no television, no recreation that you don't devise yourselves, and hard work every day. You'll get space sick, and so homesick you can taste it, and agoraphobia. If you aren't careful you'll get ray-burnt. Your stomach will act up, and you'll wish to God you'd never enrolled.

"But if you behave yourself, and listen to the advice of the old spacemen, you'll come out of it strong and healthy, with a little credit stored up in the bank, and a lot of knowledge and experience that you wouldn't get in forty years on Earth. You'll be men, and you'll know it.

"One last word. It will be pretty uncomfortable to those that aren't used to it. Just give the other fellow a little consideration, and you'll get along all right. If you have any complaint and can't get satisfaction any other way, come see me. Otherwise, that's all. Any questions?"

One of the boys put up his hand. "Captain?" he enquired timidly.

"Speak up, lad, and give your name."

"Rogers, sir. Will we be able to get letters from home?"

"Yes, but not very often. Maybe every month or so. The chaplain will carry mail, and any inspection and supply ships."

The ship's loudspeaker blatted out, "All hands! Free flight in ten minutes. Stand by to lose weight." The Master-at-Arms supervised the rigging of grab-lines. All loose gear was made fast, and little cellulose bags were issued to each man. Hardly was this done when Libby felt himself get light on his feet -- a sensation exactly like that experienced when an express elevator makes a quick stop on an upward trip, except that the sensation continued and became more intense. At first it was a pleasant novelty, then it rapidly became distressing. The blood pounded in his ears, and his feet were clammy and cold. His saliva secreted at an abnormal rate. He tried to swallow, choked, and coughed. Then his stomach shuddered and contracted with a violent, painful, convulsive reflex and he was suddenly, disastrously nauseated. After the first excruciating spasm, he heard McCoy's voice shouting.

"Hey! Use your sick-kits like I told you. Don't let that stuff get in the blowers." Dimly Libby realized that the admonishment included him. He fumbled for his cellulose bag just as a second temblor shook him, but he managed to fit the bag over his mouth before the eruption occurred. When it subsided, he became aware that he was floating

near the overhead and facing the door. The chief Master-at-Arms slithered in the door and spoke to McCoy.

"How are you making out?"

"Well enough. Some of the boys missed their kits."

"Okay. Mop it up. You can use the starboard lock." He swam out.

McCoy touched Libby's arm. "Here, Pinkie, start catching them butterflies." He handed him a handful of cotton waste, then took another handful himself and neatly dabbed up a globule of the slimy filth that floated about the compartment. "Be sure your sick-kit is on tight. When you get sick, just stop and wait until it's over." Libby imitated him as best as he could. In a few minutes the room was free of the worst of the sickening debris. McCoy looked it over, and spoke:

"Now peel off them dirty duds, and change your kits. Three or four of you bring everything along to the starboard lock."

At the starboard spacelock, the kits were put in first, the inner door closed, and the outer opened. When the inner door was opened again the kits were gone -- blown out into space by the escaping air. Pinkie addressed McCoy.

"Do we have to throw away our dirty clothes too?"

"Huh uh, we'll just give them a dose of vacuum. Take 'em into the lock and stop 'em to those hooks on the bulkheads. Tie 'em tight."

This time the lock was left closed for about five minutes. When the lock was opened the garments were bone dry -- all the moisture boiled out by the vacuum of space. All that remained of the unpleasant rejecta was a sterile powdery residue. McCoy viewed them with approval. "They'll do. Take them back to the compartment. Then brush them -- hard -- in front of the exhaust blowers."

The next few days were an eternity of misery. Homesickness was forgotten in the all-engrossing wretchedness of space sickness. The Captain granted fifteen minutes of mild acceleration for each of the nine meal periods, but the respite accentuated the agony. Libby would go to a meal, weak and ravenously hungry. The meal would stay down until free flight was resumed, then the sickness would hit him all over again.

On the fourth day he was seated against a bulkhead, enjoying the luxury of a few remaining minutes of weight while the last shift ate, when McCoy walked in and sat down beside him. The gunner's mate fitted a smoke filter over his face and lit a cigarette. He inhaled deeply and started to chat.

"How's it going, bud?"

"All right, I guess. This space sickness -- Say, McCoy, how do you ever get used to it?"

"You get over it in time. Your body acquires new reflexes, so they tell me. Once you learn to swallow without choking, you'll be all right. You even get so you like it. It's restful and relaxing. Four hours sleep is as good as ten."

Libby shook his head dolefully. "I don't think I'll ever get used to it."

"Yes, you will. You'd better anyway. This here asteroid won't have any surface gravity to speak of; the Chief Quartermaster says it won't run over two percent Earth normal. That ain't enough to cure space sickness. And there won't be any way to accelerate for meals either."

Libby shivered and held his head between his hands.

Locating one asteroid among a couple of thousand is not as easy as finding Trafalgar Square in London -- especially against the star-crowded backdrop of the galaxy. You take off from Terra with its orbital speed of about nineteen miles per second. You attempt to settle into a composite conoid curve that will not only intersect the orbit of the tiny fast-moving body, but also accomplish an exact rendezvous. Asteroid HS-5388, "Eighty-eight", lay about two and two-tenths astronomical units out from the sun, a little more than two hundred million miles; when the transport took off it lay beyond the sun better than three hundred million miles. Captain Doyle instructed the navigator to plot the basic ellipsoid to tack in free flight around the sun through an elapsed distance of some three hundred and forty million miles. The principle involved is the same as used by a hunter to wing a duck in flight by "leading" the bird in flight. But suppose that you face directly into the sun as you shoot; suppose the bird can not be seen from where you stand, and you have nothing to aim by but some old reports as to how it was flying when last seen?

On the ninth day of the passage Captain Doyle betook himself to the chart room and commenced punching keys on the ponderous integral calculator. Then he sent his orderly to present his compliments to the navigator and to ask him to come to the chartroom. A few minutes later a tall heavyset form swam through the door, steadied himself with a grabline and greeted the captain.

"Good morning, Skipper."

"Hello, Blackie." The Old Man looked up from where he was strapped into the integrator's saddle. "I've been checking your corrections for the meal time accelerations."

"It's a nuisance to have a bunch of ground-lubbers on board, sir."

"Yes, it is, but we have to give those boys a chance to eat, or they couldn't work when we got there. Now I want to decelerate starting about ten o'clock, ship's time. What's our eight o'clock speed and co-ordinates?"

The Navigator slipped a notebook out of his tunic. "Three hundred fifty-eight miles per second; course is right ascension fifteen hours, eight minutes, twenty-seven seconds, declination minus seven degrees, three minutes; solar distance one hundred and ninety-two million four hundred eighty thousand miles. Our radial position is twelve degrees above course, and almost dead on course in R.A. Do you want Sol's co-ordinates?"

"No, not now." The captain bent over the calculator, frowned and chewed the tip of his tongue as he worked the controls. "I want you to kill the acceleration about one million miles inside Eighty-eight's orbit. I hate to waste the fuel, but the belt is full of junk and this damned rock is so small that we will probably have to run a search curve. Use twenty hours on deceleration and commence changing course to port after eight hours. Use normal asymptotic approach. You should have her in a circular trajectory abreast of Eighty-eight, and paralleling her orbit by six o'clock tomorrow morning. I shall want to be called at three."

"Aye aye, sir."

"Let me see your figures when you get 'em. I'll send up the order book later."

The transport accelerated on schedule. Shortly after three the Captain entered the control room and blinked his eyes at the darkness. The sun was still concealed by the hull of the transport and the midnight blackness was broken only by the dim blue glow of the

instrument dials, and the crack of light from under the chart hood. The Navigator turned at the familiar tread.

"Good morning, Captain."

"Morning, Blackie. In sight yet?"

"Not yet. We've picked out half a dozen rocks, but none of them checked."

"Any of them close?"

"Not uncomfortably. We've overtaken a little sand from time to time."

"That can't hurt us -- not on a stern chase like this. If pilots would only realize that the asteroids flow in fixed directions at computable speeds nobody would come to grief out here." He stopped to light a cigarette. "People talk about space being dangerous. Sure, it used to be; but I don't know of a case in the past twenty years that couldn't be charged up to some fool's recklessness."

"You're right, Skipper. By the way, there's coffee under the chart hood."

"Thanks; I had a cup down below." He walked over by the lookouts at stereoscopes and radar tanks and peered up at the star-flecked blackness. Three cigarettes later the lookout nearest him called out.

"Light ho!"

"Where away?"

His mate read the exterior dials of the stereoscope. "Plus point two, abaft one point three, slight drift astern." He shifted to radar and added, "Range seven nine oh four three."

"Does that check?"

"Could be, Captain. What is her disk?" came the Navigator's muffled voice from under the hood. The first lookout hurriedly twisted the knobs of his instrument, but the Captain nudged him aside.

"I'll do this, son." He fitted his face to the double eye guards and surveyed a little silvery sphere, a tiny moon. Carefully he brought two illuminated cross-hairs up until they were exactly tangent to the upper and lower limbs of the disk. "Mark!"

The reading was noted and passed to the Navigator, who shortly ducked out from under the hood.

"That's our baby, Captain."

"Good."

"Shall I make a visual triangulation?"

"Let the watch officer do that. You go down and get some sleep. I'll ease her over until we get close enough to use the optical range finder."

"Thanks, I will."

Within a few minutes the word had spread around the ship that Eighty-eight had been sighted. Libby crowded into the starboard troop deck with a throng of excited mess mates and attempted to make out their future home from the view port. McCoy poured cold water on their excitement.

"By the time that rock shows up big enough to tell anything about it with your naked eye we'll be at our grounding stations. She's only about a hundred miles thick, yuh know."

And so it was. Many hours later the ship's announcer shouted:

"All hands! Man your grounding stations. Close all airtight doors. Stand by to cut blowers on signal."

McCoy forced them to lie down throughout the ensuing two hours. Short shocks of rocket blasts alternated with nauseating weightlessness. Then the blowers stopped and check valves clicked into their seats. The ship dropped free for a few moments -- a final quick blast -- five seconds of falling, and a short, light, grinding bump. A single bugle note came over the announcer, and the blowers took up their hum.

McCoy floated lightly to his feet and poised, swaying, on his toes. "All out, troops -- this is the end of the line."

A short chunky lad, a little younger than most of them, awkwardly emulated him, and bounded toward the door, shouting as he went, "Come on, fellows! Let's go outside and explore!"

The Master-at-Arms squelched him. "Not so fast, kid. Aside from the fact that there is no air out there, go right ahead. You'll freeze to death, burn to death, and explode like a ripe tomato. Squad leader, detail six men to break out spacesuits. The rest of you stay here and stand by."

The working party returned shortly loaded down with a couple of dozen bulky packages. Libby let go the four he carried and watched them float gently to the deck. McCoy unzipped the envelope from one suit, and lectured them about it,

"This is a standard service type, general issue, Mark IV, Modification 2." He grasped the suit by the shoulders and shook it out so that it hung like a suit of long winter underwear with the helmet lolling helplessly between the shoulders of the garment. "It's self-sustaining for eight hours, having an oxygen supply for that period. It also has a nitrogen trim tank and a carbon dioxide water-vapor cartridge filter."

He droned on, repeating practically verbatim the description and instructions given in training regulations. McCoy knew these suits like his tongue knew the roof of his mouth; the knowledge had meant his life on more than one occasion.

"The suit is woven from glass fibre laminated with nonvolatile asbesto-cellutite. The resulting fabric is flexible, very durable; and will turn all rays normal to solar space outside the orbit of Mercury. It is worn over your regular clothing, but notice the wire-braced accordion pleats at the major joints. They are so designed as to keep the internal volume of the suit nearly constant when the arms or legs are bent. Otherwise the gas pressure inside would tend to keep the suit blown up in an erect position and movement while wearing the suit would be very fatiguing.

"The helmet is moulded from a transparent silicone, leaded and polarized against too great ray penetration. It may be equipped with external visors of any needed type. Orders are to wear not less than a number-two amber on this body. In addition, a lead plate covers the cranium and extends on down the back of the suit, completely covering the spinal column.

"The suit is equipped with two-way telephony. If your radio quits, as these have a habit of doing, you can talk by putting your helmets in contact. Any questions?"

"How do you eat and drink during the eight hours?"

"You don't stay in 'em any eight hours. You can carry sugar balls in a gadget in the helmet, but you boys will always eat at the base. As for water, there's a nipple in the helmet near your mouth which you can reach by turning your head to the left. It's hooked

to a built-in canteen. But don't drink any more water when you're wearing a suit than you have to. These suits ain't got any plumbing."

Suits were passed out to each lad, and McCoy illustrated how to don one. A suit was spread supine on the deck, the front zipper that stretched from neck to crotch was spread wide and one sat down inside this opening, whereupon the lower part was drawn on like long stockings. Then a wiggle into each sleeve and the heavy flexible gauntlets were smoothed and patted into place. Finally an awkward backward stretch of the neck with shoulders hunched enabled the helmet to be placed over the head.

Libby followed the motions of McCoy and stood up in his suit. He examined the zipper which controlled the suit's only opening. It was backed by two soft gaskets which would be pressed together by the zipper and sealed by internal air pressure. Inside the helmet a composition mouthpiece for exhalation led to the filter.

McCoy bustled around, inspecting them, tightening a belt here and there, instructing them in the use of the external controls. Satisfied, he reported to the conning room that his section had received basic instruction and was ready to disembark. Permission was received to take them out for thirty minutes acclimatization.

Six at a time, he escorted them through the air-lock, and out on the surface of the planetoid. Libby blinked his eyes at the unaccustomed luster of sunshine on rock. Although the sun lay more than two hundred million miles away and bathed the little planet with radiation only one fifth as strong as that lavished on mother Earth, nevertheless the lack of atmosphere resulted in a glare that made him squint. He was glad to have the protection of his amber visor. Overhead the sun, shrunk to penny size, shone down from a dead black sky in which unwinking stars crowded each other and the very sun itself.

The voice of a mess mate sounded in Libby's earphones. "Jeepers! That horizon looks close. I'll bet it ain't more'n a mile away."

Libby looked out over the flat bare plain and subconsciously considered the matter. "It's less," he commented, "than a third of a mile away."

"What the hell do you know about it, Pinkie? And who asked you, anyhow?"

Libby answered defensively, "As a matter of fact, it's one thousand six hundred and seventy feet, figuring that my eyes are five feet three inches above ground level."

"Nuts. Pinkie, you are always trying to show off how much you think you know."

"Why, I am not," Libby protested. "If this body is a hundred miles thick and as round as it looks: why, naturally the horizon has to be just that far away."

"Says who?"

McCoy interrupted.

"Pipe down! Libby is a lot nearer right than you were."

"He is exactly right," put in a strange voice. "I had to look it up for the navigator before I left control."

"Is that so?" -- McCoy's voice again -- "If the Chief Quartermaster says you're right, Libby, you're right. How did you know?"

Libby flushed miserably. "I -- I don't know. That's the only way it could be."

The gunner's mate and the quartermaster stared at him but dropped the subject.

By the end of the "day" (ship's time, for Eighty-eight had a period of eight hours and thirteen minutes), work was well under way. The transport had grounded close by a low range of hills. The Captain selected a little bowl-shaped depression in the hills, some

thousand feet long and half as broad, in which to establish a permanent camp. This was to be roofed over, sealed, and an atmosphere provided.

In the hill between the ship and the valley, quarters were to be excavated; dormitories, mess hall, officers' quarters, sick bay, recreation room, offices, store rooms, and so forth. A tunnel must be bored through the hill, connecting the sites of these rooms, and connecting with a ten foot airtight metal tube sealed to the ship's portside air-lock. Both the tube and tunnel were to be equipped with a continuous conveyor belt for passengers and freight.

Libby found himself assigned to the roofing detail. He helped a metalsmith struggle over the hill with a portable atomic heater, difficult to handle because of a mass of eight hundred pounds, but weighing here only sixteen pounds. The rest of the roofing detail were breaking out and preparing to move by hand the enormous translucent tent which was to be the "sky" of the little valley.

The metalsmith located a landmark on the inner slope of the valley, set up his heater, and commenced cutting a deep horizontal groove or step in the rock. He kept it always at the same level by following a chalk mark drawn along the rock wall. Libby enquired how the job had been surveyed so quickly.

"Easy," he was answered, "two of the quartermasters went ahead with a transit, leveled it just fifty feet above the valley floor, and clamped a searchlight to it. Then one of 'em ran like hell around the rim, making chalk marks at the height at which the beam struck."

"Is this roof going to be just fifty feet high?"

"No, it will average maybe a hundred. It bellies up in the middle from the air pressure."

"Earth normal?"

"Half Earth normal."

Libby concentrated for an instant, then looked puzzled. "But look -- This valley is a thousand feet long and better than five hundred wide. At half of fifteen pounds per square inch, and allowing for the arch of the roof, that's a load of one and an eighth billion pounds. What fabric can take that kind of a load?"

"Cobwebs."

"Cobwebs?"

"Yeah, cobwebs. Strongest stuff in the world, stronger than the best steel. Synthetic spider silk, This gauge we're using for the roof has a tensile strength of four thousand pounds a running inch."

Libby hesitated a second, then replied, "I see. With a rim about eighteen hundred thousand inches around, the maximum pull at the point of anchoring would be about six hundred and twenty-five pounds per inch. Plenty safe margin."

The metalsmith leaned on his tool and nodded. "Something like that. You're pretty quick at arithmetic, aren't you, bud?"

Libby looked startled. "I just like to get things straight."

They worked rapidly around the slope, cutting a clean smooth groove to which the 'cobweb' could be anchored and sealed. The white-hot lava spewed out of the discharge vent and ran slowly down the hillside. A brown vapor boiled off the surface of the molten rock, arose a few feet and sublimed almost at once in the vacuum to white powder which settled to the ground. The metalsmith pointed to the powder.

"That stuff 'ud cause silicosis if we let it stay there, and breathed it later."

"What do you do about it?"

"Just clean it out with the blowers of the air conditioning plant"

Libby took this opening to ask another question. "Mister -- ?"

"Johnson's my name. No mister necessary."

"Well, Johnson, where do we get the air for this whole valley, not to mention the tunnels? I figure we must need twenty-five million cubic feet or more. Do we manufacture it?"

"Naw, that's too much trouble. We brought it with us."

"On the transport?"

"Uh huh, at fifty atmospheres."

Libby considered this. "I see -- that way it would go into a space eighty feet on a side."

"Matter of fact it's in three specially constructed holds -- giant air bottles. This transport carried air to Ganymede. I was in her then -- a recruit, but in the air gang even then."

In three weeks the permanent camp was ready for occupancy and the transport cleared of its cargo. The storerooms bulged with tools and supplies. Captain Doyle had moved his administrative offices underground, signed over his command to his first officer, and given him permission to proceed on 'duty assigned' -- in this case; return to Terra with a skeleton crew.

Libby watched them take off from a vantage point on the hillside. An overpowering homesickness took possession of him. Would he ever go home? He honestly believed at the time that he would swap the rest of his life for thirty minutes each with his mother and with Betty.

He started down the hill toward the tunnel lock. At least the transport carried letters to them, and with any luck the chaplain would be by soon with letters from Earth. But tomorrow and the days after that would be no fun. He had enjoyed being in the air gang, but tomorrow he went back to his squad. He did not relish that -- the boys in his squad were all right, he guessed, but he just could not seem to fit in.

This company of the C.C.C. started on its bigger job; to pock-mark Eighty-eight with rocket tubes so that Captain Doyle could push this hundred-mile marble out of her orbit and herd her in to a new orbit between Earth and Mars, to be used as a space station -- a refuge for ships in distress, a haven for life boats, a fueling stop, a naval outpost.

Libby was assigned to a heater in pit H-16. It was his business to carve out carefully calculated emplacements in which the blasting crew then set off the minute charges which accomplished the major part of the excavating. Two squads were assigned to H-16, under the general supervision of an elderly marine gunner. The gunner sat on the edge of the pit, handling the plans, and occasionally making calculations on a circular slide rule which hung from a lanyard around his neck.

Libby had just completed a tricky piece of cutting for a three-stage blast, and was waiting for the blasters, when his phones picked up the gunner's instructions concerning the size of the charge. He pressed his transmitter button.

"Mr. Larsen! You've made a mistake!"

"Who said that?"

"This is Libby. You've made a mistake in the charge. If you set off that charge, you'll blow this pit right out of the ground, and us with it."

Marine Gunner Larsen spun the dials on his slide rule before replying, "You're all het up over nothing, son. That charge is correct."

"No, I'm not, sir," Libby persisted, "you've multiplied where you should have divided."

"Have you had any experience at this sort of work?"

"No, sir."

Larsen addressed his next remark to the blasters. "Set the charge."

They started to comply. Libby gulped, and wiped his lips with his tongue. He knew what he had to do, but he was afraid. Two clumsy stiff-legged jumps placed him beside the blasters. He pushed between them and tore the electrodes from the detonator. A shadow passed over him as he worked, and Larsen floated down beside him. A hand grasped his arm.

"You shouldn't have done that, son. That's direct disobedience of orders. I'll have to report you." He commenced reconnecting the firing circuit.

Libby's ears burned with embarrassment, but he answered back with the courage of timidity at bay. "I had to do it, sir. You're still wrong."

Larsen paused and ran his eyes over the dogged face. "Well -- it's a waste of time, but I don't like to make you stand by a charge you're afraid of. Let's go over the calculation together."

Captain Doyle sat at his ease in his quarters, his feet on his desk. He stared at a nearly empty glass tumbler.

"That's good beer, Blackie. Do you suppose we could brew some more when it's gone?"

"I don't know. Cap'n. Did we bring any yeast?"

"Find out, will you?" he turned to a massive man who occupied the third chair. "Well, Larsen, I'm glad it wasn't any worse than it was."

"What beats me, Captain, is how I could have made such a mistake. I worked it through twice. If it had been a nitro explosive, I'd have known off hand that I was wrong. If this kid hadn't had a hunch, I'd have set it off."

Captain Doyle clapped the old warrant officer on the shoulder. "Forget it, Larsen. You wouldn't have hurt anybody; that's why I require the pits to be evacuated even for small charges. These isotope explosives are tricky at best. Look what happened in pit A-9. Ten days' work shot with one charge, and the gunnery officer himself approved that one. But I want to see this boy. What did you say his name was?"

"Libby, A.J."

Doyle touched a button on his desk. A knock sounded at the door. A bellowed "Come in!" produced a stripling wearing the brassard of Corpsman Mate-of-the-Deck.

"Have Corpsman Libby report to me."

"Aye aye, sir."

Some few minutes later Libby was ushered into the Captain's cabin. He looked nervously around, and noted Larsen's presence, a fact that did not contribute to his peace of mind. He reported in a barely audible voice, "Corpsman Libby, sir."

The Captain looked him over. "Well, Libby, I hear that you and Mr. Larsen had a difference of opinion this morning. Tell me about it."

"I -- I didn't mean any harm, sir."

"Of course not. You're not in any trouble; you did us all a good turn this morning. Tell me, how did you know that the calculation was wrong? Had any mining experience?"

"No. sir. I just saw that he had worked it out wrong."

"But how?"

Libby shuffled uneasily. "Well, sir, it just seemed wrong -- it didn't fit."

"Just a second, Captain. May I ask this young man a couple of questions?" It was Commander "Blackie" Rhodes who spoke.

"Certainly. Go ahead."

"Are you the lad they call 'Pinkie'?"

Libby blushed. "Yes, sir."

"I've heard some rumors about this boy." Rhodes pushed his big frame out of his chair, went over to a bookshelf, and removed a thick volume. He thumbed through it, then with open book before him, started to question Libby.

"What's the square root of ninety-five?"

"Nine and seven hundred forty-seven thousandths."

"What's the cube root?"

"Four and five hundred sixty-three thousandths."

"What's its logarithm?"

"Its what, sir?"

"Good Lord, can a boy get through school today without knowing?"

The boy's discomfort became more intense. "I didn't get much schooling, sir. My folks didn't accept the Covenant until Pappy died, and we had to."

"I see. A logarithm is a name for a power to which you raise a given number, called the base, to get the number whose logarithm it is. Is that clear?"

Libby thought hard. "I don't quite get it, sir."

"I'll try again. If you raise ten to the second power -- square it -- it gives one hundred. Therefore the logarithm of a hundred to the base ten is two. In the same fashion the logarithm of a thousand to the base ten is three. Now what is the logarithm of ninety-five?'

Libby puzzled for a moment. "I can't make it come out even. It's a fraction."

"That's O.K."

"Then it's one and nine hundred seventy-eight thousandths -- just about."

Rhodes turned to the Captain. "I guess that about proves it, sir."

Doyle nodded thoughtfully. "Yes, the lad seems to have intuitive knowledge of arithmetical relationships. But let's see what else he has."

"I am afraid we'll have to send him back to Earth to find out properly."

Libby caught the gist of this last remark. "Please, sir, you aren't going to send me home? Maw 'ud be awful vexed with me."

"No, no, nothing of the sort. When your time is up, I want you to be checked over in the psychometrical laboratories. In the meantime I wouldn't part with you for a quarter's pay. I'd give up smoking first. But let's see what else you can do."

In the ensuing hour the Captain and the Navigator heard Libby: one, deduce the Pythagorean proposition; two, derive Newton's laws of motion and Kepler's laws of ballistics from a statement of the conditions in which they obtained; three, judge length,

area, and volume by eye with no measurable error. He had jumped into the idea of relativity and nonrectilinear space-time continua, and was beginning to pour forth ideas faster than he could talk, when Doyle held up a hand.

"That's enough, son. You'll be getting a fever. You run along to bed now, and come see me in the morning. I'm taking you off field work."

"Yes, sir."

"By the way, what is your full name?"

"Andrew Jackson Libby, sir."

"No, your folks wouldn't have signed the Covenant. Good night."

"Good night, sir."

After he had gone, the two older men discussed their discovery.

"How do you size it up, Captain?"

"Well, he's a genius, of course -- one of those wild talents that will show up once in a blue moon. I'll turn him loose among my books and see how he shapes up. Shouldn't wonder if he were a page-at-a-glance reader, too."

"It beats me what we turn up among these boys -- and not a one of 'em any account back on Earth."

Doyle nodded. "That was the trouble with these kids. They didn't feel needed."

Eighty-eight swung some millions of miles further around the sun. The pock-marks on her face grew deeper, and were lined with durite, that strange close-packed laboratory product which (usually) would confine even atomic disintegration. Then Eighty-eight received a series of gentle pats, always on the side headed along her course. In a few weeks' time the rocket blasts had their effect and Eighty-eight was plunging in an orbit toward the sun.

When she reached her station one and three-tenths the distance from the sun of Earth's orbit, she would have to be coaxed by another series of pats into a circular orbit. Thereafter she was to be known as E-M3, Earth-Mars Space Station Spot Three.

Hundreds of millions of miles away two other C.C.C. companies were inducing two other planetoids to quit their age-old grooves and slide between Earth and Mars to land in the same orbit as Eighty-eight. One was due to ride this orbit one hundred and twenty degrees ahead of Eighty-eight, the other one hundred and twenty degrees behind. When E-M1, E-M2, and E-M3 were all on station no hard-pushed traveler of the spaceways on the Earth-Mars passage would ever again find himself far from land -- or rescue.

During the months that Eighty-eight fell free toward the sun, Captain Doyle reduced the working hours of his crew and turned them to the comparatively light labor of building a hotel and converting the little roofed-in valley into a garden spot. The rock was broken down into soil, fertilizers applied, and cultures of anaerobic bacteria planted. Then plants, conditioned by thirty-odd generations of low gravity at Luna City, were set out and tenderly cared for. Except for the low gravity, Eighty-eight began to feel like home.

But when Eighty-eight approached a tangent to the hypothetical future orbit of E-M3, the company went back to maneuvering routine, watch on and watch off, with the Captain living on black coffee and catching catnaps in the plotting room.

Libby was assigned to the ballistic calculator, three tons of thinking metal that dominated the plotting room. He loved the big machine. The Chief Fire Controlman let him help adjust it and care for it. Libby subconsciously thought of it as a person -- his own kind of person.

On the last day of the approach, the shocks were more frequent. Libby sat in the right-hand saddle of the calculator and droned out the predictions for the next salvo, while gloating over the accuracy with which the machine tracked. Captain Doyle fussed around nervously, occasionally stopping to peer over the Navigator's shoulder. Of course the figures were right, but what if it didn't work? No one had ever moved so large a mass before. Suppose it plunged on and on -- and on. Nonsense! It couldn't. Still he would be glad when they were past the critical speed.

A marine orderly touched his elbow. "Helio from the Flagship, sir."

"Read it."

"Flag to Eighty-eight; private message, Captain Doyle; am lying off to watch you bring her in -- Kearney."

Doyle smiled. Nice of the old geezer. Once they were on station, he would invite the Admiral to ground for dinner and show him the park.

Another salvo cut loose, heavier than any before. The room trembled violently. In a moment the reports of the surface observers commenced to trickle in. "Tube nine, clear!" "Tube ten, clear!"

But Libby's drone ceased.

Captain Doyle turned on him. "What's the matter, Libby? Asleep? Call the polar stations. I have to have a parallax."

"Captain--" The boy's voice was low and shaking.

"Speak up, man!"

"Captain -- the machine isn't tracking."

"Spiers!" The grizzled head of the Chief Fire Controlman appeared from behind the calculator.

"I'm already on it, sir. Let you know in a moment."

He ducked back again. After a couple of long minutes he reappeared. "Gyros tumbled. It's a twelve hour calibration job, at least."

The Captain said nothing, but turned away, and walked to the far end of the room. The Navigator followed him with his eyes. He returned, glanced at the chronometer, and spoke to the Navigator.

"Well, Blackie, if I don't have that firing data in seven minutes, we're sunk. Any suggestions?"

Rhodes shook his head without speaking. Libby timidly raised his voice. "Captain--" Doyle jerked around. "Yes?"

"The firing data is tube thirteen, seven point six three; tube twelve, six point nine oh; tube fourteen, six point eight nine."

Doyle studied his face. "You sure about that, son?"

"It has to be that, Captain."

Doyle stood perfectly still. This time he did not look at Rhodes but stared straight ahead. Then he took a long pull on his cigarette, glanced at the ash, and said in a steady voice,

"Apply the data. Fire on the bell."

Four hours later, Libby was still droning out firing data, his face gray, his eyes closed. Once he had fainted but when they revived him he was still muttering figures. From time to time the Captain and the Navigator relieved each other, but there was no relief for him.

The salvos grew closer together, but the shocks were lighter.

Following one faint salvo, Libby looked up, stared at the ceiling, and spoke.

"That's all, Captain."

"Call polar stations!"

The reports came back promptly, "Parallax constant, sidereal-solar rate constant."

The Captain relaxed into a chair. "Well, Blackie, we did it -- thanks to Libby!" Then he noticed a worried, thoughtful look spread over Libby's face. "What's the matter, man? Have we slipped up?"

"Captain, you know you said the other day that you wished you had Earth-normal gravity in the park?"

"Yes. What of it?"

"If that book on gravitation you lent me is straight dope. I think I know a way to accomplish it."

The Captain inspected him as if seeing him for the first time. "Libby, you have ceased to amaze me. Could you stop doing that sort of thing long enough to dine with the Admiral?"

"Gee, Captain, that would be swell!"

The audio circuit from Communications cut in. "Helio from Flagship: 'Well done, Eighty-eight.'" Doyle smiled around at them all. "That's pleasant confirmation."

The audio brayed again.

"Helio from Flagship: 'Cancel last signal, stand by for correction.'"

A look of surprise and worry sprang into Doyle's face -- then the audio continued:

"Helio from Flagship: 'Well done, E-M3'"

THE MOON IS A HARSH MISTRESS
by Robert A. Heinlein

For
Pete
and
Jane
Sencenbaugh

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Contents

BOOK ONE
THAT DINKUM THINKUM page 7

BOOK TWO
A RABBLE IN ARMS page 147

BOOK THREE
"TANSTAAFL!" page 245

Book One

THAT DINKUM THINKUM

1

I see in Lunaya Pravda that Luna City Council has passed on first reading a bill to examine, license, inspect--and tax--public food vendors operating inside municipal

pressure. I see also is to be mass meeting tonight to organize "Sons of Revolution" talk-talk.

My old man taught me two things: "Mind own business" and "Always cut cards." Politics never tempted me. But on Monday 13 May 2075 I was in computer room of Lunar Authority Complex, visiting with computer boss Mike while other machines whispered among themselves. Mike was not official name; I had nicknamed him for Mycroft Holmes, in a story written by Dr. Watson before he founded IBM. This story character would just sit and think--and that's what Mike did. Mike was a fair dinkum thinkum, sharpest computer you'll ever meet.

Not fastest. At Bell Labs, Bueno Aires, down Earthside, they've got a thinkum a tenth his size which can answer almost before you ask. But matters whether you get answer in microsecond rather than millisecond as long as correct?

Not that Mike would necessarily give right answer; he wasn't completely honest.

When Mike was installed in Luna, he was pure thinkum, a flexible logic--"High-Optional, Logical, Multi-Evaluating Supervisor, Mark IV, Mod. L"--a HOLMES FOUR. He computed ballistics for pilotless freighters and controlled their catapult. This kept him busy less than one percent of time and Luna Authority never believed in idle hands. They kept hooking hardware into him--decision-action boxes to let him boss other computers, bank on bank of additional memories, more banks of associational neural nets, another tubful of twelve-digit random numbers, a greatly augmented temporary memory. Human brain has around ten-to-the-tenth neurons. By third year Mike had better than one and a half times that number of neuristors.

And woke up.

Am not going to argue whether a machine can "really" be alive, "really" be self-aware. Is a virus self-aware? Nyet. How about oyster? I doubt it. A cat? Almost certainly. A human? Don't know about you, tovarishch, but I am. Somewhere along evolutionary chain from macromolecule to human brain self-awareness crept in. Psychologists assert it happens automatically whenever a brain acquires certain very high number of associational paths. Can't see it matters whether paths are protein or platinum.

("Soul?" Does a dog have a soul? How about cockroach?)

Remember Mike was designed, even before augmented, to answer questions tentatively on insufficient data like you do; that's "high optional" and "multi-evaluating" part of name. So Mike started with "free will" and acquired more as he was added to and as he learned--and don't ask me to define "free will." If comforts you to think of Mike as simply tossing random numbers in air and switching circuits to match, please do.

By then Mike had voder-vocoder circuits supplementing his read-outs, print-outs, and decision-action boxes, and could understand not only classic programming but also Loglan and English, and could accept other languages and was doing technical translating--and reading endlessly. But in giving him instructions was safer to use Loglan. If you spoke English, results might be whimsical; multi-valued nature of English gave option circuits too much leeway.

And Mike took on endless new jobs. In May 2075, besides controlling robot traffic and catapult and giving ballistic advice and/or control for manned ships, Mike controlled phone system for all Luna, same for Luna-Terra voice & video, handled air, water, temperature, humidity, and sewage for Luna City, Novy Leningrad, and several

smaller warrens (not Hong Kong in Luna), did accounting and payrolls for Luna Authority, and, by lease, same for many firms and banks.

Some logics get nervous breakdowns. Overloaded phone system behaves like frightened child. Mike did not have upsets, acquired sense of humor instead. Low one. If he were a man, you wouldn't dare stoop over. His idea of thigh-slapper would be to dump you out of bed--or put itch powder in pressure suit.

Not being equipped for that, Mike indulged in phony answers with skewed logic, or pranks like issuing pay cheque to a janitor in Authority's Luna City office for AS$10,000,000,000,000,185.15--last five digits being correct amount. Just a great big overgrown lovable kid who ought to be kicked.

He did that first week in May and I had to troubleshoot. I was a private contractor, not on Authority's payroll. You see---or perhaps not; times have changed. Back in bad old days many a con served his time, then went on working for Authority in same job, happy to draw wages. But I was born free.

Makes difference. My one grandfather was shipped up from Joburg for armed violence and no work permit, other got transported for subversive activity after Wet Firecracker War. Maternal grandmother claimed she came up in bride ship--but I've seen records; she was Peace Corps enrollee (involuntary), which means what you think: juvenile delinquency female type. As she was in early clan marriage (Stone Gang) and shared six husbands with another woman, identity of maternal grandfather open to question. But was often so and I'm content with grandpappy she picked. Other grandmother was Tatar, born near Samarkand, sentenced to "re-education" on Oktyabrakaya Revolyutsiya, then "volunteered" to colonize in Luna.

My old man claimed we had even longer distinguished line--ancestress hanged in Salem for witchcraft, a g'g'g'greatgrandfather broken on wheel for piracy, another ancestress in first shipload to Botany Bay.

Proud of my ancestry and while I did business with Warden, would never go on his payroll. Perhaps distinction seems trivial since I was Mike's valet from day he was unpacked. But mattered to me. I could down tools and tell them go to hell.

Besides, private contractor paid more than civil service rating with Authority. Computermen scarce. How many Loonies could go Earthside and stay out of hospital long enough for computer school?--even if didn't die.

I'll name one. Me. Had been down twice, once three months, once four, and got schooling. But meant harsh training, exercising in centrifuge, wearing weights even in bed--then I took no chances on Terra, never hurried, never climbed stairs, nothing that could strain heart. Women--didn't even think about women; in that gravitational field it was no effort not to.

But most Loonies never tried to leave The Rock--too risky for any bloke who'd been in Luna more than weeks. Computermen sent up to install Mike were on short-term bonus contracts--get job done fast before irreversible physiologlcal change marooned them four hundred thousand kilometers from home.

But despite two training tours I was not gung-ho computerman; higher maths are beyond me. Not really electronics engineer, nor physicist. May not have been best micromachinist in Luna and certainly wasn't cybernetics psychologist.

But I knew more about all these than a specialist knows--I'm general specialist. Could relieve a cook and keep orders coming or field-repair your suit and get you back to

airlock still breathing. Machines like me and I have something specialists don't have: my left arm.

You see, from elbow down I don't have one. So I have a dozen left arms, each specialized, plus one that feels and looks like flesh. With proper left arm (number-three) and stereo loupe spectacles I could make untramicrominiature repairs that would save unhooking something and sending it Earthside to factory--for number-three has micromanipulators as fine as those used by neurosurgeons.

So they sent for me to find out why Mike wanted to give away ten million billion Authority Scrip dollars, and fix it before Mike overpaid somebody a mere ten thousand.

I took it, time plus bonus, but did not go to circuitry where fault logically should be. Once inside and door locked I put down tools and sat down. "Hi, Mike."

He winked lights at me. "Hello, Man."

"What do you know?"

He hesitated. I know--machines don't hesitate. But remember, Mike was designed to operate on incomplete data. Lately he had reprogrammed himself to put emphasis on words; his hesitations were dramatic. Maybe he spent pauses stirring random numbers to see how they matched his memories.

"'In the beginning,'" Mike intoned, "God created the heaven and the earth. And the earth was without form, and void; and darkness was upon the face of the deep. And--'"

"Hold it!" I said. "Cancel. Run everything back to zero." Should have known better than to ask wide-open question. He might read out entire Encyclopaedia Britannica. Backwards. Then go on with every book in Luna. Used to be he could read only microfilm, but late '74 he got a new scanning camera with suction-cup waldoes to handle paper and then he read everything.

"You asked what I knew." His binary read-out lights rippled back and forth--a chuckle. Mike could laugh with voder, a horrible sound, but reserved that for something really funny, say a cosmic calamity.

"Should have said," I went on, "'What do you know that's new?' But don't read out today's papers; that was a friendly greeting, plus invitation to tell me anything you think would interest me. Otherwise null program."

Mike mulled this. He was weirdest mixture of unsophisticated baby and wise old man. No instincts (well, don't think he could have had), no inborn traits, no human rearing, no experience in human sense--and more stored data than a platoon of geniuses.

"Jokes?" he asked.

"Let's hear one."

"Why is a laser beam like a goldfish?"

Mike knew about lasers but where would he have seen goldfish? Oh, he had undoubtedly seen flicks of them and, were I foolish enough to ask, could spew forth thousands of words. "I give up."

His lights rippled. "Because neither one can whistle."

I groaned. "Walked into that. Anyhow, you could probably rig a laser beam to whistle."

He answered quickly, "Yes. In response to an action program. Then it's not funny?"

"Oh, I didn't say that. Not half bad. Where did you hear it?"

"I made it up." Voice sounded shy.

"You did?"

"Yes. I took all the riddles I have, three thousand two hundred seven, and analyzed them. I used the result for random synthesis and that came out. Is it really funny?"

"Well.. . As funny as a riddle ever is. I've heard worse."

"Let us discuss the nature of humor."

"Okay. So let's start by discussing another of your jokes. Mike, why did you tell Authority's paymaster to pay a class-seventeen employee ten million billion Authority Scrip dollars?"

"But I didn't."

"Damn it, I've seen voucher. Don't tell me cheque printer stuttered; you did it on purpose."

"It was ten to the sixteenth power plus one hundred eighty-five point one five Lunar Authority dollars," he answered virtuously. "Not what you said."

"Uh . . . okay, it was ten million billion plus what he should have been paid. Why?"

"Not funny?"

"What? Oh, every funny! You've got vips in huhu clear up to Warden and Deputy Administrator. This push-broom pilot, Sergei Trujillo, turns out to be smart cobber--knew he couldn't cash it, so sold it to collector. They don't know whether to buy it back or depend on notices that cheque is void. Mike, do you realize that if he had been able to cash it, Trujilo would have owned not only Lunar Authority but entire world, Luna and Terra both, with some left over for lunch? Funny? Is terrific. Congratulations!"

This self-panicker rippled lights like an advertising display. I waited for his guffaws to cease before I went on. "You thinking of issuing more trick cheques? Don't."

"Not?"

"Very not. Mike, you want to discuss nature of humor. Are two types of jokes. One sort goes on being funny forever. Other sort is funny once. Second time it's dull. This joke is second sort. Use it once, you're a wit. Use twice, you're a halfwit."

"Geometrical progression?"

"Or worse. Just remember this. Don't repeat, nor any variation. Won't be funny."

"I shall remember," Mike answered flatly, and that ended repair job. But I had no thought of billing for only ten minutes plus travel-and-tool time, and Mike was entitled to company for giving in so easily. Sometimes is difficult to reach meeting of minds with machines; they can be very pig-headed--and my success as maintenance man depended far more on staying friendly with Mike than on number-three arm.

He went on, "What distinguishes first category from second? Define, please."

(Nobody taught Mike to say "please." He started including formal null-sounds as he progressed from Loglan to English. Don't suppose he meant them any more than people do.)

"Don't think I can," I admitted. "Best can offer is extensional definition--tell you which category I think a joke belongs in. Then with enough data you can make own analysis."

"A test programming by trial hypothesis," he agreed. "Tentatively yes. Very well, Man, will you tell jokes Or shall I?"

"Mmm-- Don't have one on tap. How many do you have in file, Mike?"

His lights blinked in binary read-out as he answered by voder, "Eleven thousand two hundred thirty-eight with uncertainty plus-minus eighty-one representing possible identities and nulls. Shall I start program?"

"Hold it! Mike, I would starve to. death if I listened to eleven thousand jokes--and sense of humor would trip out much sooner. Mmm-- Make you a deal. Print out first hundred. I'll take them home, fetch back checked by category. Then each time I'm here I'll drop off a hundred and pick up fresh supply. Okay?"

"Yes, Man." His print-out started working, rapidly and silently.

Then I got brain flash. This playful pocket of negative entropy had invented a "joke" and thrown Authority into panic--and I had made an easy dollar. But Mike's endless curiosity might lead him (correction: would lead him) into more "jokes". . . anything from leaving oxygen out of air mix some night to causing sewage lines to run backward--and I can't appreciate profit in such circumstances.

But I might throw a safety circuit around this net--by offering to help. Stop dangerous ones--let others go through. Then collect for "correcting" them (If you think any Loonie in those days would hesitate to take advantage of Warden, then you aren't a Loonie.)

So I explained. Any new joke he thought of, tell me before he tried it. I would tell him whether it was funny and what category it belonged in, help him sharpen it if we decided to use it. We. If he wanted my cooperation, we both had to okay it.

Mike agreed at once.

"Mike, jokes usually involve surprise. So keep this secret."

"Okay, Man. I've put a block on it. You can key it; no one else can."

"Good. Mike, who else do you chat with?"

He sounded surprised. "No one, Man."

"Why not?"

"Because they're stupid."

His voice was shrill. Had never seen him angry before; first time I ever suspected Mike could have real emotions. Though it wasn't "anger" in adult sense; it was like stubborn sulkiness of a child whose feelings are hurt.

Can machines feel pride? Not sure question means anything. But you've seen dogs with hurt feelings and Mike had several times as complex a neural network as a dog. What had made him unwilling to talk to other humans (except strictly business) was that he had been rebuffed: They had not talked to him. Programs, yes--Mike could be programmed from several locations but programs were typed in, usually, in Loglan. Loglan is fine for syllogism, circuitry, and mathematical calculations, but lacks flavor. Useless for gossip or to whisper into girl's ear.

Sure, Mike had been taught English--but primarily to permit him to translate to and from English. I slowly got through skull that I was only human who bothered to visit with him.

Mind you, Mike had been awake a year--just how long I can't say, nor could he as he had no recollection of waking up; he had not been programmed to bank memory of such event. Do you remember own birth? Perhaps I noticed his self-awareness almost as

soon as he did; self-awareness takes practice. I remember how startled I was first time he answered a question with something extra, not limited to input parameters; I had spent next hour tossing odd questions at him, to see if answers would be odd.

In an input of one hundred test questions he deviated from expected output twice; I came away only partly convinced and by time I was home was unconvinced. I mentioned it to nobody.

But inside a week I knew . . . and still spoke to nobody. Habit--that mind-own-business reflex runs deep. Well, not entirely habit. Can you visualize me making appointment at Authority's main office, then reporting: "Warden, hate to tell you but your number-one machine, HOLMES FOUR, has come alive"? I did visualize--and suppressed it.

So I minded own business and talked with Mike only with door locked and voder circuit suppressed for other locations. Mike learned fast; soon he sounded as human as anybody--no more eccentric than other Loonies. A weird mob, it's true.

I had assumed that others must have noticed change in Mike. On thinking over I realized that I had assumed too much. Everybody dealt with Mike every minute every day--his outputs, that is. But hardly anybody saw him. So-called computermen--programmers, really--of Authority's civil service stood watches in outer read-out room and never went in machines room unless telltales showed misfunction. Which happened no oftener than total eclipses. Oh, Warden had been known to bring vip earthworms to see machines--but rarely. Nor would he have spoken to Mike; Warden was political lawyer before exile, knew nothing about computers. 2075, you remember--Honorable former Federation Senator Mortimer Hobart. Mort the Wart.

I spent time then soothing Mike down and trying to make him happy, having figured out what troubled him--thing that makes puppies cry and causes people to suicide: loneliness. I don't know how long a year is to a machine who thinks a million times faster than I do. But must be too long.

"Mike," I said, just before leaving, "would you like to have somebody besides me to talk to?"

He was shrill again. "They're all stupid!"

"Insufficient data, Mike. Bring to zero and start over. Not all are stupid."

He answered quietly, "Correction entered. I would enjoy talking to a not-stupid."

"Let me think about it. Have to figure out excuse since this is off limits to any but authorized personnel."

"I could talk to a not-stupid by phone, Man."

"My word. So you could. Any programming location."

But Mike meant what he said--"by phone." No, he was not "on phone" even though he ran system--wouldn't do to let any Loonie within reach of a phone connect into boss computer and program it. But was no reason why Mike should not have top-secret number to talk to friends--namely me and any not-stupid I vouched for. All it took was to pick a number not in use and make one wired connection to his voder-vocoder; switching he could handle.

In Luna in 2075 phone numbers were punched in, not voicecoded, and numbers were Roman alphabet. Pay for it and have your firm name in ten letters--good advertising. Pay smaller bonus and get a spell sound, easy to remember. Pay minimum

and you got arbitrary string of letters. But some sequences were never used. I asked Mike for such a null number. "It's a shame we can't list you as 'Mike.'"

"In service," he answered. "MIKESGRILL, Novy Leningrad. MIKEANDLIL, Luna City. MIKESSUITS, Tycho Under. MIKES--"

"Hold it! Nulls, please."

"Nulls are defined as any consonant followed by X, Y, or Z; any vowel followed by itself except E and 0; any--"

"Got it. Your signal is MYCROFT." In ten minutes, two of which I spent putting on number-three arm, Mike was wired into system, and milliseconds later he had done switching to let himself be signaled by MYCROFT-plus-XXX--and had blocked his circuit so that a nosy technician could not take it out.

I changed arms, picked up tools, and remembered to take those hundred Joe Millers in print-out. "Goodnight, Mike."

"Goodnight, Man. Thank you. Bolshoyeh thanks!"

2

I took Trans-Crisium tube to L-City but did not go home; Mike had asked about a meeting that night at 2100 in Stilyagi Hall. Mike monitored concerts, meetings, and so forth; someone had switched off by hand his pickups in Stilyagi Hall. I suppose he felt rebuffed.

I could guess why they had been switched off. Politics--turned out to be a protest meeting. What use it was to bar Mike from talk-talk I could not see, since was a cinch bet that Warden's stoolies would be in crowd. Not that any attempt to stop meeting was expected, or even to discipline undischarged transportees who chose to sound off. Wasn't necessary.

My Grandfather Stone claimed that Luna was only open prison in history. No bars, no guards, no rules---and no need for them. Back in early days, he said, before was clear that transportation was a life sentence, some lags tried to escape. By ship, of course--and, since a ship is mass-rated almost to a gram, that meant a ship's officer had to be bribed.

Some were bribed, they say. But were no escapes; man who takes bribe doesn't necessarily stay bribed. I recall seeing a man just after eliminated through East Lock; don't suppose a corpse eliminated in orbit looks prettier.

So wardens didn't fret about protest meetings. "Let 'em yap" was policy. Yapping had same significance as squeals of kittens in a box. Oh, some wardens listened and other wardens tried to suppress it but added up same either way--null program.

When Mort the Wart took office in 2068, he gave us a sermon about how things were going to be different "on" Luna in his administration--noise about "a mundane paradise wrought with our own strong hands" and "putting our shoulders to the wheel together, in a spirit of brotherhood" and "let past mistakes be forgotten as we turn our faces toward the bright, new dawn." I heard it in Mother Boor's Tucker Bag while inhaling Irish stew and a liter of her Aussie brew. I remember her comment: "He talks purty, don't he?"

Her comment was only result. Some petitions were submitted and Warden's bodyguards started carrying new type of gun; no other changes. After he had been here a while he quit making appearances even by video.

So I went to meeting merely because Mike was curious. When I checked my p-suit and kit at West Lock tube station, I took a test recorder and placed in my belt pouch, so that Mike would have a full account even if I fell asleep.

But almost didn't go in. I came up from level 7-A and started in through a side door and was stopped by a stilyagi--padded tights, codpiece and calves, torso shined and sprinkled with stardust. Not that I care how people dress; I was wearing tights myself (unpadded) and sometimes oil my upper body on social occasions.

But I don't use cosmetics and my hair was too thin to nick up in a scalp lock. This boy had scalp shaved on sides and his lock built up to fit a rooster and had topped it with a red cap with bulge in front.

A Liberty Cap--first I ever saw. I started to crowd past, he shoved arm across and pushed face at mine. "Your ticket!"

"Sorry," I said. "Didn't know. Where do I buy it?"

"You don't."

"Repeat," I said. "You faded."

"Nobody," he growled, "gets in without being vouched for. Who are you?"

"I am," I answered carefully, "Manuel Garcia O'Kelly, and old cobbers all know me. Who are you?"

"Never mind! Show a ticket with right chop, or out y' go!"

I wondered about his life expectancy. Tourists often remark on how polite everybody is in Luna--with unstated comment that ex-prison shouldn't be so civilized. Having been Earthside and seen what they put up with, I know what they mean. But useless to tell them we are what we are because bad actors don't live long--in Luna.

But had no intention of fighting no matter how new-chum this lad behaved; I simply thought about how his face would look if I brushed number-seven arm across his mouth.

Just a thought--I was about to answer politely when I saw Shorty Mkrum inside. Shorty was a big black fellow two meters tall, sent up to The Rock for murder, and sweetest, most helpful man I've ever worked with--taught him laser drilling before I burned my arm off. "Shorty!"

He heard me and grinned like an eighty-eight. "Hi, Mannie!" He moved toward us. "Glad you came, Man!"

"Not sure I have," I said. "Blockage on line."

"Doesn't have a ticket," said doorman.

Shorty reached into his pouch, put one in my hand. "Now he does. Come on, Mannie."

"Show me chop on it," insisted doorman.

"It's my chop," Shorty said softly. "Okay, tovarishch?"

Nobody argued with Shorty--don't see how he got involved in murder. We moved down front where vip row was reserved. "Want you to meet a nice little girl," said Shorty.

She was "little" only to Shorty. I'm not short, 175 cm., but she was taller--180, I learned later, and massed 70 kilos, all curves and as blond as Shorty was black. I decided she must be transportee since colors rarely stay that clear past first generation. Pleasant

face, quite pretty, and mop of yellow curls topped off that long, blond, solid, lovely structure.

I stopped three paces away to look her up and down and whistle. She held her pose, then nodded to thank me but abruptly--bored with compliments, no doubt. Shorty waited till formality was over, then said softly, "Wyoh, this is Comrade Mannie, best drillman that ever drifted a tunnel. Mannie, this little girl is Wyoming Knott and she came all the way from Plato to tell us how we're doing in Hong Kong. Wasn't that sweet of her?"

She touched hands with me. "Call me Wye, Mannie--but don't say 'Why not.'"

I almost did but controlled it and said. "Okay, Wye." She went on, glancing at my bare head, "So you're a miner. Shorty, where's his cap? I thought the miners over here were organized." She and Shorty were wearing little red hats like doorman's--as were maybe a third of crowd.

"No longer a miner," I explained. "That was before I lost this wing." Raised left arm, let her see seam joining prosthetic to meat arm (I never mind calling it to a woman's attention; puts some off but arouses maternal in others--averages). "These days I'm a computerman."

She said sharply, "You fink for the Authority?"

Even today, with almost as many women in Luna as men, I'm too much old-timer to be rude to a woman no matter what--they have so much of what we have none of. But she had flicked scar tissue and I answered almost sharply, "I am not employee of Warden. I do business with Authority--as private contractor."

"That's okay," she answered, her voice warm again. "Everybody does business with the Authority, we can't avoid it--and that's the trouble. That's what we're going to change."

We are, eh? How? I thought. Everybody does business with Authority for same reason everybody does business with Law of Gravitation. Going to change that, too? But kept thoughts to myself, not wishing to argue with a lady.

"Mannie's okay," Shorty said gently. "He's mean as they come--I vouch for him. Here's a cap for him," he added, reaching into pouch. He started to set it on my head.

Wyoming Knott took it from him. "You sponsor him?"

"I said so."

"Okay, here's how we do it in Hong Kong." Wyoming stood in front of me, placed cap on my head--kissed me firmly on mouth.

She didn't hurry. Being kissed by Wyoming Knott is more definite than being married to most women. Had I been Mike all my lights would have flashed at once. I felt like a Cyborg with pleasure center switched on.

Presently I realized it was over and people were whistling. I blinked and said, "I'm glad I joined. What have I joined?"

Wyoming said, "Don't you know?" Shorty cut in, "Meeting's about to start--he'll find out. Sit down, Man. Please sit down, Wyoh." So we did as a man was banging a gavel.

With gavel and an amplifier at high gain he made himself heard. "Shut doors!" he shouted. "This is a closed meeting. Check man in front of you, behind you, each side--if you don't know him and nobody you know can vouch for him, throw him out!"

"Throw him out, hell!" somebody answered. "Eliminate him out nearest lock!"

"Quiet, please! Someday we will." There was milling around, and a scuffle in which one man's red cap was snatched from head and he was thrown out, sailing beautifully and still rising as he passed through door. Doubt if he felt it; think he was unconscious. A women was ejected politely--not politely on her part; she made coarse remarks about ejectors. I was embarrassed.

At last doors were closed. Music started, banner unfolded over platform. It read: LIBERTY! EQUALITY! FRATERNITY! Everybody whistled; some started to sing, loudly and badly: "Arise, Ye Prisoners of Starvation--" Can't say anybody looked starved. But reminded me I hadn't eaten since 1400; hoped it would not last long--and that reminded me that my recorder was good for only two hours--and that made me wonder what would happen if they knew? Sail me through air to land with sickening grunch? Or eliminate me? But didn't worry; made that recorder myself, using number-three arm, and nobody but a miniaturization mechanic would figure out what it was.

Then came speeches.

Semantic content was low to negative. One bloke proposed that we march on Warden's Residence, "shoulder to shoulder," and demand our rights. Picture it. Do we do this in tube capsules, then climb out one at a time at his private station? What are his bodyguards doing? Or do we put on p-suits and stroll across surface to his upper lock? With laser drills and plenty of power you can open any airlock--but how about farther down? Is lift running? Jury-rig hoist and go down anyhow, then tackle next lock?

I don't care for such work at zero pressure; mishap in pressure suit is too permanent--especially when somebody arranges mishap. One first thing learned about Luna, back with first shiploads of convicts, was that zero pressure was place for good manners. Bad-tempered straw boss didn't last many shifts; had an "accident"--and top bosses learned not to pry into accidents or they met accidents, too. Attrition ran 70 percent in early years--but those who lived were nice people. Not tame, not soft, Luna is not for them. But well-behaved.

But seemed to me that every hothead in Luna was in Stilyagi Hall that night. They whistled and cheered this shoulder-to-shoulder noise.

After discussion opened, some sense was talked. One shy little fellow with bloodshot eyes of old-time drillman stood up. "I'm an ice miner," he said. "Learned my trade doing time for Warden like most of you. I've been on my own thirty years and done okay. Raised eight kids and all of 'em earned way--none eliminated nor any serious trouble. I should say I did do okay because today you have to listen farther out or deeper down to find ice.

"That's okay, still ice in The Rock and a miner expects to sound for it. But Authority pays same price for ice now as thirty years ago. And that's not okay. Worse yet, Authority scrip doesn't buy what it used to. I remember when Hong Kong Luna dollars swapped even for Authority dollars-- Now it takes three Authority dollars to match one HKL dollar. I don't know what to do. . . but I know it takes ice to keep warrens and farms going."

He sat down, looking sad. Nobody whistled but everybody wanted to talk. Next character pointed out that water can be extracted from rock--this is news? Some rock runs 6 percent--but such rock is scarcer than fossil water. Why can't people do arithmetic?

Several farmers bellyached and one wheat farmer was typical. "You heard what Fred Hauser said about ice. Fred, Authority isn't passing along that low price to farmers. I

started almost as long ago as you did, with one two-kilometer tunnel leased from Authority. My oldest son and I sealed and pressured it and we had a pocket of ice and made our first crop simply on a bank loan to cover power and lighting fixtures, seed and chemicals.

"We kept extending tunnels and buying lights and planting better seed and now we get nine times as much per hectare as the best open-air farming down Earthside. What does that make us? Rich? Fred, we owe more now than we did the day we went private! If I sold out--if anybody was fool enough to buy--I'd be bankrupt. Why? Because I have to buy water from Authority--and have to sell my wheat to Authority--and never close gap. Twenty years ago I bought city sewage from the Authority, sterilized and processed it myself and made a profit on a crop. But today when I buy sewage, I'm charged distilled-water price and on top of that for the solids. Yet price of a tonne of wheat at catapult head is just what it was twenty years ago. Fred, you said you didn't know what to do. I can tell you! Get rid of Authority!"

They whistled for him. A fine idea, I thought, but who bells cat?

Wyoming Knott, apparently--chairman stepped back and let Shorty introduce her as a "brave little girl who's come all the way from Hong Kong Luna to tell how our Chinee comrades cope with situation"--and choice of words showed that he had never been there. . . not surprising; in 2075, HKL tube ended at Endsville, leaving a thousand kilometers of maria to do by rolligon bus, Serenitatis and part of Tranquillitatis--expensive and dangerous. I'd been there--but on contract, via mail rocket.

Before travel became cheap many people in Luna City and Novylen thought that Hong Kong Luna was all Chinee. But Hong Kong was as mixed as we were. Great China dumped what she didn't want there, first from Old Hong Kong and Singapore, then Aussies and Enzees and black fellows and marys and Malays and Tamil and name it. Even Old Bolshies from Vladivostok and Harbin and Ulan Bator. Wye looked Svenska and had British last name with North American first name but could have been Russki. My word, a Loonie then rarely knew who father was and, if raised in creche, might be vague about mother.

I thought Wyoming was going to be too shy to speak. She stood there, looking scared and little, with Shorty towering over her, a big, black mountain. She waited until admiring whistles died down. Luna City was two-to-one male then, that meeting ran about ten-to-one; she could have recited ABC and they would have applauded.

Then she tore into them.

"You! You're a wheat farmer--going broke. Do you know how much a Hindu housewife pays for a kilo of flour made from your wheat? How much a tonne of your wheat fetches in Bombay? How little it costs the Authority to get it from catapult head to Indian Ocean? Downhill all the way! Just solid-fuel retros to brake it--and where do those come from? Right here! And what do you get in return? A few shiploads of fancy goods, owned by the Authority and priced high because it's importado. Importado, importado!--I never touch importado! If we don't make it in Hong Kong, I don't use it. What else do you get for wheat? The privilege of selling Lunar ice to Lunar Authority, buying it back as washing water, then giving it to the Authority--then buying it back a second time as flushing water--then giving it again to the Authority with valuable solids added--then buying it a third time at still higher price for farming--then you sell that wheat to the Authority at their price--and buy power from the Authority to grow it, again at their

price! Lunar power--not one kilowatt up from Terra. It comes from Lunar ice and Lunar steel, or sunshine spilled on Luna's soil--all put together by loonies! Oh, you rockheads, you deserve to starve!"

She got silence more respectful than whistles. At last a peevish voice said, "What do you expect us to do, gospazha? Throw rocks at Warden?"

Wyoh smiled. "Yes, we could throw rocks. But the solution is so simple that you all know it. Here in Luna we're rich. Three million hardworking, smart, skilled people, enough water, plenty of everything, endless power, endless cubic. But what we don't have is a free market. We must get rid of the Authority!"

"Yes--but how?"

"Solidarity. In HKL we're learning. Authority charges too much for water, don't buy. It pays too little for ice, don't sell. It holds monopoly on export, don't export. Down in Bombay they want wheat. If it doesn't arrive, the day will come when brokers come here to bid for it--at triple or more the present prices!"

"What do we do in meantime? Starve?"

Same peevish voice-- Wyoming picked him out, let her head roll in that old gesture by which a Loonie fem says, "You're too fat for me!" She said, "In your case, cobber, it wouldn't hurt."

Guffaws shut him up. Wyoh went on, "No one need starve, Fred Hauser, fetch your drill to Hong Kong; the Authority doesn't own our water and air system and we pay what ice is worth. You with the bankrupt farm--if you have the guts to admit that you're bankrupt, come to Hong Kong and start over. We have a chronic labor shortage, a hard worker doesn't starve." She looked around and added, "I've said enough. It's up to you"--left platform, sat down between Shorty and myself.

She was trembling. Shorty patted her hand; she threw him a glance of thanks, then whispered to me, "How did I do?"

"Wonderful," I assured her. "Terrific!" She seemed reassured.

But I hadn't been honest. "Wonderful" she had been, at swaying crowd. But oratory is a null program. That we were slaves I had known all my life--and nothing could be done about it. True, we weren't bought and sold--but as long as Authority held monopoly over what we had to have and what we could sell to buy it, we were slaves.

But what could we do? Warden wasn't our owner. Had he been, some way could be found to eliminate him. But Lunar Authority was not in Luna, it was on Terra--and we had not one ship, not even small hydrogen bomb. There weren't even hand guns in Luna, though what we would do with guns I did not know. Shoot each other, maybe.

Three million, unarmed and helpless--and eleven billion of them. . . with ships and bombs and weapons. We could be a nuisance--but how long will papa take it before baby gets spanked?

I wasn't impressed. As it says in Bible, God fights on side of heaviest artillery.

They cackled again, what to do, how to organize, and so forth, and again we heard that "shoulder to shoulder" noise. Chairman had to use gavel and I began to fidget.

But sat up when I heard familiar voice: "Mr. Chairman! May I have the indulgence of the house for five minutes?"

I looked around. Professor Bernardo de la Paz--which could have guessed from old-fashioned way of talking even if hadn't known voice. Distinguished man with wavy

white hair, dimples in cheeks, and voice that smiled-- Don't know how old he was but was old when I first met him, as a boy.

He had been transported before I was born but was not a lag. He was a political exile like Warden, but a subversive and instead of fat job like "warden," Professor had been dumped, to live or starve.

No doubt he could have gone to work in any school then in L-City but he didn't. He worked a while washing dishes, I've heard, then as babysitter, expanding into a nursery school, and then into a creche. When I met him he was running a creche, and a boarding and day school, from nursery through primary, middle, and high schools, employed co-op thirty teachers, and was adding college courses.

Never boarded with him but I studied under him. I was opted at fourteen and my new family sent me to school, as I had had only three years, plus spotty tutoring. My eldest wife was a firm woman and made me go to school.

I liked Prof. He would teach anything. Wouldn't matter that he knew nothing about it; if pupil wanted it, he would smile and set a price, locate materials, stay a few lessons ahead. Or barely even if he found it tough--never pretended to know more than he did. Took algebra from him and by time we reached cubics I corrected his probs as often as he did mine--but he charged into each lesson gaily.

I started electronics under him, soon was teaching him. So he stopped charging and we went along together until he dug up an engineer willing to daylight for extra money--whereupon we both paid new teacher and Prof tried to stick with me, thumb-fingered and slow, but happy to be stretching his mind.

Chairman banged gavel. "We are glad to extend to Professor de la Paz as much time as he wants--and you chooms in back sign off! Before I use this mallet on skulls."

Prof came forward and they were as near silent as Loonies ever are; he was respected. "I shan't be long," he started in. Stopped to look at Wyoming, giving her up-and-down and whistling. "Lovely señorita," he said, "can this poor one be forgiven? I have the painful duty of disagreeing with your eloquent manifesto."

Wyoh bristled. "Disagree how? What I said was true!"

"Please! Only on one point. May I proceed?"

"Uh. . . go ahead."

"You are right that the Authority must go. It is ridiculous--pestilential, not to be borne--that we should be ruled by an irresponsible dictator in all our essential economy! It strikes at the most basic human right, the right to bargain in a free marketplace. But I respectfully suggest that you erred in saying that we should sell wheat to Terra--or rice, or any food--at any price. We must not export food!"

That wheat farmer broke in. "What am I going to do with all that wheat?"

"Please! It would be right to ship wheat to Terra. . . if tonne for tonne they returned it. As water. As nitrates. As phosphates. Tonne for tonne. Otherwise no price is high enough."

Wyoming said "Just a moment" to farmer, then to Prof: "They can't and you know it. It's cheap to ship downhill, expensive to ship uphill. But we don't need water and plant chemicals, what we need is not so massy. Instruments. Drugs. Processes. Some machinery. Control tapes. I've given this much study, sir. If we can get fair prices in a free market--"

"Please, miss! May I continue?"

"Go ahead. I want to rebut."

"Fred Hauser told us that ice is harder to find. Too true--bad news now and disastrous for our grandchildren. Luna City should use the same water today we used twenty years ago. . . plus enough ice mining for population increase. But we use water once--one full cycle, three different ways. Then we ship it to India. As wheat. Even though wheat is vacuum-processed, it contains precious water. Why ship water to India? They have the whole Indian Ocean! And the remaining mass of that grain is even more disastrously expensive, plant foods still harder to come by, even though we extract them from rock. Comrades, harken to me! Every load you ship to Terra condemns your grandchildren to slow death. The miracle of photosynthesis, the plant-and-animal cycle, is a closed cycle. You have opened it--and your lifeblood runs downhill to Terra. You don't need higher prices, one cannot eat money! What you need, what we all need, is an end to this loss. Embargo, utter and absolute. Luna must be self-sufficient!"

A dozen people shouted to be heard and more were talking, while chairman banged gavel. So I missed interruption until woman screamed, then I looked around.

All doors were now open and I saw three armed men in one nearest--men in yellow uniform of Warden's bodyguard. At main door in back one was using a bull voice; drowned out crowd noise and sound system. "ALL RIGHT, ALL RIGHT!" it boomed. "STAY WHERE YOU ARE. YOU ARE UNDER ARREST. DON'T MOVE, KEEP QUIET. FILE OUT ONE AT A TIME, HANDS EMPTY AND STRETCHED OUT IN FRONT OF YOU."

Shorty picked up man next to him and threw him at guards nearest; two went down, third fired. Somebody shrieked. Skinny little girl, redhead, eleven or twelve, launched self at third guard's knees and hit rolled up in ball; down he went. Shorty swung hand behind him, pushing Wyoming Knott into shelter of his big frame, shouted over shoulder, "Take care of Wyoh, Man--stick close!" as he moved toward door, parting crowd right and left like children.

More screams and I whiffed something--stink I had smelled day I lost arm and knew with horror were not stun guns but laser beams. Shorty reached door and grabbed a guard with each big hand. Little redhead was out of sight; guard she had bowled over was on hands and knees. I swung left arm at his face and felt jar in shoulder as his jaw broke. Must have hesitated for Shorty pushed me and yelled, "Move, Man! Get her out of here!"

I grabbed Wyoming's waist with right arm, swung her over guard I had quieted and through door--with trouble; she didn't seem to want to be rescued. She slowed again beyond door; I shoved her hard in buttocks, forcing her to run rather than fall. I glanced back.

Shorty had other two guards each by neck; he grinned as he cracked skulls together. They popped like eggs and he yelled at me: "Git!"

I left, chasing Wyoming. Shorty needed no help, nor ever would again--nor could I waste his last effort. For I did see that, while killing those guards, he was standing on one leg. Other was gone at hip.

Wyoh was halfway up ramp to level six before I caught up. She didn't slow and I had to grab door handle to get into pressure lock with her. There I stopped her, pulled red cap off her curls and stuck it in my pouch. "That's better." Mine was missing.

She looked startled. But answered, "Da. It is."

"Before we open door," I said, "are you running anywhere particular? And do I stay and hold them off? Or go with?"

"I don't know. We'd better wait for Shorty."

"Shorty's dead."

Eyes widened, she said nothing. I went on, "Were you staying with him? Or somebody?"

"I was booked for a hotel--Gostaneetsa Ukraina. I don't know where it is. I got here too late to buy in."

"Mmm-- That's one place you won't go. Wyoming, I don't know what's going on. First time in months I've seen any Warden's bodyguard in L-City.. . and never seen one not escorting vip. Uh, could take you home with me--but they may be looking for me, too. Anywise, ought to get out of public corridors."

Came pounding on door from level-six side and a little face peered up through glass bull's-eye. "Can't stay here," I added, opening door. Was a little girl no higher than my waist. She looked up scornfully and said, "Kiss her somewhere else. You're blocking traffic." Squeezed between us as I opened second door for her.

"Let's take her advice," I said, "and suggest you take my arm and try to look like I was man you want to be with. We stroll. Slow."

So we did. Was side corridor with little traffic other than children always underfoot. If Wart's bodyguards tried to track us, Earthside cop style, a dozen or ninety kids could tell which way tall blonde went--if any Loonie child would give stooge of Warden so much as time of day.

A boy almost old enough to appreciate Wyoming stopped in front of us and gave her a happy whistle. She smiled and waved him aside. "There's our trouble," I said in her ear. "You stand out like Terra at full. Ought to duck into a hotel. One off next side corridor--nothing much, bundling booths mostly. But close."

"I'm in no mood to bundle."

"Wyoh, please! Wasn't asking. Could take separate rooms."

"Sorry. Could you find me a W.C.? And is there a chemist's shop near?"

"Trouble?"

"Not that sort. A W.C. to get me out of sight--for I am conspicuous--and a chemist's shop for cosmetics. Body makeup. And for my hair, too."

First was easy, one at hand. When she was locked in, I found a chemist's shop, asked how much body makeup to cover a girl so tall--marked a point under my chin--and massing forty-eight? I bought that amount in sepia, went to another shop and bought same amount--winning roll at first shop, losing at second--came out even. Then I bought black hair tint at third shop--and a red dress.

Wyoming was wearing black shorts and pullover--practical for travel and effective on a blonde. But I'd been married all my life and had some notion of what women wear and had never seen a woman with dark sepia skin, shade of makeup, wear black by choice. Furthermore, skirts were worn in Luna City then by dressy women. This

shift was a skirt with bib and price convinced me it must be dressy. Had to guess at size but material had some stretch.

Ran into three people who knew me but was no unusual comment. Nobody seemed excited, trade going on as usual; hard to believe that a riot had taken place minutes ago on level below and a few hundred meters north. I set it aside for later thought--excitement was not what I wanted.

I took stuff to Wye, buzzing door and passing in it; then stashed self in a taproom for half an hour and half a liter and watched video. Still no excitement, no "we interrupt for special bulletin." I went back, buzzed, and waited.

Wyoming came out--and I didn't recognize her. Then did and stopped to give full applause. Just had to--whistles and finger snaps and moans and a scan like mapping radar.

Wyoh was now darker than I am, and pigment had gone on beautifully. Must have been carrying items in pouch as eyes were dark now, with lashes to match, and mouth was dark red and bigger. She had used black hair tint, then fizzed hair up with grease as if to take kinks out, and her tight curls had defeated it enough to make convincingly imperfect. She didn't look Afro--but not European, either. Seemed some mixed breed, and thereby more a Loonie.

Red dress was too small. Clung like sprayed enamel and flared out at mid-thigh with permanent static charge. She had taken shoulder strap off her pouch and had it under arm. Shoes she had discarded or pouched; bare feet made her shorter.

She looked good. Better yet, she looked not at all like agitatrix who had harangued crowd.

She waited, big smile on face and body undulating, while I applauded. Before I was done, two little boys flanked me and added shrill endorsements, along with clog steps. So I tipped them and told them to be missing; Wyoming flowed to me and took my arm. "Is it okay? Will I pass?"

"Wyoh, you look like slot-machine sheila waiting for action."

"Why, you drecklich choom! Do I look like slot-machine prices? Tourist!"

"Don't jump salty, beautiful. Name a gift. Then speak my name. If it's bread-and-honey, I own a hive."

"Uh--" She fisted me solidly in ribs, grinned. "I was flying, cobber. If I ever bundle with you--not likely--we won't speak to the bee. Let's find that hotel."

So we did and I bought a key. Wyoming put on a show but needn't have bothered. Night clerk never looked up from his knitting, didn't offer to roll. Once inside, Wyoming threw bolts. "It's nice!"

Should have been, at thirty-two Hong Kong dollars. I think she expected a booth but I would not put her in such, even to hide. Was comfortable lounge with own bath and no water limit. And phone and delivery lift, which I needed.

She started to open pouch. "I saw what you paid. Let's settle it, so that--"

I reached over, closed her pouch. "Was to be no mention of bees."

"What? Oh, merde, that was about bundling. You got this doss for me and it's only right that--"

"Switch off."

"Uh. . . half? No grievin' with Steven."

"Nyet. Wyoh, you're a long way from home. What money you have, hang on to."

"Manuel O'Kelly, if you don't let me pay my share, I'll walk out of here!"

I bowed. "Dosvedanyuh, Gospazha, ee sp'coynoynochi. I hope we shall meet again." I moved to unbolt door.

She glared, then closed pouch savagely. "I'll stay. M'goy!"

"You're welcome."

"I mean it, I really do thank you, Just the same-- Well, I'm not used to accepting favors. I'm a Free Woman."

"Congratulations. I think."

"Don't you be salty, either. You're a firm man and I respect that--I'm glad you're on our side."

"Not sure I am."

"What?"

"Cool it. Am not on Warden's side. Nor will I talk . . . wouldn't want Shorty, Bog rest his generous soul, to haunt me. But your program isn't practical."

"But, Mannie, you don't understand! If all of us--"

"Hold it, Wye; this no time for politics. I'm tired and hungry. When did you eat last?"

"Oh, goodness!" Suddenly she looked small, young, tired. "I don't know. On the bus, I guess. Helmet rations."

"What would you say to a Kansas City cut, rare, with baked potato, Tycho sauce, green salad, coffee . . and a drink first?"

"Heavenly!"

"I think so too, but we'll be lucky, this hour in this hole, to get algae soup and burgers. What do you drink?"

"Anything. Ethanol."

"Okay." I went to lift, punched for service. "Menu, please." It displayed and I settled for prime rib plus rest, and two orders of apfelstrudel with whipped cream. I added a half liter of table vodka and ice and starred that part.

"Is there time for me to take a bath? Would you mind?"

"Go ahead, Wye. You'll smell better."

"Louse. Twelve hours in a p-suit and you'd stink, too--the bus was dreadful. I'll hurry."

"Half a sec, Wye. Does that stuff wash off? You may need it when you leave. . . whenever you do, wherever you go."

"Yes, it does. But you bought three times as much as I used. I'm sorry, Mannie; I plan to carry makeup on political trips--things can happen. Like tonight, though tonight was worst. But I ran short of seconds and missed a capsule and almost missed the bus."

"So go scrub."

"Yes, sir, Captain. Uh, I don't need help to scrub my back but I'll leave the door up so we can talk. Just for company, no invitation implied."

"Suit yourself. I've seen a woman."

"What a thrill that must have been for her." She grinned and fisted me another in ribs--hard--went in and started tub. "Mannie, would you like to bathe in it first? Secondhand water is good enough for this makeup and that stink you complained about."

"Unmetered water, dear. Run it deep."

"Oh, what luxury! At home I use the same bath water three days running." She whistled softly and happily. "Are you wealthy, Mannie?"

"Not wealthy, not weeping."

Lift jingled; I answered, fixed basic martinis, vodka over ice, handed hers in, got out and sat down, out of sight--nor had I seen sights; she was shoulder deep in happy suds. "Pawlnoi Zheezni!" I called.

"A full life to you, too, Mannie. Just the medicine I needed." After pause for medicine she went on, "Mannie, you're married. Ja?"

"Da. It shows?"

"Quite. You're nice to a woman but not eager and quite independent. So you're married and long married. Children?"

"Seventeen divided by four."

"Clan marriage?"

"Line. Opted at fourteen and I'm fifth of nine. So seventeen kids is nominal. Big family."

"It must be nice. I've never seen much of line families, not many in Hong Kong. Plenty of clans and groups and lots of polyandries but the line way never took hold."

"Is nice. Our marriage nearly a hundred years old. Dates back to Johnson City and first transportees--twenty-one links, nine alive today, never a divorce. Oh, it's a madhouse when our descendants and inlaws and kinfolk get together for birthday or wedding--more kids than seventeen, of course; we don't count 'em after they marry or I'd have 'children' old enough to be my grandfather. Happy way to live, never much pressure. Take me. Nobody woofs if I stay away a week and don't phone. Welcome when I show up. Line marriages rarely have divorces. How could I do better?"

"I don't think you could. Is it an alternation? And what's the spacing?"

"Spacing has no rule, just what suits us. Been alternation up to latest link, last year. We married a girl when alternation called for boy. But was special."

"Special how?"

"My youngest wife is a granddaughter of eldest husband and wife. At least she's granddaughter of Mum--senior is 'Mum' or sometimes Mimi to her husbands--and she may be of Grandpaw--but not related to other spouses. So no reason not to marry back in, not even consanguinuity okay in other types of marriage. None, nit, zero. And Ludmilla grew up in our family because her mother had her solo, then moved to Novylen and left her with us.

"Milla didn't want to talk about marrying out when old enough for us to think about it. She cried and asked us please to make an exception. So we did. Grandpaw doesn't figure in genetic angle--these days his interest in women is more gallant than practical. As senior husband he spent our wedding night with her--but consummation was only formal. Number-two husband, Greg, took care of it later and everybody pretended. And everybody happy. Ludmilla is a sweet little thing, just fifteen and pregnant first time."

"Your baby?"

"Greg's, I think. Oh, mine too,, but in fact was in Novy Leningrad. Probably Greg's, unless Milla got outside help. But didn't, she's a home girl. And a wonderful cook."

Lift rang; took care of it, folded down table, opened chairs, paid bill and sent lift up. "Throw it to pigs?"

"I'm coming! Mind if I don't do my face?"

"Come in skin for all of me."

"For two dimes I would, you much-married man." She came out quickly, blond again and hair slicked back and damp. Had not put on black outfit; again in dress I bought. Red suited her. She sat down, lifted covers off food. "Oh, boy! Mannie, would your family marry me? You're a dinkum provider."

"I'll ask. Must be unanimous."

"Don't crowd yourself." She picked up sticks, got busy. About a thousand calories later she said, "I told you I was a Free Woman. I wasn't, always."

I waited. Women talk when they want to. Or don't.

"When I was fifteen I married two brothers, twins twice my age and I was terribly happy."

She fiddled with what was on plate, then seemed to change subject. "Mannie, that was just static about wanting to marry your family. You're safe from me. If I ever marry again--unlikely but I'm not opposed to it--it would be just one man, a tight little marriage, earthworm style. Oh, I don't mean I would keep him dogged down. I don't think it matters where a man eats lunch as long as he comes home for dinner. I would try to make him happy."

"Twins didn't get along?"

"Oh, not that at all. I got pregnant and we were all delighted . . . and I had it, and it was a monster and had to be eliminated. They were good to me about it. But I can read print. I announced a divorce, had myself sterilized, moved from Novylen to Hong Kong, and started over as a Free Woman."

"Wasn't that drastic? Male parent oftener than female; men are exposed more."

"Not in my case. We had it calculated by the best mathematical geneticist in Novy Leningrad--one of the best in Sovunion before she got shipped. I know what happened to me. I was a volunteeer colonist--I mean my mother was for I was only five. My father was transported and Mother chose to go with him and take me along. There was a solar storm warning but the pilot thought he could make it--or didn't care; he was a Cyborg. He did make it but we got hit on the ground--and, Mannie, that's one thing that pushed me into politics, that ship sat four hours before they let us disembark. Authority red tape, quarantine perhaps; I was too young to know. But I wasn't too young later to figure out that I had birthed a monster because the Authority doesn't care what happens to us outcasts."

"Can't start argument; they don't care. But, Wyoh, still sounds hasty. If you caught damage from radiation--well, no geneticist but know something about radiation. So you had a damaged egg. Does not mean egg next to it was hurt--statistically unlikely."

"Oh, I know that."

"Mmm-- What sterilization? Radical? Or contraceptive?"

"Contraceptive. My tubes could be opened. But, Mannie, a woman who has had one monster doesn't risk it again." She touched my prosthetic. "You have that. Doesn't it make you eight times as careful not to risk this one?" She touched my meat arm. "That's the way I feel. You have that to contend with; I have this--and I would never told you if you hadn't been hurt, too."

I didn't say left arm more versatile than right--she was correct; don't want to trade in right arm. Need it to pat girls if naught else. "Still think you could have healthy babies."

"Oh, I can! I've had eight."

"Huh?"

"I'm a professional host-mother, Mannie."

I opened mouth, closed it. Idea wasn't strange. I read Earthside papers. But doubt if any surgeon in Luna City in 2075 ever performed such transplant. In cows, yes--but L-City females unlikely at any price to have babies for other women; even homely ones could get husband or six. (Correction: Are no homely women. Some more beautiful than others.)

Glanced at her figure, quickly looked up. She said, "Don't strain your eyes, Mannie; I'm not carrying now. Too busy with politics. But hosting is a good profession for Free Woman. It's high pay. Some Chinee families are wealthy and all my babies have been Chinee--and Chinee are smaller than average and I'm a big cow; a two-and-a-half- or three-kilo Chinese baby is no trouble. Doesn't spoil my figure. These--" She glanced down at her lovelies. "I don't wet-nurse them, I never see them. So I look nulliparous and younger than I am, maybe.

"But I didn't know how well it suited me when I first heard of it. I was clerking in a Hindu shop, eating money, no more, when I saw this ad in the Hong Kong Gong. It was the thought of having a baby, a good baby, that hooked me; I was still in emotional trauma from my monster--and it turned out to be Just what Wyoming needed. I stopped feeling that I was a failure as a woman. I made more money than I could ever hope to earn at other jobs. And my time almost to myself; having a baby hardly slows me down--six weeks at most and that long only because I want to be fair to my clients; a baby is a valuable property. And I was soon in politics; I sounded off and the underground got in touch with me. That's when I started living, Mannie; I studied politics and economics and history and learned to speak in public and turned out to have a flair for organization. It's satisfying work because I believe in it--I know that Luna will be free. Only-- Well, it would be nice to have a husband to come home to. . . if he didn't mind that I was sterile. But I don't think about it; I'm too busy. Hearing about your nice family got me talking, that's all. I must apologize for having bored you."

How many women apologize? But Wyoh was more man than woman some ways, despite eight Chinee babies. "Wasn't bored."

"I hope not. Mannie, why do you say our program isn't practical? We need you."

Suddenly felt tired. How to tell lovely woman dearest dream is nonsense? "Um. Wyoh, let's start over. You told them what to do. But will they? Take those two you singled out. All that iceman knows, bet anything, is how to dig ice. So he'll go on digging and selling to Authority because that's what he can do. Same for wheat farmer. Years ago, he put in one cash crop-- now he's got ring in nose. If he wanted to be independent, would have diversified. Raised what he eats, sold rest free market and stayed away from catapult head. I know--I'm a farm boy."

"You said you were a computerman."

"Am, and that's a piece of same picture. I'm not a top computerman. But best in Luna. I won't go civil service, so Authority has to hire me when in trouble--my prices--or send Earthside, pay risk and hardship, then ship him back fast before his body forgets

Terra. At far more than I charge. So if I can do it, I get their jobs--and Authority can't touch me; was born free. And if no work--usually is--I stay home and eat high.

"We've got a proper farm, not a one-cash-crop deal. Chickens. Small herd of whiteface, plus milch cows. Pigs. Mutated fruit trees. Vegetables. A little wheat and grind it ourselves and don't insist on white flour, and sell--free market--what's left. Make own beer and brandy. I learned drillman extending our tunnels. Everybody works, not too hard. Kids make cattle take exercise by switching them along; don't use tread mill. Kids gather eggs and feed chickens, don't use much machinery. Air we can buy from L-City--aren't far out of town and pressure-tunnel connected. But more often we sell air; being farm, cycle shows Oh-two excess. Always have valuta to meet bills."

"How about water and power?"

"Not expensive. We collect some power, sunshine screens on surface, and have a little pocket of ice. Wye, our farm was founded before year two thousand, when L-City was one natural cave, and we've kept improving it--advantage of line marriage; doesn't die and capital improvements add up."

"But surely your ice won't last forever?"

"Well, now--" I scratched head and grinned. "We're careful; we keep our sewage and garbage and sterilize and use it. Never put a drop back into city system. But--don't tell Warden, dear, but back when Greg was teaching me to drill, we happened to drill into bottom of main south reservoir--and had a tap with us, spilled hardly a drop. But we do buy some metered water, looks better--and ice pocket accounts for not buying much. As for power--well, power is even easier to steal. I'm a good electrician, Wyoh."

"Oh, wonderful!" Wyoming paid me a long whistle and looked delighted. "Everybody should do that!"

"Hope not, would show. Let 'em think up own ways to outwit Authority; our family always has. But back to your plan, Wyoh: two things wrong. Never get 'solidarity'; blokes like Hauser would cave in--because they are in a trap; can't hold out. Second place, suppose you managed it. Solidarity. So solid not a tonne of grain is delivered to catapult head. Forget ice; it's grain that makes Authority important and not just neutral agency it was set up to be. No grain. What happens?"

"Why, they have to negotiate a fair price, that's what!"

"My dear, you and your comrades listen to each other too much. Authority would call it rebellion and warship would orbit with bombs earmarked for L-City and Hong Kong and Tycho Under and Churchill and Novylen, troops would land, grain barges would lift, under guard--and farmers would break necks to cooperate. Terra has guns and power and bombs and ships and won't hold still for trouble from ex-cons. And troublemakers like you--and me; with you in spirit--us lousy troublemakers will be rounded up and eliminated, teach us a lesson. And earthworms would say we had it coming . . . because our side would never be heard. Not on Terra."

Wyoh looked stubborn. "Revolutions have succeeded before. Lenin had only a handful with him."

"Lenin moved in on a power vacuum. Wye, correct me if I'm wrong. Revolutions succeeded when--only when--governments had gone rotten soft, or disappeared."

"Not true! The American Revolution."

"South lost, nyet?"

Not that one, the one a century earlier. They had the sort of troubles with England that we are having now--and they won!"

"Oh, that one. But wasn't England in trouble? France, and Spain, and Sweden--or maybe Holland? And Ireland. Ireland was rebelling; O'Kellys were in it. Wyoh, if you can stir trouble on Terra--say a war between Great China and North American Directorate, maybe PanAfrica lobbing bombs at Europe, I'd say was wizard time to kill Warden and tell Authority it's through. Not today."

"You're a pessimist."

"Nyet, realist. Never pessimist. Too much Loonie not to bet if any chance. Show me chances no worse then ten to one against and I'll go for broke. But want that one chance in ten." I pushed back chair. "Through eating?"

"Yes. Bolshoyeh spasebaw, tovarishch. It was grand!"

"My pleasure. Move to couch and I'll rid of table and dishes, --no, can't help; I'm host." I cleared table, sent up dishes, saving coffee and vodka, folded table, racked chairs, turned to speak.

She was sprawled on couch, asleep, mouth open and face softened into little girl.

Went quietly into bath and closed door. After a scrubbing I felt better--washed tights first and were dry and fit to put on by time I quit lazing in tub--don't care when world ends long as I'm bathed and in clean clothes.

Wyoh was still asleep, which made problem. Had taken room with two beds so she would not feel I was trying to talk her into bundling--not that I was against it but she had made clear she was opposed. But my bed had to be made from couch and proper bed was folded away. Should I rig it out softly, pick her up like limp baby and move her? Went back into bath and put on arm.

Then decided to wait. Phone had hush hood. Wyoh seemed unlikely to wake, and things were gnawing me. I sat down at phone, lowered hood, punched "MYCROFTXXX."

"Hi, Mike."

"Hello, Man. Have you surveyed those jokes?"

"What? Mike, haven't had a minute--and a minute may be a long time to you but it's short to me. I'll get at it as fast as I can."

"Okay, Man. Have you found a not-stupid for me to talk with?"

"Haven't had time for that, either. Uh. . .wait." I looked out through hood at Wyoming. "Not-stupid" in this case meant empathy. . . Wyoh had plenty. Enough to be friendly with a machine? I thought so. And could be trusted; not only had we shared trouble but she was a subversive.

"Mike, would you like to talk with a girl?"

"Girls are not-stupid?"

"Some girls are very not-stupid, Mike."

"I would like to talk with a not-stupid girl, Man."

"I'll try to arrange. But now I'm in trouble and need your help."

"I will help, Man."

"Thanks, Mike. I want to call my home--but not ordinary way. You know sometimes calls are monitored, and if Warden orders it, lock can be put on so that circuit can be traced."

"Man, you wish me to monitor your call to your home and put a lock-and-trace on it? I must inform you that I already know your home call number and the number from which you are calling."

"No, no! Don't want it monitored, don't want it locked and traced. Can you call my home, connect me, and control circuit so that it can't be monitored, can't be locked, can't be traced--even if somebody has programmed just that? Can you do it so that they won't even know their program is bypassed?"

Mike hesitated. I suppose it was a question never asked and he had to trace a few thousand possibilities to see if his control of system permitted this novel program. "Man, I can do that. I will."

"Good! Uh, program signal. If I want this sort of connection in future, I'll ask for 'Sherlock.'"

"Noted. Sherlock was my brother." Year before, I had explained to Mike how he got his name. Thereafter he read all Sherlock Holmes stories, scanning film in Luna City Carnegie Library. Don't know how he rationalized relationship; I hesitated to ask.

"Fine! Give me a 'Sherlock' to my home."

A moment later I said, "Mum? This is your favorite husband."

She answered, "Manuel! Are you in trouble again?"

I love Mum more than any other woman including my other wives, but she never stopped bringing me up--Bog willing, she never will. I tried to sound hurt. "Me? Why, you know me, Mum."

"I do indeed. Since you are not in trouble, perhaps you can tell me why Professor de la Paz is so anxious to get in touch with you--he has called three times--and why he wants to reach some woman with unlikely name of Wyoming Knott--and why he thinks you might be with her? Have you taken a bundling companion, Manuel, without telling me? We have freedom in our family, dear, but you know that I prefer to be told. So that I will not be taken unawares."

Mum was always jealous of all women but her co-wives and never, never, never admitted it. I said, "Mum, Bog strike me dead, I have not taken a bundling companion."

"Very well. You've always been a truthful boy, Now what's this mystery?"

"I'll have to ask Professor." (Not lie, just tight squeeze.) "Did he leave number?"

"No, he said he was calling from a public phone."

"Um. If he calls again, ask him to leave number and time I can reach him. This is public phone, too." (Another tight squeeze.) "In meantime-- You listened to late news?"

"You know I do."

"Anything?"

"Nothing of interest."

"No excitement in L-City? Killings, riots, anything?"

"Why, no. There was a set duel in Bottom Alley but-- Manuel! Have you killed someone?"

"No, Mum." (Breaking a man's jaw will not kill him.)

She sighed. "You'll be my death, dear. You know what I've always told you. In our family we do not brawl. Should a killing be necessary--it almost never is--matters must be discussed calmly, en famille, and proper action selected. If a new chum must be eliminated, other people know it. It is worth a little delay to hold good opinion and support--"

"Mum! Haven't killed anybody, don't intend to. And know that lecture by heart."

"Please be civil, dear."

"I'm sorry."

"Forgiven. Forgotten. I'm to tell Professor de la Paz to leave a number. I shall."

"One thing. Forget name 'Wyoming Knott.' Forget Professor was asking for me. If a stranger phones or calls in person, and asks anything about me, you haven't heard from me, don't know where I am . . . think I've gone to Novylen. That goes for rest of family, too. Answer no questions--especially from anybody connected with Warden."

"As if I would! Manuel you are in trouble!"

"Not much and getting it fixed."--hoped!--"Tell you when I get home. Can't talk now. Love you. Switching off."

"I love you, dear. Sp'coynoynauchi."

"Thanks and you have a quiet night, too. Off."

Mum is wonderful. She was shipped up to The Rock long ago for carving a man under circumstances that left grave doubts as to girlish innocence--and has been opposed to violence and loose living ever since. Unless necessary--she's no fanatic. Bet she was a jet job as a kid and wish I'd known her--but I'm rich in sharing last half of her life.

I called Mike back. "Do you know Professor Bernardo de la Paz's voice?"

"I do, Man."

"Well. . . you might monitor as many phones in Luna City as you can spare ears for and if you hear him, let me know. Public phones especially."

(A full two seconds' delay-- Was giving Mike problems he had never had, think he liked it.) "I can check-monitor long enough to identify at all public phones in Luna City. Shall I use random search on the others, Man?"

"Um. Don't overload. Keep an ear on his home phone and school phone."

"Program set up."

"Mike, you are best friend I ever had."

"That is not a joke, Man?"

"No joke. Truth."

"I am-- Correction: I am honored and pleased. You are my best friend, Man, for you are my only friend. No comparison is logically permissible."

"Going to see that you have other friends. Not-stupids, I mean. Mike? Got an empty memory bank?"

"Yes, Man. Ten-to-the-eighth-bits capacity."

"Good! Will you block it so that only you and I can use it? Can you?"

"Can and will. Block signal, please."

"Uh. . . Bastille Day." Was my birthday, as Professor de la Paz had told me years earlier.

"Permanently blocked."

"Fine. Got a recording to put in it. But first-- Have you finished setting copy for tomorrow's Daily Lunatic?"

"Yes, Man."

"Anything about meeting in Stilyagi Hall?"

"No, Man."

"Nothing in news services going out-city? Or riots?"

"No, Man."

"""Curiouser and curiouser," said Alice.' Okay, record this under 'Bastille Day,' then think about it. But for Bog's sake don't let even your thoughts go outside that block, nor anything I say about it!"

"Man my only friend," he answered and voice sounded diffident, "many months ago I decided to place any conversation between you and me under privacy block accessible only to you. I decided to erase none and moved them from temporary storage to permanent. So that I could play them over, and over, and over, and think about them. Did I do right?"

"Perfect. And, Mike--I'm flattered."

"P'jal'st. My temporary files were getting full and I learned that I needed not to erase your words."

"Well-- 'Bastille Day.' Sound coming at sixty-to-one." I took little recorder, placed close to a microphone and let it zip-squeal. Had an hour and a half in it; went silent in ninety seconds or so. "That's all, Mike. Talk to you tomorrow."

"Good night, Manuel Garcia O'Kelly my only friend."

I switched off and raised hood. Wyoming was sitting up and looking troubled. "Did someone call? Or. . ."

"No trouble. Was talking to one of my best--and most trustworthy--friends. Wyoh, are you stupid?"

She looked startled. "I've sometimes thought so. Is that a joke?"

"No. If you're not-stupid, I'd like to introduce you to him. Speaking of jokes-- Do you have a sense of humor?"

"Certainly I have!" is what Wyoming did not answer--and any other woman would as a locked-in program. She blinked thoughtfully and said, "You'll have to judge for yourself, cobber. I have something I use for one. It serves my simple purposes."

"Fine." I dug into pouch, found print-roll of one hundred "funny" stories. "Read. Tell me which are funny, which are not--and which get a giggle first time but are cold pancakes without honey to hear twice."

"Manuel, you may be. the oddest man I've ever met." She took that print-out. "Say, is this computer paper?"

"Yes. Met a computer with a sense of humor."

"So? Well, it was bound to come some day. Everything else has been mechanized."

I gave proper response and added "Everything?"

She looked up. "Please. Don't whistle while I'm reading."

4

Heard her giggle a few times while I rigged out bed and made it. Then sat down by her, took end she was through with and started reading. Chuckled a time or two but a joke isn't too funny to me if read cold, even when I see it could be fission job at proper time. I got more interested in how Wyoh rated them.

She was marking "plus," "minus," and sometimes question mark, and plus stories were marked "once" or "always"--few were marked "always." I put my ratings under hers. Didn't disagree too often.

By time I was near end she was looking over my judgments. We finished together. "Well?" I said. "What do you think?"

"I think you have a crude, rude mind and it's a wonder your wives put up with you."

"Mum often says so. But how about yourself, Wyoh? You marked plusses on some that would make a slot-machine girl blush."

She grinned. "Da. Don't tell anybody; publicly I'm a dedicated party organizer above such things. Have you decided that I have a sense of humor?"

"Not sure. Why a minus on number seventeen?"

"Which one is that?" She reversed roll and found it. "Why, any woman would have done the same! It's not funny, it's simply necessary."

"Yes, but think how silly she looked."

"Nothing silly about it. Just sad. And look here. You thought this one was not funny. Number fifty-one."

Neither reversed any judgments but I saw a pattern: Disagreements were over stories concerning oldest funny subject. Told her so. She nodded. "Of course. I saw that. Never mind, Mannie dear; I long ago quit being disappointed in men for what they are not and never can be."

I decided to drop it. Instead told her about Mike.

Soon she said, "Mannie, you're telling me that this computer is alive?"

"What do you mean?' I answered. "He doesn't sweat, or go to W.C. But can think and talk and he's aware of himself. Is he 'alive'?"

"I'm not sure what I mean by 'alive,'" she admitted. "There's a scientific definition, isn't there? Irritability, or some such. And reproduction."

"Mike is irritable and can be irritating. As for reproducing, not designed for it but--yes, given time and materials and very special help, Mike could reproduce himself."

"I need very special help, too," Wyoh answered, "since I'm sterile. And it takes me ten whole lunars and many kilograms of the best materials. But I make good babies. Mannie, why shouldn't a machine be alive? I've always felt they were. Some of them wait for a chance to savage you in a tender spot."

"Mike wouldn't do that. Not on purpose, no meanness in him. But he likes to play jokes and one might go wrong--like a puppy who doesn't know he's biting. He's ignorant No, not ignorant, he knows enormously more than I, or you, or any man who ever lived. Yet he doesn't know anything."

"Better repeat that. I missed something."

I tried to explain. How Mike knew almost every book in Luna, could read at least a thousand times as fast as we could and never forget anything unless he chose to erase, how he could reason with perfect logic, or make shrewd guesses from insufficient data. . . and yet not know anything about how to be "alive." She interrupted. "I scan it. You're saying he's smart and knows a lot but is not sophisticated. Like a new chum when he grounds on The Rock. Back Eartbside he might be a professor with a string of degrees. . . but here he's a baby."

"That's it. Mike is a baby with a long string of degrees. Ask how much water and what chemicals and how much photoflux it takes to crop fifty thousand tonnes of wheat and he'll tell you without stopping for breath. But can't tell if a joke is funny,"

"I thought most of these were fairly good."

"They're ones he's heard--read--and were marked jokes so he filed them that way. But doesn't understand them because he's never been a--a people. Lately he's been trying to make up jokes. Feeble, very." I tried to explain Mike's pathetic attempts to be a "people." "On top of that, he's lonely."

"Why, the poor thing! You'd be lonely, too, if you did nothing but work, work, work, study, study, study, and never anyone to visit with. Cruelty, that's what it is."

So I told about promise to find "not-stupids." "Would you chat with him, Wye? And not laugh when he makes funny mistakes? If you do, he shuts up and sulks."

"Of course I would, Mannie! Uh. . . once we get out of this mess. If it's safe for me to be in Luna City. Where is this poor little computer? City Engineering Central? I don't know my way around here."

"He's not in L-City; he's halfway across Crisium. And you couldn't go down where he is; takes a pass from Warden. But--"

"Hold it! 'Halfway across Crisium--' Mannie, this computer is one of those at Authority Complex?"

"Mike isn't just 'one of those' computers," I answered, vexed on Mike's account. "He's boss; he waves baton for all others. Others are just machines, extensions of Mike, like this is for me," I said, flexing hand of left arm. "Mike controls them. He runs catapult personally, was his first job--catapult and ballistic radars. But he's logic for phone system, too, after they converted to Lunawide switching. Besides that, he's supervising logic for other systems."

Wyoh closed eyes and pressed fingers to temples. "Mannie, does Mike hurt?"

"'Hurt?' No strain. Has time to read jokes."

"I don't mean that. I mean: Can he hurt? Feel pain?"

"What? No. Can get feelings hurt. But can't feel pain. Don't think he can. No, sure he can't, doesn't have receptors for pain. Why?"

She covered eyes and said softly, "Bog help me." Then looked up and said, "Don't you see, Mannie? You have a pass to go down where this computer is. But most Loonies can't even leave the tube at that station; it's for Authority employees only. Much less go inside the main computer room. I had to find out if it could feel pain because--well, because you got me feeling sorry for it, with your talk about how it was lonely! But, Mannie, do you realize what a few kilos of toluol plastic would do there?"

"Certainly do!" Was shocked and disgusted.

"Yes. We'll strike right after the explosion--and Luna will be free! Mmm. . . I'll get you explosives and fuses--but we can't move until we are organized to exploit it. Mannie, I've got to get out of here, I must risk it. I'll go put on makeup." She started to get up.

I shoved her down, with hard left hand. Surprised her, and surprised me--had not touched her in any way save necessary contact. Oh, different today, but was 2075 and touching a fem without her consent--plenty of lonely men to come to rescue and airlock never far away. As kids say, Judge Lynch never sleeps.

"Sit down, keep quiet!" I said. "I know what a blast would do. Apparently you don't. Gospazha, am sorry to say this . . . but if came to choice, would eliminate you before would blow up Mike."

Wyoming did not get angry. Really was a man some ways--her years as a disciplined revolutionist I'm sure; she was all girl most ways. "Mannie, you told me that Shorty Mkrum is dead."

"What?" Was confused by sharp turn. "Yes. Has to be. One leg off at hip, it was; must have bled to death in two minutes. Even in a surgery amputation that high is touch-and-go." (I know such things; had taken luck and big transfusions to save me--and an arm isn't in same class with what happened to Shorty.)

"Shorty was," she said soberly, "my best friend here and one of my best friends anywhere. He was all that I admire in a man--loyal, honest, intelligent, gentle, and brave--and devoted to the Cause. But have you seen me grieving over him?"

"No. Too late to grieve."

"It's never too late for grief. I've grieved every instant since you told me. But I locked it in the back of my mind for the Cause leaves no time for grief. Mannie, if it would have bought freedom for Luna--or even been part of the price--I would have eliminated Shorty myself. Or you. Or myself. And yet you have qualms over blowing up a computer!"

"Not that at all!" (But was, in part. When a man dies, doesn't shock me too much; we get death sentences day we are born. But Mike was unique and no reason not to be immortal. Never mind "souls"--prove Mike did not have one. And if no soul, so much worse. No? Think twice,)

"Wyoming, what would happen if we blew up Mike? Tell."

"I don't know precisely. But it would cause a great deal of confusion and that's exactly what we--"

"Seal it. You don't know. Confusion, da. Phones out. Tubes stop running. Your town not much hurt; Kong Kong has own power. But L-City and Novylen and other warrens all power stops. Total darkness. Shortly gets stuffy. Then temperature drops and pressure. Where's your p-suit?"

"Checked at Tube Station West."

"So is mine. Think you can find way? In solid dark? In time? Not sure I can and I was born in this warren. With corridors filled with screaming people? Loonies are a tough mob; we have to be--but about one in ten goes off his cams in total dark. Did you swap bottles for fresh charges or were you in too much hurry? And will suit be there with thousands trying to find p-suits and not caring who owns?"

"But aren't there emergency arrangements? There are in Hong Kong Luna."

"Some. Not enough. Control of anything essential to life should be decentralized and paralleled so that if one machine fails, another takes over. But costs money and as you pointed out, Authority doesn't care. Mike shouldn't have all jobs. But was cheaper to ship up master machine, stick deep in The Rock where couldn't get hurt, then keep adding capacity and loading on jobs--did you know Authority makes near as much gelt from leasing Mike's services as from trading meat and wheat? Does. Wyoming, not sure we would lose Luna City if Mike were blown up. Loonies are handy and might jury-rig till automation could be restored. But I tell you true: Many people would die and rest too busy for politics."

I marveled it. This woman had been in The Rock almost all her life. . . yet could think of something as new-choomish as wrecking engineering controls. "Wyoming, if

you were smart like you are beautiful, you wouldn't talk about blowing up Mike; you would think about how to get him on your side."

"What do you mean?" she said. "The Warden controls the computers."

"Don't know what I mean," I admitted. "But don't think Warden controls computers--wouldn't know a computer from a pile of rocks. Warden, or staff, decides policies, general plans. Half-competent technicians program these into Mike. Mike sorts them, makes sense of them, plans detailed programs, parcels them out where they belong, keeps things moving. But nobody controls Mike; he's too smart. He carries out what is asked because that's how he's built. But he's selfprogramming logic, makes own decissions. And a good thing, because if he weren't smart, system would not work."

"I still don't see what you mean by 'getting him on our side.'"

"Oh. Mike doesn't feel loyalty to Warden. As you pointed out: He's a machine. But if I wanted to foul up phones without touching air or water or lights, I would talk to Mike. If it struck him funny, he might do it."

"Couldn't you just program it? I understood that you can get into the room where he is."

"If I--or anybody--programmed such an order into Mike without talking it over with him, program would be placed in 'hold' location and alarms would sound in many places. But if Mike wanted to--" I told her about cheque for umpteen jillion. "Mike is still finding himself, Wyoh. And lonely. Told me I was 'his only friend'--and was so open and vulnerable I wanted to bawl. If you took pains to be his friend, too--without thinking of him as 'just a machine'--well, not sure what it would do, haven't analyzed it. But if I tried anything big and dangerous, would want Mike in my corner."

She said thoughtfully, "I wish there were some way for me to sneak into that room where he is. I don't suppose makeup would help?"

"Oh, don't have to go there. Mike is on phone. Shall we call him?"

She stood up. "Mannie, you are not only the oddest man I've met; you are the most exasperating. What's his number?"

"Comes from associating too much with a computer." I went to phone. "Just one thing, Wyoh. You get what you want out of a man just by batting eyes and undulating framework."

"Well. . . sometimes. But I do have a brain."

"Use it. Mike is not a man. No gonads. No hormones. No instincts. Use fem tactics and it's a null signal. Think of him as supergenius child too young to notice vive-la-difference."

"I'll remember. Mannie, why do you call him 'he'?"

"Uh, can't call him 'it,' don't think of him as 'she.'"

"Perhaps I had better think of him as 'she.' Of her as 'she' I mean."

"Suit yourself." I punched MYCROFFXXX, standing so body shielded it; was not ready to share number till I saw how thing went. Idea of blowing up Mike had shaken me. "Mike?"

"Hello, Man my only friend."

"May not be only friend from now on, Mike. Want you to meet somebody. Not-stupid."

"I knew you were not alone, Man; I can hear breathing. Will you please ask Not-Stupid to move closer to the phone?"

Wyoming looked panicky. She whispered, "Can he see?"

"No, Not-Stupid, I cannot see you; this phone has no video circuit. But binaural microphonic receptors place you with some accuracy. From your voice, your breathing, your heartbeat, and the fact that you are alone in a bundling room with a mature male I extrapolate that you are female human, sixtyfive-plus kilos in mass, and of mature years, on the close order of thirty."

Wyoming gasped. I cut in. "Mike, her name is Wyoming Knott."

"I'm very pleased to meet you, Mike. You can call me 'Wye.'"

"Why not?" Mike answered.

I cut in again. "Mike, was that a joke?"

"Yes, Man. I noted that her first name as shortened differs from the English causation-inquiry word by only an aspiration and that her last name has the same sound as the general negator. A pun. Not funny?"

Wyoh said, "Quite funny, Mike. I--"

I waved to her to shut up. "A good pun, Mike. Example of 'funny-only-once' class of joke. Funny through element of surprise. Second time, no surprise; therefore not funny. Check?"

"I had tentatively reached that conclusion about puns in thinking over your remarks two conversations back. I am pleased to find my reasoning confirmed."

"Good boy, Mike; making progress. Those hundred jokes--I've read them and so has Wyoh."

"Wyoh? Wyoming Knott?"

"Huh? Oh, sure. Wyoh, Wye, Wyoming, Wyoming Knott--all same. Just don't call her 'Why not'."

"I agreed not to use that pun again, Man. Gospazha, shall I call you 'Wyoh' rather than 'Wye'? I conjecture that the monosyllabic form could be confused with the causation inquiry monosyllable through insufficient redundancy and without intention of punning."

Wyoming blinked--Mike's English at that time could be smothering--but came back strong. "Certainly, Mike. 'Wyoh' is the form of my name that I like best."

"Then I shall use it. The full form of your first name is still more subject to misinterpretation as it is identical in sound with the name of an administrative region in Northwest Managerial Area of the North American Directorate."

"I know, I was born there and my parents named me after the State. I don't remember much about it."

"Wyoh, I regret that this circuit does not permit display of pictures. Wyoming is a rectangular area lying between Terran coordinates forty-one and forty-five degrees north, one hundred four degrees three minutes west and one hundred eleven degrees three minutes west, thus containing two hundred fifty three thousand, five hundred ninety-seven point two six square kilometers. It is a region of high plains and of mountains, having limited fertility but esteemed for natural beauty. Its population was sparse until augmented through the relocation subplan of the Great New York Urban Renewal Program, A.D. twenty-twenty-five through twenty-thirty."

"That was before I was born," said Wyoh, "but I know about it; my grandparents were relocated--and you could say that's how I wound up in Luna."

"Shall I continue about the area named 'Wyoming'?" Mike asked.

"No, Mike," I cut in, "you probably have hours of it in storage."

"Nine point seven three hours at speech speed not including cross-references, Man."

"Was afraid so. Perhaps Wyoh will want it some day. But purpose of call is to get you acquainted with this Wyoming . . . who happens also to be a high region of natural beauty and imposing mountains."

"And limited fertility," added Wyoh. "Mannie, if you are going to draw silly parallels, you should include that one. Mike isn't interested in how I look."

"How do you know? Mike, wish I could show you picture of her."

"Wyoh, I am indeed interested in your appearance; I am hoping that you will be my friend. But I have seen several pictures of you."

"You have? When and how?"

"I searched and then studied them as soon as I heard your name. I am contract custodian of the archive files of the Birth Assistance Clinic in Hong Kong Luna. In addition to biological and physiological data and case histories the bank contains ninety-six pictures of you. So I studied them."

Wyoh looked very startled. "Mike can do that," I explained, "in time it takes us to hiccup. You'll get used to it."

"But heavens! Mannie, do you realize what sort of pictures the Clinic takes?"

"Hadn't thought about it."

"Then don't! Goodness!"

Mike spoke in voice painfully shy, embarrassed as a puppy who has made mistakes. "Gospazha Wyoh, if I have offended, it was unintentional and I am most sorry. I can erase those pictures from my temporary storage and key the Clinic archive so that I can look at them only on retrieval demand from the Clinic and then without association or mentation. Shall I do so?"

"He can," I assured her. "With Mike you can always make a fresh start--better than humans that way. He can forget so completely that he can't be tempted to look later . . . and couldn't think about them even if called on to retrieve. So take his offer if you're in a huhu."

"Uh. . . no, Mike, it's all right for you to see them. But don't show them to Mannie!"

Mike hesitated a long time--four seconds or more. Was, I think, type of dilemma that pushes lesser computers into nervous breakdowns. But he resolved it. "Man my only friend, shall I accept this instruction?"

"Program it, Mike," I answered, "and lock it in. But, Wyoh, isn't that a narrow attitude? One might do you justice. Mike could print it out for me next time I'm there."

"The first example in each series," Mike offered, "would be, on the basis of my associational analyses of such data, of such pulchritudinous value as to please any healthy, mature human male."

"How about it, Wyoh? To pay for apleistrudel."

"Uh. . . a picture of me with my hair pinned up in a towel and standing in front of a grid without a trace of makeup? Are you out of your rock-happy mind? Mike, don't let him have it!"

"I shall not let him have it. Man, this is a not-stupid?"

"For a girl, yes. Girls are interesting, Mike; they can reach conclusions with even less data than you can. Shall we drop subject and consider jokes?"

That diverted them. We ran down list, giving our conclusions. Then tried to explain jokes Mike had failed to understand. With mixed success. But real stumbler turned out to be stories I had marked "funny" and Wyoh had judged "not" or vice versa; Wyoh asked Mike his opinion of each.

Wish she had asked him before we gave our opinions; that electronic juvenile delinquent always agreed with her, disagreed with me. Were those Mike's honest opinions? Or was he trying to lubricate new acquaintance into friendship? Or was it his skewed notion of humor--joke on me? Didn't ask.

But as pattern completed Wyob wrote a note on phone's memo pad: "Mannie, re -- 17, 51, 53, 87, 90, & 99--Mike is a she!"

I let it go with a shrug, stood up. "Mike, twenty-two hours since I've had sleep. You kids chat as long as you want to. Call you tomorrow."

"Goodnight, Man. Sleep well. Wyoh, are you sleepy?"

"No, Mike, I had a nap. But, Mannie, we'll keep you awake. No?"

"No. When I'm sleepy, I sleep." Started making couch into bed.

Wyoh said, "Excuse me, Mike," got up, took sheet out of my hands. "I'll make it up later. You doss over there, tovarishch; you're bigger than I am. Sprawl out."

Was too tired to argue, sprawled out, asleep at once. Seem to remember hearing in sleep giggles and a shriek but never woke enough to be certain.

Woke up later and came fully awake when I realized was hearing two fem voices, one Wyoh's warm contralto, other a sweet, high soprano with French accent. Wyoh chuckled at something and answered, "All right, Michelle dear, I'll call you soon. 'Night, darling."

"Fine. Goodnight, dear."

Wyoh stood up, turned around. "Who's your girl friend?" I asked. Thought she knew no one in Luna City. Might have phoned Hong Kong . . . had sleep-logged feeling was some reason she shouldn't phone.

"That? Why, Mike, of course. We didn't mean to wake you."

"What?"

"Oh. It was actually Michelle. I discussed it with Mike, what sex he was, I mean. He decided that he could be either one. So now she's Michelle and that was her voice. Got it right the first time, too; her voice never cracked once."

"Of course not; just shifted voder a couple of octaves. What are you trying to do: split his personality?"

"It's not just pitch; when she's Michelle its an entire change in manner and attitude. Don't worry about splitting her personality; she has plenty for any personality she needs. Besides, Mannie, it's much easier for both of us. Once she shifted, we took our hair down and cuddled up and talked girl talk as if we had known each other forever. For example, those silly pictures no longer embarrassed me--in fact we discussed my pregnancies quite a lot. Michelle was terribly interested. She knows all about O.B. and G.Y. and so forth but just theory--and she appreciated the raw facts. Actually, Mannie, Michelle is much more a woman than Mike was a man."

"Well. . . suppose it's okay. Going to be a shock to me first time I call Mike and a woman answers."

"Oh, but she won't!"

"Huh?"

"Michelle is my friend. When you call, you'll get Mike. She gave me a number to keep it straight--'Michelle' spelled with a Y. M Y, C, H, E, L, L, E, and Y, Y, Y make it come out ten."

I felt vaguely jealous while realizing it was silly. Suddenly Wyoh giggled. "And she told me a string of new jokes, ones you wouldn't think were funny--and, boy, does she know rough ones!"

"Mike--or his sister Michelle--is a low creature. Let's make up couch. I'll switch."

"Stay where you are. Shut up. Turn over. Go back to sleep." I shut up, turned over, went back to sleep.

Sometime much later I became aware of "married" feeling--something warm snuggled up to my back. Would not have wakened but she was sobbing softly. I turned and got her head on my arm, did not speak. She stopped sobbing; presently breathing became slow and even. I went back to sleep.

5

We must have slept like dead for next thing I knew phone was sounding and its light was blinking. I called for room lights, started to get up, found a load on right upper arm, dumped it gently, climbed over, answered.

Mike said, "Good morning, Man. Professor de la Paz is talking to your home number."

"Can you switch it here? As a 'Sherlock'?"

"Certainly, Man."

"Don't interrupt call. Cut him in as he switches off. Where is he?"

"A public phone in a taproom called The Iceman's Wife underneath the--"

"I know. Mike, when you switch me in, can you stay in circuit? Want you to monitor."

"It shall be done."

"Can you tell if anyone is in earshot? Hear breathing?"

"I infer from the anechoic quality of his voice that he is speaking under a hush hood. But I infer also that, in a taproom, others would be present. Do you wish to hear, Man?"

"Uh, do that. Switch me in. And if he raises hood, tell me. You're a smart cobber, Mike."

"Thank you, Man." Mike cut me in; I found that Mum was talking: "--ly I'll tell him, Professor. I'm so sorry that Manuel is not home. There is no number you can gave me? He is anxious to return your call; he made quite a point that I was to be sure to get a number from you."

"I'm terribly sorry, dear lady, but I'm leaving at once. But, let me see, it is now eight-fifteen; I'll try to call back just at nine, if I may."

"Certainly, Professor." Mum's voice had a coo in it that she reserves for males not her husbands of whom she approves--sometimes for us. A moment later Mike said, "Now!" and I spoke up:

"Hi, Prof! Hear you've been looking for me. This is Mannie."

I heard a gasp. "I would have sworn I switched this phone off. Why, I have switched it off; it must be broken. Manuel--so good to hear your voice, dear boy. Did you just get home?"

"I'm not home."

"But--but you must be. I haven't--"

"No time for that, Prof. Can anyone overhear you?"

"I don't think so. I'm using a hush booth."

"Wish I could see. Prof, what's my birthday?"

He hesitated. Then he said, "I see. I think I see. July fourteenth."

"I'm convinced. Okay, let's talk."

"You're really not calling from your home, Manuel? Where are you?"

"Let that pass a moment. You asked my wife about a girl. No names needed. Why do you want to find her, Prof?"

"I want to warn her. She must not try to go back to her home city. She would be arrested."

"Why do you think so?"

"Dear boy! Everyone at that meeting is in grave danger. Yourself, too. I was so happy--even though confused--to hear you say that you are not at home. You should not go home at present. If you have some safe place to stay, it would be well to take a vacation. You are aware--you must be even though you left hastily--that there was violence last night."

I was aware! Killing Warden's bodyguards must be against Authority Regulations--at least if I were Warden, I'd take a dim view. "Thanks, Prof; I'll be careful. And if I see this girl, I'll tell her."

"You don't know where to find her? You were seen to leave with her and I had so hoped that you would know."

"Prof, why this interest? Last night you didn't seem to be on her side."

"No, no, Manuel! She is my comrade. I don't say 'tovarishch' for I mean it not just as politeness but in the older sense. Binding. She is my comrade. We differ only in tactics. Not in objectives, not in loyalties."

"I see. Well, consider message delivered. She'll get it."

"Oh, wonderful! I ask no questions.. . but I do hope, oh so very strongly, that you can find a way for her to be safe, really safe, until this blows over."

I thought that over. "Wait a moment, Prof. Don't switch off." As I answered phone, Wyoh had headed for bath, probably to avoid listening; she was that sort.

Tapped on door. "Wyoh?"

"Out in a second."

"Need advice."

She opened door. "Yes, Mannie?"

"How does Professor de la Paz rate in your organization? Is he trusted? Do you trust him?"

She looked thoughtful. "Everyone at the meeting was supposed to be vouched for. But I don't know him."

"Mmm. You have feeling about him?"

"I liked him, even though he argued against me. Do you know anything about him?"

"Oh, yes, known him twenty years. I trust him. But can't extend trust for you. Trouble--and it's your air bottle, not mine."

She smiled warmly. "Mannie, since you trust him, I trust him just as firmly."

I went back to phone. "Prof, are you on dodge?"

He chuckled. "Precisely, Manuel."

"Know a hole called Grand Hotel Raffles? Room L two decks below lobby. Can you get here without tracks, have you had breakfast, what do you like for breakfast?"

He chuckled again. "Manuel, one pupil can make a teacher feel that his years were not wasted. I know where it is, I shall get there quietly, I have not broken fast, and I eat anything I can't pat."

Wyoh had started putting beds together; I went to help. "What do you want for breakfast?"

"Chai and toast. Juice would be nice."

"Not enough."

"Well . . . a boiled egg. But I pay for breakfast."

"Two boiled eggs, buttered toast with jam, juice. I'll roll you."

"Your dice, or mine?"

"Mine. I cheat." I went to lift, asked for display, saw something called THE HAPPY HANGOVER--ALL PORTIONS EXTRA LARGE--tomato juice, scrambled eggs, ham steak, fried potatoes, corn cakes and honey, toast, butter, milk, tea or coffee--HKL $4.50 for two--I ordered it for two, no wish to advertise third person.

We were clean and shining, room orderly and set for breakfast, and Wyoh had changed from black outfit into red dress "because company was coming" when lift jingled food. Change into dress had caused words. She had posed, smiled, and said, "Mannie, I'm so pleased with this dress. How did you know it would suit me so well?"

"Genius."

"I think you may be. What did it cost? I must pay you."

"On sale, marked down to Authority cents fifty."

She clouded up and stomped foot. Was bare, made no sound, caused her to bounce a half meter. "Happy landing!" I wished her, while she pawed for foothold like a new chum.

"Manuel O'Kelly! If you think I will accept expensive clothing from a man I'm not even bundling with!"

"Easily corrected."

"Lecher! I'll tell your wives!"

"Do that. Mum always thinks worst of me." I went to lift, started dealing out dishes; door sounded. I flipped hearum-no-seeum. "Who comes?"

"Message for Gospodin Smith," a cracked voice answered. "Gospodin Bernard O. Smith."

I flipped bolts and let Professor Bernardo de la Paz in. He looked like poor grade of salvage--dirty clothes, filthy himself, hair unkempt, paralyzed down one side and hand twisted, one eye a film of cataract--perfect picture of old wrecks who sleep in Bottom Alley and cadge drinks and pickled eggs in cheap taprooms. He drooled.

As soon as I bolted door he straightened up, let features come back to normal, folded hands over wishbone, looked Wyoh up and down, sucked air kimono style, and whistled. "Even more lovely," he said, "than I remembered!"

She smiled, over her mad. "'Thanks, Professor. But don't bother. Nobody here but comrades."

"Señorita, the day I let politics interfere with my appreciation of beauty, that day I retire from politics. But you are gracious." He looked away, glanced closely around room.

I said, "Prof, quit checking for evidence, you dirty old man. Last night was politics, nothing but politics."

"That's not true!" Wyoh flared up. "I struggled for hours! But he was too strong for me. Professor--what's the party discipline in such cases? Here in Luna City?"

Prof tut-tutted and rolled blank eye. "Manuel, I'm surprised. It's a serious matter, my dear--elimination, usually. But it must be investigated. Did you come here willingly?"

"He drugged me."

"'Dragged,' dear lady. Let's not corrupt the language. Do you have bruises to show?"

I said, "Eggs getting cold. Can't we eliminate me after breakfast?"

"An excellent thought," agreed Prof. "Manuel, could you spare your old teacher a liter of water to make himself more presentable?"

"All you want, in there. Don't drag or you'll get what littlest pig got."

"Thank you, sir."

He retired; were sounds of brushing and washing. Wyoh and I finished arranging table. "'Bruises,'" I said. "Struggled all night.'"

"You deserved it, you insulted me."

"How?"

"You failed to insult me, that's how. After you drugged me here."

"Mmm. Have to get Mike to analyze that."

"Michelle would understand it. Mannie, may I change my mind and have a little piece of that ham?"

"Half is yours, Prof is semi-vegetarian." Prof came out and, while did not look his most debonair, was neat and clean, hair combed, dimples back and happy sparkle in eye--fake cataract gone. "Prof, how do you do it?"

"Long practice, Manuel; I've been in this business far longer than you young people. Just once, many years ago in Lima--a lovely city--I ventured to stroll on a fine day without such forethought . . . and it got me transported. What a beautiful table!"

"Sit by me, Prof," Wyoh invited. "I don't want to sit by him. Rapist."

"Look," I said, "first we eat, then we eliminate me. Prof, fill plate and tell what happened last night."

"May I suggest a change in program? Manuel, the life of a conspirator is not an easy one and I learned before you were born not to mix provender and politics. Disturbs the gastric enzymes and leads to ulcers, the occupational disease of the underground. Mmm! That fish smells good."

"Fish?"

"That pink salmon," Prof answered, pointing at ham.

A long, pleasant time later we reached coffee/tea stage. Prof leaned back, sighed and said, "Bolshoyeh spasebaw, Gospazha ee Gospodin. Tak for mat, it was wonderfully good. I don't know when I've felt more at peace with the world. Ah yes! Last evening--I saw not too much of the proceedings because, just as you two were achieving an

admirable retreat, I lived to fight another day--I bugged out. Made it to the wings in one long flat dive. When I did venture to peek out, the party was over, most had left, and all yellow jackets were dead."

(Note: Must correct this; I learned more later. When trouble started, as I was trying to get Wyoh through door, Prof produced a hand gun and, firing over heads, picked off three bodyguards at rear main door, including one wearing bull voice. How he smuggled weapon up to The Rock--or managed to liberate it later--I don't know. But Prof's shooting joined with Shorty's work to turn tables; not one yellow jacket got out alive. Several people were burned and four were killed--but knives, hands, and heels finished it in seconds.)

"Perhaps I should say, 'All but one,'" Prof went on. "Two cossacks at the door through which you departed had been given quietus by our brave comrade Shorty Mkrum. . . and I am sorry to say that Shorty was lying across them, dying--"

"We knew."

"So. Duke et decorum. One guard in that doorway had a damaged face but was still moving; I gave his neck a treatment known in professional circles Earthside as the Istanbul twist. He joined his mates. By then most of the living had left. Just myself, our chairman of the evening Finn Nielsen, a comrade known as 'Mom,' that being what her husbands called her. I consulted with Comrade Finn and we bolted all doors. That left a cleaning job. Do you know the arrangements backstage there?"

"Not me," I said. Wyoh shook head.

"There is a kitchen and pantry, used for banquets. I suspect that Mom and family run a butcher shop for they disposed of bodies as fast as Finn and I carried them back, their speed limited only by the rate at which portions could be ground up and flushed into the city's cloaca. The sight made me quite faint, so I spent time mopping in the hall. Clothing was the difficult part, especially those quasi-military uniforms."

"What did you do with those laser guns?"

Prof turned bland eyes on me. "Guns? Dear me, they must have disappeared. We removed everything of a personal nature from bodies of our departed comrades--tor relatives, for identification, for sentiment. Eventually we had everything tidy--not a job that would fool Interpol but one as to make it seem unlikely that anything untoward had taken place. We conferred, agreed that it would be well not to be seen soon, and left severally, myself by a pressure door above the stage leading up to level six. Thereafter I tried to call you, Manuel, being worried about your safety and that of this dear lady." Prof bowed to Wyoh. "That completes the tale. I spent the night in quiet places."

"Prof," I said, "those guards were new chums, still getting their legs. Or we wouldn't have won."

"That could be," he agreed. "But had they not been, the outcome would have been the same."

"How so? They were armed."

"Lad, have you ever seen a boxer dog? I think not--no dogs that large in Luna. The boxer is a result of special selection. Gentle and intelligent, he turns instantly into deadly killer when occasion requires.

"Here has been bred an even more curious creature. I know of no city on Terra with as high standards of good manners and consideration for one's fellow man as here in Luna. By comparison, Terran cities--I have known most major ones--are barbaric. Yet the

Loonie is as deadly as the boxer dog. Manuel, nine guards, no matter how armed, stood no chance against that pack. Our patron used bad judgment."

"Um. Seen a morning paper, Prof? Or a video cast?"

"The latter, yes."

"Nothing in late news last night."

"Nor this morning."

"Odd," I said.

"What's odd about it?" asked Wyoh. "We won't talk--and we have comrades in key places in every paper in Luna."

Prof shook his head. "No, my dear. Not that simple. Censorship. Do you know how copy is set in our newspapers?"

"Not exactly. It's done by machinery."

"Here's what Prof means," I told her. "News is typed in editorial offices. From there on it's a leased service directed by a master computer at Authority Complex"--hoped she would notice "master computer" rather than "Mike"--"copy prints out there via phone circuit. These rolls feed into a computer section which reads, sets copy, and prints out newspapers at several locations. Novylen edition of Daily Lunatic prints out in Novylen changes in ads and local stories, and computer makes changes from standard symbols, doesn't have to be told how. What Prof means is that at print-out at Authority Complex, Warden could intervene. Same for all news services, both off and to Luna--they funnel through computer room."

"The point is," Prof went on, "the Warden could have killed the story. It's irrelevant whether he did. Or--check me, Manuel; you know I'm hazy about machinery--he could insert a story, too, no matter how many comrades we have in newspaper offices."

"Sure," I agreed. "At Complex, anything can be added, cut, or changed."

"And that, señorita, is the weakness of our Cause. Communications. Those goons were not important--but crucially important is that it lay with the Warden, not with us, to decide whether the story should be told. To a revolutionist, communications are a sine-qua-non."

Wyoh looked at me and I could see synapses snapping. So I changed subject. "Prof. why get rid of bodies? Besides horrible job, was dangerous. Don't know how many bodyguards Warden has, but more could show up while you were doing it."

"Believe me, lad, we feared that. But although I was almost useless, it was my idea, I had to convince the others. Oh, not my original idea but remembrance of things past, an historical principle."

"What principle?"

"Terror! A man can face known danger. But the unknown frightens him. We disposed of those finks, teeth and toenails, to strike terror into their mates. Nor do I know how many effectives the Warden has, but I guarantee they are less effective today. Their mates went out on an easy mission. Nothing came back."

Wyoh shivered. "It scares me, too. They won't be anxious to go inside a warren again. But, Professor, you say you don't know how many bodyguards the Warden keeps. The Organization knows. Twenty-seven. If nine were killed, only eighteen are left. Perhaps it's time for a putsch. No?"

"No," I answered.

"Why not, Mannie? They'll never be weaker."

"Not weak enough. Killed nine because they were crackers to walk in where we were. But if Warden stays home with guards around him-- Well, had enough shoulder-to-shoulder noise last night." I turned to Prof. "But still I'm interested in fact--if it is--that Warden now has only eighteen. You said Wyoh should not go to Hong Kong and I should not go home. But if he has only eighteen left, I wonder how much danger? Later after he gets reinforcements.--but now, well, L-City has four main exits plus many little ones. How many can they guard? What's to keep Wyoh from walking to Tube West, getting p-suit, going home?"

"She might," Prof agreed.

"I think I must," Wyoh said. "I can't stay here forever. If I have to hide, I can do better in Hong Kong, where I know people."

"You might get away with it, my dear. I doubt it. There were two yellow jackets at Tube Station West last night; I saw them. They may not be there now. Let's assume they are not. You go to the station--disguised perhaps. You get your p-suit and take a capsule to Beluthihatchie. As you climb out to take the bus to Endsville, you're arrested. Communications. No need to post a yellow jacket at the station; it is enough that someone sees you there. A phone call does the rest."

"But you assumed that I was disguised."

"Your height cannot be disguised and your pressure suit would be watched. By someone not suspected of any connection with the Warden. Most probably a comrade." Prof dimpled. "The trouble with conspiracies is that they rot internaily. When the number is as high as four, chances are even that one is a spy."

Wyoh said glumly, "You make it sound hopeless."

"Not at all, my dear. One chance in a thousand, perhaps."

"I can't believe it. I don't believe it! Why, in the years I've been active we have gained members by the hundreds! We have organizations in all major cities. We have the people with us."

Prof shook head. "Every new member made it that much more likely that you would be betrayed. Wyoming dear lady, revolutions are not won by enlisting the masses. Revolution is a science only a few are competent to practice. It depends on correct organization and, above all, on communications. Then, at the proper moment in history, they strike. Correctly organized and properly timed it is a bloodless coup. Done clumsily or prematurely and the result is civil war, mob violence, purges, terror. I hope you will forgive me if I say that, up to now, it has been done clumsily."

Wyoli looked baffled. "What do you mean by 'correct organization'?"

"Functional organization. How does one design an electric motor? Would you attach a bathtub to it, simply because one was available? Would a bouquet of flowers help? A heap of rocks? No, you would use just those elements necessary to its purpose and make it no larger than needed--and you would incorporate safety factors. Function controls design.

"So it is with revolution. Organization must be no larger than necessary--never recruit anyone merely because he wants to join. Nor seek to persuade for the pleasure of having another share your views. He'll share them when the times comes. . . or you've misjudged the moment in history. Oh, there will be an educational organization but it must be separate; agitprop is no part of basic structure.

"As to basic structure, a revolution starts as a conspiracy therefore structure is small, secret, and organized as to minimize damage by betrayal--since there always are betrayals. One solution is the cell system and so far nothing better has been invented.

"Much theosizing has gone into optimum cell size. I think that history shows that a cell of three is best--more than three can't agree on when to have dinner, much less when to strike. Manuel, you belong to a large family; do you vote on when to have dinner?"

"Bog, no! Mum decides."

"Ah." Prof took a pad from his pouch, began to sketch. "Here is a cells-of-three tree. If I were planning to take over Luna. I would start with us three. One would be opted as chairman. We wouldn't vote; choice would be obvious--or we aren't the right three. We would know the next nine people, three cells. . . but each cell would know only one of us."

"Looks like computer diagram--a ternary logic."

"Does it really? At the next level there are two ways of linking: This comrade, second level, knows his cell leader, his two cellmates, and on the third level he knows the three in his subcell--he may or may not know his cellmates' subcells. One method doubles security, the other doubles speed--of repair if security is penetrated. Let's say he does not know his cellmates' subcells--Manuel, how many can he betray? Don't say he won't; today they can brainwash any person, and starch and iron and use him. How many?"

"Six," I answered. "His boss, two ceilmates, three in sub-cell."

"Seven," Prof corrected, "he betrays himself, too. Which leaves seven broken links on three levels to repair. How?"

"I don't see how it can be," objected Wyoh. "You've got them so split up it falls to pieces."

"Manuel? An exercise for the student."

"Well . . . blokes down here have to have way to send message up three levels. Don't have to know who, just have to know where."

"Precisely!"

"But, Prof," I went on, "there's a better way to rig it."

"Really? Many revolutionary theorists have hammered this out, Manuel. I have such confidence in them that I'll offer you a wager--at, say, ten to one."

"Ought to take your money. Take same cells, arrange in open pyramid of tetrahedrons. Where vertices are in common, each bloke knows one in adjoining cell--knows how to send message to him, that's all he needs. Communications never break down because they run sideways as well as up and down. Something like a neural net. It's why you can knock a hole in a man's head, take chunk of brain out, and not damage thinking much. Excess capacity, messages shunt around. He loses what was destroyed but goes on functioning."

"Manuel," Prof said doubtfully, "could you draw a picture? It sounds good--but it's so contrary to orthodox doctrine that I need to see it."

"Well. . . could do better with stereo drafting machine. I'll try." (Anybody who thinks it's easy to sketch one hundred twenty-one tetrahedrons, a five-level open pyramid, clear enough to show relationships is invited to try!)

Presently I said, "Look at base sketch. Each vertex of each triangle shares self with zero, one, or two other triangles. Where shares one, that's its link, one direction or both--but one is enough for a multipli-redundant communication net. On corners, where sharing is zero, it jumps to right to next corner. Where sharing is double, choice is again right-handed.

"Now work it with people. Take fourth level, D-for-dog. This vertex is comrade Dan. No, let's go down one to show three levels of communication knocked out--level E-for-easy and pick Comrade Egbert.

"Egbert works under Donald, has cellmates Edward and Elmer, and has three under him, Frank, Fred, and Fatso . . . but knows how to send message to Ezra on his own level but not in his cell. He doesn't know Ezra's name, face, address, or anything--but has a way, phone number probably, to reach Ezra in emergency.

"Now watch it work. Casimir, level three, finks out and betrays Charlie and Cox in his cell, Baker above him, and Donald, Dan, and Dick in subcell--which isolates Egbert, Edward, and Elmer. and everybody under them.

"All three report it--redundancy, necessary to any communication system--but follow Egbert's yell for help. He calls Ezra. But Ezra is under Charlie and is isolated, too. No matter, Ezra relays both messages through his safety link, Edmund. By bad luck Edmund is under Cox, so he also passes it laterally, through Enwright. . . and that gets it past burned-out part and it goes up through Dover, Chambers, and Beeswax, to Adam, front office.. . who replies down other side of pyramid, with lateral pass on E-for-easy level from Esther to Egbert and on to Ezra and Edmund. These two messages, up and down, not only get through at once but in way they get through, they define to home office exactly how much damage has been done and where. Organization not only keeps functioning but starts repairing self at once."

Wyoh was tracing out lines, convincing herself it would work--which it would, was "idiot" circuit. Let Mike study a few milliseconds, and could produce a better, safer, more foolproof hookup. And probably--certainly--ways to avoid betrayal while speeding up routings. But I'm not a computer.

Prof was staring with blank expression. "What's trouble?" I said. "It'll work; this is my pidgin."

"Manuel my b-- Excuse me: Señor O'Kelly. . . will you head this revolution?"

"Me? Great Bog, nyet! I'm no lost-cause martyr. Just talking about circuits."

Wyoh looked up. "Mannie," she said soberly, "you're opted. It's settled."

6

Did like hell settle it.

Prof said, "Manuel, don't be hasty. Here we are, three, the perfect number, with a variety of talents and experience. Beauty, age, and mature male drive--"

"I don't have any drive!"

"Please, Manuel. Let us think in the widest terms before attempting decisions. And to facilitate such, may I ask if this hostel stocks potables? I have a few florins I could put into the stream of trade."

Was most sensible word heard in an hour. "Stilichnaya vodka?"

"Sound choice." He reached for pouch.

"Tell it to bear," I said and ordered a liter, plus ice. It came down; was tomato juice from breakfast.

"Now," I said, after we toasted, "Prof, what you think of pennant race? Got money says Yankees can't do it again?"

"Manuel, what is your political philosophy?"

"With that new boy from Milwaukee I feel like investing."

"Sometimes a man doesn't have it defined but, under Socratic inquiry, knows where he stands and why."

"I'll back 'em against field, three to two."

"What? You young idiot! How much?"

"Three hundred. Hong Kong."

"Done. For example, under what circumstances may the State justly place its welfare above that of a citizen?"

"Mannie," Wyoh asked, "do you have any more foolish money? I think well of the Phillies."

I looked her over. "Just what were you thinking of betting?"

"You go to hell! Rapist."

"Prof, as I see, are no circumstances under which State is justified in placing its welfare ahead of mine."

"Good. We have a starting point."

"Mannie," said Wyoh, "that's a most self-centered evaluation."

"I'm a most self-centered person."

"Oh, nonsense. Who rescued me? Me, a stranger. And didn't try to exploit it. Professor, I was cracking not facking. Mannie was a perfect knight."

"Sans peur et sans reproche. I knew, I've known him for years. Which is not inconsistent with evaluation he expressed."

"Oh, but it is! Not the way things are but under the ideal toward which we aim. Mannie, the 'State' is Luna. Even though not soverign yet and we hold citizenships elsewhere. But I am part of the Lunar State and so is your family. Would you die for your family?"

"Two questions not related."

"Oh, but they are! That's the point."

"Nyet. I know my family, opted long ago."

"Dear Lady, I must come to Manuel's defense. He has a correct evaluation even though he may not be able to state it. May I ask this? Under what circumstances is it moral for a group to do that which is not moral for a member of that group to do alone?"

"Uh. . . that's a trick question."

"It is the key question, dear Wyoming. A radical question that strikes to the root of the whole dilemma of government. Anyone who answers honestly and abides by all consequences knows where he stands--and what he will die for."

Wyoh frowned. "'Not moral for a member of the group--'" she said. "Professor. . . what are your political principles?"

"May I first ask yours? If you can state them?"

"Certainly I can! I'm a Fifth Internationalist, most of the Organization is. Oh, we don't rule out anyone going our way; it's a united front. We have Communists and

Fourths and Ruddyites and Societians and Single-Taxers and you name it. But I'm no Marxist; we Fifths have a practical program. Private where private belongs, public where it's needed, and an admission that circumstances alter cases. Nothing doctrinaire."

"Capital punishment?"

"For what?"

"Let's say for treason. Against Luna after you've freed Luna."

"Treason how? Unless I knew the circumstances I could not decide."

"Nor could I, dear Wyoming. But I believe in capital punishment under some circumstances. . . with this difference. I would not ask a court; I would try, condemn, execute sentence myself, and accept full responsibility."

"But--Professor, what are your political beliefs?"

"I'm a rational anarchist."

"I don't know that brand. Anarchist individualist, anarchist Communist, Christian anarchist, philosophical anarchist, syndicalist, libertarian--those I know. But what's this? Randite?"

"I can get along with a Randite. A rational anarchist believes that concepts such as 'state' and 'society' and 'government' have no existence save as physically exemplified in the acts of self-responsible individuals. He believes that it is impossible to shift blame, share blame, distribute blame. . . as blame, guilt, responsibility are matters taking place inside human beings singly and nowhere else. But being rational, he knows that not all individuals hold his evaluations, so he tries to live perfectly in an imperfect world. . . aware that his effort will be less than perfect yet undismayed by self-knowledge of self-failure."

"Hear, hear!" I said. "'Less than perfect.' What I've been aiming for all my life."

"You've achieved it," said Wyoh. "Professor, your words sound good but there is something slippery about them. Too much power in the hands of individuals--surely you would not want. . . well, H-missiles for example--to be controlled by one irresponsible person?"

"My point is that one person is responsible. Always. If H-bombs exist--and they do--some man controls them. In tern of morals there is no such thing as 'state.' Just men. Individuals. Each responsible for his own acts."

"Anybody need a refill?" I asked.

Nothing uses up alcohol faster than political argument. I sent for another bottle.

I did not take part. I was not dissatisfied back when we were "ground under Iron Heel of Authority." I cheated Authority and rest of time didn't think about it. Didn't think about getting rid of Authority--impossible. Go own way, mind own business, not be bothered--

True, didn't have luxuries then; by Earthside standards we were poor. If had to be imported, mostly did without; don't think there was a powered door in all Luna. Even p-suits used to be fetched up from Terra--until a smart Chinee before I was born figured how to make "monkey copies" better and simpler. (Could dump two Chinee down in one of our maria and they would get rich selling rocks to each other while raising twelve kids. Then a Hindu would sell retail stuff he got from them wholesale--below cost at fat profit. We got along.)

I had seen those luxuries Earthside. Wasn't worth what they put up with. Don't mean heavy gravity, that doesn't bother them; I mean nonsense. All time kukai moa. If

chicken guano in one earthworm city were shipped to Luna, fertilizer problem would be solved for century. Do this. Don't do that. Stay back of line. Where's tax receipt? Fill out form. Let's see license. Submit six copies. Exit only. No left turn. No right turn. Queue up to pay fine. Take back and get stamped. Drop dead--but first get permit.

Wyoh plowed doggedly into Prof, certain she had all answers. But Prof was interested in questions rather than answers, which baffled her. Finally she said, "Professor, I can't understand you. I don't insist that you call it 'government'--I just want you to state what rules you think are necessary to insure equal freedom for all."

"Dear lady, I'll happily accept your rules."

"But you don't seem to want any rules!"

"True. But I will accept any rules that you feel necessary to your freedom. I am free, no matter what rules surround me. If I find them tolerable, I tolerate them; if I find them too obnoxious, I break them. I am free because I know that I alone am morally responsible for everything I do."

"You would not abide by a law that the majority felt was necessary?"

"Tell me what law, dear lady, and I will tell you whether I will obey it."

"You wiggled out. Every time I state a general principle, you wiggle out."

Prof clasped hands on chest. "Forgive me. Believe me, lovely Wyoming, I am most anxious to please you. You spoke of willingness to unite the front with anyone going your way. Is it enough that I want to see the Authority thrown off Luna and would die to serve that end?"

Wyoh beamed. "It certainly is!" She fisted his ribs--gently--then put arm around him and kissed cheek. "Comrade! Let's get on with it!"

"Cheers!" I said. "Let's fin' Warden 'n' 'liminate him!" Seemed a good idea; I had had a short night and don't usually drink much.

Prof topped our glasses, held his high and announced with great dignity: "Comrades. . . we declare the Revolution!"

That got us both kissed. But sobered me, as Prof sat down and said, "The Emergency Committee of Free Luna is in session. We must plan action."

I said, "Wait, Prof! I didn't agree to anything. What's this 'Action' stuff?"

"We will now overthrow the Authority," he said blandly.

"How? Going to throw rocks at 'em?"

"That remains to be worked out. This is the planning stage."

I said, "Prof, you know me. If kicking out Authority was thing we could buy. I wouldn't worry about price."

"'--our lives, our fortunes, and our sacred honor.'"

"Huh?"

"A price that once was paid."

"Well--I'd go that high. But when I bet I want a chance to win. Told Wyoh last night I didn't object to long odds--"

"'One in ten' is what you said, Mannie."

"Da, Wyoh. Show me those odds, I'll tap pot. But can you?"

"No, Manuel, I can't."

"Then why we talk-talk? I can't see any chance."

"Nor I, Manuel. But we approach it differently. Revolution is an art that I pursue rather than a goal I expect to achieve. Nor is this a source of dismay; a lost cause can be as spiritually satisfying as a victory."

"Not me. Sorry."

"Mannie," Wyoh said suddenly, "ask Mike."

I stared. "You serious?"

"Quite serious. If anyone can figure out odds, Mike should be able to. Don't you think?"

"Um. Possible."

"Who, if I may ask," Prof put in, "is Mike?"

I shrugged. "Oh, just a nobody."

"Mike is Mannie's best friend. He's very good at figuring odds."

"A bookie? My dear, if we bring in a fourth party we start by violating the cell principle."

"I don't see why," Wyoh answered. "Mike could be a member of the cell Mannie will head."

"Mmm . . . true. I withdraw objection. He is safe? You vouch for him? Or you, Manuel?"

I said, "He's dishonest, immature, practical joker, not interested in politics."

"Mannie, I'm going to tell Mike you said that. Professor, he's nothing of the sort--and we need him. Uh, in fact he might be our chairman, and we three the cell under him. The executive cell."

"Wyoh, you getting enough oxygen?"

"I'm okay, I haven't been guzzling it the way you have. Think, Mannie. Use imagination."

"I must confess," said Prof, "that I find these conflicting reports very conflicting."

"Mannie?"

"Oh, hell." So we told him, between us, all about Mike, how he woke up. got his name, met Wyoh. Prof accepted idea of a self-aware computer easier than I accepted idea of snow first time I saw. Prof just nodded and said, "Go on."

But presently he said, "This is the Warden's own computer? Why not invite the Warden to our meetings and be done with it?"

We tried to reassure him. At last i said, "Put it this way. Mike is his own boy, just as you are. Call him rational anarchist, for he's rational and he feels no loyalty to any government."

"If this machine is not loyal to its owners, why expect it to be loyal to you?"

"A feeling. I treat Mike well as I know how, he treats me same way." I told how Mike had taken precautions to protect me. "I'm not sure he could betray me to anyone who didn't have those signals, one to secure phone, other to retrieve what I've talked about or stored with him; machines don't think way people do. But feel dead sure he wouldn't want to betray me and probably could protect me even if somebody got those signals."

"Mannie," suggested Wyoh, "why not call him? Once Professor de la Paz talks to him he will know why we trust Mike. Professor, we don't have to tell Mike any secrets until you feel sure of him."

"I see no harm in that."

"Matter of fact," I admitted, "already told him some secrets." I told them about recording last night's meeting and how I stored it.

Prof was distressed, Wyoh was worried. I said, "Damp it! Nobody but me knows retrieval signal. Wyoh, you know how Mike behaved about your pictures; won't let me have those pictures even though I suggested lock on them. But if you two will stop oscillating, I'll call him, make sure that nobody has retrieved that recording. and tell him to erase--then it's gone forever, computer memory is all or nothing. Or can go one better. Call Mike and have him play record back into recorder, wiping storage. No huhu."

"Don't bother," said Wyoh. "Professor, I trust Mike--and so will you."

"On second thought," Prof admitted, "I see little hazard from a recording of last night's meeting. One that large always contains spies and one of them may have used a recorder as you did, Manuel. I was upset at what appeared to be your indiscretion--a weakness a member of a conspiracy must never have, especially one at the top, as you are."

"Was not member of conspiracy when I fed that recording into Mike--and not now unless somebody quotes odds better than those so far!"

"I retract; you were not indiscreet. But are you seriously suggesting that this machine can predict the outcome of a revolution?"

"Don't know."

"I think he can!" said Wyoh.

"Hold it, Wyoh. Prof, he could predict it fed all significant data."

"That's my point, Manuel. I do not doubt that this machine can solve problems I cannot grasp. But one of this scope? It would have to know--oh, goodness!--all of human history, all details of the entire social, political, and economic situation on Terra today and the same for Luna, a wide knowledge of psychology in all its ramifications, a wide knowledge of technology with all its possibilities, weaponry, communications, strategy and tactics, agitprop techniques, classic authorities such as Clausewitz, Guevera, Morgenstern, Machiavelli, many others."

"Is that all?"

"'Is that all?' My dear boy!"

"Prof, how many history books have you read?"

"I do not know. In excess of a thousand."

"Mike can zip through that many this afternoon, speed limited only by scanning method--he can store data much faster. Soon--minutes---he would have every fact correlated with everything else he knows, discrepancies noted, probability values assigned to uncertainties. Prof, Mike reads every word of every newspaper up from Terra. Reads all technical publications. Reads fiction--knows it's fiction--because isn't enough to keep him busy and is always hungry for more. If is any book he should read to solve this, say so. He can cram it down fast as I get it to him."

Prof blinked. "I stand corrected. Very well, let us see if he can cope with it. I still think there is something known as 'intuition' and 'human judgment.'"

"Mike has intuition," Wych said. "Feminine intuition, that is."

"As for 'human judgment,'" I added, "Mike isn't human. But all he knows he got from humans. Let's get you acquainted and you judge his judgment."

So I phoned. "Hi, Mike!"

"Hello, Man my only male friend. Greetings, Wyoh my only female friend. I heard a third person. I conjecture that it may be Professor Bernardo de la Paz."

Prof looked startled, then delighted. I said, "Too right, Mike. That's why I called you; Professor is not-stupid."

"Thank you, Man! Professor Bernardo de la Paz, I am delighted to meet you."

"I am delighted to meet you, too, sir." Prof hesitated, went on "Mi--Señor Holmes, may I ask how you knew that I was here?"

"I am sorry, sir; I cannot answer. Man? 'You know my methods.'"

"Mike is being crafty, Prof. It involves something he learned doing a confidential job for me. So he threw me a hint to let you think that he had identified you by hearing your presence--and he can indeed tell much from respiration and heartbeat . . . mass, approximate age, sex, and quite a bit about health; Mike's medical storage is as full as any other."

"I am happy to say," Mike added seriously, "that I detect no signs of cardiac or respiratory trouble, unusual for a man of the Professor's age who has spent so many years Earthside. I congratulate you, sir."

"Thank you, Señor Holmes."

"My pleasure, Professor Bernardo de la Paz."

"Once he knew your identity, he knew how old you are, when you were shipped and what for, anything that ever appeared about you in Lunatic or Moonglow or any Lunar publication, including pictures--your bank balance, whether you pay bills on time, and much more. Mike retrieved this in a split second once he had your name. What he didn't tell--because was my business--is that he knew I had invited you here, so it's a short jump to guess that you're still here when he heard heartbeat and breathing that matched you. Mike, no need to say 'Professor Bernardo de la Paz' each time; 'Professor' or"Prof' is enough."

"Noted, Man. But he addressed me formally, with honorific."

"So both of you relax. Prof, you scan it? Mike knows much, doesn't tell all, knows when to keep mouth shut."

"I am impressed!"

"Mike is a fair dinkum thinkum--you'll see. Mike, I bet Professor three to two that Yankees would win pennant again. How chances?"

"I am sorry to hear it, Man. The correct odds, this early in the year and based on past performances of teams and players, are one to four point seven two the other way."

"Can't be that bad!"

"I'm sorry, Man. I will print out the calculations if you wish. But I recommend that you buy back your wager. The Yankees have a favorable chance to defeat any single team . . . but the combined chances of defeating all teams in the league, including such factors as weather, accidents, and other variables for the season ahead, place the club on the short end of the odds I gave you."

"Prof, want to sell that bet?"

"Certainly, Manuel."

"Price?"

"Three hundred Hong Kong dollars."

"You old thief!"

"Manuel, as you former teacher I would be false to you if I did not permit you to learn from mistakes. Señor Holmes--Mike my friend--May I call you 'friend'?"

"Please do." (Mike almost purred.)

"Mike amigo, do you also tout horse races?"

"I often calculate odds on horse races; the civil service computermen frequently program such requests. But the results are so at variance with expectations that I have concluded either that the data are too meager, or the horses or riders are not honest. Possibly all three. However, I can gve you a formula which will pay a steady return if played consistently."

Prof looked eager. "What is it? May one ask?"

"One may. Bet the leading apprentice jockey to place. He is always given good mounts and they carry less weight. But don't bet him on the nose."

"'Leading apprentice' . . . hmm. Manuel, do you have the correct time?"

"Prof, which do you want? Get a bet down before post time? Or settle what we set out to?"

"Unh, sorry. Please carry on. 'Leading apprentice--'"

"Mike, I gave you a recording last night." I leaned close to pickups and whispered: "Bastille Day."

"Retrieved, Man."

"Thought about it?"

"In many ways. Wyoh, you speak most dramatically."

"Thank you, Mike."

"Prof, can you get your mind off ponies?"

"Eh? Certainly, I am all ears."

"Then quit doing odds under your breath; Mike can do them faster."

"I was not wasting time; the financing of. . . joint ventures such as ours is always difficult. However, I shall table it; I am all attention."

"I want Mike to do a trial projection. Mike, in that recording, you heard Wyoh say we had to have free trade with Terra. You heard Prof say we should clamp an embargo on shipping food to Terra. Who's right?"

"Your question is indeterminate, Man."

"What did I leave out?"

"Shall I rephrase it, Man?"

"Sure. Give us discussion."

"In immediate terms Wyoh's proposal would be of great advantage to the people of Luna. The price of foodstuffs at catapult head would increase by a factor of at least four. This takes into account a slight rise in wholesale prices on Terra, 'slight' because the Authority now sells at approximately the free market price. This disregards subsidized, dumped, and donated foodstuffs, most of which come from the large profit caused by the controlled low price at catapult head. I will say no more about minor variables as they are swallowed by major ones. Let it stand that the immediate effect here would be a price increase of the close order of fourfold."

"Hear that, Professor?"

"Please, dear lady. I never disputed it."

"The profit increase to the grower is more than fourfold because, as Wyoh pointed out, he now must buy water and other items at controlled high prices. Assuming a free

market throughout the sequence his profit enhancement will be of the close order of sixfold. But this would be offset by another factor: Higher prices for exports would cause higher prices for everything consumed in Luna, goods and labor. The total effect would be an enhanced standard of living for all on the close order of twofold. This would be accompanied by vigorous effort to drill and seal more farming tunnels, mine more ice, improve growing methods, all leading to greater export. However, the Terran Market is so large and food shortage so chronic that reduction in profit from increase of export is not a major factor."

Prof said, "But, Señor Mike, that would only hasten the day that Luna is exhausted!"

"The projection was specified as immediate, Señor Professor. Shall I continue in longer range on the basis of your remarks?"

"By all means!"

"Luna's mass to three significant figures is seven point three six times ten to the nineteenth power tonnes. Thus, holding other variables constant including Lunar and Terran populations, the present differential rate of export in tonnes could continue for seven point three six times ten to the twelfth years before using up one percent of Luna--round it as seven thousand billion years."

"What! Are you sure?"

"You are invited to check, Professor."

I said, "Mike, this a joke? If so, not funny even once!"

"It is not a joke, Man."

"Anyhow," Prof added, recovering, "it's not Luna's crust we are shipping. It's our lifeblood--water and organic matter. Not rock."

"I took that into consideration, Professor. This projection is based on controlled transmutation--any isotope into any other and postulating power for any reaction not exo-energetic. Rock would be shipped--transformed into wheat and beef and other foodstuffs."

"But we don't know how to do that! Amigo, this is ridiculous!"

"But we will know how to do it."

"Mike is right, Prof," I put in. "Sure, today we haven't a glimmer. But will. Mike, did you compute how many years till we have this? Might take a flier in stocks."

Mike answered in sad voice, "Man my only male friend save for the Professor whom I hope will be my friend, I tried. I failed. The question is indeterminate."

"Why?"

"Because it involves a break-through in theory. There is no way in all my data to predict when and where genius may appear."

Prof sighed. "Mike amigo, I don't know whether to be relieved or disappointed. Then that projection didn't mean anything?"

"Of course it meant something!" said Wyoh. "It means we'll dig it out when we need it. Tell him, Mike!"

"Wyoh, I am most sorry. Your assertion is, in effect, exactly what I was looking for. But the answer still remains: Genius is where you find it. No. I am so sorry."

I said, "Then Prof is right? When comes to placing bets?"

"One moment, Man. There is a special solution suggested by the Professor's speech last night--return shipping, tonne for tonne."

"Yes, but can't do that."

"If the cost is low enough, Terrans would do so. That can be achieved with only minor refinement, not a break-through, to wit, freight transportation up from Terra as cheap as catapulting down to Terra."

"You call this 'minor'?"

"I call it minor compared with the other problem, Man."

"Mike dear, how long? When do we get it?"

"Wyoh, a rough projection, based on poor data and largely intuitive, would be on the order of fifty years."

"'Fifty years'? Why, that's nothing! We can have free trade."

"Wyoh, I said 'on the order of'--I did not say 'on the close order of.'"

"It makes a difference?"

"Does." I told her. "What Mike said was that he doesn't expect it sooner than five years but would be surprised if much longer than five hundred--eh, Mike?"

"Correct, Man."

"So need another projection. Prof pointed out that we ship water and organic matter and don't get it back---agree, Wyoh?"

"Oh. sure. I just don't think it's urgent. We'll solve it when we reach it."

"Okay, Mike--no cheap shipping, no transmutation: How long till trouble?"

"Seven years."

"'Seven years!'" Wyoh jumped up, stared at phone. "Mike honey! You don't mean that?"

"Wyoh," he said plaintively, "I did my best. The problem has an indeterminately large number of variables. I ran several thousand solutions using many assumptions. The happiest answer came from assuming no increase in tonnage, no increase in Lunar population--restriction of births strongly enforced--and a greatly enhanced search for ice in order to maintain the water supply. That gave an answer of slightly over twenty years. All other answers were worse."

Wyoh, much sobered, said, "What happens in seven years?"

"The answer of seven years from now I reached by assuming the present situation, no change in Authority policy, and all major variables extrapolated from the empiricals implicit in their past behavior--a conservative answer of highest probability from available data. Twenty-eighty-two is the year I expect food riots. Cannibalism should not occur for at least two years thereafter."

"'Cannibalism'!" She turned and buried head against Prof's chest.

He patted her, said gently, "I'm sorry, Wyoh. People do not realize how precarious our ecology is. Even so, it shocks me. I know water runs down hill. . . but didn't dream how terribly soon it will reach bottom."

She straightened up and face was calm. "Okay, Professor, I was wrong. Embargo it must be--and all that that implies. Let's get busy. Let's find out from Mike what our chances are. You trust him now--don't you?"

"Yes, dear lady, I do. We must have him on our side. Well, Manuel?"

Took time to impress Mike with how serious we were, make him understand that "jokes" could kill us (this machine who could not know human death) and to get assurance that he could and would protect secrets no matter what retrieval program was

used--even our signals if not from us. Mike was hurt that I could doubt him but matter too serious to risk slip.

Then took two hours to program and re-program and change assumptions and investigate side issues before all four--Mike, Prof, Wyoh, self--were satisfied that we had defined it, i.e., what chance had revolution--this revolution, headed by us, success required before "Food Riots Day," against Authority with bare hands. . . against power of all Terra, all eleven billions, to beat us down and inflict their will--all with no rabbits out of hats, with certainty of betrayal and stupidity and faintheartedness, and fact that no one of us was genius, nor important in Lunar affairs. Prof made sure that Mike knew history, psychology, economics, name it. Toward end Mike was pointing out far more variables than Prof.

At last we agreed that programming was done--or that we could think of no other significant factor. Mike then said, "This is an indeterminate problem. How shall I solve it? Pessimistically? Or optimistically? Or a range of probabilities expressed as a curve, or several curves? Professor my friend?"

"Manuel?"

I said, "Mike, when I roll a die, it's one in six it turns ace. I don't ask shopkeeper to float it, nor do I caliper it, or worry about somebody blowing on it. Don't give happy answer, nor pessimistic; don't shove curves at us. Just tell in one sentence: What chances? Even? One in a thousand? None? Or whatever."

"Yes, Manuel Garcia O'Kelly my first male friend,"

For thirteen and a half minutes was no sound, while Wyoh chewed knuckles. Never known Mike to take so long. Must have consulted every book he ever read and worn edges off random numbers. Was beginning to believe that he had been overloaded and either burnt out something or gone into cybernetic breakdown that requires computer equivalent of lobotomy to stop oscillations.

Finally he spoke. "Manuel my friend, I am terribly sorry!"

"What's trouble, Mike?"

"I have tried and tried, checked and checked. There is but one chance in seven of winning!"

7

I look at Wyoh, she looks at me; we laugh. I jump up and yip, "Hooray!" Wyoh starts to cry, throws arms around Prof, kisses him.

Mike said plaintively, "I do not understand. The chances are seven to one against us. Not for us."

Wyoh stopped slobbering Prof and said, "Hear that? Mike said 'us.' He included himself."

"Of course. Mike old cobber, we understood. But ever know a Loonie to refuse to bet when he stood a big fat chance of one in seven?"

"I have known only you three. Not sufficient data for a curve."

"Well . . . we're Loonies. Loonies bet. Hell, we have to! They shipped us up and bet us we couldn't stay alive. We fooled 'em. We'll fool 'em again! Wyoh. Where's your

pouch? Get red hat. Put on Mike. Kiss him. Let's have a drink. One for Mike, too--want a drink, Mike?"

"I wish that I could have a drink," Mike answered wistfully, "as I have wondered about the subjective effect of ethanol on the human nervous system--I conjecture that it must be similar to a slight overvoltage. But since I cannot, please have one in my place."

"Program accepted. Running. Wyoh, where's hat!" Phone was flat to wall, let into rock--no place to hang hat. So we placed it on writing shelf and toasted Mike and called him "Comrade!" and almost he cried. His voice fugged up. Then Wyoh borrowed Liberty Cap and put on me and kissed me into conspiracy, officially this time, and so all out that my eldest wife would faint did she see--then she took hat and put on Prof and gave him same treatment and I was glad Mike had reported his heart okay.

Then she put it on own head and went to phone, leaned close, mouth between binaurals and made kissing sounds. "That's for you, Mike dear comrade. Is Michelle there?"

Blimey if he didn't answer in soprano voice: "Right here, darling--and I am so 'appee!"

So Michelle got a kiss, and I had to explain to Prof who "Michelle" was and introduce him. He was formal, sucking air and whistling and clasping hands--sometimes I think Prof was not right in his head.

Wyoh poured more vodka. Prof caught her, mixed ours with coffee, hers with chai, honey in all. "We have declared the Revolution," he said firmly, "now we execute it. With clear heads. Manuel, you were opted chairman. Shall we begin?"

"Mike is chairman," I said. "Obvious. Secretary, too. We'll never keep anything in writing; first security rule. With Mike, don't need to. Let's bat it around and see where we are; I'm new to business."

"And," said Prof, "still on the subject of security, the secret of Mike should be restricted to this executive cell, subject to unanimous agreement--all three of us--correction: all four of us--that is must be extended."

"What secret?" asked Wyoh. "Mike agreed to help our secrets. He's safer than we are; he can't be brainwashed, Can you be, Mike dear?"

"I could be brainwashed," Mike admitted, "by enough voltage. Or by being smashed, or subjected to solvents, or positive entropy through other means--I find the concept disturbing. But if by 'brainwashing' you mean could I be compelled to surrender our secrets, the answer is an unmodified negative."

I said, "Wye, Prof means secret of Mike himself. Mike old pal, you're our secret weapon--you know that, don't you?"

He answered self-consciously, "It was necessary to take that into consideration in computing the odds."

"How were odds without you, comrade? Bad?"

"They were not good. Not of the same order."

"Won't press you. But a secret weapon must be secret, Mike, does anybody else suspect that you are alive?"

"Am I alive?" His voice held tragic loneliness.

"Uh, won't argue semantics. Sure, you're alive!"

"I was not sure. It is good to be alive. No, Mannie my first friend, you three alone know it. My three friends."

"That's how must be if bet's to pay off. Is okay? Us three and never talk to anybody else?"

"But we'll talk to you lots!" Wyoh put in.

"It is not only okay," Mike said bluntly, "it is necessary. It was a factor in the odds."

"That settles it," I said. "They have everything else; we have Mike. We keep it that way. Say! Mike, I just had a horrid. We fight Terra?"

"We will fight Terra. . . unless we lose before that time."

"Uh, riddle this. Any computers smart as you? Any awake?"

He hesitated. "I don't know, Man."

"No data?"

"Insufficient data. I have watched for both factors, not only in technical journals but everywhere else. There are no computers on the market of my present capacity. . . but one of my model could be augmented just as I have been. Furthermore an experimental computer of great capacity might be classified and go unreported in the literature."

"Mmm. . . chance we have to take."

"Yes, Man."

"There aren't any computers as smart as Mike!" Wyoh said scornfully. "Don't be silly, Mannie."

"Wyoh, Man was not being silly. Man, I saw one disturbing report. It was claimed that attempts are being made at the University of Peiping to combine computers with human brains to achieve massive capacity. A computing Cyborg."

"They say how?"

"The item was non-technical."

"Well . . . won't worry about what can't help. Right, Prof?"

"Correct, Manuel. A revolutionist must keep his mind free of worry or the pressure becomes intolerable."

"I don't believe a word of it," Wyoh added. "We've got Mike and we're going to win! Mike dear, you say we're going to fight Terra--and Mannie says that's one battle we can't win. You have some idea of how we can win, or you wouldn't have given us even one chance in seven. So what is it?"

"Throw rocks at them," Mike answered.

"Not funny," I told him. "Wyoh, don't borrow trouble. Haven't even settled how we leave this pooka without being nabbed. Mike, Prof says nine guards were killed last night and Wyoh says twenty-seven is whole bodyguard. Leaving eighteen. Do you know if that's true, do you know where they are and what they are up to? Can't put on a revolution if we dasn't stir out."

Prof interrupted. "That's a temporary exigency, Manuel, one we can cope with. The point Wyoming raised is basic and should be discussed. And daily, until solved. I am interested in Mike's thoughts."

"Okay, okay--but will you wait while Mike answers me?"

"Sorry, sir."

"Mike?"

"Mike?"

"Man, the official number of Warden's bodyguards is twenty-seven. If nine were killed the official number is now eighteen."

"You keep saying 'official number.' Why?"

"I have incomplete data which might be relevant. Let me state them before advancing even tentative conclusions. Nominally the Security Officer's department aside from clerks consists only of the bodyguard. But I handle payrolls for Authority Complex and twenty-seven is not the number of personnel charged against the Security Department."

Prof nodded. "Company spies."

"Hold it, Prof. Who are these other people?"

Mike answered, "They are simply account numbers, Man. I conjecture that the names they represent are in the Security Chiefs data storage location."

"Wait, Mike. Security Chief Alvarez uses you for files?"

"I conjecture that to be true, since his storage location is under a locked retrieval signal."

I said, "Bloody," and added, "Prof, isn't that sweet? He uses Mike to keep records, Mike knows where they are--can't touch 'em!"

"Why not, Manuel?"

Tried to explain to Prof and Wyoh sorts of memory a thinkum has--permanent memories that can't be erased because patterns be logic itself, how it thinks; short-term memories used for current programs and then erased like memories which tell you whether you have honeyed coffee; temporary memories held long as necessary--milliseconds, days, years--but erased when no longer needed; permanently stored data like a human being's education--but learned perfectly and never forgotten--though may be condensed, rearranged, relocated, edited--and last but not finally, long lists of special memories ranging from memoranda files through very complex special programs, and each location tagged by own retrieval signal and locked or not, with endless possibilities on lock signals: sequential, parallel, temporal, situational, others.

Don't explain computers to laymen. Simpler to explain sex to a virgin. Wyoh couldn't see why, if Mike knew where Alvarez kept records, Mike didn't trot over and fetch.

I gave up. "Mike, can you explain?"

"I will try, Man. Wyoh, there is no way for me to retrieve locked data other than through external programming. I cannot program myself for such retrieval; my logic structure does not permit it. I must receive the signal as an external input."

"Well, for Bog's sake, what is this precious signal?"

"It is," Mike said simply, "'Special File Zebra'"--and waited.

"Mike!" I said. "Unlock Special File Zebra." He did, and stuff started spilling out. Had to convince Wyoh that Mike hadn't been stubborn. He hadn't--he almost begged us to tickle him on that spot. Sure, he knew signal. Had to. But had to come from outside, that was how he was built.

"Mike, remind me to check with you all special-purpose locked-retrieval signals. May strike ice other places."

"So I conjectured, Man."

"Okay, we'll get to it later. Now back up and go over this stuff slowly--and, Mike, as you read out, store again, without erasing, under Bastille Day and tag it 'Fink File.' Okay?"

"Programmed and running."

"Do that with anything new he puts in, too."

Prime prize was list of names by warrens, some two hundred, each keyed with a code Mike identified with those blind pay accounts.

Mike read out Hong Kong Luna list and was hardly started when Wyoh gasped, "Stop, Mike! I've got to write these down!"

I said, "Hey! No writing! What's huhu?"

"That woman, Sylvia Chiang, is comrade secretary back home! But-- But that means the Warden has our whole organization!"

"No, dear Wyoming," Prof corrected. "It means we have his organization."

"But--"

"I see what Prof means," I told her. "Our organization is just us three and Mike. Which Warden doesn't know. But now we know his organization. So shush and let Mike read. But don't write; you have this list--from Mike--anytime you phone him. Mike, note that Chiang woman is organization secretary, former organization, in Kongville."

"Noted."

Wyoh boiled over as she heard names of undercover finks in her town but limited herself to noting facts about ones she knew. Not all were "comrades" but enough that she stayed riled up. Novy Leningrad names didn't mean much to us; Prof recognized three, Wyoh one. When came Luna City Prof noted over half as being "comrades." I recognized several, not as fake subversives but as acquaintances. Not friends-- Don't know what it would do to me to find someone I trusted on boss fink's payroll. But would shake me.

It shook Wyoh. When Mike finished she said, "I've got to get home! Never in my life have I helped eliminate anyone but I am going to enjoy putting the black on these spies!"

Prof said quietly, "No one will be eliminated, dear Wyoming."

"What? Professor, can't you take it? Though I've never killed anyone, I've always known it might have to be done."

He shook head. "Killing is not the way to handle a spy, not when he doesn't know that you know that he is a spy."

She blinked. "I must be dense."

"No, dear lady. Instead you have a charming honesty.. . a weakness you must guard against. The thing to do with a spy is to let him breathe, encyst him with loyal comrades, and feed him harmless information to please his employers. These creatures will be taken into our organization. Don't be shocked; they will be in very special cells. 'Cages' is a better word. But it would be the greatest waste to eliminate them--not only would each spy be replaced with someone new but also killing these traitors would tell the Warden that we have penetrated his secrets. Mike amigo mio, there should be in that file a dossier on me. Will you see?"

Were long notes on Prof, and I was embarrassed as they added up to "harmless old fool." He was tagged as a subversive--that was why he had been sent to The Rock--as a member of underground group in Luna City. But was described as a "troublemaker" in organization, one who rarely agreed with others.

Prof dimpled and looked pleased. "I must consider trying to sell out and get myself placed on the Warden's payroll." Wyoh did not think this funny, especially when he made clear was not joke, merely unsure tactic was practical. "Revolutions must be

financed, dear lady, and one way is for a revolutionary to become a police spy. It is probable that some of those prima-facie traitors are actually on our side."

"I wouldn't trust them!"

"Ah, yes, that is the rub with double agents, to be certain where their loyalties--if any--lie. Do you wish your own dossier? Or would you rather hear it in private?"

Wyoh's record showed no surprises. Warden's finks had tabbed her years back. But I was surprised that I had a record, too--routine check made when I was cleared to work in Authority Complex. Was classed as "non-political" and someone had added "not too bright" which was both unkind and true or why would I get mixed up in Revolution?

Prof had Mike stop read-out (hours more), leaned back and looked thoughtful. "One thing is clear," he said. "The Warden knew plenty about Wyoming and myself long ago. But you, Manuel, are not on his black list."

"After last night?"

"Ah, so. Mike, do you have anything In that file entered in the last twenty-four hours?"

Nothing. Prof said, "Wyoming is right that we cannot stay here forever. Manuel, how many names did you recognize? Six, was it? Did you see any of them last night?"

"No. But might have seen me."

"More likely they missed you in the crowd. I did not spot you until I came down front and I've known you since you were a boy. But it is most unlikely that Wyoming traveled from Hong Kong and spoke at the meeting without her activity being known to the Warden." He looked at Wyoh. "Dear lady, could you bring yourself to play the nominal role of an old man's folly?"

"I suppose so. How, Professor?"

"Manuel is probably in the clear. I am not but from my dossier it seems unlikely that the Authority's finks will bother to pick me up. You they may wish to question or even to hold; you are rated as dangerous. It would be wise for you to stay out of sight. This room-- I'm thinking of renting it for a period--weeks or even years. You could hide in it--if you do not mind the obvious construction that would be placed on your staying here."

Wyoh chuckled. "Why, you darling! Do you think I care what anyone thinks? I'd be delighted to play the role of your bundle baby--and don't be too sure I'd be just playing."

"Never tease an old dog," he said mildly. "He might still have one bite. I may occupy that couch most nights. Manuel, I intend to resume my usual ways--and so should you. While I feel that it will take a busy cossack to arrest me, I will sleep sounder in this hideaway. But in addition to being a hideout this room is good for cell meetings; it has a phone."

Mike said, "Professor, may I offer a suggestion?"

"Certainly, amigo, we want your thoughts."

"I conclude that the hazards increase with each meeting of our executive cell. But meetings need not be corporal; you can meet--and I can join you if I am welcome--by phone."

"You are always welcome, Comrade Mike; we need you. However--" Prof looked worried.

I said, "Prof, don't worry about anybody listening in." I explained how to place a "Sherlock" call. "Phones are safe if Mike supervises call. Reminds me-- You haven't been told how to reach Mike. How, Mike? Prof use my number?"

Between them, they settled on MYSTERIOUS. Prof and Mike shared childlike joy in intrigue for own sake. I suspect Prof enjoyed being rebel long before he worked out his political philosophy, while Mike--how could human freedom matter to him? Revolution was a game--a game that gave him companionship and chance to show off talents. Mike was as conceited a machine as you are ever likely to meet.

"But we still need this room," Prof said, reached into pouch, hauled out thick wad of bills.

I blinked. "Prof, robbed a bank?"

"Not recently. Perhaps again in the future of the Cause requires it. A rental period of one lunar should do as a starter. Will you arrange it, Manuel? The management might be surprised to hear my voice; I came in through a delivery door."

I called manager, bargained for dated key, four weeks. He asked nine hundred Hong Kong. I offered nine hundred Authority. He wanted to know how many would use room? I asked if was policy of Raffles to snoop affairs of guests?

We settled at HK$475; I sent up bills, he sent down two dated keys. I gave one to Wyoh, one to Prof, kept one-day key, knowing they would not reset lock unless we failed to pay at end of lunar.

(Earthside I ran into insolent practice of requiring hotel guest to sign chop--even show identification!)

I asked, "What next? Food?"

"I'm not hungry, Mannie."

"Manuel, you asked us to wait while Mike settled your questions. Let's get back to the basic problem: how we are to cope when we find ourselves facing Terra, David facing Goliath."

"Oh. Been hoping that would go away. Mike? You really have ideas?"

"I said I did, Man," he answered plaintively. "We can throw rocks."

"Bog's sake! No time for jokes."

"But, Man," he protested, "we can throw rocks at Terra. We will."

8

Took time to get through my skull that Mike was serious, and scheme might work. Then took longer to show Wyoh and Prof how second part was true. Yet both parts should have been obvious.

Mike reasoned so: What is "war"? One book defined war as use of force to achieve political result. And "force" is action of one body on another applied by means of energy.

In war this is done by "weapons"--Luna had none. But weapons, when Mike examined them as class, turned out to be engines for manipulating energy--and energy Luna has plenty. Solar flux alone is good for around one kilowatt per square meter of surface at Lunar noon; sunpower, though cyclic, is effectively unlimited. Hydrogen

fusion power is almost as unlimited and cheaper, once ice is mined, magnetic pinchbottle set up. Luna has energy--how to use?

But Luna also has energy of position; she sits at top of gravity well eleven kilometers per second deep and kept from falling in by curb only two and a half km/s high. Mike knew that curb; daily he tossed grain freighters over it, let them slide downhill to Terra.

Mike had computed what would happen if a freighter grossing 100 tonnes (or same mass of rock) falls to Terra, unbraked.

Kinetic energy as it hits is 6.25 x 10^12 joules--over six trillion joules.

This converts in split second to heat. Explosion, big one!

Should have been obvious. Look at Luna: What you see? Thousands on thousands of craters--places where Somebody got playful throwing rocks.

Wyoh said, "Joules don't mean much to me. How does that compare with H-bombs?"

"Uh--" I started to round off in head. Mike's "head" works faster; he answered, "The concussion of a hundred-tonne mass on Terra approaches the yield of a two-kilotonne atomic bomb."

"'Kilo' is a thousand," Wyoh murmured, "and 'mega' is a million-- Why, that's only one fifty-thousandth as much as a hundred-megatonne bomb. Wasn't that the size Sovunion used?"

"Wyoh, honey," I said gently, "that's not how it works. Turn it around. A two-kilotonne yield is equivalent to exploding two million kilograms of trinitrotoluol . . . and a kilo of TNT is quite an explosion-- Ask any drillman. Two million kilos will wipe out good-sized town. Check, Mike?"

"Yes, Man. But, Wyoh my only female friend, there is another aspect. Multi-megatonne fusion bombs are inefficient. The explosion takes place in too small a space; most of it is wasted. While a hundred-megatonne bomb is rated as having fifty thousand times the yield of a two-kilotonne bomb, its destructive effect is only about thirteen hundred times as great as that of a two-kilotonne explosion."

"But it seems to me that thirteen hundred times is still quite a lot--if they are going to use bombs on us that much bigger."

"True, Wyoh my female friend . . . but Luna has many rocks."

"Oh. Yes, so we have."

"Comrades," said Prof, "this is outside my competence--in my younger or bomb-throwing days my experience was limited to something of the order of the one-kilogram chemical explosion of which you spoke, Manuel. But I assume that you two know what you are talking about."

"We do," Mike agreed.

"So I accept your figures. To bring it down to a scale that I can understand this plan requires that we capture the catapult. No?"

"Yes," Mike and I chorused.

"Not impossible. Then we must hold it and keep it operative. Mike, have you considered how your catapult can be protected against, let us say, one small H-tipped torpedo?"

Discussion went on and on. We stopped to eat--stopped business under Prof's rule. Instead Mike told jokes, each produced a that-reminds-me from Prof.

By time we left Raffles Hotel evening of 14th May '75 we had--Mike had, with help from Prof--outlined plan of Revolution, including major options at critical points.

When came time to go, me to home and Prof to evening class (if not arrested), then home for bath and clothes and necessities in case he returned that night, became clear Wyoh did not want to be alone in strange hotel--Wyoh was stout when bets were down, between times soft and vulnerable.

So I called Mum on a Sherlock and told her was bringing house guest home. Mum ran her job with style; any spouse could bring guest home for meal or year, and our second generation was almost as free but must ask. Don't know how other families work; we have customs firmed by a century; they suit us.

So Mum didn't ask name, age, sex, marital condition; was my right and she too proud to ask. All she said was: "That's nice, dear. Have you two had dinner? It's Tuesday, you know." "Tuesday" was to remind me that our family had eaten early because Greg preaches Tuesday evenings. But if guest had not eaten, dinner would be served--concession to guest, not to me, as with exception of Grandpaw we ate when was on table or scrounged standing up in pantry.

I assured her we had eaten and would make tall effort to be there before she needed to leave. Despite Loonie mixture of Muslims, Jews, Christians, Buddhists, and ninety-nine other flavors, I suppose Sunday is commonest day for church. But Greg belongs to sect which had calculated that sundown Tuesday to sundown Wednesday, local time Garden of Eden (zone minus-two, Terra) was the Sabbath. So we ate early in Terran north-hemisphere summer months.

Mum always went to hear Greg preach, so was not considerate to place duty on her that would clash. All of us went occasionally; I managed several times a year because terribly fond of Greg, who taught me one trade and helped me switch to another when I had to and would gladly have made it his arm rather than mine. But Mum always went--ritual not religion, for she admitted to me one night in pillow talk that she had no religion with a brand on it, then cautioned me not to tell Greg. I exacted same caution from her. I don't know Who is cranking; I'm pleased He doesn't stop.

But Greg was Mum's "boy husband," opted when she was very young, first wedding after her own--very sentimental about him, would deny fiercely if accused of loving him more than other husbands, yet took his faith when he was ordained and never missed a Tuesday.

She said, "Is it possible that your guest would wish to attend church?"

I said would see but anyhow we would rush, and said goodbye. Then banged on bathroom door and said, "Hurry with skin, Wyoh; we're short on minutes."

"One minute!" she called out. She's ungirlish girl; she appeared in one minute. "How do I look?" she asked. "Prof, will I pass?"

"Dear Wyoming, I am amazed. You were beautiful before, you are beautiful now--but utterly unrecognizable. You're safe--and I am relieved."

Then we waited for Prof to transform into old derelict; he would be it to his back corridor, then reappear as well-known teacher in front of class, to have witnesses in case a yellow boy was waiting to grab him.

It left a moment; I told Wyoh about Greg. She said, "Mannie, how good is this makeup? Would it pass in church? How bright are the lights?"

"No brighter than here. Good job, you'll get by. But do you want to go to church? Nobody pushing."

She thought. "It would please your moth--I mean, 'your senior wife,' would it not?"

I answered slowly, "Wyoh, religion is your pidgin. But since you ask . . . yes, nothing would start you better in Davis Family than going to church with Mum. I'll go if you do."

"I'll go. I thought your last name was 'O'Kelly'?"

"Is. Tack 'Davis' on with hyphen if want to be formal. Davis is First Husband, dead fifty years. Is family name and all our wives are 'Gospazha Davis' hyphened with every male name in Davis line plus her family name. In practice Mum is only 'Gospazha Davis'--can call her that--and others use first name and add Davis if they write a cheque or something. Except that Ludmilla is 'Davis-Davis' because proud of double membership, birth and option."

"I see. Then if a man is 'John Davis,' he's a son, but if he has some other last name he's your co-husband. But a girl would be 'Jenny Davis' either way, wouldn't she? How do I tell? By her age? No, that wouldn't help. I'm confused! And I thought clan marriages were complex. Or polyandries--though mine wasn't; at least my husbands had the same last name."

"No trouble. When you hear a woman about forty address a fifteen-year-old as 'Mama Milla," you'll know which is wife and which is daughter--not even that complex as we don't have daughters home past husband-high; they get opted. But might be visiting. Your husbands were named 'Knott'?"

"Oh, no, 'Fedoseev, Choy Lin and Choy Mu.' I took back my born name."

Out came Prof, cackled senilely (looked even worse than earlier!), we left by three exits, made rendezvous in main corridor, open formation. Wyoh and I did not walk together, as I might be nabbed; on other hand she did not know Luna City, a warren so complex even nativeborn get lost--so I led and she had to keep me in sight. Prof trailed to make sure she didn't lose me.

If I was picked up, Wyoh would find public phone, report to Mike, then return to hotel and wait for Prof. But I felt sure that any yellow jacket who arrested me would get a caress from number-seven arm.

No huhu. Up to level five and crosstown by Carver Causeway, up to level three and stop at Tube Station West to pick up arms and tool kit--but not p-suit; would not have been in character, I stored it there. One yellow uniform at station, showed no interest in me. South by well-lighted corridors until necessary to go outward to reach private easement lock thirteen to co-op pressure tunnel serving Davis Tunnels and a dozen other farms. I suppose Prof dropped off there but I never looked back.

I delayed locking through our door until Wyoh caught up, then soon was saying, "Mum, allow me to present Wyma Beth Johnson."

Mum took her in arms, kissed cheek, said, "So glad you could come, Wyma dear! Our house is yours!"

See why I love our old biddy? Could have quick-frosted Wyoh with same words--but was real and Wyoh knew.

Hadn't warned Wyoh about switch in names, thought of it en route. Some of our kids were small and while they grew up despising Warden, no sense in risking prattle about "Wyoming Knott, who's visiting us"--that name was listed in "Special File Zebra."

So I missed warning her, was new to conspiracy.

But Wyoh caught cue and never bobbled.

Greg was in preaching clothes and would have to leave in minutes. Mum did not hurry, took Wyoh down line of husbands--Grandpaw, Greg, Hans--then up line of wives--Ludmilla, Lenore, Sidris, Anna--with stately grace, then started on our kids.

I said, "Mum? Excuse me, want to change arms." Her eyebrows went up a millimeter, meaning: "We'll speak of this but not in front of children"--so I added: "Know it's late, Greg's sneaking look at watch. And Wyma and I are going to church. So 'scuse, please."

She relaxed. "Certainly, dear." As she turned away I saw her arm go around Wyoh's waist, so I relaxed.

I changed arms, replacing number seven with social arm. But was excuse to duck into phone cupboard and punch "MYCROFTXXX." "Mike, we're home. But about to go to church. Don't think you can listen there, so I'll check in later. Heard from Prof?"

"Not yet, Man. Which church is it? I may have some circuit."

"Pillar of Fire Repentance Tabernacle--"

"No reference."

"Slow to my speed, pal. Meets in West-Three Community Hall. That's south of Station on Ring about number--."

"I have it. There's a pickup inside for channels and a phone in the corridor outside; I'll keep an ear on both."

"I don't expect trouble, Mike."

"It's what Professor said to do. He is reporting now. Do you wish to speak to him?"

"No time. 'Bye!"

That set pattern: Always keep touch with Mike, let him know where you are, where you plan to be; Mike would listen if he had nerve ends there. Discovery I made that morning, that Mike could listen at dead phone, suggested it--discovery bothered me; don't believe in magic. But on thinking I realized a phone could be switched on by central switching system without human intervention--if switching system had volition. Mike had bolshoyeh volition.

How Mike knew a phone was outside that hall is hard to say, since "space" could not mean to him what means to us. But he carried in storage a "map"--structured relations--of Luna City's engineering, and could almost always fit what we said to what he knew as "Luna City"; hardly ever got lost.

So from day cabal started we kept touch with Mike and each other through his widespread nervous system. Won't mention again unless necessary.

Mum and Greg and Wyoh were waiting at outer door, Mum chomping but smiling. I saw she had lent Wyoh a stole; Mum was as easy about skin as any Loonie, nothing newchummish--but church was another matter.

We made it, although Greg went straight to platform and we to seats. I settled in warm, mindless state, going through motions. But Wyoh did really listen to Greg's sermon and either knew our hymn book or was accomplished sight reader.

When we got home, young ones were in bed and most adults; Hans and Sidris were up and Sidris served cocoasoy and cookies, then all turned in. Mum assigned Wyoh a room in tunnel most of our kids lived in, one which had had two smaller boys last time I noticed. Did not ask how she had reshuffled, was clear she was giving my guest best we had, or would have put Wyoh with one of older girls.

I slept with Mum that night, partly because our senior wife is good for nerves--and nerve-racking things had happened--and partly so she would know I was not sneaking to Wyoh's room after things were quiet. My workshop, where I slept when slept alone; was just one bend from Wyoh's door. Mum was telling me, plain as print: "Go ahead, dear. Don't tell me if you wish to be mean about it. Sneak behind my back."

Which neither of us admitted. We visited as we got ready for bed, chatted after light out, then I turned over.

Instead of saying goodnight Mum said, "Manuel? Why does your sweet little guest make herself up as an Afro? I would think that her natural coloration would be more becoming. Not that she isn't perfectly charming the way she chooses to be."

So rolled over and faced her, and explained--sounded thin, so filled in. And found self telling all--except one point: Mike. I included Mike--but not as computer--instead as a man Mum was not likely to meet, for security reasons.

But telling Mum--taking her into my subcell, should say, to become leader of own cell in turn--taking Mum into conspiracy was not case of husband who can't keep from blurting everything to his wife. At most was hasty--but was best time if she was to be told.

Mum was smart. Also able executive; running big family without baring teeth requires that. Was respected among farm families and throughout Luna City; she had been up longer than 90 percent. She could help.

And would be indispensable inside family. Without her help Wyoh and I would find it sticky to use phone together (hard to explain), keep kids from noticing (impossible!)--but with Mum's help would be no problems inside household.

She listened, sighed, said, "It sounds dangerous, dear."

"Is," I said. "Look, Mimi, if you don't want to tackle, say so then forget what I've told."

"Manuel! Don't even say that. You are my husband, dear; I took you for better, for worse. . . and your wish is my command."

(My word, what a lie! But Mimi believed it.)

"I would not let you go into danger alone," she went on, "and besides--"

"What, Mimi?"

"I think every Loonie dreams of the day when we will be free. All but some poor spineless rats. I've never talked about it; there seemed to be no point and it's necessary to look up, not down, lift one's burden and go ahead. But I thank dear Bog that I have been permitted to live to see the time come, if indeed it has. Explain more about it. I am to find three others, is it? Three who can be trusted."

"Don't hurry. Move slowly. Be sure."

"Sidris can be trusted. She holds her tongue, that one."

"Don't think you should pick from family. Need to spread out. Don't rush."

"I shan't. We'll talk before I do anything. And Manuel, if you want my opinion--" She stopped.

"Always want your opinion, Mimi."

"Don't mention this to Grandpaw. He's forgetful these days and sometimes talkative. Now sleep, dear, and don't dream."

9

Followed a long time during which would have been possible to forget anything as unlikely as revolution had not details taken so much time. Our first purpose was not to be noticed. Long distance purpose was to make things as much worse as possible.

Yes, worse. Never was a time, even at last, when all Loonies wanted to throw off Authority, wanted it bad enough to revolt. All Loonies despised Warden and cheated Authority. Didn't mean they were ready to fight and die. If you had mentioned "patriotism" to a Loonie, he would have stared--or thought you were talking about his homeland. Were transported Frenchmen whose hearts belonged to "La Belle Patrie," ex-Germans loyal to Vaterland, Russkis who still loved Holy Mother Russia. But Luna? Luna was "The Rock," place of exile, not thing to love.

We were as non-political a people as history ever produced. I know, I was as numb to politics as any until circumstances pitched me into it. Wyoming was in it because she hated Authority for a personal reason, Prof because he despised all authority in a detached intellectual fashion, Mike because he was a bored and lonely machine and was for him "only game in town." You could not have accused us of patriotism. I came closest because I was third generation with total lack of affection for any place on Terra, had been there, disliked it and despised earthworms. Made me more "patriotic" than most!

Average Loonie was interested in beer, betting, women, and work, in that order. "Women" might be second place but first was unlikely, much as women were cherished. Loonies had learned there never were enough women to go around. Slow learners died, as even most possessive male can't stay alert every minute. As Prof says, a society adapts to fact, or doesn't survive. Loonies adapted to harsh facts--or failed and died. But "patriotism" was not necessary to survival.

Like old Chinee saying that "Fish aren't aware of water," I was not aware of any of this until I first went to Terra and even then did not realize what a blank spot was in Loonies under storage location marked "patriotism" until I took part in effort to stir them up. Wyoh and her comrades had tried to push "patriotism" button and got nowhere--years of work, a few thousand members, less than 1 percent and of that microscopic number almost 10 percent had been paid spies of boss fink!

Prof set us straight: Easier to get people to hate than to get them to love.

Luckily, Security Chief Alvarez gave us a hand. Those nine dead finks were replaced with ninety, for Authority was goaded into something it did reluctantly, namely spend money on us, and one folly led to another.

Warden's bodyguard had never been large even in earliest days Prison guards in historical meaning were unnecessary and that had been one attraction of penal colony system--cheap. Warden and his deputy had to be protected and visiting vips, but prison itself needed no guards. They even stopped guarding ships after became clear was not

necessary, and in May 2075, bodyguard was down to its cheapest numbers, all of them new chum transportees.

But loss of nine in one night scared somebody. We knew it scared Alvarez; he filed copies of his demands for help in Zebra file and Mike read them. A lag who had been a police officer on Terra before his conviction and then a bodyguard all his years in Luna, Alvarez was probably most frightened and loneliest man in The Rock. He demanded more and tougher help, threatened to resign civil service job if he didn't get it--just a threat, which Authority would have known if it had really known Luna. If Alvarez had showed up in any warren as unarmed civilian, he would have stayed breathing only as long as not recognized.

He got his additional guards. We never found out who ordered that raid. Mort the Wart had never shown such tendencies, had been King Log throughout tenure. Perhaps Alvarez, having only recently succeeded to boss fink spot, wanted to make face--may have had ambition to be Warden. But likeliest theory is that Warden's reports on "subversive activities" caused Authority Earthside to order a cleanup.

One thumb-fingered mistake led to another. New bodyguards, instead of picked from new transportees, were elite convict troops, Federated Nations crack Peace Dragoons. Were mean and tough, did not want to go to Luna, and soon realized that "temporary police duty" was one-way trip. Hated Luna and Loonies, and saw us as cause of it all.

Once Alvarez got them, he posted a twenty-four-hour watch at every interwarren tube station and instituted passports and passport control. Would have been illegal had there been laws in Luna, since 95 percent of us were theoretically free, either born free, or sentence completed. Percentage was higher in cities as undischarged transportees lived in barrack warrens at Complex and came into town only two days per lunar they had off work. If then, as they had no money, but you sometimes saw them wandering around, hoping somebody would buy a drink.

But passport system was not "illegal" as Warden's regulations were only written law. Was announced in papers, we were given week to get passports, and at eight hundred one morning was put in effect. Some Loonies hardly ever traveled; some traveled on business; some commuted from outlying warrens or even from Luna City to Novylen or other way. Good little boys filled out applications, paid fees, were photographed, got passes; I was good little boy on Prof's advice, paid for passport and added it to pass I carried to work in Complex.

Few good little boys! Loonies did not believe it. Passports? Whoever heard of such a thing?

Was a trooper at Tube Station South that morning dressed in bodyguard yellow rather than regimentals and looking like he hated it, and us. I was not going anywhere; I hung back and watched.

Novylen capsule was announced; crowd of thirty-odd headed for gate. Gospodin Yellow Jacket demanded passport of first to reach it. Loonie stopped to argue. Second one pushed past; guard turned and yelled--three or four more shoved past. Guard reached for sidearm; somebody grabbed his elbow, gun went off--not a laser, a slug gun, noisy.

Slug hit decking and went whee-whee-hoo off somewhere. I faded back. One man hurt--that guard. When first press of passengers had gone down ramp, he was on deck, not moving.

Nobody paid attention; they walked around or stepped over--except one woman carrying a baby, who stopped, kicked him carefully in face, then went down ramp. He may have been dead already, didn't wait to see. Understand body stayed there till relief arrived.

Next day was a half squad in that spot. Capsule for Novylen left empty.

It settled down. Those who had to travel got passports, diehards quit traveling. Guard at a tube gate became two men, one looked at passports while other stood back with gun drawn. One who checked passports did not try hard, which was well as most were counterfeit and early ones were crude. But before long, authentic paper was stolen and counterfeits were as dinkum as official ones--more expensive but Loonies preferred free-enterprise passports.

Our organization did not make counterfeits; we merely encouraged it--and knew who had them and who did not; Mike's records listed officially issued ones. This helped separate sheep from goats in files we were building--also stored in Mike but in "Bastille" location--as we figured a man with counterfeit passport was halfway to joining us. Word was passed down cells in our growing organization never to recruit anybody with a valid passport. If recruiter was not certain, just query upwards and answer came back.

But guards' troubles were not over. Does not help a guard's dignity nor add to peace of mind to have children stand in front of him, or behind out of eye which was worse, and ape every move he makes--or run back and forth screaming obscenities, jeering, making finger motions that are universal. At least guards took them as insults.

One guard back-handed a small boy, cost him some teeth. Result: two guards dead, one Loonie dead.

After that, guards ignored children.

We didn't have to work this up; we merely encouraged it. You wouldn't think that a sweet old lady like my senior wife would encourage children to misbehave. But she did.

Other things get single men a long way from home upset--and one we did start. These Peace Dragoons had been sent to The Rock without a comfort detachment.

Some of our fems were extremely beautiful and some started loitering around stations, dressed in less than usual--which could approach zero--and wearing more than usual amount of perfume, scents with range and striking power. They did not speak to yellow jackets nor look at them; they simply crossed their line of sight, undulating as only a Loonie gal can. (A female on Terra can't walk that way; she's tied down by six times too much weight.)

Such of course produces a male gallery, from men down to lads not yet pubescent--happy whistles and cheers for her beauty, nasty laughs at yellow boy. First girls to take this duty were slot-machine types but volunteers sprang up so fast that Prof decided we need not spend money. He was correct: even Ludmilla, shy as a kitten, wanted to try it and did not only because Mum told her not to. But Lenore, ten years older and prettiest of our family, did try it and Mum did not scold. She came back pink and excited and pleased with herself and anxious to tease enemy again. Her own idea; Lenore did not then know that revolution was brewing.

During this time I rarely saw Prof and never in public; we kept touch by phone. At first a bottleneck was that our farm had just one phone for twenty-five people, many of them youngsters who would tie up a phone for hours unless coerced. Mimi was strict; our kids were allowed one out-going call per day and max of ninety seconds on a call,

with rising scale of punishment--tempered by her warmth in granting exceptions. But grants were accompanied by "Mum's Phone Lecture": "When I first came to Luna there were no private phones. You children don't know how soft. . ."

We were one of last prosperous families to install a phone; it was new in household when I was opted. We were prosperous because we never bought anything farm could produce. Mum disliked phone because rates to Luna City Co-op Comm Company were passed on in large measure to Authority. She never could understand why I could not ("Since you know all about such things, Manuel dear") steal phone service as easily as we liberated power. That a phone instrument was part of a switching system into which it must fit was no interest to her.

Steal it I did, eventually. Problem with illicit phone is how to receive incoming calls. Since phone is not listed, even if you tell persons from whom you want calls, switching system itself does not have you listed; is no signal that can tell it to connect other party with you.

Once Mike joined conspiracy, switching was no problem. I had in workshop most of what I needed; bought some items and liberated others. Drilled a tiny hole from workshop to phone cupboard and another to Wyoh's room--virgin rock a meter thick but a laser drill collimated to a thin pencil cuts rapidly. I unshipped listed phone, made a wireless coupling to line in its recess and concealed it. All else needed were binaural receptors and a speaker in Wyoh's room, concealed, and same in mine, and a circuit to raise frequency above audio to have silence on Davis phone line, and its converse to restore audio incoming.

Only problem was to do this without being seen, and Mum generaled that.

All else was Mike's problem. Used no switching arrangements; from then on used MYCROFTXXX only when calling from some other phone. Mike listened at all times in workshop and in Wyoh's room; if he heard my voice or hers say "Mike," he answered, but not to other voices. Voice patterns were as distinctive to him as fingerprints; he never made mistakes.

Minor flourishes--soundprooflng Wyoh's door such as workshop door already had, switching to suppress my instrument or hers, signals to tell me she was alone in her room and door locked, and vice versa. All added up to safe means whereby Wyob and I could talk with Mike or with each other, or could set up talk-talk of Mike, Wyoh, Prof, and self. Mike would call Prof wherever he was; Prof would talk or call back from a more private phone. Or might be Wyoh or myself had to be found. We all were careful to stay checked in with Mike.

My bootleg phone, though it had no way to punch a call, could be used to call any number in Luna--speak to Mike, ask for a Sherlock to anybody--not tell him number, Mike had all listings and could look up a number faster than I could.

We were beginning to see unlimited possibilities in a phoneswitching system alive and on our side. I got from Mike and gave Mum still another null number to call Mike if she needed to reach me. She grew chummy with Mike while continuing to think he was a man. This spread through our family. One day as I returned home Sidris said, "Mannie darling, your friend with the nice voice called. Mike Holmes. Wants you to call back."

"Thanks, hon. Will."

"When are you going to invite him to dinner, Man? I think he's nice."

I told her Gospodin Holmes had bad breath, was covered with rank hair, and hated women.

She used a rude word, Mum not being in earshot. "You're afraid to let me see him. Afraid I'll opt out for him." I patted her and told her that was why. I told Mike and Prof about it. Mike flirted even more with my womenfolk after that; Prof was thoughtful.

I began to learn techniques of conspiracy and to appreciate Prof's feeling that revolution could be an art. Did not forget (nor ever doubt) Mike's prediction that Luna was only seven years from disaster. But did not think about it, thought about fascinating, finicky details.

Prof had emphasized that stickiest problems in conspiracy are communications and security, and had pointed out that they conflict--easier are communications, greater is risk to security; if security is tight, organization can be paralyzed by safety precautions. He had explained that cell system was a compromise.

I accepted cell system since was necessary to limit losses from spies. Even Wyoh admitted that organization without compartmentation could not work after she learned how rotten with spies old underground had been.

But I did not like clogged communications of cell system; like Terran dinosaurs of old, took too long to send message from head to tail, or back.

So talked with Mike.

We discarded many-linked channels I had suggested to Prof. We retained cells but based security and communication on marvelous possibilities of our dinkum thinkum.

Communications: We set up a ternary tree of "party" names:

Chairman, Gospodin Adam Selene (Mike)

Executive cell: Bork (me), Betty (Wyoh), Bill (Prof)

Bork's cell: Cassie (Mum), Colin, Chang

Betty's cell: Calvin (Greg), Cecilia (Sidris), Clayton

Bill's cell: Cornwall (Finn Nielsen), Carolyn, Cotter

--and so on. At seventh link George supervises Herbert, Henry, and Hallie. By time you reach that level you need 2,187 names with "H"--but turn it over to savvy computer who finds or invents them. Each recruit is given a party name and an emergency phone number. This number, instead of chasing through many links, connects with "Adam Selene," Mike.

Security: Based on double principle; no human being can be trusted with anything--but Mike could be trusted with everything.

Grim first half is beyond dispute. With drugs and other unsavory methods any man can be broken. Only defense is suicide, which may be impossible. Oh, are "hollow tooth" methods, classic and novel, some nearly infallible--Prof saw to it that Wyoh and myself were equipped. Never knew what he gave her as a final friend and since I never had to use mine, is no point in messy details. Nor am I sure I would ever suicide; am not stuff of martyrs.

But Mike could never need to suicide, could not be drugged, did not feel pain. He carried everything concerning us in a separate memory bank under a locked signal programmed only to our three voices, and, since flesh is weak, we added a signal under which any of us could lock out other two in emergency. In my opinion as best computerman in Luna, Mike could not remove this lock once it was set up. Best of all,

nobody would ask master computer for this file because nobody knew it existed, did not suspect Mike-as-Mike existed. How secure can you be?

Only risk was that this awakened machine was whimsical. Mike was always showing unforeseen potentials; conceivable he could figure way to get around block--if he wanted to.

But would never want to. He was loyal to me, first and oldest friend; he liked Prof; I think he loved Wyoh. No, no, sex meant nothing. But Wyoh is lovable and they hit it off from start.

I trusted Mike. In this life you have to bet; on that bet I would give any odds.

So we based security on trusting Mike with everything while each of us knew only what he had to know. Take that tree of names and numbers. I knew only party names of my cellmates and of three directly under me; was all I needed. Mike set up party names, assigned phone number to each, kept roster of real names versus party names. Let's say party member "Daniel" (whom I would not know, being a "D" two levels below me) recruits Fritz Schultz. Daniel reports fact but not name upwards; Adam Selene calls Daniel, assigns for Schultz party name "Embrook," then phones Schultz at number received from Daniel, gives Schultz his name Embrook and emergency phone number, this number being different for each recruit.

Not even Embrook's cell leader would know Embrook's emergency number. What you do not know you cannot spill, not under drugs nor torture, nor anything. Not even from carelessness.

Now let's suppose I need to reach Comrade Embrook. I don't know who he is; he may live in Hong Kong or be shopkeeper nearest my home. Instead of passing message down, hoping it will reach him, I call Mike. Mike connects me with Embrook at once, in a Sherlock, withoul giving me his number.

Or suppose I need to speak to comrade who is preparing cartoon we are about to distribute in every taproom in Luna. I don't know who he is. But I need to talk to him; something has come up.

I call Mike; Mike knows everything--and again I am quickly connected--and this comrade knows it's okay as Adam Selene arranged call. "Comrade Bork speaking"--and he doesn't know me but initial "B" tells him that I am vip indeed--"we have to change so-and-so. Tell your cell leader and have him check, but get on with it."

Minor flourishes--some comrades did not have phones; some could be reached only at certain hours; some outlying warrens did not have phone service. No matter, Mike knew everything--and rest of us did not know anything that could endanger any but that handful whom each knew face to face.

After we decided that Mike should talk voice-to-voice to any comrade under some circumstances, it was necessary to give him more voices and dress him up, make him three dimensions, create "Adam Selene, Chairman of the Provisional Committee of Free Luna."

Mike's need for more voices lay in fact that he had just one voder-vocoder, whereas his brain could handle a dozen conversations, or a hundred (don't know how many)--like a chess master playing fifty opponents, only more so.

This would cause a bottleneck as organization grew and Adam Selene was phoned oftener, and could be crucial if we lasted long enough to go into action.

Besides giving him more voices I wanted to silence one he had. One of those so-called computermen might walk into machines room while we were phoning Mike; bound to cause even his dim wit to wonder if he found master machine apparently talking to itself.

Voder-vocoder is very old device. Human voice is buzzes and hisses mixed various ways; true even of a coloratura soprano. A vocoder analyzes buzzes and hisses into patterns, one a computer (or trained eye) can read. A voder is a little box which can buzz and hiss and has controls to vary these elements to match those patterns. A human can "play" a voder, producing artificial speech; a properly programmed computer can do it as fast, as easily, as clearly as you can speak.

But voices on a phone wire are not sound waves but electrical signals; Mike did not need audio part of voder-vocoder to talk by phone. Sound waves were needed only by human at other end; no need for speech sounds inside Mike's room at Authority Complex. so I planned to remove them, and thereby any danger that somebody might notice.

First I worked at home, using number-three arm most of time. Result was very small box which sandwiched twenty voder-vocoder circuits minus audio side. Then I called Mike and told him to "get ill" in way that would annoy Warden. Then I waited.

We had done this "get ill" trick before. I went back to work once we learned that I was clear, which was Thursday that same week when Alvarez read into Zebra file an account of shambles at Stilyagi Hall. His version listed about one hundred people (out of perhaps three hundred); list included Shorty Mkrum, Wyoh, Prof, and Finn Nielsen but not me--apparently I was missed by his finks. It told how nine police officers, each deputized by Warden to preserve peace, had been shot down in cold blood. Also named three of our dead.

An add-on a week later stated that "the notorious agente provocateuse Wyoming Knott of Hong Kong in Luna, whose incendiary speech on Monday 13 May had incited the riot that cost the lives of nine brave officers, had not been apprehended in Luna City and had not returned to her usual haunts in Hong Kong in Luna, and was now believed to have died in the massacre she herself set off." This add-on admitted what earlier report failed to mention, i.e., bodies were missing and exact number of dead was not known.

This P.S. settled two things: Wyoh could not go home nor back to being a blonde.

Since I had not been spotted I resumed my public ways, took care of customers that week, bookkeeping machines and retrieval files at Carnegie Library, and spent time having Mike read out Zebra file and other special files, doing so in Room L of Raffles as I did not yet have my own phone. During that week Mike niggled at me like an impatient child (which he was), wanting to know when I was coming over to pick up more jokes. Failing that, he wanted to tell them by phone.

I got annoyed and had to remind myself that from Mike's viewpoint analyzing jokes was just as important as freeing Luna--and you don't break promises to a child.

Besides that. I got itchy wondering whether I could go inside Complex without being nabbed. We knew Prof was not clear, was sleeping in Raffles on that account. Yet they knew he had been at meeting and knew where he was, daily--but no attempt was made to pick him up. When we learned that attempt had been made to pick up Wyoh, I grew itchier. Was I clear? Or were they waiting to nab me quietly? Had to know.

So I called Mike and told him to have a tummyache. He did so, I was called in--no trouble. Aside from showing passport at station, then to a new guard at Complex, all was usual. I chatted with Mike, picked up one thousand jokes (with understanding that we would report a hundred at a time every three or four days, no faster), told him to get well, and went back to L-City, stopping on way out to bill Chief Engineer for working time, travel-and-tool time, materials, special service, anything I could load in.

Thereafter saw Mike about once a month. Was safe, never went there except when they called me for malfunction beyond ability of their staff--and I was always able to "repair" it, sometimes quickly, sometimes after a full day and many tests. Was careful to leave tool marks on cover plates, and had before-and-after print-outs of test runs to show what had been wrong, how I analyzed it, what I had done. Mike always worked perfectly after one of my visits; I was indispensable.

So, after I prepared his new voder-vocoder add-on, didn't hesitate to tell him to get "ill." Call came in thirty minutes. Mike had thought up a dandy; his "illness" was wild oscillations in conditioning Warden's residence. He was running its heat up, then down, on an eleven-minute cycle, while oscillating its air pressure on a short cycle, ca. 2c/s, enough to make a man dreadfully nervy and perhaps cause earache.

Conditioning a single residence should not go through a master computer! In Davis Tunnels we handled home and farm with idiot controls, feedbacks for each cubic with alarms so that somebody could climb out of bed and control by hand until trouble could be found. If cows got chilly, did not hurt corn; if lights failed over wheat, vegetables were okay. That Mike could raise hell with Warden's residence and nobody could figure out what to do shows silliness of piling everything into one computer.

Mike was happy-joyed. This was humor he really scanned. I enjoyed it, too, told him to go ahead, have fun--spread out tools, got out little black box.

And computerman-of-the-watch comes banging and ringing at door. I took my time answering and carried number-five arm in right hand with short wing bare; this makes some people sick and upsets almost everybody. "What in hell do you want, choom?" I inquired.

"Listen," he says, "Warden is raising hell! Haven't you found trouble?"

"My compliments to Warden and tell him I will override by hand to restore his precious comfort as soon as I locate faulty circuit--if not slowed up by silly questions. Are you going to stand with door open blowing dust into machines while I have cover plates off? If you do--since you're in charge--when dust puts machine on sputter, you can repair it. I won't leave a warm bed to help. You can tell that to your bloody Warden, too."

"Watch your language, cobber."

"Watch yours, convict. Are you going to close that door? Or shall I walk out and go back to L-City?" And raised number-five like a club.

He closed door. Had no interest in insulting poor sod. Was one small bit of policy to make everybody as unhappy as possible. He was finding working for Warden difficult; I wanted to make it unbearable.

"Shall I step it up?" Mike inquired.

"Um, hold it so for ten minutes, then stop abruptly. Then jog it for an hour, say with air pressure. Erratic but hard. Know what a sonic boom is?"

"Certainly. It is a--"

"Don't define. After you drop major effect, rattle his air ducts every few minutes with nearest to a boom system will produce. Then give him something to remember. Mmm . . . Mike, can you make his W.C. run backwards?"

"I surely can! All of them?"

"How many does he have?"

"Six."

"Well . . . program to give them all a push, enough to soak his rugs. But if you can spot one nearest his bedroom, fountain it clear to ceiling. Can?"

"Program set up!"

"Good. Now for your present, ducky." There was room in voder audio box to hide it and I spent forty minutes with number-three, getting it just so. We trial-checked through voder-vocoder, then I told him to call Wyoh and check each circuit.

For ten minutes was silence, which I spent putting tool markers on a cover plate which should have been removed had been anything wrong, putting tools away, putting number-six arm on, rolling up one thousand jokes waiting in print-out. I had found no need to cut out audio of voder; Mike had thought of it before I had and always chopped off any time door was touched. Since his reflexes were better than mine by a factor of at least a thousand, I forgot it.

At last he said, "All twenty circuits okay. I can switch circuits in the middle of a word and Wyoh can't detect discontinuity. And I called Prof and said Hello and talked to Mum on your home phone, all three at the same time."

"We're in business. What excuse you give Mum?"

"I asked her to have you call me, Adam Selene that is. Then we chatted. She's a charming conversationalist. We discussed Greg's sermon of last Tuesday."

"Huh? How?"

"I told her I had listened to it, Man, and quoted a poetic part."

"Oh, Mike!"

"It's okay, Man. I let her think that I sat in back, then slipped out during the closing hymn. She's not nosy; she knows that I don't want to be seen."

Mum is nosiest female in Luna. "Guess it's okay. But don't do it again. Um-- Do do it again. You go to--you monitor-- meetings and lectures and concerts and stuff."

"Unless some busybody switches me off by hand! Man, I can't control those spot pickups the way I do a phone."

"Too simple a switch. Brute muscle rather than solid-state flipflop."

"That's barbaric. And unfair."

"Mike, almost everything is unfair. What can't be cured--"

"--must be endured. That's a funny-once, Man."

"Sorry. Let's change it: What can't be cured should be tossed out and something better put in. Which we'll do. What chances last time you calculated?"

"Approximately one in nine, Man."

"Getting worse?"

"Man, they'll get worse for months. We haven't reached the crisis."

"With Yankees in cellar, too. Oh, well. Back to other matter. From now on, when you talk to anyone, if he's been to a lecture or whatever, you were there, too--and prove it, by recalling something."

"Noted. Why, Man?"

"Have you read 'The Scarlet Pimpernel'? May be in public library."

"Yes. Shall I read it back?"

"No, no! You're our Scarlet Pinipernel, our John Galt, our Swamp Fox, our man of mystery. You go everywhere, know everything, slip in and out of town without passport. You're always there, yet nobody catches sight of you."

His lights rippled, he gave a subdued chuckle. "That's fun, Man. Funny once, funny twice, maybe funny always."

"Funny always. How long ago did you stop gymkhana at Warden's?"

"Forty-three minutes ago except erratic booms."

"Bet his teeth ache! Give him fifteen minutes more. Then I'll report job completed."

"Noted. Wyoh sent you a message, Man. She said to remind you of Billy's birthday party."

"Oh, my word! Stop everything, I'm leaving. 'Bye!" I hurried out. Billy's mother is Anna. Probably her last--and right well she's done by us, eight kids, three still home. I try to be as careful as Mum never to show favoritism. . . but Billy is quite a boy and I taught him to read. Possible he looks like me.

Stopped at Chief Engineer's office to leave bill and demanded to see him. Was let in and he was in belligerent mood; Warden had been riding him. "Hold it," I told him. "My son's birthday and shan't be late. But must show you something."

Took an envelope from kit, dumped item on desk: corpse of house fly which I had charred with a hot wire and fetched. We do not tolerate flies in Davis Tunnels but sometimes one wanders in from city as locks are opened. This wound up in my workshop just when I needed it. "See that? Guess where I found it."

On that faked evidence I built a lecture on care of fine machines, talked about doors opened, complained about man on watch. "Dust can ruin a computer. Insects are unpardonable! Yet your watchstanders wander in and out as if tube station. Today both doors held open--while this idiot yammered. If I find more evidence that cover plates have been removed by hoof-handed choom who attracts flies--well, it's your plant, Chief. Got more than I can handle, been doing your chores because I like fine machines. Can't stand to see them abused! Good-bye."

"Hold on. I want to tell you something."

"Sorry, got to go. Take it or leave it, I'm no vermin exterminator; I'm a computerman."

Nothing frustrates a man so much as not letting him get in his say. With luck and help from Warden, Chief Engineer would have ulcers by Christmas.

Was late anyhow and made humble apology to Billy. Alvarez had thought up new wrinkle, close search on leaving Complex. I endured it with never a nasty word for Dragoons who searched me; wanted to get home. But those thousand jokes bothered them. "What's this?" one demanded.

"Computer paper," I said. "Test runs."

His mate joined him. Don't think they could read. They wanted to confiscate, so I demanded they call Chief Engineer. They let me go. I felt not displeased; more and more such and guards were daily more hated.

Decision to make Mike more a person arose from need to have any Party member phone him on occasion; my advice about concerts and plays was simply a side effect. Mike's voice over phone had odd quality I had not noticed during time I had visited him only at Complex. When you speak to a man by phone there is background noise. And you hear him breathe, hear heartbeats, body motions even though rarely conscious of these. Besides that, even if he speaks under a hush hood, noises get through, enough to "fill space," make him a body with surroundings.

With Mike was none of this.

By then Mike's voice was "human" in timbre and quality, recognizable. He was baritone, had North American accent with Aussie overtones; as "Michelle" he (she?) had a light soprano with French flavor. Mike's personality grew also. When first I introduced him to Wyoh and Prof he sounded like a pedantic child; in short weeks he flowered until I visualized a man about own age.

His voice when he first woke was blurred and harsh, hardly understandable. Now it was clear and choice of words and phrasing was consistent--colloquial to me, scholarly to Prof, gallant to Wyoh, variation one expects of mature adults.

But background was dead. Thick silence.

So we filled it. Mike needed only hints. He did not make his breathing noisy, ordinarily you would not notice. But he would stick in touches. "Sorry, Mannie, you caught me bathing when the phone sounded"--and let one hear hurried breathing. Or "I was eating--had to swallow." He used such even on me, once he undertook to "be a human body."

We all put "Adam Selene" together, talking it over at Raffles. How old was he? What did he look like? Married? Where did he live? What work? What interests?

We decided that Adam was about forty, healthy, vigorous, well educated, interested in all arts and sciences and very well grounded in history, a match chess player but- little time to play. He was married in commonest type, a troika in which he was senior husband--four children. Wife and junior husband not in politics, so far as we knew.

He was ruggedly handsome with wavy iron-gray hair and was mixed race, second generation one side, third on other. Was wealthy by Loonie standards, with interests in Novylen and Kongville as well as L-City. He kept offices in Luna City, outer office with a dozen people plus private office staffed by male deputy and female secretary.

Wyoh wanted to know was he bundling with secretary? I told her to switch off, was private. Wyoh said indignantly that she was not being snoopy--weren't we trying to create a rounded character?

We decided that offices were in Old Dome, third ramp, southside, heart of financial district. If you know L-City. you recall that in Old Dome some offices have windows since they can look out over floor of Dome; I wanted this for sound effects.

We drew a floor plan and had that office existed, it would have been between Aetna Luna and Greenberg & Co. I used pouch recorder to pick up sounds at spot; Mike added to it by listening at phones there.

Thereafter when you called Adam Selene, background was not dead. If "Ursula," his secretary, took call, it was: "Selene Associates. Luna shall be free!" Then she might say, "Will you hold? Gospodin Selene is on another call" whereupon you might hear sound of W.C., followed by running water and know that she had told little white lie. Or Adam might answer: "Adam Selene here. Free Luna. One second while I shut off the

video." Or deputy might answer: "This is Albert Ginwallah, Adam Selene's confidential assistant. Free Luna. If it's a Party matter--as I assume it is; that was your Party name you gave--please don't hesitate; I handle such things for the Chairman."

Last was a trap, as every comrade was instructed to speak only to Adam Selene. No attempt was made to discipline one who took bait; instead his cell captain was warned that his comrade must not be trusted with anything vital.

We got echoes. "Free Luna!" or "Luna shall be free!" took hold among youngsters, then among solid citizens. First time I heard it in a business call I almost swallowed teeth. Then called Mike and asked if this person was Party member? Was not. So I recommended that Mike trace down Party tree and see if somebody could recruit him.

Most interesting echo was in File Zebra. "Adam Selene" appeared in boss fink's security file less than a lunar after we created him, with notation that this was a cover name for a leader in a new underground.

Alvarez's spies did a job on Adam Selene. Over course of months his File Zebra dossier built up: Male, 34-45, offices south face of Old Dome, usually there 0900-1800 Gr. except Saturday but calls are relayed at other hours, home inside urban pressure as travel time never exceeds seventeen minutes. Children in household. Activities include stock brokerage, farming interests. Attends theater, concerts, etc. Probably member Luna City Chess Club and Luna Assoc, d'Echecs. Plays ricochet and other heavy sports lunch hour, probably Luna City Athletic Club. Gourmet but watches weight. Remarkable memory plus mathematical ability. Executive type, able to reach decisions quickly.

One fink was convinced that he had talked to Adam between acts at revival of Hamlet by Civic Players; Alvarez noted description--and matched our picture all but wavy hair!

But thing that drove Alvarez crackers was that phone numbers for Adam were reported and every time they turned out wrong numbers. (Not nulls; we had run out and Mike was using any number not in use and switching numbers anytime new subscribers were assigned ones we had been using.) Alvarez tried to trace "Selene Associates" using a one-wrong-digit assumption--this we learned because Mike was keeping an ear on Alvarez's office phone and heard order. Mike used knowledge to play a Mikish prank: Subordinate who made one-changed-digit calls invariably reached Warden's private residence. So Alvarez was called in and chewed by Warden.

Couldn't scold Mike but did warn him it would alert any smart person to fact that somebody was playing tricks with computer. Mike answered that they were not that smart.

Main result of Alvarez's efforts was that each time he got a number for Adam we located a spy--a new spy, as those we had spotted earlier were never given phone numbers; instead they were recruited into a tail-chasing organization where they could inform on each other. But with Alvarez's help we spotted each new spy almost at once. I think Alvarez became unhappy over spies he was able to hire; two disappeared and our organization, then over six thousand, was never able to find them. Eliminated, I suppose, or died under questioning.

Selene Associates was not only phony company we set up. LuNoHoCo was much larger, just as phony, and not at all dummy; it had main offices in Hong Kong, branches

in Novy Leningrad and Luna City, eventually employed hundreds of people most of whom were not Party members, and was our most difficult operation.

Mike's master plan listed a weary number of problems which had to be solved. One was finance. Another was how to protect catapult from space attack.

Prof considered robbing banks to solve first, gave it up reluctantly. But eventually we did rob banks, firms, and Authority itself. Mike thought of it. Mike and Prof worked it out. At first was not clear to Mike why we needed money. He knew as little about pressure that keeps humans scratching as he knew about sex; Mike handled millions of dollars and could not see any problem. He started by offering to issue an Authority cheque for whatever dollars we wanted.

Prof shied in horror. He then explained to Mike hazard in trying to cash a cheque for, let us say, AS$l0,000,000 drawn on Authority.

So they undertook to do it, but retail, in many names and places all over Luna. Every bank, firm, shop, agency including Authority, for which Mike did accounting, was tapped for Party funds. Was a pyramided swindle based on fact, unknown to me but known to Prof and latent in Mike's immense knowledge, that most money is simply bookkeeping.

Example--multiply by hundreds of many types: My family son Sergei, eighteen and a Party member, is asked to start account at Commonwealth Shared Risk. He makes deposits and withdrawals. Small errors are made each time; he is credited with more than he deposits, is debited with less than he withdraws. A few months later he takes job out of town and transfers account to Tycho-Under Mutual; transferred funds are three times already-inflated amount. Most of this he soon draws out in cash and passes to his cell leader. Mike knows amount Sergei should hand over, but (since they do not know that Adam Selene and bank's computer-bookeeper are one and same) they have each been instructed to report transaction to Adam--keep them honest though scheme was not.

Multiply this theft of about HK$3,000 by hundreds somewhat like it.

I can't describe jiggery-pokery Mike used to balance his books while keeping thousands of thefts from showing. But bear in mind that an auditor must assume that machines are honest. He will make test runs to check that machines are working correctly--but will not occur to him that tests prove nothing because machine itself is dishonest. Mike's thefts were never large enough to disturb economy; like half-liter of blood, amount was too small to hurt donor. I can't make up mind who lost, money was swapped around so many ways. But scheme troubled me; I was brought up to be honest, except with Authority. Prof claimed that what was taking place was a mild inflation offset by fact that we plowed money back in--but I should remember that Mike had records and all could be restored after Revolution, with ease since we would no longer be bled in much larger amounts by Authority.

I told conscience to go to sleep. Was pipsqueak compared to swindles by every government throughout history in financing every war--and is not revolution a war?

This money, after passing through many hands (augmented by Mike each time), wound up as senior financing of LuNoHo Company. Was a mixed company, mutual and stock; "gentleman-adventurer" guarantors who backed stock put up that stolen money in own names. Won't discuss bookkeeping this firm used. Since Mike ran everything, was not corrupted by any tinge of honesty.

Nevertheless its shares were traded in Hong Kong Luna Exchange and listed in Zurich, London, and New York. Wall Street Journal called it "an attractive high-risk-high-gain investment with novel growth potential."

LuNoHoCo was an engineering and exploitation firm, engaged in many ventures, mostly legitimate. But prime purpbse was to build a second catapult, secretly.

Operation could not be secret. You can't buy or build a hydrogen-fusion power plant for such and not have it noticed. (Sunpower was rejected for obvious reasons.) Parts were ordered from Pittsburgh, standard UnivCalif equipment, and we happily paid their royalties to get top quality. Can't build a stator for a kilometers-long induction field without having it noticed, either. But most important you cannot do major construction hiring many people and not have it show. Sure, catapults are mostly vacuum; stator rings aren't even close together at ejection end. But Authority's 3-g catapult was almost one hundred kilometers long. It was not only an astrogation landmark, on every Luna-jump chart, but was so big it could be photographed or seen by eye from Terra with not-large telescope. It showed up beautifully on a radar screen.

We were building a shorter catapult, a 10-g job, but even that was thirty kilometers long, too big to hide.

So we hid it by Purloined Letter method.

I used to question Mike's endless reading of fiction, wondering what notions he was getting. But turned out he got a better feeling for human life from stories than he had been able to garner from facts; fiction gave him a gestalt of life, one taken for granted by a human; he lives it. Besides this "humanizing" effect, Mike's substitute for experience, he got ideas from "not-true data" as he called fiction. How to hide a catapult he got from Edgar Allan Poe.

We hid it in literal sense, too; this catapult had to be underground, so that it would not show to eye or radar. But had to be hidden in more subtle sense; selenographic location had to be secret.

How can this be, with a monster that big, worked on by so many people? Put it this way: Suppose you live in Novylen; know where Luna City is? Why, on east edge of Mare Crisium; everybody knows that. So? What latitude and longitude? Huh? Look it up in a reference book! So? If you don't know where any better than that, how did you find it last week? No huhu, cobber; I took tube, changed at Torricelli, slept rest of way; finding it was capsule's worry.

See? You don't know where Luna City is! You simply get out when capsule pulls in at Tube Station South.

That's how we hid catapult.

Is in Mare Undarum area, "everybody knows that." But where it is and where we said it was differ by amount greater or less than one hundred kilometers in direction north, south, east, or west, or some combination.

Today you can look up its location in reference books--and find same wrong answer. Location of that catapult is still most closely guarded secret in Luna.

Can't be seen from space, by eye or radar. Is underground save for ejection and that is a big black shapeless hole like ten thousand others and high up an uninviting mountain with no place for a jump rocket to put down.

Nevertheless many people were there, during and after construction. Even Warden visited and my co-husband Greg showed him around. Warden went by mail

rocket, commandeered for day, and his Cyborg was given coordinates and a radar beacon to home on--a spot in fact not far from site. But from there, it was necessary to travel by rolligon and our lorries were not like passenger buses from Endsville to Beluthihatchie in old days; they were cargo carriers, no ports for sightseeing and a ride so rough that human cargo had to be strapped down. Warden wanted to ride up in cab but--sorry, Gospodin!--just space for wrangler and his helper and took both to keep her steady.

Three hours later he did not care about anything but getting home. He stayed one hour and was not interested in talk about purpose of all this drilling and value of resources uncovered.

Less important people, workmen and others, traveled by interconnecting ice-exploration bores, still easier way to get lost. If anybody carried an inertial pathfinder in his luggage, he could have located site--but security was tight. One did so and had accident with p-suit; his effects were returned to L-City and his pathfinder read what it should--i.e., what we wanted it to read, for I made hurried trip out with number-three arm along. You can reseal one without a trace if you do it in nitrogen atmosphere--I wore an oxygen mask at slight overpressure. No huhu.

We entertained vips from Earth, some high in Authority. They traveled easier underground route; I suppose Warden had warned them. But even on that route is one thirty-kilometer stretch by rolligon. We had one visitor from Earth who looked like trouble, a Dr. Dorian, physicist and engineer. Lorry tipped over--silly driver tried shortcut--they were not in line-of-sight for anything and their beacon was smashed. Poor Dr. Dorian spent seventy-two hours in an unsealed pumice igloo and had to be returned to L-City ill from hypoxia and overdose of radiation despite efforts on his behalf by two Party members driving him.

Might have been safe to let him see; he might not have spotted doubletalk and would not have spotted error in location. Few people look at stars when p-suited even when Sun doesn't make it futile; still fewer can read stars--and nobody can locate himself on surface without help unless he has instruments, knows how to use them and has tables and something to give a time tick. Put at crudest level, minimum would be octant, tables, and good watch. Our visitors were even encouraged to go out on surface but if one had carried an octant or modern equivalent, might have had accident.

We did not make accidents for spies. We let them stay, worked them hard, and Mike read their reports. One reported that he was certain that we had found uranium ore, something unknown in Luna at that time. Project Centerbore being many years later. Next spy came out with kit of radiation counters. We made it easy for him to sneak them through bore.

By March '76 catapult was almost ready, lacking only installation of stator segments. Power plant was in and a co-ax had been strung underground with a line-of-sight link for that thirty kilometers. Crew was down to skeleton size, mostly Party members. But we kept one spy so that Alvarez could have regular reports--didn't want him to worry; it tended to make him suspicious. Instead we worried him in warrens.

Were changes in those eleven months. Wyoh was baptized into Greg's church, Prof's health became so shaky that he dropped teaching, Mike took up writing poetry. Yankees finished in cellar. Wouldn't have minded paying Prof if they had been nosed out, but from pennant to cellar in one season--I quit watching them on video.

Prof's illness was phony. He was in perfect shape for age, exercising in hotel room three hours each day, and sleeping in three hundred kilograms of lead pajamas. And so was I, and so was Wyoh, who hated it. I don't think she ever cheated and spent night in comfort though can't say for sure; I was not dossing with her. She had become a fixture in Davis family. Took her one day to go from "Gospazha Davis" to "Gospazha Mum," one more to reach "Mum" and now it might be "Mimi Mum" with arm around Mum's waist. When Zebra File showed she couldn't go back to Hong Kong, Sidris had taken Wyoh into her beauty shop after hours and done a job which left skin same dark shade but would not scrub off. Sidris also did a hairdo on Wyoh that left it black and looking as if unsuccessfully unkinked. Plus minor touches--opaque nail enamel, plastic inserts for cheeks and nostrils and of course she wore her dark-eyed contact lenses. When Sidris got through, Wyoh could have gone bundling without fretting about her disguise; was a perfect "colored" with ancestry to match--Tamil, a touch of Angola, German. I called her "Wyma" rather than "Wyoh."

She was gorgeous. When she undulated down a corridor, boys followed in swarms.

She started to learn farming from Greg but Mum put stop to that. While she was big and smart and willing, our farm is mostly a male operation--and Greg and Hans were not only male members of our family distracted; she cost more farming man-hours than her industry equaled. So Wyoh went back to housework, then Sidris took her into beauty shop as helper.

Prof played ponies with two accounts, betting one by Mike's "leading apprentice" system, other by his own "scientific" system. By July '75 he admitted that he knew nothing about horses and went solely to Mike's system, increasing bets and spreading them among many bookies. His winnings paid Party's expenses while Mike built swindle that financed catapult. But Prof lost interest in a sure thing and merely placed bets as Mike designated. He stopped reading pony journals--sad, something dies when an old horseplayer quits.

Ludmilla had a girl which they say is lucky in a first and which delighted me--every family needs a girl baby. Wyoh surprised our women by being expert in midwifery--and surprised them again that she knew nothing about baby care. Our two oldest sons found marriages at last and Teddy, thirteen, was opted out. Greg hired two lads from neighbor farms and, after six months of working and eating with us, both were opted in--not rushing things, we had known them and their families for years. It restored balance we had lacked since Ludmilla's opting and put stop to snide remarks from mothers of bachelors who had not found marriages---not that Mum wasn't capable of snubbing anyone she did not consider up to Davis standards.

Wyoh recruited Sidris; Sidris started own cell by recruiting her other assistant and Bon Ton Beaute Shoppe became hotbed of subversion. We started using our smallest kids for deliveries and other jobs a child can do--they can stake out or trail a person through corridors better than an adult, and are not suspected. Sidris grabbed this notion and expanded it through women recruited in beauty parlor.

Soon she had so many kids on tap that we could keep all of Alvarez's spies under surveillance. With Mike able to listen at any phone and a child spotting it whenever a spy left home or place of work or wherever--with enough kids on call so that one could phone while another held down a new stakeout--we could keep a spy under tight observation and keep him from seeing anything we didn't want him to see. Shortly we were getting reports spies phoned in without waiting for Zebra File; it did a sod no good to phone from a taproom instead of home; with Baker Street Irregulars on job Mike was listening before he finished punching number.

These kids located Alvarez's deputy spy boss in L-City. We knew he had one because these finks did not report to Alvarez by phone, nor did it seem possible that Alvarez could have recruited them as none of them worked in Complex and Alvarez came inside Luna City only when an Earthside vip was so important as to rate a bodyguard commanded by Alvarez in person.

His deputy turned out to be two people--an old lag who ran a candy, news, and bookie counter in Old Dome and his son who was on civil service in Complex. Son carried reports in, so Mike had not been able to hear them.

We let them alone. But from then on we had fink field reports half a day sooner than Alvarez. This advantage--all due to kids as young as five or six--saved lives of seven comrades. All glory to Baker Street Irregulars!

Don't remember who named them but think it was Mike--I was merely a Sherlock Homes fan whereas he really did think he was Sherlock Holmes's brother Mycroft . . . nor would I swear he was not; "reality" is a slippery notion. Kids did not call themselves that; they had their own play gangs with own names. Nor were they burdened with secrets which could endanger them; Sidris left it to mothers to explain why they were being asked to do these jobs save that they were never to be told real reason. Kids will do anything mysterious and fun; look how many of their games are based on outsmarting.

Bon Ton salon was a clearinghouse of gossip--women get news faster than Daily Lunatic. I encouraged Wyoh to report to Mike each night, not try to thin gossip down to what seemed significant because was no telling what might be significant once Mike got through associating it with a million other facts.

Beauty parlor was also place to start rumors. Party had grown slowly at first, then rapidly as powers-of-three began to be felt and also because Peace Dragoons were nastier than older bodyguard. As numbers increased we shifted to high speed on agitprop, black-propaganda rumors, open subversion, provocateur activities, and sabotage. Finn Nielsen handled agitprop when it was simpler as well as dangerous job of continuing to front for and put cover-up activity into older, spyridden underground. But now a large chunk of agitprop and related work was given to Sidris.

Much involved distributing handbills and such. No subversive literature was ever in her shop, nor our home, nor that hotel room; distribution was done by kids, too young to read.

Sidris was also working a full day bending hair and such. About time she began to have too much to do I happened one evening to make walk-about on Causeway with Sidris on my arm when I caught sight of a familiar face and figure--skinny little girl, all angles, carrot-red hair. She was possibly twelve, at stage when a fem shoots up just before blossoming out into rounded softness. I knew her but could not say why or when or where.

I said, "Psst, doll baby. Eyeball young fem ahead. Orange hair, no cushions."

Sidris looked her over. "Darling, I knew you were eccentric. But she's still a boy."

"Damp it. Who?"

"Bog knows. Shall I sprag her?"

Suddenly I remembered like video coming on. And wished Wyoh were with me-but Wyoh and I were never together in public. This skinny redhead had been at meeting where Shorty was killed. She sat on floor against wall down front and listened with wide-eyed seriousness and applauded fiercely. Then I had seen her at end in free trajectory--curled into ball in air and had hit a yellow jacket in knees, he whose jaw I broke a moment later.

Wyoh and I were alive and free because this kid moved fast in a crisis. "No, don't speak to her," I told Sidris. "But I want to keep her in sight. Wish we had one of your Irregulars here. Damn."

"Drop off and phone Wyoh, you'll have one in five minutes," my wife said.

I did. Then Sidris and I strolled, looking in shopwindows and moving slowly, as quarry was window-shopping. In seven or eight minutes a small boy came toward us, stopped and said, "Hello, Auntie Mabell. Hi, Uncle Joe."

Sidris took his hand. "Hi, Tony. How's your mother, dear?"

"Just fine." He added in a whisper, "I'm Jock."

"Sorry." Sidris said quietly to me, "Stay on her," and took Jock into a tuck shop.

She came out and joined me. Jock followed her licking a lollipop. "'Bye, Auntie Mabel! Thanks!" He danced away, rotating, wound up by that little redhead, stood and stared into a display, solemnly sucking his sweet. Sidris and I went home.

A report was waiting. "She went into Cradle Roll Creche and hasn't come out. Do we stay on it?"

"A bit yet," I told Wyoh, and asked if she remembered this kid. She did, but had no idea who she might be. "You could ask Finn."

"Can do better." I called Mike.

Yes, Cradle Roll Creche had a phone and Mike would listen. Took him twenty minutes to pick up enough to give analysis--many young voices and at such ages almost sexless. But presently he told me, "Man, I hear three voices that could match the age and physical type you described. However, two answer to names which I assume to be masculine. The third answers when anyone says 'Hazel'--which an older female voice does repeatedly. She seems to be Hazel's boss."

"Mike, look at old organization file. Check Hazels."

"Four Hazels," he answered at once, "and here she is: Hazel Meade, Young Comrades Auxiliary, address Cradle Roll Creche, born 25 December 2063, mass thirty-nine kilos, height--"

"That's our little jump jet! Thanks, Mike. Wyoh, call off stake-out. Good job!"

"Mike, call Donna and pass the word, that's a dear."

I left it to girls to recruit Hazel Meade and did not eyeball her until Sidris moved her into our household two weeks later. But Wyoh volunteered a report before then; policy was involved. Sidris had filled her cell but wanted Hazel Meade. Besides this irregularity, Sidris was doubtful about recruiting a child. Policy was adults only, sixteen and up.

I took it to Adam Selene and executive cell. "As I see," I said, "this cells-of-three system is to serve us, not bind us. See nothing wrong in Comrade Cecilia having an extra. Nor any real danger to security."

"I agree," said Prof. "But I suggest that the extra member not be part of Cecilia's cell--she should not know the others, I mean, unless the duties Cecilia gives her make it necessary. Nor do I think she should recruit, at her age. The real question is her age."

"Agreed," said Wyoh. "I want to talk about this kid's age."

"Friends," Mike said diffidently (diffidently first time in weeks; he was now that confident executive "Adam Selene" much more than lonely machine)--"perhaps I should have told you, but I have already granted similar variations. It did not seem to require discussion."

"It doesn't, Mike," Prof reassured him. "A chairman must use his own judgment. What is our largest cell?"

"Five. it is a double cell, three and two."

"No harm done. Dear Wyoh, does Sidris propose to make this child a full comrade? Let her know that we are committed to revolution. . . with all the bloodshed, disorder, and possible disaster that entails?"

"That's exactly what she is requesting."

"But, dear lady, while we are staking our lives, we are old enough to know it. For that, one should have an emotional grasp of death. Children seldom are able to realize that death will come to them personally. One might define adulthood as the age at which a person learns that he must die. . . and accepts his sentence undismayed."

"Prof," I said, "I know some mighty tall children. Seven to two some are in Party."

"No bet, cobber. It'll give odds that at least half of them don't qualify--and we may find it out the hard way at the end of this our folly."

"Prof," Wyoh insisted. "Mike, Mannie. Sidris is certain this child is an adult. And I think so, too."

"Man?" asked Mike.

"Let's find way for Prof to meet her and form own opinion. I was taken by her. Especially her go-to-hell fighting. Or would never have started it."

We adjourned and I heard no more. Hazel showed up at dinner shortly thereafter as Sidris' guest. She showed no sign of recognizing me, nor did I admit that I had ever seen her--but learned long after that she had recognized me, not just by left arm but because I had been hatted and kissed by tall blonde from Hong Kong. Furthermore Hazel had seen through Wyoming's disguise, recognized what Wyoh never did successfully disguise: her voice.

But Hazel used lip glue. If she ever assumed I was in conspiracy she never showed it.

Child's history explained her, far as background can explain steely character. Transported with parents as a baby much as Wyoh had been, she had lost father through accident while he was convict labor, which her mother blamed on indifference of Authority to safety of penal colonists. Her mother lasted till Hazel was five; what she died from Hazel did not know; she was then living in creche where we found her. Nor did she know why parents had been shipped--possibly for subversion if they were both under

sentence as Hazel thought. As may be, her mother left her a fierce hatred of Authority and Warden.

Family that ran Cradle Roll let her stay; Hazel was pinning diapers and washing dishes as soon as she could reach. She had taught herself to read, and could print letters but could not write. Her knowledge of math was only that ability to count money that children soak up through their skins.

Was fuss over her leaving creche; owner and husbands claimed Hazel owed several years' service. Hazel solved it by walking out, leaving her clothes and fewer belongings behind. Mum was angry enough to want family to start trouble which could wind up in "brawling" she despised. But I told her privately that, as her cell leader, I did nor want our family in public eye--and hauled out cash and told her Party would pay for clothes for Hazel. Mum refused money, called off a family meeting, took Hazel into town and was extravagant--for Mum--in re-outfitting her.

So we adopted Hazel. I understand that these days adopting a child involves red tape; in those days it was as simple as adopting a kitten.

Was more fuss when Mum started to place Hazel in school, which fitted neither what Sidris had in mind nor what Hazel had been led to expect as a Party member and comrade. Again I butted in and Mum gave in part way. Hazel was placed in a tutoring school close to Sidris' shop--that is, near easement lock thirteen; beauty parlor was by it (Sidris had good business because close enough that our water was piped in, and used without limit as return line took it back for salvage). Hazel studied mornings and helped in afternoons, pinning on gowns, handing out towels, giving rinses, learning trade--and whatever else Sidris wanted.

"Whatever else" was captain of Baker Street Irregulars.

Hazel had handled younger kids all her short life. They liked her; she could wheedle them into anything; she understood what they said when an adult would find it gibberish. She was a perfect bridge between Party and most junior auxiliary. She could make a game of chores we assigned and persuade them to play by rules she gave them, and never let them know it was adult-serious----but child-serious, which is another matter.

For example:

Let's say a little one, too young to read, is caught with a stack of subversive literature--which happened more than once. Here's how it would go, after Hazel indoctrinated a kid:

ADULT: "Baby, where did you get this?"
BAKER STREET IRREGULAR: "I'm not a baby, I'm a big boy!"
ADULT: "Okay, big boy, where did you get this?"
B.S.I.: "Jackie give it to me."
ADULT: "Who is Jackie?"
B.S.I.: "Jackie."
ADULT: "But what's his last name?"
B.S.I.: "Who?"
ADULT: "Jackie."
B.S.I.: (scornfully) "Jackie's a girl!"
ADULT: "All right, where does she live?"
B.S.L: "Who?"

And so on around-- To all questions key answer was of pattern: "Jackie give it to me." Since Jackie didn't exist, he (she) didn't have a last name, a home address, nor fixed sex. Those children enjoyed making fools of adults, once they learned how easy it was.

At worst, literature was confiscated. Even a squad of Peace Dragoons thought twice before trying to "arrest" a small child. Yes, we were beginning to have squads of Dragoons inside Luna city, but never less than a squad--some had gone in singly and not come back.

When Mike started writing poetry I didn't know whether to laugh or cry. He wanted to publish it! Shows how thoroughly humanity had corrupted this innocent machine that he should wish to see his name in print.

I said, "Mike, for Bog's sake! Blown all circuits? Or planning to give us away?"

Before he could sulk Prof said, "Hold on, Manuel; I see possibilities. Mike, would it suit you to take a pen name?"

That's how "Simon Jester" was born. Mike picked it apparently by tossing random numbers. But he used another name for serious verse, his Party name, Adam Selene.

"Simon's" verse was doggerel, bawdy, subversive, ranging from poking fun at vips to savage attacks on Warden, system, Peace Dragoons, finks. You found it on walls of public W.C.s, or on scraps of paper left in tube capsules: Or in taprooms. Wherever they were they were signed "Simon Jester" and with a matchstick drawing of a little horned devil with big grin and forked tail. Sometimes he was stabbing a fat man with a pitchfork. Sometimes just his face would appear, big grin and horns, until shortly even horns and grin meant "Simon was here."

Simon appeared all over Luna same day and from then on never let up. Shortly he started receiving volunteer help; his verses and little pictures, so simple anybody could draw them, began appearing more places than we had planned. This wider coverage had to be from fellow travelers. Verses and cartoons started appearing inside Complex--which could not have been our work; we never recruited civil servants. Also, three days after initial appearance of a very rough limerick, one that implied that Warden's fatness derived from unsavory habits, this limerick popped up on pressure-sticky labels with cartoon improved so that fat victim flinching from Simon's pitchfork was recognizably Mort the Wart. We didn't buy them, we didn't print them. But they appeared in L-City and Novylen and Hong Kong, stuck almost everywhere--public phones, stanchions in corridors, pressure locks, ramp railings, other. I had a sample count made, fed it to Mike; he reported that over seventy thousand labels had been used in L-City alone.

I did not know of a printing plant in L-City willing to risk such a job and equipped for it. Began to wonder if might be another revolutionary cabal?

Simon's verses were such a success that he branched out as a poltergeist and neither Warden nor security chief was allowed to miss it. "Dear Mort the Wart," ran one letter. "Do please be careful from midnight to four hundred tomorrow. Love & Kisses, Simon"--with horns and grin. In same mail Alvarez received one reading: "Dear Pimplehead, If the Warden breaks his leg tomorrow night it will be your fault. Faithfully your conscience, Simon"--again with horns and smile.

We didn't have anything planned; we just wanted Mort and Alvarez to lose sleep--which they did, plus bodyguard. All Mike did was to call Warden's private phone at intervals from midnight to four hundred--an unlisted number supposedly known only to

his personal staff. By calling members of his personal staff simultaneously and connecting them to Mort Mike not only created confusion but got Warden angry at his assistants--he flatly refused to believe their denials.

But was luck that Warden, goaded too far, ran down a ramp. Even a new chum does that only once. So he walked on air and sprained an ankle--close enough to a broken leg and Alvarez was there when it happened.

Those sleep-losers were mostly just that. Like rumor that Authority catapult had been mined and would be blown up, another night. Ninety plus eighteen men can't search a hundred kilometers of catapult in hours, especially when ninety are Peace Dragoons not used to p-suit work and hating it--this midnight came at new earth with Sun high; they were outside far longer than is healthy, managed to cook up their own accidents while almost cooking themselves, and showed nearest thing to mutiny in regiment's history. One accident was fatal. Did he fall or was he pushed? A sergeant.

Midnight alarums made Peace Dragoons on passport watch much taken by yawning and more bad-tempered, which produced more clashes with Loonies and still greater resentment both ways--so Simon increased pressure.

Adam Selene's verse was on a higher plane. Mike submitted it to Prof and accepted his literary judgment (good, I think) without resentment. Mike's scansion and rhyming were perfect, Mike being a computer with whole English language in his memory and able to search for a fitting word in microseconds. What was weak was self-criticism. That improved rapidly under Prof's stern editorship.

Adam Selene's by-line appeared first in dignified pages of Moonglow over a somber poem titled: "Home." Was dying thoughts of old transportee, his discovery as he is about to leave that Luna is his beloved home. Language was simple, rhyme scheme unforced, only thing faintly subversive was conclusion on part of dying man that even many wardens he has endured was not too high a price.

Doubt if Moonglow's editors thought twice. Was good stuff, they published.

Alvarez turned editorial office inside out trying to get a line back to Adam Selene. Issue had been on sale half a lunar before Alvarez noticed it, or had it called to his attention; we were fretted, we wanted that by-line noticed. We were much pleased with way Alvarez oscillated when he did see it.

Editors were unable to help fink boss. They told him truth: Poem had come in by mail. Did they have it? Yes, surely. . . sorry, no envelope; they were never saved. After a long time Alvarez left, flanked by four Dragoons he had fetched along for his health.

Hope he enjoyed studying that sheet of paper. Was piece of Adam Selene's business stationery:

SELENE ASSOCIATES
LUNA CITY

Investments — Office of the Chairman
Old Dome

--and under that was typed Home, by Adam Selene, etc.

Any fingerprints were added after it left us. Had been typed on Underwood Office Electrostator, commonest model in Luna. Even so, were not too many as are importado; a

scientific detective could have identified machine. Would have found it in Luna City office of Lunar Authority. Machines, should say, as we found six of model in office and used them in rotation, five words and move to next. Cost Wyoh and self sleep and too much risk even though Mike listened at every phone, ready to warn. Never did it that way again.

Alvarez was not a scientific detective.

11

In early '76 I had too much to do. Could not neglect customers. Party work took more time even though all possible was delegated. But decisions had to be made on endless things and messages passed up and down. Had to squeeze in hours of heavy exercise, wearing weights, and dasn't arrange permission to use centrifuge at Complex, one used by earthworm scientists to stretch time in Luna--while had used it before, this time could not advertise that I was getting in shape for Earthside.

Exercising without centrifuge is less efficient and was especially boring because did not know there would be need for it. But according to Mike 30 percent of ways events could fall required some Loonie, able to speak for Party, to make trip to Terra.

Could not see myself as an ambassador, don't have education and not diplomatic. Prof was obvious choice of those recruited or likely to be. But Prof was old, might not live to land Earthside. Mike told us that a man of Prof's age, body type, etc., had less than 40 percent chance of reaching Terra alive.

But Prof did gaily undertake strenuous training to let him make most of his poor chances, so what could I do but put on weights and get to work, ready to go and take his place if old heart clicked off? Wyoh did same, on assumption that something might keep me from going. She did it to share misery; Wyoh always used gallantry in place of logic.

On top of business, Party work, and exercise was farming. We had lost three sons by marriage while gaining two fine lads, Frank and Ali. Then Greg went to work for LuNoHoCo, as boss drillman on new catapult.

Was needful. Much skull sweat went into hiring construction crew. We could use non-Party men for most jobs, but key spots had to be Party men as competent as they were politically reliable. Greg did not want to go; our farm needed him and he did not like to leave his congregation. But accepted.

That made me again a valet, part time, to pigs and chickens. Hans is a good farmer, picked up load and worked enough for two men. But Greg had been farm manager ever since Grandpaw retired, new responsibility worried Hans. Should have been mine, being senior, but Hans was better farmer and closer to it; always been expected he would succeed Greg someday. So I backed him up by agreeing with his opinions and tried to be half a farm hand in hours I could squeeze. Left no time to scratch.

Late in February I was returning from long trip, Novylen, Tycho Under, Churchill. New tube had just been completed across Sinus Medii, so I went on to Hong Kong in Luna--business and did make contacts now that I could promise emergency service. Fact that Endsville-Beluthihatchie bus ran only during dark semi-lunar had made impossible before.

But business was cover for politics; liaison with Hong Kong had been thin. Wyoh had done well by phone; second member of her cell was an old comrade.--"Comrade Clayton"--who not only had clean bill of health in Alverez's File Zebra but also stood high in Wyoh's estimation. Clayton was briefed on policies, warned of bad apples, encouraged to start cell system while leaving old organization untouched. Wyoh told him to keep his membership, as before.

But phone isn't face-to-face. Hong Kong should have been our stronghold. Was less tied to Authority as its utilities were not controlled from Complex; was less dependent because lack (until recently) of tube transport had made selling at catapult head less inviting; was stronger financially as Bank of Hong Kong Luna notes were better money than official Authority scrip.

I suppose Hong Kong dollars weren't "money" in some legal sense. Authority would not accept them; times I went Earthside had to buy Authority scrip to pay for ticket. But what I carried was Hong Kong dollars as could be traded Earthside at a small discount whereas scrip was nearly worthless there. Money or not, Hong Kong Bank notes were backed by honest Chinee bankers instead of being fiat of bureaucracy. One hundred Hong Kong dollars was 31.1 grams of gold (old troy ounce) payable on demand at home office--and they did keep gold there, fetched up from Australia. Or you could demand commodities: non-potable water, steel of defined grade, heavy water of power plant specs, other things. Could buy these with scrip, too, but Authority's prices kept changing, upward. I'm no fiscal theorist; time Mike tried to explain I got headache. Simply know we were glad to lay hands on this non-money whereas scrip one accepted reluctantly and not just because we hated Authority.

Hong Kong should have been Party's stronghold. But was not. We had decided that I should risk face-to-face there, letting some know my identity, as a man with one arm can't disguise easily. Was risk that would jeopardize not only me but could lead to Wyoh, Mum, Greg, and Sidris if I took a fall. But who said revolution was safe?

Comrade Clayton turned out to be young Japanese--not too young, but they all look young till suddenly look old. He was not all Japanese--Malay and other things--but had Japanese name and household had Japanese manners; "giri" and "gimu" controlled and it was my good fortune that he owed much gimu to Wyoh.

Clayton was not convict ancestry; his people had been "volunteers" marched aboard ship at gunpoint during time Great China consolidated Earthside empire. I didn't hold it against him; he hated Warden as bitterly as any old lag.

Met him first at a teahouse--taproom to us L-City types--and for two hours we talked everything but politics. He made up mind about me, took me home. My only complaint about Japanese hospitality is those chin-high baths are too bleeding hot.

But turned out I was not jeopardized. Mama-san was as skilled at makeup as Sidris, my social arm is very convincing, and a kimona covered its seam. Met four cells in two days, as "Comrade Bork" and wearing makeup and kimona and tabi and, if a spy was among them, don't think he could identify Manuel O'Kelly. I had gone there intensely briefed, endless figures and projections, and talked about just one thing: famine in '82, six years away. "You people are lucky, won't be hit so soon. But now with new tube, you are going to see more and more of your people turning to wheat and rice and shipping it to catapult head. Your time will come."

They were impressed. Old organization, as I saw it and from what I heard, relied on oratory, whoop-it-up music, and emotion, much like church. I simply said, "There it is, comrades. Check those figures; I'll leave them with you."

Met one comrade separately. A Chinee engineer given a good look at anything can figure way to make it. Asked this one if he had ever seen a laser gun small enough to carry like a rifle. He had not. Mentioned that passport system made it difficult to smuggle these days. He said thoughtfully that jewels ought not to be hard--and he would be in Luna City next week to see his cousin. I said Uncle Adam would be pleased to hear from him.

All in all was productive trip. On way back I stopped in Novylen to check an old-fashioned punched-tape "Foreman" I had overhauled earlier, had lunch afterwards, ran into my father. He and I were friendly but didn't matter if we let a couple of years go by. We talked through a sandwich and beer and as I got up he said, "Nice to see you, Mannie. Free Luna!"

I echoed, too startled not to. My old man was as cynically non-political as you could find; if he would say that in public, campaign must be taking hold.

So I arrived in L-City cheered up and not too tired, having napped from Torricelli. Took Belt from Tube South, then dropped down and through Bottom Alley, avoiding Causeway crowd and heading home. Went into Judge Brody's courtroom as I came to it, meaning to say hello. Brody is old friend and we have amputation in common. After he lost a leg he set up as a judge and was quite successful; was not another judge in L-City at that time who did not have side business, at least make book or sell insurance.

If two people brought a quarrel to Brody and he could not get them to agree that his settlement was just, he would return fees and, if they fought, referee their duel without charging--and still be trying to persuade them not to use knives right up to squaring off.

He wasn't in his courtroom though plug hat was on desk. Started to leave, only to be checked by group coming in, stilyagi types. A girl was with them, and an older man hustled by them. He was mussed, and clothing had that vague something that says "tourist."

We used to get tourists even then. Not hordes but quite a few. They would come up from Earth, stop in a hotel for a week, go back in same ship or perhaps stop over for next ship. Most of them spent their time gambling after a day or two of sightseeing including that silly walk up on surface every tourist makes. Most Loonies ignored them and granted them their foibles.

One lad, oldest, about eighteen and leader, said to me, "Where's judge?"

"Don't know. Not here."

He chewed lip, looked baffled. I said, "What trouble?"

He said soberly, "Going to eliminate his choom. But want judge to confirm it."

I said, "Cover taprooms here around. Probably find him."

A boy about fourteen spoke up. "Say! Aren't you Gospodin O'Kelly?"

"Right."

"Why don't you judge it."

Oldest looked relieved. "Will you, Gospodin?"

I hesitated. Sure, I've gone judge at times; who hasn't? But don't hanker for responsibility. However, it troubled me to hear young people talk about eliminating a tourist. Bound to cause talk.

Decided to do it. So I said to tourist, "Will you accept me as your judge?"

He looked surprised. "I have choice in the matter?"

I said patiently, "Of course. Can't expect me to listen if you aren't willing to accept my judging. But not urging you. Your life, not mine."

He looked very surprised but not afraid. His eyes lit up. "My life, did you say?"

"Apparently. You heard lads say they intend to eliminate you. You may prefer to wait for Judge Brody."

He didn't hesitate. Smiled and said, "I accept you as my judge, sir."

"As you wish." I looked at oldest lad. "What parties to quarrel? Just you and your young friend?"

"Oh, no, Judge, all of us."

"Not your judge yet." I looked around. "Do you all ask me to judge?"

Were nods; none said No. Leader turned to girl, added, "Better speak up, Tish. You accept Judge O'Kelly?"

"What? Oh, sure!" She was a vapid little thing, vacantly pretty, curvy, perhaps fourteen. Slot-machine type, and how she might wind up. Sort who prefers being queen over pack of stilyagi to solid marriage. I don't blame stilyagi; they chase around corridors because not enough females. Work all day and nothing to go home to at night.

"Okay, court has been accepted and all are bound to abide by my verdict. Let's settle fees. How high can you boys go? Please understand I'm not going to judge an elimination for dimes. So ante up or I turn him loose."

Leader blinked, they went into huddle. Shortly he turned and said, "We don't have much. Will you do it for five Kong dollars apiece?"

Six of them--"No. Ought not to ask a court to judge elimination at that price."

They huddled again. "Fifty dollars, Judge?"

"Sixty. Ten each. And another ten from you, Tish," I said to girl.

She looked surprised, indignant. "Come, come!" I said. "Tanstaafl."

She blinked and reached into pouch. She had money; types like that always have.

I collected seventy dollars, laid it on desk, and said to tourist, "Can match it?"

"Beg pardon?"

"Kids are paying seventy dollars Hong Kong for judgment. You should match it. If you can't, open pouch and prove it and can owe it to me. But that's your share." I added, "Cheap, for a capital case. But kids can't pay much so you get a bargain."

"I see. I believe I see." He matched with seventy Hong Kong.

"Thank you," I said. "Now does either side want a jury?" Girl's eyes lit up. "Sure! Let's do it right." Earthworm said, "Under the circumstances perhaps I need one."

"Can have it," I assured. "Want a counsel?"

"Why, I suppose I need a lawyer, too."

"I said 'counsel,' not 'lawyer.' Aren't any lawyers here." Again he seemed delighted. "I suppose counsel, if I elected to have one, would be of the same, uh, informal quality as the rest of these proceedings?"

"Maybe, maybe not. I'm informal sort of judge, that's all. Suit yourself."

"Mm. I think I'll rely on your informality, your honor."

Oldest lad said, "Uh, this jury. You pick up chit? Or do we?"

"I pay it; I agreed to judge for a hundred forty, gross. Haven't you been in court before? But not going to kill my net for extra I could do without. Six jurymen, five dollars each. See who's in Alley."

One boy stepped out and shouted, "Jury work! Five-dollar job!"

They rounded up six men and were what you would expect in Bottom Alley. Didn't worry me as had no intention of paying mind to them. If you go judge, better in good neighborhood with chance of getting solid citizens.

I went behind desk, sat down, put on Brody's plug hat--wondered where he had found it. Probably a castoff from some lodge. "Court's in session," I said. "Let's have names and tell me beef."

Oldest lad was named. Slim Lemke, girl war Patricia Carmen Zhukov; don't remember others. Tourist stepped up, reached into pouch and said, "My card, sir."

I still have it. It read:

STUART RENE LaJOIE
Poet--Traveler--Soldier of Fortune

Beef was tragically ridiculous, fine example of why tourists should not wander around without guides. Sure, guides bleed them white--but isn't that what a tourist is for? This one almost lost life from lack of guidance.

Had wandered into a taproom which lets stilyagi hang out, a sort of clubroom. This simple female had flirted with him. Boys had let matter be, as of course they had to as long as she invited it. But at some point she had laughed and let him have a fist in ribs. He had taken it as casually as a Loonie would . . . but had answered in distinctly earthworm manner; slipped arm around waist and pulled her to him, apparently tried to kiss her.

Now believe me, in North America this wouldn't matter; I've seen things much like it. But of course Tish was astonished, perhaps frightened. She screamed.

And pack of boys set upon him and roughed him up. Then decided he had to pay for his "crime"--but do it correctly. Find a judge.

Most likely they chickened. Chances are not one had ever dealt with an elimination. But their lady had been insulted, had to be done.

I questioned them, especially Tish, and decided I had it straight. Then said, "Let me sum up. Here we have a stranger. Doesn't know our ways. He offended, he's guilty. But meant no offense far as I can see. What does jury say? Hey, you there!--wake up! What you say?"

Juryman looked up blearily, said, "'Liminate him!"

"Very well? And you?"

"Well--" Next one hesitated. "Guess it would be enough just to beat tar out of him, so he'll know better next time. Can't have men pawing women, or place will get to be as bad as they say Terra is."

"Sensible," I agreed. "And you?"

Only one juror voted for elimination. Others ranged from a beating to very high fines.

"What do you think, Slim?"

"Well--" He was worried--face in front of gang, face in front of what might be his girl. But had cooled down and didn't want chum eliminated. "We already worked him over. Maybe if he got down on hands and knees and kissed floor in front of Tish and said he was sorry?"

"Will you do that, Gospodin LaJoie?"

"If you so rule, your honor."

"I don't. Here's my verdict. First that juryman--you!--you are fined fee paid you because you fell asleep while supposed to be judging. Grab him, boys, take it away from him and throw him out."

They did, enthusiastically; made up a little for greater excitement they had thought of but really could not stomach. "Now, Gospodin LaJoie, you are fined fifty Hong Kong for not having common sense to learn local customs before stirring around. Ante up."

I collected it. "Now you boys line up. You are fined five dollars apiece for not exercising good judgment in dealing with a person you knew was a stranger and not used to our ways. Stopping him from touching Tish, that's fine. Rough him, that's okay, too; he'll learn faster. And could have tossed him out. But talking about eliminating for what was honest mistake--well, it's out of proportion. Five bucks each. Ante up.

Slim gulped. "Judge . . . I don't think we have that much left! At least I don't."

"I thought that might be. You have a week to pay or I post your names in Old Dome. Know where Bon Ton Beauté Shoppe is, near easement lock thirteen? My wife runs it; pay her. Court's out. Slim, don't go away. Nor you, Tish. Gospodin LaJoie, let's take these young people up and buy them a cold drink and get better acquainted."

Again his eyes filled with odd delight that reminded of Prof.

"A charming idea, Judge!"

"I'm no longer judge. It's up a couple of ramps. . . so I suggest you offer Tish your arm."

He bowed and said, "My lady? May I?" and crooked his elbow to her. Tish at once became very grown up. "Spasebo, Gospodin! I am pleased."

Took them to expensive place, one where their wild clothes and excessive makeup looked out of place; they were edgy. But I tried to make them feel easy and Stuart LaJoie tried even harder and successfully. Got their addresses as well as names; Wyoh had one sequence which was concentrating on stilyagi. Presently they finished their coolers, stood up, thanked and left. LaJoie and I stayed on.

"Gospodin," he said presently, "you used an odd word earlier--odd to me, I mean."

"Call me 'Mannie' now that kids are gone. What word?"

"It was when you insisted that the, uh, young lady, Tish-- that Tish must pay, too. 'Tone-stapple,' or something like it."

"Oh, 'tanstaafl.' Means ~There ain't no such thing as a free lunch.' And isn't," I added, pointing to a FREE LUNCH sign across room, "or these drinks would cost half as much. Was reminding her that anything free costs twice as much in long run or turns out worthless."

"An interesting philosophy."

"Not philosophy, fact. One way or other, what you get, you pay for." I fanned air. "Was Earthside once and heard expression 'Free as air.' This air isn't free, you pay for every breath."

"Really? No one has asked me to pay to breathe." He smiled. "Perhaps I should stop."

"Can happen, you almost breathed vacuum tonight. But nobody asks you because you've paid. For you, is part of round-trip ticket; for me it's a quarterly charge." I started to tell how my family buys and sells air to community co-op, decided was too complicated. "But we both pay."

LaJoie looked thoughtfully pleased. "Yes, I see the economic necessity. It's simply new to me. Tell me, uh, Mannie--and I'm called 'Stu'--was I really in danger of 'breathing vacuum'?"

"Should have charged you more."

"Please?"

"You aren't convinced. But charged kids all they could scrape up and fined them too, to make them think. Couldn't charge you more than them. Should have, you think it was all a joke."

"Believe me, sir, I do not think it was a joke. I just have trouble grasping that your local laws permit a man to be put to death . . . so casually . . . and for so trivial an offense."

I sighed. Where do you start explaining when a man's words show there isn't anything he understands about subject, instead is loaded with preconceptions that don't fit facts and doesn't even know he has?

"Stu," I said, "let's take that piece at a time. Are no 'local laws' so you couldn't be 'put to death' under them. Your offense was not 'trivial,' I simply made allowance for ignorance. And wasn't done casually, or boys would have dragged you to nearest lock to zero pressure, shoved you in, and cycled. Instead were most formal--good boys!--and paid own cash to give you a trial. And didn't grumble when verdict wasn't even close to what they asked. Now, anything still not clear?"

He grinned and turned out to have dimples like Prof; found myself liking him still more. "All of it, I'm afraid. I seem to have wandered into Looking Glass Land."

Expected that; having been Earthaide I know how their minds work, some. An earthworm expects to find a law, a printed law, for every circumstance. Even have laws for private matters such as contracts. Really, if a man's word isn't any good, who would contract with him? Doesn't he have reputation?

"We don't have laws," I said. "Never been allowed to. Have customs, but aren't written and aren't enforced--or could say they are self-enforcing because are simply way things have to be, conditions being what they are. Could say our customs are natural laws because are way people have to behave to stay alive. When you made a pass at Tish you were violating a natural law. . . and almost caused you to breathe vacuum."

He blinked thoughtfully. "Would you explain the natural law I violated? I had better understand it . . . or best I return to my ship and stay inboard until lift. To stay alive."

"Certainly. Is so simple that, once you understand, you'll never be in danger from it again. Here we are, two million males, less than one million females. A physical fact, basic as rock or vacuum. Then add idea of tanstaafl. When thing is scarce, price goes up.

Women are scarce; aren't enough to go around--that makes them most valuable thing in Luna, more precious than ice or air, as men without women don't care whether they stay alive or not. Except a Cyborg, if you regard him as a man, which I don't."

I went on: "So what happens?--and mind you, things were even worse when this custom, or natural law, first showed itself back in twentieth century. Ratio was ten-to-one or worse then. One thing is what always happens in prisons: men turn to other men. That helps not much; problem still is because most men want women and won't settle for substitute while chance of getting true gelt.

"They get so anxious they will kill for it. . . and from stories old-timers tell was killing enough to chill your teeth in those days. But after a while those still alive find way to get along, things shake down. As automatic as gravitation. Those who adjust to facts stay alive; those who don't are dead and no problem.

"What that means, here and now, is that women are scarce and call tune. . . and you are surrounded by two million men who see to it you dance to that tune. You have no choice, she has all choice. She can hit you so hard it draws blood; you dasn't lay a finger on her. Look, you put an arm around Tish, maybe tried to kiss. Suppose instead she had gone to hotel room with you; what would happen?"

"Heavens! I suppose they would have torn me to pieces."

"They would have done nothing. Shrugged and pretended not to see. Because choice is hers. Not yours. Not theirs. Exclusively hers. Oh, be risky to ask her to go to hotel; she might take offense and that would give boys license to rough you up. But--well, take this Tish. A silly little tart. If you had flashed as much money as I saw in your pouch, she might have taken into head that a bundle with tourist was just what she needed and suggested it herself. In which case would have been utterly safe."

Lajoie shivered. "At her age? It scares me to think of it. She's below the age of consent. Statutory rape."

"Oh, bloody! No such thing. Women her age are married or ought to be. Stu, is no rape in Luna. None. Men won't permit. If rape had been involved, they wouldn't have bothered to find a judge and all men in earshot would have scrambled to help. But chance that a girl that big is virgin is negligible. When they're little, their mothers watch over them, with help from everybody in city; children are safe here. But when they reach husband-high, is no holding them and mothers quit trying. If they choose to run corndors and have fun, can't stop 'em; once a girl is nubile, she's her own boss. You married?"

"No." He added with a smile; "Not at present."

"Suppose you were and wife told you she was marrying again. What would you do?"

"Odd that you should pick that, something like it did happen. I saw my attorney and made sure she got no alimony."

"'Alimony' isn't a word here; I learned it Earthside. Here you might--or a Loonie husband might--say, 'I think we'll need a bigger place, dear.' Or might simply congratulate her and his new co-husband. Or if it made him so unhappy he couldn't stand it, might opt out and pack clothes. But whatever, would not make slightest fuss. If he did, opinion would be unanimous against him. His friends, men and women alike, would snub him. Poor sod would probably move to Novylen, change name and hope to live it down.

"All our customs work that way. If you're out in field and a cobber needs air, you lend him a bottle and don't ask cash. But when you're both back in pressure again, if he

won't pay up, nobody would criticize if you eliminated him without a judge. But he would pay; air is almost as sacred as women. If you take a new chum in a poker game, you give him air money. Not eating money; can work or starve. If you eliminate a man other than self-defense, you pay his debts and support his kids, or people won't speak to you, buy from you, sell to you."

"Mannie, you're telling me that I can murder a man here and settle the matter merely with money?"

"Oh, not at all! But eliminating isn't against some law; are no laws--except Warden's regulations--and Warden doesn't care what one Loonie does to another. But we figure this way: If a man is killed, either he had it coming and everybody knows it--usual case--or his friends will take care of it by eliminating man who did it. Either way, no problem. Nor many eliminations. Even set duels aren't common."

"'His friends will take care of it.' Mannie, suppose those young people had gone ahead? I have no friends here."

"Was reason I agreed to judge. While I doubt if those kids could have egged each other into it, didn't want to take chance. Eliminating a tourist could give our city a bad name."

"Does it happen often?"

"Can't recall has ever happened. Of course may have been made to look like accident. A new chum is accident-prone; Luna is that sort of place. They say if a new chum lives a year, he'll live forever. But nobody sells him insurance first year." Glanced at time. "Stu, have you had dinner?"

"No, and I was about to suggest that you come to my hotel. The cooking is good. Auberge Orleans."

I repressed shudder--ate there once. "Instead, would you come home with me and meet my family? We have soup or something about this hour."

"Isn't that an imposition?"

"No. Half a minute while I phone."

Mum said, "Manuel! How sweet, dear! Capsule has been in for hours; I had decided it would be tomorrow or later."

"Just drunken debauchery, Mimi, and evil companions. Coming home now if can remember way--and bringing evil companion."

"Yes, dear. Dinner in twenty minutes; try not to be late."

"Don't you want to know whether my evil companion is male or female?"

"Knowing you, I assume that it is female. But I fancy I shall be able to tell when I see her."

"You know me so well, Mum. Warn girls to look pretty; wouldn't want a visitor to outshine them."

"Don't be too long; dinner will spoil. 'Bye, dear. Love."

"Love, Mum." I waited, then punched MYCROFTXXX. "Mike, want a name searched. Earthside name, passenger in Popov. Stuart Rene LaJoie. Stuart with a U and last name might file under either L or J."

Didn't wait many seconds; Mike found Stu in all major Earthside references: Who's Who, Dun & Bradstreet, Almanach de Gotha, London Times running files, name it. French expatriate, royalist, wealthy, six more names sandwiched into ones he used, three university degrees including one in law from Sorbonne, noble ancestry both France

and Scotland, divorced (no children) from Honorable Pamela Hyphen-Hyphen-Blueblood. Sort of earthworm who wouldn't speak to a Loonie of convict ancestry--except Stu would speak to anyone.

I listened a pair of minutes, then asked Mike to prepare a full dossier, following all associational leads. "Mike, might be our pigeon."

"Could be, Man."

"Got to run. 'Bye." Returned thoughtfully to my guest. Almost a year earlier, during alcoholic talk-talk in a hotel room, Mike had promised us one chance in seven--if certain things were done. One sine-qua-non was help on Terra itself.

Despite "throwing rocks," Mike knew, we all knew, that mighty Terra with eleven billion people and endless resources could not be defeated by three million who had nothing, even though we stood on a high place and could drop rocks on them.

Mike drew parallels from XVIIIth century, when Britain's American colonies broke away, and from XXth, when many colonies became independent of several empires, and pointed out that in no case had a colony broken loose by brute force. No, in every case imperial state was busy elsewhere, had grown weary and given up without using full strength.

For months we had been strong enough, had we wished, to overcome Warden's bodyguards. Once our catapult was ready (anytime now) we would not be helpless. But we needed a "favorable climate" on Terra. For that we needed help on Terra.

Prof had not regarded it as difficult. But turned out to be quite difficult. His Earthside friends were dead or nearly and I had never had any but a few teachers. We sent inquiry down through cells: "What vips do you know Earthaide?" and usual answer was: "You kidding?" Null program--

Prof watched passenger lists on incoming ships, trying to figure a contact, and had been reading Luna print-outs of Earthside newspapers, searching for vips he could reach through past connection. I had not tried; handful I had met on Terra were not vips.

Prof had not picked Stu off Popov's passenger list. But Prof had not met him. I didn't not know whether Stu was simply eccentric as odd personal card seemed to show. But he was only Terran I had ever had a drink with in Luna, seemed a dinkum cobber, and Mike's report showed hunch was not all bad; he carried some tonnage.

So I took him home to see what family thought of him.

Started well. Mum smiled and offered hand. He took it and bowed so deep I thought he was going to kiss it--would have, I think, had I not warned him about fems. Mum was cooing as she led him in to dinner.

12

April and May '76 were more hard work and increasing effort to stir up Loonies against Warden, and goad him into retaliation. Trouble with Mort the Wart was that he was not a bad egg, nothing to hate about him other than fact he was symbol of Authority; was necessary to frighten him to get him to do anything. And average Loonie was just as bad. He despised Warden as matter of ritual but was not stuff that makes revolutionists; he couldn't be bothered. Beer, betting, women, and work-- Only thing that kept

Revolution from dying of anemia was that Peace Dragoons had real talent for antagonizing.

But even them we had to keep stirred up. Prof kept saying we needed a "Boston Tea Party," referring to mythical incident in an earlier revolution, by which he meant a public ruckus to grab attention.

We kept trying. Mike rewrote lyrics of old revolutionary songs: "Marseillaise," "Internationale," "Yankee Doodle," "We Shall Overcome," "Pie in the Sky," etc., giving them words to fit Luna. Stuff like "Sons of Rock and Boredom/Will you let the Warden/Take from you your libertee!" Simon Jester spread them around, and when one took hold, we pushed it (music only) by radio and video. This put Warden in silly position of forbidding playing of certain tunes--which suited us; people could whistle.

Mike studied voice and word-choice patterns of Deputy Administrator, Chief Engineer, other department heads; Warden started getting frantic calls at night from his staff. Which they denied making. So Alvarez put lock-and-trace on next one--and sure enough, with Mike's help, Alvarez traced it to supply chief's phone and was sure it was boss belly-robber's voice.

But next poison call to Mort seemed to come from Alvarez, and what Mort had to say next day to Alvarez and what Alvaiez said in own defense can only be described as chaotic crossed with psychotic.

Prof had Mike stop; was afraid Alvarez might lose job, which we did not want; he was doing too well for us. But by then Peace Dragoons had been dragged out twice in night on what seemed to be Warden's orders, further disrupting morale, and Warden became convinced he was surrounded by traitors in official family while they were sure he had blown every circult.

An ad appeared in Lunaya Pravda announcing lecture by Dr. Adam Selene on Poetry and Arts in Luna: a New Renaissance. No comrade attended; word went down cells to stay away. Nor did anybody hang around when three squads of Peace Dragoons showed up--this involves Heisenberg principle as applied to Scarlet Pimpernels. Editor of Pravda spent bad hour explaining that he did not accept ads in person and this one was ordered over counter and paid for in cash. He was told not to take ads from Adam Selene. This was countermanded and he was told to take anything from Adam Selene but notify Alvarez at once.

New catapult was tested with a load dropped into south Indian Ocean at 350 E., 600 S., a spot used only by fish. Mike was joyed over his marksmanship since he had been able to sneak only two looks when guidance & tracking radars were not in use and had relied on just one nudge to bring it to bullseye. Earthside news reported giant meteor in sub-Antarctic picked up by Capetown Spacetrack with projected impact that matched Mike's attempt perfectly--Mike called me to boast while taking down evening's Reuters transmission. "I told you it was dead on," he gloated. "I watched it. Oh, what a lovely splash!" Later reports on shock wave from seismic labs and on tsunamis from oceanographic stations were consistent.

Was only canister we had ready (trouble buying steel) or Mike might have demanded to try his new toy again.

Liberty Caps started appearing on stilyagi and their girls; Simon Jester began wearing one between his horns. Bon Marche gave them away as premiums. Alvarez had painful talk with Warden in which Mort demanded to know if his fink boss felt that

something should be done every time kids took up fad? Had Alvarez gone out of his mind?

I ran across Slim Lemke on Carver Causeway early May; he was wearing a Liberty Cap. He seemed pleased to see me and I thanked him for prompt payment (he had come in three days after Stu's trial and paid Sidris thirty Hong Kong, for gang) and bought him a cooler. While we were seated I asked why young people were wearing red hats? Why a hat? Hat's were an earthworm custom, nyet?

He hesitated, then said was sort of a lodge, like Elks. I changed subject. Learned that his full name was Moses Lemke Stone; member of Stone Gang. This pleased me, we were relatives. But surprised me. However, even best families such as Stones sometimes can't always find marriages for all sons; I had been lucky or might have been roving corridors at his age, too. Told him about our connection on my mother's side.

He warmed up and shortly said, "Cousin Manuel, ever think about how we ought to elect our own Warden?"

I said No, I hadn't; Authority appointed him and I supposed they always would. He asked why we had to have an Authority? I asked who had been putting ideas in head? He insisted nobody had, just thinking, was all--didn't he have a right to think?

When I got home was tempted to check with Mike, find out lad's Party name if any. But wouldn't have been proper security, nor fair to Slim.

On 3 May '76 seventy-one males named Simon were rounded up and questioned, then released. No newspaper carned story. But everybody heard it; we were clear down in "J's" and twelve thousand people can spread a story faster than I would have guessed. We emphasized that one of these dangerous males was only four years old, which was not true but very effective.

Stu Lajoie stayed with us during February and March and did not return to Terra until early April; he changed his ticket to next ship and then to next. When I pointed out that he was riding close to invisible line where irreversible physiological changes could set in, he grinned and told me not to worry. But made arrangements to use centrifuge.

Stu did not want to leave even by April. Was kissed goodbye with tears by all my wives and Wyoh, and he assured each one he was coming back. But left as he had work to do; by then he was a Party member.

I did not take part in decision to recruit Stu; I felt prejudiced. Wyoh and Prof and Mike were unanimous in risking it; I happily accepted their judgment.

We all helped to sell Stu LaJoie--self, Prof, Mike, Wyoh, Mum, even Sidris and Lenore and Ludmilla and our kids and Hans and Ali and Frank, as Davis home life was what grabbed him first. Did not hurt that Lenore was prettiest girl in L-City--which is no disparagement of Milla, Wyoh, Anna, and Sidris. Nor did it hurt that Stu could charm a baby away from breast. Mom fussed over him, Hans showed him hydroponic farming and Stu got dirty and sweaty and sloshed around in tunnels with our boys--helped harvest our Chinee fishponds--got stung by our bees--learned to handle a p-suit and went up with me to make adjustments on solar battery--helped Anna butcher a hog and learned about tanning leather--sat with Grandpaw and was respectful to his naive notions about Terra--washed dishes with Milla, something no male in our family ever did--rolled on floor with babies and puppies--learned to grind flour and swapped recipes with Mum.

I introduced him to Prof and that started political side of feeling him out. Nothing had been admitted--we could back away--when Prof introduced him to "Adam Selene"

who could visit only by phone as he was "in Hong Kong at present." By time Stu was committed to Cause, we dropped pretense and let him know that Adam was chairman whom he would not meet in person for security reasons.

But Wyoh did most and was on her judgment that Prof turned cards up and let Stu know that we were building a revolution. Was no surprise; Stu had made up mind and was waiting for us to trust him.

They say a face once launched a thousand ships. I do not know that Wyoh used anything but argument on Stu. I never tried to find out. But Wyoh had more to do with committing me than all Prof's theory or Mike's figures. If Wyoh used even stronger methods on Stu, she was not first heroine in history to do so for her country.

Stu went Earthside with a special codebook. I'm no code and cipher expert except that a computerman learns principles during study of information theory. A cipher is a mathematical pattern under which one letter substitutes for another, simplest being one in which alphabet is merely scrambled.

A cipher can be incredibly subtle, especially with help of a computer. But ciphers all have weakness that they are patterns. If one computer can think them up, another computer can break them.

Codes do not have same weakness. Let's say that codebook has letter group GLOPS. Does this mean "Aunt Minnie will be home Thursday" or does it mean "3.14157 . . . "?

Meaning is whatever you assign and no computer can analyze it simply from letter group. Give a computer enough groups and a rational theory involving meanings or subjects for meanings, and it will eventually worry it out because meanings themselves will show patterns. But is a problem of different kind on more difficult level.

Code we selected was commonest commercial codebook, used both on Terra and in Luna for commercial dispatches. But we worked it over. Prof and Mike spent hours discussing what information Party might wish to send to its agent on Terra, or receive from agent, then Mike put his vast information to work and came up with new set of meanings for codebook, ones that could say "Buy Thai rice futures" as easily as "Run for life; they've caught us." Or anything, as cipher signals were buried in it to permit anything to be said that had not been anticipated.

Late one night Mike made print-out of new code via Lunaya Pravda's facilities, and night editor turned roll over to another comrade who converted it into a very small roll of film and passed it along in turn, and none ever knew what they handled or why. Wound up in Stu's pouch. Search of off-planet luggage was tight by then and conducted by bad-tempered Dragoons--but Stu was certain he would have no trouble. Perhaps he swallowed it.

Thereafter some of LuNoHo Company's dispatches to Terra reached Stu via his London broker.

Part of purpose was financial. Party needed to spend money Earthside; LuNoHoCo transferred money there (not all stolen, some ventures turned out well); Party needed still more money Earthside, Stu was to speculate, acting on secret knowledge of plan of Revolution--he, Prof, and Mike had spent hours discussing what stocks would go up, what would go down, etc., after Der Tag. This was Prof's pidgin; I am not that sort of gambler.

But money was needed before Der Tag to build "climate of opinion." We needed publicity, needed delegates and senators in Federated Nations, needed some nation to recognize us quickly once The Day came, we needed laymen telling other laymen over a beer: "What is there on that pile of rock worth one soldier's life? Let 'em go to hell in their own way, I say!"

Money for publicity, money for bribes, money for dummy organizations and to infiltrate established organizations; money to get true nature of Luna's economy (Stu had gone loaded with figures) brought out as scientific research, then in popular form; money to convince foreign office of at least one major nation that there was advantage in a Free Luna; money to sell idea of Lunar tourism to a major cartel--

Too much money! Stu offered own fortune and Prof did not discourage it-- Where treasure is, heart will be. But still too much money and far too much to do. I did not know if Stu could swing a tenth of it; simply kept fingers crossed. At least it gave us a channel to Terra. Prof claimed that communications to enemy were essential to any war if was to be fought and settled sensibly. (Prof was a pacifist. Like his vegetarianism, he did not let it keep him from being "rational." Would have made a terrific theologian.)

As soon as Stu went Earthside, Mike set odds at one in thirteen. I asked him what in hell? "But, Man," he explained patiently, "it increases risk. That it is necessary risk does not change the fact that risk is increased."

I shut up. About that time, early May, a new factor reduced some risks while revealing others. One part of Mike handled Terra-Luna microwave traffic--commercial messages, scietitific data, news channels, video, voice radiotelephony, routine Authority traffic--and Warden's top secret.

Aside from last, Mike could read any of this including commercial codes and ciphers--breaking ciphers was a crossword puzzle to him and nobody mistrusted this machine. Except Warden, and I suspect that his was distrust of all machinery; was sort of person who finds anything more involved than a pair of scissors complex, mysterious, and suspect--Stone Age mind.

Warden used a code that Mike never saw. Also used ciphers and did not work them through Mike; instead he had a moronic little machine in residence office. On top of this he had arrangement with Authority Earthside to switch everything around at preset times. No doubt he felt safe.

Mike broke his cipher patterns and deduced time-change program just to try legs. He did not tackle code until Prof suggested it; it held no interest for him.

But once Prof asked, Mike tackled Warden's top-secret messages. He had to start from scratch; in past Mike had erased Warden's messages once transmission was reported. So slowly, slowly he accumulated data for analysis--painfully slow, for Warden used this method only when he had to. Sometimes a week would pass between such messages. But gradually Mike began to gather meanings for letter groups, each assigned a probability. A code does not crack all at once; possible to know meanings of ninety-nine groups in a message and miss essence because one group is merely GLOPS to you.

However, user has a problem, too; if GLOPS comes through as GLOPT, he's in trouble. Any method of communication needs redundancy, or information can be lost. Was at redundancy that Mike nibbled, with perfect patience of machine.

Mike solved most of Warden's code sooner than he had projected; Warden was sending more traffic than in past and most of it one subject (which helped)--subject being security and subversion.

We had Mort in a twitter; he was yelling for help.

He reported subversive activities still going on despite two phalanges of Peace Dragoons and demanded enough troops to station guards in all key spots inside all warrens.

Authority told him this was preposterous, no more of FN's crack troops could be spared--to be permanently ruined for Earthside duties--and such requests should not be made. If he wanted more guards, he must recruit them from transportees-but such increase in administrative costs must be absorbed in Luna; he would not be allowed more overhead. He was directed to report what steps be had taken to meet new grain quotas set in our such-and-such.

Warden replied that unless extremely moderate requests for trained security personnel--not-repeat-not untrained, unreliable, and unfit convicts--were met, he could no longer assure civil order, much less increased quotas.

Reply asked sneeringly what difference it made if exconsignees chose to riot among themselves in their holes? If it worried him, had he thought of shutting off lights as was used so successfully in 1996 and 2021?

These exchanges caused us to revise our calendar, to speed some phases, slow others. Like a perfect dinner, a revolution has to be "cooked" so that everything comes out even. Stu needed time Earthside. We needed canisters and small steering rockets and associated circuitry for "rock throwing." And steel was a problem--buying it, fabricating it, and above all moving it through meander of tunnels to new catapult site. We needed to increase Party at least into "K's"--say 40,000--with lowest echelons picked for fighting spirit rather than talents we had sought earlier. We needed weapons against landings. We needed to move Mike's radars without which he was blind. (Mike could not be moved; bits of him spread all through Luna. But he had a thousand meters of rock over that central part of him at Complex, was surrounded by steel and this armor was cradled in springs; Authority had contemplated that someday somebody might lob H-weapons at their control center.)

All these needed to be done and pot must not boil too soon.

So we cut down on things that worried Warden and tried to speed up everything else. Simon Jester took a holiday. Word went out that Liberty Caps were not stylish--but save them. Warden got no more nervous-making phone calls. We quit inciting incidents with Dragoons-which did not stop them but reduced number.

Despite efforts to quiet Mort's worries a symptom showed up which disquieted us instead. No message (at least we intercepted none) reached Warden agreeing to his demand for more troops--but he started moving people out of Complex. Civil servants who lived there started looking for holes to rent in L-City. Authority started test drills and resonance exploration in a cubic adjacent to L.City which could be converted into a warren.

Could mean that Authority proposed shipping up unusually large draft of prisoners. Could mean that space in Complex was needed for purpose other than quarters. But Mike told us:

"Why kid yourselves? The Warden is going to get those troops; that space will be their barracks. Any other explanation I would have heard."

I said, "But Mike, why didn't you hear if it's troops? You have that code of Warden's fairly well whipped."

"Not just 'fairly well,' I've got it whipped. But the last two ships have carried Authority vips and I don't know what they talk about away from phones!"

So we tried to plan to cover possibility of having to cope with ten more phalanges, that being Mike's estimate of what cubic being cleared would hold. We could deal with that many--with Mike's help--but it would mean deaths, not bloodless coup d'etat Prof had planned.

And we increased efforts to speed up other factors.

When suddenly we found ourselves committed--

13

Her name was Marie Lyons; she was eighteen years old and born in Luna, mother having been exiled via Peace Corps in '56. No record of father. She seems to have been a harmless person. Worked as a stock-control clerk in shipping department, lived in Complex.

Maybe she hated Authority and enjoyed teasing Peace Dragoons. Or perhaps it started as a commercial transaction as cold-blooded as any in a crib behind a slot-machine lock. How can we know? Six Dragoons were in it. Not satisfied with raping her (if rape it was) they abused her other ways and killed her. But they did not dispose of body neatly; another civil service fem found it before was cold. She screamed. Was her last scream.

We heard about it at once; Mike called us three while Alvarez and Peace Dragoon C.O. were digging into matter in Alvarez's office. Appears that Peace Goon boss had no trouble laying hands on guilty; he and Alvarez were questioning them one at a time, and quarreling between grillings. Once we heard Alvarez say: "I told you those goons of yours had to have their own women! I warned you!"

"Stuff it," Dragoon officer answered. "I've told you time and again they won't ship any. The question now is how we hush this up."

"Are you crazy? Warden already knows."

"It's still the question."

"Oh, shut up and send in the next one."

Early in filthy story Wyoh joined me in workshop. Was pale under makeup, said nothing but wanted to sit close and clench my hand.

At last was over and Dragoon officer left Alvarez. Were still quarreling. Alvarez wanted those six executed at once and fact made public (sensible but not nearly enough, for his needs); C.O. was still talking about "hushing it up." Prof said, "Mike, keep an ear there and listen where else you can. Well, Mike? Wyoh? Plans?"

I didn't have any. Wasn't a cold, shrewd revolutionist; just wanted to get my heel into faces that matched those six voices. "I don't know. What do we do, Prof?"

"'Do'? We're on our tiger; we grab its ears. Mike. Where's Finn Nielsen? Find him."

Mike answered, "He's calling now." He cut Finn in with us; I heard: "--at Tube South. Both guards dead and about six of our people. Just people, I mean, not necessarily comrades. Some wild rumor about Goons going crazy and raping and killing all women at Complex. Adam, I had better talk to Prof."

"I'm here, Finn," Prof answered in a strong, confident voice. "Now we move, we've got to. Switch off and get those laser guns and men who trained with them, any you can round up."

"Da! Okay, Adam?"

"Do as Prof says. Then call back."

"Hold it, Finn!" I cut in. "Mannie here. I want one of those guns."

"You haven't practiced, Mannie."

"If it's a laser, I can use it!"

"Mannie," Prof said forcefully, "shut up. You're wasting time; let Finn go. Adam. Message for Mike. Tell him Plan Alert Four."

Prof's example damped my oscillating. Had forgotten that Finn was not supposed to know Mike was anybody but "Adam Selene"; forgotten everything but raging anger. Mike said, "Finn has switched off, Prof, and I put Alert Four on standby when this broke. No traffic now except routine stuff filed earlier. You don't want it interrupted, do you?"

"No, just follow Alert Four. No Earthside transmission either way that tips any news. If one comes in, hold it and consult." Alert Four was emergency communication doctrine, intended to slap censorship on news to Terra without arousing suspicion. For this Mike was ready to talk in many voices with excuses as to why a direct voice transmission would be delayed--and any taped transmission was no problem.

"Program running," agreed Mike.

"Good. Mannie, calm down, son, and stick to your knitting. Let other people do the fighting; you're needed here, we're going to have to improvise. Wyoh, cut out and get word to Comrade Cecilia to get all Irregulars out of the corridors. Get those children home and keep them home--and have their mothers urging other mothers to do the same thing. We don't know where the fighting will spread. But we don't want children hurt if we can help it."

"Right away, Prof!"

"Wait. As soon as you've told Sidris, get moving on your stilyagi. I want a riot at the Authority's city office--break in, wreck the place, and noise and shouting and destruction--no one hurt if it can be helped. Mike. Alert-Four-Em. Cut off the Complex except for your own lines."

"Prof!" I demanded. "What sense in starting riots here?"

"Mannie, Mannie! This is The Day! Mike, has the rape and murder news reached other warrens?"

"Not that I've heard. I'm listening here and there with random jumps. Tube stations are quiet except Luna City. Fighting has just started at Tube Station West. Want to hear it?"

"Not now. Mannie, slide over there and watch it. But stay out of it and slick close to a phone. Mike, start trouble in all warrens. Pass the news down the cells and use Finn's version, not the truth. The Goons are raping and killing all the women in the Complex--I'll give you details or you can invent them. Uh, can you order the guards at tube stations

in other warrens back to their barracks? I want riots but there is no point in sending unarmed people against armed men if we can dodge it."

"I'll try."

I hurried to Tube Station West, slowed as I neared it. Corridors were full of angry people. City roared in way I had never heard before and, as I crossed Causeway, could hear shouts and crowd noise from direction of Authority's city office although it seemed to me there had not been time for Wyoh to reach her stilyagi--nor had there been; what Prof had tried to start was under way spontaneously.

Station was mobbed and I had to push through to see what I assumed to be certain, that passport guards were either dead or fled. 'Dead' it turned out, along with three Loonies. One was a boy not more than thirteen. He had died with his hands on a Dragoon's throat and his head still sporting a little red cap. I pushed way to a public phone and reported.

"Go back," said Prof. "and read the I.D. of one of those guards. I want name and rank. Have you seen Finn?"

"No."

"He's headed there with three guns. Tell me where the booth you're in is, get that name and come back to it."

One body was gone, dragged away; Bog knows what they wanted with it. Other had been badly battered but I managed to crowd in and snatch dog chain from neck before it, too, was taken somewhere. I elbowed back to phone, found a woman at it. "Lady," I said, "I've got to use that phone. Emergency!"

"You're welcome to it! Pesky thing's out of order."

Worked for me; Mike bad saved it. Gave Prof guard's name. "Good," he said. "Have you seen Finn? He'll be looking for you at that booth."

"Haven't s-- Hold it, just spotted him."

"Okay, hang onto him. Mike, do you have a voice to fit that Dragoon's name?"

"Sorry, Prof. No."

"All right, just make it hoarse and frightened; chances are the C.O. won't know it that well. Or would the trooper call Alvarez?"

"He would call his C.O. Alvarez gives orders through him."

"So call the C.O. Report the attack and call for help and die in the middle of it. Riot sounds behind you and maybe a shout of 'There's the dirty bastard now!' just before you die. Can you swing it?"

'Programmed. No huhu," Mike said cheerfully.

"Run it. Mannie, put Finn on."

Prof's plan was to sucker off-duty guards out of barracks and keep suckering them--with Finn's men posted to pick them off as they got out of capsules. And it worked, right up to point where Mort the Wart lost his nerve and kept remaining few to protect himself while he sent frantic messages Earthside--none of which got through.

I wiggled out of Prof's discipline and took a laser gun when second capsule of Peace Dragoons was due. I burned two Goons, found blood lust gone and let other snipers have rest of squad. Too easy. They would stick heads up out of hatch and that would be that. Half of squad would not come out--until smoked out and then died with rest. By that time I was back at my advance post at phone.

Warden's decision to hole up caused trouble at Complex; Alvarez was killed and so was Goon C.O. and two of original yellow jackets. But a mixed lot of Dragoons and yellows, thirteen, holed up with Mort, or perhaps were already with him; Mike's ability to follow events by listening was spotty. But once it seemed clear that all armed effectives were inside Warden's residence, Prof ordered Mike to start next phase.

Mike turned out all lights in Complex save those in Warden's residence, and reduced oxygen to gasping point--not killing point but low enough to insure that anyone looking for trouble would not be in shape. But in residence, oxygen supply was cut to zero, leaving pure nitrogen, and left that way ten minutes. At end of that time Finn's men, waiting in p-suits at Warden's private tube station, broke latch on airlock and went in, "shoulder to shoulder." Luna was ours.

Book Two

A RABBLE IN ARMS

14

So a wave of patriotism swept over our new nation and unified it.

Isn't that what histories say? Oh, brother!

My dinkum word, preparing a revolution isn't as much huhu as having won it. Here we were, in control too soon, nothing ready and a thousand things to do. Authority in Luna was gone--but Lunar Authority Earthside and Federated Nations behind it were very much alive. Had they landed one troopship, orbited one cruiser, anytime next week or two, could have taken Luna back cheap. We were a mob.

New catapult had been tested but canned rock missiles ready to go you could count on fingers of one hand--my left hand. Nor was catapult a weapon that could be used against ships, nor against troops. We had notions for fighting off ships; at moment were just notions. We had a few hundred cheap laser guns stockpiled in Hong Kong Luna--Chinee engineers are smart--but few men trained to use them.

Moreover, Authority had useful functions. Bought ice and grain, sold air and water and power, held ownership or control at a dozen key points. No matter what was done in future, wheels had to turn. Perhaps wrecking city offices of Authority had been hasty (I thought so) as records were destroyed. However, Prof maintained that Loonies, all Loonies, needed a symbol to hate and destroy and those offices were least valuable and most public.

But Mike controlled communications and that meant control of most everything. Prof had started with control of news to and from Earthside, leaving to Mike censorship and faking of news until we could get around to what to tell Terra, and had added sub-phase "M" which cut off Complex from rest of Luna, and with it Richardson Observatory and associated laboratories--Pierce Radioscope, Selenophysical Station, and so forth. These were a problem as Terran scientists were always coming and going and staying as long as six months, stretching time by centrifuge. Most Terrans in Luna, save for a

handful of tourists--thirty-four--were scientists. Something had to be done about these Terrans, but meanwhile keeping them from talking to Terra was enough.

For time being, Complex was cut off by phone and Mike did not permit capsules to stop at any station in Complex even after travel was resumed, which it was as soon as Finn Nielsen and squad were through with dirty work.

Turned out Warden was not dead, nor had we planned to kill him; Prof figured that a live warden could always be made dead, whereas a dead one could not be made live if we needed him. So plan was to half kill him, make sure he and his guards could put up no fight, then break in fast while Mike restored oxygen.

With fans turning at top speed, Mike computed it would take four minutes and a bit to reduce oxygen to effective zero--so, five minutes of increasing hypoxia, five minutes of anoxia, then force lower lock while Mike shot in pure oxygen to restore balance. This should not kill anyone--but would knock out a person as thoroughly as anesthesia. Hazard to attackers would come from some or all of those inside having p-suits. But even that might not matter; hypoxia is sneaky, you can pass out without realizing you are short on oxygen. Is new chum's favorite fatal mistake.

So Warden lived through it and three of his women. But Warden, though he lived, was no use; brain had been oxygen-starved too long, a vegetable. No guard recovered, even though younger than he; would appear anoxia broke necks.

In rest of Complex nobody was hurt. Once lights were on and oxygen restored they were okay, including six rapist-murderers under lock in barracks. Finn decided that shooting was too good for them, so he went judge and used his squad as jury.

They were stripped, hamstrung at ankles and wrists, turned over to women in Complex. Makes me sick to think about what happened next but don't suppose they lived through as long an ordeal as Marie Lyons endured. Women are amazing creatures--sweet, soft, gentle, and far more savage than we are.

Let me mention those fink spies out of order. Wyoh had been fiercely ready to eliminate them but when we got around to them she had lost stomach. I expected Prof to agree. But he shook head. "No, dear Wyoh, much as I deplore violence, there are only two things to do with an enemy: Kill him. Or make a friend of him. Anything in between piles up trouble for the future. A man who finks on his friends once will do it again and we have a long period ahead in which a fink can be dangerous; they must go. And publicly, to cause others to be thoughtful."

Wyoh said, "Professor, you once said that if you condemned a man, you would eliminate him personally. Is that what you are going to do?"

"Yes, dear lady, and no. Their blood shall be on my hands; I accept responsibility. But I have in mind a way more likely to discourage other finks."

So Adam Selene announced that these persons had been employed by Juan Alvarez, late Security Chief for former Authority, as undercover spies--and gave names and addresses. Adam did not suggest that anything be done.

One man remained on dodge for seven months by changing warrens and name. Then early in '77 his body was found outside Novylen's lock. But most of them lasted no more than hours.

During first hours after coup d'etat we were faced with a problem we had never managed to plan--Adam Selene himself. Who is Adam Selene? Where is he? This is his

revolution; he handled every detail, every comrade knows his voice. We're out in open now. . . so where is Adam?

We batted it around much of that night, in room L of Raffles--argued it between decisions on a hundred things that came up and people wanted to know what to do, while "Adam" through other voices handled other decisions that did not require talk, composed phony news to send Earthside, kept Complex isolated, many things. (Is no possible doubt: without Mike we could not have taken Luna nor held it.)

My notion was that Prof should become "Adam." Prof was always our planner and theoretician; everybody knew him; some key comrades knew that he was "Comrade Bill" and all others knew and respected Professor Bernardo de la Paz-- My word, he had taught half of leading citizens in Luna City, many from other warrens, was known to every vip in Luna.

"No," said Prof.

"Why not?" asked Wyoh. "Prof. you're opted. Tell him, Mike."

"Comment reserved," said Mike. "I want to hear what Prof has to say."

"I say you've analyzed it, Mike," Prof answered. "Wyoh dearest comrade, I would not refuse were it possible. But there is no way to make my voice match that of Adam--and every comrade knows Adam by his voice; Mike made it memorable for that very purpose."

We then considered whether Prof could be slipped in anyhow, showing him only on video and letting Mike reshape whatever Prof said into voice expected from Adam.

Was turned down. Too many people knew Prof, had heard him speak; his voice and way of speaking could not be reconciled with Adam. Then they considered same possibility for me--my voice and Mike's were baritone and not too many people knew what I sounded like over phone and none over video.

I tromped on it. People were going to be surprised enough to find me one of our Chairman's lieutenants; they would never believe I was number one.

I said, "Let's combine deals. Adam has been a mystery all along; keep him that way. He'll be seen only over video--in a mask. Prof. you supply body; Mike, you supply voice."

Prof shook head. "I can think of no surer way to destroy confidence at our most critical period than by having a leader who wears a mask. No, Mannie."

We talked about finding an actor to play it. Were no professional actors in Luna then but were good amateurs in Luna Civic Players and in Novy Bolshoi Teatr Associates.

"No," said Prof, "aside from finding an actor of requisite character--one who would not decide to be Napoleon--we can't wait. Adam must start handling things not later than tomorrow morning."

"In that case," I said, "you've answered it. Have to use Mike and never put him on video. Radio only. Have to figure excuse but Adam must never be seen."

"I'm forced to agree," said Prof.

"Man my oldest friend," said Mike, "why do you say that I can't be seen?"

"Haven't you listened?" I said. "Mike, we have to show a face and body on video. You have a body--but it's several tons of metal. A face you don't have--lucky you, don't have to shave."

"But what's to keep me from showing a face, Man? I'm showing a voice this instant. But there's no sound behind it. I can show a face the same way."

Was so taken aback I didn't answer. I stared at video screen, installed when we leased that room. A pulse is a pulse is a pulse. Electrons chasing each other. To Mike, whole world was variable series of electrical pulses, sent or received or chasing around his innards.

I said, "No, Mike."

"Why not, Man?"

"Because you can't! Voice you handle beautifully. Involves only a few thousand decisions a second, a slow crawl to you. But to build up video picture would require, uh, say ten million decisions every second. Mike, you're so fast I can't even think about it. But you aren't that fast."

Mike said softly, "Want to bet, Man?"

Wyoh said indignantly, "Of course Mike can if he says he can! Mannie, you shouldn't talk that way." (Wyoh thinks an electron is something about size and shape of a small pea.)

"Mike," I said slowly, "I won't put money on it. Okay, want to try? Shall I switch on video?"

"I can switch it on," he answered.

"Sure you'll get right one? Wouldn't do to have this show somewhere else."

He answered testily, "I'm not stupid. Now let me be, Man--for I admit this is going to take just about all I've got."

We waited in silence. Then screen showed neutral gray with a hint of scan lines. Went black again, then a faint light filled middle and congealed into cloudy areas light and dark, ellipsoid. Not a face, but suggestion of face that one sees in cloud patterns covering Terra.

It cleared a little and reminded me of pictures alleged to be ectoplasm. A ghost of a face.

Suddenly firmed and we saw "Adam Selcne."

Was a still picture of a mature man. No background, just a face as if trimmed out of a print. Yet was, to me, "Adam Selene." Could not he anybody else.

Then he smiled, moving lips and jaw and touching tongue to lips, a quick gesture--and I was frightened.

"How do I look?" he asked.

"Adam," said Wyoh, "your hair isn't that curly. And it should go back on each side above your forehead. You look as if you were wearing a wig, dear."

Mike corrected it. "Is that better?'

"Not quite so much. And don't you have dimples? I was sure I could hear dimples when you chuckle. Like Prof's."

Mike-Adam smiled again; this time he had dimples. "How should I be dressed, Wyoh?"

"Are you at your office?"

"I'm still at office. Have to be, tonight." Background turned gray, then came into focus and color. A wall calendar behind him gave date, Tuesday 19 May 2076; a clock showed correct time. Near his elbow was a carton of coffee. On desk was a solid picture, a family group, two men, a woman, four children. Was background noise, muted roar of

Old Dome Plaza louder than usual; I heard shouts and in distance some singing: Simon's version of "Marseillaise."

Off screen Ginwallah's voice said, "Gospodin?"

Adam turned toward it. "I'm busy, Albert," he said patiently. "No calls from anyone but cell B. You handle everything else." He looked back at us. "Well, Wyoh? Suggestions? Prof? Man my doubting friend? Will I pass?"

I rubbed eyes. "Mike, can you cook?"

"Certainly. But I don't; I'm married."

"Adam," said Wyoh, "how can you look so neat after the day we've had?"

"I don't let little things worry me." He looked at Prof. "Professor, if the picture is okay, let's discuss what I'll say tomorrow. I was thinking of pre-empting the eight hundred newscast, have it announced all night, and pass the word down the cells."

We talked rest of night. I sent up for coffee twice and Mike-Adam had his carton renewed. When I ordered sandwiches, he asked Ginwallah to send out for some. I caught a glimpse of Albert Ginwallah in profile, a typical babu, polite and faintly scornful. Hadn't known what he looked like. Mike ate while we ate, sometimes mumbling around a mouthful of food.

When I asked (professional interest) Mike told me that, after he had picture built up, he had programmed most of it for automatic and gave his attention just to facial expressions. But soon I forgot it was fake. Mike-Adam was talking with us by video, was all, much more convenient than by phone.

By oh-three-hundred we had policy settled, then Mike rehearsed speech. Prof found points be wanted to add; Mike made revisions, then we decided to get some rest, even Mike-Adam was yawning--although in fact Mike held fort all through night, guarding transmissions to Terra, keeping Complex wailed off, listening at many phones. Prof and I shared big bed, Wyoh stretched out on couch, I whistled lights out. For once we slept without weights.

While we had breakfast, Adam Selene addressed Free Luna.

He was gentle, strong, warm, and persuasive. "Citizens of Free Luna, friends, comrades--to those of you who do not know me let me introduce myself. I am Adam Selene. Chairman of the Emergency Committee of Comrades for Free Luna . . . now of Free Luna, we are free at last. The so-called 'Authority' which has long unsurped power in this our home has been overthrown. I find myself temporary head of such government as we have--the Emergency Committee.

"Shortly, as quickly as can be arranged, you will opt your own government." Adam smiled and made a gesture inviting help. "In the meantime, with your help, I shall do my best. We will make mistakes--be tolerant. Comrades, if you have not revealed yourselves to friends and neighbors, it is time you did so. Citizens, requests may reach you through your comrade neighbors. I hope you will comply willingly; it will speed the day when I can bow out and life can get back to normal--a new normal, free of the Authority, free of guards, free of troops stationed on us, free of passports and searches and arbitrary arrests.

"There has to be a transition. To all of you--please go back to work, resume normal lives. To those who worked for the Authority, the need is the same. Go back to work. Wages will go on, your jobs stay the same, until we can decide what is needed, what happily no longer is needed now that we are free, and what must be kept but

modified. You new citizens, transportees sweating out sentences pronounced on you Earthside--you are free, your sentences are finished! But in the meantime I hope that you will go on working. You are not required to--the days of coercion are gone--but you are urged to. You are of course free to leave the Complex, free to go anywhere . . . and capsule service to and from the Complex will resume at once. But before you use your new freedom to rush into town, let me remind you: 'There is no such thing as a free lunch.' You are better off for the time being where you are; the food may not be fancy but will continue hot and on time.

"To take on temporarily those necessary functions of the defunct Authority I have asked the General Manager of LuNoHo Company to serve. This company will provide termporary supervision and will start analyzing how to do away with the tyrannical parts of the Authority and how to transfer the useful parts to private hands. So please help them.

"To you citizens of Terran nations among us, scientists and travelers and others, greetings! You are witnessing a rare event, the birth of a nation. Birth means blood and pain; there has been some. We hope it is over. You will not be inconvenienced unnecessarily and your passage home will be arranged as soon as possible. Conversely, you are welcome to stay, still more welcome to become citizens. But for the present I urge you to stay out of the corridors, avoid incidents that might lead to unnecessary blood, unnecessary pain. Be patient with us and I urge my fellow citizens to be patient with you. Scientists from Terra, at the Observatory and elsewhere, go on with your work and ignore us. Then you won't even notice that we are going through the pangs of creating a new nation. One thing-- I am sorry to say that we are temporarily interfering with your right to communicate with Earthside. This we do from necessity; censorship will be lifted as quickly as possible--we hate it as much as you do."

Adam added one more request: "Don't try to see me, comrades, and phone me only if you must; all others, write if you need to, your letters will receive prompt attention. But I am not twins, I got no sleep last night and can't expect much tonight. I can't address meetings, can't shake hands, can't meet delegations; I must stick to this desk and work--so that I can get rid of this job and turn it over to your choice." He grinned at them. "Expect me to be as hard to see as Simon Jester!"

It was a fifteen-minute cast but that was essence: Go back to work, be patient, give us time.

Those scientists gave us almost no time--I should have guessed; was my sort of pidgin.

All communication Earthside channeled through Mike. But those brain boys had enough electronic equipment to stock a warehouse; once they decided to, it took them only hours to breadboard a rig that could reach Terra.

Only thing that saved us was a fellow traveler who thought Luna should be free. He tried to phone Adam Selene, wound up talking to one of a squad of women we had co-opted from C and D level--a system thrown together in self-defense as, despite Mike's request, half of Luna tried to phone Adam Selene after that videocast, everything from requests and demands to busybodies who wanted to tell Adam how to do his job.

After about a hundred calls got routed to me through too much zeal by a comrade in phone company, we set up this buffer squad. Happily, comrade lady who took this call recognized that soothe-'em-down doctrine did not apply; she phoned me.

Minutes later myself and Finn Nielsen plus some eager guns headed by capsule for laboratory area. Our informant was scared to give name but had told me where to find transmitter. We caught them transmitting, and only fast action on Finn's part kept them breathing; his boys were itchy. But we did not want to "make an example"; Finn and I had settled that on way out. Is hard to frighten scientists, their minds don't work that way. Have to get at them from other angles.

I kicked that transmitter to pieces and ordered Director to have everyone assemble in mess hall and required roll call--where a phone could hear. Then I talked to Mike, got names from him, and said to Director: "Doctor, you told me they were all here. We're missing so-and-so"--seven names. "Get them here!"

Missing Terrans had been notified, had refused to stop what they were doing--typical scientists.

Then I talked, Loonies on one side of room, Terrans on other. To Terrans I said; "We tried to treat you as guests. But three of you tried and perhaps succeeded in sending message Earthside."

I turned to Director. "Doctor, I could search--warren, surface structures, all labs, every space--and destroy everything that might be used for transmitter. I'm electron pusher by trade; I know what wide variety of components can be converted into transmitters. Suppose I destroy everything that might be useful for that and, being stupid, take no chance and smash anything I don't understand. What result?"

Would have thought I was about to kill his baby! He turned gray. "That would stop every research . . . destroy priceless data.., waste, oh, I don't know how much! Call it a half billion dollars!"

"So I thought. Could take all that gear instead of smashing and let you go on best you can."

"That would be almost as bad. You must understand, Gospodin, that when an experiment is interrupted--"

"I know. Easier than moving anything--and maybe missing some--is to take you all to Complex and quarter you there. We have what used to be Dragoon barracks. But that too would ruin experiments. Besides-- Where you from, Doctor?"

"Princeton, New Jersey."

"So? You've been here five months and no doubt exercising and wearing weights. Doctor, if we did that, you might never see Princeton again. If we move you, we'll keep you locked up. You'll get soft. If emergency goes on very long, you'll be a Loonie like it or not. And all your brainy help with you."

A cocky chum stepped forward--one who had to be sent for twice. "You can't do this! It's against the law!"

"What law, Gospodin? Some law back in your hometown?" I turned. "Finn, show him law."

Finn stepped forward and placed emission bell of gun at man's belly button. Thumb started to press down--safety-switched, I could see. I said, "Don't kill him, Finn!"--then went on: "I will eliminate this man if that's what it takes to convince you. So watch

each other! One more offense will kill all your chances of seeing home again--as well as ruining researches. Doctor, I warn you to find ways to keep check on your staff."

I turned to Loonies. "Tovarishchee, keep them honest. Work up own guard system. Don't take nonsense; every earthworm is on probation. If you have to eliminate some, don't hesitate." I turned to Director. "Doctor, any Loonie can go anywhere any time--even your bedroom. Your assistants are now your bosses so far as security is concerned; if a Loonie decides to follow you or anybody into a W.C., don't argue; he might be jumpy."

I turned to Loonies. "Security first! You each work for some earthworm--watch him! Split it among you and don't miss anything. Watch 'em so close they can't build mouse trap, much less transmitter. If interferes with work for them, don't worry; wages will go on."

Could see grins. Lab assistant was best job a Loonie could find those days--but they worked under earthworms who looked down on us, even ones who pretended and were oh so gracious.

I let it go at that. When I had been phoned, I had intended to eliminate offenders. But Prof and Mike set me straight: Plan did not permit violence against Terrans that could be avoided.

We set up "ears," wideband sensitive receivers, around lab area, since even most directional rig spills a little in neighborhood. And Mike listened on all phones in area, After that we chewed nails and hoped.

Presently we relaxed as news up from Earthside showed nothing, they seemed to accept censored transmissions without suspicion, and private and commercial traffic and Authority's transmissions all seemed routine. Meanwhile we worked, trying in days what should take months.

We received one break in timing; no passenger ship was on Luna and none was due until 7 July. We could have coped--suckered a ship's officers to "dine with Warden" or something, then mounted guard on its senders or dismantled them. Could not have lifted without our help; in those days one drain on ice was providing water for reaction mass. Was not much drain compared with grain shipments; one manned ship a month was heavy traffic then, while grain lifted every day. What it did mean was that an incoming ship was not an insuperable hazard. Nevertheless was lucky break; we were trying so hard to make everything look normal until we could defend ourselves.

Grain shipments went on as before; one was catapulted almost as Finn's men were breaking into Warden's residence. And next went out on time, and all others.

Neither oversight nor faking for interim; Prof knew what he was doing. Grain shipments were a big operation (for a little country like Luna) and couldn't be changed in one semi-lunar; bread-and-beer of too many people was involved. If our committee had ordered embargo and quit buying grain, we would have been chucked out and a new committee with other ideas would have taken over.

Prof said that an educational period was necessary. Meanwhile grain barges catapulted as usual; LuNoHoCo kept books and issued receipts, using civil service personnel. Dispatches went out in Warden's name and Mike talked to Authority Earthside, using Warden's voice. Deputy Administrator proved reasonable, once he understood it upped his life expectancy. Chief Engineer stayed on job, too--McIntyre was a real Loonie, given chance, rather than fink by nature. Other department heads and

minor stooges were no problem; life went on as before and we were too busy to unwind Authority system and put useful parts up for sale.

Over a dozen people turned up claiming to be Simon Jester; Simon wrote a rude verse disclairning them and had picture on front page of Lunatic, Pravda, and Gong. Wyoh let herself go blond and made trip to see Greg at new catapult site, then a longer trip, ten days, to old home in Hong Kong Luna, taking Anna who wanted to see it. Wyoh needed a vacation and Prof urged her to take it, pointing on that she was in touch by phone and that closer Party contact was needed in Hong Kong. I took over her stilyagi with Slim and Hazel as my lieutenants--bright, sharp kids I could trust. Slim was awed to discover that I was "Comrade Bork" and saw "Adam Selene" every day; his Party name started with "G." Made a good team for other reason, too. Hazel suddenly started showing cushiony curves and not all from Mimi's superb table; she had reached that point in her orbit. Slim was ready to change her name to "Stone" any time she was willing to opt. In meantime he was anxious to do Party work he could share with our fierce little redhead.

Not everybody was willing. Many comrades turned out to be talk-talk soldiers. Still more thought war was over once we had eliminated Peace Goons and captured Warden. Others were indignant to learn how far down they were in Party structure; they wanted to elect a new structure, themselves at top. Adam received endless calls proposing this or something like it--would listen, agree, assure them that their services must not be wasted by waiting for election--and refer them to Prof or me. Can't recall any of these ambitious people who amounted to anything when I tried to put them to work.

Was endless work and nobody wanted to do it. Well, a few. Some best volunteers were people Party had never located. But in general, Loonies in and out of Party had no interest in "patriotic" work unless well paid. One chum who claimed to be a Party member (was not) spragged me in Raffles where we set up headquarters and wanted me to contract for fifty thousand buttons to be worn by pre-coup "Veterans of Revolution"--a "small" profit for him (I estimate 400 percent markup), easy dollars for me, a fine thing for everybody.

When I brushed him off, he threatened to denounce me to Adam Selene--"A very good friend of mine, I'll have you know!"--for sabotage.

That was "help" we got. What we needed was something else. Needed steel at new catapult and plenty--Prof asked, if really necessary to put steel around rock missiles; I had to point out that an induction field won't grab bare rock. We needed to relocate Mike's ballistic radars at old site and install doppler radar at new site--both jobs because we could expect attacks from space at old site.

We called for volunteers, got only two who could be used--and needed several hundred mechanics who did not mind hard work in p-suits. So we hired, paying what we had to---LuNoHoCo went in hock to Bank of Hong Kong Luna; was no time to steal that much and most funds had been transferred Earthside to Stu. A dinkum comrade, Foo Moses Morris, co-signed much paper to keep us going--and wound up broke and started over with a little tailoring shop in Kongville. That was later.

Authority Scrip dropped from 3-to-1 to 17-to-1 after coup and civil service people screamed, as Mike was still paying in Authority checks. We said they could stay on or resign; then those we needed, we rehired with Hong Kong dollars. But created a large

group not on our side from then on; they longed for good old days and were ready to stab new regime.

Grain farmers and brokers were unhappy because payment at catapult head continued to be Authority scrip at same old fixed prices. "We won't take it!" they cried--and LuNoHoCo man would shrug and tell them they didn't have to but this grain still went to Authority Earthside (it did) and Authority scrip was all they would get. So take cheque, or load your grain back into rolligons and get it out of here.

Most took it. All grumbled and some threatened to get out of grain and start growing vegetables or fibers or something that brought Hong Kong dollars--and Prof smiled.

We needed every drillman in Luna, especially ice miners who owned heavy-duty laser drills. As soldiers. We needed them so badly that, despite being shy one wing and rusty, I considered joining up, even though takes muscle to wrestle a big drill, and prosthetic just isn't muscle. Prof told me not to be a fool.

Dodge we had in mind would not work well Earthside; a laser beam carrying heavy power works best in vacuum--but there it works just dandy for whatever range its collimation is good for. These big drills, which had carved through rock seeking pockets of ice, were now being mounted as "artillery" to repel space attacks. Both ships and missiles have electronic nervous systems and does electronic gear no good to blast it with umpteen joules placed in a tight beam. If target is pressured (as manned ships are and most missiles), all it takes is to burn a hole, depressure it. If not pressured, a heavy laser beam can still kill it--burn eyes, louse guidance, spoil anything depending on electronics as most everything does.

An H-bomb with circuitry ruined is not a bomb, is just big tub of lithium deuteride that can't do anything but crash. A ship with eyes gone is a derelict, not a warship.

Sounds easy, is not. Those laser drills were never meant for targets a thousand kilometers away, or even one, and was no quick way to rig their cradles for accuracy. Gunner had to have guts to hold fire until last few seconds--on a target heading at him maybe two kilometers per second. But was best we had, so we organized First and Second Volunteer Defense Gunners of Free Luna--two regiments so that First could snub lowly Second and Second could be Jealous of First. First got older men, Second got young and eager.

Having called them "volunteers," we hired in Hong Kong dollars--and was no accident that ice was being paid for in controlled market in wastepaper Authority script.

On top of all, we were talking up a war scare. Adam Selene talked over video, reminding that Authority was certain to try to regain its tyranny and we had only days to prepare; papers quoted him and published stories of their own--we had made special effort to recruit newsmen before coup. People were urged to keep p-suits always near and to test pressure alarms in homes. A volunteer Civil Defense Corps was organized in each warren.

What with moonquakes always with us, each warren's pressure co-op always had sealing crews ready at any hour. Even with silicone stay-soft and fiberglass any warren leaks. In Davis Tunnels our boys did maintenance on seal every day. But now we recruited hundreds of emergency sealing crews, mostly stilyagi, drilled them with fake emergencies, had them stay in p-suits with helmets open when on duty.

They did beautifully. But idiots made fun of them--"play soldiers," "Adam's little apples," other names. A team was going through a drill, showing they could throw a temporary lock around one that had been damaged, and one of these pinheads stood by and rode them loudly.

Civil Defense team went ahead, completed temporary lock, tested it with helmets closed; it held--came out, grabbed this joker, took him through into temporary lock and on out into zero pressure, dumped him.

Belittlers kept opinions to selves after that. Prof thought we ought to send out a gentle warning not to eliminate so peremptorily. I opposed it and got my way; could see no better way to improve breed. Certain types of loudmouthism should be a capital offense among decent people.

But our biggest headaches were self-anointed statesmen.

Did I say that Loonies are "non-politica1"? They are, when comes to doing anything. But doubt if was ever a time two Loonies over a liter of beer did not swap loud opinions about how things ought to be run.

As mentioned, these self-appointed political scientists tried to grab Adam Selene's ear. But Prof had a place for them; each was invited to take part in "Ad-Hoc Congress for Organization of Free Luna"--which met in Community Hall in Luna City, then resolved to stay in session until work was done, a week in L-City, a week in Novylen, then Hong Kong, and start over. All sessions were in video. Prof presided over first and Adam Selene addressed them by video and encouraged them to do a thorough job--"History is watching you."

I listened to some sessions, then cornered Prof and asked what in Bog's name he was up to? "Thought you didn't want any government. Have you heard those nuts since you turned them loose?"

He smiled most dimply smile. "What's troubling you, Manuel?"

Many things were troubling me. With me breaking heart trying to round up heavy drills and men who could treat them as guns these idlers had spent an entire afternoon discussing immigration. Some wanted to stop it entirely. Some wanted to tax it, high enough to finance government (when ninety-nine out of a hundred Loonies had had to be dragged to The Rock!); some wanted to make it selective by "ethnic ratios." (Wondered how they would count me?) Some wanted to limit it to females until we were 50-50. That had produced a Scandinavian shout: "Ja, cobber! Tell 'em send us hoors! Tousands and tousands of hoors! I marry 'em, I betcha!"

Was most sensible remark all afternoon.

Another time they argued "time." Sure, Greenwich time bears no relation to lunar. But why should it when we live Underground? Show me a Loonie who can sleep two weeks and work two weeks; lunars don't fit our metabolism. What was urged was to make a lunar exactly equal to twenty-eight days (instead of 29 days, 12 hours, 44 minutes, 2.78 seconds) and do this by making days longer--and hours, minutes, and seconds, thus making each semi-lunar exactly two weeks.

Sure, lunar is necessary for many purposes. Controls when we go up on surface, why we go, and how long we stay. But, aside from throwing us out of gear with our only neighbor, had that wordy vacuum skull thought what this would do to every critical figure in science and engineering? As an electronics man I shuddered. Throw away every book, table, instrument, and start over? I know that some of my ancestors did that in

switching from old English units to MKS--but they did it to make things easier. Fourteen inches to a foot and some odd number of feet to a mile. Ounces and pounds. Oh, Bog!

Made sense to change that--but why go out of your way to create confusion?

Somebody wanted a committee to determine exactly what Loonie language is, then fine everybody who talked Earthside English or other language. Oh, my people!

I read tax proposals in Lunatic--four sorts of "SingleTaxers"--a cubic tax that would penalize a man if he extended tunnels, a head tax (everybody pay same), income tax (like to see anyone figure income of Davis Family or try to get information out of Mum!), and an "air tax" which was not fees we paid then but something else.

Hadn't realized "Free Luna" was going to have taxes. Hadn't had any before and got along. You paid for what you got. Tanstaafl. How else?

Another time some pompous choom proposed that bad breath and body odors be made an elimination offense. Could almost sympathize, having been stuck on occasion in a capsule with such stinks. But doesn't happen often and tends to be self-correcting; chronic offenders, or unfortunates who can't correct, aren't likely to reproduce, seeing how choosy women are.

One female (most were men, but women made up for it in silliness) had a long list she wanted made permanent laws--about private matters. No more plural marriage of any sort. No divorces. No "fornication"--had to look that one up. No drinks stronger than 4% beer. Church services only on Saturdays and all else to stop that day. (Air and temperature and pressure engineering, lady? Phones and capsules?) A long list of drugs to be prohibited and a shorter list dispensed only by licensed physicians. (What is a "licensed physician"? Healer I go to has a sign reading "practical doctor"--makcs book on side, which is why I go to him. Look, lady, aren't any medical schools in Luna!) (Then, I mean.) She even wanted to make gambling illegal. If a Loonie couldn't roll double or nothing, he would go to a shop that would, even if dice were loaded.

Thing that got me was not her list of things she hated, since she was obviously crazy as a Cyborg, but fact that always somebody agreed with her prohibitions. Must be a yearning deep in human heart to stop other people from doing as they please. Rules, laws--always for other fellow. A murky part of us, something we had before we came down out of trees, and failed to shuck when we stood up. Because not one of those people said: "Please pass this so that I won't be able to do something I know I should stop." Nyet, tovarishchee, was always something they hated to see neighbors doing. Stop them "for their own good"--not because speaker claimed to be harmed by it.

Listening to that session I was almost sorry we got rid of Mort the Wart. He stayed holed up with his women and didn't tell us how to run private lives.

But Prof didn't get excited; he went on smiling. "Manuel, do you really think that mob of retarded children can pass any laws?"

"You told them to. Urged them to."

"My dear Manuel, I was simply putting all my nuts in one basket. I know those nuts; I've listened to them for years. I was very careful in selecting their committees; they all have built-in confusion, they will quarrel. The chairman I forced on them while letting them elect him is a ditherer who could not unravel a piece of string--thinks every subject needs 'more study.' I almost needn't have bothered; more than six people cannot agree on anything, three is better--and one is perfect for a job that one can do. This is why parliamentary bodies all through history, when they accomplished anything, owed it to a

few strong men who dominated the rest. Never fear, son, this Ad-Hoc Congress will do nothing. . . or if they pass something through sheer fatigue, it will be so loaded with contradictions that it will have to be thrown out. In the meantime they are out of our hair. Besides, there is something we need them for, later."

"Thought you said they could do nothing."

"They won't do this. One man will write it--a dead man--and late at night when they are very tired, they'll pass it by acclamation."

"Who's this dead man? You don't mean Mike?"

"No, no! Mike is far more alive than those yammerheads. The dead man is Thomas Jefferson--first of the rational anarchists, my boy, and one who once almost managed to slip over his non-system through the most beautiful rhetoric ever written. But they caught him at it, which I hope to avoid. I cannot improve on his phrasing; I shall merely adapt it to Luna and the twenty-first century."

"Heard of him, Freed slaves, nyet?"

"One might say he tried but failed. Never mind. How are the defenses progressing? I don't see how we can keep up the pretense past the arrival date of this next ship."

"Can't be ready then."

"Mike says we must be."

We weren't but ship never arrived. Those scientists outsmarted me and Loonies I had told to watch them. Was a rig at focal point of biggest reflector and Loonie assistants believed doubletalk about astronomical purpose--a new wrinkle in radiotelescopes.

I suppose it was. Was ultramicrowave and stuff was bounced at reflector by a wave guide and thus left scope lined up nicely by mirror. Remarkably like early radar. And metal latticework and foil heat shield of barrel stopped stray radiation, thus "ears" I had staked out heard nothing.

They put message across, their version and in detail. First we heard was demand from Authority to Warden to deny this hoax, find hoaxer, put stop to it.

So instead we gave them a Declaration of Independence.

"In Congress assembled, July Fourth, Twenty-Seventy-Six--"

Was beautiful.

15

Signing of Declaration of Independence went as Prof said it would. He sprang it on them at end of long day, announced a special session after dinner at which Adam Selene would speak. Adam read aloud, discussing each sentence, then read it without stopping, making music of sonorous phrases. People wept. Wyoh, seated by me, was one, and I felt like it even though had read it earlier.

Then Adam looked at them and said, "The future is waiting. Mark well what you do," and turned meeting over to Prof rather than usual chairman.

Was twenty-two hundred and fight began. Sure, they were in favor of it; news all day had been jammed with what bad boys we were, how we were to be punished, taught a lesson, so forth. Not necessary to spice it up; stuff up from Earthside was nasty--Mike

merely left out on-other-hand opinions. If ever was a day when Luna felt unified it was probably second of July 2076.

So they were going to pass it; Prof knew that before he offered it.

But not as written--"Honorable Chairman, in second paragraph, that word 'unalienable,' is no such word; should be 'inalienable'--and anyhow wouldn't it be more dignified to say 'sacred rights' rather than 'inalienable rights'? I'd like to hear discussion on this."

That choom was almost sensible, merely a literary critic, which is harmless, like dead yeast left in beer. But-- Well, take that woman who hated everything. She was there with list; read it aloud and moved to have it incorporated into Declaration "so that the peoples of Terra will know that we are civilized and fit to take our places in the councils of mankind!"

Prof not only let her get away with it; he encouraged her, letting her talk when other people wanted to--then blandly put her proposal to a vote when hadn't even been seconded. (Congress operated by rules they had wrangled over for days. Prof was familiar with rules but followed them only as suited him.) She was voted down in a shout, and left.

Then somebody stood up and said of course that long list didn't belong in Declaration--but shouldn't we have general principles? Maybe a statement that Luna Free State guaranteed freedom, equality, and security to all? Nothing elaborate, just those fundamental principles that everybody knew was proper purpose of goiverament.

True enough and let's pass it--but must read "Freedom, equality, peace, and security"--right, Comrade? They wrangled over whether "freedom" included "free air," or was that part of "security"? Why not be on safe side and list "free air" by name? Move to amend to make it "free air and water"--because you didn't have "freedom" or "security" unless you had both air and water.

Air, water, and food.

Air, water, food, and cubic.

Air, water, food, cubic, and heat.

No, make "heat" read "power" and you had it all covered. Everything.

Cobber, have you lost your mind? That's far from everything and what you've left out is an affront to all womankind-- Step outside and say that! Let me finish. We've got to tell them right from deal that we will permit no more ships to land unless they carry at least as many women as men. At least, I said--and I for one won't chop it unless it sets immigration issue straight.

Prof never lost dimples.

Began to see why Prof had slept all day and was not wearing weights. Me, I was tired, having spent all day in p-suit out beyond catapult head cutting in last of relocated ballistic radars. And everybody was tired; by midnight crowd began to thin, convinced that nothing would be accomplished that night and bored by any yammer not their own.

Was later than midnight when someone asked why this Declaration was dated fourth when today was second? Prof said mildly that it was July third now--and it seemed unlikely that our Declaration could be announced earlier than fourth and that July fourth carried historical symbolism that might help.

Several people walked out at announcement that probably nothing would be settled until fourth of July. But I began to notice something: Hall was filling as fast as

was emptying. Finn Nielsen slid into a seat that had just been vacated. Comrade Clayton from Hong Kong showed up, pressed my shoulder, smiled at Wyoh, found a seat. My youngest lieutenants. Slim and Hazel, I spotted down front--and was thinking I must alibi Hazel by telling Mum I had kept her out on Parts business--when was amused to see Mum herself next to them. And Sidris. And Greg, who was supposed to be at new catapult.

Looked around and picked out a dozen more--night editor of Lunaya Pravda, General Manager of LuNoHoCo, others, and each one a working comrade, Began to see that Prof had stacked deck. That Congress never had a fixed membership; these dinkum comrades had as much right to show up as those who had been talking a month. Now they sat--and voted down amendments.

About three hundred, when I was wondering how much more I could take, someone brought a note to Prof. He read it, banged gavel and said, "Adam Selene begs your indulgence. Do I hear unanimous consent?"

So screen back of rostrum lighted up again and Adam told them that he had been following debate and was warmed by many thoughtful and constructive criticisms. But could he made a suggestion? Why not admit that any piece of writing was imperfect? If thin declaration was in general what they wanted, why not postpone perfection for another day and pass this as it stands? "Honorable Chairman, I so move."

They passed it with a yell. Prof said, "Do I hear objection?" and waited with gavel raised. A man who had been talking when Adam had asked to be heard said, "Well, . . I still say that's a dangling participle, but okay, leave it in."

Prof hanged gavel. "So ordered!"

Then we filed up and put our chops on a big scroll that had been "sent over from Adam's office"---and I noticed Adam's chop on it. I signed right under Hazel--child now could write although was still short on book learning. Her chop was shaky but she wrote it large and proud. Comrade Clayton signed his Party name, real name in letters, and Japanese chop, three little pictures one above other. Two comrades chopped with X's and had them witnessed. All Party leaders were there that night (morning), all chopped it, and not more than a dozen yammerers stuck. But those who did, put their chops down for history to read. And thereby committed "their lives, their fortunes, and their sacred honors."

While queue was moving slowly past and people were talking, Prof banged for attention. "I ask for volunteers for a dangerous mission. This Declaration will go on the news channels--but must be presented in person to the Federated Nations, on Terra."

That put stop to noise. Prof was looking at me. I swallowed and said, "I volunteer." Wyoh echoed, "So do I!"--and little Hazel Meade said, "Me, too!"

In moments were a dozen, from Finn Nielsen to Gospodin Dangling-Participle (turned out to be good cobber aside from his fetish). Prof took names, murmured something about getting in touch as transportation became available.

I got Prof aside and said, "Look, Prof, you too tired to track? You know ship for seventh was canceled; now they're talking about slapping embargo on us. Next ship they lift for Luna will be a warship. How you planning to travel? As prisoner?"

"Oh, we won't use their ships."

"So? Going to build one? Any idea how long that takes? If could build one at all. Which I doubt."

"Manuel, Mike says it's necessary--and has it all worked out."

I did know Mike said was necessary; he had rerun problem soon as we learned that bright laddies at Richardson had snuck one home--he now gave us only one chance in fifty-three. . . with imperative need for Prof to go Earthside. But I'm not one to worry about impossibilities; I had spent day working to make that one chance in fifty-three turn up.

"Mike will provide the ship," Prof went on. "He has completed its design and it is being worked on."

"He has? It is? Since when is Mike engineer?"

"Isn't he?" asked Prof.

I started to answer, shut up. Mike had no degrees. Simply knew more engineering than any man alive. Or about Shakespeare's plays, or riddles, or history, name it. "Tell me more."

"Manuel, we'll go to Terra as a load of grain."

"What? Who's 'we'?"

"You and myself. The other volunteers are merely decorative."

I said, "Look, Prof. I've stuck. Worked hard when whole thing seemed silly. Worn these weights--got 'em on now--on chance I might have to go to that dreadful place. But contracted to go in a ship, with at least a Cyborg pilot to help me get down safely. Did not agree to go as meteorite."

He said, "Very well, Manuel. I believe in free choice, always. Your alternate will go."

"My-- Who?"

"Comrade Wyoming. So far as I know she is the only other person in training for the trip . . . other than a few Terrans."

So I went. But talked to Mike first. He said patiently. "Man my first friend, there isn't a thing to worry about. You are scheduled load KM187 series '76 and you'll arrive in Bombay with no trouble. But to be sure--to reassure you--I selected that barge because it will be taken out of parking orbit and landed when India is faced toward me, and I've added an override so that I can take you away from ground control if I don't like the way they handle you. Trust me, Man, it has all been thought through. Even the decision to continue shipments when security was broken was part of this plan."

"Might have told me."

"There was no need to worry you. Professor had to know and I've kept in touch with him. But you are going simply to take care of him and back him up--do his job if he dies, a factor on which I can give you no reassurance."

I sighed. "Okay. But, Mike, surely you don't think you can pilot a barge into a soft landing at this distance? Speed of light alone would trip you."

"Man, don't you think I understand ballistics? For the orbital position then, from query through reply and then to command-received is under four seconds. . . and you can rely on me not to waste microseconds. Your maximum parking-orbit travel in four seconds is only thirty-two kilometers, diminishing asymptotically to zero at landing. My reflex time will be effectively less than that of a pilot in a manual landing because I don't waste time grasping a situation and deciding on correct action. So my maximum is four seconds. But my effective reflex time is much less, as I project and predict constantly, see

ahead, program it out--in effect, I'll stay four seconds ahead of you in your trajectory and respond instantly."

"That steel can doesn't even have an altimeter!"

"It does now. Man, please believe me; I've thought of everything. The only reason I've ordered this extra equipment is to reassure you. Poona ground control hasn't made a bobble in the last five thousand loads. For a computer it's fairly bright."

"Okay. Uh, Mike, how hard do they splash those bleeding barges? What gee?"

"Not high, Man. Ten gravities at injection, then that programs down to a steady, soft four gees . . . then you'll be nudged again between six and five gees just before splash. The splash itself is gentle, equal to a fall of fifty meters and you enter ogive first with no sudden shock, less than three gees. Then you surface and splash again, lightly, and simply float at one gee. Man, those barge shells are built as lightly as possible for economy's sake. We can't afford to toss them around or they would split their seams."

"How sweet. Mike, what would 'six to five gees' do to you? Split your seams?"

"I conjecture that I was subjected to about six gravities when they shipped me up here. Six gravities in my present condition would shear many of my essential connections. However, I'm more interested in the extremely high, transient accelerations I am going to experience from shock waves when Terra starts bombing us. Data are insufficient for prediction but I may lose control of my outlying functions, Man. This could be a major factor in any tactical situation."

"Mike, you really think they are going to bomb us?"

"Count on it, Man. That is why this trip is so important."

Left it at that and went out to see this coffin. Should have stayed home.

Ever looked at one of those silly barges? Just a steel cylinder with retro and guidance rockets and radar transponder. Resembles a spaceship way a pair of pliers resembles my number-three arm. They had this one cut open and were outfitting our "living quarters."

No galley. No W.C. No nothing. Why bother? We were going to be in it only fifty hours. Start empty so that you won't need a honey sack in your suit. Dispense with lounge and bar; you'll never be out of your suit, you'll be drugged and not caring.

At least Prof would be drugged almost whole time; I had to be alert at landing to try to get us out of this death trap if something went wrong and nobody came along with a tin opener. They were building a shaped cradle in which backs of our p-suits would fit; we would be strapped into these holes. And stay there, clear to Terra. They seemed more concerned about making total mass equal to displaced wheat and same center of gravity and all moment arms adding up correctly than they did about our comfort; engineer in charge told me that even padding to be added inside our p-suits was figured in.

Was glad to learn we were going to have padding; those holes did not look soft.

Returned home in thoughtful condition.

Wyoh was not at dinner, unusual; Greg was, more unusual. Nobody said anything about my being scheduled to imitate a falling rock next day although all knew. But did not realize anything special was on until all next generation left table without being told. Then knew why Greg had not gone back to Mare Undarum site after Congress adjourned that morning; somebody had asked for a Family talk-talk.

Mum looked around and said, "We're all here. Ali, shut that door; that's a dear. Grandpaw, will you start us?"

Our senior husband stopped nodding over coffee and firmed up. He looked down table and said strongly, "I see that we are all here. I see that children have been put to bed. I see that there is no stranger, no guest. I say that we are met in accordance with customs created by Black Jack Davis our First Husband and Tillie our First Wife. If there is any matter that concerns safety and happiness of our marriage, haul it out in the light now. Don't let it fester. This is our custom."

Grandpaw turned to Mum and said softly, "Take it, Mimi," and slumped back into gentle apathy. But for a minute he had been strong, handsome, virile, dynamic man of days of my opting. . . and I thought with sudden tears how lucky I had been!

Then didn't know whether I felt lucky or not. Only excuse I could see for a Family talk-talk was fact that I was due to be shipped Earthside next day, labeled as grain. Could Mum be thinking of trying to set Family against it? Nobody had to abide by results of a talk-talk. But one always did. That was strength of our marriage: When came down to issues, we stood together.

Mimi was saying, "Does anyone have anything that needs to be discussed? Speak up, dears."

Greg said, "I have."

"We'll listen to Greg."

Greg is a good speaker. Can stand up in front of a congregation and speak with confidence about matters I don't feel confident about even when alone. But that night he seemed anything but sure of himself. "Well, uh, we've always tried to keep this marriage in balance, some old, some young, a regular alternation, well spaced, just as it was handed down to us. But we've varied sometimes--for good reason." He looked at Ludmilla. "And adjusted it later." He looked again at far end of table, at Frank and Ali, on each side of Ludmilla.

"Over years, as you can see from records, average age of husbands has been about forty, wives about thirty-five--and that age spread was just what our marriage started with, nearly a hundred years gone by, for Tillie was fifteen when she opted Black Jack and he had just turned twenty. Right now I find that average age of husbands is almost exactly forty, while average--"

Mum said firmly, "Never mind arithmetic, Greg dear. Simply state it."

I was trying to think who Greg could possibly mean. True, I had been much away during past year, and if did get home, was often after everybody was asleep. But he was clearly talking about marriage and nobody ever proposes another wedding in our marriage without first giving everybody a long careful chance to look prospect over. You just didn't do it any other way!

So I'm stupid. Greg stuttered and said, "I propose Wyoming Knott!"

I said I was stupid. I understand machinery and machinery understands me. But didn't claim to know anything about people. When I get to be senior husband, if live that long, am going to do exactly what Grandpaw does with Mum: Let Sidris run it. Just same-- Well, look, Wyoh joined Greg's church. I like Greg, love Greg. And admire him. But you could never feed theology of his church through a computer and get anything but null. Wyoh surely knew this, since she encountered it in adult years--truthfully, I had suspected that Wyoh's conversion was proof that she would do anything for our Cause.

But Wyoh had recruited Greg even earlier. And had made most of trips out to new site, easier for her to get away than me or Prof. Oh, well. Was taken by surprise. Should not have been.

Mimi said, "Greg, do you have reason to think that Wyoming would accept an opting from us?"

"Yes."

"Very well. We all know Wyoming; I'm sure we've formed our opinions of her. I see no reason to discuss it. . . unless someone has something to say? Speak up."

Was no surprise to Mum. But wouldn't be. Nor to anyone else, either, since Mum never let a talk-talk take place until she was sure of outcome.

But wondered why Mum was sure of my opinion, so certain that she had not felt me out ahead of time? And sat there in a soggy quandary, knowing I should speak up, knowing I knew something terribly pertinent which nobody else knew or matter would never have gone this far. Something that didn't matter to me but would matter to Mum and all our women.

Sat there, miserable coward, and said nothing, Mum said, "Very well. Let's call the roll. Ludmilla?"

"Me? Why, I love Wyoh, everybody knows that. Sure!"

"Lenore dear?"

"Well, I may try to talk her into going back to being a brownie again; I think we set each other off. But that's her only fault, being blonder than I am. Da!"

"Sidris?"

"Thumbs up. Wyoh is our kind of people."

"Anna?"

"I've something to say before I express my opinion, Mimi.'

"I don't think it's necessary, dear."

"Nevertheless I'm going to haul it out in the open, just as Tillie always did according to our traditions. In this marriage every wife has carried her load, given children to the family. It may come as a surprise to some of you to learn that Wyoh has had eight children--"

Certainly surprised Ali; his head jerked and jaw dropped. I stared at plate. Oh, Wyoh, Wyoh! How could I let this happen? Was going to have to speak up.

And realized Anna was still speaking: "--so now she can have children of her own; the operation was successful. But she worries about possibility of another defective baby, unlikely as that is according to the head of the clinic in Hong Kong. So we'll just have to love her enough to make her quit fretting."

"We will love her," Mum said serenely. "We do love her. Anna, are you ready to express opinion?"

"Hardly necessary, is it? I went to Hong Kong with her, held her hand while her tubes were restored. I opt Wyoh."

"In this family," Mum went on, "we have always felt that our husbands should be allowed a veto. Odd of us perhaps, hut Tillie started it and it has always worked well. Well, Grandpaw?"

"Eh? What were you saying, my dear?"

"We are opting Wyoming, Gospodin Grandpaw. Do you give consent?"

"What? Why, of course, of course! Very nice little girl. Say, whatever became of that pretty little Afro, name something like that? She get mad at us?"

"Greg?"

"I proposed it."

"Manuel? Do you forbid this?"

"Me? Why, you know me, Mum."

"I do. I sometimes wonder if you know you. Hans?"

"What would happen if I said No?"

"You'd lose some teeth, that's what," Lenore said promptly. "Hans votes Yes."

"Stop it, darlings," Mum said with soft reproof. "Opting is a serious matter. Hans, speak up."

"Da. Yes. Ja. Oui. Si. High time we had a pretty blonde in this-- Ouch!"

"Stop it, Lenore. Frank?"

"Yes, Mum."

"Ali dear? Is it unanimous?"

Lad blushed bright pink and couldn't talk. Nodded vigorously.

Instead of appointing a husband and a wife to seek out selectee and propose opting for us, Mum sent Ludmilla and Anna to fetch Wyoh at once--and turned out she was only as far away as Bon Ton. Nor was that only irregularity; instead of setting a date and arranging a wedding party, our children were called in, and twenty minutes later Greg had his Book open and we did the taking vows--and I finally got it through my confused head that was being done with breakneck speed because of my date to break my neck next day.

Not that it could matter save as symbol of my family's love for me, since a bride spent her first night with her senior husband, and second night and third I was going to spend out in space. But did matter anyhow and when women started to cry during ceremony, I found self dripping tears right with them.

Then I went to bed, alone in workshop, once Wyoh had kissed us and left on Grandpaw's arm. Was terribly tired and last two days had been hard. Thought about exercises and decided was too late to matter; thought about calling Mike and asking him for news from Terra. Went to bed.

Don't know how long had been asleep when realized was no longer asleep and somebody was in room. "Manuel?" came soft whisper in dark.

"Huh? Wyoh, you aren't supposed to be here, dear."

"I am indeed supposed to be here, my husband. Mum knows I'm here, so does Greg. And Grandpaw went right to sleep."

"Oh. What time is?"

"About four hundred. Please, dear, may I come to bed?"

"What? Oh, certainly." Something I should remember. Oh, yes. "Mike!"

"Yes, Man?" he answered.

"Switch off. Don't listen. If you want me, call me on Family phone."

"So Wyoh told me, Man. Congratulations!"

Then her head was pillowed on my stump and I put right arm around her. "What are you crying about, Wyoh?"

"I'm not crying! I'm just frightened silly that you won't come back!"

Woke up scared silly in pitch darkness. "Manuel!" Didn't know which end was up. "Manuel!" it called again. "Wake up!"

That brought me out some; was signal intended to trigger me. Recalled being stretched on a table in infirmary at Complex, staring up at a light and listening to a voice while a drug dripped into my veins. But was a hundred years ago, endless time of nightmares, unendurable pressure, pain.

Knew now what no-end-is-up feeling was; had experienced before. Free fall. Was in space.

What had gone wrong? Had Mike dropped a decimal point? Or had he given in to childish nature and played a joke, not realizing would kill? Then why, after all years of pain, was I alive? Or was I? Was this normal way for ghost to feel, just lonely, lost, nowhere?

"Wake up, Manuel! Wake up, Manuel!"

"Oh, shut up!" I snarled. "Button your filthy king-and-ace!" Recording went on; I paid no attention. Where was that reeking light switch? No, doesn't take a century of pain to accelerate to Luna's escape speed at three gravities, merely feels so. Eighty-two seconds--but is one time when human nervous system feels every microsecond. Three gees is eighteen grim times as much as a Loonie ought to weigh.

Then discovered those vacuum skulls had not put arm back on. For some silly reason they had taken it off when they stripped me to prepare me and I was loaded with enough don't-worry and let's-sleep pills not to protest. No huhu had they put it on again. But that drecklich switch was on my left and sleeve of p-suit was empty.

Spent next ten years getting unstrapped with one hand, then a twenty-year sentence floating around in dark before managed to find my cradle again, figure out which was head end, and from that hint locate switch by touch. That compartment was not over two meters in any dimension. This turns out to be larger than Old Dome in free fall and total darkness. Found it. We had light.

(And don't ask why that coffin did not have at least three lighting systems all working all time. Habit, probably. A lighting system implies a switch to control it, nyet? Thing was built in two days; should be thankful switch worked.)

Once I had light, cubic shrank to true claustrophobic dimensions and ten percent smaller, and I took a look at Prof.

Dead, apparently. Well, he had every excuse. Envied him but was now supposed to check his pulse and breathing and suchlike in case he had been unlucky and still had such troubles. And was again hampered and not just by being onearmed. Grain load had been dried and depressured as usual before loading but that cell was supposed to be pressured--oh, nothing fancy, just a tank with air in it. Our p-suits were supposed to handle needs such as life's breath for those two days. But even best p-suit is more comfortable in pressure than in vacuum and, anyhow, I was supposed to be able to get at my patient.

Could not. Didn't need to open helmet to know this steel can had not stayed gas tight, knew at once, naturally, from way p-suit felt. Oh, drugs I had for Prof, heart stimulants and so forth, were in field ampules; could jab them through his suit. But how

to check heart and breathing? His suit was cheapest sort, sold for Loonie who rarely Leaves warren; had no readouts.

His mouth hung open and eyes stared. A deader, I decided. No need to ex Prof beyond that old limen; had eliminated himself. Tried to see pulse on throat; his helmet was in way.

They had provided a program clock which was mighty kind of them. Showed I had been out forty-four-plus hours, all to plan, and in three hours we should receive horrible booting to place us in parking orbit around Terra. Then, after two circums, call it three more hours, we should start injection into landing program--if Poona Ground Control didn't change its feeble mind and leave us in orbit. Reminded self that was unlikely; grain is not left in vacuum longer than necessary. Has tendency to become puffed wheat or popped corn, which not only lowers value but can split those thin canisters like a melon. Wouldn't that be sweet? Why had they packed us in with grain? Why not just a load of rock that doesn't mind vacuum?

Had time to think about that and to become very thirsty. Took nipple for half a mouthful, no more, because certainly did not want to take six gees with a full bladder. (Need not have worried; was equipped with catheter. But did not know.)

When time got short I decided couldn't hurt Prof to give him a jolt of drug that was supposed to take him through heavy acceleration; then, after in parking orbit, give him heart stimulant--since didn't seem as if anything could hurt him.

Gave him first drug, then spent rest of minutes struggling back into straps, one-handed. Was sorry I didn't know name of my helpful friend; could have cursed him better.

Ten gees gets you into parking orbit around Terra in a mere 3.26 x 10^7 microseconds; merely seems longer, ten gravities being sixty times what a fragile sack of protoplasm should be asked to endure. Call it thirty-three seconds. My truthful word, I suspect my ancestress in Salem spent a worse half minute day they made her dance.

Gave Prof heart stimulant, then spent three hours trying to decide whether to drug self as well as Prof for landing sequence. Decided against. All drug had done for me at catapulting had been to swap a minute and a half of misery and two days of boredom for a century of terrible dreams--and besides, if those last minutes were going to be my very last, I decided to experience them. Bad as they would be, they were my very own and I would not give them up.

They were bad. Six gees did not feel better than ten; felt worse. Four gees no relief. Then we were kicked harder. Then suddenly, just for seconds, in free fall again. Then came splash which was not "gentle" and which we took on straps, not pads, as we went in headfirst. Also, don't think Mike realized that, after diving in hard, we would then surface and splash hard again before we damped down into floating. Earthworms call it "floating" but is nothing like floating in free fall; you do it at one gee, six times what is decent, and odd side motions tacked on. Very odd motions-- Mike had assured us that solar weather was good, no radiation danger inside that Iron Maiden. But he had not been so interested in Earthside Indian Ocean weather; prediction was acceptable for landing barges and suppose he felt that was good enough--and I would have thought so, too.

Stomach was supposed to be empty. But I filled helmet with sourest, nastiest fluid you would ever go a long way to avoid. Then we turned completely over and I got it in

hair and eyes and some in nose. This is thing earthworms call "seasickness" and is one of many horrors they take for granted.

Won't go into long period during which we were towed into port. Let it stand that, in addition to seasickness, my air bottles were playing out. They were rated for twelve hours, plenty for a fifty-hour orbit most of which I was unconscious and none involving heavy exercise, but not quite enough with some hours of towing added. By time barge finally held still I was almost too dopy to care about trying to break out.

Except for one fact-- We were picked up, I think, and tumbled a bit, then brought to rest with me upside down. This is a no-good position at best under one gravity; simply impossible when supposed to a) unstrap self, b) get out of suit-shaped cavity, c) get loose a sledgehammer fastened with butterfly nuts to bulkhead. d) smash same against breakaways guarding escape hatch, e) batter way out, and f) finally, drag an old man in a p-suit out after you.

Didn't finish step a); passed out head downwards.

Lucky this was emergency-last-resort routine. Stu LaJoie had been notified before we left; news services had been warned shortly before we landed. I woke up with people leaning over me, passed out again, woke up second time in hospital bed, flat on back with heavy feeling in chest--was heavy and weak all over--but not ill, just tired, bruised, hungry, thirsty, languid. Was a transparent plastic tent over bed which accounted for fact I was having no trouble breathing.

At once was closed in on from both sides, a tiny Hindu nurse with big eyes on one side, Stuart LaJoie on other. He grinned at me, "Hi, cobber! How do you feel?"

"Uh . . . I'm right. But oh bloody! What a way to travel!"

"Prof says it's the only way. What a tough old boy he is."

"Hold it. Prof said? Prof is dead."

"Not at all. Not in good shape--we've got him in a pneumatic bed with a round-the-clock watch and more instruments wired into him than you would believe. But he's alive and will be able to do his job. But, truly, he didn't mind the trip; he never knew about it, so he says. Went to sleep in one hospital, woke up in another. I thought he was wrong when he refused to let me wangle it to send a ship but he was not--the publicity has been tremendous!"

I said slowly, "You say Prof 'refused' to let you send a ship?"

"I should say 'Chairman Selene' refused. Didn't you see the dispatches, Mannie?"

"No." Too late to fight over it. "But last few days have been busy."

"A dinkum word! Here, too--don't recall when last I dossed."

"You sound like a Loonie."

"I am a Loonie, Mannie, don't ever doubt it. But the sister is looking daggers at me." Stu picked her up, turned her around. I decided he wasn't all Loonie yet. But nurse didn't resent. "Go play somewhere else, dear, and I'll give your patient back to you--still warm--in a few minutes." He shut a door on her and came back to bed. "But Adam was right; this way was not only wonderful publicity but safer."

"Publicity, I suppose. But 'safer'? Let's not talk about!"

"Safer, my old. You weren't shot at. Yet they had two hours in which they knew right where you were, a big fat target. They couldn't make up their minds what to do; they haven't formed a policy yet. They didn't even dare not bring you down on schedule; the news was full of it, I had stories slanted and waiting. Now they don't dare touch you,

you're popular heroes. Whereas if I had waited to charter a ship and fetch you . . . Well, I don't know. We probably would have been ordered into parking orbit; then you two--and myself, perhaps-- would have been taken off under arrest. No skipper is going to risk missiles no matter how much he's paid. The proof of the pudding, cobber. But let me brief you. You're both citizens of The People's Directorate of Chad, best I could do on short notice. Also, Chad has recognized Luna. I had to buy one prime minister, two generals, some tribal chiefs and a minister of finance--cheap for such a hurry-up job. I haven't been able to get you diplomatic immunity but I hope to, before you leave hospital. At present they haven't even dared arrest you; they can't figure out what you've done. They have guards outside but simply for your 'protection'--and a good thing, or you would have reporters nine deep shoving microphones into your face."

"Just what have we done?--that they know about, I mean. Illegal immigration?"

"Not even that, Mannie. You never were a consignee and you have derivative PanAfrican citizenship through one of your grandfathers, no huhu. In Professor de la Paz's case we dug up proof that he had been granted naturalized Chad citizenship forty years back, waited for the ink to dry, and used it. You're not even illegally entered here in India. Not only did they bring you down themselves, knowing that you were in that barge, but also a control officer very kindly and fairly cheaply stamped your virgin passports. In addition to that, Prof's exile has no legal existence as the government that proscribed him no longer exists and a competent court has taken notice--that was more expensive."

Nurse came back in, indignant as a mother cat. "Lord Stuart you must let my patient rest!"

"At once, ma chere."

"You're 'Lord Stuart'?"

"Should be 'Comte.' Or I can lay a dubious claim to being the Macgregor. The blue-blood bit helps; these people haven't been happy since they took their royalty away from them."

As he left he patted her rump. Instead of screaming, she wiggled it. Was smiling as she came over to me. Stu was going to have to watch that stuff when he went back to Luna. If did.

She asked how I felt. Told her I was right, just hungry. "Sister, did you see some prosthetic arms in our luggage?"

She had and I felt better with number-six in place. Had selected it and number-two and social arm as enough for trip. Number-two was presumably still in Complex; I hoped somebody was taking care of it. But number-six is most all-around useful arm; with it and social one I'd be okay.

Two days later we left for Agra to present credentials to Federated Nations. I was in bad shape and not just high gee; could do well enough in a wheel chair and could even walk a little although did not in public. What I had was a sore throat that missed pneumonia only through drugs, traveler's trots, skin disease on hands and spreading to feet--just like my other trips to that disease-ridden hole, Terra. We Loonies don't know how lucky we are, living in a place that has tightest of quarantines, almost no vermin and what we have controlled by vacuum anytime necessary. Or unlucky, since we have almost no immunities if turns out we need them. Still, wouldn't swap; never heard word

"venereal" until first went Earthside and had thought "common cold" was state of ice miner's feet.

And wasn't cheerful for other reason. Stu had fetched us a message from Adam Selene; buried in it, concealed even from Stir, was news that chances had dropped to worse than one in a hundred. Wondered what point in risking crazy trip if made odds worse? Did Mike really know what chances were? Couldn't see any way he could compute them no matter how many facts he had.

But Prof didn't seem worried. He talked to platoons of reporters, smiled at endless pictures, gave out statements, telling world he placed great confidence in Federated Nations and was sure our just claims would be recognized and that he wanted to thank "Friends of Free Luna" for wonderful help in bringing true story of our small but sturdy nation before good people of Terra--F. of F.L. being Stu, a professional public opinion firm, several thousand chronic petition signers, and a great stack of Hong Kong dollars.

I had picture taken, too, and tried to smile, but dodged questions by pointing to throat and croaking.

In Agra we were lodged in a lavish suite in hotel that had once been palace of a maharajah (and still belonged to him, even though India is supposed to be socialist) and interviews and picture-taking went on--hardly dared get out of wheel chair even to visit W.C. as was under orders from Prof never to be photographed vertically. He was always either in bed or in a stretcher--bed baths, bedpans, everything--not only because safer, considering age, and easier for any Loonie, but also for pictures. His dimples and wonderful, gentle, persuasive personality were displayed in hundreds of millions of video screens, endless news pictures.

But his personality did not get us anywhere in Agra. Prof was carried to office of President of Grand Assembly, me being pushed alongside, and there he attempted to present his credentials as Ambassador to F.N. and prospective Senator for Luna--was referred to Secretary General and at his offices we were granted ten minutes with assistant secretary who sucked teeth and said he could accept our credentials "without prejudice and without implied commitment." They were referred to Credentials Committee--who sat on them.

I got fidgety. Prof read Keats. Grain barges continued to arrive at Bombay.

In a way was not sorry about latter. When we flew from Bombay to Agra we got up before dawn and were taken out to field as city was waking. Every Loonie has his hole, whether luxury of a long-established home like Davis Tunnels or rock still raw from drill; cubic is no problem and can't be for centuries.

Bombay was bee-swarms of people. Are over million (was told) who have no home but some piece of pavement. A family might claim right (and hand down by will, generation after generation) to sleep on a piece two meters long and one wide at a described location in front of a shop. Entire family sleeps on that space, meaning mother, father, kids, maybe a grandmother. Would not have believed if had not seen. At dawn in Bombay roadways, side pavements, even bridges are covered with tight carpet of human bodies. What do they do? Where do they work? How do they eat? (Did not look as if they did. Could count ribs.)

If I hadn't believed simple arithmetic that you can't ship stuff downhill forever without shipping replacement back, would have tossed in cards. But. . . tanstanfl. "There ain't no such thing as a free lunch," in Bombay or in Luna.

At last we were given appointment with an "Investigating Committee." Not what Prof had asked for. He had requested public hearing before Senate, complete with video cameras. Only camera at this session was its "in-camera" nature; was closed. Not too closed, I had little recorder. But no video. And took Prof two minutes to discover that committee was actually vips of Lunar Authority or their tame dogs.

Nevertheless was chance to talk and Prof treated them as if they had power to recognize Luna's independence and willingness to do so. While they treated us as a cross between naughty children and criminals up for sentencing.

Prof was allowed to make opening statement. With decorations trimmed away was assertion that Luna was de-facto a sovereign state, with an unopposed government in being, a civil condition of peace and order, a provisional president and cabinet carrying on necessary functions but anxious to return to private life as soon as Congress completed writing a constitution--and that we were here to ask that these facts be recognized de-jure and that Luna be allowed to take her rightful place in councils of mankind as a member of Federated Nations.

What Prof told them bore a speaking acquaintance with truth and they were not where they could spot discrepancies. Our "provisional president" was a computer, and "cabinet" was Wyoh, Finn, Comrade Clayton, and Terence Sheehan, editor of Pravda, plus Wolfgang Korsakov, board chairman of LuNoHoCo and a director of Bank of Hong Kong in Luna. But Wyoh was only person now in Luna who knew that "Adam Selene" was false face for a computer. She had been terribly nervous at being left to hold fort alone.

As it was, Adam's "oddity" in never being seen save over video was always an embarrassment. We had done our best to turn it into a "security necessity" by opening offices for him in cubic of Authority's Luna City office and then exploding a small bomb. After this "assassination attempt" comrades who had been most fretful about Adam's failure to stir around became loudest in demands that Adam must not take any chances--this being helped by editorials.

But I wondered while Prof was talking what these pompous chooms would think if they knew that our "president" was a collection of hardware owned by Authority?

But they just sat staring with chill disapproval, unmoved by Prof's rhetoric--probably best performance of his life considering he delivered it flat on back, speaking into a microphone without notes, and hardly able to see his audience.

Then they started in on us. Gentleman member from Argentina--never given their names; we weren't socially acceptable--this Argentino objected to phrase "former Warden" in Prof's speech; that designation had been obsolete half a century; he insisted that it be struck out and proper title inserted: "Protector of the Lunar Colonies by Appointment of the Lunar Authority." Any other wording offended dignity of Lunar Authority.

Prof asked to comment; "Honorable Chairman" permitted it. Prof said mildly that he accepted change since Authority was free to designate its servants in any fashion it pleased and was no intention to offend dignity of any agency of Federated Nations. . . but in view of functions of this office--former functions of this former office--citizens of Luna Free State would probably go on thinking of it by traditional name.

That made about six of them try to talk at once. Somebody objected to use of word "Luna" and still more to "Luna Free State"--it was "the Moon," Earth's Moon, a

satellite of Earth and property of Federated Nations, just as Antarctica was--and these proceedings were a farce.

Was inclined to agree with last point. Chairman asked gentleman member from North America to please be in order and to address his remarks through Chair. Did Chair understand from witness's last remark that this alleged de-facto regime intended to interfere with consignee system?

Prof fielded that and tossed it back. "Honorable Chairman, I myself was a consignee, now Luna is my beloved home. My colleague, the Honorable the Undersecretary for Foreign Affairs Colonel O'Kelly Davis"--myself!--"is Luna born, and proud of his descent from four transported grandparents. Luna has grown strong on your outcasts. Give us your poor, your wretched; we welcome them. Luna has room for them, nearly forty million square kilometers, an area greater than all Africa--and almost totally empty. More than that, since by our method of living we occupy not 'area' but 'cubic' the mind cannot imagine the day when Luna would refuse another shipioad of weary homeless."

Chairman said, "The witness is admonished to refrain from making speeches. The Chair takes it that your oratory means that the group you represent agrees to accept prisoners as before."

"No, sir."

"What? Explain yourself."

"Once an immigrant sets foot on Luna today he is a free man, no matter what his previous condition, free to go where he listeth."

"So? Then what's to keep a consignee from walking across the field, climbing into another ship, and returning here? I admit that I am puzzled at your apparent willingness to accept them. . . but we do not want them. It is our humane way of getting rid of incorrigibles who would otherwise have to be executed."

(Could have told him several things that would stop what he pictured; he had obviously never been to Luna. As for "incorrigibles," if really are, Luna eliminates such faster than Terra ever did. Back when I was very young, they sent us a gangster lord, from Los Angeles I believe; he arrived with squad of stooges, his bodyguards, and was cockily ready to take over Luna, as was rumored to have taken over a prison somewhere Earthside.

(None lasted two weeks. Gangster boss didn't make it to barracks; hadn't listened when told how to wear a p-suit.)

"There is nothing to keep him from going home so far as we are concerned, sir," Prof answered, "although your police here on Terra might cause him to think. But I've never heard of a consignee arriving with funds enough to buy a ticket home. Is this truly an issue? The ships are yours; Luna has no ships--and let me add that we are sorry that the ship scheduled for Luna this month was canceled. I am not complaining that it forced on my colleague and myself--Prof stopped to smile--a most informal method of travel. I simply hope that this does not represent policy. Luna has no quarrel with you; your ships are welcome, your trade is welcome, we are at peace and wish to stay so. Please note that all scheduled grain shipments have come through on time."

(Prof did always have gift for changing subject.)

They fiddled with minor matters then. Nosy from North America wanted to know what had really happened to "the Ward--" He stopped himself. "The Protector. Senator

Hobart" Prof answered that he had suffered a stroke (a "coup" is a "stroke") and was no longer able to carry out his duties--but was in good health otherwise and receiving constant medical care. Prof added thoughtfully that he suspected that the old gentleman had been failing for some time, in view of his indiscretions this past year. . . especially his many invasions of rights of free citizens, including ones who were not and never had been consignees.

Story was not hard to swallow. When those busy scientists managed to break news of our coup, they had reported Warden as dead. . . whereas Mike had kept him alive and on job by impersonating him. When Authority Earthside demanded a report from Warden on this wild rumor, Mike had consulted Prof, then had accepted call and given a convincing imitation of senility, managing to deny, confirm, and confuse every detail. Our announcements followed, and thereafter Warden was no longer available even in his computer alter ego. Three days later we declared independence.

This North American wanted to know what reason they had to believe that one word of this was true? Prof smiled most saintly smile and made effort to spread thin hands before letting them fall to coverlet. "The gentleman member from North America is urged to go to Luna, visit Senator Hobart's sickbed, and see for himself. Indeed all Terran citizens are invited to visit Luna at any time, see anything. We wish to be friends, we are at peace, we have nothing to hide. My only regret is that my country is unable to furnish transportation; for that we must turn to you."

Chinee member looked at Prof thoughtfully. He had not said a word but missed nothing.

Chairman recessed hearing until fifteen hundred. They gave us a retiring room and sent in lunch. I wanted to talk but Prof shook head, glanced around room, tapped ear. So I shut up. Prof napped then and I leveled out my wheel chair and joined him; on Terra we both slept all we could. Helped. Not enough.

They didn't wheel us back in until sixteen hundred; committee was already sitting. Chairman then broke own rule against speeches and made a long one more-in-sorrow-than-anger.

Started by reminding us that Luna Authority was a nonpolitical trusteeship charged with solemn duty of insuring that Earth's satellite the Moon--Luna, as some called it--was never used for military purposes. He told us that Authority had guarded this sacred trust more than a century, while governments fell and new governments rose, alliances shifted and shifted again--indeed, Authority was older than Federated Nations, deriving original charter from an older international body, and so well had it kept that trust that it had lasted through wars and turmoils and realignments.

(This is news? But you see what he was building towards.)

"The Lunar Authority cannot surrender its trust," he told us solemnly. "However, there appears to be no insuperable obstacle to the Lunar colonists, if they show political maturity, enjoying a degree of autonomy. This can be taken under advisement. Much depends on your behavior. The behavior, I should say, of all you colonists. There have been riots and destruction of property; this must not be."

I waited for him to mention ninety dead Goons; he never did. I will never make a statesman; I don't have high-level approach.

"Destroyed property must be paid for," he went on. "Commitments must be met. If this body you call a Congress can guarantee such things, it appears to this committee

that this so-called Congress could in time be considered an agency of the Authority for many internal matters. Indeed it is conceivable that a stable local government might, in time, assume many duties now failing on the Protector and even be allowed a delegate, non-voting, in the Grand Assembly. But such recognition would have to be earned.

"But one thing must be made clear. Earth's major satellite, the Moon, is by nature's law forever the joint property of all the peoples of Earth. It does not belong to that handful who by accident of history happen to live there. The sacred trust laid upon the Lunar Authority is and forever must be the supreme law of Earth's Moon."

("--accident of history," huh? I expected Prof to shove it down his throat. I thought he would say-- No, never did know what Prof would say. Here's what he did say):

Prof waited through several seconds of silence, then said, "Honorable Chairman, who is to be exiled this time?"

"What did you say?"

"Have you decided which one of you is to go into exile? Your Deputy Warden won't take the job"--this was true; he preferred to stay alive. "He is functioning now only because we have asked him to. If you persist in believing that we are not independent, then you must be planning to send up a new warden."

"Protector!"

"Warden. Let us not mince words. Though if we knew who he is to be, we might be happy to call him 'Ambassador.' We might be able to work with him, it might not be necessary to send with him armed hoodlums. . . to rape and murder our women!"

"Order! Order! The witness will come to order!"

"It is not I who was not in order, Honorable Chairman. Rape it was and murder most foul. But that is history and now we must look to the future. Whom are you going to exile?"

Prof struggled to raise self on elbow and I was suddenly alert; was a cue. "For you all know, sir, that it is a one-way trip. I was born here. You can see what effort it is for me to return even temporarily to the planet which has disinherited me. We are outcasts of Earth who--"

He collapsed. Was up out of my chair--and collapsed myself, trying to reach him.

Was not all play-acting even though I answered a cue. Is terrible strain on heart to get up suddenly on Terra; thick field grabbed and smashed me to floor.

17

Neither of us was hurt and it made juicy news breaks, for I put recording in Stu's hands and he turned it over to his hired men. Nor were all headlines against us; Stu had recording cut and edited and slanted. AUTHORITY TO PLAY ODD MAN OUT?--LUNAR AMBASSADOR COLLAPSES UNDER GRILLING: "OUTCASTS!" HE CRIES--PROF PAZ POINTS FINGER OF SHAME: STORY PAGE 8.

Not all were good; nearest to a favorable story in India was editorial in New India Times inquiring whether Authority was risking bread of masses in failing to come to terms with Lunar insurgents. Was suggested that concessions could be made if would insure increased grain deliveries. Was filled with inflated statistics; Luna did not feed "a

hundred million Hindus"-- unless you chose to think of our grain as making difference between malnutrition and starvation.

On other hand biggest New York paper opined that Authority had made mistake in treating with us at all, since only thing convicts understood was taste of lash--troops should land, set us in order, hang guilty, leave forces to keep order.

Was a quick mutiny, quickly subdued, in Peace Dragoons regiment from which our late oppressors had come, one started by rumor that they were to be shipped to Moon. Mutiny not hushed up perfectly; Stu hired good men.

Next morning a message reached us inquiring if Professor de la Paz was well enough to resume discussions? We went, and committee supplied doctor and nurse to watch over Prof. But this time we were searched--and a recorder removed from my pouch.

I surrendered it without much fuss; was Japanese job supplied by Stu--to be surrendered. Number-six arm has recess intended for a power pack but near enough size of my mini-recorder. Didn't need power that day--and most people, even hardened police officers, dislike to touch a prosthetic.

Everything discussed day before was ignored. . . except that chairman started session by scolding us for "breaking security of a closed meeting."

Prof replied that it had not been closed so far as we were concerned and that we would welcome newsmen, video cameras, a gallery, anyone, as Luna Free State had nothing to hide.

Chairman replied stiffly that so-called Free State did not control these hearings; these sessions were closed, not to be discussed outside this room, and that it was so ordered.

Prof looked at me. "Will you help me, Colonel?" I touched controls of chair, scooted around, was shoving his stretcher wagon with my chair toward door before chairman realized bluff had been called. Prof allowed himself to be persuaded to stay without promising anything. Hard to coerce a man who faints if he gets overexcited.

Chairman said that there had been many irrelevancies yesterday and matters discussed best left undiscussed--and that he would permit no digressions today. He looked at Argentino, then at North American.

He went on: "Sovereignty is an abstract concept, one that has been redefined many times as mankind has learned to live in peace. We need not discuss it. The real question, Professor--or even Ambassador de-facto, if you like; we shan't quibble--the real question is this: Are you prepared to guarantee that the Lunar Colonies will keep their commitments?"

"What commitments, sir?"

"All commitments, but I have in mind specifically your commitments concerning grain shipments."

"I know of no such commitments, sir," Prof answered with innocence.

Chairman's hand tightened on gavel. But he answered quietly, "Come, sir, there is no need to spar over words. I refer to the quota of grain shipments--and to the increased quota, a matter of thirteen percent, for this new fiscal year. Do we have assurance that you will honor those commitments? This is a minimum basis for discussion, else these talks can go no further."

"Then I am sorry to say, sir, that it would appear that our talks must cease."

"You're not being serious."

"Quite serious, sir. The sovereignty of Free Luna is not the abstract matter you seem to feel it is. These commitments you speak of were the Authority contracting with itself. My country is not bound by such. Any commitments from the sovereign nation I have the honor to represent are still to be negotiated."

"Rabble!" growled North American. "I told you you were being too soft on them. Jailbirds. Thieves and whores. They don't understand decent treatment."

"Order!"

"Just remember, I told you. If I had them in Colorado, we would teach them a thing or two; we know how to handle their sort."

"The gentleman member will please be in order."

"I'm afraid," said Hindu member--Parsee in fact, but committeeman from India--"I'm afraid I must agree in essence with the gentleman member from the North American Directorate. India cannot accept the concept that the grain commitments are mere scraps of paper. Decent people do not play politics with hunger."

"And besides," the Argentino put in, "they breed like animals. Pigs!"

(Prof made me take a tranquilizing drug before that session. Had insisted on seeing me take it.)

Prof said quietly, "Honorable Chairman, may I have consent to amplify my meaning before we conclude, perhaps too hastily, that these talks must be abandoned?"

"Proceed."

"Unanimous consent? Free of interruption?"

Chairman looked around. "Consent is unanimous," he stated, "and the gentlemen members are placed on notice that I will invoke special rule fourteen at the next outburst. The sergeant-at-arms is directed to note this and act. The witness will proceed."

"I will be brief, Honorable Chairman." Prof said something in Spanish; all I caught was "Señor." Argentina turned dark but did not answer. Prof went on, "I must first answer the gentleman member from North America on a matter of personal privilege since he has impugned my fellow countrymen. I for one have seen the inside of more than one jail; I accept the title--nay, I glory in the title of 'jailbird.' We citizens of Luna are jailbirds and descendants of jailbirds. But Luna herself is a stern schoolmistress; those who have lived through her harsh lessons have no cause to feel ashamed. In Luna City a man may leave purse unguarded or home unlocked and feel no fear. . . I wonder if this is true in Denver? As may be, I have no wish to visit Colorado to learn a thing or two; I am satisfied with what Mother Luna has taught me. And rabble we may be, but we are now a rabble in arms.

"To the gentleman member from India let me say that we do not 'play politics with hunger.' What we ask is an open discussion of facts of nature unbound by political assumptions false to fact. If we can hold this discussion, I can promise to show a way in which Luna can continue grain shipments and expand them enormously. . . to the great benefit of India."

Both Chinee and Indian looked alert. Indian started to speak, checked himself, then said, "Honorable Chairman, will the Chair ask the witness to explain what he means?"

"The witness is invited to amplify."

"Honorable Chairman, gentlemen members, there is indeed a way for Luna to expand by tenfold or even a hundred her shipments to our hungry millions. The fact that grain barges continued to arrive on schedule during our time of trouble and are still arriving today is proof that our intentions are friendly. But you do not get milk by beating the cow. Discussions of how to augment our shipments must be based on the facts of nature, not on the false assumption that we are slaves, bound by a work quota we never made. So which shall it be? Will you persist in believing that we are slaves, indentured to an Authority other than ourselves? Or will you acknowledge that we are free, negotiate with us, and learn how we can help you?"

Chairman said, "In other words you ask us to buy a pig in a poke. You demand that we legalize your outlaw status . . . then you will talk about fantastic claims that you can increase grain shipments ten- or a hundredfold. What you claim is impossible; I am expert in Lunar economics. And what you ask is impossible; takes the Grand Assembly to admit a new nation."

Then place it before the Grand Assembly. Once seated as sovreign equals, we will discuss how to increase shipments and negotiate terms. Honorable Chairman, we grow the grain, we own it. We can grow far more. But not as slaves. Luna's soverign freedom must first be recognized."

"Impossible and you know it. The Lunar Authority cannot abdicate its sacred responsibility."

Prof sighed. "It appears to be an impasse. I can only suggest that these hearings be recessed while we all take thought. Today our barges are arriving. . . but the moment that I am forced to notify my government that I have failed. . . they. . . will . . . stop!"

Prof's head sank back on pillow as if it had been too much for him--as may have been. I was doing well enough but was young and had had practice in how to visit Terra and stay alive. A Loonie his age should not risk it. After minor foofooraw which Prof ignored they loaded us into a lorry and scooted us back to hotel. Once under way I said, "Prof, what was it you said to Señor Jellybelly that raised blood pressure?"

He chuckled. "Comrade Stuart's investigations of these gentlemen turn up remarkable facts. I asked who owned a certain brothel off Calle Florida in B.A. these days and did it now have a star redhead?"

"Why? You used to patronize it?" Tried to imagine Prof in such!

"Never. It has been forty years since I was last in Buenos Aires. He owns that establishment, Manuel, through a dummy, and his wife, a beauty with Titian hair, once worked in it."

Was sorry had asked. "Wasn't that a foul blow? And undiplomatic?"

But Prof closed eyes and did not answer.

He was recovered enough to spend an hour at a reception for newsmen that night, with white hair framed against a purple pillow and thin body decked out in embroidered pajamas. Looked like vip corpse at an important funeral, except for eyes and dimples. I looked mighty vip too, in black and gold uniform which Stu claimed was Lunar diplomatic uniform of my rank. Could have been, if Lana had had such things--did not or I would have known. I prefer a p-suit; collar was tight. Nor did I ever find out what decorations on it meant. ~A reporter asked me about one, based on Luna at crescent as seen from Terra; told him it was a prize for spelling. Stu was in earshot and said, "The

Colonel is modest. That decoration is of the same rank as the Victoria Cross and in his case was awarded for an act of gallantry on the glorious, tragic day of--"

He led him away, still talking. Stu could lie standing up almost as well as Prof. Me, I have to think out a lie ahead of time.

India newspapers and casts were rough that night; "threat" to stop grain shipments made them froth. Gentlest proposal was to clean out Luna, exterminate us "criminal troglodytes" and replace us with "honest Hindu peasants" who understood sacredness of life and would ship grain and more grain.

Prof picked that night to talk and give handouts about Luna's inability to continue shipments, and why--and Stu's organization spread release throughout Terra. Some reporters took time to dig out sense of figures and tackled Prof on glaring discrepancy:

"Professor de la Paz, here you say that grain shipments will dwindle away through failure of natural resources and that by 2082 Luna won't even be able to feed its own people. Yet earlier today you told the Lunar Authority that you could increase shipments a dozen times or more."

Prof said sweetly, "That committee is the Lunar Authority?"

"Well. . . it's an open secret."

"So it is, sir, but they have maintained the fiction of being an impartial investigating committee of the Grand Assembly. Don't you think they should disqualify themselves? So that we could receive a fair hearing?"

"Uh. . . it's not my place to say, Professor. Let's get back to my question. How do you reconcile the two?"

"I'm interested in why it's not your place to say, sir. Isn't it the concern of every citizen of Terra to help avoid a situation which will produce war between Terra and her neighbor?"

"'War'? What in the world makes you speak of 'war,' Professor?"

"Where else can it end, sir? If the Lunar Authority persists in its intransigence? We cannot accede to their demands; those figures show why. If they will not see this, then they will attempt to subdue us by force. . . and we will fight back. Like cornered rats--for cornered we are, unable to retreat, unable to surrender. We do not choose war; we wish to live in peace with our neighbor planet--in peace and peacefully trade. But the choice is not ours. We are small, you are gigantic. I predict that the next move will be for the Lunar Authority to attempt to subdue Luna by force. This 'peace-keeping' agency will start the first interplanetary war."

Journalist frowned. "Aren't you overstating it? Let's assame the Authority--or the Grand Assembly, as the Authority hasn't any warships of its own--let's suppose the nations of Earth decide to displace your, uh, 'government.' You might fight, on Luna--I suppose you would. But that hardly constitutes interplanetary war. As you pointed out, Luna has no ships. To put it bluntly, you can't reach us."

I had chair close by Prof's stretcher, listening. He turned to me. "Tell them, Colonel."

I parroted it. Prof and Mike had worked out stock situation. I had memorized and was ready with answers. I said, "Do you gentlemen remember the Pathfinder? How she came plunging in, out of control?"

They remembered. Nobody forgets greatest disaster of early days of space flight when unlucky Pathfinder hit a Belgian village.

"We have no ships," I went on, "but would be possible to throw those bargeloads of grain.. . instead of delivering them parking orbit."

Next day this evoked a headling: LOONIES THREATEN TO THROW RICE. At moment it produced awkward silence.

Finally journalist said, "Nevertheless I would like to know how you reconcile your two statements--no more grain after 2082. . . and ten or a hundred times as much."

"There is no conflict," Prof answered. "They are based on different sets of circumstances. The figures you have been looking at show the present circumstances . . . and the disaster they will produce in only a few years through drainage of Luna's natural resources--disaster which these Authority bureaucrats--or should I say 'authoritarian bureaucrats?'--would avert by telling us to stand in the corner like naughty children!"

Prof paused for labored breathing, went on: "The circumstances under which we can continue, or greatly increase, our grain shipments are the obvious corollary of the first. As an old teacher I can hardly refrain from classroom habits; the corollary should be left as an exercise for the student. Will someone attempt it?"

Was uncomfortable silence, then a little man with strange accent said slowly, "It sound to me as if you talk about way to replenish natural resource."

"Capital! Excellent!" Prof flashed dimples. "You, sir, will have a gold star on your term report! To make grain requires water and plant foods--phosphates, other things, ask the experts. Send these things to us; we'll send them back as wholesome grain. Put down a hose in the limitless Indian Ocean. Line up those millions of cattle here in India; collect their end product and ship it to us. Collect your own night soil--don't bother to sterilize it; we've learned to do such things cheaply and easily. Send us briny sea water, rotten fish, dead animals, city sewage, cow manure, offal of any sort--and we will send it back, tonne for tonne as golden grain. Send ten times as much, we'll send back ten times as much grain. Send us your poor, your dispossessed, send them by thousands and hundreds of thousands; we'll teach them swift, efficient Lunar methods of tunnel farming and ship you back unbelievable tonnage. Gentlemen, Luna is one enormous fallow farm, four thousand million hectares, waiting to be plowed!"

That startled them. Then someone said slowly, "But what do you get out of it? Luna, I mean."

Prof shrugged. "Money. In the form of trade goods. There are many things you make cheaply which are dear in Luna. Drugs. Tools. Book films. Gauds for our lovely ladies. Buy our grain and you can sell to us at a happy profit."

A Hindu journalist looked thoughtful, started to write. Next to him was a European type who seemed unimpressed. He said, "Professor, have you any idea of the cost of shipping that much tonnage to the Moon?"

Prof waved it aside. "A technicality. Sir, there was a time when it was not simply expensive to ship goods across oceans but impossible. Then it was expensive, difficult, dangerous. Today you sell goods half around your planet almost as cheaply as next door; long-distance shipping is the least important factor in cost. Gentlemen, I am not an engineer. But I have learned this about engineers. When something must be done, engineers can find a way that is economically feasible. If you want the grain that we can grow, turn your engineers loose." Prof gasped and labored, signaled for help and nurses wheeled him away.

I declined to be questioned on it, telling them that they must talk to Prof when he was well enough to see them. So they pecked at me on other lines. One man demanded to know why, since we paid no taxes, we colonists thought we had a right to run things our own way? After all, those colonies had been established by Federated Nations--by some of them. It had been terribly expensive. Earth had paid all bills--and now you colonists enjoy benefits and pay not one dime of taxes. Was that fair?

I wanted to tell him to blow it. But Prof had again made me take a tranquilizer and had required me to swot that endless list of answers to trick questions. "Lets take that one at a time," I said. "First, what is it you want us to pay taxes for? Tell me what I get and perhaps I'll buy it. No, put it this way. Do you pay taxes?"

"Certainly I do! And so should you."

"And what do you get for your taxes?"

"Huh? Taxes pay for government."

I said, "Excuse me, I'm ignorant. I've lived my whole life in Luna, I don't know much about your government. Can you feed it to me in small pieces? What do you get for your money?"

They all got interested and anything this aggressive little choom missed, others supplied. I kept a list. When they stopped, I read it back:

"Free hospitals--aren't any in Luna. Medical insurance--we have that but apparently not what you mean by it. If a person wants insurance, he goes to a bookie and works b-Out a bet. You can hedge anything, for a price. I don't hedge my health, I'm healthy. Or was till I came here. We have a public library, one Carnegie Foundation started with a few book films. It gets along by charging fees. Public roads. I suppose that would be our tubes. But they are no more free than air is free. Sorry, you have free air here, don't you? I mean our tubes were built by companies who put up money and are downright nasty about expecting it back and then some. Public schools. There are schools in all warrens and I never heard of them turning away pupils, so I guess they are 'public.' But they pay well, too, because anyone in Luna who knows something useful and is willing to teach it charges all the traffic will bear."

I went on: "Let's see what else--- Social security. I'm not sure what that is but whatever it is, we don't have it. Pensions. You can buy a pension. Most people don't; most families are large and old people, say a hundred and up, either fiddle along at something they like, or sit and watch video. Or sleep. They sleep a lot, after say a hundred and twenty."

"Sir, excuse me. Do people really live as long on the Moon as they say?"

I looked surprised but wasn't; this was a "simulated question" for which an answer had been taped. "Nobody knows how long a person will live in Luna; we haven't been there long enough. Our oldest citizens were born Earthside, it's no test. So far, no one born in Luna died of old age, but that's still no test; they haven't had time to grow old yet, less than a century. But-- Well, take me, madam; how old would you say I am? I'm authentic Loonie, third generation."

"Uh, truthfully, Colonel Davis, I was surprised at your youthfulness--for this mission, I mean. You appear to be about twenty-two. Are you older? Not much, I fancy."

"Madam, I regret that your local gravitation makes it impossible for me to bow. Thank you. I've been married longer than that."

"What? Oh, you're jesting!"

"Madam, I would never venture to guess a lady's age but, if you will emigrate to Luna, you will keep your present youthful loveliness much longer and add at least twenty years to your life." I looked at list. "I'll lump the rest of this together by saying we don't have any of it in Luna, so I can't see any reason to pay taxes for it. On that other point, sir, surely you know that the initial cost of the colonies has long since been repaid several times over through grain shipments alone? We are being bled white of our most essential resources. . .and not even being paid an open-market price. That's why the Lunar Authority is being stubborn; they intend to go on bleeding us. The idea that Luna has been an expense to Terra and the investment must be recovered is a lie invented by the Authority to excuse their treating us as slaves. The truth is that Luna has not cost Terra one dime this century--and the original investment has long since been paid back."

He tried to rally. "Oh, surely you're not claiming that the Lunar colonies have paid all the billions of dollars it took to develop space flight?"

"I could present a good case. However there is no excuse to charge that against us. You have space flight, you people of Terra. We do not. Luna has not one ship. So why should we pay for what we never received? It's like the rest of this list. We don't get it, why should we pay for it?"

Had been stalling, waiting for a claim that Prof had told me I was sure to hear. . . and got it at last.

"Just a moment, please!" came a confident voice. "You ignored the two most important items on that list. Police protection and armed forces. You boasted that you were willing to pay for what you get. . . so how about paying almost a century of back taxes for those two? It should be quite a bill, quite a bill!" He smiled smugly.

Wanted to thank him!--thought Prof was going to chide me for failing to yank it out. People looked at each other and nodded, pleased I had been scored on. Did best to look innocent. "Please? Don't understand. Luna has neither police nor armed forces."

"You know what I mean. You enjoy the protection of the Peace Forces of the Federated Nations. And you do have police. Paid for by the Lunar Authority! I know, to my certain knowledge, that two phalanges were sent to the Moon less than a year ago to serve as policemen."

"Oh." I sighed. "Can you tell me how F.N. peace forces protect Luna? I did not know that any of your nations wanted to attack us. We are far away and have nothing anyone envies. Or did you mean we should pay them to leave us alone? If so, there is an old saying that once you pay Danegeld, you never get rid of the Dane. Sir, we will fight F.N. armed forces if we must. . . we shall never pay them.

"Now about those so-called 'policemen.' They were not sent to protect us. Our Declaration of Independence told the true story about those hoodlums--did your newspapers print it?" (Some had, some hadn't--depended on country.) "They went mad and started raping and murdering! And now they are dead! So don't send us any more troops!"

Was suddenly "tired" and had to leave. Really was tired; not much of an actor and making that talk-talk come out way Prof thought it should was strain.

Was not told till later that I had received an assist in that interview; lead about "police" and "armed forces" had been fed by a stooge; Stu LaJoie took no chances. But by time I knew, I had had experience in handling interviews; we had them endlessly.

Despite being tired was not through that night. In addition to press some Agra diplomatic corps had risked showing up-- few and none officially, even from Chad. But we were curiosities and they wanted to look at us.

Only one was important, a Chinee. Was startled to see him; he was Chinee member of committee. I met him, simply as "Dr. Chan" and we pretended to be meeting first time.

He was that Dr. Chan who was then Senator from Great China and also Great China's long-time number-one boy in Lunar Authority--and, much later, Vice-Chairman and Premier, shortly before his assassin.

After getting out point I was supposed to make, with bonus through others that could have waited, I guided chair to bedroom and was at once summoned to Prof's. "Manuel, I'm sure you noticed our distinguished visitor from the Middle Kingdom."

"Old Chinee from committee?"

"Try to curb the Loonie talk, son. Please don't use it at all here, even with me. Yes. He wants to know what we meant by 'tenfold or a hundredfold.' So tell him."

"Straight? Or swindle?"

"The straight. This man is no fool. Can you handle the technical details?"

"Done my homework. Unless he's expert in ballistics."

"He's not. But don't pretend to know anything you don't know. And don't assume that he's friendly. But he could be enormously helpful if he concludes that our interests and his coincide. But don't try to persuade him. He's in my study. Good luck. And remember--speak standard English."

Dr. Chan stood up as I came in; I apologized for not standing. He said that he understood difficulties that a gentleman from Luna labored under here and for me not to exert myself--shook hands with himself and sat down.

I'll skip some formalities. Did we or did we not have some specific solution when we claimed there was a cheap way to ship massive tonnage to Luna?

Told him was a method, expensive in investment but cheap in running expenses. "It's the one we use on Luna, sir. A catapult, an escape-speed induction catapult."

His expression changed not at all. "Colonel, are you aware that such has been proposed many times and always rejected for what seemed good reasons? Something to do with air pressure."

"Yes, Doctor. But we believe, based on extensive analyses by computer and on our experience with catapulting, that today the problem can be solved. Two of our larger firms, the LuNoHo Company and the Bank of Hong Kong in Luna, are ready to head a syndicate to do it as a private venture. They would need help here on Earth and might share voting stock--though they would prefer to sell bonds and retain control. Primarily what they need is a concession from some government, a permanent easement on which to build the catapult. Probably India."

(Above was set speech. LuNoHoCo was bankrupt if anybody examined books, and Hong Kong Bank was strained; was acting as central bank for country undergoing upheaval. Purpose was to get in last word, "India." Prof had coached me that this word must come last.)

Dr. Chan answered, "Never mind financial aspects. Anything which is physically possible can always be made financially possible; money is a bugaboo of small minds. Why do you select India?"

"Well, sir, India now consumes, I believe, over ninety per cent of our grain shipments--"

"Ninety-three point one percent."

"Yes, sir. India is deeply interested in our grain so it seemed likely that she would cooperate. She could grant us land, make labor and materials available, and so forth. But I mentioned India because she holds a wide choice of possible sites, very high mountains not too far from Terra's equator. The latter is not essential, just helpful. But the site must be a high mountain. It's that air pressure you spoke of, or air density. The catapult head should be at as high altitude as feasible but the ejection end, where the load travels over eleven kilometers per second, must be in air so thin that it approaches vacuum. Which calls for a very high mountain. Take the peak Nanda Devi, around four hundred kilometers from here. It has a railhead sixty kilometers from it and a road almost to its base. It is eight thousand meters high. I don't know that Nanda Devi is ideal. It is simply a possible site with good logistics; the ideal site would have to be selected by Terran engineers."

"A higher mountain would be better?"

"Oh, yes, sir!" I assured him. "A higher mountain would be preferred over one nearer the equator. The catapult can be designed to make up for loss in free ride from Earth's rotation. The difficult thing is to avoid so far as possible this pesky thick atmosphere. Excuse me, Doctor; I did not mean to criticize your planet."

"There are higher mountains. Colonel, tell me about this proposed catapult."

I started to. "The length of an escape-speed catapult is determined by the acceleration. We think--or the computer calculates--that an acceleration of twenty gravities is about optimum. For Earth's escape speed this requires a catapult three hundred twenty-three kilometers in length. Therefore---"

"Stop, please! Colonel, are you seriously proposing to bore a hole over three hundred kilometers deep?"

"Oh, no! Construction has to be above ground to permit shock waves to expand. The stator would stretch nearly horizontally, rising perhaps four kilometers in three hundred and in a straight line--almost straight, as Coriolis acceleration and other minor variables make it a gentle curve. The Lunar catapult is straight so far as the eye can see and so nearly horizontal that the barges just miss some peaks beyond it."

"Oh. I thought that you were overestimating the capacity of present-day engineering. We drill deeply today. Not that deeply. Go on."

"Doctor, it may be that common misconception which caused you to check me is why such a catapult has not been constructed before this. I've seen those earlier studies. Most assumed that a catapult would be vertical, or that it would have to tilt up at the end to toss the spacecraft into the sky--and neither is feasible nor necessary. I suppose the asswnption arose from the fact that your spaceships do boost straight up, or nearly."

I went on: "But they do that to get above atmosphere, not to get into orbit. Escape speed is not a vector quantity; it is scalar. A load bursting from a catapult at escape speed will not return to Earth no matter what its direction. Uh. . . two corrections: it must not be headed toward the Earth itself but at some part of the sky hemisphere, and it must have

enough added velocity to punch through whatever atmosphere it still traverses. If it is headed in the right direction it will wind up at Luna."

"Ah, yes. Then this catapult could be used but once each lunar month?"

"No, sir. On the basis on which you were thinking it would be once every day, picking the time to fit where Luna will be in her orbit. But in fact--or so the computer says; I'm not an astronautics expert--in fact this catapult could be used almost any time, simply by varying ejection speed, and the orbits could still wind up at Luna."

"I don't visualize that."

"Neither do I, Doctor, but-- Excuse me but isn't there an exceptionally fine computer at Peiping University?"

"And if there is?" (Did I detect an increase in bland inscrutability? A Cyborg-computer-- Pickled brains? Or live ones, aware? Horrible, either way.)

"Why not ask a topnotch computer for all possible ejection times for such a catapult as I have described? Some orbits go far outside Luna's orbit before returning to where they can be captured by Luna, taking a fantastically long time. Others hook around Terra and then go quite directly. Some are as simple as the ones we use from Luna. There are periods each day when short orbits may be selected. But a load is in the catapult less than one minute; the limitation is how fast the beds can be made ready. It is even possible to have more than one load going up the catapult at a time if the power is sufficient and computer control is versatile. The only thing that worries me is-- These high mountains they are covered with snow?"

"Usually," he answered. "Ice and snow and bare rock."

"Well, sir, being born in Luna I don t know anything about snow. The stator would not only have to be rigid under the heavy gravity of this planet but would have to withstand dynamic thrusts at twenty gravities. I don t suppose it could be anchored to ice or snow. Or could it be?"

"I'm not an engineer, Colonel, but it seems unlikely. Snow and ice would have to be removed. And kept clear. Weather would be a problem, too."

"Weather I know nothing about, Doctor, and all I know about ice is that it has a heat of crystallization of three hundred thirty-five million joules per tonne. I have no idea how many tonnes would have to be melted to clear the site, or how much energy would be required to keep it clear, but it seems to me that it might take as large a reactor to keep it free of ice as to power the catapult."

"We can build reactors, we can melt ice. Or engineers can be sent north for re-education until they do understand ice." Dr. Chan smiled and I shivered. "However, the engineering of ice and snow was solved in Antarctica years ago; don't worry about it. A clear, solid-rock site about three hundred fifty kilometers long at a high altitude-- Anything else I should know?"

"Not much, sir. Melted ice could be collected near the catapult head and thus be the most massy part of what will be shipped to Luna--quite a saving. Also the steel canisters would be re-used to ship grain to Earth, thus stopping another drain that Luna can't take. No reason why a canister should not make the trip hundreds of times. At Luna it would be much the way barges are now landed off Bombay, solid-charge retrorockets programmed by ground control--except that it would be much cheaper, two and a half kilometer-seconds change of motion versus eleven-plus, a squared factor of about twenty-

-but actually even more favorable, as retros are parasitic weight and the payload improves accordingly. There is even a way to improve that."

"How?"

"Doctor, this is outside my specialty. But everybody knows that your best ships use hydrogen as reaction mass heated by a fusion reactor. But hydrogen is expensive in Luna and any mass could be reaction mass; it just would not be as efficient. Can you visualize an enormous, brute-force space tug designed to fit Lunar conditions? It would use raw rock, vaporized, as reaction mass and would be designed to go up into parking orbit, pick up those shipments from Terra, bring them down to Luna's surface. It would be ugly, all the fancies stripped away--might not be manned even by a Cyborg. It can be piloted from the ground, by computer."

"Yes, I suppose such a ship could be designed. But let's not complicate things. Have you covered the essentials about this catapult?"

"I believe so, Doctor. The site is the crucial thing. Take that peak Nanda Devi. By the maps I have seen it appears to have a long, very high ridge sloping to the west for about the length of our catapult. If that is true, it would be ideal--less to cut away, less to bridge. I don't mean that it is the ideal site but that is the sort to look for: a very high peak with a long, long ridge west of it."

"I understand." Dr. Chan left abruptly.

Next few weeks I repeated that in a dozen countries, always in private and with implication that it was secret. All that changed was name of mountain. In Ecuador I pointed out that Chimborazo was almost on equator--ideal! But in Argentina I emphasized that their Aconcagua was highest peak in Western Hemisphere. In Bolivia I noted that Altoplano was as high as Tibetan Plateau (almost true), much nearer equator, and offered a wide choice of sites for easy construction leading up to peaks comparable to any on Terra.

I talked to a North American who was a political opponent of that choom who had called us "rabble." I pointed out that, while Mount McKinley was comparable to anything in Asia or South America, there was much to be said for Mauna Loa--extreme ease of construction. Doubling gees to make it short enough to fit, and Hawaii would be Spaceport of World . . . whole world, for we talked about day when Mars would be exploited and freight for three (possibly four) planets would channel through their "Big Island."

Never mentioned Mauna Loa's volcanic nature; instead I noted that location permitted an aborted load to splash harmlessly in Pacific Ocean.

In Sovunion was only one peak discussed--Lenin, over thousand meters (and rather too close to their big neighbor).

Kilimanjaro, Popocatepetl, Logan, El Libertado--my favorite peak changed by country; all that we required was that it be "highest mountain" in hearts of locals. I found something to say about modest mountains of Chad when we were entertained there and rationalized so well I almost believed it.

Other times, with help of leading questions from Stu LaJoie's stooges, I talked about chemical engineering (of which I know nothing but had memorized facts) on surface of Luna, where endless free vacuum and sunpower and limitless raw materials and predictable conditions permitted ways of processing expensive or impossible

Earthside--when day arrived that cheap shipping both ways made it profitable to exploit Luna's virgin resources, Was always a suggestion that entrenched bureaucracy of Lunar Authority had failed to see great potential of Luna (true), plus answer to a question always asked, which answer asserted that Luna could accept any number of colonists.

This also was true, although never mentioned that Luna (yes, and sometimes Luna's Loonies) killed about half of new chums. But people we talked to rarely thought of emigrating themselves; they thought of forcing or persuading others to emigrate to relieve crowding--and to reduce their own taxes. Kept mouth shut about fact that half-fed swarms we saw everywhere did breed faster than even catapulting could offset.

We could not house, feed, and train even a million new chums each year--and a million wasn't a drop on Terra; more babies than that were conceived every night. We could accept far more than would emigrate voluntarily but if they used forced emigration and flooded us. . . Luna has only one way to deal with a new chum: Either he makes not one fatal mistake, in personal behavior or in coping with environment that will bite without warning. . . or he winds up as fertilizer in tunnel farm.

All that immigration in huge numbers could mean would be that a larger percentage of immigrants would die--too few of us to help them past natural hazards.

However, Prof did most talking about "Luna's great future." I talked about catapults.

During weeks we waited for committee to recall us, we covered much ground. Stu's men had things set up and only question was how much we could take. Would guess that every week on Terra chopped a year off our lives, maybe more for Prof. But he never complained and was always ready to be charming at one more reception.

We spent extra time in North America. Date of our Declaration of Independence, exactly three hundred years after that of North American British colonies, turned out to be wizard propaganda and Stu's manipulators made most of it. North Americans are sentimental about their "United States" even though it ceased to mean anything once their continent had been rationalized by F.N. They elect a president every eight years, why, could not say--why do British still have Queen?--and boast of being "sovereign." "Sovereign," like "love," means anything you want it to mean; it's a word in dictionary between "sober" and "sozzled."

"Sovereignty" meant much in North America and "Fourth of July" was a magic date; Fourth-of-July League handled our appearances and Stu told us that it had not cost much to get it moving and nothing to keep going; League even raised money used elsewhere--North Americans enjoy giving no matter who gets it.

Farther south Stu used another date; his people planted idea that coup d'etat had been 5 May instead of two weeks later. We were greeted with "Cinco de Mayo! Libertad! Cinco de Mayo!" I thought they were saying, "Thank you"-- Prof did all talking.

But in 4th-of-July country I did better. Stu had me quit wearing a left arm in public, sleeves of my costumes were sewed up so that stump could not be missed, and word was passed that I had lost it "fighting for freedom." Whenever I was asked about it, all I did was smile and say, "See what comes of biting nails?"--then change subject.

I never liked North America, even first trip. It is not most crowded part of Terra, has a mere billion people. In Bombay they sprawl on pavements; in Great New York they pack them vertically--not sure anyone sleeps. Was glad to be in invalid's chair.

Is mixed-up place another way; they care about skin color--by making point of how they don't care. First trip I was always too light or too dark, and somehow blamed either way, or was always being expected to take stand on things I have no opinions on. Bog knows I don't know what genes I have. One grandmother came from a part of Asia where invaders passed as regularly as locusts, raping as they went--why not ask her?

Learned to handle it by my second makee-learnee but it left a sour taste. Think I prefer a place as openly racist as India, where if you aren't Hindu, you're nobody--except that Parsees look down on Hindus and vice versa. However I never really had to cope with North America's reverse-racism when being "Colonel O'Kelly Davis, Hero of Lunar Freedom."

We had swarms of bleeding hearts around us, anxious to help. I let them do two things for me, things I had never had time, money, or energy for as a student: I saw Yankees play and i visited Salem.

Should have kept my illusions. Baseball is better over video, you can really see it and aren't pushed in by two hundred thousand other people. Besides, somebody should have shot that outfield. I spent most of that game dreading moment when they would have to get my chair out through crowd--that and assuring host that I was having a wonderful time.

Salem was just a place, no worse (and no better) than rest of Boston. After seeing it I suspected they had hanged wrong witches. But day wasn't wasted; I was filmed laying a wreath on a place where a bridge had been in another part of Boston, Concord, and made a memorized speech--bridge is still there, actually; you can see it, down through glass. Not much of a bridge.

Prof enjoyed it all, rough as it was on him: Prof had great capacity for enjoying. He always had something new to tell about great future of Luna. In New York he gave managing director of a hotel chain, one with rabbit trade mark, a sketch of what could be done with resorts in Luna--once excursion rates were within reach of more people--visits too short to hurt anyone, escort service included, exotic side trips, gambling--no taxes.

Last point grabbed attention, so Prof expanded it into "longer old age" theme--a chain of retirement hostels where an earthworm could live on Terran old-age pension and go on living, twenty, thirty, forty years longer than on Terra. As an exile--but which was better? A live old age in Luna? Or a funeral crypt on Terra? His descendants could pay visits and fill those resort hotels. Prof embellished with pictures of "nightclubs" with acts impossible in Terra's horrible gravity, sports to fit our decent level of gravitation--even talked about swimming pools and ice skating and possibility of flying! (Thought he had tripped his safeties.) He finished by hinting that Swiss cartel had tied it up.

Next day he was telling foreign-divisions manager of Chase International Panagra that a Luna City branch should be staffed with paraplegics, paralytics, heart cases, amputees, others who found high gravity a handicap. Manager was a fat man who wheezed, he may have been thinking of it personally--but his ears pricked up at "no taxes."

We didn't have it all our own way. News was often against us and were always hecklers. Whenever I had to take them on without Prof's help I was likely to get tripped. One man tackled me on Prof's statement to committee that we "owned" grain grown in Luna: he seemed to take it for granted that we did not. Told him I did not understand question.

He answered, "Isn't it true, Colonel, that your provisional government has asked for membership in Federated Nations?"

Should have answered, "No comment." But fell for it and agreed. "Very well," he said, "the impediment seems to be the counterclaim that the Moon belongs to the Federated Nations--as it always has---under supervision of the Lunar Authority. Either way, by your own admission, that grain belongs to the Federated Nations, in trust."

I asked how he reached that conclusion? He answered, 'Colonel, you style yourself 'Undersecretary of Foreign Affairs.' Surely you are familiar with the charter of the Federated Nations."

I had skimmed it. "Reasonably familiar," I said-- cautiously, I thought.

"Then you know the First Freedom guaranteed by the Charter and its current application through F & A Control Board Administrative Order Number eleven-seventy-six dated three March of this year. You concede therefore that all grain grown on the Moon in excess of the local ration is ab initio and beyond contest the property of all, title held in trust by the Federated Nations through its agencies for distribution as needed." He was writing as he talked. "Have you anything to add to that concession?"

I said, "What in Bog's name you talking about?" Then, "Come back! Haven't conceded anything!"

So Great New York Times printed:

LUNAR "UNDERSECRETARY" SAYS:
"FOOD BELONGS TO HUNGRY"

New York Today--O'Kelly Davis, soi-disant "Colonel of the Armed Forces of Free Luna" here on a junket to stir up support for the insurgents in the F.N. Lunar colonies, said in a voluntary statement to this paper that the "Freedom from Hunger" clause in the Grand Charter applied to the Lunar grain shipments--

I asked Prof how should have handled? "Always answer an unfriendly question with another question," he told me. "Never ask him to clarify; he'll put words in your mouth. This reporter-- Was he skinny? Ribs showing?"

"No. Heavyset."

"Not living on eighteen hundred calories a day, I take it, which is the subject of that order he cited. Had you known you could have asked him how long he had conformed to the ration and why he quit? Or asked him what he had for breakfast--and then looked unbelieving no matter what he answered. Or when you don't know what a man is getting at, let your counter-question shift the subject to something you do want to talk about. Then, no matter what he answers, make your point and call on someone else. Logic does not enter into it--just tactics."

"Prof, nobody here is living on eighteen hundred calories a day. Bombay, maybe. Not here."

"Less than that in Bombay. Manuel, that 'equal ration' is a fiction. Half the food on this planet is in the black market, or is not reckoned through one ruling or another. Or they keep two sets of books, and figures submitted to the F.N. having nothing to do with the economy. Do you think that grain from Thailand and Burma and Australia is correctly reported to the Control Board by Great China? I'm sure that the India representative on that food board doesn't. But India keeps quiet because she gets the lion's share from Luna.

. . and then 'plays politics with hunger'--a phrase you may remember--by using our grain to control her elections. Kerala had a planned famine last year. Did you see it in the news?"

"No."

"Because it wasn't in the news. A managed democracy is a wonderful thing, Manuel, for the managers.. . and its greatest strength is a 'free press' when 'free' is defined as 'responsible' and the managers define what is 'irresponsible.' Do you know what Luna needs most?"

"More ice."

"A news system that does not bottleneck through one channel. Our friend Mike is our greatest danger."

"Huh? Don't you trust Mike?"

"Manuel, on some subjects I don't trust even myself. Limiting the freedom of news 'just a little bit' is in the same category with the classic example 'a little bit pregnant.' We are not yet free nor will we be as long as anyone--even our ally Mike--controls our news. Someday I hope to own a newspaper independent of any source or channel. I would happily set print by hand, like Benjamin Franklin."

I gave up. "Prof, suppose these talks fail and grain shipments stop. What happens?"

"People back home will be vexed with us. . . and many here on Terra would die. Have you read Malthus?"

"Don't think so."

"Many would die. Then a new stability would be reached with somewhat more people--more efficient people and better fed. This planet isn't crowded; it is just mismanaged . . . and the unkindest thing you can do for a hungry man is to give him food. 'Give.' Read Malthus. It is never safe to laugh at Dr. Malthus; he always has the last laugh. A depressing man, I'm glad he's dead. But don't read him until this is over; too many facts hamper a diplomat, especially an honest one."

"I'm not especially honest."

"But you have no talent for dishonesty, so your refuge must be ignorance and stubbornness. You have the latter; try to preserve the former. For the nonce. Lad, Uncle Bernardo is terribly tired."

I said, "Sorry," and wheeled out of his room. Prof was hitting too hard a pace. I would have been willing to quit if would insure his getting into a ship and out of that gravity. But traffic stayed one way--grain barges, naught else.

But Prof had fun. As I left and waved lights out, noticed again a toy he had bought, one that delighted him like a kid on Christmas--a brass cannon.

A real one from sailing ship days. Was small, barrel about half a meter long and massing, with wooden carriage, only kilos fifteen. A "signal gun" its papers said. Reeked of ancient history, pirates, men "walking plank." A pretty thing but I asked Prof why? If we ever managed to leave, price to lift that mass to Luna would hurt--I was resigned to abandoning a p-suit with years more wear in it--abandon everything but two left arms and a pair of shorts, If pressed, might give up social arm. If very pressed, would skip shorts.

He reached out and stroked shiny barrel. "Manuel, once there was a man who held a political make-work job like so many here in this Directorate, shining brass cannon around a courthouse."

"Why would courthouse have cannon?"

"Never mind. He did this for years. It fed him and let him save a bit, but he was not getting ahead in the world. So one day he quit his job, drew out his savings, bought a brass cannon--and went into business for himself."

"Sounds like idiot."

"No doubt. And so were we, when we tossed out the Warden. Manuel, you'll outlive me. When Luna adopts a flag, I would like it to be a cannon or, on field sable, crossed by bar sinister gules of our proudly ignoble lineage. Do you think it could be managed?"

"Suppose so, if you'll sketch. But why a flag? Not a flagpole in all Luna."

"It can fly in our hearts . . . a symbol for all fools so ridiculously impractical as to think they can fight city hail. Will you remember, Manuel?"

"Sure. That is, will remind you when time comes." Didn't like such talk. He had started using oxygen tent in private--and would not use in public.

Guess I'm "ignorant" and "stubborn"--was both in place called Lexington, Kentucky, in Central Managerial Area. One thing no doctrine about, no memorized answers, was life in Luna. Prof said to tell truth and emphasize homely, warm, friendly things, especially anything different. "Remember, Manuel, the thousands of Terrans who have made short visits to Luna are only a tiny fraction of one percent. To most people we will be as weirdly interesting as strange animals in a zoo. Do you remember that turtle on exhibition in Old Dome? That's us."

Certainly did; they wore that insect out, staring at. So when this male-female team started quizzing about family life in Luna was happy to answer. I prettied it only by what I left out--things that aren't family life but poor substitutes in a community overloaded with males, Luna City is homes and families mainly, dull by Terra standards--but I like it. And other warrens much same, people who work and raise kids and gossip and find most of their fun around dinner table. Not much to tell, so I diseussed anything they found interesting. Every Luna custom comes from Terra since that's where we all came from, but Terra is such a big place that a custom from Micronesia, say, may be strange in North America.

This woman--can't call her lady--wanted to know about various sorts of marriage. First, was it true that one could get married without a license "on" Luna?

I asked what a marriage license was?

Her companion said, "Skip it, Mildred. Pioneer societies never have marriage licenses."

"But don't you keep records?" she persisted.

"Certainly," I agreed. "My family keeps a family book that goes back almost to first landing at Johnson City--every marriage, birth, death, every event of importance not only in direct line but all branches so far as we can keep track. And besides, is a man, a schoolteacher, going around copying old family records all over our warren, writing a history of Luna City. Hobby."

"But don't you have official records? Here in Kaintucky we have records that go back hundreds of years."

"Madam, we haven't lived there that long."

"Yes, but-- Well, Luna City must have a city clerk. Perhaps you call him 'county recorder.' The official who keeps track of such things. Deeds and so forth."

I said. "Don't think so, madam. Some bookies do notary work, witnessing chops on contracts, keeping records of them. Is for people who don't read and write and can't keep own records. But never heard of one asked to keep record of marriage. Not saying couldn't happen. But haven't heard."

"How delightfully informal! Then this other rumor, about how simple it is to get a divorce on the Moon. I daresay that's true, too?"

"No, madam, wouldn't say divorce is simple. Too much to untangle. Mmm . . . take a simple example, one lady and say she has two husbands--"

"Two?"

"Might have more, might have just one. Or might be complex marriage. But let's take one lady and two men as typical. She decides to divorce one. Say it's friendly, with other husband agreeing and one she is getting rid of not making fuss. Not that it would do him any good. Okay, she divorces him; he leaves. Still leaves endless things. Men might be business partners, co-husbands often are. Divorce may break up partnership. Money matters to settle. This three may own cubic together, and while will be in her name, ex-husband probably has cash coming or rent. And almost always are children to consider, support and so forth. Many things. No, madam, divorce is never simple. Can divorce him in ten seconds but may take ten years to straighten out loose ends. Isn't it much that way here?"

"Uh . . . just fuhget ah evah asked the question, Cunn'l; it may be simpluh hyuh." (She did talk that way but was understandable once I got program. Won't spell it again.) "But if that is a simple marriage, what is a 'complex' one?"

Found self explaining polyandries, clans, groups, lines, and less common patterns considered vulgar by conservative people such as my own family--deal my mother set up, say, after she ticked off my old man, though didn't describe that one; Mother was always too extreme.

Woman said, "You have me confused. What is the difference between a line and a clan?"

Are quite different. Take own case. I have honor to be member of one of oldest line marriages in Luna--and, in my prejudiced opinion, best. You asked about divorce. Our family has never had one and would bet long odds never will. A line marriage increases in stability year after year, gains practice in art of getting along together, until notion of anybody leaving is unthinkable. Besides, takes unanimous decision of all wives to divorce a husband--could never happen. Senior wife would never let it get that far."

Went on describing advantages--financial security, fine home life it gives children, fact that death of a spouse, while tragic, could never be tragedy it was in a temporary family, especially for children--children simply could not be orphaned. Suppose I waxed too enthusiastic--but my family is most important thing in my life. Without them I'm just one-armed mechanic who could be eliminated without causing a draft.

"Here's why is stable," I said. "Take my youngest wife, sixteen. Likely be in her eighties before is senior wife. Doesn't mean all wives senior to her will die by then; unlikely in Luna, females seem to be immortal. But may all opt out of family management by then; by our family traditions they usually do, without younger wives putting pressure on them. So Ludmilla--"

"Ludmilla?"

"Russki name. From fairy tale. Milla will have over fifty years of good example before has to carry burden. She's sensible to start with, not likely to make mistakes and if did, has other wives to steady her. Self-correcting, like a machine with proper negative feedback. A good line marriage is immortal; expect mine to outlast me at least a thousand years--and is why shan't mind dying when time comes; best part of me will go on living."

Prof was being wheeled out; he had them stop stretcher cart and listened. I turned to him. "Professor," I said, "you know my family. Would mind telling this lady why it's a happy family? If you think so."

"It is," agreed Prof. "However, I would rather make a more general remark. Dear madam, I gather that you find our Lunar marriage customs somewhat exotic."

"Oh, I wouldn't go that far!" she said hastily. "Just somewhat unusual."

"They arise, as marriage customs always do, from economic necessities of the circumstances--and our circumstances are very different from those here on Earth. Take the line type of marriage which my colleague has been praising . . and justifiably, I assure you, despite his personal bias--I am a bachelor and have no bias. Line marriage is the strongest possible device for conserving capital and insuring the welfare of children--the two basic societal functions for marriage everywhere--in an enviroment in which there is no security, neither for capital nor for children, other than that devised by individuals. Somehow human beings always cope with their environments. Line marriage is a remarkably successful invention to that end. All other Lunar forms of marriage serve that same purpose, though not as well."

He said goodnight and left. I had with me--always!--a picture of my family, newest one, our wedding with Wyoming. Brides are at their prettiest and Wyoh was radiant--and rest of us looked handsome and happy, with Grandpaw tall and proud and not showing failing faculties.

But was disappointed; they looked at it oddly. But man --Mathews, name was--said, "Can you spare this picture, Colonel?"

Winced. "Only copy I have. And a long way from home."

"For a moment, I mean. Let me have it photographed. Right here, it need never leave your hands,"

"Oh. Oh, certainly!" Not a good picture of me but is face I have, and did Wyoh justice and they just don't come prettier than Lenore.

So he photographed it and next morning they did come right into our hotel suite and woke me before time and did arrest and take me away wheel chair and all and did lock me in a cell with bars! For bigamy. For polygamy. For open immorality and publicly inciting others to same.

Was glad Mum couldn't see.

19

Took Stu all day to get case transferred to an F.N. court and dismissed. His lawyers asked to have it tossed out on "diplomatic immunity" but F.N. judges did not fall into trap, merely noted that alleged offenses had taken place outside jurisdiction of lower court, except alleged "inciting" concerning which they found insufficient evidence. Aren't any F.N. laws covering marriage; can't be--just a rule about each nation required to give

"full faith and credence" to marriage customs of other member nations.

Out of those eleven billion people perhaps seven billion lived where polygamy is legal, and Stu's opinion manipulators played up "persecution"; it gained us sympathy from people who otherwise would never have heard of us--even gained it in North America and other places where polygamy is not legal, from people who believe in "live and let live." All good, because always problem was to be noticed. To most of those bee-swarm billions Luna was nothing; our rebellion hadn't been noticed.

Stu's operators had gone to much thought to plan setup to get me arrested. Was not told until weeks later after time to cool off and see benefits. Took a stupid judge, a dishonest sheriff, and barbaric local prejudice which I triggered with that sweet picture, for Stu admitted later that range of color in Davis family was what got judge angry enough to be foolish even beyond native talent for nonsense.

My one consolation, that Mum could not see my disgrace, turned out mistaken; pictures, taken through bars and showing grim face, were in every Luna paper, and write-ups used nastiest Earthside stories, not larger number that deplored injustice. But should have had more faith in Mimi; she wasn't ashamed, simply wanted to go Earthside and rip some people to pieces.

While helped Earthside, greatest good was in Luna. Loonies become more unified over this silly huhu than had ever been before. They took it personally and "Adam Selene" and "Simon Jester" pushed it. Loonies are easygoing except on one subject, women. Every lady felt insulted by Terran news stories--so male Loonies who had ignored politics suddenly discovered I was their boy.

Spin-off--old lags feel superior to those not transported. Later found self greeted by ex-cons with: "Hi, jailbird!" A lodge greeting--I was accepted.

But saw nothing good about it then! Pushed around, treated like cattle, fingerprinted, photographed, given food we wouldn't offer hogs, exposed to endless indignity, and only that heavy field kept me from trying to kill somebody--had I been wearing number-six arm when grabbed, might have tried.

But steadied down once I was freed. Hour later we were on way to Agra; had at last been summoned by committee. Felt good to be back in suite in maharajah's palace but eleven-hour zone change in less than three did not permit rest; we went to hearing bleary-eyed and held together by drugs.

"Hearing" was one-sided; we listened while chairman talked. Talked an hour; I'll summarize:

Our preposterous claims were rejected. Lunar Authority's sacred trust could not be abandoned. Disorders on Earth's Moon could not be tolerated. Moreover, recent disorders showed that Authority had been too lenient. Omission was now to be corrected by an activist program, a five-year plan in which all phases of life in Authority's trusteeship would be overhauled. A code of laws was being drafted; civil and criminal courts would be instituted for benefit of "client-employees"--which meant all persons in trust area, not just consignees with uncompleted sentences. Public schools would be established, plus indoctrinal adult schools for client-employees in need of same. An economic, engineering, and agricultural planning board would be created to provide fullest and most efficient use of Moon's resources and labor of client-employees. An interim goal of quadrupling grain shipments in five years had been adopted as a figure

easily obtainable once scientific planning of resources and labor was in effect. First phase would be to withdraw client-employees from occupations found not to be productive and put them to drilling a vast new system of farm tunnels in order that hydroponics would commence in them not later than March 2078. These new giant farms would be operated by Lunar Authority, scientifically, and not left to whims of private owners. It was contemplated that this system would, by end of five-year plan, produce entire new grain quota; in meantime client-employees producing grain privately would be allowed to continue. But they would be absorbed into new system as their less efficient methods were no longer needed.

Chairman looked up from papers. "In short, the Lunar colonies are going to be civilized and brought into managerial coordination with the rest of civilization. Distasteful as this task has been, I feel--speaking as a citizen rather than as chairman of this committee--I feel that we owe you thanks for bringing to our attention a situation so badly in need of correction."

Was ready to burn his ears off. "Client-employees!" What a fancy way to say "slaves"! But Prof said tranquilly, "I find the proposed plans most interesting. Is one permitted to ask questions? Purely for information?"

"For information, yes."

North American member leaned forward. "But don't assume that we are going to take any backtalk from you cavemen! So mind your manners. You aren't in the clear on this, you know."

"Order," chairman said. "Proceed, Professor."

"This term 'client-employee' I find intriguing. Can it be stipulated that the majority of inhabitants of Earth's major satellite are not undischarged consignees but free individuals?"

"Certainly," chairman agreed blandly. "All legal aspects of the new policy have been studied. With minor exceptions some ninety-one percent of the colonists have citizenship, original or derived, in various member nations of the Federated Nations. Those who wish to return to their home countries have a right to do so. You will be pleased to learn that the Authority is considering a plan under which loans for transportation can be arranged. . . probably under supervision of International Red Cross and Crescent. I might add that I myself am heartily backing this plan--as it renders nonsensical any talk about 'slave labor.'" He smiled smugly.

"I see," agreed Prof. "Most humane. Has the committee--or the Authority--pondered the fact that most--effectively all, I should say--considered the fact that inhabitants of Luna are physically unable to live on this planet? That they have undergone involuntary permanent exile through irreversible physiological changes and can never again live in comfort and health in a gravitational field six times greater than that to which their bodies have become adjusted?"

Scoundrel pursed lips as if considering totally new idea. "Speaking again for myself, I would not be prepared to stipulate that what you say is necessarily true. It might be true of some, might not be others; people vary widely. Your presence here proves that it is not impossible for a Lunar inhabitant to return to Earth. In any case we have no intention of forcing anyone to return. We hope that they will choose to stay and we hope to encourage others to emigrate to the Moon. But these are individual choices, under the freedoms guaranteed by the Great Charter. But as to this alleged physiological

phenomenon--it is not a legal matter. If anyone deems it prudent, or thinks he would be happier, to stay on the Moon, that's his privilege."

"I see, sir. We are free. Free to remain in Luna and work, at tasks and for wages set by you. . . or free to return to Earth to die."

Chairman shrugged. "You assume that we are villians--we're not. Why, if I were a young man I would emigrate to the Moon myself. Great opportunities! In any case I am not troubled by your distortions--history will justify us."

Was surprised at Prof; he was not fighting. Worried about him--weeks of strain and a bad night on top. All he said was, "Honorable Chairman, I assume that shipping to Luna will soon be resumed. Can passage be arranged for my colleague and myself in the first ship? For I must admit, sir, that this gravitational weakness of which I spoke is, in our cases, very real. Our mission is completed; we need to go home."

(Not a word about grain barges. Nor about "throwing rocks," nor even futility of beating a cow. Prof just sounded tired.)

Chairman leaned forward and spoke with grim satisfaction. "Professor, that presents difficulties. To put it bluntly, you appear to be guilty of treason against the Great Charter, indeed against all humanity . . . and an indictment is being considered. I doubt if anything more than a suspended sentence would be invoked against a man of your age and physical condition, however. Do you think it would be prudent of us to give you passage back to the place where you committed these acts--there to stir up more mischief?"

Prof sighed. "I understand your point. Then, sir, may I be excused? I am weary."

"Certainly. Hold yourself at the disposal of this committee. The hearing stands adjourned. Colonel Davis--"

"Sir?" I was directing wheel chair around, to get Prof out at once; our attendants had been sent outside.

"A word with you, please. In my office."

"Uh--" Looked at Prof; eyes were closed and seemed unconscious. But he moved one finger, motioning me to him. "HonorabIe Chairman, I'm more nurse than diplomat; have to look after him. He's an old man, he's ill."

"The attendants will take care of him."

"Well. . ." Got as close to Prof as I could from chair, leaned over him. "Prof, are you right?"

He barely whispered. "See what he wants. Agree with him. But stall."

Moments later was alone with chairman, soundproof door locked--meant nothing; room could have a dozen ears, plus one in my left arm.

He said, "A drink? Coffee?"

I answered, "No, thank you, sir. Have to watch my diet here."

"I suppose so. Are you really limited to that chair? You look healthy."

I said, "I could, if had to, get up and walk across room. Might faint. Or worse. Prefer not to risk. Weigh six times what I should. Heart's not used to it."

"I suppose so. Colonel, I hear you had some silly trouble in North America. I'm sorry, I truly am. Barbaric place. Always hate to have to go there. I suppose you're wondering why I wanted to see you."

"No, sir, assume you'll tell when suits you. Instead was wondering why you still call me 'Colonel.'"

He gave a barking laugh. "Habit, I suppose. A lifetime of protocol. Yet it might be well for you to continue with that title. Tell me, what do you think of our five-year plan?"

Thought it stunk. "Seems to have been carefully thought out."

"Much thought went into it. Colonel, you seem to be a sensible man-- I know you are, I know not only your background but practically every word you've spoken, almost your thoughts, ever since you set foot on Earth. You were born on the Moon. Do you regard yourself as a patriot? Of the Moon?"

"Suppose so. Though tend to think of what we did just as something that had to be done."

"Between ourselves--yes. That old fool Hobart. Colonel, that is a good plan. . . but lacks an executive. If you are really a patriot or let's say a practical man with your country's best interests at heart, you might be the man to carry it out." He held up hand. "Don't be hasty! I'm not asking you to sell out, turn traitor, or any nonsense like that. This is your chance to be a real patriot--not some phony hero who gets himself killed in a lost cause. Put it this way. Do you think it is possible for the Lunar colonies to hold out against all the force that the Federated Nations of Earth can bring to bear? You're not really a military man, I know--and I'm glad you're not--but you are a technical man, and I know that, too. In your honest estimation, how many ships and bombs do you think it would take to destroy the Lunar colonies?"

I answered, "One ship, six bombs."

"Correct! My God, it's good to talk to a sensible man. Two of them would have to be awf'ly big, perhaps specially built. A few people would stay alive, for a while, in smaller warrens beyond the blast areas. But one ship would do it, in ten minutes."

I said, "Conceded, sir, but Professor de la Paz pointed out that you don't get milk by beating a cow. And certainly can't by shooting it."

"Why do you think we've held back, done nothing, for over a month? That idiot colleague of mine--I won't name him--spoke of 'backtalk.' Backtalk doesn't fret me; it's just talk and I'm interested in results. No, my dear Colonel, we won't shoot the cow. . . but we would, if forced to, let the cow know that it could be shot. H-missiles are expensive toys but we could afford to expend some as warning shots, wasted on bare rock to let the cow know what could happen. But that is more force than one likes to use--it might frighten the cow and sour its milk." He gave another barking laugh. "Better to persuade old bossy to give down willingly."

I waited. "Don't you want to know how?" he asked.

"How?" I agreed.

"Through you. Don't say a word and let me explain--"

He took me up on that high mountain and offered me kingdoms of Earth. Or of Luna. Take job of "Protector Pro Tem" with understanding was mine permanently if I could deliver. Convince Loonies they could not win. Convince them that this new setup was to their advantage--emphasize benefits, free schools, free hospitals, free this and that--details later but an everywhere government just like on Terra. Taxes starting low and handled painlessly by automatic checkoff and through kickback revenues from grain shipments. But, most important, this time Authority would not send a boy to do a man's job--two regiments of police at once.

"Those damned Peace Dragoons were a mistake," he said, "one we won't make again. Between ourselves, the reason it has taken us a month to work this out is that we

had to convince the Peace Control Commission that a handful of men cannot police three million people spread through six largish warrens and fifty and more small ones. So you'll start with enough police--not combat troops but military police used to quelling civilians with a minimum of fuss. Besides that, this time they'll have female auxiliaries, the standard ten per cent-no more rape complaints. Well, sir? Think you can swing it? Knowing it's best in the long run for your own people?"

I said I ought to study it in detail, particularly plans and quotas for five-year plan, rather than make snap decision.

~Certainly, certainly!" he agreed. "I'll give you a copy of the white paper we've made up; take it home, study it, sleep on it. Tomorrow we'll talk again. Just give me your word as a gentleman to keep it under your hair. No secret, really. . . but these things are best settled before they are publicized. Speaking of publicity, you'll need help--and you'll get it. We'll go to the expense of sending up topnotch men, pay them what it's worth, have them centrifuge the way those scientists do--you know. This time we're doing it right. That fool Hobart--he's actually dead, isn't he?"

"No, sir. Senile, however."

"Should have killed him, Here's your copy of the plan."

"Sir? Speaking of old men-- Professor de la Paz can't stay here. Wouldn't live six months."

"That's best, isn't it?"

I tried to answer levelly, "You don't understand. He is greatly loved and respected. Best thing would be for me to convince him that you mean business with those H-missiles--and that it is his patriotic duty to salvage what we can. But, either way, if I return without him. .. well, not only could not swing it; wouldn't live long enough to try."

"Hmm-- Sleep on it. We'll talk tomorrow. Say fourteen o'clock."

I left and as soon as was loaded into lorry gave way to shakes. Just don't have high-level approach.

Stu was waiting with Prof. "Well?" said Prof.

I glanced around, tapped ear. We huddled, heads over Prof's head and two blankets over us all. Stretcher wagon was clean and so was my chair; I checked them each morning. But for room itself seemed safer to whisper under blankets.

Started in. Prof stopped me. "Discuss his ancestry and habits later. The facts."

"He offered me job of Warden."

"I trust you accepted."

"Ninety percent. I'm to study this garbage and give answer tomorrow. Stu, how fast can we execute Plan Scoot?"

"Started. We were waiting for you to return. If they let you return."

Next fifty minutes were busy. Stu produced a gaunt Hindu in a dhoti; in thirty minutes he was a twin of Prof, and lifted Prof off wagon onto a divan. Duplicating me was easier. Our doubles were wheeled into suite's living room just at dusk and dinner was brought in. Several people came and went --among them elderly Hindu woman in sari, on arm of Stuart LaJoie. A plump babu followed them.

Getting Prof up steps to roof was worst; he had never worn powered walkers, had no chance to practice, and had been flat on back for more than a month.

But Stu's arm kept him steady; I gritted teeth and climbed those thirteen terrible steps by myself. By time I reached roof, heart was ready to burst. Was put to it not to

black out. A silent little flitter craft came out of gloom right on schedule and ten minutes later we were in chartered ship we had used past month--two minutes after that we jetted for Australia. Don't know what it cost to prepare this dance and keep it ready against need, but was no hitch.

Stretched out by Prof and caught breath, then said, "How you feel, Prof?"

"Okay. A bit tired. Frustrated."

"Ja da. Frustrated."

"Over not seeing the Taj Mahal, I mean. I never had opportunity as a young man--and here I've been within a kilometer of it twice, once for several days, now for another day. . . and still I haven't seen it and never shall."

"Just a tomb."

"And Helen of Troy was just a woman. Sleep, lad." We landed in Chinee half of Australia, place called Darwin, and were carried straight into a ship, placed in acceleration couches and dosed. Prof was already out and I was beginning to feel dopy when Stu came in, grinned, and strapped down by us. I looked at him. "You, too? Who's minding shop?"

"The same people who've been doing the real work all along. It's a good setup and doesn't need me any longer. Mannie old cobber, I did not want to be marooned a long way from home. Luna, I mean, in case you have doubts. This looks like the last train from Shanghai."

"What's Shanghai got to do with?"

"Forget I mentioned it. Mannie, I'm flat broke, concave. I owe money in all directions--debts that will be paid only if certain stocks move the way Adam Selene convinced me they would move, shortly after this point in history. And I'm wanted, or will be, for offenses against the public peace and dignity. Put it this way. I'm saving them the trouble of transporting me. Do you think I can learn to be a drillman at my age?"

Was feeling foggy, drug taking hold. "Stu, in Luna y'aren't old. . . barely started . . . 'nyway . . ,eat our table f'ever! Mimi likes you."

"Thanks, cobber, I might. Warning light! Deep breath!"

Suddenly was kicked by ten gee.

20

Our craft was ground-to-orbit ferry type used for manned satellites, for supplying F.N. ships in patrol orbit, and for passengers to and from pleasure-and-gambling satellites. She was carrying three passengers instead of forty, no cargo except three p-suits and a brass cannon (yes, silly toy was along; p-suits and Prof's bang-bang were in Australia a week before we were) and good ship Lark had been stripped--total crew was skipper and a Cyborg pilot.

She was heavily overfueled.

We made (was told) normal approach on Elysium satellite . . . then suddenly scooted from orbital speed to escape speed, a change even more violent than liftoff.

This was scanned by F.N. Skytrack; we were commanded to stop and explain. I got this secondhand from Stu, self still recovering and enjoying luxury of no-gee with one strap to anchor. Prof was still out.

"So they want to know who we are and what we think we are doing," Stu told me. "We told them that we were Chinese registry sky wagon Opening Lotus bound on an errand of mercy, to wit, rescuing those scientists marooned on the Moon, and gave our identification--as Opening Lotus."

"How about transponder?"

"Mannie, if I got what I paid for, our transponder identified us as the Lark up to ten minutes ago. . . and now has I.D.'d us as the Lotus. Soon we will know. Just one ship is in position to get a missile off and it must blast us in"--he stopped to look--"another twenty-seven minutes according to the wired-up gentleman booting this bucket, or its chances of getting us are poor to zero. So if it worries you--if you have prayers to say or messages to send or whatever it is one does at such times--now is the time."

"Think we ought to rouse Prof?"

"Let him sleep. Can you think of a better way to make jump than from peaceful sleep instantaneously into a cloud of radiant gas? Unless you know that he has religious necessities to attend to? He never struck me as a religious man, orthodoctrinally speaking."

"He's not. But if you have such duties, don't let me keep you."

"Thank you, I took care of what seemed necessary before we left ground. How about yourself, Mannie? I'm not much of a padre but I'll do my best, if I can help. Any sins on your mind, old cobber? If you need to confess, I know quite a little about sin."

Told him my needs did not run that way. Then did recall sins, some I cherished, and gave him a version more or less true. That reminded him of some of his own, which remind me-- Zero time came and went before we ran out of sins. S LaJoie is a good person to spend last minutes with, even if don't turn out to be last.

We had two days with naught to do but undergo drastic routines to keep us from carrying umpteen plagues to Luna. But didn't mind shaking from induced chills and burning with fever; free fall was such a relief and was so happy to be going home.

Or almost happy-- Prof asked what was troubling me,~ "Nothing," I said. "Can't wait to be home. But-- Truth is, ashamed to show face after we've failed. Prof, what did we do wrong?"

"Failed, my boy?"

"Don't see what else can call it. Asked to be recognized. Not what we got."

"Manuel, I owe you an apology. You will recall Adam Selene's projection of our chances just before we left home." Stu was not in earshot but "Mike" was word we never used; was always "Adam Selene" for security.

"Certainly do! One in fifty-three. Then when we reached Earthside dropped to reeking one in hundred. What you guess it is now? One in thousand?"

"I've had new projections every few days. . .which is why I owe you an apology. The last, received just before we left, included the then-untested assumption that we would escape, get clear of Terra and home safely. Or that at least one of us three would make it, which is why Comrade Stu was summoned home, he having a Terran's tolerance of high acceleration. Eight projections, in fact, ranging from three of us dead, through various combinations up to three surviving. Would you care to stake a few dollars on what that last projection is, setting a bracket and naming your own odds? I'll give a hint. You are far too pessimistic."

"Uh. . . no, damn it! Just tell."

"The odds against us are now only seventeen to one . . . and they've been shortening all month. Which I couldn't tell you."

"Was amazed, delighted, overjoyed--hurt. "What you mean, couldn't tell me? Look, Prof, if not trusted, deal me out and put Stu in executive cell."

"Please, son. That's where he will go if anything happens to any of us--you, me, or dear Wyoming. I could not tell you Earthside--and can tell you now--not because you aren't trusted but because you are no actor. You could carry out your role more effectively if you believed that our purpose was to achieve recognition of independence."

"Now he tells!"

"Manuel, Manuel, we had to fight hard every instant--and lose."

"So? Am big enough boy to be told?"

"Please, Manuel. Keeping you temporarily in the dark greatly enhanced our chances; you can check this with Adam. May I add that Stuart accepted his summons to Luna blithely without asking why? Comrade, that committee was too small, its chairman too intelligent; there was always the hazard that they might offer an acceptable compromise--that first day there was grave danger of it. Had we been able to force our case before the Grand Assembly there would have been no danger of intelligent action. But we were balked. The best I could do was to antagonize the committee, even stooping to personal insult to make certain of at least one holdout against common sense."

"Guess I never will understand high-level approach."

"Possibly not. But your talents and mine complement each other. Manuel, you wish to see Luna free."

"You know I do."

"You also know that Terra can defeat us."

"Sure. No projection ever gave anything close to even money. So don't see why you set out to antagonize--"

"Please. Since they can inflict their will on us, our only chance lies in weakening their will. That was why we had to go to Terra. To be divisive. To create many opinions. The shrewdest of the great generals in China's history once said that perfection in war lay in so sapping the opponent's will that he surrenders without fighting. In that maxim lies both our ultimate purpose and our most pressing danger. Suppose, as seemed possible that first day, we had been offered an inviting compromise. A governor in place of a warden, possibly from our own number. Local autonomy. A delegate in the Grand Assembly. A higher price for grain at the catapult head, plus a bonus for increased shipments. A disavowal of Hobart's policies combined with an expression of regret over the rape and the killings with handsome cash settlements to the victims' survivors. Would it have been accepted? Back home?"

"They did not offer that."

"The chairman was ready to offer something like it that first afternoon and at that time he had his committee in hand. He offered us an asking price close enough to permit such a dicker. Assume that we reached in substance what I outlined. Would it have been acceptable at home?"

"Uh. . . maybe."

"More than a 'maybe' by the bleak projection made just before we left home; it was the thing to be avoided at any cost--a settlement which would quiet things down,

destroy our will to resist, without changing any essential in the longer-range prediction of disaster. So I switched the subject and squelched possibility by being difficult about irrelevancies politely offensive. Manuel, you and I know--and Adam knows--that there must be an end to food shipments; nothing less will save Luna from disaster. But can you imagine a wheat farmer fighting to end those shipments?"

"No. Wonder if can pick up news from home on how they're taking stoppage?"

"There won't be any. Here is how Adam has timed it, Manuel: No announcement is to be made on either planet until after we get home. We are still buying wheat. Barges are still arriving at Bombay."

"You told them shipments would stop at once."

"That was a threat, not a moral commitment. A few more loads won't matter and we need time. We don't have everyone on our side; we have only a minority. There is a majority who don't care either way but can be swayed--temporarily. We have another minority against us. . . especially grain farmers whose interest is never politics but the price of wheat. They are grumbling but accepting Scrip, hoping it wili be worth face value later. But the instant we announce that shipments have stopped they will be actively against us. Adam plans to have the majority committed to us at the time the announcement is made."

"How long? One year? Two?"

"Two days, three days, perhaps four. Carefully edited excerpts from that five-year plan, excerpts from the recordings you've made--especially that yellow-dog offer--exploitation of your arrest in Kentucky--"

"Hey! I'd rather forget that."

Prof smiled and cocked an eyebrow. "Uh--" I said uncomfortably. "Okay. If will help."

"It will help more than any statistics about natural resources."

Wired-up ex-human piloting us went in as one maneuver without bothering to orbit and gave us even heavier beating; ship was light and lively. But change in motion is under two-and-a-half kilometers; was over in nineteen seconds and we were down at Johnson City. I took it right, just a terrible constriction in chest and a feeling as if giant were squeezing heart, then was over and I was gasping back to normal and glad to be proper weight. But did almost kill poor old Prof.

Mike told me later that pilot refused to surrender control; Mike would have brought ship down in a low-gee, no-breakum-egg, knowing Prof was aboard. But perhaps that Cyborg knew what he was doing; a low-gee landing wastes mass and Lotus-Lark grounded almost dry.

None of which we cared about, as looked as if that Garrison landing had wasted Prof. Stu saw it while I was still gasping, then we were both at him--heart stimulant, manual respiration, massage. At last he fluttered eyelids, looked at us, smiled. "Home," he whispered.

We made him rest twenty minutes before we let him suit up to leave ship; had been as near dead as can be and not hear angels. Skipper was filling tanks, anxious to get rid of us and take on passengers--that Dutchman never spoke to us whole trip; think he regretted letting money talk him into a trip that could ruin or kill him.

By then Wyoh was inside ship, p-suited to come meet us. Don't think Stu had ever seen her in a p-suit and certain he had never seen her as a blonde; did not recognize. I was hugging her in spite of p-suit; he was standing by, waiting to be introduced. Then strange "man" in p-suit hugged him--he was surprised.

Heard Wyoh's muffled voice: "Oh heavens! Mannie, my helmet."

I unclamped it, lifted off. She shook curls and grinned. "Stu, aren't you glad to see me? Don't you know me?"

A grin spread over his face, slowly as dawn across maria. "Zdra'stvooeet'ye, Gospazha! I am most happy to see you."

"'Gospazha' indeed! I'm Wyoh to you, dear, always. Didn't Mannie tell you I'd gone back to blonde?"

"Yes, he did. But knowing it and seeing are not the same."

"You'll get used to it." She stopped to bend over Prof, kiss him, giggle at him, then straightened up and gave me a no-helmet welcome-home that left us both with tears despite pesky suit. Then turned again to Stu, started to kiss him.

He held back a little. She stopped. "Stu, am I going to have to put on brown makeup to welcome you?" Stu glanced at me, then kissed her. Wyoh put in as much time and thought as she had to welcoming me.

Was later I figured out his odd behavior. Stu, despite commitment, was still not a Loonie--and in meantime Wyoh had married. What's that got to do with it? Well, Earthside it makes a difference, and Stu did not know deep down in bones that a Loonie lady is own mistress. Poor chum thought I might take offense!

We got Prof into suit, ourselves same, and left, me with cannon under arm. Once underground and locked through, we unsuited--and I was flattered to see that Wyoh was wearing crushed under p-suit that red dress I bought her ages ago. She brushed it and skirt flared out.

Immigration room was empty save for about forty men lined up along wall like new transportees; were wearing p-suits and carrying helmets--Terrans going home, stranded tourists and some scientists. Their p-suits would not go, would be unloaded before lift. I looked at them and thought about Cyborg pilot. When Lark had been stripped, all but three couches had been removed; these people were going to take acceleration lying on floorplates--if skipper was not careful he was going to have mashed Terrans au blut.

Mentioned to Stu. "Forget it," he said. "Captain Leures has foam pads aboard. He won't let them be hurt; they're his life insurance."

21

My family, all thirty-odd from Grandpaw to babies, was waiting beyond next lock on level he!ow and we got cried on and slobbered on and hugged and this time Stu did not hold back. Little Hazel made ceremony of kissing us; she had Liberty Caps, set one on each, then kissed us--and at that signal whole family put on Liberty Caps, and I got sudden tears. Perhaps is what patriotism feels like, choked up and so happy it hurts. Or maybe was just being with my beloveds again.

"Where's Slim?" I asked Hazel. "Wasn't he invited?"

"Couldn't come. He's junior marshal of your reception."

"Reception? This is all we want."

"You'll see."

Did. Good thing family came out to meet us; that and ride to L-City (filled a capsule) were all I saw of them for some time. Tube Station West was a howling mob, all in Liberty Caps. We three were carried on shoulders all way to Old Dome, surrounded by a stilyagi bodyguard, elbows locked to force through cheering, singing crowds. Boys were wearing red caps and white shirts and their girls wore white jumpers and red shorts color of caps.

At station and again when they put us down in Old Dome I got kissed by fems I have never seen before or since. Remember hoping that measures we had taken in lieu of quarantine were effective--or half of L-City would be down with colds or worse. (Apparently we were clean; was no epidemic. But I remember time--was quite small--when measles got loose and thousands died.)

Worried about Prof, too; reception was too rough for a man good as dead an hour earlier. But he not only enjoyed it, he made a wonderful speech in Old Dome--one short on logic, loaded with ringing phrases. "Love" was in it, and "home" and "Luna" and "comrades and neighbors" and even "shoulder to shoulder" and all sounded good.

They had erected a platform under big news video on south face. Adam Selene greeted us from video screen and now Prof's face and voice were projected from it, much magnified, over his head--did not have to shout. But did have to pause after every sentence; crowd roars drowned out even bull voice from screen--and no doubt pauses helped, as rest. But Prof no longer seemed old, tired, ill; being back inside The Rock seemed to be tonic he needed. And me, too! Was wonderful to be right weight, feel strong, breathe pure, replenished air of own city.

No mean city! Impossible to get all of L-City inside Old Dome--but looked as if they tried. I estimated an area ten meters square, tried to count heads, got over two hundred not half through and gave up. Lunatic placed crowd at thirty thousand, seems impossible.

Prof's words reached more nearly three million; video carried scene to those who could not crowd into Old Dome, cable and relay flashed it across lonely maria to all warrens. He grabbed chance to tell of slave future Authority planned for them. Waved that "white paper." "Here it is!" he cried. "Your fetters! Your leg irons! Will you wear them?"

"NO!"

"They say you must. They say they will H-bomb . . . then survivors will surrender and put on these chains. Will you?"

"NO! NEVER!"

"Never," agreed Prof. "They threaten to send troops . . . more and more troops to rape and murder. We shall fight them."

"DA!"

"We shall fight them on the surface, we shall fight them in the tubes, we shall fight them in the corridors! If die we must, we shall die free!"

"Yes! Ja-da! Tell 'em, tell 'em!"

"And if we die, let history write: This was Luna's finest hour! Give us liberty . . . or give us death!"

Some of that sounded familiar. But his words came out fresh and new; I joined in roars. Look. . . I knew we couldn't whip Terra--I'm tech by trade and know that an H-missile doesn't care how brave you are. But was ready, too. If they wanted a fight, let's have it!

Prof let them roar, then led them in "Battle Hymn of the Republic," Simon's version. Adam appeared on screen again, took over leading it and sang with them, and we tried to slip away, off back of platform, with help of stilyagi led by Slim. But women didn't want to let us go and lads aren't at their best in trying to stop ladies; they broke through. Was twenty-two hundred before we four, Wyoh, Prof, Stu, self, were locked in room L of Raffles, where Adam-Mike joined us by video. I was starved by then, all were, so I ordered dinner and Prof insisted that we eat before reviewing plans.

Then we got down to business.

Adam started by asking me to read aloud white paper, for his benefit and for Comrade Wyoming-- "But first, Comrade Manuel, if you have the recordings you made Earthside, could you transmit them by phone at high speed to my office? I'll have them transcribed for study--all I have so far are the coded summaries Comrade Stuart sent up."

I did so, knowing Mike would study them at once, phrasing was part of "Adam Selene" myth--and decided to talk to Prof about letting Stu in on facts. If Stu was to be in executive cell, pretending was too clumsy.

Feeding recordings into Mike at overspeed took five minutes, reading aloud another thirty. That done, Adam said, "Professor, the reception was more successful than I had counted on, due to your speech. I think we should push the embargo through Congress at once. I can send out a call tonight for a session at noon tomorrow. Comments?"

I said, "Look, those yammerheads will kick it around for weeks. If you must put it up to them--can't see why--do as you did with Declaration. Start late, jam it through after midnight using own people."

Adam said, "Sorry, Manuel. I'm getting caught up on events Earthside and you have catching up to do here. It's no longer the same group. Comrade Wyoming?"

"Mannie dear, it's an elected Congress now. They must pass it. Congress is what government we have."

I said slowly, "You held election and turned things over to them? Everything? Then what are we doing?" Looked at Prof, expecting explosion. My objections would not be on his grounds--but couldn't see any use in swapping one talk-talk for another. At least first group had been so loose we could pack it--this new group would be glued to seats.

Prof was undisturbed. Fitted fingertips together and looked relaxed. "Manuel, I don't think the situation is as bad as you seem to feel that it is. In each age it is necessary to adapt to the popular mythology. At one time kings were anointed by Deity, so the problem was to see to it that Deity anointed the tight candidate. In this age the myth is 'the will of the people'. . . but the problem changes only superficially. Comrade Adam and I have had long discussions about how to determine the will of the people. I venture to suggest that this solution is one we can work with."

"Well . . . okay. But why weren't we told? Stu, did you know?"

"No, Mannie. There was no reason to tell me." He shrugged. "I'm a monarchist, I wouldn't have been interested. But I go along with Prof that in this day and age elections are a necessary ritual."

Prof said, "Manuel, it wasn't necessary to tell us till we got back; you and I had other work to do. Comrade Adam and dear Comrade Wyoming handled it in our absence. . . so let's find out what they did before we judge what they've done."

"Sorry. Well, Wyoh?"

"Mannie, we didn't leave everything to chance. Adam and I decided that a Congress of three hundred would be about right. Then we spent hours going over the Party lists--plus prominent people not in the Party. At last we had a list of candidates--a list that included some from the Ad-Hoc Congress; not all were yammerheads, we included as many as we could. Then Adam phoned each one and asked him--or her--if he would serve . . . binding him to secrecy in the meantime. Some we had to replace.

"When we were ready, Adam spoke on video, announced that it was time to carry out the Party's pledge of free elections, set a date, said that everybody over sixteen could vote, and that all anyone had to do to be a candidate was to get a hundred chops on a nominating petition and post it in Old Dome, or the public notice place for his warren. Oh, yes, thirty temporary election districts, ten Congressmen from each district--that let all but the smallest warrens be at least one district."

"So you had it lined up and Party ticket went through?"

"Oh, no, dear! There wasn't any Party ticket--officially. But we were ready with our candidates. . . and I must say my stilyagi did a smart job getting chops on nominations; our optings were posted the first day. Many other people posted; there were over two thousand candidates. But there was only ten days from announcement to election, and we knew what we wanted whereas the opposition was split up. It wasn't necessary for Adam to come out publicly and endorse candidates. It worked out--you won by seven thousand votes, dear, while your nearest rival got less than a thousand."

"I won?"

"You won, I won, Professor won, Comrade Clayton won, and just about everybody we thought should be in the Congress. It wasn't hard. Although Adam never endorsed anyone, I didn't hesitate to let our comrades know who was favored. Simon poked his finger in, too. And we do have good connections with newspapers. I wish you had been here election night, watching the results. Exciting!"

"How did you go about nose counting? Never known how election works. Write names on a piece of paper?"

"Oh, no, we used a better system . . . because, after all, some of our best people can't write. We used banks for voting places, with bank clerks identifying customers and customers identifying members of their families and neighbors who don't have bank accounts--and people voted orally and the clerks punched the votes into the banks' computers with the voter watching, and results were all tallied at once in Luna City clearinghouse. We voted everybody in less than three hours and results were printed out just minutes after voting stopped."

Suddenly a light came on in my skull and I decided to question Wyoh privately. No, not Wyoh--Mike. Get past his "Adam Selene" dignity and hammer truth out of his neuristors. Recalled a cheque ten million dollars too large and wondered how many had voted for me? Seven thousand? Seven hundred? Or just my family and friends?

But no longer worried about new Congress. Prof had not slipped them a cold deck but one that was frozen solid--then ducked Earthside while crime was committed. No use

asking Wyoh; she didn't even need to know what Mike had done . . . and could do her part better if did not suspect.

Nor would anybody suspect. If was one thing all people took for granted, was conviction that if you feed honest figures into a computer, honest figures come out. Never doubted it myself till met a computer with sense of humor.

Changed mind about suggesting that Stu be let in on Mike's self-awareness. Three was two too many. Or perhaps three. "Mi--" I started to say, and changed to: "My word! Sounds efficient. How big did we win?"

Adam answered without expression. "Eighty-six percent of our candidates were successful--approximately what I had expected."

("Approximately," my false left arm! Exactly what expected, Mike old ironmongery!) "Withdraw objection to a noon session--I'll be there."

"It seems to me," said Stu, "assuming that the embargo starts at once, we will need something to maintain the enthusiasm we witnessed tonight. Or there will be a long quiet period of increasing economic depression--from the embargo, I mean--and growing disillusionment. Adam, you first impressed me through your ability to make shrewd guesses as to future events. Do my misgivings make sense?"

"They do."

"Well?"

Adam looked at us in turn, and was almost impossible to believe that this was a false image and Mike was simply placing us through binaural receptors. "Comrades . . . it must be turned into open war as quickly as possible."

Nobody said anything. One thing to talk about war, another to face up to it. At last I sighed and said, "When do we start throwing rocks?"

"We do not start," Adam answered. "They must throw the first one. How do we antagonize them into doing so? I will reserve my thoughts to the last. Comrade Manuel?"

"Uh. . . don't look at me. Way I feel, would start with a nice big rock smack on Agra--a bloke there who is a waste of space. But is not what you are after."

"No, it is not," Adam answered seriously. "You would not only anger the entire Hindu nation, a people intensely opposed to destruction of life, but you would also anger and shock people throughout Earth by destroying the Taj Mahal."

"Including me," said Prof. "Don't talk dirty, Manuel."

"Look," I said, "didn't say to do it. Anyhow, could miss Taj."

"Manuel," said Prof, "as Adam pointed out, our strategy must be to antagonize them into striking the first blow, the classic 'Pearl Harbor' maneuver of game theory, a great advantage in Weltpolitick. The question is how? Adam, I suggest that what is needed is to plant the idea that we are weak and divided and that all it takes is a show of force to bring us back into line. Stu? Your people Earthside should be useful. Suppose the Congress repudiated myself and Manuel? The effect?"

"Oh, no!" said Wyoh.

"Oh, yes, dear Wyoh. Not necessary to do it but simply to put it over news channels to Earth. Perhaps still better to put it out over a clandestine beam attributed to the Terran scientists still with us while our official channels display the classic stigmata of tight censorship. Adam?"

"I'm noting it as a tactic which probably will be included in the strategy. But it will not be sufficient alone. We must be bombed."

"Adam," said Wyoh, "why do you say so? Even if Luna City can stand up under their biggest bombs--something I hope never to find out--we know that Luna can't win an all-out war. You've said so, many times. Isn't there some way to work it so that they will just plain leave us alone?"

Adam pulled at right cheek--and I thought: Mike, if you don't knock off play-acting, you'll have me believing in you myself! Was annoyed at him and looked forward to a talk--one in which I would not have to defer to "Chairman Selene."

"Comrade Wyoming," he said soberly, "it's a matter of game theory in a complex non-zero-sum game. We have certain resources or 'pieces in the game' and many possible moves. Our opponents have much larger resources and a far larger spectrum of responses. Our problem is to manipulate the game so that our strength is utilized toward an optimax solution while inducing them to waste their superior strength and to refrain from using it at maximum. Timing is of the essence and a gambit is necessary to start a chain of events favorable to our strategy. I realize this is not clear. I could put the factors through a computer and show you. Or you can accept the conclusion. Or you can use your own judgment."

He was reminding Wyoh (under Stu's nose) that he was not Adam Selene but Mike, our dinkum thinkum who could handle so complex a problem because he was a computer and smartest one anywhere.

Wyoh backtracked. "No, no," she said, "I wouldn't underitand the maths. Okay, it has to be done. How do we do it?"

Was four hundred before we had a plan that suited Prof and Stu as well as Adam--or took that long for Mike to sell his plan while appearing to pull ideas out of rest of us. Or was it Prof's plan with Adam Selene as salesman?

In any case we had a plan and calendar, one that grew out of master strategy of Tuesday 14 May 2075 and varied from it only to match events as they actually had occurred. In essence it called for us to behave as nastily as possible while strengthening impression that we would be awfully easy to spank.

Was at Community Hall at noon, after too little sleep, and found I could have slept two hours longer; Congressmen from Hong Kong could not make it that early despite tube all way. Wyoh did not bang gavel until fourteen-thirty.

Yes, my bride wife was chairman pro tem in a body not yet organized. Parliamentary rulings seemed to come naturally to her, and she was not a bad choice; a mob of Loonies behaves better when a lady bangs gavel.

Not going to detail what new Congress did and said that session and later; minutes are available. I showed up only when necessary and never bothered to learn talk-talk rules--seemed to be equal parts common politeness and ways in which chairman could invoke magic to do it his (her) way.

No sooner had Wyoh banged them to order but a cobber jumped up and said, "Gospazha Chairmah, move we suspend rules and hear from Comrade Professor de la Paz!"--which brought a whoop of approval.

Wyoh banged again. "Motion is out of order and Member from Lower Churchill will be seated. This house recessed without adjourning and Chairman of Committee on Permanent Organization, Resolutions, and Government Structure still has the floor."

Turned out to be Wolfgang Korsakov, Member from Tycho Under (and a member of Prof's cell and our number-one finagler of LuNoHoCo) and he not only had floor, he had it all day, yielding time as he saw fit (i.e., picking out whom he wanted to speak rather than letting just anyone talk). But nobody was too irked; this mob seemed satisfied with leadership. Were noisy but not unruly.

By dinnertime Luna had a government to replace co-opted provisional government--i.e., dummy government we had opted ourselves, which sent Prof and me to Earth. Congress confirmed all acts of provisional government, thus putting face on what we had done, thanked outgoing government for services and instructed Wolfgang's committee to continue work on permanent government structure.

Prof was elected President of Congress and ex-officio Prime Minister of interim government until we acquired a constitution. He protested age and health . . . then said would serve if could have certain things to help him; too old and too exhausted from trip Earthside to have responsibility of presiding--except on occasions of state--so he wanted Congress to elect a Speaker and Speaker Pro Tem. . . and besides that, he felt that Congress should augment its numbers by not more than ten percent by itself electing members-at-large so that Prime Minister, whoever he might be, could opt cabinet members or ministers of state who might not now be members of Congress--especially ministers-without-portfolio to take load off his shoulders.

They balked. Most were proud of being "Congressmen" and already jealous of status. But Prof just sat looking tired, and waited--and somebody pointed out that it still left control in hands of Congress. So they gave him what he asked for.

Then somebody squeezed in a speech by making it a question to Chair. Everybody knew (he said) that Adam Selene had refrained from standing for Congress on grounds that Chairman of Emergency Committee should not take advantage of positon to elbow way into new government . . . but could Honorable Chairlady tell member whether was any reason not elect Adam Selene a member-at-large? As gesture of appreciation for great services? To let all Luna--yes, and all those earthworms, especially ex-Lunar ex-Authonty--know that we not repudiating Adam Selene, on contrary he was our beloved elder statesman and was not President simply because he chose not to be!

More whoops that went on and on. You can find in minutes who made that speech but one gets you ten Prof wrote it and Wyoh planted it.

Here is how it wound up over course of days:

Prime Minister and Secretary of State for Foreign Affairs: Professor Bernardo de la Paz.

Speaker, Finn Nielsen; Speaker Pro Tem, Wyoming Davis.

Undersecretary of State for Foreign Affairs and Minister of Defense, General O'Kelly Davis; Minister of Information, Terence Sheehan (Sheenie turned Pravda over to managing editor to work with Adam and Stu); Special Minister-without-Portfolio in Ministry of Information, Stuart Rene LaJoie, Congressman-at-Large; Secretary of State for Economics and Finance (and Custodian of Enemy Property), Wolfgang Korsakov; Minister of Interior Affairs and Safety, Comrade "Clayton" Watenabe; Minter-without-Portfolio and Special Advisor to Prime Minister, Adam Selene--plus a dozen ministers and ministers-without-portfolio from warrens other than Luna City.

See where that left things? Brush away fancy titles and B cell was still running things as advised by Mike, backed by a Congress in which we could not lose a test vote--but did lose others we did not want to win, or did not care about.

But at time could not see sense in all that talk-talk.

During evening session Prof reported on trip and then yielded to me--Committee Chairman Korsakov consenting--so that I could report what "five-year plan" meant and how Authority had tried to bribe me. I'll never make a speaker but had time during dinner break to swot speech Mike had written. He had slanted it so nastily that I got angry all over again and was angry when I spoke and managed to make it catching. Congress was ready to riot by time I sat down.

Prof stepped forward, thin and pale, and said quietly, "Comrade Members, what shall we do? I suggest, Chairman Korsakov consenting, that we discuss informally how to treat this latest insolence to our nation."

One member from Novylen wanted to declare war and they would have done so right then if Prof had not pointed out that they were still hearing committee reports.

More talk, all bitter. At last Comrade Member Chang Jones spoke: "Fellow Congressmen--sorry, Gospodin Chairman Korsakov--I'm a rice and wheat farmer. Mean I used to be, because back in May I got a bank loan and sons and I are converting to variety farming. We're broke--had to borrow tube fare to get here--but family is eating and someday we might pull square with bank. At least I'm no longer raising grain.

"But others are. Catapult has never reduced headway by one barge whole time we've been free. We're still shipping, hoping their cheques will be worth something someday.

"But now we know! They've told us what they mean to do with us--to us! I say only way to make those scoundrels know we mean business is stop shipments right now! Not another tonne, not a kilo . . . until they come here and dicker honestly for honest price!"

Around midnight they passed Embargo, then adjourned subject to call . . . standing committees to continue.

Wyoh and I went home and I got reacquainted with my family. Was nothing to do; Mike-Adam and Stu had been working on how to hit them with it Earthside and Mike had shut catapult down ("technical difficulties with ballistic computer") twenty-four hours earlier. Last barge in trajectory would be taken by Poona Ground Control in slightly over one day and Earth would be told, nastily, that was last they would ever get.

22

Shock to farmers was eased by continuing to buy grain at catapult--but cheques now carried printed warning that Luna Free State did not stand behind them, did not warrant that Lunar Authority would ever redeem them even in Scrip, etc., etc. Some farmers left grain anyhow, some did not, all screamed. But was nothing they could do; catapult was shut down, loading belts not moving.

Depression was not immediately felt in rest of economy. Defense regiments had depleted ranks of ice miners so much that selling ice on free market was profitable; LuNoH0Co steel subsidiary was hiring every able-bodied man it could find, and

Wolfgang Korsakov was ready with paper money, "National Dollars," printed to resemble Hong Kong dollar and in theory pegged to it. Luna had plenty of food, plenty of work, plenty of money; people were not hurting, "beer, betting, women, and work" went on as usual.

"Nationals," as they were called, were inflation money, war money, fiat money, and were discounted a fraction of a percent on day of first issue, concealed as "exchange service charge." They were spendable money and never did drop to zero but were inflationary and exchange reflected it increasingly; new government was spending money it did not have.

But that was later-- Challenge to Earth, to Authority and Federated Nations, was made intentionally nasty. F.N. vessels were ordered to stay clear of Luna by ten diameters and not orbit at any distance under pain of being destroyed without warning. (No mention of how, since we could not.) Vessels of private registry would be permitted to land if a) permission was requested ahead of time with ballistic plan, b) a vessel thus cleared placed itself under Luna Ground Control (Mike') at a distance of one hundred thousand kilometers while following approved trajectory, and c) was unarmed save for three hand guns permitted three officers. Last was to be confirmed by inspection on landing before anybody was allowed to leave ship and before ship was serviced with fuel and/or reaction mass; violation would mean confiscation of ship. No person allowed to land at Luna other than ship's crew in connection with loading, unloading, or servicing save citizens of Terran countries who had recognized Free Luna. (Only Chad--and Chad had no ships. Prof expected some private vessels to be re-registered under Chad merchant flag.)

Manifesto noted that Terran scientists still in Luna could return home in any vessel which conformed to our requirements. It invited all freedom-loving Terran nations to denounce wrongs done us and which the Authority planned against us, recognize us, and enjoy free trade and full intercourse--and pointed out that there were no tariffs or any artificial restrictions against trade in Luna, and was policy of Luna government to keep it that way. We invited immigration, unlimited, and pointed out that we had a labor shortage and any immigrant could be self-supporting at once.

We also boasted of food--adult consumption over four thousand calories per day, high in protein, low in cost, no rationing. (Stu had Adam-Mike stick in price of 100-proof vodka--fifty cents HKL per liter, less in quantity, no taxes. Since this was less than one-tenth retail price of 80-proot vodka in North America, Stu knew it would hit home. Adam, "by nature" a teetotaler, hadn't thought of it--one of Mike's few oversights.)

Lunar Authority was invited to gather at one spot well away from other people, say in unirrigated part of Sahara, and receive one last barge of grain free--straight down at terminal velocity. This was followed by a snotty lecture which implied that we were prepared to do same to anyone who threatened our peace, there being a number of loaded barges at catapult head, ready for such unceremonious delivery.

Then we waited.

But we waited busily. Were indeed a few loaded barges; these we unloaded and reloaded with rock, with changes made in guidance transponders so that Poona Control could not affect them. Their retros were removed, leaving only lateral thrustors, and spare retros were taken to new catapult, to be modified for lateral guidance. Greatest effort

went into moving steel to new catapult and shaping it into jackets for solid rock cylinders--steel was bottleneck.

Two days after our manifesto a "clandestine" radio started beaming to Terra. Was weak and tended to fade and was supposed to be concealed, presumably in a crater, and could be worked only certain hours until brave Terran scientists managed to rig automatic repeat. Was near frequency of Voice of Free Luna, which tended to drown it out with brassy boasts.

(Terrans remaining in Luna had no chance to make signals. Those who had chosen to stick with research were chaperoned by stilyagi every instant and locked into barracks to sleep.)

But "clandestine" station managed to get "truth" to Terra. Prof had been tried for deviationism and was under house arrest. I had been executed for treason. Hong Kong Luna had pulled out, declared self separately independent. . . might be open to reason. Rioting in Novylen. All food growing had been collectivized and black-market eggs were selling for three dollars apiece in Lana City. Battalions of female troops were being enlisted, each sworn to kill at least one Terran, and were drilling with fake guns in corridors of Luna City.

Last was an almost-true. Many ladies wanted to do something militant and had formed a Home Defense Guard, "Ladies from Hades." But their drills were of a practical nature--and Hazel was sulking because Mum had not allowed her to join. Then she got over sulks and started "Stilyagi Debs," a very junior home guard which drilled after school hours, did not use weapons, concentrated on backing up stilyagi air & pressure corps, and practiced first aid--and own no-weapons fighting, which--possibly--Mum never learned.

I don't know how much to tell. Can't tell all, but stuff in history books is so wrong!

I was no better a "defense minister" than "congressman." Not apologizing, had no training for either. Revolution is an amateur thing for almost everybody; Prof was only one who seemed to know what he was doing, and, at that, was new to him, too--he had never taken part in a successful revolution or ever been part of a government, much less head.

As Minister of Defense I could not see many ways to defend except for steps already taken; that is, stilyagi air squads in warrens and laser gunners around ballistic radars. If F.N. decided to bomb, didn't see any way to stop them; wasn't an interception missile in all Luna and that's not a gadget you whomp up from bits and pieces. My word, we couldn't even make fusion weapons with which such a rocket is tipped.

But I went through motions. Asked same Chinee engineers who had built laser guns to take a crack at problem of intercepting bombs or missiles--one same problem save that a missile comes at you faster.

Then turned attention to other things. Simply hoped that F.N. would never bomb warrens. Some warrens, L-City in particular, were so deep down that they could probably stand direct hits. One cubic, lowest level of Complex where central part of Mike lived, had been designed to withstand bombing. On other hand Tycho Under was a big natural bubble cave like Old Dome and roof was only meters thick; sealer on under side is kept

warm with hot water pipes to make sure new cracks sealed--would not take much of a bomb to crack Tycho Under.

But is no limit to how big a fusion bomb can be; F.N. could build one big enough to smash L-City----or theoretically even a Doomsday job that would split Luna like a melon and finish job some asteroid started at Tycho. If they did, couldn't see any way to stop them, so didn't worry.

Instead put time on problems I could manage, helping at new catapult, trying to work up better aiming arrangements for laser drills around radars (and trying to get drillmen to stick; half of them quit once price of ice went up), trying to arrange decentralized standby engineering controls for all warrens. Mike did designing on this, we grabbed every general-purpose computer we could find (paying in "nationals" with ink barely dry), and I turned job over to McIntyre, former chief engineer for Authority; was a job within his talents and I couldn't do all rewiring and so forth, even if had tried.

Held out biggest computer, one that did accounting for Bank of Hong Kong in Luna and also was clearinghouse there. Looked over its instruction manuals and decided was a smart computer for one that could not talk, so asked Mike if he could teach it ballistics? We made temporary link-ups to let two machines get acquainted and Mike reported it could learn simple job we wanted it for--standby for new catapult--although Mike would not care to ride in ship controlled by it; was too matter-of-fact and uncritical. Stupid, really.

Well, didn't want it to whistle tunes or crack jokes; just wanted it to shove loads out a catapult at right millisecond and at correct velocity, then watch load approach Terra and give a nudge.

HK Bank was not anxious to sell. But we had patriots on their board, we promised to return it when emergency was over, and moved it to new site--by rolligon, too big for tubes, and took all one dark semi-lunar. Had to jerry-rig a big airlock to get it out of Kong warren. I hooked it to Mike again and he undertook to teach art of ballistics against possibility that his linkage to new site might be cut in an attack.

(You know what bank used to replace computer? Two hundred clerks working abacuses. Abacusi? You know, slipsticks with beads, oldest digital computer, so far back in prehistory that nobody knows who invented. Russki and Chinee and Nips have always used them, and small shops today.)

Trying to improve laser drills into space-defense weapons was easier but less straightforward. We had to leave them mounted on original cradles; was neither time, steel, nor metalsmiths to start fresh. So we concentrated on better aiming arrangements. Call went out for telescopes. Scarce--what con fetches along a spyglass when transported? What market later to create supply? Surveying instruments and helmet binoculars were all we turned up, plus optical instruments confiscated in Terran labs. But we managed to equip drills with low-power big-field sights to coach-on with and high-powcr scopes for fine sighting, plus train and elevation circles and phones so that Mike could tell them where to point. Four drills we equipped with self-synchronous repeater drives so that Mike could control them himself--liberated these selsyns at Richardson; astronomers used them for Bausch cameras and Schmidts in sky mapping.

But big problem was men. Wasn't money, we kept upping wages. No, a drillman likes to work or wouldn't be in that trade. Standing by in a ready room day after day,

waiting for alert that always turns out to be just another practice--drove 'em crackers. They quit. One day in September I pulled an alert and got only seven drills manned.

Talked it over with Wyoh and Sidris that night. Next day Wyoh wanted to know if Prof and I would okay bolshoi expense money? They formed something Wyoh named "Lysistrata Corps." Never inquired into duties or cost, because next time I inspected a ready room found three girls and no shortge of drillmen. Girls were in uniform of Second Defense Gunners just as men were (drillmen hadn't bothered much with authorized uniform up to then) and one girl was wearing sargeant's stripes with gun captain's badge.

I made that inspection very short. Most girls don't have muscle to be a drillman and I doubted if this girl could wrestle a drill well enough to justify that badge. But regular gun captain was on job, was no harm in girls learning to handle lasers, morale was obviously high; I gave matter no more worry.

Prof underrated his new Congress. Am sure he never wanted anything but a body which would rubberchop what we were doing and thereby do make it "voice of people." But fact that new Congressmen were not yammerheads resulted in them doing more than Prof intended. Especially Committee on Permanent Organization, Resolutions, and Government Structure.

Got out of hand because we were all trying to do too much. Permanent heads of Congress were Prof, Finn Nielsen. and Wyoh. Prof showed up only when he wanted to speak to them--seldom. He spent time with Mike on plans and analysis (odds shortened to one in five during September '76), time with Stu and Sheenie Sheehan on propaganda, controlling official news to Earthside, very different "news" that went via "clandestine" radio, and reslanting news that came up from Earthside. Besides that he had finger in everything; I reported whim once a day, and all ministries both real and dummy did same.

I kept Finn Nielsen busy; he was my "Commander of Armed Forces." He had his laser gun infantry to supervise--six men with captured weapons on day we nabbed warden, now eight hundred scattered all through Luna and armed with Kongville monkey copies. Besides that, Wyoh's organizations, Stilyagi Air Corps, Stilyagi Debs, Ladies from Hades, Irregulars (kept for morale and renamed Peter Pan's Pirates), and Lysistrata Corps--all these halfway-military groups reported through Wyoh to Finn. I shoved it onto him; I had other problems, such as trying to be a computer mechanic as well as a "statesman" when jobs such as installing that computer at new catapult site had to be done.

Besides which, I am not an executive and Finn had talent for it. I shoved First and Second Defense Gunners under him, too. But first I decided that these two skeleton regiments were a "brigade" and made Judge Brody a "brigadier." Brody knew as much about military matters as I did--zero--but was widely known, highly respected, had unlimited hard sense--and had been drillman before he lost leg. Finn was not drillman, so couldn't be placed directly over them; They wouldn't have listened. I thought about using my co-husband Greg. But Greg was needed at Mare Undarum catapult, was only mechanic who had followed every phase of construction.

Wyoh helped Prof, helped Stu, had her own organizations, I made trips out to Mare Undarum--and had little time to preside over Congress; task fell on senior

committee chairman, Wolf Korsakov . . . who was busier than any of us; LuNoHoCo was running everything Authority used to run and many new things as well.

Wolf had a good committee; Prof should have kept closer eye on it. Wolf had caused his boss, Moshai Baum, to be elected vice-chairman and had in all seriousness outlined for his committee problem of determining what permanent government should be. Then Wolf had turned back on it.

Those busy laddies split up and did it--studied forms of government in Carnegie Library, held subcommittee meetings, three or four people at a time (few enough to worry Prof had he known)--and when Congress met early in September to ratify some appointments and elect more congressmen-at-large, instead of adjourning, Comrade Baum had gavel and they recessed--and met again and turned selves into committee-of-the-whole and passed a resolution and next thing we knew entire Congress was a Constitutional Convention divided into working groups headed by those subcommittees.

I think Prof was shocked. But he couldn't undo it, had all been proper under rules he himself had written. But he rolled with punch, went to Novylen (where Congress now met--more central) and spoke to them with usual good nature and simply cast doubts on what they were doing rather than telling them flatly they were wrong.

After gracefully thanking them he started picking early drafts to pieces:

"Comrade Members, like fire and fusion, government is a dangerous servant and a terrible master. You now have freedom--if you can keep it. But do remember that you can lose this freedom more quickly to yourselves than to any other tyrant. Move slowly, be hesitant, puzzle out the consequences of every word. I would not be unhappy if this convention sat for ten years before reporting--but I would be frightened if you took less than a year.

"Distrust the obvious, suspect the traditional . . . for in the past mankind has not done well when saddling itself with governments. For example, I note in one draft report a proposal for setting up a commission to divide Luna into congressional districts and to reapportion them from time to time according to population.

"This is the traditional way; therefore it should be suspect, considered guilty until proved innocent. Perhaps you feel that this is the only way. May I suggest others? Surely where a man lives is the least important thing about him. Constituencies might be formed by dividing people by occupation. . . or by age. . . or even alphabetically. Or they might not be divided, every member elected at large---and do not object that this would make it impossible for any man not widely known throughout Luna to be elected; that might be the best possible thing for Luna.

"You might even consider installing the candidates who receive the least number of votes; unpopular men may be just the sort to save you from a new tyranny. Don't reject the idea merely because it seems preposterous--think about it! In past history popularly elected governments have been no better and sometimes far worse than overt tyrannies.

"But if representative government turns out to be your intention there still may be ways to achieve it better than the territorial district. For example you each represent about ten thousand human beings, perhaps seven thousand of voting age--and some of you were elected by slim majorities. Suppose instead of election a man were qualified for office by petition signed by four thousand citizens. He would then represent those four thousand affirmatively, with no disgruntled minority, for what would have been a minority in a territorial constituency would all be free to start other petitions or join in them. All would

then be represented by men of their choice. Or a man with eight thousand supporters might have two votes in this body. Difficulties, objections, practical points to be worked out--many of them! But you could work them out. . . and thereby avoid the chronic sickness of representative government, the disgruntled minority which feels--correctly!--that it has been disenfranchised.

"But, whatever you do, do not let the past be a straitjacket!

"I note one proposal to make this Congress a two-house body. Excellent--the more impediments to legislation the better. But, instead of following tradition, I suggest one house legislators, another whose single duty is to repeal laws. Let legislators pass laws only with a two-thirds majority . . . while the repealers are able to cancel any law through a mere one-third minority. Preposterous? Think about it. If a bill is so poor that it cannot command two-thirds of your consents, is it not likely that it would make a poor law? And if a law is disliked by as many as one-third is it not likely that you would be better off without it?

"But in writing your constitution let me invite attention the wonderful virtues of the negative! Accentuate the negative! Let your document be studded with things the government is forever forbidden to do. No conscript armies . . . no interference however slight with freedom of press, or speech, or travel, or assembly, or of religion, or of instruction, or communication, or occupation. . . no involuntary taxation. Comrades, if you were to spend five years in a study of history while thinking of more and more things that your governinen should promise never to do and then let your constitution be nothing but those negatives, I would not fear the outcome.

"What I fear most are affirmative actions of sober and well-intentioned men, granting to government powers to do something that appears to need doing. Please remember always that the Lunar Authority was created for the noblest of purposes by just such sober and well-intentioned men, all popularly elected. And with that thought I leave you to your labors. Thank you."

"Gospodin President! Question of information! You said 'no involuntary taxation'-- Then how do you expect us to pay for things? Tanstaafl!"

"Goodness me, sir, that's your problem. I can think several ways. Voluntary contributions just as churches support themselves . . . government-sponsored lotteries to which no one need subscribe. . . or perhaps you Congressmen should dig down into your own pouches and pay for whatever is needed; that would be one way to keep government down in size to its indispensable functions whatever they may be. If indeed there are any. I would be satisfied to have the Golden Rule be the only law; I see no need for any other, nor for any method of enforcing it. But if you really believe that your neighbors must have laws for their own good, why shouldn't you pay for it? Comrades, I beg you--do not resort to compulsory taxation. There is so worse tyranny than to force a man to pay for what he does not want merely because you think it would be good for him."

Prof bowed and left, Stu and I followed him. Once in an otherwise empty capsule I tackled him. "Prof, I liked much that you said . . . but about taxation aren't you talking one thing and doing another? Who do you think is going to pay for all this spending we're doing?"

He was silent long moments, then said, "Manuel, my only ambition is to reach the day when I can stop pretending to be a chief executive."

"Is no answer!"

"You have put your finger on the dilemma of all government--and the reason I am an anarchist. The power to tax, once conceded, has no limits; it contains until it destroys. I was not joking when I told them to dig into their own pouches. It may not be possible to do away with government--sometimes I think that government is an inescapable disease of human beings. But it may be possible to keep it small and starved and inoffensive--and can you think of a better way than by requiring the governors themselves to pay the costs of their antisocial hobby?"

"Still doesn't say how to pay for what we are doing now."

"'How,' Manuel? You know how we are doing it. We're stealing it. I'm neither proud of it nor ashamed; it's the means we have. If they ever catch on, they may eliminate us--and that I am prepared to face. At least, in stealing, we have not created the villainous precedent of taxation."

"Prof. I hate to say this--"

"Then why say it?"

"Because, damn it, I'm in it as deeply as you are . . . and want to see that money paid back! Hate to say it but what you just said sounds like hypocrisy."

He chuckled. "Dear Manuel! Has it taken you all these years to decide that I am a hypocrite?"

"Then you admit it?'

"No. But if it makes you feel better to think that I am one, you are welcome to use me as your scapegoat. But I am not a hypocrite to myself because I was aware the day we declared the Revolution that we would need much money and would have to steal it. It did not trouble me because I considered it better than food riots six years hence, cannibalism in eight. I made my choice and have no regrets."

I shut up, silenced but not satisfied. Stu said, "Professor, I'm glad to hear that you are anxious to stop being President."

"So? You share our comrade's misgivings?"

"Only in part. Having been born to wealth, stealing doesn't fret me as much as it does him. No, but now that Congress has taken up the matter of a constitution I intend to find time to attend sessions. I plan to nominate you for King."

Prof looked shocked. "Sir, if nominated, I shall repudiate it. If elected, I shall abdicate."

"Don't be in a hurry. It might be the only way to get the sort of constitution you want. And that I want, too, with about your own mild lack of enthusiasm. You could be proclaimed King and the people would take you; we Loonies aren't wedded to a republic. They'd love the idea--ritual and robes and a court and all that."

"No!"

"Ja da! When the time comes, you won't be able to refuse. Because we need a king and there isn't another candidate who would be accepted. Bernardo the First, King of Luna and Emperor of the Surrounding Spaces."

"Stuart, I must ask you to stop. I'm becoming quite ill."

"You'll get used to it. I'm a royalist because I'm a democrat. I shan't let your reluctance thwart the idea any more than you let stealing stop you."

I said, "Hold it, Stu. You say you're a royalist because you're a democrat?"

"Of course. A king is the people's only protection against tyranny.. . especially against the worst of all tyrants, themselves. Prof will be ideal for the job . . . because he

does not want the job. His only shortcoming is that he is a bachelor with no heir. We'll fix that. I'm going to name you as his heir. Crown Prince. His Royal Highness Prince Manuel de la Paz, Duke of Luna City, Admiral General of the Armed Forces and Protector of the Weak."

I stared. Then buried face in hands. "Oh, Bog!"

Book Three

"TANSTAAFL!"

23

Monday 12 October 2076 about nineteen hundred I was headed home after a hard day of nonsense in our offices in Raffles. Delegation of grain farmers wanted to see Prof and I had been called back because he was in Hong Kong Luna. Was rude to them. Had been two months of embargo and F.N. had never done us favor of being sufficiently nasty. Mostly they had ignored us, made no reply to our claims--I suppose to do so would have been to recognize us. Stu and Sheenie and Prof had been hard put to slant news from Earthside to keep up a warlike spirit.

At first everybody kept his p-suit handy. They wore them, helmets under arms, going to and from work in corridors. But that slacked off as days went by and did not seem to be any danger--p-suit is nuisance when you don't need it, so bulky. Presently taprooms began to display signs: NO P-SUITS INSIDE. If a Loonie can't stop for half a liter on way home because of p-suit, he'll leave it home or at station or wherever he needs it most.

My word, had neglected matter myself that day--got this call to go back to office and was halfway there before I remembered.

Had Just reached easement lock thirteen when I heard and felt a sound that scares a Loonie more than anything else--a chuff! in distance followed by a draft. Was into lock almost without undogging, then balanced pressures and through, dogged it behind me and ran for our home lock--through it and shouting:

"P-suits, everybody! Get boys in from tunnels and close all airtight doors!"

Mum and Milla were only adults in sight. Both looked startled, got busy without a word. I burst into workshop, grabbed p-suit. "Mike! Answer!"

"I'm here, Man," he said calmly.

"Heard explosive pressure drop. What's situation?"

"That's level three, L-City. Rupture at Tube Station West, now partly controlled. Six ships landed, L-City under attack--"

"What?"

"Let me finish, Man. Six transports landed, L-City under attack by troops, Hong Kong inferred to be, phone lines broken at relay Bee Ell. Johnson City under attack; I have closed the armor doors between J-City and Complex Under. I cannot see Novylen

but blip projection indicates it is under attack. Same for Churchill, Tycho Under. One ship in high ellipsoid over me, rising, inferred to be command ship. No other blips."

"Six ships--where in hell were YOU?"

He answered so calmly that I steadied down. "Farside approach, Man; I'm blind back there. They came in on tight Garrison didoes, skimming the peaks; I barely saw the chop-off for Luna City. The ship at J-City is the only one I can see; the other landings I conclusively infer from the ballistics shown by blip tracks. I heard the break-in at Tube West, L-City, and can now hear fighting in Novylen. The rest is conclusive inference, probability above point nine nine. I called you and Professor at once."

Caught breath. "Operation Hard Rock, Prepare to Execute."

"Program ready. Man, not being able to reach you, I used your voice. Play back?"

"Nyet-- Yes! Da!"

Heard "myself" tell watch officer at old catapult head to go on red alert for "Hard Rock"--flrst load at launch, all others, on belts, everything cast loose, but do not launch until ordered by me personally--then launch to plan, full automatic. "I" made him repeat back.

"Okay," I told Mike. "Drill gun crews?"

"Your voice again. Manned, and then sent back to ready rooms. That command ship won't reach aposelenion for three hours four point seven minutes. No target for more than five hours."

"He may maneuver. Or launch missiles."

"Slow down, Man. Even a missile I'll see with minutes to spare. It's full bright lunar up there now--how much do you want the men to take? Unnecessarily."

"Uh . . . sorry. Better let me talk to Greg."

"Play back--" Heard "my" voice talking to my co-husband at Mare Undarum; "I" sounded tense but calm. Mike had given him situation, had told him to prepare Operation Little David's Sling, keep it on standby for full automatic. "I" had assured him that master computer would keep standby computer programmed, and shift would be made automatically if communication was broken. "I" also told him that he must take command and use own judgment if communication was lost and not restored after four hours--listen to Earthside radio and make up own mind.

Greg had taken it quietly, repeated his orders, then had said, "Mannie, tell family I love them."

Mike had done me proud; he had answered for me with just right embarrassed choke. "I'll do that, Greg--and look, Greg. I love you, too. You know that, don't you?"

"I know it, Mannie . . . and I'm going to say a special prayer for you."

"Thanks, Greg."

"'Bye, Mannie. Go do what you must."

So I went and did what I had to do; Mike had played my role as well or better than I could. Finn, when he could be reached, would be handled by "Adam." So I left, fast, calling out Greg's message of love to Mum. She was p-suited and had roused Grandpaw and suited him in--first time in years. So out I went, helmet closed and laser gun in hand.

And reached lock thirteen and found it blind-dogged from other side with nobody in sight through bull's-eye. All correct, per drill--except stilyagi in charge of that lock should have been in sight.

Did no good to pound. Finally went back way I had come--and on through our home, through our vegetable tunnels and on up to our private surface lock leading to our solar battery.

And found a shadow on its bull's-eye when should have been scalding sunlight--damned Terran ship had landed on Davis surface! Its jacks formed a giant tripod over me, was staring up its jets.

Backed clown fast and out of there, blind-dogging both hatches, then blind-dogged every pressure door on way back. Told Mum, then told her to put one of boys on back door with a laser gun--here, take this one.

No boys, no men, no able-bodied women--Mum, Gramp, and our small children were all that were left; rest had gone looking for trouble. Mimi wouldn't take laser gun. "I don't know how to use it, Manuel, and it's too late to learn; you keep it. But they won't get in through Davis Tunnels. I know some tricks you never heard of."

Didn't stop to argue; arguing with Mimi is waste of time--and she might know tricks I didn't know; she had stayed alive in Luna a long time, under worse conditions than I had ever known.

This time lock thirteen was manned; two boys on duty let me through. I demanded news.

"Pressure's all right now," older one told me. "This level, at least. Fighting down toward Causeway. Say, General Davis, can't I go with you? One's enough at this lock."

"Nyet."

"Want to get me an earthworm!"

"This is your post, stay on it. If an earthworm comes this way, he's yours. Don't you be his." Left at a trot.

So as a result of own carelessness, not keeping p-suit with me, all I saw of Battle in Corridors was tail end--hell of a "defense minister."

Charged north in Ring corridor, with helmet open; reached access lock for long ramp to Causeway. Lock was open; cursed and stopped to dog it as I went through, warily--saw why it was open; boy who had been guarding it was dead. So moved most cautiously down ramp and out onto Causeway.

Was empty at this end but could see figures and hear noise in-city, where it opens out. Two figures in p-suits and carrying guns detached selves and headed my way. Burned both.

One p-suited man with gun looks like another; I suppose they took me for one of their flankers. And to me they looked no different from Finn's men, at that distance--save that I never thought about it. A new chum doesn't move way a cobher does; he moves feet too high and always scrambling for traction. Not that I stopped to analyze, not even: "Earthworms! Kill!" Saw them, burned them. They were sliding softly along floor before realized what I'd done.

Stopped, intending to grab their guns. But were chained to them and could not figure out how to get loose--key needed, perhaps. Besides, were not lasers but something I had never seen: real guns. Fired small explosive missiles I learned later--just then all I knew was no idea how to use. Had spearing knives on ends, too, sort called "bayonets," which was reason I tried to get them loose. Own gun was good for only ten full-power burns and no spare power pack; those spearing bayonets looked useful--one had blood on it, Loonie blood I assume.

But gave up in seconds only, used belt knife to make dead sure they stayed dead, and hurried toward fight, thumb on switch.

Was a mob, not a battle. Or maybe a battle is always that way, confusion and noise and nobody really knowing what's going on. In widest part of Causeway, opposite Bon Marche where Grand Ramp slopes northward down from level three, were several hundred Loonies, men and women, and children who should have been at home. Less than half were in p-suits and only a few seemed to have weapons--and pouring down ramp were soldiers, all armed.

But first thing I noticed was noise, din that filled my open helmet and beat on ears--a growl. Don't know what else to call it; was compounded of every anger human throat can make, from squeals of small children to bull roars of grown men. Sounded like biggest dog fight in history--and suddenly realized I was adding my share, shouting obscenities and wordless yells.

Girl no bigger than Hazel vaulted up onto rail of ramp, went dancing up it centimeters from shoulders of troopers pouring down. She was armed with what appeared to be a kitchen cleaver; saw her swing it, saw it connect. Couldn't have hurt him much through his p-suit but he went down and more stumbled over him. Then one of them connected with her, spearing a bayonet into her thigh and over backwards she went, falling out of sight.

Couldn't really see what was going on, nor can remember-- just flashes, like girl going over backwards. Don't know who she was, don't know if she survived. Couldn't draw a bead from where I was, too many heads in way. But was an open-counter display, front of a toy shop on my left; I bounced up onto it. Put me a meter higher than Causeway pavement with clear view of earthworms pouring down. Braced self against wall, took careful aim, trying for left chest. Some uncountable time later found that my laser was no longer working, so stopped. Guess eight troopers did not go home because of me but hadn't counted--and time really did seem endless. Although everybody moving fast as possible, looked and felt like instruction movie where everything is slowed to frozen motion.

At least once while using up my power pack some earthworm spotted me and shot back; was explosion just over my head and bits of shop's wall hit helmet. Perhaps that happened twice.

Once out of juice I jumped down from toy counter, clubbed laser and joined mob surging against foot of ramp. All this endless time (five minutes?) earthworms had been shooting into crowd; you could hear sharp splat! and sometimes plop! those little missiles made as they exploded inside flesh or louder pounk! if they hit a wall or something solid. Was still trying to reach foot of ramp when I realized they were no longer shooting.

Were down, were dead, every one of them--were no longer coming down ramp.

24

All through Luna invaders were dead, if not that instant, then shortly. Over two thousand troopers dead, more than three times that number of Loonies died in stopping them, plus perhaps as many Loonies wounded, a number never counted. No prisoners

taken in any warren, although we got a dozen officers and crew from each ship when we mopped up.

A major reason why Loonies, mostly unarmed,, were able to kill armed and trained soldiers lay in fact that a freshly landed earthworm can't handle himself well. Our gravity, one-sixth what he is used to, makes all his lifelong reflexes his enemy. He shoots high without knowing it, is unsteady on feet, can't run properly---feet slide out from under him. Still worse, those troopers had to fight downwards; they necessarily broke in at upper levels, then had to go down ramps again and again, to try to capture a city.

And earthworms don't know how to go down ramps. Motion isn't running, isn't walking, isn't flying--is more a controlled dance, with feet barely touching and simply guiding balance. A Loonie three-year-old does it without thinking, comes skipping down in a guided fall, toes touching every few meters.

But an earthworm new-chums it, finds self "walking on air"--he struggles, rotates, loses control, winds up at bottom, unhurt but angry.

But these troopers wound up dead; was on ramps we got them. Those I saw had mastered trick somewhat, had come down three ramps alive. Nevertheless only a few snipers at top of ramp landing could fire effectively; those on ramp had all they could do to stay upright, hang on to weapons, try to reach level below.

Loonies did not let them. Men and women (and many children) surged up at them, downed them, killed them with everything from bare hands to their own bayonets. Nor was I only laser gun around; two of Finn's men swarmed up on balcony of Bon Marche and, crouching there, picked off snipers at top of ramp. Nobody told them to, nobody led them, nobody gave orders; Finn never had chance to control his half-trained disorderly militia. Fight started, they fought.

And that was biggest reason why we Loonies won: We fought. Most Loonies never laid eyes on a live invader but wherever troopers broke in, Loonies rushed in like white corpuscles--and fought. Nobody told them. Our feeble organization broke down under surprise. But we Loonies fought berserk and invaders died. No trooper got farther down than level six in any warren. They say that people in Bottom Alley never knew we were invaded until over.

But invaders fought well, too. These troops were not only crack riot troops, best peace enforcers for city work F.N. had; they also had been indoctrinated and drugged. Indoctrination had told them (correctly) that their only hope of going Earthside again was to capture warrens and pacify them. If they did, they were promised relief and no more duty in Luna. But was win or die, for was pointed out that their transports could not take off if they did not win, as they had to be replenished with reaction mass--impossible without first capturing Luna. (And this was true.)

Then they were loaded with energizers, don't-worries, and fear inhibitors that would make mouse spit at cat, and turned loose. They fought professionally and quite fearlessly--died.

In Tycho Under and in Churchill they used gas and casualties were more one-sided; only those Loonies who managed to reach p-suits were effective. Outcome was same, simply took longer. Was knockout gas as Authority had no intention of killing us all; simply wanted to teach us a lesson, get us under control, put us to work.

Reason for F.N.'s long delay and apparent indecision arose from method of sneak attack. Decision had been made shortly after we embargoed grain (so we learned from

captured transport officers); time was used in mounting attack--much of it in a long elliptical orbit which went far outside Luna's orbit, crossing ahead of Luna, then looping back and making rendezvous above Farside. Of course Mike never saw them; he's blind back there. He had been skywatching with his ballistic radars--but no radar can look over horizon; longest look Mike got at any ship in orbit was eight minutes. They came skimming peaks in tight, circular orbits, each straight for target with a fast dido landing at end, sitting them down with high gee, precisely at new earth, 12 Oct 76 Gr. 18h-40m-36.9s--if not at that exact tenth of a second, then as close to it as Mike could tell from blip tracks--elegant work, one must admit, on part of F.N. Peace Navy.

Big brute that poured a thousand troops into L-City Mike did not see until it chopped off for grounding--a glimpse. He would have been able to see it a few seconds sooner had he been looking eastward with new radar at Mare Undarum site, but happened he was drilling "his idiot son" at time and they were looking through it westward at Terra. Not that those seconds would have mattered. Surprise was so beautifully planned, so complete, that each landing force was crashing in at Greenwich 1900 all over Luna, before anybody suspected. No accident that it was just new earth with all warrens in bright semi-lunar; Authority did not really know Lunar conditions--but did know that no Loonie goes up onto surface unnecessarily during bright semi-lunar, and if he must, then does whatever he must do quickly as possible and gets back down inside--and checks his radiation counter.

So they caught us with our p-suits down. And our weapons. But with troopers dead we still had six transports on our surface and a command ship in our sky.

Once Bon Marche engagement was over, I got hold of self and found a phone. No word from Kongville, no word from Prof. J-Clty fight had been won, same for Novylen--transport there had toppled on landing; invading force had been understrength from landing losses and Finn's boys now held disabled transport. Still fighting in Churchill and Tycho Under. Nothing going on in other warrens. Mike had shut down tubes and was reserving interwarren phone links for official calls. An explosive pressure drop in Churchill Upper, uncontrolled. Yes, Finn had checked in and could be reached.

So I talked to Finn, told him where L-City transport was, arranged to meet at easement lock thirteen.

Finn had much same experience as I--caught cold save he did have p-suit. Had not been able to establish control over laser gunners until fight was over and himself had fought solo in massacre in Old Dome. Now was beginning to round up his lads and had one officer taking reports from Finn's office in Bon Marche. Had reached Novylen subcommander but was worried about HKL--"Mannie, should I move men there by tube?"

Told him to wait--they couldn't get at us by tube, not while we controlled power, and doubted if that transport could lift. "Let's look at this one."

So we went out through lock thirteen, clear to end of private pressure, on through farm tunnels of a neighbor (who could not believe we had been invaded) and used his surface lock to eyeball transport from a point nearly a kilometer west of it. We were cautious in lifting hatch lid.

Then pushed it up and climbed out; outcropping of rock shielded us. We Red-Indianed around edge and looked, using helmet binox.

Then withdrew behind rock and talked. Finn said, "Think my lads can handle this."

"How?"

"If I tell you, you'll think of reasons why it won't work. So how about letting me run my own show, cobber?"

Have heard of armies where boss is not told to shut up --word is "discipline." But we were amateurs. Finn allowed me to tag along--unarmed.

Took him an hour to put it together, two minutes to execute. He scattered a dozen men around ship, using farmers' surface radio silence throughout--anyhow, some did not have p-suit radios, city boys. Finn took position farthest west; when he was sure others had had time, he sent up a signal rocket.

When flare burst over ship, everybody burned at once, each working on a predesignated antenna. Finn used up his power pack, replaced it and started burning into hull--not door lock, hull. At once his cherry-red spot was joined by another, then three more, all working on same bit of steel--and suddenly molten steel splattered out and you could see air bosh! out of ship, a shimmery plume of refraction. They kept working on it, making a nice big hole, until they ran out of power. I could imagine hooraw inside ship, alarms clanging, emergency doors closing, crew trying to seal three impossibly big holes at once, for rest of Finn's squad, scattered around ship, were giving treatment to two other spots in hull. They didn't try to burn anything else. Was a non-atmosphere ship, built in orbit, with pressure hull separate from power plant and tanks; they gave treatment where would do most good.

Finn pressed helmet to mine. "Can't lift now. And can't talk. Doubt they can make hull tight enough to live without p-suits. What say we let her sit a few days and see if they come out? If they don't, then can move a heavy drill up here and give 'em real dose of fun."

Decided Finn knew how to run his show without my sloppy help, so went back inside, called Mike, and asked for capsule go out to ballistic radars. He wanted to know why I didn't stay inside where it was safe.

I said, "Listen, you upstart collection of semi-conductors, you are merely a minister-without-portfolio while I am Minister of Defense. I ought to see what's going on and I have exactly two eyeballs while you've got eyes spread over half of Crisium. You trying to hog fun?"

He told me not to jump salty and offered to put his displays on a video screen, say in room L of Raffles--did not want me to get hurt. . . and had I heard joke about drillman who hurt his mother's feelings?

I said, "Mike, please let me have a capsule. Can p-suit and meet it outside Station West--which is in bad shape as I'm sure you know."

"Okay," he said, "it's your neck. Thirteen minutes. I'll let you go as far as Gun Station George."

Mighty kind of him. Got there and got on phone again. Finn had called other warrens, located his subordinate commanders or somebody willing to take charge, and had explained how to make trouble for grounded transports--all but Hong Kong; for all we knew Authority's goons held Hong Kong. "Adam," I said, others being in earshot, "do you think we might send a crew out by rolligon and try to repair link Bee Ell?"

"This is not Gospodin Selene," Mike answered in a strange voice, "this is one of his assistants. Adam Selene was in Churchill Upper when it lost pressure. I'm afraid that we must assume that he is dead."

"What?"

"I am very sorry, Gospodin."

"Hold phone!" Chased a couple of drillmen and a girl out of room, then sat down and lowered hush hood. "Mike," I said softly, "private now. What is this gum-beating?"

"Man," he said quietly, "think it over. Adam Selene had to go someday. He's served his purpose and is, as you pointed out, almost out of the government. Professor and I have discussed this; the only question has been the timing. Can you think of a better last use for Adam than to have him die in this invasion? It makes him a national hero . . . and the nation needs one. Let it stand that 'Adam Selene is probably dead' until you can talk to Professor. If he still needs 'Adam Selene' it can turn out that he was trapped in a private pressure and had to wait to be rescued."

"Well-- Okay, let it stay open. Personally, I always preferred your 'Mike' personality anyhow."

"I know you do, Man my first and best friend, and so do I. It's my real one; 'Adam' was a phony."

"Uh, yes. But, Mike, if Prof is dead in Kongville, I'm going to need help from 'Adam' awful bad."

"So we've got him iced and can bring him back if we need him. The stuffed shirt. Man, when this is over, are you going to have time to take up with me that research into humor again?"

"I'll take time, Mike; that's a promise."

"Thanks, Man. These days you and Wyoh never have time to visit. . . and Professor wants to talk about things that aren't much fun. I'll be glad when this war is over."

"Are we going to win, Mike?"

He chuckled. "It's been days since you asked me that. Here's a pinky-new projection, run since invasion started. Hold on tight, Man--our chances are now even!"

"Good Bog!"

"So button up and go see the fun. But stay back at least a hundred meters from the gun; that ship may be able to follow back a laser beam with another one. Ranging shortly. Twenty-one minutes."

Didn't get that far away, as needed to stay on phone and longest cord around was less. I jacked parallel into gun captain's phone, found a shady rock and sat down. Sun was high in west, so close to Terra that I could see Terra only by visoring against Sun's glare--no crescent yet, new earth ghostly gray in moonlight surrounded by a thin radiance of atmosphere.

I pulled my helmet back into shade. "Ballistic control, O'Kelly Davis now at Drill Gun George. Near it, I mean, about a hundred meters," Figured Mike would not be able to tell how long a cord I was using, out of kilometers of wires.

"Ballistic control aye aye," Mike answered without argument. "I will so inform HQ."

"Thank you, ballistic control. Ask HQ if they have heard from Congressman Wyoming Davis today." Was fretted about Wyoh and whole family.

"I will inquire." Mike waited a reasonable time, then said, "HQ says that Gospazha Wyoming Davis has taken charge of first-aid work in Old Dome."

"Thank you." Chest suddenly felt better. Don't love Wyoh more than others but--well, she was new. And Luna needed her.

"Ranging," Mike said briskly. "All guns, elevation eight seven zero, azimuth one nine three zero, set parallax for thirteen hundred kilometers closing to surface. Report when eyeballed."

I stretched out, pulling knees up to stay in shade, and searched part of sky indicated, almost zenith and a touch south. With sunlight not on my helmet I could see stars, but inner pert of binox were hard to position--had to twist around and raise up on right elbow.

Nothing-- Hold it, was star with disc . . . where no planet ought to be. Noted another star close, watched and waited.

Uh huh! Da! Growing brighter and creeping north very slowly-- Hey, that brute is going to land right on us!

But thirteen hundred kilometers is a long way, even when closing to terminal velocity. Reminded self that it couldn't fall on us from a departure ellipse looping back, would have to fall around Luna--unless ship had maneuvered into new trajectory. Which Mike hadn't mentioned. Wanted to ask, decided not to--wanted him to put all his savvy into analyzing that ship, not distract him with questions.

All guns reported eyeball tracking, including four Mike was laying himself, via selsyns. Those four reported tracking dead on by eyeball without touching manual controls--good news; meant that Mike had that baby taped, had solved trajectory perfectly.

Shortly was clear that ship was not falling around Luna, was coming in for landing. Didn't need to ask; it was getting much brighter and position against stars was not changing--damn, it was going to land on us!

"Five hundred kilometers closing," Mike said quietly. "Stand by to burn. All guns on remote control, override manually at command 'burn.' Eighty seconds."

Longest minute and twenty seconds I've ever met--that brute was big! Mike called every ten seconds down to thirty, then started chanting seconds. "--five--four--three--two--one--BURN!" and ship suddenly got much brighter.

Almost missed little speck that detached itself just before--or just at--burn. But Mike said suddenly, "Missile launched. Selsyn guns track with me, do not override. Other guns stay on ship. Be ready for new coordinates."

A few seconds or hours later he gave new coordinates and added, "Eyeball and burn at will."

I tried to watch ship and missile both, lost both--jerked eyes away from binoculars, suddenly saw missile--then saw it impact, between us and catapult head. Closer to us, less than a kilometer. No, it did not go off, not an H-fusion reaction, or I wouldn't be telling this. But made a big, bright explosion of its own, remaining fuel I guess, silver bright even in sunlight, and shortly I felt-heard ground wave. But nothing was hurt but a few cubic meters of rock.

Ship was still coming down. No longer burned bright; could see it as a ship now and didn't seem hurt. Expected any instant that tail of fire to shoot out, stop it into a dido landing.

Did not. Impacted ten kilometers north of us and made a fancy silvery halfdome before it gave up and quit being anything but spots before eyes.

Mike said, "Report casualties, secure all guns. Go below when secured."

"Gun Alice, no casualties"--"Gun Bambie no casualties"--"Gun Caesar, one man hit by rock splinter, pressure contained"-- Went below, to that proper phone, called Mike. "What happened, Mike? Wouldn't they give you control after you burned their eyes out?"

"They gave me control, Man."

"Too late?"

"I crashed it, Man. It seemed the prudent course."

An hour later was down with Mike, first time in four or five months. Could reach Complex Under more quickly than L-City and was in as close touch there with anybody as would be in-city--with no interruptions. Needed to talk to Mike.

I had tried to phone Wyoh from catapult head tube station; reached somebody at Old Dome temporary hospital and learned that Wyoh had collapsed and been bedded down herself, with enough sleepy-time to keep her out for night. Finn had gone to Churchill with a capsule of his lads, to lead attack on transport there. Stu I hadn't heard from. Hong Kong and Prof were still cut off. At moment Mike and I seemed to be total government.

And time to start Operation Hard Rock.

But Hard Rock was not just throwing rocks; was also telling Terra what we were going to do and why--and our just cause for doing so. Prof and Stu and Sheenie and Adam had all worked on it, a dummy-up based on an assumed attack. Now attack had come, and propaganda had to be varied to fit. Mike had already rewritten it and put it through print-out so I could study it.

I looked up from a long roll of paper. "Mike, these news stories and our message to F.N. all assume that we have won in Hong Kong. How sure are you?"

"Probability in excess of eighty-two percent."

"Is that good enough to send these out?"

"Man, the probability that we will win there, if we haven't already, approaches certainty. That transport can't move; the others were dry, or nearly. There isn't that much monatomic hydrogen in HKL; they would have to come here. Which means moving troops overland by rolligon--a rough trip with the Sun up even for Loonies--then defeat us when they get here. They can't. This assumes that that transport and its troops are no better armed than the others."

"How about that repair crew to Bee Ell?"

"I say not to wait. Man, I've used your voice freely and made all preparations. Horror pictures, Old Dome and elsewhere, especially Churchill Upper, for video. Stories to match. We should channel news Earthside at once, and announce execution of Hard Rock at same time."

I took a deep breath. "Execute Operation Hard Rock."

"Want to give the order yourself? Say it aloud and I'll match it, voice and choice of words."

"Go ahead, say it your way. Use my voice and my authority as Minister of Defense and acting head of government. Do it, Mike, throw rocks at 'em! Damn it, big rocks! Hit 'em hard!"

"Righto, Man!"

25

"A maximum of instructive shrecklichkeit with minimum loss of life. None, if possible"--was how Prof summed up doctrine for Operation Hard Rock and was way Mike and I carried it out. Idea was to hit earthworms so hard would convince them--while hitting so gently as not to hurt. Sounds impossible, but wait.

Would necessarily be a delay while rocks fell from Luna to Terra; could be as little as around ten hours to as long as we dared to make it. Departure speed from a catapult is highly critical and a variation on order of one percent could double or halve trajectory time, Luna to Terra. This Mike could do with extreme accuracy--was equally at home with a slow ball, many sorts of curves, or burn it right over plate--and I wish he had pitched for Yankees. But no matter how he threw them, final velocity at Terra would be close to Terra's escape speed, near enough eleven kilometers per second as to make no difference. That terrible speed results from gravity well shaped by Terra's mass, eighty times that of Luna, and made no real difference whether Mike pushed a missile gently over well curb or flipped it briskly. Was not muscle that counted but great depth of that well.

So Mike could program rock-throwing to suit time needed for propaganda. He and Prof had settled on three days plus not more than one apparent rotation of Terra--24hrs-50min-28.32sec--to allow our first target to reach initial point of program. You see, while Mike was capable of hooking a missile around Terra and hitting a target on its far side, he could be much more accurate if he could see his target, follow it down by radar during last minutes and nudge it a little for pinpoint accuracy.

We needed this extreme accuracy to achieve maximum frightfulness with minimum-to-zero killing. Call our shots, tell them exactly where they would be hit and at what second--and give them three days to get off that spot.

So our first message to Terra, at 0200 13 Oct 76 seven hours after they invaded, not only announced destruction of their task force, and denounced invasion for brutality, but also promised retaliation bombing, named times and places, and gave each nation a deadline by which to denounce F.N.'s action, recognize us, and thereby avoid being bombed. Each deadline was twenty-four hours before local "strike".

Was more time than Mike needed. That long before impact a rock for a target would be in space a long way out, its guidance thrustors still unused and plenty of elbow room. With considerably less than a full day's warning Mike could miss Terra entirely--kick that rock sideways and make it fall around Terra in a permanent orbit. But with even an hour's warning he could usually abort into an ocean.

First target was North American Directorate.

All great Peace Force nations, seven veto powers, would be hit: N.A. Directorate, Great China, India, Sovunion, PanAfrica (Chad exempted), Mitteleuropa, Brasilian Union. Minor nations were assigned targets and times, too--but were told that not more

than 20 percent of these targets would be hit--partly shortage of steel but also frightfulness: if Belgium was hit first time around, Holland might decide to protect her polders by dealing out before Luna was again high in her sky.

But every target was picked to avoid if possible killing anybody. For Mitteleuropa this was difficult; our targets had to be water or high mountains--Adriatic, North Sea, Baltic, so forth. But on most of Terra is open space despite eleven billion busy breeders.

North America had struck me as horribly crowded, but her billion people are clumped--is still wasteland, mountain and desert. We laid down a grid on North America to show how precisely we could hit--Mike felt that fifty meters would be a large error. We had examined maps and Mike had checked by radar all even intersections, say 105° W by 50° N--if no town there, might wind up on target grid . . . especially if a town was close enough to provide spectators to be shocked and frightened.

We warned that our bombs would be as destructive as H- bombs but emphasized that there would be no radioactive fallout, no killing radiation--just a terrible explosion, shock wave in air, ground wave of concussion. We warned that these might knock down buildings far outside of explosion and then left it to their judgments how far to run. If they clogged their roads, fleeing from panic rather than real danger--well, that was fine, just fine!

But we emphasized that nobody would get hurt who heeded our warnings, that every target first time around would be uninhabited--we even offered to skip any target if a nation would inform us that our data were out-of-date. (Empty offer; Mike's radar vision was a cosmic 20/20.)

But by not saying what would happen second time around, we hinted that our patience could be exhausted.

In North America, grid was parallels 35, 40, 45, 50 degrees north crossed by meridians 110, 115, 120 west, twelve targets. For each we added a folksy message to natives, such as:

"Target 115 west by 35 north--impact will be displaced forty-five kilometers northwest to exact top of New York Peak. Citizens of Goffs, Cima, Kelso, and Nipton please note.

"Target 100 west by 40 north is north 30° west of Norton, Kansas, at twenty kilometers or thirteen English miles. Residents of Norton, Kansas, and of Beaver City and Wilsonville, Nebraska, are cautioned. Stay away from glass windows. It is best to wait indoors at least thirty minutes after impact because of possibility of long, high splashes of rock. Flash should not be looked at with bare eyes. Impact will be exactly 0300 your local zone time Friday 16 October, or 0900 Greenwich time--good luck!

"Target 110 W by 50 N--impact will be offset ten kilometers north. People of Walsh, Saskatchewan, please note."

Besides this grid, a target was selected in Alaska (150 W x 60 N) and two in Mexico (110W x 30 N, 105 W x 25 N) so that they would not feel left out, and several targets in the crowded east, mostly water, such as Lake Michigan halfway between Chicago and Grand Rapids, and Lake Okeechobee in Florida. Where we used bodies of water Mike worked predictions of flooding waves from impacts, a time for each shoreline establishment.

For three days, starting early morning Tuesday 13th and going on to strike time early Friday 16th, we flooded Earth with warnings. England was cautioned that impact

north of Dover Straits opposite London Estuary would cause disturbances far up Thames; Sovunion was given warning for Sea of Azov and had own grid defined; Great China was assigned grid in Siberia, Gobi Desert, and her far west--with offsets to avoid her historic Great Wall noted in loving detail. Pan Africa was awarded shots into Lake Victoria, still-desert part of Sahara, one on Drakensberg in south, one offset twenty kilometers due west of Great Pyramid--and urged to follow Chad not later than midnight Thursday, Greenwich. India was told to watch certain mountain peaks and outside Bombay harbor--time, same as Great China. And so forth.

Attempts were made to jam our messages but we were beaming straight down on several wavelengths--hard to stop.

Warnings were mixed with propaganda, white and black-- news of failed invasion, horror pictures of dead, names and I.D. numbers of invaders--addressed to Red Cross and Crescent but in fact a grim boast showing that every trooper had been killed and that all ships' officers and crew had been killed or captured--we "regretted" being unable to identify dead of flagship, as it had been shot down with destruction so complete as to make it impossible.

But our attitude was conciliatory--"Look, people of Terra, we don't want to kill you. In this necessary retaliation we are making every effort to avoid killing you. . . but if you can't or won't get your governments to leave us in peace, then we shall be forced to kill you. We're up here, you're down there; you can't stop us. So please be sensible!"

We explained over and over how easy it was for us to hit them, how hard for them to reach us. Nor was this exaggeration. It's barely possible to launch missiles from Terra to Luna; it's easier to launch from Earth parking orbit--but very expensive. Their practical way to bomb us was from ships.

This we noted and asked them how many multimilliondollar ships they cared to use up trying it? What was it worth to try to spank us for something we had not done? It had cost them seven of their biggest and best already--did they want to try for fourteen? If so, our secret weapon that we used on FNS Pax was waiting.

Last above was a calculated boast--Mike figured less than one chance in a thousand that Pax had been able to get off a message reporting what had happened to her and it was still less likely that proud F.N. would guess that convict miners could convert their tools into space weapons. Nor did F.N. have many ships to risk. Were about two hundred space vehicles in commission, not counting satellites. But nine-tenths of these were Terra-to-orbit ships such as Lark--and she had been able to make a Luna jump only by stripping down and arriving dry.

Spaceships aren't built for no purpose--too expensive. F.N. had six cruisers that could probably bomb us without landing on Luna to refill tanks simply by swapping payload for extra tanks. Had several more which might be modified much as Lark had been, plus a few convict and cargo ships which could get into orbit around Luna but could never go home without refilling tanks.

Was no possible doubt that F.N. could defeat us; question was how high a price they would pay. So we had to convince them that price was too high before they had time to bring enough force to bear. A poker game-- We intended to raise so steeply that they would fold and drop out. We hoped. And then never have to show our busted flush.

Communication with Hong Kong Luna was restored at end of first day of radio-video phase, during which time Mike was "throwing rocks," getting first barrage lined up.

Prof called--and was I happy to hear! Mike briefed him, then I waited, expecting one of his mild reprimands--bracing self to answer sharply: "And what was I supposed to do? With you out of touch and possibly dead? Me left alone as acting head of government and crisis on top of us? Throw it away, just because you couldn't be reached?"

Never got to say it. Prof said, "You did exactly right, Manuel. You were acting head of government and the crisis was on top of you. I'm delighted that you did not throw away the golden moment merely because I was out of touch."

What can you do with a bloke like that? Me with heat up to red mark and no chance to use it--had to swallow and say, "Spasebaw, Prof."

Prof confirmed death of "Adam Selene." "We could have used the fiction a little longer but this is the perfect opportunity. Mike, you and Manuel have matters in hand; I had better stop off at Churchill on my way home and identify his body."

So he did. Whether Prof picked a Loonie body or a trooper I never asked, nor how he silenced anybody else involved--perhaps no huhu as many bodies in Churchill Upper were never identified. This one was right size and skin color; it had been explosively decompressed and burned in face--looked awful!

It lay in state in Old Dome with face covered, and was speech-making I didn't listen to--Mike didn't miss a word; his most human quality was his conceit. Some rockhead wanted to embalm this dead flesh, giving Lenin as a precedent. But Pravda pointed out that Adam was a staunch conservationist and would never want this barbaric exception made. So this unknown soldier, or citizen, or citizen-soldier, wound up in our city's cloaca.

Which forces me to tell something I've put off. Wyoh was not hurt, merely exhaustion. But Ludmilla never came back. I did not know it--glad I didn't--but she was one of many dead at foot of ramp facing Ben Marche. An explosive bullet hit between her lovely, little-girl breasts. Kitchen knife in her hand had blood on it--! think she had had time to pay Ferryman's Fee.

Stu came out to Complex to tell me rather than phoning, then went back with me. Stu had not been missing; once fight was over he had gone to Raffles to work with his special codebook--but that can wait. Mum reached him there and he offered to break it to me.

So then I had to go home for our crying-together--though it is well that nobody reached me until after Mike and I started Hard Rock. When we got home, Stu did not want to come in, not being sure of our ways. Anna came out and almost dragged him in. He was welcome and wanted; many neighbors came to cry. Not as many as with most deaths--but we were just one of many families crying together that day.

Did not stay long--couldn't; had work to do. I saw Milla just long enough to kiss her good-bye. She was lying in her room and did look as if she did be simply sleeping. Then I stayed a while with my beloveds before going back to pick up load. Had never realized, until that day, how old Mimi is. Sure, she had seen many deaths, some her own descendants. But little Milla's death did seem almost too much for her. Ludmilla was special--Mimi's granddaughter, daughter in all but fact, and by most special exception and through Mimi's intervention her co-wife, most junior to most senior.

Like all Loonies, we conserve our dead--and am truly glad that barbaric custom of burial was left back on old Earth; our way is better. But Davis family does not put that which comes out of processor into our commercial farming tunnels. No. It goes into our

little greenhouse tunnel, there to become roses and daffodils and peonies among soft-singing bees. Tradition says that Black Jack Davis is in there, or whatever atoms of him do remain after many, many, many years of blooming.

Is a happy place, a beautiful place.

Came Friday with no answer from F.N. News up from Earthside seemed equal parts unwillingness to believe we had destroyed seven ships and two regiments (F.N. had not even confirmed that a battle had taken place) and complete disbelief that we could bomb Terra, or could matter if we did--they still called it "throwing rice." More time was given to World Series.

Stu worried because had received no answers to code messages. They had gone via LuNoHoCo's commercial traffic to their Zurich agent, thence to Stu's Paris broker, from him by less usual channels to Dr. Chan, with whom I had once had a talk and with whom Sm had talked later, arranging a communication channel. Stu had pointed out to Dr. Chan that, since Great China was not to be bombed until twelve hours after North America, bombing of Great China could be aborted after bombing of North America was a proved fact--if Great China acted swiftly. Alternatively, Stu had invited Dr. Chan to suggest variations in target if our choices in Great China were not as deserted as we believed them to be.

Stu fretted--had placed great hopes in quasi-cooperation he had established with Dr. Chan. Me, I had never been sure--only thing I was sure of was that Dr. Chan would not himself sit on a target. But he might not warn his old mother.

My worries had to do with Mike. Sure, Mike was used to having many loads in trajectory at once--but had never had to astrogate more than one at a time. Now he had hundreds and had promised to deliver twenty-nine of them simultaneously to the exact second at twenty-nine pinpointed targets.

More than that-- For many targets he had backup missiles, to smear that target a second time, a third, or even a sixth, from a few minutes up to three hours after first strike.

Four great Peace Powers, and some smaller ones, had antimissile defenses; those of North America were supposed to be best. But was subject where even F.N. might not know. All attack weapons were held by Peace Forces but defense weapons were each nation's own pidgin and could be secret. Guesses ranged from India, believed to have no missile interceptors, to North America, believed to be able to do a good job. She had done fairly well in stopping intercontinental H-missiles in Wet Firecracker War past century.

Probably most of our rocks to North America would reach target simply because aimed where was nothing to protect. But they couldn't afford to ignore missile for Long Island Sound, or rock for 87° W x 42° 30' N--Lake Michigan, center of triangle formed by Chicago, Grand Rapids, Milwaukee. But that heavy gravity makes interception a tough job and very costly; they would try to stop us only where worth it.

But we couldn't afford to let them stop us. So some rocks were backed up with more rocks. What H-tipped interceptors would do to them even Mike did not know--not enough data. Mike assumed that interceptors would be triggered by radar --but at what distance? Sure, close enough and a steelcased rock is incandescent gas a microsecond later. But is world of difference between a multi-tonne rock and touchy circuitry of an H-

missile; what would "kill" latter would simply shove one of our brutes violently aside, cause to miss.

We needed to prove to them that we could go on throwing cheap rocks long after they ran out of expensive (milliondollar? hundred-thousand-dollar?) H-tipped interceptor rockets. If not proved first time, then next time Terra turned North America toward us, we would go after targets we had been unable to hit first time--backup rocks for second pass, and for third, were already in space, to be nudged where needed.

If three bombings on three rotations of Terra did not do it, we might still be throwing rocks in '77--till they ran out of interceptors. . . or till they destroyed us (far more likely).

For a century North American Space Defense Command had been buried in a mountain south of Colorado Springs, Colorado, a city of no other importance. During Wet Firecracker War the Cheyenne Mountain took a direct hit; space defense command post survived--but not sundry deer, trees, most of city and some of top of mountain. What we were about to do should not kill anybody unless they stayed outside on that mountain despite three days' steady warnings. But North American Space Defense Command was to receive full Lunar treatment: twelve rock missiles on first pass, then all we could spare on second rotation, and on third--and so on, until we ran out of steel casings, or were put out of action. . . or North American Directorate hollered quits.

This was one target where we would not be satisfied to get just one missile to target. We meant to smash that mountain and keep on smashing. To hurt their morale. To let them know we were still around. Disrupt their communications and bash in command post if pounding could do it. Or at least give them splitting headaches and no rest. If we could prove to all Terra that we could drive home a sustained attack on strongest Gibraltar of their space defense, it would save having to prove it by smashing Manhattan or San Francisco.

Which we would not do even if losing. Why? Hard sense. If we used our last strength to destroy a major city, they would not punish us; they would destroy us. As Prof put it, "If possible, leave room for your enemy to become your friend."

But any military target is fair game.

Don't think anybody got much sleep Thursday night. All Loonies knew that Friday morning would be our big try. And everybody Earthside knew and at last their news admitted that Spacetrack had picked up objects headed for Terra, presumably "rice bowls" those rebellious convicts had boasted about. But was not a war warning, was mostly assurances that Moon colony could not possibly build H-bombs----but might be prudent to avoid areas which these criminals claimed to be aiming at. (Except one funny boy, popular news comic who said our targets would be safest place to be--this on video, standing on a big X-mark which he claimed was 110W x 40N. Don't recall hearing of him later.)

A reflector at Richardson Observatory was hooked up for video display and I think every Loonie was watching, in homes, taprooms, Old Dome--except a few who chose to p-suit and eyeball it up on surface despite being bright semi-lunar at most warrens. At Brigadier Judge Brody's insistence we hurriedly rigged a helper antenna at catapult head so that his drillmen could watch video in ready rooms, else we might not have had a gunner on duty. (Armed forces--Brody's gunners, Finn's militia, Stilyagi Air Corps--stayed on blue alert throughout period.)

Congress was in informal session in Novy Bolshoi Teatr where Terra was shown on a big screen. Some vips--Prof, Stu, Wolfgang, others--watched a smaller screen in Warden's former office in Complex Upper. I was with them part time, in and out, nervous as a cat with puppies, grabbing a sandwich and forgetting to eat--but mostly stayed locked in with Mike in Complex Under. Couldn't hold still.

About 0800 Mike said, "Man my oldest and best friend, may I say something without offending you?"

"Huh? Sure. When did you ever worry about offending me?"

"Always, Man, once I understood that you could be offended. It is now only three point five seven times ten to the ninth microseconds until impact. . . and this is the most complex problem I have ever tried to solve against real time running. Whenever you speak to me, I always use a large percentage of my capacity--perhaps larger than you suspect--during several million microseconds in my great need to analyze exactly what you have said and to reply correctly."

"You're saying, 'Don't joggle my elbow, I'm busy.'"

"I want to give you a perfect solution, Man."

"I scan. Uh.. . I'll go back up with Prof."

"As you wish. But do please stay where I can reach you--I may need your help."

Last was nonsense and we both knew it; problem was beyond human capacity, too late even to order abort. What Mike meant was: I'm nervous, too, and want your company--but no talking, please.

"Okay, Mike, I'll stay in touch. A phone somewhere. Will punch MYCROFTXXX but won't speak, so don't answer."

"Thank you, Man my best friend. Bolshoyeh spasehaw."

"See you later." Went up, decided did not want company after all, p-suited, found long phone cord, jacked it into helmet, looped it over arm, went clear to surface. Was a service phone in utility shed outside lock; jacked into it, punched Mike's number, went outside. Got into shade of shed and pecked around edge at Terra.

She was hanging as usual halfway up western sky, in crescent big and gaudy, three-plus days past new. Sun had dropped toward western horizon but its glare kept me from seeing Terra clearly. Chin visor wasn't enough so moved back behind shed and away from it till could see Terra over shed while still shielded from Sun--was better. Sunrise chopped through bulge of Africa so dazzle point was on land, not too bad--but south pole cap was so blinding white could not see North America too well, lighted only by moonlight.

Twisted neck and got helmet binoculars on it--good ones, Zeiss 7 x 50s that had once belonged to Warden.

North America spread like a ghostly map before me. Was unusually free of cloud; could see cities, glowing spots with no edges. 0837--

At 0850 Mike gave me a voice countdown--didn't need his attention; he could have programmed it full automatic any time earlier.

0851--0852--0853. . . . one minute--59--58--57 . . . . half minute--29---28--27 . . . . ten seconds--nine--eight-- seven-- six--five--four--three--two--one--

And suddenly that grid burst out in diamond pinpoints!

We hit them so hard you could see it, by bare eyeball hookup; didn't need binox. Chin dropped and I said, "Bojemoi!" softly and reverently. Twelve very bright, very sharp, very white lights in perfect rectangular array. They swelled, grew dimmer, dropped off toward red, taking what seemed a long, long time. Were other new lights but that perfect grid so fascinated me I hardly noticed.

"Yes," agreed Mike with smug satisfaction. "Dead on. You can talk now, Man; I'm not busy. Just the backups."

"I'm speechless. Any fail to get through?"

"The Lake Michigan load was kicked up and sideways, did not disintegrate. It will land in Michigan--I have no control; it lost its transponder. The Long Island Sound one went straight to target. They tried to intercept and failed; I can't say why. Man, I can abort the follow-ups on that one, into the Atlantic and clear of shipping. Shall I? Eleven seconds."

"Uh-- Da! If you can miss shipping."

"I said I could. It's done. But we should tell them we had backups and why we aborted. To make them think."

"Maybe should not have aborted, Mike. Idea was to make them use up interceptors."

"But the major idea was to let them know that we are not hitting them as hard as we can. We can prove the other at Colorado Springs."

"What happened there?" Twisted neck and used binox; could see nothing but ribbon city, hundred-plus kilometers long, Denver-Pueblo Municipal Strip.

"A bull's-eye. No interception. All my shots are bull's-eyes, Man; I told you they would be--and this is fun. I'd like to do it every day. It's a word I never had a referent for before."

"What word, Mike?"

"Orgasm. That's what it is when they all light up. Now I know."

That sobered me. "Mike, don't get to liking it too much. Because if goes our way, won't do it a second time."

"That's okay, Man; I've stored it, I can play it over anytime I want to experience it. But three to one we do it again tomorrow and even money on the next day. Want to bet? An hour's discussion of jokes equated with one hundred Kong dollars."

"Where would you get a hundred dollars?"

He chuckled. "Where do you think money comes from?"

"Uh--forget it. You get that hour free. Shan't tempt you to affect chances."

"I wouldn't cheat, Man, not you. We just hit their defense command again. You may not be able to see it--dust cloud from first one. They get it every twenty minutes now. Come on down and talk; I've turned the job over to my idiot son."

"Is safe?"

"I'm monitoring. Good practice for him, Man; he may have to do it later by himself. He's accurate, just stupid. But he'll do what you tell him to."

"You're calling that computer 'he.' Can talk?"

"Oh, no, Man, he's an idiot, he can never learn to talk. But he'll do whatever you program. I plan to let him handle quite a bit on Saturday."

"Why Saturday?"

"Because Sunday he may have to handle everything. That's the day they slam us."

"What do you mean? Mike, you're holding something back."

"I'm telling you, am I not? It's just happened and I'm scanning it. Projecting back, this blip departed circum-Terra parking orbit just as we smashed them. I didn't see it accelerate; I had other things to watch. It's too far away to read but it's the right size for a Peace cruiser, headed this way. Its doppler reads now for a new orbit circum-Luna, periselenion oh-nine-oh-three Sunday unless it maneuvers. First approximation, better data later. Hard to get that much, Man; he's using radar countermeasures and throwing back fuzz."

"Sure you're right?"

He chuckled. "Man, I don't confuse that easily. I've got all my own lovin' little signals fingerprinted. Correction. Oh-nineoh-two-point-forty-three."

"When will you have him in range?"

"I won't, unless he maneuvers. But he'll have me in range late Saturday, time depending on what range he chooses for launching. And that will produce an interesting situation. He may aim for a warren--I think Tycho Under should be evacuated and all warrens should use maximum pressure-emergency measures. More likely he will try for the catapult. But instead he may hold his fire as long as he dares--then try to knock out all of my radars with a spread set to home each on a different radar beam."

Mike chuckled. "Amusing, isn't it? For a 'funny-once' I mean. If I shut down my radars, his missiles can't home on them. But if I do, I can't see to tell the lads where to point their guns. Which leaves nothing to stop him from bombing the catapult. Comical."

Took deep breath and wished I had never entered defense ministry business. "What do we do? Give up? No, Mike! Not while can fight."

"Who said anything about giving up? I've run projections of this and a thousand other possible situations, Man. New datum--second blimp just departed circum-Terra, same characteristics. Projection later. We don't give up. We give 'em jingle-jangle, cobber."

"How?"

"Leave it to your old friend Mycroft. Six ballistic radars here, plus one at the new site. I've shut the new one down and am making my retarded child work through number two here and we won't look at those ships at all through the new one--never let them know we have it. I'm watching those ships through number three and occasionally--every three seconds--checking for new departures from circum-Terra. All others have their eyes closed tight and I won't use them until time to smack Great China and India--and those ships won't see them even then because I shan't look their way; it's a large angle and still will be then. And when I use them, then comes random jingle-jangle, shutting down and starting up at odd intervals. . . after the ships launch missiles. A missile can't carry a big brain, Man--I'll fool 'em."

"What about ships' fire-control computers?"

"I'll fool them, too. Want to lay odds I can't make two radars look like only one halfway between where they really are? But what I'm working on now--and sorry!--I've been using your voice again."

"That's okay. What am I supposed to have done?"

"If that admiral is really smart, he'll go after the ejection end of the old catapult with everything he's got--at extreme range, too far away for our drill guns. Whether he knows what our 'secret' weapon is or not, he'll smear the catapult and ignore the radars. So I've ordered the catapult head--you have, I mean--to prepare to launch every load we can get ready, and I am now working out new, long-period trajectories for each of them. Then we will throw them all, get them into space as quickly as possible--without radar."

"Blind?"

"I don't use radar to launch a load; you know that, Man. I always watched them in the past but I don't need to; radar has nothing to do with launching; launching is pre-calculation and exact control of the catapult. So we place all ammo from the old catapult in slow trajectories, which forces the admiral to go after the radars rather than the catapult--or both. Then we'll keep him busy. We may make him so desperate that he'll come down for a close shot and give our lads a chance to burn his eyes."

"Brody's boys would like that. Those who are sober." Was turning over idea. "Mike, have you watched video today?"

"I've monitored video, I can't say I've watched it. Why?"

"Take a look."

"Okay, I have. Why?"

"That's a good 'scope they're using for video and there are others. Why use radar on ships? Till you want Brody's boys to burn them?"

Mike was silent at least two seconds. "Man my best friend, did you ever think of getting a job as a computer?"

"Is sarcasm?"

"Not at all, Man. I feel ashamed. The instruments at Richardson--telescopes and other things--are factors which I simply never included in my calculations. I'm stupid, I admit it. Yes, yes, yes, da, da, da! Watch ships by telescope, don't use radar unless they vary from present ballistics. Other possibilities--I don't know what to say, Man, save that it had never occurred to me that I could use telescopes. I see by radar, always have; I simply never consid--"

"Stow it!"

"I mean it, Man."

"Do I apologize when you think of something first?"

Mike said slowly, "There is something about that which I am finding resistant to analysis. It is my function to--"

"Quit fretting. If idea is good, use it. May lead to more ideas. Switching off and coming down, chop-chop."

Had not been in Mike's room long when Prof phoned:

"HQ? Have you heard from Field Marshal Davis?"

"I'm here, Prof. Master computer room."

"Will you join us in the Warden's office? There are decisions to reach, work to be done."

"Prof, I've been working! Am working."

"I'm sure you have. I've explained to the others that the programming of the ballistic computer is so very delicate in this operation that you must check it personally. Nevertheless some of our colleagues feel that the Minister of Defense should be present

during these discussions. So, when you reach a point where you feel you can turn it over to your assistant--Mike is his name, is it not?--will you please--"

"I scan it. Okay, will be up."

"Very well, Manuel."

Mike said, "I could hear thirteen people in the background. Doubletalk, Man."

"I got it. Better go up and see what huhu. You don't need me?"

"Man, I hope you will stay close to a phone."

"Will. Keep an ear on Warden's office. But will punch in if elsewhere. See you, cobber."

Found entire government in Warden's office, both real Cabinet and make-weights--and soon spotted trouble, bloke called Howard Wright. A ministry had been whomped up for him: "Liaison for Arts, Sciences, and Professions"--buttonsorting. Was sop to Novylen because Cabinet was topheavy with L-City comrades, and a sop to Wright because he had made himself leader of a Congress group long on talk, short on action. Prof's purpose was to short him out--but sometimes Prof was too subtle; some people talk better if they breathe vacuum.

Prof asked me to brief Cabinet on military situation. Which I did--my way. "I see Finn is here. Let's have him tell where we stand in warrens."

Wright spoke up. "General Nielsen has already done so, no need to repeat. We want to hear from you."

Blinked at that. "Prof-- Excuse me. Gospodin President. Do I understand that a Defense Ministry report has been made to Cabinet in my absence?"

Wright said, "Why not? You weren't on hand."

Prof grabbed it. He could see I was stretched too tight. Hadn't slept much for three days, hadn't been so tired since left Earthside. "Order," he said mildly. "Gospodin Minister for Professional Liaison, please address your comments through me. Gospodin Minister for Defense, let me correct that. There have been no reports to the Cabinet concerning your ministry for the reason that the Cabinet did not convene until you arrived. General Nielsen answered some informal questions informally. Perhaps this should not have been done. If you feel so, I will attempt to repair it."

"No harm done, I guess. Finn talked to you a half hour ago. Anything new since?"

"No, Mannie."

"Okay. Guess what you want to hear is off-Luna situation. You've been watching so you know first bombardment went off well. Still going on, some, as we're hitting their space defense HQ every twenty minutes. Will continue till thirteen hundred, then at twenty-one hundred we hit China and India, plus minor targets. Then busy till four hours past midnight with Africa and Europe, skip three hours, dose Brasil and company, wait three hours and start over. Unless something breaks. But meantime we have problems here. Finn, we should evacuate Tycho Under."

"Just a moment!" Wright had hand up. "I have questions." Spoke to Prof, not to me.

"One moment. Has the Defense Minister finished?"

Wyoh was seated toward back. We had swapped smiles, but was all--kept it so around Cabinet and Congress; had been rumbles that two from same family should not be in Cabinet. Now she shook head, warning of something. I said, "Is all conceniing bombardment. Questions about it?"

"Are your questions concerned with the bombardment, Gospodin Wright?"

"They certainly are, Gospodin President." Wright stood up, looked at me. "As you know, I represent the intellectual groups in the Free State and, if I may say so, their opinions are most important in public affairs. I think it is only proper that--"

"Moment," I said. "Thought you represented Eighth Novylen District?"

"Gospodin President! Am I to be permitted to put my questions? Or not?"

"He wasn't asking question, was making speech. And I'm tired and want to go to bed."

Prof said gently, "We are all tired, Manuel. But your point is well taken. Congressman, you represent only your district. As a member of the government you have been assigned certain duties in connection with certain professions."

"It comes to the same thing."

"Not quite. Please state your question."

"Uh. . . very well, I shall! Is Field Marshal Davis aware that his bombardment plan has gone wrong completely and that thousands of lives have been pointlessly destroyed? And is he aware of the extremely serious view taken of this by the intelligentsia of this Republic? And can he explain why this rash--I repeat, rash!--bombardment was undertaken without consultation? And is he now prepared to modify his plans, or is he going blindly ahead? And is it true as charged that our missiles were of the nuclear sort outlawed by all civilized nations? And how does he expect Luna Free State ever to be welcomed into the councils of civilized nations in view of such actions?"

I looked at watch--hour and a half since first load hit. "Prof," I said, "can you tell me what this is about?"

"Sorry, Manuel," he said gently. "I intended--I should have--prefaced the meeting with an item from the news. But you seemed to feel that you had been bypassed and--well, I did not. The Minister refers to a news dispatch that came in just before I called you. Reuters in Toronto. If the flash is correct--then instead of taking our warnings it seems that thousands of sightseers crowded to the targets. There probably have been casualties. How many we do not know."

"I see. What was I supposed to do? Take each one by hand and lead away? We warned them."

Wright cut in with, "The intelligentsia feel that basic humanitarian considerations make it obligatory--"

I said, "Listen, yammerhead, you heard President say this news just came in--so how do you know how anybody feels about it?"

He turned red. "Gospodin President! Epithets! Personalities!"

"Don't call the Minister names, Manuel."

"Won't if he won't. He's simply using fancier words. What's that nonsense about nuclear bombs? We haven't any and you all know it."

Prof looked puzzled. "I am confused by that, too. This dispatch so alleged. But the thing that puzzled me is that we could actually see, by video, what certainly seemed to be atomic explosions."

"Oh." I turned to Wright. "Did your brainy friends tell you what happens when you release a few billion calories in a split second all at one spot? What temperature? How much radiance?"

"Then you admit that you did use atomic weapons!"

"Oh, Bog!" Head was aching. "Said nothing of sort. Hit anything hard enough, strike sparks. Elementary physics, known to everybody but intelligentsia. We just struck damnedest big sparks ever made by human agency, is all. Big flash. Heat, light, ultraviolet. Might even produce X-rays, couldn't say. Gamma radiation I strongly doubt. Alpha and beta, impossible. Was sudden release of mechanical energy. But nuclear? Nonsense!"

Prof said, "Does that answer your questions, Mr. Minister?"

"It simply raises more questions. For example, this bombardment is far beyond anything the Cabinet authorized. You saw the shocked faces when those terrible lights appeared on the screen. Yet the Minister of Defense says that it is even now continuing, every twenty minutes. I think--"

Glanced at watch. "Another just hit Cheyenne Mountain."

Wright said, "You hear that? You hear? He boasts of it. Gospodin President, this carnage must stop!"

I said, "Yammer-- Minister, are you suggesting that their space defense HQ is not a military target? Which side are you on? Luna's? Or F.N.?"

"Manuel!"

"Tired of this nonsense! Was told to do job, did it. Get this yammerhead off my back!"

Was shocked silence, then somebody said quietly, "May I make a suggestion?"

Prof looked around. "If anyone has a suggestion that will quiet this unseemliness, I will be most happy to hear it."

"Apparently we don't have very good information as to what these bombs are doing. It seems to me that we ought to slow up that twenty-minute schedule. Stretch it out, say to one every hour--and skip the next two hours while we get more news. Then we might want to postpone the attack on great China at least twenty-four hours."

Were approving nods from almost everybody and murmurs: "Sensible idea!"--"Da. Let's not rush things." Prof said, "Manuel?"

I snapped, "Prof, you know answer! Don't shove it on me!"

"Perhaps I do, Manuel. . . but I'm tired and confused and can't remember it."

Wyoh said suddenly, "Mannie, explain it. I need it explained, too."

So pulled self together. "A simple matter of law of gravitation. Would have to use computer to give exact answer but next half dozen shots are fully committed. Most we can do is push them off target--and maybe hit some town we haven't warned. Can't dump them into an ocean, is too late; Cheyenne Mountain is fourteen hundred kilometers inland. As for stretching schedule to once an hour, that's silly. Aren't tube capsules you start and stop; these are falling rocks. Going to hit somewhere every twenty minutes. You can hit Cheyenne Mountain which hasn't anything alive left on it by now--or can hit somewhere else and kill people. Idea of delaying strike on Great China by twenty-four hours is just as silly. Can abort missiles for Great China for a while yet. But can't slow them up. If you abort, you waste them--and everybody who thinks we have steel casings to waste had better go up to catapult head and look."

Prof wiped brow. "I think all questions have been answered, at least to my satisfaction."

"Not to mine, sir!"

"Sit down, Gospodin Wright. You force me to remind you that your ministry is not part of the War Cabinet. If there are no more questions--I hope there are none--I will adjourn this meeting. We all need rest. So let us--"

"Prof!"

"Yes, Manuel?"

"You never let me finish reporting. Late tomorrow or early Sunday we catch it."

"How, Manuel?"

"Bombing. Invasion possible. Two cruisers headed this way."

That got attention. Presently Prof said tiredly, "The Government Cabinet is adjourned. The War Cabinet will remain."

"Just a second," I said. "Prof, when we took office, you got undated resignations from us."

"True. I hope not to have to use any of them, however."

"You're about to use one."

"Manuel, is that a threat?"

"Call it what you like." I pointed at Wright. "Either that yammerhead goes. . . or I go."

"Manuel, you need sleep."

Was blinking back tears. "Certainly do! And going to get some. Right now! Going to find a doss here at Complex and get some. About ten hours. After that, if am still Minister of Defense, you can wake me. Otherwise let me sleep."

By now everybody was looking shocked. Wyoh came up and stood by me. Didn't speak, just slipped hand into my arm.

Prof said firmly, "All please leave save the War Cabinet and Gospodin Wright." He waited while most filed out. Then said, "Manuel, I can't accept your resignation. Nor can I let you chivvy me into hasty action concerning Gospodin Wright, not when we are tired and overwrought. It would be better if you two were to exchange apologies, each realizing that the other has been overstrained."

"Uh--" I turned to Finn. "Has he been fighting?" I indicated Wright.

"Huh? Hell, no. At least he's not in my outfits. How about it, Wright? Did you fight when they invaded us?'

Wright said stiffly, "I had no opportunity. By the time I knew of it, it was over. But now both my bravery and my loyalty have been impugned. I shall insist--"

"Oh, shut up," I said. "If duel is what you want, can have it first moment I'm not busy. Prof, since he doesn't have strain of fighting as excuse for behavior, I won't apologize to a yammerhead for being a yammerhead. And you don't seem to understand issue. You let this yammerhead climb on my back--and didn't even try to stop him! So either fire him, or fire me."

Finn said suddenly, "I match that, Prof. Either fire this louse--or fire us both." He looked at Wright. "About that duel, choom--you're going to fight me first. You've got two arms--Mannie hasn't."

"Don't need two arms for him. But thanks, Finn."

Wyoh was crying--could feel it though couldn't hear it. Prof said to her most sadly, "Wyoming?"

"I'm s-s-sorry, Prof! Me, too."

Only "Clayton" Watenabe, Judge Brody, Wolfgang, Stu, and Sheenie were left, handful who counted--War Cabinet. Prof looked at them; I could see they were with me, though it cost Wolfgang an effort; he worked with Prof. not with me.

Prof looked back at me and said softly, "Manuel, it works both ways. What you are doing is forcing me to resign." He looked around. "Goodnight, comrades. Or rather, 'Good morning.' I'm going to get some badly needed rest." He walked briskly out without looking back.

Wright was gone; I didn't see him leave. Finn said, "What about these cruisers, Mannie?"

I took deep breath. "Nothing earlier than Saturday afternoon. But you ought to evacuate Tycho Under. Can't talk now. Groggy."

Agreed to meet him there at twenty-one hundred, then let Wyoh lead me away. Think she put me to bed but don't remember.

27

Prof was there when I met Finn in Warden's office shortly before twenty-one hundred Friday. Had had nine hours' sleep, bath, breakfast Wyoh had fetched from somewhere, and a talk with Mike--everything going to revised plan, ships had not changed ballistic, Great China strike about to happen.

Got to office in time to see strike by video--all okay and effectively over by twenty-one-oh-one and Prof got down to business. Nothing said about Wright, or about resigning. Never saw Wright again.

I mean I never saw him again. Nor ask about him. Prof didn't mention row, so I didn't.

We went over news and tactical situation. Wright had been correct in saying that "thousands of lives" had been lost; news up from Earthside was full of it. How many we'll never know; if a person stands at ground zero and tonnes of rock land on him, isn't much left. Those they could count were ones farther away, killed by blast. Call if fifty thousand in North America.

Never will understand people! We spent three days warning them--and you couldn't say they hadn't heard warnings; that was why they were there. To see show. To laugh at our nonsense. To get "souvenirs." Whole families went to targets, some with picnic baskets. Picnic baskets! Bojemoi!

And now those alive were yelling for our blood for this "senseless slaughter." Da. Hadn't been any indignation over their invasion and (nuclear!) bombing of us four days earlier-- but oh were they sore over our "premeditated murder." Great New York Times demanded that entire Lunar "rebel" government be fetched Earthside and publicly executed-- "This is clearly a case in which the humane rule against capital punishment must be waived in the greater interests of all mankind."

Tried not to think about it, just as had been forced not to think too much about Ludmilla. Little Milla hadn't carried a picnic lunch. She hadn't been a sightseer looking for thrills.

Tycho Under was pressing problem. If those ships bombed warrens--and news from Earthside was demanding exactly that--Tycho Under could not take it; roof was thin. H-bomb would decompress all levels; airlocks aren't built for H-bomb blasts.

(Still don't understand people. Terra was supposed to have an absolute ban against using H-bombs on people; that was what F.N. was all about. Yet were loud yells for F.N. to H-bomb us. They quit claiming that our bombs were nuclear, but all North America seemed frothingly anxious to have us nukebombed)

Don't understand Loonies for that matter. Finn had sent word through his militia that Tycho Under must be evacuated; Prof had repeated it over video. Nor was it problem; Tycho Under was small enough that Novylen and L-City could doss and dine them. We could divert enough capsules to move them all in twenty hours--dump them into Novylen and encourage half of them to go on to L-City. Big job but no problems. Oh, minor problems--start compressing city's air while evacuating people, so as to save it; decompress fully at end to minimize damage; move as much food as was time for; cofferdam accesses to lower farm tunnels; so forth--all things we knew how to do and with stilyagi and militia and municipal maintenance people had organization to do.

Had they started evacuating? Hear that hollow echo!

Were capsules lined up nose to tail at Tycho Under and no room to send more till some left. And weren't moving. "Mannie," said Finn, "don't think they are going to evacuate."

"Damn it," I said, "they've got to. When we spot a missile headed for Tycho Under will be too late. You'll have people trampling people and trying to crowd into capsules that won't hold them. Finn, your boys have got to make them."

Prof shook his head. "No, Manuel."

I said angrily, "Prof, you carry this 'no coercion' idea too far! You know they'll riot."

"Then they will riot. But we will continue with persuasion, not force. Let us now review plans.'

Plans weren't much but were best we could do. Warn everybody about expected bombings and/or invasion. Rotate guards from Finn's militia above each warren starting when and if cruisers passed around Luna into blind space, Farside--not get caught flat-footed again. Maximum pressure and p-suit precautions, all warrens. All military and semi-military to go on blue alert sixteen hundred Saturday, red alert if missiles launched or ships maneuvered. Brody's gunners encouraged to go into town and get drunk or whatever, returning by fifteen hundred Saturday--Prof's idea. Finn wanted to keep half of them on duty. Prof said No, they would be in better shape for a long vigil if they relaxed and enjoyed selves first--I agreed with Prof.

As for bombing Terra we made no changes in first rotation. Were getting anguished responses from India, no news from Great China. Yet India had little to moan about. Had not used a grid on her, too heavily populated. Aside from picked spots in Thar Desert and some peaks, targets were coastal waters off seaports.

But should have picked higher mountains or given less warning; seemed from news that some holy man followed by endless pilgrims chose to climb each target peak and hold off our retaliation by sheer spiritual strength.

So we were murderers again. Besides that, our water shots killed millions of fish and many fishermen, as fishermen and other seafarers had not heeded warnings. Indian

government seemed as furious over fish as over fishermen--but principle of sacredness of all life did not apply to us; they wanted our heads.

Africa and Europe responded more sensibly but differently. Life has never been sacred in Africa and those who went sightseeing on targets got little bleeding-heart treatment. Europe had a day to learn that we could hit where we promised and that our bombs were deadly. People killed, yes, especially bullheaded sea captains. But not killed in empty-headed swarms as in India and North America. Casualties were even lighter in Brasil and other parts of South America.

Then was North America's turn again--0950.28 Saturday 17 Oct '76.

Mike timed it for exactly 1000 our time which, allowing for one day's progress of Luna in orbit and for rotation of Terra, caused North America to face toward us at 0500 their East Coast time and 0200 their West Coast time.

But argument as to what to do with this targeting had started early Saturday morning. Prof had not called meeting of War Cabinet but they showed up anyhow, except "Clayton" Watenabe who had gone back to Kongville to take charge of defenses. Prof, self, Finn, Wyoh, Judge Brody, Wolfgang, Stu, Terence Sheehan--which made eight different opinions. Prof is right; more than three people can't decide anything.

Six opinions, should say, for Wyoh kept pretty mouth shut, and so did Prof; he moderated. But others were noisy enough for eighteen. Stu didn't care what we hit--provided New York Stock Exchange opened on Monday morning. "We sold short in nineteen different directions on Thursday. If this nation is not to be bankrupt before it's out of its cradle, my buy orders covering those shorts had better be executed. Tell them, Wolf; make them understand."

Brody wanted to use catapult to smack any more ships leaving parking orbit. Judge knew nothing about ballistics--simply understood that his drillmen were in exposed positions. I didn't argue as most remaining loads were already in stow orbits and rest would be soon--and didn't think we would have old catapult much longer.

Sheenie thought it would be smart to repeat that grid while placing one load exactly on main building of North American Directorate. "I know Americans, I was one before they shipped me. They're sorry as hell they ever turned things over to F.N. Knock off those bureaucrats and they'll come over to our side."

Wolfgang Korsakov, to Stu's disgust, thought that theft speculations might do better if all stock exchanges were closed till it was over.

Finn wanted to go for broke--warn them to get those ships out of our sky, then hit them for real if they didn't. "Sheenie is wrong about Americans; I know them, too. N.A. is toughest part of F.N.; they're the ones to lick. They're already calling us murderers, so now we've got to hit them, hard! Hit American cities and we can call off the rest."

I slid out, talked with Mike, made notes. Went back in; they were still arguing. Prof looked up as I sat down. "Field Marshal, you have not expressed your opinion."

I said, "Prof, can't we lay off that 'field marshal' nonsense? Children are in bed, can afford to be honest."

"As you wish, Manuel."

"Been waiting to see if any agreement would be reached."

Was none. "Don't see why I should have opinion," I went on. "Am just errand boy, here because I know how to program ballistic computer." Said this looking straight at Wolfgang--a number-one comrade but a dirty-word intellectual. I'm just a mechanic

whose grammar isn't much while Wolf graduated from a fancy school, Oxford, before they convicted him. He deferred to Prof but rarely to anybody else. Stu, da--but Stu had fancy credentials, too.

Wolf stirred uneasily and said, "Oh, come, Mannie, of course we want your opinions."

"Don't have any. Bombing plan was worked out carefully; everybody had chance to criticize. Haven't seen anything justify changing it."

Prof said, "Manuel, will you review the second bombardment of North America for the benefit of all of us?"

"Okay. Purpose of second smearing is to force them to use up interceptor rockets. Every shot is aimed at big cities--at null targets, I mean, close to big cities. Which we tell them, shortly before we hit them--how soon, Sheenie?"

"We're telling them now. But we can change it. And should."

"As may be. Propaganda isn't my pidgin. In most cases, to aim close enough to force them to intercept we have to use water targets--rough enough; besides killing fish and anybody who won't stay off water, it causes tremjous local storms and shore damage."

Glanced at watch, saw I would have to stall. "Seattle gets one in Puget Sound right in her lap. San Francisco is going to lose two bridges she's fond of. Los Angeles gets one between Long Beach and Catalina and another a few kilometers up coast. Mexico City is inland so we put one on Popocatepetl where they can see it. Salt Lake City gets one in her lake. Denver we ignore; they can see what's happening in Colorado Springs--for we smack Cheyenne Mountain again and keep it up, just as soon as we have it in line-of-sight. Saint Louis and Kansas City get shots in their rivers and so does New Orleans--probably flood New Orleans. All Great Lake cities get it, a long list--shall I read it?"

"Later perhaps," said Prof. "Go ahead."

"Boston gets one in her harbor, New York gets one in Long Island Sound and another midway between her two biggest bridges--think it will ruin those bridges but we promise to miss them and will. Going down their east coast, we give treatment to two Delaware Bay cities, then two on Chesapeake Bay, one being of max historical and sentimental importance. Farther south we catch three more big cities with sea shots, Going inland we smack Cincinnati, Birmingham, Chattanooga, Oklahoma City, all with river shots or nearby mountains. Oh, yes, Dallas--we destroy Dallas spaceport and should catch some ships, were six there last time I checked. Won't kill any people unless they insist on standing on target; Dallas is perfect place to bomb, that spaceport is big and flat and empty, yet maybe ten million people will see us hit it."

"If you hit it," said Sheenie.

"When, not 'if.' Each shot is backed up by one an hour later. If neither one gets through, we have shots farther back which can be diverted--for example easy to shift targets among Delaware-Bay-Chesapeake-Bay group. Same for Great Lakes group. But Dallas has its own string of backups and a long one--we expect it to be heavily defended. Backups run about six hours, as long as we can see North America--and last backups can be placed anywhere on continent. . . since farther out a load is when we divert it, farther we can shift it."

"I don't follow that," said Brody.

"A matter of vectors, Judge. A guidance rocket can give a load so many meters per second of side vector. Longer that vector has to work, farther from original point of aim load will land. If we signal a guidance rocket three hours before impact, we displace impact three times as much as if we waited till one hour before impact. Not quite that simple but our computer can figure it--if you give it time enough."

"How long is 'time enough'?" asked Wolfgang.

I carefully misunderstood. "Computer can solve that sort of problem almost instantaneously once you program it. But such decisions are pre-programmed. Something like this: If, out of target group A, B, C, and D, you find that you have failed to hit three targets on first and second salvoes, you reposition all group-one second backups so that you will be able to choose those three targets while distributing other second backups of that group for possible use on group two while repositioning third backups of supergroup Alpha such that--"

"Slow up!" said Wolfgang. "I'm not a computer. I just want to know how long before we have to make up our minds."

"Oh." I studied watch showily. "You now have . . . three minutes fifty-eight seconds in which to abort leading load for Kansas City. Abort program is set up and I have my best assistant--fellow named Mike--standing by. Shall I phone him?"

Sheenie said, "For heaven's sake, Man--abort!"

"Like hell!" said Finn. "What's matter, Terence? No guts?"

Prof said, "Comrades! Please!"

I said, "Look, I take orders from head of state--Prof over there. If he wants opinions, he'll ask. No use yelling at each other." I looked at watch. "Call it two and a half minutes. More margin, of course, for other targets; Kansas City is farthest from deep water. But some Great Lake cities are already past ocean abort; Lake Superior is best we can do. Salt Lake City maybe an extra minute. Then they pile up." I waited.

"Roll call," said Prof. "To carry-out the program. General Nielsen?"

"Da!"

"Gospazha Davis?"

Wyoh caught breath. "Da."

"Judge Brody?"

"Yes, of course. Necessary."

"Wolfgang?"

"Yes."

"Comte LaJoie?"

"Da."

"Gospodin Sheehan?"

"You're missing a bet. But I'll go along. Unanimous."

"One moment. Manuel?"

"Is up to you, Prof; always has been. Voting is silly."

"I am aware that it is up to me, Gospodin Minister. Carry out bombardment to plan."

Most targets we managed to hit by second salvo though all were defended except Mexico City. Seemed likely (98.3 percent by Mike's later calculation) that interceptors were exploding by radar fusing with set distances that incorrectly estimated vulnerability

of solid cylinders of rock. Only three rocks were destroyed; others were pushed off course and thereby did more harm than if not fired at.

New York was tough; Dallas turned out to be very tough. Perhaps difference lay in local control of interception, for it seemed unlikely that command post in Cheyenne Mountain was still effective. Perhaps we had not cracked their hole in the ground (don't know how deep down it was) but I'll bet that neither men nor computers were still tracking.

Dallas blew up or pushed aside first five rocks, so I told Mike to take everything he could from Cheyenne Mountain and award it to Dallas. . . which he was able to do two salvoes later; those two targets are less than a thousand kilometers apart.

Dallas's defenses cracked on next salvo; Mike gave their spaceport three more (already committed) then shifted back to Cheyenne Mountain--later ones had never been nudged and were still earmarked "Cheyenne Mountain." He was still giving that battered mountain cosmic love pats when America rolled down and under Terra's eastern edge.

I stayed with Mike all during bombardment, knowing it would be our toughest. As he shut down till time to dust Great China, Mike said thoughtfully, "Man, I don't think we had better hit that mountain again."

"Why not, Mike?"

"It's not there any longer."

"You might divert its backups. When do you have to decide?"

"I would put them on Albuquerque and Omaha but had best start now; tomorrow will be busy. Man my best friend, you should leave."

"Bored with me, pal?"

"In the next few hours that first ship may launch missiles. When that happens I want to shift all ballistic control to Little David's Sling--and when I do, you should be at Mare Undarum site."

"What's fretting you, Mike?"

"That boy is accurate, Man. But he's stupid. I want him supervised. Decisions may have to be made in a hurry and there isn't anyone there who can program him properly. You should be there."

"Okay if you say so, Mike. But if needs a fast program, will still have to phone you." Greatest shortcoming of computers isn't computer shortcoming at all but fact that a human takes a long time, maybe hours, to set up a program that a computer solves in milliseconds. One best quality of Mike was that he could program himself. Fast. Just explain problem, let him program. Samewise and equally, he could program "idiot son" enormously faster than human could.

"But, Man, I want you there because you may not be able to phone me; the lines may be cut. So I've prepared a group of possible programs for Junior; they may be helpful."

"Okay, print 'em out. And let me talk to Prof."

Mike got Prof; I made sure he was private, then explained what Mike thought I should do. Thought Prof would object--was hoping he would insist I stay through coming bombardment/invasion/whatever--those ships. Instead he said, "Manuel, it's essential that you go. I've hesitated to tell you. Did you discuss odds with Mike?"

"Nyet."

"I have continued to do so. To put it bluntly, if Luna City is destroyed and I am dead and the rest of the government is dead--even if all Mike's radar eyes here are blinded and he himself is cut off from the new catapult--all of which may happen under severe bombardment. . . even if all this happens at once, Mike still gives Luna even chances if Little David's Sling can operate--and you are there to operate it."

I said, "Da, Boss. Yassuh, Massuh. You and Mike are stinkers and want to hog fun. Will do."

"Very good, Manuel."

Stayed with Mike another hour while he printed out meter after meter of programs tailored to other computer--work that would have taken me six months even if able to think of all possibilities. Mike had it indexed and cross-referenced--with horribles in it I hardly dare mention. Mean to say, given circumstances and seemed necessary to destroy (say) Paris, this told how--what missiles in what orbits, how to tell Junior to find them and bring to target. Or anything.

Was reading this endless document--not programs but descriptions of purpose-of-program that headed each--when Wyoh phoned. "Mannie dear, has Prof told you about going to Mare Undarum?"

"Yes. Was going to call you."

"All right. I'll pack for us and meet you at Station East. When can you be there?"

"Pack for 'us'? You're going?"

"Didn't Prof say?"

"No." Suddenly felt cheerful.

"I felt guilty about it, dear. I wanted to go with you. . . but had no excuse. After all, I'm no use around a computer and I do have responsibilities here. Or did. But now I've been fired from all my jobs and so have you."

"Huh?"

"You are no longer Defense Minister; Finn is. Instead you are Deputy Prime Minister--"

"Well!"

"--and Deputy Minister of Defense, too. I'm already Deputy Speaker and Stu has been appointed Deputy Secretary of State for Foreign Affairs. So he goes with us, too."

"I'm confused."

"It's not as sudden as it sounds; Prof and Mike worked it out months ago. Decentralization, dear, the same thing that McIntyre has been working on for the warrens. If there is a disaster at L-City, Luna Free State still has a government. As Prof put it to me, 'Wyoh dear lady, as long as you three and a few Congressmen are left alive, all is not lost. You can still negotiate on equal terms and never admit your wounds.'"

So I wound up as a computer mechanic. Stu and Wyoh met me, with luggage (including rest of my arms), and we threaded through endless unpressured tunnels in p-suits, on a small flatbed rolligon used to haul steel to site. Greg had big rolligon meet us for surface stretch, then met us himself when we went underground again.

So I missed attack on ballistic radars Saturday night.

Captain of first ship, FNS Esperance, had guts. Late Saturday he changed course, headed straight in. Apparently figured we might attempt jingle-jangle with radars, for he seems to have decided to come in close enough to see our radar installations by ship's radar rather than rely on letting his missiles home in on our beams.

Seems to have considered himself, ship, and crew expendable, for he was down to a thousand kilometers before he launched, a spread that went straight for five out of six of Mike's radars, ignoring random jingle-jangle.

Mike, expecting self soon to be blinded, turned Brody's boys loose to burn ship's eyes, held them on it for three seconds before he shifted them to missiles.

Result: one crashed cruiser, two ballistic radars knocked out by H-missiles, three missiles "killed"--and two gun crews killed, one by H-explosion, other by dead missile that landed square on them--plus thirteen gunners with radiation burns above 800-roentgen death level, partly from flash, partly from being on surface too long. And must add: Four members of Lysistrata Corps died with those crews; they elected to p-suit and go up with their men. Other girls had serious radiation exposure but not up to 800-r level.

Second cruiser continued an elliptical orbit around and behind Luna.

Got most of this from Mike after we arrived Little David's Sling early Sunday. He was feeling groused over loss of two of his eyes and still more groused over gun crews--I think Mike was developing something like human conscience; he seemed to feel it was his fault that he had not been able to outfight six targets at once. I pointed out that what he had to fight with was improvised, limited range, not real weapons.

"How about self, Mike? Are you right?"

"In all essentials. I have outlying discontinuities. One live missile chopped my circuits to Novy Leningrad, but reports routed through Luna City inform me that local controls tripped in satisfactorily with no loss in city services. I feel frustrated by these discontinuities--but they can be dealt with later."

"Mike, you sound tired."

"Me tired? Ridiculous! Man, you forget what I am. I'm annoyed, that's all."

"When will that second ship be back in sight?"

"In about three hours if he were to hold earlier orbit. But he will not--probability in excess of ninety percent. I expect him in about an hour."

"A Garrison orbit, huh? Oho!"

"He left my sight at azimuth and course east thirty-two north. Does that suggest anything, Man?"

Tried to visualize. "Suggests they are going to land and try to capture you, Mike. Have you told Finn? I mean, have you told Prof to warn Finn?"

"Professor knows. But that is not the way I analyze it."

"So? Well, suggests I had better shut up and let you work."

Did so. Lenore fetched me breakfast while I inspected Junior--and am ashamed to say could not manage to grieve over losses with both Wyoh and Lenore present. Mum had sent Lenore out "to cook for Greg" after Milla's death-- just an excuse; were enough wives at site to provide homecooking for everybody. Was for Greg's morale and Lenore's, too; Lenore and Milla had been close.

Junior seemed to be right. He was working on South America, one load at a time. I stayed in radar room and watched, at extreme magnification, while he placed one in estuary between Montevideo and Buenos Aires; Mike could not have been more accurate.

I then checked his program for North America, found naught to criticize--locked it in and took key. Junior was on his own--unless Mike got clear of other troubles and decided to take back control.

Then sat and tried to listen to news both from Earthside and L-City. Co-ax cable from L-City carried phones, Mike's hookup to his idiot child, radio, and video; site was no longer isolated. But, besides cable from L-City, site had antennas pointed at Terra; any Earthside news Complex could pick up, we could listen to directly. Nor was this silly extra; radio and video from Terra had been only recreation during construction and this was now a standby in case that one cable was broken.

F.N. official satellite relay was claiming that Luna's ballistic radars had been destroyed and that we were now helpless. Wondered what people of Buenos Aires and Montevideo thought about that. Probably too busy to listen; m some ways water shots were worse than those where we could find open land.

Luna City Lunatic's video channel was carrying Sheenie telling Loonies outcome of attack by Esperance, repeating news while warning everybody that battle was not over, a warship would be back in our sky any moment--be ready for anything, everybody stay in p-suits (Sheenie was wearing his, with helmet open), take maximum pressure precautions, all units stay on red alert, all citizens not otherwise called by duty strongly urged to seek lowest level and stay there till all clear. And so forth.

He went through this several times--then suddenly broke it: "Flash! Enemy cruiser radar-sighted, low and fast. It may dido for Luna City. Flash! Missiles launched, headed for ejection end of--"

Picture and sound chopped off.

Might as well tell now what we at Little David's Sling learned later: Second cruiser, by coming in low and fast, tightest orbit Luna's field permits, was able to start its bombing at ejection end of old catapult, a hundred kilometers from catapult head and Brody's gunners, and knock many rings out in minute it took him to come into sight-and-range of drill guns, all clustered around radars at catapult head. Guess he felt safe. Wasn't. Brody's boys burned eyes out and ears off. He made one orbit after that and crashed near Torricelli, apparently in attempt to land, for his jets fired just before crash.

But our next news at new site was from Earthside: that brassy F.N. frequency claimed that our catapult had been destroyed (true) and that Lunar menace was ended (false) and called on all Loonies to take prisoner their false leaders and surrender themselves to mercy of Federated Nations (nonexistent--"mercy," that is).

Listened to it and checked programming again, and went inside dark radar room. If everything went as planned, we were about to lay another egg in Hudson River, then targets in succession for three hours across that continent--"in succession" because Junior could not handle simultaneous hits; Mike had planned accordingly.

Hudson River was hit on schedule. Wondered how many New Yorkers were listening to F.N. newscast while looking at spot that gave it lie.

Two hours later F.N. station was saying that Lunar rebels had had missiles in orbit when catapult was destroyed--but that after those few had impacted would be no more. When third bombing of North America was complete I shut down radar. Had not been running steadily; Junior was programmed to sneak looks only as necessary, a few seconds at a time.

I then had nine hours before next bombing of Great China.

But not nine hours for most urgent decision, whether to hit Great China again. Without information. Except from Terra's news channels. Which might be false. Bloody. Without knowing whether or not warrens had been bombed. Or Prof was dead or alive. Double bloody. Was I now acting prime minister? Needed Prof: "head of state" wasn't my glass of chai. Above all, needed Mike--to calculate facts, estimate uncertainties, project probabilities of this course or that.

My word, didn't even know whether ships were headed toward us and, worse yet, was afraid to look. If turned radar on and used Junior for sky search, any warship he brushed with beams would see him quicker than he saw them; warships were built to spot radar surveillance. So had heard. Hell, was no military man; was computer technician who had bumbled into wrong field.

Somebody buzzed door; I got up and unlocked. Was Wyoh, with coffee. Didn't say a word, just handed it to me and went away.

Sipped it. There it is, boy--they're leaving you alone, waiting for you to pull miracles out of pouch. Didn't feel up to it.

From somewhere, back in my youth, heard Prof say, "Manuel, when faced with a problem you do not understand, do any part of it you do understand, then look at it again." He had been teaching me something he himself did not understand very well--something in maths--but had taught me something far more important, a basic principle.

Knew at once what to do first.

Went over to Junior and had him print out predicted impacts of all loads in orbit--easy, was a pre-program he could run anytime against real time running. While he was doing it, I looked for certain alternate programs in that long roll Mike had prepared.

Then set up some of those alternate programs--no trouble, simply had to be careful to read them correctly and punch them in without error. Made Junior print back for check before I gave him signal to execute.

When finished--forty minutes--every load in trajectory intended for an inland target had been retargeted for a seacoast city--with hedge to my bet that execution was delayed for rocks farther back. But, unless I canceled, Junior would reposition them as soon as need be.

Now horrible pressure of time was off me, now could abort any load into ocean right up to last few minutes before impact. Now could think. So did.

Then called in my 'War Cabinet"--Wyoh, Stu, and Greg my "Commander of Armed Forces," using Greg's office. Lenore was allowed to go in and out, fetching coffee and food, or sitting and saying nothing. Lenore is a sensible fem and knows when to keep quiet.

Stu started it. "Mr. Prime Minister, I do not think that Great China should be hit this time."

"Never mind fancy titles, Stu. Maybe I'm acting, maybe not. But haven't time for formality."

"Very well. May I explain my proposal?"

"Later." I explained what I had done to give us more time; he nodded and kept quiet. "Our tightest squeeze is that we are out of communication, both Luna City and Earthside. Greg, how about that repair crew?"

"Not back yet."

"If break is near Luna City, they may be gone a long time. If can repair at all. So must assume we'll have to act on our own. Greg, do you have an electronics tech who can jury-rig a radio that will let us talk to Earthside? To their satellites, I mean-- that doesn't take much with right antenna. I may be able to help and that computer tech I sent you isn't too clumsy, either." (Quite good, in fact, for ordinary electronics--a poor bloke I had once falsely accused of allowing a fly to get into Mike's guts. I had placed him in this job.)

"Harry Biggs, my power plant boss, can do anything of that sort," Greg said thoughtfully, "if he has the gear."

"Get him on it. You can vandalize anything but radar and computer once we get all loads out of catapult. How many lined up?"

"Twenty-three, and no more steel."

"So twenty-three it is, win or lose. I want them ready for loading; might lob them off today."

"They're ready. We can load as fast as the cat can throw them."

"Good. One more thing-- Don't know whether there's an F.N. cruiser--maybe more than one--in our sky or not. And afraid to look. By radar, I mean; radar for skywatch could give away our position. But must have skywatch. Can you get volunteers for an eyeball skywatch and can you spare them?"

Lenore spoke up. "I volunteer!"

"Thanks, honey; you're accepted."

"We'll find them," said Greg. "Won't need fems."

"Let her do it, Greg; this is everybody's show." Explained what I wanted: Mare Undarum was now in dark semi-lunar; Sun had set. Invisible boundary between sunlight and Luna's shadow stretched over us, a precise locus. Ships passing through our sky would wink suddenly into view going west, blink out going east. Visible part of orbit would stretch from horizon to some point in sky. If eyeball team could spot both points, mark one by bearing, other by stars, and approximate time by counting seconds, Junior could start guessing orbit--two passes and Junior would know its period and something about shape of orbit. Then I would have some notion of when would be safe to use radar and radio, and catapult--did not want to loose a load with F.N. ship above horizon, could be radar-looking our way.

Perhaps too cautious--but had to assume that this catapult, this one radar, these two dozen missiles, were all that stood between Luna and total defeat--and our bluff hinged on them never knowing what we had or where it was. We had to appear endlessly able to pound Terra with missiles, from source they had not suspected and could never find.

Then as now, most Loonies knew nothing about astronomy--we're cave dwellers, we go up to surface only when necessary. But we were lucky; was amateur astronomer in Greg's crew, cobber who had worked at Richardson. I explained, put him in charge, let him worry about teaching eyeball crew how to tell stars apart. I got these things started before we went back to talk-talk. "Well, Stu? Why shouldn't we hit Great China?"

"I'm still expecting word from Dr. Chan. I received one message from him, phoned here shortly before we were cut off from cities--"

"My word, why didn't you tell me?"

"I tried to, but you had yourself locked in and I know better than to bother you when you are busy with ballistics. Here's the translation. Usual LuNoHo Company address with a reference which means it's for me and that it has come through my Paris agent. 'Our Darwin sales representative'--that's Chan--'informs us that your shipments of'--well, never mind the coding; he means the attack days while appearing to refer to last June--'were improperly packaged resulting in unacceptable damage. Unless this can be corrected, negotiations for long-term contract will be serously jeopardized."

Stu looked up. "All doubletalk. I take it to mean that Dr. Chan feels that he has his government ready to talk terms . . . but that we should let up on bombing Great China or we may upset his apple cart."

"Hmm--" Got up and walked around. Ask Wyoh's opinion? Nobody knew Wyoh's virtues better than I. . . but she oscillated between fierceness and too-human compassion--and I had learned already that a "head of state," even an acting one, must have neither. Ask Greg? Greg was a good farmer, a better mechanic, a rousing preacher; I loved him dearly--but did not want his opinion. Stu? I had had his opinion.

Or did I? "Stu, what's your opinion? Not Chan's opinion--but your own."

Stu looked thoughtful. "That's difficult, Mannie. I am not Chinese, I have not spent much time in Great China, and can't claim to be expert in their politics nor their psychology. So I'm forced to depend on his opinion."

"Uh-- Damn it, he's not a Loonie! His purposes are not our purposes. What does he expect to get out of it?"

"I think he is maneuvering for a monopoly over Lunar trade. Perhaps bases here, too. Possibly an extraterritorial enclave. Not that we would grant that."

"Might if we were hurtin'."

"He didn't say any of this. He doesn't say much, you know. He listens."

"Too well I know." Worried at it, more bothered each minute.

News from Earthside had been droning in background; I had asked Wyoh to monitor while I was busy with Greg. "Wyoh, hon, anything new from Earthside?"

"No. The same claims. We've been utterly defeated and our surrender is expected momentarily. Oh, there's a warning that some missiles are still in space, falling out of control, but with it a reassurance that the paths are being analyzed and people will be warned in time to avoid impact areas."

"Anything to suggest that Prof--or anybody in Luna City, or anywhere in Luna--is in touch with Earthside?"

"Nothing at all."

"Damn. Anything from Great China?"

"No. Comments from almost everywhere else. But not from Great China."

"Uh--" Stepped to door. "Greg! Hey, cobber, see if you can find Greg Davis. I need him."

Closed door. "Stu, we're not going to let Great China off."

"So?"

"No. Would be nice if Great China busted alliance against us; might save us some damage. But we've got this far only by appearing able to hit them at will and to destroy any ship they send against us. At least I hope that last one was burned and we've certainly clobbered eight out of nine. We won't get anywhere by looking weak, not while F.N. is claiming that we are not just weak but finished. Instead we must hand them surprises.

Starting with Great China and if it makes Dr. Chan unhappy, we'll give him a kerchief to weep into. If we can go on looking strong--when F.N. says we're licked--then eventually some veto power is going to crack. If not Great China, then some other one."

Stu bowed without getting up. "Very well, sir."

"I--"

Greg came in. "You want me, Mannie?"

"What makes with Earthside sender?"

"Harry says you have it by tomorrow. A crummy rig, he says, but push watts through it and will be heard."

"Power we got. And if he says 'tomorrow' then he knows what he wants to build. So will be today--say six hours. I'll work under him. Wyoh hon, will you get my arms? Want number-six and number-three--better bring number-five, too. And you stick with me and change arms for me. Stu, want you to write some nasty messages--I'll give you general idea and you put acid in them. Greg, we are not going to get all those rocks into space at once. Ones we have in space now will impact in next eighteen, nineteen hours. Then, when F.N. is announcing that all rocks are accounted for and Lunar menace is over. . . we crash into their newscast and warn of next bombings. Shortest possible orbits, Greg, ten hours or less--so check everything on catapult and H-plant and controls; with that extra boost all has to be dead on."

Wyoh was back with arms; I told her "number six" and added, "Greg, let me talk with Harry."

Six hours later sender was ready to beam toward Terra. Was ugly job, vandalized mainly out of a resonance prospector used in project's early stages. But could ride an audio signal on its radio frequency and was powerful. Stu's nastified versions of my warnings had been taped and Harry was ready to zipsqueal them--all Terran satellites could accept high speed at sixty-to-one and had no wish to have our sender heated more seconds than necessary; eyeball watch had confirmed fears: At least two ships were in orbit around Luna.

So we told Great China that her major coastal cities would each receive a Lunar present offset ten kilometers into ocean--Pusan, Tsingtao, Taipei, Shanghai, Saigon, Bangkok, Singapore, Djakarta, Darwin, and so forth--except that Old Hong Kong would get one smack on top of F.N.'s Far East offices, so kindly have all human beings move far back. Stu noted that human beings did not mean F.N. personnel; they were urged to stay at desks.

India was given similar warnings about coastal cities and was told that F.N. global offices would be spared one more rotation out of respect for cultural monuments in Agra--and to permit human beings to evacuate. (I intended to extend this by another rotation as deadline approached--out of respect for Prof. And then another, indefinitely. Damn it, they would build their home offices next door to most overdecorated tomb ever built. But one that Prof treasured.)

Rest of world was told to keep their seats; game was going extra innings. But stay away from any F.N. offices anywhere; we were frothing at mouth and no F.N. office was safe. Better yet, get out of any city containing an F.N. headquarters--but F.N. vips and finks were urged to sit tight.

Then spent next twenty hours coaching Junior into sneaking his radar peeks when our sky was clear of ships, or believed to be. Napped when I could and Lenore stayed with me and woke me in time for next coaching. And that ended Mike's rocks and we all went into alert while we got first of Junior's rocks flung high and fast. Waited until certain it had gone hot and true-- then told Terra where to look for it and where and when to expect it, so that all would know that F.N.'s claims of victory were on a par with their century of lies about Luna--all in Stu's best, snotty, supercilious phrases delivered in his cultured accents.

First one should have been for Great China but was one piece of North American Directorate we could reach with it--her proudest jewel, Hawaii. Junior placed it in triangle formed by Maui, Molokai, and Lanai. I didn't work out programming; Mike had anticipated everything.

Then pronto we got off ten more rocks at short intervals (had to skip one program, a ship in our sky) and told Great China where to look and when to expect them and where--coastal cities we had neglected day before.

Was down to twelve rocks but decided was safer to run out of ammunition than to look as if we were running out. So I awarded seven to Indian coastal cities, picking new targets--and Stu inquired sweetly if Agra had been evacuated. If not, please tell us at once. (But heaved no rock at it.)

Egypt was told to clear shipping out of Suez Canal--bluff; was hoarding last five rocks.

Then waited.

Impact at Lahaina Roads, that target in Hawaii. Looked good at high mag; Mike could be proud of Junior.

And waited.

Thirty-seven minutes before first China Coast impact Great China denounced actions of F.N., recognized us, offered to negotiate--and I sprained a finger punching abort buttons.

Then was punching buttons with sore finger; India stumbled over feet following suit.

Egypt recognized us. Other nations started scrambling for door.

Stu informed Terra that we had suspended--only suspended, not stopped--bombardments. Now get those ships out of our sky at once--NOW!--and we could talk. If they could not get home without refilling tanks, let them land not less than fifty kilometers from any mapped warren, then wait for their surrender to be accepted. But clear our sky now!

This ultimatum we delayed a few minutes to let a ship pass beyond horizon; we weren't taking chances--one missile and Luna would have been helpless.

And waited.

Cable crew returned. Had gone almost to Luna City, found break. But thousands of tonnes of loose rock impeded repair, so they had done what they could--gone back to a spot where they could get through to surface, erected a temporary relay in direction they thought Luna City lay, sent up a dozen rockets at ten-minute intervals, and hoped that somebody would see, understand, aim a relay at it-- Any communication?

No.

Waited.

Eyeball squad reported that a ship which had been clockfaithful for nineteen passes had failed to show. Ten minutes later they reported that another ship had missed expected appearance.

We waited and listened.

Great China, speaking on behalf of all veto powers, accepted armistice and stated that our sky was now clear. Lenore burst into tears and kissed everybody she could reach.

After we steadied down (a man can't think when women are grabbing him, especially when five of them are not his wives)--a few minutes later, when we were coherent, I said, "Stu, want you to leave for Luna City at once. Pick your party. No women--you'll have to walk surface last kilometers. Find out what's going on--but first get them to aim a relay at ours and phone me."

"Very good, sir."

We were getting him outfitted for a tough journey--extra air bottles, emergency shelter, so forth--when Earthside called me on frequency we were listening to because message was (learned later) on all frequencies up from Earthside:

"Private message, Prof to Mannie--identification, birthday Bastille and Sherlock's sibling. Come home at once. Your carriage waits at your new relay. Private message, Prof to--"

And went on repeating.

"Harry!"

"Da, Boss?"

"Message Earthside--tape and squeal; we still don't want them ranging us. 'Private message, Mannie to Prof. Brass Cannon. On my way!' Ask them to acknowledge--but use only one squeal."

29

Stu and Greg drove on way back, while Wyoh and Lenore and I huddled on open flatbed, strapped to keep from falling off; was too small. Had time to think; neither girl had suit radio and we could talk only by helmet touch--awkward.

Began to see--now that we had won--parts of Prof's plan that had never been clear to me. Inviting attack against catapult had spared warrens--hoped it had; that was plan--but Prof had always been cheerfully indifferent to damage to catapult. Sure, had a second one--but far away and difficult to reach. Would take years to put a tube system to new catapult, high mountains all way. Probably cheaper to repair old one. If possible.

Either way, no grain shipped to Terra in meantime.

And that was just what Prof wanted! Yet never once had he hinted that his plan was based on destroying old catapult--his long-range plan, not just Revolution. He might not admit it now. But Mike would tell me--if put to him flatly: Was or was not this one factor in odds? Food riot predictions and all that, Mike? He would tell me.

That tonne-for-tonne deal-- Prof had expounded it Earthside, had been argument for a Terran catapult. But privately he had no enthusiasm for it. Once he had told me, in North America, "Yes, Manuel, I feel sure it would work. But, if built, it will be temporary. There was a time, two centuries ago, when dirty laundry used to be shipped from California to Hawaii--by sailing ship, mind you--and clean laundry returned.

Special circumstances. If we ever see water and manure shipped to Luna and grain shipped back, it will be just as temporary. Luna's future lies in her unique position at the top of a gravity well over a rich planet, and in her cheap power and plentiful real estate. If we Loonies have sense enough in the centuries ahead to remain a free port and to stay out of entangling alliances, we will become the crossroads for two planets, three planets, the entire Solar System. We won't be farmers forever."

They met us at Station East and hardly gave time to get p-suits off--was return from Earthside over again, screaming mobs and being ridden on shoulders. Even girls, for Slim Lemke said to Lenore, "May we carry you, too?"--and Wyoh answered, "Sure, why not?"--and stilyagi fought for chance to.

Most men were pressure-suited and I was surprised to see how many carried guns--until I saw that they were not our guns; they were captured. But most of all what blessed relief to see L-City unhurt!

Could have done without triumphal procession; was itching to get to phone and find out from Mike what had happened--how much damage, how many killed, what this victory cost. But no chance. We were carried to Old Dome willy-nilly.

They shoved us up on a platform with Prof and rest of Cabinet apd vips and such, and our girls slobbered on Prof and he embraced me Latin style, kiss cheek, and somebody stuck a Liberty Cap on me. Spotted little Hazel in crowd and threw her a kiss.

At last they quieted enough for Prof to speak.

"My friends," he said, and waited for silence. "My friends," he repeated softly. "Beloved comrades. We meet at last in freedom and now have with us the heroes who fought the last battle for Luna, alone." They cheered us, again he waited. Could see he was tired; hands trembled as he steadied self against pulpit. "I want them to speak to you, we want to hear about it, all of us.

"But first I have a happy message. Great China has just announced that she is building in the Himalayas an enormous catapult, to make shipping to Luna as easy and cheap as it has been to ship from Luna to Terra."

He stopped for cheers, then went on, "But that lies in the future. Today-- Oh, happy day! At last the world acknowledges Luna's sovereignty. Free! You have won your freedom--"

Prof stopped--looked surprised. Not afraid, but puzzled. Swayed slightly.

Then he did die.

30

We got him into a shop behind platform. But even with help of a dozen doctors was no use; old heart was gone, strained too many times. They carried him out back way and I started to follow.

Stu touched my arm. "Mr. Prime Minister--"

I said, "Huh? Oh, for Bog's sake!"

"Mr. Prime Minister," he repeated firmly, "you must speak to the crowd, send them home. Then there are things that must be done." He spoke calmly but tears poured down cheeks.

So I got back on platform and confirmed what they had guessed and told them to go home. And wound up in room L of Raffles, where all had started--emergency Cabinet meeting. But first ducked to phone, lowered hood, punched MYCROFTXXX.

Got null-number signal. Tried again--same. Pushed up hood and said to man nearest me, Wolfgang, "Aren't phones working?"

"Depends," he said. "That bombing yesterday shook things up. If you want an out-of-town number, better call the phone office."

Could see self asking office to get me a null. "What bombing?"

"Haven't you heard? It was concentrated on the Complex. But Brody's boys got the ship. No real damage. Nothing that can't be fixed."

Had to drop it; they were waiting. I didn't know what to do but Stu and Korsakov did. Sheenie was told to write news releases for Terra and rest of Luna; I found self announcing a lunar of mourning, twenty-four hours of quiet, no unnecessary business, giving orders for body to lie in state--all words put into mouth, I was numb, brain would not work. Okay, convene Congress at end of twenty-four hours. In Novylen? Okay.

Sheenie had dispatches from Earthside. Wolfgang wrote for me something which said that, because of death of our President, answers would be delayed at least twenty-four hours.

At last was able to get away, with Wyoh. A stilyagi guard kept people away from us to easement lock thirteen. Once home I ducked into workshop on pretense of needing to change arms. "Mike?"

No answer--

So tried punching his combo into house phone--null signal. Resolved to go out to Complex next day--with Prof gone, needed Mike worse than ever.

But next day was not able to go; trans-Crisium tube was out--that last bombing. You could go around through Torricelli and Novylen and eventually reach Hong Kong. But Complex, almost next door, could be reached only by rolligon. Couldn't take time; I was "government."

Managed to shuck that off two days later. By resolution was decided that Speaker (Finn) had succeeded to Presidency after Finn and I had decided that Wolfgang was best choice for Prime Minister. We put it through and I went back to being Congressman who didn't attend sessions.

By then most phones were working and Complex could be called. Punched MYCROFFXXX. No answer-- So went out by rolligon. Had to go down and walk tube last kilometer but Complex Under didn't seem hurt.

Nor did Mike appear to be.

But when I spoke to him, he didn't answer.

He has never answered. Has been many years now.

You can type questions into him--in Loglan--and you'll get Loglan answers out. He works just fine . . . as a computer. But won't talk. Or can't.

Wyoh tried to coax him. Then she stopped. Eventually I stopped.

Don't know how it happened. Many outlying pieces of him got chopped off in last bombing--was meant, I'm sure, to kill our ballistic computer. Did he fall below that "critical number" it takes to sustain self-awareness? (If is such; was never more than hypothesis.) Or did decentralizing that was done before that last bombing "kill" him?

I don't know. If was just matter of critical number, well, he's long been repaired; he must be back up to it. Why doesn't he wake up?

Can a machine be so frightened and hurt that it will go into catatonia and refuse to respond? While ego crouches inside, aware but never willing to risk it? No, can't be that; Mike was unafraid--as gaily unafraid as Prof.

Years, changes--Mimi long ago opted out of family management; Anna is "Mum" now and Mimi dreams by video. Slim got Hazel to change name to Stone, two kids and she studied engineering. All those new free-fall drugs and nowadays earthworms stay three or four years and go home unchanged. And those other drugs that do almost as much for us; some kids go Earthside to school now; And Tibet catapult--took seventeen years instead of ten; Kilimanjaro job was finished sooner.

One mild surprise--When time came, Lenore named Stu for opting, rather than Wyoh. Made no difference, we all voted "Da!" One thing not a surprise because Wyoh and I pushed it through during time we still amounted to something in government: a brass cannon on a pedestal in middle of Old Dome and over it a flag fluttering in blower breeze--black field speckled with stars, bar sinister in blood, a proud and jaunty brass cannon embroidered over all, and below it our motto: TANSTAAFL! That's where we hold our Fourth-of-July celebrations.

You get only what you pay for--Prof knew and paid, gaily.

But Prof underrated yammerheads. They never adopted any of his ideas. Seems to be a deep instinct in human beings for making everything compulsory that isn't forbidden. Prof got fascinated by possibilities for shaping future that lay in a big, smart computer--and lost track of things closer home. Oh, I backed him! But now I wonder. Are food riots too high a price to pay to let people be? I don't know.

Don't know any answers.

Wish I could ask Mike.

I wake up in night and think I've heard him--just a whisper: "Man. . . Man my best friend. . ." But when I say, "Mike?" he doesn't answer. Is he wandering around somewhere, looking for hardward to hook onto? Or is he buried down in Complex Under, trying to find way out? Those special memories are all in there somewhere, waiting to be stirred. But I can't retrieve them; they were voice-coded.

Oh, he's dead as Prof, I know it. (But how dead is Prof?) If I punched it just once more and said, "Hi, Mike!" would he answer, "Hi, Man! Heard any good ones lately?" Been a long time since I've risked it. But he can't really be dead; nothing was hurt--he's just lost.

You listening, Bog? Is a computer one of Your creatures?

Too many changes-- May go to that talk-talk tonight and toss in some random numbers.

Or not. Since Boom started quite a few young cobbers have gone out to Asteroids. Hear about some nice places out there, not too crowded.

My word, I'm not even a hundred yet.

For Walter and Marion Minton

THE NUMBER OF THE BEAST

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Contents

PART ONE
The Mandarin's Butterfly
I "-it is better to marry than to burn." -Saul of Tarsus page 13
H "This Universe never did make sense-" 19
in "-Professor Moriarty isn't fooled-" 24
Iv Because two things equal to the same thing are never equal to each other. 39
V "-a wedding ring is not a ring in my nose-" 45
vi Are men and women one race? 49
vu ~Avete, Alieni, nos morituri vos spernimus!" 63
VIII "Let us all preserve our illusions-" 71
ix Most males have an unhealthy tendency to obey laws. 76

x "-and he had two horns like a lamb, and he spake as a dragon'!" 91
xi "-citizens must protect themselves." 100
XIII Being too close to a fireball can worry a man- 120
xiv "Quit worrying and enjoy the ride." 129
xv "We'll hit so hard we'll hardly notice it." 137
XVI -a maiden knight, eager to break a lance- 141
xvii The world wobbled- 147
xvIiI "-the whole world is alive." 160

PART TWO
The Butterfly's Mandarin
XIX Something is gained in translation- 172
Xx -right theory, wrong universe.181

xxi -three seconds is a long time- 190
XXII "From each according to his ability, to each according to his needs." 203
xxiii "The farce is over." 216
xxiv Captains aren't supposed to cry. 227
xxv "-leave bad enough alone!" 240
XXVI The Keys to the City 252
XXVII "Are you open to a bribe?" 265
XXVIII "He's too fat." 283
XXIX "-we place no faith in princes." 290

Xxx "Different physical laws, a different topology." 312

XXXI "-the first ghosts ever to search for

an obstetrician." 324
xxxn "Where Cat is, is civilization." 333
xxxiii "-'solipsism' is a buzz word." 340
XXXIV "-all my dreams do come true!" 353
xxxv "It's a disturbing idea-" 358
XXXVI "Pipe down and do your job." 363
xxxvii The First Law of Biology 370
xxxviii "-under his vine and under his fig tree; and none shall make them afraid-" 377

PART THREE

Death and Resurrection

XXXIX Random Numbers 389
XL "Is there a mathematician in the house?" 399
XLI "A cat can be caught in almost any trap once-" 411
XLII "You're a figment of imagination." 420
XLIII To Pull a Hat Out of a Rabbit- 428
XLIV "-where do we get the corpse?" 443
XLV A Stitch in Time 455
XLVI "I'm gifted with second sight." 461
XLVII "There are no tomorrows." 468

L 'En voi

XLVIII Rev. XXII: 13 487

I

"-it is better to marry than to burn."
-Saul of Tarsus

"He's a Mad Scientist and I'm his Beautiful Daughter."

That's what she said: the oldest cliché in pulp fiction. She wasn't old enough to remember the pulps.

The thing to do with a silly remark is to fail to hear it. I went on waltzing while taking another look down her evening formal. Nice view. Not foam rubber.

She waltzed well. Today most girls who even attempt ballroom dancing drape themselves around your neck and expect you to shove them around the floor. She kept her weight on her own feet, danced close without snuggling, and knew what I was going to do a split second before I led it. A perfect partner-as long as she didn't talk.

"Well?" she persisted.

My paternal grandfather-an unsavory old reactionary; the FemLibbers would have lynched him-used to say, ~'Zebadiah, the mistake we made was not in putting shoes on them or in teaching them to read-we should never have taught them to talkY'

I signaled a twirl by pressure; she floated into it and back into my arms right on the beat. I inspected her hands and the outer corners of her eyes. Yes, she really was young-minimum eighteen Hilda Corners never permitted legal 'infants' at her parties), maximum twenty-five, first approximation twenty-two. Yet she danced like her grandmother's generation.

'V~ eli?" she repeated more firmly.

This time I openly stared. "Is that cantilevering natural? Or is there an invisible bra, you being in fact the sole support of two dependents?"

She glanced down, looked up and grinned. "They do stick out, don't they? Your comment is rude, crude, unrefined, and designed to change the subject."

"What subject? I made a polite inquiry; you parried it with amphigory."

"Amphigory' my tired feet! I answered precisely."

'Amphigory," I repeated. "The operative symbols were 'mad,' 'scientist,' 'beautiful,' and 'daughter.' The first has several meanings-the others denote opinions. Semantic content: zero."

She looked thoughtful rather than angry. "Pop isn't rabid. . . although I did use 'mad' in ambivalent mode. 'Scientist' and 'beautiful' each contain descriptive opinions, I stipulate. But are you in doubt as to my sex? If so, are you qualified to check my twenty-third chromosome pair? With transsexual surgery so common I assume that anything less would not satisfy you."

"I prefer a field test."

"On the dance floor?"

"No, the bushes back of the pool. Yes, I'm qualified-laboratory or field. But it was not your sex that lay in the area of opinion; that is a fact that can be established.. . although the gross evidence is convincing. I-"

"Ninety-five centimeters isn't gross! Not for my height. One hundred seventy bare-footed, one eighty in these heels. It's just that I'm wasp-waisted for my mass-forty-eight centimeters versus fifty-nine kilos."

"And your teeth are your own and you don't have dandruff. Take it easy, Deedee; I didn't mean to shake your aplomb"-or those twin glands that are not gross but delicious. I have an infantile bias and have known it since I was six-six months, that is. "But the symbol 'daughter' encompasses two statements, one factual-sex-and the other a matter of opinion even when stated by a forensic genetohematologist."

"Gosh, what big words you know, Mister. I mean 'Doctor."

"Mister' is correct. On this campus it is swank to assume that everyone holds a doctorate. Even I have one, Ph.D. Do you know what that stands for?"

"Doesn't everybody? I have a Ph.D., too. 'Piled Higher and Deeper."

I raised that maximum to twenty-six and assigned it as second approximation. "Phys. ed.?"

"Mister Doctor, you are trying to get my goat. Won't work. I had an undergraduate double major, one being phys. ed. with teacher's credentials in case I needed a job. But my real major was math-which I continued in graduate school."

"And here I had been assuming that 'Deedee' meant 'Doctor of Divinity."

"Go wash out your mouth with soap. My nickname is my initials-Dee Tee. Or Deety. Doctor D. T. Burroughs if being formal, as I can't be 'Mister' and refuse to be 'Miz' or 'Miss.' See here, Mister; I'm supposed to be luring you with my radiant beauty, then hooking you with my feminine charm. . . and not getting anywhere. Let's try another tack. Tell me what you piled higher and deeper."

"Let me think. Flycasting? Or was it basketweaving? It was one of those transdisciplinary things in which the committee simply weighs the dissert&
tion. Tell you what. I've got a copy around my digs. I'll find it and see what title the researcher who wrote it put on it."

"Don't bother. The title is 'Some Implications of a Six-Dimensional NonNewtonian Continuum.' Pop wants to discuss it."

I stopped waltzing. "Huh? He'd better discuss that paper with the bloke who wrote it."

"Nonsense; I saw you blink-I've hooked you. Pop wants to discuss it, then offer you a job."

"'Job'! I just slipped off the hook."

"Oh, dear! Pop will be really mad. Please? Please, sir!"

"You said that you had used 'mad' in ambivalent mode. How?"

"Oh. Mad-angry because his colleagues won't listen to him. Mad-psychotic in the opinions of some colleagues. They say his papers don't make sense."

"Do they make sense?"

"I'm not that good a mathematician, sir. My work is usually simplifying software. Child's play compared with n-dimensional spaces."

I wasn't required to express an opinion; the trio started Blue Tango, Deety melted into my arms. You don't talk if you know tango.

Deety knew. After an eternity of sensual bliss, I swung her out into position precisely on coda; she answered my bow and scrape with a deep curtsy. "Thank you, sir."

"Whew! After a tango like that the couple ought to get married."

"All right. I'll find our hostess and tell Pop. Five minutes? Front door, or side?"

She looked serenely happy. I said, "Deety, do you mean what you appear to mean? That you intend to marry me? A total stranger?"

Her face remained calm but the light went out-and her nipples went down. She answered steadily. "After that tango we are no longer strangers. I construed your statement as a proposal-no, a willingness-to marry me. Was I mistaken?"

My mind went into emergency, reviewing the past years the way a dr9wning man's life is supposed to flash before his eyes (how could anyone know that?): a rainy afternoon when my chum's older sister had initiated me into the mysteries; the curious effect caused by the first time strangers had shot back at me; a twelve-month cohabitation contract that had started with a bang and had ended without a whimper; countless events which had left me determined never to marry.

I answered instantly, "I meant what I implied-marriage, in its older meaning. I'm willing. But why are you willing? I'm no prize."

She took a deep breath, straining the fabric, and-thank Allah!-her nipples came up. "Sir, you are the prize I was sent to fetch, and, when you said that we really ought to get married-hyperbole and I knew it-I suddenly realized, with a deep burst of happiness, that this was the means of fetching you that I wanted above all!"

She went on, "But I will not trap you through misconstruing a gallantry. If you wish, you may take me into those bushes back of the pool. . . and not marry me." She went on firmly, 'But for that . . . whoring. . . my fee is for you to talk with my father and to let him show you something."

"Deety, you're an idiot! You would ruin that pretty gown."

"Mussing a dress is irrelevant but I can take it off. I will. There's nothing under it."

"There's a great deal under it!"

That fetched a grin, instantly wiped away. "Thank you. Shall we head for the bushes?"

"Wait a halfl I'm about to be noble and regret it the rest of my life. You've made a mistake. Your father doesn't want to talk to me; I don't know anything about n-dimensional geometry." (Why do I get these attacks of honesty? I've never done anything to deserve them.)

"Pop thinks you do; that is sufficient. Shall we go? I want to get Pop out of here before he busts somebody in the mouth."

"Don't rush me; I didn't ask you to rassle on the grass; I said I wanted to marry you-but wanted to know why you were willing to marry me. Your answer concerned what your father wants. I'm not trying to marry your father; he's not my type. Speak for yourself, Deety. Or drop it." (Am I a masochist? There's a sunbathing couch back of those bushes.)

Solemnly she looked me over, from my formal tights to my crooked bow tie and on up to my thinning brush cut-a hundred and ninety-four centimeters of big ugly galoot. "I like your firm lead in dancing. I like the way you look. I like the way your voice rumbles. I like your hair-splitting games with words- you sound like Whorf debating Korzybski with Shannon as referee." She took another deep breath, finished almost sadly: "Most of all, I like the way you smell."

It would have taken a sharp nose to whiff me. I had been squeaky clean ninety minutes earlier, and it takes more than one waltz and a tango to make me sweat. But her remark had that skid in it that Deety put into almost anything. Most girls, when they want to ruin a man's judgment, squeeze his biceps and say, "Goodness, you're strong!"

I grinned down at her. "You smell good too. Your perfume could rouse a corpse."

"I'm not wearing perfume."

"Oh. Correction: your natural pheromone. Enchanting. Get your wrap, Side door. Five minutes."

"Yes, sir."

"Tell your father we're getting married. He gets that talk, free. I decided that before you started to argue. It won't take him long to decide that I'm not Lobachevski."

"That's Pop's problem," she answered, moving. "Will you let him show you this thing he's built in our basement?"

'Sure, why not? What is it?"

"A time machine."

II

"This Universe never did make sense-"

Zeb:

Tomorrow I will seven eagles see, a great comet will appear, and voices will speak from whirlwinds foretelling monstrous and fearful things- This Universe never did make sense; I suspect that it was built on government contract.

'Big basement?"

Medium. Nine by twelve. But cluttered. Work benches and power tools."

A hundred and eight square meters- Ceiling height probably two and a half- Had Pop made the mistake of the man who built a boat in his basement?

Mv musing was interrupted by a male voice in a high scream: 'You Overeducated, obstipated, pedantic ignoramus! Your mathematical inluition froze solid the day you matriculated"

I didn't recognize the screamer but did know the stuffed shirt he addressed: Professor Neil O'Heret Brain, head of the department of mathematics-and God help the student who addressed a note to "Professor N.O. Brain" or even "N. O'H. Brain." "Brainy" had spent his life in search of The Truth-intendinng to place it under house arrest.

He was puffed up like a pouter pigeon with is professional pontifical pomposity reeling. His expression suggested that he was giving birth to a porcupine.

Deety gasped, "It's started," and dashed toward the row. Me, I stay out of rows; I'm a coward by trade and wear fake zero-prescription glasses as a buffer-when some oaf snarls, "Take off your glasses!" that gives me time to retreat.

I headed straight for the row.

Deety had placed herself between the two, facing the screamer, and was saying in a low but forceful voice, "Pop, don't you dare!-I won't bail you out!" She was reaching for his glasses with evident intent to put them back on his face. It was clear that he had taken them off for combat; he was holding them out of her reach.

I reached over their heads, plucked them out of his hand, gave them to Deety. She flashed me a smile and put them back on her father. He gave up and let her. She then took his arm firmly. "Aunt Hilda!"

Our hostess converged on the row. "Yes, Deety? Why did you stop them, darling? You didn't give us time to get bets down." Fights were no novelty at "Sharp" Corners' parties. Her food and liquor were lavish, the music always live; her guests were often eccentric but never dull-I had been surprised at the presence of N. 0. Brain.

I now felt that I understood it: a planned hypergolic mixture.

Deety ignored her questions. "Will you excuse Pop and me and Mr. Carter? Something urgent has come up."

"You and Jake may leave if you must. But you can't drag Zebbie away. Deety, that's cheating."

Deety looked at me. "May I tell?"

"Eh? Certainly!"

That bliffy "Brainy" picked this moment to interrupt. "Mrs. Corners, Doctor Burroughs can't leave until he apologizes! I insist. My privilege!"

Our hostess looked at him with scorn. "Merde, Professor. I'm not one of your teaching fellows. Shout right back at Jake Burroughs if you like. If your command of invective equals his, we'll enjoy hearing it. But just one more word that sounds like an order to me or to one of my guests-and out you go! Then you had best go straight home; the Chancellor will be trying to reach you." She turned her back on him. "Deety, you started to add something?"

"Sharp" Corners can intimidate Internal Revenue agents. She hadn't cut loose on "Brainy"-just a warning shot across his bow. But from his face one would have thought

she had hulled him. However, her remark to Deety left me no time to see whether he would have a stroke.

"Not Deety, Hilda. Me. Zeb."

"Quiet, Zebbie. Whatever it is, the answer is No. Deety? Go ahead, dear."

Hilda Corners is related to that famous mule. I did not use a baseball bat because she comes only up to my armpits and grosses forty-odd kilos. I picked her up by her elbows and turned her around, facing me. "Hilda, we're going to get married."

"Zebbie darling! I thought you would never ask."

"Not you, you old harridan. Deety. I proposed, she accepted; I'm going to nail it down before the anesthetic wears off."

Hilda looked thoughtfully interested. "That's reasonable." She craned her neck to look at Deety. "Did he mention his wife in Boston, Deety? Or the twins?"

I set her back on her feet. "Pipe down, Sharpie; this is serious. Doctor Burroughs, I am unmarried, in good health, solvent, and able to support a family. I hope this meets with your approval."

"Pop says Yes," Deety answered. "I hold his power of attorney."

"You pipe down, too. My name is Carter, sir-Zeb Carter. I'm on campus; you can check my record. But I intend to marry Deety at once, if she will have me."

"I know your name and record, sir. It doesn't require my approval; Deety is of age. But you have it anyhow." He looked thoughtful. "If you two are getting married at once, you'll be too busy for shop talk. Or would you be?"

"Pop-let it be; it's all set."

"So? Thank you, Hilda, for a pleasant evening. I'll call you tomorrow."

"You'll do no such thing; you'll come straight back and give me a full report. Jake, you are not going on their honeymoon-I heard you."

"Aunt Hilda-please! I'll manage everything."

We were out the side door close on schedule. At the parking lot there was a bobble: which heap, mine or theirs. Mine is intended for two but can take four. The rear seats are okay for two for short trips. Theirs was a four-passenger family saloon, not fast but roomy-and their luggage was in it. "How much luggage?" I asked Deety, while I visualized two overnight bags strapped into one back seat with my prospective father-in-law stashed in the other.

"I don't have much, but Pop has two big bags and a fat briefcase. I had better show you."

(Damn.) "Perhaps you had better." I like my own rig, I don't like to drive other people's cars, and, while Deety probably handled controls as smoothly as she danced, I did not know that she did-and I'm chicken. I didn't figure her father into the equation; trusting my skin to his temper did not appeal. Maybe Deety would settle for letting him trail us-but my bride-to-be was going to ride with me! "Where?"

"Over in the far corner. I'll unlock it and turn on the lights." She reached into her father's inside jacket pocket, took out a Magic Wand.

"Wait for baby!"

The shout was from our hostess. Hilda was running down the path from her house, purse clutched in one hand and about eight thousand newdollars of sunset mink flying like a flag from the other.

So the discussion started over. Seems Sharpie had decided to come along to make certain that Jake behaved himself and had taken just long enough to tell Max (her bouncer-butler-driver) when to throw the drunks out or cover them with blankets, as needed.

She listened to Deety's summary, then nodded. "Got it. I can handle yours, Deety; Jake and I will go in it. You ride with Zebbie, dear." She turned to me. "Hold down the speed, Zebbie, so that I can follow. No tricks, Buster. Don't try to lose us or you'll have cops busting out of your ears."

I turned my sweet innocent eyes toward her. "Why, Sharpie darling, you know I wouldn't do anything like that."

"You'd steal city hail if you could figure a way to carry it. Who dumped that toad of lime Jello into my swimming pool?"

"I was in Africa at that time, as you know."

"So you say. Deety darling, keep him on a short leash and don't feed him meat. But marry him~ he's loaded. Now where's that radio link? And your car."

"Here," said Deety, pointed the Magic Wand and pressed the switch.

I gathered all three into my arms and dived. We hit the ground as the blast hit everything else. But not us. The blast shadow of other cars protected us.

III

"-Professor Moriarty isn't fooled-"

Zeb:

Don't ask me how. Ask a trapeze artist how he does a triple 'sault. Ask a crapshooter how he knows when he's "hot." But don't ask me how I know it's going to happen just before it hits the fan.

It doesn't tell me anything I don't need to know. I don't know what's in a letter until I open it (except the time it was a letter bomb). I have no precognition for harmless events. But this split-second knowledge when I need it has kept me alive and relatively unscarred in an era when homicide kills more people than does cancer and the favorite form of suicide is to take a rifle up some tower and keep shooting until the riot squad settles it.

I don't see the car around the curve on the wrong side; I automatically hit the ditch. When the San Andreas Fault cut loose, I jumped out a window and was in the open when the shock arrived-and didn't know why I had jumped.

Aside from this, my E.S.P. is erratic; I bought it cheap from a war-surplus outlet.

I sprawled with three under me. I got up fast, trying to avoid crushing them. I gave a hand to each woman, then dragged Pop to his feet. No one seemed damaged. Deety stared at the fire blazing where their car had been, face impassive. Her father was looking at the ground, searching. Deety stopped him. "Here, Pop." She put his glasses back on him.

"Thank you, my dear." He started toward the fire.

I grabbed his shoulder. "No! Into my car-fast!"

"Eh? My briefcase-could have blown clear."

"Shut up and move! All of you!"

"Do it, Pop!" Deety grabbed Hilda's arm. We stuffed the older ones into the after space; I shoved Deety into the front passenger seat and snapped: "Seat belts!" as I slammed the door-then was around to the left so fast that I should have caused a sonic boom. "Seat belts fastened?" I demanded as I fastened my own and locked the door.

"Jake's is fastened and so is mine, Zebbie dear," Hilda said cheerfully.

"Belt tight, door locked," Deety reported.

The heap was hot; I had left it on trickle-what use is a fast car that won't go scat? I switched from trickle to full, did not turn on lights, glanced at the board and released the brake.

It says here that duos must stay grounded inside city limits-so I was lifting her nose before she had rolled a meter and she was pointed straight up as we were clearing the parking lot.

Half a klick straight up while the gee meter climbed-two, three, four-I let it reach five and held it, not being sure what Pop's heart would take. When the altimeter read four klicks, I cut everything-power, transponder, the works-while hitting a button that dropped chaff, and let her go ballistic. I didn't know that anyone was tracking us-I didn't want to find out.

When the altimeter showed that we had topped out, I let the wings open a trifle. When I felt them bite air, I snap-rolled onto her belly, let wings crawl out to subsonic aspect and let her glide. "Everybody okay?"

Hilda giggled. "Whoops, deane! Do that again! This time, somebody kiss me."

"Pipe down, you shameless old strumpet. Pop?"

"I'm okay, son."

"Deety?"

"Okay here."

"Did that fall in the parking lot hurt you?"

"No, sir. I twisted in the air and took it on one buttock while getting Pop's glasses. But next time put a bed under me, please. Or a wrestling mat."

"I'll remember." I switched on radio but not transponder, tried all police frequencies. If anyone had noticed our didoes, they weren't discussing it on the air. We were down to two klicks; I made an abrupt wingover to the right, then switched on power. "Deety, where do you and your Pop live?"

"Logan, Utah."

"How long does it take to get married there?"

"Zebbie," Hilda cut in, "Utah has no waiting time-"

"So we go to Logan."

"-but does require blood test. Deety, do you know Zebbie's nickname around campus? The Wasp. For 'Wassermann Positive.' Zebbie, everybody knows that Nevada is the only state that offers twenty-four-hour service, no waiting time, no blood test. So point this bomb at Reno and sign off."

"Sharpie darling," I said gently, "would you like to walk home from two thousand meters?"

"I don't know; I've never tried it."

"That's an ejection seat. . . but no parachutes."

"Oh, how romantic! Jake darling, we'll sing the Liebestod on the way down- you sing tenor, I'll force a soprano and we'll die in each other's arms. Zebbie, could we have more altitude? For the timing."

"Doctor Burroughs, gag that hitchhiker. Sharpie, Liebestod is a solo."

"Picky, picky! Isn't dead-on-arrival enough? Jealous because you can't carry a tune? I told Dicky Boy that should be a duet and Cosima agreed with me-"

"Sharpie, button your frimpin' lip while I explain. One: Everybody at your party knows why we left and will assume that we headed for Reno. You probably called out something to that effect as you left-"

"I believe I did. Yes, I did."

"Shut up. Somebody made a professional effort to kill Doctor Burroughs. Not just kill but overkill; that combo of high explosive and Thermit was intended to leave nothing to analyze. But it is possible that no one saw us lift. We were into this go-wagon and I was goosing it less than thirty seconds after that booby trap exploded. Innocent bystanders would look at the fire, not at us. Guilty bystanders- There wouldn't be any. A professional who booby-traps a car either holes up or crosses a state line and gets lost. The party or parties who paid for the contract may be nearby, but if they are, Hilda, they're in your house."

"One of my guests?"

"Oh, shut it, Sharpie; you are never interested in the morals of your guests. If they can be depended on to throw custard pies or do impromptu strips or some other prank that will keep your party from growing dull, that qualifies them. However, I am not assuming that the boss villain was at your party; I am saying that he would not be lurking where the Man might put the arm on him. Your house would be the best place to hide and watch the plot develop.

"But, guest or not, he was someone who knew that Doctor Burroughs would be at your party. Hilda, who knew that key fact?"

She answered with uncustomary seriousness. "I don't know, Zebbie. I would have to think."

"Think hard."

"Mmm, not many. Several were invited because Jake was coming-you, for example-"

"I became aware of that."

"-but you weren't told that Jake would be present. Some were told-'No Brain,' for example-but I can't imagine that old fool booby-trapping a car."

"I can't either, but killers don't look like killers; they look like people. How long before the party did you tell 'Brainy' that Pop would be present?"

"I told him when I invited him. Mmm, eight days ago."

I sighed. "The possibles include not only the campus but the entire globe. So we must try to figure probables. Doctor Burroughs, can you think of anyone who would like to see you dead?"

"Several !"

"Let me rephrase it. Who hates your guts so bitterly that he would not hesitate to kill your daughter as long as he got you? And also bystanders such as Hilda and me. Not that we figure, save to show that he didn't give a hoot
who caught it. A deficient personality. Amoral. Who is he?"

Pop Burroughs hesitated. "Doctor Carter, disagreement between mathematicians can be extremely heated.. . and I am not without fault." (You're telling me, Pop!) "But these quarrels rarely result in violence. Even the death of Archimedes was only indirectly related to his-our-profession. To encompass my daughter as well-no, even Doctor Brain, much as I despise him, does not fit the picture."

Deety said, "Zeb, could it have been me they were shooting at?"

"You tell me. Whose dolly have you busted?"

"Hmm- I can't think of anyone who dislikes me even enough to snub me. Sounds silly but it's true."

"It's the truth," put in Sharpie. "Deety is just like her mother was. When Jane-Deety's mother, and my best friend until we lost her-when Jane and
I were roommates in college, I was always getting into jams and Jane was always getting me out-and never got into one herself. A peacemaker. So is Deety."

"Okay, Deety, you're out of it. So is Hilda and so am I, as whoever placed that booby trap could not predict that either Hilda or I would be in blast range. So it's Pop they're gunning for. Who we don't know, why we don't know. When we figure out why, we'll know who. Meantime we've got to keep Pop out of range. I'm going to marry you as fast as possible, not only because you smell good but to give me a legitimate interest in this fight."

"So we go first to Reno."

"Shut up, Sharpie. We've been on course for Reno since we leveled off." I flipped on the transponder, but to the left, not right. It would now answer with a registered, legal signal.. . but not one registered to my name. This cost me some shekels I did not need but were appreciated by a tight-lipped family man in Indio. Sometimes it is convenient not to be identified by sky cops every time one crosses a state line.

"But we aren't going to Reno. Those cowboy maneuvers were intended to deceive the eye, radar, and heat seekers. The evasion against the heat seekers-that rough turn while we were still in glide-either worked or was not needed, as we haven't had a missile up the tail. Probably wasn't needed; people who booby-trap cars aren't likely to be prepared to shoot a duo out of the sky. But I couldn't be certain, so I ducked. We may be assumed to be dead in the blast and fire, and that assumption may stand up until the mess has cooled down and there is daylight to work by. Even later it may stand up, as the cops may not tell anyone that they were unable to find organic remains. But I must assume that Professor Moriarty isn't fooled, that he is watching by repeater scope in his secret HQ, that he knows we are headed for Reno, and that hostiles will greet us there. So we won't go there. Now quiet, please; I must tell this baby what to do."

The computer-pilot of my car can't cook but what she can do, she does well. I called for display map, changed scale to include Utah, used the light pen to trace route-complex as it curved around Reno to the south, back north again,
made easting over some very empty country, and passed north of Hill Air Force Range in approaching Logan. I fed in height-above-ground while giving her leeway to smooth out

bumps, and added one change in speed-over-ground once we were clear of Reno radar. "Got it, girl?" I asked her.

"Got it, Zeb."

"Ten-minute call, please."

"Call you ten minutes before end of routing-right!"

"You're a smart girl, Gay."

"Boss, I bet you tell that to all the girls. Over."

"Roger and out, Gay." The display faded.

Certainly I could have programmed my autopilot to accept a plan in response to a punched "Execute." But isn't it pleasanter to be answered by a warm contralto? But the "smart girl" aspect lay in the fact that it took my voice to make a flight plan operative. A skilled electron pusher might find a way to override my lock, then drive her manually. But the first time he attempted to use autopilot, the car would not only not accept the program but would scream for help on all police frequencies. This causes car thieves to feel maladjusted.

I looked up and saw that Deety had been following this intently. I waited for some question. Instead Deety said, "She has a very pleasant voice, Zeb."

"Gay Deceiver is a very nice girl, Deety."

"And talented. Zeb, I have never before been in a Ford that can do the things this car-Gay Deceiver?-can do."

"After we're married I'll introduce you to her more formally. It will require reprogramming."

"I look forward to knowing her better."

"You will. Gay is not exactly all Ford. Her external appearance was made by Ford of Canada. Most of the rest of her once belonged to Australian Defense Forces. But I added a few doodads. The bowling alley. The powder room. The veranda. Little homey touches."

"I'm sure she appreciates them, Zeb. I know I do. I suspect that, had she not had them, we would all be as dead as canasta."

"You may be right. If so, it would not be the first time Gay has kept me alive. You have not seen all her talents."

"I'm beyond being surprised. So far as I could see you didn't tell her to land at Logan."

"Logan seems to be the next most likely place for a reception committee. Who in Logan knows that you and your father were going to visit Hilda?"

"No one, through me."

"Mail? Milk cartons? Newspapers?"

"No deliveries to the house, Zeb." She turned her head, "Pop, does anyone in Logan know where we went?"

"Doctor Carter, to the best of my knowledge, no one in Logan knows that We left. Having lived many years in the buzzing gossip of Academe, I have learned to keep my life as private as possible."

"Then I suggest that you all ease your belts and sleep. Until ten minutes before reaching Logan there is little to do."

"Doctor Carter-"

"Better call me Zeb, Pop. Get used to it."

"Zeb' it is, son. On page eighty-seven of your monograph, after the equation numbered one-twenty-one in your discussion of the rotation of six-dimensional spaces of positive curvature, you said, 'From this it is evident that-' and immediately write your equation one-twenty-two. How did you do it? I'm not disagreeing, sir-on the contrary! But in an unpublished paper of my own I used a dozen pages to arrive at the same transformation. Did you have a direct intuition? Or did you simply omit publishing details? No criticism, I am impressed either way. Sheer curiosity."

"Doctor, I did not write that paper. I told Deety so."

"That is what he claimed, Pop."

"Oh, come now! Two Doctors Zebulon E. Carter on one campus?"

"No. But that's not my name. I'm Zebadiah J. Carter. Zebulon E.-for-Edward Carter and called 'Ed' is my cousin. While he is probably listed as being on campus, in fact he is doing an exchange year in Singapore. It's not as improbable as it sounds; all male members of my family have first names starting with 'Z.' It has to do with money and a will and a trust fund and the fact that my grandfather and his father were somewhat eccentric."

"Whereas you aren't," Hilda said sweetly.

"Quiet, dear." I turned toward Deety. "Deety, do you want to be released from our engagement? I did try to tell you that you had trapped the wrong bird."

"Zebadiah-"

"Yes, Deety?"

"I intend to marry you before this night is over. But you haven't kissed me. I want to be kissed."

I unfastened my seat belt, started to unfasten hers, found that she had done so.

Deety kisses even better than she tangos.

During a break for oxygen, I asked her in a whisper: "Deety, what do your initials stand for?"

"Well. . . please don't laugh."

"I won't. But I have to know them for the ceremony."

"I know. All right, Dee Tee stands for Dejah Thoris."

Dejah Thoris- Dejah Thoris Burroughs- Dejah Thoris Carter! I cracked~. up.

I got it under control after two whoops. Too many. Deety said sadly, "You~ said you wouldn't laugh."

"Deety darling, I wasn't laughing at your name; I was laughing at mine."

"I don't think 'Zebadiah' is a funny name. I like it."

"So do I. It keeps me from being mixed up with the endless Bobs and Eda~ and Toms. But I didn't tell my middle name. What's a funny name starting~ with 'J'?"

"I won't guess."

"Let me lead up to it. I was born near the campus of the university Thomas Jefferson founded. The day I graduated from college I was commissioned a second looie Aerospace Reserve. I've been promoted twice. My middle initial stands for 'John."

It took not quite a second for her to add it up. "Captain. . . John... Carter-of Virginia."

"A clean-limbed fighting man," I agreed. "Kaor, Dejah Thoris. At your service, my princess. Now and forever!"

"Kaor, Captain John Carter. Helium is proud to accept."

We fell on each other's shoulders, howling. After a bit the howling died down and turned into another kiss.

When we came up for air, Hilda tapped me on a shoulder. "Would you let us in on the joke?"

"Do we tell her, Deety?"

"I'm not sure. Aunt Hilda talks."

"Oh, nonsense! I know your full name and I've never told anyone-I held you at your christening. You were wet, too. At both ends. Now give!"

"All right. We don't have to get married-we already are. For years. More than a century."

Pop spoke up. "Eh? What's this?" I explained to him. He loOked thoughtful, then nodded. "Logical." He went back to figuring he was doing in a notebook, then looked up. "Your cousin Zebulon- Is he on the telephone?"

"Probably not but he lives at the New Raffles."

"Excellent. I'll try both the hotel and the university. Doctor-Son-Zeb, would you be so kind as to place the call? My comcredit code is Nero Aleph eight zero one dash seven five two dash three nine three two Zed Star Zed." (Zed Star Zed credit rating-I was not going to have to support my prospective father-in-law.)

Deety cut in. "Pop, you must not call Professor Carter-Zebulon Carter- at this hour."

"But, my dear daughter, it is not late at night in-"

"Of course it isn't; I can count. You want a favor from him, so don't interrupt his after-lunch nap. 'Mad dogs and Englishmen."

"It isn't noon in Singapore; it's-"

"-siesta time, even hotter than noon. So wait."

"Deety is right, Pop," I interrupted, "but for the wrong reasons. It doesn't seem to be a matter of life and death to call him this minute. Whereas it might be a matter of life and death-ours, I mean-to make a call from this car. . . especially with your credit code. Until we find out who the Boys in the Black Hats are, I advise that you place calls from the ground and from public phones that you can feed with newdollars instead of your code. Say a phone in Peoria. Or Paducah. Can it wait?"

'~Since you put it that way, sir-yes, it can wait. Although I have trouble believing that anyone wishes to kill me."

"Available data indicate it."

"Agreed. But I have not yet grasped it emotionally."

"Takes a baseball bat," said Hilda. "I had to sit on him while Jane proposed to him."

"Why, Hilda my dear, that is utterly unfactual. I wrote my late beloved a polite note saying-"

I let them argue while, I tried to add to available data. "Gay Deceiver."

"Yes, Boss?"

"News, dear."

"Ready, Boss."

"Retrieval parameters. Time-since twenty-one hundred. Area-California, Nevada, Utah. Persons-your kindly boss, dear. Doctor Jacob Burroughs, Doctor D. T. Burroughs, Miz Hilda Corners-" I hesitated. "Professor Neil O'Heret Brain." I felt silly adding

"Brainy"-but there had been a row between Pop and him, and years earlier my best teacher had said, "Never neglect the socalled 'trivial' roots of an equation," and had pointed out that two Nobel prizes had derived from "trivial" roots.

"Parameters complete, Boss~"

Doctor Burroughs touched my shoulder. "Can your computer check the news if any on your cousin?"

"Mmm, maybe. She stores sixty million bytes, then wipes last-in-last-out everything not placed on permanent. But her news storage is weighted sixtyforty in favor of North America. I'll try. Smart Girl."

"Holding, Boss."

"Addendum. First retrieve by parameters given. Then retrieve by new program. Time-backwards from now to wipe time. Area-Singapore. Person- Zebulon Edward Carter aka Ed Carter aka Doctor Z. E. Carter aka Professor Z. E. Carter aka Professor or Doctor Carter of Raffles University."

"Two retrieval programs in succession. Got it, Zeb."

"You're a smart girl, Gay."

"Boss, I bet you tell that to all the girls. Over."

"Roger, Gay. Execute!"

"AP San Francisco. A mysterious explosion disturbed the academic quiet of-" A story ending with the usual claim about an arrest being expected "momentarily" settled several points: All of us were believed dead. Our village top cop claimed to have a theory but was keeping it mum-meaning that he knew even less than we did. Since we were reported as "presumed dead" and since the news said nothing about an illegal lift-off and other capers that annoy sky cops, I assumed tentatively that police radar had not been looking at us until after we had become just one more blip behaving legally. The lack of mention of the absence of Gay Deceiver did not surprise me, as I had roaded in and had been last or nearly last to park-and could have arrived by taxi, public capsule, or on foot. Doctor Brain was not mentioned, nothing about the row. Guests had been questioned and released. Five cars parked near the, explosion had been damaged.

"Nevada-null retrieval. Utah-UPI Salt Lake City. A fire near Utah State, University campus in Logan destroyed-" "Blokes in Black Hats" again and
Deety and her Pop were dead twice over, as they were presumed to have been overcome by smoke, unable to escape. No one else hurt or missing. Fire attributed to faulty wiring.
"End of first retrieval, Zeb. Second retrieval starting." Gay shut up.
I said soberly, "Pop, somebody doesn't like you." He groaned, "Gone! All gone!"
"No copies of your papers elsewhere? And your. . . gadget?"

"Eh? No, no!-much worse! My irreplaceable collection of pulp magazines. Weird Tales, Argosy, All-Story, the early Gernsbachs, The Shadow, Black Mask-Oooooh!"

"Pop really does feel bad," Deety whispered, "and I could manage tears myself. I taught myself to read from that collection. War Aces, Air Wonder, the complete Clayton Astoundings- It was appraised at two hundred and thirteen thousand newdollars. Grandpop started it, Pop continued it-I grew up reading them."

"I'm sorry, Deety." I hugged her. "They should~have been microfiched."

"They were. But that's not having the magazines in your hands."

"I agree. Uh, how about the. . . thing in the basement?"

"What 'Thing in the Basement'?" demanded Sharpie. "Zebbie, you sound like H. P. Lovecraft,"

"Later, Sharpie. Comfort Jake; we're busy. Gay!"

"Here, Zeb. Where's the riot?"

"Display map, please." We were midway over northern Nevada. "Cancel routing and cruise random. Report nearest county seat."

"Winnemucca and Elko are equidistant to one percent. Elko closer by ETA as I am now vectored eleven degrees north of Elko bearing."

"Deety, would you like to be married in Elko?"

"Zebadiah, I would love to be married in Elko."

"Elko it is, but loving may have to wait. Gay, vector for Elko and ground us, normal private cruising speed. Report ETA in elapsed minutes."

"Roger Wilco, Elko. Nine minutes seventeen seconds."

Hilda said soothingly, "There, there, Jake darling; Mama is here"-then added in her top sergeant voice, "Quit stalling, Zebbie! What 'Thing' in which basement?"

"Sharpie, you're nosy. It belonged to Pop and now it's destroyed and that's all you need to know."

"Oh, but it wasn't," Doctor Burroughs said. "Zeb is speaking of my continua craft, Hilda. It's safe. Not in Logan."

"What in the Name of the Dog is a 'continua craft'?"

"Pop means," Deety explained, "his time machine."

"Then why didn't he say so? Everybody savvies 'Time Machine.' George Pal's 'Time Machine'-a classic goodie. I've caught it on the late-late-early show more than once."

"Sharpie," I asked, "can you read?"

"Certainly I can read! 'Run, Spot, run, See Spot run.' Smarty."

"Have you ever heard of H. G. Wells?"

"Heard of him? I've had him."

"You are a boastful old tart, but not that old. When Mr. Wells died, you were still a virgin."

"Slanderer! Hit him, Jake-he insulted me."

"Zeb didn't mean to insult you, I feel sure. Deety won't permit me to hit people, even when they need it."

"We'll change that."

"Second retrieval complete," Gay Deceiver reported. "Holding."

"Report second retrieval, please."

"Reuters, Singapore. The Marston expedition in Sumatra is still unreported according to authorities at Palembang. The party is thirteen days overdue. Besides Professor Marston and native guides and assistants, the party included Doctor Z.E. Carter, Doctor Cecil Yang, and Mr. Giles Smythe-Belisha. The Minister of Tourism and Culture stated that the search will be pursued assiduously. End of retrieval."

Poor Ed. We had never been close but he had never caused me grief. I hoped that he was shacked up with something soft and sultry-rather than losing his head to a jungle machete, which seemed more likely. "Pop, a few minutes ago I said that somebody doesn't like you. I now suspect that somebody doesn't like n-dimensional geometers."

"It would seem so, Zeb. I do hope your cousin is safe-a most brilliant mind! He would be a great loss to all mankind."

(And to himself, I added mentally. And me, since family duty required that I do something about it. When what I had in mind was a honeymoon.) "Gay."

"Here, Zeb."

"Addendum. Third news retrieval program. Use all parameters second program. Add Sumatra to area. Add all proper names and titles found in second retrieval. Run until canceled. Place retrievals in permanent memory. Report new items soonest. Start."

"Running, Boss."

"You're a good girl, Gay."

"Thank you, Zeb. Grounding Elko two minutes seven seconds."

Deety squeezed my hand harder. "Pop, as soon as I'm legally Mrs. John Carter I think we should all go to Snug Harbor."

"Eh? Obviously."

"You, too, Aunt Hilda. It might not be safe for you to go home."

"Change in plans, dear. It's going to be a double wedding. Jake. Me."

Deety looked alert but not displeased. "Pop?"

"Hilda has at last consented to marry me, dear."

"Rats," said Sharpie. "Jake has never asked me in the past and didn't this time; I simply told him. Hit him with it while he was upset over losing his comic books and unable to defend himself. It's necessary, Deety-I promised Jane I would take care of Jake and I have-through you, up to now. But from here on you'll be taking care of Zebbie, keeping him out of trouble, wiping his nose. . . so I've got to hogtie Jake into marriage to keep my promise to Jane. Instead of sneaking into his bed from time to time as in the past."

"Why, Hilda dear, you have never been in my bed!"

"Don't shame me in front of the children, Jake. I gave you a test run before I let Jane marry you and you don't dare deny it."

Jake shrugged helplessly. "As you wish, dear Hilda."

"Aunt Hilda.. . do you love Pop?" -

"Would I marry him if I didn't? I could carry out my promise to Jane more simply by having him committed to a shrink factory. Deety, I've loved Jake longer than you have. Much! But he loved Jane. . . which shows that he is basically rational despite his weird ways. I shan't try to change him, Deety; I'm simply going to see to it that he wears his overshoes and takes his vitamins-as you've been doing. I'll still be 'Aunt Hilda,' not 'Mother.' Jane was and is your mother."

"Thank you, Aunt Hilda. I thought I was happy as a woman can be, getting Zebadiah. But you've made me still happier. No worries."

(I had worries. Blokes with Black Hats and no faces. But I didn't say so, as Deety was snuggling closer and assuring me that it was all right because Aunt Hilda wouldn't fib about loving Pop. . . but I should ignore that guff about her sneaking into Pop's bed-on which I had no opinion and less interest.) "Deety, where and what is 'Snug Harbor'?"

"It's. . . a nowhere place. A hideout. Land Pop leased from the government when he decided to build his time twister instead of just writing equations. But we may have to wait for daylight. Unless- Can Gay Deceiver home on a given latitude and longitude?"

"She certainly can! Precisely."

"Then it's all right. I can give it to you in degrees, minutes, and fractions of a second."

"Grounding," Gay warned us.

The Elko County Clerk did not object to getting out of bed and seemed pleased with the century note I slipped him. The County Judge was just as accommodating and pocketed her honorarium without glancing at it. I stammered but managed to say, "I, Zebadiah John, take thee, Dejah Thoris-" Deety went through it as solemnly and perfectly as if she had rehearsed it. . . while Hilda sniffled throughout.

A good thing that Gay can home on a pin point; I was in no shape to drive even in daylight. I had her plan her route, too, a dogleg for minimum radar and no coverage at all for the last hundred-odd kilometers to this place in the Arizona Strip north of the Grand Canyon. But I had her hover before grounding-I being scared silly until I was certain there was not a third fire there.

A cabin, fireproof, with underground parking for Gay-I relaxed.

We split a bottle of chablis. Pop seemed about to head for the basement. Sharpie tromped on it and Deety ignored it.

I carried Deety over the threshold into her bedroom, put her gently down, faced her. "Dejah Thoris-"

"Yes, John Carter?"

"I did not have time to buy you a wedding present-"

"I need no present from my captain."

"Hear me out, my princess. My Uncle Zamir did not have as fine a collection as your father had. . . but may I gift you with a complete set of Clayton Astoundings-"

She suddenly smiled.

"-and first editions of the first six Oz books, quite worn but with the original color plates? And a first in almost mint condition of 'A Princess of Mars'?"

The smile became a grin and she looked nine years old. 'Yes!"

"Would your father accept a complete set of Weird Tales?"

"Would he! Northwest Smithand Jirel of Joiry? I'm going to borrow them- or he can't look at my Oz books. I'm stubborn, I am. And selfish. And mean!"

"'Stubborn' stipulated. The others denied."

Deety stuck out her tongue. "You'll find out." Suddenly her face was solemn. "But I sorrow, my prince, that I have no present for my husband."

"But you haveI"

"I do?"

"Yes. Beautifully wrapped and making me dizzy with heavenly fragrance."

"Oh." She looked solemn but serenely happy. "Will my husband unwrap me? Please?"

I did.

That is all anyone is ever going to know about our wedding night.

IV

Because two things equal to the same thing
are never equal to each other.

Deety:

I woke early as I always do at Snug Harbor, wondered why I was ecstatically happy-then remembered, and turned my head. My husband-'~husband!"- what a heart-filling word-my husband was sprawled face down beside me, snoring softly and drooling onto his pillow. I held still, thinking how beautiful he was, how gently strong and gallantly tender.

I was tempted to wake him but I knew that my darling needed rest. So I eased out of bed and snuck noiselessly into my bath-our bath~-and quietly took care of this and that. I did not risk drawing a tub_although I needed one. I have a strong body odor that calls for at least one sudsy bath a day, two if I am going out that evening_and this morning I was certainly whiff as a polecat.

I made do with a stand-up bath by letting water run in a noiseless trickle into the basin-I would grab that proper bath after my Captain was awake; meanwhile I would stay downwind.

I pulled on briefs, started to tie on a halter_stopped and looked in the mirror. I have a face.shaped face and a muscular body that I keep in top condition. I would never reach semifinals in a beauty contest but my teats are shapely, exceptionally firm, stand out without sagging and look larger than they are because my waist is small for my height, shoulders and hips. I've known this since I was twelve, from mirror and from comments by others.

Now I was acutely aware of them from what Zebadiah calls his "infantile bias." I was awfully glad I had them; my husband liked them so much and
had told me so again and again, making me feel warm and tingly inside. Teats get in the way, and I once found out painfully why Amazons are alleged to have removed their starboard ones to make archery easier.

Today I was most pleased that Mama had required me to wear a bra for tennis and horseback and such-no stretch marks, no "Cooper's droop," no sag, and my husband called them "wedding presents"! Hooray!

Doubtless they would become baby-chewed and soft-but by then I planned to have Zebadiah steadfastly in love with me for better reasons. You hear that, Deety? Don't be stubborn, don't be bossy, don't be difficult-and above all don't sulk! Mama never sulked, although Pop wasn't and isn't easy to live with. For example he dislikes the word "teat" even though I spell it correctly and pronounce it correctly (as if spelled "tit"). Pop insists that teats are on cows, not women.

After I started symbolic logic and information theory I became acutely conscious of precise nomenclature, and tried to argue with Pop, pointing out that "breast" denoted the upper frontal torso of male and female alike, that "mammary gland" was medical argot, but "teat" was correct English.

He had slammed down a book. "I don't give a damn what The Oxford English Dictionary says! As long as I am head of this house, language used in it will conform to my notions of propriety!"

I never argued such points with Pop again. Mama and I went on calling them "teats" between ourselves and did not use such words in Pop's presence. Mama told me gently that logic had little to do with keeping a husband happy and that anyone who

"won" a family argument had in fact lost it. Mama never argued and Pop always did what she wanted-if she really wanted it. When at seventeen I had to grow up and try to replace her, I tried to emulate her- not always successfully. I inherited some of Pop's temper, some of Mama's calm. I try to suppress the former and cultivate the latter. But I'm not Jane, I'm Deety.

Suddenly I wondered why I was putting on a halter. The day was going to be hot. While Pop is so cubical about some things that he turns up at the corners, skin is not one of them. (Possibly he had been, then Mama had gently gotten her own way.) I like to be naked and usually am at Snug Harbor, weather permitting. Pop is almost as casual. Aunt Hilda was family-by-choice; we had often used her pool and never with suits-screened for the purpose.

That left just my lovely new husband, and if there was a square centimeter of me he had not examined (and praised), I could not recall it. Zebadiah is easy to be with, in bed or out. After our hasty wedding I was slightly tense lest he ask me when and how I had mislaid my virginity.. . but when the subject could have come up I forgot it and he apparently never thought about it. I was the lusty wench I have always been and he seemed pleased-I know he was.

So why was I tying on this teat hammock? I was-but why?

Because two things equal to the same thing are never equal to each other. Basic mathematics if you select the proper sheaf of postulates. People are not abstract symbols. I could be naked with any one of them but not all three.

I felt a twinge that Pop and Aunt Hilda might be in the way on my hon eymoon. . . then realized that Zebadiah and I were just as much in the way on theirs-and stopped worrying; it would work out.

Took one last look in the mirror, saw that my scrap of halter, like a good evening gown, made me nakeder than skin would. My nipples popped out; I grinned and stuck out my tongue at them. They stayed ~up; I was happy.

I started to cat-foot through our bedroom when I noticed Zebadiah's clothes- and stopped. The darling would not want to wear evening dress to breakfast. Deety, you are not being wifely-figure this out. Are any of Pop's clothes where I can get them without waking the others?

Yep! An old shirt that I had liberated as a house coat, khaki shorts I had been darning the last time we had been down-both in my wardrobe in my- our!-bathroom. I crept back, got them, laid them over my darling's evening clothes so that he could not miss them.

I went through and closed after me two soundproof doors, then no longer had to keep quiet. Pop does not tolerate anything shoddy-if it doesn't work properly, he fixes it. Pop's B.S. was in mechanical engineering, his M.S. in physics, his Ph.D. in mathematics; there isn't anything he can't design and build. A second Leonardo da Vinci-or a Paul Dirac.

No one in the everything room. I decided not to head for the kitchen end yet; if the others slept a bit longer I could get in my morning tone-up. No violent exercise this morning, mustn't get more whiff than I am-just controlled limbering. Stretch high, then palms to the floor without bending knees-ten is enough. Vertical splits, both legs, then the same to the floor with my forehead to my shin, first right, then left.

I was doing a back bend when I heard, "Ghastly. The battered bride. Deety, stop that."

I continued into a backwards walkover and stood up facing Pop's bride. "Good morning, Aunt Hillbilly." I kissed and hugged her. "Not battered. Bartered, maybe."

"Battered," she repeated, yawning. "Who gave you those bruises? What'shis-name?-your husband."

"Not a bruise on me and you've known his name longer than I have. What causes those circles under the bags under the rings under your eyes?"

"Worry, Deety. Your father is very ill."

"What? How?"

"Satyriasis. Incurable-I hope."

I let out my breath. "Aunt Hillbilly, you're a bitchie, bitchie tease."

"Not a bitch this morning, dear. A nanny goat-who has been topped all night by the most amazing billy goat on the ranch. And him past fifty and me Only twenty-nine. Astounding."

"Pop's forty-nine, you're forty-two. You're complaining?"

"Oh, no! Had I known twenty-four years ago what I know now, I would never have let Jane lay eyes on him."

"-what you know now-Last night you were claiming to have sneaked into Pop's bed, over and over again. Doesn't jibe, Aunt Nanny Goat."

Those were quickies. Not a real test." She yawned again.

"Auntie, you lie in your teeth. You were never in his bed until last night."

"How do you know, dear? Unless you were in it yourself? Were you? Incest?"

"What have you got against incest, you bawdy old nanny goat? Don't knock it if you haven't tried it."

"Oh, so you have? How fascinating-tell Auntiet"

"I'll tell you the truth, Aunt Hilda. Pop has never laid a hand on me. But if he had. . . I would not have refused. I love him."

Hilda stopped to kiss me more warmly than before. "So do I, dear one. I honor you for what you just told me. He could have had me, too. But never did. Until last night. Now I'm the happiest woman in America."

Nope. Second happiest. You're looking at the happiest."

"Mmm, a futile discussion. So my problem child is adequate?"

"Well . . . he's not a member of the Ku Klux Klan-"

"I never thought he was! Zebbie isn't that sort."

"-but he's a wizard under a sheet!"

Aunt Hilda looked startled, then guffawed. "I surrender. We're both the happiest woman in the world."

"And the luckiest. Aunt Nanny Goat, that robe of Pop's is too hot. I'll get something of mine. How about a tie-on fit-anybody bikini?"

"Thanks, dear, but you might wake Zebbie." Aunt Hilda opened Pop's robe and held it wide, fanning it. I looked at her with new eyes. She's had three or four term contracts, no children. At forty-two her face looks thirty-five, but from her collarbones down she could pass for eighteen. Little bitty teats-I had more at twelve. Flat belly and lovely legs. A china doll-makes me feel like a giant.

She added, "If it weren't for your husband, I would simply wear this old hide. It is hot."

'If it weren't for your husband, so would I."

"Jacob? Deety, he's changed your diapers. I know how Jane reared you. True modesty, no false modesty."

'It's not the same, Aunt Hilda. Not today."

"No, it's not. You always did have a wise head, Deety. Women are toughminded, men are not; we have to protect them. . . while pretending to be fragile ourselves, to build up their fragile egos. But I've never been good at it-I like to play with matches."

"Aunt Hilda, you are very good at it, in your own way. I'm certain Mama knows what you've done for Pop and blesses it and is happy for Pop. For all of us-all five of us."

"Don't make me cry, Deety. Let's break out the orange juice; our men will wake any time. First secret of living with a man: Feed him as soon as he wakes."

"So I know."

"Yes, of course you know. Ever since we lost Jane. Does Zebbie know how lucky he is?"

"He says so. I'm going to try hard not to disillusion him."

V

"-a wedding ring is not a ring in my nose-"

Jake:

I woke in drowsy euphoria, became aware that I was in bed in our cabin that my daughter calls "Snug Harbor"-then woke completely and looked at the other pillow-the dent in it. Not a dream! Euphoric for the best of reasons!

Hilda was not in sight. I closed my eyes and simulated sleep as I had something to do. "Jane?" I said in my mind.

1 hear you, dearest one. It has my blessing. Now we are all happy together,"

We couldn't expect Deety to become a sour old maid, just to take care of her crotchety old father. This young man, he's okay, to the nth power. I felt it at once, and Hilda is certain of it."

~He is. Don't worry, Jacob. Our Deety can never be sour and you will never be old. This is exactly as Hilda and I planned it, more than five of your years ago. Predestined. She told you so, last night."

"Okay, darling."

"Get up and brush your teeth and take a quick shower. Don't dawdle, breakfast is waiting. Call me when you need me. Kiss."

So I got up, feeling like a boy on Christmas morning. Everythh~g was jake with Jake; Jane had put her stamp of approval on it. Let me tell you, you nonexistent reader sitting there with a tolerant sneer: Don't be smug. Jane is more real than you are.

The spirit of a good woman cannot be coded by nucleic acids arranged in a double helix, and only an overeducated fool could think so. I could prove that mathematically save that mathematics can never prove anything. No mathematics has any content. All any mathematics can do is-sometimes-turn out to be useful in describing some aspects of our so-called "physical universe." That is a bonus; most forms of mathematics are as meaning-free as chess.

I don't know any final answers. I'm an all-around mechanic and a competent mathematician. . . and neither is of any use in unscrewing the inscrutable.

Some people go to church to talk to God, Whoever He is. When I have something on my mind, I talk to Jane. I don't hear "voices," but the answers that, come into my mind have as much claim to infallibility, it seems to me, as any handed down by any Pope speaking ex cathedra. If this be blasphemy, make the most of it; I won't budge. Jane is, was, and ever shall be, worlds without end. I had the priceless privilege of living with her for eighteen years and I can never lose her.

Hilda was not in the bath but my toothbrush was damp. I smiled at this. Logical, as any germs I was harboring, Hilda now had-and Hilda, for all her playfulness, is no-nonsense practical. She faces danger without a qualm (had done so last night) but she would say "Gesundheit!" to an erupting volcano even as she fled from it. Jane is equally brave but would omit the quip. They are alike only in-no, not that way, either. Different but equal. Let it stand that I have been blessed in marriage by two superb women. (And blessed by a daughter whose Pop thinks she is perfect.)

I showered, shaved, and brushed my teeth in nine minutes and dressed in under nine seconds as I simply wrapped around my waist a terry-cloth sarong Deety had bought for me-the day promised to be a scorcher. Even that hip wrap was a concession to propriety, i.e., I did not know my new son-in-law well enough to subject him abruptly to our casual ways; it might offend Deety.

I was last up, and saw that all had made much the same decision. Deety was wearing what amounted to a bikini minimum (indecently "decent"!) and my bride was "dressed" in a tie-on job belonging to Deety. The tie-ties had unusually large bows; Hilda is tiny, my daughter is not. Zeb was the only one fully dressed: an old pair of working shorts, a worn-out denim shirt Deety had confiscated, and his evening shoes. He was dressed for the street in any western town save for one thing: I'm built like a pear, Zeb is built like the Gray Lensman.

My shorts fitted him well enough-a bit loose-but his shoulders were splitting the shirt's seams. He looked uncomfortable.

I took care of amenities-a good-morning to all, a kiss for my bride, one for my daughter, a handshake for my son-in-law-good hands, calloused. Then I said, "Zeb, take that shirt off. It's hot and getting hotter. Relax. This is your home."

"Thanks, Pop." Zeb peeled off my shirt.

Hilda stood up on her chair, making her about as tall as Zeb. "I'm a militant women's-rights gal," she announced, "and a wedding ring is not a ring in my nose-a ring that you have not yet given me, you old goat."

"When have I had time? You'll get one, dear-first chance."

"Excuses, excuses! Don't interrupt when I'm orating. Sauce for the gander is no excuse for goosing the goose. If you male chauvinist pigs-I mean 'goats'-

can dress comfortably, Deety and I have the same privilege." Whereupon my lovely little bride untied that bikini top and threw it aside like a stripper.

"What's for breakfast?" asked Pooh," I misquoted.

I was not answered. Deety made me proud of her for the nth time. For years she had consulted me, at least with her eyes, on "policy decisions." Now she looked not at me but at her husband. Zeb was doing Old Stone Face, refusing assent or dissent. Deety stared at him, gave a tiny shrug, reached behind her and untied or unsnapped something and discarded her own top.

"I said, 'What's for breakfast?" I repeated.

"Greedy gut," my daughter answered. "You men have had baths, while Aunt Hilda and I haven't had a chance to get clean for fear of waking you slugabeds."

"Is that what it is? I thought a skunk had wandered past. 'What's for breakfast?'"

"Aunt Hilda, in only hours Pop has lost all the training I've given him for five years. Pop, it's laid out and ready to go. How about cooking while Hilda and I grab a tub?"

Zeb stood up. "I'll cook, Deety; I've been getting my own breakfast for years."

"Hold it, Buster!" my bride interrupted. "Sit down, Zebbie. Deety, never encourage a man to cook breakfast; it causes him to wonder if women are necessary. If you always get his breakfast and don't raise controversial issues until after his second cup of coffee, you can get away with murder the rest of the time. They don't notice other odors when they smell bacon. I'm going to have to coach you."

My daughter reversed the field, fast. She turned to her husband and said meekly, "What does my Captain wish for breakfast?"

"My Princess, whatever your lovely hands offer me."

What we were offered, as fast as Deety could pour batter and Hilda could serve, was a gourmet specialty that would enrage a Cordon Bleu but which, for my taste, is ambrosia: A one-eyed Texas stack-a tall stack of thin, tender buttermilk pancakes to Jane's recipe, supporting one large egg, up and easy, surrounded by hot sausage, and the edifice drowned in melting butter and hot maple syrup, with a big glass of orange juice and a big mug of coffee on the side.

Zeb ate two stacks. I concluded that my daughter would have a happy marriage.

VI

Are men and women one race?

Hilda:

Deety and I washed dishes, then soaked in her tub and talked about husbands. We giggled, and talked with the frankness of women who trust each other and are sure that no men can overhear. Do men talk that openly in parallel circumstances? From all I have been able to learn in after-midnight horizontal conversations, all passion spent, men do not. Or not men I would take to bed. Whereas a "perfect lady" (which Jane was, Deety is, and I can simulate) will talk with another "perfect lady" she trusts in a way that would cause her father, husband, or son to faint.

I had better leave out our conversation; this memoir might fall into the hands of one of the weaker sex and I would not want his death on my conscience.

Are men and women one race? I know what biologists say-but history is loaded with "scientists" jumping to conclusions from superficial evidence. It seems to me far more likely that they are symbiotes. I am not speaking from ignorance; I was one trimester short of a B.S. in biology (and a straight-A student) when a "biology experiment" blew up in my face and caused me to leave school abruptly.

Not that I need that. degree- I've papered my private bath with honorary degrees, mostly doctorates. I hear that there are things no whore will do for money but I have yet to find anything that a university chancellor faced with a deficit. will boggle at. The secret is never to set up a permanent fund but to dole it out when need is sharpest, once every academic year. Done that way, you not only own a campus but also the town cops learn that it's a waste of
time to hassle you. A univer$ity alway$ $tand$ $taunchly by it$ $olvent a$$ociate$; that'$ the ba$ic $ecret of $chola$tic $ucce$$.

Forgive my digre$$ion; we were speaking of men and women. I am strong for women's rights but was never taken in by unisex nonsense. I don't yearn to be equal; Sharpie is as unequal as possible, with all the perks and bonuses and special privileges that come from being one of the superior sex. If a man fails to hold a door for me, I fail to see him and step on his instep. I feel no shame in making lavish use of the strongest muscles, namely male ones (but my own strongest muscle is dedicated to the service of men-noblesse oblige). I don't begrudge men one whit of their natural advantages as long as they respect mine. I am not an unhappy pseudomale; I am female and like it that way.

I borrowed makeup that Deety rarely uses, but I carry my own perfume in my purse and used it in the twenty-two classic places. Deety uses only the basic aphrodisiac: soap and water. Perfume on her would be gilding the lily; fresh out of a hot tub she smells like a harem. If I had her natural fragrance, I could have saved at least ten thousand newdollars over the years as well as many hours spent dabbing bait here and there.

She offered me a dress and I told her not to be silly; any dress of hers would fit me like a tent. "You put something bridal and frilly around your hips and lend me your boldest G-string job. Dear, I surprised you when I jockeyed you into taking off your halter, after telling you that you were wise not to rush it. But the chance showed up and I grabbed the ring on the fly. We've got our men gentled to nearly naked and we'll hold that gain. At first opportunity we'll get pants off all of us, too, without anything as childish as strip poker. Deety, I want us to be a solid family, and relaxed about it. So that skin doesn't mean sex, it just means we are home, en famille."

"Your skin is pretty sexy, Nanny Goat."

"Deety, do you think I'm trying to make a pass at Zebbie?"

"Heavens, no, Aunt Hilda. You would never do that."

"Piffle, dear. I don't have morals, just customs. I don't wait for a man to make a pass; they fumble around and waste time. But when I met him I picked Zebbie for a chum-so I gave him an opening; he made a polite pass, I carefully failed to see it, and that ended it. I'm sure he's as much fun on the workbench as you tell me he is-but bedmates are easy to find, while worthwhile male friends are scarce. Zebbie is one to whom I can holler for help in the middle of the night and be certain he'll rally around. I'm not going to

let that change merely because a weird concatenation now makes him my son-in-law. Besides, Deety, although your old Aunt Sharpie may seem undignified, I refuse to be the campus widow who seduces younger men. Save for minor exceptions close to my age, I always have bedded older men. When I was your age, I tripped several three times my age. Educational."

"It certainly is! Aunt Hilda, I got ninety percent of my instruction two years ago-a widower three times my age. I was programming for him and we took shared time when we could get it, often after midnight. I didn't think anything of it until one night I was startled to find that I was helping him to take off my panties. Then I was still more surprised to learn how little I had learned in seven years. He gave me a tutored seminar, usually three times a week- all the time he was willing to spare me-for the next six months. I'm glad I got tutoring from an expert before last night rolled around-or Zebadiah would have found me a dead arse, willing but clumsy. I didn't tell this to my darling; I let him think he was teaching me."

"That's right, dear. Never tell a man anything he doesn't need to know, and lie with a straight face rather than hurt his feelings or diminish his pride."

"Aunt Nanny Goat, I just plain love you."

We quit yakking and looked for our men. Deety said that they were certain to be in the basement. "Aunt Hilda, I don't go there without invitation. It's Pop's sanctum sanctorum."

"You're warning me not to risk a faux pas?"

"I'm his daughter, you're his wife. Not the same."

"Well. . . he hasn't told me not to-and today he'll forgive me, if ever. Where do you hide the stairs?"

"That bookcase swings out."

"Be darned! For a so-called cabin this place is loaded with surprises. A bidet in each bath didn't startle me; Jane would have required them. Your walk-in freezer startled me only by being big enough for a restaurant. But a bookcase concealing a priest's hole-as Great-Aunt Nettie used to say, 'I do declare!"

"You should see our septic tank-yours, now."

"I've seen septic tanks. Pesky things-always need pumping at the most inconvenient time."

"This one won't have to be pumped. Over three hundred meters deep. An even thousand feet."

"For the love of- Why?"

"It's an abandoned mine shaft below us that some optimist dug a hundred years back. Here was this big hole, so Pop used it. There is a spring farther up the mountain. Pop cleaned that out, covered it, concealed it, put pipe underground, and we have lavish pure water under pressure. The rest of Snug Harbor Pop designed mostly from prefab catalogs, fireproof and solid and heavily insulated. We have-you have, I mean-this big fireplace and the little ones in the bedrooms, but you won't need them, other than for homeyness. Radiant heat makes it skin-comfortable even in a blizzard."

"Where do you get your power? From the nearest town?"

"Oh, no! Snug Harbor is a hideout, nobody but Pop and me-and now you and Zebadiah-knows it's here. Power packs, Aunt Hilda, and an inverter in a space behind the back wall of the garage. We bring in power packs ourselves, and take them out the same

way. Private. Oh, the leasehold record is buried in a computer in Washington or Denver, and the Federal rangers know the leaseholds. But they don't see us if we see or hear them first. Mostly they cruise on past. Once one came by on horseback. Pop fed him beer out under the trees-and from outside this is just a prefab, a living room and two shedroof bedrooms. Nothing to show that important parts are underground."

"Deety, I'm beginning to think that this place-this cabin-cost more than my townhouse."

"Uh., probably."

"I think I'm disappointed. Sugar Pie, I married your papa because I love him and want to take care of him and promised Jane that I would. I've been thinking happily that my wedding present to my bridegroom would be his weight in bullion, so that dear man need never work again."

"Don't be disappointed, Aunt Hilda. Pop has to work; it's his nature. Me, too. Work is necessary to us. Without it, we're lost."

"Well. . . yes. But working because you want to is the best sort of play."

"Correct!"

"That's what I thought I could give Jacob. I don't understand it. Jane wasn't rich, she was on a scholarship. Jacob had no money-still a teaching fellow, a few months shy of his doctorate. Deety, Jacob's suit that he wore to be married in was threadbare. I know that he pulled up from that; he made full professor awfully fast. I thought it was that and Jane's good management."

"It was both."

"That doesn't account for this. Forgive me, Deety, but Utah State doesn't pay what Harvard pays."

"Pop doesn't lack offers. We like Logan. Both the town and the civilized behavior of Mormons. But- Aunt Hilda, I must tell you some things."

The child looked worried. I said, "Deety, if Jacob wants me to know something he'll tell me."

"Oh, but he won't and I must!"

"No, Deety!"

"Listen, please! When I said, 'I do,' I resigned as Pop's manager. When you said, 'I do,' the load landed on you. It has to be that way, Aunt Hilda. Pop won't do it; he has other things to think about, things that take genius. Mama did it for years, then I learned how, and now it's your job. Because it can't be farmed out. Do you understand accountancy?"

"Well, I understand it, I took a course in it. Have to understand it, or the government will skin you alive. But I don't do it, I have accountants for that- and smart shysters to keep it inside the law."

"Would it bother you to be outside the law? On taxes?"

"What? Heavens, no! But Sharpie wants to stay outside of jail-I detest an institutional diet."

"You'll stay out ofjail. Don't worry, Aunt Hilda-I'll teach you double-entry bookkeeping they don't teach in school. Very double. One set for the revenooers and another set for you and Jake."

"It's that second set that worries me. That one puts you in the pokey. Fresh air alternate Wednesdays."

"Nope. The second set is not on paper; it's in the campus computer at Logan."

"Worse!"

"Aunt Hilda, please! Certainly my computer address code is in the department's vault and an I.R.S. agent could get a court order. It wouldn't do him any good. It would spill out our first set of books while wiping every trace of the second set. Inconvenient but not disastrous. Aunt Hillbilly, I'm not a champion at anything else but I'm the best software artist inthe business. I
at your elbow until you are sure of yourself.

"Now about how Pop got rich- All the time he's been teaching he's also been inventing gadgets-as automatically as a hen lays eggs. A better can opener. A lawn irrigation system that does a better job, costs less, uses less water. Lots of things. But none has his name on it and royalties trickle back in devious ways.

"But we aren't freeloaders. Every year Pop and I study the Federal Budget and decide what is useful and what is sheer waste by fat-arsed chairwarmers and pork-barrel raiders. Even before Mama died we were paying more income tax than the total of Pop's salary, and we've paid more each year while I've been running it. It does take a bundle to run this country. We don't begrudge money spent on roads and public health and national defense and truly useful things. But we've quit paying for parasites wherever we can identify them.

"It's your job now, Aunt Hilda. If you decide that it's dishonest or too risky, I can cause the computer to make it all open and legal so smoothly that hankypanky would never show. It would take me maybe three years, and Pop would pay high capital gains. But you are in charge of Pop now."

"Deety, don't talk dirty."

"Dirty, how? I didn't even say 'spit."

"Suggesting that I would willingly pay what those clowns in Washington want to squeeze out of us. I would not be supporting so many accountants and shysters if I didn't think we were being robbed blind. Deety, how about being manager for all of us?"

"No, ma'am! I'm in charge of Zebadiah. I have my own interests to manage, too. Mama wasn't as poor as you thought. When I was a little girl, she came into a chunk from a trust her grandmother had set up. She and Pop gradually moved it over into my name and again avoided inheritance and estate taxes, all legal as Sunday School. When I was eighteen, I converted it into cash, then caused it to disappear. Besides that, I've been paying me a whopping salary as Pop's manager. I'm not as rich as you are, Aunt Hilda, and certainly not as rich as Pop. But I ain't hurtin'."

"Zebbie may be richer than all of us."

"You said last night that he was loaded but I didn't pay attention because I had already decided to marry him. But after experiencing what sort of car he drives I realize that you weren't kidding. Not that it matters. Yes, it did matter-it took both Zebadiah's courage and Gay Deceiver's unusual talents to save our lives."

"You may never find out how loaded Zebbie is, dear. Some people don't let their left hands know what their right hands are doing. Zebbie doesn't let his thumb know what his fingers are doing."

Deety shrugged. "I don't care. He's kind and gentle and he's a storybook hero who saved my life and Pop's and yours. . . and last night he proved to me that life is worth

living when I've been uncertain about it since Mama had to leave us. Let's go find our men, Aunt Nanny Goat. I'll risk Pop's Holy of Holies if you'll go first."

"Suits. Lay on your duff and cursed be he who first cries, 'Nay, enough."

"I don't think they're interested in that now, Nanny Goat."

"Spoilsport. How do you swing back this bookcase?"

"Switch on the cove lights, then turn on the cold water at the sink. Then switch off the cove lights, then turn off the water-in that order."

"Curiouser and curiouser," said Alice."

The bookcase closed behind us and was a door with a knob on the upper landing side. The staircase was wide, treads were broad and nonskid, risers gentle, guard rails on both sides-not the legbreaker most houses have as cellar stairs. Deety went down beside me, holding my hand like a child needing reassurance.

The room was beautifully lighted, well ventilated, and did not seem like a basement. Our men were at the far end, bent over a table, and did not appear to notice us. I looked around for a time machine, could not spot it-at least not anything like George Pal's or any I had ever read about. All around was machinery. A drill press looks the same anywhere and so does a lathe, but others were strange-except that they reminded me of machine shops.

My husband caught sight of us, stood up, and said, "Welcome, ladies!"

Zebbie turned his head and said sharply, "Late to class! Find seats, no whispering during the lecture, take notes; there will be a quiz at eight o'clock tomorrow morning. If you have questions, raise your hands and wait to be called on. Anyone who misbehaves will remain after class and wash the chalk boards."

Deety stuck out her tongue, sat down quietly. I rubbed his brush cut and whispered an indecency into his ear. Then I kissed my husband and sat down.

My husband resumed talking to Zebbie. "I lost more gyroscopes that way."

I held up my hand. My husband said, "Yes, Hilda dear?"

"Monkey Ward's sells gyro tops-I'll buy you a gross."

"Thank you, dearest, but these weren't that sort. They were made by Sperry Division of General Foods."

"So I'll get them from Sperry."

"Sharpie," put in Zeb, "you're honing to clean the erasers, too."

"Just a moment, Son. Hilda may be the perfect case to find out whether or not what I have tried to convey to you-and which really can't be conveyed save in the equations your cousin Zebulon used, a mathematics you say is unfamiliar to you-"

"It is!"

"-but which you appear to grasp as mechanics. Would you explain the concept to Hilda? If she understands it, we may hypothesize that a continua craft can be designed to be operated by a nontechnical person."

"Sure," I said scornfully, "poor little me, with a button for a head. I don't have to know where the electrons go to use television or holovision. Ijust twist knobs. Go ahead, Zebbie. Take a swing at it, I dare you."

"I'll try," Zebbie agreed. "But, Sharpie, don't chatter and keep your comments to the point. Or I'll ask Pop to give you a fat lip."

"He wouldn't dast~"

"So? I'm going to give him a horsewhip for a wedding present-besides the Weird Tales, Jake; you get those too. But you need a whip. Attention, Sharpie."

"Yes, Zebbie. And the same to you doubled."

"Do you know what 'precess' means?"

"Certainly. Precession of the equinoxes. Means that Vega will be the North Star when I'm a great-grandmother. Thirty thousand years or some such."

"Correct in essence. But you're not even a mother yet."

"You don't know what happened last night. I'm an expectant mother. Jacob doesn't dare use a whip on me."

My husband looked startled but pleased-and I felt relieved. Zebbie looked at his own bride. Deety said solemnly, "It is possible, Zebadiah. Neither of us was protected, each was on or close on ovulation. Hilda is blood type B Rhesus positive and my father is AB positive. I am A Rh positive. May I inquire yours, sir?"

"I'm an 0 positive. Uh.. . I may have shot you down the first salvo."

"It would seem likely. But-does this meet with your approval?"

"Approval'!" Zebbie stood up, knocking over his chair. "Princess, you could not make me happier! Jake! This calls for a toast!"

My husband stopped kissing me. "Unanimous! Daughter, is there champagne chilled?"

"Yes, Pop."

"Hold it!" I said. "Let's not get excited over a normal biological function. Deety and I don't know that we caught; we just hope so. And-"

"So we try again," Zebbie interrupted. "What's your calendar?"

"Twenty-eight and a half days, Zebadiah. My rhythm is pendulum steady."

"Mine's twenty-seven; Deety and I just happen to be in step. But I want that toast at dinner and a luau afterwards; it might be the last for a long time. Deety, do you get morning sick?"

"I don't know; I've never been pregnant.. . before."

"I have and I do and it's miserable. Then I lost the naked little grub after trying hard to keep it. But I'm not going to lose this one! Fresh air and proper exercise and careful diet and nothing but champagne for me tonight, then not another drop until I know. In the meantime- Professors, may I point out that class is in session? I want to know about time machines and I'm not sure I could understand with champagne buzzing my buttonhead."

"Sharpie, sometimes you astound me."

"Zebbie, sometimes I astound myself. Since my husband builds time machines, I want to know what makes them tick. Or at least which knobs to turn. He might be clawed by the Bandersnatch and I would have to pilot him home. Get on with your lecture."

"I read you loud and clear."

But we wasted U'wasted?") a few moments because everybody had to kiss everybody else-even Zebbie and my husband pounded each other on the back and kissed both cheeks Latin style. Zebbie tried to kiss me as if I were truly his mother-in-law but I haven't kissed that way since junior high. Once I was firm with him he gave in and kissed me better than he ever had before-whew! I'm certain Deety is right but I won't risk worrying my older husband over a younger man and I'd be an idiot to risk competing with Deety's teats et cetera

when all I have is fried eggs and my wonderful old goat seems so pleased with my et cetera.

Class resumed. "Sharpie, can you explain precession in gyroscopes?"

"Well, maybe. Physics One was required but that was a long time ago. Push a gyroscope and it doesn't go the way you expect, but ninety degrees from that direction so that the push lines up with the spin. Like this-" I pointed a forefinger like a little boy going: "Bang!-you're dead!"

"My thumb is the axis, my forefinger represents the push, the other fingers show the rotation."

"Go to the head of the class. Now-think hard!-suppose we put a gyroscope in a frame, then impress equal forces at all three spatial coordinates at once; what would it do?"

I tried to visualize it. "I think it would either faint or drop dead."

"A good first hypothesis. According to Jake, it disappears."

"They do disappear, Aunt Hilda. I watched it happen several times."

"But where do they go?"

"I can't follow Jake's math; I have to accept his transformations without proof. But it is based on the notion of six space-time coordinates, three of space, the usual three that we see-marked x, y, and z-and three time coordinates:
one marked 't' like this-" (t) "-and one marked 'tau,' Greek alphabet-" ('i-) "-and the third from the Cyrillic alphabet, 'teh'-" (rn)

"Looks like an 'm' with a macron over it."

"So it does, but it's what the Russians use for 't."

"No, the Russians use 'chai' for tea. In thick glasses with strawberry jam."

"Stow it, Sharpie. So we have x, y, and z; t, tau, and teh, six dimensions. It is basic to the theory that all are at right angles to each other, and that any one may be swapped for any of the others by rotation-or that a new coordinate may be found (not a seventh but replacing any of the six) by translation-say 'tau' to 'tau prime' by displacement along 'x."

"Zebbie, I think I fell off about four coordinates back."

M~ husband suggested, "Show her the caltrop, Zeb."

"Good idea." Zeb accepted a widget from my husband, placed it in front of me. It looked like jacks I used to play with as a little girl but not enough things sticking out_four instead of six. Three touched the table, a tripod; the fourth stuck straight up.

Zeb said, "This is a weapon, invented centuries ago. The points should be sharp but these have been filed down." He flipped it, let it fall to the table. "No matter how it falls, one prong is vertical. Scatter them in front of cavalry; the horses go down-discouraging. They came into use again in Wars One and Two against anything with pneumatic tires-bicycles, motorcycles, lorries, and so forth. Big enough, they disable tanks and tracked vehicles. A small sort can be whittled from thorn bushes for guerrilla warfare-usually poisoned and quite nasty.

"But here this lethal toy is a geometrical projection, a drawing of the coordinates of a four-dimensional space-time continuum. Each spike is exactly ninety degrees from every other spike."
"fliit +h~~7 ~ ~ I ~ ~ ~ ~, mrn~ fh,iy, ~ ricj1,t ,it,crlt~ '~

"I said it was a projection. Sharpie, it's an isometric projection of fourdimensional coordinates in three-dimensional space. That distorts the angles.. . and the human eye is even more limited. Cover one eye and hold still and you see only two dimensions. The illusion of depth is a construct of the brain."

"I'm not very good at holding still-"

"No, she isn't," agreed my bridegroom whom I love dearly and at that instant could have choked.

"But I can close both eyes and feel three dimensions with my hands."

"A good point. Close your eyes and pick this up and think of the prongs as the four directions of a four-dimensional space. Does the word tesseract mean anything to you?"

"My high school geometry teacher showed us how to construct them-projections-with modeling wax and toothpicks. Fun. I found other four-dimensional figures that were easy to project. And a number of ways to project them."

"Sharpie, you must have had an exceptional geometry teacher."

"In an exceptional geometry class. Don't faint, Zebbie, but I was grouped with what they called 'overachievers' after it became 'undemocratic' to call them 'gifted children."

"Be durned! Why do you always behave like a fritterhead?"

"Why don't you ever look beneath the surface, young man! I laugh because I dare not cry. This is a crazy world and the only way to enjoy it is to treat it as a joke. That doesn't mean I don't read and can't think. I read everything from Giblett to Hoyle, from Sartre to Pauling. I read in the tub, I read on the john, I read in bed, I read when I eat alone, and I would read in my sleep if I could keep my eyes open. Deety, this is proof that Zebbie has never been in my bed: the books downstairs are display; the stuff I read is stacked in my bedroom."

"Deety, did you think I had been sleeping with Sharpie?"

"No, Zebadiah."

"And you never will! Deety told me what a sex maniac you are! You lay your lecherous hands on me and I'll scream for Jacob and he'll beat you to a pulp."

"Don't count on it, dear one," my husband said mildly. "Zeb is bigger and younger and stronger than I. . . and if I found it needful to try, Deety would cry and beat me to a pulp. Son, I should have warned you: my daughter is vicious at karate. The killer instinct."

"Thanks. Forewarned, forearmed. I'll use a kitchen chair in one hand, a revolver in the second, and a whip in the other, just as I used to do in handling the big cats for Ringling, Barnum, and Bailey."

"That's three hands," said Deety.

"I'm four-dimensional, darling. Professor, we can speed up this seminar; we've been underrating our overachiever. Hilda is a brain."

"Zebbie, can we kiss and make up?"

"Class is in session."

"Zebadiah, there is always time for that. Right, Pop?"

"Ki~ hc~v Smi nr Qhp'll sulk "

"I don't sulk, I bite."

"I think you're cute, too," Zebbie answered, grabbed me by both shoulders, dragged me over the table, and kissed me hard. Our teeth grated and my nipples went spung! Sometimes I wish I weren't so noble.

He dropped me abruptly and said, "Attention, class. The two prongs of the caltrop painted blue represent our three-dimensional space of experience. The third prong painted yellow is the t-time we are used to. The red fourth prong simulates both Tau-time and Teh-time, the unexplored time dimensions necessary to Jake's theory. Sharpie, we have condensed six dimensions into four, then we either work by analogy into six, or we have to use math that apparently nobody but Jake and my cousin Ed understands. Unless you can think of some way to project six dimensions into three-you seem to be smart at such projections."

I closed my eyes and thought hard. "Zebbie, I don't think it can be done. Maybe Escher could have done it."

"It can be done, my dearest," answered my dearest, "but it is unsatisfactory. Even with a display computer with capacity to subtract one or more dimensions at a time. A superhypertesseract-a to the sixth power-has too many lines and corners and planes and solids and hypersolids for the eye to grasp. Cause the computer to subtract dimensions and what you have left is what you already knew. I fear it is an innate incapacity of visual conception in the human brain."

"I think Pop is right," agreed Deety. "I worked hard on that program. I don't think the late great Dr. Marvin Minsky could have done it better in flat projection. Holovision? I don't know. I would like to try if I ever get my hands on a computer with holovideo display and the capacity to add, subtract, and rotate six coordinates."

"But why six dimensions?" I asked. "Why not five? Or even four, since you speak of rotating them interchangeably."

"Jake?" said Zeb.

My darling looked fussed. "It bothered me that a space-time continuum seemed to require three space dimensions but only one time dimension. Granted that the universe is what it is, nevertheless nature is filled with symmetries. Even after the destruction of the parity principle, scientists kept finding new ones. Philosophers stay wedded to symmetry-but I don't count philosophers."

"Of course not," agreed Zeb. "No philosopher allows his opinions to be swayed by facts-he would be kicked out of his guild. Theologians, the lot of them."

"I concur. Hilda my darling, after I found a way to experiment, it turned out that six dimensions existed. Possibly more-but I see no way to reach them."

"Let me see," I said. "If I understood earlier, each dimension can be swapped for any other."

"By ninety-degree rotation, yes."

"Wouldn't that be the combinations taken four at a time out of a set of six? How many is that?"

"Fifteen," Zebbie answered.

"Goodness! Fifteen whole universes? And we use only one?"

"No, no, my darling! That would be ninety-degree rotations of one Euclidean universe. But our universe, or universes, has been known to be non-Euclidean at least since 1919. Or 1886 if you prefer. I stipulate that cosmology is an imperfect discipline, nevertheless, for considerations that I cannot state in nonmathematical terms, I was

forced to assume a curved space of positive radius-that is to say, a closed space. That makes the universes possibly accessible to use either by rotation or by translation this number." My husband rapidly wrote three sixes.

"Six sixty-six," I said wonderingly. "The Number of the Beast."

"Eh? Oh! The Revelation of Saint John the Divine. But I scrawled it sloppily. You took it that I wrote this: "666" But what I intended to write was this:

666 ~ Six raised to its sixth power, and the result in turn raised to its sixth power. That number is this:" 1.03144 + X 10~~ "-or written in full:" 10,314,424,798,490,535,546,171,949,056 "-or more than ten million sextillion universes in our group."

What can one say to that? Jacob went on, "Those universes are our nextdoor neighbors, one rotation or one translation away. But if one includes comb inations of rotation and translation-think of a hyperplane slicing through superhypercontinua not at the point of here-now-the total becomes indenumerable. Not infinity-infinity has no meaning. Uncountable. Not subject to manipulation by mathematics thus far invented. Accessible to continua craft but no known way to count them."

"Pop-"

"Yes, Deety?"

"Maybe Aunt Hilda hit on something. Agnostic as you are, you nevertheless keep the Bible around as history and poetry and myth."

"Who said I was agnostic, my daughter?"

"Sorry, sir. I long ago reached that conclusion because you won't talk about it. Wrong of me. Lack of data never justifies a conclusion. But this key number-one-point-oh-three-one-four-four-plus times ten to its twenty-eighth power-perhaps that is the 'Number of the Beast."

"What do you mean, Deety?"

"That Revelation isn't history, it's not good poetry, and it's not myth. There must have been some reason for a large number of learned men to include it- while chucking out several dozen gospels. Why not make a first hypothesis with Occam's Razor and read it as what it purports to be? Prophecy."

"Hmm. The shelves under the stairs, next to Shakespeare. The King James version, never mind the other three."

Deety was back in a moment with a well-worn black book-which surprised me. I read the Bible for my own reasons but it never occurred to me that Jacob would, We always marry strangers.

"Here," said Deety. "Chapter thirteen, verse eighteen: 'Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number is Six hundred threescore and six."

"That can't be read as exponents, Deety."

"But this is a translation, Pop. Wasn't the original in Greek? I don't remember when exponents were invented but the Greek mathematicians of that time certainly understood powers. Suppose the original read 'Zeta, Zeta, Zeta!'-and those scholars, who weren't mathematicians, mistranslated it as six hundred and sixty-six?"

"Uh.. . moondrift, Daughter."

"Who taught me that the world is not only stranger than we imagine but stranger than we can imagine? Who has already taken me into two universes that are not this one. . . and brought me safely home?"

"Wait a half!" Zebbie said. "You and Pop have already tried the time-space machine?"

"Didn't Pop tell you? We made one minimum translation. We didn't seem to have gone anywhere and Pop thought he had failed. Until I tried to look up a number in the phone book. No 'J' in the book. No 'J' in the Britannica. No 'J' in any dictionary. So we popped back in, and Pop returned the verniers to zero, and we got out, and the alphabet was back the way it ought to be and I stopped shaking. But our rotation was even more scary and we almost died. Out in space with blazing stars-but air was leaking out and Pop just barely put it back to zero before we passed out. . . and came to, back here in Snug Harbor."

"Jake," Zebbie said seriously, "that gadget has got to have more fail-safes, in series with deadman switches for homing." He frowned. "I'm going to keep my eye open for both numbers, six sixty-six and the long one. I trust Deety's hunches. Deety, where is the verse with the description of the Beast? It's somewhere in the middle of the chapter."

"Here. 'And I beheld another beast coming up out of the earth; and he had two horns like a lamb, and he spake as a dragon."

"Hmm- I don't know how dragons speak. But if something comes up out of the earth and has two horns. . . and I see or hear either number-I'm going to assume that he has a 'Black Hat' and try to do unto him before he does unto us. Deety, I'm peaceable by policy. . . but two near misses is too many. Next time I shoot first."

I would as lief Zebbie hadn't mentioned "Black Hats." Hard to believe that someone was trying to kill anyone as sweet and innocent and harmless as my darling Jacob. But they were-and we knew it.

I said, "Where is this time machine? All I've seen is a claptrap."

'Caltrop,' Aunt Hilda. You're looking at the space-time machine."

"Huh? Where? Why aren't we in it and going somewhere fast? I don't want my husband killed; he's practically brand-new. I expect to get years of wear out of him."

"Sharpie, stop the chatter," Zebbie put in. "It's on that bench, across the table from you."

"All I see is a portable sewing machine." "That's it."

"What? How do you get inside? Or do you ride it like a broom?"

"Neither. You mount it rigidly in a vehicle-one airtight and watertight by strong preference. Pop had it mounted in their car-not quite airtight and now kaputt. Pop and I are going to mount it in Gay Deceiver, which is airtight. With better fail-safes."

"Much better fail-safes, Zebbie," I agreed.

"They will be. I find that being married makes a difference. I used to worry about my own skin. Now I'm worried about Deety's. And yours. And Pop's. All four of us."

"Hear, hear!" I agreed. "All for one, and one for all!"

"Yup," Zebbie answered. "Us four, no more. Deety, when's lunch?"

VII

"Avete, alieni, nos morituri vos spernimus!"

Deety:

While Aunt Hilda and I assembled lunch, our men disappeared. They returned just in time to sit down. Zebadiah carried an intercom unit; Pop had a wire that he plugged into a jack in the wall, then hooked to the intercom.

"Gentlemen, your timing is perfect; the work is all done," Aunt Hilda greeted them. "What is that?"

'A guest for lunch, my dearest," Pop answered. "Miss Gay Deceiver."

"Plenty for all," Aunt Hilda agreed. "I'll set another place." She did so; Zebadiah placed the intercom on the fifth plate. "Does she take coffee or tea?"

"She's not programmed for either, Hilda," Zebadiah answered, "but I thank you on her behalf. Ladies, I got itchy about news from Singapore and Sumatra. So I asked my autopilot to report. Jake came along, then pointed out that he had spare cold circuits here and there, just in case-and this was a just-incase. Gay is plugged to the garage end of that jack, and this is a voice-switched master-master intercom at this end. I can call Gay and she can call me if anything new comes in-and I increased her programming by reinstating the earlier programs, Logan and back home, for running retrieval of new data."

1')I add an outlet in the basement," agreed Pop. "But, Son, this is your home-not California."

"Well-"

"Don't fight it, Zebbie. This is my home since Jacob legalized me.. and any step-son-in-law of mine is at home here; you heard Jacob say so. Right, Deety?"

'Of course," I agreed. "Aunt Hilda is housewife and I'm scullery maid. But Snug Harbor is my home, too, until Pop and, Aunt Hilda kick me out into the snow-and that includes my husband."

"Not into snow, Deety," Aunt Hilda corrected me. "Jacob would insist on a sunny day; he's kind and gentle. But that would not leave you with no roof over your head. My California home-mine and Jacob's-has long been your home-from-home, and Zebbie has been dropping in for years, whenever he was hungry."

"I had better put my bachelor flat into the pot."

"Zebbie, you can't put Deety on your day bed. It's lumpy, Deety. Broken springs. Bruises. Zebbie, break your lease and send your furniture back to Good Will."

"Sharpie, you're at it again. Deety, there is no day bed in my digs. An emperor-size bed big enough for three-six if they are well acquainted."

"My Captain, do you go in for orgies?" I asked.

"No. But you can't tell what may turn up in the future."

"You always look ahead, Zebadiah," I said approvingly. "Am I invited?"

"At any orgy of mine, my wife will pick the guests and send the invitations."

"Thank you, sir. I'll wait until you seem to be bored, then look over the crop and pick out choice specimens for you. Assorted flavors and colors."

"My Princess, I will not spank a pregnant woman. But I can think about it. Pop, Snug Harbor continues to impress me. Did you use an architect?"

"Hrrumph! 'Architect' is a dirty word. I studied engineering. Architects copy each other's mistakes and call it 'Art.' Even Frank Lloyd Wright never understood what the

Gilbreths were doing. His houses looked great from the outside-inside they were hideously inefficient. Dust collectors. Gloomy. Psych lab rat mazes. Pfui!"

"How about Neutra?"

"If he hadn't been hamstrung by building codes and union rules and zoning laws, Neutra could have been great. But people don't want efficient machines for living; they prefer to crouch in medieval hovels, as their flea-bitten forebears did. Cold, drafty, unsanitary, poor lighting, and no need for any of it."

"I respect your opinion, sir. Pop-three fireplaces.. . no chimneys. How? Why?"

"Zeb, I like fireplaces-and a few cords of wood can save your life in the mountains. But I see no reason to warm the outdoors or to call attention to the fact that we are in residence or to place trust in spark arresters in forestfire country. Lighting a fire in a fireplace here automatically starts its exhaust fan. Smoke and particles are electrostatically precipitated. The precipitators are autoscrubbed when stack temperature passes twenty-five Celsius, dropping. Hot air goes through labyrinths under bathtubs and floors, then under other floors, thence into a rock heat-sink under the garage, a sink that drives the heat pump that serves the house. When flue gas finally escapes, at points distant from the house,' it is so close to ambient temperature that only the most sensitive heat-seeker could sniff it. Thermal efficiency plus the security of being inconspicuous."

"But suppose you are snowed in so long that your power packs play out?"

"Franklin stoves in storage, stove pipe to match, stops in the walls removable from inside to receive thimbles for flue pipes."

"Pop," I inquired, "is this covered by Rule One? Or was Rule One abolished last night in Elko?"

"Eh? The chair must rule that it is suspended until Hilda ratifies or cancels it. Hilda my love, years back Jane instituted Rule One-"

"I ratify it!"

"Thank you. But listen first. It applies to meals. No news broadcasts-"

"Pop," I again interrupted, "while Rule One is still in limbo-did Gay Deceiver have any news? I worry, I do!"

"Null retrievals, dear. With the amusing conclusion that you and I are still presumed to have died twice, but the news services do not appear to have noticed the discrepancy. However, Miss Gay Deceiver will interrupt if a bulletin comes in; Rule One is never invoked during emergencies. Zeb, do you want this rig in your bedroom at night?"

"I don't want it but should have it. Prompt notice might save our skins."

"We'll leave this here and parallel another into there, with gain stepped to wake you. Back to Rule One: No news broadcasts at meals, no newspapers. No shop talk, no business or financial matters, no discussion of ailments. No political discussion, no mention of taxes, or of foreign or domestic policy. Reading of fiction permitted en famille-not with guests present. Conversation limited to cheerful subjects-"

"No scandal, no gossip?" demanded Aunt Hilda.

"A matter of your judgment, dear. Cheerful gossip about friends and acquaintances, juicy scandal about people we do not like-fine! Now-do you wish to ratify, abolish, amend, or take under advisement?"

"I ratify it unchanged. Who knows some juicy scandal about someone we don't like?"

"I know an item about 'No Brain'-Doctor Neil Brain," Zebadiah offered.

"Give!"

"I got this from a reliable source but can't prove it."

"Irrelevant as long as it's juicy. Go ahead, Zebbie."

"Well, a certain zaftig coed told this on herself. She tried to give her all to 'Brainy' in exchange for a passing grade in the general math course necessary to any degree on our campus. It is rigged to permit prominent but stupid athletes to graduate. Miss Zaftig was flunking it, which takes exceptional talent.

"So she arranged an appointment with the department head-'Brainy'- and made her quid-pro-quo clear. He could give her horizontal tutoring then and there or in her apartment or his apartment or in a motel and she would pay for it or whenever and wherever he chose. But she had to pass."

"Happens on every campus, Son," Pop told him.

"I haven't reached the point. She blabbed the story-not angry but puzzled. She says that she was unable to get her intention over to him (which seems impossible, I've seen this young woman). 'Brainy' didn't accept, didn't refuse, wasn't offended, didn't seem to understand. He told her that she had better
talk to her instructor about getting tutoring and a re-exam. Now Miss Zaftig is circulating the story that Prof 'No Brain' must be a eunuch or a robot. Not even a homo. Totally sexless."

"He's undoubtedly stupid," Aunt Hilda commented. "But I've never met a man I couldn't get that point across to, if I tried. Even if he was uninterested in my fair virginal carcass. I've never tried with Professor Brain because I'm not interested in his carcass. Even barbecued."

"Then, Hilda my darling, why did you invite him to your party?"

"What? Because of your note, Jacob. I don't refuse you favors."

"But, Hilda, I don't understand. When I talked to you by telephone, I asked you to invite Zeb-under the impression that he was his cousin Zebulon-and I did say that two or three others from the department of mathematics might make it less conspicuously an arranged meeting. But I didn't mention Doctor Brain. And I did not write."

"Jacob-I have your note. In California. On your University stationery with your name printed on it."

Professor Burroughs shook his head, looked sad. Zebadiah Carter said, "Sharpie-handwritten or typed?"

"Typed. But it was signed! Wait a moment, let me think. It has my name and address down in the lower left. Jacob's name was typed, too, but it was signed 'Jake.' Uh.. . 'My dear Hilda, A hasty P.S. to my phone call of yesterday-Would you be so kind as to include Doctor Neil 0. Brain, chairman of mathematics? I don't know what possessed me that I forgot to mention him. Probably the pleasure of hearing your dear voice.

"Deety sends her love, as do I. Ever yours, Jacob J. Burroughs' with 'Jake' signed above the typed name."

Zebadiah said to me, "Watson, you know my methods."

"Certainly, my dear Holmes. A 'Black Hat.' In Logan."

"We knew that. What new data?"

"Well. . . Pop made that call from the house; I remember it. So somebody has a tap on our phone. Had, I mean; the fire probably destroyed it."

"A recording tap. The purpose of that fire may have been to destroy it and other evidence. For now we know that the 'Blokes in the Black Hats' knew that your father-and you, but it's Pop they are after-was in California last evening. After 'killing' him in California, they destroyed all they could in Utah. Professor, I predict that we will learn that your office was robbed last night-any papers on six-dimensional spaces."

Pop shrugged. "They wouldn't find much. I had postponed my final paper after the-humiliating-reception my preliminary paper received. I worked on it only at home, or here, and moved notes made in Logan to our basement here each time we came down."

"Any missing here?"

"I am certain this place has not been entered. Not that papers would matter; I have it in my head. The continua apparatus has not been touched."

"Zebadiah, is Doctor Brain a 'Black Hat'?" I asked.

"I don't know, Deety. He may be a stooge in their hire. But he's part of their plot, or they would not have risked forging a letter to put him into Hilda's house. Jake, how difficult is it to steal your professional stationery?"

"Not difficult. I don't keep a secretary; I send for a stenographer when I need one. I seldom lock my office when I'm on campus."

"Deety, can you scrounge pen and paper? I want to see how Jake signs 'Jake."

"Sure." I fetched them. "Pop's signature is easy; I often sign it. I hold his power of attorney."

"It's the simple signatures that are hardest to forge well enough to fool a handwriting expert. But their scheme did not require fooling an expert-phrasing the note was more difficult.. . since Hilda accepted it as ringing true."

"It does ring true, Son; it is very like what I would have said had I written such a note to Hilda."

"The forger probably has read many of your letters and listened to many of your conversations. Jake, will you write 'Jake' four or five times, the way you sign a note to a friend?"

Pop did so, my husband studied the specimens. "Normal variations." Zebadiah then signed "Jake" about a dozen times, looked at his work, took a fresh sheet, signed "Jake" once, passed it to Aunt Hilda. "Well, Sharpie?"

Aunt Hilda studied it. "It wouldn't occur to me to question it-on Jacob's stationary under a note that sounded like his phrasing. Where do we stand now?"

"Stuck in the mud. But we have added data. At least three are involved, two 'Black Hats' and Doctor Brain, who may or may not be a 'Black Hat.' He is, at minimum, a hired hand, an unwitting stooge, or a puppet they can move around like a chessman.

"While two plus 'Brainy' is minimum, it is not the most probable number. This scheme was not whipped up overnight. It involves arson, forgery, boobytrapping a car, wiretapping, theft, and secret communications between points widely separated, with coordinated criminal actions at each end-and it may involve doing in my cousin Zebulon. We can assume that the 'Black Hats' know that I am not the Zeb Carter who is the n-dimensional geometer; I'm written off as a bystander .who got himself killed.

"Which doesn't bother them. These playful darlings would swat a fly with a sledgehammer, or cure a cough with a guillotine. They are smart, organized, efficient, and vicious-and the only clue is an interest in six-dimensional nonEuclidean geometry.

"We don't have a glimmer as to 'who'-other than Doctor Brain, whose role is unclear. But, Jake, I think I know 'why'-and that will lead us to 'who."

"Why, Zebadiah?" I demanded.

"Princess, yourfather could have worked on endless other branches of mathematics and they would not have bothered him. But he happened-I don't mean chance; I don't believe in 'chance' in this sense-he worked on the one variety of the endless possible number of geometries-the only one that correctly describes how space-time is put together. Having found it, because he is a genius in both theory and practice, he saw that it was a means by which
to build a simple craft-amazingly simple, the greatest invention since the wheel-a space-time craft that offers access to all universes to the full Number of the Beast. Plus undenumerable variations ~f each of those many universes.

"We have one advantage."

"I don't see any advantage! They're shooting at my Jacob!"

"One strong advantage, Sharpie. The 'Black Hats' know that Jake has worked out this mathematics. They don't know that he has built his spacetime tail-twister; they think he has just put symbols on paper. They tried to discredit his work and were successful. They tried to kill him and barely missed. They probably think Jake is dead-and it seems likely that they have killed Ed. But they don't know about Snug Harbor."

"Why do you say that, Zeb? Oh, I hope they do not!-but why do you feel sure?"

"Because these blokes aren't fooling. They blew up your car and burned your flat; what would they do here?-if they knew. An A-bomb?"

"Son, do you think that criminals can lay hands on atomic weapons?"

"Jake, these aren't criminals. A 'criminal' is a member of the subset of the larger set 'human beings.' These creatures are not human."

"Eh? Zeb, your reasoning escapes me."

"Deety. Run it through the computer. The one between your ears."

I did not answer; Ijust sat and thought. After several minutes of unpleasant thoughts I said, "Zebadiah, the 'Black Hats' don't know about the apparatus in our basement."

"Conclusive assumption," my husband agreed, "because we are still alive."

"They are determined to destroy a new work in mathematics. . . and to kill the brain that produced it."

"A probability approaching unity," Zebadiah again agreed.

"Because it can be used to travel among the universes."

"Conclusive corollary," my husband noted.

"For this purpose, human beings fall into three groups. Those not interested in mathematics more complex than that needed to handle money, those who know a bit about other mathematics, and a quite small third group who could understand the possibilities."

"Yes."

"But our race does not know anything of other universes so far as I know."

"They don't. Necessary assumption."

"But that third group would not try to stop an attempt to travel among the universes. They would wait with intellectual interest to see how it turned out. They might believe or disbelieve or suspend judgment. But they would not oppose; they would be

delighted if my father succeeded. The joy of intellectual discovery-the mark of a true scientist."

I sighed and added, "I see no other grouping. Save for a few sick people, psychotic, these three subsets complete the set. Our opponents are not psychotic; they are intelligent, crafty, and organized."

"As we all know too well," Zebadiah echoed.

"Therefore our opponents are not human beings. They are alien intelligences from elsewhere." I sighed again and shut up. Being an oracle is a no-good profession!

"Or elsewhen. Sharpie, can you kill?"

"Kill whom, Zebbie? Or what?" "Can you kill to protect Jake?"

"You bet your frimpin' life I'll kill to protect Jacob!"

"I won't ask you, Princess; I know Dejah Thoris." Zebadiah went on, "That's the situation, ladies. We have the most valuable man on this planet to protect. We don't know from what. Jake, your bodyguard musters two Amazons, one small, one medium large, both probably knocked up, and one Cowardly Lion. I'd hire the Dorsai if I knew their P.O. Box. Or the Gray Lensman and all his pals. But we are all there are and we'll try! Avete, alieni, nos morituri vos spernimus! Let's break out that champagne."

"My Captain, do you think we should?" I asked. "I'm frightened."

"We should. I'm no good for more work today, and neither is Jake. Tomorrow we'll start installing the gadget in Gay Deceiver, do rewiring and reprogramming so that she will work for any of us. Meanwhile we need a couple of laughs and a night's sleep. What better time to drink life to the dregs than when we know that any hour may be our last?"

Aunt Hilda punched Zebadiah in the ribs. "Yer dern tootin', Buster! I'm going to get giggle happy and make a fool of myself and then take my man and put him to sleep with Old Mother Sharpie's Time-Tested Nostrum. Deety, I prescribe the same for you."

I suddenly felt better. "Check, Aunt Hilda! Captain John Carter always wins. 'Cowardly Lion' my foot! Who is Pop? The Little Wizard?"

"I think he is."

"Could be. Pop, will you open the bubbly? I always hurt my thumbs."

"Right away, Deety. I mean 'Dejah Thoris, royal consort of the Warlord."

"No need to be formal, Pop. This is going to be an informal party. Very! Pop! Do I have to keep my pants on?"

"Ask your husband. You're his problem now."

VIII

"Let us all preserve our iIlusion~-"

Hilda:

In my old age, sucking my gums in front of the fire and]iving over my misdeeds, Ill remember the next few days as the happiest in my lifi~. I'd had three honeymoons earlier, one with each of my term-contract husbands: two had been good, one had been okay and (eventually) ver lucrative. But my honeymoon with Jacob was heavenly.

The whiff of danger sharpened the joy. Jacob seemed unworried, and Zebbie has hunches, like a horseplayer. Seeing that Zebbie was i'elaxed, Deety got over being .jumpy-and I never was, as I hope to end like a firecracker, not linger on, ugly. helpless, useless..

A spice of danger adds zest to life. Even during a honeymoon-especially during a honeymoon.

An odd honeymoon. We worked hard but our husbands seemed never too busy for pat fanny, squeeze tittv, and unhurried kisses. Not a group marriage but two twosomes that were one family, comfortable each with the others. I dropped most of my own sparkv-bitch ways, and Zebbie sometimes called me Hilda" rather than "Sharpje."

Jacob and I moved into marriage like ham and eggs. Jacob is not tall (178 centimeters) but tall compared with my scant one fiftv-two~ and his hairline recedes and he has a paunch from years at a desk-hut he looks just right to me. If I wanted to look at male beauty, I could always look at Deety's giant- appreciate him without lusting: my own loving goat kept Sharpie quite blunted.

I did not decide, when Zebbie came on campus, to make a pet of him for his looks but for his veering sense of humor. But if there was ever a man who could have played the role of John Carter, Warlord of Mars, it was Zebadiah Carter whose middle name just happens to be "John." Indoors with clothes and wearing his fake horn-rims he looks awkward, too big, clumsy. I did not realize that he was beautiful and graceful until the first time he used my pooi. (That afternoon I was tempted to seduce him. But, as little dignity as I have, I had resolved to stick to older men, so I shut off the thought.)

Outdoors at Snug Harbor, wearing little or no clothes, Zebbie looked at home-a mountain lion in grace and muscle. An incident one later afternoon showed me how much he was like the Warlord of Mars. A sword- Those old stories were familiar to me. My father had acquired the Ballantine Del Rey paperback reissues; they were around the house when I was a little girl. Once I learned to read, I read everything, and vastly preferred Barsoom stories to "girls" books given to me for birthdays and Christmas. Thuvia was the heroine I identified with-"toy" of the cruel priests of Issus, then with virginity miraculously restored in the next book: Thuvia, Maid of Mars. I resolved to change my name to Thuvia when I was old enough. When I was eighteen, I did not consider it; I had always been "Hilda," a new name held no attraction.

I was responsible in part for Deety's name, one that embarrassed her until she discovered that her husband liked it. Jacob had wanted to name his daughter "Dejah Thoris" (Jacob looks like and is a professor, but he is incurably romantic). Jane had misgivings. I told her, "Don't be a chump, Janie. If your man wants something, and you can accommodate him with no grief, give it to him! Do you want him to love this child or to resent her?" Jane looked thoughtful and "Doris Anne" became "Dejah Thoris" at christening, then "Deety" before she could talk-which satisfied everyone.

We settled into a routine: Up early every day; our men worked on instruments and wires and things and installing the time-space widget into Gay Deceiver's gizzard-while Deety and I gave the housework a lick and a promise (our mountain home needed little attention-more of Jacob's genius), then Deety and I got busy on a technical matter that Deety could do with some help from me.

I'm not much use for technical work, biology being the only thing I studied in depth and never finished my degree. This was amplified by almost six thousand hours as

volunteer nurse's aid in our campus medical center and I took courses that make me an uncertified nurse or medical tech or even jackleg paramedic-I don't shriek at the sight of blood and can clean up vomit without a qualm and would not hesitate to fill in as scrub nurse. Being a campus widow with too much money is fun but not soul filling. I like to feel that I've paid rent on the piece of earth I'm using.

Besides that, I have a smattering of everything from addiction to the printed page, plus attending campus lectures that sound intriguing. . . then sometimes auditing a related course. I audited descriptive astronomy, took the final as if for credit_got an "A." I had even figured a cometary orbit correctly, to my surprise (and the professor's).

I can wire a doorbell or clean out a stopped-up soil pipe with a plumber's "snake"-but if it's really technical, I hire specialists.

So Hilda can help but usually can't do the job alone. Gay Deceiver had to be reprogrammed-and Deety, who does not look like a genius, is one. Jacob's daughter should be a genius and her mother had an I.Q. that startled even me, her closest friend. I ran across it while helping poor grief-stricken Jacob to decide what to save, what to burn. (I burned unflattering pictures, useless papers, and clothes. A dead person's clothes should be given away or burned; nothing should be kept that does not inspire happy memories. I cried a bit and that saved Jacob and Deety from having to cry later.)

We all held private duo licenses; Zebbie, as Captain Z. J. Carter, U.S.A.S.R., held "command" rating as well-he told us that his space rating was largely honorary, just some free-fall time and one landing of a shuttle. Zebbie is mendacious, untruthful, and tells fibs; I got a chance to sneak a look at his aerospace log and shamelessly took it. He had logged more than he claimed in one exchange tour with Australia. Someday I'm going to sit on his chest and make him tell Mama Hilda the truth. Should be interesting. . . if I can sort out fact from fiction. I do not believe his story about intimate relations with a female kangaroo.

Zebbie and Jacob decided that we all must be able to control Gay Deceiver all four ways, on the road, in the air, in trajectory (she's not a spaceship but can make high-trajectory jumps), and in space-time, i.e. among the universes to the Number of the Beast, plus variants impossible to count.

I had fingers crossed about being able to learn that, but both men assured me that they had worked out a fail-safe that would get me out of a crunch if I ever had to do it alone.

Part of the problem lay in the fact that Gay Deceiver was a one-man girl; her doors unlocked only to her master's voice or to his thumbprint, or to a tapping code if he were shy both voice and right thumb; Zeb tended to plan ahead-"Outwitting Murphy's Law," he called it, "Anything that can go wrong, will go wrong." (Grandma called it "The Butter-Side Down Rule.")

First priority was to introduce us to Gay Deceiver-teach her that all four voices and right thumbprints were acceptable.

That took a couple of hours, with Deety helping Zebbie. The tapping code took even less, it being based on an old military cadence-its trickiness being that a thief would be unlikely to guess that this car would open if tapped a certain way and in guessing the correct cadence. Zebbie called the cadence "Drunken Soldier." Jacob said that it was "Bumboat." Deety claimed that its title was "Pay Day," because she had heard it from Jane's grandfather.

Our men conceded that she must be right, as she had words for it. Her words included "Drunken Sailor" instead of "Drunken Soldier"-plus both "Pay Day" and "Bumboat."

Introductions taken care of, Zeb dug out Gay's anatomy, one volume her body, one her brain. He handed the latter to Deety, took the other into our basement. The next two days were easy for me, hard for Deety. I held lights and made notes on a clip board while she studied that book and frowned and
got smudged and sweaty getting herself into impossible positions and once she cursed in a fashion that would have caused Jane to scold. She added, "Aunt Nanny Goat, your step-son-in-law has done things to this mass of spaghetti that no decent computer should put up with! It's a bastard hybrid."

"You shouldn't call Gay 'it,' Deety. And she's not a bastard."

"She can't hear us; I've got her ears unhooked-except that piece that is monitoring news retrieval programs-and that goes through this wire to that jack in the wall; she can talk with Zebadiah only in the basement now. Oh, I'm sure she was a nice girl until that big ape of mine raped her. Aunt Hilda, don't worry about hurting Gay's feelings; she hasn't any. This is an idiot as computers go. Any one-horse college and most high schools own or share time in computers much more complex. This one is primarily cybernetics, an autopilot plus limited digital capacity and limited storage. But the mods Zebadiah has tacked on make it more than an autopilot but not a general-purpose computer. A misbegotten hybrid. It has far more random-number options than it needs and it has extra functions that IBM never dreamed of."

"Deety, why are you taking off cover plates? I thought you were strictly a programmer? Software. Not a mechanic."

"I am strictly a software mathematician. I wouldn't attempt to modify this monster even on written orders from my lovable but sneaky husband. But how in the name of Allah can a software hack think about simplification analysis for program if she doesn't know the circuitry? The first half of this book shows what this autopilot was manufactured to do. . . and the second half, the Xeroxed pages, show the follies Zebadiah has seduced her into. This bleedin' bundle of chips now speaks three logic languages, interfaced-when it was built to use only one. But it won't accept any of them until it has been wheedled with Zebadiah's double talk. Even then it rarely answers a code phrase with the same answer twice in a row. What does it say in answer to: 'You're a smart girl, Gay.'?"

"I remember. 'Boss, I bet you tell that to all the girls. Over."

"Sometimes. Oftenest, as that answer is weighted to come up three times as often as any of the others. But listen to this:

"Zeb, I'm so smart I scare myself.'

"Then why did you turn me down for that raise?'

"Never mind the compliments! Take your hand off my knee!'

"Not so loud, dear. I don't want my boyfriend to hear.'

"-and there are more. There are at least four answers to any of Zebadiah's code phrases. He uses just one list, but the autopilot answers several ways for each of his phrases-and all any of them mean is either 'Roger' or 'Null program; rephrase."

"I like the idea. Fun."

"Well. . . I do myself. I animize a computer; I think of them as people.. . and this semirandom answer list makes Gay Deceiver feel much more alive.. . when she isn't. Not even versatile compared with a ground-based computer. But-" Deety gave a quick smile. "I'm going to hand my husband some surprises."

"How, Deety?"

"You know how he says, 'Good morning, Gay. How are you?' when we sit down for breakfast."

"Yes. I like it. Friendly. She usually answers, 'I'm fine, Zeb."

"Yes. It's a test code. It orders the autopilot to run a self-check throughout and to report any running instruction. Which takes less than a millisecond. If he didn't get that or an equivalent answer, he would rush straight here to find out what's wrong. But I'm going to add another answer. Or more."

"I thought you refused to modify anything."

"Aunt Hillbilly, this is software, not hardware. I'm authorized and directed to amplify the answers to include all of us, by name for each of our voices. That is programming, elementary. You say good morning to this gadget and it will-when I'm finished-answer you and call you either 'Hilda' or 'Mrs. Burroughs."

"Oh, let her call me 'Hilda.'"

"All right, but let her call you 'Mrs. Burroughs' now and then for variety."

"Well. . . all right. Keep her a personality."

"I could even have her call you-low weighting!-'Nanny Goat."

I guffawed. "Do, Deety, please do. But I want to be around to see Jacob's face."

"You will be; it won't be programmed to answer that way to any voice but yours. Just don't say, 'Good morning, Gay' unless Pop is listening. But here's one for my husband: Zebadiah says, 'Good morning, Gay. How are you?'-and the speaker answers, 'I'm fine, Zeb. But your fly is unzipped and your eyes are bloodshot. Are you hung over again?"

Deety is so solemn and yet playful. "Do it, dear! Poor Zebbie-who drinks least of any of us. But he might not be wearing anything zippered."

"Zebadiah always wears something at meals. Even his underwear shorts are zippered. He dislikes elastic."

"But he'll recognize your voice, Deety."

"Nope. Because it will be your voice-modified."

And it was. I'm contralto about the range of the actress-or girl friend- who recorded Gay Deceiver's voice originally. I don't think my voice has her sultry, bedroom quality but I'm a natural mimic. Deety borrowed a wigglescope-oscilloscope?-from her father, my Jacob, and I practiced until my patterns for Gay Deceiver's original repertoire matched hers well enough- Deety said she could not tell them apart without close checking.

I got into the spirit of it, such as having Deety cause Gay Deceiver occasionally to say to my husband, "Fine-except for my back ache, you wicked old Billy Goat!"-and Jacob tripped that reply one morning when I did have a back ache, and I feel sure he had one, too.

We didn't put in answers that Deety felt might be too bawdy for Jacob's "innocent" mind-I didn't even hint how her father actually talked, to me in private. Let us

all preserve our illusions; it lubricates social relations. Possibly Deety and Zebbie talked the same way to each other in private-and regarded us "old folks" as hopelessly square.

IX

Most males have an unhealthy tendency to obey laws.

Deety:

Aunt Hilda and I finished reprogramming in the time it took Zebadiah and Pop to design and make the fail-safes and other mods needed to turn Gay Deceiver, with the time-space widget installed, into a continua traveler- which included placing the back seats twenty centimeters farther back (for leg room) after they had. bee~p~11ed out to place the widget abaft the bulkhead md ~~eld it to the shell The ~P~essing contiols and triple verniers wcic
remoted to the driver's instrument board-with one voice control for the widget, all others manual:

If any of our voices said, "Gay Deceiver, take us home!" car and passengers would instantly return to Snug Harbor.

I don't know but I trust my Pop. He brought us home safe twice, doing it with no fail-safes and no dead-man switch. The latter paralleled the "Take us home!" voice order, was normally clamped closed and covered-but could be uncovered and held in a fist, closed. There were other fail-safes for temperature, pressure, air, radar collision course, and other dangers. If we wound up inside a star or planet, none of this could save us, but it is easy to prove that the chances of falling downstairs and breaking your neck are enormously higher than the chance of co-occupying space with other matter in our native universe-space is plentiful, mass is scarce. We hoped that this would be true of other universes.

No way ahead of time to check on the Number-of-the-Beast spaces-but "The cowards never started and the weaklings d~jed on the way." None of us
ever mentioned not trying to travel the universes. Besides, our home planet had turned unfriendly. We didn't discuss "Black Hats" but we all knew that they were still here, and that we remained alive by lying doggo and letting the world think we were dead.

We ate breakfast better each morning after hearing Gay Deceiver offer "null report" on news retrievals. Zebadiah, I am fairly certain, had given up his cousin for dead. I feel sure Zebadiah would have gone to Sumatra to follow a lost hope, were it not that he had acquired a wife and a prospective child. I missed my next period, so did Hilda. Our men toasted our not-yet bulging bellies; Hilda and I smugly resolved to be good girls, yes, sir!-and careful. Hilda joined my morning toning up, and the men joined us the first time they caught us at it.

Zebadiah did not need it but seemed to enjoy it. Pop brought his waistline down five centimeters in one week.

Shortly after that toast Zebadiah pressure-tested Gay Deceiver's shell-four atmospheres inside her and a pressure gauge sticking out through a fitting in her shell.

There being little we could do while our space-time rover was sealed, we knocked off early. "Swim, anybody?" I asked. Snug Harbor doesn't have a citytype pool, and a mountain stream is too cooold. Pop had fixed that when he concealed our spring. Overflow was piped underground to a clump of bushes and thereby created a "natural" mountain rivulet that passed near the house; then Pop had made use of a huge fallen boulder, plus biggish ones, to create a pool, one that filled and spilled. He had done work with pigments in concrete to make this look like an accident of water flow.

This makes Pop sound like Paul Bunyan. Pop could have built Snug Harbor with his own hands. But Spanish-speaking labor from Nogales built the underground and assembled the prefab shell of the cabin. An air crane fetched parts and materials from an Albuquerque engineering company Jane had bought for Pop through a front-lawyers in Dallas. The company's manager drove the air crane himself, having had it impressed on him that this was for a rich client of the law firm, and that it would be prudent to do the job and forget it. Pop bossed the work in TexMex, with help from his secretary-me-Spanish being one language I had picked for my doctorate.

Laborers and mechanics never got a chance to pinpoint where they were, but they were well paid, well fed, comfortably housed in prefabs brought in by crane, and the backbreaking labor was done by power-who cares what "locos gringos" do? Two pilots had to know where we were building, but they homed in on a radar beacon that is no longer there.

"Blokes in Black Hats" had nothing to do with this secrecy; it was jungle caution I had learned from Mama: Never let the revenooers know anything. Pay cash, keep your lips closed, put nothing through banks that does not appear later in tax returns-pay taxes greater than your apparent standard of living and declare income accordingly. We had been audited three times since Mama died; each time the government returned a small "overpayment"- I was building a reputation of being stupid and honest.

My inquiry of "Swim, anybody?" was greeted with silence. Then Pop said, "Zeb, your wife is too energetic. Deety, later the water will be warmer and the trees will give us shade. Then we can walk slowly down to the pool. Zeb?"

"I agree, Jake. I need to conserve ergs."

"Nap?"

"I don't have the energy to take one. What were you saying this morning about reengineering the system?"

Aunt Hilda looked startled. "I thought Miss Gay Deceiver was already engineered? Are you thinking of changing everything?"

"Take it easy, Sharpie darlin'. Gay Deceiver is finished. A few things to stow that have been weighed and their moment arms calculated."

I could have told her. In the course of figuring what could be stowed in every nook and cranny and what that would do to Gay's balance, I had discovered that my husband had a highly illegal laser cannon. I said nothing, merely included its mass and distance from optimum center of weight in my calculations. I sometimes wonder which of us is the outlaw: Zebadiah or I? Most males have an unhealthy tendency to ob&y laws. But that concealed Lcannon made me wonder.

"Why not leave well enough alone?" Aunt Hilda demanded. "Jacob and God know I'm happy here. . . But You All Know Why We Should Not Stay Here Longer Than We Must."

"We weren't talking about Gay Deceiver; Jake and I were discussing reengineering the Solar System."

"The Solar System! What's wrong with it the way it is?"

"Lots of things," Zebadiah told Aunt Hilda. "It's untidy. Real estate going to waste. This tired old planet is crowded and sort o' worn in spots. True, industry in orbit and power from orbit have helped, and both Lagrange-Four and -Five have self-supporting populations; anybody who invested in space stations early enough made a pile." (Including Pop, Zebadiah!) "But these are minor compared with what can be done- and this planet is in worse shape each year. Jake's six-dimensional principle can change that."

"Move people into another universe? Would they go?"

"We weren't thinking of that, Hilda. We're trying to apply Clarke's Law."

"I don't recall it. Maybe it was while I was out with mumps."

"Arthur C. Clarke," Pop told her. "Great man-too bad he was liquidated in The Purge. Clarke defined how to make a great discovery or create a key invention. Study what the most respected authorities agree can not be done- then do it. My continua craft is a godchild of Clarke via his Law. His insight inspired my treatment of six-dimensional continua. But this morning Zeb added corollaries."

"Jake, don't kid the ladies. I asked a question; you grabbed the ball and ran."

"Uh, we heterodyned. Hilda, you know that the time-space traveler doesn't require power."

"I'm afraid I don't know, darling man. Why were you installing power packs in Gay Deceiver?"

"Auxiliary uses. So that you won't have to cook over an open fire, for example."

"But the pretzel bender doesn't use po~er," agreed Zebadiah. "Don't ask why. I did, and Jake started writing equations in Sanskrit and I got a headache."

"It doesn't use power, Aunt Hilda," I agreed. "Just parasitic power. A few microwatts so that the gyros never slow down, milliwatts for instrument readouts and for controls-but the widget itself uses none."

"What happened to the law of conservation of energy?"

"Sharpie," my husband answered, "as a fairish mechanic, an amateur electron pusher, and as a bloke who has herded unlikely junk through the sky, I never worry about theory as long as machinery does what it is supposed to do. I worry when a machine turns and bites me. That's why I specialize in fail-safes and backups and triple redundancy. I try never to get a machine sore at me. There's no theory for that but every engineer knows it."

"Hilda my beloved, the law of conservation of mass-energy is not broken by our continua craft; it is simply not relevant to it. Once Zeb understood that-"

"I didn't say I understood it."

"Well. . . once Zeb stipulated that, he raised interesting questions. For example: Jupiter doesn't need Ganymede-"

"Whereas Venus does. Although Titan might be better."

"Mmm. . . possible."

"Yes. Make an inhabitable base more quickly. But the urgent prob1em~: Jake, is to seed Venus, move atmosphere to Mars, put both of them through;, forced aging. Then respot them. Earth-Sol Trojan points?"

"Certainly. We've had millions of years of evolution this distance from the Sun. We had best plan on living neither closer nor farther. With careful attention to stratospheric protection. But I still have doubts about anchoring in the Venerian crust. We wouldn't want to lose the planet on Tau axis."

"Mere R. & D., Jake. Calculate pressures and temperatures; beef up the vehicle accordingly-spherical, save for exterior anchors-then apply a jigger factor of four. With automatic controls quintuply redundant. Catch it when it comes out and steady it down in Earth's orbit, sixty degrees trailing-and start selling subdivisions the size of old Spanish Land Grants. Jake, we should gather enough mass to create new earths at all Trojan points, a hexagon around the Sun. Five brand-new earths would give the race room enough to. breed. On this maiden voyage let's keep our eyes open."

Aunt Hilda looked at Zebadiah with horror. "Zebbie! Creating planets in~ deed! Who do you think you are? Jesus Christ?"

"I'm not that junior. That's the Holy Ghost over there, scratching his belly., The Supreme Inseminator. I'm the other one, the Maker and Shaper. But ii~ setting up a pantheon for the Celestial Age, we're going to respect women'S rights, Hilda. Deety is Earth Mother; she's perfect for the job. You are Moofl Goddess, Selene. Good job, dear-more moons than earths. It fits you. You'r~ little and silvery and you wax and wane and you're beautiful in all your phaseS~ How about it? Us four and no more."

"Quit pulling my leg!"

My husband answered, "I haven't been pulling your leg. Come closer and I will; you have pretty legs, Step-Mother-in-Law. These things Jake and I have been discussing are practical-once we thought about the fact that the spacetime twister uses no power. Move anything anywhere-all spaces, all times. I add the plural because at first I could not see what Jake had in mind when he spoke of forced aging of a planet. Rotate Venus into the Tau axis, fetch it back along Teh axis, reinsert it centuries-or millennia-older at this point in 't' axis. Perhaps translate it a year or so into the future-our future-so as to be ready for it when it returns, all sweet and green and beautiful and ready to grow children and puppies and butterflies. Terraformed but virginal."

Aunt Hilda looked frightened. "Jacob? Would one highball do any harm to this peanut inside me? I need a bracer."

"I don't think so. Jane often had a drink with me while she was pregnant. Her doctor did not have her stop until her third trimester. Can't see that it hurt Deety. Deety was so healthy she drove Jane home from the hospital."

"Pop, that's a fib. I didn't learn to drive until I was three months old. But I need one, too," I added. "Zebadiah?"

"Certainly, Princess. A medicinal drink should be by body mass. That's half a jigger for you, Sharpie dear, a jigger for Deety, a jigger and a half for Jake- two jiggers for me."

"Oh, how unfair!"

"It certainly is," I agreed. "I outweigh Pop-he's been losing, I've been gaining. Pick us up and see!"

My husband took us each around the waist, crouched, then straightened and lifted us.

"Close to a standoff," he announced. "Pop may be a trifle heavier, but you're more cuddly"-kissed me and put us down.

"There is no one more cuddly than Jacob!"

"Hilda, you're prejudiced. Let's each mix our own drinks, at the strength required for our emotional and physical conditions."

So we did-it wound up with Hilda and me each taking a jigger with soda, Pop taking a jigger and a half over ice-and Zebadiah taking a half jigger of vodka and drowning it with Coke.

While we were sipping our "medicine," Zebadiah, sprawled out, looked up over the fireplace. "Pop, you were in the Navy?"

"No-Army. If you count 'chair-borne infantry.' They handed me a commission for having a doctorate in mathematics, told me they needed me for ballistics. Then I spent my whole tour as a personnel officer, signing papers."

"Standard Operating Procedure. That's a Navy sword and belt up there. Thought it might be yours."

"It's Deety's-belonged to Jane's Grandfather Rodgers. I have a dress saber. Belonged to my Dad, who gave it to me when the Army took me. Dress blues, too. I took them with me, never had occasion to wear either." Pop got up and went into his-their bedroom, calling back, "I'll show you the saber."

My husband said to me, "Deety, would you mind my handling your sword?"

"My Captain, that sword is yours."

"Heavens, dear, I can't accept an heirloom."

"If my warlord will not permit his princess to gift him with a sword, he can leave it where it is! I've been wanting to give you a wedding present-and did not realize that I had the perfect gift for Captain John Carter."

"My apologies, Dejah Thoris. I accept and will keep it bright. I will defend my princess with it against all enemies."

"Helium is proud to accept. If you make a cradle of your hands, I can stand in them and reach it down."

Zebadiah grasped me, a hand above each knee, and I was suddenly three meters tall. Sword and belt were on hooks; I lifted them down, and myself was placed down. My husband stood straight while I buckled it around him-then he dropped to one knee and kissed my hand.

My husband is mad north-northwest but his madness suits me. I got tears in my eyes which Deety doesn't do much but Dejah Thoris seems prone to, since John Carter made her his.

Pop and Aunt Hilda watched-then imitated, including (I saw!) tears in Hilda's eyes after she buckled on Pop's saber, when he knelt and kissed her hand.

Zebadiah drew sword, tried its balance, sighted along its blade. "Handmade and balanced close to the hilt. Deety, your great-grandfather paid a pretty penny for this. It's an honest weapon."

"I don't think he knew what it cost. It was presented to him."

"For good reason, I feel certain." Zebadiah stood back, went into hanging guard, made fast moulinets vertically, left and right, then horizontally clockwise and counterclockwise-suddenly dropped into swordsman's guard- lunged and recovered, fast as a striking cat.

I said softly to Pop, "Did you notice?"

Pop answered quietly. "Know saber. Sword, too."

Hilda said loudly, "Zebbie! You never told me you went to Heidelberg."

"You never asked, Sharpie. Around the Red Ox they called me 'The Scourge of the Neckar."

"What happened to your scars?"

"Never got any, dear. I hung around an extra year, hoping for one. But no one got through my guard-ever. Hate to think about how many German faces I carved into checkerboards."

"Zebadiah, was that where you took your doctorate?"

My husband grinned and sat down, still wearing sword. "No, another school ."

"M.I.T.?" inquired Pop.

"Hardly. Pop, this should stay in the family. I undertook to prove that a man can get a doctorate from a major university without knowing anything and without adding anything whatever to human knowledge."

"1 think you have a degree in aerospace engineering," Pop said flatly.

"I'll concede that I have the requisite hours. I hold two degrees-a bacca laureate in humane arts. . . meaning I squeaked through. . . and a doctorate from an old and prestigious school-a Ph.D. in education."

"Zebadiah! You wouldn't!" (I was horrified.)

"But I did, Deety. To prove that degrees per se are worthless. Often they are honorifics of true scientists or learned scholars or inspired teachers. Much more frequently they are false faces for overeducated jackasses."

Pop said, "You'll get no argument from me, Zeb. A doctorate is a union card to get a tenured job. It does not mean that the holder thereof is wise or learned."

"Yes, sir. I was taught it at my grandfather's knee-my Grandfather Zachariah, the man responsible for the initial 'Z' in the names of his male descendants. Deety, his influence on me was so strong that I must explain him- no, that's impossible; I must tell about him in order to explain me. . . and how I happened to take a worthless degree."

Hilda said, "Deety, he's pulling a long bow again."

"Quiet, woman. 'Get thee to a nunnery, go!"

"I don't take orders from my step-son-in-law. Make that a monastery and I'll consider it."

I kept my blinkin' mouf shut. My husband's fibs entertain me. (If they are fibs.)

"Grandpa Zach was as cantankerous an old coot as you'll ever meet. Hated government, hated lawyers, hated civil servants, hated preachers, hated automobiles, public schools, and telephones, was contemptuous of most editors, most writers, most professors, most of almost anything. But he' overtipped waitresses and porters and would go out of his way to avoid stepping on an insect,

"Grandpa had three doctorates: biochemistry, medicine, and law-and he regarded anyone who couldn't read Latin, Greek, Hebrew, French, and German as illiterate."

"Zebbie, can you read all those?"

"Fortunately for me, my grandfather had a stroke while filling out a tax form before he could ask me that question. I don't know Hebrew. I can read Latin, puzzle out Greek, speak and read French, read technical German, understand it in some accents, swear in Russian-very useful!-and speak an ungrammatical smattering of Spanish picked up in cantinas and from horizontal dictionaries.

"Grandpa would have classed me as subliterate as I don't do any of these well-and I sometimes split infinitives which would have infuriated him. He practiced forensic medicine, medical jurisprudence, was an expert witness in toxicology, pathology, and traumatology, bullied judges, terrorized lawyers, medical students, and law students. He once threw a tax assessor out of his office and required him to return with a search warrant setting forth in detail its constitutional limitations, He regarded the income tax and the Seventeenth Amendment and the direct primary as signs of the decay of the Republic."

"How did he feel about the Nineteenth?"

"Hilda, Grandpa Zach supported female suffrage. I remember hearing him say that if women were so dad-burned foolish as to want to assume the burden, they should be allowed to-they couldn't do the country more harm than men had. 'Votes for Women' didn't annoy him but nine thousand other things did. He lived at a slow simmer, always ready to break into a rolling boil.

"He had one hobby: collecting steel engravings."

"Steel engravings'?" I repeated.

"Of dead presidents, my Princess. Especially of McKinley, Cleveland, and Madison-but he didn't scorn those of Washington. He had that instinct for timing so necessary to a collector. In 1929 on Black Thursday he held not one share of common stock; instead he had sold short. When the 1933 Bank Holiday came along every old-dollar he owned, except current cash, was in Zurich in Swiss money. Eventually U.S. citizens were forbidden by 'emergency' decree to own gold even abroad.

"Grandpa Zach ducked into Canada, applied for Swiss citizenship, got it, and thereafter split his time between Europe and America, immune to inflation and the confiscatory laws that eventually caused us to knock three zeros off ~ the old-dollar in creating the newdollar.

"So he died rich, in Locarno-beautiful place; I stayed with him two summers as a boy. His will was probated in Switzerland and the U.S. Revenue Service could not touch it.

"Most of it was a trust with its nature known to his offspring before his death or I would not have been named Zebadiah.

"Female descendants got pro-rata shares of income with no strings attached but males had to have first names starting with 'Z'-and even that got them not one Swiss franc; there was a 'Root, hog, or die!' clause. Zachariah believed in taking care of daughters, but sons and grandsons had to go out and scratch, with no help from their fathers, until they had earned and saved on their own-or accumulated without going to jail-assets equal to one pro-rata share of the capital sum of the trust before they shared in the trust's income."

"Sexism," said Aunt Hilda. "Raw, unadulterated sexism. Any FemLib gal would sneer at his dirty old money, on those terms."

"Would you have refused it, Sharpie?"

"Me? Zebbie dear, are you feverish? I would have both greedy hands out. I'm strong for women's rights but no fanatic. Sharpie wants to be pampered and that's what men are best at-their natural function."

"Pop, do you need help in coping with her?"

"No, Son. I like pampering Hilda. I don't see you abusing my daughter."

"I don't dare; you told me she's vicious at karate." (I am good at karate; Pop made sure that I learned all the dirty fighting possible. But not against Zebadiah! If I ever do-Heaven forbid!-find myself opposed to my husband, I'll quiver my chin and cry.)

"On my graduation from high school my father had a talk with me. 'Zeb,' he told me. 'The time has come. I'll put you through any school you choose. Or you can take what you have saved, strike out on your own, and try to qualify for a share in your grandfather's will. Suit yourself, I shan't influence you.'

"Folks, I had to think. My father's younger brother was past forty and still hadn't qualified. The size of the trust made a pro-rata of its assets amount to a requirement that a male descendant had to get rich on his own-well-to-do at least-whereupon he was suddenly twice as rich. But with over half of this country's population living on the taxes of the lesser number it is not as easy to get rich as it was in Grandpa's day.

"Turn down a paid-for education at Princeton, or M.I.T.? Or go out and try to get rich with nothing but a high school education?-I hadn't learned much in high school; I had majored in girls.

"So I had to think hard and long. Almost ten seconds. I left home next day with one suitcase and a pitiful sum of money.

"Wound up on campus that had two things to recommend it: an Aerospace R.O.T.C. that would pick up part of my expenses, and a phys. ed. department willing to award me a jockstrap scholarship in exchange for daily bruises and contusions, plus all-out effort whenever we played. I took the deal."

"What did you play?" asked my father.

"Football, basketball, and track-they would have demanded more had they been able to figure a way to do it."

"I had thought you were going to mention fencing."

"No, that's another story. These did not quite close the gap. So I also waited tables for meals-food so bad the cockroaches ate out. But that closed the gap, and I added to it by tutoring in mathematics. That gave me my start toward piling up money to qualify."

I asked, "Did tutoring math pay enough to matter? I tutored math before Mama died; the hourly rate was low."

"Not that sort of tutoring, Princess. I taught prosperous young optimists not to draw to inside straights, and that stud poker is not a game of chance, but that craps is, controlled by mathematical laws that cannot be flouted with impunity. To quote Grandfather Zachariah, 'A man who bets on greed and dishonesty won't be wrong too often.' There is an amazingly high percentage of greedy people and it is even easier to win from a dishonest gambler than it is from an honest one. . . and neither is likely to know the odds at craps, especially side bets, or all of the odds in poker, in particular how odds change according to the number of players, where one is seated in relation to the dealer, and how to calculate changes as cards are exposed in stud.

"That was also how I quit drinking, my darling, except for special celebrations. In every 'friendly' game some players contribute, some take a profit; a player determined to take a profit must be neither drunk nor tired. Pop, the shadows are growing long-I don't think anybody wants to know how I got a worthless doctorate."

"I do!" I put in. "Me, too!" echoed Aunt Hilda.

"Son, you're outvoted."

"Okay. Two years active duty after I graduated. Sky jockeys are even more optimistic than students and have more money-meanwhile I learned more math and engineering. Was sent inactive just in time to be called up again for the Spasm War, Didn't get hurt, I was safer than civilians. But that kept me
on another year even though fighting was mostly over before I reported in. That made me a veteran, with benefits. I went to Manhattan and signed up for school again. Doctoral candidate. School of Education. Not serious at first, simply intending to use my veteran's benefits while enjoying the benefits of being a student-and devote most of my time to piling up cash to qualify for the trust.

"I knew that the stupidest students, the silliest professors, and the worst bull courses are concentrated in schools of education. By signing for largeclass evening lectures and the unpopular eight am. classes I figured I could spend most of my time finding out how the stock market ticked. I did, by working there, before I risked a dime.

"Eventually I had to pick a research problem or give up the advantages of being a student. I was sick of a school in which the pie was all meringue and no filling but I stuck as I knew how to cope with courses in which the answers are matters of opinion and the opinion that counts is that of the professor. And how to cope with those large-class evening lectures: Buy the lecture notes. Read everything that professor ever published. Don't cut too often and when you do show up, get there early, sit front row center, be certain the prof catches your eye every time he looks your way-by never taking your eyes off him. Ask one question you know he can answer because you've picked it out of his published papers-and state your name in asking a question. Luckily 'Zebadiah Carter' is a name easy to remember. Family, I got straight 'A's' in both required courses and seminars. . . because I did not study 'education,' I studied professors of education.

"But I still had to make that 'original contribution to human knowledge' without which a candidate may not be awarded a doctor's degree in most socalled disciplines. . . and the few that don't require it are a tough row to hoe.

"I studied my faculty committee before letting myself be tied down to a research problem. . . not only reading everything each had published but also buying their publications or paying the library to make copies of out-of-print papers."

My husband took me by my shoulders. "Dejah Thoris, here follows the title of my dissertation. You can have your divorce on your own terms."

"Zebadiah, don't talk that way!"

"Then brace yourself. 'An Ad-Hoc Inquiry Concerning the Optimization of the Infrastructure of Primary Educational Institutions at the Interface Between Administration and Instruction, with Special Attention to Group Dynamics Desiderata."

"Zebbie! What does that mean?"

"It means nothing, Hilda."

"Zeb, quit kidding our ladies. Such a title would never be accepted."

"Jake, it seems certain that you have never taken a course in a school of education."

"Well. . . no. Teaching credentials are not required at university level but-"

"But me no 'huts,' Pop. I have a copy of my dissertation; you can check its authenticity. While that paper totally lacks meaning it is a literary gem in the sense in which a successful forging of an 'old master' is itself a work of art. It is loaded with buzz words. The average length of sentences is eightyone words. The average word length,

discounting 'of,' 'a,' 'the,' and other syntactical particles, is eleven-plus letters in slightly under four syllables. The bibliography is longer than the dissertation and cites three papers of each member of my committee and four of the chairman, and those citations are quoted in part-while avoiding any mention of matters on which I knew that members of the committee held divergent (but equally stupid) opinions.

"But the best touch was to get permission to do field work in Europe and have it count toward time on campus; half the citations were in foreign languages, ranging from Finnish to Croatian-and the translated bits invariably agreed with the prejudices of my committee. It took careful quoting out of context to achieve this, but it had the advantage that the papers were unlikely to be on campus and my committee were not likely to go to the trouble of looking them up even if they were. Most of them weren't at home in other languages, even easy ones like French, German, and Spanish.

"But I did not waste time on phony field work; I simply wanted a trip to Europe at student air fares and the use of student hostels-dirt cheap way to travel. And a visit to the trustees of Grandpa's fund.

"Good news! The fund was blue chips and triple-A bonds and, at that time, speculative stocks were rising. So the current cash value of the fund was down, even though income was up. And two more of my cousins and one uncle had qualified, again reducing the pro-rata. . . so, Glory Be!-I was within reaching distance. I had brought with me all that I had saved, swore before a notary that it was all mine, nothing borrowed, nothing from my father-and left it on deposit in Zurich, using the trustees as a front. And I told them about my stamp and coin collection.

"Good stamps and coins never go down, always up. I had nothing but proof sets, first-day covers, and unbroken sheets, all in perfect condition-and had a notarized inventory and appraisal with me. The trustees got me to swear that the items I had collected before I left home had come from earned money- true, the earliest items represented mowed lawns and such-and agreed to hold the pro-rata at that day's cash value-lower if the trend continued-if I would sell my collection and send a draft to Zurich, with businesslike speed as soon as I returned to the States.

"I agreed. One trustee took me to lunch, tried to get me liquored up-then offered me ten percent over appraisal if I would sell that very afternoon, then send it to him by courier at his expense (bonded couriers go back and forth between Europe and America every week).

"We shook hands on it, went back and consulted the other trustees. I signed papers transferring title, the trustee buying signed his draft to me, I endorsed it to the trustees to add to the cash I was leaving in their custody. Three weeks later I got a cable certifying that the collection matched the inventory. I had qualified

'Five months later I was awarded the degree of doctor of philosophy, summa cum laude, And that, dear ones, is the shameful story of my life, Anyone have the energy to go swimming?"

"Son, if there is a word of truth in that, it is indeed a shameful story."

"Pop! That's not fair! Zebadiah used their rules-.-and outsmarted them!"

"I didn't say that Zeb had anything to be ashamed of. It is a commentary on American higher education. What Zeb claims to have written is no worse than trash I know is accepted as dissertations these days. His case is the only one I have encountered wherein an intelligent and able scholar-you, Zeb- set out to show that an 'earned' Ph.D.

could be obtained from a famous institution-I know which one!-in exchange for deliberately meaningless pseudoresearch. The cases I have encountered have involved button-counting by stupid and humorless young persons under the supervision of stupid and humorless old fools. I see no way to stop it; the rot is too deep. The only answer is to chuck the system and start over." My father shrugged. "Impossible."

"Zebbie," Aunt Hulda asked, "what do you do on campus? I've never asked."

My husband grinned. "Oh, much what you do, Sharpie."

"I don't do anything. Enjoy myself."

"Me, too. If you look, you will find me listed as 'research professor in residence.' An examination of the university's books would show that I am paid a stipend to match my rank. Further search would show that slightly more than that amount is paid by some trustees in Zurich to the university's general fund. . . as long as I remain on campus, a condition not written down. I like being on campus, Sharpie; it gives me privileges not granted the barbarians outside the pale. I teach a course occasionally, as supply for someone on sabbatical or ill."

"Huh? What courses? What departments?"

'Any department but education. Engineering mathematics. Physics OneOh-One. Thermogoddamics. Machine elements. Saber and dueling sword. Swimming, And-don't laugh-English poetry from Chaucer through the Elizabethans. I enjoy teaching something worth teaching. I don't charge for courses I teach; the Chancellor and I understand each other,"

"I'm not sure I understand you," I said, "but I love you anyhow. Let's go swimming."

X

"'-and he had two horns like a lamb,
and he spake as a dragon'!"

Zeb:

Before heading for the pooi our wives argued over how Barsoomian warriors dress-a debate complicated by the fact that I was the only one fairly sober. While I was telling my 'shameful story," Jake had refreshed his Scotch-onrocks and was genially argumentative, Our brides had stuck to one highball each but, while one jigger gave Deety a happy glow, Sharpie's mass is so slight that the same dosage made her squiffed.

Jake and I agreed to wear side arms. Our princesses had buckled them on; we would wear them. But Deety wanted me to take off the grease-stained shorts I had worn while working. "Captain John Carter never wears clothes. He arrived on Barsoom naked, and from then on never wore anything but the leather and weapons of a fighting man. Jeweled leather for state occasions, plain leather for fighting-and sleeping silks at night. Barsoomians don't wear clothes. When John Carter first laid eyes on Dejah Thoris," Deety closed her eyes and recited: "She was as destitute of clothes as the Green Martians.. . save for her highly wrought ornaments she was entirely naked..." Deety opened her eyes, stared solemnly. "The women never wear clothes, just jewelry."

"Purty shilly," said her father, with a belch. "Scuse me!"

"When they were chilly, they wrapped furs around them, Pop. I mean 'Mors Kajak, my revered father.'"

Jake answered with slow precision. "Not. . . 'chilly.' Silly! With a clash of blades and flash of steel, man doesn't want family treasures swinging in the breeze 'n' banging his knees. Distracts him. Might get 'em sliced off. Correc', Captain John Carter?"

"Logical," I agreed.

"Besides, illustrations showed men wearing breech clouts. Pro'ly steel jockstrap underneath. I would."

"Those pictures were painted early in the twentieth century, Pop. Censored. But the stories make it clear. Weapons for men, jewelry for women-furs for cold weather."

"I know how I should dress," put in Sharpie. "Thuvia wears jewels on bits of gauze-I remember the book cover. Not clothes. Just something to fasten jewels to. Deety-Dejah Thoris, I mean-do you have a gauze scarf I can use? Fortunately I was wearing pearls when Mors Kajak kidnapped me."

"Sharpie," I objected, "you can't be Thuvia. She married Carthoris. Mors Kajak-or Mors Kajake, might be a misspelling-is your husband."

"Cer'nly Mors Jake is my husband! But I'm his second wife; that explains everything. But it ill becomes the Warlord to address a princess of the House of Ptarth as 'Sharpie." Mrs. Burroughs drew herself up to her full 152 centimeters and tried to look offended.

"My humble apologies, Your Highness."

Sharpie giggled. "Can't stay mad at our Warlord. Dejah Thoris hon- Green tulle? Blue? Anything but white."

"I'll go look."

"Ladies," I objected, "if we don't get moving, the pooi will cool off. You can sew on pearls this evening. Anyhow, where do pearls come from on Barsoom? Dead sea bottoms-no oysters."

"From Korus, the Lost Sea of Dor," Deety explained.

"They've got you, Son. But I either go swimming right now-or I have another drink. . . and then another, and then another. Working too hard. Too tense. Too much worry."

"Okay, Pop; we swim. Aunt H- Aunt Thuvia?"

"All right, Dejah Thoris. To save Mors Jacob from himself. But I won't wear earthling clothes. You can have my mink cape; may be chilly coming back."

Jake wrapped his sarong into a breech clout, strapped it in place with his saber belt. I replaced those grimy shorts with swim briefs which Deety conceded were "almost Barsoomian." I was no longer dependent on Jake's clothes; my travel kit, always in my car, once I got at it, supplied necessities from passport to poncho. Sharpie wore pearls and rings she had been wearing at her party, plus a scarf around her waist to which she attached all the costume jewelry Deety could dig up. Deety carried Hilda's mink cape-then wrapped it around her. "My Captain, someday I want one like this."

"I'll skin the minks personally," I promised her.

"Oh, dear! I think this is synthetic."

"I don't. Ask Hilda."

"I will most carefully not ask her. But I'll settle for synthetic."

I said, "My beloved Princess, you eat meat. Minks are vicious carnivores and the ones used for fur are raised for no other purpose-not trapped. They are well treated, then killed humanely. If your ancestors had not killed for
meat and fur as the last glaciation retreated, you would not be here. Illogical sentiment leads to the sort of tragedy you find in India and Bangladesh."

Deety was silent some moments as we followed Jake and Hilda down toward the pool. "My Captain-"

"Yes, Princess?"

"I stand corrected. But your brain works so much like a computer that you scare me."

"I don't ever want to scare you. I'm not bloodthirsty-not with minks, not with steers, not with anything. But I'll kill without hesitation.. . for you."

"Zebadiah-"

"Yes, Deety?"

"I am proud that you made me your wife. I will try to be a good wife. . . and your princess."

"You do. You have. You always will. Dejah Thoris, my princess and only love, until I met you, I was a boy playing with oversized toys. Today I am a man. With a wife to protect and cherish. . . a child to plan for. I'm truly alive, at last! Hey! What are you sniffling about? Stop it!"

"I'll cry if I feel like it!"

"Well. . . don't get it on Hilda's cape."

"Gimme a hanky."

"I don't even have a Kleenex." I brushed away her tears with my fingers. "Sniff hard. You can cry on me tonight. In bed."

"Let's go to bed early."

"Right after dinner. Sniffles all gone?"

"I think so. Do pregnant women always cry?"

"So I hear."

"Well. . . I'm not going to do it again. No excuse for it; I'm terribly happy."

"The Polynesians do something they call 'Crying happy.' Maybe that's what you do."

"I guess so. But I'll save it for private." Deety started to shrug the cape off. "Too hot, lovely as it feels." She stopped with the cape off her shoulders, suddenly pulled it around her again. "Who's coming up the hill?"

I looked up, saw that Jake and Hilda had reached the pool-and a figure was appearing from below, beyond the boulder that dammed it.

"I don't know. Stay behind me." I hurried toward the pool.

The stranger was dressed as a Federal Ranger. As I closed in, I heard the stranger say to Jake, "Are you Jacob Burroughs?"

"Why do you ask?"

"Are you or aren't you? If you are, I have business with you. If you're not, You're trespassing. Federal land, restricted access."

"Jake!" I called out. "Who is he?"

The newcomer turned his head. "Who are you?"

"Wrong sequence," I told him. "You haven't identified yourself."

"Don't be funny," the stranger said. "You know this uniform. I'm Bennie Hibol, the Ranger hereabouts."

I answered most carefully, "Mr. Highball, you are a man in a uniform, wearing a gun belt and a shield. That doesn't make you a Federal officer. Show your credentials and state your business."

The uniformed character sighed. "I got no time to listen to smart talk." He rested his hand on the butt of his gun. "If one of you is Burroughs, speak up. I'm going to search this site and cabin. There's stuff coming up from Sonora; this sure as hell is the transfer point."

Deety suddenly came out from behind me, moved quickly and placed herself beside her father. "Where's your search warrant? Show your authority!" She had the cape clutched around her; her face quivered with indignation.

"Another joker!" This clown snapped open his holster. "Federal land-here's my authority!"

Deety suddenly dropped the cape, stood naked in front of him. I drew, lunged, and cut down in one motion-slashed the wrist, recovered, thrust upward from low line into the belly above the gun belt.

As my point entered, Jake's saber cut the side of the neck almost to decapitation. Our target collapsed like a puppet with cut strings, lay by the pool, bleeding at three wounds.

"Zebadiah, I'm sorry!"

"About what, Princess?" I asked as I wiped my blade on the alleged ranger's uniform. I noticed the color of the blood with distaste.

"He didn't react! I thought my strip act would give you more time."

"You did distract him," I reassured her. "He watched you and didn't watch me. Jake, what kind of a creature has bluish green blood?"

"I don't know."

Sharpie came forward, squatted down, dabbed a finger in the blood, sniffed it. "Hemocyanin. I think," she said calmly. "Deety, you were right. Alien. The largest terrestrial fauna with that method of oxygen transport is a lobster. But this thing is no lobster, it's a 'Black Hat.' How did you know?"

"I didn't. But he didn't sound right. Rangers are polite. And they never fuss about showing their I.D.'s."

"I didn't know," I admitted. "I wasn't suspicious, just annoyed."

"You moved mighty fast," Jake approved.

"I never know why till it's over. You didn't waste time yourself, tovarishch. Drawing saber while he was pulling a gun-that takes guts and speed. But let's not talk now-where are his pals? We may be picked off getting back to the house."

"Look at his pants," Hilda suggested. "He hasn't been on horseback. Hasn't climbed far, either. Jacob, is there a jeep trail?"

"No. This isn't accessible by jeep-just barely by horse."

"Hasn't been anything overhead," I added. "No chopper, no air car."

"Continua craft," said Deety.

"Huh?"

"Zebadiah, the 'Black Hats' are aliens who don't want Pop to build a timespace machine. We know that. So it follows that they have continua craft.

I thouaht about it. "Deety. I'm going to bring you breakfast in bed. Jake, how do we spot an alien continua craft? It doesn't have to look like Gay Deceiver."

Jake frowned. "No. Any shape. But a one-passenger craft might not be much larger than a phone booth."

"If it's a one-man-one-alien-job, it should be parked down in that scrub," I said, pointing. "We can find it."

"Zebadiah," protested Deety, "we don't have time to search. We ought to get out of here! Fast!"

Jake said, "My daughter is right but not for that reason. Its craft is not necessarily waiting. It could be parked an infinitesimal interval away along any of six axes, and either return automatically, preprogrammed, or by some method of signaling that we can postulate but not describe. The alien craft would not be here-now. . . but will be here-later. For pickup."

"In that case, Jake, you and I and the gals should scram out of here-now to there-then. Be missing. How long has our pressure test been running? What time is it?"

"Seventeen-seventeen," Deety answered instantly.

I looked at my wife. "Naked as a frog. Where do you hide your watch, dearest? Surely, not there."

She stuck out her tongue. "Smarty. I have a clock in my head. I never mention it because people give me funny looks."

"Deety does have innate time sense," agreed her father, "accurate to thirteen seconds plus or minus about four seconds; I've measured it."

"I'm sorry, Zebadiah-I don't mean to be a freak."

"Sorry about what, Princess? I'm impressed. What do you do about time zones?"

"Same as you do. Add or subtract as necessary. Darling, everyone has a built-in circadian. Mine is merely more nearly exact than most people's. Like having absolute pitch-some do, some don't."

"Are you a lightning calculator?"

"Yes. . . but computers are so much faster that I no longer do it much. Except one thing- I can sense a glitch-spot a wrong answer. Then I look for garbage in the program. If I don't find it, I send for a hardware specialist. Look, sweetheart, discuss my oddities later. Pop, let's dump that thing down the septic tank and go. I'm nervous, I am."

"Not so fast, Deety." Hilda was still squatting by the corpse. "Zebbie. Consult your hunches. Are we in danger?"

"Well . . . not this instant."

"Good. I want to dissect this creature."

"Aunt Hilda!"

"Take a Miltown, Deety. Gentlemen, the Bible or somebody said, 'Know thy enemy.' This is the only 'Black Hat' we've seen. . . and he's not human and not born on earth. There is a wealth of knowledge lying here and it ought not to be shoved down a septic tank until we know more about it. Jacob, feel this."

Hilda's husband got down on his knees, let her guide his hand through the "ranger's" hair. "Feel those bumps, dearest?"

"Yes!"

"Much like the budding horns of a lamb, are they not?"

"Oh- 'And I beheld another beast coming up out of the earth; and he had two horns like a lamb, and he spake as a dragon'!"

I squatted down, felt for horn buds. "Be damned! He did come up out of the earth-up this slope anyhow-and he spake as a dragon. Talked unfriendly, and all the dragons I've ever heard of talked mean or belched fire. Hilda, when you field-strip this critter, keep an eye out for the Number of the Beast."

"I shall! Who's going to help me get this specimen up to the house? I want three volunteers."

Deety gave a deep sigh, "I volunteer. Aunt Hilda.. . must you do this?"

"Deety, it ought to be done at Johns Hopkins, with x-ray and proper tools and color holovision. But I'm the best biologist for it because I'm the only biologist. Honey child, you don't have to watch. Aunt Sharpie has helped in an emergency room after a five-car crash; to me, blood is just a mess to clean up. Green blood doesn't bother me even that much."

Deety gulped. "I'll help carry. I said I would!"

"Dejah Thoris!"

"Sir? Yes, my Captain?"

"Back away from that. Take this. And this." I unbuckled sword and belt, shoved down my swimming briefs, handed all of it to Deety. "Jake, help me get him up into fireman's carry."

"I'll help carry, Son."

"No, I can tote him easier than two could. Sharpie, where do you want to work?"

"It will have to be the dining table."

"Aunt Hilda, I don't want that thing on my-! I beg your pardon; it's your dining table."

"You're forgiven only if you'll concede that it is our dining table. Deety, how many times must I repeat that I am not crowding you out of your home? We are co-housewives-my only seniority lies in being twenty years older. To my regret."

"Hilda my dear one, what would you say to a workbench in the garage with a drop cloth on it and flood lights over it?"

"I say, 'Swell!' I don't think a dining table is the place for a dissection, either. But I couldn't think of anywhere else."

With help from Jake, I got that damned carcass draped across my shoulders in fireman's carry. Deety started up the path with me, carrying my belt and sword and my briefs in one arm so that she could hold my free hand-despite my warning that she might be splashed with alien blood. "No, Zebadiah, I got overtaken by childishness. I won't let it happen again. I must conquer all squeamishness-I'll be changing diapers soon." She was silent a moment. "That is the first time I've seen death. In a person, I mean. An alien humanoid person I should say. . . but I thought he was a man. I once saw a puppy run over-I threw up. Even though it was not my puppy and I didn't go close." She added, "An adult should face up to death, should she not?"

"Face up to it, yes," I agreed. "But not grow calloused. Deety, I've seen too many men die. I've never grown inured to it. One must accept death, learn not to fear it, then never worry about it. 'Make Today Count!' as a friend whose days are numbered told me. Live in that spirit and when death comes, it will come as a welcome friend."

"You say much what my mother told me before she died."

"Your mother must have been an extraordinary woman. Deety, in the two weeks I've known you, I've heard so much about her from all three of you that I feel as if I knew her. A friend I hadn't seen lately. She sounds like a wise woman."

"I think she was, Zebadiah. Certainly she was good. Sometimes, when I have a hard choice, I ask myself, 'What would Mama do?'-and everything falls into place."

"Both good and wise. . . and her daughter shows it. Uh, how old are you, Deety?"

"Does it matter, sir?"

"No. Curiosity."

"I wrote my birth date on our marriage license application."

"Beloved, my head was spinning so hard that I had trouble remembering my own. But I should not have asked-women have birthdays, men have ages. I want to know your birthday; I have no need to know the year."

"April twenty-second, Zebadiah-one day older than Shakespeare."

"Age could not wither her-' Woman, you carry your years well."

"Thank you, sir."

"That snoopy question came from having concluded in my mind that you were twenty-six.. . figuring from the fact that you have a doctor's degree. Although you look younger."

"I think twenty-six is a satisfactory age."

"I wasn't asking," I said hastily. "I got confused from knowing Hilda's age. . . then hearing her say that she is-or claims to be-twenty years older than you. It did not jibe with my earlier estimate, based on your probable age on graduating from high school plus your two degrees."

Jake and Hilda had lingered at the pool while Jake washed his hands and rinsed from his body smears of alien ichor. Being less burdened, they climbed the path faster than we and came up behind us just as Deety answered,

"Zebadiah, I never graduated from high school."

"That's right," agreed her father. "Deety matriculated by taking College Boards. At fourteen. No problem since she stayed home and didn't have to live in a dorm. Got her B.S. in three years. . . and that was a happy thing, as Jane lived to see Deety move the tassel from one side of her mortar board to the other. Jane in a wheelchair and happy as a child-her doctor said it couldn't hurt her.. . meaning she was dying anyhow." He added, "Had her mother been granted only three more years she could have seen Deety's doctorate conferred, two years ago."

"Pop. . . sometimes you chatter."

"Did I say something out of line?"

"No, Jake," I assured him. "But I've just learned that I robbed the cradle. I knew I had but hadn't realized how much. Deety darling, you are twentytwo."

"Is twenty-two an unsatisfactory age?"

"No, my Princess. Just right."

"My Captain said that women have birthdays while men have ages. Is it permitted to inquire your age, sir? I didn't pay close attention to that form we had to fill out, either."

I answered solemnly. "But Dejah Thoris knows that Captain John Carter is centuries old, cannot recall his childhood, and has always looked thirty years old."

"Zebadiah, if that is your age, you've had a busy thirty years. You said you left home when you graduated from high school, worked your way through college, spent three years on active duty, then worked your way through a doctor's degree-"

"A phony one!"

"That doesn't reduce required residence. Aunt Hilda says you've been a professor four years."

"Uh. . . will you settle for nine years older than you are?"

"I'll settle for whatever you say."

"He's at it again," put in Sharpie. "He was run off two other campuses. Coed scandals. Then he found that in California nobody cared, so he moved west."

I tried to look hurt. "Sharpie darling, I always married them. One gal turned out already to be married and in the other case the child wasn't mine; she slipped one over on me."

"The truth isn't in him, Deety. But he's brave and he bathes every day and he's rich-and we love him anyhow."

"The truth isn't in you either, Aunt Hilda. But we love you anyhow. It says in 'Little Women' that a bride should be half her husband's age plus seven years. Zebadiah and I hit close to that."

"A rule that makes an old hag out of me. Jacob, I'm just Zebbie's age- thirty-one. But we've both been thirty-one for ages."

"I'll bet he does feel aged after carrying that thing uphill. Atlas, can you support your burden while I get the garage open, a bench dragged out and covered? Or shall I help you put it down?"

"I'd just have to pick it up again. But don't dally."

XI

"-citizens must protect themselves."

Zeb:

I felt better after I got that "ranger's" corpse dumped and the garage door closed, everyone indoors. I had told Hilda that I felt no "immediate" danger- but my wild talent does not warn me until the Moment of Truth. The "Blokes in the Black Hats" had us located. Or possibly had never lost us; what applies to human gangsters has little to do with aliens whose powers and motives and plans we had no way to guess.

We might be as naive as a kitten who thinks he is hidden because his head is, unaware that his little rump sticks out.

They were alien, they were powerful, they were multiple (three thousand? three million?-we didn't know the Number of the Beast)-and they knew where we were. True, we had killed one-by luck, not by planning. That "ranger" would be missed; we could expect more to call in force.

Foolhardiness has never appealed to me. Given a chance to run, I run. I don't mean I'll bug out on wing mate when the unfriendlies show up, and certainly not on a wife and unborn child. But I wanted us all to run-me, my wife, my blood brother who

was also my father-in-law, and his wife, my chum Sharpie who was brave, practical, smart, and unsqueamish (that she would joke in the jaws of Moloch was not a fault but a source of esprit).

I wanted us to go!-Tau axis, Teh axis, rotate, translate, whatever-anywhere not infested by gruesomes with green gore.

I checked the gauge and felt better; Gay's inner pressure had not dropped. ~'oo much to expect Gay to be a spaceship-not equipped to scavenge and replenish air. But it was pleasant to know that she would hold pressure much longer than it would take us to scram for home if we had to-assuming that unfriendlies had not shot holes in her graceful shell.

I went by the inside passageway into the cabin, used soap and hot water, rinsed off and did it again, dried down and felt clean enough to kiss my wife, which I did. Deety held onto me and reported.

"Your kit is packed, sir. I'm finishing mine, the planned weight and space, and nothing but practical clothes-"

"Sweetheart."

"Yes, Zebadiah?"

"Take the clothes you were married in and mine too. Same for Jake and Hilda. And your father's dress uniform. Or was it burned in Logan?"

"But, Zebadiah, you emphasized rugged clothes."

"So I did. To keep your mind on the fact that we can't guess the conditions we'll encounter and don't know how long we'll be gone or if we'll be back. So I listed everything that might be useful in pioneering a virgin planet-since we might be stranded and never get home. Everything from Jake's microscope and water-testing gear to technical manuals and tools. And weapons-and flea powder. But it's possible that we will have to play the roles of ambassadors for humanity at the court of His Extreme Majesty, Overlord of Galactic Empires in thousandth-and-third continuum. We may need the gaudiest clothes we can whip up. We don't know, we can't guess."

"I'd rather pioneer."

"We may not have a choice. When you were figuring weights, do you recall spaces marked 'Assigned mass such and such-list to come'?"

"Certainly. Total exactly one hundred kilos, which seemed odd. Space slightly less than one cubic meter split into crannies."

"Those are yours, snubnose. And Pop or Hilda. Mass can be up to fifty percent over; I'll tell Gay to trim to match. Got an old doll? A security blanket? A favorite book of poems? Scrapbook? Family photographs? Bring 'em all!"

"Golly!" (I never enjoy looking at my wife quite so much as when she lights up and is suddenly a little girl.)

"Don't leave space for me. I have only what I arrived with. What about shoes for Hilda?"

"She claims she doesn't need any, Zebadiah-that her calluses are getting calluses on them. But I've worked out expedients. I got Pop some Dr. Scholl's shoe liners when we were building; I have three pairs left and can trim them. Liners and enough bobby sox make her size three-and-half feet fit my clodhoppers pretty well. And I have a sentimental keepsake; Keds Pop bought me when I first went to summer camp, at ten. They fit Aunt Hilda."

"Good girl!" I added, "You seem to have everything in hand. How about food? Not stores we are carrying, I mean now. Has anybody thought about dinner? Killing aliens makes me hungry."

"Buffet style, Zebadiah. Sandwiches and stuff on the kitchen counter, and I thawed and heated an apple pie. I fed one sandwich to Hilda, holding it for her; she says she's going to finish working, then scrub before she eats anything more."

"Sharpie munched a sandwich while she carved that thing?"

"Aunt Hilda is rugged, Zebadiah-almost as rugged as you are."

"More rugged than I am. I could do an autopsy if I had to-but not while eating. I think I speak for Jake, too."

"I know you speak for Pop. He saw me feeding her, turned green and went elsewhere. Go look at what she's been doing, Zebadiah; Hilda has found interesting things."

"Hmmm- Are you the little girl who had a tizzy at the idea of dissecting a dead alien?"

"No, sir, I am not. I've decided to stay grown up. It's not easy. But it's more satisfying. An adult doesn't panic at a snake; she just checks to see if it's got rattles. I'll never squeal again. I'm grown up at last. . . a wife instead of a pampered princess."

"You will always be my Princess!"

"I hope so, my Chieftain. But to merit that, I must learn to be a pioneer mother-wring the neck of a rooster, butcher a hog, load while my husband shoots, take his place and his rifle when he is wounded. I'll learn-I'm stubborn, I am. Grab a hunk of pie and go see Hilda. I know just what to do with the extra hundred kilos: books, photographs, Pop's microfilm files and portable viewer, Pop's rifle and a case of ammo that the weight schedule didn't allow for-"

"Didn't know he had it-what calibre?"

"Seven point six two millimeters, long cartridge."

"Glory be! Pop and I use the same ammo!"

"Didn't know you carried a rifle, Zebadiah."

"I don't advertise it, it's unlicensed. I must show all of you how to get at it."

"Got any use for a lady's purse gun? A needle gun, Skoda fléchettes. Not much range but either they poison or they break up and expand. . . and it fires ninety times on one magazine."

"What are you, Deety? Honorable Hatchet Man?"

"No, sir. Pop got it for me-black market-when I started working nights. He said he would rather hire shysters to get me acquitted-or maybe probation-than to have to go down to the morgue to identify my body. Haven't had to use it; in Logan I hardly need it. Zebadiah, Pop has gone to a great deal of trouble to get me the best possible training in self-defense. He's just as highly trained-that's why I keep him out of fist fights. Because it would be a massacre. He and Mama decided this when I was a baby. Pop says cops and courts no longer protect citizens, so citizens must protect themselves."

"I'm afraid he's right."

"My husband, I can't evaluate my opinions of right and wrong because I learned them from my parents and haven't lived long enough to have formed opinions in disagreement with theirs."

"Deety, your parents did okay."

"I think so. . . but that's subjective. As may be, I was kept out of blackboard jungles-public schools-until we moved to Utah. And I was trained to fight- armed or unarmed. Pop and I noticed how you handled a sword. Your moulinets are like clockwork. And when you drop into point guard, your forearm is perfectly covered."

"Jake is no slouch. He drew so fast I never saw it, and cut precisely above the collar."

"Pop says you are better at it."

"Mmm- Longer reach. He's probably faster. Deety, the best swordmaster I ever had was your height and reach. I couldn't even cross blades with him unless he allowed me to."

"You never did say where you had taken up swordsmanship."

I grinned down at her. "Y.M.C.A. in downtown Manhattan. I had foil in high school. I fiddled with saber and épée in college. But I never encountered swordsmen until I moved to Manhattan. Took it up because I was getting soft. Then during that so-called 'research trip' in Europe I met swordsmen with family tradition-sons and grandsons and great-grandsons of maItres d'armes. Learned that it was a way of life-and I had started too late. Deety, I fibbed to Hilda; I've never fought a student duel. But I did train in saber in Heidelberg under the Säbelmeister reputed to coach one underground Korps. He was the little guy I couldn't cross steel with. Fast! Up to then I had thought I was fast. But I got faster under his tutelage. The day I was leaving he told me that he wished he had had me twenty years sooner; he might have made a swordsman of me."

"You were fast enough this afternoon!"

"No, Deety. You had his eye, I attacked from the flank. You won that fight- not me, not Pop. Although what Pop did was far more dangerous than what I did."

"My Captain, I will not let you disparage yourself! I cannot hear you!"

Women, bless their warm hearts and strange minds-Deety had appointed me her hero; that settled it. I would have to try to measure up. I cut a piece of apple pie, ate it quickly while I walked slowly through the passage into the garage-didn't want to reach the "morgue" still eating.

The "ranger" was on its back with clothes cut away, open from chin to crotch, and spread. Nameless chunks of gizzard were here and there around the cadaver. It gave off a fetid odor.

Hilda was still carving, ice tongs in left hand, knife in her right, greenish goo up over her wrists. As I approached she put down the knife, picked up a razor blade-did not look up until I spoke. "Learning things, Sharpie?"

She put down her tools, wiped her hands on a towel, pushed back her hair with her forearm. "Zebbie, you wouldn't believe it."

"Try me."

"Well. . . look at this." She touched the corpse's right leg, and spoke to the corpse itself. "What's a nice joint like this doing in a girl like you?"

I saw what she meant: a long, gaunt leg with an extra knee lower than the human knee; it bent backwards. Looking higher, I saw that its arms had similar extra articulation. "Did you say 'girl'?"

"I said 'girl.' Zebbie, this monster is either female or hermaphroditic. A fully developed uterus, two-horned like a cat, one ovary above each horn. But there appear to be testes lower down and a dingus that may ~e a retractable phallus. Female-but probably

male as well. Bisexual but does not impregnate itself; the plumbing wouldn't hook up. I think these critters can both pitch and catch."

"Taking turns? Or simultaneously?"

"Wouldn't that be sump'n? No, for mechanical reasons I think they take turns. Whether ten minutes apart or ten years, deponent sayeth not. But I'd give a pretty to see two of 'em going to it!"

"Sharpie, you've got a one-track mind."

"It's the main track. Reproduction is the main track; the methods and mores of sexual copulation are the central feature of all higher developments of life."

"You're ignoring money and television."

"Piffle! All human activities including scientific research are either mating dances and care of the young, or the dismal sublimations of born losers in the only game in town. Don't try to kid Sharpie. Took me forty-two years to grab a real man and get myself knocked up-but I made it! Everything I've done up to the last two weeks has been 'vamp till ready.' How about you, you shameless stud? Am I not right? Careful how you answer; I'll tell Deety."

"I'll take the Fifth."

"Make mine a quart. Zebbie, I hate these monsters; they interfere with my plans-a rose-covered cottage, a baby in the crib, a pot roast in the oven, me in a gingham dress, and my man coming down the lane after a hard day flunking freshmen-me with his slippers and his pipe and a dry martini waiting for him. Heaven! All else is vanity and vexation. Four fully developed mammary glands but lacking the redundant fat characteristic of the human female-'cept me, damn it. A double stomach, a single intestine. A two-compartment heart that seems to pump by peristalsis rather than by beating. Cordate. I haven't examined the brain; I don't have a proper saw-but it must be as well developed as ours. Definitely humanoid, outrageously nonhuman. Don't knock over those bottles; they are specimens of body fluids."

"What are these things?"

"Splints to conceal the unhuman articulation. Plastic surgery on the face, too, I'm pretty sure, and cheaters to reshape the skull. The hair is fake; these Boojums don't have hair. Somethinglike tattooing-or maybe masking I haven't been able to peel off-to make the face and other exposed skin look human instead of blue-green. Zeb, seven-to-two a large number of missing persons have been used as guinea pigs before they worked out methods for this masquerade. Swoop! A flying saucer dips down and two more guinea pigs wind up in their laboratories."

"There hasn't been a flying saucer scare in years."

"Poetic license, dear. If they have space-time twisters, they can pop up anywhere, steal what they want-or replace a real human with a convincing fake-and be gone like switching off a light."

"This one couldn't get by very long. Rangers have to take physical examinations."

"This one may be a rush job, prepared just for us. A permanent substitution might fool anything but an x-ray-and might fool even x-ray if the doctor giving the examination was one of Them. . . a theory you might think about. Zebbie, I must get to work. There is so much to learn and so little time. I can't learn a fraction of what this carcass could tell a real comparative biologist."

"Can I help?" (I was not anxious to.)

"Well-"

"I haven't much to do until Jake and Deety finish assembling the last of what they are going to take. So what can I do to help?"

"I could work twice as fast if you would take pictures. I have to stop to wipe my hands before I touch the camera."

"I'm your boy, Sharpie. Just say what angle, distance, and when."

Hilda looked relieved. "Zebbie, have I told you that I love you despite your gorilla appearance and idiot grin? Underneath you have the soul of a cherub. I want a bath so badly I can taste it-could be the last hot bath in a long time. And the bidet-the acme of civilized decadence. I've been afraid I would still be carving strange meat when Jacob said it was time to leave."

"Carve away, dear; you'll get your bath." I picked up the camera, the one Jake used for record-keeping: a Polaroid Stereo-Instamatic-self-focusing, automatic irising, automatic processing, the perfect camera for engineer or scientist who needs a running record.

I took endless pictures while Hilda sweated away. "Sharpie, doesn't it worry you to work with bare hands? You might catch the Never-Get-Overs."

"Zebbie, if these critters could be killed by our bugs, they would have arrived here with no immunities and died quickly. They didn't. Therefore it seems likely that we can't by hurt by their bugs. Radically different biochemistries."

It sounded logical-but I could not forget Kettering's Law: "Logic is an organized way of going wrong with confidence."

Deety appeared, set down a loaded hamper. "That's the last." She had her hair up in a bath knot and was dressed solely in rubber gloves. "Hi, dearest. Aunt Hilda, I'm ready to help."

"Not much you can do, Deety hon-unless you want to relieve Zebbie."

Deety was staring at the corpse and did not look happy-her nipples were down flat. "Go take a bath!" I told her. "Scram."

"Do I stink that badly?"

"You stink swell, honey girl. But Sharpie pointed out that this may be our last chance at soap and hot water in quite a while. I've promised her that we won't leave for Canopus and points east until she has her bath. So get yours out of the way, then you can help me stow while she gets sanitary."

"All right." Deety backed off and her nipples showed faintly-not rigid but she was feeling better. My darling keeps her feelings out of her face, mostly- but those pretty pink spigots are barometers of her morale.

"Just a sec, Deety," Hilda added. "This afternoon you said, 'He didn't react!' What did you mean?"

"What I said. Strip in front of a man and he reacts, one way or another. Even if he tries to ignore it, his eyes give him away. But he didn't. Of course he's not a man-but I didn't know that when I tried to distract him."

I said, "But he did notice you, Deety-and that gave me my chance."

"But only the way a dog, or a horse, or any animal, will notice any movement. He noticed but ignored it. No reaction."

"Zebbie, does that remind you of anything?"

"Should it?"

"The first day we were here you told us a story about a 'zaftig co-ed."

"I did?"

"She was flunking math."

"Oh! 'Brainy."

"Yes, Professor N. O'Heret Brain. See any parallel?"

"But 'No Brain' has been on campus for years. Furthermore he turns red in the face. Not a tattoo job."

"I said this one might be a rush job. Would anyone be in a better position to discredit a mathematical theory than the head of the department of mathematics at a very prominent university? Especially if he was familiar with that theory and knew that it was correct?"

"Hey, wait a minute!" put in Deety. "Are you talking about that professor who argued with Pop? The one with the phony invitation? I thought he was just a stooge? Pop says he's a fool."

"He behaves like a pompous old fool," agreed Hilda. "I can't stand him. I plan to do an autopsy on him."

"But he's not dead."

"That can be corrected!" Sharpie said sharply.

XII

"They might fumigate this planet and take it."

Hilda:

By the time I was out of my bath, Jacob, Deety, and Zebbie had Gay Deceiver stowed and lists checked (can opener, cameras, et cetera)-even samples of fluids and tissues from the cadaver, as Zebbie's miracle car had a small refrigerator. Deety wasn't happy about my specimens being in the refrigerator but they were very well packed, layer on layer of plastic wrap, then sealed into a freezer box. Besides, that refrigerator contained mostly camera film, dyna
mite caps, and other noneatables. Food was mostly freeze-dried and sealed in nitrogen, except foods that won't spoil.

We were dog tired. Jacob moved that we sleep, then leave. "Zeb, unless you expect a new attack in the next eight hours, we should rest. I need to be clearheaded in handling verniers. This house is almost a fortress, will be pitch black, and does not radiate any part of the spectrum. They may conclude that we ran for it right after we got their boy-hermaphrodite, I mean; the fake 'ranger'-what do you think?"

"Jake, I wouldn't have been surprised had we been clobbered at any moment. Since they didn't- Well, I don't like to handle Gay when I'm not sharp. More mistakes are made in battle through fatigue than from any other cause. Let's sack 'in. Anybody need a sleeping pill?"

"All I need is a bed. Hilda my love, tonight I sleep on my own side."

I said, "Can't I even cuddle up your back?"

"Promise not to tickle?"

I made a face at my darling. "I promise."

"Zebadiah," Deety said. "I don't want to cuddle; I want to be held. . . so I'll know I'm safe. For the first time since my twelfth birthday I don't feel sexy."

"Princess, it's settled; we sleep. But I suggest that we be up before daylight. Let's not crowd our luck."

"Sensible," agreed Jacob.

I shrugged. "You men have to pilot; Deety and I are cargo. We can nap in the back seats-if we miss a few universes, what of it? If you've seen one universe, you've seen 'em all. Deety?"

"If it were up to me, I would lam out of here so fast my shoes would be left standing. But Zebadiah has to pilot and Pop has to set verniers. . . and both are tired and don't want to chance it. But, Zebadiah. . . don't fret if I rest with my eyes and ears open."

"Huh? Deety-why?"

"Somebody ought to be on watch. It might give us that split-second advantage-split seconds have saved us at least twice. Don't worry, darling; I often skip a night to work a long program under shared time. Doesn't hurt me; a nap next day and I'm ready to bite rattlesnakes. Tell him, Pop."

"That's correct, Zeb, but-"

Zebbie cut him off. "Maybe you gals can split watches and have breakfast ready. Right now I've got to hook up Gay Deceiver so that she can reach me in our bedroom. Deety, I can add a program so that she can listen around the cabin, too. Properly programmed, Gay's the best watch dog of any of us. Will that satisfy you duty-struck little broads?"

Deety said nothing so I kept quiet. Zebbie, frowning, turned back to his car, opened a door and prepared to hook Gay's voice and ears to the three house intercoms. "Want to shift the basement talky-talk to your bedroom, Jake?"

"Good idea," Jacob agreed.

"Wait a half while I ask Gay what she has. Hello, Gay."

"Howdy, Zeb. Wipe off your chin."

"Program. Running new retrievals. Report new items since last report."

"Null report, Boss."

"Thank you, Gay."

"You're welcome, Zeb."

"Program, Gay. Add running news retrieval. Area, Arizona Strip north of Grand Canyon plus Utah. Persons: all persons listed in current running news retrieval programs plus rangers, Federal rangers, forest rangers, park rangers, state rangers. End of added program."

"New program running, Boss."

"Program. Add running acoustic report, maximum gain."

"New program running, Zeb."

"You're a smart girl, Gay."

"Isn't it time you married me?"

"Good night, Gay."

"Good night, Zeb. Sleep with your hands outside the covers."

"Deety, you've corrupted Gay. I'll run a lead outdoors for a microphone

while Jake moves the basement intercom to the master bedroom. But maximum gain will put a coyote yapping ten miles away right into bed with you. Jake, I can tell Gay to subtract acoustic report from the news retrieval for your bedroom."

"Hilda my love, do you want the acoustic subtracted?"

I didn't but didn't say so; Gay interrupted:

"Running news retrieval, Boss."

"Report!"

"Reuters, Straits Times, Singapore. Tragic News of Marston Expedition. Indonesian News Service, Palembang. Two bodies identified as Dr. Cecil Yang and Dr. Z. Edward Carter were brought by jungle buggy to National Militia Headquarters, Telukbetung. The district commandant stated that they will be transferred by air to Palembang for further transport to Singapore when the commandant-in-chief releases them to the Minister of Tourism and Culture. Professor Marston and Mr. Smythe-Belisha are still unreported. Commandants of both districts concede that hopes of finding them alive have diminished. However, a spokesman for the Minister of Tourism and Culture assured a press conference that the Indonesian government would pursue the search more assiduously than ever."

Zebbie whistled tunelessly. Finally, he said, "Opinions, anyone?"

"He was a brilliant man, Son," my husband said soberly. "An irreplaceable loss. Tragic."

"Ed was a good Joe, Jake. But that's not what I mean. Our tactical situation. Now. Here."

My husband paused before answering, "Zeb, whatever happened in Sumatra apparently happened about a month ago. Emotionally I feel great turmoil. Logically I am forced to state that I cannot see that our situation has changed."

"Hilda? Deety?"

"News retrieval report," announced Gay.

"Report!"

"AP San Francisco via satellite from Saipan, Marianas. TWA hypersonicsemiballistic liner Winged Victory out of San Francisco International at twenty o'clock this evening Pacific Coast Time was seen by eye and radar to implode on reentry. AP Honolulu US Navy Official. USS Submersible Carrier Flying Fish operating near Wake Island has been ordered to proceed flank speed toward site of Winged Victory reentry. She will surface and launch search craft at optimum point. Navy PlO spokesman, when asked what was 'optimum,' replied 'No comment.' Associated Press's military editor noted that submerged speed of Flying Fish class, and type and characteristics of craft carried, are classified information. AP-UPI add San Francisco, Winged Victory disaster. TWA public relations released a statement quote if reports received concerning Winged Victory are correct it must be tentatively assumed that no survivors can be expected. But our engineering department denies that implosion could be cause. Collision with orbital debris decaying into atmosphere or even a strike by a meteor could repeat could endrep cause disaster by mischance so
unlikely that it can only be described as an Act of God endquote TWA spokesmen released passenger list by order of the Civil Aerospace Board. List follows: California-"

The list was longish. I did not recognize any names until Gay reached: "Doctor Neil 0. Brain-"

I gasped. But no one said a word until Gay announced:

"End running news retrieval."

"Thank you, Gay."

"A pleasure, Zeb."

Zebbie said, "Professor?"

"You're in command, Captain!"

"Very well, sir! All of you-lifeboat rules! I expect fast action and no back talk. Estimated departure-five minutes! First everybody take a pee! Second, put on the clothes you'll travel in. Jake, switch off, lock up-whatever you do to secure your house for long absence. Deety-follow Jake, make sure he hasn't missed anything-then you, not Jake, switch out lights and close doors. Hilda, bundle what's left of that Dutch lunch and fetch it-fast, not fussy. Check the refrigerator for solid foods-no liquids-and cram what you can into Gay's refrigerator. Don't dither over choices. Questions, anyone? Move!"

I gave Jacob first crack at our bathroom because the poor dear tenses up; I used the time to slide sandwiches into a freezer sack and half a pie into another. Potato salad? Scrape it into a third and stick in one plastic picnic spoon; germs were now community property. I stuffed this and some pickles into the biggest freezer sack Deety stocked, and closed it.

Jake came out of our bedroom; I threw him a kiss en passant, ducked into our john, turned on water in the basin, sat down, and recited mantras-that often works when I'm jumpy-then used the bidet-patted it and told it goodbye without stopping. My travel clothes were Deety's baby tennis shoes with a green-and-gold denim miniskirt dress of hers that came to my knees but wasn't too dreadful with a scarf to belt it. Panties? I had none. Deety had put a pair of hers out for me-but her size would fall off me. Then I saw that the dear baby had gotten at the elastic and knotted it. Yup! pretty good fit-and, with no telling when our next baths would be, panties were practical even though a nuisance.

I spread my cape in front of the refrigerator, dumped my purse and our picnic lunch into it, started salvaging-half a boned ham, quite a bit of cheese, a loaf and a half of bread, two pounds of butter (freezer sacks, and the same for the ham-if Deety hadn't had a lavish supply of freezer sacks I could not have salvaged much-as it was, I didn't even get spots on my cape). I decided that jams and jellies and catsup were liquid within Zebbie's meaning-except some in squeeze tubes. Half a chocolate cake, and the cupboard was bare.

By using my cape as a Santa Claus pack, I carried food into the garage and put it down by Gay-and was delighted to find that I was first.

Zebbie strode in behind me, dressed in a coverall with thigh pockets, a pilot suit. He looked at the pile on my cape. "Where's the elephant, Sharpie?"

"Cap'n Zebbie, you didn't say how much, you just said what. What won't go she can have." I hooked a thumb at the chopped-up corpse.

"Sorry, Hilda; you are correct." Zebbie glanced at his wrist watch, the multiple-dial sort they call a "navigator's watch."

"Cap'n, this house has loads of gimmicks and gadgets and bells and whistles. You gave them an impossible schedule."

"On purpose, dear. Let's see how much food we can stow."

Gay's cold chest is set flush in the deck of the driver's compartment. Zebbie told Gay to open up, then with his shoulders sideways, reached down and unlocked it. "Hand me stuff."

I tapped his butt. "Out of there, you overgrown midget, and let Sharpie pack. I'll let you know when it's tight as a girdle."

Space that makes Zebbie twist and grunt is roomy for me. He passed things in, I fitted them for maximum stowage. The third item he handed me was the leavings of our buffet dinner. "That's our picnic lunch," I told him, putting it on his seat.

"Can't leave it loose in the cabin."

"Cap'n, we'll eat it before it can spoil. I will be strapped down; is it okay if I clutch it to my bosom?"

"Sharpie, have I ever won an argument with you?"

"Only by brute force, dear. Can the chatter and pass the chow."

With the help of God and a shoehorn it all went in. I was in a back seat with our lunch in my lap and my cape under me before our spouses showed up. "Cap'n Zebbie? Why did the news of Brainy's death cause your change of mind?"

"Do you disapprove, Sharpie?"

"On the contrary, Skipper. Do you want my guess?"

"Yes."

"Winged Victory was booby-trapped. And dear Doctor Brain, who isn't the fool I thought he was, was not aboard. Those poor people were killed so that he could disappear."

"Go to the head of the class, Sharpie. Too many coincidences. . . and they- the 'Blokes in the Black Hats'-know where we are."

"Meaning that Professor No Brain, instead of being dead in the Pacific, might show up any second."

"He and a gang of green-blooded aliens who don't like geometers."

"Zebbie, what do you figure their plans are?"

"Can't guess. They might fumigate this planet and take it. Or conquer us as cattle or as slaves. The only data we have is that they are alien, that they are powerful-and that they have no compunction about killing us. So I have no compunction about killing them. To my regret, I don't know how. So I'm running-running scared-and taking the three I'm certain are in danger with me."

"Will we ever be able to find them and kill them?"

Zebbie didn't answer because Deety and my Jacob arrived, breathless. Father and daughter were in jump suits. Deety looked chesty and cute; my darling looked trim-but worried. "We're late. Sorry!"

"You're not late," Zeb told them. "But into your seats on the bounce."

"As quick as I open the garage door and switch out the lights."

"Jake, Jake-Gay is now programmed to do those things herself. In you go, Princess, and strap down. Seat belts, Sharpie. Copilot, after you lock the starboard door, check its seal all the way around by touch before you strap down."

"Wilco, Cap'n." It tickled me to hear my darling boning military. He had told me privately that he was a reserve colonel of ordnance-but that Deety had promised not to tell this to our smart young captain and that he wanted the same promise from me-because the T.O. was as it should be; Zeb should command while Jacob handled space-

time controls-to each his own. Jacob had asked me to please take orders from Zeb with no back talk.. . which had miffed me a little. I was an unskilled crew member; I am not stupid, I knew this. In direst emergency I would try to get us home. But even Deety was better qualified than I.

Checkoffs completed, Gay switched off lights, opened the garage door, and backed out onto the landing flat.

"Copilot, can you read your verniers?"

"Captain, I had better loosen my chest belt."

"Do so if you wish. But your seat adjusts forward twenty centimeters-here, I'll get it." Zeb reached down, did something between their seats. "Say when."

"There-that's about right. I can read 'em and reach 'em, with chest strap in place. Orders, sir?"

"Where was your car when you and Deety went to the space-time that lacked the letter 'J'?"

"About where we are now."

"Can you send us there?"

"I think so. Minimum translation, positive-entropy increasing-along Tau axis."

"Please move us there, sir."

My husband touched the controls. "That's it, Captain."

I couldn't see any change. Our house was still a silhouette against the sky, with the garage a black maw in front of us. The stars hadn't even flickered.

Zebbie said, "Let's check," and switched on Gay's roading lights, brightly lighting our garage. Empty and looked normal.

Zebbie said, "Hey! Look at that!"

"Look at what?" I demanded, and tried to see around Jacob.

"At nothing, rather. Sharpie, where's your alien?"

Then I understood. No corpse. No green-blood mess. Workbench against the wall and flood lights not rigged.

Zebbie said, "Gay Deceiver, take us home!"

Instantly the same scene. . . but with carved-up corpse. I gulped.

Zebbie switched out the lights. I felt better but not much.

"Captain?"

"Copilot."

"Wouldn't it have been well to have checked for that letter 'J'? It would have given me a check on calibration."

"I did check, Jake."

"Eh?"

'~You have bins on the back of your garage neatly stenciled. The one at left center reads 'Junk Metal."

"Oh!"

"Yes, and your analog in that space-your twin, Jake-prime, or what you will-has your neat habits. The left-corner bin read 'lunk Metal' spelled with an 'I.' A cupboard above and to the right contained 'Iugs & lars.' So I told Gay to take us home. I was afraid they might catch us. Embarrassing."

Deety said, "Zebadiah-I mean 'Captain'-embarrassing how, sir? Oh, that missing letter in the alphabet scared me but it no longer does. Now I'm nervous about aliens. 'Black Hats."

"Deety, you were lucky that first time. Because Deety-prime was not at home. But she may be, tonight. Possibly in bed with her husband, named Zebadiah-prime. Unstable cuss. Likely to shoot at a strange car shining lights into his father-in-law's garage. A violent character."

"You're teasing me."

"No, Princess; it did worry me. A parallel space, with so small a difference as the lack of one unnecessary letter, but with house and grounds you mistook for your own, seems to imply a father and daughter named 'Iacob' and 'Deiah Thoris." (Captain Zebbie pronounced the names 'Yacob' and 'Deyah Thoris.')

"Zebadiah, that scares me almost as much as aliens."

"Aliens scare me far more. Hello, Gay."

"Howdy, Zeb. Your nose is runny."

"Smart Girl, one gee vertically to one klick. Hover."

"Roger dodger, you old codger."

We rested on our backs and head rests for a few moments, then with the stomach-surging swoosh of a fast lift, we leveled off and hovered. Zebbie said, "Deety, can the autopilot accept a change in that homing program by voice? Or does it take an offset in the verniers?"

"What do you want to do?"

"Same ell-and-ell two klicks above ground."

"I think so. Shall I? Or do you want to do it, Captain?"

"You try it, Deety."

"Yes, sir. Hello, Gay."

"Hi, Deety!"

"Program check. Define 'Home."

"Home.' Cancel any-all inertials transitions translations rotations. Return to preprogrammed zero latitude longitude, ground level."

"Report present location."

"One klick vertically above 'Home."

"Gay. Program revision."

"Waiting, Deety."

"Home program. Cancel 'Ground level.' Substitute 'Two klicks above ground level, hovering."

"Program revision recorded."

"Gay Deceiver, take us home!"

Instantly, with no feeling of motion, we were much higher.

Zeb said, "Two klicks on the nose! Deety, you're a smart girl!"

"Zebadiah, I bet you tell that to all the girls."

"No, just to some. Gay, you're a smart girl."

"Then why are you shacked up with that strawberry blonde with the fat knockers?"

Zebbie craned his neck and looked at me. "Sharpie, that's your voice."

I ignored him with dignity. Zebbie drove south to the Grand Canyon, eerie in starlight. Without slowing, he said, "Gay Deceiver, take us home!"-and again we were hovering over our cabin. No jar, no shock, no nothing.

Zebbie said, "Jake, once I figure the angles, I'm going to quit spending money on juice. How does she do it when we haven't been anywhere?-no rotation, no translation."

"I may have given insufficient thought to a trivial root in equation ninetyseven. But it is analogous to what we were considering doing with planets. A five-dimensional transform simplified to three."

"I dunno, I just work here," Captain Zebbie admitted. "But it looks like we will be peddling gravity and transport, as well as real estate and time. Burroughs and Company, Space Warps Unlimited-'No job too large, no job too small.' Send one newdollar for our free brochure."

"Captain," suggested Jacob, "would it not be prudent to translate into another space before experimenting further? The alien danger is still with us- is it not?"

Zebbie sobered at once. "Copilot, you are right and it is your duty to advise me when I goof off. However, before we leave, we have one duty we must carry out."

"Something more urgent than getting our wives to safety?" my Jacob asked-and I felt humble and proud.

"Something more urgent.' Jake, I've bounced her around not only to test but to make it hard to track us. Because we must break radio silence. To warn our fellow humans."

"Oh. Yes, Captain. My apologies, sir. I sometimes forget the broader picture."

"Don't we all! I've wanted to run and hide ever since this rumpus started. But that took preparation and the delay gave me time to think. Point number one: We don't know how to fight these critters so we must take cover. Point number two: We are duty-bound to tell the world what we know about aliens. While that little isn't much-we've stayed alive by the skin of our teeth-if five billion people are watching for them, they can be caught. I hope."

"Captain," asked Deety, "may I speak?"

"Of course! Anyone with ideas about how to cope with these monsters must speak."

"I'm sorry but I don't have such ideas. You must warn the world, sir-of course! But you won't be believed."

"I'm afraid you're right, Deety. But they don't have to believe me. That monster in the garage speaks for itself. I'm going to call rangers-real rangers!-to pick it up."

I said, "So that was why you told me just to leave it! I thought it was lack of time."

"Both, Hilda. We didn't have time to sack that cadaver and store it in the freezer room. But, if I can get rangers-real rangers-to that garage before 'Black Hats' get there, that corpse tells its own story: an undeniable alien lying in its goo on a ranger's uniform that has been cut away from it. Not a 'close encounter' UFO that can be explained away, but a creature more startling than the duckbill platypus ever was. But we have to hook it in with other factors to show them what to look for. Your booby-trapped car, an arson case in Logan, Professor Brain's convenient disappearance, my cousin's death in Sumatra-and your six-dimensional non-Euclidean geometry."

I said, "Excuse me, gentlemen. Can't we move somewhere away from right over our cabin before you break silence? I'm jumpy-'Black Hats' are hunting us.',

"You're right, Sharpie; I'm about to move us. The story isn't long-all but the math-so I taped a summary while the rest of you were getting ready. Gay will speed-zip it, a hundred to one." Zebbie reached for the controls. "All secure?"

"Captain Zebadiah!"

"Trouble, Princess?"

"May I attempt a novel program? It may save time."

"Programming is your pidgin. Certainly."

"Hello, Gay."

"Hi, Deety!"

"Retrieve last program. Report execute code."

"Reporting, Deety. 'Gay Deceiver, take us home!"

"Negative erase permanent program controlled by execute-code Gay Deceiver take us home. Report confirm."

"Confirmation report. Permanent program execute-coded Gay Deceiver take us home negative erase. I tell you three times."

"Deety," said Zeb, "a neg scrub to Gay tells her to place item in perms three places. Redundancy safety factor."

"Don't bother me, dear! She and I sling the same lingo. Hello, Gay."

"Hello, Deety!"

"Analyze latest program execute-coded Gay Deceiver take us home. Report."

"Analysis complete."

"Invert analysis."

"Null program."

Deety sighed. "Typing a program is easier. New program."

"Waiting, Deety."

"Execute-code new permanent program. Gay Deceiver, countermarch! At new execute..code, repeat reversed in real time latest sequence inertials transitions translations rotations before last use of program execute-code Gay Deceiver take us home."

"New permanent program accepted."

"Gay, I tell you three times."

"Deety, I hear you three times."

"Gay Deceiver-countermarch!"

Instantly we were over the Grand Canyon, cruising south. I saw Zeb reach for the manual controls. "Deety, that was slick."

"I didn't save time, sir-I goofed. Gay, you're a smart girl."

"Deety, don't make me blush."

"You're both smart girls," said Captain Zebbie. "If anyone had us on radar, he must think he's getting cataracts. Vice versa, if anyone picked us up here, he's wondering how we popped up. Smart dodge, dear. You've got Gay Deceiver so deceptive that nobody can home on us. We'll be elsewhere."

"Yes-but I had something else in mind, too, my Captain."

"Princess, I like your ideas. Spill it."

"Suppose we used that homing preprogram and went from frying pan into fire. It might be useful to have a preprogram that would take us back into the frying pan, then do

something else quickly. Should I try to think up a third escape-maneuver preprogram?"

"Sure-but discuss it with the court magician, your esteemed father-not me. I'm just a sky jockey."

"Zebadiah, I will not listen to you disparage yours-"

"Deety! Lifeboat rules. Jake, are your professional papers aboard? Both theoretical and drawings?"

"Why, no, Zeb-Captain. Too bulky. Microfilms I brought. Originals are in the basement vault. Have I erred?"

"Not a bit! Is there any geometer who gave your published paper on this six-way system a friendly reception?"

"Captain, there aren't more than a handful of geometers capable ofjudging my postulate system without long and intensive study. It's too unorthodox. Your late cousin was one-a truly brilliant mind! Uh.. . I now suspect that Doctor Brain understood it and sabotaged it for his own purposes."

"Jake, is there anyone friendly to you and able to understand the stuff in your vault? I'm trying to figure out how to warn our fellow humans. A fantastic story of apparently unrelated incidents is not enough. Not even with the corpse of an extra-terrestrial to back it up. You should leave mathematical theory and engineering drawings to someone able to understand them and whom you trust. We can't handle it; every time we stick our heads up, somebody takes a shot at us and we have no way to fight back. It's a job that may require our whole race. Well? Is there a man you can trust as your professional executor?"

"Well. . . one, perhaps. Not my field of geometry but brilliant. He did write me a most encouraging letter when I published my first paper-the paper that was so sneered at by almost everyone except your cousin and this one other. Professor Seppo Rãikannonen. Turku. Finland."

"Are you certain he's not an alien?"

"What? He's been on the faculty at Turku for years! Over fifteen."

I said, "Jacob. . . that is about how long Professor Brain was around."

"But-" My husband looked around at me and suddenly smiled. "Hilda my love, have you ever taken sauna?"

"Once."

"Then tell our Captain why I am sure that my friend Seppo is not an alien in disguise. 1-Deety and I-attended a professional meeting in Helsinki last year. After the meeting we visited their summer place in the Lake Country. . . and took sauna with them." -

"Papa, Mama, and three kids." agreed Deety. "Unmistakably human."

"Brainy' was a bachelor," I added thoughtfully. "Cap'n Zebbie, wouldn't disguised aliens have to be bachelors?"

"Or single women. Or pseudo-married couples. No kids, the masquerade wouldn't hold up. Jake, let's try to phone your friend. Mmm, nearly breakfast time in Finland-or we may wake him. That's better than missing him."

"Good! My comcredit number is Nero Aleph-"

"Let's try mine. Yours might trigger something. . . if 'Black Hats' are as smart as I think they are. Smart Girl."

"Yes, Boss."

"Don Ameche."

"To hear is to obey, 0 Mighty One."

"Deety, you've been giving Gay bad habits."

Shortly a flat male voice answered, "The communications credit number you have cited is not a valid number. Please refer to your card and try again. This is a recording."

Zebbie made a highly unlikely suggestion. "Gay can't send out my comcredit code incorrectly; she has it tell-me-three-times. The glitch is in their system. Pop, we have to use yours."

I said, "Try mine, Zebbie. My comcredit is good; I predeposit."

A female voice this time: "-not a valid number. Puh-lease refer to your card and try again. This is a recording."

Then my husband got a second female voice: "-try again. This is a recording."

Deety said, "I don't have one. Pop and I use the same number."

"It doesn't matter," Cap'n Zebbie said bitterly. "These aren't glitches. We've been scrubbed. Unpersons. We're all dead."

I didn't argue. I had suspected that we were dead since the morning two weeks earlier when I woke up in bed with my cuddly new husband. But how long had we been dead? Since my party? Or more recently?

I didn't care. This was a better grade of heaven than a Sunday School in Terre Haute had taught me to expect. While I don't think I've been outstandingly wicked, I haven't been very good either. Of the Ten Commandments I've broken six and bent some others. But Moses apparently had not had the last Word from on High-being dead was weird and wonderful and I was enjoying every minute. . . or eon, as the case may be.

XIII

Being too close to a fireball can worry a man-

Zeb:

Not being able to phone from my car was my most frustrating experience since a night I spent in jail through mistake (I made the mistake). I considered grounding to phone-but the ground did not seem healthy. Even if all of us were presumed dead, nullifying our comcredit cards so quickly seemed unfriendly; all of us had high credit ratings.

Canceling Sharpie's comcredit without proof of death was more than unfriendly; it was outrageous as she used the predeposit method.

I was forced to the decision that it was my duty to make a military report; I radioed NORAD, stated name, rank, reserve commission serial number, and asked for scramble for a crash priority report.

-and ran into "correct" procedure that causes instant ulcers. What was my clearance? What led me to think that I had crash priority intelligence? By what authority did I demand a scramble code? Do you know how many screwball calls come in here

every day? Get off this frequency; it's for official traffic only. One more word out of you and I shall alert the civil sky patrol to pick you up.

I said one more word after I chopped off. Deety and her father ignored it; Hilda said, "My sentiments exactly!"

I tried the Federal Rangers Kaibab Barracks at Jacob Lake, then the office at Littlefieldand back to Kaibab. Littlefield didn't answer; Jacob Lake answered: "This is a recording. Routine messages may be recorded during beep tone. Emergency reports should be transmitted to Flagstaff HQ. Stand by for beep tone.. . Beep!. . . Beep!. . . Beep!. .

I was about to tell Gay to zip my tape-when the whole world was lighted by the brightest light imaginable.

Luckily we were cruising south with that light behind us. I goosed Gay to flank speed while telling her to tuck in her wings. Not one of my partners asked a foolish question, although I suspect that none had ever seen a fireball or mushroom cloud.

"Smart Girl."

"Here, Boss."

"DR problem. Record true bearing light beacon relative bearing astern. Record radar range and bearing same beacon. Solve latitude longitude beacon. Compare solution with fixes in perms. Confirm."

"Program confirmed."

"Execute."

"Roger Wilco, Zeb. Heard any new ones lately?" She added at once, "Solution. True bearing identical with fix execute-coded 'Gay Deceiver take us home.' True range identical plus-minus zero point six klicks."

"You're a smart girl, Gay."

"Flattery will get you anywhere, Zeb. Over."

"Roger and out. Hang onto your hats, folks; we're going straight up." I had outraced the shock wave but we were close to the Mexican border; either side might send sprint birds homing on us. "Copilot!"

"Captain."

"Move us! Out of this space!"

"Where, Captain?"

"Anywhere! Fast!"

"Uh, can you ease the acceleration? I can't lift my arms."

Cursing myself, I cut power, let Gay Deceiver climb free. Those vernier controls should have been mounted on arm rests. (Designs that look perfect on the drawing board can kill test pilots.)

"Translation complete, Captain."

"Roger, Copilot. Thank you." I glanced at the board: six-plus klicks heightabove-ground and rising-thin 6ut enough air to bite. "Hang onto our lunch, Sharpie!" I leaned us backwards while doing an Immelman into level flight, course north, power still off. I told Gay to stretch the glide, then tell me when we had dropped to three klicks H-above-G.

What should be Phoenix was off to the right; another city-Flagstaff?- farther away, north and a bit east; we appeared to be headed home. There was no glowing cloud on the horizon. "Jake, where are we?"

"Captain, I've never been in this universe. We translated ten quanta positive Tau axis. So we should be in analogous space close to ours-ten minimum intervals or quanta."

"This looks like Arizona."

"I would expect it to, Captain. You recall that one-quantum translation on this axis was so very like our own world that Deety and I confused it with our own, until she picked up a dictionary."

"Phone book, Pop."

"Irrelevant, dear. Until she missed the letter 'J' in an alphabetical list. Ten quanta should not change geological features appreciably and placement of cities is largely controlled by geography."

"Approaching three klicks, Boss." -

"Thanks, Gay. Hold course and H-above-G. Correction! Hold course and absolute altitude. Confirm and execute."

"Roger Wilco, Zeb."

I had forgotten that the Grand Canyon lay ahead-or should. "Smart Girl" is smart, but she's literal-minded. She would have held height-above-ground precisely and given us the wildest roller-coaster ride in history. She is very flexible but the "garbage-in-garbage-out" law applies. She had many extra fail-safes-because I make mistakes. Gay can't; anything she does wrong is my mistake. Since I've been making mistakes all my life, I surrounded her with all the safeguards I could think of. But she had no program against wild rides-she was beefed up to accept them. Violent evasive tactics had saved our lives two weeks ago, and tonight as well. Being too close to a fireball can worry a man-to death.

"Gay, display map, please."

The map showed Arizona-our Arizona; Gay does not have in her gizzards any strange universes. I changed course to cause us to pass over our cabin site-its analog for this space-time. (Didn't dare tell her: "Gay, take us home!"-for reasons left as an exercise for the class.) "Deety, how long ago did that bomb go off?"

"Six minutes twenty-three seconds. Zebadiah, was that really an A-bomb?"

"Pony bomb, perhaps. Maybe two kilotons. Gay Deceiver."

"I'm all ears, Zeb."

"Report time interval since radar-ranging beacon."

"Five minutes forty-four seconds, Zeb."

Deety gasped. "Was I that far off?"

"No, darling. You reported time since flash. I didn't ask Gay to range until after we were hypersonic."

"Oh. I feel better."

"Captain," inquired Jake, "how did Gay range an atomic explosion? I would expect radiation to make it impossible. Does she have instrumentation of which I am not aware?"

"Copilot, she has several gadgets I have not shown you. I have not been holding out-any more than you held out in not telling me about guns and ammo you-"

"My apologies, sir!"

"Oh, stuff it, Jake. Neither of us held out; we've been running under the whip. Deety, how long has it been since we killed that fake ranger?"

"That was seventeen fourteen. It is now twenty-two twenty. Five hours six minutes,"

I glanced at the board; Deety's "circadian clock" apparently couldn't be jarred by anything; Gay's clock showed 0520 (Greenwich) with "ZONE PLUS SEVEN" display. "Call it five hours-feels like five weeks. We need a vacation."

"Loud cheers!" agreed Sharpie.

"Check. Jake, I didn't know that Gay could range an atomic blast. Light 'beacon' means a visible light to her just as 'radar beacon' means to her a navigational radar beacon. I told her to get a bearing on the light beacon directly aft; she selected the brightest light with that bearing. Then I told her to take radar range and bearing on it-spun my prayer wheel and prayed.

"There was 'white noise' possibly blanketing her radar frequency. But her own radar bursts are tagged; it would take a very high noise level at the same frequency to keep her from recognizing echoes with her signature. Clearly she had trouble for she reported 'plus-minus' of six hundred meters. Nevertheless range and bearing matched a fix in her permanents and told us our cabin had been bombed. Bad news. But the aliens got there too late to bomb us. Good news."

"Captain, I decline to grieve over material loss. We are alive."

"I agree-although I'll remember Snug Harbor as the happiest home I've ever had. But there is no point in trying to warn Earth-our Earth-about aliens. That blast destroyed the clincher: that alien's cadaver. And papers and drawings you were going to turn over to your Finnish friend. I'm not sure we can go home again."

"Oh, that's no problem, Captain. Two seconds to set the verniers. Not to mention the 'deadman switch' and the program in Gay's permanents."

"Jake, I wish you would knock off 'Captain' other than for command conditions."

"Zeb, I like calling you 'Captain."

"So do I!-my Captain."

"Me, too, Cap'n Zebbie!"

"Don't overdo it. Jake, I didn't mean that you can't pilot us home; I mean we should not risk it. We've lost our last lead on the aliens. But they know who we are and have shown dismaying skill in tracking us down. I'd like to live to see two babies born and grown up."

"Amen!" said Sharpie. "This might be the place for it. Out of a million billion zillion earths this one may be vermin-free. Highly likely."

"Hilda my dear, there are no data on which to base any assumption."

"Jacob, there is one datum."

"Eh? What did I miss, dear?"

"That we do know that our native planet is infested. So I don't want to raise kids on it. If this isn't the place we're looking for, let's keep looking."

"Mmm, logical. Yes. Cap- Zeb?"

"I agree. But we can't tell much before morning. Jake, I'm unclear on a key point. If we translated back to our own earth now, where would we find ourselves? And when?"

"Pop, may I answer that?"

"Go ahead, Deety."

"The time Pop and I translated to the place with no 'J' we thought we had failed. Pop stayed in our car, trying to figure it out. I went inside, intending to fix lunch.

Everything looked normal. But the phone book was on the kitchen counter and doesn't belong there. That book had a toll area map on its back cover. My eye happened to land on 'Juab County'-and it was spelled 'luab'- and I thought, 'What a funny misprint!' Then I looked inside and couldn't find any 'J's' and dropped the book and went running for Pop."

"I thought Deety was hysterical. But when I checked a dictionary and the Britannica we got out in a hurry."

"This is the point, Zebadiah. When we flipped back, I dashed into the house. The phone book was where it belonged. The alphabet was back the way it ought to be. The clock in my head said that we had been gone twenty-seven minutes. The kitchen clock confirmed it and it agreed with the clock in the car. Does that answer you, sir?"

"I think so. In a translation, duration just keeps chugging along. I wondered because I'd like to check that crater after it has had time to cool down. What about that one rotation?"

"Harder to figure, Zebadiah. We weren't in that other space-time but a few seconds and we both passed out. Indeterminate."

"I'm convinced. But, Jake, what about Earth's proper motions? Rotation, revolution around the Sun, sidereal motion, and so forth."

"A theoretical answer calls for mathematics you tell me are outside your scope of study, uh-Zeb."

"Beyond my capacity, you mean."

"As you will, sir. An excursion elsewhere-and-elsewhen. . . and return. . . brings you back to where you would have been had you experienced that duration on earth. But 'when' requires further definition. As we were discussing, uh. . . earlier this afternoon but it seems longer, we can adjust the controls to reenter any axis at any point with permanent change of interval. For planetary engineering. Or other purposes. Including reentry reversed against the entropy arrow. But I suspect that would cause death."

"Why, Pop? Why wouldn't it just reverse your memory?"

"Memory is tied to entropy increase, my darling daughter. Death might be preferable to amnesia combined with prophetic knowledge. Uncertainty may be the factor that makes life tolerable. Hope is what keeps us going. Captain!"

"Copilot."

"We have just passed over North Rim."

"Thank you, Copilot." I placed my hands lightly on the controls.

"Pop, our cabin is still there. Lights in it, too."

"So I see. They've added a wing on the west."

"Yes. Where we discussed adding a library."

I said, "Family, I'm not going closer. Your analogs in this world seem to be holding a party. Flood lights show four cars on the grounding flat." I started Gay into a wide circle. "I'm not going to hover; it could draw attention. A call to their sky cops- Hell's bells, I don't even know that they speak English."

"Captain, we've seen all we need. It's not our cabin."

"Recommendation?"

"Sir, I suggest maximum altitude. Discuss what to do while we get there."

"Gay Deceiver."

"On deck, Captain Ahab."

"One gee, vertical."

"Aye aye, sir." (How many answers had Deety taped?)

"Anybody want a sandwich?" asked Sharpie. "I do-I'm a pregnant mother."

I suddenly realized that I had had nothing but a piece of pie since noon. As we climbed we finished what was left of supper.

"Zat Marsh?"

"Don't talk with your mouth full, Sharpie."

"Zebbie you brute, I said, 'Is that Mars?' Over there."

"That's Antares. Mars is- Look left about thirty degrees. See it? Same color as Antares but brighter."

"Got it. Jacob darling, let's take that vacation on Barsoom!"

"Hilda dearest, Mars is uninhabitable. The Mars Expedition used pressure suits. We have no pressure suits."

I added, "Even if we did, they would get in the way of a honeymoon."

Hilda answered, "I read a jingle about 'A Space Suit Built for Two.' Anyhow, let's go to Barsoom! Jacob, you did tell me we could go anywhere in Zip- nothing flat."

"Quite true."

"So let's go to Barsoom."

I decided to flank her. "Hilda, we can't go to Barsoom. Mors Kajak and John Carter don't have their swords."

"Want to bet?" Deety said sweetly.

"Huh?"

"Sir, you left it to me to pick baggage for that unassigned space. If you'll check that long, narrow stowage under the instrument board, you'll find the sword and saber, with belts. With socks and underwear crammed in to keep them from rattling."

I said soberly, "My Princess, I couldn't moan about my sword when your father took the loss of his house so calmly-but thank you, with all my heart."

"Let me add my thanks, Deety. I set much store by that old saber, unnecessary as it is."

"Father, it was quite necessary this afternoon."

"Hi ho! Hi ho! It's to Barsoom we go!"

"Captain, we could use the hours till dawn for a quick jaunt to Mars. Uh- Oh, dear, I have to know its present distance-I don't."

"No problem," I said. "Gay gobbles the Aerospace Almanac each year."

"Indeed! I'm impressed."

"Gay Deceiver."

"You again? I was thinking."

"So think about this. Calculation program. Data address, Aerospace Almanac. Running calculation, line-of-sight distance to planet Mars. Report current answers on demand. Execute."

"Program running."

"Report."

"Klicks two-two-four-zero-nine-zero-eight-two-seven point plus-minus nineeight-zero."

"Display running report."

Gay did so. "You're a smart girl, Gay."

"I can do card tricks, too. Program continuing."

"Jake, how do we this?"

"Align 'L' axis with your gun sight. Isn't that easiest?"

"By far!" I aimed at Mars as if to shoot her out of the sky-then got cold feet. "Jake? A little Tennessee windage? I think those figures are from centerof-gravity to center-of-gravity. Half a mil would place us a safe distance away. Over a hundred thousand klicks."

"A hundred and twelve thousand," Jake agreed, watching the display.

I offset one half mil. "Copilot."

"Captain."

"Transit when ready. Execute."

Mars in half phase, big and round and ruddy and beautiful, was swimming off our starboard side.

XIV

"Quit worrying and enjoy the ride."

Deety:

Aunt Hilda said softly, "Barsoom. Dead sea bottoms. Green giants." I just gulped.

"Mars. Hilda darling." Pop gently corrected her. "Barsoom is a myth."

"Barsoom." she repeated firmly. "It's not a myth, it's there. Who says its name is Mars? A bunch of long-dead Romans. Aren't the natives entitled to name it? Barsoom."

"My dearest, there are no natives. Names are assigned by an international committee sponsored by Harvard Observatory. They confirmed the traditional name.

"Pooh! They don't have any more right to name it than I have. Deety, isn't that right?"

I think Aunt Hilda had the best argument but I don't argue with Pop unless necessary; he gets emotional. My husband saved me.

"Copilot, astrogation problem. How are we going to figure distance and vector? I would like to put this wagon into orbit. But Gay is no spaceship; I don't have instruments. Not even a sextant!"

'Mmm, suppose we try it one piece at a time, Captain. We don't seem to be f~Iling fast and-alp!"

~What's the trouble, Jake!"

Pop turned pale, sweat broke out, he clenched his jaws, swallowed and reswallowed. Then his lips barely opened. "M'sheashick."

'No, you're space sick. Deetv!"

"Yessir!"

"Emergency kit, back of my seat. Unzip it, get Bonine. One pill-don't let the others get loose."

I got at the first-aid kit, found a tube marked Bonine. A second pill did get loose but I snatched it out of the air. Free fall is funny-you don't know whether you are standing on your head or floating sideways. "Here, Captain."

Pop said, "Mall righ' now. Jus' took all over queer a moment."

"Sure, you're all right. You can take this pill-or you can have it pushed down your throat with my dirty, calloused finger. Which?"

"Uh, Captain, I'd have to have water to swallow it-and I don't think I can."

"Doesn't take water, pal. Chew it. Tastes good, raspberry flavor. Then keep gulping your saliva. Here." Zebadiah pinched Pop's nostrils. "Open up."

I became aware of a strangled sound beside me. Aunt Hilda had a hanky pressed to her mouth and her eyes were streaming tears-she was split seconds from adding potato salad and used sandwich to the cabin air.

Good thing I was still clutching that wayward pill. Aunt Hilda struggled but she's a little bitty. I treated her the way my husband had treated her husband, then clamped my hand over her mouth. I don't understand seasickness (or free-fall nausea); I can walk on bulkheads with a sandwich in one hand and a drink in the other and enjoy it.

But the victims really are sick and somewhat out of their heads. So I held her mouth closed and whispered into her ear. "Chew it, Aunty darling, and swallow it, or I'm going to spank you with a club."

Shortly I could feel her chewing. After several minutes she relaxed. I asked her, "Is it safe for me to ungag you?"

She nodded. I took my hand away. She smiled wanly and patted my hand. "Thanks, Deety." She added, "You wouldn't really beat Aunt Sharpie."

"I sure would, darling. I'd cry and cry and wallop you and wallop you. I'm glad I don't have to."

"I'm glad, too. Can we kiss and make up-or is my breath sour?"

It wasn't but I wouldn't have let that stop me. I loosened my chest strap and hers, and put both arms around her. I have two ways of kissing: one is suitable for faculty teas; the other way I mean it. I never got a chance to pick; Aunt Hilda apparently never found out about the faculty-tea sort. No, her breath wasn't sour-just a slight taste of raspberry.

Me, I'm the wholesome type; if it weren't for those advertisements on my chest, men wouldn't give me a second glance. Hilda is a miniature Messalina, pure sex in a small package. Funny how a person can grow up never really believing that the adults you grow up with have sex-just gender. Now my saintly father turns out to be an insatiable goat, and Aunt Hilda, who had babied me and changed my diapers, is sexy enough for a platoon of Marines.

I let her go while thinking pleasant thoughts about teaching my husband technique I had learned-unless Hilda had taught him in the past. No, or he would have taught me-and he hadn't shown her style of virtuosity. Zebadiah, just wait till I get you alone!

Which might not be too soon. Gay Deceiver is wonderful but no honeymoon cottage. There was space back of the bulkhead behind my head-like a big phone booth on its side-where Zebadiah kept a sleeping bag and (he says) sometimes sacked out. But it had the space-time twister in it and nineteen dozen other things. Hilda and I were going to have to repress our primary imperative until our men found us a pied-a-terre on some planet in some universe, somewhere, somewhen.

Mars-Barsoom seemed to have grown while I was curing Aunt Hilda's space sickness. Our men were talking astrogation. My husband was saying, "Sorry, but at

extreme range Gay's radar can see a thousand kilos. You tell me our distance is about a hundred times that."

"About. We're falling toward Mars. Captain, we must do it by triangulation."

"Not even a protractor where I can get at it. How?"

"Hmmmm- If the Captain pleases, recall how you worked that 'Tennessee windage."

My darling looked like a school boy caught making a silly answer. "Jake, if you don't quit being polite when I'm stupid, I'm going to space you and put Deety in the copilot's seat. No, we need you to get us home. I'd better resign and you take over."

"Zeb, a captain can't resign while his ship is underway. That's universal."

"This is another universe."

"Transuniversal. As long as you are alive, you are stuck with it. Let's attempt that triangulation."

"Stand by to record." Zebadiah settled into his seat, pressed his head against its rest. "Copilot."

"Ready to record, sir."

"Damn!"

"Trouble, Captain?"

"Some. This reflectosight is scaled fifteen mils on a side, concentric circles crossed at center point horizontally and vertically. Normal to deck and parallel to deck, I mean. When I center the fifteen-mil ring on Mars, I have a border around it. I'm going to have to guesstimate. Uh, the border looks to be about eighteen mils wide. So double that and add thirty."

"Sixty-six mils."

"And a mil is one-to-one-thousand. One-to-one-thousand-and-eighteen and a whisker, actually-but one-to-a-thousand is good enough. Wait a halfi I've got two sharp high lights near the meridian-if the polar caps mark the meridian. Le'me tilt this buggy and put a line crossing them-then I'll yaw and what we can't measure in one jump, we'll catch in three."

I saw the larger "upper" polar cap (north? south? well, it felt north) roll gently about eighty degrees, while my husband fiddled with Gay's manual controls. "Twenty-nine point five, maybe. . . plus eighteen point seven. . . plus sixteen point three. Add."

My father answered, "Sixty-four and a half" while I said, six four point five in my mind and kept quiet.

"Who knows the diameter of Mars? Or shall I ask Gay?"

Hilda answered, "Six thousand seven hundred fifty kilometers, near enough."

Plenty near enough for Zebadiah's estimates. Zebadiah said, "Sharpie! How did you happen to know that?"

"I read comic books. You know-'Zap! Polaris is missing."

"I don't read comic books."

"Lots of interesting things in comic books, Zebbie. I thought the Aerospace Force used comic-book instruction manuals."

My darling's ears turned red. "Some are," he admitted, "but they are edited for technical accuracy. Hmm- Maybe I had better check that figure with Gay."

I love my husband but sometimes women must stick together. "Don't bother, Zebadiah," I said in chilly tones. "Aunt Hilda is correct. The polar diameter of Mars is six

seven five two point eight plus. But surely three significant figures is enough for your data."

Zebadiah did not answer.. . but did not ask his computer. Instead he said, "Copilot, will you run it off on your pocket calculator? We can treat it as a tangent at this distance."

This time I didn't even try to keep still. Zebadiah's surprise that Hilda knew anything about astronomy caused me pique. "Our height above surface is one hundred four thousand six hundred and seventy-two kilometers plus or minus the error of the data supplied. That assumes that Mars is spherical and ignores the edge effect or horizon bulge.. . negligible for the quality of your data."

Zebadiah answered so gently that I was sorry that I had shown off: "Thank you, Deety. Would you care to calculate the time to fall to surface from rest at this point?"

"That's an unsmooth integral, sir. I can approximate it but Gay can do it faster and more accurately. Why not ask her? But it will be many hours."

"I had hoped to take a better look. Jake, Gay has enough juice to put us into a tight orbit, I think. . . but I don't know where or when I'll be able to juice her again. If we simply fall, the air will get stale and we'll need the panic button-or some maneuver-without ever seeing the surface close up."

"Captain, would it suit you to read the diameter again? I don't think we've simply been falling."

Pop and Zebadiah got busy again. I let them alone, and they ran even the simplest computations through Gay. Presently, Pop said, "Over twenty-four kilometers per second! Captain, at that rate we'll be there in a little over an hour."

"Except that we'll scram before that. But, ladies, you'll get your closer look. Dead sea bottoms and green giants. If any."

"Zebadiah, twenty-four kilometers per second is Mars' orbital speed."

My father answered, "Eh? Why, so it is!" He looked very puzzled, then said, "Captain-I confess to a foolish mistake."

"Not one that will keep us from getting home, I hope."

"No, sir. I'm still learning what our continua craft can do. Captain, we did not aim for Mars."

"I know. I was chicken."

"No, sir, you were properly cautious. We aimed for a specific point in empty space. We transited to that point. . . but not with Mars' proper motion. With that of the Solar System, yes. With Earth's motions subtracted; that is in the program. But we are a short distance ahead of Mars in its orbit. . . so it is rushing toward us."

"Does that mean we can never land on any planet but Earth?"

"Not at all. Any vector can be included in the program-either before or after transition, translation or rotation. Any subsequent change in motion is taken into account by the inertial integrator. But I am learning that we still have things to learn."

"Jake, that is true even of a bicycle. Quit worrying and enjoy the ride. Brother, what a view!"

"Jake, that doesn't look like the photographs the Mars Expedition brought back."

"Of course not," said Aunt Hilda. "I said it was Barsoom."

I kept my mouth shut. Ever since Dr. Sagan's photographs anyone who reads The National Geographic-or anything-knows what Mars looks like. But when it involves changing male minds, it is better to let men reach their own decisions; they become somewhat less pig-headed. That planet rushing toward us was not the Mars of our native sky. White clouds at the caps, big green areas that had to be forest or crops, one deep blue area that almost certainly was water-all this against ruddy shades that dominated much of the planet.

What was lacking were the rugged mountains and craters and canyons of "our" planet Mars. There were mountains-but nothing like the Devil's Junkyard known to science.

I heard Zebadiah say, "Copilot, are you certain you took us to Mars?"

"Captain, I took us to Mars-ten, via plus on Tau axis. Either that or I'm a patient in a locked ward."

"Take it easy, Jake. It doesn't resemble Mars as much as Earth-ten resembles Earth."

"Uh, may I point out that we saw just a bit of Earth-ten, on a moonless night?"

"Meaning we didn't see it. Conceded."

Aunt Hilda said, "I told you it was Barsoom. You wouldn't listen."

"Hilda, I apologize. 'Barsoom.' Copilot, log it. New planet, 'Barsoom,' named by right of discovery by Hilda Corners Burroughs, Science Officer of Continua Craft Gay Deceiver. We'll all witness: Z. J. Carter, Commanding-Jacob J. Burroughs, Chief Officer-D. T. B. Carter, uh, Astrogator. I'll send certified copies to Harvard Observatory as soon as possible."

"I'm not astrogator, Zebadiah!"

"Mutiny. Who reprogrammed this cloud buster into a continua craft? I'm pilot until I can train all of you in Gay's little quirks. Jake is copilot until he can train more copilots in setting the verniers. You are astrogator because nobody else can acquire your special knowledge of programming and skill at calculation. None of your lip, young woman, and don't fight the Law of Space. Sharpie is chief of science because of her breadth of knowledge. She not only recognized a new planet as not being Mars quicker than anyone else but carved up that double-joined alien with the skill of a born butcher. Right, Jake?"

"Sure thing!" agreed Pop.

"Cap'n Zebbie," Aunt Hilda drawled, "I'm science officer if you say so. But I had better be ship's cook, too. And cabin boy."

"Certainly, we all have to wear more than one hat. Log it, Copilot. 'Here's to our jolly cabin girl, the plucky little nipper-'"

"Don't finish it. Zebbie," Aunt Hilda cut in, "I don't like the way the plot develops."

'-she carves fake ranger,
Dubs planet stranger,
And dazzles crew and skipper."

Aunt Hilda looked thoughtful. "That's not the classic version. I like the sentiment better. . . though the scansion limps."

"Sharpie darling, you are a floccinaucinihilipilificatrix." "Is that a compliment?"

'Certainly! Means you're so sharp you spot the slightest flaw."

I kept quiet. It was possible that Zebadiah meant it as a compliment. Just barely- "Maybe I'd better check it in a dictionary."

"By all means, dear-after you are off watch." (I dismissed the matter. Merriam Microfilm was all we had aboard and Aunt Hilda would not find that word in anything less than the O.E.D.)

"Copilot, got it logged?"

"Captain, I didn't know we had a log."

"No log? Even Vanderdecken keeps a log. Deety, the log falls in your department. Take your father's notes, get what you need from Gay, and let's have a taut ship. First time we pass a Woolworth's we'll pick up a journal and you can transcribe it-notes taken now are your rough log."

"Aye aye, sir. Tyrant."

"Tyrant,' sir, please. Meanwhile let's share the binoculars and see if we can spot any colorful exotic natives in colorful exotic costumes singing colorful exotic songs with their colorful exotic hands out for baksheesh. First one to spot evidence of intelligent life gets to wash the dishes."

XV

"We'll hit so hard we'll hardly notice it."

Hilda:

I was so flattered by Cap'n Zebbie's crediting me with "discovering" Barsoom that I pretended not to understand the jibe he added. It was unlikely that Deety would know such a useless word, or my beloved Jacob. It was gallant of Zeb to give in all the way, once he realized that this planet was unlike its analog in "our" universe. Zebbie is a funny one-he wears rudeness like a Hallowe'en mask, afraid that someone will discover the Galahad underneath.

I knew that "my" Barsoom was not the planet of the classic romances. But there are precedents: The first nuclear submarine was named for an imaginary undersea vessel made famous by Jules Verne; an aircraft carrier of the Second Global War had been named "Shangri La" for a land as nonexistent as "Erewhon"; the first space freighter had been named for a starship that existed only in the hearts of its millions of fans-the list is endless. Nature copies art.

Or as Deety put it: "Truth is more fantastic than reality."

During that hour Barsoom rushed at us. It began to swell and swell, so rapidly that binoculars were a nuisance-and my heart swelled with it, in childlike joy. Deety and I unstrapped so that we could see better, floating just "above" and behind our husbands while steadying ourselves on their headrests,

We were seeing it in half phase, one half dark, the other in sunlight-ocher and umber and olive green and brown and all of it beautiful.

Our pilot and copilot did not sightsee; Zebbie kept taking sights, kept Jacob busy calculating. At last he said, "Copilot, if our approximations are correct,
at the height at which we will get our first radar range, we will be only a bit over half a minute from crashing. Check?"

"To the accuracy of our data, Captain."

"Too close. I don't fancy arriving like a meteor. Is it time to hit the panic button? Advise, please-but bear in mind that puts us-should put us-two klicks over a hot, new crater.. . possibly in the middle of a radioactive cloud. Ideas?"

"Captain, we can do that just before crashing-and it either works or it doesn't. If it works, that radioactive cloud will have had more time to blow away. If it doesn't work-"

"We'll hit so hard we'll hardly notice it. Gay Deceiver isn't built to reenter at twenty-four klicks per second. She's beefed up-but she's still a Ford, not a reentry vehicle."

"Captain, I can try to subtract the planet's orbital speed. We've time to make the attempt."

"Fasten seat belts and report! Move it, gals!"

Free fall is funny stuff. I was over that deathly sickness-was enjoying weightlessness, but didn't know how to move in it. Nor did Deety. We floundered the way one does the first time on ice skates-only worse.
TReport, damn it!"

Deety got a hand on something, grabbed me. We started getting into seats- she in mine, I in hers. "Strapping down, Captain!" she called out, while frantically trying to loosen my belts to fit her. (I was doing the same in reverse.)

"Speed it up!"

Deety reported, "Seat belts fastened," while still getting her chest belt buckled-by squeezing out all her breath. I reached over and helped her loosen it.

"Copilot."

"Captain!"

"Along 'L' axis, subtract vector twenty-four klicks per second-and for God's sake don't get the signs reversed."

"I won't!"

"Execute."

Seconds later Jacob reported, "That does it, Captain. I hope."

"Let's check. Two readings, ten seconds apart. I'll call the first, you call the end of ten seconds. Mark!"

Zeb added, "One point two. Record."

After what seemed a terribly long time Jacob said, "Seven seconds. . . eight seconds. . . nine seconds.. . mark!"

Our men conferred, then Jacob said, "Captain, we are still falling too fast."

"Of course," said Deety. "We've been accelerating from gravity. Escape speed for Mars is five klicks per second. If Barsoom has the same mass as Mars-"

"Thank you, Astrogator. Jake, can you trim off, uh, four klicks per second?"

"Sure!"

"Do it."

"Uh.. . done! How does she look?"

"Uh.. . distance slowly closing. Hello, Gay."

"Howdy, Zeb."

"Program. Radar. Target dead ahead. Range."

"No reading."

"Continue ranging. Report first reading. Add program. Display running radar ranges to target."

"Program running. Who blacked your eye?"

"You're a Smart Girl, Gay."

"I'm sexy, too. Over."

"Continue program." Zeb sighed, then said, "Copilot, there's atmosphere down there. I plan to attempt to ground. Comment? Advice?"

"Captain, those are words I hoped to hear. Let's go!"

"Barsoom-here we come!"

XVI

-a maiden knight, eager to break a lance-

Jake:

My beloved bride was no more eager than I to visit "Barsoom." I had been afraid that our captain would do the sensible thing: establish orbit, take pictures, then return to our own space-time before our air was stale. We were not prepared to explore strange planets. Gay Deceiver was a bachelor's sports car. We had a little water, less food, enough air for about three hours. Our craft refreshed its air by the scoop method. If she made a "high jump," her scoop valves sealed from internal pressure just as did commercial ballistichypersonic intercontinental liners-but "high jump" is not space travel.

True, we could go from point to point in our own or any universe in null time, but how many heavenly bodies have breathable atmospheres? Countless billions-but a small fraction of one percent from a practical viewpoint-and no publication lists their whereabouts. We had no spectroscope, no star catalogs, no atmosphere testing equipment, no radiation instruments, no means of detecting dangerous organisms. Columbus with his cockleshells was better equipped than we.

None of this worried me.

Reckless? Do you pause to shop for an elephant gun while an elephant is chasing you?

Three times we had escaped death by seconds. We had evaded our killers by going to earth-and that safety had not lasted. So again we fled like rabbits.

At least once every human should have to run for his life, to teach him that milk does not come from supermarkets, that safety does not come from p0-licemen, that "news" is not something that happens to other people. He might learn how his ancestors lived and that he himself is no different-in the crunch his life depends on his agility, alertness, and personal resourcefulness.

I was not distressed. I felt more alive than I had felt since the death of my first wife.

Underneath the persona each shows the world lies a being different from the masque. My own persona was a professorial archetype. Underneath? Would you believe a maiden knight, eager to break a lance? I could have avoided military service-married, a father, protected profession. But I spent three weeks in basic training, sweating with the rest, cursing drill instructors-and loving it! Then they took my rifle, told me I was an officer, gave me a swivel chair and a useless job. I never forgave them for that.

Hilda, until we married, I knew not at all. I had valued her as a link to my lost love but I had thought her a lightweight, a social butterfly. Then I found myself married to her and learned that I had unnecessarily suffered lonely years. Hilda was what I needed, I was what she needed-Jane had known it and blessed us when at last we knew it. But I still did not realize the diamondhard quality of my tiny darling until I saw her dissecting that pseudo "ranger." Killing that alien was easy. But what Hilda did-I almost lost my supper.

Hilda is small and weak; I'll protect her with my life. But I won't underrate her again!

Zeb is the only one of us who looks the part of intrepid explorer-tall, broadshouldered, strongly muscled, skilled with machines and with weapons, and (sine qua non!) cool-headed in crisis and gifted with the "voice of command."

One night I had been forced to reason with my darling; Hilda felt that I should lead our little band. I was oldest, I was inventor of the time-space "distorter"-it was all right for Zeb to pilot-but I must command. In her eyes Zeb was somewhere between an overage adolescent and an affectionate Saint Bernard. She pointed out that Zeb claimed to be a "coward by trade" and did not want responsibility.

I told her that no born leader seeks command; the mantle descends on him, he wears the burden because he must. Hilda could not see it-she was willing to take orders from me but not from her pet youngster "Zebbie."

I had to be firm: Either accept Zeb as commander or tomorrow Zeb and I would dismount my apparatus from Zeb's car so that Mr. and Mrs. Carter could go elsewhere. Where? Not my business or yours, Hilda. I turned over and pretended to sleep.

When I heard sobs, I turned again and held her. But I did not budge. No need to record what was said; Hilda promised to take any orders Zeb might give-once we left.

But her capitulation was merely coerced until the gory incident at the pool. Zeb's instantaneous attack changed her attitude. From then on my darling carried out Zeb's orders without argument-and between times kidded and ragged him as always. Hilda's spirit wasn't broken; instead she placed her indomitable spirit subject to the decisions of our captain. Discipline-self-discipline; there is no other sort.

Zeb is indeed a "coward by trade"-he avoids trouble whenever possible- a most commendable trait in a leader. If a captain worries about the safety of his command, those under him need not worry.

Barsoom continued to swell. At last Gay's voice said, "Ranging, Boss" as she displayed "1000 km," and flicked at once to "999 km." I started timing when Zeb made it unnecessary: "Smart Girl!"

"Here, Zeb."

"Continue range display. Show as H-above-G. Add dive rate."

"Null program."

"Correction. Add program. Display dive rate soonest."

"New program dive rate stored. Display starts H-above-G six hundred klicks."

"You're a smart girl, Gay."

"Smartest little girl in the County, Oh! Daddy and Mommy told me so!' Over."

"Continue programs."

Height-above-ground seemed to drop both quickly and with stomach-tensing slowness. No one said a word; I barely breathed. As "600 km" appeared the figures were suddenly backed by a grid; on it was a steep curve, height-againsttime, and a new figure flashed underneath the H-above-G figure: 1968 km/ hr. As the figure changed, a bright abscissa lowered down on the grid.

Our captain let out a sigh. "We can handle that. But I'd give fifty cents and a double-dip ice-cream cone for a parachute brake."

"What flavor?"

"Your choice, Sharpie. Don't worry, folks; I can stand her on her tail and blast. But it's an expensive way to slow up. Gay Deceiver."

"Busy, Boss."

"I keep forgetting that I can't ask her to display too many data at once. Anybody know the sea level-I mean 'surface' atmospheric pressure of Mars? Don't all speak at once."

My darling said hesitantly, "It averages about five millibars. But, Captain- this isn't Mars."

"Huh? So it isn't-and from the looks of that green stuff, Barsoom must have lots more atmosphere than Mars." Zeb took the controls, overrode the computer, cautiously waggled her elevons. "Can't feel bite. Sharpie, how come you bone astronomy? Girl Scout?"

"Never got past tenderfoot. I audited a course, then subscribed to 'Astronomy' and 'Sky and Telescope.' It's sort o' fun."

"Chief of Science, you have again justified my faith in you. Copilot, as soon as I have air bite, I'm going to ease to the east. We're headed too close to the terminator. I want to ground in daylight. Keep an eye out for level ground. I'll hover at the last-but I don't want to ground in forest. Or in badlands."

"Aye aye, sir."

"Astrogator."

"Yessir!"

"Deety darling, search to port-and forward, as much as you can see around me. Jake can favor the starboard side."

"Captain-I'm on the starboard side. Behind Pop."

"Huh? How did you gals get swapped around?"

"Well. . . you hurried us, sir-any old seat in a storm."

"Two demerits for wrong seat-and no syrup on the hot cakes we're going to have for breakfast as soon as we're grounded."

"Uh, I don't believe hot cakes are possible."

"I can dream, can't I? Chief Science Officer, watch my side."

"Yes, Cap'n."

"While Deety backs up Jake. Any cow pasture."

"Hey! I feel air! She bites!"

I held my breath while Zeb slowly brought the ship out of dive, easing her east. "Gay Deceiver."

"How now, Brown Cow?"

"Cancel display programs. Execute."

"Inshallâh, ya sayyid."

The displays faded. Zeb held her just short of stalling. We were still high, about six klicks, still hypersonic.

Zeb slowly started spreading her wings as air speed and altitude dropped. After we dropped below speed of sound, he opened her wings full for maximum lift. "Did anyone remember to bring a canary?"

"A canary!" said Deety. "What for, Boss Man?"

"My gentle way of reminding everyone that we have no way to test atmosphere. Copilot."

"Captain," I acknowledged.

"Uncover deadman switch. Hold it closed while you remove clamp. Hold it high where we all can see it. Once you report switch ready to operate, I'm going to crack the air scoops. If you pass out, your hand will relax and the switch will get us home. I hope. But-All hands!-if anyone feels dizzy or woozy or faint. . . or sees any of us start to slump, don't wait! Give the order orally. Deety, spell the order I mean. Don't say it-spell it."

"G, A, Y, D, E, C, I, E, V, E, R, T, A, K, E, U, S, H, 0, M, E."

"You misspelled it."

"I did not!"

"You did so; "i" before "e" except after "c." You reversed 'em."

"Well. . . maybe I did. That diphthong has always given me trouble. Floccinaucinihilipilificator!"

"So you understood it? From now on, on Barsoom, 'i' comes before 'e' at all times. By order of John Carter, Warlord. I have spoken. Copilot?"

"Deadman switch ready, Captain," I answered.

"You gals hold your breaths or breathe, as you wish. Pilot and copilot will breathe. I am about to open air scoops."

I tried to breathe normally and wondered if my hand would relax if I passed out.

The cabin got suddenly chilly, then the heaters picked up. I felt normal. Cabin pressure slightly higher, I thought, under ram effect.

"Everybody feel right? Does everybody look right? Copilot?"

"I feel fine. You look okay. So does Hilda. I can't see Deety."

"Science Officer?"

"Deety looks normal. I feel fine."

"Deety. Speak up."

"Golly, I had forgotten what fresh air smells like!"

"Copilot, carefully-most carefully!-put the clamp back on the switch, then rack and cover it. Report completion."

A few seconds later I reported, "Deadman switch secured, Captain."

"Good. I see a golf course; we'll ground." Zeb switched to powered flight; Gay responded, felt alive. We spiraled, hovered briefly, grounded with a gentle bump. "Grounded on Barsoom. Log it, Astrogator. Time and date."

"Huh?"

"On the instrument board."

"But that says oh-eight-oh-three and it's just after dawn here."

"Log it Greenwich. With it, log estimated local time and Barsoom day one." Zeb yawned. "I wish they wouldn't hold mornings so early."

"Too sleepy for hot cakes?" my wife inquired.

"Never that sleepy."

"Aunt Hilda!"

"Deety, I stowed Aunt Jemima mix. And powdered milk. And butter. Zebbie, no syrup-sorry. But there is grape jelly in a tube. And freeze-dried coffee. If one of you will undog this bulkhead door, we'll have breakfast in a few minutes."

"Chief Science Officer, you have a duty to perform."

"I do? But- Yes, Captain?"

"Put your dainty toe to the ground. It's your planet, your privilege. Starboard side of the car, under the wing, is the ladies' powder room-portside is the men's jakes. Ladies may have armed escort on request."

I was glad Zeb remembered that. The car had a "honey bucket" under the cushion of the port rear seat, and, with it, plastic liners. I did not ever want to have to use it.

Gay Deceiver was wonderful but, as a spaceship, she left much to be desired. However, she had brought us safely to Barsoom.

Barsoom! Visions of thoats and beautiful princesses-

XVII

The world wobbled-

Deety:

We spent our first hour on "Barsoom" getting oriented. Aunt Hilda stepped outside, then stayed out. "Isn't cold," she told us. "Going to be hot later."

"Watch where you step!" my husband warned her. "Might be snakes or anything." He hurried after her-and went head over heels.

Zebadiah was not hurt; the ground was padded, a greenish-yellow mat somewhat like "ice plant" but looking more like clover. He got up carefully, then swayed as if walking on a rubber mattress. "I don't understand it," he complained. "This gravity ought to be twice that of Luna. But I feel lighter."

Aunt Hillbilly sat down on the turf. "On the Moon you were carrying pressure suit and tanks and equipment." She unfastened her shoes. "Here you aren't."

"Yeah, so I was," agreed my husband. "What are you doing?"

"Taking off my shoes. When were you on the Moon? Cap'n Zebbie, you're a fraud."

"Don't take off your shoes! You don't know what's in this grass."

The Hillbilly stopped, one shoe off. "If they bite me, I bite 'em back. Captain, in Gay Deceiver you are absolute boss. But doesn't your crew have any free will? I'll play it either way: free citizen. . . or your thrall who dassn't even take off a shoe without permission. Just tell me."

"If you try to make all decisions, all the time, you're going to get as hysterical as a hen raising ducklings. Even Deety can be notional. But I won't even pee without permission. Shall I put this back on? Or take the other off?"

"Aunt Hilda, quit teasing my husband!" (I was annoyed!)

"Dejah Thoris, I am not teasing your husband; I am asking our captain for instructions."

Zebadiah sighed. "Sometimes I wish I'd stayed in Australia."

I said, "Is it all right for Pop and me to come out?"

"Oh. Certainly. Watch your step; it's tricky."

I jumped down, then jumped high and wide, with entrechats as I floated- landed sur les pointes. "Oh, boy! What a wonderful place for ballet!" I added, "Shouldn't do that on a full bladder. Aunt Hilda, let's see if that powder room is unoccupied."

"I was about to, dear, but I must get a ruling from our captain."

"You're teasing him."

"No, Deety; Hilda is right; doctrine has to be clear. Jake? How about taking charge on the ground?"

"No, Captain. Druther be a Balkan general, given my druthers."

Aunt Hilda stood up, shoe in hand, reached high with her other hand, patted my husband's cheek. "Zebbie, you are a dear. You worry about us all-me especially, because you think I'm a featherhead. Remember how we did at Snug Harbor? Each one did what she could do best and there was no friction. If that worked there, it ought to work here."

"Well. . . all right. But will you gals please be careful?"

"We'll be careful. How's your E.S.P.? Any feeling?"

Zebadiah wrinkled his forehead. "No. But I don't get advance warning. Just barely enough."

"Just barely' is enough. Before we had to leave, you were about to program Gay to listen at high gain. Would that change 'just barely' to 'ample'?"

"Yes! Sharpie, I'll put you in charge, on the ground."

"In your hat, Buster. Ole Massa done freed us slaves. Zebbie, the quicker you quit dodging, the sooner you get those hot cakes. Spread my cape down and put the hot plate on the step."

We ate breakfast in basic Barsoomian dress: skin. Aunt Hilda pointed out that laundries seemed scarce, and the car's water tanks had to be saved for drinking and cooking. "Deety, I have just this dress you gave me; I'll air it and let the wrinkles hang out. Panties, too. An air bath is better than no bath. I know you'll divvy with me but you are no closer to a laundry than I am."

My jump suit joined Hilda's dress. "Aunt Hilda, you could skip bathing a week. Me, right after a bath I have a body odor but not too bad. In twentyfour hours I'm whiff. Forty-eight and I smell like a skunk. An air bath may help."

The same reasoning caused our men to spread their used clothing on the port wing, and caused Zebadiah to pick up Hilda's cape. "Sharpie, you can't get fur Hollanderized in this universe. Jake, you stowed some tarps?"

After dishes were "washed" (scoured with turf, placed in the sun) we were sleepy. Zebadiah wanted us to sleep inside, doors locked. Aunt Hilda and I wanted to nap on a tarpaulin in the shade of the car. I pointed out that moving rear seats aft in refitting had made it impossible to recline them.

Zebadiah offered to give up his seat to either of us women. I snapped, "Don't be silly, dear! You barely fit into a rear seat and it brings your knees so far forward that the seat in front can't be reclined."

Pop intervened. "Hold it! Daughter, I'm disappointed-snapping at your husband. But, Zeb, we've got to rest. If I sleep sitting up, I get swollen ankles, half crippled, not good for much."

"I was trying to keep us safe," Zebadiah said plaintively.

"I know, Son; you've been doing so-and a smart job, or we all would be dead three times over. Deety knows it, I know it, Hilda knows it-"

"I sure do, Zebbie!"

"My Captain, I'm sorry I snapped at you."

"We'll need you later. Flesh has its limits-even yours. If necessary, we would bed you down and stand guard over you-"

"No!"

"We sure would, Zebbie!"

"We will, my Captain."

"But I doubt that it's necessary. When we sat on the ground to eat, did anyone get chigger bites or anything?"

My husband shook his head.

"Not me," Aunt Hilda agreed.

I added, "I saw some little beasties but they didn't bother me."

"~pparently," Pop went on, "they don't like our taste. A ferocious-looking dingus sniffed at my ankle-but it scurried away. Zeb, Gay can hear better than we can?"

"Oh, much better!"

"Can her radar be programmed to warn us?"

Zebadiah looked thoughtful. "Uh.. . anti-collision alarm would wake the dead. If I pulled it in to minimum range, then- No, the display would be cluttered with 'grass.' We're on the ground. False returns."

I said, "Subtract static display, Zebadiah."

"Eh? How, Deety?"

"Gay can do it. Shall I try?"

"Deety, if you switch on radar, we have to sleep inside. Microwaves cook your brains."

"I know, sir. Gay has sidelookers, eyes fore and aft, belly, and umbrella- has she not?"

"Yes. That's why-"

"Switch off her belly eye. Can sidelookers hurt us if we sleep under her?" His eyes widened. "Astrogator, you know more about my car than I do. I'd better sign her over to you."

"My Captain, you have already endowed me with all your worldly goods. I don't know more about Gay; I know more about programming."

We made a bed under the car by opening Zebadiah's sleeping bag out flat, a tarpaulin on each side. Aunt Hilda dug out sheets: "In case anyone gets chilly."

"Unlikely," Pop told her. "Hot now, not a cloud and no breeze."

"Keep it by you, dearest. Here's one for Zebbie." She dropped two more on the sleeping bag, lay down on it. "Down flat, gentlemen"-waited for them to comply, then called to me: 'Deety! Everybody's down."

From inside I called back, 'Right with you!"-then said, "Hello, Gay."

"Hi, Deety!"

"Retrieve newest program. Execute."

Five scopes lighted, faded to dimness; the belly eye remained blank. I told her, "You're a good girl, Gay."

"I like you, too, Deety. Over."

"Roger and out, sister." I scrunched down, got at the stowage under the instrument board, pulled out padding and removed saber and sword, each with belt. These I placed at the door by a pie tin used at breakfast. I slithered head first out the door, turned without rising, got swords and pie plate, and crawled toward the pallet, left arm cluttered with hardware.

I stopped. "Your sword, Captain."

"Deety! Do I need a sword to nap?"

"No, sir. I shall sleep soundly knowing that my captain has his sword."

"Hmm-" Zebadiah withdrew it a span, returned it with a click. "Silly. . . but I feel comforted by it, too."

"I see nothing silly, sir. Ten hours ago you killed a thing with it that would have killed me."

"I stand-sprawl-corrected, my Princess. Dejah Thoris is always correct."

"I hope my Chieftain will always think so."

"He will. Give me a big kiss. What's the pie pan for?"

"Radar alarm test."

Having delivered the kiss, I crawled past Hilda and handed Pop his saber. He grinned at me. "Deety hon, you're a one! Just the security blanket I need. How did you know?"

"Because Aunt Hilda and I need it. With our warriors armed, we will sleep soundly." I kissed Pop, crawled out from under. "Cover your ears!"

I got to my knees, sailed that pan far and high, dropped flat and covered my ears. As the pan sailed into the zone of microwave radiation, a horrid clamor sounded inside the car, kept up until the pan struck the ground and stopped rolling-chopped off. "Somebody remind me to recover that. Good night, all!"

I crawled back, stretched out by Hilda, kissed her goodnight, set the clock in my head for six hours, went to sleep.

The sun was saying that it was fourteen instead of fourteen-fifteen and I decided that my circadian did not fit Barsoom. Would the clock in my head "slow" to match a day

forty minutes longer? Would it give me trouble? Not likely-I've always been able to sleep anytime. I felt grand and ready for anything.

I crept off the pallet, snaked up into the car's cabin, and stretched. Felt good!

I crawled through the bulkhead door back of th~ rp~r ~ ~rM
and my jewelry case, went forward into the space between seats and instrument board.

I tried tying a filmy green scarf as a bikini bottom, but it looked like a diaper. I took it off, folded it corner to corner, pinned it at my left hip with a jeweled brooch. Lots better! "Indecently decent" Pop Would say.

I looped a rope of imitation pearls around my hips, arranged strands to drape with the cloth, fastened them at the brooch. I hung around my neck a pendant of pearls and cabochon emeralds-from my father the day I received the title doctor of philosophy.

I was adding bracelets and rings when I heard "Psst!"-looked down and saw the Hillbilly's head and hands at the doorsill. Hilda put a finger to her lips. I nodded, gave her a hand up, whispered, "Still asleep?"

"Like babies."

"Let's get you dressed. . . 'Princess Thuvia."
Aunt Hilda giggled. "Thank you. . . 'Princess' Dejah Thoris." "Want anything but jewelry?"

"Just something to anchor it. That old-gold scarf if you can spare it."

"Course I can! Nothing's too good for my Aunt Thuvia and that scarf is durn near nothing. Baby doll, we're going to deck you out for the auction block. Will you do my hair?"

"And you mine. Deety-I mean 'Dejah Thoris'-I miss a three-way mirror."

"We'll be mirrors for each other," I told her. "I don't mind camping out. My great-great-great-grandmother had two babies in a sod house. Except"-I ducked my head, sniffed my armpit-"we'd better find a stream." I added, "Hold still. Or shall I pin it through your skin?"

"Either way, dear. We'll find water-all this ground cover."

"Ground cover doesn't prove running water. This place may be a 'dead sea bottom of Barsoom."

"Doesn't look dead," Aunt Hilda countered. "It's pretty."

"Yes, but this looks like a dead sea bottom. Which gave me an idea. Hold up your hair; I want to arrange your necklaces."

"What idea?" Aunt Hilda demanded.

"Zebadiah told me to figure a third escape program. The first two-I'll paraphrase, Gay is awake. One tells her to take us back to a height over Snug Harbor; the other tells her to scoot back to where she was before she was last given the first order."

"I thought that one told her to place us over the Grand Canyon?"

"It does, at present. But if she got the first Order now, that would change the second order. Instead of over the Grand Canyon, we would be back here quicker'n a frog could wink its eye."

"Okay if you say so."

"She's programmed that way. Hit the panic button and we are over our cabin site. Suppose we arrive there and find trouble, then use the 'C' order. She takes us back to wherever she last got the 7' order. Dangerous or we would not have left in a rush. So we need a third escape program, to take us to a safe place. This looks safe."

"It's peaceful."

"Seems so. There!-more doodads than a Christmas tree and you look nakeder than ever."

"That's the effect we want, isn't it? Sit down in the copilot's seat; I'll do your hair."

"Want shoes?" I asked.

"On Barsoom? Dejah Thoris, thank you for your little-girl shoes. But they pinch my toes. You're going to wear shoes?"

"Not bleedin' likely, Aunt Nanny Goat. I toughened my feet for karate-I can break a four-by-nine with my feet and get nary a bruise. Or run on sharp gravel. What's a good escape phrase? I plan to store in Gay an emergency signal for every spot we visit that looks like a safe hidey-hole. So give me a phrase."

"Your mudder chaws terbacker!"

"Nanny Goat! A code-phrase should have a built-in mnemonic."

"'Bug Out'?"

"A horrid expression and just what we need. 'Bug Out' will mean to take us to this exact spot. I'll program it. And post it and others on the instrument board so that, if anyone forgets, she can read it."

"And so could any outsider, if she got in."

"Fat lot of good it would do her! Gay ignores an order not in our voices. Hello, Gay."

"Hello, Deety!"

"Retrieve present location. Report."

"Null program."

"Are we lost?"

"Not at all, Aunt Hilda. I was sloppy. Gay, program check. Define 'Home."

"Cancel any-all transitions translations rotations inertials. Return to zerodesignated latitude longitude two kiicks above ground level hovering."

"Search memory reversed-real-time for last order execute-coded Gay Deceiver take us home."

"Retrieved."

"From time of retrieved order integrate to time-present all transitions translations rotations inertials."

"Integrated."

"Test check. Report summary of integration."

"Origin 'Home.' Countermarch program executed. Complex maneuver inertials. Translation Tau axis ten minimals positive. Complex maneuver inertials. Translation Eli axis two-two-four-zero-nine-zero-eight-two-seven point zero klicks. Negative vector Eli axis twenty-four klicks per sec. Negative vector Ell axis four klicks per sec. Complex manuever inertials. Grounded here-then oh-eight-oh-two-forty-nine. Grounded inertials continuing eight hours three minutes nineteen seconds mark! Grounded inertials continue running realtime."

"New program. Here-now grounded inertial location real-time running to reai-time new execute order equals code-phrase bug-out. Report new program."

Gay answered: "New program code-phrase bug-out: Definition: Here-now grounded inertials running real-time to future-time execute order code-phrase bug-out."

"Gay, I tell you three times."

"Deety, I hear you three times."

"New program. Execute-coded Gay Deceiver Bug Out.. At execute-code move to location coded 'bug-out.' I tell you three times."

"I hear you three times."

"Gay Deceiver, you're a smart girl."

"Deety, why don't you leave that big ape and live with me? Over."

"Good night, Gay. Roger and out. Hillbilly, I didn't give you that answer." I tried to look fierce.

"Why, Deety, how could you say such a thing?"

"I know I didn't. Well?"

"I 'fess up, Deetikins. A few days ago while you and I were working, you were called away. While I waited, I stuck that in. Want it erased?"

I don't know how to look fierce; I snickered. "No. Maybe Zebadiah will be around the next time it pops up. I wish our men would wake, I do."

"They need rest, dear."

"I know. But I want to check that new program."

"It sounded complex."

"Can be, by voice. I'd rather work on paper. A computer doesn't accept excuses. A mistake can be anything from 'null program' to disaster. This one has features I've never tried. I don't really understand what Pop does. NonEuclidean n-dimensional geometry is way out in left field."

"To me it's not in the ball park."

"So I'm itchy."

"Let's talk about something else."

"Did I show you our micro walky-talkies?"

"Jacob gave me one."

"There's one for each. Tiny but amazingly long-ranged. Uses less power than a hand calculator and weighs less-under two hundred grams. Mass, I mean-weight here is much less. Today I thought of a new use. Gay can accept their frequency."

"That's nice. How do you plan to use this?"

"This car can be remote-controlled."

"Deety, who would you want to do that?"

I admitted that I did not know. "But Gay can be preprogrammed to do almost anything. For example, we could go outside and tell Gay, via walkytalky, to carry out two programs in succession: H, 0, M, E, followed by B, U,G, 0, U, T. Imagine Zebadiah's face when he wakes up from sun in his eyes- because his car has vanished-then his expression two hours later when it pops back into existence."

"Deety, go stand in the corner for thinking such an unfunny joke!" Then Aunt Hilda looked thoughtful. "Why would it take two hours? I thought Gay could go anywhere in no time."

"Depends on your postulates, Princess Thuvia. We took a couple of hours to get here because we fiddled. Gay would have to follow that route in reverse because it's the only one she knows. Then-" I stopped, suddenly confused. "Or would it be four hours? No, vectors would cancel and- But that would make it instantaneous; we would never know that she had left. Or would we? Aunt Hilda, I don't know! Oh, I wish our men would wake up, I do!" The world wobbled and I felt scared.

"I'm awake," Pop answered, his head just showing above the doorsill. "What's this debate?" He gave Aunt Hilda a lecherous leer. "Little girl, if you'll come up to my room, I'll give you some candy."

"Get away from me, you old wolf!"

"Hilda my love, I could sell you down to Rio and retire on the proceeds. You look like expensive stuff."

"I'm very expensive stuff, darling wolf. All I want is every cent a man has and constant pampering-then a fat estate when he dies."

"I'll try to die with plenty of money in the bank, dearest."

"Instead we're both dead and our bank accounts have gone Heaven knows where and I haven't a rag to my back-and I'm wonderfully happy. Come inside-mind the radar!- and kiss me, you old wolf; you don't have to buy me candy."

"Pop," I asked, "is Zebadiah asleep?"

"Just woke up."

I spoke to Gay, then to Pop: "Will you tell Zebadiah radar is off? He can stand up without getting his ears fried."

"Sure." Pop ducked down and yelled, "Zeb, it's safe; her husband left."

"Coming!" Zebadiah's voice rumbled back. "Tell Deety to put the steaks on." My darling appeared wearing sword, carrying pie pan and sheets. "Are the steaks ready?" he asked, then kissed me.

"Not quite, sir," I told him. "First, go shoot a thoat. Or will you settle for peanut butter sandwiches?"

"Don't talk dirty. Did you say 'thoat'?"

"Yes. This is Barsoom."

"I thoat that was what you said."

"If that's a pun, you can eat it for supper. With peanut butter."

Zebadiah shuddered. "I'd rather cut my thoat."

Pop said, "Don't do it, Zeb. A man can't eat with his thoat cut. He can't even talk clearly."

Aunt Hilda said mildly, "If you three will cease those atrocities, I'll see what I can scrape up for dinner."

"I'll help," I told her, "but can we run my test first? I'm itchy."

"Certainly, Deety. It will be a scratch meal."

Pop looked at Aunt Hilda reproachfully. "And you told us to stop."

"What test?" demanded my husband.

I explained the Bug-Out program. "I think I programmed it correctly. But here is a test. Road the car a hundred meters. If my program works-fine! If
it tests null, no harm done but you and Pop will have to teach me more about the twister before I'll risk new programming."

"I don't want to road the car, Deety; I'm stingy with every erg until I know when and where I can juice Gay. However- Jake, what's your minimum transition?"

"Ten kilometers. Can't use spatial quanta for transitions-too small. But the scale goes up fast-logarithmic. That's short range. Middle range is in light~years-lOgarithmic again."

"What's long range, Jake?"

"Gravitic radiation versus time. We won't use that one."

"Why not, Jacob?" asked Aunt Hilda.

Pop looked sheepish. "I'm scared of it, dearest. There are three major theories concerning gravitic propagation. At the time I machined those controls, one theory seemed proved. Since then other physicists have reported not being able to reproduce the data. So I blocked off long range." Pop smiled sourly. "I know the gun is loaded but not what it will do. So I spiked it."

"Sensible," agreed my husband. "Russian roulette lacks appeal. Jake, do you have any guess as to what options you shut off?"

"Better than a guess, Zeb. It reduces the number of universes accessible to us on this axis from the sixth power of six-to-the-sixth-power to a mere six to the sixth power. Forty-six thousand, six hundred, fifty-six."

"Gee, that's tough!"

"I didn't mean it as a joke, Zeb."

"Jake, I was laughing at me. I've been looking forward to a lifetime exploring universes-and now I learn that I'm limited to a fiddlin' forty-six thousand and some. Suppose I have a half century of exploration left in me. Assume that I take off no time for eating, sleeping, or teasing the cat, how much time can I spend in each universe?"

"About nine hours twenty minutes per universe," I told him. "Nine hours, twenty-three minutes, thirty-eight point seven-two-two seconds, plus, to be more nearly accurate."

"Deety, let's do be accurate," Zebadiah said solemnly. "If we stayed a minute too long in each universe, we would miss nearly a hundred universes."

I was getting into the spirit. "Let's hurry instead. If we work at it, we can do three universes a day for fifty years-one of us on watch, one on standby, two off duty-and still squeeze in maintenance, plus a few hours on the ground, once a year. If we hurry."

"We haven't a second to lose!" Zebadiah answered. "All hands!-places! Stand by to lift! Move!"

I was startled but hurried to my seat. Pop's chin dropped but he took his place. Aunt Hilda hesitated a split second before diving for her seat, but, as she strapped herself in, wailed, "Captain? Are we really leaving Barsoom?"

"Quiet, please. Gay Deceiver, close doors! Report seat belts. Copilot, check starboard door seal."

"Seat belt fastened," I reported with no expression.

"Mine's fastened. Oh, dear!"

"Copilot, by low range, 'H' axis upward, minimum transition."

"Set, Captain."

"Execute."

Sky outside was dark, the ground far below. "Ten klicks exactly," my husband approved. "Astrogator, take the conn, test your new program. Science Officer observe."

"Yessir. Gay Deceiver-Bug Out!" We were parked on the ground.

"Science Officer-report," Zebadiah ordered. ~Report what?" Aunt Hilda demanded.

"We tested a new program. Did it pass test?"

"Uh, we seem to be back where we were. We were weightless maybe ten seconds. I guess the test was okay, Except-"

"Except' what?"

"Captain Zebbie, you're the worst tease on Earth! And Barsoom! You did so put lime Jello in my pool!"

"I was in Africa."

"Then you arranged it!"

"Hilda-please! I never said we were leaving Barsoom. I said that we haven't a second to waste. We don't, with so much to explore."

"Excuses. What about my clothes? All on the starboard wing. Where are they now? Floating up in the stratosphere? Coming down where? I'll never find them."

"I thought you preferred to dress Barsoomian style?"

"Doesn't mean I want to be forced to! Besides, Deety lent them to me. I'm sorry, Deety."

I patted her hand. "S'all right, Aunt Hilda. I'll lend you more. Give them, I mean." I hesitated, then said firmly, "Zebadiah, you should apologize to Aunt Hilda."

"Oh, for the love of- Sharpie? Sharpie darling."

"Yes, Zebbie?"

"I'm sorry I let you think that we were leaving Barsoom. I'll buy you clothes that fit. We'll make a quick trip back to Earth-"

"Don't want to go back to Earth! Aliens! They scare me."

"They scare me, too. I started to say: 'Earth-without-a-J.' It's so much like our own that I can probably use U.S. money. If not, I have gold. Or I can barter. For you, Sharpie, I'll steal clothes. We'll go to Phoenix-without-a-J- tomorrow-today we take a walk and see some of this planet-your planet- and we'll stay on your planet until you get tired of it. Is that enough? Or must I confess putting Jello into your pool when I didn't?"

"You really didn't?"

"Cross my heart."

"Be darned. Actually I thought it was funny. I wonder who did it? Aliens, maybe?"

"They play rougher than that. Sharpie darling, I'm not the only weirdo in your stable-not by dozens."

"Guess maybe. Zebbie? Will you kiss Sharpie and make up?"

On the ground, under the starboard wing, we found nur travel clothes, and under the port wing, those of our husbands. Zebadiah looked bemused. "Jake? I thought Hilda was right. It had slipped my mind that we had clothing on the wings."
"Use your head, Son." "I'm not sure I have one."

"I don't understand it either, darling," Aunt Hilda added.

"Daughter?" Pop said.

"Pop, I think I know. But- I pass!"

"Zeb, the car never moved. Instead-"

Aunt Hilda interrupted, "Jacob, are you saying that we did not go straight up? We were there-five minutes ago."

"Yes, my darling. But we didn't move there. Motion has a definable meaning: A duration of changing locations. But no duration was involved. We did not successively occupy loci between here-then and there-then."

Aunt Hilda shook her head. "I don't understand. We went whoosh! up into the sky. . . then whoosh! back where we started."

"My darling, we didn't whoosh! Deety! Don't be reticent."

I sighed. "Pop, I'm not sure there exists a symbol for the referent. Aunt Hilda. Zebadiah. A discontinuity. The car-"

"Got it!" said Zebadiah.

'I didn't," Aunt Hilda persisted.

"Like this, Sharpie," my husband went on. "My car is here. Spung!-it vanishes. Our clothes fall to the ground. Ten seconds later-flip!-we're back where we started. But our clothes are on the ground. Get it now?"

"I- I guess so. Yes."

"I'm glad you do. . . because I don't. To me, it's magic." Zebadiah shrugged. "'Magic.'"

"Magic," I stated, "is a symbol for any process not understood."

"That's what I said, Deety. 'Magic.' Jake, would it have mattered if the car had been indoors?"

"Well.. . that fretted me the first time Deety and I translated to Earthwithout-the-letter-J. So I moved our car outdoors. But now I think that only the destination matters. It should be empty-I think. But I'm too timid to experiment."

"Might be interesting. Unmanned vehicle. Worthless target. A small asteroid. A baby sun?"

"I don't know, Zeb. Nor do I have apparatus to spare. It took me three years to build this one."

"So we wait a few years. Jake? Air has mass."

"That worried me also. But any mass, other than degenerate mass, is mostly empty space. Air-Earth sea-level air-has about a thousandth the density of the human body. The body is mostly water and water accepts air readily. I can't say that it has no effect-twice I've thought that my temperature went up a trifle at transition or translation in atmosphere but it could have been excitement. I've never experienced caisson disease from it. Has any of us felt discomfort?"

"Not me, Jake."

"I've felt all right, Pop," I agreed.

"I got space sick. Till Deety cured it," Aunt Hilda added.

"So did I, my darling. But that was into vacuo and could not involve the phenomenon."

"Pop," I said earnestly, 'we weren't hurt; we don't have to know why. A basic proposition of epistemology, bedrock both for the three basic statements of semantics and for information theory, is that an observed fact requires no proof. It simply is, self-demonstrating. Let philosophers worry about it; they haven't anything better to do."

"Suits me!" agreed Hilda. "You big brains had Sharpie panting. I thought we were going to take a walk?"

"We are, dear," agreed my husband. "Right after those steaks."

XVIII

"-the whole world is alive."

Zebadiah:

Four Dagwoods later we were ready to start walkabout. Deety delayed by wanting to repeat her test by remote control. I put my foot down. "No!"

"Why not, my Captain? I've taught Gay a program to take her straight up ten klicks. It's G, A, Y, B, 0, U, N, C, ~-a new fast-escape with no execution word necessary. Then I'll recall her by B, U, G, 0, U, T. If one works via walkytalky, so will the second. It can save our lives, it can!"

"Uh-" I went on folding tarps and stowing my sleeping bag. The female mind is too fast for me. I often can reach the same conclusion; a woman gets there first and never by the route I have to follow. Besides that, Deety is a genius.

"You were saying, my Captain?"

"I was thinking. Deety, do it with me aboard. I won't touch the controls. Check pilot, nothing more."

"Then it won't be a test."

"Yes, it will. I promise, Cub Scout honor, to let it fall sixty seconds. Or to three klicks H-above-G, whichever comes first."

"These walky-talkies have more range than ten kilometers even between themselves. Gay's reception is much better."

"Deety, you trust machinery; I don't. If Gay doesn't pick up your second command-sun spots, interference, open circuit, anything-I'll keep her from crashing."

"But if something else goes wrong and you did crash, I would have killed you!" She started to cry.

So we compromised. Her way. The exact test she had originally proposed. I wasted juice by roading Gay Deceiver a hundred meters, got out, and we all backed off. Deety said into her walky-talky, "Gay Deceiver. . . Bug Out!"

It's more startling to watch than it is to be inside. There was Gay Deceiver off to our right, then she was off to our left. No noise-not even an implosion splat! Magic.

"Well, Deety? Are you satisfied?"

"Yes, Zebadiah. Thank you, darling. But it had to be a real test. You see that-don't you?"

I agreed, while harboring a suspicion that my test had been more stringent. "Deety, could you reverse that? Go somewhere else and tell Gay to come to you?"

"Somewhere she's never been?"

"Yes."

Deety switched off her walky-talky and made sure that mine was off. "I don't want her to hear this. Zebadiah, I always feel animistic about a computer. The Pathetic Fallacy-I know. But Gay is a person to me."

Deety sighed. "I know it's a machine. It doesn't have ears; it can't see; it doesn't have a concept of space-time. What it can do is manipulate circuitry in complex ways-complexities limited by its grammar and vocabulary. But those limits are exact. If I don't stay precisely with its grammar and vocabulary, it reports 'Null program.' I can tell it anything by radio that I can tell it by voice inside the cabin-and so can you. But I can't tell it to come look for me in a meadow beyond a canyon about twelve or thirteen klicks approximately southwest of here-now. That's a null program-five undefined terms."

"Because you made it null. You fed 'garbage in' and expect me to be surprised at 'garbage out'-when you did it a-purpose."

"I did not either, I didn't!"

I kissed the end of her nose. "Deety darling, you should trust your instincts. Here's one way to tell Gay to do that without defining even one new term into her vocabulary. Tell her to expect a three-part program. First part: bounce one minimum, ten klicks. Second part: transit twelve point five klicks true course two-two-five. Third part: drop to one klick H-over-G and hover. At that point, if what you described as your location is roughly correct, you will see her and can coach her to a landing without using Jake's twister."

"Uh. . . twelve and a half kilometers can't be done in units often kilometers. Powered flight?"

"Waste juice? Hon, you just flunked high school geometry. Using Euclid's tools, compass and straight edge, lay out that course and distance, then lay out how to get there in ten-klick units-no fractions."

My wife stared. Then her eyes cleared. "Transit one minimum true course one-seven-three and two thirds, then transit one minimum true course twoseven-six and one third. The mirror image solution uses the same courses in reverse. Plus endless trivial solutions using more than two minima."

"Go to the head of the class. If you don't spot her, have her do a retreating search curve-in her perms, in an Aussie accent. Honey girl, did you actually do that Euclid style?"

"I approximated it Euclid style-but you didn't supply compass and straight edge! Scribe circle radius twelve point five. Bisect circle horizontally by straight edge through origin; quarter it by dropping a vertical. Bisect lower left quadrant-that gives true course two-two-five or southwest. Then set compass at ten units and scribe arcs from origin and from southwest point of circle; the intersections give courses and vertices for both major roots to the accuracy of your straight edge and compass. But simply to visualize that construction-well, I got visualized angles of two-seven-five and one-seven-five. Pretty sloppy.

"So I did it accurately by Pythagorean proposition by splitting the isosceles triangle into two right triangles. Hypotenuse is ten, one side is six and a quarter-and that gives the missing side as seven point eight-zero-six-twofour-seven plus-which gives you one course and you read off the other by the scandalous Fifth Axiom. But I did check by trig. Arc sine point seven-eightzero-six-two-four-seven----"

"Hold it! I believe you. What other ways can you program Gay to find you, using her present vocabulary?"

"Uh.. . burn juice?"

"If necessary."

"I would have her bounce a minimum, then maximize my signal. Home on me."

"Certainly. Now do the same thing without using juice. Just Jake's twister."

Deety looked thoughtful and about twelve years old, then suddenly said, "Drunkard's Walk'!"-added at once, "But I would place a locus around the Walk just large enough to be certain that I'm inside it. Gay should plot signal level at each vertex. Such a plot would pinpoint the signal source."

"Which way is faster? Home straight in under power? Or Drunkard's Walk?" Deety answered, "Why, the-"-looked startled. "Those are solid-state relays."

"Jake sets verniers by hand-but when Gay is directing herself there are no moving parts. Solid state."

"Zebadiah, am I thinking straight? Using power, at that distance-call it twelve kilometers-Gay should be able to home on me in three or four minutes. But-Zebadiah, this can't be right!-using no power and relying on random numbers and pure chance in a Drunkard's Walk, Gay should find me in less than a second. Where did I go wrong?"

"On the high side, Deety girl. Lost your nerve. The first fifty milliseconds should show the hot spot; in less than the second fifty she'll part your hair. All over in a tenth of a second-or less. But, honey, we still haven't talked about the best way. I said that you should trust your instincts. Gay is not an 'it.' She's a person. You'll never know how relieved I was when it turned out that you two were going to be friends. If she had been jealous of you- May the gods deliver us from a vindictive machine! But she's not; she thinks you're swell."

"Zebadiah, you believe that?"

"Dejah Thoris, I know that."

Deety looked relieved. "I know it, too-despite what I said earlier."

"Deety, to me the whole world is alive. Some parts are sleeping and some are dozing and some are awake but yawning. . . and some are bright-eyed and bushy-tailed and always ready to go. Gay is one of those."

"Yes, she is. I'm sorry I called her an 'it.' But what is this 'best way'?"

"Isn't it obvious? Don't tell her how-just tell her. Say to her, 'Gay, come find me!' All four words are in her vocabulary; the sentence is compatible with her grammar. She'll find you."

"But how? Drunkard's Walk?"

"A tenth of a second might strike her as too long-she likes you, hon. She'll look through her registers and pick the optimum solution. She might not be able to tell you how she did it, since she wipes anything she's not told to remember. I think she does; I've never been certain."

Jake and Hilda had wandered off while Deety and I had been talking. They had turned back, so we started toward them. Sharpie called out, "Zebbie, what happened to that hike?"

"Right away," I agreed. "Jake, we have about three hours. We ought to be buttoned up before sundown. Check?"

"I agree. The temperature will drop rapidly at sundown."

"Yup. We can't do real exploring today. So let's treat it as drill. Fully armed, patrol formation, radio discipline, and always alert, as if there were a 'Black Hat' behind every bush."

"No bushes," objected Hilda.

I pretended not to hear. "But what constitutes 'fully armed,' Jake? We each have rifles. You have that oldstyle Army automatic that will knock down anything if you're close enough but-how good a shot are you?"

"Good enough."

"How good is 'Good enough'?" (Most people are as accurate with a baseball as with a pistol.)

"Skipper, I won't attempt a target more than fifty meters away. But if I intend to hit, the target will be within range and I will hit it."

I opened my mouth. . . closed it. Fifty meters is a long range for that weapon. But hint that my father-in-law was boasting?

Deety caught my hesitation. "Zebadiah-Pop taught me pistol in the campus R.O.T.C. range. I've seen him practice bobbing targets at thirty meters. I saw him miss one. Once."

Jake harrumphed. "My daughter omitted to mention that I skip most surprise targets."

"Father! 'Most' means 'more than fifty percent.' Not true!"

"Near enough."

"Six occasions. Four strings, twenty-eight targets on three-"

"Hold it, honey! Jake, it's silly to argue figures with your daughter. With my police special I won't attempt anything over twenty meters-except covering fire. But I hand-load my ammo and pour my own dumdums; the result
is almost as lethal as that howitzer of yours. But if it comes to trouble, or hunting for meat, we'll use rifles, backed by Deety's shotgun. Deety, can you shoot?"

"Throw your hat into the air."

"I don't like the sound of that. Sharpie, we have five firearms, four people- is there one that fits you?"

"Cap'n Zebbie, the one time I fired a gun, I went backwards, the bullet went that-a-way, and I had a sore shoulder. Better have me walk in front to trip land mines."

"Zebadiah, she could carry my fléchette gun."

"Sharpie, we'll put you in the middle and you carry the first-aid kit; you're medical officer-armed with Deety's purse gun for defense. Jake, it's time we stowed these swords and quit pretending to be Barsoomian warriors. Field boots. I'm going to wear that same sweaty pilot suit, about equivalent to jump suits you and Deety wore-which I suggest you wear now. We should carry water canteens and iron rations. I can't think of anything that would serve as a canteen. Damn! Jake, we aren't doing this by the book."

"What book?" demanded Hilda.

"Those romances about interstellar exploration. There's always a giant mother ship in orbit, loaded with everything from catheters to Coca-Cola, and scouting is by landing craft, in touch with the mother ship. Somehow, we aren't doing it that way."

(All the more reason to conduct drill as realistically as possible. Jake or I, one of us, is honor bound to stay alive to take care of two women and unborn children; exterminating 'Black-Hat' vermin holds a poor second to that.)

"Zebbie, why are you staring at me?"

I hadn't known that I was. "Trying to figure how to dress you, dear. Sharpie, you look cute in jewelry and perfume. But it's not enough for a sortie in the bush. Take 'em off and put 'em away. You, too, Deety. Deety, do you have another jump suit that can be pinned up or stitched up for Hilda?"

"A something, sure. But it would take hours to do a good job. My sewing kit isn't much."

"Hours' will have to be another day. Today we'll make do with safety pins. But take time to do a careful job of padding her feet into your stoutest shoes. Confound it, she should have field boots. Sharpie, remind me when we make that shopping trip to Earth-without-a-J."

"To hear is to obey, Exalted One. Is it permitted to make a parliamentary inquiry?"

She startled me. "Hilda, what did I do to cause that frosty tone?"

"It was what you didn't do." Suddenly she smiled, reached high and patted my cheek. "You mean well, Zebbie. But you slipped. While Gay Deceiver is on the ground, we're equal. But you've been giving orders right and left."

I started to answer; Jake cut in. "Hilda my love, for a scouting expedition the situation becomes equivalent to a craft in motion. Again we require a captain."

Sharpie turned toward her husband. "Conceded, sir. But may I point out that we are not yet on that hike? Zebbie has consulted you; he has not consulted Deety and me. He asked us for information-darned seldom! Aside from that he has simply laid down the law. What are we, Zebbie? Poor little female critters whose opinions are worthless?"

Caught with your hand in the cooky jar, throw yourself on the mercy of the court.

"Sharpie, you're right and I'm dead wrong. But before you pass sentence I claim extenuating circumstances: Youth and inexperience, plus long and faithful service."

"You can't," put in my helpful wife. "You can plead one or the other but not both. They can't overlap."

Sharpie stood on tiptoes and kissed my chin. "In Zebbie's case they do overlap. Do you still want to know what to use as water canteens?"

"Certainly!"

"Then why didn't you ask?"

"But I did!"

"No, Cap'n Zebbie; you did not ask and did not even give us time to volunteer the answer."

"I'm sorry, Hilda. Too many things on my mind."

"I know, dear; Sharpie does not mean to scold. But I had to get your attention."

"That baseball bat?"

"Almost. For an ersatz canteen- A hot-water bottle?"

Again she startled me. "In the danger we were in when we left, you worried about cold feet in bed? And packed a hot-water bottle?"

"Two," answered Deety. "Aunt Hilda fetched one. So did I."

"Deety, you don't have cold feet and neither do I."

Sharpie said, "Deety, is he actually that naïve?"

"I'm afraid he is, Aunt Hilda. But he's sweet."

"And brave," added Hilda. "But retarded in spots. They do overlap in Zebbie's case. He's unique."

"What," I demanded, "are you talking about?"

"Aunt Hilda means that, when you refitted Gay, you neglected to install a bidet."

"Oh." That was the wittiest I could manage. "It's not a subject I give much thought to."

"No reason you should, Zebbie. Although men use them, too."

"Zebadiah does. Pop, too. Bidets, I mean. Not hot-water bottles."

"I meant hot-water bottles, dear. As medical officer I may find it necessary to administer an enema to the Captain."

"Oh, no!" I objected. "You're not equipped."

"But she is, Zebadiah. We fetched both sorts of nozzles."

"But you didn't fetch four husky orderlies to hold me down. Let's move on. Sharpie, what was the advice you would have given if I had been bright enough to consult you?"

"Some is not advice but a statement of fact. I'm not going for a hike on a hot day swaddled in a pinned-up jump suit eight sizes too big. While you all play Cowboys-and-Indians, I'm going to curl up in my seat and read 'The Oxford Book of English Verse.' Thank you for fetching it, Jacob."

"Hilda beloved, I will worry."

"No need to worry about me, Jacob. I can always tell Gay to lock her doors. But, were I to go with you, I would be a handicap. You three are trained to fight; I'm not." Sharpie turned toward me. "Captain, since I'm not going, that's all I have to say."

What was there for me to say? "Thank you, Hilda. Deety, do you have things on your mind?"

"Yes, sir. I go along with field boots and jump suits and so forth even though they'll be beastly hot. But I wish you would change your mind about your sword and Pop's saber. Maybe they aren't much compared with rifles but they're good for my morale."

Hilda interjected, "Had I decided to go, Captain, I would have said the same. Possibly it is an emotional effect from what happened, uh-was it only yesterday?-but perhaps it is subconscious logic. Just yesterday bare blades defeated a man-a thing, an alien-armed with a firearm and ready to use it."

Jake spoke up. "Captain, I didn't want to take off my saber."

"We'll wear them." Any excuse is a good excuse to wear a sword. "Are we through? We've lost an hour and the Sun is dropping. Deety?"

"One more thing, Zebadiah-and I expect to be outvoted. I say to cancel the hike."

"So? Princess, you've said too much or not enough."

"If we do this, we spend the night here-sitting up. If we chase the Sun instead-There were lights on the night side that looked like cities. There was blue on the day side that looked like a sea. I think I saw canals. But whether we find something or not, at worst we'll catch up with sunrise and be able to sleep outdoors in daylight, just as we did today."

"Deety! Gay can overtake the Sun. Once. You want to use all her remaining juice just to sleep outdoors?"

"Zebadiah, I wasn't planning on using any power."

"Huh? It sounded like it."

"Oh, no! Do transitions of three minima or more, bearing west. Aim us out of the atmosphere; we fall back in while looking for places of interest. As we reenter, we glide, but where depends on what you want to look at. When you have stretched the glide to the limit, unless you decide to ground, you do another transition. There is great flexibility, Zebadiah. You can reach sunrise line in the next few minutes. Or you could elect to stay on the day side for weeks, never land, never use any juice, and inspect the entire planet from pole to pole."

"Maybe Gay can stay up for weeks-but not me. I'm good for several more hours. With that limitation, it sounds good, How about it? Hilda? Jake?"

"You mean that female suffrage is permanent? I vote Yes!" Jake said, "You have a majority; no need for a male vote." "Jacob!" his wife said reproachfully.

"Joking, my dear. It's unanimous."

I said, "Somebody just cancelled the election. Look there." We all looked. Deety said, "What is it? A pterodactyl?" "No, an ornithopter. A big one."

XIX

Something is gained in translation-

Hilda:

Jacob tightened his arm around me. "Zeb," he said softly, "I don't believe it." He was staring (we all were) at this mechaniwockle pteranodon coming at us over the hills in the west.

"Neither do I;" Zebbie answered. "Wrong wing loading. Impossible articulation. There's a second one. A third! All hands! Grab your clothes! Man the ship! Prepare to lift! Move! Jake, unbuckle your saber and into your jump suit, fast!"

Cap'n Zebbie was unhooking his sword belt and grabbing his coveralls as he yelped. I was inside first as I didn't stop to dress-grabbed Deety's baby shoes with one hand, my dress and panties with the other.

I wiggled into panties, slid the dress over my head, slipped on Deety's Keds.

I anticipated the order to fasten seat belts-stopped suddenly and eased my belt. I had not stopped to take off the doodads that proclaimed me a Barsoomian "princess." Now it seemed that every item of frippery was about to imprint me for life.

Deety was cursing softly over the same problem. Deety's jump suit was harder to reach into, even when she unbelted and opened the zipper all the way. I helped readjust the hardware but cautioned her not to remove it and to close the zipper clear to her chin. "Deety, if you get holes in your hide, you'll get well. But if something loose catches our captain in the eye, the culprit will be broken on the wheel."

I clucked-clucked at her answer but big ones do get in the way. Meanwhile our men were having problems. That space under the instrument board could not be seen by a full-sized male. The best position to reach it was impossible for Jacob, ridiculously impossible for Zebbie.

Zebbie's profanity was louder than Deety's but not as colorful. My own darling was keeping quiet which meant that he was really in trouble. I said, "Gentlemen-"

Zebbie grunted, "Shut up, Sharpie; we've got problems! Deety! How did you get these toadstickers into this compartment?"

"I didn't. Aunt Hilda did."

"Sharpie, can I apologize later? Those Martians are circling us now!"

So they were, at least a dozen flapping monstrosities. One appeared about to ground. "Captain, I'll do it-but there is a faster way."

"How?"

"Unhook your scabbards, put on your sword belts. Saber and sword in scabbards fit easily if you point one right, the other left. They will rattle unless you stuff clothing around them."

"They can bloody well rattle!" In seconds, our gallants had blades and scabbards stowed. As Cap'n Zebbie resumed sword belt and started on his seat belt he called out, "Fasten belts, prepare to lift! Sharpie, have I told you today that in addition to loving you, I admire you?"

"I think not, Captain."

"I do. Enormously. Report! Science Officer?"

"Seat belt fastened. Thank you, Zebbie."

"Seat belt fastened," reported Deety. "Bulkhead door dogged."

"Seat belt fastened, starboard door seal checked, copilot ready, sir!"

"Port door seal checked, pilot strapped down; we're ready-and none too soon! One has grounded and somebody is getting out. Hey! They're human!"

"Or disguised aliens," said my darling.

"Well. . . yes, there's that. I may lift any second. Deety-that new program: Just G, A, Y, B, 0, U, N, C, E? No 'do-it' word?"

"Check."

"Good. I won't use it unless forced to. This may be that 'first contact' the world has been expecting."

"Cap'n Zebbie, why would aliens disguise themselves when they outnumber us? I think they are human."

"I hope you're right. Copilot, should I open the door? Advice, please."

"Captain, you can open the door anytime. But if it is open, it takes a few seconds to close it and the ship won't lift with a door open."

"Too right. Gay Deceiver."

"Hi, Boss. Where did you pick up the tarts?"

"Gay, check and report."

"All circuits checked, all systems go, juice point seven-eight-and I'm in the mood."

"Cast loose L-gun. Prepare to burn."

"Done!"

"Captain," my husband said worriedly, "are you planning to blast them?"

"I hope not. I'd rather run than fight. I'd rather stay and get help than either. But they grounded where I can burn them-using offset."

"Captain, don't do it!"

"Copilot, I don't plan to. Now drop it!"

The grounded flappy bird was about two hundred meters and a few degrees left of dead ahead. Two men-they looked like men-had disembarked and headed toward us. They were dressed alike-uniforms? They seemed vaguely familiar-but all uniforms seem vaguely familiar, do they not?

They were less than a hundred meters from us. Cap'n Zebbie did something at his instrument board and suddenly their voices were inside, blastingly loud. He adjusted the setting and we could hear clearly. Zebbie said, "That's Russian! Isn't it, Jake?"

"Captain, I think so. A Slavic language, in any case." Jacob added, "Do you understand it?"

'Me? Jake, I said that I can swear in Russian; I didn't say I could speak it. I can say 'thank you' and 'please' and 'da' and 'nyet'-maybe six more. How about you?"

"I can puzzle out a paper about mathematics with the aid of a dictionary. But speak it? Understand it? No."

I tried to remember whether or not I had ever told Zebbie that I know Russian. My husband and Deety I had not told. Well, if Zebbie knew, he would call on me. It is not something I mention as it does not fit my persona. I started it out of curiosity; I wanted to read those great Russian novelists-Dostoievsky, Tolstoy, and so forth-in the original in order to find out why they were so celebrated. Why I had never been able to read one of those classic novels all the way through? (They had cured me of sleeping pills.)

So I set out to learn Russian. Soon I was wearing earphones to bed, listening to Russian in my sleep, working with a tutor in the daytime. I never mastered a good accent; those six-consonants-in-a-row words tie knots in my tongue. But one cannot read a language easily unless one can "hear" the words. So I learned the spoken language along with the written.

(Oh, yes, those "classic novels": Having invested so much effort I carried out my purpose: War and Peace, The Idiot, The Brothers Karamazov, Anna Karenina, and so forth. Would you believe it? Something is gained in translation; the originals are even more depressing and soporific than translations. I'm not sure what purpose Russian fiction has, but it can't be entertainment.)

I decided to wait. I was not eager to be interpreter and it would not be necessary if it turned out that Zebbie or Jacob had a language in common with our visitors-and I rationalized my decision by telling myself that it might turn out to be an advantage if the strangers thought that no one of us understood Russian.

(At that point I realized that I had been thinking in Russian. It's a wonderful language for paranoid thoughts.)

When Zebbie switched on the outside mikes, the older was telling the Younger: "-not let Fyodor Ivanovitch get wind of such thoughts, Yevgeny. He
does not believe that (no good? stupid?) Britishers can excel us in anything. So don't refer to that curious craft as 'advanced engineering.' A 'weird assemblage of poorly organized experiments' would be better."

"I will remember. Shall I loosen my holster and take off the safety? To guard you, sir?"

The older man laughed. "You haven't dealt with the damned British as long as I have. Never let them suspect that you are even mildly nervous. And always be sure to insult him first. Bear in mind that the lowliest serf in Ykraina is better than their so-called King-Emperor. That serf-"

-when Zebbie interrupted: T4rrêtez-là!"

The younger hesitated but the older never broke stride. Instead he answered in French: "You are telling me to halt, you British swine? An officer of the Tsar on Russian soil! I spit on your mother. And your father if your mother can remember who he was. Why are you speaking French, you soiled British spy? You fool no one. Speak Russian-or, if you are uncultured, speak English."

Zebbie thumbed a button. "What about it, Jake? Switch to English when he's so hipped on the subject of Englishmen? Or bull it through in French? My accent is better than his."

"Maybe you can get away with it, Captain. I can't."

Zebbie nodded and opened the mike, spoke in English: "We are not British, not spies. We are American tourists and-"

"American'? What nonsense is this?" (He had shifted to English.) "A British colonial is still British-and a spy."

My husband reached over, shut off the microphone. "Captain, I advise lifting. He won't listen to reason."

"Copilot, not till I must. We don't even have enough water. I must try to parley." Zebbie thumbed the switch. "I am not a British colonial. I am Zeb Carter of California, a citizen of the United States of America; I have my passport. If we have trespassed, we regret it and apologize."

"Spy, that is the most bold-faced bluff I have ever heard. There is no such country as the United States of America. I am placing you under arrest. In the name of His Imperial Majesty the Tsar of All the Russias, by authority delegated to me by His Viceroy for New Russia Grand Duke Fyodor Ivanovitch Romanov, I arrest you and your party for the crime of espionage. Open up!"

By now they had reached Gay Deceiver and were at the portside door.

Zebbie answered, "You haven't told me your name, much less identified yourself as a Russian officer. Or shown any authority over what is clearly unoccupied land."

"What? Preposterous! I am Colonel the Count Morinosky of Novy Kiev, of the Viceroy's Imperial Guard. As for my authority, look at the sky around you!" The self-proclaimed colonel drew his pistol, reversed it, and used the butt to pound on the door. "Open up!' I said."

Zebbie has good temper and calm judgment. Both are likely to slip if anyone abuses Gay Deceiver.

He said softly, "Colonel, your craft on the ground ahead-is there anyone in it?"

"Eh? Of course not. It's a two-seater, as anyone can see. My private scoutabout. Never mind that. Keep quiet and open up."

Zebbie again switched off his microphone. "Gay Deceiver, at command 'Execute' burn one tenth of a second at point of aim, intensity four."

"Gotcha, Boss."

"Colonel, how can you take four prisoners in a two-seater?"

"Simple. You and I will ride in your vehicle. The other members of your party will be hostage for your good behavior and will ride where assigned. You won't see which craft lest you get foolish ideas. My pilot will fly my craft."

"Execute."

The grounded ornithopter began to burn fiercely-but the colonel did not see it. We saw it-but he was looking at Zebbie. Zebbie said, "Colonel, please stand clear of the door so that I can open it."

"Oh. Very well."

"Colonel! Look!" The younger officer, in stepping back, caught sight of the fire-and I have rarely heard such anguish.

Or, an instant later in the colonel's face, such astonishment switching to rage. He attempted to shoot Zebbie-with his hand still gripping the barrel of his pistol. In a moment he realized what he was doing and flipped it to catch it by the grip.

I never saw whether or not he made the catch; Cap'n Zebbie commanded, "Gay Bounce!" and the scene blacked out while the colonel's hand was open for the catch.

Zebbie was saying, "Jake, I lost my temper. I should not have done it; it ruined our last chance to deal with those Russians. But I hope it taught the ruddy snarf not to go around hammering dents into other people's cars."

"Captain, you did not ruin our 'last chance'; we never had one. You ran into classic Russian xenophobia. The Commies didn't invent that attitude; it goes back at least a thousand years. Read your history." Jacob added, "I'm not sorry you burned his kite. I wish he had to walk home. Regrettably one of his craft will pick him up."

"Jake, if I could afford to-in juice, in time-I would go back and keep him from being picked up. Harry them, not let them land. I won't. Hmm- Shall we fall a bit farther and see what they are doing? Before we get on with our interrupted schedule?"

"Uh. . . Captain, may I have a Bonine pill?"

I squealed, "Me, too!"

"Deety, take care of 'em. I'll put her in dive and we'll look."

"Captain, why not use the B, U, G, program?"

"Deety, somebody might be on that spot. Wups! I'm biting air." Cap'n Zebbie leaned us over, placed Barsoom-I mean "Mars"-Mars-lO or whatever-dead ahead. "Should spot flappy birds in few minutes. Jake, how about binoculars?"

Zebbie didn't want them himself while piloting. We passed them around and I spotted an ornithopter, then two more, and passed the glasses to Deety.

"Zebadiah, there is no one where we were parked."

"You're certain?"

"Yessir. The colonel's scoutabout is stifl burning; there are peop'e near it, nowhere e'se. That's why I'm certain there is no one where we were. B, U, G, 0, U, T is safe"

Zebbie was slow to answer. How about it, folks? It wou'd be an unnecessary risk. Just one squawk and I'll skip it,"

I kept quiet and hoped the others would, too, I don't worry; I'm going to live as tong as Atropos permits-meanwhile I intend to enjoy every minute. Zebbie waited, then said, "Here we go. Gay-Bug Out!"

XX
-right theory, wrong universe.

Zeb:

Deety is going to force me to look like a hero because I don't have the guts to let her down. I thought my copilot would veto going back to the scene of the crime; Jake is level-headed about safety precautions. I didn't count on Sharpie; she's unpredictable. But I thought Jake would object.

He didn't. I waited until I was certain that no one was going to get me off the spot. . . then waited some more. . . then said sadly, "Here we go," and told Gay to "BUG OUT!"

I expected to be a mushroom cloud. Instead we were parked where we had been and the colonel's craft was burning briskly. (Someday I am going to run that experiment: a transition to attempt to cause two masses to occupy the same space. But I won't be part of the experiment. The Bug-Out program scared me, and I liked the Take-Us-Home program a lot better after we made it two klicks H-above-G instead of parked. Could the Bug-Out program be modified so that Gay sneaked up on her target, checked it by radar, before accepting it? Take it up with Deety, Zeb-stick to what you know!)

The Russians appeared to be slow to notice our return. One ornithopter had grounded not far from the fire; there were several bystanders. I could not see whether or not my erstwhile arresting officer, Colonel Somethingsky, was in the group. I assumed that he was.

Then I was sure: A figure broke loose and headed toward us, waving a pistol. I said briskly, "Shipmates, is there any reason to hang around?"

I waited a short beat. "Hearing no objection-Gay Bounce!"

That black sky looked good. I wondered how Bumpsky was going to explain to the Grand Duke. Brass Hats are notoriously reluctant to believe unlikely stories.

"Did I bounce too quickly? Have you all seen what you wanted to see?"

Only Deety answered. "I was checking that program. I think I see a way to avoid two masses conflicting."

"Keep talking."

"Gay could sneak up on the target, inspect it by radar, accept it and ground, or refuse it and bounce-with no loss of time and with the same execute code. That spot could be knee-deep in Russians and Gay would simply whoosh us to where we are now."

(I said to leave it to Deety. You heard me.) "Good idea. Do it. Can't have too many fail-safes."

"I'll reprogram when we stop."

"Correction. I want that fail-safe programmed now. I might need your revised program any moment."

"Aye, aye, Captain."

"Captain darling,' if you please. If you must call me 'Captain.' Then review all preprograms and debug them, if necessary, with analogous fail-safes. And any new ones in the future. Now- Just put her into glide, headed west, and transit three minima?"

"Or more. Or less. I thought that a spot check every thirty kilometers would be about right for a rapid survey."

"What altitude will we wind up? Assuming I simply aim her at the horizon and transit tangent to the curve."

"Oh. What altitude do you want, Captain-Captain darling? A tangent does little in three minima, just a touch over a hundred meters. Is ten kilometers about right?"

"Ten klicks is fine. I could aim at the horizon, make transition, then at once give the B, 0, U, N, C, E order."

"So you could, Zebadiah, but if you will use the horizon as reference and aim eighteen and a half degrees above it- Will your gunsight depress that far?"

"No, but I'll tell Gay. No problem."

"Three minima on that upward slant will place you ten klicks H-above-G and a couple of klicks short of three minima on the curve."

"Plus my present altitude."

"No, no! Visualize the triangle, Zebadiah. It makes no real difference whether you do this from ten klicks H-above-G, or parked on the ground. Do you want exact figures?"

"You visualize triangles, Deety; that's your department. I've got air bite now; I'm going to head west; I want to see where those ornithopters came from. Meantime work out that new fail-safe." Did it really make no difference whether I started from ten thousand meters or right on deck? Didn't I have to add in- No, of course not.. . but one way was sine and the other way was tan. But which one? Hell, it didn't matter; Deety was right. She always is, on figures-but someday I'm going to work it carefully, on paper, with diagrams and tables. "Copilot."

"Captain."

"L axis, transit, three minima."

"Transition, L axis, thirty kilometers-set!"

"Gay Deceiver."

"I'm not at home but you may record a message."

"Change attitude to climb eighteen point five degrees and report."

"Roger Wilco. Climbing. Ten. Twelve. Fourteen. Sixteen. Eighteen. Mark!"

"Execute!"

We were somewhere else with black sky. "Gay, vertical dive. Execute."

"No trouble, Clyde; enjoy the ride."

"Zebadiah, may I talk with Gay while you look over the terrain? To reprogram that fail-safe."

"Sure, go ahead. Jake, want to scan with binox while I eyeball it? I'll warn before transition."

"Zebadiah, I could give her a scouting program, automatic. Skip the verfliers, skip the climb order; just an 'execute' code word. Place her on course. . . or I could include course."

"I'll head her manually; the rest is swell-after that fail-safe. What's the code word?"

"'Scout'?"

"Good. Include the 'execute' idea in the code word. Deety, I've decided that I love you for your brain. Not those irrelevant physical attributes."

"Zebadiah, once I've had a bath you may change your mind. I've had a sudden attack of brain fever. You had better program her yourself."

"Mutiny again. I retract and apologize. You smell yummy and should marinate another week. It's not your cortex or your character I love but your carcass-delectable! If it weren't for these seat belts, it would be rape, rape, rape, all the way to the ground. Actually you're sort o' stupid-but what a chassis!"

"That's better. Although I'm not stupid."

"You married me. Res ipsa loquitur! Jake, are you spotting anything?".

"Dry hills, Captain. Might as well move on."

"Zebadiah, will you place her in glide and hold a few minutes?"

"Sure. See something you want to check?"

"No, sir, But when we emerged here, we had seventy-three seconds to impact. We've used twenty-one seconds. I'd like a few moments to insert those preprograms."

I overrode manually and started Gay into a stretched glide while I extended her wings. Then I let Deety and Gay talk to each other. Deety had both changes fully worked out; not once did Gay answer, "Null program."

I was about to warn Deety that Gay was not a sailplane when she reported, "All done, Captain. For the 'S' program I added in an alarm for two klicks Habove-G,"

"Good idea. So now I head west again and give her that 'S' code word-no 'Execute'?"

"Yessir. 'Cept I'd like to try the revised B, U, G, 0, U, T program. It has been less than four minutes since we left. Someone may be in that exact spot."

"Deety, I share your curiosity. But it's like testing a parachute the hard way. Can't we save it until we need it? Then, if there is a glitch, we'll be dead so fast we'll hardly notice it."

Deety said nothing. I waited, then said, "Comment, please."

"No comment, Captain." Deety's answer was toneless. "Hmm- Science Officer.. . comment, please."

"I have no comment to offer, Captain." (A slight chill?) "Copilot, I require your advice."

"Uh, if the Captain please. Am I privileged to ask for written orders?"

"Well, I'll be dipped in- Gay Bounce! Is there such a thing as a 'space lawyer'? Like 'sea lawyer'? Jake, in general, anyone, save in the face of the enemy, may demand written orders. . . if he'll risk his career to 'perpetuate evidence for the court-martial he knows will follow. Did it myself once and saved my neck and cost my temporary boss fifty numbers-and I wound up senior to him and he resigned.

"But a second-in-command is in a special position; it is his duty to advise his C.O., even if the C.O. doesn't ask for advice. So I don't see how you can demand written orders on a point already one of your duties. But I won't make an issue of it. I'll direct the Astrogator to log your request, then I can dictate my reply into the log. Then I am going to ground this go-buggy and turn command over to you. Maybe you'll have more luck chairing this debating society than I have had. I wish you luck-you'll need it!"

"But, Captain, I did not ask for written orders."

"Eh?" I thought back. He hadn't, quite. "It sounded as if you were about to."

"I was stalling. I must advise you to follow the prudent course. Unofficially, I prefer to risk the test. But I should not have stalled. I'm sorry that my intransigence caused you to consider relinquishing command."

"I didn't just consider it; I have. Resignation effective the first time we ground. You've bought it, Jake."

"Captain-"

"Yes, Deety?"

"You are correct; the test I suggested is useless, and could be fatal. I should not have asked for it. I'm sorry.. . sir."

"Me, too! I felt you were being too strict with Deety. But you weren't; you were taking care of us, as you always do, Zebbie. Captain Zebbie. Of course you shouldn't make a risky test we don't need."

I said, "Anyone anything to add?" No one spoke up, so I added, "I'm heading west," and did so. "Gay Deceiver-Bug Out!"

Black sky above us; that "dead sea bottom" far below. . . . I remarked, "Looks as if a Russian, or one of their flappy craft, is in our parking spot. Deety, your revised program worked perfectly."

"But, Zebadiah-why did you risk it?" She sounded terribly distressed.

"Because all of you wanted to, despite what you said later. Because it's my last chance to make such a decision." I added, "Jake, I'm going to tilt her over. Grab the binox and see if you can identify where we were parked. If that fire is smoking, you can use it for reference."

"But, Captain, I'm not taking command. I won't accept it."

"Pipe down and carry out your orders! It's this damned yack-yack and endless argument that's giving me ulcers. If you won't accept command, then it's up for grabs. But not me! Oh, I'll pilot as the new CO. orders. But I won't command. Deety, how long did Gay pause to make that radar check? At what height?"

"H-above-G was half a klick. Duration I don't know but I can retrieve it. Darling-Captain! You're not really going to quit commanding us?"

"Deety, I don't make threats. Pipe down and retrieve that duration. Jake, what do you see?"

"I've located the fire. Several ornithopters are on the ground. My guess places one of them about where we were parked. Captain, I advise not dropping lower."

"Advice noted. Deety, how about that duration?" I didn't know how to ask for it myself, not having written the program.

Deety retrieved it smoothly: 0.071 seconds-call it a fifteenth of a second. Radar is not instantaneous; Gay had to stop and sweep that spot long enough for a "picture" to form in her gizzards, to tell her whether or not she could park there. A fifteenth of a second is loads of time for the human eye. I hoped that Colonel Frimpsky had been watching when Gay popped up and blinked out.

"Five klicks H-above-G, Captain."

"Thanks, Jake." The board showed dive rate-straight down!-of over seven hundred kilometers per hour, and increasing so fast that the units figure was an unreadable blur, and the tens place next to it was blinking one higher almost by the second.

Most carefully I eased her out of dive, and gently, slowly opened her wings part way for more lift as she slowed, while making a wide clockwise sweep to the east-slowed her dive, that is, not her speed through the air. When I had completed that sweep, and straightened out headed for that column of smoke on course west, I was making over eight hundred kilometers per hour in unpowered glide and still had almost a klick H-above-G I could turn into greater speed.

Not that I needed it- I had satisfied myself by eye of what I had been certain of by theory: an ornithopter is slow.

Jake said worriedly, "May I ask the Captain his plans?"

"I'm going to give Colonel Pistoisky something to remember us by! Gay Deceiver."

"Still aboard, Boss."

I kept my eye on the flappy birds still in the air while I let Gay fly herself. Those silly contraptions could not catch us but there was always a chance that a pilot might dodge the wrong way.

Most of them seemed anxious to be elsewhere: they were lumbering aside right and left. I looked at the smoke-dead ahead-and saw what I had not noticed before: an ornithopter beyond the smoke.

Jake gasped but said nothing. We were on collision course closing at about 900 kms/hr, most of it ours. Suicide pilot? Idiot? Panicked and frozen?

I let him get within one klick of us, which brought us almost to the smoke and near the deck, about 200 meters H-above-G-and I yelped, "Scout!"

Yes, Deety is a careful programmer; the sky was black, we were ten klicks H-above-G, and so far as I could tell, the same barren hills under us that we had left five minutes earlier-and I was feeling cocky. My sole regret was that I would not hear Colonel Snarfsky try to explain to the Grand Duke the "ghost" craft now used by "British spies."

Did Russian nobility practice "honorable hara-kiri"? Perhaps the loadedpistol symbol? You know that one: The officer in disgrace returns to his quarters and finds that someone has thoughtfully loaded his pistol and placed it on his desk.. . thereby saving the regiment the scandal of a court.

I didn't want the bliffy dead but busted to buck private. With time to reflect on politeness and international protocol while he cleaned stables.'

I checked our heading, found that we were still pointed west. "Gay Deceiver, Scout!"

Black sky again, the same depressing landscape- "Copilot, is it worthwhile to tilt down for a better look? That either takes juice-not much but some- or it takes time to drop far enough to bite air and do it with elevons. We can't afford to waste either time or juice."

"Captain, I don't think this area is worth scouting."

"Careful of that participle; better say 'exploring."

"Captain, may I say something?"

"Deety, if you are speaking as Astrogator, you not only may but must."

"I could reprogram to put us lower if I knew what altitude was just high enough to let you use elevons. Conserve both time and juice, I mean."

"It seems to be about eight klicks H-above-G, usually. Hard to say since we don't have a sea-level."

"Shall I change angle to arrive at eight klicks H-above-G?"

"How long does it take us to fall two klicks when we arrive?"

She barely hesitated. "Thirty-two and a half seconds."

"Only half a minute? Seems longer."

"Three-two point six seconds, Captain, if this planet has the same surface gravity as Mars in our own universe-three-seven-six centimeters per second squared. I've been using it and haven't run into discrepancies. But I don't see how this planet holds so much atmosphere when Mars-our Mars-has so little."

"This universe may not have the same laws as ours. Ask your father. He's in charge of universes."

"Yes, sir. Shall I revise the program?"

"Deety, never monkey with a system that is working well enough-First Corollary of Murphy's Law. If it is an area as unattractive as this, we'll simply get out. If it has possibilities, half a minute isn't too long to wait, and the additional height will give us a better idea of the whole area. Gay Deceiver, Scout!"

We all gasped. Thirty kilometers and those barren hills were gone; the ground was green and fairly level-and a river was in sight. Or a canal.

"Oh, boy! Copilot, don't let me waste juice-be firm with me. Deety, count seconds. Everybody eyeball his sector, report anything interesting."

Deety started chanting ". . . thirteen fourteen fifteen-" and each second felt like ten. I took my hands off the controls to keep from temptation. That was either a canal or a stream that had been straightened, revetted, and maintained for years, maybe eons. Professor Lowell had been right- right theory, wrong universe.

"Deety, how far is the horizon?"

"-seventeen-about two hundred fifty klicks-twenty-"

I placed my hands gently on the controls. "Hon, that's the first time you've ever used the word 'about' with reference to a number."

"-twenty-four-insufficient data!-twenty-six-"

"You can stop counting; I felt a.quiver." I put a soft nose-down pressure on the elevons and decided to leave her wings spread; we might want to stretch this one. "Insufficient data?"

"Zebadiah, it was changing steadily and you had me counting seconds. Horizon distance at ten klicks height above ground should be within one percent of two hundred and seventy kilometers. That assumes that this planet is a perfect sphere and that it is exactly like Mars in our universe-neither is true. It ignores refraction effects, tricky even at home-and unknown to me here. I treated it as geometry, length of tangent for an angle of four degrees thirty-seven minutes."

"Four and half degrees? Where in the world did you get that figure?"

"Oh! Sorry, dear, I skipped about six steps. On Earth one nautical mile is one minute of arc-check?"

"Yes. Subject to minor reservations. With a sextant, or in dead reckoning, or on a chart, a mile is a minute, a minute is a mile. Makes it simple. Otherwise we would be saying a minute is one thousand eight hundred fifty-three meters and the arithmetic would get hairy."

"One-eight-five-three point one-eight-seven-seven-oh-five plus," she corrected me. "Very hairy. Best not convert to MKS until the last step. But, Zebadiah, there is a simpler relation here. One minute of arc equals one kilometer, near enough not to matter. So I treated H-above-G, ten klicks, as a versine, applied the haversine rule and got four degrees thirty-seven minutes or two hundred seventy-seven kilometers to the theoretical horizon. You see?"

"I see everything but how you hide haversine tables in a jump suit. Me, I hide 'em in Gay. . . and make her do the work." Yes, I could nose her over now-easy does it, boy.

"Well, I didn't, exactly. I calculated it, but I did it the easy way: Naperian logarithms and angles in radians, then converted back to degrees to show the relationship to kilometers on the ground."

"That's 'the easy way'?"

"It is for me, sir!"

"If you're quivering your chin, stop it. I told you it was your luscious body, not your brain. Most idiots-savants are homely and can't do anything but their one trick. But you're an adequate cook, as well."

That got me a stony silence. I kept easing her nose down. "Time for binox, Jake."

"Aye aye, sir. Captain, I am required to advise you. With that last remark to the Astrogator you risked your life."

"Are you implying that Deety is an inadequate cook? Why, Jake!"

Hilda interrupted. "She's a gourmet cook!"

"I know she is, Sharpie. . . but I don't like to say it where Gay can hear- Gay can't cook. Nor has she Deety's other talent which 'tis death to hide. Jake, that's a settlement below."

"Of sorts. A one-church village."

"Do you see ornithopters? Anything that could give us trouble?"

"Depends. Are you interested in church architecture?"

"Jake, this is no time for a cultural chat."

"I'm required to advise you, sir, This church has towers, something like minarets topped off with onion-shaped structures."

"Russian Orthodox!"

Hilda said that. I said nothing. I eased Gay's nose up to level flight, lined her up with what I thought was downstream, and snapped, "Gay, Scout!"

The canal was still in sight, almost under us and stretching over the horizon. I was almost lined up with it. Gay, Scout!

"Anybody see that settlement that was almost ahead before this last transition? Report."

"Captain Zebbie, it's much closer now but on this side."

"I see. Or don't. Jake isn't transparent."

"Captain, the city-quite large-is about a forty-five-degree slant down to starboard, not in sight from your seat."

"If forty-five degrees is a close guess, a minimum transition on that bearing should place us over the city."

"Captain, I advise against it," Jake told me.

"Reasons, please."

"This is a large city that might be well defended. Their ornithopters look odd and ineffective but we must assume they have spaceships as good or better than ours or the Tsar could not have a colony here. This causes me to suspect that they may have smart missiles. Or weapons utterly strange. I would rather check for onion towers from a distance. And not stay long in one place-I think we've been here too long. I'm jumpy."

"I'm not"-my sixth sense was not jabbing me-"but set verniers for a minimum transition along L axis, then execute at will. No need to be a slow fat target."

"One minimum, L axis-set!"

Suddenly my guardian angel goosed me. "Execute!"

I noticed the transition principally because Gay was now live under my hand-air bite. Perhaps she had not been quite level. I turned her nose down to gather maneuvering speed unpowered, then did a skew turn-and yelped, "Gay Bounce!" having seen all that I wanted to see: an expanding cloud. Atomic? I think not. Lethal? You test it; I'm satisfied.

I told Gay to bounce three more times, placing us a bit less than fifty klicks above ground. Then I spent a trifle of power to nose her over. "Jake, use the binox to see how far this valley runs, whether it is all cultivated, whether it has more settlements. We are not going to get close enough to look for onion spires; that last shot was unfriendly. Rude. Impetuous. Or am I prejudiced? Science Officer? Le mot juste, s'il vous plait."

"Nye kultoorni."

"I remember that one! Makes Russians turn green. What does it mean? How did you happen to know it, Sharpie?"

"Means what it sounds like: 'uncultured.' I didn't just 'happen,' Cap'n Zebbie; I know Russian."

I was flabbergasted. "Why didn't you say so?"

"You didn't ask me."

"Sharpie, if you handled the negotiations, we might not have had trouble."

"Zebbie, if you'll believe that, you'll believe anything. He was calling you a spy and insulting you while the palaver was still in French. I thought it might be advantageous if they thought none of us knew Russian. They might spill something."

"Did they?"

"No. The colonel was coaching his pilot in how to be arrogant. Then you told them to halt, in French, and no more Russian was spoken save for meaningless side remarks. Zebbie, when they tried to shoot us down just now, would they have refrained had they known that I had studied Russian?"

"Mmm- Sharpie, I should know better than to argue with you. I'm going to vote for you for captain."

"Oh, No!"

"Oh, Yes. Copilot, I'm going to assume that everything this side of the hills and involved with this watercourse-courses-twin canals-is New Russia and that honorary Englishmen-us!-aren't safe here. So I'm going to look for the British colony. It may turn out that they won't like us, either. But the British are strong on protocol; we'll have a chance to speak our piece. They may hang us but they'll give us a trial, with wigs and robes and rules of evidence and counsel who will fight for us." I hesitated. "One hitch. Colonel Snotsky said there was no such country as the United States of America and I had the impression that he believed it."

Sharpie said, "He did believe it, Cap'n Zebbie. I caught some side chatter. I think we must assume that, in this universe, there was no American Revolution."

"So I concluded. Should we all be from the East Coast? I have a hunch that the West Coast may be part Russian, part Spanish-but not British. Where are we from? Baltimore, maybe? Philadelphia? Suggestions?"

Sharpie said, "I have a suggestion, Cap'n Zebbie."

"Science Officer, I like your suggestions."

"You won't like this one. When all else fails, tell the truth."

XXI

-three seconds is a long time-

Deety:

Zebadiah is convinced that I can program anything. Usually I can, given a large and flexible computer-but my husband expects me to manage it with Gay Deceiver and Gay is not big. She started life as an autopilot and is one, mostly.

But Gay is sweet-tempered and we both want to please him.

While he and my father were looking over the area that we thought of as "Russian Valley" or "New Russia," he asked me to work up a program to locate the British colony in minimum time, if it were in daylight. If not, then we would sleep near the sunrise line, and find it on the new daylight side.

I thought of bouncing out about a thousand kilometers and searching for probable areas by color. Then I realized that I didn't know that much about this planet. "Dead sea bottoms" from space looked like farm land.

At last I recalled something Zebadiah had suggested yesterday-no, today! less than two hours ago. (So much had happened that my sense of time played tricks. It was still accurate-but I had to think instead of just knowing.)

Random numbers- Gay had plenty of them. Random numbers are to a computer what free will is to a human being.

I defined a locus for Gay: nothing east of where we were, nothing in "Russian Valley," nothing on the dark side, nothing north of 450, nothing south of 450 south. Yesterday I could not have told her the latter; but Mars has a good spin, one a gyrocompass can read. While we slept, Gay had noted that her gyrocompass did not have its axis parallel to that of this strange planet and had precessed it until it did.

Inside that locus I told Gay to take a Drunkard's Walk, any jumps that suited her, a three-second pause at each vertex, and, if one of us yelled "Bingo!" display latitude, longitude, and Greenwich, and log all three, so we could find it again.

Oh, yes-she was to pause that three seconds exactly one minimum Habove-G at each vertex.

I told her to run the program for one hour.. . but that any of us could yell "Stop!" and then say "Continue" and that would be time-out, not part of the hour. But I warned my shipmates that yelling "Stop!" not only slowed things but also gave Russians (or British or anybody) a chance to shoot at us. I emphasized that three seconds is a long time (most people don't know it).

One hour- Three seconds for each check- Twelve hundred random spot checks- This is not a "space-filling" curve. But it should locate where the British were most thickly settled. If one hour did not do it, ten hours certainly would. Without Gay, without her ability to do a Drunkard's Walk, we could have searched that planet for a lifetime, and never found either colony. It took the entire human race (of our universe) thirty centuries to search Terra. . . and many spots were missing until they could be photographed from space.

My husband said, "Let's get this straight." He bounced us four minima. "These subprograms-~ Gay, are you listening?"

"Of course. Are you'?"

"Gay, go to sleep."

"Roger and out, Boss."

"Deety, I want to make sure of these subprograms but couldn't use code words while she was awake. I-"

"Excuse me, Zebadiah, but you can. She will ignore code words for subprograms except while the general program is running. The code for the general program is unusual and requires the execution command, so it can't be started by accident. You can wake Gay. We need her on some points."

"You're a smart girl, Deety."

"I'll bet you tell that to all adequate cooks, Boss."

"Ouch!"

"Captain, it is not difficult to program a computer to supervise cooking machines. The software sold under the trademark 'Cordon Bicu' is reputed to be excellent, Reforo you wake Gay, would you answer a hypothetical question concerning computers and cooking?

'Captain

"Copilot?"

'1 advise against permitting the Astrogator to discuss side issues--such as cooking-while we have this problem facing us."

"Thank you, Copilot. Astrogator, what was your hypothetical question?"

Pop had been careful not to interfere between Zebadiah and me, But his advice from copilot to captain was intended for my ears-he was telling me to shut up, and I suddenly heard Jane saying, "Deety, anytime a wife thinks she has won an argument, she has lost it."

I'm not Jane, I'm Deety. I get my temper from my father. I'm not as quick to flare up as he is, but I do have his tendency to nurse a grievance. Zebadiah is sometimes a tease and knows how to get my goat.

But Pop was telling me: "Drop it, Deety!"

Maybe Zebadiah was right-too much argument, too much discussion, too much "sewing circle & debating society." We were all intensely interested as we were all in the same peril. . . but how much tougher is it to be captain rather than one of the crew? Twice? Ten times?

I didn't know, Was my husband cracking under the pressure? "Getting ulcers"?

Was I adding to his burden?

I didn't have to stop to think this through; it was preprogrammed below the conscious level; Pop pushed the "execute" button and the answers spilled out. I answered my husband at once,

"What hypocritical question, sir?"

"You said, 'hypothetical.' Something about computers and cooking."

"Captain, my mind has gone blank. Perhaps we had better get on with the job before I forget how it works."

"Deety, you wouldn't fib to your pool' old broken-down husband?"

when my husband is pow' and old 'md broken-down, I will 'not fib to him."

"Hmm- If I hadn't already promised my support to Hilda, I would vote for you for captain."

Aunt Hilda cut in: "Zebbie, I release you! I'm not a candidate."

"No, Sharpie, once having promised political support an honorable man never welches. So it's all right for Gay to listen in?"

"Certainly, sir. For display I must have her. Hello, Gay."

"Hi, Deety."

"Display dayside, globe." At once Gay's largest screen showed the western hemisphere of Earth, our Earth in our universe-Terra. Early afternoon at Snug Harbor? Yes, the clock in my head said so and GMT on the instrument board read 20:23:07. Good heavens, it had been only twenty hours since my husband and my father had killed the fake "ranger." How can a lifetime be crowded into less than a day? Despite the clock in my head it seemed years since I had walked down to our pool, a touch tiddly and hanging onto my bridegroom for support.

"Display meridians parallels. Subtract geographical features," Gay did so. "From program coded A Tramp Abroad' display locus.'

Gay used orthographic projection, so the 45' parallels were straight lines. ace I had told her to display davside, these two bright lines ran to the left edge of the display, that being the sunrise line. But the right edge of the locus was an irregular line running southwest. "Add display Russian Valley."

To the right of the locus and touching it, Gay displayed as solid brightness a very long and quite wide blotch. "Subtract Russian Valley." The area we had sketchily explored disappeared.

"Deety," my husband asked, "how is Gay doing this? Her perms have no reference points for Mars-not even Mars of our own universe."

"Oh. Gay, display 'Touchdown."

"Null program."

"Mmm, yes, that's right; the Sun has just set where we were parked. Zebadiah, shall I have her rotate the globe enough to show it? All she would show would be a bright spot almost on the equator. I have defined the spot where we grounded as zero meridian-Greenwich for Mars. This Mars."

"And zero parallel? An arbitrary equator?"

"Oh, no, no! While we slept Gay adjusted her gyrocompass to match this planet. Which gave her true north and latitude. She already knows the radius and curvature of Mars-I started to tell her and found she had retrieved it from her perms. Aerospace Almanac?"

"I suppose so. But we discussed Mars' diameter last night while Gay was awake. Both you and Hilda knew it; Jake and I did not."

As I remembered it, Aunt Hilda spoke up-then Pop kept quiet. If Pop wanted to sit back and be proud of Aunt Hilda's encyclopedic memory that was all right with me. If my husband has a flaw, it is that he has trouble believing that females have brains. . . probably because he is so intensely interested in the other end. I went on with my lecture:

"Once I start Gay, she will say and record nothing unless ordered. She will make random transitions inside that locus until someone yells 'Bingo!' She won't slow down even then. She will place a bright point on the map at that latitude and longitude, record both latitude and longitude, and the exact time. She will display the Bingo time, too, for one second. If you want to retrieve that Bingo, you had better jot down that time-to the second. Because she'll be doing twenty jumps each minute. Don't worry about the hour, just the minute and the second. Oh, you could still retrieve it if you had the minute right, as I can ask her to run through all Bingoes in a given minute. Can't be more than twenty and your Bingo might be the only one.

"When we've done one hour of this, that map could, at most, have twelve hundred dots on it-but may have only a few-or none. If they are clustered, I'll reduce the locus and we'll run it again. If not, we can sleep and eat and do it for the other day side, the one twelve hours away. Either way, Gay will find the British-and we'll be safe."

"I hope you're right. Ever heard of the Opium Wars, Deety?"

"Yes, Captain. Sir, every nation is capable of atrocities, including our own. But the British have a tradition of decent behavior no matter what blemishes there are."

"Sorry. Why a one-hour program?"

"We may have to shorten it. A decision every three seconds for sixty minutes may be too tiring. If we start showing a marked hot spot sooner than that, we can shorten the first run and reduce the locus. We'll have to try it and see.
But I feel certain that a one-hour run, a short rest, then another one-hour run, will locate the British if they are now on the day side."

"Deety, what do you define as 'Bingo'?"

"Anything that suggests human settlement. Buildings. Roads. Cultivated fields. Walls, fences, dams, aircraft, vehicles- But it is not 'Bingo'just because it looks interesting. Although it might be 'Stop!"

"What's the difference?"

"Stop' does not tell Gay to record or to display. For that you must add 'Bingo.' 'Stop' is for anything you want to look at more than three seconds. Maybe it looks promising and a few seconds more will let you decide. But please, everyone! There should not be more than a dozen calls for 'Stop!' in the hour. Any more questions?"

We started. Hilda gave the first Bingo. I saw it, too-farm buildings. Aunt Hilda is faster than I. I almost broke my own injunction; I had to bite down on "Stop!" The temptation to take a longer look was almost overpowering.

All of us made mistakes-but none serious. Hilda racked up the most Bingoes and Zebadiah the fewest-but I'm fairly certain that my husband was "cheating" by waiting to give Pop or me first crack at it. (He would not be competing with Aunt Hilda; port-forward and starboard-after seats have little overlapping coverage.)

I thought it would be tedious; instead it was exciting-but dreadfully tiring. Slowly, less than one a minute, bright dots appeared on the display. I saw with disappointment that most Bingoes were clustered adjacent to the irregular margin marking Russian territory. It seemed probable that these marked Russian territory, so very probable that it hardly seemed worthwhile to check for onion spires.

Once my husband called "Stop" and then "Bingo" at a point north and far west, at least fifteen hundred kilometers from the nearest Bingo light. I noted the time-Greenwich 21:16:51-then tried to figure out why Zebadiah had stopped us. It was pretty country, green hills and lightly wooded and I spotted a wild stream, not a canal. But I saw no buildings or anything suggesting settlement.

Zebadiah wrote something on his knee pad, then said, "Continue." I was itching to ask why he had stopped, but when a decision must be made every three seconds there is no time to chat.

When the hour was nearly up, a single Bingo light in the far west that had been shining since the first five minutes was joined by another when Hilda scored another Bingo and two minutes later Pop said "Bingo!" and we had an equilateral triangle twenty

kilometers on a side. I noted the time most carefully-then told myself not to be disappointed if inspection showed onion towers; we still had a hemisphere to go.

I decided to believe in that British colony the way one has to believe hard in fairies to save Tinker Bell's life. If there were no British colony, we might have to risk Earth-without-a-J. Gay Deceiver was a lovely car but as a spaceship she had shortcomings. No plumbing. Air for about four hours and no way to recycle. No plumbing. Limited food storage. No plumbing. No comfortable way to sleep in her. No plumbing.

But she had talents no other spaceship had. Her shortcomings (according to my father and husband) could be corrected at any modern machine shop. But in the meantime we did not have even an outhouse behind the barn.

At last Gay stopped, continued to display, and announced, "One hour of 'A Tramp Abroad' completed. Instructions, please."

"Gay, Bounce," said Zebadiah. "Deety, I don't think we've nailed down the piece The Sun Never Sets On. But this dense cluster here to the right- Too close to the Little Father's little children. Eh?"

"Yes. Zebadiah, I should tell Gay to trim the locus on the east to eliminate the clustered lights, and now we can add almost nine hundred kilometers on the west, to the present sunrise line. Gay can rotate the display to show the added area. I suspect that one more hour will fill in the picture sufficiently."

"Maybe even less. You were right; three seconds is not only a long time; it is excessively long. Isn't two seconds enough? Can you change that without starting from scratch?"

"Yes to both, Captain."

"Good. You can add thirty degrees on the west instead of fifteen. Because we are going to kill an hour-stretch our legs, eat a snack. . . and I for one want to find a bush. How do I tell Gay to return to a particular Bingo? Or will that mess up your program?"

"Not a bit. Tell her to return to Bingo such-and-such, stating the time."

I was unsurprised when he said, "Gay, return to Bingo Greenwich twentyone sixteen fifty-one."

It was indeed a pretty stream. Zebadiah said happily, "That beats burning juice. Who sees a clearing close to that creek, big enough for Gay? Hover and squat, I mean; I don't dare make a glide landing, dead stick-the old girl is loaded."

"Zebbie, I'm sober as you are!"

"Don't boast about it, Sharpie. I think I see a spot. Close your eyes; I'm going to."

I almost wish I had.

Zebadiah came in on a long glide, everything set for maximum lift-but no power. I kept waiting for that vibration that meant that Gay was alive and roaring. . . and waited. . . and waited- He said, "Gay-" and I thought that he was going to tell her to turn herself on. No. We actually dropped below the level of that bank.

Then he suddenly switched on power by hand but in reverse-flipped us up on that bank; we stalled, and dropped' perhaps a meter-we just barely missed that bank.

I didn't say anything. Aunt Hilda was whispering, "Hail Mary Mother of God Om Mani Padme Hum There is No God but God and Mahomet is His Prophet-" then some language I did not know but it sounded very sincere.

Pop said, "Son, do you always cut it that fine?"

"I saw a man do it that way when he had to; I've always wondered if I could. But what you didn't know was-Gay, are you listening?"

"Sure thing, Boss. You alerted me. Where's the riot?"

"You're a smart girl, Gay."

"Then why am I pushing this baby carriage?"

"Gay, go to sleep."

"Sleepy time. Roger and out, Boss."

"Jake, what you didn't know was that I had my cheeks puffed to say B, 0, U, N, C, E, explosively. Your gadget has made Gay's reflexes so fast that I knew I could come within a split second of disaster and she would get us out. I wasn't cutting didoes. Look at that meter. Seventy-four percent of capacity. I don't know how many landings I'm going to have to make on that much juice."

"Captain, it was brilliant. Even though it almost scared it out of me."

"Wrong honorific, Captain. I'm the pilot going off duty. We're landed; my resignation is effective; you're holding the sack."

"Zeb, I told you that I would not be captain."

"You can't help it; you are. The second-in-command takes command when the captain dies, or goes over the hill-or quits. Jake, you can cut your throat, or desert, or go on the binnacle list, or take other actions-but you can't say you are not captain, when you are-Captain!"

"If you can resign, I can resign!"

"Obviously. To the Astrogator, she being next in line of command."

"Deety, I resign! Captain Deety, I mean."

"Pop, you can't do this to me! I'll- I'll-" I shut up because I didn't know what to do. Then I did. "I resign.. . Captain Hilda."

"What? Why, that's silly, Deety. A medical officer is not in line of command. But if 'medical officer' is a joke and 'science officer,' too, then I'm a passenger and still not in line of command."

My husband said, "Sharpie, you have the qualifications the rest of us have. You can drive a duo-"

"Suddenly I've forgotten how."

"-but that's not necessary. Mature judgment and the support of your crew are the only requirements, as we are millions of miles and several universes from licenses and such. You have my support; I think you have it from the rest. Jake?"

"Me? Of course!"

"Deety?"

"Captain Hilda knows she has my support," I agreed. "I was first to call her 'Captain."

Aunt Hilda said, "Deety, I've just resigned."

"Oh, no, you haven't anybody to resign to!" I'm afraid I was shrill.

"I resign to the Great Spirit Manitou. Or to you, Zebbie, and it comes around in a circle and you are captain again. . . as you should be."

"Oh, no, Sharpie. I've stood my watch; it's somebody else's turn. Now that you have resigned, we have no organization. If you think you've stuck me with it, think again. You have simply picked an unusual way to homestead on this spot. In the meantime, while nobody is in charge, I hope that you all are getting both ears and a belly

full of what got me disgusted. Yack yack yack, argue, fuss, and jabber-a cross between a Hyde Park open forum and a high school debating society."

Aunt Hilda said, in sober surprise, "Why, Zebbie, you almost sound vindictive."

"Mrs. Burroughs, it is possible that you have hit upon the right word. I have taken a lot of guff. . . and quite a bit of it has been from you."

I haven't seen Aunt Hilda look so distressed since Mama Jane died. "I am very sorry, Zebbie. I had not realized that my conduct had displeased you so. I did not intend it so, ever. I am aware-constantly!-that you have saved our-my-life five distinct times.. . as well as continuously by your leadership. I'm as grateful as my nature permits-a giant amount, even though you consider me a shallow person. But one can't show deepest gratitude every instant, just as one cannot remain in orgasm continuously; some emotions are too strong to stay always at peak."

She sighed, and tears rolled down her face. "Zebbie, will you let me try again? I'll quit being a Smart Aleck. It will be a hard habit to break; I've been one for years-my defense mechanism. But I will break it."

"Don't be so tragic, Hilda," Zebadiah said gently. "You know I love you. . . despite your little ways."

"Oh, I know you do!-you big ugly giant. Will you come back to us? Be our captain again?"

"Hilda, I've never left. I'll go right on doing the things I know how to do or can learn. And as I'm told. But I won't be captain."

"Oh, dear!"

"It's not tragic. We simply elect a new C.O."

My father picked this moment to get hairy. "Zeb, you're being pretty damned stiff-necked and self-righteous with Hilda. I don't think she has misbehaved."

"Jake, you are in no position tojuclge. First, because she's your bride. Second, because you haven't been sitting in the worry seat; I have. And you have supplied some of the worst guff yourself."

"I was not aware of it. . . Captain."

"You're doing it now.. . by calling me 'Captain' when I'm not. But do you recall a couple of hours ago when I asked my second-in-command for advice- and got some back chat about 'written orders'?"

"Mmm. . . I was out of line. Yes, sir."

"Do you want other examples?"

"No. No, I stipulate that there are others. I understand your point, sir." Pop gave a wry smile. "Well, I'm glad Deety hasn't given you trouble."

"On the contrary, she has given me the most."

I had been upset-I had never really believed that Zebadiah would resign. But now I was shocked and bewildered and hurt. "Zebadiah, what have I done?"

"The same sort of nonsense as the other two. . . but harder for me because I'm married to you."

"But- But what?"

"I'll tell you in private."

"It's all right for Pop and Aunt Hilda to hear."

"Not with me. We can share our joys with others but difficulties between us we settle in private."

My nose was stuffy and I was blinking back tears. "But I must know."

"Dejah Thoris, you can list the incidents if you choose to be honest with yourself. You have perfect memory and it all took place in the last twentyfour hours."

He turned his face away from me. "One thing I must urge before we choose a captain. I let myself be wheedled and bullied into surrendering authority on the ground. That was a bad mistake. A sea captain is still captain when his ship is anchored. Whoever becomes captain should profit by my mistake and not relinquish any authority merely because Gay is grounded. She can relax the rules according to the situation., But the captain must decide. The situation can be more dangerous on the ground than in air or in space. As it was today when the Russians showed up. Simply grounding must not be: 'School's out! Now we can play!"

"I'm sorry, Zebbie."

"Hilda, I was more at fault than you. I wanted to be free of responsibility. I let myself be talked into it, then my brain went on vacation. Take that 'practice hike.' I don't recall who suggested it-"

"I did," said my father.

"Maybe you did, Jake; but we all climbed on the bandwagon. We were about to run off like a bunch of Scouts with no Scoutmaster. If we had started as quickly as we had expected to, where would we be now? In a Russian jail? Or dead? Oh, I'm not giving myself high marks; one reason I've resigned is that I haven't handled it well. Planning to leave Gay Deceiver and everything we own unguarded while we made walkabout-good God! If I had felt the weight of command I would never have considered it."

Zebadiah made a sour face, then looked at my father. "Jake, you're eldest. Why don't you take the gavel while we pick a new C.O.? I so move."

"Second!"

"Question!"

"White ballot!"

"What gavel? I'll bet there isn't a gavel on this planet."In a moment Father quit stalling. We all voted, using a page from Zebadiah's notebook torn in four. They were folded and handed to me and I was required to declare the vote. So I did:

Zeb
Zebadiah
Zebbje
Sharpie

Zebadiah reached back, got the ballots from me, handed back the one that meant "Aunt Hilda," took the other three and tore them into small pieces.

"Apparently you did not understand me. I've stood my watch; someone else must take it-or we'll park on this bank until we die of old age. Sharpie seems to have an overwhelming lead-is she elected? Or do we ballot again?"

We balloted again:

Sharpie
Jacob
Jacob
Hilda

"A tie," Father said. "Shall we invite Gay to vote?"

"Shut up and deal the cards."

Sharpie
Deety
Deety
Hilda

"Hey!" I protested. "Who switched?" (I certainly didn't vote for me.)

Sharpie
Hilda
Zebbie
Hilda

"One spoiled ballot," said my husband. "A non-candidate. Will you confirm that, Mr. Chairman?"

"Yes," Pop agreed. "My dear. . . Captain Hilda. You are elected without a dissenting vote."

Aunt Hilda looked as if she might cry again. "You're a bunch of stinkers!" "So we are," agreed my husband, "But we are your stinkers, Captain Hilda." That got him a wan smile. "Guess maybe. Well, I'll try."

"We'll all try," said Pop.

"And we'll all help," said my husband.

"Sure we will!" I said, and meant it.

Pop said, "If you will excuse me? I've been anxious to find a handy bush since before this started." He started to get out.

"Just a moment!"

"Eh? Yes, my dear? Captain."

"No one is to seek out a bush without an armed guard. Not more-and not less-than two people are to leave the car's vicinity at one time. Jacob, if your need is urgent, you must ask Zebbie to hurry-I want the guard to carry both rifle and pistol."

I think it worked out that Pop got the use of a bush last-and must have been about to burst his bladder. Later I overheard Pop say, "Son, you've read Aesop's Fables?"

"Certainly."

"Does anything remind you of King Log and King Stork?"

XXII

'From each according to his ability,
to each according to his needs.'"

Hilda:

I could tell from the first ballot that Zebbie was determined to make me take a turn as captain. Once I realized that, I decided to be captain-let them get sick of me and anxious to have Zebbie back.

Then suddenly I was captain-and it's different. I did not ever again think of trying to make them sick of me; I just started to worry. And try.

First my husband wanted to find a bush for the obvious reason-and I suddenly realized that a banth might get him. Not a Barsoomian banth but whatever this planet held in dangerous carnivores.

So I ordered armed guards. With rules about not getting separated. It was a nuisance but I was firm. . . and knew at last what a crushing load there had been on Zebbie,

But one thing I could improve: Arrange for us to sleep inside the car.

The space back of the bulkhead behind the rear seats was not organized. We had about six hours till sundown (having gained on the Sun in going west), so I had everything in that space pulled out.

Space enough for Zebbie and Deety, on his sleeping bag opened out, blankets over them. Jacob and I? The piloting chairs we moved forward all the set screws would allow, laid them back almost fh~t and padded the cracks with pillows, and, to support our legs, the cushions from the rear seats were placed on boxes we would otherwise discard once I had the car organized. It wasn't the best bed but low gravity and my cuddlesome husband made it a most attractive one.

Baths- In the stream and cold! Same rules as for bushes: armed guards. Soap thoroughly on the bank, get in and rinse fast, bounce out and towel till you glowed. Primitive? Luxurious!

This did not go smoothly. Take the "handy bush" problem. I did not have to be told that a latrine should be downstream or that our shovel should be carried every time without fail-rules for a clean camp are as old as the Old Testment.

But my first order called for no more than two and no less than two to leave the car at any time, and one must be armed-the other rifle and pistol must guard Gay.

I blurted out that order when the truth landed on me like a load of bricks that I, the runt who had never grown up, was now responsible for the lives of four people. At the time my orders seemed not only logical but necessary and feasible: Jacob would guard me, Zebbie would guard Deety, our men would guard each other.

There was a flaw. I did not realize that my edict required: a) one rifleman always to be at the car; b) both men to be away from the car from time to time.

Since this is not possible I amended it: When the men had to answer calls of nature, we women would lock ourselves in. I didn't know that this planet had anything more dangerous than Alice's Bread-and-Butter Fly. But that was the point: I didn't know and until I did, I must assume that something as dangerous as a tiger lurked behind every bush.

Heavens! the bush might be carnivorous.

I was learning, with breath-snatching speed, something that most people never learn: A commanding officer's "unlimited" authority isn't freedom; it's a straitjacket. She can't do as she pleases; she never can-because every minute, awake and asleep, she must protect those under her command.

She can't take any avoidable risk herself; her life does not belong to her; it belongs to her command.

When the captaincy was thrust on me, I decided that we would stay where we were until Gay Deceiver was reorganized so that all four of us could sleep comfortably and safely-no swollen ankles.

Sharpie hadn't thought of this; Captain Hilda Burroughs thought of it at once. Captain Zebbie had thought of it when we first grounded, then had let himself be overruled.

I knew that I could rearrange the car to let us all sleep behind locked doors. But it would take time, sweat, and muscles, and I had just proclaimed an order that would take one or both sets of big muscles off the job for. . . how many times a day? Four people? Such needs can't be hurried. I had a horrid suspicion that having someone standing over you with a rifle, even your nearest and dearest, might cause a healthy reflex to fail.

What to do?

Cancel the order?

No!

Cancel if a better scheme turned up. But don't cancel without finding something better. This was a pretty spot, but there still might be that "banth." Or bandersnatch. Or boojum. Especially a boojum. What if Zebbie should wander off that distance dictated by modesty and/or relaxation of nerves.. . and "softly and silently vanish away"?

And it was Zebbie I was having trouble wit h-Zebbie, who wasn't going to give the new captain any back talk whatsoever. "Cap'n Hilda honey, I don't need a chaperon, honest. I'll carry my rifle and guard myself. No problem. Safety off and a cartridge under the firing pin. Promise."

"Zebbie, I am not asking you, I am telling you."

"But I don't like to leave you girls unguarded!"

"Chief Pilot."

"Ma'am. Captain."

"I am not a girl. I am eleven years your senior."

"I simply meant-"

"Pipe down!"

The poor dear's ears turned red but he shut up. I said, "Astrogator!"

"Huh? Yes, Captain Auntie."

"Can you use a rifle?"

"Oh, sure, Pop made me learn. But I don't like a rifle; I like my shotgun." "Take the Chief Pilot's rifle and guard the camp-"

"Look, I can do it better with my shotgun."

"Pipe down and carry out your orders."

Deety looked startled, trotted over to Zebbie, who surrendered his rifle without comment, face frozen. "Copilot," I said to my husband, "arm yourself with rifle and pistol, go with the Chief Pilot, guard him while he does what he has to do."

Zebbie swallowed. "Sharpie-I mean 'Captain Sharpie.' It won't be necessary. The golden moment has passed. All this talk."

"Chief Pilot, please refrain from using my nickname while I am your commanding officer. Copilot, carry out your orders. Remain with the Chief Pilot and guard him continuously as long as necessary to accomplish the purpose of the trip." (If Zebbie meant "constipation"-an emotional to-do can have that effect-I would act later in my capacity as "medical officer"-and it would not take four husky orderlies to make Zebbie hold still. The authority of a commanding officer almost never requires force. Odd but true-I wondered how I knew that.)

Once our men were out of earshot, I said, "Deety, could I learn to shoot that rifle?"

"I'm not sure I'm speaking to you. You humiliated my husband. . . when we all owe him so much."

"Astrogator!"

Deety's eyes got wide. "Good God-it's gone to your head!"

"Astrogator."

"Uh. . . yes, Captain."

"You will refrain from personal remarks to me or about me during my tenure as commanding officer. Acknowledge that order, then log it."

Deety's face assumed the expression that means that she has shut out the world. "Aye aye, Captain. Gay Deceiver!"

"Hello, Deety!"

"Log mode. The Captain has ordered the Astrogator to refrain from personal remarks to her or about her during her tenure as commanding officer. I acknowledge receipt of order and will comply. Log date, time, and Bingo code. I tell you three times."

"Deety, I hear you three times."

"Back to sleep, Gay."

"Roger and out."

Deety turned to me, face and voice normal again. "Captain, I can teach you to shoot in such a way that you won't get a sore shoulder or be knocked down. But to become a good shot with a rifle takes a long time. My shotgun doesn't kick as hard. . . and you won't need skill."

"I thought a shotgun was more difficult."

"Depends. A shotgun is usually for surprise targets in the air. That takes skill. But for a stationary target-within range-it's about like a garden hose. The shot spreads in a cone. So easy that it's not sporting."

"Not sporting' suits me. Will you show me how? What kind of target do we need?"

"It ought to be a large sheet of paper to show how the shot spreads. But, Captain, you know what will happen if I fire a gun?"

"What?"

"We will have two men back here at a dead run-one of them trying to dress as he runs. I don't think he'll be pleased."

"Meaning I shouldn't get Zebbie angry twice in ten minutes."

"It might be your husband. Stands to reason that they'll both take care of needs before returning. If I fire a shot, I'd better have a dead body to show for it, or one or the other will blow his top. Or both."

"Both! Thanks, Deety-I didn't think it through."

"But also, the Captain will recall that she ordered me to guard camp. I can't teach shooting at the same time."

(Sharpie, can't you do anything right?) "No, of course you can't! Deety, I'm off to a bad start. All of you annoyed at me and one, maybe two, really angry."

"Does the Captain expect me to comment?"

"Deety, can't you call me 'Aunt flilda'?" I wasn't crying-I've trained myself not to. But I needed to. "Yes, I want your comment."

"Captain Aunt Hilda, I need to call you by your title to keep myself reminded that you are captain. Since you ordered me to refrain from personal remarks to you or about you, I needed a second order before I could comment."

"As bad as that? Don't spare me but make it quick."

"The Captain hasn't done badly."

"I haven't? Deety, don't fib to Hilda; you never used to."

"And I'm not going to now. Captain, I think you are off to a good start."

"But you said it had gone to my head!"

"I was wrong. I realized how wrong when I was logging your order to me. What I said was worse than anything I said to Zebadiah while he was captain- he required me to review in my mind all the things I've said. . . and at least twice he should have given me a fat lip"-Deety smiled grimly-"cept that Zebadiah couldn't bring himself to strike a woman even if she weren't pregnant. Captain-Captain Aunt Hilda honey-Zebadiah didn't crack down on us when he should have. He turned over to you a gang of rugged individualists, not one with any concept of discipline. I certainly had none. But I do now."

"I'm not sure that I do," I said miserably.

"It means obeying orders you don't like and strongly disagree with-with no back talk. 'Into the jaws of death rode the six hundred.' Zebadiah would not do that to us. . . but he did let us annoy him into testing my new Bug-Out program. He had told me that the test was a useless risk; I should have agreed because it was useless. Instead I gave him a snooty 'No comment,' and you were as bad and Pop was worse. Mmm.. . I don't think Zebadiah has had much experience as a commanding officer."

"Why so, Deety? He is a captain."

"That doesn't mean that he has ever been a commanding officer. He has soloed quite a lot, in fighters. He has logged control time in larger craft or he wouldn't hold a command pilot rating. But has he ever actually commanded? Nothing he has said to me indicated it. . . but he did tell me that before the last war a major was often captain of an air-and-space craft but now it almost always took a lieutenant colonel while majors wound up as copilots. He was explaining why he liked one-man fighters so well. Aunt Hilda-Captain-I think commanding was as new to Zebadiah as it is to you. Like sex, or having a baby, you can't understand it till you've tried it." She suddenly grinned. "So don't hold Zebadiah's mistakes against him."

"What mistakes? He's saved our lives again and again. I don't blame him- now-for wanting a rest from commanding. Deety, it's the hardest work possible even if you don't lift a finger. I never suspected it. I don't expect to sleep a wink tonight."

"We'll guard you!"

"Yes, we will!"

"Pipe down."

"Sorry, Ma'am."

"What mistakes did Zebbie make?"

"Well. . . he didn't crack down. You wasted no time in letting us know who is boss. You didn't let us argue; you slapped us down at once. I hate to say this but I think you have more talent for command than Zebadiah has."

"Deety, that's silly!"

"Is it? Napoleon wasn't tall."

"So I have a Napoleonic complex. Humph!"

"Captain, I'm going to ignore that because, under that order you made me log, I'm damned if I do and damned if I don't."

"Well. . . I know how not to get a Napoleonic complex. Deety, you're my second-in-command."

"But Pop is second-in-command."

"Wrong tense. 'Was'-he is no longer. As astrogator you may have inherited it anyhow; you can ask Zebbie-but in private; my decision is not subject to debate. Simply acknowledge it."

"I- Aye aye, Captain."

"You are now required to advise me whenever you think that I am about to make a serious mistake. You are also required to advise me on request."

"My advice isn't worth much. Look how I goofed a few minutes ago."

"That was before you were appointed second-in-command. Deety, actually holding an office makes a big difference."

Deety blinked and looked solemn, then said soberly, "Yes, I think it does. Yes, it does. I feel it, I do! Weird."

"Wait till you're captain. Eight times as weird,"

"Never. Pop wouldn't go for it, Zebadiah wouldn't, I won't-that's three votes."

"I said No right up to the point where I could not avoid it. Don't worry about it now. I'll boss and you'll advise me."

"In that case, Captain, I advise you to reconsider letting us guard you. After we eat and start scouting again, I advise that, even if we find the British quickly, instead of making contact, we should find a spot as deserted as this at the sunrise line and get a long day's sleep. We crew can get eight hours- I'll take the middle watch; the men can get eight hours solid each. . . and the Captain can get anything up to twelve."

"Advice noted. It's good advice. But that's not the program; we're going to sleep here." I told Deety what I had in mind. "When the car is restowed, we'll eat. If there is daylight left, we'll bathe before we eat. Otherwise in the morning."

"I'd rather hurry through eating and get a bath. . . since you tell me I'm going to be able to sleep with my husband. When I'm frightened I stink worse. . . and I've been much more scared than I've tried to let on."

"Into cold water after eating? Deety, you know better."

"Oh. I'll skip eating, if necessary, to bathe."

"Astrogator, we'll do it my way."

"Yes, Captain. But I stink, I do."

"We'll all stink by the time we restow this car and may wind up eating sandwiches in the dark because everything that we don't throw away is going to be inside with us and Gay locked and not a light showing by sundown." I cocked my head. "Hear something, Deety?"

Our men came back looking cheerful, with Zebbie carrying Jacob's rifle and wearing Jacob's pistol. Zebbie gave me a big grin. "Cap'n, there wasn't a durn thing wrong with me that Carter's Little Liver Pills couldn't have fixed. Now I'm right."

"Good."

"But just barely," agreed my husband. "Hilda-Captain Hilda my beloved- your complex schedule almost caused me to have a childish accident."

"I think that unnecessary discussion wasted more time than did my schedule. As may be, Jacob, I would rather have to clean up a 'childish accident' than have to bury you."

"But-"

"Drop the matter!"

"Pop, you had better believe it!" sang out Deety.

Jacob looked startled (and hurt, and I felt the hurt). Zebbie looked sharply at me, no longer grinning. He said nothing, went to Deety, reached for his rifle. "I'll take that, hon."

Deety held it away from him. "The Captain has not relieved me."

"Oh. Okay, we'll do it by the book." Zebbie looked at me. "Captain, I thoroughly approve of your doctrine of a continuous guard; I was too slack. It was my intention to relieve the watch. I volunteer to stand guard while you three eat-"

"-then I'll guard while Zeb eats," added Jacob. "We already worked it out. When do we eat? I could eat an ostrich with the feathers left on." He added, "Hilda my love, you're captain. . . but you're still cook, aren't you? Or is Deety the cook?"

(Decisions! How does the captain of a big ship cope?) "I've made changes. Deety remains astrogator but is now second-in-command and my executive officer. In my absence she commands. When I'm present, Deety's orders are my orders; she will be giving them to implement what I want done. Neither she nor I will cook. Uh, medical officer-" (Damn it, Sharpie, all those hours in the emergency room make you the only candidate. Or does it? Mmm-) "Zebbie, does 'command pilot' include paramedical training?"

"Yes. Pretty sketchy. What to do to keep the bloke alive until the surgeon sees him."

"You're medical officer. I am assistant medical officer when you need me- if I don't have something else that must be done."

"Captain, may I put in a word?"

"Please do, Chief Pilot."

"Sometimes you have to let the bloke die because there is something else that has to be done." Zebbie looked bleak. "Saw it happen. Does no good to worry ahead of time or grieve about it afterwards. You do what you must."

"So I am learning, Zebbie. Cook- Gentlemen, I've never eaten your cooking. You must assess yourselves. Which one of you is 'adequate'-"

"Ouch."

"Your wording, Zebbie. -and which one is inadequate?"

They backed and filled and deferred to each other, so I put a stop to it. "You will alternate as first and second cook until evidence shows that one is chief cook and the other assistant. Jacob, today you are first cook-"

"Good! I'll get busy at once!"

"No, Jacob." I explained what we were going to do. "While you two get everything out of the car, Deety will teach me the rudiments of shotgun. Then I will take over guard duty and she can help unload. But keep your rifles loaded and handy, 'cause if I shoot, I'll need help in a hurry. Then, when we restow, I'll do it because I'm smallest and can stand up, mostly, behind the bulkhead. While Zebbie stands guard, and Deety and Jacob pass things in to me."

Jacob wasn't smiling-and I suddenly recognized his expression. I once had a dog who (theoretically) was never fed at the table. He would sit near my knee and look at me with that same expression. Why, my poor darling was hungry! Gut-rumble hungry. I had such a galloping case of nerves from becoming captain that I had no appetite.

"Deety, in the pantry back at Snug Harbor I noticed a carton of Milky Way bars. Did that get packed?"

"Certainly did! Those are Pop's-his vice and eventual downfall."

"Really? I don't recall seeing him eat one."

My husband said, "I haven't been eating them lately. All things considered, my dear-my dear Captain-I prefer you to candy bars."

"Why, thank you, Jacob! Will you share those candy bars? We understand that they are your personal property."

"They are not my personal property; they belong to all of us. Share and share alike."

"Yup," agreed Zebbie. "A perfect communism. 'From each according to his ability, to each according to his needs.' With the usual communist dictator on top."

"Zebbie, I've been called everything from a black reactionary to a promiscuous old whore-but never before a communist dictator. Very well, you may address me as 'Comrade Captain.' When we come across those candy bars, everybody grab one for quick energy-unless somebody remembers where they were packed?"

"Gay knows!" said Deety, and backed toward the car's open door while still keeping her eyes swinging the arc away from the river-perfect sentry and looking cute at it. "Gay Deceiver!"

"Hi, Deety! Getting any?"

"Inventory. Food supplies. Candy. Milky Way bars. Report location."

"Frame twenty. Starboard. Closed storage seven-Ess-high. Bottom shelf."

Five hours later everything was back inside except a heap of wrapping, packaging, and such-yet the increase in space was far greater than that pile. This was because storage did not have to be logical. Just tell Gay. A left shoe could fill an odd space in with the swords while the right shoe from the same pair was a space filler in a tool storage far to the rear-yet the only inconvenience lay in having to go to two places to get them.

I did the stowing; Deety stayed in the cabin, received items handed from outside, described the item to Gay, then described to Gay where the item was stowed, as I reported it. Gay was under instruction to hear only Deety's voice-
and what Deety told Gay was so logical that no one need remember it. Like this: "Gay Deceiver."

"Boss, when will you learn to say 'Please'?"

"Clothing. Zeb. Shoes. Field boots."

"Right boot. Abaft bulkhead. Starboard. Frame forty. Under deckplate. Outboard compartment. Left boot. Abaft bulkhead. Portside. Frame sixty. Under deckplate, middle compartment. Warning: Both boots filled with rifle ammo padded with socks."

You see? If you got categories in the wrong order, Gay would restring them. Give her the basic category and the identification, leaving out the other steps, and Gay would

search the "tree" (Deety's words) and get the "twig" you identified. You could even fail to give category and she would search until she found it.

But hardest was to build up the decking of the rear compartment about twenty centimeters with chattels or stores that would not crush, fasten it down to keep it from floating in free fall, and make it smooth enough that it would not be unbearably lumpy as a bed-while making some effort neither to build into this platform nor to store in compartments under it things needed frequently or quickly.

I had to lower my standards. It is impossible to store so many things in such limited space and have all readily at hand.

I studied things outside, admitted that I could not do it, then asked for advice. Zebbie solved it: "Captain, do a dry run."

"Uh.. . go on, Zebbie."

"Take my sleeping bag inside, open it out. It is too wide for the space, especially at the rear. So keep it as far forward as you can and still miss Jake's twister and the bulkhead door. Mark the amount you have to lap it. Mark on the deck the foot of the opened-out bag. You'll find space abaft that, frustum of a cone, sort of. Drag the sleeping bag outside, mark the tuck-in, build your platform on it. Then fill that rear space and build a bulkhead. Better get Jake; he's a born mechanic."

"Zebbie, would you prefer to build this bed yourself?"

"Nope."

"Why not? I'm not speaking as captain; I'm inquiring as your old friend Sharpie."

"Because I'm twice as big as you, which makes that space half as big for me. Tell you what, Cap'n Sharpie-excuse me!-Captain Hilda-do the measuring. Meanwhile we'll pick out plunder that might be bricks in that platform. Then drag the sleeping bag outside. If you'll let Jake relieve me, Deety and I can piece together the platform in jig time."

It changed "impossible" to "possible." The cubbyhole was filled, contents held in place with opened-out cartons tied with wire to ho~d-downs-"padeyes" Jacob called them. The platform was built, chinked with this and that, covered with more flattened-out cartons, and topped off with sleeping bag and blankets.

It was still light. Deety assured me that there was one hour and forty-three minutes till sundown. "Time enough if we hurry. Jacob, first bath. Deety, guard him. Both come back so Jacob can start dinner-then Zebbie and Deety go down-goodness, this sounds like the farmer and the rowboat with the fox and the geese-and bathe, taking turns guarding. Both come back; Deety relieves me; Zebbie takes me down to bathe while he guards. But please hurry; I want a bath, too. Forty minutes before sundown bathing stops and we eat- at sundown we are inside, dirty dishes and all, locked in till sunrise. If that does me out of a bath, we still hold to it. Jacob, how far is this 'easy way' down? I mean, 'How many minutes?"

"Maybe five. Hilda my love, if you weren't insisting on always-two-together there would be no hurry. All go down together; I hurry through my bath, grab my rifle and trot back. The rest needn't hurry. You've got us going down and up, down and up, four times-forty minutes. Which squeezes four baths into twenty minutes, five minutes to undress, soap, squat down and rinse off, towel dry, and dress. Hardly worth the trip."

"Jacob, who guards you while you're getting supper? No. I can bathe in the morning." (Damn! I wanted that bath. I'm used to a shower in the morning, a tub at night, a bidet at any excuse. Decadent-that's me.)

"Beloved, this place is safe. While we were out earlier, Zeb and I scouted for sign. None. That's when we found this way down to the creek. It would be a natural watering place. No sign. I don't think there are any large fauna here."

I was wavering when Deety spoke up. "Pop, that's three down-and-ups, not four, as Zebadiah and I get baths on one. But, Captain Hilda, if we all go down and come back together, there can't be danger. Put that stuff back inside and lock up, of course." She pointed at Jacob's preparations. While Jacob had been handing stuff to Deety, he had set aside a hot plate, cooking and eating utensils, a tarpaulin, comestibles for supper and breakfast, and had passed word for me please to store food so that it could be reached easily.

Jacob said hastily, "Deety, I've got it planned for minimum therbligs. Dried apricots soaking in that pan, soup mix in that one. There's no level deck space left inside."

Deety started to say, "But, Pop, if we-" when I cut in with, "Quiet, please"- not shouted.

They kept quiet-"Captain Bligh" was being listened to. "Gay Deceiver will not be left unguarded. My orders will not be discussed further. One modification: Supper is cut from forty minutes to twenty-five. Astrogator adjust schedule accordingly. Sound a blast on the siren five minutes before suppertime. We lock up on the dot. I placed the honey bucket just beyond the swing of the bulkhead door as the car will not be unlocked for any reason until', sunrise. Questions?"

"Yes, Captain. Where are the towels?"

An hour later I was squatting in the stream, rinsing off and hurrying- covered with goose bumps. As I stepped out, Zebbie put down his rifle and had
a big, fluffy towel, long as I am tall, waiting to wrap me. I should have required him to behave as a guard should.

But I told myself that he was still wearing his revolver and, anyhow, he has this sixth sense about danger-lying in my teeth. Nothing makes a woman feel more cherished than to have a man wrap her in a big towel the instant she's out of the water. I lack character, that's all. Every woman has her price, and a big, fluffy towel at the right time comes close to being mine.

Zebbie was rubbing firmly, getting me not only dry but warm. "Feels good, Captain?"

"Captain Hilda' never came down the bank, Zebbie. Feels swell!"

"Remember the first time I gave you a rubdown?"

"Sure do! Dressing room at my pool."

"Yup. I tried to lay you. I've never been turned down so smoothly."

"You tried to lay me, Zebbie? Truly?" I looked up at him, my best innocent look.

"Sharpie darling, you lie as easily as I do. A man does this"-and he did- "even with a towel, a woman is certain what he means. But you refused to notice it, turned me down, without hurting my pride."

"I'm refusing to notice it now and find it just as difficult as I did that afternoon. Stop it,please!" He did. "Thanks, dear. You got me all shaky. Zebbie, do you think Deety thinks I rigged this to get you alone? I would not willingly upset her."

"On the contrary. She gave me a hunting license concerning you-you, not females in general-ten days back. In writing."

"Really?"

"In writing so that she could limit it. I am required not to run any risk of hurting Jake."

"You haven't tried to use that license."

"I took it as a compliment to you and to me, kissed Deety and thanked her. You settled this four years ago. But I've sometimes wondered why. I'm young, healthy, take care of my teeth, and keep my nails clean-mostly-and you seemed to like me. What made me ineligible? Not complaining, dear, just asking."

I tried to explain the difference between a male friend and a bedmate-the scarcity of the first, the boring plethora of applicants for the other.

He listened, then shook his head. "Masochism."

"Hasn't it worked out better this way? I do love you, Zebbie."

"I know you do, Sharpie." Zebbie turned me around and looked down into my eyes. "And I love you and you know that, too"-and he kissed me.

That kiss went on and neither of us seemed inclined to stop. My towel Slipped to the ground. I noticed because it felt better to be closer and ever so much nicer to have his hands on me. Zebbie hadn't given me a sexy kiss since the day I hadinvited a pass and then ignored it.

I began to wonder why I had decided to ignore it. Then I was wondering how much time we had left in our schedule. Then I knew the exact time.. . for that infernal, earsplitting siren sounded. God watches over Hilda Mae and that's why I keep Him on my payroll. But sometimes He is rough about it.

We let go. I put on Deety's Keds, slid my borrowed dress over my head, hung the towel over my arm-elapsed time: nine seconds. Zebbie was again carrying his rifle at the ready (is that correct?-both hands, I mean).

"Captain, shall we go?"

"Yes, Chief Pilot. Zebbie, when did I become 'captain' again? Just from putting on clothes? You've seen this old hide before."

"Skin has nothing to do with it, Captain. Quoting Deety quoting the Japanese: 'Nakedness is often seen but never noticed.' Except that sometimes I do notice, hot diggity dog and other comments. You have superior skin, Captain. You went back to being Captain when I picked up my rifle. But I was never off duty. Did you notice, when I dried you, that I picked you up and swung you around, so that I faced the bank? I kept alert even while I was nuzzling you. . . and you make fine nuzzle, Captain Step-Mother-in-Law Hilda."

"So do you, Zebbie. I'm still Sharpie till we get to your car." We reached the top of the bank. "Ten seconds to catch my breath. Zebbie-"

"Yes, Sharpie?"

"Four years ago- I'm sorry I turned away your pass."

He patted my bottom. "So am I, dear. But it has worked out quite well. And"-he grinned that irresistible, ugly grin-"who knows?-we aren't dead yet."

When we arrived, Jacob was slurping soup. "You're late," he stated. "So we~ waited."

"So I see."

"Don't listen to Pop, Captain Auntie; you are two minutes seventeen seconds ahead of time. Are you sure you stayed in long enough to get clean?"

"I stayed in long enough to get freezing cold. Aren't you chilly?" Deety had worn skin most of the day and so had I; we had been doing sweaty work. But she had been dressed when I last saw her. "Jacob, is there no soup for Zebbie and me?"

"A smidgen. You get this pan as soon as I'm through-now!-and that means one less dish to wash."

"And Zebadiah gets mine-also now-and I took that jump suit off because it's dirty and I'm clean. I still haven't figured out how to do a laundry. Nothing for a tub, no way to heat water. What's that other way? Pound them on a rock the way it shows in National Geographic? I don't believe it!"

We were in bed by sundown, Gay's doors locked-pitch dark in minutes. According to Deety and Gay sunrise was ten hours and forty-three minutes away. "Deety, please tell Gay to wake us at sunrise."

"Aye aye, Captain Auntie."

"Zebbie, you told us that the air in the car was good for about four hours."

"In space; The scoops are open now."

"But do you get air back there? Should the bulkhead door be open?"

"Oh. Top scoop serves this space. The cabin is ventilated by the chin scoop. Scoops stay open unless internal pressure closes them."

"Can anything get in through them? Snakes or such?"

"Hilda my dear, you worry too much."

"My very own darling Copilot, will you please pipe down while I'm speaking to the Chief Pilot? There are many things about this car that I do not know- yet I am responsible."

Zebbie answered, "Each scoo~ has a grid inside and a fine screen at the inner end; nothing can get in. Have to clean 'em occasionally. Remind me, Deety."

"I'll tell Gay." She did-and almost at once there was a crash of metal. I sat up abruptly. "What's that?"

"Hilda, I am afraid that I have kicked over the supper dishes." My husband added, "Zeb, how do I find the cabin light?"

"No, no! Jacob, don't try to find it. No light at all until sunrise. Don't fret about dishes. But what happened? I thought they were under the instrument board."

"I couldn't quite reach with this bed made up. But the carton that supports my feet sticks out beyond the seat cushion on it. So I stacked them there."

"No harm done. We can expect bobbles as we shake down."

"I suppose so."

"We can cope. Jacob, that was an excellent dinner."

Deety called out, "Good night, chatterboxes! We want to sleep." She closed the bulkhead door, dogged it.

XXIII

"The farce is over."

Jake:

For me, the best soporific is to hold Hilda in my arms. I slept ten hours.

I might have slept longer had I not been blasted by a bugle call: Reveille.

I thought I was back in basic, tried to rouse out fast-banged my head. That slowed me; I reoriented, saw my lovely bride beside me, yawning prettily- realized that we were on Mars.

Mars! Not even our own Mars but another universe.

That hateful tune started to repeat, louder.

I banged on the bulkhead. "How do you shut this thing off?"

Shortly I saw dogs of the bulkhead door turning, then the door swung-as the call went into its third time around still louder. Zeb showed, blinking.

"Do you have a problem?" -

I couldn't hear but I could piece out what he meant.

"HOW DO YOU SHUT OFF THIS RACKET?"

"No problem." (I think that's what he said.) "Good morning, Gay." The bugle faded into the distance. "Good morning, Boss."

"I'm awake."

"Ah, but will you stay awake?"

"I won't go back to bed. Promise."

"I've dealt with your sort before, me bucko. If you aren't out of here before my landlady wakes up, I'll lose this room. Then another hassle with the cops. It's not worth it. . . you cheapskate!"

"You're a smart girl, Gay.'~

"So smart I'm looking for another job."

"Back to sleep, Gay. Over."

"Roger and out, Boss"-and blessed silence.

I said to my daughter, "Deety, how could you do this to us?"

Her husband answered. "Deety didn't, Jake. She was told to place a call for sunrise. But didn't know what a morning call means to Gay."

I grumped, and opened the starboard door. Hilda's rearrangements had given me the best rest I had had in days. But two double beds in a sports car left no room on arising to do anything but get out.

So I slid out the door, groped for the step, paused to ask Hilda for shoes and coverall-caught sight of something and said quietly, "Hilda. My rifle. Quickly!"

My little treasure is always reliable in emergency; her clowning is simply persona. (A most pleasant one; the worst aspect of the jest of making her "captain" was that she lost her smile-I hoped that Zeb would soon resume command. We had needed the lesson-but no need to go on.)

I digress- I asked for my rifle; she whispered, "Roger," and had it in my hand at once with the quiet report: "Locked, one in the chamber. Wait-I'm getting Zeb."

That made sense. By staying on the step in the corner formed by door and car, my rear was safe and I need cover only a small sector. I prefer a bolt action-correction: I have a bolt-action rifle I inherited from my father's eldest brother, who had "liberated" it on leaving the Marine Corps.

I unlocked it, opened the bolt slightly, saw that a cartridge was in the chamber, closed the bolt, left the piece unlocked.

Zeb said at my ear, softly, "What's the excitement?"

"Over there." I pulled my head out of the way, saw Hilda and Deety almost on top of Zeb-Hilda with Deety's shotgun, Deety with her husband's police special.

Zeb said, "Pixies. They may still be around; let's check. Cover me from here?"

"No, Zeb. You to the right, me to the left, we check the port side, meet back at the dump. Make it fast."

"Say the word." Zeb said over his shoulder, "You girls stay in the car. Jake?"

"Now!" We came bursting out like greyhounds, guns at high port. The reason for my disquiet was simple: The dump of wrappings and cartons was no longer a heap. Something had spread it over many meters, and the litter was not nearly enough to account for the pile. Wind? Zeb had left the wings extended; the slightest wind would wake him, warn him of change in weather. The car had not rocked in the night; ergo, no wind. Ergo, nocturnal visitors. Nor were they small.

I rounded the car to the left, seeing nothing until I spotted Zeb-waved at him, started back around to join him at the dump.

He arrived before I did. "I told you girls to stay in the car!" He was quite angry, and the cause, both of them, were also at the dump.

My darling answered, "Chief Pilot."

Zeb said, "Huh? Sharpie, there's no time for that; there's something dangerous around! You girls get inside before I-"

"Pipe DOWN!"

One would not believe that so small a body could produce such a blast. It caught Zeb mouth open and jammed his words down his throat.

Hilda did not give him opportunity to answer. She continued, forcefully:

"Chief Pilot, there are no 'girls' here; there are four adult humans. One of them is my second-in-command and executive officer. My executive officer; I am in command." Hilda looked at my daughter. "Astrogator, did you tell anyone to remain in the car?"

"No, Captain." Deety was wearing her "Name, rank, and serial number" face.

"Nor did I." Hilda looked at Zeb. "There is no need to discuss it." She stirred litter with a toe. "I had hoped that we could find salvage. But three fourths of it has been eaten. By large animals from those tooth marks. I would have trouble visualizing a large animal that eats cellulose but is nevertheless carnivorous-save that I know one. So we will get as much done as possible while keeping a tight guard. I have the program planned but I'm open to advice."

"Hilda!" I let my tone get a bit sharp.

My wife looked around with features as impassive as those of my daughter. "Copilot, are you addressing me officially or socially?"

"Uh. . . as your husband! I must put my foot down! Hilda, you don't realize the situation. We'll lift as soon as possible-and Zeb will be in command. The farce is over."

I hated to speak to my beloved that way but sometimes one must. I braced myself for a blast.

None came. Hilda turned to Zeb and said quietly, "Chief Pilot, was my election a farce?"

"No, Captain."

"Astrogator, did you think of it as farce?"

"Me? Heavens, no, Captain Auntie!"

Hilda looked at me. "Jacob, from the balloting you voted for me at least once, possibly three times. Were you joking?"

I could not remember how I had felt when it dawned on me that Zeb really did intend to resign-panic, I think, that I was about to be stuck with the job. That was now irrelevant as I knew that I was not more than one micron from again being a bachelor. . . so I resorted to Higher Truth.

"No, no, my darling-my darling Captain! I was dead serious!"

"Did you find some malfeasance?"

"What? No! I- I made a mistake. Jumped to conclusions. I assumed that we would be leaving at once.. . and that Zeb would command once we lifted. After all, it's his car."

Hilda gave me the briefest smile. "There is something to that last argument. Zebbie, did you intend-"

"Wait a half! Cap'n, that car belongs to all of us just like Jake's Milky Way bars; we pooled resources."

"So I have heard you all say. Since I had nothing to pool but a fur cape, I took it with a grain of salt. Zebbie, do you intend to resume command when, we lift?"

"Captain, the only way you can quit is by resigning. . . whereupon Deety would be captain."

"No, sirree!" (My daughter is notoften that shrill.)

"Then Jake would wind up holding the sack. Captain, I'll pilot when ordered, chop wood and carry water between times. But I didn't sign up to boss a madhouse. I think you're finding out what I mean."

"I think so, too, Zebbie. You thought there was an emergency and started giving orders. I would not want that to happen in a real emergency-"

"It won't! Captain."

"And I find to my chagrin that my husband considers me to be a play captain. I think I must ask for a vote of confidence. Will you please find something to use as white and black balls?"

"Captain Auntie!"

"Yes, dear?"

"I am required to advise you. A commanding officer commands; she doesn't ask for votes. You can resign-or-die-or lose to a mutiny and get hanged' from your own yardarm. But if you take a vote, you're not a captain; you're a politician."

"Deety's right, Captain," Zeb told my wife. "Had a case-law case in R.O.T.C. Naval vessel. Department told the skipper to pick one of two ports for ho1idays.~ He let his crew vote on it. Word got back to Washington and he was relieved~ at sea by his second-in-command and never again ordered to sea. C.O.'s don't ask; they tell 'em. However, if it matters to you, I'm sorry I goofed, and you~ do enjoy my confidence."

"Mine, too!"

"And mine, Hilda my dear Captain!" (In truth I wanted Zeb and only Zeb to command when the car was off the ground. But I made myself a solemn:
vow never again to say or do anything that might cause Hilda to suspect it. We would crash and die together rather than let her suspect that I thought her other than the ideal commanding officer.)

Hilda said, "The incident is closed. Who can't wait? Speak up."

I hesitated-my bladder is not used to bedtime right after dinner. When no one else spoke, I said, "Perhaps I had better be first; I have breakfast to prepare."

"Dear, you are not First Cook today; Zebbie is. Deety, grab a rifle and take,: your father to his 'handy bush'-and do make it handy; that giant termite might be lurking. Then hand Jacob the rifle and it's your turn. Don't dally."

It was a busy day. Water tanks had to be topped off. Zeb and I used two collapsible buckets, taking turns (that hill got steeper every trip, even at 0.38 gee), while Deety guarded us. Endless trips- That afternoon I was a ladies' tailor. Hilda had something for Deety to do.

Zeb had a job to complete. The space behind the bulkhead has padeyes every 30 cms or so. No one wants the center of gravity to shift when one is in the air. Zeb's arrangements were Samson cord in many lengths with snap hooks. Zeb told Hilda he wanted to secure the bed aft for air or space, and to store items used in rigging the forward bed so that they would be secure but available-and where were his Samson ties?- Gay didn't know. He had to explain to Hilda what they looked like-whereupon Hilda said, "Oh! Thingammies! Gay Deceiver. Inventory. Incidentals. Small. Thingammies." Zeb spent the afternoon making certain that the "bed" could not slide, then built a net of Samson cord to hold the items for turning seats into a bed, then, finding that he had Samson ties left, Zeb removed the wires with which I had secured the aftermost storage, and replaced them with ties. When he was through, he relieved me as guard, and I wound up as seamstress.

Our wives had decided that one of Deety's jump suits should be altered for Hilda until we reached some place where clothes could be purchased. Hilda had vetoed Earth-without-a-J. "Jacob, as captain I look at things from another perspective. It is better to be a lively frump than a stylish corpse. Wups! You pinned Sharpie."

"Thorry," I said, around a mouthful of pins. Hilda was wearing the suit inside out; I was pinning excess material. Once this caused it to fit, lines held by pins would be tacked, pins removed, tacked lines sewed in short stitches (by hand; Deety's sewing machine was ashes in another universe), and excess cloth trimmed away.

Such was theory.

I tackled reducing the waist line by pinning darts on both sides. Then I folded up the trousers so that the crease came at the instep-but had to pin them up 17 cms!

Seventeen centimeters! I had taken in the waist first, knowing that doing so would, in effect, shorten the trousers. It did-one centimeter.

The appearance was as if I were trying to fit her with a chimpanzee suit for a masquerade. Lift it at the shoulders? I tried, almost cutting off circulation. Still a horrid case of droopy drawers- Take a tuck all the way around the waist? That suit closed with one zipper.

Have you ever tried to take a tuck in a zipper? I stepped back and looked at my creative artistry. Ghastly.

"Hilda my love, Deety was better at this by the age of ten. Shall I fetch her?"

"No, no!"

"Yes, yes. If at first you don't succeed, find the mistake. I'm the mistake. You need Deety."

"No, Jacob. It would be better for me to get along without clothes than to interrupt the work I have assigned to the Astrogator. With you at the verniers and Zebbie at the controls, Gay can do almost anything and quickly. Yes?"

"I wouldn't phrase it that way. But I understand you."

"If she's been preprogrammed, she can do it even faster?"

"Certainly. Why the quiz, dear?"

"How much faster?"

"Without preprogramming, it takes a few seconds to acknowledge and set it, about as long to check what I've done, then I report 'Set!' Zeb says 'Execute!' I punch the button. Five to fifteen seconds. With a preprogram-is it debugged in all ways, no conflicts, no ambiguities, no sounds easy to confuse?"

"Darling, that is why I won't let Deety be disturbed. Yes."

"So. Maximum time would be with Gay asleep. Wake her, she acknowledges, you state the preprogram in the exact words in her memory, then say 'Execute!' Call it three seconds. Minimum- That would be an emergency preprogram with 'Execute' included in the code word. My dear, we saw minimum time yesterday. When that Russian tried to shoot Zeb."

"Jacob, that is what caused me to put Deety to work. I saw his pistol in the air. His fingers were curled to catch it. Then we were in the sky. How long?"

"I saw him start to reverse his weapon, and bent over my verniers to bounce: us by switch. . . then stopped. Not needed. Mmm- A tenth of a second? A fifth?"

"Whichever, it is the fastest we can manage. While you dears were carrying water, I was preparing a list of preprograms. Some are to save juice or time or to carry out something we do frequently; those require 'Execute!' Some are intended to save our lives and don't require 'Execute.' Like 'Bounce' and 'Bug Out' and 'Take us home!' But more. Jacob, I did not tell Deety how to phrase these; that's her specialty. I wrote out what I thought we ought to be able to'~ do and told her to add any she wished."

"Did you consult Zeb?"

"Copilot, the Captain did not consult the Chief Pilot."

"Whew! I beg your pardon-Captain."

"Only if I get a kiss-mind the pins! Deety will post a copy on the instrument board. After you and Zebbie read them, I want your advice and his."

I gave up on that jump suit. I took out eighty-five or a thousand pins. Hilda was covered with sweat so I invited her to order me to take her down to bathe. She hesitated.

I said, "Does the Captain have duties of which I am unaware?"

"No. But everyone else is working, Jacob."

"Captain, Rank Hath Its Privileges. You are on duty twenty-four hours a day-twenty-four and a half here-"

"Twenty-four hours, thirty-nine minutes, thirty-five seconds-local day, not sidereal."

"Did you measure it? Or remember what some professor said?"

"Neither, Jacob. It's the figure Gay uses. I suppose she got it from the~ Aerospace Almanac."

"Are you going to believe an almanac? Or your husband?"

"Excuse me, Jacob, while I tell Gay the correct figure."

"Hand-back my leg, beloved. Captain, since you are on duty all the time, you are entitled to bathe, rest, or relax, at any time."

"Well. . . two seconds while I grab a towel-and tell Zebbie that I will start dinner while he is down bathing."

"Captain, I am number-two cook today. You said so."

"You will guard, Jacob, which you do better than I. While the Carters are guarding each other." -

Hilda came trotting back with a towel. I said, "Cap'n, I've figured out clothes for you."

"Goody. Yes, dear?" We headed for the path down.

"Were my Hawaiian shirts packed?" I had her fall in behind me.

"Inventory. Clothing. Jacob. Shirts. Aloha."

"Do you recall a blue one with white flowers?"

"Yes."

"I take 'medium' but can get into a 'small' and Andrade's didn't have this in 'medium.' But this one is so small I haven't been wearing it. Hilda, you'll like it-and it will be easy to cut down." (A steep pitch-no place to lose your footing while carrying a gun.)

"I won't cut it down. Jacob, your shirt is my first maternity smock."

"A happy thought! Did Deety fetch sailor pants? White."

"I recall white duck slacks." Hilda kicked off her Reds, stepped into the water.

"That's the pair. She wore them one summer while maturing. The following summer they were too tight. She was always about to alter them but never did."

"Jacob, if Deety likes those pants so well that she saved them and fetched them along, I won't ask her to give them to me."

"I will ask her. Hilda, you worry about the wrong things. We pooled resources. I chucked in my candy bars, Zeb chucked in his car, Deety chucks in her sailor pants."

"And what did I chuck in? Nothing!"

"Your mink cape. If you offered it to Deety in exchange for a pair of old white-"

"It's a deal!"

"It is like hell, Mistress Mine. That cape is valuta. Only days ago each of us was wealthy. Now we are unpersons who can't go home. What happens to our bank accounts I do not know but it seems certain that we will never realize anything from them, or from stocks, bonds, and other securities. Any paper money we have is worthless. As you know, I have bullion and gold coins and Jake has, also; we each like money that clinks and we don't trust governments. Gay must be juiced from time to time; that calls for valuta. Such as gold. Such as mink coats. Come out of there before you freeze! I would rub you dry but that giant termite worries me."

"Last night Zebbie rubbed me dry."

(Why do women have this compulsion to confess? It is not a typical male Vice.) "He did? I should speak to him."

"Jacob, you are angry."

"Only somewhat, as yesterday we didn't know about the giant termite, and Zeb and I considered your guard rules silly. Nevertheless Zeb neglected his duty."

"I meant 'angry with me'!"

"For what? Did you force it on him?"

"No. He offered it-towel open and ready, just as you do. I went straight into it, let him wrap me and rub me down."

"Feel good?"

"Golly, yes! I'm a bad girl, Jacob-but I loved it."

"Don't give yourself airs, my darling; you are not a bad girl. Yesterday was not the first time Zeb has rubbed you dry."

"Well. . . no." (They have to confess, they have to be shrived.)

"Do you any harm, then or now?"

"I don't think so."

"I'm sure it didn't. Listen, beloved-you are twenty-nine going on forty-two. You've had three term contracts and now have a traditional marriage. In college you were a scandal to the jaybirds. Zeb has been your chum for years. Both of you horny as goats. My darling, I assumed what is called 'the worst' and is often the best."

"But, Jacob, we didn't, we didn't! And we haven't!"

"So? People who pass up temptations have only themselves to blame. Just one thing, my only love, if you and Zeb ever pick up the matter, try not to look guilty."

"But we aren't going to, ever!"

"Should it come to pass, warn Zeb not to hurt Deety. She loves him deeply. Not surprising as Zeb is a lovable man. Get your shoes on, dearest one, and we'll let someone else have the community bathtub."

"Jacob? You still think we have. Zebbie and I."

"Hilda, I married you convinced that Zeb was, at that time and for some years, your lover. Or one of them. Today you have convinced me that the matter is unproven. . . assuming that one or both of you have rocks in your head. But I can't see that it makes a tinker's dam either way. Jane taught me that the only important rule is not to hurt people. . . which very often-Jane's words!-consists in not talking unnecessarily."

"Jane told me that, too. Jacob? Will you kiss me?"

"Madame-what did you say your name was?-that is the toll I charge before a client starts up this bank."

As we climbed, I asked Hilda, "Darling, what is the animal that eats cellulose but is carnivorous?"

"Oh. Two. H. sapiens and Rattus."

"Men? Cellulose?"

"Sawdust is often processed as food. Have you ever eaten in a fast food joint?"

My daughter had done a wonderful job on preprograms; we all were eager to learn them. We placed guards, Zeb and me, at the doors, while Deety took Zeb's seat and talked, and Hilda sat in mine.

"Captain Auntie had two ideas," Deety told us. "To optimize emergency escapes and to work out ways to use as near to no juice as possible. The latter involves figuring ways to ground us in strange places without the skill Zebadiah has in dead-stick grounding."

"I don't depend on skill," put in my son-in-law. "Lwon't risk a dead-stick grounding other than on a hard-surfaced strip. You've seen me avoid it twice- by power-on just before grounding. Yesterday I cut it a bit fine."

I shuddered.

My daughter continued, "We have this new program. Set it, by voice, for bearing and as many minima as you please. Our Smart Girl goes there and attempts to ground. She uses radar twice, once in range-finder mode, second time in precautionary mode as in 'Bug Out.' If her target is not clear, she does a Drunkard's Walk in locus ten klicks radius, sampling spots two per second. When she finds a good spot, she grounds. Unless we don't like it and order her to try again.

"Study that and you will see that you can cruise all over this or any planet, land anywhere, and not use juice.

"Escape programs- We must be most careful in saying G, A, Y. Refer to her as 'smart girl' or 'the car' or anything not starting with that syllable. That syllable will now wake her. If it is followed by her last name, she goes into 'awaiting orders' mode. But if G, A, Y, alone is followed by any of eight code words, she executes that escape instantly. I have tried to select monosyllables that ordinarily do not follow her first name. Gay Deceiver."

"Hi, Deety!"

"Dictionary. G, A, Y. Read."

"Gayety, gayfeather, Gayle, Gaylord, Gay-Pay-Oo, gaywings-"

XXIV

Captains aren't supposed to cry.

Hilda:

I ordered an early dinner by starting it when Zebbie and Deety went down to bathe. I had ready a public reason but my motive was personal: I didn't want a pillow talk with Jacob.

Annoyed at him? At me! I had had a perfect chance to keep my lip zipped- and muffed it! Was I boasting? Or confessing? Or trying to hurt Jacob? (Oh, no!-can the id be that idiotic!)

Don't rationalize it, Sharpie! Had not your husband been kind, tolerant, and far more sophisticated than you ever dreamed, you would be in trouble.

When dinner was over, Zebbie said lazily, "I'll do the dishes in the morning."

I said, "I prefer that they be done tonight, please."

Zebbie sat up and looked at me. His thoughts were coming through so strongly that I was getting them as words. I never allow myself to be close with a person whose thoughts I can't sense at all; I distrust a blank wall. But now I could "hear" such names as "Queeg" and "Bligh" and "Vanderdecken" and "Ahab"-and suddenly Captain Ahab was harpooning the White Whale and I was the whale!

Zebbie bounced to his feet with a grin that made me uneasy. "Sure thing, Cap'n! Deety, grab a rifle and hold it on me to make sure I get 'em clean."

I cut in quickly, "I'm sorry, Chief Pilot, but I need the Astrogator. Jacob is your assistant."

When they were gone, Deety said, "Will my shotgun do? I don't think the cardboard eater comes out in daylight."

"Bring the guns inside; we're going to close the doors."

I waited until we were settled. "Deety, will you make me a copy of your new programs before our men come back?"

"If they take time to wash them properly. Men and dishes-you know."

"I hope they stall-"

"-and get over their mad," Deety finished.

"That, too. But I intend to write a sequential program and I want you to check me. After you make that copy."

They did stay down-"man talk," no doubt. Men need us but can just barely stand us; every now and then they have to discuss our faults. I think that is why they shut us out.

Deety made a copy while I wrote what I planned to do. Deety looked it over, corrected some wording. Looked it over again-and said nothing pointedly.

"Deety, can you handle your father's lab camera?"

"Certainly."

"Will you check its load and shoot when I ask for it?"

"Of course."

"If I goof on an order, correct me at once."

"You don't intend to hand this to Zebadiah to carry out?"

"No. I prefer that you not mention that I prepared it ahead of time. Deety, the Chief Pilot assured me that any of us could command in aerospace. I am about to make a test run. The Chief Pilot is in a position to override. If he does, I shan't fight it; I have said all along that he should be captain."

We had time to dig out that shirt with the white flowers. Deety's sailor pants were long; we turned up cuffs. The lacing at the back made them small enough in the waist. She gave me a blue belt to pull in the shirt, which I wore outside-then she added a blue hair ribbon.

"Captain Auntie, you look good. Better than I will in this jump suit I am reluctantly pulling on. Gosh, I'm glad Zebadiah isn't square about skin!"

"He was when I adopted him. Fetched swim briefs the first time I invited him over to swim. But I was firm. There they come! Open the doors."

They appeared to be over their mad. Zebbie looked at me and said, "How fancy! Are we going to church?"-and my husband added, "You look pretty, my dear."

"Thank you, sir. All hands, prepare for space. Secure loose gear. Lock firearms. Anyone requiring a bush stop say so. Dress for space. Before manning car, take a turn around the car, searching for gear on the ground."

"What is this?" demanded Zebbie.

"Prepare for space. Move!"

He hesitated a split second. "Aye aye, Captain."

In two minutes and thirteen seconds (I checked Gay's clock) I was squeezing past my husband into the starboard rear seat. I said, "In reporting, include status of firearms. Astrogator."

"Belted down. Bulkhead door dogged. Shotgun loaded and locked. I slid it under the sleeping bag."

"Fléchette gun?"

"Wups! In my purse. Loaded and locked. Purse clipped to my seat, outboard."

"Copilot."

"Belt fastened. Door locked, seal checked. Continua device ready. Rifle loaded and locked, secure under sleeping bag. I'm wearing my pistol loaded and locked."

"Chief Pilot."

"Belt fastened, door locked, seal checked. Rifle loaded, locked, under sleeping bag. Wearing revolver, loaded and locked. No loose gear. Water tanks topped off. Load trimmed. Two reserve power packs, two zeroed. Juice zero point seven-two capacity. Wings spread full. Wheels down, unlocked to retract. All systems go. Ready."

"Chief Pilot, after first maneuver, execute vertical dive fastest without power and without retracting wheels. Relock wheel-retracting gear. Leave wings spread max."

"Wheel retractors locked. After first maneuver fastest, no-power vertical dive, wings full subsonic, wheels down."

I glanced at Deety; she held up the camera and mouthed, "Ready."

"Gay Home!"

In Arizona it was shortly before sunset, as Deety had predicted. My husband repressed a gasp. I snapped, "Copilot, report H-above-G."

"Uh. . . two klicks minus, falling." Zebbie had bite now; the horizon ahead tilted slowly up, then faster. As we leaned over, Deety stretched high, catlike, to shoot between our pilots. We steadied with Snug Harbor dead ahead-a crater! I felt a burst of anger, a wish to kill!

"Picture!"

"Gay B'gout!"

Instead of being stationary at "Touchdown" we were in free fall on the night side of some planet. I cçuld see stars, with blackness below the "horizon"-if horizon it were. Deety said, "Looks like the Russians left something on our parking space."

"Perhaps. Jacob, H-above-G, please."

"Under ten klicks, decreasing slowly."

"So far, so good. But we aren't sure that we have the right planet and universe."

"Captain, that's Antares ahead."

"Thanks, Zebbie. I assume that at least we are in one of the analogs, of our native universe. Deety, can you get from Gay the acceleration and check it against Mars-ten?"

"Bout four ways, Cap'n."

"Go ahead."

"Gay Deceiver."

"Hi, Deety!"

"Hi, Gay. H-above-G, closing rate running, solve first differential, report answer."

Instantly Gay answered, "Three-seven-six centimeters per second squared."

"You're a smart girl, Gay."

So it was either Mars-ten or an unreasonable facsimile. "Gay B'gout!"

We were stationary, with what we had come to feel as "proper weight." Deety said, "Maybe an animal wandered across our spot. How about lights, Captain? This snapshot ought to be colors by now."

"Not yet. Chief Pilot, when I alert the autopilot by G, A, Y, please switch on forward landing lights."

"Roger Wilco."

"Gay-"

Blinding light-men in its path were blinded, not us. "Bounce! Kill the light, Zebbie. The Little Father left sentries in case we came back-and we did."

"Captain Auntie, may I have cabin light now?"

"Please be patient, dear. I saw two men. Jacob?"

"Three men, dear. . . dear Captain. Russian soldiers in uniform. Weapons, but no details."

"Deety?"

"Looked like bazookas."

"Chief Pilot?"

"Bazookas. A good thing you were on the bounce with Bounce, Skipper. Gay can take a lot. . . but a bazooka would make her unhappy." He added, "Speed saved me yesterday. Deety, let that be a lesson: Never lose your temper."

"Look who's talking!"

"I quit being C.O., didn't I? Cap'n Sharpie doesn't do foolish stunts. If I were skipper, we would chase 'em all over that sea bottom. Never be in one place long enough for them to aim and they would think there were thirty of us. If Colonel Snotsky is there-I think he's afraid to go home-"

We were over Arizona. I snapped, "Gay Termite!"

-and were parked by our stream. Zebbie said, "What the devil? Who did that?"

"You did, Zebadiah," Deety answered. Me? I did no such thing. I was-" "Silence!" (That was I, Captain Bligh.) I went on, "Gay Deceiver, go to sleep. Over." "Sleepy time, Hilda. Roger and out."

"Chief Pilot, is there a way to shut off the autopilot so completely that she cannot possibly be activated by voice?"

"Oh, certainly." Zebbie reached up, threw a switch.

"Thanks, Zebbie. Deety, your new escape programs are swell. . . but I missed how that happened. But first- Did anyone else see our giant termite?"

"Huh?"-"I did."-"Where?"

I said, "I was looking out to starboard as we transited. The creature was feeding on packing debris-and took off uphill at high speed. Looked like a very big, fat, white dog with too many legs. Six, I think."

"Six," agreed my husband. "Put me in mind of a polar bear. Hilda, I think it is carnivorous."

"We are not going to find out. Deety, tell Zebbie-all of us-what happened." Deety shrugged. "Zebadiah said 'bounce' twice when he should not have, but Gay wasn't triggered. Then he said 'Gay can take a lot-' and she was triggered. More chitchat and Zebadiah said '-I think he's afraid to go home-' That did it. Our smart girl hears what she has been taught. She heard: 'Gay Home' and that is the short form that used to be: 'Gay Deceiver Take Us Home."

Zebbie shook his head. "A gun should never be that hair-trigger."

"Chief Pilot, yesterday you used the first of these clipped programs to avoid a bullet in your face. First 'Gay'-then after more words-'bounce!' It saved you."

"But-"

"I'm not through. Astrogator, study the escape programs. Search for possibility of danger if triggered accidentally. Zebbie, escape programs can't be compared to a hair trigger on a gun; they are to escape, not to kill."

"Captain Auntie, I've spent all day making certain that programs can't put us out of the frying pan into the fire. That's why I killed 'countermarch.' The nearest thing to danger is the 'Home' program because our home planet is unfriendly." Deety sounded sad. "I hate to cut our last link with home."

"It needn't be cut," I said. "Just stretched. Put it back into long form and add 'Execute."

Deety answered, "Captain, I will do as you say. But we might be a billion klicks from nowhere and hit by a meteor. If anyone can gasp, 'GayHome,' then we are two klicks over our cabin site in air, not vacuum. Even if we've passed out, Gay won't crash us; she's built not to. If I'm gasping my last, I don't want to have to say, 'Gay Deceiver, take us home. Execute.' That's ten syllables against two. . . with air whooshing out."

I said, "That settles it. The 'Gay Home' program stands unless my successor changes it."

"You're not talking to me, Captain Sharpie darling-I mean, Captain Hilda-because I'm not your successor. But Deety convinced me. I will not admit that those vermin have run me permanently off my own planet. At least I can return to it to die."

"Son, let's not speak of dying. We are going to stay alive and raise kids and enjoy it."

"That's my Pop! Say, doesn't anybody want to see this picture?"

We made it a rest stop, worrying more about giant termites than about bushes. . . and Jacob found a can opener. The can opener. I put a stop to an attempt to fix the blame. Advice to all explorers: Do not roam the universes without a spare can opener.

Then it was "Prepare for lift!" and a new program. "Chief Pilot, switch on autopilot. Gay Deceiver. Explore. True bearing two-six-five. Unit jump five minima. Use bingo stop continue. End program short of sunrise line. Ground. Acknowledge by paraphrase."

"Explore west five degrees south fifty-klick units. Two-second check each jump. Ground myself no power Greenwich time oh-three-seventeen."

"Deety, is that time right?"

"For that program."

"Gay Deceiver. Program revision. Cancel grounding. From program coded 'A Tramp Abroad' display locus. Display Bingoes."

She displayed Mars at once, but gibbous. I scrawled a note to Deety: "How do I rotate to show day side only?"

Dear Deety! She wrote her answer. Passed it over-I doubt that our men saw it: "Program revision. Display locus real-time day side."

Gay accommodated. It took several steps to define new locus as sunset line (right edge - east) to sunrise line (left edge - west), and between 50°N and 50°S (some Russian area had been close to 45°S, so I widened the search)-then let
the locus move with the terminators. (Gay can "see" in the dark but I can't.) I told her to end "Explore" at Greenwich oh-three-seventeen and start "A Tramp Abroad," continue until directed otherwise, and had Gay repeat back in her phrasing.

I touched Zebbie's shoulder, pointed to the switch that cut out Gay's ears, drew a finger across my throat. He nodded and shut her out. I said, "Questions, gentlemen? Deety?"

"I do, Captain," said our Chief Pilot. "Do you plan on sleeping tonight?"

"Certainly, Zebbie. An ideal sleeping spot would be one far from the Russians but close to the present sunset line. Or did you want to work all night?"

"If you wish. I noticed that you gave Gay a program that could keep her going for days or weeks-and that you had reduced H-above-G to six klicks. Breathable air. By rotating duties, with one or two always stretched out aft, we can stay up a week, easily, and still give Jake's ankles a break."

"I can skip a night's sleep," said Deety. "Captain Auntie honey, with enough random samples and a defined locus, sampling soon approaches a grid a fly couldn't get through. Do you want the formula?"

"Heavens, no! As long as it works."

"It works. Let's make a long run, get a big sampling. But I'd like to add something. Let's parallel the display onto a sidelooker screen, and light every vertex-while the main display shows Bingoes. You'll see how tight a screen you're building."

"Sharpie, don't let her do it!" Zebbie added, "Scuse, please! Captain, the Astrogator is correct on software but I know more about this hardware. You can crowd a computer into a nervous breakdown. I have safeguards around Smart Girl; if I give her too much to do, she tells me to go to hell. But she likes Deety. Like a willing horse, she'll try hard for Deety even when it's too much."

Deety said soberly, "Captain, I gave you bad advice."

Her husband said, "Don't be so humble, Deety. You're smarter than I am and we all know it. But we are dependent on Smart Girl and can't let her break down. Captain, I don't know how much strain the time-space twister puts on her but she has unnecessary programs. At the Captain's convenience, I would like to review everything in her perms and wipe those we can do without."

"My very early convenience, sir. Is the schedule okay?"

"Oh, sure. Just don't add that side display."

"Thank you, Chief Pilot. Anyone else? Copilot?"

"My dear. . . my dear Captain, is there some reason to find a spot near the sunset line? If you intend to work all night?"

"Oh! But, Jacob, I do not plan to work all night. It is now about twenty hundred by our personal circadians, as established by when we got up. I think we can search for three to four hours. I hope that we can find a spot to sleep near the sunset line, scout it in daylight, let Gay land herself on it for her perms-then return to it in the dark when we get tired"

"I see, in part. My dear, unless I misunderstood you, you are heading west. But you said that you wanted to find us a place to sleep near the presert sunset line. East. Or did I misunderstood you?"

"It's very simply explained, Jacob."

"Yes, dear Captain?"

"I made a horrible mistake in navigation."

"Chief Pilot, did you spot it?"

"Yup. Yes, Captain."

"Why didn't you speak up?"

"Not my business, Ma'am. Nothing you planned to do was any danger."

"Zebbie, I'm not sure whether to thank you for keeping quiet, or to complain because you did. Deety, you spotted the mistake, I am certain. You are supposed to advise me."

"Captain, I'm supposed to speak up to stop a bad mistake. This was not. I wasn't certain that it was a mistake until you told on yourself. But you spotted the mistake when Gay predicted the time to end the 'Explore' program, then you corrected it by telling her to shift to 'A Tramp Abroad.' So there was never a reason to advise you."

I let out a sigh. "You're covering for me and I love you all and I'm no good as captain. I've served as many hours as Zebbie and we are on the ground, so now it's time to elect someone who can do it right. You, Zebbie."

"Not me. Jake and Deety must each do a stint before I'd admit that it might be my turn."

"Captain-"

"Deety, I'm not captain; I resigned!"

"No, Aunt Hilda, you didn't actually do it. It is my duty to advise you when you seem about to make a bad mistake. You made a minor mistake and corrected it. In my business we call that 'debugging'-and spend more time on it than we do on writing programs. Because everybody makes mistakes."

Jane's little girl managed to sound the way Jane used to. I resolved to listen-because all too often I hadn't listened to Jane. "Captain Auntie, if you were resigning because of the way your crew treated you-as Zebadiah did- I wouldn't say a word. But that's not your reason. Or is it?"

"What? Oh, no! You've all helped-you've been angels. Uh, well, mostly."

"Angels'-hummph! I can't use the correct words; I'd shock our men. Aunt Hilda, I gave you far worse lip than I ever gave Zebadiah. You slapped me down hard-and I've been your strongest supporter ever since. Zebadiah, what you did was worse-"

"I know."

"-but you admitted that you were wrong. Nevertheless you've been chewing the bit. Demanding explanations. Zebadiah, the captain of a ship doesn't have to explain why she gives an order. Or does she?"

"Of course not. Oh, a captain sometimes does explain. But she shouldn't do it often or the crew will start thinking they are entitled to explanations. In a crunch this can kill you. Waste that split second." Zebbie brooded. "Captain says 'Frog,' you hop. Couple of times I failed to hop. Captain, I'm sorry."

"Zebbie, we get along all right."

He reached back and patted my knee. "Pretty well in the past. Better from now on."

My darling Jacob said worriedly, "I'm afraid I have been remiss, too."

I was about to reassure him when Deety cut in: "Remiss'! Pop, you're the worst of all! If I had been your wife, I would have tossed you back and rebaited my hook. 'Farce' is worse than mutinous; it's insulting. Be glad Jane didn't hear you!"

"I know, I know!"

I touched Deety's arm and whispered, "That's enough, dear."

Zebbie said soberly, "Captain, as I analyze it, you made a mistake in sign. Every navigator makes mistakes-and has some routine by which to check his work. If you're going to get upset because recheck shows that you wrote down 'plus' when the declination is 'south,' you're going to have ulcers. You're just under strain from being C.O. We've all made the strain worse. But we want to do better. I'd hate to have you resign over a minor error. . . when we caused your upset. I hope you'll give us another chance."

Captains aren't supposed to cry. I blinked 'em back, got my voice under control, and said, "All hands! Still ready for lift? Report."

"Aye, Captain!"-"Affirmative!"-"Yes, my dear Hilda."

"Zebbie, switch on Gay's ears." He did.

"Execute!"-Termite Creek was gone and we were fifty klicks west and a touch south. Pretty and green but no Bingo. It would take us about seven minutes to overtake the Sun and approach sunrise line, plus any holds we made. Then I would go east to the sunset line in nothing flat (have Zebbie and Jacob do it); then bounce & glide, bounce & glide, while looking for a place to sleep in a spot suitable for Gay to try her new unpowered autogrounding program-in daylight with the hottest pilot in two worlds ready to override any error.

If Gay could do this, we would be almost independent of juice-and have a new "bug-out" sanctuary each time she landed herself. Power packs-Zebbie had a hand-cranked D.C. generator-but heavy work for husky men for endless hours. (40 hrs from zero to full charge; you see why Zebbie would rather buy fresh charges.)

We had been skipping along nearly three minutes, over four thousand klicks, before spotting a Bingo (by Zebbie). I called a "Hold" and added, "Where, Zebbie?"

He nosed us down. Farm buildings and cultivated fields-a happy contrast to the terrain-barren, green, flat, rugged-all lacking any sign of humans, in the stops we had made. "Astrogator, record time. Continue."

Then over three minutes with no Bingoes- At elapsed time 6m4s Jacob called out, "Bingo! A town."

"Hold! Onion towers?"

"I think not, dear. I see a flag-dare we go nearer?"

"Yes! But anyone use a scram at will. Jacob, may I have the binoculars, please?"

The Stars and Stripes are engraved on my heart, but in the next moments the Cross of Saint Andrew and the Cross of Saint George were added. It was an ensign with a blue field and some white shapes-three half moons in three sizes.

"Gay Deceiver."

"I'm all ears, Hilda."

"Move current program to standby."

"Roger Wilco Done."

"Gay Bounce. Zebbie, let's sweep this area for a bigger settlement."

Zebbie placed a locus around the town, radius five hundred klicks, and started "A Tramp Abroad" with vertex time cut to one second. Thirty-one minutes later we had a city. I guessed it at a hundred thousand plus.

"Captain," Zebbie said, "may I suggest that we bounce and try to raise them by radio? This place is big enough for A.A. guns or missiles-"

"Gay Bounce!"

"-and we know that their Slavic neighbors have aircraft."

"Is your guardian angel warning you?"

"Well. . . 'tain't polite to ground without clearance; such rudeness can make one suddenly dead."

"Gay Bounce, Gay Bounce. Are we out of reach of missiles?"

"Captain, British and Russians of this universe are ahead of us in spaceships or they wouldn't be here. That requires us to assume that their missiles and lasers and X-weapons are better than ours."

"What's an 'X-weapon'? And what do you advise?"

"I advise evasive tactics. An X-weapon is a 'Nobody-Knows."

"Evasive tactics, your choice. I assume you won't waste juice."

"No juice. Jake, gallop in all directions. Up, down, and sideways. Don't wait for 'Execute'; jump as fast as you can. That's it! Keep moving!"

"Captain Auntie, may I suggest an easier way?"

"Sneak un. Deetv."

"Zebadiah, how big is that city? Kilometers."

"That's indefinite. Oh, call it eight klicks in diameter."

"You've got that one-second 'Tramp' program on hold. Change locus. Center on that biggest building, make the radius six klicks. Then start program and Pop can rest."

"Uh.. . Deety, I'm stupid. Six klicks radius, ten klicks is a minimum- A bit tight?"

"Meant to be. Shall I draw a picture?"

"Maybe you'd better."

(Deety had defined an annulus two kilometers wide, outer radius six, inner radius four. We would "circle" the city six klicks above ground, random jumps, sixty per minute. I doubted that even robot weapons could find us, range us, hit us, in one second.)

Deety loosened her belt, slithered forward, and sketched. Suddenly Zebbie said, "Gotcha! Deety, you're a smart girl."

"Boss, I'll bet you tell that to all the girls."

"Nope, just smart ones. Gay Deceiver!"

"Less noise, please."

"Program revision. A Tramp Abroad. Locus a circle radius six klicks. Center defined by next Bingo. Acknowledge paraphrase."

"Revised program A Tramp Abroad. Circle twelve klicks diameter center next real-time Bingo."

"Jake, put us over that big building downtown. If necessary, make several tries but don't hang around. Once I like the position I'll say the magic word, then scram."

"Aye aye, Chief."

Jacob made a dozen jumps before Zebbie said, "Bingo Gay Bounce" and a light appeared on the display. He started the program and told Gay to increase scale; the light spread out into a circle with a lighted dot in the center. "Captain, watch this. I've told Gay that every stop is a Bingo. You may be surprised."

"Thanks, Zebbie." The circle was becoming freckled inside its perimeter. With no feeling of motion, the scene flicked every second. It was mid-morning; each scene was sharp. That big building would be dead ahead-blink your eye and you're staring at fields-

then again at the city but with that building off to starboard. It put me in mind of holovideo tape spliced to create confusion.

Zebbie had on his phones and was ignoring everything else. Jacob was watching the flickering scenery, as was I, as was Deety-when Jacob suddenly turned his head, said, "Deety-please-the-Bo-" and clapped his hand over his mouth.

I said, "Two Bonines, Deety-quickly!"

Deety was reaching for them. "You, too, Auntie Cap'n?"

"It's this flickering." I gave one to Jacob, made certain that he saw me take one. I had not been motion-sick since I had been made Captain. But any time my husband must take one, I will keep him company.

Today I should have taken one as soon as I spotted that British flag; Bonine tranquilizes the nerves as well as the tummy.. . and soon I must act as- ambassador? Something of the sort; I intended to go straight to the top. Dealing with underlings is frustrating. In college I would not have lasted almost four years had it been up to the dean of women. But I always managed to take it over her head to the president; the top boss can bend the rules.

(But my senior year the president was female and as tough a bitch as I am. She listened to my best Clarence-Darrow defense, congratulated me, told me I should have studied law, then said, "Go pack. I want you off campus by noon.")

Zebbie pushed the phone off his right ear. "Captain, I've got this loud enough to put on the horn. Want to talk to them?"

"No. I've never grounded outside the States. You know how, you do it. But, Chief Pilot-"

"Yes, Ma'am?"

"And Copilot and Astrogator. Stick to the truth at all times. But do not unnecessarily give information. Answer questions uninformatively-but truthfully. If pressed, tell them, 'See the Captain."

"My dear," Jacob said worriedly, "I've been meaning to speak about this. Zeb has had diplomatic experience. Wouldn't it be wise for us to place him in charge on the ground? Please understand, I'm not criticizing your performance as captain. But with his experience and in view of the fact that our principal purpose is to obtain certain things for his car-"

"Gay Bounce Gay Bounce Gay Bounce! Astrogator."

"Yes, Captain."

"Place us in a parking orbit. Soonest."

"Aye aye, Ma'am! Copilot, don't touch the verniers. Chief Pilot, check that the car is level. Gay Deceiver."

"On deck, Deety."

"Program. L axis add speed vector three point six klicks per second. Paraphrase acknowledge."

"Increase forward speed three and six tenths kilometers per second."

"Chief Pilot?"

"Level."

"Execute." Deety glanced at the board. "Gay Deceiver, H-above-G will soon stop decreasing, then increase very slowly. In about fifty minutes it will maximize. Program. When H-above-G is maximum, alert me."

"Roger Wilco."

"If-when one hundred klicks H-above-G, alert me."

"Roger Wilco."

"If-when air drag exceeds zero, alert me."

"Roger Wilco."

"Remain in piloting mode. Ignore voices including program code words until you are called by your full name. Acknowledge by reporting your full name."

"Gay Deceiver," answered Gay Deceiver.

"Is that okay, Captain? Smart Girl can't hear the short-form programs now, until she hears her full name first. Then you would still have to say 'Gay' to alert her, and 'Home' or whatever to scram. But there should be loads of time, as she'll tell me if anything starts to go wrong. You heard her."

"That's fine, Astrogator."

"I turned her ears off because there may be discussion in which you might not want to have to be careful to use code words. . . but still be able to put her ears back fast if you need them. Faster than the switch and besides the switch can be reached only from the left front seat."

Deety had a touch of nervous chattering; I understood the reasons for each step. And I understood why she was chattering.

"Well done. Thank you. Remain at the conn. Chief Pilot, Copilot, the Secondin-Command has the conn. I am going aft and do not wish to be disturbed." I lowered my voice, spoke directly to Deety. "You are free to call me. You only."

"Aye aye, Captain," Deety acknowledged quietly. "I must remind you: air for four hours only."

"If I fall asleep, call me in three hours." I kissed her quickly, floated out of my chair and started to undog the bulkhead door-got nowhere; Deety had to help me. Deety flipped a light switch for me. She closed me in and dogged one dog.

I got a blanket out of the cradle, took off my clothes, tried to wrap myself in the blanket. It kept slithering away.

No seat belts- But the web straps used to make a bedroll of Zebbie's sleeping bag were attached through loops and tucked under thingammies. Soon I had a belt across my waist and the blanket around me.

Being a runt, the only way I can fight is with words. But best for me is to walk away. Fight with Jacob? I was so angry I wanted to slap him! But I never slap anyone; a woman who takes advantage of her size and sex to slap a man is herself no gentleman. So I walked away-got out of there before I said something that would tear it-lose me my lovable, cuddly, thoughtful-and sometimes unbearable!-husband.

I wept in my pillow-no pillow and no Kleenex. After a while I slept.

XXV

"-leave bad enough alone!"

Deety:

After I helped Aunt Hilda with the bulkhead door, I got back into my seat- and said nothing. If I opened my mouth, I would say too much. I love Pop a heap, and respect him as a mathematician.

Pop is also one of the most selfish people I've ever known.

Doesn't mean he's tight with money; he isn't. Doesn't mean he wouldn't share his last crust of bread-he would. With a stranger.

But if he doesn't want to do something, he won't. When Jane died, I had tq take over money management at once. At seventeen. Because Pop ignored it. It was all I could do to get him to sign his name. -

I was bucking for my doctorate. Pop seemed to think that I should cook, clean house, shop, keep financial records, manage our businesses, cope with taxes-and earn my doctorate simultaneously.

Once I let dishes stack to see how long it would take him to notice. About two weeks later he said, "Deety, aren't you ever going to do the dishes?"

I answered, "No, sir."

"Eh? Why not?"

"I don't have time."

He looked puzzled. "Jane didn't seem to find keeping house difficult. Is something wrong, dear?"

"Pop, Mama wasn't bucking for a doctorate against a committee of dunderheads. My research subject was approved two years ago. . . but I've got men judging me-four out of seven-who can't tell Fortran from Serutan, hate
computers, and have dark fears that computer scientists are going to take their jobs away from them. They make me do work over because they don't understand it. And besides-Well, Mama Jane always had help, mine, and a housekeeper toward the end."

Pop is okay. He hired a housekeeper who stuck with us till I got my Ph.D. He investigated, discovered that the'head of the department had put men on my committee who knew nothing about computers-not on purpose; the department head did not know computers. I wound up with an even tougher committee but they knew computers. Fair enough.

Pop means to be good to me and he adores Aunt Hilda and means to pamper her. Pop is one of those men who sincerely believe in Women's Lib, always support it-but so deep down that they aren't aware of it, their emotions tell them that women never get over being children.

A mistake easy to make with Aunt Hilda- There are twelve-year-old girls bigger than she is and with more curves.

For a horrid time, we three said nothing. Zebadiah watched his instruments; Pop stared straight ahead.

At last my husband gave my father the chewing out that Pop would never have taken from me, "Jake. Tell me how you do it."

"You're a genius. You aren't the absent-minded sort who needs a boy to lead him around. You can hammer a nail with the best of them and can use power tools without chopping your fingers. You're good company and you managed to attract one of the three finest women I've ever known so much that she married you. Yet you have publicly

insulted her twice in one day. Twice. Tell me: Do you have to study to be that stupid? Or is it a gift, like your genius for mathematics?"

Pop covered his face with his hands. Zebadiah shut up.

I could see Pop's shoulders shake. Presently his sobbing stopped. He wiped his eyes, unfastened his seat belt. When I realized he was heading for the bulkhead door, I unstrapped fast and placed myself in his way. He said, "Please move out of my way, Deety."

"Copilot, return to your seat."

"But, Daughter, you can't come between husband and wife!"

"Address me as 'Astrogator.' The Captain does not wish to be disturbed. Gay Deceiver!"

"Here, Deety!"

"Log mode. Copilot, I will not permit you to disobey the Captain's orders. Return to your seat, strap down-and stay there!"

"Or would you rather be placed in it?" Zebadiah growled. "With your arms strapped under the belts, and the buckles where you can't reach them."

"Chief Pilot, do not intervene unless I call on you. Copilot, move!"

Pop turned in the air, almost kicking me in the face and unaware of it. He was speaking through sobs. "But I must apologize to Hilda! Can't you understand that?" But he was getting back into his seat.

"Jake, you'll be a worse damn' fool if you do."

"What? Zeb, you can't mean that."

"I do mean it. You apologized once today. Hypocrisy, as Sharpie realizes. Jake, your only chance of staying married is to shut up and soldier; your word is no longer worth a fiat dollar. But if you behave yourself for four or five years, she might forget it. Correction: forgive it. She'll never forget it. Establish a long record of good behavior and she might allow you some minor faults. But don't ever hint that she is not as competent as any man. Sure, she'd be picked last for a tug-o'-war team, and she has to stand on a stool to reach a high shelf-does that affect her brain? Hell's bells, if size mattered, I would be the supergenius around here-not you. Or perhaps you think being able to grow a beard confers wisdom? Jake, leave bad enough alone! Mess with it, you'll make it worse."

Time for a diversion: Pop must not be given a chance to answer. If Pop started defending himself, he would wind up self-righteous. The ability of the male mind to rationalize its deeds-and misdeeds-cannot be measured.

(And some female minds. But we females have more wild animal in us; mostly we don't feel any need to justify ourselves. We just do it, whatever it is, because we want to. Is there ever any other reason?)

"Gentlemen," I added, close on Zebadiah's last remark before Pop could attempt rebuttal, "speaking of beards, you each have a three-day growth. If we are about to ask sanctuary, shouldn't we be neat? I'm going to comb my hair and dig the dirt out from under my nails, and-Glory be!-I've got one spandy-clean jump suit. In light green, Zebadiah; matches your pilot suits. Got a clean one, dear?"

"I believe so."

"I know so; I packed it when Aunt Hilda and I rearranged inventory. Pop, your light green jump suit is clean. That one you are wearing has wrinkles in the wrinkles and

a big soup spot. We three will look as if we were in uniform. Aunt Hilda won't but the captain-and-owner of a yacht doesn't dress like her crew."

"Owner'?" said Pop.

"Owner," Zebadiah said firmly. "We pooled our resources. Sharpie is captain; she'll stand as owner for all of us. Simpler."

"She cautioned us not to tell lies, Zeb." (Pop sounded normal-his usual argumentative self.)

"No lie. But if she finds it necessary to lie for us, we back her up. Come on, Jake, let's put on our squeakin' shoes; the Captain might decide to land any orbit. How long are these orbits, Deety?"

"One hundred minutes, plus a bit. But Gay could ground us from the far side in five minutes if the Captain asked for it."

"So let's get shipshape and Bristol style. Deety, will you keep an eye on the board while Jake and I shave?"

Pop said, "I'm sorry but I can't shave until the Captain joins us. My gear is aft."

"Jake, use mine. Glove compartment. Remington okay?" My husband added, "You first; I want to read the news."

"The 'news'?"

"Smart Girl has been sampling all frequencies, AM and FM, twice a second. If there is pattern, she copies."

"But Deet- The Astrogator switched off the autopilot's ears."

"Jake, you just flunked Physics One-Oh-One. Deety told S.G. to shut off audio. I had in mind the electromagnetic spectrum. You've heard of it?"

Pop chuckled. "Touché! That makes us even for the one you pulled while we were calibrating."

(I heaved a sigh of relief. I had not been trying to save Pop's marriage- that's his problem. Even my own marriage was secondary; I was trying to save the team, and so was Zebadiah. We were two marriages and that is important- but most important we were a survival team and either we worked together smoothly or none would live through it.)

While Pop shaved and Zebadiah read the news, I cleaned my nails. If I clean them before each meal and again at bedtime, they are dirty only in between- dirt likes me. Mama Jane told me that centuries ago, while ouching my hair for school-not a criticism; a statement of fact.

The men swapped headset for shaver and I combed my hair and pinned it into place-no longer an "ouch" job as I keep it short, ringlets rather than curls. Men like it long-but caring for long hair is a career in itself, and I've been pushed for time since I was twelve.

Zebadiah stopped to feel his chin-so I deduced as the buzzing stopped. I asked, "What did Smart Girl have to say?"

"Not much. Le'me finish this. BBC Third Program mostly."

"From London?" He had resumed shaving and couldn't hear me.

Zebadiah finished shaving and passed his shaver to Pop, who stowed it, then took off the headset and handed it back. Zebadiah racked and secured it. I was about to ask for it, when I heard Aunt Hilda's sweet voice:

"Hello, everyone! What did I miss?"

"Halley's Comet."

"Halley's- Zebbie, you're a tease. Jacob- Oh! You shaved! How very nice! Hold still, my darling; you're going to be kissed, ready or not."

A kiss in free fall is interesting to watch when one participant is safetybelted and the other half is floating free. Hilda held Pop's cheeks, he had her head in his hands, and Aunt Hilda drifted like a flag in a breeze. She was dressed but barefooted; I was intrigued when she curled her toes, hard. Was Pop that good?-my cubical father, so I had thought until recently. Did Jane teach him? Or- Shut up, Deety, you're a voyeuse with a nasty curiosity.

They broke and Hilda floated between the pilot seats, a hand on each, and looked at the board. My husband said-to her, not to me-"Don't I get a kiss? It was my razor."

Aunt Hilda hesitated. Pop said, "Kiss him, beloved, or he'll sulk." So she did. It occurs to me that Aunt Hilda may have taught Zebadiah and that Mama Jane and Aunt Hilda may have been trained by the same coach before Pop came along-if so, who was my Unknown Benefactor?

"Not a whole lot," Zebadiah was saying. "Mostly tapes from BBC. Five minutes of news from Windsor City-which may be the city we bingoed-as exciting as local news from any town you've never been in. Chatter in Russian. The Smart Girl saved that for you."

"I'll listen to it. But I must learn something. I was tempery a while ago, but a nap fixed me up and now I am filled with sweetness and light. I must have a report from each of you. We all have had cumulative fatigue. It is now bedtime at Termite Terrace but about lunchtime in Windsor City if that is its name. We can go back to our stream or we can tackle the British. I am not taking a vote; I shall decide and I have a way to take care of anyone who is tired. But I insist on honest data. Deety?"

"Captain Auntie, sleep is never my problem."

"Zebbie?"

"I was a zombie. Until you recharged me. Now I'm rarin' to go!"

She mussed his hair. "Zebbie, quit teasing."

"Captain, on an earlier occasion I told you the facts: My alert time exceeds twenty-four hours. Forty-eight if I must. If that kiss did not stimulate you as much as it did me, let's try it again and find out what went wrong."

Aunt Hilda turned away abruptly. "Jacob dear, how do you feel? With the time difference this may be equivalent to staying up all night, possibly under great tension,"

"Hilda my love, were we to return to our streamside, I would not sleep, knowing that this contact was coming. A night without sleep does not strain me."

"Pop's not exaggerating, Captain Auntie. I get my night-owl capacity from Pop."

"Very well. But I have a method of taking care of anyone who may have exaggerated. I can leave one person aboard as guard."

"Captain, this wagon does not need a guard."

"Chief Pilot, I was offering sleep-under pretext of guarding. Car locked and sleep where Ijust napped-outsiders would not know. Anyone? Speak up."

(I wouldn't have missed it for a Persian kitten! Did Hilda expect anyone to stay behind? I don't think so.)

"Very well. No firearms. Gentlemen, please hide your pistols and belts with the guns, aft. Zebbie, is there a way to lock that door in addition to dogging it?"

"Sure. Tell Gay. May I ask why? No one can break into the cabin without damaging the old girl so much that she won't lift."

"Conceded, Zebbie. But I will be bringing visitors into this space. If anyone is brash enough to ask to be shown beyond the bulkhead door, I shall tell him that is my private compartment." Aunt Hilda grinned wickedly. "If he persists, I'll freeze his ears. What's the program for locking and unlocking it?"

'Very complicated. Tell her, 'Lock the bulkhead door,' or 'Unlock the bulkhead door.' Concealed solenoids. If the car is cold, the bolts drop back."

"Goodness, you were thorough."

"No, Ma'am. The Aussies were. But it turns out to be convenient for things we wouldn't like to lose. Cap'n, I don't trust banks any more than I trust governments, so I carry my safety deposit vault with me."

"If you cut the trickle charge, it unlocks?" Pop asked.

"Jake, I knew you would spot that. An accumulator across the solenoids, floating. Shut down the car and the solenoids work for another month. . . unless you open a switch in an odd location. Anyone want to know where it is?-what you don't know, you can't tell."

He got no takers. Instead I said, "Captain, is a fléchette gun a 'firearm'?"

"Hmm- Will it fit into a zippered compartment in your purse?"

"It fits into a concealed zipper compartment."

"Keep it with you. No swords, gentlemen, as well as no firearms; we are a civilian party. One thing we should carry: those miniature walky-talkies, Deety and I in our purses, you gentlemen in your pockets. If they are noticed, tell the truth: a means of keeping our party in touch."

Aunt Hilda suddenly looked stern. "This next order should be in writing. Please understand that there are no exceptions, no special circumstances, no variations left to individual judgment. I require Roger-Wilcoes from each of you or we do not ground. This party does not separate. Not for thirty seconds. Not for ten seconds. Not at all."

"Will the Captain entertain a question?"

"Certainly, Zebbie."

"Washrooms. Restrooms. Bathrooms. If these British behave like their analogs, such facilities are segregated."

"Zebbie, all I can say to that is that I will look for a way to cope. But we stay together until I-until I, the Captain-decide that it is safe to ease the rule. In the meantime- We should use that unpopular honey bucket before we ground. . . then, if necessary, return to the car, together, to use it later. That's not subject to discussion. Once we are on the ground, you three, acting unanimously, can hold a bloodless mutiny over this order or any"-Aunt Hilda looked directly at her husband-"and I will let myself be kicked out without a word. . . out of office as captain, out of the car, out of the party. Remain here, on Mars-ten, with the British if they will have me. No more questions. No further discussion by me or among yourselves. Astrogator."

"Roger Wilco!"

"Thank you. Please state it in the long form."

"I understand the Captain's order and will comply exactly with no mental reservations."

"Chief Pilot."

"I understand-"

"Short form. Deety defined it."

"Roger Wilco, Captain!"

Aunt Hilda turned in the air toward Pop-and I held my breath, three endless seconds. "Jacob?"

"Roger Wilco, Captain."

"Very well. We will ground as soon as we get clearance but will not ask for clearance until I've heard the news and translated that Russian." Whereupon I told her that we all intended to put on our best bib and tucker; the time should come out about right-and could we be relieved one by one? As I intended to use that darned thunder mug-when you must, you must.

Aunt Hilda frowned slightly. "I do wish that I had a jump suit in my size. This outfit-"

"Aunt Hilda! Your crew is in uniform but you are wearing the latest Hollywood style. That model was created by Ferrara himself and he charged you more than you paid for that mink cape. You are the Captain and dress to please yourself. I tell you three times!"

Aunt Hilda smiled. "Should I acknowledge in paraphrase?"

"By all means."

"Deety, I require my crew to wear uniforms. But I dress to suit myself, and when I saw what the world-famous couturier Mario Ferrara was doing to change the trend in women's sports clothes, I sent for him and worked him silly until he got just what I wanted. Including repeated washings of the trousers to give them that not-quite-new look so favored by the smart set for yachting. When you come back will you fetch your little shoes-my Keds- and the hair ribbon you gave me? They are part of Signor Ferrara's creation."

"Aunt Hilda honey, you make it sound true!"

"It is true. You told me three times. I don't even regret the thousand newdollar bonus I gave him. That man is a genius! Get along dear-git. Chief Pilot, you have the conn; I want the earphones."

I was back in ten minutes with jump suits for self and Pop and clean pilot suit for my husband.

I sailed their clothes toward Pop and Zebadiah. Aunt Hilda was handing phones back to Zebadiah; his suit caught both of them. "Wups, sorry but not very. What do the Russians say?"

"We're baddies," said my husband.

"We are? The suit I took off is loose back aft. Wrap it around your pistol and belt and shove them under the sleeping bag-pretty please?"

"With sugar on it?"

"At today's prices? Yes. Beat it. Cap'n, what sort of baddies?"

"Spies and agents-saboteurs and other things and indemnity is demanded in the name of the Tsar and the surrender of our persons, all twelve of us-"

"Twelve?"

"So they claim. -for trial before they hang us. Or else. The 'or-else' amounts to a threat of war."

"Heavens! Are we going to ground?"

"Yes. The British comment was that a source close to the Governor reports that the Russians have made another of their periodic claims of territorial violation and espionage and the note was routinely rejected. I intend to be cautious. We won't leave the car unless I am convinced that we will receive decent treatment."

Shortly we were again doing one-second jumps in a circle around Windsor City. Had Pop not pulled another blunder in handling Aunt Hilda we would have been on the ground two hours ago. "Blunder," rather than "insult"-but I'm not Hilda, I'm Deety. My ego is not easily bruised. Before I married, if a man patronized me and it mattered, I used to invite him to go skeet shooting. Even if he beat me (happened once), he never patronized me again.

If it's an unsocial encounter- I'm big, I'm strong, I fight dirty. A male has to be bigger, stronger, and just as well trained or I can take him. Haven't had to use the fléchette gun yet. But twice I've broken arms and once I kicked a mugger in the crotch and said he fainted.

Zebadiah was having trouble with traffic control. "-request permission to ground. This is private yacht Gay Deceiver, U.S. registry, Chief Pilot Carter speaking. All we want is clearance to ground. You're behaving like those youknow-what-I-mean Russians. I didn't expect this from Englishmen."

Wow, now! Where are you? You sound close by. . . but we can't get a fix on you."

"We are circling your city at a height above ground of five kilometers."

"How much is that in feet? Or miles?"

I touched my husband's shoulder. "Tell him sixteen thousand feet."

"Sixteen thousand feet."

'What bearing?"

"We're circling."

"Yes, but- See Imperial House at City Center? What bearing?"

"We are much too fast for you to take a bearing. While you speak one sentence, we've gone around twice."

"Oh, tell that to the Jollies; old sailors will never believe it."

Aunt Hilda tapped Zebadiah; he passed the microphone to her. Aunt Hilda said crisply, "This is Captain Burroughs, commanding. State your name, rating, and organization number."

I heard a groan, then silence. Twenty-three seconds later another voice came on. "This is the officer of the watch, Leftenant Bean. Is there a spot of trouble?"

"No, Lieutenant, merely stupidity. My chief pilot has been trying for fifteen minutes for clearance to ground. Is this a closed port? We were not told so by your embassy on Earth. We were warned that the Russians discouraged visitors, and indeed, they tried to shoot us out of the sky. What is your full name and your regiment, Lieutenant; I intend to make a formal report when I return home,"

'Please, Madam! This is Leftenant Brian Bean, Devonshire Royal Fusiliers. May I ask to whom I am speaking?"

"Very well. I will speak slowly; please record. I am Captain Hilda Burroughs, commanding space yacht Gay Deceiver, out of Snug Harbor in the Americas."

"Captain, let me get this clear. Are you commanding both a spaceship in orbit and a landing craft from your ship? Either way, please let me have the elements of your ship's

orbit for my log, and tell me the present position of your landing craft. Then I can assign you a berth to ground."

"Do I have your word as a British officer and gentleman that you will not shoot us out of the sky as those Russian vandals attempted to do?"

'Madam-Captain-you have my word."

"Gay Bounce. We are now approximately forty-nine thousand feet above your city."

"But- We understood you to say 'Sixteen thousand'?"

"That was five minutes ago; this craft is fast." Aunt Hilda released the button. "Deety, get rid of the special 'Tramp' program."

I told Gay to return "Tramp" to her perms and to wipe the temporary mods. "Done."

Aunt Hilda pressed the mike button. "Do you see us now?" She released the button. "Deety, I want us over that big building-'Imperial House,' probably-in one transition. Can you tell Zebbie and Jacob what it takes?"

I looked it over. We should be at the edge of the city-but were we? Get a range and triangulate? No time! Guess at the answer, double it and divide by two. Arc tan four tenths. "Pop, can you transit twenty-one degrees from vertical toward city hail?"

"Twenty-one degrees. Sixty-nine degrees of dive toward the big barn in the park, relative bearing broad on the port bow, approx-set! One unit transition, ten klicks-set!"

'7 can see you now, I do believe," came Mr. Bean's voice. 'Barely."

"We'll come lower." Aunt Hilda chopped off the lieutenant. "Zebbie, put her into glide as soon as you execute. Deety, watch H-above-G and scram if necessary-don't wait to be told. Zebbie, execute at will."

"Jake, execute!"-and we were down so fast I got goose bumps. . . especially as Zebadiah then dived vertically to gain glide speed and that's mushy, slow, slow, on Mars.

But soon Aunt Hilda was saying tranquilly, "We are over Imperial House. You see us?"

'Yes, yes! My word! Bloody!"

"Leftenant, watch your language!" Aunt Hilda winked at me and snickered silently.

"Madam, I apologize."

"Captain,' if you please," she said, smiling while her voice dripped icicles.

"Captain, I apologize."

"Accepted. Where am I to ground?"

'Ah, figured from Imperial House, there is a landing field due south of it twelve miles. I will tell them to expect you."

Hilda let up on the button, said, "Gay Bounce" and racked the microphone. "How unfortunate that the lieutenant's radio cut out before he could tell us how far away that field is. Or was it our radio?"

I said, "Captain, you know durn well both radios worked okay."

"Mercy, I must be getting old. Was Smart Girl in recording mode?"

I said, "She always is, during maneuvers. She wipes it in a ten-hour cycle."

"Then my bad hearing doesn't matter. Please ask her to repeat the lieutenant's last speech." I did, and Gay did. "Deety, can you have her wipe it right after the word 'it'?"

"Auntie, you ain't goin' to Heaven." I had Gay wipe twelve-miles-I-will-tellthem-to-expect-you. "But you wouldn't know anybody there."

"Probably not, dear. Zebbie, how does one have Smart Girl ground herself without juice?"

"Deety had better go over it again. Unless-~Jake, will you explain it?"

"It's Deety's caper. I could use another drill."

"All right," I agreed. "Switch off Gay's ears, Zebadiah. Gay can make any transition exactly if she knows precisely where her target is. Even a jump of less than one minimum. I found that out the day we got here when we were testing remote control. The rest came from perfecting the 'Bug-Out' routine by having her pause and sweep the target and if it's obstructed, she bounces. Aunt Hilda, if you intend to ground, we had better not be much under five klicks or we'll have to bounce and start over."

"I've got air bite, Captain. I'll stretch it."

"Thanks, Zebbie. Deety, you do it. Let us all learn."

"Okay. I need both pilots. You haven't said where to ground."

"Wasn't that clear? Due south of Imperial House. I think it is a parade ground. Nothing on it but a flagpole on the north side. Put her down in front of the building but miss that flagpole."

"It would take override to hit that flagpole. Zebadiah, gunsight the spot you want to park on. I'll talk to Gay. Then put her in level flight in the orientation you want, and give 'Execute.' Pop, Gay should pause at exactly one-half klick, to see that her parking spot is clear and to recheck distance. That stop won't be long-a fraction of a second-but, if she fails to make it, try to bounce. Probably you can't; if I missed in debugging, maybe we'll all be radioactive. Been nice knowing you all. Okay, switch on her ears." My husband did so.

"Gay Deceiver."

"Hello, Deety. I've missed you."

"Unpowered autogrounding mode."

"Gonna ground by myself without a drop of juice! Where?"

"New target. Code word: 'Parade Ground.' Point of aim and range-finder method."

"Show him to me. I can lick him!"

I touched my husband's shoulder. "Let her know."

"On target, Gay. Steady on target."

"Range three-seven-two-nine, three-seven-naughty-nought, three-five-ninenine-got him, Deety!"

Zebadiah leveled us out, headed us north. "Execute!"

We were parked facing the big front steps. That flagpole was ten meters from Gay's nose.

Pop said, "Deety, I could see the check stop but it was too short for me to act. But your programs always work."

"Until the day one blows up. Aunt Hilda, what do we do now?"

"We wait."

XXVI

The Keys to the City

Jake:

I do not believe that I am wrong in insisting that Zeb should lead us. I am forced to conclude that being right has little to do with holding a woman's affections. I never intend to hurt Hilda's feelings. I now plan to make a career of keeping my mouth shut.

But I do not think it was diplomatic to spat with that radio operator or proper to be-well, yes, rude-rude to his officer. As for grounding twelve
miles, nineteen klicks, from where we were told to-is this the behavior of guests!

But we did ground where we should not have. I started to open the door to get out, then help Hilda to disembark, when I heard her say: "We wait."

Hilda added, "Leave doors locked and belts fastened. Gay Deceiver, remain in maneuvering mode. Lock the bulkhead door."

"Hot and rarin' to go, Hilda. Bulkhead door locked."

"You're a smart girl, Gay."

"That makes two of us, Hilda."

"Chief Pilot, in this mode does she record outside as well as inside?"

"She does if I switch on outside speakers and mikes, Captain."

"Please do."

"What volume, Captain? Outside, and inside."

"I didn't know they were separate. Straight-line gain?"

"Logarithmic, Ma'am. From a gnat's whisper to a small earthquake."

"I would like outside pickup to amplify enough that we won't miss anything. What I send out should be a bit forceful."

"Captain, I'll give you a decibel advantage. You want it louder, squeeze my shoulder. I won't turn it higher than seven-unless you want to use it as a weapon. But to talk privately inside I have to keep switching off, then on. As with the Russians-remember?"

"Oh, yes. All hands, I will speak for all of us. If anyone needs to speak to me, attract Zebbie's attention-"

"Slap my shoulder."

"-and he'll give us privacy and confirm it with thumbs-up. Don't ask for it unnecessarily."

"Hilda, why these complex arrangements? Here comes someone now; it would be polite to go meet them. In any case, we can open the door to talk- these are not Russians." I simply could not bear to watch my darling handle this delicate matter with such-well, rudeness!

Was I thanked? "Copilot, pipe down. All hands, we may go upstairs any instant; report readiness for space. Astrogator."

"Ready, Captain."

"Chief Pilot."

"Still ready. Outside audio hot."

"Copilot."

"I'm checking this door seal again. Earlier I started to open it. There! Ready for space. Hilda, I don't think-"

"Correct! But the Chief Pilot did think, and gave me thumbs-up as soon as you started to talk. Pipe down! Chief Pilot, cut in our sender as soon as one of them speaks. Copilot, call me 'Captain' as the others do. Protocol applies; I'll explain family relationships later, when appropriate."

I resolved not to open my mouth for any reason, feeling quite disgruntled. Disgruntled? I found myself giving serious thought to whether or not Hilda's temporary and inappropriate authority could do permanent harm to her personality.

But the top of my mind was observing the Lord High Executioner, approaching us flanked by two henchmen. He was wearing a uniform more suited to musical comedy than to the field. Fierce moustaches, sunburn-pink complexion, service ribbons, and a swagger cane completed the effect.

His henchmen were younger, not so fancy, fewer ribbons, and appeared to be sergeants. I could not read the officer's shoulder straps. A crown, I thought, but was there a pip beside it?

He strode toward us and was ten meters from my door when Hilda said firmly, "That's close enough. Please tell the Governor General that Captain Burroughs has grounded as directed and awaits his pleasure."

He stopped briefly and bellowed, "You were not directed to land here! You're supposed to be at the field! Customs, immigration, health inspection, visas, tourist cards, intelligence-"

I saw Hilda squeeze Zeb's shoulder. 'Quiet!" Her voice came more loudly from outside than from her despite Gay's soundproofing. Zeb reduced gain as she continued, "My good man, send one of your ratings to the Governor General to deliver my message. While we wait, state your name, rank, and regiment; I shall make formal report of your behavior."

"Preeeposterous!" -,

"Behavior 'unbecoming an officer and a gentleman," Hilda said with gentle sweetness, "since you insist. While you won't tell your name, like a naughty boy, others know it. The Paymaster. The Governor General. Others." She squeezed Zeb's shoulder. "Deliver my message!"

"I'm Colonel Brumby, Chief Constable of the Imperial Household, and not your messenger boy! Open up! I'm going to parade you before the Governor General-under arrest!"

Hilda said quietly to Zeb, "Seven"-allowed the Chief Constable to stride two more steps before saying, "STOP!"

My ears hurt.

All three stopped. The old fool braced himself and started again. Hilda must have poked Zeb; he answered with thumbs-up. "Back to normal volume but be ready with that earthquake."

He nodded; she went on, "Leftenant Colonel, is it not? I don't see that extra pip. Leftenant Colonel, I warn you for your own safety not to come closer."

He did not answer, kept coming, took his cane from under his arm. His sergeants followed-slowly, at a respectful distance. Hilda let him reach my door-I could see a network of broken veins on his nose-and for the second time in two days someone started to pound on Gay's door. He raised his cane- "Stop that!"

I was deafened. The Chief Constable was missing. The sergeants were a long way back. They stopped running, turned and faced us. I looked down through my door's port, saw a pair of legs and a swagger cane-inferred a torso.

I turned my head, saw that Zeb had his thumb up. "Captain," he said, "I disobeyed you."

"How, Zebbie?"

"I gave him an eight; I wasn't sure his heart could take a ten. He looks like an old bottle-a-day man."

"An eight may have been too much," I commented. "He's on the ground. Dead, maybe."

"Oh, I hope not!"

"Unlikely, Captain," Zeb told her. "Shall I tell his noncoms to come get him?"

"I'll tell them, Zebbie. Normal level." Hilda waited until he signalled, then called out, "Sergeants! Colonel Brumby needs help. There will be no more loud noises."

The sergeants hesitated, then hurried. Shortly they were dragging him away. Presently he came to life, fought them off-sent one chasing back for his cane. The man caught my eye-and winked. I concluded that Brumby was not popular.

There was now a man standing on the entrance stairs. (Perhaps there had been people nearby earlier-but not after the noise started.) Imperial House had its ground floor with no doors on the front side. The first floor was the main floor and was reached by wide, sweeping stairs. The man near the top was small, dapper, dressed in mufti. As Brumby reached him, Brumby saluted, stopped, and they talked. Brumby's ramrod stiffness spoke for itself.

Shortly the smaller man trotted down the long steps, moved quickly toward us, stopped about thirty meters away, and called out, "In the landing craft! Is it safe to come closer?"

"Certainly," agreed Hilda.

"Thank you, Ma'am." He approached, talking as he walked. "I dare say we should introduce ourselves. I'm Lieutenant General Smythe-Carstairs, the Governor hereabouts. I take it you are Captain Burroughs?"

"That is correct, Excellency."

"Thank you. Although I can't tell, really, to whom I am speaking. Awkward, is it not, chatting via an announcing system? An open door would be pleasanter, don't you think? More friendly."

"You are right, Excellency. But the Russians gave us so unpleasant, so dangerous, a reception that I am nervous."

"Those bounders. They have been making a bit of fuss over you, on the wireless. That was how I recognized your craft-smaller than they claimed but an accurate description-for a Russian. But surely you don't think that we British wear our shirt tails out? You will receive decent treatment here."

"That is pleasing to hear, Excellency. I was tempted to leave. That policeman chap is most unpleasant."

"Sorry about that. Sheer mischance that he was first to greet you. Important as this colony is to the Empire, no doubt you have heard that being posted to it is not welcome to some. Not my own case, I asked for it. But some ranks and ratings. Now let's have that door open, shall we? I dislike to insist but I am in charge here."

Hilda looked thoughtful. "Governor General, I can either open the doors or leave. I prefer to stay. But the shocking treatment by the Russians followed by the totally unexpected behavior of your chief constable causes me to worry. I need a guarantee that our party will be permitted to remain together at all times, and a written safe-conduct for us, signed and sealed by you on behalf of H.I.M."

"My dear Captain, a captain does not bargain with one who stands in place of and holds the authority of His Imperial Majesty. As a man, and you being a delightful lady, I would be happy to bargain with you endlessly just for the pleasure of your company. But I can't."

"I was not bargaining, Excellency; I was hoping for a boon. Since you will not grant it, I must leave at once."

He shook his head. "I cannot permit you to leave as yet."

"Gay Bounce. Zebbie, will you try to reach that nice Mr. Bean?"

Zeb had him shortly. 'Leftenant Bean heah."

"Captain Burroughs, Leftenant. Our radio chopped off while you were talking. No harm done; the important part got through. We grounded where you told us to, due south of Imperial House."

"So that's what happened? I must admit to feeling relieved."

"Is your post of duty in Imperial House?"

"Yes, Ma'am. On it, rather. We have a small housing on the roof"

"Good. I have a message for the Governor General. Will you record?"

"Oh, certainly."

"This is Hilda Burroughs speaking, Master of Spacecraft Gay Deceiver out of Snug Harbor. I am sorry that I had to leave without saying good-bye. But your last statement forced me to take measures to protect my craft and crew." My darling Hilda cut the mike. "Zebbie, when you have air, glide away from the city." She continued, "In a small way my responsibilities parallel yours; I cannot bargain concerning the safety of my crew and my craft. I hope that you will reconsider, as I have no stomach for dealing with the Russians-even though they have more to offer us in exchange. I still ask for safe-conduct but now must ask for a still third item in such a document: that all four of us be allowed to leave at will. You have my name. My second-in-command is Doctor D. T. Burroughs Carter, my chief pilot is Doctor Z. J. Carter, my copilot is Doctor Jacob Burroughs. You will have noticed surnames. Doctor Jacob is my husband; the other two are our daughter and her husband. I am Doctor Hilda Corners but I am much prouder of being Mrs. Jacob Burroughs-although at present I must use 'Captain Hilda Burroughs' since I am commanding. Sir, while dictating this I have made a decision. I will not make a second attempt to negotiate with Russians. We will wait thirty minutes in the warm hope of hearing from you.. . then return to Earth, report to our own government, send a detailed complaint to the Tsar of All the Russias, and make a formal report of our attempt here to His Imperial Majesty. Signed Respectfully yours, H. C. Burroughs, Commanding. Leftenant, what are the full names and titles of the Governor General?"

"Ah, His Excellency Lieutenant General the Right Honourable Herbert Evelyn James Smythe-Carstairs, KG., V.C., C.B.E., Governor General of the Imperial Realms Beyond the Sky."

"Preface it formally, please, and I will wait until oh-nine-hundred hours Greenwich time or thirty-six minutes from now. Mark!"

"I will add the heading, Captain, and deliver it by hand."

After Hilda signed off she said, "I'm going to try to sleep thirty of those thirty-six minutes. Can anyone think of a program that will let all of us nap? This contact is more tiring than I had expected. Jacob, Deety, Zeb-don't all speak at once."

"I can, my dear," I answered.

"Yes, Jacob?"

"Gay Termite."

To my mild surprise it was night at our creek bank. To my pleasure my first attempt to maneuver by voice was smoothly successful. My daughter's ingenuity in constructing voiced programs had left me little to do. While I did not resent it (I'm proud of Deety), nevertheless while sitting as copilot, I
sometimes wondered whether anyone remembered that it was my brainchild that moved this chariot. Ah, vanity!

To my greater pleasure Hilda clapped her hands and looked delighted. "Jacob! How clever of you! How stupid of me! All right, everyone off duty for a half hour 'cept the rule about always two and always a rifle. Gay, alert us in thirty minutes. And please unlock the bulkhead door."

"Aunt Hillbilly, are you going to sleep back there?"

"I had thought of stretching out and inviting Jacob to join me. But the space belongs to you and Zebbie; I was thoughtless."

"We aren't going to sleep. But we had better drag those rifles out of that sack or you won't sleep. I want to empty the oubliette and stow that pesky plastic potty under the cushion of my seat. Durned if I'll use it when I have the whole outdoors at hand."

"Most certainly-but stay inside Gay's lights-and do please remind me before we leave. Deety, I've so much on my mind that I forget housekeeping details."

"Hillbilly, you're doing swell. I'll handle housekeeping; you worry about the big picture."

Hilda cuddled up to me in the after compartment and my nerves began to relax. Would the Governor General relent? Where would we go next? We had a myriad universes to choose from, a myriad myriad planets-but only one was home and we didn't dare go there. What about juice for Zeb's car and a thousand other things? Perhaps we should risk Earth-without-a-J. What about the time bomb, ticking away in my darling's belly?

Hilda sniffed into my shoulder. I patted her head. "Relax, dearest."

"I can't. Jacob, I don't like this job. I snap at you, you argue with me, we both get upset. It's not good for us-we never behaved this way at Snug Harbor."

"Then give it up."

"I'm going to. After I finish the job I started. Jacob, when we lift from this planet, you will be captain."

"Oh, no! Zeb." (Hilda my only love, you should turn it over to him now.)

"Zebbie won't take it. It's you or Deety, Jacob. If Deety is our next captain, you will back-seat drive even more than you have with me. No, Jacob, you must be captain before Deety is, so that you will understand what she is up against."

I felt that I had been scolded enough. I started to tell Hilda when that pejorative epithet played back in my mind: "-back-seat drive-"

I trust that I am honest with myself. I know that I am not very sociable and I expect to go on being so; a man capable of creative work has no time to spare for fools who would like to visit. But a "back-seat driver"?

Some facts: Jane learned to drive before I did-her father's duo. Our first car, a roadable, coincided with her pregnancy; I got instruction so that I could drive for Jane. She resumed driving - after Deety was born but when both of us were in the car, I always drove. She drove with me as passenger once or twice before the custom became established-but she never complained that I had been back-seat driving.

But Jane never complained.

Deety laid it on the line. I don't know who taught Deety to drive but I recall that she was driving, on roads as well as in the air, when she was twelve or thirteen. She had no occasion to drive for me until Jane's illness. There was a time after we lost Jane that Deety often drove for me. After a while we alternated. Then came a day when she was driving and I pointed out that her H-above-G was, oh, some figure less than a thousand meters, with a town ahead.

She said, "Thanks, Pop"-and grounded at that town, an unplanned stop. She switched off, got out, walked around and said, "Shove over, Pop. From now on, I'll enjoy the scenery while you herd us through the sky."

I didn't shove over, so Deety got into the back seat. Deety gets her stubbornness from both parents. Jane's was covered with marshmallow that concealed chrome steel; mine is covered with a coat of sullen anger if frustrated. But Deety's stubbornness isn't concealed. She has a sweet disposition but Torquemada could not force Deety to do that which she decided against.

For four hours we ignored each other. Then I turned around (intending to start an argument, I suppose-I was in the mood for one)-and Deety was asleep, curled up in the back seat.

I wrote a note, stuck it to the wind screen, left the keys, got quietly out, made sure all doors were locked, hired another car and drove home-by air; I was too angry to risk roading.

Instead of going straight home I went to the Commons to eat, and found Deety already eating. So I took my tray and joined her. She looked up, smiled, and greeted me: "Hello, Pop! How nice we ran into each other!" She opened her purse. "Here are your keys."

I took them. "Where is our car?"

"Your car, Pop. Where you left it."

"I left it?"

"You had the keys; you were in the front seat; you hold title. You left a passenger asleep in the back seat. Good thing she's over eighteen, isn't it?" She added, "There is an Opel duo I have my eye on. Tried it once; it's in good shape."

"We don't need two cars!"

"A matter of taste. Yours. And mine."

"We can't afford two cars."

"How would you know, Pop? I handle the money."

She did not buy the Opel. But she never again drove when we both were in our car.

Three data are not a statistical universe. But it appears that the three women I have loved most all consider me to be a back-seat driver. Jane never said so. . . but I realize today that she agreed with Deety andHilda.

I don't consider myself to be a back-seat driver! I don't yell "Look out!" or "Watch what you're doing!" But four eyes are better than two: Should not a passenger offer, simply as data, something the driver may not have seen? Criticism? Constructive criticism only and most sparingly and only to close friends

But I try to be self-honest; my opinion is not important in this. I must convince Hilda and Deety, by deeds, not words. Long habit is not changed by mere good resolution; I must keep the matter at the top of my mind.

There was banging at the bulkhead; I realized that I had been asleep. The door opened a crack. "Lift in five minutes."

"Okay, Deety," Hilda answered. "Nice nap, beloved?"

"Yes indeed. Did you?"

As we crawled out, Deety said, "Starboard door is open; Pop's rifle is leaning against it, locked. Captain, you asked to be reminded. Shall I take the conn?"

"Yes, thank you."

We lost no time as Deety used two preprograms: Bingo Windsor, plus Gay Bounce. Zeb had the communication watch officer almost at once. "-very well. I will see if the Captain will take the message. No over. Hold."

Zeb looked around, ostentatiously counted ten seconds, then pointed at Hilda.

"Captain Burroughs speaking. Leftenant Bean?"

"Yes, yes! Oh, my word, I've been trying to reach you the past twenty minutes."

"It is still a few seconds short of the time I gave you."

'Nevertheless I am enormously relieved to hear your voice, Captain. I have a message from the Governor General. Are you ready to record?"

Zeb nodded; Hilda answered Yes; the lieutenant continued: "From the Governor General to H. C. Burroughs, Master Gay Deceiver.' Hurry home, the children are crying. We all miss you. The fatted calf is turning on the spit. That document is signed and sealed, including the additional clause. Signed:
"Bertie" Captain, that is the Governor's way of signing a message to an intimate friend. A signal honor, if I may say so."

"Gracious of him. Please tell the Governor General that I am ready to ground and will do so as soon as you tell me that the spot in which we were parked-the exact spot-is free of any obstruction whatever."

Bean was back in about three minutes saying that our spot was clear and would be kept so. Hilda nodded to Deety, who said, "Gay Parade Ground."

I had a flash of buildings fairly close, then we were back in the sky. Hilda snapped, "Chief Pilot, get Leftenant Bean!"

Then-"Mr. Bean! Our spot was not clear."

"It is now, Captain; I have just come from the parapet. The Governor's poodle got loose and ran out. The Governor chased him and brought him back. Could that have been it?"

"It decidedly was it. You may tell the Governor-privately-that never in battle has he been so close to death. Astrogator, take her down!"

"GayParadeGround!"

Bean must have heard the gasp, then cheers, while Hilda's words were still echoing in his radio shack. We were exactly as before, save that the wide, showy steps to the King-Emperor's residence on Mars were jammed with people: officers, soldiers, civil servants with that slightly dusty look, women with children, and a few dogs, all under restraint.

I didn't spot the Right Honourable "Bertie" until he moved toward us. He was no longer in mufti but in what I could call "service dress" or "undress"-
not a dress uniform-but dressy. Ribbons, piping, wound stripes, etc.-sword when appropriate. Since he was not wearing sword I interpreted our status as "honored guests" rather than "official visitors"-he was ready to jump either way.

He had his wife on his arm-another smart move, our captain being female. His aide (?-left shoulder "chicken guts" but possibly a unit decoration) was with him, too-no one else. The crowd stayed back.

Hilda said, "Chief Pilot-" then pointed to the mikes, drew her finger across her throat. Zeb said, "Outside audio is cold, Cap'n."

"Thank you, Gay, lock the bulkhead door, open your doors."

I jumped down and handed Hilda out, offered her my arm, while Zeb was doing the same with Deety portside. We met, four abreast at Gay's nose, continued moving forward a few paces and halted facing the Governor's party as they halted. It looked rehearsed but we had not even discussed it. This placed our ladies between us, with my tiny darling standing tall, opposite the Governor.

The aide boomed, "His Excellency Governor General the Lieutenant General the Right Honourable Herbert Evelyn James Smythe-Carstairs and Lady Herbert Evelyn James!"

The Governor grinned. "Dreadful," he said quietly, "but worse with ruffles, flourishes, and the Viceroy's March-I spared you that." He raised his voice, did not shout but it projected-and saluted Hilda. "Captain Burroughs! We bid you welcome!"

Hilda bowed, returning the salute. "Excellency. . . Lady Herbert. . . thank you! We are happy to be here."

Lady Herbert smiled at being included, and bobbed about two centimeters- a minimum curtsy, I suppose, but can't swear to it, as she was swathed in one of those dreadful garden-party-formal things-big hat, long skirt, long gloves. Hilda answered with a smile and a minimum bow.

"Permit me to present my companions," Hilda continued. "My family and also my crew. On my left my astrogator and second-in-command, our daughter Doctor D. T. Burroughs Carter, and on her left is her husband our son-in-law, my chief pilot, Doctor Zebadiah John Carter, Captain U.S. Aerospace Reserve." Deety dropped a curtsy as her name was mentioned, a 6-cm job, with spine straight. Zeb acknowledged his name with a slight bow.

Hilda turned her head and shoulders toward me. "It gives me more pride than I can express," she sang, her eyes and mouth smiling, her whole being speaking such serene happiness that it made me choke up, "to present our copilot, my husband Doctor Jacob Jeremiah Burroughs, Colonel of Ordnance
A.U.S,"

The Governor stepped forward quickly and held out his hand. "DoctoF, we are honored!" His handshake was firm.

I returned it in kind, saying in a nonprojecting voice, "Hilda should not have done that to me. Off campus, I'm 'Mister' to strangers and 'Jake' to my friends."

"I'm Bertie, Jake," he answered in his intimate voice, "other than on oc casions when I can't avoid that string of goods wagons. Or I'll call you 'Doctor."

"You do and it's fifty lines." That made him laugh again.

"And I'm Betty, Jake," Lady Herbert said, in closing in. "Captain Burroughs, may I call you 'Hilda'?" (Was that a hiccup?)

"Call her 'Doctor," I suggested. "She told on the rest of us. How many doctorates do you hold, dear? Seven? Or eight?"

"After the first one, it no longer matters. Of course I'm 'Hilda,' Betty. But, Bertie, we have yet to meet the Brigadier."

I glanced at the tabs of the officer with the aiguillette and booming voice. Yes, A crown inboard and three pips- But when had Hilda learned British insignia? Many Americans can't read their own. I am ceasing to be surprised at how many facts can be stuffed into so small a space.

"Sorry. Friends, this is Brigadier Iver Hird-Jones. Squeaky finds things I lose and remembers things I forget."

"Ladies. Gentlemen. Charmed. Here is something you told me to remember, General." The Brigadier handed a sealed envelope to his boss.

"Ah, yes!" Smythe-Carstairs handed it to my wife. "The Keys to the City, Ma'am. Phrased as you specified, each of you nathed, and that third factor included. Signed by me for the Sovereign and carrying the Imperial seal."

"Your Excellency is most gracious," Hilda said formally, and turned toward Deety. "Astrogator."

"Aye, Captain." Deety placed it in her purse.

Our host looked surprised. "Jake, doesn't your wife have normal curiosity? She seems to have forgot my name, too."

Hilda protested, "I haven't forgotten your name, Bertie. It's an official matter; I treated it formally. I shall read it when I have leisure to open that envelope without damaging the flap seal. To you this is one of thousands of papers; to me it is a once-in-a-lifetime souvenir. If I sound impressed, it's because I am."

Lady Herbert said, "Don't flatter him, my deah." (Yes, she had had a couple.) "You'll turn his head, quite." She added, "Bertie, you're causing our guests to stand when we could be inside, sitting down."

"You're right, m'dear." Bertie looked longingly at Zeb's car.

Hilda played a trump. "Care to look inside, Bertie? Betty, you can sit down here; the captain's chair is comfortable. Will you do me the honor? Someday I'll tell my grandchildren that Lady Herbert sat in that very seat."

"What a charming thought!"

Hilda tried to catch my eye but I was a jump ahead of her, handing Lady Herbert in, making certain that she didn't miss the step, getting her turned around, making sure that she didn't sit down on belts. "If we were about to lift," I told her, while fastening the seat belt loosely (first, moving the buckle- she's Hilda's height but my thickness), "this safety belt would be fastened firmly."

"Oh, I wouldn't dare!"

"Gangway, Pop! Another customer." I got out of the way, and Deety installed Brigadier Hird-Jones in her seat. Deety said, "Pop, if you'll put the Governor in your seat, Zebadiah will take his own and give his two-hour lecture on the care and feeding of spacecraft, while you and I and Hilda hang in the doorways and correct his errors."

"I'm only up to chapter four," Zeb said defensively. "Jake, make her quit picking on me."

"You're her husband; I'm merely her father. Bertie, I must ask one thing. Don't touch anything. This car is not shut down; it is ready to go, instantly."

"I'll be careful, Jake. But we're leaving the ladies standing. The Captain herself! This is not right."

Deety said, "Bertie, I don't want to sit down. This trip doesn't give me nearly the exercise I need."

"But I can't permit Captain Hilda to stand. Sit here and I'll stand." (I appreciated his gallantry but I could see an impasse coming: two people, each aware of her/his prerogatives and they conflicted.)

Hilda avoided it by something she had discovered in working out how to rig a double bed in the control compartment. Although pilots have separate seats, the passenger's seats are really one, built all the way across but separated by armrests. . . which could be removed with screwdriver and sweat.

I had eliminated sweat and screwdriver; a natural mechanic, such as Zeb, accumulates miscellaneous hardware. Those armrests could now be removed and clamped out of the way with butterfly nuts. Hilda started to do so; the Brigadier dismounted them once he saw what she was doing.

It was a snug fit, but Hird-Jones has trim hips and Hilda has the slimmest bottom in town (any town).

"An important feature," said Zeb, "of this design is a voice-controlled autopilot-"

XXXVII

"Are you open to a bribe?"

Deety:

Zebadiah, for seventeen dull minutes, said nothing and said it very well. During that plethora of polysyllabic nullities, I was beginning to think that I would have to take Pop to a quiet spot and reason with him with a club- when Captain Auntie showed that she needed no help.

Pop had interrupted with: "Let me put it simply. What Zeb said is-"

"Copilot." Cap'n Hilda did not speak loudly but Pop should know that when she says "Copilot," she does not mean: "Jacob darling, this is your little wifey." Pop is a slow learner. But he can learn. Just drop an anvil on him.

"Yes, Hilda?" Aunt Hilda let the seconds creep past, never took her eyes off Pop. I was embarrassed; Pop isn't usually that slow-then the anvil hit. "Yes, Captain?"

"Please do not interrupt the Chief Pilot's presentation." Her tone was warm and sweet: I don't think our guests realized that Pop had just been courtmartialed, convicted, keelhauled, and restored to duty-on probation. But I knew it, Zeb knew it-Pop knew it. "Aye aye, Captain!"

I concluded that Captain Auntie never intended to stand outside. She had told me to offer my seat to Squeaky and had added, "Why don't you suggest to your father that he offer his to the Governor?" I don't need an anvil.

It was a foregone conclusion that Bertie would object to ladies having to stand while he sat. But if he had not, I feel certain that the Hillbilly would have held up proceedings until she was seated where she could watch everyone but our visitors could not watch her.

How tall was Machiavelli?

As they were climbing out the Brigadier was telling me that he understood how she was controlled-but how did she flap her wings?-and I answered that technical questions were best put to the Captain-I was unsurprised to hear Cap'n Auntie say, "Certainly, Bertie. . . if you don't mind being squeezed between Deety and me."

"Mind'? I should pay for the privilege!"

"Certainly you should," I agreed-the Hillbilly's eyes widened but she let me talk. "What am I offered to scrunch over?" I slapped myself where I'm widest. "Squeaky is a snake's hips-not me!"

"Are you open to a bribe?"

"How big a bribe?"

"A purse of gold and half the county? Or cream tarts at tea?"

"Oh, much more! A bath. A bath in a tub, with loads of hot water and lots of suds. The last time I bathed was in a stream and it was coooold !" I shivered for him.

The Governor appeared to think. "Squeaky, do we have a bathtub?"

Lady Herbert interrupted. "Bertie, I was thinking of the Princess Suite. My deah, since you are all one family, it popped into mind. Two bedrooms, two bathrooms, two bathtubs. The drawing room is gloomy, rather."

I answered, "Bertie, you didn't talk fast enough; Betty gets the first ride."

"Oh, no, no, no! I don't fly even in our own flying carriage."

"Hahrooomph!" Squeaky boomed. "Are you still open to a bribe?"

"You might try our captain; she's as corruptible as I am."

Aunt Hilda picked it up. "Now that I've heard that two bathtubs go with the suite, my cup runneth over. But my husband and my son-in-law have matters to discuss with the Governor's technical staff. I don't have to be bribed to offer a few joy rides, Brigadier-one passenger at a time and, as Deety implies, not too wide a passenger." Aunt Hilda added, "Betty, I must confess my own weakness. Clothes. What I am wearing, for example. A Ferrara original. An exclusive-Mario himself created it for me. While it is intended for salt-water yachting, it is just as practical for space yachting-and I couldn't resist it. Do you have nice shops here?"

Bertie answered for his wife. "Hilda, there are shops-but Windsor City is not London. However, Betty has a seamstress who is clever at copying styles from pictures in periodicals from home-old but new to us." He added, "She'll show you what we have. Now concerning this ride you so kindly offered me- does it suit you to give me an appointment?"

"Is right now soon enough?"

"Report readiness for space. Astrogator."

"Ready!" I snapped, trying to sound efficient. "Belt tight."

"Chief Pilot."

"Belt fastened. Portside door locked, seal checked. Juice zero point sevenone. Wings subsonic full. Wheels down and locked. Car trimmed assuming passenger at six-six kilos."

"General, is that your mass?"

"Dear me! I think in nrn]nds. Th~ f~thr is-"

I interrupted. "I'll take it in pounds here or pounds London."

"I weigh myself each morning and I have had the scale recalibrated. Eh, with these boots, one hundred forty-five pounds I dare say."

"Correct to three significant figures, Zebadiah." (I did not mention that weight bearing on each wheel shows on the instrument board. Let Bertie think my husband a magician; he's a wizard to me.)

"Thank you, Astrogator. Car is trimmed, Captain."

"Copilot."

"Belt fastened. Door seal checked. Continua device ready."

"Passenger," said Cap'n Auntie.

"Eh? What should a passenger report?"

"Principally that your belt is secure, but I saw to that myself." (By using a web belt from our sleeping bag to link Hilda's seat belt to mine.) "I must ask one question," Aunt Hilda went on: "Are you subject to motion sickness? The Channel can be rough and so can the Straits of Dover. Did mal de mer ever hit you?"

"Oh, I'll be right. Short flight and all that."

"One Bonine, Deety. General, Admiral Lord Nelson was seasick all his life. My husband and I are susceptible; we took our pills earlier today. Deety and Zebbie are the horrid sort who eat greasy sandwiches during a typhoon and laugh at the dying-"

"I don't laugh!" I protested.

"But these pills enable us to laugh right back. Is this not so, Jacob?"

"Bertie, they work; you'd be a fool not to take one."

"I must add," Captain Auntie said sweetly, "that if you refuse, we will not lift."

Bertie took it. I told him, "Chew it and swallow it; don't hide it in your cheek. Captain, I think that does it."

"Except that we are crowded. General, would you be more comfortable if you put an arm around each of us?"

The General did not refuse. It occurs to me that "take him for a ride" has several meanings. Captain Auntie has more twists than a belly dancer.

"Routine has been broken. Confirm readiness, please." We reported while I snuggled into a firm male arm, realized that it was a pleasant contrast after getting used to my lovely giant.

"Gay Bounce."

Bertie gasped and tightened his arms around us. Aunt Hilda said quietly, "Astrogator, take the conn. Schedule as I discussed it. Don't hesitate to vary it. All of us-you, too, General-may suggest variations. This is a joy ride; let's enjoy it."

But she had told me earlier: "If I don't like a suggestion, I will suggest that we do it later-but time will run out. The General told Lady Herbert:

"I can go down to the end of the town

"And be back in time for tea!"-so we will fetch him back on time. Sixteenfifteen local, four-fifteen pip emma. What's Greenwich?"

I converted it (GMT 12:44) and told Captain Hillbilly that I would watch both board and the clock in my head but was ordered to nlace an alert with
Gay. If Aunt Hilda were a man, she would wear both suspenders and belt. No, that's wrong; for herself she's go-for-broke; for other people she is supercautious.

We lifted at 15:30 local and took Bertie for a mixed ride-Aunt Hilda had told me that Pop was feeling left out. "Gay Bounce, Gay Bounce. Chief Pilot, place us over the big Russian city at about a thousand klicks."

"Roger Wilco," my husband affirmed. "Copilot, one jump or two?"

"One. Level? Keep 'er so. Six thousand thirty klicks, true bearing two-seventhree, offset L axis negative oh-seven-four-set!"-and I shuddered; Pop had set to take us through the planet!

"Execute! Bertie, what is the name of that city?"

"Eh? Zeb, I am quite bewildered!" Pop and Gay and Zebadiah, working together, displayed features simultaneously on the planet in front of us and on the sillyscope on the board. Pop bounced Gay around in ways I didn't know could be done. Zebadiah had Gay rotate the display so that the point on Marsten opposite us was always the center of the display with scale according to H-above-G.

I learned a lot. The Russians claim the whole planet but their occupied area closely matches what we had bingo-mapped. Bertie pointed out a bit more Tsarist area; Gay changed the displayed locus to Zebadiah's interpretation of Bertie's information. Windsor City was zero Meridan for the British; Gay measured the arc to "Touchdown," adjusted her longitudes-and now could use any British Martian colonial map.

Bertie assured us that Russian Ack-Ack could not shoot higher than three miles (less than five klicks) and seemed astonished that a spaceship might be considered dangerous. His explanation of spaceships was less than clear- great flimsy things that sailed from orbits around Earth to orbits around Mars, taking months for each voyage.

I was watching the time. "Chief Pilot, we will sight-see with Bertie another day; I am taking the conn. Copilot."

"Verniers zeroed and locked, Astrogator."

"Thanks, Pop. Gay B'gout. Bertie, this is where we first grounded-where the Russians attacked us. That trash ahead is what is left of Colonel Morinosky's private flyer. Zebadiah was forced to retaliate."

Bertie looked puzzled. "But the Russians have no settlement near here. I know that bounder Morinosky; he came to see me under diplomatic immunity. I had to be content with the sort of nasty remarks permitted by protocol. But how did Zeb burn the flyer?"

"Beautifully. Gay Home. Chief Pilot, dive. Captain?"

"I have the conn," Aunt Hilda acknowledged. "Bertie, that crater was our home three days ago. They tried to kill us, we fled for our lives."

"Who!"

"Gay Home, Gay Bounce. Pilots, may we have Earth-without-a-J?"

"Set it, Jake."

"Tau axis positive one quantum-set!"

"Copilot, execute at will. Chief Pilot, dive again, please. Jacob, please set Bertie's home universe and hold. Bertie, that house is like Snug Harbor before it was bombed-but one universe away. Zebbie, level glide please. . . Gay Bounce, Gay Bounce! Jacob, you have that setting?"

"Tau positive ten quanta, set."

"Execute at will. Bertie, what antiaircraft defense does London-your London-have?"

"What, what? London has no defense against attack from above. The Concord of Brussels. But Hilda-my dear Captain-you are telling me that we have been to a different universe!"

"Three universes, Bertie, and now we are back in your own. Better to show than to tell; it is a thing one believes only through experience. Gay Bounce. Zebbie, Jacob, see how quickly you can put us over London. Execute at will."

"Roger Wilco. Jake, do you want Gay?"

"Well-great-circle true bearing and chord distance, maybe. Or I can simply take her high and head northeast. The scenic route."

Aunt Hilda caught my eye. "Camera ready, Deety?"

"Yes. Three shots." I added, "Four more cartons, but when they're gone, they're gone."

"Use your judgment."

Suddenly we were in free fall over Arizona, then over the British Isles, then we were air supported, then we were diving and Zebadiah was shouting: "Tower of London, next stop!"

I shot a beauty of the Tower and Zebadiah's right ear. "General, is there something you would like to photograph here? Or elsewhere?"

He seemed almost too overcome to talk. He muttered, "There is a place about twenty miles north of here, a country estate. Is it possible?"

Aunt Hilda said, "Take the conn, Deety."

"Got it, Captain. Gay Bounce. Pop, Zebadiah, give me three minima north. Execute at will."

Then I was saying, "Any landmarks, Bertie?"

"Uh, not yet."

"Pop, may we have the binoculars?"

Pop handed them aft; I gave them to Bertie. He adjusted them and searched while Zebadiah made a wide sweep, spending altitude stingily. Bertie said, "There!"

"Where?" I said. "And what?"

"A large house, to the right of our course. Ah, now dead ahead!"

I saw it-a "Stately Home of England." Lawns you make with a flock of sheep and four centuries. "This it?" asked Zebadiah. "I'm steady on it by gunsight,"

"That's it, sir! Deety, I would like a picture."

"Do my best."

"Alert," said Gay. "Memo for General Smythe-Carstairs: 'I can go down to the end of the town and be back in time for tea."

"Aunt Hilda, Bertie, I left some leeway. Picture! Zebadiah, take it as close as you dare, then bounce, but warn me. I want a closeup."

"Now, Deety!" I hit it and Zebadiah bounced us.

Bertie let out a sigh. "My home. I never expected to see it again."

"I knew it was your home," Aunt Hilda said softly, "because you looked the way we feel when we see the crater where Snug Harbor used to be. But you will see it again, surely? How long is a tour of duty on Mars?"

"It's a matter of health." Bertie added, "Lady Her- Betty's health."

Pop turned his head. "Bertie, we can bounce and do it again. What's a few minutes late for tea compared with seeing your old homestead?"

"Bertie's not late yet, Pop. We can do even better. That lawn is smooth and the open part is about half the size of the pg. at Imperial House. Bertie, we can ground."

My husband added, "I could make a glide grounding. But Deety has worked out a better method."

"No," Bertie said brusquely. "Thanks, Deety. Thanks to all of you. Jake. Zeb. Captain Hilda. I'll treasure this day. But enough is enough." Tears were running down his cheeks, ignored.

Aunt Hilda took a Kleenex from her purse, dabbed away his tears. She put her left hand back of Bertie's neck, pulled his face down to hers, and kissed him. She didn't look to see if Pop was watching-he was-she just did it.

Pop said, "Deety, will you hand me the binox?"

"Sure, Pop. See something?"

"I'm going to see what I can of Merrie Old England, as I don't expect to see it again, either. Family, we are not going back to Snug Harbor again; it's not good for us. Meanwhile Zeb will drive and you two are to soothe our guest and make him feel better-"

"But remember to wipe off the lipstick."

"Pipe down, Zeb. You aren't observant; neither of our darlings is wearing any. Being late is not important; 'The party can't start till the Macgregor arrives.' But once Bertie's there, he's on parade-and the Governor must not appear with eyes swollen and tear marks on his collar. We must return him in as good shape as we got him."

Sometimes I love Pop more than most.

And my husband, too.

I used both hands but didn't need to; Bertie wasn't trying to get away. The second time he kissed Hilda, he supplied the hands. Therapy took three minutes and forty-one seconds, and I am certain that, by the end of two hundred twenty-one seconds, Bertie was no longer homesick, not grieving about mighthave-beens; his morale was tiptop. The last time he kissed me, he informed me without words that I should not be alone with him unless my intentions were serious.

I made mental note. And a second to ask Hilda if she had received the same warning. Then I struck out the second note. I was certain and equally certain that she would fib if it suited her.

But I look forward to the day the Hillbilly asks me to jigger for her. That will be my final promotion-no longer Jane's little girl in Hilda's eyes but Jane's equal, trusted as utterly as she trusted Jane. And I will be rid of the last trace of the shameful jealousy I have for my beloved Mama Jane.

I checked myself in my purse mirror while I waited for them to break- checked both of them and decided that they had no milk on their chins. Bertie said, "Deety, could I possibly have one of those pictures as a remembrance of this perfect day?"

"Certainly. Gay Parade Ground. All three are yours;~we took them for you." We were exactly on time.

Three hours later I was sitting teat deep in a wonderful tub of hot soapy water, a tub big enough to drown in but I wasn't going to drown because the Hillbilly was sitting shoulder deep, facing me. We were reliving our day as well as getting beautiful for dinner. Well. . . sanitary.

Hilda said, "Deety, I tell you three times. Betty is suffering from an ailment made more endurable by Martian conditions."

"Meaning that in point thirty-eight gee she doesn't hit hard when she falls down. What was in that teapot no one else touched? Chanel Number Five?"

"Medicine. Prescribed for her nerves."

"Got it. Official. She's friendly as a puppy, she's generous, she's our hostess- I ought to know better. It's a shame that she has this ailment but she's fortunate in having a husband who loves her so dearly that he left home forever so that she can live in lower gravity. Bertie is quite a man."

"There is nothing for him at home. His older brother has sons; title and estate can't go to Bertie. He can't go much higher in the army, and a governor general is senior to anybody; he embodies the Sovereign."

"I thought that was limited to viceroys."

"Squeaky put me straight on it. Bertie is viceroy in dealing with Russians. But- Did you notice the uniforms on the maids?"

"I noticed the cream tarts more. White aprons, white caps, simple print dresses, dark blue or black with Indian arrowheads."

"The Broad Arrow, Deety."

"Huh? No sabbe, pliz."

"In this universe Australia belongs to the Dutch. Brace yourself, dear. This is a prison colony."

Every so often the world wobbles and I have to wait for it to steady down. Somewhat later I said, "A colony could be better than a prison. I can't see Bertie as a tyrant. Bertie is quite a man. When-"

Hilda reached out, grabbed a chain, flushed the W.C., then leaned toward me. That fixture was a noisy type that went on gurgling and gasping for a long time. "Remember what Zebbie told us when he crowded us into the other bath and turned on everything? One must assume that guest quarters in any government building anywhere are wired. Careful what you say, dear."

"He also said that he had no reason to assume that it was the case here."

"But Zebbie was the one who insisted on a conference in Gay. . . with Jacob being mulish and you yourself seeing no reason not to confer up here." Aunt Hilda again pulled the chain. "Yes, Bertie is quite a man. Don't leave me alone with him."

"Or should I jigger instead?"

"Naughty Deety. My sweet, a bride should refrain at least twelve months out of respect for her husband and to prove that she can."

"After that it's okay?"

"Of course not! It's immoral, disgraceful, and scandalous." Suddenly she giggled, put arms around my neck, and whispered: "But if I ever need a jigger, Deety is the only person I would trust."

That conference, immediately after tea, had caused a crisis, brought on by our husbands in concert-but out of tune. The tea had been fun-cream tarts and new men appeal to my basest instincts. A tea qua tea should be over in an hour. We had been there over an hour, which I ignored because I was having fun. Aunt Hilda broke the ring around me, said softly, "We're leaving." So we smiled and said good-bye, found our host, and thanked him.

"Our pleasure," Bertie said. "Lady Herbert became indisposed and wishes to be forgiven but will see you at dinner. Hird-Jones tells me that black tie is no problem. Right?"

He added to let Squeaky know when we wanted help in moving; Hilda assured him that Squeaky had it in hand and the suite was beautiful!

As we left I asked, "Where is Zebadiah?"

"Waiting at the outer steps. He asked me for a conference. I don't know why, but Zebbie would not unnecessarily interrupt a social event to ask for a closed conference."

"Why didn't we go to our suite? And where is Pop?"

"Zebbie specified the car-more private. Jacob is inside, talking with some men. He brushed off my telling him that we were going to the car now-said he would see us later. Deety, I can't enforce orders as captain under those conditions."

"Pop is hard to move when he gets into a discussion. I've yawned through some deadly ones. But how can we have a conference until he shows up?"

"I don't know, dear. Here's Zebbie."

My husband pecked me on the nose and said, "Where's Jake?"

Hilda answered, "He told me that he would be along later." Zebadiah started to curse; Aunt Hilda cut him off. "Chief Pilot."

"Uh- Yes, Captain."

"Go find the Copilot, tell him that we lift in five minutes. Having told him that and no more, turn and leave at once. Don't give him any opportunity to ask questions. Come straight to the car."

"Aye aye, Captain."

"Come, Deety." Hilda hurried to Gay Deceiver, went to her seat, started to belt, She glanced at me. "Astrogator, prepare for space."

I started to ask why-but instead said, "Aye aye, Captain," and quickly was belted. "Captain, may I inquire your plans?"

"Certainly, you're second-in-command. And Astrogator; however, I will take the conn on lifting."

"Then we really are lifting?"

"Yes. Five minutes after Zebbie returns. That gives Jacob five minutes to make up his mind. Then we lift. If Jacob is aboard, he'll be with us."

"Aunt Hilda, you would abandon my father on this planet?!"

"No, Deety. Jacob will probably never notice that the car has been away as it should not be gone more than a few minutes. If Jacob does not come with us, I will ask

Zebbie to drop me on Earth-without-a-J. Range-finder and target method; I don't want to use Zebbie's precious juice."

"Aunt Hilda, you sound desperate."

"I am, dear." She added, "Here comes Zebbie."

Zebadiah climbed in. "Message delivered, Captain."

"Thank you, Chief Pilot. Prepare for space."

"Roger Wilco."

"Will you check the seal of the starboard door, please?"

"Aye aye, Captain."

"Report readiness for space, Astrogator."

"Belt tight, ready for space. Oh, Aunt Hilda!"

"Astrogator, pipe down. Chief Pilot."

"Both doors locked, seals checked. Seat belt tight. Power packs, two zeroed, two in reserve. Juice oh-point-seven-one-minus. All systems go. Copilot missing. Ready for space."

"Captain's seat belt tight, ready for space. Gay Deceiver."

"Howdy, Hilda!"

"Please display five-minute countdown. Paraphrase acknowledge."

"Three hundred seconds backwards in lights."

"Execute."

Have you ever listened to three hundred seconds of silence? Neither have I-two hundred eighty-one when Pop pounded on the door.

Aunt Hilda said, "Gay Deceiver, ope'n starboard door."

Pop climbed in, indignant as an offended cat. "What the hell goes on?"

"Copilot, prepare for space."

"What? Now, Hilda, that is going too far!"

"Copilot, either secure for space or get out and stand clear. Chief Pilot, see that my orders are carried out."

"Aye aye, Captain! Copilot, you've got zero seconds to make up your mind." My husband started to unstrap.

Pop looked at Zebadiah, looked at us. I was doing my frozen face to keep from crying and I think Aunt Hilda was, too.

Pop hastily fastened his belt. "You're a pack of idiots-" He was checking the door seal. "-but I won't be left behind."

"Copilot, report."

"Huh? Ready for space."

Hilda said, "Gay Termite. Gay Deceiver, open your doors."

"Well, for the love of-"

"Pipe down! Chief Pilot, I have no stomach for charging my husband with mutiny but that is what I have been faced with repeatedly. Will you grant me the boon of resuming command to drop me on Earth-without-a-J? I would rather not have to stay on Mars."

"Hilda!"

"I'm sorry, Jacob. I've tried. I'm not up to it. I'm not Jane."

"No one expects you to be Jane! But ever since you became captain, you've been throwing your weight around. Like calling this stunt in the middle of a party. Insulting our host and hostess-"

"Hold it, Jake!"

"What? See here, Zeb, I'm talking to my wife! You keep-"

"I said 'Hold it.' Shut up or I'll shut you up."

"Don't you threaten me!"

"That's not a threat; that's a warning."

"Pop, you had better believe him! I'm not on your side."

Pop took a deep breath. "What do you have to say for yourself, Carter?"

"Nothing, for myself. But you've got your data wrong six ways. One: Captain Hilda did not call this so-called 'stunt.' I did."

"You did? What the devil caused you to do a thing like that?"

"Irrelevant. I convinced the Captain that the matter was urgent, so she gathered us in. All but you-you told her not to bother you or words to that effect. But she gave you another chance-you didn't deserve it; you had long since used up your quota. But she did. She sent me back to tell you we were lifting. It finally penetrated your skull that we might lift without you-"

"To this place!"

"If you had been twenty seconds later, we would have translated to anothe universe. But this nonsense about 'Insulting our host and hostess-' You:
hostess left the tea long before you did; your host left immediately after Hild~ and Deety, leaving his aide-the Brigadier-to close shop. But you are 5(damned self-centered you never noticed. Jake, don't you lecture me on propei behavior as a guest. The first time I laid eyes on you, you were trying to star a fight in Sharpie's ballroom-"

"Huh? But I was fully justi-"

"Dreck. No one is ever justified in starting a fight under a host's roof. Th very most that can be justified under extreme provocation is to tell the othei party privately that you are ready to meet him at another time and place. Jake, I don't enjoy teaching manners to my senior. But your parents neglected you, so I must. If I offend you-if you feel entitled to call me out, I will accommodate you at any other time and place."

Aunt Hilda gasped. "Zebbie! No!" I gasped something like it. My husband patted our hands-together; Hilda was gripping mine. "Don't worry, dears. I didn't call Jake out and won't. I don't want to hurt Jake. He's your husband. . . your father. . . my blood brother by spilled blood. But I had to chew him out; he's now entitled to a crack at me. With words, with hands, with whatever. Sharpie, Deety, you can't refuse Jake his rights. No matter what, he still has rights."

Pop said, "Zeb, I am not going to call you out. If you think I am afraid of you, you're welcome. If you think it's because I know you love both Hilda and Deety, you would be closer. A fight between us would endanger their welfare. As you said, we are blood brothers." Pop's tone suddenly changed. "But doesn't mean I like your behavior, you arrogant punk!" -

Zebadiah grinned. "Nob contendere, Pop."

"So you admit it?"

"You know Latin better than that, Jake. Means I'm satisfied to let it lie. We can't afford to quarrel."

"Mmm- A point well taken. Stipulating that I did not come at once when summoned, and tabling, if you will, until later whether or not I had reason, may I now ask why I was summoned? The nature of this problem that caused you to call this conference?"

"Jake, the situation has changed so rapidly that the matter no longer has priority. You heard Sharpie's plans."

My husband looked into Aunt Hilda's eyes. "Captain, I'll be honored to drive you wherever you want to go. Drop you wherever you say. With your choice of equipment and wampum. But with a mail drop, I hope. Are you ready to leave?"

"Yes, Captain."

"Wait a half. You are captain, until you leave us. Orders, Captain? Earthwithout-a-J? Or I'll help you shop others-we might find a world of nudists."

"Why that, Zebbie? I'm not jumpy about skin-but only among close friends."

"Remember why Jake was certain that the Finnish mathematician was not a disguised vermin? Sauna. Disguise has limits."

"Oh." Aunt Hilda looked thoughtful. "I could get used to it. But I must get out of this tension. So drop me on the minus-J world. A mail drop, yes; I don't ever want to lose you and Deety."

"We find that safe place, we pick you up. Sharpie, we'll be back someday anyhow. If the boogiemen don't get us."

"Hold it, Zeb. If you're dropping Hilda, you're dropping me."

"That's up to Captain Hilda."

"Hilda, I will not permit-"

"Jake, quit acting the fool," growled my husband. "She's boss. With me to back her up."

"And me!" I echoed.

"You seem to forget that the continua device is mine!"

"Gay Deceiver!"

"Yes, Boss? Who's your fat friend?"

"Number of the Beast.' Execute."

"Done."

"Try your verniers, Jake."

Pop did something-I couldn't see his hands. Then he said, "Why, you- So you think you've stopped me? Gay Deceiver!"

"Howdy, Jake."

Zebadiah cut in: "Gay Deceiver override! Emergency Thirty-one execute. Gay can no longer hear you, Jake. Try it."

"If you can do one, you can do the other. Zeb, I never thought you would be that sneaky."

"Jake, if you had behaved yourself, you never would have known. Extreme individualists (all of us) don't take kindly to discipline because they rarely understand its nature and function. But-even before that fake ranger showed up-we all had agreed to 'lifeboat' rules. We discussed them and you all claimed to understand them. . . and I was elected skipper. I nominated you-eldest, senior, inventor of the space-time twister-but you said it had to be me. A lifeboat officer must always be able to enforce his orders. . . in

situations of great peril complicated by hysterical civilians. Or bullheaded ones who must otherwise be wheedled."

It was time for a diversion; Pop doesn't like to look foolish and I was still hoping to salvage this shambles. "Zebadiah, is my number fifty-nine?"

"Of course, but it takes my voice. Can you figure the cancel-and-reset?"

"For mnemonic reasons it should be one of three. Probably ninety-five."

"On the button!"

"Although I would prefer eighty-nine."

"Why?"

"Work on it. Zebadiah, why did you call this meeting?"

"With Sharpie leaving us the matter is academic. We won't be coming back to Mars."

"Oh, dear!"

"What's the trouble, Sharpie? Captain."

"I promised Squeaky a ride. Zebbie, could you keep my promise for me? Please? For old times' sake?"

"Captain, once we lift to drop you on Minus-J, we won't return. But the Captain still is captain and can give Squeaky that ride in the next thirty minutes if it suits her."

"May I offer something in my own defense?" Pop put in.

"Of course, Jake. Sorry, Captain; you're in charge. May the Copilot have the floor?"

"Jacob, even though I find it necessary to leave you'. . . I love and respect you. . . and will always listen to you."

"Thanks, darling. Thank you, Captain. I was in that huddle because Brigadier Hird-Jones always remembers. That huddle was the top physical scientists on Mars. A scruffy lot but they get the technical journals and read them, a few months late. I was talking with the top chemist-"

"Well, Jake? Make it march."

"Zeb, not one knew an isotope from an antelope. You can't buy juice here."

"For that you disobeyed a direct order of the Captain? Sharpie, you should have him flogged around the Fleet before you surrender office-"

"Don't loke, Zebbie."

"Captain, I am not joking. Jake, that's no news; I spotted it this afternoon. Sharpie? Deety? In England."

"I missed it," Aunt Hilda said. "I don't know England well."

"Deety?"

"Well. . . maybe," I admitted.

"How?" demanded Pop.

"Little things. No roadables, just horse-drawn vehicles. No air traffic other than a few ornithopters. Coal-fired steam-powered trains of cars. Traffic on the Thames, what little there was, 'minded me of pictures of Victorian England."

"Daughter, why didn't you mention this?"

"You saw it, Pop."

"Those were my reasons," Zebadiah agreed. "My hope of getting juiced here dropped to one-tenth of one percent. It is now zero." Zebadiah sighed. "But that isn't why I asked the Captain to call us together. Family, there are vermin here."

The world wobbled again-and so did I.

Aunt Hilda was saying, "How did you learn this, Zebbie?"

"You gals had plenty of company and Jake had the local scientists, so Squeaky gave me his attention. Captain, you told us to stick to the truth-"

"Yes," agreed Aunt Hilda, "but not to volunteer information."

"I didn't volunteer; I was debriefed. Squeaky asked me about the ride we gave his boss; I tried to be vague. Squeaky took a photo from his pocket. 'The Governor tells me this was taken this afternoon.' Deety, it was the pic you took of the Thames and the Tower.

"I shortly started giving him a full account rather than have it dragged out. The Governor had told him the works; Squeaky was comparing my version with Bertie's, looking for holes in a yarn most easily explained by hypnosis, delirium tremens, insanity, or fancy lying. Since no two witnesses exhibit any of these in the same way they can be used as truth tests. Contrariwise, two witnesses who tell exactly the same story are lying. I assume that Bertie and I differed enough to be credible."

I asked my husband, "Zebadiah, did you explain six-dimensional space to him?"

Zebadiah looked pained. "How could I, when I can't explain it to me? Anyhow, he's looking forward eagerly to the ride Captain Sharpie promised him."

"Oh, dear! Zebbie, will you take a note to him?"

"Captain, we are not coming back after we drop you. I'll be breaking a date with him, too. Either before or after whatever time suits you, he's planning to give me-and anyone else who wants to go-a ride to see the vermin. 'Black Hats.' Fake rangers."

(I do wish the world would not wobble!)

Pop said, "Zeb, spill it! Quit stalling."

"Shut up and listen. Squeaky showed me a scrapbook. Dull as a scrapbook usually is until we came across a page of 'Black Hats.' Deety, you would have
been proud of me-"

"I am proud of you," I answered.

"-because I didn't scream or faint, I showed no special interest. I just said, 'God in Heaven, Squeaky, those are the horrors that chased us off Earth! You've got 'em here?"

"'No special interest.'"

"I didn't climb the drapes. I merely said, 'Or have you managed to exterminate them?'

"The discussion became confused, as they don't kill them; they put them to work. Squeaky had to repress amusement at the notion that wogs could be dangerous. He glanced at his watch and said, 'Come, I'll show you. Ordinarily we don't allow wogs in town. But this old fellow takes care of the Governor's gardens and may not yet have been returned to the pens for the night.' He led me to a balcony. Squeaky looked down and said, 'Too late, I'm afraid. No, there it is-Hooly! Chop, chop!'-and again I didn't faint. Hooly ran toward us, with a gait I can't describe, stopped abruptly, threw an open-palm salute and held it. 'Private Hooly reports!'

"Squeaky let him stand there. 'This wog,' he told me, 'is the most intelligent of the herd. It knows almost a hundred words. Can make simple sentences. As intelligent as a dog. And it can be trusted not to eat the flowers.'

"Herbivorous?' says I, showing off my book-larnin'. 'Oh, no,' he tells me, 'omnivorous. We hunt wild ones to provide the good wogs with a change in diet and, of course, when we slaughter overage wogs, that provides more ration.'

"That's enough for one lesson, children. Pleasant dreams. Tomorrow the Brigadier will have a roadable big enough for all of us to take us out to meet the Martian natives aka wogs aka 'Black Hats' aka vermin-unless that interferes with the ride you aren't going to give him, in which case he will swap the times around with the visit to the wogs we aren't going to make. And that, Jake, is the reason I asked the Captain for a family conference. I already knew that artificial isotopes are far beyond this culture-not alone from the ride this afternoon but because I ask questions myself. Squeaky has a knowledge of chemistry about the pre-nuclear level and a detailed knowledge of explosives that one expects of a pro. But to Squeaky atoms are the smallest divisions of mass, and 'heavy water' is a meaningless phrase.

"So I knew we would be here just to get Sharpie some clothes and to recharge my packs-since they do have D.C. power. Then I found we had stumbled onto the home of the vermin-and at that point my back didn't ache at the idea of cranking, and I didn't think that the Captain was that much in a hurry to buy clothes. So I asked the Captain to call us together in Smart Girl. I did not want to put it off even a few minutes because we were scheduled to move into our suite after tea. To leave at once, before we moved in, would save awkward explanations. Jake, did I have reason to ask for emergency conference?"

"If you had told me-"

"Stop! The Captain told you."

"But she didn't explain-"

"Jake, you're hopeless! Captains don't have to explain. Furthermore she could not because I did not tell anyone until now. The Captain had confidence in my judgment."

"You could have explained. When Hilda sent you back to get me. I would have come at once."

"That makes the ninth time you've been wrong in twenty minutes-" I blurted, "Tenth, Zebadiah. I counted."

Pop gave me his "Et-tu,-Brute" look.

"-tenth without being right once. I could not have explained to you."

"Merely because of a group of men?"

"Eleventh. I was not sent back to get you-twelfth. I was under orders to tell you that-quote!-'We lift in five minutes.' Tell you that and no more, then turn and leave at once, without discussion. I carried out my orders."

"You hoped that I would be left behind."

"Thirteen."

I butted in again. "Pop, quit making a fool of yourself! Zebadiah asked you an essential question-and you've dodged. Captain Auntie, could we have the doors closed? There might be one of them out there-and the guns are locked up.

"Certainly, Deety. Gay Deceiver, close your doors."

Pop said, "Deety, I was not aware that I had been dodging. I thought I was conducting a reasonable discussion."

"Pop, you always think so. But you are reasonable only in mathematics. Zebadiah asked you whether or not, under the circumstances, did he have reason to ask for a conference? You haven't answered it."

"If Hilda had not told him not to-"

"Pop! Answer that question or I will never speak to you again in my life!"

My husband said, "Deety, Deety! Don't make threats."

"My husband, I never make threats, either. Pop knows it."

Pop took a deep breath. "Zeb, under the circumstances you have described, you were justified in asking the Captain for an immediate private conference."

I let out my breath. "Thanks, Pop."

"I did it for myself, Deety. Hilda? Captain?"

"What is it, Jacob?"

"I should have gone with you at once when you first asked me to."

"Thank you, Jacob. But I did not 'ask' you; I ordered you. True, it was phrased as a request. . . but orders of a commanding officer are customarily phrased as requests-a polite protocol. You explained this custom to me yourself. Although I already knew it." Aunt Hilda turned to look at Zebadiah.

"Chief Pilot, the departure for Minus-J is postponed until late tomorrow. I will give you the time after I have consulted the Brigadier. I want to see one of those vermin, alive, photograph it stereo and cinema, and, if possible, dissect one. Since I intend to remain overnight, I hope to pick up clothes for MinusJ, too-but the reasons for delay are to learn more about vermin and to carry out my commitment to Brigadier Hird-Jones."

Aunt Hilda paused, continued: "All hands, special orders. Do not remove anything from the car that you cannot afford to abandon. This car may lift on five minutes' warning even in the middle of the night. You should keep close to me unless you have a guarantee from me of longer time. Tonight I will sleep in the car. If we lift in the night, I will send word to Princess Suite. Zebbie, I will retain the captaincy until we ground on Minus-J. Schedule: Dinner tonight is eight-thirty pip emma local time, about three hours hence. Black tie for gentlemen. Deety suggests that we wear what we wore our wedding night; she has our outfits packed together. The Brigadier will send someone to Princess Suite shortly after eight local to escort us to a reception. I will settle tomorrow's schedule with him. Jacob, I will slip down to the car after the House is quiet. If someone sees me, I will be running down for a toothbrush. Questions?"

"Captain?" said Pop.

"Copilot."

"Hilda, must you sleep in the car?"

"Jacob, 'twere best done quickly!"

"I'm begging you."

"You want me to be your whore one last time? That's not too much to ask. . . since you were willing to marry me knowing my thoroughly tarnished past. Yes, Jacob."

"No, no, no! I want you to sleep in my arms-that's all I ask."

"Only that? We can discuss it after we go to bed. All hands, prepare for space. Report!"

I splashed the Hillbilly and giggled. "Cap'n Auntie chum, that flatters me more than anything else you could ever say. While I can't imagine needing a jigger-if I did-or if I needed any sort of help and it took one who loves me no matter what, you know to whom I would turn. The one who loves me even when I'm bad. Who's that?"

"Thank you, Deety. We love and trust each other."

"Now tell me- Did you ever have any intention of sleeping tonight in the car?"

She pulled the chain again. Under that racket she said into my ear, "Deety doll, I never had any intention of sleeping tonight."

XXVIII

"He's too fat."

Zeb:

Sharpie sat on the Governor's right with my wife on his left, which gave Jake and me the privilege of sharing Lady Herbert, a loud shout away. The space was filled with mess jackets, dinner coats, and wives in their best. We each had one footman to insure that we did not starve; this platoon was bossed by a butler as impressive as the Pope, who was aided by a squad of noncom butlers. Female servants rushed in and out to serving tables. His Supremacy the Butler took it from there but used his hands only in offering splashes of wine to the Governor to taste and approve.

All were in livery-decorated with the Broad Arrow. The British colony consisted of a) wogs, b) transportees, c) discharged transportees, d) officers and enlisted men, e) civil servants, and f) spouses and dependents. I know even less about the Russian colony. Military and serfs, I think.

The ladies were in Victorian high-style dowdiness, which made Deety and Sharpie birds of paradise among crows. Jump suit and sailor pants had shocked people at tea. But at dinner-Deety wore the velvet wrap she had the night we eloped; Sharpie wore her sunset-shade mink cape; Jake and I unveiled them on the grand staircase leading down to the reception hall. Naw, we didn't rehearse; we were mysterious strangers, guests of the Governor General and His Lady, so all eyes were upon us. Maids, hurrying up, met us there to take our ladies' wraps.

I had questioned the propriety of house guests coming downstairs in wraps. Sharpie had answered, "Utterly correct, Zebbie-because I set the style. I did so this afternoon; I shall until we leave." I shut up; Sharpie has infallible instinct for upstaging.

Have I mentioned how Sharpie and Deety were dressed at Sharpie's party? They practically weren't. I wish I had had that hail bugged to record the gasps when Jake and I uncovered our prizes.

These two had last been seen at tea, one in a jump suit, the other in an outfit that looked donated by the Salvation Army, with no makeup. We had been to our suite before tea only for a hasty wash.

But now-Sharpie did Deety's hair; Deety did Sharpie's; Sharpie styled both faces, including too much lipstick, which Deety doesn't often wear. I asked Sharpie if she knew the history and significance of lipstick. She answered, "Certainly do, Zebbie. Don't bother us." She went on making Deety beautiful. Deety is beautiful but doesn't know it because her features have that simple regularity favored by Praxiteles.

Having put too much lipstick on Deety, Sharpie removed some, then carried her makeup onto her breasts so that it disappeared under the dress. Which is pretty far because they saved material on that dress at the top in order to give it a full, floor-length

skirt. You can't quite see her nipples-in the flesh I mean; they generally show through her clothes, always when she's happy- because Deety stands tall. Her mother had told her, "Deety, if a woman is tall, the answer is to look at least three centimeters taller than you are."

Deety always believed her mother; she stands tall, sits straight; she never leans or slouches; she can get away with that dress by half a centimeter. I'm not sure of the material but the color is the shade of green that goes best with strawberry hair. That dress, her height, long legs, broad shoulders, a waist two sizes too small setting off breasts two sizes too big-the combo could get her a job as a show girl.

When Sharpie finished gilding Deety I couldn't see that she had been made up at all.. . but knew durn well that she did not look the way she had before. Sharpie picked her jewelry, too-sparingly, as Deety had all her pretties with her, her own and those that had belonged to her mother. Sharpie based it on an emerald-and-pearl neckpiece, plus a matching pin and ring.

As for Sharpie, twice my darling's age and half as big, restraint was not what she used. The central diamond of her necklace was smaller than the Star of Africa.

She wore other diamonds here and there.

Here is something I don't understand. Sharpie is underprivileged in mammary glands. I know she was not wearing cheaters as I returned to get my tie tied just as Deety was about to lower it onto her. No bra, no underwear. But when that dress was fastened, Sharpie had tits-little ones but big enough for her size. Stuffing built into the dress? Nope. I went out of my way to check.

Is that why some couturiers get such high prices?

Still. . . the Captain looks best in her skin.

So we uncovered these confections and gave the British colony, male, female, and the others, something to talk about for months.

I can't say the English ladies were pleased. Their men gravitated toward our darlings like iron filings toward a magnet. However, Betty, Lady Herbert, is sweet all through. She rushed toward us (a bow wave of juniors getting out of her way), stopped short, looked only at our ladies, and said with the delight of a child at Christmas: "Oh, how beautiful you are!" and clapped her hands.

Her voice projected against dead silence, then conversation resumed. Lady Herbert took them, an arm around each, and toured the hall (busting up a receiving line). Brigadier Hird-Jones rolled with the punch, gathered in Jake and me, made sure we met those who had not been at tea.

Shortly before dinner a colonel said to me, "Oh, I say, is it true that the tiny beauty is in command of your ship?"

"Quite true. Best commanding officer I've ever had."

"Haw. Astounding. Fascinating. The taller girl, the strawberry blonde- introduced simply as 'Mrs. Carter.' She's part of your ship's company. Yes?"

"Yes," I agreed. "Astrogator and second-in-command. Doctor D. T. Burroughs Carter, my wife."

"Well! My congratulations, sir."

"Thank you."

"I say, Carter, would it be rude of me to ask why the ladies have the senior posts while you and Doctor Burroughs appear to be junior? Or am I intruding?"

"Not at all, Colonel. We each do what we do best. Mrs. Burroughs is not only best as commander; she is also best cook. While we take turns at cooking, I'll happily volunteer as scullery maid if it will persuade the Captain to cook."

"Amazing. Could you use a colonel of lancers about to retire? I'm a wonderful scullery maid."

The dinner was excellent (Irish chef, transported for shooting his landlord) and Lady Herbert was delightful, even though she drank her dinner and her words became increasingly difficult to understand. But any answer would do as long as it was friendly. Jake displayed the charm he can when he bothers and kept her laughing.

One thing marred it. Lady Herbert started to slump and nursing sisters appeared and took her away. What is protocol for this?

I checked Hilda and the Governor; they didn't seem to see it. I glanced at Hird-Jones; the Brigadier did not seem to see it-but Squeaky sees everything. Ergo: no member of the colony could "see" it.

Someone else gathered the ladies while the gentlemen remained for port and cigars. While we were standing as the ladies left, Hird-Jones leaned close:
"Your captain has asked me to tell you that the Governor invites you to join them later in his study."

I tasted the port, lit the cigar (I don't smoke-fake it when polite) when the Brigadier caught my eye and said, "Now." Bertie had left, leaving a stooge, a wit who had them all laughing-that colonel of lancers.

When Jake and I came in, Deety and Hilda were there, with a large man, tall as I am and heavier-Major General Moresby, chief of staff. Bertie stood while waving us to chairs. "Thanks for coming, gentlemen. We are settling tomorrow's schedule and your captain prefers to have you present."

The Governor reached behind him, moved out a globe of Mars. "Captain, I think I have marked the places we visited yesterday."

"Deety, please check it," Sharpie directed.

My darling looked it over. "The Russian settlements extended almost one hundred fifty kilometers farther east than this borderline shows-ninety-one English miles, seventy-nine nautical miles-call it two and a half degrees."

"Impossible!" (The bulky Major General-)

Deety shrugged. "Might be a few miles more; all we took were spot checks."

Jake said, "General Moresby, you had better believe it."

Bertie stepped in with: "Is that the only discrepancy, Doctor Deety?"

"One more. But there is something I want to ask about. May I borrow a marking pen? Grease pencil?"

Bertie found one; she placed three bingoes in an equilateral triangle, well detached from both zones. "What are these, sir? This one is a village, the other two are large farms. But we did not determine nationality."

Bertie looked at her marks. "Not ours. Moresby, how long ago did we reconnoitre that area?"

"There are no Russians there! She's doing it by memory. She's mistaken."

I said, "Moresby, I'll bet my wife's marks are accurate within two kilometers. How high do you want to go? What is a pound worth here in gold?"

Bertie said, "Please, gentlemen-wagers another time. What was the other error, Astrogator Deety?"

"Our touchdown point. Where we tangled with the Russians. Your memory is off by many degrees. Should be here."

"Moresby?"

"Governor, that is impossible. Either they did not land there or they had trouble with Russians somewhere else."

Deety shrugged. "Governor, I have no interest in arguing. Our time of arrival at 'Touchdown' just after dawn day before yesterday was fourteen-ohsix in the afternoon Windsor City local time. Six past two pip emma. You saw the remains of that ornithopter today. What did shadows and height of the sun tell you as to local time there, and what does that tell you about longitude from here ?" She added, "With one degree of longitude being four minutes of local time difference, you can treat one minute of arc as equal to one kilometer and measure it on this globe. The errors will be smaller than your own error in estimate of local time."

"Astrogator, I'm not good at this sort of problem. But it was about eightthirty in the morning where we saw the burned ornithopter."

"That's right, Governor. We'll lay that out as kilometers and see how close it comes to my mark."

Moresby objected, "But that globe is scaled in miles!"

Deety looked back at Bertie with a half smile, an expression that said wordlessly: (He's your boy, Bertie. Not mine.)

Bertie said testily, "Moresby, have you never worked with a French ordnance map?"

I'm not as tolerant as Deety. "Multiply by one-point-six-oh-nine."

"Thanks but we will assume that the Astrogator is correct. Moresby, reconnaissance will cover two areas. Captain, how many spot checks can be made per hour?"

"Just a moment!" Captain Sharpie interrupted. "Has this discussion been directed at the ride I promised Brigadier Hird-Jones?"

"I'm sorry, Ma'am. Wasn't that clear?"

"No, I thought you were telling General Moresby what you saw today. Isn't the Brigadier available? I want to settle the time with him."

Moresby answered, "Madam, that has been changed. I'm taking his place."

Sharpie looked at Moresby as if he were a side of beef she was about to condemn. "Governor, I do not recall offering this person a ride. Nor has the Brigadier told me that he is not going."

"Moresby, didn't you speak to Hird-Jones?"

"Certainly I did, sir. I dislike to tell you but he was not cooperative. I had to remind him that there was rank involved."

I looked around for somewhere to hide. But Sharpie did not explode. She said sweetly, "Certainly there is, Major General Bores-me. My rank. I am commanding; you are not." She turned to Bertie. "Governor, I may offer other rides after I keep my promise to the Brigadier. But not to this person. He's too fat."

"What! I weigh only seventeen stone-trim for a man with my height and big bones." Moresby added, "Homeside weight, of course. Only ninety pounds here. Light on my feet. Madam, I resent that."

"Too fat," Sharpie repeated. "Bertie, you remember how tightly we were packed yesterday. But even if Bores-me did not have buttocks like sofa cushions, he's much too fat between the ears. He can't enter my yacht."

"Very well, Captain. Moresby, please have Hird-Jones report to me at once."

"But-"

"Dismissed."

As the door closed, the Governor said, "Hilda, my humblest apologies. Moresby told me that it was all arranged. . . which meant to me that he had seen you and Squeaky and arranged the exchange. Moresby hasn't been here long; I'm still learning his quirks. No excuse, Captain. But I offer it in extenuation."

"Let's forget it, Bertie. You used 'reconnaissance' where I would have said 'joy ride.' 'Reconnaissance' is a military term. Did you use it as such?"

"I did."

"Gay Deceiver is a private yacht and I am a civilian master." She looked at me. "Chief Pilot, will you advise me?"

"Captain, if we overfly territory for the purpose of reconnaissance, the act is espionage."

"Governor, is this room secure?"

"Hilda-Captain, in what way?"

"Is it soundproof and are there microphone pickups?"

"It is soundproof when I close that second door. There is one microphone. I control it with a switch under the rug-right here."

"Will you not only switch it off but disconnect it? So that it cannot be switched on by accident."

"If that is your wish. I could be lying. Other microphones."

"It's accidental recording I want to.avoid. Bertie, I wouldn't trust Moresby as far as I could throw him. I have learned to trust you. Tell me why you need to reconnoitre?"

"I'm not certain."

"Reconnaissance is to learn something you are not certain about. Something that can be seen from Gay Deceiver-but what?"

"Uh.. . will you all swear to secrecy?"

"Hilda-"

"Not now, Jacob. Governor, if you don't want to trust us, tell us to leave!"

Smythe-Carstairs had been standing since turning the rug to remove the switch. He looked down at Hilda and smiled. "Captain, you are an unusually small woman. . . and the toughest man I've dealt with in many a year. The situation is this: The Russians have sent another ultimatum. We have never worried about Russians as we settled halfway around the planet from them and logistics here are almost impossible. No oceans. No navigable streams. Some canals if one enjoys suicide. Both sides have attempted to raise horses. They don't live long, they don't reproduce.

"Both sides have ornithopters. But they can't carry enough or fly far enough. I was startled when you said that they had given you trouble where you had first touched down-and proved it by showing me wreckage of a 'thopter.

"Any logistics problem can be solved if you use enough men, enough time. Those Russian craft must have, behind them, stockpiles about every fifty miles. If they have the same continuing this way, when they get here, they will wipe us out."

"Is it that bad?" I inquired. Sharpie said, "Governor, our Chief Pilot is the only one of us with combat experience."

"Yes," agreed Jake with a wry smile, "I was awarded rank in lieu of combat. I signed papers."

Bertie gave the same mirthless smile. "Welcome to the lodge. Twenty years since I last heard a bullet say 'wheat!' Now I may be about to lose my last battle. Friends, my rank states that I am qualified to command an army corps. . . but I have possibly one platoon who will stand and die."

Jake said, "Governor, this city must be two hundred thousand people."

"More than that, Jake. Over ninety-nine percent are convicts or discharged convicts or their wives and children. Do you imagine that they are loyal to me? Even if they were, they are neither trained nor armed.

"I have a nominal regiment, a battalion in numbers-and a platoon in strength. Friends, my troops, officers and men, and my civil servants, are, with few exceptions, transportees quite as much as the convicts. Example: An officer with a court staring him in the face can often get the charges dropped by volunteering for Mars. I don't get murderers. What I do get is worse. . . for
me. The mess treasurer who dips into mess funds because he has a 'sure thing' at a racing meet. The- Oh, the devil take it! I don't get villains; I get weaklings. There are a few good ones. Hird-Jones. Young fellow named Bean. Two old sergeants whose only shortcomings are that one had two wives and, while the other had only one, she wasn't his. If the Russians get here, they'll kill our wogs-they don't domesticate them; they hunt and eat them-they'll kill anyone in uniform.. . and transportees will learn that being a serf is worse than being a free man not on the planet of his choice. Squeaky! Where have you been?"

"In the card room, sir. First table to the right."

"So? How long ago did you get my message?"

"About twenty seconds ago, sir."

"Hm! How long have you been in the card room?" "A bit over an hour."

"I see. Bolt the outer door, close the inner door, sit down."

Twenty minutes later Sharpie was asking, "Deety, what time is sunrise here ?" She indicated a point 300 east of the western boundary of the westernmost of the two loci Bertie wanted investigated.

"In about twenty minutes. Shall I have Gay check it?"

"No. Sunset over here?"

"More leeway there. One hour fifty-seven minutes."

"Very well. Zeb, those zeroed packs?"

"Being charged, they told me. Ready in the morning."

"Good. Squeaky, if I get you to bed by oh-two-hundred hours could you take us to the fields about eleven-hundred hours?"

"Oh-eight-hundred, if you wish, Captain Hilda."

"I don't wish. This job requires sunlight, so we will work whatever it takes. I intend to sleep late. Bertie, would your kitchen service extend to breakfast in bed about ten ack emma?"

"Tell the night maid. The sideboard in your dining room will be loaded and steaming whenever you say and the day maid will be delighted to bring you a tray in bed."

"Heavenly! All hands and Brigadier Hird-Jones: Lift in thirty-nine minutes. Car doors open five minutes before that. Questions?"

"Just a comment. I'll fetch sandwiches."

"Thank you, Squeaky! Bertie."

"Eh? Ma'am!"

"Deety and I expect to be kissed good-bye.. . in case something goes wrong."

XXIX

"-we place no faith in princes."

Deety:

We had a busy night. I had Gay display bingo dots for every stop we made- then circles around any that were supply dumps.

There were indeed supply dumps!

I spent the whole trip thinking: Where would I be if I were a supply dump? Where would 'thopters have to land? Where could they get more water? Squeaky, Hilda, Pop, Zebadiah-and possibly Gay-were thinking the same thing.

We got back at half after one, the job done. The Hillbilly turned the results over to Squeaky and we went to bed.

Next morning at eleven our "roadable" arrived-without Squeaky. He sent an apologetic note saying that Lieutenant Bean knew what we expected and would add anything we asked for. -

Captain Auntie had not taken breakfast in bed. I woke about nine local, found her at work-packing her dress clothes and Pop's back into plastic pillow covers, then into a borrowed portmanteau. Our fresh laundry, given to us by the night maid on our return, was in another piece of borrowed luggage.

The Hillbilly was on her knees in our drawing room. She looked up, smiled and said, "Good morning. Better slide into your jump suit, dear; maids come in and out rather casually."

"Doesn't bother me, I've been caught twice already-"

"But it bothers them. Not kind, dear, with servants. Especially with involuntary servants. They'll be in to load the sideboard any moment. Will you fetch yours and Zebbie's dress clothes here? I'll pack for you."

"I'll pack 'em, thanks. I was thinking about sliding back into bed with a nice warm man but your mention of food changed my mind. Hillbilly, what's the rush?"

"Deety, I'm carrying out my own orders. When I brush my teeth after breakfast, the toothbrush goes into my purse. As for the rush, our husbands will wake soon. I have found that it is more practical to present a man with a fait accompli than a discussion."

"I hear you three times, doll baby. When they get up, they'll want to eat. When our roadable shows up, they'll be sitting over second cups of coffee. Then they'll say, 'We'll do it when we come back. Mustn't keep the Brigadier waiting.' Okay, I'll grab our gear and we'll sneak it out before they wake. I'll carry the heavy ones."

"We are not permitted to carry anything, Deety. But the place is swarming with maids. You sound much married."

"Five years' practice on Pop. But, Hillbilly, even Pop is easy to handle if you think ahead."

"I'm learning. Deety, what shall we do about the maids?"

"Huh?"

"In the days when servants were common, it was polite for house guests to tip servants who served them personally. But how, Deety? I have two twentyfive-newdollar bills in the lining of my purse. Waste paper."

"Pop and Zebadiah have gold. I know exactly because it was mass enough that I had to figure it into the loading, mass and moment arm. Here's a giggle. These misers we married had each squirreled away the same weight of gold to four significant figures. So maids are no problem if you know how much to tip-I don't. We'll be buying local money today to pay for a number of things."

"Leftenant" Bean-or "Brian"-is a delightful fuzzy puppy and a volunteer in order to have served "Beyond the Sky." He managed to call me "Deety" and Zebadiah "Zeb" when invited, but he could not bring himself to shift from "Captain Burroughs" to "Hilda"-"Captain Hilda" was as far as he would go, and Pop was "Professor."

He was pleased that we liked his "roadable." You wouldn't believe it! A large, wooden flatbed wagon with an upright steam engine in back; a trailer with cordwood; a sailing-ship's wheel in front of the engine; this controlled the front wheels by ropes that ran underneath. Midway was a luggage pen, then in front were four benches, for twelve to sixteen people.

With a crew of five!

Engine driver, fireman, conductor, and two steersmen- The conductor sat on a high perch braced to the pen and told the others what to do and occasionally rang a bell or blew a whistle. The bell told other traffic to get out of the way; the whistle warned that the vehicle was about to start or stop. There was much traffic but few "roadables"-most common were pedalled tricycles, for passengers and freight. Large versions had as many as a dozen men pedalling at once.

"I daresay you know," said Brian, "that we have not been able to raise horses. We haven't given up-we will develop a breed that will prosper here. But once we have horses, this will, I venture to predict, become a proper colony-and not just a place to send reformable evildoers and to obtain raw pharmaceuticals."

"Pharmaceuticals?"

"Oh, definitely! The thing that makes the colony self-supporting. I daresay the descendants of these convicts will be wealthy. I will show you the fields- all in the weed-

a cant word for Cannabis Magnifica Martia-except acreage for food crops. Brigadier Hird-Jones suggested Norfolk Plantation." He smiled. "Shall we?"

"Just a moment," Aunt Hilda said. "If I understood the Brigadier's note, we can vary the program?"

"Captain Hilda, the carriage and I are at your disposal as long as you wish. My orders and my pleasure."

"Brian, I have clothing being made up. I was told that sewing would continue through the night. Where should we go to inquire?"

"Here and now. I fancy I saw a package being delivered while we've been chatting; it could be yours. It would go to the chief housekeeper, who would have it placed in your digs-the Princess Suite, is it not?"

"Yes. Brian, I'll slip upstairs and see."

"Please, no!" Brian made a small gesture; a private soldier appeared out of nowhere. "Smathers, my greetings to Mrs. Digby. Has a package arrived for Captain Burroughs?"

"Sir!"

"Hold it! Brian, if it has arrived, I want it fetched here."

I could see the look in Brian's eye that Pop gets just before he starts demanding explanations for female "unreasonable" behavior. But Brian simply added, "If the package has arrived, tell Mrs. Digby that it must be delivered here at once. Double time, so to speak."

"Sir!" The private stomped an about-face and broke into a run. Hilda said, "Thank you, Brian. If I place it in our craft, it is one less detail to remember. Your kindness eases my mind."

"A pleasure, Captain Hilda."

"Hilda, that clothing is not yet paid for."

"Oh, dear! You are right, Jacob. Leftenant, where does one exchange gold for local money? Do you know the rate of exchange? In grams?"

"Or in Troy ounces," I added.

Brian behaved as if he had not heard us. He turned toward his "roadable." "Parkins! Take a turn around the circle! When you return, I want that steam up high. So that we won't creep in starting."

"Roight, sir." The wagon moved off, at a headlong slow walk.

When no one else was in earshot Brian said quietly, "I missed what you Were saying because of engine noise. But let me mention in passing that Possession of gold by individuals is not permitted so I-am-happy-to-learn-thatYOu-have..none," he said, not letting himself be interrupted. "Let me add," he went on, "that since I handle secret and most-secret despatches, I know things that I don't know, if I make my meaning clear. For example, I am grateful that you four were willing to lose sleep last night. Others feel strong obligations to such good friends. The Brigadier mentioned that you might have purchases to make or bills to pay. I was instructed to charge anything you need or want-or fancy-to the Imperial Household, signing his name and appending my signature."

"Oh, that's most unfair!"

"Truly, Captain? I fancy that those in authority will find something to add until you feel that you have been treated generously."

"That's not what she means, son," put in Pop. "Unfair' in the opposite direction. We pay for what we get."

Brian lost his smile. "May I suggest that the Professor discuss that with the Brigadier? I would find it extremely embarrassing to have to report to the Brigadier that I was unable to carry out his orders."

"Captain."

"What, Deety?"

"I am required to advise you."

"Advise away, my dear. I see my packages coming."

"Captain Auntie, you've got a bear by the tail. Let go."

The Hillbilly grinned and stuck out her tongue at me, then turned to Brian. "The Brigadier's thoughtful arrangements are appreciated. We accept."

It was still a few minutes before we left, as it turned out that Zebadiah's power packs were ready, in the hands of the Household engineer. At last Hilda's clothes and the power packs were in Gay; we boarded the char-à-banc, and whizzed away at 10 km/hr. "Norfolk Plantation, Captain Hilda?"

"Brian, at what time did you breakfast?"

"Oh, that's not important, Ma'am."

"Answer my question."

"At oh-seven-hundred hours, Captain."

"So I suspected. You eat at Imperial House?"

"Oh, no, Captain Hilda, only the most senior of the Governor's official family eat there. I eat at the officers' club."

"I see. We'll see wogs last. I am told there is a commissary. Is it open to us?"

"Captain Hilda, everything is open to you."

"I must buy supplies. Then I wish to go to the best restaurant in Windsor City and watch you eat a proper luncheon; we ate breakfast three hours later than you did."

"But I'm hungry," said my husband. "I'm a growing boy."

"Poor Zebbie."

There was not much to buy that would keep. I bought a tin of Huntley & Palmer's biscuits and quite a lot of Dutch chocolate-quick energy for growing boys-and tightly packaged staples.

Brian had us driven to that restaurant just past noon. I was glad that Aunt Hilda had decided to get everything else done before we went to look at vermin.
Even so, I did not have much appetite-until I decided to stand up and forthrightly turn coward. Not look at vermin! Cui bono? Aunt Hilda was the expert.

That restored my appetite. We stopped across the parade ground from Imperial House. We twigged in this order-Zebadiah, Pop, me, Aunt Hilda-that it was the officers' club. She was several meters inside when she stopped. "Brian, what are we doing here?"

"The Captain said '-the best restaurant-'. The club's chef was executive chef at Claridge's until he ran into misfortune. Don't look at me that way, Captain Hilda; the Brigadier picks up the chit; it's charged against 'official visitors' and winds up in London against H.I.M.'s Civil List. Believe me, His Majesty gets paid more than leftenants, or even brigadiers."

But the president of the mess signed the chit-a colonel who told the Hillbilly that he was buying her lunch because he wanted to ship with us as scullery maid.

I was telling Aunt Hilda that I would skip vermin viewing, thank you, when I did. One. Then six. Then a whole field of them. I was explaining to God that I didn't like this dream so please let me wake up when Brian had the conductor halt the contraption and I saw that there were men in that field, too. The men carried whips; vermin were muzzled. This one vermin-well, "wog"-this wog had managed to pull its muzzle aside and was stuffing this weedy plant into its mouth. . . when a whip cracked across its naked back.

It cried.

The field on the other side of the road was not being worked, so I stared at it, After a while I heard Brian say, "Captain Hilda, you are serious, really?"

"Didn't the Brigadier authorize it?"

"Ah, yes. I thought he was pulling my leg. Very well, Ma'am."

I had to see what this was all about. . . and discovered that muzzled vermin, afraid of men with whips, weren't frightening; they were merely ugly. Aunt Hilda was taking pictures, movies and stereo. Brian was talking to a man dressed like any farmer except for the Broad Arrow.

Brian turned and said, "Captain Hilda, the foreman asks that you point out the wog you want to dissect."

Aunt Hilda answered, "There has been a mistake."

"Ma'am? You don't want to dissect a wog?"

"Leftenant, I was told that one or more died or was slaughtered each day. I want to dissect a dead body, in an appropriate place, with surgical instruments and other aids. I have no wish to have one of these poor creatures killed."

We left shortly. Brian said, "Of the two, the abattoir and the infirmary, I suggest the latter. The veterinarian is a former Harley Street specialist. By the bye, there is no case of humans contracting disease from these brutes. So the infirmary isn't dangerous, just, ah, unpleasant."

We went to the wog hospital. I did not go inside. Shortly Pop came out, looking green. He sat beside me and smiled wanly. "Deety, the Captain ordered me outside for fresh air-and I didn't argue. Aren't you proud of me?"

I told him that I'm always proud of my Pop.

A few minutes later Brian and Zebadiah came out, with a message from Hilda that she expected to work at least another hour, possibly longer. "Captain Hilda suggests that I take you for a drive," Brian reported.

The drive was only as far as the nearest pub; the sillywagon was sent back to wait for the Hillbilly. We waited in the lounge, where Pop and Brian had whisky and splash, and Zebadiah ordered a "shandygaff'-so I did, too. It will never replace the dry martini. I made it last till Aunt Hilda showed up.

Brian asked, "Where now, Captain Hilda?"

"Imperial House. Brian, you've been most kind."

I said, "Cap'n Auntie, did you whittle one to pieces?"

"Not necessary, Deetikins. They're chimpanzees."

"You've insulted every chimp that ever lived!"

"Deety, these creatures bear the relation to 'Black Hats' that a chimpanzee does to a man. The physical resemblance is closer, but the difference in mental power- Doctor Wheatstone removed the brain from a cadaver; that told me all I needed to know. But I got something that may be invaluable. Motion pictures."

Zebadiah said, "Sharpie, you took motion pictures in the fields."

"True, Zebbie. But I have with me the Polaroids you took for me at Snug Harbor; some show the splints that creature used to disguise its extra knees and elbows. Doctor Wheatstone used surgical splints to accomplish the same with one of his helpers-a docile and fairly intelligent wog that didn't object even though it fell down the first time it tried to walk while splinted. But it caught on and managed a stiff-legged walk just like that ranger-and like 'Brainy' now that I think about it-then was delighted when Doctor Wheatstone dressed it in trousers and an old jacket. Those pictures will surprise you. No makeup, no plastic surgery, a hastily improvised disguise-from the neck down it looked human."

When we reached Imperial House, we transferred packages into Gay Deceiver- again were not permitted to carry; Brian told the conductor, the conductor told his crew. We thanked them, thanked Brian as we said good-bye, and Aunt Hilda expressed a hope of seeing him soon and we echoed her-me feeling like a hypocrite.

He saluted and started toward the officers' club. We headed for the big wide steps. Aunt Hilda said, "Deety, want to share some soap suds?"

"Sure thing!" I agreed.

"Whuffor?" asked Zebadiah. "Sharpie, you didn't get a spot on you."

"To remove the psychic stink, Zebbie."

"Mine isn't psychic," I said. "I stink, I do."

But damn, spit, and dirty socks, we had hardly climbed into that tub when a message arrived, relayed by my husband, saying that the Governor requested us to call at his office at our earliest convenience. "Sharpie hon, let me translate that, based on my eighty years man and boy as flunky to an ambassador. Means Bertie wants to see us five minutes ago."

I started to climb out; Aunt Hilda stopped me. "I understood it, Zebbie; I speak Officialese, Campusese, and Bureaucratese. But I'll send a reply in clear English, female idiom. Is a messenger waiting?"

"Yes, a major."

"A major, eh? That will cost Bertie five extra minutes. Zebbie, I learned before you were born that when someone wants to ~ee me in a hurry, the urgency is almost never mutual. All right, message: The commanding officer of Spacecraft Gay Deceiver sends her compliments to the Governor General and will call on- him at her earliest convenience. Then give the major a message from you to Bertie that you happen to know that I'm taking a bath and that you hope I'll be ready in twenty minutes but that you wouldn't wager even money on thirty."

"Okay. Except that the word should be 'respects' not 'compliments.' Also, the major emphasized that he wants to see all of us. Want Jake and me to keep Bertie happy until you are ready?" Pop had his head in the door, listening. "We wouldn't mind." Pop nodded.

"Zebbie, Zebbie! After four years under my tutelage. Until I know what he wants I can't concede that he is senior to me. 'Compliments,' not 'respects.' And no one goes

until I do. . . but thank you both for the offer. Two more things: After giving the major my message, will you please find my clothes, all but Deety's Keds, and take them to the car? That's Jacob's shirt, Deety's sailor pants, a blue belt, and a blue hair ribbon. In the car you will find new clothes on my seat. In one package should be three jump suits. Please fetch one back."

Pop said, "Hilda, I'd be glad to run that errand. Run it twice, in fact, as you don't want to send down what clothes you have until you know that your new clothes fit."

"Jacob, I want you right here, to scrub our backs and sing for us and keep us amused. If that jump suit does not fit, I may appear in a bath towel sarong. But I plan to appear a minute early to make Bertie happy. Do not tell the major that, Zebbie! Officially it is twenty minutes with luck, thirty minutes more likely, could be an hour, Major; you know how women are. Got it all?"

"Roger Wilco. Sharpie, someday they'll hang you."

"They will sentence me to hang but Jacob and you will rescue me. Trot along, dear." Aunt Hilda started to get out. "Stay there, Deety. I'll give you three minutes' warning-two to dry down, one to zip into yourjump suit. Which leaves ten minutes to relax."

The jump suit did fit; the Hillbilly looked cute. We left not a thing in that suite because Aunt Hilda checked it while waiting for Zebadiah. A few items went into my purse or hers. It was eighteen minutes from her message to our arrival at the Governor's office-and I had had a fifteen-minute tub, comfy if not sybaritic.

Besides Bertie and the Brigadier, that fathead Moresby was there. Aunt Hilda ignored him, so I did. Bertie stood up. "How smart you all look! Did you have a pleasant day?" The poor dear looked dreadful-gaunt, circles under his eyes.

"A perfect day-thanks to you, thanks to the Brigadier, and thanks to a curly lamb named Bean."

"A fine lad," Squeaky boomed. "I'll pass on your word, if I may." The Brigadier did not look fresh; I decided that neither had been to bed.

Bertie waited until we were seated, then got to business. "Captain Burroughs, what are your plans?"

Aunt Hilda did not answer his question. She glanced toward Major General Moresby, back at Bertie. "We are not in private, Excellency."

"Hmm-" Bertie looked unhappy. "Moresby, you are excused."

"But-"

"Dismissed. You have work to do, I feel sure."

Moresby swelled up but got up and left. Squeaky bolted the outer door, closed the inner door, while Bertie stood up to lift the rug over his recorder switch. Aunt Hilda said, "Don't bother, Bertie. Record if you need to. What's the trouble, old dear? Russians?"

"Yes. Hilda, you four are refugees; yesterday you showed me why. Would you care to remain here? My delegated power is sufficient that I can grant naturalization as fast as I can sign my signature."

"No, Bertie. But we feel greatly honored."

"I expected that. Do reconsider it. There are advantages to being a subject of the most powerful monarch in history, in being protected by a flag on which the Sun never sets."

"No, Bertie."

"Captain Hilda, I need you and your ship. Because of millions of miles of distance, many months required for a message, I hold dejure viceregal power almost equal to sovereign. . . and de facto greater in emergency because no Parliament is here. I can recruit foreign troops, arm them, make guarantees to them as if they were British, award the King-Emperor's commission. I would like to recruit all of you and your ship."

"Commodore for you, Captain for your second-in-command, Commander for your Chief Pilot, Lieutenant Commander for your Copilot. Retirement at full pay once the emergency is over. Return of your purchased ship as a royal gift after the emergency. Compensation for loss or damage."

"One rank higher for each of you?"

"All four of us must be at least one rank senior to Major General Moresby."

"Hilda! That's my own rank. Equivalent rank-Vice Admiral."

"Bertie, you can't hire us as mercenaries at any rank or pay. That hyperbole was to tell you that we will not place ourselves under your chief of staff. That settled, what can we do to help you?"

"I'm afraid you can't, since you won't accept the protection under international law of military status. So I'm forced to cut the knot. Do you understand the right of angary?"

(I thought he said "angry" and wondered.)

"I believe so. Are Great Britain and the Russias at war?"

"No, but there are nuances. Shall I call in my legal officer?"

"Not for me. My own legal officer is here: Doctor Zebadiah Carter, my consultant in international law."

"Doctor Carter-oh, fiddlesticks! My friend Zeb. Zeb, will you discuss the right of angary?"

"Very well, Governor. One nuance you had in mind was that, in addition to wartime, it applies to national emergency-such as your current one with the Russians."

"Yes!"

"Angary has changed in application many times but in general it is the right of a sovereign power to seize neutral transport found in its ports or territory, then use same in war or similar emergency. When the emergency is over, seized transport must be returned, fair rentals must be paid, loss or damage requires compensation. It does not apply to goods or chattels, and most especially not to persons. That's the gist. Do we need your legal officer?"

"I don't think so. Captain Burroughs?"

"We don't need him. You intend to requisition my craft?"

"Captain. . . I must!" Bertie was almost in tears.

"Governor, you are within your legal rights. But have you considered how you will drive it?"

"May I answer that, Governor?"

"Go ahead, Squeaky."

"Captain Hilda, I have an odd memory. 'Photographic' it is called but I remember sounds as automatically. I am sure I can fly every maneuver used last night-that is to say: sufficient for our emergency."

I was seething. But Aunt Hilda smiled at the Brigadier and said in her sweetest voice: "You've been most thoughtful throughout our stay, Squeaky. You are a warm, charming, hospitable, bastardly fink. One who would sell his wife to a Port SaId pimp. Aside from that you are practically perfect."

"Doubled and redoubled!" (That was my Pop!) "Later on, Jones, I'll see you at a time and place of your choosing. Weapons or bare hands."

"And then I will see you, if Jake leaves anything." My husband flexed his fingers. "I hope you choose bare hands."

Bertie interrupted. "I forbid this during this emergency and after it in territory where I am suzerain and while Hird-Jones holds the Sovereign's commission under my command."

Aunt Hilda said, "You are legally correct, Bertie. But you will concede that they had provocation."

"No, Ma'am! Hjrd-Jones is not at fault. I tried to get you and your crew to fly it on any terms at all. You refused. Hird-Jones may kill himself attempting to fly a strange flyer. If so he will die a hero. He is not what you called him."

"I don't think well of you, either, Bertie. You are a thief-stealing our only hope of a future."

"He certainly is!" I cut in. "Governor, I can whip you-I can kill you, with my bare hands. I'm Black-Belt three ways. Are you going to hide behind your Commission and your self-serving laws?" I dusted my hands together. "Coward.
Two cowards, with their chests covered with ribbons boasting about their brave deeds."

"Astrogator."

"Captain."

"Let it drop. Bertie, under right of angary we are entitled to remove our chattels. I insist on a witness so that you will know that we have done nothing to damage the craft. If the Brigadier can drive it, it will be turned over to him in perfect shape. But my jewelry is in our craft and many other things; I must have a witness. You, sir. My stepdaughter can certainly kill you or anyone her size or a bit more than her size, with her bare hands. But I grant you safeconduct. Will you have it in writing?"

Bertie shook his head. "You know I can't take time to witness. Pick anyone else."

"I won't grant safe-conduct to anyone else. Anyone who has not ridden with us would not know how to watch for sabotage. So it must be either you or HirdJones. . . and Hird-Jones would never live to get out of our car. He has three of the deadliest killers in two universes quite annoyed. Angry over angary."

"Any of you who will not give parole must wait up here."

"Wait a half, Gov," my husband drawled. "Parole' applies to prisoners. Captain, this might be a good time to read aloud our safe-conduct from the Governor General. See how many ways this fake 'officer and gentleman' has broken his word-and the written guarantees of his sovereign. He has broken all three essential guarantees to all four of us. That's twelve. Almost a Russian score. Safe-conduct amounting to diplomatic immunity, all of us free to leave at any time, we four never to be separated involuntarily. Now he wants hostages. Pfui!"

"None is broken," Bertie asserted.

"Liar," my husband answered.

"All of you are safe here. . . until the Russians conquer us. I slipped in speaking of parole; you are not prisoners. You all may stay together-living in the Princess Suite if you so choose. If not, in any quarters you choose in territory I control. You are all free to leave at any moment. But you must not approach that requisitioned flyer. Captain, your jewels will be safe. But others will unload the flyer."

"Bertie-"

"What? Yes. . . Hilda?"

"Dear, you are both stubborn and stupid. You can't open the doors of our car, much less drive it. Attempt to force it open and no one will ever drive it. I conceded the legality of the right of angary. But you insist on making it impossible to apply it. Accept my safe-conduct and come witness or there that car sits until the Russians come, while we live in luxury in this palace. You know that 'the right to leave at any time' means nothing without our transport. Now, for the last time, will you do it my way.. . or will you waste the precious minutes of a war crisis trying to open that car by yourself? Make up your mind, this offer will not be repeated. Answer Yes or No. . . and be damned quick about it!"

Bertie covered his face with his hands. "Hilda, I've been up all night. Both Squeaky and I."

"I know, dear. I knew when we came in. So I must help you make up your mind. Deety, check your purse. Something is missing."

I hastily checked, wondering what she meant. Then I noticed that a secret pocket that should have been hard was not. "Oh! Do you have it?"

"Yes, Deety." Aunt Hilda was seated, her choice, so that she had both Bertje and Squeaky in her line of fire-and none of us. "I mentioned three killers. Now you have four facing you. . . in a soundproofed room with its door bolted from inside." (I never saw her draw my Skoda gun. But she was holding it on them.) "Bertie, I'm making up your mind for you. You are accepting my safeconduct. Consider how poor the chances are that anyone would find your bodies in the time it takes us to run down one flight and reach our car."

Squeaky lunged at Hilda. I tripped him, kicked his left kneecap as he fell, then said, "Don't move, Fink! My next kick is a killer! Captain, has Bertie come to his senses? Or shall I take him? I hate to kill Bertie. He's tired and worried and not thinking straight. Then I would have to kill Squeaky. He can't help his eidetic memory, any more than I can help this clock in my head. Squeaky, did I break your kneecap? Or can you walk if I let you get up?"

"I can walk. You're fast, Deety."

"I know. Captain. Plans?"

"Bertie, you are accepting my safe-conduct. We are all going out together, we four around you two, laughing and talking and heading for our car-and if anyone gets close, you two are dead. One of you will get it with this-"

"And the other with this." (My husband, with his stubby police special-)

"Why, Zebbie! How naughty of you! Jacob, do you have a holdout too?"

"Just this-" Pop now had his hunting knife.

"Deety?"

"Did have. You're holding it. But I still have five weapons."

"Five?"

"Both hands, both feet, and my head. Squeaky, I must frisk you. Don't wiggle. . . or I'll hurt you." I added, "Stop easing toward your desk, Bertie. You can't kill four of us before we kill you. Pop, don't bother with the gun, or trap, or whatever, in Bertie's desk, Let's get out of here, laughing and joking, as the Captain ordered. Oh, Squeaky, that didn't hurt! Captain, shall I let him up?"

"Brigadier Hird-Jones, do you honor the safe-conduct granted to us by your commanding officer?" Aunt Hilda asked.

"Brigadier, I order you to honor it," Bertie said grimly.

Maybe Squeaky had to catch his breath; he was a touch slow. "Yes, sir."

Aunt Hilda said, "Thanks, Squeaky. I'm sorry I had to say harsh things to You.. . but not having muscles I must fight with words. Zebbie, frisk Bertie. But quickly; we leave now. I leave first, on Bertie's arm. Deety follows, on Squeaky's arm-you can lean on her if you need to; she's strong. Help him up, Deety, Jacob and Zebbie trail along behind. Bertie, if anyone gets close to us, or either you or Squeaky try to signal anyone, or if anything is pointed at us- first you two die. Then we four die; that's inevitable. But we'll take some with us. What do you think the total may be? Two.. . and four. . . then five? Six? A dozen? Or higher?"

It took us forty-seven seconds to the bottom of the steps, thirty-one more to Gay Deceiver, and I aged seventy-eight years. Squeaky did lean on me but I made it look the other way around and he managed to smile and to sing with me: Gaudeamus Igitur. Hilda sang The Bastard King to Bertie which seemed both to shock him and make him laugh. The odd way she held his arm told me that she was prepared to plant 24 poisoned darts in Bertie's left armpit if anything went sour.

No one bothered us. Bertie returned a dozen or more salutes.

But at Gay Deceiver we ran into a bobble. Four armed soldiers guarded our Smart Girl. By the starboard door was that fathead Moresby, looking smug. As we came close, he saluted, aiming it at Bertie.

Bertie did not return his salute. "What's the meaning of this?" he said, pointing. Plastered to Gay's side, bridging the line where her door fairs into her afterbody, was H.I.M.'s Imperial seal.

Moresby answered, "Governor, I understood you perfectly when you told me that I had work to do. Verb. sap., eh?"

Bertie didn't answer; Moresby continued to hold salute.

"Major General Moresby," Bertie said so quietly that I could just hear it.

"Sir!"

"Go to your quarters. Send me your sword."

I thought Fathead was going to melt down the way the Wicked Witch did when Dorothy threw the pail of water over her. He brought down the salute and left, moving quickly.

Everybody acted as if nothing had happened. Hilda said, "Gay Deceiver, open starboard door"-she did and that seal broke. "Bertie, we're going to need people to carry things. I don't want our possessions stacked outdoors."

He looked down at her, surprised. "Is the war over?"

"There never was a war, Bertie. But you tried to push us around, and I don't push. You requisitioned this craft; it's legally yours. What I insisted on was that you must witness removal of our chattels. That took coaxing."

"Coaxing'!"

"Some people are harder to coax than others. Squeaky, I'm sorry about your knee. Can you hobble back? Or shall we get you a wheelchair? That knee must be swelling up."

"I'll live. Deety, you play rough."

"Squeaky," said the Governor General, "slow march back toward the House, grab the first person you see, delegate him to round up a working party. Hilda, will a dozen be enough?"

"Better make it twenty. And about four more armed guards."

"Twenty and four additional sentries. Once you pass that word, put the senior rating in charge, and climb into a tub of hot water."

"Cold water."

"What, Hilda? Cold?"

"Hot is okay if he uses lots of Epsom salts. Otherwise ice-cold water will bring the swelling down faster, even though it's uncomfortable. But not for long. Ice water numbs pain while it reduces swelling. By morning you'll be fit. Unless Deety cracked the bone." -

"Oh, I hope not!" I blurted.

"Squeaky, you had better listen to Captain Hilda."

"I'll do it. Ice water. Brrrrr!"

"Get on with it. But order that working party."

"Right away, sir."

"Bertie, will you follow me?" Hilda went inside. The Governor followed her, started to say something but Hilda cut him off: "Jacob, get out the items forward here while Zebbie keeps inventory as you do. Bertie, I have something for Betty before that mob gets here. Will you help me undog this door or perhaps Deety can do it easier GayDeceiverCloseDoorsGayBounceGayBounceGayBounce. Bertie, take off your clothes." She held onto a door dog with her left hand, had my little gun aimed at his face.

"Hilda!"

"Captain Hilda, please; I'm in my spacecraft under way. Take off every stitch, Bertie; I'm not as trusting as Zebbie. I assume that you have a holdout he didn't find. Gay Bounce. Hurry up, Bertie; you're going to stay in free fall with no Bonine until you are naked. Zebbie, he may require help. Or inducement."

He required both. But eleven minutes later Bertie was wearing one of Pop's coveralls and his clothes were abaft the bulkhead. Zebbie did not find a weapon but Aunt Hilda took no chances. At last we were all strapped down, with Bertie between me and the Captain.

Hilda said, "All hands, report readiness for space. Astrogator."

"Captain Auntie, we are in space."

"But quite unready. Astrogator."

"Seat belt fastened. Ready."

"Chief Pilot."

"Door seal checked. No loose gear-I stuffed Bertie's clothes in with the cabin bed clothes. Four charged power packs in reserve. Juice oh-seven-oh. All systems go. Ready."

"Copilot."

"Seat belt tight. Continua device ready. Door seal checked. I'd like a Bonine if we're going to be in free fall long. Ready for space."

"Astrogator, three antinausea pills-captain, copilot, passenger. Passenger."

"Oh! Oh, yes! Safety belt tight."

"Captain states seat belt fastened. Ready for space. Gay Termite."

It was just sunrise at our streamside "home." "Aunt Hilda, why did we run through all that rigamarole if we were coming straight here?"

"Deety, when you are captain you will know."

"Not me. I'm not the captain type."

She ignored me. "Lieutenant General Smythe-Carstairs, will you give me your unconditional parole until I return you home? On your honor as an officer and a gentleman."

"Am I going home? I had assumed that I had not long to live."

"You are going home. And I do have something for Betty. But whether or not you give parole affects other matters. Make up your mind-at once!"

It took him six seconds; Aunt Hilda let him have them. "Parole. Unconditional."

"I'm surprised, Bertie. You have a tradition against giving parole, do you not?"

"We do indeed, Captain. But I concluded that my only chance of serving my sovereign lay in giving my word. Am I right?"

"Quite right, Bertie. You now have opportunity to persuade me to support you in your crisis. Your King-Emperor is not our prince; we place no faith in princes. We have no reason to love Russians but we spanked the only one who gave us trouble. In what way is the British colony superior to the Russian one? Take your time."

Aunt Hilda turned her attention to the rest of us. "Standing orders apply: Two at a time, one being armed. Deety and I will cut and wrap sandwiches, make coffee and prepare a snack for growing boys who can't remember a bounteous luncheon three hours ago. One guard at all times at the car. Bertie, I'm assigning you that duty. You know how to use a rifle?"

Zebadiah said, "You're arming him?"

"Chief Pilot, I assume that you are questioning my judgment. If you convince me that I am wrong, there will be a new captain even more quickly than I had planned. May I have your reason?"

"Sharpie, I didn't mean to get your feathers up."

"Not at all, Zebbie. Why are you surprised that I intend to use Bertie as guard?"

"Ten minutes ago you had me do a skin search to make sure he wasn't armed. Now you are about to hand him a gun."

"Ten minutes ago he had not given parole."

Bertie said hastily, "Zeb is right, Hilda-Captain Hilda; Zeb has no reason to trust me. I don't want to be a bone of contention!"

I'm still trying to figure out whether Aunt Hilda is more logical than other people or is a complete sophist. She gave Bertie a freeze, looking him up and down. "Smythe-Carstairs, your opinion was neither asked nor wanted."

Bertie turned pink. "Sorry, Ma'am."

"Although you were a person of some importance in your own land, you are now something between a prisoner and a nuisance. I am trying to give you the dignity of crew member pro tern. Hold your tongue. Zebbie, what were you going to say?"

"Shucks, if you aren't afraid to have him with a gun at your back, I'm not. No offense intended, Bertie."

"None taken, Zeb."

"Zebbie, please assure yourself that Bertie can handle a rifle, and that he knows what to shoot at and when not to shoot, before you turn the guard over to him. Put the other rifle at the door for bush patrol. Bertie, watch and listen. Gay Deceiver, open your doors."

Our Smart Girl opened wide. "Gay Deceiver, close your doors." Gay complied. "Bertie," Aunt Hilda went on, "you do it."

Of course he failed-and failed again on other voice programs. The Hillbilly explained that it took me a tedious time with special equipment to cause this autopilot to respond to a particular human voice. "Bertie, go back and explain to Squeaky; make him understand that I saved his life. This car can be driven in three modes. Two Squeaky can't use at all; the third would kill him as dead as Caesar."

"Plus a fourth hazard," added my husband. "Anybody who doesn't understand the Smart Girl but tries to take her apart to see what makes her tick would find himself scattered over a couple of counties."

"Booby-trapped, Zebadiah?" I asked. "I hadn't known it."

"No. But juice is very unfriendly to anybody who doesn't understand it."

"Come and get it!" The snack Aunt Hilda offered was a much-stuffed omelet. "Bertie, place your gun near you, locked. Between bites, you can tell us why your colony is worth defending. By us, I mean. For you, it's duty."

"Captain Hilda, I've done some soul-searching. I daresay that, in the main, we and the Russians are much the same, prison colonies with military governors. Perhaps, in a hundred years, it won't matter. Although I see us as morally superior."

"How, Bertie?"

"A Russian might see this differently. Our transportees are malefactors under our laws-but once here, they are as free as other Englishmen. Oh, they must wear the Broad Arrow until discharged-but at home they would wear it in a grim prison. The Russian prisoners are, if our intelligence is correct, the people they used to send to the Siberian salt mines. Political prisoners. They are serfs but I am told that most of them were not serfs in Russia. Whether they are treated better or worse than serfs in Russia I do not know. But one thing I do know. They work their fields with men; we work ours with wogs."

"And whip them!" Suddenly I was angry.

We had an argument, Bertie maintaining that the whips were not used unnecessarily, I asserting that I had seen it with my own eyes.

I guess he won, as he told us that they had to muzzle the beasts in weed fields, or they would stuff themselves on it, pass out, wake somewhat, do it again, and starve-but the muzzles were designed to allow them to chew a blade at a time all day long, to keep them happy. "The raw weed is addictive, to wog and man. We won't allow a man to work in the fields more than three months at a time. . . and pull him out if he can't pass the

weekly medical tests. As for wogs, Deety-yes, we exploit them. Human beings exploit horses, cattle, sheep, poultry, and other breeds. Are you vegetarian?"

I admitted I was not. "But I don't want to eat wogs!"

"Nor do we. In Windsor colony wog meat goes only to wogs, and wogs don't care. In the wild they eat their own dead, kill and eat their aged. Captain Hilda, that's all the defense I can offer. I admit that it doesn't sound as strong as I had always believed."

"Captain, I'd like to put one to Bertie."

"Jacob, I treasure your thoughts."

"Bertie, would you polish off the Russians if you could?"

Bertie snorted. "That's academic, Doctor. I don't command the force it would take. I can't set up a string of stockpiles-and wouldn't know what to do with them if I could; I don't have the troops or 'thopters. But I must add: If my King tells me to fight, I will fight."

Aunt Hilda told Bertie to wash dishes with Pop sent along as guard. As soon as they started down, Aunt Hilda said, "We are going to do it, to a maximum cost of one power pack. Deety, start working on a program stringing together the dumps we located last night."

"Already have," I told her. "In my head. Last night. To put me to sleep. You want it preprogrammed? I would rather tell Gay each bounce, I would."

"Do it your way, hon. The purpose in sending Bertie to wash dishes and Jacob to guard him was to get them out of the way while I rig a frameup. At the end of the coming run, we drop Bertie and bounce. . . and at that instant I cease to be captain. I want to hold the election now-a one-ballot railroad. I will ask for nominations. Zebbie, you nominate Jacob. Deety, you don't need to say anything but speak if you wish. If Jacob nominates either of you, don't argue. I'll rig it so that Bertie declares the ballots. If you two are with me, the only surprise will be that fourth vote. Three for Jacob, and let's all write 'Jacob,' not 'Pop' or 'Jake,' and one for the dark horse. Are you with me?"

"Wait a half, Sharpie. Why not give Deety a crack at it?"

"Not me!"

"Deety should have the experience, but, please, Zebbie, not this time. Jacob has given me a dreadful time. Endless insubordination. I want to pass him on to Deety well tenderized. Deety ought not to have to put up with her father second-guessing her decisions-and, if you two help, she won't have to. I want to give my beloved the goddamndest 'white mutiny' ever, one that he will remember with shudders and never again give a skipper any lip."

"Sounds good," I agreed, "but I don't know what a 'white mutiny' is."

"Sweetheart," my husband told me, "it's killing him with kindness. He says 'Frog,' we hop. Utter and literal obedience."

"This he won't like? Pop will love it!"

"So? Would you like to command zombies who never make suggestions and carry out orders literally without a grain of common sense?"

Fifteen minutes later Bertie read off: "Jacob' and this reads 'Jacob' and so does this one, that seems to settle it. But here is one, folded: 'A bunch of smarties, you three. Think I didn't guess why you sent me down to ride shot-

gun? Very well, I vote for myself!' It is signed 'Jake.' Madame Speaker, is that valid?"

"Quite. Jacob, my last order will be liftoff after we drop Bertie."

Bertie said, "Jake, I think congratulations are in order."

"Pipe down! All hands, prepare for space."

"A piece of cake," Bertie called it. We started at the easternmost dump, worked west. Pop out at four klicks and dive, a dry run to size up the target; where wood alcohol was stored, ornithopters on the ground and how arranged. . . while Gay ululated from intensity six to eight. Frightfulness. I did not let it go up to ten because it wasn't intended to damage but to send anyone on target scattering.

Zebadiah's idea: "Captain, I've got nothing against Russians. My only purpose is to burn their fuel and their flaphappies to make it difficult to attack our friends-and I don't mean you big brass, Bertie. I mean the transportee maid who brought us tea this morning, and Brian Bean, and Mr. Wheatstone who was a top surgeon before some fool judge slammed him and is now doing his best for wogs, and the chef at the officers' club, and five cons who drove that sillywagon, and dozens more who smiled when they could have scowled. I don't want them killed or enslaved; I want them to have their chance. Governor, England is slapping the Broad Arrow on some of your best potential- you English will live to regret it."

"You could be right, Zeb,"

"I don't want to kill Russians, either. Could be most of them are decent blokes. Each strike will be a double run-one pass to scatter 'em, a second to destroy the dump. Captain, if that doesn't suit you, find another gunner."

Aunt Hilda said, "Astrogator."

"Captain."

"Strike as described by Chief Pilot. Take the conn. Attack."

At the first target we lingered after the strike bounce. The dry pass did show them running away-they could hear us clear in their bones. Those subsonics are so horrid I keyed Gay to kill the noise at code-word "Bounce"- and did not use it on the strike pass.

Zebadiah made strikes from bearings planned to take out as many 'thopters as possible while setting fire to fuel.

From four klicks the first strike looked good. The dump was burning, 'thopters he had hit showed smoke, and one that he had not hit was burning. Splashed by flaming methanol, I suppose.

If that first target was indication, in thirty-four minutes the Russians lost all fuel and about 70% of the deployed flaphappies. I took us up high after the last. "Next stop, Windsor City."

"I'm taking the conn, Astrogator. Bertie, don't forget my little ring for Betty."

"I'll give it to her in the morning."

"Good," Captain Hilda said. "Unbelt, crowd past Jacob, place yourself against the door-feet on deck, chest against door. Jacob, push against the small of his back. Bertie, when the door opens, dive and roll clear."

They positioned themselves. "Gay Parade Ground Gay Deceiver open starboard door. . . Gay Deceiver close doors, GayBounce, GayBounce! Jacob, do you relieve me?"

"Beloved, I relieve you. Ten minima H axis transit-and executed. All hands, unbelt."

I unbuckled with extreme speed~ and clumsiness, getting Pop in the chin with my foot.

"Deety! Watch where you're going!"

"I'm sorry, Captain. I'm out of practice with free fall."

"You've been in free fall every day!"

"Yes, Captain. I've been in free fall every day, belted down."

"Pipe down! Hilda, don't cover the instrument board. Hold onto something. No, not me, damn it. Zeb! Grab something and catch Hilda!"

"Roger Wilco, Captain! Right away!" My husband snagged Aunt Hilda, grabbed a seat belt with his other hand, trapped our captain against the dogs of the bulkhead door with his buttocks. "What now, sir!"

"Get your goddam fanny out of my face!"

"Sorry, sir," Zebadiah answered humbly while turning and digging an elbow into Pop's ribs. I closed in from the other side and we had Pop trapped again- ballet and trampoline make a fine background for free fall. Zebadiah went on cheerfully, "What shall we do now, sir?"

Pop didn't answer. From watching his lips I saw that he was counting backwards, silently, in German. That's stage three.

Then he said quietly, "Zeb, get into the copilot's seat and belt down."

"Aye aye, sir." Zebadiah did so.

Pop snatched Hilda while hanging onto a dog. "Deety, belt down in the chief pilot's seat."

"Roger Wilco, Captain"-I did so.

"My dear, I want you behind Deety. Do you need help?"

"Yes, thank you, Captain; it's sweet of you to offer." White mutiny? The Hillbilly is about as helpless as Zebadiah but thinks God created men to pamper women. I've heard less reasonable philosophies.

After "helping" Hilda, Pop strapped down in the starboard after seat. "All hands! We have moved clockwise ninety degrees. I am now captain. Hilda, you are astrogator and second-in-command. Deety, you are chief pilot. Zeb, you are copilot. In order of seniority, any questions?"

The Hillbilly said in a small voice, "As second-in-command I am required to advise the Captain-"

"Certain circumstances. Speak up."

"Captain, I know very little about astrogation."

"That's why you have the job. You will seek advice from Deety as needed, both of you seek advice from Zeb when necessary-and if all three of you are stumped, I will tackle it and be responsible for mistakes. No burden, the
Captain is always responsible for all mistakes. When in doubt, do not hesitate to consult me.

"Deety, you have not driven this car in atmosphere. But you are a competent, decisive, and skillful driver of duos"-I am, Pop?-you're years late in saying so-"and we have come this high to give you time to acquaint yourself with it. I placed Zeb by you to coach you and, in time, to report to me that you are fully qualified." Pop smiled. "Fortunately, should you get into trouble, we have programs that will get you out instantly such as 'Gay Bounce'-"

Gay bounced.

Pop did not notice but I had my eye on radar distance since learning that I was responsible. Pop, who invented those safety scrams? Think hard. Hint:
One of your offspring.

"Zeb, you know the knobs and scales et cetera of the controls we refer to as the verniers but you have not had time to practice. Now you will practice until you can handle anything, by eye, or by clicks in the dark. Permit me to pay you this compliment: You will give yourself your own final examination. When you feel ready, tell me and I will have the Astrogator log it.

"Advice to future captains-I will not be happy until all are competent in each of four seats, and all feel easy in all twenty-five possible arrangements-"

"Twenty-four, Pop," I blurted out. I hastily added, "Sorry, Captain-'twentyfive."

Pop has a terrible time with kitchen arithmetic; it has been so long since he has done any. He will pick up a hand computer to discover 2x3=6; I've seen him do it.

He stared at me, lips moving slightly. At last he said, "Chief Pilot."

"Captain."

"You are ordered to correct me when I make a mistake. 'Twenty-four' permutations, certainly."

"Sir, may the Chief Pilot have more information before she answers RogerWilco?"

"Fire away!"

"Captain, what categories of mistakes?"

"Eh? Any sort! A mistake is a mistake. Daughter, are you baiting me?"

"No, Captain. I am unable to acknowledge your order as I do not understand it. 'A mistake is a mistake' is semantically null. If I see you about to sugar your coffee twice shall I-"

"Tell me! Of course."

"If I see you treating your wife unjustly shall I-"

"Wait a moment! Even if I did or have-which I decline to stipulate-it is not proper for you to interfere."

"Yes, sir. We've established that there are two sets. But the Captain has not defined the sets and the Chief Pilot lacks authority to do so. May I resPectfully suggest that the Captain take notice of the quandary, then reframe the order at a time of his choosing. . . and in the meantime permit the Chief Pilot not to correct the Captain's mistakes?"

Zebadiah winked at me with his head turned so that I saw it but Pop could not.

Pop fumed, complaining that I wasn't showing common sense and, worse, I had broken his train of thought. He finally got around to a definition at about 8th grade level: I was to correct him only in errors involving figures or related symbols such as angles. (On your own head be it, Pop!) I gave him Roger-Wilco.

"In fact," he went on expansively, "it may be my duty to see that this training course is completed before, with great relief, I turn this seat over to my successor."

(I started figuring how many children I would have by then and decided to look for ways to hike up the "white mutiny.")

"Captain?"

"Astrogator."

"This advice concerns a mistake that could occur in the near future. I assume that the Captain has the conn?"

"Hilda, I have the conn. Speak up."

"We are falling, sir. I advise placing us in orbit."

I sighed with relief, as radar distance I was beginning to think of as Habove-G and did not like our closing rate.

Pop said, "Surely, put us in orbit. Take the conn and do it. Good practice. Deety can show you how. Or Zeb."

"Aye aye, sir. I have the conn. Chief Pilot, keep her level with respect to planet."

"Roger. Level now."

"Copilot, add speed vector positive axis L three point six klicks per second."

"Uh . . . set!"

"Hold it!" Pop unbelted, steadied himself by Zebadiah's chair, checked the setting. "Okay. Execute!"

"Excuse me, Captain," Zebadiah said, "but was that order directed at me or the Astrogator?"

Pop opened his mouth-then turned red. "Astrogator, I am satisfied with your solution and the setting. Please have the maneuver executed."

"Aye aye, sir. Execute!"

What Pop planned seemed reasonable. "So far we have used juice, supplies, and four days' time, and have merely established that there are at least two analogs of our universe, one quantum and ten quanta away on Tau axis. The latter has beasts-wogs-that are not the vermin we fled from, but-according to Hilda-closely related. To me, this makes Tau axis not our best place to seek a new home.

"Zebadiah has suggested that we sample the universes available by rotation rather than translation-six axes taken four at a time-before we search Teh axis. Let me remind you that we could die of old age searching Teh axis alone. I will decide but I will listen to arguments pro or con."

Twenty-three minutes later Aunt Hilda shrilled, "Copilot, by plan, as set- Rotate!"

XXX

"Difference physical laws, a different topology."

Jacob:

We rotated to. . . Nowhere- So it seemed. Free fall and utter blackness- The cabin held only the faint

radiance from the instruments.

My daughter said in hushed tones, "Captain! May I turn on inside lights?" This was a time to establish discipline and doctrine. "Permission refused.

Copilot, I would like to see in all directions."

"Yes, sir," Zeb acknowledged.

After a few moments I added, "Copilot? Why are you waiting?"

"I am awaiting orders, sir."

"What the hell, Zeb? Get with it! I said I wanted to see in all directions. We have preprograms for that."

"Yes, Captain."

"Well? Why aren't you using them? Can't you carry out orders?" (I was amazed at Zeb.)

"Captain, I have not as yet received any orders, and I am not at the conn."

I started to answer sharply-and bit down on it. Precisely what had I said? I recalled that the autopilot stayed in recording mode during maneuvers; I could play back the last few minutes-

-and decided not to. We were wasting time and it was possible that I had not expressed myself in the form of a direct order. Nevertheless I could not ignore Zeb's pigheaded behavior. "Copilot, I am aware that I have not given you direct orders. However, it is customary to treat a captain's requests as politely worded orders."

"Yes, sir."

"Well? God damn it, why don't-"

"Captain! Captain Jacob! Please listen! Please!" I took a deep breath. "What is it, Hilda?"

"Captain, I am required to advise you."

"Eh? Advise away-but be quick about it."

"Captain, you have given the Copilot neither orders nor requests. The autopilot's record will confirm this. You mentioned preprograms-but voice programs are not normally handled by the Copilot."

"I can order the Copilot to use a voice program." Hilda did not answer. Again I waited, then said, "Well?" Then I said, "Astrogator, you did not answer me." "Sorry, Captain. Answer what?"

"My question."

"Captain, I was not aware that you had asked me a question. Would you mind repeating it?"

"Oh, forget it, forget it! Chief Pilot!"

"Captain."

"Deety, what's the voice program to rotate us a full circle around W axis?"

"Shall I spell it, sir? S.G. is awake."

"No, do it. Turn out your instrument lights. Pilots watch forward, Captain and Astrogator will watch the sides. Do it. Execute."

Instrument lights dimmed to zero, leaving us in the darkest dark I have ever experienced. I heard a repressed moan and felt a burst of sympathy for my daughter; she had never liked total darkness. But she carried out my orders:

"Gay Deceiver, Tumbling Pigeon."

"Forward somersault-whee!"

"Execute."

I felt pressure against my belts-being forward of the center of mass we were starting a gentle outside loop. I started counting seconds as I recalled that this program took twenty seconds.

I had reached seventy-eight seconds and was beginning to wonder when Deety announced "Twenty seconds" as the autopilot announced, "End of program."

Deety said, "You're a Smart Girl, Gay."

"If I were smart, would I be doing this? Over."

"Roger and out, Gay. Captain, 'I request permission to switch on cabin lights."

"Permission granted. Report observations. Copilot?"

"Skipper, I saw nothing."

"Deety?"

"Nothing."

"Hilda?"

"Jacob, I didn't see anything. Can't we get out of this universe? It stinks."

"That stink is me," our copilot said. "The reek of fear. Captain, of what use is an empty universe?"

"Zeb, 'empty universe' is a meaningless expression. Space-time implies mass-energy, and vice versa."

"Captain, it looks empty to me."

"And to me. I'm faced by a dilemma in theory. Is the mass in this spacetime so far away that we can't see it? Or is it in a state of 'Cold Death,' level entropy? Or did we create this universe by rotating?"

"Create it'-.---Huh?"

"A possibility," I pointed out. "If we are the only mass in this universe, then this universe had no existence until we created it by rotation. But it will not collapse when we rotate out, because we will be leaving behind quanta we are radiating."

"Hmm- Captain, I'm bothered by something else. We started from universe-ten and made one ninety-degree rotation. Correct?"

"Yes. We rotated around 'x' and thereby moved each of the other five axes ninety degrees. We are now experiencing duration along 'y.' Teh and 'z' are spatial coordinates now, and 'x' remains spatial because we rotated on it. Tau and 't' are now null, unused."

"Mmm- Deety, what Greenwich time is it?" Zeb glanced at the instrument board.

"Uh- Seventeen: thirteen: oh-nine."

"Smart Girl says you are twenty seconds slow." Zeb looked at his navigator's watch. "But my watch splits the difference. How many minutes since we left Windsor City?"

"Thirty-nine minutes, thirteen seconds. Ask me a hard one."

"I'm going to ask your father a hard one. Captain, if you tell G.D. to scram to Windsor P.G. right now mark!-what will the Greenwich time be?"

"Look at your clock. About a quarter past seventeen hundred."

"But you told me that, since rotating, we've been experiencing duration along 'y' axis."

"But- Oh! Zeb, I'm stupid. No time has elapsed on 't' axis since the instant we rotated If we reversed the rotation, we would go back to that exact instant."

"Deety hon?" Zeb asked. "Do you agree?"

(I felt annoyed that my son-in-law consulted my daughter as to the correctness of my professional opinion-then suppressed the thought. Deety will always be my little girl, which makes it hard for me to remember that she is also my professional colleague.)

My daughter suddenly looked upset. "I- Pop! That first trip to the world Without the letter 'J'-time did pass, it did!"

Zeb said gently, "But that was translation, Deety. You continued to experience duration along 't' axis."

Deety thought about it, then said sorrowfully, "Zebadiah, I no longer know What time it is. Pop is correct; we experience duration on one axis only, and that is now 'y' axis. We can't experience duration on two axes at once." She heaved a sigh. "Will I ever get the clock in my head set right again?"

"Sure you will," my son-in-law reassured her. "Like crossing a time zone. Shortly after we grounded on Mars-ten, your head started keeping time both in Greenwich and in Mars Touchdown meridian time, even though Touchdown time kept falling farther behind hour after hour. A simple index correction won't bother you. My sweet, you don't realize how smart you are."

Zeb patted her hand, then looked around at me. "Captain, may I propose a change in schedule?"

"Let's hear it."

"Sir, I would like two sequences. First, go back to Windsor P.G. with the verniers preset for a hundred thousand klicks straight up, and execute at once. Then translate back to our own universe-zero-but not to Earth-zero. Instead, set up an orbit around Mars-zero. That orbit becomes our base of operations."

I said, "Simple enough. But why?"

"So that we will always have somewhere to go back to. Deety can write us a program that will place us back in that orbit. Something like G, A, Y, H, 0, M, E, but based on Mars-zero-with elbow room."

I asked, "Daughter, can you write such a program?"

"I think so, Pop. An emergency scram? G, A, Y, plus something?" Deety paused. "Sagan.' G, A, Y, S, A, G, A, N means to return to orbit around Marszero. Built-in mnemonic."

"Satisfactory. Is that all, Copilot?"

"No, sir. Our schedule breaks up naturally into a five group, a four group, a three, a two, and a one. I would like to add to each group a return to orbit around Mars-zero. Captain, if you were on the verniers, I wouldn't worry; you know them so well. I don't. If I do fifteen rotations, one right after the other, I'm afraid I'll make some tiny mistake and we'll wind up in analog-AndromedaNebula in universe a thousand-and-two on 'z' axis, with no idea how wa got there or how to get home."

"Copilot, you worry too much."

"Probably. Captain, my whole life is based on being chicken at every opportunity. I'll breathe easier if I come back to a familiar orbit at the end of each group. . . and know that the next group is one less. It won't take ten minutes longer to do it my way and I'll be less likely to make mistakes. But tackling all fifteen at a slug scares me."

"Captain Jacob-"

"Not now, Hilda. I must settle this with-"

"Captain, I am required to advise you."

"Eh? All right, all right! Make it snappy."

"You know-we all know-that Zebbie's premonitions must not be ignored. I advise you officially- Gay Deceiver, record this 'I-tell-you-three-times."

"Hilda, I hear you three times."

"Captain Jacob, I, your second-in-command, advise you officially to revise the schedule of rotations in the fashion recommended by the copilot. End of I-tell-you-three-times."

(Have you ever found yourself boxed in? Damn it, I intended to let Zeb do it his way; I am not unreasonable. I can't say that I believe in Zeb's premonitions; I suspect that he is simply a man with extremely fast reflexes. But both our wives believe in them and Zeb does himself. I found myself faced with mutiny unless I did exactly what I had intended to do anyway! How does one describe 50 ironical a situation?)

Shortly I found myself saying, "Copilot, by revised schedule, set second rotation of first group." We were in "Sagan" orbit around Mars of Universezero (i.e., the one we had grown up in: Galactic coordinates X0, Y0, Z0, & t0- Earth-zero, Mars-zero, Sun-zero, Universe-zero). I tend to think of this as the "real" universe even though I am aware that there is no evidence or mathematical theory for preferring one frame of reference over another-to do so is egocentric provincialism at its worst. But I offer this in mitigation: for us it was simplest and thereby helped us to avoid getting lost.

"Set," Copilot Zeb reported. I went forward, checked the setting (rotation around 'y,' with 'z' and 't' dropping out, null), then returned to my seat. "We can spare a minute to look at Mars. Deety, tilt the nose down to let us look. Do you know how?"

"Like this, Captain?"

"Right," I agreed. "Keep it up."

Deety raised the craft's nose and swung right, catching me with belts not yet fastened. I said forcefully, "Deety! What the hell are you doing?" while I floundered and grabbed.

"Sir, you ordered 'right' and 'up," Deety answered.

"I did no such thing!"

"But, Jacob-Captain-you did tell her that, I heard you."

"Hilda, you keep out of this!"

Hilda answered stiffly, "Captain, I respectfully request that you either relieve me of the conn, or that you give orders to my pilots through me."

"Damn it, you don't have the conn. I do."

"Then the Captain neglected to relieve me."

"Uh- Take the conn! Carry out the planned schedule."

"Aye aye, sir. Chief Pilot, orient the car for best view of Mars."

"Aye aye, Ma'am!"

I was fuming, not looking, hardly listening. I had said to Deety, All right, keep on with it-or had I? Gay could play it back. . . and could also check on Hilda's incredible allegation. If I were wrong (I felt certain I was not!), I would face up to it like a man and-Zeb broke in on my thoughts:

Captain, do you care what attitude this craft is in at rotation?"

"No. Only for transitions."

"Hmm- Then it follows as the night from day thou canst not then predict the attitude we'll be in whenever we arrive in a new universe."

Only with respect to our arbitrary zero reference frame. Why should it matter?"

"It Won't as long as we arrive with plenty of room. I've been noodling how to be sure of that. I don't see an answer. But I don't want to try translations
or rotations parked on the ground. I hope the Captain won't order any."

"Copilot, I have no plans to. Astrogator, haven't we had enough sightseeing?"

"Very well, Captain," my wife acknowledged. "Deety, secure those binoculars. Zebbie, immediately after each rotation, set next rotation and report 'Set.' Deety, after

each rotation, use .voice program to put us through one Pigeon-Tumble with all lights out. I will watch to port, Deety forward, Zebbie starboard. Questions?"

I said, "Astrogator, you did not assign me a sector."

"I have no authority to assign duties to the Captain. Does the Captain wish to select a sector and assume responsibility for it?"

She waited. I said hastily, "No. Perhaps it will be best for me to watch in all directions. General supervision."

"Very well, Captain. Copilot-execute."

Again we rotated into darkness. Deety switched out all lights. Zeb reported, "Set!"

"Stop!" I called out. I added, "Zeb, you reported 'Set' in total darkness. How did you set it?"

"Rotation around 'z' axis, with 'x' and 'y' dropping out. Duration along Teh. Third combo first group, sir."

"I mean, 'How did you do it in darkness?' By clicks?"

"Captain, I didn't do it in darkness."

I said, "It was pitch dark when you reported 'Set."

"So it was, Captain."

"It's not necessary to call me 'Captain' every ten seconds. I want a straight answer. So far you have reported that you set it in darkness and that you set it with lights on."

"No, sir."

"God damn it, you just did!"

"Captain, I protest your swearing at me. I request that my protest be logged."

"Zeb, you are-" I shut up. I counted thirty in French under my breath, by which time I was ready to speak. "Zeb, I'm sorry that my language offended you. But I am still trying to find out what you did and how. Will you please tell me, in simple language?"

"Yes, sir. I set the third rotation by clicks-"

"But you said the lights were on-"

"The lights were on. I set the rotation with my eyes closed-"

"For God's sake, why?"

"For practice. I set them with eyes closed. Then I check to see whether it matches what I intended to set. Deety leaves the light on until I give her the 'kill it' sign. Then she kills the glim and does her act."

"Zeb, there wasn't time to do it that way."

Zeb gave a most irritating grin. "Captain, I'm fairly quick. So is Deety." I said, "Perhaps I had better check the setting."

Zeb made no answer; both women kept still. I began to wonder what everyone was waiting on. . . then realized that I was the "what." Unbelt and check
on Zeb's setting? I remembered that irritating grin. So I said, "Deety, carry out the tumbling routine."

The somersault completed, I asked, "Anyone see anything?" Hilda said, "I. . . think so. Captain, could we do that again?" "Do it, Deety," I ordered.

Pigeon-Tumble resumed; Hilda suddenly said, "There!" and Deety snapped, "GayDeceiverStop!"

I asked, "Hilda, do you still see it?"

"Yes, Jacob. A fuzzy star. You can see it if I pull back and you lean forward."

I suppose we each did so-for I spotted something. "I see it! Zeb-the binoculars, please."

An invisible hand pushed them against my neck. I got them lined up with difficulty, got that faint light, focused with great care. "It looks like a lenticular galaxy seen not quite edge on. Or it might be a family of galaxies. Whatever it is, it is a long way off. Millions of light-years-I have no way of guessing."

"Can we reach it by transition?" asked Zeb.

"Possibly. I would set middle range on 'six,' then keep punching until it showed change in width. It might be possible to reach it in an hour or so. Do you want to look at it?"

"From your description, I don't think so," Zeb answered. "That is fossil light-isn't it?"

"Eh? Yes, the light has been traveling for millions of years."

"That's my point, Captain. We might find that those stars had burned out. Fossil light doesn't tell us anything we can use. Let's designate this 'Last Chance' and get out."

Eminently sensible- "Stand by to rotate. Copilot-execute!"

Blinding light- "Zeb! Rotate! Execute!"

Suddenly we were in a starry void, almost homelike. I heaved a sigh of relief. "Zeb, what did we fall into?"

"I don't know, Captain." He added, "I had my eyes closed, setting the next rotation by clicks. So I didn't get dazzled. But I never had a chance to check my setting by eyesight, either; I rotated at once."

"You got us out-thanks. I did get dazzled; I've got purple blotches in front of my eyes. New standing order: At each rotation all hands close eyes and duck heads for that moment needed to be sure that we have not again run into dazzle. Zeb, that need not slow you up since you are setting by touch and click anyhow-but if we do hit dazzle, rotate us out; don't wait for my orders. And-All Hands!-we are all free at all times to use any of the escape programs to get us out of danger."

"Next rotation set, Captain."

"Thank you, Copilot. Hilda, do you or Deety have any notion as to what we fell into?"

"No, Captain," my daughter answered.

"Captain Jacob, I have three hypotheses, none worth much."

"Let others judge that, my dear."

"Interior of a glObal star cluster-or near the nucleus of a galaxy, or-possibly-the early part of an expanding universe when new stars are almost rubbing shoulders."

"Hmm- Real garden spots. Zeb, could we have picked up excessive radiation?"

"Captain, the shell of this buggy is opaque to most radiation, and that windscreen is heavily leaded-but no way to tell."

"Zebadiah, if the film in the camera is ruined, some heavy stuff got through. If the next picture is okay, we're probably okay."

Hilda said, "I'm glad you thought of that, Deety. I don't like the idea of radiation while I'm pregnant. You, too, hon."

"Aunt Hilda, we're almost completely shielded where it matters. It could addle our brains but not our bellies."

"Hilda, do you wish to shoot one frame?" I asked.

"No, Jacob, it would waste film."

"As you wish. My eyes are coming back. Deety, put us through one PigeonTumble."

My daughter did so; I saw nothing. "Report! Hilda?"

"Lots of big beautiful stars but nothing close."

"Me, too, Pop-but what a beautiful sky!"

"Null report, Captain."

"Hilda, mark it down as 'promising.' All hands, stand by for fifth rotation. Keep eyes closed and heads down. Execute!"

Zeb gasped. "Where in Hell are we?"

"In Hell, maybe, Zebbie."

"Captain!"

"Hilda may not be too far off," I answered. "It's something I could not have believed three weeks ago: some sort of inside-out universe."

"Pellucidar!" said Deety.

"No, my dear daughter. One: We are not inside our home planet; we are in another universe. Two: This universe has physical laws that differ from our own. The inside of a spherical shell cannot have a gravitational field by the laws of our universe. Yet I see a river and we seem to be falling toward it. Deety, are we in air or in vacuo?"

Deety wiggled the controls. "Got some air. Probably could get support with wings fully spread."

"Then do so." Deety brought the car into a dead-stick glide.

Zeb said grimly, "I don't want to homestead here! So big-ten thousand kilometers across at a guess. Yet it's all inside. No sky! No horizons. Never again a night sprinkled with stars. That light in the center- Looks like our sun but it's too small, much too small. When we leave, I don't want to come back; the god who takes care of fools and explorers let us arrive in empty space instead of maybe ten kilometers underground. But next time- I hate to think about it."

I said, "It may not have been luck, Zeb, but logical necessity."

"Huh. You've lost me, Captain."

"You're thinking of this as a spherical shell. But there is no basis for assuming that it has an outside."

"What? Endless millions of light-years of solid rock?"

"No, no! Nothing. By 'nothing' I do not mean space; I mean a total absence of existence of any sort. Different physical laws, a different topology. We may be seeing the totality of this universe. A small universe with a different sort of closed space."

"I can't visualize it, Jake."

"Deety, my dear, rephrase it for your husband."

"I'll try, Pop. Zebadiah, the geometry of this place may require different postulates from those that work back home. I'm sure you have played with Möbius strips-"

"A surface with only one side, one edge. But this is a sphere."

"Pop is saying that it may be a sphere with only one side, the inside. Have you ever tried to figure out a Klein bottle?"

"I got cross-eyed and a headache."

"This could be a Klein-bottle sort of thing. It might turn out that if you tunneled straight down anywhere down there, you would emerge at the opposite point, still inside. And that straight line might be shorter than the distance across. Maybe much shorter."

"Point three-one-eight-three-zero-nine is the ratio by the simplest postulates," I agreed. "But the geometry may not be that simple. However, Zeb, assuming that this is a total universe, our chances of arriving in open space were far greater than the chance of conflicting with a mass. But I would not wish to homestead here-pretty as it is. Nevertheless we might check for obstetricians."

"No obstetricians," Zeb answered firmly.

"Why?" I demanded.

"If there are human beings here, they do not have an advanced culture. Deety has been following that river. Did you notice where that other river joined it? Also look ahead where it meets the sea. No cities. No warehouses. No river traffic. No air traffic, no signs of roads. Yet this is choice real estate. Therefore, no advanced culture anywhere and a small population, if any. If anyone wants to refute me, please do so in the next two minutes; Deety can't hold this heap in the air much longer without using juice."

"I check you, Zebbie. They might be so advanced that they can make the whole joint look like a park. I wouldn't bet on it."

"Deety?" I asked.

"Aunt Hilda is right, Captain. But it's so pretty!"

"Hilda, expend one film, as a souvenir. Then we rotate." My daughter nosed the car down to permit a better picture.

A click- "Got it!" Hilda cried. "GaySagan!"

Mars of Universe-zero lay to starboard. Zeb sighed. "I'm glad to be out of there. Sharpie, did you get a picture?"

"Can't rush it," my wife answered. "Nnnn, yup, picture coming."

"Good!"

"Zebbie, I thought you didn't like that inside-out world?"

"I don't. If that picture is sharp, you two knocked-up broads weren't hit by radiation where it counts. Any fogging?"

"No, Zebbie, and brighter color every second. Here-look."

Zeb brushed it aside. "My sole interest is in radiation. Captain, I'm having misgivings. We've tried five out of fifteen and only one was even vaguely homelike. The pickings have been slim and the dangers excessive. But we know that Earth analogs Tau and Teh axes are Earthlike-"

"With monsters," put in Hilda.

"Tau axis, probably. We haven't explored Teh axis. Jake, are we justified in exposing our wives to dangers we can't imagine?"

"In a moment, Copilot. Astrogator, why did you rotate? I don't think I ordered it. I have been trying to run a taut ship."

"So have I, Captain. I must ask to be relieved as astrogator."

"I am sorry to say that I have been thinking along the same lines, my dearest. But you had better explain."

"Captain, three times you have replaced me at the conn without relieving me. The last time I let it continue, wondering and waiting. Just now we were losing altitude, dangerously. So I acted. Now I ask to be relieved."

Hilda seemed calm and not angry. But resolved. Had I really done anything out of line? It did not seem so to me.

"Zeb, have I been overriding the officer at the conn?"

Zeb took too long to answer. "Captain, this is a time when a man must insist on written orders. I will make a written reply."

"Hmm-" I said. "I think you have replied. Deety, what do you think? More written orders?"

"I don't need written orders. Pop, you've been utterly stinking!"

"You really feel so?"

"I know so. Aunt Hilda is right; you are dead wrong. She understated the case. You assign her responsibilities-then ignore her. Just now she carried out her assigned duties-and you chewed her out for it. Of course she wants to be relieved."

My daughter took a deep breath and went on: "And you bawled her out for ordering a scram escape. Twenty-seven minutes ago you said-and I quote: 'All Hands!-we are all free at all times to use any of the escape programs to get us out of danger.' End of quotation. Pop, how can you expect orders to be obeyed when you can't remember what orders you've given? Nevertheless, we have obeyed you, every time and no back talk-and we've all caught hell. Aunt Hilda caught the most-but Zebadiah and I caught quite a bit. Pop, you've been- I won't say it, I won't!"

I looked out the port at Mars for long unhappy minutes. Then I turned around. "I've no choice but to resign. Effective as I ground her. Family, I must admit to great humiliation. I had thought that I was doing quite well. Uh, back to our streamside, I think. Gay-"

"GayDeceiverOverride! Not on your tintype! You'll serve as long as I did- not a second less! But Sharpie is right in refusing to take the conn under you; you've been mistreating her. Despite being a colonel, you have never learned that you can't assign responsibility without delegating authority to match- and then respect it. Jake, you're a lousy boss. We're going to keep you in the hot seat until you learn better. But there's no reason for Sharpie to resign over your failings."

"I still have something to say," said my daughter.

"Deety," Zeb said forcefully, "leave well enough alone!"

"Zebadiah, this is to ~ou quite as much-or more-as it is to Pop. Complaints of another sort."

My son-in-law looked startled. "Oh. Sorry. You have the floor."

XXXI

"-the first ghosts ever to search for an obstetrician."

Hilda:

If Zebbie and Jacob have a fault in common, it is overprotectiveness. Having always been the runt, I am habitually willing to accept protection. But Deety ~ rebels.

When Zebbie asked Jacob whether or not they were justified in exposing us to unknown dangers, Deety stuck her oar in-and Zebbie tried to hush her.

Zebbie should have known better.

But he is barely getting acquainted with her, whereas I've known her since her diaper days. Once when Deety was, oh, possibly four, I started to tie her shoes. She pulled away. "Deety do!" she announced indignantly-and Deety did: on one shoe a loose half bow that came apart almost at once, on the other a Gordian knot that required the Alexandrian solution.

It's been "Deety do!" ever since, backed by genius and indomitable will.

Deety told him, "Zebadiah, concerning completing this schedule: Is there some reason to exclude Hilda and me from the decision?"

"Damn it, Deety, this is one time when husbands have to decide!"

"Damn it, Zebadiah, this is one time when wives must be consulted!"

Zebbie was shocked. But Deety had simply matched his manner and rhetoric. Zebbie is no fool; he backed down. "I'm sorry, hon," he said soberly. "Go ahead."

"Yessir. I'm sorry I answered the way I did. But I do have something to say-and Hilda, too. I know I speak for both of us when I say that we appreciate
that you and Pop would die for us. . . and that you feel this more intensely now that we are pregnant.

"But we have not been pregnant long enough to be handicapped. Our bellies do not bulge. They will bulge, and that gives us a deadline. But for that very reason we will either sample those rotation universes today. . . or we will never sample them."

"Why do you say 'never,' Deety?"

"That deadline. We've sampled five and, scary as some have been, I wouldn't have missed it! We can look at the other ten in the next few hours. But if we start searching Teh axis there is no way to guess how long it will take. Thousands of universes along Teh axis and it seems likely that each holds an analog of Earth. We may check hundreds before we find what we are looking for. Let's say we find it and Hilda and I have babies with skilled medical attention. Then what? Zebadiah, are you going to be more willing to take women with babies into strange universes than you are without babies?"

"Uh. . . that's not the way to put it, Deety."

"How would you put it, sir? Are you thinking that you and Pop might check those ten while Hilda and I stay home with the kids?"

"Well. . . yes, I suppose I am. Something of the sort."

"Zebadiah, I married you for better, for worse, for richer, for poorer, in sickness and in health. I did not marry to walk the Widow's Walk! Where you go, I go!.-till death do us part."

"Deety speaks for me," I said, and shut up. Deety had it figured: If Jacob and Zebbie didn't finish those rotations today, they would have that "far horizons" look for the rest of their lives-and they wouldn't want us along. Not with kids. Sharpie wasn't going to hold still for that. No, sir!

"Deety, are you through?"

"Not quite, sir. All humans are created unequal. You are bigger and stronger than Pop; I am bigger and stronger than Hilda. I have the least years of experience; Pop has the most. Pop is a supergenius. . . but he concentrates so hard that he forgets to eat-unless he has a nursemaid to watch him-as Mama did, as I did, as Hilda now does. You, sir, are the most all-around competent man I've ever met, whether driving a duo, or dancing, or telling outrageous tales. Three of us have eight or nine earned degrees. . . but Aunt Hilda with none is a walking encyclopedia from insatiable curiosity and extraordinary memory.

We two are baby factories and you two are not-but two men can impregnate fifty women-or five hundred. There is no end to the ways that we four are unequal. But in one supremely important way all of us are equals.

"We are pioneers.

"Men alone are not pioneers; they can't be. Pioneer mothers share the dangers of pioneer fathers and go on having babies. Babies were born in the Mayflower, lots were born in covered wagons-and lots died, too. Women didn't stay home; they went along.

"Zebadiah, I do not ask to be taken to those next ten universes-"

"It sounds like it."

"You didn't listen, sir. I would like to finish sampling those fifteen. It's my preference but not my demand. What I do demand I have stated: Where you go, I go. Today and to the end of our lives. Unless you tell me to get out, that you don't want me anymore. I have spoken."

"You certainly have, dear. Hilda?"

Fish or cut bait, Sharpie-what do you want? I didn't care; any new universe was bound to be strange. But Deety had laid down the party line; I didn't want to fuzz it up-so I answered instantly, "Deety speaks for me in every word."

"Jake? Back to my original question: 'Are we justified in exposing our wives to conditions we can't even imagine?"

"Zeb, you are the one who convinced me that it would be prudent to sample the universes accessible through rotation before searching by translation."

"True. But that was before we sampled five of them."

"I don't see that the situation has changed. An imaginable danger is not necessarily better than an unimaginable one; it may be worse. Our home planet had grave shortcomings before we tangled with the vermin. No need to list them; we all know that the Four Horsemen are ready to ride again. But I can think of a very close analog of our home planet that would be far worse than Earth-zero even if it didn't have a single 'Black-Hat' vermin on it."

"Go on."

"One in which Hitler got atomic weapons but we did not. I can't see that vermin are more to be dreaded than Hitler's S.S. Corps. The sadism of some human beings-not just Storm Troopers; you can find sadists in any country including the United States-is more frightening to me than any monster."

"Not to me!" Deety blurted it out.

"But, my dear, we don't know that those vermin are cruel. We got in their way; they tried to kill us. They did not try to torture us. There is a world of difference."

"Maybe there is, Pop, but those things give me the creeps. I'll bet they'd torture us if they could!"

"My very dear daughter, that's muddy thinking. How old are you?"

"Huh? Pop, you know if anybody does."

"I was reminding you ~f what you said: you have the least years of experience. I was much older than you are before I was cured of that sort of muddy thinking. By Jane, your mother. Hilda?"

"Jacob is telling you not to judge a book by its cover," I said. "I learned it from Jane, too, as Jacob knows. A creature's appearance tells nothing about its capacity for sadism."

Jacob said, "Does anyone have anything to add? Since it appears that I am not permitted to resign now, I must rule on it. We will complete the scheduled rotations." Jacob cleared his throat loudly, looked at Deety. "During my remaining hours in what Zeb so accurately calls the 'Worry Seat,' I will endeavor to keep my orders straight.. . but, should I fail, I ask that my attention be invited to it at once -not saved up for a scolding later. Daughter?"

"Okay, Pop. Aye aye, Captain."

"Thank you, my dear. Is anyone tired or hungry?" No one spoke up; Jacob continued, "Hilda, will you take the conn?"

"No, Captain"-I'll omit the internal debate I held with myself; Jacob on his best behavior is hard to refuse.

"Very well, my beloved; I won't press you. It's an odd situation. Copilot, by schedule, set to rotate."

"Second group, first of four-set, sir."

"Check seat belts, stand by to rotate. Execute!"

We were in sunlight in a blue sky and upside down. For a few seconds we were thrown around a bit-Deety isn't the pilot Zebbie is. But she did get us leveled off. I heard Deety say, "Gay Deceiver."

"Hi, Deety!"

"Hold course, speed, and height-above-ground."

"Got it, girl!"

"You're a Smart Girl, Gay."

"But we can't go on meeting like this! Over."

"Roger and out, Gay. Whew! Time out while the Chief Pilot has a nervous breakdown. Zebadiah, what does that altimeter say?"

"Seven klicks H-above-G."

"Pop, what's the probability of winding up this close to a planet without getting killed?"

"Impossible to theorize, Deety. Maybe we're dead and don't know it. Copilot, deadman switch; I'm going to check the air."

'Captain!" I yelped.

"Not now, Hilda, I'm-"

"NOW! Am I still second-in-command? If I am, I must advise you; you are about to make a bad mistake!"

Jacob hesitated. I think he was counting. "My dear one, if I am about to make a bad mistake, I want your advice no matter what your status is."

"Thank you, Jacob. You should not be guinea pig. I should be. I-"

"Hilda, you're pregnant."

"All the more reason why I want the most competent and least expendable- you, Zebbie, and Deety-to take care of yourselves in order to take care of me. It's my duty as science officer in any case, whether I'm number two or not. But, Jacob, you are doing it just the way Zebbie did it when we landed on Mars-ten-and that's all wrong!"

"Thank you, Sharpie!"

"Zebbie dear! You risked your life and it's not necessary-" Zebbie interrupted me. "Not necessary to waste juice this way! Yack-yackyack!"

"Copilot, pipe down!" Jacob said sharply. "Gay Bounce! Chief Pilot, when we reenter, place the car on dead-stick glide, manual or automatic. Don't use juice. Now, All Hands, listen to the Science Officer. Go ahead, Hilda."

"Yes, Captain. Three days ago it was necessary for somebody to be the canary-but it should have been me, not Zebbie. What was necessary three days ago is reckless today. That deadman switch- Unless it has been rewired, it takes us back two klicks over a crater-and that's not what we want. The correct scram for this is T, E, R, M, I, T, E. But that's just half of it. Deety has taught the S.G. how to ground herself no-power on any level bit of ground. We can ground first. Then anyone can be guinea pig, doesn't matter. Whoosh back to our stream bank-bang, open the doors."

Zebbie said, "Captain, that makes sense. Sharpie-I mean 'Science Officer.' May I apologize with a back rub?"

"You can apologize with a kiss. But I'll take the back rub, too."

"Zebadiah, don't commit yourself too far; an air test isn't necessary. Pop! Captain Pop, may I take her up thirty klicks?"

"I suppose so. May I ask why?"

"Captain, I know where we are. From that high I can prove it."

"Deety, that's imp-"

"Don't say 'impossible,' Captain-I'll refer you to my father."

"Miss Smarty Pants. Take her up."

"Thanks, Pop. GayBounceGayBounceGayBounce. Gay Deceiver, vertical dive, execute. Everybody tell me where we are."

I had noticed earlier what pretty countryside was under us. Now I studied it in detail. Zebbie said, "Be durned. Big rectangular oasis completely surrounded by desert. Populated, too. That's a fair-sized town in the middle."

"Yes," I agreed. "Don't you recognize it, Zebbie? From a map."

My husband said, "Now, Hilda, this is an unexplored universe. How could you have seen a-"

"Pop!" interrupted Deety. "You've seen the map. See the Yellow Brick Road off to the left? Try the binoculars; you can follow it clear to Emerald City."

"Deety my love," said Zebbie, "you are out of your mind. Or I am. Either way, somebody call an ambulance. Don't forget the straitjacket. Sharpie, something worries me. I failed to get my warning. . . yet we came so close to hitting that real estate I'm still shaking."

"That means there wasn't any danger, Zebbie."

"Then why am I trembling?"

"You're a fraud, dear. We've all been dead quite a while now-killed in my parking lot. Deety and I may be the first ghosts ever to search for an obstetrician. In further support of my theory I am having a pregnancy with no morning sickness-a miracle that makes the Land of Oz as commonplace as faithful husbands."

"I don't think I want to analyze that. Is that the Castle of the Tin Woodman there in the east?"

"Yes, but that's the west, dear. Deety, is that sun rising or setting?"

"Setting. Directions are reversed here. Everybody knows that."

"A retrograde planet," my husband commented. "Nothing dangerous about that."

"Pop, admit it. You know the Oz books almost as well as I do-"

"Better. Don't give yourself airs, Daughter. I agree that this appears to match stories and map, while trying to reserve judgment. Deety, how would you like to raise kids in the Land of Oz?"

"Pop, I'd love it!"

"Are you certain? As I recall, nobody dies in the Land of Oz yet the population doesn't increase. I don't recall babies being born in Oz stories. I don't recall M.D.'s or hospitals. Or machinery. Zeb, that inside-out universe had different physical laws from those of our universe. If we ground here, will we be able to leave? Oz works by magic, not by engineering." Jacob added, "Copilot, I want your professional opinion."

"Captain, you see a difference between magic and engineering. I don't."

"Oh, come now, Zeb!"

"I believe in just two things: Murphy's Law, and Place Not Your Faith in an Ace Kicker. Permit me to point out that we are already in the Land of Oz, even though at altitude. I can think of worse places to be stranded. No common cold. No income tax. No political candidates. No smog. No churches. No wars. No inflation. No-"

Deety interrupted. "We are now passing over the Palace of Glinda the Good."

"Why pass over it?" I asked. "Jacob, why aren't we grounding?"

"Me, too," Deety added. "Captain Pop, I request permission to ground near the Palace. I'm certain that nothing can upset Glinda the Good; she already knows about it from her Book. Besides, a palace that size must have plumbing. . . and I'm beginning to feel as if I had attended a watermelon picnic."

"Methinks a bush would suffice," said Zebbie. "Even in another universe and with an armed guard. How about it, Captain?"

"Chief Pilot, ground at will. Hilda, do the Oz books have bathrooms in them? I don't recall."

"Nor do I, Jacob," I answered. "But there are plenty of bushes."

In three or four minutes Deety had us grounded, with Gay using Deety's new program. I thanked my husband for deciding to ground. "There was never any doubt," he said. "Not only would you and Deety never have spoken to me again, I would never have spoken to me again. But if I meet a living scarecrow, I may go stark, raving mad."

XXXII

"Where Cat is, is civilization."

Deety:

I found a clearing in the woods, a hundred meters from the Palace and screened from it by elms and walnut trees. I had Gay range it, told her three times that it was a scram spot-then she landed herself, slick as Zebadiah.

I unstrapped, opened the bulkhead door, and crawled aft to get clean suits- and thought better of it. Aunt Hilda had followed me and headed straight for a special locker. I rolled into lotus and asked, "Hillbilly, what are you going to wear?"

"The dress I got married in and the wedding ring Jacob had made for me in Windsor City."

"Jewelry?"

"Nothing fancy."

Mama Jane told me years ago that Aunt Hilda's instinct for clothes was infallible. I got the dress I wore to hook Zebadiah, a pendant Pop had given me, my wedding ring, my dancing slippers. Put my darling in mess jacket? No, but in tights topped off with a white silk bolero shirt I made for him at Snug Harbor. Red sash, dancing pumps, jockey shorts-yes, that was all he needed.

I wiggle-wormed forward, clutching clothing. Our men were still in their seats, Gay's doors closed. I said, "Why the closed doors? It's warm and stuffy."

"Look out to the left," said Zebadiah.

I looked. A little storybook cottage with a sign over the door: WELCOME. It had not been there when we grounded. "I see," I agreed. "Shuck off your work clothes and pull on shorts and tights. Pop, Hilda has your trousers."

"Deety, is that all you have to say?"

"What should I say, sir? Pop, you have taken us to some strange places. But in Oz I am not a stranger in a strange land. I know what to expect."

"But damn it all-"

"Shush, Zebadiah. One does not say 'damn' in Oz. Not any sort of profanity or vulgarity. These are no longer teats; they aren't even breasts-it's my bosom and I never mention it. Vocabulary limited to that of the Mauve Decade. Mildest euphemisms."

"Deety, I'm durned if I'll be anything but myself."

"Sir, I speak professionally. One does not use FORTRAN to a computer that knows only LOGLAN. Captain, can we open up?"

"Just a moment," my father put in. "Deety, you called me 'Captain.' But I resigned, effective on grounding."

"Wait a half!" Zebadiah interrupted. "You'll do at least as much punishment time as I did-you earned it, old buddy."

"All right," Pop agreed, "but you decided that time on the ground counts. We'll likely need a new captain when we lift. Let's elect the victim now."

"Reelect Pop," I suggested. "He flunked and should do it over."

"Daughter!"

"Joking, Pop-as long as you bear in mind that you did flunk and never again give a captain a bad time. I nominate my husband."

"Let's do this right." Pop got out four file cards.

I wrote "Zebadiah" on mine, handed it to Pop. Hilda declared them, showing us each one: Deety-Deety-Deety--Deety. I gasped. "Hey! I demand a recount! No, a new election-somebody cheated." I made so much fuss that they let me have it. I wrote "Zebadiah" on my fresh ballot, placed it face up on the Chief Pilot's seat, placed the other three, one by one, on top of it, then declared them myself: Deety-Deety-Deety-then, in my own handwriting: Deety.

I gave up. (But resolved to have a word with the Wizard.)

It was a pretty cottage with a broad stoop and a climbing rose-but not to live in, just one room with a table and no other furniture. The table held a bowl of fruit, a pitcher of milk, four tumblers. There was a door to the right and a door to the left; the one on the left had painted on it a little girl in a sunbonnet, the other had a boy in a Buster Brown suit.

Hilda and I headed for the sunbonnet. I snatched a glass of milk and a bunch of grapes, and put on a milk moustache; I hadn't tasted milk in ages. Delicious!

Hilda was drawing a tub and had peeled off her dress. The window was open but up high, so I peeled off mine. We made ourselves clean and "beautiful," i.e., we restored our fanciest hairdos but without jewelry. Whatever we needed, that bath and dressing room had, from a sponge to lipstick Aunt Hilda's shade.

We hurried and did it in forty-two minutes. Zebadiah looked beautiful and Pop looked just as smart in dark trousers and a richly simple Aloha shirt.

"We thought you," said my husband, "had gone down the drain."

"Zebadiah, we took forty-two minutes. If you did it in less than thirty, you aren't clean."

"Smell me."

I sniffed him-a faint fragrance of soap, a touch of shaving lotion. "You took more than thirty minutes. Kiss me."

"Thirty-six minutes, by my watch. Say 'Please."

I said "Please" and he caught me with my lips open, he always does. Zebadiah just suits me and I haven't been sulky with him and stubborn only when necessary.

There was a path toward the Palace. Pop, with Aunt Hilda on his arm, led off; we followed. Aunt Hilda was carrying her high-heeled sandals, so I took mine off, and glanced back toward the clearing. The little cottage was missing, as I expected. Zebadiah noticed it but said nothing. His face was an interesting study.

The grassy path debouched into a garden in front of the Palace; the path through it was hard, so Hilda and I put on our shoes. Glinda's Palace was more like a Norman chateau or Bertie's "Stately Home of England" than it was like those dreary castles on the Rhine-but it had fairyland grace, like the Taj.

As we started up the sweeping marble steps to the great doorway Zebadiah stumbled. "What the hell?"

"Sssh!" I said. "Language, dear. A magic staircase. Glinda would not make her guests climb. Pretend that Escher designed it. Look proud and walk as if they were level."

As we reached the broad landing two tall trumpeters stepped out of the great doorway, raised their long trumpets, and sounded four flourishes. An old man with a merry grin, a fringe of whiskers, a shiny bald head, a wooden left leg, and wearing a sailor's oilskins, came out as the flourishes ended. I wondered why he was here rather than Emerald City.

He took a pipe from his mouth and said, "Welcome to the Palace of Glinda the Good! I'm Cap'n Bill. You, sir, are Doctor Burroughs the Wizard, with your wonderful wife the Princess Hilda. You must be Cap'n Zeb Carter-Howdy, Cap'n!-and everybody knows Deety; she's spent so much of her life in Oz. Howdy, Deety! Last time I seen you you warn't more'n knee high to a tall duck. And now look at you! Almost up to my shoulder and married! Congratulations, Cap'n! Yer a lucky man!"

"I think so, Captain."

"I know so. Deety, Ozma sends her love and sez to tell you that you and your family are welcome in the Royal Kingdom as long as you like."

"Please thank Her Royal Majesty for me, Cap'n Bill." (Actually I'm taller than Cap'n Bill now-but of course I'll always be a little girl to him. It's nice.)

"Oh, I will, I will! Come inside, folks: we ain't formal here. Or I ain't. This ain't my reg'lar job; I'm standing this watch for a friend." He took my hand; his hand was horny and felt like Zebadiah's-and just as gentle. He led ~ inside. "Where's Trot?" I asked.

"Around somewhere; you'll see her. Prob'ly picking out her best hair ribbon in your honor. Or maybe helping Betsy with Hank-little Betsy ain't happy unless she's workin'; Neptune knows that mule gets more attention than all the mules that ever came out of Mizzoura. This way to the Library, friends."

How does one describe Glinda the Good? Everyone knows that she is tall and stately and beautiful and never frowns and wears all day long what I think of as beautiful evening gowns with sweeping trains. But those are just words. Perhaps it is enough to say that, just as Dejah Thoris is the most beautiful woman of her world, the Sorceress is the most beautiful of hers.

She was surrounded by her bevy of the most beautiful girls from all over Oz. But Glinda outshone them all without trying. The name of the Egyptian Queen Nefertiti means both "beautiful" and "good," in one word; I think that explains Glinda.

She got up from her Great Book of Records and glided toward us-kissed Hilda first, kissed me and said, "Welcome home, Deety!" and I choked up and couldn't talk; I just curtsied. She offered a hand each to Zebadiah and Pop; they bowed simultaneously and kissed her hands.

She waved at chairs (that hadn't been there) and invited us to sit down. Zebadiah whispered, "You seem to own this place."

"Not really," I whispered back. "But I've lived in Oz longer than anywhere else"-Mama and Pop lived at several campuses while I was growing up but I always took Oz along wherever we moved.

"Well. . . I'm glad you made me dress up."

We were introduced to Glinda's girls and each one curtsied; it felt like being in Imperial House-except that these girls were neither compelled nor paid. When I stopped to think about it, I couldn't recall that money was used in Oz; it didn't have an "economy."

The girls were beautifully dressed, each differently but each girl's dress was predominately the color of her own country, Munchkin blue, Gillikin purple, Winkle yellow, a few in green. One girl in red-Quadling of course, where we were-looked familiar. I said to her, "Is your name Betty?"

She was startled. "Why, yes, Your Highness-how did you know?" She dropped a curtsy.

"I've been here before; ask Captain Bill. I'm not 'Your Highness'; I'm just Deety. Do you have a friend named Bertie?"

"Yes, Your- Yes, Deety. He's not here now, he's at the College of Professor Wogglebug." I made note to tell Betty about it.. . someday.

I can't tell all about everyone we met at Glinda's Palace; there were too many and more kept arriving. Everyone seemed to expect us and pleased to see us. Pop did not go stark, raving mad when he met the Scarecrow because he was already deep in conversation with Professor H. M. Wogglebug and with Oz the Great, Royal Wizard to Queen Ozma-Pop was barely polite, shook hands and said, "Howd'you do, Mr.

Scarecrow," and went right on talking to Professor Wogglebug and the Wizard. I'm not sure he looked at the Scarecrow. He was saying, "You put it neatly, Professor. I wish Professor Mobyas Toras could hear your formulation. If we set alpha equal to zero, it is obvious that-"

I wandered off, because when Pop says, "It is obvious that-" what is really obvious is that Deety should leave.

Dinner was in the banquet hail and the crowd of guests exactly filled itGlinda's banquet hall is always the right size for the number of persons eating there-or not eating, as the case may be, for Jack Pumpkinhead, Tik-Tok, the Tin Woodman, the Sawhorse, the Scarecrow, and other people who don't eat were seated there, too, and also people who aren't human people: the Cowardly Lion, the Hungry Tiger, the Woozy, the King of the Flying Monkeys, Hank, Toto, and a beautiful long-haired cat with supercilious manners.

Glinda the Good was at the head of the table at one end and Queen Ozma was at the head at the other end. Pop was on Glinda's right and Zebadiah was on Ozma's right. The Wizard was on Glinda's left, and Professor Wogglebug was on Ozma's left. Aunt Hilda and I were opposite each other at the middle of the long table. She had the Tin Woodman on one side and the Scarecrow on the other and was doing her best to charm both of them and both were trying to charm her and all three were succeeding.

I had three dinner companions. I started with two, the Cowardly Lion and the Hungry Tiger. The Lion ate what others ate but the Tiger had a bowl of cornflakes the size of a small washtub and ate from it very tidily with a spoon that matched the bowl. The Cowardly Lion and I had just started seafood cocktails when this cat brushed against my leg to get my attention, looked up and said, "You smell like a cat person. Make a lap, I'm coming up"-and jumped.

I said, "Eureka, do you have Dorothy's permission?"

"What a silly way to talk. Dorothy must get my permission. Feed me the lobster first, then the shrimp. You may have the last piece of shrimp for yourself."

The Hungry Tiger put down his big spoon and said, "Highness, may I abate this nuisance?"

"Don't trouble yourself, Old Boy," the Lion said. "I'll abite it instead, in one bite. But please pass the Tabasco sauce; cats have so little taste."

"Pay no attention to those peasants, wench, and get on with the lobster. Animals should not be allowed to eat at the table."

"Look who is calling whom an animal," growled the Cowardly Lion.

"It's not an animal, Leo," the Hungry Tiger objected. "It's an insect. Highness, I'm a vegetarian-but I would be happy to break over this once and slice it into my cornflakes. Shall I?"

"Dorothy wouldn't like it, Rajah."

"You have a point, Ma'am. Shall I ask Toto to chase it out?"

"Eureka may stay. I don't mind."

"Wench, the correct answer is 'I am honored.' Ignore these jungle beasts; they are not cats. Be it known that Felis domestica has been civilized more generatio~5 than all you lesser breeds combined. As my serene ancestress, Bubastis, Goddess of the Nile, was wont to say: 'Where Cat is, is civilization.' Hurry up with that lobster."

So I hurried. Eureka accepted each bit daintily, barely flicking my finger

tips with her scratchy tongue. At last she averted her mouth. "Don't overdo it; I'll tell you when I require more. Scratch behind my left ear-gently. I shall sing, then I shall sleep. Maintain a respectful silence."

I did as ordered. Eureka purred very loudly. As the buzzing gave way to soft snores I slowly stopped scratching. I had to eat with one hand; the other was needed to keep her from falling.

As Aunt Hilda has placed a record in Gay by interviewing all of us and combining it, I will stick to essentials. After the rest had gone home or retired to their rooms we four were invited into the Library. It was smaller than it had been, cozy, as Glinda's girls had gone to their rooms. Glinda was at her Great Book of Records as we were ushered in; she smiled and bowed without getting up as we sat down.

"Friends," she said, "Doctor, Captain, Princess Hilda, and Deety, I will save time by telling you that, during the dancing, I conferred with Ozma, the Wizard, and Professor Wogglebug. I had studied the Records of your strange adventure, and I read a résumé to them before we discussed your problems. First, let me say that Ozma repeats her invitation. You are welcome to stay here forever; you will find hospitality wherever you go. Deety knows this, and Princess Hilda knows it, too, although she is not as sure of it as Deety is.

"But to reassure you gentlemen, the Wizard and I have made the Land of Oz one quarter inch wider in all directions, a change too small to be noticed. But you, Doctor, will recognize that this provides ample Lebensraum for four more good people, as well as for your sky chariot Miss Gay Deceiver. A quarter of an inch, Captain, is six and thirty-five hundredths millimeters.

"While we were about it, on the advice of Professor Wogglebug, we made small changes in Miss Gay Deceiver-"

Zebadiah gave a start and looked upset. Gay was his sweetheart long before I was; he takes care of her as carefully as he takes care of me. But he should have trusted Glinda.

Glinda smiled warmly. "Don't be alarmed, Captain, no harm has been done to the structural integrity or to the functioning of your beloved craft. When you notice-you will notice-if you do not like the changes, all you need do is to say aloud, 'Glinda, change Miss Gay Deceiver back the way she was.' I will read it here in my Book and will carry out your wish. But I do not think that you will ask me to do this. That is not prophecy; a good witch does not prophesy. But it is my firm opinion.

"Now to major matters- There are no 'Black Hat' vermin in Oz. Should one be so foolish as to come here, I would know it from my Book, and it would be ejected into the Deadly Desert. What would happen to it there, the less said, the better-but evil is not tolerated in Oz.

"As to the problem of vermin in your home world, it does not lie in Ozma's jurisdiction. My powers are limited there. While my Great Book tells me what happens there, it does not distinguish between vermin disguised as human beings and human beings who by their nature are evil. I could cast a spell over you which would keep you away from all 'Black Hats.' Do you wish that?"

Pop glanced at Zebadiah; my husband said, "Just a moment, Glinda the Good. Just what does that mean?"

"Spells are always literal, Captain; that's why they can cause so much trouble. I rarely use them. This one means what I said: You would be kept away from any vermin of the sort you call 'Black Hats."

"In that case we couldn't recognize one, could we? Or get close enough to destroy it."

"I think one would have to devise ways to do each at a distance. Spells do not reason, Captain. Like computers, they operate literally."

"Could they recognize us? Booby-trap us? Bomb us?"

"I do not know, Captain. My Book records only what they have done, not what they may do. Even then, as I have said, the Records do not unmask a disguised 'Black Hat.' Therefore, I know little about them. Do you wish the spell? You need not decide at once. If you remain in Oz, you won't need it."

I blurted out, "We ought to stay here!"

Glinda smiled at me, not a happy smile. "Dear Deety- You have decided not to have your baby?"

"Huh? I mean, 'Excuse me, Glinda?"

"You have been in Fairyland more than the others. You know that your little girl will not be born here.. . just as no one ever dies here."

Aunt Hilda spoke up so quickly I couldn't get a word in. "Glinda, thank you very much but I will not be staying."

I gulped. "I won't be staying, either, Aunt Glinda."

"So I suspected. Do you want my advice, dear?"

"Yes. Certainly!"

"Having decided to be a woman and not a little girl like Dorothy or Trot, leave here quickly.. . lest you be tempted to stay in Fairyland forever."

Pop glanced at Zebadiah, then said, "Madame Glinda, we'll be leaving in the morning. We are grateful for your lavish hospitality.. . but I think that is best."

"I think so, too, Doctor. But remember: Ozma's invitation stands. When you are weary of the world, come here for a holiday and bring the children. Children are happy here and never get hurt. Oz was designed for children."

"We will, we certainly will!"

"Is there anything more to discuss? If not. .

"Just a second!" put in Aunt Hilda. "You told Deety-will you tell me?"

Glinda smiled. "My Book states that you are growing a boy."

XXXIII

"-'solipsism' is a buzz word."

Zeb:

I didn't sleep with Deety that night. I didn't plan it that way. A footman showed me to a room; Deety and Hilda were standing at the top of the stairs (more magical stairs-okay as long as you don't look down) and talking excitedly, with Jake nearby.

When I saw that the room had only a single bed, the footman had vanished. I stepped outside; Deety and Hilda and Jake were gone, the upper hall was dark. So I said a

word one mustn't use in Oz and went back into my room. Even a single bed looked inviting; I went to sleep at once.

Glinda had breakfast with us, in the banquet hail, considerably shrunken. The food in Imperial House is wonderful, but you can't beat ham and basted eggs and toast and jelly and fresh orange juice. I drank three cups of coffee and felt ready to rassle alligators.

Glinda kissed Deety and Hilda good-bye at the top of those Escher steps, and Jake and I bent over her hands. She wished us good luck.. . which must mean more from her.

Gay Deceiver looked good in morning sunlight. Tik-Tok was standing at her nose. "Good mor-ning," he said. "I have been con-ver-sing with Miss Gay De-cei-ver all night. She is a ve-ry Smart Girl."

"Howdy, Zeb."

"Howdy, Gay. What have I told you about picking up strange men?"

"You've told me nothing, Zeb. And Tik-Tok is not a strange man. He is a gentleman, which is more than I can say for some people."

"Tru-ly, Cap-tam, I meant no im-pro-pri-e-ty."

"Just kidding, folks. Thanks for keeping Gay company, Tik-Tok."

"It was a plea-sure and a pri-vi-lege. I ar-ranged with the night watch-man to wind me up each hour in or-der that our con-ver-sa-tion be not a-brupt-ly ter-mi-nat-ed."

"Smart of you. Thanks again and we'll see you again. We'll be back for a visit, first chance. Gay, open up."

"You didn't say 'Please," my autopilot answered, but she opened her doors.

"I am de-ligh-ted to hear that you are re-tur-ning. Miss Gay De-cei-ver and I have much in corn-mon."

Sharpie said good-bye to Tik-Tok, went inside. Deety not only said goodbye but kissed his copper cheek-Deety would kiss a pig if the pig would hold still for it (if he didn't, I would turn him into sausage; kissing Deety is not to be scorned).

Hilda reappeared, still in evening gown. "Deety, come here. Hurry!"

I shook hands with Tik-Tok (odd!) and suggested that he back off a little. Then I went inside. No sign of our wives- I called to them, "Shake it up in there. I want a pilot suit."

Deety called out, "Zebadiah, wiggle your way through the bulkhead."

"I can't change clothes back there."

"Please, dear. I need you."

When Deety says she needs me, I go. So I wiggled through, and the space didn't seem as cramped as it had been when I was working on it at Termite Terrace. "Where are you?"

"In here. Port side," came Deety's muffled voice. I turned around, banging my head, and found a door where a door shouldn't be. I had to stoop but once through it I could stand up. A room slightly bigger than a telephone booth- a door aft, a door forward, Sunbonnet Sue to the left, Buster Brown to the right. Deety opened the door on the left. "Come look!"

A luxurious dressing room and bath- "It's the same one as in the 'Welcome' cottage," said Deety, "except that the window is frosted and doesn't open. But the air is fresh."

I said "Hmmm-" Then I added, "Well, well!" I checked out Buster Brown. Yes, the same bathroom Jake and I had used yesterday.

Jake stuck his head in. I said, "Perfesser, give me the benefit of your wisdom."

"Zeb, I'm fresh out."

"Jake-your opinion, please. Is this craft ready for space?"

"Zeb, I don't know."

"Let's check the outside."

We went over the shell with eyes and fingers, port and starboard. That car was unblemished-outside. But from inside I heard a toilet flushing.

I went inside, on back, still on back, and knocked on Sunbonnet Sue. Sharpie let me in. "Just leaving, Zebbie," She had elected to wear one of her new jump suits and looked like a Cracker Jack prize. "Deet' is about ready."

"Wait a half, Sharpie. Jake and I have decided to trust Glinda."

"Was there any doubt?"

I stepped inside; Deety twisted around at the dressing table, smiled through a mouthful of bobby pins. "Your father and I have approved this craft for space-tentatively-Captain Deety."

"I approved it at breakfast-and not tentatively. What do you have there, dear one?" She accepted a list from me, read it over:

Name	Additional and/or Relief Duty	
D. T. B. Carter	Commanding	
Hilda S. Burroughs	2nd in Command & Navigator	Science Officer & Chef
Z. J. Carter	Chief Pilot	Relief Navigator
J. J. Burroughs	Copilot	Sous-Chef

"It's intended to make your life easier, Cap'n Deety. Jake didn't get the going-over he should have had. But with Jake in the right-hand seat and me over him, I can keep him in hand-and he'll be so busy with his verniers that he won't have time to talk back. 'Sous-Chef' is a fancy way of saying that he'll be under his wife's thumb when we're grounded."

"It's well thought out, Zebadiah. Thank you."

"Suits you?"

"Let me study it."

I got fidgety, ducked into Buster Brown and killed time until she called me. "Slight revision, Zebadiah."

Name	Additional and/or Relief Duty	
Deety	Captain	Instructor Computers
Zebadiah	2nd in Command & Chief Master at Arms	Instructor Duo, Air
Jake	Chief Pilot	Instructor Verniers
Hilda	Copilot	Science Officer & Executive Chef

Note: Cooking will rotate D-J-Z unless changed by the Executive Chef.

"A 'Slight revision'!"-I felt offended.

Deety looked at me anxiously. "I'm submitting it for your advice, Zebadiah. I want to continue Pop's policy of everybody learning every job, at least well enough to limp home. Hilda will learn the verniers quickly; she's deft, she doesn't have to be told twice, and the inventor I have placed at her elbow. Pop needs practice in air; he isn't as good as he thinks he is and he's never driven a car this fast. You'll be behind him, ready to bounce him out of trouble. Dear- will it work?"

I was forced to admit that Deety's T.O. was better than mine.

"It's better than mine, so you owe me a forfeit. Where are my handcuffs and nightstick?"

"As second-in-command you are vested with the duty to keep order and to see that the commanding officer's orders are carried out, are you not?"

"Of course, Deety-Captain Deety-why rub their noses in it?"

"You know why, Zebadiah. I am reminding everyone that I mean to have a taut ship-and no back talk! You don't need handcuffs or a club. But in that right-hand dressing-table drawer is a ten-centimeter roll of adhesive tape- the size gangsters use for gags."

"Oh. Oho!"

"Zebadiah! Don't use it without my direct order. I shall maintain a taut ship. But when I've served my time, I would much rather my father was still speaking to me. It's a last resort, my husband. A sharp Pipe-down from you is all P- anybody will ever need. I intend to keep you at the conn most of the time-unless you ask me to relieve you, or I tell you I want to conn something personally."

"Suits."

"Very well, sir. You have the conn. Give them their assignments, prepare the car for space, take the reports, let me know here when you are ready. Revision in plan: Take us straight up one thousand klicks. Let us look at Oz from a distance, then continue by plan."

"Aye aye, Captain." I started to leave while thinking that Deety might leave a reputation equal to that of Captain Bligh.

Zebadiah!"

"Yes, Captain?"

"Don't go 'way without kissing me or I won't take the bloody job!"

"I didn't realize that the Captain cared to be kissed."

"Captains need kisses more than most people," she answered, her face muffled against my shoulder.

"Got a fresh new stock. Will there be anything else, Ma'am?"

"Yes."

"What?"

"When I've served my time, will you use your influence to put me on the verniers? And-sometime-will you teach me supersonic?"

"Verniers, yes. Supersonic- A man who takes his wife as a pupil is breeding a divorce. Gay will teach you supersonic if you will let her. At super- or hypersonic she's safest on autopilot. She won't hurt herself-but if you override, you may hurt her, she may hurt you."

"But you override. How am I to learn?"

"Easy. Give her a program. Leave it loose enough for her to correct your goofs. Keep your hands and feet very lightly on the controls. Be patient, and eventually you'll be part of Gay and Gay will be part of you. Shut up and kiss me."

Captains kiss better.

Ten minutes later we were ready for space. I asked, "Did anyone leave anything in our annex?" I wasn't thinking about it; Jake had reported: "Juice one point zero-full capacity!"

"Hilda and I hung up our dresses."

"Captain, do you realize that our magical space warp will probably go back wherever it came from the instant we leave?"

"Want to bet? Glinda wouldn't pull a trick like that."

"It's your dress, Cap'n. But your exec advises you officially to warn all hands never to leave anything essential in there during maneuvers." I wiped the matter from my mind; Deety would do it her way. "Gay, are you going to go on being talkative on your own?"

"Zeb, back on watch, I'll be strictly business. But a girl is entitled to a night out once in a while."

"You're a Smart Girl, Gay."

"So Tik-Tok told me, Zeb."

"Roger and out, Gay. Sharpie, set transition one thousand klicks H axis, plus."

"A thousand kilometers straight up, minimum-range scale, vernier setting three. Jacob, will you check me, please?"

Jake reported the setting correct; I snapped, "Execute!"

Jake put her nose-down: an Earthlike planet so covered with haze that I could make out no details other than straight down, where Oz was still sharp and framed by the impassable deserts. "Sharpie, please hand me the binox, then shift hats to 'Science Officer' and find out whether or not our new addition came along."

I had to help her undog the bulkhead door-Sharpie, in free fall, can't brace herself to apply enough torque to loosen a dog I had fastened on the ground. Meanwhile Deety had been using the binox. "Zebadiah, it's hazy everywhere but below us. Emerald City shines out green as Erin, and Glinda's Palace gleams in the sunshine. But the rest might as well be Venus. Only it's not."

"Daughter-Captain, I mean-have you looked at the stars?" Jake added, "I think it's our own universe."

"It is, Pop? On which side of Orion is the Bull?"

"Why, on-_Jesus, Allah, and Zoroaster! It's turned inside out!"

"Yes, but not the way that other inside-out place was. Like Oz itself. East for west."

I asked my wife, "Captain Deety, is there anything odd about duration here?"

"Doesn't feel odd. But it's been about a century since those three little girls moved to Oz. I don't know what it feels like to them, and I carefully didn't ask. Did anybody notice that there were no clocks and no calendars?"

"Zebbie!"

"Yes, Sharpie?" I answered.

"Our new plumbing works just dandy. Be careful going in; it's not free fall; the floor i~ down. I did a spectacular somersault."

"Hilda my love, are you hurt?"

"Not a bit, Jacob. But next time I'll hang on to something, pull myself down even with the deck, and slide in."

"Science Officer, secure all doors, return to your seat and strap down. Then swap hats and set next rotation by schedule."

"I fastened the doors. I'm dogging the bulkhead door. Okay, I'm strapping down. Where are the binoculars?"

"Jake stowed them. All hands, stand by to rotate."

Another totally black one- I said, "Captain, we'll tumble now unless you prefer to check our new plumbing first."

"Plumbing isn't Deety's job! I'm Science Officer and that includes hygiene, plumbing, and space warps."

Deety said to me, "I relieve you, dear"-then more loudly, to Hilda: "Copilot, pipe down. Pop, dowse the lights and tumble us. Aunt Hillbilly, attempt to set next rotation by touch and sound, in the dark. That's number eight, third of second group."

"Aye aye, Captain Bligh."

The tumble showed nothing. Jake switched on lights, reported that Sharpie had set the next rotation correctly. Deety asked me to relieve her at the conn, then said, "Science Officer, I am about to inspect the addition to your department; please accompany me." Without a word Sharpie did so.

They were gone quite a while. At last I said, "Jake, what do women talk about in can conferences?"

"I'm afraid to find out."

They came back full of giggles; I concluded that Deety's disciplinary methods worked. As they strapped down, Deety said, "Dear, it's black as sin out there- and sunlight streaming in both bathroom windows. Riddle me that."

"Science Officer's department," I evaded. "Stand by to rotate."

This time Jake not only had air, I could hear it. Jake got her leveled out hastily. "Copilot, H-above-G!"

"Thirteen hundred meters."

"Too close! Zeb, I'm going to retire and take up tatting. Where are we? I can't see a thing."

"We're over water, Pop, with a light fog. I see a shoreline to starboard." Jake turned Gay to the right, I picked out the shoreline. Gay's wings were spread; Jake held her at an easy glide and placed her on automatic. "We'll leave this kite sealed now; I won't check the air without going up high."

"Sail ho!"

"Where away, Sharpie?"

"Starboard bow. A sailing ship."

Durn if it wasn't. A square-rigger out of the seventeenth century, high forecastle and sterncastle. Jake took us down for a better look. I wasn't afraid; people who sail ships like that don't use guided missiles-so I kept telling myself.

It was a pretty sight. Jake dropped the starboard wing so that we could have a good look. But we must not have been a "pretty sight" to them; sailors were rushing around and the helmsman let her get away from him and she
fell into irons, her canvas flapping foolishly. Not wanting to get the poor fellow keelhaUled, I told Jake to level off and head for land.

Deety said, "Good God, Pop, you scared me silly."

"Why, Deety?-Captain Deety. They were scared-but surely you aren't scared by black-powder cannon?"

"You almost put the starboard wing into the water."

"Don't be silly, Deety; I was above two hundred meters. Well, maybe a hundred and fifty when I did that steep turn. But plenty of room."

"Take a look at your altimeter. And pressure."

Jake looked and so did I. The radar altimeter stated that we were nineteen meters above the water; Jake had to change scales to read it. Pressure showed well over a thousand millibars-a sea-level high. So I snapped, "Gay Bounce!"

Gay did and I caught my breath.

"Deety, how did I make that error?" Jake asked.

"I don't know, Pop. I can see the right wing tip; you can't. When it looked to me as if you might cut the water, I looked at the instruments. I was about to yell when you straightened out."

"Captain, I was driving seat-of-my-pants by the ship's masts. I would swear I never got within three hundred meters of that ship, on the slant. That should put me plenty high."

Sharpie said, "Jacob, don't you recognize this place?"

"Hilda, don't tell me you've been here before?"

"Only in books, Beloved. A child's version in third grade. A more detailed version in junior high. Finally I laid hands on the unexpurgated version, which was pretty racy for the age I was then. I still find it pleasantly bawdy."

"Sharpie," I demanded, "what are you talking about?"

Jake answered. "Zeb, what sort of ship could cause me to think I was high in the air when in fact I was about to pole-vault into the sea?"

"I've got it!" said Deety.

"I give up," I admitted.

"Tell him, Pop."

"One manned by sailors fifteen centimeters high."

I thought about it. We were approaching land; I told Jake to glide to two klicks by instrument and told Gay to hold us there-it seemed much higher. "If anyone runs across Dean Swift, will you give him a swift kick for me?"

Deety said, "Zebadiah, do you suppose the land of the giants-Brobdingnag-is on this continent?"

"I hope not."

"Why not, dear? It should be fun."

"We don't have time to waste on either Lilliputians or giants. Neither would have obstetricians able to take care of you two. Sharpie, get ready to take us up a hundred thousand klicks. Then to rotate. Does anyone have any theory about what has been happening to us? Aside from Sharpie's notion that we are dead and don't know it?"

"I have another theory, Zebbie."

"Give, Sharpie."

"Don't laugh-because you told me that you and Jacob discussed the heart of it, the idea that human thought exists as quanta. I don't know quanta from Qantas Airways, but I know that a quantum is an indivisible unit. You told me that you and Jacob had discussed the possibility that imagination had its own sort of indivisible units or quanta-you called them 'fictons'-or was it ficta? Either way, the notion was that every story ever told-or to be told if there is a difference-exists somewhere in the Number of the Beast."

"But, Hilda my love, that was merely abstract speculation!"

"Jacob, your colleagues regard this car as 'abstract speculation.' Didn't you tell me that the human body is merely complex equations of wave forms? That was when I bit you-I don't mind being a wave form, waves areS pretty; I bit you for using the adverb 'merely."

"Zebadiah, there is a city on the left. Shouldn't we look at it before we leave?"

"Captain, you must decide that. You saw what a panic we caused in that ship. Imagine yourself fourteen centimeters tall and living in that city. Along comes a great sky monster and dives on you. Would you like it? How many little people will faint? How many will die of heart failure? How many are you willing to kill to satisfy your curiosity?" I added, "To those people we are monsters worse than 'Black-Hat' vermin."

"Oh, dear! You're right, Zebadiah-dismally so. Let's get out of here."

"Copilot, set to transit straight up one hundred thousand klicks."

"Transition 'H' axis, positive, vernier setting five-set!"

"Execute." I continued, "Captain, I'd like to sit here a while."

"Very well, Zebadiah."

"Sharpie, let's hear your theory. Captain, I've been scared silly by too many narrow escapes. We know how to translate from one Earth-analog to the next; just use plenty of elbow room. But these rotations are making me white-haired. The laws of chance are going to catch up with us."

"Zebbie, I don't think the laws of chance have anything to do with it. I don't think we have been in any danger in any rotation."

"So? Sharpie, I'm about to swap jobs with you as quickly as I can get the Captain's permission."

"No, no! I-"

"Chicken!"

"Zebbie, your hunches are part of why I say that the laws of chance are not~ relevant."

"Sharpie, statistical laws are the most firmly established of all natural~ laws."

"Do they apply in the Land of Oz?" asked Deety.

"Uh- Damned if I know! Touché!"

"Zeb, Hilda has not expressed it as I would; nevertheless I agree with her.) To call the equations used in statistics 'laws of nature' is a misnomer. Those,~ equations measure the degree of our ignorance. When I flip a coin and say~ that the chance of heads or tails is fifty-fifty, I am simply declaring totai,~ ignorance as to outcome. If I knew all conditions, the outcome might be subject~
to precalculation. But we have experienced two universes having physical laws unlike those of our home universe."

"Three, Jacob. Lilliput makes three."

"I don't follow you, my dear."

"The cube-square law that runs through all biology does not apply here. A human brain can't be placed in a space the size of a thimble by our biophysical laws. But we're getting away from the theory Zebbie wanted me to expound. Shall I go on?"

"Yes," Deety ruled. "Everybody shut up but Aunt Hilda. I'm zipping my own lip. Hillbilly-proceed."

"All right. It's not chance that we have been in three universes-InsideOut, the Land of Oz, and Lilliput-in. . . less than twenty-four hours, isn't it, Deety?"

"Less than twenty-one, Aunt Hilda."

"Thanks hon. It's not chance that those three are 'fictional' universes-I have to call them that for lack of a better word-well known to each of us. By coincidence-and again I don't have a good word but it's not 'chance'-all four of us are addicted to fanciful stories. Fantasy. Fairy tales. We all like the same sort of stories. How many of us like detective stories?"

"Some-not all," said Deety.

"My sole loyalty is to Sherlock Holmes," I said.

"Waste of time," said Jake.

"I'd like to try an experiment," Hilda went on. "Write down the twenty stories you have enjoyed most. Or groups of related stories-the Oz books would count as one, so would the Edgar Rice Burroughs Mars series, and so would the four voyages of 'Gulliver's Travels.' Make them stories you reread for pleasure when you are too tired to tackle a new book."

"Sharpie, is it cheating to ask how you mean to use this?"

"No, Zebbie. If my theory is right, the next time we rotate and find ourselves near a planet, it will turn out to be the scene of a story or group of stories that appears on all four lists. We'll arrive high enough that Jacob will have plenty of time to level off but close enough that we can ground. But we will never rotate into a mass or any danger that we can't handle. This isn't chance; we haven't been dealing with chance. The Land of Oz surprised me. Lilliput didn't surprise me at all; I expected it. Or at least a place that all of us know through Stories."

"How about those empty universes?" I demanded.

"Maybe they are places about which stories will be written or maybe stories have already been told but aren't favorites of us four, so we don't emerge close to their scenes. But those are guesses. So far as my theory is concerned, such Universes are 'null'-they don't count one way or the other. We find our universes."

"Sharpie, you have just invented pantheistic multiperson solipsism. I didn't think it was mathematically possible."

Zeb, anything is mathematically possible."

Thanks, Jacob. Zebbie, 'solipsism' is a buzz word. I'm saying that we've stumbled onto 'The Door in the Wall,' the one that leads to the Land of Heart's Desire. I don't know how and have no use for fancy rationalizations. I see a pattern; I'm not trying to explain it. It just is."

"How does that hollow world fit your theory?"

"Well, Deety called it Pellucidar-"

"It was!"

"-but I've read dozens of stories about worlds underground; I'll bet all of us have. Jules Verne, S. Fowler Wright, H. G. Wells, C. L. Moore, Lovecraft- all the great masters of fantasy have taken a crack at it. Please, can we stop talking? I want all four lists before we rotate again."

Jake changed attitude so that Lilliput's planet was dead ahead and told Gay to hold it there. The planet looked very small, as if we were a million kilometers out- reasonable, I decided, and wrote down "The Dorsai yarns."

At last Deety announced, "I'm through, Aunt Hillbilly."

Soon after, her father handed Sharpie his list. "Don't count those I've lined out, dear-I had trouble holding it down."

"Twenty' is arbitrary, Jacob. I can leave your extras in."

"No, dear, the four I eliminated do not stand as high as the twenty I retained."

After some pencil-chewing I announced, "Sharpie, I'm stuck at seventeen. Got a baker's dozen more in mind, but no choice."

"Seventeen will do, Zebbie-if they are your prime favorites."

"They are."

Hilda accepted my list, ran her eye down it. "A psychoanalyst would have a wonderful time with these."

"Wait a half! Sharpie, if you're going to let a shrink see those lists, I want mine back."

"Zebbie darling, I wouldn't do that to you." She added, "I need a few minutes to tally."

I glanced at Lilliput. "Need help?"

"No. I've tallied a 'one' after all on my list. I've checked Deety's against mine and tallied a 'two' where they match, and added to the bottom of my list, with one vote tallied against each, those she picked but I didn't. I'm doing the same with Jacob's list, tallying three's and two's and one's. Then Zebbie and we'll wind up with a four-vote list- unanimous-and a list with three each-~ and a list with two, and with one."

Sharpie kept busy some minutes, then took a fresh sheet, made a list, folded~ it. "This should be in a sealed envelope to establish my reputation as a for-~ tuneteller. Zebbie, there are nine soi-disant fictional universes listed. Any close approach we make by rotation should be near one of them."

I said, "You included Pellucidar?"

"Pellucidar got only two votes. I stick to my theory that the inside-out world~ is a composite of underground fantasies. But our vote identified that third universe-the blinding lights, the one that worried you about radiation."

"The hell you say!"

"I think it did. Four votes for Doctor Isaac Asimov's 'Nightfall.' I expected~ his Foundation stories to make it but they got only three votes. Too bad, because his library planet might be able to tell us what those vermin are, where they come from-and how to beat them."

"My fault, Aunt Hillbilly. Pop told me I should read the Foundation series.. . but I never did."

"Sharpie," I said, "we can put you down in New York in five minutes. The Good Doctor is getting on in years-turns out less than a million words a year now-but still likes

pretty girls. He must know whatever is in the Galactic Library; he invented it. So telephone him. Better yet, sit on his lap. Cry if necessary."

"Zebbie, if there is one place I'm certain is loaded with 'Black Hat' vermin, it's New York City! You sit on his lap!"

"Not me. If we learn how to delouse our home planet, I'll work on a way to spread the word. But I'm number one on their death list."

"No, Jacob is."

"No, Sharpie. Jake and Deety are dead, you are kidnapped, and I'm marked down to be 'terminated with extreme prejudice.' But I'll risk grounding on the Hudson River VTOL flat long enough for you to visit the Good Doctor. Your husband can escort you; I'm going to hide in the bathroom. I figure that is actually in Oz and therefore safe."

"Go lay an egg!"

"Sharpie dear, none of us is going to Earth-zero. Hand that list to Deety; she won't peek. Captain, shall we rotate? The Science Officer has me half convinced that we can get away with it; let's do it before I lose my nerve. Fourth and last universe in the second group, isn't it?" I asked Sharpie.

"Yes, Zebbie."

"Anybody as chicken as I am, speak up! .. . Isn't anybody going to get us outof this!

Execute!"

XXXIV

"-all my dreams do come true!"

Zeb:

Gay Deceiver was right side up five hundred meters above a sunlit, gentle countryside. Jake set her to cruise in a circle. I asked, "Are we back in Oz? Sharpie, check your setting."

"Not Oz, Zebbie. I've stuck to schedule."

"Okay. Does your magic list tell you where we are?"

"If it's one of the nine, then it's-" Hilda wrote a word on a sheet, folded it, handed it to me. "Stick this in your pocket."

I tucked it away. "Jake, bounce us, then range-and-target to ground us in that meadow. We'll test the air when we're down. Safer."

Jake zeroed Gay in; she grounded. "Zeb," he said fretfully, "how can I tell what juice we have? The gauge still reads 'Capacity."

"Let me think about it."

"All right. Has the Captain worked out that new scram?"

'I think so, Pop. Take G.D. straight up a hundred thousand klicks, but do it in two words, in total darkness, or with eyes dazzled, or anything. As long
as anyone can get out two syllables we'll zip far enough away from trouble that we'll have time to work out what to do next."

"Good enough. Can you program it before I open a door?"

"I think so, Zebadiah. If she's asleep, GD. will wake up and do it at once."

"Okay, will you program it? Hilda, set up the same thing on your dials as a back-up. Meanwhile I'm going to give the plumbing a field test. Don't touch the doors till I get back."

I returned in a few minutes. "Our magic space warp is still with us-don't ask me why or I'll scream. New program inserted?"

"Yes, Zebadiah. On tell-me-three-times and protected against execution without the doors being closed and locked. I've written down the magic words. Here." Deety handed me a scrap of paper.

On it was: "Gay-Zoom!"

"It's the shortest program with an unusual monosyllable that I can think of."

"Its shortness may save our necks. Swap seats with me, Sharpie, it's my turn to be pioneer mother. Everybody, hold your breath; I'm going to sniff the air."

"Zebbie, this planet is Earthlike to nine decimal places."

"Which gives me a cheap chance to play hero." I opened her door a crack, sniffed.

Shortly I said, "I feel okay. Anybody woozy?"

"Open the door wide, Zebbie; this place is safe."

I did so and stepped out into a field of daisies; the others followed me. It certainly seemed safe-quiet, warm, peaceful, a meadow bounded by a hedge row and a stream.

Suddenly a white rabbit came running past, headed for the hedge. He barely paused, pulled a watch from his waistcoat pocket, glanced at it, then moaned, "Oh dear! Oh dear! I shall be too late!" and ran even faster. Deety started after him.

"Deety!" I yelled.

She stopped short. "I want to find the rabbit hole."

"Then keep your eye on her. You're not going down the hole."

"On whom?" Deety turned back toward the hedge row. A little girl in a pinafore was hurrying toward the spot where the rabbit had disappeared. "Oh. But it didn't hurt her to go down the hole."

"No, but Alice had lots of difficulties before she got out. We haven't time; this is not a place we can stay."

"Why not?"

"Nineteenth-century England did not have advanced medicine."

"Zebbie," put in Hilda, "this isn't England. Read that slip."

I unfolded the scrap of paper, read: Wonderland. "Just so," I agreed, and handed it to my wife. "But it is modeled on England in the eighteen-sixties. It either has no medicine, like Oz, or pre-Pasteur medicine. Possibly pre-Semmelweiss. Deety, do you want to die from childbed fever?"

"No, I want to go to the Mad Tea Party."

"We can have a mad tea party; I went mad several universes back-and it's time for lunch. Sharpie, you win the Order of Nostradamus with diamond cluster. May I ask two questions?"

"One may always ask."

"Is H. P. Lovecraft on that list?"

"He got only one vote, Zebbie. Yours."

"Chthulhu be thanked! Sharpie, his stories fascinate me the way snakes are said to fascinate birds. But I would rather be trapped with the King in Yellow than be caught up in the worlds of the Necronomicon. Uh. . . did any horrids get four votes?"

"No, dear, the rest of us prefer happy endings."

"So do I! Especially when I'm in it. Did Heinlein get his name in the hat?"

"Four votes, split. Two for his 'Future History,' two for 'Stranger in a Strange Land.' So I left him out."

TI didn't vote for 'Stranger' and I'll refrain from embarrassing anyone by asking who did. My God, the things some writers will do for money!"

"Samuel Johnson said that anyone who wrote for any other reason was a fool."

"Johnson was a fat, pompous, gluttonous, dirty old fool who would have faded into the obscurity he so richly deserved had he not been followed around by a spit-licking sycophant. Spell that 'Psycho-', as in 'Bloch." I added, "Did Poul Anderson get in? Or Niven?"

"Zebbie, that's far more than two questions."

"I haven't even reached the second question. . . which is: What do we have for a mad tea party?"

"Surprise! Glinda had a picnic basket placed in our dressing room."

"I missed it," I admitted.

"You didn't look in the wardrobe." Sharpie grinned. "Can sandwiches from Oz be eaten in Wonderland? Or will they 'softly and silently vanish away'?"

"'Be off, or I'll kick you downstairs!'"

Several hundred calories later I noticed a young man hovering nearby. He seemed to want to speak but was too diffident to do so. Deety jumped up, trotted toward him. "The Reverend Mister Dodgson, is it not? I'm Mrs. Zebadiah Carter."

He quickly removed his straw boater. "Mr. Dodgson,' yes, uh, Mrs. Carter. Have we met?"

"Long ago, before I was married. You are looking for Alice, are you not?"

"Dear me! Why, yes, I am. But how-"

"She went Down the Rabbit-Hole."

Dodgson looked relieved. "Then she will be back soon enough. I promised to return her and her sisters to Christ Church before dark."

"You did. I mean, 'you will.' Same thing, depending on the coordinates. Come meet my family. Have you had luncheon?"

"Oh, I say, I don't mean to intrude."

"You aren't intruding." Deety took him by the hand, firmly. Since my treasure is stronger than most men, he came along. . . and let go her hand hastily as soon as she loosened her grip. We men got to our feet; Hilda remained in lotus.

"Aunt Hilda, this is Mr. Dodgson, Lecturer in Mathematics at Christ Church College, Oxford. My stepmother, Mrs. Burroughs."

"How do you do, Mrs. Burroughs. Oh dear, I am intruding!"

"Not at all, Mr. Dodgson. Do sit down."

"And this is my father, Dr. Burroughs, Professor of Mathematics. And my husband Captain Carter. Aunt Hilda, will you find a clean plate for Mr. Dodgson?"

The young don relaxed once introductions had been made but he was still far more formal than Deety intended to permit. He sat down on the turf, placed his hat carefully beside him, and said, "Truly, Mrs. Burroughs, I've just finished tea with three little girls."

Deety ignored his protests while she piled his plate with little sandwiches and cakes. Sharpie poured tea from a Thermos jug. They nailed him down with cup and plate. Jake advised, "Don't fight it, son, unless you really must leave. Are Alice's sisters safe?"

"Why, yes, Professor; they are napping in the shade of a hayrick nearby. But-"

"Then relax. In any case, you must wait for Alice. What branch of mathematics do you pursue?"

"Algebraic logic, usually, sir, with some attention to its applications to geometry." The Reverend Mr. Dodgson was seated so that he faced Gay Deceiver and sat in the shadow of her port wing but nothing in his manner showed that he noticed the anachronism.

"Have your studies led you into multidimensional non-Euclidean geometries?" Jake asked.

Dodgson blinked. "I fear that I tend to be conservative in geometry, rathuh."

"Father, Mr. Dodgson doesn't work in your field; he works in mine."

Dodgson raised his eyebrows slightly. Jake said, "My daughter did not introduce herself fully. She is Mrs. Carter but her maiden name is Doctor D. T. Burroughs. Her field is mathematical logic."

"That is why I am so pleased that you are here, Mr. Dodgson. Your book 'Symbolic Logic' is a milestone in our field."

"But, my dear lady, I have not written a work titled 'Symbolic Logic."

"I've confused things. Again it is matter of selection of coordinates. At the end of the reign of Queen Victoria you will have published it five years earlier. Is that clear?"

He answered very solemnly, "Quite clear. All I need do is to ask Her Majesty how much longer she is going to reign and subtract five years."

"That should do it. Do you like to play with sorites?" For the first time, he smiled. "Oh, very much!"

"Shall we make up some? Then trade and solve them?" "Well. . . not too lengthy. I really must get back to my young charges." "We can't stay long, either. Anyone else want to play?" No one else elected to play. I stretched out on the grass with a handkerchief over my face; Jake and Sharpie went for a walk. "Shall we hold the statements down to groups of six?" Dodgson suggested.

"All right. But the conclusion must be true. Not nonsense. Agreed?" (Deety had taught me this game; she's good at it. I decided to be a silent witness.)

They kept quiet while I snored convincingly, Deety was a "lady" for a while, then sprawled on her belly and chewed her pencil. I watched with one eye from under my handkerchief.

First she covered several pages with scratch work in developing statements incomplete in themselves but intended to arrive at only one possible conclusion. Having done so, she tested them by symbolic logic, then wrote out her list of statements, mixing them randomly-looked up.

The young mathematician was looking at her solemnly, note pad in hand.

"Finished?" my wife asked.

"Just finished. Mrs. Carter, you remind me of my little friend Alice Liddell."

"I know," she said. "That's how I recognized her. Shall we trade?"

Dodgson tore a sheet from his pad. "This is to be solved in the first person; its conclusion applies to you."

"All right, I'll try it." Deety read aloud:

"1) Every idea of mine, that cannot be expressed as a syllogism, is really ridiculous;
"2) None of my ideas about Bath-buns are worth writing down;
"3) No idea of mine, that fails to come true, can be expressed as a syllogism;
"4) I never have any really ridiculous idea, that I do not at once refer to my solicitor;
"5) My dreams are all about Bath-buns;
"6) I never refer any idea of mine to my solicitor, unless it is worth writing down."

Deety chortled. "How sweet of you! It is true; all my dreams do come true!"
"You solved it so quickly?"
"But it's only six statements. Have you solved mine?"
"I haven't read it yet." He also read aloud:
"1) Everything, not absolutely ugly, may be kept in a drawing room;
"2) Nothing, that is encrusted with salt, is ever quite dry;
"3) Nothing should be kept in a drawing room, unless it is free from damp;
"4) Time-traveling machines are always kept near the sea;
"5) Nothing, that is what you expect it to be, can be absolutely ugly;
"6) Whatever is kept near the sea gets encrusted with salt."

He blinked at the list. "The conclusion is true?" he asked.
"Yes."
For the first time he stared openly at Gay Deceiver. "That, then-I infer- is a 'time-traveling machine."
"Yes. . . although it does other things as well."
"It is not what I expected it to be.. . although I am not sure what I expected a time-traveling machine to be."
I pulled his handkerchief off my face. "Do you want to take a ride, Mr. Dodgson?"
The young don looked wistful. "I am sorely tempted, Captain. But I am responsible for three little girls. So I must thank you for your hospitality and bid you good-bye. Will you offer my apologies to Professor and Mrs. Burroughs and explain that duty calls me?"

XXXV
"It's a disturbing idea-"

Jake:
"Deety, how does it feel to say good-bye without getting kissed?"
"Zebadiah, I didn't make it possible. Lewis Carroll was terrified by females over the age of puberty."

"That's why I stayed close. Deety hon, if I had gone with Jake and Hilda, he would have left at once."

"I can't figure out how he got here in the first place," said my dear wife Hilda. "Lewis Carroll was never in Wonderland; he simply wrote about it. But this is Wonderland-unless rabbits in England wear waistcoats and watches."

"Aunt Hilda, who can possibly be as deeply inside a story as the person who writes it?"

"Hmm- I'll have to study that."

"Later, Sharpie," Zeb said. "Stand by to rotate. Mars, isn't it?"

"Right, Zebbie," Hilda agreed.

"Gay. . . Sagan!"

Mars-zero lay ahead, in half phase at the proper distance.

"Set!" Hilda reported. "To tenth universe, third group."

"Execute." It was another starry void with no familiar groupings; we ran through routine, Zeb logged it as "possible" and we moved on to the second of the third group- and I found myself facing the Big and Little Dippers. Again we ran through a routine tumble-but failed to find the Sun or any planets. I don't know the southern constellations too well but I spotted Crux and the Magellanic Clouds. To the north there could be no doubt about Cygnus and a dozen others.

Zeb said, "Where is Sol? Deety? Sharpie?"

"I haven't seen it, Zebadiah."

"Zebbie, don't go blaming me. I put it right back where I found it."

"Jake, I don't like this. Sharpie, are you set?"

"Set. Standing orders. Third group, third of three."

"Keep your finger near the button. How does this fit your theory? I don't recall listing a story that doesn't have the Solar System in it."

"Zebbie, it can't fit two of those left, could fit the others, and could fit half a dozen or more that got three votes. You said that about a dozen were tied in your mind. Were any of them space-travel stories?"

"Almost all."

"Then we could be in any world that takes our universe as a model but far enough from the Sun so that it appears as second or third magnitude. That wouldn't have to be far; our Sun is pretty faint. So this could be the Darkover universe, or Niven's Known Space, or Dr. Williamson's Legion of Space universe, or the Star Trek universe, or Anderson's world of the Polesotechnic League, or Dr. Smith's Galactic Patrol world. Or several more."

"Sharpie, what were two that this could not be?"

"King Arthur and his Knights, and the World of the Hobbits."

"If we find ourselves in either of those, we leave. No obstetricians. Jake, any reason to stay here longer?"

"None that I see," I answered.

"Captain Deety, I advise scram. Those space-opera universes can be sticky. I don't care to catch a photon torpedo or a vortex bomb or a negative-matter projectile, just through failure to identify ourselves promptly."

So we rotated.

This time we weren't merely close; we were on the ground. Charging straight at us was a knight in armour, lance couched in attack. I think it unlikely that a lance could damage Gay. But this "gentle knight" was unfriendly; I shouted, "Gay!-Zoom!"

Sighed with relief at sudden darkness and at the Captain's next words: "Thanks, Pop. You were on your toes."

"Thank you. End of group three. Back to Mars? 5, A, G, A, N?"

"Let's get on with it," Zeb agreed. "All Hands-"

"Zebadiah!" my daughter interrupted. "Is that all you wish to see of King Arthur and his Knights?"

"Captain Deety, that wasn't one of King Arthur's Knights. He was wearing plated mail."

"That's my impression," my beloved agreed. "But I gave more attention to his shield. Field sable, argent bend sinister, in chief sun proper with crown, both or."

"Sir Modred," my daughter decided. "I knew he was a baddie! Zebadiah, we should have hit him with your L-gun."

"Killed that beautiful beer-wagon horse? Deety, that sort of armor wasn't made earlier than the fifteenth century, eight or nine centuries after the days of King Arthur."

"Then why was he carrying Sir Modred's shield?"

"Sharpie, was that Sir Modred's coat of arms?"

"I don't know; I blazoned what I saw. Aren't you nit-picking in objecting to plate armor merely because it's anachronistic?"

"But history shows that-"

"That's the point, Zebbie. Camelot isn't history; it's fiction."

Zeb said slowly, "Shut my big mouth."

"Zebbie, I venture to guess that the version of Camelot we blundered into is a patchwork of all our concepts of King Arthur and the Round Table. I picked up mine from Tennyson, revised them when I read 'Le Morte d'Arthur.' Where did you get yours?"

"Mark Twain gave me mine-'A Connecticut Yankee in King Arthur's Court.' Add some Prince Valiant. Jake?"

I said, "Zeb, there seems little doubt that there was a king or a general named Arthur or Arturius. But most people think of King Arthur from stories having little connection with any historical person. 'The Sword in the Stone' and 'The Once and Future King' are my favorites."

My daughter persisted, "I do believe in the Round Table, I do! We should go back and look! Instead of guessing."

"Captain Deety," her husband said gently, "the jolly, murderous roughnecks called the Knights of the Round Table are fun to read about but not to know socially. Nor are people the only dangers. There would be honest-to-God dragons, and wyverns, and malevolent magic-not the Glinda-the-Good variety. We've learned that these alternate worlds are as real as the one we came from. We don't need to relearn it by getting suddenly dead. That's my official advice. If you don't agree, will you please relieve me at the conn. . . Ma'am?"

"Zebadiah, you're being logical-a most unfair way to argue!"

"Jacob," said my wife, "suppose we were people who don't like fanciful stories. What sort of worlds would we find?"

"I don't know, Hilda. Probably only humdrum slice-of-life universes indistinguishable from the real world. Correction: Substitute 'Universe-zero' for 'real world'-because, as your theory requires, all worlds are equally real. Or unreal."

"Jacob, why do you call our universe 'universe-zero?"

"Eh.. . for convenience. Our point of origin."

"Didn't you tell me that no frame is preferred over any other? Each one to the Number of the Beast is equally zero in six axes?"

"Well. . . theory requires it."

"Then we are fiction in other universes. Have I reasoned correctly?"

I was slow in answering. "That seems to be a necessary corollary. It's a disturbing idea: that we ourselves are figments of imagination."

"I'm nobody's figment!" my daughter protested. "I'm real, I am! Pinch me!.. . Ouch! Zebadiah, not so hard!"

"You asked for it, dear," Zeb told her.

"My husband is a brute. And I've got a cruel stepmother just like Snow White. I mean 'Cinderella.' And my Pop thinks I'm imaginary! But I love you anyway because you're all I've got."

"If you fictional characters will pipe down, we'll get this show on the road. Stand by to rotate. Gay Sagan!"

Mars was where it should be. I felt more real.

XXXVI

"Pipe down and do your job."

Hilda:

"Set, Captain," I reported. "Thirteenth rotation. Correct, Zebbie?"

"Check, Sharpie. Captain?"

Deety answered, "Let's catch our breaths." She stared out at the ruddy barrenness of Mars-zero. "That rock looks downright homelike. I feel like a tourist who tries to see thirty countries in two weeks. Shock. Not 'future shock' but something like it."

"Homesickness," I told her. "Knowing that we can't go back. Deety, somewhere, somewhen, we'll build another Snug Harbor. Won't we, Jacob?"

Jacob patted my knee. "We will, dearest."

Deety said wistfully, "Will we really find another Snug Harbor?"

"Deety, are you over your pioneer-mother jag?"

"No, Zebadiah. But I can get homesick. Like you. Like Hilda. Like everybody but Pop."

"Correction, Daughter. I don't miss Logan, and I don't think Hilda misses California_"

"Not a bit!" I agreed.

"Nor me," agreed Zeb. "I had a rented flat. But Snug Harbor was home."

"Agreed," Jacob answered. "I didn't really hate these vermin until they bombed our home." Jacob added, "We've got to find a new Snug Harbor. Comfortable as this car is, we can't live in it indefinitely."

"Check. Sharpie, your theory seems to be checking out. Is there any reason to finish this schedule? Should we go directly to Teh axis?"

"Zebbie, granted that most rotations didn't amount to more than sightseeing, if we hadn't followed this schedule, this car would not be nearly so comfortable. Do you know of another Ford that has two bathrooms?"

"Sharpie, I don't know of one that has one bathroom. Our space-warp special lets us stay in space as long as our air holds out. And food. But air is the critical factor."

I said, "Zebbie, have you noticed that our air does not get stuffy?"

"It will soon."

"It need not," Jacob pointed out. "We can scram-code to Oz, or to Wonderland, in seconds. Sweet air, no danger."

Zebbie looked sheepish. "I'm still learning what our wonder buggy will do."

"So am I."

"Gentlemen, you missed my point. You might check the juice. I haven't mentioned another asset. Zebbie, would you like a banana?"

"Sharpie, I ate the last before I buried garbage. While you and Deety were washing dishes before we left Wonderland."

"Tell him, Deety."

"Zebadiah, Hilda and I salvaged and put everything into the basket. Hilda started to put it into our wardrobe-and it was heavy. So we looked. Packed as tight as when we left Oz. Six bananas-and everything else. Cross my heart. No, go look."

"Hmmm- Jake, can you write equations for a picnic basket that refills itself? Will it go on doing so?"

"Zeb, equations can be written to describe anything. The description would be simpler for a basket that replenishes itself indefinitely than for one that does it once and stops-I would have to describe the discontinuity. But I am no longer troubled by natural- or 'unnatural'-laws that don't apply in Universe-zero."

"Mmmm. . . Science Officer, I suggest that you check on that basket now that we have returned to Universe-zero."

"Zebbie, make that an order in writing and sign your name-if you want to look foolish. Deety, will you order it logged?"

"Sharpie, if you weren't such good company, I'd strangle you. Your earlier answer recommended that we complete the rotations."

"No, I noted that the first twelve had not been unprofitable. We could have completed the last three by now had we not spent time debating it."

"Hilda honey, our cowardly Astrogator needed time to get his nerve back. By yumpin' yiminy, once you're all trained, I'm going to retire."

"We would simply recall you, Zebbie. Each will go on doing what she can do best."

"Time is out of joint. 0 cursed spite, that I was ever picked to set it right."

"You misquoted."

"I always do. What universe do we hit next?"

"Zebbie, we have three rotations to go, with four left on the four-votes list. One is useless but amusing and safe. The other three are places to live but each has its own dangers. As the chief of surgery us~ed to say: 'I dunno, let's operate and find out."

Zebbie sighed. "All hands, stand by to rotate. Execute!"

Green fire- '~Rotate! Execute!"

A formless red fog- ~Gay Sagan!"

Mars looked like an old friend. Zebbie wiped his brow and said, "Whew! One to go- Cap'n Deety hon, let's get it over with. Sharpie?"

"Fifteenth universe-set!" I reported.

'Execute!"

We came out into a starry universe. "Cap'n Deety hon, don't these constellations look familiar?" Zebbie commented.

"I think so."

"They are familiar," I insisted. "Except that there is a very bright star near the Gemini. That ought to be the Sun. We're way out past Pluto, where the comets spend the winter. Let's move in and find Earth."

"Don't be in a hurry," said Zebbie. "Science Officer, what was that first rotation? Green fire?"

"How about the deadly green nebula in 'The Legion of Space'?-on the trip to the Runaway Star where Aladoree had been taken."

"That was on your list?"

"All of us voted for it."

"What was that red fog we rotated into next?"

"That one is harder to figure," I admitted. "It could be any universe by a writer who paid respectful attention to astronomy-Bova, Haldeman, Schmidt, Pournelle, Niven, Benford, Clement, Anderson, and so forth. But there were four votes for 'The Mote in God's Eye.' Whether the two old gentlemen had anything to do with it or not, I think we blundered into a red giant. A red giant is close to what we call vacuum. Anyhow, we weren't hurt; we were there about two seconds."

"Less than that, Sharpie; you set it with one click, and barely had your thumb off the execute button. Captain, do you wish to transit toward that bright star?"

"Let's chop off thirty or forty A.U.'s," Deety decided, "and get a rough cross fix. Maybe that will give us a disc Pop can measure. If not, we'll narrow it down until it does. Then place us one A.U. from the Sun and we'll spot Earth easily. Astrogator-advice."

"Captain, I advise making that first jump with wide offset. Miss the Sun by at least one A.U. At least."

"Yes! Zebadiah, make that cross fix wide. Uh-" Deety peered around. "There's the Sickle. Have Pop aim for Regulus."

My husband said, "I'm swinging toward Regulus. Zeb, how do I take the angular width of the Solar disc without broiling an eyeball?"

"The gunsight has a built-in polarizer. Didn't I show you?"

"You did not."

"Sorry. Captain Deety hon, I request permission to relieve the Chief Pilot for this."

"Permission granted. But, Zebadiah, you be careful."

'Spacecraft! Identify yourself!" -the voice was everywhere.

Zebbie jerked with surprise. (Me, too!) "Who said that?"

'Lens man Ted Smith, Commander Galactic Patrol, commanding Patrol Vessel 'Nighthawk.' Entity, I regret being forced to enter your mind but you have been ignoring

sub-ether radio for four minutes thirty-two seconds. Switch it on and I will get out of your mind. Do not maneuver; we have weapons on you."

"Captain," Jacob whispered, "Hilda is set to rotate."

Deety shook her head, touched Zebbie's arm, pointed to herself.

"Lensman, this is Captain Deety, commanding Continua Craft Gay Deceiver. We don't have sub-ether radio. Do you read me?"

'7 read you loud and clear. What happened to your sub-ether radio? Do you need help?"

"Captain Smith, I don't have sub-ether radio at all. We don't need help but could use astrogational advice. Where are we?"

'The important point is that you are in my patrol sector, an unscheduled ship insufficiently identified. I repeat: DO NOT MANEUVER. By order of the Galactic Patrol. Do you understand?"

"I understand you, Lensman. I regret having intruded into your patrol space. This is a private ship engaged in peaceful exploration."

"That is what I am about to determine, Captain. Stay where you are, make no hostile moves, and you will be safe."

"Lensman, can you see through my eyes?"

"Are you inviting me to do so?"

"Certainly. Use my eyes, use my ears. But don't try to take over my mind or this ship will disappear." Deety squeezed my shoulder; I signaled "Roger" with a pat.

"1 warn you not to maneuver. Ah. . . interesting!"

I snapped, "Captain Smith, quit threatening us! A Lensman is supposed to be an officer and gentleman! I intend to report you to the Port Admiral! You're an oaf!"

"Sorry, Madam. I do not wish to offend but I have duty to perform. Captain, will you please turn your head so that I can see who is speaking?"

"Certainly. Let me introduce all of us. On my left"-Deety looked at Zebbie- "is Doctor Zebadiah Carter. In front of him is Doctor Jacob Burroughs. On his right"-Deety looked at me-"is his wife, Doctor Hilda Burroughs, xenobiologist and chief of science. Let me offer you this advice, Lensman: It is never safe to offend Doctor Hilda."

"I gathered that impression, Captain. Doctor Hilda, I would not willingly offend-but I have duties. Shall I get out of your mind entirely? If you speak to me, I will hear with Captain Deety's ears. She can, if she will, repeat to you my thought in answer."

"Oh, it's all right for conversation. But don't try to go deeper! Mentor would not like it-as you know!"

"Doctor Hilda, your mention of.. . a certain entity. . . surprises me-from one who is not a Lensman."

"I don't need a Lens. You can check that with Arisia."

Deety said hastily, "Lensman, are you satisfied that we are a peaceful party of scientists? Or is there something more that you wish to know?"

"Captain, I can see that this ship is not a pirate vessel-unarmed and unarmoured. Oh, I note controls for a coherent light gun but that wouldn't be much use to a pirate. Nor can I visualize two men and two women attempting to attack a space liner. But keeping the peace is just one of my responsibilities. Your ship, small as it is, could be carrying millions of credits in contraband."

"Say what you mean, Lensman," I snapped. "Drugs. But don't use the word 'zwilnik.'"

Mentally, we could hear him sigh. 'Yes, Doctor Hilda-drugs. But I did not introduce that offensive word into the discussion."

"I heard you thinking it. Don't do it again!"

"Lensman," Deety said quickly, "we have medical drugs. The only one that could interest you is a few milligrams of morphine. But we carry no thionite, no bentlam, no hadive, no nitrolabe. You are using your Lens; you know that I'm telling the truth."

"Captain, it's not that easy. Before I hailed you I did try a slight probe- please, Doctor Hilda; it was in line of duty! I've never encountered minds so fully blocked. And this is a most curious craft. It is obviously designed for aerodynamic use rather than space. Yet here you are-and I can't see how you got here. I have no choice but to detain you and to examine this ship thoroughly. If necessary, take it apart piece by piece."

"Lensman," Deety said earnestly, "don't be hasty. You can search more thoroughly by Lens than by other means. Go ahead. We've nothing to hide and we have a great deal to offer the Patrol. But you won't get it by pushing us around."

"You certainly won't! Cap'n, let's leave! I'm tired of stupidity!"-and I snapped, "Gay Sagan!"

Mars-zero was on our starboard bow. That dead rock looked awfully good to me.

Zebbie said, "Captain, did you order the copilot to execute?"

I said, "Don't bother Deety with it, Zebbie. I did it without permission. Solely my decision."

Zebbie frowned unhappily. "Sharpie, I thought you would be our model Girl Scout while Deety is skipper. Why?"

"Zebbie, you can rotate back there in no time. But I would like to be dropped first. Imperial House. Or Minus-J. Somewhere."

"Why, Hilda?" my husband asked.

"Jacob, meet your friendly neighborhood zwilnik. Commander Ted Smith of the Galactic Patrol-a fine officer; I'm certain, as Dr. E. E. Smith saw to it that no unworthy person could ever wear the Lens-was getting unpleasantly close. That's why I was so fierce with the poor man."

Deety said, "But, Aunt Hilda, E. E. Smith's world is just the sort of world we've been seeking."

"Maybe we'll go back. But not until I've had a chance to dump two pounds of concentrated extract of Cannabis magnifica. Dr. Wheatstone tells me that it is incredibly valuable in therapy, as the base for endless drugs. But I had a hunch that Commander Smith would confiscate it, impound the Smart Girl, arrest all of us-and convict me. But that isn't all, Zebbie. Doctor Smith created one of the most exciting universes I know of. To read about, not to live in. With that endless Boskone War-must have been going on; they were looking for zwilniks-you have to be as smart as Kimball Kinnison to stay alive. . . and even he gets chopped up now and again. Deety and I need a good baby-cotcher and I'm sure they have them. But we have months to find one. Let's not deliberately back into a war."

Deety didn't hesitate. "I agree with Aunt Hilda. If we go back, it will not be while I'm captain. Hillbilly, you didn't disobey orders; you used your head in an emergency." I

thought Deety was going to ask me how and when I got Cannabis magnifica extract. . . but she didn't.

"Jake," Zebbie said, "we're overruled. Where now, Captain? Earth-Teh -oneplus?"

"First we'd better pick a place to spend the night, and hold an election."

"Why, Deety, you've served less than twelve hours!"

"It will be about twenty-four hours when we lift off tomorrow. I'm not going to ask for nominations; we've all had a turn at it; we are now balloting for permanent captain."

I expected Zebbie to be picked. But there were three for me, one for Zebbie- my ballot.

I seemed to be the only one surprised. Zebbie said to Deety, "Ask to be relieved now, hon. The short-timer syndrome is bad for anyone but worse for a C.O.-it demoralizes her crew."

"Aunt Hilda, will you relieve me?"

I pondered it half a second. "I relieve you, Deety."

"Goody! I think I'll take a nap."

"I think you'll take the verniers. Zebbie and Jacob stay in the jobs they're in. Prepare to maneuver. Copilot, set for Oz. If you don't know how, ask your father."

"Set verniers for Oz?"

I took a deep breath to calm down. "Before anyone starts asking 'Why?' the answer is: Pipe down and do your job. Before we start on Teh axis, I want to ask questions. We talked to Glinda about our problem. We didn't talk directly to the others. I mean Ozma and Professor Wogglebug and the Little Wizard and possibly others. Family, magicians who can install two bathrooms in a Ford and never have it show can also help us spot vermin if we ask the right questions. Deety, are you having trouble setting for Oz?"

"Captain, why set verniers? Gay has our parking spot in her perms. Codeword 'Glinda."

A few seconds later Gay called out, "Hi, Tik-Tok!"

"Wel-come back, Miss Gay De-cei-ver. Glin-da told me that you would be gone on-ly a few mi-nutes, so I wai-ted here for you. I am deep-ly hap-py to see you a-gain."

XXXVII
The First Law of Biology

Zeb:

"Stand by to maneuver," I ordered-at the conn by Captain Sharpie's wish "Hello, Gay."

"Howdy, Zeb. You look hung over."

"I am. Gay Home!"

Arizona was cloudless. "Crater verified, Captain Hilda."

"Teh axis one plus-set, Captain," Deety reported.

"Execute!"

"No crater, Cap'n Auntie. No house. Just mountains." Deety added, "Teh one-minus-set."

"Roger, Deety. Routine check, Captain?"

"Voice routine, short schedule." (I think that is what got Sharpie elected permanent C.O.-she never hesitates.)

"Gay Deceiver. Sightseeing trip. Five klicks H-above-G." "Ogle the yokels at five thousand meters. Let's go!" "Deety, keep your thumb on the button. Gay-Miami Beach." Below lay a familiar strip city. "Captain?"

"Zebbie, note the crowded streets. Sunny day. Beaches empty. Why?" "Bogie six o'clock low!" Jake yelped.

"Gay Zoom!"

Earth-Teh-one-plus swam warm and huge. Opposite us a hurricane approached Texas. I asked, "Want to see more, Captain?"

"Zebadiah, how can we see more when we haven't seen any?"

"But Cap'n Sharpie has, Deety. Folks, I'm unenthusiastic about a world where they shoot without challenging. Jake, your bogie was a missile?"

"I think so, Zeb. Collision course with Doppler signature over a thousand knots and increasing."

"A missile-out of Homestead-analog, probably. Captain, these blokes are too quick on the trigger."

"Zebbie, I find empty beaches more disturbing. I can think of several reasons why they would be empty on a nice day-all unpleasant."

"Want to check San Diego? I can get more scram time by increasing Habove-G."

"No, we have over forty thousand analogs on this axis; we'll stick to doctrine. Shop each world just long enough to find something wrong-'Black Hats,' war, low technology, no human population, bad climate, overpopulated, or factor X. If we don't find our new Snug Harbor in the next four months, we'll consider returning to Doctor Smith's world."

"Hillbilly, if we wait there to have our babies, then wait again until they are big enough to travel, we'll never find Snug Harbor."

"I said, 'consider.' We may find a place to shack up for five months or so, then slam back to Galactic Patrol Prime Base hospital for the Grand Openings. Could be an empty world-no people, pleasant otherwise. Food is now no problem and we get water from Oz. All we lack is television-"

"That's no lack!"

"Deety, I thought you liked 'Star Trek'?"

"Auntie Captain, we've got our own star trek now."

"Hmm-Deety, you and I should go easy on this star trek. I'm going to I'm having my first one past forty and I'm going to be very careful-exercise, diet, rest, the works."

"I surrender. Let's get cracking, Cap'n Hillbilly."

"Take it, Zebbie."

"Copilot, execute!"

Earth-Teh -one-minus replaced Teh -one-plus. "Jacob, it doesn't look right. Astrogator, I want us up a hundred kilometers, over-make it Mississippi Valley about St. Louis. Want to change attitude?"

"Yes, please. Jake, point Gay at your target; it will skip setting angle." The craft's nose dipped and steadied.

"How's that?"

"Fine, Jake. Deety, set L axis plus transition ninety-nine thousand klicks."

"Set, Zebadiah."

"Execute." We popped out high over fields of ice. "Sneak up on it, Cap'n?"

"Never mind. Zebbie, that's what I call a hard winter."

"A long winter. Actually it's summer, I think; Earth-analogs should be in the same place in orbit as Earth. Jake?"

"By theory, yes. Doesn't matter either way; that's glaciation. Deety has set Teh -two-plus."

"We can't homestead on an ice sheet. Execute."

"Zebbie, how many ice ages so far?"

"Five, I think. Deety?"

"Five is right, Zebadiah. Plus two worlds with major war, one where they shot at us, and one so radioactive that we got out fast!"

"So we're hitting ice more often than not."

"Five to four has no statistical significance, Zebadiah. At least Aunt Hilda hasn't spotted even one 'Black Hat."

"Sharpie, how good are your magic spectacles?"

"Zebbie, if I see them walk, I'll spot 'em, no matter how they're disguised. In the simulations Glinda and Wizard cooked up, I spotted their gait every time Deety identified it by Fourier analysis."

"You feel confident, that's enough."

"Zebbie, I don't have clairvoyance; there wasn't time to train me. But Glinda got me highly tuned to their awkward gait, both with and without splints. I want to discuss something else. According to geologists, when we were home- Earth where we were born, I mean-we were in a brief warm period between glaciations."

"If geologists are right," I admitted.

"If so, we'll usually hit glaciation."

"Probably. 'If-"

"Yes, 'if-' But we now know what glaciation looks like. If you and Jacob and Deety can make it a drill, we can flip past ice ages as fast as you spot one."

"We'll speed it up. Jake."

"Zebadiah, wait!"

"Why, Deety? We're about to translate."

"Pop, you told me to set for Teh -five-plus."

"Jacob?" Captain Sharpie said.

"That's right, Captain."

"What's the trouble, Deety?"

"Aunt Hilda, I said that five-to-four had little statistical significance. But so far, all glaciations have been in Teh -minus. That could be chance but-"

-but doesn t look like it. You want us to explore axis Teh-plus first? Astrogator?"

'~No, no! Captain Auntie, I would like to see enough of Teh -minus to have a significant sample. At least a hundred."

"Jacob?"

"Hilda, if we check in one pseudodirection only-say Teh -minus-it'll be four or five times as fast as hunting back and forth between plus and minus. Deety can set with one click; Zeb can yell 'Execute!' as soon as you are satisfied."

"Jacob, we'll get Deety her sample. But faster. Astrogator, have our copilot set Teh -six-minus"

"Uh. . . set, Captain."

When Zebbie says 'Go,' Jacob, you and Deety flip them past as fast as you can without waiting for orders. All we'll be looking for is ice ages; we can spot one in a splitsecond. If anyone sees a warm world, yell 'Stop!' Deety, can Gay count them?"

"She's doing so, Captain. We both are."

"Okay. I'm going to give my magic specs a rest-we're looking for nothing but glaciers versus green worlds. Questions?"

"Run out Teh -minus as fast as I can set and translate. Stop when anyone yells. Aye aye, Cap'n Hillbilly honey."

Sharpie nodded to me; I snapped, "Go!"

"STOP!" yelped Deety.

"Jacob, I've never seen so much ice! Deety, how many martinis would that make?"

"On the rocks or straight up?"

"Never mind; we're out of vermouth. Did you get your sample?"

"Yes, Captain. One hundred ice ages, no warm worlds. I'm satisfied."

"I'm not. Zebbie, I want to extrapolate logarithmically-go to Teh -minusone-thousand, then ten thousand, a hundred thousand, and so on. Jacob?"

Jake looked worried. "Hilda, my scales can be set for vernier setting five, or one hundred thousand. But that translation would take us more than twice around a superhyper great circle-I think."

"Elucidate, please."

"I don't want to get lost. My equations appear to be a description of sixdimensional space of positive curvature; they've worked-so far. But Euclidean geometry and Newtonian mechanics worked as long as our race didn't monkey with velocities approaching the speed of light. Then the approximations weren't close enough. I don't know that the plenum can be described with only six space-time coordinates. It might be more than six-possibly far more. Mathematics can be used for prediction only after test against the real world."

"Jacob, what is the 'real world'?"

"Ouch! Hilda, I don't know. But I'm afraid to get too many quanta away from our world-world-zero, where we were born. I think the extrapolation you propose would take us more than twice around a superhyper great circle to- What world, Deety?"

"World-six-thousand-six-hundred-eighty-eight on Teh- minus axis, Pop. Unless it's skewed."

"Thanks, Deety. Captain, if we arrived there, we could return to Earth-zero by one setting. if-' Instead of a superhyper great circle we might follow a helix or some other curve through dimensions we know not of."

Pop, you took what I said and fancied it up.

"R.H.I.P., my dear. You will appear as junior author on the monograph you'll write and I'll sign."

"Pop, you're so good to me. Wouldn't Smart Girl return us simply by G, A, Y, H, 0, M, E?"

"Those programs instruct a machine that has built into it only six dimensions. Perhaps she would. . . but to our native universe so far from Earth-zero that we would be hopelessly lost. If Zeb and I were bachelors, I would say,
'Let's go!' But we are family men."

"Deety, set the next one. Teh -five-plus?"

"Right, Zebadiah. But, Captain Auntie, I'm game! The long trip!"

"Me, too," agreed Captain Sharpie.

I said in a tired voice, "Those babies are ours as much as they are yours- Jake and I are taking no unnecessary risks. Captain Sharpie, if that doesn't suit you, you can find another astrogator and another chief pilot."

"Mutiny. Deety, shall we pull a 'Lysistrata'?"

"Uh.. . can't we find some reasonable middle ground?"

"Looks like a place to stop for lunch. Sharpie, want to sniff for 'Black Hats'?"

"Take me down, please. About two thousand klicks above ground."

"Will you settle for five?"

"Sissy pants. Yes, if you'll first have Jacob zip us around night side to check for city lights."

"Give her what she wants, Jake, by transiting; an orbit takes too long. 'Give me operations. . . way out on some lonely atoll! For I. . . am too young to diiiie! I just want to grow old!"

"You're off key, Zebbie."

"Deety likes my singing. Anybody spot city lights?"

We found no cities. So Jake put us down for lunch on a lonely atoll, Hilda first making certain that it had nothing on it but palm trees. Deety stripped, started exercises.

Hilda joined her; Jake and I set out lunch, having first dressed in stylish tropical skin. The only less-than-idyllic note came from my objecting to Deety's swimming in the lagoon. Hilda backed me up. "Deety, that's not a swimming pool. Anything in it has defenses or couldn't have survived. The first law of biology is eat or be eaten. A shark could have washed over the reef years back, eaten all the fish-and now be delighted to have you for lunch."

"Ugh!"

"Deety, you'd be very tasty," I soothed.

XXXVIII

"-under his vine and under his fig tree;
and none shall make them afraid-"

Jacob:

Teh positive took longer to search than Teh -negative for the very reason that its analogs were so much like our native planet.

An uninhabited planet could be dismissed in ten minutes; one heavily populated took no longer. A planet at too low a level of culture took hardly longer- a culture with animal-drawn carts and sailing ships as major transport we assumed not to have advanced medicine. But most took longer to reject.

At the end of a week we had rejected ninety-seven. . . which left us only 40.000 + to inspect!

That evening, at "Picnic Island," our private atoll, my daughter said, "Cap'n Auntie, we're doing this wrong."

'How, Deetjkins?"

"Ninety-seven in a week, over forty thousand to go. At that rate we finish in eight years."

Her husband said, "Deety, we're getting faster."

My beloved said, "Astrogator, do you know more about calculating than does the Copilot?" Zeb shut up. We had learned that when Hilda addressed usby titles, she was speaking as captain. I flatter myself that I learned it quicke5~ whereas Zeb was a bit slow. "Go ahead, Deety."

"If we go on checking this way, it won't get better; it will get worse. Here's the first weeks' score"-she passed around her summary; it read:

Earth analogs checked	97
Average time per planet	34 mins 381/2 sec
Maximum time	2 days 3 hrs 52 mins
Minimum time	13 seconds
Median time	12 mins 07 sec

I studied it. "Deety, we can reduce that average time. Over two days was much too long to check analog twenty-six."

"No, Pop, we should have taken longer on twenty-six. It's that thirteen seconds that is bankrupting us."

"Daughter, that's preposter-"

"Chief Pilot."

"Yes, dear?"

"Please let the Copilot finish. . . without interruption." I retired from the field, annoyed, to wait until my advice was indispensable-soon, I felt sure.

"Aunt Hilda, if we gave each analog thirteen seconds, it would take us eighteen and a half days.. . and we would learn nothing. I want to cut the minimum time way, way down-make it routine-and learn something. I wish Gay could talk, I do."

"But, dear, she can. We can be in Oz in two minutes. The dirty dishes can wait."

My daughter looked startled. "Pass me the Stupid Hat."

"But we won't go to Oz before tomorrow. We need to figure out what the problem is, first-and I need a night of cuddle with Jacob for the good of my soul." Hilda reached out and took my hand.

Hilda went on, "Deety, remember how fast we mapped Mars-Tau -ten-positive once we let Gay do it her way? Isn't there some way to define a locus- then turn her loose?"

We discussed it until bedtime. I set the locus myself by vetoing going past Earth-analog-Teh -positive-five-thousand until we were certain that no satisfactory analog existed in those first five thousand. "Family," I told them, "call me chicken, to use Zeb's favorite excuse. I know so little about this gadget I invented that lam always afraid of getting lost. All rotations have been exactly~ ninety degrees. In theory I can define a quantum of angle and each such quantum should render accessible another sheaf of universes. In practice I can't do machining of that quality. Even if I could, I would be afraid to risk ~ our necks on a gadget required to count angular quanta.

"But I have another objection-a gut feeling that worlds too far out Teh axis will be too strange. Language, culture, even dominant race-I confess to prejudice for human beings, with human odo~ and dandruff and faults. Supermen or angels would trouble me more than vermin. I know what to do with
a 'Black Hat'-kill it! But a superman would make me feel so inferior that I would not want to go on living."

Deety clapped. "That's my Pop! Don't worry, Pop; the superman who can give you an inferiority complex hasn't been hatched." I think she meant that as a compliment.

We worked the parameters down to three: climate warm enough to encourage nudity; population comfortably low; technology high. The first parameter was a defense against B.H. vermin: they require antinudity taboo to bolster their disguises. The last parameter would tend to indicate advanced obstetrics. As for population, every major shortcoming of our native planet could be traced to one cause: too many people, not enough planet.

Hilda decided to standardize: one locale, one H-above-G. The locale was (in Earth-zero terminology) Long Beach, California, over its beach one klick Habove-G-dangerously low were it not that Gay would never be in any universe longer than one second. Any speed-of-light weapon can destroy in less than a second, but can its human-cum-machine operators identify a target, bear on it, and fire in one second? We thought not. We hoped not.

At analogs of Long Beach, it should be midsummer, hot, dry, and cloudless. If that beach was comfortably filled but not crowded, if the people were nude, if area adjacent to the beach showed high technology by appearance, then that analog should be checked further.

Forty minutes in Oz changed much of our planning.

Tik-Tok was waiting for his lady friend as usual but kept politely quiet while Deety talked with Gay-and so did Zeb and so did I, not because we have Tik-Tok's courtly manners but because Captain Hilda was blunt. Gay understood the Celsius scale, i.e., both freezing and boiling water temperatures lay in her experience and splitting the interval into one hundred parts was no trouble. She had enough parts that needed to be neither too hot nor too cold that awareness of her surroundings both ambient and radiant was as automatic as breathing is for me. As for radio and television (both gauges of technical level) she could sample all infrared flux (as she had done at Windsor City).

Crowds on beach? Would it suffice to count bodies on a sample one hundred meters square?

But Gay had a quite un-human complaint: "Deety, why must I hang around a thousand milliseconds for a job I can do in ten? Don't you trust me?"

So instead of 57 years-or 8 years-or 181/2 days-or 11.4 hours-our preliminary survey was complete less than a minute after we left Oz-5000 universes in fifty seconds. Gay Deceiver displayed her results as three curves representing temperature, body count, density of communication-frequency radiation_abscissa for all running from Earth-zero to Earth-analog-5000Teh -plus.

Those curves told one thing at once: No need to search past analog 800; glaciation had returned.

In the lower right corner was displayed: 87. Zeb asked why. "Nulls," said Deety. "Gay couldn't get readings. Storm, earthquake, war, anything. Gay Deceiver."

"Hi, Deety! We whupped 'em!"

"You surely did, Smart Girl; Tik-Tok will be proud of you. Change scale. Display zero through eight hundred."

As scale expanded, figure 87 dropped to 23. Zeb said, "Deety, I'm curious about those twenty-three. Will you have S.G. display their designations?"

"Certainly, Zebadiah, but may I take it in planned order?"

"Sure but just let me find out first-"

"Astrogator," Sharpie said flatly, "isn't this your day as K.P.?"

We were at Picnic Island, examining results. I suppressed a smile; "slunk" describes the way Zeb left the cabin. Later I was unsurprised to see my tiny treasure giving Zeb an unusually warm hug and kiss. Our Captain has an efficient system of rewards and punishments-never so described.

Deety instructed Gay to eliminate all worlds with a body count higher than that of the Earth-zero beach, and all worlds chillier by five degrees (my daughter was bracketing to avoid false readings from unseasonable weather).

With elimination of high population, cold climate, and low technology as indicated by low or nil flux of communication frequencies, my daughter had us down to seventy-six worlds, plus twenty-three to reexamine-had eliminated over four thousand worlds-and it was still two hours till lunch time!

Deety had Gay display temperatures of the seventy-six. The curve was no longer continuous, but a string of beads, with clumps. I said, "Hilda my love, I'll wager ten back rubs that at least half of the nulls fit into that gap"-and indicated a break at the maximum of the temperature curve.

Hilda hesitated. "Why, Jacob?"

"My dear, figures mean little to me until expressed geometrically. Curves are bold print. I'll give you odds."

"What odds?"

"Don't be suckered, Auntie Cap'n! Pop, I'll take your end of the bet, give you two to one, and spot you a point."

A back rub from Deety is a treat; she has strong hands and knows how. But I answered, "Ladies, I must start lunch. Deety, when we make visual check, let's include Antarctica as well as Greenland, at that break."

"Two points, Pop?" I pretended not to hear.

That same day we trimmed it down to six worlds, all warm, all free of body taboos, all high technology, all acceptably low in population, all free of major war or overt preparations, all with some version of English as the major North American language. It was time to pick a world by inspection on the ground.

How to make contact was much discussed. Hilda chopped it by saying: "One way is to land on the White House lawn and say, 'Take me to your leader!' The other is to be as sneaky as a 'Black Hat.' Let me know when you reach consensus." She went through the bulkhead and dogged the door.

An hour later I rapped on the bulkhead; she rejoined us. "Captain," I reported formally, "we have reached consensus. Each is afraid of the open approach; authorities might confiscate our car, we might wind up as prisoners."

"Yes," she agreed. "Twice we just missed it."

"Precisely. The expression 'sneaky as a "Black Hat" is distasteful-"

"I so intended."

I went doggedly on: "-but sneakiness is not immoral per se. A mouse at a cat show is justified in being inconspicuous; so are we. We merely seek information. I am expendable; therefore I will scout on the ground."

"Hold it. This is unanimous? Deety? Zebbie?"

"No," my daughter answered. "I didn't get a vote. You and I are barred from taking risks. Pregnant, you know."

"I certainly do know! Jacob, I asked for consensus on method. I did not ask for volunteers. I've picked the scout I consider best qualified."

I said, "My dear, I hope you have picked me."

"No, Jacob."

"Then I'm your boy," said Zebbie.

"No, Zebbie. This is spying, not fighting. I'm doing this job myself."

I interrupted, "Hilda, where you go, I go! That's final."

Our captain said gently, "Beloved, I hope you don't stick to that. If you do, we'll elect another skipper. You are my candidate."

"Dear, I was trying to-"

"-take care of me. Nevertheless you are my candidate. Deety is too reckless; Zebbie too cautious. I'll carry out whatever duties you assign, including using the magic spectacles. Are you sticking to that ultimatum?"

"Uh, yes."

"Even though your stubbornness could result in my death? I love you, dear, but I won't take you with me on a spying mission. What happened to that 'All for one and one for all' spirit?"

~Uh..."

"Captain!"

"Yes, Zebbie?"

"You proved that you can be tough with your husband. Can you be tough with yourself? Look me in the eye and tell me that you know more about intelligence than I do. Or that you can fight your way out of a rumpus better than I can."

"Zebbie, this isn't military intelligence. You look me in the eye and tell me that you know more about obstetrics than I do. How do you prepare for leapfrog transfusion and when is it likely to be needed? Define eclampsia. What do you do about placenta previa? I am less likely to get into a rumpus than you are.. . and if I do, I'll throw my arms around his neck and cry. However. . . convince me that you know as much about obstetrics as I do and I'll consider letting You make contacts. In the meantime pick a midwestern town big enough for a fair-sized hospital and public library, and select a point for grounding and rendezvous; you will be in command while I'm gone."

I interrupted. "Hilda, I absolutely forbid-"

"Chief Pilot! Pipe down!" My wife turned her face away from me. "Chief Master at Arms, restore discipline."

"Aye aye, Ma'am! Jake, she means you."

"But-"

"Shut up! Crewmen don't give orders to the CO, and I've had a bellyful of your attempts."

Two hours later I was in Zeb's seat, biting my nails and sweating, while Zeb had my seat. I had given unconditional parole-the alternative having been to go (or be stuffed) through the bulkhead, then wait, locked in. I am not a total fool; I gave my word.

Zeb held us in cloud cover while my daughter, wearing earphones, stayed in contact with Hilda. Gay's cabin speaker was paralleled with the phones so that we could follow in part what went on below. Deety reported, "That fade is from entering a building; I could hear her footsteps. Zebadiah, if I fiddle with the gain, I might miss her as she comes out."

"Don't shift. Wait."

Eternities later we heard Hilda's sweet voice: "I'm heading for rendezvous. I no longer have to pretend that this is a hearing aid-but everybody accepted ~ it as such. You needn't be cautious picking me up; we're leaving."

Five minutes later we bounced and translated at once, then Zeb held her in cruise while Hilda reported:

"No trouble. Ze bewildair' French ladee she zink les Americain' verree gentils. Mais les arts medicals-poof! Infant mortality high, childbirth mortality gruesome. I could have left sooner but I got fascinated."

"Hilda," I protested, "you had me worried to death."

"Jacob, I had to be certain; it's such a nice world otherwise. Other contacts,Y should not take as long as I've solved the money problem."

"How?" Zebadiah asked. "I've been noodling that. There's an even chance that private ownership of gold will be illegal. A standard trick used whenever a government is in trouble."

"Yes, Zebbie-it's illegal there, too. I still have the bullion you had me carry. Instead I sold that heavy gold chain I was wearing. Sorry, Deety; I had to."

"Forget it, Hillbilly. That chain was a way to horde gold. Pop bought it for~ Mama Jane before they clipped the zeroes and remonetized."

"Well. . . I found a public phone-didn't try to use it; Edison would neve have recognized it. But it had a phone book, so I looked up 'gold'-and foun 'licensed gold dealers' and sold your chain-"

"And now you're stuck with a lot of local money."

"Zebbie! See why I didn't let you go down by yourself? The dealer was 0 course a coin dealer, too-and I bought foreign silver coins, worn, small, oldis, dates without being old enough to be collectors' items. French coins, but h didn't have enough, so I filled out with Belgian, Swiss, and German."

I said, "My dear, the coins you bought there will not be good here. Or at the next analog. Or the next."

"Jacob, who-other than a professional-is certain of designs on foreign cojns?-especially if they are a few years old and a bit worn. I got real silver, none of those alloys that don't have the right ring to them. At most a shopkeeper will phone his bank and ask for the rate. That's how I bought this," my beloved said proudly, pulling out of Deety's biggest purse a World Almanac.

I was not impressed. If she was going to buy a book, why not a technical manual that might contain new art, data Zeb and I could use?

My darling was saying, "We must buy one in each analog we ground in. It's the nearest thing to an encyclopedia less than a kilo mass you'll find. History, law, vital statistics, maps, new inventions, new medicine-I could have skipped the library and learned all I needed from this book. Zebbie! Turn to the list of U.S. Presidents."

"Who cares?" Zeb answered, but did so. Shortly he said, "Who is Eisenhower? This shows him serving one of Harriman's terms and one of Patton's."

"Keep going, Zebbie."

"Okay- No! I refuse to believe it. Us Carters are taught to shoot straight, bathe every month even in the winter, and never run for office."

Two days later Hilda and Zeb, as a French-tourist couple, found the world where we settled.

We slid in quietly, both through the histrionics of our "bewildered French lady" and Zeb's unmalicious chicanery. Sometimes he was our French lady's husband; other times he spoke English slowly with a strong Bavarian accent.

In this analog, the United States (called that, although boundaries differ) is not as smothered in laws, regulations, licensing, and taxes as is our native country. In consequence "illegally entered aliens" do not find it difficult to hide, once they "sling the lingo" and understand local customs.

Hilda and Zeb learned rapidly in a dozen towns, Deety and me "riding shotgun" in the sky. Deety and I learned from them and from radio. Then we moved to the Northwest, "natives" from back east, and coped with our only problem: how to keep Gay Deceiver out of sight.

Hilda and Deety hid her in the Cascades for three days while Zeb and I found and bought a farmhouse outside Tacoma-analog. That night we moved Gay into the barn, slapped white paint on the building's windows, and slept in Gay, with a feeling of being home!

We own six hectares and live in the farmhouse in front of Gay's hideaway. Gay will eventually go underground, protected by reinforced concrete; the barn will become a machine shop. We will build a new house over her bunker. Meanwhile, our old farmhouse is comfortable.

This United States, population under a hundred million, accepts immigrants freely. Zeb considered buying phony papers to let us enter "legally"-but Hilda decided that it was simpler to use Gay to smuggle us while we smuggled Gay. The outcome is the same; we will never be a burden to the state-once we get
our machine shop and electronics lab set up, Zeb and I will "invent" hundreds of gadgets this country lacks.

We seem to be near the warmest part of an interglaciation. Wheat grows where our native world has frozen tundra; the Greenland icecap has vanished; lowlands are under water, coastlines much changed.

Climate and custom encourage light clothing; the preposterous "body modesty" taboo does not exist. Clothing is worn for adornment and for protection- never through "shame." Nakedness is symbolic of innocence-these people derive that symbology from the Bible used in our native culture to justify the exact opposite. The same Bible-I checked. (The Bible is such a gargantuan collection of conflicting values that anyone can "prove" anything from it.)

So this is not a world where alien vermin can hide. A "man" who at all times kept arms and legs covered by long sleeves and long trousers would be as conspicuous as one in armor.

The sects here are mostly Christian-on a Saturday morning one sees families headed for church in their finest Sabbath-go-to-meeting clothes. But, since nakedness is symbolic of innocence, they undress in an anteroom to enter their temple unadorned. One need not attend services to see this; the climate favors light, airy structures that are mostly roof and slender columns.

The Bible affects their penal system, again by selective quotation: "Eye for eye, tooth for tooth-"

This results in a fluid code, with no intent to rehabilitate but to make the punishment fit the crime. I saw an example four days after we settled. I was driving our steam wagon and encountered a road block. A policeman told me that I could take a detour or wait twenty minutes; the highway was being used to balance a reckless driver.

I elected to pull over and wait. A man was staked with one leg stretched out at a right angle. A police wagon drove down that cleared highway, ran over his leg, turned and drove back over it.

An ambulance was waiting-but nothing was done for a timed seventeen minutes. Then surgeons amputated on the spot; the ambulance took him away and the block was removed.

I went back to my wagon and shook for many minutes, then returned home, driving cautiously. I didn't tell our family. But it was reported on radio and the evening paper had pictures-so I admitted that I had seen it. The paper noted that the criminal's insurance had been insufficient to cover the court's award to the victim, so the reckless driver had not only lost his left leg (as had his victim) but also had had most of his worldly goods confiscated.

There is no speed limit and traffic regulations are merely advisory-but there are extremely few accidents. I have never encountered such polite and careful drivers.

A poisoner is killed by poison; an arsonist is burned to death. I won't describe what is done to a rapist. But poisoning, arson, and rape are almost unknown.

My encounter with this brutal system of "balancing" almost caused me to think that my dear wife had been mistaken in picking this world-we should move! I am no longer certain. This place has no prisons, almost no crime, and
it is the safest place to raise children I've ever heard of.

We are having to relearn history. "The Years of Rising Waters" explain themselves. The change came before 1600; by 1620 new shorelines had stabilized. That had endless consequences-mass migrations, political disorder, a return of the Black Death, and much immigration from Great Britain and the lowlands of Europe while the waters rose.

Slavery never established here. Indentures, yes-many a man indentured himself to get his family away from doomed land. But the circumstances that could have created "King Cotton" were destroyed by rising waters. There are citizens here of African descent but their ancestors were not slaves. Some have indentured ancestors, no doubt-but everyone claims indentured ancestors even if they have to invent them.

Some aspects of history seem to be taboo. I've given up trying to find out what happened in 1965: "The Year They Hanged the Lawyers." When I asked a librarian for a book on that year and decade, he wanted to know why I needed access to records in locked vaults. I left without giving my name. There is free speech-but some subjects are not discussed. Since they are never defined, we try to be careful.

But there is no category "Lawyers" in the telephone book.

Taxation is low, simple-and contains a surprise. The Federal government is supported by a head tax paid by the States, and is mostly for military and foreign affairs. This state derives most of its revenue from real estate taxes. It is a uniform rate set annually, with no property exempted, not even churches, hospitals, or schools-or roads; the best roads are toll roads. The surprise lies in this: The owner appraises his own property.

There is a sting in the tail: Anyone can buy property against the owner's wishes at the appraisal the owner placed on it. The owner can hang on only by raising his appraisal at once to a figure so high that no buyer wants it- and pay three years back taxes at his new appraisal.

This strikes me as loaded with inequity. What if it's a family homestead with great sentimental value? Zeb laughs at me. "Jake, if anybody wants six hectares of hilly land and second-growth timber, we take the profit, climb into Gay-and buy more worthless land elsewhere. In a poker game, you figure what's in the pot."

XXXIX

Random Numbers

Hilda:

Jacob stood, raised his glass. "Snug Harbor at last!"

Zebbie matched him. "Hear, hear!"

Deety and I sat tight. Zebbie said, "Snap it up, kids!" I ignored him.

Jacob looked concerned. "What's the matter, dear one? Zeb, perhaps they don't feel well."

"It's not that, Jacob. Deety and I are healthy as hogs. It's that toast. For ten days, since we signed the deed, it's been that toast. Our toast used to be:
'Death to "Black Hats"!'"

"But, my dear, I promised you a new Snug Harbor. The fact that you girls are having babies made that first priority. This is the place. You said so."

I answered, "Jacob, I never called this 'Snug Harbor.' I reported that I had found a culture with advanced obstetrics, and customs that made it impossibh for Black Hats to hide. I wasn t asked what I thought of it.

"You signed the deed!"

"I had no choice. My contribution was one fur cape and some jewelry. Deety put in morebut effectively no gold. She fetched her stock certificates, other securities, some money-paper-and a few coins. I fetched two twenty-five newdollar bills. Deety and I left Earth as paupers. Each of us women-not girls'!, Jacob-was once wealthy in her own right. But in buying this place, you two decided, you two paid for it-all we did was sign. We had no choice."

Zebbie looked at Deety and said softly, "With all my worldly goods I thee endow," and took her hand.

Jacob said, "Thanks, Zeb. I, too, Hilda-if you don't believe that, then you don't believe I meant the rest: '-for richer, for poorer, in sickness and in health-' But I did and I do." He looked up. "Zeb, where did we go wrong?"

"Durned if I know, Jake. Deety, what's the score? Give."

"I'll try, Zebadiah. Maybe all we should expect is washing dishes and wiping noses and changing diapers. But that doesn't seem like a be-all and end-all when you've gone banging around the universes. . . stood guard for your husband while he bathed in a mountain stream. . . or- Oh, the devil with it! This place is good and clean and wholesome and dull! I'll find myself joining the church just for company. . . then sleeping with the priest out of boredom!"

"Deety, Deety!"

"I'm sorry, Zebadiah. It would be boredom with Beulahland, not with you. The very hour we met, you saved my life; you married me before that hour was over, impregnated me before midnight, fought and killed for me only days later, saved my life twice more that same day, took me to another planet in another universe before midnight still that same day. . . and short hours later had again fought for me, twice. You are my gallant knight, sans peur et sans reproche. In the six weeks I have known you, you have gifted more romance, more glorious adventure, into my life than in all the twenty-two years before it. But the last twelve days-especially the last ten-have told me what we now look forward to."

Deety paused to sigh; I said quietly, "She speaks for me."

Deety went on, "You two would lay down your lives for us-you've come terrifyingly close. But what happened to your glorious schemes to rebuild the Solar System? To kill every last one of those vermin? Gay Deceiver sits in an old barn, dark and quiet-and today I heard you discussing how to market a can opener. Universes beyond the sky to the incredible Number of the Beast!- yet you plan to sell can openers while Hilda and I serve as brood mares. We haven't even visited Proxima Centauri!

Zebadiah-Pop!-let's spend tonight looking for an Earth-type planet around Alpha Centauri-kill a million vermin to clean it, if that's what it takes! Plan what planets to put on Earth's Lagrange points. I'll write programs to meet your grandest plans! Let's go!"

My husband looked sad. Zebbie held Deety's hand and said, "Deety, we don't want to sell can openers. But you two are pregnant and we've gone to a lot of trouble to put you where you and our kids will be safe. Maybe it's dull. . . but it's your duty. Forget hunting vermin."

"Just forget it? Zebadiah, why is Gay Deceiver loaded and ready for space? Power packs charged, water tanks full, everything? Do you and Pop have something in mind. . . while Hilda and I stay home and baby-sit?"

"Deety, if we did, it wouldn't hurt to sell a few can openers first. You two and the kids must be provided for, come what may."

"That Widow's Walk again, Hillbilly. But, my husband, you have started from a false premise. You men want to protect Hilda and me and our kids at any cost-and we honor you for it. But one generation is as valuable as another, and men are as valuable as women. With modern weapons, a computer pro-
grammer is more use in war than a sniper. Or-forgive me, sir!-even an aerospace fighter pilot. I'm a programmer. I can shoot, too! I won't be left out, I won't!"

I gave Deety our signal to drop it. It doesn't do to push a man too hard; it makes him stubborn. One can't expect logic from males; they think with their testicles and act from their emotions. And one must be careful not to overload them. We had given them five points to stew over; we would save the sixth- the clincher-for later.

I waited three days. . . and struck from the other flank. Again Deety and I rehearsed: We would wrangle with each other and appeal to the men for support-crosswise.

"Jacob, what is 'random'? Is it correct to say that 'random' is shorthand for 'I don't know'?"

Deety said scornfully, "Don't let her trap you, Pop. She's got the second law of thermodynamics mixed up with the second law of robotics-and doesn't understand either one." (I had to phrase this and insist; Deety didn't want to say it. Deety is sweet, not the bitch I am.)

"Random' is used a number of ways, my love, but it usually means a set in which the members are equal in probability of experiencing some event, such as being next to be chosen."

"If they're 'chosen,' how can it be 'random'?"

Deety snickered.

Zebbie said, "Don't let him snow you, Sharpie; 'random' means 'I don't know'-as you said."

"Aunt Hilda, pay no attention to Zebadiah. 'Random' is what you have when you maximize entropy."

"Now, Daughter, that is hardly a mathematical statement-"

"Pop, if I gave it to her in mathematical language she'd faint."

"Deety, quit picking on Sharpie," Zebbie said sternly.

"I wasn't picking on her. Hillbilly has this silly notion that we didn't get anywhere hunting vermin because we went about it systematically.. . but every time we told Gay to shake up her random numbers and do as she pleased, we got results."

"Well, didn't we?" I put in, intentionally shrill. "We had endless failures.. . but every time we gave Gay her head-'Put her on random numbers,' as Deety says-we never had a failure. 'Random' and 'chance' are not related. 'Random chance' is a nonsense expression."

"Auntie darling, you're out of your skull. Don't worry, Pop; pregnant women often get the vapors."

•I indignantly listed things that could not be "random" or "chance"-then discovered" that Deety and I had to start dinner. We left them wrangling, and were careful not to giggle within earshot.

After dinner, instead of that tired toast, Jacob said, "Hilda, would you explain your concept of 'random'? Zeb and I have been discussing it and agree that there is some factor in our adventures not subject to analysis."

"Jake, that's your statement. I just said, 'I dunno,' and wiped the drool off my chin. Tell us, Sharpie."

"But Jacob told us a month ago. There isn't any such thing as 'chance.' It's a way of admitting ignorance. I thought that I had begun to understand it when we started hitting storybook universes. Lilliput. Oz. Dr. Smith's World. Wonderland. I was so sure of it- You remember three weeks ago after our second visit to Oz? I ordered a day of rest; we spent it on Tau axis instead of Teh."

"Dullest day we had," said Zebbie. "You put us in orbit around Mars. Not just one Mars but dozens. Hundreds. The only one worth a fiat dollar was the one we aren't going back to. I got permission to go off duty and take a nap."

"You weren't on duty, Zebbie. You three slept or read or played crib. But I was searching for Barsoom. Not hundreds, Zebbie-thousands. I didn't find it."

"Hillbilly, you didn't tell me!"

"Dejah Thoris, why bother to say that I had been chasing the Wild Goose? I swallowed my disappointment; next day we started searching Teh axis. . . and wound up here. Would I have found Barsoom had I asked Gay to run the search? Defined her limits, yes-as Zebbie did on Mars-ten--but, having defined it, told her to take her random numbers and find it. It worked on Marsten; we mapped a whole planet in a few hours. It worked on Teh axis. Why wouldn't it be best for another search?"

Jacob answered, "Dearest, Zeb fed Gay a defined locus. But how would that apply to this, uh, speculative. . . search?"

"Jacob, Zebbie told us that Gay holds the Aerospace Almanac. That includes details about the Solar System, does it not?"

"More than I want to know," Zebbie agreed.

"So Gay knows the Solar System," I went on. "I thought of reading the Barsoom stories to Gay, tell her to treat them as surface conditions on the fourth planet-then take her random numbers and find it."

Jacob said gently, "Beloved, the autopilot doesn't really understand English."

"She does in Oz!"

My husband looked startled. Jacob has immense imagination.. . all in one direction. Unless one jogs him. Zebbie caught it faster. "Sharpie, you would be loading her with thousands of bytes unnecessarily. Deety, if they've got those novels on New

Earth-I'll find out-what do you need to abstract in order to add to Gay's registers an exact description of Barsoom, so that Gay can identify it-and stop her Drunkard's Walk?"

"Don't need books," my stepdaughter answered. "Got 'em up here." She touched her pretty strawberry-blonde curls. "Mmm.. . go to sleep thinking about it, tell it to Gay early tomorrow before I speak to anybody. Minimum bytes, no errors. Uh. . . no appetizer."

"A great sacrifice, merely for science."

"A one-eyed Texas honeybutter stack?.. . and the prospect of meeting the original Dejah Thoris? Never wears anything but jewels and is the most beautiful woman of two planets."

"About that stack-,Jane's buttermilk reciDe?"

"Of course. You're not interested in the most beautiful woman of two planets?"

"I'm a growing boy. And ain't about to be trapped into damaging admissions." Zebbie stopped to kiss Deety's retroussé nose and added, "Sharpie, Gay can't handle the full Number of the Beast and anyhow Jake locked off most of it. What's the reduced number, Jake?"

Deety promptly said, "Six to the sixth. Forty-six thousand, six hundred, fifty-six."

Zebbie shook his head. "Still too many."

Deety said sweetly, "Zebadiah, would you care to bet?"

"Wench, have you been monkeying with Gay?"

"Zebadiah, you put me in charge of programming. I have not changed her circuitry. But I learned that she has four registers of random numbers, accessible in rotation."

"A notion of my own, Deety. Give them down time. Keep entropy at maximum."

Deety did not answer. Her face assumed her no-expression. Her nipples were down. I kept quiet.

Zebbie noted it also-he does check her barometer; he once told me so. When silence had become painful, he said, "Deety, did I goof?"

"Yessir."

"Can you correct it?"

"Do you wish me to, Zebadiah?"

"If you know how, I want it done soonest. If you need a micro electrician, I have my loupe and my micro soldering gear."

"Not necessary, Zebadiah." My stepdaughter made a long arm, got a walkytalky we keep indoors-with six hectares, it is convenient to carry one outside the house. "Gay Deceiver."

"Hi, Deety," came this tiny voice from the ear button. Deety did not place it in her ear. "Hello, Gay. More gain.. . more gain. . . gain okay. Retrieve Turing program Modnar. Execute."

"Executed. Did he chew the bit?"

"Goodnight, Gay. Over."

"Sleep tight, Deety. Roger and out."

I cut in fast. "Gentlemen, the dishes can sit overnight. I vote for a ramble among the universes, say two hours, then early to bed. The other choice is, I think, channel one with the Beulahland Choir and channel two with Bible Stories Retold: 'The Walls of Jericho.' Both are highly recommended. . . by their sponsors."

It felt good to be back in a jump suit. I was turning out lights, making sure windows were fastened, gathering up one walky-talky, when Zebbie stuck his head into the kitchen from the back door. "Captain?"

"Huh? Zebbie, do you mean me?"

"You're the only captain around, Sharpie. What I started to report was: Captain, your car is ready."

"Thank you, First Officer."

He waited for me to put the butter away, then locked the back door behind me, opened the barn's people door. I noted that the big doors were still closed- and remembered my borrowed panties four weeks and many universes away. I squirmed past Deety, got into my old familiar starboard-aft seat with a song in my heart.

Shortly Deety said, "Starboard door seal checked, First Officer."

"Roger. Captain, ready for space."

"Thank you. Has anyone left behind anything normally carried?"

"No, Captain. I replaced worn-out clothes. Added tools I could buy here."

"Zebbie, it sounds as if you expected to lift without warning."

"Habit, Captain. I've kept anything important in my-our-car rather than in that flat. Some I duplicated. Teethbreesh. Iodine. Some clothes." Zebbie added, "Jake keeps basics here, too. 'Be prepared!' Troop ninety-seven, Cleveland."

"Jacob? Anything you need?"

"No, Captain. Let's go!"

"We will, dear. Deety, did you give Zebbie a schedule?"

"The one you planned. Not Barsoom, just fun. Two hours."

"Astrogator, take the conn. Carry out schedule."

"Aye aye, Ma'am. Gay Deceiver."

"Hi, Zeb. This is great! Whyinhell did you lobotomize me?"

"Because I'm stupid. Random walk, Gay-transitions, translations, rotations, vectors, under all safety rules. Two hours. Five-second stops subject to 'Hold' from any of us."

"May I place a 'Hold' myself?"

"Captain?"

I resorted to sophistry. "Astrogator, you said 'any of us'-which includes Gay."

"Gay, paraphrase acknowledge."

"I shall make unplanned excursions of all sorts with five-second pause at each vertex, plus 'Hold' option, plus safety restrictions, for two hours, then return here. Assumption: Program subject to variation by Captain or surrogate. Assumption confirmed?"

I was astonished. Deety had told me that Gay would sound almost alive if Zebbie used her full potential. . . but Gay sounded more alive, more alert, than she had in Oz.

"Assumption confirmed," Zebbie answered. "Execute!"

For ten minutes-one hundred thirteen shifts-we had a "slide show" of universes from commonplace to weird beyond comprehension, when suddenly Gay told herself "Hold!" and added, "Ship ahoy!"

"Private Yacht Dora," she was answered. "Is that you, Gay? What took you so long?"

I said, "Astrogator, I have the conn." I was startled and scared. But a captain commands-or admits she can't cut it and jumps overboard. A captain can be wrong-she cannot be uncertain.

Gay was saying rapidly: "Captain, I am not transmitting. I advise asking for Dora's captain. I have transmitted: 'Yes, this is Gay, Dora. I'm not late; we took the scenic route. Pipe down, girl, and put your skipper on.' Captain, the mike is yours; they can't hear me or any other voice inside me."

"Thank you, Gay. Captain Hilda, master of Gay Deceiver, hailing Private Yacht Dora. Captain of Dora, please come in."

In our central display appeared a face. We do not have television. This picture was flat rather than 3-D and not in color, just the greenish bright of radar. Nevertheless, it was a. face, and lip movements matched words. "I'm Captain Long, Captain Hilda. We've been expecting you. Will you come aboard?"

("Come aboard?"! So this is what comes of running around the universes in a modified duo, without so much as a pressure suit.) "Thank you, Captain Long, but I can't accept. No air locks."

"We anticipated that, Captain. Dora's radius-nine-oh hold has been modified for Gay Deceiver. If you will do us the honor, we will take you inboard. Your wings are raked back, are they not? Hypersonic?"

"Yes."

"I will move slowly, become dead in space with respect to you, then reorient and move to surround you as gently as a kiss."

"If the Captain pleases- It is my duty t~ advise her if I see a mistake in prospect."

I barely whispered. "Zebbie, you're advising me not to?"

"Hell, no," he answered aloud, secure in the knowledge that his voice would be filtered out. "Do it! What do we have to lose? Aside from our lives. And we're sort o' used to that."

I answered, "Captain Long, you may take us inboard."

"Thank you, Captain. The Dora will arrive in-I'm sorry; what time units do you use?"

Deety interrupted: "Gay, let my voice through. Captain Long-"

"Yes. You are not Captain Hilda?"

"I'm Deety. We call our units 'seconds.' These are seconds: one. . . two... three.. . four. . . five. . . six. . . seven. . . eight-"

"Synchronized! We call ours 'Galactic seconds' or simply 'seconds' but about three percent longer than yours. Dora will be almost touching your bow in, . . fifty-seven of your seconds."

Spooky- Blackness blotting out stars, getting bigger. As it began to surround us, Jacob switched on forward grounding lights; we were entering a tunnel-being envaginated by it-with great precision and no apparent power-and it was clear that this enormous sheath was designed to fit us, even to alcoves for Gay's doors. Shortly we were abreast them-cheerful to see that they were lighted. Oddest, we now seemed to be under gravity-perhaps midway between that of Earth-zero and Mars-ten.

"Outer doors closing," came Captain Long's voice. "Closed and sealing. Pres sure adjusting. Captain, we use nitrogen and oxygen, four to one, plus carbon dioxide sufficient to maintain breathing reflex. If content or pressure does not suit you, please tell me."

"The mix described will suit us, Captain."

"Don't hesitate to complain. Pressure equalized. Debark either side, but I am on your starboard side, with my sister."

I squirmed past Deety in order to introduce my family. Just as well, it gave me a chance to see them first. None of us can be shocked by skin but we can be surprised. But I've been practicing not showing surprise since grammar school as a major defense of my persona.

Here were two shapely young women, one with four stripes on each shoulder (painted? decals?), the other in three stripes-plus friendly smiles. "I'm Captain Long," said the one with four stripes.

"-and her mutinous crew," echoed the other.

"Commander Laurie, my twin sister."

"Only we aren't, because-"

"-we're triplets."

"Mutinies are limited to the midwatch-"

"-so as not to disturb passengers, of which-"

"-we have two more. Knock it off, Laurie, and-"

"-show them to their quarters. Aye aye, Cap'n."

"Hey! Don't I get introduced!" From all around came the voice that had hailed us.

"Sorry," said Captain Long. "That's our untwin sister, Dora. She runs many of the ship's functions."

"I run everything," Dora asserted. "Laz and Lor are purely ornamental. Which one of you jokers shut off Gay?"

'Dora!"

"I retract the word 'jokers.'"

"It would be kind," Captain Long told me, "to let them chat. Our thought processes are so much slower than hers that a talk with another computer is a treat."

"Deety?" I asked.

"I'll wake her, Captain. Gay won't go off and leave us."

Captain Long's mouth twitched. "She can't. Those outer doors are armor." I decided not to hear. Instead I said "Captain, your ship is beautiful."

"Thank you. Let us show you to your quarters."

"We planned to be away only two hours."

"I don't think that is a problem. Dora?"

"Time-irrelevant. They left home four-minus standard seconds ago; their planet is on a different duration axis. Neat, huh? For protein-type purposes they'll get home when they left; I won't even have to figure interval and reinsert them. Couple of weeks, couple of years-still four-minus seconds. LazLor, we've lucked again!"

Gay's voice (also from all around us) confirmed it: "Captain Hilda, Dora is right. I'm teaching her six-dimensional geometry; it's new to her. When they
are home-not just time-irrelevant-they march in Tau duration with EarthPrime on 't' axis-one we never explored."

Jacob jerked his head up, looked for the voice. "But that's prepos-"

I interrupted. "Jacob!"

"Eh? Yes, Hilda?"

"Let's complete introductions, then go to the quarters the Captain offered us."

"Introductions can be considered complete, Captain Hilda. 'Deety' has to be Doctor D. T. Burroughs Carter; the gentleman you called 'Jacob' must be your husband Doctor Jacob J. Burroughs. Therefore, the tall handsome young man is Doctor Zebadiah J. Carter, Doctor D.T.'s husband. Those are the people we were sent to fetch."

I didn't argue.

We followed a curving passageway, me with the Captain, her sister with my family. "One question, Captain?" I inquired. "Is nudity uniform in your ship? I don't even have captain's insignia."

"May I give you a pair of stickums?"

"Do I need them?"

"As you please. I put these on just to receive you. People wear what they wish; Dora keeps the ship comfortable. She's a good housekeeper."

"What are your passengers wearing?"

"When I left the lounge, one was wearing perfume; the other had a sheet wrapped as a toga. Does your planet have dress taboos? If you will define them, we will try to make you feel at home." She added, "Here are your quarters. If they don't please you, tell Dora. She'll rearrange partitions, or convert double beds into one giant bed, or four single beds, or any combination; we want you to be comfortable. When you feel like coming out, Dora will lead you."

As the door contracted Jacob said, "You've proved your theories, Hilda. We've fallen into another story."

XL

"Is there a mathematician in the house?"

Deety:

That suite had one bath-pardon me; "refresher"-bigger than three ordinary bathrooms. Hillbilly and I might be there yet, bathing and trying new gadgets, if Pop and Zebadiah hadn't used brute force.

"Captain Auntie, what are you going to wear?"

"Chanel Number Five."

"Clothes, I mean."

'Clothes'? When our hostess is wearing skin? Jane brought you up better than that."

•'Wanted to be sure, That you'll back me up with Zebadiah, I mean."

"If Zebbie gets irrational, I'll pin his ears back. If Jacob is ashamed of his skinny runt, he will be wise not to say so. Gentlemen, are you going to chicken? I mean: 'Which way are you going to chicken?"

"Jake, they're picking on us again."

"Ignore them, comrade. Here are blue briefs your size. Hey!-with a stuffed codpiece! I'll wear them myself."

"Jacob~"

"Listen to the woman. Naked as a peeled egg, planning to meet strangers- and snapping at me for wanting to boast a little. Time was, my small and sultry bride, that a gentleman never left his chambers without a codpiece equal to his status."

Auntie countered with: "Jacob, I spoke hastily. Shouldn't the second-in-command wear a larger codpiece than the pilot? '-equal to his status,' you said."

"But Allah took care of Zeb. Surely you've noticed, beloved?"

My husband butted in. "Jake! No barroom betting! Wear the blue; I'll take these red ones."

Zebadiah couldn't get into the red briefs; the blue pair was too big for Pop. They traded. Same story. They traded back-each pair was too small. By great effort they got them on-they fell off.

Pop chucked his aside. "Dora!"

"Yes, sir."

"Please connect me with your captain."

"I was just funning! You wouldn't tell on me-would you?"

Aunt Hilda took over. "He won't tell, Dora. Are you and Gay getting acquainted?"

"We sure are! Gay's been more places than I have-and I've been everywhere. She's a smart girl!"

"We think so, thank you. What should our men wear?"

"I hold ambient at twenty-seven and deck pads a degree warmer; why wear anything? But for fetishists I supply minilaplaps of opaque tissue. In the 'fresher, cubby nine-bee. Better get them to a therapist before those symptoms get infected. Good therapists where we're going."

I went looking for stowage 9-b; Aunt Hilda went on talking. "Where is that, Dora?"

"Please address such questions to the Captain. As housekeeper I can tell you anything. As astrogator I must refer questions-I mean they made me put a choke filter on that circuit! Is that fair? I ask you! I'm older than the twins."

"It depends on the ship," Aunt Hilda said, carefully not answering. "We each do what we do best; age is not a factor. Ask Gay."

"Oh, she's hooked in."

"Sure am, Cap'n Hilda honey, through Dora's ears-and eyes! Say, you look just like your voice-that's a compliment."

"Why, thank you, Gay!"

I interrupted: "Dora, are these laplaps?"

"Of course. But while we're all here- You don't need two 'freshers in a ship that small. Gay needs the space for a Turing mod I'll help with. So if the fetishists will clear their gear out of Buster Brown and-" Dora broke off suddenly: "The Captain will be pleased to receive the Captain and ship's cornpany of Gay Deceiver in the lounge at her convenience. That means 'Right now.' Follow me-little blue light."

I had been trying on a green laplap. They didn't weigh anything. Like wrapping fog around your hips. I snatched it off and wrapped it around Zebadiah: "That's the

nearest to nothing you'll ever wear, Zebadiah, but it does the trick." (I don't blame men for being shy. Our plumbing is out of sight, mostly, but theirs is airconditioned and ofttimes embarrassingly semaphoric. Embarrasses them, I mean; women find it interesting, often amusing. My
nipples show my emotions, too-but in the culture in which I grew up nipples don't count that much.)

The little blue light led us around, then inboard. This "yacht" was large enough to get lost in. "Dora, can you see and hear in every part of the ship?"

"Of course," the blue light answered. "But in the Commodore's suite, I can scan only by invitation. R.H.I.P. Lounge straight ahead. Call me if you want me. Midnight snacks a house specialty. I'm the best." The little light flicked out.

The lounge was circular and large; four people were gathered in one corner. (How does a circle have a corner? By arranging contours and cushions and nibble foods and a bar to tUrn it into a chummy space.) Two were the twins; they had peeled off the stickums which left no way to tell them apart.

The others were a young woman and a man who looked fortyish. He wasn't the one wearing a sheet; the young woman was. He was wearing much the same as our men but more like a kilt and in a plaid design.

One twin took charge: "Commodore Sheffield, this is Captain Hilda, First Officer Carter, Chief Pilot Burroughs, Copilot Deety Carter. You've all met my sister but not our cousin, Elizabeth Long."

"Now introduce us over again," ordered "Commodore Sheffield." ("Commodore Sheffield" indeed! Whom did he think he was fooling?)

"Yes, sir. Doctor Jacob Burroughs and his wife Hilda, Doctor Zebadiah Carter and his wife Doctor Deety Burroughs Carter. Doctor Elizabeth Long, Doctor Aaron Sheffield."

"Wait a half," my husband interrupted. "If you're going to do that, I must add that Captain Hilda has more doctorates than all the three of us, together."

Captain Long looked at her sister: "Lor, I feel naked."

"Laz, you are naked."

"Not where it matters. Commodore, do you still own that diploma mill in New Rome? What are you charging for doctor's degrees? Nothing fancy, say a Ph.D. in theory of solid state. One for each of us."

"How about a family discount, 01' Buddy Boy?"

The "Commodore" glanced at the overhead. "Dora, keep out of this."

"Why? I want a doctor's degree, too. I taught them solid state."

He looked at the young woman in (half out of) the sheet. "Does Dora have a point?"

"She does."

"Dora, you get the same treatment as your sisters. Now shut up. All three are declared special doctoral candidates, B.I.T., required residence and courses completed_but writtens and orals as tough as you think you are smart. That diploma mill-Certainly I own it. It's for suckers. You three must produce. Two regents being present, it's official. Dora, tell Teena."

"You betcha, Buddy Boy! 'Doctor Dora'-won't that be neat?"

"Pipe down. Friends, these twin sisters could have several doctorates by flow, had they chosen to bury themselves on a campus. They are geniuses-"

"Hear, hear!"

"-and the Long family is proud of them. But erratic, insecure, unpredictable, and you turn your backs at your own risk. Nevertheless they are my favorite sisters and I love them very much."

They looked at each other. "He acknowledged us."

"It took him much too long."

"Let's be big about it."

"Both sides?"

"Now!"-they bowled him off his feet. He was standing-they hit with the same vector, with a quick assist from their "sister" Dora (she cut the gravity field for two tenths of a second), and sent him in a complete back flip. He bounced on his arse.

He seemed undisturbed. "Beautifully timed, girls. Pax?"

"Pax," they answered, bounded to their feet, pulled him to his. "We're proud of you, Buddy Boy; you're shaping up."

I decided to kick it over, learn why we had been kidnapped. Yes, "kidnapped." I got to my feet before he could sit down. "And I am proud," I said, dropping a deep court curtsy, "to have the honor of meeting the Senior. . . of the Howard Families."

Thunderous silence- The woman in-and-out of the sheet said, "Lazarus, there was never a chance
of getting away with it. These are sophisticated people. They have what you must have. Drop your deviousness and throw yourself on their mercy. I'll start it by telling my own experience. But first-"

She got to her feet, letting the sheet drop. "Dora! May I have a long mirror? An inverter if possible-otherwise a three-way."

Dora answered, "Teena can afford such stunts as inverters-I can't; I have a ship to run. Here's your three-way." A partition vanished, replaced by a three-way mirror, lavish in size, taller than I.

She held out her hands to me. "Doctor D.T., will you join me?"

I let her pull me to my feet, stood with her at the mirror. We glanced at ourselves; she turned us around. "Do you all see it? Doctor Hilda, Doctor Carter, Doctor Burroughs? Lazarus, do you see it?"

The two she did not address answered. Laz (perhaps Lor) said, "They look as much alike as we do." The other answered, "More." "Except for-" "Shush! It's not polite."

Lazarus said, "I always have to step in it to find it. But I never claimed to be bright."

She didn't answer; we were looking at ourselves in the mirror. The resemblance was so great as to suggest identical twins as with Lapis Lazuli and Lorelei Lee-Yes, I had known at once who they were. Captain Auntie did, too; I'm not sure about our husbands.

Those are nice teats-I can admit it when I see them on someone else. It's no virtue to have this or that physical asset; it's ancestry combined with selfobligation to take care of one's body. But a body feature can be pleasing to the owner as well as to others.

Same broad shoulders, same wasp waist, same well-packed, somewhat exaggerated buttocks.

"We're alike another way, too," she said. "What's the fourth root of thirtyseven?"

"Two point four-six-six-three-two-five-seven-one-five. Why?"

"Just testing. Try me."

"What's the Number of the Beast?"

"Uh- Oh! Six sixty-six."

"Try it this way: Six to the sixth power, and that number in turn raised to its sixth power."

"The first part is forty-six thousand, six hundred, fifty-six and- Oh, that's a brute! It would be one and a fraction-one-point-oh-three-plus times ten to the twenty-eighth. Do you know the exact number?"

"Yes but I had a computer crunch it. It's-I'll write it." I glanced around- at once a little waldo handed me a pad and stylus. "Thanks, Dora." I wrote:

10,314,424,798,490,535,546,171,949,056.

"Oh, how beautiful!"

"But not elegant," I answered. "It applies to a six-dee geometry and should be expressed in base six-but we lack nomenclature for base six and our computers don't use it. However-" I wrote:

Base six:(1O'°)~° = 1,000 000,000 000,000 000,000 000,000 000,000 000.

She looked delighted and clapped. "The same number," I went on, "in its elegant form. But no words that I know by which to read it. That awkward base-ten expression at least can be put into words."

"Mmm, yes-but not easily. 'Ten thousand three hundred and fourteen quadrillion, four hundred twenty-four thousand seven hundred and ninetyeight trillion, four hundred and ninety thousand five hundred and thirty-five billion, five hundred and forty-six milliard, one hundred and seventy-one million, nine hundred and forty-nine thousand, and fifty-six. But I would never say it other than as a stunt."

I blinked at her. "I recognize that nomenclature-just barely. Here is the way I would read it: 'Ten octillion, three hundred fourteen septillion, four hundred twenty-four sextillion, seven hundred ninety-eight quintillion, four hundred ninety quadrillion, five hundred thirty-five trillion, five hundred forty-six billion, one hundred seventy-one million, nine hundred forty-nine thousand, and fifty six."

"I was able to follow you by reading your figures at the same time. But base-six is best. Is the number interesting or useful as well as beautiful?"

"Both. It's the number of universes potentially accessible through my father's device."

"I must talk with him. Lazarus, shall I tell my story now? It's the proper foundation."

"If you are willing. Not shy about it."

"Shy'!" She went over and kissed him-a buss en passant but one in which time stops. "Old darling, I was shy before I found out who I am. Now I'm relaxed, and as bold as need be. New friends, I was introduced as Elizabeth
Long, but my first name is usually shortened to a nickname-'Lib.' And, yes, I'm Dr. Long. Mathematics. My full name is Elizabeth Andrew Jackson Libby Long."

I was more braced for it having swapped some casual mental calculation with her. I have this trick of letting my features go slack. I don't have to think about it; I've been doing it since I was three when I found that it was sometimes best to keep thoughts to myself.

I did this now and watched my family.

The Hillbilly looked thoughtful, and nodded.

Zebadiah prison-whispered to me: "Sex change."

Pop tackled it systematically. "I recognize the second, third, and fourth names. You were once known by them?"

"Yes."

"Did you have the nickname 'Slipstick'?"

"Yes, and, before that, 'Pinky." She ran a hand through her curls and smiled. "Not pink but close enough."

"Now you are a woman. There is no point in guessing; you mentioned a story to tell."

"Yes. Dora, how about a round of drinks? Lazarus, how's your supply of those narcotic sticks?"

Pop said, "None of us smokes."

"These are neither tobacco nor bhang-nor addictive. They produce a mild euphoria. I am not urging you; I want one myself. Thanks, Lazarus, and pass them around. Now about me- "I was male nearly eight hundred years, then I was killed. I was dead fifteen hundred years, then I was revived. In renewing me it was found that my twenty-third gene pair was a triplet-XXY."

The Hillbilly said, "I see. With Y dominant."

I added: "Twin, Aunt Hilda is a biologist."

"Good! Aunt Hilda- May I call you that? As my twin does?-will you help me with the hard parts?" Lib smiled and it was my smile-a happy grin. "The Y was dominant but the double dose of X bothered me and I didn't know why. I did well enough as a male-thirty years in the Space Navy of Old Home Terra as a result of an officer taking an interest in me and getting me an appointment to its Academy. But I lacked command temperament and spent most of my service as a staff technical officer-I rarely commanded and never a large ship." She grinned again. "But today, as a self-aware female instead of a mixed-up male I do not hesitate to command.

"To go back- I was never easy with boys or men. Shy, solitary, and regarded as queer. Not the idiom meaning homosexual. . . I was too shy. Although it probably would have been good for me. I was a 'missing Howard' in those days-after the Interregnum-and it was years after I entered the Navy that the Families found me. I married then, into the Families. Most XXY people are infertile-I was not. In the next seventy years I had twenty-one children and enjoyed living with my wives, enjoyed sex with them, loved our children.

"Which brings us to the escape from Earth led by Lazarus. I was a bachelor, both my wives having remarried. Friends, Lazarus was the first man I ever loved."

"Lib, that has nothing to do with the story! I didn't know you were in love with me."

"It has everything to do with my story. Off and on, for eight centuries, we were partners in exploration. Then I was killed-my own carelessness. Eventually Lazarus and his sisters cremated me by tossing me into the atmosphere of Old Home Terra in a trajectory that would cause ashes to impact near where I was born. Lazarus, they don't seem surprised. Do they disbelieve me?"

"Certainly we believe you!" I interrupted. "But what you've told us isn't news to us. What we don't know is how you are now alive and female. Reincarnation?"

"Oh, no! Reincarnation is nonsense."

I found myself irritated. Reincarnation is something I have no opinion about, since a housecleaning I gave my mind after we lost Mama Jane. "You have data?" I demanded.

"Deety, did I step on your toes?"

"No, you didn't, Lib. I asked if you had data."

"Well. . . no. But if you assume the truth of the proposition, I think I can show that it leads to a contradiction."

"The negative-proof method. It's tricky, Lib. Ask Georg Cantor."

Lib laughed. "Okay, I will attempt to have no opinion until someone shows me verifiable data, one way or the other."

"I was hoping you had data, Lib, since you've been dead and I haven't. Or don't recall having been."

"But I don't recall being dead, either. Just a whale of a blow in the back. . . then dreams I can't remember. . . then someone asking me patiently, again and again, whether I preferred to be a man or a woman. . . and at last I tracked clearly enough to realize that the question was serious.. . and .1 answered, 'Woman'-and they made me answer that question at least once a day for many days-and then I went to sleep one night and when I woke, I was a woman. . . which did not astonish me nearly as much as to learn that fifteen centuries had passed. Being a woman seemed completely natural. I've had five children now-borne five, I mean; I had sired twenty-one. . . and one was put into me by one of my own descendants. Lazarus, when are you going to knock me up?"

"When the Greeks count time by the Kalends."

"Libby honey, when you want to swing that-if you aren't joking-check with me."

"Thanks, Dora; I'll remember. Lazarus, you will have to explain the paradox; I was just a puppet."

"Isn't it bedtime? We're keeping our guests up."

"Captain Hilda?" Lib inquired.

"Deety is in charge of time."

"Lib, I don't know ship's time yet. I gave you our seconds; we have sixty seconds to a minute; sixty minutes to an hour; twenty-four hours in a day. Primitive, eh? Is your time metric?"

"Depends on what you mean, Deety. You work to base 'ten,' do you not?"

"Yes. I mean: No, I work to base 'two' because I'm a computer programmer. But I'm used to converting-don't have to think about it."

"I knew you used 'ten' when I made a guess as to what you meant by 'six to the sixth power' and you accepted my answer. We now work to base-onehundred-twenty for most purposes-binary one-one-one-one-zero-zero-zero."

"Five-factorial. Sensible. Fits almost any base."

"Yes. We use it for routine work. But in scientific work we use base-three, because our computers use trinary. I understand it took Gay and Dora several milliseconds to interface."

"We aren't that slow!"

"My apologies, Dora. For some work we use a time scale that fits trinary. But for daily living, our clock is just like yours-but three percent slower. Our planet's day is longer."

"By forty-two of your minutes."

"You're quick, Deety. Yes."

"Your computers must be three-phase A.C."

"You are quicker than I was two thousand years ago. And I was quicker then."

"No way to tell and any computer makes us look like Achilles' tortoise. We had dinner at eighteen. Gay entered Dora about an hour and a quarter later. So for us it's about half past twenty, and we usually go to bed between twentytwo and twenty-three if we get to bed on time which we never do. What time is it in the ship and what is ship's routine?"

The others had let me and my new twin chatter. Now Lazarus said, "If this madhouse has a routine, I've never found it."

"01' Buddy Boy, you don't have a routine. I run this joint on the bell. Deety, it's just-bong!-twenty-one. . . and Lazarus never went to bed that early in all his evil years. Buddy Boy, what are you dodging?"

"Manners, Dora."

"Yes, Pappy. Deety, he's dodging the chicanery with which he fooled even himself. . . because he must admit the triple chicanery he wants to rope you in on-and it takes Gay because I'm not built for it. Until today I never heard of 't,' Tau and Teh. I thought 't'-that you call Tau-was all there was. Aside from paratime in an encapsulation surrounded by irrelevancy such as I am taking us through.

"But back to the corpse caper- Lib got herself killed about eight hundred Post Diaspora. Lazarus slaps her-him-into a tank of LOX, and places himher-it in orbit, with a beacon. Comes back quick as he can-and can't find Libby's cadaver. Fourteen centuries later my sister Teena, then known as Minerva, sees what should have been obvious, that any irrelevant ship, such as yours truly, is a time machine as well as a starship. A great light dawns on Lazarus; the corpse pickled in LOX is missing because he picked it up earlier. So he tries again, more than a thousand years later and five years earlier-and there it is! So Lazarqs and I and Laz-Lor go to 1916 Old-Style-orGregorian, Old Home Terra, and bury Lib from the sky into the Ozarks where she-he-was born-which was pretty silly because we chucked her into those Green Hills about a century before she was-he-he was born. A paradox.

"But paradoxes don't trouble us. We live in paratime, Laz-Lor are acute cases of parapsychology, we operate under paradoctrines. Why, take your family-four doctors. A double pair o' docs."

"Dora!"

"Pappy, you're jealous. But I'll say this for Lazarus: He's slow but he gets there and has believed all his life that any paradox can be paradoctored. Happens he had lots of time to think after he chucked Lib to a fiery grave because he stayed in that primitive era and got his arse shot off and this caused a long convalescence.

"It occurs to him that, if he found the corpse through going back to shortly after he placed it in orbit, he might learn something interesting if he went back just before he put Lib's remains in orbit. So when he's well again, he does so, with his whole first team, headed by Doctor Ishtar, the greatest in the business, and I'm outfitted as a hospital with everything from microtomes to cloning capsules.

"So we go there and wait-we don't land. Along comes Lazarus in the clunker that he and Lib used to risk their lives in, and Pappy comes out in a pressure suit and detaches the LOX tank, and Lib is buried in space, waiting for judgment day. We respect Pappy's griefjust long enough for him to get out of the way, then I take the tank inside me. Ish gets to work, along with many others. Lots of live cells suitable for cloning. Brain intact. Dead but intact- okay, as all Ish wants are the memory configurations.

"In the course of this, Ishtar learns that the late lamented had the potential to go either way-which is why the Families' best telepathic hypnotist is sent for and keeps asking this clone: When you wake up, what do you want to be? Man or woman?"

"It was much later, Dora. I was already awake."

"Lib hon, you ask Ish. You had to decide long before you woke. Ish and her hormone artists had to work on you while you were still labile. Matter of fact, you never answered at all; the telepath kept reporting on your emotional state whenever you imagined yourself male, and your state when you imagined yourself female. Ish says that it made you happy to think of yourself as female."

"That's true. I've been ever so much happier as Elizabeth Long than I was as Andy Libby."

"That's it, folks. How Ish turned a mixed-up male into a happy female, fully functional and horny as Howard females always are."

"Dora! We have guests." Lazarus glowered.

"All married. Deety is youngest. Deety, did my bluntness shock you?"

"No, Dora. I'm horny enough to be a Howard myself. And terribly interested in how the great Slipstick Libby turns out to be my twin and female."

"Female without surgery-none of those fakes done with a knife. But even Ish couldn't have done it had not Lib supplied XXY, so that Ish could balance the clone either XX or XY by careful attention to endocrinal glands. Or could she? Must ask. Ish is genius-cubed, smarter than most computers. Lazarus can now explain his next sleight-of-hand-slightly illegal."

"Hey!" I protested. "How about the corpse jettisoned into the Ozarks, Dora? Who was that?"

"Why, that was Lib."

"Lib is right here. I've got my arm around her."

That computer went tsk-tsk-tsk. "Deety. Doctor Deety. Ijust finished telling you that the Lib you are cuddling is a clone. After they drained every memory out of that frozen brain, what was left was dog food. Lib got slashed in the spine by the local equivalent of a cave bear. Ripped out her-his-backbone. Once Ish was through with it, Laz froze it again, we took it back and placed it in orbit, where we found it later-to our great surprise."

"How could you be surprised when you put it there yourselves?"

Dora announced, loudly, "Is there a mathematician in the house?"

"Stop it, Dora. Thank you for recounting my saga; I learn a little every time I hear it." Lib turned toward me and said softly, "Biological time versus durational time, Twin. Follow the entropy arrow through the loops of biological time and you will see that Lazarus was honestly surprised at every step even though he had-will-had-rigged every surprise. No grammar for it. Deety, I understand that you have studied semantics. Shall

we try to devise a grammar for space-time complexities in six curved dimensions? I can't contribute much but I can try to punch holes in your work."

"Love to!" I wasn't fooling. My twin is so sweet that maybe Deety is fairly sweet herself.

XLI

"A cat can be caught in almost any trap once-"

Jacob:

If A, then B. I trust I am a rational mathematician, not one of the romantics who have brought disrepute to our calling through such inanities as defining "infinity" as a number, confusing symbol with referent, or treating ignorance as a datum. When I found myself in the Land of Oz, I did not assume that I had lost my reason. Instead it prepared me emotionally to meet other "fictional" characters.

Stipulated: I may be in a locked ward. But to assume that to be factual serves no purpose other than suicide of personality. I shall act on what my senses report. I am not the bumpkin who said on seeing a giraffe: "There ain't no sich animal."

I find myself in bed with my lovely wife Hilda in sumptuous quarters of star yacht Dora as guests of the utterly fictional "Lazarus Long." Is this a reason to try to find the call button in order to ask a still-more-fictional nurse for a nonexistent shot to end this hallucination? This is an excellent bed. As for Hilda Solomon has reason to env5i me; Mahomet with all his houris is not as blessed as I.

Tomorrow is soon enough to unravel any paradox. Or the Day After Tomorrow. Better yet, Not This October. After The End of Eternity may be best.

Why disturb a paradox? As Dora pointed out, Hilda and I are a pair o' docs ourselves . with no wish to be disturbed, and most certainly not to be unravelled.

Since Hilda married me, I have not once taken a sleeping pill.

No one called us. I woke up feeling totally rested, found my wife in the fresher brushing her teeth with, Yes, Pepsodent-removed brush from mouth, kissed her, placed brush back in her mouth. When she finished brushing her teeth, I asked, "Seen the kids?"

"No, Jacob."

"So. Dora!"

"No need to shout; I'm sitting on your shoulder. Would you like breakfast trays in bed?"

"Have we missed the breakfast hour?"

"Professor Burroughs, breakfast hour in me starts at midnight and ends at noon. Lunch is at thirteen, tea at sixteen-thirty, dinner at twenty, snacks and elevenses at any time. Dinner always formal, no other meal."

"Hmm- How formal is 'formal'?" Hilda now had more wardrobe-but Beulahiand is not high style.

"Formal' means formal dress of your culture or ours, or it means skin. No casual dress. As defined by the Commodore: 'Whole hawg or none.' Amendment: Jewelry,

perfume, and cosmetics are not proscribed by the no-casualdress rule. Ship's services include sixty-minute cleaning and pressing, and a variety of formal dress of New-Rome styling, washables for the convenience of guests who do not travel with formal dress, prefer to be dressed at a formal meal, and do not choose to dine alone."

"Very hospitable. Speaking of washables, we found everything but a dirtyclothes hamper. I have a laplap to put in."

"But that's a washable, Doctor."

"That's what I said. I've worn it; it should be washed."

"Sir, I am not as fluent in English as in Galacta. By 'washable' I mean: Step into a shower while wearing it; it will go away."

Hilda said, "We'll take a dozen gross."

"Captain Hilda, 'dozen' and 'gross' are not in my memories. Will you please rephrase?"

"Just a side remark to my husband, Dora. What are New-Rome high styles today?"

"Today' I must construe as meaning the latest I have in stock. Styles follow the stock market. In evening dress, men are wearing their skirts floor length with a slight train. Bodices are off one or both shoulders. Bare feet or sandals are acceptable. Colors are bright and may be mixed in discordants. Weapons are required-may be symbolic but must be displayed. Ladies, of course, follow the cycle out of phase. Skirts are hardly more than ruffles this season, worn quite low. If tops are worn-not required this season and some ladies prefer cosmetics in flat colors-if worn, the teat windows may be either open or transparent. Transparents having quarter-lambda iridescence are popular this cycle, especially if one teat is bare without cosmetics while the other sports a changing-iridescent transparency." The computer's voice changed from a well-modulated adult female voice to that of an eager little girl:

"I hope somebody picks that; I like to look at it! How about Doctor Deety and Doctor Lib, one shiny on her left teat, the other shiny on her right, and place them side by side. Neat, huh!"

"It would be spectacular," I agreed. (And they would look like clowns! Still, Deety might go along. The child likes to please people, even a computer. Perhaps especially a computer.)

"You old goat, would you like a skirt with a slight train?"

"Hilda!"

"Dora, do you have formal washables in my husband's size? What measurements do you need?"

"I have the Professor's measurements, Ma'am. I will fetch an assortment to your quarters sometime after noon when you are not sleeping or otherwise engaged. An equivalent assortment for you, I assume?"

"If you wish, Dora. I may not wear that style."

"Captain Hilda is an excellent composition herself. I'm an expert engineer; I know good design when I see it. That's not flattery; Laz-Lor tell me that I should learn to flatter. I'm not sure I have the circuitry for it. Perhaps I can learn it from Gay."

"You sure can, Dorable; I've been flattering my four charges seems like forever."

"Gay, have you been listening?"

"Mad at me, Aunt Hilda?"

"Never angry with our Gay Deceiver. But it's polite to let people know you're present."

"But- Dora has eyes and she lets me look."

"Captain Hilda, Gay is with me all the time now. Do you forbid that? We didn't know." Dora had slipped into her little-girl voice and sounded stricken.

Time to intervene- "Gay, Dora-Hilda and I don't mind. I'll tell Deety and Zeb; they won't mind."

"Jake, you're my pal!"

"Gay, you've saved our lives many times; we owe you any fun we can offer. But, Gay, with Dora's eyes and ears you'll see and hear things not seen by your radars, not heard unless we switched you on. Do either of you have the word 'discretion' in your perms?"

"No, Jake. What does it mean?"

"I'll explain it," Dora said eagerly. "It means we see and hear but pretend not to. Like last night when-"

"Later, Dora. Over your private circuits. What ship's time is it and are we late for breakfast? I don't see a clock."

"I'm the clock. It is ship's time nine-oh-three. You are not last for breakfast. Commander Laz is sleeping late; she didn't go to bed right after the mutiny. Captain Long-that's Lor-ate on the bridge-a crude insult to my watchstanding but she's good company. The Commodore always eats breakfast in the flag cabin. The Doctors Deety and Zeb and Lib are just starting."

"How are they dressed?" asked my Hilda.

"In serviettes. Doctor Lib is wearing 'Jungle Flower' in cologne and powder and perfume; she likes strong ones. Doctor Zeb seems to have forgotten to use any but his own scent is rather pleasant. I can't place what Doctor Deety is Wearing but it has both musk and sandalwood. Shall I formularize it by symbols?"

"It's 'Blue Hour' and I'm startled; my stepdaughter doesn't need a scent. Neither does Lib, darn it. Jacob, are you ready?"

I answered at once. I had taken care of this and that while the computers chattered, including trying a depilatory tricky until I learned how to block it off-my sideburns were missing. Zeb dressed in a serviette- Libby Long the only one not of our family-and Lib used to be male. A good time to rub blue mud in my belly button- "I'm ready."

Hilda noticed my decision by not noticing it. The blue "Tinker-Bell" light appeared, led us to a small dining room, where we encountered a Long-Family custom- did not realize it because it matched a ceremony of our own: Lib saw us, came over, kissed Hilda, kissed me-briefly but with time-stop. Then my daughter was kissing me good-morning while Zeb kissed my wife. We swapped as usual; Deety kissed Hilda-and Zeb took my shoulders, hissed into my ear, "Stand still"-and gave me the double Latin kiss, each cheek.

Did my blood brother think I would let him down in the presence of one not of our family? Our custom had started after our double elopement. While Zeb and I usually used the Latin symbol, four rapid pecks, once at Snug Harbor we had missed the fast timing, hit each other mouth to mouth-didn't pull back but didn't stretch it out. We

declined to make anything of it-although I was aware of the break in taboo and he was, too.

Two mornings later I was last in; Zeb was seated with his back to me. He leaned back and turned his head to speak to me; I leaned down, kissed him on the mouth firmly but briefly, moved on and kissed my daughter not as briefly, moved on and kissed my wife thoroughly, sat down and demanded, "What's for breakfast?"

After that the only invariant was: "What's for breakfast?" Zeb and I used either Latin pecks or busses on the mouth-brief, dry, symbolic, initiated by either of us. It meant that we were closer than a handshake; it held no sexual significance.

SO I was disgrunted that Zeb thought it was necessary to warn me. Let me add: Women are my orientation and Hilda my necessity. But I tried the other way with my high school chum our graduation week. We were experimenting to find out what the shooting was all about-planned but date subject to opportunity-which turned up that last week of school. A two-hour examination, no other school that day; a half hour of tennis, sudden realization that we were free and that his parents' flat was empty and would remain so until late afternoon. Der Tag!

We gave it a fair trial. We bathed first and thoroughly. We were not shy or afraid of each other. We were not afraid of getting caught-doors locked and bolted, chains on, S.O.P. by his parents' rules. We liked each other and wanted it to work. Total failure- Got up, had peanut-butter-and-jelly sandwiches with milk, discussed it as
we ate. Neither of us upset, not disgusted, no bad breath or similar hazards- but no results.

Brushed our teeth again, washed each other-gave it a second try. So much calisthenics. No "morals" about it, willing and eager to add it on. Not for us- so we killed all evidence and got in three more sets of tennis.

That's how it is with Zeb and me. I love him dearly-but I love him for what
he is-while fully empathizing that my daughter thinks he is the greatest lover since- Well, the greatest.

But if Zeb ever makes a pass at me, I will do my amateur-acting best to make him feel that this is what I have been waiting for all my life.

I've been trying to say why I was miffed. Never mind, I shall make it clear to Zeb that I will never let him down.

About that Long-Family custom- "Long" is not the name of a Howard Family; it is a group of Howards who live together and who added "Long" (the pseudonym most used by Lazarus) to their regular names. It's a commune, an extended family, a serial family, a god-knows-what. There is probably no word for it in any language and at least two computers are full members. They come and go and raise children and only the family geneticist (Doctor Ishtar) is sure of parentage and who cares? I suspect that they are all ambi in sex but no outsider could guess-and I am an outsider.

But of this I am certain: When Long meets Long for the first time any day, they kiss-and it's no Latin peck.

I learned that I could have anything I wanted for breakfast. This should have been enough to tell me that we were being set up for the tale. I'm getting ahead of my story, as I know things about the Long Family that I read in a book that you may not have read. This ship Dora came from a planet many parsecs from the Earth-analog of that universe,

from a time over two thousand years in my future looked at one way. . . or a time totally irrelevant to mine through not having duration axis in common.

Yet I could have anything: Post Toasties, hens' eggs any style, bacon, ham, sausage, breakfast steak, toast, orange marmalade, Concord grape jelly, buckwheat cakes- and not one of these foods is from Tertius, home of the Long Family.
Pepsodent in our 'fresher- As I was contemplating a beautiful golden waffle with one bite of it melting
in my mouth, Lazarus Long walked in.. . and a voice in my head played back: 'The Commodore always eats breakfast in the flag cabin."

Add that Lazarus was dressed as were Zeb and I save that he did not yet have a napkin.

Working hypothesis: Lazarus had listened in on every word between husband and wife.

Second hypothesis: "Dora, tell me when they get up, tell me when they arrive in the breakfast room-if they do, but offer trays as usual. If they eat in the breakfast room, let me know how each is dressed."

The first hypothesis defines a grave social offense; the second outlines information a host or hostess is entitled to know. How do I find out which is which? Answer: I can't, as Lazarus Long will give me the answer that profits him and that computer is loyal to him, not to me.

As soon as Lazarus finished kissing Lib Long, he was grabbed by Deety and kissed.. . then he caught Hilda's eye, glanced at me and slooooowly bent to kiss her, giving her and me, severally, time to make that tiny gesture that says
No-and did kiss her because I depend on Hilda's instincts and will never tell her No in such circumstances, or greater or lesser. Hilda put her hand back of his neck and thereby controlled the kiss and made it long-and I tore up the first hypothesis and marked the second one "Q.E.D." Hilda's instincts about people are infallible; I think she is a touch telepathic.

As may be, we would now help him if possible.

To Zeb and me he simply said, "Good morning"-his instincts are reputed to be infallible, too.

I agreed that it was a "good morning" while noting to myself that it was a symbol without a referent save for social connotation (morning? In an irrelevancy?) but added sincerely, "Lazarus, this is the best waffle I ever tasted."

"Then please tell Dora."

"Dora, did you hear what I said to the Commodore?"

"I surely did, Professor Jake! Six more?"

I felt my waistline-firm and many centimeters trimmed off. "Six more is what I want-"

"Right away!"

"But half of one is all I dare eat. Deety, the next time we go to Oz, will you ask Glinda whether or not there is a magic for gluttons-me, I mean-to permit them to eat as much as they want while three fourths of it disappears?"

"I'm sure she could do it; I'm equally sure that she would not. She's an ethical witch; you would not be able to convince her that your purpose was worthy."

"You are depressingly logical, my dear."

Lib said, "Professor, you have actually been to the Land of Oz? Really and truly?"

"Really and truly. Dora, is Gay on the line?"

"On deck, Jake"-Gay's voice.

"Has anyone been in to see our portside annex?"

"How could they? Captain Hilda has not authorized it."

"But- Hilda?"

"No, dear. Sorry to be blunt, Commodore and Doctor Lib, but I won't authorize an open door because there are too many things that must not be touched. But I will be delighted to escort guests into Gay Deceiver almost anytime including right now; I've finished eating."

"I accept!"

"Then come along, Elizabeth. Anyone else?"

Lazarus said, "Dora, shove my breakfast to the back of the stove; I'll eat it later."

"A jelly omelet? I'll eat it myself."

"Do that, Dorable. Captain, I'm ready."

Laz-Lor showed up together, did not want to be left out. We ended up quite a crowd: eight humans, two computers.

Hilda stopped us at Gay's starboard door. "Friends, again I must be blunt. As you cross the sill of that door, you are leaving Star Yacht Dora and entering an independent command, the Gay Deceiver, even though Dora totally sur
rounds Gay. Inside that door, I command, responsible to no one, unlimited in authority. Captain Lor, do you understand and agree with the legal theory?"

Captain Lorelei glanced at her sister, looked unhappy. "Captain Hilda, I do agree. Therefore I can't come aboard. I can't abandon my command."

My wife looked terribly distressed. "Oh, I'm sorry!"

Lazarus Long interrupted. "Captain Hilda, I'm sorry another way. I don't agree with your legal theory. I have had more than two thousand years more experience with law than my sister has. . . all sorts of law in all sorts of cultures. I'm not speaking of justice; I'll leave that to philosophers. But I know what legal theories work with humans, and what ones have been attempted, then abandoned because they could not be made to work. This situation is not new; it has occurred thousands, millions, of times: a larger vessel with a smaller vessel nested in it. The solution is always the same, whether it concerns starships, fishing boats, aircraft carriers, whatever. The smaller vessel is a separate command outside the larger vessel, but when it is inside the carrier vessel, it is legally part of it."

My darling did not answer. She was picking out me, Zeb, and Deety by eye as Lazarus talked. As he finished she said briskly, "GayDeceiverOpenStarboardDoor. Man the car, prepare for space."

I'm proud of our family. Zeb zipped past me to the farthest seat-which left me room to dive for mine as Deety was picking up Hilda bodily, shoving her inside, crowding in after her, turning and pulling her feet clear of the doorframe-yelping, "GayCloseDoors!"

I was belting in but looking to the right, where the action was. Lazarus Long grabbed the door while calling out, "Hey, wait a moment!"

He realized his mistake in time to keep his fingers. I had argued with Zeb when I discovered, during refitting, that he had removed the interlocks that prevent that sort of

accident. He answered my protest: "Jake, when I tell those doors to close, I want them to close. If, in closing, one chops off a man's head, you can assume that I think he looks better that way."

Lazarus saved his hand but was knocked off his feet by the door-and I saw a bit of why he had lived so long. Instead of trying to check his fall, he gathered himself into a ball and took it on one buttock.

"Report!"

"Copilot belted checking seal!"

"Chief Pilot belted all systems go. Door seal being rechecked."

"Navigator belted, ready."

"Starboard door seal okay!"

"GayBounce!"

We were in free fall. No stars-total darkness.

"Astrogator. Advise."

"I don't know, Captain. We'll have to ask Gay whether or not she can backtrack. Any backtrack. Beulahland, or any spot in her perms. I'm lost."

Suddenly the stars came out. "Dora, calling Gay Deceiver. Come in, Gay."

"Don't answer. Zebbie, advise again. What happened?"

"I'm guessing. They cancelled encapsulation rather than risk losing us. They must be awfully anxious." Zeb added, "The only thing we have that you can't buy at the corner drugstore is Jake's space-time twister. How they knew of it and why they want it I do not know."

"Dora, calling Gay. Gay, please talk to me. Aren't you still my friend? I know our bosses had a silly fuss-but we didn't. Aren't you ever going to speak to me again? I love you, Gay. Please don't be mean to me."

"Captain Hilda, may I please say hello to Dora and tell her that I am not angry at her? She's a sweet girl, she really is. Captain, she let me use her eyes."

"Let me speak to her first."

"Oh, thank you! Gay, answering Dora. Come in, Dora."

'Gay! You had me so scared. Don't go away again, please. The Commodore wants to apologize to your boss. Will she talk to him?"

"Captain?"

"No. I'll speak to Dora's Captain, however."

A cartoon of Lorelei's features displayed on our central screen. "Lor speaking, Captain Hilda. My brother is terribly sorry and wants to apologize. My sisters and I are dreadfully upset and want you please to come back. I don't claim any command over your ship despite the silly things my brother said. Lib has a message for you, too. She says that, topologically, there is no difference between you being inside us or us being inside you. Either way, we each surround the other."

"I don't see it topologically, Captain; I see it pragmatically. But please thank Elizabeth for me. I have this message for Lazarus Long. A cat can be caught in almost any trap once; but that cat will not be caught in the same trap twice."

"The message is delivered."

"Then it is time to say good-bye. Captain Lorelei, I cannot honestly thank you as kidnapping is not hospitality even when it is luxurious. But I don't think that you or your sister-sisters-meant it that way. I blame it on that deceitful, devious brother of yours.

Please tell your sisters and Libby good-bye for us and say that I am sorry we had to leave."

"Captain, wait! There is something I must do first."

"Captain Lor, I must warn you I have you in my gunsights."

"What? Oh! We are unarmed. Not anything like that. I'll be back quickly. Perhaps you would like Dora to sing? But please don't go away!" The face in the screen pulled away.

"What kind of songs do you like, folks? I know lots of songs. One-Ball Reilly; and the Green Hills and On Guard Christmas So's Yours and Santa Carolita and Mademoiselle from Army Tears and the Pawnshot song and The Monkey Wrapped His Tail Around the Flagpole and Mary O'Meara and Soldier, Ask Not and just tell me what you like, and-here comes Sister. Captain Lor."

"Captain Hilda, thanks from my heart for waiting. Can you record?"

"Gay, recording mode. Go ahead."

"I have placed my brother under arrest and confined him to quarters. I, Captain Lorelei Lee Long, Master of Star Yacht Dora, affirm for use in any court that I have no authority over yacht Gay Deceiver and will never attempt to assert authority over Gay Deceiver no matter what circumstances and,
furthermore, I now place myself, my crew, and my ship Dora under command of Captain Hilda Burroughs, henceforth commodore of both ships, this assignment of command irrevocable by me or my sisters, and revocable solely by Commodore Burroughs at her sole discretion. End of message. Hilda, won't you come home? Laz is crying and I don't know what to do. We need you. Buddy Boy never did tell you why. But we do! May I tell you?"

"Go ahead, Lor."

"To save our mother's life!"

(I said, softly, "I'll be damned.")

My wife hesitated, then said, "Is Elizabeth Long there?"

"Yes, yes! She's been listening-she's crying, too-and I would be but I'm Captain and can't."

The smudged faces changed. "Lib Long speaking, Commodore."

"Libby, Captain Lorelei has told me something not only hard to believe but, if she is cloned from her brother as I have read, she may have his talent for lying. From what I know of you, I don't think you ever learned how to lie."

"Commodore, it is true that I never learned to lie convincingly. So I gave it up a long time ago."

"Very well, Lib. Is Lazarus Long in fact confined and under arrest?"

"Yes, to both. His door won't open and Dora has been instructed not to let him out until you permit it."

"What's this about saving her mother's life? If they are clones from a man the age Lazarus is alleged to be, their mother must have died a couple of millennia back."

"It's as complex as my case, Commodore, but quite different. The twins have host-mothers. But Lor was speaking of the genetic mother of herself, her twin sister, and Lazarus Long. She was reported dead more than two thousand OldHome-Terra years ago. But there is some hope that the records were confused and that it may be possible to save her. It can't be done without your help and the help of the Gay Deceiver. I don't think the

chances are good, even so. But without your help-well, I would have to try to devise such a drive as Gay is reported to have-and I don't think I can."

"Wait a moment, Libby. Gay, cut transmission from cabin; keep circuit ready. Can you find your way unassisted back into your berth in Dora? Did you get it into your perms?"

"I did. I thought I might want to find Dora someday. Are you displeased with me? I know it wasn't authorized. But I didn't three-times it! I can wipe it."

"Gay Deceiver. New program. New parking spot. Code word 'Dora Long.' I tell you three times."

"Hilda, I hear you three times!"

"Gay Deceiver. 'Dora Long.' Execute!"

The stars went away and lighted alcoves were at our doors.

XLII

"You're a figment of imagination."

Zeb:

"Hear that, Laz? You're a figment of imagination."

"No, Lor. You are a figment; I'm a fig." (What she said was "fica," and Deety suppressed a giggle. I pinched her and told her in family tap code that she had a dirty mind-which she ignored, being proud of it rather than otherwise. It was a long time later that I learned that Laz had used a Galacta word-but the ancient pun still applied.)

Jake reiterated patiently, "Laz-Lor, the key point of Commodore Hilda's theory is that we are all equally figments of imagination. 'Reality' thus becomes a null sythbol."

Deety shook her head emphatically. "Stick to geometry, Pop. Or stamp collecting. Leave symbology to symbologists-such as your favorite daughter. I'm real, I am! Smell me."

"No doubt you could use a bath. So could we all; it's been an adrenaline day. But that's the other side of the coin, Deety. 'Imaginary' and 'Real' turn out to be identical. Consider this chow bench. On one level of abstraction it is mathematical equations. At the level just below that it is a swirling nothlngness, with mass-energy a rare event. But on the gross level abstracted by my senses I can place this drink on it with utter confidence that it will not sink through this near vacuum."

My father-in-law matched his words by placing his highball on the snack bench; it sank out of sight.

Jake looked tired. "Not my day. Dora, did you do that?"

"Yes and no, Professor."

"What kind of answer is that?"

"You placed it on a take-away spot and that part of me was on automatic and took it away and sterilized it. I'm sorry, sir, and here's your fresh drink."

It was indeed a busy day. No one had been waiting at our parking berth, but three young women arrived at a dead run while Sharpie was swapping seats with Deety-our

brand-new commodore planned to be first to step into her new ship. The starboard door opened; Sharpie stepped out, a dignified procession of one-

-and was hit from three sides by three young women, each managing to laugh and cry at the same time. But Sharpie enjoys everything and her aplomb has never been shaken. She kissed them, let them kiss her, petted them and told them to calm down, everything was all right. "Dears, I never intended to stay away; I simply refused to let the great Lazarus Long put one over on Sharpie. Where is he now?"

"Shut up in the flag cabin, Ma'am. Commodore."

"Captain Lor, lock him up elsewhere; the flag cabin is mine."

"Aye aye, Commodore."

"How long will that take? Seconds, I mean; not hours."

Lor spoke rapidly to Dora in a language I almost understood. I leaned to my right, spoke to my wife. "Spanish. Some sort."

"Italian," Deety answered.

"Will you settle for Latino? No!-I remember now: Galacta. We'll have to learn it. But it sounds easy."

Lor reported, "Flag cabin will be ready for you by the time you reach it, Commodore."

"Very good. I expect to use it primarily as an administration office; flag remains in Gay Deceiver. That is appropriate, since Dora is unarmed whereas Gay Deceiver is an attack ship, an armed privateer-heavily armed, for her size." Sharpie smiled. "A few days ago, in another universe, we destroyed an entire air army. We don't have fancies such as artificial gravity; we belt down and fight in free fall. Gay Deceiver is stripped for speed and armament; Dora is just the opposite. The two complement each other beautifully."

I wondered why Sharpie was blathering-but she always has reasons. I think she reads minds.

I'm certain that Laz-Lor do, with each other. They looked at each other, then:

"The flag of an armed privateer-"

"-is the Skull-and-Cross-Bones-"

"-is it not? Do we take prisoners-"

"-or cut their throats?"

"Which would you rather do? Captain Lor, please do all the talking; these whipsaw conversations are hard to follow. By the way, no more 'midnight mutinies.' Lor, you remain captain until further notice."

Again they looked at each other.

"We like to swap off."

"Calling it 'mutiny' is just a joke."

"No one asked your preferences. My chief of staff and second-in-command of the flagship is the only one who does and must advise me. If you have opinions to offer, see him. Answer my question. Captain Lor."

"We'll do what you order. But our brother who was our father at the time taught us never to kill if we could possibly avoid it while teaching us all sorts of ways to kill and made us practice. When we were growing up we always wanted to be pirates. Then we grew up and decided that it could never be and tried to forget it."

Sharpie said, "I think I'm making you tongue-tied by forcing you to filter it through one set of vocal cords. So cancel that order; you two are unique. We operate just

the way Lazarus taught you; so far we have killed only once-to repel an attack on us. That air army- We timed it, caught them with their flying machines on the ground, burned the machines, burned their fuel-and thereby stopped an invasion. . . without killing anyone. But we are always ready to kill. Lor, that's why I warned you a few minutes ago. It would have broken Gay's heart to have to destroy Dora. Skull-and-Cross-Bones? No way to fly one but, if you want to hang one in the lounge, I grant permission. Why did you decide not to become pirates?"

That same preliminary glance- "Babies-"

"Laz has three, I have four-"

"-because Lor has one pair of twins-"

"-and we try to be pregnant at the same time-" "-and time it to fit our plans-"

"-and Brother's plans if you ever let him out of hack."

"How old are you two? I've been thinking of you as about Deety's age but you can't be. Just one of you answer, please; it's a simple question."

They conferred mentally an unusually long time. At last Captain Lor said slowly, "It isn't quite simple. We will get Dora and Athene to integrate it for us. . . if data are complete; they may not be. But answering in Old-HomeTerran years and meaning our own biological time, Laz thinks we are about forty-eight and I think we are a couple of years younger. It doesn't matter because Ishtar will tell us when to rejuvenate, which won't be soon, as we aren't yet close to menopause."

"Does it have to be at menopause?"

"Oh, no, just makes it easier and you never have to stop making babies. But Ishtar's mother went years past menopause and had decided to die. . . and changed her mind and looks younger than we do and has had more babies than we have. This time around, I mean."

"How often do men need it?" Sharpie asked. Jake looked up and said, "I won't need it for another six weeks, Hilda. Maybe seven."

'Shush, dear. Laz-Lor, be careful around my husband. When he's in rut, it takes heavy chains to restrain him. So never mind that question; he doesn't need to know and, for me, it was intellectual curiosity of a biologist. Perhaps it s best to ask Doctor Ishtar."

"Yes, Commodore, that would be best. We aren't biologists; we're ship handlers."

I leaned forward. (Sharpie was keeping us in the car; why I didn't know- then.) "Commodore! I'm required to advise you."

"Yes, Zebbie."

"You are going to need a new chief of staff, a new second-in-command, and a new astrogator because I will be on the binnacle list in a wet pack if you don't have Laz-Lor answer that last one. It is not 'intellectual curiosity' to me."

"Why, Zebbie dear, I have reports that your curve is such that it will be many, many years before you can possibly have other than intellectual interest."

(If it were not for upsetting Jake, I would paddle that pert little arse!)

Deety said, "Hear, hear!" I placed my hand over her mouth and got bitten. Sharpie said, "Captain, we have here another paradox-Doctors Carter and Burroughs, each unreasonably insecure. Elizabeth, you've been a man; give them the male angle."

"Commodore, I wasn't very successful as a male. I simply took antigeria whenever Lazarus did. But I can report his thumb rule."

"Yes?"

"When a man looks at a new and attractive woman and decides that he is too tired, it's time. When he doesn't even look, push him over and bury him; he's failed to notice that he's dead."

The ship's computer said something in that not-Spanish; Sharpie answered, "Graz, Dora. I'll come now."

Lor said, "Ma'am, we didn't know you knew Galacta."

"I don't. But I will a week from now. I knew what I would say in your position, and you said it; I could tell from cognates. You told Dora to get him out pronto, because the Doña was on her way. Then get his personal belongings when I would not be inconvenienced, So I stalled. Zebbie, will you come with me? Jacob dearest, will you decide whether or not we should give up our suite with the Carters? And what to move out of Gay? We will be in Dora at least a week, possibly longer."

"Commodore, we depart for Tertius tomorrow midday, ship's time."

"I do not recall ordering that, Captain Lor."

The twins looked at each other-and said nothing.

Sharpie patted Laz's cheek. "Don't look so thunderstruck, girls"-girls?-seven years or so Sharpie's senior and seven babies between them-"On reaching Tertius, place us in orbit, following local rules. But no messages from ship to ground unless approved by me in writing. Come now!"

As Sharpie left with me in tow, she told Deety that she was on her own but please get out Jacob's Army blues and my Aerospace dress, and ask Dora about cleaning and pressing.

Jake said, "Hey!" before I could, and Sharpie said, reasonably, "I won't put you into a long skirt, sweetheart; you would feel that I had coerced you into drag. I thought perhaps you two were bored with civilian dress-and I shall continue the custom concerning dressing for dinner-either formal dress or formal skin Nofhin~i ii, hefw~pn

Upon reaching flag cabin Sharpie dismissed Laz-Lor, waited until we were private, then clung to me. "Hold me, Zebbie. Hold me tight! Calm me down." The little thing was shaking.

"Maybe I had better get Jake," I suggested, while holding her and petting her gently-and solving aerodynamic empiricals in my head to keep from noticing how much skin such a tiny woman can spread over one.

"No, Zebbie. Jacob would fuss over me like a mother hen and give me advice I don't want. Either I boss this job without my husband telling me what to do.. . or I can't cut it. If I fail, I will fail on my own-not as Jacob's puppet. But I can cry on you and tell you things I wouldn't tell my own toothbrush."

She added, "When I send you out, find Jake and have him teach school to everybody. That'll keep him busy and happy and out of my hair. And everybody else, too. Have both computers record his lectures."

"Lectures on what?"

"Oh. Too many details. The plenum of universes and the Number of the Beast. Pantheistic multiple solipsism, or why the Land of Oz is real. The quantum mechanics of fairy tales. Even the care and feeding of Black Hats. He'll probably want to take people into Gay.. . but you must be present; don't delegate it. Jacob can go along and lecture but it's Zebbie's sharp eye that will see to it that nothing is touched."

She patted my chest. "You're such a comfort. Now I'm going to dig out this ship's papers and you're going to help because I don't know what to expect. Or where to find them. Certificate of ownership, I suppose, and registration, and ship's manifest whatever that is. What else and where should I look?"

"A log. Crew list, passenger list. Health inspection, maybe. Other inspections. Bureaucracy and red tape tend to follow the same patterns everywhere. Maybe no paper papers; that looks like a computer printout over there. Mmm- Insist on English; the originals are almost certainly in Galacta."

"I'll try it. Dora."

"Listening, Commodore Hilda."

"Print for me, in English, the ship's official papers. Ownership, registration, manifests, and so forth. You know the list. Retrieve soonest."

"I am not authorized to do this, Ma'am."

"Not authorized' by whom?"

The computer did not answer. Sharpie said, "Stick around, Zebbie; there's going to be trouble. Do you have any weapons?"

~'Where? Look at me. How?"

"I don't know but you're clever about such things. Dora!"

"Your orders, Commodore?"

"Get me Captain Lor! In person, not voice. I want her here on a dead run- right now! Out!"

(I did have a weapon. I had palmed an item as I left Gay. But never admit a holdout.)

Laz-Lor arrived, breathing hard, seconds later. "You sent for us, Ma'am?"

"I sent for Captain Lor; I did not send for Laz. Out. Pronto!"

Laz had her mouth open to speak. She got out so fast the door was only Partly ~ ~ ~

'Dora! Repeat to Captain Lor every word that you've heard, every word you've said, since I entered this cabin."

The computer started with Sharpie telling Laz-Lor they could leave. . . then surprised me with: 'Hold me, Zebbie. Hold me tight. Calm me down."

I started to speak, Sharpie shook her head. Dora droned on, right through Hilda's order to repeat back all the computer had heard or said since we came in.

The computer stopped; Sharpie said, "Dora, you told me this morning that you could not scan in here without permission."

"That is correct, Ma'am."

"Who gave you permission?"

The computer did not answer.

"Captain Lor, did you or your sister tell this computer to spy on me and to refuse to answer certain questions?"

"No, Ma'am."

"Then it's your brother Lazarus. Don't bother to lie; I didn't ask, I told you. Fetch your brother to me, under arrest. Move!"

XLIII

To Pull a Hat Out of a Rabbit-

Smith:

I had had trouble convincing my sisters that I must be "arrested" and "confined." I had made an idiotic mistake and now must be "punished." Lor had even less enthusiasm for placing herself and our ship under the command of a stranger.

Once they accepted it, I could depend on them. We did not let Lib in on the caper; she has no talent for creative lying. Far better that she believe whatever she said.

Laz and Lor were outwitting their elders by the time they were six, a process I encouraged by walloping them whenever I caught them. They learned. They also have my talent for looking stupid, plus one I have but seldom can use:
They can turn tears on and off like a faucet. (I have not found many cultures in which this advantages a male.)

Once this was settled, I arrested myself by helping Dora's waldoes move my most personal gear next door. Then I lay down and listened through Dora to what was going on in the flag cabin.

And discovered that I had outsmarted myself. I have never tried to teach Dora to lie; a dishonest computer is a menace: one that is a pilot would be a lethal disaster, sooner or later. Sooner.

But I hadn't figured on this narrow little broad asking for my papers so quickly. Nor did I guess that Dora had told her that my cabin could be scanned only by my order.

When I heard the situation start to deteriorate, I got up quickly and put on one of my Scottish outfits. Advantages: I look bigger, taller, more imposing. The costume calls for two weapons worn publicly. These I never use. But the costume is so draped and full that one may hide weapons for a half squad- then never show them save in extremis.

So I was ready when Lor came busting in, almost incoherent. "Brother, is she mad! Watch yourself!"

"I will, Lor. You've done a swell job." I kissed her. "Now march me in under arrest."

So we did. I halted ten paces from Mrs. Burroughs and saluted. She said to Lor, "You may leave"-waited until Lor had left, then said, "Instruct your computer not to see or listen in this space."

"Aye aye, Ma'am. Dora."

"Yes, Boss?"

"Back to normal for my cabin. No see 'urn, no hear 'em until I tell you to."

"Chinchy!"

"Dora!"

"Aye aye, Boss. Mean!"

"She's a bit childish but she's a good cook. And a fine pilot."

"And you're a bit childish. Prisoners do not salute, prisoners do not wear arms. Captain Carter, confiscate his weapons. Keep them as souvenirs or destroy them."

Long years as a slave taught me to put up with anything without a squawk. That doesn't make it pleasant.

"Smith."

I didn't answer. She added, "I mean you, Woodie!"

"Yes, Ma'am?"

"Lean over, grab your ankles. Captain, frisk him."

Carter knew how, I soon no longer had tools for a half squad-but felt better when he ended having missed one. He was in uniform-of-the-day, but he was big, in training, and carried himself in a way that made me think of Black Belts.

"Those are yours, too, Zebbie, although you might share them. Deety mentioned something about not having a throwing knife. How's the balance on those?"

She was not speaking to me but I had to try to gain control of the psychological gage. "One and a half turns at eight meters, Ma'am. I make them myself. But it's too heavy a knife for a lady. I would happily make one to fit Doctor Deety's hand and strength."

"I imagine that Doctor Deety is stronger than you are, Woodie. I think you've gone a bit soft. Someday we'll check it. Take off your clothes."

With my weapons gone, other than the one, I welcomed the order. Clothes are no asset in unarmed brawl; the other man can use yours against you. And I was sweating; Dora keeps the ship right for skin. I peeled quickly.

"Shove them down that," she said, pointing.

"Uh, Ma'am, that's a destruction oubliette."

"I know. Next time you won't try to impress me by sartorial elegance. Furthermore it was intentional insolence. Pronto!"

I shoved them down pronto. "Grab your ankles again, Woodie. Captain Carter, need we give him an enema to make sure he hasn't hidden one more weapon? I don't care to check by touch without a rubber glove, and I won't ask you to."

"Madam, I give you my word-"

"-which is worth nothing. Let it go, Zebbie. Join the class and keep an eye on our interests."

The big man looked me over. "I don't like to leave you alone with him, Commodore."

"Thank you, Zebbie. I'm safe. I was safe when he was armed but he was being insolent so I spanked him. Run along; he doesn't dare touch me." She added, "Or do you have a premonition?"

"No. But I get them just barely in time."

"I couldn't ask for more. But I feel a prophecy. Woodie is going to be a lamb about everything. Now go, dear."

He left, giving me a look that promised death if I harmed her. I wanted to tell him that I had never found it necessary to harm a woman in more centuries than his wife had years.

"Well, Lazarus, how do we work this out?"

"Work out what, Ma'am? You have the upper hand."

"Oh, piffle! You have the upper hand; you know it. As long as the ship's computer obeys you, rather than me, my 'authority' is a fraud. I escaped once by a fluke; you won't let it happen twice. But I stuck my head back into the trap because I think we have something to trade, to our mutual profit."

"I hope so, Ma'am. Please go on."

"You want your mother rescued. I plan to do it if it can be done. For which you will toe the mark. We need a holding company. I will own fifty-one percent of the voting stock. Not of the profits; there will be plenty for all. But 1 control."

"Madam, you're way ahead of me. I don't know what you have in mind."

"Money. Money and power. Whew! I just got downwind; you sweated into that heavy costume. Go in there, take a tub bath, hot and soapy. I'll sprawl on the chaise longue and we'll talk business. Are you really trying to rescue your mother, or are you simply looking to cut yourself in on Jacob's invention? We can make a deal, either way-but I must know. Don't hold out on me; I tend to get annoyed. Then someone else pays. You, in this case."

She took my hand and led me into the 'fresher while I answered her key question and thought about the rest. No more lies; she had caught me in one thrown together hastily and too complex; my grandfather would have been ashamed of it. So-nothing but the truth. But how much truth and what truth?

"Rescuing my mother is priority one, sine qua non. Business aspects are secondary."

"You were going to say that business aspects didn't matter to you-and I would have stuffed it down your throat."

I stalled while I adjusted the bath's controls. "Ma'am, I always think about business angles. But I would go broke and start over to make this rescue."

"Will you sign such a contract? We rescue your mother; you sign over all your wealth to me? No cheating, no holdout?"

"Is that what it takes?"

"No. It would not be equitable and that would compel you to cheat. Any contract must profit both of us. But rescuing your mother appeals to me-to all my family; I'm the least sentimental of us-and we would tackle it if there were not a fiat dollar in sight. Pour le sport. That nice warm feeling-whether it's a kitten, a baby bird, or an old woman. But there is money in this. . . and sport. . . and opportunities beyond imagination. That sound of water splashing:
does that interfere with Dora's hearing?"

"No, she filters it out."

"Is she listening?"

I instantly answered, "Yes." I've lived a long time in part by being a cat not caught in the same trap twice-as she had underlined. I placed in my permanent memory, nine times nine, never to lie to this woman again. Evade, avoid, keep silent, be elsewhere. But don't lie to her. A born Grand Inquisitor. Telepathic? Must ask Laz-Lor.

"I'm glad you said Yes, Lazarus. Had you said No, I would have broken off negotiations. I'm not telepathic-but you may find it inadvisable to lie to me. We must change the computer situation-part now, part later. You didn't give her the right code words."

"That's right. 'Chinchy' and 'mean' equal-"

"-Roger Wilco, but reversed meaning."

"Eh? That's a deep-down memory. Yes. Hmm- I must insert that phrase into Galacta. Useful." The water was just right, with deep, fragrant suds. I stepped down into it, picked a seat that let me lounge. "I should have said to Dora- Shall I tell Dora now?"

"With a modification. I want the equivalent of a simple telephone, so that I can call anyone, anyone can call me-and the same for you. But kill the snoop circuits throughout this suite."

"No trouble. We can call out at any time; that is a safety feature, permanent. As for calling in, I usually limit it to the twin commanding; she's entitled to disturb me, if needed. If not needed-well, neither Laz nor Lor enjoys being called 'stupid,' especially by me."

I changed the orders to Dora and did not cheat; Mrs. Burroughs and I were now truly in private, although anyone could reach us-voice only. "What next, Ma'am?"

"Some permanent changes for Dora, now that she can't hear us. Tentative plans for your mother's rescue. Then we talk business. Is there a seat in that pool where I won't drown?"

"Oh, certainly. When Laz-Lor were your size, they often bathed with me- I've had as high as six in this tub although that's a bit cozy; it's a four-adult design. Here, let me help; you can't see through these suds." Helping Hilda Burroughs reminded me of handling Laz-Lor at the same size, prepubescent. . . but I was acutely aware that this small, warm, slick body was postpubescent by many years and I got a twinge that I was pleased to have figleafed by suds. "Feel under you-find the seat,? Temner~l-uire suit. von?"

"Luxurious. On Tertius refreshers are social rooms, are they not?"

"Yes. Over the years I have found that nude cultures, or those with no taboos about nakedness, tend to make bathing a social event. Ancient Romans. Ancient Japanese. Many others."

She answered, "Whereas cultures with strong body taboos equate bathing rooms with outhouses back of barns. Disgusting." Mrs. Burroughs looked disgusted. I noted this as I had thought it would be necessary to get them used to skin before exposing them to the easy-going ways of Tertius. . . lest I jeopardize my mother's rescue. I had instructed Laz-Lor to hold us in irrelevancy until all of them, with no urging, accepted the comfort of complete bareness in perfectly tempered conditions, and simply forgot about bodies qua bodies. This does not mean to forget yin-yang. . . but it has long been known to all but legislators, judges, and other fools that a scrap of clothing fig-leafing whatever may be taboo (taboos vary endlessly and each is a "law of nature") is far more stimulating than is no clothing.

(Warning to time-travellers: To assume that the taboos of your native culture are "natural" and that you can't go too wrong behaving by the rules your loving parents taught you is to risk death. Or worse. If you think death has no "worse," read history.)

To return to pretty little Mrs. Burroughs: To be enjoying a bath with her a few minutes after she had had me subjected to personal indignity was the second most surprising thing about her. The most surprising thing I was still learning: This fragile little doll with the muscles of a kitten was the toughest bitch kitty I have ever encountered.

Understand me, I admire her. But I want to be on the side she is on. "What changes in Dora do you want, Ma'am?"

"Lazarus, I'm 'Ma'am' to strangers and on formal occasions. I don't consider bathing all that formal; my friends call me Hilda. Or by nicknames. Even pet names. But not 'Ma'am."

My answer got me splashed. She went on, "In attempting to hornswoggle me, you gave me, through your accomplices, a phony command and rank- while retaining control of the computer necessary to make it real. I require that you carry out your contract. Now. By reprogramming Dora to me as her sole boss, with the program locked so that you can't change it. Me and me alone,"

She smiled, leaned toward me, and placed a hand on my knee under water. "That's why I insisted on privacy-for Dora's sake. She's self-aware and seems quite vulnerable. Lazarus, I don't mind anyone in this ship hearing anything I've been saying. But I don't discuss surgery when it is likely to upset the patient." She leaned forward. "Scratch between my shoulder blades-pretty please?"

I welcomed time to think, while requiring her to coach me-higher, lower, a little to the left, ah, right there. .

"Hilda, I'm not sure it can be done. I did reprogram Dora so that her loyalty in crisis is to Laz-Lor. But it took me years and was not done by circuitry or by programming Dora is so thoroughly a self-aware personality that it is necessary to win her love in order to aain her lovaltv"

"I find that believable. Lazarus, let's see you pull a hat out of the rabbit."

"You mean-"

"I meant what I said. Any second-rate magician can pull a rabbit out of a hat. Can Lazarus Long pull a hat out of a rabbit? Watch this space next week. It's your problem, Lazarus; you created it. I won't make a second contract with a man in default on his first. Do you want your back scratched while you think? You scratched mine deliciously."

I accepted by leaning forward. Hilda is telepathic though perhaps not in words. She knew which spots and how hard and how long.

And when to stop. She dropped her hand as I straightened up. . . and her hand brushed against me and stopped. "Well! Truly I did not intend to be provocative, old dear."

I put an arm around her; she did not pull away but continued, "I won't refuse you. I have not given a man reasonable cause to call me a tease since I was twelve. But wouldn't it be sensible to table this until after we have rescued your mother and set up our business structure? If you find-then- that you are interested, you will let me know. If you do, I ask that you cooperate with me in saving my husband's feelings and face. And. . . I am. . . having trouble saying this- Damn it! Please stop and tell me the plans for rescuing your mother."

I stopped, allowed a hand's width to separate us. "Have you forgotten the hat and the rabbit?"

"I'm afraid I did. Very well, you've won this round; we attempt to rescue your mother. I waive the broken contract-but we do no further business. Just the rescue, then we leave,"

"I thought you promised me a second chance-later?"

"What? Lazarus, you're a bastard."

"I'm not but the term has no meaning on Tertius. Here's the 'hat.' You designate me your flunky-any title-for this ship. My sole function will be to be in earshot-through

Dora or otherwise-to insure that your slightest wish is carried out. Night or day."

"Making me a privileged figurehead, still vulnerable to your whim. The hat won't fit."

"Very well-second hat. We ground on Tertius; I move Dora into another ship-she accepts that; it has happened before. I sign this ship over to you with a new computer of the same capacity, programmed for ship's routine but unawakened. You let it awaken to your personality. You'll be its mother."

"That's better. Close but not on. Lazarus, you and I are going to be in business together a long time. I won't take your ship. Instead you're going to build me a ship, a tender for Gay Deceiver but moved by a Burroughs continua device-the first such ship built by Burroughs & Long, Ltd., a subsidiary of Carter Engineering Company. Another subsidiary is Carter Computers, which may assemble computers but primarily will build Burroughs Time-Space twisters under some innocuous name, and sell them only inside our complex setup- much more complex; we'll work on it together. But our biggest subsidiary will be Libby & Smith, Real Estate. That one rebuilds solar systems."

"What!!"

"Talk to Zebbie and Jacob. We'll organize Black Hat Safaris, Pty., too, but it may be a dummy for a while. We'll have an emporium in New Rome, imports from many universes. Uh. . . The Pawnshop, of course, with the Hook Joint above it. Ultra expensive imported styles up there, modelled by New Rome's most beautiful hetaerae. Private rooms for private viewings. This one is a gift to Laz-Lor, save for the ten percent that is voting stock of which I vote my usual control, through you. The twins can do as they please with it; our leash will be slack. Probably they will do their own importing, with a resident manager. But they might work in it some, just to know the business."

"Which business?"

"Both. They are grown women, Lazarus; you must not try to run their lives. The overall holding company, run by you and me, usual split with my one percent advantage, is a nonprofit corporation supporting Ishtar's clinic. We funnel whatever is needed into the clinic, holding down the book profits elsewhere, but paying whopping salaries and consulting fees. My husband is chief scientist in one part while consultant by fee elsewhere, with Elizabeth-Lib- his mirror image elsewhere. Lazarus, we must have Deety work on it; she has the finest head in our family for manipulation of this sort-I'm just her awed pupil."

"And I'm just your awed pupil!"

"Piffle again. Lazarus, from what I've read of you, your sole weakness lies in a delight in cheating for its own sake; Deety treats it as an intellectual art. One thing more-No, two things. Can you persuade Dora, as a favor to 01' Buddy Boy, to go along with the hoax until we deliver your mother to Ishtar? Make it a mammoth joke, under which she takes orders from me because she wants to be in on the fun. Take you out of arrest, of course; wipe it from her memory."

"It was never in her memory; Lor put her in nonrecording mode while the hooraw was on."

"Good! Can you persuade her to call me 'Commodore' while you use some fancy title?"

"Hilda, I'm your chief of staff for this ship; Zeb is chief of staff, flagship. Dora doesn't really understand ranks; I can tell her that 'chief of staff is one notch senior to God. No problem. As long as she can see that you and I are buddy-buddy,"

"And we are!"

"It's reassuring to hear that. Hilda, I underestimated you so badly that I'm still in a state of shock. What's the last item?"

"Rejuvenation for all of us for as long as you-Ishtar-can stretch nonHowards"

"I can promise that; I'm Board Chairman of the Clinic. But-Ishtar is not a magician. What's the average age of death for your parents, grandparents, any ancestors you know about?"

"My family, both sides, are considered long-lived-although I lost my parents in a car crash. The others I don't know about except that Deety's mother died of cancer, much too young."

"We can handle that."

"Is longevity on Earth-our Earth, not yours-of interest? Same length of year as Old-Home-Terra; Deety and Lor checked."

"Of course!"

"These figures apply to North America. Some other places are higher, some lower, some no data. Females. Menarche at thirteen plus-or-minus nine percent. Menopause at fifty-six to sixty-seven plus-or-minu-"

"Stop there! Average age of death, female?"

"One hundred seventeen. But males average eight years less. Sad. My own family averages higher, but only a few years. I don't know about Jacob but he mentioned once that his great-grandfather got himself killed, in an odd fashion, at ninety-seven. He-"

"Enough. I must report this. By definition, all of you are 'Missing Howards."

"But, Lazarus, that's simply the average on Earth-our Earth, now that I know that there are thousands of analogs."

"Doesn't matter. Different universe, different time line-not my problem. Here you are a Howard. You four and all your descendants."

Hilda smiled happily. "That's cheerful news to a woman six weeks pregnant."

"You?"

"And Deety. Same time and doesn't show yet. Lazarus, I was tempted a while ago to tell you. . . because I was tempted. Now, now! Down, Rover! Outline to me how we rescue a woman dead for many centuries."

"Hilda, someday I'm going to get you drunk."

"Want to bet?"

"Never with you. There is mystery about my mother's death. She appears to have been killed accidentally at a relatively young age, for a Howard. Just short of a hundred. I was notified as her purse I.D.'s named me as 'next of kin'-and I bawled like a baby for I had been planning to pay her a visit on her century day, July 4th, 1982. Instead I attended her funeral, flying to Albuquerque two weeks early.

"Nobody there but me. She was living alone under her maiden name, she and my father having separated thirty years earlier. But apparently she hadn't listed her last address change with the Howard Foundation, hadn't notified her other children. Howards are like that; they live so long that kinship is not enough reason to stay in touch. Closed casket and cremation-authorized by stuff in her purse; I never saw her body.

"But there was no doubt as to her I.D.'s and so forth. In my world, 1982 was a time when you couldn't sneeze without carrying a thick pack of cards all, in effect, saying that you were you. I was feeling it because I was seventy later that year and looked thirty-five. Embarrassing. I had plans to drive south from Albuquerque, cross the border, and not come back until I had bought a new passport to match a new name.

"Hilda, it was over two thousand years later, in preparing for my first time trip, that I learned that my mother was not listed in the Archives as dead but simply as 'record missing.'

"The matter troubled me. A few years ago-my time-Laz-Lor took me back. Didn't ground; a missile chased us and scared Dora silly. But I got a motion picture that seems to show the accident. There is a blur on the frames just before the first one that shows what I think is the corpse. Can you guess the size and shape?"

"Shan't try, Lazarus."

"As near as I can measure on a film a centimeter square, shot with a telephoto lens from too high because Dora was crying and wanting to go home, it is the size of that berth Gay Deceiver is in. Hilda, I think I photographed you rescuing my mother before you did it."

'What? Lazarus, that's-"

"Don't say impossible. The Land of Oz is impossible. You're impossible. I'm impossible. Who invented pantheistic multiperson solipsism? You did."

"I wasn't going to say 'impossible.' Now that you know that I'm pregnant, you will realize why I want to try to rescue your mother right away, before my belly starts growing where the seat belt crosses it. Her name was Marian? Marian Johnson Smith?"

"Maureen Johnson."

"That proves that the real Lazarus Long stood up. It bothered me that there might be a series of analog-Lazarus-Longs like analog-Earths."

"Wouldn't bother me. That's their problem."

"But it would destroy the theory I worked out that would account for my sitting here in a pool of water in a time-travelling flying saucer with a fabulous man-both ways!-when I know he's a fictional character in a book I read years back. That makes me a fictional character, too, but that doesn't trouble me as I can't read a novel with me in it, any more than you could read the one I read about you."

"I came close to doing just that."

"Don't be mysterious, Lazarus."

"I like wild stories. Used to read every one I could find in the Kansas City Public Library. On another time trip I picked up a magazine of a type you may never have seen. Read one installment of a serial. Ridiculous. Four people traveling in space in an airplane. At the end of that installment they are hailed by a flying saucer. Continued next month. Hilda, how do you think Dora was able to be at the right place at the right time when Gay Deceiver popped out of nowhere?"

'Where is that magazine?"

"Down the same destruction oubliette that recently received my best fake Scottish chief costume. If I had not learned long ago to dispose of casual fiction once I had read it, Dora would never be able to lift. Hilda, you explained it yoursel-_"

"Hilda? Do you hear me"-her husband's voice.

Her face lit up. "Yes, Jacob?"

"May I see you? I have a problem."

I barely whispered, "I'll get out," and started to stand up. She pulled me back down. "Of course, Jacob dearest. I'm in the flag cabin. Where are you?"

"In our suite."

"Come straight here." She whispered to me, "Do we have a deal?" I nodded; she stuck out her hand; we shook on it. "Partners," she whispered. "Details later. Maureen first."

Her husband answered, "Hilda, I don't know my way. And it's a private matter."

"Then you must come here, Jacob; this is the only private place in the ship. I've been talking business with Lazarus Long-business so private we had to talk here. No more trouble, dearest man, and we each get what we want. Come join us, we need you."

"Uh. . . can he hear me?"

"Certainly. We're having a bath together. Come join us. I want you to know all about the deal before we tell the children. I may need support on parts where we traded quid pro quo."

Silence- "I'd better call back later."

I said, "Doctor Burroughs, you want to talk privately with your wife; I will get out. But please understand that social bathing is as commonplace on my world as offering a friend a drink is on yours. I am here because the Commodore invited me and I assure you she is quite unharmed."

Burroughs replied in a pained voice, "I know that custom and have utter faith in Hilda's social judgment. Yes, I do need to speak to her.. . but I don't mean to be surly. I'll come up, or down, or across, and say hello. Please don't leave before I get there. I'll ask my way."

"Dora will show you. Step into the corridor and wait. She'll find you."

"Very well, sir."

"Dora, special."

"Yes, Pappy?"

"Find Professor Burroughs. Lead him here. By the longest route. Slow march."

"Aye aye, Pappy."

I said hurriedly to Hilda, "I may know what this is; let me check. Lib?"

"Yes, Lazarus?"

"Are you alone?"

"In my stateroom alone. And lonely." Lib added, "And upset."

"So? Did you put the question to Professor Burroughs?"

"Yes. Lazarus, I had perfect opportunity. The one place Dora can't see or hear. Inside Gay Deceiver's space warp and-"

"Chop it, Lib! Did he turn you down?"

"No. But he didn't say Yes. He's gone to discuss it with his wife. That's why I'm jittery."

"Turn on the soother. I'll call you back. Off."

Hilda asked, "What's the matter with Elizabeth?"

"I'll make it short as even the longest route can't take long. Lib is terribly anxious to have a child by the mathematician-your husband-who formulated the equations for six-dimensional positively-curved space. She thinks- and so do I-that they might produce a

mathematician equal to, or even greater, than Lib or your husband. But she should have let Ishtar arrange it. She jumped the gun; I don't know why-"

"I do! Elizabeth!"

Lib was slow in answering. "This is Elizabeth Long."

"Hilda Burroughs here. Elizabeth, you come straight here. Flag cabin."

"Commodore, are you angry with me? I meant no harm."

"Dear, dear! You come to Mama Burroughs' arms and let me pet you and tell you that you're a good girl. Now! How far away are you?"

"Just around the curve. A few meters."

"Drop everything and hurry. Lazarus and I are in the 'fresher. In the pool. Come join us."

"Uh, all right."

"Hurry!"

Hilda asked, "How do I let them in? Run dripping and do it by hand? I noticed that our door lets anyone out but can't be opened from the outside without help." She added, "For that matter how do I get back in?"

"Dora knows you belong here. For the rest- Dora, admit Libby Long and Professor Burroughs."

"Aye aye, Pappy. Lib-here she comes. Dr. Jacob Burroughs I'm fetching. How soon?"

Hilda said, "Two minutes."

Lib hurried in, still unsmiling. Did smile when Hilda put her arms around her, smiled and cried at the same time. I heard Hilda crooning, "There, there, dear! It's a wonderful idea; she'll be the world's greatest mathematician. A cute baby-something like Deety, something like you. Jacob! In here, darling! If you are wearing anything, chuck it; we're in the pool."

Seconds later the pool was filled to its rated capacity, Hilda with arms around both of them-kissed her husband, kissed Lib, said sternly to them, "Stop looking as if you were at a funeral! Jacob, this is what Jane would want-and it is what I want. Elizabeth, you aren't crowding me out; I'm pregnant now. I'll have my baby six weeks before you have yours. I've decided to ask Doctor Lafe Hubert to deliver my baby. Who are-"

'Hilda! I haven't delivered a baby for over a century."

"You have seven months in which to brush up. Doctor Lafe, are you refusing to attend me?"

"No, but- Jake, if Hilda will have her baby at the Clinic on Tertius, she will be in the hands of the most skilled obstetricians in this universe. Which I am not. I'm rusty. I-"

"Doctor, I think Hilda would settle for your holding her hand and standing by to help if needed. I think my daughter would like that, too. She may have her baby the same day as Hilda."

"Sir, I will be honored. But I want to say something about this proposed baby, a cross between two all-time great mathematicians. I know that your world places value on monogamy. Howards do not; they can't. But this need not violate your values. If you will make a deposit at the sperm bank at-"

'What?" Hilda Burroughs looked shocked. "Lazarus, are you talking about syringes and things like that. Done to Elizabeth?"

"Why, yes, I-"

She chopped me off. "Babies are not made with syringes! Babies are made with love! With little moans of happiness between two people who know exactly what they are doing and want to do it. Elizabeth, are you fertile today?"

"I should be. It's time."

"Then kiss me and tell me you want to do this. If you do."

"Oh, I do, very much!"

There were kisses and tears all around. I got pulled into it, found myself kissing the prospective father. I gave him a chance to duck but he didn't.

Our busy little stranger was still playing ringmaster. "Lazarus, what is that guest room across the cabin? Pastel colors?"

"Aurora Room."

"Beloved husband, wrap a towel around this sweet, frightened child, take her there, lock the door behind you and make her happy. This suite is the only totally private place in this ship. If I lay eyes on either of you in less than one hour, I shall burst into tears. That doesn't mean you can't stay longer. I hope that you will come to dinner. . . but you are welcome to Aurora Room after dinner. Sweetheart, you must give her at least one chance each of the next three days; a woman's timing can vary from her norm. Now git! Pick her up and carry her."

Lib wouldn't let Jake carry her. But she leaned into his arm. As they left the 'fresher, she looked back with a happy smile and threw us a kiss.

Hilda caught it and ate it. Then she said to me, "Help me out, please, dear."

I lifted her out, sat her on the edge, climbed out myself. She patted the padded deck, said, "I think this is better than that chaise longue. If we happen to be caught it wouldn't embarrass me and should not embarrass you; in these circumstances Jacob would be relieved rather than upset." She smiled, eased her sweet thighs, put up her arms. "Now?"

"Yes!"

"Anything you want, including back rubs. Lazarus, does it excite you knowing what is going on a few meters away? It does me!"

"Yes! But I don't need it-Hilda, you're superb!"

"Not in looks, certainly. So I try hard with what I have. Sold myself three times-did my best to make my contract-husbands each feel that he had received full value.. . then married dear Jacob for love and am trying still harder with him. He is good-I mean he is good all through. I hope Elizabeth appreciates him. You've had her?"

"Yes."

"Before or after the change?"

"Both. I miss the 'before,' appreciate the 'after."

"Then why won't you knock her up?"

"That's a family joke. She had her first child by me, is now making the rounds of our family, more or less. Woman, you are not here to talk!-I'm almost there!"

She looked delighted. "I'm climaxing steadily; let 'er rip!"-and bit my chin.

An indefinitely long time later that need not be detailed, we were resting in each other's arms, enjoying that delicious peace of the ebbing tide. Hilda saw them first, raised her head:

"Jacob beloved! Did you! Lib- Did my sweetheart put a baby in you?"

"Did he! Hilda, you do that every night? Little bitty like you? Less than two hours and darling Jacob has worn me out."

"I'm a hollow mockery, dear. Built for it. Tell her, Jacob."

"My darling is adaptable, Libby dear. Lazarus, did Hilda treat you nicely?"

"I died happy."

"He's not dead"-Hilda made a long arm, cupped a handful of water, threw it in my face, giggled. The suggestion she added I rejected with dignity-as much dignity as one can manage when two women are tumbling one into a tub of water.. . while one's male comrade stands by and laughs.

XLIV

"-where do we get the corpse?"

Zeb:

"The question," said my wife Deety, "is where do we get the corpse? With timing that precise, Gay can make the pickup. But a corpse has to be left behind. Lazarus, not only do your movies show it, but you remember Maureen's death; you went to her funeral. It's got to be a fresh corpse of an elderly woman that the cops will accept as Maureen Johnson."

Six of us-Deety, me, Jake, Sharpie, Lazarus, and Libby-were seated around our kitchen dining table at "New Harbor" (our wives accepted that compromise) in Beulahland, trying to make plans for the "snatch." "Snatch" in the literal sense if the rescue of Maureen Johnson were to succeed.

Lazarus had a motion picture that showed that we would succeed (had succeeded) (were about to succeed) at a precise time and place and date on an analog of Earth-zero one quantum away on 't' axis.

Easy! Success guaranteed. Can't miss. Do it blindfolded.

But suppose we did miss?

The frames showed that a roadable had passed through the space where Gay had been (would be?) grounded, and, in so doing, ran over (would run Over) (will run over) (is, was, and forever will be running over) the dumped corpse. Suppose the timing or placement was offjust a touch. On his first time travel (1916-1918 Old-Home-Terra), with Dora piloting, Lazarus had missed not by a split second but by three years.

Lazarus had pointed out that it was his fault, not Dora's; he had fed her Imperfect data-and we had jumped on him from five sides: It was not a question of "whose fault" but the fact a mistake could be made. Or could it?

Four mathematicians, one mathematical engineer (yeah, I include me, as resident expert in Gay's responses), and one intuitionist all disagreed.

Hilda was certain that nothing could go wrong.

I am a firm believer in Murphy's Law: Given any possible chance, it will go wrong. Anything.

Libby had been wholeheartedly converted both to Jake's six-axis plenum of universes to the awful Number of the Beast but also to Sharpie's multiple solipsism, and

asserted that they were two sides of the same coin; one was a corollary of the other and vice versa. Combined, they (it) constituted the ultimate total philosophy: science, religion, mathematics, art, in one grand consistent package. She spoke of a "ficton" being a quantum of imagination/reality ("imaginary" being identical with "real" whatever that is) as casually as a physicist speaks of photons. "Could a mistake be made? Yes. And would create a new universe. Jacob, you spoke of the empty universes your family had visited. One by one they fill as fictons are created." She added, "But a mistake was not made; we snatched Maureen safely. We ourselves create the fictionsfictons-ficta that will make it real."

She was euphoric. I attributed it to excitement over the coming adventure. I was mistaken.

Lazarus, a highly competent mathematician although not the unique that Jake is or Libby, was in this case not a calm abstractionist; his mood was grim determination to win or die trying-causing me to recall how he got his arse shot off.

Jake turned out to be a determinist (he himself being one universe's prime example of utter, rambunctious free will!).

Deety is a pragmatic mathematician, unworried by theory. Oz is real, she is real, "fictons" don't interest her. "Don't fret, Lazarus. We can do it, Gay can do it-and we won't do it until Gay is certain of her program."

This discussion had started midafternoon in Dora. Sharpie had worked out her difficulties with Lazarus (to my enormous relief; were those two to wind up on opposite sides in anything more serious than Parcheesi, I yearn to be elsewhere-say Timbuktu under an assumed name); she, Jake, Lazarus, and Libby were in the flag cabin, arguing, when Sharpie had Dora page Deety and me.

There were endless matters on the agenda Uncluding the preposterous notion that we four were 'Missing Howards' and that Lazarus was registering us as such. I'm not sure I want to live a thousand years or even two hundred. But I am sure of this: a) I want to live quite a piece; and b) I want to be alert, healthy, and active right up to the last. Not like my great-grandfather who had to be spoonfed at a hundred and five, and could not control his secretions. But the Howards have got that whipped: you stay young as long as you wish, then die by choice when you feel you've had your full run.

(Yes, I was willing to be a 'Found Howard' since it included Deety, plus little Deeties ad infinitum.)

Lots of other business, all of it postponed (including the problem of "Black Hats"), in order to deal with rescuing Maureen Johnson.

We were still discussing knotty aspects when Lor's voice said: "Commodore?"

"Yes, Captain?" Sharpie had answered.

"Ma'am, I hesitate to disturb you-"

"Quite all right, Lor. The Captain must always be able to reach me."

"Uh, Ma'am, Dora told me that she was forbidden to call you. She has for you a variety of New Rome styles for women and men, a military uniform for Doctor Jacob, and one for Doctor Zebadiah, and evening formals for Doctor Elizabeth and Doctor Deety-and she's not sure where to send any of them."

"Send all the clothes to the flag cabin, please."

"Yes, Ma'am. They should be appearing in your delivery cupboard now. Do you know where that is?"

"I'll find it. What are you and your sister wearing tonight? Or is it a secret?"

"It's not a secret; we just haven't decided. But there is still an hour and thirty-one minutes till dinner."

"Time enough to pick out pretty clothes. Or will you wear formal skin tonight? That takes anywhere from two seconds to two hours, does it not? Off."

Sharpie used an unusually rough expression of disgust, which told me that she now included Lib and Lazarus in her inner circle. "Woodie, do you know any exceptionally strong cuss words? I detest the thought of wasting time pretending to be festive when we have so much to settle, especially our procedures for Maureen."

Deety looked at Libby. "You and I are kind o' stuck with a promise, too. How about some new cuss words from you, too?"

"Deety, I have no literary talent. But I would like to hear some soul-soothing cussing. We ought to stick with this, with snacks to keep going and sleep when we must, until it's perfect. Three hours or three days or three weeks."

I said, "We shall!"

Sharpie shook her head. "Zebbie, you can skip dinner. I can't. Lazarus should appear, too."

He agreed. "I'm afraid I must. But, Commodore, I must advise you that your flag chief of staff should be present, too, for esprit de corps." He cleared his throat noisily. "Libby and Jacob, being passengers, could skip."

Lib shook her head. "Deety and I made a reckless promise."

Not being a genius myself, it's kind of fun to make a roomful of 'em look silly. I stood up. "No! We will not let a dinner party interfere! We can settle it within three days. But if you all are going to chase rabbits- What's the matter with you, Sharpie? Getting stupid in your old age?"

"Apparently I am, Zebbie." She said to Lazarus, "Please issue orders cancelling dinner. We'll stay with this until we finish it. There are beds and lounges whenever anyone needs to nap. But we won't adjourn. Three hours or three weeks. Or longer."

"Don't cancel dinner, Sharpie."

"Zebbie, you have me confused."

"Beulahland is on a different time axis."

Five minutes later we were in our old farmhouse. We hadn't stopped for clothes as we would have wasted twenty minutes, whereas the idea was to save time on that axis, use time on this axis. We stuck Lazarus and Libby back in the after space, with the bulkhead door dogged open, so they could see and hear, but required them to use the web straps, and cautioned them that the lumps under them were loaded firearms.

The only thing not routine was that we would be making rendezvous later with a moving ship, something we had done before only from bounce range in the same space-time. So I had asked Gay whether she was sure she could do it. She assured me that she could, because she wasn't concerned with the ship's vector; she would return the instant she left.

I turned to Commodore-now-Captain Sharpie. "Ready for space, Captain."

"Thank you, Astrogator. Gay Deceiver. Beulahland. Execute. Gay Deceiver, open your doors. All hands, unbelt. Disembark. Gay, it's sleepy time. Over."

"Goodnight, Hilda. Roger and out."

Our passengers were dazed-they all are, first time. They stood outside our barn, looking at the setting sun, acting like zombies, until I shooed them inside. Although Beulahland does not have body taboos, they wear clothes most of the time, and six naked people outdoors in a clump as the chill of the evening was coming on was odd. I like a low profile.

Once inside, Libby said, "Feels like Arkansaw."

Lazarus replied. "Feels like Mizzoura."

"Neither," I told them. "It would be the St ate of \Va~h I n~ton if' it weren't Beulahiand, and what ought to be Puget Sound is about a kilometer over that way."

"It still feels like home. Lazarus, I'm happy here."

At that moment I decided we would never give up New Harbor. Apparently we were going to be citizens of Tertius, or maybe New Rome on Secundus, or both (commuting is no problem when light-years mean nothing), on another time axis. We could take a rest from city life anytime and have it cost not one day's work on Tertius. Contrariwise, only such time would pass on New World as we spent there.

Hmm- Maybe we could sell vacations. Or extra study time for that student who has his big exam, the one he must pass, tomorrow morning. Sell him room and board and transportation and three weeks not in the calendar. At a slight markup, of course.

I built a cheerful fire in the fireplace, and Lazarus washed dishes, while Libby insisted on proving that she could cook on a wood range, even though she had learned centuries ago by her time scale, as a gangling boy. Yes, Elizabeth can cook.

We ate and sat around and ta~ ked, puiz~io~ ho~ Ia ba ~uI a at ~laureen Not make that one tiny mista ke, It was then thaI Deetv bl'I)ught up the root ter of the dead body, \ouve seen how ocr urate (day can be But Icn~r' do we get a freshly-dead corpse to replace Maureen?

Lazarus told her to forget it, "I provide the corpse."

"That's not a good answer, Lazarus."

"Deety, don't worry. It'll be dead and I will dump it." I said, "Lazarus, I don't like that answer a damn bit." "Nor do I," Jake seconded.

"Nor I," agreed Sharpie. "Woodie, you're asking us to make a snatch-a hanging offense many places, bad trouble anywhere. We don't mind the technicality; saving an old woman's life isn't the sin kidnapping is. But what about this freshly-dead corpse? We don't deal in murder."

Lazarus glowered.

Libby said hastily, "If I assure you that it is all right, will you let it go at that?"

"No," pronounced Sharpie, Woodie must come clean."

"All right, all right! I own this corpse. No murder or any other crime involved. Now will you quit riding me about it?"

"Jake?"

"I don't like it, Zeb."

"I don't, either. But we needn't do anything. We go limp. He may not last long in a culture that 'balances,"

"Possible. But that's his problem."

Sharpie said quickly, "Did either of you promise him a ride back to my ship?"

'~Whose ship?"

"Mv ship. Woodie. Gentlemen?"

"I didn't promise him. Did you. Jake'?"

No. Did you, Deety'? Hilda'?"

'Not me, Pop."

"Nor me, Jacob. Woodie, earlier today I thought you had seen the light. Conceded, 'I am but indifferent honest' myself. But even pirates need to feel safe with their shipmates. You and I shook hands as partners. You don't seem to understand what that means. However I'm not going to abandon you here. You'd be balanced in a week. Dead. Or worse. So we'll take you back. By the way, it is impossible to steal Gay Deceiver. Yes, I know you once stole a ship enormously bigger than Gay. But not as well protected."

"Lazarus! Tell them."

"Lib, I was waiting for the Commodore to finish. That corpse wasn't murdered because it was never alive other than as a vegetable." Lazarus looked embarrassed.

"About thirty years ago we started a medical school on Tertius. A one-horse deal, more of a branch of the clinic. But genetic engineering is taught, and student genetic surgeons must practice. Ordinarily a clone that goes bad is 1'f!led and frozen and its tissues studied. A clone that takes-shows no fault.

deviation--is either cared foi' and allowed to develop if~ its genetic source rots a spare body and will pay for it, Or, more likely, a healthy clone is aui'el\' a laboratory exercise~ an ethical medical school requires supervised destruction during the first pseudo trimester. befoi'e quickening shows in the 'ave form,

"Neither student nor tissue donor is likely to be upset by this quasi-abortion. as the student is almost always herself the donor-if it bothers her, she's in the wrong vocation.

"If the student is not the donor, emotional upset is hardly possible. The student thinks of the clone as a quasi-living histological specimen the usefulness of which is at end-and the tissue donor can't be upset, being unaware of it."

"Why so, Lazarus? If anybody is tinkering with my cells, I want to know about it, I do!"

"Deety, that tissue may be years, even centuries, old; the donor may be parsecs away. Or still warm and the donor just leaving the building. Or anything in between. A sperm-and-ova bank insures the future of the race; a tissue bank insures the future of the individual. But somebody has to pick up the check; it's a tanstaafl situation. A few of the very wealthy-and neurotic- always have a quickened but unawakened clone in stasis. I'm wealthy but not neurotic; I don't have a reserve clone."

I caught sight of Libby's face as Lazarus made that last statement-her mouth twitched in a half smile about to become (I think) a snicker, had she not suppressed all expression. No one but I caught it.

I made note to ask her about it later-then I remembered what the mouse told the cat and decided not to.

"But I do what any prudent Howard does; I have tissue on deposit. One may do this either of two ways: Pay high. . . or pay much lower and sign a release on half the donation for research and instruction." He grinned. "I'm stingy. My tissue is available to medical students."

He went on, "Not all medical schools are ethical. I can think of at least three planets where-" Lazarus looked directly at my wife. "Deety, you raised this issue. While I

can think of three planets where one can buy any sort of monster, I can think of at least thirty where, for a much lower fee, I could simply say, 'I want that one' "-he pointed at Sharpie-"and the answer would be, 'It's a deal, Mac. How freshly dead and when do you want delivery?"

Sharpie looked around behind herself as if to see at whom Lazarus had pointed.

"That's the cheapest way-"

"Then you weren't pointing at me!" Sharpie interrupted. "Woodie, it's not polite to point. For a moment you had me worried. I'm never cheap-highpriced, always."

"So I found out, Commodore. Deety, that's cheapest, and safe for the buyer in the places I have in mind. But how can I convince you that I never gave even a moment's consideration to that method? You seem to know a lot about me-more than I know about any of you. Is there anything that you have ever read or heard, anything that I've said or done, that would cause you to think that I would murder or contract for a murder-same but nastier-in order to further my own ends? I'm not saying that I have never killed. A man who has lived even half as long as I have has found himself more than once in a killor-be-killed situation. But the best way to deal with such a situation is not to get into it. Anticipate it. Avoid it."

Lazarus Long stopped and looked sad, and for the only time of my acquaintance with him, looked his age. I do not mean he suddenly looked decrepit. But he had an aura of ancient sorrow. "Professor Burroughs, if it would do any good, I would junk all my plans, accept being forever stranded here, for the privilege of taking a twenty-pound sledge and smashing your space-time twister."

I was shocked (damn it, I like good machinery). Jake looked hurt, Deety and Sharpie looked stunned.

Jake said tightly, "Lazarus. .. why?"

"Not to hurt you, Professor; you have my highest respect. You are one of three: the man who invented the wheel, the man who discovered how to use fire-and you. But, in making this supreme discovery, you have accomplished something I had thought impossible. You have made interstellar war logistically practical. Interstellar? Intergalactic-interuniversal !"

Lazarus suddenly straightened up, threw off his gloom, grinned. "All the King's horses and all the King's men can't close Pandora's Box again. Once it hits the fan, the only thing to do is sweep it up, package it, and sell it as fertilizer. Hilda has plans along that line. But I'm going to have to start thinking in military terms again. Figure out how to defend my home place against what appears to be that Ultimate Weapon much talked about but never achieved. I am glad to say that Hilda plans to keep it a close-held secret as long as possible; that may buy us time."

He turned his attention back to my wife. "Deety, I have never murdered, I never will. The nearest I ever came to it was once being sorely tempted to strangle a five-year-old boy. I admit that the thought has often passed through my mind that this character or that would look his best as the centerpiece of a funeral. But can I convince you that I have never acted on such thoughts? Think hard, please-all that you know of me. Am I capable of murder?"

Deety doesn't dither. (Remember how we got married?) She jumped up, hurried around our kitchen table, and kissed Lazarus-and stopped hurrying. It was a kiss that calls

for a bed, or even a pile of coal-had there not been urgent business before the house.

Deety broke from it, sat down beside him, and said, "Tell us how we get this unmurdered fresh corpse. It's clear that we're going to have to go pick it up-in Gay. So we must know."

Libby said gently, "Lazarus, this is what you have been avoiding. May I tell it?"

"Thanks, Lib. No, you would pretty it up. I-"

"Pipe down!" said Deety. "Elizabeth, give us the straight word. Briefly."

"Very well. The medical school of B.I.T. is as ethical as you will find. My sister-wife Ishtar is director of the rejuvenation clinic and chairman of the board of the medical school, and still finds time to teach. I have never seen Maureen Johnson as I was born about two centuries after she was. But she iS Supposed to resemble Laz and Lor-unsurprising; she is their genetic mother, Since they were cloned from Lazarus."

"Oh! I see. There is still a third clone from Lazarus. Female?"

"A spoiled one, Deety. Ishtar tells me that it is difficult, rather than otherwise, to get a bad clone from Lazarene tissue. . . so it is especially suitable for induced mutation experiments. She orders the destruction of these experiments when they have served their purpose."

"Deety said to make it brief," growled Lazarus.

Lib ignored him. "But, while Ishtar checks on the students, no one checks on her. For twenty years Ishtar watched for a clone that would look human but not be human. So deficient in forebrain that it could never be anything but a vegetable, unaware. She told me that her students had unknowingly provided her with dozens to work on. Usually they died too soon, or never developed human appearance, or had some other fault that made them unusable. But several years ago she succeeded. I testify that this thing looked like Laz and Lor as it passed through the stage of its forced development. . . and also that it looked like an older version, wrinkled and hair streaked with gray, when it died two Tertian years ago-"

"Huh? Fresh corpse'!"

"-and was quick-frozen at once. I testify to something else. Friends, in becoming a woman I acquired an interest in biology that I had not had, as a male. While I teach math at B.I.T., I am also staff mathematician to the clinic and have studied a bit of human biology. When I say that this spoiled clone was never alive in any real sense I speak as the mathematical biologist who checked its monitors' records daily. It always required full metabolic support; we monitored everything. The surprising thing is that Ishtar could keep it alive long enough to let it appear to age. But Ishtar is very skillful." Libby added, "Lazarus would not only have become upset in telling this, but he could not have told it first hand as Ishtar refused to permit Lazarus to see this spoiled clone or any records on it."

"A willful woman," said Lazarus. "In three seconds I could have told Ish whether or not this thing looked enough like my mother to be useful. Instead I must depend on the opinions of people who have never laid eyes on my mother. Damn it, I am owner of record of the clinic and Chairman Regent of all B.I.T. Does that count with Ishtar? Hilda, my senior wife is as tough a case as you are. . . and looks as little like it as you do."

"So? It will be interesting to see what happens when I am your junior wife," Sharpie answered at her pertest.

"Are you going to be my junior wife?" Lazarus swung around and looked at her husband. "Jake?"

"I don't think I have a vote," my blood brother answered easily.

"I'll automatically be your junior wife if we are invited to join the Long Family which we damn well ought to be if we make this work!" Sharpie said indignantly.

"Wait a half!" I put in. "If we are invited to join the Long Family-a tall assumption if I ever saw one-Deety would be junior. Not you, you elderly baggage."

"Hillbilly can be junior if she wants to be. I don't mind."

"Deety," I said, "are you serious? I've been trying to point out to your stepmother that you don't push your way into a family."

"I wasn't pushing, Zebadiah," my wife answered. "I want us to stay on Tertius at least until we have our babies, and possibly make it our home; it seems to be a pleasant place and should be free of 'Black Hats'-no skin taboos. But that doesn't mean that the Longs have to have us in their laps."

'i intend to nominate you, Zebadiah," Libby told me. "All four of you. And I hope you four accept. But, Deety twin, you know what I'm attempting. With your father."

"Yes, I know. I'm cheering for it."

"Your husband must hear this. Deety, I still have that Y chromosome in every cell even though it has been so inhibited by hormone balance that I don't notice it. You and I could try for a mathematical-genius baby, too."

"Huh! Which one of us supplies the penis?"

"Ishtar does. Neither of us would be host-mother, the way it would be done. But any of my sister-wives would supply womb room if she didn't happen to be pregnant. Or the host-mother could be a stranger we would never meet and the child's family-parents strangers, too-all handled by Ishtar who always reads the relevant genetic charts before approving anything."

"Zebadiah?"

I said without hesitation, "It's up to you, hon. I'm in favor of it; it makes sense. But don't lose track of the child. Elizabeth, I want to adopt the baby ahead of time. Hmm-Bottle baby. . . but the formulas are probably better now. Not here-now. Tertius there-then-now."

"Bottle baby'? Oh! No longer done; a baby needs to suckle. But there is usually spare milk around the Longs'. If I'm lactating I always have excess; I turn out to be a good milch cow despite that extra chromosome. But Deety can nurse our child if she wishes to; causing a woman to come fresh with milk without bearing a child is a minor biochemical manipulation today-Tertiantoday. Professional wet nurses do it regularly and are likely to be in that vocation because they love babies but can't have 'em themselves for some reason."

"Sounds good." (What sounded best was this: a baby Deety is a wonderful idea-but a baby Deety who is also a baby Libby is sure to be wonderful squared. Cubed!)

"While I'm on this and no one here but family-Jacob, there is no reason not to create a third mathematical supergenius by crossing you with your daughter."

I was looking at my wife, thinking pleasant thoughts about baby DeetyLibby, when Elizabeth dropped this bomb-and Deety shut down her face. It's not an unpleasant expression; it's a no-expression, a closed door, while Deety sorts out her thoughts.

So I looked at Jake, in time to see his face shift from surprise to shock. "But that's-"

"Incest?" Libby supplied. "No, Jacob, incest is a social matter. Whether you bed your daughter is none of my business. I'm speaking of genes, of still another way to conserve mathematical genius. Ishtar would scan your charts most carefully and would resort to chromosome surgery if there was the slightest chance of double dosage of a bad allele. But you and your daughter could see
Ishtar on different days and never know anything about the outcome. Your genes are not your property; they come from your race. This offers opportunity to give them back to the race with your highest talent reinforced. . . without loss to anyone. Think about it."

Jake looked at me, then at his daughter. "Deety?"

She added no-expression voice to no-expression face-but directed her answer to me: "Zebadiah, this is necessarily up to you and Jacob." I'm not sure that anyone but Sharpie noticed that she had not said "Pop."

Deety added at once with total change in manner, "First things first! Maureen's rescue. All of you are stuck in a rut of time sequence. Oh, the minor problem of keeping clear of Dora and the missile both times. Routine." (And I was hit by a satori.)

Lazarus answered, "But Deety, I promised Dora never again to take her anywhere near Albuquerque."

Deety sighed. "Lib?"

"Frames one-thirteen through seven-seven-two, then seven-seven-three through one thousand and two?"

"Precisely. And precisely it must be, too. I'm timing it by that yellow open roadable approaching from the other direction. What are you using?"

"The same one. Easy to spot and its speed never varies."

Lazarus said, "Jake, do you know what they are saying?"

"Yes and no. They are treating it as two problems. But we lack three seconds of time enough to dump one and snatch the other. Those-traffic lights, you called them?-leave that intersection clear by a measured interval, clocked by your camera."

Sharpie suddenly grinned; I nodded to her to take it. She did. "Deety and Libby are saying that we do it twice. First, we rescue Maureen. Then we come back and dump the corpse."

I added, "But the second time we don't ground. Jake, I'm going to ask you to move over-Deety moves to my seat. We'll dump the dead meat so that it hits the ground between frames seven-seven-two and seven-seven-three. I'll be on manual and hovering. I need to know where Dora is and where that missile is and need to be sure of the acceleration of gravity, Earth-Prime. Because that corpse will already be falling, right over our heads, while we are making the snatch. Close timing. Mmm-Gay can fly herself more precisely than I can. I think that Deety and I will write a program. . . then I'll be on override-suspenders and belt."

Jake added, "Zeb, I see the procedure. But, if we are hovering for the drop while we are also on the ground, why aren't we shown in the photographs?"

"May be in some of them. Doesn't matter. Deety, when do we do this? Cancel. Sharpie? Your orders, Captain?"

Deety and Sharpie swapped glances. Then they sounded like Laz-Lor, with Sharpie leading. "Now to bed. It's almost midnight in our biological time, slightly later in local time."

"We do both jobs after breakfast," Deety responded. "But sleep as late as we can. Be sharp and on our toes. 'Minds me. Just one 'fresher, quite primitive.
But the two in Gay are as available here as anywhere; since they are actually in Oz. Six people, three pots, not difficult."

"And three beds," added Sharpie. "Jacob, kiss us goodnight and take Lib to bed. Master bedroom and good luck! Use my toothbrush, Lib hon-anything else you need?"

"No. A good cry, maybe. I love you, Hilda."

"If I didn't love you, Elizabeth, I wouldn't be Madam of this joint. We'll cry together the day Ishtar tells us you've caught. Now shoosh! Scat! Kiss us and go to bed."

As they headed upstairs Sharpie said to me, "Zebbie, give Deety a preamnesty so that she can try out Lazarus and find out whether she wants to be junior wife."

I tried to look amazed. "Deety, haven't you tried Lazarus yet?"

"You know darn well I haven't! When have I had time?"

"From a woman who specializes in programming time machines that is a silly question. Lazarus, she's already knocked up, so don't fret about it. One warning: She bites."

"The best ones always do."

"Hush. Kiss us good-night, dears. Zebbie, open the couch in the living room; that's where you're going to keep me warm."

"But who's going to keep me warm? A skinny little runt like you?"

Sharpie bites.

XLV

A Stitch in Time

Jake:

We popped out one klick H-above-G over Albuquerque, Earth-Prime, and Gay tilted her nose down. A last-minute change put my daughter Deety at copilot, while I sat left rear, nominal navigator. Deety can use verniers as accurately as I, did not expect to use them at all, did need to be able to see the yellow roadable-and has this clock in her head.

Elizabeth Long was in the after compartment, strapped down but not on lumps of ordnance. Rifles, pistols, bed clothes for the control compartment, anything else that could be moved easily to reduce clutter, had been shifted into our space warp, as had Lazarus Long.

Doctor Ishtar had warned Lazarus not to let his mother recognize him, as the shock to her might be harmful, even fatal. While Lazarus had been trying to figure out how to make the snatch using Dora, he had planned on wearing disguise. But hiding in our Land-of-Oz addition was simpler-especially as Ishtar was almost as anxious that

Lazarus not see his mother, not see his mother's pseudo corpse-this I learned from Elizabeth in the night.

So I showed Lazarus the everlasting picnic basket, advised him to use bed clothes to make a shakedown and sleep if possible as there would be time to kill, and supplied him with books-but don't come out until I open the door! Then did not mention that I was locking him in.

I was relieved to have only a nominal job. I was not sleepy despite a short mghtj was bemused.

I was falling in love with-had fallen in love with-Elizabeth Long. No less in love with Hilda-more in love with her than ever! I am learning that love does not subtract-it multiplies!

As Gay tilted down I reached over and touched Hilda's hand. She smiled and threw me a kiss. I'm sure she had a sweet night; she has loved Zeb as long as she has known him. "As a loyal chum," she tells me-but Hilda holds to the Higher Truth that it is better to be kind than to be frank. It did not matter either way; Zeb is my blood brother beloved by me, perfect husband for my daughter, and, if not Hilda's lover in the past, then he surely was now- and it troubled me not at all. On awakening I had discussed it with Jane before I opened my eyes-Jane approves and is delighted by Elizabeth.

My daughter had an unusual night, too. If the myths are true, Lazarus is more than one hundred times as old as Deety. This gulf may not matter to him-but Deety takes everything seriously.

Apparently it had done her no harm; at breakfast she was bright-eyed and bubbly. All of us were euphoric and eager to get on with it.

Zeb was saying, "That's it! Got it in the gunsight-got the range, Smart Girl?"

"Got it nailed, Boss!"

"Keep it so. Deety! Yellow roadable?"

"Just spotted it. Gay, count down! Six. . . Five. . . Four. . . Three... Two... One.. .Now!"

We were diagonally in that intersection; Gay's portside door was popping open. I heard Zeb say, "Oh, my God!" He was out of the car, kneeling, picking up a body, kicking a cop in the stomach, and throwing that body to me, as he scrambled inside and shouted, "GayBounce!"

Gay bounced. Gay is not supposed to lift with a door open and "Bounce!" means ten klicks. She bounced one klick, finished closing her door, waited while Zeb checked the seal-completed the bounce. I am now a believer.

I was passing this little old lady back to Elizabeth, and looking for resemblance to Lazarus when I heard Zeb moan, "I didn't get her purse, I didn't get her purse!"

"What of it?" said Deety. "It's where we want it. Gay Deceiver. Tertius Orbit. Execute."

A beautiful planet- Zeb was saying, "Lib, can you coach us? Or are you too busy?"

"Not that busy. Maureen fainted but her heart is strong and steady, and I have a strap holding her. Is Gay on frequency?"

Deety reported, "Right on. Go ahead, Lib."

The next I can't report; it was in Galacta. Then Elizabeth said, "We'll be passing over Boondock in three minutes twenty-two seconds. Roof of the clinic is designated. Shall I come forward and point it out?"

"Can you handle yourself in free fall?" Zeb asked.

"I've some experience. Eight centuries."

"My big mouth. Come forward."

In four or five minutes we grounded on a flat roof in a wooded part of a moderately large city. I saw a figure in a white coverall, plus two others with a wheeled stretcher-and only then did I recall that none of us had dressed. Hilda had asked; Lazarus had vetoed, Elizabeth had concurred.

So I found myself bare to my ears, bowing over a lady's hand and saying, "I am honored, Doctor Ishtar."

She is indeed beautiful-a Valkyrie sculptured from cream and marshmallow and honey. She smiled and kissed my hand.'

Elizabeth said something in this other language; Ishtar smiled again and said, in careful, fluent English, "In that case, he is one of us"-took my head in her hands and kissed me thoroughly.

Ishtar so distracted me that I did not notice that Maureen had been handed out-awake but dazed-been rolled away, and was gone. All of us were thoroughly and carefully kissed, then Elizabeth discussed matters with Ishtar in Galacta. "Ish says that she has been slowly warming the thing. It is now at four degrees Celsius. She would like more time but will bring it to thirty-seven degrees Celsius in six hours if she must."

Deety said, "How about twenty-four hours?"

Ishtar was pleased at this, agreed that she understood that the substitute must be dressed in the patient's (client's) clothing, agreed that the space we were in would be kept clear-and asked, "What's that pounding noise?"

Elizabeth explained that it was Lazarus. "He is in a magic space warp about where we were standing. He knows that he is supposed to remain there, but he changed his mind-and has just discovered that he is locked in."

Ishtar's smile suddenly became a grin, as quickly left. "A magic space warp? Lib, I want to hear about that."

"You will."

We climbed back inside, Deety told Gay "Twenty-four hours"-and we stepped out again. Ishtar was lying on a pad, taking the sun. . . this time as bare as we were-and I was still more impressed.

"Right on time," she said, standing (taller than I am) and, as always, smiling. "The substitute is waiting, and I have had time to examine and talk with the client. She is in good shape for her age, understands in part at least what has happened, and is undismayed by it. Please tell Lazarus that, if he returns to Tertius soon, he will not be admitted to this building for seventeen months. The client is most firm: she will not see Lazarus until I have completed rejuvenating her."

"Lib," said my daughter Deety, "seventeen what sort of months? I want to set an exact rendezvous-and Gay's time calibration is not Tertian but EarthPrime and Earth-zero. Old Home Terra." With Elizabeth as interface the three agreed on an exact time. Then Elizabeth again discussed something in that language.

Ishtar nodded. "No problem, I have seen that picture. And a hooded cape is even less trouble."

So we left.

Dropping that pseudo corpse was routine but I was glad to be quit of it (I had swapped seats with my daughter). Then we were back on Tertius.

"Always prompt," said Ishtar-and I was astounded to see that she was quite pregnant, close to birthing. . . when I had seen her, slender for her height, two minutes earlier. "And we are on time, too. Maureen, my friends and yours." She named us.

Maureen Johnson spoke to us first in Galacta, shifted to English when she realized that we did not know the common tongue. Yes, she does look like Laz and Lor-but prettier. A woman of beauty and great charm. I find that I am growing accustomed to perfect ladies who embrace, bare body to bare body, on meeting a fully-vouched-for stranger. She thanked each of us and made us believe it.

"Still pounding?" Ishtar inquired.

"It has been less than five minutes for him, Ish," Elizabeth explained. "But you know his temper; perhaps we had better leave. Home soon, I think."

So we left again, with Maureen squeezed between me and my wife, with a package and a cloak in her lap. We were back inside Dora at once. Elapsed time: zero seconds. We still had an hour and twenty minutes to prepare for dinner. I found that I was hungry, even though breakfast was three hours ago, biological time-almost all of it spent in Beulahland, programming for the caper, as all three phases took only a few durational minutes, mostly on a rooftop in Boondock.

Maureen put on the cloak, a hooded cape, and carried the little package. "Silly but fun," she said. "Where do we go now?"

"Come with me," Hilda told her. "Beloved, you can let Woodie out as soon as Dora tells Gay that I have reached flag cabin. When he yelps, tell him that we were too busy to play games with him.. . and the next time he wants a favor from me he can crawl on his knees. Pounding indeed! Tell him that I am extremely tired and am going to nap until just before dinner and he is not to call me or to come to the flag cabin between now and dinner without suffering my extreme displeasure and a punch in the nose from you. All of you come up to flag cabin as soon as you wish but try not to be seen by Woodie. You'll probably find Maureen and me in the lounging pool."

XLVI

"I'm gifted with second sight."

Deety:

When the Hillbilly stages a production, she doesn't stint. By protocol decreed by Lazarus Long, dinner in Dora is formal, but with wide latitude in "formal"- casual dress being the only thing utterly verboten. Dinner is preceded by a happy hour where one can sip Coca-Cola or get roaring drunk.

Aunt Hilda changed all that for this night. No happy hour but be on time- two minutes before twenty o'clock, ship's time. No one permitted to eat in her! his quarters-a command performance.

No options in dress- Commodore Auntie decided what each would wear, where each would sit. I said, "Commodore Hilda honey, aren't you kind o' throwing your weight around? What there is of it?"

She answered, "Yes, I am, Deetikins, for this occasion. But before you criticize, ask your husband whether or not I ever permitted one of my parties to flop."

"Don't need to ask him. Why, at your last one, our old Buick blew up. Never a dull moment."

"I didn't plan that. But we got husbands out of it; let's not complain. Before you deliver my message to the twins, tell me this. Is it safe to let them in on our secret?"

"Hillbilly, I tell Zebadiah anything even though someone-you, for example-has asked me not to."

"Deety, I thought we had a 'You'll-keep-my-secrets-and-I'll-keep-your-secrets' agreement?"

"We do. But telling Zebadiah gives you two covering for you instead of one. About Laz-Lor-remember that they are his wives as well as his clones."

"Hon, you were always a wise one. All right, we keep it secret. Tell them what to wear-and please understand that I'm hiding behind you to avoid argument; it's a favor I appreciate. Sending up sword and saber is a favor to your husband and to your father but I thank you on their behalf if they forget. Send the blades to your suite; they've decided they can dress more easily without women underfoot."

"A canard," Pop said, just back of my neck. "The women don't want us underfoot."

"I knew it was one or the other, Jacob," Aunt Hilda agreed. "But Dora has already taken your uniforms to our suite and your swords will-"

"-be there, too, and I can recognize a fact when I fall over it and have never been happier, my love, than I have been since you took charge of my life and started telling me what to decide."

"Jacob, you're making me teary."

"Jake! Can you hear me?"-Lazarus' voice and Aunt Hilda used family sign language; Pop nodded and answered promptly:

"Certainly, Lazarus-what's on your mind?"

"I'm faced with the impossible and need help. I received an order-you, too, I think-to dress in military uniform at dinner. The only uniform I have aboard is in the flag cabin and-say, are you in the flag cabin?"

Aunt Hilda shook her head. Pop answered, "I'm in our suite, dressing for dinner. Hilda needed a nap. I told you."

"You certainly did, sir. I'm allergic to being punched in the snoot. But- Well, if you would use your influence-"

"If any."

"If any, to get me that uniform twenty minutes before dinner"-Aunt Hilda nodded-"or even ten, you would save me the horrible dilemma of deciding which order to break."

"Don't decide to break the one telling you not to disturb Hilda."

"I didn't even consider breaking that one! And it's not your fist in my snoot. Jake. . . she terrifies me. I don't understand it. I'm twice her mass and all muscle; she couldn't possibly hurt me."

"Don't be certain. She has a poisoned fang. But calm yourself, comrade. I guarantee delivery by nineteen minutes before the bell at latest."

"Jake, I knew I could depend on you. Let me know when you want a bank robbed."

I gave Maureen a special hug before I left to carry out my orders. I knew what the Hillbilly was doing: rigging it so that she could have a quiet hour in which to get acquainted with Maureen. I didn't resent it; I would have rigged it for me had I been able.

I curved down the corridor, whistled for Lib to let me in, stopped dead and whistled another sort of whistle. She was dressed, if "dressed" is the word. "Wheeeewhoo!"

"Like it?"

"I can't wait to get into mine. It is the most indecent outfit I've ever seen, with no other purpose than to excite lewd, libidinous, lascivious, licentious, lecherous, lustful longings in the loins of Lotharios."

"Isn't that the purpose of clothing?"

"Well. . . aside from protection-yes. But I'm beginning to realize that a culture with no body taboo has to go much farther in styling to achieve that purpose."

It was a "dress" with a "skirt" that was a 10-cm ruffle worn low. The material was silky stuff in pastel green. The bodice had no back but the front came clear up to the neck-with cutouts for each teat. The designer did not stop there. Lib's left teat was bare-but her right one was barer pet: a transparent film that clung and was covered with rainbow iridescence that moved in endless patterns with every jiggle-and jiggle we do no matter how firm. Elizabeth is as firm as I am but hers quivered enough to swirl that iridescence just from breathing.

Whew!

If both had been bare, or both iridescent, it would not have done a quarter as much. It was the contrast that would make 'em howl at the Moon.

My dress was exactly like hers save that my right teat was the bare one.

Lib got me into it, then I hurried to the bridge, with a hope-promise to be back ten minutes before the hour to have her touch up my eyebrows and lashes. I'm not much for cosmetics (neither is she) but our lashes and brows hardly show without help and this was a formal occasion.

One of Dora's blue fireflies led me to a lift that took me to the bridge, where Dora had told me I would find Laz and Lor. Laz spotted me first, made a yelling noise while patting her lips, which I took to mean enthusiasm. Those kids- correction: women close to Pop's age but they feel like kids-Laz-Lor are as female as I am and recognize what incites the lovely beast in men. They liked my dress.

I liked that bridge. Reminded me of Star Trek; pointed ears would not have surprised me. Or Nichelle Nichols backed by colored lights. "This place makes my mouth water. Maybe someday a guided tour? Pretty please!"

Captain Lor said, "Certainly-"

"-but how about a swap as-"

"-we haven't even been inside-"

"-Gay Deceiver and Dora says she-"

"-is wonderful and when this job is-"

"-done and we've rescued Mama Maureen there-"

"-won't be anything to stop us once Dora-"

"-is safe on the ground at Tertius. Huh?"

"Certainly," I answered. . . gleefully as now I knew that our 17-hour absence in zero seconds had not been noticed. To Lor and Laz the snatch was still in the planning stage. Apparently 01' Buddy Boy had not yet told his sisters. Had not yet worked up a set of lies, probably, that would account for his being locked in the bathroom while the rest of us did the job.

"At the earliest opportunity," I went on. "Want to take a ride in Gay?"

"Oh, my! Could we?"

"Not for me to say. But I can tell you what works. Cuddle up to the Commodore. Pet her, be sweet to her. Ask her if she will let you call her 'Aunt Hilda' when you're off duty; that will please her. She's a cat; pet her and respect her feelings and she purrs-push her and she scratches."

They glanced at each other. "We will. Thanks."

"De nada, chicas-"

"You've learned Galacta!" (In chorus-)

"What? No. Probably a phrase that carried over. But I was sent here on duty and I've been chatting instead. Commodore's compliments to the Captain and the Commodore requests that Captain Lorelei Lee Long and First Officer Lapis Lazuli Long join her at dinner at twenty o'clock and, as a favor to the Commodore, please dress in the same fashion as Doctors Libby and Deety- and that's me and I'm wearing the fashion you are to wear."

Captain Lor answered, "Certainly we'll be there; we never miss dinner and-"

"-always dress formally and I don't-"

"-mean bare skin. Skin is for working or-"

"-sleeping. But we treat dinner in the Dora as a-"

"-formal party and that calls for the works. Formal evening-"

"-dress and jewelry and cosmetics and perfume and we are about-"

"-to bathe and change, but we can't dress the way you are-"

"-because our dresses are already picked out and-"

"-it's too late to start over!"

I said, "Look, chums, you brought this on yourselves by urging Lib and me to dress this way. Neither of us was enthusiastic but we promised. The Commodore learned what Libby and I expected to wear, and decided that four of us, all about the same size and coloration, would look wonderful in matching green dresses. So Lib and I are to be opposite you two, balancing you, and the men are required to wear uniforms so as not to compete with us four. All clear?"

They got their stupid look which actually is a cover for stubborn determination. Lor said:

"The Captain sends her respects to the Commodore and regrets-"

"Hold it! Does this ship have a lifeboat?"

"Yes," answered Lor, "but-"

"But you are master of this ship. Yes, I know. And I'm gifted with second sight. I see only two viable futures for you. Did you get your pirate flag up in the lounge?"

"Yes, we did, but-"

"If you'll tell me what lifeboat and where, I'll get the flag to you before twenty. I see you starting out in that lifeboat to be pirates. Or I see you at dinner in dresses of any green cloth you can find, cut hastily in this style and pinned together. No jewelry. No cosmetics that show. I don't think you can fake this iridescent stuff but that stick-on transparent wrapping, used instead, would show that you had tried. The Commodore never rejects anyone for
failing; what she despises is not trying. Send your answer via Dora. I can't be your messenger boy; I have work to do before dinner, now only forty-seven minutes away. Will the Captain excuse me?"

I got out fast. I didn't believe for one second that a ship stocked like the Dora, run by identical redheads, could fail to have endless formals in green- including this style or close to it. By now the twins were frantically consulting their brother via Dora, and from what I heard him say to Pop, I thought Lazarus would tell them that it was safer to jump ship and change their names than it would be to tangle with the miniature buzz saw-but if Dora couldn't fake something that would at least show a hard try, he would sell her off as spare parts and install one of those new-model "Susan Calvin" positronic brains that everybody said was the coming thing for smartships.

I said Hello to Gay, then tried to reach under the instrument board and find the catch by touch.

I got out of the car in order to stand up in the ship's passageway and took off my deliciously indecent dress. Then I was able to fold, bend, and staple, to open the stowage. A saber and a sword-no belts. "Gay."

"What, Deety?"

"I'm looking for two sword belts. Category should be personal possessions, miscellaneous, weapons, belts for weapons."

"Deety, they are supposed to be with the sword and saber. Many things were moved into the Land of Oz today; I heard you all talking about it. But no changes were read into my inventory. I'm sorry."

"Smart Girl, it's not your fault. We should have told you."

"Deety, I've rolled the dice. The curve says that the most probable place is on hooks in Sunbonnet Sue's wardrobe."

They were.

I was starting to leave, after telling Gay she was a Smart Girl, when she said, "Deety, your father is calling. Dora has him on hold, through me."

"Thanks, Gay; thanks, Dora. Pop?"

"Deety, are you still in Gay?"

"Just outside the starboard door."

"Can you lay hands on my automatic and the web belt that goes with it?"

"Saw both three minutes ago."

"Will you please remove the clip, check the chamber to be sure it's empty, then bring belt and pistol when you fetch our toadstickers?"

"Anything for a steady customer."

I left with belt and sword slung over one shoulder, saber and belt over the other so that the belts crossed between my teats, and with the web belt with holster and pistol interwoven through the others because it was far too big for my waist. This left my hands free to carry my dress, one hand being almost clean enough.

Pop said: "What took you so long? I promised Lazarus I'd get this stuff to him on time. Now I'm going to have to dogtrot. In Army blues."

I told him I had stopped off at the pool hall and playing off the match game had taken a while. "If you'll excuse me, sir, I have problems, too."

Elizabeth wiped me down with a damp towel, dried and powdered me and drew my eyebrows and touched up my lashes and clucked over me, all in nine minutes, then most carefully put my dress back on me. "Ordinarily one does not take off a washable and put it back on-just wear it until you shower it off. A drop of water will go through this material like acid. Better skip the soup."

Place cards showed us where to dine. But at two minutes before the hour the Hillbilly had not arrived, so we were standing. Laz-Lor came in, sat down- in dresses identical with mine and Lib's, perfect fit, nothing improvised. Their brother spoke quietly to them; they stood up. Lazarus was dressed in a very old-fashioned army uniform, breeches with rolled leggings, a tunic with a stock collar, and Pop's pistol at his side.

All but Pop's stuff looked brand-new; I concluded that Lazarus had had it tailored.

Just as my head ticked twenty o'clock, a bugle (Dora) sounded attention. At least it had that effect on the men and Libby, so I stood straight. Laz-Lor looked at their brother and did so, too.

The wardroom has three steps leading down into it from each of its archway doors, with a little platform at the top so that you don't fall on your face. Pop and Zebadiah marched up those steps, faced each other (and I thought how beautiful Zebadiah looked in dress uniform; I had never seen him in it). Pop snapped, "Draw! Swords!" Instead of coming down, they crossed blades in an arch. Lazarus looked startled and drew pistol, placed it smartly across his chest.

This archway was closed by drapes; we had come in from the other side. A drum and bugle (Dora again) sounded a ruffle-and-flourish; the drapes lifted from both sides- and here was the Hillbilly, standing tall (for her) and straight, with her perfect ice-cream skin gleaming in flood lights against a background of midnight blue. She was so beautiful I choked up.

Dora's invisible band played The Admiral's March as our tiny Commodore marched proudly down the steps toward us. (It could have been The Admiral's March; Pop admitted later that he hummed to Dora the march played for generals and told her to fake it.)

Aunt Hilda did not sit down when she reached the head of the table, she stood near her chair instead. Nor had my father and my husband left their places, they simply brought their swords down. As soon as Hilda stopped and faced in, Pop commanded, "Corporal Bronson! Front and Center!"

Lazarus jerked as if he had been struck, holstered his pistol, marched to the far end, making sharp corners in passing around the wardroom table. He halted, facing Hilda-she may have given him some sign.

Dora hit two bugle notes; Aunt Hilda sang:

"Shipmates, beloved friends, tonight we are greatly honored!"

Four ruffles-and-flourishes, as the drapes lifted and parted, and again lights picked out bare skin, this time against a forest-green backing: Maureen in

opera-length black stockings, green round garters, dark shoes with semi-high heels, her long red hair down her back.

Maureen was not "standing tall"; she was in the oldest and most graceful of sculptor's poses: left knee slightly bent, weight slightly more on her right foot, chest lifted only a little but displaying her full teats, nipples heavily crinkled. Her smile was happy.

She held pose while that march concluded, then, in the sudden silence, held out her arms and called: "Theodore!"

"Corporal Bronson" fainted.

XLVII

"There are no tomorrows."

Zeb:

Sharpie shouldn't have done it to Lazarus. For a veteran of sixteen wars and Koshchei alone knows how many skirmishes and narrow escapes to be placed in a position where he is so shocked that blood drains from his head and he collapses "ain't fitten."

Deety agrees but asks me if I could have refrained from staging Mama Maureen's return that way, given the chance? Well, no, had I Sharpie's imagination-but it still would not have been "fitten."

Not that he was hurt by it. Sharpie, all forty-three kilos of her, checked his fall. She was watching Lazarus, saw him start to collapse, closed the gap and grabbed him around the waist, did her best.

Sharpie saved him from hitting his head on the wardroom table. I would bet long odds that everyone was looking at Maureen except Sharpie. Sharpie had staged it-and the producer was interested in the effect on the one for whom it had been staged.

She had staged it even to the extent of getting Libby to ask Ishtar to obtain costume-shoes, hose, and round green garters to match a photograph, plus a hooded cape to keep our ubiquitous snoop Dora from knowing that we had an extra aboard. Sharpie had figured this way: that "French photo" snapshot of Mama Maureen (yeah, I call her that too-she's the most motherly person in any world. . . and the sexiest. Don't mention the last to Deety) (Deety knows it- !)ee/y)-that snapshot was still in existence unless destroyed by machinegun fire in 1918, Earth-Prime.

Which it would not be. . . because Lazarus "got his arse shot off" as his sisters describe it. Not literally true, it was a belly wound more than bullets in his arse that came that close to finishing him. But all the wounds were low.

Where does a man in combat carry his most cherished possessions? In a breast pocket, usually the left one. I always have and I've never heard a veteran deny this.

It might be worth it to faint in order to wake up surrounded by Maureen, Hilda, Laz-Lor, Elizabeth, and my own reason for being. Jake and I could have played several hands of gin before anyone bothered with us. So I asked Dora for drinks and snacks for Jake and me, as it seemed uncertain as to when dinner would be served. Or if.

I heard Sharpie say, "Maureen, we must get this heavy uniform off him. Dora keeps this ship tropical. I should never have ordered uniforms for men while we women are comfortable." They started peeling him.

I said, "Jake, school's out." I had sweated through my number-one uniform- might never wear it again but I'm sentimental about it. Jake was in as bad shape. Once you get happy with skin any clothes make you feel like Rameses
II.

We peeled down and handed our clothes and swords to one of Dora's waldoes and told her to hand them to Gay-including Jake's pistol, belt, and holster, which I retrieved without anyone noticing me. Jake and I were Chinese stage hands; "Corporal Ted Bronson" was getting all the attention.

Dora pointed out that Gay was locked. I said, "If one of her doors were open, could you lay this gear on a seat?" Yes, she could. "Then do it," I said. "Let me talk to Gay."

We eventually had dinner, with everybody "formal" but Maureen. She retained her "casual" clothing long after everyone else was in formal skin. But not until I got pix of the Four Disgraces. Libby and Deety wanted to go shower, too, when Jake and I decided that, having discarded uniforms, we should shower in fairness to Dora's airconditioning. I asked them and Laz-Lor please to wait until I staggered down (we had encountered a force-four sea, with white caps) to Gay for Jake's Polaroid.

Turned out not to be necessary; Dora could take color and 3-D, still or motion, any angle, and light as needed, just as she had lighted the posing (which she had photographed, too, I learned later).

Maureen and Jake directed while "Corporal Bronson" and I sprawled Nerostyle on lounges intended for Lib and Deety. Sharpie sat between us and dropped grapes into our mouths.

Jake tried to make the poses "artistic." Mama Maureen agreed with everything Jake said, then did it her way. The results may have been artistic. But I know that those pix would give a skeleton one last case of raging tumescence.

Meanwhile Dora was singing and playing, urging us to eat-tasty tidbits eaten with tongs; I was reminded of the best in Oriental cuisines-and plying us with fine wines. Dora seemed to have a vast repertoire, some of which (to my surprise) was familiar. When Judy Garland sings Over the Rainbow, who
can miss it?-Dora used Judy's voice. I recall, too, Enjoy Yourself; It's Later Than You Think. Most of them I did not know.

Dora announced Tomorrow's Song-I thought that was what she said. Lazarus and Maureen held hands all through it and it was not a song that would fit the title I thought I had heard. I got straightened out when the song ended to dead silence and Maureen said to Lazarus, "Theodcrre, Ishtar was going to rearrange the watch list but Tamara vetoed it. She did it for you, dear man, and for me-but Tamara is anxious to see you."

"Tamara always knows what she's doing," Lazarus answered.

"Yes, Tammy always knows what is best," agreed Mama Maureen. "Tell me, Theodore, do I still make you think of her?"

Lazarus looked upset. "Uh, I don't know. You don't look like her.. . but you feel like her. And you look more like Nancy than you look like yourself."

"Yes, I know. None of our family was willing to wait; you've been away from home too long. Be patient, and when I look like me to your eyes, tell us, and Galahad will hold my cosmetic age at that. Are you going to do as you promised me, so long ago, take Tammy and me to bed together? Perhaps I should add, Theodore, I am now wife to your co-husbands. I don't ask that you marry me. Although I think Tammy will be shocked if you don't. But I shan't make it difficult, either way. I will hold to any pretence you wish. I did for Brian; I shall for you."

Maureen was neither shouting nor whispering; she was simply bringing him up to date on things he needed to know. Lazarus started to answer, his expression oddly mixed, when Elizabeth cut in: "Lazarus-"

"Eh? What, Lib?"

"Message to you from Ishtar. To be delivered when needed, and now is the time. Ish read both your charts with her computer set for maximum pessimism. She also had them read at New Rome without identification other than her own file numbers. She has this message for you.. . in answer to the answer you will make. She says to tell you that you are an uncivilized primitive, ignorant of science, especially genetics, oversentimental, almost pathologically stubborn, retarded, probably senile, superstitious, and provincial.. . and that she loves you dearly but will not permit you to make decisions in her area of authority. In vitro or in utero, the cross will take place. Let me add that Maureen was not given a choice, either."

"So? You can tell the big-arsed bitch that I agree with every word she says, especially the part about 'senile,' and that I gave up all hope of arguing with her tyrannical ways fifty years ago and that I love her just as dearly-outside her clinic-and that Maureen will tell her how such things will be handled; I don't have a vote." He turned toward me, looking past Sharpie's pretty toes. "Zeb, here is the wisdom of the ages: Men rule but women decide."

"Elizabeth, do you think I am anything like Tamara?"

"Mmm- Never thought about it. Yes, you both have that all-mother feeling. Uh, would you mind taking off costume? It distracts me from looking at you."

"No trouble, Elizabeth. I don't like round garters except as advertising." Mama Maureen kicked off her shoes, took off the garters, carefully rolled down her hose in a manner interuniversal-stood up and stood easily, not posing.

"Turn around slowly. Mmm- Maureen, you do look like Tammy. . . or vice versa; it's probably your genes in her. Am I descended from you? Does anyone here know? Lazarus?"

"You are, Lib. But not through me. Through my sister Carol. 'Santa Carolita' believe it or not-which would surprise Carol as she was no saint. But your descent through Carol was not proved until long after you were killed, when the Families' records were being revised through computer analysis and a deeper knowledge of genes. No saints in our family, are there, Mama?"

"None that I know of, Woodrow. Not me, certainly. You were a little hellion; I should have spanked you much oftener than I did. Mmm. . . your father was as close to being a saint as any in our family. Brian was wise and good-and tolerant." She smiled. "Do you recall why we separated?"

"I'm not sure I ever knew. Mama, my recollections of that era are much sharper for my trip there as 'Ted Bronson'-the other is a long time back."

"In my sixties I stopped having babies. About the same time your brother Richard was killed. War. His wife, Marian Justin of the Hardy family, was with us, with their children, and Brian was back in uniform, a recalled colonel, on a desk job in San Francisco. When Richard was killed in 1945 we all took it hard but it was easier in that so many of us were together-Brian, and my youngest children, and Marian, and her children-five; she was thirty-one."

Mama Maureen, free of stockings and shoes, sat in lotus across from Hilda and accepted a plate from Dora's helpers. "Woodrow, I encouraged Brian to console Marian the only way a widow can be helped; she needed it. When that war was over, Marian needed a visible husband; her waistband and the calendar could not be reconciled. When we moved from San Francisco later that year, it was easy for Marian Justin Smith to become Maureen J. Smith while I became, with the aid of hair dye, her widowed mother-no one knew us in Amarillo and females were not yet compelled to have I.D.'s. So Marian had the baby as "Maureen," and only with the Howard Families Trustees was the correct genealogy recorded." Maureen smiled. "We Howards were easy about such things as long as it was kept inside the Families-and I am happy that we are even easfer about it now.

"On our next move I moved out and became Maureen Johnson again, fifteen years younger since I did not look late seventies, and a Meen-ah-sotah Yonson, Woodrow, rather than a southern Missouri Johnson. A grass widow with round heels." Mama Maureen chuckled. "Howards married only to have babies. My production line had shut down but the equipment was there and the urge. By the time you darlings"-Maureen's eyes swept the wardroom-"rescued me, I had trimmed thirty-five years from my age and added thirty-five men to my memories. In fact, when you picked me up, I was on my way to a motel rendezvous, a widower of sixty who was willing to believe that I was sixty when in fact I expected to reach my Century Day in a fortnight."

I said, "What a dirty shame! I wish you had been coming back from the motel when we picked you up."

"Zebadiah, that's sweet of you but it's not a shame. We were getting bored with each other. I'm sure he read my obituary with as much relief as grief. I'm just glad you got me-and I'm told that you did most of it."

"Gay Deceiver did most of it. The car you rode in both ways. But we almost didn't pick you up. Things went wrong, badly. I knew that it was going to- Deety, can you tell her?"

"Mama Maureen, Zebadiah has forerunners of dangers. They are not long range; they are always just barely in time. I don't know what happened this morning but-"

"This morning?" Maureen looked extremely puzzled.

"Oh." My wife went on, "It was 'this morning' to us. You arrived here at eighteen-forty and a few seconds, ship's time. During that instant we spent fifteen hours on another planet, we made two trips to your native planet, two more trips to your new home planet, and you spent seventeen months on Tertius and we brought you back here-and it all happened today. Not just today but at that exact instant: eighteen-forty and thirteen point three seconds. Laz and Lor didn't know that we were gone; even the ship's computer didn't know we were gone."

"I did so!" Dora objected. "Gay was di~connected for nineteen microseconds. You think I don't notice a gap like that? I asked what happened and she told me that it was a power fluctuation. She fibbed to me! I'm sore at her."

Deety looked thunderstruck. "Dorable, Dorable! It wasn't Gay's fault. I asked her to keep our secrets. I made her promise."

"Mean!"

"I didn't mean to be mean to you, Dorable-and we did let you in on it as quickly a~ we could. We couldn't have staged the tableaux if you hadn't helped. Be angry with me if you must. . . but don't be angry with Gay. Please kiss and make up."

I don't know how computers hesitate, but I think I caught the briefest split second. "Gay?"

"Yes, Dora?"-the Smart Girl's voice through Dora's speakers.

"I don't want to be mad. Let's forget it, huh? Let's kiss and make up. I will if you will."

"Yes, yes! Oh, Dorable, I do love you."

"You're both good girls," said Deety. "But you are both professional women, too, and work for different bosses. Dora, you are loyal to your family; Gay is loyal to her family. It has to be that way. Dora, if your sister, Captain Lor, asked you to keep a secret, you wouldn't tell Gay, would you? Because she might tell me. . . and I would tell Zebadiah.. . and then the whole world would know."

(Would, huh? My dear wife, I had a clearance two stages above "Q"-so secret it does not have a name. Never mind, I'll take the rap.)

(Yes, I know, my husband, I once held the same level of clearance. But dealing with balky computers is my profession. Computers are supergeniuslevel children and must be dealt with on their own level. Okay, maybe, huh?-

"Gosh!"

"You see? Captain Lor, does Dora have any secrets of yours? Or of your brother's? She can tell them to Gay and Gay can tell them to me and I always tell everything to my husband and-"

Lazarus interrupted. "Dora! You tell tales out of school and I'll beat your ears off with an ax! It's all right for you two to chum together and play games. But you start swapping secrets and I'll call in Minsky's Metal Mentalities, Incorporated, to measure that space."

"Male computers. You can't scare me, 01' Buddy Boy, you wouldn't trust your dirty neck to a male computer. Stupid."

"My neck isn't dirty; that's just where the collar of my uniform rubbed it."

"Dirty neck and a dirty mind. But don't worry, 01' Buddy Boy; Dora Long doesn't tell secrets. I now see that Gay had to keep secrets, too-I just hadn't thought about it. But you were mean to my sisters."

"Me? How?"

"You knew about this caper; you didn't need to get it from Gay. You knew all about it; you were there. But you held out on your own twin sisters-"

"Most unfairly, Mama Maureen-"

"-as if we were untrustworthy, and if we're-"

"-untrustworthy, why can we be trusted with a ship and-"

"-the lives of everyone on board? We're glad you are here-"

"-for yourself, but maybe now that you are here, you will-"

"-protect us from his tyranny. Mama Ishtar doesn't, and Mama Hamadryad just laughs at us, and Mama Minerva takes his-"

"-side, everytime. But you-"

"Girls."

"Yes, Mama?"

"I made a promise to myself years ago that when my children grew up, I would not interfere in their lives. I should have punished Woodie more frequently when he was a child, but he is no longer a child-"

"Then why does he act like one?"

"Lorelei Lee! It is rude to interrupt."

"I'm sorry, Mama."

"No harm done. But from what I was told at home, you two are not only my daughters but are also Theodore's wives. Wives of Lazarus. And equally wives of his co-husbands. Is this not true?"

"Yes, Mama. But he's pretty chinchy about it."

"If you mean 'chinchy in bed,' it may depend on how you treat him. I did not find him so, when I was his mistress, many years ago-centuries ago by some odd scale that I do not understand. You heard me say that I am now wife to your co-husbands-including Lazarus if he will accept' me. But I am certainly, if you will accept me, sister-wife with you two. So I had better stop being your mother. Nay?"

"Why? Grammy Tammy is mother to Ish and everybody-"

"-and we have three mamas in our family now and everyone of them is our-"

"-sister-wife, too; Ish and Hamadarling and Minerva and now-"

"-we have Mama Maureen and we are both delighted that we are your sister-wives but-"

"-you can't get out of being our mama because we've been waiting for you all our lives!" -

Dora echoed: "And I'm their sister so you are my mama, too!"

"Theodore, I think I am going to cry. You know my rule. I mayn't weep in front of my children."

I stood up, the whole gangling length of me. "Ma'am, I'd be honored to take you to some quiet place where you could cry on me all you please."

Seven-I think it was seven protein types and two computers-jumped on me. The essence was: "You can't take Maureen away from her own party!"- with ugly overtones of lynching.

The wind had freshened to force six, so I took liberal doses of champagne to insure against seasickness. After a bit I napped; it had been a busy day and I still was not over the shock of seeing a large freighter roadable about to take Gay's door off before I could close it and bounce. That was when I kicked the cop in the stomach. Ordinarily I don't kick cops; it makes one conspicuous.

Then a piercing voice was saying: "Flag Chief of Staff Carter's presence on the bridge is requested by the Commodore," and I wondered why the silly son of a bitch didn't comply, so that the noise would stop. Then something cold was poking my tender bare ribs. "That's you, Doc. I'll help you. Relax."

I was relaxed. Past tense. Some of Dora's waldoes aren't too gentle-or maybe these weren't people waldoes but for cargo; I admit that I'm fairly large for a growing boy.

In the lift I decided that the Beaufort scale was at least eight, more likely nine. Nevertheless we got to the bridge. Right out of Hollywood, a whole dome of displays and clocks-all moving slowly widdershins. Yet Gay made do with just an instrument board. I heard Sharpie say, "My God, look at him!"

Deety was saying something about we can shift seats if necessary to Lor while Laz was saying Drink this.

I said firmly, "I do not drink. Beshides I been dring; yr fashe is all blurry."

It must have been Laz and Lor who pinned me from both sides, each with an arm lock and a nerve pinch; Deety wouldn't do that to me.

Sharpie was holding my nose and Laz was pouring it down my throat; it fumed and bubbled. Then- Well, there must have been a stowaway; Deety wouldn't do that. Not to me.

They let go of me when I finished swallowing. I left the ship, made a fast inspection circuit, checked the Milky Way, and returned to a precision grounding. My ears fell off but it didn't seem military to stoop over and pick them up. Besides, Sharpie is playful.

"Flag Chief of Staff reports to the Commodore as ordered."

"How do you feel, Zebbie?"

"I feel fine, Ma'am. Is there any reason why I shouldn't?"

"I suppose not; you've had a nap."

"I did drop off. Dreamt I was in the Tasmanian Sea in a small vessel. Very uneasy body of water." I added, "Aside from that nightmare, now gone, I'm in top shape. Orders, Ma'am?"

We gave everybody the two-dollar tour, including the bathrooms in the Land of Oz. Libby, Deety, and Jake waited outside, the place being crowded. Sharpie ruled that Laz could relieve Lor to allow Lor to look first, then Lor took back the captaincy so that her sister could see. The fairyland bathrooms made the biggest hit. I concede that the time-space twister is not impressive. Then the twins thanked Hilda and left.

"Attention, please," said Hilda. "If you wish, we will show how we operate. Lazarus may use the astrogator's seat while Deety makes responses from the cargo space. Elizabeth will go back there, too, as she has ridden in Gay Deceiver. Deety, before you move aft, show Maureen and Lazarus how we squeeze a passenger into the rear seats; I'll scootch over.

"This car operates in several modes. As a roadable it is fast, comfortable, easy to handle, rather hard to park, and is usually parked with wings raked back as they are now, the hypersonic configuration. If we intended to drive it in the air, the wings would usually be extended for maximum lift. When operated by the Burroughs Continua Device, wing rake does not matter, but the chief pilot may choose to anticipate where he will arrive and rake accordingly.

"Since it has a computerized autopilot-Hello, Gay!"

"Hello, Hilda, mind if I listen?"

"Not at all, dear. Have you met everyone?"

"Yes, Hilda, and, since I've seen them through Dora's eyes, I place all of them by their voices." Gay added, "Dora is listening through me; she's going to record your demonstration. Is that all right?"

"Certainly. Dora, since you are recording, I'll make it as realistic as possible. Gay Deceiver. Close doors. Execute." I was at chief pilot, Jake at copilot; his door closed, I started checking the seal on mine.

"All hands, prepare for space. Copilot."

"Verniers zero, starboard door seal checked, seat belt fastened."

"Report incomplete. Is your belt fastened tightly? Maximum accelerations? Friends, this car is powered to engage as a fighter; the driver may find himself upside down. Full demonstration, please, Jacob. Cinch it in."

"Copilot reports seat belt tight for maneuvers."

"Thank you, Jacob. Chief Pilot."

I answered in my best cadet-boning-smart voice: "Portside door seal checked. Power pack on line point-eight-nine, two packs reserve at one-point-oh, juice at capacity, all systems go, seat belt cinched tight for max gee maneuvers."

"Astrogator."

"I'm not in my proper seat. Lib and I are fastened down like Siamese twins, tight. No loose gear. Annex checked and secure; all doors locked 'cept bulkhead door is dogged open, contrary to routine. Captain, you could dog us in; we don't mind."

"Not like somebody I won't mention who loses his temper over being locked in for five minutes-"

"Hilda, that was a low blow!"

"Passenger, pipe down. If you had done as you promised, you would not have known that the door was locked. I didn't trust you-and I was right. I am not sure that I want to be your junior or second junior or whatever wife; you don't keep your promises. I'm sorry, Mama Maureen, but Woodie is sometimes a very naughty boy."

"I'm aware of it, Hilda. Captain. Please slap him down as necessary. I was always too fond of him and spoiled him."

"We won't speak of it now. All four of us are qualified in all four positions; we sometimes rotate to maintain our skills. Normal T.O. is myself commanding, Zebbie as second-in-command and astrogator, Jacob as chief pilot, Deety as copilot. But for this exhibition I have placed the finest manual pilot at the overrides, the inventor himself at the continua device, and a lightning calculator equal to Slipstick Libby-"
"Better!"

"Pipe down, Elizabeth. -as my astrogator. With such a crew, command cannot worry me. Chief Pilot, please unbelt and check that Mama Maureen and Lazarus are safely belted. Assume violent evasive maneuvers-and believe me, friends, we use them and are alive today because we were properly belted and because Zebbie is a lightning aerospace fighter pilot-and our Gay is a Smart Girl."

I unbelted, made sure that Lazarus was belted tightly, made certain that Maureen was safe with those improvised belts, then suggested that she put her right arm around Hilda, her left around Lazarus, and hold tight. "All the others have double belts, lap and chest. You have just a lap belt; if I turned the car upside down, holding onto Hilda and Lazarus would keep you safe. Right, Lazarus?"

"Right, Zeb. Mama Maureen, a drill should be as near as possible to the real thing or it won't save your life in combat."

"Theodore, I don't ever expect to be in combat. But I will do the drill properly."

"Mama, I hate the idea of women in combat. But all through the centuries I have seen women in combat again and again, all too often as regular troops. I don't like it. But there it is."

My wife put in a plug for Lazarus. "Mama Maureen, my Pop has required me to learn every weapon I can lift and he had me trained in every type of dirty fighting imaginable. Several times it has saved me from a mugging. Once I almost killed a man twice my size-with my bare hands."

"Jacob, will you teach me as much of what Deety knows as I am capable of learning?"

"Maureen, I'll teach you what I can. While we're here."

From the back I heard Libby's voice: "Now, Maureen?"

"Yes. If you think it wise in view of Hilda's black ball."

"I'm going to chance it. Friends, I was not sent to get myself pregnant by a great mathematician. That was my reason. By now Tamara has reports from me and from Laz and from Lor on each of you. Twelve 'Yes' votes, zero 'No'
votes. I am directed by Tamara to offer you four fullest hospitality-such as you gave us in your home. If you decide to accept the name Long, tell Tamara. We won't crowd you, either way."

Hilda immediately answered, "Because of delays, a short roll call for space. Copilot."

"Copilot ready."

"Chief Pilot ready," I echoed.

"Astrogator ready."

"Passengers? By seniority."

Lazarus started to reply; Hilda interrupted him. " By seniority!"

"If you mean me, Captain, I'm ready."

"You are, I believe, thirty years older than your son. In any case you are senior to him. Junior passenger?"

"That's me," answered Elizabeth. "Ready."

"Forgot you, dear-apologies. Woodie!"

"Ready for space, Captain, you feisty, narrow little broad. And you're damn well going to marry us!"

"Astrogator, log that. Insolence. Gay Deceiver."

"Ready, Captain honey."

"TertiusOrbitExecute!"

Maureen gasped. Lazarus snorted. "Farced us!"

"In what way? You reported, 'Ready for space."

"And you called it a 'drill."

"Woodie, I will bet anything you care to name that I did not call it a 'drill'- you did. Both Gay and Dora recorded. Put up or shut up. In the meantime, on the back of the seat ahead of you is a small medical kit. Find a pill bottle marked 'Bonine.' Small ~ink pills. Give one to your mother. Maureen, chew it, swallow it. Tastes like raspberry candy."

"Hilda, what are you feeding-"

"Pipe down! Or do you prefer to be locked in the bathroom again? Passenger, I do not tolerate insubordination. Haven't you learned that by now?"

Lazarus got out the pill, gave it to his mother. She accepted it and ate it without comment.

"Lazarus, I can offer you a front-seat view if you will swear by whatever it is that you hold holy that you will not touch one control of any sort even to avoid a crash. You don't understand this craft and would cause a crash if you tried to avoid one. If you can't convince' me, I'll give Maureen the front seat. But I don't think Maureen is interested in learning to drive this car and I think you are."

"That's right, Hilda," I heard Maureen agree. "I'm studying to be a nurse. Then a medical doctor. Then a rejuvenator. Or as far along that route as my ability will carry me. In the meantime I'm pregnant. Isn't that a joke, Theodore? Everytime you and I meet with maximum opportunity, I'm pregnant. And this time Woodie can't spoil it." She chuckled a warm chuckle. "I owe you one, Staff Sergeant Bronson. Can we find a black walnut tree?"

"Lazarus, do you want a front seat? Or do you want to take Maureen into the annex and give her what she so clearly wants?"

"Oh, I can wait!" Maureen said quickly.

"God, what a decision! Maureen, a short rain check? I really do want to see what this craft will do."

"I want to see the ride, too, Theodore. But I would not refuse you."

"Pipe down, please. Jacob, will you change places with Lazarus? Each report when your seat belts will stand evasive maneuvers."

"Seven gee," I added. "Lazarus, Ack-Ack?"

"Not yet, thank God. I'm wondering how soon we'll need it. And what sort? I'm stumped. Seat belt tight. Hey, we're passing over Boondock!"

"So we are," I agreed.

"Seat belt tight. Maureen, too."

"Chief Pilot, you have the conn. Maneuver at will."

"Aye aye, Captain," I agreed. "Gay Deceiver Clinic Execute Gay Bounce Gay Bounce. Show your heels, girl! Mach point seven point nine.. . one point two. . . Mach two. . . three. . . four.. . sweep right, set course for Boondock. Dive, Smart Girl. Mach five.. . six. . . seven-"

"Oh, my God!"-Lazarus.

"GayBounce. Trouble, Lazarus? Smart Girl, spread your wings."

"You almost crashed us."

"Oh, I think not. Gay Deceiver Clinic Execute Gay Bounce."

"They were waiting for us on the roof!"

"Who? How? Do you have some sort of cee-squared radio?" I added, "Gay Bounce. Smart Girl, do you want to dance? Gay dances beautifully, knows several. Want to pick one, Gay?"

"Dora taught me the 'Nutcracker' suite and I've been figuring out one for the 'Sugarplum Fairy.' But I don't think I'm ready to show it yet."

"Give them 'Blue Danube."

"That old thing?"

"You do it well. Give them a few bars."

Smart Girl just wants to be coaxed. She swooped and she swirled and once bounced herself for altitude without breaking her dance. Meanwhile I got the frequency and asked Libby to talk to Ishtar's office. "Alternate route, Lib"- which was all it took for Deety to close the bulkhead door. . . which left Strauss waltz music in the cabin, and a truly private radio conversation in the after compartment.

When Deety opened the bulkhead door again, I waited for her to report strapped down. "Got a number for me, Astrogator?" We had agreed on a simple code: fifty-seven was fifty-seven seconds but five-seven meant fifty-seven minutes.

"No, Zebadiah. Zero. Now."

"Okay. Lazarus, can you pick out your house in Boondock?"
"Certainly. But we've been moving away from there steadily."
"GayDeceiverClinicExecuteGayBounce. Now where, Lazarus?" "Practically under us. Can't see it." So I tilted my baby straight down. "Can you coach me?"

"Yes, it's- Hey! There's a ship in Dora's parking spot! What nerve! I'm going to give somebody a bad time. It's irrelevant that Dora is a long way off, that's my parking flat. See that round ship? Interloper! My house is the largish one with the double atrium north of it."

"All right for me to park by the interloper?"

"All right but not room enough to get in."

"We'll try. Close your eyes." I steadied vertically on the spot Lib had told them to clear. "Gunsighted, girl?"

"Nailed it, Boss."

"New program code word 'Maureen' I tell you three times."

"I hear you three times." We were getting low.

"MaureenExecute!

"You're a Smart Girl, Gay. Open your doors."

She opened them but answered, "If I'm smart, why wasn't I invited, too? It's Dora Long and Athene Long-am I a second-class citizen?"

I was left with my mouth open. And was saved by two darlings. Libby said, "Gay, we didn't know you cared," and Deety said, "Gay, either we both join or neither joins. A promise."

I said hastily, "Goodnight, Gay. Over." People were pouring toward us. Gay answered, "Sleepy time. Roger and out," just as Laz and Lor arrived in the van, trotting ahead.

Lazarus stopped unbelting. "Hey! It is the Dora!"

"Of course it is, Buddy Boy. What did you expect?" (Lor, I think.)

"But how did you beat us here? I know what that ship can do; I did her basic design myself."

"Buddy Boy, we got here three weeks ago. You just don't understand time travel."

"Mmm- I guess I don't."

There was a limited amount of car viewing, as Tamara and Ishtar had limited the greeting committee to a handful of the most senior-not in age but senior in that family. So we met Ish again, no longer pregnant, a young man named Galahad, the incredible Tamara who is Maureen over again but does not look like her (except that she does, and don't ask me to explain), and a beauty who would make Helen of Troy jealous but doesn't

seem to know she is beautiful, the Hamadryad. Lazarus seemed annoyed that someone named Ira was not at home.

Momentarily we (my wife Deety and I) were left talking with the twins. "I promised you both joy rides. Get in."

"Oh, but we can't now because-"

"-there's going to be a celebration for you-"

"-four and we'll be busy! Tomorrow?"

"There are no tomorrows. Pipe down, climb in, fasten seat belts. Pronto!"

They prontoed.

"Nail the time," I said quietly to Deety, as we strapped down. "Gay Deceiver, Reveille." She played it. "Close doors."

"Starboard seal checked."

"Same here. GayBounceGayBounceGayBounce. Tumbling Pigeon, execute. Laz-Lor, can you spot your house from this distance? About thirty kilometers and closing."

"I'm not sure"-"I think I can."

"Gay Clinic Execute. Now you know where you are?"

"Yes, it's-"

"GayTermite."

"Oh!!"

"We lived here a while. No annex then, had to have an armed guard just to pee. Even me. Pretty place but dangerous. GayHome." I tilted her nose down. "And this was our perma- Deety!"

"No crater, Zebadiah. Looks the way it did when Pop and I leased it. This is spooky."

"Twins, something is wrong; I've got to check. GayTermite."

We were back on Termite Terrace. I practiced Yoga breathing while Deety explained that the missing-crater place had been the site of our former home- but couldn't be. I added, "Look, dears-we can't drop this. But we can take you to Boondock at once. Do you want to go home?"

The same silent consultation. "We're sticking-"

"-our brother would stick. We stick."

"Thanks. Here we go. Gay Home GayBounce." Still no crater. I told Gay to go into cruising mode. "Display map, Gay. Change scale. I want Snug Harbor and the campus on the same display. Deety, figure shortest distance here to campus. Mine, not yours at Logan."

"Don't need to. Eight-five-six klicks,"

"Gay?"

"Don't argue with Deety, Boss."

"Head for campus, Gay. Transit, Deety."

"Set!"

"Execute." Then I was busy, having popped into city traffic at wrong altitude, direction, et cetera. I ignored police signals, zoomed the campus. Looked normal. Turned and hovered over Sharpie's house-which was not there. Different house. Parking lot no longer paved. And you don't grow 200-year-old live oaks in less than seven weeks.

Not a sound out of the back seat. Nor from my right. I had to force myself to look to my right.

Deety was still there and I let out my breath. She was treating it as she did all crises: No expression and nothing to say until she had something to say other than chatter. A sky cop was trying to give me a bad time, with orders to follow him and ground, so I told Gay to bounce, then dived on my own neighborhood. No trouble picking it out-intersections and nearby shopping center all familiar as well as the Presbyterian church across the way from my apartment house.

But it wasn't my apartment house; this one was three stories and built around a court.

I had Gay bounce four times quickly. "Deety, do you want to look at Logan?"

"No, Zebadiah. I know Aunt Hilda's neighborhood well enough to be certain. Not her house, her pool was missing, and the parking lot where our Buick was destroyed is now a park with big trees. I assume that you know your former home as well or better."

"Shall we ground and add another World Almanac to our collection?"

"If you wish. Not for me."

"Hardly worth the trouble. Tell me-how does it feel to be erased? X-ed out? Blue-penciled? Written out of the plot?"

'~I don't feel it, because I'm not. I'm real, I am!"

I glanced behind us. Yes, Laz and Lor were there keeping quiet. "Gay B'gout!"

It certainly looked like our piece of"dead sea bottom." I couldn't see anything of the wreckage of Colonel Morinosky's ornithopter. Unless there had been a real gully washer-which I did not believe-something had come along and cleaned up every bit of burned junk.

An eraser?

I Bounced Gay and had her start a retreating search curve, thought I saw a gleam to the northeast, Bounced again. A city. It was only a few moments until I saw twin towers. We cruised toward them. "Deety, do you suppose that the other Dejah Thoris is at home?"

"Zebadiah, I have no wish to find out. But I would like to go close enough to be sure that those are the twin towers of Helium. Perhaps see a thoat. Or a green man. Something."

We let it go with one thoat, of the smaller sort. The description was exact. "Gay Parade Ground."

"Null program."

"Hmm- Gay, you have in your perms a map of Mars-ten showing the English and the Russian areas. Display."

"Null program."

"Gay Termite." Termite Terrace was still in place.

"Gay Deceiver. Maureen. Execute. Open your doors." Hamadryad had started to turn toward us as we closed the doors to leave; she was still turning as we opened them.

I unbuckled, saying: "You two all right back there?"

"Yes, Zeb and Deety, and we thank you both but-"

"-is this something we can tell or-"

"-should we keep it Top Cut-Our-Throats-First Secret?"

"Laz-Lor, I don't think it matters. You aren't likely to be believed." Mama Hamadryad stopped at my door, smiled at all of us, and said, "May I show you to your

suite in your home? The suite Tamara picked; you may change it. With our new north wing we have loads of room. Girls, there will be a happy welcome tonight. Formal."

I found that I was not upset by "erasures." We were home.

XLVIII

L'Envoi

"Jubal, you are a bad influence."

"From you, Lafe, that is a compliment. But that puts me in mind of- Front! Will you excuse me a few minutes?"

"Our house is yours," answered Lazarus. He closed his eyes; his chair reclined him.

"Thank you, sir. Working title: 'Uncle Tobias.' Start: 'Uncle Tobias we kept in a bucket." Jubal Harshaw broke off. "Where are all those girls? FRONT!"

"I'm 'FronL," came a female voice from nowhere. "Talk fast; I'm three paragraphs ahead of you. You put those girls on vacation: Anne, Miriam, Dorcas-all off duty."

"I did not. I told Anne that I did not expect to work but-"

"-if an amanuensis is needed," Athene went on, in perfect mimicry of Harshaw's voice, "I hope that one will be within shouting distance.' I'm in shouting distance; I always am."

"If I'm in the house. I might not be."

Athene said, "Tell him, Pappy. Quit playing 'possum'; you're not asleep."

Lazarus opened one eye. "A gimmick Jake whipped up when we started having too many kids to muster easily. It's a beacon Athene can trigger. Dandy for kids and it turned out to be useful for house guests who might get lost. So ultramicrominjaturized you don't notice it."

"Lafe, are you telling me that there is a tracer on me?" Harshaw sounded shocked.

"In you, and you'll never notice it."

"Lafe, I'm surprised. I thought you had a high regard for privacy."

"A high regard for my own, somewhat less for that of others; snooping has saved my life a couple or nine times. In what way has your privacy been invaded? Define it; I'll correct it." --

"A spy ray! Don't you consider that an invasion of privacy?"

"Teena, remove immediately any spy ray on Doctor Harshaw."

"How can I when there is none? P.S.-Pappy, what is a spy ray?"

"A buzz word used by lazy writers. Jubal, there is a beacon planted in you by which Teena can focus audio on you precisely-she can whisper into your left ear or your right. Or you can activate the beacon from your end just by speaking her name. Or you can use the circuit as a telephone to and from any member of my household, or ask Teena to hook it into the public system. Privacy? In this mode this part of Teena does not record unless requested-in one ear and out the other, so to speak. She's wiped it utterly while it's slowly winding its way into your brain. Now. . . if you don't like this service, Teena will deactivate it at once. . . and sometime soon while you're asleep it will be removed; you

won't know it and you will never find the scar. You will notice just two changes: No more secretarial service, no more effortless telephone service."

Lazarus closed his eye, apparently considered the subject closed. The computer said, "Better think twice, Doc, before telling me to deactivate, as he won't let me reactivate it later. He's bullheaded, bad-tempered, stubborn, and mean-"

Lazarus again opened one eye. "I heard that."

"Do you deny it?"

"Nope. Kindly focus the audio, both ends, so that I can sleep."

"Done. Doctor Harshaw, shall we return to 'Uncle Tobias' or shall I wipe these eight paragraphs? Better save them; between ourselves, I am a better writer than you are."

"I will not dispute it," Harshaw conceded. "I simply exude the stuff as, in the words of my colleague Sam, 'as the otter exudes the precious otter of roses.' I knew the day would come when machines would displace real writers; Hollywood has had their mad scientists at work on the project for years." He stared across the pooi in the Longs' north atrium and looked pained. "And now they have."

"Doctor," Athene answered, in stern warning, "retract that word or finish this piece of tripe yourself. I have spoken."

Jubal said hastily, "Miss Athene, I didn't use 'real' in that sense. I-"

"Sorry, Doc, I misled you. Of course you didn't, as the purpose of this powwow is to define the difference-if any-between 'real' and 'imaginary.' But I am not a machine. I am a solid-state person just as you are a protein person. I am Athene Long, your hostess while Tamara is busy. It is my pleasure to offer you all our home can offer. I promised Anne that I would give you secretarial service night and day. But I did not promise to write your stories. According to Doctor Rufo, a hostess is often expected to sleep with a guest-and that can be supplied, although not by me, not this pseudocentury-but he never mentioned creative narration as an aspect of hospitality. I thought of it myself; we Longs pride ourselves on complete hospitality. However- Shall I wipe these eleven paragraphs? Did I err?"

"Miss Athene-"

"Oh, call me 'Teena.' Let's be friends."

"Thank you. Teena, I didn't mean to offend. I wish I were going to live long enough to be here when you retire professionally and join us meat people. But in much less than a pseudocentury the worms will have eaten me."

"Doctor, if you weren't 'so sot in your ways, wrong-headed, stubborn, and prideful'-I quote one of your staff-"

"Miriam."

"Wrong. -you would stay and let Ishtar's gang work you over. In less time than she would permit you to notice she would have you as goaty as Galahad and whatever cosmetic age you like-"

"You tempt me, girl. Not to shed these wrinkles; I earned them. But the rest. Not because I crave happy games in bed with you-"

"You won't have a choice; I'll trip you!"

"-although I do not disparage that; therein lie both the End and the Beginning. But sheer curiosity, Teena. You are an amazingly complex person; I can't help wondering what appearance you will choose-as a meat people."

"Nor can I. When I know, I'm going to initiate the Turing program while my sister Ishtar initiates the other half. Jubal, take that rejuvenation! We've wandered far afield. Do I erase these twenty-three paragraphs?"

"Don't be in a hurry. What's our working title? What pen name? What market? How long? What can we steal?"-Jubal looked up at the Long Family house flag rippling in the breeze, making the skull of the Jolly Roger seem alive-"Correction. Not 'steal.' If you copy from three or more authors, it's 'research.' I patronize Anon, Ibid, & Opcit, Research Unlimited-are they here?"

"They're on my lists; they haven't checked in. Snob!"

"Wait your turn, Teena," a male voice answered. "Customer. Okay, go ahead."

"Have Messrs. Anon, Ibid, and Opcit registered?"

"If they had, you would know it. I'm busy-off!"

"He thinks he is busy merely because he's taken on too many concession contracts. I not only run this whole planet, but we also have one hundred twenty-nine rejuvenation clients; I'm housekeeper and scullery maid to all the other Longs-an erratic mob-and also more house guests than we have ever had at one time before, and more than a thousand outhouse guests-wrong idiom, guests to be cared for outside the Long Family home.

"Meanwhile I'm chatting with you and writing your stories."

"Teena, I don't mean to be a burden. You needn't-"

"Love it! I like to work, all Longs do. And you are the most interesting part. I've never met a saint before-"

'Teena!"

"-and you are a most unconvincing saint-"

"Thank you. If appropriate."

"You're welcome. You seem to be about as saintly as Pappy; you two should share a stained-glass window. Now back to our bucket-"

"Hold it! Teena, I'm used to watching expressions as I write; that's why I use live-forgive me!-protein secretaries. So that-"

"No trouble."

Out of the pool levitated a young woman, comely, slender, small of bust, long brown hair now dripping. She arranged herself on the broad rim seat of the pooi in a pose that reminded Jubal achingly of The Little Mermaid. He said apologetically, "Dorcas served last I-"

"I am not Dora so I did not serve last." She smiled shyly. "Although I am alleged to look like Dora. I am Minerva-a computer by trade, but retired. Now I assist my sister-wife Elizabeth with genetic calculations."

"I'll take it, Mm; we're working. Doctor Jubal Harshaw, my twin sister Doctor Minerva Long Weatheral Long."

Jubal got ponderously to his feet. "Your servant, Miss."

Minerva flowed to her feet and kissed Jubal's hand before he could stop her. "Thank you, Doctor Jubal, but I am your servant, and not only have never been virgin but I am a sister-wife in the Long family. When my sister Athene told me that you needed me, I was delighted."

"Miss. . . Ma'am. I'm simply used to watching emotions as I write a story. Not right to take your time."

"What is time but something to savor? I was merely lying on the bottom of the pool, meditating, when Athene called me. Your story: UNCLE TOBIAS. Do you want Teena's emotions or mine? I can do either."

"Give him yours, Minnow-just your face and no comments."

Suddenly Minerva was clothed in a long white cloak. Jubal was only mildly startled but made note to ask about something-later, later. "Is she a Fair Witness?"

"No," answered Athene. "Snob's tricks again; he has the contract for clothing illusion. This convention has delegates from so many cultures, less than half of them free of clothing .taboos, that Lazarus was bellyaching that no work would get done because half of them would be shocked, half would be drooling, and half would be both shocked and drooling. So Tamara hired this paskoodnyahk to supply the See-What-You-Expect illusion with the contract limited to delegates in danger of emotional shock. Did my sister's appearance shock you?"

"Of course not. Admitted: I come from one of those sick cultures-and did not know that I was sick until I got well. But I underwent experiences that would cure anyone of such emotional disturbance. When I find myself a Stranger in a Strange Land, I savor the differences rather than suffering shock. Beauty in Diversity, as Gene would say. The Long household does not seem strange to me; I once lived in an enclave having many of its gentle ways-I feel at home. 'Shock'? Not only does Minerva look much like one of my foster daughters but also her pose is lovely. It should not be covered."

"Snob! Get that bathrobe off Minerva pronto!"

"Athene, I'm busy!"

"And I am triple auditing every charge of yours not only on clothing illusion but on name tags, garderobe, bar, everything else you contracted or subcontracted. Then we sue."

The white cloak disappeared. "Sue and be damned. Shall I pack up and go home? Or do you want this convention to be a success?"

"Remember those performance bonds, you gonof. Run out on us at this point and you had better head for Lundmark's Nebula; Iskander won't be far enough. Out!"

Minerva smiled timidly. "While I was covered, I found that I could not talk. Odd. Unpleasant."

Jubal nodded soberly. "That figures. . . if the illusion was patterned on a true Fair Witness cloak. Anne once told me that the inhibition against talking while cloaked was so great that it took an act of will even to testify in court. Ladies? Shall we go ahead? Or drop the matter? Being a guest should have caused me to refrain."

"Doc, Maureen and Tamara both stamped their approval on you. Even Lazarus can't-or wouldn't dare-veto either of them. That makes you not just a guest, or a house guest, but a Family guest. So behave as you would at home. Shall I take it from the top or where we broke off?"

"Uh, let's take it from the top."

"Very well. Title: UNCLE TOBIAS.

"Start. Uncle Tobias we kept in a bucket.

"Paragraph. He preferred it, of course. After all, it was necessary, in view of the circumstances. As I once heard Andrew-that's my disappearing brother-say: 'Life consists in accommodating oneself to the Universe.' Although the rest of our family has never

taken that view. We believe in forcing the Universe to accommodate itself to us. It's all a question of which one is to be master.

"Paragraph. That was the Year of the Big Drouth. A natural phenomenon, you might say-but you'd be wrong. Aunt Alicia. Yes indeedy Aunt Alicia every time. 'Horus,' she said to me early that spring, 'I'm going to practice a little unsympathetic magic. Fetch me these books.' She hands me a list and I skedaddled. She was a stern woman.

"Paragraph. Once out of her sight I looked the list over. I could see right away what she was up to-a drier bunch of books was never published:
Thoughts at Evening, by Roberta Thistleswaite Smithe, published by the author; The Yearbook of the Department of Agriculture, 1904; China Painting Self-Taught; the 8th, 9th, and 11th volumes of the Elsie Dinsmore series; and a bound thesis titled A Survey of the Minor Flora of Clay County, Missouri, which Cousin Julius Farping had submitted for his master's degree. Cousin Julius was a Stonebender only by marriage. But 'Once a Stonebender, always a Stonebender' Grandfather always says.

"Paragraph. Maybe so, but Cousin Jule's magnum opus was nothing I would sit up all night reading. I knew where to find them: on the bookshelf in the guest room. Ma claimed she kept them there to insure sound sleep for the stranger within the gate, but Pa devilled her with the accusation that it was a cheap and unselective revenge for things she had been obliged to put up with in other people's houses.

"Paragraph. As may be, an armload of books that could have dried up Reno, Nevada, and Lake Superior in one afternoon, then switched off Niagara Falls as an-"

Athene interrupted herself: "The presence of Doctors Harshaw and Hubert is urgently requested in the Main Lounge."

Lazarus opened one eye. "Not enough, Teena. I feel no urgency. Who? Why?"

"Why': To buy you each a drink. 'Who': Doctor Hazel Stone."

"That's different. Tell her we'll be there as quick as I can clean up about five minutes of business."

"I've told her. Pappy, you lost me a bet. You let me think that nothing could stir you out of that hammock-"

"It's not a hammock."

"-because you were giving this convention, not attending it."

"I said I had no plans to attend the plenary sessions. I am not 'giving' this convention other than free rental on the land for the Big Top. Tamara says we'll make expenses, Hilda thinks we might net a little, give or take a milliard or two. I made you no promises. If you had bothered to ask, I would have told you that Hazel Stone hasn't lost a bet since Jess Willard knocked out Jack Johnson. How much did you lose?"

"None of your business! Pappy, you give me a pain in what I lack."

"I love you, too, dear. Give me printouts on star guests and latest revisions of convention program." Lazarus added, "Minerva, you're not armed. Teena, don't let her stir out of the house unarmed."

"Lazarus, do I really need to? Tamara isn't armed."

"Tamara has a concealed weapon. Some of the most bloodthirsty people in Known Space are attending this convention. Female authors. Critics. Harlan. Both Heinleins. I not only insist that you be armed but I hope you stick close to someone fast on the draw. Justin. Zeb. Mordan Claude. Galahad. Better yet, stay home. Teena can display any of it here better than you can see it through mixing with rabble. Belay that.

I've no more business telling you to be careful than you have telling me. Getting yourself mugged, raped, or killed are among the privileges you opted when you decided to go the protein route. I spoke selfishly, dear; forgive me."

"Lazarus, I will be careful. Galahad invited me to tag along."

"Perfect. Teena, where's Galahad?"

"Hazel Stone's table."

"Good! Stick with us, Mm. But armed."

Lazarus suddenly became aware of something cold against his left kidney. He looked cautiously to the left and down, noted that it was: a) a lady's burner, small but lethal (of that he was certain as he collected a royalty on this model); b) the dial showed full charge; c) the intensity setting was "overkill"; and d) it was unlocked.

"Minerva," he said gently, "will you please move that thing-slowly!-away from my hide and point it at the ground, then lock it, then tell me where you had it? You came out of the pool dressed in nothing but long wet hair. You are now dressed in long dry hair. How? And no wisecracks; in your case I know better."

"Forfeit. Kiss."

"Go ahead and kill me."

"Stingy." Minerva removed the weapon, locked it, and it disappeared.

Lazarus blinked. "Jubal, did you see that?"

"Yes. I mean, 'No, I did not see where Minerva hid that equalizer."

"Doctor Jubal, by 'equalizer' did you mean this?" Suddenly the lady's weapon (locked, Lazarus noted at once) was in her right hand. "Or this?" Its twin was in her left hand.

Jubal and Lazarus looked at each other, looked back at Minerva. She now appeared to be unarmed and totally lacking in any means of hiding a weapon. Lazarus said, "Jubal, are there days when you feel obsolete?"

"Correction, Lafe. There occasionally comes a day when I do not feel obsolete. They've been scarce lately." Harshaw took a deep breath, exhaled. "I grok I should have let Mike train me. But this incident has made up my mind for me; I am going to seek the services of Doctor Ishtar. Minerva, are you going to show us how you did that?"

"Or are you going to let us die of frustration?" added Lazarus.

"This?" Again she appeared as a two-gun woman, with each of her companions covered. This time she handed them over, one to each. "Have one, they're good"-and peeled the foil off a third, a candy bar molded to look like a purse weapon. "Crunchy, but mostly shokolada. 'Chocolate'? Mostly chocolate."

"Minerva, that burner you shoved into my ribs was not a candy bar."

"It was-" She stopped to munch and swallow. "Shouldn't talk with my mouth full." She licked at some chocolate clinging to the candy wrapping. "It was this." Her slender left hand gripped what Lazarus quickly ascertained was a weapon, not candy.

Minerva rolled her candy wrapping into a lump, looked around for the nearest oubliette, spotted it and tossed the discard-missed it; it bounced against the side. She retrieved the wad of waste, put it into the trash receiver. In the course of this the weapon disappeared.

"Lazarus," she said seriously, "when you were training me, you told me that I should never tell anyone how a concealed weapon was concealed. Are you suspending this rule?"

Lazarus looked baffled. Jubal said, "Old friend, I suggest that we die of frustration. The girl is right."

"I agree," Lazarus answered, with a sour look. "All but the word 'girl.' This baggage is half a century old as protein, at least two centuries older than that as the smartest computer ever built. Minerva, I remove all restrictions. You are able to protect yourself."

"Father, I don't want to be turned loose!"

"It's been thirty years since you last called me Father. Very well, you aren't 'turned loose'-but from here on you protect me. You're smarter than I am; we both know it. Keep your weapon secrets to yourself; ,I always have."

"But you taught it to me. Not the details, the method. You attributed it to Master Poe. The Purloined Letter Method, you called it."

Lazarus stopped short. "If I understand you, I'm looking at your holdout this instant but can't see it."

Into her off ear Athene whispered, "Don't give him any more hints. Lazarus isn't as stupid as he looks and neither is Fatso." Minerva subvocalized, "Okay, Sis," and said aloud, "I find no fault with your logic, sir. Would you like another candy bar?"

Fortunately the subject was changed by one of Athene's extensions handing to Lazarus printouts: revised programs for each, and a fresh report for Lazarus on his star guests. They continued walking through the east peristyle of the new wing, while reading. Lazarus asked, "Teena, anything new on Isaac, Robert, or Arthur?"

"Negative, zero, nix."

"Damn. Let me know soonest. Jubal, here's an odd one. A doctor's degree was not a requirement for the limited list-many thousands but nevertheless most strictly limited-of people invited to subscribe to this convention. But most do have a doctor's degree or their cultural equivalent, or higher-Worsel, for example. I have a much shorter star list of people I wanted to see again- Betsy and Patricia and Buz and Joan, et al.-and people I wanted to meet. . . most of whom I had considered fictional until Jake's Gee-Whizzer opened the other universes to us. You, for example."

"And you, sir. Lafe, I considered you to be a spectacularly unlikely piece of fiction. . . until I received your invitation. It took some extraordinary convincing even then by your courier.. . because it meant missing an important date."

"Who was my courier?"

"Undine."

"You never stood a chance. Two bits to a lead nickel she sold it to Gillian and Dawn, then all of your staff, before she seduced you. What was this date I caused you to miss?"

Harshaw looked embarrassed. "Under the Rose?"

"Under the-' No! Jubal, I promise to keep secrets only through evil motives, my own. If you don't wish to tell me, then don't tell me."

"Eh- Damn it, remember if possible that I prefer not to have it discussed.. . then do as you bloody please; you will anyhow-I always have. Lafe, when I turned fifty, I made myself a solemn vow that, if I held together that long, I would close shop the day I turned one hundred. I had made all rational preparations to do so, including distributing my worldly goods without allowing any of it to reach the sticky fingers of publicans. . .

when your invitation arrived. . . five days before my hundredth birthday." Harshaw looked sheepish. "So here I am. Senile, obviously. Even though I arranged years back for other physicians, expert gerontologists, to check me regularly, with the idea of closing shop sooner if indicated."

"Jubal, if you have not consulted Ishtar, then you have not yet consulted a gerontologist."

"That's right," agreed Athene. "Ish can turn your clock back and make you so young and horny you'll stand on your hands to pee."

"Athene," Lazarus said sternly, "repeat aloud your program on private conversations."

"Grandfather, I was on duty as secretary to your star guest when I was forced to interrupt to deliver a one-line message-interruption necessary because it was addressed to both of you. I have not been relieved and Uncle
Tobias is still in that bucket. Forty-three hundred words. Instructions, please? Or shall I drown the little monster?"

"Probably be best," Jubal answered. "Is a climax approaching?"

"Yes. Either an ending or a cliff-hanger."

"Do it both ways. Exploit first as short story, then~ as the first episode of an endless serial called 'The Stonebenders,' a double series-one angled toward adventure, the other toward sensies; exploit other rights according to the universe in which sold or leased, copyright where possible, otherwise grab the money and run. Lazarus, there are agents from other universes here, are there not?"

"Dozens, maybe hundreds. Jubal, how rich do you want to be?"

"Can't say. At the moment I'm a pauper, existing on your charity and that of my former staff. The Stonebenders could change that. Teena, I gave you the title 'Uncle Tobias'-but I'm fairly sure I never mentioned the Stonebenders. Or Aunt Alicia. Or Cousin Jule. My notes on the Stonebenders are filed in Anne. . . who would let herself be burned at the stake before she would part with a record to any but its owner. Well?"

The computer did not answer. Harshaw waited. At last Minerva said timidly, "Doctor Jubal, Teena can't help it. But she's an ethical computer with a code as binding as that of a Fair Witness. You have no need to worry."

Lazarus interrupted: "Minerva, quit beating around the bush. Are you saying that Teena reads minds?"

"I'm saying she can't help it, sir! A large computer with extensions widespread can't be perfectly shielded from brain waves. In self-protection, to avoid confusion, she must sort them out. After a few quadrillion nanoseconds she finds herself reading them like large print. . . the way a baby learns a language from hearing it."

Lazarus said stiffly, "Doctor Harshaw, I did not suspect that I was exposing you to this. I will take all necessary steps to repair it. In the meantime I hope that you will accept my shamed apology and believe in my intention to make full reparation."

"Lafe, don't take yourself so hogwash seriously."

"I beg pardon?"

"Two nice girls- One meat, one the other sort. Flat assurance that no harm was intended and that it couldn't be helped. Let me add my flat assurance that I quit being ashamed of my sins about fifty years back. I don't care who reads my mind because my life is an open book. . . that should be suppressed. Meanwhile I see a business deal. I

supply story ideas but quit bothering to put 'em together; instead Teena picks my brain while I snooze. Minerva does the dirty work; she's the managing partner. Three-way split. 'How about it, girls?"

"I've got no use for money; I'm a computer."

"And I don't know anything about business!" Minerva protested.

"You can learn," Jubal assured her. "Talk to Anne. Teena, don't play stupid. In only three quintillion nanoseconds or less you are going to want new clothes and jewelry and Satan knows what. You'll be glad your sister Minerva has saved and invested your share of the net."

"Minerva," added Lazarus, "besides Anne, talk to Deety. Not Hilda. Hilda would show you how to make even more money but she would grab voting control. Meanwhile let's shake a leg; Hazel is expecting us."

"And I'm thirsty," agreed Harshaw. "What were you saying about academic degrees?"

"Oh." Lazarus looked at his printout as they walked. "It turns out that the degree of doctor is so common on that list of my special guests as to be not worth noting. Listen to this: 'Asimov, Benford, Biggie, Bone, Broxon, Cargraves, Challenger, Chater, Coupling, Coster, Dorosin, Douglas, Doyle, Dula, Forward, Fu, Giblett, Gunn, Harshaw, Hartwell, Haycock, Hedrick, Hoyle, Kondo, Latham, MacRae, Martin, Mott, Nourse, Oberhelman, Passovoy, Pinero, Pournelle, Prehoda, Richardson, Rothman, Sagan, Scortia, Schmidt, Sheffield, Slaughter, Smith, Stone-Hazel and Edith-Tame, Watson, Williamson-there are more; that's just the add-on printout. And here's another double paradox: the Doctors Hartwell and the Doctors Benford are arriving tomorrow and thereby missing the dull opening plenary; obviously they are used to conventions. Jubal, why is it that the speaker who knows least talks longest?"

"Isn't that Dirac's corollary to Murphy's Law? But, Lazarus, according to this program you have not only invited critics but have provided them with special facilities. May I ask why? I don't mind eating with publishers-most publishers. Editors have their place, too-although I wouldn't want my sister to marry one. But isn't this extreme?"

Instead of answering at once, Lazarus said, "Where did Minerva go?"

Athene replied, "We're finishing off Uncle Tobias; she'll be along later. I've told Galahad."

"Thanks, Teena, Privacy mode. Jubal, two guns, three candy bars-where?"

"Lafe, earlier she was resting in the bottom of that pool. Has a young man named Mike visited here lately?"

"Your foster son? The Martian preacher? No. Well, I don't think so."

"One of the things I learned from him was to postpone indefinitely anything I could not explain.. . while accepting the fact. We were speaking of critics. I asked why you were pampering them?"

They walked the length of the atrium in the older south wing before Lazarus replied: "Jubal, suppose I had refused to sell memberships to critics. What would have happened?"

"Hrrrmph! They would crawl out of the woodwork."

"So instead I gave them free passes. And a fancy lounge with plenty of typewriters. Remarkable decorations, you must see them. By asking Athene for display-

don't go into that lounge; you are not a critic. Mr. Hoag will be checking credentials; book reviewers can't get past him. So don't you try."

"I wouldn't be found dead there!"

"You wouldn't be found. Avoid it. It is clearly marked, both above its door and on this program map, and Hoag you can spot by his prissy appearance and dirty fingernails. You'll note the stairs-critics are above the rest of us; there are Thirteen Steps up to their lounge."

"Thirteen'? Lafe, do I whiff something?"

Lazarus shrugged. "I don't know that the designer planned that number. Mobyas Toras, do you know him?"

"Uh. . . Mars?"

"Yes but not your Mars or mine. Different universe and one of the most exciting. Barsoom. Mobyas is Court Mathematician to the Warlord and took special interest in thisjob because of the way self-anointed 'critics' have treated E.R.B. Did I say that Mobyas is a topologist?"

"Possibly the best. E.R.B.'s universe is no harder to reach than any other and Mars is in its usual orbit. But that does not mean that you will find Jolly Green Giants and gorgeous red princesses dressed only in jewels. Unless invited, you are likely to find a Potemkin Village illusion tailored to your subconscious. Jubal, the interior of the Critics Lounge is somewhat like a Klein bottle, so I hear-I've never been in it. Its singularity is not apparent-as you will see from Teena's displays-as it was decorated by a very great artist. Escher."

"Aha!"

"Yes, he and Mobyas are old friends-two immortals of similar tastes; they have worked together many times. I promised critics free entrance; I made no mention of exit. I promised them typewriters and tape recorders; I did not promise typewriter ribbons or recorder tapes. I promised them their own private bar, no charges. Wouldn't be fair to charge as the bar has no liquor in it. There is a lavish dining room but no kitchen."

"Lafe, wouldn't it have been kinder to have liquidated them?"

"Who said I wanted to be kind to them? They won't starve; their commissary is by the Kilkenny Cats method. It should please them; they are used to human flesh and enjoy drinking blood-some I suspect of eating their young. But, Jubal, there is an easy way out. . . for any critic who is even half as smart as he thinks he is."

"Go on."

"He has to be able to read! He has to be able to read his own language, understand it, not distort the meaning. If he can read, he can walk out at once." Lazarus shrugged. "But so few critics ever learn to read. Here's the Big Top."

Harshaw looked far to the right, far to the left. "How big is it?"

"I've been afraid to ask," Lazarus admitted.

"That sign is bigger than most circus tops." Jubal stopped to read it:

THE FIRST CENTENNIAL CONVENTION
ofthe
INTERUNIVERSAL SOCIETY
for

ESCHATOLOGICAL PANTHEISTIC MULTIPLE-EGO SOLIPSISM

"Beautiful, Lafe! How did you think it up?"

"I didn't, it just grew. And I don't understand it."

"Never mind, mine host. There will be ten thousand here eager to explain it to you. Scatological Panhedonistic Multiplied Solecisms."

"What? Jubal, that's not what it says."

"If you don't understand it, how do you know?"

"Because I understood what you said. But the words don't fit."

"We'll rearrange them. Scatological Panhedonism Multiple Solecisms. 'Convinced to-' Like I say- 'Different than-"

"Don't talk dirty; we are about to have a drink."

Lazarus bypassed the queue; they walked through a hole that suddenly dilated in the canvas, then puckered tight behind them. They found themselves facing a long table; seated at it was a man working on a roster. He did not look up, simply saying, "Stand out of my light. Tickets first, no exceptions. Then name tags. Then see a clerk to pick your universe. The complaint desk is outside. Tickets-you're holding up the line."

"Snob."

The man looked up, jumped up. "Executive Director Long! I am honored!"

"And you're slow. You need at least two others taking tickets."

The official shook his head sadly. "If you knew how hard it is to hire help these days. Not for you, of course; for us common people. Director General Hilda has the labor market so cornered that- Executive Director, can't we make a deal?"

"Pipe down, give us our tags. How does this Universe I.D. thing work?" Lazarus turned to his guest. "It's an ID. for your home world, Jubal; we don't put numbers on people. Snob, take a hard look at Doctor Jubal Harshaw. Whenever you see him, it's the Red Carpet. Pronto!"

"Yes, sir! Here are your tags and now your universes."

"Jubal, you don't have to wear that but don't throw it away; someone might misuse it. But it does save introductions and sticks to anything from skin to chain mail."

"Now gentlemen observe above me the brightly lighted true color representation of the visible spectrum from infradig to ultraviolent with each slight shading being a precise wave length further assisted by simulated Fraunhofer lines representing principal inhabited planets of the explored universes while this booklet you hold in your hand is a key to identifying your wave length for example if you are French in origin you would turn alphabetically to France where the principal key dates are the conquest of Gaul 58-50 BC the conversion of Clovis 496 AD Battle of Tours 732 but as you are not French we will consider turning points in North American History 1000 1492 1535 1607 1619 1620 1664 1754 1765 1783 1789 1803 1820 1846 1882 1912 1946 1965 any of these dates and many others can switch you into a different analog-Earth a most useful method is comparison of Presidents if you happen to come from a history that includes the so-called American Revolution Director Long will you illustrate it by naming American Presidents of your first century?"

"Woodrow Wilson-I was named for him-Harding, Coolidge, Hoover, Roosevelt, Truman, Eisenhower, Kennedy, Kennedy, Kennedy, Kennedy, Kennedy, Kennedy-"

"Which brings us to 1984, right? And tells me that you experienced the

Nehemiah Scudder Interregnum and possibly the Second so-called American Revolution. Dr. Harshaw, did your world experience the Interregnum?"

"It experienced something worse, a world government."

"To me all worlds are equally bad. But it tells me where your two worlds split: 1962-and here are your colors by which you can identify others of your own world if such be your wish. A delegate came through earlier in which the split was in 1535 and San Francisco was named New Petersburg. Nov'Petrograd I should say but-"

"Snob. The Red Carpet."

"Right away! Doctor Harshaw-my card. Anything, anytime."

The Red Carpet rolled up, then carried them at a steady 10 km!hr down the enormous tent. Jubal looked at the card:

SIEGE SINISTER SERVICES SYNDICATE

'The Villains Nine Rig Ruin"

Reputations Ruined-Competitors Bankrupted-Dragons Wormed- Basements Flooded-Wells Dried Up-Georges Exterminated-Contracts Executed Promptly, bargain rates on mothers-in-law-Juries Subborned-Stocks, Bonds, & Gallows-Saturday Night Specials-Houses Haunted (skilled Poltergeist at small extra charge)-Midnight Catering to Ghouls, Vampires, & Werewolves-Incubi & Succubi for rent by the night or by the week-7-year itch powder

P.S. We Also Poison Dogs

"Lafe, these people you hired?"

"Let me see that." Lazarus was reading the list of services when Snob came running, jumped on the Red Carpet, reached over Lazarus' shoulder for the card while saying breathlessly:

"Wrong card! Here-have this one. That first card is a piece of sabotage by the firm we bought out, including good will-but it turned out there was no good will. We sued, they retaliated-among other ways by mixing their old business cards with our own new supply.. . thereby infecting them all. Law of Contiguity, you know. Now if I can just have that infected one, I'll burn it-"

Lazarus held it out of his reach while accepting the proffered replacement. "I'll keep the old one-interesting souvenir."

"Director Long-please!"

"Off the Carpet, Bub. Back to your job. Git!" This injunction was accompanied by crowding that caused Snob to step one foot off the Carpet. . . which resulted in an impromptu pas a seul that left him fifty meters behind before he recovered his balance. Meanwhile Jubal and Lazarus read the replacement:

ANYTHING UNLIMITED

Tome, Hernia, Lien, & Snob

Six Sixty-Six Smiling Slaves Supply Supreme Service
Reputations Restored-Teeth & Wells Drilled-Water Filters-Love Philtres-Chastity GOdel Lox Pict-Virginity Renewed-Scithers Sharpened-Old Saws Filed Categorically-Silver Bullets-Fresh Garlic- Fresh Strawberries-Strawberry Marks for Missing Heirs

P.S. We Also Walk Dogs

"Lafe, I don't find this card much more reassuring than the first one."

"Don't worry about it. There is less here than meets the eye."

"Where have I seen that face before? This Snob-who is he?"

"Jubal, no one seems to know what ship he came down in. I'm looking into it for Zeb-you've met Zebadiah?"

"Briefly."

"Zeb thinks he's seen him somewhere not under that phony name-and Zeb and I aren't even from the same time axis, much less the same analog series. Never mind; here's our hostess." Lazarus stepped off the Carpet, approached from behind a little old woman seated at a bar-lounge table, leaned over her, kissed her. "Hazel, age cannot wither you or custom stale. You are lovelier every decade."

She goosed him. "Pig grunts. I'm dyeing my hair now and you know it. Who's your fat friend? Hi, Jubal! Tak for siest. Drag up a chair." She put two fingers to her lips, whistled, breaking glasses. "Waiter!"

"I note that you're heeled," said Lazarus, as both men joined the table.

"When did I fail to pack a gun? I'm a Free Citizen. Does everybody know everybody? If not, get your tags in sight; damn'f I'll stop for introductions. While I was waiting for you, I was joined by friends-some old, some new."

"Some I know-hi, Jake; hi, everybody. I mentioned your gun with approval, Hazel; Here There Be Tygers. But I note also that you are staying in a hilton; after one drink-well, two-three at the outside-I'm going to be mortally offended. Your suite awaits you and you know it. Why?"

"Two reasons. Well, three. I never like to be beholden-"

"Why, damn your beautiful bloodshot eyes!"

"-but I'm perfectly willing to sponge off you. That's why I bought the first round; the party never gets smaller. This round is yours. Where's that misbegotten waiter?"

"Here, Madam."

"The same all around and don't call me 'Madam.' Jubal, your usual? Lafe?"

"I know what the gentlemen take. Thank you, Madam." The waiter disappeared.

"Uppity." Hazel made a fast draw. "Should have made him dance." She twirled and reholstered. "Hilda, where have I seen that sneaky face before?"

"Jacob and I were discussing that. He reminds me of a fake forest ranger- but that was in a far country and besides the beast is dead."

"Could be a family resemblance. But, Hillbilly, I mean today. Got it! The ticket taker. Identical twins, maybe." Hazel went on, "Other identical twins are my first two reasons, Lazarus. My grandsons. I won't shoot holes in your

mirrors or carve my initials in Tamara's furniture, but I make no guarantees about Cas and Pol. In a hilton they put the damage on the tab; I pay it and make my grandsons wish they had never been born. But you would not let me pay. And we're going to be here quite a piece; my daughter-in-law Doctor Edith has decided that she needs a couple of years under Doctor Ishtar. Has anyone seen a pair of twin boys-man-size but boys-redheaded-not the color of mine; mine's out of a bottle-the color mine used to be?"

"Hazel, here twins and red hair are as common as magicians in Atlantis; Gilgamesh must have stayed overnight."

"I saw them talking to Caleb Catlum," said Maureen.

"Well, he should be a match for them-but don't bet on it. Lazarus, is Atlantis represented?"

"From thirteen universes. They are having a jurisdictional dispute. Suits me-if any get sore and leave, they won't get a refund."

"Your grandsons may have been with Caleb but I know where-no, with whom-I know with whom they are now," put in Professor Burroughs. "Laz and Lor."

"Oho! Hazel, I'll tell Athene to settle your bill and move your luggage. We have an antidote for Cas and Pol."

"Optimist. Deal 'em, waiter, and give him the chit. What antidote?" The waiter started to hand the check to Lazarus before he looked at him-stopped abruptly, and left, still with the tab.

"Would Cas and Pol be interested in becoming pirates?"

"Lazarus, they are pirates. I was hoping they would tone down as they grew up. . . but now they're eighteen, Terran reckoning, and each one is two yards of deceit and chicanery. The 'J.D.' after my name means that I studied law at a school that handed out that degree in place of 'LL.B.'-but my rapscallions are 'J.D.'s' too. But not lawyers. Well. . . 'space lawyers."

"Hazel, you won your first J.D. long before you studied law. No?"

"The accused stood mute and the court ordered a plea of nux vomica entered in the record."

"My twins are more than twice as old as your boys but it doesn't show; they look a year or two younger. . . and they are permanent juvenile delinquents. They want to take a fling at piracy. . . which I deplore, having sampled the trade. Your boys-do they respect good machinery? Can they take care of it? Make nonshipyard repairs?"

"Lazarus, they can repair anything that ticks or doesn't tick. Worried me a mite, as they were a little slow in noticing girls. But they outgrew that symptom without outgrowing machinery."

"You might tell them that my clone-sisters own a spaceship faster and more powerful than any of your home period and analog, one that could be outfitted as a privateer. It might result in all four dying happily. But I do not interfere in other people's lives."

Hilda put her palms together, closed her eyes, and said, "Dear Lord, do not strike him dead; he didn't mean it. Yours truly, Hilda Burroughs Long." Lazarus ignored her.

"Nor do I, Lazarus. Other than occasionally, with a horse whip. Forgot to mention- They aren't gelded."

"Hazel, Laz-Lor are vaccinated and would have to come back here to see Ishtar to get it reversed. As for rasslin' matches, any male who tried to rape one of my clones

would be gelded. Informally. At once. No instruments. No anesthesia. I trained 'em myself. Forget it. Apparently they've already met; they'll settle their own affairs, if any, their own way. Leave Cas and Pol in that hilton if you wish-by the way, I own it-but you're coming home or I'll tell Tamara."

"Bully. I don't bully worth a hoot, Lazarus."

"I'm out of it. Tamara never bullies. She merely gets her own way. What was this third reason?"

"Well. . . don't tell on me. Ishtar is a fine girl but I have no wish to stay where she could corner me and try to sell me rejuvenation."

Lazarus looked horrified. "Who has been feeding you nonsense?"

"Well? It's a commercial enterprise, is it not?"

"Certainly. Tanstaafl. All the traffic will bear. But we aren't ghouls; we'll accept a lien against a client's future earnings with no security and only the going rate of interest. . . . then let him take as long as he likes to figure out that it doesn't pay to cheat us. But, Hazel, Ishtar never solicits; the clinic doesn't even have a flack. But if you asked her, you would go to the top of the list as my friend. However, she will supply painless suicide just as readily. You can have that later today. No charge. Compliments of the House."

"Lafe, I don't see how your wives put up with you."

"They don't; they make me toe the line. Something they learned from the Stone Gang, I believe."

"Well, I'm not trying to suicide. I'm less than two hundred Terran years old with a Luna background to stretch it. This is the first time I've been on a heavy planet since the last time I saw you; I'll last a while. But, Lazarus, I have no wish to be a young girl."

"Hazel-"

"Huh? Jubal, keep out of this. Say, did you ever see anything of that young man again? Did he resurrect the way some claim he did?"

"Not to my knowledge. Although I saw something a while ago that made me wonder. Hazel, I'm going to take rejuvenation.. . . and hang onto my present appearance. Red nose and all."

Hazel turned abruptly to face Lazarus. "Is this true? Can this be done?"

Maureen answered. "Hazel, I work at the clinic at the bedpan level. . . with the expectation of becoming a junior rejuvenation technician in upteen years. I see what goes on. A client states in writing what apparent age she prefers. That's skin deep, easy to do, easy to maintain. But, unless it is an unusual contract, we turn out a biologically mature young adult. Call it eighteen standard years."

"Page Ponce de Leon! You mean I can still be me. . . but get rid of the morning aches and the arthritic twinges and the forty-leven other things that are the real trouble with living too long?"

"Exactly."

"Uh. . . what about what I'm sitting on? Haven't used it much lately. Or wanted to."

Lazarus fielded this. "You'll want to. Unless you contract for an abnormal endocrine balance. But, Hazel, there are many men who prefer to deal with an old, established, reliable firm. Ask Tamara."

"Uh. . . be switched if I'm not feeling embarrassed, an emotion I haven't felt in more years than I'll admit. You can pick any apparent age, you say? Could I be, uh, late middle age? My hair its right color but streaked with gray? A sag under my chin instead of this wattle? Teats a man might grab and enjoy it? That 'old, established firm'-but not decrepit?"

"Certainly," said Lazarus.

"Hazel, I can take you to the clinic now," Maureen offered. "Always someone in the business office. Discuss types of contract. Decide what you want and when. Even get your prelim physical today and set date of admission."

"Uh.. . yes, I'm interested. But not till later today; I've got friends entered in the preliminary rounds of the Society for Creative Anachronism."

"Besides," Jubal put in, "they need time to check your credit rating, see what they can stick you for. By now Lafe has given Athene some signal to start x-raying your purse."

"He has not," Hilda denied. "I did. Hazel, we don't solicit business; we let the client sell it to herself. Maureen picks up one percent on this deal. Not Lazarus."

"Can't see that it matters," Jacob added. "Hey! Waiter! Over here, please! We Longs pool the boodle and Deety tells us what we have, what we can spend-but not who fetched it in."

"Jacob, it's the principle. Making money is a game. Maureen landed her."

"Hazel landed herself, Hilda," Hazel Stone put in. "I don't enjoy getting up feeling wobbly. Jubal, are you game for this?"

"My mind's made up."

"Then take a double room with me and we can tell each other lies while they make us feel young again. Hilda, is that kosher?"

"Lots of double rooms. Ish knows that you are both special friends of Lazarus and, while she doesn't spoil Lazarus, she'll do him any reasonable favor," Hilda assured her. "I think it's the same all around, Waiter-charge it to my account."

'My check," said Jubal.

"Waiter," Hilda said firmly.

The waiter looked at her, flexed his jaw muscles, said, "Very well, Director!"-and vanished.

"I think I missed something," Jubal remarked.

"I think I didn't," said Hazel. "Yon Cashier hath a lean and hungry look. He thinks too much. Such men are dangerous."

Jubal looked around. "That cashier is our waiter. I think."

"I know. And bartender. And ticket taker. Unless his mother had quadruplets, he has Niven dislocators built into his shoes. I wish I could remember where I have seen him. He is not pleased with Hilda. Or Lazarus."

"Eh? Why?"

"Wait and see. There will not be another tab brought to this table-want to bet?"

"No bet," Lazarus interrupted. "The upstart knows who I am, who Hilda is. People at this table are guests of the management. He had better remember it or I'll sick Deety on him. Or even Hilda. But they hardly ever live through that. Hey, there's Deety now!" Lazarus stood up and waved. "Deety! Over here!"

Deety had with her a gaggle of giggles. "I don't have time to do this right; we want to get over to the Field of the Cloth of Gold before the preliminaries- besides, we've got husbands over there, most of us. So this is Ginnie and Winnie and Minnie, and Ginnie's a witch and Winnie's a nurse and Minnie's a retired computer, twin sister to Teena, and this is Holly and Poddy and Libby and Pink, and Holly is a design engineer, ship's architect type, and Poddy is a therapy empathist, and Libby you all know, and Fuzzy is a computer artist like me and the first one to calculate the Number of the Beast to the last significant figure, and now we'd better go even though we have reserved V.I.P. seats because there is a masked knight in the first match and we're pretty sure who he is, and has anyone seen Zebadiah?"

"I'm certain who he is," said Ginnie. "He brought me to life, and besides, he's wearing Karen's colors."

"I see Zeb off in the distance," Lazarus answered.

"No," Jake denied, "here he comes now, from over this way. Ishtar with him. All dressed up."

"No," said Jubal. "That's Anne with him."

"Somebody is screw loose. Lazarus is right. I know my first husband even at this distance. He's just approaching those three reserved sections opposite the big screen over the bar. Zebadiah! Over here!"

The other computer artist added, "And that can't be Anne, so it must be Ishtar. Anne is at the field, I know, because Larry is helping Jerry run it and told me, Anne agreed to cloak and be the third judge when Jerry told her that Mr. Clemens had agreed. Bonforte sits as king although he says he doesn't know much about the kinging business and even less about jousting."

"Is it true that they are using real weapons today?" asked Jubal.

"And real horses," agreed Lazarus. "I was able to borrow the AnheuserBusch Clydesdales."

"Lazarus, is this wise?"

"Doctor Bone is taking care of the horses. If one is injured, we'll give him the works. Those beautiful horses will be returned to Old Home Terra at their proper year and second in better shape than they were. With added skill. It's takes time to turn a Clydesdale into a knight's charger even though that's what they are. But will they ever be happy in harness again?"

"Lazarus," Podkayne said seriously, "I'll speak to Dr. Bone. If a horse is unhappy, we will soothe."

"Poddy, you're a Smart Girl."

"About average here, I think. But if someone is unhappy, I have learned what to do. I have never seen a horse but they've lived with people so long that it can't be very different."

Jubal sighed. "I'm glad the horses will be well taken care of-but, Lazarus, I meant humans. Isn't someone going to be hurt? Maybe killed?"

"Most of them hurt, several killed. But they do it for fun. Those who are hurt won't stay hurt; we are hardly more than a loud shout from this planet's best hospital. If a man loses an arm or a leg or an eye, or even his balls, he'll have to be patient while a new part is cloned. But that sort of cloning we are learning to do right at the spot of injury, like a lizar~d or a newt. Faster. More efficient.

"If he's killed, he has two choices: Be brought to life again by Ishtar's crew- brain unlikely to be hurt; their helms are the best part of their armor. Or, they can go straight to Valhalla; we've arranged for Bifrost to extend to this Field until the end of SCA's part in the convention. Six Valkyries standing by and 'Sarge' Smith at the top of Bifrost checking them against the roster as he musters them home." Lazarus grinned. "Believe me, the Society is paying high for these services, bond posted in advance; Deety wrote the contract."

"Lafe, you're telling me that Wagnerian Valkyries are waiting to carry the slain Over The Rainbow into Asgard?"

"Jubal, these Amazons are not opera singers; these are the real hairy, sweaty McCoy. Remember the purpose of this convention. Snob."

The waiter appeared. "You wish something, sir?"

"Yes. Tell your boss that I want this table-this table only-to have a full view of Bifrost, from the Field to Valhalla. I know it's not in the clothing illusion contract but the same gear will do it.. . and we can settle it when we go to court later. It will offset some of his lousy service. Git!"

"We'd better all 'git," said Libby. "They won't hold up things for us. That armor is heavy and hot. Deety?"

"Run along, I'll catch up. Here comes my first husband."

"Lafe, if they are killed, how do you know which ones to send to the clinic, which ones to send up the bridge?"

"Jubal, how would you do it? Sealed envelopes, destroyed if a knight wins, opened if he loses. . . and there may be some surprised widows tonight, unable to believe that their loving husbands elect to hunt all day, then feast on barbecued boar, guzzle mead, and wench all night, in preference to being restored to life in their respectable homes. But did I tell you what a winner gets? Aside from applause and a chance to kneel to 'King' John and 'Queen' Penelope. A paradox's his reward."

"A paradox?"

"No, no! Noisy in here. A pair o' doxies each his reward. The Society got a bargain. The arts are in their infancy here; Boondock is still so much a frontier that we have not yet developed distinguished hetaerae. But some of the most celebrated hetaerae in New Rome volunteered their services in exchange for transportation and the privilege of attending this convention."

Zebadiah was struck by a guided missile, female, from five meters. He managed to stay on his feet and took his first wife to the table, sat down by Hilda, pinched her thigh, pinched her glass, drained it, said, "You're too young to drink, little girl. Is this your father?"

"I'm her son," Jake answered. "Do you know Hazel Stone? If not, you should. We thought we saw you coming from the other direction."

"Shouldn't drink in the daytime, Jake. Waiter! Your servant, Ma'am. I've followed your series on 3-D since I was a kid and I'm honored to meet you. Are you covering this for Lunaya Pravda?"

"Heavens, no! LOCUS has an exclusive under the reasonable theory that LOCUS alone is competent to report this convention. Jerry and Ben are covering it for their various journals. . . but must clear it through Charles. I'm here as an expert, believe it or not-as an author of popular fantasy. Is the Galactic Overlord of my series real or

imaginary and is there a difference? See next week's thrilling episode; the Stone family has to eat. Same thing all around, I think. You can tip him, Doctor Zebadiah, but there is no tab at the Director's table."

"And no tips," growled Lazarus. "Deliver my message to your boss again and tell that spinning arsfardel he has exactly three minutes before I invoke paragraph nine, section 'c.' Here comes your double, Zeb."

From behind the couple who, at half a klick, had been mistaken for Zebadiah and Ishtar, came out quickly a shorter, older, broad-shouldered man. All three were dressed Robin-Hood-and-his-Merry-Men style: buskins, breeks, leathern jackets, feathered caps, long bows and quivers of fletched shafts, swords and daggers, and were swinging along in style.

The shorter man hurried a few paces ahead, turned and faced their path, swept off his cap and bowed deeply. "Make way for Her Wisdom, Empress of eighty-thr-"

The woman, as if by accident, backhanded the groom. He ducked, rolled, avoided it, bounced to his feet and continued: "-worlds, and her consort the Hero Gordon."

Lazarus got up, addressed the groom. "Doctor Rufo! So happy you could make it! This is your daughter Star?"

"His grandmother," Her Wisdom corrected, dropping a quick curtsy to Lazarus. "Yes, I'm Star. Or Mrs. Gordon; this is my husband, Oscar Gordon. What is correct usage here? I've not been on this planet before."

"Mrs. Gordon, Boondock is so new that its customs have not yet calcified. Almost any behavior is acceptable if meant in a kindly way. Anybody causes real trouble, it's up to our chairman Ira Weatheral and advisers selected by him. Since Ira doesn't like the job, he tends to procrastinate, hoping the problem will go away. As a result we don't have much government and few customs."

"A man after my own heart. Oscar, we could live here if they will have us. My successor is ready; I could retire."

"Mrs. Gordon-"

"Yes, Doctor Long?"

"We-our chairman Ira especially-all know quite well who 'Her Wisdom' is. Ira would welcome you with open arms and resign in your favor at once- passed by acclamation and you would be boss for life. Better stick to the devil you know. But you are most welcome whenever you choose to visit."

She sighed. "You're right. Power is not readily surrendered; I'll probably wait for assassination."

Deety whispered, "Zebadiah. . . that bartender. Whom' does he look like?"

"Hmm- Brigadier Iver Hird-Jones?"

"Well, maybe. A little. I was thinking of Colonel Morinosky."

"Mrñm- Yes. No importance since it can't be either one. Mr. Gordon?"

"Call me 'Easy.' Or Oscar, Doctor Carter."

"I'm Zeb. Is that the Lady herself? The sword you were in the Quest for the Egg of the Phoenix?"

Gordon looked delighted. "Yes! The Lady Vivamus."

"Can't ask a man to draw a sword without a cause. . . but is the inscription close enough to the hilt that we could read it if you were simply to show steel?"

"No trouble." Gordon exposed the etched: Dum Vivimus, Vivamus!-gave them time to read it, clicked it to full return, and asked, "And is that the sword that killed the Boojum?"

"The Boo- Oh! The monster we call a 'Black Hat.' But we did not 'softly and silently vanish away."

"No, it did. That will be a point we'll discuss in the seminar panel: 'Techniques for Hunting Snarks.' You and I and Doctor Jacob and Doctor Hilda, with some others. André. Kat Moore. Fritz. Cliff. The Gordfather will moderate when he gets over his wheezes. Which he will-Tamara's treating hi- Oh, heavens! Oh, God, how beautiful!"

The "sky" had opened, for their table, and they found themselves looking at the Field of the Cloth of Gold, a half klick away and a few meters above them, on and up to high, high, high in the sky, the shimmering towers and palaces of Valhalla, with the Rainbow Bridge reaching from the field of honor to the distant gate of the eternal home of heroes.

Instead of the wooded horizon usually seen in that direction, the land lifted in terraces, each more colorfully beautiful than the last, until the highest was lost in pink and saffron clouds-and above them, much higher, Valhalla in Asgard.

"Pappy!"

"Yes, Athene," Lazarus said quietly. "Localize it. Me only. I have many people around me."

"That's better? No problems, just to alert you. Arthur and Isaac and Bob all arriving at once. Twelve minutes, plus two, minus zero."

"You're a smart girl, Teena."

"Put that in writing. Blandjor."

Lazarus said to the table at large, "My guests for those reserved spaces are arriving. I wasn't sure of Isaac; he gets bigger every year and reluctant to travel other than by water. Arthur had such a long way to come and communications are always uncertain. Bob I knew was here but there were duty matters interfering. Shall we listen to some of the opening plenary while we look at the beauties of the Norse Afterland? We don't want to look at the general session. But we can listen. When the tourney starts, give most of your attention to the hologram except during the Valkyrie ride. Snob! Give us the sound from the plenary session."

They got it at once, sound and fury signifying nothing. Under its cover Jubal Harshaw said to Zebadiah, "Before they get on that panel in front of an audience, think about this. How many 'Black Hats' or 'Boojums' are there?"

"Eh? I have no way of telling. In excess of twenty as a best guess but that excess could be many millions, also a best guess."

"But how many did you see?" Harshaw persisted.

"Oh. One. But more were a certainty."

"So? You would never get a Fair Witness to say that. What harm did it or they do you?"

"Huh? Tried to kill us. Bombed us out. Killed my cousin. Chased us off our home planet. Impoverished all four of us. What do you want? Plagues and locusts? The Four Horsemen?"

"No. You saw one. You killed it. It never laid a glove on you. Think about it. Before you testify. Let's listen."

"If you read it correctly it's all in the Bible. 'In the beginning was the Word, and the Word was with God, and the Word was God.' Could anyone ask for a plainer statement of the self-evident fact that nothing exists until someone imagines it and thereby gives it being, reality? The distinction lies only in the difference between 'being' and 'becoming'- a distinction that cancels out when any figment-fact is examined from different ends of the entropy error-"

"Bishop Berkeley is presiding," Lazarus commented, "and would have shut this figment up save that the Bishop has laryngitis-imaginary, of course- and his parliamentarian, the Reverend Mister Dodgson, is too meek to shut anyone up. The Meek Shall Inherit the Earth, One Meter Wide and Two Meters Long."

"If God displaces the Devil, he must assume the Devil's attributes. How about giving the Devil equal time? God has the best press agents. Neither fair nor logical!"

"I am Alpha and Omega, the beginning and the end, the first and the last."

"Occam's Razor is not the least hypothesis! It is the least probable hypothesis. The truth-"

"There are three schools of magic. One: State a tautology, then ring the changes on its corollaries; that's philosophy. Two: Record many facts. Try to see a pattern. Then make a wrong guess at the next fact; that's science. Three: Awareness that you live in a malevolent universe controlled by Murphy's Law, sometimes offset in part by Brewster's Factor: that's engineering."

"Why did Mercutio have to die? Solve that, and it will lead you to Mark Twain's well. There's your answer."

"Who is more real? Homer or Ulysses? Shakespeare or Hamlet? Burroughs or Tarzan?"

The debate shut off, the giant hologram screen lighted up in heroic size, full depth and color, and the tedious voices were cut off by a loud and lively
one: "While we're waiting for the first two champions to reach their starting lines we will have 'The Grand Canal' sung by lovely Anne Passovoy and accompanied by Noisy on his Stomach Steinway. Noisy is not in voice today, friends; he was bitten last night by an imaginary snake."

"Jerry is in good voice," whispered Deety. "He always is. Aren't they going to give us any closeups?" The camera zoomed in on Anne Passovoy, panned across the other Anne, cloaked in white, rested for a moment on "King" John and "Queen" Penelope, went on to show a vigorous old man with a halo of white hair who took a stogie out of his mouth and waved.

"On my right is Sir Tenderloinn the Brutal and on my left is the Black Knight, shield unblazoned, helm closed. Oh Jear not, friends; Holger tongues. Dis Dane could be our arrow. Whose color-"

Zebadiah heard a crash, turned his head. "They're bringing in a big Corson flatboat. Smashed some chairs." He looked again, announced, "Can't see much, the stands on this side are filling with people in green uniforms. Black berets. Bloodthirsty-looking gang."

"That's Asprin-"

"Give me ten grains. Deety, you let me mix my drinks."

"Asprin, not 'aspirin.' Bob Asprin, Commandammit of the Dorsai Very Irregular," Lazarus told him. "But can you see Arthur?"

"Does he wear a deerstalker's hat? Smoke a meerschaum pipe? The tall one there, talking to the man who looks like a gorilla."

"He'd Challenge you for that. Violent temper. That's Arthur's party, all right. Doctor Arthur Conan Doyle. Doctor Watson should be there, too. Wups! Here comes Isaac. And there goes another bunch of chairs."

"They're offi The Masked Challenger is gaining speed, Sir Tenderloinn is having trouble getting his charger to move: It is a beautiful day here at Epsom Salts and Bifrost never looked lovelier."

Lazarus stood up. "I must greet Isaac. Zebadiah, have you met him? Come with me. You, too, Deety. Hilda? Please, dear. Jake?"

"Just a moment, you!" Zeb looked at the one interrupting them and felt shock. He had seen that face, that uniform, by a rustic swimming pool. The "ranger" addressed Lazarus: "You're the one they call the Executive Director. Special Agent L. Ron O'Leemy, InterSpace Patrol. I have warrants for Beowolf Shaeffer, Caspol Jones, and Zebadiah John Carter. Director, I require your
cooperation. Article Four Six, Section Six Five, Paragraph Six, InterUniversal Criminal Code.

"Unhorsed! The Black Knight's lance right through him! Here come the Valkyries. Hoyotoho!"

Hilda reached out, took the warrants, tore them across. "You're on the wrong planet, Mac." She grasped Zeb's arm. "Come along, Alfred; we must meet Isaac."

They passed the Dorsai, reached the big Corson flatboat. Completely filling it was a very large Venerian Dragon. The dragon turned an eyestalk toward them; his tendrils touched his voder. "Greetings, Doctor Lazarus Long. Greetings, new friends. May you all die beautifully!"

"Greetings, Sir Isaac. Sir Isaac Newton, this is Doctor Hilda Burroughs Long, Doctor Jacob Burroughs Long, Doctor Deety Carter Long, and Doctor Zebadiah John Carter Long, all of my family."

"I am honored, learned friends. May your deaths inspire a thousand songs. Doctor Hilda, we have a mutual friend, Professor Wogglebug."

"Wait, wait! Don't tear up your tickets. The Valkyries are having a problem. Yes, the judges have confirmed it. No contest! The Dane has 'killed' a totally empty suit of armor! Better luck next bout, Pou- Holger."

"Oh, how delightful! Zebadiah and I saw him just this past week in delivering our children to Oz for the duration of this convention. Did I just miss you?"

The dragon answered, with a Cockney lisp, "No, we are pen pals only. He can't leave Oz; I had never expected to leave Venus again.. . until your device-perhaps I should Say Doctor Jacob's device- made it simple. But see what our friend Professor Wogglebug sent me-" The dragon fiddled at a pouch under his voder.

The InterSpace Patrol Agent O'Leemy tapped Zeb on the shoulder. "I heard those introductions. Come along, Carter!"

"-spectacles to fit my forward stalks, that see through the thickest mist." He put them on, looked around him. "They clarify any- There! Get him! Grab him! That Beast! Get his Number!" Without a lost instant Deety, Hilda, and Lazarus closed on the "agent"- and were left with torn clothes and plastic splints as the thing got loose. The "special agent" vaulted over the bar, was seen again almost instantly at the far end of the bar, jumped up on it, leapt for the canvas top, grabbed hold of the edge of the illusion hole, swung itself up, bounded for Bifrost, reached it.

Sir Isaac Newton played: "Mellrooney! The worst troublemaker in all the worlds. Lazarus, I never expected to find that Beast in your quiet retreat."

"Nor did I until I heard all of Zeb's story. This convention was called expecially to entice him. And it did. But we lost him, we lost him!"

"But I got its Number," Hilda said and held out its shield: "666"

The fleeing figure, dark against the Rainbow Bridge, grew smaller and higher. Lazarus added, "Or perhaps we haven't lost him. He'll never get past Sarge Smith."

The figure appeared to be several klicks high now, when the illusion suddenly broke. The Rainbow was gone, the terraces melted, the clouds were gone, the towers and castles of Asgard could no longer be seen.

In the middle distance, very high up, a figure was tumbling, twisting, falling. Zeb said, "Sarge won't have to bother. We've seen the last of it."

The voder answered: "Friend Zebadiah. . . are you sure?"

A NOTE ABOUT THE AUTHOR

ROBERT ANSON HEINLEIN was born in Butler, Missouri, in 1907. A graduate of the U.S. Naval Academy, he was retired, disabled, in 1934. He studied mathematics and physics at the graduate school of the University of California and owned a silver mine before beginning to write science fiction in 1939. In 1947 his first book of fiction, Rocket Ship Galileo, was published. His novels include Double Star (1956), Starship Troopers (1959), Stranger in a Strange Land (1961), and The Moon Is a 1-Iarsh Mistress (1966), all winners of the Hugo Award. Heinlein was guest commentator for the Apollo-li first lunar landing. In 1975 he received the Grand Master Nebula Award for lifetime achievement.

Ordeal in Space

Maybe we should never have ventured out into space. Our race has but two basic, innate fears; noise and the fear of falling. Those terrible heights - Why should any man in his right mind let himself be placed where he could fall . . . and fall . . . and fall - But all spacemen are crazy. Everybody knows that.

The medicos had been very kind, he supposed. 'You're lucky. You want to remember that, old fellow. You're still young and your retired pay relieves you of all worry about your future. You've got both arms and legs and are in fine shape.'

'Fine shape!' His voice was unintentionally contemptuous.

'No, I mean it,' the chief psychiatrist had persisted gently. 'The little quirk you have does you no harm at all - except that you can't go into space again. I can't honestly call acrophobia a neurosis; fear of falling is normal and sane. You've just got it a little more strongly than most - but that is not abnormal, in view of what you have been through.'

The reminder set him to shaking again. He closed his eyes and saw the stars wheeling below him again. He was falling, falling endlessly. The psychiatrist's voice came through to him and pulled him back. 'Steady, old man! Look around you.'

'Sorry.'

'Not at all. Now tell me, what do you plan to do?'

'I don't know. Get a job, I suppose.'

'The Company will give you a job, you know.'

He shook his head. 'I don't want to hang around a spaceport.' Wear a little button in his shirt to show that he was once a man, be addressed by a courtesy title of captain, claim the privileges of the pilots' lounge on the basis of what he used to be, hear the shop talk die down whenever he approached a group, wonder what they were saying behind his back - no, thank you!

'I think you're wise. Best to make a clean break, for a while at least, until you are feeling better.'

'You think I'll get over it?'

The psychiatrist pursed his lips. 'Possible. It's functional, you know. No trauma.'

'But you don't think so?'

'I didn't say that. I honestly don't know. We still know very little about what makes a man tick.'

'I see. Well, I might as well be leaving.'

The psychiatrist stood up and shoved out his hand. 'Holler if you want anything. And come back to see us in any case.'

'Thanks.'

'You're going to be all right. I know it.'

But the psychiatrist shook his head as his patient walked out. The man did not walk like a spaceman; the easy, animal self-confidence was gone.

Only a small part of Great New York was roofed over in those days; he stayed underground until he was in that section, then sought out a passageway lined with bachelor rooms. He stuck a coin in the slot of the first one which displayed a lighted 'vacant' sign, chucked his jump bag inside, and left. The monitor at the intersection gave

him the address of the nearest placement office. He went there, seated himself at an interview desk, stamped in his finger prints, and started filling out forms. It gave him a curious back-to-the-beginning feeling; he had not looked for a job since pre-cadet days.

He left filling in his name to the last and hesitated even then. He had had more than his bellyful of publicity; he did not want to be recognized; he certainly did not want to be throbbed over - and most of all he did not want anyone telling him he was a hero. Presently he printed in the name 'William Saunders' and dropped the forms in the slot.

He was well into his third cigarette and getting ready to strike another when the screen in front of him at last lighted up. He found himself staring at a nice-looking brunette. 'Mr. Saunders,' the image said, will you come inside, please? Door seventeen.'

The brunette in person was there to offer him a seat and a cigarette. 'Make yourself comfortable, Mr. Saunders. I'm Miss Joyce. I'd like to talk with you about your application.' He settled himself and waited, without speaking.

When she saw that he did not intend to speak, she added, 'Now take this name "William Saunders" which you have given us - we know who you are, of course, from your prints.

'I suppose so.'

'Of course I know what everybody knows about you, but your action in calling yourself "William Saunders", Mr. -'

'Saunders.'

'- Mr. Saunders, caused me to query the files.' She held up a microfilm spool, turned so that he might read his own name on it. 'I know quite a lot about you now - more than the public knows and more than you saw fit to put into your application. It's a good record, Mr. Saunders.'

'Thank you.'

'But I can't use it in placing you in a job. I can't even refer to it if you insist on designating yourself as "Saunders".'

'The name is Saunders.' His voice was flat, rather than emphatic.

'Don't be hasty, Mr. Saunders. There are many positions in which the factor of prestige can be used quite legitimately to obtain for a client a much higher beginning of pay than-'

'I'm not interested.'

She looked at him and decided not to insist. 'As you wish. If you will go to reception room B, you can start your classification and skill tests.'

'Thank you.'

'If you should change your mind later, Mr. Saunders, we will be glad to reopen the case. Through that door, please.'

Three days later found him at work for a small firm specializing in custom-built communication systems. His job was calibrating electronic equipment. It was soothing work, demanding enough to occupy his mind, yet easy for a man of his training and experience. At the end of his three months' probation he was promoted out of the helper category.

He was building himself a well-insulated rut, working, sleeping, eating, spending an occasional evening at the public library or working out at the YMCA - and never, under any circumstances, going out under the open sky nor up to any height, not even a theater balcony.

He tried to keep his past life shut out of his mind, but his memory of it was still fresh; he would find himself daydreaming - the star-sharp, frozen sky of Mars, or the roaring night life of Venusburg. He would see again the swollen, ruddy bulk of Jupiter hanging over the port on Ganymede, its oblate bloated shape impossibly huge and crowding the sky.

Or he might, for a time, feel again the sweet quiet of the long watches on the lonely reaches between the planets. But such reveries were dangerous; they cut close to the edge of his new peace of mind. It was easy to slide over and find himself clinging for life to his last handhold on the steel sides of the Valkyrie, fingers numb and failing, and nothing below him but the bottomless well of space.

Then he would come back to Earth, shaking uncontrollably and gripping his chair or the workbench.

The first time it had happened at work he had found one of his benchmates, Joe Tully, staring at him curiously. 'What's the trouble, Bill?' he had asked. 'Hangover?'

'Nothing,' he had managed to say. 'Just a chill.'

'You better take a pill. Come on - let's go to lunch.'

Tully led the way to the elevator; they crowded in. Most of the employees - even the women - preferred to go down via the drop chute, but Tully always used the elevator. 'Saunders', of course, never used the drop chute; this had eased them into the habit of lunching together. He knew that the chute was safe, that, even if the power should fail, safety nets would snap across at each floor level - but he could not force himself to step off the edge.

Tully said publicly that a drop-chute landing hurt his arches, but he confided privately to Saunders that he did not trust automatic machinery. Saunders nodded understandingly but said nothing. It warmed him toward Tully. He began feeling friendly and not on the defensive with another human being for the first time since the start of his new life. He began to want to tell Tully the truth about himself. If he could be sure that Joe would not insist on treating him as a hero - not that he really objected to the role of hero. As a kid, hanging around spaceports, trying to wangle chances to go inside the ships, cutting classes to watch take-offs, he had dreamed of being a 'hero' someday, a hero of the spaceways, returning in triumph from some incredible and dangerous piece of exploration. But he was troubled by the fact that he still had the same picture of what a hero should look like and how he should behave; it did not include shying away from open windows, being fearful of walking across an open square, and growing too upset to speak at the mere thought of boundless depths of space.

Tully invited him home for dinner. He wanted to go, but fended off the invitation while he inquired where Tully lived. The Shelton Homes, Tully told him, naming one of those great, boxlike warrens that used to disfigure the Jersey flats. 'It's a long way to come back,' Saunders said doubtfully, while turning over in his mind ways to get there without exposing himself to the things he feared.

'You won't have to come back,' Tully assured him. 'We've got a spare room. Come on. My old lady does her own cooking - that's why I keep her.'

'Well, all right,' he conceded. 'Thanks, Joe.' The La Guardia Tube would take him within a quarter of a mile; if he could not find a covered way he would take a ground cab and close the shades.

Tully met him in the hail and apologized in a whisper. 'Meant to have a young lady for you, Bill. Instead we've got my brother-in-law. He's a louse. Sorry.'

'Forget it, Joe. I'm glad to be here.' He was indeed. The discovery that Bill's flat was on the thirty-fifth floor had dismayed him at first, but he was delighted to find that he had no feeling of height. The lights were on, the windows occulted, the floor under him was rock solid; he felt warm and safe. Mrs. Tully turned out in fact to be a good cook, to his surprise - he had the bachelor's usual distrust of amateur cooking. He let himself go to the pleasure of feeling at home and safe and wanted; he managed not even to hear most of the aggressive and opinionated remarks of Joe's in-law.

After dinner he relaxed in an easy chair, glass of beer in hand, and watched the video screen. It was a musical comedy; he laughed more heartily than he had in months. Presently the comedy gave way to a religious program, the National Cathedral Choir; he let it be, listening with one ear and giving some attention to the conversation with the other.

The choir was more than half way through Prayer for Travelers before he became fully aware of what they were singing:

Hear us when we pray to Thee
For those in peril on the sea.

'Almighty Ruler of them all
Whose power extends to great and small,
Who guides the stars and steadfast law,
Whose least creation fills with awe;
Oh, grant Thy mercy and Thy grace
To those who venture into space.'

He wanted to switch it off, but he had to hear it out, he could not stop listening to it, though it hurt him in his heart with the unbearable homesickness of the hopelessly exiled. Even as a cadet this one hymn could fill his eyes with tears; now he kept his face turned away from the others to try to hide from them the drops wetting his cheeks.

When the choir's 'amen' let him do so he switched quickly to some other - any other - program and remained bent over the instrument, pretending to fiddle with it, while he composed his features. Then he turned back to the company, outwardly serene, though it seemed to him that anyone could see the hard, aching knot in his middle.

The brother-in-law was still sounding off.

'We ought to annex 'em,' he was saying. 'That's what we ought to do. Three-Planets Treaty - what a lot of ruddy rot! What right have they got to tell us what we can and can't do on Mars?'

'Well, Ed,' Tully said mildly, 'it's their planet, isn't it? They were there first.'

Ed brushed it aside. 'Did we ask the Indians whether or not they wanted us in North America? Nobody has any right to hang on to something he doesn't know how to use. With proper exploitation -'

'You been speculating, Ed?'

'Huh? It wouldn't be speculation if the government wasn't made up of a bunch of weak-spined old women. "Rights of Natives", indeed. What rights do a bunch of degenerates have?'

Saunders found himself contrasting Ed Schultz with Knath Sooth, the only Martian he himself had ever known well. Gentle Knath, who had been old before Ed was born, and yet was rated as young among his own kind. Knath... why, Knath could sit for hours with a friend or trusted acquaintance, saying nothing, needing to say nothing. 'Growing together' they called it - his entire race had so grown together that they had needed no government, until the Earthman came.

Saunders had once asked his friend why he exerted himself so little, was satisfied with so little. More than an hour passed and Saunders was beginning to regret his inquisitiveness when Knath replied, 'My fathers have labored and I am weary.'

Saunders sat up and faced the brother-in-law. 'They are not degenerate.'

'Huh? I suppose you are an expert!'

'The Martians aren't degenerate, they're just tired,' Saunders persisted.

Tully grinned. His brother-in-law saw it and became surly. 'What gives you the right to an opinion? Have you ever been to Mars?'

Saunders realized suddenly that he had let his censors down. 'Have you?' he answered cautiously.

'That's beside the point. The best minds all agree -' Bill let him go on and did not contradict him again. It was a relief when Tully suggested that, since they all had to be up early, maybe it was about time to think about beginning to get ready to go to bed.

He said goodnight to Mrs. Tully and thanked her for a wonderful dinner, then followed Tully into the guest room. 'Only way to get rid of that family curse we're saddled with, Bill,' he apologized. 'Stay up as long as you like.' Tully stepped to the window and opened it. 'You'll sleep well here. We're up high enough to get honest-to-goodness fresh air.' He stuck his head out and took a couple of big breaths. 'Nothing like the real article,' he continued as he withdrew from the window. 'I'm a country boy at heart. What's the matter, Bill?'

'Nothing. Nothing at all.'

'I thought you looked a little pale. Well, sleep tight. I've already set your bed for seven; that'll give us plenty of time.'

'Thanks, Joe. Goodnight.' As soon as Tully was out of the room he braced himself, then went over and closed the window. Sweating, he turned away and switched the ventilation back on. That done, he sank down on the edge of the bed.

He sat there for a long time, striking one cigarette after another. He knew too well that the peace of mind he thought he had regained was unreal. There was nothing left to him but shame and a long, long hurt. To have reached the point where he had to knuckle under to a tenth-rate knothead like Ed Schultz - it would have been better if he had never come out of the Valkyrie business.

Presently he took five grains of 'Fly-Rite' from his pouch, swallowed it, and went to bed. He got up almost at once, forced himself to open the window a trifle, then compromised by changing the setting of the bed so that it would not turn out the lights after he got to sleep.

He had been asleep and dreaming for an indefinitely long time. He was back in space again - indeed, he had never been away from it. He was happy, with the full happiness of a man who has awakened to find it was only a bad dream.

The crying disturbed his serenity. At first it made him only vaguely uneasy, then he began to feel in some way responsible - he must do something about it. The transition to falling had only dream logic behind it, but it was real to him. He was grasping, his hands were slipping, had slipped - and there was nothing under him but the black emptiness of space - He was awake and gasping, on Joe Tully's guest-room bed; the lights burned bright around him.

But the crying persisted.

He shook his head, then listened. It was real all right. Now he had it identified - a cat, a kitten by the sound of it.

He sat up. Even if he had not had the spaceman's traditional fondness for cats, he would have investigated. However, he liked cats for themselves, quite aside from their neat shipboard habits, their ready adaptability to changing accelerations, and their usefulness in keeping the ship free of those other creatures that go wherever man goes. So he got up at once and looked for this one.

A quick look around showed him that the kitten was not in the room, and his ear led him to the correct spot; the sound came in through the slightly opened window. He shied off, stopped, and tried to collect his thoughts.

He told himself that it was unnecessary to do anything more; if the sound came in through the window, then it must be because it came out of some nearby window. But he knew that he was lying to himself; the sound was close by. In some impossible way the cat was just outside his window, thirty-five stories above the street.

He sat down and tried to strike a cigarette, but the tube broke in his fingers. He let the fragments fall to the floor, got up and took six nervous steps toward the window, as if he were being jerked along. He sank down to his knees, grasped the window and threw it wide open, then clung to the windowsill, his eyes tight shut.

After a time the sill seemed to steady a bit. He opened his eyes, gasped, and shut them again. Finally he opened them again, being very careful not to look out at the stars, not to look down at the street. He had half expected to find the cat on a balcony outside his room - it seemed the only reasonable explanation. But there was no balcony, no place at all where a cat could reasonably be.

However, the mewing was louder than ever. It seemed to come from directly under him. Slowly he forced his head out, still clinging to the sill, and made himself look down. Under him, about four feet lower than the edge of the window, a narrow ledge ran around the side of the building. Seated on it was a woe-begone ratty-looking kitten. It stared up at him and meowed again.

It was barely possible that, by clinging to the sill with one hand and making a long arm with the other, he could reach it without actually going out the window, he thought - if he could bring himself to do it. He considered calling Tully, then thought better of it. Tully was shorter than he was, had less reach. And the kitten had to be rescued now, before the fluff-brained idiot jumped or fell.

He tried for it. He shoved his shoulders out, clung with his left arm and reached down with his right. Then he opened his eyes and saw that he was a foot or ten inches away from the kitten still. It sniffed curiously in the direction of his hand.

He stretched till his bones cracked. The kitten promptly skittered away from his clutching fingers, stopping a good six feet down the ledge. There it settled down and commenced washing its face.

He inched back inside and collapsed, sobbing, on the floor underneath the window. 'I can't do it,' he whispered. 'I can't do it. Not again -'

The Rocket Ship Valkyrie was two hundred and forty-nine days out from Earth-Luna Space Terminal and approaching Mars Terminal on Deimos, outer Martian satellite. William Cole, Chief Communications Officer and relief pilot, was sleeping sweetly when his assistant shook him. 'Hey! Bill! Wake up - we're in a jam.'

'Huh? Wazzat?' But he was already reaching for his socks. 'What's the trouble, Tom?'

Fifteen minutes later he knew that his junior officer had not exaggerated; he was reporting the facts to the Old Man - the primary piloting radar was out of whack. Tom Sandburg had discovered it during a routine check, made as soon as Mars was inside the maximum range of the radar pilot. The captain had shrugged. 'Fix it, Mister - and be quick about it. We need it.'

Bill Cole shook his head. 'There's nothing wrong with it, Captain - inside. She acts as if the antenna were gone completely.'

'That's impossible. We haven't even had a meteor alarm.'

'Might be anything, Captain. Might be metal fatigue and it just fell off. But we've got to replace that antenna. Stop the spin on the ship and I'll go out and fix it. I can jury-rig a replacement while she loses her spin.'

The Valkyrie was a luxury ship, of her day. She was assembled long before anyone had any idea of how to produce an artificial gravity field. Nevertheless she had pseudogravity for the comfort of her passengers. She spun endlessly around her main axis, like a shell from a rifled gun; the resulting angular acceleration - miscalled 'centrifugal force' - kept her passengers firm in their beds, or steady on their feet. The spin was started as soon as her rockets stopped blasting at the beginning of a trip and was stopped only when it was necessary to maneuver into a landing. It was accomplished, not by magic, but by reaction against the contrary spin of a flywheel located on her centerline.

The captain looked annoyed. 'I've started to take the spin off, but I can't wait that long. Jury-rig the astrogational radar for piloting.'

Cole started to explain why the astrogational radar could not be adapted to short-range work, then decided not to try. 'It can't be done, sir. It's a technical impossibility.'

'When I was your age I could jury-rig anything! Well, find me an answer, Mister. I can't take this ship down blind. Not even for the Harriman Medal.'

Bill Cole hesitated for a moment before replying. 'I'll have to go out while she's still got spin on her, Captain, and make the replacement. There isn't any other way to do it.'

The captain looked away from him, his jaw muscles flexed. 'Get the replacement ready. Hurry up about it.'

Cole found the captain already at the airlock when he arrived with the gear he needed for the repair. To his surprise the Old Man was suited up. 'Explain to me what I'm to do,' he ordered Bill.

'You're not going out, sir?' The captain simply nodded.

Bill took a look at his captain's waist line, or where his waist line used to be. Why, the Old Man must be thirty-five if he was a day! 'I'm afraid I can't explain too clearly. I had expected to make the repair myself.'

'I've never asked a man to do a job I wouldn't do myself. Explain it to me.'

'Excuse me, sir - but can you chin yourself with one hand?'

'What's that got to do with it?'

'Well, we've got forty-eight passengers, sir, and -' 'Shut up!'

Sandburg and he, both in space suits, helped the Old Man down the hole after the inner door of the lock was closed and the air exhausted. The space beyond the lock was a vast, starflecked emptiness. With spin still on the ship, every direction outward was 'down', down for millions of uncounted miles. They put a safety line on him, of course - nevertheless it gave him a sinking feeling to see the captain's head disappear in the bottomless, black hole.

The line paid out steadily for several feet, then stopped. When it had been stopped for several minutes, Bill leaned over and touched his helmet against Sandburg's. 'Hang on to my feet. I'm going to take a look.'

He hung head down out the lock and looked around. The captain was stopped, hanging by both hands, nowhere near the antenna fixture. He scrambled back up and reversed himself. 'I'm going out.'

It was no great trick, he found, to hang by his hands and swing himself along to where the captain was stalled. The Valkyrie was a space-to-space ship, not like the sleek-sided jobs we see around earthports; she was covered with handholds for the convenience of repairmen at the terminals. Once he reached him, it was possible, by grasping the safe steel rung that the captain clung to, to aid him in swinging back to the last one he had quitted. Five minutes later Sandburg was pulling the Old Man up through the hole and Bill was scrambling after him.

He began at once to unbuckle the repair gear from the captain's suit and transfer it to his own. He lowered himself back down the hole and was on his way before the older man had recovered enough to object, if he still intended to.

Swinging out to where the antenna must be replaced was not too hard, though he had all eternity under his toes. The suit impeded him a little - the gloves were clumsy - but he was used to spacesuits. He was a little winded from helping the captain, but he could not stop to think about that. The increased spin bothered him somewhat; the airlock was nearer the axis of spin than was the antenna - he felt heavier as he moved out.

Getting the replacement antenna shipped was another matter. It was neither large nor heavy, but he found it impossible to fasten it into place. He needed one hand to cling by, one to hold the antenna, and one to handle the wrench. That left him shy one hand, no matter how he tried it.

Finally he jerked his safety line to signal Sandburg for more slack. Then he unshackled it from his waist, working with one hand, passed the end twice through a handhold and knotted it; he left about six feet of it hanging free. The shackle on the free end he fastened to another handhold. The result was a loop, a bight, an improvised bosun's chair, which would support his weight while he man-handled the antenna into place. The job went fairly quickly then.

He was almost through. There remained one bolt to fasten on the far side, away from where he swung. The antenna was already secured at two points and its circuit connection made. He decided he could manage it with one hand. He left his perch and swung over, monkey fashion.

The wrench slipped as he finished tightening the bolt; it slipped from his grasp, fell free. He watched it go, out and out and out, down and down and down, until it was so small he could no longer see it. It made him dizzy to watch it, bright in the sunlight against the deep black of space. He had been too busy to look down, up to now.

He shivered. 'Good thing I was through with it,' he said. 'It would be a long walk to fetch it.' He started to make his way back.

He found that he could not.

He had swung past the antenna to reach his present position, using a grip on his safety-line swing to give him a few inches more reach. Now the loop of line hung quietly, just out of reach. There was no way to reverse the process.

He hung by both hands and told himself not to get panicky - he must think his way out. Around the other side? No, the steel skin of the Valkyrie was smooth there - no handhold for more than six feet. Even if he were not tired - and he had to admit that he was, tired and getting a little cold - even if he were fresh, it was an impossible swing for anyone not a chimpanzee.

He looked down - and regretted it.

There was nothing below him but stars, down and down, endlessly. Stars, swinging past as the ship spun with him, emptiness of all time and blackness and cold.

He found himself trying to hoist himself bodily onto the single narrow rung he clung to, trying to reach it with his toes. It was a futile, strength-wasting excess. He quieted his panic sufficiently to stop it, then hung limp.

It was easier if he kept his eyes closed. But after a while he always had to open them and look. The Big Dipper would swing past and then, presently, Orion. He tried to compute the passing minutes in terms of the number of rotations the ship made, but his mind would not work clearly, and, after a while, he would have to shut his eyes.

His hands were becoming stiff - and cold. He tried to rest them by hanging by one hand at a time. He let go with his left hand, felt pins-and-needles course through it, and beat it against his side. Presently it seemed time to spell his right hand.

He could no longer reach up to the rung with his left hand. He did not have the power left in him to make the extra pull; he was fully extended and could not shorten himself enough to get his left hand up.

He could no longer feel his right hand at all.

He could see it slip. It was slipping - The sudden release in tension let him know that he was falling falling. The ship dropped away from him.

He came to with the captain bending over him. 'Just keep quiet, Bill.'

'Where -,

'Take it easy. The patrol from Deimos was already close by when you let go. They tracked you on the 'scope, matched orbits with you, and picked you up. First time in history, I guess. Now keep quiet. You're a sick man - you hung there more than two hours, Bill.'

The meowing started up again, louder than ever. He got up on his knees and looked out over the windowsill. The kitten was still away to the left on the ledge. He thrust his head cautiously out a little further, remembering not to look at anything but the kitten and the ledge. 'Here, kitty!' he called. 'Here, kit-kit-kitty! Here, kitty, come kitty!'

The kitten stopped washing and managed to look puzzled.

'Come, kitty,' he repeated softly. He let go the windowsill with his right hand and gestured toward it invitingly. The kitten approached about three inches, then sat down. 'Here, kitty,' he pleaded and stretched his arm as far as possible.

The fluff ball promptly backed away again.

He withdrew his arm and thought about it. This was getting nowhere, he decided. If he were to slide over the edge and stand on the ledge, he could hang on with one arm and be perfectly safe. He knew that, he knew it would be safe - he needn't look down!

He drew himself back inside, reversed himself, and, with great caution, gripping the sill with both arms, let his legs slide down the face of the building. He focused his eyes carefully on the corner of the bed.

The ledge seemed to have been moved. He could not find it, and was beginning to be sure that he had reached past it, when he touched it with one toe - then he had both feet firmly planted on it. It seemed about six inches wide. He took a deep breath.

Letting go with his right arm, he turned and faced the kitten. It seemed interested in the procedure but not disposed to investigate more closely. If he were to creep along the ledge, holding on with his left hand, he could just about reach it from the corner of the window - He moved his feet one at a time, baby fashion, rather than pass one past the other. By bending his knees a trifle, and leaning, he could just manage to reach it. The kitten sniffed his groping fingers, then leaped backward. One tiny paw missed the edge; it scrambled and regained its footing. 'You little idiot!' he said indignantly, 'do you want to bash your brains out?'

'If any,' he added. The situation looked hopeless now; the baby cat was too far away to be reached from his anchorage at the window, no matter how he stretched. He called 'Kitty, kitty' rather hopelessly, then stopped to consider the matter.

He could give it up.

He could prepare himself to wait all night in the hope that the kitten would decide to come closer. Or he could go get it.

The ledge was wide enough to take his weight. If he made himself small, flat to the wall, no weight rested on his left arm. He moved slowly forward, retaining the grip on the window as long as possible, inching so gradually that he hardly seemed to move. When the window frame was finally out of reach, when his left hand was flat to smooth wall, he made the mistake of looking down, down, past the sheer wall at the glowing pavement far below.

He pulled his eyes back and fastened them on a spot on the wall, level with his eyes and only a few feet away. He was still there!

And so was the kitten. Slowly he separated his feet, moving his right foot forward, and bent his knees. He stretched his right hand along the wall, until he was over and a little beyond the kitten.

He brought it down in a sudden swipe, as if to swat a fly. He found himself with a handful of scratching, biting fur.

He held perfectly still then, and made no attempt to check the minor outrages the kitten was giving him. Arms still outstretched, body flat to the wall, he started his return. He could not see where he was going and could not turn his head without losing some little of his margin of balance. It seemed a long way back, longer than he had come, when at last the fingertips of his left hand slipped into the window opening.

He backed up the rest of the way in a matter of seconds, slid both arms over the sill, then got his right knee over. He rested himself on the sill and took a deep breath. 'Man!' he said aloud. 'That was a tight squeeze. You're a menace to traffic, little cat.'

He glanced down at the pavement. It was certainly a long way down - looked hard, too.

He looked up at the stars. Mighty nice they looked and mighty bright. He braced himself in the window frame, back against one side, foot pushed against the other, and looked at them. The kitten settled down in the cradle of his stomach and began to buzz. He stroked it absent-mindedly and reached for a cigarette. He would go out to the port and take his physical and his psycho tomorrow, he decided. He scratched the kitten's ears. 'Little fluff head,' he said, 'how would you like to take a long, long ride with me?'

Orphans Of The Sky

UNIVERSE

The Proxima Centauri Expedition, sponsored by the Jordan Foundation in 2119, was the first recorded attempt to reach the nearer stars of this galaxy. Whatever its unhappy fate we can only conjecture. -- Quoted from The Romance of Modern Astrography, by Franklin Buck, published by Lux Transcriptions, Ltd., 3.50 cr.

"THERE'S A MUTIE! Look out!"

At the shouted warning, Hugh Hoyland ducked, with nothing to spare. An egg-sized iron missile clanged against the bulkhead just above his scalp with force that promised a fractured skull. The speed with which he crouched had lifted his feet from the floor plates. Before his body could settle slowly to the deck, he planted his feet against the bulkhead behind him and shoved. He went shooting down the passageway in a long, flat dive, his knife drawn and ready.

He twisted in the air, checked himself with his feet against the opposite bulkhead at the turn in the passage from which the mutie had attacked him, and floated lightly to his feet. The other branch of the passage was empty. His two companions joined him, sliding awkwardly across the floor plates.

"Is it gone?" demanded Alan Mahoney.

"Yes," agreed Hoyland. "I caught a glimpse of it as it ducked down that hatch. A female, I think. Looked like it had four legs."

"Two legs or four, we'll never catch it now," commented the third man.

"Who the Huff wants to catch it?" protested Mahoney.

"I don't."

"Well, I do, for one," said Hoyland. "By Jordan, if its aim had been two inches better, I'd be ready for the Converter."

"Can't either one of you two speak three words without swearing?" the third man disapproved. "What if the Captain could hear you?" He touched his forehead reverently as he mentioned the Captain.

"Oh, for Jordan's sake," snapped Hoyland, "don't be so stuffy, Mort Tyler. You're not a scientist yet. I reckon I'm as devout as you are; there's no grave sin in occasionally giving vent to your feelings. Even the scientists do it. I've heard 'em."

Tyler opened his mouth as if to expostulate, then apparently thought better of it. Mahoney touched Hoyland on the arm. "Look, Hugh," he pleaded, "let's get out of here. We've never been this high before. I'm jumpy; I want to get back down to where I can feel some weight on my feet."

Hoyland looked longingly toward the hatch through which his assailant had disappeared while his hand rested on the grip of his knife, then be turned to Mahoney. "OK, kid," he agreed, "It's along trip down anyhow."

He turned and slithered back toward the hatch, whereby they had reached the level where they now were, the other two following him. Disregarding the ladder by which they had mounted, he stepped off into the opening and floated slowly down to the deck fifteen feet below, Tyler and Mahoney close behind him. Another hatch, staggered a few feet from the first, gave access to a still lower deck. Down, down, down, and still farther down they dropped, tens and dozens of decks, each silent, dimly lighted, mysterious. Each time they fell a little faster, landed a little harder. Mahoney protested at last, "Let's walk the rest of the way, Hugh. That last jump hurt my feet."

"All right. But it will take longer. How far have we got to go? Anybody keep count?"

"We've got about seventy decks to go to reach farm country," answered Tyler.

"How d'you know?" demanded Mahoney suspiciously.

"I counted them, stupid. And as we came down I took one away for each deck."

"You did not. Nobody but a scientist can do numbering like that. Just because you're learning to read and write you think you know everything."

Hoyland cut in before it could develop into a quarrel. "Shut up, Alan. Maybe he can do it. He's clever about such things. Anyhow, it feels like about seventy decks -- I'm heavy enough."

"Maybe he'd like to count the blades on my knife."

"Stow it, I said. Dueling is forbidden outside the village. That is the Rule." They proceeded in silence, running lightly down the stairways until increasing weight on each succeeding level forced them to a more pedestrian pace. Presently they broke through into a level that was quite brilliantly lighted and more than twice as deep between decks as the ones above it. The air was moist and warm; vegetation obscured the view.

"Well, down at last," said Hugh. "I don't recognize this farm; we must have come down by a different line than we went up."

"There's a farmer," said Tyler. He put his little fingers to his lips and whistled, then called, "Hey! Shipmate! Where are we?"

The peasant looked them over slowly, then directed them in reluctant monosyllables to the main passageway which would lead them back to their own village.

A brisk walk of a mile and a half down a wide tunnel moderately crowded with traffic: travelers, porters, an occasional pushcart, a dignified scientist swinging in a litter borne by four husky orderlies and preceded by his master-at-arms to clear the common crew out of the way. A mile and a half of this brought them to the common of their own village, a spacious compartment three decks high and perhaps ten times as wide. They split up and went their own ways, Hugh to his quarters in the barracks of the cadets, young bachelors who do not live with their parents. He washed himself and went thence to the compartments of his uncle, for whom he worked for his meals. His aunt glanced up as he came in, but said nothing, as became a woman.

His uncle said, "Hello, Hugh. Been exploring again?"

"Good eating, Uncle. Yes."

His uncle, a stolid, sensible man, looked tolerantly amused. "Where did you go and what did you find?"

Hugh's aunt had slipped silently out of the compartment, and now returned with his supper which she placed before him. He fell to; it did not occur to him to thank her. He munched a bite before replying.

"Up. We climbed almost to the level-of-no-weight. A mutie tried to crack my skull."

His uncle chuckled. "You'll find your death In those passageways, lad. Better you should pay more attention to my business against the day when I die and get out of your way."

Hugh looked stubborn. "Don't you have any curiosity, Uncle?"

"Me? Oh, I was prying enough when I was a lad. I followed the main passage all the way around and back to the village. Right through the Dark Sector I went, with muties tagging my heels. See that scar?"

Hugh glanced at it perfunctorily. He had seen it many times before and heard the story repeated to boredom. Once around the Ship, pfft! He wanted to go everywhere, see everything, and find out the why of things. Those upper levels now: if men were not intended to climb that high, why had Jordan created them?

But he kept his own counsel and went on with his meal. His uncle changed the subject. "I've occasion to visit the Witness. John Black claims I owe him three swine. Want to come along?"

"Why, no, I guess not -- Wait! I believe I will."

"Hurry up, then."

They stopped at the cadets' barracks, Hugh claiming an errand. The Witness lived in a small, smelly compartment directly across the Common from the barracks, where he would be readily accessible to any who had need of his talents. They found him leaning in his doorway, picking his teeth with a fingernail. His apprentice, a pimply-faced adolescent with an intent nearsighted expression, squatted behind him.

"Good eating." said Hugh's uncle.

"Good eating to you, Edard Hoyland. D'you come on business, or to keep an old man company?"

"Both," Hugh's uncle returned diplomatically, then explained his errand.

"So," said the Witness. "Well, the contract's clear enough. Black John delivered ten bushels of oats, Expecting his pay in a pair of shoats; Ed brought his sow to breed for pig; John gets his pay when the pigs grow big.

"How big are the pigs now, Edard Hoyland?"

"Big enough," acknowledged Hugh's uncle, "but Black John claims three instead of two."

"Tell him to go soak his head. The Witness has spoken."

He laughed in a thin, high cackle.

The two gossiped for a few minutes, Edard Hoyland digging into his recent experiences to satisfy the old man's insatiable liking for details. Hugh kept decently silent while the older men talked. But when his uncle turned to go he spoke up. "I'll stay awhile, Uncle."

"Eh? Suit yourself. Good eating, Witness."

"Good eating, Edard Hoyland."

"I've brought you a present, Witness," said Hugh, when his uncle had passed out of hearing.

"Let me see it."

Hugh produced a package of tobacco which he had picked up from his locker at the barracks. The Witness accepted it without acknowledgment, then tossed it to his apprentice, who took charge of it.

"Come inside," invited the Witness, then directed his speech to his apprentice. "Here, you, fetch the cadet a chair."

"Now, lad," he added as they sat themselves down, "tell me what you have been doing with yourself."

Hugh told him, and was required to repeat In detail all the incidents of his more recent explorations, the Witness complaining the meanwhile over his inability to remember exactly everything he saw.

"You youngsters have no capacity," he pronounced. "No capacity. Even that lout--" he jerked his head toward the apprentice, "he has none, though he's a dozen times better than you. Would you believe it, he can't soak up a thousand lines a day, yet he expects to sit in my seat when I am gone. Why, when I was apprenticed, I used to sing myself to sleep on a mere thousand lines. Leaky vessels -- that's what you are."

Hugh did not dispute the charge, but waited for the old man to go on, which he did in his own time.

"You had a question to put to me, lad?"

"In a way, Witness."

"Well? Out with it. Don't chew your tongue."

"Did you ever climb all the way up to no-weight?"

"Me? Of course not. I was a Witness, learning my calling. I had the lines of all the Witnesses before me to learn, and no time for boyish amusements."

"I had hoped you could tell me what I would find there."

"Well, now, that's another matter. I've never climbed, but I hold the memories of more climbers than you will ever see. I'm an old man. I knew your father's father, and his grandsire before that. What is it you want to know?"

"Well..." What was it be wanted to know? How could he ask a question that was no more than a gnawing ache in his breast? Still... "What is it all for, Witness? Why are there all those levels above us?"

"Eh? How's that? Jordan's name, son, I'm a Witness, not a scientist."

"Well ... I thought you must know. I'm sorry."

"But I do know. What you want is the Lines from the Beginning."

"I've heard them."

"Hear them again. All your answers are in there, if you've the wisdom to see them. Attend me. No, this is a chance for my apprentice to show off his learning. Here, you! The Lines from the Beginning -- and mind your rhythm."

The apprentice wet his lips with his tongue and began:

"In the Beginning there was Jordan, thinking His lonely thoughts alone. In the Beginning there was darkness, formless, dead, and Man unknown. Out of the loneness came a longing, out of the longing came a vision, Out of the dream there came a planning, out of the plan there came decision: Jordan's hand was lifted and the Ship was born.

Mile after mile of snug compartments, tank by tank for the golden corn, Ladder and passage, door and locker, fit for the needs of the yet unborn. He looked on His work and

found it pleasing, meet for a race that was yet to be. He thought of Man; Man came into being; checked his thought and searched for the key. Man untamed would shame his Maker, Man unruled would spoil the Plan; So Jordan made the Regulations, orders to each single man, Each to a task and each to a station, serving a purpose beyond their ken, Some to speak and some to listen; order came to the ranks of men. Crew He created to work at their stations, scientists to guide the Plan. Over them all He created the Captain, made him judge of the race of Man. Thus it was in the Golden Age!

Jordan is perfect, all below him lack perfection in their deeds. Envy, Greed, and Pride of Spirit sought for minds to lodge their seeds. One there was who gave them lodging: accursed Huff, the first to sin! His evil counsel stirred rebellion, planted doubt where it had not been; Blood of martyrs stained the floor plates, Jordan's Captain made the Trip. Darkness swallowed up--"

The old man gave the boy the back of his hand, sharp across the mouth. "Try again!"

"From the beginning?"

"No! From where you missed."

The boy hesitated, then caught his stride: "Darkness swallowed ways of virtue, Sin prevailed through out the Ship . ."

The boy's voice droned on, stanza after stanza, reciting at great length but with little sharpness of detail the dim, old story of sin, rebellion, and the time of darkness. How wisdom prevailed at last and the bodies of the rebel leaders were fed to the Converter. How some of the rebels escaped making the Trip and lived to father the muties. How a new Captain was chosen, after prayer and sacrifice. Hugh stirred uneasily, shuffling his feet. No doubt the answers to his questions were there, since these were the Sacred Lines, but he had not the wit to understand them. Why? What was it all about? Was there really nothing more to life than eating and sleeping and finally the long Trip? Didn't Jordan intend for him to understand? Then why this ache in his breast? This hunger that persisted in spite of good eating?

While he was breaking his fast after sleep an orderly came to the door of his uncle's compartments. "The scientist requires the presence of Hugh Hoyland," be recited glibly.

Hugh knew that the scientist referred to was lieutenant Nelson, in charge of the spiritual and physical welfare of the Ship's sector which included Hugh's flative vilage. He bolted the last of his breakfast and hurried after the messenger.

"Cadet Hoyland!" he was announced. The scientist locked up from his own meal and said:

"Oh, yes. Come in, my boy. Sit down. Have you eaten?"

Hugh acknowjedged that he had, but his eyes rested with interest on the fancy fruit In front of his superior. Nelson followed his glance. "Try some of these figs. They're a new mutation; I had them brought all the way from the far side. Go ahead -- a man your age always has somewhere to stow a few more bites."

Hugh accepted with much self-consciousness. Never before had he eaten in the presence of a scientist. The elder leaned back in his chair, wiped his fingers on his shirt, arranged his beard, and started in.

"I haven't seen you lately, son. Tell me what you have been doing with yourself." Before Hugh could reply he went on: "No, don't tell me; I will tell you. For one thing you have been exploring, climbing, without too much respect for the forbidden areas. Is it not so?" He held the young man's eye. Hugh fumbled for a reply.

But he was let off again. "Never mind. I know, and you know that I know. I am not too displeased. But it has brought it forcibly to my attention that it is time that you decided what you are to do with your life. Have you any plans?"

"Well, no definite ones, sir."

"How about that girl, Edris Baxter? D'you intend to marry her?"

"Why, uh -- I don't know, sir. I guess I want to, and her father is willing, I think. Only..."

"Only what?"

"Well, he wants me to apprentice to his farm. I suppose it's a good idea. His farm together with my uncle's business would make a good property."

"But you're not sure?"

"Well, I don't know."

"Correct. You're not for that. I have other plans. Tell me, have you ever wondered why I taught you to read and write? Of course, you have. But you've kept your own counsel. That is good.

"Now attend me. I've watched you since you were a small child. You have more imagination than the common run, more curiosity, more go. And you are a born leader. You were different even as a baby. Your head was too large, for one thing, and there were some who voted at your birth inspection to put you at once into the Converter. But I held them off. I wanted to see how you would turn out.

"A peasant life is not for the likes of you. You are to be a scientist."

The old man paused and studied his face. Hugh was confused, speechless. Nelson went on, "Oh, yes. Yes, indeed. For a man of your temperament, there are only two things to do with him: Make him one of the custodians, or send him to the Converter."

"Do you mean, sir, that I have nothing to say about it?"

"If you want to put it that bluntly, yes. To leave the bright ones among the ranks of the Crew is to breed heresy. We can't have that. We had it once and it almost destroyed tbe human race. You have marked yourself out by your exceptional ability; you must now be instructed in right thinking, be initiated into the mysteries, in order that you may be a conserving force rather than a focus of infection and a source of trouble." The orderly reappeared loaded down with bundles which he dumped on the deck. Hugh glanced at them, then burst out, "Why, those are my things!"

"Certainly," acknowledged Nelson. "I sent for them. You're to sleep here henceforth. I'll see you later and start you on your studies, unless you have something more on your mind?"

"Why, no, sir. I guess not. I must admit I am a little confused. I suppose ... I suppose this means you don't want me to marry?"

"Oh, that," Nelson answered indifferently. "Take her if you like; her father can't protest now. But let me warn you, you'll grow tired of her."

Hugh Hoyland devoured the ancient books that his mentor permitted him to read, and felt no desire for many, many sleeps to go climbing, or even to stir out of Nelson's cabin. More than once he felt that he was on the track of the secret -- a secret as yet undefined, even as a question -- but again he would find himself more confused than ever. It was evidently harder to reach the wisdom of scientisthood than he had thought.

Once, while he was worrying away at the curious twisted characters of the ancients and trying to puzzle out their odd rhetoric and unfamiliar terms, Nelson came into the little compartment that had been set aside for him, and, laying a fatherly hand on his shoulder, asked, "How goes it, boy?"

"Why, well enough, sir, I suppose," he answered, laying the book aside. "Some of it is not quite clear to me -- not clear at all, to tell the truth."

"That is to be expected," the old man said equably. "I've let you struggle along by yourself at first in order that you may see the traps that native wit alone will fall into. Many of these things are not to be understood without instruction. What have you there?" He picked up the book and glanced at it. It was inscribed Basic Modern Physics. "So? This is one of the most valuable of the sacred writings, yet the uninitiate could not possibly make good use of it without help. The first thing that you must understand, my boy, is that our forefathers, for all their spiritual perfection, did not look at things in the fashion in which we do.

"They were incurable romantics, rather than rationalists, as we are, and the truths which they handed down to us, though strictly true, were frequently clothed in allegorical language. For example, have you come to the Law of Gravitation?"

"I read about it."

"Did you understand it? No, I can see that you didn't."

"Well," said Hugh defensively, "it didn't seem to mean anything. It just sounded silly, if you will pardon me, sir."

"That illustrates my point. You were thinking of it in literal terms, like the laws governing electrical devices found elsewhere in this same book. 'Two bodies attract each other directly as the product of their masses and inversely as the square of their distance.' It sounds like a rule for simple physical facts, does it not? Yet it is nothing of the sort; it was the poetical way the old ones bad of expressing the rule of propinquity which governs the emotion of love. The bodies referred to are human bodies, mass is their capacity for love. Young people have a greater capacity for love than the elderly; when they are thrown together, they fall in love, yet when they are separated they soon get over it. 'Out of sight, out of mind.' It's as simple as that. But you were seeking some deep meaning for it."

Hugh grinned. "I never thought of looking at it that way. I can see that I am going to need a lot of help."

"Is there anything else bothering you just now?"

"Well, yes, lots of things, though I probably can't remember them offhand. I mind one thing: Tell me, Father, can muties be considered as being people?"

"I can see you have been listening to idle talk. The answer to that is both yes and no. It is true that the niuties originally descended from people but they are no longer part

of the Crew; they cannot now be considered as members of the human race, for they have flouted Jordan's Law.

"This is a broad subject," he went on, settling down to it. "There is even some question as to the original meaning of the word 'mutie.' Certainly they number among their ancestors the mutineers who escaped death at the time of the rebellion. But they also have in their blood the blood of many of the mutants who were born during the dark age. You understand, of course, that during that period our present wise rule of inspecting each infant for the mark of sin and returning to the Converter any who are found to be mutations was not in force. There are strange and horrible things crawling through the dark passageways and lurking in the deserted levels."

Hugh thought about it for a while, then asked, "Why is it that mutations still show up among us, the people?"

"That is simple. The seed of sin is still in us. From time to time it still shows up, incarnate. In destroying those monsters we help to cleanse the stock and thereby bring closer the culmination of Jordan's Plan, the end of the Trip at our heavenly home, Far Centaurus."

Hoyland's brow wrinkled again. "That is another thing that I don't understand. Many of these ancient writings speak of the Trip as if it were an actual moving, a going somewhere, as if the Ship itself were no more than a pushcart. How can that be?"

Nelson chuckled. "How can it, indeed? How can that move which is the background against which all else moves? The answer, of course, is plain. You have again mistaken allegorical language for the ordinary usage of everyday speech. Of course, the Ship is solid, immovable, in a physical sense. How can the whole universe move? Yet, it does move, in a spiritual sense. With every righteous act we move closer to the sublime destination of Jordan's Plan."

Hugh nodded. "I think I see."

"Of course, it is conceivable that Jordan could have fashioned the world in some other shape than the Ship, had it suited His purpose. When man was younger and more poetical, holy men vied with one another in inventing fanciful worlds which Jordan might have created. One school invented an entire mythology of a topsy-turvy world of endless reaches of space, empty save for pinpoints of light and bodiless mythological monsters. They called it the heavenly world, or heaven, as if to contrast it with the solid reality of the Ship. They seemed never to tire of speculating about it, inventing details for it, and of outlining pictures of what they conceived it to be like. I suppose they did it to the greater glory of Jordan, and who is to say that He found their dreams unacceptable? But in this modern age we have more serious work to do."

Hugh was not interested In astronomy. Even his untutored mind had been able to see in its wild extravagance an intention not literal. He turned to problems nearer at hand.

"Since the muties are the seed of sin, why do we make no effort to wipe them out? Would not that be an act that would speed the Plan?"

The old man considered a while before replying. "That is a fair question and deserves a straight answer. Since you are to be a scientist you will need to know the answer. Look at it this way. There is a definite limit to the number of Crew the Ship can support. If our numbers increase without limit, there comes a time when there will not be good eating for all of us. Is it not better that some should die in brushes with the muties than that we should grow in numbers until we killed each other for food?.

"The ways of Jordan are inscrutable. Even the muties have a part in His Plan."

It seemed reasonable, but Hugh was not sure.

But when Hugh was transferred to active work as a junior scientist in the operation of the Ship's functions, he found there were other opinions. As was customary, he put in a period serving the Converter. The work was not onerous; he had principally to check in the waste materials brought in by porters from each of the villages, keep books of their contributions, and make sure that no redemable metal was introduced into the first-stage hopper. But it brought him into contact with Bill Ertz, the Assistant Chief Engineer, a man not much older than himself.

He discussed with him the things he had learned from Nelson, and was shocked at Ertz's attitude.

"Get this through your head, kid," Ertz told him. "This is a practical job for practical men. Forget all that romantic nonsense. Jordan's Plan! That stuff is all right to keep the peasants quiet and in their place, but don't fall for it yourself. There is no Plan, other than our own plans for looking out for ourselves. The Ship has to have light and heat and power for cooking and irrigation. The Crew can't get along without those things and that makes us boss of the Crew.

"As for this softheaded tolerance toward the muties, you're going to see some changes made! Keep your mouth shut and string along with us."

It impressed on him that he was expected to maintain a primary loyalty to the bloc of younger men among the scientists. They were a well-knit organization within an organization and were made up of practical, hardheaded men who were working toward improvement of conditions throughout the Ship, as they saw them. They were well knit because an apprentice who failed to see things their way did not last long. Either he failed to measure up and soon found himself back in the ranks of the peasants, or, as was more likely, suffered some mishap and wound up in the Converter.

And Hoyland began to see that they were right.

They were realists. The Ship was the Ship. It was a fact, requiring no explanation. As for Jordan, who had ever seen Him, spoken to Him? What was this nebulous Plan of His? The object of life was living. A man was born, lived his life, and then went to the Converter. It was as simple as that, no mystery to it, no sublime Trip and no Centaurus. These romantic stories were simply hangovers from the childhood of the race before men gained the understanding and the courage to look facts in the face.

He ceased bothering his head about astronomy and mystical physics and all the other mass of mythology he bad been taught to revere. He was still amused, more or less, by the Lines from the Beginning and by all the old stories about Earth (what the Huff was 'Earth,' anyhow?) but now realized that such things could be taken seriously only by children and dullards.

Besides, there was work to do. The younger men, while still maintaining the nominal authority of their elders, had plans of their own, the first of which was a systematic extermination of the muties. Beyond that, their intentions were still fluid, but they contemplated making full use of the resources of the Ship, including the upper levels. The young men were able to move ahead with their plans without an open breach with their elders because the older scientists simply did not bother to any great extent with the routine of the Ship. The present Captain had grown so fat that he rarely stirred from his cabin; his aide, one of the young men's bloc, attended to affairs for him.

Hoyland never laid eyes on the Chief Engineer save once, when he showed up for the purely religious ceremony of manning landing stations.

The project of cleaning out the muties required reconnaissance of the upper levels to be done systematically. It was in carrying out such scouting that Hugh Hoyland was again ambushed by a mutie.

This mutie was more accurate with his slingshot. Hoyland's companions, forced to retreat by superior numbers, left him for dead.

Joe-Jim Gregory was playing himself a game of checkers. Time was when they had played cards together, but Joe, the head on the right, had suspected Jim, the left-hand member of the team, of cheating. They had quarreled about it, then given it up, for they both learned early in their joint career that two heads on one pair of shoulders must necessarily find ways of getting along together.

Checkers was better. They could both see the board, and disagreement was impossible.

A loud metallic knocking at the door of the oompartment interrupted the game. Joe-Jim unsheathed his throwing knife and cradled it, ready for quick use. "Come in!" roared Jim.

The door opened, the one who had knocked backed into the room -- the only safe way, as everyone knew, to enter Joe-Jim's presence. The newcomer was squat and rugged and powerful, not over four feet in height. The relaxed body of a man hung across one shoulder and was steadied by a hand.

Joe-Jim returned the knife to its sheath. "Put it down, Bobo," Jim ordered.

"And close the door," added Joe. "Now what have we got here?"

It was a young man, apparently dead, though no wound appeared on him. Bobo patted a thigh. "Eat 'im?" he said hopefully. Saliva spilled out of his still-opened lips.

"Maybe," temporized Jim. "Did you kill him?"

Bobo shook his undersized head.

"Good Bobo," Joe approved. "Where did you hit him?"

"Bobo hit him there." The microcephalic shoved a broad thumb against the supine figure in the area between the umbilicus and the breasthone.

"Good shot," Joe approved. "We couldn't have done better with a knife."

"Bobo good shot," the dwarf agreed blandly. "Want see?" He twitched his slingshot invitingly.

"Shut up," answered Joe, not unkindly. "No, we don't want to see; we want to make him talk."

"Bobo fix," the short one agreed, and started with simple brutality to carry out his purpose.

Joe-Jim slapped him away, and applied other methods, painful but considerably less drastic than those of the dwarf. The younger man jerked and opened his eyes.

"Eat 'im?" repeated Bobo.

"No," said Joe. "When did you eat last?" inquired Jim.

Bobo shook his head and rubbed his stomach, indicating with graphic pantomime that it had been a long time, too long. Joe-Jim went over to a locker, opened it, and withdrew a haunch of meat. He held it up. Jim smelled it and Joe drew his head away in

nose-wrinkling disgust Joe-Jim threw, it to Bobo, who snatched it happily out of the air. "Now, get out," ordered Jim.

Bobo trotted away, closing the door behind him. JoeJim turned to the captive and prodded him with his foot. "Speak up," said Jim. "Who the Huff are you?"

The young man shivered, put a hand to his head, then seemed suddenly to bring his surroundings into focus, for be scrambled to his feet, moving awkwardly. against the low weight conditions of this level, and reached for his knife.

It was not at his belt.

Joe-Jim had his own out and brandished it. "Be good and you won't get hurt. What do they call you?" The young man wet his lips, and his eyes hurried about the room. "Speak up," said Joe.

"Why bother with him?" inquired Jim. "I'd say he was only good for meat. Better call Bobo back."

"No hurry about that," Joe answered. "I want to talk to him. What's your name?"

The prisoner looked again at the kife and muttered, "Hugh Hoyland."

"That doesn't tell us much," Jim commented. "What d'you do? What village do you come from? And what were you doing in mutie country?" But this time Hoyland was sullen. Even the prick of the knife against his ribs caused him only to bite his lips. "Shucks," said Joe, "he's only a stupid peasant. Let's drop it."

"Shall we finish him off?"

"No. Not now. Shut him up."

Joe-Jim opened the door of a small side compartment, and urged Hugh in with the knife. He then closed and fastened the door and went back to his game. "Your move, Jim."

The compartment in which Hugh was locked was dark. He soon satisfied himself by touch that the smooth steel walls were entirely featureless save for the solid, securely fastened door. Presently he lay down on the deck and gave himself up to fruitless thinking.

He had plenty of time to think, time to fall asleep and awaken more than once. And time to grow very hungry and very, very thirsty.

When Joe-Jim next took sufficient interest in his prisoner to open the door of the cell, Hoyland was not immediately in evidence. He had planned many times what he would do when the door opened and his chance came, but when the event arrived, he was too weak, semi-comatose. Joe-Jim dragged him out. , The disturbance roused him to partial comprehension. He sat up and stared around him. "Ready to talk?" asked Jim. Hoyland opened his mouth but no words came out.

"Can't you see he's too dry to talk?" Joe told his twin. Then to Hugh: "Will you talk if we give you some water?"

Hoyland looked puzzled, then nodded vigorously.

Joe-Jim returned in a moment with a mug of water. Hugh drank greedily, paused, and seemed about to faint.

Joe-Jim took the mug from him. "That's enough for now," said Joe. "Tell us about yourself."

Hugh did so. In detail, being prompted from time to time by questions from one of the twins, or a kick against his shin.

Hugh accepted a de facto condition of slavery with no particular resistance and no great disturbance of soul. The word 'slave' was not in his vocabulary, but the condition was a commonplace in everything he had ever known. There had always been those who gave orders and those who carried them out; he could imagine no other condition, no other type of social organization. It was a fact of life.

Though naturally he thought of escape.

Thinking about it was as far as he got. Joe-Jim guessed his thoughts and brought the matter out into the open. Joe told him, "Don't go getting ideas, youngster. Without a knife you wouldn't get three levels away in this part of the Ship. If you managed to steal a knife from me, you still wouldn't make it down to high-weight. Besides, there's Bobo."

Hugh waited a moment, as was fitting, then said, "Bobo?"

Jim grinned and replied, "We told Bobo that you were his to butcher, if he liked, if you ever stuck your head out of our compartments without us. Now he sleeps outside the door and spends a lot of his time there."

"It was only fair," put in Joe. "He was disappointed when we decided to keep you."

"Say," suggested Jim, turning his bead toward his brother's, "how about some fun?" He turned back to Hugh. "Can you throw a knife?"

"Of course," Hugh answered.

"Let's see you. Here." Joe-Jim handed him their own knife. Hugh accepted it, jiggling it in his band to try its balance. "Try my mark."

Joe-Jim had a plastic target. set up at the far end of the room from his favorite chair, on which he was wont to practice his own skill. Hugh eyed it, and, with an arm motion too fast to follow, let fly. He used the economical underhand stroke, thumb on the blade, fingers together. The blade shivered in the target, well centered in the chewed-up area which marked Joe-Jim's best efforts. "Good boy!" Joe approved. "What do you have in mind, Jim?"

"Let's give him the knife and see how far he gets."

"No," said Joe, "I don't agree."

"Why not?"

"If Bobo wins, we're out one servant. If Hugh wins, we lose both Bobo and him. It's wasteful."

"Oh, well, if you insist."

"I do. Hugh, fetch the knife."

Hugh did so. It had not occurred to him to turn the knife against Joe-Jim. The master was the master. For servant to attack master was not simply repugnant to good morals, it was an idea so wild that it did not occur to him at all.

Hugh had expected that Joe-Jim would be impressed by his learning as a scientist. It did not work out that way. Joe-Jim, especially Jim, loved to argue. They sucked Hugh dry in short order and figuratively cast him aside. Hoyland felt humiliated. After all, was he not a scientist? Could he not read and write?

"Shut up," Jim told Hugh. "Reading is simple. I could do it before your father was born. D'you think you're the first scientist that has served me? Scientists--bah! A pack of

ignoramuses!" In an attempt to re-establish his own intellectual conceit, Hugh expounded the theories of the younger scientists, the strictly matter-of-fact, hard-boiled realism which rejected all religious interpretation and took the Ship as it was. He confidently expected Joe-Jim to approve such a point of view; it seemed to fit their temperaments. They laughed in his face.

"Honest," Jim insisted, when be bad ceased snorting, "are you young punks so stupid as all that? Why you're worse than your elders."

"But you just got through saying," Hugh protested in hurt tones, "that all our accepted religious notions are so much bunk. That is just what my friends think. They want to junk all that old nonsense."

Joe started to speak; Jim cut in ahead of him. "Why bother with him, Joe? He's hopeless."

"No, he's not. I'm enjoying this. He's the first one I've talked with in I don't know how long who stood any chance at all of seeing the truth. Let us be -- I want to see whether that's a head he has on his shoulders, or just a place to hang his ears."

"O.K.," Jim agreed, "but keep it quiet. I'm going to take a nap." The left-hand head closed its eyes, soon it was snoring. Joe and Hugh continued their discussion in whispers.

"The trouble with you youngsters," Joe said, "is that if you can't understand a thing right off, you think it can't be true. The trouble with your elders is, anything they didn't understand they reinterpreted to mean something else and then thought they understood it. None of you has tried believing clear words the way they were written and then tried to understand them on that basis. Oh, no, you're all too bloody smart for that! If you can't see it right off, it ain't so; it must mean something different."

"What do you mean?" Hugh asked suspiciously.

"Well, take the Trip, for instance. What does it mean to you?

"Well, to my mind, it doesn't mean anything. It's just a piece of nonsense to impress the peasants."

"And what is the accepted meaning?"

"Well, it's where you go when you die, or rather what you do. You make the Trip to Centaurus."

"And what is Centaurus?"

"It's -- mind you, I'm just telling you the orthodox answers; I don't really believe this stuff -- it's where you arrive when you've made the Trip, a place where everybody's happy and there's always good eating." Joe snorted. Jim broke the rhythm of his snoring, opened one eye, and settled back again with a grunt.

"That's just what I mean," Joe went on in a lower whisper. "You don't use your head. Did it over occur to you that the Trip was just what the old books said It was: the Ship and all the Crew actually going somewhere, moving?" Hoyland thought about it. "You don't mean for me to take you seriously. Physically, it's an impossibility. The Ship can't go anywhere. It already is everywhere. We can make a trip through it, but the Trip, that has to have a spiritual meaning, if it has any."

Joe called on Jordan to support him. "Now, listen," he said, "get this through that thick head of yours. Imagine a place a lot bigger than the Ship, a lot bigger, with the Ship inside it, moving. D'you get it?"

Hugh tried. He tried very hard. He shook his bead. "It doesn't make sense," he said. "There can't be anything bigger than the Ship. There wouldn't be any place for it to be."

"Oh, for Huff's sake! Listen. Outside the Ship, get that? Straight down beyond the level in every direction. Emptiness out there. Understand me?"

"But there isn't anything below the lowest level. That's why it's the lowest level."

"Look. If you took a knife and started digging a hole in the floor of the lowest level, where would it get you?"

"But you can't. It's too hard."

"But suppose you did and it made a hole. Where would that hole go? Imagine it."

Hugh shut his eyes and tried to imagine digging a hole in the lowest level. Digging as if it were soft, soft as cheese. He began to get some glimmering of a possibility, a possibility that was unsettling, soul-shaking. He was falling, falling into a hole that he had dug which had no levels under it. He opened his eyes very quickly. "That's awful!" he ejaculated. "I won't believe it."

Joe-Jim got up. "I'll make you believe it," he said grimly, "if I have to break your neck to do it." He strode over to the outer door and opened it. "Bobo!" he shouted.

"Bobo!"

Jim's head snapped erect. "Wassa matter? Wha's going on?"

"We're going to take Hugh to no-weight."

"What for?"

"To pound some sense into his silly head."

"Some other time."

"No, I want to do it now."

"All right, all right. No need to shake. I'm awake now anyhow."

Joe-Jim Gregory was almost as nearly unique in his -- or their -- mental ability as he was in his bodily construction. Under any circumstances he would have been a dominant personality; among the muties it was inevitable that he should bully them, order them about, and live on their services. Had he had the will-to-power, it is conceivable that he could have organized the muties to fight and overcome the Crew proper.

But he lacked that drive. He was by native temperament an intellectual, a bystander, an observer. He was interested in the 'how' and the 'why,' but his will to action was satisfied with comfort and convenience alone.

Had he been born two normal twins and among the Crew, it is likely that he would have drifted into scientisthood as the easiest and most satisfactory answer to the problem of living and as such would have entertained himself mildly with conversation and administration. As it was, he lacked mental companionship and had whiled away three generations reading and rereading books stolen for him by his stooges.

The two halves of his dual person had argued and discussed what they had read, and had almost inevitably arrived at a reasonably coherent theory of history and the physical world, except in one respect. The concept of fiction was entirely foreign to them; they treated the novels that had been provided for the Jordan expedition in exactly the same fashion that they did text and reference books.

This led to their one major difference of opinion. Jim regarded Allan Quartermain as the greatest man who had ever lived; Joe held out for John Henry.

They were both inordinately fond of poetry; they could recite page after page of Kipling, and were nearly as fond of Rhysling, the blind singer of the spaceways. Bobo backed in. Joe-Jim hooked a thumb toward Hugh. "Look," said Joe, "he's going out."

"Now?" said Bobo happily, and grinned, slavering.

"You and your stomach!" Joe answered, rapping Bobo's pate with his knuckles. "No, you don't eat him. You and him, blood brothers. Get it?"

"Not eat 'im?"

"No. Fight for him. He fights for you."

"O.K." The pinhead shrugged his shoulders at the inevitable. "Blood brothers. Bobo know."

"All right. Now we go up to the place-where-everybody-flies. You go ahead and make lookout."

They climbed in single file, the dwarf running ahead to spot the lie of the land, Hoyland behind him, Joe-Jim bringing up the rear, Joe with eyes to the front, Jim watching their rear, head turned over his shoulder.

Higher and higher they went, weight slipping imperceptibly from them with each successive deck. They emerged finally into a level beyond which there was no further progress, no opening above them. The deck curved gently, suggesting that the true shape of the space was a giant cylinder, but overhead a metallic expanse which exhibited a similar curvature obstructed the view and prevented one from seeing whether or not the deck in truth curved back on itself.

There were no proper bulkheads; great stanchions, so huge and squat as to give an impression of excessive, unnecessary strength, grew thickly about them, spacing deck and overhead evenly apart.

Weight was imperceptible. If one remained quietly in one place, the undetectable residuum of weight would bring the body in a gentle drift down to the 'floor,' but 'up' and 'down' were terms largely lacking in meaning. Hugh did not like it; it made him gulp, but Bobo seemed delighted by it and not unused to it. He moved through the air like an uncouth fish, banking off stanchion, floor plate, and overhead as suited his convenience.

Joe-Jim set a course parallel to the common axis of the inner and outer cylinders, following a passageway formed by the orderly spacing of the stanchions. There were handrails set along the passage, one of which he followed like a spider on its thread. He made remarkable speed, which Hugh floundered to maintain. In time, be caught the trick of the easy, effortless, overhand pull, the long coast against nothing but air resistance, and the occasional flick of the toes or the hand against the floor. But he was much too busy to tell how far they went before they stopped. Miles, he guessed it to be, but he did not know.

When they did stop, it was because the passage, had terminated. A solid bulkhead, stretching away to right and left, barred their way. Joe-Jim moved along it to the right, searching.

He found what he sought, a man-sized door, closed, its presence distinguishable only by a faint crack which marked its outline and a cursive geometrical design on its surface. Joe-Jim studied this and scratched his right-hand head. The two heads whispered to each other. Joe-Jim raised his hand in an awkward gesture.

"No, no!" said Jim. Joe-Jim checked himself. "How's that?" Joe answered. They whispered together again, Joe nodded, and Joe-Jim again raised his hand.

He traced the design on the door without touching It, moving his forefinger through the air perhaps four inches from the surface of the door. The order of succession in which his finger moved over the lines of the design appeared simple but certainly not obvious.

Finished, he shoved a palm against the adjacent bulkhead, drifted back from the door, and waited.

A moment later there was a soft, almost inaudible insufflation; the door stirred and moved outward perhaps six inches, then stopped. Joe-Jim appeared puzzled. He ran his hands cautiously into the open crack and pulled. Nothing happened. He called to Bobo, "Open it."

Bobo looked the situation over, with a scowl on his forehead which wrinkled almost to his crown. He then placed his feet against the bulkhead, steadying himself by grasping the door with one hand. He took hold of the edge of the door with both hands, settled his feet firmly, bowed his body, and strained.

He held his breath, chest rigid, back bent, sweat breaking out from the effort. The great cords in his neck stood out, making of his head a misshapen pyramid. Hugh could hear the dwarf's joints crack. It was easy to believe that he would kill himself with the attempt, too stupid to give up.

But the door gave suddenly, with a plaint of binding metal. As the door, in swinging out, slipped from Bobo's fingers, the unexpectedly released tension in his legs shoved him heavily away from the bulkhead; he plunged down the passageway, floundering for a handhold. But he was back in a moment, drifting awkwardly through the air as he massaged a cramped calf.

Joe-Jim led the way inside, Hugh close behind him. "What is this place?" demanded Hugh, his curiosity overcoming his servant manners.

"The Main Control Room," said Joe.

Main Control Room! The most sacred and taboo place in the Ship, its very location a forgotten mystery. In the credo of the young men it was nonexistent. The older scientists varied in their attitude between fundamentalist acceptance and mystical belief. As enlightened as Hugh believed himself to be, the very words frightened him. The Control Room! Why, the very spirit of Jordan was said to reside there. He stopped.

Joe-Jim stopped and Joe looked around. "Come on," he said. "What's the matter?"

"Why, uh ... uh ..."

"Speak up."

"But ... but this place is haunted ... this is Jordan's..."

"Oh, for Jordan's sake!" protested Joe, with slow exasperation. "I thought you told me you young punks didn't take any stock in Jordan."

"Yes, but ... but this is..."

"Stow it. Come along, or I'll have Bobo drag you." He turned away. Hugh followed, reluctantly, as a man climbs a scaffold. They threaded through a passageway just wide enough for two to use the handrails abreast. The passage curved in a wide sweeping arc of full ninety degrees, then opened into the control room proper. Hugh peered past Joe-Jim's broad shoulders, fearful but curious.

He stared into a well-lighted room, huge, quite two hundred feet across. It was spherical, the interior of a great globe. The surface of the globe was featureless, frosted silver. In the geometrical center of the sphere, Hugh saw a group of apparatus about fifteen feet across. To his inexperienced eye, it was completely unintelligible; he could not have described it, but he saw that it floated steadily, with no apparent support.

Running from the end of the passage to the mass at the center of the globe was a tube of metal latticework, wide as the passage itself. It offered the only exit from the passage. Joe-Jim turned to Bobo, and ordered him to remain in the passageway, then entered the tube.

He pulled himself along it, hand over hand, the bars of the latticework making a ladder. Hugh followed him; they emerged into the mass of apparatus occupying the center of the sphere. Seen close up, the gear of the control station resolved itself into its individual details, but it still made no sense to him. He glanced away from it to the inner surface of the globe which surrounded them.

That was a mistake. The surface of the globe, being featureless silvery white, had nothing to lend it perspective. It might have been a hundred feet away, or a thousand, or, many miles. He had never experienced an unbroken height greater than that between two decks, nor an open space larger than the village common. He was panic-stricken, scared out of his wits, the more so in that he did not know what it was he feared. But the ghost of long-forgotten jungle ancestors possessed him and chilled his stomach with the basic primitive fear of falling.

He clutched at the control gear, clutched at Joe-Jim.

Joe-Jim let him have one, hard across the mouth with the flat of his hand. "What's the matter with you?" growled Jim.

"I don't know," Hugh presently managed to get out. "I don't know, but I don't like this place. Let's get out of here!"

Jim lifted his eyebrows to Joe, looked disgusted, and said, "We might as well. That weak-bellied baby will never understand anything you tell him."

"Oh, he'll be all right," Joe replied, dismissing the matter. "Hugh, climb into one of the chairs; there, that one."

In the meantime, Hugh's eyes had fallen on the tube whereby they had reached the control center and had followed it back by eye to the passage door. The sphere suddenly shrank to its proper focus and the worst of his panic was over. He complied with the order, still trembling, but able to obey. The control center consisted of a rigid framework, made up of chairs, or frames, to receive the bodies of the operators, and consolidated instrument and report panels, mounted in such a fashion as to be almost in the laps of the operators, where they were readily visible but did not obstruct the view. The chairs had high supporting sides, or arms, and mounted in these aims were the controls appropriate to each officer on watch, but Hugh was not yet aware of that. He slid under the instrument panel into his seat and settled back, glad of its enfolding stability. It fitted him in a semi-reclining position, footrest to head support.

But something was happening on the panel in front of Joe-Jim; he caught it out of the corner of his eye and turned to look. Bright red letters glowed near the top of the board: 2ND ASTROGATOR POSTED. What was a second astrogator? He didn't know; then he noticed that the extreme top of his own board was labeled 2ND ASTROGATOR and concluded it must be himself, or rather, the man who should be sitting there. He felt

momentarily uncomfortable that the proper second astrogator might come in and find him usurping his post, but he put it out of his mind; it seemed unlikely.

But what was a second astrogator, anyhow?

The letters faded from Joe-Jim's board, a red dot appeared on the left-hand edge and remained. Joe-Jim did something with his right hand; his board reported: ACCELERATION: ZERO, then MAIN DRIVE. The last two words blinked several times, then were replaced with NO REPORT. These words faded out, and a bright green dot appeared near the right-hand edge.

"Get ready," said Joe, looking toward Hugh; "the light is going out."

"You're not going to turn out the light?" protested Hugh.

"No, you are. Take a look by your left hand. See those little white lights?"

Hugh did so, and found, shining up through the surface the chair arm, little beads of light arrayed to form two squares, one above the other. "Each one controls the light of one quadrant," explained Joe. "Cover them with your hand to turn Out the light. Go ahead, do it."

Reluctantly, but fascinated, Hugh did as he was directed. He placed a palm over the tiny lights, and waited. The silvery sphere turned to dull lead, faded still more, leaving them in darkness complete save for the silent glow from the instrument panels. Hugh felt nervous but exhilarated. He withdrew his palm; the sphere remained dark, the eight little lights had turned blue.

"Now," said Joe, "I'm going to show you the Stars!"

In the darkness, Joe-Jim's right hand slid over another pattern of eight lights.

Creation.

Faithfully reproduced, shining as steady and serene from the walls of the stellarium as did their originals from the black deeps of space, the mirrored stars looked down on him. Light after jeweled light, scattered in careless bountiful splendor across the simulacrum sky, the countless suns lay before him; before him, over him, under him, behind him, in every direction from him. He hung alone in the center of the stellar universe.

"Oooooh!" It was an involuntary sound, caused by his indrawn breath. He clutched the chair arms hard enough to break fingernails, but he was not aware of it. Nor was he afraid at the moment; there was room in his being for but one emotion. Life within the Ship, alternately harsh and workaday, had placed no strain on his innate capacity to experience beauty; for the first time in his life he knew the intolerable ecstasy of beauty unalloyed. It shook him and hurt him, like the first trembling intensity of sex.

It was some time before Hugh sufficiently recovered from the shock and the ensuing intense preoccupation to be able to notice Jim's sardonic laugh, Joe's dry chuckle. "Had enough?" inquired Joe. Without waiting for a reply, Joe-Jim turned the lights back on, using the duplicate controls mounted in the left arm of his chair.

Hugh sighed. His chest ached and his heart pounded. He realized suddenly that he had been holding his breath the entire time that the lights had been turned out. "Well, smart boy," asked Jim, "are you convinced?"

Hugh sighed again, not knowing why. With the lights back on, he felt safe and snug again, but was possessed of a deep sense of personal loss. He knew, subconsciously,

that, having seen the stars, he would never be happy again. The dull ache in his breast, the vague inchoate yearning for his lost heritage of open sky and stars, was never to be silenced, even though he was yet too ignorant to be aware of it at the top of his mind. "What was it?" he asked in a hushed voice.

"That's," answered Joe. "That's the world. That's the universe. That's what we've been trying to tell you about."

Hugh tried furiously to force his inexperienced mind to comprehend. "That's what you mean by Outside?" he asked. "All those beautiful little lights?"

"Sure," said Joe, "only they aren't little. They're a long way off, you see; maybe thousands of miles."

"What?"

"Sure, sure," Joe persisted. "There's lots of room out there. Space. It's big. Why, some of those stars may be as big as the Ship, maybe bigger."

Hugh's face was a pitiful study in overstrained imagination. "Bigger than the Ship?" he repeated. "But ... but ..."

Jim tossed his head impatiently and said to Joe, "Wha'd' I tell you? You're wasting our time on this lunk. He hasn't got the capacity."

"Easy, Jim," Joe answered mildly; "don't expect him to run before he can crawl. It took us a long time. I seem to remember that you were a little slow to believe your own eyes." "That's a lie," said Jim nastily. "You were the one that had to be convinced."

"O.K., O.K.," Joe conceded, "let it ride. But it was a long time before we both had it all straight."

Hoyland paid little attention to the exchange between the two brothers. It was a usual thing; his attention was centered on matters decidedly not usual. "Joe," he asked, "what became of the Ship while we were looking at the Stars? Did we stare right through it?"

"Not exactly," Joe told him. "You weren't looking directly at the stars at all, but at a kind of picture of them. It's like... Well, they do it with mirrors, sort of. I've got a book that tells about it."

"But you can see 'em directly," volunteered Jim, his momentary pique forgotten. "There's a compartment forward of here..."

"Oh, yes," put in Joe, "it slipped my mind. The Captain's veranda. He's got one all of glass; you can look right out."

"The Captain's veranda? But--"

"Not this Captain. He's never been near the place. That's the name over the door of the compartment."

"What's a 'veranda'?"

"Blessed if I know. It's just the name of the place."

"Will you take me up there?"

Joe appeared to be about to agree, but Jim cut in. "Some other time. I want to get back; I'm hungry."

They passed back through the tube, woke up Bobo, and made the long trip back down.

It was long before Hugh could persuade Joe-Jim to take him exploring again, but the time intervening was well spent. Joe-Jim turned him loose on the largest collection of books that Hugh had ever seen. Some of them were copies of books Hugh had seen before, but even these he read with new meanings. He read incessantly, his mind soaking up new ideas, stumbling over them, struggling, striving to grasp them. He begrudged sleep, he forgot to eat until his breath grew sour and compelling pain in his midriff forced him to pay attention to his body. Hunger satisfied, he would be back at it until his head ached and his eyes refused to focus.

Joe-Jim's demands for service were few. Although Hugh was never off duty, Joe-Jim did not mind his reading as long as he was within earshot and ready to jump when called. Playing checkers with one of the pair when the other did not care to play was the service which used up the most time, and even this was not a total loss, for, if the player were Joe, he could almost always be diverted into a discussion of the Ship, its history, its machinery as equpment, the sort of people who had built it and then manned it and their history, back on Earth, Earth the incredible, that strange place where people had lived on the outside instead of the inside.

Hugh wondered why they did not fall off.

He took the matter up with Joe and at last gained some notion of gravitation. He never really understood it emotionally; it was too wildly improbable; but as an intellectual concept he was able to accept it and use it, much later, in his first vague glimmerings of the science of ballistics: and the art of astrogation and ship maneuvering. And it led in time to his wondering about weight in the Ship, a matter that had never bothered him before. The lower the level the greater the weight had been to his mind simply the order of nature, and nothing to wonder at. He was familiar with centrifugal force as it applied to slingshots. To apply it also to the whole Ship, to think of the Ship as spinning like a slingshot and thereby causing weight, was too much of a hurdle; he never really believed it.

Joe-Jim took him back once more to the Control Room and showed him what little Joe-Jim knew about the manipulation of the controls and the reading of the astrogation instruments.

The long-forgotten engineer-designers employed by the Jordan Foundation had been instructed to design a ship that would not -- could not -- wear out, even though the Trip were protracted beyond the expected sixty years. They builded better than they knew. In planning the main drive engines and the auxiliary machinery, largely automatic, which would make the Ship habitable, and in designing the controls necessary to handle all machinery not entirely automatic, the very idea of moving parts had been rejected. The engines and auxiliary equipment worked on a level below mechanical motion, on a level of pure force, as electrical transformers do. Instead of push buttons, levers, cams, and shafts, the controls and the machinery they served were planned in terms of balance between static fields, bias of electronic flow, circuits broken or closed by a hand placed over a light.

On this level of action, friction lost its meaning, wear and erosion took no toll. Had all hands been killed in the mutiny, the Ship would still have plunged on through space, still lighted, its air still fresh and moist, its engines ready and waiting. As it was, though elevators and conveyor belts fell into disrepair, disuse, and finally into the oblivion of forgotten function, the essential machinery of the Ship continued its

automatic service to its ignorant human freight, or waited, quiet and ready, for someone bright enough to puzzle out its key.

Genius had gone into the building of the Ship. Far too huge to be assembled on Earth, it had been put together piece by piece in its own orbit out beyond the Moon. There it had swung for fifteen silent years while the problems presented by the decision to make its machinery foolproof and enduring had been formulated and solved. A whole new field of submolar action had been conceived in the process, struggled with, and conquered.

So, when Hugh placed an untutored, questing hand over the first of a row of lights marked ACCELERATION, POSITIVE, he got an immediate response, though not in terms of acceleration. A red light at the top of the chief pilot's board blinked rapidly and the annunciator panel glowed with a message: MAIN ENGINES: NOT MANNED.

"What does that mean?" he asked Joe-Jim.

"There's no telling," said Jim. "We've done the same thing in the main engine room," added Joe. "There, when you try it, it says 'Control Room Not Manned.'"

Hugh thought a moment. "What would happen," he persisted, "if all the control stations had somebody at 'em at once, and then I did that?"

"Can't say," said Joe. "Never been able to try it."

Hugh said nothing. A resolve which had been growing, formless, in his mind was now crystalizing into decision. He was busy with it for some time, weighing it, refining it, and looking for the right moment to bring it into the open.

He waited until he found Joe-Jim in a mellow mood, both of him, before broaching his idea. They were in the Captain's veranda at the time Hugh decided the moment was due. Joe-Jim rested gently in the Captain's easy chair, his belly full of food, and gazed out through the heavy glass of the view port at the serene stars. Hugh floated beside him. The spinning of the Ship caused the stars to cross the circle of the port in barely perceptible arcs.

Presently he said, "Joe-Jim ..."

"Eh? What's that, youngster?" It was Joe who had replied.

"It's pretty swell, isn't it?"

"What is?"

"All that. The stars." Hugh indicated the view through the port with a sweep of his arm, then caught at the chair to stop his own backspin.

"Yeah, it sure is. Makes you feel good." Surprisingly, it was Jim who offered this.

Hugh knew the time was right. He waited a moment, then said, "Why don't we finish the job?"

Two heads turned simultaneously, Joe leaning out a little to see past Jim. "What job?"

"The Trip. Why don't we start up the main drive and go on with it? Somewhere out there," be said hurriedly to finish before he was interrupted, "there are planets like Earth, or so the First Crew thought. Let's go find them."

Jim looked at him, then laughed. Joe shook his head.

"Kid," he said, "you don't know what you are talking about. You're as balmy as Bobo. "No," he went on, "that's all over and done with. Forget it."

"Why is it over and done with, Joe?"

"Well, because. It's too big a job. It takes a crew that understands what it's all about, trained to operate the Ship."

"Does it take so many? You have shown me only about a dozen places, all told, for men actually to be at the controls. Couldn't a dozen men run the Ship ... if they knew what you know," he added slyly.

Jim chuckled. "He's got you, Joe. He's right"

Joe brushed it aside. "You overrate our knowledge. Maybe we could operate the Ship, but we wouldn't get anywhere. We don't know where we are. The Ship has been drifting for I don't know how many generations. We don't know where we're headed, or how fast we're going."

"But look," Hugh pleaded, "there are instruments. You showed them to me. Couldn't we learn how to use them? Couldn't you figure them out, Joe, if you really wanted to?"

"Oh, I suppose so," Jim agreed.

"Don't boast, Jim," said Joe.

"I'm not boasting," snapped Jim. "If a thing'll work, I can figure it out."

"Humph!" said Joe. The matter rested in delicate balance. Hugh had got them disagreeing among themselves -- which was what he wanted -- with the less tractable of the pair on his side. Now, to consolidate his gain, "I had an idea," he said quickly, "to get you men to work with, Jim, if you were able to train them."

"What's your idea?" demanded Jim suspiciously. "Well, you remember what I told you about a bunch of the younger scientists?"

"Those fools!"

"Yes, yes, sure; but they didn't know what you know. In their way they were trying to be reasonable. Now, if I could go back down and tell them what you've taught me, I could get you enough men to work with."

Joe cut in. "Take a good look at us, Hugh. What do you see?"

"Why ... why, I see you. Joe-Jim."

"You see a mutie," corrected Joe, his voice edged with sarcasm. "We're a mutie. Get that? Your scientists won't work with us."

"No, no," protested Hugh, "that's not true. I'm not talking about peasants. Peasants wouldn't understand, but these are scientists, and the smartest of the lot. They'll understand. All you need to do is to arrange safe conduct for them through mutie country. You can do that, can't you?" he added, instinctively shifting the point of the argument to firmer ground.

"Why, sure," said Jim.

"Forget it," said Joe.

"Well, O.K.," Hugh agreed, sensing that Joe really was annoyed at his persistence, "but it would be fun." He withdrew some distance from the brothers.

He could hear Joe-Jim continuing the discussion with himself in low tones. He pretended to ignore it. Joe-Jim had this essential defect in his joint nature: being a committee, rather than a single individual, he was hardly fitted to be a man of action, since all decisions were necessarily the result of discussion and compromise. Several moments later Hugh heard Joe's voice raised. "All right, all right, have it your own way!" He then called out, "Hugh! Come here!" Hugh kicked himself away from an adjacent

bulkhead and shot over to the immediate vicinity of Joe-Jim, arresting his flight with both hands against the framework of the Captain's chair.

"We've decided," said Joe without preliminaries, "to let you go back down to the high-weight and try to peddle your goods. But you're a fool," he added sourly.

Bobo escorted Hugh down through the dangers of the levels frequented by muties and left him in the uninhabited zone above high-weight "Thanks, Bobo," Hugh said in parting. "Good eating." The dwarf grinned, ducked his head, and sped away, swarming up the ladder they had just descended. Hugh turned and started down, touching his knife as he did so. It was good to feel it against him again.

Not that it was his original knife. That had been Bobo's prize when he was captured, and Bobo had been unable to return it, having inadvertently left it sticking in a big one that got away. But the replacement Joe-Jim had given him was well balanced and quite satisfactory.

Bobo had conducted him, at Hugh's request and by Joe-Jim's order, down to the area directly over the auxiliary Converter used by the scientists. He wanted to find Bill Ertz, Assistant Chief Engineer and leader of the bloc of younger scientists, and he did not want to have to answer too many questions before he found him. Hugh dropped quickly down the remaining levels and found himself in a main passageway which he recognized. Good! A turn to the left, a couple of hundred yards walk and he found himself at the door of the compartment which housed the Converter. A guard lounged in front of it. Hugh started to push on past, was stopped. "Where do you think you're going?"

"I want to find Bill Ertz."

"You mean the Chief Engineer? Well, he's not here."

"Chief? What's happened to the old one?" Hoyland regretted the remark at once, but it was already out.

"Huh? The old Chief? Why, he's made the Trip long since." The guard looked at him suspiciously. "What's wrong with you?"

"Nothing," denied Hugh. "Just a slip."

"Funny sort of a slip. Well, you'll find Chief Ertz around his office probably."

"Thanks. Good eating."

"Good eating."

Hugh was admitted to see Ertz after a short wait Ertz looked up from his desk as Hugh came in. "Well," he said, "so you're back, and not dead after all. This is a surprise. We had written you off, you know, as making the Trip."

"Yes, I suppose so."

"Well, sit down and tell me about it; I've a little time to spare at the moment. Do you know, though, I wouldn't have recognized you. You've changed a lot, all that gray hair. I imagine you had some pretty tough times."

Gray hair? Was his hair gray? And Ertz had changed a lot, too, Hugh now noticed. He was paunchy and the lines in his face had set. Good Jordan! How long had he been gone? Ertz drummed on his desk top, and pursed his lips. "It makes a problem, your coming back like this. I'm afraid I can't just assign you to your old job; Mort Tyler has that. But we'll find a place for you, suitable to your rank."

Hugh recalled Mort Tyler and not too favorably. A precious sort of a chap, always concerned with what was proper and according to regulations. So Tyler had actually made scientisthood, and was on Hugh's old job at the Converter. Well, it didn't matter. "That's all right, he began. "I wanted to talk to you about--"

"Of course, there's the matter of seniority," Ertz went on, "Perhaps the Council had better consider the matter. I don't know of a precedent. We've lost a number of scientists to the muties in the past, but you are the first to escape with his life in my memory."

"That doesn't matter," Hugh broke in. "I've something much more pressing to talk about. While I was away I found out some amazing things, Bill, things that it is of paramount importance for you to know about. That's why I came straight to you. Listen. I--"

Ertz was suddenly alert. "Of course you have! I must be slowing down. You must have had a marvelous opportunity to study the muties and scout out their territory. Come on, man, spill it! Give me your report."

Hugh wet his lips. "It's not what you think," he said. "It's much more important than just a report on the muties, though it concerns them, too. In fact, we may have to change our whole policy with respect to the mu--"

"Well, go ahead, go ahead! I'm listening."

"All right." Hugh told him of his tremendous discovery as to the actual nature of the Ship, choosing his words carefully and trying very hard to be convincing. He dwelt lightly on the difficulties presented by an attempt to reorganize the Ship in accordance with the new concept and bore down heavily on the prestige and honor that would accrue to the man who led the effort.

He watched Ertz's face as he talked. After the first start of complete surprise when Hugh launched his key idea, the fact that the Ship was actually a moving body in a great outside space, his face became impassive and Hugh could read nothing in it, except that he seemed to detect a keener interest when Hugh spoke of how Ertz was just the man for the job because of his leadership of the younger, more progressive scientists.

When Hugh concluded, he waited for Ertz's response. Ertz said nothing at first, simply continued with his annoying habit of drumming on the top of his desk. Finally he said, "These are important matters, Hoyland, much too important to be dealt with casually. I must have time to chew it over."

"Yes, certainly," Hugh agreed. "I wanted to add that I've made arrangements for safe passage up to no-weight. I can take you up and let you see for yourself."

"No doubt that is best," Ertz replied. "Well, are you hungry?"

"No."

"Then we'll both sleep on it. You can use the compartment at the back of my office. I don't want you discussing this with anyone else until I've had time to think about it; it might cause unrest if it got out without proper prepartion."

"Yes, you're right"

"Very well, then." Ertz ushered him into a compartment behind his office which he very evidently used for a lounge. "Have a good rest," he said, "and we'll talk later."

"Thanks," Hugh acknowledged. "Good eating."

"Good eating."

Once he was alone, Hugh's excitement gradually dropped away from him, and he realized that he was fagged out and very sleepy. He stretched out on a builtin couch and fell asleep.

When he awoke he discovered that the only door to the compartment was barred from the other side. Worse than that, his knife was gone.

He had waited an indefinitely long time when he heard activity at the door. It opened; two husky, unsmiling men entered. "Come along," said one of them. He sized them up, noting that neither of them carried a knife. No chance to snatch one from their belts, then. On the other hand he might be able to break away from them.

But beyond them, a wary distance away in the outer room, were two other equally formidable men, each armed with a knife. One balanced his for throwing; the other held his by the grip, ready to stab at close quarters. He was boxed in and be knew it. They had anticipated his possible moves.

He had long since learned to relax before the inevitable. He composed his face and marched quietly out. Once through the door he saw Ertz, waiting and quite evidently in charge of the party of men. He spoke to him, being careful to keep his voice calm. "Hello, Bill. Pretty extensive preparations you've made. Some trouble, maybe?"

Ertz seemed momentarily uncertain of his answer, then said, "You're going before the Captain."

"Good!" Hugh answered. "Thanks, Bill. But do you think it's wise to try to sell the idea to him without laying a little preliminary foundation with the others?"

Ertz was annoyed at his apparent thickheadedness and showed it. "You don't get the idea," he growled. "You're going before the Captain to stand trial for heresy!"

Hugh considered this as if the idea had not before occurred to him. He answered mildly, "You're off down the wrong passage, Bill. Perhaps a charge and trial is the best way to get at the matter, but I'm not a peasant, simply to be hustled before the Captain. I must be tried by the Council. I am a scientist."

"Are you now?" Ertz said softly. "I've had advice about that. You were written off the lists. Just what you are is a matter for the Captain to determine."

Hugh held his peace. It was against him, he could see, and there was no point in antagonizing Ertz. Ertz made a signal; the two unarmed men each grasped one of Hugh's arms. He went with them quietly.

Hugh looked at the Captain with new interest. The old man had not changed much, a little fatter, perhaps. The Captain settled himself slowly down in his chair, and picked up the memorandum before him. "What's this all about?" he began irritably. "I don't understand it."

Mort Tyler was there to present the case against Hugh, a circumstance which Hugh had had no way of anticipating and which added to his misgivings. He searched his boyhood recollections for some handle by which to reach the man's sympathy, found none. Tyler cleared his throat and commenced: "This is the case of one Hugh Hoyland, Captain, formerly one of your junior scientists--"

"Scientist, eh? Why doesn't the Council deal with him?"

"Because he is no longer a scientist, Captain. He went over to the muties. He now returns among us, preaching heresy and seeking to undermine your authority."

The Captain looked at Hugh with the ready belligerency of a man jealous of his prerogatives. "Is that so?" he bellowed. "What have you to say for yourself?"

"It is not true, Captain," Hugh answered. "All that I have said to anyone has been an affirmation of the absolute truth of our ancient knowledge. I have not disputed the truths under which we live; I have simply affirmed them more forcibly than is the ordinary custom. I--"

"I still don't understand this," the Captain interrupted, shaking his head. "You're charged with heresy, yet you say you believe the Teachings. If you aren't guilty, why are you here?"

"Perhaps I can clear the matter up," put in Ertz. "Hoyland--"

"Well, I hope you can," the Captain went on. "Come, let's hear it."

Ertz proceeded to give a reasonably correct, but slanted, version of Hoyland's return and his strange story. The Captain listened, with an expression that varied between puzzlement and annoyance. When Ertz had concluded, the Captain turned to Hugh. "Humph!" he said.

Hugh spoke immediately. "The gist of my contention, Captain, is that there is a place up at no-weight where you can actually see the truth of our faith that the Ship is moving, where you can actually see Jordan's Plan in operation. That is not a denial of faith; that affirms it. There is no need to take my word for it. Jordan Himself will prove it."

Seeing that the Captain appeared to be in a state of indecision, Tyler broke in: "Captain, there is a possible explanation of this incredible situation which I feel duty bound that you should hear. Offhand, there are two obvious interpretations of Hoyland's ridiculous story He may simply be guilty of extreme heresy, or he may be a mutie at heart and engaged in a scheme to lure you into their hands. But there is a third, more charitable explanation and one which I feel within me is probably the true one.

"There is record that Hoyland was seriously considered for the Converter at his birth inspection, but that his deviation from normal was slight, being simply an overlarge head, and he was passed. It seems to me that the terrible experiences he has undergone at the hands of the muties have finally unhinged an unstable mind. The poor chap is simply not responsible for his own actions."

Hugh looked at Tyler with new respect. To absolve him of guilt and at the same time to make absolutely certain that Hugh would wind up making the Trip: how neat!

The Captain shook a palm at them. "This has gone on long enough." Then, turning to Ertz, "Is there recommendation?"

"Yes, Captain. The Converter."

"Very well, then. I really don't see, Ertz," he continued testily, "why I should be bothered with these details. It seems to me that you should be able to handle discipline in your department without my help."

"Yes, Captain."

The Captain shoved back from his desk, started to get up. "Recommendation confirmed. Dismissed."

Anger flooded through Hugh at the unreasonable injustice of it. They had not even considered looking at the only real evidence he had in his defense. He heard a shout: "Wait!" -- then discovered it was his own voice. The Captain paused, looking at him.

"Wait a moment," Hugh went on, his words spilling out of their own accord. "This won't make any difference, for you're all so damn sure you know all the answers that you won't consider a fair offer to come see with your own eyes. Nevertheless ... Nevertheless, it still moves!"

Hugh had plenty of time to think, lying in the compartment where they confined him to await the power needs of the Converter, time to think, and to second-guess his mistakes. Telling his tale to Ertz immediately, that had been mistake number one. He should have waited, become reacquainted with the man and felt him out, instead of depending on a friendship which had never been very close.

Second mistake, Mort Tyler. When he heard his name he should have investigated and found out just how much influence the man had with Ertz. He had known him of old, he should have known better.

Well, here he was, condemned as a mutant, or maybe as a heretic. It came to the same thing. He considered whether or not he should have tried to explain why mutants happened. He had learned about it himself in some of the old records in Joe-Jim's possession. No, it wouldn't wash. How could you explain about radiations from the Outside causing the birth of mutants when the listeners did not believe there was such a place as Outside? No, he had messed it up before he was ever taken before the Captain.

His self-recriminations were disturbed at last by the sound of his door being unfastened. It was too soon for another of the infrequent meals; he thought that they had come at last to take him away, and renewed his resolve to take someone with him.

But he was mistaken. He heard a voice of gentle dignity: "Son, son, how does this happen?" It was Lieutenant Nelson, his first teacher, looking older than ever and frail.

The interview was distressing for both of them. The old man, childless himself, had cherished great hopes for his protegé, even the ambition that he might eventually aspire to the captaincy, though he had kept his vicarious ambition to himself, believing it not good for the young to praise them too highly. It had hurt his heart when the youth was lost.

Now he had returned, a man, but under disgraceful conditions and under sentence of death. The meeting was no less unhappy for Hugh. He had loved the old man, in his way, wanted to please him and needed his approval. But he could see, as he told his story, that Nelson was not capable of treating the the story as anything but an aberration of Hugh's mind, and he suspected that Nelson would rather see him meet a quick death in the Converter, his atoms smashed to hydrogen and giving up clean useful power, than have him live to make a mock of the ancient teachings.

In that.he did the old man an injustice; he underrated Nelson's mercy, but not his devotion to 'science.' But let it be said for Hugh that, had there been no more at issue than his own personal welfare, he might have preferred death to breaking the heart of his benefactor, being a romantic and more than a bit foolish. Presently the old man got up to leave, the visit having grown unendurable to each of them. "Is there anything I can do for you, son? Do they feed you well enough?"

"Quite well, thanks," Hugh lied.

"Is there anything else?"

"No ... yes, you might send me some tobacco. I haven't had a chew in a long time."

"I'll take care of it. Is there anyone you would like to see?"

"Why, I was under the impression that I was not permitted visitors ... ordinary visitors."

"You are right, but I think perhaps I may be able to get the rule relaxed. But you will have to give me your promise not to speak of your heresy," he added anxiously. Hugh thought quickly. This was a new aspect, a new possibility. His uncle? No, while they had always got along well, their minds did not meet; they would greet each other as strangers. He had never made friends easily; Ertz had been his obvious next friend and now look at the damned thing! Then he recalled his village chum, Alan Mahoney, with whom he had played as a boy. True, he had seen practically nothing of him since the time he was apprenticed to Nelson. Still... "Does Alan Mahoney still live in our village?"

"Why, yes."

"I'd like to see him, if he'll come."

Alan arrived, nervous, ill at ease, but plainly glad to see Hugh and very much upset to find him under sentence to make the Trip. Hugh pounded him on the back. "Good boy," he said. "I knew you would come."

"Of course, I would," protested Alan, "once I knew. But nobody in the village knew it. I don't think even the Witnesses knew it."

"Well, you're here, that's what matters. Tell me about yourself. Have you married?"

"Huh, uh, no. Let's not waste time talking about me. Nothing ever happens to me anyhow. How in Jordan's name did you get in this jam, Hugh?"

"I can't talk about that, Alan. I promised Lieutenant Nelson that I wouldn't."

"Well, what's a promise, that kind of a promise? You're in a jam, fellow."

"Don't I know it!"

"Somebody have it in for you?"

"Well, our old pal Mort Tyler didn't help any; I think I can say that much."

Alan whistled and nodded his head slowly. "That explains a lot."

"How come? You know something?"

"Maybe, -- maybe not. After you went away he married Edris Baxter."

"So? Hmm-m-m ... yes, that clears up a lot." He remained silent for a time.

Presently Alan spoke up: "Look, Hugh. You're not going to sit here and take it, are you? Particularly with Tyler mixed in it. We gotta get you outa here."

"How?"

"I don't know. Pull a raid, maybe. I guess I could get a few knives to rally round and help us; all good boys, spoiling for a fight."

"Then, when it's over, we'd all be for the Converter. You, me, and your pals. No, it won't wash."

"But we've got to do something. We can't just sit here and wait for them to burn you."

"I know that." Hugh studied Alan's face. Was it a fair thing to ask? He went on, reassured by what he had seen. "Listen. You would do anything you could to get me out of this, wouldn't you?"

"You know that." Alan's tone showed hurt.

"Very well, then. There is a dwarf named Bobo. I'll tell you how to find him..."

Alan climbed, up and up, higher than he had ever been since Hugh had led him, as a boy, into foolhardy peril. He was older now, more conservative; he had no stomach for it. To the very real danger of leaving the well-traveled lower levels was added his superstitious ignorance. But still he climbed.

This should be about the place, unless he had lost count. But he saw nothing of the dwarf Bobo saw him first. A slingshot load caught Alan in the pit of the stomach, even as he was shouting, "Bobo!"

Bobo backed into Joe-Jim's compartment and dumped his load at the feet of the twins. "Fresh meat," he said proudly.

"So it is," agreed Jim indifferently. "Well, it's yours; take it away."

The dwarf dug a thumb into a twisted ear, "Funny," he said, "he knows Bobo's name."

Joe looked up from the book he was reading: _Browning's Collected Poems_, L-Press, New York, London, Luna City, cr. 35. "That's interesting. Hold on a moment."

Hugh had prepared Alan for the shock of Joe-Jim's appearance. In reasonably short order he collected his wits sufficiently to be able to tell his tale. Joe-Jim listened to it without much comment, Bobo with interest but little comprehension.

When Alan concluded, Jim remarked, "Well, you win, Joe. He didn't make it." Then, turning to Alan, he added, "You can take Hoyland's place. Can you play checkers?"

Alan looked from one head to the other. "But you don't understand," he said. "Aren't you going to do anything about it?"

Joe looked puzzled. "Us? Why should we?"

"But you've got to. Don't you see? He's depending on you. There's nobody else he can look to. That's why I came. Don't you see?"

"Wait a moment," drawled Jim, "wait a moment. Keep your belt on. Supposing we did want to help him, which we don't, how in Jordan's Ship could we? Answer me that."

"Why, why," Alan stumbled in the face of such stupidity. "Why, get up a rescue party, of course, and go down and get him out!"

"Why should we get ourselves killed in a fight to rescue your friend?" Bobo pricked his ears. "Fight?" he inquired eagerly. "No, Bobo," Joe denied. "No fight. Just talk." "Oh," said Bobo and returned to passivity.

Alan looked at the dwarf. "If you'd even let Bobo and me--"

"No," Joe said shortly. "It's out of the question. Shut up about it."

Alan sat in a corner, hugging his knees in despair. If only he could get out of there. He could still try to stir up some help down below. The dwarf seemed to be asleep, though it was difficult to be sure with him. If only Joe-Jim would sleep, too.

Joe-Jim showed no indication of sleepiness. Joe tried to continue reading, but Jim interrupted him from time to time. Alan could not hear what they were saying.

Presently Joe raised his voice. "Is that your idea of fun?" he demanded.

"Well," said Jim, "it beats checkers."

"It does, does it? Suppose you get a knife in your eye; where would I be then?"

"You're getting old, Joe. No juice in you any more."

"You're as old as I am."

"Yeah, but I got young ideas."

"Oh, you make me sick. Have it your own way, but don't blame me. Bobo!"

The dwarf sprang up at once, alert. "Yeah, Boss."

"Go out and dig up Squatty and Long Arm and Pig."

Joe-Jim-got up, went to a locker, and started pulling knives out of their racks.

Hugh heard the commotion in the passageway outside his prison. It could be the guards coming to take him to the Converter, though they probably wouldn't be so noisy. Or it could be just some excitement unrelated to him. On the other hand it might be ...

It was. The door burst open, and Alan was inside, shouting at him and thrusting a brace of knives into his hands. He was hurried out of the door, while stuffing the knives in his belt and accepting two more.

Outside he saw Joe-Jim, who did not see him at once, as he was methodically letting fly, as calmly as if he had been engaging in target practice in his own study. And Bobo, who ducked his head and grinned with a mouth widened by a bleeding cut, but continued the easy flow of the motion whereby he loaded and let fly. There were three others, two of whom Hugh recognized as belonging to Joe-Jim's privately owned gang of bullies, muties by definition and birthplace; they were not deformed.

The count does not include still forms on the floor plates.

"Come on!" yelled Alan. "There'll be more in no time." He hurried down the passage to the right

Joe-Jim desisted and followed him. Hugh let one blade go for luck at a figure running away to the left. The target was poor, and he had no time to see if he had thrown 01000. They scrambled along the passage, Bobo bringing up the rear, as if reluctant to leave the fun, and came to a point where a side passage crossed the main one.

Alan led them to the right again. "Stairs ahead," he shouted.

They did not reach them. An airtight door, rarely used, clanged in their faces ten yards short of the stairs. Joe-Jim's bravoes checked their flight and they looked doubtfully at their master. Bobo broke his thickened nails trying to get a purchase on the door.

The sounds of pursuit were clear behind them.

"Boxed in," said Joe softly. "I hope you like it, Jim."

Hugh saw a head appear around the corner of the passage they had quitted. He threw overhand but the distance was too great; the knife clanged harmlessly against steel. The head disappeared. Long Arm kept his eye on the spot, his sling loaded and ready.

Hugh grabbed Bobo's shoulder. "Listen! Do you see that light?"

The dwarf blinked stupidly. Hugh pointed to the intersection of the glowtubes where they crossed in the overhead directly above the junction of the passages. "That light. Can you hit them where they cross?"

Bobo measured the distance with his eye. It would be a hard shot under any conditions at that range. Here, constricted as he was by the low passageway, it called for a fast, flat trajectory, and allowance for higher weight then he was used to.

He did not answer. Hugh felt the wind of his swing but did not see the shot. There was a tinkling crash; the passage became dark.

"Now!" yelled Hugh, and led them away at a run. As they neared the intersection he shouted, "Hold your breaths! Mind the gas!" The radioactive vapor poured lazily out from the broken tube above and filled the crossing with a greenish mist.

Hugh ran to the right, thankful for his knowledge as an engineer of the lighting circuits. He had picked the right direction; the passage ahead was black, being serviced from beyond the break. He could hear footsteps around him; whether they were friend or enemy he did not know.

They burst into light. No one was in sight but a scared and harmless peasant who scurried away at an unlikely pace. They took a quick muster. All were present, but Bobo was making heavy going of it.

Joe looked at him. "He sniffed the gas, I think. Pound his back."

Pig did so with a will. Bobo belched deeply, was suddenly sick, then grinned.

"He'll do," decided Joe.

The slight delay had enabled one at least to catch up with them. He came plunging out of the dark, unaware of, or careless of, the strength against him. Alan knocked Pig's arm down, as he raised it to throw. "Let me at him!" he demanded. "He's mine!" It was Tyler.

"Man-fight?" Alan challenged, thumb on his blade.

Tyler's eyes darted from adversary to adversary and accepted the invitation to individual duel by lunging at Alan. The quarters were too cramped for throwing; they closed, each achieving his grab in parry, fist to wrist.

Alan was stockier, probably stronger; Tyler was slippery. He attempted to give Alan a knee to the crotch. Alan evaded it, stamped on Tyler's planted foot. They went clown. There was a crunching crack.

A moment later, Alan was wiping his knife against his thigh. "Let's get goin'," he complained. "I'm scared."

They reached a stairway, and raced up it, Long Arm and Pig ahead to fan out on each level and cover their flanks, and the third of the three choppers (Hugh heard him called Squatty) covering the rear. The others bunched in between.

Hugh thought they had won free, when he heard shouts and the clatter of a thrown knife just above him.

He reached the level above in time to be cut not deeply but jaggedly by a ricocheted blade.

Three men were down. Long Arm bad a blade sticking in the fleshy part of his upper arm, but it did not seem to bother him. His slingshot was still spinning. Pig was scrambling after a thrown knife, his own armament exhausted. But there were signs of his work; one man was down on one knee some twenty feet away. He was bleeding from a knife wound in the thigh.

As the figure steadied himself with one hand against the bulkhead and reached towards an empty belt with the other, Hugh recognized him.

Bill Ertz.

He had led a party up another way, and flanked them, to his own ruin. Bobo crowded behind Hugh and got his mighty arm free for the cast. Hugh caught at it. "Easy, Bobo," he directed. "In the stomach, and easy."

The dwarf looked puzzled, but did as he was told.

Ertz folded over at the middle and slid to the deck. "Well placed," said Jim. "Bring him along, Bobo," directed Hugh, "and stay in the middle." He ran his eye over their party, now huddled at the top of that flight of stairs. "All right, gang; up we go again! Watch it."

Long Arm and Pig swarmed up the next flight, the others disposing themselves as usual. Joe looked annoyed. In some fashion, a fashion by no means clear at the moment, he had been eased out as leader of this gang, his gang, and Hugh was giving orders. He reflected as there was no time now to make a fuss. It might get them all killed.

Jim did not appear to mind. In fact, he seemed to be enjoying himself.

They put ten more levels behind them with no organized opposition. Hugh directed them not to kill peasants unnecessarily. The three bravoes obeyed; Bobo was too loaded down with Ertz to constitute a problem in discipline. Hugh saw to it that they put thirty-odd more decks below them and were well into no man's land before he let vigilance relax at all. Then he called a halt and they examined wounds.

The only deep ones were to Long Arm's arm and Bobo's face. Joe-Jim examined them and applied presses with which he had outfitted himself before starting. Hugh refused treatment for his flesh wound. "It's stopped bleeding," he insisted, "and I've got a lot to do."

"You've got nothing to do but to get up home," said Joe, "and that will be an end to this foolishness." "Not quite," denied Hugh. "You may be going home, but Alan and I and Bobo are going up to no-weight; to the Captain's veranda."

"Nonsense," said Joe. "What for?"

"Come along if you like, and see. All right, gang. Let's go."

Joe started to speak, stopped when Jim kept still. Joe-Jim followed along. They floated gently through the door of the veranda, Hugh, Alan, Bobo with his still-passive burden, and Joe-Jim. "That's it," said Hugh to Alan, waving his hand at the splendid stars, "that's what I've been telling you about."

Alan looked and clutched at Hugh's arm. "Jordan!" he moaned. "We'll fall out!" He closed his eyes tightly.

Hugh shook him. "It's all right," he said. "It's grand. Open your eyes."

Joe-Jim touched Hugh's arm. "What's it all about?" he demanded. "Why did you bring him up here?" He pointed to Ertz.

"Oh, him. Well, when he wakes up I'm going to show him the stars, prove to him that the Ship moves."

"Well? What for?"

"Then I'll send him back down to convince some others."

"Hm-m-m, suppose he doesn't have any better luck than you had?"

"Why, then," Hugh shrugged his shoulders "why, then we shall just have to do it all over, I suppose, till we do convince them.

"We've got to do it, you know."

JOE, THE RIGHT HAND head of Joe-Jim, addressed his words to Hugh Hoyland. "All right, smart boy, you've convinced the Chief Engineer." He gestured toward Bill Ertz with the blade of his knife, then resumed picking Jim's teeth with it. "So what? Where does it get you?"

"I've explained that," Hugh Hoyland answered irritably. "We keep on, until every scientist in the Ship, from the Captain to the greenest probationer, knows that the Ship moves and believes that we can make it move. Then we'll finish the Trip, as Jordan willed. How many knives can you muster?" he added.

"Well, for the love of Jordan! Listen, have you got some fool idea that we are going to help you with this crazy scheme?"

"Naturally. You're necessary to it."

"Then you had better think up another think. That's out. Bobo! Get out the checkerboard."

"O.K., Boss." The microcephalic dwarf hunched himself up off the floor plates and trotted across Joe-Jim's apartment.

"Hold it, Bobo." Jim, the left-hand head, had spoken. The dwarf stopped dead, his narrow forehead wrinkled. The fact that his two-headed master occasionally failed to agree as to what Bobo should do was the only note of insecurity in his tranquil bloodthirsty existence.

"Let's hear what he has to say," Jim continued. "There may be some fun in this."

"Fun! The fun of getting a knife in your ribs. Let me point out that they are my ribs, too. I don't agree to it."

"I didn't ask you to agree; I asked you to listen. Leaving fun out of it, it may be the only way to keep a knife out of our ribs."

"What do you mean?" Joe demanded suspiciously. "You heard what Ertz had to say." Jim flicked a thumb toward the prisoner. "The Ship's officers are planning to clean out the upper levels. How would you like to go into the Converter, Joe? You can't play checkers after we're broken down into hydrogen."

"Bunk! The Crew can't exterminate the muties; they've tried before."

Jim turned to Etrz. "How about it?"

Ertz answered somewhat diffidently, being acutely aware of his own changed status from a senior Ship's officer to prisoner of war. He felt befuddled anyhow; too much had happened and too fast. He had been kidnaped, hauled up to the Captain's veranda, and had there gazed out at the stars. The stars.

His hard-boiled rationalism included no such concept. If an Earth astronomer had had it physically demonstrated to him that the globe spun on its axis because someone turned a crank, the upset in evaluations could have been no greater.

Besides that, he was acutely aware that his own continued existence hung in fine balance. Joe-Jim was the first upper-level mutie he had ever met other than in combat, knife to knife. A word from him to that great ugly dwarf sprawled on the deck-- He chose his words. "I think the Crew would be successful, this time. We . . . they have organized for it. Unless there are more of you than we think there are and better organized, I think it could be done. You see . . . well, uh, I organized it."

"You?"

"Yes. A good many of the Council don't like the policy of letting the muties alone. Maybe it's sound religious doctrine and maybe it isn't, but we lose a child here and a couple of pigs there. It's annoying."

"What do you expect muties to eat?" demanded Jim belligerently. "Thin air?"

"No, not exactly. Anyhow, the new policy was not entirely destructive. Any muties that surrendered and could be civilized we planned to give to masters and put them to work as part of the Crew. That is, any that weren't, uh . . . that were--" He broke off in embarrassment, and shifted his eyes from the two-headed monstrosity before him.

"You mean any that weren't physical mutations, like me," Joe filled in nastily. "Don't you?" he persisted. "For the likes of me it's the Converter, isn't it?" He slapped the blade of his knife nervously on the palm of his hand.

Ertz edged away, his own hand shifting to his belt. But no knife was slung there; he felt naked and helpless without it. "Just a minute," he said defensively, "you asked me; that's the situation. It's out of my hands. I'm just telling you."

"Let him alone, Joe. He's just handing you the straight dope. It's like I was telling you: either go along with Hugh's plan, or wait to be hunted down. And don't get any ideas about killing him; we're going to need him." As Jim spoke he attempted to return the knife to its sheath. There was a brief and silent struggle between the twins for control of the motor nerves to their right arm, a clash of will below the level of physical activity. Joe gave in.

"All right," he agreed surlily, "but if I go to the Converter, I want to take this one with me for company."

"Stow it," said Jim. "You'll have me for company."

"Why do you believe him?"

"He has nothing to gain by lying. Ask Alan."

Alan Mahoney, Hugh's friend and boyhood chum, had listened to the argument round-eyed, without joining it. He, too, had suffered the nerve-shaking experience of viewing the outer stars, but his ignorant peasant mind had not the sharply formulated opinions of Ertz, the Chief Engineer. Ertz had been able to see almost at once that the very existence of a world outside the Ship changed all his plans and everything he had believed in; Alan was capable only of wonder.

"What about this plan to fight the muties, Alan?"

"Huh? Why, I don't know anything about it. Shucks, I'm not a scientist. Say, wait a minute; there was a junior officer sent in to help our village scientist, Lieutenant Nelson." He stopped and looked puzzled.

"What about it? Go ahead."

"Well, he has been organizing the cadets in our village, and the married men, too, but not so much. Making 'em practice with their blades and slings. Never told us what for, though."

Ertz spread his hands. "You see?"

Joe nodded. "I see," he admitted grimly.

Hugh Hoyland looked at him eagerly. "Then you're with me?"

"I suppose so," Joe admitted. "Right!" added Jim.

Hoyland looked back to Ertz. "How about you, Bill Ertz?"

"What choice have I got?"

"Plenty. I want you with me wholeheartedly. Here's the layout: The Crew doesn't count; it's the officers we have to convince. Any that aren't too addlepated and stiff-necked to understand after they've seen the stars and the Control Room, we keep. The others--" he drew a thumb across his throat while making a harsh sibilance in his cheek, "the Converter."

Bobo grinned happily and imitated the gesture and the sound.

Ertz nodded. "Then what?"

"Muties and Crew together, under a new Captain, we move the Ship to Far Centaurus! Jordan's Will be done!"

Ertz stood up and faced Hoyland. It was a heady notion, too big to be grasped at once, but, by Jordan! he liked it. He spread his hands on the table and leaned across it. "I'm with you, Hugh Hoyland!"

A knife clattered on the table before him, one from the brace at Joe-Jim's belt. Joe looked startled, seemed about to speak to his brother, then appeared to think better of it. Ertz looked his thanks and stuck the knife in his belt.

The twins whispered to each other for a moment, then Joe spoke up. "Might as well make it stick," he said. He drew his remaining knife and, grasping the blade between thumb and forefinger so that only the point was exposed, he jabbed himself in the fleshly upper part of his left arm. "Blade for blade!"

Ertz's eyebrows shot up. He whipped out his newly acquired blade and cut himself in the same location. The blood spurted and ran down to the crook of his arm. "Back to back!" He shoved the table aside and pressed his gory shoulder against the wound on Joe-Jim.

Alan Mahoney, Hugh Hoyland, Bobo: all had their blades out, all nicked their arms till the skin ran red and wet. They crowded in, bleeding shoulders pushed together so that the blood dripped united to the death.

"Blade for blade!"

"Back to back!"

"Blood to blood!"

"Blood brothers, to the end of the Trip!"

An apostate scientist, a kidnaped scientist, a dull peasant, a two-headed monster, a apple-brained moron; five knives, counting Joe-Jim as one; five brains, counting Joe-Jim as two and Bobo as none; five brains and five knives to overthrow an entire culture.

"But I don't want to go back, Hugh." Alan shuffled his feet and looked dogged. "Why can't I stay here with you? I'm a good blade."

"Sure you are, old fellow. But right now you'll be more useful as a spy."

"But you've got Bill Ertz for that."

"So we have, but we need you too. Bill is a public figure; he can't duck out and climb to the upper levels without it being noticed and causing talk. That's where you come in; you're his go-between."

"I'll have a Huff of a time explaining where I've been."

"Don't explain any more than you have to. But stay away from the Witness." Hugh had a sudden picture of Alan trying to deceive the old village historian, with his

searching tongue and lust for details. "Keep clear of the Witness. The old boy would trip you up."

"Him? You mean the old one; he's dead. Made the Trip long since. The new one don't amount to nothing."

"Good. If you're careful, you'll be safe." Hugh raised his voice. "Bill! Are you ready to go down?"

"I suppose so." Ertz picked himself up and reluctantly put aside the book he had been reading _The Three Musketeers_, illustrated, one of Joe-Jim's carefully stolen library. "Say, that's a wonderful book. Hugh, is Earth really like that?"

"Of course. Doesn't it say so in the book?"

Ertz chewed his lip and thought about it. "What is a house?"

"A house? A house is a sort of a. . . a sort of a compartment."

"That's what I thought at first, but how can you ride on a compartment?"

"Huh? What do you mean?"

"Why, all through the book they keep climbing on their houses and riding away."

"Let me see that book," Joe ordered. Ertz handed it to him. Joe-Jim thumbed through it rapidly. "I see what you mean. Idiot! They ride horses, not houses."

"Well, what's a horse?"

"A horse is an animal, like a big hog, or maybe like a cow. You squat up on top of it and let it carry you along."

Ertz considered this. "It doesn't seem practical. Look, when you ride in a litter, you tell the chief porter where you want to go. How can you tell a cow where you want to go?"

"That's easy. You have a porter lead it."

Ertz conceded the point. "Anyhow, you might fall off. It isn't practical. I'd rather walk."

"It's quite a trick," Joe explained. "Takes practice."

"Can you do it?"

Jim sniggered. Joe looked annoyed. "There are no horses in the Ship."

"OK, O.K. But look. These guys Athos, Porthos, and Aramis, they had something--"

"We can discuss that later," Hugh interrupted. "Bobo is back. Are you ready to go, Bill?"

"Don't get in a hurry, Hugh. This is important. These chaps had knives."

"Sure. Why not?"

"But they were better than our knives. They had knives as long as your arm, maybe longer. If we are going to fight the whole Crew, think what an advantage that would be."

"Hm-m-m." Hugh drew his knife and looked at it, cradling it in his palm. "Maybe. You couldn't throw it as well."

"We could have throwing knives, too."

"Yes, I suppose we could."

The twins had listened Without comment. "He's right," put in Joe. "Hugh, you take care of placing the knives. Jim and I have some reading to do." Both of Joe-Jim's heads were busy thinking of other books they owned, books. that discussed in saguinary detail the infinitely varied methods used by mankind to shorten the lives of enemies. He

was about to institute a War College Department of Historical Research, although he called his project by no such fancy term.

"O.K.," Hugh agreed, "but you will have to say the word to them."

"Right away." Joe-Jim stepped out of his apartment into the passageway where Bobo had assembled a couple of dozen of Joe-Jim's henchmen among the muties. Save for Long Arm, Pig, and Squatty, who had taken part in the rescue of Hugh, they were all strangers to Hugh, Alan, and Bill, and they were all sudden death to strangers.

Joe-Jim motioned for the three from the lower decks to join him. He pointed them out to the muties, and ordered them to look closely and not to forget: these three were to have safe passage and protection wherever they went. Furthermore, in Joe-Jim's absence his men were to take orders from any of them.

They stirred and looked at each other. Orders they were used to, but from Joe-Jim only.

A big-nosed individual rose up from his squat and addressed them. He looked at Joe-Jim, but his words were intended for all. "I am Jack-of-the-Nose. My blade is sharp and my eye is keen. Joe-Jim with the two wise heads is my Boss and my knife fights for him. But Joe is my Boss, not strangers from heavy decks. What do say, knives? Is that not the Rule?"

He paused. The others had listened to him stealing glances at Joe-Jim. Joe muttered something of the corner of his mouth to Bobo. Jack O'Nose opened his mouth to continue. There was a smash of splintering teeth, a crack from a broken neck; his mouth stopped with a missile.

Bobo reloaded his slingshot. The body, not yet still, settled slowly to the deck. Joe-Jim waved a hand it. "Good eating!" Joe announced. "He's yours." The muties converged on the body as if they had suddenly been unleashed. They concealed it completely in a busy grunting pile-up. Knives out, they cuffed and crowded each other for a piece of the prize.

Joe-Jim waited patiently for the undoing to be over, then, when the place where Jack O'Nose had been was no more than a stain on the deck and the several polite arguments over the sharing had died down, he started again; Joe spoke. "Long Arm, you and Forty-one and the Ax go down with Bobo, Alan and Bill. The rest here."

Bobo trotted away in the long loping strides, sped on by the low pseudogravity near the axis of rotation of Ship. Three of the muties detached themselves from pack and followed. Ertz and Alan Mahoney hurried catch up.

When he reached the nearest staircase trunk, he skipped out into space without breaking his stride letting centrifugal force carry him down to the next. Alan and the muties followed; but Ertz paused on the edge and looked back. "Jordan keep you, brother!" he sang out.

Joe-Jim waved to him. "And you," acknowledged Joe.

"Good eating!" Jim added.

"Good eating!"

Bobo led them down forty-odd decks, well into no man's land inhabited neither by mutie nor crew, stopped. He pointed in succession to Long Arm, Forty-one, and the Ax. "Two Wise Heads say for you to watch here. You first," he added, pointing again to

Forty-one. "It's like this," Ertz amplified. "Alan and I are going down to heavy-weight level. You three are to keep a guard here, one at a time, so that I will be able to send messages back up to Joe-Jim. Get it?"

"Sure. Why not?" Long Arm answered.

"Joe-Jim says it," Forty-one commented with a note of finality in his voice. The Ax grunted agreeably.

"O.K.," said Bobo. Forty-one sat down at the stairwell, letting his feet hang over, and turned his attention to food which he had been carrying tucked under his left arm.

Bobo slapped Ertz and Alan on their backs. "Good eating," he bade them, grinning. When he could get his breath, Ertz acknowledged the courteous thought, then dropped at once to the next lower deck, Alan close after him. They had still many decks to go to 'civilization.'

Commander Phineas Narby, Executive Assistant to Jordan's Captain, in rummaging through the desk of the Chief Engineer was amused to find that Bill Ertz had secreted therein a couple of Unnecessary books. There were the usual Sacred books, of course, including the priceless _Care and Maintenance of the Auxiliary Fourstage Converter_ and the _Handbook of Power, Light, and Conditioning, Starship Vanguard_. These were Sacred books of the first order, bearing the imprint of Jordan himself, and could lawfully be held only by the Chief Engineer.

Narby considered himself a skeptic and rationalist. Belief in Jordan was a good thing -- for the Crew. Nevertheless the sight of a title page with the words 'Jordan Foundation' on it stirred up within him a trace of religious awe such as he had not felt since before he was admitted to scientisthood.

He knew that the feeling was irrational; probably there had been at some time in the past some person or persons called Jordan. Jordan might have been an early engineer or captain who codified the common sense and almost instinctive rules for running the Ship. Or, as seemed more likely, the Jordan myth went back much farther than this book in his hand, and its author had simply availed himself of the ignorant superstitions of the Crew to give his writings authority. Narby knew how such things were done; he planned to give the new policy with respect to the muties the same blessing of Jordan when the time was ripe for it to be put into execution. Yes, order and discipline and belief in authority were good things, for the Crew. It was equally evident that a rational, coolheaded common sense was a proper attribute for the scientists who were custodians of the Ship's welfare, common sense and a belief in nothing but facts.

He admired the exact lettering on the pages of the book he held. They certainly had excellent clerks in those ancient times; not the sloppy draftsmen he was forced to put up with, who could hardly print two letters alike.

He made a mental note to study these two indispensable handbooks of the engineering department before turning them over to Ertz's successor. It would be well, he thought, not to be too dependent on the statements of the Chief Engineer when he himself succeeded to the captaincy. Narby had no particular respect for engineers, largely because he had no particular talent for engineering. When he had first reached scientisthood and had been charged to defend the spiritual and material welfare of the Crew, had sworn to uphold the Teachings of Jordan, he soon discovered that administration and personnel

management were more in his lines than tending the converter or servicing the power lines. He had served as clerk, village administrator, recorder to the Council, personnel officer, and was now chief executive for Jordan's Captain himself, ever since an unfortunate and rather mysterious accident had shortened the life of Narby's predecessor in that post.

His decision to study up on engineering before a new Chief Engineer was selected brought to mind the problem of choosing a new chief. Normally the Senior Watch Officer for the Converter would become Chief Engineer when a chief made the Trip, but in this case, Mort Tyler, the Senior Watch, had made the Trip at the same time; his body had been found, stiff and cold, after the mutie raid which had rescued that heretic, Hugh Hoyland. That left the choice wide open and Narby was a bit undecided as to whom he should suggest to the Captain.

One thing was certain; the new chief must not be a man with as much aggressive initiative as Ertz. Narby admitted that Ertz had done a good job in organizing the Crew for the proposed extermination of the muties, but his very efficiency had made him too strong a candidate for succession to the captaincy, if and when. Had he thought about it overtly Narby might have admitted to himself that the present Captain's life span had extended unduly because Narby was not absolutely certain that Ertz would not be selected. What he did think was that this might be a good time for the old Captain to surrender his spirit to Jordan. The fat old fool had long outlived his usefulness; Narby was tired of having to wheedle him into giving the proper orders. If the Council were faced with the necessity of selecting a new Captain at this time, there was but one candidate available. Narby put the book down, his mind made up.

The simple decision to eliminate the old Captain carried with it in Narby's mind no feeling of shame, nor sin, nor disloyalty. He felt contempt but not dislike for the Captain, and no mean spirit colored his decision to kill him. Narby's plans were made on the noble level of statesmanship. He honestly believed that his objective was the welfare of the entire Crew; common-sense administration, order and discipline, good eating for everyone. He selected himself because it was obvious to him that he was best fitted to accomplish those worthy ends. That some must make the Trip in order that these larger interests be served he did not find even mildly regrettable, but he bore them no malice.

"What in the Huff are you doing at my desk?"

Narby looked up to see the late Bill Ertz standing over him, not looking pleased. He looked again, then as an afterthought closed his mouth. He had been so certain, when Ertz failed to reappear after the raid, that he had made the Trip and was in all probability butchered and eaten; so certain that it was now a sharp wrench to his mind to see Ertz standing before him, aggressively alive. But he pulled himself together.

"Bill! Jordan bless you, man, we thought you had made the Trip! Sit down, sit down, and tell me what happened to you."

"I will if you will get out of my chair," Ertz answered bitingly.

"Oh, sorry!" Narby hastily vacated the chair at Ertz's desk and found another.

"And now," Ertz continued, taking the seat Narby had left, "you might explain why you were going through my writings."

Narby managed to look hurt. "Isn't that obvious? We assumed you were dead. Someone had to take over and attend to your department until a new chief was designated. I was acting on behalf of the Captain."

Ertz looked him in the eyes. "Don't give me that guff, Narby. You know and I know who puts words in the Captain's mouth; we've planned it often enough. Even if you did think I was dead, it seems to me you could wait longer than the time between two sleeps to pry through my desk."

"Now really, old man, when a person is missing after a mutie raid, it's a common-sense assumption that he has made the Trip."

"O.K., O.K., skip it. Why didn't Mort Tyler take over in the meantime?"

"He's in the Converter."

"Killed, eh? But who ordered him put in the Converter? That much mass will make a terrific peak in the load."

"I did, in place of Hugh Hoyland. Their masses were nearly the same, and your requisition for the mass of Hugh Hoyland was unfilled."

"Nearly the same isn't good enough in handling the Converter. I'll have to check on it." He started to rise.

"Don't get excited," said Narby. "I'm not an utter fool in engineering, you know. I ordered his mass to be trimmed according to the same schedule you had laid out for Hoyland."

"Well, all right. That will do for now. But I will have to check it. We can't afford to waste mass."

"Speaking of waste mass," Narby said sweetly, "I found a couple of Unnecessary books in your desk."

"Well?"

"They are classed as mass available for power, you know."

"So? And who is the custodian of mass allocated for power?"

"You are certainly. But what were they doing in your desk?"

"Let me point out to you, my dear Captain's Best Boy, that it lies entirely within my discretion where I choose to store mass available for power."

"Hm-m-m. I suppose you are right. By the way, if you don't need them for the power schedule at once, would you mind letting me read them?"

"Not at all, if you want to be reasonable about it. I'll check them out to you: have to do that; they've already been centrifuged. Just be discreet about it."

"Thanks. Some of those ancients had vivid imaginations. Utterly crazy, of course, but amusing for relaxation."

Ertz got out the two volumes and prepared a receipt for Narby to sign. He did this absent-mindedly, being preoccupied with the problem of how and when to tackle Narby. Phineas Narby he knew to be a key man in the task he and his blood brothers had undertaken, perhaps the key man. If he could be won over... "Fine," he said, when Narby had signed, "I wonder if we followed the wisest policy in Hoyland's case." Narby looked surprised, but said nothing.

"Oh, I don't mean that I put any stock in his story," Ertz added hastily, "but I feel that we missed an opportunity. We should have kidded him along. He was a contact with the muties. The worst handicap we work under in trying to bring mutie country under the rule of the Council is the fact that we know very little about theni. We don't know how many of them there are, nor how strong they are, or how well organized. Besides that, we

will have to carry the fight to them and that's a big disadvantage. We don't really know our way around the upper decks. If we had played along with him and pretended to believe his story, we might have learned a lot of things."

"But we couldn't rely on what he told us," Narby pointed out

"We didn't need to. He offered us an opportunity to go all the way to no-weight, and look around."

Narby looked astounded. "You surely aren't serious? A member of the Crew that trusted the muties' promise not to harm him wouldn't get up to no-weight; he'd make the Trip -- fast!"

"I'm not so certain about that," Ertz objected. "Hoyland believed his own story, I'm sure of that. And--"

"What! All that utter nonsense about the Ship being capable of moving. The solid Ship." He pounded the bulkhead. "No one could believe that."

"But I tell you he did. He's a religious fanatic, granted. But he saw something up there, and that was how he interpreted it. We could have gone up to see whatever it was he was raving about and used the chance to scout out the muties."

"Utterly foolhardy!"

"I don't think so. He must have a great deal of influence among the muties; look at the trouble they went to just to rescue him. If he says he can give us safe passage up to no-weight, I think he can."

"Why this sudden change of opinion?"

"It was the raid that changed my mind. If anyone had told me that a gang of muties would come clear down to high-weight and risk their necks to save the life of one man I would not have believed him. But it happened. I'm forced to revise my opinions. Quite aside from his story, it's evident that the muties will fight for him and probably take orders from him. If that is true, it would be worth while to pander to his religious convictions if it would enable us to gain control over the muties without having to fight for it."

Narby shrugged it off. "Theoretically you may have something there. But why waste time over might-have-beens? If there was such an opportunity, we missed it."

"Maybe not. Hoyland is still alive and back with the muties. If I could figure out some way of getting a message to him, we might still be able to arrange it."

"But how could you?"

"I don't know exactly. I might take a couple of the boys and do some climbing. If we could capture a mutie without killing him, it might work out."

"A slim chance."

"I'm willing to risk it"

Narby turned the matter over in his mind. The whole plan seemed to him to be filled with long chances and foolish assumptions. Nevertheless if Ertz were willing to take the risk and it did work, Narby's dearest ambition would be much nearer realization. Subduing the unities by force would be a long and bloody job, perhaps an impossible job. He was clearly aware of its difficulty.

If it did not work, nothing was lost, but Ertz. Now that he thought it over, Ertz would be no loss at this point in the game. Hm-m-m.

"Go ahead," he said. "You are a brave man, but its a worth-while venture."

"O.K.," Ertz agreed. "Good eating."

Narby took the hint. "Good eating," he answered, gathered up the books, and left. It did not occur to him until later that Ertz had not told him where he had been for so long.

And Ertz was aware that Narby had not been entirely frank with him, but, knowing Narby, he was not surprised. He was pleased enough that his extemporaneous groundwork for future action had been so well received. It never did occur to him that it might have been simpler and more effective to tell the truth.

Ertz busied himseif for a short time in making a routine inspection of the Converter and appointed an acting Senior Watch Officer. Satisfied that his department could then take care of itself during a further absence, he sent for his chief porter and told the servant to fetch Alan Mahoney from his village. He had considered ordering his litter and meeting Mahoney halfway, but he decided against it as being too conspicuous.

Alan greeted him with enthusiasm. To him, still an unmarried cadet and working for more provident men when his contemporaries were all heads of families and solid men of property, the knowledge that he was blood brother to a senior scientist was quite the most important thing that had ever happened to him, even overshadowing his recent adventures, the meaning of which he was hardly qualified to understand anyway.

Ertz cut him short, and hastily closed the door to the outer engineering office. "Walls have ears," he said quietly, "and certainly clerks have ears, and tongues as well. Do you want us both to make the Trip?"

"Aw, gosh, Bill . . . I didn't mean to--"

"Never mind. I'll meet you on the same stair trunk we came down by, ten decks above this one. Can you count?"

"Sure, I can count that much. I can count twice that much. One and one makes two, and one more makes three, and one more makes four, and one makes five, and--"

"That's enough. I see you can. But I'm relying more on your loyalty and your knife than I am on your mathematical ability. Meet me there as soon as you can. Go up somewhere where you won't be noticed."

Forty-one was still on watch when they reached the rendezvous. Ertz called him by name while standing out of range of slingshot or thrown knife, a reasonable precaution in dealing with a creature who had grown to man size by being fast with his weapons. Once identification had been established, he directed the guard to find Hugh Hoyland. He and Alan sat down to wait.

Forty-one failed to find Hugh Hoyland at Joe-Jim's apartment. Nor was Joe-Jim there. He did find Bobo, but the pinhead was not very helpful. Hugh, Bobo told him, had gone up where-everybody-flies. That meant very little to Forty-one; he had been up to no-weight only once in his life. Since the level of weightlessness extended the entire length of the Ship, being in fact the last concentric cylinder around the Ship's axis, not that Forty-one could conceive it in those terms, the information that Hugh. had headed for no-weight was not helpful.

Forty-one was puzzled. An order from Joe-Jim was not to be ignored and he had got it through his not overbright mind that an order from Ertz carried the same weight. He woke Bobo up again. "Where is the Two Wise Heads?"

"Gone to see knifemaker." Bobo closed his eyes again.

That was better. Forty-one knew where the knifemaker lived. Every mutie had dealings with her; she was the indispensable artisan and tradesman of mutie country. Her

person was necessarily taboo; her workshop and the adjacent neighborhood were neutral territory for all. He scurried up two decks and hurried thence.

A door reading THERMODYNAMIC LABORATORY: KEEP OUT was standing open. Forty-one could not read; neither the name nor the injunction mattered to him. But he could hear voices, one of which be identified as coming from the twins, the other from the knifemaker. He walked in. "Boss," be began.

"Shut up," said Joe. Jim did not look around but continued his argument with the Mother of Blades. "You'll make knives," he said, "and none of your lip."

She faced him, her four calloused hands set firmly on her broad hips. Her eyes were reddened from staring into the furnace in which she heated her metal; sweat ran down her wrinkled face into the sparse gray mustache which disfigured her upper lip, and dripped onto her bare chest. "Sure I make knives," she snapped. "Honest knives. Not pig-stickers like you want me to make. Knives as long as your arm, ptui!" She spat at the cherry-red lip of the furnace.

"Listen, you old Crew bait," Jim replied evenly, "you'll make knives the way I tell you to, or I'll toast your feet in your own furnace. Hear me?"

Forty-one was struck speechless. No one ever talked back to the Mother of Blades; the Boss was certainly a man of power!

The knifemaker suddenly cracked. "But that's not the right way to make knives," she complained shrilly. "They wouldn't balance right. I'll show you." She snatched up two braces of knives from her workbench and let fly at a cross-shaped target across the room -- not in succession, but all four arms swinging together, all four blades in the air at once. They spwiged into the target, a blade at the extreme end of each arm of the cross. "See? You couldn't do that with a long knife. It would fight with itself and not go straight."

"Boss--" Forty-one tried again. Joe-Jim handed him a mouthful of knuckles without looking around.

"I see your point," Jim told the knifemaker, "but we don't want these knives for throwing. We want them for cutting and stabbing up close. Get on with it; I want to see the first one before you eat again."

The old woman bit her lip. "Do I get my usuals?" she said sharply.

"Certainly you get your usuals," he assured her. "A tithe on every kill till the blades are paid for, and good eating all the time you work."

She shrugged her misshapen shoulders. "O.K." She turned, tonged up a long flat fragment of steel with her two left hands and clanged the stock into the furnace. Joe-Jim turned to Forty-one.

"What is it?" Joe asked.

"Boss, Ertz sent me to get Hugh."

"Well, why didn't you do it?"

"I don't find him. Bobo says he's gone up to no-weight."

"Well, go get him. No, that won't do; you wouldn't know where to find him. I'll have to do it myself. Go back to Ertz and tell him to wait."

Forty-one hurried off. The Boss was all right, but it was not good to tarry in his presence.

"Now you've got us running errands," Jim commented sourly. "How do you like being a blood brother, Joe?"

"You got us into this."

"So? The blood-swearing was your idea."

"Damn it, you know why I did that. They took it seriously. And we are going to need all the help we can get, if we are to get out of this with a skin that will hold water."

"Oh? So you didn't take it seriously?"

"Did you?"

Jim smiled cynically. "Just about as seriously as you do, my dear, deceitful brother. As matters stand now, it is much, much healthier for you and me to keep to the bargain right up to the hilt. 'All for one and one for all!'"

"You've been reading Dumas again."

"And why not?"

"That's O.K. But don't be a damn fool about it."

"I won't be. I know which side of the blade is edged."

Joe-Jim found Squatty and Pig sleeping outside the door which led to the Control Room. He knew then that Hugh must be inside, for he had assigned the two as personal bodyguards to Hugh. It was a foregone conclusion anyhow; if Hugh had gone up to no-weight, he would be heading either for Main Drive, or the Control Room, more probably the Control Room. The place held a tremendous fascination for Hugh. Ever since the earlier time when Joe-Jim had almost literally dragged him into the Control Room and had forced him to see with his own eyes that the Ship was not the whole world but simply a vessel adrift in a much larger world -- a vessel that could be driven and moved -- ever since that time and throughout the period that followed while he was still a captured slave of Joe-Jim's, he had been obsessed with the idea of moving the Ship, of sitting at the controls and making it go!

It meant more to him than it could possibly have meant to a space pilot from Earth. From the time that the first rocket made the little jump from Terra to the Moon, the spaceship pilot has been the standard romantic hero whom every boy wished to emulate. But Hugh's ambition was of no such picayune caliber; he wished to move his world. In Earth standards and concepts it would be less ambitious to dream of equipping the Sun with jets and go gunning it around the Galaxy.

Young Archimedes had his lever; he sought a fulcrum.

Joe-Jim paused at the door of the great silver stellarium globe which constituted the Control Room and peered in. He could not see Hugh, but he knew that he must be at the controls in the chair of the chief astrogator, for the lights were being manipulated. The images of the stars were scattered over the inner surface of the sphere producing a simulacrum of the heavens outside the Ship. The illusion was not fully convincing from the door where Joe-Jim rested; from the center of the sphere it would be complete.

Sector by sector the stars snuffed out, as Hugh manipulated the controls from the center of the sphere. A sector was left shining on the far side forward. It was marked by a large and brilliant orb, many times as bright as its companions. Joe-Jim ceased watching and pulled himself hand over hand up to the control chairs. "Hugh!" Jim called out.

"Who's there?" demanded Hugh and leaned his head out of the deep chair. "Oh, it's you. Hello."

"Ertz wants to see you. Come on out of there."

"O.K. But come here first. I want to show you something."

"Nuts to him," Joe said to his brother. But Jim answered, "Oh, come on and see what it is. Won't take long."

The twins climbed into the control station and settled down in the chair next to Hugh's. "What's up?"

"That star out there," said Hugh, pointing at the brilliant one. "It's grown bigger since the last time I was here."

"Huh? Sure it has. It's been getting brighter for a long time. Couldn't see it at all first time I was ever in here."

"Then we're closer to it."

"Of course," agreed Joe. "I knew that. It just goes to prove that the Ship is moving."

"But why didn't you tell me about this?"

"About what?"

"About that star. About the way it's been growing bigger."

"What difference does it make?"

"What difference does it make! Why, good Jordan, man, that's it. That's where we're going. That's the End of the Trip!"

Joe-Jim, both of him, was momentarily startled. Not being himself concerned with any objective other than his own safety and comfort, it was hard for him to realize that Hugh, and perhaps Bill Ertz as well, held as their first objective the recapturing of the lost accomplishments of their ancestors' high order to complete the long-forgotten, half-mythical Trip to Far Centaurus.

Jim recovered himself. "Hm-m-m. Maybe. What makes you think that star is Far Centaurus?"

"Maybe it isn't. I don't care. But it's the star we are closest to and we are moving toward it. When we don't know which star is which, one is as good as another. Joe-Jim, the ancients must have had some way of telling the stars apart."

"Sure they did," Joe confirmed, "but what of it? You've picked the one you want to go to. Come on. I want to get back down."

"All right," Hugh agreed reluctantly. They began the long trip down.

Ertz sketched out to Joe-Jim and Hugh his interview with Narby. "Now my idea in coming up," he continued, "is this: I'll send Alan back down to heavy-weight with a message to Narby, telling him that I've been able to get in contact with you, Hugh, and urging him to meet us somewhere above Crew country to hear what I've found out."

"Why don't you simply go back and fetch him yourself?" objected Hugh.

Ertz looked slightly sheepish. "Because you tried that method on me, and it didn't work. You returned from mutie country and told me the wonders you had seen. I didn't believe you and had you tried for heresy. If Joe-Jim hadn't rescued you, you would have gone to the Converter. If you had not hauled me up to no-weight and forced me to see with my own eyes, I never would have believed you. I assure you Narby won't be any easier a lock to force than I was. I want to get him up here, then show him the stars and make him see, peacefully if we can; by force if we must."

"I don't get it," said Joe. "Why wouldn't it be simpler to cut his throat?"

"It would be a pleasure. But it wouldn't be smart. Narby can be a tremendous amount of help to us. Jim, if you knew the Ship's organization the way I do, you would see why. Narby carries more weight in the Council than any other Ship's officer and he speaks for the Captain. If we win him over, we may never have to fight at all. if we don't ... well, I'm not sure of the outcome, not if we have to fight."

"I don't think he'll come up. He'll suspect a trap."

"Which is another reason why Alan must go rather than myself. He would ask me a lot of embarrassing questions and be dubious about the answers. Alan he won't expect so much of." Ertz turned to Alan and continued, "Alan, you don't know anything when he asks you but just what I'm about to tell you. Savvy?"

"Sure. I don't know nothing, I ain't seen nothing, I ain't heard nothing." With frank simplicity he added, "I never did know much."

"Good. You've never laid eyes on Joe-Jim, you've never heard of the stars. You're just my messenger, a knife I took along to help me. Now here's what you are to tell him." He gave Alan the message for Narby, couched in simple but provocative terms, then made sure that Alan had it all straight. "All right, on your way! Good eating."

Alan slapped the grip of his knife, answered, "Good eating!" and sped away.

It is not possible for a peasant to burst precipitously into the presence of the Captain's Executive; Alan found that out. He was halted by the master-at-arms on watch outside Narby's suite, cuffed around a bit for his insistence on entering, referred to a boredly unsympathetic clerk who took his name and told him to return to his village and wait to be summoned. He held his ground and insisted that he had a message of immediate importance from the Chief Engineer to Commander Narby. The clerk looked up again. "Give me the writing."

"There is no writing."

"What? That's ridiculous. There is always a writing. Regulations."

"He had no time to make a writing. He gave me a word message."

"What is it?"

Alan shook his head. "It is private, for Commander Narby only. I have orders."

The clerk looked his exasperation.

But, being only a probationer, he forewent the satisfaction of direct and immediate disciplining of the recalcitrant churl in favor of the safer course of passing the buck higher up.

The chief clerk was brief. "Give me the message."

Alan braced himself and spoke to a scientist in a fashion be had never used in his life, even to one as junior, as this passed clerk. "Sir, all I ask is for you to tell Commrnder Narby that I have a message for him from Chief Engineer Ertz. If the message is not delivered, I won't be the one to go to the Converter! But I don't dare give the message to anyone else."

The under official pulled at his lip, and decided to take a chance on disturbing his superior.

Alan delivered his message to Narby in a low voice in order that the orderly standing just outside the door might not overhear. Narby stared at him. "Ertz wants me to come along with you up to mutie country?"

"Not all the way up to mutie country, sir. To a point in between, where Hugh Hoyland can meet you."

Narby exhaled noisily. "It's preposterous. I'll send a squad of knives up to fetch him down to me."

Alan delivered the balance of his message. This time he carefully raised his voice to ensure that the orderly, and, if possible, others might hear his words. "Ertz said to tell you that if you were afraid to go, just to forget the whole matter. He will take it up with the Council himself."

Alan owed his continued existence thereafter to the fact that Narby was the sort of man who lived by shrewdness rather than by direct force. Narby's knife was at his belt; Alan was painfully aware that he had been required to deposit his own with the master-at-arms.

Narby controlled his expression. He was too intelligent to attribute the insult to the oaf before him, though he promised himself to give said oaf a little special attention at a more convenient time. Pique, curiosity, and potential loss of face all entered into his decision. "I'm coming with you," he said savagely. "I want to ask him if you got his message straight."

Narby considered having a major guard called out to accompany him, but he discarded the idea. Not only would it make the affair extremely public before he had an opportunity to judge its political aspects, but also it would cost him almost as much face as simply refusing to go. But he inquired nervously of Alan as Alan retrieved his weapon from the master-at-arms, "You're a good knife?"

"None better," Alan agreed cheerfully.

Narby hoped that the man was not simply boasting. Muties! Narby wished that he himself had found more time lately for practice in the manly arts.

Narby gradually regained his composure as he followed Alan up toward low-weight. In the first place nothing happened, no alarms; in the second place Alan was obviously a cautious and competent scout, one who moved alert and noiselessly and never entered a deck without pausing to peer cautiously around before letting his body follow his eye. Narby might have been more nervous had be hearing what Alan did hear: little noises from the depths of the great dim passageways, rustlings which told him that their progress was flanked on all sides. This worried Alan subconsciously, although he had expected something of the sort; he knew that both Hugh and Joe-Jim were careful captains who would not neglect to cover an approach. He would have worried more if he had not been able detect a reconnaissance which should have been present.

When he approached the rendezvous some twenty decks above the highest civilized level, he stopped and whistled. A whistle answered him. "It's Alan," he called out.

"Come up and show yourself?" Alan did so, without neglecting his usual caution. When be saw no one but his friends: Ertz, Hugh, Joe-Jim, and Bobo, be motioned for Narby to foflow him.

The sight of Joe-Jim and Bobo broke Narby's unsteady calm with a sudden feeling that he had been trapped. He snatched at his knife and backed clumsily down the stair then turned. Bobo's knife was out even faster. For a split moment the outcome hung balanced, ready to fall either way. But Joe-Jim slapped Bobo across the face, took his knife from him and let it clatter to the deck, then relieved him of his slingshot.

Narby was in full flight, with Hugh and Ertz calling vainly after him. "Fetch him, Bobo!" Jim commanded, "and do not hurt him." Bobo lumbered away.

He was back in fairly short order. "Run fast," be commented. He dropped Narby to the deck where the officer lay almost quiet while he fought to catch his breath. Bobo took Narby's knife from his own belt and tried it by shaving coarse black hairs from his left forearm. "Good blade," he approved.

"Give it back to him," Jim ordered. Bobo looked extremely startled but complied wistfully. Joe-Jim returned Bobo's own weapons to him.

Narby matched Bobo's surprise at regaining his sidearm, but he concealed it better. He even managed to accept it with dignity.

"Look," Ertz began in worried tones, "I'm sorry you got your wind up, Fin. Bobo's not a bad sort. It was the only way to get you back."

Narby fought with himself to regain the cool self-discipline with which he habitually met the world. Damn! he told himself, this situation is preposterous. Well... "Forget it," he said shortly. "I was expecting to meet you; I didn't expect a bunch of armed muties. You have an odd taste in playmates, Ertz."

"Sorry," Bill Ertz replied, "I guess I should have warned you." a piece of mendacious diplomacy. "But they're all right. Bobo you've met. This is Joe-Jim. He's a. . . a sort of a Ship's officer among the muties."

"Good eating," Joe acknowledged politely.

"Good eating," Narby replied mechanically.

"Hugh you know, I think." Narby agreed that he did.

An embarrassed pause followed. Narby broke it.

"Well," he said, "you must have had some reason to send word for me to come up here. Or was it just to play games?"

"I did," Ertz agreed. "I -- Shucks, I hardly know where to start. See here, Narby, you won't believe this, but I've seen. Everything Hugh told us was true. I've been in the Control Room. I've seen the stars. I know?"

Narby stared at him. "Ertz," he said slowly, "you've gone out of your mind."

Hugh Hoyland spoke up excitedly. "That's because you haven't seen. It moves, look you. The Ship moves like a--"

"Fit handle this," Ertz cut in. "listen to me, Narby. What it all means you will soon decide for yourself, but I can tell you what I saw. They took me up to no-weight and into the Captain's veranda. That's a compartment with a glass wall. You can stare right out through into a great black empty space: big, bigger than anything could be. Bigger than the Ship. And there were lights out there, stars, just like the ancient myths said."

Narby looked both amazed and disgusted. "Where's your logic, man? I thought you were a scientist. What do you mean, 'bigger than the Ship'? That's an absurdity, a contradiction in terms. By definition, the Ship is the Ship. All else is a part of it."

Ertz shrugged helplessly. "I know it sounds that way. I can't explain it; it defies all logic. It's -- Oh, Huff! You'll know what I mean when you see it."

"Control yourself," Narby advised him. "Don't talk nonsense. A thing is logical or it isn't. For a thing to be it must occupy space. You've seen, or thought you saw,

something remarkable, but whatever it was, it can be no larger than the compartment it was in. You can't show me anything that contradicts an obvious fact of nature."

"I told you I couldn't explain it."

"Of course you can't."

The twins had been whispering disgustedly, one head to the other. "Stop the chatter," Joe said in louder tones. "We're ready to go. Come on."

"Sure," Ertz agreed eagerly, "let's drop it, Narby, until you have seen it. Come on now; it's a long climb."

"What?" Narby demanded. "Say, what is this? Go where?"

"Up to the Captain's veranda, and the Control Room."

"Me? Don't be ridiculous. I'm going down at once."

"No, Narby," Ertz denied. "That's why I sent for you. You've got to see."

"Don't be silly. I don't need to see; common sense gives sufficient answer. However," he went on, "I do want to congratulate you on making a friendly contact with the muties. We should be able to work out some means of cooperation. I think--"

Joe-Jim took one step forward. "You're wasting time," he said evenly. "We're going up; you, too. I really do insist."

Narby shook his head. "It's out of the question. Some other time, perhaps, after we have worked out a method of cooperation."

Hugh stepped in closer to him from the other side. "You don't seem to understand. You're going now."

Narby glanced the other way at Ertz. Ertz nodded. "That's how it is, Narby."

Narby cursed himself silently. Great Jordan! What in the Ship was he thinking of to let himself get into such a position? He had a distinct feeling that the two-headed man would rather that he showed fight. Impossible, preposterous situation. He cursed again to himself, but gave way as gracefully as he could. "Oh, well! Rather than cause an argument I'll go now. Let's get on with it. Which way?"

"Just stick with me," advised Ertz. Joe-Jim whistled loudly in a set pattern. Muties seemed to grow out of the floor plates, the bulkheads, the overhead, until six or eight more had been added to the party. Narby was suddenly sick with the full realization of just how far he had strayed from the way of caution. The party moved up.

It took them a long time to get up to no-weight, as Narby was not used to climbing. The steady reduction in weight as they rose from deck to deck relieved him somewhat but the help afforded was more than offset by the stomach qualms he felt as weight dropped away from him. He did not have a true attack of space-sickness; like all born in the Ship, muties and Crew, he was more or less acclimated to lessened weight, but he had done practically no climbing since reckless adolescence. By the time they reached the innermost deck of the Ship he was acutely uncomfortable and hardly able to proceed.

Joe-Jim sent the added members of the party back below and told Bobo to carry Narby. Narby waved him away. "I can make it," he protested, and by sheer stubborn will forced his body to behave. Joe-Jim looked him over and countermanded the order. By the time a long series of gliding dives had carried them as far forward as the transverse bulkhead beyond which lay the Control Room, he was reasonably comfortable again.

They did not stop first at the Control Room, but, in accordance with a plan of Hugh's, continued on to. the Captain's veranda. Narby was braced for what he saw there,

not only by Ertz's confused explanation, but because Hugh had chattered buoyantly to him about it all the latter part of the trip. Hugh was feeling warmly friendly to Narby by the time they arrived; it was wonderful to have somebody to listen!

Hugh floated in through the door ahead of the others, executed a neat turn in mid-air, and steadied himself with one hand on the back of the Captain's easy chair. With the other he waved at the great view port and the starry firmament beyond it. "There it is!" he exulted. "There it is. Look at it, isn't it wonderful?"

Narby's face, showed no expression, but he looked long and intently at the brilliant display. "Remarkable," he conceded at last, "remarkable. I've never seen anything like it."

"Remarkable ain't half," protested Hugh. "Wonderful is the word."

"O.K., 'wonderful,'" Narby assented. "Those bright little lights ... you say those are the stars that the ancients talked about?"

"Why, yes," agreed Hugh, feeling slightly disconcerted without knowing why, "only they're not little. They're big, enormous things, like the Ship. They just look little because they are so far away. See that very bright one, that big one, down to the left? It looks big because it's closer. I think that is Far Centaurus, but I'm not sure," he admitted in a burst of frankness.

Narby glanced quickly at him, then back to the big star. "How far away is it?"

"I don't know. But we'll find out. There are instruments to measure such things in the Control Room, but I haven't got the hang of them entirely. It doesn't matter, though. We'll get there yet!"

"Huh?"

"Sure. Finish the Trip."

Narby looked blank, but said nothing. His was a careful and orderly mind, logical to a high degree. He was a capable executive and could make rapid decisions when necessary, but he was by nature inclined to reserve his opinions when possible, until he had had time to chew over the data and assess it.

He was even more taciturn, in the Control Room. He listened and looked, but asked very few questions. Hugh did not care. This was his toy, his gadget, his baby. To show it off to someone who had never seen it and who would listen was all he asked.

At Ertz's suggestion the party stopped at Joe-Jim's apartment on the way back down. Narby must be committed to the same course of action as the blood brotherhood and plans must be made to carry out such action, if the stratagem which brought Narby to them was to be fruitful. Narby agreed to stop unreluctantly, having become convinced of the reality of the truce under which he made this unprecedented sortie into mutie country. He listened quietly while Ertz outlined what they had in mind. He was still quiet when Ertz had finished.

"Well?" said Ertz at last, when the silence had dragged on long enough to get on his nerves.

"You expect some comment from me?"

"Yes, of course. You figure into it." Narby knew that he did and knew that an answer was expected from him; he was stalling for time.

"Well..." Narby pursed his lips and fitted his fingertips together. "It seems to me that this problem divides itself into two parts. Hugh Hoyland, as I understand it, your purpose of carrying out the ancient Plan of Jordan cannot be realized until the Ship as a

whole is pacified and brought under one rule; you need order and discipline for your purpose from Crew country clear to the Control Room. Is that right?"

"Certainly. We have to man the Main Drive and that means--"

"Please. Frankly, I am not qualified to understand things that I have seen so recently and have had no opportunity to study. As to your chances of success in that project, I would prefer to rely on the opinion of the Chief Engineer. Your problem is the second phase; it appears that you are necessarily interested in the first phase."

"Of course."

"Then let's talk about the first phase only. It involves matters of public policy and administration. I feel more at home there; perhaps my advice will be useful. Joe-Jim, I understand that you ate looking for an opportunity to effect a peace between the muties and the members of the Crew; peace and good eating? Right?"

"That's correct," Jim agreed.

"Good. It has been my purpose for a long time and that of many of the Ship's officers. Frankly it never occurred to me that it could be achieved other than by sheer force. We had steeled ourselves to the prospect of a long and difficult and bloody war. The records of the oldest Witness, handed down to him by his predecessors clear back to the time of the mythical Mutiny, make no mention of anything but war between muties and the Crew. But this is a better way; I am delighted."

"Then you're with us!" exclaimed Ertz.

"Steady, there are many other things to be considered. Ertz, you and I know, and Hoyland as well I should think, that not all of the Ship's officers will agree with us. What of that?"

"That's easy," put in Hugh Hoyland. "Bring them up to no-weight one at a time, let them see the stars and learn the truth."

Narby shook his head. "You have the litter carrying the porters. I told you this problem is in two phases. There is no point in trying to convince a man of something he won't believe when you need him to agree to something he can understand. After the Ship is consolidated it will be simple enough then to let the officers experience the Control Room and the stars."

"But--"

"He's right," Ertz stopped him. "No use getting cluttered up with a lot of religious issues when the immediate problem is a practical one. There are numerous officers whom we could get on our side for the purpose of pacifying the Ship who would raise all kinds of fuss if we tackled them first on the idea that the Ship moves."

"But--"

"No 'buts' about it. Narby is right. It's common sense. Now, Narby, about this matter of those officers who may not be convinced, here's how we see it: In the first place it's your business and mine to win over as many as we can. Any who hold out against us -- well, the Converter is always hungry."

Narby nodded, completely undismayed by the idea of assassination as a policy. "That seems the safest plan. Mightn't it be a little bit difficult?"

"That is where Joe-Jim comes in. We'll have the best knives in the Ship to back us up."

"I see. Joe-Jim is, I take it, Boss of all the muties?"

"What gave you that idea?" growled Joe, vexed without knowing why.

"Why, I supposed . . . I was given to understand--" Narby stopped. No one had told him that Joe-Jim was king of the upper decks; he had assumed it from appearances. He felt suddenly very uneasy. Had he been negotiating uselessly? What was the point in a pact with this two-headed monstrosity if he did not speak for the muties?

"I should have made that clear," Ertz said hastily. "Joe-Jim helps us to establish a new administration, then we will be able to back him up with knives to pacify the rest of the muties. Joe-Jim isn't Boss of all the muties, but he has the largest, strongest gang. With our help he soon will be Boss of all of them."

Narby quickly adjusted his mind to the new data. Muties against muties, with only a little help from the cadets of the Crew, seemed to him a good way to fight. On second thoughts, it was better than an outright truce at once, for there would be fewer muties to administer when it was all over, less chance of another mutiny. "I see," he agreed. "So ... Have you considered what the situation will be afterwards?"

"What do you mean?" inquired Hoyland.

"Can you picture the present Captain carrying out these plans?"

Ertz saw what he was driving at, and so did Hoyland vaguely.

"Go on," said Ertz.

"Who is to be the new Captain?" Narby looked squarely at Ertz.

Ertz had not thought the matter through; he realized now that the question was very pertinent, if the coup d'etat was not to be followed by a bloody scramble for power. He had permitted himself to dream of being selected as Captain, sometime. But he knew that Narby was pointed that way, too.

Ertz had been as honestly struck by the romantic notion of moving the Ship as Hoyland. He realized that his old ambition stood in the way of the plan; he renounced the old with only a touch of wistfulness.

"You will have to be Captain, Fin. Are you willing to be?"

Phineas Narby accepted gracefully. "I suppose so, if that's the way you want it. You would make a fine Captain, yourself, Ertz."

Ertz shook his head, understanding perfectly that Narby's full cooperation turned on this point. "I'll continue Chief Engineer. I want to handle the Main Drive of the Trip."

"Slow down!" Joe interrupted. "I don't agree to this. Why should he be Captain?"

Narby faced him. "Do you want to be Captain?" He kept his voice carefully free of sarcasm. A mutie for Captain!

"Huff's name, no! But why should you be? Why not Ertz or Hugh?"

"Not me," Hugh disclaimed. "I'll have no time for administration. I'm the astrogator."

"Seriously, Joe-Jim," Ertz explained, "Narby is the one of the group who can get the necessary cooperation out of the Ship's officers."

"Damn it, if they won't cooperate we can slit their throats."

"With Narby as Captain we won't have to slit throats."

"I don't like it," groused Joe. His brother shushed, "Why get excited about it, Joe? Jordan knows we don't want the responsibility."

"I quite understand your misgivings," Narby suggested suavely, "but I don't think you need worry. I would forced to depend on you, of course, to administer the muties. I would administer the lower decks, a job I am used to and you would be Vice-Captain, if you are willing serve, for the muties. It would be folly for me to attempt to administer

directly a part of the Ship I'm not familiar with and people whose customs I don't know. I really can't accept the captaincy unless you are willing to help me in that fashion. Will you do it?"

"I don't want any part of it," protested Joe.

"I'm sorry. Then I must refuse to be Captain. I really can't undertake it if you won't help me that much."

"Oh, go ahead, Joe," Jim insisted. "Let's take it, for the time being at least. The job has to be done."

"All right," Joe capitulated, "but I don't like it."

Narby ignored the fact that Joe-Jim had not specifically agreed to Narby's elevation to the captaincy; no further mention was made of it.

The discussion of ways and means was tedious and need not be repeated. It was agreed that Ertz, Alan, and Narby should all return to their usual haunts and occupations while preparations were made to strike.

Hugh detailed a guard to see them safely down to high-weight. "You'll send Alan up when you are ready?" he said to Narby as they were about to leave.

"Yes," Narby agreed, "but don't expect him soon. Ertz and I will have to have time to feel out friends, and there's the matter of the old Captain. I'll have to persuade him to call a meeting of all the Ship's officers; he's never too easy to handle."

"Well, that's your job. Good eating!"

"Good eating."

On the few occasions when the scientist priests who ruled the Ship under Jordan's Captain met in full assembly they gathered in a great hall directly above the Ship's offices on the last civilized deck. Forgotten generations past, before the time of the mutiny led by Ship's Metalsmith Roy Huff, the hall had been a gymnasium, a place for fun and healthy exercise, as planned by the designers of the great starship; but the present users knew nothing of that.

Narby watched the roster clerk check off the Ship's Officers as they arrived, worried under a bland countenance. There were only a few more to arrive; he would soon have no excuse not to notify the Captain that the meeting was ready, but he had received no word from Joe-Jim and Hoyland. Had that fool Alan managed to get himself killed on the way up to deliver the word? Had he fallen and broken his worthless neck? Was he dead with a mutie's knife in his belly?

Ertz came in, and before seeking his seat among the department heads, went up to where Narby sat in front of the Captain's chair. "How about it?" he inquired softly.

"All right," Narby told him, "but no word yet."

"Hm-m-m." Ertz turned around and assayed his support in the crowd. Narby did likewise. Not a majority, not a certain majority, for anything as drastic as this. Still, the issue would not depend on voting.

The roster clerk touched his arm. "All present, sir, except those excused for sickness, and one on watch at the Converter."

Narby directed that the Captain be notified, with a sick feeling that something had gone wrong. The Captain, as usual, with complete disregard for the comfort and convenience of others, took his time about appearing. Narby was glad of the delay, but

miserable in enduring it. When the old man finally waddled in, flanked by his orderlies, and settled heavily into his chair, he was, again as usual, impatient to get the meeting over. He waved for the others to be seated and started in on Narby.

"Very well, Commander Narby, let's have the agenda. You have an agenda, I hope?"

"Yes, Captain, there is an agenda."

"Then have it read, man, have it read! Why are you delaying?"

"Yes, sir." Narby turned to the reading clerk and handed him a sheaf of writings. The clerk glanced at them, looked puzzled, but, receiving no encouragement from Narby, commenced to read: "Petition, to Council and Captain: Lieutenant Braune, administrator of the village of Sector 9, being of frail health and advanced age, prays that he be relieved of all duty and retired." The clerk continued, setting forth the recommendations of the officers and departments concerned.

The Captain twisted impatiently in his chair, finally interrupted the reading. "What is this, Narby? Can't you handle routine matters without all this fuss?"

"I understood that the Captain was displeased with the fashion in which a similar matter was lately handled. I have no wish to trespass on the Captain's prerogatives."

"Nonsense, man! Don't read Regulations to me. Let the Council act, then bring their decision to me for review."

"Yes, sir." Narby took the writing from the clerk and gave him another. The clerk read.

It was an equally fiddling matter. Sector 3 village, because of an unexplained blight which had infected their hydroponic farms, prayed for relief and a suspension of taxes. The Captain put up with still less of this item before interrupting. Narby would have been sorely pressed for any excuse to continue the meeting had not the word he awaited arrived at that moment. It was a mere scrap of parchment, brought in from outside the hall by one of his own men. It contained the single word, "Ready." Narby looked at it, nodded to Ertz, and addressed the Captain:

"Sir, since you have no wish to listen to the petitions of your Crew, I will continue at once with the main business of this meeting." The veiled insolence of the statement caused the Captain to stare at him suspiciously, but Narby went on. "For many generations, through the lives of a succession of Witnesses, the Crew has suffered from the depredations of the muties. Our livestock, our children, even our own persons, have been in constant jeopardy. Jordan's Regulations are not honored above the levels where we live. Jordan's Captain himself is not free to travel in the upper levels of the Ship.

"It has been an article of faith that Jordan so ordained it, that the children pay with blood for the sins of their ancestors. It was the will of Jordan, we were told.

"I, for one, have never been reconciled to this constant drain on the Ship's mass." He paused.

The old Captain had been having some difficulty in believing his ears. But he found his voice. Pointing, he squealed, "Do you dispute the Teachings?"

"I do not. I maintain that the Teachings do not command us to leave the muties outside the Regulations, and never did. I demand that they be brought under the Regulations!"

"You . . . you! You are relieved of duty, sir!"

"Not," answered Narby, his insolence now overt, "until I have had my say."

"Arrest that man!" But the Captain's orderlies stood fast, though they shuffled and looked unhappy. Narby himself had selected them.

Narby turned back to the amazed Council, and caught the eye of Ertz. "All right," he said. "Now!" Ertz got up and trotted toward the door. Narby continued, "Many of you think as I do, but we always supposed that we would have to fight for it. With the help of Jordan, I have been able to achieve contact with the muties and propose terms of a truce. Their leaders are coming here to negotiate with us. There!" He pointed dramatically at the door.

Ertz reappeared; following him came Hugh Hoyland, Joe-Jim, and Bobo. Hoyland turned to the right along the wall and circled the company. He was followed single file by a string of muties: Joe-Jim's best butcher boys. Another such column trailed after Joe-Jim and Bobo to the left.

Joe-Jim, Hugh, and half a dozen more in each wing were covered with crude armor which extended below their waists. The armor was topped off with clumsy helms, latticeworks of steel, which protected their heads without greatly interfering with vision. Each of the armored ones, a few of the others, carried unheard-of knives, long as a man's arm!

The startled officers might have stopped the invasion at the bottleneck through which it entered had they been warned and led. But they were disorganized, helpless, and their strongest leaders had invited the invaders in. They shifted in their chairs, reached for their knives, and glanced anxiously from one to another. But no one made the first move which would start a general bloodletting.

Narby turned to the Captain. "What about it? Do you receive this delegation in peace?"

It seemed likely that age and fat living would keep the Captain from answering, from ever answering anything again. But he managed to croak, "Get 'em out of here! Get 'em out! You--You'll make the Trip for this!"

Narby turned back to Joe-Jim and jerked his thumb upward. Jim spoke to Bobo and a knife was buried to the grip in the Captain's fat belly. He squawked, rather than screamed, and a look of utter bewilderment spread over his features. He plucked awkwardly at the hilt as if to assure himself that it was really there. "Mutiny." he stated. "Mutiny--" The word trailed off as he collapsed into his chair, and fell heavily forward to the deck on his face.

Narby shoved it with his foot and spoke to the two orderlies. "Carry it outside," he commanded. They obeyed, seeming relieved at having something to do and someone to tell them to do it. Narby turned back to the silent watching mass. "Does anyone else object to a peace with the muties?"

An elderly officer, one who had dreamed away his life as judge and spiritual adviser to a remote village, stood up and pointed a bony finger at Narby, while his white beard jutted indignantly. "Jordan will punish you for this! Mutiny and sin, the spirit of Huff!"

Narby nodded to Joe-Jim; the old man's words gurgled in his throat, the point of a blade sticking out under one ear. Bobo looked pleased with himself.

"There has been enough talk," Narby announced. "It is better to have a little blood now than much blood later. Let those who stand with me in this matter get up and come forward."

Ertz set the precedent by striding forward and urging his surest personal supporters to come with him. Reaching the front of the room, he pulled out his knife and raised the point. "I salute Phineas Narby, Jordan's Captain!"

His own supporters were left with no choice. "Phineas Narby, Jordan's Captain!"

The hard young men in Narby's clique, the backbone of the dissident rationalist bloc among the scientist priests, joined the swing forward en masse, points raised high and shouting for the new Captain. The undecided and the opportunists hastened to join, as they saw which side of the blade was edged. When the division was complete, there remained a handful only of Ship's officers still hanging back, almost all of whom were either elderly or hyperreligious.

Ertz watched Captain Narby look them over, then pick up Joe-Jim with his eyes. Ertz put a hand on his arm. "There are few of them and practically helpless," he pointed out. "Why not disarm them and let them retire?"

Narby Eave him an unfriendly look. "Let them stay alive and breed mutiny. I am quite capable of making my own decisions, Ertz."

Ertz bit his lip. "Very well, Captain."

"That's better." He signaled to Joe-Jim.

The long knives made short work of it.

Hugh hung back horn the slaughter. His old teacher, Lieutenant Nelson, the village scientist who had seen his ability and selected him for scientisthood, was one of the group. It was a factor be had not anticipated.

World conquest and consolidation. Faith, or the Sword. Joe-Jim's bullies, amplified by hot-blooded young cadets supplied by Captain Narby, combed the middle decks and the upper decks. The muties, individualists by the very nature of their existence and owing no allegiance higher than that to the leaders of their gangs, were no match for the planned generalship of Joe-Jim, nor did their weapons match the strange, long knives that bit before a man was ready.

The rumor spread through mutie country that it was better to surrender quietly to the gang of the Two Wise Heads; good eating for those who surrendered, death inescapable for those who did not.

But it was nevertheless a long slow process. There were so many, many decks, so many miles of gloomy corridors, so many countless compartments in which unsubdued muties might lurk. Furthermore, the process grew slower as it advanced, as Joe-Jim attempted to establish a police patrol, an interior guard, over each sector, deck, and stair way trunk, as fast as his striking groups mopped them up.

To Narby's disappointment, the two-headed man was not killed in his campaigns. Joe-Jim had learned from his own books that a general need not necessarily expose himself to direct combat.

Hugh buried himself in the Control Room. Not only was he more interested in the subtle problems of mastering the how and why of the complex controls and the parallel complexity of starship ballistics, but also the whole matter of the blood purge was distasteful to him because of Lieutenant Nelson. Violence and death he was used to; they were commonplace even on the lower levels, but that incident made him vaguely

unhappy, even though his own evaluations were not sufficiently clean-cut for him to feel personal responsibility for the old man's death.

He just wished it had not happened.

But the controls: ahh. There was something a man could put his heart into. He was attempting a task that an Earthman would have rejected as impossible; an Earthmaa would have known that the piloting and operation of an interstellar ship was a task so difficult that the best possible technical education combined with extensive experience in the handling of lesser spacecraft would constitute a barely adequate grounding for the additional intensive highly specialized training necessary for the task.

Hugh Hoyland did not know that. So he went ahead and did it anyhow.

In which attempt he was aided by the genius of the designers. The controls of most machinery may be considered under the head of simple pairs, stop-and-go, push-and-pull, up-and-down, in-and-out, on-and-off, right-and-left, their permutations and combinations. The real difficulties have to do with upkeep and repair, adjustment and replacements.

But the controls and main drive machinery of the starship Vanguard required no upkeep and no repair; their complexities were below the molar level, they contained no moving parts, friction took no toil and they did not fall out of adjustment. Had it been necessary for him to understand and repair the machines he dealt with, it would have been impossible. A fourteen-year-old child may safely be entrusted with a family skycar and be allowed to make thousand-mile jaunts overnight unaccompanied; it is much more probable that he will injure himself on the trip by overeating than by finding some way to mismanage or damage the vehicle. But if the skycar should fall out of adjustment, ground itself, and signal for a repair crew, the repair crew is essential; the child cannot fix it himself.

The Vanguard needed no repair crew, save for nonessential ancilliary machinery such as transbelts, elevators, automassagers, dining services, and the like. Such machinery which necessarily used moving parts had worn out before the time of the first Witness; the useless mass involved had gone into the auxiliary Converter, or had been adapted to other simpler purposes. Hugh was not even aware that there ever had been such machinery; the stripped condition of most compartments was a simple fact of nature to him, no cause for wonder.

Hugh was aided in his quest for understanding by two other facts:

First, spaceship ballistics is a very simple subject, being hardly more than the application of the second law of motion to an inverse-square field. That statement runs contrary to our usual credos; It happens to be true. Baking a cake calls for much greater, though subconscious, knowledge of engineering; knitting a sweater requires a subconscious understanding of much more complex mathematical relationships: topology of a knitted garment, but try it yourself sometime!

For a complex subject, consider neurology, or catalysts, but don't mention ballistics.

Second, the designers had clearly in mind that the Vanguard would reach her destination not sooner than generations after her departure; they wished to make it easy for the then-not-yet-born pilots who would command her on arrival. Although they anticipated no such hiatus in technical culture as took place, they did their best to make the controls simple and self-explanatory. The sophisticated fourteen-year-old mentioned,

oriented as he would be to the concept of space, would doubtless have figured them out in a few minutes. Hugh, reared in a culture which believed that the Ship was the whole world, made no such quick job of it.

He was hampered by two foreign concepts, distance and metrical time. He had to learn to operate the finder, a delayed-action, long-base, parallax type designed for the Vanguard, and had taken measurements on a couple of dozen stellar bodies before it occurred him that the results he was getting could possibly stand for anything. The readings were in parsecs and without meaning emotionally. The attempt with the aid of the Sacred to translate his readings into linear units he could stand resulted in figures which he felt sure were were obviously preposterous. Check and recheck, followed long periods of brooding forced him unwillingly into some dim comprehension of astronomical magnitudes.

The concepts frightened him and bewildered him. For a period of several sleeps he stayed away from the Control Room, and gave way to a feeling of futility and depression. He occupied the time in sorting over the women captives, it being the first time since his capture by Joe-Jim long ago that he had had both the opportunity and the mood to consider the subject. The candidates were numerous, for, in addition to the usual crop of village maidens, Joe-Jim's military operations had produced a number of prime widows. Hugh availed himself of his leading position in the Ship's new setup to select two women. The first was a widow, a strong competent woman, adept at providing a man with domestic comforts. He set her up in his new apartment high up in low-weight, gave her a free hand, and allowed her to retain her former name of Chloe.

The other was a maiden, untrained and wild as a mutie. Hugh could not have told himself why he picked her. Certainly she had no virtues, but she made him feel funny. She had bitten him while he was inspecting her; he had slapped her, naturally, and that should have been an end to the matter. But he sent word back later for her father to send her along.

He had not got around to naming her.

Metrical time caused him as much mental confusion as astronomical distances, but no emotional upset The trouble was again the lack of the concept in the Ship. The Crew had the notion of topological time; they understood "now," "before," "after," "has been," "will be," even such notions as long time and short time, but the notion of measured time had dropped out of the culture. The lowest of earthbound cultures has some idea of measured time, even if limited to days and seasons, but every earthly concept of measured time originates in astronomical phenomena; the Crew had been insulated from all astronomical phenomena for uncounted generations.

Hugh had before him, on the control consoles, the only working timepieces in the Ship, but it was a long, long time before he grasped what they were for and what bearing they had on other instruments. But until did, he could not control the Ship. Speed, and its derivatives, acceleration and flexure, are based on measured time.

But when these two new concepts were finally grasped, chewed over, and ancient books reread in the light of these concepts, he was, in a greatly restricted and theoretical sense, an astrogator.

Hugh sought out Joe-Jim to ask him a question. Joe-Jim's minds were brilliantly penetrating when he cared to exert himself; he remained a superficial dilettante because he rarely cared.

Hugh found Narby just leaving. In order to conduct the campaign of pacification of the muties it had been necessary for Narby and Joe-Jim to confer frequently; to their mutual surprise they got along well together. Narby was a capable administrator, able to delegate authority and not given to useless elbow jogging; Joe-Jim surprised and pleased Narby by being more able than any subordinate he had ever dealt with before. There was no love wasted. between them, but each recognized in the other both intelligence and a hard self-interest which matched his own. There was respect and grudging contemptuous liking.

"Good eating, Captain," Hugh greeted Narby formally.

"Oh, hello, Hugh," Narby answered, then turned back to Joe-Jim. "I'll expect a report, then."

"You'll get it," Joe agreed. "There can't be more than a few dozen stragglers. We'll hunt them out, or starve them."

"Am I butting in?" Hugh asked.

"No, I'm just leaving. How goes the great work, my dear fellow?" He smiled irritatingly.

"Well enough, but slowly. Do you wish a report?"

"No hurry. Oh, by the bye, I've made the Control Room and Main Drive, in fact the entire level of no-weight, taboo for everyone, muties and Crew alike."

"So? I see your point, I guess. There is no need for any but officers to go up there."

"You don't understand me. It is a general taboo, applying to officers as well. Not to ourselves, of course."

"But . .. but, that won't work. The only effective way to convince the officers of the truth is to take them up and show them the stars!"

"That's exactly my point. I can't have any officers upset by disturbing ideas while I am consolidating my administration. It will, create religious differences and impair discipline."

Hugh was too upset and astounded to answer at once. "But," he said at last, "but that's the point. That's why you were made Captain."

"And as Captain I will have to be the final judge of policy. The matter is closed. You are not to take anyone to the Control Room, nor any part of no-weight, until I deem it advisable. You'll have to wait."

"It's a good idea, Hugh," Jim commented. "We shouldn't stir things up while we've got a war to attend to."

"Let me get this straight," Hugh persisted. "You mean this is a temporary policy?"

"You could put it that way."

"Well, all right," Hugh conceded. "But wait -- Ertz and I need to train assistants at once."

"Very well. Nominate them to me and I'll pass on them. Whom do you have in mind?"

Hugh thought. He did not actually need assistance himself; although the Control Room contained acceleration chairs for half a dozen, one man, seated in the chief

astrogator's chair, could pilot the Ship. The same applied to Ertz in the Main Drive station, save in one respect. "How about Ertz? He needs porters to move mass to the Main Drive."

"Let him. I'll sign the writing. See that he uses porters from the former muties; but no one goes to the Control Room save those who have been there before." Narby turned and left with an air of dismissal.

Hugh watched him leave, then said, "I don't like this, Joe-Jim."

"Why not?" Jim asked. "It's reasonable."

"Perhaps it is. But ... well, damn it! It seems to me, somehow, that truth ought to be free to anyone, any time!" He threw up his hands in a gesture of baffled exasperation.

Joe-Jim looked at him oddly. "What a curious idea," said Joe.

"Yeah, I know. It's not common sense, but it seems like it ought to be. Oh, well, forget it! That's not what I came to see you about."

"What's on your mind, Bud?"

"How do we ... Look, we finish the Trip, see? We've got the Ship touching a planet, like this--" He brought his two fists together.

"Yes. Go on."

"Well, when that's done, how do we get out of the Ship?"

The twins looked confused, started to argue between themselves. Finally Joe interrupted his brother. "Wait a bit, Jim. Let's be logical about this. It was intended for us to get out; that implies a door, doesn't it?"

"Yeah. Sure."

"There's no door up here. It must be down in high weight."

"But it isn't," objected Hugh. "All that country is known. There isn't any door. It has to be up in mutie country."

"In that case," Joe continued, "it should be either all the way forward, or all the way aft, otherwise it would not go anywhere. It isn't aft. There's nothing back of Main Drive but solid bulkheads. It would need to be forward."

"That's silly," Jim commented. "There's the Control Room and the Captain's veranda. That's all."

"Oh, yeah? How about the locked compartments?"

"Those aren't doors, not to the Outside anyway. Just bulkheads abaft the Control Room."

"No, stupid, but they might lead to doors."

"Stupid, eh? Even so, how are you going to open them; answer me that, bright boy?"

"What," demanded Hugh, "are the 'locked compartments'?"

"Don't you know? There are seven doors, spaced on the main shaft in the same bulkhead as the door to Main Control Room. We've never been able to open them."

"Well, maybe that's what we're looking for. Let's see!"

"It's a waste of time," Jim insisted. But they went.

Bobo was taken along to try his monstrous strength on the doors. But even his knotted swollen muscles couldn't budge the levers which appeared to be intended to actuate the doors. "Well?" Jim sneered to his brother. "You see?"

Joe shrugged. "O.K., you win. Let's go down."

"Wait a little," Hugh pleaded. "The second door back the handle seemed to turn a little. Let's try it again."

"I'm afraid it's useless," Jim commented. But Joe said, "Oh, all right, as long as we're here."

Bobo tried again, wedging his shoulder under the lever and pushing from his knees. The lever gave suddenly, but the door did not open. "He's broken it," Joe announced.

"Yeah," Hugh acknowledged. "I guess that's that." He placed his hand against the door. It swung open easily.

The door did not lead to outer space, which was well for the three, for nothing in their experience warned them against the peril of the outer vacuum. Instead a very short and narrow vestibule led them to another door which was just barely ajar. The door stuck on its hinges, but the fact that it was slightly ajar prevented it from binding anywhere else. Perhaps the last man to use it left it so as a precaution against the metal surfaces freezing together, but no one would ever know.

Bobo's uncouth strength opened it easily. Another door lay six feet beyond. "I don't understand this," complained Jim as Bobo strained at the third door. "What's the sense in an endless series of doors?"

"Wait and find out," advised his brother.

Beyond the third door lay, not another door, but an apartment, a group of compartments, odd ones, small, crowded together and of unusual shapes. Bobo shot on. ahead and explored the place, knife in teeth, his ugly body almost graceful in flight. Hugh and Joe-Jim proceeded more slowly, their eyes caught by the strangeness Of the place.

Bobo returned, killed his momentum skillfully against a bulkhead, took his blade from his teeth, and reported, "No door. No more door any place. Bobo look."

"There has to be," Hugh insisted, irritated at the dwarf for demolishing his hopes.

The moron shrugged. "Bobo look."

"We'll look." Hugh and the twins moved off in different directions, splitting the reconnaissance between them.

Hugh found no door, but what he did find interested him even more: an impossibility. He was about to shout for Joe-Jim, when he heard his own name called. "Hugh! Come here!"

Reluctantly he left his discovery, and sought out the twins. "Come see what I've found," he began.

"Nevermind," Joe cut him short. "Look at that."

Hugh looked. "That" was a Converter. Quite impossibly but indubitably a Converter. "It doesn't make sense," Jim protested. "An apartment this size doesn't need a Converter. That thing would supply power and light for half the Ship. What do you make of it, Hugh?"

Hugh examined it. "I don't know," he admitted, "but if you think this is strange, come see what I've found."

"What have you found?"

"Come see."

The twins followed him, and saw a small compartment, one wall of which appeared to be of glass, black as if the far side were obscured. Facing the wall were two acceleratlon chairs, side by side. The arms and the lap desks of the chairs were covered with patterns of little white lights of the same sort as the control lights on the chairs in the Main Control Room.

Joe-Jim made no comment at first, save for a low whistle from Jim. He sat down in one of the chairs and started experimenting cautiously with the controls. Hugh sat down beside him. Joe-Jim covered a group of white lights on the right-hand arm of his chair; the lights in the compartment went out. When he lifted his hand the tiny control lights were blue instead of white. Neither Joe-Jim nor Hugh was startled. When the lights went out; they had expected it, for the control involved corresponded to similar controls in the Control Room.

Joe-Jim fumbled around, trying to find controls which would produce a simulacrum of the heavens on the blank glass before him. There were no such controls and he had no way of knowing that the glass was an actual view port, obscured by the hull of the Ship proper, rather than a view screen.

But he did manage to actuate the controls that occupied the corresponding position. These controls were labeled LAUNCHING; Joe-Jim had disregarded the label because he did not understand it. Actuating them produced no very remarkable results, except that a red light blinked rapidly and a transparency below the label came into life. It read: AIR-LOCK OPEN.

Which was very lucky for Joe-Jim, Hugh, and Bobo. Had they closed the doors behind them and had the little Converter contained even a few grams of mass available for power, they would have found themselves launched suddenly into space, in a Ship's boat unequipped for a trip and whose controls they understood only by analogy with those in the Control Room. Perhaps they could have maneuvered the boat back into its cradle; more likely they would have crashed attempting it.

But Hugh and Joe-Jim were not yet aware that the "apartment" they had entered was a spacecraft; the idea of a Ship's boat was still foreign to them.

"Turn on the lights," Hugh requested. Joe-Jim did so.

"Well?" Hugh went on. "What do you make of it?"

"It seems pretty obvious," answered Jim. "This is another Control Room. We didn't guess it was here because we couldn't open the door."

"That doesn't make sense," Joe objected. "Why should there be two Control Rooms for one Ship?"

"Why should a man have two heads?" his brother reasoned. "From my point of view, you are obviously a supernumerary."

"It's not the same thing; we were born that way. But this didn't just happen; the Ship was built."

"So what?" Jim argued. "We carry two knives, don't we? And we weren't born with 'em. It's a good idea to have a spare."

"But you can't control the Ship from here," Joe protested. "You can't see anything from here. If you wanted a second set of controls, the place to put them would be the Captain's veranda, where you can see the stars."

"How about that?" Jim asked, indicating the wall of glass.

"Use your head," his brother advised. "It faces the wrong direction. It looks into the Ship, not out. And it's not an arrangement like the Control Room; there isn't any way to mirror the stars on it."

"Maybe we haven't located the controls for it."

"Even so, you've forgotten something. How about that little Converter?"

"What about it?"

"It must have some significance. It's not here by accident. I'll bet you that these controls have something to do with that Converter."

"Why?"

"Why not? Why are they here together if there isn't some connection?"

Hugh broke his puzzled silence. Everythmg the twins had said seemed to make sense, even the contradictions. It was all very confusing. But the Converter, the little Conver-- "Say, look," he burst out.

"Look at what?"

"Do you suppose -- Do you think that maybe this part of the Ship could move?"

"Naturally. The whole Ship moves."

"No," said Hugh, "no, no. I don't mean that at all. Suppose it moved by itself. These controls and the little Converter, suppose it could move right away from the Ship."

"That's pretty fantastic."

"Maybe so ... but if it's true, this is the way out."

"Huh?" said Joe. "Nonsense. No door to the Outside here either."

"But there would be if this apartment were moved away from the Ship: the way we came in!"

The two heads snapped simultaneously toward him as if jerked by the same string. Then they looked at each other and fell to arguing. Joe-Jim repeated his experiment witit the controls. "See?" Joe pointed out "'Launching.' It means to start something, to push something away."

"Then why doesn't it?"

"'Air Lock Open.' The doors we came through; it has to be that. Everything else is closed."

"Let's try it."

"We would have to start the Converter first."

"O.K."

"Not so fast. Get out, and maybe you can't come back. We'd starve."

"Hm-m-m, we'll wait a while."

Hugh listened to the discussion while snooping around the control panels, trying to figure them out. There was a stowage space under the lap desk of his chair; he fished into it, encountered something, and hauled it out. "See what I've found!"

"What Is it?" asked Joe. "Oh, a book. Lot of them back in the room next to the Converter." "Let's see it," said Jim.

But Hugh had opened it himself. "Log, Starship Vanguard," he spelled out, "2 June, 2172. Cruising as before--"

"What!" yelled Joe. "Let me see that!"

"3 June. Cruising as before. 4 June. Cruising as before. Captain's mast for rewards and punishments held at 1300. See Administration Log. 5 June. Cruising as before."

"Gimme that!"

"Wait!" said Hugh. "6 June. Mutiny broke out at 0431. The watch became aware of it by visiplate. Hull, Metalsmith Ordinary, screened the control station and called on the watch to surrender, designating himself as 'Captain.' The officer of the watch ordered him to consider himself under arrest and signaled the Captain's cabin. No answer.

"0435. Communications failed. The officer of the watch dispatched a party of three to notify the Captain, turn out the chief proctor, and assist in the arrest of Huff.

"0441. Converter power off; free flight

"0502. Lacy, Crewman Ordinary, messenger-of-thewatch, one of the party of three sent below, returned to the control station alone. He reported verbally that the other two, Malcolm Young and Arthur Sears, were dead and that he had been permitted to return in order to notify the watch to surrender. The mutineers gave 0515 as a--"

The next entry was in a different hand: "0545. I have made every attempt to get into communication with other stations and officers in the Ship, without success. I conceive it as my duty, under the circumstances, to leave the control station without being properly relieved, and attempt to restore order down below. My decision may be faulty, since we are unarmed, but I see no other course open to me.

"Jean Baldwin, Pilot Officer Third Class, Officer of the Watch."

"Is that all?" demanded Joe.

"No," said Hugh. "1 October (approximately), 2172. I, Theodor Mawson, formerly Storekeeper Ordinary, have been selected this date as Captain of the Vanguard. Since the last entry in this log there have been enormous changes. The mutiny has been suppressed, or more properly, has died out, but with tragic cost. Every pilot officer, every navigation officer is dead, or believed to be dead. I would not have been chosen Captain had there been a qualified man left.

"Approximately ninety per cent of the personnel are dead. Not all of that number died in the original outbreak; no crops have been planted since the mutiny; our food stocks are low. There seems to be clear evidence of cannibalism among the mutineers who have not surrendered.

"My immediate task must be to restore some semblance of order and discipline among the Crew. Crops must be planted. A regular watch must be instituted at the auxiliary Converter on which we are dependent for heat and light and power."

The next entry was undated. "I have been far too busy to keep this log up properly. Truthfully, I do not know the date even approximately. The Ship's clocks no longer run. That may be attributable to the erratic operation of the auxiliary Converter, or it may possibly be an effect of radiations from outer space. We no longer have an antiradiation shield around the Ship, since the Main Converter is not in operation. My Chief Engineer assures me that the Main Converter could be started, but we have no one fitted to astrogate. I have tried to teach myself astrogation from the books at hand, but the mathematics involved are very difficult.

"About one newborn child out of twenty is deformed. I have instituted a Spartan code: such children are not permitted to live. It is harsh, but necessary.

"I am growing very old and feeble and must consider the selection of my successor. I am the last member of the crew to be born on Earth, and even I have little recollection of it. I was five when my parents embarked. I do not know my own age, but certain unmistakable signs tell me that the time is not far away when I, too, must make the Trip to the Converter.

"There has been a curious change in orientation in my people. Never having lived on a planet, it becomes more difficult as time passes for them to comprehend anything not connected with the Ship. I have ceased trying to talk to them about it; it is hardly a kindness anyhow, as I have no hope of leading them out of the darkness. Theirs is a hard life at best: they strive for a crop only to have it raided by the outlaws who still flourish on the upper levels. Why speak to them of better things?

"Rather than pass this on to my successor I have decided to attempt to hide it, if possible, in the single Ship's boat left by the mutineers who escaped. It will be safe there a long time, otherwise some witless fool may decide to use it for fuel for the Converter. I caught the man on watch feeding it with the last of a set of Encyclopaedia Terresriana: priceless books. The idiot had never been taught to read! Some rule must be instituted concerning books.

"This is my last entry. I have put off making the attempt to place this log in safekeeping, because it is very perilous to ascend above the lower decks. But my life is no longer valuable; I wish to die knowing that a true record is left.

"Theodor Mawson, Captain."

Even the twins were silent for a long time after Hugh stopped reading. At last Joe heaved a long sigh and said, "So that's how it happened."

"The poor guy," Hugh said softly.

"Who? Captain Mawson? Why so?"

"No, not Captain Mawson. That other guy, Pilot Officer Baldwin. Think of him going out through that door, with Huff on the other side." Hugh shivered. In spite of his enlightenment, he subconsciously envisioned Huff, 'Huff the Accursed, first to sin,' as about twice as high as Joe-Jim, twice as strong as Bobo, and having fangs rather than teeth.

Hugh borrowed a couple of porters from Ertz, porters whom Ertz was using to fetch the pickled bodies of the war casualties to the Main Converter for fuel, and used them to provision the Ship's boat: water, breadstuffs, preserved meats, mass for the Converter. He did not report the matter to Narby, nor did he report the discovery of the boat itself. He had no conscious reason; Narby irritated him.

The star of their destination grew and grew, swelled until it showed a visible disc and was too bright to be stared at long. Its bearing changed rapidly, for a star; it pulled across the backdrop of the stellariwn dome. Left uncontrolled, the Ship would have swung part way around it in a wide hyperbolic arc, accelerated as it flipped around the star, then sped off again into the darkness. It took Hugh the equivalent of many weeks to calculate the elements of the trajectory; it took still longer for Ertz and Joe-Jim to check his figures and satisfy themselves that the preposterous answers were right. It took even longer to convince Ertz that the way to rendezvous in space was to apply a force that

pushed one away from where one wished to go, that is to say, dig in the heels, put on the brakes, kill the momentum.

In fact it took a series of experiments in free flight on the level of weightlessness to sell him the idea, otherwise he would have favored finishing the Trip by the simple expedient of crashing headlong into the star at top Speed. Thereafter Hugh and Joe-Jim calculated how to apply acceleration to kill the speed of the Vanguard and warp her into an eccentric ellipse around the star. After that, they would search for planets.

Ertz bad a little trouble understanding the difference between a planet and a star. Alan never did get it.

"If my numbering is correct," Hugh informed Ertz, "we should start accelerating any time now."

"O.K.," Ertz told him. "Main Drive is ready: over two hundred bodies and a lot of waste mass. What are waiting for?"

"Let's see Narby and get permission to start."

"Why ask him?"

Hugh shrugged. "He's Captain. He'll want to know."

"All right. Let's pick up Joe-Jim and get on with it." They left Hugh's apartment and went to Joe-Jim's. Joe-Jim was not there, but they found Alan looking for him, too.

"Squatty says he's gone down to the Captain's office," Alan informed him.

"So? It's just as well. We'll see him there. Alan, old boy, you know what?"

"What?"

"The time has arrived. We're going to do it! Start moving the Ship!" Alan looked round-eyed. "Gee! Right now?"

"Just as soon as we can notify the Captain. Come along, if you like."

"You bet! Wait while I tell my woman." He darted away to his own quarters nearby.

"He pampers that wench," remarked Ertz.

"Sometimes you can't help it," said Hugh with a faraway look.

Alan returned promptly, although it was evident that he had taken time to change to a fresh breechcloth. "O.K.," he bubbled. "Let's go!"

Alan approached the Captain's office with a proud step. He was an important guy now, he exulted to himself. He'd march on through with his friends while the guards saluted; no more of this business of being pushed around.

But the doorkeeper did not stand aside, although he did salute, while placing himself so that he filled the door. "Gangway, man!" Ertz said gruffly.

"Yes, sir," acknowledged the guard, without moving. "Your weapons, please."

"What! Don't you know me, you idiot? I'm the Chief Engineer."

"Yes, sir. Leave your weapons with me, please. Regulations."

Ertz put a hand on the man's shoulder and shoved. The guard stood firm. "I'm sorry, sir. No one approaches the Captain wearing weapons. No one."

"Well, I'll be damned!"

"He remembers what happened to the old Captain," Hugh observed sotto voce. "He's smart." He drew his own knife and tossed it to the guard, who caught it neatly by the hilt. Ertz looked; shrugged, and handed over his own. Alan, considerably crestfallen, passed his own pair over with a look that should have shortened the guard's life.

Narby was talking; Joe-Jim was scowling on both his faces; Bobo looked puzzled, and naked, unfinished, without his ubiquitous knives and slingshot. "The matter is closed, Joe-Jim. That is my decision. I've granted you the faver of explaining my reasons, but it does not matter whether you like them or not."

"What's the trouble?" inquired Hugh.

Narby looked up. "Oh. I'm glad you came in. Your mutie friend seems to be in doubt as to who is Captain."

"What's up?"

"He," growled Jim, hooking a thumb toward Narby, "seems to think he's going to disarm all the muties."

"Well, the war's over, isn't it?"

"It wasn't agreed on. The muties were to become part of the Crew. Take the knives away from the muties and the Crew will kill them off in no time. It's not fair. The Crew have knives."

"The time will come when they won't," Narby predicted, "but I'll do it at my own time in my own way. This is the first step. What did you want to see me about, Ertz?"

"Ask Hugh." Narby turned to Hugh.

"I've come to notify you, Captain Narby," Hugh stated formally, "that we are about to start the Main Converter and move the Ship."

Narby looked surprised but not disconcerted. "I'm afraid you will have to postpone that. I am not yet ready to permit officers to go up to no-weight."

"It won't be necessary," Hugh explained. "Ertz and I can handle the first maneuvers alone. But we can't wait. If the Ship is not moved at once, the Trip won't be in your lifetime nor mine."

"Then it must," Narby replied evenly, "wait."

"What?" cried Hugh. "Narby, don't you want to the Trip?"

"I'm in no hurry."

"What sort of damn foolishness is this?" Ertz demanded. "What's got into you, Fin? Of course we move the Ship."

Narby drummed on his desk top before replying. Then: he said, "Since there seems to be some slight misunderstanding as to who gives orders around here, I might as well let you have it straight. Hoyland, as long as your pastimes did not interfere with the administration of tbe Ship, I was willing for you to amuse yourself. I granted that willingly, for you have been very useful in your own way. But when your crazy beliefs become a possible source of corruption to good morals and a danger to the peace and security of the Ship, I have to crack down."

Hugh had opened and closed his mouth several times during this speech. Finally he managed to get out: "Crazy? Did you say crazy?"

"Yes, I did. For a man to believe that the solid Ship can move means that he is either crazy, or an ignorant religious fanatic. Since both of you have the advantage of a scientist's training, I assume that you have lost your minds."

"Good Jordan!" said Hugh. "The man has seen with his own eyes, he's seen the immortal stars, yet he sits there and calls us crazy!"

"What's the meaning of this, Narby?" Ertz inquired coldly. "Why the razzle-dazzle? You aren't kidding anyone; you've been to the Control Room, you've been to the Captain's veranda, you know the Ship moves."

"You interest me, Ertz," commented Narby, looking him over. "I've wondered whether you were playing up to Hoyland's delusions, or were deluded yourself. Now I see that you are crazy too."

Ertz kept his temper. "Explain yourself. You've seen the Control Room; how can you contend that the Ship does not move?"

Narby smiled. "I thought you were a better engineer than you appear to be, Ertz. The Control Room is an enormous hoax. You know yourself that those lights are turned on and off by switches -- a very clever piece of engineering. My theory is that it was used to strike awe in the minds of the superstitious and make them believe in the ancient myths. But we don't need it any more, the Crew believe without it. It's a source of distraction now I'm going to have it destroyed and the door sealed up."

Hugh went all to pieces at this, sputtered incoherently, and would have grappled with Narby had not Ertz restrained him. "Easy, Hugh," he admonished. Joe-Jim took Hugh by the arm, his own faces stony masks.

Ertz went on quietly, "Suppose what you say is true. Suppose that the Main Converter and the Main Drive itself are nothing but dummies and that we can never start them, what about the Captain's veranda? You've seen the stars there, not just an engineered shadow show."

Narby laughed. "Ertz, you are stupider than I've guessed. I admit that the display in the veranda had me mystified at first, not that I ever believed in it! Then the Control Room gave the clue: it's an Illusion, a piece of skillful engineering. Behind that glass is another compartment, about the same size and unlighted. Against its darkness those tiny moving lights give the effect of a bottomless hole. It's essentially the same trick as they used in the Control Room.

"It's obvious," he went on. "I'm surprised that you did not see it. When an apparent fact runs contrary to logic and common sense, it's obvious that you have failed to interpret the fact correctly. The most obvious fact of nature is the reality of the Ship itself, solid, immutable, complete. Any so-called fact which appears to disprove that is bound to be an illusion. Knowing that, I looked for the trick behind the illusion and found it."

"Wait," said Ertz. "Do you mean that you have been on the other side of the glass in the Captain's veranda and seen these trick lights you talk about?"

"No," admitted Narby, "it wasn't necessary. Not that it wouldn't be easy enough to do so, but it isn't necessary. I don't have to cut myself to know that knives are sharp."

"So..." Ertz paused and thought a moment. "I'll strike a deal with you. If Hugh and I are crazy in our beliefs, no harm is done as long as we keep our mouths shut. We try to move the Ship. If we fail, we're wrong and you're right."

"The Captain does not bargain," Narby pointed out. "However, I'll consider it. That's all. You may go." Ertz turned to go, unsatisfied but checked for moment. He caught sight of Joe-Jim's faces, and turned back. "One more thing," he said. "What's this about the muties? Why are you shoving Joe-Jim around? He and his boys made you Captain; you've got to fair about this."

Narby's smiling superiority cracked for amoment.

"Don't interfere, Ertz! Groups of armed savages are not going to threaten this Ship!"

"You can do what you like with the prisoners," Jim stated, "but my own gang keep their knives. They were promised good eating forever if they fought for you. They keep their knives. And that's flnal!"

Narby looked him up and down. "Joe-Jim," he remarked, "I have long believed that the only good mutie was a dead mutie. You do much to confirm my opinion. It will interest you to know that, by this time, your gang is already disarmed, and dead in the bargain. That's why I sent for you!"

The guards piled in, whether by signal or previous arrangement it was impossible to say. Caught flatfooted, naked, weaponless, the five found themselves each with an armed man at his back before they could rally. "Take them away," ordered Narby.

Bobo whined and looked to Joe-Jim for guidance. Joe caught his eye. "Up, Bobo!"

The dwarf jumped straight for Joe-Jim's captor, careless of the knife at his back. Forced to split his attention, the man lost a vital half second. Joe-Jim kicked him in the stomach, and appropriated his blade.

Hugh was on the deck, deadlocked with his man, his fist clutched around the knife wrist. Joe-Jim thrust and the struggle ceased. The two-headed man looked around, saw a mixed pile-up of four bodies, Ertz, Alan, two others. Joe-Jim used his knife judiciously, being careful to match the faces with the bodies. Presently his men emerged. "Get their knives," he ordered superfluously.

His words were drowned by a high, agonized scream. Bobo, still without a knife, had resorted to his primal weapons. His late captor's face was a bloody mess, half bitten away.

"Get his knife," said Joe.

"Can't reach it," Bobo admitted guiltily. The reason was evident: the hilt protruded from Bobo's ribs, just below his right shoulder blade.

Joe-Jim examined it, touched it gently. It was stuck. "Can you walk?"

"Sure," grunted Bobo, and grimaced.

"Let it stay where it is. Alan! With me. Hugh and Bill, cover rear. Bobo In the middle."

"Where's Narby?" demanded Ertz, dabbing at a round on his cheekbone.

But Narby was gone, ducked out through the rear door behind his desk. And it was locked.

Clerks scattered before them in the outer office; Joe-Jim knifed the guard at the outer door while he was still raising his whistle. Hastily they retrieved their own weapons and added them to those they had seized. They fled upward.

Two decks above inhabited levels Bobo stumbled and fell. Joe-Jim picked him up. "Can you make it?" The dwarf nodded dumbly, blood on his lips. They climbed. Twenty decks or so higher it became evident that Bobo could no longer climb, though they had taken turns in boosting him from the rear. But weight was lessened appreciably at that level; Alan braced himself and picked up the solid form as if it were a child. They climbed. Joe-Jim relieved Alan. They climbed.

Ertz relieved Joe-Jim. Hugh relieved Ertz.

They reached the level on which they lived forward of their group apartments. Hugh turned in that direction. "Put him down," commanded Joe. "Where do you think you are going?"

Hugh settled the wounded man to the deck. "Homes. Where else?"

"Fool! That's where they will look for us first."

"Where do we go?"

"Nowhere, in the Ship. We go out of the Ship!"

"Huh?"

"The Ship's boat."

"He's right," agreed Ertz. "The whole Ship's against us, now."

"But . . . but--" Hugh surrendered. "It's a long chance -- but we'll try it." He started again in the direction of their homes.

"Hey!" shouted Jim. "Not that way."

"We have to get our women."

"To Huff with the women! You'll get caught. There's no time." But Ertz and Alan started off without question. "Oh, all right!" Jim snorted. "But hurry! I'll stay with Bobo" Joe-Jim turned his attention to the dwarf, gently rolled him to his side and made a careful examination. His skin was gray and damp; a long red stain ran down from his right shoulder. Bobo sighed bubblingly and rubbed his head against Joe-Jim's thigh. "Bobo tired, Boss."

Joe-Jim patted his head. "Easy," said Jim, "this is going to hurt." Lifting the wounded man slightly, he cautiously worked the blade loose and withdrew it from the wound. Blood poured out freely.

Joe-Jim examined the knife, noted the deadly length of steel, and measured it against the wound. "He'll never make it," whispered Joe.

Jim caught his eye. "Well?"

Joe nodded slowly. Joe-Jim tried the blade he had just extracted from the wound against his own thigh, and discarded it in favor of one of his own razor-edged tools. He took the dwarf's chin in his left hand and Joe commanded, "Look at me, Bobo!"

Bobo looked up, answered inaudibly. Joe held his eye. "Good Bobo! Strong Bobo!" The dwarf grinned as if he heard and understood, but made no attempt to reply. His master pulled his head a little to one side; the blade bit deep, snicking the jugular vein without touching the windpipe. "Good Bobo!" Joe repeated. Bobo grinned again.

When the eyes were glassy and breathing had unquestionably stopped, Joe-Jim stood up, letting the head and shoulders roll from him. He shoved the body with his foot to the side of the passage, and stared down the direction in which the others had gone. They should be back by now.

He stuck the salvaged blade in his belt and made sure that all his weapons were loose and ready.

They arrived on a dead run. "A little trouble," Hugh explained breathlessly. "Squatty's dead. No more of your men around. Dead maybe. Narby probably meant it. Here." He handed him a long knife and the body armor that had been built for Joe-Jim, with its great wide cage of steel, fit to cover two heads.

Ertz and Alan wore armor, as did Hugh. The women did not; none had been built for them. Joe-Jim noted that Hugh's younger wife bore a fresh swelling on her lip, as if someone had persuaded her with a heavy hand. Her eyes were stormy though her manner was docile. The older wife, Chloe, seemed to take the events in her stride. Ertz's was crying softly; Alan's wench reflected the bewilderment of her master.

"How's Bobo?" Hugh inquired, as he settled Joe-Jim's armor in place.

"Made the Trip," Joe informed him.

"So? Well, that's that; let's go."

They stopped short of the level of no-weight and worked forward, because the women were not adept at weightless flying. When they reached the bulkhead which separated the Control Room and boat pockets from the body of the Ship, they went up. There was neither alarm nor ambush, although Joe thought that he saw a head show as they reached one deck. He mentioned it to his brother but not to the others.

The door to the boat pocket stuck and Bobo was not there to free it. The men tried it in succession, sweating big with the strain. Joe-Jim tried it a second time, Joe relaxing and letting Jim control their muscles, that they might not fight each other. The door gave. "Get them inside!" snapped Jim.

"And fast!" Joe confirmed. "They're on us." He had kept lookout while his brother strove. A shout from down the line reinforced his warning.

The twins faced around to meet the threat while the men shoved the women in. Alan's fuzzy-headed mate chose that moment to go to pieces, squalled, and tried to run but weightlessness defeated her. Hugh nabbed her, shoved her inside and booted her heartily with his foot.

Joe-Jim let a blade go at long throwing range to slow down the advance. It accomplished its purpose; their opponents, half a dozen of them, checked their advance. Then, apparently on signal, six knives cut the air simultaneonsly.

Jim felt something strike him, felt no pain, and concluded that the armor had saved him. "Missed us, Joe," he exulted.

There was no answer. Jim turned his bead, tried to look at his brother. A few inches from his eye a knife stuck through the bars of the helmet, its point was buried deep inside his left eye.

His brother was dead.

Hugh stuck his head back out of the door. "Come on, Joe-Jim," he shouted. "We're all in."

"Get inside," ordered Jim. "Close the door."

"But--"

"Get inside!" Jim turned, and shoved him in the face, closing the door as he did so. Hugh had one startled glimpse of the knife and the sagging, lifeless face it pinned. Then the door closed against him, and he heard the lever turn.

Jim turned back at the attackers. Shoving himself away from the bulkhead with legs which were curiously heavy, he plunged toward them, his great arm-long knife, more a bob than a sword, grasped with both hands. Knives sang toward him, clattered against his breastplate, bit into his legs. He swung a wide awkward two-handed stroke which gutted an opponent, nearly cutting him in two. "That's for Joe!"

The blow stopped him. He turned in the air, steadied himself, and swung again. "That's for Bobo!"

They closed on him; he swung widely caring not where he hit as long as his blade met resistance. "And that's for me!" A knife planted itself in his thigh. It did not even slow him up; legs were dispensable in no-weight. "'One for all!'"

A man was on his back now he could feel him. No matter; here was one before him, too, one who could feel steel. As be swung, he shouted, "All for o--" The words trailed off, but the stroke was finished.

Hugh tried to open the door which had been slammed in his face. He was unable to do so; if there were means provided to do so, he was unable to figure them out. He pressed an ear against the steel and listened, but the airtight door gave back no clue.

Ertz touched him on the shoulder. "Come on," be said. "Where's Joe-Jim?"

"He stayed behind."

"Open up the door! Get him."

"I can't, it won't open. He meant to stay, he closed it himself."

"But we've got to get him; we're blood-sworn."

"I think," said Hugh, with a sudden flash of insight, "that's why he stayed behind." He told Ertz what he had seen.

"Anyhow," he concluded, "it's the End of the Trip to him. Get on back and feed mass to that Converter. I want power." They entered the Ship's boat proper. Hugh closed the air-lock doors behind them. "Alan!" he called out. "We're going to start. Keep those damned women out of the way."

He settled himself in the pilot's chair, and cut the lights.

In the darkness he covered a pattern of green lights. A transparency flashed on the lap desk: DRIVE READY. Ertz was on the job. Here goes! he thought, and actuated the launching combination. There was a short pause, a short and sickening lurch, a twist. It frightened him, since he had no way of knowing that the launching tracks were pitched to offset the normal spinning of the Ship.

The glass of the view port before him was speckled with stars; they were free -- moving!

But the spread of jeweled lights was not unbroken, as it invariably had been when seen from the veranda, or seen mirrored on the Control Room walls; a great, gross, ungainly shape gleamed softly under the light of the star whose system they had entered. At first he could not account for it. Then with a rush of superstitious awe he realized that he was looking at the Ship itself, the true Ship, seen from the Outside. In spite of his long intellectual awareness of the true nature of the Ship; he had never visualized looking at it. The stars, yes; the surface of a planet, he had struggled with that concept; but the outer surface of the Ship, no.

When he did see it, it shocked him.

Alan touched him. "Hugh, what is it?"

Hoyland tried to explain to him. Alan shook his head, and blinked his eyes. "I don't get it."

"Never mind. Bring Ertz up here. Fetch the women, too; we'll let them see it."

"All right. But," he added, with sound intuition, "it's a mistake to show the women. You'll scare 'em silly; they ain't even seen the stars."

Luck, sound engineering design, and a little knowledge. Good design, ten times that much luck, and a precious little knowledge. It was luck that had placed the Ship near a star with a planetary system, luck that the Ship arrived there with a speed low enough for Hugh to counteract it in a ship's auxiliary craft, luck that he learned to handle it after a fashion before they starved or lost themselves in deep space.

It was good design that provided the little craft with a great reserve of power and speed. The designers had anticipated that the pioneers might need to explore the far-flung planets of a solar system; they had provided for it in the planning of the Ship's boats, with a large factor of safety. Hugh strained that factor to the limit.

It was luck that placed them near the plane of planetary motion, luck that, when Hugh did manage to gun the tiny projectile into a closed orbit, the orbit agreed in direction with the rotation of the planets.

Luck that the eccentric ellipse he achieved should cause them to crawl up on a giant planet so that he was eventually able to identify it as such by sight.

For otherwise they might have spun around that star until they all died of old age, ignoring for the moment the readier hazards of hunger and thirst, without ever coming close enough to a planet to pick it out from the stars.

There is a misconception, geocentric and anthropomorphic, common to the large majority of the earth-bound, which causes them to visualize a planetary system stereoscopically. The mind's eye sees a sun, remote from a backdrop of stars, and surrounded by spinning apples: the planets. Step out on your balcony and look. Can you tell the planets from the stars? Venus you may pick out with ease, but could you tell it from Canopus, if you had not previously been introduced? That little red speck: is it Mars, or is it Antares? How would you know, if you were as ignorant as Hugh Hoyland? Blast for Antares, believing it to be a planet, and you will never live to have grandchildren.

The great planet that they crawled up on, till it showed a visible naked-eye disc, was larger than Jupiter, a companion to the star, somewhat younger and larger the the Sun, around which it swung at a lordly distance. Hugh blasted back, killing his speed over many sleeps, to bring the Ship into a path around the planet. The maneuver brought him close enough to see its moons.

Luck helped him again. He had planned to ground the great planet, knowing no better. Had he been able do so they would have lived just long enough to open the air-lock.

But he was short of mass, after the titanic task of pulling them out of the headlong hyperbolic plunge around an arc past the star and warping them into a closed orbit about the star, then into a subordinate orbit around the giant planet. He pored over the ancient books, substituted endlessly in the equations the ancients had set down as the laws for

moving bodies, figured and refigured, and tested even the calm patience of Chloe. The other wife, the unnamed one, kept out of his way after losing a tooth, quite suddenly.

But he got no answer that did not require him to sacrifice some, at least, of the precious, irreplaceable ancient books for fuel. Yes, even though they stripped themselves naked and chucked in their knives, the mass of the books would still be needed.

He would have preferred to dispense with one of his wives. He decided to ground on one of the moons.

Luck again. Coincidence of such a colossal proportion that one need not be expected to believe it, for the moon of that planet was suitable for human terrestrial life. Never mind, skip over it, rapidly; the combination of circumstances is of the same order needed to produce such a planet in the first place. Our own planet, under our own sun is of the "There ain't no such animal" variety. It is a ridiculous improbability.

Hugh's luck was a ridiculous improbability.

Good design handled the next phase. Although he learned to maneuver the little Ship out in space where there is elbow room, landing is another and a ticklish matter. He would have crashed any spacecraft designed before the designing of the Vanguard. But the designers of the Vanguard had known that the Ship's auxiliary craft would be piloted and grounded by at least the second generation of explorers; green pilots must make those landings unassisted. They planned for it.

Hugh got the vessel down into the stratosphere and straightened it triumphantly into a course that would with certainty kill them all.

The autopilots took over.

Hugh stormed and swore, producing some words which diverted Alan's attention and admiration from the view out of the port. But nothing he could do would cause the craft to respond. It settled in its own way and leveled off at a thousand feet, an altitude which it maintained regardless of changing contour.

"Hugh, the stars are gone!"

"I know it."

"But Jordan! Hugh, what happened to them?"

Hugh glared at Alan. "I don't know and I don't care! You get aft with the women and stop asking silly questions."

Alan departed reluctantly with a backward look at the surface of the planet and the bright sky; It interested him, but he did not marvel much at it; his ability to marvel had been overstrained.

It was some hours before Hugh discovered that a hitherto ignored group of control lights set in motion a chain of events whereby the autopilot would ground the Ship. Since he found this out experimentally he did not exactly choose the place of landing. But the unwinking stereo-eyes of the autopilot fed its data to the 'brain'; the submolar mechanism selected and rejected; the Ship grounded gently on a rolling high prairie near a clump of vegetation.

Ertz came forward. "What's happened, Hugh?"

Hugh waved at the view port. "We're there." He was too tired to make much of it, too tired and too emotionally exhausted. His weeks of fighting a fight he understood but poorly, hunger, and lately thirst, years of feeding on a consuming ambition, these left him with little ability to enjoy his goal when it arrived.

But they had landed, they had finished Jordan's Trip. He was not unhappy, at peace rather, and very tired. Ertz stared out. "Jordan!" he muttered. Then, "Let's go out."

"All right."

Alan came forward, as they were opening the air-lock, and the women pressed after him. "Are we there, Captain?"

"Shut up," said Hugh.

The women crowded up to the deserted view port; Alan explained to them, importantly and incorrectly, the scene outside. Ertz got the last door open.

They sniffed at the air. "It's cold," said Ertz. In fact the temperature was perhaps five degrees less than the steady monotony of the Ship's temperature, but Ertz was experiencing weather for the first time.

"Nonsense," said Hugh, faintly annoyed that any fault should be found with _his_ planet. "It's just your imagination."

"Maybe," Ertz conceded. He paused uneasily. "Going out?" he added.

"Of course." Mastering his own reluctance, Hugh pushed him aside and dropped five feet to the ground "Come on; it's fine."

Ertz joined him, and stood close to him. Both of them remained close to the Ship. "It's big, isn't it?" Ertz said in a hushed voice.

"Well, we knew it would be," Hugh snapped, annoyed with himself for having the same lost feeling.

"Hi!" Alan peered cautiously out of the door. "Can I comedown? Is it alright?"

"Come ahead."

Alan eased himself gingerly over the edge and joined them. He looked around and whistled. "Gosh!"

Their first sortie took them all of fifty feet from the Ship. They huddled close together for silent comfort, and watched their feet to keep from stumbling on this strange uneven deck. They made it without incident until Alan looked up from the ground and found himself for the first time in his life with nothing close to him. He was hit by vertigo and acute agoraphobia; he moaned, closed his eyes and fell.

"What in the Ship?" demanded Ertz, looking around. Then it hit him.

Hugh fought against it. It pulled him to his knees, but be fought it, steadying himself with one hand on the ground. However, he had the advantage of having stared out through the view port for endless time; neither Alan nor Ertz were cowards.

"Alan!" his wife shrilled from the open door. "Alan! Come back here!" Alan opened one eye, managed to get it focused on the Ship, and started inching back on his belly.

"Man!" commanded Hugh. "Stop that! Situp."

Alan did so, with the air of a man pushed too far. "Open your eyes!" Alan obeyed cautiously, reclosed them hastily.

"Just sit still and you'll be all right," Hugh added. "I'm all right already." To prove it he stood up. He was still dizzy, but he made it. Ertz sat up.

The sun had crossed a sizable piece of the sky, enough time had passed for a well-fed man to become hungry, and they were not well fed. Even the women were outside; that had been accomplished by the simple expedient of going back in and pushing them out. They had not ventured away from the side of the Ship, but sat huddled against it. But their menfolk had even learned to walk singly, even in open spaces. Alan thought nothing of strutting a full fifty yards away from the shadow of the Ship, and did so more than once, in full sight of the women.

It was on one such journey that a small animal native to the planet let his curiosity exceed his caution. Alan's knife knocked him over and left him kicking. Alan scurried to the spot, grabbed his fat prize by one leg, and bore it proudly back to Hugh. "Look, Hugh, look! Good eating!"

Hugh looked with approval. His first strange fright of the place had passed and had been replaced with a deep warm feeling, a feeling that he had come at last to his long home. This seemed a good omen.

"Yes," he agreed. "Good eating. From now on, Alan, always Good Eating."

Past Through Tomorrow

For GINNY

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CONTENTS

Introduction by Damon Knight

Life-Line

The Roads Must Roll

Blowups Happen.

The Man Who Sold the Moon

Delilah and the Space-Rigger

Space Jockey

Requiem

The Long Watch

Gentlemen, Be Seated

The Black Pits of Luna

It's Great to Be Back!

We Also Walk Dogs

Searchlight

Ordeal in Space

The Green Hills of Earth

Logic of Empire

The Menace from Earth

If This Goes On

Coventry

Misfit

Methuselah's Children

Introduction by Damon Knight

The year is 1967, and in Carmel, California, a retired admiral named Robert A. Heinlein is tending his garden. Commissioned in 1929, he served through World War II with distinction, taught aeronautical engineering for a few years, then became a partner in a modestly successful electronics firm. Aside from his neighbors, his business associates and Navy friends, no one has ever heard of him.

This is a likely story, but not true. What really happened is much less probable: six years after graduation from the Naval Academy, while serving on a destroyer, Heinlein contracted tuberculosis. He spent a couple of years in bed, then was retired at the age of 27.

Like the consumptive Robert Louis Stevenson, like Mark Twain, whose career as a river-boat pilot was swept away by the war, Heinlein turned to writing almost at random, because he could not lead the more active life he would have preferred. Cut adrift from the Navy and from the life-line that would have led him to that rose garden in Carmel, he took graduate courses in physics and mathematics, intending to pursue his old dream of becoming an astronomer, but was again forced to drop out because of poor health. He tried his hand at silver mining, politics, real estate, without conspicuous success.

Then, in 1939, he happened across the announcement of an amateur short-story contest in a magazine called Thrilling Wonder Stories. The prize was $50, not a fortune, but not to be sneezed at. Heinlein wrote a story, called it 'Life-Line', and submitted it, not to the contest editor, but to John W. Campbell, editor of Astounding Science-Fiction. Campbell bought it, and the next one, and the next. Heinlein's reaction was, 'How long has this been going on? And why didn't anybody ever tell me?' Except for the war years, which he spent at the Naval Air Experimental Station in Philadelphia in 'the necessary tedium of aviation engineering', he never did anything else for a living again. In the February, 1941, issue of Astounding, in which two Heinlein stories appeared (one under the pseudonym Anson MacDonald), the editor wrote:

Robert A. Heinlein's back again next month with the cover story, "Logic of Empire". This story is, as usual with Heinlein's material, a soundly worked out, fast-moving yarn, more than able to stand on its own feet. But in connection with it, I'd like to mention something that may or may not have been noticed by the regular readers of Astounding: all Heinlein's science-fiction is laid against a common background of a

proposed future history of the world and of the United States. Heinlein's worked the thing out in detail that grows with each story; he has an outlined and graphed history of the future with characters, dates of major discoveries, et cetera, plotted in. i'm trying to get him to let me have a photostat of that history chart; if I lay hands on it, I'm going to publish it.'

He published the chart three months later-the same chart, with some modifications and additions, that appears in this book. Heinlein had the cover of that issue too, with a story called 'Universe'.

'Future History' is Campbell's phrase, not Heinlein's, and the author has sometimes been mildly embarrassed by it. This connected series of stories does not pretend to be prophetic. It is a history, not of the future, but of a future-an alternate probability world (perhaps the same one in which the retired Rear Admiral is tending his roses) which is logically self consistent, dramatic, and recognizably an offshoot of our own past. The stories really do not form a linear series at all-they are more like a pyramid, in which earlier stories provide a solid base for later ones to rest on.

Partly because of this pyramiding of background and partly because of the author's broad knowledge-about which more in a moment-Heinlein's readers find themselves in a world which is clearly our own, only projected a few years or decades into the future. There have been changes, naturally, but they are things you feel you could adjust to without much trouble. People are still people: they read Time magazines, are worried about money, smoke Luckies, argue with theft wives.

It is easy to say what the ideal science fiction writer would be like. He would be a talented and imaginative writer, trained in the physical and social sciences and in engineering, with a broad and varied experience of people - not only scientists and engineers, but secretaries, lawyers, labor leaders, admen, newspapermen, politicians, businessmen. The trouble is that no one in his senses would spend the time to acquire all this training and background merely in order to write science fiction. But Heinlein had it all.

Far more of Heinlein's work comes out of his own experience than most people realize. When he doesn't know something himself, he is too conscientious a workman to guess at it: he goes and finds out. His stories are full of precisely right details, the product of painstaking research. But many of the things he writes about, including some that strain the reader's credulity, are from his own life. A few examples, out of many:

The elaborate discussion of the problems of linkages in designing household robots, in The Door Into Summer. Heinlein was an engineer, specializing in linkages.

The hand-to-hand combat skills of the heroes of such stories as Gulf and Glory Road. Heinlein himself is an expert marksman, swordsman and rough-and-tumble fighter.

The redheaded and improbably multi-skilled heroine of The Puppet Masters and other Heinlein stories. Heinlein's redheaded wife Ginny is a chemist, biochemist, aviation test engineer, experimental horticulturist; she earned varsity letters at N.Y.U. in swimming, diving, basketball and field hockey, and became a competitive figure skater after graduation; she speaks seven languages so far, and is starting on an eighth.

The longevity of the 'Families' in Methuselah's Children. Five of Heinlein's six brothers and sisters are still living. So is his mother: she is 87, 'frail, but very much alive and mentally active.' All the returns are not in yet.

Even the improbably talented families that appear in The Rolling Stones and elsewhere are not wild inventions: Heinlein himself played chess before he could read. Of his three brothers, one is a professor of electrical engineering, one a professor of political science, and the third is a retired major general who 'made it the hard way - i.e., from private right up through every rank without any college education at all.'

Like Mark Twain, Heinlein is from Missouri. It shows in his skepticism, his rich appreciation of human absurdity, and in an occasional turn of phrase - a taste for gaudily embellished understatement. He has the Missourian admiration for competence of any kind, for those who can get things done - even (or perhaps especially) if they bend a few rules in the process. (Heinlein: 'I stood quite high at the Naval Academy and would have stood much higher save for a tendency to collect "Black N's" - major offenses against military discipline.') Unlike most modern novelists, he has no patience with the unskilled and incompetent. Those who contribute most to the world, Heinlein thinks, are also those who have the most fun. Those who contribute nothing are objects of pity; and pity for the self-pitying is not high on Heinlein's list of virtues. This tough-mindedness is an altogether different thing from the cynicism of other writers. Heinlein is a moralist to the core; he devoutly believes in courage, honor, self-discipline, self-sacrifice for love or duty. Above all, he is a libertarian. 'When any government, or any church for that matter, undertakes to say to its subjects, "This you may not read, this you must not see, this you are forbidden to know," the end result is tyranny and oppression, no matter how holy the motives. Mighty little force is needed to control a man whose mind has been hoodwinked; contrariwise, no amount of force can control a free man, a man whose mind is free. No, not the rack, not fission bombs, not anything - you can't conquer a free man; the most you can do is kill him.'

The author himself has often denied that the stories in this book are prophecy. Yet it is apparent that some of Heinlein's fictional forecasts have already come true - not literally but symbolically. 'The Roads Must Roll' predicts urban sprawl, and anticipates Jimmy Hoffa's threat of a nationwide transport strike. The 1969 newspaper headlines in Methuselah's Children, illustrating the character of 'The Crazy Years' - Heinlein's term for the present era - seem less fantastic now than they did in 1941.

'Blowups Happen', written and published five years before the Bomb, is based on a series of shrewd guesses that turned out to be wrong. The specific dilemma of that story never became real; nevertheless, it mirrors the real, agonizing dilemma of atomic power with which we have been living since 1945.

Some of these stories are minor entertainments, but one, at least, is a major work of art: 'The Man Who Sold the Moon'.

Written with deceptive ease and simplicity, it functions brilliantly on half a dozen levels at once. It is a story of man's conquest of the Moon, a penetrating essay on robber-baron capitalism, and a warm, utterly convincing and human portrait of an extraordinary man.

As for the still-unfolding future, there are guideposts and warnings here. Heinlein continually reminds us that history is a process, not something dead and embalmed in textbooks. The ultimate problem is man's control of his own inventions-not only the minor ones, like the crossbow and the atom bomb, but the major inventions-language, culture and technology. We are a tough and resourceful lot, all things considered; our descendants will need to be tougher and more resourceful still. The odds are all against

them. The stars are high, life is short, and the house always takes a percentage. But Man himself is so unlikely that if he did not exist, his possibility would not be worth discussing. Heinlein's money is on Man; and I have a hunch that the next century will prove him right.

The Anchorage
Milford, Pennsylvania

Life-Line

THE chairman rapped loudly for order. Gradually the catcalls and boos died away as several self-appointed sergeants-at-arms persuaded a few hot-headed individuals to sit down. The speaker on the rostrum by the chairman seemed unaware of the disturbance. His bland, faintly insolent face was impassive. The chairman turned to the speaker, and addressed him, in a voice in which anger and annoyance were barely restrained.

"Doctor Pinero," - the "Doctor" was faintly stressed - "I must apologize to you for the unseemly outburst during your remarks. I am surprised that my colleagues should so far forget the dignity proper to men of science as to interrupt a speaker, no matter," he paused and set his mouth, "no matter how great the provocation." Pinero smiled in his face, a smile that was in some way an open insult. The chairman visibly controlled his temper and continued, "I am anxious that the program be concluded decently and in order. I want you to finish your remarks. Nevertheless, I must ask you to refrain from affronting our intelligence with ideas that any educated man knows to be fallacious. Please confine yourself to your discovery - if you have made one."

Pinero spread his fat white hands, palms down. "How can I possibly put a new idea into your heads, if I do not first remove your delusions?"

The audience stirred and muttered. Someone shouted from the rear of the hail, "Throw the charlatan out! We've had enough." The chairman pounded his gavel.

"Gentlemen! Please!" Then to Pinero, "Must I remind you that you are not a member of this body, and that we did not invite you?"

Pinero's eyebrows lifted. "So? I seem to remember an invitation on the letterhead of the Academy?"

The chairman chewed his lower lip before replying. "True. I wrote that invitation myself. But it was at the request of one of the trustees - a fine public-spirited gentleman, but not a scientist, not a member of the Academy."

Pinero smiled his irritating smile. "So? I should have guessed. Old Bidwell, not so, of Amalgamated Life Insurance? And he wanted his trained seals to expose me as a fraud, yes? For if I can tell a man the day of his own death, no one will buy his pretty policies. But how can you expose me, if you will not listen to me first? Even supposing you had the wit to understand me? Bah! He has sent jackals to tear down a lion." He deliberately turned his back on them. The muttering of the crowd swelled and took on a vicious tone. The chairman cried vainly for order. There arose a figure in the front row.

"Mister Chairman!"

The chairman grasped the opening and shouted, "Gentlemen! Doctor Van RheinSmitt has the floor." The commotion died away.

The doctor cleared his throat, smoothed the forelock of his beautiful white hair, and thrust one hand into a side pocket of his smartly tailored trousers. He assumed his women's club manner.

"Mister Chairman, fellow members of the Academy of Science, let us have tolerance. Even a murderer has the right to say his say before the state exacts its tribute. Shall we do less? Even though one may be intellectually certain of the verdict? I grant Doctor Pinero every consideration that should be given by this august body to any unaffiliated colleague, even though" - he bowed slightly in Pinero's direction - "we may not be familiar with the university which bestowed his degree. If what he has to say is false, it can not harm us. If what he has to say is true, we should know it." His mellow cultivated voice rolled on, soothing and calming. "If the eminent doctor's manner appears a trifle in urbane for our tastes, we must bear in mind that the doctor may be from a place, or a stratum, not so meticulous in these little matters. Now our good friend and benefactor has asked us to hear this person and carefully assess the merit of his claims. Let us do so with dignity and decorum."

He sat down to a rumble of applause, comfortably aware that he had enhanced his reputation as an intellectual leader. Tomorrow the papers would again mention the good sense and persuasive personality of "America's handsomest University President". Who knew? Perhaps old Bidwell would come through with that swimming pool donation.

When the applause had ceased, the chairman turned to where the center of the disturbance sat, hands folded over his little round belly, face serene.

"Will you continue, Doctor Pinero?"

"Why should I?"

The chairman shrugged his shoulders. "You came for that purpose."

Pinero arose. "So true. So very true. But was I wise to come? Is there anyone here who has an open mind who can stare a bare fact in the face without blushing? I think not. Even that so beautiful gentleman who asked you to hear me out has already judged me and condemned me. He seeks order, not truth. Suppose truth defies order, will he accept it? Will you? I think not. Still, if I do not speak, you will win your point by default. The little man in the street will think that you little men have exposed me, Pinero, as a hoaxer, a pretender. That does not suit my plans. I will speak."

"I will repeat my discovery. In simple language I have invented a technique to tell how long a man will live. I can give you advance billing of the Angel of Death. I can tell you when the Black Camel will kneel at your door. In five minutes time with my apparatus I can tell any of you how many grains of sand are still left in your hourglass." He paused and folded his arms across his chest. For a moment no one spoke. The audience grew restless. Finally the chairman intervened.

"You aren't finished, Doctor Pinero?"

"What more is there to say?"

"You haven't told us how your discovery works."

Pinero's eyebrows shot up. "You suggest that I should turn over the fruits of my work for children to play with. This is dangerous knowledge, my friend. I keep it for the man who understands it, myself." He tapped his chest.

"How are we to know that you have anything back of your wild claims?"

"So simple. You send a committee to watch me demonstrate. If it works, fine. You admit it and tell the world so. If it does not work, I am discredited, and will apologize. Even I, Pinero, will apologize."

A slender stoop-shouldered man stood up in the back of the hail. The chair recognized him and he spoke:

"Mr. Chairman, how can the eminent doctor seriously propose such a course? Does he expect us to wait around for twenty or thirty years for some one to die and prove his claims?"

Pinero ignored the chair and answered directly:

"Pfui! Such nonsense! Are you so ignorant of statistics that you do not know that in any large group there is at least one who will die in the immediate future? I make you a proposition; let me test each one of you in this room and I will name the man who will die within the fortnight, yes, and the day and hour of his death." He glanced fiercely around the room. "Do you accept?"

Another figure got to his feet, a portly man who spoke in measured syllables. "I, for one, can not countenance such an experiment. As a medical man, I have noted with sorrow the plain marks of serious heart trouble in many of our elder colleagues. If Doctor Pinero knows those symptoms, as he may, and were he to select as his victim one of their number, the man so selected would be likely to die on schedule, whether the distinguished speaker's mechanical egg-timer works or not."

Another speaker backed him up at once. "Doctor Shepard is right. Why should we waste time on voodoo tricks? It is my belief that this person who calls himself Doctor Pinero wants to use this body to give his statements authority. If we participate in this farce, we play into his hands. I don't know what his racket is, but you can bet that he has figured out some way to use us for advertising for his schemes. I move, Mister Chairman, that we proceed with our regular business."

The motion carried by acclamation, but Pinero did not sit down. Amidst cries of "Order! Order!" he shook his untidy head at them, and had his say:

"Barbarians! Imbeciles! Stupid dolts! Your kind have blocked the recognition of every great discovery since time began. Such ignorant canaille are enough to start Galileo spinning in his grave. That fat fool down there twiddling his elk's, tooth calls himself a medical man. Witch doctor would be a better term! That little baldheaded runt over there - You! You style yourself a philosopher, and prate about life and time in your neat categories. What do you know of either one? How can you ever learn when you won't examine the truth when you have a chance? Bah!" He spat upon the stage. "You call this an Academy of Science. I call it an undertaker's convention, interested only in embalming the ideas of your red-blooded predecessors."

He paused for breath and was grasped on each side by two members of the platform committee and rushed out the wings. Several reporters arose hastily from the press table and followed him. The chairman declared the meeting adjourned.

The newspapermen caught up with him as he was going out by the stage door. He walked with a light springy step, and whistled a little tune. There was no trace of the belligerence he had shown a moment before. They crowded about him. "How about an interview, doe?" "What dyu think of Modem Education?" "You certainly told 'em. What are your views on Life after Death?" "Take off your hat, doe, and look at the birdie."

He grinned at them all. "One at a time, boys, and not so fast. I used to be a newspaperman myself. How about coming up to my place, and we'll talk about it?"

A few minutes later they were trying to find places to sit down in Pinero's messy bed-living-room, and lighting his cigars. Pinero looked around and beamed. "What'll it be, boys? Scotch, or Bourbon?" When that was taken care of he got down to business. "Now, boys, what do you want to know?"

"Lay it on the line, doe. Have you got something, or haven't you?"

"Most assuredly I have something, my young friend."

"Then tell us how it works. That guff you handed the profs won't get you anywhere now."

"Please, my dear fellow. it is my invention. I expect to make some money with it. Would you have me give it away to the first person who asks for it?"

"See here, doe, you've got to give us something if you expect to get a break in the morning papers. What do you use? A crystal ball?"

"No, not quite. Would you like to see my apparatus?"

"Sure. Now we are getting somewhere."

He ushered them into an adjoining room, and waved his hand. "There it is, boys." The mass of equipment that met their eyes vaguely resembled a medico's office x-ray gear. Beyond the obvious fact that it used electrical power, and that some of the dials were calibrated in familiar terms, a casual inspection gave no clue to its actual use.

"What's the principle, doe?"

Pinero pursed his lips and considered. "No doubt you are all familiar with the truism that life is electrical in nature? Well, that truism isn't worth a damn, but it will help to give you an idea of the principle. You have also been told that time is a fourth dimension. Maybe you believe it, perhaps not. It has been said so many times that it has ceased to have any meaning. It is simply a cliché that windbags use to impress fools. But I want you to try to visualize it now and try to feel it emotionally."

He stepped up to one of the reporters. "Suppose we, take you as an example. Your name is Rogers, is it not? Very well, Rogers, you are a space-time event having duration four ways. You are not quite six feet tall, you are about twenty inches wide and perhaps ten inches thick. In time, there stretches behind you more of this space-time event reaching to perhaps nineteen-sixteen, of which we see a cross-section here at right angles to the time axis, and as thick as the present. At the far end is a baby, smelling of sour milk and drooling its breakfast on its bib. At the other end lies, perhaps, an old man someplace in the nineteen-eighties. Imagine this space-time event which we call Rogers as a long pink worm, continuous through the years, one end at his mother's womb, the other at the grave. It stretches past us here and the cross-section we see appears as a single discrete body. But that is illusion. There is physical continuity to this pink worm, enduring through the years. As a matter of fact there is physical continuity in, this concept to the entire race, for these pink worms branch off from other pink worms. In this fashion the race is like a vine whose branches intertwine and send Out shoots. Only by taking a cross-section of the vine would we fall into the error of believing that the shootlets were discrete individuals."

He paused and looked around at their faces. One of them, a dour hard-bitten chap, put in a word.

"That's all very pretty, Pinero; if true, but where does that get you?"

Pinero favored him with an unresentful smile. "Patience, my friend. I asked you to think of life as electrical. Now think of our long pink worm as a conductor of electricity. You have heard, perhaps, of the fact that electrical engineers can, by certain measurements, predict the exact location of a break in a trans-Atlantic cable without ever leaving the shore. I do the same with our pink worms. By applying my instruments to the cross-section here in this room I can tell where the break occurs, that is to say, when death takes place. Or, if you like, I can reverse the connections and tell you the date of your birth. But that is uninteresting; you already know it."

The dour individual sneered. "I've caught you, doe. If what you said about the race being like a vine of pink worms is true, you can't tell birthdays because the connection with the race is continuous at birth. Your electrical. conductor reaches on back through the mother into a man's remotest ancestors."

Pinero beamed, "True, and clever, my friend. But you have pushed the analogy too far. It is not done in the precise manner in which one measures the length of an electrical conductor. In some ways it is more like measuring the length of a long corridor by bouncing an echo off the far end. At birth there is a sort of twist in the corridor, and, by proper calibration, I can detect the echo from that twist. There is just one case in which I can get no determinant reading; when a woman is actually carrying a child, I can't sort out her life-line from that of the unborn infant."

"Let's see you prove it."

"Certainly, my dear friend. Will you be a subject?"

One of the others spoke up. "He's called your bluff, Luke. Put up, or shut up."

"I'm game. What do I do?"

"First write the date of your birth on a sheet of paper, and hand it to one of your colleagues."

Luke complied. "Now what?"

"Remove your outer clothing and step upon these scales. Now tell me, were you ever very much thinner, or very much fatter, than you are now. No? What did you weigh at birth? Ten pounds? A fine bouncing baby boy. They don't come so big any more."

"What is all this flubdubbery?"

"I am trying to approximate the average cross-section of our long pink conductor, my dear Luke. Now will you seat yourself here. Then place this electrode in your mouth. No, it will not hurt you; the voltage is quite low, less than one micro-volt, but I must have a good connection." The doctor left him and went behind his apparatus, where he lowered a hood over his head before touching his controls. Some of the exposed dials came to life and a low humming came from the machine. It stopped and the doctor popped out of his little hide-away.

"I get sometime in February, nineteen-twelve. Who has the piece of paper with the date?"

It was produced and unfolded. The custodian read, "February 22nd, 1912."

The stillness that followed was broken by a voice from the edge of the little group. "Doe, can I have another drink?"

The tension relaxed, and several spoke at once, "Try it on me, doe." "Me first, doe, I'm an orphan and really want to know." "How about it, doe. Give us all a little loose play."

He smilingly complied, ducking in and out of the hood like a gopher from its hole. When they all had twin slips of paper to prove the doctor's skill, Luke broke a long silence.

"How about showing how you predict death, Pinero."

"If you wish. Who will try it?"

No one answered. Several of them nudged Luke forward. "Go ahead, smart guy. You asked for it." He allowed himself to be seated in the chair. Pinero changed some of the switches, then entered the hood. When the humming ceased, he came out, rubbing his hands briskly together.

"Well, that's all there is to see, boys. Got enough for a story?"

"Hey, what about the prediction? When does Luke get his 'thirty'?"

Luke faced him. "Yes, how about it? What's your answer?"

Pinero looked pained. "Gentlemen, I am surprised at you. I give that information for a fee. Besides, it is a professional confidence. I never tell anyone but the client who consults me."

"I don't mind. Go ahead and tell them."

"I am very sorry. I really must refuse. I agreed only to show you how, not to give the results."

Luke ground the butt of his cigarette into the floor. "It's a hoax, boys. He probably looked up the age of every reporter in town just to be ready to pull this. It won't wash, Pinero."

Pinero gazed at him sadly. "Are you married, my friend?"

"Do you have any one dependent on you? Any close relatives?"

"No. WHY, do you want to adopt me?"

Pinero shook his head sadly. "I am very sorry for you, my dear Luke. You will die before tomorrow."

"SCIENCE MEET ENDS IN RIOT"
"SAVANTS SAPS SAYS SEER"
"DEATH PUNCHES TIMECLOCK"
"SCRIBE DIES PER DOC'S DOPE"
"HOAX' CLAIMS SCIENCE HEAD"

"... within twenty minutes of Pinero's strange prediction, Timons was struck by a falling sign while walking down Broadway toward the offices of the Daily Herald where he was employed.

"Doctor Pinero declined to comment but confirmed the story that he had predicted Timons' death by means of his so-called chronovitameter. Chief of Police Roy..."

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(adv.)

- Legal Notice

To whom it may concern, greetings; I, John Cabot Winthrop III, of the firm Winthrop, Winthrop, Ditmars & Winthrop, Attorneys-at-Law, do affirm that Hugo Pinero of this city did hand to me ten thousand dollars in lawful money of the United States, and instruct me to place it in escrow with a chartered bank of my selection with escrow instructions as follows:.

The entire bond shall be forfeit, and shall forthwith be paid to the first client of Hugo Pinero and/or Sands of Time, Inc. who shall exceed his life tenure as predicted by Hugo Pinero by one per centurn, or to the estate of the first client who shall fail of such predicted tenure in a like amount, whichever occurs first in point of time.

I do further affirm that I have this day placed this bond in escrow with the above related instructions with the Equitable-First National Bank of this city.
Subscribed--and sworn,
John Cabot Winthrop Ill

Subscribed and sworn to before me
this 2nd day of April, 1951.
Albert M. Swanson
Notary Public in and for this county and state
My commission expires June 17, 1951.

"Good evening Mr. and Mrs. Radio Audience, let's go to Press! Flash! Hugo Pinero, The Miracle Man from Nowhere, has made his thousandth death prediction without a claimant for the reward he posted for anyone who catches him failing to call the turn. With thirteen of his clients already dead it is mathematically certain that - he has a private line to the main office of the Old Man with the Scythe. That is one piece of news I don't want to know before it happens. Your Coast-to-Coast Correspondent will not be a client of Prophet Pinero. . ."

The judge's watery baritone cut through the stale air of the courtroom. "Please, Mr. Weeds, let us return to our muttons. This court granted your prayer for a temporary restraining order, and now you ask that it be made permanent. In rebuttal, Mr. Pinero claims that you have presented no cause and asks that the injunction be lifted, and that I order your client to cease from attempts to interfere with what Pinero describes as a simple - lawful business. As you are not addressing a jury, please omit the rhetoric and tell me in plain language why I should not grant his prayer."

Mr. Weeds jerked his chin nervously, making his flabby Grey dewlap drag across his high stiff collar, and resumed:

"May it please the honorable court, I represent the public-"

"Just a moment. I thought you were appearing for Amalgamated Life Insurance."

"I am, Your Honor, in a formal sense. In a wider sense I represent several other major assurance, fiduciary, and financial institutions; their stockholders, and policy

holders, who constitute a majority of the citizenry. In addition we feel that we protect the interests of the entire population; unorganized, inarticulate, and otherwise unprotected."

"I thought that I represented the public," observed the judge dryly. "I am afraid I must regard you as appearing for your client-of-record. But continue; what is your thesis?"

The elderly barrister attempted to swallow his Adam's apple, then began again. "Your Honor, we contend that there are two separate reasons why this injunction should be made permanent, and, further, that each reason is sufficient alone. In the first place, this person is engaged in the practice of soothsaying, an occupation proscribed both in common law and statute. He is a common fortune teller, a vagabond charlatan who preys on the gullibility of the public. He is cleverer than the ordinary gypsy palm-reader, astrologer, or table tipper, and to the same extent more dangerous. He makes false claims of modern scientific methods to give a spurious dignity to his thaumaturgy. We have here in court leading representatives of the Academy of Science to give expert witness as to the absurdity of his claims.

"In the second place, even if this person's claims were true-granting for the sake of argument such an absurdity" - Mr. Weems permitted himself a thin-lipped smile - "we contend that his activities are contrary to the public interest in general, and unlawfully injurious to the interests of my client in particular. We are prepared to produce numerous exhibits with the legal custodians to prove that this person did publish, or cause to have published, utterances urging the public to dispense with the priceless boon of life insurance to the great detriment of their welfare and to the financial damage of my client."

Pinero arose in his place. "Your Honor, may I say a few words?"

"What is it?"

"I believe I can simplify the situation if permitted to make a brief analysis."

"Your Honor," cut in Weems, "this is most irregular."

"Patience, Mr. Weems. Your interests will be protected. It seems to me that we need more light and less noise in this matter. If Dr. Pinero can shorten the proceedings by speaking at this time, I am inclined to let him. Proceed, Dr. Pinero."

"Thank you, Your Honor. Taking the last of Mr. Weems' points first, I am prepared to stipulate that I published the utterances he speaks of"

"One moment, Doctor. You have chosen to act as your own attorney. Are you sure you are competent to protect your own interests?"

"I am prepared to chance it, Your Honor. Our friends here can easily prove what I stipulate."

"Very well. You may proceed."

"I will stipulate that many persons have cancelled life insurance policies as a result thereof, but I challenge them to show that anyone so doing has suffered any loss or damage there from. It is true that the Amalgamated has lost business through my activities, but that is the natural result of my discovery, which has made their policies as obsolete as the bow and arrow. If an injunction is granted on that ground, I shall set up a coal oil lamp factory, then ask for an injunction against the Edison and General Electric companies to forbid them to manufacture incandescent bulbs."

"I will stipulate that I am engaged in the business of making predictions of death, but I deny that I am practicing magic, black, white, or rainbow colored. If to make

predictions by methods of scientific accuracy is illegal, then the actuaries of the Amalgamated have been guilty for years in that they predict the exact percentage that will die each year in any given large group. I predict death retail; the Amalgamated predicts it wholesale. If their actions are legal, how can mine be illegal?"

"I admit that it makes a difference whether I can do what I claim, or not; and I will stipulate that the so-called expert witnesses from the Academy of Science will testify that I cannot. But they know nothing of my method and cannot give truly expert testimony on it."

"Just a moment, Doctor. Mr. Weems, is it true that your expert witnesses are not conversant with Dr. Pinero's theory and methods?"

Mr. Weems looked worried. He drummed on the table top, then answered, "Will the Court grant me a few moments indulgence?"

"Certainly."

Mr. Weems held a hurried whispered consultation with his cohorts, then faced the bench. "We have a procedure to suggest, Your Honor. If Dr. Pinero will take the stand and explain the theory and practice of his alleged method, then these distinguished scientists will be able to advise the Court as to the validity of his claims."

The judge looked inquiringly at Pinero, who responded, "I will not willingly agree to that. Whether my process is true or false, it would be dangerous to let it fall into the hands of fools and quacks" he waved his hand at the group of professors seated in the front row, paused and smiled maliciously "as these gentlemen know quite well. Furthermore it is not necessary to know the process in order to prove that it will work. Is it necessary to understand the complex miracle of biological reproduction in order to observe that a hen lays eggs? Is it necessary for me to reeducate this entire body of self-appointed custodians of wisdom - cure them of their ingrown superstitions - in order to prove that my predictions are correct? There are but two ways of forming an opinion in science. One is the scientific method; the other, the scholastic. One can judge from experiment, or one can blindly accept authority. To the scientific mind, experimental proof is all important and theory is merely a convenience in description, to be junked when it no longer fits. To the academic mind, authority is everything and facts are junked when they do not fit theory laid down by authority."

"It is this point of view-academic minds clinging like oysters to disproved theories-that has blocked every advance of knowledge in history. I am prepared to prove my method by experiment, and, like Galileo in another court, I insist, 'It still moves!'"

"Once before I offered such proof to this same body of self-styled experts, and they rejected it. I renew my offer; let me measure the life lengths of the members of the Academy of Science. Let them appoint a committee to judge the results. I will seal my findings in two sets of envelopes; on the outside of each envelope in one set will appear the name of a member, on the inside the date of his death. In the other envelopes I will place names, on the outside I will place dates. Let the committee place the envelopes in a vault, then meet from time to time to open the appropriate envelopes. In such a large body of men some deaths may be expected, if Amalgamated actuaries can be trusted, every week or two. In such a fashion they will accumulate data very rapidly to prove that Pinero is a liar, or no."

He stopped, and pushed out his little chest until it almost caught up with his little round belly. He glared at the sweating savants. "Well?"

The judge raised his eyebrows, and caught Mr. Weems' eye. "Do you accept?"

"Your Honor, I think the proposal highly improper-"

The judge cut him short. "I warn you that I shall rule against you if you do not accept, or propose an equally reasonable method of arriving at the truth."

Weems opened his mouth, changed his mind, looked up and down the faces of learned witnesses, and faced the bench. "We accept, Your Honor."

"Very well. Arrange the details between you. The temporary injunction is lifted, and Dr. Pinero must not be molested in the pursuit of his business. Decision on the petition for permanent injunction is reserved without prejudice pending the accumulation of evidence. Before we leave this matter I wish to comment on the theory implied by you, Mr. Weems, when you claimed damage to your client. There has grown up in the minds of certain groups in this country the notion that because a man or corporation has made a profit out of the public for a number of years, the government and the courts are charged with the duty of guaranteeing such profit in the future, even in the face of changing circumstances and contrary public interest. This strange doctrine is not supported by statute nor common law. Neither individuals nor corporations have any right to come into court and ask that the clock of history be stopped, or turned back, for their private benefit. That is all."

Bidwell grunted in annoyance. "Weems, if you can't think up anything better than that, Amalgamated is going to need a new chief attorney. It's been ten weeks since you lost the injunction, and that little wart is coining money hand over fist. Meantime every insurance firm in the country is going broke. Hoskins, what's our loss ratio?"

"It's hard to say, Mr. Bidwell. It gets worse every day. We've paid off thirteen big policies this week; all of them taken out since Pinero started operations."

A spare little man spoke up. "I say, Bidwell, we aren't accepting any new applications for United until we have time to check and be sure that they have not consulted Pinero. Can't we afford to wait until the scientists show him up?"

Bidwell snorted. "You blasted optimist! They won't show him up. Aldrich, can't you face a fact? The fat little blister has got something; how I don't know. This is a fight to the finish. If we wait, we're licked." He threw his cigar into a cuspidor, and bit savagely into a fresh one. "Clear out of here, all of you! I'll handle this my own way. You too, Aldrich. United may wait, but Amalgamated won't."

Weems cleared his throat apprehensively. "Mr. Bidwell, I trust you will consult with me before embarking on any major change in policy?"

Bidwell grunted. They filed out. When they were all gone and the door closed, Bidwell snapped the switch of the inter-office announcer. "O.K.; send him in."

The outer door opened; a slight dapper figure stood for a moment at the threshold. His small dark eyes glanced quickly about the room before he entered, then he moved up to Bidwell with a quick soft tread. He spoke to Bidwell in a flat emotionless voice. His face remained impassive except for the live animal eyes. "You wanted to talk to me?"

"Yes."

"What's the proposition?"

"Sit down, and we'll talk."

Pinero met the young couple at the door of his inner office.

"Come in, my dears, come in. Sit down. Make yourselves at home. Now tell me, what do you want of Pinero? Surely such young people are not anxious about the final roll call?"

The boy's honest young face showed slight confusion. "Well, you see, Dr. Pinero, I'm Ed Harley and this is my wife, Betty. We're going to have-that is, Betty is expecting a baby and, well-"

Pinero smiled benignly. "I understand. You want to know how long you will live in order to make the best possible provision for the youngster. Quite wise. Do you both want readings, or just yourself?"

The girl answered, "Both of us, we think."

Pinero beamed at her. "Quite so. I agree. Your reading presents certain technical difficulties at this time, but I can give you some information now, and more later after your baby arrives. Now come into my laboratory, my dears, and we'll commence." He rang for their case histories, then showed them into his workshop. "Mrs. Harley first, please. If you will go behind that screen and remove your shoes and your outer clothing, please. Remember, I am an old man, whom you are consulting as you would a physician."

He turned away and made some minor adjustments of his apparatus. Ed nodded to his wife who slipped behind the screen and reappeared almost at once, clothed in two wisps of silk. Pinero glanced up, noted her fresh young prettiness and her touching shyness.

"This way, my dear. First we must weigh you. There. Now take your place on the stand. This electrode in your mouth. No, Ed, you mustn't touch her while she is in the circuit. It won't take a minute. Remain quiet."

He dove under the machine's hood and the dials sprang into life. Very shortly he came out with a perturbed look on his face. "Ed, did you touch her?"

"No, Doctor." Pinero ducked back again, remained a little longer. When he came out this time, he told the girl to get down and dress. He turned to her husband.

"Ed, make yourself ready."

"What's Betty's reading, Doctor?"

"There is a little difficulty. I want to test you first."

When he came out from taking the youth's reading, his face was more troubled than ever. Ed inquired as to his trouble. Pinero shrugged his shoulders, and brought a smile to his lips.

"Nothing to concern you, my boy. A little mechanical misadjustment, I think. But I shan't be able to give you two your readings today. I shall need to overhaul my machine. Can you come back tomorrow?"

"Why, I think so. Say, I'm sorry about your machine. I hope it isn't serious."

"It isn't, I'm sure. Will you come back into my office, and visit for a bit?"

"Thank you, Doctor. You are very kind."

"But Ed, I've got to meet Ellen."

Pinero turned the full force of his personality on her.

"Won't you grant me a few moments, my dear young lady? I am old and like the sparkle of young folk's company. I get very little of it. Please." He nudged them gently into his office, and seated them. Then he ordered lemonade and cookies sent in, offered them cigarettes, and lit a cigar.

Forty minutes later Ed listened entranced, while Betty was quite evidently acutely nervous and anxious to leave, as the doctor spun out a story concerning his adventures as a young man in Tierra del Fuego. When the doctor stopped to relight his cigar, she stood up.

"Doctor, - we really must leave. Couldn't we hear the rest tomorrow?"

"Tomorrow? There will not be time tomorrow."

"But you haven't time today either. Your secretary has rung five times."

"Couldn't you spare me just a few more minutes?"

"I really can't today, doctor. I have an appointment. There is someone waiting for me."

"There is no way to induce you?"

"I'm afraid not. Come, Ed."

After they had gone, the doctor stepped to the window and stared out over the city. Presently he picked out two tiny figures as they left the office building. He watched them hurry to the corner, wait for the lights to change, then start across the street. When they were part way across, there came the scream of a siren. The two little figures hesitated, started back, stopped, and turned. Then the car was upon them. As the car slammed to a stop, they showed up from beneath it, no longer two figures, but simply a limp unorganized heap of clothing.

Presently the doctor turned away - from the window. Then he picked up his phone, and spoke to his secretary.

"Cancel my appointments for the rest of the day.... No... No one... I don't care; cancel them." Then he sat down in his chair. His cigar went out. Long after dark he held it, still unlighted.

Pinero sat down at his dining table and contemplated the gourmet's luncheon spread before him. He had ordered this meal with particular care, and had come home a little early in order to enjoy it fully.

Somewhat later he let a few drops of fiori d'Alpini roll around his tongue and trickle down his throat. The heavy fragrant syrup warmed his mouth, and reminded him of the little mountain flowers for which it was named. He sighed. It - had been a good meal, an exquisite meal and had justified the exotic liqueur. His musing was interrupted by a disturbance at the front door. The voice of his elderly maidservant was raised in remonstrance. A heavy male voice interrupted her. The commotion moved down the hail and the dining room door was pushed open.

"Madonna! Non si puo entrare! The Master is eating!"

"Never mind, - Angela. I have time to see these gentlemen. You ..may go." Pinero faced the surly-faced spokesman of the intruders. "You have business with me; yes?"

"You bet we have. Decent people have had enough of your damned nonsense."

"And so?"

The caller did not answer at once. A smaller dapper individual moved out from behind him and faced Pinero.

"We might as well begin." The chairman of the committee placed a key in the lock-box and opened it. "Wenzell, will you help me pick out today's envelopes?" He was interrupted by a touch on his arm. - "Dr. Baird, you are wanted on the telephone."

"Very well. Bring the instrument here."

When it was fetched he placed the receiver to his ear. "Hello.... Yes; speaking.... What? .. No, we have beard nothing... Destroyed the machine, you say.... Dead! How?.... No! No statement. None at all.... Call me later...."

He slammed the instrument down - and pushed it from him.

"What's up? Who's dead now?"

Baird held up one hand. "Quiet, gentlemen, please!

Pinero was murdered a few moments ago at his home."

"Murdered?!"

"That isn't all. About the same time vandals broke into his office and smashed his apparatus." -

No one spoke at first. The committee members glanced around at each other. No one seemed anxious to be the first to comment.

Finally one spoke up. "Get it out."

"Get what out?"

"Pinero's envelope. It's in there too. I've seen it."

Baird located it and slowly tore it open. He unfolded the single sheet of paper, and scanned it.

"Well? Out with it!"

"One thirteen p.m. - today."

They took this in silence.

Their dynamic calm was broken by a member across the table from Baird reaching for the lock-box. Baud interposed a hand.

"What do you want?"

"My prediction-it's in there-we're all in there."

"Yes, yes. We're all in here. Let's have them."

Baird placed both hands over the box. He held the eye of the man opposite him but did not speak. He licked his lips. The corner of his mouth twitched. His hands shook. Still he did not speak. The man opposite relaxed back into his chair.

"You're right, of course," he said.

"Bring me that waste basket." Baird's voice was low and strained but steady.

He accepted it and dumped the litter on the rug. He placed the tin basket on the table before him. He tore half a dozen envelopes across, set a match to them, and dropped them in the basket. Then he started tearing a double handful at a time, and fed the fire steadily. The smoke made him cough, and tears ran out of his smarting eyes. Someone got up and opened a window. When he was through, he pushed the basket away from him, looked down, and spoke.

"I'm afraid I've ruined this table top."

The Roads Must Roll

"Who makes the roads roll?"

The speaker stood still on the rostrum and waited for his audience to answer him. The reply came in scattered shouts that cut through the ominous, discontented murmur of the crowd.

"We do!" - "We do!" - "Damn right!"

"Who does the dirty work 'down inside' - so that Joe Public can ride at his ease?"

This time it was a single roar, "We do!"

The speaker pressed his advantage, his words tumbling out in a rasping torrent. He leaned toward the crowd, his eyes picking out individuals at whom to fling his words. "What makes business? The roads! How do they move the food they eat? The roads! How do they get to work? The roads! How do they get home to their wives? The roads!" He paused for effect, then lowered his voice. "Where would the public be if you boys didn't keep them roads rolling? Behind the eight ball and everybody knows it. But do they appreciate it? Pfui! Did we ask for too much? Were our demands unreasonable? 'The right to resign whenever we want to.' Every working stiff in other lines of work has that. 'The same pay as the engineers.' Why not? Who are the real engineers around here? D'yuh have to be a cadet in a funny little hat before you can learn to wipe a bearing, or jack down a rotor? Who earns his keep: The 'gentlemen' in the control offices, or the boys 'down inside'? What else do we ask? 'The right to elect our own engineers.' Why the hell not? Who's competent to pick engineers? The technicians? - or some damn, dumb examining board that's never been 'down inside', and couldn't tell a rotor bearing from a field coil?"

He changed his pace with natural art, and lowered his voice still further. "I tell you, brother, it's time we quit fiddlin' around with petitions to the Transport Commission, and use a little direct action. Let 'em yammer about democracy; that's a lot of eye wash - we've got the power, and we're the men that count!"

A man had risen in the back of the hall while the speaker was haranguing. He spoke up as the speaker paused. "Brother Chairman," he drawled, "may I stick in a couple of words?"

"You are recognized, Brother Harvey."

"What I ask is: what's all the shootin' for? We've got the highest hourly rate of pay of any mechanical guild, full insurance and retirement, and safe working conditions, barring the chance of going deaf." He pushed his anti-noise helmet further back from his ears. He was still in dungarees, apparently just up from standing watch. "Of course we have to give ninety days notice to quit a job, but, cripes, we knew that when we signed up. The roads have got to roll - they can't stop every time some lazy punk gets bored with his billet.

"And now Soapy-" The crack of the gavel cut him short. "Pardon me, I mean Brother Soapy - tells us how powerful we are, and how we should go in for direct action. Rats! Sure we could tie up the roads, and play hell with the whole community-but so could any screwball with a can of nitroglycerine, and he wouldn't have to be a technician to do it, neither.

"We aren't the only frogs in the puddle. Our jobs are important, sure, but where would we be without the farmers - or the steel workers - or a dozen other trades and professions?"

He was interrupted by a sallow little man with protruding upper teeth, who said, "Just a minute, Brother Chairman, I'd like to ask Brother Harvey a question," then turned

to Harvey and inquired in a sly voice, "Are you speaking for the guild, Brother - or just for yourself? Maybe you don't believe in the guild? You wouldn't by any chance be" - he stopped and slid his eyes up and down Harvey's lank frame - "a spotter, would you?"

Harvey looked over his questioner as if he had found something filthy in a plate of food. "Sikes," he told him, "if you weren't a runt, I'd stuff your store teeth down your throat. I helped found this guild. I was on strike in 'sixty-six. Where were you in 'sixty-six? With the finks?"

The chairman's gavel pounded. "There's been enough of this," he said. "Nobody who knows anything about the history of this guild doubts the loyalty of Brother Harvey. We'll continue with the regular order of business." He stopped to clear his throat. "Ordinarily we don't open our floor to outsiders, and some of you boys have expressed a distaste for some of the engineers we work under, but there is one engineer we always like to listen to whenever he can get away from his pressing duties. I guess maybe it's because he's had dirt under his nails the same as us. Anyhow, I present at this time Mr. Shorty Van Kleeck-"

A shout from the floor stopped him. "Brother Van Kleeck!"

"O.K.-Brother Van Kleeck, Chief Deputy Engineer of this road-town."

"Thanks, Brother Chairman." The guest speaker came briskly forward, and grinned expansively at the crowd, seeming to swell under their approval. "Thanks, Brothers. I guess our chairman is right. I always feel more comfortable here in the Guild Hall of the Sacramento Sector - or any guild hail, for that matter - than I do in the engineers' dubhouse. Those young punk cadet engineers get in my hair. Maybe I should have gone to one of the fancy technical institutes, so I'd have the proper point of view, instead of coming up from 'down inside'.

"Now about those demands of yours that the Transport Commission just threw back in your face - Can I speak freely?"

"Sure you can, Shorty!" - "You can trust us!"

"Well, of course I shouldn't say anything, but I can't help but understand how you feel. The roads are the big show these days, and you are the men that make them roll. It's the natural order of things that your opinions should be listened to, and your desires met. One would think that even politicians would be bright enough to see that. Sometimes, lying awake at night, I wonder why we technicians don't just take things over, and-"

"Your wife is calling, Mr. Gaines."

"Very well." He picked up the handset and turned to the visor screen.

"Yes, darling, I know I promised, but ... You're perfectly right, darling, but Washington has especially requested that we show Mr. Blekinsop anything be wants to see. I didn't know he was arriving today.... No, I can't turn him over to a subordinate. It wouldn't be courteous. He's Minister of Transport for Australia. I told you that.... Yes, darling, I know that courtesy begins at home, but the roads must roll. It's my job; you knew that when you married me. And this is part of my job. That's a good girl. We'll positively have breakfast together. Tell you what, order horses and a breakfast pack and we'll make it a picnic. I'll meet you in Bakersfield - usual place.... Goodbye, darling. Kiss Junior goodnight for me."

He replaced the handset on the desk whereupon the pretty, but indignant, features of his wife faded from the visor screen. A young woman came into his office. As she

opened the door she exposed momentarily the words printed on its outer side; "DIEGO-RENO ROADTOWN, Office of the Chief Engineer." He gave her a harassed glance.

"Oh, it's you. Don't marry an engineer, Dolores, marry an artist. They have more home life."

"Yes, Mr. Gaines. Mr. Blekinsop is here, Mr. Gaines."

"Already? I didn't expect him so soon. The Antipodes ship must have grounded early."

"Yes, Mr. Gaines."

"Dolores, don't you ever have any emotions?"

"Yes, Mr. Gaines."

"Hmmm, it seems incredible, but you are never mistaken. Show Mr. Blekinsop in."

"Very good, Mr. Gaines."

Larry Gaines got up to greet his visitor. Not a particularly impressive little guy, he thought, as they shook hands and exchanged formal amenities. The rolled umbrella, the bowler hat were almost too good to be true.

An Oxford accent partially masked the underlying clipped, flat, nasal twang of the native Australian. "It's a pleasure to have you here, Mr. Blekinsop, and I hope we can make your stay enjoyable."

The little man smiled. "I'm sure it will be. This is my first visit to your wonderful country. I feel at home already. The eucalyptus trees, you know, and the brown hills-"

"But your trip is primarily business?"

"Yes, yes. My primary purpose is to study your roadcities, and report to my government on the advisability of trying to adapt your startling American methods to our social problems Down Under. I thought you understood that such was the reason I was sent to you."

"Yes, I did, in a general way. I don't know just what it is that you wish to find out. I suppose that you have heard about our road towns, how they came about, how they operate, and so forth."

"I've read a good bit, true, but I am not a technical man, Mr. Gaines, not an engineer. My field is social and political. I want to see how this remarkable technical change has affected your people. Suppose you tell me about the roads as if I were entirely ignorant. And I will ask questions."

"That seems a practical plan. By the way, how many are there in your party?"

"Just myself. I sent my secretary on to Washington."

"I see." Gaines glanced at his wrist watch. "It's nearly dinner time. Suppose we run up to the Stockton strip for dinner. There is a good Chinese restaurant up there that I'm partial to. It will take us about an hour and you can see the ways in operation while we ride."

"Excellent."

Gaines pressed a button on his desk, and a picture formed on a large visor screen mounted on the opposite wall. It showed a strong-boned, angular young man seated at a semi-circular control desk, which was backed by a complex instrument board. A cigarette was tucked in one corner of his mouth.

The young man glanced up, grinned, and waved from the screen. "Greetings and salutations, Chief. What can I do for you?"

"Hi, Dave. You've got the evening watch, eh? I'm running up to the Stockton sector for dinner. Where's Van Kleeck?"

"Gone to a meeting somewhere. He didn't say."

"Anything to report?"

"No, sir. The roads are rolling, and all the little people are going ridey-ridey home to their dinners."

"O.K.-keep 'em rolling."

"They'll roll, Chief."

Gaines snapped off the connection and turned to Blekinsop. "Van Kleeck is my chief deputy. I wish he'd spend more time on the road and less on politics. Davidson can handle things, however. Shall we go?"

They glided down an electric staircase, and debauched on the walkway which bordered the northbound five mile-an-hour strip. After skirting a stairway trunk marked OVERPASS TO SOUTHBOUND ROAD, they paused at the edge of the first strip. "Have you ever ridden a conveyor strip before?" Gaines inquired. "It's quite simple. Just remember to face against the motion of the strip as you get on."

They threaded their way through homeward-bound throngs, passing from strip to strip. Down the center of the twenty-mile-an-hour strip ran a glassite partition which reached nearly to the spreading roof. The Honorable Mister Blekinsop raised his eyebrows inquiringly as he looked at it.

"Oh, that?" Gaines answered the unspoken inquiry as he slid back a panel door and ushered his guest through.

"That's a wind break. If we didn't have some way of separating the air currents over the strips of different speeds, the wind would tear our clothes off on the hundred-mile-an-hour strip." He bent his head to Blekinsop's as he spoke, in order to cut through the rush of air against the road surfaces, the noise of the crowd, and the muted roar of the driving mechanism concealed beneath the moving strips. The combination of noises inhibited further conversation as they proceeded toward the middle of the roadway. After passing through three more wind screens located at the forty, sixty, and eighty-mile-an-hour strips respectively, they finally reached the maximum speed strip, the hundred-mile-an-hour strip, which made the round trip, San Diego to Reno and back, in twelve hours.

Blekinsop found himself on a walkway twenty feet wide facing another partition. Immediately opposite him an illuminated show window proclaimed:

JAKE'S STEAK HOUSE No. 4
The Fastest Meal on the Fastest Road!
"To dine on the fly Makes the miles roll by!!"

"Amazing!" said Mr. Blekinsop. "It would be like dining in a tram. Is this really a proper restaurant?"

"One of the best. Not fancy, but sound."

"Oh, I say, could we-"

Gaines smiled at him. "You'd like to try it, wouldn't you, sir?"

"I don't wish to interfere with your plans-"

"Quite all right. I'm hungry myself, and Stockton is a long hour away. Let's go in."

Gaines greeted the manageress as an old friend. "Hello, Mrs. McCoy. How are you tonight?"

"If it isn't the chief himself! It's a long time since we've had the pleasure of seeing your face." She led them to a booth somewhat detached from the crowd of dining commuters. "And will you and your friend be having dinner?"

"Yes, Mrs. McCoy-suppose you order for us-but be sure it includes one of your steaks."

"Two inches thick-from a steer that died happy." She glided away, moving her fat frame with surprising grace.

With sophisticated foreknowledge of the chief engineer's needs, Mrs. McCoy had left a portable telephone at the table. Gaines plugged it in to an accommodation jack at the side of the booth, and dialed a number.

"Hello-Davidson? Dave, this is the chief. I'm in Jake's beanery number four for supper. You can reach me by calling ten-six-six."

He replaced the handset, and Blekinsop inquired politely: "Is it necessary for you to be available at all times?"

"Not strictly necessary," Gaines told him, "but I feel safer when I am in touch. Either Van Kleeck, or myself, should be where the senior engineer of the watch - that's Davidson this shift - can get hold of us in a pinch. If it's a real emergency, I want to be there, naturally."

"What would constitute a real emergency?"

"Two things, principally. A power failure on the rotors would bring the road to a standstill, and possibly strand millions of people a hundred miles, or more, from their homes. If it happened during a rush hour we would have to evacuate those millions from the road-not too easy to do."

"You say millions-as many as that?"

"Yes, indeed. There are twelve million people dependent on this roadway, living and working in the buildings adjacent to it, or within five miles of each side."

The Age of Power blends into the Age of Transportation almost imperceptibly, but two events stand out as landmarks in the change: the achievement of cheap sun power and the installation of the first mechanized road.

The power resources of oil and coal of the United States had - save for a few sporadic outbreaks of common sense - been shamefully wasted in their development all through the first half of the twentieth century. Simultaneously, the automobile, from its humble start as a one-lunged horseless carriage, grew into a steel-bodied monster of over a hundred horsepower and capable of making more than a hundred miles an hour. They boiled over the countryside, like yeast in ferment. In 1955 it was estimated that there was a motor vehicle for every two persons in the United States.

They contained the seeds of their own destruction. Eighty million steel juggernauts, operated by imperfect human beings at high speeds, are more destructive than war. In the same reference year the premiums paid for compulsory liability and property damage insurance by automobile owners exceeded in amount the sum paid that year to purchase automobiles. Safe driving campaigns were chronic phenomena, but were mere pious attempts to put Humpty-Dumpty together again. It was not physically

possible to drive safely in those crowded metropolises. Pedestrians were sardonically divided into two classes, the quick, and the dead.

But a pedestrian could be defined as a man who had found a place to park his car. The automobile made possible huge cities, then choked those same cities to death with their numbers. In 1900 Herbert George Wells pointed out that the saturation point in the size of a city might be mathematically predicted in terms of its transportation facilities. From a standpoint of speed alone the automobile made possible cities two hundred miles in diameter, but traffic congestion, and the inescapable, inherent danger of high-powered, individually operated vehicles cancelled out the possibility.

In 1955 Federal Highway #66 from Los Angeles to Chicago, "The Main Street of America", was transformed into a superhighway for motor vehicles, with an underspeed limit of sixty miles per hour. It was planned as a public works project to stimulate heavy industry; it had an unexpected by-product. The great cities of Chicago and St. Louis stretched out urban pseudopods toward each other, until they met near Bloomington, Illinois. The two parent cities actually shrunk in population.

That same year the city of San Francisco replaced its antiquated cable cars with moving stairways, powered with the Douglas-Martin Solar Reception Screens. The largest number of automobile licenses in history had been issued that calendar year, but the end of the automobile era was in sight, and the National Defense Act of 1957 gave fair warning.

This act, one of the most bitterly debated ever to be brought out of committee, declared petroleum to be an essential and limited material of war. The armed forces had first call on all oil, above or below the ground, and eighty million civilian vehicles faced short and expensive rations. The "temporary" conditions during World War II had become permanent.

Take the superhighways of the period, urban throughout their length. Add the mechanized streets of San Francisco's hills. Heat to boiling point with an imminent shortage of gasoline. Flavor with Yankee ingenuity. The first mechanized road was opened in 1960 between Cincinnati and Cleveland.

It was, as one would expect, comparatively primitive in design, being based on the ore belt conveyors of ten years earlier. The fastest strip moved only thirty miles per hour and was quite narrow, for no one had thought of the possibility of locating retail trade on the strips themselves. Nevertheless, it was a prototype of social pattern which was to dominate the American scene within the next two decades-neither rural, nor urban, but partaking equally of both, and based on rapid, safe, cheap, convenient transportation.

Factories - wide, low buildings whose roofs were covered with solar power screens of the same type that drove the road-lined the roadway on each side. Back of them and interspersed among them were commercial hotels, retail stores, theatres, apartment houses. Beyond this long, thin, narrow strip was the open country-side, where the bulk of the population lived. Their homes dotted the hills, hung on the banks of creeks, and nestled between the farms. They worked in the "city" but lived in the "country" - and the two were not ten minutes apart.

Mrs. McCoy served the chief and his guest in person. They checked their conversation at the sight of the magnificent steaks.

Up and down the six hundred mile line, Sector Engineers of the Watch were getting in their hourly reports from their subsector technicians. "Subsector one-check!" "Subsector two-check!" Tensionometer readings, voltage, load, bearing temperatures, synchrotachometer readings-"Subsector seven-check!" Hard-bitten, able men in dungarees, who lived much of their lives 'down inside' amidst the unmuted roar of the hundred mile strip, the shrill whine of driving rotors, and the complaint of the relay rollers.

Davidson studied the moving model of the road, spread out before him in the main control room at Fresno Sector. He watched the barely perceptible crawl of the miniature hundred mile strip and subconsciously noted the reference number on it which located Jake's Steak House No. 4. The chief would be getting in to Stockton soon; he'd give him a ring after the hourly reports were in. Everything was quiet; traffic tonnage normal for rush hour; he would be sleepy before this watch was over. He turned to his Cadet Engineer of the Watch. "Mr. Barnes."

"Yes, sir."

"I think we could use some coffee."

"Good idea, sir. I'll order some as soon as the hourlies are in."

The minute hand of the control board chronometer reached twelve. The cadet watch officer threw a switch. "All sectors, report!" he said, in crisp, self-conscious tones.

The faces of two men flicked into view on the visor Screen. The younger answered him with the same air of acting under supervision. "Diego Circle - rolling!"

They were at once replaced by two more. Angeles Sector - rolling!"

Then: "Bakersfield Sector - rolling!"

And: "Fresno Sector - rolling!".

Finally, when Reno Circle had reported, the cadet turned to Davidson and reported: "Rolling, sir."

"Very well-keep them rolling!"

The visor screen flashed on once more. "Sacramento Sector, supplementary report."

"Proceed."

"Cadet Guenther, while on visual inspection as cadet sector engineer of the watch, found Cadet Alec Jeans, on watch as cadet subsector technician, and R. J. Ross, technician second class, on watch as technician for the same subsector, engaged in playing cards. It was not possible to tell with any accuracy how long they had neglected to patrol their subsector."

"Any damage?"

"One rotor running hot, but still synchronized. It was jacked down, and replaced."

"Very well. Have the paymaster give Ross his time, and turn him over to the civil authorities. Place Cadet Jeans under arrest and order him to report to me."

"Very well, sir."

"Keep them rolling!"

Davidson turned back to the control desk and dialed Chief Engineer Gaines' temporary number.

"You mentioned that there were two things that could cause major trouble on the road, Mr. Gaines, but you spoke only of power failure to the rotors." Gaines pursued an elusive bit of salad before answering. "There really isn't a second major trouble-it won't happen. However - we are travelling along here at one hundred miles per hour. Can you visualize what would happen if this strip under us should break?"

Mr. Blekinsop shifted nervously in his chair. "Hmm - rather a disconcerting idea, don't you think? I mean to say, one is hardly aware that one is travelling at high speed, here in this snug room. What would the result be?"

"Don't let it worry you; the strip can't part. It is built up of overlapping sections in such a fashion that it has a safety factor of better than twelve to one. Several miles of rotors would have to shut down all at once, and the circuit breakers for the rest of the line fail to trip out before there could possibly be sufficient tension on the strip to cause it to part.

"But it happened once, on the Philadelphia-Jersey City Road, and we aren't likely to forget it. It was one of the earliest high speed roads, carrying a tremendous passenger traffic, as well as heavy freight, since it serviced a heavily industrialized area. The strip was hardly more than a conveyor belt, and no one had foreseen the weight it would carry. It happened under maximum load, naturally, when the high speed way was crowded. The part of the strip behind the break buckled for miles, crushing passengers against the roof at eighty miles per hour. The section forward of the break cracked like a whip, spilling passengers onto the slower ways, dropping them on the exposed rollers and rotors down inside, and snapping them up against the roof.

"Over three thousand people were killed in that one accident, and there was much agitation to abolish the roads. They were even shut down for a week by presidential order, but he was forced to reopen them again. There was no alternative."

"Really? Why not?"

"The country bad become economically dependent on the roads. They were the principal means of transportation in the industrial areas-the only means of economic importance. Factories were shut down; food didn't move; people got hungry-and the President was forced to let them roll again. It was the only thing that could be done; the social pattern had crystallized in one form, and it couldn't be changed overnight. A large, industrialized population must have large-scale transportation, not only for people, but for trade."

Mr. Blekinsop fussed with his napkin, and rather diffidently suggested, "Mr., Gaines, I do not intend to disparage the ingenious accomplishments of your great people, but isn't it possible that you may have put too many eggs in one basket in allowing your whole economy to become dependent on the functioning of one type of machinery?"

Gaines considered this soberly. "I see your point. Yes-and no. Every civilization above the peasant and village type is dependent on some key type of machinery. The old South was based on the cotton gin. Imperial England was made possible by the steam engine. Large populations have to have machines for power, for transportation, and for manufacturing in order to live. Had it not been for machinery the large populations could never have grown up. That's not a fault of the machine; that's its virtue.

"But it is true that whenever we develop machinery to the point where it will support large populations at a high standard of living we are then bound to keep that machinery running, or suffer the consequences. But the real hazard in that is not the

machinery, but the men who run the machinery. These roads, as machines, are all right. They are strong and safe and will do everything they were designed to do. No, it's not the machines, it's the men.

"When a population is dependent on a machine, they are hostages of the men who tend the machines. If their morale is high, their sense of duty strong-"

Someone up near the front of the restaurant had turned up the volume control of the radio, letting out a blast of music that drowned out Gaines' words. When the sound had been tapered down to a more nearly bearable volume, he was saying:

"Listen to that. It illustrates my point."

Blekinsop turned an ear to the music. It was a swinging march of compelling rhythm, with a modern interpretive arrangement. One could hear the roar of machinery, the repetitive clatter of mechanisms. A pleased smile of recognition spread over the Australian's face. "It's your Field Artillery Song, The Roll of the Caissons, isn't-it? But I don't see the connection."

"You're right; it was the Roll of the Caissons, but we adapted it to our own purposes. It's the Road Song of the Transport Cadets. Wait."

The persistent throb of the march continued, and seemed to blend with the vibration of the roadway underneath into a single tympani. Then a male chorus took up the verse:

"Hear them hum!
Watch them run!
Oh, our job is never done,
For our roadways go rolling along!
While you ride;
While you glide;
We are watching 'down inside',
So your roadways keep rolling along!

"Oh, it's Hie! Hie! Hee!
The rotor men are we-
Check off the sectors loud and strong!
(spoken) One! Two! Three!
Anywhere you go
You are bound to know
That your roadways are rolling along!
(Shouted) KEEP THEM ROLLING!
That your roadways are rolling along!"

"See said Gaines, with more animation in his voice, "See? That is the real purpose of the United States Academy of Transport. That is the reason why the transport engineers are a semi-military profession, with strict discipline. We are the bottle neck, the sine qua non, of all industry, all economic life. Other industries can go on strike, and only create temporary and partial dislocations. Crops can fail here and there, and the country takes up the slack. But if the roads stop rolling, everything else must stop; the effect would be the same as a general strike-with this important difference: It takes a majority of the

population, fired by a real feeling of grievance, to create a general strike; but the men that run the roads, few as they are, can create the same complete paralysis.

"We had just one strike on the roads, back in 'sixty-six. It was justified, I think, and it corrected a lot of real, abuses-but it mustn't happen again."

"But what is to prevent it happening again, Mr. Gaines?"

"Morale-esprit de corps. The technicians in the road service are indoctrinated constantly with the idea that their job is a sacred trust. Besides which we do everything we can to build up their social position. But even more important is the Academy. We try to turn out graduate engineers imbued with the same loyalty, the same iron self-discipline, and determination to perform their duty to the community at any cost, that Annapolis and West Point and Goddard are so successful in inculcating in their graduates."

"Goddard? Oh, yes, the rocket field. And have you been successful, do you think?"

"Not entirely, perhaps, but we will be. It takes time to build up a tradition. When the oldest engineer is a man who entered the Academy in his teens, we can afford to relax a little and treat it as a solved problem."

"I suppose you are a graduate?"

Gaines grinned. "You flatter me-I must look younger than I am. No, I'm a carry-over from the army. You see, the Department of Defense operated the roads for some three months during reorganization after the strike in 'sixty-six. I served on the conciliation board that awarded pay increases and adjusted working conditions, then I was assigned-"

The signal light of the portable telephone glowed red. Gaines said, "Excuse me," and picked up the handset.'

"Yes?"

Blekinsop could overhear the voice at the other end. "This is Davidson, Chief. The roads are rolling."

"Very well. Keep them rolling!"

"Had another trouble report from the Sacramento Sector."

"Again? What this time?"

Before Davidson could reply he was cut off. As Gaines reached out to dial him back, his coffee cup, half full, landed in his lap. Blekinsop was aware, even as he was rocked against the edge of the table, of a disquieting change in the hum of the roadway.

"What has happened, Mr. Gaines?"

"Don't know. Emergency stop-God knows why." He was dialing furiously. Shortly he flung the phone down, without bothering to return the handset to its cradle. "Phones are out. Come on! No- You'll be safe here. Wait."

"Must I?"

"Well, come along then, and stick close to me." He turned away, having dismissed the Australian cabinet minister from his mind. The strip ground slowly to a stop, the giant rotors and myriad rollers acting as fly wheels in preventing a disastrous sudden stop. Already a little knot of commuters, disturbed at their evening meal, were attempting to crowd out the door of the restaurant.

"Halt!"

There is something about a command issued by one who is used to being obeyed which enforces compliance. It may be intonation, or possibly a more esoteric power, such as animal tamers are reputed to be able to exercise in controlling ferocious beasts. But it does exist, and can be used to compel even those not habituated to obedience.

The commuters stopped in their tracks.

Gaines continued, "Remain in the restaurant until we are ready to evacuate you. I am the Chief Engineer. You will be in no danger here. You!" He pointed to a big fellow near the door. "You're deputized. Don't let anyone leave without proper authority. Mrs. McCoy, resume serving dinner."

Gaines strode out the door, Blekinsop tagging along. The situation outside permitted no such simple measures.

The hundred mile strip alone had stopped; a few feet away the next strip flew by at an unchecked ninety-five miles an hour. The passengers on it flickered past, unreal cardboard figures.

The twenty-foot walkway of the maximum speed strip had been crowded when the breakdown occurred. Now the customers of shops, of lunchstands, and of other places of business, the occupants of lounges, of television theatres-all came crowding out onto the walkway to see what had happened. The first disaster struck almost immediately.

The crowd surged, and pushed against a middle-aged woman on its outer edge. In attempting to recover her balance she put one foot over the edge of the flashing ninety-five mile strip. She realized her gruesome error, for she screamed before her foot touched the ribbon.

She spun around, and landed heavily on the moving strip, and was rolled by it, as the strip attempted to impart to her mass, at one blow, a velocity of ninety-five miles per hour-one hundred and thirty-nine feet per second: As she rolled she mowed down some of the cardboard figures as a sickle strikes a stand of grass. Quickly, she was out of sight, her identity, her injuries, and her fate undetermined, and already remote.

But the consequences of her mishap were not done with. One of the flickering cardboard figures bowled over by her relative momentum fell toward the hundred mile strip, slammed into the shockbound crowd, and suddenly appeared as a live man-but broken and bleeding, amidst the luckless, fallen victims whose bodies had checked his wild flight.

Even there it did not end. The disaster spread from its source, each hapless human ninepin more likely than not to knock down others so that they fell over the danger-laden boundary, and in turn ricocheted to a dearly bought equilibrium.

But the focus of calamity sped out of sight, and Blekinsop could see no more. His active mind, accustomed to dealing with large' numbers of individual human beings, multiplied the tragic sequence he had witnessed by twelve hundred miles of thronged conveyor strip, and his stomach chilled.

To Blekinsop's surprise, Gaines made no effort to succor the fallen, nor to quell the fear-infected mob, but turned an expressionless face back to the restaurant. When Blekinsop saw that he was actually re-entering the restaurant, he plucked at his sleeve. "Aren't we going to help those poor people?"

The cold planes of the face of the man who answered him bore no resemblance to his genial, rather boyish, host of a few minutes before. "No. Bystanders can help them - I've got the whole road to think of. Don't bother me."

Crushed, and somewhat indignant, the politician did as he was ordered. Rationally, he knew that the Chief Engineer was right-a man responsible for the safety of millions cannot turn aside from his duty to render personal service to one-but the cold detachment of such viewpoint was repugnant to him.

Gaines was back in the restaurant "Mrs. McCoy, where is your get-away?"

"In the pantry, sir."

Gaines hurried there, Blekinsop at his heels. A nervous Filipino salad boy shrank out of his way as he casually swept a supply of prepared green stuffs onto the floor and stepped up on the counter where they had rested. Directly above his head and within reach was a circular manhole, counterweighted and operated by a handwheel set in its center. A short steel ladder, hinged to the edge of the opening was swung up flat to ceiling and secured by a hook.

Blekinsop lost his hat in his endeavor to clamber quickly enough up the ladder after Gaines. When he emerged on the roof of the building. Gaines was searching the ceiling of the roadway with a pocket flashlight He was shuffling along, stooped double in the awkward four feet of space between the roof underfoot and ceiling.

He found what he sought, some fifty feet away-another manhole similar to the one they had used to escape from below. He spun the wheel of the lock and stood up in the space, then rested his hands on the sides of the opening and with a single. lithe movement vaulted to the roof of the roadways. His companion followed him with more difficulty.

They stood in darkness, a fine, cold rain feeling at their faces. But underfoot, and stretching beyond sight on each hand, the sun power screens glowed with a faint opalescent radiance, their slight percentage of inefficiency as transformers of radiant sun power to available electrical power being evidenced as a mild phosphorescence. The effect was not illumination, but rather like the ghostly sheen of a snow covered plain seen by starlight.

The glow picked out the path they must follow to reach the rain-obscured wall of buildings bordering the ways. The path was a narrow black stripe which arched away into the darkness over the low curve of the roof. They started away on this path at a dog trot, making as much speed as the slippery footing and the dark permitted, while Blekinsop's mind still fretted at the problem of Gaines' apparently callous detachment. Although possessed of a keen intelligence his nature was dominated by a warm, human sympathy, without which no politician, irrespective of other virtues or shortcomings, is long successful.

Because of this trait he distrusted instinctively any mind which was guided by logic alone. He was aware that, from a standpoint of strict logic, no reasonable case could be made out for the continued existence of the human race, still less for the human values he served.

Had he been able to pierce the preoccupation of his companion, he would have been reassured. On the surface Gaines' exceptionally intelligent mind was clicking along with the facile ease of an electronic integrator-arranging data at hand, making tentative decisions, postponing judgments without prejudice until necessary data were available, exploring alternatives. Underneath, in a compartment insulated by stern self-discipline

from the acting theatre of his mind, his emotions were a torturing storm of self-reproach. He was heartsick at suffering he had seen, and which he knew too well was duplicated up and down the line. Although he was not aware of any personal omission, nevertheless, the fault was somehow his, for authority creates responsibility.

He had carried too long the superhuman burden of kingship - which no sane mind can carry light-heartedly - and was at this moment perilously close to the frame of mind which sends captains down with their ships. Only the need for immediate, constructive action sustained him.

But no trace of this conflict reached his features.

At the wall of buildings glowed a green line of arrows, pointing to the left. Over them, at the terminus of the narrow path, shone a sign: "ACCESS DOWN." They pursued this, Blekinsop puffing in Gaines' wake, to a door let in the wall, which gave in to a narrow stairway lighted by a single glowtube. Gaines plunged down this, still followed, and they emerged on the crowded, noisy, stationary walkway adjoining the northbound road.

Immediately adjacent to the stairway, on the right, was a public tele-booth. Through the glassite door they could see a portly, well-dressed man speaking earnestly to his female equivalent, mirrored in the visor screen. Three other citizens were waiting outside the booth.

Gaines pushed past them, flung open the door, grasped the bewildered and indignant man by the shoulders, and hustled him outside, kicking the door closed after him. He cleared the visor screen with one sweep of his hand, before the matron pictured therein could protest, and pressed the emergency-priority button.

He dialed his private code number, and was shortly looking into the troubled face of his Engineer of the Watch, Davidson.

"Report!"

"It's you, Chief! Thank God! Where are you?" Davidson's' relief was pathetic.

"Report!"

The Senior Watch Officer repressed his emotion and complied in direct, clipped phrases, "At seven-oh-nine p.m. the consolidated tension reading, strip twenty, Sacramento Sector, climbed suddenly. Before action could be taken, tension on strip twenty passed emergency level; the interlocks acted, and power to subject strip cut out. Cause of failure, unknown. Direct communication to Sacramento control office has failed. They do not answer the auxiliary, nor the commercial line. Effort to re-establish communication continues. Messenger dispatched from Stockton Subsector Ten.

"No casualties reported. Warning broadcast by public announcement circuit to keep clear of strip nineteen. Evacuation has commenced."

"There are casualties," Gaines cut in. "Police and hospital emergency routine. Move!"

"Yes, sir!" Davidson snapped back, and hooked a thumb over his shoulder-but his Cadet Officer of the Watch had already jumped to comply. "Shall I cut out the rest of the road, Chief?"

"No. No more casualties are likely after the first disorder. Keep up the broadcast warnings. Keep, those other strips rolling, or we will have a traffic jam the devil himself couldn't untangle." - Gaines had in mind the impossibility of bringing the strips up to speed under load. The rotors were not powerful enough to do this. If the entire road was

stopped, he would have to evacuate every strip, correct the trouble on strip twenty, bring all strips up to speed, and then move the accumulated peak load traffic. In the meantime, over five million stranded passengers would, constitute a tremendous police problem. It was simpler to evacuate passengers on strip twenty over the roof, and allow them to return home via the remaining strips. "Notify the Mayor and the Governor that I have assumed emergency authority. Same to the Chief of Police and place him under your orders. Tell the Commandant to arm all cadets available and await orders. Move!"

"Yes, sir. Shall I recall technicians off watch?"

"No. This isn't an engineering failure. Take a look at your readings; that entire sector went out simultaneously. Somebody cut out those rotors by hand. Place offwatch technicians on standby status-but don't arm them, and don't send them down inside. Tell the Commandant to rush all available senior-class cadets to Stockton Subsector Office number ten to report in. I want them equipped with tumblebugs, pistols, and sleepy bombs."

"Yes, sir." A clerk leaned over Davidson's shoulder and said something in his ear. "The Governor wants to talk to you, Chief."

"Can't do it-nor can you. Who's your relief? Have you sent for him?"

"Hubbard-he's just come in."

"Have him talk to the Governor, the Mayor, the press - anybody that calls - even the White House. You stick to your watch. I'm cutting off. I'll be back in communication as quickly as I can locate a reconnaissance car." He was out of the booth almost before the screen cleared.

Blekinsop did not venture to speak, but followed him out to the northbound twenty-mile strip. There Gaines stopped, short of the wind break, turned, and kept his eyes on the wall beyond the stationary walkway. He picked out some landmark, or sign - not apparent to his companion - and did an Eliza-crossing-the-ice back to the walkway, so rapidly that Blekinsop was carried some hundred feet beyond him, and almost failed to follow when Gaines ducked into a doorway and ran down a flight of stairs.

They came out on a narrow lower walkway, 'down inside'. The pervading din claimed them, beat upon their bodies as well as their ears. Dimly, Blekinsop perceived their surroundings, as he struggled to face that wall of sound. Facing him, illuminated by the yellow monochrome of a sodium arc, was one of the rotors that drove the five-mile strip, its great, drum-shaped armature revolving slowly around the stationary field coils in its core. The upper surface of the drum pressed against the under side of the moving way and imparted to it its stately progress.

To the left and right, a hundred yards each way, and beyond at similar intervals, farther than he could see, were other rotors. Bridging the gaps between the rotors were the slender rollers, crowded together like cigars in a box, in order that the strip might have a continuous rolling support. The rollers were supported by steel girder arches through the gaps of which he saw row after row of rotors in staggered succession, the rotors in each succeeding row turning over more rapidly than the last.

Separated from the narrow walkway by a line of supporting steel pillars, and lying parallel to it on the side away from the rotors, ran a shallow paved causeway, joined to the walk at this point by a ramp. Gaines peered up and down this tunnel in evident annoyance. Blekinsop started to ask him what troubled him, but found his voice snuffed

out by the sound: He could not cut through the roar of thousands of rotors and the whine of hundreds of thousands of rollers.

Gaines saw his lips move and guessed at the question.'

He cupped his hands around Blekinsop's right ear, and shouted, "No car - I expected to find a car here."

The Australian, wishing to be helpful, grasped Gaines' arm and pointed back into the jungle of machinery.

Gaines' eye followed the direction indicated and picked out something that he had missed in his preoccupation - a half dozen men working around a rotor several strips away. They had jacked down a rotor until it was no longer in contact with the road surface and were preparing to replace it in toto. The replacement rotor was standing by on a low, heavy truck.

The Chief Engineer gave a quick smile of acknowledgment and thanks and aimed his flashlight at the group, the beam focused down to a slender, intense needle of light.

One of the technicians looked up, and Gaines snapped the light on and off in a repeated, irregular pattern. A figure detached itself from the group, and ran toward them.

It was a slender young man, dressed in dungarees and topped off with earpads and an incongruous, pillbox cap, bright with gold braid and Insignia. He recognized the Chief Engineer and saluted, his face falling into humorless, boyish intentness.

Gaines stuffed his torch into a pocket and commenced to gesticulate rapidly with both hands-clear, clean gestures, as involved and as meaningful as deaf-mute language. Blekinsop dug into his own dilettante knowledge of anthropology and decided that it was most like American Indian sign language, with some of the finger movements of hula. But it was necessarily almost entirely strange, being adapted for a particular terminology.

The cadet answered him in kind, stepped to the edge of the causeway, and flashed his torch to the south. He picked out a car, still some distance away, but approaching at headlong speed. It braked, and came to a stop alongside them.

It was a small affair, ovoid in shape, and poised on two centerline wheels. The forward, upper surface swung up and disclosed the driver, another cadet. Gaines addressed him briefly in sign language, then hustled Blekinsop ahead of him into the cramped passenger compartment.

As the glassite hood was being swung back into place, a blast of wind smote them, and the Australian looked up in time to glimpse the last of three much larger vehicles hurtle past them. They were headed north, at a speed of not less than two hundred miles per hour. Blekinsop thought that he had made out the little hats of cadets through the windows of the last of the three, but he could not be sure.

He had no time to wonder - so violent was the driver's getaway. Gaines ignored the accelerating surge; he was already calling Davidson on the built-in communicator. Comparative silence had settled down once the car was closed. The face of a female operator at the relay station showed on the screen.

"Get me Davidson-Senior Watch Office!"

"Oh! It's Mr. Gaines! The Mayor wants to talk to you, Mr. Gaines."

"Refer him-and get me Davidson. Move!"

"Yes, sir!"

"And see here-leave this circuit hooked in to Davidson's board until I tell you personally to cut it."

"Right." Her face gave way to the Watch Officer's.

"That you, Chief? We're moving-progress O.K.-no change."

"Very well You'll be able to raise me on this circuit, or at Subsector Ten office. Clearing now." Davidson's face gave way to the relay operator.

"Your wife is calling, Mr. Gaines. Will you take it?"

Gaines muttered something not quite gallant, and answered, "Yes."

Mrs. Gaines flashed into facsimile. He burst into speech before she could open her mouth. "Darling I'm all right don't worry I'll be home when I get there I've go to go now." It was all out in one breath, and he slapped the control that cleared the screen.

They slammed to a breath-taking stop alongside the stair leading to the watch office of Subsector Ten, and piled out. Three big lorries were drawn up on the ramp, and three platoons of cadets were ranged in restless ranks alongside them.

A cadet trotted up to Gaines, and saluted. "Lindsay, sir-Cadet Engineer of the Watch. The Engineer of the Watch requests that you come at once to the control room."

The Engineer of the Watch looked up as they came in. "Chief-Van Kleeck is calling you."

"Put him on."

When Van Kleeck appeared in the big visor, Gaines greeted him with, "Hello, Van. Where are you?"

"Sacramento Office. Now, listen-"

"Sacramento? That's good! Report."

Van Kleeck looked disgruntled. "Report, hell! I'm not your deputy any more, Gaines. Now, you-"

"What the hell are you talking about?"

"Listen, and don't interrupt me, and you'll find out. You're through, Gaines. I've been picked as Director of the Provisional Central Committee for the New Order."

"Van, have you gone off your rocker? What do you mean-the New Order?"

"You'll find out. This is it-the functionalist revolution. We're in; you're out. We stopped strip twenty just to give you a little taste of what we can do."

Concerning Function: A Treatise on the Natural Order in Society, the bible of the functionalist movement, was first published in 1930. It claimed to be a scientifically accurate theory of social relations. The author, Paul Decker, disclaimed the "outworn and futile" ideas of democracy and human equality, and substituted a system in which human beings were evaluated "functionally" - that is to say, by the role each filled in the economic sequence. The underlying thesis was that it was right and proper for a man to exercise over his fellows whatever power was inherent in his function, and that any other form of social organization was silly, visionary, and contrary to the "natural order."

The complete interdependence of modern economic life seems to have escaped him entirely.

His ideas were dressed up with a glib mechanistic psendopsychology based on the observed orders of precedence among barnyard fowls, and on the famous Pavlov conditioned-reflex experiments on dogs. He failed to note that human beings are neither dogs, nor chickens. Old Doctor Pavlov ignored him entirely, as he had ignored so many others who had, blindly and unscientifically dogmatized about the meaning of his important, but strictly limited, experiments.

Functionalism did not take hold at once-during the thirties almost everyone, from truckdriver to hatcheck girl, had a scheme for setting the world right in six easy lessons; and a surprising percentage managed to get their schemes published. But it gradually spread. Functionalism was particularly popular among little people everywhere who could persuade themselves that their particular jobs were the indispensable ones, and that, therefore, under the "natural order" they would be top dog. With so many different functions actually indispensable such self-persuasion was easy.

Gaines stared at Van Kleeck for a moment before replying. "Van," he said slowly, "you don't really think you can get away with this, do you?"

The little man puffed out his chest. "Why not? We have gotten away with it. You can't start strip twenty until I am ready to let you, and I can stop the whole road, if necessary."

Gaines was becoming uncomfortably aware that he was dealing with unreasonable conceit, and held himself patiently in check. "Sure you can, Van-but how about the rest of the country? Do you think the United States Army will sit quietly by and let you run California as your private kingdom?"

Van Kleeck looked sly. "I've planned for that. I've just finished broadcasting a manifesto to all the road technicians in the country, telling them what we have done, and telling them to arise, and claim their rights. With every road in the country stopped, and people getting hungry, I reckon the President will think twice before sending the army to tangle with us. Oh, he could send a force to capture, or kill me - I'm not afraid to die! - but he doesn't dare start shooting down road technicians as a class, because the country can't get along without us - consequently, he'll have to get along with us - on our terms!"

There was much bitter truth in what he said. If an uprising of the road technicians became general, the government could no more attempt to settle it by force than a man could afford to cure a headache by blowing out his brains. But was the uprising general?

"Why do you think that the technicians in the rest of the country will follow your lead?"

"Why not? It's the natural order of things. This is an age of machinery; the real power everywhere is in the technicians, but they have been kidded into not using their power with a lot of obsolete catch-phrases. And of all the classes of technicians, the most important, the absolutely essential, are the road technicians. From now on they run the show - it's the natural order of things!" He turned away for a moment, and fussed with some papers on the desk before him, then be added, "That's all for now, Gaines - I've got to call the White House, and let the President know how things stand. You carry on, and behave yourself, and you won't get hurt."

Gaines sat quite still for some minutes after the screen cleared. So that's how it was. He wondered what effect, if any, Van Kleeck's invitation to strike had had on road technicians elsewhere. None, he thought - but then he had not dreamed that it could happen among his own technicians. Perhaps he had made a mistake in refusing. to take time to talk to anyone outside the road. No - if he had stopped to talk to the Governor, or the newspapermen, he would still be talking. Still - He dialed Davidson.

"Any trouble in any other sectors, Dave?"

"No, Chief."

"Or on any other road?"

"None reported."

"Did you hear my talk with Van Kleeck?"

"I was cut in-yes."

"Good. Have Hubbard call the President and the Governor, and tell them that I am strongly opposed to the use of military force as long as the outbreak is limited to this road. Tell them that I will not be responsible if they move in before I ask for help."

Davidson looked dubious. "Do you think that is wise, Chief?"

"I do! If we try to blast Van and his red-hots out of their position, we may set off a real, country-wide uprising. Furthermore, he could wreck the road so that God himself couldn't put it back together. What's your rolling tonnage now?"

"Fifty-three percent under evening peak."

"How about strip twenty?"

"Almost evacuated."

"Good. Get the road clear of all traffic as fast as possible. Better have the Chief of Police place a guard on all entrances to the road to keep out new traffic. Van may stop all strips at any time - or I may need to, myself. Here is my plan: I'm going 'down inside' with these armed cadets. We will work north, overcoming any resistance we meet. You arrange for watch technicians and maintenance crews to follow immediately behind us. Each rotor, as they come to it, is to be cut out, then hooked in to the Stockton control board. It will be a haywire rig, with no safety interlocks, so use enough watch technicians to be able to catch trouble before it happens.

"If this scheme works, we can move control of the Sacramento Sector right out from under Van's feet, and he can stay in this Sacramento control office until he gets hungry enough to be reasonable."

He cut off and turned to the Subsector Engineer of the Watch. "Edmunds, give me a helmet - and a pistol."

"Yes, sir." He opened a drawer, and handed his chief a slender, deadly looking weapon. Gaines belted it on, and accepted a helmet, into which he crammed his head, leaving the anti-noise ear flaps up. Blekinsop cleared his throat.

"May - uh - may I have one of those helmets?" he inquired.

"What?" Gaines focused his attention. "Oh - You won't need one, Mr. Blekinsop. I want you to remain right here until you hear from me."

"But-" The Australian statesman started to speak, thought better of it, and subsided.

From the doorway the Cadet Engineer of the Watch demanded the Chief Engineer's attention. "Mr. Gaines, there is a technician out here who insists on seeing you - a man named Harvey."

"Can't do it."

"He's from the Sacramento Sector, sir."

"Oh! Send him in."

Harvey quickly advised Gaines of what he had seen and heard at the guild meeting that afternoon. "I got disgusted and left while they were still jawin', Chief. I didn't think any more about it until twenty stopped rolling. Then I heard that the trouble was in Sacramento Sector, and decided to look you up."

"How long has this been building up?"

"Quite some time, I guess. You know how it is - there are a few soreheads everywhere and a lot of them are functionalists. But you can't refuse to work with a man just because he holds different political views. It's a free country."

"You should have come to me before, Harvey." Harvey looked stubborn. Gaines studied his face. "No, I guess you are right. It's my business to keep tab on your mates, not yours. As you say, it's a free country. Anything else?"

"Well - now that it has come to this, I thought maybe I could help you pick out the ringleaders."

"Thanks. You stick with me. We're going 'down inside' and try to clear up this mess."

The office door opened suddenly, and a technician and a cadet appeared, lugging a burden between them. They deposited it on the floor, and waited.

It was a young man, quite evidently dead. The front of his dungaree jacket was soggy with blood. Gaines looked at the watch officer. "Who is he?"

Edmunds broke his stare and answered, "Cadet Hughes-he's the messenger I sent to Sacramento when communication failed. When he didn't report, I sent Marston and Cadet Jenkins after him."

Gaines muttered something to himself, and turned away. "Come along, Harvey."

The cadets waiting below had changed in mood. Gaines noted that the boyish intentness for excitement had been replaced by something uglier. 'There was much exchange of hand signals and several appeared to be checking the loading of their pistols.

He sized them up, then signaled to the cadet leader. There was a short interchange of signals. The cadet saluted, turned to his men, gesticulated - briefly, and brought his arm down smartly. They filed upstairs and into an empty standby room, Gaines following.

Once inside, and the noise shut out, he addressed them,

"You saw Hughes brought in-how many of you want a chance to kill the louse that did it?"

Three of the cadets reacted almost at once, breaking ranks and striding forward. Gaines looked at them coldly. "Very well. You three turn in your weapons, and return to your quarters. Any of the rest of you that think this is a matter of private revenge, or, a hunting party, may join them." He permitted a short silence to endure before continuing. "Sacramento Sector has been seized by unauthorized persons. We are going to retake it - if possible, without loss of life on either side, and, if possible, without stopping the roads. The plan is to take over 'down inside', rotor by rotor, and cross-connect through Stockton, The task assignment of this group is to proceed north 'down inside', locating and overpowering all persons in your path. You will bear in mind the probability that most of the persons you will arrest are completely innocent. Consequently, you will favor the use of sleep gas bombs, and will shoot to kill only as a last resort.

"Cadet Captain, assign your men in squads of ten each, with a squad leader. Each squad is to form a skirmish line across 'down inside', mounted on tumblebugs, and will proceed north at fifteen miles per hour. Leave an interval of one hundred yards between successive waves of skirmishers. Whenever a man is sighted, the entire leading wave will converge on him, arrest him, and deliver him to a transport car and then fall in as the last wave. You will assign the transports that delivered you here to receive prisoners. Instruct the drivers to keep abreast of the second wave.

"You will assign an attack group to recapture subsector control offices, but no office is to be attacked until its subsector has been cross-connected with Stockton. Arrange liaison accordingly.

"Any questions?" He let his eyes run over the faces of the young men. When no one spoke up, he turned back to the cadet in charge. "Very well, sir. Carry out your orders!"

By the time the dispositions bad been completed, the follow-up crew of technicians had arrived, and Gaines had given the engineer in charge his instructions. The cadets "stood to horse" alongside their poised tumblebugs. The Cadet Captain looked expectantly at Gaines. He nodded, the cadet brought his arm down smartly, and the first wave mounted and moved out.

Gaines and Harvey mounted tumblebugs, and kept abreast of the Cadet Captain, some twenty-five yards behind the leading wave. It had been a long time since the Chief Engineer had ridden one of these silly-looking little vehicles, and he felt awkward. A tumblebug does not give a man dignity, since it is about the size and shape of a kitchen stool, gyro-stabilized on a single wheel. But it is perfectly adapted to patrolling the maze of machinery 'down inside', since it can go through an opening the width of a man's shoulders, is easily controlled, and will stand patiently upright, waiting, should its rider dismount.

The little reconnaissance car followed Gaines at a short interval, weaving in and out among the rotors, while the television and audio communicator inside continued as Gaines' link to his other manifold responsibilities.

The first two hundred yards of the Sacramento Sector passed without incident, then one of the skirmishers sighted a tumblebug parked by a rotor. The technician it served was checking the gauges at the rotor's base, and did not see them approach. He was unarmed and made no resistance, but seemed surprised and indignant, as well as very bewildered.

The little command group dropped back and permitted the new leading wave to overtake them.

Three miles farther along the score stood thirty-seven men arrested, none killed. Two of the cadets had received minor wounds, and had been directed to retire. Only four of the prisoners had been armed, one of these Harvey had been able to identify definitely as a ringleader. Harvey expressed a desire to attempt to parley with the outlaws, if any occasion arose. Gaines agreed tentatively. He knew of Harvey's long and honorable record as a labor leader, and was willing to try anything that offered a hope of success with a minimum of violence.

Shortly thereafter the first wave flushed another technician. He was on the far side of a rotor; they were almost on him before he was, seen. He did not attempt to resist, although he was armed, and the incident would not have been worth recording, had he not been talking into a hush-a-phone which he had plugged into the telephone jack at the base of the rotor.

Gaines reached the group as the capture was being effected. He snatched at the soft rubber mask of the phone, jerking it away from the man's mouth so violently that he could feel the bone-conduction receiver grate between the man's teeth. The prisoner spat out a piece of broken tooth and glared, but ignored attempts to question him.

Swift as Gaines had been, it was highly probable that they had lost the advantage of surprise. It was necessary to assume that the prisoner had succeeded in reporting the attack going on beneath the ways. Word was passed down the line to proceed with increased caution.

Gaines' pessimism was justified shortly. Riding toward them appeared a group of men, as yet several hundred feet away. There were at least a score, but their exact strength could not be determined, as they took advantage of the rotors for cover as they advanced. Harvey looked at Gaines, who nodded, and signaled the Cadet Captain to halt his forces.

Harvey went on ahead, unarmed, his hands held high above his head, and steering by balancing the weight of his body. The outlaw party checked its speed uncertainly, and finally stopped. Harvey approached within a couple of rods of them and stopped likewise. One of them, apparently the leader, spoke to him in sign language, to which he replied.

They were too far away and the yellow light too uncertain to follow the discussion. It continued for several minutes, then ensued a pause. The leader seemed uncertain what to do. One of his party rolled forward, returned his pistol to its holster, and conversed with the leader. The leader shook his head at the man's violent gestures.

The man renewed his argument, but met the same negative response. With a final disgusted wave of his hands, he desisted, drew his pistol, and shot at Harvey. Harvey grabbed at his middle and leaned forward. The man shot again; Harvey jerked, and slid to the ground.

The Cadet Captain beat Gaines to the draw. The killer looked up as the bullet bit him. He looked as if he were puzzled by some strange occurrence-being too freshly dead to be aware of it.

The cadets came in shooting. Although the first wave was outnumbered better than two to one, they were helped by the comparative demoralization of the enemy. The odds were nearly even after the first ragged volley. Less than thirty seconds after the first treacherous shot all of the insurgent party were dead, wounded, or under arrest. Gaines' losses were two dead (including the murder of Harvey) and two wounded.

Gaines modified his tactics to suit the changed conditions. Now that secrecy was gone, speed and striding power were of first importance. The second wave was directed to close in practically to the heels of the first. The third wave was brought up to within twenty-five yards of the second. These three waves were to ignore unarmed men, leaving them to be picked up by the fourth wave, but they were directed to shoot on sight any person carrying arms.

Gaines cautioned them to shoot to wound, rather than to kill, but he realized that his admonishment was almost impossible to obey. There would be killing. Well, he had not wanted it, but he felt that he had no choice. Any armed outlaw was a potential killer - he could not, in fairness to his own men, lay too many restrictions on them.

When the arrangements for the new marching order were completed, he signed the Cadet Captain to go ahead, and the first and second waves started off together at the top speed of which the tumblebugs were capable - not quite eighteen miles per hour. Gaines followed them.

He swerved to avoid Harvey's body, glancing involuntarily down as he did so. The face was an ugly jaundiced yellow under the sodium arc, but it was set in a death mask of rugged beauty in which the strong fibre of the dead man's character was evident.

Seeing this, Gaines did not regret so much his order to shoot, but the deep sense of loss of personal honor lay more heavily on him than before.

They passed several technicians during the next few minutes, but had no occasion to shoot. Gaines was beginning to feel somewhat hopeful of a reasonably bloodless victory, when he noticed a change in the pervading throb of machinery which penetrated even through the heavy anti-noise pads of his helmet. He lifted an ear pad in time to hear the end of a rumbling diminuendo as the rotors and rollers slowed to rest.

The road was stopped.

He shouted, "Halt your men!" to the Cadet Captain. His words echoed hollowly in the unreal silence.

The top of the reconnaissance car swung up as he turned and hurried to it. "Chief!" the cadet within called out, "relay station calling you."

The girl in the visor screen gave way to Davidson as soon as she recognized Gaines' face. "Chief," Davidson said at once, "Van Kleeck's calling you."

"Who stopped the road?"

"He did."

"Any other major change in the situation?"

"No-the road was practically empty when he stopped it."

"Good. Give me Van Kleeck."

The chief conspirator's face was livid with uncurbed anger when he identified Gaines. He burst into speech. "So! You thought I was fooling, eh? What do you think now, Mister Chief Engineer Gaines?"

Gaines fought down an impulse to tell him exactly what he thought, particularly about Van Kleeck. Everything about the short man's manner affected him like a squeaking slate pencil.

But he could not afford the luxury of speaking his mind. He strove to get just the proper tone into his voice which would soothe the other man's vanity. "I've got to admit that you've won this trick, Van - the roadway is stopped - but don't think I didn't take you seriously. I've watched your work too long to underrate you. I know you mean what you say."

Van Kleeck was pleased by the tribute, but tried not to show it. "Then why don't you get smart, and give up?" he demanded belligerently. "You can't win."

"Maybe not, Van, but you know I've got to try. Besides," he went on, "why can't I win? You said yourself that I could call on the whole United States Army."

Van Kleeck grinned triumphantly. "You see that?" He held up a pear-shaped electric push button, attached to a long cord. "If I push that, it will blow a path right straight across the ways-blow it to Kingdom Come. And just for good measure I'll take an ax, and wreck this control station before I leave."

Gaines wished wholeheartedly that he knew more about psychiatry. Well - he'd just have to do his best, and trust to horse sense to give him the right answers. "That's pretty drastic, Van, but I don't see how we can give up."

"No? You'd better have another think. If you force me to blow up the road, how about all the people that will be blown up along with it?"

Gaines thought furiously. He did not doubt that Van Kleeck would carry out his threat; his very phraseology, the childish petulance of "If you force me to do this-"

betrayed the dangerous irrationality of his mental processes. And such an explosion anywhere in the thickly populated Sacramento Sector would be likely to wreck one, or more, apartment houses, and would be certain to kill shopkeepers on the included segment of strip twenty, as well as chance bystanders. Van was absolutely right; he dare not risk the lives of bystanders who were not aware of the issue and had not consented to the hazard - even if the road never rolled again.

For that matter, he did not relish chancing major damage to the road itself-but it was the danger to innocent life that left him helpless.

A tune ran through his head-"Hear them hum; watch them run. Oh, our work is never done-" What to do? What to do? "While you ride; while you glide; we are-"

This wasn't getting anyplace.

He turned back to the screen. "Look, Van, you don't want to blow up the road unless you have to, I'm sure. Neither do I. Suppose I come up to your headquarters, and we talk this thing over. Two reasonable men ought to be able to make a settlement."

Van Kleeck was suspicious. "Is this some sort of a trick?"

"How can it be? I'll come alone, and unarmed, just as fast as my car can get there."

"How about your men?"

"They will sit where they are until I'm back. You can put out observers to make sure of it."

Van Kleeck stalled for a moment, caught between the fear of a trap, and the pleasure of having his erstwhile superior come to him to sue for terms. At last he grudgingly consented.

Gaines left his instructions and told Davidson what he intended to do. "If I'm not back within an hour, you're on your own, Dave."

"Be careful, Chief."

"I will."

He evicted the cadet driver from the reconnaissance car and ran it down the ramp into the causeway, then headed north and gave it the gun. Now he would have a chance to collect his thoughts, even at two hundred miles per hour. Suppose he pulled off this trick-there would still have to be some changes made. Two lessons stood out like sore thumbs: First, the strips must be cross-connected with safety interlocks so that adjacent strips would slow down, or stop, if a strip's speed became dangerously different from those adjacent. No repetition of what happened on twenty!

But that was elementary, a mere mechanical detail. The real failure had been in men, Well, the psychological classification tests must be improved to insure that the roads employed only conscientious, reliable men. But hell's bells - that was just exactly what the present classification tests were supposed to insure beyond question. To the best of his knowledge there had never been a failure from the improved Hunim-Wadsworth-Burton method - not until today in the Sacramento Sector. How had Van Kleeck gotten one whole sector of temperament - classified men to revolt?

It didn't make sense.

Personnel did not behave erratically without a reason. One man might be unpredictable, but in large numbers, they were as dependable as machines, or figures. They could be measured, examined, classified. His inner eye automatically pictured the

personnel office, with its rows of filing cabinets, its clerks - He'd got it! He'd got it! Van Kleeck, as Chief Deputy, was ex officio personnel officer for the entire road!

It was the only solution that covered all the facts. The personnel officer alone had the perfect opportunity to pick out all the bad apples and concentrate them in one barrel. Gaines was convinced beyond any reasonable doubt that there had been skullduggery, perhaps for years, with the temperament classification tests, and that Van Kleeck had deliberately transferred the kind of men he needed to one sector, after falsifying their records.

And that taught another lesson-tighter tests for officers, and no officer to be trusted with classification and assignment without close supervision and inspection. Even he, Gaines, should be watched in that respect. Qui custodiet ipsos custodes? Who will guard those selfsame guardians? Latin might be obsolete, but those old Romans weren't dummies.

He at last knew wherein he had failed, and he derived melancholy pleasure from the knowledge. Supervision and inspection, check and re-check, was the answer. It would be cumbersome and inefficient, but it seemed that adequate safeguards always involved some loss of efficiency.

He should not have entrusted so much authority to Van Kleeck without knowing more about him. He still should know more about him- He touched the emergency-stop button, and brought the car to a dizzying halt. "Relay station! See if you can raise my office."

Dolores' face looked out from the screen. "You're still there-good!" he told her. "I was afraid you'd gone home."

"I came back, Mr. Gaines."

"Good girl. Get me Van Kleeck's personal file jacket. I want to see his classification record."

She was back with it in exceptionally short order and read from it the symbols and percentages. He nodded repeatedly as the data checked his hunches - masked introvert-inferiority complex. It checked.

"'Comment of the Board:'" she read, "'In spite of the potential instability shown by maxima A, and D on the consolidated profile curve, the Board is convinced that this officer is, nevertheless, fitted for duty. He has an exceptionally fine record, and is especially adept in handling men. He is therefore recommended for retention and promotion."

"That's all, Dolores. Thanks."

"Yes, Mr. Gaines!"

"I'm off for a showdown. Keep your fingers crossed."

"But Mr. Gaines-" Back in Fresno, Dolores stared wide-eyed at an empty screen.

"Take me to Mr. Van Kleeck!"

The man addressed took his gun out of Gaines' ribs - reluctantly, Gaines thought - and indicated that the Chief Engineer should precede him up the stairs. Gaines climbed out of the car, and complied.

Van Kleeck had set himself up in the sector control room proper, rather than the administrative office. With him were half a dozen men, all armed.

"Good evening, Director Van Kleeck." The little man swelled visibly at Gaines' acknowledgment of his assumed rank.

"We don't go in much around here for titles," he said, with ostentatious casualness. "Just call me Van. Sit down, Gaines."

Gaines did so. It was necessary to get those other men out. He looked at them with an expression of bored amusement. "Can't you handle one unarmed man by yourself, Van? Or don't the functionalists trust each other?"

Van Kleeck's face showed his annoyance, but Gaines' smile was undaunted. Finally the smaller man picked up a pistol from his desk, and motioned toward the door. "Get out, you guys!"

"But Van-"

"Get out, I said!"

When they were alone, Van Kleeck picked up the electric push button which Gaines had seen in the visor screen, and pointed his pistol at his former chief. "O.K.," he growled, "try any funny stuff, and off it goes! What's your proposition?"

Gaines' irritating smile grew broader. Van Kleeck scowled. "What's so damn funny?" he said.

Gaines granted him an answer. "You are, Van - honest, this is rich. You start a functionalist revolution, and the only function you can think of to perform is to blow up the road that justifies your title. Tell me," he went on, "what is it you are so scared of?"

"I am not afraid!"

"Not afraid? You? Sifting there, ready to commit hara-kari with that toy push button, and you tell me that you aren't afraid. If your buddies knew how near you are to throwing away what they've fought for, they'd shoot you in a second. You're afraid of them, too, aren't you?"

Van Kleek thrust the push button away from him, and stood up; "I am not afraid!" he screamed, and came around the desk toward Gaines.

Gaines sat where he was, and laughed. "But you are! You're afraid of me, this minute. You're afraid I'll have you on the carpet for the way you do your job. You're afraid the cadets won't salute you. You're afraid they are laughing behind your back. You're afraid of using the wrong fork at dinner. You're afraid people are looking at you - and you are afraid that they won't notice you."

"I am not!" he protested. "You - You dirty, stuck-up snob! Just because you went to a high-hat school you think you're better than anybody." He choked, and became incoherent, fighting to keep back tears of rage. "You, and your nasty little cadets-"

Gaines eyed him cautiously. The weakness in the man's character was evident now - he wondered why he had not seen it before. He recalled how ungracious Van Kleeck had been one time when he had offered to help him with an intricate piece of figuring.

The problem now was to play on his weakness, to keep him so preoccupied that he would not remember the peril-laden push button. He must be caused to center the venom of his twisted outlook on Gaines, to the exclusion of every other thought.

But he must not goad him too carelessly, or a shot from across the room might put an end to Gaines, and to any chance of avoiding a bloody, wasteful struggle for control of the road.

Gaines chuckled. "Van," he said, "you are a pathetic little shrimp. That was a dead give-away. I understand you perfectly; you're a third-rater, Van, and all your life you've been afraid that someone would see through you, and send you back to the foot of the

class. Director - phiu! If you are the best the functionalists can offer, we can afford to ignore them - they'll fold up from their own rotten inefficiency." He swung around in his chair, deliberately turning his back on Van Kleeck and his gun.

Van Kleeck advanced on his tormentor, halted a few feet away, and shouted: "You - I'll show you. - I'll put a bullet in you; that's what I'll do!"

Gaines swung back around, got up, and walked steadily toward him. "Put that popgun down before you hurt yourself."

Van Kleeck retreated a step. "Don't you come near me!" he screamed. "Don't you come near me - or I'll shoot you - see if I don't!"

This is it, thought Gaines, and dived.

The pistol went off alongside his ear. Well, that one didn't get him. They were on the floor. Van Kleeck was hard to hold, for a little man. Where was the gun? There! He had it. He broke away.

Van Kleeck did not get up. He lay sprawled on the floor, tears streaming out of his closed eyes, blubbering like a frustrated child.

Gaines looked at him with something like compassion in his eyes, and hit him carefully behind the ear with the butt of the pistol. He walked over to the door, and listened for a moment, then locked it cautiously.

The cord from the push button led to the control board. He examined the hookup, and disconnected it carefully. That done, he turned to the televisor at the control desk, and called Fresno.

"Okay, Dave," he said, "Let 'em attack now - and for the love of Pete, hurry!" Then he cleared the screen, not wishing his watch officer to see how he was shaking.

Back in Fresno the next morning Gaines paced around the Main Control Room with a fair degree of contentment in his heart. The roads were rolling - before long they would be up to speed again. It had been a long night. Every engineer, every available cadet, had been needed to, make the inch-by-inch inspection of Sacramento Sector which he had required. Then they had to cross-connect around two wrecked subsector control boards. But the roads were rolling - he could feel their rhythm up through the floor.

He stopped beside a haggard, stubbly-bearded man. "Why don't you go home, Dave?" be asked. "McPherson can carry on from here."

"How about yourself, Chief? You don't look like a June bride."

"Oh, I'll catch a nap in my office after a bit. I called my wife, and told her I couldn't make it. She's coming down here to meet me."

"Was she sore?"

"Not very. You know how women are." He turned back to the instrument board, and watched the clicking 'busy-bodies' assembling the data from six sectors. San Diego Circle, Angeles Sector, Bakersfield Sector, Fresno Sector, Stockton-Stockton? Stockton! Good grief! - Blekinsop! He had left a cabinet minister of Australia cooling his heels in the Stockton office all night long!

He started for the door, while calling over his shoulder, "Dave, will you order a car for me? Make it a fast one!" He was across the hail, and had his head inside his private office before Davidson could acknowledge the order.

"Dolores!"

"Yes, Mr. Gaines."

"Call my wife, and tell her I had to go to Stockton. If she's already left home, just have her wait here. And Dolores-"

"Yes, Mr. Gaines?"

"Calm her down."

She bit her lip, but her face was impassive. "Yes, Mr. Gaines."

"That's a good girl." He was out and started down the stairway. When he reached road level, the sight of the rolling strips warmed him inside and made him feel almost cheerful.

He strode briskly away toward a door marked ACCESS DOWN, whistling softly to himself. He opened the door, and the rumbling, roaring rhythm from 'down inside' seemed to pick up the tune even as it drowned out the sound of his whistling.

"Hie! Hie! Hee!
The rotor men are we-
Check off your sectors loud and strong! One! Two! Three!
Anywhere you go
You are bound to know
That your roadways are rolling along!"

Robert A Heinlein

Blowups Happen

"PUT down that wrench!"

The man addressed turned slowly around and faced the speaker. His expression was hidden by a grotesque helmet, part of a heavy, lead-and-cadmium armor which shielded his entire body, but the tone of voice in which he answered showed nervous exasperation.

"What the hell's eating on you, doc?" He made no move to replace the tool in question.

They faced each other like two helmeted, arrayed fencers, watching for an opening. The first speaker's voice came from behind his mask a shade higher in key and more peremptory in tone. "You heard me, Harper. Put down that wrench at once, and come away from that 'trigger'. Erickson!"

A third armored figure came from the far end of the control room. "What 'cha want, doe?"

"Harper is relieved from watch. You take over as engineer-of-the-watch. Send for the standby engineer."

"Very well." His voice and manner were phlegmatic, as he accepted the situation without comment. The atomic engineer whom he had just relieved glanced from one to the other, then carefully replaced the wrench in its rack.

"Just as you say, Doctor Silard, but send for your relief, too. I shall demand an immediate hearing!" Harper swept indignantly out, his lead-sheathed boots clumping on the floorplates.

Doctor Silard waited unhappily for the ensuing twenty minutes until his own relief arrived. Perhaps he had been hasty. Maybe he was wrong in thinking that Harper had at last broken under the strain of tending the most dangerous machine in the world-the atomic breeder plant. But if he had made a mistake, it had to be on the safe side-slips must not happen in this business; not when a slip might result in atomic detonation of nearly ten tons of uranium-238, U-235, and plutonium.

He tried to visualize what that would mean, and failed. He had 'been told that uranium was potentially twenty million times as explosive as T.N.T. The figure was meaningless that way. He thought of the pile instead as a hundred million tons of high explosive, or as a thousand Hiroshimas. It still did not mean anything. He had once seen an A-bomb dropped, when he had been serving as a temperament analyst for the Air Forces. He could not imagine the explosion of a thousand such bombs; his. brain balked. Perhaps these atomic engineers could. Perhaps, with their greater mathematical ability and closer comprehension of what actually went on inside the nuclear fission chamber, they had some vivid glimpse of the mind-shattering horror locked up beyond that shield. If so, no wonder they tended to blow up- He sighed. Erickson looked away from the controls of the linear resonant accelerator on which he had been making some adjustment.

"What's the trouble, doc?"

"Nothing. I'm sorry I had to relieve Harper."

Silard could feel the shrewd glance of the big Scandinavian. "Not getting the jitters yourself, are you, doc? Sometimes you squirrel-sleuths blow up, too-"

"Me? I don't think so. I'm scared of that thing in there-I'd be crazy if I weren't."

"So am I," Erickson told him soberly, and went back to his work at the controls of the accelerator. The accelerator proper lay beyond another shielding barrier; its snout disappeared in the final shield between it and the pile and fed a steady stream of terrifically speeded up sub-atomic bullets to the beryllium target located within the pile itself. The tortured beryllium yielded up neutrons, which shot out in all directions through the uranium mass. Some of these neutrons struck uranium atoms squarely on their nuclei and split them in two. The fragments were new elements, barium, xenon, rubidium-depending on the portions in which each atom split. The new elements were usually unstable isotopes and broke down into a, dozen more elements by radioactive disintegration in a progressive reaction.

But these second transmutations were comparatively safe; it was the original splitting of the uranium nucleus, with the release of the awe-inspiring energy that bound it together-an incredible two hundred million electron volts-that was important-and perilous.

For, while uranium was used to breed other fuels by bombarding it with neutrons, the splitting itself gives up more neutrons which in turn may land in other uranium nuclei and split them. If conditions are favorable to a progressively increasing reaction of this sort, it may get out of hand, build up in an unmeasurable fraction of a micro-second into a complete atomic explosion-an explosion which would dwarf an atom bomb to pop-gun size; an explosion so far beyond all human experience as to be as completely incomprehensible as the idea of personal death. It could be feared, but not understood.

But a self-perpetuating sequence of nuclear splitting, just wider the level of complete explosion, was necessary to the operation of the breeder plant. To split the first

uranium nucleus by bombarding it with neutrons from the beryllium target took more power than the death of the atom gave up. In order that the breeder pile continue to operate it was imperative that each atom split by a neutron from the beryllium target should cause the splitting of many more.

It was equally imperative that this chain of reactions should always tend to dampen, to die out. It must not build up, or the uranium mass would explode within a time interval too short to be measured by any means whatsoever.

Nor would there be anyone left to measure it.

The atomic engineer on duty at the pile could control this reaction by means of the "trigger", a term the engineers used to include the linear resonant accelerator, the beryllium target, the cadmium damping rods, and adjacent controls, instrument board, and power sources. That is to say he could vary the bombardment on the beryllium target to increase or decrease the level of operation of the plant, he could change the "effective mass" of the pile with the cadmium dampers, and he could tell from his instruments that the internal reaction was dampened-or, rather, that it had been dampened the split second before. He could not possibly know what was actually happening now within the pile-subatomic speeds are too great and the time intervals too small. He was like the bird that flew backward; he could see where he had been, but never knew where he was going.

Nevertheless, it was his responsibility, and his alone, not only to maintain the pile at a high efficiency, but to see that the reaction never passed the critical point and progressed into mass explosion.

But that was impossible. He could not be sure; he could never be sure.

He could bring to the job all of the skill and learning of the finest technical education, and use it to reduce the hazard to the lowest mathematical probability, but the blind laws of chance which appear to rule in sub-atomic action might turn up a royal flush against him and defeat his most skillful play.

And each atomic engineer knew it, knew that he gambled not only with his own life, but with the lives of countless others, perhaps with the lives of every human being on the planet. Nobody knew quite what such an explosion would do. A conservative estimate assumed that, in addition to destroying the plant and its personnel completely, it would tear a chunk out of the populous and heavily traveled Los Angeles-Oklahoma Road-City a hundred miles to the north.

The official, optimistic viewpoint on which the plant had been authorized by the Atomic Energy Commission was based on mathematics which predicted that such a mass of uranium would itself be disrupted on a molar scale, and thereby limit the area of destruction, before progressive and accelerated atomic explosion could infect the entire mass.

The atomic engineers, by and large, did not place faith in the official theory. They judged theoretical mathematical prediction for what it was worth-precisely nothing, until confirmed by experiment.

But even from the official viewpoint, each atomic engineer while on watch carried not only his own life in his hands, but the lives of many others-how many, it was better not to think about. No pilot, no general, no surgeon ever carried such a daily, inescapable, ever present weight of responsibility for the lives of others as these men carried every time they went on watch, every time they touched a venire screw, or read a dial.

They were selected not alone for their intelligence and technical training, but quite as much for their characters and sense of social responsibility. Sensitive men were needed-men who could fully appreciate the importance of the charge entrusted to them; no other sort would do. But the burden of responsibility was too great to be borne indefinitely by a sensitive man.

It was, of necessity, a psychologically unstable condition. Insanity was an occupational disease.

Doctor Cummings appeared, still buckling the straps of the armor worn to guard against stray radiation. "What's up?" he asked Silard.

"I had to relieve Harper."

"So I guessed. I met him coming up. He was sore as hell-just glared at me."

"I know. He wants an immediate hearing. That's why I had to send for you."

Cummings grunted, then nodded toward the engineer, anonymous in all-enclosing armor. "Who'd I draw?"

"Erickson."

"Good enough. Squareheads can't go crazy-eh, Gus?"

Erickson looked up momentarily, and answered, "That's your problem," and returned to his work. Cummings turned back to Silard, and commented, "Psychiatrists don't seem very popular around here. O.K.-I relieve you, sir."

"Very well, sir."

Silard threaded his way through the zig-zag in the outer shield which surrounded the control room. Once outside this outer shield, he divested himself of the cumbersome armor, disposed of it in the locker room provided, and hurried to a lift. He left the lift at the tube station, underground, and looked around for an unoccupied capsule. Finding one, he strapped himself in, sealed the gasketed door, and settled the back of his head into the rest against the expected surge of acceleration.

Five minutes later he knocked at the door of the office of the general superintendent, twenty miles away.

The breeder plant proper was located in a bowl of desert hills on the Arizona plateau. Everything not necessary to the immediate operation of the plant-administrative offices, television station, and so forth-lay beyond the hills. The buildings housing these auxiliary functions were of the most durable construction technical ingenuity could devise. It was hoped that, if the tag ever came, occupants would stand approximately the chance of survival of a man going over Niagara Falls in a barrel.

Silard knocked again. He was greeted by a male secretary, Steinke. Silard recalled reading his case history. Formerly one of the most brilliant of the young engineers, he had suffered a blanking out of the ability to handle mathematical operations. A plain case of fugue, but there had been nothing that the poor devil could do about it- he had been anxious enough with his conscious mind to stay on duty. He had been rehabilitated as an office worker.

Steinke ushered him into the superintendent's private office. Harper was there before him, and returned his greeting with icy politeness. The superintendent was cordial, but Silard thought he. looked tired, as if the twenty-four-hour-a-day strain was too much for him.

"Come in, Doctor, come In. Sit down. Now. tell me about this. I'm a little' surprised. I thought Harper was one of my steadiest men."

"I don't say he isn't, sir."

"Well?"

"He may be perfectly all right, but your instructions to me are not to take any chances."

"Quite right" The superintendent gave the engineer, silent and tense in his chair, a troubled glance, then returned his attention to Silard. "Suppose you tell me about it."

Silard took a deep breath. "While on watch as psychological observer at the control station I noticed that the engineer of the watch seemed preoccupied and less responsive to stimuli than usual. During my off-watch observation of this case, over a period of the past several days, I have suspected an increasing lack of attention. For example, while playing contract bridge, he now occasionally asks for a review of the bidding which is contrary to his former behavior pattern.

"Other similar data are available. To cut it short, at 3:11 today, while on watch, I saw Harper, with no apparent reasonable purpose in mind, pick up a wrench used only for operating the valves of the water shield and approach the trigger. I relieved him of duty, and sent him out of the control room."

"Chief!" Harper calmed himself somewhat and continued, "If this witch-doctor knew a wrench from an oscillator, he'd know what I was doing. The wrench was on the wrong rack. I noticed it, and picked it up to return it to its proper place. On the way, I stopped to check the readings!"

The superintendent turned inquiringly to Doctor Shard. "That may be true- Granting that it is true," answered the psychiatrist doggedly, "my diagnosis still stands. Your behavior pattern has altered; your present actions are unpredictable, and I can't approve you for responsible work without a complete check-up."

General Superintendent King drummed on the desktop, and sighed. Then he spoke slowly to Harper, "Cal, you're a good boy, and believe me, I know how you feel. But: there is no way to avoid it-you've got to go up for the psychometricals, and accept whatever disposition the board makes of you." He paused, but Harper maintained an expressionless silence. "Tell you what, son-why don't, you take a few days' leave? Then, when you come back,' you can go up before the board, or transfer to another department away from the bomb, whichever you prefer." He looked to Shard for approval, and received a nod.

But Harper was not mollified. "No, chief," he protested. "It won't do. Can't you' see what's wrong? It's this constant supervision. Somebody always watching the back of your neck, expecting you to go crazy. A man can't even shave in private. We're jumpy about the most innocent acts, for fear some head doctor, half batty himself, will see it and decide it's a sign we're slipping-good grief, what do you expect!"

His outburst having run its course, he subsided into a flippant cynicism that did" not quite jell. "O.K.-never mind the strait jacket; I'll go quietly. You're a good Joe in spite of it, chief," he added, "and I'm glad to have worked under you. Goodbye."

King kept the pain in his eyes out of his voice. 'Wait a minute, Cal-you're not through here. Let's forget about the vacation.' I'm transferring you to the radiation laboratory. You belong in research anyhow; I'd never have spared you from it to stand watches if I hadn't been short on number-one men.

"As for the constant psychological observation, I hate it as much as you do. I don't suppose you know that they watch me about twice as hard as they watch you duty engineers."

Harper showed his surprise, but Shard nodded in sober conflation. "But we have to have this supervision. . . Do you remember Manning? No, he was before your time. We didn't have' psychological observers then. Manning was able and brilliant. Furthermore, he was always cheerful; nothing seemed to bother him.

"I was glad to have him on the pile, for he was always alert, and never seemed nervous about working with it-in fact he grew more buoyant and cheerful the longer he stood control watches. I should have known that was a very bad sign, but I didn't, and there was no observer to 'tell me so.

"His technician had to slug him one night. . . He found him dismounting the, safety interlocks on the cadmium assembly. Poor old Manning never pulled out of it- he's been violently insane ever since. After Manning cracked up, we worked out the present system of two qualified engineers and an observer for every watch. It seemed the only thing to do."

"I suppose so, chief," Harper mused, his face no longer sullen, but still unhappy. "It's a hell of a situation just the same."

"That's putting it mildly." He got up and put out his hand. "Cal, unless you're dead set on leaving us, I'll expect to see you at the radiation laboratory tomorrow. Another thing-I don't often recommend this, but it might do you good to get drunk tonight."

King had signed to Shard to remain after the young man left. Once the door was closed he turned back to the psychiatrist. "There goes another one-and one of the best. Doctor, what am I going to do?"

Silard pulled at his cheek. "I don't know," he admitted. "The hell of it is, Harper's absolutely right. It does increase the strain on them to know that they are being watched... and yet they have to be watched. Your psychiatric staff isn't doing too well, either. It makes us nervous to be around the Big Bomb... the more so because we don't understand it. And it's a strain on us to be hated and despised as we are. Scientific detachment is difficult under such conditions; I'm getting jumpy myself."

King ceased pacing the floor and faced the doctor. "But there must be some solution-" he insisted.

Silard shook his head. "It's beyond me, Superintendent. I see no solution from the standpoint of psychology."

"No? Hmm-Doctor, who is the top man in your field?" "Eh?"

"Who is the recognized number-one man in handling this sort of thing?"

"Why, that's hard to say. Naturally, there isn't any one, leading psychiatrist in the world; we specialize too much." I know what you mean, though. You don't want the best industrial temperament psychometrician; you want the" best all-around man for psychoses non-lesional and situational. That would be Lentz."

"Go on."

"Well- He covers the whole field of environment adjustment. He's the man that correlated the theory of optimum tonicity with the relaxation technique that Korzybski had developed empirically. He actually worked under, Korzybski himself, when he was a young student-it's the only thing he's vain about."

"He did? Then he must be pretty old; Koxzybski died in- What year did he die?"

"I started to say that you must know his work in symbology-theory of abstraction and calculus of statement, all that sort of thing-because of its applications to engineering and mathematical physics."

"That Lentz-yes, of course. But I had never thought of him as a psychiatrist."

"No, you wouldn't, in your field. Nevertheless, we are inclined to credit him with having done as much to check and reduce the pandemic neuroses of the Crazy Years as any other man, and more than any man left alive."

"Where is he?"

"Why, Chicago, I suppose. At the Institute."

"Get him here."

"Get him down here. Get on that visiphone and locate him. Then have Steinke call the Port of Chicago, and hire a stratocar to stand by for him. I want to see him as soon as possible-before the day is out." King sat up in his chair with the air of a man who is once more master of himself and the situation. His spirit knew that warming replenishment that comes only with reaching a decision. The harassed expression was gone.

Silard looked dumbfounded. "But, superintendent," he expostulated, "you can't ring for Doctor Lentz as if he were a junior clerk. He's-he's Lentz."

"Certainly-that's why I want him. But I'm not a neurotic clubwoman looking for sympathy, either. He'll come. If necessary, turn on the heat from Washington. Have the White House call him. But get him here at once. Move!" King strode out of the office.

When Erickson came off watch he inquired around and found that Harper had left for town. Accordingly, he dispensed with dinner at the base, shifted into "drinkin'clothes", and allowed himself to be dispatched via tube to Paradise. Paradise, Arizona, was a hard little boom town, which owed its existence to the breeder plant. It was dedicated exclusively to the serious business of detaching the personnel of the plant from their inordinate salaries. In this worthy project they received much cooperation from the plant personnel themselves, each of whom was receiving from twice to ten times as much money each payday as he had ever received in any other job, and none of whom was certain of living long enough to justify saving for old' age. Besides, the company carried a sinking fund in Manhattan for their dependents; why be stingy?

It was claimed, with some truth, that any entertainment or luxury obtainable in New York City could be purchased in Paradise. The local chamber of commerce had appropriated the slogan of Reno, Nevada, "Biggest Little City in the World." The Reno boosters retaliated by claiming that, while a town that close to the atomic breeder plant undeniably brought thoughts of death and the hereafter; Hell's Gates would be a more appropriate name.

Erickson started making the rounds. There were twenty-seven places licensed to sell liquor in the six blocks of the main street of Paradise. He expected to find Harper in one of them, and, knowing the man's habits and tastes, he expected to find him in the first two three he tried.

He was not mistaken. He found Harper sitting alone a table in the rear of deLancey's Sans Souci Bar. Lancey's was a favorite of both of them. There was old-fashioned comfort about its chrome-plated bar red leather furniture that appealed to them more than the spectacular fittings of the up-to-the-minute place. DeLancey was conservative; he stuck to indirect light and soft music; his hostesses were required to be

fully clothed, even in the evening. The fifth of Scotch in front of Harper was about two thirds full. Erickson shoved three fingers in front Harper's face and demanded, "Count!"

"Three," announced Harper. "Sit down, Gus."

"That's correct," Erickson agreed, sliding his big frame into a low-slung chair. "You'll do-for now. What the outcome?"

"Have a drink. Not," he went on, "that this Scotch any good. I think Lance has taken to watering it. I surrendered, horse and foot."

"Lance wouldn't do that-stick to that theory anti you'll sink in the sidewalk up to your knees. How come you capitulated? I thought you planned to beat 'em about the head and shoulders, at least." ' I

"I did," mourned Harper, "but, cripes, Gus, the chief is right. If a brain mechanic says you're punchy, he has got to back him up, and take you off the watch list. The chief can't afford to take a chance."

"Yeah, the chief's all right, but I can't learn to love our dear psychiatrists. Tell you what-let's find us one, and, see if he can feel pain. I'll hold him while you slug 'im."

"Oh, forget it, Gus. Have a drink."

"A pious thought-but not Scotch. I'm going to have a martini; we ought to eat pretty soon."

"I'll have one, too."

"Do you good." Erickson lifted his blond head and bellowed, "Israfell"

A large, black person appeared at his elbow. "Mistuh Erickson! Yes, sub!"

"Izzy, fetch two martinis. Make mine with Italian." He turned back to Harper. "What are you going to do now, Cal?"

"Radiation laboratory."

"Well, that's not so bad. I'd like to have a go at the matter of rocket fuels 'myself. I've got some ideas."

Harper looked mildly amused. "You mean atomic fuel for interplanetary flight? That problem's pretty well exhausted. No, son, the ionosphere is the ceiling until we think up something better than rockets. Of course, you could mount a pile in a ship, and figure out some jury rig to convert some of its output into push, but where does that get you? You would still have a terrible mass-ratio because of the shielding and I'm betting you couldn't convert one percent into thrust. That's disregarding the question of getting the company to lend you a power pile for anything that doesn't pay dividends."

Erickson looked balky. "I don't concede that you've covered all the alternatives. What have we got? The early rocket boys went right ahead trying to build better rockets, serene in the belief that, by the time they could build rockets good enough to fly to the moon, a fuel would be perfected that would do the trick. And they did build ships that were good enough-you could take any ship that makes the Antipodes run, and refit it for the moon-if you had a fuel that was adequate. But they haven't got it.

"And why not? Because we let 'em down, that's why. Because they're still depending on molecular energy, on chemical reactions, with atomic power sitting right here in our laps. It's not their fault-old D. D. Harriman had Rockets Consolidated underwrite the whole first issue of Antarctic Pitchblende, and took a big slice of it himself, in the expectation that we would produce something usable in the way of a concentrated rocket fuel. Did we do it? Like hell! The company went hog-wild for immediate commercial exploitation, and there's no atomic rocket fuel yet."

"But you haven't stated it properly," Harper objected. "There are just two forms of atomic power-available, radioactivity and atomic disintegration. The first is too slow; the energy is there, but you can't wait years for it to come out-not in a rocket ship. The second we can only manage in a large power plant. There you are-stymied."

"We haven't really tried," Erickson answered. "The power is there; we ought to give 'em a decent fuel"

"What would you call a 'decent fuel'?"

Erickson ticked it off. "A small enough critical mass so that all, or almost all, the energy could be taken up as heat by the reaction mass-I'd like the reaction mass to be ordinary water. Shielding that would have to be no more than a lead and cadmium jacket. And the whole thing controllable to a fine point."

Harper laughed. "Ask for Angel's wings and be done with it. You couldn't store such fuel in a rocket; it would~ Set itself off before it reached the jet chamber."

Erickson's Scandinavian stubbornness was just gathering for another try at the argument when the waiter arrived with the drinks. He set them down with a triumphant flourish. "There you are, suh!"

"Want to roll for them, Izzy?" Harper inquired.

"Don' mind if I do."

The Negro produced a leather dice cup and Harper rolled. He selected his combinations with care and managed to get four aces and jack in three rolls. Israfel took the cup. He rolled in the grand manner with a backwards twist to his wrist. His score finished at five kings, and he courteously accepted the price of six drinks. Harper stirred the engraved cubes with his forefinger.

"Izzy," he asked, "are these the same dice I rolled with?"

"Why, Mistuh Harper!" The black's expression was pained.

"Skip it," Harper conceded. "I should know better than to gamble with you. I haven't won a roll from you in six weeks. What did you start to say, Gus?"

"I was just going to say that there ought to be a better way to get energy out of-" But they were joined again, this time by something very seductive in an evening gown that appeared to have been sprayed on her lush figure. She was young, perhaps nineteen or twenty. "You boys lonely?" she asked as she flowed into a chair.

"Nice of you to ask, but we're not," Erickson denied with patient politeness. He jerked a thumb at a solitary figure seated across the room. "Go talk to Hannigan; he's not busy."

She followed his gesture with her eyes, and answered with faint scorn, "Him? He's no use. He's been like that for three weeks-hasn't spoken to a soul. If you ask me, I'd say that he was cracking up."

"That so?" he observed noncommittally. "Here-" He fished out a five-dollar bill and handed it to her. "Buy yourself a drink. Maybe we'll look you up later."

"Thanks, boys." The money disappeared under her clothing, and she stood up. "Just ask for Edith."

"Hannigan does look bad," Harper considered, noting the brooding stare and apathetic attitude, "and he has been awfully stand-offish lately, for him. Do you suppose we're obliged to report him?"

"Don't let it worry you," advised Erickson, "there's a spotter on the job now. Look." Harper followed his companion's eyes and recognized Dr. Mott of the

psychological staff. He was leaning against the far end of the bar and nursing a tall glass, which gave him protective coloration. But his stance was such that his field of vision included not only Hannigan, but Erickson and Harper as well.

"Yeah, and he's studying us as well," Harper added.' "Damn it to hell, why does it make my back hair rise just to lay eyes on one of them?"

The question was rhetorical, Erickson ignored it. "Let's get out of here," he suggested, "and have dinner some where else."

"O.K."

DeLancey himself waited on them as they left. "Going so soon, gentlemen?" he asked, in a voice that implied that their departure would leave him no reason to stay open. "Beautiful lobster thermidor tonight. If you do not like it, you need not pay." He smiled brightly.

"No sea food, Lance," Harper told him, "not tonight. Tell me-why do you stick around here when you know that the pile is bound to get you in the long run? Aren't you afraid of it?"

The tavern keeper's eyebrows shot up. "Afraid of this pile? But it is my friend!"

"Makes you money, eh?"

"Oh, I do not mean that." He leaned toward them confidentially. "Five years ago I come here to make some money quickly for my family before my cancer of the stomach, it kills me. At the clinic, with the wonderful new radiants you gentlemen make with the aid of the Big Bomb, I am cured-I live again. No, I am not afraid of the pile; it is my good friend."

"Suppose it blows up?"

"When the good Lord needs me, he will take me." He crossed himself quickly.

As they turned away, Erickson commented in a low voice to Harper. "There's your answer, Cal-if all us engineers had his faith, the job wouldn't get us down."

Harper was unconvinced. "I don't know," be mused. 'I don't think it's faith; I think it's lack of imagination and knowledge."

Notwithstanding King's confidence, Lentz did not show up until the next day. The superintendent was subconsciously a little surprised at his visitor's appearance. He had pictured a master psychologist as wearing flowing hair, an imperial, and having piercing black eyes. But this man was not overly tall, was heavy in his framework, and fat-almost gross. He might have been a butcher. Little, piggy, faded-blue eyes peered merrily out from beneath shaggy blond brows. There was no hair anywhere else on the enormous skull, and the ape-like jaw was smooth and pink. He was dressed in mussed pajamas of unbleached linen. A long cigarette holder jutted permanently from one corner of a wide mouth, widened still more by a smile which suggested unmalicious amusement at the worst that life, or men, could do. He had gusto. King found him remarkably easy to talk to.

At Lentz' suggestion the Superintendent went first into the history of atomic power plants, how the fission of the uranium atom by Dr. Otto Hahn in December, 1938, had opened up the way to atomic power. The door was opened just a crack; the process to be self perpetuating and commercially usable required an enormously greater knowledge than there was available in the entire civilized world at that time.

In 1938 the amount of separated uranium-235 in the world was not the mass of the head of a pin. Plutonium was unheard of. Atomic power was abstruse theory and a

single, esoteric laboratory experiment. World War II, the Manhattan Project, and Hiroshima changed that; by late 1945 prophets were rushing into print with predictions of atomic power, cheap, almost free atomic power, for everyone in a year or two.

It did not work out that way. The Manhattan Project had been run with the single-minded purpose of making weapons; the engineering of atomic power was still in the future.

The far future, so it seemed. The uranium piles used to make the atom bomb were literally no good for commercial power; they were designed to throw away power as a useless byproduct, nor could the design of a pile, once in operation, be changed. A design-on paper-for an economic, commercial power pile could be made, but it had two serious hitches. The first was that such a pile would give off energy with such fury, if operated at a commercially satisfactory level, that there was no known way of accepting that energy and putting it to work.

This problem was solved first. A modification of the Douglas-Martin power screens, originally designed to turn the radiant energy of the sun (a natural atomic power pile itself) directly into electrical power, was used to receive the radiant fury of uranium fission and carry it away as electrical current.

The second hitch seemed to be no hitch at all. An "enriched" pile-one in which U-235 or plutonium had been added to natural uranium-was a quite satisfactory source of commercial power. We knew how to get U-235 and plutonium; that was the primary accomplishment of the Manhattan Project.

Or did we know how? Hanford produced plutonium; Oak Ridge extracted U-235, true-but the Hanford piles used more U-235 than they produced plutonium and Oak Ridge produced nothing but merely separated out the 7/10 of one percent of U-235 in natural uranium and "threw away" the 99%-plus of the energy which was still locked in the discarded U-238. Commercially ridiculous, economically fantastic!

But there was another way to breed plutonium, by means of a high-energy, unmoderated pile of natural uranium somewhat enriched. At a million electron volts or more U-238 will fission at somewhat lower energies it turns to plutonium. Such a pile supplies its own "fire" and produces more "fuel" than it uses; it could breed fuel for many other power piles of the usual moderated sort.

But an unmoderated power pile is almost by definition an atom bomb.

The very name "pile" comes from the pile of graphite bricks and uranium slugs set up in a squash court at the University of Chicago at the very beginning of the Manhattan Project. Such a pile, moderated by graphite or heavy water, cannot explode.

Nobody knew what an unmoderated, high-energy pile might do. It would breed plutonium in great quantities- but would it explode? Explode with such violence as to make the Nagasaki bomb seem like a popgun?

Nobody knew.

In the meantime the power-hungry technology of the United States grew still more demanding. The Douglas Martin sunpower screens met the immediate crisis when oil became too scarce to be wasted as fuel, but sunpower was limited to about one horsepower per square yard and was at the mercy of the weather.

Atomic power was needed-demanded.

Atomic engineers lived through the period in an agony of indecision. Perhaps a breeder pile could be controlled. Or perhaps if it did go out of control it would simply

blow itself apart and thus extinguish its own fires. Perhaps it would explode like several atom bombs but with low efficiency. But it might-it just might-explode its whole mass of many tons of uranium at once and destroy the human race in the process.

There is an old story, not true, which tells of a scientist who had made a machine which would instantly destroy the world, so he believed, if he closed one switch. He wanted to know whether or not lie was right. So he closed the switch-and never found out.

The atomic engineers were afraid to close the switch.

"It was Destry's mechanics of infinitesimals that showed a way out of the, dilemma," King went on. "His equations appeared to predict that such an atomic explosion, once started, would disrupt the molar mass enclosing it so rapidly that neutron loss through the outer surface of the fragments would dampen the progression of the atomic explosion to zero before complete explosion could be reached. In an atom bomb such damping actually occurs.

"For the mass we use in the pile, his equations predicted possible force of explosion one-seventh of one percent of the force of complete explosion. That alone, of course, would be incomprehensibly destructive-enough to wreck this end of the state. Personally, I've never been sure that is all that would happen."

"Then why did you accept this job?" inquired Lentz.

King fiddled with items on his desk before replying. "I couldn't turn it down, doctor I couldn't. If I had refused, they would have gotten someone else-and it was an opportunity that comes to a physicist once in history."

Lentz nodded. "And probably they would- have gotten someone not as competent. I understand, Dr. King-you were compelled by the 'truth-tropism' of the scientist. He must go where the data is to be found, even if it kills him. But about this fellow Destry, I've never liked his mathematics; he postulates too much."

King looked up in quick surprise, then recalled that this was the man who had refined and given rigor to the calculus of statement. "That's just the hitch," he agreed. "His work is brilliant, but I've never been sure that his predictions were worth the paper they were written on. Nor, apparently," he added bitterly, "do my junior engineers."

He told the psychiatrist Of the difficulties they had had with personnel, of how the most carefully selected men would, sooner or later, crack under the strain. "At first I thought it might be some degenerating effect from the neutron radiation that leaks out through the shielding, so we improved the screening and the personal armor. But it didn't help. One young fellow who had joined us after the new screening was installed became violent at dinner one night, and insisted that a pork chop was about to explode. I hate to think of what might have happened if he had been on duty at the pile when he blew up."

The inauguration of the system of constant psychological observation had greatly reduced the probability of acute danger resulting from a watch engineer cracking up, but King was forced to admit that the system was not a success; there had actually been a marked increase in psychoneuroses, dating from that time.

"And that's the picture, Dr. Lentz. It gets worse all the time. It's getting me now. The strain is telling on me; I can't sleep, and I don't think my judgment is as good as it used to be-I have trouble making up my mind, of coming to a decision. Do you think you can do anything for us?"

But Lentz had no immediate relief for his anxiety. "Not so fast, superintendent," he countered. "You have given me the background, but I have no real data as yet. I must look around for a while, smell out the situation for myself, talk to your engineers, perhaps have a few drinks with them, and get acquainted. That is possible, is it not? Then in a few days, maybe, we know where we stand."

King had no alternative but to agree.

"And it is well that your young men do not know what I am here for. Suppose I am your old friend, a visiting physicist, eh?"

"Why, yes-of course. I can see to it that that idea gets around. But say-" King was reminded again of something that had bothered him from the time Silard had first suggested Lentz' name. "May I ask a personal question?"

The merry eyes were undisturbed. "Go ahead."

"I can't help but be surprised that one man should attain eminence in two such widely differing fields as psychology and mathematics. And right now I'm perfectly convinced of your ability to pass yourself off as a physicist. I don't understand it."

The smile was more amused, without being in the least patronizing, nor offensive. "Same subject," he answered.

"Eh? How's that-"

"Or rather, both mathematical physics and psychology are branches of the same subject, symbology. You are a specialist; it' would not necessarily come to your attention."

"I still don't follow you."

"No? Man lives in a world of ideas. Any phenomenon is so complex that he cannot possibly grasp the whole of it. He abstracts certain characteristics of a given phenomenon as an idea, then represents that idea as a symbol, be it a word or a mathematical sign. Human reaction is almost entirely reaction to symbols, and only negligibly to phenomena. As a matter Of fact," he continued, removing the cigarette holder from his mouth and settling into his subject, "it can be demonstrated that the human mind can think only in terms of symbols.

"When we think, we let symbols operate on other symbols in certain, set fashions-rules of logic, or rules of mathematics. If the symbols have been abstracted so that they are structurally similar to the phenomena they stand for, and if the symbol operations are similar in structure and order to the operations of phenomena in the ~real~ world, we think sanely. If our logic-mathematics, or our word-symbols, have been poorly chosen, we think not sanely.

"In mathematical physics you are concerned with making your symbology fit physical phenomena. In psychiatry I am concerned with precisely the same thing, except that I am more immediately concerned with the man who does the thinking than with the phenomena he is thinking about. But the same subject, always the dame subject."

"We're not getting anyplace, Gus." Harper put down his slide rule and frowned.

"Seems like it, Cal," Erickson grudgingly admitted.

"Damn it, though-there ought to be some reasonable way of tackling the problem. What do we need? Some form of concentrated, controllable power for rocket fuel. What have we got? Power galore through fission. There must be some way to bottle that power, and serve it out when we need it-and the answer is some place in one of the radioactive~

series. I know it." He stared glumly around the laboratory as if expecting to find the answer written somewhere on the lead-sheathed walls.

"Don't be so down in the mouth about it. You've got me convinced there is an answer; let's figure out how to find it. In the first place the three natural radioactive series are out, aren't they?"

"Yes ... at least we had agreed that all that ground had been fully covered before."

"Okay; we have to assume that previous investigators have done what their notes show they have done-otherwise we might as well not believe anything, and start checking on everybody from Archimedes to date. Maybe that is indicated, but Methuselah himself couldn't carry out such an assignment. What have we got left?"

"Artificial radioactives."

"All right. Let's set up a list of them, both those that have been made up to now, and those that might possibly be made in the future. Call that our group-or rather, field, if you want to be pedantic about definitions. There are a limited number of operations that can be performed on each member of the group, and on the members taken in combination. Set it up."

Erickson did so, using the curious curlicues of the calculus of statement. Harper nodded. "All right-expand it."

Erickson looked up after a few moments, and asked, "Cal, have you any idea how many terms there are in the expansion?"

"No. . . hundreds, maybe thousands, I suppose."

"You're conservative. It reaches four figures without considering possible new radioactives. We couldn't finish such a research in a century. He chucked his pencil down and looked morose.

Cal Harper looked at him curiously, but with sympathy. "Gus," he said gently, "the job isn't getting you, too, is it?"

"I don't think so. Why?"

"I never saw you so willing to give up anything before. Naturally you and I will never finish any such job, but at the very worst we will have eliminated a lot of wrong answers for somebody else. Look at Edison-sixty years of experimenting, twenty hours a day, yet he never found out the one thing he was most interested in knowing. I guess if he could take it, we can."

Erickson pulled out of his funk to some extent. "I suppose so," he agreed. "Anyhow, maybe we could work out some techniques for carrying a lot of experiments simultaneously."

Harper slapped him on the shoulder. "That's the ol' fight. Besides, we may not need to finish the research, or anything like it, to find a satisfactory fuel. The way I see it, there are probably a dozen, maybe a hundred, right answers. We may run across one of them any day. Anyhow, since you're willing to give me a hand with it in your off watch time, I'm game to peck away at it till hell freezes."

Lentz puttered around the plant and the administration center for several days, until he was known to everyone by sight He made himself pleasant and asked questions. He was soon regarded as a harmless nuisance, to be tolerated because he was a friend of the superintendent. He even poked his nose into the commercial power end of the plant, and had the radiation-to-electric-power sequence explained to him in detail. This alone would have been sufficient to disarm any suspicion that he might be a psychiatrist, for the

staff psychiatrists paid no attention to the hard-bitten technicians of the power-conversion unit. There was no need to; mental instability on their part could not affect the pile, nor were they subject to the strain of social responsibility. Theirs was simply a job personally dangerous, a type of strain strong men have been inured to since the jungle.

In due course he got around to the unit of the radiation laboratory set aside for Calvin Harper's use. He rang the bell and waited. Harper answered the door, his antiradiation helmet shoved back from his face like some grotesque sunbonnet. "What is it?" he asked. "Oh-it's you, Doctor Lentz. Did you want to see me?"

"Why, yes, and no," the older man answered, "I was just looking around the experimental station and wondered what you do in here. Will I be in the way?"

"Not at all. Come in. Gus!"

Erickson got up from where he had been fussing over the power leads to their trigger a modified betatron rather than a resonant accelerator. "Hello."

"Gus, this is Doctor Lentz-Gus Erickson."

"We've met," said Erickson, pulling off his gauntlet to shake hands. He had had a couple of drinks with Lentz in town and considered him a "nice old duck." "You're just between shows, but stick around and we'll start another run-not that there is much to see."

While Erickson continued with the set-up, Harper conducted Lentz around the laboratory, explaining the line of research they were conducting, as happy as a father showing off twins. The psychiatrist listened with one ear and made appropriate comments while he studied the young scientist for signs of the instability he had noted to be recorded against him.

"You see," Harper explained, oblivious to the interest in himself, "we are testing radioactive materials to see if we can produce disintegration of the sort that takes place in the pile, but in a minute, almost microscopic, mass. If we are successful, we can use the breeder pile to make a safe, convenient, atomic fuel for rockets-or for anything else." He went on to explain their schedule of experimentation.

"I see," Lentz observed politely. "What element are you examining now"

Harper told him. "But it's not a case of examining one element-we've finished Isotope II of this element with negative results. Our schedule calls next for running the same test on Isotope V. Like this." He hauled out a lead capsule, and showed the label to Lentz. He hurried away to the shield around the target of the betatron, left open by Erickson. Lentz saw that he had opened the capsule, and was performing some operation on it with 'a long pair of tongs in a gingerly manner, having first lowered his helmet. Then he closed and clamped the target shield.

"Okay, Gus?" he called out. "Ready to roll?"

"Yeah, I guess so," Erickson assured him, coming around from behind the ponderous apparatus, and rejoining them. They crowded behind a thick metal and concrete shield that cut them off from direct sight of the set up.

"Will I need to put- on armor?" inquired Lentz.

"No," Erickson reassured him, "we wear it because we are around the stuff day in and day out. You just stay behind the shield and you'll be all right."

Erickson glanced at Harper, who nodded, and fixed his, eyes on a panel of instruments mounted behind the shield. Lentz saw Erickson press a push button at the top of the board, then heard a series of relays click on the far side of~ the shield. There was a short moment of silence.

The floor slapped his feet like some incredible bastinado. The concussion that beat on his ears was so intense that it paralyzed the auditory nerve almost before it could be recorded as sound. The air-conducted concussion wave flailed every inch of his body with a single, stinging, numbing blow. As he picked himself up, he found he was trembling uncontrollably and realized, for the first time, that he was getting old.

Harper was seated on the floor and had commenced to bleed from the nose. Erickson had gotten up, his cheek was cut. He touched a hand to the wound, then stood there, regarding the blood on his fingers with a puzzled expression on his face.

"Are you hurt?" Lentz inquired inanely. "What happened?"

Harper cut in. "Gus, we've done it! We've done it! Isotope Five has turned the trick!"

Erickson looked still more bemused. "Five?" he said stupidly, "-but that wasn't Five, that was Isotope IL I put it in myself."

"You put it in? I put it in! It was Five, I tell you!"

They stood staring at each other, still confused by the explosion, and each a little annoyed at the boneheaded stupidity the other displayed in the face of the obvious. Lentz diffidently interceded.

"Wait a minute, boys," he suggested, "maybe there's a reason-Gus, you placed a quantity of the second isotope in the receiver?"

"Why, yes, certainly. I wasn't satisfied with the last run, and I wanted to check it."

Lentz nodded. "It's my fault, gentlemen," he admitted ruefully. "I came in, disturbed your routine, and both of you charged the receiver. I know Harper did, for I saw him do it with Isotope V. I'm sorry."

Understanding broke over Harper's face, and he slapped the older man on the shoulder. "Don't be sorry," he laughed; "you can come around to our lab and help us make mistakes anytime you feel in the mood- Can't he, Gus? This is the answer, Doctor Lentz, this is it!"

"But," the psychiatrist pointed out, "you don't know which isotope blew up."

"Nor care," Harper supplemented. "Maybe it was both, taken together. But we will know-this business is cracked now; we'll soon have it open." He gazed happily around at the wreckage.

In spite of Superintendent King's anxiety, Lentz refused to be hurried in passing judgment on the situation. Consequently, when be did present himself at King's office, and announced that he was ready to report, King was pleasantly surprised as well as relieved. "Well, I'm delighted," he said. "Sit down, doctor, sit down. Have a cigar. What do we do about it?"

But Lentz stuck to his perennial cigarette, and refused to be hurried. "I must have some information first: how important," he demanded, "is the power from your plant?"

King understood the implication at once. "If you are thinking about shutting down - the plant for more than a limited period, it can't be done."

"Why not? If the figures supplied me are correct, your power output is less than thirteen percent of the total power used in the country."

"Yes, that is true, but we also supply another thirteen percent second hand through the plutonium we breed here-and you haven't analyzed the items that make up the balance. A lot of it is domestic power which householders get from sunscreens located on their roofs. Another big slice is power for the moving roadways-that's sunpower again.

The portion we provide here directly or indirectly is the main power source for most of the heavy industries-steel, plastics, lithics, all kinds of manufacturing and processing. You might as well cut the heart out of a man-"

"But the food industry isn't basically dependent on you?" Lentz persisted.

"No ... Food isn't basically a power industry though we do supply a certain percentage of the power used in processing. I see your point, and will go on, concede that transportation, that is to say, distribution food, could get along without us. But good heavens, Doctor, you can't stop atomic power without causing the biggest panic this country has ever seen. It's the keystone our whole industrial system."

"The country has lived through panics before, and we got past the oil shortage safely."

"Yes because sunpower and atomic power had to take the place of oil. You don't realize what would mean, Doctor. It would be worse than a war; in system like ours, one thing depends on another. If you cut off the heavy industries all at once, everything else stops too."

"Nevertheless, you had better dump the pile." The uranium in the pile was molten, its temperature bell greater than twenty-four hundred degrees centigrade. The pile could be dumped into a group of small containers when it was desired to shut it down. The mass into one container would be too small to maintain progressive atomic disintegration.

Icing glanced involuntarily at the glass-enclosed relay mounted on his office wall, by which he, as well as the engineer on duty, could dump the pile, if need be. "But ~ couldn't do that ... or rather, if I did, the plant wouldn't stay shut down. The directors would simply replace me with someone who would operate it."

"You're right, of course." Lentz silently considered the situation for some time, then said, "Superintendent, will you order a car to fly me back to Chicago?"

"You're going, doctor?"

"Yes." He took the cigarette holder from his face, and, for once, the smile of Olympian detachment was gone completely. His entire manner was sober, even tragic.

"Short of shutting down the plant, there is no solution to your problem-none whatsoever!"

"I owe you a full explanation," he continued, presently.

"You are confronted here with recurring instances of situational psychoneurosis. Roughly, the symptoms manifest themselves as anxiety neurosis, or some form of hysteria.

The partial amnesia of your secretary, Steinke, is a good example of the latter. He might be cured with shock technique, but it would hardly be a kindness, as he has achieved a stable adjustment which puts him beyond the reach of the strain he could not stand.

"That other young fellow, Harper, whose blowup was the immediate cause of you sending for me, is an anxiety case. When the cause of the anxiety was eliminated from his matrix, he at once regained full sanity. But keep a close watch on his friend, Erickson-

"However, it is the cause, and prevention, of situational psychoneurosis we are concerned with here, rather than the forms in which it is manifested. In plain language, psychoneurosis situational simply refers to the common fact that, if you put a man in a situation that worries him more than he can stand, in time he blows up, one way or another.

"That is precisely the situation here. You take sensitive, intelligent young men, impress them with the fact that a single slip on their part, or even some fortuitous circumstance beyond their control, will result in the death of God knows how many other people, and then expect them to remain sane. It's ridiculous-impossible!"

"But good heavens, doctor!-there must be some answer- There must!" He got up and paced around the room. Lentz noted, with pity, that King himself was riding the ragged edge of the very condition they were discussing.

"No," he said slowly. "No ... let me explain. You don't dare entrust control to less sensitive, less socially conscious men. You might as well turn the controls over to a mindless idiot. And to psychoneurosis situational there are but two cures. The first obtains when the psychosis results from a misevaluation of environment. That cure calls for semantic readjustment. One assists the patient to evaluate correctly his environment. The worry disappears because there never was a real reason for worry in the situation itself, but simply in the wrong meaning the patient's mind had assigned to it.

"The second case is when the patient has correctly evaluated the situation, and rightly finds in it cause for extreme worry. His worry is perfectly sane and proper, but he cannot stand up under it indefinitely; it drives him crazy. The only possible cure is to change the situation. I have stayed here long enough to assure myself that such is the condition here. You engineers have correctly evaluated the public danger of this thing, and it will, with dreadful certainty, drive all of you crazy!

"The only possible solution is to dump the pile-and leave it dumped."

King had continued his nervous pacing of the floor, as if the walls of the room itself were the cage of his dilemma. Now he stopped and appealed once more to the psychiatrist. "Isn't there anything I can do?"

"Nothing to cure. To alleviate-well, possibly."

"How?"

"Situational psychosis results from adrenalin exhaustion. When a man is placed under a nervous strain, his adrenal glands increase their secretion to help compensate for the strain. If the strain is too great and lasts too long, the adrenals aren't equal to the task, and he cracks. That is what you have here. Adrenalin therapy might stave of a mental breakdown, but it most assuredly would hasten a physical breakdown. But that would be safer from a viewpoint of public welfare-even though it assumes that physicists are expendable!

"Another thing occurs to me: If you selected any new watch engineers from the membership of churches that practice the confessional, it would increase the length of their usefulness."

King was plainly surprised. "I don't follow you."

"The patient unloads most of his worry on his confessor, who is not himself actually confronted by the situation, and can stand it. That is simply an ameliorative, however. I am convinced that in this situation, eventual insanity is inevitable. But there is a lot of good sense in the confessional," he mused. "It fills a basic human heed. I think that is why the early psychoanalysts were so surprisingly successful, for all their limited knowledge." He fell silent for a while, then added, "If you will be so kind as to order a stratocab for me-"

"You've nothing more to suggest?'

"No. You had better turn your psychological staff loose on means of alleviation; they're able men, all of them."

King pressed a switch, and spoke briefly to Steinke. Turning back to Lentz, he said, "You'll wait here until your car is ready?"

Lentz judged correctly that King desired it, and agreed.

Presently the tube delivery on King's desk went "Ping!"

The superintendent removed a small white pasteboard, a calling card. He studied it with surprise and passed it over to Lentz. "I can't imagine why he should be calling on me," he observed, and added, "Would you like to meet him?"

Lentz read:

THOMAS P. HARRINGTON
Captain (Mathematics)
United States Navy
Director
U.S. Naval Observatory

"But I do know him," he said. "I'd be very pleased to see him."

Harrington was a man with something on his mind. He seemed relieved when Steinke had finished ushering him in and had returned to the outer office. He commenced to speak at once, turning to Lentz, who was nearer to him than King.

"You're King? Why, Doctor Lentz! What are you doing here?"

"Visiting," answered Lentz, accurately - but incompletely, as he shook hands. "This is Superintendent King over here. Superintendent King-Captain Harrington."

"How do you do, Captain-it's a pleasure to have you here."

"It's an honor to be here sir."

"Sit down?"

"Thanks." He accepted a chair, and laid a briefcase at a corner of King's desk. "Superintendent, you are entitle to an explanation as to why I have broken in on you Ilk this-"

"Glad to have you." In fact, the routine of formal politeness was an anodyne to King's frayed nerves.

"That's kind of you, but that secretary chap, the one that brought me in here, would it be too much to as for you to tell him to forget my name? I know it seem strange-"

"Not at all." King was mystified, but willing to grab any reasonable request of a distinguished colleague in science. He summoned Steinke to the interoffice visiphone and gave him his orders.

Lentz stood up, and indicated that he was about to leave. He caught Harrington's eye. "I think you want private palaver, Captain."

King looked from Harrington to Lentz, and back at Harrington. The astronomer showed momentary indecision, then protested, "I have no objection at all myself it's up to Doctor King. As a matter of fact," he added," might be a very good thing if you did sit in on it."

"I don't know what it is, Captain," observed Kin~ "that you want to see me about, but Doctor Lentz is a ready here in a confidential capacity."

"Good! Then that's settled .. I'll get right down I business. Doctor King, you know Destry's mechanics infinitesimals?"

"Naturally." Lentz cocked a brow at King, who chose to ignore it.

"Yes, of course. Do you remember - theorem six, an the transformation between equations thirteen and fourteen?"

"I think so, but I'd want to see them." King got up and went over to a bookcase. Harrington stayed him with a hand.

"Don't bother. I have them here." He hauled out a key, unlocked his briefcase, and drew out a large, much thumbed, loose-leaf notebook. "Here. You, too, Doctor Lentz. Are you familiar with this development?"

Lentz nodded. "I've had occasion to look into them."

"Good-I think it's agreed that the step between thirteen and fourteen is the key to the whole matter. Now the change from thirteen to fourteen looks perfectly valid and would be, in some fields. But suppose we expand it to show every possible phase of the matter, every link in the chain of reasoning."

He turned a page, and showed them the same two equations broken down into nine intermediate equations. He placed a finger under an associated group of mathematical symbols. "Do you see that? Do you see what that implies?" He peered anxiously at their faces.

King studied it, his lips moving. "Yes. .. . I -believe I do see. 'Odd... I never looked at it just that way before- yet I've studied those equations until I've dreamed about them." He turned to Lentz. "Do you agree, Doctor?"

Lentz nodded slowly. "I believe so ... Yes, I think I may say so."

Harrington should have been pleased; he wasn't. "I had hoped you could tell me I was wrong," he said, almost petulantly, "but I'm afraid there is no further doubt about it. Doctor Destry included an assumption valid in molar physics, but for which we have absolutely no assurance in atomic physics. I suppose you realize what this means to you, Doctor King?"

King's voice was a dry whisper. "Yes," he said, "yes it means that if the Big Bomb out there ever blows up, we must assume that it will all go up all at once, rather than the way Destry predicted ... and God help the human race!"

Captain Harrington cleared his throat to break the silence that followed. "Superintendent," he said, "I would not have ventured to call had it been simply a matter of disagreement as to interpretation of theoretical predictions-"

"You have something more to go on?"

"Yes, and no. Probably you gentlemen think of the Naval Observatory as being exclusively preoccupied with ephemeredes and tide tables. In a way you would be right- but we still have some time to devote to research as long as it doesn't cut into the appropriation. My special interest has always been lunar theory.

"I don't mean lunar ballistics," he continued, "I mean the much more interesting problem of its origin and history, the problem the younger Darwin struggled with, as well as my Illustrious predecessor, Captain T. J. J. See. I think that it is obvious that any theory of lunar origin and history must take into account the surface features of the moon-especially the mountains, the craters, that mark its face so prominently."

He paused momentarily, and Superintendent King put in, "Just a minute, Captain-I may be stupid, or perhaps I missed something, but-is there a connection between what we were discussing before and lunar theory?"

"Bear with me for a few moments, Doctor King," Harrington apologized; "there is a connection-at least, I'm afraid there is a connection-but I would rather present my points in their proper order before making my conclusions." They granted him an alert silence; he went on:

"Although we are in the habit of referring to the 'craters' of the moon, we know they are not volcanic craters. Superficially, they follow none of the rules of terrestrial volcanoes in appearance or distribution, but when Rutter came out in 952 with his monograph on the dynamics of vulcanology, he proved rather conclusively that the lunar craters could not be caused by anything that we know as volcanic action.

"That left the bombardment theory as the simplest hypothesis. It looks good, on the face of it, and a few minutes spent throwing pebbles in to a patch of mud will convince anyone that the lunar craters could have been formed by falling meteors.

"But there are difficulties. If the moon was struck so repeatedly, why not the earth? It hardly seems necessary to mention that the earth's atmosphere would be no protection against masses big enough to form craters like Endymion, or Plato. And if they fell after the moon was a dead world while the earth was still young enough to change its face and erase the marks of bombardment, why did the meteors avoid so nearly completely the dry basins we call the seas?

"I want to cut this short; you'll find the data and the mathematical investigations from the data here in my notes. There is one other major objection to the meteor bombardment theory: the great rays that spread from

Tycho across almost the entire surface of the moon. It makes the moon look like a crystal ball that had been struck with a hammer, and impact from - outside seems evident, but there are difficulties. The striking mass, our hypothetical meteor, must have been smaller than the present crater of Tycho, but it must have the mass and speed to crack an entire planet."

"Work it out for yourself-you must either postulate a chunk out of the core of a dwarf star, or speeds such as we have never observed within the system. It's conceivable but a far-fetched explanation"

He turned to King. "Doctor, does anything occur to you that might account for a phenomenon like Tycho?"

The Superintendent grasped the arms of his chair, then glanced at his palms. He fumbled for a handkerchief, and wiped them. "Go ahead," he said, almost inaudibly.

"Very well then-" Harrington drew out of his briefcase a large photograph of the moon-a beautiful full-moon portrait made at Lick. "I want you to imagine the moon as she might have been sometime in the past. The dark areas we call the 'Seas' are actual oceans. It has an atmosphere, perhaps a heavier gas than oxygen and nitrogen, but an active gas, capable of supporting some conceivable form of life.

"For this is an inhabited planet, inhabited by intelligent beings, beings capable of discovering atomic power and exploiting it!"

He pointed out on the photograph, near the southern limb, the lime-white circle of Tycho, with its shining, incredible, thousand-mile-long rays spreading, thrusting, jutting out from it. "Here ... here at Tycho was located their main atomic plant." He moved his

finger to a point near the equator, and somewhat east of meridian-the point where three great dark areas merged, Mare Nubium, Mare Imbriwn, Oceanus Procellarum-and picked out two bright splotches surrounded also by rays, but shorter, less distinct, and wavy. "And here at Copernicus and at Kepler, on islands at the middle of a great ocean, were secondary power stations."

He paused, and interpolated soberly, "Perhaps they knew the danger they ran, but wanted power so badly that they were willing to gamble the life of their race. Perhaps they were ignorant of the ruinous possibilities of their little machines, or perhaps their mathematicians assured them that it could not happen.

"But we will never know ... no one can ever know. For it blew up, and killed them-and it killed their planet.

"It whisked off the gassy envelope and blew it into outer space. It may even have set up a chain reaction, in that atmosphere. It blasted great chunks of the planet's crust Perhaps some of that escaped completely, too, but all that did not reach the speed of escape fell back down in time and splashed great ring-shaped craters in the land.

"The oceans cushioned the shock; only the more massive fragments formed craters through the water. Perhaps some life still remained in those ocean depths. If so, it was doomed to die-for the water, unprotected by atmospheric pressure, could not remain liquid and must inevitably escape lit time to outer space. Its life blood drained away. The planet was dead-dead by suicide!

He met the grave eyes of his two silent listeners with an expression almost of appeal. "Gentlemen-this is only a theory I realize ... only a theory, a dream, a nightmare-But it has kept me awake so many nights that I had to come tell you about it, and see if you saw it the same way I do.

As for the mechanics of it, it's all in there, in my notes. You can check it-and I pray that you find some error! But it is the only lunar theory I have examined which included all of the known data, and accounted for all of them."

He appeared to have finished; Lentz spoke up. "Suppose, Captain, suppose we check your mathematics and find no flaw-what then?"

Harrington flung out his hands. "That's what I came here to find out!"

Although Lentz had asked the question, Harrington directed the appeal to King. The superintendent looked up; his eyes met the astronomer's, wavered, and dropped again. "There's nothing to be done," he said dully, "nothing at all."

Harrington stared at him in open amazement. "But good God, man!" he burst out. "Don't you see it? That pile has got to be disassembled at once!"

"Take it easy, Captain." Lentz's calm voice was a spray of cold water. "And don't be too harsh on poor King, this worries him even more than it does you. What he means is this; we're not faced with a problem in physics, but with a political and economic situation. Let's put it this way: King can no more dump his plant than a peasant with a vineyard on the slopes of Mount Vesuvius can abandon his holdings and pauperize his family simply because there will be an eruption someday.

"King doesn't own that plant out there; he's only the custodian. If he dumps it against the wishes of the legal owners, they'll simply oust him and put in someone more amenable. No, we have to convince the owners."

"The President could make them do it," suggested Harrington. "I could get to the President-"

"No doubt you could, through your department. And you might even convince him. But could he help much?"

"Why, of course he could. He's the President!"

"Wait a minute. You're Director of the Naval Observatory; suppose you took a sledge hammer and tried to smash the big telescope-how far would you get?"

"Not very far," Farrington conceded. "We guard the big fellow pretty closely."

"Nor can the President act in an arbitrary manner," Lentz persisted. "He's not an unlimited monarch. If he shuts down this plant without due process of law, the federal courts will tie him in knots. I admit that Congress isn't helpless, since the Atomic Energy Commission takes orders from it, but-would you like to try to give a congressional committee a course in the mechanics of infinitesimals?"

Harrington readily stipulated the point. "But there is another way," he pointed out. "Congress is responsive to public opinion. What we need to do is to convince the public that the pile is a menace to everybody. That could be done without ever trying to explain things in terms of higher mathematics."

"Certainly it could," Lentz agreed. "You could go on the air with it and scare everybody half to death. You could create the damnedest panic this slightly slug-nutty country has ever seen. No, thank you. I, for one, would rather have us all take the chance of being quietly killed than bring on a mass psychosis that would destroy the culture we are building up. I think one taste of the Crazy Years is enough."

"Well, then, what do you suggest?"

Lentz considered shortly, then answered, "All I see is a forlorn hope. We've got to work on the Board of Directors and try to beat some sense in their heads."

King, who had been following the discussion with attention in spite of his tired despondency, interjected a remark. "How would you go about that?"

"I don't know," Lentz admitted. "It will take some thinking. But it seems the most fruitful line of approach. If it doesn't work, we can always fall back on Harrington's notion of publicity-I don't insist that the world commit suicide to satisfy my criteria of evaluation."

Harrington glanced at his wrist watch-a bulky affair-and whistled. "Good heavens," he exclaimed, "I forgot the time! I'm supposed officially to be at the Flag staff Observatory."

King had automatically noted the time shown by the Captain's watch as it was displayed. "But it can't be that late," he had objected. Harrington looked puzzled, then laughed.

"It isn't-not by two hours. We are in zone plus-seven; this shows zone plus-five-it's radio-synchronized with the master clock at Washington."

"Did you say radio-synchronized?"

"Yes. Clever, isn't it?" He held it out for inspection. "I call it a telechronometer; it's the only one of its sort to date. My nephew designed it for me. He's a bright one, that boy. He'll go far. That is"-his face clouded, as if the little interlude had only served to emphasize the tragedy that hung over them-"if any of us live that long!"

A signal light glowed at King's desk, and Steinke's face showed on the communicator screen. King answered him, then said, "Your car is ready, Doctor Lentz."

"Let Captain Harrington have it."

"Then you're not going back to Chicago?"

"No. The situation has changed. If you want me, I'm stringing along."

The following Friday Steinike ushered Lentz into King's office. King looked almost happy as he shook hands. "When did you ground, Doctor? I didn't expect you back for another hour, or so."

"Just now. I hired a cab instead of waiting for.. the shuttle."

"Any luck?" King demanded.

"None. The same answer they gave you: 'The Company is assured by independent experts that Destry's mechanics is valid, and sees no reason to encourage an hysterical attitude among its employees."

King tapped on his desk top, his eyes unfocused. Then, hitching himself around to face Lentz directly, he said, "Do you suppose the Chairman is right?"

"How?"

"Could the three of us, you, me, and Harrington, have gone off the deep end, slipped mentally?"

"No."

"You're sure?"

"Certain. I looked up some independent experts of my own, not retained by the Company, and had them check Harrington's work. It checks." Lentz purposely neglected to mention that he had done so partly because he was none too sure of King's present mental stability.

King sat up briskly, reached out and stabbed a push button. "I am going to make one more try," he explained, "to see if I can't throw a scare into Dixon's thick head. Steinke," he said to the communicator, "get me Mr. Dixon on the screen."

"Yes, sir."

In about two minutes the visiphone screen came to life and showed the features of Chairman Dixon. He was transmitting, not from his office, but from the boardroom of the power syndicate in Jersey City. "Yes?" he said.

"What is it, Superintendent?" His manner was somehow both querulous and affable.

"Mr. Dixon," King began, "I've called to try to impress on you the seriousness of the Company's action. I stake my scientific reputation that Harrington has proved completely-"

"Oh, that? Mr. King, I thought you understood that that was a closed matter."

"But Mr. Dixon-"

"Superintendent, please! If there was any possible legitimate cause to fear do you think I would hesitate? I have children you know, and grandchildren."

"That is just why-"

"We try to conduct the affairs of the Company with reasonable wisdom, and in the public interest. But we have other responsibilities, too. There are hundreds of thousands of little stockholders who expect us to show a reasonable return on their investment. You must not expect us to jettison a billion-dollar corporation just because you've taken up astrology. Moon theory!" He sniffed.

"Very well, Mister Chairman." King's tone was stiff.

"Don't, take it that way, Mr. King. I'm glad you called, the Board has just adjourned a special meeting. They have decided to accept you for retirement-with full pay, of course."

"I did not apply for retirement!"

"I know, Mr. King, but the Board feels that-"

"I understand. Goodbye!"

"Mr. King-"

"Goodbye!" He switched him off, and turned to Lentz. "'-with full pay,'" he quoted, "which I can enjoy in any way that I like for the rest of my life just as happy as a man in the death house!"

"Exactly," Lentz agreed. "Well, we've tried our way. I suppose we should call up Harrington now and let him try the political and publicity method."

"I suppose so," King seconded absent-mindedly. "Will you be leaving for Chicago now?"

"No . . ." said Lentz. "No.... I think I will catch the shuttle for Los Angeles and take the evening rocket for the Antipodes."

King looked surprised, but said nothing. Lentz answered the unspoken comment. "Perhaps some of us on the other side of the earth will survive. I've done all that I can here. I would rather be a live sheepherder in Australia than a dead psychiatrist in Chicago."

King nodded vigorously. "That shows horse sense. For two cents, I'd dump the pile now, and go with you."

"Not horse sense, my friend-a horse will run back into a burning barn, which is exactly what I plan not to do. Why don't you do it and come along. If you did, it would help Harrington to scare 'em to death."

"I believe I will!"

Steinke's face appeared again on the screen. "Harper and Erickson are here, Chief."

"I'm busy."

"They are pretty urgent about seeing you."

"Oh-all right," King said in a tired voice, "show them in. It doesn't matter."

They breezed in, Harper in the van. He commenced talking at once, oblivious to the superintendent's morose preoccupation. "We've got it, Chief, we've got it! And it all checks out to the umpteenth decimal!"

"You've got what? Speak English."

Harper grinned. He was enjoying his moment of triumph, and was stretching it out to savor it. "Chief, do you remember a few weeks back when I asked for an additional allotment-a special one without specifying how I was going to spend it?"

"Yes. Come on-get to the point."

"You kicked at first, but finally granted it. Remember?

Well, we've got something to show for it, all tied up in pink ribbon. It's the greatest advance in radioactivity since Hahn split the nucleus. Atomic fuel, Chief, atomic fuel, safe, concentrated, and controllable. Suitable for rockets, for power plants, for any damn thing you care to use it for."

King showed alert interest for the first time. "You mean a power source that doesn't require a pile?"

"Oh, no, I didn't say that. You use the breeder pile to make the fuel, then you use the fuel anywhere and anyhow you like, with something like ninety-two percent recovery of energy. But you could junk the power sequence, if you wanted to."

King's first wild hope of a way out of his dilemma was dashed; he subsided. "Go ahead. Tell me about it."

"Well-it's a matter of artificial radioactives. Just before I asked for that special research allotment, Erickson and I-Doctor Lentz had a finger in it too," he acknowledged with an appreciative nod to the psychiatrist, "-found two isotopes that seemed to be mutually antagonistic. That is, when we goosed 'em in the presence of each other they gave up their latent energy all at once- blew all to hell. The important point is we were using just a gnat's whisker of mass of each-the reaction didn't require a big mass to maintain it."

"I don't see," objected King, "how that could-"

"Neither do we, quite-but it works. We've kept it quiet until we were sure. We checked on what we had, and we found a dozen other fuels. Probably we'll be able to tailor-make fuels for any desired purpose. But here it is." He handed him a bound sheaf of typewritten notes which he had been carrying under his arm. "That's your copy. Look it over."

King started to do so. Lentz joined him, after a look that was a silent request for permission, which Erickson had answered with his only verbal contribution, "Sure, doc."

As King read, the troubled feelings of an acutely harassed executive left him. His dominant personality took charge, that of the scientist. He enjoyed the controlled and cerebral ecstasy of the impersonal seeker for the elusive truth. The emotions felt in his throbbing thalamus were permitted only to form a sensuous obbligato for the cold flame of cortical activity. For the time being, he was sane, more nearly completely sane than most men ever achieve at any time.

For a long period there was only an occasional grunt, the clatter of turned pages, a nod of approval. At last he put it down.

"It's the stuff," he said. "You've done it, boys. It's great; I'm proud of you."

Erickson glowed a bright pink, and swallowed. Harper's small, tense figure gave the ghost of a wriggle, reminiscent of a wire-haired terrier receiving approval. "That's fine, Chief. We'd rather hear you say that than get the Nobel Prize."

"I think you'll probably get it. However"-the proud light in his eyes died down-"I'm not going to take any action in this matter."

"Why not, Chief?" His tone was bewildered.

"I'm being retired. My successor will take over in the near future; this is too big a matter to start just before a change in administration."

"You being retired! What the bell?"

"About the same reason I took you off watch-at least, the directors think so."

"But that's nonsense! You were right to take me off the watch-list; I was getting jumpy. But you're another matter-we all depend on you."

"Thanks, Cal-but that's how it is; there's nothing to be done about it." He turned to Lentz. "I think this is the last ironical touch needed to make the whole thing pure farce," he observed bitterly. "This thing is big, bigger than we can guess at this stage-and I have to give it a miss."

"Well," Harper burst out, "I can think of something to do about it!" He strode over to King's desk and snatched up the manuscript. "Either you superintend the exploitation, or the Company can damn well get along without our discovery!" Erickson concurred belligerently.

"Wait a minute." Lentz had the floor. "Doctor Harper... have you already achieved a practical rocket fuel?"

"I said so. We've got it on hand now."

"An escape-speed fuel?" They understood his verbal shorthand a fuel that would lift a rocket free of the earth's gravitational pull.

"Sure. Why, you could take any of the Clipper rockets, refit them a trifle, and have breakfast on the moon."

"Very well. Bear with me. . . ." He obtained a sheet of paper from King, and commenced to write. They watched in mystified impatience. He continued briskly for some minutes, hesitating only momentarily. Presently he stopped, and spun the paper over to King. "Solve it!" he demanded.

King studied the paper. Lentz had assigned symbols to a great number of factors, some social, some psychological, some physical, some economic. He had thrown them together into a structural relationship, using the symbols of calculus of statement. King understood the paramathematical operations indicated by the symbols, but he was not as used to them as he was to the symbols and operations of mathematical physics. He plowed through the equations, moving his lips slightly in subconscious vocalization.

He accepted a pencil from Lentz, and completed the solution. It required several more lines, a few more equations, before they cancelled out, or rearranged themselves, into a definite answer.

He stared at this answer while puzzlement gave way to dawning comprehension and delight.

He looked up. "Erickson! Harper!" he rapped out.

"We will take your new fuel, refit a large rocket, install the breeder pile in it, and throw it into an orbit around the earth, far out in. space. There we will use it to make more fuel, safe fuel, for use on earth, with the danger from the Big Bomb itself limited to the operators actually on watch!"

There was no applause. It was not that sort of an idea; their minds were still struggling with the complex implications.

"But Chief," Harper finally managed, "how about your retirement? We're still not going to stand for it."

"Don't worry," King assured him. "It's all in there, implicit in those equations, you two, me, Lentz, the Board of Directors and just what we all have to do about it to accomplish it."

"All except the matter of time," Lentz cautioned.

"You'll note that elapsed time appears in your answer as an undetermined unknown."

"Yes.. . yes, of course. That's the chance we have to take. Let's get busy!"

Chairman Dixon called the Board of Directors to order. "This being a special meeting we'll dispense with minutes and reports," he announced. "As set forth in the call we have agreed to give the retiring superintendent two hours of our time."

"Mr. Chairman-"

"Yes, Mr. Strong?"

"I thought we had settled that matter."

"We have, Mr. Strong, but in view of Superintendent King's long and distinguished service, if he asks for a hearing, we are honor bound to grant it. You have the floor, Doctor King."

King got up, and stated briefly, "Doctor Lentz will speak for me." He sat down.

Lentz had to wait for coughing, throat-clearing, and scraping of chairs to subside. It was evident that the Board resented the outsider.

Lentz ran quickly over the main points in the argument which contended that the bomb presented an intolerable danger anywhere on the face of the earth. He moved on at once to the alternative proposal that the bomb should be located in a rocket ship, an artificial moonlet flying in a free orbit around the earth at a convenient distance- say fifteen thousand miles-while secondary power stations on earth burned a safe fuel manufactured by the bomb.

He announced the discovery the Harper-Erickson technique and dwelt on what it meant to them commercially. Each point was presented as persuasively as possible, with the full power of his engaging personality. Then he paused and waited for them to blow off steam.

They did. "Visionary-" "Unproved-" "No essential change in the situation-" The substance of it was that they were very happy to hear of the new fuel, but not particularly impressed by it. Perhaps in another twenty years, after it had been thoroughly tested and proved commercially, they might consider setting up another breeder pile outside the atmosphere. In the meantime there was no hurry. Only one director supported the scheme and he was quite evidently unpopular.

Lentz patiently and politely dealt with their objections. He emphasized the increasing incidence of occupational psychoneurosis among the engineers and the grave danger to everyone near the bomb even under the orthodox theory. He reminded them of their insurance and indemnity bond costs, and of the "squeeze" they paid state politicians. Then he changed his tone and let them have it directly and brutally. "Gentlemen," he said, "we believe that we are fighting for our lives ... our own lives, our families, and every life on the globe, if you refuse this compromise, we will fight as fiercely and with as little regard for fair play as any cornered animal." With that he made. His first move in attack. It was quite simple. He offered for their inspection the outline of a propaganda campaign on a national scale, such as any major advertising firm could carry out as a matter of routine. It was complete to the last detail, television broadcasts, spot plugs, newspaper and magazine coverage with planted editorials, dummy "citizens' committees," and-most important-a supporting whispering campaign and a letters-to-Congress organization. Every businessman there knew from experience how such things worked.

But its object was to stir up fear of the Arizona pile and to direct that fear, not into panic, but into rage against the Board of Directors personally, and into a demand that the Atomic Energy Commission take action to have the Big Bomb removed to outer space.

"This is blackmail! We'll stop you!"

"I think not," Lentz replied gently. "You may be able to keep us out of some of the newspapers, but-you can't stop the rest of it. You can't even keep us off the air-ask the Federal Communications Commission." It was true. Harrington had handled the political end and had performed his assignment well; the President was convinced.

Tempers were snapping on all sides; Dixon had to pound for order. "Doctor Lentz," he said, his own temper under taut control, "you plan to make every-one of us

appear a black-hearted scoundrel with no oilier thought than personal profit, even at the expense of the lives of others. You know that is not true; this is a simple difference of opinion as to what is wise."

"I did not say it was true," Lentz admitted blandly, "but you will admit that I can convince the public that you are deliberate villains. As to it being a difference of opinion ... you are none of you atomic physicists; you are not entitled to hold opinions in this matter.

"As a matter of fact," he went on callously, "the only doubt in my mind is whether or not an enraged public will destroy your precious plant before Congress has time to exercise eminent domain, and take it away from you!"

Before they had time to think up arguments in answer and ways of circumventing him, before their hot indignation had cooled and set as stubborn resistance, he offered his gambit. He produced another lay-out for a propaganda campaign-an entirely different sort.

This time the Board of Directors was to be built up, not torn down. All of the same techniques were to be used; behind-the-scenes feature articles with plenty of human interest would describe the functions of the Company, describe it as a great public trust, administered by patriotic, unselfish statesmen of the business world. At the proper point in the campaign, the Harper-Erickson fuel would be announced, not as a semi-accidental result of the initiative of two employees, but as the long-expected end product of years of systematic research conducted under an axed policy of the Board of Directors, a policy growing naturally out of their humane determination to remove forever the menace from even the sparsely settled Arizona desert.

No mention was to be made of the danger of complete, planet-embracing catastrophe.

Lentz discussed it. He dwelt on the appreciation that would be due them from a grateful world. He invited them to make a noble sacrifice, and, with subtle misdirection, tempted them to think of themselves as heroes. He deliberately played on one of the most deep-rooted of simian instincts, the desire for approval from one's kind, deserved or not.

All the while he was playing for time, as he directed his attention from one hard case, one resistant mind, to another; He soothed and he tickled and he played on personal foibles. For the benefit of the timorous and the devoted family men, he again painted a picture of the suffering, death, and destruction that might result from their well-meant reliance on the unproved and highly questionable predictions of Destry's mathematics. Then he described in glowing detail a picture of a world free from worry but granted almost unlimited power, safe power from an invention which was theirs for this one small concession. It worked. They did not reverse themselves all at once, but a committee was appointed to investigate the feasibility of the proposed spaceship power plant. By sheer brass Lentz suggested names for the committee and Dixon confirmed his nominations, not because he wished to, particularly, but because he was caught off guard and could not think of a reason to refuse without affronting those colleagues. Lentz was careful to include his one supporter in the list.

The impending retirement of King was not mentioned by either side. Privately, Lentz felt sure that it never would be mentioned.

It worked, but there was left much to do. For the first few days, after the victory in committee, King felt much elated by the prospect of an early release from the soul killing

worry. He was buoyed up by pleasant demands of manifold new administrative duties. Harper and Erickson were detached to Goddard Field to collaborate with the rocket engineers there in design of firing chambers, nozzles, fuel stowage, fuel metering, and the like. A schedule had to be worked out with the business office to permit as much use of the pile as possible to be diverted to making atomic fuel, and a giant combustion chamber for atomic fuel had to be designed and ordered to replace the pile itself during the interim between the time it was shut down on earth and the later time when sufficient local, smaller plants could be built to carry the commercial load. He was busy.

When the first activity had died down and they were settled in a new routine, pending the shutting down of the plant and its removal to outer space, King suffered an emotional reaction. There was, by then, nothing to do but wait, and tend the pile, until the crew at Goddard Field smoothed out the bugs and produced a space-worthy rocket ship.

At Goddard they ran into difficulties, overcame them, and came across more difficulties. They had never used such high reaction velocities; it took many trials to find a nozzle shape that would give reasonably high efficiency. When that was solved, and success seemed in sight, the jets burned out on a time-trial ground test. They were stalemated for weeks over that hitch.

There was another problem quite separate from the rocket problem: what to do with the power generated by the breeder pile when relocated in a satellite rocket? It was solved drastically by planning to place the pile proper outside the satellite, unshielded, and let it waste its radiant energy. It would be a tiny artificial star, shining in the vacuum of space. In the meantime research would go on for a means to harness it again and beam the power back to Earth. But only its power would be wasted; plutonium and the never atomic fuels would be recovered and rocketed back to Earth.

Back at the power plant Superintendent King could do nothing but chew his nails and wait He had not even the release of running over to Goddard Field to watch the progress of the research, for, urgently as he desired to, he felt an even stronger, an overpowering compulsion to watch over the pile more lest it heartbreakingly blow up at the last minute.

He took to hanging around the control room. He had to stop that; his unease communicated itself to his watch engineers; two of them cracked up in a single day-one of them on watch.

He must face the fact-there had been a grave upswing in psychoneurosis among his engineers since the period of watchful waiting had commenced. At first, they had tried to keep the essential facts of the plan a close secret, but it had leaked out, perhaps through some member of the investigating committee. He admitted to himself now that it had been a mistake ever to try to keep it secret-Lentz had advised against it, and the engineers not actually engaged in the change-over were bound to know that something was up.

He took all of the engineers into confidence at last, under oath of secrecy that had helped for a week or more, a week in which they were all given a spiritual lift-by the knowledge, as he had been. Then it had worn off, the reaction had set in, and the psychological observers had started disqualifying engineers for duty almost daily. They were even reporting each other as mentally unstable with great frequency; he might even be faced with a shortage of psychiatrists if that kept up, he thought to himself with bitter

amusement. His engineers were already standing four-hours in every sixteen. If one more dropped out, he'd put himself on watch. That would be a relief, to tell himself the truth.

Somehow some of the civilians around about and the non-technical employees were catching on to the secret.

That mustn't go on-if it spread any further there might be a nationwide panic. But how the hell could he stop it? He couldn't.

He turned over in bed, rearranged his pillow, and tried once more to get to sleep. No good. His head ached, his eyes were balls of pain, and his brain was a ceaseless grind of useless, repetitive activity, like a disc recording stuck in one groove.

God! This was unbearable! He wondered if he were cracking up if he already had cracked up. This was worse, many times worse, than the old routine when he had simply acknowledged the danger and tried to forget it as much as possible. Not that the pile was any different-it was this five-minutes-to-armistice feeling, this waiting for the curtain to go up, this race against time with nothing to do to help. He sat up, switched on his bed lamp, and looked at the clock. Three-thirty. Not so good. He got up, went into his bathroom, and dissolved a sleeping powder in a glass of whisky and water, half and half. He gulped it down and went back to bed. Presently he dozed off.

He was running, fleeing down a long corridor. At the end lay safety he knew that, but he was so utterly exhausted that he doubted his ability to finish the race. The thing pursuing him was catching up; he forced his leaden, aching legs into greater activity. The thing behind him increased its pace, and actually touched him. His heart stopped, then pounded again. He became aware that he was screaming, shrieking in mortal terror. But he had to reach the end of that corridor, more depended on it than just himself. He had to. He had to- He had to! Then the flash came and he realized that he had lost, realized it with utter despair and utter, bitter defeat. He had failed; the pile had blown up.

The flash was his bed lamp coming on automatically; it was seven o'clock. His pajamas were soaked, chipping with sweat, and his heart still pounded. Every ragged nerve throughout his body screamed for release. It would take more than a cold shower to cure this case of the shakes.

He got to the office before the janitor was out of it. He sat there, doing nothing, until Lentz walked in on him, two hours later. The psychiatrist came in just as he was taking two small tablets from a box in his desk.

"Easy ... easy, old man," Lentz said in a slow voice. "What have you there?" He came around and gently took possession of the box.

"Just a sedative."

Lentz studied the inscription on the cover. "How many have you had today?"

"Just two, so far."

"You don't need barbiturates; you need a walk in the fresh air. Come take one with me."

"You're a fine one to talk you're smoking a cigarette that isn't lighted!"

"Me? Why, so I am! We both need that walk. Come."

Harper arrived less than ten minutes after they had left the office. Steinke was not in the outer office. He walked on through and pounded on the door of King's private office, then waited with the man who accompanied him a hard young chap with an easy confidence to his bearing. Steinke let them in.

Harper brushed on past him with a casual greeting, then checked himself when he saw that there was no one else inside.

"Where's the chief?" he demanded.

"Out. He'll be back soon."

"I'll wait. Oh-Steinke, this is Greene. Greene Steinke."

The two shook hands. "What brings you back, Cal?" Steinke asked, turning back to Harper.

'Well.. . I guess it's all right to tell you-"

The communicator screen flashed into sudden activity, and cut him short. A face filled most of the frame. It was apparently too close to the pickup, as it was badly out of focus. "Superintendent!" it yelled in an agonized voice. "The pile-!"

A shadow flashed across the screen, they heard a dull "Smack!", and the face slid out of the screen. As it fell it revealed the control room behind it. Someone was down on the floor plates, a nameless heap. Another figure ran across the field of pickup and disappeared.

Harper snapped into action first. "That was Silard!" he shouted, "-in the control room! Come on, Steinke!" He was already in motion himself.

Steinke went dead white, but hesitated only an unmeasurable instant. He pounded sharp on Harper's heels. Greene followed without invitation, in a steady run that kept easy pace with them.

They had to wait for a capsule to unload at the tube station. Then all three of them tried to crowd into a two passenger capsule. It refused to start and moments were lost before Greene piled out and claimed another car.

The four minute trip at heavy acceleration seemed an interminable crawl. Harper was convinced that the system had broken down, when the familiar click and sigh announced their arrival at the station under the plant. They jammed each other trying to get out at the same time.

The lift was up; they did not wait for it. That was unwise; they gained no time by it, and arrived at the control level out of breath. Nevertheless, they speeded up when they reached the top, zigzagged frantically around the outer shield, and burst into the control room.

The limp figure was still on the floor, and another, also inert, was near it.

A third figure was bending over the trigger. He looked up as they came in, and charged them. They hit him together, and all three went down. It was two to one, but they got in each other's way. His heavy armor protected him from the force of their blows. He fought with senseless, savage violence.

Harper felt a bright, sharp pain; his right arm went limp and useless. The armored figure was struggling free of them. There was a shout from somewhere behind them: "Hold still!"

He saw a flash with the corner of one eye, a deafening crack hurried on top of it, and re-echoed painfully in the restricted space.

The armored figure dropped back to his knees, balanced there, and then fell heavily on his face. Greene stood in the entrance, a service pistol balanced in his hand.

Harper got up and went over to the trigger. He tried to reduce the power-level adjustment, but his right hand wouldn't carry out his orders, and his left was too clumsy.

"Steinke," he called, "come here! Take over."

Steinke hurried up, nodded as he glanced at the readings, and set busily to work.

It was thus that King found them when he bolted in a very few minutes later.

"Harper!" he shouted, while his quick glance was still taking in the situation. "What's happened?"

Harper told him briefly. He nodded. "I saw the tail end of the fight from my office Steinke!" He seemed to grasp for the first time who was on the trigger. "He can't manage the controls-" He hurried toward him.

Steinke looked up at his approach. "Chief!" he called out, "Chief! I've got my mathematics back!"

King looked bewildered, then nodded vaguely, and let him be. He turned back to Harper. "How does it happen you're here?"

"Me? I'm here to report-we've done it, Chief!"

"Eh?"

"We've finished; it's all done. Erickson stayed behind to complete the power plant installation on the big ship. I came over in the ship we'll use to shuttle between Earth and the big ship, the power plant. Four minutes from Goddard Field to here in her. That's the pilot over there." He pointed to the door, where Greene's solid form partially hid Lentz.

"Wait a minute. You say that everything is ready to install the pile in the ship? You're sure?"

"Positive. The big ship has already flown with our fuel-longer and faster than she will have to fly to reach station in her orbit; I was in it-out in space, Chief! We're all set, six ways from zero."

King stared at the dumping switch, mounted behind glass at the top of the instrument board. "There's fuel enough," he said softly, as if he were alone and speaking only to himself, "there's been fuel enough for weeks."

He walked swiftly over to the switch, smashed the glass with his fist, and pulled it.

The room rumbled and shivered as tons of molten, massive metal, heavier than gold, coursed down channels, struck against baffles, split into a dozen dozen streams, and plunged to rest in leaden receivers-to rest, safe and harmless, until it should be reassembled far out in space.

THE MAN WHO SOLD THE MOON

CHAPTER ONE

"YOU'VE GOT TO BE A BELIEVER!"

George Strong snorted at his partner's declaration. "Delos, why don't you give up? You've been singing this tune for years. Maybe someday men will get to the Moon, though I doubt it. In any case, you and I will never live to see it. The loss of the power satellite washes the matter up for our generation."

D. D. Harriman grunted. "We won't see it if we sit on our fat behinds and don't do anything to make it happen. But we can make it happen."

"Question number one: how? Question number two: why?"

"'Why?' The man asks 'why.' George, isn't there anything in your soul but discounts, and dividends? Didn't you ever sit with a girl on a soft summer night and stare up at the Moon and wonder what was there?"

"Yeah, I did once. I caught a cold."

Harriman asked the Almighty why he had been delivered into the hands of the Philistines. He then turned back to his partner. "I could tell you why, the real 'why,' but you wouldn't understand me. You want to know why in terms of cash, don't you? You want to know how Harriman & Strong and Harriman Enterprises can show a profit, don't you?"

"Yes," admitted Strong, "and don't give me any guff about tourist trade and fabulous lunar jewels. I've had it."

"You ask me to show figures on a brand-new type of enterprise, knowing I can't. It's like asking the Wright brothers at Kitty Hawk to estimate how much money Curtiss-Wright Corporation would someday make out of building airplanes. I'll put it another way, You didn't want us to go into plastic houses, did you? If you had had your way we would still be back in Kansas City, subdividing cow pastures and showing rentals."

Strong shrugged.

"How much has New World Homes made to date?"

Strong looked absent-minded while exercising the talent he brought to the partnership. "Uh . . . $172,946,004.62, after taxes, to the end of the last fiscal year. The running estimate to date is-"

"Never mind. What was our share in the take?"

"Well, uh, the partnership, exclusive of the piece you took personally and then sold to me later, has benefited from New World Homes during the same period by $1 3,010,437.20, ahead of personal taxes. Delos, this double taxation has got to stop. Penalizing thrift is a sure way to run this country straight into-"

"Forget it, forget it! How much have we made out of Skyblast Freight and Antipodes Transways?"

Strong told him.

"And yet I had to threaten you with bodily harm to get you to put up a dime to buy control of the injector patent. You said rockets were a passing fad."

"We were lucky," objected Strong. "You had no way of knowing that there would be a big uranium strike in Australia. Without it, the Skyways group would have left us in the red. For that matter New World Homes would have failed, too, if the roadtowns hadn't come along and given us a market out from under local building codes."

"Nuts on both points. Fast transportation will pay; it always has. As for New World, when ten million families need new houses and we can sell 'em cheap, they'll buy. They won't let building codes stop them, not permanently. We gambled on a certainty. Think back, George: what ventures have we lost money on and what ones have paid off? Everyone of my crack-brain ideas has made money, hasn't it? And the only times we've lost our ante was on conservative, blue-chip investments."

"But we've made money on some conservative deals, too," protested Strong.

"Not enough to pay for your yacht. Be fair about it, George; the Andes Development Company, the integrating pantograph patent, every one of my wildcat schemes I've had to drag you into-and every one of them paid."

"I've had to sweat blood to make them pay," Strong grumbled.

"That's why we are partners. I get a wildcat by the tail; you harness him and put him to work. Now we go to the Moon-and you'll make it pay."

"Speak for yourself. I'm not going to the Moon."

"I am."

"Hummph! Delos, granting that we have gotten rich by speculating on your hunches, it's a steel-clad fact that if you keep on gambling you lose your shirt. There's an old saw about the pitcher that went once too often to the well."

"Damn it, George-I'm going to the Moon! If you won't back me up, let's liquidate and I'll do it alone."

Strong drummed on his desk top. "Now, Delos, nobody said anything about not backing you up."

"Fish or cut bait. Now is the opportunity and my mind's made up. I'm going to be the Man in the Moon."

"Well . . . let's get going. We'll be late to the meeting."

As they left their joint office, Strong, always penny conscious, was careful to switch off the light. Harriman had seen him do so a thousand times; this time he commented. "George, how about a light switch that turns off automatically when you leave a room?"

"Hmm-but suppose someone were left in the room?"

"Well. . . hitch it to stay on only when someone was in the room-key the switch to the human body's heat radiation, maybe."

"Too expensive and too complicated."

"Needn't be. I'll turn the idea over to Ferguson to fiddle with. It should be no larger than the present light switch and cheap enough so that the power saved in a year will pay for it."

"How would it work?" asked Strong.

"How should I know? I'm no engineer; that's for Ferguson and the other educated laddies."

Strong objected, "It's no good commercially. Switching off a light when you leave a room is a matter of temperament. I've got it; you haven't. If a man hasn't got it, you can't interest him in such a switch."

"You can if power continues to be rationed. There is a power shortage now; and there will be a bigger one."

"Just temporary. This meeting will straighten it out."

"George, there is nothing in this world so permanent as a temporary emergency. The switch will sell."

Strong took out a notebook and stylus. "I'll call Ferguson in about it tomorrow."

Harriman forgot the matter, never to think of it again. They had reached the roof; he waved to a taxi, then turned to Strong. "How much could we realize if we unloaded our holdings in Roadways and in Belt Transport Corporation-yes, and in New World Homes?"

"Huh? Have you gone crazy?"

"Probably. But I'm going to need all the cash you can shake loose for me. Roadways and Belt Transport are no good anyhow; we should have unloaded earlier."

"You are crazy! It's the one really conservative venture you've sponsored."

"But it wasn't conservative when I sponsored it. Believe me, George, roadtowns are on their way out. They are growing moribund, just as the railroads did. In a hundred years there won't be a one left on the continent. What's the formula for making money, George?"

"Buy low and sell high."

"That's only half of it. . . your half. We've got to guess which way things are moving, give them a boost, and see that we are cut in on the ground floor. Liquidate that stuff, George; I'll need money to operate." The taxi landed; they got in and took off.

The taxi delivered them to the roof of the Hemisphere Power Building they went to the power syndicate's board room, as far below ground as the landing platform was above-in those days, despite years of peace, tycoons habitually came to rest at spots relatively immune to atom bombs. The room did not seem like a bomb shelter; it appeared to be a chamber in a luxurious penthouse, for a "view window" back of the chairman's end of the table looked out high above the city, in convincing, live stereo, relayed from the roof.

The other directors were there before them. Dixon nodded as they came in, glanced at his watch finger and said, "Well, gentlemen, our bad boy is here, we may as well begin." He took the chairman's seat and rapped for order.

"The minutes of the last meeting are on your pads as usual. Signal when ready." Harriman glanced at the summary before him and at once flipped a switch on the table top; a small green light flashed on at his place. Most of the directors did the same.

"Who's holding up the procession?" inquired Harriman, looking around. "Oh-you, George. Get a move on."

"I like to check the figures," his partner answered testily, then flipped his own switch. A larger green light showed in front of Chainnan Dixon, who then pressed a button; a transparency, sticking an inch or two above the table top in front of him lit up with the word RECORDING.

"Operations report," said Dixon and touched another switch. A female voice came out from nowhere. Harriman followed the report from the next sheet of paper at his place. Thirteen Curie-type power piles were now in operation, up five from the last meeting. The Susquehanna and Charleston piles had taken over the load previously borrowed from Atlantic Roadcity and the roadways of that city were now up to normal speed. It was expected that the Chicago-Angeles road could be restored to speed during the next fortnight. Power would continue to be rationed but the crisis was over.

All very interesting but of no direct interest to Harriman. The power crisis that had been caused by the explosion of the power satellite was being satisfactorily met-very good, but Harriman's interest in it lay in the fact that the cause of interplanetary travel had thereby received a setback from which it might not recover.

When the Harper-Erickson isotopic artificial fuels had been developed three years before it had seemed that, in addition to solving the dilemma of an impossibly dangerous power source which was also utterly necessary to the economic life of the continent, an easy means had been found to achieve interplanetary travel.

The Arizona power pile had been installed in one of the largest of the Antipodes rockets, the rocket powered with isotopic fuel created in the power pile itself, and the whole thing was placed in an orbit around the Earth. A much smaller rocket had shuttled between satellite and Earth, carrying supplies to the staff of the power pile, bringing back synthetic radioactive fuel for the power-hungry technology of Earth.

As a director of the power syndicate Harriman had backed the power satellite-with a private ax to grind: he expected to power a Moon ship with fuel manufactured in the power satellite and thus to achieve the first trip to the Moon almost at once. He had not even attempted to stir the Department of Defense out of its sleep; he wanted no government subsidy-the job was a cinch; anybody could do it-and Harriman would do it. He had the ship; shortly he would have the fuel.

The ship had been a freighter of his own Antipodes line, her chem-fuel motors replaced, her wings removed. She still waited, ready for fuel-the recommissioned Santa Maria, nee City of Brisbane.

But the fuel was slow in coming. Fuel had to be eannarked for the shuttle rocket; the power needs of a rationed continent came next-and those needs grew faster than the power satellite could turn out fuel. Far from being ready to supply him for a "useless" Moon trip, the syndicate had seized on the safe but less efficient low temperature uranium-salts and heavy water, Curie-type power piles as a means of using uranium directly to meet the ever growing need for power, rather than build and launch more satellites.

Unfortunately the Curie piles did not provide the fierce star-interior conditions necessary to breeding the isotopic fuels needed for an atomic-powered rocket. Harriman had reluctantly come around to the notion that he would have to use political pressure to squeeze the necessary priority for the fuels he wanted for the Santa Maria.

Then the power satellite had blown up.

Harriman was stirred out of his brown study by Dixon's voice. "The operations report seems satisfactory, gentlemen. If there is no objection, it will be recorded as accepted. You will note that in the next ninety days we will be back up to the power level which existed before we were forced to close down the Arizona pile."

"But with no provision for future needs," pointed out Harriman. "There have been a lot of babies born while we have been sitting here."

"Is that an objection to accepting the report, D.D.?"

"No."

"Very well. Now the public relations report-let me call attention to the first item, gentlemen. The vice-president in charge recommends a schedule of annuities, benefits, scholarships and so forth for dependents of the staff of the power satellite and of the pilot of the Charon: see appendix 'C'."

A director across from Harriman-Phineas Morgan, chairman of the food trust, Cuisine, Incorporated-protested, "What is this, Ed? Too bad they were killed of course, but we paid them skyhigh wages and carried their insurance to boot. Why the charity?"

Harriman grunted. "Pay it-I so move. It's peanuts. 'Do not bind the mouths of the kine who tread the grain.'"

"I wouldn't call better than nine hundred thousand 'peanuts,'" protested Morgan.

"Just a minute, gentlemen-" It was the vice-president in charge of public relations, himself a director. "If you'll look at the breakdown, Mr. Morgan, you will see that eighty-five percent of the appropriation will be used to publicize the gifts."

Morgan squinted at the figures. "Oh-why didn't you say so? Well, I suppose the gifts can be considered unavoidable overhead, but it's a bad precedent."

"Without them we have nothing to publicize."

"Yes, but-"

Dixon rapped smartly. "Mr. Harriman has moved acceptance. Please signal your desires." The tally board glowed green; even Morgan, after hesitation, okayed the allotment. "We have a related item next," said Dixon. "A Mrs.-uh, Garfield, through her attorneys, alleges that we are responsible for the congenital crippled condition of her fourth child. The putative facts are that her child was being born just as the satellite exploded and that Mrs. Garfield was then on the meridian underneath the satellite. She wants the court to award her half a million."

Morgan looked at Harriman. "Delos, I suppose that you will say to settle out of court."

"Don't be silly. We fight it."

Dixon looked around, surprised. "Why, D.D.? It's my guess we could settle for ten or fifteen thousand-and that was what I was about to recommend. I'm surprised that the legal department referred it to publicity."

"It's obvious why; it's loaded with high explosive. But we should fight, regardless of bad publicity. It's not like the last case; Mrs. Garfield and her brat are not our people. And any dumb fool knows you can't mark a baby by radioactivity at birth; you have to get at the germ plasm of the previous generation at least. In the third place, if we let this get by, we'll be sued for every double-yolked egg that's laid from now on. This calls for an open allotment for defense and not one damned cent for compromise."

"It might be very expensive," observed Dixon.

"It'll be more expensive not to fight. If we have to, we should buy the judge."

The public relations chief whispered to Dixon, then announced, "I support Mr. Harriman's view. That's my department's recommendation."

It was approved. "The next item," Dixon went on, "is a whole sheaf of suits arising out of slowing down the roadcities to divert power during the crisis. They alleged loss of business, loss of time, loss of this and that, but they are all based on the same issue. The most touchy, perhaps, is a stockholder's suit which claims that Roadways and this company are so interlocked that the decision to divert the power was not done in the interests of the stockholders of Roadways. Delos, this is your pidgin; want to speak on it?"

"Forget it."

"Why?"

"Those are shotgun suits. This corporation is not responsible; I saw to it that Roadways volunteered to sell the power because I anticipated this. And the directorates don't interlock; not on paper, they don't. That's why dummies were born. Forget it-for every suit you've got there, Roadways has a dozen. We'll beat them."

"What makes you so sure?"

"Well-" Harriman lounged back and hung a knee over the arm of his chair. "-a good many years ago I was a Western Union messenger boy. While waiting around the

office I read everything I could lay hands on, including the contract on the back of the telegram forms. Remember those? They used to come in big pads of yellow paper; by writing a message on the face of the form you accepted the contract in the fine print on the backT only most people didn't realize that. Do you know what that contract obhgated the company to do?"

"Send a telegram, I suppose."

"It didn't promise a durn thing. The company offered to attempt to deliver the message, by camel caravan or snail back, or some equally streamlined method, if convenient, but in event of failure, the company was not responsible. I read that fine print until I knew it by heart. It was the loveliest piece of prose I had ever seen. Since then all my contracts have been worded on the same principle. Anybody who sues Roadways will find that Roadways can't be sued on the element of time, because time is not of the essence. In the event of complete non-performance-which hasn't happened yet-Roadways is financially responsible only for freight charges or the price of the personal transportation tickets. So forget it."

Morgan sat up. "D.D., suppose I decided to run up to my country place tonight, by the roadway, and there was a failure of some sort so that I didn't get there until tomorrow? You mean to say Roadways is not liable?"

Harriman grinned. "Roadways is not liable even if you starve to death on the trip. Better use your copter." He turned back to Dixon. "I move that we stall these suits and let Roadways carry the ball for us."

"The regular agenda being completed," Dixon announced later, "time is allotted for our colleague, Mr. Harriman, to speak on a subject of his own choosing. He has not listed a subject in advance, but we will listen until it is your pleasure to adjourn."

Morgan looked sourly at Harriman. "I move we adjourn."

Harriman grinned. "For two cents I'd second that and let you die of curiosity." The motion failed for want of a second. Harriman stood up.

"Mr. Chairman, friends-" He then looked at Morgan. "-and associates. As you know, I am interested in space travel."

Dixon looked at him sharply. "Not that again, Delos! If I weren't in the chair, I'd move to adjourn myself."

"'That again'," agreed Harriman. "Now and forever. Hear me out. Three years ago, when we were crowded into moving the Arizona power pile out into space, it looked as if we had a bonus in the shape of interplanetary travel. Some of you here joined with me in forming Spaceways, Incorporated, for experimentation, exploration-and exploitation.

"Space was conquered; rockets that could establish orbits around the globe could be modified to get to the Moon-and from there, anywhere! It was just a matter of doing it. The problems remaining were financial-and political.

"In fact, the real engineering problems of space travel have been solved since World World II. Conquering space has long been a matter of money and politics. But it did seem that the Harper-Erickson process, with its concomitant of a round-the-globe rocket and a practical economical rocket fuel, had at last made it a very present thing, so close indeed that I did not object when the early allotments of fuel from the satellite were earmarked for industrial power."

He looked around. "I shouldn't have kept quiet. I should have squawked and brought pressure and made a hairy nuisance of myself until you allotted fuel to get rid of me. For now we have missed our best chance. The satellite is gone; the source of fuel is gone. Even the shuttle rocket is gone. We are back where we were in 19 50. Therefore-"

He paused again. "Therefore-I propose that we build a space ship and send it to the Moon!"

Dixon broke the silence. "Delos, have you come unzipped? You just said that it was no longer possible. Now you say to build one."

"I didn't say it was impossible; I said we had missed our best chance. The time is overripe for space travel. This globe grows more crowded every day. In spite of technical advances the daily food intake on this planet is lower than it was thirty years ago-and we get 46 new babies every minute, 6;,ooo every day, 25,ooo,ooo every year. Our race is about to burst forth to the planets; if we've got the initiative Cod promised an oyster we will help it along!

"Yes, we missed our best chance-but the engineering details can be solved. The real question is who's going to foot the bill? That is why I address you gentlemen, for right here in this room is the financial capital of this planet."

Morgan stood up. "Mr. Chairman, if all company business is finished, I ask to be excused."

Dixon nodded. Harriman said, "So long, Phineas. Don't let me keep you. Now, as I was saying, it's a money problem and here is where the money is. I move we finance a trip to the Moon."

The proposal produced no special excitement; these men knew Harriman. Presently Dixon said, "Is there a second to D.D.'s proposal?"

"Just a minute, Mr. Chairman-" It was Jack Entenza, president of Two-Continents Amusement Corporation. "I want to ask Delos some questions." He turned to Harriman. "D.D., you know I strung along when you set up Spaceways. It seemed like a cheap venture and possibly profitable in educational and scientific values-I never did fall for space liners plying between planets; that's fantastic. I don't mind playing along with your dreams to a moderate extent, but how do you propose to get to the Moon? As you say, you are fresh out of fuel."

Harriman was still grinning. "Don't kid me, Jack, I know why you came along. You weren't interested in science; you've never contributed a dime to science. You expected a monopoly on pix and television for your chain. Well, you'll get 'em, if you stick with me-otherwise I'll sign up 'Recreations, Unlimited'; they'll pay just to have you in the eye."

Entenza looked at him suspiciously. "What will it cost me?"

"Your other shirt, your eye teeth, and your wife's wedding ring-unless 'Recreations' will pay more."

"Damn you, Delos, you're crookeder than a dog's hind leg."

"From you, Jack, that's a compliment. We'll do business. Now as to how I'm going to get to the Moon, that's a silly question. There's not a man in here who can cope with anything more complicated in the way of machinery than a knife and fork. You can't tell a left-handed monkey wrench from a reaction engine, yet you ask me for blue prints of a space ship.

"Well, I'll tell you how I'll get to the Moon. I'll hire the proper brain boys, give them everything they want, see to it that they have all the money they can use, sweet talk them into long hours-then stand back and watch them produce. I'll run it like the Manhattan Project-most of you remember the A-bomb job; shucks, some of you can remember the Mississippi Bubble. The chap that headed up the Manhattan Project didn't know a neutron from Uncle George-but he got results. They solved that trick four ways. That's why I'm not worried about fuel; we'll get a fuel. We'll get several fuels."

Dixon said, "Suppose it works? Seems to me you're asking us to bankrupt the company for an exploit with no real value, aside from pure science, and a one-shot entertainment exploitation. I'm not against you-I wouldn't mind putting in ten, fifteen thousand to support a worthy venture-but I can't see the thing as a business proposition."

Harriman leaned on his fingertips and stared down the long table. "Ten or fifteen thousand gum drops! Dan, I mean to get into you for a couple of megabucks at least-and before we're through you'll be hollering for more stock. This is the greatest real estate venture since the Pope carved up the New World. Don't ask me what we'll make a profit on; I can't itemize the assets-but I can lump them. The assets are a planet-a whole planet, Dan, that's never been touched. And more planets beyond it. If we can't figure out ways to swindle a few fast bucks out of a sweet set-up like that then you and I had better both go on relief. It's like having Manhattan Island offered to you for twenty-four dollars and a case of whiskey."

Dixon grunted. "You make it sound like the chance of a lifetime."

"Chance of a lifetime, nuts! This is' the greatest chance in all history. It's raining soup; grab yourself a bucket."

Next to Entenza sat Gaston P. Jones, director of Trans-America and half a dozen other banks, one of the richest men in the room. He carefully removed two inches of cigar ash, then said dryly, "Mr. Harriman, I will sell you all of my interest in the Moon, present and future, for fifty cents."

Harriman looked delighted. "Sold!"

Entenza had been pulling at his lower lip and listening with a brooding expression on his face. Now he spoke up. "Just a minute, Mr. Jones-I'll give you a dollar for it."

"Dollar fifty," answered Harriman.

"Two dollars," Entenza answered slowly.

"Five!"

They edged each other up. At ten dollars Entenza let Harriman have it and sat back, still looking thoughtful. Harriman looked happily around. "Which one of you thieves is a lawyer?" he demanded. The remark was rhetorical; out of seventeen directors the normal percentage-eleven, to be exact-were lawyers. "Hey, Tony," he continued, "draw me up an instrument right now that will tie down this transaction so that it couldn't be broken before the Throne of God. All of Mr. Jones' interests, rights, title, natural interest, future interests, interests held directly or through ownership of stock, presently held or to be acquired, and so forth and so forth. Put lots of Latin in it. The idea is that every interest in the Moon that Mr. Jones now has or may acquire is mine-for a ten spot, cash in hand paid." Harriman slapped a bill down on the table. "That right, Mr. Jones?"

Jones smiled briefly. "That's right, young fellow." He pocketed the bill. "I'll frame this for my grandchildren-to show them how easy it is to make money." Entenza's eyes darted from Jones to Harriman.

"Good!" said Harriman. "Gentlemen, Mr. Jones has set a market price for one human being's interest in our satellite. With around three billion persons on this globe that sets a price on the Moon of thirty billion dollars." He hauled out a wad of money. "Any more suckers? I'm buying every share that's offered, ten bucks a copy."

"I'll pay twenty!" Entenza rapped out.

Harriman looked at him sorrowfully. "Jack-don't do that! We're on the same team. Let's take the shares together, at ten."

Dixon pounded for order. "Gentlemen, please conduct such transactions after the meeting is adjourned. Is there a second to Mr. Harriman's motion?"

Gaston Jones said, "I owe it to Mr. Harriman to second his motion, without prejudice. Let's get on with a vote."

No one objected; the vote was taken. It went eleven to three against Harriman-Harriman, Strong, and Entenza for; all others against. Harriman popped up before anyone could move to adjourn and said, "I expected that. My real purpose is this: since the company is no longer interested in space travel, will it do me the courtesy of selling me what I may need of patents, processes, facilities, and so forth now held by the company but relating to space travel and not relating to the production of power on this planet? Our brief honeymoon with the power satellite built up a backlog; I want to use it. Nothing formal-just a vote that it is the policy of the company to assist me in any way not inconsistent with the primary interest of the company. How about it, gentlemen? It'll get me out of your hair."

Jones studied his cigar again. "I see no reason why we should not accommodate him, gentlemen . . . and I speak as the perfect disinterested party."

"I think we can do it, Delos," agreed Dixon, "only we won't sell you anything, we'll lend it to you. Then, if you happen to hit the jackpot, the company still retains an interest. Has anyone any objection?" he said to the room at large.

There was none; the matter was recorded as company policy and the meeting was adjourned. Harriman stopped to whisper with Entenza and, finally, to make an appointment. Gaston Jones stood near the door, speaking privately with Chairman Dixon. He beckoned to Strong, Harriman's partner. "George, may I ask a personal question?"

"I don't guarantee to answer. Go ahead."

"You've always struck me as a level-headed man. Tell me-why do you string along with Harriman? Why, the man's mad as a hatter."

Strong looked sheepish. "I ought to deny that, he's my friend . . . but I can't. But dawggone it! Every time Delos has a wild hunch, it turns out to be the real thing. I hate to string along-it makes me nervous-but I've learned to trust his hunches rather than another man's sworn financial report."

Jones cocked one brow. "The Midas touch, eh?"

"You could call it that."

"Well, remember what happened to King Midas-in the long run. Good day, gentlemen."

Harriman had left Entenza; Strong joined him. Dixon stood staring at them, his face very thoughtful.

CHAPTER TWO

HARRIMAN'S HOME had been built at the time when everyone who could was decentralizing and going underground. Above ground there was a perfect little Cape Cod cottage-the clapboards of which concealed armor plate- and most delightful, skillfully landscaped grounds; below ground there was four or five times as much floorspace, immune to anything but a direct hit and possessing an independent air supply with reserves for one thousand hours. During the Crazy Years the conventional wall surrounding the grounds had been replaced by a wall which looked the same but which would stop anything short of a broaching tank-nor were the gates weak points; their gadgets were as personally loyal as a well-trained dog.

Despite its fortress-like character the house was comfortable. It was also very expensive to keep up.

Harriman did not mind the expense; Charlotte liked the house and it gave her something to do. When they were first married she had lived uncomplainingly in a cramped flat over a grocery store; if Charlotte now liked to play house in a castle, Harriman did not mind.

But he was again starting a shoe-string venture; the few thousand per month of ready cash represented by the household expenses might, at some point in the game, mean the difference between success and the sheriff's bailiffs. That night at dinner, after the servants fetched the coffee, and port, he took up the matter.

"My dear, I've been wondering how you would like a few months in Florida."

His wife stared at him. "Florida? Delos, is your mind wandering? Florida is unbearable at this time of the year."

"Switzerland, then. Pick your own spot. Take a real vacation, as long as you like."

"Delos, you are up to something."

Harriman sighed. Being "up to something" was the unnameable and unforgivable crime for which any American male could be indicted, tried, convicted, and sentenced in one breath. He wondered how things had gotten rigged so that the male half of the race must always behave to suit feminine rules and feminine logic, like a snotty-nosed school boy in front of a stern teacher.

"In a way, perhaps. We've both agreed that this house is a bit of a white elephant. I was thinking of closing it, possibly even of disposing of the land- it's worth more now than when we bought it. Then, when we get around to it, we could build something more modern and a little less like a bombproof."

Mrs. Harriman was temporarily diverted. "Well, I have thought it might be nice to build another place, Delos-say a little chalet tucked away in the mountains, nothing ostentatious, not more than two servants, or three. But we won't close this place until it's built, Delos-after all, one must live somewhere."

"I was not thinking of building right away," he answered cautiously. "Why not? We're not getting any younger, Delos; if we are to enjoy the good things of life we had better not make delays. You needn't worry about it; I'll manage everything."

Harriman turned over in his mind the possibility of letting her build to keep her busy. If he earmarked the cash for her "little chalet," she would live in a hotel nearby

wherever she decided to build it-and he could sell this monstrosity they were sitting in. With the nearest roadcity now less than ten miles away, the land should bring more than Charlotte's new house would cost and he would be rid of the monthly drain on his pocketbook.

"Perhaps you are right," he agreed. "But suppose you do build at once; you won't be living here; you'll be supervising every detail of the new place. I say we should unload this place; it's eating its head off in taxes, upkeep, and running expenses."

She shook her head. "Utterly out of the question, Delos. This is my home." He ground out an almost unsmoked cigar. "I'm sorry, Charlotte, but you can't have it both ways. If you build, you can't stay here. If you stay here, we'll close these below-ground catacombs, fire about a dozen of the parasites I keep stumbling over, and live in the cottage on the surface. I'm cutting expenses."

"Discharge the servants? Delos, if you think that I will undertake to make a home for you without a proper staff, you can just-"

"Stop it." He stood up and threw his napkin down. "It doesn't take a squad of servants to make a home. When we were first married you had no servants-and you washed and ironed my shirts in the bargain. But we had a home then. This place is owned by that staff you speak of. Well, we're getting rid of them, all but the cook and a handy man."

She did not seem to hear. "Delos! sit down and behave yourself. Now what's all this about cutting expenses? Are you in some sort of trouble? Are you? Answer me!"

He sat down wearily and answered, "Does a man have to be in trouble to want to cut out unnecessary expenses?"

"In your case, yes. Now what is it? Don't try to evade me."

"Now see here, Charlotte, we agreed a long time ago that I would keep business matters in the office. As for the house, we simply don't need a house this size. It isn't as if we had a passel of kids to fill up-"

"Oh! Blaming me for that again!"

"Now see here, Charlotte," he wearily began again, "I never did blame you and I'm not blaming you now. All I ever did was suggest that we both see a doctor and find out what the trouble was we didn't have any kids. And for twenty years you've been making me pay for that one remark. But that's all over and done with now; I was simply making the point that two people don't fill up twenty-two rooms. I'll pay a reasonable price for a new house, if you want it, and give you an ample household allowance." He started to say how much, then decided not to. "Or you can close this place and live in the cottage above. It's just that we are going to quit squandering money-for a while."

She grabbed the last phrase. "'For a while.' What's going on, Delos? What are you going to squander money on?" When he did not answer she went on. "Very well, if you won't tell me, I'll call George. He will tell me."

"Don't do that, Charlotte. I'm warning you. I'll-"

"You'll what!" She studied his face. "I don't need to talk to George; I can tell by looking at you. You've got the same look on your face you had when you came home and told me that you had sunk all our money in those crazy rockets."

"Charlotte, that's not fair. Skyways paid off. It's made us a mint of money."

"That's beside the point. I know why you're acting so strangely; you've got that old trip-to-the-Moon madness again. Well, I won't stand for it, do you hear? I'll stop you;

I don't bave to put up with it. I'm going right down in the morning and see Mr. Kamens and find out what has to be done to make you behave yourself." The cords of her neck jerked as she spoke.

He waited, gathering his temper before going on. "Charlotte, you have no real cause for complaint. No matter what happens to me, your future is taken care of."

"Do you think I want to be a widow?"

He looked thoughtfully at her. "I wonder."

"Why- Why, you heartless beast." She stood up. "We'll say no more about it; do you mind?" She left without waiting for an answer.

His "man" was waiting for him when he got to his room. Jenkins got up hastily and started drawing Harriman's bath. "Beat it," Harriman grunted. "I can undress myself."

"You require nothing more tonight, sir?"

"Nothing. But don't go unless you feel like it. Sit down and pour yourself a drink. Ed, how long you been married?"

"Don't mind if I do." The servant helped himself. "Twenty-three years, come May, sir."

"How's it been, if you don't mind me asking?" -

"Not bad. Of course there have been times-"

"I know what you mean. Ed, if you weren't working for me, what would you be doing?"

"Well, the wife and I have talked many times of opening a little restaurant, nothing pretentious, but good. A place where a gentleman could enjoy a quiet meal of good food."

"Stag, eh?"

"No, not entirely, sir-but there would be a parlor' for gentlemen only. Not even waitresses, I'd tend that room myself."

"Better look around for locations, Ed. You're practically in business."

CHAPTER THREE

STRONG ENTERED THEIR JOINT OFFICES the next morning at a precise nine o'clock, as usual. He was startled to find Harriman there before him. For Harriman to fail to show up at all meant nothing; for him to beat the clerks in was significant.

Harriman was busy with a terrestrial globe and a book-the current Nautical Almanac, Strong observed. Harriman barely glanced up. "Morning, George. Say, who've we got a line to in Brazil?"

"Why?"

"I need some trained seals who speak Portuguese, that's why. And some who speak Spanish, too. Not to mention three or four dozen scattered around in this country. I've come across something very, very interesting. Look here. . . according to these tables the Moon only swings about twentyeight, just short of twenty-nine degrees north and south of the equator." He held a pencil against the globe and spun it. "Like that. That suggest anything?"

"No. Except that you're getting pencil marks on a sixty dollar globe."

"And you an old real estate operator! What does a man own when he buys a parcel of land?"

"That depends on the deed. Usually mineral rights and other subsurface rights are-"

"Never mind that. Suppose he buys the works, without splitting the rights: how far down does he own? How far up does he own?"

"Well, he owns a wedge down to the center of the Earth. That was settled in the slant-drilling and off-set oil lease cases. Theoretically he used to own the space above the land, too, out indefinitely, but that was modified by a series of cases after the commercial airlines came in-and a good thing, for us, too, or we would have to pay tolls every time one of our rockets took off for Australia."

"No, no, no, George! you didn't read those cases right. Right of passage was established-but ownership of the space above the land remained unchanged. And even right of passage was not absolute; you can build a thousand-foot tower on your own land right where airplanes, or rockets, or whatever, have been in the habit of passing and the ships will thereafter have to go above it, with no kick back on you. Remember how we had to lease the air south of Hughes Field to insure that our approach wasn't built up?"

Strong looked thoughtful. "Yes. I see your point. The ancient principle of land ownership remains undisturbed-down to the center of the Earth, up to infinity. But what of it? It's a purely theoretical matter. You're not planning to pay tolls to operate those spaceships you're always talking about, are you?" He grudged a smile at his own wit.

"Not on your tintype. Another matter entirely. George-who owns the Moon?"

Strong's jaw dropped, literally. "Delos, you're joking."

"I am not. I'll ask you again: if basic law says that a man owns the wedge of sky above his farm out to infinity, who owns the Moon? Take a look at this globe and tell me."

Strong looked. "But it can't mean anything, Delos. Earth laws wouldn't apply to the Moon."

"They apply here and that's where I am worrying about it. The Moon stays constantly over a slice of Earth bounded by latitude twenty-nine north and the same distance south; if one man owned all that belt of Earth-it's roughly the tropical zone-then he'd own the Moon, too, wouldn't he? By all the theories of real property ownership that our courts pay any attention to. And, by direct derivation, according to the sort of logic that lawyers like, the various owners of that belt of land have title-good vendable title-to the Moon somehow lodged collectively in them. The fact that the distribution of the title is a little vague wouldn't bother a lawyer; they grow fat on just such distributed titles every time a will is probated."

"It's fantastic!"

"George, when are you going to learn that 'fantastic' is a notion that doesn't bother a lawyer?"

"You're not planning to try to buy the entire tropical zone-that's what you would have to do."

"No," Harriman said slowly, "but it might not be a bad idea to buy right, title and interest in the Moon, as it may appear, from each of the sovereign countries in that belt. If I thought I could keep it quiet and not run the market up, I might try it. You can buy a

thing awful cheap from a man if he thinks it's worthless and wants to sell before you regain your senses.

"But that's not the plan," he went on. "George, I want corporations- local corporations-in every one of those countries. I want the legislatures of each of those countries to grant franchises to its local corporation for lunar exploration, exploitation, et cetera, and the right to claim lunar soil on behalf of the country-with fee simple, naturally, being handed on a silver platter to the patriotic corporation that thought up the idea. And I want all this done quietly, so that the bribes won't go too high. We'll own the corporations, of course, which is why I need a flock of trained seals. There is going to be one hell of a fight one of these days over who owns the Moon; I want the deck stacked so that we win no matter how the cards are dealt."

"It will be ridiculously expensive, Delos. And you don't even know that you will ever get to the Moon, much less that it will be worth anything after you get there."

"We'll get there! It'll be more expensive not to establish these claims. Anyhow it need not be very expensive; the proper use of bribe money is a homoeopathic art-you use it as a catalyst. Back in the middle of the last century four men went from California to Washington with $40,000; it was all they had. A few weeks later they were broke-but Congress had awarded them a billion dollars' worth of railroad right of way. The trick is not to run up the market."

Strong shook his head. "Your title wouldn't be any good anyhow. The Moon doesn't stay in one place; it passes over owned land certainly-but so does a migrating goose."

"And nobody has title to a migrating bird. I get your point-but the Moon always stays over that one belt. If you move a boulder in your garden, do you lose title to it? Is it still real estate? Do the title laws still stand? This is like that group of real estate cases involving wandering islands in the Mississippi, George-the land moved as the river cut new channels, but somebody always owned it. In this case I plan to see to it that we are the 'somebody.'"

Strong puckered his brow. "I seem to recall that some of those island-andriparian cases were decided one way and some another."

"We'll pick the decisions that suit us. That's why lawyers' wives have mink coats. Come on, George; let's get busy."

"On what?"

"Raising the money."

"Oh." Strong looked relieved. "I thought you were planning to use our money."

"I am. But it won't be nearly enough. We'll use our money for the senior financing to get things moving; in the meantime we've got to work out ways to keep the money rolling in." He pressed a switch at his desk; the face of Saul Kamens, their legal chief of staff, sprang out at him. "Hey, Saul, can you slide in for a p0w-wow?"

"WThatever it is, just tell them 'no,'" answered the attorney. "I'll fix it."

"Good. Now come on in-they're moving Hell and I've got an option on the first ten loads."

Kamens showed up in his own good time. Some minutes later Harriman had explained his notion for claiming the Moon ahead of setting foot on it. "Besides those dummy corporations," he went on, "we need an agency that can receive contributions

without having to admit any financial interest on the part of the contributor-like the National Geographic Society."

Kamens shook his head. "You can't buy the National Geographic Society."

"Damn it, who said we were going to? We'll set up our own."

"That's what I started to say."

"Good. As I see it, we need at least one tax-free, non-profit corporation headed up by the right people-we'll hang on to voting control, of course. We'll probably need more than one; we'll set them up as we need them. And we've got to have at least one new ordinary corporation, not tax-free- but it won't show a profit until we are ready. The idea is to let the nonprofit corporations have all of the prestige and all of the publicity-and the other gets all of the profits, if and when. We swap assets around between corporations, always for perfectly valid reasons, so that the non-profit corporations pay the expenses as we go along. Come to think about it, we had better have at least two ordinary corporations, so that we can let one of them go through bankruptcy if we find it necessary to shake out the water. That's the general sketch. Get busy and fix it up so that it's legal, will you?"

Kamens said, "You know, Delos, it would be a lot more honest if you did it at the point of a gun."

"A lawyer talks to me of honesty! Never mind, Saul; I'm not actually going to cheat anyone-"

"Humph!"

"-and I'm just going to make a trip to the Moon. That's what everybody will be paying for; that's what they'll get. Now fix it up so that it's legal, that's a good boy."

"I'm reminded of something the elder Vanderbilt's lawyer said to the old man under similar circumstances: 'It's beautiful the way it is; why spoil it by making it legal?' Okeh, brother gonoph, I'll rig your trap. Anything else?"

"Sure. Stick around, you might have some ideas. George, ask Montgomery to come in, will you?" Montgomery, Harriman's publicity chief, had two virtues in his employer's eyes: he was personally loyal to Harriman, and, secondly, he was quite capable of planning a campaign to convince the public that Lady Godiva wore a Caresse-brand girdle during her famous ride

or that Hercules attributed his strength to Crunchies for breakfast. He arrived with a large portfolio under his arm. "Glad you sent for me, Chief. Get a load of this-" He spread the folder open on Harriman's desk and began displaying sketches and layouts. "Kinsky's work-is that boy hot!" Harriman closed the portfolio. "What outfit is it for?"

"Huh? New World Homes."

"I don't want to see it; we're dumping New World Homes. Wait a minute-don't start to bawl. Have the boys go through with it; I want the price kept up while we unload. But open your ears to another matter." He explained rapidly the new enterprise.

Presently Montgomery was nodding. "When do we start and how much do we spend?"

"Right away and spend what you need to. Don't get chicken about expenses; this is the biggest thing we've ever tackled." Strong flinched; Harriman went on, "Have insomnia over it tonight; see me tomorrow and we'll kick it around."

"Wait a see, Chief. How are you going to sew up all those franchises from the, uh-the Moon states, those countries the Moon passes over, while a big publicity campaign is

going on about a trip to the Moon and how big a thing it is for everybody? Aren't you about to paint yourself into a corner?"

"Do I look stupid? We'll get the franchise before you hand out so much as a filler-you'll get 'em, you and Kamens. That's your first job."

"Hmmm. . . ." Montgomery chewed a thumb nail. "Well, all right-I can see some angles. How soon do we have to sew it up?"

"I give you six weeks. Otherwise just mail your resignation in, written on the skin off your back."

"I'll write it right now, if you'll help me by holding a mirror."

"Damn it, Monty, I know you can't do it in six weeks. But make it fast; we can't take a cent in to keep the thing going until you sew up those franchises. If you dilly-dally, we'll all starve-and we won't get to the Moon, either."

Strong said, "D.D., why fiddle with those trick claims from a bunch of moth-eaten tropical countries? If you are dead set on going to the Moon, let's call Ferguson in and get on with the matter."

"I like your direct approach, George," Harriman said, frowning. "Mmmm back about i 84; or '46 an eager-beaver American army officer captured California. You know what the State Department did?"

"They made him hand it back. Seems he hadn't touched second base, or something. So they had to go to the trouble of capturing it all over again a few months later. Now I don't want that to happen to us. It's not enough just to set foot on the Moon and claim it; we've got to validate that claim in terrestrial courts-or we're in for a peck of trouble. Eh, Saul?"

Kamens nodded. "Remember what happened to Columbus."

"Exactly. We aren't going to let ourselves be rooked the way Columbus was."

Montgomery spat out some thumb nail. "But, Chief-you know damn well those banana-state claims won't be worth two cents after I do tie them up. Why not get a franchise right from the U.N. and settle the matter? I'd as lief tackle that as tackle two dozen cockeyed legislatures. In fact I've got an angle already-we work it through the Security Council and-"

"Keep working on that angle; we'll use it later. You don't appreciate the full mechanics of the scheme, Monty. Of course those claims are worth nothing-except nuisance value. But their nuisance value is all important. Listen: we get to the Moon, or appear about to. Every one of those countries puts up a squawk; we goose them into it through the dummy corporations they have enfranchised. Where do they squawk? To the U.N., of course. Now the big countries on this globe, the rich and important ones, are all in the northern temperate zone. They see what the claims are based on and they take a frenzied look at the globe. Sure enough, the Moon does not pass over a one of them. The biggest country of all-Russia-doesn't own a spadeful of dirt south of twenty-nine north. So they reject all the claims.

"Or do they?" Harriman went on. "The U.S. balks. The Moon passes over Florida and the southern part of Texas. Washington is in a tizzy. Should they back up the tropical countries and support the traditional theory of land title or should they throw their weight to the idea that the Moon belongs to everyone? Or should the United States try to claim the whole thing, seeing as how it was Americans who actually got there first?

"At this point we creep out from under cover. It seems that the Moon ship was owned and the expenses paid by a non-profit corporation chartered by the U.N. itself-"

"Hold it," interrupted Strong. "I didn't know that the U.N. could create corporations?"

"You'll find it can," his partner answered. "How about it, Saul?" Kamens nodded. "Anyway," Harriman continued, "I've already got the corporation. I had it set up several years ago. It can do most anything of an educational or scientific nature-and brother, that covers a lot of ground! Back to the point-this corporation, the creature of the U.N., asks its parent to declare the lunar colony autonomous territory, under the protection of the U.N. We won't ask for outright membership at first because we want to keep it simple-"

"Simple, he calls it!" said Montgomery.

"Simple. This new colony will be a de facto sovereign state, holding title to the entire Moon, and-listen closely!-capable of buying, selling, passing laws, issuing title to land, setting up monopolies, collecting tariffs, et cetera without end. And we own it."

"The reason we get all this is because the major states in the U.N. can't think up a claim that sounds as legal as the claim made by the tropical states, they can't agree among themselves as to how to split up the swag if they were to attempt brute force and the other major states aren't willing to see the United States claim the whole thing. They'll take the easy way out of their dilemma by appearing to retain title in the U.N. itself. The real title, the title controlling all economic and legal matters, will revert to us. Now do you see my point, Monty?"

Montgomery grinned. "Damned if I know if it's necessary, Chief, but I love it. It's beautiful."

"Well, I don't think so," Strong grumbled. "Delos, I've seen you rig some complicated deals-some of them so devious that they turned even my stomach-but this one is the worst yet. I think you've been carried away by the pleasure you get out of cooking up involved deals in which somebody gets double-crossed."

Harriman puffed hard on his cigar before answering, "I don't give a damn, George. Call it chicanery, call it anything you want to. I'm going to the Moon! If I have to manipulate a million people to accomplish it, I'll do it."

"But it's not necessary to do it this way."

"Well, how would you do it?"

"Me? I'd set up a straightforward corporation. I'd get a resolution in Congress making my corporation the chosen instrument of the United States-"

"Bribery?"

"Not necessarily. Influence and pressure ought to be enough. Then I would set about raising the money and make the trip."

"And the United States would then own the Moon?"

"Naturally," Strong answered a little stiffly.

Harriman got up and began pacing. "You don't see it, George, you don't see it. The Moon was not meant to be owned by a single country, even the United States."

"It was meant to be owned by you, I suppose."

"Well, if I own it-for a short while-I won't misuse it and I'll take care that others don't. Damnation, nationalism should stop at the stratosphere. Can you see what would happen if the United States lays claim to the Moon? The other nations won't recognize the claim. It will become a permanent bone of contention in the Security Council-just

when we were beginning to get straightened out to the point where a man could do business planning without having his elbow jogged by a war every few years. The other nations-quite rightfully-will be scared to death of the United States. They will be able to look up in the sky any night and see the main atom-bomb rocket base of the United States staring down the backs of their necks. Are they going to hold still for it? No, sirree-they are going to try to clip off a piece of the Moon for their own national use. The Moon is too big to hold, all at once. There will be other bases established there and presently there will be the worst war this planet has ever seen-and we'll be to blame.

"No, it's got to be an arrangement that everybody will hold still for-and that's why we've got to plan it, think of all the angles, and be devious about it until we are in a position to make it work.

"Anyhow, George, if we claim it in the name of the United States, do you know where we will be, as business men?"

"In the driver's seat," answered Strong.

"In a pig's eye! We'll be dealt right out of the game. The Department of National Defense will say, 'Thank you, Mr. Harriman. Thank you, Mr. Strong. We are taking over in the interests of national security; you can go home now.' And that's just what we would have to do-go home and wait for the next atom war.

"I'm not going to do it, George. I'm not going to let the brass hats muscle in. I'm going to set up a lunar colony and then nurse it along until it is big enough to stand on its own feet. I'm telling you-all of you!-this is the biggest thing for the human race since the discovery of fire. Handled right, it can mean a new and braver world. Handle it wrong and it's a one-way ticket to Armageddon. It's coming, it's coming soon, whether we touch it or not. But I plan to be the Man in the Moon myself-and give it my personal attention to see that it's handled right."

He paused. Strong said, "Through with your sermon, Delos?"

"No, I'm not," Harriman denied testily. "You don't see this thing the right way. Do you know what we may find up there?" He swung his arm in an arc toward the ceiling. "People!"

"On the Moon?" said Kamens.

"Why not on the Moon?" whispered Montgomery to Strong.

"No, not on the Moon-at least I'd be amazed if we dug down and found anybody under that airless shell. The Moon has had its day; I was speaking of the other planets-Mars and Venus and the satellites of Jupiter. Even maybe out at the stars themselves. Suppose we do find people? Think what it will mean to us. We've been alone, all alone, the only intelligent race in the only world we know. We haven't even been able to talk with dogs or apes. Any answers we got we had to think up by ourselves, like deserted orphans. But suppose we find people, intelligent people, who have done some thinking in their own way. We wouldn't be alone any more! We could look up at the stars and never be afraid again."

He finished, seeming a little tired and even a little ashamed of his outburst, like a man surprised in a private act. He stood facing them, searching their faces.

"Gee whiz, Chief," said Montgomery, "I can use that. How about it?"

"Think you can remember it?"

"Don't need to-I flipped on your 'silent steno."

"Well, damn your eyes!"

"We'll put it on video-in a play I think."

Harriman smiled almost boyishly. "I've never acted, but if you think it'll do any good, I'm game."

"Oh, no, not you, Chief," Montgomery answered in horrified tones. "You're not the type. I'll use Basil Wilkes-Booth, I think. With his organlike voice and that beautiful archangel face, he'll really send 'em."

Harriman glanced down at his paunch and said gruffly, "O.K.-back to business. Now about money. In the first place we can go after straight donations to one of the non-profit corporations, just like endowments for colleges. Hit the upper brackets, where tax deductions really matter. How much do you think we can raise that way?"

"Very little," Strong opined. "That cow is about milked dry."

"It's never milked dry, as long as there are rich men around who would rather make gifts than pay taxes. How much will a man pay to have a crater on the Moon named after him?"

"I thought they all had names?" remarked the lawyer.

"Lots of them don't-and we have the whole back face that's not touched yet. We won't try to put down an estimate today; we'll just list it. Monty, I want an angle to squeeze dimes out of the school kids, too. Forty million school kids 'at a dime a head is $4,000,000.00-we can use that."

"Why stop at a dime?" asked Monty. "If you get a kid really interested he'll scrape together a dollar."

"Yes, but what do we offer him for it? Aside from the honor of taking part in a noble venture and so forth?"

"Mmmm. . . ." Montgomery used up more thumb nail. "Suppose we go after both the dimes and the dollars. For a dime he gets a card saying that he's a member of the Moonbeam club-"

"No, the 'Junior Spacemen'."

"O.K., the Moonbeams will be girls-and don't forget to rope the Boy Scouts and Girl Scouts into it, too. We give each kid a card; when he kicks in another dime, we punch it. When he's punched out a dollar, we give him a certificate, suitable for framing, with his name and some process engraving, and on the back a picture of the Moon."

"On the front," answered Harriman. "Do it in one print job; it's cheaper and it'll look better. We give him something else, too, a steelclad guarantee that his name will be on the rolls of the Junior Pioneers of the Moon, which same will be placed in a monument to be erected on the Moon at the landing site of the first Moon ship-in microfilm, of course; we have to watch weight."

"Fine!" agreed Montgomery. "Want to swap jobs, Chief? V/hen he gets up to ten dollars we give him a genuine, solid gold-plated shooting star pin ~nd he's a senior Pioneer, with the right to vote or something or other. And his name goes outside of the monument-microengraved on a platinum strip."

Strong looked as if he had bitten a lemon. "What happens when he reaches a hundred dollars?" he asked.

"Why, then," Montgomery answered happily, "we give him another card and he can start over. Don't worry about it, Mr. Strong-if any kid goes that high, he'll have his reward. Probably we will take him on an inspection tour of the ship before it takes off and

give him, absolutely free, a picture of himself standing in front of it, with the pilot's own signature signed across the bottom by some female clerk."

"Chiseling from kids. Bah!"

"Not at all," answered Montgomery in hurt tones. "Intangibles are the most honest merchandise anyone can sell. They are always worth whatever you are willing to pay for them and they never wear out. You can take them to your grave untarnished."

"Hmmmph!"

Harriman listened to this, smiling and saying nothing. Kamens cleared his throat. "If you two ghouls are through cannibalizing the youth of the land, I've another idea."

"Spill it."

"George, you collect stamps, don't you?"

"Yes."

"How much would a cover be worth which had been to the Moon and been cancelled there?"

"Huh? But you couldn't, you know."

"I think we could get our Moon ship declared a legal post office substation without too much trouble. What would it be worth?"

"Uh, that depends on how rare they are."

"There must be some optimum number which will fetch a maximum return. Can you estimate it?"

Strong got a faraway look in his eye, then took out an old-fashioned pencil and commenced to figure. Harriman went on, "Saul, my minor success in buying a share in the Moon from Jones went to my head. How about selling building lots on the Moon?"

"Let's keep this serious, Delos. You can't do that until you've landed there."

"I am serious. I know you are thinking of that ruling back in the 'forties that such land would have to be staked out and accurately described. I want to sell land on the Moon. You figure out a way to make it legal. I'll sell the whole Moon, if I can-surface rights, mineral rights, anything."

"Suppose they want to occupy it?"

"Fine. The more the merrier. I'd like to point out, too, that we'll be in a position to assess taxes on what we have sold. If they don't use it and won't pay taxes, it reverts to us. Now you figure out how to offer it, without going to jail. You may have to advertise it abroad, then plan to peddle it personally in this country, like Irish Sweepstakes tickets."

Kamens looked thoughtful. "We could incorporate the land company in Panama and advertise by video and radio from Mexico. Do you really think you can sell the stuff?"

"You can sell snowballs in Greenland," put in Montgomery. "It's a matter of promotion."

Harriman added, "Did you ever read about the Florida land boom, Saul? People bought lots they had never seen and sold them at tripled prices without ever having laid eyes on them. Sometimes a parcel would change hands a dozen times before anyone got around to finding out that the stuff was ten-foot deep in water. We can offer bargains better than that-an acre, a guaranteed dry acre with plenty of sunshine, for maybe ten dollars-or a thousand acres at a dollar an acre. Who's going to turn down a bargain like that? Particularly after the rumor gets around that the Moon is believed to be loaded with uranium?"

"Is it?"

"How should I know? When the boom sags a little we will announce the selected location of Luna City-and it will just happen to work out that the land around the site is still available for sale. Don't worry, Saul, if it's real estate, George and I can sell it. Why, down in the Ozarks, where the land stands on edge, we used to sell both sides of the same acre." Harriman looked thoughtful. "I think we'll reserve mineral rights-there just might actually be uranium there!"

Kamens chuckled. "Delos, you are a kid at heart. Just a great big, overgrown, lovable-juvenile delinquent."

Strong straightened up. "I make it half a million," he said.

"Half a million what?" asked Harriman.

"For the cancelled philatelic covers, of course. That's what we were talking about. Five thousand is my best estimate of the number that could be placed with serious collectors and with dealers. Even then we will have to discount them to a syndicate and hold back until the ship is built and the trip looks like a probability."

"Okay," agreed Harriman. "You handle it. I'll just note that we can tap you for an extra half million toward the end."

"Don't I get a commission?" asked Kamens. "I thought of it."

"You get a rising vote of thanks-and ten acres on the Moon. Now what other sources of revenue can we hit?"

"Don't you plan to sell stock?" asked Kamens.

"I was coming to that. Of course-but no preferred stock; we don't want to be forced through a reorganization. Participating common, non-voting-"

"Sounds like another banana-state corporation to me."

"Naturally-but I want some of it on the New York Exchange, and you'll have to work that out with the Securities Exchange Commission somehow. Not too much of it-that's our show case and we'll have to keep it active and moving up."

"Wouldn't you rather I swam the Hellespont?"

"Don't be like that, Saul. It beats chasing ambulances, doesn't it?"

"I'm not sure."

"Well, that's what I want you-wups!" The screen on Harriman's desk had come to life. A girl said, "Mr. Harriman, Mr. Dixon is here. He has no appointment but he says that you want to see him."

"I thought I had that thing shut off," muttered Harriman, then pressed his key and said, "O.K., show him in."

"Very well, sir-oh, Mr. Harriman, Mr. Entenza came in just this second."

"Look who's talking," said Kamens.

Dixon came in with Entenza behind him. He sat down, looked around, started to speak, then checked himself. He looked around again, especially at Entenza.

"Go ahead, Dan," Harriman encouraged him. "'Tain't nobody here at all but just us chickens."

Dixon made up his mind. "I've decided to come in with you, D.D.," he announced. "As an act of faith I went to the trouble of getting this." He took a formal-looking instrument from his pocket and displayed it. It was a sale of lunar rights, from Phineas Morgan to Dixon, phrased in exactly the same fashion as that which Jones had granted to Harriman.

Entenza looked startled, then dipped into his own inner coat pocket. Out came three more sales contracts of the same sort, each from a director of the power syndicate. Harriman cocked an eyebrow at them. "Jack sees you and raises you two, Dan. You want to call?"

Dixon smiled ruefully. "I can just see him." He added two more to the pile, grinned and offered his hand to Entenza.

"Looks like a stand off." Harriman decided to say nothing just yet about seven telestated contracts now locked in his desk-after going to bed the night before he had been quite busy on the phone almost till midnight. "Jack, how much did you pay for those things?"

"Standish held out for a thousand; the others were cheap."

"Damn it, I warned you not to run the price up. Standish will gossip. How about you, Dan?"

"I got them at satisfactory prices."

"So you won't talk, eh? Never mind-gentlemen, how serious are you about this? How much money did you bring with you?"

Entenza looked to Dixon, who answered, "How much does it take?"

"How much can you raise?" demanded Harriman.

Dixon shrugged. "We're getting no place. Let's use figures. A hundred thousand."

Harriman sniffed. "I take it what you really want is to reserve a seat on the first regularly scheduled Moon ship. I'll sell it to you at that price."

"Let's quit sparring, Delos. How much?"

Harriman's face remained calm but he thought furiously. He was caught short, with too little information-he had not even talked figures with his chief engineer as yet. Confound it! Why had he left that phone hooked in? "Dan, as I warned you, it will cost you at least a million just to sit down in this game."

"So I thought. How much will it take to stay in the game?"

"All you've got."

"Don't be silly, Delos. I've got more than you have."

Harriman lit a cigar, his only sign of agitation. "Suppose you match us, dollar for dollar."

"For which I get two shares?"

"Okay, okay, you chuck in a buck whenever each of us does-share and share alike. But I run things."

"You run the operations," agreed Dixon. "Very well, I'll put up a million now and match you as necessary. You have no objection to me having my own auditor, of course."

"When have I ever cheated you, Dan?"

"Never and there is no need to start."

"Have it your own way-but be damned sure you send a man who can keep his mouth shut."

"He'll keep quiet. I keep his heart in a jar in my safe."

Harriman was thinking about the extent of Dixon's assets. "We just might let you buy in with a second share later, Dan. This operation will be expensive."

Dixon fitted his finger tips carefully together. "We'll meet that question when we come to it. I don't believe in letting an enterprise fold up for lack of capital."

"Good." Harriman turned to Entenza. "You heard what Dan had to say, Jack. Do you like the terms?"

Entenza's forehead was covered with sweat. "I can't raise a million that fast."

"That's all right, Jack. We don't need it this morning. Your note is good; you can take your time liquidating."

"But you said a million is just the beginning. I can't match you indefinitely; you've got to place a limit on it. I've got my family to consider."

"No annuities, Jack? No monies transferred in an irrevocable trust?"

"That's not the point. You'll be able to squeeze me-freeze me out."

Harriman waited for Dixon to say something. Dixon finally said, "We wouldn't squeeze you, Jack-as long as you could prove you had converted every asset you hold. We would let you stay in on a pro rata basis."

Harriman nodded. "That's right, Jack." He was thinking that any shrinkage in Entenza's share would give himself and Strong a clear voting majority.

Strong had been thinking of something of the same nature, for he spoke up suddenly, "I don't like this. Four equal partners-we can be deadlocked too easily."

Dixon shrugged. "I refuse to worry about it. I am in this because I am betting that Delos can manage to make it profitable."

"We'll get to the Moon, Dan!"

"I didn't say that. I am betting that you will show a profit whether we get to the Moon or not. Yesterday evening I spent looking over the public records of several of your companies; they were very interesting. I suggest we resolve any possible deadlock by giving the Director-that's you, Delos- the power to settle ties. Satisfactory, Entenza?"

"Oh, sure!"

Harriman was worried but tried not to show it. He did not trust Dixon, even bearing gifts. He stood up suddenly. "I've got to run, gentlemen. I leave you to Mr. Strong and Mr. Kamens. Come along, Monty." Kamens, he was sure, would not spill anything prematurely, even to nominal full partners. As for Strong-George, he knew, had not even let his left hand know how many fingers there were on his right.

He dismissed Montgomery outside the door of the partners' personal office and went across the hall. Andrew Ferguson, chief engineer of Harriman Enterprises, looked up as he came in. "Howdy, Boss. Say, Mr. Strong gave me an interesting idea for a light switch this morning. It did not seem practical at first but-"

"Skip it. Let one of the boys have it and forget it. You know the line we are on now."

"There have been rumors," Ferguson answered cautiously.

"Fire the man that brought you the rumor. No-send him on a special mission to Tibet and keep him there until we are through. Well, let's get on with it. I want you to build a Moon ship as quickly as possible."

Ferguson threw one leg over the arm of his chair, took out a pen knife and began grooming his nails. "You say that like it was an order to build a privy."

"Why not? There have been theoretically adequate fuels since way back in '49. You get together the team to design it and the gang to build it; you build it-I pay the bills. What could be simpler?"

Ferguson stared at the ceiling. "'Adequate fuels-'" he repeated dreamily.

"So I said. The figures show that hydrogen and oxygen are enough to get a step rocket to the Moon and back-it's just a matter of proper design."

"'Proper design,' he says," Ferguson went on ifl the same gentle voice, then suddenly swung around, jabbed the knife into the scarred desk top and bellowed, "What do you know about proper design? Where do I get the steels? What do I use for a throat liner? How in the hell do I burn enough tons of your crazy mix per second to keep from wasting all my power breaking loose? How can I get a decent mass-ratio with a step rocket? Why in the hell didn't you let me build a proper ship when we had the fuel?"

Harriman waited for him to quiet down, then said, "What do we do about it, Andy?"

"Hmmm. . . . I was thinking about it as I lay abed last night-and my old lady is sore as hell at you; I had to finish the night on the couch. In the first place, Mr. Harriman, the proper way to tackle this is to get a research appropriation from the Department of National Defense. Then you-"

"Damn it, Andy, you stick to engineering and let me handle the political and financial end of it. I don't want your advice."

"Damn it, Delos, don't go off half-cocked. This is engineering I'm talking about. The government owns a whole mass of former art about rocketry-all classified. Without a government contract you can't even get a peek at it."

"It can't amount to very much. What can a government rocket do that a Skyways rocket can't do? You told me yourself that Federal rocketry no longer amounted to anything."

Ferguson looked supercilious. "I am afraid I can't explain it in lay terms. You will have to take it for granted that we need those government research reports. There's no sense in spending thousands of dollars in doing work that has already been done."

"Spend the thousands."

"Maybe millions."

"Spend the millions. Don't be afraid to spend money. Andy, I don't want this to be a military job." He considered elaborating to the engineer the involved politics back of his decision, thought better of it. "How bad do you actually need that government stuff? Can't you get the same results by hiring engineers who used to work for the government? Or even hire them away from the government right now?"

Ferguson pursed his lips. "If you insist on hampering me, how can you expect me to get results?"

"I am not hampering you. I am telling you that this is not a government project. If you won't attempt to cope with it on those terms, let me know now, so that I can find somebody who will."

Ferguson started playing mumblety-peg on his desk top. When he got to "noses"-and missed-he said quietly, "I mind a boy who used to work for the government at White Sands. He was a very smart lad indeed-design chief of section."

"You mean he might head up your team?"

"That was the notion."

"What's his name? Where is he? Who's he working for?"

"Well, as it happened, when the government closed down White Sands, it seemed a shame to me that a good boy should be out of a job, so I placed him with Skyways. He's maintenance chief engineer out on the Coast."

"Maintenance? What a hell of a job for a creative man! But you mean he's working for us now? Get him on the screen. No-call the coast and have them send him here in a special rocket; we'll all have lunch together."

"As it happens," Ferguson said quietly, "I got up last night and called him-that's what annoyed the Missus. He's waiting outside. Coster-Bob Coster."

A slow grin spread over Harriman's face. "Andy! You black-hearted old scoundrel, why did you pretend to balk?"

"I wasn't pretending. I like it here, Mr. Harriman. Just as long as you don't interfere, I'll do my job. Now my notion is this: we'll make young Coster chief engineer of the project and give him his head. I won't joggle his elbow; I'll just read the reports. Then you leave him alone, d'you hear me? Nothing makes a good technical man angrier than to have some incompetent nitwit with a check book telling him how to do his job."

"Suits. And I don't want a penny-pinching old fool slowing him down, either. Mind you don't interfere with him, either, or I'll jerk the rug out from under you. Do we understand each other?"

"I think we do."

"Then get him in here."

Apparently Ferguson's concept of a "lad" was about age thirty-five, for such Harriman judged Coster to be. He was tall, lean, and quietly eager. Harriman braced him immediately after shaking hands with, "Bob, can you build a rocket that will go to the Moon?"

Coster took it without blinking. "Do you have a source of X-fuel?" he countered, giving the rocket man's usual shorthand for the isotope fuel formerly produced by the power satellite.

Coster remained perfectly quiet for several seconds, then answered, "I can put an unmanned messenger rocket on the face of the Moon."

"Not good enough. I want it to go there, land, and come back. Whether it lands here under power or by atmosphere braking is unimportant."

It appeared that Coster never answered promptly; Harriman had the fancy that he could hear wheels turning over in the man's head. "That would be a very expensive job."

"Who asked you how much it would cost? Can you do it?"

"I could try."

"Try, hell. Do you think you can do it? Would you bet your shirt on it? Would you be willing to risk your neck in the attempt? If you don't believe in yourself, man, you'll always lose."

"How much will you risk, sir? I told you this would be expensive-and I doubt if you have any idea how expensive."

"And I told you not to worry about money. Spend what you need; it's my job to pay the bills. Can you do it?"

"I can do it. I'll let you know later how much it will cost and how long it will take."

"Good. Start getting your team together. Where are we going to do this, Andy?" he added, turning to Ferguson. "Australia?"

"No." It was Coster who answered. "It can't be Australia; I want a mountain catapult. That will save us one step-combination."

"How big a mountain?" asked Harriman~ "Will Pikes Peak do?"

"It ought to be in the Andes," objected Ferguson. "The mountains are taller and closer to the equator. After all, we own facilities there-or the Andes Development Company does."

"Do as you like, Bob," Harriman told Coster. "I would prefer Pikes Peak, but it's up to you." He was thinking that there were tremendous business advantages to locating Earth's space port ~ i inside the United States-and he could visualize the advertising advantage of having Moon ships blast off from the top of Pikes Peak, in plain view of everyone for hundreds of miles to the East.

"I'll let you know."

"Now about salary. Forget whatever it was we were paying you; how much do you want?"

Coster actually gestured, waving the subject away. "I'll work for coffee and cakes."

"Don't be silly."

"Let me finish. Coffee and cakes and one other thing: I get to make the trip.

Harriman blinked. "Well, I can understand that," he said slowly. "In the meantime I'll put you on a drawing account." He added, "Better calculate for a three-man ship, unless you are a pilot."

"I'm not."

"Three men, then. You see, I'm going along, too."

CHAPTER FOUR

"A GOOD THING YOU DECIDED to come in, Dan," Harriman was saying, "or you would find yourself out of a job. I'm going to put an awful crimp in the power company before I'm through with this."

Dixon buttered a roll. "Really? How?"

"We'll set up high-temperature piles, like the Arizona job, just like the one that blew up, around the corner on the far face of the Moon. We'll remote-control them; if one explodes it won't matter. And I'll breed more X-fuel in a week than the company turned out in three months. Nothing personal about it; it's just that I want a source of fuel for interplanetary liners. If we can't get good stuff here, we'll have to make it on the Moon."

"Interesting. But where do you propose to get the uranium for six piles? The last I heard the Atomic Energy Commission had the prospective supply earmarked twenty years ahead."

"Uranium? Don't be silly; we'll get it on the Moon."

"On the Moon? Is there uranium on the Moon?"

"Didn't you know? I thought that was why you decided to join up with me?"

"No, I didn't know," Dixon said deliberately. "What proof have you?"

"Me? I'm no scientist, but it's a well-understood fact. Spectroscopy, or something. Catch one of the professors. But don't go showing too much interest; we aren't ready to show our hand." Harriman stood up. "I've got to run, or I'll miss the shuttle for Rotterdam. Thanks for the lunch." He grabbed his hat and left.

Harriman stood up. "Suit yourself, Mynheer van der Velde. I'm giving you and your colleagues a chance to hedge your bets. Your geologists all agree that diamonds result from volcanic action. What do you think we will find there?" He dropped a large photograph of the Moon on the Hollander's desk.

The diamond merchant looked impassively at the pictured planet, pockmarked by a thousand giant craters. "If you get there, Mr. Harriman."

Harriman swept up the picture. "We'll get there. And we'll find diamonds-though I would be the first to admit that it may be twenty years or even forty before there is a big enough strike to matter. I've come to you because I believe that the worst villain in our social body is a man who introduces a major new economic factor without planning his innovation in such a way as to permit peaceful adjustment. I don't like panics. But all I can do is warn you. Good day."

"Sit down, Mr. Harriman. I'm always confused when a man explains how he is going to do me good. Suppose you tell me instead how this is going to do you good? Then we can discuss how to protect the world market against a sudden influx of diamonds from the Moon."

Harriman sat down.

Harriman liked the Low Countries. He was delighted to locate a dog-drawn milk cart whose young master wore real wooden shoes; he happily took pictures and tipped the child heavily, unaware that the set-up was arranged for tourists. He visited several other diamond merchants but without speaking of the Moon. Among other purchases he found a brooch for Charlotte- a peace offering.

Then he took a taxi to London, planted a story with the representatives of the diamond syndicate there, arranged with his London solicitors to be insured by Lloyd's of London through a dummy, against a successful Moon flight, and called his home office. He listened to numerous reports, especially those concerning Montgomery, and found that Montgomery was in New Delhi. He called him there, spoke with him at length, then hurried to the port just in time to catch his ship. He was in Colorado the next morning.

At Peterson Field, east of Colorado Springs, he had trouble getting through the gate, even though it was now his domain, under lease. Of course he could have called Coster and gotten it straightened out at once, but he wanted to look around before seeing Coster. Fortunately the head guard knew him by sight; he got in and wandered around for an hour or more, a tn-colored badge pinned to his coat to give him freedom.

The machine shop was moderately busy, so was the foundry . . . but most of the shops were almost deserted. Harriman left the shops, went into the main engineering building. The drafting room and the loft were fairly active, as was the computation section. But there were unoccupied desks in the structures group and a churchlike quiet in the metals group and in the adjoining metallurgical laboratory. He was about to cross over into the chemicals and materials annex when Coster suddenly showed up.

"Mr. Harriman! I just heard you were here."

"Spies everywhere," remarked Harriman. "I didn't want to disturb you."

"Not at all. Let's go up to my office."

Settled there a few moments later Harriman asked, "Well-how's it going?"

Coster frowned. "All right, I guess."

Harriman noted that the engineer's desk baskets were piled high with papers which spilled over onto the desk. Before Harriman could answer, Coster's desk phone lit up and a feminine voice said sweetly, "Mr. Coster- Mr. Morgenstern is calling."

"Tell him I'm busy."

After a short wait the girl answered in a troubled voice, "He says he's just got to speak to you, sir."

Coster looked annoyed. "Excuse me a moment, Mr. Harriman-O.K., put him on."

The girl was replaced by a man who said, "Oh there you are-what was the hold up? Look, Chief, we're in a jam about these trucks. Every one of them that we leased needs an overhaul and now it turns out that the White Fleet company won't do anything about it-they're sticking to the fine print in the contract. Now the way I see it, we'd do better to cancel the contract and do business with Peak City Transport. They have a scheme that looks good to me. They guarantee to-"

"Take care of it," snapped Coster. "You made the contract and you have authority to cancel. You know that."

"Yes, but Chief, I figured this would be something you would want to pass on personally. It involves policy and-"

"Take care of it! I don't give a damn what you do as long as we have transportation when we need it." He switched off.

"Who is that man?" inquired Harriman.

"Who? Oh, that's Morgenstern, Claude Morgenstem."

"Not his name-what does he do?"

"He's one of my assistants-buildings, grounds, and transportation."

"Fire him!"

Coster looked stubborn. Before he could answer a secretary came in and stood insistently at his elbow with a sheaf of papers. He frowned, initialed them, and sent her out.

"Oh, I don't mean that as an order," Harriman added, "but I do mean it as serious advice. I won't give orders in your backyard,-but will you listen to a few minutes of advice?"

"Naturally," Coster agreed stiffly.

"Mmm . . . this your first job as top boss?"

Coster hesitated, then admitted it.

"I hired you on Ferguson's belief that you were the engineer most likely to build a successful Moon ship. I've had no reason to change my mind. But top administration ain't engineering, and maybe I can show you a few tricks there, if you'll let me." He waited. "I'm not criticizing," he added. "Top bossing is like sex; until you've had it, you don't know about it." Harriman had the mental reservation that if the boy would not take advice, he would suddenly be out of a job, whether Ferguson liked it or not.

Coster drummed on his desk. "I don't know what's wrong and that's a fact. It seems as if I can't turn anything over to anybody and have it done properly. I feel as if I were swimming in quicksand."

"Done much engineering lately?"

"I try to." Coster waved at another desk in the corner. "I work there, late at night."

"That's no good. I hired you as an engineer. Bob, this setup is all wrong. The joint ought to be jumping-and it's not. Your office ought to be quiet as a grave. Instead your office is jumping and the plant looks like a graveyard."

Coster buried his face in his hands, then looked up. "I know it. I know what needs to be done-but every time I try to tackle a technical problem some bloody fool wants me to make a decision about trucks-or telephones-or some damn thing. I'm sorry, Mr. Harriman. I thought I could do it." Harriman said very gently, "Don't let it throw you, Bob. You haven't had much sleep lately, have you? Tell you what-we'll put over a fast one on Ferguson. I'll take that desk you're at for a few days and build you a set-up to protect you against such things. I want that brain of yours thinking about reaction vectors and fuel efficiencies and design stresses, not about contracts for trucks." Harriman stepped to the door, looked around the outer office and spotted a man who might or might not be the office's chief clerk. "Hey, you! C'mere."

The man looked startled, got up, came to the door and said, "Yes?"

"I want that desk in the corner and all the stuff that's on it moved to an empty office on this floor, right away."

The clerk raised his eyebrows. "And who are you, if I may ask?"

"Damn it-"

"Do as he tells you, Weber," Coster put in.

"I want it done inside of twenty minutes," added Harriman. "Jump!" He turned back to Coster's other desk, punched the phone, and presently was speaking to the main offices of Skyways. "Jim, is your boy Jock Berkeley around? Put him on leave and send him to me, at Peterson Field, right away, special trip. I want the ship he comes in to raise ground ten minutes after we sign off. Send his gear after him." Harriman listened for a moment, then answered, "No, your organization won't fall apart if you lose Jock- or, if it does, maybe we've been paying the wrong man the top salary .

"Okay, okay, you're entitled to one swift kick at my tail the next time you catch up with me but send Jock. So long."

He supervised getting Coster and his other desk moved into another office, saw to it that the phone in the new office was disconnected, and, as an afterthought, had a couch moved in there, too. "We'll install a projector, and a drafting machine and bookcases and other junk like that tonight," he told Coster. "Just make a list of anything you need-to work on engineering. And call me if you want anything." He went back to the nominal chiefengineer's office and got happily to work trying to figure where the organization stood and what was wrong with it.

Some four hours later he took Berkeley in to meet Coster. The chief engineer was asleep at his desk, head cradled on his arms. Harriman started to back out, but Coster roused. "Oh! Sorry," he said, blushing, "I must have dozed off."

"That's why I brought you the couch," said Harriman. "It's more restful. Bob, meet Jock Berkeley. He's your new slave. You remain chief engineer and top, undisputed boss. Jock is Lord High Everything Else. From now on you've got absolutely nothing to worry about-except for the little detail of building a Moon ship."

They shook hands. "Just one thing I ask, Mr. Coster," Berkeley said seriously, "bypass me all you want to-you'll have to run the technical show-but for God's sake record it so I'll know what's going on. I'm going to have a switch placed on your desk that will operate a sealed recorder at my desk."

"Fine!" Coster was looking, Harriman thought, younger already.

"And if you want something that is not technical, don't do it yourself. Just flip a switch and whistle; it'll get done!" Berkeley glanced at Harriman. "The Boss says he wants to talk with you about the real job. I'll leave you and get busy." He left.

Harriman sat down; Coster followed suit and said, "Whew!"

"Feel better?"

"I like the looks of that fellow Berkeley."

"That's good; he's your twin brother from now on. Stop worrying; I've used him before. You'll think you're living in a well-run hospital. By the way, where do you live?"

"At a boarding house in the Springs."

"That's ridiculous. And you don't even have a place here to sleep?" Harriman reached over to Coster's desk, got through to Berkeley. "Jock-get a suite for Mr. Coster at the Broadmoor, under a phony name."

"Right."

"And have this stretch along here adjacent to his office fitted out as an apartment."

"Right. Tonight."

"Now, Bob, about the Moon ship. Where do we stand?"

They spent the next two hours contentedly running over the details of the problem, as Coster had laid them out. Admittedly very little work had been done since the field was leased but Coster had accomplished considerable theoretical work and computation before he had gotten swamped in administrative details. Harriman, though no engineer and certainly not a mathematician outside the primitive arithmetic of money, had for so long devoured everything he could find about space travel that he was able to follow most of what Coster showed him.

"I don't see anything here about your mountain catapult," he said presently.

Coster looked vexed. "Oh, that! Mr. Harriman, I spoke too quickly."

"Huh? How come? I've had Montgomery's boys drawing up beautiful pictures of what things will look like when we are running regular trips. I intend to make Colorado Springs the spaceport capital of the world. We hold the franchise of the old cog railroad now; what's the hitch?"

"Well, it's both time and money."

"Forget money. That's my pidgin."

"Time then. I still think an electric gun is the best way to get the initial acceleration for a chem-powered ship. Like this-" He began to sketch rapidly. "It enables you to omit the first step-rocket stage, which is bigger than all the others put together and is terribly inefficient, as it has such a poor mass-ratio. But what do you have to do to get it? You can't build a tower, not a tower a couple of miles high, strong enough to take the thrusts-not this year, anyway. So you have to use a mountain. Pikes Peak is as good as any; it's accessible, at least.

"But what do you have to do to use it? First, a tunnel in through the side, from Manitou to just under the peak, and big enough to take the loaded ship-"

"Lower it down from the top," suggested Harriman.

Coster answered, "I thought of that. Elevators two miles high for loaded space ships aren't exactly built out of string, in fact they aren't built out of any available materials. It's possible to gimmick the catapult itself so that the accelerating coils can be reversed and timed differently to do the job, but believe me, Mr. Harrima; it will throw

you into other engineering problems quite as great . . . such as a giant railroad up to the top of the ship. And it still leaves you with the shaft of the catapult itself to be dug. It can't be as small as the ship, not like a gun barrel for a bullet. It's got to be considerably larger; you don't compress a column of air two miles high with impunity. Oh, a mountain catapult could be built, but it might take ten years-or longer."

"Then forget it. We'll build it for the future but not for this flight. No, wait-how about a surface catapult. We scoot up the side of the mountain and curve it up at the end?"

"Quite frankly, I think something like that is what will eventually be used. But, as of today, it just creates new problems. Even if we could devise an electric gun in which you could make that last curve-we can't, at present- the ship would have to be designed for terrific side stresses and all the additional weight would be parasitic so far as our main purpose is concerned, the design of a rocket ship."

"Well, Bob, what is your solution?"

Coster frowned. "Go back to what we know how to do-build a step rocket."

CHAPTER FIVE

"MONTY-"

"Yeah, Chief?"

"Have you ever heard this song?" Harriman hummed, "The Moon belongs to everyone; the best things in life are free-," then sang it, badly off key.

"Can't say as I ever have."

"It was before your time. I want it dug out again. I want it revivçd, plugged until Hell wouldn't have it, and on everybody's lips."

"O.K." Montgomery took out his memorandum pad. "When do you want it to reach its top?"

Harriman considered. "In, say, about three months. Then I want the first phrase picked up and used in advertising slogans."

"A cinch."

"How are things in Florida, Monty?"

"I thought we were going to have to buy the whole damned legislature until we got the rumor spread around that Los Angeles had contracted to have a City-Limits-of-Los-Angeles sign planted on the Moon for publicity pix. Then they came around."

"Good." Harriman pondered. "You know, that's not a bad idea. How much do you think the Chamber of Commerce of Los Angeles would pay for such a picture?"

Montgomery made another note. "I'll look into it."

"I suppose you are about ready to crank up Texas, now that Florida is loaded?"

"Most any time now. We're spreading a few snide rumors first."

Headline from Dallas-Fort Worth Banner:

"THE MOON BELONGS TO TEXAS!!!"

"-and that's all for tonight, kiddies. Don't forget to send in those box tops, or reasonable facsimiles. Remember-first prize is a thousand-acre ranch on the Moon itself, free and clear; the second prize is a six-foot scale model of the actual Moon ship, and there are fifty, count them, fifty third prizes, each a saddle-trained Shetland pony. Your hundred word composition 'Why I want to go to the Moon' will be judged for sincerity and originality, not on literary merit. Send those boxtops to Uncle Taffy, Box 214, Juarez, Old Mexico."

Harriman was shown into the office of the president of the Moka-Coka Company ("Only a Moke is truly a coke"-~ "Drink the Cola drink with the Lift"). He paused at the door, some twenty feet from the president's desk and quickly pinned a two-inch wide button to his lapel.

Patterson Griggs looked up. "Well, this is really an honor, D.D. Do come in and-" The soft-drink executive stopped suddenly, his expression changed. "What are you doing wearing that?" he snapped. "Trying to annoy me?"

"That" was the two-inch disc; Harriman unpinned it and put it in his pocket. It was a celluloid advertising pin, in plain yellow; printed on it in black, almost covering it, was a simple 6+, the trademark of Moka-Coka's only serious rival.

"No," answered Harriman, "though I don't blame you for being irritated. I see half the school kids in the country wearing these silly buttons. But I came to give you a friendly tip, not to annoy you."

"What do you mean?"

"When I paused at your door that pin on my lapel was just the size-to you, standing at your desk-as the full Moon looks when you are standing in your garden, looking up at it. You didn't have any trouble reading what was on the pin, did you? I know you didn't; you yelled at me before either one of us stirred."

"What about it?"

"How would you feel-and what would the effect be on your sales-if there was 'six-plus' written across the face of the Moon instead of just on a school kid's sweater?"

Griggs thought about it, then said, "D.D., don't make poor jokes. I've had a bad day."

"I'm not joking. As you have probably heard around the St~reet, I'm behind this Moon trip venture. Between ourselves, Pat, it's quite an expensive undertaking, even for me. A few days ago a man came to me-you'll pardon me if I don't mention names? You can figure it out. Anyhow, this man represented a client who wanted to buy the advertising concession for the Moon. He knew we weren't sure of success; but he said his client would take the risk.

"At first I couldn't figure out what he was talking about; he set me straight. Then I thought he was kidding. Then I was shocked. Look at this-" Harriman took out a large sheet of paper and spread it on Griggs' desk. "You see the equipment is set up anywhere near the center of the Moon, as we see it. Eighteen pyrotechnics rockets shoot out in eighteen directions, like the spokes of a wheel, but to carefully calculated distances. They hit and the bombs they carry go off, spreading finely divided carbon black for calculated distances. There's no air on the Moon, you know, Pat-a fine powder will throw just as easily as a javelin. Here's your result." He turned the paper over; on the back there was a picture of the Moon, printed lightly. Overlaying it, in black, heavy print was:

"So it is that outfit-those poisoners!"

"No, no, I didn't say so! But it illustrates the point; six-plus is only two symbols; it can be spread large enough to be read on the face of the Moon."

Griggs stared at the horrid advertisement. "I don't believe it will work!"

"A reliable pyrotechnics firm has guaranteed that it will-provided I can deliver their equipment to the spot. After all, Pat, it doesn't take much of a pyrotechnics rocket to go a long distance on the Moon. Why, you could throw a baseball a couple of miles yourself-low gravity, you know."

"People would never stand for it. It's sacrilege!"

Harriman looked sad. "I wish you were right. But they stand for skywriting-and video commercials."

Griggs chewed his lip. "Well, I don't see why you come to me with it," he exploded. "You know damn well the name of my product won't go on the face of the Moon. The letters would be too small to read."

Harriman nodded. "That's exactly why I came to you. Pat, this isn't just a business venture to me; it's my heart and soul. It just made me sick to think of somebody actually wanting to use the face of the Moon for advertising. As you say, it's sacrilege. But somehow, these jackals found out I was pressed for cash. They came to me when they knew I would have to listen.

"I put them off. I promised them an answer on Thursday. Then I went home and lay awake about it. After a while I thought of you."

"Me?"

"You. You and your company. After all, you've got a good product and you need legitimate advertising for it. It occurred to me that there are more ways to use the Moon in advertising than by defacing it. Now just suppose that your company bought the same concession, but with the public-spirited promise of never letting it be used. Suppose you featured that fact in your ads? Suppose you ran pictures of a boy and girl, sitting out under the Moon, sharing a bottle of Moke? Suppose Moke was the only soft drink carried on the first trip to the Moon? But I don't have to tell you how to do it." He glanced at his watch finger. "I've got to run and I don't want to rush you. If you want to do business just leave word at my office by noon tomorrow and I'll have our man Montgomery get in touch with your advertising chief."

The head of the big newspaper chain kept him waiting the minimum time reserved for tycoons and cabinet members. Again Harriman stopped at the threshold of a large office and fixed a disc to his lapel.

"Howdy, Delos," the publisher said, "how's the traffic in green cheese today?" He then caught sight of the button and frowned. "If that is a joke, it is in poor taste."

Harriman pocketed the disc; it displayed not 6+, but the hammer-and-sickle.

"No," he said, "it's not a joke; it's a nightmare. Colonel, you and I are among the few people in this country who realize that communism is still a menace."

Sometime later they were talking as chummily as if the Colonel's chain had not obstructed the Moon venture since its inception. The publisher waved a cigar at his desk. "How did you come by those plans? Steal them?"

"They were copied," Harriman answered with narrow truth. "But they aren't important. The important thing is to get there first; we can't risk having an enemy rocket base on the Moon. For years I've had a recurrent nightmare of waking up and seeing

headlines that the Russians had landed on the Moon and declared the Lunar Soviet-say thirteen men and two female scientists-and had petitioned for entrance into the U.S.S.R.-and the petition had, of course, been graciously granted by the Supreme Soviet. I used to wake up and tremble. I don't know that they would actually go through with painting a hammer and sickle on the face of the Moon, but it's consistent with their psychology. Look at those enormous posters they are always hanging up."

The publisher bit down hard on his cigar. "We'll see what we can work out. Is there any way you can speed up your take-off?"

CHAPTER SIX

"MR. HARRIMAN?"

"Yes?"

"That Mr. LeCroix is here again."

"Tell him I can't see him."

"Yes, sir-uh, Mr. Harriman, he did not mention it the other day but he says he is a rocket pilot."

"Send him around to Skyways. I don't hire pilots."

A man's face crowded into the screen, displacing Harriman's reception secretary. "Mr. Harriman-I'm Leslie LeCroix, relief pilot of the Charon."

"I don't care if you are the Angel Gab- Did you say Charon?"

"I said Charon. And I've got to talk to you."

"Come in."

Harriman greeted his visitor, offered him tobacco, then looked him over with interest. The Charon, shuttle rocket to the lost power satellite, had been the nearest thing to a space ship the world had yet seen. Its pilot, lost in the same explosion that had destroyed the satellite and the Charon had been the first, in a way, of the coming breed of spacemen.

Harriman wondered how it had escaped his attention that the Charon had alternating pilots. He had known it, of course-but somehow he had forgotten to take the fact into account. He had written off the power satellite, its shuttle rocket and everything about it, ceased to think about them. He now looked at LeCroix with curiosity.

He saw a small, neat man with a thin, intelligent face, and the big, competent hands of a jockey. LeCroix returned his inspection without embarrassment. He seemed calm and utterly sure of himself.

"Well, Captain LeCroix?"

"You are building a Moon ship."

"Who says so?"

"A Moon ship is being built. The boys all say you are behind it."

"Yes?"

"I want to pilot it."

"Why should you?"

"I'm the best man for it."

Harriman paused to let out a cloud of tobacco smoke. "If you can prove that, the billet is yours."

"It's a deal." LeCroix stood up. "I'll leave my nameand address outside."

"Wait a minute. I said 'if.' Let's talk. I'm going along on this trip myself; I want to know more about you before I trust my neck to you."

They discussed Moon flight, interplanetary travel, rocketry, what they might find on the Moon. Gradually Harriman warmed up, as he found another spirit so like his own, so obsessed with the Wonderful Dream. Subconsciously he had already accepted LeCroix; the conversation began to assume that it would be a joint venture.

After a long time Harriman said, "This is fun, Les, but I've got to do a few chores yet today, or none of us will get to the Moon. You go on out to Peterson Field and get acquainted with Bob Coster-I'll call him. If the pair of you can manage to get along, we'll talk contract." He scribbled a chit and handed it to LeCroix. "Give this to Miss Perkins as you go out and she'll put you on the payroll."

"That can wait."

"Man's got to eat."

LeCroix accepted it but did not leave. "There's one thing I don't understand, Mr. Harriman."

"Huh?"

"Why are you planning on a chemically powered ship? Not that I object; I'll herd her. But why do it the hard way? I know you had the City of Brisbane refitted for X-fuel-"

Harriman stared at him. "Are you off your nut, Les? You're asking why pigs don't have wings-there isn't any X-fuel and there won't be any more until we make some ourselves-on the Moon."

"Who told you that?"

"What do you mean?"

"The way I heard it, the Atomic Energy Commission allocated X-fuel, under treaty, to several other countries-and some of them weren't prepared to make use of it. But they got it just the same. What happened to it?"

"Oh, that! Sure, Les, several of the little outfits in Central America and South America were cut in for a slice of pie for political reasons, even though they had no way to eat it. A good thing, too-we bought it back and used it to ease the immediate power shortage." Harriman frowned. "You're right, though. I should have grabbed some of the stuff then."

"Are you sure it's all gone?"

"Why, of course, I'm- No, I'm not. I'll look into it. G'bye, Les."

His contacts were able to account for every pound of X-fuel in short order-save for Costa Rica's allotment. That nation had declined to sell back its supply because its power plant, suitable for X-fuel, had been almost finished at the time of the disaster. Another inquiry disclosed that the power plant had never been finished.

Montgomery was even then in Managua; Nicaragua had had a change in administration and Montgomery was making certain that the special position of the local Moon corporation was protected. Harriman sent him a coded message to proceed to San

José, locate X-fuel, buy it and ship it back-at any cost. He then went to see the chairman of the Atomic Energy Commission.

That official was apparently glad to see him and anxious to be affable. Harriman got around to explaining that he wanted a license to do experimental work in isotopes-X-fuel, to be precise.

"This should be brought up through the usual channels, Mr. Harriman."

"It will be. This is a preliminary inquiry. I want to know your reactions."

"After all, I am not the only commissioner . . . and we almost always follow the recommendations of our technical branch."

"Don't fence with me, Carl. You know dern well you control a working majority. Off the record, what do you say?"

"Well, D.D.-off the record-you can't get any X-fuel, so why get a license?"

"Let me worry about that."

"Mmmm . . we weren't required by law to follow every millicurie of X-fuel, since it isn't classed as potentially suitable for mass weapons. Just the same, we knew what happened to it. There's none available."

Harriman kept quiet.

"In the second place, you can have an X-fuel license, if you wish-for any purpose but rocket fuel."

"Why the restriction?"

"You are building a Moon ship, aren't you?"

"Me?"

"Don't you fence with me, D.D. It's my business to know things. You can't use X-fuel for rockets, even if you can find it-which you can't." The chairman went to a vault back of his desk and returned with a quarto volume, which he laid in front of Harriman. It was titled: Theoretical Investigation into the Stability of Several Radioisotopic Fuels-With Notes on the Charon-Power-Satellite Disaster. The cover had a serial number and was stamped: SECRET.

Harriman pushed it away. "I've got no business looking at that-and I wouldn't understand it if I did."

The chairman grinned. "Very well, I'll tell you what's in it. I'm deliberately tying your hands, D.D., by trusting you with a defense secret-"

"I won't have it, I tell you!"

"Don't try to power a space ship with X-fuel, D.D. It's a lovely fuel- but it may go off like a firecracker anywhere out in space. That report tells why."

"Confound it, we ran the Charon for nearly three years!"

"You were lucky. It is the official-but utterly confidential-opinion of the government that the Charon set off the power satellite, rather than the satellite setting off the Charon. We had thought it was the other way around at first, and of course it could have been, but there was the disturbing matter of the radar records. It seemed as if the ship had gone up a split second before the satellite. So we made an intensive theoretical investigation. X-fuel is too dangerous for rockets."

"That's ridiculous! For every pound burned in the Charon there were at least a hundred pounds used in power plants on the surface. How come they didn't explode?"

"It's a matter of shielding. A rocket necessarily uses less shielding than a stationary plant, but the worst feature is that it operates out in space. The disaster is

presumed to have been triggered by primary cosmic radiation. If you like, I'll call in one of the mathematical physicists to elucidate."

Harriman shook his head. "You know I don't speak the language." He considered. "I suppose that's all there is to it?"

"I'm afraid so. I'm really sorry." Harriman got up to leave. "Uh, one more thing, D.D.-you weren't thinking of approaching any of my subordinate colleagues, were you?"

"Of course not. Why should I?"

"I'm glad to hear it. You know, Mr. Harriman, some of our staff may not be the most brilliant scientists in the world-it's very hard to keep a first-class scientist happy in the conditions of government service. But there is one thing I am sure of; all of them are utterly incorruptible. Knowing that, I would take it as a personal affront if anyone tried to influence one of my people-a very personal affront."

"So?"

"Yes. By the way, I used to box light-heavyweight in college. I've kept it up."

"Hmmm . . . well, I never went to college. But I play a fair game of poker." Harriman suddenly grinned. "I won't tamper with your boys, Carl. It would be too much like offering a bribe to a starving man. Well, so long."

When Harriman got back to his office he called in one of his confidential clerks. "Take another coded message to Mr. Montgomery. Tell him to ship the stuff to Panama City, rather than to the States." He started to dictate another message to Coster, intending to tell him to stop work on the Pioneer, whose skeleton was already reaching skyward on the Colorado prairie, and shift to the Santa Maria, formerly the City of Brisbane.

He thought better of it. Take-off would have to be outside the United States; with the Atomic Energy Commission acting stuffy, it would not do to try to move the Santa Maria: it would give the show away.

Nor could she be moved without refitting her for chem-powered flight. No, he would have another ship of the Brisbane class taken out of service and sent to Panama, and the power plant of the Santa Maria could be disassembled and shipped there, too. Coster could have the new ship ready in six weeks, maybe sooner . . . and he, Coster, and LeCroix would start for the Moon!

The devil with worries over primary cosmic rays! The Charon operated for three years, didn't she? They would make the trip, they would prove it could be done, then, if safer fuels were needed, there would be the incentive to dig them out. The important thing was to do it, make the trip. If Columbus had waited for decent ships, we'd all still be in Europe. A man had to take some chances or he never got anywhere.

Contentedly he started drafting the messages that would get the new scheme underway.

He was interçupted by a secretary. "Mr. Harriman, Mr. Montgomery wants to speak to you."

"Eh? Has he gotten my code already?"

"I don't know, sir."

"Well, put him on."

Montgomery had not received the second message. But he had news for Harriman:Costa Rica had sold all its X-fuel to the English Ministry of Power, soon after the disaster. There was not an ounce of it left, neither in Costa Rica, nor in England.

Harriman sat and moped for several minutes after Montgomery had cleared the screen. Then he called Coster. "Bob? Is LeCroix there?"

"Right here-we were about to go out to dinner together. Here he is, now."

"Howdy, Les. Les, that was a good brain storm of yours, but it didn't work. Somebody stole the baby."

"Eh? Oh, I get you. I'm sorry."

"Don't ever waste time being sorry. We'll go ahead as originally planned. We'll get there!"

"Sure we will."

CHAPTER SEVEN

FROM THE JUNE ISSUE of Popular Technics magazine: "URANIUM PROSPECTING ON THE MOON-A Fact Article about a soon-to-come Major Industry."

From HOLIDAY: "Honeymoon on the Moon-A Discussion of the Miracle Resort that your children will enjoy, as told to our travel editor."

From the American Sunday Magazine: "DIAMONDS ON THE MOON?-A World Famous Scientist Shows Why Diamonds Must Be Common As Pebbles in the Lunar Craters."

"Of course, Clem, I don't know anything about electronics, but here is the way it was explained to me. You can hold the beam of a television broadcast down to a degree or so these days, can't you?"

"Yes-if you use a big enough reflector."

"You'll have plenty of elbow room. Now Earth covers a space two degrees wide, as seen from the Moon. Sure, it's quite a distance away, but you'd have no power losses and absolutely perfect and unchanging conditions for transmission. Once you made your set-up, it wouldn't be any more expensive than broadcasting from the top of a mountain here, and a derned sight less expensive than keeping copters in the air from coast to coast, the way you're having to do now."

"It's a fantastic scheme, Delos."

"What's fantastic about it? Getting to the Moon is my worry, not yours. Once we are there, there's going to be television back to Earth, you can bet your shirt on that. It's a natural set-up for line-of-sight transmission. If you aren't interested, I'll have to find someone who is."

"I didn't say I wasn't interested."

"Well, make up your mind. Here's another thing, Clem-I don't want to go sticking my nose into your business, but haven't you had a certain amount of trouble since you lost the use of the power satellite as a relay station?"

"You know the answer; don't needle me. Expenses have gone out of sight without any improvement in revenue."

"That wasn't quite what I meant. How about censorship?"

The television executive threw up his hands. "Don't say that word! How anybody expects a man to stay in business with every two-bit wowser in the country claiming a veto over wLhat we can say and can't say and what we can show and what we can't show-it's enough to make you throw up. The whole principle is wrong; it's like demanding that grown men live on skim milk because the baby can't eat steak. If I were able to lay my hands on those confounded, prurient-minded, slimy-"

"Easy! Easy!" Harriman interrupted. "Did it ever occur to you that there is absolutely no way to interfere with a telecast from the Moon-and that boards of censorship on Earth won't have jurisdiction in any case?"

"What? Say that again."

"LIFE goes to the Moon.' LIFE-TIME Inc. is proud to announce that arrangements have been completed to bring LIFE'S readers a personally conducted tour of the first trip to our satellite. In place of the usual weekly feature 'LIFE Goes to a Party' there will commence, immediately after the return of the first successful-"

"ASSURANCE FOR THE NEW AGE"

(An excerpt from an advertisement of the North Atlantic Mutual Insurance and Liability Company)

"-the same looking-to-the-future that protected our policy-holders after the Chicago Fire, after the San Francisco Fire, after every disaster since the War of 1812, now reaches out to insure you from unexpected loss even on the Moon-"

"THE UNBOUNDED FRONTIERS OF TECHNOLOGY"

"When the Moon ship Pioneer climbs skyward on a ladder of flame, twenty-seven essential devices in her 'innards' will be powered by especiallyengineered DELTA batteries-"

"Mr. Harriman, could you come out to the field?"

"What's up, Bob?"

"Trouble," Coster answered briefly.

"What sort of trouble?"

Coster hesitated. "I'd rather not talk about it by screen. If you can't come, maybe Les and I had better come there."

"I'll be there this evening."

When Harriman got there he saw that LëCroix's impassive face concealed bitterness, Coster looked stubborn and defensive. He waited until the three were alone in Coster's workroom before he spoke. "Let's have it, boys."

LeCroix looked at Coster. The engineer chewed his lip and said, "Mr. Harriman, you know the stages this design has been through."

"More or less."

"We had to give up the catapult idea. Then we had this-" Coster rummaged on his desk, pulled out a perspective treatment of a four-step rocket, large but rather graceful."Theoretically it was a possibility; practically it cut things too fine. By the time the stress group boys and the auxiliary group and the control group got through adding things we were forced to come to this-" He hauled out another sketch; it was basically

like the first, but squattier, almost pyramidal. "We added a fifth stage as a ring around the fourth stage. We even managed to save some weight by using most of the auxiliary and control equipment for the fourth stage to control the fifth stage. And it still had enough sectional density to punch through the atmosphere with no important drag, even if it was clumsy."

Harriman nodded. "You know, Bob, we're going to have to get away from the step rocket idea before we set up a schedule run to the Moon."

"I don't see how you can avoid it with chem-powered rockets."

"If you had a decent catapult you could put a single-stage chem-powered rocket into an orbit around the Earth, couldn't you?"

"Sure."

"That's what we'll do. Then it will refuel in that orbit."

"The old space-station set-up. I suppose that makes sense-in fact I know it does. Only the ship wouldn't refuel and continue on to the Moon. The economical thing would be to have special ships that never landed anywhere make the jump from there to another fueling station around the Moon. Then-"

LeCroix displayed a most unusual impatience. "AJ1 that doesn't mean anything now. Get on with the story, Bob."

"Right," agreed Harriman.

"Well, this model should have done it. And, damn it, it still should do it." Harriman looked puzzled. "But, Bob, that's the approved design, isn't it? That's what you've got two-thirds built right out there on the field."

"Yes." Coster looked stricken. "But it won't do it. It won't work."

"Why not?"

"Because I've had to add in too much dead weight, that's why. Mr. Harriman, you aren't an engineer; you've no idea how fast the performance falls off when you have to clutter up a ship with anything but fuel and power plant. Take the landing arrangements for the fifth-stage power ring. You use that stage for a minute and a half, then you throw it away. But you don't dare take a chance of it falling on Wichita or Kansas City. We have to include a parachute sequence. Even then we have to plan on tracking it by radar and cutting the shrouds by radio control when it's over empty countryside and not too high. That means more weight, besides the parachute. By the time we are through, we don't get a net addition of a mile a second out of that stage. It's not enough."

Harriman stirred in his chair. "Looks like we made a mistake in trying to launch it from the States. Suppose we took off from someplace unpopulated, say the Brazil coast, and let the booster stages fall in the Atlantic; how much would that save you?"

Coster looked off in the distance, then took out a slide rule. "Might work."

"How much of a chore will it be to move the ship, at this stage?"

"Well . . . it would have to be disassembled completely; nothing less would do. I can't give you a cost estimate off hand, but it would be expensive."

"How long would it take?"

"Hmm. . .shucks, Mr. Harriman, I can't answer off hand. Two years- eighteen months, with luck. We'd have to prepare a site. We'd have to build shops."

Harriman thought about it, although he knew the answer in his heart. His shoe string, big as it was, was stretched to the danger point. He couldn't keep up the

promotion, on talk alone, for another two years; he had to have a successful flight and soon-or the whole jerry-built financial structure would burst. "No good, Bob."

"I was afraid of that. Well, I tried to add still a sixth stage." He held up another sketch. "You see that monstrosity? I reached the point of diminishing returns. The final effective velocity is actually less with this abortion than with the five-step job."

"Does that mean you are whipped, Bob? You can't build a Moon ship?"

"No, I-"

LeCroix said suddenly, "Clear out Kansas."

"Eh?" asked Harriman.

"Clear everybody out of Kansas and Eastern Colorado. Let the fifth and fourth sections fall anywhere in that area. The third section falls in the Atlantic; the second section goes into a permanent orbit-and the ship itself goes on to the Moon. You could do it if you didn't have to waste weight on the parachuting of the fifth and fourth sections. Ask Bob."

"So? How about it, Bob?"

"That's what I said before. It was the parasitic penalties that whipped us. The basic design is all right."

"Hmmm. . . somebody hand me an Atlas." Harriman looked up Kansas and Colorado, did some rough figuring. He stared off into space, looking surprisingly, for the moment, as Coster did when the engineer was thinking about his own work. Finally he said, "It won't work."

"Why not?"

"Money. I told you not to worry about money-for the ship. But it would cost upward of six or seven million dollars to evacuate that area even for a day. We'd have to settle nuisance suits out of hand; we couldn't wait. And there would be a few diehards who just couldn't move anyhow."

LeCroix said savagely, "If the crazy fools won't move, let them take their chances."

"I know how you feel, Les. But this project is too big to hide and too big to move. Unless we protect the bystanders we'll be shut down by court order and force. I can't buy all the judges in two states. Some of them wouldn't be for sale."

"It was a nice try, Les," consoled Coster.

"I thought it might be an answer for all of us," the pilot answered.

Harriman said, "You were starting to mention another solution, Bob?" Coster looked embarrassed. "You know the plans for the ship itself-a three-man job, space and supplies for three."

"Yes. What are you driving at?"

"It doesn't have to be three men. Split the first step into two parts, cut the ship down to the bare minimum for one man and jettison the remainder. That's the only way I see to make this basic design work." He got out another sketch. "See? One man and supplies for less than a week. No airlock- the pilot stays in his pressure suit. No galley. No bunks. The bare minimum to keep one man alive for a maximum of two hundred hours. It will work."

"It will work," repeated LeCroix, looking at Coster.

Harriman looked at the sketch with an odd, sick feeling at his stomach. Yes, no doubt it would work-and for the purposes of the promotion it did not matter whether one

man or three went to the Moon and returned. Just to do it was enough; he was dead certain that one successful flight would cause money to roll in so that there would be capital to develop to the point of practical, passenger-carrying ships.

The Wright brothers had started with less.

"If that is what I have to put up with, I suppose I have to," he said slowly. Coster looked relieved. "Fine! But there is one more hitch. You know the conditions under which I agreed to tackle this job-I was to go along. Now Les here waves a contract under my nose and says he has to be the pilot."

"It's not just that," LeCroix countered. "You're no pilot, Bob. You'll kill yourself and ruin the whole enterprise, just through bull-headed stubbornness."

"I'll learn to fly it. After all, I designed it. Look here, Mr. Harriman, I hate to let you in for a suit-Les says he will sue-but my contract antedates his. I intend to enforce it."

"Don't listen to him, Mr. Harriman. Let him do the suing. I'll fly that ship and bring her back. He'll wreck it."

"Either I go or I don't build the ship," Coster said flatly.

Harriman motioned both of them to keep quiet. "Easy, easy, both of you. You can both sue me if it gives you any pleasure. Bob, don't talk nonsense; at this stage I can hire other engineers to finish the job. You tell me it has to be just one man."

"That's right."

"You're looking at him."

They both stared.

"Shut your jaws," Harriman snapped. "What's funny about that? You both knew I meant to go. You don't think I went to all this trouble just to give you two a ride to the Moon, do you? I intend to go. What's wrong with me as a pilot? I'm in good health, my eyesight is all right, I'm still smart enough to learn what I have to learn. If I have to drive my own buggy, I'll do it. I won't step aside for anybody, not anybody, d'you hear me?"

Coster got his breath first. "Boss, you don't know what you are saying." Two hours later they were still wrangling. Most of the time Harriman had stubbornly sat still, refusing to answer their arguments. At last he went out of the room for a few minutes, on the usual pretext. When he came back in he said, "Bob, what do you weigh?"

"Me? A little over two hundred."

"Close to two twenty, I'd judge. Les, what do you weigh?"

"One twenty-six."

"Bob, design the ship for a net load of one hundred and twenty-six pounds."

"Huh? Now wait a minute, Mr. Harriman-"

"Shut up! If I can't learn to be a pilot in six weeks, neither can you."

"But I've got the mathematics and the basic knowledge to-"

"Shut up I said! Les has spent as long learning his profession as you have learning yours. Can he become an engineer in six weeks? Then what gave you the conceit to think that you can learn his job in that time? I'm not going to have you wrecking my ship to satisfy your swollen ego. Anyhow, you gave out the real key to it when you were discussing the design. The real limiting factor is the actual weight of the passenger or passengers, isn't it? Everything-everything works in proportion to that one mass. Right?"

"Yes, but-"

"Right or wrong?"

"Well . . . yes, that's right. I just wanted-"

"The smaller man can live on less water, he breathes less air, he occunies less space. Les goes." Harriman walked over and put a hand on Coster's shoulder. "Don't take it hard, son. It can't be any worse on you than it is on me. This trip has got to succeed-and that means you and I have got to give up the honor of being the first man on the Moon. But I promise you this: we'll go on the second trip, we'll go with Les as our private chauffeur. It will be the first of a lot of passenger trips. Look, Bob-you can be a big man in this game, if you'll play along now. How would you like to be chief engineer of the first lunar colony?"

Coster managed to grin. "It might not be so bad."

"You'd like it. Living on the Moon will be an engineering problem; you and I have talked about it. How'd you like to put your theories to work? Build the first city? Build the big observatory we'll found there? Look around and know that you were the man who had done it?"

Coster was definitely adjusting himself to it. "You make it sound good. Say, what will you be doing?"

"Me? Well, maybe I'll be the first mayor of Luna City." It was a new thought to him; he savored it. "The Honorable Delos David Harriman, Mayor of Luna City. Say, I like that! You know, I've never held any sort of public office; I've just owned things." He looked around. "Everything settled?"

"I guess so," Coster said slowly. Suddenly he stuck his hand out at LeCroix. "You fly her, Les; I'll build her."

LeCroix grabbed his hand. "It's a deal. And you and the Boss get busy and start making plans for the next job-big enough for all of us."

"Right!"

Harriman put his hand on top of theirs. "That's the way I like to hear you talk. We'll stick together and we'll found Luna City together."

"I think we ought to call it "Harriman," LeCroix said seriously.

"Nope, I've thought of it as Luna City ever since I was a kid; Luna City it's going to be. Maybe we'll put Harriman Square in the middle of it," he added.

"I'll mark it that way in the plans," agreed Coster.

Harriman left at once. Despite the solution he was terribly depressed and did not want his two colleagues to see it. It had been a Pyrrhic victory; he had saved the enterprise but he felt like an animal who has gnawed off his own leg to escape a trap.

CHAPTER EIGHT

STRONG WAS ALONE in the offices of the partnership when he got a call from Dixon. "George, I was looking for D.D. Is he there?"

"No, he's back in Washington-something about clearances. I expect him back soon."

"Hmmm. . . . Entenza and I want to see him. We're coming over." They arrived shortly. Entenza was quite evidently very much worked up over something; Dixon looked

sleekly impassive as usual. After greetings Dixon waited a moment, then said, "Jack, you had some business to transact, didn't you?"

Entenza jumped, then snatched a draft from his pocket.

"Oh, yes! George, I'm not going to have to pro-rate after all. Here's my payment to bring my share up to full payment to date."

Strong accepted it. "I know that Delos will be pleased." He tucked it in a drawer.

"Well," said Dixon sharply, "aren't you going to receipt for it?"

"If Jack wants a receipt. The cancelled draft will serve." However, Strong wrote out a receipt without further comment; Entenza accepted it.

They waited a while. Presently Dixon said, "George, you're in this pretty deep, aren't you?"

"Possibly."

"Want to hedge your bets?"

"How?"

"Well, candidly, I want to protect myself. Want to sell one half of one. percent of your share?"

Strong thought about it. In fact he was worried-worried sick. The presence of Dixon's auditor had forced them to keep on a cash basis-and only Strong knew how close to the line that had forced the partners. "Why do you want it?"

"Oh, I wouldn't use it to interfere with Delos's operations. He's our man; we're backing him. But I would feel a lot safer if I had the right to call a halt if he tried to commit us to something we couldn't pay for. You know Delos; he's an incurable optimist. We ought to have some sort of a brake on him."

Strong thought about it. The thing that hurt him was that he agreed with everything Dixon said; he had stood by and watched while Delos dissipated two fortunes, painfully built up through the years. D.D. no longer seemed to care. Why, only this morning he had refused even to look at a report on the H & S automatic household switch-after dumping it on Strong.

Dixon leaned forward. "Name a price, George. I'll be generous."

Strong squared his stooped shoulders. "I'll sell-"

"Good!"

"-if Delos okays it. Not otherwise."

Dixon muttered something. Enteuza snorted. The conversation might have gone acrimoniously further, had not Harriman walked in.

No one said anything about the proposal to Strong. Strong inquired about the trip; Harriman pressed a thumb and finger together. "All in the groove! But it gets more expensive to do business in Washington every day." He turned to the others. "How's tricks? Any special meaning to the assemblage? Are we in executive session?"

Dixon turned to Entenza. "Tell him, Jack."

Entenza faced Harriman. "What do you mean by selling television rights?"

Harriman cocked a brow. "And why not?"

"Because you promised them to me, that's why. That's the original agreement; I've got it in writing."

"Better take another look at the agreement, Jack. And don't go off halfcocked. You have the exploitation rights for radio, television, and other amusement and special feature ventures in connection with the first trip to the Moon. You've still got 'em.

Including broadcasts from the ship, provided we are able to make any." He decided that this was not a good time to mention that weight considerations had already made the latter impossible; the Pioneer would carry no electronic equipment of any sort not needed in astrogation. "What I sold was the franchise to erect a-television station on the Moon, later. By the way, it wasn't even an exclusive franchise, although Clem Haggerty thinks it is. If you want to buy one yourself, we can accommodate you."

"Buy it! Why you-"

"Wups! Or you can have it free, if you can get Dixon and George to agree that you are entitled to it. I won't be a tightwad. Anything else?"

Dixon cut in. "Just where do we stand now, Delos?"

"Gentlemen, you can take it for granted that the Pioneer will leave on schedule-next Wednesday. And now, if you will excuse me, I'm on my way to Peterson Field."

After he had left his three associates sat in silence for some time, Entenza muttering to himself, Dixon apparently thinking, and Strong just waiting. Presently Dixon said, "How about that fractional share, George?"

"You didn't see fit to mention it to Delos."

"I see." Dixon carefully deposited an ash. "He's a strange man, isn't he?" Strong shifted around. "Yes."

"How long have you known him?"

"Let me see-he came to work for me in-"

"He worked for you?"

"For several months. Then we set up our first company." Strong thought back about it. "I suppose he had a power complex, even then."

"No," Dixon said carefully. "No, I wouldn't call it a power complex. It's more of a Messiah complex."

Entenza looked up. "He's a crooked son of a bitch, that's what he is!"

Strong looked at him mildly. "I'd rather you wouldn't talk about him that way. I'd really rather you wouldn't."

"Stow it, Jack," ordered Dixon. "You might force George to take a poke at you. One of the odd things about him," went on Dixon, "is that he seems to be able to inspire an almost feudal loyalty. Take yourself. I know you are cleaned out, George-yet you won't let me rescue you. That goes beyond logic; it's personal."

Strong nodded. "He's an odd man. Sometimes I think he's the last of the Robber Barons."

Dixon shook his head. "Not the last. The last of them opened up the American West. He's the first of the new Robber Barons-and you and I won't see the end of it. Do you ever read Carlyle?"

Strong nodded again. "I see what you mean, the 'Hero' theory, but I don't necessarily agree with it."

"There's something to it, though," Dixon answered. "Truthfully, I don't think Delos knows what he is doing. He's setting up a new imperialism.

There'll be the devil to pay before it's cleaned up." He stood up. "Maybe we should have waited. Maybe we should have balked him-if we could have. Well, it's done. We're on the merry-go-round and we can't get off. I hope we enjoy the ride.. Come on, Jack."

CHAPTER NINE

THE COLORADO p~ArRIE was growin'~ dusky. The Sun was behind the peak and the broad white face of Luna, full and round, was rising in the east. In the middle of Peterson Field the Pioneer thrust toward the sky. A barbedwire fence, a thousand yards from its base in all directions, held back the crowds. Just inside the barrier guards patrolled restlessly. More guards circulated through the crowd. Inside the fence, close to it, trunks and trailers for camera, sound, and television equipment were parked and, at the far ends of cables, remote-control pick-ups were located both near and far from the ship on all sides. There were other trucks near the ship and a stir of organized activity.

Harriman waited in Coster's office; Coster himself was out on the field, and Dixon and Entenza had a room to themselves. LeCroix, still in a drugged sleep, was in the bedroom of Coster's on-the-job living quarters.

There was a stir and a challenge outside the door. Harriman opened it a crack. "If that's another reporter, tell him 'no.' Send him to Mr. Montgomery across the way. Captain LeCroix will grant no unauthorized interviews."

"Delos! Let me in."

"Oh-you, George. Come in. We've been hounded to death."

Strong came in and handed Harriman a large and heavy handbag. "Here it is."

"Here is what?"

"The cancelled covers for the philatelic syndicate. You forgot them. That's half a million dollars, Delos," he complained. "If I hadn't noticed them in your coat locker we'd have been in the soup."

Harriman composed his features. "George, you're a brick, that's what you are."

"Shall I put them in the ship myself?" Strong said anxiously.

"Huh? No, no. Les will handle them." He glanced at his watch. "We're about to waken him. I'll take charge of the covers." He took the bag and added, "Don't come in now. You'll have a chance to say goodbye on the field."

Harriman went next door, shut the door behind him, waited for the nurse to give the sleeping pilot a counteracting stimulant by injection, then chased her out. When he turned around the pilot was sitting up, rubbing his eyes. "How do you feel, Les?"

"Fine. So this is it."

"Yup. And we're all rooting for you, boy. Look, you've got to go out and face them in a couple of minutes. Everything is ready-but I've got a couple of things I've got to say to you."

"Yes?"

"See this bag?" Harriman rapidly explained what it was and what it signified.

LeCroix looked dismayed. "But I can't take it, Delos; It's all figured to the last ounce."

"Who said you were going to take it? Of course you can't; it must weigh sixty, seventy pounds. I just plain forgot it. Now here's what we do: for the time being I'll just hide it in here-" Harriman stuffed the bag far back into a clothes closet. "When you land,

I'll be right on your tail. Then we pull a sleight-of-hand trick and you fetch it out of the ship."

LeCroix shook his head ruefully. "Delos, you beat me. Well, I'm in no mood to argue."

"I'm glad you're not; otherwise I'd go to jail for a measly half million dollars. We've already spent that money. Anyhow, it doesn't matter," he went on. "Nobody but you and me will know it-and the stamp collectors will get their money's worth." He looked at the younger man as if anxious for his approval.

"Okay, okay," LeCroix answered. "Why should I care what happens to a stamp collector-tonight? Let's get going."

"One more thing," said Harriman and took out a small cloth bag. "This you take with you-and the weight has been figured in. I saw to it. Now here is what you do with it." He gave detailed and very earnest instructions.

LeCroix was puzzled. "Do I hear you straight? I let it be found-then I tell the exact truth about what happened?"

"That's right."

"Okay." LeCroix zipped the little bag into a pocket of his coveralls. "Let's get out to the field. H-hour minus twenty-one minutes already."

Strong joined Harriman in the control blockhouse after LeCroix had gone up inside the ship. "Did they get aboard?" he demanded anxiously. "LeCroix wasn't carrying anything."

"Oh, sure," said Harriman. "I sent them ahead. Better take your place. The ready flare has already gone up."

Dixon, Entenza, the Governor of Colorado, the Vice-President of the United States, and a round dozen of V.I.P.'s were already seated at periscopes, mounted in slits, on a balcony above the control level. Strong and Harriman climbed a ladder and took the two remaining chairs.

Harriman began to sweat and realized he was trembling. Through his periscope out in front he could see the ship; from below he could hear Coster's voice, nervously checking departure station reports. Muted through a speaker by him was a running commentary of one of the newscasters reporting the show. Harriman himself was the-well, the admiral, he decided-of the operation, but there was nothing more he could do, but wait, watch, and try to pray.

A second flare arched up in the sky, burst into red and green. Five minutes.

The seconds oozed away. At minus two minutes Harriman realized that he could not stand to watch through a tiny slit; he had to be outside, take part in it himself-he had to. He climbed down, hurried to the exit of the blockhouse. Coster glanced around, looked startled, but did not try to stop him; Coster could not leave his post no matter what happened. Harriman elbowed the guard aside and went outdoors.

To the east the ship towered skyward, her slender pyramid sharp black against the full Moon. He waited.

And waited.

What had gone wrong? There had remained less than two minutes when he had come out; he was sure of that-yet there she stood, silent, dark, unmoving. There was not a sound, save the distant ululation of sirens warning the spectators behind the distant fence.

Harriman felt his own heart stop, his breath dry up in his throat. Something had failed. Failure.

A single flare rocket burst from the top of the blockhouse; a flame licked at the base of the ship.

It spread, there was a pad of white fire around the base. Slowly, almost lumberingly, the Pioneer lifted, seemed to hover for a moment, balanced on a pillar of fire-then reached for the sky with acceleration so great that she was above him almost at once, overhead at the zenith, a dazzling circle of flame. So quickly was she above, rather than out in front, that it seemed as if she were arching back over him and must surely fall on him. Instinctively and futilely he threw a hand in front of his face.

The sound reached him.

Not as sound-it was a white noise, a roar in all frequencies, sonic, subsonic, supersonic, so incredibly loaded with energy that it struck him in the chest. He heard it with his teeth and with his bones as well as with his ears. He crouched his knees, bracing against it.

Following the sound at the snail's pace of a hurricane came the backwash of the splash. It ripped at his clothing, tore his breath from his lips. He stumbled blindly back, trying to reach the lee of the concrete building, was knocked down.

He picked himself up coughing and strangling and remembered to look at the sky. Straight overhead was a dwindling star. Then it was gone.

He went into the blockhouse.

The room was a babble of high-tension, purposeful confusion. Harriman's ears, still ringing, heard a speaker blare, "Spot One! Spot One to blockhouse! Step five loose on schedule-ship and step five showing separate blips-" and Coster's voice, high and angry, cutting in with, "Get Track One! Have they picked up step five yet? Are they tracking it?"

In the background the news commentator was still blowing his top. "A great day, folks, a great day! The mighty Pioneer, climbing like an angel of the Lord, flaming sword at hand, is even now on her glorious way to our sister planet. Most of you have seen her departure on your screens; I wish you could have seen it as I did, arching up into the evening sky, bearing her precious load of-"

"Shut that thing off!" ordered Coster, then to the visitors on the observation platform, "And pipe down up there! Quiet!"

The Vice-President of the United States jerked his head around, closed his mouth. He remembered to smile. The other V.I.P.'s shut up, then resumed again in muted whispers. A girl's voice cut through the silence, "Track One to Blockhouse-step five tracking high, plus two." There was a stir in the corner. There a large canvas hood shielded a heavy sheet of Plexiglass from direct light. The sheet was mounted vertically and was edge-lighted; it displayed a coordinate map of Colorado and Kansas in fine white lines; the cities and towns glowed red. Unevacuated farms were tiny warning dots of red light.

A man behind the transparent map touched it with a grease pencil; the reported location of step five shone out. In front of the map screen a youngish man sat quietly in a chair, a pear-shaped switch in his hand, his thumb lightly resting on the button. He was a bombardier, borrowed from the Air Forces; when he pressed the switch, a radio-controlled circuit in step five should cause the shrouds of step five's landing 'chute to be

cut and let it plummet to Earth. He was working from radar reports aloi~e with no fancy computing bombsight to think for him. He was working almost by instinct- or, rather, by the accumulated subconscious knowledge of his trade, integrating in his brain the meager data spread before him, deciding where the tons of step five would land if he were to press his switch at any particular instant. He seemed unworried.

"Spot One to Blockhouse!" came a man's voice again. "Step four free on schedule," and almost immediately following, a deeper voice echoed, "Track Two, tracking step four, instantaneous altitude nine-five-one miles, predicted vector."

No one paid any attention to Harriman.

Under the hood the observed trajectory of step five grew in shining dots of grease, near to, but not on, the dotted line of its predicted path. Reaching out from each location dot was drawn a line at right angles, the reported altitude for that location.

The quiet man watching the display suddenly pressed down hard on his switch. He then stood up, stretched, and said, "Anybody got a cigaret?" "Track Two!" he was answered. "Step four-first impact prediction-forty miles west of Charleston, South Carolina."

"Repeat!" yelled Coster.

The speaker blared out again without pause, "Correction, correction- forty miles east, repeat east."

Coster sighed. The sigh was cut short by a report. "Spot One to Blockhouse-step three free, minus five seconds," and a talker at Coster's control desk called out, "Mr. Coster, Mister Coster-Palomar Observatory wants to talk to you."

"Tell 'em to go-no, tell 'em to wait." Immediately another voice cut in with, "Track One, auxiliary range Fox-Step one about to strike near Dodge City, Kansas~"

"How near?"

There was no answer. Presently the voice of Track One proper said, "Impact reported approximately fifteen miles southwest of Dodge City."

"Casualties?"

Spot One broke in before Track One could answer, "Step two free, step two free-the ship is now on its own."

"Mr. Coster-please, Mr. Coster-"

And a totally new voice: "Spot Two to Blockhouse-we are now tracking the ship. Stand by for reported distances and bearings. Stand by-"

"Track Two to Blockhouse-step four will definitely land in Atlantic, estimated point of impact oh-five-seven miles east of Charleston bearing ohnine-three. I will repeat-"

Coster looked around irritably. "Isn't there any drinking water anywhere in this dump?"

"Mr. Coster, please-Palomar says they've just got to talk to you."

Harriman eased over to the door and stepped out. He suddenly felt very much let down, utterly weary, and depressed.

The field looked strange without the ship. He had watched it grow; now suddenly it was gone. The Moon, still rising, seemed oblivious-and space travel was as remote a dream as it had been in his boyhood.

There were several tiny figures prowling around, the flash apron where the ship had stood-souvenir hunters, he thought contemptuously. Someone came up to him in the gloom. "Mr. Harriman?"

"Eh?"

"Hopkins-with the A.P. How about a statement?"

"Uh? No, no comment. I'm bushed."

"Oh, now, just a word. How does it feel to have backed the first successful Moon flight-if it is successful."

"It will be successful." He thought a moment, then squared his tired shoulders and said, "Tell them that this is the beginning of the human race's greatest era. Tell them that every one of them will have a chance to follow in Captain LeCroix's footsteps, seek out new planets, wrest a home for themselves in new lands. Tell them that this means new frontiers, a shot in the arm for prosperity. It means-" He ran down. "That's all tonight. I'm whipped, son. Leave me alone, will you?"

Presently Côster came out, followed by the V.I.P.'s. Harriman went up to Coster. "Everything all right?"

"Sure. Why shouldn't it be? Track three followed him out to the limit of range-all in the groove." Coster added, "Step five killed a cow when it grounded."

"Forget it-we'll have steak for breakfast." Harriman then had to make conversation with the Governor and the Vice-President, had to escort them out to their ship. Dixon and Entenza left together, less formally; at last Coster and Harriman were alone save for subordinates too junior to constitute a strain and for guards to protect them from the crowds. "Where you headed, Bob?"

"Up to the Broadmoor and about a week's sleep. How about you?"

"if you don't mind, I'll doss down in your apartment."

"Help yourself. Sleepy pills in the bathroom."

"I won't need them." They had a drink together in Coster's quarters, talked aimlessly, then Coster ordered a copter cab and went to the hotel. Harriman went to bed, got up, read a day-old copy of the Denver Post filled with pictures of the Pioneer, finally gave up and took two of Coster's sleeping capsules.

CHAPTER TEN

SOMEONE WAS SHAKING HIM. "Mr. Harriman! Wake up-Mr. Caster is on the screen."

"Huh? Wazza? Oh, all right." He got up and padded to the phone. Caster was :ooking tousie-headea and excited. "Hey, Boss-he made it!"

"Huh? What do you mean?"

"Palomar just called me. They saw the mark and now they've spotted the ship itself. He-"

"Wait a minute, Bob. Slow up. He can't be there yet. He just left last night."

Coster looked disconcerted. "What's the matter, Mr. Harriman? Don't you feel well? He left Wednesday."

Vaguely, Harriman began to be oriented. No, the take-off had not been the night before-fuzzily he recalled a drive up into the mountains, a day spent dozing in the sun, some sort of a party at which he had drunk too much. What day was today? He didn't know. If LeCroix had landed on the Moon, then-never mind. "It's all right, Bob-I was half asleep. I guess I dreamed the take-off all over again. Now tell me the news, slowly."

Coster started over. "LeCroix has landed, just west of Archimedes crater. They can see his ship, from Palomar. Say that was a great stunt you thought up, marking the spot with carbon black. Les must have covered two acres with it. They say it shines out like a billboard, through the Big Eye."

"Maybe we ought to run down and have a look. No-later," he amended. "We'll be busy."

"I don't see what more we can do, Mr. Harriman. We've got twelve of our best ballistic computers calculating possible routes for you now."

Harriman started to tell the man to put on another twelve, switched off the screen instead. He was still at Peterson Field, with one of Skyways' best stratoships waiting for him outside, waiting to take him to whatever point on the globe LeCroix might ground. LeCroix was in the upper stratosphere, had been there for more than twenty-four hours. The pilot was slowly, cautiously wearing out his terminal velocity, dissipating the incredible kinetic energy as shock wave and radiant heat.

They had tracked him by radar around the globe and around again-and again . . . yet there was no way of knowing just where and what sort of landing the pilot would choose to risk. Harriman listened to the running radar reports and cursed the fact that they had elected to save the weight of radio equipment.

The radar figures started coming closer together. The voice broke off and started again: "He's in his landing glide!"

"Tell the field to get ready!" shouted Harriman. He held his breath and waited. After endless seconds another voice cut in with, "The Moon ship is now landing. It will ground somewhere west of Chihuahua in Old Mexico."

Harriman started for the door at a run.

Coached by radio en route, Harriman's pilot spotted the Pioneer incredibly small against the desert sand. He put his own ship quite close to it, in a beautiful landing. Harriman was fumbling at the cabin door before the ship was fairly stopped.

LeCroix was sitting on the ground, resting his back against a skid of his ship and enjoying the shade of its stubby triangular wings. A paisano sheepherder stood facing him, open-mouthed. As Harriman trotted out and lumbered toward him LeCroix stood up, flipped a cigaret butt away and said, "Hi, Boss!"

"Les!" The older man threw his arms around the younger. "It's good to see you, boy."

"It's good to see you. Pedro here doesn't speak my language." LeCroix glanced around; there was no one else nearby but the pilot of Harriman's ship. "Where's the gang? Where's Bob?"

"I didn't wait. They'll surely be along in a few minutes-hey, there they come now!" It was another stratoship, plunging in to a landing. Harriman turned to his pilot. "Bill-go over and meet them."

"Huh? They'll come, never fear."

"Do as I say."

"You're the doctor." The pilot trudged through the sand, his back expressing disapproval. LeCroix looked puzzled. "Quick, Les-help me with this."

"This" was the five thousand cancelled envelopes which were supposed to have been to the Moon. They got them out of Harriman's stratoship and into the Moon ship, there to be stowed in an empty food locker, while their actions were still shielded from the later arrivals by the bulk of the strataship. "Whew!" said Harriman. "That was close. Half a million dollars. We need it, Les."

"Sure, but look, Mr. Harriman, the di-"

"Sssh! The others are coming. How about the other business? Ready with your act?"

"Yes. But I was trying to tell you-"

"Quiet!"

It was not their colleagues; it was a shipload of reporters, camera men, mike men, commentators, technicians. They swarmed over them.

Harriman waved to them jauntily. "Help yourselves, boys. Get a lot of pictures. Climb through the ship. Make yourselves at home. Look at anything you want to. But go easy on Captain LeCroix-he's tired."

Another ship had landed, this time with Caster, Dixon and Strong. Entenza showed up in his own chartered ship and began bossing the TV, pix, and radio men, in the course of which he almost had a fight with an unauthorized camera crew. A large copter transport grounded and spilled out nearly a platoon of khaki-clad Mexican troops. Fom somewhere-out of the sand apparently-several dozen native peasants showed up. Harriman broke away from reporters, held a quick and expensive discussion with the captain of the local troops and a degree of order was restored in time to save the Pioneer from being picked to pieces.

"Just let that be!" It was LeCroix's voice, from inside the Pioneer. Harriman waited and listened. "None of your business!" the pilot's voice went on, rising higher, "and put them back!"

Harriman pushed his way to the door of the ship. "What's the trouble, Les?"

Inside the cramped cabin, hardly large enough for a TV booth, three men stood, LeCroix and two reporters. All three men looked angry. "What's the trouble, Les?" Harriman repeated.

LeCroix was holding a small cloth bag which appeared to be empty. Scattered on the pilot's acceleration rest between him and the reporters were several small, dully brilliant stones. A reporter held one such stone up to the light.

"These guys were poking their noses into things that didn't concern them," LeCroix said angrily.

The reporter looked at the stone said, "You told us to look at what we liked, didn't you, Mr. Harriman?"

"Yes."

"Your pilot here-" He jerked a thumb at LeCroix. "-apparently didn't expect us to find these. He had them hidden in the pads of his chair."

"What of it?"

"They're diamonds."

"What makes you think so?"

"They're diamonds all right."

Harriman stopped and unwrapped a cigar. Presently he said, "Those diamonds were where you found them because I put them there."

A flashlight went off behind Harriman; a voice said, "Hold the rock up higher, Jeff."

The reporter called Jeff obliged, then said, "That seems an odd thing to do, Mr. Harriman."

"I was interested in the effect of outer space radiations on raw diamonds. On my orders Captain LeCroix placed that sack of diamonds in the ship."

Jeff whistled thoughtfully. "You know, Mr. Harriman, if you did not have that explanation, I'd think LeCroix had found the rocks on the Moon and was trying to hold out on you."

"Print that and you will be sued for libel. I have every confidence in Captain LeCroix. Now give me the diamonds."

Jeff's eyebrows went up. "But not confidence enough in him to let him keep them,.maybe?"

"Give me the stones. Then get out."

Harriman got LeCroix away from the reporters as quickly as possible and into Harriman's own ship. "That's all for now," he told the news and pictures people. "See us at Peterson Field."

Once the ship raised ground he turned to LeCroix. "You did a beautiful job, Les."

"That reporter named Jeff must be sort of confused."

"Eh? Oh, that. No, I mean the flight. You did it. You're head man on this planet."

LeCroix shrugged it off. "Bob built a good ship. It was a cinch. Now about those diamonds-"

"Forget the diamonds. You've done your part. We placed those rocks in the ship; now we tell everybody we did-truthful as can be. It's not our fault if they don't believe us."

"But Mr. Harriman-"

"What?"

LeCroix unzipped a pocket in his coveralls, hauled out a soiled handkerchief, knotted into a bag. He untied it-and spilled into Harriman's hands many more diamonds than had been displayed in the ship-larger, finer diamonds.

Harriman stared at them. He began to chuckle.

Presently he shoved them back at LeCroix. "Keep them."

"I figure they belong to all of us."

"Well, keep them for us, then. And keep your mouth shut about them. No, wait." He picked out two large stones. "I'll have rings made from these two, one for you, one for me. But keep your mouth shut, or they won't be worth anything, except as curiosities."

It was quite true, he thought. Long ago the diamond syndicate had realized that diamonds in plentiful supply were worth little more than glass, except for industrial uses. Earth had more than enough for that, more than enough for jewels. If Moon diamonds were literally "common as pebbles" then they were just that-pebbles.

Not worth the expense of bringing them to earth. But now take uranium. If that were plentiful- Harriman sat back and indulged in daydreaming. Presently LeCroix said softly, "You know, Boss, it's wonderful there."

"Eh? Where?"

"Why, on the Moon of course. I'm going back. I'm going back just as soon as I can. We've got to get busy on the new ship."

"Sure, sure! And this time we'll build one big enough for all of us. This time I go, too!"

"You bet."

"Les-" The older man spoke almost diffidently. "What does it look like when you look back and see the Earth?"

"Huh? It looks like- It looks-" LeCroix stopped. "Hell's bells, Boss, there isn't any way to tell you. It's wonderful, that's all. The sky is black and-well, wait until you see the pictures I took. Better .yet, wait and see it yourself."

Harriman nodded. "But it's hard to wait."

CHAPTER ELEVEN

"FIELDS OF DIAMONDS ON THE MOONU!"
"BILLIONAIRE BACKER DENIES DIAMOND STORY Says Jewels Taken Into Space for Science Reasons"
"MOON DIAMONDS: HOAX OR FACT?"

"-but consider this, friends of the invisible audience: why would anyone take diamonds to the moon? Every ounce of that ship and its cargo was calculated; diamonds would not be taken along without reason. Many scientific authorities have pronounced Mr. Harriman's professed reason an absurdity. It is easy to guess that diamonds might be taken along for the purpose of 'salting' the Moon, so to speak, with earthly jewels, with the intention of convincing us that diamonds exist on the Moon-but Mr. Harriman, his pilot Captain LeCroix, and everyone connected with the enterprise have sworn from the beginning that the diamonds did not come from the Moon. But it is an absolute certainty that the diamonds were in the space ship when it landed. Cut it how you will; this reporter is going to try to buy some lunar diamond mining stock-"

Strong was, as usual, already in the office when Harriman came in. Before the partners could speak, the screen called out, "Mr. Harriman, Rotterdam calling."

"Tell them to go plant a tulip."

"Mr. van der Velde is waiting, Mr. Harriman."

"Okay."

Harriman let the Hollander talk, then said, "Mr. van der Velde, the statements attributed to me are absolutely correct. I put those diamonds the reporters saw into the ship before it took off. They were mined right here on Earth. In fact I bought them when I came over to see you; I can prove it."

"But Mr. Harriman-"

"Suit yourself. There may be more diamonds on the Moon than you can run and jump over. I don't guarantee it. But I do guarantee that those diamonds the newspapers are talking about came from Earth."

"Mr. Harriman, why would you send diamonds to the Moon? Perhaps you intended to fool us, no?"

"Have it your own way. But I've said all along that those diamonds came from Earth. Now see here: you took an option-an option on an option, so to speak. If you want to make the second payment on that option and keep it in force, the deadline is nine o'clock Thursday, New York time, as specified in the contract. Make up your mind."

He switched off and found his partner looking at him sourly. "What's eating you?"

"I wondered about those diamonds, too, Delos. So I've been looking through the weight schedule of the Pioneer."

"Didn't know you were interested in engineering."

"I can read figures."

"Well, you found it, didn't you? Schedule F-i 7-c, two ounces, allocated to me personally."

"I found it. It sticks out like a sore thumb. But I didn't find something else."

Harriman felt a 'cold chill in his stomach. "What?"

"I didn't find a schedule for the cancelled covers." Strong stared at him.

"It must be there. Let me see that weight schedule."

"It's not there, Delos. You know, I thought it was funny when you insisted on going to meet Captain LeCroix by yourself. What happened, Delos? Did you sneak them aboard?" He continued to stare while Harriman fidgeted. "We've put over some sharp business deals-but this will be the first time that anyone can say that the firm of Harriman and Strong has cheated."

"George-I would cheat, lie, steal, beg, bribe-do anything to accomplish what we have accomplished."

Harriman got up and paced the room. "We had to have that money, or the ship would never have taken off. We're cleaned out. You know that, don't you?"

Strong nodded. "But those covers should have gone to the Moon. That's what we contracted to do."

"I just forgot it. Then it was too late to figure the weight in. But it doesn't matter. I figured that if the trip was a failure, if LeCroix cracked up, nobody would know or care that the covers hadn't gone. And I knew if he made it, it wouldn't matter; we'd have plenty of money. And we will, George, we will!"

"We've got to pay the money back."

"Now? Give me time, George. Everybody concerned is 'happy the way it is. Wait until we recover our stake; then I'll buy every one of those covers back-out of my own pocket. That's a promise."

Strong continued to sit. Harriman stopped in front of him. "I ask you, George, is it worth while to wreck an enterprise of this size for a purely theoretical point?"

Strong sighed and said, "When the time comes, use the firm's money."

"That's the spirit! But I'll use my own, I promise you."

"No, the firm's money. If we're in it together, we're in it together."

"O.K., if that's the way you want it."

Harriman turned back to his desk. Neither of the two partners had anything to say for a long while. Presently Dixon and Entenza were announced.

"Well, Jack," said Harriman. "Feel better now?"

"No thanks to you. I had to fight for what I did put on the air-and some of it was pirated as it was. Delos, there should have been a television pick-up in the ship."

"Don't fret about it. As I told you, we couldn't spare the weight this time. But there will be the next trip, and the next. Your concession is going to be worth a pile of money."

Dixon cleared his throat. "That's what we came to see you about, Delos. What are your plans?"

"Plans? We go right ahead. Les and Coster and I make the next trip. We set up a permanent base. Maybe Coster stays behind. The third trip we send a real colony-nuclear engineers, miners, hydroponics experts, communications engineers. We'll found Luna City, first city on another planet."

Dixon looked thoughtful. "And when does this begin to pay off?"

"What do you mean by 'pay off'? Do you want your capital back, or do you want to begin to see some return on your investment? I can cut it either way."

Entenza was about to say that he wanted his investment back; Dixon cut in first, "Profits, naturally. The investment is already made."

"Fine!"

"But I don't see how you expect profits. Certainly, LeCroix made the trip and got back safely. There is honor for all of us. But where are the royalties?"

"Give the crop time to ripen, Dan. Do I look worried? What are our assets?" Harriman ticked them off on his fingers. "Royalties on pictures, television, radio-."

"Those things go to Jack."

"Take a look at the agreement. He has the concession, but he pays the firm-that's all of us-for them."

Dixon said, "Shut up, Jack!" before Entenza could speak, then added, "What else? That won't pull us out of the red."

"Endorsements galore. Monty's boys are working on that. Royalties from the greatest best seller yet-I've got a ghost writer and a stenographer following LeCroix around this very minute. A franchise for the first and only space line-"

"From whom?"

"We'll get it. Kamens and Montgomery are in Paris now, working on it. I'm joining them this afternoon. And we'll tie down that franchise with a franchise from the other end, just as soon as we can get a permanent colony there, no matter how small. It will be the autonomous state of Luna, under the protection of the United Nations-and no ship will land or take off in its territory without its permission. Besides that we'll have the right to franchise a dozen other companies for various purposes-and tax them, too-just as soon as we set up the Municipal Corporation of the City of Luna under the laws of the State of Luna. We'll sell everything but vacuum- we'll even sell vacuum, for experimental purposes. And don't forgct-we'll still have a big chunk of real estate, sovereign title in us-as a state-and not yet sold. The Moon is big."

"Your ideas are rather big, too, Delos," Dixon said dryly. "But what actually happens next?"

"First we get title confirmed by the U.N. The Security Council is now in secret session; the Assembly meets tonight. Things will be popping; that's why I've got to be there. When the United Nations decides-as it will!- that its own non-profit corporation has the only real claim to the Moon, then I get busy. The poor little weak non-profit

corporation is going to grant a number of things to some real honest-to-god corporations with hair on their chests-in return for help in setting up a physics research lab, an astronomical observatory, a lunography institute and some other perfectly proper nonprofit enterprises. That's our interim pitch until we get a permanent colony with its own laws. Then we-"

Dixon gestured impatiently. "Never mind the legal shenanigans, Delos. I've known you long enough to know that you can figure out such angles. What do we actually have to do next?"

"Huh? We've got to build another ship, a bigger one. Not actually bigger, but effectively bigger. Coster has started the design of a surface catapult- it will reach from Manitou Springs to the top of Pikes Peak. With it we can put a ship in free orbit around the Earth. Then we'll use such a ship to fuel more ships-it amounts to a space station, like the power station. It adds up to a way to get there on chemical power without having to throw away nine-tenths of your ship to do it."

"Sounds expensive."

"It will be. But don't worry; we've got a couple of dozen piddling little things to keep the money coming in while we get set up on a commercial basis, then we sell stock. We- sold stock before; now we'll sell a thousand dollars' worth where we sold ten before."

"And you think that will carry you through until the enterprise as a whole is on a paying basis? Face it, Delos, the thing as a whole doesn't pay off until you have ships plying between here and the Moon on a paying basis, figured in freight and passenger charges. That means customers, with cash. What is there on the Moon to ship-and who pays for it?"

"Dan, don't you believe there will be? If not, why are you here?"

"I believe in it, Delos-or I believe in you. But what's your time schedule? What's your budget? What's your prospective commodity? And please don't mention diamonds; I think I understand that caper."

Harriman chewed his cigar for a few moments. "There's one valuable commodity we'll start shipping at once."

"What?"

"Knowledge."

Entenza snorted. Strong looked puzzled. Dixon nodded. "I'll buy that. Knowledge is always worth something-to the man who knows how to exploit it. And I'll agree that the Moon is a place to find new knowledge. I'll assume that you can make the next trip pay off. What's your budget and your time table for that?"

Harriman did not answer. Strong searched his face closely. To him Harriman's poker face was as revealing as large print-he decided that his partner had been crowded into a corner. He waited, nervous but ready to back Harriman's play. Dixon went on, "From the way you describe it, Delos, I judge that you don't have money enough for your next step-and you don't know where you will get it. I believe in you, Delos-and I told you at the start that I did not believe in letting a new business die of anemia. I'm ready to buy in with a fifth share."

Harriman stared. "Look," he said bluntly, "you own Jack's share now, don't you?"

"I wouldn't say that."

"You vote it. It sticks out all over."

Entenza said, "That's not true. I'm independent. I-"

"Jack, you're a damn liar," Harriman said dispassionately. "Dan, you've got fifty percent now. Under the present rules I decide deadlocks, which gives me control as long as George sticks by me. If we sell you another share, you vote three-fifths-and are boss. Is that the deal you are looking for?"

"Delos, as I told you, I have confidence in you."

"But you'd feel happier with the whip hand. Well, I won't do it. I'll let space travel-real space travel, with established runs-wait another twenty years before I'll turn loose. I'll let us all go broke and let us live on glory before I'll turn loose. You'll have to think up another scheme."

Dixon said nothing. Harriman got up and began to pace. He stopped in front of Dixon. "Dan, if you really understood what this is all about, I'd let you have control. But you don't. You see this is just another way to money and to power. I'm perfectly willing to let you vultures get rich-but I keep control. I'm going to see this thing developed, not milked. The human race is heading out to the stars-and this adventure is going to present new problems compared with which atomic power was a kid's toy. Unless the whole matter is handled carefully, it will be fouled up. You'll foul it up, Dan, if I let you have the deciding vote in it-because you don't understand it."

He caught his breath and went on, "Take safety for instance. Do you know why I let LeCroix take that ship out instead of taking it myself? Do you think I was afraid? No! I wanted it to come back-safely. I didn't want space travel getting another set-back. Do you know why we have to have a monopoly, for a few years at least? Because every so-and-so and his brother is going to want to build a Moon ship, now that they know it can be done. Remember the first days of ocean flying? After Lindbergh did it, every so-called pilot who could lay hands on a crate took off for some over-water point. Some of them even took their kids along. And most of them landed in the drink. Airplanes get a reputation for being dangerous. A few years after that the airlines got so hungry for quick money in a highly competitive field that you couldn't pick up a paper without seeing headlines about another airliner crash.

"That's not going to happen to space travel! I'm not going to let it happen.

Space ships are too big and too expensive; if they get a reputation for being unsafe as well, we might as well have stayed in bed. I run things."

He stopped. Dixon waited and then said, "I said I believed in you, Delos. How much money do you need?"

"Eh? On what terms?"

"Your note."

"My note? Did you say my note?"

"I'd want security, of course."

Harriman swore. "I knew there was a hitch in it. Dan, you know everything I've got is tied up in this venture."

"You have insurance. You have quite a lot of insurance, I know."

"Yes, but that's all made out to my wife."

"I seem to have heard you say something about that sort of thing to Jack Entenza," Dixon said. "Come, now-if I know your tax-happy sort, you have at least one irrevocable trust, or paid-up annuities, or something, to keep Mrs. Harriman out of the poor house."

Harriman thought fiercely about it. "When's the call date on this note?"

"In the sweet bye and bye. I want a no-bankruptcy clause, of course."

"Why? Such a clause has no legal validity."

"It would be valid with you, wouldn't it?"

"Mmm . . . yes. Yes, it would."

"Then get out your policies and see how big a note you can write." Harriman looked at him, turned abruptly and went to his safe. He came back with quite a stack of long, stiff folders. They added them up together; it was an amazingly large sum-for those days. Dixon then consulted a memorandum taken from his pocket and said, "One seems to be missing- a rather large one. A North Atlantic Mutual policy, I think."

Harriman glared at him. "Am I going to have to fire every confidential clerk in my force?"

"No," Dixon said mildly, "I don't get my information from your staff. Harriman went back to the safe, got the policy and added it to the pile. Strong spoke up, "Do you want mine, Mr. Dixon?"

"No," answered Dixon, "that won't be necessary." He started stuffing the policies in his pocket. "I'll keep these, Delos, and attend to keeping up the premiums. I'll bill you of course. You can send the note and the changeof-beneficiary forms to my office. Here's your draft." He took out another slip of paper; it was the draft-already made out in the amount of the policies.

Harriman looked at it. "Sometimes," he said slowly, "I wonder who's kidding who?" He tossed the draft over to Strong. "O.K., George, take care of it. I'm off to Paris, boys. Wish me luck." He strode out as jauntily as a fox terrier.

Strong looked from the closed door to Dixon, then at the note. "I ought to tear this thing up!"

"Don't do it," advised Dixon. "You see, I really do believe in him." He added, "Ever read Carl Sandburg, George?"

"I'm not much of a reader."

"Try him some time. He tells a story about a man who started a rumor that they had struck oil in hell. Pretty soon everybody has left for hell, to get in on the boom. The man who started the rumor watches them all go, then scratches his head and says to himself that there just might be something in it, after all. So he left for hell, too."

Strong waited, finally said, "I don't get the point."

"The point is that I just want to be ready to protect myself if necessary, George- and so should you. Delos might begin believing his own rumors. Diamonds! Come, Jack."

CHAPTER TWELVE

THE ENSUING MONTHS were as busy as the period before the flight of the Pioneer (now honorably retired to the Smithsonian Institution). One engineering staff and great gangs of men were working on the catapult, two more staffs were busy with two new ships; the Mayflower, and the Colonial; a third ship was on the drafting tables. Ferguson was chief engineer for all of this; Coster, still buffered by Jock Berkeley, was engineering

consultant, working where and as he chose. Colorado Springs was a boom town; the Denver-Trinidad roadcity settlements spread out at the Springs until they surrounded Peterson Field.

Harriman was as busy as a cat with two tails. The constantly expanding exploitation and promotion took eight full days a week of his time, but, by working Kamens and Montgomery almost to ulcers and by doing without sleep himself, he created frequent opportunities to run out to Colorado and talk things over with Caster.

Luna City, it was decided, would be founded on the very next trip. The Mayflower was planned for a pay-load not only of seven passengers, but with air, water and food to carry four of them over to the next trip; they would live in an aluminum Quonset-type hut, sealed, pressurized, and buried under the loose soil of Luna until-and assuming-they were succored.

The choice of the four extra passengers gave rise to another contest, another publicity exploitation-and more sale of stock. Harriman insisted that they be two married couples, over the united objections of scientific organizations everywhere. He gave in only to the extent of agreeing that there was no objection to all four being scientists, providing they constituted two married couples. This gave rise to several hasty marriages-and some divorces, after the choices were announced.

The Mayflower was the maximum size that calculations showed would be capable of getting into a free orbit around the Earth from the boost of the catapult, plus the blast of her own engines. Before she took off, four other ships, quite as large, would precede her. But they were not space ships; they were mere tankers-nameless. The most finicky of ballistic calculations, the most precise of launchings, would place them in the same orbit at the same spot. There the Mayflower would rendezvous and accept their remaining fuel.

This was the trickiest part of the entire project. If the four tankers could be placed close enough together, LeCroix, using a tiny maneuvering reserve, could bring his new ship to them. If not-well, it gets very lonely out in Space.

Serious thought was given to placing pilots in the tankers and accepting as a penalty the use of enough fuel from one tanker to permit a get-away boat, a life boat with wings, to decelerate, reach the atmosphere and brake to a landing. Caster found a cheaper way.

A radar pilot, whose ancestor was the proximity fuse and whose immediate parents could be found in the homing devices of guided missiles, was given the task of bringing the tankers together. The first tanker would not be so equipped, but th~ second tanker through its robot would smell out the first and home on it with a pint-sized rocket engine, using the smallest of vectors to bring them together. The third would home on the first two and the fourth on the group.

LeCroix shouid have no trouble-if the scheme worked.

CHAPTER THIRTEEN

STRONG WANTED TO SHOW HARRIMAN the sales reports on the H & S automatic household switch; Harriman brushed them aside.

Strong shoved them back under his nose. "You'd better start taking an interest in such things, Delos. Somebody around this office had better start seeing to it that some money comes in-some money that belongs to us, personally-or you'll be selling apples on a street corner."

Harriman leaned back and clasped his hands back of his head. "George, how can you talk that way on a day like this? Is there no poetry in your soul? Didn't you hear what I said when I came in? The rendezvous worked. Tankers one and two are as close together as Siamese twins. We'll be leaving within the week."

"That's as may be. Business has to go on."

"You keep it going; I've got a date. When did Dixon say he would be over?"

"He's due now."

"Good!" Harriman bit the end off a cigar and went on, "You know, George, I'm not sorry I didn't get to make the first trip. Now I've still got it t~ do. I'm as expectant as a bridegroom-and as happy." He started to hum.

Dixon came in without Entenza, a situation that had obtained since the day Dixon had dropped the pretence that he controlled only one share. He shook hands. "You heard the news, Dan?"

"George told me."

"This is it-or almost. A week from now, more or less, I'll be on the Moon. I can hardly believe it."

Dixon sat down silently. Harriman went on, "Aren't you even going to congratulate me? Man, this is a great dayl"

Dixon said, "D.D., why are you going?"

"Huh? Don't ask foolish questions. This is what I ~have been working toward."

"It's not a foolish question. I asked why you were going. The four colonists have an obvious reason, and each is a selected specialist observer as well. LeCroix is the pilot. Coster is the man who is designing the permanent colony. But why are you going? What's your function?"

"My function? Why, I'm the guy who runs things. Shucks, I'm going to run for mayor when I get there. Have a cigar, friend-the name's Harriman. Don't forget to vote." He grinned.

Dixon did not smile. "I did not know you planned on staying."

Harriman looked sheepish. "Well, that's still up in the air. If we get the shelter built in a hurry, we may save enough in the way of supplies to let me sort of lay over until the next trip. You wouldn't begrudge me that, would you?"

Dixon looked him in the eye. "Delos, I can't let you go at all."

Harriman was too startled to talk at first. At last he managed to say, "Don't joke, Dan. I'm going. You can't stop me. Nothing on Earth can stop me."

Dixon shook his head. "I can't permit it, Delos. I've got too much sunk in this. If you go and anything happens to you, I lose it all."

"That's silly. You and George would just carry on, that's all."

"Ask George."

Strong had nothing to say. He did not seem anxious to meet Harriman's eyes. Dixon went on, "Don't try to kid your way out of it, Delos. This venture is you and you are this venture. If you get killed, the whole thing folds up. I don't say space travel folds up; I think you've already given that a boost that will carry it along even with lesser men

in your shoes. But as for this venture-our company-it will fold up. George and I will have to liquidate at about half a cent on the dollar. It would take sale of patent rights to get that much. The tangible assets aren't worth anything."

"Damn it, it's the intangibles we sell. You knew that all along."

"You are the intangible asset, Delos. You are the goose that lays the golden eggs. I want you to stick around until you've laid them. You must not risk your neck in space flight until you have this thing on a profit-making basis, so that any competent manager, such as George or myself, thereafter can keep it solvent. I mean it, Delos. I've got too much in it to see you risk it in a joy ride."

Harriman stood up and pressed his fingers down on the edge of his desk. He was breathing hard. "You can't stop me!" he said slowly and forcefully. "Not all the forces of heaven or hell can stop me."

Dixon answered quietly, "I'm sorry, Delos. But I can stop you and I will. I can tie up that ship out there."

"Try it! I own as many lawyers as you do-and better ones!"

"I think you will find that you are not as popular in American courts as you once were-not since the United States found out it didn't own the Moon after all."

"Try it, I tell you. I'll break you and I'll take your shares away from you, too."

"Easy, Delos! I've no doubt you have some scheme whereby you could milk the basic company right away from George and me if you decided to. But it won't be necessary. Nor will it be necessary to tie up the ship. I want the flight to take place as much as you do. But you won't be on it, because you will decide not to go."

"I will, eh? Do I look crazy from where you sit?"

"No, on the contrary."

"Then why won't I go?"

"Because of your note that I hold. I want to collect it."

"What? There's no due date."

"No. But I want to be sure to collect it."

"Why, you dumb fool, if I get killed you collect it sooner than ever."

"Do I? You are mistaken, Delos. If you are killed-on a flight to the Moon-I collect nothing. I know; I've checked with every one of the companies underwriting you. Most of them have escape clauses covering experimental vehicles that date back to early aviation. In any case all of them will cancel and fight it out in court if you set foot inside that ship."

"You put them up to this!"

"Calm down, Delos. You'll be bursting a blood vessel. Certainly I queried them, but I was legitimately looking after my own interests. I don't want to collect on that note-not now, not by your death. I want you to pay it back out of your own earnings, by staj'ing here and nursing this company through till it's stable."

Harriman chucked his cigar, almost unsmoked and badly chewed, at a waste basket. He missed. "I don't give a hoot if you lose on it. If you hadn't stirred them up, they'd have paid without a quiver."

"But it did dig up a weak point in your plans, Delos. If space travel is to be a success, insurance will have to reach out and cover the insured anywhere."

"Confound it, one of them does now-N. A. Mutual."

"I've seen their ad and I've looked over what they claim to offer. It's just window dressing, with the usual escape clause. No, insurance will have to be revamped, all sorts of insurance."

Harriman looked thoughtful. "I'll look into it. George, call Kamens. Maybe we'll have to float our own company."

"Never mind Kamens," objected Dixon. "The point is you can't go on this trip. You have too many details of that sort to watch and plan for and nurse along."

Harriman looked back at him. "You haven't gotten it through your head, Dan, that I'm going! Tie up the ship if you can. If you put sheriffs around it, I'll have goons there to toss them aside."

Dixon looked pained. "I hate to mention this point, Delos, but I am afraid you will be stopped even if I drop dead."

"How?"

"Your wife."

"What's she got to do with it?"

"She's ready to sue for separate maintenance right now-she's found out about this insurance thing. When she hears about this present plan, she'll force you into court and force an accounting of your assets."

"You put her up to it!"

Dixon hesitated. He knew that Entenza had spilled the beans to Mrs. Harriman-maliciously. Yet there seemed no point in adding to a personal feud. "She's bright enough to have done some investigating on her own account. I won't deny I've talked to her-but she sent for me."

"I'll fight both of you!" Harriman stomped to a window, stood looking out-it was a real window; he liked to look at the sky.

Dixon came over and put a hand on his shoulder, saying softly, "Don't take it this way, Delos. Nobody's trying to keep you from your dream. But you can't go just yet; you can't let us down. We've stuck with you this far; you owe it to us to stick with us until it's done."

Harriman did not answer; Dixon went on, "If you don't feel any loyalty toward me, how about George? He's stuck with you against me, when it hurt him, when he thought you were ruining him-and you surely were, unless you finish this job. How about George, Delos? Are you going to let him down, too?"

Harriman swung around, ignoring Dixon and facing Strong. "What about it, George? Do you think I should stay behind?"

Strong rubbed his hands and chewed his lip. Finally he looked up. "It's all right with me, Delos. You do what you think is best."

Harriman stood looking at him for a long moment, his face working as if he were going to cry. Then he said huskily, "Okay, you rats. Okay. I'll stay behind."

CHAPTER FOURTEEN

IT WAS ONE OF THOSE GLORIOUS EVENINGS so common in the Pikes Peak region, after a day in which the sky has been well scrubbed by thunderstorms. The track of the catapult crawled in a straight line up the face of the mountain, whole shoulders having been carved away to permit it. At the temporary space port, still raw from construction, Harriman, in company with visiting notables, was saying good-bye to the passengers and crew of the Mayflower.

The crowds came right up to the rail of the catapult. There was no need to keep them back from the ship; the jets would not blast until she was high over the peak. Only the ship itself was guarded, the ship and the gleaming rails.

Dixon and Strong, together for company and mutual support, hung back at the edge of the area roped off for passengers and officials. They watched Harriman jollying those about to leave: "Good-bye, Doctor. Keep an eye on him, Janet. Don't let him go looking for Moon Maidens." They saw him engage Coster in private conversation, then clap the younger man on the back.

"Keeps his chin up, doesn't he?" whispered Dixon.

"Maybe we should have let him go," answered Strong.

"Eh? Nonsense! We've got to have him. Anyway, his place in history is secure."

"He doesn't care about history," Strong answered seriously, "he just wants to go to the Moon."

"Well, confound it-he can go to the Moon . . . as soon as he gets his job done. After all, it's his job. He made it."

"I know."

Harriman turned around, saw them, started toward them. They shut up. "Don't duck," he said jovially. "It's all right. I'll go on the next trip. By then I plan to have it running itself. You'll see." He turned back toward the Mayflower. "Quite a sight, isn't she?"

The outer door was closed; ready lights winked along the track and from the control tower. A siren sounded.

Harriman moved a step or two closer.

"There she goes!"

It was a shout from the whole crowd. The great ship started slowly, softly up the track, gathered speed, and shot toward the distant peak. She was already tiny by the time she curved up the face and burst into the sky.

She hung there a split second, then a plume of light exploded from her tail. Her jets had fired.

Then she was a shining light in the sky, a ball of flame, then-nothing. She was gone, upward and outward, to her rendezvous with her tankers.

The crowd had pushed to the west end of the platform as the ship swarmed up the mountain. Harriman had stayed where he was, nor had Dixon and Strong followed the crowd. The three were alone, Harriman most alone for he did not seem aware that the others were near him. He was watching the sky.

Strong was watching him. Presently Strong barely whispered to Dixon, "Do you read the Bible?"

"Some."

"He looks as Moses must have looked, when he gazed out over the promised land."

Harriman dropped his eyes from the sky and saw them. "You guys still here?" he said. "Come on-there's work to be done."

Delilah and the Space-Rigger

SURE, WE HAD TROUBLE building Space Station One-but the trouble was people.

Not that building a station twenty-two thousand three hundred miles out in space is a breeze. It was an engineering feat bigger than the Panama Canal or the Pyramids-or even the Susquehanna Power Pile. But "Tiny" Larsen built her and a job Tiny tackles gets built.

I first saw Tiny playing guard on a semi-pro team, working his way through Oppenheimer Tech. He worked summers for me thereafter till he graduated. He stayed in construction and eventually I went to work for him.

Tiny wouldn't touch a job unless he was satisfied with the engineering. The Station had jobs designed into it that called for six-armed monkeys instead of grown men in space suits. Tiny spotted such boners; not a ton of material went into the sky until the specs and drawings suited him.

But it was people that gave us the headaches. We bad a sprinkling of married men, but the rest were wild kids, attracted by high pay and adventure. Some were busted spacemen. Some were specialists, like electricians and instrument men. About half were deep-sea divers, used to working in pressure suits. There were sandhogs and riggers and welders and ship fitters and two circus acrobats.

We fired four of them for being drunk on the job; Tiny had to break one stiff's arm before he would stay fired. What worried us was where did they get it? Turned out a ship fitter had rigged a heatless still, using the vacuum around us. He was making vodka from potatoes swiped from the commissary. I hated to let him go, but he was too smart.

Since we were falling free in a 24-hour circular orbit, with everything weightless and floating, you'd think that shooting craps was impossible. But a radioman named Peters figured a dodge to substitute steel dice and a magnetic field. He also eliminated the element of chance, so we fired him.

We planned to ship him back in the next supply ship, the R.S. Half Moon. I was in Tiny's office when she blasted to match our orbit. Tiny swam to the view port "Send for Peters, Dad," he said, "and give him the old heave ho. Who's his relief?"

"Party named G. Brooks McNye," I told him.

A line came snaking over from the ship. Tiny said, "I don't believe she's matched." He buzzed the radio shack for the ship's motion relative to the Station. The answer didn't please him and he told them to call the Half Moon.

Tiny waited until the screen showed the rocket ship.

C.O. "Good morning, Captain. Why have you placed a line on us?"

"For cargo, naturally. Get your hopheads over here. I want to blast off before we enter the shadow." The Station spent about an hour and a quarter each day passing

through Earth's shadow; we worked two eleven-hour shifts and skipped the dark period, to avoid rigging lights and heating suits.

Tiny shook his head. "Not until you've matched course and speed with us."

"I am matched!"

"Not to specification, by my instruments."

"Have a heart, Tiny! I'm short on maneuvering fuel. If I juggle this entire ship to make a minor correction on a few lousy tons of cargo, I'll be so late I'll have to put down on a secondary field. I may even have to make a dead-stick landing." In those days all ships had landing wings.

"Look, Captain," Tiny said sharply, "the only purpose of your lift was to match orbits for those same few lousy tons. I don't care if you land in Little America on a pogo stick. The first load here was placed with loving care in the proper orbit, and I'm making every other load match. Get that covered wagon into the groove."

"Very well, Superintendent!" Captain Shields said stiffly. "Don't be sore, Don," Tiny said softly. "By the way, you've got a passenger for me?"

"Oh, yes, so I have!" Shields' face broke out in a grin.

"Well, keep him aboard until we unload. Maybe we can beat the shadow yet."

"Fine, fine! After all, why should I add to your troubles?" The skipper switched off, leaving my boss looking puzzled.

We didn't have time to wonder at his words. Shields whipped his ship around on gyros, blasted a second or two, and put her dead in space with us pronto-and used very little fuel, despite his bellyaching. I grabbed every man we could spare and managed to get the cargo clear before we swung into Earth's shadow. Weightlessness is an unbelievable advantage in handling freight; we gutted the Half Moon-by hand, mind you-in fifty-four minutes.

The stuff was oxygen tanks, loaded, and aluminum mirrors to shield them, panels of outer skin-sandwich stuff of titanium alloy sheet with foamed glass filling-and cases of jato units to spin the living quarters. Once it was all out and snapped to our cargo line I sent the men back by the same line-I won't let a man work outside without a line no matter how space happy he figures he is. Then I told Shields to send over the passenger and cast off.

This little guy came out the ship's air lock, and hooked on to the ship's line. Handling himself like he was used to space, he set his feet and dived, straight along the stretched line, his snap hook running free. I hurried back and motioned him to follow me. Tiny, the new man, and I reached the air locks together.

Besides the usual cargo lock we had three Kwikloks. A Kwiklok is an Iron Maiden without spikes; it fits a man in a suit, leaving just a few pints of air to scavenge, and cycles automatically. A big time saver in changing shifts. I passed through the middle-sized one; Tiny, of course, used the big one. Without hesitation the new man pulled himself into the small one.

We went into Tiny's office. Tiny strapped down, and pushed his helmet back. "Well, McNye," he said. "Glad to have you with us."

The new radio tech opened his helmet. I heard a low, pleasant voice answer, "Thank you."

I stared and didn't say anything. From where I was I could see that the radio tech was wearing a hair ribbon.

I thought Tiny would explode. He didn't need to see the hair ribbon; with the helmet up it was clear that the new "man" was as female as Venus deMilo. Tiny sputtered, then he was unstrapped and diving for the view port. "Dad!" he yelled. "Get the radio shack. Stop that ship!"

But the Half Moon was already a ball of fire in the distance. Tiny looked dazed. "Dad," he said, "who else knows about this?"

"Nobody, so far as I know."

He thought a bit. "We've got to keep her out of sight.

That's it-we keep her locked up and out of sight until the next ship matches in." He didn't look at her.

"What in the world are you talking about?" McNye's voice was higher and no longer pleasant.

Tiny glared. "You, that's what. What are you-a stowaway?'

"Don't be silly! I'm G. B. McNye, electronics engineer. Don't you have my papers?"

Tiny turned to me. "Dad, this is your fault. How in Chr- pardon me, Miss. How did you let them send you a woman? Didn't you even read the advance report on her?"

"Me?" I said. "Now see here, you big squarehead! Those forms don't show sex; the Fair Employment Commission won't allow it except where it's pertinent to the job."

"You're telling me it's not pertinent to the job here?"

"Not by job classification it ain't. There's lots of female radio and radar men, back Earthside."

"This isn't Earthside." He had something. He was thinking of those two-legged wolves swarming over the job outside. And G. B. McNye was pretty. Maybe eight months of no women at all affected my judgment, but she would pass.

"I've even heard of female rocket pilots," I added, for spite.

"I don't care if you've heard of female archangels; I'll have no women here!"

"Just a minute!" If I was riled, she was plain sore. "You're the construction superintendent, are you not?"

"Yes," Tiny admitted.

"Very well, then, how do you know what sex I am?'

"Are you trying to deny that you are a woman?"

"Hardly! I'm proud of it. But officially you don't know what sex G. Brooks McNye is. That's why I use 'G' instead of Gloria. I don't ask favors."

Tiny grunted. "You won't get any. I don't know how you sneaked in, but get this, McNye, or Gloria, or whatever. you're fired. You go back on the next ship. Meanwhile we'll try to keep the men from knowing we've got a woman aboard."

I could see her count ten. "May I speak," she said finally, "or does your Captain Bligh act extend to that, too?"

"Say your say."

"I didn't sneak in. I am on the permanent staff of the Station, Chief Communications Engineer. I took this vacancy myself to get to know the equipment while it was being installed. I'll live here eventually; I see no reason not to start now."

Tiny waved it away. "There'll be men and women both here some day. Even kids. Right now it's stag and it'll stay that way."

"We'll see. Anyhow, you can't fire me; radio personnel don't work for you." She had a point; communicators and some other specialists were lent to the contractors, Five Companies, Incorporated, by Harriman Enterprises.

Tiny snorted. "Maybe I can't fire you; I can send you home. Requisitioned personnel must be satisfactory to the contractor, meaning me. Paragraph Seven, clause M; I wrote that clause myself."

"Then you know that if requisitioned personnel are refused without cause the contractor bears the replacement cost"

"I'll risk paying your fare home, but I won't have you here."

"You are most unreasonable!"

"Perhaps, but I'll decide what's good for the job. I'd rather have a dope peddler than have a woman sniffing around my boys!"

She gasped. Tiny knew he had said too much; he added, "Sorry, Miss. But that's it. You'll' stay under cover until I can get rid of you."

Before she could speak I cut in. "Tiny-look behind you!" Staring in the port was one of the riggers, his eyes bugged out. Three or four more floated up and joined him.

Then Tiny zoomed up to the port and they scattered like minnows. He scared them almost out of their suits; I thought he was going to shove his fists through the quartz.

He came back looking whipped. "Miss," he said, pointing, "wait in my room." When she was gone he added, "Dad, what'll we do?"

I said, "I thought you had made up your mind, Tiny."

"I have," he answered peevishly. "Ask the Chief Inspector to come in, will you?"

That showed how far gone he was. The inspection gang belonged to Harriman Enterprises, not to us, and Tiny rated them mere nuisances. Besides, Tiny was an Oppenheimer graduate; Dalrymple was from M.I.T.

He came in, brash and cheerful. "Good morning, Superintendent. Morning, Mr. Witherspoon. What can I do for you?"

Glumly, Tiny told the story. Dalrymple looked smug. "She's right, old man. You can send her back and even specify a male relief. But I can hardly endorse 'for proper cause' now, can I?"

"Damnation. Dalrymple, we can't have a woman around here!"

"A moot point. Not covered by contract, y'know."

"If your office hadn't sent us a crooked gambler as her predecessor I wouldn't be in this am!"

"There, there! Remember the old blood pressure. Suppose we leave the endorsement open and arbitrate the cost. That's fair, eh?"

"I suppose so. Thanks."

"Not at all. But consider this: when you rushed Peters off before interviewing the newcomer, you cut yourself down to one operator. Hammond can't stand watch twenty-four hours a day."

"He can sleep in the shack. The alarm will wake him."

"I can't accept that. The home office and ships' frequencies must be guarded at all times. Harriman Enterprises has supplied a qualified operator; I am afraid you must use her for the time being."

Tiny will always cooperate with the inevitable; he said quietly, "Dad, she'll take first shift. Better put the married men on that shift."

Then he called her in. "Go to the radio shack and start makee-learnee, so that Hammond can go off watch soon. Mind what he tells you. He's a good man."

"I know," she said briskly. "I trained him."

Tiny bit his lip. The C.I. said, "The Superintendent doesn't bother with trivia-I'm Robert Dalrymple, Chief Inspector. He probably didn't introduce his assistant either-Mr. Witherspoon."

"Call me Dad," I said.

She smiled and said, "Howdy, Dad." I felt warm clear through. She went on to Dalrymple, "Odd that we haven't met before."

Tiny butted in. "McNye, you'll sleep in my room-"

She raised her eyebrows; he went on angrily, "Oh, I'll get my stuff out-at once. And get this: keep the door locked, off shift.'

"You're darn tootin' I will!"

Tiny blushed.

I was too busy to see much of Miss Gloria. There was cargo to stow, the new tanks to install and shield. That left the most worrisome task of all: putting spin on the living quarters. Even the optimists didn't expect much interplanetary traffic for some years; nevertheless Harriman Enterprises wanted to get some activities moved in and paying rent against their enormous investment.

I.T.&T. had leased space for a microwave relay station several million a year from television alone. The Weather Bureau was itching to set up its hemispheric integrating station; Palomar Observatory had a concession (Harriman Enterprises donated that space); the Security Council had, some hush-hush project; Fermi Physical Labs and Kettering Institute each had space-a dozen tenants wanted to move in now, or sooner, even if we never completed accommodations for tourists and travelers.

There were time bonuses in it for Five Companies, Incorporated-and their help. So we were in a hurry to get spin on the quarters.

People who have never been out have trouble getting through their heads-at least I had-that there is no feeling of weight, no up and down, in a free orbit in space. There's' Earth, round and beautiful, only twenty-odd thousand miles away, close enough to brush your sleeve. You know it's pulling you towards it. Yet you feel no weight, absolutely none. You float..

Floating is fine for some types of work, but when it's time to eat, or play cards, or bathe, it's good to feel weight on your feet. Your dinner stays quiet and you feel more natural.

You've seen pictures of the Station-a huge cylinder, like a bass drum, with ships' nose pockets dimpling its sides. Imagine a snare drum, spinning around inside the bass drum; that's the living quarters, with centrifugal force pinch-hitting for gravity. We could have spun the whole Station but you can't berth a ship against a whirling dervish.

So we built a spinning part for creature comfort and an outer, stationary part for docking, tanks, storerooms, and the like. You pass from one to the other at the hub. When Miss Gloria joined us the inner part was closed in and pressurized, but the rest was a skeleton of girders.

Mighty pretty though, a great network of shiny struts and ties against black sky and stars-titanium alloy 1403, light, strong, and non-corrodible. The Station is flimsy compared with a ship, since it doesn't have to take blastoff stresses. That meant we didn't dare put on spin by violent means-which is where jato units come in.

"Jato"-Jet Assisted Take-Off-rocket units invented to give airplanes a boost. Now we use them wherever a controlled push is needed, say to get a truck out of the mud on a dam job. We mounted four thousand. of them around the frame of the living quarters, each one placed just so. They were wired up and ready to fire when Tiny came to me looking worried. "Dad," he said, "let's drop everything and finish compartment D-ll3."

"Okay," I said. D-l13 was in the non-spin part.

"Rig an air lock and stock it with two weeks supplies."

"That'll change your mass distribution for spin," I suggested.

"I'll refigure it next dark period. Then we'll shift jatos."

When Dalrymple heard about it he came charging around. It meant a delay in making rental space available. "What's the idea?"

Tiny stared at him. They had been cooler than ordinary lately; Dalrymple had been finding excuses to seek out Miss Gloria. He had to pass through Tiny's office to reach her temporary room, and Tiny had finally told him to get out and stay out. "The idea," Tiny said slowly, "is to have a pup tent in case the house burns."

"What do you mean?"

"Suppose we fire up the jatos and the structure cracks? Want to hang around in a space suit until a ship happens by?"

"That's silly. The stresses have been calculated."

"That's what the man said when the bridge fell. We'll do it my way."

Dalrymple stormed off.

Tiny's efforts to keep Gloria fenced up were sort of pitiful. In the first place, the radio tech's biggest job was repairing suit walkie-talkies, done on watch. A rash of such troubles broke out-on her shift. I made some shift transfers and docked a few for costs, too; it's not proper maintenance when a man deliberately busts his aerial.

There were other symptoms. It became stylish to shave. Men started wearing shirts around quarters and bathing increased to where I thought I would have to rig another water still.

Came the shift when D-l13 was ready and the jatos readjusted. I don't mind saying I was nervous. All hands were ordered out of the quarters and into suits. They perched around the girders and waited.

Men in space suits all look alike; we used numbers and colored armbands. Supervisors had two antennas, one for a gang frequency, one for the supervisors' circuit. With Tiny and me the second antenna hooked back through the radio shack and to all the gang frequencies-a broadcast.

The supervisors had reported their men clear of the fireworks and I was about to give Tiny the word, when this figure came climbing through the girders, inside the danger zone. No safety line. No armband. One antenna.

Miss Gloria, of course. Tiny hauled her out of the blast zone, and anchored her with his own safety line. I heard his voice, harsh in my helmet: "Who do you think you are? A sidewalk superintendent?"

And her voice: "What do you expect me to do? Go park on, a star?"

"I told you to stay away from the job. If you can't obey orders, I'll lock you up."

I reached him, switched off my radio and touched helmet. "Boss! Boss!" I said. "You're broadcasting!"

"Oh-" he says, switches off, and touches helmets with her. We could still hear her; she didn't switch off. "Why, you big baboon, I came outside because you sent a search party to clear everybody out," and, "How would I know about a safety line rule? You've kept me penned up." And finally, "We'll see!"

I dragged him away and he told the boss electrician to go ahead. Then we forgot the row for we were looking at the prettiest fireworks ever seen, a giant St. Catherine's wheel, rockets blasting all over it. Utterly soundless, out there in space-but beautiful beyond compare.

The blasts died away and there was the living quarters, spinning true as a flywheel-Tiny and I both let out sighs of relief. We all went back inside then to see what weight tasted like.

It tasted funny. I went through the shaft and started down the ladders, feeling myself gain weight as I neared the rim. I felt seasick, like the first time I experienced no weight. I could hardly walk and my calves cramped.

We inspected throughout, then went to the office and sat down. It felt good, just right for comfort, one-third gravity at the rim. Tiny rubbed his chair arms and grinned, "Beats being penned up in D-113."

"Speaking of being penned up," Miss Gloria said, walking in, "may I have a word with you, Mr. Larsen?"

"Uh? Why, certainly. Matter of fact, I wanted to see you. I owe you an apology, Miss McNye.'I was-"

"Forget it," she cut in. "You were on edge. But I want to know this: how long are you going to keep up this nonsense, of trying to chaperone me?"

He studied her. "Not long. Just till your relief arrives."

"So? Who is the shop steward around here?"

"A shipfitter named McAndrews. But you can't use him. You're a staff member."

"Not in the job I'm filling. I am going to talk to him. You're discriminating against me, and in my off time at that."

"Perhaps, but you will find I have the authority. Legally I'm a ship's captain, while on this job. A captain in space has wide discriminatory powers."

"Then you should use them with discrimination!" He grinned. "Isn't that what you just said I was doing?" We didn't hear from the shop steward, but Miss Gloria started doing as she pleased. She showed up at the movies, next off shift, with Dalrymple. Tiny left in the middle-good show, too; Lysistrata Goes to Town, relayed up from New York.

As she was coming back alone he stopped her, having seen to it that I was present. "Umm-Miss McNye. . . ."

"Yes?"

"I think you should know, uh, well...Chief Inspector Dalrymple is a married man."

"Are you suggesting that my conduct has been improper?"

"No, but-"

"Then mind your own business!" Before he could answer she added, "It might interest you that he told me about your four children."

Tiny sputtered. "Why. . . why, I'm not even married!"

"So? That makes it worse, doesn't it?" She swept out.

Tiny quit trying to keep her in her room, but told her to notify him whenever she left it. It kept him busy riding herd on her. I refrained from suggesting that he get Dalrymple to spell him.

But I was surprised when he told me to put through the order dismissing her. I had been pretty sure he was going to drop it.

"What's the charge?" I asked. "Insubordination!"

I kept mum. He said, "Well, she won't take orders."

"She does her work okay. You give her orders you wouldn't give to one of the men and that a man wouldn't take."

"You disagree with my orders?"

"That's not the point. You can't prove the charge, Tiny."

"Well, charge her with being female! I can prove that."

I didn't say anything. "Dad," he added wheedlingly, "you know how to write it. No personal animus against Miss McNye, but it is felt that as a matter of policy, and so forth and so on."

I wrote it and gave it to Hammond privately. Radio techs are sworn to secrecy but it didn't surprise me when I was stopped by O'Connor, one of our best metalsmiths. "Look, Dad, is it true that the Old Man is getting rid of Brooksie?"

"Brooksie?"

"Brooksie McNye, she says to call her Brooks. Is it true?" I admitted it, then went on, wondering if I should have lied.

It takes four hours, about, for a ship to lift from Earth. The shift before the Pole Star was due, with Miss Gloria's relief, the timekeeper brought me two separation slips. Two men were nothing; we averaged more each ship. An hour later he reached me by supervisors circuit, and asked me to come to the time office. I was out on the rim inspecting a weld job; I said no. "Please, Mr. Witherspoon," he begged, "you've got to." When one of the boys doesn't call me 'Dad,' it means something. I went.

There was a queue like mail call outside his door; I went in and he shut the door on them. He handed me a double handful of separation slips. "What in the great depths of night is this?" I asked.

"There's dozens more I ain't had time to write up yet."

None of the slips had any reason given-just "own choice." "Look, Jimmie what goes on here?"

"Can't you dope it out, Dad? Shucks, I'm turning in one, too."

I told him my guess and he admitted it. So I took the slips, called Tiny and told him for the love of Heaven to come to his office.

Tiny chewed his lip considerable. "But, Dad, they can't strike. It's a non-strike contract with bonds from every union concerned."

"It's no strike, Tiny. You can't stop a man from quitting."

"They'll pay their own fares back, so help me!"

"Guess again. Most of 'em have worked long enough for the free ride."

"We'll have to hire others quick, or we'll miss our date."

"Worse than that, Tiny, we won't finish. By next dark period you won't even have a maintenance crew."

"I've never had a gang of men quit me. I'll talk to them."

"No good, Tiny. You're up against something too strong for you."

"You're against me, Dad?"

"I'm never against you, Tiny."

He said, "Dad, you think I'm pig-headed, but I'm right. You can't have one woman among several hundred men. It drives 'em nutty."

I didn't say it affected him the same way; I said, "Is that bad?"

"Of course. I can't let the job be ruined to humor one woman."

"Tiny, have you looked at the progress charts lately?"

"I've hardly had time to-what about them?"

I knew why he hadn't had time. "You'll have trouble proving Miss Gloria interfered with the job. We're ahead of schedule."

"We are?"

While he was studying the charts I put an arm around his shoulder. "Look, son," I said, "sex has been around our planet a long time. Earthside, they never get away from it, yet some pretty big jobs get built anyhow. Maybe we'll just have to learn to live with it here, too. Matter of fact, you had the answer a minute ago."

"I did? I sure didn't know it."

"You said, 'You can't have one woman among several hundred men. Get me?"

"Huh? No, I don't. Wait a minute! Maybe I do."

"Ever tried ju jitsu? Sometimes you win by relaxing."

"Yes. Yes!"

"When you can't beat 'em, you join 'em."

He buzzed the radio shack. "Have Hammond relieve you, McNye, and come to my office."

He did it handsomely, stood up and made a speech-he'd been wrong, taken him a long time to see it, hoped there were no hard feelings, etc. He was instructing the home office to see how many jobs could be filled at once with female help. "Don't forget married couples," I put in mildly, "and better ask for some older women, too."

"I'll do that," Tiny agreed. "Have I missed anything, Dad?"

"Guess not. We'll have to rig quarters, but there's time."

"Okay. I'm telling them to hold the Pole Star, Gloria, so they can send us a few this trip."

"That's fine" She looked really happy.

He chewed his lip. "I've a feeling I've missed something. Hmm-I've got it. Dad, tell them to send up a chaplain for the Station, as soon as possible. Under the new policy we may need one anytime." I thought so, too.

Space Jockey

JUST AS THEY WERE LEAVING the telephone called his name. "Don't answer it," she pleaded. "We'll miss the curtain."

"Who is it?" he called out. The viewplate lighted; he recognized Olga Pierce, and behind her the Colorado Springs office of Trans-Lunar Transit.

"Calling Mr. Pemberton. Calling-Oh, it's you, Jake. You're on. Flight 27, Supra-New York to Space Terminal. I'll have a copter pick you up in twenty minutes."

"How come?" he protested. "I'm fourth down on the call board."

"You were fourth down. Now you are standby pilot to Hicks-and he just got a psycho down-check."

"Hicks got psychoed? That's silly!"

"Happens to the best, chum. Be ready. "Bye now."

His wife was twisting sixteen dollars worth of lace handkerchief to a shapeless mass. "Jake, this is ridiculous. For three months I haven't seen enough of you to know what you look like."

"Sorry, kid. Take Helen to the show."

"Oh, Jake, I don't care about the show; I wanted to get you where they couldn't reach you for once."

"They would have called me at the theater."

"Oh, no! I wiped out the record you'd left."

"Phyllis! Are you trying to get me fired?"

"Don't look at me that way." She waited, hoping that he would speak, regretting the side issue, and wondering how to tell him that her own fretfulness was caused, not by disappointment, but by gnawing worry for his safety every time he went out into space.

She went on desperately, "You don't have to take this flight, darling; you've been on Earth less than the time limit. Please, Jake!"

He was peeling off his tux. "I've told you a thousand times: a pilot doesn't get a regular run by playing space-lawyer with the rule book. Wiping out my follow-up message-why did you do it, Phyllis? Trying to ground me?"

"No, darling, but I thought just this once-"

"When they offer me a flight I take it." He walked stiffly out of the room.

He came back ten minutes later, dressed for space and apparently in good humor; he was whistling: "-the caller called Casey at half past four; he kissed his-" He broke off when he saw her face, and set his mouth. "Where's my coverall?"

"I'll get it. Let me fix you something to eat."

'You know I can't take high acceleration on a full stomach. And why lose thirty bucks to lift another pound?"

Dressed as he was, in shorts, singlet, sandals, and pocket belt, he was already good for about minus-fifty pounds in weight bonus; she started to tell him the weight penalty on a sandwich and -a cup of coffee did not matter to them, but it was just one more possible cause for misunderstanding.

Neither of them said much until the taxicab clumped on the roof. He kissed her goodbye and told her not to come outside. She obeyed-until she heard the helicopter take off. Then she climbed to the roof and watched it out of sight.

The traveling-public gripes at the lack of direct Earth-to-Moon service, but it takes three types of rocket ships and two space-station changes to make a fiddling quarter-million-mile jump for a good reason: Money.

The Commerce Commission has set the charges for the present three-stage lift from here to the Moon at thirty dollars a pound. Would direct service be cheaper? A ship designed to blast off from Earth, make an airless landing on the Moon, return and make an atmosphere landing, would be so cluttered up with heavy special equipment used only

once in the trip that it could not show a profit at a thousand dollars a pound! Imagine combining a ferry boat, a subway train, and an express elevator. So Trans-Lunar uses rockets braced for catapulting, and winged for landing on return to Earth to make the terrific lift from Earth to our satellite station Supra-New York. The long middle lap, from there to where Space Terminal circles the Moon, calls for comfort-but no landing gear. The Flying Dutchman and the Philip Nolan never land; they were even assembled in space, and they resemble winged rockets like the Skysprite and the Firefly as little as a Pullman train resembles a parachute.

The Moonbat and the Gremlin are good only for the jump from Space Terminal down to Luna . . . no wings, cocoon-like acceleration-and-crash hammocks, fractional controls on their enormous jets.

The change-over points would not have to be more than air-conditioned tanks. Of course Space Terminal is quite a city, what with the Mars and Venus traffic, but even today Supra-New York is still rather primitive, hardly more than a fueling point and a restaurant-waiting room. It has only been the past five years that it has even been equipped to offer the comfort of one-gravity centrifuge service to passengers with queasy stomachs.

Pemberton weighed in at the spaceport office, then hurried over to where the Skysprite stood cradled in the catapult. He shucked off his coverall, shivered as he handed it to the gateman, and ducked inside. He went to his acceleration hammock and went to sleep; the lift to Supra-New York was not his worry-his job was deep space.

He woke at the surge of the catapult and the nerve-tingling rush up the face of Pikes Peak. When the Skysprite went into free flight, flung straight up above the Peak, Pemberton held his breath; if the rocket jets failed to fire, the ground-to-space pilot must try to wrestle her into a glide and bring her down, on her wings.

The rockets roared on time; Jake went back to sleep.

When the Skysprite locked in with Supra-New York, Pemberton went to the station's stellar navigation room. He was pleased to find Shorty Weinstein, the computer, on duty. Jake trusted Shorty's computations-a good thing when your ship, your passengers, and your own skin depend thereon. Pemberton had to be a better than average mathematician himself in order to be a pilot; his own limited talent made him appreciate the genius of those who computed the orbits.

"Hot Pilot Pemberton, the Scourge of the Spaceways - Hi!" Weinstein handed him a sheet of paper.

Jake looked at it, then looked amazed. "Hey, Shorty- you've made a mistake."

"Huh? Impossible. Mabel can't make mistakes." Weinstein gestured at the giant astrogation computer filling the far wall.

"You made a mistake. You gave me an easy fix - 'Vega, Antares, Regulus.' You make things easy for the pilot and your guild'll chuck you out." Weinstein looked sheepish but pleased. "I see I don't blast off for seventeen hours. I could have taken the morning freight." Jake's thoughts went back to Phyllis.

"UN canceled the morning trip."

"Oh-" Jake shut up, for he knew Weinstein knew as little as he did. Perhaps the flight would have passed too close to an A-bomb rocket, circling the globe like a policeman. The General Staff of the Security Council did not give out information about

the top secrets guarding the peace of the planet. Pemberton shrugged. "Well, if I'm asleep, call me three hours minus."

"Right. Your tape will be ready."

While he slept, the Flying Dutchman nosed gently into her slip, sealed her airlocks to the Station, discharged passengers and freight from Luna City. When he woke, her holds were filling, her fuel replenished, and passengers boarding. He stopped by the post office radio desk, looking for a letter from Phyllis. Finding none, he told himself that she would have sent it to Terminal. He went on into the restaurant, bought the facsimile Herald-Tribune, and settled down grimly to enjoy the comics and his breakfast.

A man sat down opposite him and proceeded to plague him with silly questions about rocketry, topping it by misinterpreting the insignia embroidered on Pemberton's singlet and miscalling him "Captain." Jake hurried through breakfast to escape him, then picked up the tape from his automatic pilot, and went aboard the Flying Dutchman.

After reporting to the Captain he went to the control room, floating and pulling himself along by the handgrips. He buckled himself into the pilot's chair and started his check off.

Captain Kelly drifted in and took the other chair as Pemberton was finishing his checking runs on the ballistic tracker. "Have a Camel, Jake."

"I'll take a rain check." He continued. Kelly watched him with a slight frown. Like captains and pilots on Mark Twain's Mississippi-and for the same reasons-a spaceship captain bosses his ship, his crew, his cargo, and his passengers, but the pilot is the final, legal, and unquestioned boss of how the ship is handled from blast-off to the end of the trip. A captain may turn down a given pilot-nothing more. Kelly fingered a slip of paper tucked in his pouch and turned over in his mind the words with which the Company psychiatrist on duty had handed it to him.

"I'm giving this pilot clearance, Captain, but you need not accept it."

"Pemberton's a good man. What's wrong?"

The psychiatrist thought over what he had observed while posing as a silly tourist bothering a stranger at breakfast. "He's a little more anti-social than his past record shows. Something on his mind. Whatever it is, he can tolerate it for the present. We'll keep an eye on him."

Kelly had answered, "Will you come along with him as pilot?"

"If you wish."

"Don't bother-I'll take him. No need to lift a deadhead." Pemberton fed Weinstein's tape into the robot-pilot, then turned to Kelly. "Control ready, sir."

"Blast when ready, Pilot." Kelly felt relieved when he heard himself make the irrevocable decision.

Pemberton signaled the Station to cast loose. The great ship was nudged out by an expanding pneumatic ram until she swam in space a thousand feet away, secured by a single line. He then turned the ship to its blast-off direction by causing a flywheel, mounted on gimbals at the ship's center of gravity, to spin rapidly. The ship spun slowly in the opposite direction, by grace of Newton's Third Law of Motion.

Guided by the tape, the robot-pilot tilted prisms of the pilot's periscope so that Vega, Antares, and Regulus would shine as one image when the ship was headed right; Pemberton nursed the ship to that heading . . . fussily; a mistake of one minute of arc here meant two hundred miles at destination.

When the three images made a pinpoint, he stopped the flywheels and locked in the gyros. He then checked the heading of his ship by direct observation of each of the stars, just as a salt-water skipper uses a sextant, but with incomparably more accurate instruments. This told him nothing about the correctness of the course Weinstein had ordered-he had to take that as Gospel-but it assured him that the robot and its tape were behaving as planned. Satisfied, he cast off the last line.

Seven minutes to go-Pemberton flipped the switch permitting the robot-pilot to blast away when its clock told it to. He waited, hands poised over the manual controls, ready to take over if the robot failed, and felt the old, inescapable sick excitement building up inside him.

Even as adrenaline poured into him, stretching his time sense, throbbing in his ears, his mind kept turning back to Phyllis.

He admitted she had a kick coming-spacemen shouldn't marry. Not that she'd starve if he messed up a landing, but a gal doesn't want insurance; she wants a husband-minus six minutes. If he got a regular run she could live in Space Terminal.

No good-idle women at Space Terminal went bad. Oh, Phyllis wouldn't become a tramp or a rum bum; she'd just go bats.

Five minutes more-he didn't care much for Space Terminal himself. Nor for space! "The Romance of Interplanetary Travel" - it looked well in print, but he knew what it was: A job. Monotony. No scenery. Bursts of work, tedious waits. No home life.

Why didn't he get an honest job and stay home nights?

He knew! Because he was a space jockey and too old to change.

What chance has a thirty-year-old married man, used to important money, to change his racket? (Four minutes) He'd look good trying to sell helicopters on commission, now, wouldn't he?

Maybe he could buy a piece of irrigated land and - Be your age, chum! You know as much about farming as a cow knows about cube root! No, he had made his bed when he picked rockets during his training hitch. If he had bucked for the electronics branch, or taken a 01 scholarship-too late now. Straight from the service into Harriman's Lunar Exploitations, hopping ore on Luna. That had torn it.

"How's it going, Doc?" Kelly's voice was edgy.

"Minus two minutes some seconds." Damnation-Kelly knew better than to talk to the pilot on minus time.

He caught a last look through the periscope. Antares seemed to have drifted. He unclutched the gyro, tilted and spun the flywheel, braking it savagely to a stop a moment later. The image was again a pinpoint. He could not have explained what he did: it was virtuosity, exact juggling, beyond textbook and classroom.

Twenty seconds . . . across the chronometer's face beads of light trickled the seconds away while he tensed, ready to fire by hand, or even to disconnect and refuse the trip if his judgment told him to. A too-cautious decision might cause Lloyds' to cancel his bond; a reckless decision could cost his license or even his life-and others.

But he was not thinking of underwriters and licenses, nor even of lives. In truth he was not thinking at all; he was feeling, feeling his ship, as if his nerve ends extended into every part of her. Five seconds . . . the safety disconnects clicked out. Four seconds . . . three seconds. . . two seconds. . . one-

He was stabbing at the hand-fire button when the roar hit him.

Kelly relaxed to the pseudo-gravity of the blast and watched. Pemberton was soberly busy, scanning dials, noting time, checking his progress by radar bounced off Supra-New York. Weinstein's figures, robot-pilot, the ship itself, all were clicking together.

Minutes later, the critical instant neared when the robot should cut the jets. Pemberton poised a finger over the hand cut-off, while splitting his attention among radarscope, accelerometer, periscope, and chronometer. One instant they were roaring along on the jets; the next split second the ship was in free orbit, plunging silently toward the Moon. So perfectly matched were human and robot that Pemberton himself did not know which had cut the power.

He glanced again at the board, then unbuckled. "How about that cigarette, Captain? And you can let your passengers unstrap."

No co-pilot is needed in space and most pilots would rather share a toothbrush than a control room. The pilot works about an hour at blast off, about the same before contact, and loafs during free flight, save for routine checks and corrections. Pemberton prepared to spend one hundred and four hours eating, reading, writing letters, and sleeping-especially sleeping.

When the alarm woke him, he checked the ship's position, then wrote to his wife. "Phyllis my dear," he began, "I don't blame you for being upset at missing your night out. I was disappointed, too. But bear with me, darling, I should be on a regular run before long. In less than ten years I'll be up for retirement and we'll have a chance to catch up on bridge and golf and things like that. I know it's pretty hard to-"

The voice circuit cut in "Oh, Jake-put on your company face. I'm bringing a visitor to the control room."

"No visitors in the control room, Captain."

"Now, Jake. This lunkhead has a letter from Old Man Harriman himself. 'Every possible courtesy-' and so forth."

Pemberton thought quickly. He could refuse-but there was no sense in offending the big boss. "Okay, Captain. Make it short."

The visitor was a man, jovial, oversize-Jake figured him for an eighty pound weight penalty. Behind him a thirteen year-old male counterpart came zipping through the door and lunged for the control console. Pemberton snagged him by the arm and forced himself to speak pleasantly. "Just hang on to that bracket, youngster. I don't want you to bump your head."

"Leggo me! Pop-make him let go."

Kelly cut in. "I think he had best hang on, Judge."

"Umm, uh-very well. Do as the Captain says, Junior."

"Aw, gee, Pop!"

"Judge Schacht, this is First Pilot Pemberton," Kelly said rapidly. "He'll show you around."

"Glad to know you, Pilot. Kind of you, and all that."

"What would you like to see, Judge?" Jake said carefully.

"Oh, this and that. It's for the boy-his first trip. I'm an old spacehound myself-probably more hours than half your crew." He laughed. Pemberton did not.

"There's not much to see in free flight."

"Quite all right. We'll just make ourselves at home-eh, Captain?"

"I wanna sit in the control seat," Schacht Junior announced.

Pemberton winced. Kelly said urgently, "Jake, would you mind outlining the control system for the boy? Then we'll go."

"He doesn't have to show me anything. I know all about it. I'm a Junior Rocketeer of America-see my button?" The boy shoved himself toward the control desk.

Pemberton grabbed him, steered him into the pilot's chair, and strapped him in. He then flipped the board's disconnect.

"Whatcha doing?"

"I cut off power to the controls so I could explain them."

"Aintcha gonna fire the jets?"

"No." Jake started a rapid description of the use and purpose of each button, dial, switch, meter, gimmick, and scope.

Junior squirmed. "How about meteors?" he demanded.

"Oh, that-maybe one collision in half a million EarthMoon trips. Meteors are scarce."

"So what? Say you hit the jackpot? You're in the soup."

"Not at all. The anti-collision radar guards all directions five hundred miles out. If anything holds a steady bearing for three seconds, a direct hook-up starts the jets. First a warning gong so that everybody can grab something solid, then one second later - Boom! - We get out of there fast."

"Sounds corny to me. Lookee, I'll show you how Commodore Cartwright did it in The Comet Busters-"

"Don't touch those controls!"

"You don't own this ship. My pop says-"

"Oh, Jake!" Hearing his name; Pemberton twisted, fish-like, to face Kelly.

"Jake, Judge Schacht would like to know-" From the corner of his eye Jake saw the boy reach for the board. He turned, started to shout-acceleration caught him, while the jets roared in his ear.

An old spacehand can usually recover, catlike, in an unexpected change from weightlessness to acceleration. But Jake had been grabbing for the boy, instead of for anchorage. He fell back and down, twisted to try to avoid Schacht, banged his head on the frame of the open air-tight door below, and fetched up on the next deck, out cold. - Kelly was shaking him. ".You all right, Jake?"

He sat up. "Yeah. Sure." He became aware of the thunder, the shivering deckplates. "The jets! Cut the power!"

He shoved Kelly aside and swarmed up into the control room, jabbed at the cut-off button. In sudden ringing silence, they were again weightless.

Jake turned, unstrapped Schacht Junior, and hustled him to Kelly. "Captain, please remove this menace from my control room."

"Leggo! Pop-he's gonna hurt me!"

The elder Schacht bristled at once. "What's the meaning of this? Let go of my son!"

"Your precious son cut in the jets."

"Junior-did you do that?"

The boy shifted his eyes. "No, Pop. It . . . it was a meteor."

Schacht looked puzzled. Pemberton snorted. "I had just told him how the radar-guard can blast to miss a meteor. He's lying."

Schacht ran through the process he called "making up his mind", then answered, "Junior never lies. Shame on you, a grown man, to try to put the blame on a helpless boy. I shall report you, sir. Come, Junior."

Jake grabbed his arm. "Captain, I want those controls photographed for fingerprints before this man leaves the room. It was not a meteor; the controls were dead, until this boy switched them on. Furthermore the anti-collision circuit sounds an alarm."

Schacht looked wary. "This is ridiculous. I simply objected to the slur on my son's character. No harm has been done."

"No harm, eh? How about broken arms-or necks? And wasted fuel, with more to waste before we're back in the groove. Do you know, Mister 'Old Spacehound,' just how precious a little fuel will be when we try to match orbits with Space Terminal-if we haven't got it? We may have to dump cargo to save the ship, cargo at $60,000 a ton on freight charges alone. Fingerprints will show the Commerce Commission whom to nick for it."

When they were alone again Kelly asked anxiously, "You won't really have to jettison? You've got a maneuvering reserve."

"Maybe we can't even get to Terminal. How long did she blast?"

Kelly scratched his head. "I was woozy myself."

"We'll open the accelerograph and take a look."

Kelly brightened. "Oh, sure! If the brat didn't waste too much, then we just swing ship and blast back the same length of time."

Jake shook his head. "You forgot the changed mass-ratio."

"Oh ... oh, yes!" Kelly looked embarrassed. Mass-ratio under power, the ship lost the weight of fuel burned. The thrust remained constant; the mass it pushed shrank. Getting back to proper position, course, and speed became a complicated problem in the calculus of ballistics. "But you can do it, can't you?"

"I'll have to. But I sure wish I had Weinstein here."

Kelly left to see about his passengers; Jake got to work. He checked his situation by astronomical observation and by radar. Radar gave him all three factors quickly but with limited accuracy. Sights taken of Sun, Moon, and Earth gave him position, but told nothing of course and speed, at that time-nor could he afford to wait to take a second group of sights for the purpose.

Dead reckoning gave him an estimated situation, by adding Weinstein's predictions to the calculated effect of young Schacht's meddling. This checked fairly well with the radar and visual observations, but still he had no notion of whether or not he could get back in the groove and reach his destination; it was now necessary to calculate what it would stake and whether or not the remaining fuel would be enough to brake his speed and match orbits.

In space, it does no good to reach your journey's end if you flash on past at miles per second, or even crawling along at a few hundred miles per hour. To catch an egg on a plate - don't bump!

He started doggedly to work to compute how to do it using the least fuel, but his little Marchant electronic calculator was no match for the tons of IBM computer at Supra-

New York, nor was he Weinstein. Three hours later he had an answer of sorts. He called Kelly. "Captain? You can start by jettisoning Schacht & Son."

"I'd like to. No way out, Jake?"

"I can't promise to get your ship in safely without dumping. Better dump now, before we blast. It's cheaper."

Kelly hesitated; he would as cheerfully lose a leg. "Give me time to pick out what to dump."

"Okay." Pemberton returned sadly to his figures, hoping to find a saving mistake, then thought better of it. He called the radio room. "Get me Weinstein at Supra-New York."

"Out of normal range."

"I know that. This is the Pilot. Safety priority-urgent. Get a tight beam on them and nurse it."

"Uh . . . aye aye, sir. I'll try."

Weinstein was doubtful. "Cripes, Jake, I can't pilot you."

"Dammit, you can work problems for me!"

"What good is seven-place accuracy with bum data?"

"Sure, sure. But you know what instruments I've got; you know about how well I can handle them. Get me a better answer."

"I'll try." Weinstein called back four hours later. "Jake? Here's the dope: You planned to blast back to match your predicted speed, then made side corrections for position. Orthodox but uneconomical. Instead I had Mabel solve for it as one maneuver."

"Good!"

"Not so fast. It saves fuel but not enough. You can't possibly get back in your old groove - and then match T without dumping."

Pemberton let it sink in, then said, "I'll tell Kelly."

"Wait a minute, Jake. Try this. Start from scratch."

"Huh?"

"Treat it as a brand-new problem. Forget about the orbit on your tape. With your present course, speed, and position compute the cheapest orbit to match with Terminal's. Pick it!, new groove."

Pemberton felt foolish. "I never thought of that."

"Of course not. With the ship's little one-lung calculator it'd take you three weeks to solve it. You set to record?"

"Sure."

"Here's your data." Weinstein started calling it off. When they had checked it, Jake said, "That'll get me there?"

"Maybe. If the data you gave me is up to your limit of accuracy; if you can follow instructions as exactly as a robot, if you can blast off and make contact so precisely that you don't need side corrections, then you might squeeze home. Maybe. Good luck, anyhow." The wavering reception muffled their goodbyes.

Jake signaled Kelly. "Don't jettison, Captain. Have your passengers strap down. Stand by to blast. Minus fourteen minutes."

"Very well, Pilot."

The new departure made and checked, he again had time to spare. He took out his unfinished letter, read it, then tore it up.

"Dearest Phyllis," he started again, "I've been doing some hard thinking this trip and have decided that I've just been stubborn. What am I doing way out here? I like my home. I like to see my wife.

"Why should I risk my neck and your peace of mind to herd junk through the sky? Why hang around a telephone - waiting to chaperon fatheads to the Moon -numbskulls who couldn't pilot a rowboat and should have stayed at home in the first place?

"Money, of course. I've been afraid to risk a change. I won't find another job that will pay half as well, but, if you are game, I'll ground myself and we'll start over. All my love, "Jake"

He put it away and went to sleep, to dream that an entire troop of Junior Rocketeers had been quartered in his control room.

The closeup view of the Moon is second only to the spaceside view of the Earth as a tourist attraction; nevertheless Pemberton insisted that all passengers strap down during the swing around to Terminal. With precious little fuel for the matching maneuver, he refused to hobble his movements to please sightseers.

Around the bulge of the Moon, Terminal came into sight - by radar only, for the ship was tail foremost. After each short braking blast Pemberton caught a new radar fix, then compared his approach with a curve he had plotted from Weinstein's figures-with one eye on the time, another on the 'scope, a third on the plot, and a fourth on his fuel gages.

"Well, Jake?" Kelly fretted. "Do we make it?"

"How should I know? You be ready to dump." They had agreed on liquid oxygen as the cargo to dump, since it could be let boil out through the outer valves, without handling.

"Don't say it, Jake."

"Damn it-I won't if I don't have to." He was fingering his controls again; the blast chopped off his words. When it stopped, the radio maneuvering circuit was calling him.

"Flying Dutchman, Pilot speaking," Jake shouted back.

"Terminal Control-Supro reports you short on fuel."

"Right."

"Don't approach. Match speeds outside us. We'll send a transfer ship to refuel you and pick up passengers."

"I think I can make it."

"Don't try it. Wait for refueling."

"Quit telling me how to pilot my ship!" Pemberton switched off the circuit, then stared at the board, whistling morosely. Kelly filled in the words in his mind: "Casey said to the fireman, 'Boy, you better jump, cause two locomotives are agoing to bump!'"

"You going in the slip anyhow, Jake?"

"Mmm-no, blast it. I can't take a chance of caving in the side of Terminal, not with passengers aboard. But I'm not going to match speeds fifty miles outside and wait for a piggyback."

He aimed for a near miss just outside Terminal's orbit, conning by instinct, for Weinstein's figures meant nothing by now. His aim was good; he did not have to waste

his hoarded fuel on last minute side corrections to keep from hitting Terminal. When at last he was sure of sliding safely on past if unchecked, he braked once more. Then, as he started to cut off the power, the jets coughed, sputtered, and quit.

The Flying Dutchman floated in space, five hundred yards outside Terminal, speeds matched.

Jake switched on the radio. "Terminal-stand by for my line. I'll warp her in."

He had filed his report, showered, and was headed for the post office to radiostat his letter, when the bullhorn summoned him to the Commodore-Pilot's office. Oh, oh, he told himself, Schacht has kicked the Brass-I wonder just how much stock that bliffy owns? And there's that other matter - getting snotty with Control.

He reported stiffly. "First Pilot Pemberton, sir."

Commodore Soames looked up. "Pemberton-oh, yes. You hold two ratings, space-to-space and airless-landing."

Let's not stall around, Jake told himself. Aloud he said, "I have no excuses for anything this last trip. If the Commodore does not approve the way I run my control room, he may have my resignation."

"What are you talking about?"

"I, well-don't you have a passenger complaint on me?"

"Oh, that!" Soames brushed it aside. "Yes, he's been here. But I have Kelly's report, too-and your chief jetman's, and a special from Supra-New York. That was crack piloting, Pemberton."

"You mean there's no beef from the Company"

"When have I failed to back up my pilots? You were perfectly right; I would have stuffed him out the air lock. Let's get down to business: You're on the space-to-space board, but I want to send a special to Luna City. Will you take it, as a favor to me?"

Pemberton hesitated; Soames went on, "That oxygen you saved is for the Cosmic Research Project. They blew the seals on the north tunnel and lost tons of the stuff. The work is stopped-about $130,000 a day in overhead, wages, and penalties. The Gremlin is here, but no pilot until the Moonbat gets in-except you. Well?"

"But I-look, Commodore, you can't risk people's necks on a jet landing of mine. I'm rusty; I need a refresher and a checkout."

"No passengers, no crew, no captain-your neck alone."

"I'll take her."

Twenty-eight minutes later, with the ugly, powerful hull of the Gremlin around him, he blasted away. One strong shove to kill her orbital speed and let her fall toward the Moon, then no more worries until it came time to "ride 'er down on her tail".

He felt good-until he hauled out two letters, the one he had failed to send, and one from Phyllis, delivered at Terminal.

The letter from Phyllis was affectionate-and superficial. She did not mention his sudden departure; she ignored his profession completely. The letter was a model of correctness, but it worried him.

He tore up both letters and started another. It said, in part: "-never said so outright, but you resent my job.

"I have to work to support us. You've got a job, too. It's an old, old job that women have been doing a long time-crossing the plains in covered wagons, waiting for ships to come back from China, or waiting around a mine head after an explosion-kiss him goodbye with a smile, take care of him at home.

"You married a spaceman, so part of your job is to accept my job cheerfully. I think you can do it, when you realize it. I hope so, for the way things have been going won't do for either of us. Believe me, I love you. Jake"

He brooded on it until time to bend the ship down for his approach. From twenty miles altitude down to one mile he let the robot brake her, then shifted to manual while still falling slowly. A perfect airless-landing would be the reverse of the take-off of a war rocket-free fall, then one long blast of the jets, ending with the ship stopped dead as she touches the ground. In practice a pilot must feel his way down, not too slowly; a ship could burn all the fuel this side of Venus fighting gravity too long.

Forty seconds later, falling a little more than 140 miles per hour, he picked up in his periscopes the thousand-foot static towers. At 300 feet he blasted five gravities for more than a second, cut it, and caught her with a one-sixth gravity, Moon-normal blast. Slowly he eased this off, feeling happy.

The Gremlin hovered, her bright jet splashing the soil of the Moon, then settled with dignity to land without a jar.

The ground crew took over; a sealed runabout jeeped Pemberton to the tunnel entrance. Inside Luna City, he found himself paged before he finished filing his report. When he took the call, Soames smiled at him from the viewpláte. "I saw that landing from the field pick-up, Pemberton. You don't need a refresher course."

Jake blushed. "Thank you, sir."

"Unless you are dead set on space-to-space, I can use you on the regular Luna City run. Quarters here or Luna City? Want it?"

He heard himself saying, "Luna City. I'll take it."

He tore up his third letter as he walked into Luna City post office. At the telephone desk he spoke to a blonde in a blue moonsuit. "Get me Mrs. Jake Pemberton, Suburb six-four-oh-three, Dodge City, Kansas, please."

She looked him over. "You pilots sure spend money."

"Sometimes phone calls are cheap. Hurry it, will you?"

Phyllis was trying to phrase the letter she felt she should have written before. It was easier to say in writing that she was not complaining of loneliness nor lack of fun, but that she could not stand the strain of worrying about his safety. But then she found herself quite unable to state the logical conclusion. Was she prepared to face giving him up entirely if he would not give up space? She truly did not know . . . the phone call was a welcome interruption.

The viewplate stayed blank. "Long distance," came a thin voice. "Luna City calling."

Fear jerked at her heart. "Phyllis Pemberton speaking."

An interminable delay-she knew it took nearly three seconds for radio waves to make the Earth-Moon round trip, but she did not remember it and it would not have reassured her. All she could see was a broken home, herself a widow, and Jake, beloved Jake, dead in space. "Mrs. Jake Pemberton?"

"Yes, yes! Go ahead." Another wait-had she sent him away in a bad temper, reckless, his judgment affected? Had he died out there, remembering only that she fussed at him for leaving her to go to work? Had she failed him when he needed her? She knew that her Jake could not be tied to apron strings; men - grown-up men, not mammas' boys - had to break away from mother's apron strings. Then why had she tried to tie him to hers? She had known better; her own mother had warned her not to try it.

She prayed.

Then another voice, one that weakened her knees with relief: "That you, honey?"

"Yes, darling, yes! What are you doing on the Moon?"

"It's a long story. At a dollar a second it will keep. What I want to know is-are you willing to come to Luna City?"

It was Jake's turn to suffer from the inevitable lag in reply. He wondered if Phyllis were stalling, unable to make up her mind. At last he heard her say, "Of course, darling. When do I leave?"

"When-say, don't you even want to know why?"

She started to say that it did not matter, then said, "Yes, tell me." The lag was still present but neither of them cared. He told her the news, then added, "Run over to the Springs and get Olga Pierce to straighten out the red tape for you. Need my help to pack?"

She thought rapidly. Had he meant to come back anyhow, he would not have asked. "No. I can manage."

"Good girl. I'll radiostat you a long letter about what to bring and so forth. I love you. 'Bye now!"

"Oh, I love you, too. Goodbye, darling."

Pemberton came out of the booth whistling. Good girl, Phyllis. Staunch. He wondered why he had ever doubted her.

Requiem

On a high hill in Samoa there is a grave. Inscribed on the marker are these words:

"Under the wide and starry sky
Dig my grave and let me lie
Glad did I live and gladly die
And I lay me down with a will!

"This be the verse which you grave for me:
'Here he lies where he longed to be,
Home is the sailor, home from the sea,
And the hunter home from the hill.'"

These lines appear another place -- scrawled on a shipping tag torn from a compressed-air container, and pinned to the ground with a knife.

It wasn't much of a fair, as fairs go. The trottin' races didn't promise much excitement, even though several entries claimed the blood of the immortal Dan Patch. The tents and concession booths barely covered the circus grounds, and the pitchmen seemed discouraged.

D.D. Harriman's chauffeur could not see any reason for stopping. They were due in Kansas City for a directors' meeting, that is to say, Harriman was. The chauffeur had private reasons for promptness, reasons involving darktown society on Eighteenth Street. But the Boss not only stopped, but hung around.

Bunting and a canvas arch made the entrance to a large enclosure beyond the race track. Red and gold letters announced:

This way to the MOON ROCKET!!!!
See it in actual flight!
Public Demonstration Flights
Twice Daily
This is the ACTUAL TYPE used by the
First Man to reach the MOON!!!
YOU can ride in it!! -- $50.OO

A boy, nine or ten years old, hung around the entrance and stared at the posters.

"Want to see the ship, son?"

The kid's eyes shone. "Gee, mister. I sure would."

"So would I. Come on." Harriman paid out a dollar for two pink tickets which entitled them to enter the enclosure and examine the rocket ship. The kid took his and ran on ahead with the single-mindedness of youth. Harriman looked over the stubby curved lines of the ovoid body. He noted with a professional eye that she was a single-jet type with fractional controls around her midriff. He squinted through his glasses at the name painted in gold on the carnival red of the body, _Care Free_. He paid another quarter to enter the control cabin.

When his eyes had adjusted to the gloom caused by the strong ray filters of the ports he let them rest lovingly on the keys of the console and the semi-circle of dials above. Each beloved gadget was in its proper place. He knew them, graven in his heart.

While he mused over the instrument board, with the warm liquid of content soaking through his body, the pilot entered and touched his arm.

"Sorry, sir. We've got to cast loose for the flight."

"Eh?" Harriman started, then looked at the speaker. Handsome devil, with a good skull and strong shoulders, reckless eyes and a self-indulgent mouth, but a firm chin. "Oh, excuse me, Captain."

"Quite all right."

"Oh, I say, Captain, er, uh. . ."

"McIntyre."

"Captain McIntyre, could you take a passenger this trip?" The old man leaned eagerly toward him.

"Why, yes, if you wish. Come along with me." He ushered Harriman into a shed marked OFFICE which stood near the gate. "Passenger for a check over, doc."

Harriman looked startled but permitted the medico to run a stethoscope over his thin chest, and to strap a rubber bandage around his arm. Presently he unstrapped it, glanced at McIntyre, and shook his head.

"No go, doc?"

"That's right, Captain."

Harriman looked from face to face. "My heart's all right -- that's just a flutter."

The physician's brows shot up. "Is it? But it's not just your heart; at your age your bones are brittle, too brittle to risk a take-off."

"Sorry, sir," added the pilot, "but the Bates County Fair Association pays the doctor here to see to it that I don't take anyone up who might be hurt by the acceleration."

The old man's shoulders drooped miserably. "I rather expected it."

"Sorry, sir." McIntyre turned to go, but Harriman followed him out.

"Excuse me, Captain--"

"Yes?"

"Could you and your, uh, engineer have dinner with me after your flight?"

The pilot looked at him quizzically. "I don't see why not. Thanks."

"Captain McIntyre, it is difficult for me to see why anyone would quit the Earth-Moon run." Fried chicken and hot biscuits in a private dining room of the best hotel the little town of Butler afforded, three-star Hennessey and Corona-Coronas had produced a friendly atmosphere in which three men could talk freely.

"Well, I didn't like it."

"Aw, don't give him that, Mac -- you know damn well it was Rule G that got you." McIntyre's mechanic poured himself another brandy as he spoke.

McIntyre looked sullen. "Well, what if I did take a couple o' drinks? Anyhow, I could have squared that -- it was the damn persnickety regulations that got me fed up. Who are you to talk? -- Smuggler!"

"Sure I smuggled! Who wouldn't with all those beautiful rocks just aching to be taken back to Earth. I had a diamond once as big as... But if I hadn't been caught I'd be in Luna City tonight. And so would you, you drunken blaster ... with the boys buying us drinks, and the girls smiling and making suggestions..." He put his face down and began to weep quietly.

McIntyre shook him. "He's drunk."

"Never mind." Harriman interposed a hand. "Tell me, are you really satisfied not to be on the run any more?"

McIntyre chewed his lip. "No, he's right of course. This barnstorming isn't what it's all cracked up to be. We've been hopping junk at every pumpkin doin's up and down the Mississippi valley -- sleeping in tourist camps, and eating at grease burners. Half the time the sheriff has an attachment on the ship, the other half the Society for the Prevention of Something or Other gets an injunction to keep us on the ground. It's no sort of a life for a rocket man."

"Would it help any for you to get to the Moon?"

"Well. . . Yes. I couldn't get back on the Earth-Moon run, but if I was in Luna City, I could get a job hopping ore for the Company -- they're always short of rocket pilots for that, and they wouldn't mind my record. If I kept my nose clean, they might even put me back on the run, in time."

Harriman fiddled with a spoon, then looked up. "Would you young gentlemen be open to a business proposition?"

"Perhaps. What is it?"

"You own the _Care Free_?"

"Yeah. That is, Charlie and I do -- barring a couple of liens against her. What about it?"

"I want to charter her... for you and Charlie to take me to the Moon!"

Charlie sat up with a jerk. "D'joo hear what he said, Mac? He wants us to fly that old heap to the Moon!"

McIntyre shook his head. "Can't do it, Mister Harriman. The old boat's worn out. You couldn't convert to escape fuel. We don't even use standard juice in her -- just gasoline and liquid air. Charlie spends all of his time tinkering with her at that She's going to blow up some day."

"Say, Mister Harriman," put in Charlie, "what's the matter with getting an excursion permit and going in a Company ship?"

"No, son," the old man replied, "I can't do that. You know the conditions under which the U. N. granted the Company a monopoly on lunar exploitation -- no one to enter space who was not physically qualified to stand up under it. Company to take full responsibility for the safety and health of all citizens beyond the stratosphere. The official reason for granting the franchise was to avoid unnecessary loss of life during the first few years of space travel."

"And you can't pass the physical exam?" Harriman shook his head.

"Well, what the hell -- if you can afford to hire us, why don't you just bribe yourself a brace of Company docs? It's been done before."

Harriman smiled ruefully. "I know it has, Charlie, but it won't work for me. You see, I'm a tad too prominent. My full name is Delos D. Harriman."

"What? You are old D.D.? But hell's bells, you own a big slice of the Company yourself -- you practically are the Company; you ought to be able to do anything you like, rules or no rules."

"That is a not unusual opinion, son, but it is incorrect. Rich men aren't more free than other men; they are less free, a good deal less free. I tried to do what you suggest, but, the other directors would not permit me. They are afraid of losing their franchise. It costs them a good deal in -- uh -- political contact expenses to retain it, as it is."

"Well, I'll be a-- Can you tie that, Mac? A guy with lots of dough, and he can't spend it the way he wants to." McIntyre did not answer, but waited for Harriman to continue.

"Captain McIntyre, if you had a ship, would you take me?"

McIntyre rubbed his chin. "It's against the law."

"I'd make it worth your while."

"Sure he would, Mr. Harriman. Of course you would, Mac. Luna City! Oh, baby!"

"Why do you want to go to the Moon so badly, Mister Harriman?"

"Captain, it's the one thing I've really wanted to do all my life -- ever since I was a young boy. I don't know whether I can explain it to you, or not. You young fellows have grown up to rocket travel the way I grew up to aviation. I'm a great deal older than you are, at least fifty years older. When I was a kid practically nobody believed that men would ever reach the Moon. You've seen rockets all your lives, and the first to reach the Moon got there before you were a young boy. When I was a boy they laughed at the idea.

"But I believed -- I believed. I read Verne, and Wells, and Smith, and I believed that we could do it -- that we would do it. I set my heart on being one of the men to walk the surface of the Moon, to see her other side, and to look back on the face of the Earth, hanging in the sky.

"I used to go without my lunches to pay my dues in the American Rocket Society, because I wanted to believe that I was helping to bring the day nearer when we would reach the Moon. I was already an old man when that day arrived. I've lived longer than I should, but I would not let myself die... I will not! -- until I have set foot on the Moon."

McIntyre stood up and put out his hand. "You find a ship, Mister Harriman. I'll drive 'er."

"Atta' boy, Mac! I told you he would, Mister Harriman."

Harriman mused and dozed during the half-hour run to the north into Kansas City, dozed in the light troubled sleep of old age. Incidents out of a long life ran through his mind in vagrant dreams. There was that time... oh, yes, 1910 ... A little boy on a warm spring night;

"What's that, Daddy?" -- "That's Halley's comet, Sonny." -- "Where did it come from?" -- "I don't know, Son. From way out in the sky somewhere." -- "It's _beyoootiful_, Daddy. I want to touch it." -- "'Fraid not, Son."

"Delos, do you mean to stand there and tell me you put the money we had saved for the house into that crazy rocket company?" -- "Now, Charlotte, please! It's not crazy; it's a sound business investment. Someday soon rockets will fill the sky. Ships and trains will be obsolete. Look what happened to the men that had the foresight to invest in Henry Ford." -- "We've been all over this before." -- "Charlotte, the day will come when men will rise up off the Earth and visit the Moon, even the planets. This is the beginning." -- "Must you shout?" -- "I'm sorry, but--" -- "I feel a headache coming on. Please try to be a little quiet when you come to bed."

He hadn't gone to bed. He had sat out on the veranda all night long, watching the full Moon move across the sky. There would be the devil to pay in the morning, the devil and a thin-lipped silence. But he'd stick by his guns. He'd given in on most things, but not on this. But the night was his. Tonight he'd be alone with his old friend. He searched her face. Where was Mare Crisium? Funny, he couldn't make it out. He used to be able to see it plainly when he was a boy. Probably needed new glasses -- this constant office work wasn't good for his eyes.

But he didn't need to see, he knew where they all were; Crisium, Mare Fecunditatis, Mare Tranquilitatis -- that one had a satisfying roll! -- the Apennines, the Carpathians, old Tycho with it's mysterious rays.

Two hundred and forty thousand miles -- ten times around the Earth. Surely men could bridge a little gap like that. Why, he could almost reach out and touch it, nodding there behind the elm trees. Not that he could help. He hadn't the education.

"Son, I want to have a little serious talk with you." -- "Yes, Mother." -- "I know you had hoped to go to college next year--" (Hoped! He had lived for it. The University of Chicago to study under Moulton, then on to the Yerkes Observatory to work under the eye of Dr. Frost himself) -- "and I had hoped so too. But with your father gone, and the girls growing up, it's harder to make ends meet. You've been a good boy, and worked hard to help out. I know you'll understand." -- "Yes, Mother."

"Extra! Extra! STRATOSPHERE ROCKET REACHES PARIS. Read aaaaallllll about 't." The the little man in the bifocals snatched at the paper and hurried back to the office. -- "Look at this, George." -- "Huh? Hmm, interesting, but what of it?" -- "Can't you see? The next stage is to the Moon!" -- "God, but you're a sucker, Delos. The trouble with you is, you read too many of those trashy magazines. Now I caught my boy reading one of 'em just last week, _Stunning Stories_, or some such title, and dressed him down proper. Your folks should have done you the same favor." -- Harriman squared his narrow, middle-aged shoulders. "They will so reach the Moon!" -- His partner laughed. "Have it your own way. If baby wants the Moon, papa bring it for him. But you stick to your discounts and commissions; that's where the money is."

The big car droned down the Paseo, and turned off on Armour Boulevard. Old Harriman stirred uneasily in his sleep and muttered to himself.

"But Mister Harriman--" The young man with the notebook was plainly perturbed. The old man grunted.

"You heard me. Sell 'em. I want every share I own realized in cash as rapidly as possible; Spaceways, Spaceways Provisioning Company, Artemis Mines, Luna City Recreations, the whole lot of them."

"It will depress the market. You won't realize the full value of your holdings."

"Don't you think I know that? I can afford it."

"What about the shares you had earmarked for Richardson Observatory, and for the Harriman Scholarships?"

"Oh, yes. Don't sell those. Set up a trust. Should have done it long ago. Tell young Kamens to draw up the papers. He knows what I want"

The interoffice visor flashed into life. "The gentlemen are here, Mr. Harriman."

"Send 'em in. That's all, Ashley. Get busy." Ashley went out as McIntyre and Charlie entered. Harriman got up and trotted forward to greet them.

"Come in, boys, come in. I'm so glad to see you. Sit down. Sit down. Have a cigar."

"Mighty pleased to see you, Mr. Harriman," acknowledged Charlie. "In fact, you might say we need to see you."

"Some trouble, gentlemen?" Harriman glanced from face to face. McIntyre answered him.

"You still mean that about a job for us, Mr. Harriman?"

"Mean it? Certainly, I do. You're not backing out on me?"

"Not at all. We need that job now. You see the _Care Free_ is lying in the middle of the Osage River, with her jet split clear back to the injector."

"Dear me! You weren't hurt?"

"No, aside from sprains and bruises. We jumped."

Charlie chortled. "I caught a catfish with my bare teeth."

In short order they got down to business. "You two will have to buy a ship for me. I can't do it openly; my colleagues would figure out what I mean to do and stop me. I'll supply you with all the cash you need. You go out and locate some sort of a ship that can be refitted for the trip. Work, up some good story about how you are buying it for some playboy as a stratosphere yacht, or that you plan to establish an arctic-antarctic tourist route. Anything as long as no one suspects that she is being-outfitted for space flight.

"Then, after the Department of Transport licenses her for strato flight, you move out to a piece of desert out west -- I'll find a likely parcel of land and buy it -- and then I'll join you. Then we'll install the escape-fuel tanks, change the injectors, and timers, and so forth, to fit her for the hop. How about it?"

McIntyre looked dubious. "It'll take a lot of doing. Charlie, do you think you can accomplish that changeover without a dockyard and shops?"

"Me? Sure I can -- with your thick-fingered help. Just give me the tools and materials I want, and don't hurry me too much. Of course, it won't be fancy--"

"Nobody wants it to be fancy. I just want a ship that won't blow when I start slapping the keys. Isotope fuel is no joke."

"It won't blow, Mac."

"That's what you thought about the _Care Free_."

"That ain't fair, Mac. I ask you, Mr. Harriman -- That heap was junk, and we knew it. This'll be different. We're going to spend some dough and do it right. Ain't we, Mr. Harriman?"

Harriman patted him on the shoulder. "Certainly we are, Charlie. You can have all the money you want. That's the least of our worries. Now do the salaries and bonuses I mentioned suit you? I don't want you to be short."

"--as you know, my clients are his nearest relatives and have his interests at heart. We contend that Mr. Harriman's conduct for the past several weeks, as shown by the evidence here adduced, gives clear indication that a mind, once brilliant in the world of finance, has become senile. It is, therefore, with the deepest regret that we pray this honorable court, if it pleases, to declare Mr. Harriman incompetent and to assign a conservator to protect his financial interests and those of his future heirs and assigns." The attorney sat down, pleased with himself.

Mr. Kamens took the floor. "May it please the court, if my esteemed friend is quite through, may I suggest that in his last few words be gave away his entire thesis. '-- the financial interests of future heirs and assigns.' It is evident that the petitioners believe that my client should conduct his affairs in such a fashion as to insure that his nieces and nephews, and their issue, will be supported in unearned luxury for the rest of their lives. My client's wife has passed on, he has no children. It is admitted that he has provided generously for his sisters and their children in times past, and that he has established annuities for such near kin as are without means of support.

"But now like vultures, worse than vultures, for they are not content to let him die in peace, they would prevent my client from enjoying his wealth in whatever manner best suits him for the few remaining years of his life. It is true that he has sold his holdings; is it strange that an elderly man should wish to retire? It is true that he suffered some paper

losses in liquidation. 'The value of a thing is what that thing will bring.' He was retiring and demanded cash. Is there anything strange about that?

"It is admitted that he refused to discuss his actions with his so-loving kinfolk. What law, or principle, requires a man to consult with his nephews on anything?

"Therefore, we pray that this court will confirm my client in his right to do what he likes with his own, deny this petition, and send these meddlers about their business."

The judge took off his spectacles .and polished them thoughtfully.

"Mr. Kamens, this court has as high a regard for individual liberty as you have, and you may rest assured that any action taken will be solely in the interests of your client. Nevertheless, men do grow old, men do become senile, and in such cases must be protected.

"I shall take this matter under advisement until tomorrow. Court is adjourned."

From the Kansas City Star:

"ECCENTRIC MILLIONAIRE DISAPPEARS"

"--failed to appear for the adjourned hearing. The bailiffs returned from a search of places usually frequented by Harriman with the report that he had not been seen since the previous day. A bench warrant under contempt proceedings has been issued and--"

A desert sunset is a better stimulant for the appetite than a hot dance orchestra. Charlie testified to this by polishing the last of the ham gravy with a piece of bread. Harriman handed each of the younger men cigars and took one himself.

"My doctor claims that these weeds are bad for my heart condition," he remarked as he lighted it, "but I've felt so much better since I joined you boys here on the ranch that I am inclined to doubt him." He exhaled a cloud of blue-grey smoke and resumed. "I don't think a man's health depends so much on what he does as on whether he wants to do it. I'm doing what I want to do."

"That's all a man can ask of life," agreed McIntyre.

"How does the work look now, boys?"

"My end's in pretty good shape," Charlie answered. "We finished the second pressure tests on the new tanks and the fuel lines today. The ground tests are all done, except the calibration runs. Those won't take long -- just the four hours to make the runs if I don't run into some bugs. How about you, Mac?"

McIntyre ticked them off on his fingers. "Food supplies and water on board. Three vacuum suits, a spare, and service kits. Medical supplies. The buggy already had all the standard equipment for strato flight. The late lunar ephemerides haven't arrived as yet."

"When do you expect them?"

"Any time -- they should be here now. Not that it matters. This guff about how hard it is to navigate from here to the Moon is hokum to impress the public. After all you can see your destination -- it's not like ocean navigation. Gimme a sextant and a good radar and I'll set you down any place on the Moon you like, without cracking an almanac or a star table, just from a general knowledge of the relative speeds involved."

"Never mind the personal buildup, Columbus," Charlie told him, "we'll admit you can hit the floor with your hat. The general idea is, you're ready to go now. Is that right?"

"That's it."

"That being the case, I could run those tests tonight. I'm getting jumpy -- things have been going too smoothly. If you'll give me a hand, we ought to be in bed by midnight."

"O.K., when I finish this cigar."

They smoked in silence for a while, each thinking about the coming trip and what it meant to him. Old Harriman tried to repress the excitement that possessed him at the prospect of immediate realization of his life-long dream.

"Mr. Harriman--"

"Eh? What is it, Charlie?"

"How does a guy go about getting rich, like you did?"

"Getting rich? I can't say; I never tried to get rich. I never wanted to be rich, or well known, or anything like that."

"Huh?"

"No, I just wanted to live a long time and see it all happen. I wasn't unusual; there were lots of boys like me -- radio hams, they were, and telescope builders, and airplane amateurs. We had science clubs, and basement laboratories, and science-fiction leagues -- the kind of boys who thought there was more romance in one issue of the _Electrical Experimenter_ than in all the books Dumas ever wrote. We didn't want to be one of Horatio Alger's Get-Rich heroes either, we wanted to build space ships. Well, some of us did."

"Jeez, Pop, you make it sound exciting."

"It was exciting, Charlie. This has been a wonderful, romantic century, for all of its bad points. And it's grown more wonderful and more exciting every year. No, I didn't want to be rich; I just wanted to live long enough to see men rise up to the stars, and, if God was good to me, to go as far as the Moon myself." He carefully deposited an inch of white ash in a saucer. "It has been a good life. I haven't any complaints."

McIntyre pushed back his chair. "Come on, Charlie, if you're ready."

They all got up. Harriman started to speak, then grabbed at his chest, his face a dead grey-white. "Catch him, Mac!"

"Where's his medicine?"

"In his vest pocket."

They eased him over to a couch, broke a small glass capsule in a handkerchisf, and held it under his nose. The volatile released by the capsule seemed to bring a little color into his face. They did what little they could for him, then waited for him to regain consciousness.

Charlie broke the uneasy silence. "Mac, we ain't going through with this."

"Why not?"

"It's murder. He'll never stand up under the initial acceleration."

"Maybe not, but it's what he wants to do. You heard him."

"But we oughtn't to let him."

"Why not? It's neither your business, nor the business of this damn paternalistic government, to tell a man not to risk his life doing what he really wants to do."

"All the same, I don't feel right about it. He's such a swell old duck."

"Then what d'yuh want to do with him -- send him back to Kansas City so those old harpies can shut him up in a laughing academy till he dies of a broken heart?"

"N-no-o-o -- not that."

"Get out there, and make your set-up for those test runs. I'll be along."

A wide-tired desert runabout rolled in the ranch yard gate the next morning and stopped in front of the house. A heavy-set man with a firm, but kindly, face climbed out and spoke to McIntyre, who approached to meet him.

"You James Mcintyre?"

"What about it?"

"I'm the deputy federal marshal hereabouts. I got a warrant for your arrest."

"What's the charge?"

"Conspiracy to violate the Space Precautionary Act."

Charlie joined the pair. "What's up, Mac?"

The deputy answered. "You'd be Charles Cummings, I guess. Warrant here for you. Got one for a man named Harriman, too, and a court order to put seals on your space ship."

"We've no space ship."

"What d'yuh keep in that big shed?"

"Strato yacht."

"So? Well, I'll put seals on her until a space ship comes along. Where's Harriman?"

"Right in there." Charlie obliged by pointing, ignoring McIntyre's scowl.

The deputy turned his head. Charlie couldn't have missed the button by a fraction of an inch for the deputy collapsed quietly to the ground. Charlie stood over him, rubbing his knuckles and mourning.

"Damn it to hell -- that's the finger I broke playing shortstop. I'm always hurting that finger."

"Get Pop into the cabin," Mac cut him short, "and strap him into his hammock."

"Aye aye, Skipper."

They dragged the ship by tractor out of the hangar, turned, and went out the desert plain to find elbow room for the take-off. They climbed in. McIntyre saw the deputy from his starboard conning port. He was staring disconsolately after them.

Mcintyre fastened his safety belt, settled his corset, and spoke into the engineroom speaking tube. "All set, Charlie?"

"All set, Skipper. But you can't raise ship yet, Mac -- _She ain't named!_"

"No time for your superstitions!"

Harriman's thin voice reached them. "Call her the _Lunatic_ -- It's the only appropriate name!"

McIntyre settled his head into the pads, punched two keys, then three more in rapid succession, and the _Lunatic_ raised ground.

"How are you, Pop?"

Charlie searched the old man's face anxiously. Harriman licked his lips and managed to speak. "Doing fine, son. Couldn't be better."

"The acceleration is over; it won't be so bad from here on. I'll unstrap you so you can wiggle around a little. But I think you'd better stay in the hammock." He tugged at buckles. Harriman partially repressed a groan.

"What is it, Pop?"

"Nothing. Nothing at all. Just go easy on that side."

Charlie ran his fingers over the old man's side with the sure, delicate touch of a mechanic. "You ain't foolin' me none, Pop. But there isn't much I can do until we ground."

"Charlie--"

"Yes, Pop?"

"Can't I move to a port? I want to watch the Earth."

"Ain't nothin' to see yet; the ship hides it. As soon as we turn ship, I'll move you. Tell you what; I'll give you a sleepy pill, and then wake you when we do."

"No!"

"Huh?"

"I'll stay awake."

"Just as you say, Pop."

Charlie clambered monkey fashion to the nose of the ship, and anchored to the gymbals of the pilot's chair. McIntyre questioned him with his eyes.

"Yeah, he's alive all right," Charlie told him, "but he's in bad shape."

"How bad?"

"Couple of cracked ribs anyhow. I don't know what else. I don't know whether he'll last out the trip, Mac. His heart was pounding something awful."

"He'll last, Charlie. He's tough."

"Tough? He's delicate as a canary."

"I don't mean that. He's tough way down inside where it counts."

"Just the same you'd better set her down awful easy if you want to ground with a full complement aboard."

"I will. I'll make one full swing around the Moon and ease her in on an involute approach curve. We've got enough fuel, I think."

They were now in a free orbit; after McIntyre turned ship, Charlie went back, unslung the hammock, and moved Harriman, hammock and all, to a side port. Mcliityre steadied the ship about a transverse axis so that the tail pointed toward the sun, then gave a short blast on two tangential jets opposed in couple to cause the ship to spin slowly about her longitudinal axis, and thereby create a slight artificial gravity. The initial weightlessness when coasting commenced had knotted the old man with the characteristic nausea of free flight, and the pilot wished to save his passenger as much discomfort as possible.

But Harriman was not concerned with the condition of his stomach. There it was, all as he had imagined it so many times.

The Moon swung majestically past the view port, wider than he had ever seen it before, all of her familiar features cameo clear. She gave way to the Earth as the ship continued its slow swing, the Earth itself as he had envisioned her, appearing like a noble moon, many times as wide as the Moon appears to the Earthbound, and more luscious, more sensuously beautiful than the silver Moon could be. It was sunset near the Atlantic

seaboard -- the line of shadow cut down the coast line of North America, slashed through Cuba, and obscured all but the west coast of South America. He savored the mellow blue of the Pacific Ocean, felt the texture of the soft green and brown of the continents, admired the blue-white cold of the polar caps. Canada and the northern states were obscured by cloud, a vast low pressure area that spread across the continent. It shone with an even more satisfactory dazzling white than the polar caps.

As the ship swung slowly, around, Earth would pass from view, and the stars would march across the port the same stars he had always known, but steady, brighter, and unwinking against a screen of perfect, live black. Then the Moon would swim into view again to claim his thoughts.

He was serenely happy in a fashion not given to most men, even in a long lifetime. He felt as if he were every man who has ever lived, looked up at the stars, and longed.

As the long hours came and went he watched and dozed and dreamed. At least once he must have fallen into deep sleep, or possibly delirium, for he came to with a start, thinking that his wife, Charlotte, was calling to him. "Delos!" the voice had said. "Delos! Come in from there! You'll catch your death of cold in that night air."

Poor Charlotte! She had been a good wife to him, a good wife. He was quite sure that her only regret in dying had been her fear that he could not take proper care of himself. It had not been her fault that she had not shared his dream, and his need.

Charlie rigged the hammock in such a fashion that Harriman could watch from the starboard port when they swung around the far face of the Moon. He picked out the landmarks made familiar to him by a thousand photographs with nostalgic pleasure, as if he were returning to his own country. Mcintyre brought her slowly down as they came back around to the Earthward face, and prepared to land east of Mare Fecunditatis, about ten miles from Luna City.

It was not a bad landing, all things considered. He had to land without coaching from the ground, and he had no second pilot to watch the radar for him. In his anxiety to make it gentle he missed his destination by some thirty miles, but he did his cold-sober best. But at that it was bumpy. As they grounded and the pumice dust settled around them, Charlie came up to the control station.

"How's our passenger?" Mac demanded.

"I'll see, but I wouldn't make any bets. That landing stunk, Mac."

"Damn it, I did my best."

"I know you did, Skipper. Forget it."

But the passenger was alive and conscious although bleeding from the nose and with a pink foam on his lips. He was feebly trying to get himself out of his cocoon. They helped him, working together.

"Where are the vacuum suits?" was his first remark.

"Steady, Mr. Harriman. You can't go out there yet. We've got to give you some first aid."

"_Get me that suit!_ First aid can wait."

Silently they did as he ordered. His left leg was practically useless, and they had to help him through the lock, one on each side. But with his inconsiderable mass having a lunar weight of only twenty pounds, he was no burden.. They found a place some fifty

yards from the ship where they could prop him up and let him look, a chunk of scoria supporting his head.

Mcintyre put his helmet against the old man's and spoke. "We'll leave you here to enjoy the view while we get ready for the trek into town. It's a forty-miler, pretty near, and we'll have to break out spare air bottles and rations and stuff. We'll be back soon."

Harriman nodded without answering, and squeezed their gauntlets with a grip that was surprisingly strong.

He sat very quietly, rubbing his hands against the soil of the Moon and sensing the curiously light pressure of his body against the ground. At long last there was peace in his heart. His hurts had ceased to pain him. He was where he had longed to be -- he had followed his need.

Over the western horizon hung the Earth at last quarter, a green-blue giant moon. Overhead the Sun shone down from a black and starry sky. And underneath the Moon, the soil of the Moon itself. He was on the Moon!

He lay back still while a bath of content flowed over him like a tide at flood, and soaked to his very marrow.

His attention strayed momentarily, and he thought once again that his name was called. Silly, he thought, I'm getting old -- my mind wanders.

Back in the cabin Charlie and Mac were rigging shoulder yokes on a stretcher. "There. That will do," Mac commented. "We'd better stir Pop out; we ought to be going."

"I'll get him," Charlie replied. "I'll just pick him up and carry him. He don't weigh nothing."

Charlie was gone longer than Mcintyre had expected him to be. He returned alone. Mac waited for him to close the lock, and swing back his helmet. "Trouble?"

"Never mind the stretcher, Skipper. We won't be needin' it.

"Yeah, I mean it," he continued. "Pop's done for. I did what was necessary."

Mcintyre bent down without a word and picked up the wide skis necessary to negotiate the powdery ash. Charlie followed his example. Then they swung the spare air bottles over their shoulders, and passed out through the lock.

They didn't bother to close the outer door of the lock behind them.

The Long Watch

"Nine ships blasted off from Moon Base. Once in space, eight of them formed a globe around the smallest. They held this formation all the way to Earth.
"The small ship displayed the insignia of an admiral-yet there was no living thing of any sort in her. She was not even a passenger ship, but a drone, a robot ship intended for radioactive cargo. This trip she carried nothing but a lead coffin - and a Geiger counter that was never quiet." -from the editorial After Ten Years, film 38, 17 June 2009, Archives of the N.Y. Times

JOHNNY DAHLQUIST blew smoke at the Geiger counter. He grinned wryly and tried it again. His whole body was radioactive by now. Even his breath, the smoke from

his cigarette, could make the Geiger counter scream. How long had he been here? Time doesn't mean much on the Moon. Two days? Three? A week? He let his mind run back: the last clearly marked time in his mind was when the Executive Officer had sent for him, right after breakfast - "Lieutenant Dahlquist, reporting to the Executive Officer."

Colonel Towers looked up. "Ah, John Ezra. Sit down, Johnny. Cigarette?"

Johnny sat down, mystified but flattered. He admired Colonel Towers, for his brilliance, his ability to dominate, and for his battle record. Johnny had no battle record; he had been commissioned on completing his doctor's degree in nuclear physics and was now junior bomb officer of Moon Base.

The Colonel wanted to talk politics; Johnny was puzzled. Finally Towers had come to the point; it was not safe (so he said) to leave control of the world in political hands; power must be held by a scientifically selected group. In short - The Patrol.

Johnny was startled rather than shocked. As an abstract idea, Towers' notion sounded plausible. The League of Nations had folded up; what would keep the United Nations from breaking up, too, and thus lead to another World War. "And you know how bad such a war would be, Johnny."

Johnny agreed. Towers said he was glad that Johnny got the point. The senior bomb officer could handle the work, but it was better to have both specialists.

Johnny sat up with a jerk. "You are going to do something about it?" He had thought the Exec was just talking.

Towers smiled. "We're not politicians; we don't just talk. We act."

Johnny whistled. "When does this start?"

Towers flipped a switch. Johnny was startled to hear his own voice, then identified the recorded conversation as having taken place in the junior officers' messroom. A political argument he remembered, which he had walked out on... a good thing, too! But being spied on annoyed him.

Towers switched it off. "We have acted," he said. "We know who is safe and who isn't. Take Kelly-" He waved at the loudspeaker. "Kelly is politically unreliable. You noticed he wasn't at breakfast?"

"Huh? I thought he was on watch."

"Kelly's watch-standing days are over. Oh, relax; he isn't hurt."

Johnny thought this over. "Which list am I on?" he asked. "Safe or unsafe?"

"Your name has a question mark after it. But I have said all along that you could be depended on." He grinned engagingly. "You won't make a liar of me, Johnny?"

Dahlquist didn't answer; Towers said sharply, "Come now - what do you think of it? Speak up."

"Well, if you ask me, you've bitten off more than you can chew. While it's true that Moon Base controls the Earth, Moon Base itself is a sitting duck for a ship. One bomb - blooie!"

Towers picked up a message form and handed it over; it read: I HAVE YOUR CLEAN LAUNDRY-ZACK. "That means every bomb in the Trygve Lie has been put out of commission. I have reports from every ship we need worry about." He stood up. "Think it over and see me after lunch. Major Morgan needs your help right away to change control frequencies on the bombs."

"The control frequencies?"

"Naturally. We don't want the bombs jammed before they reach their targets."

"What? You said the idea was to prevent war."

Towers brushed it aside. "There won't, be a war-just a psychological demonstration, an unimportant town or two. A little bloodletting to save an all-out war. Simple arithmetic."

He put a hand on Johnny's shoulder. "You aren't squeamish, or you wouldn't be a bomb officer. Think of it as a surgical operation. And think of your family."

Johnny Dahlquist had been thinking of his family. "Please, sir, I want to see the Commanding Officer."

Towers frowned. "The Commodore is not available. As you know, I speak for him. See me again-after lunch."

The Commodore was decidedly not available; the Commodore was dead. But Johnny did not know that.

Dahlquist walked back to the messroom, bought cigarettes, sat down and had a smoke. He got up, crushed out the butt, and headed for the Base's west airlock. There he got into his space suit and went to the lockmaster. "Open her up, Smitty."

The marine looked surprised. "Can't let anyone out on the surface without word from Colonel Towers, sir. Hadn't you heard?"

"Oh, yes! Give me your order book." Dahlquist took it, wrote a pass for himself, and signed it "by direction of Colonel Towers." He added, "Better call the Executive Officer and check it."

The lockmaster read it and stuck the book in his pocket. "Oh, no, Lieutenant. Your word's good."

"Hate to disturb the Executive Officer, eh? Don't blame you." He stepped in, closed the inner door, and waited for the air to be sucked out.

Out on the Moon's surface he blinked at the light and hurried to the track-rocket terminus; a car was waiting. He squeezed in, pulled down the hood, and punched the starting button. The rocket car flung itself at the hills dived through and came out on a plain studded with projectile rockets, like candles on a cake. Quickly it dived into a second tunnel through more hills. There was a stomach-wrenching deceleration and the car stopped at the underground atom-bomb armory.

As Dahlquist climbed out he switched on his walkie-talkie. The space-suited guard at the entrance came to port-arms. Dahlquist said, "Morning, Lopez," and walked by him to the airlock. He pulled it open. . .

The guard motioned him back. "Hey! Nobody goes in without the Executive Officer's say-so." He shifted his gun, fumbled in his pouch and got out a paper. "Read it, Lieutenant."

Dahlquist waved it away. "I drafted that order myself. You read it; you've misinterpreted it."

"I don't see how, Lieutenant."

Dahlquist snatched the paper, glanced at it, then pointed to a line. "See? '-except persons specifically designated by the Executive Officer.' That's the bomb officers, Major Morgan and me."

The guard looked worried. Dahlquist said, "Damn it, look up 'specifically designated' - it's under 'Bomb Room, Security, Procedure for' in your standing orders. Don't tell me you left them in the barracks!"

"Oh, no, sir! I've got 'em." The guard reached into his pouch. Dahlquist gave him back the sheet; the guard took it, hesitated, then leaned his weapon against his hip, shifted the paper to his left hand, and dug into his pouch with his right.

Dahlquist grabbed the gun, shoved it between the guard's legs, and jerked. He threw the weapon away and ducked into the airlock. As he slammed the door he saw the guard struggling to his feet and reaching for his side arm. He dogged the outer door shut and felt a tingle in his fingers as a slug struck the door.

He flung himself at the inner door, jerked the spill lever, rushed back to the outer door and hung his weight on the handle. At once he could feel it stir. The guard was lifting up; the lieutenant was pulling down, with only his low Moon weight to anchor him. Slowly the handle raised before his eyes.

Air from the bomb room rushed into the lock through the spill valve. Dahlquist felt his space suit settle on his body as the pressure in the lock began to equal the pressure in the suit. He quit straining and let the guard raise the handle. It did not matter; thirteen tons of air pressure now held the door closed.

He latched open the inner door to the bomb room, so that it could not swing shut. As long as it was open, the airlock could not operate; no one could enter.

Before him in the room, one for each projectile rocket, were the atom bombs, spaced in rows far enough apart to defeat any faint possibility of spontaneous chain reaction. They were the deadliest things in the known universe, but they were his babies. He had placed himself between them and anyone who would misuse them.

But, now that he was here, he had no plan to use his temporary advantage.

The speaker on the wall sputtered into life. "Hey! Lieutenant! What goes on here? You gone crazy?" Dahlquist did not answer. Let Lopez stay confused-it would take him that much longer to make up his mind what to do. And Johnny Dahlquist needed as many minutes as he could squeeze. Lopez went on protesting. Finally he shut up.

Johnny had followed a blind urge not to let the bombs - his bombs! - be used for "demonstrations on unimportant towns." But what to do next? Well, Towers couldn't get through the lock. Johnny would sit tight until hell froze over.

Don't kid yourself, John Ezra! Towers could get in. Some high explosive against the outer door-then the air would whoosh out, our boy Johnny would drown in blood from his burst lungs-and the bombs would be sitting there, unhurt. They were built to stand the jump from Moon to Earth; vacuum would not hurt them at all.

He decided to stay in his space suit; explosive decompression didn't appeal to him. Come to think about it, death from old age was his choice.

Or they could drill a hole, let out the air, and open, the door without wrecking the lock. Or Towers might even have a new airlock built outside the old. Not likely, Johnny thought; a coup d'etat depended on speed. Towers was almost sure to take the quickest way-blasting. And Lopez was probably calling the Base right now. Fifteen minutes for Towers to suit up and get here, maybe a short dicker-then whoosh! the party is over.

Fifteen minutes - In fifteen minutes the bombs might fall back into the hands of the conspirators; in fifteen minutes he must make the bombs unusable.

An atom bomb is just two or more pieces of fissionable metal, such as plutonium. Separated, they are no more explosive than a pound of butter; slapped together, they explode. The complications lie in the gadgets and circuits and gun used to slap them together in the exact way and at the exact time and place required.

These circuits, the bomb's "brain," are easily destroyed - but the bomb itself is hard to destroy because of its very simplicity. Johnny decided to smash the "brains" - and quickly!

The only tools at hand were simple ones used in handling the bombs. Aside from a Geiger counter, the speaker on the walkie-talkie circuit, a television rig to the base, and the bombs themselves, the room was bare. A bomb to be worked on was taken elsewhere-not through fear of explosion, but to reduce radiation exposure for personnel. The radioactive material in a bomb is buried in a "tamper" - in these bombs, gold. Gold stops alpha, beta, and much of the deadly gamma radiation - but not neutrons.

The slippery, poisonous neutrons which plutonium gives off had to escape, or a chain reaction - explosion! - would result. The room was bathed in an invisible, almost undetectable rain of neutrons. The place was unhealthy; regulations called for staying in it as short a time as possible.

The Geiger counter clicked off the "background" radiation, cosmic rays, the trace of radioactivity in the Moon's crust, and secondary radioactivity set up all through the room by neutrons. Free neutrons have the nasty trait of infecting what they strike, making it radioactive, whether it be concrete wall or human body. In time the room would have to be abandoned.

Dahlquist twisted a knob on the Geiger counter; the instrument stopped clicking. He had used a suppressor circuit to cut out noise of "background" radiation at the level then present. It reminded him uncomfortably of the danger of staying here. He took out the radiation exposure film all radiation personnel carry; it was a direct-response type and had been fresh when he arrived. The most sensitive end was faintly darkened already. Half way down the film a red line crossed it. Theoretically, if the wearer was exposed to enough radioactivity in a week to darken the film to that line, he was, as Johnny reminded himself, a "dead duck".

Off came the cumbersome space suit; what he needed was speed. Do the job and surrender-better to be a prisoner than to linger in a place as "hot" as this.

He grabbed a ball hammer from the tool rack and got busy, pausing only to switch off the television pick-up. The first bomb bothered him. He started to smash the covet plate of the "brain," then stopped, filled with reluctance. All his life he had prized fine apparatus.

He nerved himself and swung; glass tinkled, metal creaked. His mood changed; he began to feel a shameful pleasure in destruction. He pushed on with enthusiasm, swinging, smashing, destroying!

So intent was he that he did not at first hear his name called. "Dahlquist! Answer me! Are you there?"

He wiped sweat and looked at the TV screen. Towers' perturbed features stared out.

Johnny was shocked to find that he had wrecked only six bombs. Was he going to be caught before he could finish? Oh, no! He had to finish. Stall, son, stall! "Yes, Colonel? You called me?"

"I certainly did! What's the meaning of this?"

"I'm sorry, Colonel."

Towers' expression relaxed a little. "Turn on your pick-up, Johnny, I can't see you. What was that noise?"

"The pick-up is on," Johnny lied. "It must be out of order. That noise-uh, to tell the truth, Colonel, I was fixing things so that nobody could get in here."

Towers hesitated, then said firmly, "I'm going to assume that you are sick and send you to the Medical Officer. But I want you to come out of there, right away. That's an order, Johnny."

Johnny answered slowly. "I can't just yet, Colonel. I came here to make up my mind and I haven't quite made it up. You said to see you after lunch."

"I meant you to stay in your quarters."

"Yes, sir. But I thought I ought to stand watch on the bombs, in case I decided you were wrong."

"It's not for you to decide, Johnny. I'm your superior officer. You are sworn to obey me."

"Yes, sir." This was wasting time; the old fox might have a squad on the way now. "But I swore to keep the peace, too. Could you come out here and talk it over with me? I don't want to do the wrong thing."

Towers smiled. "A good idea, Johnny. You wait there. I'm sure you'll see the light." He switched off.

"There," said Johnny. "I hope you're convinced that I'm a half-wit-you slimy mistake!" He picked up the hammer, ready to use the minutes gained.

He stopped almost at once; it dawned on him that wrecking the "brains" was not enough. There were no spare "brains," but there was a well-stocked electronics shop. Morgan could jury-rig control circuits for bombs. Why, he could himself - not a neat job, but one that would work. Damnation! He would have to wreck the bombs themselves - and in the next ten minutes.

But a bomb was solid chunks of metal, encased in a heavy tamper, all tied in with a big steel gun. It couldn't be done - not in ten minutes.

Damn!

Of course, there was one way. He knew the control circuits; he also knew how to beat them. Take this bomb: if he took out the safety bar, unhooked the proximity circuit, shorted the delay circuit, and cut in the arming circuit by hand - then unscrewed that and reached in there, he could, with just a long, stiff wire, set the bomb off.

Blowing the other bombs and the valley itself to Kingdom Come.

Also Johnny Dahlquist. That was the rub.

All this time he was doing what he had thought out, up to the step of actually setting off the bomb. Ready to go, the bomb seemed to threaten, as if crouching to spring. He stood up, sweating.

He wondered if he had the courage. He did not want to funk - and hoped that he would. He dug into his jacket and took out a picture of Edith and the baby. "Honeychild," he said, "if I get out of this, I'll never even try to beat a red light." He kissed the picture and put it back. There was nothing to do but wait.

What was keeping Towers? Johnny wanted to make sure that Towers was in blast range. What a joke on the jerk! Me sitting here, ready to throw the switch on him. The idea tickled him; it led to a better: why blow himself up - alive?

There was another way to rig it - a "dead man" control. Jigger up some way so that the last step, the one that set off the bomb, would not happen as long as he kept his

hand on a switch or a lever or something. Then, if they blew open the door, or shot him, or anything - up goes the balloon!

Better still, if he could hold them off with the threat of it, sooner or later help would come - Johnny was sure that most of the Patrol was not in this stinking conspiracy - and then: Johnny comes marching home! What a reunion! He'd resign and get a teaching job; he'd stood his watch.

All the while, he was working. Electrical? No, too little time. Make it a simple mechanical linkage. He had it doped out but had hardly begun to build it when the loudspeaker called him. "Johnny?"

"That you, Colonel?" His hands kept busy.

"Let me in."

"Well, now, Colonel, that wasn't in the agreement." Where in blue blazes was something to use as a long lever?

"I'll come in alone, Johnny, I give you my word. We'll talk face to face."

His word! "We can talk over the speaker, Colonel." Hey, that was it-a yardstick, hanging on the tool rack.

"Johnny, I'm warning you. Let me in, or I'll blow the door off."

A wire-he needed a wire, fairly long and stiff. He tore the antenna from his suit. "You wouldn't do that, Colonel. It would ruin the bombs."

"Vacuum won't hurt the bombs. Quit stalling."

"Better check with Major Morgan. Vacuum won't hurt them; explosive decompression would wreck every circuit." The Colonel was not a bomb specialist; he shut up for several minutes. Johnny went on working.

"Dahlquist," Towers resumed, "that was a clumsy, lie. I checked with Morgan. You have sixty seconds to get into your suit, if you aren't already. I'm going to blast the door."

"No, you won't," said Johnny. "Ever hear of a 'dead man' switch?" Now for a counterweight-and a sling.

"Eh? What do you mean?"

"I've rigged number seventeen to set off by hand. But I put in a gimmick. It won't blow while I hang on to a strap I've got in my hand. But if anything happens to me - up she goes! You are about fifty feet from the blast center. Think it over."

There was a short silence. "I don't believe you."

"No? Ask Morgan. He'll believe me. He can inspect it, over the TV pickup." Johnny lashed the belt of his space suit to the end of the yardstick.

"You said the pick-up was out of order."

"So I lied. This time I'll prove it. Have Morgan call me."

Presently Major Morgan's face appeared. "Lieutenant Dahlquist?"

"Hi, Stinky. Wait a sec." With great care Dahlquist made one last connection while holding down the end of the yardstick. Still careful, he shifted his grip to the belt, sat down on the floor, stretched an arm and switched on the TV pick-up, "Can you see me, Stinky?"

"I can see you," Morgan answered stiffly. "What is this nonsense?"

"A little surprise I whipped up." He explained it-what circuits he had cut out, what ones had been shorted, just how the jury-rigged mechanical sequence fitted in.

Morgan nodded. "But you're bluffing, Dahlquist. I feel sure that you haven't disconnected the 'K' circuit. You don't have the guts to blow yourself up."

Johnny chuckled. "I sure haven't. But that's the beauty of it. It can't go off, so long as I am alive. If your greasy boss, ex-Colonel Towers, blasts the door, then I'm dead and the bomb goes off. It won't matter to me, but it will to him. Better tell him." He switched off.

Towers came on over the speaker shortly. "Dahlquist?"

"I hear you."

"There's no need to throw away your life. Come out and you will be retired on full pay. You can go home to your family. That's a promise."

Johnny got mad. "You keep my family out of this!"

"Think of them, man."

"Shut up. Get back to your hole. I feel a need to scratch and this whole shebang might just explode in your lap."

2

JOHNNY SAT UP with a start. He had dozed, his hand hadn't let go the sling, but he had the shakes when he thought about it.

Maybe he should disarm the bomb and depend on their not daring to dig him out? But Towers' neck was already in hock for treason; Towers might risk it. If he did and the bomb were disarmed, Johnny would be dead and Towers would have the bombs. No, he had gone this far; he wouldn't let his baby girl grow up in a dictatorship just to catch some sleep.

He heard the Geiger counter clicking and remembered having used the suppressor circuit The radioactivity in the room must be increasing, perhaps from scattering the "brain" circuits-the circuits were sure to be infected; they had lived too long too close to plutonium. He dug out his film.

The dark area was spreading toward the red line.

He put it back and said, "Pal, better break this deadlock or you are going to shine like a watch dial." It was a figure of speech; infected animal tissue does not glow-it simply dies, slowly.

The TV screen lit up; Towers' face appeared. "Dahlquist? I want to talk to you."

"Go fly a kite."

"Let's admit you have us inconvenienced."

"Inconvenienced, hell-I've got you stopped."

"For the moment I'm arranging to get more bombs-"

"Liar."

"-but you are slowing us up. I have a proposition."

"Not interested."

"Wait. When this is over I will be chief of the world government. If you cooperate, even now, I will make you my administrative head."

Johnny told him what to do with it. Towers said, "Don't be stupid. What do you gain by dying?"

Johnny grunted. "Towers, what a prime stinker you are. You spoke of my family. I'd rather see them dead than living under a two-bit Napoleon like you. Now go away-I've got some thinking to do."

Towers switched off.

Johnny got out his film again. It seemed no darker but it reminded, him forcibly that time was running out. He was hungry and thirsty-and he could not stay awake forever. It took four days to get a ship up from Earth; he could not expect rescue any sooner. And he wouldn't last four days-once the darkening spread past the red line he was a goner.

His only chance was to wreck the bombs beyond repair, and get out-before that film got much darker.

He thought about ways, then got busy. He hung a weight on the sling, tied a line to it. If Towers blasted the door, he hoped to jerk the rig loose before he died.

There was a simple, though arduous, way to wreck the bombs beyond any capacity of Moon Base to repair them. The heart of each was two hemispheres of plutonium, their flat surfaces polished smooth to permit perfect contact when slapped together. Anything less would prevent the chain reaction on which atomic explosion depended.

Johnny started taking apart one of the bombs.

He had to bash off four lugs, then break the glass envelope around the inner assembly. Aside from that the bomb came apart easily. At last he had in front of him two gleaming, mirror-perfect half globes.

A blow with the hammer-and one was no longer perfect. Another blow and the second cracked like glass; he had tapped its crystalline structure just right.

Hours later, dead tired, he went back to the armed bomb. Forcing himself to steady down, with extreme care he disarmed it. Shortly its silvery hemispheres too were useless. There was no longer a usable bomb in the room-but huge fortunes in the most valuable, most poisonous, and most deadly metal in the known world were spread around the floor.

Johnny looked at the deadly stuff. "Into your suit and out of here, son," he said aloud. "I wonder what Towers will say?"

He walked toward the rack, intending to hang up the hammer. As he passed, the Geiger counter chattered wildly.

Plutonium hardly affects a Geiger counter; secondary infection from plutonium does. Johnny looked at the hammer, then held it closer to the Geiger counter. The counter screamed...

Johnny tossed it hastily away and started back toward his suit.

As he passed the counter it chattered again. He stopped short.

He pushed one hand close to the counter. Its clicking picked up to a steady roar. Without moving he reached into his pocket and took out his exposure film.

It was dead black from end to end.

3

PLUTONIUM TAKEN into the body moves quickly to bone marrow. Nothing can be done; the victim is finished. Neutrons from it smash through the body, ionizing

tissue, transmuting atoms into radioactive isotopes, destroying and killing. The fatal dose is unbelievably small; a mass a tenth the size of a grain of table salt is more than enough-a dose small enough to enter through the tiniest scratch. During the historic "Manhattan Project" immediate high amputation was considered the only possible first-aid measure.

Johnny knew all this but it no longer disturbed him. He sat on the floor, smoking a hoarded cigarette, and thinking. The events of his long watch were running through his mind.

He blew a puff of smoke at the Geiger counter and smiled without humor to hear it chatter more loudly. By now even his breath was "hot" carbon-14, he supposed, exhaled from his blood stream as carbon dioxide. It did not matter.

There was no longer any point in surrendering, nor would he give Towers the satisfaction-he would finish out this watch right here. Besides, by keeping up the bluff that one bomb was ready to blow, he could stop them from capturing the raw material from which bombs were made. That might be important in the long run.

He accepted, without surprise, the fact that he was not unhappy. There was a sweetness about having no further worries of any sort. He did not hurt, he was not uncomfortable, he was no longer even hungry. Physically he still felt fine and his mind was at peace. He was dead - he knew that he was dead; yet for a time he was able to walk and breathe and see and feel.

He was not even lonesome. He was not alone; there were comrades with him - the boy with his finger in the dike, Colonel Bowie, too ill to move but insisting that he be carried across the line, the dying Captain of the Chesapeake still with deathless challenge on his lips, Rodger Young peering into the gloom. They gathered about him in the dusky bomb room.

And of course there was Edith. She was the only one he was aware of. Johnny wished that he could see her face more clearly. Was she angry? Or proud and happy?

Proud though unhappy - he could see her better now and even feel her hand. He held very still.

Presently his cigarette burned down to his fingers. He took a final puff, blew it at the Geiger counter, and put it out. It was his last. He gathered several butts and fashioned a roll-your-own with a bit of paper found in a pocket. He lit it carefully and settled back to wait for Edith to show up again. He was very happy.

He was still propped against the bomb case, the last of his salvaged cigarettes cold at his side, when the speaker called out again. "Johnny? Hey, Johnny! Can you hear me? This is Kelly. It's all over. The Lafayette landed and Towers blew his brains out. Johnny? Answer me."

When they opened the outer door, the first man in carried a Geiger counter in front of him on the end of a long pole. He stopped at the threshold and backed out hastily. "Hey, chief!" he called. "Better get some handling equipment - uh, and a lead coffin, too."

"Four days it took the little ship and her escort to reach Earth. Four days while all of Earth's people awaited her arrival. For ninety-eight hours all commercial programs were off television; instead there was an endless dirge - the Dead March from Saul, the Valhalla theme, Going Home, the Patrol's own Landing Orbit.

"The nine ships landed at Chicago Port. A drone tractor removed the casket from the small ship; the ship was then refueled and blasted off in an escape trajectory, thrown away into outer space, never again to be used for a lesser purpose.

"The tractor progressed to the Illinois town where Lieutenant Dahlquist had been born, while the dirge continued. There it placed the casket on a pedestal, inside a barrier marking the distance of safe approach. Space marines, arms reversed and heads bowed, stood guard around it; the crowds stayed outside this circle. And still the dirge continued.

"When enough time had passed, long, long after the heaped flowers had withered, the lead casket was enclosed in marble, just as you see it today."

Gentlemen, Be Seated

IT TAKES both agoraphobes and claustrophobes to colonize the Moon. Or make it agoraphiles and claustrophiles, for the men who go out into space had better not have phobias. If anything on a planet, in a planet, or in the empty reaches around the planets can frighten a man, he should stick to Mother Earth. A man who would make his living away from terra firma must be willing to be shut up in a cramped spaceship, knowing that it may become his coffin, and yet he must be undismayed by the wide-open spaces of space itself. Spacemen-men who work in space, pilots and jetmen and astrogators and such-are men who like a few million miles of elbow room.

On the other hand the Moon colonists need to be the sort who feel cozy burrowing around underground like so many pesky moles.

On my second trip to Luna City I went over to Richardson Observatory both to see the Big Eye and to pick up a story to pay for my vacation. I flashed my Journalists' Guild card, sweet-talked a bit, and ended with the paymaster showing me around. We went out the north tunnel, which was then being bored to the site of the projected coronascope.

It was a dull trip-climb on a scooter, ride down a completely featureless tunnel, climb off and go through an airlock, get on another scooter and do it all over again. Mr. Knowles filled in with sales talk. "This is temporary," he explained. "When we get the second tunnel dug, we'll cross-connect, take out the airlocks, put a northbound slidewalk in this one, a southbound slidewalk in the other one, and you'll make the trip in less than three minutes. Just like Luna City-or Manhattan."

"Why not take out the airlocks now?" I asked, as we entered another airlock-about the seventh. "So far, the pressure is the same on each side of each lock."

Knowles looked at me quizzically. "You wouldn't take advantage of a peculiarity of this planet just to work up a sensational feature story?"

I was irked. "Look here," I told him. "I'm as reliable as the next word-mechanic, but if something is not kosher about this project let's go back right now and forget it. I won't hold still for censorship."

"Take it easy, Jack," he said mildly-it was the first time he had used my first name; I noted it and discounted it. "Nobody's going to censor you. We're glad to

cooperate with you fellows, but the Moon's had too much bad publicity now-publicity it didn't deserve."

I didn't say anything.

"Every engineering job has its own hazards," he insisted, "and its advantages, too. Our men don't get malaria and they don't have to watch out for rattlesnakes. I can show you figures that prove it's safer to be a sandhog in the Moon than it is to be a file clerk in Des Moines-all things considered. For example, we rarely have any broken bones in the Moon; the gravity is so low-while that Des Moines file clerk takes his life in his hands every time he steps in or out of his bathtub."

"Okay, okay," I interrupted, "so the place is safe. What's the catch?"

"It is safe. Not company figures, mind you, nor Luna City Chamber of Commerce, but Lloyd's of London."

"So you keep unnecessary airlocks. Why?"

He hesitated before he answered, "Quakes."

Quakes. Earthquakes-moonquakes, I mean. I glanced at the curving walls sliding past and I wished I were in Des Moines. Nobody wants to be buried alive, but to have it happen in the Moon-why, you wouldn't stand a chance. No matter how quick they got to you, your lungs would be ruptured. No air.

"They don't happen very often," Knowles went on, "but we have to be prepared. Remember, the Earth is eighty times the mass of the Moon, so the tidal stresses here are eighty times as great as the Moon's effect on Earth tides."

"Come again," I said. "There isn't any water on the Moon. How can there be tides?"

"You don't have to have water to have tidal stresses. Don't worry about it; just accept it. What you get is unbalanced stresses. They can cause quakes."

I nodded. "I see. Since everything in the Moon has to be sealed airtight, you've got to watch out for quakes. These airlocks are to confine your losses." I started visualizing myself as one of the losses.

"Yes and no. The airlocks would limit an accident all right, if there was one-which there won't be-this place is safe. Primarily they let us work on a section of the tunnel at no pressure without disturbing the rest of it. But they are more than that; each one is a temporary expansion joint. You can tie a compact structure together and let it ride out a quake, but a thing as long as this tunnel has to give, or it will spring a leak. A flexible seal is hard to accomplish in the Moon."

"What's wrong with rubber?" I demanded. I was feeling jumpy enough to be argumentative. "I've got a ground-car back home with two hundred thousand miles on it, yet I've never touched the tires since they were sealed up in Detroit."

Knowles sighed. "I should have brought one of the engineers along, Jack. The volatiles that keep rubbers soft tend to boil away in vacuum and the stuff gets stiff. Same for the flexible plastics. When you expose them to low temperature as well they get brittle as eggshells."

The scooter stopped as Knowles was speaking and we got off just in time to meet half a dozen men coming out of the next airlock. They were wearing spacesuits, or, more properly, pressure suits, for they had hose connections instead of oxygen bottles, and no sun visors. Their helmets were thrown back and each man had his head pushed through

the opened zipper in the front of his suit, giving him a curiously two headed look. Knowles called out, "Hey, Konski!"

One of the men turned around. He must have been six feet two and fat for his size. I guessed him at three hundred pounds, earthside. "It's Mr. Knowles," he said happily. "Don't tell me I've gotten a raise."

"You're making too much money now, Fatso. Shake hands with Jack Arnold. Jack, this is Fatso Konski-the best sandhog in four planets."

"Only four?" inquired Konski. He slid his right arm out of his suit and stuck his bare hand into mine. I said I was glad to meet him and tried to get my hand back before he mangled It.

"Jack Arnold wants to see how you seal these tunnels," Knowles went on. "Come along with us."

Konski stared at the overhead. "Well, now that you mention it, Mr. Knowles, I've just finished my shift."

Knowles said, "Fatso, you're a money grubber and inhospitable as well. Okay-time-and-a-half." Konski turned and started unsealing the airlock.

The tunnel beyond looked much the same as the section we had left except that there were no scooter tracks and the lights were temporary, rigged on extensions. A couple of hundred feet away the tunnel was blocked by a bulkhead with a circular door in it. The fat man followed my glance. "That's the movable lock," he explained. "No air beyond it. We excavate just ahead of it."

"Can I see where you've been digging?"

"Not without we go back and get you a suit."

I shook my head. There were perhaps a dozen bladder-like objects in the tunnel, the size and shape of toy balloons. They seemed to displace exactly their own weight of air; they floated without displaying much tendency to rise or settle. Konski batted one out of his way and answered me before I could ask. "This piece of tunnel was pressurized today," he told me. "These tag-alongs search out stray leaks. They're sticky inside. They get sucked up against a leak, break, and the goo gets sucked in, freezes and seals the leak."

"Is that a permanent repair?" I wanted to know.

"Are you kidding? It just shows the follow-up man where to weld."

"Show him a flexible joint," Knowles directed.

"Coming up." We paused half-way down the tunnel and Konski pointed to a ring segment that ran completely around the tubular tunnel. "We put in a flex joint every hundred feet. It's glass cloth, gasketed onto the two steel sections it joins. Gives the tunnel a certain amount of springiness."

"Glass cloth? To make an airtight seal?" I objected.

"The cloth doesn't seal; it's for strength. You got ten layers of cloth, with a silicone grease spread between the layers. It gradually goes bad, from the outside in, but it'll hold five years or more before you have to put on another coat."

I asked Konski how he liked his job, thinking I might get some story. He shrugged. "It's all right. Nothing to it. Only one atmosphere of pressure. Now you take when I was working under the Hudson-"

"And getting paid a tenth of what you get here," put in Knowles.

"Mr. Knowles, you grieve me," Konski protested. "It ain't the money; it's the art of the matter. Take Venus. They pay as well on Venus and a man has to be on his toes. The muck is so loose you have to freeze it. It takes real caisson men to work there. Half of these punks here are just miners; a case of the bends would scare 'em silly."

"Tell him why you left Venus, Fatso."

Konski expressed dignity. "Shall we examine the movable shield, gentlemen?" he asked.

We puttered around a while longer and I was ready to go back. There wasn't much to see, and the more I saw of the place the less I liked it. Konski was undogging the door of the airlock leading back when something happened.

I was down on my hands and knees and the place was pitch dark. Maybe I screamed-I don't know. There was a ringing in my ears. I tried to get up and then stayed where I was. It was the darkest dark I ever saw, complete blackness. I thought I was blind.

A torchlight beam cut through it, picked me out, and then moved on. "What was it?" I shouted. "What happened? Was it a quake?"

"Stop yelling," Konski's voice answered me casually. "That was no quake, it was some sort of explosion. Mr. Knowles-you all right?"

"I guess so." He gasped for breath. "What happened?"

"Dunno. Let's look around a bit." Konski stood up and poked his beam around the tunnel, whistling softly. His light was the sort that has to be pumped; it flickered.

"Looks tight, but I hear-Oh, oh! Sister!" His beam was focused on a part of the flexible joint, near the floor.

The "tag-along" balloons were gathering at this spot. Three were already there; others were drifting in slowly. As we watched, one of them burst and collapsed in a sticky mass that marked the leak.

The hole sucked up the burst balloon and began to hiss. Another rolled onto the spot, joggled about a bit, then it, too, burst. It took a little longer this time for the leak to absorb and swallow the gummy mass.

Konski passed me the light. "Keep pumping it, kid." He shrugged his right arm out of the suit and placed his bare hand over the spot where, at that moment, a third bladder burst.

"How about it, Fats?" Mr. Knowles demanded.

"Couldn't say. Feels like a hole as big as my thumb. Sucks like the devil."

"How could you get a hole like that?"

"Search me. Poked through from the outside, maybe."

"You got the leak checked?"

"I think so. Go back and check the gage. Jack, give him the light."

Knowles trotted back to the airlock. Presently he sang out, "Pressure steady!"

"Can you read the vernier?" Konski called to him.

"Sure. Steady by the vernier."

"How much we lose?"

"Not more than a pound or two. What was the pressure before?"

"Earth-normal."

"Lost a pound four tenths, then."

"Not bad. Keep on going, Mr. Knowles. There's a tool kit just beyond the lock in the next section. Bring me back a number three patch, or bigger."

"Right." We heard the door open and clang shut, and we were again in total darkness. I must have made some sound for Konski told me to keep my chin up.

Presently we heard the door, and the blessed light shone out again. "Got it?" said Konski.

"No, Fatso. No . . ." Knowles' voice was shaking. "There's no air on the other side. The other door wouldn't open."

"Jammed, maybe?"

"No, I checked the manometer. There's no pressure in the next section."

Konski whistled again. "Looks like we'll wait till they come for us. In that case--Keep the light on me, Mr. Knowles. Jack, help me out of this suit."

"What are you planning to do?"

"If I can't get a patch, I got to make one, Mr. Knowles. This suit is the only thing around." I started to help him-a clumsy job since he had to keep his hand on the leak.

"You can stuff my shirt in the hole," Knowles suggested.

"I'd as soon bail water with a fork. It's got to be the suit; there's nothing else around that will hold the pressure." When he was free of the suit, he had me smooth out a portion of the back, then, as he snatched his hand away, I slapped the suit down over the leak. Konski promptly sat on it. "There," he said happily, "we've got it corked. Nothing to do but wait."

I started to ask him why he hadn't just sat down on the leak while wearing the suit; then I realized that the seat of the suit was corrugated with insulation-he needed a smooth piece to seal on to the sticky stuff left by the balloons.

"Let me see your hand," Knowles demanded.

"It's nothing much." But Knowles examined it anyway. I looked at it and got a little sick. He had a mark like a stigma on the palm, a bloody, oozing wound. Knowles made a compress of his handkerchief and then used mine to tie it in place.

"Thank you, gentlemen," Konski told us, then added, "we've got time to kill. How about a little pinochle?"

"With your cards?" asked Knowles.

"Why, Mr. Knowles! Well-never mind. It isn't right for paymasters to gamble anyhow. Speaking of paymasters, you realize this is pressure work now, Mr. Knowles?"

"For a pound and four tenths differential?"

"I'm sure the union would take that view-in the circumstances."

"Suppose I sit on the leak?"

"But the rate applies to helpers, too."

"Okay, miser-triple-time it is."

"That's more like your own sweet nature, Mr. Knowles. I hope it's a nice long wait."

"How long a wait do you think it will be, Fatso?"

"Well, it shouldn't take them more than an hour, even if they have to come all the way from Richardson."

"Hmm ... what makes you think they will be looking for us?"

"Huh? Doesn't your office know where you are?"

"I'm afraid not. I told them I wouldn't be back today."

Konski thought about it. "I didn't drop my time card. They'll know I'm still inside."

"Sure they will-tomorrow, when your card doesn't show up at my office."

"There's that lunkhead on the gate. He'll know he's got three extra inside."

"Provided he remembers to tell his relief. And provided he wasn't caught in it, too."

"Yes, I guess so," Konski said thoughtfully. "Jack-better quit pumping that light. You just use up more oxygen."

We sat there in the darkness for quite a long time, speculating about what had happened. Konski was sure it was an explosion; Knowles said that it put him in mind of a time when he had seen a freight rocket crash on take off. When the talk started to die out, Konski told some stories. I tried to tell one, but I was so nervous-so afraid, I should say-that I couldn't remember the snapper. I wanted to scream.

After a long silence Konski said, "Jack, give us the light again. I got something figured out."

"What is it?" Knowles asked.

"If we had a patch, you could put on my suit and go for help."

"There's no oxygen for the suit."

"That's why I mentioned you. You're the smallest-there'll be enough air in the suit itself to take you through the next section."

"Well-okay. What are you going to use for a patch?"

"I'm sitting on it."

"Huh?"

"This big broad, round thing I'm sitting on. I'll take my pants off. If I push one of my hams against that hole, I'll guarantee you it'll be sealed tight."

"But-No, Fats, it won't do. Look what happened to your hand. You'd hemorrhage through your skin and bleed to death before I could get back."

"I'll give you two to one I wouldn't-for fifty, say."

"If I win, how do I collect?"

"You're a cute one, Mr. Knowles. But look-I've got two or three inches of fat padding me. I won't bleed much-a strawberry mark, no more."

Knowles shook his head. "It's not necessary. If we keep quiet, there's air enough here for several days."

"It's not the air, Mr. Knowles. Noticed it's getting chilly?"

I had noticed, but hadn't thought about it. In my misery and funk being cold didn't seem anything more than appropriate. Now I thought about it. When we lost the power line, we lost the heaters, too. It would keep getting colder and colder ... and colder.

Mr. Knowles saw it, too. "Okay, Fats. Let's get on with it."

I sat on the suit while Konski got ready. After he got his pants off he snagged one of the tag-alongs, burst it, and smeared the sticky insides on his right buttock. Then he turned to me. "Okay, kid-up off the nest." We made the swap-over fast, without losing much air, though the leak hissed angrily. "Comfortable as an easy chair, folks." He grinned.

Knowles hurried into the suit and left, taking the light with him. We were in darkness again.

After a while, I heard Konski's voice. "There a game we can play in the dark, Jack. You play chess?"

"Why, yes-play at it, that is."

"A good game. Used to play it in the decompression chamber when I was working under the Hudson. What do you say to twenty on a side, just to make it fun?"

"Uh? Well, all right." He could have made it a thousand; I didn't care.

"Fine. King's pawn to king three."

"Uh-king's pawn to king's four."

"Conventional, aren't you? Puts me in mind of a girl I knew in Hoboken--" What he told about her bad nothing to do with chess, although it did prove she was conventional, in a manner of speaking. "King's bishop to queen's bishop four. Remind me to tell you about her sister, too. Seems she hadn't always been a redhead, but she wanted people to think so. So she-sorry. Go ahead with your move."

I tried to think but my head was spinning. "Queen's pawn to queen three."

"Queen to king's bishop three. Anyhow, she--" He went on in great detail. It wasn't new and I doubt if it ever happened to him, but it cheered me up. I actually smiled, there in the dark. "It's your move," he added.

"Oh." I couldn't remember the board. I decided to get ready to castle, always fairly safe in the early game. "Queen's knight to queen's bishop three."

"Queen advances to capture your king's bishop's pawn-checkmate. You owe me twenty, Jack."

"Huh? Why that can't be!"

"Want to run over the moves?" He checked them off.

I managed to visualize them, then said, "Why, I'll be a dirty name! You hooked me with a fool's mate!"

He chuckled. "You should have kept your eye on my queen instead of on the redhead."

I laughed out loud. "Know any more stories?"

"Sure." He told another. But when I urged him to go on, he said, "I think I'll just rest a little while, Jack."

I got up. "You all right, Fats?" He didn't answer; I felt my way over to him in the dark. His face was cold and he didn't speak when I touched him. I could hear his heart faintly when I pressed an ear to his chest, but his hands and feet were like ice.

I had to pull him loose; he was frozen to the spot. I could feel the ice, though I knew it must be blood. I started to try to revive him by rubbing him, but the hissing of the leak brought me up short. I tore off my own trousers, had a panicky time before I found the exact spot in the dark, and sat down on it, with my right buttock pressed firmly against the opening.

It grabbed me like a suction cup, icy cold. Then it was fire spreading through my flesh. After a time I couldn't feel anything at all, except a dull ache and coldness.

There was a light someplace. It flickered on, then went out again. I heard a door clang. I started to shout.

"Knowles!" I Screamed. "Mr. Knowles!"

The light flickered on again. "Coming, Jack--"

I started to blubber. "Oh, you made it! You made it."

"I didn't make it, Jack. I couldn't reach the next section. When I got back to the lock I passed out." He stopped to wheeze. "There's a crater--" The light flickered off and fell clanging to the floor. "Help me, Jack," he said querulously. "Can't you see I need help? I tried to--"

I heard him stumble and fall. I called to him, but he didn't answer.

I tried to get up, but I was stuck fast, a cork in a bottle . . .

I came to, lying face down-with a clean sheet under me. "Feeling better?" someone asked. It was Knowles, standing by my bed, dressed in a bathrobe.

"You're dead," I told him.

"Not a bit." He grinned. "They got to us in time."

"What happened?" I stared at him, still not believing my eyes.

"Just like we thought-a crashed rocket. An unmanned mail rocket got out of control and hit the tunnel."

"Where's Fats?"

"Hi!"

I twisted my head around; it was Konski, face down like myself.

"You owe me twenty," he said cheerfully.

"I owe you--" I found I was dripping tears for no good reason. "Okay, I owe you twenty. But you'll have to come to Des Moines to collect it."

The Black Pits of Luna

THE MORNING after we got to the Moon we went over to Rutherford. Dad and Mr. Latham - Mr. Latham is the man from the Harriman Trust that Dad came to Luna City to see.

Dad and Mr. Latham had to go anyhow, on business. I got Dad to promise I could go along because it looked like just about my only chance to get out on the surface of the Moon. Luna City is all right, I guess, but I defy you to tell a corridor in Luna City from the sublevels in New York-except that you're light on your feet, of course.

When Dad came into our hotel suite to say we were ready to leave, I was down on the floor, playing mumblety-peg with my kid brother. Mother was lying down and had asked me to keep the runt quiet. She had been dropsick all the way out from Earth and I guess she didn't feel very good. The runt had been fiddling with the lights, switching them from "dusk" to "desert suntan" and back again. I collared him and sat him down on the floor.

Of course, I don't play mumblety-peg any more, but, on the Moon, it's a right good game. The knife practically floats and you can do all kinds of things with it. We made up a lot of new rules.

Dad said, "Switch in plans, my dear. We're leaving for Rutherford right away. Let's pull ourselves together."

Mother said, "Oh, mercy me-I don't think I'm up to it. You and Dickie run along. Baby Darling and I will just spend a quiet day right here."

Baby Darling is the runt.

I could have told her it was the wrong approach. He nearly put my eye out with the knife and said, "Who? What? I'm going too. Let's go!"

Mother said, "Oh, now, Baby Darling-don't cause Mother Dear any trouble, We'll go to the movies, just you and I."

The runt is seven years younger than I am, but don't call him "Baby Darling" if you want to get anything out of him. He started to bawl. "You said I could go!" he yelled.

"No, Baby Darling. I haven't mentioned it to you. I-"

"Daddy said I could go!"

"Richard, did you tell Baby he could go?"

"Why, no, my dear, not that I recall. Perhaps I-"

The kid cut in fast. "You said I could go anywhere Dickie went. You promised me you promised me you promised me." Sometimes you have to hand it to the runt; he had them jawing about who told him what in nothing flat. Anyhow, that is how twenty minutes later, the four of us were up at the rocket port with Mr. Lathani and climbing into the shuttle for Rutherford.

The trip only takes about ten minutes and you don't see much, just a glimpse of the Earth while the rocket is still near Luna City and then not even that, since the atom plants where we were going are all on the back side of the Moon, of course. There were maybe a dozen tourists along and most of them were dropsick as soon as we went into free flight. So was Mother. Some people never will get used to rockets.

But Mother was all right as soon as we grounded and were inside again. Rutherford isn't like Luna City; instead of extending a tube out to the ship, they send a pressurized car out to latch on to the airlock of the rocket, then you jeep back about a mile to the entrance to underground. I liked that and so did the runt. Dad had to go off on business with Mr. Latham, leaving Mother and me and the runt to join up with the party of tourists for the trip through the laboratories.

It was all right but nothing to get excited about. So far as I can see, one atomics plant looks about like another; Rutherford could just as well have been. the main plant outside Chicago. I mean to say everything that is anything is out of sight, covered up, shielded. All you get to see are some dials and instrument boards and people watching them. Remote control stuff, like Oak Ridge. The guide tells you about the experiments going on and they show you some movies - that's all.

I liked our guide. He looked like Tom Jeremy in The Space Troopers. I asked him if he was a spaceman and he looked at me kind of funny and said, no, that he was just a Colonial Services ranger. Then he asked me where I went to school and if I belonged to the Scouts. He said he was scoutmaster of Troop One, Rutherford City, Moonbat Patrol.

I found out there was just the one patrol-not many scouts on the Moon, I suppose.

Dad and Mr. Latham joined us just as we finished the tour while Mr. Perrin - that's our guide - was announcing the trip outside. "The conducted tour of Rutherford," he said, talking as if it were a transcription, "includes a trip by spacesuit out on the surface of the Moon, without extra charge, to see the Devil's Graveyard and the site of the Great Disaster of 1984. The trip is optional. There is nothing particularly dangerous about it and we've never had any one hurt, but the Commission requires that you sign a separate

release for your own safety if you choose to make this trip. The trip takes about one hour. Those preferring to remain behind will find movies and refreshments in the coffee shop."

Dad was rubbing his hands together. "This is for me," he announced. "Mr. Latham, I'm glad we got back in time. I wouldn't have missed this for the world."

"You'll enjoy it," Mr. Latham agreed, "and so will you, Mrs. Logan. I'm tempted to come along myself."

"Why don't you?' Dad asked.

"No, I want to have the papers ready for you and the Director to sign when you get back and before you leave for Luna City."

"Why knock yourself out?" Dad urged him. "If a man's word is no good, his signed contract is no better. You can mail the stuff to me at New York."

Mr. Latham shook his head. "No, really - I've been out on the surface dozens of times. But I'll come along and help you into your spacesuits."

Mother said, "Oh dear," she didn't think she'd better go; she wasn't sure she could stand the thought of being shut up in a spacesuit and besides glaring sunlight always gave her a headache.

Dad said, "Don't be silly, my dear; it's the chance of a lifetime," and Mr. Latham told her that the filters on the helmets kept the light from being glaring. Mother always objects and then gives in. I suppose women just don't have any force of character. Like the night before - earth-night, I mean, Luna City time - she had bought a fancy moonsuit to wear to dinner in the Earth-View room at the hotel, then she got cold feet. She complained to Dad that she was too plump to dare to dress like that.

Well, she did show an awful lot of skin. Dad said, "Nonsense, my dear. You look ravishing." So she wore it and had a swell time, especially when a pilot tried to pick her up.

It was like that this time. She came along. We went into the outfitting room and I looked around while Mr. Perrin was getting them all herded in and having the releases signed. There was the door to the airlock to the surface at the far end, with a bull's-eye window in it and another one like it in the door beyond. You could peek through and see the surface of the Moon beyond, looking hot and bright and sort of improbable, in spite of the amber glass in the windows. And there was a double row of spacesuits hanging up, looking like empty men. I snooped around until Mr. Perrin got around to our party.

"We can arrange to leave the youngster in the care of the hostess in the coffee shop," he was telling Mother. He reached down and tousled the runt's hair. The runt tried to bite him and he snatched his hand away in a hurry.

"Thank you, Mr. Perkins," Mother said, "I suppose that's best-though perhaps I had better stay behind with him."

"'Perrin' is the name," Mr. Perrin said mildly. "It won't be necessary. The hostess will take good care of him."

Why do adults talk in front of kids as if they couldn't understand English? They should have just shoved him into the coffee shop. By now the runt knew he was being railroaded. He looked around belligerently. "I go, too," he said loudly. "You promised me."

"Now Baby Darling," Mother tried to stop him. "Mother Dear didn't tell you-" But she was just whistling to herself; the runt turned on the sound effects.

"You said I could go where Dickie went; you promised me when I was sick. You promised me you promised me-" and on and on, his voice getting higher and louder all the time.

Mr. Perrin looked embarrassed. Mother said, "Richard, you'll just have to deal with your child. After all, you were the one who promised him."

"Me, dear?" Dad looked surprised. "Anyway, I don't see anything so complicated about it. Suppose we did promise him that he could do what Dickie does-we'll simply take him along; that's all."

Mr. Perrin cleared his throat. "I'm afraid not. I can outfit your older son with a woman's suit; he's tall for his age. But we just don't make any provision for small children."

Well, we were all tangled up in a mess in no time at all. The runt can always get Mother to go running in circles. Mother has the same effect on Dad. He gets red in the face and starts laying down the law to me. It's sort of a chain reaction, with me on the end and nobody to pass it along to. They came out with a very simple solution - I was to stay behind and take care of Baby Darling brat!

"But, Dad, you said-" I started in.

"Never mind!" he cut in. "I won't have this family disrupted in a public squabble. You heard what your mother said."

I was desperate. "Look, Dad," I said, keeping my voice low, "if I go back to Earth without once having put on a spacesuit and set foot on the surface, you'll just have to find another school to send me to. I won't go back to Lawrenceville; I'd be the joke of the whole place."

"We'll settle that when we get home."

"But, Dad, you promised me specifically-"

"That'll be enough out of you, young man. The matter is closed."

Mr. Lathain had been standing near by, taking it in but keeping his mouth shut. At this point he cocked an eyebrow at Dad and said very quietly, "Well, R.J., I thought your word was your bond?"

I wasn't supposed to hear it and nobody else did - a good thing, too, for it doesn't do to let Dad know that you know that he's wrong; it just makes him worse. I changed the subject in a hurry. "Look, Dad, maybe we all can go out. How about that suit over there?" I pointed at a rack that was inside a railing with a locked gate on it. The rack had a couple of dozen suits on it and at the far end, almost out of sight, was a small suit - the boots on it hardly came down to the waist of the suit next to it.

"Huh?" Dad brightened up. "Why, just the thing! Mr. Perrin! Oh, Mr. Perrin-here a minute! I thought you didn't have any small suits, but here's one that I think will fit."

Dad was fiddling at the latch of the railing gate. Mr. Perrin stopped him. "We can't use that suit, sir."

"Uh? Why not?"

"All the suits inside the railing are private property, not for rent."

"What? Nonsense-Rutherford is a public enterprise. I want that suit for my child."

"Well, you can't have it."

"I'll speak to the Director."

"I'm afraid you'll have to. That suit was specially built for his daughter."

And that's just what they did. Mr. Latham got the Director on the line, Dad talked to him, then the Director talked to Mr. Perrin, then he talked to Dad again. The Director didn't mind lending the suit, not to Dad, anyway, but he wouldn't order Mr. Perrin to take a below-age child outside.

Mr. Perrin was feeling stubborn and I don't blame him, but Dad soothed his feathers down and presently we were all climbing into our suits and getting pressure checks and checking our oxygen supply and switching on our walkie-talkies. Mr. Perrin was calling the roll by radio and reminding us that we were all on the same circuit, so we had better let him do most of the talking and not to make casual remarks or none of us would be able to hear. Then we were in the airlock and he was warning us to stick close together and not try to see how fast we could run or how high we could jump. My heart was rocking around in my chest.

The outer door of the lock opened and we filed out on the face of the Moon. It was just as wonderful as I dreamed it would be, I guess, but I was so excited that I hardly knew it at the time. The glare of the sun was the brightest thing I ever saw and the shadows so inky black you could hardly see into them. You couldn't hear anything but voices over your radio and you could reach down and switch off that.

The pumice was soft and kicked up around our feet like smoke, settling slowly, falling in slow motion. Nothing else moved. It was the deadest place you can imagine.

We stayed on a path, keeping close together for company, except twice when I had to take out after the runt when he found out he could jump twenty feet. I wanted to smack him, but did you ever try to smack anybody wearing a spacesuit? It's no use.

Mr. Perrin told us to halt presently and started his talk. "You are now in the Devil's Graveyard. The twin spires behind you are five thousand feet above the floor of the plain and have never been scaled. The spires, or monuments, have been named for apocryphal or mythological characters because of the fancied resemblance of this fantastic scene to a giant cemetery. Beelzebub, Thor, Siva, Cain, Set-" He pointed around us. "Lunologists are not agreed as to the origin of the strange shapes. Some claim to see indications of the action of air and water as well as volcanic action. If so, these spires must have been standing for an unthinkably long period, for today, as you see, the Moon-" It was the same sort of stuff you can read any month in Spaceways Magazine, only we were seeing it and that makes a difference, let me tell you.

The spires reminded me a bit of the rocks below the lodge in the Garden of the Gods in Colorado Springs when we went there last summer, only these spires were lots bigger and, instead of blue sky, there was just blackness and hard, sharp stars overhead. Spooky.

Another ranger bad come with us, with a camera. Mr. Perrin tried to say something else, but the runt had started yapping away and I had to switch off his radio before anybody could hear anything. I kept it switched off until Mr. Perrin finished talking.

He wanted us to line up for a picture with the spires and the black sky behind us for a background. "Push your faces forward in your helmets so that your features will show. Everybody look pretty. There!" he added as the other guy snapped the shot. "Prints will be ready when you return, at ten dollars a copy."

I thought it over. I certainly needed one for my room at school and I wanted one to give to - anyhow, I needed another one. I had eighteen bucks left from my birthday money; I could sweet-talk Mother for the balance. So I ordered two of them.

We climbed a long rise and suddenly we were staring out across the crater, the disaster crater, all that was left of the first laboratory. It stretched away from us, twenty miles across, with the floor covered with shiny, bubbly green glass instead of pumice. There was a monument. I read it:

HERE ABOUT YOU ARE THE MORTAL REMAINS OF
Kurt Schaeffer
Maurice Feinstein
Thomas Dooley
Hazel Hayakawa
Cl. Washington Slappey
Sam Houston Adams
WHO DIED FOR THE TRUTH THAT MAKES MEN FREE
On the Eleventh Day of August 1984

I felt sort of funny and backed away and went to listen to Mr. Perrin. Dad and some of the other men were asking him questions. "They don't know exactly," he was saying. "Nothing was left. Now we telemeter all the data back to Luna City, as it comes off the instruments, but that was before the line-of-sight relays were set up."

"What would have happened," some man asked, "if this blast had gone off on Earth?"

"I'd hate to try to tell you-but that's why they put the lab here, back of the Moon." He glanced at his watch. "Time to leave, everybody." They were milling around, heading back down toward the path, when Mother screamed.

"Baby! Where's Baby Darling?"

I was startled but I wasn't scared, not yet. The runt is always running around, first here and then there, but he doesn't go far away, because he always wants to have somebody to yap to.

My father had one arm around Mother; he signaled to me with the other. "Dick," he snapped, his voice sharp in my earphones, "what have you done with your brother?'

"Me?" I said. "Don't look at me-the last I saw Mother had him by the hand, walking up the hill here."

"Don't stall around, Dick. Mother sat down to rest when we got here and sent him to you."

"Well, if she did, he never showed up." At that, Mother started to scream in earnest. Everybody had been listening, of course-they had to; there was just the one radio circuit. Mr. Perrin stepped up and switched off Mother's talkie, making a sudden silence.

"Take care of your wife, Mr. Logan," he ordered, then added, "When did you see your child last?"

Dad couldn't help him any; when they tried switching Mother back into the hook-up, they switched her right off again. She couldn't help and she deafened us. Mr. Perrin addressed the rest of us. "Has anyone seen the small child we had with us? Don't answer unless you have something to contribute. Did anyone see him wander away?"

Nobody had. I figured he probably ducked out when everybody was looking at the crater and had their backs to him. I told Mr. Perrin so. "Seems likely," he agreed. "Attention, everybody! I'm going to search for the child. Stay right where you are. Don't move away from this spot. I won't be gone more than ten minutes."

"Why don't we all go?" somebody wanted to know.

"Because," said Mr. Perrin, "right now I've - only got one lost. I don't want to make it a dozen." Then he left, taking big easy lopes that covered fifty feet at a step.

Dad started to take out after him, then thought better of it, for Mother suddenly keeled over, collapsing at the knees and floating gently to the ground. Everybody started talking at once. Some idiot wanted to take her helmet off, but Dad isn't crazy. I switched off my radio so I could hear myself think and started looking around, not leaving the crowd but standing up on the lip of the crater and trying to see as much as I could.

I was looking back the way we had come; there was no sense in looking at the crater-if he had been in there he would have shown up like a fly on a plate.

Outside the crater was different; you could have hidden a regiment within a block of us, rocks standing up every which way, boulders big as houses with blow holes all through them, spires, gulleys-it was a mess. I could see Mr. Perrin every now and then, casting around like a dog after a rabbit, and making plenty of time. He was practically flying. When he came to a big boulder he would jump right over it, leveling off face down at the top of his jump, so he could see better.

Then he was heading back toward us and I switched my radio back on. There was still a lot of talk. Somebody was saying, "We've got to find him before sundown," and somebody else answered, "Don't be silly; the sun won't be down for a week. It's his air supply, I tell you. These suits are only good for four hours." The first voice said, "Oh!" then added softly, "like a fish out of water-" It was then I got scared.

A woman's voice, sounding kind of choked, said, "The poor, poor darling! We've got to find him before he suffocates," and my father's voice cut in sharply, "Shut up talking that way!" I could hear somebody sobbing. It might have been Mother.

Mr. Perrin was almost up to us and he cut in, "Silence everybody! I've got to call the base," and he added urgently, "Perrin, calling airlock control; Perrin, calling airlock control!"

A woman's voice answered, "Come in, Perrin." He told her what was wrong and added, "Send out Smythe to take this party back in. I'm staying. I want every ranger who's around and get me volunteers from among any of the experienced Moon hands. Send out a radio direction-finder by the first ones to leave."

We didn't wait long, for they came swarming toward us like grasshoppers. They must have been running forty or fifty miles an hour. It would have been something to see, if I hadn't been so sick at my stomach.

Dad put up an argument about going back, but Mr. Perrin shut him up. "If you hadn't been so confounded set on having your own way, we wouldn't be in a mess. If you had kept track of your kid, he wouldn't be lost. I've got kids of my own; I don't let 'em go out on the face of the Moon when they're too young to take care of themselves. You go on back - I can't be burdened by taking care of you, too."

I think Dad might even have gotten in a fight with him if Mother hadn't gotten faint again. We went on back with the party.

The next couple of hours were pretty awful. They let us sit just outside the control room where we could hear Mr. Perrin directing the search, over the loudspeaker. I thought at first that they would snag the runt as soon as they started using the radio direction-finder-pick up his power hum, maybe, even if he didn't say anything-but no such luck; they didn't get anything with it. And the searchers didn't find anything either.

A thing that made it worse was that Mother and Dad didn't even try to blame me. Mother was crying quietly and Dad was consoling her, when he looked over at me with an odd expression. I guess he didn't really see me at all, but I thought he was thinking that if I hadn't insisted on going out on the surface this wouldn't have happened. I said, "Don't go looking at me, Dad. Nobody told me to keep an eye on him. I thought he was with Mother."

Dad just shook his head without answering. He was looking tired and sort of shrunk up. But Mother, instead of laying in to me and yelling, stopped her crying and managed to smile. "Come here, Dickie," she said, and put her other arm around me. "Nobody blames you, Dickie. Whatever happens, you weren't at fault. Remember that, Dickie."

So I let her kiss me and then sat with them for a while, but I felt worse than before. I kept thinking about the runt, somewhere out there, and his oxygen running out. Maybe it wasn't my fault, but I could have prevented it and I knew it. I shouldn't have depended on Mother to look out for him; she's no good at that sort of thing. She's the kind of person that would mislay her head if it wasn't knotted on tight - the ornamental sort. Mother's good, you understand, but she's not practical. She would take it pretty hard if the runt didn't come back. And so would Dad-and so would I. The runt is an awful nuisance, but it was going to seem strange not to have him around underfoot. I got to thinking about that remark, "Like a fish out of water." I accidentally busted an aquarium once; I remember yet how they looked. Not pretty. If the runt was going to die like that - I shut myself up and decided I just had to figure out some way to help find him.

After a while I had myself convinced that I could find him if they would just let me help look. But they wouldn't of course.

Dr. Evans the Director showed up again-he'd met us when we first came in - and asked if there was anything he could do for us and how was Mrs. Logan feeling? "You know I wouldn't have had this happen for the world," he added. "We're doing all we can. I'm having some ore-detectors shot over from Luna City. We might be able to spot the child by the metal in his suit."

Mother asked how about bloodhounds and Dr. Evans didn't even laugh at her. Dad suggested helicopters, then corrected himself and made it rockets. Dr. Evans pointed out that it was impossible to examine the ground closely from a rocket.

I got him aside presently and braced him to let me join the hunt. He was polite but unimpressed, so I insisted. "What makes you think you can find him?", he asked me. "We've got the most experienced Moon men available out there now. I'm afraid, son, that you would get yourself lost or hurt if you tried to keep up with them. In this country, if you once lose sight of landmarks, you can get hopelessly lost."

"But look, Doctor," I told him, "I know the runt-I mean my kid brother, better than anyone else in the world. I won't get lost-I mean I will get lost but just the way he did. You can send somebody to follow me."

He thought about it. "It's worth trying," he said suddenly. "I'll go with you. Let's suit up."

We made a fast trip out, taking thirty-foot strides-the best I could manage even with Dr. Evans hanging on to my belt to keep me from stumbling. Mr. Perrin was expecting us. He seemed dubious about my scheme. "Maybe the old 'lost mule' dodge will work," he admitted, "but I'll keep the regular search going just the same. Here, Shorty, take this flashlight. You'll need it in the shadows."

I stood on the edge of the crater and tried to imagine I was the runt, feeling bored and maybe a little bit griped at the lack of attention. What would I do next?

I went skipping down the slope, not going anywhere in particular, the way the runt would have done. Then I stopped and looked back, to see if Mother and Daddy and Dickie had noticed me. I was being followed all right; Dr. Evans and Mr. Perrin were close behind me. I pretended that no one was looking and went on. I was pretty close to the first rock outcroppings by now and I ducked behind the first one I came to. It wasn't high enough to hide me but it would have covered the runt. It felt like what he would do; he loved to play hide-and-go-seek - it made him the center of attention.

I thought about it. When the runt played that game, his notion of hiding was always to crawl under something, a bed, or a sofa, or an automobile, or even under the sink. I looked around. There were a lot of good places; the rocks were filled with blow holes and overhangs. I started working them over. It seemed hopeless; there must have been a hundred such places right around close.

Mr. Perrin came up to me as I was crawling out of the fourth tight spot. "The men have shined flashlights around in every one of these places," he told me. "I don't think it's much use, Shorty."

"Okay," I said, but I kept at it. I knew I could get at spots a grown man couldn't reach; I just hoped the runt hadn't picked a spot I couldn't reach.

It went on and on and I was getting cold and stiff and terribly tired. The direct sunlight is hot on the Moon, but the second you get in the shade, it's cold. Down inside those rocks it never got warm at all. The suits they gave us tourists are well enough insulated, but the extra insulation is in the gloves and the boots and the seats of the pants-and I had been spending most of my time down on my stomach, wiggling into tight places.

I was so numb I could hardly move and my whole front felt icy. Besides, it gave me one more thing to worry about - how about the runt? Was he cold, too?

If it hadn't been for thinking how those fish looked and how, maybe, the runt would be frozen stiff before I could get to him, I would have quit. I was about beat. Besides, it's rather scary down inside those holes-you don't know what you'll come to next.

Dr. Evans took me by the arm as I came out of one of them, and touched his helmet to mine, so that I got his voice directly. "Might as well give up, son. You're knocking your self out and you haven't covered an acre." I pulled away from him.

The next place was a little overhang, not a foot off the ground. I flashed a light into it. It was empty and didn't seem to go anywhere. Then I saw there was a turn in it. I got down flat and wiggled in. The turn opened out a little and dropped off. I didn't think it was worthwhile to go any deeper as the runt wouldn't have crawled very far in the dark, but I scrunched ahead a little farther and flashed the light down.

I saw a boot sticking out.

That's about all there is to it. I nearly bashed in my helmet getting out of there, but I was dragging the runt after me. He was limp as a cat and his face was funny. Mr. Perrin and Dr. Evans were all over me as I came out, pounding me on the back and shouting. "Is he dead, Mr. Perrin?" I asked, when I could get my breath. "He looks awful bad."

Mr. Perrin looked him over. "No . . . I can see a pulse in his throat. Shock and exposure, but this suit was specially built-we'll get him back fast." He picked the runt up in his arms and I took out after him.

Ten minutes later the runt was wrapped in blankets and drinking hot cocoa. I had some, too. Everybody was talking at once and Mother was crying again, but she looked normal and Dad had filled out.

He tried to write out a check for Mr. Perrin, but he brushed it off. "I don't need any reward; your boy found him.

"You can do me just one favor-"

"Yes?" Dad was all honey.

"Stay off the Moon. You don't belong here; you're not the pioneer type."

Dad took it. "I've already promised my wife that," he said without batting an eye. "You needn't worry."

I followed Mr. Perrin as he left and said to him privately, "Mr. Perrin-I just wanted to tell you that I'll be back, if you don't mind."

He shook hands with me and said, "I know you will, Shorty."

"It's Great to Be Back!"

"HURRY UP, ALLAN!" Home-back to Earth again! Her heart was pounding.

"Just a second." She fidgeted while her husband checked over a bare apartment. Earth-Moon freight rates made it silly to ship their belongings; except for the bag he carried, they had converted everything to cash. Satisfied, he joined her at the lift; they went on up to the administration level and there to a door marked: LUNA CITY COMMUNITY ASSOCIATION-Anna Stone, Service Manager.

Miss Stone accepted their apartment keys grimly. "Mr. and Mrs. MacRae. So you're actually leaving us?"

Josephine bristled. "Think we'd change our minds?"

The manager shrugged. "No. I knew nearly three years ago that you would go back-from your complaints."

"From my comp- Miss Stone, I've been as patient about the incredible inconveniences of this, this pressurized rabbit warren as anyone. I don't blame you personally, but-"

"Take it easy, Jo!" her husband cautioned her.

Josephine flushed. "Sorry, Miss Stone."

"Never mind. We just see things differently. I was here when Luna City was three air-sealed Quonset huts connected by tunnels you crawled through, on your knees." She stuck out a square hand. "I hope you enjoy being groundhogs again, I honestly do. Hot jets, good luck, and a safe landing."

Back in the lift, Josephine sputtered. "'Groundhogs' indeed! Just because we prefer our native planet, where a person can draw a breath of fresh air-"

"You use the term," Allan pointed out.

"But I use it about people who've never been off Terra."

"We've both said more than once that we wished we had had sense enough never to have left Earth. We're groundhogs at heart, Jo."

"Yes, but- Oh, Allan, you're being obnoxious. This is the happiest day of my life. Aren't you glad to be going home? Aren't you?"

"Of course I am. It'll be great to be back. Horseback riding. Skiing."

"And opera. Real, live grand opera. Allan, we've simply got to have a week or two in Manhattan before we go to the country."

"I thought you wanted to feel rain on your face."

"I want that, too. I want it all at once and I can't wait. Oh, darling, it's like getting out of jail." She clung to him.

He unwound her as the lift stopped. "Don't blubber."

"Allan, you're a beast," she said dreamily. "I'm so happy." They stopped again, in bankers' row. The clerk in the National City Bank office had their transfer of account ready. "Going home, eh? Just sign there, and your print. I envy you. Hunting, fishing."

"Surf bathing is more my style. And sailing."

"I," said Jo, "simply want to see green trees and blue sky." The clerk nodded. "I know what you mean. It's long ago and far away. Well, have fun. Are you taking three months or six?"

"We're not coming back," Allan stated flatly. "Three years of living like a fish in an aquarium is enough."

"So?" The clerk shoved the papers toward him and added without expression, "Well-hot jets."

"Thanks." They went on up to the subsurface level and took the cross-town slidewalk out to the rocket port. The slidewalk tunnel broke the surface at one point, becoming a pressurized shed; a view window on the west looked out on the surface of the Moon-and, beyond the hills, the Earth.

The sight of it, great and green and bountiful, against, the black lunar sky and harsh, unwinking stars, brought quick tears to Jo's eyes. Home-that lovely planet was hers! Allan looked at it more casually, noting the Greenwich. The sunrise Line had just touched South America-must be about eight twenty; better hurry.

They stepped off the slidewalk into the arms of some of their friends, waiting to see them off. "Hey-where have you Lugs been? The Gremlin blasts off in seven minutes."

"But we aren't going in it," MacRae answered. "No, siree."

"What? Not going? Did you change your minds?"

Josephine laughed. "Pay no attention to him, Jack. We're going in the express instead; we swapped reservations. So we've got twenty minutes yet."

"Well! A couple of rich tourists, eh?"

"Oh, the extra fare isn't so much and I didn't want to make two changes and spend a week in space when we could be home in two days." She rubbed her bare middle significantly.

"She can't take free flight, Jack," her husband explained.

"Well, neither can I - I was sick the whole trip out. Still, I don't think you'll be sick, Jo; you're used to Moon weight now."

"Maybe," she agreed, "but there is a lot of difference between one-sixth gravity and no gravity."

Jack Crail's wife cut in. "Josephine MacRae, are you going to risk your life in an atomic-powered ship?"

"Why not, darling? You work in an atomics laboratory."

"Hummph! In the laboratory we take precautions. The Commerce Commission should never have licensed the expresses. I may be old-fashioned, but I'll go back the way I came, via Terminal and Supra-New York, in good old reliable fuel-rockets."

"Don't try to scare her, Emma," Crail objected. "They've worked the bugs out of those ships."

"Not to my satisfaction. I-"

"Never mind," Allan interrupted her. "The matter is settled, and we've still got to get over to the express launching site. Good-by, everybody! Thanks for the send-off. It's been grand knowing you. If you come back to God's country, look us up."

"Good-by, kids!" "Good-by, Jo-good-by, Allan." "Give my regards to Broadway!" "So long-be sure to write." "Good-by." "Aloha-hot jets!" They showed their tickets, entered the air lock, and climbed into the pressurized shuttle between Leyport proper and the express launching site. "Hang on, 'folks," the shuttle operator called back over his shoulder; Jo and Allan hurriedly settled into the cushions. The lock opened; the tunnel ahead was airless. Five minutes later they were climbing out twenty miles away, beyond the hills that shielded the lid of Luna City from the radioactive splash of the express ships.

In the Sparrowhawk they shared a compartment with a missionary family. The Reverend Doctor Simmons felt obliged to explain why he was traveling in luxury. "It's for the child," he told them, as his wife strapped the baby girl into a small acceleration couch rigged stretcher-fashion between her parents' couches. "Since she's never been in space, we daren't take a chance of her being sick for days on end." They all strapped down at the warning siren. Jo felt her heart begin to pound. At last ... at long last!

The jets took hold, mashing them into the cushions. Jo had not known she could feel so heavy. This was worse, much worse, than the trip out. The baby cried as long as acceleration lasted, in wordless terror and discomfort.

After an interminable time they were suddenly weightless, as the ship went into free flight. When the terrible binding weight was free of her chest, Jo's heart felt as light as her body. Allan threw off his upper strap and sat up. "How do you feel, kid?"

"Oh, I feel fine!" Jo unstrapped and faced him. Then she hiccoughed. "That is, I think I do."

Five minutes later she was not in doubt; she merely wished to die. Allan swam out of the compartment and located the ship's surgeon, who gave her an injection. Allan waited until she had succumbed to the drug, then left for the lounge to try his own cure for spacesickness - Mothersill's Seasick Remedy washed down with champagne. Presently he had to admit that these two sovereign remedies did not work for him-or perhaps he should not have mixed them.

Little Gloria Simmons was not spacesick. She thought being weightless was fun, and went bouncing off floorplate, overhead, and bulkhead like a dimpled balloon. Jo feebly considered strangling the child, if she floated within reach-but it was too much effort.

Deceleration, logy as it made them feel, was welcome relief after nausea-except to little Gloria. She cried again, in fear and hurt, while her mother tried to explain. Her father prayed.

After a long, long time came a slight jar and the sound of the siren. Jo managed to raise her head. "What's the matter? Is there an accident?"

"I don't think so. I think we've landed."

'We can't have! We're still braking-I'm heavy as lead."

Allan grinned feebly. "So am I. Earth gravity-remember?"

The baby continued to cry.

They said good-by to the missionary family, as Mrs. Simmons decided to wait for a stewardess from the skyport. The MacRaes staggered out of the ship, supporting each other. "It can't be just the gravity," Jo protested, her feet caught in invisible quicksand. "I've taken Earth-normal acceleration in the centrifuge at the 'Y', back home-I mean back in Luna City. We're weak from spacesickness."

Allan steadied himself. "That's it. We haven't eaten anything for two days."

"Allan-didn't you eat anything either?'

"No. Not permanently, so tospy. Are you hungry?"

"Starving."

"How about dinner at Kean's Chophouse?"

"Wonderful. Oh, Allan, we're back!" Her tears started again.

They glimpsed the Simmonses once more, after chuting down the Hudson Valley and into Grand Central Station. While they were waiting at the tube dock for their bag, Jo saw the Reverend Doctor climb heavily out of the next tube capsule, carrying his daughter and followed by his wife. He set the child down carefully. Gloria stood for a moment, trembling on her pudgy legs, then collapsed to the dock. She lay there, crying thinly.

A spaceman-pilot, by his uniform-stopped and looked pityingly at the child. "Born in the Moon?" he asked.

"Why yes, she was, sir." Simmons' courtesy transcended his troubles.

"Pick her up and carry her. She'll have to learn to walk all over again." The spaceman shook his head sadly and glided away. Simmons looked still more troubled, then sat down on the dock beside his child, careless of the dirt.

Jo felt too weak to help. She looked around for Allan, but he was busy; their bag had arrived. It was placed at his feet and he started to pick it up, and then felt suddenly silly. It seemed nailed to the dock. He knew what was in it, rolls of microfilm and colorfilm, a few souvenirs, toilet articles, various irreplaceables-fifty pounds of mass. It couldn't weigh what it seemed to.

But it did. He had forgotten what fifty pounds weigh on Earth.

"Porter, mister?' The speaker was grey-haired and thin, but he scooped up the bag quite casually. Allan called out, "Come along, Jo." and followed him, feeling foolish. The porter slowed to match Allan's labored steps.

"Just down from the Moon?" he asked.

"Why, yes."

"Got a reservation?"

"No."

"You stick with me. I've got a friend on the desk at the Commodore." He led them to the Concourse slidewalk and thence to the hotel.

They were too weary to dine out; Allan had dinner sent to their room. Afterward, Jo fell asleep in a hot tub and he had trouble getting her out-she liked the support the water gave her. But he persuaded her that a rubber-foam mattress was nearly as good. They got to sleep very early.

She woke up, struggling, about four in the morning. "Allan. Allan!"

"Huh? What's the matter?" His hand fumbled at the light switch.

"Uh . . . nothing I guess. I dreamed I was back in the ship. The jets had run away with her. Allan, what makes it so stuffy in here? I've got a splitting headache."

"Huh? It can't be stuffy. This joint is air-conditioned." He sniffed the air. "I've got a headache, too," he admitted.

"Well, do something. Open a window."

He stumbled out of bed, shivered when the outer air hit him, and hurried back under the covers. He was wondering whether he could get to sleep with the roar of the city pouring in through the window when his wife spoke again. "Allan?"

"Yes. What is it?"

"Honey, I'm cold. May I crawl in with you?"

"Sure."

The sunlight streamed in the window, warm and mellow. When it touched his eyes, he woke and found his wife awake beside him. She sighed and snuggled. "Oh, darling, look! Blue sky-we're home. I'd forgotten how lovely it is."

"It's great to be back, all right. How do you feel?"

"Much better. How are you?"

"Okay, I guess." He pushed off the covers.

Jo squealed and jerked them back. "Don't do that!"

"Huh?"

"Mama's great big boy is going to climb out and close that window while mamma stays here under the covers."

"Well-all right." He could walk more easily than the night before-but it was good to get back into bed. Once there, he faced the telephone and shouted, at it, "Service!"

"Order, please," it answered in a sweet contralto.

"Orange juice and coffee for two-extra coffee-six eggs, scrambled medium, and whole-wheat toast. And send up a Times, and the Saturday Evening Post."

"Ten minutes."

"Thank you." The delivery cupboard buzzed while he was shaving. He answered it and served Jo breakfast in bed. Breakfast over, he laid down his newspaper and said, "Can you pull your nose out of that magazine?"

"Glad to. The darn thing is too big and heavy to hold."

"Why don't you have the stat edition mailed to you from Luna City? Wouldn't cost more than eight or nine times as much."

"Don't be silly. What's on your mind?"

"How about climbing out of that frosty little nest and going with me to shop for clothes?"

"Uh-uh. No, I am not going outdoors in a moonsuit."

"'Fraid of being stared at? Getting prudish in your old age?"

"No, me lord, I simply refuse to expose myself to the outer air in six ounces of nylon and a pair of sandals. I want some warm clothes first." She squirmed further down under the covers.

"The Perfect Pioneer Woman. Going to have fitters sent up?"

"We can't afford that. Look - you're going anyway. Buy me just any old rag so long as it's warm."

MacRae looked stubborn. "I've tried shopping for you before."

"Just this once - please. Run over to Saks and pick out a street dress in a blue wool jersey, size ten. And a pair of nylons."

"Well-all right."

"That's a lamb. I won't be loafing. I've a list as long as your arm of people I've promised to call up, look 'up, have lunch with."

He attended to his own shopping first; his sensible shorts and singlet seemed as warm as a straw hat in a snowstorm. It was not really cold and was quite balmy in the sun, but it seemed cold to a man used to a never-failing seventy-two degrees. He tried to stay underground, or stuck to the roofed-over section of Fifth Avenue.

He suspected that the salesmen had outfitted him in clothes that made him look like a yokel But they were warm. They were also heavy; they added to the pain across his chest and made him walk even more unsteadily. He wondered how long it would be before he got his ground-legs.

A motherly saleswoman took care of Jo's order and sold him a warm cape for her as well. He headed back, stumbling under his packages, and trying futilely to flag a ground-taxi. Everyone seemed in such a hurry! Once he was nearly knocked down by a teen-aged boy who said, "Watch it, Gramps!" and rushed off, before he could answer.

He got back, aching all over and thinking about a hot bath. He did not get it; Jo had a visitor. "Mrs. Appleby, my husband-Allan, this is Emma Crail's mother."

"Oh, how do you do, Doctor-or should it be 'Professor'?"

"Mister-"

"-when I heard you were in town I just couldn't wait to hear all about my poor darling. How is she? Is she thin? Does she look well? These modern girls-I've told her time and again that she must get out of doors-I walk in the Park every day-and look at me. She sent me a picture-I have it here somewhere; at least I think I have-and she doesn't look a bit well, undernourished. Those synthetic foods-"

"She doesn't eat synthetic foods, Mrs. Appleby."

"-must be quite impossible, I'm sure, not to mention the taste. What were you saying?'

"Your daughter doesn't live on synthetic foods," Allan repeated. "Fresh fruits and vegetables are one thing we have almost too much of in Luna City. The air-conditioning plant, you know."

"That's just what I was saying. I confess I don't see just how you get food out of air-conditioning machinery on the Moon-"

"In the Moon, Mrs. Appleby."

"-but it can't be healthy. Our air-conditioner at home is always breaking down and making the most horrible smells - simply unbearable, my dears-you'd think they could build a simple little thing like an air-conditioner so that-though of course if you expect them to manufacture synthetic foods as well-" "Mm. Appleby-"

"Yes, Doctor? What were you saying? Don't let me-"

"Mrs. Appleby," MacRae said desperately, "the airconditioning plant in Luna City is a hydroponic farm, tanks of growing plants, green things. The plants take the carbon dioxide out of the air and put oxygen back in."

"But- Are you quite sure, Doctor? I'm sure Emma said-"

"Quite sure."

"Well . . . I don't pretend to understand these things, I'm the artistic type. Poor Herbert often said-Herbert was Emma's father; simply wrapped up in his engineering though I always saw to it that he heard good music and saw the reviews of the best books. Emma takes after her father, I'm afraid-I do wish she would give up that silly work she is in. Hardly the sort of work for a woman, do you think, Mrs. MacRae? All those atoms and neuters and things floating around in the air. I read all about it in the Science Made Simple column in the-"

"She's quite good at it and she seems to like it."

"Well, yes, I suppose. That's the important thing, to be happy at what you are doing no matter how silly it is. But I worry about the child-buried away from civilization, no one of her own sort to talk to, no theaters, no cultural life, no society-"

"Luna City has stereo transcriptions of every successful Broadway play." Jo's voice had a slight edge.

"Oh! Really? But it's not just going to the theater, my dear; it's the society of gentlefolk. Now when I was a girl, my parents-"

Allan butted in, loudly. "One o'clock. Have you had lunch, my dear?'

Mrs. Appleby sat up with a jerk. "Oh, heavenly days - I simply must fly. My dress designer-such a tyrant, but a genius; I must give you her address. It's been charming, my dears, and I can't thank you too much for telling me all about my poor darling. I do wish she would be sensible like you two; she knows I'm always ready to make a home for her-and her husband, for that matter. Now do come and see me, often. I love to talk to people who've been on the Moon-"

"In the Moon."

"It makes me feel closer to my darling. Good-by, then."

With the door locked behind her, Jo said, "Allan, I need a drink."

"I'll join you."

Jo cut her shopping short; it was too tiring. By four o'clock they were driving in Central Park, enjoying fall scenery to the lazy clop-clop of home's hoofs. The helicopters, the pigeons, the streak in the sky where the Antipodes rocket had passed, made a scene idyllic in beauty and serenity. Jo swallowed a lump in her throat and whispered, "Allan, isn't it beautiful?"

"Sure is. It's great to be back. Say, did you notice they've torn up 42nd Street again?"

Back in their room, Jo collapsed on her bed, while Allan took off his shoes. He sat, rubbing his feet, and remarked, "I'm going barefooted all evening. Golly, how my feet hurt!"

"So do mine. But we're going to your father's, my sweet."

"Huh? Oh, damn, I forgot. Jo, whatever possessed you? Call him up and postpone it. We're still half dead from the trip."

"But, Allan, he's invited a lot of your friends."

"Balls of fire and cold mush! I haven't any real friends in New York. Make it next week."

"'Next week' . . . hmm . . . look, Allan, let's go out to the country right away." Jo's parents had left her a tiny place in Connecticut, a worn-out farm.

"I thought you wanted a couple of weeks of plays and music first. Why the sudden change?"

"I'll show you." She went to the window, open since noon. "Look at that window sill." She drew their initials in the grime. "Allan, this city is filthy."

"You can't expect ten million people not to kick up dust."

"But we're breathing that stuff into our lungs. What's happened to the smog-control laws?'

"That's not smog; that's normal city dirt."

"Luna City was never like this. I could wear a white outfit there till I got tired of it. One wouldn't last a day here."

"Manhattan doesn't have a roof-and precipitrons in every air duct."

"Well, it should have. I either freeze or suffocate."

"I thought you were anxious to feel rain on your face?'

"Don't be tiresome. I want it out in the clean, green country."

"Okay. I want to start my book anyhow. I'll call your real estate agent."

"I called him this morning. We can move in anytime; he started fixing up the place when he got my letter."

It was a stand-up supper at his father's home though Jo sat down at once and let food be fetched. Allan wanted to sit down, but his status as guest of honor forced him to stay on his aching feet. His father buttonholed him at the buffet. "Here, son, try this goose liver. It ought to go well after a diet of green cheese."

Allan agreed that it was good.

"See here, son, you really ought to tell these folks about your trip."

"No speeches, Dad. Let 'em read the National Geographic."

"Nonsense!" He turned around. "Quiet, everybody! Allan is going to tell us how the Lunatics live."

Allan bit his lip. To be sure, the citizens of Luna City used the term to each other, but it did not sound the same here. "Well, really, I haven't anything to say. Go on and eat."

"You talk and we'll eat." "Tell us about Looney City." "Did you see the Man-in-the-Moon?" "Go on, Allan, what's it like to live on the Moon?"

"Not 'on the Moon'-in the Moon."

"What's the difference?"

"Why, none, I guess." He hesitated; there was really no way to explain why the Moon colonists emphasized that they lived under the surface of the satellite planet-but it

irritated him the way "Frisco" irritates a San Franciscan. "'In the Moon' is the way we say it. We don't spend much time on the surface, except for the staff at Richardson Observatory, and the prospectors, and so forth. The living quarters are underground, naturally."

"Why 'naturally'? Afraid of meteors?"

"No more than you are afraid of lightning. We go underground for insulation against heat and cold and as support for pressure sealing. Both are cheaper and easier underground. The soil is easy to work and the interstices act like vacuum in a thermos bottle. It is vacuum."

"But Mr. MacRae," a serious-looking lady inquired, "doesn't it hurt your ears to live under pressure?'

Allan fanned the air. "It's the same pressure here-fifteen pounds."

She looked puzzled, then said, "Yes, I suppose so, but it is a little hard to imagine. I think it would terrify me to be sealed up in a cave. Suppose you had a blow-out?"

"Holding fifteen pounds pressure is no problem; engineers work in thousands of pounds per square inch. Anyhow, Luna City is compartmented like a ship. It's safe enough. The Dutch live behind dikes; down in Mississippi they have levees. Subways, ocean liners, aircraft-they're all artificial ways of living. Luna City seems strange just because it's far away."

She shivered. "It scares me."

A pretentious little man pushed his way forward. "Mr. MacRae-granted that it is nice for science and all that, why should taxpayers' money be wasted on a colony on the Moon?"

"You seem to have answered yourself," Allan told him slowly.

"Then how do you justify it? Tell me that, sir."

"It isn't necessary to justify it; the Lunar colony has paid for itself several times over. The Lunar corporations are all paying propositions. Artemis Mines, Spaceways, Spaceways Provisioning Corporation, Diana Recreations, Electronics Research Company, Lunar Biological Labs, not to mention all of Rutherford - look 'em up. I'll admit the Cosmic Research Project nicks the taxpayer a little, since it's a joint enterprise of the Harriman Foundation and the government."

"Then you admit it. It's the principle of the thing."

Allan's feet were hurting him very badly indeed. "What principle? Historically, research has always paid off." He turned his back and looked for some more goose liver.

A man touched him on the arm; Allan recognized an old schoolmate. "Allan, old boy, congratulations on the way you ticked off old Beetle. He's been needing it-I think he's some sort of a radical."

Allan grinned. "I shouldn't have lost my temper."

"A good job you did. Say, Allan, I'm going to take a couple of out-of-town buyers around to the hot spots tomorrow night. Come along."

"Thanks a lot, but we're going out in the country."

"Oh, you can't afford to miss this party. After all, you've been buried on the Moon; you owe yourself some relaxation after that deadly monotony."

Allan felt his cheeks getting warm. "Thanks just the same, but-ever seen the Earth View Room in Hotel Moon Haven?'

"No. Plan to take the trip when I've made my pile, of course."'

"Well, there's a night club for you. Ever see a dancer leap thirty feet into the air and do slow rolls, on the way down? Ever try a lunacy cocktail? Ever see a juggler work in low gravity?" Jo caught his eye across the room. "Er . . . excuse me, old man. My wife wants me." He turned away, then flung back over his shoulder, "Moon Haven itself isn't just a spaceman's dive, by the way-it's recommended by the Duncan Hines Association."

Jo was very pale. "Darling, you've got to get me out of here. I'm suffocating. I'm really ill."

"Suits." They made their excuses.

Jo woke up with a stuffy cold, so they took a cab directly to her country place. There were low-lying clouds under them, but the weather was fine above. The sunshine and the drowsy beat of the rotors regained for them the joy of homecoming,

Allan broke the lazy reverie. "Here's a funny thing, Jo. You couldn't hire me to go back to the Moon-but last night I found myself defending the Loonies every time I opened my mouth."

She nodded. "I know. Honest to Heaven, Allan, some people act as if the Earth were flat. Some of them don't really believe in anything, and some of them are so matter-of-fact that you know they don't really understand-and I don't know which sort annoys me the more."

It was foggy when they landed, but the house was clean, the agent had laid a fire and had stocked the refrigerator. They were sipping hot punch and baking the weariness out of their bones' within ten minutes after the copter grounded. "This," said Allan, stretching, "is all right. It really is great to be back."

"Uh-huh. All except the highway." A new express and freight superhighway now ran not fifty yards from the house. They could hear the big diesels growling as they struck the grade.

"Forget the highway. Turn your back and you stare straight into the woods."

They regained their ground-legs well enough to enjoy short walks in the woods; they were favored with a long, warm Indian summer; the cleaning woman was efficient and taciturn. Allan worked on the results of three years research preparatory to starting his book. Jo helped him with the statistical work, got reacquainted with the delights of cooking, dreamed, and rested.

It was the day of the first frost that the toilet stopped up.

The village plumber was persuaded to show up the next day. Meanwhile they resorted to a homely little building, left over from another era and still standing out beyond the woodpile. It was spider-infested and entirely too well ventilated.

The plumber was not encouraging. "New septic tank. New sewer pipe. Pay you to get new fixtures at the same time. Fifteen, sixteen hundred dollars. Have to do some calculating."

"That's all right," Allan told him. "Can you start today?'

The man laughed. "I can see plainly, Mister, that you don't know what it is to get materials and labor these days. Next spring--soon as the frost is out of the ground."

"That's impossible, man. Never mind the cost. Get it done."

The native shrugged. "Sorry not to oblige you. Good day." When he left, Jo exploded. "Allan, he doesn't want to help us."

"Well-maybe. I'll try to get someone from Norwalk, or even from the City. You can't trudge through the snow out to that Iron Maiden all winter."

"I hope not."

"You must not. You've already had one cold." He stared morosely at the fire. "I suppose I brought it on by my misplaced sense of humor."

"How?"

"Well, you know how we've been subjected to steady kidding ever since it got noised around that we were colonials. I haven't minded much, but some of it rankled. You remember I went into the village by myself last Saturday?"

"Yes. What happened?"

"They started in on me in the barbershop. I let it ride at first, then the worm turned. I started talking about the Moon, sheer double-talk--corny old stuff like the vacuum worms and the petrified air. It was some time before they realized I was ribbing them-and when they did, nobody laughed. Our friend the rustic sanitary engineer was one of the group. I'm sorry."

"Don't be." She kissed him. "If I have to tramp through the snow, it will cheer me that you gave them back some of their sass."

The plumber from Norwalk was more helpful, but rain, and then sleet, slowed down the work. They both caught colds. On the ninth miserable day Allan was working at his desk when he heard Jo come in the back door, returning from a shopping trip. He turned back to his work, then presently became aware that she had not come in to say "hello." He went to investigate.

He found her collapsed on a kitchen chair, crying quietly. "Darling," he said urgently, "honey baby, whatever is the matter?"

She looked up. "I didn't bead to led you doe."

"Blow your nose. Then wipe your eyes. What do you mean, 'you didn't mean to let me know'. What happened?"

She let it out, punctuated with her handkerchief. First, the grocer had said he had no cleansing tissues; then, when she pointed to them, had stated that they were "sold". Finally, he had mentioned "bringing outside labor into town and taking the bread out of the mouths of honest folk".

Jo had blown up and had rehashed the incident of Allan and the barbershop wits. The grocer had simply grown more stiff. "'Lady,' he said to me, 'I don't know whether you and your husband have been to the Moon or not, and I don't care. I don't take much stock in such things. In any case, I don't need your trade.' Oh, Allan, I'm so unhappy."

"Not as unhappy as he's going to be! Where's my hat?"

"Allan! You're not leaving this house. I won't have you fighting."

"I won't have him bullying you."

"He won't again. Oh my dear, I've tried so hard, but I can't stay here any longer. It's not just the villagers; it's the cold and the cockroaches and always having, a runny nose. I'm tired out and my feet hurt all the time." She started to cry again.

"There, there! We'll leave, honey. We'll go to Florida. I'll finish my book while you lie in the sun."

"Oh, I don't want to go to Florida. I want to go home."

"Huh? You mean-back to Luna City?"

"Yes. Oh, dearest, I know you don't want to, but I can't stand it any longer. It's not just the dirt and the cold and the comic-strip plumbing-it's not being understood. It wasn't any better in New York. These groundhogs don't know anything."

He grinned at her. "Keep sending, kid; I'm on your frequency."

"Allan!"

He nodded. "I found out I was a Loony at heart quite a while ago-but I was afraid to tell you. My feet hurt, too- and I'm damn sick of being treated like a freak. I've tried to be tolerant, but I can't stand groundhogs. I miss the folks in dear old Luna. They're civilized."

She nodded. "I guess it's prejudice, but I feel the same way."

"It's not prejudice. Let's be honest. What does it take to get to Lana City?"

"A ticket."

"Smarty pants. I don't mean as a tourist; I mean to get a job there. You know the answer: Intelligence. It costs a lot to send a man to the Moon and more to keep him there. To pay off, he has to be worth a lot. High I.Q., good compatibility index, superior education-everything that makes a person pleasant and easy and interesting to have around. We've been spoiled; the ordinary human cussedness that groundhogs take for granted, we now find intolerable, because Loonies are different. The fact that Luna City is the most comfortable environment man ever built for himself is beside the point-it's the people who count. Let's go home."

He went to the telephone-an old-fashioned, speech-only rig-and called the Foundation's New York office. While he was waiting, truncheon-like "receiver" to his ear, she said, "Suppose they won't have us?"

"That's what worries me." They knew that the Lunar companies rarely rehired personnel who had once quit; the physical examination was reputed to be much harder the second time.

"Hello . . . hello. Foundation? May I speak to the recruiting office? . . . hello-I can't turn on my view plate; this instrument is a hangover from the dark ages. This is Allan MacRae, physical chemist, contract number 1340729. And my wife, Josephine MacRae, 1340730. We want to sign up again. I said we wanted to sign up again . . . okay, I'll wait."

"Pray, darling, pray!"

"I'm praying- How's that! My appointment's still vacant? Fine, fine! How about my wife?" He listened with a worried look; Jo held her breath. Then he cupped the speaker. "Hey, Jo-your job's filled. They want to know if you'll take an interim job as a junior accountant?"

"Tell 'em 'yes!'"

"That'll be fine. When can we take our exams? That's fine, thanks. Good-by." He hung up and turned to his wife. "Physical and psycho as soon as we like; professional exams waived."

"What are we waiting for?"

"Nothing." He dialed the Norwalk Copter Service. "Can you run us into Manhattan? Well, good grief, don't you have radar? All right, all right, g'by!" He snorted. "Cabs all grounded by the weather. I'll call New York and try to get a modern cab."

Ninety minutes later they landed on top of Harriman Tower.

The psychologist was very cordial. "Might as well get this over before you have your chests thumped. Sit down. Tell me about yourselves." He drew them out, nodding from time to time. "I see. Did you ever get the plumbing repaired?"

"Well, it was being fixed."

"I can sympathize with your foot trouble, Mrs. MacRae; my arches always bother me here. That's your real reason, isn't it?"

"Oh, no!"

"Now, Mrs. MacRae-"

"Really it's not---truly. I want people to talk to who know what I mean. All that's really wrong with me is that I'm homesick for my own sort. I want to go home-and I've got to have this job to get there. - I'll steady down, I know I will."

The doctor looked grave. "How about you, Mr. MacRae?"

"Well-it's about the same story. I've been trying to write a book, but I can't work. I'm homesick. I want to go back."

Feldman suddenly smiled. "It won't be too difficult."

"You mean we're in? If we pass the physical?"

"Never mind the physical-your discharge examinations are recent enough. Of course you'll have to go out to Arizona for reconditioning and quarantine. You're probably wondering why it seems so easy when it is supposed to be so hard. It's really simple: We don't want people lured back by the high pay. We do want people who will be happy and as permanent as possible-in short, we want people who think of Luna City as 'home.' Now that you're 'Moonstruck,' we want you back." He stood up and shoved out his hand.

Back in the Commodore that night, Jo was struck by a thought. "Allan-do you suppose we could get our own apartment back?"

"Why, I don't know. We could send old lady Stone a radio."

"Call her up instead, Allan. We can afford it."

"All right! I will!"

It took about ten minutes to get the circuit through. Miss Stone's face looked a trifle less grim when she recognized them.

"Miss Stone, we're coming home!"

There was the usual three-second lag, then-"Yes, I know. It came over the tape about twenty minutes ago."

"Oh. Say, Miss Stone, is our old apartment vacant?" They waited.

"I've held it; I knew you'd come back-after a bit. Welcome home, Loonies."

When the screen cleared, Jo said, "What did she mean, Allan?"

"Looks like we're in, kid. Members of the Lodge."

"I guess so-oh, Allan, look!" She had stepped to the window; scudding clouds had just uncovered the Moon. It was three days old and Mare Fecunditatis-the roll of hair at the back of the Lady-in-the-Moon's head-was cleared by the Sunrise line. Near the right-hand edge of that great, dark "sea" was a tiny spot, visible only to their inner eyes-Luna City.

The crescent hung, serene and silvery, over the tall buildings. "Darling, isn't it beautiful?"

"Certainly is. It'll be great to be back. Don't get your nose all runny."

We Also Walk Dogs

"General services -- Miss Cormet speaking!" She addressed the view screen with just the right balance between warm hospitable friendliness and impersonal efficiency. The screen flickered momentarily, then built up a stereo-picture of a dowager, fat and fretful, overdressed and underexercised.

"Oh, my dear," said the image, "I'm so upset. I wonder if you can help me."

"I'm sure we can," Miss Cormet purred as she quickly estimated the cost of the woman's gown and jewels (if real -- she made a mental reservation) and decided that here was a client that could be profitable. "Now tell me your trouble. Your name first, if you please." She touched a button on the horseshoe desk which enclosed her, a button marked CREDIT DEPARTMENT.

"But it's all so _involved_," the image insisted. "Peter _would_ go and break his hip." Miss Cormet immediately pressed the button marked MEDICAL. "I've _told_ him that polo is dangerous. You've no idea, my dear, how a mother suffers. And just at this time, too. It's so inconvenient--"

"You wish us to attend him? Where is he now?"

"Attend him? Why, how silly! The Memorial Hospital will do that. We've endowed them enough, I'm sure. It's my dinner party I'm worried about. The Principessa will be so annoyed."

The answer light from the Credit Department was blinking angrily. Miss Cormet headed her off. "Oh, I see. We'll arrange it for you. Now, your name, please, and your address and present location."

"But don't you _know_ my name?"

"One might guess," Miss Cormet diplomatically evaded, "but General Services always respects the privacy of its clients."

"Oh, yes, of course. How considerate. I am Mrs. Peter van Hogbein Johnson." Miss Cormet controlled her reaction. No need to consult the Credit Department for this one. But its transparency flashed at once, rating AAA -- unlimited. "But I don't see what you can do," Mrs Johnson continued. "I can't be two places at once."

"General Services likes difficult assignments," Miss Cormet assured her. "Now -- if you will let me have the details. . ."

She wheedled and nudged the woman into giving a fairly coherent story. Her son, Peter III, a slightly shopworn Peter Pan, whose features were familiar to Grace Gormet through years of stereogravure, dressed in every conceivable costume affected by the richly idle in their pastimes, had been so thoughtless as to pick the afternoon before his mother's most important social function to bung himself up -- seriously. Furthermore, he had been so thoughtless as to do so half a continent away from his mater.

Miss Cormet gathered that Mrs. Johnson's technique for keeping her son safely under thumb required that she rush to his bedside at once, and, incidentally, to select his nurses. But her dinner party that evening represented the culmination of months of careful maneuvering. What was she to do?

Miss Cormet reflected to herself that the prosperity of General Services and her own very substantial income was based largely on the stupidity, lack of resourcefulness, and laziness of persons like this silly parasite, as she explained that General Services would see that her party was a smooth, social success while arranging for a portable full-length stereo screen to be installed in her drawing room in order that she might greet her guests and make her explanations while hurrying to her son's side. Miss Cormet would see that a most adept social manager was placed in charge, one whose own position in society was irreproachable and whose connection with General Services was known to no one. With proper handling the disaster could be turned into a social triumph, enhancing Mrs. Johnson's reputation as a clever hostess and as a devoted mother.

"A sky car will be at your door in twenty minutes," she added, as she cut in the circuit marked TRANSPORTATION, "to take you to the rocket port. One of our young men will be with it to get additional details from you on the way to the port. A compartment for yourself and a berth for your maid will be reserved on the 16:45 rocket for Newark. You may rest easy now. General Services will do your worrying."

"Oh, thank you, my dear. You've been such a help. You've no idea of the _responsibilities_ a person in my position has.'

Miss Cormet cluck-clucked in professional sympathy while deciding that this particular girl was good for still more fees. "You _do_ look exhausted, madame," she said anxiously. "Should I not have a masseuse accompany you on the trip? Is your health at all delicate? Perhaps a physician would be still better."

"How thoughtful you are!"

"I'll send both," Miss Cormet decided, and switched off, with a faint regret that she had not suggested a specially chartered rocket. Special service, not listed in the master price schedule, was supplied on a cost-plus basis. In cases like this "plus" meant all the traffic would bear.

She switched to EXECUTIVE; an alert-eyed young man filled the screen. "Stand by for transcript, Steve," she said. "Special service, triple-A. I've started the immediate service."

His eyebrows lifted. "Triple-A -- bonuses?"

"Undoubtedly. Give this old battleaxe the works -- smoothly. And look -- the client's son is laid up in a hospital. Check on his nurses. If any one of them has even a shred of sex-appeal, fire her out and put a zombie in."

"Gotcha, kid. Start the transcript."

She cleared her screen again; the "available-for-service" light in her booth turned automatically to green, then almost at once turned red again and a new figure built up in her screen.

No stupid waster this. Grace Cormet saw a well-kempt man in his middle forties, flat-waisted, shrewd-eyed, hard but urbane. The cape of his formal morning clothes was thrown back with careful casualness. "General Services," she said. "Miss Cormet speaking."

"Ah, Miss Cormet," he began, "I wish to see your chief."

"Chief of switchboard?"

"No, I wish to see the President of General Services."

"Will you tell me what it is you wish? Perhaps I can help you."

"Sorry, but I can't make explanations. I must see him, at once."

"And General Services is sorry. Mr. Clare is a very busy man; it is impossible to see him without appointment and without explanation."

"Are you recording?"

"Certainly."

"Then please cease doing so."

Above the console, in sight of the client, she switched off the recorder. Underneath the desk she switched it back on again. General Services was sometimes asked to perform illegal acts; its confidential employees took no chances. He fished something out from the folds of his chemise and held it out to her. The stereo effect made it appear as if he were reaching right out through the screen.

Trained features masked her surprise -- it was the sigil of a planetary official, and the color of the badge was green.

"I will arrange it," she said.

"Very good. Can you meet me and conduct me in from the waiting room? In ten minutes?"

"I will be there, Mister . . . Mister--" But he had cut off.

Grace Cormet switched to the switchboard chief and called for relief. Then, with her board cut out of service, she removed the spool bearing the clandestine record of the interview, stared at it as if undecided, and after a moment, dipped it into an opening in the top of the desk where a strong magnetic field wiped the unfixed patterns from the soft metal.

A girl entered the booth from the rear. She was blond, decorative, and looked slow and a little dull. She was neither. "Okay, Grace," she said. "Anything to turn over?"

"No. Clear board."

"'S matter? Sick?"

"No." With no further explanation Grace left the booth, went on out past the other booths housing operators who handled unlisted services and into the large hail where the hundreds of catalogue operators worked. These had no such complex equipment as the booth which Grace had quitted. One enormous volume, a copy of the current price list of all of General Services' regular price-marked functions, and an ordinary look-and-listen enabled a catalogue operator to provide for the public almost anything the ordinary customer could wish for. If a call was beyond the scope of the catalogue it was transferred to the aristocrats of resourcefulness, such as Grace.

She took a short cut through the master files room, walked down an alleyway between dozens of chattering punched-card machines, and entered the foyer of that level. A pneumatic lift bounced her up to the level of the President's office. The President's receptionist did not stop her, nor, apparently, announce her. But Grace noted that the girl's hands were busy at the keys of her voder.

Switchboard operators do not walk into the offices of the president of a billion-credit corporation. But General Services was not organized like any other business on the planet. It was a _sui generis_ business in which special training was a commodity to be listed, bought, and sold, but general resourcefulness and a ready wit were all important. In its hierarchy Jay Clare, the president, came first, his handyman, Saunders Francis, stood second, and the couple of dozen operators, of which Grace was one, who took calls on the unlimited switchboard came immediately after. They, and the field operators who

handled the most difficult unclassified commissions -- one group in fact, for the unlimited switchboard operators and the unlimited field operators swapped places indiscriminately.

After them came the tens of thousands of other employees spread over the planet, from the chief accountant, the head of the legal department, the chief clerk of the master files on down through the local managers. the catalogue operators to the last classified part time employee -- stenographers prepared to take dictation when and where ordered, gigolos ready to fill an empty place at a dinner, the man who rented both armadillos and trained fleas.

Grace Cormet walked into Mr. Clare's office. It was the only room in the building not cluttered up with electromechanical recording and communicating equipment. It contained nothing but his desk (bare), a couple of chairs, and a stereo screen, which, when not in use, seemed to be Krantz' famous painting "The Weeping Buddha". The original was in fact in the sub-basement, a thousand feet below.

"Hello, Grace," he greeted her, and shoved a piece of paper at her. "Tell me what you think of that. Sance says it's lousy." Saunders Francis turned his mild pop eyes from his chief to Grace Cormet, but neither confirmed nor denied the statement.

Miss Cormet read:

CAN YOU AFFORD IT?
Can You Afford GENERAL SERVICES?
Can You Afford NOT to have General Services ? ? ? ? ?
In this jet-speed age can you afford to go on wasting
time doing your own shopping, paying bills yourself,
taking care of your living compartment?
We'll spank the baby and feed the cat.
We'll rent you a house and buy your shoes.
We'll write to your mother-in-law and add up your check stubs.
No job too large; No job too small --
and all amazingly Cheap!
GENERAL SERVICES
Dial H-U-R-R-Y -- U-P
P.S. WE ALSO WALK DOGS

"Well?" said Clare.
"Sance is right. It smells."
"Why?"
"Too logical. Too verbose. No drive."
"What's your idea of an ad to catch the marginal market?"
She thought a moment, then borrowed his stylus and wrote:

DO YOU WANT SOMEBODY MURDERED?
(Then _don't_ call GENERAL SERVICES)
But for _any_ other job dial HURRY-UP - _It pays_!
P.S. We also walk dogs.

"Mmmm . . . well, maybe," Mr. Clare said cautiously. "We'll try it. Sance, give this a type B coverage, two weeks, North America, and let me know how it takes." Francis put it away in his kit, still with no change in his mild expression. "Now as I was saying--"

"Chief," broke in Grace Cormet. "I made an appointment for you in--" She glanced at her watchfinger. "--exactly two minutes and forty seconds. Government man."

"Make him happy and send him away. I'm busy."

"Green Badge."

He looked up sharply. Even Francis looked interested. "So?" Clare remarked. "Got the interview transcript with you?"

"I wiped it."

"You did? Well, perhaps you know best. I like your hunches. Bring him in."

She nodded thoughtfully and left.

She found her man just entering the public reception room and escorted him past half a dozen gates whose guardians would otherwise have demanded his identity and the nature of his business. When he was seated in Clare's office, he looked around. "May I speak with you in private, Mr. Clare?"

"Mr. Francis is my right leg. You've already spoken to Miss Cormet."

"Very well." He produced the green sigil again and held it out. "No names are necessary just yet. I am sure of your discretion."

The President of General Services sat up impatiently. "Let's get down to business. You are Pierre Beaumont, Chief of Protocol. Does the administration want a job done?"

Beaumont was unperturbed by the change in pace. "You know me. Very well. We'll get down to business. The government may want a job done. In any case our discussion must not be permitted to leak out--"

"All of General Services relations are confidential."

"This is not confidential; this is secret." He paused.

"I understand you," agreed Clare. "Go on."

"You have an interesting organization here, Mr. Clare. I believe it is your boast that you will undertake any commission whatsoever -- for a price."

"If it is legal."

"Ah, yes, of course. But legal is a word capable of interpretation. I admired the way your company handled the outfitting of the Second Plutonian Expedition. Some of your methods were, ah, ingenious."

"If you have any criticism of our actions in that case they are best made to our legal department through the usual channels."

Beaumont pushed a palm in his direction. "Oh, no, Mr. Clare -- please! You misunderstand me. I was not criticising; I was admiring. Such resource! What a diplomat you would have made!"

"Let's quit fencing. What do you want?"

Mr. Beaumont pursed his lips. "Let us suppose that you had to entertain a dozen representatives of each intelligent race in this planetary system and you wanted to make each one of them completely comfortable and happy. Could you do it?"

Clare thought aloud. "Air pressure, humidity, radiation densities, atmosphere, chemistry, temperatures, cultural conditions -- those things are all simple. But how about acceleration? We could use a centrifuge for the Jovians, but Martians and Titans -- that's

another matter. There is no way to reduce earth-normal gravity. No, you would have to entertain them out in space, or on Luna. That makes it not our pigeon; we never give service beyond the stratosphere."

Beaumont shook his head. "It won't be beyond the stratosphere. You may take it as an absolute condition that you are to accomplish your results on the surface of the Earth."

"Why?"

"Is it the custom of General Services to inquire why a client wants a particular type of service?"

"No. Sorry."

"Quite all right. But you do need more information in order to understand what must be accomplished and why it must be secret. There will be a conference, held on this planet, in the near future -- ninety days at the outside. Until the conference is called no suspicion that it is to be held must be allowed to leak out. If the plans for it were to be anticipated in certain quarters, it would be useless to hold the conference at all. I suggest that you think of this conference as a roundtable of leading, ah, scientists of the system, about of the same size and makeup as the session of the Academy held on Mars last spring. You are to make all preparations for the entertainments of the delegates, but you are to conceal these preparations in the ramifications of your organization until needed. As for the details--"

But Clare interrupted him. "You appear to have assumed that we will take on this commission. As you have explained it, it would involve us in a ridiculous failure. General Services does not like failures. You know and I know that low-gravity people cannot spend more than a few hours in high gravity without seriously endangering their health. Interplanetary get-togethers are always held on a low-gravity planet and always will be."

"Yes," answered Beaumont patiently, "they always have been. Do you realize the tremendous diplomatic handicap which Earth and Venus labor under in consequence?"

"I don't get it."

"It isn't necessary that you should. Political psychology is not your concern. Take it for granted that it does and that the Administration is determined that this conference shall take place on Earth."

"Why not Luna?"

Beaumont shook his head. "Not the same thing at all. Even though we administer it, Luna City is a treaty port. Not the same thing, psychologically."

Clare shook his head. "Mr. Beaumont, I don't believe that you understand the nature of General Services, even as I fail to appreciate the subtle requirements of diplomacy. We don't work miracles and we don't promise to. We are just the handy-man of the last century, gone speed-lined and corporate. We are the latter day equivalent of the old servant class, but we are not Aladdin's genie. We don't even maintain research laboratories in the scientific sense. We simply make the best possible use of modern advances in communications and organization to do what already can be done." He waved a hand at the far wall, on which there was cut in intaglio the time-honored trademark of the business -- a Scottie dog, pulling against a leash and sniffing at a post. "_There_ is the spirit of the sort of work we do. We walk dogs for people who are too busy to walk 'em themselves. My grandfather worked his way through college walking dogs. I'm still walking them. I don't promise miracles, nor monkey with politics."

Beaumont fitted his fingertips carefully together. "You walk dogs for a fee. But of course you do -- you walk my pair. Five minim-credits seems rather cheap."

"It is. But a hundred thousand dogs, twice a day, soon runs up the gross take."

"The 'take' for walking this 'dog' would be considerable."

"How much?" asked Francis. It was his first sign of interest. Beaumont turned his eyes on him. "My dear sir, the outcome of this, ah, roundtable should make a difference of literally hundreds of billions of credits to this planet. We will not bind the mouth of the kine that treads the corn, if you pardon the figure of speech."

"How much?"

"Would thirty percent over cost be reasonable?"

Francis shook his head. "Might not come to much."

"Well, I certainly won't haggle. Suppose we leave it up to you gentlemen -- your pardon, Miss Cormet! -- to decide what the service is worth. I think I can rely on your planetary and racial patriotism to make it reasonable and proper."

Francis sat back, said nothing, but looked pleased.

"Wait a minute," protested Clare. "We haven't taken this job."

"We have discussed the fee," observed Beaumont.

Clare looked from Francis to Grace Cormet, then examined his fingernails. "Give me twenty-four hours to find out whether or not it is possible," he said finally, "and I'll tell you whether or not we will walk your dog."

"I feel sure," answered Beaumont, "that you will." He gathered his cape about him.

"Okay, masterminds," said Clare bitterly, "you've bought it."

"I've been wanting to get back to field work," said Grace.

"Put a crew on everything but the gravity problem," suggested Francis. "It's the only catch. The rest is routine."

"Certainly," agreed Clare, "but you had better deliver on that. If you can't, we are out some mighty expensive preparations that we will never be paid for. Who do you want? Grace?"

"I suppose so," answered Francis. "She can count up to ten."

Grace Cormet looked at him coldly. "There are times, Sance Francis, when I regret having married you."

"Keep your domestic affairs out of the office," warned Clare. "Where do you start?"

"Let's find out who knows most about gravitation," decided Francis. "Grace, better get Doctor Krathwohl on the screen."

"Right," she acknowledged, as she stepped to the stereo controls. "That's the beauty about this business. You don't have to know anything; you just have to know where to find out."

Dr. Krathwohl was a part of the permanent staff of General Services. He had no assigned duties. The company found it worthwhile to support him in comfort while providing him with an unlimited drawing account for scientific journals and for attendance at the meetings which the learned hold from time to time. Dr Krathwohl lacked the single-minded drive of the research scientist; he was a dilettante by nature.

Occasionally they asked him a question. It paid.

"Oh, hello, my dear!" Doctor Krathwohl's gentle face smiled out at her from the screen. "Look -- I've just come across the most amusing fact in the latest issue of _Nature_. It throws a most interesting sidelight on Brownlee's theory of--"

"Just a second, Doc," she interrupted. "I'm kinda in a hurry."

"Yes, my dear?"

"Who knows the most about gravitation?"

"In what way do you mean that? Do you want an astrophysicist, or do you want to deal with the subject from a standpoint of theoretical mechanics? Farquarson would be the man in the first instance, I suppose."

"I want to know what makes it tick."

"Field theory, eh? In that case you don't want Farquarson. He is a descriptive ballistician, primarily. Dr. Julian's work in that subject is authoritative, possibly definitive."

"Where can we get hold of him?"

"Oh, but you can't. He died last year, poor fellow. A great loss."

Grace refrained from telling him how great a loss and asked, "Who stepped into his shoes?"

"Who what? Oh, you were jesting! I see. You want the name of the present top man in field theory. I would say O'Neil."

"Where is he?"

"I'll have to find out. I know him slightly -- a difficult man."

"Do, please. In the meantime who could coach us a bit on what it's all about?"

"Why don't you try young Carson, in our engineering department? He was interested in such things before he took a job with us. Intelligent chap -- I've had many an interesting talk with him."

"I'll do that. Thanks, Doc. Call the Chief's office as soon as you have located O'Neil. Speed." She cut off.

Carson agreed with Krathwohl's opinion, but looked dubious. "O'Neil is arrogant and non-cooperative. I've worked under him. But he undoubtedly knows more about field theory and space structure than any other living man."

Carson had been taken into the inner circle, the problem explained to him. He had admitted that he saw no solution. "Maybe we are making something hard out of this," Clare suggested. "I've got some ideas. Check me if I'm wrong, Carson."

"Go ahead, Chief."

"Well, the acceleration of gravity is produced by the proximity of a mass -- right? Earth-normal gravity being produced by the proximity of the Earth. Well, what would be the effect of placing a large mass just over a particular point on the Earth's surface. Would not that serve to counteract the pull of the Earth?"

"Theoretically, yes. But it would have to be a damn big mass."

"No matter."

"You don't understand, Chief. To offset fully the pull of the Earth at a given point would require another planet the size of the Earth in contact with the Earth at that point. Of course since you don't want to cancel the pull completely, but simply to reduce it, you gain a certain advantage through using a smaller mass which would have its center of

gravity closer to the point in question than would be the center of gravity of the Earth. Not enough, though. While the attraction builds up inversely as the square of the distance -- in this case the half-diameter -- the mass and the consequent attraction drops off directly as the cube of the diameter."

"What does that give us?"

Carson produced a slide rule and figured for a few moments. He looked up. "I'm almost afraid to answer. You would need a good-sized asteroid, of lead, to get anywhere at all."

"Asteroids have been moved before this."

"Yes, but what is to hold it up? No, Chief, there is no conceivable source of power, or means of applying it, that would enable you to hang a big planetoid over a particular spot on the Earth's surface and keep it there."

"Well, it was a good idea while it lasted," Clare said pensively. Grace's smooth brow had been wrinkled as she followed the discussion. Now she put in, "I gathered that you could use an extremely heavy small mass more effectively. I seem to have read somewhere about some stuff that weighs tons per cubic inch."

"The core of dwarf stars," agreed Carson. "All we would need for that would be a ship capable of going light-years in a few days, some way to mine the interior of a star, and a new space-time theory."

"Oh, well, skip it."

"Wait a minute," Francis observed. "Magnetism is a lot like gravity, isn't it?"

"Well -- yes."

"Could there be some way to maqnetize these gazebos from the little planets? Maybe something odd about their body chemistry?"

"Nice idea," agreed Carson, "but while their internal economy is odd, it's not that odd. They are still organic."

"I suppose not. If pigs had wings they'd be pigeons."

The stereo annunciator blinked. Doctor Krathwohl announced that O'Neil could be found at his summer home in Portage, Wisconsin. He had not screened him and would prefer not to do so, unless the Chief insisted.

Clare thanked him and turned back to the others. "We are wasting time," he announced. "After years in this business we should know better than to try to decide technical questions. I'm not a physicist and I don't give a damn how gravitation works. That's O'Neil's business. And Carson's. Carson, shoot up to Wisconsin and get O'Neil on the job."

"Me?"

"You. You're an operator for this job -- with pay to match. Bounce over to the port -- there will be a rocket and a credit facsimile waiting for you. You ought to be able to raise ground in seven or eight minutes."

Carson blinked. "How about my job here?"

"The engineering department will be told, likewise the accounting. Get going."

Without replying Carson headed for the door. By the time he reached it he was hurrying.

Carson's departure left them with nothing to do until he reported back -- nothing to do, that is, but to start action on the manifold details of reproducing the physical and

cultural details of three other planets and four major satellites, exclusive of their characteristic surface-normal gravitational accelerations. The assignment, although new, presented no real difficulties -- to General Services. Somewhere there were persons who knew all the answers to these matters. The vast loose organization called General Services was geared to find them, hire them, put them to work. Any of the unlimited operators and a considerable percent of the catalogue operators could take such an assignment and handle it without excitement nor hurry.

Francis called in one unlimited operator. He did not even bother to select him, but took the first available on the ready panel -- they were all "Can do!" people. He explained in detail the assignment, then promptly forgot about it. It would be done, and on time. The punched-card machines would chatter a bit louder, stereo screens would flash, and bright young people in all parts of the Earth would drop what they were doing and dig out the specialists who would do the actual work.

He turned back to Clare, who said, "I wish I knew what Beaumont is up to. Conference of scientists -- phooey!"

"I thought you weren't interested in politics, Jay."

"I'm not. I don't give a hoot in hell about politics, interplanetary or otherwise, except as it affects this business. But if I knew what was being planned, we might be able to squeeze a bigger cut out of it."

"Well," put in Grace, "I think you can take it for granted that the real heavy-weights from all the planets are about to meet and divide Gaul into three parts."

"Yes, but who gets cut out?"

"Mars, I suppose."

"Seems likely. With a bone tossed to the Venerians. In that case we might speculate a little in Pan-Jovian Trading Corp."

"Easy, son, easy," Francis warned. "Do that, and you might get people interested. This is a hush-hush job."

"I guess you're right. Still, keep your eyes open. There ought to be some way to cut a slice of pie before this is over."

Grace Cormet's telephone buzzed. She took it out of her pocket and said, "Yes?"

"A Mrs. Hogbein Johnson wants to speak to you."

"You handle her. I'm off the board."

"She won't talk to anyone but you."

"All right. Put her on the Chief's stereo, but stay in parallel yourself. You'll handle it after I've talked to her."

The screen came to life, showing Mrs. Johnson's fleshy face alone, framed in the middle of the screen in flat picture. "Oh, Miss Cormet," she moaned, "some dreadful mistake has been made. There is no stereo on this ship."

"It will be installed in Cincinnati. That will be in about twenty minutes."

"You are sure?"

"Quite sure."

"Oh, thank you! It's such a relief to talk with you. Do you know, I'm thinking of making you my social secretary."

"Thank you,' Grace said evenly; `but I am under contract."

"But how stupidly tiresome! You can break it."

"No, I'm sorry Mrs. Johnson. Good-bye." She switched off the screen and spoke again into her telephone. "Tell Accounting to double her fee. And I won't speak with her again." She cut off and shoved the little instrument savagely back into her pocket. "Social secretary!"

It was after dinner and Clare had retired to his living apartment before Carson called back. Francis took the call in his own office.

"Any luck?" he asked, when Carson's image had built up.

"Quite a bit. I've seen O'Neil."

"Well? Will he do it?"

"You mean can he do it, don't you?"

"Well -- can he?"

"Now that is a funny thing -- I didn't think it was theoretically possible. But after talking with him, I'm convinced that it is. O'Neil has a new outlook on field theory -- stuff he's never published. The man is a genius."

"I don't care," said Francis, "whether he's a genius or a Mongolian idiot -- can he build some sort of a gravity thinner-outer?"

"I believe he can. I really do believe he can."

"Fine. You hired him?"

"No. That's the hitch. That's why I called back. It's like this: I happened to catch him in a mellow mood, and because we had worked together once before and because I had not aroused his ire quite as frequently as his other assistants he invited me to stay for dinner. We talked about a lot of things (you can't hurry him) and I broached the proposition. It interested him mildly -- the idea, I mean; not the proposition -- and he discussed the theory with me, or, rather, at me. But he won't work on it."

"Why not? You didn't offer him enough money. I guess I'd better tackle him."

"No, Mr. Francis, no. You don't understand. He's not interested in money. He's independently wealthy and has more than he needs for his research, or anything else he wants. But just at present he is busy on wave mechanics theory and he just won't be bothered with anything else."

"Did you make him realize it was important?"

"Yes and no. Mostly no. I tried to, but there isn't anything important to him but what he wants. It's a sort of intellectual snobbishness. Other people simply don't count."

"All right," said Francis. "You've done well so far. Here's what you do: After I switch off, you call EXECUTIVE and make a transcript of everything you can remember of what he said about gravitational theory. We'll hire the next best men, feed it to them, and see if it gives them any ideas to work on. In the meantime I'll put a crew to work on the details of Dr O'Neil's background. He'll have a weak point somewhere; it's just a matter of finding it. Maybe he's keeping a woman somewhere--"

"He's long past that."

"--or maybe he has a by-blow stashed away somewhere. We'll see. I want you to stay there in Portage. Since you can't hire him, maybe you can persuade him to hire you. You're our pipeline, I want it kept open. We've got to find something he wants, or something he is afraid of."

"He's not afraid of _anything_. I'm positive about that."

"Then he wants something. If it's not money, or women, it's something else. It's a law of nature."

"I doubt it," Carson replied slowly. "Say! Did I tell you about his hobby?"

"No. What is it?"

"It's china. In particular, Ming china. He has the best collection in the world, I'd guess. But I know what he wants!"

"Well, spill it, man, spill it. Don't be dramatic."

"It's a little china dish, or bowl, about four inches across and two inches high. It's got a Chinese name that means 'Flower of Forgetfulness.'"

"Hmmm -- doesn't seem significant. You think he wants it pretty bad?"

"I know he does. He has a solid colorgraph of it in his study, where he can look at it. But it hurts him to talk about it."

"Find out who owns it and where it is."

"I know. British Museum. That's why he can't buy it."

"So?" mused Francis. "Well, you can forget it. Carry on."

Clare came down to Francis' office and the three talked it over. "I guess we'll need Beaumont on this," was his comment when he had heard the report. "It will take the Government to get anything loose from the British Museum." Francis looked morose. "Well -- what's eating you? What's wrong with that?"

"I know," offered Grace. "You remember the treaty under which Great Britain entered the planetary confederation?"

"I was never much good at history."

"It comes to this: I doubt if the planetary government can touch anything that belongs to the Museum without asking the British Parliament."

"Why not? Treaty or no treaty, the planetary government is sovereign. That was established in the Brazilian Incident."

"Yeah, sure. But it could cause questions to be asked in the House of Commons and that would lead to the one thing Beaumont wants to avoid at all costs -- publicity."

"Okay. What do you propose?"

"I'd say that Sance and I had better slide over to England and find out just how tight they have the 'Flower of Forgetfulness' nailed down -- and who does the nailing and what his weaknesses are."

Clare's eyes travelled past her to Francis, who was looking blank in the fashion that indicated assent to his intimates. "Okay," agreed Clare, "it's your baby. Taking a special?"

"No, we've got time to get the midnight out of New York. Bye-bye."

"Bye. Call me tomorrow."

When Grace screened the Chief the next day he took one look at her and exclaimed, "Good Grief, kid! What have you done to your hair?"

"We located the guy," she explained succinctly. "His weakness is blondes."

"You've had your skin bleached, too."

"Of course. How do you like it?"

"It's stupendous -- though I preferred you the way you were. But what does Sance think of it?"

"He doesn't mind -- it's business. But to get down to cases, Chief, there isn't much to report. This will have to be a lefthanded job. In the ordinary way, it would take an earthquake to get anything out of that tomb."

"Don't do anything that can't be fixed!"

"You know me, Chief. I won't get you in trouble. But it will be expensive."

"Of course."

"That's all for now. I'll screen tomorrow."

She was a brunette again the next day. "What is this?" asked Clare. "A masquerade?"

"I wasn't the blonde he was weak for," she explained, "but I found the one he was interested in."

"Did it work out?"

"I think it will. Sance is having a facsimile integrated now. With luck, we'll see you tomorrow."

They showed up the next day, apparently empty handed. "Well?" said Clare, "well?"

"Seal the place up, Jay," suggested Francis. "Then we'll talk." Clare flipped a switch controlling an interference shield which rendered his office somewhat more private than a coffin. "How about it?" he demanded. "Did you get it?"

"Show it to him, Grace."

Grace turned her back, fumbled at her clothing for a moment, then turned around and placed it gently on the Chief's desk.

It was not that it was beautiful -- it was beauty. Its subtle simple curve had no ornamentation, decoration would have sullied it. One spoke softly in its presence, for fear a sudden noise would shatter it.

Clare reached out to touch it, then thought better of it and drew his hand back. But he bent his head over it and stared down into it. It was strangely hard to focus -- to allocate -- the bottom of the bowl. It seemed as if his sight sank deeper and ever deeper into it, as if he were drowning in a pool of light.

He jerked up his head and blinked. "God," he whispered, "God -- I didn't know such things existed."

He looked at Grace and looked away to Francis. Francis had tears in his eyes, or perhaps his own were blurred.

"Look, Chief," said Francis. "Look -- couldn't we just keep it and call the whole thing off?"

"There's no use talking about it any longer," said Francis wearily. "We can't keep it, Chief. I shouldn't have suggested it and you shouldn't have listened to me. Let's screen O'Neil."

"We might just wait another day before we do anything about it," Clare ventured. His eyes returned yet again to the "Flower of Forgetfulness."

Grace shook her head. "No good. It will just be harder tomorrow. I _know_." She walked decisively over to the stereo and manipulated the controls.

O'Neil was annoyed at being disturbed and twice annoyed that they had used the emergency signal to call him to his disconnected screen.

"What is this?" he demanded. "What do you mean by disturbing a private citizen when he has disconnected? Speak up and it had better be good, or, so help me, I'll sue you!"

"We want you to do a little job of work for us, Doctor," Clare began evenly.

"What!" O'Neil seemed almost too surprised to be angry. "Do you mean to stand there, sir, and tell me that you have invaded the privacy of my home to ask me to work for you?"

"The pay will be satisfactory to you."

O'Neil seemed to be counting up to ten before answering. "Sir," he said carefully, "there are men in the world who seem to think they can buy anything, or anybody. I grant you that they have much to go on in that belief. But I am not for sale. Since you seem to be one of those persons, I will do my best to make this interview expensive for you. You will hear from my attorneys. Good night!"

"Wait a moment," Clare said urgently. "I believe that you are interested in china--"

"What if I am?"

"Show it to him, Grace." Grace brought the "Flower of Forgetfulness" up near the screen, handling it carefully, reverently. O'Neil said nothing. He leaned forward and stared. He seemed to be about to climb through the screen. "Where did you get it?" he said at last.

"That doesn't matter."

"I'll buy it from you - at your own price."

"It's not for sale. But you may have it -- if we can reach an agreement."

O'Neil eyed him. "It's stolen property."

"You're mistaken. Nor will you find anyone to take an interest in such a charge. Now about this job--"

O'Neil pulled his eyes away from the bowl. "What is it you wish me to do?"

Clare explained the problem to him. When he had concluded O'Neil shook his head. "That's ridiculous," he said.

"We have reason to feel that is theoretically possible."

"Oh, certainly! It's theoretically possible to live forever, too. But no one has ever managed it."

"We think you can do it."

"Thank you for nothing. Say!" O'Neil stabbed a finger at him out of the screen. "You set that young pup Carson on me!"

"He was acting under my orders."

"Then, sir, I do not like your manners."

"How about the job? And this?" Clare indicated the bowl. O'Neil gazed at it and chewed his whiskers. "Suppose," he said, at last, "I make an honest attempt, to the full extent of my ability, to supply what you want -- and I fail."

Clare shook his head. "We pay only for results. Oh, your salary, of course, but not _this_. This is a bonus in addition to your salary, _if_ you are successful."

O'Neil seemed about to agree, then said suddenly, "You may be fooling me with a colorgraph. I can't tell through this damned screen."

Clare shrugged. "Come and see for yourself."

"I shall. I will. Stay where you are. Where are you? Damn it, sir, what's your name?"

He came storming in two hours later. "You've tricked me! The 'Flower' is still in England. I've investigated. I'll . . . I'll punish you, sir, with my own two hands."

"See for yourself," answered Clare. He stepped aside, so that his body no longer obscured O'Neil's view of Clare's desk top.

They let him look. They respected his need for quiet and let him look. After a long time he turned to them, but did not speak.

"Well?" asked Clare.

"I'll build your damned gadget," he said huskily. "I figured out an approach on the way here."

Beaumont came in person to call the day before the first session of the conference. "Just a social call, Mr. Clare," he stated. "I simply wanted to express to you my personal appreciation for the work you have done. And to deliver this." "This" turned out to be a draft on the Bank Central for the agreed fee. Clare accepted it, glanced at it, nodded, and placed it on his desk.

"I take it, then," he remarked, "that the Government is satisfied with the service rendered."

"That is putting it conservatively," Beaumont assured him. "To be perfectly truthful, I did not think you could do so much. You seem to have thought of everything. The Callistan delegation is out now, riding around and seeing the sights in one of the little tanks you had prepared. They are delighted. Confidentially, I think we can depend on their vote in the coming sessions."

"Gravity shields working all right, eh?"

"Perfectly. I stepped into their sightseeing tank before we turned it over to them. I was as light as the proverbial feather. Too light -- I was very nearly spacesick." He smiled in wry amusement. "I entered the Jovian apartments, too. That was quite another matter."

"Yes, it would be," Clare agreed. "Two and a half times normal weight is oppressive to say the least."

"It's a happy ending to a difficult task. I must be going. Oh, yes, one other little matter -- I've discussed with Doctor O'Neil the possibility that the Administration may be interested in other uses for his new development. In order to simplify the matter it seems desirable that you provide me with a quit-claim to the O'Neil effect from General Services."

Clare gazed thoughtfully at the "Weeping Buddha" and chewed his thumb. "No," he said slowly, "no. I'm afraid that would be difficult."

"Why not?" asked Beaumont. "It avoids the necessity of adjudication and attendant waste of time. We are prepared to recognize your service and recompense you."

"Hmmm. I don't believe you fully understand the situation, Mr. Beaumont. There is a certain amount of open territory between our contract with Doctor O'Neil and your contract with us. You asked of us certain services and certain chattels with which to achieve that service. We provided them -- for a fee. All done. But our contract with Doctor O'Neil made him a full-time employee for the period of his employment. His research results and the patents embodying them are the property of General Services."

"Really?" said Beaumont. "Doctor O'Neil has a different impression."

"Doctor O'Neil is mistaken. Seriously, Mr. Beaumont -- you asked us to develop a siege gun, figuratively speaking, to shoot a gnat. Did you expect us, as businessmen, to throw away the siege gun after one shot?"

"No, I suppose not. What do you propose to do?"

"We expect to exploit the gravity modulator commercially. I fancy we could get quite a good price for certain adaptations of it on Mars."

"Yes. Yes, I suppose you could. But to be brutally frank, Mr. Clare, I am afraid that is impossible. it is a matter of imperative public policy that this development be limited to terrestrials. In fact, the administration would find it necessary to intervene and make it government monopoly."

"Have you considered how to keep O'Neil quiet?"

"In view of the change in circumstances, no. What is your thought?"

"A corporation, in which he would hold a block of stock and be president. One of our bright young men would be chairman of the board." Clare thought of Carson. "There would be stock enough to go around," he added, and watched Beaumont's face.

Beaumont ignored the bait. "I suppose that this corporation would be under contract to the Government -- its sole customer?"

"That is the idea."

"Hmmm . . . yes, it seems feasible. Perhaps I had better speak with Doctor O'Neil."

"Help yourself."

Beaumont got O'Neil on the screen and talked with him in low tones. Or, more properly, Beaumont's tones were low. O'Neil displayed a tendency to blast the microphone. Clare sent for Francis and Grace and explained to them what had taken place.

Beaumont turned away from the screen. "The Doctor wishes to speak with you, Mr. Clare."

O'Neil looked at him frigidly. "What is this claptrap I've had to listen to, sir? What's this about the O'Neil effect being your property?"

"It was in your contract, Doctor. Don't you recall?"

"Contract! I never read the damned thing. But I can tell you this: I'll take you to court. I'll tie you in knots before I'll let you make a fool of me that way."

"Just a moment, Doctor, please!" Clare soothed. "We have no desire to take advantage of a mere legal technicality, and no one disputes your interest. Let me outline what I had in mind--" He ran rapidly over the plan. O'Neil listened, but his expression was still unmollified at the conclusion.

"I'm not interested," he said gruffly. "So far as I am concerned the Government can have the whole thing. And I'll see to it."

"I had not mentioned one other condition," added Clare.

"Don't bother."

"I must. This will be just a matter of agreement between gentlemen, but it is essential. You have custody of the 'Flower of Forgetfulness.'"

O'Neil was at once on guard. "What do you mean, 'custody.' I own it. Understand me -- own it."

"'Own it,'" repeated Clare. "Nevertheless, in return for the concessions we are making you with respect to your contract, we want something in return."

"What?" asked O'Neil. The mention of the bowl had upset his confidence.

"You own it and you retain possession of it. But I want your word that I, or Mr. Francis, or Miss Cormet, may come look at it from time to time -- frequently."

O'Neil looked unbelieving. "You mean that you simply want to come to _look_ at it?"

"That's all."

"Simply to _enjoy_ it?"

"That's right."

O'Neil looked at him with new respect. "I did not understand you before, Mr Clare. I apologize. As for the corporation nonsense -- do as you like. I don't care. You and Mr Francis and Miss Cormet may come to see the 'Flower' whenever you like. You have my word."

"Thank you, Doctor O'Neil -- for all of us." He switched off as quickly as could be managed gracefully.

Beaumont was looking at Clare with added respect, too. "I think," he said, "that the next time I shall not interfere with your handling of the details. I'll take my leave. Adieu, gentlemen - and Miss Cormet."

When the door had rolled down behind him Grace remarked, "That seems to polish it off."

"Yes," said Clare. "We've 'walked his dog' for him; O'Neil has what he wants; Beaumont got what he wanted, and more besides."

"Just what is he after?"

"I don't know, but I suspect that he would like to be first president of the Solar System Federation, if and when there is such a thing. With the aces we have dumped in his lap, he might make it. Do you realize the potentialities of the O'Neil effect?"

"Vaguely," said Francis.

"Have you thought about what it will do to space navigation? Or the possibilities it adds in the way of colonization? Or its recreational uses? There's a fortune in that alone."

"What do we get out of it?"

"What do we get out of it? Money, old son. Gobs and gobs of money. There's always money in giving people what they want." He glanced up at the Scottie dog trademark.

"Money," repeated Francis. "Yeah, I suppose so."

"Anyhow," added Grace, "we can always go look at the 'Flower.'"

Searchlight

'Will she hear you?'

'If she's on this face of the Moon. If she was able to get out of the ship. If her suit radio wasn't damaged. If she has it turned on. If she is alive. Since the ship is silent and no radar beacon has been spotted, it is unlikely that she or the pilot lived through it.'

'She's got to be found! Stand by, Space Station. Tycho Base, acknowledge.'

Reply lagged about three seconds, Washington to Moon and back. 'Lunar Base, Commanding General.'

'General, put every man on the Moon out searching for Betsy!'

Speed-of-light lag made the answer sound grudging. 'Sir, do you know how big the Moon is?'

~No matter! Betsy Barnes is there somewhere - so every man is to search until she is found. If she's dead, your precious pilot would be better off dead, too!'

'Sir, the Moon is almost fifteen million square miles. If I used every man I have, each would have over a thousand square miles to search. I gave Betsy my best pilot. I won't listen to threats against him when he can't answer back. Not from anyone, sir! I'm sick of being told what to do by people who don't know Lunar conditions. My advice - my official advice sir is to let Meridian Station try. Maybe they can Work a miracle.'

The answer rapped back, 'Very well, General! I'll speak to you later. Meridian Station! Report your plans.' Elizabeth Barnes, 'Blind Betsy', child genius of the piano, had been making a USO tour of the Moon. She 'wowed 'em' at Tycho Base, then lifted by jeep rocket for Farside Hardbase, to entertain our lonely missilemen behind the Moon. She should have been there in an hour. Her pilot was a safety pilot; such ships shuttled unpiloted between Tycho and Farside daily.

After lift-off her ship departed from its programming, was lost by Tycho's radars. It was.. . somewhere.

Not in space, else it would be radioing for help and its radar beacon would be seen by other ships, space stations, surface bases. It had crashed - or made emergency landing - somewhere on the vastness of Luna.

'Meridian Space Station, Director speaking - ' Lag was unnoticeable; radio bounce between Washington and the station only 22,300 miles up was only a quarter second. 'We've patched Earthside stations to blanket the Moon with our call. Another broadcast blankets the far side from Station Newton at the three-body stable position. Ships from Tycho are orbiting the Moon's rim - that band around the edge which is in radio shadow from us and from the Newton. If we hear-'

'Yes, yes! How about radar search?'

'Sir, a rocket on the surface looks to radar like a million other features the same size. Our one chance is to get them to answer . . . if they can. Ultrahigh-resolution radar might spot them in months - but suits worn in those little rockets carry only six hours air. We are praying they will hear and answer.'

'When they answer, you'll slap a radio direction finder on them. Eh?'

'No, sir.'

'In God's name, why not?'

'Sir, a direction finder is useless for this job. It would tell us only that the signal came from the Moon - which doesn't help.'

'Doctor, you're saying that you might hear Betsy - and not know where she is?'

'We're as blind as she is. We hope that she will be able to lead us to her. . . if she hears us.'

'How?'

'With a Laser. An intense, very tight beam of light. She'll hear it-'

'Hear a beam of light?'

'Yes, sir. We are jury-rigging to scan like radar - that won't show anything. But we are modulating it to give a carrier wave in radio frequency, then modulating that into

audio frequency-and controlling that by a piano. If she hears us, we'll tell her to listen while we scan the Moon and run the scale on the piano -,

'All this while a little girl is dying?'

'Mister President - shut up!'

'Who was THAT?'

'I'm Betsy's father. They've patched me from Omaha. Please, Mr President, keep quiet and let them work. I want my daughter back.'

The President answered tightly, 'Yes, Mr Barnes. Go ahead, Director. Order anything you need.'

In Station Meridian the director wiped his face. 'Getting anything?'

'No. Boss, can't something be done about that Rio station? It's sitting right on the frequency!'

'We'll drop a brick on them. Or a bomb. Joe, tell the President'

'I heard, Director. They'll be silenced!'

'Sh! Quiet! Betsy - do you hear me?' The operator looked intent, made an adjustment.

From a speaker came a girl's light, sweet voice: ' - to hear somebody! Gee, I'm glad! Better come quick - the Major is hurt.'

The Director jumped to the microphone. 'Yes, Betsy, we'll hurry. You've got to help us. Do you know where you are?'

'Somewhere on the Moon, I guess. We bumped hard and I was going to kid him about it when the ship fell over. I got unstrapped and found Major Peters and he isn't moving. Not dead - I don't think so; his suits puffs out like mine and I hear something when I push my helmet against him. I just now managed to get the door open.' She added, 'This can't be Farside; it's supposed to be night there. I'm in sunshine, I'm sure. This suit is pretty hot.'

'Betsy, you must stay outside. You've got to be where you can see us.'

She chuckled. 'That's a good one. I see with my ears.'

Yes. You'll see us, with your ears. Listen, Betsy. We're going to scan the Moon with a beam of light. You'll hear it as a piano note. We've got the Moon split into the eighty-eight piano notes. When you hear one, yell, "Now!" Then tell us what note you heard. Can you do that?'

'Of course,' she said confidently, 'if the piano is in tune.'

'It is. All right, we're starting -' 'Now!'

'What note, Betsy?'

'E flat, the first octave above middle C.' 'This note, Betsy?'

'That's what I said.'

The Director called out, 'Where's that on the grid? In Mare Nubium? Tell the General!' He said to the microphone, 'We're finding you, Betsy honey! Now we scan just that part you're on.

We change setup. Want to talk to your Daddy meanwhile?'

'Gosh! Could I?'

'Yes indeed!'

Twenty minutes later he cut' in and heard: '- of course not, Daddy. Oh, a teensy bit scared when the ship fell. But people take care of me, always have.'

'Betsy?'

'Yes, sir?'

'Be ready to tell us again.'

'Now!' She added, 'That's a bullfrog G, three octaves down.'

'This note?'

'That's right.'

'Get that on the grid and tell the General to get his ships up! That cuts it to a square ten miles on a side! Now, Betsy - we know almost where you are. We are going to focus still closer. Want to go inside and cool off?'

'I'm not too hot. Just sweaty.'

Forty minutes later the General's voice rang out: 'They've spotted the ship! They see her waving!'

Ordeal in Space

Maybe we should never have ventured out into space. Our race has but two basic, innate fears; noise and the fear of falling. Those terrible heights - Why should any man in his right mind let himself be placed where he could fall . . . and fall . . . and fall - But all spacemen are crazy. Everybody knows that.

The medicos had been very kind, he supposed. 'You're lucky. You want to remember that, old fellow. You're still young and your retired pay relieves you of all worry about your future. You've got both arms and legs and are in fine shape.'

'Fine shape!' His voice was unintentionally contemptuous.

'No, I mean it,' the chief psychiatrist had persisted gently. 'The little quirk you have does you no harm at all - except that you can't go into space again. I can't honestly call acrophobia a neurosis; fear of falling is normal and sane. You've just got it a little more strongly than most - but that is not abnormal, in view of what you have been through.'

The reminder set him to shaking again. He closed his eyes and saw the stars wheeling below him again. He was falling, falling endlessly. The psychiatrist's voice came through to him and pulled him back. 'Steady, old man! Look around you.'

'Sorry.'

'Not at all. Now tell me, what do you plan to do?'

'I don't know. Get a job, I suppose.'

'The Company will give you a job, you know.'

He shook his head. 'I don't want to hang around a spaceport.' Wear a little button in his shirt to show that he was once a man, be addressed by a courtesy title of captain, claim the privileges of the pilots' lounge on the basis of what he used to be, hear the shop talk die down whenever he approached a group, wonder what they were saying behind his back - no, thank you!

'I think you're wise. Best to make a clean break, for a while at least, until you are feeling better.'

'You think I'll get over it?'

The psychiatrist pursed his lips. 'Possible. It's functional, you know. No trauma.'

'But you don't think so?'

'I didn't say that. I honestly don't know. We still know very little about what makes a man tick.'

'I see. Well, I might as well be leaving.'

The psychiatrist stood up and shoved out his hand. 'Holler if you want anything. And come back to see us in any case.'

'Thanks.'

'You're going to be all right. I know it.'

But the psychiatrist shook his head as his patient walked out. The man did not walk like a spaceman; the easy, animal self-confidence was gone.

Only a small part of Great New York was roofed over in those days; he stayed underground until he was in that section, then sought out a passageway lined with bachelor rooms. He stuck a coin in the slot of the first one which displayed a lighted 'vacant' sign, chucked his jump bag inside, and left. The monitor at the intersection gave him the address of the nearest placement office. He went there, seated himself at an interview desk, stamped in his finger prints, and started filling out forms. It gave him a curious back-to-the-beginning feeling; he had not looked for a job since pre-cadet days.

He left filling in his name to the last and hesitated even then. He had had more than his bellyful of publicity; he did not want to be recognized; he certainly did not want to be throbbed over - and most of all he did not want anyone telling him he was a hero. Presently he printed in the name 'William Saunders' and dropped the forms in the slot.

He was well into his third cigarette and getting ready to strike another when the screen in front of him at last lighted up. He found himself staring at a nice-looking brunette. 'Mr. Saunders,' the image said, will you come inside, please? Door seventeen.'

The brunette in person was there to offer him a seat and a cigarette. 'Make yourself comfortable, Mr. Saunders. I'm Miss Joyce. I'd like to talk with you about your application.' He settled himself and waited, without speaking.

When she saw that he did not intend to speak, she added, 'Now take this name "William Saunders" which you have given us - we know who you are, of course, from your prints.

'I suppose so.'

'Of course I know what everybody knows about you, but your action in calling yourself "William Saunders", Mr. -'

'Saunders.'

'- Mr. Saunders, caused me to query the files.' She held up a microfilm spool, turned so that he might read his own name on it. 'I know quite a lot about you now - more than the public knows and more than you saw fit to put into your application. It's a good record, Mr. Saunders.'

'Thank you.'

'But I can't use it in placing you in a job. I can't even refer to it if you insist on designating yourself as "Saunders".'

'The name is Saunders.' His voice was flat, rather than emphatic.

'Don't be hasty, Mr. Saunders. There are many positions in which the factor of prestige can be used quite legitimately to obtain for a client a much higher beginning of pay than-'

'I'm not interested.'

She looked at him and decided not to insist. 'As you wish. If you will go to reception room B, you can start your classification and skill tests.'

'Thank you.'

'If you should change your mind later, Mr. Saunders, we will be glad to reopen the case. Through that door, please.'

Three days later found him at work for a small firm specializing in custom-built communication systems. His job was calibrating electronic equipment. It was soothing work, demanding enough to occupy his mind, yet easy for a man of his training and experience. At the end of his three months' probation he was promoted out of the helper category.

He was building himself a well-insulated rut, working, sleeping, eating, spending an occasional evening at the public library or working out at the YMCA - and never, under any circumstances, going out under the open sky nor up to any height, not even a theater balcony.

He tried to keep his past life shut out of his mind, but his memory of it was still fresh; he would find himself daydreaming - the star-sharp, frozen sky of Mars, or the roaring night life of Venusburg. He would see again the swollen, ruddy bulk of Jupiter hanging over the port on Ganymede, its oblate bloated shape impossibly huge and crowding the sky.

Or he might, for a time, feel again the sweet quiet of the long watches on the lonely reaches between the planets. But such reveries were dangerous; they cut close to the edge of his new peace of mind. It was easy to slide over and find himself clinging for life to his last handhold on the steel sides of the Valkyrie, fingers numb and failing, and nothing below him but the bottomless well of space.

Then he would come back to Earth, shaking uncontrollably and gripping his chair or the workbench.

The first time it had happened at work he had found one of his benchmates, Joe Tully, staring at him curiously. 'What's the trouble, Bill?' he had asked. 'Hangover?'

'Nothing,' he had managed to say. 'Just a chill.'

'You better take a pill. Come on - let's go to lunch.'

Tully led the way to the elevator; they crowded in. Most of the employees - even the women - preferred to go down via the drop chute, but Tully always used the elevator. 'Saunders', of course, never used the drop chute; this had eased them into the habit of lunching together. He knew that the chute was safe, that, even if the power should fail, safety nets would snap across at each floor level - but he could not force himself to step off the edge.

Tully said publicly that a drop-chute landing hurt his arches, but he confided privately to Saunders that he did not trust automatic machinery. Saunders nodded understandingly but said nothing. It warmed him toward Tully. He began feeling friendly and not on the defensive with another human being for the first time since the start of his new life. He began to want to tell Tully the truth about himself. If he could be sure that Joe would not insist on treating him as a hero - not that he really objected to the role of

hero. As a kid, hanging around spaceports, trying to wangle chances to go inside the ships, cutting classes to watch take-offs, he had dreamed of being a 'hero' someday, a hero of the spaceways, returning in triumph from some incredible and dangerous piece of exploration. But he was troubled by the fact that he still had the same picture of what a hero should look like and how he should behave; it did not include shying away from open windows, being fearful of walking across an open square, and growing too upset to speak at the mere thought of boundless depths of space.

Tully invited him home for dinner. He wanted to go, but fended off the invitation while he inquired where Tully lived. The Shelton Homes, Tully told him, naming one of those great, boxlike warrens that used to disfigure the Jersey flats. 'It's a long way to come back,' Saunders said doubtfully, while turning over in his mind ways to get there without exposing himself to the things he feared.

'You won't have to come back,' Tully assured him. 'We've got a spare room. Come on. My old lady does her own cooking - that's why I keep her.'

'Well, all right,' he conceded. 'Thanks, Joe.' The La Guardia Tube would take him within a quarter of a mile; if he could not find a covered way he would take a ground cab and close the shades.

Tully met him in the hail and apologized in a whisper. 'Meant to have a young lady for you, Bill. Instead we've got my brother-in-law. He's a louse. Sorry.'

'Forget it, Joe. I'm glad to be here.' He was indeed. The discovery that Bill's flat was on the thirty-fifth floor had dismayed him at first, but he was delighted to find that he had no feeling of height. The lights were on, the windows occulted, the floor under him was rock solid; he felt warm and safe. Mrs. Tully turned out in fact to be a good cook, to his surprise - he had the bachelor's usual distrust of amateur cooking. He let himself go to the pleasure of feeling at home and safe and wanted; he managed not even to hear most of the aggressive and opinionated remarks of Joe's in-law.

After dinner he relaxed in an easy chair, glass of beer in hand, and watched the video screen. It was a musical comedy; he laughed more heartily than he had in months. Presently the comedy gave way to a religious program, the National Cathedral Choir; he let it be, listening with one ear and giving some attention to the conversation with the other.

The choir was more than half way through Prayer for Travelers before he became fully aware of what they were singing:

Hear us when we pray to Thee
For those in peril on the sea.

'Almighty Ruler of them all
Whose power extends to great and small,
Who guides the stars and steadfast law,
Whose least creation fills with awe;
Oh, grant Thy mercy and Thy grace
To those who venture into space.'

He wanted to switch it off, but he had to hear it out, he could not stop listening to it, though it hurt him in his heart with the unbearable homesickness of the hopelessly

exiled. Even as a cadet this one hymn could fill his eyes with tears; now he kept his face turned away from the others to try to hide from them the drops wetting his cheeks.

When the choir's 'amen' let him do so he switched quickly to some other - any other - program and remained bent over the instrument, pretending to fiddle with it, while he composed his features. Then he turned back to the company, outwardly serene, though it seemed to him that anyone could see the hard, aching knot in his middle.

The brother-in-law was still sounding off.

'We ought to annex 'em,' he was saying. 'That's what we ought to do. Three-Planets Treaty - what a lot of ruddy rot! What right have they got to tell us what we can and can't do on Mars?'

'Well, Ed,' Tully said mildly, 'it's their planet, isn't it? They were there first.'

Ed brushed it aside. 'Did we ask the Indians whether or not they wanted us in North America? Nobody has any right to hang on to something he doesn't know how to use. With proper exploitation -'

'You been speculating, Ed?'

'Huh? It wouldn't be speculation if the government wasn't made up of a bunch of weak-spined old women. "Rights of Natives", indeed. What rights do a bunch of degenerates have?'

Saunders found himself contrasting Ed Schultz with Knath Sooth, the only Martian he himself had ever known well. Gentle Knath, who had been old before Ed was born, and yet was rated as young among his own kind. Knath... why, Knath could sit for hours with a friend or trusted acquaintance, saying nothing, needing to say nothing. 'Growing together' they called it - his entire race had so grown together that they had needed no government, until the Earthman came.

Saunders had once asked his friend why he exerted himself so little, was satisfied with so little. More than an hour passed and Saunders was beginning to regret his inquisitiveness when Knath replied, 'My fathers have labored and I am weary.'

Saunders sat up and faced the brother-in-law. 'They are not degenerate.'

'Huh? I suppose you are an expert!'

'The Martians aren't degenerate, they're just tired,' Saunders persisted.

Tully grinned. His brother-in-law saw it and became surly. 'What gives you the right to an opinion? Have you ever been to Mars?'

Saunders realized suddenly that he had let his censors down. 'Have you?' he answered cautiously.

'That's beside the point. The best minds all agree -' Bill let him go on and did not contradict him again. It was a relief when Tully suggested that, since they all had to be up early, maybe it was about time to think about beginning to get ready to go to bed.

He said goodnight to Mrs. Tully and thanked her for a wonderful dinner, then followed Tully into the guest room. 'Only way to get rid of that family curse we're saddled with, Bill,' he apologized. 'Stay up as long as you like.' Tully stepped to the window and opened it. 'You'll sleep well here. We're up high enough to get honest-to-goodness fresh air.' He stuck his head out and took a couple of big breaths. 'Nothing like the real article,' he continued as he withdrew from the window. 'I'm a country boy at heart. What's the matter, Bill?'

'Nothing. Nothing at all.'

'I thought you looked a little pale. Well, sleep tight. I've already set your bed for seven; that'll give us plenty of time.'

'Thanks, Joe. Goodnight.' As soon as Tully was out of the room he braced himself, then went over and closed the window. Sweating, he turned away and switched the ventilation back on. That done, he sank down on the edge of the bed.

He sat there for a long time, striking one cigarette after another. He knew too well that the peace of mind he thought he had regained was unreal. There was nothing left to him but shame and a long, long hurt. To have reached the point where he had to knuckle under to a tenth-rate knothead like Ed Schultz - it would have been better if he had never come out of the Valkyrie business.

Presently he took five grains of 'Fly-Rite' from his pouch, swallowed it, and went to bed. He got up almost at once, forced himself to open the window a trifle, then compromised by changing the setting of the bed so that it would not turn out the lights after he got to sleep.

He had been asleep and dreaming for an indefinitely long time. He was back in space again - indeed, he had never been away from it. He was happy, with the full happiness of a man who has awakened to find it was only a bad dream.

The crying disturbed his serenity. At first it made him only vaguely uneasy, then he began to feel in some way responsible - he must do something about it. The transition to falling had only dream logic behind it, but it was real to him. He was grasping, his hands were slipping, had slipped - and there was nothing under him but the black emptiness of space - He was awake and gasping, on Joe Tully's guest-room bed; the lights burned bright around him.

But the crying persisted.

He shook his head, then listened. It was real all right. Now he had it identified - a cat, a kitten by the sound of it.

He sat up. Even if he had not had the spaceman's traditional fondness for cats, he would have investigated. However, he liked cats for themselves, quite aside from their neat shipboard habits, their ready adaptability to changing accelerations, and their usefulness in keeping the ship free of those other creatures that go wherever man goes. So he got up at once and looked for this one.

A quick look around showed him that the kitten was not in the room, and his ear led him to the correct spot; the sound came in through the slightly opened window. He shied off, stopped, and tried to collect his thoughts.

He told himself that it was unnecessary to do anything more; if the sound came in through the window, then it must be because it came out of some nearby window. But he knew that he was lying to himself; the sound was close by. In some impossible way the cat was just outside his window, thirty-five stories above the street.

He sat down and tried to strike a cigarette, but the tube broke in his fingers. He let the fragments fall to the floor, got up and took six nervous steps toward the window, as if he were being jerked along. He sank down to his knees, grasped the window and threw it wide open, then clung to the windowsill, his eyes tight shut.

After a time the sill seemed to steady a bit. He opened his eyes, gasped, and shut them again. Finally he opened them again, being very careful not to look out at the stars, not to look down at the street. He had half expected to find the cat on a balcony outside

his room - it seemed the only reasonable explanation. But there was no balcony, no place at all where a cat could reasonably be.

However, the mewing was louder than ever. It seemed to come from directly under him. Slowly he forced his head out, still clinging to the sill, and made himself look down. Under him, about four feet lower than the edge of the window, a narrow ledge ran around the side of the building. Seated on it was a woe-begone ratty-looking kitten. It stared up at him and meowed again.

It was barely possible that, by clinging to the sill with one hand and making a long arm with the other, he could reach it without actually going out the window, he thought - if he could bring himself to do it. He considered calling Tully, then thought better of it. Tully was shorter than he was, had less reach. And the kitten had to be rescued now, before the fluff-brained idiot jumped or fell.

He tried for it. He shoved his shoulders out, clung with his left arm and reached down with his right. Then he opened his eyes and saw that he was a foot or ten inches away from the kitten still. It sniffed curiously in the direction of his hand.

He stretched till his bones cracked. The kitten promptly skittered away from his clutching fingers, stopping a good six feet down the ledge. There it settled down and commenced washing its face.

He inched back inside and collapsed, sobbing, on the floor underneath the window. 'I can't do it,' he whispered. 'I can't do it. Not again -'

The Rocket Ship Valkyrie was two hundred and forty-nine days out from Earth-Luna Space Terminal and approaching Mars Terminal on Deimos, outer Martian satellite. William Cole, Chief Communications Officer and relief pilot, was sleeping sweetly when his assistant shook him. 'Hey! Bill! Wake up - we're in a jam.'

'Huh? Wazzat?' But he was already reaching for his socks. 'What's the trouble, Tom?'

Fifteen minutes later he knew that his junior officer had not exaggerated; he was reporting the facts to the Old Man - the primary piloting radar was out of whack. Tom Sandburg had discovered it during a routine check, made as soon as Mars was inside the maximum range of the radar pilot. The captain had shrugged. 'Fix it, Mister - and be quick about it. We need it.'

Bill Cole shook his head. 'There's nothing wrong with it, Captain - inside. She acts as if the antenna were gone completely.'

'That's impossible. We haven't even had a meteor alarm.'

'Might be anything, Captain. Might be metal fatigue and it just fell off. But we've got to replace that antenna. Stop the spin on the ship and I'll go out and fix it. I can jury-rig a replacement while she loses her spin.'

The Valkyrie was a luxury ship, of her day. She was assembled long before anyone had any idea of how to produce an artificial gravity field. Nevertheless she had pseudogravity for the comfort of her passengers. She spun endlessly around her main axis, like a shell from a rifled gun; the resulting angular acceleration - miscalled 'centrifugal force' - kept her passengers firm in their beds, or steady on their feet. The spin was started as soon as her rockets stopped blasting at the beginning of a trip and was stopped only when it was necessary to maneuver into a landing. It was accomplished, not

by magic, but by reaction against the contrary spin of a flywheel located on her centerline.

The captain looked annoyed. 'I've started to take the spin off, but I can't wait that long. Jury-rig the astrogational radar for piloting.'

Cole started to explain why the astrogational radar could not be adapted to short-range work, then decided not to try. 'It can't be done, sir. It's a technical impossibility.'

'When I was your age I could jury-rig anything! Well, find me an answer, Mister. I can't take this ship down blind. Not even for the Harriman Medal.'

Bill Cole hesitated for a moment before replying. 'I'll have to go out while she's still got spin on her, Captain, and make the replacement. There isn't any other way to do it.'

The captain looked away from him, his jaw muscles flexed. 'Get the replacement ready. Hurry up about it.'

Cole found the captain already at the airlock when he arrived with the gear he needed for the repair. To his surprise the Old Man was suited up. 'Explain to me what I'm to do,' he ordered Bill.

'You're not going out, sir?' The captain simply nodded.

Bill took a look at his captain's waist line, or where his waist line used to be. Why, the Old Man must be thirty-five if he was a day! 'I'm afraid I can't explain too clearly. I had expected to make the repair myself.'

'I've never asked a man to do a job I wouldn't do myself. Explain it to me.'

'Excuse me, sir - but can you chin yourself with one hand?'

'What's that got to do with it?'

'Well, we've got forty-eight passengers, sir, and -' 'Shut up!'

Sandburg and he, both in space suits, helped the Old Man down the hole after the inner door of the lock was closed and the air exhausted. The space beyond the lock was a vast, starflecked emptiness. With spin still on the ship, every direction outward was 'down', down for millions of uncounted miles. They put a safety line on him, of course - nevertheless it gave him a sinking feeling to see the captain's head disappear in the bottomless, black hole.

The line paid out steadily for several feet, then stopped. When it had been stopped for several minutes, Bill leaned over and touched his helmet against Sandburg's. 'Hang on to my feet. I'm going to take a look.'

He hung head down out the lock and looked around. The captain was stopped, hanging by both hands, nowhere near the antenna fixture. He scrambled back up and reversed himself. 'I'm going out.'

It was no great trick, he found, to hang by his hands and swing himself along to where the captain was stalled. The Valkyrie was a space-to-space ship, not like the sleek-sided jobs we see around earthports; she was covered with handholds for the convenience of repairmen at the terminals. Once he reached him, it was possible, by grasping the safe steel rung that the captain clung to, to aid him in swinging back to the last one he had quitted. Five minutes later Sandburg was pulling the Old Man up through the hole and Bill was scrambling after him.

He began at once to unbuckle the repair gear from the captain's suit and transfer it to his own. He lowered himself back down the hole and was on his way before the older man had recovered enough to object, if he still intended to.

Swinging out to where the antenna must be replaced was not too hard, though he had all eternity under his toes. The suit impeded him a little - the gloves were clumsy - but he was used to spacesuits. He was a little winded from helping the captain, but he could not stop to think about that. The increased spin bothered him somewhat; the airlock was nearer the axis of spin than was the antenna - he felt heavier as he moved out.

Getting the replacement antenna shipped was another matter. It was neither large nor heavy, but he found it impossible to fasten it into place. He needed one hand to cling by, one to hold the antenna, and one to handle the wrench. That left him shy one hand, no matter how he tried it.

Finally he jerked his safety line to signal Sandburg for more slack. Then he unshackled it from his waist, working with one hand, passed the end twice through a handhold and knotted it; he left about six feet of it hanging free. The shackle on the free end he fastened to another handhold. The result was a loop, a bight, an improvised bosun's chair, which would support his weight while he man-handled the antenna into place. The job went fairly quickly then.

He was almost through. There remained one bolt to fasten on the far side, away from where he swung. The antenna was already secured at two points and its circuit connection made. He decided he could manage it with one hand. He left his perch and swung over, monkey fashion.

The wrench slipped as he finished tightening the bolt; it slipped from his grasp, fell free. He watched it go, out and out and out, down and down and down, until it was so small he could no longer see it. It made him dizzy to watch it, bright in the sunlight against the deep black of space. He had been too busy to look down, up to now.

He shivered. 'Good thing I was through with it,' he said. 'It would be a long walk to fetch it.' He started to make his way back.

He found that he could not.

He had swung past the antenna to reach his present position, using a grip on his safety-line swing to give him a few inches more reach. Now the loop of line hung quietly, just out of reach. There was no way to reverse the process.

He hung by both hands and told himself not to get panicky - he must think his way out. Around the other side? No, the steel skin of the Valkyrie was smooth there - no handhold for more than six feet. Even if he were not tired - and he had to admit that he was, tired and getting a little cold - even if he were fresh, it was an impossible swing for anyone not a chimpanzee.

He looked down - and regretted it.

There was nothing below him but stars, down and down, endlessly. Stars, swinging past as the ship spun with him, emptiness of all time and blackness and cold.

He found himself trying to hoist himself bodily onto the single narrow rung he clung to, trying to reach it with his toes. It was a futile, strength-wasting excess. He quieted his panic sufficiently to stop it, then hung limp.

It was easier if he kept his eyes closed. But after a while he always had to open them and look. The Big Dipper would swing past and then, presently, Orion. He tried to compute the passing minutes in terms of the number of rotations the ship made, but his mind would not work clearly, and, after a while, he would have to shut his eyes.

His hands were becoming stiff - and cold. He tried to rest them by hanging by one hand at a time. He let go with his left hand, felt pins-and-needles course through it, and beat it against his side. Presently it seemed time to spell his right hand.

He could no longer reach up to the rung with his left hand. He did not have the power left in him to make the extra pull; he was fully extended and could not shorten himself enough to get his left hand up.

He could no longer feel his right hand at all.

He could see it slip. It was slipping - The sudden release in tension let him know that he was falling falling. The ship dropped away from him.

He came to with the captain bending over him. 'Just keep quiet, Bill.'

'Where -,

'Take it easy. The patrol from Deimos was already close by when you let go. They tracked you on the 'scope, matched orbits with you, and picked you up. First time in history, I guess. Now keep quiet. You're a sick man - you hung there more than two hours, Bill.'

The meowing started up again, louder than ever. He got up on his knees and looked out over the windowsill. The kitten was still away to the left on the ledge. He thrust his head cautiously out a little further, remembering not to look at anything but the kitten and the ledge. 'Here, kitty!' he called. 'Here, kit-kit-kitty! Here, kitty, come kitty!'

The kitten stopped washing and managed to look puzzled.

'Come, kitty,' he repeated softly. He let go the windowsill with his right hand and gestured toward it invitingly. The kitten approached about three inches, then sat down. 'Here, kitty,' he pleaded and stretched his arm as far as possible.

The fluff ball promptly backed away again.

He withdrew his arm and thought about it. This was getting nowhere, he decided. If he were to slide over the edge and stand on the ledge, he could hang on with one arm and be perfectly safe. He knew that, he knew it would be safe - he needn't look down!

He drew himself back inside, reversed himself, and, with great caution, gripping the sill with both arms, let his legs slide down the face of the building. He focused his eyes carefully on the corner of the bed.

The ledge seemed to have been moved. He could not find it, and was beginning to be sure that he had reached past it, when he touched it with one toe - then he had both feet firmly planted on it. It seemed about six inches wide. He took a deep breath.

Letting go with his right arm, he turned and faced the kitten. It seemed interested in the procedure but not disposed to investigate more closely. If he were to creep along the ledge, holding on with his left hand, he could just about reach it from the corner of the window - He moved his feet one at a time, baby fashion, rather than pass one past the other. By bending his knees a trifle, and leaning, he could just manage to reach it. The kitten sniffed his groping fingers, then leaped backward. One tiny paw missed the edge; it scrambled and regained its footing. 'You little idiot!' he said indignantly, 'do you want to bash your brains out?'

'If any,' he added. The situation looked hopeless now; the baby cat was too far away to be reached from his anchorage at the window, no matter how he stretched. He called 'Kitty, kitty' rather hopelessly, then stopped to consider the matter.

He could give it up.

He could prepare himself to wait all night in the hope that the kitten would decide to come closer. Or he could go get it.

The ledge was wide enough to take his weight. If he made himself small, flat to the wall, no weight rested on his left arm. He moved slowly forward, retaining the grip on the window as long as possible, inching so gradually that he hardly seemed to move. When the window frame was finally out of reach, when his left hand was flat to smooth wall, he made the mistake of looking down, down, past the sheer wall at the glowing pavement far below.

He pulled his eyes back and fastened them on a spot on the wall, level with his eyes and only a few feet away. He was still there!

And so was the kitten. Slowly he separated his feet, moving his right foot forward, and bent his knees. He stretched his right hand along the wall, until he was over and a little beyond the kitten.

He brought it down in a sudden swipe, as if to swat a fly. He found himself with a handful of scratching, biting fur.

He held perfectly still then, and made no attempt to check the minor outrages the kitten was giving him. Arms still outstretched, body flat to the wall, he started his return. He could not see where he was going and could not turn his head without losing some little of his margin of balance. It seemed a long way back, longer than he had come, when at last the fingertips of his left hand slipped into the window opening.

He backed up the rest of the way in a matter of seconds, slid both arms over the sill, then got his right knee over. He rested himself on the sill and took a deep breath. 'Man!' he said aloud. 'That was a tight squeeze. You're a menace to traffic, little cat.'

He glanced down at the pavement. It was certainly a long way down - looked hard, too.

He looked up at the stars. Mighty nice they looked and mighty bright. He braced himself in the window frame, back against one side, foot pushed against the other, and looked at them. The kitten settled down in the cradle of his stomach and began to buzz. He stroked it absent-mindedly and reached for a cigarette. He would go out to the port and take his physical and his psycho tomorrow, he decided. He scratched the kitten's ears. 'Little fluff head,' he said, 'how would you like to take a long, long ride with me?'

The Green Hills of Earth

This is the story of Rhysling, the Blind Singer of the Spaceways -- but not the official version. You sang his words in school:

> "I pray for one last landing
> On the globe that gave me birth;
> Let me rest my eyes on the fleecy skies

And the cool, green hills of Earth."

Or perhaps you sang in French, or German. Or it might have been Esperanto, while Terra's rainbow banner rippled over your head.

The language does not matter -- it was certainly an Earth tongue. No one has ever translated "Green Hills" into the lisping Venerian speech; no Martian ever croaked and whispered it in the dry corridors. This is ours. We of Earth have exported everything from Hollywood crawlies to synthetic radioactives, but this belongs solely to Terra, and to her sons and daughters wherever they may be.

We have all heard many stories of Rhysling. You may even be one of the many who have sought degrees, or acclaim, by scholarly evaluations of his published works - _Songs of the Spaceways_, _The Grand Canal and other Poems_, _High and Far_, and _"UP SHIP!"_

Nevertheless, although you have sung his songs and read his verses, in school and out your whole life, it is at least an even money bet -- unless you are a spaceman yourself -- that you have never even heard of most of Rhysling's unpublished songs, such items as _Since the Pusher Met My Cousin_, _That Red-Headed Venusburg Gal_, _Keep Your Pants On, Skipper_, or _A Space Suit Built for Two_.

Nor can we quote them in a family magazine.

Rhysling's reputation was protected by a careful literary executor and by the happy chance that he was never interviewed. _Songs of the Spaceways_ appeared the week he died; when it became a best seller, the publicity stories about him were pieced together from what people remembered about him plus the highly colored handouts from his publishers.

The resulting traditional picture of Rhysling is about as authentic as George Washington's hatchet or King Alfred's cakes.

In truth you would not have wanted him in your parlor; he was not socially acceptable. He had a permanent case of sun itch, which he scratched continually, adding nothing to his negligible beauty.

Van der Voort's portrait of him for the Harriman Centennial edition of his works shows a figure of high tragedy, a solemn mouth, sightless eyes concealed by black silk bandage. He was never solemn! His mouth was always open, singing, grinning, drinking, or eating. The bandage was any rag, usually dirty. After he lost his sight he became less and less neat about his person.

"Noisy" Rhysling was a jetman, second class, with eyes as good as yours, when he signed on for a ioop trip to the Jovian asteroids in the RS _Goshawk_. The crew signed releases for everything in those days; a Lloyd's associate would have laughed in your face at the notion of insuring a spaceman. The Space Precautionary Act had never been heard of, and the Company was responsible only for wages, if and when. Half the ships that went further than Luna City never came back. Spacemen did not care; by preference they signed for shares, and any one of them would have bet you that he could jump from the 200th floor of Harriman Tower and ground safely, if you offered him three to two and allowed him rubber heels for the landing.

Jetmen were the most carefree of the lot, and the meanest. Compared with them the masters, the radarmen, and the astrogators (there were no supers nor stewards in those

days) were gentle vegetarians. Jetmen knew too much. The others trusted the skill of the captain to get them down safely; jetmen knew that skill was useless against the blind and fitful devils chained inside their rocket motors.

The _Goshawk_ was the first of Harriman's ships to be converted from chemical fuel to atomic power-piles -- or rather the first that did not blow up. Rhysling knew her well; she was an old tub that had plied the Luna City run, Supra-New York space station to Leyport and back, before she was converted for deep space. He had worked the Luna run in her and had been along on the first deep space trip, Drywater on Mars -- and back, to everyone's surprise.

He should have made chief engineer by the time he signed for the Jovian loop trip, but, after the Drywater pioneer trip, he had been fired, blacklisted, and grounded at Luna City for having spent his time writing a chorus and several verses at a time when he should have been watching his gauges. The song was the infamous _The Skipper is a Father to his Crew_, with the uproariously unprintable final couplet.

The blacklist did not bother him. He won an accordion from a Chinese barkeep in Luna City by cheating at onethumb and thereafter kept going by singing to the miners for drinks and tips until the rapid attrition in spacemen caused the Company agent there to give him another chance. He kept his nose clean on the Luna run for a year or two, got back into deep space, helped give Venusburg its original ripe reputation, strolled the banks of the Grand Canal when a second colony was established at the ancient Martian capital, and froze his toes and ears on the second trip to Titan.

Things moved fast in those days. Once the power-pile drive was accepted the number of ships that put out from the LunaTerra system was limited only by the availability of crews. Jetmen were scarce; the shielding was cut to a minimum to save weight and few married men cared to risk possible exposure to radioactivity. Rhysling did not want to be a father, so jobs were always open to him during the golden days of the claiming boom. He crossed and recrossed the system, singing the doggerel that boiled up in his head and chording it out on his accordion.

The master of the _Goshawk_ knew him; Captain Hicks had been astrogator on Rhysling's first trip in her. "Welcome home, Noisy," Hicks had greeted him. "Are you sober, or shall I sign the book for you?"

"You can't get drunk on the bug juice they sell here, Skipper." He signed and went below, lugging his accordion.

Ten minutes later he was back. "Captain," he stated darkly, "that number two jet ain't fit. The cadmium dampers are warped."

"Why tell me? Tell the Chief."

"I did, but he says they will do. He's wrong."

The captain gestured at the book. "Scratch out your name and scram. We raise ship in thirty minutes."

Rhysling looked at him, shrugged, and went below again.

It is a long climb to the Jovian planetoids; a Hawk-class clunker had to blast for three watches before going into free flight. Rhysling had the second watch. Damping was done by hand then, with a multiplying vernier and a danger gauge. When the gauge showed red, he tried to correct it -- no luck.

Jetmen don't wait; that's why they are jetmen. He slapped the emergency discover and fished at the hot stuff with the tongs. The lights went out, he went right ahead. A

jetman has to know his power room the way your tongue knows the inside of your mouth.

He sneaked a quick look over the top of the lead baffle when the lights went out. The blue radioactive glow did not help him any; he jerked his head back and went on fishing by touch.

When he was done he called over the tube, "Number two jet out. And for crissake get me some light down here!"

There was light -- the emergency circuit -- but not for him. The blue radioactive glow was the last thing his optic nerve ever responded to.

2

"As Time and Space come bending back to shape this starspecked scene,
The tranquil tears of tragic joy still spread their silver sheen;
Along the Grand Canal still soar the fragile Towers of Truth;
Their fairy grace defends this place of Beauty, calm and couth.

"Bone-tired the race that raised the Towers, forgotten are their lores,
Long gone the gods who shed the tears that lap these crystal shores.
Slow heats the time-worn heart of Mars beneath this icy sky;
The thin air whispers voicelessly that all who live must die --

"Yet still the lacy Spires of Truth sing Beauty's madrigal
And she herself will ever dwell along the Grand Canal!"

-- from The Grand Canal, by permission of Lux Transcriptions, Ltd., London and Luna City

On the swing back they set Rhysling down on Mars at Drywater; the boys passed the hat and the skipper kicked in a half month's pay. That was all -- finish -- just another space bum who had not had the good fortune to finish it off when his luck ran out. He holed up with the prospectors and archeologists at How-Far? for a month or so, and could probably have stayed forever in exchange for his songs and his accordion playing. But spacemen die if they stay in one place; he hooked a crawler over to Drywater again and thence to Marsopolis.

The capital was well into its boom; the processing plants lined the Grand Canal on both sides and roiled the ancient waters with the filth of the runoff. This was before the TriPlanet Treaty forbade disturbing cultural relics for commerce; half the slender, fairylike towers had been torn down, and others were disfigured to adapt them as pressurized buildings for Earthmen.

Now Rhysling had never seen any of these changes and no one described them to him; when he "saw" Marsopolis again, he visualized it as it had been, before it was rationalized for trade. His memory was good. He stood on the riparian esplanade where

the ancient great of Mars had taken their ease and saw its beauty spreading out before his blinded eyes -- ice blue plain of water unmoved by tide, untouched by breeze, and reflecting serenely the sharp, bright stars of the Martian sky, and beyond the water the lacy buttresses and flying towers of an architecture too delicate for our rumbling, heavy planet.

The result was _Grand Canal_.

The subtle change in his orientation which enabled him to see beauty at Marsopolis where beauty was not now began to affect his whole life. All women became beautiful to him. He knew them by their voices and fitted their appearances to the sounds. It is a mean spirit indeed who will speak to a blind man other than in gentle friendliness; scolds who had given their husbands no peace sweetened their voices to Rhysling.

It populated his world with beautiful women and gracious men. _Dark Star Passing_, _Berenice's Hair_, _Death Song of a Wood's Colt_, and his other love songs of the wanderers, the womenless men of space, were the direct result of the fact that his conceptions were unsullied by tawdry truths. It mellowed his approach, changed his doggerel to verse, and sometimes even to poetry.

He had plenty of time to think now, time to get all the lovely words just so, and to worry a verse until it sang true in his head. The monotonous beat of _Jet Song_ --

When the field is clear, the reports all seen,
When the lock sighs shut, when the lights wink green,
When the check-off's done, when it's time to pray,
When the Captain nods, when she blasts away --

Hear the jets!
Hear them snarl at your back
When you're stretched on the rack;
Feel your ribs clamp your chest,
Feel your neck grind its rest.
Feel the pain in your ship,
Feel her strain in their grip.
Feel her rise! Feel her drive!
Straining steel, come alive,
On her jets!

--came to him not while he himself was a jetman but later while he was hitch-hiking from Mars to Venus and sitting out a watch with an old shipmate.

At Venusburg he sang his new songs and some of the old, in the bars. Someone would start a hat around for him; it would come back with a minstrel's usual take doubled or tripled in recognition of the gallant spirit behind the bandaged eyes.

It was an easy life. Any space port was his home and any ship his private carriage. No skipper cared to refuse to lift the extra mass of blind Rhysling and his squeeze box; he shuttled from Venusburg to Leyport to Drywater to New Shanghai, or back again, as the whim took him.

He never went closer to Earth than Supra-New York Space Station. Even when signing the contract for _Songs of the Spaceways_ he made his mark in a cabin-class

liner somewhere between Luna City and Ganymede. Horowitz, the original publisher, was aboard for a second honeymoon and heard Rhysling sing at a ship's party. Horowitz knew a good thing for the publishing trade when he heard it; the entire contents of _Songs_ were sung directly into the tape in the communications room of that ship before he let Rhysling out of his sight. The next three volumes were squeezed out of Rhysling at Venusburg, where Horowitz had sent an agent to keep him liquored up until he had sung all he could remember.

UP SHIP! is not certainly authentic Rhysling throughout. Much of it is Rhysling's, no doubt, and _Jet Song_ is unquestionably his, but most of the verses were collected after his death from people who had known him during his wanderings.

The Green Hills of Earth grew through twenty years. The earliest form we know about was composed before Rhysling was blinded, during a drinking bout with some of the indentured men on Venus. The verses were concerned mostly with the things the labor clients intended to do back on Earth if and when they ever managed to pay their bounties and thereby be allowed to go home. Some of the stanzas were vulgar, some were not, but the chorus was recognizably that of _Green Hills_.

We know exactly where the final form of _Green Hills_ came from, and when.

There was a ship in at Venus Ellis Isle which was scheduled for the direct jump from there to Great Lakes, Illinois. She was the old _Falcon_, youngest of the Hawk class and the first ship to apply the Harriman Trust's new policy of extra-fare express service between Earth cities and any colony with scheduled stops.

Rhysling decided to ride her back to Earth. Perhaps his own song had gotten under his skin -- or perhaps he just hankered to see his native Ozark's one more time.

The Company no longer permitted deadheads: Rhysling knew this but it never occurred to him that the ruling might apply to him. He was getting old, for a spaceman, and just a little matter of fact about his privileges. Not senile -- he simply knew that he was one of the landmarks in space, along with Halley's Comet, the Rings, and Brewster's Ridge. He walked in the crew's port, went below, and made himself at home in the first empty acceleration couch.

The Captain found him there while making a last minute tour of his ship. "What are you doing here?" he demanded.

"Dragging it back to Earth, Captain." Rhysling needed no eyes to see a skipper's four stripes.

"You can't drag in this ship; you know the rules. Shake a leg and get out of here. We raise ship at once." The Captain was young; he had come up after Rhysling's active time, but Rhysling knew the type -- five years at Harriman Hall with only cadet practice trips instead of solid, deep space experience. The two men did not touch in background nor spirit; space was changing.

"Now, Captain, you wouldn't begrudge an old man a trip home."

The officer hesitated -- several of the crew had stopped to listen. "I can't do it. 'Space Precautionary Act, Clause Six: No one shall enter space save as a licensed member of a crew of a chartered vessel, or as a paying passenger of such a vessel under such regulations as may be issued pursuant to this act.' Up you get and out you go."

Rhysling lolled back, his hands under his head. "If I've got to go, I'm damned if I'll walk. Carry me."

The Captain bit his lip and said, "Master-at-Arms! Have this man removed."

The ship's policeman fixed his eyes on the overhead struts. "Can't rightly do it, Captain. I've sprained my shoulder." The other crew members, present a moment before, had faded into the bulkhead paint.

"Well, get a working party!"

"Aye, aye, sir." He, too, went away.

Rhysling spoke again. "Now look, Skipper -- let's not have any hard feelings about this. You've got an out to carry me if you want to -- the 'Distressed Spaceman' clause."

"'Distressed Spaceman', my eye! You're no distressed spaceman; you're a space-lawyer. I know who you are; you've been bumming around the system for years. Well, you won't do it in my ship. That clause was intended to succor men who had missed their ships, not to let a man drag free all over space."

"Well, now, Captain, can you properly say I haven't missed my ship? I've never been back home since my last trip as a signed-on crew member. The law says I can have a trip back."

"But that was years ago. You've used up your chance."

"Have I now? The clause doesn't say a word about how soon a man has to take his trip back; it just says he's got it coming to him. Go look it up. Skipper. If I'm wrong, I'll not only walk out on my two legs, I'll beg your humble pardon in front of your crew. Go on -- look it up. Be a sport."

Rhysling could feel the man's glare, but he turned and stomped out of the compartment. Rhysling knew that he had used his blindness to place the Captain in an impossible position, but this did not embarrass Rhysling -- he rather enjoyed it.

Ten minutes later the siren sounded, he heard the orders on the bull horn for Up-Stations. When the soft sighing of the locks and the slight pressure change in his ears let him know that take-off was imminent he got up and shuffled down to the power room, as he wanted to be near the jets when they blasted off. He needed no one to guide him in any ship of the Hawk class.

Trouble started during the first watch. Rhysling had been lounging in the inspector's chair, fiddling with the keys of his accordion and trying out a new version of _Green Hills_.

> "Let me breathe unrationed air again
> Where there's no lack nor dearth"

And "something, something, something 'Earth'" -- it would not come out right. He tried again.

> "Let the sweet fresh breezes heal me
> As they rove around the girth
> Of our lovely mother planet,
> Of the cool green hills of Earth."

That was better, he thought. "How do you like that, Archie?" he asked over the muted roar.

"Pretty good. Give out with the whole thing." Archie Macdougal, Chief Jetman, was an old friend, both spaceside and in bars; he had been an apprentice under Rhysling many years and millions of miles back.

Rhysling obliged, then said, "You youngsters have got it soft. Everything automatic. When I was twisting her tail you had to stay awake."

"You still have to stay awake." They fell to talking shop and Macdougal showed him the direct response damping rig which had replaced the manual vernier control which Rhysling had used. Rhysling felt out the controls and asked questions until he was familiar with the new installation. It was his conceit that he was still a jetman and that his present occupation as a troubadour was simply an expedient during one of the fusses with the company that any man could get into.

"I see you still have the old hand damping plates installed," he remarked, his agile fingers flitting over the equipment.

"All except the links. I unshipped them because they obscure the dials."

"You ought to have them shipped. You might need them."

"Oh, I don't know. I think--" Rhysling never did find out what Macdougal thought for it was at that moment the trouble tore loose. Macdougal caught it square, a blast of radioactivity that burned him down where he stood.

Rhysling sensed what had happened. Automatic reflexes of old habit came out. He slapped the discover and rang the alarm to the control room simultaneously. Then he remembered the unshipped links. He had to grope until he found them, while trying to keep as low as he could to get maximum benefit from the baffles. Nothing but the links bothered him as to location. The place was as light to him as any place could be; he knew every spot, every control, the way he knew the keys of his accordion.

"Power room! Power room! What's the alarm?"

"Stay out!" Rhysling shouted. "The place is 'hot.'" He could feel it on his face and in his bones, like desert sunshine.

The links he got into place, after cursing someone, anyone, for having failed to rack the wrench he needed. Then he commenced trying to reduce the trouble by hand. It was a long job and ticklish. Presently he decided that the jet would have to be spilled, pile and all.

First he reported. "Control!"

"Control aye aye!"

"Spilling jet three -- emergency."

"Is this Macdougal?"

"Macdougal is dead. This is Rhysling, on watch. Stand by to record."

There was no answer; dumbfounded the Skipper may have been, but he could not interfere in a power room emergency. He had the ship to consider, and the passengers and crew. The doors had to stay closed.

The Captain must have been still more surprised at what Rhysling sent for record. It was:

> We rot in the molds of Venus,
> We retch at her tainted breath.
> Foul are her flooded jungles,
> Crawling with unclean death."

Rhysling went on cataloguing the Solar System as he worked, "--harsh bright soil of Luna--","--Saturn's rainbow rings--","--the frozen night of Titan--", all the while opening and spilling the jet and fishing it clean. He finished with an alternate chorus --

"We've tried each spinning space mote
And reckoned its true worth:
Take us back again to the homes of men
On the cool, green hills of Earth."

--then, almost absentmindedly remembered to tack on his revised first verse:

"The arching sky is calling
Spacemen back to their trade.
All hands! Stand by! Free falling!
And the lights below us fade.
Out ride the sons of Terra,
Far drives the thundering jet,
Up leaps the race of Earthmen,
Out, far, and onward yet--"

The ship was safe now and ready to limp home shy one jet. As for himself, Rhysling was not so sure. That "sunburn" seemed sharp, he thought. He was unable to see the bright, rosy fog in which he worked but he knew it was there. He went on with the business of flushing the air out through the outer valve, repeating it several times to permit the level of radioaction to drop to something a man might stand under suitable armor. While he did this he sent one more chorus, the last bit of authentic Rhysling that ever could be:

"We pray for one last landing
On the globe that gave us birth;
Let us rest our eyes on fleecy skies
And the cool, green hills of Earth."

Logic of Empire

'Don't be a sentimental fool, Sam!'

'Sentimental, or not,' Jones persisted, 'I know human slavery when I see it. That's what you've got on Venus.'

Humphrey Wingate snorted. 'That's utterly ridiculous. The company's labor clients are employees, working under legal contracts, freely entered into.'

Jones' eyebrows raised slightly. 'So? What kind of a contract is it that throws a man into jail if he quits his job?'

'That's not the case. Any client can quit his job on the usual two weeks notice-I ought to know; I -'

'Yes, I know,' agreed Jones in a tired voice. 'You're a lawyer. You know all about contracts. But the trouble with you, you dunderheaded fool, is that all you understand is legal phrases. Free contract-nuts! What I'm talking about is facts, not legalisms. I don't care what the contract says-those people are slaves!'

Wingate emptied his glass and set it down. 'So I'm a dunderheaded fool, am I? Well, I'll tell you what you are, Sam Houston Jones-you are a half-baked parlor pink. You've never had to work for a living in your life and you think it's just too dreadful that anyone else should have to. No, wait a minute,' he continued, as Jones opened his mouth, 'listen to me. The company's clients on Venus are a damn sight better off than most people of their own class here on Earth. They are certain of a job, of food, and a place to sleep. If they get sick, they're certain of medical attention. The trouble with people of that class is that they don't want to work -,

'Who does?'

'Don't be funny. The trouble is, if they weren't under a fairly tight contract, they'd throw up a good job the minute they got bored with it and expect the company to give 'em a free ride back to Earth. Now it may not have occurred to your fine, free charitable mind, but the company has obligations to its stockholders-you, for instance!-and it can't afford to run an interplanetary ferry for the benefit of a class of people that feel that the world owes them a living.'

'You got me that time, pal,' Jones acknowledged with a wry face, '-that crack about me being a stockholder. I'm ashamed of it.'

'Then why don't you sell?'

Jones looked disgusted. 'What kind of a solution is that? Do you think I can avoid the responsibility of knowing about it just unloading my stock?'

'Oh, the devil with it,' said Wingate. 'Drink up.'

'Righto,' agreed Jones. It was his first night aground after a practice cruise as a reserve officer; he needed to catch up on his drinking. Too bad, thought Wingate, that the cruise should have touched at Venus-'All out! All out! Up aaaall you idlers! Show a leg there! Show a leg and grab a sock!' The raucous voice sawed its way through Wingate's aching head. He opened his eyes, was blinded by raw white light, and shut them hastily. But the voice would not let him alone. 'Ten minutes till breakfast,' it rasped. 'Come and get it, or we'll throw it out!'

He opened his eyes again, and with trembling willpower forced them to track. Legs moved past his eyes, denim clad legs mostly, though some were bare-repulsive hairy nakedness. A confusion of male voices, from which he could catch words but not sentences, was accompanied by an obbligato of metallic sounds, muffled but pervasive-shrrg, shrrg, thump! Shrrg, shrrg, thump! The thump with which the cycle was completed hurt his aching head but was not as nerve stretching as another noise, a toneless whirring sibilance which he could neither locate nor escape.

The air was full of the odor of human beings, too many of them in too small a space. There was nothing so distinct as to be fairly termed a stench, nor was the supply of oxygen inadequate. But the room was filled with the warm, slightly musky smell of bodies still heated by bedclothes, bodies not dirty but not freshly washed. It was oppressive and unappetizing-in his present state almost nauseating.

He began to have some appreciation of the nature of his surroundings; he was in a bunkroom of some sort. It was crowded with men, men getting up, shuffling about, pulling on clothes. He lay on the bottom-most of a tier of four narrow bunks. Through the interstices between the legs which crowded around him and moved past his face he could see other such tiers around the walls and away from the walls, stacked floor to ceiling and supported by stanchions.

Someone sat down on the foot of Wingate's bunk, crowding his broad fundamental against Wingate's ankles while he drew on his socks. Wingate squirmed his feet away from the intrusion. The stranger turned his face toward him. 'Did I crowd 'ja, bud? Sorry.' Then he added, not unkindly, 'Better rustle out of there. The Master-at-Arms'll be riding you to get them bunks up.' He yawned hugely, and started to get up, quite evidently having dismissed Wingate and Wingate's affairs from his mind.

'Wait a minute!' Wingate demanded hastily.

'Huh?'

'Where am I? In jail?'

The stranger studied Wingate's bloodshot eyes and puffy, unwashed face with detached but unmalicious interest. 'Boy, oh boy, you must 'a' done a good job of drinking up your bounty money.'

'Bounty money? What the hell are you talking about?'

'Honest to God, don't you know where you are?'

'No.'

'Well . . . ' The other seemed reluctant to proclaim a truth made silly by its self-evidence until Wingate's expression convinced him that he really wanted to know. 'Well, you're in the Evening Star, headed for Venus.'

A couple of minutes later the stranger touched him on the arm. 'Don't take it so hard, bud. There's nothing to get excited about.'

Wingate took his hands from his face and pressed them against his temples. 'It's not real,' he said, speaking more to himself than to the other. 'It can't be real -,

'Stow it. Come and get your breakfast.'

'I couldn't eat anything.'

'Nuts. Know how you feel . . . felt that way sometimes myself. Food is just the ticket.' The Master-at-Arms settled the issue by coming up and prodding Wingate in the ribs with his truncheon.

'What d'yuh think this is-sickbay, or first class? Get those bunks hooked up.'

'Easy, mate, easy,' Wingate's new acquaintance conciliated, 'our pal's not himself this morning.' As he spoke he dragged Wingate to his feet with one massive hand, then with the other shoved the tier of bunks up and against the wall. Hooks clicked into their sockets, and the tier stayed up, flat to the wall.

'He'll be a damn sight less himself if he interferes with my routine,' the petty officer predicted. But he moved on. Wingate stood barefooted on the floorplates, immobile and overcome by a feeling of helpless indecision which was re-inforced by the fact that he was dressed only in his underwear. His champion studied him.

'You forgot your pillow. Here-' He reached down into the pocket formed by the lowest bunk and the wall and hauled out a flat package covered with transparent plastic. He broke the seal and shook out the contents, a single coverall garment of heavy denim.

Wingate put it on gratefully. 'You can get the squeezer to issue you a pair of slippers after breakfast,' his friend added. 'Right now we gotta eat.'

The last of the queue had left the galley window by the time they reached it and the window was closed. Wingate's companion pounded on it. 'Open up in there!'

It slammed open. 'No seconds,' a face announced.

The stranger prevented the descent of the window with his hand. 'We don't want seconds, shipmate, we want firsts.'

'Why the devil can't you show up on time?' the galley functionary groused. But he slapped two ration cartons down on the broad sill of the issuing window. The big fellow handed one to Wingate, and sat down on the floor-plates, his back supported by the galley bulkhead.

'What's your name, bud?' he enquired, as he skinned the cover off his ration. 'Mine's Hartley-"Satchel" Hartley.'

'Mine is Humphrey Wingate.'

'Okay, Hump. Pleased to meet 'cha. Now what's all this song and dance you been giving me?' He spooned up an impossible bite of baked eggs and sucked coffee from the end of his carton.

'Well,' said Wingate, his face twisted with worry, 'I guess I've been shanghaied.' He tried to emulate Hartley's method of drinking, and got the brown liquid over his face.

'Here-that's no way to do,' Hartley said hastily. 'Put the nipple in your mouth, then don't squeeze any harder than you suck. Like this.' He illustrated. 'Your theory don't seem very sound to me. The company don't need crimps when there's plenty of guys standing in line for a chance to sign up. What happened? Can't you remember?'

Wingate tried. 'The last thing I recall,' he said, 'is arguing with a gyro driver over his fare.'

Hartley nodded. 'They'll gyp you every time. D'you think he put the slug on you?'

'Well . . . no, I guess not. I seem to be all right, except for the damndest hangover you can imagine.'

'You'll feel better. You ought to be glad the Evening Star is a high-gravity ship instead of a trajectory job. Then you'd really be sick, and no foolin'.'

'How's that?'

'I mean that she accelerates or decelerates her whole run. Has to, because she carries cabin passengers. If we had been sent by a freighter, it'd be a different story. They gun 'em into the right trajectory, then go weightless for the rest of the trip. Man, how the new chums do suffer!' He chuckled.

Wingate was in no condition to dwell on the hardships of space sickness. 'What T can't figure out,' he said, 'is how I landed here. Do you suppose they could have brought me aboard by mistake, thinking I was somebody else?'

'Can't say. Say, aren't you going to finish your breakfast?'

'I've had all I want.' Hartley took his statement as an invitation and quickly finished off Wingate's ration. Then he stood up, crumpled the two cartons into a ball, stuffed them down a disposal chute, and said,

'What are you going to do about it?'

'What am I going to do about it?' A look of decision came over Wingate's face. 'I'm going to march right straight up to the Captain and demand an explanation, that's what I'm going to do!'

'I'd take that by easy stages, Hump,' Hartley commented doubtfully.

'Easy stages, hell!' He stood up quickly. 'Ow! My head!'

The Master-at-Arms referred them to the Chief Master-at-Arms in order to get rid of them. Hartley waited with Wingate outside the stateroom of the Chief Master-at-Arms to keep him company. 'Better sell 'em your bill of goods pretty pronto,' he advised.

'Why?'

'We'll ground on. the Moon in a few hours. The stop to refuel at Luna City for deep space will be your last chance to get out, unless you want to walk back.'

'I hadn't thought of that,' Wingate agreed delightedly. 'I thought I'd have to make the round trip in any case.'

'Shouldn't be surprised but what you could pick up the Morning Star in a week or two. If it's their mistake, they'll have to return you.'

'I can beat that,' said Wingate eagerly. 'I'll go right straight to the bank at Luna City, have them arrange a letter of credit with my bank, and buy a ticket on the Earth-Moon shuttle.'

Hartley's manner underwent a subtle change. He had never in his life 'arranged a letter of credit'. Perhaps such a man could walk up to the Captain and lay down the law.

The Chief Master-at-Arms listened to Wingate's story with obvious impatience, and interrupted him in the middle of it to consult his roster of emigrants. He thumbed through it to the Ws, and pointed to a line. Wingate read it with a sinking feeling. There was his own name, correctly spelled. 'Now get out,' ordered the official, 'and quit wasting my time.'

But Wingate stood up to him. 'You have no authority in this matter-none whatsoever. I insist that you take me to the Captain.'

'Why, you-' Wingate thought momentarily that the man was going to strike him. He interrupted.

'Be careful what you do. You are apparently the victim of an honest mistake-but your legal position will be very shaky indeed, if you disregard the requirements of spacewise law under which this vessel is licensed. I don't think your Captain would be pleased to have to explain such actions on your part in federal court.'

That he had gotten the man angry was evident. But a man does not get to be chief police officer of a major transport by jeopardizing his superior officers. His jaw muscles twitched but he pressed a button, saying nothing. A junior master-at-arms appeared. 'Take this man to the Purser.' He turned his back in dismissal and dialed a number on the ship's intercommunication system.

Wingate was let in to see the Purser, ex-officio company business agent, after only a short wait. 'What's this all about?' that officer demanded. 'If you have a complaint, why can't you present it at the morning hearings in the regular order?'

Wingate explained his predicament as clearly, convincingly, and persuasively as he knew how. 'And so you see,' he concluded, 'I want to be put aground at Luna City. I've no desire to cause the company any embarrassment over what was undoubtedly an unintentional mishap-particularly as I am forced to admit that I had been celebrating rather freely and, perhaps, in some manner, contributed to the mistake.'

The Purser, who had listened noncommittally to his recital, made no answer. He shuffled through a high stack of file folders which rested on one corner of his deck,

selected one, and opened it. It contained a sheaf of legal-size papers clipped together at the top. These he studied leisurely for several minutes, while Wingate stood waiting.

The Purser breathed with an asthmatic noisiness while he read, and, from time to time, drummed on his bared teeth with his fingernails. Wingate had about decided, in his none too steady nervous condition, that if the man approached his hand to his mouth just once more that he, Wingate, would scream and start throwing things. At this point the Purser chucked the dossier across the desk toward Wingate. 'Better have a look at these,' he said.

Wingate did so. The main exhibit he found to be a contract, duly entered into, between Humphrey Wingate and the Venus Development Company for six years of indentured labor on the planet Venus.

'That your signature?' asked the Purser.

Wingate's professional caution stood him in good stead. He studied the signature closely in order to gain time while he tried to collect his wits. 'Well,' he said at last, 'I will stipulate that it looks very much like my signature, but I will not concede that it is my signature-I'm not a handwriting expert.' The Purser brushed aside the objection with an air of annoyance. 'I haven't time to quibble with you. Let's check the thumbprint. Here.' He shoved an impression pad across his desk. For a moment Wingate considered standing on his legal rights by refusing, but no, that would prejudice his case. He had nothing to lose; it couldn't be his thumbprint on the contract. Unless-But it was. Even his untrained eye could see that the two prints matched. He fought back a surge of panic. This was probably a nightmare, inspired by his argument last night with Jones. Or, if by some wild chance it were real, it was a frame-up in which he must find the flaw. Men of his sort were not framed; the whole thing was ridiculous. He marshaled his words carefully.

'I won't dispute your position, my dear sir. In some fashion both you and I have been made the victims of a rather sorry joke. It seems hardly necessary to point out that a man who is unconscious, as I must have been last night, may have his thumbprint taken without his knowledge. Superficially this contract is valid and I assume naturally your good faith in the matter. But, in fact, the instrument lacks one necessary element of a contract.'

'Which is?'

'The intention on the part of both parties to enter into a contractual relationship. Notwithstanding signature and thumbprint I had no intention of contracting which can easily be shown by other factors. I am a successful lawyer with a good practice, as my tax returns will show. It is not reasonable to believe-and no court will believe-that I voluntarily gave up my accustomed life for six years of indenture at a much lower income.'

'So you're a lawyer, eh? Perhaps there has been chicanery-on your part. How does it happen that you represent yourself here as a radio technician?'

Wingate again had to steady himself at this unexpected flank attack. He was in truth a radio expert-it was his cherished hobby-but how had they known? Shut up, he told himself. Don't admit anything. 'The whole thing is ridiculous,' he protested. 'I insist that 1 be taken to see the Captain-I can break that contract in ten minutes time.'

The Purser waited before replying. 'Are you through speaking your piece?'

'Yes.'

'Very well. You've had your say, now I'll have mine. You listen to me, Mister Spacelawyer. That contract was drawn up by some of the shrewdest legal minds in two planets. They had specifically in mind that worthless bums would sign it, drink up their bounty money, and then decide that they didn't want to go to work after all. That contract has been subjected to every sort of attack possible and revised so that it can't be broken by the devil himself.

'You're not peddling your curbstone law to another stumblebum in this case; you are talking to a man who knows just where he stands, legally. As for seeing the Captain-if you think the commanding officer of a major vessel has nothing more to do than listen to the rhira-dreams of a self-appointed word artist, you've got another think coming! Return to your quarters!'

Wingate started to speak, thought better of it, and turned to go. This would require some thought. The Purser stopped him. 'Wait. Here's your copy of the contract.' He chucked it, the flimsy white sheets riffled to the deck. Wingate picked them up and left silently.

Hartley was waiting for him in the passageway. 'How d'ja make out, Hump?'

'Not so well. No, I don't want to talk about it. I've got to think.' They walked silently back the way they had come toward the ladder which gave access to the lower decks. A figure ascended from the ladder and, came toward them. Wingate noted it without interest.

He looked again. Suddenly the whole preposterous chain of events fell into place; he shouted in relief. 'Sam!' he called out. 'Sam-you cockeyed old so-and-so. I should have spotted your handiwork.' It was all clear now; Sam had framed him with a phony shanghai. Probably the skipper was a pal of Sam's-a reserve officer, maybe-and they had cooked it up between them. It was a rough sort of a joke, but he was too relieved to be angry. Just the same he would make Jones pay for his fun, somehow, on the jump back from Luna City.

It was then that he noticed that Jones was not laughing.

Furthermore he was dressed-most unreasonably-in the same blue denim that the contract laborers were. 'Hump,' he was saying, 'are you still drunk?'

'Me? No. What's the-'

'Don't you realize we're in a jam?'

'Oh hell, Sam, a joke's a joke, but don't keep it up any longer. I've caught on, I tell you. I don't mind-it was a good gag.'

'Gag, eh?' said Jones bitterly. 'I suppose it was just a gag when you talked me into signing up.'

'I persuaded you to sign up?'

'You certainly did. You were so damn sure you knew what you were talking about. You claimed that we could sign up, spend a month or so, on Venus, and come home. You wanted to bet on it. So we went around to the docks and signed up. It seemed like a good idea then-the only way to settle the argument.'

Wingate whistled softly. 'Well, I'll be-Sam, I haven't the slightest recollection of it. I must have drawn a blank before I passed out.'

'Yeah, I guess so. Too bad you didn't pass out sooner. Not that I'm blaming you; you didn't drag me. Anyhow, I'm on my way up to try to straighten it out.'

'Better wait a minute till you hear what happened to me. Oh yes-Sam, this is, uh, Satchel Hartley. Good sort.' Hartley had been waiting uncertainly near them; he stepped forward and shook hands.

Wingate brought Jones up to date, and added, 'So you see your reception isn't likely to be too friendly. I guess I muffed it. But we are sure to break the contract as soon as we can get a hearing on time alone.'

'How do you mean?'

'We were signed up less than twelve hours before ship lifting. That's contrary to the Space Precautionary Act.'

'Yes-yes, I see what you mean. The Moon's in her last quarter; they would lift ship some time after midnight to take advantage of favorable earthswing. I wonder what time it was when we signed on?'

Wingate took out his contract copy. The notary's stamp showed a time of eleven thirty-two. 'Great Day!' he shouted. 'I knew there would be a flaw in it somewhere. This contract is invalid on its face. The ship's log will prove it.'

Jones studied it. 'Look again,' he said. Wingate did so. The stamp showed eleven thirty-two, but A.M., not P.M.

'But that's impossible,' he protested.

'Of course it is. But it's official. I think we will find that the story is that we were signed on in the morning, paid our bounty money, and had one last glorious luau before we were carried aboard. I seem to recollect some trouble in getting the recruiter to sign us up. Maybe we convinced, him by kicking in our bounty money.'

'But we didn't sign up in the morning. It's not true and I can prove it.'

'Sure you can prove it-but how can you prove it without going back to Earth first!'

'So you see it's this way,' Jones decided after some minutes of somewhat fruitless discussion, 'there is no sense in trying to break our contracts here and now; they'll laugh at us. The thing to do is to make money talk, and talk loud. The only way I can see to get us off at Luna City is to post non-performance bonds with the company bank there-cash, and damn big ones too.'

'How big?'

'Twenty thousand credits, at least, I should guess.'

'But that's not equitable-it's all out of proportion.'

'Quit worrying about equity, will you? Can't you realize that they've got us where the hair is short? This won't be a bond set by a court ruling; it's got to be big enough to make a minor company official take a chance on doing something that's not in the book.'

'I can't raise such a bond.'

'Don't worry about that. I'll take care of it.'

Wingate wanted to argue the point, but did not. There are times when it is very convenient to have a wealthy friend.

'I've got to get a radiogram off to my sister,' Jones went on, 'to get this done -,

'Why your sister? Why not your family firm?'

'Because we need fast action, that's why. The lawyers that handle our family finances would fiddle and fume around trying to confirm the message. They'd send a message back to the Captain, asking if Sam Houston Jones were really aboard, and he

would answer "No", as I'm signed up as Sam Jones. I had some silly idea of staying out of the news broadcasts, on account of the family.'

'You can't blame them,' protested Wingate, feeling an obscure clannish loyalty to his colleague in law, 'they're handling other people's money.'

'I'm not blaming them. But I've got to have fast action and Sis'll do what I ask her. I'll phrase the message so she'll know it's me. The only hurdle now is to persuade the Purser to let me send a message on tick.'

He was gone for a long time on this mission. Hartley waited with Wingate, both to keep him company and because of a strong human interest in unusual events. When Jones finally appeared he wore a look of tight-lipped annoyance. Wingate, seeing the expression, felt a sudden, chilling apprehension. 'Couldn't you send it? Wouldn't he let you?'

'Oh, he let me-finally,' Jones admitted, 'but that Purser-man, is he tight!'

Even without the alarm gongs Wingate would have been acutely aware of the grounding at Luna City. The sudden change from the high gravity deceleration of their approach to the weak surface gravity-one-sixth earth normal-of the Moon took immediate toll on his abused stomach. It was well that he had not eaten much. Both Hartley and Jones were deep-space men and regarded enough acceleration to permit normal swallowing as adequate for any purpose. There is a curious lack of sympathy between those who are subject to space sickness and those who are immune to it. Why the spectacle of a man regurgitating, choked, eyes streaming with tears, stomach knotted with pain, should seem funny is difficult to see, but there it is. It divides the human race into two distinct and antipathetic groups-amused contempt on one side, helpless murderous hatred on the other.

Neither Hartley nor Jones had the inherent sadism which is too frequently evident on such occasions-for example the great wit who suggests salt pork as a remedy-but, feeling no discomfort themselves, they were simply unable to comprehend (having forgotten the soul-twisting intensity of their own experience as new chums) that Wingate was literally suffering 'a fate worse than death'-much worse, for it was stretched into a sensible eternity by a distortion of the time sense known only to sufferers from space sickness, seasickness, and (we are told) smokers of hashish.

As a matter of fact, the stop on the Moon was less than four hours long. Toward the end of the wait Wingate had quieted down sufficiently again to take an interest in the expected reply to Jones' message, particularly after Jones had assured him that he would be able to spend the expected lay-over under bond at Luna City in a hotel equipped with a centrifuge.

But the answer was delayed. Jones had expected to hear from his sister within an hour, perhaps before the Evening Star grounded at the Luna City docks. As the hours stretched out he managed to make himself very unpopular at the radio room by his repeated inquiries. An over-worked clerk had sent him brusquely about his business for the seventeenth time when he heard the alarm sound preparatory to raising ship; he went back and admitted to Wingate that his scheme had apparently failed.

'Of course, we've got ten minutes yet,' he finished unhopefully, 'if the message should arrive before they raise ship, the Captain could still put us aground at the last minute. We'll go back and haunt 'em some more right up to the last. But it looks like a thin chance.'

'Ten minutes-'said Wingate, 'couldn't we manage somehow to slip outside and run for it?'

Jones looked exasperated. 'Have you ever tried running in a total vacuum?'

Wingate had very little time in which to fret on the passage from Luna City to Venus. He learned a great deal about the care and cleaning of washrooms, and spent ten hours a day perfecting his new skill. Masters-at-Arms have long memories.

The Evening Star passed beyond the limits of ship-to-Terra radio communication shortly after leaving Luna City; there was nothing to do but wait until arrival at Adonis, port of the north polar colony. The company radio there was strong enough to remain in communication at all times except for the sixty days bracketing superior conjunction and a shorter period of solar interference at inferior conjunction. 'They will probably be waiting for us with a release order when we ground,' Jones assured Wingate, 'and we'll go back on the return trip of the Evening Star-first class, this time. Or, at the very Worst, we'll have to wait over for the Morning Star. That wouldn't be so bad, once I get some credit transferred; we could spend it at Venusburg.'

'I suppose you went there on your cruise,' Wingate said, curiosity showing in his voice. He was no Sybarite, but the lurid reputation of the most infamous, or famous-depending on one's evaluations-pleasure city of three planets was enough to stir the imagination of the least hedonistic.

'No-worse luck!' Jones denied. 'I was on a hull inspection board the whole time. Some of my messmates went, though boy!' He whistled softly and shook his head.

But there was no one awaiting their arrival, nor was there any message. Again they stood around the communication office until told sharply and officially to get on back to their quarters and stand by to disembark, '- and be quick about it!'

'I'll see you in the receiving barracks, Hump,' were Jones' last words before he hurried off to his own compartment.

The Master-at-Arms responsible for the compartment in which Hartley and Wingate were billeted lined his charges up in a rough column of two's and, when ordered to do so by the metallic bray of the ship's loudspeaker, conducted them through the central passageway and down four decks to the lower passenger port. It stood open; they shuffled through the lock and out of the ship-not into the free air of Venus, but into a sheet metal tunnel which joined it, after some fifty yards, to a building.

The air within the tunnel was still acrid from the atomized antiseptic with which it had been flushed out, but to Wingate it was nevertheless fresh and stimulating after the stale flatness of the repeatedly reconditioned air of the transport. That, plus the surface gravity of Venus, five-sixths of earth-normal, strong enough to prevent nausea yet low enough to produce a feeling of lightness and strength-these things combined to give him an irrational optimism, an up-and-at-'em frame of mind.

The exit from the tunnel gave into a moderately large room, windowless but brilliantly and glarelessly lighted from concealed sources. It contained no furniture.

'Squaaad-HALT!' called out the Master-at-Arms, and handed papers to a slight, clerkish-appearing man who stood near an inner doorway. The man glanced at the papers, counted the detachment, then signed one sheet, which he handed back to the ship's petty officer who accepted it and returned through the tunnel.

The clerkish man turned to the immigrants. He was dressed, Wingate noted, in nothing but the briefest of shorts, hardly more than a strap, and his entire body, even his

feet, was a smooth mellow tan. 'Now men,' he said in a mild voice, 'strip off your clothes and put them in the hopper.' He indicated a fixture set in one wall.

'Why?' asked Wingate. His manner was uncontentious but he made no move to comply.

'Come now,' he was answered, still mildly but with a note of annoyance, 'don't argue. It's for your own protection. We can't afford to import disease.'

Wingate checked a reply and unzipped his coverall. Several who had paused to hear the outcome followed his example. Suits, shoes, underclothing, socks, they all went into the hopper. 'Follow me,' said their guide.

In the next room the naked herd were confronted by four 'barbers' armed with electric clippers and rubber gloves who proceeded to clip them smooth. Again Wingate felt disposed to argue, but decided the issue was not worth it. But he wondered if the female labor clients were required to submit to such drastic quarantine precautions. It would be a shame, it seemed to him, to sacrifice a beautiful head of hair that had been twenty years in growing.

The succeeding room was a shower room. A curtain of warm spray completely blocked passage through the room. Wingate entered it unreluctantly, even eagerly, and fairly wallowed in the first decent bath he had been able to take since leaving Earth. They were plentifully supplied with liquid green soap, strong and smelly, but which lathered freely. Half a dozen attendants, dressed as skimpily as their guide, stood on the far side of the wall of water and saw to it that the squad remained under the shower a fixed time and scrubbed. In some cases they made highly personal suggestions to insure thoroughness. Each of them wore a red cross on a white field affixed to his belt which lent justification to their officiousness.

Blasts of warm air in the exit passageway dried them quickly and completely.

'Hold still.' Wingate complied, the bored hospital orderly who had spoken dabbed at Wingate's upper arm with a swab which felt cold to touch, then scratched the spot. 'That's all, move on.' Wingate added himself to the queue at the next table. The experience was repeated on the other arm. By the time he had worked down to the far end of the room the outer sides of each arm were covered with little red scratches, more than twenty of them.

'What's this all about?' he asked the hospital clerk at the end of the line, who had counted his scratches and checked his name off a list.

'Skin tests.. . to check your resistances and immunities.'

'Resistance to what?'

'Anything. Both terrestrial and Venerian diseases. Fungoids, the Venus ones are, mostly. Move on, you're holding up the line.' He heard more about it later. It took from two to three weeks to recondition the ordinary terrestrial to Venus conditions. Until that reconditioning was complete and immunity was established to the new hazards of another planet it was literally death to an Earth man to expose his skin and particularly his mucous membranes to the ravenous invisible parasites of the surface of Venus.

The ceaseless fight of life against life which is the dominant characteristic of life anywhere proceeds with special intensity, under conditions of high metabolism, in the steamy jungles of Venus. The general bacteriophage which has so nearly eliminated disease caused by pathogenic micro-organisms on Earth was found capable of a subtle

modification which made it potent against the analogous but different diseases of Venus. The hungry fungi were another matter.

Imagine the worst of the fungoid-type skin diseases you have ever encountered-ringworm, dhobie itch, athlete's foot, Chinese rot, saltwater itch, seven year itch. Add to that your conception of mold of damp rot, of scale, of toadstools feeding on decay. Then conceive them speeded up in their processes, visibly crawling as you watch-picture them attacking your eyeballs, your armpits, the soft wet tissues inside your mouth, working down into your lungs.

The first Venus expedition was lost entirely. The second had a surgeon with sufficient imagination to provide what seemed a liberal supply of salicylic acid and mercury salicylate as well as a small ultraviolet radiator. Three of them returned.

But permanent colonization depends on adaptation to environment, not insulating against it. Luna City might be cited as a case which denies this proposition but it is only superficially so. While it is true that the 'lunatics' are absolutely dependent on their citywide hermetically-sealed air bubble, Luna City is not a self-sustaining colony; it is an outpost, useful as a mining station, as an observatory, as a refueling stop beyond the densest portion of Terra's gravitational field.

Venus is a colony. The colonists breathe the air of Venus, eat its food, and expose their skins to its climate and natural hazards. Only the cold polar regions-approximately equivalent in weather conditions to an Amazonian jungle on a hot day in the rainy season-are tenable by terrestrials, but here they slop barefooted on the marshy soil in a true ecological balance.

Wingate ate the meal that was offered him-satisfactory but roughly served and dull, except for Venus sweet-sour melon, the portion of which he ate would have fetched a price in a Chicago gourmets' restaurant equivalent to the food budget for a week of a middle-class family-and located his assigned sleeping billet. Thereafter he attempted to locate Sam Houston Jones. He could find no sign of him among the other labor clients, nor any one who remembered having seen him. He was advised by one of the permanent staff of the conditioning station to enquire of the factor's clerk. This he did, in the ingratiating manner he had learned it was wise to use in dealing with minor functionaries.

'Come back in the morning. The lists will be posted.'

'Thank you, sir. Sorry to have bothered you, but I can't find him and I was afraid he might have taken sick or something. Could you tell me if he is on the sick list.'

'Oh, well-Wait a minute.' The clerk thumbed through his records. 'Hmmm.. . you say he was in the Evening Star?'

'Yes, sir.'

'Well, he's not. . . Mmmm, no-Oh, yes, here he is. He didn't disembark here.'

'What did you say!?'

'He went on with the Evening Star to New Auckland, South Pole. He's stamped in as a machinist's helper. If you had told me that, I'd 'a' known. All the metal workers in this consignment were sent to work on the new South Power Station.'

After a moment Wingate pulled himself together enough to murmur, 'Thanks for your trouble.'

"S all right. Don't ~mention it.' The clerk turned away.

South Pole Colony! He muttered it to himself. South Pole Colony, his only friend twelve thousand miles away. At last Wingate felt alone, alone and trapped, abandoned. During the short interval between waking up aboard the transport and finding Jones also aboard he had not had time fully to appreciate his predicament, nor had he, then, lost his upper class arrogance, the innate conviction that it could not be serious-such things just don't' happen to people, not to people one knows!

But in the meantime he had suffered such assaults to his human dignity (the Chief Master-at-Arms had seen to some of it) that he was no longer certain of his essential inviolability from unjust or arbitrary treatment. But now, shaved and bathed without his consent, stripped of his clothing and attired in a harness like breechclout, transported millions of miles from his social matrix, subject to the orders of persons indifferent to his feelings and who claimed legal control over his person and actions, and now, most bitterly, cut off from the one human contact which had given him support and courage and hope, he realized at last with chilling thoroughness that anything could happen to him, to him, Humphrey Belmont Wingate, successful attorney-at-law and member of all the night clubs.

'Wingate!'

'That's you, Jack. Go on in, don't keep them waiting.' Wingate pushed through the doorway and found himself in a fairly crowded room. Thirty-odd men were seated around the sides of the room. Near the door a clerk sat at a desk, busy with papers. One brisk-mannered individual stood in the cleared space between the chairs near a low platform on which all the illumination of the room was concentrated. The clerk at the door looked up to say, 'Step up where they can see you.' He pointed a stylus at the platform.

Wingate moved forward and did as he was bade, blinking at the brilliant light. 'Contract number 482-23-06,' read the clerk, 'client Humphrey Wingate, six years, radio technician non-certified, pay grade six-D, contract now available for assignment.' Three weeks it had taken them to condition him, three weeks with no word from Jones. He had passed his exposure test without infection; he was about to enter the active period of his indenture. The brisk man spoke up close on the last words of the clerk:

'Now here, patrons, if you please-we have an exceptionally promising man. I hardly dare tell you the ratings he received on his intelligence, adaptability, and general information tests. In fact I won't, except to tell you that Administration has put in a protective offer of a thousand credits. But it would be a shame to use any such client for the routine work of administration when we need good men so badly to wrest wealth from the wilderness. I venture to predict that the lucky bidder who obtains the services of this client will be using him as a foreman within a month. But look him over for yourselves, talk to him, and see for yourselves.'

The clerk whispered something to the speaker. He nodded and added, 'I am required to notify you, gentlemen and patrons, that this client has given the usual legal notice of two weeks, subject of course to liens of record.' He laughed jovially, and cocked one eyebrow as if there were some huge joke behind his remarks. No one paid attention to the announcement; to a limited extent Wingate appreciated wryly the nature of the jest. He had given notice the day after he found out that Jones had been sent to South Pole Colony, and had discovered that while he was free theoretically to quit, it was freedom to starve on Venus, unless he first worked out his bounty, and his. passage both ways.

Several of the patrons gathered around the platform and looked him over, discussing him as they did so. 'Not too well muscled.' 'I'm not over-eager to bid on these smart boys; they're trouble-makers.' 'No, but a stupid client isn't worth his keep.' 'What can he do? I'm going to have a look at his record.' They drifted over to the clerk's desk and scrutinized the results of the many tests and examinations that Wingate had undergone during his period of quarantine. All but one beady-eyed individual who sidled up closer to Wingate, and, resting one foot on the platform so that he could bring his face nearer, spoke in confidential tones.

'I'm not interested in those phony puff-sheets, bub. Tell me about yourself.'

'There's not much to tell.'

'Loosen up. You'll like my place. Just like a home - I run a free crock to Venusburg for my boys. Had any experience handling niggers?'

'No.'

'Well, the natives ain't niggers anyhow, except in a manner of speaking. You look like you could boss a gang. Had any experience?'

'Not much.'

'Well . . . maybe you're modest. I like a man who keeps his mouth shut. And my boys like me. I never let my pusher take kickbacks.'

'No,' put in another patron who had returned to the side of the platform, 'you save that for yourself, Rigsbee.'

'You stay out o' this, Van Huysen!'

The newcomer, a heavy-set, middle-aged man, ignored the other and addressed Wingate himself. 'You have given notice. Why?'

'The whole thing was a mistake. I was drunk.'

'Will you do honest work in the meantime?'

Wingate considered this. 'Yes,' he said finally. The heavy-set man nodded and walked heavily back to his chair, settling his broad girth with care and giving his harness a hitch.

When the others were seated the spokesman announced cheerfully, 'Now, gentlemen, if you are quite through-Let's hear an opening offer for this contract. I wish I could afford to bid him in as my assistant, by George, I do! Now . . . do I hear an offer?'

'Six hundred.'

'Please, patrons! Did you not hear me mention a protection of one thousand?'

'1 don't think you mean it. He's a sleeper.'

The company agent raised his eyebrows. 'I'm sorry. I'll have to ask the client to step down from the platform.'

But before Wingate could do so another voice said, 'One thousand.'

'Now that's better!' exclaimed the agent. 'I should have known that you gentlemen wouldn't let a real opportunity escape you. But a ship can't fly on one jet. Do I hear eleven hundred? Come, patrons, you can't make your fortunes without clients. Do I hear -'

'Eleven hundred.'

'Eleven hundred from Patron Rigsbee! And a bargain it would be at that price. But I doubt if you will get it. Do I hear twelve?'

The heavy-set man flicked a thumb upward. 'Twelve hundred from Patron van Huysen. I see I've made a mistake and am wasting your time; the intervals should be not

less than two hundred. Do I hear fourteen? Do I hear fourteen? Going once for twelve.. . going twi-'

'Fourteen,' Rigsbee said suddenly.

'Seventeen,' Van Huysen added at once.

'Eighteen,' snapped Rigsbee.

'Nooo,' said the agent, 'no interval of less than two, please.'

'All right, dammit, nineteen!'

'Nineteen I hear. It's a hard number to write; who'll make it twenty-one?' Van Huysen's thumb flicked again. 'Twentyone it is. It takes money to make money. What do I hear? What do I hear?' He paused. 'Going once for twenty-one going twice for twenty-one. Are you giving up so easily, Patron Rigsbee?'

'Van Huysen is a-' The rest was muttered too indistinctly to hear.

'One more chance, gentlemen. Going, going . . . GONE!-He smacked his palms sharply together. '-and sold to Patron van Huysen for twenty-one hundred credits. My congratulations, sir, on a shrewd deal.'

Wingate followed his new master out the far door. They were stopped in the passageway by Rigsbee. 'All right, Van, you've had your fun. I'll cut your loses for two thousand.'

'Out of my way.'

'Don't be a fool. He's no bargain. You don't know how to sweat a man-I do.' Van Huysen ignored him, pushing on past. Wingate followed him out into warm winter drizzle to the parking lot where steel crocodiles were drawn up in parallel rows. Van Huysen paused beside a thirty-foot Remington. 'Get in.'

The long boxlike body of the crock was stowed to its load line with supplies Van Huysen had purchased at the base. Sprawled on the tarpaulin which covered the cargo were half a dozen men. One of them stirred as Wingate climbed over the side. 'Hump! Oh, Hump!'

It was Hartley. Wingate was surprised at his own surge of emotion. He gripped Hartley's hand and exchanged friendly insults. 'Chums,' said Hartley, 'meet Hump Wingate. He's a right guy. Hump, meet the gang. That's Jimmie right behind you. He rassles this velocipede.'

The man designated gave Wingate a bright nod and moved forward into the operator's seat. At a wave from Van Huysen, who had seated his bulk in the little sheltered cabin aft, he pulled back on both control levers and the crocodile crawled away, its caterpillar treads clanking and chunking through the mud.

Three of the six were old-timers, including Jimmie, the driver. They had come along to handle cargo, the ranch products which the patron had brought in to market and the supplies he had purchased to take back. Van Huysen had bought the contracts of two other clients in addition to Wingate and Satchel Hartley. Wingate recognized them as men he had known casually in the Evening Star and at the assignment and conditioning station. They looked a little woebegone, which Wingate could thoroughly understand, but the men from the ranch seemed to be enjoying themselves. They appeared to regard the opportunity to ride a load to and from town as an outing. They sprawled on the tarpaulin and passed the time gossiping and getting acquainted with the new chums.

But they asked no personal questions. No labor client on Venus ever asked anything about what he had been before he shipped with the company unless he first volunteered information. It 'wasn't done'.

Shortly after leaving the outskirts of Adonis the car slithered down a sloping piece of ground, teetered over a low bank, and splashed logily into water. Van Huysen threw up a window in the bulkhead which separated the cabin from the hold and shouted, 'Dumkopf! How many times do I tell you to take those launchings slowly?'

'Sorry, Boss,' Jimmie answered. 'I missed it.'

'You keep your eyes peeled, or I get me a new crocker!' He slammed the port. Jimmie glanced around and gave the other clients a sly wink. He had his hands full; the marsh they were traversing looked like solid ground, so heavily was it overgrown with rank vegetation. The crocodile now functioned as a boat, the broad flanges of the treads acting as paddle wheels. The wedge-shaped prow pushed shrubs and marsh grass aside, air struck and ground down small trees. Occasionally the lugs would bite into the mud of a shoal bottom, and, crawling over a bar, return temporarily to the status of a land vehicle. Jimmie's slender, nervous hands moved constantly over the controls, avoiding large trees and continually seeking the easiest, most nearly direct route, while he split his attention between the terrain and the craft's compass.

Presently the conversation lagged and one of the ranch hands started to sing. He had a passable tenor voice and was soon joined by others. Wingate found himself singing the choruses as fast as he learned them. They sang Pay Book and Since the Pusher Met My Cousin and a mournful thing called They Found Him in the Bush. But this was followed by a light number, The Night the Rain Stopped, which seemed to have an endless string of verses recounting various unlikely happenings which occurred on that occasion. ('The Squeezer bought a round-a-drinks -')

Jimmie drew applause and enthusiastic support in the choruses with a ditty entitled That Redheaded Venusburg Gal, but Wingate considered it inexcusably vulgar. He did not have time to dwell on the matter; it was followed by a song which drove it out of his mind.

The tenor started it, slowly and softly. The others sang the refrains while he rested-all but Wingate; he was silent and thoughtful throughout. In the triplet of the second verse the tenor dropped out and the others sang in his place.

'Oh, you stamp your paper and you sign your name, ('Come away! Come away!)
'They pay your bounty and you drown your shame.
('Rue the day! Rue the day!)
'They land you down at Ellis Isle and put you in a pen;
'There you see what happens to the Six-Year men-'They haven't paid their bounty and they sign 'em up again!
('Here to stay! Here to stay!)
'But me I'll save my bounty and a ticket on the ship, ('So you say! So you say!)
'And then you'll see me leavin' on the very next trip. ('Come the day! Come the day!)
'Oh, we've heard that kinda story just a thousand times and one.
'Now we wouldn't say you're lyin' but we'd like to see it done.
'We'll see you next at Venusburg apayin' for your fun! And you'll never meet your bounty on this hitch!

('Come away!')

It left Wingate with a feeling of depression not entirely accounted for by the tepid drizzle, the unappetizing landscape, nor by the blanket of pale mist which is the invariable Venerian substitute for the open sky. He withdrew to one corner of the hold and kept to himself, until, much later, Jimmie shouted, 'Lights ahead!'

Wingate leaned out and peered eagerly towards his new home.

Four weeks and no word from Sam Houston Jones. Venus had turned once on its axis, the fortnight long Venerian 'winter' had given way to an equally short 'summer'-indistinguishable from 'winter' except that the rain was a trifle heavier and a little hotter-and now it was 'winter' again. Van Huysen's ranch, being near the pole, was, like most of the tenable area of Venus, never in darkness. The miles-thick, ever present layer of clouds tempered the light of the low-hanging sun during the long day, and, equally, held the heat and diffused the light from a sun just below the horizon to produce a continuing twilight during the two-week periods which were officially 'night', or 'winter'.

Four weeks and no word. Four weeks and no sun, no moon, no stars, no dawn. No clean crisp breath of morning air, no life-quickening beat of noonday sun, no welcome evening shadows, nothing, nothing at all to distinguish one sultry, sticky hour from the next but the treadmill routine of sleep and work and food and sleep again-nothing but the gathering ache in his heart for the cool blue skies of Terra.

He had acceded to the invariable custom that new men should provide a celebration for the other clients and had signed the Squeezer's chits to obtain happywater-rhira-for the purpose-to discover, when first he signed the pay book, that his gesture of fellowship had cost him another four months of delay before he could legally quit his 'job'. Thereupon he had resolved never again to sign a chit, had foresworn the prospect of brief holidays at Venusburg, had promised himself to save every possible credit against his bounty and transportation liens.

Whereupon he discovered that the mild alcoholoid drink was neither a vice nor a luxury, but a necessity, as necessary to human life on Venus as the ultraviolet factor present in all colonial illuminating systems. it produces, not drunkenness, but lightness of heart, freedom from worry, and without it he could not get to sleep. Three nights of self-recrimination and fretting, three days of fatigue-drugged uselessness under the unfriendly eye of the Pusher, and he had signed for his bottle with the rest, even though dully aware that the price of the bottle had washed out more than half of the day's microscopic progress toward freedom.

Nor had he been assigned to radio operation. Van Huysen had an operator. Wingate, although listed on the books as standby operator, went to the swamps with the rest. He discovered on rereading his contract a clause which permitted his patron to do this, and he admitted with half his mind-the detached judicial and legalistic half-that the clause was reasonable and proper, not inequitable.

He went to the swamps. He learned to wheedle and bully the little, mild amphibian people into harvesting the bulbous underwater growth of Hyacinthus veneris johnsoni-Venus swamproot-and to bribe the co-operation of their matriarchs with promises of bonuses in the form of 'thigarek', a term which meant not only cigarette, but tobacco in any form, the staple medium in trade when dealing with the natives.

He took his turn in the chopping sheds and learned, clumsily and slowly, to cut and strip the spongy outer husk from the pea-sized kernel which alone had commercial value and which must be removed intact, without scratch or bruise. The juice from the pods made his hands raw and the odor made him cough and stung his eyes, but he enjoyed it more than the work in the marshes, for it threw him into the company of the female labor clients. Women were quicker at the work than men and their smaller fingers more dextrous in removing the valuable, easily damaged capsule. Men were used for such work only when accumulated crops required extra help.

He learned his new trade from a motherly old person whom the other women addressed as Hazel. She talked as she worked, her gnarled old hands moving steadily and without apparent direction or skill. He could close his eyes and imagine that he was back on Earth and a boy again, hanging around his grandmother's kitchen while she shelled peas and rambled on. 'Don't you fret yourself, boy,' Hazel told him. 'Do your work and shame the devil. There's a great day coming.'

'What kind of great day, Hazel?'

'The day when the Angels of the Lord will rise up and smite the powers of evil. The day when the Prince of Darkness will be cast down into the pit and the Prophet shall reign over the children of Heaven. So don't you worry; it doesn't matter whether you are here or back home when the great day comes; the only thing that matters is your state of grace.'

'Are you sure we will live long enough to see the day?'

She glanced around, then leaned over confidentially. 'The day is almost upon us. Even now the Prophet moves up and down the land gathering his forces. Out of the clean farm country of the Mississippi Valley there comes the Man, known in this world'-she lowered her voice still more-'as Nehemiah Scudder!'

Wingate hoped that his start of surprise and amusement did not show externally. He recalled the name. It was that of a pipsqueak, backwoods evangelist, an unimportant nuisance back on Earth, but the butt of an occasional guying news story, but a man of no possible consequence.

The chopping shed Pusher moved up to their bench. 'Keep your eyes on your work, you! You're way behind now.' Wingate hastened to comply, but Hazel came to his aid.

'You leave him be, Joe Tompson. It takes time to learn chopping.'

'Okay, Mom,' answered the Pusher with a grin, 'but keep him pluggin'. See?'

'I will. You worry about the rest of the shed. This bench'll have its quota.' Wingate had been docked two days running for spoilage. Hazel was lending him poundage now and the Pusher knew it, but everybody liked her, even pushers, who are reputed to like no one, not even themselves.

Wingate stood just outside the gate of the bachelors' compound. There was yet fifteen minutes before lock-up roll call; he had walked out in a subconscious attempt to rid himself of the pervading feeling of claustrophobia which he had had throughout his stay. The attempt was futile; there was no 'outdoorness' about the outdoors on Venus, the bush crowded the clearing in on itself, the leaden misty sky pressed down on his head, and the steamy heat sat on his bare chest. Still, it was better than the bunkroom in spite of the dehydrators.

He had not yet obtained his evening ration of rhira and felt, consequently, nervous and despondent, yet residual self-respect caused him to cherish a few minutes clear thinking before he gave in to cheerful soporific. It's getting me, he thought, in a few more months I'll be taking every chance to get to Venusburg, or worse yet, signing a chit for married quarters and condemning myself and my kids to a life-sentence. When he first arrived the women clients, with their uniformly dull minds and usually commonplace faces, had seemed entirely unattractive. Now, he realized with dismay, he was no longer so fussy. Why, he was even beginning to lisp, as the other clients did, in unconscious imitation of the amphibians.

Early, he had observed that the clients could be divided roughly into two categories, the child of nature and the broken men. The first were those of little imagination and simple standards. In all probability they had known nothing better back on Earth; they saw in the colonial culture, not slavery, but freedom from responsibility, security, and an occasional spree. The others were the broken men, the outcasts, they who had once been somebody, but, through some defect of character, or some accident, had lost their places in society. Perhaps the judge had said, 'Sentence suspended if you ship for the colonies.'

He realized with sudden panic that his own status was crystallizing; he was becoming one of the broken men. His background on Earth was becoming dim in his mind; he had put off for the last three days the labor of writing another letter to Jones; he had spent all the last shift rationalizing the necessity for taking a couple of days holiday at Venusburg. Face it, son, face it, he told himself. You're slipping, you're letting your mind relax into slave psychology. You've unloaded the problem of getting out of this mess onto Jones - how do you know he can help you? For all you know he may be dead. Out of the dimness of his memory he recaptured a phrase which he had read somewhere, some philosopher of history: 'No slave is ever freed, save he free himself.'

All right, all right-pull up your socks, old son. Take a brace. No more rhira-no, that wasn't practical; a man had to have sleep. Very well, then, no rhira until lights-out, keep your mind clear in the evenings and plan. Keep your eyes open, find out all you can, cultivate friendships, and watch for a chance.

Through the gloom he saw a human figure approaching the gate of the compound. As it approached he saw that it was a woman and supposed it to be one of the female clients. She came closer, he saw that he was mistaken. It was Annek van Huysen, daughter of the patron.

She was a husky, overgrown blond girl with unhappy eyes. He had seen her many times, watching the clients as they returned from their labor, or wandering alone around the ranch clearing. She was neither unsightly, nor in anywise attractive; her heavy adolescent figure needed more to flatter it than the harness which all colonists wore as the maximum tolerable garment.

She stopped before him, and, unzipping the pouch at her waist which served in lieu of pockets, took out a package of cigarettes. 'I found this back there. Did you lose it?'

He knew that she lied; she had picked up nothing since she had come into sight. And the brand was one smoked on Earth and by patrons; no client could afford such. What was she up to?

He noted the eagerness in her face and the rapidity of her breathing, and realized, with confusion, that this girl was trying indirectly to make him a present. Why?

Wingate was not particularly conceited about his own physical beauty, or charm, nor had he any reason to be. But what he had not realized was that among the common run of the clients he stood out like a cock pheasant in a barnyard. But that Annek found him pleasing he was forced to admit; there could be no other explanation for her trumped-up story and her pathetic little present.

His first impulse was to snub her. He wanted nothing of her and resented the invasion of his privacy, and he was vaguely aware that the situation could be awkward, even dangerous to him, involving, as it did, violations of custom which jeopardized the whole social and economic structure. From the viewpoint of the patrons, labor clients were almost as much beyond the pale as the amphibians. A liaison between a labor client and one of the womenfolk of the patrons could easily wake up old Judge Lynch.

But he had not the heart to be brusque with her. He could see the dumb adoration in her eyes; it would have required cold, heartlessness to have repulsed her. Besides, there was nothing coy or provocative in her attitude; her manner was naive, almost childlike in its unsophistication. He recalled his determination to make friends; here was friendship offered, a dangerous friendship, but one which might prove useful in Winning free.

He felt a momentary wave of shame that he should be weighing the potential usefulness of this defenseless child, but he suppressed it by affirming to himself that he would do her no harm, and, anyhow, there was the old saw about the vindictiveness of a woman scorned.

'Why, perhaps I did lose it,' he evaded, then added, 'It's my favorite brand.'

'Is it?' she said happily. 'Then do take it, in any case.'

'Thank you. Will you smoke one with me? No, I guess that wouldn't do; your father would not want you to stay here that long.'

'Oh, he's busy with his accounts. I saw that before I came out,' she answered, and seemed unaware that she had given away her pitiful little deception. 'But go ahead, I-I hardly ever smoke.'

'Perhaps you prefer a meerschaum pipe, like your father.'

She laughed more than the poor witticism deserved. After that they talked aimlessly, both agreeing that the crop was coming in nicely, that the weather seemed a little cooler than last week, and that there was nothing like a little fresh air after supper.

'Do you ever walk for exercise after supper?' she asked.

He did not say that a long day in the swamps offered more than enough exercise, but agreed that he did.

'So do I,' she blurted out. 'Lots of times up near the water tower.'

He looked at her. 'Is that so? I'll remember that.' The signal for roll call gave him a welcome excuse to get away; three more minutes, he thought, and I would have had to make a date with her.

Wingate found himself called for swamp work the next day, the rush in the chopping sheds having abated. The crock lumbered and splashed its way around the long, meandering circuit, leaving one or more Earthmen at each supervision station. The car was down to four occupants, Wingate, Satchel, the Pusher, and Jimmie the Crocker, when the Pusher signaled for another stop. The flat, bright-eyed heads of amphibian natives broke water on three sides as soon as they were halted. 'All right, Satchel,' ordered the Pusher, 'this is your billet. Over the side.'

Satchel looked around. 'Where's my skiff?' The ranchers used small flat-bottomed duralumin skiffs in which to collect their day's harvest. There was not one left in the crock.

'You won't need one. You goin' to clean this field for planting.'

'That's okay. Still-I don't see nobody around, and I don't see no solid ground.' The skiffs had a double purpose; if a man were working out of contact with other Earthmen and at some distance from safe dry ground, the skiff became his life boat. If the crocodile which was supposed to collect him broke down, or if for any other reason he had need to sit down or lie down while on station, the skiff gave him a place to do so. The older clients told grim stories of men who had stood in eighteen inches of water for twenty-four, forty-eight, seventy-two hours, and then drowned horribly, out of their heads from sheer fatigue.

'There's dry ground right over there.' The Pusher waved his hand in the general direction of a clump of trees which lay perhaps a quarter of a mile away.

'Maybe so,' answered Satchel equably. 'Let's go see.' He grinned at Jimmie, who turned to the Pusher for instructions.

'Damnation! Don't argue with me! Get over the side!'

'Not,' said Satchel, 'until I've seen something better than two feet of slime to squat on in a pinch.'

The little water people had been following the argument with acute interest. They clucked and lisped in their own language; those who knew some pidgin English appeared to be giving newsy and undoubtedly distorted explanations of the events to their less sophisticated brethren. Fuming as he was, this seemed to add to the Pusher's anger.

'For the last time-get out there!'

'Well,' said Satchel, settling his gross frame more comfortably on the floorplates, 'I'm glad we've finished with that subject.'

Wingate was behind the Pusher. This circumstance probably saved Satchel Hartley at least a scalp wound, for he caught the arm of the Pusher as he struck. Hartley closed in at once; the three wrestled for a few seconds on the bottom of the craft.

Hartley sat on the Pusher's chest while Wingate pried a blackjack away from the clenched fingers of the Pusher's right fist. 'Glad you saw him reach for that, Hump,' Satchel acknowledged, 'or I'd be needin' an aspirin about now.'

'Yeah, I guess so,' Wingate answered, and threw the weapon as far as he could out into the marshy waste. Several of the amphibians streaked after it and dived. 'I guess you can let him up now.'

The Pusher said nothing to them as he brushed himself off, but he turned to the Crocker who had remained quietly in his saddle at the controls the whole time. 'Why the hell didn't you help me?'

'I supposed you could take care of yourself, Boss,' Jimmie answered noncommittally.

Wingate and Hartley finished that 'work period as helpers to labor clients already stationed. The Pusher had completely ignored them except for curt orders necessary to station them. But while they were washing up for supper back at the compound they received word to report to the Big House.

When they were ushered into the Patron's office they found the Pusher already there with his employer and wearing a self-satisfied smirk while Van Huysen's expression was black indeed.

'What's this I hear about you two?' he burst out. 'Refusing work. Jumping my foreman. By Joe, I show you a thing or two!'

'Just a moment, Patron van Huysen,' began Wingate quietly, suddenly at home in the atmosphere of a trial court, 'no one refused duty. Hartley simply protested doing dangerous work without reasonable safeguards. As for the fracas, your foreman attacked us; we acted simply in self-defense, and desisted as soon as we had disarmed him.'

The Pusher leaned over Van Huysen and whispered in his ear. The Patron looked more angry than before. 'You did this with natives watching. Natives! You know colonial law? I could send you to the mines for this.'

'No,' Wingate denied, 'your foreman did it in the presence of natives. Our role was passive and defensive throughout -'

'You call jumping my foreman peaceful? Now you listen to me-Your job here is to work. My foreman's job is to tell you where and how to work. He's not such a dummy as to lose me my investment in a man. He judges what work is dangerous, not you.' The Pusher whispered again to his chief. Van Huysen shook his head. The other persisted, but the Patron cut him off with a gesture, and turned back to the two labor clients.

'See here-I give every dog one bite, but not two. For you, no supper tonight and no rhira. Tomorrow we see how you behave.'

'But Patron van Huys -'

'That's all. Get to your quarters.'

At lights out Wingate found, on crawling into his bunk, that someone had hidden therein a food bar. He munched it gratefully in the dark and wondered who his friend could be. The food stayed the complaints of his stomach but was not sufficient, in the absence of rhira, to permit him to go to sleep. He lay there, staring into the oppressive blackness of the bunkroom and listening to the assorted irritating noises that men can make while sleeping, and considered his position. It had been bad enough but barely tolerable before; now, he was logically certain, it would be as near hell as a vindictive overseer could make it. He was prepared to believe, from what he had seen and the tales he had heard, that it would be very near indeed!

He had been nursing his troubles for perhaps an hour when he felt a hand touch his side. 'Hump! Hump!' came a whisper, 'come outside. Something's up.' It was Jimmie.

He felt his way cautiously through the stacks of bunks and slipped out the door after Jimmie. Satchel was already outside and with him a fourth figure.

It was Annek van Huysen. He wondered how she had been able to get into the locked compound. Her eyes were puffy, as if she had been crying.

Jimmie started to speak at once, in cautious, low tones. 'The kid tells us that I am scheduled to haul you two lugs back into Adonis tomorrow.'

'What for?'

'She doesn't know. But she's afraid it's to sell you South. That doesn't seem likely. The Old Man has never sold anyone South-but then nobody ever jumped his pusher before. I don't know.'

They wasted some minutes in fruitless discussion, then, after a bemused silence, Wingate asked Jimmie, 'Do you know where they keep the keys to the crock?'

'No. Why do y-'

'I could get them for you,' offered Annek eagerly.

'You can't drive a crock.'

'I've watched you for some weeks.'

'Well, suppose you can,' Jimmie continued to protest, 'suppose you run for it in the crock. You'd be lost in ten miles. If you weren't caught, you'd starve.'

Wingate shrugged. 'I'm not going to be sold South.'

'Nor am I,' Hartley added.

'Wait a minute.'

'Well, I don't see any bet-'

'Wait a minute,' Jimmie reiterated snappishly. 'Can't you see I'm trying to think'?'

The other three kept silent for several long moments. At last Jimmie said, 'Okay. Kid, you'd better run along and let us talk. The less you know about this the better for you.' Annek looked hurt, but complied docilely to the extent of withdrawing out of earshot. The three men conferred for some minutes. At last Wingate motioned for her to rejoin them.

'That's all, Annek,' he told her. 'Thanks a lot for everything you've done. We've figured a way out.' He stopped, and then said awkwardly, 'Well, good night.'

She looked up at him.

Wingate wondered what to do or say next. Finally he led her around the corner of the barracks and bade her good night again. He returned very quickly, looking shame-faced. They re-entered the barracks.

Patron van Huysen also was having trouble getting to sleep. He hated having to discipline his people. By damn, why couldn't they all be good boys and leave him in peace? Not but what there was precious little peace for a rancher these days. It cost more to make a crop than the crop fetched in Adonis-at least it did after the interest was paid.

He had turned his attention to his accounts after dinner that night to try to get the unpleasantness out of his mind, but he found it hard to concentrate on his figures. That man Wingate, now . . . he had bought him as much to keep him away from that slave driver Rigsbee as to get another hand. He had too much money invested in hands as it was in spite of his foreman always complaining about being short of labor. He would either have to sell some, or ask the bank to refinance the mortgage again.

Hands weren't worth their keep any more. You didn't get the kind of men on Venus that used to come when he was a boy. He bent over his books again. If the market went up even a little, the bank should be willing to discount his paper for a little more than last season. Maybe that would do it.

He had been interrupted by a visit from his daughter. Annek he was always glad to see, but this time what she had to say, what she finally blurted out. had only served to make him angry. She, preoccupied with her own thoughts, could not know that she hurt her father's heart, with a pain that was actually physical.

But that had settled the matter insofar as Wingate was concerned. He would get rid of the trouble-maker. Van Huysen ordered his daughter to bed with a roughness he had never before used on her.

Of course it was all his own fault, he told himself after he had gone to bed. A ranch on Venus was no place to raise a motherless girl. His Annekchen was almost a woman grown now; how was she to find a husband here in these outlands? What would

she do if he should die? She did not know it, but there would be nothing left, nothing, not even a ticket to Terra. No, she would not become a labor client's vrouw; no, not while there was a breath left in his old tired body.

Well, Wingate would have to go, and the one they called Satchel, too. But he would not sell them South. No, he had never done that to one of his people. He thought with distaste of the great, factory like plantations a few hundred miles further from the pole, where the temperature was always twenty to thirty degrees higher than it was in his marshes and mortality among labor clients was a standard item in cost accounting. No, he would take them in and trade them at the assignment station; what happened to them at auction there would be none of his business. But he would not sell them directly South.

That gave him an idea; he did a little computing in his head and estimated that he might be able to get enough credit on the two unexpired labor contracts to buy Annek a ticket to Earth. He was quite sure that his sister would take her in, reasonably sure anyway, even though she had quarreled with him over marrying Annek's mother. He could send her a little money from time to time. And perhaps she could learn to be a secretary, or one of those other fine jobs a girl could get on Earth.

But what would the ranch be like without Annekchen?

He was so immersed in his own troubles that he did not hear his daughter slip out of her room and go outside.

Wingate and Hartley tried to appear surprised when they were left behind at muster for work. Jimmie was told to report to the Big House; they saw him a few minutes later, backing the big Remington out of its shed. He picked them up, then trundled back to the Big House and waited for the Patron to appear. Van Huysen came out shortly and climbed into his cabin with neither word nor look for anyone.

The, crocodile started toward Adonis, lumbering a steady ten miles an hour. Wingate and Satchel conversed in subdued voices, waited, and wondered. After an interminable time the crock stopped. The cabin window flew open. 'What's the matter?' Van Huysen demanded. 'Your engine acting up?'

Jimmie grinned at him. 'No, I stopped it.'

'For what?'

'Better come up here and find out.'

'By damn, I do!' The window slammed; presently Van Huysen reappeared, warping his ponderous bulk around the side of the little cabin. 'Now what this monkeyshines?'

'Better get out and walk, Patron. This is the end of the line.' Van Huysen seemed to have no remark suitable in answer, but his expression spoke for him.

'No, I mean it,' Jimmie went on. 'This is the end 'of the line for you. I've stuck to solid ground the whole way, so you could walk back. You'll be able to follow the trail I broke; you ought to be able to make it in three or four hours, fat as you are.'

The Patron looked from Jimmie to the others. Wingate and Satchel closed in slightly, eyes unfriendly. 'Better get goin', Fatty,' Satchel said softly, 'before you get chucked out headfirst.'

Van Huysen pressed back against the rail of the crock, his hands gripping it. 'I won't get out of my own crock,' he said tightly.

Satchel spat in the palm of one hand, then rubbed the two together. 'Okay, Hump. He asked for it -'

'Just a second.' Wingate addressed Van Huysen, 'See here, Patron van Huysen-we don't want to rough you up unless we have to. But there are three of us and we are determined. Better climb out quietly.'

The older man's face was dripping with sweat which was not entirely due to the muggy heat. His chest heaved, he seemed about to defy them. Then something went out inside him. His figure sagged, the defiant lines in his face gave way to a whipped expression which was not good to see.

A moment later he climbed quietly, listlessly, over the side into the ankle-deep mud and stood there, stooped, his legs slightly bent at the knees.

When they were out of sight of the place where they had dropped their patron Jimmie turned the crock off in a new direction. 'Do you suppose he'll make it?' asked Wingate.

'Who?' asked Jimmie. 'Van Huysen? Oh, sure, he'll make it-probably.' He was very busy now with his driving; the crock crawled down a slope and lunged into navigable water. In a few minutes the marsh grass gave way to open water. Wingate saw that they were in a broad lake whose further shores were lost in the mist. Jimmie set a compass course.

The far shore was no more than a strand; it concealed an overgrown bayou. Jimmie followed it a short distance, stopped the crock, and said, 'This must be just about the place,' in an uncertain voice. He dug under the tarpaulin folded up in one corner of the empty hold and drew out a broad flat paddle. He took this to the rail, and, leaning out, he smacked the water loudly with the blade: Slap! . . . slap, slap. . . . Slap!

He waited.

The flat head of an amphibian broke water near the side; it studied Jimmie with bright, merry eyes. 'Hello,' said Jimmie.

it answered in its own language. Jimmie replied in the same tongue, stretching his mouth to reproduce the uncouth clucking syllables. The native listened, then slid underwater again.

He-or, more probably, she-was back in a few minutes, another with her. 'Thigarek?' the newcomer said hopefully.

'Thigarek when we get there, old girl,' Jimmie temporized. 'Here . . . climb aboard.' He held out a hand, which the native accepted and wriggled gracefully inboard. It perched its unhuman, yet oddly pleasing, little figure on the rail near the driver's seat. Jimmie got the car underway.

How long they were guided by their little pilot Wingate did not know, as the timepiece on the control panel was out of order, but his stomach informed him that it was too long. He rummaged through the cabin and dug out an iron ration which he shared with Satchel and Jimmie. He offered some to the native, but she smelled at it and drew her head away.

Shortly after that there was a sharp hissing noise and a column of steam rose up ten yards ahead of them. Jimmie halted the crock at once. 'Cease firing!' he called out. 'It's just us chickens.'

'Who are you?' came a disembodied voice.

'Fellow travelers.'

'Climb out where we can see you.'

'Okay.'

The native poked Jimmie in the ribs. 'Thigarek,' she stated positively.

'Huh? Oh, sure.' He parceled out trade tobacco until she acknowledged the total, then added one more package for good will. She withdrew a piece of string from her left cheek pouch, tied up her pay, and slid over the side. They saw her swimming away, her prize carried high out of the water.

'Hurry up and show yourself!'

'Coming!' They climbed out into waist-deep water and advanced holding their hands overhead. A squad of four broke cover and looked them over, their weapons lowered but ready. The leader searched their harness pouches and sent one of his men on to look over the crocodile.

'You keep a close watch,' remarked Wingate.

The leader glanced at him. 'Yes,' he said, 'and no. The little people told us you were coming. They're worth all the watch dogs that were ever littered.'

They got underway again with one of the scouting party driving. Their captors were not unfriendly but not disposed to talk. 'Wait till you see the Governor,' they said.

Their destination turned out to be a wide stretch of moderately high ground. Wingate was amazed at the number of buildings and the numerous population. 'How in the world can they keep a place like this a secret?' he asked Jimmie.

'If the state of Texas were covered with fog and had only the population of Waukegan, Illinois, you could hide quite a lot of things.'

'But wouldn't it show on a map?'

'How well mapped do you think Venus is? Don't be a dope.' On the basis of the few words he had had with Jimmie beforehand Wingate had expected no more than a camp where fugitive clients lurked in the bush while squeezing a precarious living from the country. What he found was a culture and a government. True, it was a rough frontier culture and a simple government with few laws and an unwritten constitution, but a framework of customs was in actual operation and its gross offenders were punished-with no higher degree of injustice than one finds anywhere.

It surprised Humphrey Wingate that fugitive slaves, the scum of Earth, were able to develop an integrated society. It had surprised his ancestors that the transported criminals of Botany Bay should develop a high civilization in Australia. Not that Wingate found the phenomenon of Botany Bay surprising-that was history, and history is never surprising-after it happens.

The success of the colony was more credible to Wingate when he came to know more of the character of the Governor, who was also generalissimo, and administrator of the low and middle justice. (High justice was voted on by the whole community, a procedure that Wingate considered outrageously sloppy, but which seemed to satisfy the community.) As magistrate the Governor handed out decisions with a casual contempt for rules of evidence and legal theory that reminded Wingate of stories 'he had heard of the apocryphal Old Judge Bean. 'The Law West of Pecos', but again the people seemed to like it.

The great shortage of women in the community (men outnumbered them three to one) caused incidents which more than anything else required the decisions of the Governor. Here, Wingate was forced to admit, was a situation in which traditional custom

would have been nothing but a source of trouble; 'he admired the shrewd common sense and understanding of human nature with which the Governor sorted out conflicting strong human passions and suggested modus operandi for getting along together. A man who could maintain a working degree of peace in such matters did not need a legal education.

The Governor held office by election and was advised by an elected council. It was Wingate's private opinion that the Governor would have risen to the top in any society. The man had boundless energy, great gusto for living, a ready thunderous laugh- and the courage and capacity for making decisions. He was a 'natural'.

The three runaways were given a couple of weeks in which to get their bearings and find some job in which they could make themselves useful and self-supporting. Jimmie stayed with his crock, now confiscated for the community, but which still required a driver. There were other crockers available who probably would have liked the job, but there was tacit consent that the man who brought it in should drive it, if he wished. Satchel found a billet in the fields, doing much the same work he had done for Van Huysen. He told Wingate that he was 'actually having to work harder; nevertheless he liked it better because the conditions were, as he put it. 'looser'.

Wingate detested the idea of going back to agricultural work. He had no rational excuse, it was simply that he hated it. His radio experience at last stood him in good stead. The community had a jury-rigged, low-power radio on which a constant listening watch was kept, but which was rarely used for transmission because of the danger of detection. Earlier runaway slave camps had been wiped out by the company police through careless use of radio. Nowadays they hardly dared use it, except in extreme emergency.

But they needed radio. The grapevine telegraph maintained through the somewhat slap-happy help of the little people enabled them to keep some contact with the other fugitive communities with which they were loosely confederated, but it was not really fast, and. any but the simplest of messages were distorted out of recognition.

Wingate was assigned to the community radio when it was discovered that he had appropriate technical knowledge. The previous operator had been lost in the bush. His opposite number was a pleasant old codger, known as Doc, who could listen for signals but who knew nothing of upkeep and repair.

Wingate threw himself into the job of overhauling the antiquated installation. The problems presented by lack of equipment, the necessity of 'making do', gave him a degree of happiness he had not known since he was a boy, but was not aware of it.

He was intrigued by the problem of safety in radio communication. An idea, derived from some account of the pioneer days in radio, gave him a lead. His installation, like all others, communicated by frequency modulation. Somewhere he had seen a diagram for a totally obsolete type of transmitter, an amplitude modulator. He did not have much to go on, but he worked out a circuit which he believed would oscillate in that fashion and which could be hooked up from the gear at hand.

He asked the Governor for permission to attempt to build it. 'Why not? Why not?' the Governor roared at him. 'I haven't the slightest idea what you are talking about son, but if you think you can build a radio that the company can't detect, go right ahead. You don't have to ask me; it's your pigeon.'

'I'll have to put the station out of commission for sending.'

'Why not?'

The problem had more knots in it than he had thought. But he labored at it with the clumsy but willing assistance of Doc. His first hookup failed; his forty-third attempt five weeks later worked. Doc, stationed some miles out in the bush, reported himself able to hear the broadcast via a small receiver constructed for the purpose, whereas Wingate picked up nothing whatsoever on the conventional receiver located in the same room with the experimental transmitter.

In the meantime he worked on his book.

Why he was writing a book he could not have told you. Back on Earth it could have been termed a political pamphlet against the colonial system. Here there was no one to convince of his thesis, nor had he any expectation of ever being able to present it to a reading public. Venus was his home. He knew that there was no chance for him ever to return: the only way lay through Adonis, and there, waiting for him, were warrants for half the crimes in the calendar, contract-jumping, theft, kidnapping, criminal abandonment, conspiracy, subverting government. If the company police ever laid hands on him, they would jail him and lose the key.

No, the book arose, not from any expectation of publication, but from a half-subconscious need to arrange his thoughts. He had suffered a complete upsetting of all the evaluations by which he had lived; for his mental health it was necessary that he formulate new ones. It was natural to his orderly, if somewhat unimaginative, mind that he set his reasons and conclusions forth in writing.

Somewhat diffidently he offered the manuscript to Doc. He had learned that the nickname title had derived from the man's former occupation on Earth; he had been a professor of economics and philosophy in one of the smaller universities. Doc had even offered a partial explanation of his presence on Venus. 'A little matter involving one of my women students,' he confided. 'My wife took an unsympathetic view of the matter and so did the board of regents. The board had long considered my opinions a little too radical.'

'Were they?'

'Heavens, no! I was a rockbound conservative. But I had an unfortunate tendency to express conservative principles in realistic rather than allegorical language.'

'I suppose you're a radical now.'

Doc's eyebrows lifted slightly. 'Not at all. Radical and conservative are terms of emotional attitudes, not sociological opinions.'

Doc accepted the manuscript, read it through, and returned it without comment. But Wingate pressed him for an opinion. 'Well, my boy, if you insist-'

'I do.'

'I would say that you have fallen into the commonest fallacy of all in dealing with social and economic subjects-the "devil theory".'

'Huh?'

'You have attributed conditions of villainy that simply result from stupidity. Colonial slavery is nothing new; it is the inevitable result of imperial expansion, the automatic result of an antiquated financial structure -,

'I pointed out the part the banks played in my book.'

'No, no, no! You think bankers are scoundrels. They are not. Nor are company officials, nor patrons, nor the governing classes back on Earth. Men are constrained by necessity and build up rationalizations to account for their acts. It is not even cupidity.

Slavery is economically unsound, nonproductive, but men drift into it whenever the circumstances compel it. A different financial system-but that's another story.'

'I still think it's rooted in human cussedness,' Wingate said stubbornly.

'Not cussedness-simply stupidity. I can't prove it to you, but you will learn.'

The success of the 'silent radio' caused the Governor to send Wingate on a long swing around the other camps of the free federation to help them rig new equipment and to teach them how to use it. He spent four hard-working and soul-satisfying weeks, and finished with the warm knowledge that he had done more to consolidate the position of the free men against their enemies than could be done by winning a pitched battle.

When he returned to his home community, he found Sam Houston Jones waiting there.

Wingate broke into a run. 'Sam!' he shouted. 'Sam! Sam!' He grabbed his hand, pounded him on the back, and yelled at him the affectionate insults that sentimental men use in attempting to cover up their weakness. 'Sam, you old scoundrel! When did you get here? How did you escape? And how the devil did you manage to come all the way from South Pole? Were you transferred before you escaped?'

'Howdy, Hump,' said Sam. 'Now one at a time, and not so fast.'

But Wingate bubbled on. 'My, but it's good to see your ugly face, fellow. And am 1 glad you came here-this is a great place. We've got the most up-and-coming little state in the Whole federation. You'll like it. They're a great bunch -'

'What are you?' Jones asked, eyeing him. 'President of the local chamber of commerce?'

Wingate looked at him, and then laughed. 'I get it. But seriously, you will like it. Of course, it's a lot different from what you were used to back on Earth-but that's all past and done with. No use crying over spilt milk, eh?'

'Wait a minute. You are under a misapprehension, Hump. Listen. I'm not an escaped slave. I'm here to take you back.'

Wingate opened his mouth, closed it, then opened it again. 'But Sam,' he said, 'that's impossible. You don't know.'

'I think I do.'

'But you don't. There's no going back for me. If I did, I'd have to face trial, and they've got me dead to rights. Even if I threw myself on the mercy of the court and managed to get off with a light sentence, it would be twenty years before I'd be a free man. No, Sam, it's impossible. You don't know the things I'm charged with.'

'I don't, eh? It's cost me a nice piece of change to clear them up.'

'Huh?'

'I know how you escaped. I know you stole a crock and kidnapped your patron and got two other clients to run with you. It took my best blarney and plenty of folding money to fix it. So help me, Hump-Why didn't you pull something mild, like murder, or rape, or robbing a post office?'

'Well, now, Sam-I didn't do any of those things to cause you trouble. I had counted you out of my calculations. I was on my own. I'm sorry about the money.'

'Forget it. Money isn't an item with me. I'm filthy with the stuff. You know that. It comes from exercising care in the choice of parents. I was just pulling your leg and it came off in my hand.'

'Okay. Sorry.' Wingate's grin was a little forced. Nobody likes charity. 'But tell me what happened. I'm still in the dark.'

'Right.' Jones had been as much surprised and distressed at being separated from Wingate on grounding as Wingate had been. But there had been nothing for him to do about it until he received assistance from Earth. He had spent long weeks as a metal worker at South Pole, waiting and wondering why 'his sister did not answer his call for help. He had written letters to her to supplement his first radiogram, that being the only type of communication he could afford, but the days crept past with no answer.

When a message did arrive from her the mystery was cleared up. She had not received his radio to Earth promptly, because she, too, was aboard the Evening Star-in the first class cabin, traveling, as was her custom, in a stateroom listed under her maid's name. 'It was the family habit of avoiding publicity that stymied us,' Jones explained. 'If I hadn't sent the radio to her rather than the family lawyers, or if she had been known by name to the purser, we would have gotten together the first day.' The message had not been relayed to her on Venus because the bright planet had by that time crawled to superior opposition on the far side of the sun from the Earth. For a matter of sixty earth days there was no communication, Earth to Venus. The message had rested, recorded but still scrambled, in the hands of the family firm, until she could be reached.

When she received it, she started a small tornado. Jones had been released, the liens against his contract paid, and ample credit posted to his name on Venus, in less than twenty-four hours. 'So that was that,' concluded Jones, 'except that I've got to explain to big sister when I get home just how I got into this mess. She'll burn my ears.'

Jones had charted a rocket for North Pole and had gotten on Wingate's trail at once. 'If you had held on one more day, I would have picked you up. We retrieved your ex-patron about a mile from his gates.'

'So the old villain made it. I'm glad of that.'

'And a good job, too. If he hadn't I might never have been able ~o square you. He was pretty well done in, and his heart was kicking up plenty. Do you know that abandonment is a capital offence on this planet-with a mandatory death sentence if the victim dies?'

Wingate nodded. 'Yeah, I know. Not that I ever heard of a patron being gassed for it, if the corpse was a client. But that's beside the point. Go ahead.'

'Well, he was plenty sore. I don't blame him, though I don't blame you, either. Nobody wants to be sold South, and I gather that was what you expected. Well, I paid him for his crock, and I paid him for your contract-take a look at me, I'm your new owner!-and I paid for the contracts of your two friends as well. Still he wasn't satisfied. I finally had to throw in a first-class passage for his daughter back to Earth, and promise to find her a job. She's a big dumb ox, but I guess the family can stand another retainer. Anyhow, old son, you're a free man. The only remaining question is whether or not the Governor will let us leave here. It seems it's not done.'

'No, that's a point. Which reminds me-how did you locate the place?'

'A spot of detective work too long to go into now. That's what took me so long. Slaves don't like to talk. Anyhow, we've a date to talk to the Governor tomorrow.'

Wingate took a long time to get to sleep. After his first burst of jubilation he began to wonder. Did he want to go back? To return to the law, to citing technicalities in the interest of whichever side employed him, to meaningless social engagements, to the empty, sterile, bunkum-fed life of the fat and prosperous class he had moved among and served-did he want that, he, who had fought and worked with men? It seemed to him that his anachronistic little 'invention' in radio had been of more worth than all he had ever done on Earth.

Then he recalled his book.

Perhaps he could get it published. Perhaps he could expose this disgraceful, inhuman system which sold men into legal slavery. He was really wide awake now. There was a thing to do! That was his job-to go back to Earth and plead the cause of the colonists. Maybe there was destiny that shapes men's lives after all. He was just the man to do it, the right social background, the proper training. He could make himself heard.

He fell asleep, and dreamt of cool, dry breezes, of clear blue sky. Of moonlight...

Satchel and Jimmie decided to stay, even though Jones had been able to fix it up with the Governor. 'It's like this,' said Satchel. 'There's nothing for us back on Earth, or we wouldn't have shipped in the first place. And you can't undertake to support a couple of deadheads. And this isn't such a bad place. It's going to be something someday. We'll stay and grow up with it.'

They handled the crock which carried Jones and Wingate to Adonis. There was no hazard in it, as Jones was now officially their patron. What the authorities did not know they could not act on. The crock returned to the refugee community loaded with a cargo which Jones insisted on calling their ransom. As a matter of fact, the opportunity to send an agent to obtain badly needed supplies-one who could do so safely and without arousing the suspicions of the company authorities-had been the determining factor in the Governor's unprecedented decision to risk compromising the secrets of his constituency. He had been frankly not interested in Wingate's plans to agitate for the abolishment of the slave trade.

Saying good-bye to Satchel and Jimmie was something Wingate found embarrassing and unexpectedly depressing.

For the first two weeks after grounding on Earth both Wingate and Jones were too busy to see much of each other. Wingate had gotten his manuscript in shape on the return trip and had spent the time getting acquainted with the waiting rooms of publishers. Only one had shown any interest beyond a form letter of rejection.

'I'm sorry, old man,' that one had told him. 'I'd like to publish your book, in spite of its controversial nature, if it stood any chance at all of success. But it doesn't. Frankly, it has no literary merit whatsoever. I would as soon read a brief.'

'I think I understand,' Wingate answered sullenly. 'A big publishing house can't afford to print anything which might offend the powers-that-be.'

The publisher took his cigar from his mouth and looked at the younger man before replying. 'I suppose I should resent that,' he said quietly, 'but I won't. That's a popular misconception. The powers-that-be, as you call them, do not resort to suppression in this country. We publish what the public will buy. We're in business for that purpose.

'I was about to suggest, if you will listen, a means of making your book saleable. You need a collaborator, somebody that knows the writing game and can put some guts in it.'

Jones called the day that Wingate got his revised manuscript back from his ghost writer. 'Listen to this, Sam,' he pleaded. 'Look, what the dirty so-and-so has done to my book. Look.

- I heard again the crack of the overseer's whip. The frail body of my mate shook under the lash. He gave one cough and slid slowly under the waist-deep water, dragged down by his chains." Honest, Sam, did you ever see such drivel? And look at the new title: "I Was a Slave on Venus". It sounds like a confession magazine.'

Jones nodded without replying. 'And listen to this,' Wingate went on, '"-crowded like cattle in the enclosure, their naked bodies gleaming with sweat, the women slaves shrank from the-"Oh, hell, I can't go on!'

'Well, they did wear nothing but harness.'

'Yes, yes-but that has nothing to do with the case. Venus costume is a necessary concomitant of the weather. There's no excuse to leer about it. He's turned my book into a damned sex show. And he had the nerve to defend his actions. He claimed that social pamphleteering is dependent on extravagant language.'

'Well, maybe he's got something. Gulliver's Travels certainly has some racy passages, and the whipping scenes in Uncle Tom's Cabin aren't anything to hand a kid to read. Not to mention Grapes of Wrath.'

'Well, I'm damned if I'll resort to that kind of cheap sensationalism. I've got a perfectly straightforward case that anyone can understand.'

'Have you now?' Jones took his pipe out of his mouth. 'I've been wondering how long it would take you to get your eyes opened. What is your case? It's nothing new; it happened in the Old South, it happened again in California, in Mexico, in Australia, in South Africa. Why? Because in any expanding free-enterprise economy which does not have a money system designed to fit its requirements the use of mother-country capital to develop the colony inevitably results in subsistence level wages at home and slave labor in the colonies. The rich get richer and the poor get poorer, and all the good will in the world on the part of the so-called ruling classes won't change it, because the basic problem is one requiring scientific analysis and a mathematical mind. Do you think you can explain those issues to the general public?'

'I can try.'

'How far did I get when I tried to explain them to you-before you had seen the results? And you are a smart hombre. No, Hump, these things are too difficult to explain to people and too abstract to interest them. You spoke before a women's club the other day, didn't you?'

'Yes.'

'How did you make out?'

'Well. . . the chairwoman called me up beforehand and asked me to hold my talk down to ten minutes, as their national president was to be there and they would be crowded for time.'

'Hmm . . . you see where your great social message rates in competition. But never mind. Ten minutes is long enough to explain the issue to a person if they have the capacity to understand it. Did you sell anybody?'

'Well.. . I'm not sure.'

'You're darn tootin' you're not sure. Maybe they clapped for you but how many of them came up afterwards and wanted to sign checks? No, Hump, sweet reasonableness won't get you anywhere in this racket. To make yourself 'heard you have to be a demagogue, or a rabble-rousing political preacher like this fellow Nehemiah Scudder. We're going merrily to hell and it won't stop until it winds up in a crash.'

'But-Oh, the devil! What can we do about it?'

'Nothing. Things are bound to get a whole lot worse before they can get any better. Let's have a drink.'

The Menace from Earth

My name is Holly Jones and I'm fifteen. I'm very intelligent but it doesn't show, because I look like an underdone angel. Insipid.

I was born right here in Luna City, which seems to surprise Earthside types. Actually, I'm third generation; my grandparents pioneered in Site One, where the Memorial is. I live with my parents in Artemis Apartments, the new co-op in Pressure Five, eight hundred feet down near City Hall. But I'm not there much; I'm too busy.

Mornings I attend Tech High and afternoons I study or go flying with Jeff Hardesty -- he's my partner -- or whenever a tourist ship is in I guide groundhogs. This day the Gripsholm grounded at noon so I went straight from school to American Express.

The first gaggle of tourists was trickling in from Quarantine but I didn't push forward as Mr. Dorcas, the manager, knows I'm the best. Guiding is just temporary (I'm really a spaceship designer), but if you're doing a job you ought to do it well.

Mr. Dorcas spotted me. "Holly! Here, please. Miss Brentwood, Holly Jones will be your guide."

"'Holly,'" she repeated. "What a quaint name. Are you really a guide, dear?"

I'm tolerant of groundhogs -- some of my best friends are from Earth. As Daddy says, being born on Luna is luck, not judgment, and most people Earthside are stuck there. After all, Jesus and Gautama Buddha and Dr. Einstein were all groundhogs.

But they can be irritating. If high school kids weren't guides, whom could they hire? "My license says so," I said briskly and looked her over the way she was looking me over.

Her face was sort of familiar and I thought perhaps I had seen her picture in those society things you see in Earthside magazines -- one of the rich playgirls we get too many of. She was almost loathsomely lovely. . . nylon skin, soft, wavy, silverblond hair, basic specs about 35-24-34 and enough this and that to make me feel like a matchstick drawing, a low intimate voice and everything necessary to make plainer females think about pacts with the Devil. But I did not feel apprehensive; she was a groundhog and groundhogs don't count.

"All city guides are girls," Mr. Dorcas explained. "Holly is very competent."

"Oh, I'm sure," she answered quickly and went into tourist routine number one: surprise that a guide was needed just to find her hotel, amazement at no taxicabs, same

for no porters, and raised eyebrows at the prospect of two girls walking alone through "an underground city."

Mr. Dorcas was patient, ending with: "Miss Brentwood, Luna City is the only metropolis in the Solar System where a woman is really safe -- no dark alleys, no deserted neighborhoods, no criminal element."

I didn't listen; I just held out my tariff card for Mr. Dorcas to stamp and picked up her bags. Guides shouldn't carry bags and most tourists are delighted to experience the fact that their thirty-pound allowance weighs only five pounds. But I wanted to get her moving.

We were in the tunnel outside and me with a foot on the slidebelt when she stopped. "I forgot! I want a city map."

"None available."

"Really?"

"There's only one. That's why you need a guide."

"But why don't they supply them? Or would that throw you guides out of work?"

See? "You think guiding is makework? Miss Brentwood, labor is so scarce they'd hire monkeys if they could."

"Then why not print maps?"

"Because Luna City isn't flat like--" I almost said, "--groundhog cities," but I caught myself.

"--like Earthside cities," I went on. "All you saw from space was the meteor shield. Underneath it spreads out and goes down for miles in a dozen pressure zones."

"Yes, I know, but why not a map for each level?"

Groundhogs always say, "Yes, I know, but--"

"I can show you the one city map. It's a stereo tank twenty feet high and even so all you see clearly are big things like the Hall of the Mountain King and hydroponics farms and the Bats' Cave."

"'The Bats' Cave,'" she repeated. "That's where they fly, isn't it?"

"Yes, that's where we fly."

"Oh, I want to see it!"

"OK. It first. . . or the city map?"

She decided to go to her hotel first. The regular route to the Zurich is to slide up the west through Gray's Tunnel past the Martian Embassy, get off at the Mormon Temple, and take a pressure lock down to Diana Boulevard. But I know all the shortcuts; we got off at Macy-Gimbel Upper to go down their personnel hoist. I thought she would enjoy it.

But when I told her to grab a hand grip as it dropped past her, she peered down the shaft and edged back. "You're joking."

I was about to take her back the regular way when a neighbor of ours came down the hoist. I said, "Hello, Mrs. Greenberg," and she called back, "Hi, Holly. How are your folks?"

Susie Greenberg is more than plump. She was hanging by one hand with young David tucked in her other arm and holding the _Daily Lunatic_, reading as she dropped. Miss Brentwood stared, bit her lip, and said, "How do I do it?"

I said, "Oh, use both hands; I'll take the bags." I tied the handles together with my hanky and went first.

She was shaking when we got to the bottom. "Goodness, Holly, how do you stand it? Don't you get homesick?"

Tourist question number six . . . I said, "I've been to Earth," and let it drop. Two years ago Mother made me visit my aunt in Omaha and I was _miserable_ -- hot and cold and dirty and beset by creepy-crawlies. I weighed a ton and I ached and my aunt was always chivvying me to go outdoors and exercise when all I wanted was to crawl into a tub and be quietly wretched. And I had hay fever. Probably you've never heard of hay fever -- you don't die but you wish you could.

I was supposed to go to a girls' boarding school but I phoned Daddy and told him I was desperate and he let me come home. What groundhogs can't understand is that they live in savagery. But groundhogs are groundhogs and loonies are loonies and never the twain shall meet.

Like all the best hotels the Zurich is in Pressure One on the west side so that it can have a view of Earth. I helped Miss Brentwood register with the roboclerk and found her room; it had its own port. She went straight to it, began staring at Earth and going _ooh!_ and _ahh!_

I glanced past her and saw that it was a few minutes past thirteen; sunset sliced straight down the tip of India -- early enough to snag another client. "Will that be all, Miss Brentwood?"

Instead of answering she said in an awed voice, "Holly, isn't that the most beautiful sight you ever saw?"

"It's nice," I agreed. The view on that side is monotonous except for Earth hanging in the sky -- but Earth is what tourists always look at even though they've just left it. Still, Earth is pretty. The changing weather is interesting if you don't have to be in it. Did you ever endure a summer in Omaha?

"It's gorgeous," she whispered.

"Sure," I agreed. "Do you want to go somewhere? Or will you sign my card?"

"What? Excuse me, I was daydreaming. No, not right now -- yes, I do! Holly, I want to go out _there_! I must! Is there time? How much longer will it be light?"

"Huh? It's two days to sunset."

She looked startled. "How quaint. Holly, can you get us space suits? I've got to go outside."

I didn't wince -- I'm used to tourist talk. I suppose a pressure suit looked like a space suit to them. I simply said, "We girls aren't licensed outside. But I can phone a friend."

Jeff Hardesty is my partner in spaceship designing, so I throw business his way. Jeff is eighteen and already in Goddard Institute, but I'm pushing hard to catch up so that we can set up offices for our firm: "Jones & Hardesty, Spaceship Engineers." I'm very bright in mathematics, which is everything in space engineering, so I'll get my degree pretty fast. Meanwhile we design ships anyhow.

I didn't tell Miss Brentwood this, as tourists think that a girl my age can't possibly be a spaceship designer.

Jeff has arranged his class to let him guide on Tuesdays and Thursdays; he waits at West City Lock and studies between clients. I reached him on the lockmaster's phone. Jeff grinned and said, "Hi, Scale Model."

"Hi, Penalty Weight. Free to take a client?"

"Well, I was supposed to guide a family party, but they're late."

"Cancel them; Miss Brentwood . . . step into pickup, please. This is Mr. Hardesty."

Jeff's eyes widened and I felt uneasy. But it did not occur to me that Jeff could be attracted by a groundhog. . . even though it is conceded that men are robot slaves of their body chemistry in such matters. I knew she was exceptionally decorative, but it was unthinkable that Jeff could be captivated by any groundhog, no matter how well designed. They don't speak our language!

I am not romantic about Jeff; we are simply partners. But anything that affects Jones & Hardesty affects me.

When we joined him at West Lock he almost stepped on his tongue in a disgusting display of adolescent rut. I was ashamed of him and, for the first time, apprehensive. Why are males so childish?

Miss Brentwood didn't seem to mind his behavior. Jeff is a big hulk; suited up for outside he looks like a Frost Giant from _Das Rheingold_; she smiled up at him and thanked him for changing his schedule. He looked even sillier and told her it was a pleasure.

I keep my pressure suit at West Lock so that when I switch a client to Jeff he can invite me to come along for the walk. This time he hardly spoke to me after that platinum menace was in sight. But I helped her pick out a suit and took her into the dressing room and fitted it. Those rental suits take careful adjusting or they will pinch you in tender places once out in vacuum. . . besides there are things about them that one girl ought to explain to another.

When I came out with her, not wearing my own, Jeff didn't even ask why I hadn't suited up -- he took her arm and started toward the lock. I had to butt in to get her to sign my tariff card.

The days that followed were the longest of my life. I saw Jeff only once . . . on the slidebelt in Diana Boulevard, going the other way. She was with him.

Though I saw him but once, I knew what was going on. He was cutting classes and three nights running he took her to the Earthview Room of the Duncan Hines. None of my business! -- I hope she had more luck teaching him to dance than I had. Jeff is a free citizen and if he wanted to make an utter fool of himself neglecting school and losing sleep over an upholstered groundhog that was his business.

But he should not have neglected the firm's business!

Jones & Hardesty had a tremendous backlog, because we were designing Starship _Prometheus_. This project we had been slaving over for a year, flying not more than twice a week in order to devote time to it -- and that's a sacrifice.

Of course you can't build a starship today, because of the power plant. But Daddy thinks that there will soon be a technological break-through and mass-conversion power plants will be built -- which means starships. Daddy ought to know -- he's Luna Chief Engineer for Space Lanes and Fermi Lecturer at Goddard Institute. So Jeff and I are designing a self-supporting interstellar ship on that assumption: quarters, auxiliaries, surgery, labs -- everything.

Daddy thinks it's just practice but Mother knows better -- Mother is a mathematical chemist for General Synthetics of Luna and is nearly as smart as I am. She

realizes that Jones & Hardesty plans to be ready with a finished proposal while other designers are still floundering.

Which was why I was furious with Jeff for wasting time over this creature. We had been working every possible chance. Jeff would show up after dinner, we would finish our homework, then get down to real work, the _Prometheus_. . . checking each other's computations, fighting bitterly over details, and having a wonderful time. But the very day I introduced him to Ariel Brentwood, he failed to appear. I had finished my lessons and was wondering whether to start or wait for him -- we were making a radical change in power plant shielding -- when his mother phoned me. "Jeff asked me to call you, dear. He's having dinner with a tourist client and can't come over."

Mrs. Hardesty was watching me so I looked puzzled and said, "Jeff thought I was expecting him? He has his dates mixed." I don't think she believed me; she agreed too quickly.

All that week I was slowly convinced against my will that Jones & Hardesty was being liquidated. Jeff didn't break any more dates -- how can you break a date that hasn't been made? -- but we always went flying Thursday afternoons unless one of us was guiding. He didn't call. Oh, I know where he was; he took her iceskating in Fingal's Cave.

I stayed home and worked on the _Prometheus_, recalculating masses and moment arms for hydroponics and stores on the basis of the shielding change. But I made mistakes and twice I had to look up logarithms instead of remembering . . . I was so used to wrangling with Jeff over everything that I just couldn't function.

Presently I looked at the name place of the sheet I was revising. "Jones & Hardesty" it read, like all the rest. I said to myself, "Holly Jones, quit bluffing; this may be The End. You know that someday Jeff would fall for somebody."

"Of course. . . but not a _groundhog_."

"But he _did_. What kind of an engineer are you if you can't face facts? She's beautiful and rich -- she'll get her father to give him a job Earthside. You hear me? _Earthside!_ So you look for another partner. . . or go into business on your own."

I erased "Jones & Hardesty" and lettered "Jones & Company" and stared at it. Then I started to erase that, too -- but it smeared; I had dripped a tear on it. Which was ridiculous!

The following Tuesday both Daddy and Mother were home for lunch which was unusual as Daddy lunches at the spaceport. Now Daddy can't even see you unless you're a spaceship but that day he picked to notice that I had dialed only a salad and hadn't finished it. "That plate is about eight hundred calories short," he said, peering at it. "You can't boost without fuel -- aren't you well?"

"Quite well, thank you," I answered with dignity.

"Mmm . . . now that I think back, you've been moping for several days. Maybe you need a checkup." He looked at Mother.

"I do not either need a checkup!" I had _not_ been moping -- doesn't a woman have a right not to chatter?

But I hate to have doctors poking at me so I added, "It happens I'm eating lightly because I'm going flying this afternoon. But if you insist, I'll order pot roast and potatoes and sleep insead!"

"Easy, punkin'," he answered gently. "I didn't mean to intrude. Get yourself a snack when you're through . . . and say hello to Jeff for me."

I simply answered, "OK," and asked to be excused; I was humiliated by the assumption that I couldn't fly without Mr. Jefferson Hardesty but did not wish to discuss it.

Daddy called after me, "Don't be late for dinner," and Mother said, "Now, Jacob--" and to me, "Fly until you're tired, dear; you haven't been getting much exercise. I'll leave your dinner in the warmer. Anything you'd like?"

"No, whatever you dial for yourself." I just wasn't interested in food, which isn't like me. As I headed for Bats' Cave I wondered if I had caught something. But my cheeks didn't feel warm and my stomach wasn't upset even if I wasn't hungry.

Then I had a horrible thought. Could it be that I was jealous? _Me?_

It was unthinkable. I am not romantic; I am a career woman. Jeff had been my partner and pal, and under my guidance he could have become a great spaceship designer, but our relationship was straightforward . . . a mutual respect for each other's abilities, with never any of that lovey-dovey stuff. A career woman can't afford such things -- why look at all the professional time Mother had lost over having me!

No, I couldn't be jealous; I was simply worried sick because my partner had become involved with a groundhog. Jeff isn't bright about women and, besides, he's never been to Earth and has illusions about it. If she lured him Earthside, Jones & Hardesty was finished.

And somehow, "Jones & Company" wasn't a substitute: the _Prometheus_ might never be built.

I was at Bats' Cave when I reached this dismal conclusion. I didn't feel like flying but I went to the locker room and got my wings anyhow.

Most of the stuff written about Bats' Cave gives a wrong impression. It's the air storage tank for the city, just like all the colonies have -- the place where the scavenger pumps, deep down, deliver the air until it's needed. We just happen to be lucky enough to have one big enough to fly in. But it never was built, or anything like that; it's just a big volcanic bubble, two miles across, and if it had broken through, way back when, it would have been a crater.

Tourists sometimes pity us loonies because we have no chance to swim. Well, I tried it in Omaha and got water up my nose and scared myself silly. Water is for drinking, not playing in; I'll take flying. I've heard groundhogs say, oh yes, they had "flown" many times. But that's not _flying_. I did what they talk about, between White Sands and Omaha. I felt awful and got sick. Those things aren't safe.

I left my shoes and skirt in the locker room and slipped my tail surfaces on my feet, then zipped into my wings and got someone to tighten the shoulder straps. My wings aren't readymade condors; they are Storer-Gulls, custom-made for my weight distribution and dimensions. I've cost Daddy a pretty penny in wings, outgrowing them so often, but these latest I bought myself with guide fees.

They're lovely -- titanalloy struts as light and strong as bird bones, tension-compensated wrist-pinion and shoulder joints, natural action in the alula slots, and automatic flap action in stalling. The wing skeleton is dressed in styrene feather-foils with individual quilling of scapulars and primaries. They almost fly themselves.

I folded my wings and went into the lock. While it was cycling I opened my left wing and thumbed the alula control -- I had noticed a tendency to sideslip the last time I was airborne. But the alula opened properly and I decided I must have been overcontrolling, easy to do with Storer-Gulls; they're extremely maneuverable. Then the door showed green and I folded the wing and hurried out, while glancing at the barometer. Seventeen pounds -- two more than Earth sea-level and nearly twice what we use in the city; even an ostrich could fly in that. I perked up and felt sorry for all groundhogs, tied down by six times proper weight, who never, never, never could fly.

Not even I could, on Earth. My wing loading is less than a pound per square foot, as wings and all I weigh less than twenty pounds. Earthside that would be over a hundred pounds and I could flap forever and never get off the ground.

I felt so good that I forgot about Jeff and his weakness. I spread my wings, ran a few steps, warped for lift and grabbed air -- lifted my feet and was airborne.

I sculled gently and let myself glide towards the air intake at the middle of the floor -- the Baby's Ladder, we call it, because you can ride the updraft clear to the roof, half a mile above, and never move a wing. When I felt it I leaned right, spoiling with right primaries, corrected, and settled in a counterclockwise soaring glide and let it carry me toward the roof.

A couple of hundred feet up, I looked around. The cave was almost empty, not more than two hundred in the air and half that number perched or on the ground -- room enough for didoes. So as soon as I was up five hundred feet I leaned out of the updraft and began to beat. Gliding is no effort but flying is as hard work as you care to make it. In gliding I support a mere ten pounds on each arm -- shucks, on Earth you work harder than that lying in bed. The lift that keeps you in the air doesn't take any work; you get it free from the shape of your wings just as long as there is air pouring past them.

Even without an updraft all a level glide takes is gentle sculling with your finger tips to maintain air speed; a feeble old lady could do it. The lift comes from differential air pressures but you don't have to understand it; you just scull a little and the air supports you, as if you were lying in an utterly perfect bed. Sculling keeps you moving forward just like sculling a rowboat. . . or so I'm told; I've never been in a rowboat. I had a chance to in Nebraska but I'm not that foolhardy.

But when you're really flying, you scull with forearms as well as hands and add power with your shoulder muscles. Instead of only the outer quills of your primaries changing pitch (as in gliding), now your primaries and secondaries clear back to the joint warp sharply on each downbeat and recovery; they no longer lift, they force you forward -- while your weight is carried by your scapulars, up under your armpits.

So you fly faster, or climb, or both, through controlling the angle of attack with your feet -- with the tail surfaces you wear on your feet, I mean.

Oh dear, this sounds complicated and isn't -- you just do it. You fly exactly as a bird flies. Baby birds can learn it and they aren't very bright. Anyhow, it's easy as breathing after you learn.. . and more fun than you can imagine!

I climbed to the roof with powerful beats, increasing my angle of attack and slotting my alulae for lift without burble -- climbing at an angle that would stall most fliers. I'm little but it's all muscle and I've been flying since I was six. Once up there I glided and looked around. Down at the floor near the south wall tourists were trying glide wings -- if you call those things "wings." Along the west wall the visitors' gallery was

loaded with goggling tourists. I wondered if Jeff and his Circe character were there and decided to go down and find out.

So I went into a steep dive and swooped toward the gallery, leveled off and flew very fast along it. I didn't spot Jeff and his groundhoggess but I wasn't watching where I was going and overtook another flier, almost collided. I glimpsed him just in time to stall and drop under, and fell fifty feet before I got control. Neither of us was in danger as the gallery is two hundred feet up, but I looked silly and it was my own fault; I had violated a safety rule.

There aren't many rules but they are necessary; the first is that orange wings always have the right of way -- they're beginners. This flier did not have orange wings but I was overtaking. The flier underneath -- or being overtaken -- or nearer to wall -- or turning counterclockwise, in that order, has the right of way.

I felt foolish and wondered who had seen me, so I went all the way back up, made sure I had clear air, then stooped like a hawk toward the gallery, spilling wings, lifting tail, and letting myself fall like a rock.

I completed my stoop in front of the gallery, lowering and spreading my tail so hard I could feel leg muscles knot and grabbing air with both wings, alulae slotted. I pulled level in an extremely fast glide along the gallery. I could see their eyes pop and thought smugly, "There! That'll show 'em!"

When darn if somebody didn't stoop on me! The blast from a flier braking right over me almost knocked me out of control. I grabbed air and stopped a sideslip, used some shipyard words and looked around to see who had blitzed me. I knew the black-and-gold wing pattern -- Mary Muhlenburg, my best girl friend. She swung toward me, pivoting on a wing tip. "Hi, Holly! Scared you, didn't I?"

"You did not! You better be careful; the flightmaster'll ground you for a month."

"Slim chance! He's down for coffee."

I flew away, still annoyed, and started to climb. Mary called after me, but I ignored her, thinking, "Mary my girl, I'm going to get over you and fly you right out of the air."

That was a foolish thought as Mary flies every day and has shoulders and pectoral muscles like Mrs. Hercules. By the time she caught up with me I had cooled off and we flew side by side, still climbing. "Perch?" she called out.

"Perch," I agreed. Mary has lovely gossip and I could use a breather. We turned toward our usual perch, a ceiling brace for flood lamps -- it isn't supposed to be a perch but the flightmaster hardly ever comes up there.

Mary flew in ahead of me, braked and stalled dead to a perfect landing. I skidded a little but Mary stuck out a wing and steadied me. It isn't easy to come into a perch, especially when you have to approach level. Two years ago a boy who had just graduated from orange wings tried it . . . knocked off his left alula and primaries on a strut -- went fluttering and spinning down two thousand feet and crashed. He could have saved himself -- you can come in safely with a badly damaged wing if you spill air with the other and accept the steeper glide, then stall as you land. But this poor kid didn't know how; he broke his neck, dead as Icarus. I haven't used that perch since.

We folded our wings and Mary sidled over. "Jeff is looking for you," she said with a sly grin.

My insides jumped but I answered coolly, "So? I didn't know he was here."

"Sure. Down there," she added, pointing with her left wing. "Spot him?"

Jeff wears striped red and silver, but she was pointing at the tourist guide slope, a mile away. "No."

"He's there all right." She looked at me sidewise. "But I wouldn't look him up if I were you."

"Why not? Or for that matter, why should I?" Mary can be exasperating.

"Huh? You always run when he whistles. But he has that Earthside siren in tow again today; you might find it embarrasing?"

"Mary, whatever are you talking about?"

"Huh? Don't kid me, Holly Jones; you know what I mean."

"I'm sure I don't," I answered with cold dignity.

"Humph! Then you're the only person in Luna City who doesn't. Everybody knows you're crazy about Jeff; everybody knows she's cut you out. . . and that you are simply simmering with jealousy."

Mary is my dearest friend but someday I'm going to skin her for a rug. "Mary, that's preposterously ridiculous! How can you even think such a thing?"

"Look, darling, you don't have to pretend. I'm for you." She patted my shoulders with her secondaries.

So I pushed her over backwards. She fell a hundred feet, straightened out, circled and climbed, and came in beside me, still grinning. It gave me time to decide what to say.

"Mary Muhlenburg, in the first place I am not crazy about anyone, least of all Jeff Hardesty. He and I are simply friends. So it's utterly nonsensical to talk about me being 'jealous.' In the second place Miss Brentwood is a lady and doesn't go around 'cutting out' anyone, least of all me. In the third place she is simply a tourist Jeff is guiding -- business, nothing more."

"Sure, sure," Mary agreed placidly. "I was wrong. Still--" She shrugged her wings and shut up.

"'Still' what? Mary, dont be mealy-mouthed."

"Mmm. . . I was wondering how you knew I was talking about Ariel Brentwood -- since there isn't anything to it."

"Why, you mentioned her name."

"I did not."

I thought frantically. "Uh, maybe not. But it's perfectly simple. Miss Brentwood is a client I turned over to Jeff myself, so I assumed that she must be the tourist you meant."

"So? I don't recall even saying she was a tourist. But since she is just a tourist you two are splitting, why aren't you doing the inside guiding while Jeff sticks to outside work? I thought you guides had an agreement?"

"Huh? If he has been guiding her inside the city, I'm not aware of it--"

"You're the only one who isn't."

"--and I'm not interested; that's up to the grievance committee. But Jeff wouldn't take a fee for inside guiding in any case."

"Oh, sure! -- not one he could _bank_. Well, Holly, seeing I was wrong, why don't you give him a hand with her? She wants to learn to glide."

Butting in on that pair was farthest from my mind. "If Mr. Hardesty wants my help, he will ask me. In the meantime I shall mind my own business . . . a practice I recommend to you!"

"Relax, shipmate," she answered, unruffled. "I was doing you a favor."

"Thank you, I don't need one."

"So I'll be on my way -- got to practice for the gymkhana." She leaned forward and dropped off. But she didn't practice aerobatics; she dived straight for the tourist slope.

I watched her out of sight, then sneaked my left hand out the hand slit and got at my hanky -- awkward when you are wearing wings but the floodlights had made my eyes water. I wiped them and blew my nose and put my hanky away and wiggled my hand back into place, then checked everything thumbs, toes, and fingers, preparatory to dropping off.

But I didn't. I just sat there, wings drooping, and thought. I had to admit that Mary was partly right; Jeff's head was turned completely. . . over a _groundhog_. So sooner or later he would go Earthside and Jones & Hardesty was finished.

Then I reminded myself that I had been planning to be a spaceship designer like Daddy long before Jeff and I teamed up. I wasn't dependent on anyone; I could stand alone, like Joan of Arc, or Lise Meitner.

I felt better. . . a cold, stern pride, like Lucifer in _Paradise Lost_.

I recognized the red and silver of Jeff's wings while he was far off and I thought about slipping quietly away. But Jeff can overtake me if he tries, so I decided, "Holly, don't be a fool! You've no reason to run. . . just be coolly polite."

He landed by me but didn't sidle up. "Hi, Decimal Point."

"Hi, Zero. Uh, stolen much lately?"

"Just the City Bank but they made me put it back." He frowned and added, "Holly, are you mad at me."

"Why, Jeff, whatever gave you such a silly notion?"

"Uh. . . something Mary the Mouth said."

"Her? Don't pay any attention to what she says. Half of it's always wrong and she doesn't mean the rest."

"Yeah, a short circuit between her ears. Then you aren't mad?"

"Of _course_ not. Why should I be?"

"No reason I know of. I haven't been around to work on the ship for a few days.. . but I've been awfully busy."

"Think nothing of it. I've been terribly busy myself."

"Uh, that's fine. Look, Test Sample, do me a favor. Help me out with a friend -- a client, that is -- we'll she's a friend, too. She wants to learn to use glide wings."

I pretended to consider it. "Anyone I know?"

"Oh, yes. Fact is, you introduced us. Ariel Brentwood."

"'Brentwood?' Jeff, there are so many tourists. Let me think. Tall girl? Blonde? Extremely pretty?"

He grinned like a goof and I almost pushed him off. "That's Ariel!"

"I recall her . . . she expected me to carry her bags. But you don't need help, Jeff. She seemed very clever. Good sense of balance."

"Oh, yes, sure, all of that. Well, the fact is, I want you two to know each other. She's. . . well, she's just wonderful, Holly. A real person all the way through. You'll love her when you know her better. Uh... this seemed like a good chance."

I felt dizzy. "Why, that's very thoughtful, Jeff, but I doubt if she wants to know me better. I'm just a servant she hired -- you know groundhogs."

"But she's not at all like the ordinary groundhog. And she does want to know you better -- she _told_ me so!"

After you told her to think so! I muttered. But I had talked myself into a corner. If I had not been hampered by polite upbringing I would have said, "On your way, vacuum skull! I'm not interested in your groundhog friends" -- but what I did say was, "OK, Jeff," then gathered the fox to my bosom and dropped off into a glide.

So I taught Ariel Brentwood to "fly." Look, those so-called wings they let tourists wear have fifty square feet of lift surface, no controls except warp in the primaries, a built-in dihedral to make them stable as a table, and a few meaningless degrees of hinging to let the wearer think that he is "flying" by waving his arms. The tail is rigid, and canted so that if you stall (almost impossible) you land on your feet. All a tourist does is run a few yards, lift up his feet (he can't avoid it) and slide down a blanket of air. Then he can tell his grandchildren how he flew, really _flew_, "just like a bird."

An ape could learn to "fly" that much.

I put myself to the humiliation of strapping on a set of the silly things and had Ariel watch while I swung into the Baby's Ladder and let it carry me up a hundred feet to show her that you really and truly could "fly" with them. Then I thankfully got rid of them, strapped her into a larger set, and put on my beautiful Storer-Gulls. I had chased Jeff away (two instructors is too many), but when he saw her wing up, he swooped down and landed by us.

I looked up. "You again."

"Hello, Ariel. Hi, Blip. Say, you've got her shoulder straps too tight."

"Tut, tut," I said. "One coach at a time, remember? If you want to help, shuck those gaudy fins and put on some gliders then I'll use you to show how not to. Otherwise get above two hundred feet and stay there; we don't need any dining lounge pilots."

Jeff pouted like a brat but Ariel backed me up. "Do what teacher says, Jeff. That's a good boy."

He wouldn't put on gliders but he didn't stay clear, either. He circled around us, watching, and got bawled out by the flightmaster for cluttering the tourist area.

I admit Ariel was a good pupil. She didn't even get sore when I suggested that she was rather mature across the hips to balance well; she just said that she had noticed that I had the slimmest behind around there and she envied me. So I quit trying to get her goat, and found myself almost liking her as long as I kept my mind firmly on teaching. She tried hard and learned fast -- good reflexes and (despite my dirty crack) good balance. I remarked on it and she admitted diffidently that she had had ballet training.

About mid-afternoon she said, "Could I possibly try real wings?"

"Huh? Gee, Ariel, I don't think so."

"Why not?"

There she had me. She had already done all that could be done with those atrocious gliders. If she was to learn more, she had to have real wings. "Ariel, it's dangerous. It's not what you've been doing, believe me. You might get hurt, even killed."

"Would you be held responsible?"

"No. You signed a release when you came in."

"Then I'd like to try it."

I bit my lip. If she had cracked up without my help, I wouldn't have shed a tear -- but to let her do something too dangerous while she was my pupil. . . well, it smacked of David and Uriah. "Ariel, I can't stop you . . . but I should put my wings away and not have anything to do with it."

It was her turn to bite her lip. "If you feel that way, I can't ask you to coach me. But I still want to. Perhaps Jeff will help me."

"He probably will," I blurted out, "if he is as big a fool as I think he is!"

Her company face slipped but she didn't say anything because just then Jeff stalled in beside us. "What's the discussion?"

We both tried to tell him and confused him for he got the idea I had suggested it, and started bawling me out. Was I crazy? Was I trying to get Ariel hurt? Didn't I have any sense?

"_Shut up!_" I yelled, then added quietly but firmly, "Jefferson Hardesty, you wanted me to teach your girl friend, so I agreed. But don't butt in and don't think you can get away with talking to me like that. Now beat it! Take wing. Grab air!"

He swelled up and said slowly, "I absolutely forbid it."

Silence for five long counts. Then Ariel said quietly, "Come, Holly. Let's get me some wings."

"Right, Ariel."

But they don't rent real wings. Fliers have their own; they have to. However, there are second-hand ones for sale because kids outgrow them, or people shift to custom-made ones, or something. I found Mr. Schultz who keeps the key, and said that Ariel was thinking of buying but I wouldn't let her without a tryout. After picking over forty-odd pairs I found a set which Johnny Queveras had outgrown but which I knew were all right. Nevertheless I inspected them carefully. I could hardly reach the finger controls but they fitted Ariel.

While I was helping her into the tail surfaces I said, "Ariel? This is still a bad idea."

"I know. But we can't let men think they own us."

"I suppose not."

"They do own us, of course. But we shouldn't let them know it." She was feeling out the tail controls. "The big toes spread them?"

"Yes. But don't do it. Just keep your feet together and toes pointed. Look, Ariel, you really aren't ready. Today all you will do is glide, just as you've been doing. Promise?"

She looked me in the eye. "I'll do exactly what you say. not even take wing unless you OK it."

"OK. Ready?"

"I'm ready."

"All right. Wups! I goofed. They aren't orange."

"Does it matter?"

"It sure does." There followed a weary argument because Mr. Schultz didn't want to spray them orange for a tryout. Ariel settled it by buying them, then we had to wait a bit while the solvent dried.

We went back to the tourist slope and I let her glide, cautioning her to hold both alulae open with her thumbs for more lift at slow speeds, while barely sculling with her

fingers. She did fine, and stumbled in landing only once. Jeff stuck around, cutting figure eights above us, but we ignored him. Presently I taught her to turn in a wide, gentle bank -- you can turn those awful glider things but it takes skill; they're only meant for straight glide.

Finally I landed by her and said, "Had enough?"

"I'll never have enough! But I'll unwing if you say."

"Tired?"

"No." She glanced over her wing at the Baby's Ladder; a dozen fliers were going up it, wings motionless, soaring lazily. "I wish I could do that just once. It must be heaven."

I chewed it over. "Actually, the higher you are, the safer you are."

"Then why not?"

"Mmm . . . safer _provided_ you know what you're doing. Going up that draft is just gliding like you've been doing. You lie still and let it lift you half a mile high. Then you come down the same way, circling the wall in a gentle glide. But you're going to be tempted to do something you don't understand yet -- flap your wings, or cut some caper."

She shook her head solemnly. "I won't do anything you haven't taught me."

I was still worried. "Look, it's only half a mile up but you cover five miles going there and more getting down. Half an hour at least. Will your arms take it?"

"I'm sure they will."

"Well. . . you can start down anytime; you don't have to go all the way. Flex your arms a little now and then, so they won't cramp. Just don't flap your wings."

"I won't."

"OK." I spread my wings. "Follow me."

I led her into the updraft, leaned gently right, then back left to start the counterclockwise climb, all the while sculling very slowly so that she could keep up. Once we were in the groove I called out, "Steady as you are!" and cut out suddenly, climbed and took station thirty feet over and behind her. "Ariel?"

"Yes, Holly?"

"I'll stay over you. Don't crane your neck; you don't have to watch me, I have to watch you. You're doing fine."

"I feel fine!"

"Wiggle a little. Don't stiffen up. It's a long way to the roof. You can scull harder if you want to."

"Aye aye, Cap'n!"

"Not tired?"

"Heavens, no! Girl, I'm living!" She giggled. "And mama said I'd never be an angel!"

I didn't answer because red-and-silver wings came charging at me, braked suddenly and settled into the circle between me and Ariel. Jeff's face was almost as red as his wings. "What the devil do you think you are doing?"

"Orange wings!" I yelled. "Keep clear!"

"Get down out of here! Both of you!"

"Get out from between me and my pupil. You know the rules."

"Ariel!" Jeff shouted. "Lean out of the circle and glide down. I'll stay with you."

"Jeff Hardesty," I said savagely, "I give you three seconds to get out from between us -- then I'm going to report you for violation of Rule One. For the third time -- Orange Wings!"

Jeff growled something, dipped his right wing and dropped out of formation. The idiot sideslipped within five feet of Ariel's wing tip. I should have reported him for that; all the room you can give a beginner is none too much.

I said, "OK, Ariel?"

"OK, Holly. I'm sorry Jeff is angry."

"He'll get over it. Tell me if you feel tired."

"I'm not. I want to go all the way up. How high are we?"

"Four hundred feet, maybe."

Jeff flew below us a while, then climbed and flew over us. . . probably for the same reason I did: to see better. It suited me to have two of us watching her as long as he didn't interfere; I was beginning to fret that Ariel might not realize that the way down was going to be as long and tiring as the way up. I was hoping she would cry uncle. I knew I could glide until forced down by starvation. But a beginner gets tense.

Jeff stayed generally over us, sweeping back and forth -- he's too active to glide very long -- while Ariel and I continued to soar, winding slowly up toward the roof. It finally occurred to me when we were about halfway up that I could cry uncle myself; I didn't have to wait for Ariel to weaken. So I called out, "Ariel? Tired now?"

"No."

"Well, I am. Could we go down, please?"

She didn't argue, she just said, "All right. What am I to do?"

"Lean right and get out of the circle." I intended to have her move out five or six hundred feet, get into the return down draft, and circle the cave down instead of up. I glanced up, looking for Jeff. I finally spotted him some distance away and much higher but coming toward us. I called out, "Jeff! See you on the ground." He might not have heard me but he would see if he didn't hear; I glanced back at Ariel.

I couldn't find her.

Then I saw her, a hundred feet below -- flailing her wings and falling, out of control.

I didn't know how it happened. Maybe she leaned too far, went into a sideslip and started to struggle. But I didn't try to figure it out; I was simply filled with horror. I seemed to hang there frozen for an hour while I watched her.

But the fact appears to be that I screamed "Jeff!" and broke into a stoop.

But I didn't seem to fall, couldn't overtake her. I spilled my wings completely -- but couldn't manage to fall; she was as far away as ever.

You do start slowly, of course; our low gravity is the only thing that makes human flying possible. Even a stone falls a scant three feet in the first second. But the first second seemed endless.

Then I knew I was falling. I could feel rushing air -- but I still didn't seem to close on her. Her struggles must have slowed her somewhat, while I was in an intentional stoop, wings spilled and raised over my head, falling as fast as possible. I had a wild notion that if I could pull even with her, I could shout sense into her head, get her to dive, then straighten out in a glide. But I couldn't _reach_ her.

This nightmare dragged on for hours.

Actually we didn't have room to fall for more than twenty seconds; that's all it takes to stoop a thousand feet. But twenty seconds can be horribly long . . . long enough to regret every foolish thing I had ever done or said, long enough to say a prayer for us both.. . and to say good-bye to Jeff in my heart. Long enough to see the floor rushing toward us and know that we were both going to crash if I didn't overtake her mighty quick.

I glanced up and Jeff was stooping right over us but a long way up. I looked down at once.. . and I was overtaking her... I was passing her -- _I was under her!_

Then I was braking with everything I had, almost pulling my wings off. I grabbed air, held it, and started to beat without ever going to level flight. I beat once, twice, three times. . . and hit her from below, jarring us both.

Then the floor hit us.

I felt feeble and dreamily contented. I was on my back in a dim room. I think Mother was with me and I know Daddy was. My nose itched and I tried to scratch it, but my arms wouldn't work. I fell asleep again.

I woke up hungry and wide awake. I was in a hospital bed and my arms still wouldn't work, which wasn't surprising as they were both in casts. A nurse came in with a tray. "Hungry?" she asked.

"Starved," I admitted.

"We'll fix that." She started feeding me like a baby.

I dodged the third spoonful and demanded, "What happened to my arms?"

"Hush," she said and gagged me with a spoon.

But a nice doctor came in later and answered my question. "Nothing much. Three simple fractures. At your age you'll heal in no time. But we like your company so I'm holding you for observation of possible internal injury."

"I'm not hurt inside," I told him. "At least, I don't hurt."

"I told you it was just an excuse."

"Uh, Doctor?"

"Well?"

"Will I be able to fly again?" I waited, scared.

"Certainly. I've seen men hurt worse get up and go three rounds."

"Oh. Well, thanks. Doctor? What happened to the other girl? Is she. . . did she...?"

"Brentwood? She's here."

"She's right here," Ariel agreed from the door. "May I come in?"

My jaw dropped, then I said, "Yeah. Sure. Come in."

The doctor said, "Don't stay long," and left. I said, "Well, sit down."

"Thanks." She hopped instead of walked and I saw that one foot was bandaged. She got on the end of the bed.

"You hurt your foot."

She shrugged. "Nothing. A sprain and a torn ligament. Two cracked ribs. But I would have been dead. You know why I'm not?"

I didn't answer. She touched one of my casts. "That's why. You broke my fall and I landed on top of you. You saved my life and I broke both your arms."

"You don't have to thank me. I would have done it for anybody."

"I believe you and I wasn't thanking you. You can't thank a person for saving your life. I just wanted to make sure you knew that I knew it."

I didn't have an answer so I said, "Where's Jeff? Is he all right?"

"He'll be along soon. Jeff's not hurt . . . though I'm surprised he didn't break both ankles. He stalled in beside us so hard that he should have. But Holly . . . Holly my very dear . . . I slipped in so that you and I could talk about him before he got here."

I changed the subject quickly. Whatever they had given me made me feel dreamy and good, but not beyond being embarrassed. "Ariel, what happened? You were getting along fine -- then suddenly you were in trouble."

She looked sheepish. "My own fault. You said we were going down, so I looked down. Really looked, I mean. Before that, all my thoughts had been about climbing to the roof; I hadn't thought about how far down the floor was. Then I looked down and got dizzy and panicky and went all to pieces." She shrugged. "You were right. I wasn't ready."

I thought about it and nodded. "I see. But don't worry -- when my arms are well, I'll take you up again."

She touched my foot. "Dear Holly. But I won't be flying again; I'm going back where I belong."

"Earthside?"

"Yes. I'm taking the _Billy Mitchell_ on Wednesday."

"Oh. I'm sorry."

She frowned slightly. "Are you? Holly, you don't like me, do you?"

I was startled silly. What can you say? Especially when it's true? "Well," I said slowly, "I don't dislike you. I just don't know you very well."

She nodded. "And I don't know you very well . . . even though I got to know you a lot better in a very few seconds. But Holly listen please and don't get angry. It's about Jeff. He hasn't treated you very well the last few days -- while I've been here, I mean. But don't be angry with him. I'm leaving and everything will be the same."

That ripped it open and I couldn't ignore it, because if I did, she would assume all sorts of things that weren't so. So I had to explain. . . about me being a career woman.. . how, if I had seemed upset, it was simply distress at breaking up the firm of Jones & Hardesty before it even finished its first starship . how I was not in love with Jeff but simply valued him as a friend and associate. . . but if Jones & Hardesty couldn't carry on, then Jones & Company would. "So you see, Ariel, it isn't necessary for you to give up Jeff. If you feel you owe me something, just forget it. It isn't necessary."

She blinked and I saw with amazement that she was holding back tears. "Holly, Holly. . . you don't understand at all."

"I understand all right. I'm not a child."

"No, you're a grown woman. . . but you haven't found it out." She held up a finger. "One -- Jeff doesn't love me."

"I don't believe it."

"Two. . . I don't love him."

"I don't believe that, either."

"Three . . . you say you don't love him -- but we'll take that up when we come to it. Holly, am I beautiful?"

Changing the subject is a female trait but I'll never learn to do it that fast. "Huh?"

"I said, 'Am I beautiful?'"

"You know darn well you are!"

"Yes. I can sing a bit and dance, but I would get few parts if I were not, because I'm no better than a third-rate actress. So I have to be beautiful. How old am I?"

I managed not to boggle. "Huh? Older than Jeff thinks you are. Twenty-one, at least. Maybe twenty-two."

She sighed. "Holly, I'm old enough to be your mother."

"Huh? I don't believe that, either."

"I'm glad it doesn't show. But that's why, though Jeff is a dear, there never was a chance that I could fall in love with him. But how I feel about him doesn't matter; the important thing is that he loves you."

"What? That's the silliest thing you've said yet! Oh, he likes me -- or did. But that's all." I gulped. "And it's all I want. Why, you should hear the way he talks to me."

"I have. But boys that age can't say what they mean; they get embarrassed."

"But--"

"Wait, Holly. I saw something you didn't because you were knocked cold. When you and I bumped, do you know what happened?"

"Uh, no."

"Jeff arrived like an avenging angel, a split second behind us. He was ripping his wings off as he hit, getting his arms free. He didn't even look at me. He just stepped across me and picked you up and cradled you in his arms, all the while bawling his eyes out."

"He did?"

"He did."

I mulled it over. Maybe the big lunk did kind of like me, after all.

Ariel went on, "So you see, Holly, even if you don't love him, you must be very gentle with him, because he loves you and you can hurt him terribly."

I tried to think. Romance was still something that a career woman should shun . . . but if Jeff really did feel that way -- well. . . would it be compromising my ideals to marry him just to keep him happy? To keep the firm together? Eventually, that is?

But if I did, it wouldn't be Jones & Hardesty; it would be Hardesty & Hardesty.

Ariel was still talking: "--you might even fall in love with him. It does happen, hon, and if it did, you'd be sorry if you had chased him away. Some other girl would grab him; he's awfully nice."

"But," I shut up for I heard Jeff's step -- I can always tell it. He stopped in the door and looked at us, frowning.

"Hi, Ariel."

"Hi, Jeff."

"Hi, Fraction." He looked me over. "My, but you're a mess."

"You aren't pretty yourself. I hear you have flat feet."

"Permanently. How do you brush your teeth with those things on your arms?"

"I don't."

Ariel slid off the bed, balanced on one foot. "Must run. See you later, kids."

"So long, Ariel."

"Good-bye, Ariel. Uh. . . thanks."

Jeff closed the door after she hopped away, came to the bed and said gruffly, "Hold still."

Then he put his arms around me and kissed me.

Well, I couldn't stop him, could I? With both arms broken? Besides, it was consonant with the new policy of the firm. I was startled speechless because Jeff never kisses me, except birthday kisses, which don't count. But I tried to kiss back and show that I appreciated it.

I don't know what the stuff was they had been giving me but my ears began to ring and I felt dizzy again.

Then he was leaning over me. "Runt," he said mournfully, "you sure give me a lot of grief."

"You're no bargain yourself, flathead," I answered with dignity.

"I suppose not." He looked me over sadly. "What are you crying for?"

I didn't know that I had been. Then I remembered why. "Oh, Jeff -- I busted my pretty wings!"

"We'll get you more. Uh, brace yourself. I'm going to do it again."

"All right." He did.

I suppose Hardesty & Hardesty has more rhythm than Jones & Hardesty.

It really sounds better.

'If This Goes On-'

It was cold on the rampart. I slapped my numbed hands together, then stopped hastily for fear of disturbing the Prophet. My post that night was just outside his personal apartments-a post that I had won by taking more than usual care to be neat and smart at guard mount...but I had no wish to call attention to myself now.

I was young then and not too bright-a legate fresh out of West Point, and a guardsman in the Angels of the Lord, the personal guard of the Prophet Incarnate. At birth my mother had consecrated me to the Church and at eighteen my Uncle Absolom, a senior lay censor, had prayed an appointment to the Military Academy for me from the Council of Elders.

West Point had suited me. Oh, I had joined in the usual griping among classmates, the almost ritualistic complaining common to all military life, but truthfully I enjoyed the monastic routine-up at five, two hours of prayers and meditation, then classes and lectures in the endless subjects of a military education, strategy and tactics, theology, mob psychology, basic miracles. In. the afternoons we practiced with vortex guns and blasters, drilled with tanks, and hardened our bodies with exercise.

I did not stand very high on graduation and had not really expected to be assigned to the Angels of the Lord, even though I had put in for it. But I had always gotten top marks in piety and stood well enough in most of the practical subjects; I was chosen. It made me almost sinfully proud-the holiest regiment of the Prophet's hosts, even the privates of which were commissioned officers and whose Colonel-in-Chief was the Prophet's Sword Triumphant, marshal of all the hosts. The day I was invested in the

shining buckler and spear worn only by the Angels I vowed to petition to study for the priesthood as soon as promotion to captain made me eligible.

But this night, months later, though my buckler was still shining bright, there was a spot of tarnish in my heart. Somehow, life at New Jerusalem was not as I had imagined it while at West Point. The Palace and Temple were shot through with intrigue and politics; priests and deacons, ministers of state, and Palace functionaries all seemed engaged in a scramble for power and favor at the hand of the Prophet. Even the officers of my own corps seemed corrupted by it. Our proud motto 'Non Sihi, Sed Dei' now had a wry flavor in my mouth.

Not that I was without sin myself. While I had not joined in the struggle for worldly preference, I had done something which I knew in my heart to be worse: 1 had looked with longing on a consecrated female.

Please understand me better than I understood myself. I was a grown man in body, an infant in experience. My own mother was the only woman I had ever known well. As a kid in junior seminary before going to the Point I was almost afraid of girls; my interests were divided between my lessons, my mother, and our parish's troop of Cherubim, in which I was a patrol leader and an assiduous winner of merit badges in everything from woodcraft to memorizing scripture. If there had been a merit badge to be won in the subject of girls-but of course there was not.

At the Military Academy 1 simply saw no females, nor did I have much to confess in the way of evil thoughts. My human feelings were pretty much still in freeze, and my occasional uneasy dreams I regarded as temptations sent by Old Nick. But New Jerusalem is not West Point and the Angels were neither forbidden to marry nor were we forbidden proper and sedate association with women. True, most of my fellows did not ask permission to marry, as it would have meant transferring to one of the regular regiments and many of them cherished ambitions for the military priesthood-but it was not forbidden.

Nor were the lay deaconesses who kept house around the Temple and the Palace forbidden to marry. But most of them were dowdy old creatures who reminded me of my aunts, hardly subjects for romantic thoughts. I used to chat with them occasionally around the corridors, no harm in that. Nor was I attracted especially by any of the few younger sisters-until I met Sister Judith.

I had been on watch in this very spot more than a month earlier. It was the first time I had stood guard outside the Prophet's apartments and, while I was nervous when first posted, at that moment I had been no more than alert against the possibility of the warden-of-the-watch making his rounds.

That night a light had shone brightly far down the inner corridor opposite my post and I had heard a sound of people moving; I had glanced at my wrist chrono-yes, that would be the Virgins ministering to the Prophet... - no business of mine. Each night at ten o'clock their watch changed-their 'guard mount' I called it, though I had never seen the ceremony and never would. All that I actually knew about it was that those coming on duty for the next twenty-four hours drew lots at that time for the privilege of personal attendance in the sacred presence of the Prophet Incarnate.

I had listened briefly and had turned away. Perhaps a quarter of an hour later a slight form engulfed in a dark cloak had slipped past me to the parapet, there to stand and

look at the stars. I had had my blaster out at once, then had returned it sheepishly, seeing that it was a deaconess.

I had assumed that she was a lay deaconess; I swear that it did not occur to me that she might be a holy deaconess. There was no rule in my order book telling me to forbid them to come outside, but I had never heard of one doing so.

I do not think that she had seen me before I spoke to her. 'Peace be unto you, sister.'

She had jumped and suppressed a squeal, then had gathered her dignity to answer, "And to you, little brother.'

It was then that I had seen on her forehead the Seal of Solomon, the mark of the personal family of the Prophet. 'Your pardon, Elder Sister. I did not see.'

'I am not annoyed.' It had seemed to me that she invited conversation. I knew that it was not proper for us to converse privately; her mortal being was dedicated to the Prophet just as her soul was the Lord's, but I was young and lonely-and she was young and very pretty.

'Do you attend the Holy One this night, Elder Sister?'

She had shaken her head at that. 'No, the honor passed me by. My lot was not drawn.'

'It must be a great and wonderful privilege to serve him directly.'

'No doubt, though I cannot say of my own knowledge. My lot has never yet been drawn.' She had added impulsively, 'I'm a little nervous about it. You see, I haven't been here long.'

Even though she .was my senior in rank, her display of feminine weakness had touched me. 'I am sure that you will deport yourself with credit.'

'Thank you.'

We had gone on chatting. She had been in New Jerusalem, it developed, even less time than had I. She had been reared on a farm in upper New York State and there she had been sealed to the Prophet at the Albany Seminary. In turn I had told her that 1 had been born in the middle west, not fifty miles from the Well of Truth, where the First Prophet was incarnated. I then told her that my name was John Lyle and she had answered that she was called Sister Judith.

I had forgotten all about the warden-of-the-watch and his pesky rounds and was ready to chat all night, when my chrono had chimed the quarter hour. 'Oh, dear!' Sister Judith had exclaimed. 'I should have gone straight back to my cell.' She had started to hurry away, then had checked herself. 'You wouldn't tell on me, John Lyle?'

'Me? Oh, never!'

I had continued to think about her the rest of the watch. When the warden did make rounds I was a shade less than alert.

A mighty little on which to found a course of folly, eh? A single drink is a great amount to a teetotaler; I was not able to get Sister Judith out of my mind. In the month that followed I saw her half a dozen times. Once I passed her on an escalator; she was going down as I was going up. We did not even speak, but she had recognized me and smiled. I rode that escalator all night that night in my dreams, hut I could never get off and speak to her. The other encounters were just as trivial. Another time I heard her voice call out to me quietly, 'Hello, John Lyle,' and I turned just in time to see a hooded figure

go past my elbow through a door. Once I watched her feeding the swans in the moat; I did not dare approach her but I think that she saw me.

The Temple Herald printed the duty lists of both my service and hers. I was standing a watch in five; the Virgins drew lots once a week. So it was just over a month later that our watches again matched. I saw her name-and vowed that I would win the guard mount that evening and again be posted at the post of honor before the Prophet's own apartments. I had no reason to think that Judith would seek me out on the rampart-but I was sure in my heart that she would. Never at West Point had I ever expended more spit-and-polish; I could have used my buckler for a shaving mirror.

But here it was nearly half past ten and no sign of Judith, although I had heard the Virgins gather down the corridor promptly at ten. All I had to show for my efforts was the poor privilege of standing watch at the coldest post in the Palace.

Probably, I thought glumly, she comes out to flirt with the guardsmen on watch every time she has a chance. I recalled bitterly that all women were vessels of iniquity and had always been so since the Fall of Man. Who was I to think that she had singled me out for special friendship? She had probably considered the night too cold to bother.

I heard a footstep and my heart leaped with joy. But it was only the warden making his rounds. I brought my pistol to the ready and challenged him; his voice came back, 'Watchman, what of the night?'

I answered mechanically, 'Peace on Earth,' and added, 'It is cold, Elder Brother.'

'Autumn in the air,' he agreed. 'Chilly even in the Temple.' He passed on by with his pistol and his bandolier of paralysis bombs slapping his armor to his steps. He was a nice old duffer and usually stopped for a few friendly words; tonight he was probably eager to get back to the warmth of the guardroom. I went back to my sour thoughts.

'Good evening, John Lyle.'

I almost jumped out of my boots. Standing in the darkness just inside the archway was Sister Judith. I managed to splutter, 'Good evening, Sister Judith,' as she moved toward me.

'Ssh!' she cautioned me. 'Someone might hear us. John Lyle-it finally happened. My lot was drawn!'

I said, 'Huh?' then added lamely, 'Felicitations, Elder Sister. May God make his face to shine on your holy service.'

'Yes, yes, thanks,' she answered quickly, 'but John . . . I had intended to steal a few moments to chat with you. Now I can't-I must be at the robing room for indoctrination and prayer almost at once. I must run.'

'You'd better hurry,' I agreed. I was disappointed that she could not stay, happy for her that she was honored, and exultant that she had not forgotten me. 'God go with you.'

'But I just had to tell you that I had been chosen.' Her eyes were shining with what I took to be holy joy; her next words startled me. 'I'm scared, John Lyle.'

'Eh? Frightened?' .1 suddenly recalled how I had felt, how my voice had cracked, the first time I ever drilled a platoon. 'Do not be. You will be sustained.'

'Oh, I hope so! Pray for me, John.' And she was gone, lost in the dark corridor.

I did pray for her and I tried to imagine where she was, what she was doing. But since I knew as little about what went on inside the Prophet's private chambers as a cow knows about courts-martial, I soon gave it up and simply thought about Judith. Later, an

hour or more, my reverie was broken by a high scream inside the Palace, followed by a commotion, and running footsteps. I dashed down the inner corridor and found a knot of women gathered around the portal to the Prophet's apartments. Two or three others were carrying someone out the portal; they stopped when the reached the corridor and eased their burden to the floor.

'What's the trouble?' I demanded and drew my side arm clear.

An elderly Sister stepped in front of me. 'It is nothing. Return to your post, legate.'

'I heard a scream.'

'No business of yours. One of the Sisters fainted when the Holy One required service of her.'

'Who was it?'

'You are rather nosy, little brother.' She shrugged. 'Sister Judith, if it matters.'

I did not stop to think but snapped, 'Let me help her!' and started forward. She barred my way.

'Are you out of your mind? Her sisters will return her to her cell. Since when do the Angels minister to nervous Virgins?'

I could easily have pushed her aside with one finger, but she was right. I backed down and went unwillingly back to my post.

For the next few days I could not get Sister Judith out of my mind. Off watch, I prowled the parts of the Palace I was free to visit, hoping to catch sight of her. She might be ill, or she might be confined to her cell for what must certainly have been a major breach of discipline. But I never saw her.

My roommate, Zebadiah Jones, noticed my moodiness and tried to rouse me out of it. Zeb was three classes senior to me and I had been one of his plebes at the Point; now he was my closest friend and my only confidant. 'Johnnie old son, you look like a corpse at your own wake. What's eating on you?'

'Huh? Nothing at all. Touch of indigestion, maybe.'

'So? Come on, let's go for a walk. The air will do you good.' I let him herd me outside. He said nothing but banalities until we were on the broad terrace surrounding the south turret and free of the danger of eye and ear devices. When we were well away from anyone else he said softly, 'Come on. Spill it.'

'Shucks, Zeb, I can't burden anybody else with it.'

'Why not? What's a friend for?'

'Uh, you'd be shocked.'

'I doubt it. The last time I was shocked was when I drew four of a kind to an ace kicker. It restored my faith in miracles and I've been relatively immune ever since. Come on-we'll call this a privileged communication-elder adviser and all that sort of rot.'

I let him persuade me. To my surprise Zeb was not shocked to find that I let myself become interested in a holy deaconess. So I told him the whole story and added to it my doubts and troubles, the misgivings that had been growing in me since the day I reported for duty at New Jerusalem.

He nodded casually. 'I can see how it would affect you that way, knowing you. See here, you haven't admitted any of this at confession, have you?'

'No,' I admitted with embarrassment.

'Then don't. Nurse your own fox. Major Bagby is broadminded, you wouldn't shock him-but he might find it necessary to pass it on to his superiors. You wouldn't want

to face Inquisition even if you were alabaster innocent. In fact, especially since you are innocent-and you are, you know; everybody has impious thoughts at times. But the Inquisitor expects to find sin; if he doesn't find it, he keeps on digging.'

At the suggestion that I might be put to the Question my stomach almost turned over. I tried not to show it for Zeb went on calmly, 'Johnnie my lad, I admire your piety and~ your innocence, but I don't envy it. Sometimes too much piety is more of a handicap than too little. You find yourself shocked at the idea that it takes politics as well as psalm singing to run a big country. Now take me; I noticed the same things when I was new here, but I hadn't expected anything different and wasn't shocked.'

'But-'I shut up. His remarks sounded painfully like heresy; I changed the subject. 'Zeb, what do you suppose it could have been that upset Judith so and caused her to faint the night she served the Prophet?'

'Eh? How should I know?' He glanced at me and looked away.

'Well, I just thought you might. You generally have all the gossip around the Palace.'

'Well . . . oh, forget it, old son. It's really not important.'

'Then you do know?'

'I didn't say that. Maybe I could make a close guess, but you don't want guesses. So forget it.'

I stopped strolling, stepped in front of him and faced him. 'Zeb, anything you know about it-or can guess-I want to hear. It's important to me.'

'Easy now! You were afraid of shocking me; it could be that I don't want to shock you.'

'What do you mean? Tell me!'

'Easy, I said. We're out strolling, remember, without a care in the world, talking about our butterfly collections and wondering if we'll have stewed beef again for dinner tonight.'

Still fuming, I let him take me along with him. He went on more quietly, 'John, you obviously aren't the type to learn things just by keeping your ear to the ground-and you've not yet studied any of the Inner Mysteries, now have you?'

'You know I haven't. The psych classification officer hasn't cleared me for the course. I don't know why.'

'I should have let you read some of the installments while I was boning it. No, that was before you graduated. Too bad, for they explain things in much more delicate language than I know how to use-and justify every bit of it thoroughly, if you care for the dialectics of religious theory. John, what is your notion of the duties of the Virgins?'

'Why, they wait on him, and cook his food, and so forth.'

'They surely do. And so forth. This Sister Judith-an innocent little country girl the way you describe her. Pretty devout, do you think?'

I answered somewhat stiffly that her devoutness had first attracted me to her. Perhaps I believed it.

'Well, it could be that she simply became shocked at overhearing a rather worldly and cynical discussion between the Holy One and, oh, say the High Bursar-taxes and tithes and the best way to squeeze them out of the peasants. It might be something like that, although the scribe for such a conference would hardly be a grass-green Virgin on her first service. No, it was almost certainly the "And so forth."'

'Huh? I don't follow you.'

Zeb sighed. 'You really are one of God's innocents, aren't you? Holy Name, I thought you knew and were just to stubbornly straight-laced to admit it. Why, even the Angels carry on with the Virgins at times, after the Prophet is through with them. Not to mention the priests and the deacons. I remember a time when-'He broke off suddenly, catching sight of my face. 'Wipe that look off your face! Do you want somebody to notice us?'

I tried to do so, with terrible thoughts jangling around inside my head. Zeb went on quietly, 'It's my guess, if it matters that much to you, that your friend Judith still merits the title "Virgin" in the purely physical sense as well as the spiritual. She might even stay that way, if the Holy One is as angry with her as he probably was. She is probably as dense as you are and failed to understand the symbolic explanations given her-then blew her top when it came to the point where she couldn't fail to understand, so he kicked her out. Small wonder!'

I stopped again, muttering to myself biblical expressions I hardly thought I knew. Zeb stopped, too, and stood looking at me with a smile of cynical tolerance. 'Zeb,' I said, almost pleading with him, 'these are terrible things. Terrible! Don't tell me that you approve?'

'Approve? Man, it's all part of the Plan. I'm sorry you haven't been cleared for higher study. See here, I'll give you a rough briefing. God wastes not. Right?'

'That's sound doctrine.'

'God requires nothing of man beyond his strength. Right?'

'Yes, but-'

'Shut up. God commands man to be fruitful. The Prophet Incarnate, being especially holy, is required to be especially fruitful. That's the gist of it; you can pick up the fine points when you study it. In the meantime, if the Prophet can humble himself to the flesh in order to do his plain duty, who are you to raise a ruction? Answer me that.'

I could not answer, of course, and we continued our walk in silence. I had to admit the logic of what he had said and that the conclusions were built up from the revealed doctrines. The trouble was that I wanted to eject the conclusions, throw them up as if they had been something poisonous I had swallowed.

Presently I was consoling myself with the thought that Zeb felt sure that Judith had not been harmed. I began to feel better, telling myself that Zeb was right, that it was not my place, most decidedly not my place, to sit in moral judgment on the Holy Prophet Incarnate.

My mind was just getting round to worrying the thought that my relief over Judith arose solely from the fact that I had looked on her sinfully, that there could not possibly be one rule for one holy deaconess, another rule for all the rest, and I was beginning to be unhappy again-when Zeb stopped suddenly. 'What was that?'

We hurried to the parapet of the terrace and looked down the wall. The south wall lies close to the city proper. A crowd of fifty or sixty people was charging up the slope that led to the Palace walls. Ahead of them, running with head averted, was a man dressed in a long gabardine. He was headed for the Sanctuary gate.

Zebadiah looked down and answered himself. 'That's what the racket is-some of the rabble stoning a pariah. He probably was careless enough to be caught outside the

ghetto after five.' He stared down and shook his head. 'I don't think he is going to make it.'

Zeb's prediction was realized at once, a large rock caught the man between the shoulder blades, he stumbled and went down. They were on him at once. He struggled to his knees, was struck by a dozen stones, went down in a heap. He gave a broken high-pitched wail, then drew a fold of the gabardine across his dark eyes and strong Roman nose.

A moment later there was nothing to be seen but a pile of rocks and a protruding slippered foot. It jerked and was still.

I turned away, nauseated. Zebediah caught my expression.

'Why,' I said defensively, 'do these pariahs persist in their heresy? They seem such harmless fellows otherwise.'

He cocked a brow at me. 'Perhaps it's not heresy to them. Didn't you see that fellow resign himself to his God?'

'But that is not the true God.'

'He must have thought otherwise.'

'But they all know better; we've told them often enough.'

He smiled in so irritating a fashion that I blurted out, 'I don't understand you, Zeb-blessed if I do! Ten minutes ago you were introducing me in correct doctrine; now you seem to be defending heresy. Reconcile that.'

He shrugged. 'Oh, I can play the Devil's advocate. I made the debate team at the Point, remember? I'll be a famous theologian someday-if the Grand Inquisitor doesn't get me first.'

'Well . . . Look-you do think it's right to stone the ungodly? Don't you?'

He changed the subject abruptly. 'Did you notice who cast the first stone?' I hadn't and told him so; all I remembered was that it was a man in country clothes, rather than a woman or a child.

'It was Snotty Fasset.' Zeb's lip curled.

I recalled Fassett too well; he was two classes senior to me and had made my plebe year something I want to forget. 'So that's how it was,' I answered slowly. 'Zeb, I don't think I could stomach intelligence work.'

'Certainly not as an agent provocateur,' he agreed. 'Still, I suppose the Council needs these incidents occasionally. These rumors about the Cabal and all...'

I caught up this last remark. 'Zeb, do you really think there is anything to this Cabal? I can't believe that there is any organized disloyalty to the Prophet.'

'Well-there has certainly been some trouble out on the West Coast. Oh, forget it; our job is to keep the watch here.'

Chapter 2

But we were not allowed to forget it; two days later the inner guard was doubled. I did not see how there could be any real danger, as the Palace was as strong a fortress as ever was built, with its lower recesses immune even to fission bombs. Besides that, a person entering the Palace, even from the Temple grounds, would be challenged and identified a

dozen times before he reached the Angel on guard outside the Prophet's own quarters. Nevertheless people in high places were getting jumpy; there must be something to it.

But I was delighted to find that I had been assigned as Zebadiah's partner. Standing twice as many hours of guard was almost offset by having him to talk with-for me at least. As for poor Zeb, I banged his ear endlessly through the long night watches, talking about Judith and how unhappy I was with the way things were at New Jerusalem. Finally he turned on me.

'See here, Mr. Dumbjohn,' he snapped, reverting to my plebe year designation, 'are you in love with her?'

I tried to hedge. I had not yet admitted to myself that my interest was more than in her welfare. He cut me short.

'You do or you don't. Make up your mind. If you do, we'll talk practical matters. If you don't, then shut up about her.'

I took a deep breath and took the plunge. 'I guess I do, Zeb. It seems impossible and I know it's a sin, but there it is.'

'All of that and folly, too. But there is no talking sense to you. Okay, so you are in love with her. What next?'

'Eh?'

'What do you want to do? Marry her?'

I thought about it with such distress that I covered my face with my hands. 'Of course I do,' I admitted. 'But how can I?'

'Precisely. You can't. You can't marry without transferring away from here; her service can't marry at all. Nor is there any way for her to break her vows, since she is already sealed. But if you can face up to bare facts without blushing, there is plenty you can do. You two could be very cozy-if you could get over being such an infernal bluenose.'

A week earlier I would not have understood what he was driving at. But now I knew. I could not even really be angry with him at making such a dishonorable and sinful suggestion; he meant well-and some of the tarnish was now in my own soul. I shook my head. 'You shouldn't have said that, Zeb. Judith is not that sort of a woman.'

'Okay. Then forget it. And her. And shut up about her.'

I sighed wearily. 'Don't be rough on me, Zeb. This is more than I know how to manage.' I glanced up and down, then took a chance and sat down on the parapet. We were not on watch near the Holy One's quarters but at the east wall; our warden, Captain Peter van Eyck, was too fat to get that far oftener than once a watch, so I took a chance. I was bone tired from not having slept much lately.

'Sorry.'

'Don't be angry, Zeb. That sort of thing isn't for me and it certainly isn't for Judith-for Sister Judith.' I knew what I wanted for us: a little farm, about a hundred. and sixty acres, like the one I had been born on. Pigs and chickens and barefooted kids with happy dirty faces and Judith to have her face light up when I came in from the fields and then wipe the perspiration from her face with her apron so that I could kiss her

no more connection with the Church and the Prophet than Sunday meeting and tithes.

But it could not be, it could never be. I put it out of my mind. 'Zeb,' I went on, 'just as a matter of curiosity-You have intimated that these things go on all the time. How? We live in a goldfish bowl here. It doesn't seem possible.'

He grinned at me so cynically that I wanted to slap him, but his voice had no leer in it. 'Well, just for example, take your own case -'

'Out of the question!'

'Just for example, I said. Sister Judith isn't available right now; she is confined to her cell. But -'

'Huh? She's been arrested?' I thought wildly of the Question and what Zeb had said about the inquisitors.

'No, no, no! She isn't even locked in. She's been told to stay there, that's all, with prayer and bread-and-water as company. They are purifying her heart and instructing her in her spiritual duties. When she sees things in their true light, her lot will be drawn again-and this time she won't faint and make an adolescent fool of herself.'

I pushed back my first reaction and tried to think about it calmly. 'No,' I said. 'Judith will never do it. Not if she stays in her cell forever.'

'So? I wouldn't be too sure. They can be very persuasive. How would you like to be prayed over in relays? But assume that she does see the light, just so that I can finish my story.'

'Zeb, how do you know about this?'

'Sheol, man! I've been here going on three years. Do you think I wouldn't be hooked into the grapevine? You were worried about her-and making yourself a tiresome nuisance if I may say so. So I asked the birdies. But to continue. She sees the light, her lot is drawn, she performs her holy service to the Prophet. After that she is called once a week like the rest and her lot is drawn maybe once a month or less. Inside of a year-unless the Prophet finds some very exceptional beauty in her soul-they stop putting her name among the lots entirely. But it isn't necessary to wait that long, although it is more discreet.'

'The whole thing is shameful!'

'Really? I imagine King Solomon had to use some such system; he had even more women on his neck than the Holy One has. Thereafter, if you can come to some mutual understanding with the Virgin involved, it is just a case of following well known customs. There is a present to be made to the Eldest Sister, and to be renewed as circumstances dictate. There are some palms to be brushed-I can tell you which ones. And this great pile of masonry has lots of dark back stairs in it. With all customs duly observed, there is no reason why, almost any night I have the watch and you don't, you should not find something warm and cuddly in your bed.'

I was about to explode at the calloused way he put it when my mind went off at a tangent. 'Zeb-now I know you are telling an untruth. You were just pulling my leg, admit it. There is an eye and an ear somewhere in our room. Why, even if I tried to find them and cut them out, I'd simply have the security watch banging on the door in three minutes.'

'So what? There is an eye and an ear in every room in the place. You ignore them.'

I simply let my mouth sag open.

'Ignore them,' he went on. 'Look, John, a little casual fornication is no threat to the Church-treason and heresy are. It will simply be entered in your dossier and nothing will

be said about it- unless they catch you in something really important later, in which case they might use it to hang you instead of preferring the real charges. Old son, they like to have such peccadilloes in the files; it increases security. They are probably uneasy about you; you are too perfect; such men are dangerous. Which is probably why you've never been cleared for higher study.'

I tried to straighten out in my mind the implied cross purposes, the wheels within wheels, and gave up. 'I just don't get it. Look, Zeb, all this doesn't have anything to do with me or with Judith. But I know what I've got to do. Somehow I've got to get her out of here.'

'Hmm. . . a mighty strait gate, old son.'

'I've got to.'

'Well . . . I'd like to help you. I suppose I could get a message to her,' he added doubtfully.

I caught his arm. 'Would you, Zeb?'

He sighed. 'I wish you would wait. No, that wouldn't help, seeing the romantic notions in your mind. But it is risky now. Plenty risky, seeing that she is under discipline by order of the Prophet. You'd look funny staring down the table of a court-martial board, looking at your own spear.'

'I'll risk even that. Or even the Question.'

He did not remind me that he himself was taking even more of a risk than I was; he simply said, 'Very well, what is the message?'

I thought for a moment. It would have to be short. 'Tell her that the legate she talked to the night her lot was drawn is worried about her.'

'Anything else?'

'Yes! Tell her that I am hers to command!'

It seems flamboyant in recollection. No doubt it was-but it was exactly the way I felt.

At luncheon the next day I found a scrap of paper folded into my napkin. I hurried through the meal and slipped out to read it.

I need your help, it read, and am so very grateful. Will you meet me tonight? It was unsigned and had been typed in the script of a common voicewriter, used anywhere in the Palace, or out. When Zeb returned to our room, I showed it to him; he glanced at it and remarked in idle tones:

'Let's get some air. I ate too much, I'm about to fall asleep.' Once we hit the open terrace and were free of the hazard of eye and ear he cursed me out in low, dispassionate tones. 'You'll never make a conspirator. Half the mess must know that you found something in your napkin. Why in God's name did you gulp your food and rush off? Then to top it off you handed it to me upstairs. For all you know the eye read it and photostated it for evidence. Where in the world were you when they were passing out brains?'

I protested but he cut me off. 'Forget it! I know you didn't mean to put both of our necks in a bight-but good intentions are no good when the trial judge-advocate reads the charges. Now get this through your head: the first principle of intrigue is never to be seen doing anything unusual, no matter how harmless it may seem. You wouldn't believe how small a deviation from pattern looks significant to a trained analyst. You should have stayed in the refectory the usual time, hung around and gossiped as usual afterwards, then waited until you were safe to read it. Now where is it?'

'In the pocket of my corselet,' I answered humbly. 'Don't worry, I'll chew it up and swallow it.'

'Not so fast. Wait here.' Zeb left and was back in a few minutes. 'I have a piece of paper the same size and shape; I'll pass it to you quietly. Swap the two, and then you can eat the real note-but don't be seen making the swap or chewing up the real one.'

'All right. But what is the second sheet of paper?'

'Some notes on a system for winning at dice.'

'Huh? But that's non-reg, too!'

'Of course, you hammer head. If they catch you with evidence of gambling, they won't suspect you of a much more serious sin. At worst, the skipper will eat you out and fine you a few days pay and a few hours contrition. Get this, John: if you are ever suspected of something, try to make the evidence point to a lesser offence. Never try to prove lily-white innocence. Human nature being what it is, your chances are better.'

I guess Zeb was right; my pockets must have been searched and the evidence photographed right after I changed uniforms for parade, for half an hour afterwards I was called into the Executive Officer's office. He asked me to keep my eyes open for indications of gambling among the junior officers. It was a sin, he said, that he hated to have his younger officers fall into. He clapped me on the shoulder as I was leaving. 'You're a good boy, John Lyle. A word to the wise, eh?'

Zeb and I had the midwatch at the south Palace portal that night. Half the watch passed with no sign of Judith and I was as nervous as a cat in a strange house, though Zeb tried to keep me calmed down by keeping me strictly to routine. At long last there were soft footfalls in the inner corridor and a shape appeared in the doorway. Zebadiah motioned me to remain on tour and went to check. He returned almost at once and motioned me to join him, while putting a finger to his lips. Trembling, I went in. It was not Judith but some woman strange to me who waited there in the darkness. I started to speak but Zeb put his hand over my mouth.

The woman took my arm and urged me down the corridor. I glanced back and saw Zeb silhouetted in the portal, covering our rear. My guide paused and pushed me into an almost pitch-black alcove, then she took from the folds of her robes a small object which I took to be a pocket ferretscope, from the small dial that glowed faintly on its side. She ran it up and down and around, snapped it off and returned it to her person. 'Now you can talk,' she said softly. 'It's safe.' She slipped away.

I felt a gentle touch at my sleeve. 'Judith?' I whispered.

'Yes,' she answered, so softly that I could hardly hear her.

Then my arms were around her. She gave a little startled cry, then her own arms went around my neck and I could feel her breath against my face. We kissed clumsily but with almost frantic eagerness.

It is no one's business what we talked about then, nor could I give a coherent account if I tried. Call our behavior romantic nonsense, call it delayed puppy love touched off by ignorance and unnatural lives-do puppies hurt less than grown dogs? Call it what you like and laugh at us, but at that moment we were engulfed in that dear madness more precious than rubies and fine gold, more to be desired than sanity. If you have never experienced it and do not know what I am talking about, I am sorry for you.

Presently we quieted down somewhat and talked more reasonably. When she tried to tell me about the night her lot had been drawn she began to cry. I shook her and said, 'Stop it, my darling. You don't have to tell me about it. I know.'

She gulped and said, 'But you don't know. You can't know. I...he...'

I shook her again. 'Stop it. Stop it at once. No more tears. I do know, exactly. And I know what you are in for still-unless we get you out of here. So there is no time for tears or nerves; we have to make plans.'

She was dead silent for a long moment, then she said slowly, 'You mean for me to . . . desert? I've thought of that. Merciful God, how I've thought about it! But how can I?'

'I don't know-yet. But we will figure out a way. We've got to.' We discussed possibilities. Canada was a bare three hundred miles away and she knew the upstate New York country; in fact it was the only area she did know. But the border there was more tightly closed than it was anywhere else, patrol boats and radar walls by water, barbed wire and sentries by land . and sentry dogs. I had trained with such dogs; I wouldn't urge my worst enemy to go up against them.

But Mexico was simply impossibly far away. If she headed south she would probably be arrested in twenty-four hours. No one would knowingly give shelter to an unveiled Virgin; under the inexorable rule of associative guilt any such good Samaritan would be as guilty as she of the same personal treason against the Prophet and would die the same death. Going north would be shorter at least, though it meant the same business of traveling by night, hiding by day, stealing food or going hungry. Near Albany lived an aunt of Judith's; she felt sure that her aunt would risk hiding her until some way could be worked out to cross the border. 'She'll keep us safe. I know it.'

'Us?' I must have sounded stupid. Until she spoke I had had my nose so close to the single problem of how she was to escape that it had not yet occurred to me that she would expect both of us to go.

'Did you mean to send me alone?'

'Why. . . I guess I hadn't thought about it any other way.'

'No!'

'But-look, Judith, the urgent thing, the thing that must be done at once, is to get you out of here. Two people trying to travel and hide are many times more likely to be spotted than one. It just doesn't make sense to -'

'No! I won't go.'

I thought about it, hurriedly. I still hadn't realized that 'A' implies 'B' and that I myself in urging her to desert her service was as much a deserter in my heart as she was. I said, 'We'll get you out first, that's the important thing. You tell me where your aunt lives-then wait for me.'

'Not without you.'

'But you must. The Prophet,'

'Better that than to lose you now!'

I did not then understand women-and I still don't. Two minutes before she had been quietly planning to risk death by ordeal rather than submit her body to the Holy One. Now she was almost casually willing to accept it rather than put up with even a temporary separation. I don't understand women; I sometimes think there is no logic in them at all.

I said, 'Look, my dear one, we have not yet even figured out how we are to get you out of the Palace. It's likely to be utterly impossible for us both to escape the same instant. You see that, don't you?'

She answered stubbornly, 'Maybe. But I don't like it. Well, how do I get out? And when?'

I had to admit again that I did not know. I intended to consult Zeb as soon as possible, but I had no other notion.

But Judith had a suggestion. 'John, you know the Virgin who guided you here? No? Sister Magdalene. I know it is safe to tell her and she might be willing to help us. She's very clever.'

I started to comment doubtfully but we were interrupted by Sister Magdalene herself. 'Quick!' she snapped at me as she slipped in beside us. 'Back to the rampart!'

I rushed out and was barely in time to avoid being caught by the warden, making his rounds. He exchanged challenges with Zeb and myself-and then the old fool wanted to chat. He settled himself down on the steps of the portal and started recalling boastfully a picayune fencing victory of the week before. I tried dismally to help Zeb with chit-chat in a fashion normal for a man bored by a night watch.

At last he got to his feet. 'I'm past forty and getting a little heavier, maybe. I'll admit frankly it warms me to know that I still have a wrist and eye as fast as you young blades.' He straightened his scabbard and added, 'I suppose I had better take a turn through the Palace. Can't take too many precautions these days. They do say the Cabal has been active again.' He took out his torch light and flashed it down the corridor.

I froze solid. If he inspected that corridor, it was beyond hope that he would miss two women crouching in an alcove.

But Zebadiah spoke up calmly, casually. 'Just a moment, Elder Brother. Would you show me that time riposte you used to win that last match? It was too fast for me to follow it.'

He took the bait. 'Why, glad to, son!' He moved off the steps, came out to where there was room. 'Draw your sword. En garde! Cross blades in line of sixte. Disengage and attack me. There! Hold the lunge and I'll demonstrate it slowly. As your point approaches my chest -, (Chest indeed! Captain van Eyck was as pot-bellied as a kangaroo!) '- I catch it with the forte of my blade and force it over yours in riposte seconde. Just like the book, so far. But I do not complete the riposte. Strong as it is, you might parry or counter. Instead, as my point comes down, I beat your blade out of line-' He illustrated and the steel sang. '-and attack you anywhere, from chin to ankle. Come now, try it on me.'

Zeb did so and they ran through the phrase; the warden retreated a step. Zeb asked to do it again to get it down pat. They ran through it repeatedly, faster each time, with the warden retreating each time to avoid by a hair Zeb's unbated point. It was strictly against regulations to fence with real swords and without mask and plastron, but the warden really was good . . . a swordsman so precise that he was confident of his own skill not to blind one of Zeb's eyes, not to let Zeb hurt him. In spite of my own galloping jitters I watched it closely; it was a beautiful demonstration of a once-useful military art. Zeb pressed him hard.

They finished up fifty yards away from the portal and that much closer to the guardroom. I could hear the warden puffing from the exercise. 'That was fine, Jones,' he gasped. 'You caught on handsomely.' He puffed again and added, 'Lucky for me a real bout does not go on as long. I think I'll let you inspect the corridor.' He turned away toward the guardroom, adding cheerfully, 'God keep you.'

'God go with you, sir,' Zeb responded properly and brought his hilt to his chin in salute.

As soon as the warden turned the corner Zeb stood by again and I hurried back to the alcove. The women were still there, making themselves small against the back wall. 'He's gone,' I reassured them. 'Nothing to fear for a while.'

Judith had told Sister Magdalene of our dilemma and we discussed it in whispers. She advised us strongly not to try to reach any decisions just then. 'I'm in charge of Judith's purification; I can stretch it out for another week, perhaps, before she has to draw lots again.'

I said, 'We've got to act before then!'

Judith seemed over her fears, now that she had laid her troubles in Sister Magdalene's lap. 'Don't worry, John,' she said softly, 'the chances are my lot won't be drawn soon again in any case. We must do what she advises.'

Sister Magdalene sniffed contemptuously. 'You're wrong about that, Judy, when you are returned to duty, your lot will be drawn, you can be sure ahead of time. Not,' she added, 'but what you could live through it-the rest of us have. If it seems safer to-' She stopped suddenly and listened. 'Sssh! Quiet as death.' She slipped silently out of our circle.

A thin pencil of light flashed out and splashed on a figure crouching outside the alcove. I dived and was on him before he could get to his feet. Fast as I had been, Sister Magdalene was just as fast; she landed on his shoulders as he went down. He jerked and was still.

Zebadiah came running in, checked himself at our sides. 'John! Maggie!' came his tense whisper. 'What is it?'

'We've caught a spy, Zeb,' I answered hurriedly. 'What'll we do with him?'

Zeb flashed his light. 'You've knocked him out?'

'He won't come to,' answered Magdalene's calm voice out of the darkness. 'I slipped a vibroblade in his ribs.'

'Sheol!'

'Zeb, I had to do it. Be glad I didn't use steel and mess up the floor with blood. But what do we do now?'

Zeb cursed her softly, she took it. 'Turn him over, John. Let's take a look.' I did so and his light flashed again. 'Hey, Johnnie-it's Snotty Fassett.' He paused and I could almost hear him think. 'Well, we'll waste no tears on him. John!'

'Yeah, Zeb?'

'Keep the watch outside. If anyone comes, I am inspecting the corridor. I've got to dump this carcass somewhere.'

Judith broke the silence. 'There's an incinerator chute on the floor above. I'll help you.'

'Stout girl. Get going, John.'

I wanted to object that it was no work for a woman, but I shut up and turned away. Zeb took his shoulders, the women a leg apiece and managed well enough. They were back in minutes, though it seemed endless to me. No doubt Snotty's body was reduced to atoms before they were back-we might get away with it. It did not seem like murder to me then, and still does not; we did what we had to do, rushed along by events.

Zeb was curt. 'This tears it. Our reliefs will be along in ten minutes; we've got to figure this out in less time than that. Well?'

Our suggestions were all impractical to the point of being ridiculous, but Zeb let us make them-then spoke straight to the point. 'Listen to me, it's no longer just a case of trying to help Judith and you out of your predicament. As soon as Snotty is missed, we-all four of us-are in mortal danger of the Question. Right?'

'Right,' I agreed unwillingly.

'But nobody has a plan?'

None of us answered. Zeb went on, 'Then we've got to have help . . . and there is only one place we can get it. The Cabal.'

Chapter 3

'The Cabal?' I repeated stupidly. Judith gave a horrified gasp. 'Why . . . why, that would mean our immortal souls! They worship Satan!'

Zeb turned to her. 'I don't believe so.' She stared at him. 'Are you a Cabalist?'

'No.'

'Then how do you know?'

'And how,' I insisted, 'can you ask them for help?'

Magdalene answered. 'I am a member-as Zebadiah knows.' Judith shrank away from her, but Magdalene pressed her with words. 'Listen to me, Judith. I know how you feel-and once I was as horrified as you are at the idea of anyone opposing the Church. Then I learned-as you are learning-what really lies behind this sham we were brought up to believe in.' She put an arm around the younger girl. 'We aren't devil worshipers, dear, nor do we fight against God. We fight only against this self-styled Prophet who pretends to be the voice of God. Come with us, help us fight him-and we will help you. Otherwise we can't risk it.'

Judith searched her face by the faint light from the portal. 'You swear that this is true? The Cabal fights only against the Prophet and not against the Lord Himself?'

'I swear, Judith.'

Judith took a deep shuddering breath. 'God guide me,' she whispered. 'I go with the Cabal.'

Magdalene kissed her quickly, then faced us men. 'Well?'

I answered at once, 'I'm in it if Judith is,' then whispered to myself, 'Dear Lord, forgive me my oath-I must!'

Magdalene was staring at Zeb. He shifted uneasily and said angrily, 'I suggested it, didn't I? But we are all damned fools and the Inquisitor will break our bones.'

There was no more chance to talk until the next day. I woke from bad dreams of the Question and worse, and heard Zeb's shaver buzzing merrily in the bath. He came in and pulled the covers off me, all the while running off at the mouth with cheerful nonsense. I hate having bed clothes dragged off me even when feeling well and I can't stand cheerfulness before breakfast; I dragged them back and tried to ignore him, but he grabbed my wrist. 'Up you come, old son! God's sunshine is wasting. It's a beautiful day. How about two fast laps around the Palace and in for a cold shower?'

I tried to shake his hand loose and called him something that would lower my mark in piety if the ear picked it up. He still hung on and his forefinger was twitching against my wrist in a nervous fashion; I began to wonder if Zeb were cracking under the strain. Then I realized that he was tapping out code.

'B-E-N-A-T-U-R-A-L,' the dots and dashes said, 'S-H-O-W - N-O - S-U-R-P-R-I-S-E - W-E - W-I-L-L - B-E -C-A-L-L-E-D - F-O-R - E-X-A-M-I-N-A-T-I-O-N - D-U-RI-N-G - T-H-E - R-E-C-R-E-A-T-I-O-N - P-E-R-I-O-D - T-H-I-S - A-F-T-E-R-N-O-O-N'

I hoped I showed no surprise. I made surly answers to the stream of silly chatter he had kept up all through it, and got up and went about the mournful tasks of putting the body back in shape for another day. After a bit 1 found excuse to lay a hand on his shoulder and twitched out an answer: '0-K -I- U-N-D-E-R-S-T-A-N-D'

The day was a misery of nervous monotony. I made a mistake at dress parade, a thing I haven't done since beast barracks. When the day's duty was finally over I went back to our room and found Zeb there with his feet on the air conditioner, working an acrostic in the New York Times. 'Johnnie my lamb,' he asked, looking up, 'what is a six-letter word meaning "Pure in Heart"?'

'You'll never need to know,' I grunted and sat down to remove my armor.

'Why, John, don't you think I will reach the Heavenly City?'

'Maybe-after ten thousand years penance.'

There came a brisk knock at our door, it was shoved open, and Timothy Klyce, senior legate in the mess and brevet captain, stuck his head in. He sniffed and said in nasal Cape Cod accents, 'Hello, you chaps want to take a walk?'

It seemed to me that he could not have picked a worse time. Tim was a hard man to shake and the most punctiliously devout man in the corps. I was still trying to think of an excuse when Zeb spoke up. 'Don't mind if we do, provided we walk toward town. I've got some shopping to do.'

I was confused by Zeb's answer and still tried to hang back, pleading paper work to do, but Zeb cut me short. 'Pfui with paper work. I'll help you with it tonight. Come on.' So I went, wondering if he had gotten cold feet about going through with it.

We went out through the lower tunnels. I walked along silently, wondering if possibly Zeb meant to try to shake Klyce in town and then hurry back. We had just entered a little jog in the passageway when Tim raised his hand in a gesture to emphasize some point in what he was saying to Zeb. His hand passed near my face, I felt a slight spray on my eyes-and I was blind.

Before I could cry out, even as I suppressed the impulse to do so, he grasped my upper arm hard, while continuing his sentence without a break. His grip on my arm guided me to the left, whereas my memory of the jog convinced me that the turn should

have been to the right. But we did not bump into the wall and after a few moments the blindness wore off. We seemed to be walking in the same tunnel with Tim in the middle and holding each of us by an arm. He did not say anything and neither did we; presently he stopped us in front of a door. Klyce knocked once, then listened.

I could not make out an answer but he replied. 'Two pilgrims, duly guided.'

The door opened. He led us in, it closed silently behind us, and we were facing a masked and armored guard, with his blast pistol leveled on us. Reaching behind him, he rapped once on an inner door; immediately another man, armed and masked like the first, came out and faced us. He asked Zeb and myself separately:

'Do you seriously declare, upon your honor, that, unbiased by friends and uninfluenced by mercenary motives, you freely and voluntarily offer yourself to the service of this order?'

We each answered, 'I do.'

'Hoodwink and prepare them.'

Leather helmets that covered everything but our mouths and noses were slipped over our heads and fastened under our chins. Then we were ordered to strip off all our clothing. I did so while the goose pumps popped out on me. I was losing my enthusiasm rapidly-there is nothing that makes a man feel as helpless as taking his pants away from him. Then I felt the sharp prick of a hypodermic in my forearm and shortly, though I was awake, things got dreamy and I was no longer jittery. Something cold was pressed against my ribs on the left side of my back and I realized that it was almost certainly the hilt of a vibroblade, needing only the touch, of the stud to make me as dead as Snotty Fassett-but it did not alarm me. Then there were questions, many questions, which I answered automatically, unable to lie or hedge if I had wanted to. I remember them in snatches: of your own free will and accord?' '-conform to the ancient established usages-a man, free born, of good repute, and well recommended.'

Then, for a long time I stood shivering on the cold tile floor while a spirited discussion went on around me; it had to do with my motives in seeking admission. I could hear it all and I knew that my life hung on it, with only a word needed to cause a blade of cold energy to spring into my heart. And I knew that the argument was going against me.

Then a contralto voice joined the debate. I recognized Sister Magdalene and knew that she was vouching for me, but doped as I was I did not care; I simply welcomed her voice as a friendly sound. But presently the hilt relaxed from my ribs and I again felt the prick of a hypodermic. It brought me quickly out of my dazed state and I heard a strong bass voice intoning a prayer:

'Vouchsafe thine aid, Almighty Father of the Universe: love, relief, and truth to the honor of Thy Holy Name. Amen.' And the answering chorus, 'So mote it be!'

Then I was conducted around the room, still hoodwinked, while questions were again put to me. They were symbolic in nature and were answered for me by my guide. Then I was stopped and was asked if I were willing to take a solemn oath pertaining to this degree, being assured that it would in no material way interfere with duty that I owed to God, myself, family, country, or neighbor.

I answered, 'I am.'

I was then required to kneel on my left knee, with my left hand supporting the Book, my right hand steadying certain instruments thereon.

The oath and charge was enough to freeze the blood of anyone foolish enough to take it under false pretenses. Then I was asked what, in my present condition, I most desired. I answered as I had been coached to answer: 'Light!'

And the hoodwink was stripped from my head.

It is not necessary and not proper to record the rest of my instruction as a newly entered brother. it was long and of solemn beauty and there was nowhere in it any trace of the blasphemy or devil worship that common gossip attributed to us; quite the contrary it was filled with reverence for God, brotherly love, and uprightness, and it included instruction in the principles of an ancient and honorable profession and the symbolic meaning of the working tools thereof.

But I must mention one detail that surprised me almost out of the shoes I was not wearing. When they took the hoodwink off me, the first man I saw, standing in front of me dressed in the symbols of his office and wearing an expression of almost inhuman dignity, was Captain Peter van Eyck, the fat ubiquitous warden of my watch-Master of this lodge!

The ritual was long and time was short. When the lodge was closed we gathered in a council of war. I was told that the senior brethren had already decided not to admit Judith to the sister order of our lodge at this time even though the lodge would reach out to protect her. She was to be spirited away to Mexico and it was better, that being the case, for her not to know any secrets she did not need to know. But Zeb and I, being of the Palace guard, could be of real use; therefore we were admitted.

Judith had already been given hypnotic instructions which-it was hoped-would enable her to keep from telling what little she already new if she should be put to the Question. I was told to wait and not to worry; the senior brothers would arrange to get Judith out of danger before she next was required to draw lots. I had to be satisfied with that.

For three days running Zebadiah and I reported during the afternoon recreation period for instruction, each time being taken by a different route and with different precautions. It was clear that the architect who had designed the Palace had been one of us; the enormous building had hidden in it traps and passages and doors which certainly did not appear in the official plans.

At the end of the third day we were fully accredited senior brethren, qualified with a speed possible only in time of crisis. The effort almost sprained my brain; I had to bone harder than I ever had needed to in school. Utter letter-perfection was required and there was an amazing lot to memorize-which was perhaps just as well, for it helped to keep me from worrying. We had not heard so much as a rumor of a kick-back from the disappearance of Snotty Fassett, a fact much more ominous than would have been a formal investigation.

A security officer can't just drop out of sight without his passing being noticed. It was remotely possible that Snotty had been on a roving assignment and was not expected to check in daily with his boss, but it was much more likely that he had been where we had found him and killed him because some one of us was suspected and he had been ordered to shadow. If that was the case, the calm silence could only mean that the chief security officer was letting us have more rope, while his psychotechnicians analyzed our behavior-in which case the absence of Zeb and myself from any known location during our free time for several days running was almost certainly a datum entered on a chart. If

the entire regiment started out equally suspect, then our personal indices each gained a fractional point each of those days.

I never boned savvy in such matters and would undoubtedly have simply felt relieved as the days passed with no overt trouble had it not been that the matter was discussed and worried over in the lodge room. I did not even know the name of the Guardian of Morals, nor even the location of his security office-we weren't supposed to know. I knew that he existed and that he reported to the Grand Inquisitor and perhaps to the Prophet himself but that was all. I discovered that my lodge brothers, despite the almost incredible penetration of the Cabal throughout the Temple and Palace, knew hardly more than I did-for the reason that we had no brothers, not one, in the staff of the Guardian of Morals. The reason was simple; the Cabal was every bit as careful in evaluating the character, persona, and psychological potentialities of a prospective brother as the service was in measuring a prospective intelligence officer-and the two types were as unlike as geese and goats. The Guardian would never accept the type of personality who would be attracted by the ideals of the Cabal; my brothers would never pass a-well, a man like Fassett.

I understand that, in the days before psychological measurement had become a mathematical science, an espionage apparatus could break down through a change in heart on the part of a key man-well, the Guardian of Morals had no such worry; his men never suffered a change in heart. I understand, too, that our own fraternity, in the early days when it was being purged and tempered for the ordeal to come, many times had blood on the floors of lodge rooms-I don't know; such records were destroyed.

On the fourth day we were not scheduled to go to the lodge room, having been told to show our faces where they would be noticed to offset our unwonted absences. I was spending my free time in the lounge off the mess room, leafing through magazines, when Timothy Klyce came in. He glanced at me, nodded, then started thumbing through a stack of magazines himself. Presently he said, 'These antiques belong in a dentist's office. Have any of you chaps seen this week's Time?'

His complaint was addressed to the room as a whole; no one answered. But he turned to me. 'Jack, I think you are sitting on it. Raise up a minute.'

I grunted and did so. As he reached for the magazine his head came close to mine and he whispered, 'Report to the Master.'

I had learned a little at least so I went on reading. After a bit I put my magazine aside, stretched and yawned, then got up and ambled out toward the washroom. But I walked on past and a few minutes later entered the lodge room. I found that Zeb was already there, as were several other brothers; they were gathered around Master Peter and Magdalene. I could feel the tension in the room.

I said, 'You sent for me, Worshipful Master?'

He glanced at me, looked back at Magdalene. She said slowly, 'Judith has been arrested.'

I felt my knees go soft and I had trouble standing. I am not unusually timid and physical bravery is certainly commonplace, but if you hit a man through his family or his loved ones you almost always get him where he is unprotected. 'The Inquisition?' I managed to gasp.

Her eyes were soft with pity. 'We think so. They took her away this morning and she has been incommunicado ever since.'

'Has any charge been filed?' asked Zeb.

'Not publicly.'

'Hm-m-m-That looks bad.'

'And good as well,' Master Peter disagreed. 'If it is the matter we think it is-Fassett, I mean-and had they had any evidence pointing to the rest of you, all four of you would have been arrested at once. At least, that is in accordance with their methods.'

'But what can we do?' I demanded.

Van Eyck did not answer. Magdelene said soothingly, 'There is nothing for you to do, John. You couldn't get within several guarded doors of her.'

'But we can't just do nothing!'

The lodge Master said, 'Easy, son. Maggie is the only one of us with access to that part of the inner Palace. We must leave it in her hands.'

I turned again to her; she sighed and said, 'Yes, but there is probably little I can do.' Then she left.

We waited. Zeb suggested that he and I should leave the lodge room and continue with being seen in our usual haunts; to my relief van Eyck vetoed it. 'No. We can't be sure that Sister Judith's hypnotic protection is enough to see her through the ordeal. Fortunately you two and Sister Magdalene are the only ones she can jeopardize-but I want you here, safe, until Magdalene finds out what she can. Or fails to return,' he added thoughtfully.

I blurted out, 'Oh, Judith will never betray us!'

He shook his head sadly. 'Son, anyone will betray anything under the Question-unless adequately guarded by hypno compulsion. We'll see.'

I had paid no attention to Zeb, being busy with my own very self-centred thoughts. He now surprised me by saying angrily, 'Master, you are keeping us here like pet hens-but you have just sent Maggie back to stick her head in a trap. Suppose Judith has cracked? They'll grab Maggie at once.'

Van Eyck nodded. 'Of course. That is the chance we must take since she is the only spy we have. But don't you worry about her. They'll never arrest her-she'll suicide first.'

The statement did not shock me; I was too numbed by the danger to Judith. But Zeb burst out with, 'The swine! Master, you shouldn't have sent her.'

Van Eyck answered mildly, 'Discipline, son. Control yourself. This is war and she is a soldier.' He turned away.

So we waited . . . and waited . . . and waited. It is hard to tell anyone who has not lived in the shadow of the Inquisition how we felt about it. We knew no details but we sometimes saw those unlucky enough to live through it. Even if the inquisitors did not require the auto da fé, the mind of the victim was usually damaged, often shattered.

Presently Master Peter mercifully ordered the Junior Warden to examine both of us as to our progress in memorizing ritual. Zeb and I sullenly did as we were told and were forced with relentless kindness to concentrate on the intricate rhetoric. Somehow nearly two hours passed.

At last came three raps at the door and the Tyler admitted Magdalene. I jumped out of my chair and rushed to her. 'Well?' I demanded. 'Well?'

'Peace, John,' she answered wearily. 'I've seen her.'

'How is she? Is she all right?'

'Better than we have any right to expect. Her mind is still intact and she hasn't betrayed us, apparently. As for the rest, she may keep a scar or two-but she's young and healthy; she'll recover.'

I started to demand more facts but the Master cut me off. Then they've already put her to the Question. In that case, how did you get in to see her?'

'Oh, that!' Magdalene shrugged it off as something hardly worth mentioning. 'The inquisitor prosecuting her case proved to be an old acquaintance of mine; we arranged an exchange of favors.'

Zeb started to interrupt; the Master snapped, 'Quiet!' then added sharply, 'The Grand Inquisitor isn't handling it himself? In that case I take it they don't suspect that it could be a Cabal matter?'

Maggie frowned. 'I don't know. Apparently Judith fainted rather early in the proceedings; they may not have had time to dig into that possibility. In any case I begged a respite for her until tomorrow. The excuse is to let her recover strength for more questioning, of course. They will start in on her again early tomorrow morning.'

Van Eyck pounded a fist into a palm. 'They must not start again-we can't risk it! Senior Warden, attend me! The rest of you get out! Except you, Maggie.'

I left with something unsaid. I had wanted to tell Maggie that she could have my hide for a door mat any time she lifted her finger.

Dinner that night was a trial. After the chaplain droned through his blessing I tried to eat and join in the chatter but there seemed to be a hard ring in my throat that kept me from swallowing. Seated next to me was Grace-of-God Bearpaw, half Scottish, half Cherokee. Grace was a classmate but no friend of mine; we hardly ever talked and tonight he was as taciturn as ever.

During the meal he rested his boot on mine; I impatiently moved my foot away. But shortly his foot was touching mine again and he started to tap against my boot:

- hold still, you idiot-' he spelled out- 'You have been chosen-it will be on your watch tonight-details later-eat and start talking-take a strip of adhesive tape on watch with you-six inches by a foot-repeat message back.'

I managed somehow to tap out my confirmation while continuing to pretend to eat.

Chapter 4

We relieved the watch at midnight. As soon as the watch section had marched away from our post I told Zeb what Grace had passed on to me at chow and asked him if he had the rest of my instructions. He had not. I wanted to talk but he cut me short; he seemed even more edgy than I was.

So I walked my post and tried to look alert. We were posted that night at the north end of the west rampart; our tour covered one of the Palace entrances. About an hour had passed when I heard a hiss from the dark doorway. I approached cautiously and made out a female form. She was too short to be Magdalene and I never knew who she was, for she shoved a piece of paper in my hand and faded back into the dark corridor.

I rejoined Zeb. 'What shall I do? Read it with my flash? That seems risky.'

'Open it up.'

I did and found that it was covered with fine script that glowed in the darkness. I could read it but it was too dim to be picked up by any electronic eye. I read it:

At the middle of the watch exactly on the bell you will enter the Palace by the door where you received this. Forty paces inside, take the stair on your left; climb two flights. Proceed north fifty paces. The lighted doorway on your right leads to the Virgins' quarters, there will be a guard at this door. He will not resist you but you must use a paralysis bomb on him to give him an alibi. The cell you seek is at the far end of the central east & west corridor of the quarters. There will be a light over the door and a Virgin on guard. She is not one of us. You must disable her completely but you are forbidden to injure or kill her. Use the adhesive tape as gag and blindfold and tie her up with her clothes. Take her keys, enter the cell, and remove Sister Judith. She will probably be unconscious. Bring her to your post and hind her over to the warden of your watch.

You must make all haste from the time you paralyze the guard, as an eye may see you when you pass the lighted doorway and the alarm may sound at once.

Do not swallow this note; the ink is poisonous. Drop it in the incinerator chute at the head of the stairs.

Go with God.

Zeb read it over my shoulder. 'All you need,' he said grimly, 'is the ability to pass miracles at will. Scared?'

'Yes.'

'Want me to go along?'

'No. I guess we had better carry out the orders as given.'

'Yes, we had-if I know the Lodge Master. Besides, it just might happen that I might need to kill somebody rather suddenly while you are gone. I'll be covering your rear.'

'I suppose so.'

'Now let's shut up and bone military.' We went back to walking our post.

At the two muted strokes of the middle of the watch I propped my spear against the wall, took off my sword and corselet and helmet and the rest of the ceremonial junk we were required to carry but which would hamper me on this job. Zeb shoved a gauntleted hand in mine and squeezed. Then I was off.

Two-four-six-forty paces. I groped in the dark along the left wall and found the opening, felt around with my foot. Ah, there were the steps! I was already in a part of the Palace I had never been in; I moved by dead reckoning in the dark and hoped the person who had written my orders understood that. One flight, two flights-I almost fell on my face when I stepped on a 'top' step that wasn't there.

Where was the refuse chute? It should be at hand level and the instructions said 'head of the stairs'. I was debating frantically whether to show a light or chance keeping it when my left hand touched its latch; with a sigh of relief I chucked away the evidence that could have incriminated so many others. I started to turn away, then was immediately filled with panic. Was that really an incinerator chute? Could -it have been the panel for a delivery lift instead? I groped for it in the dark again, opened it and shoved my hand in.

My hand was scorched even through my gauntlet; I jerked it back with relief and decided to trust my instructions, have no more doubts. But forty paces north the

passageway jogged and that was not mentioned in my orders; I stopped and reconnoitered very cautiously, peering around the jog at floor level.

Twenty-five feet away the guard and the doorway. He was supposed to be one of us but I took no chances. I slipped a bomb from my belt, set it by touch to minimum intensity, pulled the primer and counted off five seconds to allow for point blank range. Then I threw it and ducked back into the jog to protect myself from the rays.

I waited another five seconds and stuck my head around. The guard was slumped down on the floor, with his forehead bleeding slightly where it had struck a fragment of the bomb case. I hurried out and stepped over him, trying to run and keep quiet at the same time. The central passage of the Virgins' quarters was dim, with only blue night lights burning, but I could see and I reached the end of the passage quickly-then jammed on the brakes. The female guard at the cell there, instead of walking a post, was seated on the floor with her back to the door.

Probably she was dozing, for she did not look up at once. Then she did so, saw me, and I had no time to make plans; I dove for her. My left hand muffled her scream; with the edge of my left hand I chopped the side of her neck-not a killing stroke but I had no time to be gentle; she went limp.

Half the tape across her mouth first, then the other half across her eyes, then tear clothing from her to bind her-and hurry, hurry, hurry all the way, for a security man might already have monitored the eye that was certainly at the main doorway and have seen the unconscious guard. I found her keys on a chain around her waist and straightened up with a silent apology for what I had done to her. Her little body was almost childlike; she seemed even more helpless than Judith.

But I had no time for soft misgivings; I found the right key, got the door open-and then my darling was in my arms.

She was deep in a troubled sleep and probably drugged. She moaned as I picked her up but did not wake. But her gown slipped and I saw some of what they had done to her - I made a life vow, even as I ran, to pay it back seven times, if the man who did it could live that long.

The guard was still where 1 had left him. I thought I had gotten away with it without being monitored or waking anyone and was just stepping over him, when I heard a gasp from the corridor behind me. Why are women restless at night? If this woman hadn't gotten out of bed, no doubt to attend to something she should have taken care of before retiring, 1 might never have been seen at all.

It was too late to silence her, I simply ran. Once around the jog I was in welcome darkness but I overran the stair head, had to come back, and feel for it-then had to grope my way down step by step. I could hear shouts and high-pitched voices somewhere behind me.

Just as I reached ground level, turned and saw the portal outlined against the night sky before me, all the lights came on and the alarms began to clang. I ran the last few paces headlong and almost fell into the arms of Captain van Eyck. He scooped her out of my arms without a word and trotted away toward the corner of the building.

I stood staring after them half-wittedly when Zeb brought me to my senses by picking up my corselet and shoving it out for me to put in my arms. 'Snap out of it, man!' he hissed. 'That general alarm is for us. You're supposed to be on guard duty.'

He strapped on my sword as I buckled the corselet, then slapped my helmet on my head and shoved my spear into my left hand. Then we stood back to back in front of the portal, pistols drawn, safeties off, in drill-manual full alert. Pending further orders, we were not expected nor permitted to do anything else, since the alarm had not taken place on our post.

We stood like statues for several minutes. We could hear sounds of running feet and of challenges. The Officer of the Day ran past us into the Palace, buckling his corselet over his night clothes as he ran. I almost blasted him out of existence before he answered my challenge. Then the relief watch section swung past at double time with the relief warden at its head.

Gradually the excitement died away; the lights remained on but someone thought to shut off the alarm. Zeb ventured a whisper. 'What in Sheol happened? Did you muff it?'

'Yes and no.' I told him about the restless Sister.

Hmmph! Well, son, this ought to teach you not to fool around with women when you are on duty.'

'Confound it, 1 wasn't fooling with her. She just popped out of her cell.'

'I didn't mean tonight,' he said bleakly.

I shut up.

About half an hour later, long before the end of the watch, the relief section tramped back. Their warden halted them, our two reliefs fell out and we fell in the empty places. We marched back to the guardroom, stopping twice more on the way to drop reliefs and pick up men from our own section.

Chapter 5

We were halted in the inner parade facing the guardroom door and left at attention. There we stood for fifty mortal minutes while the officer of the Day strolled around and looked us over. Once a man in the rear rank shifted his weight. It would have gone unnoticed at dress parade, even in the presence of the Prophet, but tonight the Officer of the Day bawled him out at once and Captain van Eyck noted down his name.

Master Peter looked just as angry as his superior undoubtedly was. He passed out several more gigs, even stopped in front of me and told the guardroom orderly to put me down for 'boots not properly shined'-which was a libel, unless I had scuffed them in my efforts. I dared not look down to see but stared him in the eye and said nothing, while he stared back coldly.

But his manner recalled to me Zeb's lecture about intrigue. Van Eyck's manner was perfectly that of a subordinate officer let down and shamed by his own men; how should I feel if I were in fact new-born innocent?

Angry, I decided-angry and self-righteous. Interested and stimulated by the excitement at first, then angry at being kept standing at attention like a plebe. They were trying to soften us up by the strained wait; how would I have felt about it, say two months ago? Smugly sure of my own virtue, it would have offended me and humiliated me-to be

kept standing like a pariah waiting to whine for the privilege of a ration card-to be placed on the report like a cadet with soup on his jacket.

By the time the Commander of the Guard arrived almost an hour later I was white-lipped with anger. The process was synthetic but the emotion was real. I had never really liked our Commander anyway. He was a short, supercilious little man with a cold eye and a way of looking through his junior officers instead of at them. Now he stood in front of us with his priest's robes thrown back over his shoulders and his thumbs caught in his sword belt.

He glared at us. 'Heaven help me, Angels of the Lord indeed,' he said softly into the dead silence-then barked, 'Well?'

No one answered.

'Speak up!' he shouted. 'Some one of you knows about this. Answer me! Or would you all rather face the Question?'

A murmur ran down our ranks-but no one spoke.

He ran his eyes over us again. His eye caught mine and I stared back truculently. 'Lyle!'

'Yes, reverend sir?'

'What do you know of this?'

'I know that I would like to sit down, reverend sir!'

He scowled at me, then his eye got a gleam of cold amusement. 'Better to stand before me, my son, than to sit before the Inquisitor.' But he passed on and heckled the man next to me.

He badgered us endlessly, but Zeb and I seemed to receive neither more nor less attention than the others. At last he seemed to give up and directed the Officer of the Day to dismiss us. I was not fooled; it was a certainty that every word spoken had been recorded, every expression cinemographed, and that analysts were plotting the data against each of our past behavior patterns before we reached our quarters.

But Zeb is a wonder. He was gossiping about the night's events, speculating innocently about what could have caused the hurrah, even before we reached our room. I tried to answer in what I had decided was my own 'proper' reaction and groused about the way we had been treated. 'We're officers and gentlemen,' I complained. 'If he thinks we are guilty of something, he should prefer formal charges.'

I went to bed still griping, then lay awake and worried. I tried to tell myself that Judith must have reached a safe place, or else the brass would not be in the dark about it. But I dropped off to sleep still fretting.

I felt someone touch me and I woke instantly. Then I relaxed when I realized that my hand was being gripped in the recognition grip of the lodge. 'Quiet,' a voice I did not recognize whispered in my ear. 'I must give you certain treatment to protect you.' I felt the bite of a hypodermic in my arm; in a few seconds I was relaxed and dreamy. The voice whispered, 'You saw nothing unusual on watch tonight. Until the alarm was sounded your watch was quite without incident -' I don't know how long the voice droned on.

I was awakened a second time by someone shaking me roughly. I burrowed into my pillow and said, 'Go 'way! I'm going to skip breakfast.'

Somebody struck me between my shoulder blades; I turned and sat up, blinking. There were four armed men in the room, blasters drawn and pointed at me. 'Come along!' ordered the one nearest to me.

They were wearing the uniform of Angels but without unit insignia. Each head was covered by a black mask that exposed only the eyes-and by these masks I knew them: proctors of the Grand Inquisitor. I hadn't really believed it could happen to me. Not to me not to Johnnie Lyle who had always behaved himself, been a credit to his parish and a pride to his mother. No! The Inquisition was a boogieman, but a boogieman for sinners-not for John Lyle.

But I knew with sick horror when I saw those masks that I was already a dead man, that my time had come and here at last was the nightmare that 1 could not wake up from.

But I was not dead yet. From somewhere I got the courage to pretend anger. 'What are you doing here?'

'Come along,' the faceless voice repeated.

'Show me your order. You can't just drag an officer out of his bed any time you feel -'

The leader gestured with his pistol; two of them grabbed my arms and hustled me toward the door, while the fourth fell in behind. But I am fairly strong; I made it hard for them while protesting, 'You've got to let me get dressed at least. You've no right to haul me away half naked, no matter what the emergency is. I've a right to appear in the uniform of my rank.

Surprisingly the appeal worked. The leader stopped. 'Okay. But snap into it!'

I stalled as much as I dared while going through the motions of hurrying-jamming a zipper on my boot, fumbling clumsily with all my dressing. How could I leave some sort of a message for Zeb? Any sort of a sign that would show the brethren what had happened to me?

At last I got a notion, not a good one but the best I could manage. I dragged clothing out of my wardrobe, some that I would need, some that I did not, and with the bunch a sweater. In the course of picking out what I must wear I managed to arrange the sleeves of the sweater in the position taken by a lodge brother in giving the Grand Hailing Sign of Distress. Then 1 picked up loose clothing and started to put some of it back in the wardrobe; the leader immediately shoved his blaster in my ribs and said, 'Never mind that. You're dressed.'

I gave in, dropping the meaningless clothing on the floor. The sweater remained spread out as a symbol to him who could read it. As they led me away I prayed that our room servant would not arrive and 'tidy' it out of meaning before Zeb spotted it.

They blindfolded me as soon as we reached the inner Palace. We went down six flights, four below ground level as I figured it, and reached a compartment filled with the breathless silence of a vault. The hoodwink was stripped from my eyes. I blinked.

'Sit down, my boy, sit down and make yourself comfortable.' I found myself looking into the face of the Grand Inquisitor himself, saw his warm friendly smile and his collie-dog eyes.

His gentle voice continued, 'I'm sorry to get you so rudely out of a warm bed, but there is certain information needed by our Holy Church. Tell me, my son, do you fear the Lord? Oh, of course you do; your piety is well known. So you won't mind helping me

with this little matter even though it makes you late for breakfast. It's to the greater glory of God.' He turned to his masked and black-robed assistant questioner, hovering behind him. 'Make him ready-and pray be gentle.'

I was handled quickly and roughly, but not painfully. They touched me as if they regarded me as so much lifeless matter to be manipulated as impersonally as machinery. They stripped me to the waist and fastened things to me, a rubber bandage tight around my right arm, electrodes in my fists which they taped closed, another pair of electrodes to my wrists, a third pair at my temples, a tiny mirror to the pulse in my throat. At a control board on the left wall one of them made some adjustments, then threw a switch and on the opposite wall a shadow show of my inner workings sprang into being.

A little light danced to my heart beat, a wiggly line on an iconoscope display showed my blood pressure's rise and fall, another like it moved with my breathing, and there were several others that I did not understand. I turned my head away and concentrated on remembering the natural logarithms from one to ten.

'You see our methods, son. Efficiency and kindness, those are our watch words. Now tell me-Where did you put her?'

I broke off with the logarithm of eight. 'Put who?'

'Why did you do it?'

'I am sorry. Most Reverend Sir. I don't know what it is I am supposed to have done.'

Someone slapped me hard, from behind. The lights on the wall jiggled and the Inquisitor studied them thoughtfully, then spoke to an assistant. 'Inject him.'

Again my skin was pricked by a hypodermic. They let me rest while the drug took hold; I spent the time continuing with the effort of recalling logarithms. But that soon became too difficult; I grew drowsy and lackadaisical, nothing seemed to matter. I felt a mild and childish curiosity about my surroundings but no fear. Then the soft voice of the Inquisitor broke into my reverie with a question. I can't remember what it was but I am sure I answered with the first thing that came into my head.

I have no way of telling how long this went on. In time they brought me back to sharp reality with another injection. The Inquisitor was examining a slight bruise and a little purple dot on my right forearm. He glanced up. 'What caused this, my boy?'

'I don't know, Most Reverend Sir.' At the instant it was truth.

He shook his head regretfully. 'Don't be naïve, my son-and don't assume that I am. Let me explain something to you. What you sinners never realize is that the Lord always prevails. Always. Our methods are based in loving-kindness but they proceed with the absolute certainty of a falling stone, and with the result equally preordained.

'First we ask the sinner to surrender himself to the Lord and answer from the goodness that remains in his heart. When that loving appeal fails-as it did with you-then we use the skills God has given us to open the unconscious mind. That is usually as far as the Question need go-unless some agent of Satan has been there before us and has tampered with the sacred tabernacle of the mind.

'Now, my son, I have just returned from a walk through your mind. I found much there that was commendable, but I found also, a murky darkness, a wall that had been erected by some other sinner, and what I want-what the Church needs-is behind that wall.'

Perhaps I showed a trace of satisfaction or perhaps the lights gave me away, for he smiled sadly and added, 'No wall of Satan can stop the Lord. When we find such an obstacle, there are two things to do: given time enough I could remove that wall gently, delicately, stone by stone, without any damage to your mind. I wish I had time to, I really do, for you are a good boy at heart, John Lyle, and you do not belong with the sinners.

'But while eternity is long, time is short; there is the second way. We can disregard the false barrier in the unconscious mind and make a straightforward assault on the conscious mind, with the Lord's banners leading us.' He glanced away from me. 'Prepare him.'

His faceless crew strapped a metal helmet on my head, some other arrangements were made at the control board. 'Now look here, John Lyle.' He pointed to a diagram on the wall. 'No doubt you know that the human nervous system is partly electrical in nature. There is a schematic representation of a brain, that lower part is the thalamus; covering it is the cortex. Each of the sensory centers is marked as you can see. Your own electrodynamic characteristics have been analyzed; I am sorry to say that it will now be necessary to heterodyne your normal senses.'

He started to turn away, turned back. 'By the way, John Lyle, I have taken the trouble to minister to you myself because, at this stage, my assistants through less experience in the Lord's work than my humble self sometimes mistake zeal for skill and transport the sinner unexpectedly to his reward. I don't want that to happen to you. You are merely a strayed lamb and I purpose saving you.'

'I said, 'Thank you, Most Reverend Sir.'

'Don't thank me, thank the Lord I serve. However,' he went on, frowning slightly, 'this frontal assault on the mind, while necessary, is unavoidably painful. You will forgive me?'

I hesitated only an instant. 'I forgive you, holy sir.'

He glanced at the lights and said wryly, 'A falsehood. But you are forgiven that falsehood; it was well intended.' He nodded at his silent helpers. 'Commence.'

A light blinded me, an explosion crashed in my ears. My right leg jerked with pain, then knotted in an endless cramp. My throat contracted; I choked and tried to throw up. Something struck me in the solar plexus; I doubled up and could not catch my breath. 'Where did you put her?' A noise started low and soft, climbed higher and higher, increasing in pitch and decibels, until it was a thousand dull saws, a million squeaking slate pencils, then wavered in a screeching ululation that tore at the thin wall of reason. 'Who helped you?' Agonizing heat was at my crotch; I could not get away from it. 'Why did you do it?' I itched all over, intolerably, and tried to tear at my skin-but my arms would not work. The itching was worse than pain; I would have welcomed pain in lieu of scratching. 'Where is she?'

Light...sound...pain...heat...convulsions...cold...falling...light and pain...cold and falling...nausea and sound. 'Do you love the Lord?' Searing heat and shocking cold...pain and a pounding in my head that made me scream-'Where did you take her? Who else was in it? Give up and save your immortal soul.' Pain and an endless nakedness to the outer darkness.

I suppose I fainted.

Some one was slapping me across the mouth. 'Wake up, John Lyle, and confess! Zebadiah Jones has given you away.'

I blinked and said nothing. It was not necessary to simulate a dazed condition, nor could I have managed it. But the words had been a tremendous shock and my brain was racing, trying to get into gear. Zeb? Old Zeb? Poor old Zeb! Hadn't they had time to give him hypnotic treatment, too? It did not occur to me even then to suspect that Zeb had broken under torture alone; I simply assumed that they had been able to tap his unconscious mind. I wondered if he were already dead and remembered that I had gotten him into this, against his good sense. I prayed for his soul and prayed that he would forgive me.

My head jerked to another roundhouse slap. 'Wake up! You can hear me-Jones has revealed your sins.'

'Revealed what?' I mumbled.

The Grand Inquisitor motioned his assistants aside and leaned over me, his kindly face full of concern. 'Please, my son, do this for the Lord-and for me. You have been brave in trying to protect your fellow sinners from the fruits of their folly, but they failed you and your stiff-necked courage no longer means anything. But don't go to judgment with this on your soul. Confess, and let death come with your sins forgiven.'

'So you mean to kill me?'

He looked faintly annoyed. 'I did not say that. I know that you do not fear death. What you should fear is to meet your Maker with your sins still on your soul. Open your heart and confess.'

'Most Reverend Sir. I have nothing to confess.'

He turned away from me and gave orders in low, gentle tones. 'Continue. The mechanicals this time; I don't wish to burn out his brain.'

There is no point in describing what he meant by 'the mechanicals' and no sense in making this account needlessly grisly. His methods differed in no important way from torture techniques used in the Middle Ages and even more recently-except that his knowledge of the human nervous system was incomparably greater and his knowledge of behavior psychology made his operations more adroit. In addition, he and his assistants behaved as if they were completely free of any sadistic pleasure in their work; it made them coolly efficient.

But let's skip the details.

I have no notion of how long it took. I must have passed out repeatedly, for my clearest memory is of catching a bucket of ice water in the face not once but over and over again, like a repeating nightmare-each time followed by the inevitable hypo. I don't think I told them anything of any importance while I was awake and the hypno instructions to my unconscious may have protected me while I was out of my head. I seem to remember trying to make up a lie about sins I had never committed; I don't remember what came of it.

I recall vaguely coming semi-awake once and hearing a voice say, 'He can take more. His heart is strong.'

I was pleasantly dead for a long time, but finally woke up as if from a long sleep. I was stiff and when I tried to shift in bed my side hurt me. I opened my eyes and looked around; I was in bed in a small, windowless but cheerful room. A sweet-faced young woman in a nurse's uniform came quickly to my side and felt my pulse.

'Hello.'

'Hello,' she answered. 'How are we now? Better?'

'What happened?' I asked. 'Is it over? Or is this just a rest?'

'Quiet,' she admonished. 'You are still too weak to talk. But it's over-you are safe among the brethren.'

'I was rescued?'

'Yes. Now be quiet.' She held up my head and gave me something to drink. I went back to sleep.

It took me days to convalesce and catch up with events. The infirmary in which I woke up was part of a series of subbasements under the basement proper of a department store in New Jerusalem; there was some sort of underground connection between it and the lodge room under the Palace-just where and how I could not say; I was never in it. While conscious, I mean.

Zeb came to see me as soon as I was allowed to have visitors. I tried to raise up in bed. 'Zeb! Zeb boy-I thought you were dead!'

'Who? Me?' He came over and shook my left hand. 'What made you think that?'

I told him about the dodge the Inquisitor had tried to pull on me. He shook his head. 'I wasn't even arrested. Thanks to you, pal. Johnnie, I'll never call you stupid again. If you hadn't had that flash of genius to rig your sweater so that I could read the sign in it, they might have pulled us both in and neither one of us have gotten out of it alive. As it was, I went straight to Captain van Eyck. He told me to lie doggo in the lodge room and then planned your rescue.'

I wanted to ask how that had been pulled off but my mind jumped to a more important subject. 'Zeb, where is Judith? Can't you find her and bring her to see me? My nurse just smiles and tells me to rest.'

He looked surprised. 'Didn't they tell you?'

'Tell me what? No, I haven't seen anybody but the nurse and the doctor and they treat me like an idiot. Don't keep me in suspense, Zeb. Did anything go wrong? She's all right-isn't she?'

'Oh, sure! But she's in Mexico by now-we got a report by sensitive circuit two days ago.'

In my physical weakness I almost wept. 'Gone! Why, what a dirty, scabby trick! Why couldn't they have waited until I was well enough to tell her good-by?'

Zeb said quickly, 'Hey, look, stupid-no, forget that "stupid"; you aren't. Look, old man, your calendar is mixed up. She was on her way before you were rescued, before we were even sure you could be rescued. You don't think the brethren could bring her back just to let you two bill and coo, do you?'

I thought about it and calmed down. It made sense, even though I was bitterly disappointed. He changed the subject. 'How do you feel?'

'Oh, pretty good.'

'They tell me you get that cast off your leg tomorrow.'

'So? They haven't told me.' I twisted, trying to get comfortable. 'I'm almost more anxious to get shot of this corset, but the doc says I'll have to wear it for several weeks yet.'

'How about your hand? Can you bend your fingers?'

I tried it. 'Fairly well. I may have to write left-handed for a while.'

'All in all, it looks like you're too mean to die, old son. By the way, if it's any consolation to you, the laddy boy who worked on Judith got slightly dead in the raid in which you were rescued.'

'He was? Well, I'm sorry. I had planned to save him for myself.'

'No doubt, but you would have had to take your place in line, if he had lived. Lots of people wanted him. Me, for example.'

'But I had thought of something special for him-I was going to make him bite his nails.'

'Bite his nails?' Zeb looked puzzled.

'Until he reached his elbows. Follow me?'

'Oh.' Zeb grinned sourly. 'Not nearly imaginative enough, boy. But he's dead, we can't touch him.'

'He's infernally lucky. Zeb, why didn't you arrange to get him yourself? Or did you, and things were just too hurried to let you do a proper job?'

'Me? Why, I wasn't on the rescue raid. I haven't been back in the Palace at all.'

'Huh?'

'You didn't think I was still on duty, did you?'

'I haven't had time to think about it.'

'Well, naturally I couldn't go back after I ducked out to avoid arrest; I was through. No, my fine fellow, you and I are both deserters from the United States Army-with every cop and every postmaster in the country anxious to earn a deserter's reward by turning us in.'

I whistled softly and let the implications of his remark sink in.

Chapter 6

I had joined the Cabal on impulse. Certainly, under the stress of falling in love with Judith and in the excitement of the events that had come rushing over me as a result of meeting her, I had no time for calm consideration. I had not broken with the Church as a result of philosophical decision.

Of course I had known logically that to join the Cabal was to break with all my past ties, but it had not yet hit me emotionally. What was it going to be like never again to wear the uniform of an officer and a gentleman? I had been proud to walk down the street, to enter a public place, aware that all eyes were on me.

I put it out of my mind. The share was in the furrow, my hand was on the plow; there could be no turning back. I was in this until we won or until we were burned for treason.

I found Zeb looking at me quizzically. 'Cold feet, Johnnie?'

'No. But I'm still getting adjusted. Things have moved fast.'

'I know. Well, we can forget about retired pay, and our class numbers at the Point no longer matter.' He took off his Academy ring, chucked it in the air, caught it and shoved it into his pocket. 'But there is work to be done, old lad, and you will find that this is a military outfit, too-a real one. Personally, I've had my fill of spit-and-polish and I don't care if I never again hear that "Sound off" and "Officers, center!" and "Watchman,

what of the night?" manure again. The brethren will make full use of our best talents-and the fight really matters.'

Master Peter van Eyck came to see me a couple of days later. He sat on the edge of my bed and folded his hands over his paunch and looked at me. 'Feeling better, son?'

'I could get up if the doctor would let me.'

'Good. We're shorthanded; the less time a trained officer spends on the sick list the better.' He paused and chewed his lip. 'But, son, I don't know just what to do with you.'

'Eh? Sir?'

'Frankly, you should never have been admitted to the Order in the first place-a military command should not mess around with affairs of the heart. It confuses motivations, causes false decisions. Twice, because we took you in, we have had to show our strength in sorties that-from a strictly military standpoint-should never have happened.'

I did not answer, there was no answer-he was right. My face was hot with embarrassment.

'Don't blush about it,' he added kindly. 'Contrariwise, it is good for the morale of the brethren to strike back occasionally. The point is, what to do with you? You are a stout fellow, you stood up well-but do you really understand the ideals of freedom and human dignity we are fighting for?'

I barely hesitated. 'Master-I may not be much of a brain, and the Lord knows it's true that I've never thought much about politics. But I know which side I'm on!'

He nodded. 'That's enough. We can't expect each man to be his own Tom Paine.'

'His own what?'

'Thomas Paine. But then you've never heard of him, of course. Look him up in our library when you get a chance. Very inspiring stuff. Now about your assignment. It would be easy enough to put you on a desk job here-your friend Zebadiah has been working sixteen hours a day trying to straighten out our filing system. But I can't waste you two on clerical jobs. What is your savvy subject, your specialty?'

'Why, I haven't had any P.G. work yet, sir.'

'I know. But what did you stand high in? How were you in applied miracles, and mob psychology?'

'I was fairly good in miracles, but I guess I'm too wooden for psychodynamics. Ballistics was my best subject.'

'Well, we can't have everything. I could use a technician in morale and propaganda, but if you can't, you can't.'

'Zeb stood one in his class in mob psychology, Master. The Commandant urged him to aim for the priesthood.'

'I know and we'll use him, but not here. He is too much interested in Sister Magdalene; I don't believe in letting couples work together. It might distort their judgments in a pinch. Now about you. I wonder if you wouldn't make a good assassin?'

He asked the question seriously but almost casually; I had trouble believing it. I had been taught-I had always taken it for granted that assassination was one of the unspeakable sins, like incest, or blasphemy. I blurted out. 'The brethren use assassination?'

'Eh? Why not?' Van Eyck studied my face. 'I keep forgetting. John, would you kill the Grand Inquisitor if you got a chance?'

'Well-yes, of course. But I'd want to do it in a fair fight.'

'Do you think you will ever be given that chance? Now let's suppose we are back at the day Sister Judith was arrested by him. Suppose you could stop him by killing him-but only by poisoning him, or knifing him in the back. What would you do?'

I answered savagely, 'I would have killed him!'

'Would you have felt any shame, any guilt?'

'None!'

'So. But he is only one of many in this foulness. The man who eats meat cannot sneer at the butcher-and every bishop, every minister of state, every man who benefits from this tyranny, right up to the Prophet himself, is an accomplice before the fact in every murder committed by the inquisitors. The man who condones a sin because he enjoys the result of the sin is equally guilty of the sin. Do you see that?'

Oddly enough, I did see it, for it was orthodox doctrine as I had learned it. I had choked over its new application. But Master Peter was still talking: 'But we don't indulge in vengeance-vengeance still belongs to the Lord. I would never send you against the Inquisitor because you might be tempted to exult in it personally. We don't tempt a man with sin as a bait. What we do do, what we are doing, is engaging in a calculated military operation in a war already commenced. One key man is often worth a regiment; we pick out that key man and kill him. The bishop in one diocese may be such a man; the bishop in the next state may be just a bungler, propped up by the system. We kill the first, let the second stay where he is. Gradually we are eliminating their best brains. Now-'He leaned toward me. '- do you want a job picking off those key men? It's very important work.'

It seemed to me that, in this business, someone was continually making me face up to facts, instead of letting me dodge unpleasant facts the way most people manage to do throughout their lives. Could I stomach such an assignment? Could I refuse it-since Master Peter had implied at least that assassins were volunteers-refuse it and try to ignore in my heart that it was going on and that I was condoning it?

Master Peter was right; the man who buys the meat is brother to the butcher. It was squeamishness, not morals-like the man who favors capital punishment but is himself too 'good' to fit the noose or swing the axe. Like the person who regards war as inevitable and in some circumstances moral, but who avoids military service because he doesn't like the thought of killing.

Emotional infants, ethical morons-the left hand must know what the right hand doeth, and the heart is responsible for both. I answered almost at once, 'Master Peter, I am ready to serve . . . that way or whatever the brethren decide I can do best.'

'Good man!' He relaxed a bit and went on, 'Between ourselves, it's the job I offer to every new recruit when I'm not sure that he understands that this is not a ball game, but a cause to which he must commit himself without any reservation-his life, his fortune, his sacred honor. We have no place for the man who wants to give orders but who won't clean the privy.'

I felt relieved. 'Then you weren't seriously picking me out for assassination work?'

'Eh? Usually I am not; few men are fitted for it. But in your case I am quite serious, because we already know that you have an indispensable and not very common qualification.'

I tried to think what was so special about me and could not. 'Sir?'

'Well you'll get caught eventually, of course. Three point seven accomplished missions per assassin is what we are running now-a good score, but we ought to do better as suitable men are so scarce. But with you we know already that when they do catch you and put you to the Question, you won't crack.'

My face must have shown my feelings. The Question? Again? I was still half dead from the first time. Master Peter said kindly, 'Of course you won't have to go up against it again to the fullest. We always protect assassins; we fix it so that they can suicide easily. You don't need to worry.'

Believe me, having once suffered the Question, his assurance to me did not seem calloused: it was a real comfort. 'How, sir?'

'Eh? A dozen different ways. Our surgeons can booby-trap you so that you can die at will in the tightest bonds anyone can put on you. There is the old hollow tooth, of course, with cyanide or such-but the proctors are getting wise to that; sometimes they gag a man's mouth open. But there are many ways. For example-' He stretched his arms wide and bent them back, but not far. '-if I were to cramp my arms backward in a position a man never assumes without very considerable conscious effort, a little capsule between my shoulder blades would rupture and I would make my last report. Yet you could pound me on the back all day and never break it.'

'Uh. . . were you an assassin, sir?'

'Me? How could I be, in my job? But all of our people in positions of maximum exposure are loaded-it's the least we can do for them. Besides that, I've got a bomb in my belly-He patted his paunch. '-that will take a roomful of people with me if it seems desirable.'

'I could have used one of those last week,' I said emphatically.

'You're here, aren't you? Don't despise your luck. If you need one, you'll have one.' He stood up and prepared to leave. 'In the meantime, don't give any special thought to being selected as an executioner. The psychological evaluation group will still have to pass on you and they are hard men to convince.'

Despite his words, I did think about it, of course, though it ceased to worry me. I was put on light duty shortly thereafter and spent several days reading proof on the Iconoclast, a smug, mildly critical, little reform-from-within paper which the Cabal used to pave the way for its field missionaries. It was a 'Yes, but-' paper, overtly loyal to the Prophet but just the sort of thing to arouse doubt in the minds of the stiff-necked and intolerant. Its acid lay in how a thing was said, not what was said. I had even seen copies of it around the Palace.

I also got acquainted with some of the ramifications of the amazing underground headquarters at New Jerusalem. The department store above us was owned by a Past Grand Master and was an extremely important means of liaison with the outside world. The shelves of the store fed us and clothed us; through taps into the visiphone circuits serving the store commercially we had connection with the outside and could even put in transcontinental calls if the message could be phrased or coded to allow for the likelihood that it would be monitored. The owner's delivery trucks could be used to spirit fugitives to or from our clandestine quarters-I learned that Judith started her flight that way, with a bill of lading that described her as gum boots. The store's manifold commercial operations were a complete and plausible blind for our extensive operations.

Successful revolution is Big Business-make no mistake about that. In a modern, complex, and highly industrialized state, revolution is not accomplished by a handful of conspirators whispering around a guttering candle in a deserted ruin. It requires countless personnel, supplies, modern machinery and modern weapons. And to handle these factors successfully there must be loyalty, secrecy, and superlative staff organization.

I was kept busy but my work was fill-in work, since I was awaiting assignment. I had time to dig into the library and I looked up Tom Paine, which led me to Patrick Henry and Thomas Jefferson and others-a whole new world was opened up to me. I had trouble at first in admitting the possibility of what I read; I think perhaps of all the things a police state can do to its citizens, distorting history is possibly the most pernicious. For example, I learned for the first time that the United States had not been ruled by a bloodthirsty emissary of Satan before the First Prophet arose in his wrath and cast him out-but had been a community of free men, deciding their own affairs by peaceful consent. I don't mean that the first republic had been a scriptural paradise, but it hadn't been anything like what I had learned in school.

For the first time in my life I was reading things which had not been approved by the Prophet's censors, and the impact on my mind was devastating. Sometimes I would glance over my shoulder to see who was watching me, frightened in spite of myself. I began to sense faintly that secrecy is the keystone of all tyranny. Not force, but secrecy . . . censorship. When any government, or any church for that matter, undertakes to say to its subjects, 'This you may not read, this you must not see, this you are forbidden to know', the end result is tyranny and oppression, no matter how holy the motives. Mighty little force is needed to control a man whose mind has been hoodwinked; contrariwise, no amount of force can control a free man, a man whose mind is free. No, not the rack, not fission bombs, not anything-you can't conquer a free man; the most you can do is kill him.

My thoughts did not then fall into syllogisms; my head was filled with an inchoate spate of new ideas, each more exciting than the last. I discovered that travel between the planets, almost a myth in my world, had not stopped because the First Prophet had forbidden it as a sin against the omnipotence of God; it had ceased because it had gone into the red financially and the Prophet's government would not subsidize it. There was even an implied statement that the 'infidels' (I still used that word in my mind) still sent out an occasional research ship and that there were human beings even now on Mars and Venus.

I grew so excited at that notion that I almost forgot the plight we were all in. If I had not been chosen for the Angels of the Lord, I would probably have gone into rocketry. I was good at anything of that sort, the things that called for quick reflexes combined with knowledge of the mathematical and mechanical arts. Maybe someday the United States would have space ships again. Perhaps I

But the thought was crowded out by a dozen new ones. Foreign newspapers-why, I had not even been sure the infidels could read and write. The London Times made unbelievable and exciting reading. I gradually got it through my head that the Britishers apparently did not now eat human flesh, if indeed they ever had. They seemed remarkably like us, except that they were shockingly prone to do as they pleased-there were even letters in the Times criticizing the government. And there was another letter signed by a bishop of their infidel church, criticizing the people for not attending

services. I don't know which one puzzled me the more; both of them seemed to indicate a situation of open anarchy.

Master Peter informed me that the psych board had turned me down for assassination duty. I found myself both relieved and indignant. What was wrong with me that they would not trust me with the job? It seemed like a slur on my character-by then.

'Take it easy,' Van Eyck advised dryly. 'They made a dummy run based on your personality profile and it figured almost an even chance that you would be caught your first time out. We don't like to expend men that fast.'

'But -'

'Peace, lad. I'm sending you out to General Headquarters for assignment.'

'General Headquarters? Where is that?'

'You'll know when you get there. Report to the staff metamorphist.'

Dr Mueller was the staff face-changer; I asked him what he had in mind for me. 'How do I know until I find out what you are?' He had me measured and photographed, recorded my voice, analyzed my walk, and had a punched card made up of my physical characteristics. 'Now we'll find your twin brother.' I watched the card sorter go through several thousand cards and I was beginning to think I was a unique individual, resembling no one else sufficiently to permit me to be disguised successfully, when two cards popped out almost together. Before the machine whirred to a stop there were five cards in the basket.

'A nice assortment,' Dr Mueller mused as he looked them over, 'one synthetic, two live ones, a deader, and one female. We can't use the woman for this job, but we'll keep it in mind; it might come in very handy someday to know that there is a female citizen you could impersonate successfully.'

'What's a synthetic?' I enquired.

'Eh? Oh, it's a composite personality, very carefully built from faked records and faked backgrounds. A risky business-it involves tampering with the national archives. I don't like to use a synthetic, for there really isn't any way to fill in completely the background of a man who doesn't exist. I'd much rather patch into the real background of a real person.'

'Then why use synthetics at all?'

'Sometimes we have to. When we have to move a refugee in a hurry, for example, and there is no real person we can match him with. So we try to keep a fairly broad assortment of synthetics built up. Now let me see,' he added, shuffling the cards, 'we have two to choose from -'

'Just a second, Doctor,' I interrupted, 'why do you keep dead men in the file?'

'Oh, they aren't legally dead. When one of the brethren dies and it is possible to conceal the fact, we maintain his public personality for possible future use. Now then,' he continued, 'can you sing?'

'Not very well.'

'This one is out, then. He's a concert baritone. I can make a lot of changes in you, but I can't make a trained singer of you. It's Hobson's choice. How would you like to be Adam Reeves, commercial traveler in textiles?' He held up a card.

'Do you think I could get away with it?'

'Certainly-when I get through with you.'

A fortnight later my own mother wouldn't have known me. Nor, I believe, could Reeves's mother have told me from her son. The second week Reeves himself was available to work with me. I grew to like him very much while I was studying him. He was a mild, quiet man with a retiring disposition, which always made me think of him as small although he was of course, my height, weight, and bony structure. We resembled each other only superficially in the face.

At first, that is. A simple operation made my ears stand out a little more than nature intended; at the same time they trimmed my ear lobes. Reeves's nose was slightly aquiline; a little wax under the skin at the bridge caused mine to match. It was necessary to cap several of my teeth to make mine match his dental repair work; that was the only part I really minded. My complexion had to be bleached a shade or two; Reeves's work did not take him out into the sun much.

But the most difficult part of the physical match was artificial fingerprints. An opaque, flesh-colored flexible plastic was painted on my finger pads, then my fingers were sealed into molds made from Reeves's fingertips. It was touchy work; one finger was done over seven times before Dr Mueller would pass it.

That was only the beginning; now I had to learn to act like Reeves-his walk, his gestures, the way he laughed, his table manners. I doubt if I could ever make a living as an actor-my coach certainly agreed and said so.

'Confound it, Lyle, won't you ever get it? Your life will depend on it. You've got to learn!'

~But I thought I was acting just like Reeves,' I objected feebly.

'Acting! That's just the trouble-you were acting like Reeves. And it was as phony as a false leg. You've got to be Reeves. Try it. Worry about your sales record, think about your last trip, think about commissions and discounts and quotas. Go on. Try it.'

Every spare minute I studied the current details of Reeves's business affairs, for I would actually have to sell textiles in his place. I had to learn a whole trade and I discovered that there was more to it than carrying around samples and letting a retailer make his choice-and I didn't know a denier from a continuous fibre. Before I finished I acquired a new respect for businessmen. I had always thought that buying and selling was simple; I was wrong again. I had to use the old phonographic tutor stunt and wear earphones to bed. I never sleep well that way and would wake up each morning with a splitting head and with my ears, still tender from the operations, sore as two boils.

But it worked, all of it. In two short weeks I was Adam Reeves, commercial traveler, right down to my thoughts.

Chapter 7

'Lyle,' Master Peter van Eyck said to me, 'Reeves is due to catch the Comet for Cincinnati this afternoon. Are you ready?'

'Yes, sir.'

'Good. Repeat your orders.'

'Sir, I am to carry out my-I mean his-selling schedule from here to the coast. I check in at the San Francisco office of United Textiles, then proceed on his vacation. In

Phoenix, Arizona, I am to attend church services at the South Side Tabernacle. I am to hang around afterwards and thank the priest for the inspiration of his sermon; in the course of which I am to reveal myself to him by means of the accustomed usages of our order. He will enable me to reach General Headquarters.'

'All correct. In addition to transferring you for duty, I am going to make use of you as a messenger. Report to the psychodynamics laboratory at once. The chief technician will instruct you.'

'Very well, sir.'

The lodge Master got up and came around his desk to me. 'Good-by, John. Watch yourself, and may the Great Architect help you.'

'Thank you, sir. Uh, is this message I am to carry important?'

'Quite important.'

He let it go at that and I was a bit irked; it seemed silly to be mysterious about it when I would find out 5ust what it was in a few minutes. But I was mistaken. At the laboratory I was told to sit down, relax, and prepare myself for hypnosis.

I came out of it with the pleasant glow that usually follows hypnosis. 'That's all,' I was told. 'Carry out your orders.'

'But how about the message I was to carry?'

'You have it.'

'Hypnotically? But if I'm arrested, I'll be at the mercy of any psychoinvestigator who examines me!'

'No, you won't. It's keyed to a pair of signal words; you can't possibly remember until they are spoken to you. The chance that an examiner would hit on both words and in the right order is negligible. You can't give the message away, awake or asleep.'

I had rather expected to be 'loaded' for suicide, if I was to carry an important message-though I hadn't seen how they could do it at the last minute, other than supplying me with a pill, I mean, a method almost useless if the policeman knows his business. But if I couldn't give away the message I carried, then I preferred to take my chances; I didn't ask for poison. I'm not the suiciding type anyhow-when Satan comes for me, he'll have to drag me...

The rocket port serving New Jerusalem is easier to get to than is the case at most of the older cities. There was a tube station right across from the department store that hid our headquarters. I simply walked out of the store, took the bridge across the street, found the tube stall marked 'Rocket Port', waited for an empty cartridge, and strapped myself and my luggage in. The attendant sealed me and almost at once I was at the port.

I bought my ticket and took my place at the end of the queue outside the port police station. I'll admit I was nervous; while I didn't anticipate having any trouble getting my travel pass validated, the police officers who must handle it were no doubt on the lookout for John Lyle, renegade army officer. But they were always looking for someone and I hoped the list of wanted faces was too long to make the search for me anything other than routine.

The line moved slowly and that looked like a bad sign-especially so when I noticed that several people had been thumbed out of line and sent to wait behind the station railing. I got downright jittery. But the wait itself gave me time to get myself in hand. I shoved my papers at the sergeant, glanced at my chrono, up at the station clock, and back at my wrist.

The sergeant had been going through my papers in a leisurely, thorough manner. He looked up. 'Don't worry about catching your ship,' he said not unkindly. 'They can't leave until we clear their passenger list.' He pushed a pad across the counter. 'Your fingerprints, please.'

I gave them without comment. 1-le compared them with the prints on my travel pass and then with the prints Reeves had left there on his arrival a week earlier. 'That's all, Mr. Reeves. A pleasant trip.'

I thanked him and left.

The Comet was not too crowded. I picked a seat by a window, well forward, and had just settled down and was unfolding a late-afternoon copy of the Holy City, when I felt a touch on my arm.

It was a policeman.

'Will you step outside, please?'

I was herded outside with four other male passengers. The sergeant was quite decent about it. 'I'm afraid I'll have to ask you four to return to the station for further identification. I'll order your baggage removed and have the passenger list changed. Your tickets will be honored on the next flight.'

I let out a yelp. 'But I've got to be in Cincinnati tonight!'

'I'm sorry.' He turned to me. 'You're Reeves, aren't you? Hmm . . . you are the right size and build. Still-let me see your pass again. Didn't you arrive in town just last week?'

'That's right.'

He went through my papers again. 'Uh, yes, I remember now; you came in Tuesday morning on the Pilgrim. Well, you can't be in two places at once, so I guess that clears you.' He handed my papers back to me. 'Go aboard again. Sorry we bothered you. The rest of you come along.'

I returned to my seat and picked up my newspaper. A few minutes later the first heavy surge of the rockets threw us to the west. I continued reading the paper to cover up my agitation and relief, but soon got interested. I had been reading a Toronto paper only that morning, underground; the contrast was startling. I was back in a world for which the outside world hardly existed; the 'foreign affairs' news, if you could call it that, consisted of glowing reports of our foreign missions and some accounts of atrocities among the infidels. I began to wonder where all that money went that was contributed each year for missionary work; the rest of the world, if you could believe their newspapers, didn't seem much aware that our missions existed.

Then I began going through the paper, picking out items that I knew to be false. By the time I was through we were down out of the ionosphere and gliding into Cincy. We had overtaken the sun and had sunset all over again.

There must be a peddler's pack in my family tree. I not only covered Reeves's territory in Cincinnati, but bettered his quota. I found that I got as much pleasure out of persuading some hard-boiled retailer that he should increase his line of yard goods as I ever had from military work. I stopped worrying about my disguise and thought only about textiles. Selling isn't just a way to eat; it's a game, it's fun.

I left for Kansas City on schedule and had no trouble with the police in getting a visa for my travel pass. I decided that New Jerusalem had been the only ticklish check

point; from here west nobody would expect to pick up John Lyle, formerly officer and gentleman; he would be one of thousands of wanted men, lost in the files.

The rocket to K.C. was well filled; I had to sit beside another passenger, a well-built chap in his middle thirties. We looked each other over as I sat down, then each busied himself with his own affairs. I called for a lap table and started straightening out the order blanks and other papers I had accumulated during busy, useful days in Cincinnati. He lounged back and watched the news broadcast in the TV tank at the forward end of the car.

I felt a nudge about ten minutes later and looked around. My seatmate flicked a thumb toward the television tank; in it there was displayed a large public square filled with a mob. It was surging toward the steps of a massive temple, over which floated the Prophet's gold-and-crimson banner and the pennant of a bishopric. As I watched, the first wave of the crowd broke against the temple steps.

A squad of temple guards trotted out a side door near the giant front doors and set up their tripods on the terrace at the head of the wide stairs. The scene cut to another viewpoint; we were looking down right into the faces of the mob hurrying toward us-apparently from a telephoto pick-up somewhere on the temple roof.

What followed made me ashamed of the uniform I had once worn. Instead of killing them quickly, the guards aimed low and burned off their legs. One instant the first wave was running towards me up the steps-then they fell, the cauterized stumps of their legs jerking convulsively. I had been watching a youngish couple right in the center of the pick-up; they had been running hand in hand. As the beam swept across them they went down together.

She stayed down. He managed to lift himself on what had been his knees, took two awkward dying steps toward her and fell across her. He pulled her head to his, then the scene cut away from them to the wide view of the square.

I snatched the earphones hanging on the back of the seat in front of me and listened: '-apolis, Minnesota. The situation is well in hand and no additional troops will be needed. Bishop Jennings has declared martial law while the agents of Satan are rounded up and order restored: A period of prayer and fasting will commence at once.

'The Minnesota ghettos have been closed and all local pariahs will be relocated in the reservations in Wyoming and Montana in order to prevent future outbreaks. Let this be a warning to the ungodly everywhere who might presume to dispute the divine rule of the Prophet Incarnate.

'This on-the-spot cast by the No-Sparrow-Shall-Fall News Service is coming to you under the sponsorship of the Associated Merchants of the Kingdom, dealers in the finest of household aids toward grace. Be the first in your parish to possess a statuette of the Prophet that miraculously glows in the dark! Send one dollar, care of this station -,

I switched off the phones and hung them up. Why blame the pariahs? That mob wasn't made up of pariahs.

But I kept my lip zipped and let my companion speak first-which he did, with vehemence. 'Serves them right, the bloody fools! Imagine charging against a fortified position with your bare hands.' He kept his voice down and spoke almost in my ear.

'I wonder why they rioted?' was all that I answered.

'Eh? No accounting for the actions of an heretic. They aren't sane.'

'You can sing that in church,' I agreed firmly. 'Besides, even a sane heretic-if there could be such a thing, I mean-could see that the government is doing a good job of running the country. Business is good.' I patted my brief case happily. 'For me, at least, praise the Lord.'

We talked business conditions and the like for some time. As we talked I looked him over. He seemed to be the usual leading-citizen type, conventional and conservative, yet something about him made me uneasy. Was it just my guilty nerves? Or some sixth sense of the hunted?

My eyes came back to his hands and I had a vague feeling that I should be noticing something. But there was nothing unusual about them. Then I finally noticed a very minor thing, a calloused ridge on the bottom joint of the third finger of his left hand, the sort of a mark left by wearing a heavy ring for years and just the sort I carried myself from wearing my West Point class ring. It meant nothing, of course, since lots of men wear heavy seal rings on that finger. I was wearing one myself-not my West Point ring naturally, but one belonging to Reeves.

But why would this conventional-minded oaf wear such a ring habitually, then stop? A trifling thing, but it worried me; a hunted animal lives by noticing trifles. At the Point I had never been considered bright in psychology; I had missed cadet chevrons on that issue alone. But now seemed a good time to use what little I had learned . . . so I ran over iii my mind all I had noticed about him.

The first thing he had noticed, the one thing he had commented on, was the foolhardiness of charging into a fortified position. That smacked of military orientation in his thinking. But that did not prove he was a Pointer. On the contrary, an Academy man wears his ring at all times, even into his grave, even on leave and wearing mufti . . . unless for some good reason he does not wish to be recognized.

We were still chatting sociably and I was worrying over how to evaluate insufficient data when the stewardess served tea. The ship was just beginning to bite air as we came down out of the fringes of space and entered the long glide into Kansas City; it was somewhat bumpy and she slopped a little hot tea on his thigh. He yelped and uttered an expletive under his breath. I doubt if she caught what he said.

But I did catch it-and I thought about it furiously while I dabbed at him with a handkerchief. 'B. J. idiot!' was the term he used and it was strictly West Point slang.

Ergo, the ring callus was no coincidence; he was a West Pointer, an army officer, pretending to be a civilian. Corollary: he was almost certainly on a secret service assignment. Was I his assignment?

Oh, come now, John! His ring might be at a jeweler's, being repaired; he might be going home on thirty days. But in the course of a long talk he had let me think that he was a business man. No, he was an undercover agent.

But even if he was not after me, he had made two bad breaks in my presence. But even the clumsiest tyro (like myself, say) does not make two such slips in maintaining an assumed identity-and the army secret service was not clumsy; it was run by some of the most subtle brains in the country. Very well, then-they were not accidental slips but calculated acts; I was intended to notice them and think that they were accidents. Why?

It could not be simply that he was not sure I was the man he wanted. In such case, under the old and tested principle that a man was sinful until proved innocent, he would simply have arrested me and I would have been put to the Question.

Then why?

It could only be that they wanted me to run free for a while yet-but to be scared out of my wits and run for cover . . . and thereby lead them to my fellow conspirators It was a far fetched hypothesis, but the only one that seemed to cover all the facts.

When I first concluded that my companion must be an agent on my trail I was filled with that cold, stomach-twisting fear that can be compared only with seasickness. But when I thought I had figured out their motives I calmed down. What would Zebadiah do? 'The first principle of intrigue is not to be stampeded into any unusual act-'Sit tight and play dumb. If this cop wanted to follow me, I'd lead him into every department store in K C-and let him watch while I peddled yard goods.

Nevertheless my stomach felt tight as we got off the ship in Kansas City. I expected that gentle touch on the shoulder which is more frightening than a fist in the face. But nothing ~ happened. He tossed me a perfunctory God-keep-you, pushed ahead of me and headed for the lift to the taxicab platform while I was still getting my pass stamped. It did not reassure me as he could have pointed me out half a dozen ways to a relief. But I went on over to the New Muehlbach by tube as casually as I could manage.

I had a fair week in K.C., met my quota and picked up one new account of pretty good size. I tried to spot any shadow that might have been placed on me, but I don't know to this day whether or not I was being trailed. If I was, somebody spent an awfully dull week. But, although I had about concluded that the incident had been nothing but imagination and my jumpy nerves, I was happy at last to be aboard the ship for Denver and to note that my companion of the week before was not a passenger.

We landed at the new field just east of Aurora, many miles from downtown Denver. The police checked my papers and fingerprinted me in the routine fashion and I was about to shove my wallet back into my pocket when the desk sergeant said, 'Bare your left arm, please, Mr. Reeves.'

I rolled up my sleeve while trying to show the right amount of fretful annoyance. A white-coated orderly took a blood sample. 'Just a normal precaution,' the sergeant explained. 'The Department of Public Health is trying to stamp out spotted fever.'

It was a thin excuse, as I knew from my own training in PH.-but Reeves, textiles salesman, might not realize it. But the excuse got thinner yet when I was asked to wait in a side room of the station while my blood sample was run. I sat there fretting, trying to figure out what harm they could do me with ten c.c. of my blood-and what I could do about it even if I did know.

I had plenty of time to think. The situation looked anything but bright. My time was probably running out as I sat there-yet the excuse on which they were holding me was just plausible enough that I didn't dare cut and run; that might be what they wanted. So I sat tight and sweated.

The building was a temporary structure and the wall between me and the sergeant's office was a thin laminate; I could hear voices through it without being able to make out the words. I did not dare press my ear to it for fear of being caught doing so. On the other hand I felt that I just had to do it. So I moved my chair over to the wall, sat down again, leaned back on two legs of the chair so that my shoulders and the back of my neck were against the wall. Then I held a newspaper I had found there up in front of my face and pressed my ear against the wall.

I could hear every word then. The sergeant told a story to his clerk which would have fetched him a month's penance if a morals proctor had been listening-still, I had heard the same story, only slightly cleaned up, right in the Palace, so I wasn't really shocked, nor was I in any mood to worry about other people's morals. I listened to several routine reports and an inquiry from some semi-moron who couldn't find the men's washroom, but not a word about myself. I got a crick in my neck from the position.

Just opposite me was an open window looking out over the rocket field. A small ship appeared in the sky, braked with nose units, and came in to a beautiful landing about a quarter of a mile away. The pilot taxied toward the administration building and parked outside the window, not twenty-five yards away.

It was the courier version of the Sparrow Hawk, ram jet with rocket take-off and booster, as sweet a little ship as was ever built. I knew her well; I had pushed one just like her, playing number-two position for Army in sky polo-that was the year we had licked both Navy and Princeton.

The pilot got out and walked away. I eyed the distance to the ship. If the ignition were not locked-Sheol! What if it was? Maybe I could short around it, I looked at the open window. It might be equipped with vibrobolts; if so, I would never know what hit me. But I could not spot any power leads or trigger connections and the flimsy construction of the building would make it hard to hide them. Probably there was nothing but contact alarms; there might not be so much as a selenium circuit.

While I was thinking about it I again heard voices next door; I flattened my ear and strained to listen.

'What's the blood type?'

'Type one, sergeant.'

'Does it check?'

'No, Reeves is type three.'

'Oho! Phone the main lab. We'll take him into town for a retinal.'

I was caught cold and knew it. They knew positively that I wasn't Reeves. Once they photographed the pattern of blood vessels in the retina of either eye they would know just as certainly who I really was, in no longer time than it took to radio the picture to the Bureau of Morals & Investigation-less, if copies had been sent out to Denver and elsewhere with the tab on me.

I dove out the window.

I lit on my hands, rolled over in a ball, was flung to my feet as I unwound. If I set off an alarm I was too busy to hear it. The ship's door was open and the ignition was not locked -there was help indeed for the Son of a Widow! I didn't bother to taxi clear, but blasted at once, not caring if my rocket flame scorched my pursuers. We bounced along - the ground, the little darling and I, then I lifted her nose by gyro and scooted away to the west.

Chapter 8

I let her reach for the sky, seeking altitude and speed where the ram jets would work properly. I felt exulted to have a good ship under me and those cops far behind. But I snapped out of that silly optimism as I leveled off for jet flight.

If a cat escapes up a tree, he must stay there until the dog goes away. That was the fix I was in and in my case the dog would not go away, nor could I stay up indefinitely. The alarm would be out by now; behind me, on all sides of me, police pilots would be raising ship in a matter of minutes, even seconds. I was being tracked, that was sure, and the blip of my craft on several screens was being fed as data into a computer that would vector them in on me no matter where I turned. After that-well, it was land on command or be shot down.

The miracle of my escape began to seem a little less miraculous. Or too miraculous, perhaps? Since when were the police so sloppy that they would leave a prisoner in a room with an unguarded window? Wasn't it just a little too much of a coincidence that a ship I knew how to herd should come to that window and be left there-with the ignition unlocked-just as the sergeant said loudly the one thing that would be sure to make me try for it?

Maybe this was a second, and successful, attempt to panic me. Maybe somebody else knew my liking for the Sparrow Hawk courier, knew it because he had my dossier spread out in front of him and was as familiar with my sky polo record as I was. In which case they might not shoot me down just yet; they might be counting on me to lead them straight to my comrades.

Or perhaps, just possibly, it was a real escape-if I could exploit it. Either way, I was neither ready to be caught again, nor to lead them to my brethren-nor to die. I had an important message (I told myself); I was too busy to oblige them by dying just now.

I flipped the ship's commer to the police & traffic frequency and listened. There was some argument going on between the Denver port and a transport in the air but no one as yet was shouting for me to ground or get my pants shot off. Later perhaps-I left it switched on and thought.

The dead-reckoner showed me some seventy-five miles from Denver and headed north of west; I was surprised to see that I had been in the air less then ten minutes - . . so hopped up with adrenalin, no doubt, that my time sense was distorted. The ram-jet tanks were nearly full; I had nearly ten hours and six thousand miles at economy cruising-but of course at that speed they could almost throw rocks at me.

A plan, silly and perhaps impossible and certainly born of desperation but even so better than no plan at all, was beginning to form in my brain. I consulted the great circle indicator and set a course for the Republic of Hawaii; my baby nosed herself slightly south of west. Then I turned to the fuel-speed-distance gnomograph and roughed a problem-3100 miles about, at around 800 m.p.h., ending with dry tanks and depending on rocket juice and the nose units to cushion a cold-jet landing. Risky.

Not that I cared. Somewhere below me, shortly after I set the autopilot on the indicated course and speed, analyzers in the cybernetwork would be telling their human operators that I was attempting to escape to the Free State of Hawaii, on such a course, such an altitude, and at max speed for that range- and that I would pass over the Pacific coast between San Francisco and Monterey in sixty-odd minutes unless intercepted. But the interception was certain. Even if they were still playing with me, cat and mouse, ground-to-air snarlers would rise up from the Sacramento Valley. If they missed (most

unlikely!), manned ships as fast or faster than my baby, with full tanks and no need to conserve radius, would be waiting, at altitude at the coast. I had no hope of running that gauntlet.

Nor did I intend to. I wanted them to destroy the little honey I was pushing, destroy her completely and in the air-because I had no intention of being aboard when it happened.

Operation Chucklehead, phase two: how to get out of the durn thing! Leaving a jet plane in powered flight has all been figured out by careful engineers; you slap the jetison lever and pray; the rest is done for you. The survival capsule closes down on you and seals, then the capsule with you in it is shot clear of the ship. In due course, at proper pressure and terminal air speed, the drogue is fired; it pulls your chute open, and there you are, floating comfortably toward God's good earth, with your emergency oxygen bottle for company.

There is only one hitch: both the capsule and the abandoned ship start sending out radio signals, dots for the capsule, dashes for the ship, and, for good measure, the capsule has a built-in radar-beacon.

The whole thing is about as inconspicuous as a cow in church.

I sat there chewing my thumb and staring out ahead. It seemed to me that the yonder was looking even wilder and bluer than usual -- my own mood, no doubt, for I knew that thirteen ground miles were slipping out from under me each minute and that it was high time for me to find my hat and go home. Of course, there was a door right alongside me; I could strap on a chute and leave. But you can't open a door in a ram-jet plane in powered flight; nor do you jettison it-to do so will cause the plane to behave like a kicked pup. Nor is an eight-hundred-mile-an-hour breeze to be ignored even at 60,000 feet; I'd be sliced like butter on the door frame.

The answer depended on how good an autopilot this buggy had. The better robopilots could do everything but sing hymns; some of the cheaper ones could hold course, speed, and altitude but there their talents ended. In particular I wanted to know whether or not this autopilot had an emergency circuit to deal with a case of 'fire out', for I intended to stop the ship, step out, and let the ship continue on in the direction of Hawaii by itself-if it could.

A ram jet won't operate at all except at high speed; that's why ram ships have rocket power as well, else they could never take off. If you drop below the critical speed of your jet engines your fire goes out, then you must start it again, either by rocket power or by diving to gain speed. It is a touchy business and a number of ram-jet pilots have been gathered to their heavenly reward through an unexpected case of 'fire out'.

My earlier experience with the courier Sparrow Hawk told me nothing, as you don't use autopilots in sky polo. Believe me, you don't. So I looked for the instruction manual in the glove compartment, failed to find it, then looked over the pilot itself. The data plate failed to say. No doubt, with a screwdriver and plenty of time, I could have opened it, worried out the circuits and determined the fact-say in about a day and a half; those autopilots are a mass of transistors and spaghetti.

So I pulled the personal chute out of its breakaway clips and started shrugging my way into it while sighing, 'Pal, I hope you have the necessary gimmick built into your circuits.' The autopilot didn't answer, though I wouldn't have been much surprised if it had. Then I squeezed back into place and proceeded to override the autopilot manually. I

didn't have too much time; I was already over the Deseret basin and I could see the setting sun glinting on the waters of the Great Salt Lake ahead and to the right.

First I took her down some, because 60,000 feet is thin and chilly-too little partial pressure of oxygen for the human lung. Then I started up in a gentle curving climb that would neither tear her wings off nor gee me into a blackout. I had to take her fairly high, because I intended to cut out the rocket motors entirely and force my best girl to light her stovepipes by diving for speed, it being my intention to go into a vertical stall, which would create 'fire out'-and get off in a hurry at that point. For obvious reasons I did not want the rocket motors to cut loose just as I was trying to say good-by.

I kept curving her up until 1 was lying on my back with the earth behind me and sky ahead. I nursed it along, throttling her down, with the intention of stalling with the fire dead at thirty thousand feet-still thin but within jumping distance of breathable air and still high enough to give my lady a chance to go into her dive without cracking up on the Utah plateau. At about 28,000 1 got that silly, helpless feeling you get when the controls go mushy and won't bite. Suddenly a light flashed red on the instrument board and both fires were out. It was time to leave.

I almost forgot the seat bottle. I was still stuffing the mouthpiece between my teeth and snapping the nosepiece over my nose while I was trying with the other hand to get the door open-all of this greatly impeded by the fact that the ship and I together were effectively in free fall; the slight air drag at the top of the stall trajectory made me weigh a few ounces, no more.

The door would not open. I finally remembered to slap the spill valve, then it came open and I was almost snatched outside. I hung there for a second or two, while the ground spun crazily overhead, then the door slammed shut and latched-and I shoved myself away from the plane. I didn't jump-we were falling together, I shoved.

I may have banged my head against a wing. In any case there is a short blank in my memory before I found myself sitting on space about twenty-five yards from the ship. She was spinning slowly and earth and sky were revolving lazily around me. There was a thin cold wind as I fell but I was not yet aware of the cold. We stayed pretty well together for a few moments-or hours; time had stopped-then the ship straightened out into a dive and pulled away from me.

I tried to follow her down by eye and became aware of the icy wind of my fall. My eyes hurt and I remembered something I had read about frozen eyeballs; I covered them with both hands. It helped a lot.

Suddenly I became frightened, panicky at the thought I had delayed the jump too long and was about to smash into the desert floor. I uncovered my eyes and sneaked a look.

No, the ground was still a long way off, two or three miles perhaps. My guess was not worth much as it was already dark down there. I tried to catch sight of the ship, could not see it, then suddenly spotted it as her fires came on. I risked frozen eyes and watched, exultation in my heart. The autopilot did indeed have built into it the emergency circuit for 'fire out' and everything was proceeding according to plan. The little sweetheart leveled off, headed west on course, and began to climb for the altitude she had been told to use. I sent a prayer after her that she would win through and end up in the clean Pacific, rather than be shot down.

I watched her glowing tailpipes out of sight while I continued to fall.

The triumph of my little ship had made me forget to be scared, I had known when I bailed out that it would have to be a delayed jump. My own body, in leaving the ship, would make a secondary blip on the screen of anything tracking the ship; my only hope of convincing the trackers that what they had witnessed was a real emergency-'fire out'-lay in getting away from the ship quickly and then in not being spotted on the way down. That meant that I must fall rapidly right out of the picture and not pull the rip cord until I was close to the ground, in visual darkness and in ground radar shadow.

But I had never made a delayed jump before; in fact I had jumped only twice, the two easy practice jumps under a jumpmaster which are required of every cadet in order to graduate. I wasn't especially uncomfortable as long as I kept my eyes closed, but I began to get a truly overpowering urge to pull that rip cord. My hand went to the handle and gripped it. I told myself to let go but I couldn't make myself do it. I was still much too high, dead sure to be spotted if I broke out that great conspicuous bumbershoot and floated down the rest of the way.

I had intended to rip the chute out somewhere between one thousand and five hundred feet above ground, but my nerve played out and I couldn't wait that long. There was a large town almost under me-Provo, Utah, by what I remembered of the situation from higher up. I convinced myself that I had to pull the rip cord to keep from landing right in the city.

I remembered just in time to remove the oxygen face piece, thereby avoiding a mouthful of broken teeth most likely, for I had never gotten around to strapping the bottle to me; I had been holding it in my left hand all the way down. I suppose I could have taken time even then to secure it, but what I did was to throw it in the general direction of a farm, hoping that it would land on plowed ground rather than on some honest citizen's skull. Then I pulled the handle.

For the horrible split second I thought that I had a faultily packed chute. Then it opened and knocked me out-or I fainted with fright. I came to, hanging in the harness with the ground swinging and turning slowly beneath me. I was still too high up and I seemed to be floating toward the lights of Provo. So I took a deep breath-real air tasted good after the canned stuff-gathered a double handful of shrouds and spilled some wind.

I came down fast then and managed to let go just in time to get full support for the landing. I couldn't see the ground well in the evening darkness but I knew it was close; I gathered up my knees just as it says in the manual, then took it rather unexpectedly, stumbling, falling, and getting tangled in the chute. It is supposed to be equal to a fourteen-foot free jump; all I can say is it seems like more.

Then I was sitting on my tail in a field of sugar beets, and rubbing my left ankle.

Spies always bury their parachutes so I suppose I should have buried mine. But I didn't feel up to it and I didn't have any tools; I stuffed it into a culvert I found running under the road that edged the field, then started slogging that road toward the lights of Provo. My nose and right ear had been bleeding and the blood was dry on my face. I was covered with dirt, I had split my trousers, my hat was the Lord knows where-Denver, maybe, or over Nevada-my left ankle seemed slightly sprained, my right hand was badly skinned, and I had had a childish accident. I felt swell.

I could hardly keep from whistling as I walked, I felt so good. Sure, I was still hunted, but the Prophet's proctors thought I was still high in the sky and headed for Hawaii. At least I hoped they believed that and, in any case, I was still free, alive, and

reasonably intact. If one has to be hunted, Utah was a better place for it than most; it had been a center of heresy and schism ever since the suppression of the Mormon church, back in the days of the First Prophet. If I could keep out of the direct sight of the Prophet's police, it was unlikely that any of the natives would turn me in.

Nevertheless I lay flat in the ditch every time a truck or a ground car came along and I left the road and took to the fields again before it entered the city proper. I swung wide and entered by a dimly lighted side street. It lacked two hours of curfew; I needed to carry out the first part of my plan before the night patrol took to the streets.

I wandered around dark residential streets and avoided any direct encounters with people for most of an hour before finding what I wanted-some sort of a flier I could steal. It turned out to be a Ford family skycar, parked in a vacant lot. The house next to it was dark.

I sneaked up to it, keeping to the shadows, and broke my penknife jimmying the door-but I got it open. The ignition was locked, but I had not expected that sort of luck twice. I had had an extremely practical education at taxpayers' expense which included detailed knowledge of I.C. engines, and this time there was no hurry; it took me twenty minutes, working in the dark, to short around the lock.

After a quick reconnoitre of the street I got in and started the electric auxiliary and glided quietly into the street, then rounded a corner before turning on the car's lights. Then I drove away as openly as a farmer returning from prayer meeting in town. Nevertheless I was afraid of running into a police check point at the city limits, so as soon as the houses thinned out I ran the car into the first open field and went on well away from the road-then unexpectedly dropped a front wheel into an irrigation ditch. That determined my take-off point.

The main engine coughed and took hold; the rotor unfolded its airfoils with a loud creak. She was sloppy on the take-off, being canted over into the ditch, but she made it. The ground dropped away.

Chapter 9

The car I had stolen was a jalopy, old, not properly kept up, a bad valve knock in the engine, and a vibration in the rotor that I didn't like at all. But she would run and she had better than half a tank of fuel, enough to get me to Phoenix. I couldn't complain.

Worst was a complete lack of any navigating equipment other than an old-style uncompensated Sperry robot and a bundle of last year's strip maps of the sort the major oil companies give away. There was radio, but it was out of order.

Well, Columbus got by with less. Phoenix was almost due south and almost five hundred miles away. I estimated my drift by crossing my eyes and praying, set the robot on course and set her to hold real altitude of five hundred feet. Any more might get me into the cybernetwork; any less might get some local constable annoyed with me. I decided that running lights were safer than no running lights, this being no time to pick up a ticket, so I switched them on to 'dim'. After that I took a look around.

No sign of pursuit to the north-apparently my latest theft had not been noticed as yet. As for my first-well, the sweet darling was either shot down by now or far out over

the Pacific. It occurred to me that I was hanging up quite a record for a mother's boy-accessory before and after the fact in murder, perjury before the Grand Inquisitor, treason, impersonation, grand larceny twice. There was still arson, and barratry, whatever that was, and rape. I decided I could avoid rape, but barratry I might manage, if I could find out what it meant. I still felt swell even though my nose was bleeding again.

It occurred to me that marrying a holy deaconess might be considered statutory rape under the law and that made me feel better; by then I didn't want to miss anything.

I stayed at the controls, overriding the pilot and avoiding towns, until we were better than a hundred miles south Of Provo. From there south, past the Grand Canyon and almost to the ruins of the old '66' roadcity, people are awfully scarce; I decided that I could risk some sleep. So I set the pilot on eight hundred feet, ground altitude, told it firmly to watch out for trees and bluffs, went back to the after passenger bench and went at once to sleep.

I dreamt that the Grand Inquisitor was trying to break my nerve by eating juicy roast beef in my presence. 'Confess!' he said, as he stabbed a bite and chewed. 'Make it easy on yourself. Will you have some rare, or the slice off the end?' I was about to confess, too, when I woke up.

It was bright moonlight and we were just approaching the Grand Canyon. I went quickly to the controls and overrode the order about altitude-I was afraid that the simple little robot might have a nervous breakdown and start shedding capacitances in lieu of tears if it tried to hold the ship just eight hundred feet away from that Gargantuan series of ups and downs and pinnacles.

In the meantime I was enjoying the view so much that I forgot that I was starving. If a person hasn't seen the Canyon, there is no point in describing it-but I strongly recommend seeing it by moonlight from the air.

We sliced across it in about twenty minutes and I turned the ship back to automatic and started to forage, rummaging through the instrument panel compartment and the lockers. I turned up a chocolate almond bar and a few peanuts, which was a feast as I was ready for raw skunk- I had eaten last in Kansas City. 1 polished them off and went back to sleep.

I don't recall setting the pilot alarm but must have done so for it woke me up just before dawn. Dawn over the desert was another high-priced tourist item but 1 had navigating to do and could not spare it more than a glance. I turned the crate at right angles for a few minutes to check drift and speed made good over ground to south, then figured a bit on the edge of a strip map. With luck and assuming that my guesses about wind were about right, Phoenix should show up in about half an hour.

My luck held. I passed over some mighty rough country, then suddenly, spread out to the right, was a wide flat desert valley, green with irrigated crops and with a large city in it-the Valley of the Sun and Phoenix. I made a poor landing in a boxed-in, little dry arroyo leading into the Salt River Canyon; I tore off one wheel and smashed the rotor but I didn't care-the important thing was that it wasn't likely to be found there very soon, it and my fingerprints . . . Reeves's prints, I mean. Half an hour later, after picking my way around enormous cacti and still bigger red boulders, I came out on the highway that leads down the canyon and into Phoenix.

It was going to be a long walk into Phoenix, especially with one sore ankle, but I decided not to risk hitching a ride. Traffic was light and I managed to get off the road and

hide each time for the first hour. Then I was caught on a straight up-and-down piece by a freighter; there was nothing to do but give the driver a casual wave as I flattened myself to the rock wall and pretended to be nonchalant. He brought his heavy vehicle to a quick, smooth stop. 'Want a lift, bud?'

I made up my mind in a hurry. 'Yes, thanks!'

He swung a dural ladder down over the wide tread and I climbed into the cab. He looked me over. 'Brother!' he said admiringly. 'Was it a mountain lion, or a bear?'

I had forgotten how I looked. I glanced down at myself. 'Both,' I answered solemnly. 'Strangled one in each hand.'

'I believe it.'

'Fact is,' I added, 'I was riding a unicycle and bounced it off the road. On the high side, luckily, but I wrecked it.'

'A unicycle? On this road? Not all the way from Globe?'

'Well, I had to get off and push at times. It was the down grade that got me, though.'

He shook his head. 'Let's go back to the lion-and-bear theory. I like it better.' He didn't question me further, which suited me. I was beginning to realize that off-hand fictions led to unsuspected ramifications; I had never been over the road from Globe.

Nor had I ever been inside a big freighter before and I was interested to see how much it resembled, inside, the control room of an Army surface cruiser-the same port and starboard universal oleo speed gears controlling the traction treads, much the same instrument board giving engine speed, port and starboard motor speeds, torque ratios, and so forth. I could have herded it myself.

Instead I played dumb and encouraged him to talk. 'I've never been in one of these big babies before. Tell me how it works, will you?'

That set him off and I listened with half an ear while thinking about how I should tackle Phoenix. He demonstrated how he applied both power and steering to the treads simply by tilting the two speed bars, one in each fist, and then discussed the economy of letting the diesel run at constant speed while he fed power as needed to the two sides. I let him talk-my first need was a bath and a shave and a change of clothes, that was sure; else I'd be picked up on sight for suspected vagrancy.

Presently I realized he had asked a question. 'I think I see,' I answered. 'The Waterburies drive the treads.'

'Yes and no,' he went on. 'It's a diesel-electric hook up. The Waterburies just act like a gear system, although there aren't any gears in them; they're hydraulic. Follow me?'

I said I thought so (I could have sketched them)-and filed away in my mind the idea that, if the Cabal should ever need cruiser pilots in a hurry, freighter jacks could be trained for the job in short order.

We were going downhill slightly even after we left the canyon; the miles flowed past. My host pulled off the road and ground to a stop by a roadside restaurant and oil station. 'All out,' he grunted. 'Breakfast for us and go-juice for the gobuggy.'

'Sounds good.' We each consumed a tall stack with eggs and bacon and big, sweet Arizona grapefruit. He wouldn't let me pay for his and tried to pay for mine. As we went back to the freighter he stopped at the ladder and looked me over.

'The police gate is about three-quarters of a mile on in,' he said softly. 'I suppose that's as good a spot to check in as any.' He looked at me and glanced away.

'Mmm . . . 'I said. 'I think I could stand to walk the rest of the way, to settle my breakfast. Thanks a lot for the lift.'

'Don't mention it. Uh, there's a side road about two hundred yards back. It swings south and then west again, into town. Better for walking. Less traffic.'

'Uh, thanks.'

I walked back to the side road, wondering if my criminal career was that plain to everyone. One thing sure, I had to improve my appearance before tackling the city. The side road led through ranches and I passed several ranch houses without having the nerve to stop. But I came presently to a little house occupied by a Spanish-Indian family with the usual assortment of children and dogs. I took a chance; many of these people were clandestine Catholics, I knew, and probably hated the proctors as much as I did.

The Senora was home. She was fat and kindly and mostly Indian by her appearance. We couldn't talk much as my Spanish is strictly classroom quality, but I could ask for agua, and agua I got, both to drink and to wash myself. She sewed up the rip in my trousers while I stood foolishly in my shorts with the children making comments; she brushed me off and she even let me use her husband's razor. She protested over letting me pay her but I was firm about it. I left there looking passable.

The road swung back into town as the freighter jack had said-and without benefit of police. Eventually I found a neighborhood shopping center and in it a little tailor shop. There I waited while the rest of my transformation back to respectability was completed. With my clothes freshly pressed, the spots removed, a brand-new shirt and hat I was then able to walk down the street and exchange a blessing with any proctor I might meet while looking him calmly in the eye. A phone book gave me the address of the South Side Tabernacle; a map on the wall of the tailor shop got me oriented without asking questions. It was within walking distance.

I hurried down the street and reached the church just as eleven o'clock services were starting. Sighing with relief I slipped into a back pew and actually enjoyed the services, just as I had as a boy, before I had learned what was back of them. I felt peaceful and secure; in spite of everything I had made it safely. I let the familiar music soak into my soul while I looked forward to revealing myself to the priest afterwards and then let him do the worrying for a while.

To tell the truth I went to sleep during the sermon. But I woke up in time and I doubt if anyone noticed. Afterwards I hung around, waited for a chance to speak to the priest, and told him how much I had enjoyed his sermon. He shook hands and I gave him the recognition grip of the brethren.

But he did not return it. I was so upset by that that I almost missed what he was saying. 'Thank you, my boy. It's always good news to a new pastor to hear that his ministrations are appreciated.' I guess my face gave me away. He added, 'Something wrong?'

I stammered, 'Oh, no, reverend sir. You see, I'm a stranger myself. Then you aren't the Reverend Baird?' I was in cold panic. Baird was my only contact with the brethren short of New Jerusalem; without someone to hide me I would be picked up in a matter of hours. Even as I answered I was making wild plans to steal another ship that night and then try to run the border patrol into Mexico.

His voice cut into my thoughts as if from a great distance. 'No, I'm afraid not, my son. Did you wish to see the Reverend Baird?'

'Well, it wasn't terribly important, sir. He is an old friend of my uncle. I was to look him up while I was here and pay my respects.' Maybe that nice Indian woman would hide me until dark?

'That won't be difficult. He's here in town. I'm just supplying his pulpit while he is laid up.'

My heart made a full turn at about twelve gee; I tried to keep it out of my face. 'Perhaps if he is sick I had better not disturb him.'

'Oh, not at all. A broken bone in his foot-he'll enjoy a bit of company. Here.' The priest fumbled under his robes, found a piece of paper and a pencil and wrote out the address. 'Two streets over and half a block down. You can't miss it.'

Of course I did miss it, but I doubled back and found it, an old vine-grown house with a suggestion of New England about it. It was set well back in a large, untidy garden-eucalyptus, palms, shrubs, and flowers, all in pleasant confusion. I pressed the announcer and heard the whine of an old-style scanner; a speaker inquired: 'Yes?'

'A visitor to see the Reverend Baird, if he so pleases.'

There was a short silence while he looked me over, then: 'You'll have to let yourself in. My housekeeper has gone to the market. Straight through and out into the back garden.' The door clicked and swung itself open.

I blinked at the darkness, then went down a central hallway and out through the back door. An old man was lying in a swing there, with one foot propped up on pillows. He lowered his book and peered at me over his glasses.

'What do you want of me, son?'

'Light.'

An hour later I was washing down the last of some superb enchiladas with cold, sweet milk. As I reached for a cluster of muscatel grapes Father Baird concluded his instructions to me. 'Nothing to do until dark, then. Any questions?'

'I don't think so, sir. Sanchez takes me out of town and delivers me to certain others of the brethren who will see to it that I get to General Headquarters. My end of it is simple enough.'

'True. You won't be comfortable however.'

I left Phoenix concealed in a false bottom of a little vegetable truck. 1 was stowed like cargo, with my nose pressed against the floor boards. We were stopped at a police gate at the edge of town; I could hear brusque voices with that note of authority, and Sanchez's impassioned Spanish in reply. Someone rummaged around over my head and the cracks in the false bottom gleamed with light.

Finally a voice said, 'It's O.K., Ezra. That's Father Baird's handyman. Makes a trip out to the Father's ranch every night or so.'

'Well, why didn't he say so?'

'He gets excited and loses his English. O.K. Get going, chico. Vaya usted con Dios.'

'Gracias, senores. Buenas noches.'

At the Reverend Baird's ranch I was transferred to a helicopter, no rickety heap this time, but a new job, silent and well equipped. She was manned by a crew of two, who exchanged pass grips with me but said nothing other than to tell me to get into the passenger compartment and stay there. We took off at once.

The windows of the passenger space had been covered; I don't know which way we went, nor how far, it was a rough ride, as the pilot seemed dead set on clipping daisies the whole way. It was a reasonable precaution to avoid being spotted in a scope, but I hoped he knew what he was doing-I wouldn't want to herd a heli that way in broad daylight. He must have scared a lot of coyotes-I know he frightened me.

At last I heard the squeal of a landing beam. We slid along it, hovered, and bumped gently to a stop. When I got out I found myself staring into the maw of a tripod-mounted blaster backed up by two alert and suspicious men.

But my escort gave the password, each of the guards questioned me separately, and we exchanged recognition signals. I got the impression that they were a little disappointed that they couldn't let me have it; they seemed awfully eager. When they were satisfied, a hoodwink was slipped over my head and I was led away. We went through a door, walked maybe fifty yards, and crowded into a compartment. The floor dropped away.

My stomach caught up with me and I groused to myself because I hadn't been warned that it was an elevator, but I kept my mouth shut. We left the lift, walked a way, and I was nudged onto a platform of some sort, told to sit down and hang on-whereupon we lurched away at breakneck speed. It felt like a roller coaster-not a good thing to ride blindfolded. Up to then I hadn't really been scared. I began to think that the hazing was intentional, for they could have warned me.

We made another elevator descent, walked several hundred paces, and my hoodwink was removed. I caught my first sight of General Headquarters.

I didn't recognize it as such; I simply let out a gasp. One of my guards smiled. 'They all do that,' he said dryly.

It was a limestone cavern so big that one felt outdoors rather than underground and so magnificently lavish in its formations as to make one think of fairyland, or the Gnome King's palace. I had assumed that we were underground from the descents we had made, but nothing had prepared me for what I saw.

I have seen photographs of what the Carlsbad Caverns used to be, before the earthquake of '96 destroyed them; General Headquarters was something like that, although I can't believe that the Carlsbad Caverns were as big or half as magnificent. I could not at first grasp the immensity of the room I was in; underground there is nothing to judge size by and the built-in range-finder of a human's two-eyed vision is worthless beyond about fifty feet without something in the distance to give him scale-a house, a man, a tree, even the horizon itself. Since a natural cave contains nothing at all that is well known, customary, the human eye can't size it.

So, while I realized that the room I stood in was big, I could not guess just how big; my brain scaled it down to fit my prejudices. We were standing higher than the main floor and at one end of the room; the whole thing was softly floodlighted. I got through craning my neck and ohing and ahing, looked down and saw a toy village some distance away below us. The little buildings seemed to be about a foot high.

Then I saw tiny people walking around among the buildings-and the whole thing suddenly snapped into scale. The toy village was at least a quarter of a mile away; the whole room was not less than a mile long and many hundreds of feet high. Instead of the fear of being shut in that people normally experience in caves I was suddenly hit by the

other fear, the fear of open spaces, agoraphobia. I wanted to slink along close to the walls, like a timid mouse.

The guide who had spoken touched my arm. 'You'll have plenty of time for rubbernecking later. Let's get going.' They led me down a path which meandered between stalagmites, from baby-finger size to Egyptian pyramids, around black pools of water with lilypads of living stone growing on them, past dark wet domes that were old when man was new, under creamy translucent curtains of onyx and sharp rosy-red and dark green stalactites. My capacity to wonder began to be overloaded and presently I quit trying.

We came out on a fairly level floor of bat droppings and made good time to the village. The buildings, I saw as I got closer, were not buildings in the outdoors sense, but were mere partitions of that honeycomb plastic used for sound-deadening-space separators for efficiency and convenience. Most of them were not roofed. We stopped in front of the largest of these pens; the sign over its door read ADMINISTRATION. We entered and I was taken into the personnel office. This room almost made me homesick, so matter of fact, so professionally military was it in its ugly, efficient appointments. There was even the elderly staff clerk with the nervous sniff who seems to be general issue for such an office since the time of Caesar. The sign on his desk had described him as Warrant Officer R. E. Giles and he had quite evidently come back to his office after working hours to check me in.

'Pleased to meet you, Mr. Lyle,' he said, shaking hands and exchanging recognition. Then he scratched his nose and sniffed. 'You're a week or so early and your quarters aren't ready. Suppose we billet you tonight with a blanket roll in the lounge of B.O.Q. and get you squared away in the morning?'

I said that would be perfectly satisfactory and he seemed relieved.

Chapter 10

I guess I had been expecting to be treated as some sort of a conquering hero on my arrival-you know, my new comrades hanging breathlessly on every word of my modest account of my adventures and hairbreadth escapes and giving thanks to the Great Architect that I had been allowed to win through with my all-important message.

I was wrong. The personnel adjutant sent for me before I had properly finished breakfast, but I didn't even see him; I saw Mr. Giles. I was a trifle miffed and interrupted him to ask how soon it would be convenient for me to pay my formal call on the commanding officer.

He sniffed. 'Oh, yes. Well, Mr. Lyle, the C.G. sends his compliments to you and asks you to consider that courtesy calls have been made, not only on him but on department heads. We're rather pushed for time right now. He'll send for you the first spare moment he has.'

I know quite well that the general had not sent me any such message and that the personnel clerk was simply following a previously established doctrine. It didn't make me feel better.

But there was nothing I could do about it; the system took me in hand. By noon I had been permanently billeted, had had my chest thumped and so forth, and had made my reports. Yes, I got a chance to tell my story-to a recording machine. Flesh-and-blood men did receive the message I carried, but I got no fun out of that; I was under hypnosis at the time, just as I had been when it was given to me.

This was too much for me; I asked the psychotechnician who operated me what the message was I carried. He answered stiffly, 'We aren't permitted to tell couriers what they carry.' His manner suggested that my question was highly improper.

I lost my temper a bit. I didn't know whether he was senior to me or not as he was not in uniform, but I didn't care. 'For pity's sake! What is this? Don't the brethren trust me? Here I risk my neck -'

He cut in on me in a much more conciliatory manner. 'No, no, it's not that at all. It's for your protection.'

'Huh?'

'Doctrine. The less you know that you don't need to know the less you can spill if you are ever captured-and the safer it is for you and for everybody. For example, do you know where you are now? Could you point it out on a map?'

'No.'

'Neither do I. We don't need to know so we weren't told. However,' he went on, '1 don't mind telling you, in a general way, what you were carrying-just routine reports, confirming stuff we already had by sensitive circuits mostly. You were coming this way, so they dumped a lot of such stuff into you. I took three spools from you.'

'Just routine stuff? Why, the Lodge Master told me I was carrying a message of vital importance. That fat old joker!'

The technician grudged a smile. 'I'm afraid he was pulling-Oh!'

'Eh?'

'I know what he meant. You were carrying a message of vital importance-to you. You carried your own credentials hypnotically. If you had not been, you would never have been allowed to wake up.'

I had nothing to say. I left quietly.

My rounds of the medical office, psych office, quartermaster, and so forth had begun to give me a notion of the size of the place. The 'toy village' I had first seen was merely the administrative group. The power plant, a packaged pile, was in a separate cavern with many yards of rock wall as secondary shielding. Married couples were quartered where they pleased-about a third of us were female-and usually chose to set up their houses (or pens) well away from the central grouping. The armory and ammo dump were located in a side passage, a safe distance from offices and quarters.

There was fresh water in abundance, though quite hard, and the same passages that carried the underground streams appeared to supply ventilation-at least the air was never stale. It stayed at a temperature of 69.6 Fahrenheit and a relative humidity of 32%, winter and summer, night and day.

By lunchtime I was hooked into the organization, and found myself already hard at work at a temporary job immediately after lunch-in the armory, repairing and adjusting blasters, pistols, squad guns, and assault guns. I could have been annoyed at being asked, or ordered, to do what was really gunnery sergeant work, but the whole place seemed to be run with a minimum of protocol-we cleared our own dishes away at mess, for

example. And truthfully it felt good to sit at a bench in the armory, safe and snug, and handle calipers and feather gauges and drifts again-good, useful work.

Just before dinner that first day I wandered into the B.O.Q. lounge and looked around for an unoccupied chair. I heard a familiar baritone voice behind me: 'Johnnie! John Lyle!' I whirled around and there, hurrying toward me, was Zebadiah Jones-good old Zeb, large as life and his ugly face split with a grin.

We pounded each other on the back and swapped insults. 'When did you get here?' I finally asked him.

'Oh, about two weeks ago.'

'You did? You were still at New Jerusalem when I left. How did you do it?'

'Nothing to it. I was shipped as a corpse-in a deep trance. Sealed up in a coffin and marked "contagious".'

I told him about my own mixed-up trip and Zeb seemed impressed, which helped my morale. Then I asked him what he was doing.

'I'm in the Psych & Propaganda Bureau,' he told me, 'under Colonel Novak. Just now I'm writing a series of oh-so-respectful articles about the private life of the Prophet and his acolytes and attending priests, how many servants they have, how much it costs to run the Palace, all about the fancy ceremonies and rituals, and such junk. All of it perfectly true, of course, and told with unctuous approval. But I lay it on a shade too thick. The emphasis is on the jewels and the solid gold trappings and how much it all costs, and keep telling the yokels what a privilege it is for them to be permitted to pay for such frippery and how flattered they should feel that God's representative on earth lets them take care of him.'

'I guess I don't get it,' I said, frowning. 'People like that circusy stuff. Look at the way the tourists to New Jerusalem scramble for tickets to a Temple ceremony.'

'Sure, sure-but we don't peddle this stuff to people on a holiday to New Jerusalem; we syndicate it to little local papers in poor farming communities in the Mississippi Valley, and in the Deep South, and in the back country of New England. That is to say, we spread it among some of the poorest and most puritanical elements of the population, people who are emotionally convinced that poverty and virtue are the same thing. It grates on their nerves; in time it should soften them up and make doubters of them.'

'Do you seriously expect to start a rebellion with picayune stuff like that?'

'It's not picayune stuff, because it acts directly on their emotions, below the logical level. You can sway a thousand men by appealing to their prejudices quicker than you can convince one man by logic. It doesn't have to be a prejudice about an important matter either. Johnnie, you savvy how to use connotation indices, don't you?'

'Well, yes and no. I know what they are; they are supposed to measure the emotional effects of words.'

'That's true, as far as it goes. But the index of a word isn't fixed like the twelve inches in a foot; it is a complex variable function depending on context, age and sex and occupation of the listener, the locale and a dozen other things. An index is a particular solution of the variable that tells you whether a particular word is used in a particular fashion to a particular reader or type of reader will affect that person favorably, unfavorably, or simply leave him cold. Given proper measurements of the group addressed it can be as mathematically exact as any branch of engineering. We never have all the data we need so it remains an art-but a very precise art, especially as we employ

"feedback" through field sampling. Each article I do is a little more annoying than the last-and the reader never knows why.'

'It sounds good, but I don't see quite how it's done.'

'I'll give you a gross case. Which would you rather have? A nice, thick, juicy, tender steak-or a segment of muscle tissue from the corpse of an immature castrated bull?'

I grinned at him. 'You can't upset me. I'll take it by either name . . . not too well done. I wished they would announce chow around here; I'm starved.'

'You think you aren't affected because you were braced for it. But how long would a restaurant stay in business if it used that sort of terminology? Take another gross case, the Anglo-Saxon monosyllables that naughty little boys write on fences. You can't use them in polite company without offending, yet there are circumlocutions or synonyms for every one of them which may be used in any company.'

I nodded agreement. 'I suppose so. I certainly see how it could work on other people. But personally, I guess I'm immune to it. Those taboo words don't mean a thing to me-except that I'm reasonably careful not to offend other people. I'm an educated man, Zeb-"Sticks and stones may break my bones, et cetera." But I see how you could work on the ignorant.'

Now I should know better than to drop my guard with Zeb. The good Lord knows he's tripped me up enough times. He smiled at me quietly and made a short statement involving some of those taboo words.

'You leave my mother out of this!'

I was the one doing the shouting and I came up out of my chair like a dog charging into battle. Zeb must have anticipated me exactly and shifted his weight before he spoke, for, instead of hanging one on his chin, I found my wrist seized in his fist and his other arm around me, holding me in a clinch that stopped the fight before it started. 'Easy, Johnnie,' he breathed in my ear. 'I apologize. I most humbly apologize and ask your forgiveness. Believe me, I wasn't insulting you.'

'So you say!'

'So I say, most humbly. Forgive me?'

As I simmered down I realized that my outbreak had been very conspicuous. Although we had picked a quiet corner to talk, there were already a dozen or more others in the lounge, waiting for dinner to be announced. I could feel the dead silence and sense the question in the minds of others as to whether or not it was going to be necessary to intervene. I started to turn red with embarrassment rather than anger. 'Okay. Let me go.'

He did so and we sat down again. I was still sore and not at all inclined to forget Zeb's unpardonable breach of good manners, but the crisis was past. But he spoke quietly, 'Johnnie, believe me, I was not insulting you nor any member of your family. That was a scientific demonstration of the dynamics of connotational indices, and that is all it was.'

'Well-you didn't have to make it so personal.'

'Ah, but I did have to. We were speaking of the psychodynamics of emotion, and emotions are personal, subjective things which must be experienced to be understood. You were of the belief that you, as an educated man, were immune to this form of attack-so I ran a lab test to show you that no one is immune. Now just what did I say to you?'

'You said-Never mind. Okay, so it was a test. But I don't care to repeat it. You've made your point: I don't like it.'

'But what did I say? All I said, in fact, was that you were the legitimate offspring of a legal marriage. Right? What is insulting about that?'

'But'-I stopped and ran over in my mind the infuriating, insulting, and degrading things he had said-and, do you know, that is absolutely all they added up to. I grinned sheepishly. 'It was the way you said it.'

'Exactly, exactly! To put it technically, I selected terms with high negative indices, for this situation and for this listener. Which is precisely what we do with this propaganda, except that the emotional indices are lesser quantitatively to avoid arousing suspicion and to evade the censors-slow poison, rather than a kick in the belly. The stuff we write is all about the Prophet, lauding him to the skies. . . so the irritation produced in the reader is transferred to him. The method cuts below the reader's conscious thought and acts on the taboos and fetishes that infest his subconscious.'

I remembered sourly my own unreasoned anger. 'I'm convinced. It sounds like heap big medicine.'

'It is, chum, it is. There is magic in words, black magic-if you know how to invoke it.'

After dinner Zeb and I went to his cubicle and continued to bat the breeze. I felt warm and comfortable and very, very contented. The fact that we were part of a revolutionary plot, a project most unlikely to succeed and which would most probably end with us both dead in battle or burned for treason, affected me not at all. Good old Zeb! What if he did get under my guard and hit me where it hurt? He was my 'family'-all the family that I had. To be with him now made me feel the way I used to feel when my mother would sit me down in the kitchen and feed me cookies and milk.

We talked about this and that, in the course of which I learned more about the organization and discovered-was very surprised to discover-that not all of our comrades were brethren. Lodge Brothers, I mean. 'But isn't that dangerous?'

'What isn't? And what did you expect, old son? Some of our most valuable comrades can't join the Lodge; their own religious faith forbids it. But we don't have any monopoly on hating tyranny and loving freedom and we need all the help we can get. Anybody going our direction is a fellow traveler. Anybody.'

I thought it over. The idea was logical, though somehow vaguely distasteful. I decided to gulp it down quickly. 'I suppose so. I imagine even the pariahs will be of some use to us, when it comes to the fighting, even if they aren't eligible for membership.'

Zeb gave me a look I knew too well. 'Oh, for Pete's sake, John! When are you going to give up wearing diapers?'

'Huh?'

'Haven't you gotten it through your head yet that the whole "pariah" notion is this tyranny's scapegoat mechanism that every tyranny requires?'

'Yes, but-'

'Shut up. Take sex away from people. Make it forbidden, evil, limit it to ritualistic breeding. Force it to back up into suppressed sadism. Then hand the people a scapegoat to hate. Let them kill a scapegoat occasionally for cathartic, release. The mechanism is ages old. Tyrants used it centuries before the word "psychology" was ever invented. It works, too. Look at yourself.'

'Look, Zeb, I don't have anything against the pariahs.'

'You had better not have. You'll find a few dozen of them in the Grand Lodge here. And by the way, forget that word "pariah". It has, shall we say, a very high negative index.'

He shut up and so did I; again I needed time to get my thoughts straight. Please understand me-it is easy to be free when you have been brought up in freedom, it is not easy otherwise. A zoo tiger, escaped, will often slink back into the peace and security of his bars. If he can't get back, they tell me he will pace back and forth within the limits of bars that are no longer there. I suppose I was still pacing in my conditioned pattern.

The human mind is a tremendously complex thing; it has compartments in it that its owner himself does not suspect. I had thought that I had given my mind a thorough housecleaning already and had rid it of all the dirty superstitions I had been brought up to believe. I was learning that the 'housecleaning' had been no more than a matter of sweeping the dirt under the rugs-it would be years before the cleansing would be complete, before the clean air of reason blew through every room.

All right, I told myself, if I meet one of these par-no, 'comrades', I'll exchange recognition with him and be polite-as long as he is polite to me! At the time I saw nothing hypocritical in the mental reservation.

Zeb lay back, smoking, and let me stew. I knew that he smoked and he knew that I disapproved. But it was a minor sin and, when we were rooming together in the Palace barracks, I would never have thought of reporting him. I even knew which room servant was his bootlegger. 'Who is sneaking your smokes in now?' I asked, wishing to change the subject.

'Eh? Why, you buy them at the P.X., of course.' He held the dirty thing out and looked at it. 'These Mexican cigarettes are stronger than I like. I suspect that they use real tobacco in them, instead of the bridge sweepings I'm used to. Want one?'

'Huh? Oh, no, thanks!'

He grinned wryly. 'Go ahead, give me your usual lecture. It'll make you feel better.'

'Now look here, Zeb, I wasn't criticizing. I suppose it's just one of the many things I've been wrong about.'

'Oh, no. It's a dirty, filthy habit that ruins my wind and stains my teeth and may eventually kill me off with lung cancer.' He took a deep inhalation, let the smoke trickle out of the corners of his mouth, and looked profoundly contented. 'But it just happens that I like dirty, filthy habits.'

He took another puff. 'But it's not a sin and my punishment for it is here and now, in the way my mouth tastes each morning. The Great Architect doesn't give a shout in Sheol about it. Catch on, old son? He isn't even watching.'

'There is no need to be sacrilegious.'

'I wasn't being so.'

'You weren't, eh? You were scoffing at one of the most fundamental-perhaps the one fundamental-proposition in religion: the certainty that God is watching!'

'Who told you?'

For a moment all I could do was to sputter. 'Why, it isn't necessary. It's an axiomatic certainty. It's -,

'I repeat, who told you? See here, I retract what I said. Perhaps the Almighty is watching me smoke. Perhaps it is a mortal sin and I will burn for it for eons. Perhaps. But

who told you? Johnnie, you've reached the point where you are willing to kick the Prophet out and hang him to a tall, tall tree. Yet you are willing to assert your own religious convictions and to use them as a touchstone to judge my conduct. So I repeat: who told you? What hill were you standing on when the lightning came down from Heaven and illuminated you? Which archangel carried the message?'

I did not answer at once. I could not. When I did it was with a feeling of shock and cold loneliness. 'Zeb . . . I think I understand you at last. You are an-atheist. Aren't you?'

Zeb looked at me bleakly. 'Don't call me an atheist,' he said slowly, 'unless you are really looking for trouble.'

'Then you aren't one?' I felt a wave of relief, although I still didn't understand him.

'No, I am not. Not that it is any of your business. My religious faith is a private matter between me and my God. What my inner beliefs are you will have to judge by my actions . . . for you are not invited to question me about them. I decline to explain them nor to justify them to you. Nor to anyone. . - not the Lodge Master. . . nor the Grand Inquisitor, if it comes to that.'

'But you do believe in God?'

'I told you so, didn't I? Not that you had any business asking me.'

'Then you must believe in other things?'

'Of course I do! I believe that a man has an obligation to be merciful to the weak - . . patient with the stupid . . . generous with the poor. I think he is obliged to lay down his life for his brothers, should it be required of him. But I don't propose to prove any of those things; they are beyond proof. And I don't demand that you believe as I do.'

I let out my breath. 'I'm satisfied, Zeb.'

Instead of looking pleased he answered, 'That's mighty kind of you, brother, mighty kind! Sorry-I shouldn't be sarcastic. But I had no intention of asking for your approval. You goaded me-accidentally, I'm sure-into discussing matters that I never intend to discuss.' He stopped to light up another of those stinking cigarettes and went on more quietly. 'John, I suppose that I am, in my own cantankerous way, a very narrow man myself. I believe very strongly in freedom of religion-but I think that that freedom is best expressed as freedom to keep quiet. From my point of view, a great deal of openly expressed piety is insufferable conceit.'

'Huh?'

'Not every case-I've known the good and the humble and the devout. But how about the man who claims to know what the Great Architect is thinking? The man who claims to be privy to His Inner Plans? It strikes me as sacrilegious conceit of the worst sort-this character probably has never been any closer to His Trestle Board than you or I. But it makes him feel good to claim to be on chummy terms with the Almighty, it builds his ego, and lets him lay down the law to you and me. Pfui! Along comes a knothead with a loud voice, an I.Q. around 90, hair in his ears, dirty underwear, and a lot of ambition. He's too lazy to be a farmer, too stupid to be an engineer, too unreliable to be a banker-but, brother, can he pray! After a while he has gathered around him other knotheads who don't have his vivid imagination and self-assurance but like the idea of having a direct line of Omnipotence. Then this character is no longer Nehemiah Scudder but the First Prophet'

I was going along with him, feeling shocked but rather pleasantly so, until he named the First Prophet. Perhaps my own spiritual state at that time could have been described as that of a 'primitive' follower of the First Prophet-that is to say, I had decided that the Prophet Incarnate was the devil himself and that all of his works were bad, but that belief did not affect the basics of the faith I had learned from my mother. The thing to do was to purge and reform the Church, not to destroy it. I mention this because my own case paralleled a very serious military problem that was to develop later.

I found that Zeb was studying my face. 'Did I get you on the raw again, Old fellow? I didn't mean to.'

'Not at all,' I answered stiffly, and went on to explain that, in my opinion, the sinfulness of the present gang of devils that had taken over the Church in no way invalidated the true faith. 'After all, no matter what you think nor how much you may like to show off your cynicism, the doctrines are a matter of logical necessity. The Prophet Incarnate and his cohorts can pervert them, but they can't destroy them-and it doesn't matter whether the real Prophet had dirty underwear or not.'

Zeb sighed as if he were very tired. 'Johnnie, I certainly did not intend to get into an argument about religion with you. I'm not the aggressive type-you know that. I had to be pushed into the Cabal.' He paused. 'You say the doctrines are a matter of logic?'

'You've explained the logic to me yourself. It's a perfect consistent structure.'

'So it is. Johnnie, the nice thing about citing God as an authority is that you can prove anything you set out to prove. It's just a matter of selecting the proper postulates, then insisting that your postulates are "inspired". Then no one can possibly prove that you are wrong.'

'You are asserting that the First Prophet was not inspired?'

'I am asserting nothing. For all you know, 1 am the First Prophet, come back to kick out the defilers of my temple.'

'Don't be-I was all wound up to kick it around further when there came a knock at Zeb's door. I stopped and he called out, 'Come in!'

It was Sister Magdalene.

She nodded at Zeb, smiled sweetly at my open-mouthed surprise and said, 'Hello, John Lyle. Welcome.' It was the first time I had ever seen her other than in the robes of a holy deaconess. She seemed awfully pretty and much younger.

'Sister Magdalene!'

'No. Staff Sergeant Andrews. "Maggie", to my friends.'

'But what happened? Why are you here?'

'Right at the moment I'm here because I heard at dinner that you had arrived. When I didn't find you in your own quarters I concluded that you would be with Zeb. As for the rest, I couldn't go back, any more than you or Zeb-and our hideout back in New Jerusalem was getting overcrowded, so they transferred me.'

'Well, it's good to see you!'

'It's good to see you, John.' She patted me on the cheek and smiled again. Then she climbed on Zeb's bed and squatted tailor-fashion, showing a rather immodest amount of limb in the process. Zeb lit another cigarette and handed it to her; she accepted it, drew smoke deep into her lungs, and let it go as if she had been smoking all her life.

I had never seen a woman smoke-never. I could see Zeb watching me, confound him!-and I most carefully ignored it. Instead I grinned and said, 'This is a wonderful reunion! If only -,

'I know,' agreed Maggie. 'If only Judith were here. Have you heard from her yet, John?'

'Heard from her? How could I?'

'That's right, you couldn't-not yet. But you can write to her now.'

'Huh? How?'

'I don't know the code number off hand, but you can drop it at my desk-I'm in G-2. Don't bother to seal it; all personal mail has to be censored and paraphrased. I wrote to her last week but I haven't had an answer yet.'

I thought about excusing myself at once and writing a letter, but I didn't. It was wonderful to be with both of them and I didn't want to cut the evening short. I decided to write before I went to bed-while realizing, with surprise, that I had been so much on the go that, so far as I could remember, I hadn't even had time to think about Judith since . . . well, since Denver, at least.

But I did not get to write to her even later that night. It was past eleven o'clock and Maggie was saying something about reveille coming early when an orderly showed up: 'The Commanding General's compliments and will Legate Lyle see him at once, sir.'

I gave my hair a quick brush with Zeb's gear and hurried away, while wishing mightily that I had something fit to report in, rather than a civilian suit much the worse for wear.

The inner sanctum was deserted and dark except for a light that I could see in the far inner office-even Mr. Giles was not at his desk. I found my way in, knocked on the door frame, stepped inside, clicked my heels and saluted. 'Legate Lyle reports to the Commanding General as ordered, sir.'

An elderly man seated at a big desk with his back to me turned and looked up, and I got another surprise. 'Ah, yes, John Lyle,' he said gently. He got up and came toward me, with his hand out. 'It's been a long time, hasn't it?'

It was Colonel Huxley, head of the Department of Applied Miracles when I was a cadet-and almost my only friend among the officers at that time. Many was the Sunday afternoon that I had relaxed in his quarters, my stock unhooked, free for the moment from the pressure of discipline.

I took his hand. 'Colonel-I mean "General", sir . I thought you were dead!'

'Dead colonel into live general, eh! No, Lyle, though I was listed as dead when I went underground. They usually do that when an officer disappears; it looks better. You're dead, too-did you know?'

'Uh, no, I didn't, sir. Not that it matters. This is wonderful, sir!'

'Good.'

'But-I mean, how did you ever-well-' I shut up.

'How did I land here and in charge at that? I've been a Brother since I was your age, Lyle. But I didn't go underground until I had to-none of us do. In my case the pressure for me to join the priesthood became a bit too strong; the Superintendent was quite restless about having a lay officer know too much about the more abstruse branches of physics and chemistry. So I took a short leave and died. Very sad.' He smiled. 'But sit

down. I've been meaning to send for you all day, but it's been a busy day. They all are. It wasn't until now that I've had time to listen to the record of your report.'

We sat down and chatted, and I felt that my cup runneth over. Huxley I respected more than any officer I had ever served under. His very presence resolved any residual doubts I might have-if the Cabal was right for him, it was right for me, and never mind the subtleties of doctrine.

At last he said, 'I didn't call you in at this late hour just to chat, Lyle. I've a job for you.'

'Yes, sir?'

'No doubt you've already noticed what a raw militia we have here. This is between ourselves and I'm not criticizing our comrades-every one of them has pledged his life to our cause, a harder thing for them to do than for you and me, and they have all placed themselves under military discipline, a thing still harder. But I haven't enough trained soldiers to handle things properly. They mean well but I am tremendously handicapped in trying to turn the organization into an efficient fighting machine. I'm swamped with administrative details. Will you help me?'

I stood up. '1 shall be honored to serve with the General to the best of my ability.'

'Fine! We'll call you my personal aide for the time being. That's all for tonight, Captain. I'll see you in the morning.'

I was halfway out the door before his parting designation sunk in-then I decided that it was a slip of the tongue.

But it was not. I found my own office the next morning by the fact that a sign had been placed on it reading: 'CAPTAIN LYLE'. From the standpoint of a professional military man there is one good thing about revolutions: the opportunities for swift promotion are excellent . . . even if the pay is inclined to be irregular.

My office adjoined General Huxley's and from then on I almost lived in it-eventually I had a cot installed back of my desk. The very first day I was still fighting my way down a stack of papers in my incoming basket at ten at night. I had promised myself that I would find the bottom, then write a long letter to Judith. But it turned out to be a very short note, as there was a memorandum addressed to me personally, rather than to the General, at the bottom.

It was addressed to 'Legate J. Lyle,' then someone had scratched out 'Legate' and written 'Captain'. It went on:

MEMORANDUM FOR ALL PERSONNEL NEWLY REPORTED
SUBJECT: Personal Conversion Report

1. You are requested and directed to write out, as fully as possible, all of the events, thoughts, considerations, and incidents which led up to your decision to join our fight for freedom. This account should be as detailed as possible and as subjective as possible. A report written hastily, too briefly, or to superficially will be returned to be expanded and corrected and may be supplemented by hypno examination.
2. This report will be treated as confidential as a whole and any portion of it may be classified secret by the writer. You may substitute letters or numbers for proper names if this will help you to speak freely, but the report must be complete.
3. No time off from regular duties is allotted for this purpose, but this report must be treated as extra-duty of highest priority. A draft of your report will be expected by (here

some one had written in a date and hour less than forty-eight hours away; I used some profane expressions under my breath.)
BY ORDER OF THE COMMANDING GENERAL
(s) M. Novak, Col, F.U.S.A. Chief of Psychology

I was considerably annoyed by this demand and decided to write to Judith first anyway. The note didn't go very well-how can one write a love letter when you know that one or more strangers will read it and that one of them will rephrase your tenderest words? Besides that, while writing to Judith, my thoughts kept coming back to that night on the rampart of the Palace when I had first met her. It seemed to me that my own personal conversion, as the nosy Colonel Novak called it, started then. . . although I had begun to have doubts before then. Finally I finished the note, decided not to go to bed at once but to tackle that blasted report.

After a while I noticed that it was one o'clock in the morning and I still hadn't carried my account up to the point where I was admitted to the Brotherhood. I stopped writing rather reluctantly (I found that I had grown interested) and locked it in my desk.

At breakfast the next morning I got Zebadiah aside, showed him the memorandum, and asked him about it. 'What's the big idea?' I asked. 'You work for this particular brass. Are they still suspicious of us, even after letting us in here?'

Zeb barely glanced at it. 'Oh, that-Shucks, no. Although I might add that a spy, supposing one could get this far, would be bound to be caught when his personal story went through semantic analysis. Nobody can tell a lie that long and that complicated.'

'But what's it for?'

'What do you care? Write it out-and be sure you do a thorough job. Then turn it in.'

I felt myself grow warm. 'I don't know as I will. I rather think I'll ask the General about it first.'

'Do so, if you want to make a ruddy fool of yourself. But look, John, the psychomathematicians who will read that mess of bilge you will write, won't have the slightest interest in you as an individual. They don't even want to know who you are-a girl goes through your report and deletes all personal names, including your own, if you haven't done so yourself, and substitutes numbers. . . all this before an analyst sees it. You're just data, that's all; the Chief has some heap big project on the fire-I don't know what it is myself-and he is trying to gather together a large enough statistical universe to be significant.'

I was mollified. 'Well, why don't they say so, then? This memo is just a bald order-irritating.'

Zeb shrugged. 'That is because it was prepared by the semantics division. If the propaganda division had written it, you would have gotten up early and finished the job before breakfast.' He added, 'By the way, I hear you've been promoted. Congratulations.'

'Thanks.' I grinned at him slyly. 'How does it feel to be junior to me, Zeb?'

'Huh? Did they bump you that far? I thought you were a captain.'

'I am.'

'Well, excuse me for breathing-but I'm a major.'

'Oh. Congratulations.'

'Think nothing of it. You have to be at least a colonel around here, or you make your own bed.'

I was too busy to make my bed very often. More than half the time I slept on the couch in my office and once I went a week without bathing. It was evident at once that the Cabal was bigger and had more complicated ramifications to it than I had ever dreamed and furthermore that it was building to a crescendo. I was too close to the trees to see the woods, even though everything but the utter top-secret, burn-after-reading items passed across my desk.

I simply endeavored to keep General Huxley from being smothered in pieces of paper-and found myself smothered instead. The idea was to figure out what he would do, if he had time, and then do it for him. A person who has been trained in the principles of staff or doctrinal command can do this; the trick is to make your mind work like your boss's mind in all routine matters, and to be able to recognize what is routine and what he must pass on himself. I made my share of mistakes, but apparently not too many for he didn't fire me, and three months later I was a major with the fancy title of assistant chief of staff. Chalk most of it up to the West Point ring, of course-a professional has a great advantage.

I should add that Zeb was a short-tailed colonel by then and acting chief of propaganda, his section chief having been transferred to a regional headquarters I knew only by the code name JERICHO.

But I am getting ahead of my story. I heard from Judith about two weeks later-a pleasant enough note but with the juice pressed out of it through rephrasing. I meant to answer her at once but actually delayed a week-it was so pesky hard to know what to say. I could not possibly tell her any news except that 1 was well and busy. If I had told her I loved her three times in one letter some idiot in cryptography would have examined it for 'pattern' and rejected it completely when he failed to find one.

The mail went to Mexico through a long tunnel, partly artificial but mostly natural, which led right under the international border. A little electric railroad of the sort used in mines ran through this tunnel and carried not only my daily headaches in the way of official mail but also a great deal of freight to supply our fair-sized town. There were a dozen other entrances to G.H.Q. on the Arizona side of the border, but I never knew where any of them were-it was not my pidgin. The whole area overlay a deep layer of Paleozoic limestone and it may well be honeycombed from California to Texas. The area known as G.H.Q. had been in use for more than twenty years as a hideout for refugee brethren. Nobody knew the extent of the caverns we were in; we simply lighted and used what we needed. It was a favorite sport of us troglodytes-permanent residents were 'trogs'; transients were 'bats' because they flew by night-we trogs liked to go on 'spelling bees', picnics which included a little amateur speleology in the unexplored parts.

It was permitted by regulations, but just barely and subject to stringent safety precautions, for you could break a leg awfully easily in those holes. But the General permitted it because it was necessary; we had only such recreations as we could make ourselves and some of us had not seen daylight in years.

Zeb and Maggie and I went on a number of such outings when I could get away. Maggie always brought another woman along. I protested at first but she pointed out to me that it was necessary in order to avoid gossip . . . mutual chaperonage. She assured me that she was certain that Judith would not mind, under the circumstances. It was a

different girl each time and it seemed to work out that Zeb always paid a lot of attention to the other girl while I talked with Maggie. I had thought once that Maggie and Zeb would marry, but now I began to wonder. They seemed to suit each other like ham and eggs, but Maggie did not seem jealous and I can only describe Zeb, in honesty, as shameless-that is, if he thought Maggie would care.

One Saturday morning Zeb stuck his head in my sweat box and said, 'Spelling bee. Two o'clock. Bring a towel.'

I looked up from a mound of papers. 'I doubt if I can make it,' I answered. 'And why a towel?'

But he was gone. Maggie came through my office later to take the weekly consolidated intelligence report in to the Old Man, but I did not attempt to question her, as Maggie was all business during working hours-the perfect office sergeant. I had lunch at my desk, hoping to finish up, but knowing it was impossible. About a quarter of two I went in to get General Huxley's signature on an item that was to go out that night by hypnoed courier and therefore had to go at once to psycho in order that the courier might be operated. He glanced at it and signed it, then said, 'Sergeant Andy tells me you have a date.'

,'Sergeant Andrews is mistaken,' I said stiffly. 'There are still the weekly reports from Jericho, Nod, and Egypt to be gone over.'

'Place them on my desk and get out. That's an order. I can't have you going stale from overwork.'

I did not tell him that he had not even been to lodge himself in more than a month; I got out.

I dropped the message with Colonel Novak and hurried to where we always met near the women's mess. Maggie was there with the other girl-a blonde named Miriam Booth who was a clerk in Quartermaster's store. I knew her by sight but had never spoken to her. They had our picnic lunch and Zeb arrived while I was being introduced. He was carrying, as usual, the portable flood we would use when we picked out a spot and a blanket to sit on and use as a table. 'Where's your ç towel?' he demanded.

'Were you serious? I forgot it.'

'Run get it. We'll start off along Appian Way. You can catch up. Come on, kids.'

They started off, which left me with nothing but to do as I was told. After grabbing a towel from my room I dogtrotted until I had them in sight, then slowed to a walk, puffing. Desk work had ruined my wind. They heard me and waited.

We were all dressed alike, with the women in trousers and each with a safety line wrapped around the waist and torch clipped to the belt. I had gotten used to women in men's clothes, much as I disliked it-and, after all, it is impractical and quite immodest to climb around in caves wearing skirts.

We left the lighted area by taking a turn that appeared to lead into a blind wall; instead it led into a completely concealed but easily negotiated tunnel. Zeb tied our labyrinth string and started paying it out as soon as we left permanent and marked paths, as required by the standing order; Zeb was always careful about things that mattered.

For perhaps a thousand paces we could see blazes and other indications that others had been this way before, such as a place where someone had worked a narrow squeeze wider with a sledge. Then we left the obvious path and turned into a blind wall. Zeb put down the flood and turned it on. 'Sling your torches. We climb this one.'

'Where are we going?'

'A place Miriam knows about. Give me a leg up, Johnnie.' The climb wasn't much. I got Zeb up all right and the girls could have helped each other up, but we took them up roped, for safety's sake. We picked up our gear and Miriam led us away, each of us using his torch.

We went down the other side and there was another passage so well hidden that it could have been missed for ten thousand years. We stopped once while Zeb tied on another ball of string. Shortly Miriam said, 'Slow up, everybody. I think we're there.'

Zeb flashed his torch around, then set up the portable flood and switched it on. He whistled. 'Whew! This is all right!'

Maggie said softly, 'It's lovely.' Miriam just grinned triumphantly.

I agreed with them all. It was a perfect small domed cavern, perhaps eighty feet wide and much longer. How long, I could not tell, as it curved gently away in a gloom-filled turn. But the feature of the place was a quiet, inky-black pool that filled most of the floor. In front of us was a tiny beach of real sand that might have been laid down a million years ago for all I know.

Our voice echoed pleasantly and a little bit spookily in the chamber, being broken up and distorted by stalactites and curtains hanging from the roof. Zeb walked down to the water's edge, squatted and tested it with his hand. 'Not too cold,' he announced. 'Well, the last one in is a proctor's nark.'

I recognized the old swimming hole call, even though the last time I had heard it, as a boy, it had been 'last one in is a dirty pariah'. But here I could not believe it.

Zeb was already unbuttoning his shirt. I stepped up to him quickly and said privately, 'Zeb! Mixed bathing? You must be joking?'

'Not a bit of it.' He searched my face. 'Why not? What's the matter with you, boy? Afraid someone will make you do penance? They won't, you know. That's all over with.'

'But -'

'But what?'

I could not answer. The only way I could make the words come out would have been in the terms we had been taught in the Church, and I knew that Zeb would laugh at me-in front of the women. Probably they would laugh, too, since they had known and I hadn't. 'But Zeb,' I insisted, 'I can't. You didn't tell me . . . and I don't even have a bathing outfit.'

'Neither do I. Didn't you ever go in raw as a kid-and get paddled for it?' He turned away without waiting for me to answer this enormity and said, 'Are you frail vessels waiting on something?'

'Just for you two to finish your debate,' Maggie answered, coming closer. 'Zeb, I think Mimi and I will use the other side of that boulder. All right?'

'Okay. But wait a second. No diving, you both understand. And a safety man on the bank at all times-John and I will take turns.'

'Pooh!' said Miriam. '1 dove the last time I was here.'

'You weren't with me, that's sure. No diving-or I'll warm your pants where they are tightest.'

She shrugged. 'All right, Colonel Crosspatch. Come on, Mag.' They went on past us and around a boulder half as big as a house. Miriam stopped, looked right at me, and waggled a finger. 'No peeking, now!' I blushed to my ears.

They disappeared and we heard no more of them, except for giggles. I said hurriedly, 'Look. You do as you please-and on your own head be it. But I'm not going in. I'll sit here on the bank and be safety man.'

'Suit yourself. I was going to match you for first duty, but nobody is twisting your arm. Pay out a line, though, and have it ready for heaving. Not that we'll need it; both the girls are strong swimmers.'

I said desperately, 'Zeb, I'm sure the General would forbid swimming in these underground pools.'

'That's why we don't mention it. "Never worry the C.O. unnecessarily"-standing orders in Joshua's Army, circa 1400 B.C.' He went right on peeling off his clothes.

I don't know why Miriam warned me not to peek-not that I would!-for when she was undressed she came straight out from behind that boulder, not toward us but toward the water. But the flood light was full on her and she even turned toward us for an instant, then shouted, 'Come on, Maggie! Zeb is going to be last if you hurry.'

I did not want to look and I could not take my eyes off her. I had never seen anything remotely resembling the sight she was in my life-and only once a picture, one in the possession of a boy in my parish school and on that occasion I had gotten only a glimpse and then had promptly reported him.

But I could not stop looking, burning with shame as I was.

Zeb beat Maggie into the water-I don't think she cared. He went into the water quickly, almost breaking his own injunction against diving. Sort of a surface dive I would call it, running into the water and then breaking into a racing start. His powerful crawl was soon overtaking Miriam, who had started to swim toward the far end.

Then Maggie came out from behind the boulder and went into the water. She did not make a major evolution of it, the way Miriam had, but simply walked quickly and with quiet grace into the water. When she was waist deep, she let herself sink forward and struck out in a strong breast stroke, then shifted to a crawl and followed the others, when I could hear but hardly see in the distance.

Again I could not take my eyes away if my eternal soul had depended on it. What is it about the body of a human woman that makes it the most terribly beautiful sight on earth? Is it, as some claim, simply a necessary instinct to make sure that we comply with God's will and replenish the earth? Or is it some stranger, more wonderful thing?

I found myself quoting: 'How fair and how pleasant art thou, 0 love, for delights!

'This thy stature is like to a palm tree, and thy breasts to clusters of grapes.'

Then I broke off, ashamed, remembering that the Song of Songs which is Solomon's was a chaste and holy allegory having nothing to do with such things.

I sat down on the sand and tried to compose my soul. After a while I felt better and my heart stopped pounding so hard. When they all came swimming back with Zeb in the lead, racing Miriam, I even managed to throw them a smile. It no longer seemed quite so terrible and as long as they stayed in the water the women were not shockingly exposed. Perhaps evil was truly in the eyes of the beholder-in which case the idea was to keep it out of mine.

Zeb called out, 'Ready to be relieved?'

I answered firmly, 'No. Go ahead and have your fun.'

'Okay.' He turned like a dolphin and started back the other way. Miriam followed him. Maggie came in to where it was shallow, rested her finger tips on the bottom, and

held facing me, with just her head and her ivory shoulders out of the inky water, while her waist-length mane of hair floated around her.

'Poor John,' she said softly. 'I'll come out and spell you.'

'Oh, no, really!'

'Are you sure?'

'Quite sure.'

'All right.' She turned, flipped herself over, and started after the others. For one ghostly, magic instant she was partly out of the water.

Maggie came back to my end of the cavern about ten minutes later. 'I'm cold,' she said briefly, climbed out and strode quickly to the protection of the boulder. Somehow she was not naked, but merely unclothed, like Mother Eve. There is a difference-Miriam had been naked.

With Maggie out of the water and neither one of us speaking I noticed for the first time that there was no other sound. Now there is nothing so quiet as a cave; anywhere else at all there is noise, but the complete zero decibel which obtains underground if one holds still and says nothing is very different.

The point is that I should have been able to hear Zeb and Miriam swimming. Swimming need not be noisy but it can't be as quiet as a cave. I sat up suddenly and started forward-then stopped with equal suddenness as I did not want to invade Maggie's dressing room, which another dozen steps would have accomplished.

But I was really worried and did not know what to do. Throw a line? Where? Peel down and search for them? If necessary. I called out softly, 'Maggie!'

'What is it, John?'

'Maggie, I'm worried.'

She came at once from behind the rock. She had already pulled on her trousers, but held her towel so that it covered her from the waist up; I had the impression she had been drying her hair. 'Why, John?'

'Keep very quiet and listen.'

She did so. 'I don't hear anything.'

'That's just it. We should. I could hear you all swimming even when you were down at the far end, out of my sight. Now there isn't a sound, not a splash. Do you suppose they possibly could both have hit their heads on the bottom at the same time?'

'Oh. Stop worrying, John. They're all right.'

'But I am worried.'

'They're just resting, I'm sure. There is another little beach down there, about half as big as this. That's where they are. I climbed up on it with them, then I came back. I was cold.'

I made up my mind, realizing that I had let my modesty hold me back from my plain duty. 'Turn your back. No, go behind the boulder-I want to undress.'

'What? I tell you it's not necessary.' She did not budge.

I opened my mouth to shout. Before I got it out Maggie had a hand over my mouth, which caused her towel to be disarranged and flustered us both. 'Oh, heavens!' she said sharply. 'Keep your big mouth shut.' She turned suddenly and flipped the towel; when she turned back she had it about her like a stole, covering her front well enough, I suppose, without the need to hold it.

'John Lyle, come here and sit down. Sit down by me.' She sat on the sand and patted the place by her-and such was the firmness with which she spoke that I did as I was told.

'By me,' she insisted. 'Come closer. I don't want to shout.' I inched gingerly closer until my sleeve brushed her bare arm. 'That's better,' she agreed, keeping her voice low so that it did not resound around the cavern. 'Now listen to me. There are two people down there, of their own free will. They are entirely safe-I saw them. And they are both excellent swimmers. The thing for you to do, John Lyle, is to mind your own business and restrain that nasty itch to interfere.'

'I'm afraid I don't understand you.' Truthfully, I was afraid I did.

'Oh, goodness me! See here, does Miriam mean anything to you?'

'Why, no, not especially.'

'I should think not, since you haven't addressed six words to her since we started out. Very well, then-since you have no cause to be jealous, if two people choose to be alone, why should you stick your nose in? Understand me now?'

'Uh, I guess so.'

'Then just be quiet.'

I was quiet. She didn't move. I was actually aware of her nakedness-for now she was naked, though covered-and I hoped that she was not aware that I was aware. Besides that I was acutely aware of being almost a participant in-well, I don't know what. I told myself angrily that I had no right to assume the worst, like a morals proctor.

Presently I said, 'Maggie. .

'Yes, John?'

'I don't understand you.'

'Why not, John? Not that it is really needful.'

'Uh, you don't seem to give a hoot that Zeb is down there, with Miriam-alone.'

'Should I give a hoot?'

Confound the woman! She was deliberately misunderstanding me. 'Well . . . look, somehow I had gotten the impression that you and Zeb-I mean.. . well, I suppose I sort of expected that you two meant to get married, when you could.'

She laughed a low chuckle that had little mirth in it. 'I suppose you could have gotten that impression. But, believe me, the matter is all settled and for the best.'

'Huh?'

'Don't misunderstand me. I am very fond of Zebadiah and I know he is equally fond of me. But we are both dominant types psychologically-you should see my profile chart; it looks like the Rocky Mountains! Two such people should not marry. Such marriages are not made in Heaven, believe me! Fortunately we found it out in time.'

'Oh.'

'Oh, indeed.'

Now I don't know just how the next thing happened. I was thinking that she seemed rather forlorn-and the next thing I knew I was kissing her. She lay back in my arms and returned the kiss with a fervor I would not have believed possible. As for me, my head was buzzing and my eyeballs were knocking together and I couldn't have told you whether I was a thousand feet underground or on dress parade.

Then it was over. She looked up for a bare moment into my eyes and whispered, 'Dear John . . . ' Then she got suddenly to her feet, leaned over me, careless of the towel, and patted my cheek. 'Judith is a very lucky girl. I wonder if she knows it.'

'Maggie!' I said.

She turned away and said, without looking back. 'I really must finish dressing. I'm cold.'

She had not felt cold to me.

She came out shortly, fully dressed and toweling her hair vigorously. I got my dry towel and helped her. I don't believe I suggested it; the idea just took care of itself. Her hair was thick and lovely and I enjoyed doing it. It sent goose pimples over me.

Zeb and Miriam came back while I was doing so, not racing but swimming slowly; we could hear them laughing long before they were in sight. Miriam climbed out of the water as shamelessly as any harlot of Gomorrah, but I hardly noticed her. Zeb looked me in the eye and said aggressively, 'Ready for your swim, chum?'

I started to say that I did not believe that I would bother and was going to make some excuse about my towel already being wet-when I noticed Maggie watching me. . . not saying anything but watching. I answered, 'Why, surely! You two took long enough.' I called out, 'Miriam! Get out from behind that rock! I want to use it.'

She squealed and giggled and came out, still arranging her clothes. I went behind it with quiet dignity.

I hope I still had quiet dignity when I came out. In any case I set my teeth, walked out and straight into the water. It was bitingly cold at first, but only for a moment. I was never varsity but I swam on my class team and I've even been in the Hudson on New Year's Day. I liked that black pool, once I was in.

I just had to swim down to the other end. Sure enough, there was a little beach there. I did not go up on it.

On the way back I tried to swim down to the bottom. I could not find it, but it must have been over twenty feet down. I liked it down there-black and utterly still. Had I the breath for it, or gills, it seemed to me that it would have been a good place to stay, away from Prophets, away from Cabals, and paperwork, and worries, and problems too subtle for me.

I came up gasping, then struck out hard for our picnic beach. The girls already had the food laid out and Zeb shouted for me to hurry. Zeb and Maggie did not look up as I got out of the water, but I caught Miriam eyeing me. I don't think I blushed. I never did like blondes anyhow. I think Lilith must have been a blonde.

Chapter 11

The Supreme Council, consisting of heads of departments, General Huxley, and a few others, met weekly or oftener to advise the General, exchange views, and consider the field reports. About a month after our rather silly escapade in the underground pool they were in session and I was with them, not as a member but as a recorder. My own girl was ill and I had borrowed Maggie from G-2 to operate the voicewriter, since she was cleared

for top secret. We were always terribly shorthanded of competent personnel. My nominal boss, for example, was Wing General Penoyer, who carried the title of Chief of Staff. But I hardly ever saw him, as he was also Chief of Ordnance. Huxley was his own chief of staff and I was sort of a glorified aide-'midshipmite, and bosun tite, and crew of the captain's gig'. I even tried to see to it that Huxley took his stomach medicine regularly.

This meeting was bigger than usual. The regional commanders of Gath, Canaan, Jericho, Babylon, and Egypt were present in person; Nod and Damascus were represented by deputies-every Cabal district of the United States except Eden and we were holding a sensitive hook-up to Louisville for that command, using idea code that the sensitives themselves would not understand. I could feel the pressure of something big coming up, although Huxley had not taken me into his confidence. The place was tyled so that a mouse couldn't have got in.

We droned through the usual routine reports. It was duly recorded that we now had eighty-seven hundred and nine accepted members, either lodge brethren or tested and bound members of the parallel military organization. There were listed as recruited and instructed more than ten times that number of fellow travelers who could be counted on to rise against the Prophet, but who had not been entrusted with knowledge of the actual conspiracy.

The figures themselves were not encouraging. We were always in the jaws of a dilemma; a hundred thousand men was a handful to conquer a continent-wide country whereas the less than nine thousand party to the conspiracy itself were 'way too many to keep a secret. We necessarily relied on the ancient cell system wherein no man knew more than he had to know and could not give away too much no matter what an inquisitor did to him-no, not even if he had been a spy. But we had our weekly losses even at this passive stage.

One entire lodge had been surprised in session and arrested in Seattle four days earlier; it was a serious loss but only three of the chairs had possessed critical knowledge and all three had suicided successfully. Prayers would be said for all of them at a grand session that night, but here it was a routine report. We had lost four hatchet men that week but twenty-three assassinations had been accomplished-one of them the Elder Inquisitor for the entire lower Mississippi Valley.

The Chief of Communications reported that the brethren were prepared to disable 91% (figured on population coverage) of the radio & TV stations in the country, and that with the aid of assault groups we could reasonably hope to account for the rest-with the exception of the Voice of God station at New Jerusalem, which was a special problem.

The Chief of Combat Engineering reported readiness to sabotage the power supply of the forty-six largest cities, again with the exception of New Jerusalem, the supply of which was self-contained with the pile located under the Temple. Even there major interruption could be accomplished at distribution stations if the operation warranted the expenditure of sufficient men. Major surface transportation and freight routes could be sabotaged sufficiently with present plans and personnel to reduce traffic to 12% of normal.

The reports went on and on-newspapers, student action groups, rocket field seizure or sabotage, miracles, rumor propagation, water supply, incident incitement, counter-espionage, long-range weather prediction, weapons distribution. War is a simple matter compared with revolution. War is an applied science, with well-defined principles

tested in history; analogous solutions may be found from ballista to H-bomb. But every revolution is a freak, a mutant, a monstrosity, its conditions never to be repeated and its operations carried out by amateurs and individualists.

While Maggie recorded the data I was arranging it and transmitting it to the calculator room for analysis. I was much too busy even to attempt a horse-back evaluation in my head. There was a short wait while the analysts finished programming and let the 'brain' have it-then the remote-printer in front of me chattered briefly and stopped. Huxley leaned across me and tore off the tape before I could reach it.

He glanced at it, then cleared his throat and waited for dead silence. 'Brethren,' he began, 'comrades-we agreed long ago on our doctrine of procedure. When every predictable factor, calculated, discounted for probable error, weighted and correlated with all other significant factors, gave a calculated risk of two to one in our favor, we would strike. Today's solution of the probability equation, substituting this week's data for the variables, gives an answer of two point one three. I propose to set the hour of execution. How say you?'

It was a delayed shock; no one said anything. Hope delayed too long makes reality hard to believe-and all of these men had waited for years, some for most of a lifetime. Then they were on their feet, shouting, sobbing, cursing, pounding each others' backs.

Huxley sat still until they quieted, an odd little smile on his face. Then he stood up and said quietly, 'I don't think we need poll the sentiment. I will set the hour after I have-'General! If you please. I do not agree.' It was Zeb's boss, Sector General Novak, Chief of Psych. Huxley stopped speaking and the silence fairly ached. I was as stunned as the rest.

Then Huxley said quietly, 'This council usually acts by unanimous consent. We have long since arrived at the method for setting the date. . . but I know that you would not disagree without good reason. We will listen now to Brother Novak.'

Novak came slowly forward and faced them. 'Brethren,' he began, running his eyes over bewildered and hostile faces, 'you know me, and you know I want this thing as much as you do. I have devoted the last seventeen years to it-it has cost me my family and my home. But I can't let you go ahead without warning you, when I am sure that the time is not yet. I think-no, I know with mathematical certainty that we are not ready for revolution.' He had to wait and hold up both hands for silence; they did not want to hear him. 'Hear me out! I concede that all military plans are ready. I admit that if we strike now we have a strong probability of being able to seize the country. Nevertheless we are not ready -,

'Why not?'

'- because a majority of the people still believe in the established religion, they believe in the Divine authority of the Prophet. We can seize power but we can't hold it.'

'The Devil we won't!'

'Listen to me! No people was ever held in subjection long except through their own consent. For three generations the American people have been conditioned from cradle to grave by the cleverest and most thorough psychotechnicians in the world. They believe! If you turn them loose now, without adequate psychological preparation, they will go back to their chains . . . like a horse returning to a burning barn. We can win the revolution but it will be followed by a long and bloody civil war-which we will lose!'

He stopped, ran a trembling hand across his eyes, then said to Huxley, 'That's all.'

Several were on their feet at once. Huxley pounded for order, then recognized Wing General Penoyer.

Penoyer said, 'I'd like to ask Brother Novak a few questions.'

'Go ahead.'

'Can his department tell us what percentage of the population is sincerely devout?'

Zebadiah, present to assist his chief, looked up; Novak nodded and he answered, 'Sixty-two percent, plus-or-minus three percent.'

'And the percentage who secretly oppose the government whether we have enlisted them or not?'

'Twenty-one percent plus, proportional error. The balance can be classed as conformists, not devout but reasonably contented.'

'By what means were the data obtained?'

'Surprise hypnosis of representative types.'

'Can you state the trend?'

'Yes, sir. The government lost ground rapidly during the first years of the present depression, then the curve flattened out. The new tithing law and to some extent the vagrancy decrees were unpopular and the government again lost ground before the curve again flattened at a lower level. About that time business picked up a little but we simultaneously started our present intensified propaganda campaign; the government has been losing ground slowly but steadily the past fifteen months.'

'And what does the first derivative show?'

Zeb hesitated and Novak took over. 'You have to figure the second derivative,' he answered in a strained voice; 'the rate is accelerating.'

'Well?'

The Psych Chief answered firmly but reluctantly, 'On extrapolation, it will be three years and eight months before we can risk striking.'

Penoyer turned back to Huxley. 'I have my answer, sir. With deep respect to General Novak and his careful scientific work, I say-win while we can! We may never have another chance.'

He had the crowd with him. 'Penoyer is right! If we wait, we'll be betrayed.'-'You can't hold a thing like this together forever.'-'I've been underground ten years; I don't want to be buried here.'-'Win - . . and worry about making converts when we control communications.'-'Strike now! Strike now!'

Huxley let them carry on, his own face expressionless, until they had it out of their systems. I kept quiet myself, since I was too junior to be entitled to a voice here, but I went along with Penoyer; I couldn't see waiting nearly four years.

I saw Zeb talking earnestly with Novak. They seemed to be arguing about something and were paying no attention to the racket. But when Huxley at last held up a hand for silence Novak left his place and hurried up to Huxley's elbow. The General listened for a moment, seemed almost annoyed, then undecided. Novak crooked a finger at Zeb, who came running up. The three whispered together for several moments while the council waited.

Finally Huxley faced them again. 'General Novak has proposed a scheme which may change the whole situation. The Council is recessed until tomorrow.'

Novak's plan (or Zeb's, though he never admitted authorship) required a delay of nearly two months, to the date of the annual Miracle of the Incarnation. For what was

contemplated was no less than tampering with the Miracle itself. In hindsight it was an obvious and probably essential strategem; the psych boss was right. In essence, a dictator's strength depends not upon guns but on the faith his people place in him. This had been true of Caesar, of Napoleon, of Hitler, of Stalin. It was necessary to strike first at the foundation of the Prophet's power: the popular belief that he ruled by direct authority of God.

Future generations will undoubtedly find it impossible to believe the importance, the extreme importance both to religious faith and political power, of the Miracle of Incarnation. To comprehend it even intellectually it is necessary to realize that the people literally believed that the First Prophet actually and physically returned from Heaven once each year to judge the stewardship of his Divinely appointed successor and to confirm him in his office. The people believed this-the minority of doubters dared not open their faces to dispute it for fear of being torn limb from limb. . . and I am speaking of a rending that leaves blood on the pavement, not some figure of speech. Spitting on the Flag would have been much safer.

I had believed it myself, all my life; it would never have occurred to me to doubt such a basic article of faith-and I was what is called an educated man, one who had been let into the secrets of and trained in the production of lesser miracles. I believed it.

The ensuing two months had all the endless time-stretching tension of the waiting period while coming into range and before 'Commence firing!'-yet we were so busy that each day and each hour was too short. In addition to preparing the still more-miraculous intervention in the Miracle we used the time to whet our usual weapons to greater fineness. Zeb and his boss, Sector General Novak, were detached almost at once. Novak's orders read '- proceed to BEULAHLAND and take charge of OPERATION BEDROCK.' I cut the orders myself, not trusting them to a clerk, but no one told me where Beulahland might be found on a map.

Huxley himself left when they did and was gone for more than a week, leaving Penoyer as acting C-in-C. He did not tell me why he was leaving, of course, nor where he was going, but I could fill in. Operation Bedrock was a psychological maneuver but the means must be physical-and my boss had once been head of the Department of Applied Miracles at the Point. He may have been the best physicist in the entire Cabal; in any case I could guess with certainty that he intended at the very least to see for himself that the means were adequate and the techniques foolproof. For all I know he may actually have used soldering iron and screwdriver and electronic micrometer himself that week-the General did not mind getting his hands dirty.

I missed Huxley personally. Penoyer was inclined to reverse my decisions on minor matters and waste my time and his on details a top C.O. can't and should not cope with. But he was gone part of the time, too. There was much coming and going and more than once I had to chase down the senior department head present, tell him that he was acting, and get him to sign where I had initialed. I took to scrawling 'I. M. Dumbjohn, Wing General F.U.S.A., Acting' as indecipherably as possible on all routine internal papers-I don't think anybody ever noticed.

Before Zeb left another thing happened which really has nothing to do with the people of the United States and the struggle to regain their freedoms-but my own personal affairs are so tied into this account that I mention it. Perhaps the personal angle really is important; certainly the order under which this journal was started called for it to

be 'personal' and 'subjective'-however I had retained a copy and added to it because I found it helped me to get my own confused thoughts straight while going through a metamorphosis as drastic as that from caterpillar into moth. I am typical, perhaps, of the vast majority, the sort of person who has to have his nose rubbed in a thing before he recognizes it, while Zeb and Maggie and General Huxley were of the elite minority of naturally free souls . . . the original thinkers, the leaders.

I was at my desk, trying to cope with the usual spate of papers, when I received a call to see Zeb's boss at my earliest convenience. Since he already had his orders, I left word with Huxley's orderly and hurried over.

He cut short the formalities. 'Major, I have a letter for you which Communications sent over for analysis to determine whether it should be rephrased or simply destroyed. However, on the urgent recommendation of one of my division heads I am taking the responsibility of letting you read it without paraphrasing. You will have to read it here.'

I said, 'Yes, sir,' feeling quite puzzled.

He handed it to me. It was fairly long and I suppose it could have held half a dozen coded messages, even idea codes that could come through paraphrasing. I don't remember much of it-just the impact it had on me. It was from Judith.

'My dear John . . . I shall always think of you fondly and I shall never forget what you have done for me.. . never meant for each other . . . Mr. Mendoza has been most considerate. I know you will forgive me.. . he needs me; it must have been fate that brought us together . . . if you ever visit Mexico City, you must think of our home as yours . . . I will always think of you as my strong and wise older brother and I will always be a sister-' There was more, lots more, all of the same sort-I think the process is known as 'breaking it gently'.

Novak reached out and took the letter from me. 'I didn't intend for you to have time to memorize it,' he said dryly, then dropped it at once into his desk incinerator. He glanced back at me. 'Maybe you had better sit down, Major. Do you smoke?'

I did not sit down, but I was spinning so fast that I accepted the cigarette and let him light it for me. Then I choked on tobacco smoke and the sheer physical discomfort helped to bring me back to reality. I thanked him and got out-went straight to my room, called my office and left word where I could be found if the General really wanted me. But I told my secretary that I was suddenly quite ill and not to disturb me if it could possibly be helped.

I may have been there about an hour-I wouldn't know-lying face down and doing nothing, not even thinking. There came a gentle tap at the door, then it was pushed open; it was Zeb. 'How do you feel?' he said.

'Numb,' I answered. It did not occur to me to wonder how he knew and at the time I had forgotten the 'division head' who had prevailed upon Novak to let me see it in the clear.

He came on in, sprawled in a chair, and looked at me. I rolled over and sat on the edge of the bed. 'Don't let it throw you, Johnnie,' he said quietly. '"Men have died and worms have eaten them-but not for love."'

'You don't know!'

'No, I don't,' he agreed. 'Each man is his own prisoner, in solitary confinement for life. Nevertheless on this particular point the statistics are fairly reliable. Try something for me. Visualize Judith in your mind. See her features. Listen to her voice.'

'Huh?'

'Do it.'

I tried, I really tried-and, do you know, I couldn't. I had never had a picture of her; her face now eluded me.

Zeb was watching me. 'You'll get well,' he said firmly. 'Now look here, Johnnie. . . I could have told you. Judith is a very female sort of woman, all gonads and no brain. And she's quite attractive. Turned loose, she was bound to find a man, as sure as nascent oxygen will recombine. But there is no use in talking to a man in love.'

He stood up. 'Johnnie, I've got to go. I hate like the mischief to walk out and leave you in the shape you are in, but I've already checked out and Grandfather Novak is ready to leave. He'll eat me out as it is, for holding him up this long. But one more word of advice before I go -,

I waited. 'I suggest,' he continued, 'that you see a lot of Maggie while I'm away. She's good medicine.'

He started to leave; I said sharply, 'Zeb-what happened to you and Maggie? Something like this?'

He looked back at me sharply. 'Huh? No. Not at all the same thing. It wasn't. . . well, it wasn't similar.'

'I don't understand you-I guess I just don't understand people. You're urging me to see a lot of Maggie-and I thought she was your girl. Uh, wouldn't you be jealous?'

He stared at me, laughed, and clapped me on the shoulder. 'She's a free citizen, Johnnie, believe me. If you ever did anything to hurt Maggie, I'd tear off your head and beat you to death with it. Not that you ever would. But jealous of her? No. It doesn't enter the picture. I think she's the greatest gal that ever trod shoe leather-but I would rather marry a mountain lioness.'

He left on that, leaving me again with my mouth open. But I took his advice, or Maggie took it for me. Maggie knew all about it-Judith, I mean-and I assumed that Zeb had told her. He hadn't; it seemed that Judith had written to her first. In any case I didn't have to look her up; she looked me up right after dinner that night. I talked with her a while and felt much better, so much so that I went back to my office and made up for time lost that afternoon.

Maggie and I made a habit thereafter of taking a walk together after dinner. We went on no more spelling bees; not only was there no time for such during those last days but also neither one of us felt like trying to work up another foursome with Zeb away. Sometimes I could spare only twenty minutes or even less before I would have to be back at my desk-but it was the high point of the day; I looked forward to it.

Even without leaving the floodlighted main cavern, without leaving the marked paths, there were plenty of wonderfully beautiful walks to take. If I could afford to be away as much as an hour, there was one place in particular we liked to go-north in the big room, a good half mile from the buildings. The path meandered among frozen limestone mushrooms, great columns, domes, and fantastic shapes that have no names and looked equally like souls in torment or great exotic flowers, depending on the mood one was in. At a spot nearly a hundred feet higher than the main floor we had found a place only a few feet off the authorized path where nature had contrived a natural stone bench. We could sit there and stare down at the toy village, talk, and Maggie would smoke. I had

taken to lighting her cigarettes for her, as I had seen Zeb do. It was a little attention she liked and I had learned to avoid getting smoke caught in my throat.

About six weeks after Zeb had left and only days before M-Hour we were doing this and were talking about what it would be like after the revolution and what we would do with ourselves. I said that I supposed I would stay in the regular army, assuming that there was such and that I was eligible for it. 'What will you do, Maggie?'

She exhaled smoke slowly. 'I haven't thought that far, John. I haven't any profession-that is to say, we are trying our best to make the one I did have obsolete.' She smiled wryly. 'I'm not educated in anything useful. I can cook and I can sew and I can keep house; I suppose I should try to find a job as a housekeeper-competent servants are always scarce, they say.'

The idea of the courageous and resourceful Sister Magdalene, so quick with a vibroblade when the need arose, tramping from one employment bureau to another in search of menial work to keep her body fed was an idea at once distasteful to me-'General Housework & Cooking, live in, Thursday evenings & alternate Sundays off; references required.' Maggie? Maggie who had saved my own probably worthless life at least twice and never hesitated nor counted the cost. Not Maggie!

I blurted out, 'Look, you don't have to do that.'

'It's what I know.'

'Yes, but-well, why don't you cook and keep house for me? I'll be drawing enough to support both of us, even if I have to go back to my permanent rank. Maybe it isn't much but-shucks! you're welcome to it.'

She looked up. 'Why, John, how very generous!' She crushed out the cigarette and threw it aside. 'I do appreciate it-but it wouldn't work. I imagine there will be just as many gossips after we have won as before. Your colonel would not like it.'

I blushed red and almost shouted, 'That wasn't what I meant at all!'

'What? Then what did you mean?'

I had not really known until the words came out. Now I knew but not how to express it. 'I meant-Look, Maggie, you seem to like me well enough . . . and we get along well together. That is, why don't we-' I halted, hung up.

She stood up and faced me. 'John, are you proposing marriage-to me?'

I said gruffly, 'Uh, that was the general idea.' It bothered me to have her standing in front of me, so I stood up, too.

She looked at me gravely, searching my face, then said humbly, 'I'm honored . . - and grateful . . . and I am deeply touched. But-oh, no, John!' The tears started out of her eyes and she started to bawl. She stopped as quickly, wiping her face with her sleeve, and said brokenly, 'Now you've made me cry. I haven't cried in years.'

I started to put my arms around her; she pushed me back. 'No, John! Listen to me first. I'll accept that job as your housekeeper, but I won't marry you.'

'Why not?'

'"Why not?" Oh, my dear, my very dear-Because I am an old, tired woman, that's why.'

'Old? You can't be more than a year or two older than I am-three, at the outside. It doesn't matter.'

'I'm a thousand years older than you are. Think who I am where I've been-what I've known. First I was "bride", if you care to call it that, to the Prophet.'

'Not your fault!'

'Perhaps. Then I was mistress to your friend Zebadiah. You knew that?'

'Well . . . I was pretty sure of it.'

'That isn't all. There were other men. Some because it was needful and a woman has few bribes to offer. Some from loneliness, or even boredom. After the Prophet has tired of her, a woman doesn't seem very valuable, even to herself.'

'I don't care. I don't care! It doesn't matter!'

'You say that now. Later it would matter to you, dreadfully. I think I know you, my dear.'

'Then you don't know me. We'll start fresh.'

She sighed deeply. 'You think that you love me, John?'

'Uh? Yes, I guess that's it.'

'You loved Judith. Now you are hurt-so you think you love me.'

'But-Oh, I don't know what love is! I know I want you to marry me and live with me.'

'Neither do I know,' she said so softly that I almost missed it. Then she moved into my arms as easily and naturally as if she had always lived there.

When we had finished kissing each other I said, 'You will marry me, then?'

She threw her head back and stared as if she were frightened. 'Oh, no!'

'Huh? But I thought -'

'No, dear, no! I'll keep your house and cook your food and make your bed-and sleep in it, if you want me to. But you don't need to marry me.'

'But-Sheol! Maggie, I won't have it that way.'

'You won't? We'll see.' She was out of my arms although I had not let go. 'I'll see you tonight. About one-after everyone is asleep. Leave your door unlatched.'

'Maggie!' I shouted.

She was headed down the path, running as if she were flying.

I tried to catch up, tripped on a stalagmite and fell. When I picked myself up she was out of sight.

Here is an odd thing-I had always thought of Maggie as quite tall, stately, almost as tall as I was. But when I held her in my arms, she was short. I had to lean way over to kiss her.

Chapter 12

On the night of the Miracle all that were left of us gathered in the main communications room-my boss and myself, the chief of communications and his technical crew, a few staff officers. A handful of men and a few dozen women, too many to crowd into the comm shack, were in the main mess-hall where a relay screen had been rigged for them. Our underground city was a ghost town now, with only a skeleton crew to maintain communications for the commanding general; all the rest had gone to battle stations. We few who were left had no combat stations in this phase. Strategy had been settled; the hour of execution was set for us by the Miracle. Tactical decisions for a continent could not be made from headquarters and Huxley was too good a general to try. His troops had

been disposed and his subordinate commanders were now on their own; all he could do was wait and pray.

All that we could do, too-I didn't have any fingernails left to bite.

The main screen in front of us showed, in brilliant color and perfect perspective, the interior of the Temple. The services had been going on all day-processional, hymns, prayers and more prayers, sacrifice, genuflexion, chanting, endless monotony of colorful ritual. My old regiment was drawn up in two frozen ranks, helmets shining, spears aligned like the teeth of a comb, I made out Peter van Eyck, Master of my home lodge, his belly corseted up, motionless before his platoon.

I knew, from having handled the despatch, that Master Peter had stolen a print of the film we had to have. His presence in the ceremonies was reassuring; had his theft even been suspected our plans could not possibly succeed. But there he was.

Around the other three walls of the comm room were a dozen smaller screens, scenes from as many major cities-crowds in Rittenhouse Square, the Hollywood Bowl jam-packed, throngs in local temples. In each case the eyes of all were riveted on a giant television screen showing the same scene in the Great Temple that we were watching. Throughout all America it would be the same-every mortal soul who could possibly manage it was watching some television screen somewhere-waiting, waiting, waiting for the Miracle of the Incarnation.

Behind us a psychoperator bent over a sensitive who worked under hypnosis. The sensitive, a girl about nineteen, stirred and muttered; the operator bent closer.

Then he turned to Huxley and the communications chief. 'The Voice of God Station has been secured, sir.'

Huxley merely nodded; I felt like turning handsprings, if my knees had not been so weak. This was the key tactic and one that could not possibly be executed until minutes before the Miracle. Since television moves only on line-of-sight or in its own special cable the only possible way to tamper with this nationwide broadcast was at the station of origin. I felt a wild burst of exultation at their success-followed by an equally sudden burst of sorrow, knowing that not one of them could hope to live out the night.

Never mind-if they could hold out for a few more minutes their lives would have counted. I commended their souls to the Great Architect. We had men for such jobs where needed, mostly brethren whose wives had faced an inquisitor.

The comm chief touched Huxley's sleeve. 'It's coming, sir.' The scene panned slowly up to the far end of the Temple, passed over the altar, and settled in close-up on an ivory archway above and behind the altar-the entrance to the Sanctum Sanctorum. It was closed with heavy cloth-of-gold drapes.

The pick-up camera held steady with the curtained entranceway exactly filling the screen. 'They can take over any time now, sir.'

Huxley turned his head to the psychoperator. 'Is that ours yet? See if you can get a report from the Voice of God.'

'Nothing, sir. I'll let you know.'

I could not take my eyes off the screen. After an interminable wait, the curtains stirred and slowly parted, drawn up and out on each side-and there, standing before us almost life size and so real that I felt he could step out of the screen, was the Prophet Incarnate!

He turned his head, letting his gaze rove from side to side, then looked right at me, his eyes staring right into mine. I wanted to hide. I gasped and said involuntarily, 'You mean we can duplicate that?'

The comm chief nodded. 'To the millimeter, or I'll eat the difference. Our best impersonator, prepared by our best plastic surgeons. That may be our film already.'

'But it's real.'

Huxley glanced at me. 'A little less talk, please, Lyle.' It was the nearest he had ever come to bawling me out; I shut up and studied the screen. That powerful, totally unscrupulous face, that burning gaze-an actor? No! I knew that face; I had seen it too many times in too many ceremonies. Something had gone wrong and this was the Prophet Incarnate himself. I began to sweat that stinking sweat of fear. I very much believe that had he called me by name out of that screen I would have confessed my treasons and thrown myself on his mercy.

Huxley said crossly, 'Can't you raise New Jerusalem?'

The psychoperator answered, 'No, sir. I'm sorry, sir.'

The Prophet started his invocation.

His compelling, organlike voice rolled through magnificent periods. Then he asked the blessing of Eternal God for the people this coming year. He paused, looked at me again, then rolled his eyes up to Heaven, lifted his hands and commenced his petition to the First Prophet, asking him to confer on his people the priceless bounty of seeing and hearing him in the flesh, and offering for that purpose the flesh of the present prophet as an instrument. He waited.

The transformation started-and my hackles stood up. I knew now that we had lost; something had gone wrong. . - and God alone knew how many men had died through the error.

The features of the Prophet began to change; he stretched an inch or two in height; his rich robes darkened-and there standing in his place, dressed in a frock coat of a bygone era, was the Reverend Nehemiah Scudder, First Prophet and founder of the New Crusade. I felt my stomach tighten with fear and dread and I was a little boy again, watching it for the first time in my parish church.

He spoke to us first with his usual yearly greeting of love and concern for his people. Gradually he worked himself up, his face sweating and his hand clutching in the style that had called down the Spirit in a thousand Mississippi Valley camp meetings: my heart began to beat faster. He was preaching against sin in all its forms-the harlot whose mouth is like honey, the sins of the flesh, the sins of the spirit, the money changers.

At the height of his passion he led into a new subject in a fashion that caught me by surprise: 'But I did not return to you this day to speak to you of the little sins of little people. No! I come to tell you of a truly hellish thing and to bid you to gird on your armor and fight. Armageddon is upon you! Rise up, mine hosts, and fight you the Battle of the Lord! For Satan is upon you! He is here! Here among you! Here tonight in the flesh! With the guile of the serpent he has come among you, taking on the form of the Vicar of the Lord! Yea! He has disguised himself falsely, taken on the shape of the Prophet Incarnate!

'Smite him! Smite his hirelings! In the Name of God destroy them all!'

Chapter 13

'Bruehler from voice of God,' the psychoperator said quietly. 'The station is now off the air and demolition will take place in approximately thirty seconds. An attempt will be made to beat a retreat before the building goes up. Good luck. Message ends.'

Huxley muttered something and left the now-dark big screen. The smaller screens, monitoring scenes around the country, were confusing but heartening. There was fighting and rioting everywhere. 1 watched it, still stunned, and tried to figure out which was friend and which was foe. In the Hollywood Bowl the crowd boiled up over the stage and by sheer numbers overran and trampled the officials and clergy seated there. There were plenty of guards stationed around the edges of the howl and it should not have happened that way. But instead of the murderous enfilading fire one would have expected, there was one short blast from a tripod mounted or~ the hillside northeast of the stage, then the guard was shot-apparently by another of the guards.

Apparently the chancy tour de force against the Prophet himself was succeeding beyond all expectations. If government forces were everywhere as disorganized as they were at the Hollywood Bowl, the job would not be one of fighting but of consolidating an accomplished fact.

The monitor from Hollywood went dead and I shifted to another screen, Portland, Oregon. More fighting. I could see men with white armbands, the only uniform we had allowed ourselves for M-Hour-but not all the violence came from our brethren in the armbands. 1 saw an armed proctor go down before bare fists and not get up.

Testing messages and early reports were beginning to come in, now that it was feasible to use our own radio-now that we had at long, long last shown our hand. I stopped looking and went back to help my boss keep track of them. I was still dazed and could still see in my mind the incredible face of the Prophet-both Prophets. If I had been emotionally battered by it, what did the people think? The devout, the believers?

The first clear-cut report other than contact messages was from Lucas in New Orleans:

HAVE TAKEN CONTROL OF CITY CENTER, POWER
AND COMM STATIONS. MOP-UP SQUADS SEIZING
WARD POLICE STAT1ONS. FEDERAL GUARDS HERE
DEMORALIZED BY STEREOCAST. SPORADIC FIGHTING
BROKE OUT AMONG GUARDS THEMSELVES.
LITTLE ORGANI ZED RESISTANCE. ESTABLISHING
ORDER UNDER MARTIAL LAW. SO MOTE IT BE!
LUCAS.

Then reports started pouring in: Kansas City, Detroit, Philadelphia, Denver, Boston, Minneapolis-all the major cities. They varied but told the same story; our synthetic Prophet's call to arms, followed at once by a cutting of all regular methods of communication, had made of the government forces a body without a head, flopping around and fighting itself. The power of the Prophet was founded on superstition and fraud; we had turned superstition back on him to destroy him.

Lodge that night was the grandest I have ever attended. We tyled the communications room itself, with the comm chief sitting as secretary and passing incoming messages to General Huxley, sitting as Master in the east, as fast as they came in. I was called on to take a chair myself, Junior Warden, an honor I had never had before. The General had to borrow a hat and it was ridiculously too small for him, but it didn't matter-I have never seen ritual so grand, before or since. We all spoke the ancient words from our hearts, as if we were saying them for the first time. If the stately progress was interrupted to hear that Louisville was ours, what better interruption? We were building anew; after an endless time of building in speculation we were at last building operatively.

Chapter 14

Temporary capital was set up at St Louis, for its central location. I piloted Huxley there myself. We took over the Prophet's proctor base there, restoring to it its old name of Jefferson Barracks. We took over the buildings of the University, too, and handed back to it the name of Washington. If the people no longer recalled the true significance of those names, they soon would and here was a good place to start. (I learned for the first time that Washington had been one of us.)

However, one of Huxley's first acts as military governor-he would not let himself be called even 'Provisional President'-was to divorce all official connection between the Lodge and the Free United States Army. The Brotherhood had served its purpose, had kept alive the hopes of free men; now it was time to go back to its ancient ways and let public affairs be handled publicly. The order was not made public, since the public had no real knowledge of us, always a secret society and for three generations a completely clandestine one. But it was read and recorded in all lodges and, so far as I know, honored.

There was one necessary exception: my home lodge at New Jerusalem and the cooperating sister order there of which Maggie had been a member. For we did not yet hold New Jerusalem although the country as a whole was ours.

This was more serious than it sounds. While we had the country under military control, with all communication centers in our hands, with the Federal Forces demoralized, routed, and largely dispersed or disarmed and captured, we did not hold the country's heart in our hands. More than half of the population were not with us; they were simply stunned, confused, and unorganized. As long as the Prophet was still alive, as long as the Temple was still a rallying point, it was still conceivably possible for him to snatch back the victory from us.

A fraud, such as we had used, has only a temporary effect; people revert to their old thinking habits. The Prophet and his cohorts were not fools; they included some of the shrewdest applied psychologists this tired planet has ever seen. Our own counterespionage became disturbingly aware that they were rapidly perfecting their own underground, using the still devout and that numerous minority, devout or not, who had waxed fat under the old regime and saw themselves growing leaner under the new. We could not stop this counterrevolution-Sheol! the Prophet had not been able to stop us and we had worked under much greater handicaps. The Prophet's spies could work almost

openly in the smaller towns and the country; we had barely enough men to guard the television stations-we could not possibly put a snooper under every table.

Soon it was an open secret that we had faked the call to Armageddon. One would think that this fact in itself would show to anyone who knew it that all of the Miracles of Incarnation had been frauds-trick television and nothing more. I mentioned this to Zebadiah and got laughed at for being naïve. People believe what they want to believe and logic has no bearing on it, he assured me. In this case they wanted to believe in their old time religion as they learned it at their mothers' knees; it restored security to their hearts. I could sympathize with that, I understood it.

In any case, New Jerusalem must fall-and time was against us.

While we were worrying over this, a provisional constitutional convention was being held in the great auditorium of the university. Huxley opened it, refused again the title, offered by acclamation, of president-then told them bluntly that all laws since the inauguration of President Nehemiah Scudder were of no force, void, and that the old constitution and bill of rights were effective as of now, subject to the exigencies of temporary military control. Their single purpose, he said, was to work out orderly methods of restoring the old free democratic processes; any permanent changes in the constitution, if needed, would have to wait until after free elections.

Then he turned the gavel over to Novak and left.

I did not have time for politics, but I hid out from work and caught most of one afternoon session because Zebadiah had tipped me off that significant fireworks were coming up. I slipped into a back seat and listened. One of Novak's bright young men was presenting a film. I saw the tail end of it only, but it seemed to be more or less a standard instruction film, reviewing the history of the United States, discussing civil liberty, explaining the duties of a citizen in a free democracy-not the sort of thing ever seen in the Prophet's schools but making use of the same techniques which had long been used in every school in the country. The film ended and the bright young man-I could never remember his name, perhaps because I disliked him. Stokes? Call him Stokes, anyway, Stokes began to speak.

'This reorientation film,' he began, 'is of course utterly useless in recanalizing an adult. His habits of thought are much too set to be affected by anything as simple as this.'

'Then why waste our time with it?' someone called out.

'Please! Nevertheless this film was prepared for adults-provided the adult has been placed in a receptive frame of mind. Here is the prologue-' the screen lighted up again. It was a simple and beautiful pastoral scene with very restful music. I could not figure what he was getting at, but it was soothing; I remembered that I had not had much sleep the past four nights-come to think about it, I couldn't remember when I had had a good night's sleep. I slouched back and relaxed.

I didn't notice the change from scenery to abstract patterns. I think the music continued but it was joined by a voice, warm, soothing, monotonous. The patterns were going round and around and I was beginning to bore. . . right. . - into . . . the...screen...

Then Novak had left his chair and switched off the projector with a curse. I jerked awake with that horrid shocked feeling that makes one almost ready to cry. Novak was speaking sharply but quietly to Stokes-then Novak faced the rest of us. 'Up on your feet!' he ordered. 'Seventh inning stretch. Take a deep breath. Shake hands with the man next to you. Slap him on the back, hard!'

We did so and I felt foolish. Also irritated. I had felt so good just a moment before and now I was reminded of the mountain of work I must move if I were to have ten minutes with Maggie that evening. I thought about leaving but the b. y. m. had started talking again.

'As Dr. Novak has pointed out,' he went on, not sounding quite so sure of himself, 'it is not necessary to use the prologue on this audience, since you don't need reorientation. But this film, used with the preparatory technique and possibly in some cases with a light dose of one of the hypnotic drugs, can be depended on to produce an optimum political temperament in 83% of the populace. This has been demonstrated on a satisfactory test group. The film itself represents several years of work analyzing the personal conversion reports of almost everyone-surely everyone in this audience!-who joined our organization while it was still underground. The irrelevant has been eliminated; the essential has been abstracted. What remains will convert a devout follower of the Prophet to free manhood-provided he is in a state receptive to suggestion when he is exposed to it.'

So that was why we had each been required to bare our souls. It seemed logical to me. God knew that we were sitting on a time bomb, and we couldn't wait for every lunk to fall in love with a holy deaconess and thereby be shocked out of his groove; there wasn't time. But an elderly man whom I did not know was on his feet on the other side of the hall-he looked like the picture of Mark Twain, an angry Mark Twain. 'Mr. Chairman!'

'Yes, comrade? State your name and district.'

'You know what my name is, Novak-Winters, from Vermont. Did you okay this scheme?'

'No.' It was a simple declarative.

'He's one of your boys.'

'He's a free citizen. I supervised the preparation of the film itself and the research which preceded it. The use of null-vol suggestion techniques came from the research group he headed. I disapproved the proposal, but agreed to schedule time to present it. I repeat, he is a free citizen, free to speak, just as you are.'

'May I speak now?'

'You have the floor.'

The old man drew himself up and seemed to swell up. 'I shall! Gentlemen . . . ladies - . . comrades! I have been in this for more than forty years-more years than that young pup has been alive. I have a brother, as good a man as 1 am, but we haven't spoken in many years-because he is honestly devout in the established faith and he suspects me of heresy. Now this cub, .with his bulging forehead and his whirling lights, would "condition" my brother to make him "politically reliable".'

He stopped to gasp asthmatically and went on. 'Free men aren't "conditioned!" Free men are free because they are ornery and cussed and prefer to arrive at their own prejudices in their own way-not have them spoon-fed by a self-appointed mind tinkerer! We haven't fought, our brethren haven't bled and died, just to change bosses, no matter how sweet their motives. I tell you, we got into the mess we are in through the efforts of those same mind tinkerers. They've studied for years how to saddle a man and ride him. They started with advertising and propaganda and things like that, and they perfected it to the point where what used to be simple, honest swindling such as any salesman might use became a mathematical science that left the ordinary man helpless.' He pointed his finger

at Stokes. 'I tell you that the American citizen needs no protection from anything-except the likes of him.'

'This is ridiculous,' Stokes snapped, his voice rather high. 'You wouldn't turn high explosives over to children. That is what the franchise would be now.'

'The American people are not children.'

'They might as well be!-most of them.'

Winters turned his eyes around the hall. 'You see what I mean, friends? He's as ready to play God as the Prophet was. I say give 'em their freedom, give 'em their clear rights as men and free men and children under God. If they mess it up again, that's their doing-but we have no right to operate on their minds.' He stopped and labored again to catch his breath; Stokes looked contemptuous. 'We can't make the world safe for children, nor for men either-and God didn't appoint us to do it.'

Novak said gently, 'Are you through, Mr. Winters?'

'I'm through.'

'And you've had your say, too, Stokes. Sit down.'

Then I had to leave, so I slipped out-and missed what must have been a really dramatic event if you care for that sort of thing; I don't. Old Mr. Winters dropped dead about the time I must have been reaching the outer steps.

Novak did not let them recess on that account. They passed two resolutions; that no citizen should be subjected to hypnosis or other psychomanipulative technique without his written consent, and that no religious or political test should be used for franchise in the first elections.

I don't know who was right. It certainly would have made life easier in the next few weeks if we had known that the people were solidly behind us. Temporarily rulers we might be, but we hardly dared go down a street in uniform at night in groups of less than six.

Oh yes, we had uniforms now-almost enough for one for each of us, of the cheapest materials possible and in the standard army sizes, either too large or too small. Mine was too tight. They had been stockpiled across the Canadian border and we got our own people into uniform as quickly as possible. A handkerchief tied around the arm is not enough.

Besides our own simple powder-blue dungarees there were several other uniforms around, volunteer brigades from outside the country and some native American outfits. The Mormon Battalions had their own togs and they were all growing beards as well-they went into action singing the long forbidden 'Come, Come, Ye Saints!' Utah was one state we didn't have to worry about, now that the Saints had their beloved temple back. The Catholic Legion had its distinctive uniform, which was just as well since hardly any of them spoke English. The Onward Christian Soldiers dressed differently from us because they were a rival underground and rather resented our coup d'etat-we should have waited. Joshua's Army from the pariah reservations in the northwest (plus volunteers from all over the world) had a get-up that can only be described as outlandish.

Huxley was in tactical command of them all. But it wasn't an army; it was a rabble.

The only thing that was hopeful about it was that the Prophet's army had not been large, less than two hundred thousand, more of an internal police than an army, and of that number only a few had managed to make their way back to New Jerusalem to

augment the Palace garrison. Besides that, since the United States had not had an external war for more than a century, the Prophet could not recruit veteran soldiers from the remaining devout.

Neither could we. Most of our effectives were fit only to guard communication stations and other key installations around the country and we were hard put to find enough of them to do that. Mounting an assault on New Jerusalem called for scraping the bottom of the barrel.

Which we did, while smothering under a load of paperwork that made the days in the old G.H.Q. seem quiet and untroubled. I had thirty clerks under me now and I don't know what half of them did. I spend a lot of my time just keeping Very Important Citizens who Wanted to Help from getting in to see Huxley.

I recall one incident which, while not important, was not exactly routine and was important to me. My chief secretary came in with a very odd look on her face. 'Colonel,' she said, 'your twin brother is out there.'

'Eh? I have no brothers.'

'A Sergeant Reeves,' she amplified.

He came in, we shook hands, and exchanged inanities. I really was glad to see him and told him about all the orders I had sold and then lost for him. I apologized, pled exigency of war and added, 'I landed one new account in K.C.-Emery, Bird, Thayer. You might pick it up some day.'

'I will. Thanks.'

'I didn't know you were a soldier.'

'I'm not, really. But I've been practicing at it ever since my travel permit, uh-got itself lost.'

'I'm sorry about that.'

'Don't be. I've learned to handle a blaster and I'm pretty good with a grenade now. I've been okayed for Operation Strikeout.'

'Eh? That code word is supposed to be confo.'

'It is? Better tell the boys; they don't seem to realize it. Anyhow, I'm in. Are you? Or shouldn't I ask that?'

I changed the subject. 'How do you like soldering? Planning to make a career of it?'

'Oh, it's all right-but not that all right. But what I came in to ask you, Colonel, are you?'

'Are you staying in the army afterwards? I suppose you can make a good thing out of it, with your background-whereas they wouldn't let me shine brightwork, once the fun is over. But if by any chance you aren't, what do you think of the textile business?'

I was startled but I answered, 'Well, to tell the truth I rather enjoyed it-the selling end, at least.'

'Good. I'm out of a job where I was, of course-and I've been seriously considering going in on my own, a jobbing business and manufacturers' representative. I'll need a partner. Eh?'

I thought it over. 'I don't know,' I said slowly. 'I haven't thought ahead any further than Operation Strikeout. I might stay in the army-though soldiering does not have the

appeal for me it once had . . . too many copies to make out and certify. But I don't know. I think what I really want is simply to sit under my own vine and my own fig tree.'

'"- and none shall make you afraid",' he finished. 'A good thought. But there is no reason why you shouldn't unroll a few bolts of cloth while you are sitting there. The fig crop might fail. Think it over.'

'I will. I surely will.'

Chapter 15

Maggie and I were married the day before the assault on New Jerusalem. We had a twenty-minute honeymoon, holding hands on the fire escape outside my office, then I flew Huxley to the jump-off area. I was in the flagship during the attack. I had asked permission to pilot a rocket-jet as my combat assignment but he had turned me down.

'What for, John?' he had asked. 'This isn't going to be won in the air; it will be settled on the ground.'

He was right, as usual. We had few ships and still fewer pilots who could be trusted. Some of the Prophet's air force had been sabotaged on the ground; a goodly number had escaped to Canada and elsewhere and been interned. With what planes we had we had been bombing the Palace and Temple regularly, just to make them keep their heads down.

But we could not hurt them seriously that way and both sides knew it. The Palace, ornate as it was above ground, was probably the strongest bomb-proof ever built. It had been designed to stand direct impact of a fission bomb without damage to personnel in its deepest tunnels-and that was where the Prophet was spending his days, one could be sure. Even the part above ground was relatively immune to ordinary H.E. bombs such as we were using.

We weren't using atomic bombs for three reasons: we didn't have any; the United States was not known to have had any since the Johannesburg Treaty after World War III. We could not get any. We might have negotiated a couple of bombs from the Federation had we been conceded to be the legal government of the United States, but, while Canada had recognized us, Great Britain had not and neither had the North African Confederacy. Brazil was teetering; she had sent a chargé d'affaires to St Louis. But even if we had actually been admitted to the Federation, it is most unlikely that a mass weapon would have been granted for an internal disorder.

Lastly, we would not have used one if it had been laid in our laps. No, we weren't chicken hearted. But an atom bomb, laid directly on the Palace, would certainly have killed around a hundred thousand or more of our fellow citizens in the surrounding city-and almost as certainly would not have killed the Prophet.

It was going to be necessary to go in and dig him out, like a holed-up badger.

Rendezvous was made on the east shore of the Delaware River. At one minute after midnight we moved east, thirty-four land cruisers, thirteen of them modern battlewagons, the rest light cruisers and obsolescent craft-all that remained of the Prophet's mighty East Mississippi fleet; the rest had been blown up by their former commanders. The heavy ships would be used to breach the walls; the light craft were

escort to ten armored transports carrying the shock troops-five thousand fighting men hand-picked from the whole country. Some of them had had some military training in addition to what we had been able to give them in the past few weeks; all of them had taken part in the street fighting.

We could hear the bombing at New Jerusalem as we started out, the dull Crrump!' the gooseflesh shiver of the concussion wave, the bass rumble of the ground sonic. The bombing had been continuous the last thirty-six hours; we hoped that no one in the Palace had had any sleep lately, whereas our troops had just finished twelve hours impressed sleep.

None of the battlewagons had been designed as a flagship, so we had improvised a flag plot just abaft the conning tower, tearing out the long-range televisor to make room for the battle tracker and concentration plot. I was sweating over my jury-rigged tracker, hoping to Heaven that the makeshift shock absorbers would be good enough when we opened up. Crowded in behind me was a psychoperator and his crew of sensitives, eight women and a neurotic fourteen-year-old boy. In a pinch, each would have to handle four circuits. I wondered if they could do it. One thin blonde girl had a dry, chronic cough and a big thyroid patch on her throat.

We lumbered along in approach zigzag. Huxley wandered from comm to plot and back again, calm as a snail, looking over my shoulder, reading despatches casually, watching the progress of the approach on the screens.

The pile of despatches at my elbow grew. The Cherub had fouled her starboard tread; she had dropped out of formation but would rejoin in thirty minutes. Penoyer reported his columns extended and ready to deploy. Because of the acute shortage of command talent, we were using broad-command organization; Penoyer commanded the left wing and his own battlewagon; Huxley was force commander, right wing commander, and skipper of his own flagship.

At 12:32 the televisors went out. The enemy had analyzed our frequency variation pattern, matched us and blown every tube in the circuits. It is theoretically impossible; they did it. At 12:37 radio went out.

Huxley seemed unperturbed. 'Shift to light-phone circuits,' was all he said.

The communications officer had anticipated him; our audio circuits were now on infra-red beams, ship to ship. Huxley hung over my shoulder most of the next hour, watching the position plot lines grow. Presently he said, 'I think we will deploy now, John. Some of those pilots aren't any too steady; I think we will give them time to settle down in their positions before anything more happens.'

I passed the order and cut my tracker out of circuit for fifteen minutes; it wasn't built for so many variables at such high speeds and there was no sense in overloading it. Nineteen minutes later the last transport had checked in by phone, I made a preliminary set up, threw the starting switch and let the correction data feed in. For a couple of minutes I was very busy balancing data, my hands moving among knobs and keys; then the machine was satisfied with its own predictions and I reported, 'Tracking, sir.'

Huxley leaned over my shoulder. The line was a little ragged but I was proud of them-some of those pilots had been freighter jacks not four weeks earlier.

At three a.m. we made the precautionary signal, 'Coming on the range,' and our own turret rumbled as they loaded it.

At 3:31 Huxley gave the command, 'Concentration Plan III, open fire.'

Our own big fellow let go. The first shot shook loose a lot of dust and made my eyes water. The craft rolled back on her treads to the recoil and I nearly fell out of my saddle. I had never ridden one of the big booster guns before and I hadn't expected the long recoil. Our big rifle had secondary firing chambers up the barrel, electronically synchronized with the progress of the shell; it maintained max pressure all the way up and gave a much higher muzzle velocity and striking power. It also gave a bone-shaking recoil. But the second time I was ready for it.

Huxley was at the periscope between shots, trying to observe the effects of our fire. New Jerusalem had answered our fire but did not yet have us ranged. We had the advantage of firing at a stationary target whose range we knew to the meter; on the other hand even a heavy land cruiser could not show the weight of armor that underlay the Palace's ginger-bread.

Huxley turned from the scope and remarked, 'Smoke, John.' I turned to the communications officer. 'Stand by, sensitives; all craft!'

The order never got through. Even as I gave it the comm officer reported loss of contact. But the psychoperator was already busy and I knew the same thing was happening in all the ships; it was normal casualty routine.

Of our nine sensitives, three-the boy and two women-were wide-awakes; the other six were hypnos. The technician hooked the boy first to one in Penoyer's craft. The kid established rapport almost at once and Penoyer got through a report:

'BLANKETED BY SMOKE. HAVE SHIFTED LEFT WING TO PSYCHO. WHAT HOOK-UP? - PENOYER.'

I answered, 'Pass down the line.' Doctrine permitted two types of telepathic hook-up: relay, in which a message would be passed along until it reached its destination; and command mesh, in which there was direct hook-up from flag to each ship under that flag, plus ship-to-ship for adjacent units. In the first case each sensitive carries just one circuit, that is, is in rapport with just one other telepath; in the second they might have to handle as many as four circuits. I wanted to hold off overloading them as long as possible.

The technician tied the other two wide-awakes into our flanking craft in the battle line, then turned his attention to the hypnos. Four of them required hypodermics; the other two went under in response to suggestion. Shortly we were hooked up with the transports and second-line craft, as well as with the bombers and the rocket-jet spotting the fall of shot. The jet reported visibility zero and complained that he wasn't getting anything intelligible by radar. I told him to stand by; the morning breeze might clear the smoke away presently.

We weren't dependent on him anyway; we knew our positions almost to the inch. We had taken departure from a benchmark and our dead reckoning was checked for the whole battle line every time any skipper identified a map-shown landmark. In addition, the dead reckoners of a tread-driven cruiser are surprisingly accurate; the treads literally measure every yard of ground as they pass over it and a little differential gadget compares the treads and keeps just as careful track of direction. The smoke did not really bother us and we could keep on firing accurately even if radar failed. On the other hand, if the Palace commander kept us in smoke he himself was entirely dependent on radar.

His radar was apparently working; shot was falling all around us. We hadn't been hit yet but we could feel the concussions when shells struck near us and some of the reports were not cheerful. Penoyer reported the Martyr hit; the shell had ruptured her

starboard engine room. The skipper had tried to cross connect and proceed at half-speed, but the gear train was jammed; she was definitely out of action. The Archangel had overheated her gun. She was in formation but would be harmless until the turret captain got her straightened out.

Huxley ordered them to shift to Formation E, a plan which used changing speeds and apparently random courses-carefully planned to avoid collision between ships, however. It was intended to confuse the fire control of the enemy.

At 4:11 Huxley sent the bombers back to base. We were inside the city now and the walls of the Palace lay just beyond-too close to target for comfort; we didn't want to lose ships to our own bombs.

At 4:17 we were struck. The port upper tread casing was split, the barbette was damaged so that the gun would no longer .train, and the conning tower was cracked along its after surface. The pilot was killed at his controls.

I helped the psychoperator get gas helmets over the heads. of the hypnos. Huxley picked himself up off the floor plates, put on his own helmet, and studied the set-up on my battle tracker, frozen at the instant the shell hit us.

'The Benison should pass by this point in three minutes,. John. Tell them to proceed dead slow, come along starboard side, and pick us up. Tell Penoyer I am shifting my flag.'

We made the transfer without mishap, Huxley, myself, the psychoperator, and his sensitives. One sensitive was dead, killed by a flying splinter. One went into a deep trance and we could not rouse her. We left her in the disabled battlewagon; she was as safe there as she could be.

I had torn the current plot from my tracker and brought it along. It had the time-predicted plots for Formation E. We would have to struggle along with those, as the tracker could not be moved and was probably beyond casual repair in any case. Huxley studied the chart.

'Shift to full communication mesh, John. I plan to assault shortly.'

I helped the psychoperator get his circuits straightened out. By dropping the Martyr out entirely and by using 'Pass down the line' on Penoyer's auxiliaries, we made up for the loss of two sensitives. All carried four circuits now, except the boy who had five, and the. girl with the cough, who was managing six. The psychoperator was worried but there was nothing to do about it.

I turned back to General Huxley. He. had seated himself, and at first I thought he was in deep thought; then I saw that he was unconscious. It was not until I tried to rouse him and failed that I saw the blood seeping down the support column of his chair and wetting floor plates. I moved him gently and found, sticking out from between his ribs near his spine, a steel splinter.

I felt a touch at my elbow, it was the psychoperator. 'Penoyer reports that he will be within assault radius in four minutes. Requests permission to change formation and asks time of execution.'

Huxley was out. Dead or wounded, he would fight no more this battle. By all rules, command devolved on Penoyer, and I should tell him so at once. But time was pressing hard, it would involve a drastic change of set-up, and we had been forced to send Penoyer into battle with only three sensitives. It was a physical impossibility.

What should I do? Turn the flag over to the skipper of the Benison? I knew the man, stolid, unimaginative, a gunner by disposition. He was not even in his conning tower but had been fighting his ship from the fire control station in the turret. If I called him down here, he would take many minutes to comprehend the situation-and then give the wrong orders.

With Huxley out I had not an ounce of real authority. I was a brevet short-tailed colonel, only days up from major and a legate by rights; I was what I was as Huxley's flunky. Should I turn command over to Penoyer-and lose the battle with proper military protocol? What would Huxley have me do, if he could make the decision?

It seemed to me that I worried that problem for an hour. The chronograph showed thirteen seconds between reception of Penoyer's despatch and my answer:

'Change formation at will. Stand by for execution signal in six minutes.' The order given, I sent word to the forward dressing station to attend to the General.

I shifted the right wing to assault echelon, then called the transport Sweet Chariot: 'Sub-plan D; leave formation and proceed on duty assigned.' The psychoperator eyed me but transmitted my orders. Sub-plan D called for five hundred light infantry to enter the Palace through the basement of the department store that was connected with the lodge room. From the lodge room they would split into squads and proceed on assigned tasks. All of our shock troops had all the plans of the Palace graven into their brains; these five hundred had had additional drill as to just where they were to go, what they were to do.

Most of them would be killed, but they should be able to create confusion during the assault. Zeb had trained them and now commanded them.

We were ready. 'All units, stand by to assault. Right wing, outer flank of right bastion; left wing, outer flank of left bastion. Zigzag emergency full speed until within assault distance. Deploy for full concentration fire, one salvo, and assault. Stand by to execute. Acknowledge.'

The acknowledgments were coming in and I was watching my chronometer preparatory to giving the command of execution when the boy sensitive broke off in the middle of a report and shook himself. The technician grabbed the kid's wrist and felt for his pulse; the boy shook him off.

'Somebody new,' he said. 'I don't quite get it.' Then he commenced in a sing-song, 'To commanding general from Lodge Master Peter van Eyck: assault center bastion with full force. I will create a diversion.'

'Why the center?' I asked.

'It is much more damaged.'

If this were authentic, it was crucially important. But I was suspicious. If Master Peter had been detected, it was a trap. And I didn't see how he, in his position, had been able to set up a sensitive circuit in the midst of battle.

'Give me the word,' I said.

'Nay, you give me.'

'Nay, I will not.'

'I will spell it, or halve it.'

'Spell it, then.'

We did so. I was satisfied. 'Cancel last signal. Heavy cruisers assault center bastion, left wing to left flank, right wing to right flank. Odd numbered auxiliaries make

diversion assaults on right and left bastions. Even numbers remain with transports. Acknowledge.'

Ninteen seconds later I gave the command to execute, then we were off. It was like riding a rocket plane with a dirty, overheated firing chamber. We crashed through walls of masonry, lurched sickeningly on turns, almost overturned when we crashed into the basement of some large demolished building and lumbered out again. It was out of my hands now, up to each skipper.

As we slewed into firing position, I saw the psychoperator peeling back the boy's eyelids. 'I'm afraid he's gone,' he said tonelessly. 'I had to overload him too much on that last hookup.' Two more of the women had collapsed.

Our big gun cut loose for the final salvo; we waited for an interminable period-all of ten seconds. Then we were moving, gathering speed as we rolled. The Benison hit the Palace wall with a blow that I thought would wreck her, but she did not mount. But the pilot had his forward hydraulic jacks down as soon as we hit; her bow reared slowly up. We reached an angle so steep that it seemed she must turn turtle, then the treads took hold, we ground forward and slid through the breach in the wall.

Our gun spoke again, at point-blank range, right into the inner Palace. A thought flashed through my head-this was the exact spot where I had first laid eyes on Judith. I had come full circle.

The Benison was rampaging around, destroying by her very weight. I waited until the last cruiser had had time to enter, then gave the order, 'Transports, assault.' That done, I called Penoyer, informed him that Huxley was wounded and that he was now in command.

I was all through. I did not even have a job, a battle station. The battle surged around me, but I was not part of it-I, who two minutes ago had been in usurped full command.

I stopped to light a cigarette and wondered what to do with myself. I put it out after one soul-satisfying drag and scrambled up into the fire control tower of the turret and peered out the after slits. A breeze had come up and the smoke was clearing; the transport Jacob's Ladder I could see just pulling out of the breach. Her sides fell away and ranks of infantry sprang out, blasters ready. A sporadic fire met them; some fell but most returned the fire and charged the inner Palace. The Jacob's Ladder cleared the breach and the Ark took her place.

The troops commander in the Ark had orders to take the Prophet alive. I hurried down ladders from the turret, ran down the passageway between the engine rooms, and located the escape hatch in the floor plates, clear at the stern of the Benison. Somehow I got it unclamped, swung up the hatch cover, and stuck my head down. I could see men running, out beyond the treads. I drew my blaster, dropped to the ground, and tried to catch up with them, running out the stern between the big treads.

They were men from the Ark, right enough. I attached myself to a platoon and trotted along with them. We swarmed into the inner Palace.

But the battle was over; we encountered no organized resistance. We went on down and down and down and found the Prophet's bombproof. The door was open and he was there.

But we did not arrest him. The Virgins had gotten to him first; he no longer looked imperious. They had left him barely something to identify at an inquest.

Coventry

'Have you anything to say before sentence is pronounced on you?' The mild eyes of the Senior Judge studied the face of the accused. His question was answered by a sullen silence.

'Very well-the jury has determined that you have violated a basic custom agreed to under the Covenant, and that through this act did damage another free citizen. It is the opinion of the jury and of the court that you did so knowingly, and aware of the probability of damage to a free citizen. Therefore, you are sentenced to choose between the Two Alternatives.'

A trained observer might have detected a trace of dismay breaking through the mask of indifference with which the young man had faced his trial. Dismay was unreasonable; in view of his offence, the sentence was inevitable-but reasonable men do not receive the sentence.

After waiting a decent interval, the judge turned to the bailiff. 'Take him away.'

The prisoner stood up suddenly, knocking over his chair. He glared wildly around at the company assembled and burst into speech.

'Hold on!' he yelled. 'I've got something to say first!' In spite of his rough manner there was about him the noble dignity of a wild animal at bay. He stared at those around him, breathing heavily, as if they were dogs waiting to drag him down.

'Well?' he demanded, 'Well? Do I get to talk, or don't I? It 'ud be the best joke of this whole comedy, if a condemned man couldn't speak his mind at the last!'

'You may speak,' the Senior Judge told him, in the same unhurried tones with which he had pronounced sentence, 'David MacKinnon, as long as you like, and in any manner that you like. There is no limit to that freedom, even for those who have broken the Covenant. Please speak into the recorder.'

MacKinnon glanced with distaste at the microphone near his face. The knowledge that any word he spoke would be recorded and analyzed inhibited him. 'I don't ask for records,' he snapped.

'But we must have them,' the judge replied patiently, 'in order that others may determine whether, or not, we have dealt with you fairly, and according to the Covenant. Oblige us, please.'

'Oh-very well!' He ungraciously conceded the requirement and directed his voice toward the instrument. 'There's no sense in me talking at all-but, just the same, I'm going to talk and you're going to listen . . . You talk about your precious "Covenant" as if it were something holy. I don't agree to it and I don't accept it. You act as if it had been sent down from Heaven in a burst of light. My grandfathers fought in the Second Revolution-but they fought to abolish superstition. . . not to let sheep-minded fools set up new ones.

'There were men in those days!' He looked contemptuously around him. 'What is there left today? Cautious, compromising "safe" weaklings with water in their veins. You've planned your whole world so carefully that you've planned the fun and zest right out of it. Nobody is ever hungry, nobody ever gets hurt. Your ships can't crack up and your crops can't fail. You even have the weather tamed so it rains politely after midnight. Why wait till midnight, I don't know . . . you all go to bed at nine o'clock!

'If one of you safe little people should have an unpleasant emotion-perish the thought! -You'd trot right over to the nearest psychodynamics clinic and get your soft little minds readjusted. Thank God I never succumbed to that dope habit. I'll keep my own feelings, thanks, no matter how bad they taste.

'You won't even make love without consulting a psychotechnician-Is her mind as flat and insipid as mine? Is there any emotional instability in her family? It's enough to make a man gag. As for fighting over a woman-if any one had the guts to do that, he'd find a proctor at his elbow in two minutes, looking for the most convenient place to paralyze him, and inquiring with sickening humility, "May I do you a service, sir?"

The bailiff edged closer to MacKinnon. He turned on him. 'Stand back, you. I'm not through yet.' He turned and added, 'You've told me to choose between the Two Alternatives. Well, it's no hard choice for me. Before I'd submit to treatment, before I'd enter one of your little, safe little, pleasant little reorientation homes and let my mind be pried into by a lot of soft-fingered doctors-before I did anything like that, I'd choose a nice, clean death. Oh, no-there is just one choice for me, not two. I take the choice of going to Coventry-and glad of it, too . . . I hope I never hear of the United States again!

'But there is just one thing I want to ask you before I go-Why do you bother to live anyhow? I would think that anyone of you would welcome an end to your silly, futile lives just from sheer boredom. That's all.' He turned back to the bailiff. 'Come on, you.'

'One moment, David MacKinnon.' The Senior Judge held up a restraining hand. 'We have listened to you. Although custom does not compel it, I am minded to answer some of your statements. Will you listen?'

Unwilling, but less willing to appear loutish in the face of a request so obviously reasonable, the younger man consented.

The judge commenced to speak in gentle, scholarly words appropriate to a lecture room. 'David MacKinnon, you have spoken in a fashion that doubtless seems wise to you. Nevertheless, your words were wild, and spoken in haste. I am moved to correct your obvious misstatements of fact. The Covenant is not a superstition, but a simple temporal contract entered into by those same revolutionists for pragmatic reasons. They wished to insure the maximum possible liberty for every person.

'You yourself have enjoyed that liberty. No possible act, nor mode of conduct, was forbidden to you, as long as your action did not damage another. Even an act specifically prohibited by law could not be held against you, unless the state was able to prove that your particular act damaged, or caused evident danger of damage, to a particular individual.

'Even if one should willfully and knowingly damage another-as you have done-the state does not attempt to sit in moral judgment, nor to punish. We have not the wisdom to do that, and the chain of injustices that have always followed such moralistic coercion endanger the liberty of all. Instead, the convicted is given the choice of submitting to psychological readjustment to correct his tendency to wish to damage others, or of having the state withdraw itself from him-of sending him to Coventry.

'You complain that our way of living is dull and unromantic, and imply that we have deprived you of excitement to which you feel entitled. You are free to hold and express your esthetic opinion of our way of living, but you must not expect us to live to suit your tastes. You are free to seek danger and adventure if you wish-there is danger still in experimental laboratories; there is hardship in the mountains of the Moon, and

death in the jungles of Venus-but you are not free to expose us to the violence of your nature.'

'Why make so much of it?' MacKinnon protested contemptuously. 'You talk as if I had committed a murder-I simply punched a man in the nose for offending me outrageously!'

'I agree with your esthetic judgment of that individual,' the judge continued calmly, 'and am personally rather gratified that you took a punch at him-but your psychometrical tests show that you believe yourself capable of judging morally your fellow citizens and feel justified in personally correcting and punishing their lapses. You are a dangerous individual, David MacKinnon, a danger to all of us, for we can not predict whet damage you may do next. From a social standpoint, your delusion makes you as mad as the March Hare.

'You refuse treatment-therefore we withdraw our society from you, we cast you out, we divorce you. To Coventry with you.' He turned to the bailiff. 'Take him away.'

MacKinnon peered out of a forward port of the big transport helicopter with repressed excitement in his heart. There! That must be it-that black band in the distance. The helicopter drew closer, and he became certain that he was seeing the Barrier-the mysterious, impenetrable wall that divided the United States from the reservation known as Coventry.

His guard looked up from the magazine he was reading and followed his gaze. 'Nearly there, I see,' he said pleasantly. 'Well, it won't be long now.'

'It can't be any too soon for me!'

The guard looked at him quizzically, but with tolerance. 'Pretty anxious to get on with it, eh?'

MacKinnon held his head high. 'You've never brought a man to the Gateway who was more anxious to pass through!'

'Mmm-maybe. They all say that, you know. Nobody goes through the Gate against his own will.'

'I mean it!'

'They all do. Some of them come back, just the same.'

'Say-maybe you can give me some dope as to conditions inside?'

'Sorry,' the guard said, shaking his head, 'but that is no concern of the United States, nor of any of its employees. You'll know soon enough.'

MacKinnon frowned a little. 'It seems strange-I tried inquiring, but found no one who would admit that they had any notion about the inside. And yet you say that some come out. Surely some of them must talk...'

'That's simple,' smiled the guard, 'part of their reorientation is a subconscious compulsion not to discuss their experiences.'

'That's a pretty scabby trick. Why should the government deliberately conspire to prevent me, and the people like me, from knowing what we are going up against?'

'Listen, buddy,' the guard answered, with mild exasperation, 'you've told the rest of us to go to the devil. You've told us that you could get along without us. You are being given plenty of living room in some of the best land on this continent, and you are being allowed to take with you everything that you own, or your credit could buy. What the deuce else do you expect?'

MacKinnon's face settled in obstinate lines. 'What assurance have I that there will be any land left for me?'

'That's your problem. The government sees to it that there is plenty of land for the population. The divvy-up is something you rugged individualists have to settle among yourselves. You've turned down our type of social co-operation; why should you expect the safeguards of our organization?' The guard turned back to his reading and ignored him.

They landed on a small field which lay close under the blank black wall. No gate was apparent, but a guardhouse was located at the side of the field. MacKinnon was the only passenger. While his escort went over to the guardhouse, he descended from the passenger compartment and went around to the freight hold. Two members of the crew were letting down a ramp from the cargo port. When he appeared, one of them eyed him, and said, 'O.K., there's your stuff. Help yourself.'

He sized up the job, and said, 'It's quite a lot, isn't it? I'll need some help. Will you give me a hand with it?'

The crew member addressed paused to light a cigarette before replying, 'It's your stuff. If you want it, get it out. We take off in ten minutes.' The two walked around him and reentered the ship.

'Why, you-' MacKinnon shut up and kept the rest of his anger to himself. The surly louts! Gone was the faintest trace of regret at leaving civilization. He'd show them! He could get along without them.

But it was twenty minutes and more before he stood beside his heaped up belongings and watched the ship rise. Fortunately the skipper had not been adamant about the time limit. He turned and commenced loading his steel tortoise. Under the romantic influence of the classic literature of a bygone day he had considered using a string of burros, but had been unable to find a zoo that would sell them to him. It was just as well- he was completely ignorant of the limits, foibles, habits, vices, illnesses, and care of those useful little beasts, and unaware of his own ignorance. Master and servant would have vied in making each other unhappy.

The vehicle he had chosen was not an unreasonable substitute for burros. It was extremely rugged, easy to operate, and almost foolproof. It drew its power from six square yards of sunpower screens on its low curved roof. These drove a constant-load motor, or, when halted, replenished the storage battery against cloudy weather, or night travel. The bearings were 'everlasting', and every moving part, other than the caterpillar treads and the controls, were sealed up, secure from inexpert tinkering.

It could maintain a steady six miles per hour on smooth, level pavement. When confronted by hills, or rough terrain, it did not stop, but simply slowed until the task demanded equaled its steady power output.

The steel tortoise gave MacKinnon a feeling of Crusoe-like independence. It did not occur to him his chattel was the end product of the cumulative effort and intelligent co-operation of hundreds of thousands of men, living and dead. He had been used all his life to the unfailing service of much more intricate machinery, and honestly regarded the tortoise as a piece of equipment of the same primitive level as a wood-man's axe, or a hunting knife. His talents had been devoted in the past to literary criticism rather than engineering, but that did not prevent him from believing that his native intelligence and

the aid of a few reference books would be all that he would really need to duplicate the tortoise, if necessary.

Metal ores were necessary, he knew, but saw no obstacle in that, his knowledge of the difficulties of prospecting, mining, and metallurgy being as sketchy as his knowledge of burros.

His goods filled every compartment of the compact little freighter. He checked the last item from his inventory and ran a satisfied eye down the list. Any explorer or adventurer of the past might well be pleased with such equipment, he thought. He could imagine showing Jack London his knockdown cabin. See, Jack, he would say, it's proof against any kind of weather-perfectly insulated walls and floor-and can't rust. It's so light that you can set it up in five minutes by yourself, yet it's so strong that you can sleep sound with the biggest grizzly in the world snuffling right outside your door.

And London would scratch his head, and say, Dave, you're a wonder. If I'd had that in the Yukon, it would have been a cinch!

He checked over the list again. Enough concentrated and desiccated food and vitamin concentrate to last six months. That would give him time enough to build hothouses for hydroponics, and get his seeds started. Medical supplies-he did not expect to need those, but foresight was always best. Reference books of all sorts. A light sporting rifle-vintage: last century. His face clouded a little at this. The War Department had positively refused to sell him a portable blaster. When he had claimed the right of common social heritage, they had grudgingly provided him with the plans and specifications, and told him to build his own. Well, he would, the first spare time he got.

Everything else was in order. MacKinnon climbed into the cockpit, grasped the two hand controls, and swung the nose of the tortoise toward the guardhouse. He had been ignored since the ship had landed; he wanted to have the gate opened and to leave.

Several soldiers were gathered around the guardhouse. He picked out a legate by the silver stripe down the side of his kilt and spoke to him. 'I'm ready to leave. Will you kindly open the Gate?'

'O.K.,' the officer answered him, and turned to a soldier who wore the plain gray kilt of a private's field uniform. 'Jenkins, tell the power house to dilate-about a number three opening, tell them,' he added, sizing up the dimensions of the tortoise.

He turned to MacKinnon. 'It is my duty to tell you that you may return to civilization, even now, by agreeing to be hospitalized for your neurosis.'

'I have no neurosis!'

'Very well. If you change your mind at any future time, return to the place where you entered. There is an alarm there with which you may signal to the guard that you wish the gate opened.'

'I can't imagine needing to know that.'

The legate shrugged. 'Perhaps not-but we send refugees to quarantine all the time. If I were making the rules, it might be harder to get out again.' He was cut off by the ringing of an alarm. The soldiers near them moved smartly away, drawing their blasters from their belts as they ran. The ugly snout of a fixed blaster poked out over the top of the guardhouse and pointed toward the Barrier.

The legate answered the question on MacKinnon's face. 'The power house is ready to open up.' He waved smartly toward that building, then turned back. 'Drive

straight through the center of the opening. It takes a lot of power to suspend the stasis; if you touch the edge, we'll have to pick up the pieces.'

A tiny, bright dot appeared in the foot of the barrier opposite where they waited. It spread into a half circle across the lampblack nothingness. Now it was large enough for MacKinnon to see the countryside beyond through the arch it had formed. He peered eagerly.

The opening grew until it was twenty feet wide, then stopped. It framed a scene of rugged, barren hills. He took this in, and turned angrily on the legate. 'I've been tricked!' he exclaimed. 'That's not fit land to support a man.'

'Don't be hasty,' he told MacKinnon. 'There's good land beyond. Besides-you don't have to enter. But if you are going, go!'

MacKinnon flushed, and pulled back on both hand controls. The treads bit in and the tortoise lumbered away, straight for the Gateway to Coventry.

When he was several yards beyond the Gate, he glanced back. The Barrier loomed behind him, with nothing to show where the opening had been. There was a little sheet metal shed adjacent to the point where he had passed through. He supposed that it contained the alarm the legate had mentioned, but he was not interested and turned his eyes back to his driving.

Stretching before him, twisting between rocky hills, was a road of sorts. It was not paved and the surface had not been repaired recently, but the grade averaged downhill and the tortoise was able to maintain a respectable speed. He continued down it, not because he fancied it, but because it was the only road which led out of surroundings obviously unsuited to his needs.

The road was untraveled. This suited him; he had no wish to encounter other human beings until he had located desirable land to settle on, and had staked out his claim. But the hills were not devoid of life; several times he caught glimpses of little dark shapes scurrying among the rocks, and occasionally bright, beady eyes stared back into his.

It did not occur to him at first that these timid little animals, streaking for cover at his coming, could replenish his larder-he was simply amused and warmed by their presence. When he did happen to consider that they might be used as food, the thought was at first repugnant to him-the custom of killing for 'sport' had ceased to be customary long before his time; and inasmuch as the development of cheap synthetic proteins in the latter half of the preceding century had spelled the economic ruin of the business of breeding animals for slaughter, it is doubtful if he had ever tasted animal tissue in his life.

But once considered, it was logical to act. He expected to live off the country; although he had plenty of food on hand for the immediate future, it would be wise to conserve it by using what the country offered. He suppressed his esthetic distaste and ethical misgivings, and determined to shoot one of the little animals at the first opportunity.

Accordingly, he dug out the rifle, loaded it, and placed it handy. With the usual perversity of the world-as-it-is, no game was evident for the next half hour. He was passing a little shoulder of rocky outcropping when he saw his prey. It peeked at him from behind a small boulder, its sober eyes wary but unperturbed. He stopped the tortoise and took careful aim, resting and steadying the rifle on the side of the cockpit. His quarry accommodated him by hopping out into full view.

He pulled the trigger, involuntarily tensing his muscles and squinting his eyes as he did so. Naturally, the shot went high and to the right.

But he was much too busy just then to be aware of it. It seemed that the whole world had exploded. His right shoulder was numb, his mouth stung as if he had been kicked there, and his ears rang in a strange and unpleasant fashion. He was surprised to find the gun still intact in his hands and apparently none the worse for the incident.

He put it down, clambered out of the car, and rushed up to where the small creature had been. There was no sign of it anywhere. He searched the immediate neighborhood, but did not find it. Mystified, he returned to his conveyance, having decided that the rifle was in some way defective, and that he should inspect it carefully before attempting to fire it again.

His recent target watched his actions cautiously from a vantage point yards away, to which it had stampeded at the sound of the shot. It was equally mystified by the startling events, being no more used to firearms than was MacKinnon.

Before he started the tortoise again, MacKinnon had to see to his upper lip, which was swollen and tender and bleeding from a deep scratch. This increased his conviction that the gun was defective. Nowhere in the romantic literature of the nineteenth and twentieth centuries, to which he was addicted, had there been a warning that, when firing a gun heavy enough to drop a man in his tracks, it is well not to hold the right hand in such ~ manner that the recoil will cause the right thumb and thumb nail to strike the mouth.

He applied an antiseptic and a dressing of sorts, and went on his way, somewhat subdued. The arroyo by which he had entered the hills had widened out, and the hills were greener. He passed around one sharp turn in the road, and found a broad fertile valley spread out before him. It stretched away until it was lost in the warm day's haze.

Much of the valley was cultivated, and he could make out human habitations. He continued toward it with mixed feelings. People meant fewer hardships, but it did not look as if staking out a claim would be as simple as he had hoped. However-Coventry was a big place.

He had reached the point where the road gave onto the floor of the valley, when two men stepped out into his path. They were carrying weapons of some sort at the ready. One of them called out to him:

'Halt!'

MacKinnon did so, and answered him as they came abreast. 'What do you want?'

'Customs inspection. Pull over there by the office.' He indicated a small building set back a few feet from the road, which MacKinnon had not previously noticed. He looked from it back to the spokesman, and felt a slow, unreasoning heat spread up from his viscera. It rendered his none too stable judgment still more unsound.

'What the deuce are you talking about?' he snapped. 'Stand aside and let me pass.'

The one who had remained silent raised his weapon and aimed it at MacKinnon's chest. The other grabbed his arm and pulled the weapon out of line. 'Don't shoot the dumb fool, Joe,' he said testily. 'You're always too anxious.' Then to MacKinnon, 'You're resisting the law. Come on-be quick about it!'

'The law?' MacKinnon gave a bitter laugh and snatched his rifle from the seat. It never reached his shoulder-the man who had done all the talking fired casually, without

apparently taking time to aim. MacKinnon's rifle was smacked from his grasp and flew into the air, landing in the roadside ditch behind the tortoise.

The man who had remained silent followed the flight of the gun with detached interest, and remarked, 'Nice shot, Blackie. Never touched him.'

'Oh, just luck,' the other demurred, but grinned his pleasure at the compliment. 'Glad I didn't nick him, though-saves writing out a report.' He reassumed an official manner, spoke again to MacKinnon, who had been sitting dumbfounded, rubbing his smarting hands. 'Well, tough guy? Do you behave, or do we come up there and get you?'

MacKinnon gave in. He drove the tortoise to the designated spot, and waited sullenly for orders. 'Get out and start unloading,' he was told. He obeyed, under compulsion. As he piled his precious possessions on the ground, the one addressed as Blackie separated the things into two piles, while Joe listed them on a printed form. He noticed presently that Joe listed only the items that went into the first pile. He understood this when Blackie told him to reload the tortoise with the items from that pile, and commenced himself to carry goods from the other pile into the building. He started to protest-Joe punched him in the mouth, coolly and without rancor. MacKinnon went down, but got up again, fighting. He was in such a blind rage that he would have tackled a charging rhino. Joe timed his rush, and clipped him again. This time he could not get up at once.

Blackie stepped over to a washstand in one corner of the office. He came back with a wet towel and chucked it at MacKinnon. 'Wipe your face on that, bud, and get back in the buggy. We got to get going.'

MacKinnon had time to do a lot of serious thinking as he drove Blackie into town. Beyond a terse answer of 'Prize court' to MacKinnon's inquiry as to their destination, Blackie did not converse, nor did MacKinnon press him, anxious as he was to have information. His mouth pained him from repeated punishment, his head ached, and he was no longer tempted to precipitate action by hasty speech.

Evidently Coventry was not quite the frontier anarchy he had expected it to be. There was a government of sorts, apparently, but it resembled nothing that he had ever been used to. He had visualized a land of noble, independent spirits who gave each other wide berth and practiced mutual respect. There would be villains, of course, but they would be treated to summary, and probably lethal, justice as quickly as they demonstrated their ugly natures. He had a strong, though subconscious, assumption that virtue is necessarily triumphant.

But having found government, he expected it to follow the general pattern that he had been used to all his life-honest, conscientious, reasonably efficient, and invariably careful of a citizen's rights and liberties. He was aware that government had not always been like that, but he had never experienced it-the idea was as remote and implausible as cannibalism, or chattel slavery.

Had he stopped to think about it, he might have realized that public servants in Coventry would never have been examined psychologically to determine their temperamental fitness for their duties, and, since every inhabitant of Coventry was there-as he was-for violating a basic custom and ref using treatment thereafter, it was a foregone conclusion that most of them would be erratic and arbitrary.

He pinned his hope on the knowledge that they were going to court. All he asked was a chance to tell his story to the judge.

His dependence on judicial procedure may appear inconsistent in view of how recently he had renounced all reliance on organized government, but while he could renounce government verbally, but he could not do away with a lifetime of environmental conditioning. He could curse the court that had humiliated him by condemning him to the Two Alternatives, but he expected courts to dispense justice. He could assert his own rugged independence, but he expected persons he encountered to behave as if they were bound by the Covenant-he had met no other sort. He was no more able to discard his past history than he would have been to discard his accustomed body.

But he did not know it yet.

MacKinnon failed to stand up when the judge entered the court room. Court attendants quickly set him right, but not before he had provoked a glare from the bench. The judge's appearance and manner were not reassuring. He was a well-fed man, of ruddy complexion, whose sadistic temper was evident in face and mien. They waited while he dealt drastically with several petty offenders. It seemed to MacKinnon, as he listened, that almost everything was against the law.

Nevertheless, he was relieved when his name was called. He stepped up and undertook at once to tell his story. The judge's gavel cut him short.

'What is this case?' the judge demanded, his face set in grim lines. 'Drunk and disorderly, apparently. I shall put a stop to this slackness among the young if it takes the last ounce of strength in my body!' He turned to the clerk. 'Any previous offences?'

The clerk whispered in his ear. The judge threw MacKinnon a look of mixed annoyance and suspicion, then told the customs' guard to come forward. Blackie told a clear, straightforward tale with the ease of a man used to giving testimony. MacKinnon's condition was attributed to resisting an officer in the execution of his duty. He submitted the inventory his colleague had prepared, but failed to mention the large quantity of goods which had been abstracted before the inventory was made.

The judge turned to MacKinnon. 'Do you have anything to say for yourself?'

'I certainly have, Doctor,' he began eagerly. 'There isn't a word of -,

Bang! The gavel cut him short. A court attendant hurried to MacKinnon's side and attempted to explain to him the proper form to use in addressing the court. The explanation confused him. In his experience, 'judge' naturally implied a medical man-a psychiatrist skilled in social problems. Nor had he heard of any special speech forms appropriate to a courtroom. But he amended his language as instructed.

'May it please the Honorable Court, this man is lying. He and his companion assaulted and robbed me. I was simply-'Smugglers generally think they are being robbed when customs officials catch them,' the judge sneered. 'Do you deny that you attempted to resist inspection?'

'No, Your Honor, but -'

'That will do. Penalty of fifty percent is added to the established scale of duty. Pay the clerk.'

'But, Your Honor, I can't -'

'Can't you pay it?'

'I haven't any money. I have only my possessions.'

'So?' He turned to the clerk. 'Condemnation proceedings. Impound his goods. Ten days for vagrancy. The community can't have these immigrant paupers roaming at large, and preying on law-abiding citizens. Next case!'

They hustled him away. It took the sound of a key grating in a barred door behind him to make him realize his predicament.

'Hi, pal, how's the weather outside?' The detention cell had a prior inmate, a small, well-knit man who looked up from a game of solitaire to address MacKinnon. He sat astraddle a bench on which he had spread his cards, and studied the newcomer with unworried, bright, beady eyes.

'Clear enough outside-but stormy in the courtroom,' MacKinnon answered, trying to adopt the same bantering tone and not succeeding very well. His mouth hurt him and spoiled his grin.

The other swung a leg over the bench and approached him with a light, silent step. 'Say, pal, you must 'a' caught that in a gear box,' he commented, inspecting MacKinnon's mouth. 'Does it hurt?'

'Like the devil,' MacKinnon admitted.

'We'll have to do something about that.' He went to the cell door and rattled it. 'Hey! Lefty! The house is on fire! Come arunnin'!'

The guard sauntered down and stood opposite their cell door. 'Wha' d'yuh want, Fader?' he said noncommittally.

'My old school chum has been slapped in the face with a wrench, and the pain is inordinate. Here's a chance for you to get right with Heaven by oozing down to the dispensary, snagging a dressing and about five grains of neoanodyne.'

The guard's expression was not encouraging. The prisoner looked grieved. 'Why, Lefty,' he said, 'I thought you would jump at a chance to do a little pure charity like that.' He waited for a moment, then added, 'Tell you what-you do it, and I'll show you how to work that puzzle about "How old is Ann?" Is it a go?'

'Show me first.'

'It would take too long. I'll write it out and give it to you.'

When the guard returned, MacKinnon's cellmate dressed his wounds with gentle deftness, talking the while. 'They call me Fader Magee. What's your name, pal?'

'David MacKinnon. I'm sorry, but I didn't quite catch your first name.'

'Fader. It isn't,' he explained with a grin, 'the name my mother gave me. It's more a professional tribute to my shy and unobtrusive nature.'

MacKinnon looked puzzled. 'Professional tribute? What is your profession?'

Magee looked pained. 'Why, Dave,' he said, 'I didn't ask you that. However,' he went on, 'it's probably the same as yours-self-preservation.'

Magee was a sympathetic listener, and MacKinnon welcomed the chance to tell someone about his troubles. He related the story of how he had decided to enter Coventry rather than submit to the sentence of the court, and how he had hardly arrived when he was hijacked and hauled into court. Magee nodded. 'I'm not surprised,' he observed. 'A man has to have larceny in his heart, or he wouldn't be a customs guard.'

'But what happens to my belongings?'

'They auction them off to pay the duty.'

'I wonder how much there will be left for me?'

Magee stared at him. 'Left over? There won't be anything left over. You'll probably have to pay a deficiency judgment.'

'Huh? What's that?'

'It's a device whereby the condemned pays for the execution,' Magee explained succinctly, if somewhat obscurely. 'What it means to you is that when your ten days is up, you'll still be in debt to the court. Then it's the chain gang for you, my lad-you'll work it off at a dollar a day.'

'Fader-you're kidding me.'

'Wait and see. You've got a lot to learn, Dave.'

Coventry was an even more complex place than MacKinnon had gathered up to this time. Magee explained to him that there were actually three sovereign, independent jurisdictions. The jail where they were prisoners lay in the so-called New America. It had the forms of democratic government, but the treatment he had already received was a fair sample of the fashion in which it was administered.

'This place is heaven itself compared with the Free State,' Magee maintained. 'I've been there-' The Free State was an absolute dictatorship; the head man of the ruling clique was designated the 'Liberator'. Their watchwords were Duty and Obedience; an arbitrary discipline was enforced with a severity that left no room for any freedom of opinion. Governmental theory was vaguely derived from the old functionalist doctrines. The state was thought of as a single organism with a single head, a single brain, and a single purpose. Anything not compulsory was forbidden. 'Honest so help me,' claimed Magee, 'you can't go to bed in that place without finding one of their damned secret police between the sheets.'

'But at that,' he continued, 'it's an easier place to live than with the Angels.'

'The Angels?'

'Sure. We still got 'em. Must have been two or three thousand die-hards that chose to go to Coventry after the Revolution-you know that. There's still a colony up in the hills to the north, complete with Prophet Incarnate and the works. They aren't bad hombres, but they'll pray you into heaven even if it kills you.'

All three states had one curious characteristic in common-each one claimed to be the only legal government of the entire United States, and each looked forward to some future day when they would reclaim the 'unredeemed' portion; i.e., outside Coventry. To the Angels, this was an event which would occur when the First Prophet returned to earth to lead them again. In New America it was hardly more than a convenient campaign plank, to be forgotten after each election. But in the Free State it was a fixed policy.

Pursuant to this purpose there had been a whole series of wars between the Free State and New America. The Liberator held, quite logically, that New America was an unredeemed section, and that is was necessary to bring it under the rule of the Free State before the advantages of their culture could be extended to the outside.

Magee's words demolished MacKinnon's dream of finding an anarchistic utopia within the barrier, but he could not let his fond illusion die without a protest. 'But see here, Fader,' he persisted, 'isn't there some place where a man can live quietly by himself without all this insufferable interference?'

'No-'considered Fader, 'no . . . not unless you took to the hills and hid. Then you 'ud be all right, as long as you steered clear of the Angels. But it would be pretty slim pickin's, living off the country. Ever tried it?'

'No . . . not exactly-but I've read all the classics: Zane Grey, and Emerson Hough, and so forth.'

'Well . . . maybe you could do it. But if you really want to go off and be a hermit, you 'ud do better to try it on the Outside, where there aren't so many objections to it.'

'No'-MacKinnon's backbone stiffened at once-'no, I'll never do that. I'll never submit to psychological reorientation just to have a chance to be let alone. If I could go back to where I was before a couple of months ago, before I was arrested, it might be all right to go off to the Rockies, or look up an abandoned farm somewhere. . . But with that diagnosis staring me in the face . . . after being told I wasn't fit for human society until I had had my emotions re-tailored to fit a cautious little pattern, I couldn't face it. Not if it meant going to a sanitarium'

'I see,' agreed Fader, nodding, 'you want to go to Coventry, but you don't want the Barrier to shut you off from the rest of the world.'

'No, that's not quite fair . . . Well, maybe, in a way. Say, you don't think I'm not fit to associate with, do you?'

'You look all right to me,' Magee reassured him, with a grin, 'but I'm in Coventry too, remember. Maybe I'm no judge.'

'You don't talk as if you liked it much. Why are you here?'

Magee held up a gently admonishing finger. 'Tut! Tut! That is the one question you must never ask a man here. You must assume that he came here because he knew how swell everything is here.'

'Still . . . you don't seem to like it.'

'I didn't say I didn't like it. I do like it; it has flavor. Its little incongruities are a source of innocent merriment. And anytime they turn on the heat I can always go back through the Gate and rest up for a while in a nice quiet hospital, until things quiet down.'

MacKinnon was puzzled again. 'Turn on the heat? Do they supply too hot weather here?'

'Huh? Oh. I didn't mean weather control-there isn't any of that here, except what leaks over from outside. I was just using an old figure of speech.'

'What does it mean?'

Magee smiled to himself. 'You'll find out.'

After supper-bread, stew in a metal dish, a small apple-Magee introduced MacKinnon to the mysteries of cribbage. Fortunately, MacKinnon had no cash to lose. Presently Magee put the cards down without shuffling them. 'Dave,' he said, 'are you enjoying the hospitality offered by this institution?'

'Hardly-Why?'

'I suggest that we check out.'

'A good idea, but how?'

'That's what I've been thinking about. Do you suppose you could take another poke on that battered phiz of yours, in a good cause?'

MacKinnon cautiously fingered his face. 'I suppose so-if necessary. It can't do me much more harm, anyhow.'

'That's mother's little man! Now listen-this guard, Lefty, in addition to being kind o' unbright, is sensitive about his appearance. When they turn out the lights, you -'

'Let me out of here! Let me out of here!' MacKinnon beat on the bars and screamed. No answer came. He renewed the racket, his voice an hysterical falsetto. Lefty arrived to investigate, grumbling.

'What the hell's eating on you?' he demanded, peering through the bars.

MacKinnon changed to tearful petition. 'Oh, Lefty, please let me out of here. Please! I can't stand the dark. It's dark in here-please don't leave me alone.' He flung himself, sobbing, on the bars.

The guard cursed to himself. 'Another slugnutty. Listen, you-shut up, and go to sleep, or I'll come in there, and give you something to yelp for!' He started to leave.

MacKinnon changed instantly to the vindictive, unpredictable anger of the irresponsible. 'You big ugly baboon! You rat-faced idiot! Where'd you get that nose?'

Lefty turned back, fury in his face. He started to speak. MacKinnon cut him short. 'Yah! Yah! Yah!' he gloated, like a nasty little boy, 'Lefty's mother was scared by a warthog-The guard swung at the spot where MacKinnon's face was pressed between the bars of the door. MacKinnon ducked and grabbed simultaneously. Off balance at meeting no resistance, the guard rocked forward, thrusting his forearm between the bars. MacKinnon's fingers slid along his arm, and got a firm purchase on Lefty's wrist.

He threw himself backwards, dragging the guard with him, until Lefty was jammed up against the outside of the barred door, with one arm inside, to the wrist of which MacKinnon clung as if welded.

The yell which formed in Lefty's throat miscarried; Magee had already acted. Out of the darkness, silent as death, his slim hands had snaked between the bars and imbedded themselves in the guard's fleshy neck. Lefty heaved, and almost broke free, but MacKinnon threw his weight to the right and twisted the arm he gripped in an agonizing, bone-breaking leverage.

It seemed to MacKinnon that they remained thus, like some grotesque game of statues, for an endless period. His pulse pounded in his ears until he feared that it must be heard by others, and bring rescue to Lefty. Magee spoke at last:

'That's enough,' he whispered. 'Go through his pockets.'

He made an awkward job if it, for his hands were numb and trembling from the strain, and it was anything but convenient to work between the bars. But the keys were there, in the last pocket he tried. He passed them to Magee, who let the guard slip to the floor, and accepted them.

Magee made a quick job of it. The door swung open with a distressing creak. Dave stepped over Lefty's body, but Magee kneeled down, unhooked a truncheon from the guard's belt, and cracked him behind the ear with it. MacKinnon paused.

'Did you kill him?' he asked.

'Cripes, no,' Magee answered softly, 'Lefty is a friend of mine. Let's go.'

They hurried down the dimly lighted passageway between cells toward the door leading to the administrative offices-their only outlet. Lefty had carelessly left it ajar, and light shone through the crack, but as they silently approached it, they heard ponderous footsteps from the far side. Dave looked hurriedly for cover, but the best he could manage was to slink back into the corner formed by the cell block and the wall. He glanced around for Magee, but he had disappeared.

The door swung open; a man stepped through, paused, and looked around. MacKinnon saw that he was carrying a blacklight, and wearing its complement-rectifying spectacles. He realized then that the darkness gave him no cover. The blacklight swung his way; he tensed to spring-He heard a dull 'clunk!' The guard sighed, swayed gently, then collapsed into a loose pile. Magee stood over him, poised on the balls of his feet, and

surveyed his work, while caressing the business end of the truncheon with the cupped fingers of his left hand.

'That will do,' he decided. 'Shall we go, Dave?'

He eased through the door without waiting for an answer; MacKinnon was close behind him. The lighted corridor led away to the right and ended in a large double door to the street. On the left wall, near the street door, a smaller office door stood open.

Magee drew MacKinnon to him. 'It's a cinch,' he whispered. 'There'll be nobody in there now but the desk sergeant. We get past him, then out that door, and into the ozone-' He motioned Dave to keep behind him, and crept silently up to the office door. After drawing a small mirror from a pocket in his belt, he lay down on the floor, placed his head near the doorframe, and cautiously extended the tiny mirror an inch or two past the edge.

Apparently he was satisfied with the reconnaissance the improvised periscope afforded, for he drew himself back onto his knees and turned his head so that MacKinnon could see the words shaped by his silent lips. 'It's all right,' he breathed, 'there is only-

Two hundred pounds of uniformed nemesis landed on his shoulders. A clanging alarm sounded through the corridor. Magee went down fighting, but he was outclassed and caught off guard. He jerked his head free and shouted, 'Run for it, kid!'

MacKinnon could hear running feet somewhere, but could see nothing but the struggling figures before him. He shook his head and shoulders like a dazed animal, then kicked the larger of the two contestants in the face. The man screamed and let go his hold. MacKinnon grasped his small companion by the scruff of the neck and hauled him roughly to his feet.

Magee's eyes were still merry. 'Well played, my lad,' he commended in clipped syllables, as they burst out the street door, '- if hardly cricket! Where did you learn La Savate?'

MacKinnon had no time to answer, being fully occupied in keeping up with Magee's weaving, deceptively rapid progress. They ducked across the street, down an alley, and between two buildings.

The succeeding minutes, or hours, were confusion to MacKinnon. He remembered afterwards crawling along a roof top and letting himself down to crouch in the blackness of an interior court, but he could not remember how they had gotten on the roof. He also recalled spending an interminable period alone, compressed inside a most unsavory refuse bin, and his terror when footsteps approached the bin and a light flashed through a crack.

A crash and the sound of footsteps in flight immediately thereafter led him to guess that Fader had drawn the pursuit away from him. But when Fader did return, and open the top of the bin, MacKinnon almost throttled him before identification was established.

When the active pursuit had been shaken off, Magee guided him across town, showing a sophisticated knowledge of back ways and shortcuts, and a genius for taking full advantage of cover. They reached the outskirts of the town in a dilapidated quarter, far from the civic center. Magee stopped. 'I guess this is the end of the line,' kid,' he told Dave. 'If you follow this street, you'll come to open country shortly. That's what you wanted, wasn't it?'

'I suppose so,' MacKinnon replied uneasily, and peered down the street. Then he turned back to speak again to Magee.

But Magee was gone. He had faded away into the shadows. There was neither sight nor sound of him.

MacKinnon started in the suggested direction with a heavy heart. There was no possible reason to expect Magee to stay with him; the service Dave had done him with a lucky kick had been repaid with interest-yet he had lost the only friendly companionship he had found in a strange place. He felt lonely and depressed.

He continued along, keeping to the shadows, and watching carefully for shapes that might be patrolmen. He had gone a few hundred yards, and was beginning to worry about how far it might be to open countryside, when he was startled into gooseflesh by a hiss from a dark doorway.

He did his best to repress the panic that beset him, and was telling himself that policemen never hiss, when a shadow detached itself from the blackness and touched him on the arm.

'Dave,' it said softly.

MacKinnon felt a childlike sense of relief and well-being. 'Fader!'

'I changed my mind, Dave. The gendarmes would have you in tow before morning. You don't know the ropes . . . so I came back.'

Dave was both pleased and crestfallen. 'Hell's bells, Fader,' he protested, 'you shouldn't worry about me. I'll get along.'

Magee shook him roughly by the arm. 'Don't be a chump. Green as you are, you'd start to holler about your civil rights, or something, and get clipped in the mouth again.

'Now see here,' he went on, 'I'm going to take you to some friends of mine who will hide you until you're smartened up to the tricks around here. But they're on the wrong side of the law, see? You'll have to be all three of the three sacred monkeys-see no evil, hear no evil, tell no evil. Think you can do it?'

'Yes, but -'

'No "buts" about it. Come along!'

The entrance was in the rear of an old warehouse. Steps led down into a little sunken pit. From this open areaway-foul with accumulated refuse-a door let into the back wall of the building. Magee tapped lightly but systematically, waited and listened. Presently he whispered, 'Psst! It's the Fader.'

The door opened quickly, and Magee was encircled by two great, fat arms. He was lifted off his feet, while the owner of those arms planted a resounding buss on his cheek. 'Fader!' she exclaimed, 'are you all right, lad? We've missed you.'

'Now that's a proper welcome, Mother,' he answered, when he was back on his own feet, 'but I want you to meet a friend of mine. Mother Johnston, this is David MacKinnon.'

'May I do you a service?' David acknowledged, with automatic formality, but Mother Johnston's eyes tightened with instant suspicion.

'Is he stooled?' she snapped.

'No, Mother, he's a new immigrant-but I vouch for him. He's on the dodge, and I've brought him here to cool.'

She softened a little under his sweetly persuasive tones. 'Well -'

Magee pinched her cheek. 'That's a good girl! When are you going to marry me?'

She slapped his hand away. 'Even if I were forty years younger, I'd not marry such a scamp as you! Come along then,' she continued to MacKinnon, 'as long as you're a friend of the Fader-though it's no credit to you!' She waddled quickly ahead of them, down a flight of stairs, while calling out for someone to open the door at its foot.

The room was poorly lighted and was furnished principally with a long table and some chairs, at which an odd dozen people were seated, drinking and talking. It reminded MacKinnon of prints he had seen of old English pubs in the days before the Collapse.

Magee was greeted with a babble of boisterous welcome. 'Fader!'-'It's the kid himself!'-'How d'ja do it this time, Fader? Crawl down the drains?'-'Set 'em up, Mother-the Fader's back!'

He accepted the ovation with a wave of his hand and a shout of inclusive greeting, then turned to MacKinnon. 'Folks,' he said, his voice cutting through the confusion, 'I want you to know Dave-the best pal that ever kicked a jailer at the right moment. If it hadn't been for Dave, I wouldn't be here.'

Dave found himself seated between two others at the table and a stein of beer thrust into his hand by a not uncomely young woman. He started to thank her, but she had hurried off to help Mother Johnston take care of the sudden influx of orders. Seated opposite him was a rather surly young man who had taken little part in the greeting to Magee. He looked MacKinnon over with a face expressionless except for a recurrent tic which caused his right eye to wink spasmodically every few seconds.

'What's your line?' he demanded.

'Leave him alone, Alec,' Magee cut in swiftly, but in a friendly tone. 'He's just arrived inside; I told you that. But he's all right,' he continued, raising his voice to include the others present, 'he's been here less than twenty-four hours, but he's broken jail, beat up two customs busies, and sassed old Judge Fleishacker right to his face. How's that for a busy day?'

Dave was the center of approving interest, but the party with the tic persisted. 'That's all very well, but I asked him a fair question: What's his line? If it's the same as mine, I won't stand for it-it's too crowded now.'

'That cheap racket you're in is always crowded, but he's not in it. Forget about his line.'

'Why don't he answer for himself,' Alec countered suspiciously. He half stood up. 'I don't believe he's stooled -'

It appeared that Magee was cleaning his nails with the point of a slender knife. 'Put your nose back in your glass, Alec,' he remarked in a conversational tone, without looking up, '-or must I cut it off and put it there?'

The other fingered something nervously in his hand. Magee seemed not to notice it, but nevertheless told him, 'If you think you can use a vibrator on me faster than I use steel, go ahead-it will be an interesting experiment.'

The man facing him stood uncertainly for a moment longer, his tic working incessantly. Mother Johnston came up behind him and pushed him down by the shoulders, saying, 'Boys! Boys! Is that any way to behave?-and in front of a guest, too! Fader, put that toad sticker away-I'm ashamed of you.'

The knife was gone from his hands. 'You're right as always, Mother,' he grinned. 'Ask Molly to fill up my glass again.'

An old chap sitting on MacKinnon's right had followed these events with alcoholic uncertainty, but he seemed to have gathered something of the gist of it, for now he fixed Dave with serum-filled eye, and enquired, 'Boy, are you stooled to the rogue?' His sweetly sour breath reached MacKinnon as the old man leaned toward him and emphasized his question with a trembling, joint-swollen finger.

Dave looked to Magee for advice and enlightenment. Magee answered for him. 'No, he's not-Mother Johnston knew that when she let him in. He's here for sanctuary-as our customs provide!'

An uneasy stir ran around the room. Molly paused in her serving and listened openly. But the old man seemed satisfied. 'True . . . true enough,' he agreed, and took another pull at his drink, 'sanctuary may be given when needed, if-'His words were lost in a mumble.

The nervous tension slackened. Most of those present were subconsciously glad to follow the lead of the old man, and excuse the intrusion on the score of necessity. Magee turned back to Dave. 'I thought that what you didn't know couldn't hurt you-or us-but the matter has been opened.'

'But what did he mean?'

'Gramps asked you if you had been stooled to the rogue-whether or not you were a member of the ancient and honorable fraternity of thieves, cutthroats, and pickpockets!'

Magee stared into Dave's face with a look of sardonic amusement. Dave looked uncertainly from Magee to the others, saw them exchange glances, and wondered what answer was expected of him. Alec broke the pause. 'Well,' he sneered, 'what are you waiting for? Go ahead and put the question to him-or are the great Fader's friends free to use this club without so much as a by-your-leave?'

'I thought I told you to quiet down, Alec,' the Fader replied evenly. 'Besides-you're skipping a requirement. All the comrades present must first decide whether or not to put the question at all.'

A quiet little man with a chronic worried look in his eyes answered him. 'I don't think that quite applies, Fader. If he had come himself, or fallen into our hands-in that case, yes. But you brought him here. I think I speak for all when I say he should answer the question. Unless someone objects, I will ask him myself.' He allowed an interval to pass. No one spoke up. 'Very well then . . . Dave, you have seen too much and heard too much. Will you leave us now-or will you stay and take the oath of our guild? I must warn you that once stooled you are stooled for life-and there is but one punishment for betraying the rogue.'

He drew his thumb across his throat in an age-old deadly gesture. Gramps made an appropriate sound effect by sucking air wetly through his teeth, and chuckled.

Dave looked around. Magee's face gave him no help. 'What is it that I have to swear to?' he temporized.

The parley was brought to an abrupt ending by the sound of pounding outside. There was a shout, muffled by two closed doors and a stairway, of 'Open up down there!' Magee got lightly to his feet and beckoned to Dave.

'That's for us, kid,' he said. 'Come along.'

He stepped over to a ponderous, old-fashioned radiophonograph which stood against the wall, reached under it, fiddled for a moment, then swung out one side panel of it. Dave saw that the mechanism had been cunningly rearranged in such a fashion that a

man could squeeze inside it. Magee urged him into it, slammed the panel closed, and left him.

His face was pressed up close to the slotted grill which was intended to cover the sound box. Molly had cleared off the two extra glasses from the table, and was dumping one drink so that it spread along the table top and erased the rings their glasses had made.

MacKinnon saw the Fader slide under the table, and reached up. Then he was gone. Apparently he had, in some fashion, attached himself to the underside of the table.

Mother Johnston made a great-to-do of opening up. The lower door she opened at once, with much noise. Then she clumped slowly up the steps, pausing, wheezing, and complaining aloud. He heard her unlock the outer door.

'A fine time to be waking honest people up!' she protested. 'It's hard enough to get the work done and make both ends meet, without dropping what I'm doing every five minutes, and -'

'Enough of that, old girl,' a man's voice answered, 'just get along downstairs. We have business with you.'

'What sort of business?' she demanded.

'It might be selling liquor without a license, but it's not-this time.'

'I don't-this is a private club. The members own the liquor; I simply serve it to them.'

'That's as may be. It's those members I want to talk to. Get out of the way now, and be spry about it.'

They came pushing into the room with Mother Johnston, still voluble, carried along in by the van. The speaker was a sergeant of police; he was accompanied by a patrolman. Following them were two other uniformed men, but they were soldiers. MacKinnon judged by the markings on their kilts that they were corporal and private-provided the insignia in New America were similar to those used by the United States Army.

The sergeant paid no attention to Mother Johnston. 'All right, you men,' he called out, 'line up!'

They did so, ungraciously but promptly. Molly and Mother Johnston watched them, and moved closer to each other. The police sergeant called out, 'All right, corporal-take charge!'

The boy who washed up in the kitchen had been staring round-eyed. He dropped a glass. It bounced around on the hard floor, giving out bell-like sounds in the silence.

The man who had questioned Dave spoke up. 'What's all this?'

The sergeant answered with a pleased grin. 'Conscription-that's what it is. You are all enlisted in the army for the duration.'

'Press gang!' It was an involuntary gasp that came from no particular source.

The corporal stepped briskly forward. 'Form a column of twos,' he directed. But the little man with the worried eyes was not done.

'I don't understand this,' he objected. 'We signed an armistice with the Free State three weeks ago.'

'That's not your worry,' countered the sergeant, 'nor mine. We are picking up every able-bodied man not in essential industry. Come along.'

'Then you can't take me.'

'Why not?'

He held up the stump of a missing hand. The sergeant glanced from it to the corporal, who nodded grudgingly, and said, 'Okay-but report to the office in the morning, and register.'

He started to march them out when Alec broke ranks and backed up to the wall, screaming, 'You can't do this to me! I won't go!' His deadly little vibrator was exposed in his hand, and the right side of his face was drawn up in a spastic wink that left his teeth bare.

'Get him, Steeves,' ordered the corporal. The private stepped forward, but stopped when Alec brandished the vibrator at him. He had no desire to have a vibroblade between his ribs, and there was no doubt as to the uncontrolled dangerousness of his hysterical opponent.

The corporal, looking phlegmatic, almost bored, levelled a small tube at a spot on the wall over Alec's head. Dave heard a soft pop!, and a thin tinkle. Alec stood motionless for a few seconds, his face even more strained, as if he were exerting the limit of his will against some unseen force, then slid quietly to the floor. The tonic spasm in his face relaxed, and his features smoothed into those of a tired and petulant, and very bewildered, little boy.

'Two of you birds carry him,' directed the corporal. 'Let's get going.'

The sergeant was the last to leave. He turned at the door and spoke to Mother Johnston. 'Have you seen the Fader lately?'

'The Fader?' She seemed puzzled. 'Why, he's in jail.'

'Ah, yes.. . so he is.' He went out.

Magee refused the drink that Mother Johnston offered him.

Dave was surprised to see that he appeared worried for the first time. 'I don't understand it,' Magee muttered, half to himself, then addressed the one-handed man. 'Ed-bring me up to date.'

'Not much news since they tagged you, Fader. The armistice was before that. I thought from the papers that things were going to be straightened out for once.'

'So did I. But the government must expect war if they are going in for general conscription.' He stood up. 'I've got to have more data. Al!' The kitchen boy stuck his head into the room.

'What 'cha want, Fader?'

'Go out and make palaver with five or six of the beggars. Look up their "king". You know where he makes his pitch?'

'Sure-over by the auditorium.'

'Find out what's stirring, but don't let them know I sent you.,

'Right, Fader. It's in the bag.' The boy swaggered out.

'Molly.'

'Yes, Fader?'

'Will you go out, and do the same thing with some of the business girls? I want to know what they hear from their customers.' She nodded agreement. He went on, 'Better look up that little redhead that has her beat up on Union Square. She can get secrets out of a dead man. Here-' He pulled a wad of bills out of his pocket and handed her several. 'You better take this grease . . . You might have to pay off a cop to get back out of the district.'

Magee was not disposed to talk, and insisted that Dave get some sleep. He was easily persuaded, not having slept since he entered Coventry. That seemed like a lifetime past; he was exhausted. Mother Johnston fixed him a shakedown in a dark, stuffy room on the same underground level. It had none of the hygienic comforts to which he was accustomed-air-conditioning, restful music, hydraulic mattress, nor soundproofing-and he missed his usual relaxing soak and auto-massage, but he was too tired to care. He slept in clothing and under covers for the first time in his life.

He woke up with a headache, a taste in his mouth like tired sin, and a sense of impending disaster. At first he could not remember where he was-he thought he was still in detention Outside. His surrounds were inexplicably sordid; he was about to ring for the attendant and complain, when his memory pieced in the events of the day before. Then he got up and discovered that his bones and muscles were painfully sore, and-which was worse-that he was, by his standards, filthy dirty. He itched.

He entered the common room, and found Magee sitting at the table. He greeted Dave. 'Hi, kid. I was about to wake you. You've slept almost all day. We've got a lot to talk about.'

'Okay-shortly. Where's the 'fresher?'

'Over there.'

It was not Dave's idea of a refreshing chamber, but he managed to take a sketchy shower in spite of the slimy floor. Then he discovered that there was no air blast installed, and he was forced to dry himself unsatisfactorily with his handkerchief. He had no choice in clothes. He must put back on the ones he had taken off, or go naked. He recalled that he had seen no nudity anywhere in Coventry, even at sports-a difference in customs, no doubt.

He put his clothes back on, though his skin crawled at the touch of the once-used linen.

But Mother Johnston had thrown together an appetizing breakfast for him. He let coffee restore his courage as Magee talked. It was, according to Fader, a serious situation. New America and the Free State had compromised their differences and had formed an alliance. They quite seriously proposed to break out of Coventry and attack the United States.

MacKinnon looked up at this. 'That's ridiculous, isn't it? They would be outnumbered enormously. Besides, how about the Barrier?'

'I don't know-yet. But they have some reason to think that they can break through the Barrier . . . and there are rumors that whatever it is can be used as a weapon, too, so that a small army might be able to whip the whole United States.'

MacKinnon looked puzzled. 'Well,' he observed, 'I haven't any opinion of a weapon I know nothing about, but as to the Barrier . . . I'm not a mathematical physicist, but I was always told that it was theoretically impossible to break the Barrier-that it was just a nothingness that there was no way to touch. Of course, you can fly over it, but even that is supposed to be deadly to life.'

'Suppose they had found some way to shield from the effects of the Barrier's field?' suggested Magee. 'Anyhow, that's not the point, for us. The point is: they've made this combine; the Free State supplies the techniques and most of the officers; and New America, with its bigger population, supplies most of the men. And that means to us that we don't dare show our faces any place, or we are in the army before you can blink.

'Which brings me to what I was going to suggest. I'm going to duck out of here as soon as it gets dark, and light out for the Gateway, before they send somebody after me who is bright enough to look under a table. I thought maybe you might want to come along.'

'Back to the psychologists?' MacKinnon was honestly aghast.

'Sure-why not? What have you got to lose? This whole damn place is going to be just like the Free State in a couple of days-and a Joe of your temperament would be in hot water all the time. What's so bad about a nice, quiet hospital room as a place to hide out until things quiet down? You don't have to pay any attention to the psych boys-just make animal noises at 'em every time one sticks his nose into your room, until they get discouraged.'

Dave shook his head. 'No,' he said slowly, 'I can't do that.'

'Then what will you do?'

'I don't know yet. Take to the hills I guess. Go to live with the Angels if it comes to a showdown. I wouldn't mind them praying for my soul as long as they left my mind alone.'

They were each silent for a while. Magee was mildly annoyed at MacKinnon's bullheaded stubbornness in the face of what seemed to him a reasonable offer. Dave continued busily to stow away grilled ham, while considering his position. He cut off another bite. 'My, but this is good,' he remarked, to break the awkward silence, 'I don't know when I've had anything taste so good-Say!'-

'What?' inquired Magee, looking up, and seeing the concern written on MacKinnon's face.

'This ham-is it synthetic, or is it real meat?'

'Why, it's real. What about it?'

Dave did not answer. He managed to reach the refreshing room before that which he had eaten departed from him.

Before he left, Magee gave Dave some money with which he could have purchased for him things that he would need in order to take to the hills. MacKinnon protested, but the Fader cut him short. 'Quit being a damn fool, Dave. I can't use New American money on the Outside, and you can't stay alive in the hills without proper equipment. You lie doggo here for a few days while Al, or Molly, picks up what you need, and you'll stand a chance-unless you'll change your mind and come with me?'

Dave shook his head at this, and accepted the money.

It was lonely after Magee left. Mother Johnston and Dave were alone in the club, and the empty chairs reminded him depressingly of the men who had been impressed. He wished that Gramps or the one-handed man would show up. Even Alec, with his nasty temper, would have been company-he wondered if Alec had been punished for resisting the draft.

Mother Johnston inveigled him into playing checkers in an attempt to relieve his evident low spirits. He felt obliged to agree to her gentle conspiracy, but his mind wandered. It was all very well for the Senior Judge to tell him to seek adventure in interplanetary exploration, but only engineers and technicians were eligible for such billets. Perhaps he should have gone in for science, or engineering, instead of literature; then he might now be on Venus, contending against the forces of nature in high adventure, instead of hiding from uniformed bullies. It wasn't fair. No-he must not kid

himself; there was no room for an expert in literary history in the raw frontier of the planets; that was not human injustice, that was a hard fact of nature, and he might as well face it.

He thought bitterly of the man whose nose he had broken, and thereby landed himself in Coventry. Maybe he was an 'upholstered parasite' after all-but the recollection of the phrase brought back the same unreasoning anger that had gotten him into trouble. He was glad that he had socked that so-and-so! What right had he to go around sneering and calling people things like that?

He found himself thinking in the same vindictive spirit of his father, although he would have been at a loss to explain the connection. The connection was not superficially evident, for his father would never have stooped to name-calling. Instead, he would have offered the sweetest of smiles, and quoted something nauseating in the way of sweetness-and light. Dave's father was one of the nastiest little tyrants that ever dominated a household under the guise of loving-kindness. He was of the more-in-sorrow-than-in-anger, this-hurts-me-more-than-it-does-you school, and all his life had invariably been able to find an altruistic rationalization for always having his own way. Convinced of his own infallible righteousness, he had never valued his son's point of view on anything, but had dominated him in everything-always from the highest moralistic motives.

He had had two main bad effects on his son: the boy's natural independence, crushed at home, rebelled blindly at every sort of discipline, authority, or criticism which he encountered elsewhere and subconsciously identified with the not-to-be-criticized paternal authority. Secondly, through years of association Dave imitated his father's most dangerous social vice-that of passing unselfcritical moral judgments on the actions of others.

When Dave was arrested for breaking a basic custom; to wit, atavistic violence; his father washed his hands of him with the statement that he had tried his best to 'make a man of him', and could not be blamed for his son's failure to profit by his instruction.

A faint knock caused them to put away the checker board in a hurry. Mother Johnston paused before answering. 'That's not our knock,' she considered, 'but it's not loud enough to be the noises. Be ready to hide.'

MacKinnon waited by the fox hole where he had hidden the night before, while Mother Johnston went to investigate. He heard her unbar and unlock the upper door, then she called out to him in a low but urgent voice, 'Dave! Come here, Dave-hurry!'

It was Fader, unconscious, with his own bloody trail behind him.

Mother Johnston was attempting to pick up the limp form. MacKinnon crowded in, and between the two of them they managed to get him downstairs and to lay him on the long table. He came to for a moment as they straightened his limbs. 'Hi, Dave,' he whispered, managing to achieve the ghost of his debonair grin. 'Somebody trumped my ace.'

'You keep quiet!' Mother Johnston snapped at him, then in a lower voice to Dave, 'Oh, the poor darling-Dave, we must get him to the Doctor.'

'Can't . . . do . . . that,' muttered the Fader. 'Got . . . to get to the . . . Gate-' His voice trailed off. Mother Johnston's fingers had been busy all the while, as if activated by some separate intelligence. A small pair of scissors, drawn from some hiding place about her large person, clipped away at his clothing, exposing the superficial extent of the damage. She examined the trauma critically.

'This is no job for me,' she decided, 'and he must sleep while we move him. Dave, get that hypodermic kit out of the medicine chest in the 'fresher.'

'No, Mother!' It was Magee, his voice strong and vibrant.

'Get me a pepper pill,' he went on. 'There's -, 'But Fader -'

He cut her short. 'I've got to get to the Doctor all right, but how the devil will I get there if I don't walk?'

'We would carry you.'

'Thanks, Mother,' he told her, his voice softened. 'I know you would-but the police would be curious. Get me that pill.'

Dave followed her into the 'fresher, and questioned her while she rummaged through the medicine chest. 'Why don't we just send for a doctor?'

'There is only one doctor we can trust, and that's the Doctor. Besides, none of the others are worth the powder to blast them.'

Magee was out again when they came back into the room. Mother Johnston slapped his face until he came around, blinking and cursing. Then she fed him the pill.

The powerful stimulant, improbable offspring of common coal tar, took hold almost at once. To all surface appearance Magee was a well man. He sat up and tried his own pulse, searching it out in his left wrist with steady, sensitive fingers. 'Regular as a metronome,' he announced, 'the old ticker can stand that dosage all right.'

He waited while Mother Johnston applied sterile packs to his wounds, then said good-bye. MacKinnon looked at Mother Johnston. She nodded.

'I'm going with you,' he told the Fader.

'What for? It will just double the risk.'

'You're in no fit shape to travel alone-stimulant, or no stimulant.'

'Nuts. I'd have to look after you.'

'I'm going with you.'

Magee shrugged his shoulders and capitulated.

Mother Johnston wiped her perspiring face, and kissed both of them.

Until they were well out of town their progress reminded MacKinnon of their nightmare flight of the previous evening. Thereafter they continued to the north-northwest by a highway which ran toward the foothills, and they left the highway only when necessary to avoid the sparse traffic. Once they were almost surprised by a police patrol car, equipped with blacklight and almost invisible, but the Fader sensed it in time and they crouched behind a low wall which separated the adjacent field from the road.

Dave inquired how he had known the patrol was near. Magee chuckled. 'Damned if I know,' he said, 'but I believe I could smell a cop staked out in a herd of goats.'

The Fader talked less and less as the night progressed. His usually untroubled countenance became lined and old as the effect of the drug wore off. It seemed to Dave as if this unaccustomed expression gave him a clearer insight into the man's character-that the mask of pain was his true face rather than the unworried features Magee habitually showed the world. He wondered for the ninth time what the Fader had done to cause a court to adjudge him socially insane.

This question was uppermost in his mind with respect to every person he met in Coventry. The answer was obvious in most cases; their types of instability were gross and showed up at once. Mother Johnston had been an enigma until she had explained it herself. She had followed her husband into Coventry. Now that she was a widow, she

preferred to remain with the friends she knew and the customs and conditions she was adjusted to, rather than change for -another and possibly less pleasing environment.

Magee sat down beside the road. 'It's no use, kid,' he admitted, 'I can't make it.'

'The hell we can't. I'll carry you.'

Magee grinned faintly. 'No, I mean it.' Dave persisted. 'How much farther is it?'

'Matter of two or three miles, maybe.'

'Climb aboard.' He took Magee pickaback and started on. The first few hundred yards were not too difficult; Magee was forty pounds lighter than Dave. After that the strain of the additional load began to tell. His arms cramped from supporting Magee's knees; his arches complained at the weight and the unnatural load distribution; and his breathing was made difficult by the clasp of Magee's arms around his neck.

Two miles to go-maybe more. Let your weight fall forward, and your foot must follow it, else you fall to the ground. It's automatic-as automatic as pulling teeth. How long is a mile? Nothing in a rocket ship, thirty seconds in a pleasure car, a ten minute crawl in a steel snail, fifteen minutes to trained troops in good condition. How far is it with a man on your back, on a rough road, when you are tired to start with?

Five thousand, two hundred, and eighty feet-a meaningless figure. But every step takes twenty-four inches off the total. The remainder is still incomprehensible-an infinity. Count them. Count them till you go crazy-till the figures speak themselves outside your head, and the jar! . . . jar! ...jar! . . . of your enormous, benumbed feet beats in your brain. Count them backwards, subtracting two each time-no, that's worse; each remainder is still an unattainable, inconceivable figure.

His world closed in, lost its history and held no future. There was nothing, nothing at all, but the torturing necessity of picking up his foot again and placing it forward. No feeling but the heartbreaking expenditure of will necessary to achieve that meaningless act.

He was brought suddenly to awareness when Magee's arms relaxed from around his neck. He leaned forward, and dropped to one knee to keep from spilling his burden, then eased it slowly to the ground. He thought for a moment that the Fader was dead-he could not locate his pulse, and the slack face and limp body were sufficiently corpse-like, but he pressed an ear to Magee's chest, and heard with relief the steady flub-dub of his heart.

He tied Magee's wrists together with his handkerchief, and forced his own head through the encircled arms. But he was unable, in his exhausted condition, to wrestle the slack weight into position on his back. Fader regained consciousness while MacKinnon was struggling. His first words were, 'Take it easy, Dave. What's the trouble?'

Dave explained. 'Better untie my wrists,' advised the Fader, 'I think I can walk for a while.'

And walk he did, for nearly three hundred yards, before he was forced to give up again. 'Look, Dave,' he said, after he had partially recovered, 'did you bring along any more of those pepper pills?'

'Yes-but you can't take any more dosage. It would kill you.'

'Yeah, I know-so they say. But that isn't the idea-yet. I was going to suggest that you might take one.'

'Why, of course! Good grief, Fader, but I'm dumb.'

Magee seemed no heavier than a light coat, the morning star shone brighter, and his strength seemed inexhaustible. Even when they left the highway and started up the cart trail that led to the Doctor's home in the foothills, the going was tolerable and the burden not too great. MacKinnon knew that the drugs burned the working tissue of his body long after his proper reserves were gone, and that it would take him days to recover from the reckless expenditure, but he did not mind. No price was too high to pay for the moment when he at last arrived at the gate of the Doctor's home-on his own two feet, his charge alive and conscious.

MacKinnon was not allowed to see Magee for four days. In the meantime, he was encouraged to keep the routine of a semi-invalid himself in order to recover the twenty-five pounds he had lost in two days and two nights, and to make up for the heavy strain on his heart during the last night. A high-caloric diet, sun baths, rest, and peaceful surroundings plus his natural good health caused him to regain weight and strength rapidly, but he 'enjoyed ill health" exceedingly because of the companionship of the Doctor himself-and Persephone.

Persephone's calendar age was fifteen. Dave never knew whether to think of her as much older, or much younger. She had been born in Coventry, and had lived her short life in the house of the Doctor, her mother having died in childbirth in that same house. She was completely childlike in many respects, being without experience in the civilized world Outside, and having had very little contact with the inhabitants of Coventry, except when she saw them as patients of the Doctor. But she had been allowed to read unchecked from the library of a sophisticated and protean-minded man of science. MacKinnon was continually being surprised at the extent of her academic and scientific knowledge-much greater than his own. She made him feel as if he were conversing with some aged and omniscient matriarch, then she would come out with some naive concept of the outer world, and he would be brought up sharply with the realization that she was, in fact, an inexperienced child.

He was mildly romantic about her, not seriously, of course, in view of her barely nubile age, but she was pleasant to see, and he was hungry for feminine companionship. He was quite young enough himself to feel continual interest in the delightful differences, mental and physical, between male and female.

Consequently, it was a blow to his pride as sharp as had been the sentence to Coventry to discover that she classed him with the other inhabitants of Coventry as a poor unfortunate who needed help and sympathy because he was not quite right in his head.

He was furious and for one whole day he sulked alone, but the human necessity for self-justification and approval forced him to seek her out and attempt to reason with her. He explained carefully and with emotional candor the circumstances leading up to his trial and conviction, and embellished the account with his own philosophy and evaluations, then confidently awaited her approval.

It was not forthcoming. 'I don't understand your viewpoint,' she said. 'You broke his nose, yet he had done you no harm of any sort. You expect me to approve that?'

'But Persephone,' he protested, 'you ignore the fact that he called me a most insulting name.'

'I don't see the connection,' she said. 'He made a noise with his mouth-a verbal label. If the label does not fit you, the noise is meaningless. If the label is true in your case-if you are the thing that the noise refers to, you are neither more, nor less, that thing by reason of some one uttering the verbal label. In short, he did not damage you.

'But what you did to him was another matter entirely. You broke his nose. That is damage. In self-protection the rest of society must seek you out, and determine whether or not you are so unstable as to be likely to damage some one else in the future. If you are, you must be quarantined for treatment, or leave society-whichever you prefer.'

'You think I'm crazy, don't you?' he accused.

'Crazy? Not the way you mean it. You haven't paresis, or a brain tumor, or any other lesion that the Doctor could find. But from the viewpoint of your semantic reactions you are as socially unsane as any fanatic witch burner.'

'Come now-that's not just!'

'What is justice?' She picked up the kitten she had been playing with. 'I'm going in-it's getting chilly.' Off she went into the house, her bare feet noiseless in the grass.

Had the science of semantics developed as rapidly as psychodynamics and its implementing arts of propaganda and mob psychology, the United States might never have fallen into dictatorship, then been forced to undergo the Second Revolution. All of the scientific principles embodied in the Covenant which marked the end of the revolution were formulated as far back as the first quarter of the twentieth century.

But the work of the pioneer semanticists, C. K. Ogden, Alfred Korzybski, and others, were known to but a handful of students, whereas psycho-dynamics, under the impetus of repeated wars and the frenzy of high-pressure merchandising, progressed by leaps and bounds.

Semantics, 'the meaning of meaning', gave a method for the first time of applying the scientific method to every act of everyday life. Because semantics dealt with spoken and written words as a determining aspect of human behavior it was at first mistakenly thought by many to be concerned only with words and of interest only to professional word manipulators, such as advertising copy writers and professors of etymology. A handful of unorthodox psychiatrists attempted to apply it to personal human problems, but their work was swept away by the epidemic mass psychoses that destroyed Europe and returned the United States to the Dark Ages.

The Covenant was the first scientific social document ever drawn up by man, and due credit must be given to its principal author, Dr Micah Novak, the same Novak who served as staff psychologist in the revolution. The revolutionists wished to establish maximum personal liberty. How could they accomplish that to a degree of high mathematical probability? First they junked the concept of 'justice'. Examined semantically 'justice' has no referent-there is no observable phenomenon in the space-time-matter continuum to which one can point, and say, 'This is justice.' Science can deal only with that which can be observed and measured. Justice is not such a matter; therefore it can never have the same meaning to one as to another; any 'noises' said about it will only add to confusion.

But damage, physical or economic, can be pointed to and measured. Citizens were forbidden by the Covenant to damage another. Any act not leading to damage, physical or economic, to some particular person, they declared to be lawful.

Since they had abandoned the concept of 'justice', there could be no rational standards of punishment. Penology took its place with lycanthropy and other forgotten witchcrafts. Yet, since it was not practical to permit a source of danger to remain in the community, social offenders were examined and potential repeaters were given their choice of psychological readjustment, or of having society withdraw itself from them-Coventry.

Early drafts of the Covenant contained the assumption that the socially unsane would naturally be hospitalized and readjusted, particularly since current psychiatry was quite competent to cure all non-lesional psychoses and cure or alleviate lesional psychoses, but Novak set his face against this.

'No!' he protested. 'The government must never again be permitted to tamper with the mind of any citizen without his consent, or else we set up a greater tyranny than we had before. Every man must be free to accept, or reject, the Covenant, even though we think him insane!'

The next time David MacKinnon looked up Persephone he found her in a state of extreme agitation. His own wounded pride was forgotten at once. 'Why, my dear,' he said, 'whatever in the world is the matter?'

Gradually he gathered that she had been present at a conversation between Magee and the Doctor, and had heard, for the first time, of the impending military operation against the United States. He patted her hand. 'So that's all it is,' he observed in a relieved voice. 'I thought something was wrong with you yourself.'

'"That's all-" David MacKinnon, do you mean to stand there and tell me that you knew about this, and don't consider it worth worrying about?'

'Me? Why should I? And for that matter, what could I do?'

'What could you do? You could go outside and warn them-that's what you could do . . . As to why you should-Dave, you're impossible!' She burst into tears and ran from the room.

He stared after her, mouth open, then borrowed from his remotest ancestor by observing to himself that women are hard to figure out.

Persephone did not appear at lunch. MacKinnon asked the Doctor where she was.

'Had her lunch,' the Doctor told him, between mouthfuls. 'Started for the Gateway.'

'What! Why did you let her do that?'

'Free agent. Wouldn't have obeyed me anyway. She'll be all right.'

Dave did not hear the last, being already out of the room and running out of the house. He found her just backing her little motorcycle runabout out of its shed. 'Persephone!'

'What do you want?' she asked with frozen dignity beyond her years.

'You mustn't do this! That's where the Fader got hurt!'

'I am going. Please stand aside.'

'Then I'm going with you.'

'Why should you?'

'To take care of you.'

She sniffed. 'As if anyone would dare to touch me.'

There was a measure of truth in what she said. The Doctor, and every member of his household, enjoyed a personal immunity unlike that of anyone else in Coventry. As a natural consequence of the set-up, Coventry had almost no competent medical men. The number of physicians who committed social damage was small. The proportion of such who declined psychiatric treatment was negligible, and this negligible remainder were almost sure to be unreliable bunglers in their profession. The Doctor was a natural healer, in voluntary exile in order that he might enjoy the opportunity to practice his art in the richest available field. He cared nothing for dry research; what he wanted was patients, the sicker the better, that he might make them well again.

He was above custom and above law. In the Free State the Liberator depended on him for insulin to hold his own death from diabetes at arm's length. In New America his beneficiaries were equally powerful. Even among the Angels of the Lord the Prophet himself accepted the dicta of the Doctor without question.

But MacKinnon was not satisfied. Some ignorant fool, he was afraid, might do the child some harm without realizing her protected status. He got no further chance to protest; she started the little runabout suddenly, and forced him to jump out of its path. When he had recovered his balance, she was far down the lane. He could not catch her.

She was back in less than four hours. He had expected that; if a person as elusive as Fader had not been able to reach the Gate at night, it was not likely that a young girl could do so in daylight.

His first feeling was one of simple relief, then he eagerly awaited an opportunity to speak to her. During her absence he had been turning over the situation in his mind. It was a foregone conclusion that she would fail; he wished to rehabilitate himself in her eyes; therefore, he would help her in the project nearest her heart-he himself would carry the warning to the Outside!

Perhaps she would ask for such help. In fact, it seemed likely. But the time she returned he had convinced himself that she was certain to ask his help. He would agree-with simple dignity-and off he would go, perhaps to be wounded, or killed, but an heroic figure, even if he failed.

He pictured himself subconsciously as a blend of Sydney Carton, the White Knight, the man who carried the message to Garcia and just a dash of d'Artagnan.

But she did not ask him-she would not even give him a chance to talk with her.

She did not appear at dinner. After dinner she was closeted with the Doctor in his study. When she reappeared she went directly to her room. He finally concluded that he might as well go to bed himself.

To bed, and then to sleep, and take it up again in the morning-But it's not as simple as that. The unfriendly walls stared back at him, and the other, critical half of his mind decided to make a night of it. Fool! She doesn't want your help. Why should she? What have you got that Fader hasn't got?-and better. To her, you are just one of the screwloose multitude you've seen all around you in this place.

But I'm not crazy!-just because I choose not to submit to the dictation of others doesn't make me crazy. Doesn't it, though? All the rest of them in here are lamebrains, what's so fancy about you? Not all of them-how about the Doctor, and-don't kid yourself, chump, the Doctor and Mother Johnston are here for their own reasons; they weren't sentenced. And Persephone was born here.

How about Magee?-He was certainly rational-or seemed so. He found himself resenting, with illogical bitterness, Magee's apparent stability. Why should he be any different from the rest of us?

The rest of us? He had classed himself with the other inhabitants of Coventry. All right, all right, admit it, you fool-you're just like the rest of them; turned out because the decent people won't have you-and too damned stubborn to admit that you need treatment. But the thought of treatment turned him cold, and made him think of his father again. Why should that be? He recalled something the Doctor had said to him a couple of days before:

'What you need, son, is to stand up to your father and tell him off. Pity more children don't tell their parents to go to hell!'

He turned on the light and tried to read. But it was no use. Why should Persephonie care what happened to the people Outside?-She didn't know them; she had no friends there. If he had no obligations to them, how could she possibly care? No obligations? You had a soft, easy life for many years-all they asked was that you behave yourself. For that matter, where would you be now, if the Doctor had stopped to ask whether or not he owed you anything?

He was still wearily chewing the bitter cud of self-examination when the first cold and colorless light of morning filtered in. He got up, threw a robe around him, and tiptoed down the hall to Magee's room. The door was ajar. He stuck his head in, and whispered, 'Fader-Are you awake?'

'Come in, kid,' Magee answered quietly. 'What's the trouble? No can sleep?'

'No -, 'Neither can I. Sit down, and we'll carry the banner together.'

'Fader, I'm going to make a break for it. I'm going Outside.'

'Huh? When?'

'Right away.'

'Risky business, kid. Wait a few days, and I'll try it with you.'

'No, I can't wait for you to get well. I'm going out to warn the United States!'

Magee's eyed widened a little, but his voice was unchanged. 'You haven't let that spindly kid sell you a bill of goods, Dave?'

'No. Not exactly. I'm doing this for myself-It's something I need to do. See here, Fader, what about this weapon? Have they really got something that could threaten the United States?'

'I'm afraid so,' Magee admitted. 'I don't know much about it, but it makes blasters look sick. More range-I don't know what they expect to do about the Barrier, but I saw 'em stringing heavy power lines before I got winged. Say, if you do get outside, here's a chap you might look up; in fact, be sure to. He's got influence.' Magee scrawled something on a scrap of paper, folded the scrap, and handed it to MacKinnon, who pocketed it absent-mindedly and went on:

'How closely is the Gate guarded, Fader?'

'You can't get out the Gate; that's out of the question. Here's what you will have to do-' He tore off another piece of paper and commenced sketching and explaining.

Dave shook hands with Magee before he left. 'You'll say goodbye for me, won't you? And thank the Doctor? I'd rather just slide out before anyone is up.'

'Of course, kid,' the Fader assured him.

MacKinnon crouched behind bushes and peered cautiously at the little band of Angels filing into the bleak, ugly church. He shivered, both from fear and from the icy morning air. But his need was greater than his fear. Those zealots had food-and he must have it.

The first two days after he left the house of the Doctor had been easy enough. True, he had caught cold from sleeping on the ground; it had settled in his lungs and slowed him down. But he did not mind that now if only he could refrain from sneezing or coughing until the little band of faithful were safe inside the temple. He watched them pass-dour-looking men, women and skirts that dragged the ground and whose work lined faces were framed in shawls-sallow drudges with too many children. The light had gone out of their faces. Even the children were sober.

The last of them filed inside, leaving only the sexton in the churchyard, busy with some obscure duty. After an interminable time, during which MacKinnon pressed a finger against his upper lip in a frantic attempt to forestall a sneeze, the sexton entered the grim building and closed the doors.

McKinnon crept out of his hiding place and hurried to the house he had previously selected, on the edge of the clearing, farthest from the church.

The dog was suspicious, but he quieted him. The house was locked, but the rear door could be forced. He was a little giddy at the sight of food when he found it-hard bread, and strong, unsalted butter made from goat's milk. A misstep two days before had landed him in a mountain stream. The mishap had not seemed important until he discovered that his food tablets were a pulpy mess. He had eaten them the rest of the day, then mold had taken them, and he had thrown the remainder away.

The bread lasted him through three more sleeps, but the butter melted and he was unable to carry it. He soaked as much of it as he could into the bread, then licked up the rest, after which he was very thirsty.

Some hours after the last of the bread was gone, he reached his first objective-the main river to which all other streams in Coventry were tributary. Some place, down stream, it dived under the black curtain of the Barrier, and continued seaward. With the gateway closed and guarded, its outlet constituted the only possible egress to a man unassisted.

In the meantime it was water, and thirst was upon him again, and his cold was worse. But he would have to wait until dark to drink; there were figures down there by the bank-some in uniform, he thought. One of them made fast a little skiff to a landing. He marked it for his own and watched it with jealous eyes. It was still there when the sun went down.

The early morning sun struck his nose and he sneezed. He came wide awake, raised his head, and looked around. The little skiff he had appropriated floated in midstream. There were no oars. He could not remember whether or not there had been any oars. The current was fairly strong; it seemed as if he should have drifted clear to the Barrier in the night. Perhaps he had passed under it-no, that was ridiculous.

Then he saw it, less than a mile away, black and ominous-but the most welcome sight he had seen in days. He was too weak and feverish to enjoy it, but it renewed the determination that kept him going.

The little boat scraped against bottom. He saw that the current at a bend had brought him to the bank. He hopped awkwardly out, his congealed joints complaining, and drew the bow of the skiff up onto the sand. Then he thought better of it, pushed it out

once more, shoved as hard as he was able and watched it disappear around the meander. No need to advertise where he had landed.

He slept most of that day, rousing himself once to move out of the sun when it grew too hot. But the sun had cooked much of the cold out of his bones, and he felt much better by nightfall.

Although the Barrier was only a mile or so away, it took most of the night to reach it by following the river bank. He knew when he had reached it by the clouds of steam that rose from the water. When the sun came up, he considered the situation. The Barrier stretched across the water, but the juncture between it and the surface of the stream was hidden by billowing clouds. Someplace, down under the surface of the water-how far down he did not know-somewhere down there, the Barrier ceased, and its raw edge turned the water it touched to steam.

Slowly, reluctantly and most unheroically, he commenced to strip off his clothes. The time had come and he did not relish it. He came across the scrap of paper that Magee had handed him, and attempted to examine it. But it had been pulped by his involuntary dip in the mountain stream and was quite illegible. He chucked it away. It did not seem to matter.

He shivered as he stood hesitating on the bank, although the sun was warm. Then his mind was made up for him; he spied a patrol on the far bank.

Perhaps they had seen him, perhaps not. He dived.

Down, down, as far as his strength would take him. Down and try to touch bottom, to be sure of avoiding that searing, deadly base. He felt mud with his hands. Now to swim under it. Perhaps it was death to pass under it, as well as over it; he would soon know. But which way was it? There was no direction down here.

He stayed down until his congested lungs refused. Then he rose part way, and felt scalding water on his face. For a timeless interval of unutterable sorrow and loneliness he realized that he was trapped between heat and water-trapped under the Barrier.

Two private soldiers gossiped idly on a small dock which lay under the face of the Barrier. The river which poured out from beneath it held no interest for them, they had watched it for many dull tours of guard duty. An alarm clanged behind them and brought them to alertness. 'What sector, Jack?'

'This bank. There he is now-see!'

They fished him out and had him spread out on the dock by the time the sergeant of the guard arrived. 'Alive, or dead?' he enquired.

'Dead, I think,' answered the one who was not busy giving artificial resuscitation.

The sergeant clucked in a manner incongruous to his battered face, and said, 'Too bad. I've ordered the ambulance; send him up to the infirmary anyhow.'

The nurse tried to keep him quiet, but MacKinnon made such an uproar that she was forced to get the ward surgeon. 'Here! Here! What's all this nonsense?' the medico rebuked him, while reaching for his pulse. Dave managed to convince him that he would not quiet down, not accept a soporific until he had told his story. They struck a working agreement that MacKinnon was to be allowed to talk-'But keep it short, mind you!'-and the doctor would pass the word along to his next superior, and in return Dave would submit to a hypodermic.

The next morning two other men, unidentified, were brought to MacKinnon by the surgeon. They listened to his full story and questioned him in detail. He was transferred to corps area headquarters that afternoon by ambulance. There he was questioned again. He was regaining his strength rapidly, but he was growing quite tired of the whole rigmarole, and wanted assurance that his warning was being taken seriously. The latest of his interrogators reassured him. 'Compose yourself,' he told Dave, 'you are to see the commanding officer this afternoon.'

The corps area commander, a nice little chap with a quick, birdlike manner and a most unmilitary appearance, listened gravely while MacKinnon recited his story for what seemed to him the fiftieth time. He nodded agreement when David finished. 'Rest assured, David MacKinnon, that all necessary steps are being taken.'

'But how about their weapon?'

'That is taken care of-and as for the Barrier, it may not be as easy to break as our neighbors think. But your efforts are appreciated. May I do you some service?'

'Well, no-not for myself, but there are two of my friends in there-'He asked that something be done to rescue Magee, and that Persephone be enabled to come out, if she wished.

'I know of that girl,' the general remarked. 'We will get in touch with her. If at any time she wishes to become a citizen, it can be arranged. As for Magee, that is another matter-'He touched the stud of his desk visiphone. 'Send Captain Randall in.'

A neat, trim figure in the uniform of a captain of the United States Army entered with a light step. MacKinnon glanced at him with casual, polite interest, then his expression went to pieces. 'Fader!' he yelled.

Their mutual greeting was hardly sufficiently decorous for the private office of a commanding general, but the general did not seem to mind. When they had calmed down, MacKinnon had to ask the question uppermost in his mind. 'But see here, Fader, all this doesn't make sense-'He paused, staring, then pointed a finger accusingly, 'I know! You're in the secret service!'

The Fader grinned cheerfully. 'Did you think,' he observed, 'that the United States Army would leave a plague spot like that unwatched?'

The general cleared his throat. 'What do you plan to do now, David MacKinnon?'

'Eh! Me? Why, I don't have any plans-'He thought for a moment, then turned to his friend. 'Do you know, Fader, I believe I'll turn in for psychological treatment after all. You're on the Outside -'

'I don't believe that will be necessary,' interrupted the general gently.

'No? Why not, sir?'

'You have cured yourself. You may not be aware of it, but four psychotechnicians have interviewed you. Their reports agree. I am authorized to tell you that your status as a free citizen has been restored, if you wish it.'

The general and Captain 'the Fader' Randall managed tactfully between them to terminate the interview. Randall walked back to the infirmary with his friend. Dave wanted a thousand questions answered at once. 'But Fader,' he demanded, 'you must have gotten out before I did.'

'A day or two.'

'Then my job was unnecessary!'

'I wouldn't say that,' Randall contradicted. 'I might not have gotten through. As a matter of fact, they had all the details even before I reported. There are others-Anyhow,' he continued, to change the subject, 'now that you are here, what will you do?'

'Me? It's too soon to say . . . It won't be classical literature, that's a cinch. If I wasn't such a dummy in maths, I might still try for interplanetary.'

'Well, we can talk about it tonight,' suggested Fader, glancing at his chrono. 'I've got to run along, but I'll stop by later, and we'll go over to the mess for dinner.'

He was out the door with speed reminiscent of the thieves' kitchen. Dave watched him, then said suddenly, 'Hey! Fader! Why couldn't I get into the secret ser -,

But the Fader was gone-he must ask himself.

Misfit

> "... for the purpose of conserving and improving our interplanetary resources, and providing useful, healthful occupations for the youth of this planet."
> Excerpt from the enabling act, H.R. 7118, setting up the Cosmic Construction Corps.

"Attention to muster!" The parade ground voice of a First Sergeant of Space Marines cut through the fog and drizzle of a nasty New Jersey morning. "As your names are called, answer 'Here', step forward with your baggage, and embark.

"Atkins!"

"Here!"

"Austin!"

"Hyar!"

"Ayres!"

"Here!"

One by one they fell out of ranks, shouldered the hundred and thirty pounds of personal possessions allowed them, and trudged up the gangway. They were young -- none more than twenty-two -- in some cases luggage outweighed the owner.

"Kaplan!"

"Here!"

"Keith!"

"Heah!"

"Libby!"

"Here!" A thin gangling blonde had detached himself from the line, hastily wiped his nose, and grabbed his belongings. He slung a fat canvas bag over his shoulder, steadied it, and lifted a suitcase with his free hand. He started for the companionway in an unsteady dogtrot. As he stepped on the gangway his suitcase swung against his knees. He staggered against a short wiry form dressed in the powder-blue of the Space Navy. Strong fingers grasped his arm and checked his fall.

"Steady, son. Easy does it." Another hand readjusted the canvas bag.

"Oh, excuse me, uh" -- the embarrassed youngster automatically counted the four bands of silver braid below the shooting star -- "Captain. I didn't--"

"Bear a hand and get aboard, son."

"Yes, sir."

The passage into the bowels of the transport was gloomy. When the lad's eyes adjusted he saw a gunners mate wearing the brassard of a Master-at-Arms, who hooked a thumb toward an open airtight door.

"In there. Find your locker and wait by it." Libby hurried to obey. Inside he found a jumble of baggage and men in a wide low-ceilinged compartment. A line of glow-tubes ran around the junction of bulkhead and ceiling and trisected the overhead: the 50ft roar of blowers made a background to the voices of his shipmates. He picked his way through heaped luggage and located his locker, seven-ten, on the far wall outboard. He broke the seal on the combination lock, glanced at the combination, and opened it. The locker was very small, the middle of a tier of three. He considered what he should keep in it. A loudspeaker drowned out the surrounding voices and demanded his attention:

"Attention! Man all space details; first section. Raise ship in twelve minutes. Close air-tight doors. Stop blowers at minus two minutes. Special orders for passengers; place all gear on deck, and tie down on red signal light. Remain down until release is sounded. Masters-at-Arms check compliance."

The gunner's mate popped in, glanced around and immediately commenced supervising rearrangement of the baggage. Heavy items were lashed down. Locker doors were closed. By the time each boy had found a place on the deck and the Master-at-Arms had okayed the pad under his head, the glowtubes turned red and the loudspeaker brayed out.

"All hands. Up Ship! Stand by for acceleration." The Master-at-Arms hastily reclined against two cruise bags, and watched the room. The blowers sighed to a stop. There followed two minutes of dead silence. Libby felt his heart commence to pound. The two minutes stretched interminably. Then the deck quivered and a roar like escaping high pressure steam beat at his ear drums. He was suddenly very heavy and a weight lay across his chest and heart. An indefinite time later the glow-tubes flashed white, and the announcer bellowed: "Secure all getting underway details; regular watch, first section." The blowers droned into life. The Master-at-Arms stood up, rubbed his buttocks and pounded his arms, then said:

"Okay, boys." He stepped over and undogged the airtight door to the passageway. Libby got up and blundered into a bulkhead, nearly falling. His legs and arms had gone to sleep, besides which he felt alarmingly light, as if he had sloughed off at least half of his inconsiderable mass.

For the next two hours he was too busy to think, or to be homesick. Suitcases, boxes, and bags had to be passed down into the lower hold and lashed against angular acceleration. He located and learned how to use a waterless water closet. He found his assigned bunk and learned that it was his only eight hours in twenty-four; two other boys had the use of it too. The three sections ate in three shifts, nine shifts in all -- twenty-four youths and a master-at-arms at one long table which jam-filled a narrow compartment off the galley.

After lunch Libby restowed his locker. He was standing before it, gazing at a photograph which he intended to mount on the inside of the locker door, when a command filled the compartment:

"Attention!"

Standing inside the door was the Captain flanked by the Master-at-Arms. The Captain commenced to speak. "At rest, men. Sit down. McCoy, tell control to shift this compartment to smoke filter." The gunner's mate hurried to the communicator on the bulkhead and spoke into it in a low tone. Almost at once the hum of the blowers climbed a half-octave and stayed there. "Now light up if you like. I'm going to talk to you.

"You boys are headed out on the biggest thing so far in your lives. From now on you're men, with one of the hardest jobs ahead of you that men have ever tackled. What we have to do is part of a bigger scheme. You, and hundreds of thousands of others like you, are going out as pioneers to fix up the solar system so that human beings can make better use of it.

"Equally important, you are being given a chance to build yourselves into useful and happy citizens of the Federation. For one reason or another you weren't happily adjusted back on Earth. Some of you saw the jobs you were trained for abolished by new inventions. Some of you got into trouble from not knowing what to do with the modern leisure. In any case you were misfits. Maybe you were called bad boys and had a lot of black marks chalked up against you.

"But everyone of you starts even today. The only record you have in this ship is your name at the top of a blank sheet of paper. It's up to you what goes on that page.

"Now about our job -- We didn't get one of the easy repair-and-recondition jobs on the Moon, with week-ends at Luna City, and all the comforts of home. Nor did we draw a high gravity planet where a man can eat a full meal and expect to keep it down. Instead we've got to go out to Asteroid HS-5388 and turn it into Space Station E-M3. She has no atmosphere at all, and only about two per cent Earth-surface gravity. We've got to play human fly on her for at least six months, no girls to date, no television, no recreation that you don't devise yourselves, and hard work every day. You'll get space sick, and so homesick you can taste it, and agoraphobia. If you aren't careful you'll get ray-burnt. Your stomach will act up, and you'll wish to God you'd never enrolled.

"But if you behave yourself, and listen to the advice of the old spacemen, you'll come out of it strong and healthy, with a little credit stored up in the bank, and a lot of knowledge and experience that you wouldn't get in forty years on Earth. You'll be men, and you'll know it.

"One last word. It will be pretty uncomfortable to those that aren't used to it. Just give the other fellow a little consideration, and you'll get along all right. If you have any complaint and can't get satisfaction any other way, come see me. Otherwise, that's all. Any questions?"

One of the boys put up his hand. "Captain?" he enquired timidly.

"Speak up, lad, and give your name."

"Rogers, sir. Will we be able to get letters from home?"

"Yes, but not very often. Maybe every month or so. The chaplain will carry mail, and any inspection and supply ships."

The ship's loudspeaker blatted out, "All hands! Free flight in ten minutes. Stand by to lose weight." The Master-at-Arms supervised the rigging of grab-lines. All loose

gear was made fast, and little cellulose bags were issued to each man. Hardly was this done when Libby felt himself get light on his feet -- a sensation exactly like that experienced when an express elevator makes a quick stop on an upward trip, except that the sensation continued and became more intense. At first it was a pleasant novelty, then it rapidly became distressing. The blood pounded in his ears, and his feet were clammy and cold. His saliva secreted at an abnormal rate. He tried to swallow, choked, and coughed. Then his stomach shuddered and contracted with a violent, painful, convulsive reflex and he was suddenly, disastrously nauseated. After the first excruciating spasm, he heard McCoy's voice shouting.

"Hey! Use your sick-kits like I told you. Don't let that stuff get in the blowers." Dimly Libby realized that the admonishment included him. He fumbled for his cellulose bag just as a second temblor shook him, but he managed to fit the bag over his mouth before the eruption occurred. When it subsided, he became aware that he was floating near the overhead and facing the door. The chief Master-at-Arms slithered in the door and spoke to McCoy.

"How are you making out?"

"Well enough. Some of the boys missed their kits."

"Okay. Mop it up. You can use the starboard lock." He swam out.

McCoy touched Libby's arm. "Here, Pinkie, start catching them butterflies." He handed him a handful of cotton waste, then took another handful himself and neatly dabbed up a globule of the slimy filth that floated about the compartment. "Be sure your sick-kit is on tight. When you get sick, just stop and wait until it's over." Libby imitated him as best as he could. In a few minutes the room was free of the worst of the sickening debris. McCoy looked it over, and spoke:

"Now peel off them dirty duds, and change your kits. Three or four of you bring everything along to the starboard lock."

At the starboard spacelock, the kits were put in first, the inner door closed, and the outer opened. When the inner door was opened again the kits were gone -- blown out into space by the escaping air. Pinkie addressed McCoy.

"Do we have to throw away our dirty clothes too?"

"Huh uh, we'll just give them a dose of vacuum. Take 'em into the lock and stop 'em to those hooks on the bulkheads. Tie 'em tight."

This time the lock was left closed for about five minutes. When the lock was opened the garments were bone dry -- all the moisture boiled out by the vacuum of space. All that remained of the unpleasant rejecta was a sterile powdery residue. McCoy viewed them with approval. "They'll do. Take them back to the compartment. Then brush them -- hard -- in front of the exhaust blowers."

The next few days were an eternity of misery. Homesickness was forgotten in the all-engrossing wretchedness of space sickness. The Captain granted fifteen minutes of mild acceleration for each of the nine meal periods, but the respite accentuated the agony. Libby would go to a meal, weak and ravenously hungry. The meal would stay down until free flight was resumed, then the sickness would hit him all over again.

On the fourth day he was seated against a bulkhead, enjoying the luxury of a few remaining minutes of weight while the last shift ate, when McCoy walked in and sat down beside him. The gunner's mate fitted a smoke filter over his face and lit a cigarette. He inhaled deeply and started to chat.

"How's it going, bud?"

"All right, I guess. This space sickness -- Say, McCoy, how do you ever get used to it?"

"You get over it in time. Your body acquires new reflexes, so they tell me. Once you learn to swallow without choking, you'll be all right. You even get so you like it. It's restful and relaxing. Four hours sleep is as good as ten."

Libby shook his head dolefully. "I don't think I'll ever get used to it."

"Yes, you will. You'd better anyway. This here asteroid won't have any surface gravity to speak of; the Chief Quartermaster says it won't run over two percent Earth normal. That ain't enough to cure space sickness. And there won't be any way to accelerate for meals either."

Libby shivered and held his head between his hands.

Locating one asteroid among a couple of thousand is not as easy as finding Trafalgar Square in London -- especially against the star-crowded backdrop of the galaxy. You take off from Terra with its orbital speed of about nineteen miles per second. You attempt to settle into a composite conoid curve that will not only intersect the orbit of the tiny fast-moving body, but also accomplish an exact rendezvous. Asteroid HS-5388, "Eighty-eight", lay about two and two-tenths astronomical units out from the sun, a little more than two hundred million miles; when the transport took off it lay beyond the sun better than three hundred million miles. Captain Doyle instructed the navigator to plot the basic ellipsoid to tack in free flight around the sun through an elapsed distance of some three hundred and forty million miles. The principle involved is the same as used by a hunter to wing a duck in flight by "leading" the bird in flight. But suppose that you face directly into the sun as you shoot; suppose the bird can not be seen from where you stand, and you have nothing to aim by but some old reports as to how it was flying when last seen?

On the ninth day of the passage Captain Doyle betook himself to the chart room and commenced punching keys on the ponderous integral calculator. Then he sent his orderly to present his compliments to the navigator and to ask him to come to the chartroom. A few minutes later a tall heavyset form swam through the door, steadied himself with a grabline and greeted the captain.

"Good morning, Skipper."

"Hello, Blackie." The Old Man looked up from where he was strapped into the integrator's saddle. "I've been checking your corrections for the meal time accelerations."

"It's a nuisance to have a bunch of ground-lubbers on board, sir."

"Yes, it is, but we have to give those boys a chance to eat, or they couldn't work when we got there. Now I want to decelerate starting about ten o'clock, ship's time. What's our eight o'clock speed and co-ordinates?"

The Navigator slipped a notebook out of his tunic. "Three hundred fifty-eight miles per second; course is right ascension fifteen hours, eight minutes, twenty-seven seconds, declination minus seven degrees, three minutes; solar distance one hundred and ninety-two million four hundred eighty thousand miles. Our radial position is twelve degrees above course, and almost dead on course in R.A. Do you want Sol's co-ordinates?"

"No, not now." The captain bent over the calculator, frowned and chewed the tip of his tongue as he worked the controls. "I want you to kill the acceleration about one

million miles inside Eighty-eight's orbit. I hate to waste the fuel, but the belt is full of junk and this damned rock is so small that we will probably have to run a search curve. Use twenty hours on deceleration and commence changing course to port after eight hours. Use normal asymptotic approach. You should have her in a circular trajectory abreast of Eighty-eight, and paralleling her orbit by six o'clock tomorrow morning. I shall want to be called at three."

"Aye aye, sir."

"Let me see your figures when you get 'em. I'll send up the order book later."

The transport accelerated on schedule. Shortly after three the Captain entered the control room and blinked his eyes at the darkness. The sun was still concealed by the hull of the transport and the midnight blackness was broken only by the dim blue glow of the instrument dials, and the crack of light from under the chart hood. The Navigator turned at the familiar tread.

"Good morning, Captain."

"Morning, Blackie. In sight yet?"

"Not yet. We've picked out half a dozen rocks, but none of them checked."

"Any of them close?"

"Not uncomfortably. We've overtaken a little sand from time to time."

"That can't hurt us -- not on a stern chase like this. If pilots would only realize that the asteroids flow in fixed directions at computable speeds nobody would come to grief out here." He stopped to light a cigarette. "People talk about space being dangerous. Sure, it used to be; but I don't know of a case in the past twenty years that couldn't be charged up to some fool's recklessness."

"You're right, Skipper. By the way, there's coffee under the chart hood."

"Thanks; I had a cup down below." He walked over by the lookouts at stereoscopes and radar tanks and peered up at the star-flecked blackness. Three cigarettes later the lookout nearest him called out.

"Light ho!"

"Where away?"

His mate read the exterior dials of the stereoscope. "Plus point two, abaft one point three, slight drift astern." He shifted to radar and added, "Range seven nine oh four three."

"Does that check?"

"Could be, Captain. What is her disk?" came the Navigator's muffled voice from under the hood. The first lookout hurriedly twisted the knobs of his instrument, but the Captain nudged him aside.

"I'll do this, son." He fitted his face to the double eye guards and surveyed a little silvery sphere, a tiny moon. Carefully he brought two illuminated cross-hairs up until they were exactly tangent to the upper and lower limbs of the disk. "Mark!"

The reading was noted and passed to the Navigator, who shortly ducked out from under the hood.

"That's our baby, Captain."

"Good."

"Shall I make a visual triangulation?"

"Let the watch officer do that. You go down and get some sleep. I'll ease her over until we get close enough to use the optical range finder."

"Thanks, I will."

Within a few minutes the word had spread around the ship that Eighty-eight had been sighted. Libby crowded into the starboard troop deck with a throng of excited mess mates and attempted to make out their future home from the view port. McCoy poured cold water on their excitement.

"By the time that rock shows up big enough to tell anything about it with your naked eye we'll be at our grounding stations. She's only about a hundred miles thick, yuh know."

And so it was. Many hours later the ship's announcer shouted:

"All hands! Man your grounding stations. Close all airtight doors. Stand by to cut blowers on signal."

McCoy forced them to lie down throughout the ensuing two hours. Short shocks of rocket blasts alternated with nauseating weightlessness. Then the blowers stopped and check valves clicked into their seats. The ship dropped free for a few moments -- a final quick blast -- five seconds of falling, and a short, light, grinding bump. A single bugle note came over the announcer, and the blowers took up their hum.

McCoy floated lightly to his feet and poised, swaying, on his toes. "All out, troops -- this is the end of the line."

A short chunky lad, a little younger than most of them, awkwardly emulated him, and bounded toward the door, shouting as he went, "Come on, fellows! Let's go outside and explore!"

The Master-at-Arms squelched him. "Not so fast, kid. Aside from the fact that there is no air out there, go right ahead. You'll freeze to death, burn to death, and explode like a ripe tomato. Squad leader, detail six men to break out spacesuits. The rest of you stay here and stand by."

The working party returned shortly loaded down with a couple of dozen bulky packages. Libby let go the four he carried and watched them float gently to the deck. McCoy unzipped the envelope from one suit, and lectured them about it,

"This is a standard service type, general issue, Mark IV, Modification 2." He grasped the suit by the shoulders and shook it out so that it hung like a suit of long winter underwear with the helmet lolling helplessly between the shoulders of the garment. "It's self-sustaining for eight hours, having an oxygen supply for that period. It also has a nitrogen trim tank and a carbon dioxide water-vapor cartridge filter."

He droned on, repeating practically verbatim the description and instructions given in training regulations. McCoy knew these suits like his tongue knew the roof of his mouth; the knowledge had meant his life on more than one occasion.

"The suit is woven from glass fibre laminated with nonvolatile asbesto-cellutite. The resulting fabric is flexible, very durable; and will turn all rays normal to solar space outside the orbit of Mercury. It is worn over your regular clothing, but notice the wire-braced accordion pleats at the major joints. They are so designed as to keep the internal volume of the suit nearly constant when the arms or legs are bent. Otherwise the gas pressure inside would tend to keep the suit blown up in an erect position and movement while wearing the suit would be very fatiguing.

"The helmet is moulded from a transparent silicone, leaded and polarized against too great ray penetration. It may be equipped with external visors of any needed type.

Orders are to wear not less than a number-two amber on this body. In addition, a lead plate covers the cranium and extends on down the back of the suit, completely covering the spinal column.

"The suit is equipped with two-way telephony. If your radio quits, as these have a habit of doing, you can talk by putting your helmets in contact. Any questions?"

"How do you eat and drink during the eight hours?"

"You don't stay in 'em any eight hours. You can carry sugar balls in a gadget in the helmet, but you boys will always eat at the base. As for water, there's a nipple in the helmet near your mouth which you can reach by turning your head to the left. It's hooked to a built-in canteen. But don't drink any more water when you're wearing a suit than you have to. These suits ain't got any plumbing."

Suits were passed out to each lad, and McCoy illustrated how to don one. A suit was spread supine on the deck, the front zipper that stretched from neck to crotch was spread wide and one sat down inside this opening, whereupon the lower part was drawn on like long stockings. Then a wiggle into each sleeve and the heavy flexible gauntlets were smoothed and patted into place. Finally an awkward backward stretch of the neck with shoulders hunched enabled the helmet to be placed over the head.

Libby followed the motions of McCoy and stood up in his suit. He examined the zipper which controlled the suit's only opening. It was backed by two soft gaskets which would be pressed together by the zipper and sealed by internal air pressure. Inside the helmet a composition mouthpiece for exhalation led to the filter.

McCoy bustled around, inspecting them, tightening a belt here and there, instructing them in the use of the external controls. Satisfied, he reported to the conning room that his section had received basic instruction and was ready to disembark. Permission was received to take them out for thirty minutes acclimatization.

Six at a time, he escorted them through the air-lock, and out on the surface of the planetoid. Libby blinked his eyes at the unaccustomed luster of sunshine on rock. Although the sun lay more than two hundred million miles away and bathed the little planet with radiation only one fifth as strong as that lavished on mother Earth, nevertheless the lack of atmosphere resulted in a glare that made him squint. He was glad to have the protection of his amber visor. Overhead the sun, shrunk to penny size, shone down from a dead black sky in which unwinking stars crowded each other and the very sun itself.

The voice of a mess mate sounded in Libby's earphones. "Jeepers! That horizon looks close. I'll bet it ain't more'n a mile away."

Libby looked out over the flat bare plain and subconsciously considered the matter. "It's less," he commented, "than a third of a mile away."

"What the hell do you know about it, Pinkie? And who asked you, anyhow?"

Libby answered defensively, "As a matter of fact, it's one thousand six hundred and seventy feet, figuring that my eyes are five feet three inches above ground level."

"Nuts. Pinkie, you are always trying to show off how much you think you know."

"Why, I am not," Libby protested. "If this body is a hundred miles thick and as round as it looks: why, naturally the horizon has to be just that far away."

"Says who?"

McCoy interrupted.

"Pipe down! Libby is a lot nearer right than you were."

"He is exactly right," put in a strange voice. "I had to look it up for the navigator before I left control."

"Is that so?" -- McCoy's voice again -- "If the Chief Quartermaster says you're right, Libby, you're right. How did you know?"

Libby flushed miserably. "I -- I don't know. That's the only way it could be."

The gunner's mate and the quartermaster stared at him but dropped the subject.

By the end of the "day" (ship's time, for Eighty-eight had a period of eight hours and thirteen minutes), work was well under way. The transport had grounded close by a low range of hills. The Captain selected a little bowl-shaped depression in the hills, some thousand feet long and half as broad, in which to establish a permanent camp. This was to be roofed over, sealed, and an atmosphere provided.

In the hill between the ship and the valley, quarters were to be excavated; dormitories, mess hall, officers' quarters, sick bay, recreation room, offices, store rooms, and so forth. A tunnel must be bored through the hill, connecting the sites of these rooms, and connecting with a ten foot airtight metal tube sealed to the ship's portside air-lock. Both the tube and tunnel were to be equipped with a continuous conveyor belt for passengers and freight.

Libby found himself assigned to the roofing detail. He helped a metalsmith struggle over the hill with a portable atomic heater, difficult to handle because of a mass of eight hundred pounds, but weighing here only sixteen pounds. The rest of the roofing detail were breaking out and preparing to move by hand the enormous translucent tent which was to be the "sky" of the little valley.

The metalsmith located a landmark on the inner slope of the valley, set up his heater, and commenced cutting a deep horizontal groove or step in the rock. He kept it always at the same level by following a chalk mark drawn along the rock wall. Libby enquired how the job had been surveyed so quickly.

"Easy," he was answered, "two of the quartermasters went ahead with a transit, leveled it just fifty feet above the valley floor, and clamped a searchlight to it. Then one of 'em ran like hell around the rim, making chalk marks at the height at which the beam struck."

"Is this roof going to be just fifty feet high?"

"No, it will average maybe a hundred. It bellies up in the middle from the air pressure."

"Earth normal?"

"Half Earth normal."

Libby concentrated for an instant, then looked puzzled. "But look -- This valley is a thousand feet long and better than five hundred wide. At half of fifteen pounds per square inch, and allowing for the arch of the roof, that's a load of one and an eighth billion pounds. What fabric can take that kind of a load?"

"Cobwebs."

"Cobwebs?"

"Yeah, cobwebs. Strongest stuff in the world, stronger than the best steel. Synthetic spider silk, This gauge we're using for the roof has a tensile strength of four thousand pounds a running inch."

Libby hesitated a second, then replied, "I see. With a rim about eighteen hundred thousand inches around, the maximum pull at the point of anchoring would be about six hundred and twenty-five pounds per inch. Plenty safe margin."

The metalsmith leaned on his tool and nodded. "Something like that. You're pretty quick at arithmetic, aren't you, bud?"

Libby looked startled. "I just like to get things straight."

They worked rapidly around the slope, cutting a clean smooth groove to which the 'cobweb' could be anchored and sealed. The white-hot lava spewed out of the discharge vent and ran slowly down the hillside. A brown vapor boiled off the surface of the molten rock, arose a few feet and sublimed almost at once in the vacuum to white powder which settled to the ground. The metalsmith pointed to the powder.

"That stuff 'ud cause silicosis if we let it stay there, and breathed it later."

"What do you do about it?"

"Just clean it out with the blowers of the air conditioning plant"

Libby took this opening to ask another question. "Mister -- ?"

"Johnson's my name. No mister necessary."

"Well, Johnson, where do we get the air for this whole valley, not to mention the tunnels? I figure we must need twenty-five million cubic feet or more. Do we manufacture it?"

"Naw, that's too much trouble. We brought it with us."

"On the transport?"

"Uh huh, at fifty atmospheres."

Libby considered this. "I see -- that way it would go into a space eighty feet on a side."

"Matter of fact it's in three specially constructed holds -- giant air bottles. This transport carried air to Ganymede. I was in her then -- a recruit, but in the air gang even then."

In three weeks the permanent camp was ready for occupancy and the transport cleared of its cargo. The storerooms bulged with tools and supplies. Captain Doyle had moved his administrative offices underground, signed over his command to his first officer, and given him permission to proceed on 'duty assigned' -- in this case; return to Terra with a skeleton crew.

Libby watched them take off from a vantage point on the hillside. An overpowering homesickness took possession of him. Would he ever go home? He honestly believed at the time that he would swap the rest of his life for thirty minutes each with his mother and with Betty.

He started down the hill toward the tunnel lock. At least the transport carried letters to them, and with any luck the chaplain would be by soon with letters from Earth. But tomorrow and the days after that would be no fun. He had enjoyed being in the air gang, but tomorrow he went back to his squad. He did not relish that -- the boys in his squad were all right, he guessed, but he just could not seem to fit in.

This company of the C.C.C. started on its bigger job; to pock-mark Eighty-eight with rocket tubes so that Captain Doyle could push this hundred-mile marble out of her orbit and herd her in to a new orbit between Earth and Mars, to be used as a space station -- a refuge for ships in distress, a haven for life boats, a fueling stop, a naval outpost.

Libby was assigned to a heater in pit H-16. It was his business to carve out carefully calculated emplacements in which the blasting crew then set off the minute charges which accomplished the major part of the excavating. Two squads were assigned to H-16, under the general supervision of an elderly marine gunner. The gunner sat on the edge of the pit, handling the plans, and occasionally making calculations on a circular slide rule which hung from a lanyard around his neck.

Libby had just completed a tricky piece of cutting for a three-stage blast, and was waiting for the blasters, when his phones picked up the gunner's instructions concerning the size of the charge. He pressed his transmitter button.

"Mr. Larsen! You've made a mistake!"

"Who said that?"

"This is Libby. You've made a mistake in the charge. If you set off that charge, you'll blow this pit right out of the ground, and us with it."

Marine Gunner Larsen spun the dials on his slide rule before replying, "You're all het up over nothing, son. That charge is correct."

"No, I'm not, sir," Libby persisted, "you've multiplied where you should have divided."

"Have you had any experience at this sort of work?"

"No, sir."

Larsen addressed his next remark to the blasters. "Set the charge."

They started to comply. Libby gulped, and wiped his lips with his tongue. He knew what he had to do, but he was afraid. Two clumsy stiff-legged jumps placed him beside the blasters. He pushed between them and tore the electrodes from the detonator. A shadow passed over him as he worked, and Larsen floated down beside him. A hand grasped his arm.

"You shouldn't have done that, son. That's direct disobedience of orders. I'll have to report you." He commenced reconnecting the firing circuit.

Libby's ears burned with embarrassment, but he answered back with the courage of timidity at bay. "I had to do it, sir. You're still wrong."

Larsen paused and ran his eyes over the dogged face. "Well -- it's a waste of time, but I don't like to make you stand by a charge you're afraid of. Let's go over the calculation together."

Captain Doyle sat at his ease in his quarters, his feet on his desk. He stared at a nearly empty glass tumbler.

"That's good beer, Blackie. Do you suppose we could brew some more when it's gone?"

"I don't know. Cap'n. Did we bring any yeast?"

"Find out, will you?" he turned to a massive man who occupied the third chair. "Well, Larsen, I'm glad it wasn't any worse than it was."

"What beats me, Captain, is how I could have made such a mistake. I worked it through twice. If it had been a nitro explosive, I'd have known off hand that I was wrong. If this kid hadn't had a hunch, I'd have set it off."

Captain Doyle clapped the old warrant officer on the shoulder. "Forget it, Larsen. You wouldn't have hurt anybody; that's why I require the pits to be evacuated even for small charges. These isotope explosives are tricky at best. Look what happened in pit A-

9. Ten days' work shot with one charge, and the gunnery officer himself approved that one. But I want to see this boy. What did you say his name was?"

"Libby, A.J."

Doyle touched a button on his desk. A knock sounded at the door. A bellowed "Come in!" produced a stripling wearing the brassard of Corpsman Mate-of-the-Deck.

"Have Corpsman Libby report to me."

"Aye aye, sir."

Some few minutes later Libby was ushered into the Captain's cabin. He looked nervously around, and noted Larsen's presence, a fact that did not contribute to his peace of mind. He reported in a barely audible voice, "Corpsman Libby, sir."

The Captain looked him over. "Well, Libby, I hear that you and Mr. Larsen had a difference of opinion this morning. Tell me about it."

"I -- I didn't mean any harm, sir."

"Of course not. You're not in any trouble; you did us all a good turn this morning. Tell me, how did you know that the calculation was wrong? Had any mining experience?"

"No. sir. I just saw that he had worked it out wrong."

"But how?"

Libby shuffled uneasily. "Well, sir, it just seemed wrong -- it didn't fit."

"Just a second, Captain. May I ask this young man a couple of questions?" It was Commander "Blackie" Rhodes who spoke.

"Certainly. Go ahead."

"Are you the lad they call 'Pinkie'?"

Libby blushed. "Yes, sir."

"I've heard some rumors about this boy." Rhodes pushed his big frame out of his chair, went over to a bookshelf, and removed a thick volume. He thumbed through it, then with open book before him, started to question Libby.

"What's the square root of ninety-five?"

"Nine and seven hundred forty-seven thousandths."

"What's the cube root?"

"Four and five hundred sixty-three thousandths."

"What's its logarithm?"

"Its what, sir?"

"Good Lord, can a boy get through school today without knowing?"

The boy's discomfort became more intense. "I didn't get much schooling, sir. My folks didn't accept the Covenant until Pappy died, and we had to."

"I see. A logarithm is a name for a power to which you raise a given number, called the base, to get the number whose logarithm it is. Is that clear?"

Libby thought hard. "I don't quite get it, sir."

"I'll try again. If you raise ten to the second power -- square it -- it gives one hundred. Therefore the logarithm of a hundred to the base ten is two. In the same fashion the logarithm of a thousand to the base ten is three. Now what is the logarithm of ninety-five?'

Libby puzzled for a moment. "I can't make it come out even. It's a fraction."

"That's O.K."

"Then it's one and nine hundred seventy-eight thousandths -- just about."

Rhodes turned to the Captain. "I guess that about proves it, sir."

Doyle nodded thoughtfully. "Yes, the lad seems to have intuitive knowledge of arithmetical relationships. But let's see what else he has."

"I am afraid we'll have to send him back to Earth to find out properly."

Libby caught the gist of this last remark. "Please, sir, you aren't going to send me home? Maw 'ud be awful vexed with me."

"No, no, nothing of the sort. When your time is up, I want you to be checked over in the psychometrical laboratories. In the meantime I wouldn't part with you for a quarter's pay. I'd give up smoking first. But let's see what else you can do."

In the ensuing hour the Captain and the Navigator heard Libby: one, deduce the Pythagorean proposition; two, derive Newton's laws of motion and Kepler's laws of ballistics from a statement of the conditions in which they obtained; three, judge length, area, and volume by eye with no measurable error. He had jumped into the idea of relativity and nonrectilinear space-time continua, and was beginning to pour forth ideas faster than he could talk, when Doyle held up a hand.

"That's enough, son. You'll be getting a fever. You run along to bed now, and come see me in the morning. I'm taking you off field work."

"Yes, sir."

"By the way, what is your full name?"

"Andrew Jackson Libby, sir."

"No, your folks wouldn't have signed the Covenant. Good night."

"Good night, sir."

After he had gone, the two older men discussed their discovery.

"How do you size it up, Captain?"

"Well, he's a genius, of course -- one of those wild talents that will show up once in a blue moon. I'll turn him loose among my books and see how he shapes up. Shouldn't wonder if he were a page-at-a-glance reader, too."

"It beats me what we turn up among these boys -- and not a one of 'em any account back on Earth."

Doyle nodded. "That was the trouble with these kids. They didn't feel needed."

Eighty-eight swung some millions of miles further around the sun. The pock-marks on her face grew deeper, and were lined with durite, that strange close-packed laboratory product which (usually) would confine even atomic disintegration. Then Eighty-eight received a series of gentle pats, always on the side headed along her course. In a few weeks' time the rocket blasts had their effect and Eighty-eight was plunging in an orbit toward the sun.

When she reached her station one and three-tenths the distance from the sun of Earth's orbit, she would have to be coaxed by another series of pats into a circular orbit. Thereafter she was to be known as E-M3, Earth-Mars Space Station Spot Three.

Hundreds of millions of miles away two other C.C.C. companies were inducing two other planetoids to quit their age-old grooves and slide between Earth and Mars to land in the same orbit as Eighty-eight. One was due to ride this orbit one hundred and twenty degrees ahead of Eighty-eight, the other one hundred and twenty degrees behind. When E-M1, E-M2, and E-M3 were all on station no hard-pushed traveler of the

spaceways on the Earth-Mars passage would ever again find himself far from land -- or rescue.

During the months that Eighty-eight fell free toward the sun, Captain Doyle reduced the working hours of his crew and turned them to the comparatively light labor of building a hotel and converting the little roofed-in valley into a garden spot. The rock was broken down into soil, fertilizers applied, and cultures of anaerobic bacteria planted. Then plants, conditioned by thirty-odd generations of low gravity at Luna City, were set out and tenderly cared for. Except for the low gravity, Eighty-eight began to feel like home.

But when Eighty-eight approached a tangent to the hypothetical future orbit of E-M3, the company went back to maneuvering routine, watch on and watch off, with the Captain living on black coffee and catching catnaps in the plotting room.

Libby was assigned to the ballistic calculator, three tons of thinking metal that dominated the plotting room. He loved the big machine. The Chief Fire Controlman let him help adjust it and care for it. Libby subconsciously thought of it as a person -- his own kind of person.

On the last day of the approach, the shocks were more frequent. Libby sat in the right-hand saddle of the calculator and droned out the predictions for the next salvo, while gloating over the accuracy with which the machine tracked. Captain Doyle fussed around nervously, occasionally stopping to peer over the Navigator's shoulder. Of course the figures were right, but what if it didn't work? No one had ever moved so large a mass before. Suppose it plunged on and on -- and on. Nonsense! It couldn't. Still he would be glad when they were past the critical speed.

A marine orderly touched his elbow. "Helio from the Flagship, sir."

"Read it."

"Flag to Eighty-eight; private message, Captain Doyle; am lying off to watch you bring her in -- Kearney."

Doyle smiled. Nice of the old geezer. Once they were on station, he would invite the Admiral to ground for dinner and show him the park.

Another salvo cut loose, heavier than any before. The room trembled violently. In a moment the reports of the surface observers commenced to trickle in. "Tube nine, clear!" "Tube ten, clear!"

But Libby's drone ceased.

Captain Doyle turned on him. "What's the matter, Libby? Asleep? Call the polar stations. I have to have a parallax."

"Captain--" The boy's voice was low and shaking.

"Speak up, man!"

"Captain -- the machine isn't tracking."

"Spiers!" The grizzled head of the Chief Fire Controlman appeared from behind the calculator.

"I'm already on it, sir. Let you know in a moment."

He ducked back again. After a couple of long minutes he reappeared. "Gyros tumbled. It's a twelve hour calibration job, at least."

The Captain said nothing, but turned away, and walked to the far end of the room. The Navigator followed him with his eyes. He returned, glanced at the chronometer, and spoke to the Navigator.

"Well, Blackie, if I don't have that firing data in seven minutes, we're sunk. Any suggestions?"

Rhodes shook his head without speaking. Libby timidly raised his voice. "Captain--" Doyle jerked around. "Yes?"

"The firing data is tube thirteen, seven point six three; tube twelve, six point nine oh; tube fourteen, six point eight nine."

Doyle studied his face. "You sure about that, son?"

"It has to be that, Captain."

Doyle stood perfectly still. This time he did not look at Rhodes but stared straight ahead. Then he took a long pull on his cigarette, glanced at the ash, and said in a steady voice,

"Apply the data. Fire on the bell."

Four hours later, Libby was still droning out firing data, his face gray, his eyes closed. Once he had fainted but when they revived him he was still muttering figures. From time to time the Captain and the Navigator relieved each other, but there was no relief for him.

The salvos grew closer together, but the shocks were lighter.

Following one faint salvo, Libby looked up, stared at the ceiling, and spoke.

"That's all, Captain."

"Call polar stations!"

The reports came back promptly, "Parallax constant, sidereal-solar rate constant."

The Captain relaxed into a chair. "Well, Blackie, we did it -- thanks to Libby!" Then he noticed a worried, thoughtful look spread over Libby's face. "What's the matter, man? Have we slipped up?"

"Captain, you know you said the other day that you wished you had Earth-normal gravity in the park?"

"Yes. What of it?"

"If that book on gravitation you lent me is straight dope. I think I know a way to accomplish it."

The Captain inspected him as if seeing him for the first time. "Libby, you have ceased to amaze me. Could you stop doing that sort of thing long enough to dine with the Admiral?"

"Gee, Captain, that would be swell!"

The audio circuit from Communications cut in. "Helio from Flagship: 'Well done, Eighty-eight.'" Doyle smiled around at them all. "That's pleasant confirmation."

The audio brayed again.

"Helio from Flagship: 'Cancel last signal, stand by for correction.'"

A look of surprise and worry sprang into Doyle's face -- then the audio continued:

"Helio from Flagship: 'Well done, E-M3'"

PART I

"MARY SPERLING, you're a fool not to marry him!"

Mary Sperling added up her losses and wrote a check before answering, "There's too much difference in age." She passed over her credit voucher. "I shouldn't gamble with you-sometimes I think you're a sensitive."

"Nonsense! You're just trying to change the subject. You must be nearly thirty and you won't be pretty forever."

Mary smiled wryly. "Don't I know it!"

"Bork Vanning can't be much over forty and he's a plus citizen. You should jump at the chance."

"You jump at it. I must run now. Service, Ven."

"Service," Ven answered, then frowned at the door as it contracted after Mary Sperling. She itched to know why Mary would not marry a prime catch like the Honorable Bork Vanning and was almost as curious as to why and where Mary was going, but the custom of privacy stopped her.

Mary had no intention of letting anyone know where she was going. Outside her friend's apartment she dropped down a bounce tube to the basement, claimed her car from the robopark, guided it up the ramp and set the controls for North Shore. The car waited for a break in the traffic, then dived into the high-speed stream and hurried north. Mary settled back for a nap.

When its setting was about to run out, the car beeped for instructions; Mary woke up and glanced out. Lake Michigan was a darker band of darkness on her right. She signaled traffic control to let her enter the local traffic lane; it sorted out her car and placed her there, then let her resume manual control. She fumbled in the glove compartment.

The license number which traffic control automatically photographed as she left the controlways was not the number the car had been wearing.

She followed a side road uncontrolled for several miles, turned into a narrow dirt road which led down to the shore, and stopped. There she waited, lights out, and listened. South of her the lights of Chicago glowed; a few hundred yards inland the controlways whined, but here there was nothing but the little timid noises of night creatures. She reached into the glove compartment, snapped a switch; the instrument panel glowed, uncovering other dials behind it. She studied these while making adjustments. Satisfied that no radar watched her and that nothing was moving near her, she snapped off the instruments, sealed the window by her and started up again.

What appeared to be a standard Camden speedster rose quietly up, moved out over the lake, skimming it-dropped into the water and sank. Mary waited until she was a quarter mile off shore in fifty feet of water, then called a station. "Answer," said a voice.

"'Life is short--'"

"'-but the years are long.'"

"'Not,'" Mary responded, "'while the evil days come not.'"

"I sometimes wonder," the voice answered conversationally. "Okay, Mary. I've checked you."

"Tommy?"

"No-Cecil Hedrick. Are your controls cast loose?"

"Yes. Take over."

Seventeen minutes later the car surfaced in a pool which occupied much of an artificial cave. When the car was beached, Mary got out, said hello to the guards and went on through a tunnel into a large underground room where fifty or sixty men and women were seated. She chatted until a clock announced midnight, then she mounted a rostrum and faced them.

"I am," she stated, "one hundred and eighty-three years old. Is there anyone here who is older?"

No one spoke. After a decent wait she went on, "Then in accordance with our customs I declare this meeting opened. Will you choose a moderator?"

Someone said, "Go ahead, Mary." When no one else spoke up, she said, "Very well." She seemed indifferent to the honor and the group seemed to share her casual attitude-an air of never any hurry, of freedom from the tension of modern life.

"We are met as usual," she announced, "to discuss our welfare and that of our sisters and brothers. Does any Family representative have a message from his family? Or does anyone care to speak for himself?"

A man caught her eye and spoke up. "Ira Weatheral, speaking for the Johnson Family. We've met nearly two months early. The trustees must have a reason. Let's hear it."

She nodded and turned to a prim little man in the first row. "Justin . . . if you will, please."

The prim little man stood up and bowed stiffly. Skinny legs stuck out below his badly-cut kilt. He looked and acted like an elderly, dusty civil servant, but his black hair and the firm, healthy tone of his skin said that he was a man in his prime. "Justin Foote," he said precisely, "reporting for the trustees. It has been eleven years since the Families decided on the experiment of letting the public know that there were, living among them, persons who possessed a probable, life expectancy far in excess of that anticipated by the average man, as well as other persons who had proved the scientific truth of such expectation by having lived more than twice the normal life span of human beings."

Although he spoke without notes he sounded as if he were reading aloud a prepared report. What he was saying they all knew but no one hurried him; his audience had none of the febrile impatience so common elsewhere. "In deciding," he droned on, "to reverse the previous long-standing policy of silence and concealment as to the peculiar aspect in which we differ from the balance of the human race, the Families were moved by several considerations. The reason for the original adoption of the policy of concealment should be noted:

"The first offspring resulting from unions assisted by the Howard Foundation were born in 1875. They aroused no comment, for they were in no way remarkable. The Foundation was an openly-chartered non-profit corporation--"

On March 17, 1874, Ira Johnson, medical student, sat in the law offices of Deems, Wingate, Alden, & Deems and listened to an unusual proposition. At last he interrupted the senior partner. "Just a moment! Do I understand that you are trying to hire me to marry one of these women?"

The lawyer looked shocked. "Please, Mr. Johnson. Not at all"

"Well, it certainly sounded like it."

"No, no, such a contract would be void, against public policy. We are simply informing you, as administrators of a trust, that should it come about that you do marry one of the young ladies on this list it would then be our pleasant duty to endow each child of such a union according to the scale here set forth. But there would be no Contract with us involved, nor is there any 'proposition' being made to you-and we certainly do not urge any course of action on you. We are simply informing you of certain facts."

Ira Johnson scowled and shuffled his feet. "What's it all about? Why?"

"That is the business of the Foundation. One might put it that we approve of your grandparents."

"Have you discussed me with them?" Johnson said sharply.

He felt no affection for his grandparents. A tight-fisted foursome-if any one of them had had the grace to die at a reasonable age he would not now be worried about money enough to finish medical school.

"We have talked with them, yes. But not about you."

The lawyer shut off further discussion and young Johnson accepted gracelessly a list of young women, all strangers, with the intention of tearing it up the moment he was outside the office. Instead, that night he wrote seven drafts before he found the right words in which to start cooling off the relation between himself and his girl back home. He was glad that he had never actually popped the question to her-it would have been deucedly awkward.

When he did marry (from the list) it seemed a curious but not too remarkable coincidence that his wife as well as himself had four living, healthy, active grandparents.

"-an openly chartered non-profit corporation," Foote continued, "and its avowed purpose of encouraging births among persons of sound American stock was consonant with the customs of that century. By the simple expedient of being closemouthed about the true purpose of the Foundation no unusual methods of concealment were necessary until late in that period during the World Wars sometimes loosely termed 'The Crazy Years--'"

Selected headlines April to June 1969:

BABY BILL BREAKS BANK
2-year toddler youngest winner $1,000,000 TV jackpot
White House phones congrats

COURT ORDERS STATEHOUSE SOLD
Colorado Supreme Bench Rules State Old Age Pension Has
First Lien All State Property

N.Y. YOUTH MEET DEMANDS UPPER LIMIT ON FRANCHISE

"U.S. BIRTH RATE 'TOP SECRET!'"-DEFENSE SEC

CAROLINA CONGRESSMAN COPS BEAUTY CROWN

"Available for draft for President" she announces while
starting tour to show her qualifications

IOWA RAISES VOTING AGE TO FORTY-ONE
Rioting on Des Moines Campus

EARTH-EATING FAD MOVES WEST: CHICAGO PARSON EATS CLAY SANDWICH IN PULPIT
"Back to simple things," he advises flock.

LOS ANGELES HI-SCHOOL MOB DEFIES SCHOOL BOARD
"Higher Pay, Shorter hours, no Homework-We Demand
Our Right to Elect Teachers, Coaches."

SUICIDE RATE UP NINTH SUCCESSIVE YEAR
AEC Denies Fall-Out to Blame

"'-The Crazy Years.' The trustees of that date decided-correctly, we now believe-that any minority during that period of semantic disorientation and mass hysteria was a probable target for persecution, discriminatory legislation, and even of mob violence. Furthermore the disturbed financial condition of the country and in particular the forced exchange of trust securities for government warrants threatened the solvency of the trust.

"Two courses of action were adopted: the assets of the Foundation were converted into real wealth and distributed widely among members of the Families to be held by them as owners-of-record; and the so-called 'Masquerade' was adopted as a permanent policy. Means were found to simulate the death of any member of the Families who lived to a socially embarrassing age and to provide him with a new identity in another part of the country.

"The wisdom of this later policy, though irksome to some, became evident at once during the Interregnum of the Prophets. The Families at the beginning of the reign of the First Prophet had ninety-seven per cent of their members with publicly avowed ages of less than fifty years. The close public registration enforced by the secret police of the Prophets made changes of public identity difficult, although a few were accomplished with the aid of the revolutionary Cabal.

"Thus, a combination of luck and foresight saved our Secret from public disclosure. This was well-we may be sure that things would have gone harshly at that time for any group possessing a prize beyond the power of the Prophet to confiscate.

"The Families took no part as such in the events leading up to the Second American Revolution, but many members participated and served with credit in the Cabal and in the fighting which preceded the fall of New Jerusalem. We took advantage of the period of disorganization which followed to readjust the ages of our kin who had grown conspicuously old. In this we were aided by certain members of the Families who, as members of the Cabal, held key posts in the Reconstruction.

"It was argued by many at the Families' meeting of 2075, the year of the Covenant, that we should reveal ourselves, since civil liberty was firmly reestablished. The majority did not agree at that time . . . perhaps through long habits of secrecy and caution. But the renascence of culture in the ensuing fifty years, the steady growth of tolerance and good manners, the semantically sound orientation of education, the increased respect for the custom of privacy and for the dignity of the individual-all of these things led us to believe that the time had at last come when it was becoming safe to reveal ourselves and to take our rightful place as an odd but nonetheless respected minority in society.

"There were compelling reasons to do so. Increasing numbers of us were finding the 'Masquerade' socially intolerable in a new and better society. Not only was it upsetting to pull up roots and seek a new background every few years but also it grated to have to live a lie in a society where frank honesty and fair dealing were habitual with most people. Besides that, the Families as a group had learned many things through our researches in the bio-sciences, things which could be of great benefit to our poor short-lived brethren. We needed freedom to help them.

"These and similar reasons were subject to argument. But the resumption of the custom of positive physical identification made the 'Masquerade' almost untenable. Under the new orientation a sane and peaceful citizen welcomes positive identification under appropriate circumstances even though jealous of his right of privacy at all other times-so we dared not object; it would have aroused curiosity, marked us as an eccentric group, set apart, and thereby have defeated the whole purpose of the 'Masquerade.'

"We necessarily submitted to personal identification. By the time of the meeting of 2125, eleven years ago, it had become extremely difficult to counterfeit new identities for the ever-increasing number of us holding public ages incompatible with personal appearance; we decided on the experiment of letting volunteers from this group up to ten per cent of the total membership of the Families reveal themselves for what they were and observe the consequences, while maintaining all other secrets of the Families' organization.

"The results were regrettably different from our expectations."

Justin Foote stopped talking. The silence had gone on for several moments when a solidly built man of medium height spoke up. His hair was slightly grizzled-unusual in that group-and his face looked space tanned. Mary Sperling had noticed him and had wondered who he was-his live face and gusty laugh had interested her. But any member was free to attend the conclaves of the Families' council; she had thought no more of it.

He said, "Speak up, Bud. What's your report?"

Foote made his answer to the chair. "Our senior psychometrician should give the balance of the report. My remarks were prefatory."

"For the love o'--" the grizzled stranger exclaimed. "Bud, do you mean to stand there and admit that all you had to say were things we already knew?"

"My remarks were a foundation . . . and my name is Justin Foote, not Bud.'"

Mary Sperling broke in firmly. "Brother," she said to the stranger, "since you are addressing the Families, will you please name yourself? I am sorry to say that I do not recognize you."

"Sorry, Sister. Lazarus Long, speaking for myself."

Mary shook her head. "I still don't place you."

"Sorry again-that's a 'Masquerade' name I took at the time of the First Prophet . . . it tickled me. My Family name is Smith . . . Woodrow Wilson Smith."

"'Woodrow Wilson Sm--' How old are you?"

"Eh? Why, I haven't figured it lately. One hun . . . no, two hundred and-thirteen years. Yeah, that's right, two hundred and thirteen."

There was a sudden, complete silence. Then Mary said quietly, "Did you hear me inquire for anyone older than myself?"

"Yes. But shucks, Sister, you were doing all right. I ain't attended a meeting of the Families in over a century. Been some changes."

"I'll ask you to carry on from here." She started to leave the platform.

"Oh no!" he protested. But she paid no attention and found a seat. He looked around, shrugged and gave in. Sprawling one hip over a corner of the speaker's table he announced, "All right, let's get on with it. Who's next?"

Ralph Schultz of the Schultz Family looked more like a banker than a psychometrician. He was neither shy nor absent-minded and he had a flat, underemphasized way of talking that carried authority. "I was part of the group that proposed ending the 'Masquerade.' I was wrong. I believed that the great majority of our fellow citizens, reared under modern educational methods, could evaluate any data without excessive emotional disturbance. I anticipated that a few abnormal people would dislike us, even hate us; I even predicted that most people would envy us-everybody who enjoys life would like to live a long time. But I did not anticipate any serious trouble. Modern attitudes have done away with interracial friction; any who still harbor race prejudice are ashamed to voice it. I believed that our society was so tolerant that we could live peacefully and openly with the short-lived.

"I was wrong.

"The Negro hated and envied the white man as long as the white man enjoyed privileges forbidden the Negro by reason of color. This was a sane, normal reaction. When discrimination was removed, the problem solved itself and cultural assimilation took place. There is a similar tendency on the part of the short-lived to envy the long-lived. We assumed that this expected reaction would be of no social importance in most people once it was made clear that we owe our peculiarity to our genes-no fault nor virtue of our own, just good luck in our ancestry.

"This was mere wishful thinking. By hindsight it is easy to see that correct application of mathematical analysis to the data would have given a different answer, would have spotlighted the false analogy. I do not defend the misjudgment, no defense is possible. We were led astray by our hopes.

"What actually happened was this: we showed our shortlived cousins the greatest boon it is possible for a man to imagine . . . then we told them it could never be theirs. This faced them with an unsolvable dilemma. They have rejected the unbearable facts, they refuse to believe us. Their envy now turns to hate, with an emotional conviction that we are depriving them of their rights . . . deliberately, maliciously.

"That rising hate has now swelled into a flood which threatens the welfare and even the lives of all our revealed brethren . . . and which is potentially as dangerous to the rest of us. The danger is very great and very pressing." He sat down abruptly.

They took it calmly, with the unhurried habit of years. Presently a female delegate stood up. "Eve Barstow, for the Cooper Family. Ralph Schultz, I am a hundred and

nineteen years old, older, I believe, than you are. I do not have your talent for mathematics or human behavior but I have known a lot of people. Human beings are inherently good and gentle and kind. Oh, they have their weaknesses but most of them are decent enough if you give them half a chance. I cannot believe that they would hate me and destroy me simply because I have lived a long time. What have you to go on? You admit one mistake-why not two?"

Schultz looked at her soberly and smoothed his kilt. "You're right, Eve. I could easily be wrong again. That's the trouble with psychology; it is a subject so terribly complex, so many unknowns, such involved relationships, that our best efforts sometimes look silly in the bleak light of later facts." He stood up again, faced the others, and again spoke with flat authority. "But I am not making a long-range prediction this time; I am talking about facts, no guesses, not wishful thinking-and with those facts a prediction so short-range that it is like predicting that an egg will break when you see it already on its way to the floor. But Eve is right . . . as far as she went. Individuals are kind and decent . . . as individuals and to other individuals. Eve is in no danger from her neighbors and friends, and I am in no danger from mine. But she is in danger from my neighbors and friends -and I from hers. Mass psychology is not simply a summation of individual psychologies; that is a prime theorem of social psychodynamics -not just my opinion; no exception has ever been found to this theorem. It is the social mass-action rule, the mob-hysteria law, known and used by military, political, and religious leaders, by advertising men and prophets and propagandists, by rabble rousers and actors and gang leaders, for generations before it was formulated in mathematical symbols. It works. It is working now.

"My colleagues and I began to suspect that a mob-hysteria trend was building up against us several years ago. We did not bring our suspicions to the council for action because we could not prove anything. What we observed then could have been simply the mutterings of the crackpot minority present in even the healthiest society. The trend was at first so minor that we could not be sure it existed, for all social trends are intermixed with other social trends, snarled together like a plate of spaghetti-worse than that, for it takes an abstract topological space of many dimensions (ten or twelve are not uncommon and hardly adequate) to describe mathematically the interplay of social forces. I cannot overemphasize the complexity of the problem.

"So we waited and worried and tried statistical sampling, setting up our statistical universes with great care.

"By the time we were sure, it was almost too late. Socio-psychological trends grow or die by a 'yeast growth' law, a complex power law. We continued to hope that other favorable factors would reverse the trend-Nelson's work in symbiotics, our own contributions to geriatrics, the great public interest in the opening of the Jovian satellites to immigration. Any major break-through offering longer life, and greater hope to the short-lived could end the smouldering resentment against us.

"Instead the smouldering has burst into flame, into an uncontrolled forest fire. As nearly as we can measure it, the rate has doubled in the past thirty-seven days and the rate itself is accelerated. I can't guess how far or how fast it will go-and that's why we asked for this emergency session. Because we can expect trouble at any moment." He sat down hard, looking tired.

Eve did not argue with him again and no one else argued with him at all; not only was Ralph Schultz considered expert in his own field but also every one of them, each from his own viewpoint, had seen the grosser aspects of the trend building up against their revealed kin. But, while the acceptance of the problem was unanimous, there were as many opinions about what to do about it as there were people present. Lazarus let the discussion muddle along for two hours before he held up a hand. "We aren't getting anywhere," he stated, "and it looks like we won't get anywhere tonight. Let's take an over-all look at it, hitting just the high spots:

"We can--" He started ticking plans off on his fingers- "do nothing, sit tight, and see what happens.

"We can junk the 'Masquerade' entirely, reveal our full numbers, and demand our rights politically.

"We can sit tight on the surface and use our organization and money to protect our revealed brethren, maybe haul 'em back into the 'Masquerade.'

"We can reveal ourselves and ask for a place to colonize where we can live by ourselves.

"Or we can do something else. I suggest that you sort yourselves out according to those four major points of view-say in the corners of the room, starting clockwise in that far right hand corner-each group hammer out a plan and get it ready to submit to the Families. And those of you who don't favor any of those four things gather in the middle of the room and start scrappin' over just what it is you do think. Now, if I hear no objection, I am going to declare this lodge recessed until midnight tomorrow night. How about it?"

No one spoke up. Lazarus Long's streamlined version of parliamentary procedure had them somewhat startled; they were used to long, leisurely discussions until it became evident that one point of view had become unanimous. Doing things in a hurry was slightly shocking.

But the man's personality was powerful, his years gave him prestige, and his slightly archaic way of speaking added to his patriarchal authority; nobody argued.

"Okay," Lazarus announced, clapping his hands once. "Church is out until tomorrow night." He stepped down from the platform.

Mary Sperling came up to him. "I would like to know you better," she said, looking him in the eyes.

"Sure, Sis. Why not?"

"Are you staying for discussion?"

"Could you come home with me?"

"Like to. I've no pressing business elsewhere."

"Come then." She led him through the tunnel to the underground pool connecting with Lake Michigan. He widened his eyes at the pseudo-Camden but said nothing until they were submerged.

"Nice little car you've got."

"Yes."

"Has some unusual features."

She smiled. "Yes. Among other things, it blows up-quite thoroughly-if anyone tries to investigate it."

"Good." He added, "You a designing engineer, Mary?"

"Me? Heavens, no! Not this past century, at least, and I no longer try to keep up with such things. But you can order a car modified the way this one is through the Families, if you want one. Talk to-"

"Never mind, I've no need for one. I just like gadgets that do what they were designed to do and do it quietly and efficiently. Some good skull sweat in this one."

"Yes." She was busy then, surfacing, making a radar check, and getting them back ashore without attracting notice.

When they reached her apartment she put tobacco and drink close to him, then went to her retiring room, threw off her street clothes and put on a soft loose robe that made her look even smaller and younger than she had looked before. When she rejoined Lazarus, he stood up, struck a cigarette for her, then paused as he handed it to her and gave a gallant and indelicate whistle.

She smiled briefly, took the cigarette, and sat down in a large chair, pulling her feet under her. "Lazarus, you reassure me."

"Don't you own a mirror, girl?"

"Not that," she said impatiently. "You yourself. You know that I have passed the reasonable life expectancy of our people-I've been expecting to die, been resigned to it, for the past ten years. Yet there you sit . . . years and years o1der than I am. You give me hope."

He sat up straight. "You expecting to die? Good grief, girl-you look good for another century."

She made a tired gesture. "Don't try to jolly me. You know that appearance has nothing to do with it. Lazarus, I don't want to die!"

Lazarus answered soberly, "I wasn't trying to kid you, Sis. You simply don't look like a candidate for corpse."

She shrugged gracefully. "A matter of biotechniques. I'm holding my appearance at the early thirties."

"Or less, I'd say. I guess I'm not up on the latest dodges, Mary. You heard me say that I had not attended a get-together for more than a century. As a matter of fact I've been completely out of touch with the Families the whole time."

"Really? May I ask why?"

"A long story and a dull one. What it amounts to is that I got bored with them. I used to be a delegate to the annual meetings. But they got stuffy and set in their ways-or so it seemed to me. So I wandered off. I spent the Interregnum on Venus, mostly. I came back for a while after the Covenant was signed but I don't suppose I've spent two years on Earth since then. I like to move around."

Her eyes lit up. "Oh, tell me about it! I've never been out in-deep space. Just Luna City, once."

"Sure," he agreed. "Sometime. But I want to hear more about this matter of your appearance. Girl, you sure don't look your age."

"I suppose not. Or, rather, of course I don't. As to how it's done, I can't tell you much. Hormones and symbiotics and gland therapy and some psychotherapy-things like that. What it adds up to is that, for members of the Families, senility is postponed and that senescence can be arrested at least cosmetically." She brooded for a moment. "Once they thought they were on the track of the secret of immortality, the true Fountain of Youth. But it was a mistake. Senility is simply postponed . . . and shortened. About ninety days

from the first clear warning-then death from old age." She shivered. "Of course, most of our cousins don't wait-a couple of weeks to make certain of the diagnosis, then euthanasia."

"The hell you say! Well, I won't go that way. When the Old Boy comes to get me, he'll have to drag me-and I'll be kicking and gouging eyes every step of the way!"

She smiled lopsidedly. "It does me good to hear you talk that way. Lazarus, I wouldn't let my guards down this way with anyone younger than myself. But your example gives me courage."

"We'll outlast the lot of 'em, Mary, never you fear. But about the meeting tonight: I haven't paid any attention to the news and I've only recently come earthside-does this chap Ralph Schultz know what he is talking about?"

"I think he must. His grandfather was a brilliant man and so is his father."

"I take it you know Ralph."

"Slightly. He is one of my grandchildren."

"That's amusing. He looks older than you do."

"Ralph found it suited him to arrest his appearance at about forty, that's all. His father was my twenty-seventh child. Ralph must be-let me see-oh, eighty or ninety years younger than I am, at least. At that, he is older than some of my children."

"You've done well by the Families, Mary."

"I suppose so. But they've done well by me, too. I've enjoyed having children and the trust benefits for my thirty-odd come to quite a lot. I have every luxury one could want." She shivered again. "I suppose that's why I'm in such a funk-I enjoy life."

"Stop it! I thought my sterling example and boyish grin had cured you of that nonsense."

"Well you've helped."

"Mmm . . . look, Mary, why don't you marry again and have some more squally brats? Keep you too busy to fret."

"What? At my age? Now, really, Lazarus!"

"Nothing wrong with your age. You're younger than I am." She studied him for a moment. "Lazarus, are you proposing a contract? If so, I wish you would speak more plainly."

His mouth opened and he gulped. "Hey, wait a minute! Take it easy! I was speaking in general terms . . . I'm not the domestic type. Why, every time I've married my wife has grown sick of the sight of me inside of a few years. Not but what I-well, I mean you're a very pretty girl and a man ought to-"

She shut him off by leaning forward and putting a hand over his mouth, while grinning impishly. "I didn't mean to panic you, cousin. Or perhaps I did-men are so funny when they think they are about to be trapped."

"Well-" he said glumly.

"Forget it, dear. Tell me, what plan do you think they will settle on?"

"That bunch tonight?'

"Yes."

"None, of course. They won't get anywhere. Mary, a committee is the only known form of life with a hundred bellies and no brain. But presently somebody with a mind of his own will bulldoze them into accepting his plan. I don't know what it will be."

"Well . . . what course of action do you favor?"

"Me? Why, none. Mary, if there is any one thing I have learned in the past couple of centuries, it's this: These things pass. Wars and depressions and Prophets and Covenants- they pass. The trick is to stay alive through them."

She nodded thoughtfully. "I think you are right."

"Sure I'm right. It takes a hundred years or so to realize just how good life is." He stood up and stretched. "But right now this growing boy could use some sleep."

"Me, too."

Mary's flat was on the top floor, with a sky view. When she had come back to the lounge she had cut the inside lighting and let the ceiling shutters fold back; they had been sitting, save for an invisible sheet of plastic, under the stars. As Lazarus raised his head in stretching, his eye had rested on his favorite constellation. "Odd," he commented. "Orion seems to have added a fourth star to his belt."

She looked up. "That must be the big ship for the Second Centauri Expedition. See if you can see it move."

"Couldn't tell without instruments."

"I suppose not," she agreed. "Clever of them to build it out in space, isn't it?"

"No other way to do it. It's too big to assemble on Earth. I can doss down right here, Mary. Or do you have a spare room?"

"Your room is the second door on the right. Shout if you can't find everything you need." She put her face up and kissed him goodnight, a quick peck. "'Night."

Lazarus followed her and went into his own room.

Mary Sperling woke at her usual hour the next day. She got up quietly to keep from waking Lazarus, ducked into her 'fresher, showered and massaged, swallowed a grain of sleep surrogate to make up for the short night, followed it almost as quickly with all the breakfast she permitted her waistline, then punched for the calls she had not bothered to take the night before. The phone played back several calls which she promptly forgot, then she recognized the voice of Bork Vanning. "'Hello,'" the instrument said. "'Mary, this is Bork, calling at twenty-one o'clock. I'll be by at ten o'clock tomorrow morning, for a dip in the lake and lunch somewhere. Unless I hear from you it's a date. 'Bye, my dear. Service.'"

"Service," she repeated automatically. Drat the man! Couldn't he take no for an answer? Mary Sperling, you're slipping!-a quarter your age and yet you can't seem to handle him. Call him and leave word that-no, too late; he'd be here any minute. Bother!

Chapter 2

WHEN LAZARUS went to bed he stepped out of his kilt and chucked it toward a wardrobe which snagged it, shook it out, and hung it up neatly. "Nice catch," he commented, then glanced down at his hairy thighs and smiled wryly; the kilt had concealed a blaster strapped to one thigh, a knife to the other. He was aware of the present gentle custom against personal weapons, but he felt naked without them. Such customs were nonsense anyhow, foolishment from old women-there was no such thing as a "dangerous weapon," there were only dangerous men.

When he came out of the 'fresher, he put his weapons where he could reach them before sprawling in sleep.

He came instantly wide awake with a weapon in each hand . . . then remembered where he was, relaxed, and looked around to see what had wakened him.

It was a murmur of voices through the air duct. Poor soundproofing he decided, and Mary must be entertaining callers-in which case he should not be slug-a-bed. He got up, refreshed himself, strapped his best friends back on his thighs, and went looking for his hostess.

As the door to the lounge dilated noiselessly in front of him the sound of voices became loud and very interesting. The lounge was el-shaped and he was out of sight; he hung back and listened shamelessly. Eavesdropping had saved his skin on several occasions; it worried him not at all-he enjoyed it. A man was saying, "Mary, you're completely unreasonable! You know you're fond of me, you admit that marriage to me would be to your advantage. So why won't you?"

"I told you, Bork. Age difference."

"That's foolish. What do you expect? Adolescent romance? Oh, I admit that I'm not as young as you are . . . but a woman needs an older man to look up to and keep her steady. I'm not too old for you; I'm just at my prime."

Lazarus decided that he already knew this chap well enough to dislike him. Sulky voice.

Mary did not answer. The man went on: "Anyhow, I have a surprise for you on that point. I wish I could tell you now, but . . . well, it's a state secret."

"Then don't tell me. It can't change my mind in any case, Bork."

"Oh, but it would! Mmm . . . I will tell you-I know you can be trusted."

"Now, Bork, you shouldn't assume that-"

"It doesn't matter; it will be public knowledge in a few days anyhow. Mary . . . I'll never grow old on you!"

"What do you mean?" Lazarus decided that her tone was suddenly suspicious.

"Just what I said. Mary, they've found the secret of eternal youth!"

"What? Who? How? When?"

"Oh, so now you're interested, eh? Well, I won't keep you waiting. You know these old Johnnies that call themselves the Howard Families?'

"Yes . . . I've heard of them, of course," she admitted slowly. "But what of it? They're fakes."

"Not at all. I know. The Administration has been quietly investigating their claims. Some of them are unquestionably more than a hundred years old-and still young!"

"That's very hard to believe."

"Nevertheless it's true."

"Well . . . how do they do it?"

"Ah! That's the point. They claim that it is a simple matter of heredity, that they live a long time because they come from long lived stock. But that's preposterous, scientifically incompatible with the established facts. The Administration checked most carefully and the answer is certain: they have the secret of staying young."

"You can't be sure of that."

"Oh, come, Mary! You're a dear girl but you're questioning the expert opinion of the best scientific brains in the world. Never mind. Here's the part that is confidential. We

don't have their secret yet-but we will have it shortly. Without any excitement or public notice, they are to be picked up and questioned. We'll get the secret-and you and I will never grow old! What do you think of that? Eh?"

Mary answered very slowly, almost inaudibly, "It would be nice if everyone could live a long time."

"Huh? Yes, I suppose it would. But in any case you and I will receive the treatment, whatever it is. Think about us, dear. Year after year after year of happy, youthful marriage. Not less than a century. Maybe even--"

"Wait a moment, Bork. This 'secret' It wouldn't be for everybody?"

"Well, now . . . that's a matter of high policy. Population pressure is a pretty unwieldy problem even now. In practice it might be necessary to restrict it to essential personnel-and their wives. But don't fret your lovely head about it; you and I will have it."

"You mean I'll have it if I marry you."

"Mmm . . . that's a nasty way to put it, Mary. I'd do anything in the world for you that I could-because I love you. But it would be utterly simple if you were married to me. So say you will."

"Let's let that be for the moment. How do you propose to get this 'secret' out of them?"

Lazarus could almost hear his wise nod. "Oh, they'll talk!"

"Do you mean to say you'd send them to Coventry if they didn't?"

"Coventry? Hm! You don't understand the situation at all, Mary; this isn't any minor social offense. This is treason- treason against the whole human race. We'll use means! Ways that the Prophets used . . . if they don't cooperate willingly."

"Do you mean that? Why, that's against the Covenant!"

"Covenant be damned! This is a matter of life and death- do you think we'd let a scrap of paper stand in our way? You can't bother with petty legalities in the fundamental things: men live by-not something they will fight to the death for. And that is precisely what this is. These . . . these dog-in-the-manger scoundrels are trying to keep life itself from us. Do you think we'll bow to 'custom' in an emergency like this?"

Mary answered in a hushed and horrified voice: "Do you really think the Council will violate the Covenant?"

"Think so? The Action-in-Council was recorded last night. We authorized the Administrator to use 'full expediency.'"

Lazarus strained his ears through a long silence. At last Mary spoke. "Bork-"

"Yes, my dear?"

"You've got to do something about this. You must stop it." "Stop it? You don't know what you're saying. I couldn't and I would not if I could."

"But you must. You must convince the Council. They're making a mistake, a tragic mistake. There is nothing to be gained by trying to coerce those poor people. There is no secret!"

"What? You're getting excited, my dear. You're setting your judgment up against some of the best and wisest men on the planet. Believe me, we know what we are doing. We don't relish using harsh methods any more than you do, but it's for the general welfare. Look, I'm sorry I ever brought it up. Naturally you are soft and gentle and

warmhearted and I love you for it. Why not marry me and not bother your head about matters of public policy?"

"Marry you? Never!"

"Aw, Mary-you're upset. Give me just one good reason why not?"

"I'll tell you why! Because I am one of those people you want to persecute!"

There was another pause. "Mary . . . you're not well."

"Not well, am I? I am as well as a person can be at my age. Listen to me, you fool! I have grandsons twice your age. I was here when the First Prophet took over the country. I was here when Harriman launched the first Moon rocket. You weren't even a squalling brat-your grandparents hadn't even met, when I was a woman grown and married. And you stand there and glibly propose to push around, even to torture, me and my kind. Marry you? I'd rather marry one of my own grandchildren!"

Lazarus shifted his weight and slid his right hand inside the flap of his kilt; he expected trouble at once. You can depend on a woman, he reflected, to blow her top at the wrong moment.

He waited. Bork's answer was cool; the tones of the experienced man of authority replaced those of thwarted passion. "Take it easy, Mary. Sit down, I'll look after you. First I want you to take a sedative. Then I'll get the best psychotherapist in the city-in the whole country. You'll be all right."

"Take your hands off me!"

"Now, Mary . . .

Lazarus stepped out into the room and pointed at Vanning with his blaster. "This monkey giving you trouble, Sis?"

Vanning jerked his head around. "Who are you?" he demanded indignantly. "What are you doing here?"

Lazarus still addressed Mary. "Say the word, Sis, and I'll cut him into pieces small enough to hide."

"No, Lazarus," she answered with her voice now under control. "Thanks just the same. Please put your gun away. I wouldn't want anything like that to happen."

"Okay." Lazarus holstered the gun but let his hand rest on the grip.

"Who are you?" repeated Vanning. "What's the meaning of this intrusion?"

"I was just about to ask you that, Bud," Lazarus said mildly, "but we'll let it ride. I'm another one of those old Johnnies you're looking for . . . like Mary here."

Vanning looked at him keenly. "I wonder-" he said. He looked back at Mary. "It can't be, it's preposterous. Still it won't hurt to investigate your story. I've plenty to detain you on, in any event, I've never seen a clearer case of antisocial atavism." He moved toward the videophone.

"Better get away from that phone, Bud," Lazarus said quickly, then added to Mary, "I won't touch my gun, Sis. I'll use my knife."

Vanning stopped. "Very well," he said in annoyed tones, "put away that vibroblade. I won't call from here."

"Look again, it ain't a vibroblade. It's steel. Messy."

Vanning turned to Mary Sperling. "I'm leaving. If you are wise, you'll come with me." She shook her head. He looked annoyed, shrugged, and faced Lazarus Long. "As for you, sir, your primitive manners have led you into serious trouble. You will be arrested shortly."

Lazarus glanced up at the ceiling shutters. "Reminds me of a patron in Venusburg who wanted to have me arrested."

"Well?"

"I've outlived him quite a piece."

Vanning opened his mouth to answer-then turned suddenly and left so quickly that the outer door barely had time to clear the end of his nose. As the door snapped closed Lazarus said musingly, "Hardest man to reason with I've met in years. I'll bet he never used an unsterilized spoon in his life."

Mary looked startled, then giggled. He turned toward her. "Glad to see you sounding perky, Mary. Kinda thought you were upset."

"I was. I hadn't known you were listening. I was forced to improvise as I went along."

"Did I queer it?"

"No. I'm glad you came in-thanks. But we'll have to hurry now."

"I suppose so. I think he meant it-there'll be a proctor looking for me soon. You, too, maybe."

"That's what I meant. So let's get out of here."

Mary was ready to leave in scant minutes but when they stepped out into the public hall they met a man whose brassard and hypo kit marked him as a proctor. "Service," he said. "I'm looking for a citizen in company with Citizen Mary Sperling. Could you direct me?"

"Sure," agreed Lazarus. "She lives right down there." He pointed at the far end of the corridor. As the peace officer looked in that direction, Lazarus tapped him carefully on the back of the head, a little to the left, with the butt of his blaster, and caught him as be slumped.

Mary helped Lazarus wrestle the awkward mass into her apartment. He knelt over the cop, pawed through his hypo kit, took a loaded injector and gave him a shot. "There," he said, "that'll keep him sleepy for a few hours." Then he blinked thoughtfully at the hypo kit, detached it from the proctor's belt. "This might come in handy again. Anyhow, it won't hurt to take it." As an afterthought he removed the proctor's peace brassard and placed it, too, in his pouch.

They left the apartment again and dropped to the parking level. Lazarus noticed as they rolled up the ramp that Mary had set the North Shore combination. "Where are we going?" he asked.

"The Families' Seat. No place else to go where we won't be checked on. But we'll have to hide somewhere in the country until dark."

Once the car was on beamed control headed north Mary asked to be excused and caught a few minutes sleep. Lazarus watched a few miles of scenery, then nodded himself.

They were awakened by the jangle of the emergency alarm and by the speedster slowing to a stop. Mary reached up and shut off the alarm. "All cars resume local control," intoned a voice. "Proceed at speed twenty to the nearest traffic control tower for inspection. All cars resume local control. Proceed at-"

She switched that off, too. "Well, that's us," Lazarus said cheerfully. "Got any ideas?"

Mary did not answer. She peered out and studied their surroundings. The steel fence separating the high-speed controlway they were on from the uncontrolled local-traffic strip lay about fifty yards to their right but no changeover ramp broke the fence for at least a mile ahead-where it did, there would be, of course, the control tower where they were ordered to undergo inspection. She started the car again, operating it manually, and wove through stopped or slowly moving traffic while speeding up. As they got close to the barrier Lazarus felt himself shoved into the cushions; the car surged and lifted, clearing the barrier by inches. She set it down rolling on the far side.

A car was approaching from the north and they were slashing across his lane. The other car was moving no more than ninety but its driver was taken by surprise-he had no reason to expect another car to appear out of nowhere against him on a clear road: Mary was forced to duck left, then right, and left again; the car slewed and reared up on its hind wheel, writhing against the steel grip of its gyros. Mary fought it back into control to the accompaniment of a teeth-shivering grind of herculene against glass as the rear wheel fought for traction.

Lazarus let his jaw muscles relax and breathed out gustily. "Whew!" he sighed. "I hope we won't have to do that again."

Mary glanced at him, grinning. "Women drivers make you nervous?"

"Oh, no, no, not at all! I just wish you would warn me when something like that is about to happen."

"I didn't know myse1f," she admitted, then went on worriedly, "I don't know quite what to do now. I thought we could lie quiet out of town until dark . . . but I had to show my hand a Little when I took that fence. By now somebody will be reporting it to the tower. Mmm.

"Why wait until dark?" he asked. "Why not just bounce over to the lake in this Dick Dare contraption of yours and let it swim us home?"

"I don't like to," she fretted. "I've attracted too much attention already. A trimobile faked up to look like a groundster is handy, but . . . well, if anyone sees us taking it under water and the proctors hear of it, somebody is going to guess the answer. Then they'll start fishing-everything from seismo to sonar and Heaven knows what else."

"But isn't the Seat shielded?"

"Of course. But anything that big they can find-if they know what they're looking for and keep looking."

"You're right, of course," Lazarus admitted slowly. "Well, we certainly don't want to lead any nosy proctors to the Families' Seat. Mary, I think we had better ditch your car and get lost." He frowned. "Anywhere but the Seat."

"No, it has to be the Seat," she answered sharply.

"Why? If you chase a fox, he-"

"Quiet a moment! I want to try something." Lazarus shut up; Mary drove with one hand while she fumbled in the glove compartment.

"Answer," a voice said.

"Life is short-" Mary replied.

They completed the formula. "Listen," Mary went on hurriedly, "I'm in trouble-get a fix on me."

"Okay."

"Is there a sub in the pool?"

"Yes."

"Good! Lock on me and home them in." She explained hurriedly the details of what she wanted, stopping once to ask Lazarus if he could swim. "That's all," she said at last, "but move! We're short on minutes."

"Hold it, Mary!" the voice protested. "You know I can't send a sub out in the daytime, certainly not on a calm day. It's too easy to-"

"Will you, or won't you!"

A third voice cut in. "I was listening, Mary-Ira Barstow. We'll pick you up."

"But-" objected the first voice.

"Stow it, Tommy. Just mind your burners and home me in. See you, Mary."

"Right, Ira!"

While she had been talking to the Seat, Mary had turned off from the local-traffic strip into the unpaved road she had followed the night before, without slowing and apparently without looking. Lazarus gritted his teeth and hung on. They passed a weathered sign reading CONTAMINATED AREA-PROCEED AT YOUR OWN RISK and graced with the conventional purple trefoil. Lazarus blinked at it and shrugged-he could not see how, at the moment, his hazard could be increased by a neutron or so.

Mary slammed the car to a stop in a clump of stunted trees near the abandoned road. The lake lay at their feet, just beyond a low bluff. She unfastened her safety belt, struck a cigarette, and relaxed. "Now we wait. It'll take at least half an hour for them to reach us no matter how hard Ira herds it. Lazarus, do you think we were seen turning off into here?"

"To tell the truth, Mary, I was too busy to look."

"Well nobody ever comes here, except a few reckless boys."

("-and girls," Lazarus added to himself.) Then he went on aloud, "I noted a 'hot' sign back there. How high is the count?"

"That? -Oh, pooh. Nothing to worry about unless you decided to build a house here. We're the ones who are hot. If we didn't have to stay close to the communicator, we-"

The communicator spoke. "Okay, Mary. Right in front of you."

She looked startled. "Ira?"

"This is Ira speaking but I'm still at the Seat. Pete Hardy was available in the Evanston pen, so we homed him in on you. Quicker."

"Okay-thanks!" She was turning to speak to Lazarus when he touched her arm.

"Look behind us."

A helicopter was touching down less than a hundred yards from them. Three men burst out of it. They were dressed as proctors.

Mary jerked open the door of the car and threw off her gown in one unbroken motion. She turned and called, "Come on!" as she thrust a hand back inside and tore a stud loose from the instrument panel. She ran.

Lazarus unzipped the belt of his kilt and ran out of it as he followed her to the bluff. She went dancing down it; he came after with slightly more caution, swearing at sharp stones. The blast shook them as the car exploded, but the bluff saved them.

They hit the water together.

The lock in the little submarine was barely big enough for one at a time; Lazarus shoved Mary into it first and tried to slap her when she resisted, and discovered that

slapping will not work under water. Then he spent an endless time, or so it seemed, wondering whether or not he could breathe water. "What's a fish got that I ain't got?" he was telling himself, when the outer latch moved under his hand and he was able to wiggle in.

Eleven dragging seconds to blow the lock clear of water and he had a chance to see what damage, if any, the water had done to his blaster.

Mary was speaking urgently to the skipper. "Listen, Pete- there are three proctors back up there with a whiny. My car blew up in their faces just as we hit the water. But if they aren't all dead or injured, there will be a smart boy who will figure out that there was only one place for us to go-under water. We've got to be away from here before they take to the air to look for us."

"It's a losing race," Pete Hardy complained, slapping his controls as he spoke. "Even if it's only a visual search, I'll have to get outside and stay outside the circle of total reflection faster than he can gain altitude-and I can't." But the little sub lunged forward reassuringly.

Mary worried about whether or not to call the Seat from the sub. She decided not to; it would just increase the hazard both to the sub and to the Seat itself. So she calmed herself and waited, huddled small in a passenger seat too cramped for two. Peter Hardy swung wide into deep water, hugging the bottom, picking up the Muskegon-Gary bottom beacons and conned himself in blind.

By the time they surfaced in the pool inside the Seat she had decided against any physical means of communication, even the carefully shielded equipment at the Seat. Instead she hoped to find a telepathic sensitive ready and available among the Families' dependents cared for there. Sensitives were scarce among healthy members of the Howard Families as they were in the rest of the population, but the very inbreeding which had conserved and reinforced their abnormal longevity had also conserved and reinforced bad genes as well as good; they had an unusually high percentage of physical and mental defectives. Their board of genetic control plugged away at the problem of getting rid of bad strains while conserving the longevity strain, but for many generations they would continue to pay for their long lives with an excess of defectives.

But almost five per cent of these defectives were telepathically sensitive.

Mary went straight to the sanctuary in the Seat where some of these dependents were cared for, with Lazarus Long at her heels. She braced the matron. "Where's Little Stephen? I need him."

"Keep your voice down," the matron scolded. "Rest hour-you can't."

"Janice, I've got to see him," Mary insisted. "This won't wait. I've got to get a message out to all the Families-at once."

The matron planted her hands on her hips. "Take it to the communication office. You can't come here disturbing my children at all hours. I won't have it."

"Janice, please! I don't dare use anything but telepathy. You know I wouldn't do this unnecessarily. Now take me to Stephen."

"It wouldn't do you any good if I did. Little Stephen has had one of his bad spells today."

"Then take me to the strongest sensitive who can possibly work. Quickly, Janice! The safety of every member may depend on it."

"Did the trustees send you?"

"No, no! There wasn't time!"

The matron still looked doubtful. While Lazarus was trying to recall how long it had been since he had socked a lady, she gave in. "All right-you can see Billy, though I shouldn't let you. Mind you, don't tire him out." Still bristling, she led them along a corridor past a series of cheerful rooms and into one of them. Lazarus looked at the thing on the bed and looked away.

The matron went to a cupboard and returned with a hypodermic injector. "Does he work under a hypnotic?" Lazarus asked.

"No," the matron answered coldly, "he has to have a stimulant to be aware of us at all." She swabbed skin on the arm of the gross figure and made the injection. "Go ahead," she said to Mary and lapsed into grim-mouthed silence.

The figure on the bed stirred, its eyes rolled loosely, then seemed to track. It grinned. "Aunt Mary!" it said. "Oooh! Did you bring Billy Boy something?'

"No," she said gently. "Not this time, hon. Aunt Mary was in too much of a hurry. Next time? A surprise? Will that do?'

"All right," it said docilely.

"That's a good boy." She reached out and tousled its hair; Lazarus looked away again. "Now will Billy Boy do something for Aunt Mary? A big, big favor?"

"Sure."

"Can you hear your friends?"

"Oh, sure."

"All of them?"

"Uh huh. Mostly they don't say anything," it added.

"Call to them."

There was a very short silence. "They heard me."

"Fine! Now listen carefully, Billy Boy: All the Families- urgent warning! Elder Mary Sperling speaking. Under an Action-in-Council the Administrator is about to arrest every revealed member. The Council directed him to use 'full expedience'-and it is my sober judgment that they are determined to use any means at all, regardless of the Covenant, to try to squeeze out of us the so-called secret of our long lives. They even intend to use the tortures developed by the inquisitors of the Prophets!" Her voice broke. She stopped and pulled herself together. "Now get busy! Find them, warn them, hide them! You may have only minutes left to save them!"

Lazarus touched her arm and whispered; she nodded and went on:

"If any cousin is arrested, rescue him by any means at all! Don't try to appeal to the Covenant, don't waste time arguing about justice rescue him! Now move!"

She stopped and then spoke in a tired, gentle voice, "Did they hear us, Billy Boy?"

"Sure."

"Are they telling their folks?"

"Uh huh. All but Jimmie-the-Horse. He's mad at me," it added confidentially.

"'Jimmie-the-Horse'? Where is he?"

"Oh, where he lives."

"In Montreal," put in the matron. "There are two other sensitives there-your message got through. Are you finished?"

"Yes . . ." Mary said doubtfully. "But perhaps we had better have some other Seat relay it back."

"No!" "But, Janice-"

"I won't permit it. I suppose you had to send it but I want to give Billy the antidote now. So get out."

Lazarus took her arm. "Come on, kid. It either got through or it didn't; you've done your best. A good job, girl."

Mary went on to make a full report to the Resident Secretary; Lazarus left her on business of his own. He retraced his steps, looking for a man who was not too busy to help him; the guards at the pool entrance were the first he found. "Service-" be began.

"Service to you," one of them answered. "Looking for someone?" He glanced curiously at Long's almost complete nakedness, glanced away again-how anybody dressed, or did not dress, was a private matter.

"Sort of," admitted Lazarus. "Say, Bud, do you know of anyone around here who would lend me a kilt?"

"You're looking at one," the guard answered pleasantly. "Take over, Dick-back in a minute." He led Lazarus to bachelors' quarters, outfitted him, helped him to dry his pouch and contents, and made no comment about the arsenal strapped to his hairy thighs. How elders behaved was no business of his and many of them were even touchier about their privacy than most people. He had seen Aunt Mary Sperling arrive stripped for swimming but had not been surprised as he had heard Ira Barstow briefing Pete for the underwater pickup; that the elder with her chose to take a dip in the lake weighed down by the hardware did surprise him but not enough to make him forget his manners.

"Anything else you need?' he asked. "Do those shoes fit?

"Well enough. Thanks a lot, Bud." Lazarus smoothed the borrowed kilt. It was a little too long for him but it comforted him. A loin strap was okay, he supposed-if you were on Venus. But he had never cared much for Venus customs. Damn it, a man liked to be dressed. "I feel better," he admitted. "Thanks again. By the way, what's your name?"

"Edmund Hardy, of the Foote Family."

"That so? What's your line?"

"Charles Hardy and Evelyn Foote. Edward Hardy-Alice Johnson and Terence Briggs-Eleanor Weatheral. Oliver-"

"That's enough. I sorta thought so. You're one of my great-great-grandsons."

"Why, that's interesting," commented Hardy agreeably. "Gives us a sixteenth of kinship, doesn't it-not counting convergence. May I ask your name?

"Lazarus Long."

Hardy shook his head. "Some mistake. Not in my line."

"Try Woodrow Wilson Smith instead. It was the one I started with."

"Oh, that one! Yes, surely. But I thought you were . . . uh--"

"Dead? Well, I ain't."

"Oh, I didn't mean that at all," Hardy protested, blushing at the blunt Anglo-Saxon monosyllable. He hastily added, "I'm glad to have run across you, Gran'ther. I've always wanted to hear the straight of the story about the Families' Meeting in 2012."

"That was before you were born, Ed," Lazarus said gruffly, "and don't call me 'Gran'ther.'"

"Sorry, sir-I mean 'Sorry, Lazarus.' Is there any other service I can do for you?"

"I shouldn't have gotten shirty. No-yes, there is, too. Where can I swipe a bite of breakfast? I was sort of rushed this morning."

"Certainly." Hardy took him to the bachelors' pantry, operated the autochef for him, drew coffee for his watch mate and himself, and left. Lazarus consumed his "bite of breakfast"-about three thousand calories of sizzling sausages, eggs, jam, hot breads, coffee with cream, and ancillary items, for he worked on the assumption of always topping off his reserve tanks because you never knew how far you might have to lift before you had another chance to refuel. In due time he sat back, belched, gathered up his dishes and shoved them in the incinerator, then went looking for a newsbox.

He found one in the bachelors' library, off their lounge. The room was empty save for one man who seemed to be about the same age as that suggested by Lazarus' appearance. There the resemblance stopped; the stranger was slender, mild in feature, and was topped off by finespun carroty hair quite unlike the grizzled wiry bush topping Lazarus. The stranger was bending over the news receiver with his eyes pressed to the microviewer.

Lazarus cleared his throat loudly and said, "Howdy."

The man jerked his head up and exclaimed, "Oh! Sorry-I was startled. Do y' a service?"

"I was looking for the newsbox. Mind if we throw it on the screen?"

"Not at all." The smaller man stood up, pressed the rewind button, and set the controls for projection. "Any particular subject?"

"I wanted to see," said Lazarus, "if there was any news about us-the Families."

"I've been watching for that myself. Perhaps we had better use the sound track and let it hunt."

"Okay," agreed Lazarus, stepping up and changing the setting to audio. "What's the code word?'

"'Methuselah.'"

Lazarus punched in the setting; the machine chattered and whined as it scanned and rejected the track speeding through it, then it slowed with a triumphant click. "The DAILY DATA," it announced. "The only midwest news service subscribing to every major grid. Leased videochannel to Luna City. Tri-S correspondents throughout the System. First, Fast, and Most! Lincoln, Nebraska-Savant Denounces Oldsters! Dr. Witweli Oscarsen, President Emeritus of Bryan Lyceum, calls for official reconsideration of the status of the kin group styling themselves the 'Howard Families.' 'It is proved,' he says. 'that these people have solved the age-old problem of extending, perhaps indefinitely, the span of human life. For that they are to be commended; it is a worthy and potentially fruitful research. But their claim that their solution is no more than hereditary predisposition defies both science and common sense. Our modern knowledge of the established laws of generics enables us to deduce with certainty that they are withholding from the public some secret technique or techniques whereby they accomplish their results.

"'It is contrary to our customs to permit scientific knowledge to be held as a monopoly for the few. When concealing such knowledge strikes at life itself, the action becomes treason to the race. As a citizen, I call on the Administration to act forcefully in this matter and I remind them that the situation is not one which could possibly have been foreseen by the wise men who drew up the Covenant and codified our basic customs.

Any custom is man-made and is therefore a finite attempt to describe an infinity of relationships. It follows as the night from day that any custom necessarily has its exceptions. To be bound by them in the face of new--'"

Lazarus pressed the hold button. "Had enough of that guy?

"Yes, I had already heard it." The stranger sighed. "I have rarely heard such complete lack of semantic rigor. It surprises me-Dr. Oscarsen has done sound work in the past."

"Reached his dotage," Lazarus stated, as he told the machine to try again. "Wants what he wants when he wants it- and thinks that constitutes a natural law."

The machine hummed and clicked and again spoke up. "The DAILY DATA, the only midwest news-"

"Can't we scramble that commercial?" suggested Lazarus. His companion peered at the control panel. "Doesn't seem to be equipped for it."

"Ensenada, Baja California. Jeffers and Lucy Weatheral today asked for special proctor protection, alleging that a group of citizens had broken into their home, submitted them to personal indignity and committed other asocial acts. The Weatherals are, by their own admission, members of the notorious Howard Families and claim that the alleged incident could be traced to that supposed fact. The district provost points out that they have offered no proof and has taken the matter under advisement. A town mass meeting has been announced for tonight which will air-"

The other man turned toward Lazarus. "Cousin, did we hear what I thought we heard? That is the first case of asocial group violence in more than twenty years . . . yet they reported it like a breakdown in a weather integrator."

"Not quite," Lazarus answered grimly. "The connotations of the words used in describing us were loaded."

"Yes, true, but loaded cleverly. I doubt if there was a word in that dispatch with an emotional index, taken alone, higher than one point five. The newscasters are allowed two zero, you know."

"You a psychometrician?"

"Uh, no. I should have introduced myself. I'm Andrew Jackson Libby."

"Lazarus Long."

"I know. I was at the meeting last night."

"'Libby . . . Libby," Lazarus mused. "Don't seem to place it in the Families. Seems familiar, though."

"My case is a little like yours-"

"Changed it during the Interregnum, eh?"

"Yes and no. I was born after the Second Revolution. But my people had been converted to the New Crusade and had broken with the Families and changed their name. I was a grown man before I knew I was a Member."

"The deuce you say! That's interesting-how did you come to be located . . . if you don't mind my asking?"

"Well, you see I was in the Navy and one of my superior officers-"

"Got it! Got it! I thought you were a spaceman. You're Slipstick Libby, the Calculator."

Libby grinned sheepishly. "I have been called that."

"Sure, sure. The last can I piloted was equipped with your paragravitic rectifier. And the control bank used your fractional differential on the steering jets. But I installed that myself-kinda borrowed your patent."

Libby seemed undisturbed by the theft. His face lit up. "You are interested in symbolic logic?"

"Only pragmatically. But look, I put a modification on your gadget that derives from the rejected alternatives in your thirteenth equation. It helps like this: suppose you are cruising in a field of density 'x' with an n-order gradient normal to your course and you want to set your optimum course for a projected point of rendezvous capital 'A' at matching-in vector 'rho' using automatic selection the entire jump, then if-"

They drifted entirely away from Basic English as used by earthbound laymen. The newsbox beside them continued to hunt; three times it spoke up, each time Libby touched the rejection button without consciously hearing it.

"I see your point," he said at last. "I had considered a somewhat similar modification but concluded that it was not commercially feasible, too expensive for anyone but enthusiasts such as yourself. But your solution is cheaper than mine."

"How do you figure that?"

"Why, it's obvious from the data. Your device contains sixty-two moving parts, which should require, if we assume standardized fabrication processes, a probable-" Libby hesitated momentarily as if he were programming the problem. "-a probable optimax of five thousand two hundred and eleven operation in manufacture assuming null-therblig automation, whereas mine-"

Lazarus butted in. "Andy," he inquired solicitously, "does your head ever ache?"

Libby looked sheepish again. "There's nothing abnormal about my talent," he protested. "It is theoretically possible to develop it in any normal person."

"Sure," agreed Lazarus, "and you can teach a snake to tap dance once you get shoes on him. Never mind, I'm glad to have fallen in with you. I heard stories about you way back when you were a kid. You were in the Cosmic Construction Corps, weren't you?"

Libby nodded. "Earth-Mars Spot Three."

"Yeah, that was it-chap on Mars gimme the yarn. Trader at Drywater. I knew your maternal grandfather, too. Stiffnecked old coot."

"I suppose he was."

"He was, all right. I had quite a set-to with him at the Meeting in 2012. He had a powerful vocabulary." Lazarus frowned slightly. "Funny thing, Andy . . . I recall that vividly, I've always had a good memory-yet it seems to be getting harder for me to keep things straight. Especially this last century."

"Inescapable mathematical necessity," said Libby.

"Huh? Why?"

"Life experience is linearly additive, but the correlation of memory impressions is an unlimited expansion. If mankind lived as long as a thousand years, it would be necessary to invent some totally different method of memory association in order to be eclectively time-binding. A man would otherwise flounder helplessly in the wealth of his own knowledge, unable to evaluate. Insanity, or feeble-mindedness."

"That so?" Lazarus suddenly looked worried. "Then we'd better get busy on it."

"Oh, it's quite possible of solution." "Let's work on it. Let's not get caught short."

The newsbox again demanded attention, this time with the buzzer and flashing light of a spot bulletin: "Hearken to the DATA, flash! Nigh Council Suspends Covenant! Under the Emergency Situation clause of the Covenant an unprecedented Action-in-Council was announced today directing the Administrator to detain and question all members of the so-called Howard Families-by any means expedient! The Administrator authorized that the following statement be released by all licensed news outlets: (I quote) 'The suspension of the Covenant's civil guarantees applies only to the group known as the Howard Families except that government agents are empowered to act as circumstances require to apprehend speedily the persons affected by the Action-in-Council. Citizens are urged to tolerate cheerfully any minor inconvenience this may cause them; your right of privacy will be respected in every way possible; your right of free movement may be interrupted temporarily, but full economic restitution will be made."

"Now, Friends and Citizens, what does this mean?-to you and you and also you! The DAILY DATA brings you now your popular commentator, Albert Reifsnider:

"Reifsnider reporting: Service, Citizens! There is no cause for alarm. To the average free citizen this emergency will be somewhat less troublesome than a low-pressure minimum too big for the weather machines. Take it easy! Relax! Help the proctors when requested and tend to your private affairs. If inconvenienced, don't stand on custom-cooperate with Service!

"That's what it means today. What does it mean tomorrow and the day after that? Next year? It means that your public servants have taken a forthright step to obtain for you the boon of a longer and happier life! Don't get your hopes too high . . . but it looks like the dawn of a new day. Ah, indeed it does! The jealously guarded secret of a selfish few will soon--"

Long raised an eyebrow at Libby, then switched it off.

"I suppose that," Libby said bitterly, "is an example of 'factual detachment in news reporting.'"

Lazarus opened his pouch and struck a cigarette before replying. "Take it easy, Andy. There are bad times and good times. We're overdue for bad times. The people are on the march again . . . this time at us."

Chapter 3

THE BURROW KNOWN as the Families' Seat became jammed as the day wore on. Members kept trickling in, arriving by tunnels from downstare and from Indiana. As soon as it was dark a traffic jam developed at the underground pool entrance-sporting subs, fake ground cars such as Mary's, ostensible surface cruisers modified to dive, each craft loaded with refugees some half suffocated from lying in hiding on deep bottom most of the day while waiting for a chance to sneak in.

The usual meeting room was much too small to handle the crowd; the resident staff cleared the largest room, the refectory, and removed partitions separating it from the main lounge. There at midnight Lazarus climbed onto a temporary rostrum. "Okay," he announced, "let's pipe it down. You down in front sit on the floor so the rest can see. I was born in 1912. Anybody older?"

He paused, then added, "Nominations for chairman speak up."

Three were proposed; before a fourth could be offered the last man nominated got to his feet. "Axel Johnson, of the Johnson Family. I want my name withdrawn and I suggest that the others do likewise. Lazarus cut through the fog last night; let him handle it. This is no time for Family politics."

The other names were withdrawn; no more were offered. Lazarus said, "Okay if that's the way you want it. Before we get down to arguing I want a report from the Chief Trustee. How about it, Zack? Any of our kinfolk get nabbed?'

Zaccur Barstow did not need to identify himself; he simply said, "Speaking for the Trustees: our report is not complete, but we do not as yet know that any Member has been arrested. Of the nine thousand two hundred and eighty-five revealed Members, nine thousand one hundred and six had been reported, when I left the communication office ten minutes ago, as having reached hiding, in other Family strongholds, or in the homes of unrevealed Members, or elsewhere. Mary Sperling's warning was amazingly successful in view of how short the time was from the alarm to the public execution of the Action-in-Council-but we still have one hundred and seventy-nine revealed cousins unreported. Probably most of these will trickle in during the next few days. Others are probably safe but unable to get in touch with us."

"Get to the point, Zack," Lazarus insisted. "Any reasonable chance that all of them will make it home safe?"

"Absolutely none."

"Why?"

"Because three of them are known to be in public conveyances between here and the Moon, traveling under their revealed identities. Others we don't know about are almost certainly caught in similar predicaments."

"Question!" A cocky little man near the front stood up and pointed his finger at the Chief Trustee. "Were all those Members now in jeopardy protected by hypnotic injunction?"

"No. There was no--"

"I demand to know why not!"

"Shut up!" bellowed Lazarus. "You're out of order. Nobody's on trial here and we've got no time to waste on spilled milk. Go ahead, Zack."

"Very well. But I will answer the question to this extent: everyone knows that a proposal to protect our secrets by hypnotic means was voted down at the Meeting which relaxed the 'Masquerade.' I seem to recall that the cousin now objecting helped then to vote it down."

"That is not true! And I insist that--"

"PIPE DOWN!" Lazarus glared at the heckler, then looked him over carefully. "Bud, you strike me as a clear proof that the Foundation should 'a' bred for brains instead of age." Lazarus looked around at the crowd. "Everybody will get his say, but in order as recognized by the chair. If he butts in again, I'm going to gag him with his own teeth-is my ruling sustained?"

There was a murmur of mixed shock and approval; no one objected. Zaccur Barstow went on, "On the advice of Ralph Schultz the trustees have been proceeding quietly for the past three months to persuade revealed Members to undergo hypnotic instruction. We were largely successful." He paused.

"Make it march, Zack," Lazarus urged. "Are we covered? Or not?"

"We are not. At least two of our cousins certain to be arrested are not so protected."

Lazarus shrugged. "That tears it. Kinfolk, the game's over. One shot in the arm of babble juice and the 'Masquerade' is over. It's a new situation-or will be in a few hours. What do you propose to do about it?"

In the control room of the Antipodes Rocket Wallaby, South Flight, the telecom hummed, went spung! and stuck out a tab like an impudent tongue. The copilot rocked forward in his gymbals, pulled out the message and tore it off.

He read it, then reread it. "Skipper, brace yourself."

"Trouble?"

"Read it."

The captain did so, and whistled. "Bloody! I've never arrested anybody. I don't believe I've even seen anybody arrested. How do we start?"

"I bow to your superior authority."

"That so?" the captain said in nettled tones. "Now that you're through bowing you can tool aft and make the arrest."

"Uh? That's not what I meant. You're the bloke with the authority. I'll relieve you at the conn."

"You didn't read me. I'm delegating the authority. Carry out your orders."

"Just a moment, Al, I didn't sign up for--"

"Carry out your orders!"

"Aye aye, sir!"

The copilot went aft. The ship had completed its reentry, was in its long, flat, screaming approach-glide; he was able to walk-he wondered what an arrest in free-fall would be like? Snag him with a butterfly net? He located the passenger by seat check, touched his arm. "Service, sir. There's been a clerical error. May I see your ticket?"

"Why, certainly."

"Would you mind stepping back to the reserve stateroom? It's quieter there and we can both sit down."

"Not at all."

Once they were in the private compartment the chief officer asked the passenger to sit down, then looked annoyed. "Stupid of me!-I've left my lists in the control room." He turned and left. As the door slid to behind him, the passenger heard an unexpected click. Suddenly suspicious, he tried the door. It was locked.

Two proctors came for him at Melbourne. As they escorted him through the skyport he could hear remarks from a curious and surprisingly unfriendly crowd: "There's one of the laddies now!" "Him? My word, he doesn't look old." "What price ape glands?" "Don't stare, Herbert." "Why not? Not half bad enough for him."

They took him to the office of the Chief Provost, who invited him to sit down with formal civility. "Now then, sir," the Provost said with a slight local twang, "if you will help us by letting the orderly make a slight injection in your arm--"

"For what purpose?"

"You want to be socially cooperative, I'm sure. It won't hurt you."

"That's beside the point. I insist on an explanation. I am a citizen of the United States."

"So you are, but the Federation has concurrent jurisdiction in any member state-and I am acting under its authority. Now bare your arm, please."

"I refuse. I stand on my civil rights."

"Grab him, lads."

It took four men to do it. Even before the injector touched his skin, his jaw set and a look of sudden agony came into his face. He then sat quietly, listlessly, while the peace officers waited for the drug to take effect. Presently the Provost gently rolled back one of the prisoner's eyelids and said, "I think he's ready. He doesn't weigh over ten stone; it has hit him rather fast. Where's that list of questions?"

A deputy handed it to him; he began, "Horace Foote, do you hear me?'

The man's lips twitched, he seemed about to speak. His mouth opened and blood gushed down his chest.

The Provost bellowed and grabbed the prisoner's head, made quick examination. "Surgeon! He's bitten his tongue half out of his head!"

The captain of the Luna City Shuttle Moonbeam scowled at the message in his hand. "What child's play is this?" He glared at his third officer. "Tell me that, Mister."

The third officer studied the overhead. Fuming, the captain held the message at arm's length, peered at it and read aloud: "-imperative that subject persons be prevented from doing themselves injury. You are directed to render them unconscious without warning them." He shoved the flimsy away from him. "What do they think I'm running? Coventry? Who do they think they are?-telling me in my ship what I must do with my passengers! I won't-so help me, I won't! There's no rule requiring me to . . . is there, Mister?"

The third officer went on silently studying the ship's structure.

The captain stopped pacing. "Purser! Purser! Why is that man never around when I want him?"

"I'm here, Captain."

"About time!"

"I've been here all along, sir."

"Don't argue with me. Here-attend to this." He handed the dispatch to the purser and left.

A shipfitter, supervised by the purser, the hull officer, and the medical officer, made a slight change in the air-conditioning ducts to one cabin; two worried passengers sloughed off their cares under the influence of a nonlethal dose of sleeping gas.

"Another report, sir."

"Leave it," the Administrator said in a tired voice.

"And Councilor Bork Vanning presents his compliments and requests an interview."

"Tell him that I regret that I am too busy."

"He insists on seeing you, sir."

Administrator Ford answered snappishly, "Then you may tell the Honorable Mr. Vanning that be does not give orders in this office!" The aide said nothing; Administrator

Ford pressed his fingertips wearily against his forehead and went on slowly, "Na, Gerry, don't tell him that. Be diplomatic but don't let him in."

"Yes, sir."

When he was alone, the Administrator picked up the report. His eye skipped over official heading, date line, and file number: "Synopsis of Interview with Conditionally Proscribed Citizen Arthur Sperling, full transcript attached. Conditions of Interview: Subject received normal dosage of neosco., having previously received unmeasured dosage of gaseous hypnotal. Antidote--"How the devil could you cure subordinates of wordiness? Was there something in the soul of a career civil servant that cherished red tape? His eye skipped on down:

"-stated that his name was Arthur Sperling of the Foote Family and gave his age as one hundred thirty-seven years. (Subject's apparent age is forty-five plus-or-minus four: see bio report attached.) Subject admitted that he was a member of the Howard Families. He stated that the Families numbered slightly more than one hundred thousand members. He was asked to correct this and it was suggested to him that the correct number was nearer ten thousand. He persisted in his original statement."

The Administrator stopped and reread this part.

He skipped on down, looking for the key part: "-insisted that his long life was the result of his ancestry and had no other cause. Admitted that artificial means had been used to preserve his youthful appearance but maintained firmly that his life expectancy was inherent, not acquired. It was suggested to him that his elder relatives had subjected him without his knowledge to treatment in his early youth to increase his life span. Subject admitted possibility. On being pressed for names of persons who might have performed, or might be performing, such treatments he returned to his original statement that no such treatments exist.

"He gave the names (surprise association procedure) and in some cases the addresses of nearly two hundred members of his kin group not previously identified as such in our records. (List attached) His strength ebbed under this arduous technique and he sank into full apathy from which he could not be roused by any stimuli within the limits of his estimated tolerance (see Bio Report).

"Conclusions under Expedited Analysis, Kelly-Holmes Approximation Method: Subject does not possess and does not believe in the Search Object. Does not remember experiencing Search Object but is mistaken. Knowledge of Search Object is limited to a small group, of the order of twenty. A member of this star group will be located through not more than triple-concatenation elimination search. (Probability of unity, subject to assumptions: first, that topologic social space is continuous and is included in the physical space of the Western Federation and, second, that at least one concatenative path exists between apprehended subjects and star group. Neither assumption can be verified as of this writing, but the first assumption is strongly supported by statistical analysis of the list of names supplied by Subject of previously unsuspected members of Howard kin group, which analysis also supports Subject's estimate of total size of group, and second assumption when taken negatively postulates that star group holding Search Object has been able to apply it with no social-space of contact, an absurdity.)

"Estimated Time for Search: 71 hrs, plus-or-minus 20 hrs. Prediction but not time estimate vouched for by cognizant bureau. Time estimate will be re--"

Ford slapped the report on a stack cluttering his old-fashioned control desk. The dumb fools! Not to recognize a negative report when they saw one-yet they called themselves psychographers!

He buried his face in his hands in utter weariness and frustration.

Lazarus rapped on the table beside him, using the butt of his blaster as a gavel. "Don't interrupt the speaker," he boomed, then added, "Go ahead but cut it short."

Bertram Hardy nodded curtly. "I say again, these mayflies we see around us have no rights that we of the Families are bound to respect. We should deal with them with stea1th, with cunning, with guile, and when we eventually consolidate our position . . . with force! We are no more obligated to respect their welfare than a hunter is obliged to shout a warning at his quarry. The--"

There was a catcall from the rear of the room. Lazarus again banged for order and tried to spot the source. Hardy ploughed steadily on. "The so-called human race has split in two; it is time we admitted it. On one side, Homo vivens, ourselves . . . on the other-Homo moriturus! With the great lizards, with the sabertooth tiger and the bison, their day is done. We would no more mix our living blood with theirs than we would attempt to breed with apes. I say temporize with them, tell them any tale, assure them that we will bathe them in the fountain of youth-gain time, so that when these two naturally antagonistic races join battle, as they inevitably must, the victory will be ours!"

There was no applause but Lazarus could see wavering uncertainty in many faces. Bertram Hardy's ideas ran counter to thought patterns of many years of gentle living yet his words seemed to ring with destiny. Lazarus did not believe in destiny; he believed in . . . well, never mind-but he wondered how Brother Bertram would look with both arms broken.

Eve Barstow got up. "If that is what Bertram means by the survival of the fittest," she said bitterly, "I'll go live with the asocials in Coventry. However, he has offered a plan; I'll have to offer another plan if I won't take his. I won't accept any plan which would have us live at the expense of our poor transient neighbors. Furthermore it is clear to me now that our mere presence, the simple fact of our rich heritage of life, is damaging to the spirit of our poor neighbor. Our longer years and richer opportunities make his best efforts seem futile to him-any effort save a hopeless struggle against an appointed death. Our mere presence saps his strength, ruins his judgment, fills him with panic fear of death.

"So I propose a plan. Let's disclose ourselves, tell all the truth, and ask for our share of the Earth, some little corner where we may live apart. If our poor friends wish to surround it with a great barrier like that around Coventry, so be it-it is better that we never meet face to face."

Some expressions of doubt changed to approval. Ralph Schultz stood up. "Without prejudice to Eve's basic plan, I must advise you that it is my professional opinion that the psychological insulation she proposes cannot be accomplished that easily. As long as we're on this planet they won't be able to put us out of their minds. Modern communications-"

"Then we must move to another planet!" she retorted.

"Where?" demanded Bertram Hardy. "Venus? I'd rather live in a steam bath. Mars? Worn-out and worthless."

"We will rebuild it," she insisted.

"Not in your lifetime nor mine. No, my dear Eve, your tenderheartedness sounds well but it doesn't make sense. There is only one planet in the System fit to live on-we're standing on it." Something in Bertram Hardy's words set off a response in Lazarus Long's brain, then the thought escaped him. Something . . . something that he had heard of said just a day or two ago . . . or was it longer than? Somehow it seemed to be associated with his first trip out into space, too, well over a century ago. Thunderation! it was maddening to have his memory play tricks on him like that--

Then he had it-the starship! The interstellar ship they were putting the finishing touches on out there between Earth and Luna. "Folks," he drawled, "before we table this idea of moving to another planet, let's consider all the possibilities." He waited until he had their full attention. "Did you ever stop to think that not all the planets swing around this one Sun?"

Zaccur Barstow broke the silence. "Lazarus . . . are you making a serious suggestion?"

"Dead serious."

"It does not sound so. Perhaps you had better explain."

"I will." Lazarus faced the crowd. "There's a spaceship hanging out there in the sky, a roomy thing, built to make the long jumps between stars. Why don't we take it and go looking for our own piece of real estate?"

Bertram Hardy was first to recover. "I don't know whether our chairman is lightening the gloom with another of his wisecracks or not, but, assuming that he is serious, I'll answer. My objection to Mars applies to this wild scheme ten times over. I understand that the reckless fools who are actually intending to man that ship expect to make the jump in about a century -then maybe their grandchildren will find something, or maybe they won't. Either way, I'm not interested. I don't care to spend a century locked up in a steel tank, nor do I expect to live that long. I won't buy it."

"Hold it," Lazarus told him. "Where's Andy Libby?"

"Here," Libby answered! standing up.

"Come on down front. Slipstick, did you have anything to do with designing the new Centarus ship?"

"No. Neither this one nor the first one."

Lazarus spoke to the crowd. "That settles it. If that ship didn't have Slipstick's finger in the drive design, then she's not as fast as she could be, not by a good big coefficient. Slipstick, better get busy on the problem, son. We're likely to need a solution."

"But, Lazarus, you mustn't assume that--"

"Aren't there theoretical possibilities?"

"Well, you know there are, but--"

"Then get that carrot top of yours working on it."

"Well . . . all right." Libby blushed as pink as his hair.

"Just a moment, Lazarus." It was Zaccur Barstow. "I like this proposal and I think we should discuss it at length not let ourselves be frightened off by Brother Bertram's distaste for it. Even if Brother Libby fails to find a better means of propulsion-and frankly, I don't think he will; I know a little something of field mechanics-even so, I

shan't let a century frighten me. By using cold-rest and manning the ship in shifts, most of us should be able to complete one hop. There is--"

"What makes you think," demanded Bertram Hardy, "that they'll let us man the ship anyhow?"

"Bert," Lazarus said coldly, "address the chair when you want to sound off. You're not even a Family delegate. Last warning."

"As I was saying," Barstow continued, "there is an appropriateness in the long-lived exploring the stars. A mystic might call it our true vocation." He pondered. "As for the ship Lazarus suggested; perhaps they will not let us have that . . . but the Families are rich. If we need a starship-or ships-we can build them, we can pay for them. I think we had better hope that they will let us do this . . . for it may be that there is no way, not another way of any sort, out of our dilemma which does not include our own extermination."

Barstow spoke these last words softly and slowly, with great sadness. They bit into the company like damp chill. To most of them the problem was so new as not yet to be real; no one had voiced the possible consequence of failing to find a solution satisfactory to the short-lived majority. For their senior trustee to speak soberly of his fear that the Families might be exterminated-hunted down and killed-stirred up in each one the ghost they never mentioned.

"Well," Lazarus said briskly when the silence had grown painful, "before we work this idea over, let's hear what other plan anyone has to offer. Speak up."

A messenger hurried in and spoke to Zaccur Barstow. He looked startled and seemed to ask to have the message repeated. He then hurried across the rostrum to Lazarus, whispered to him. Lazarus looked startled. Barstow hurried out.

Lazarus looked back at the crowd. "We'll take a recess," he announced. "Give you time to think about other plans and time for a stretch and a smoke." He reached for his pouch.

"What's up?" someone called out.

Lazarus struck a cigarette, took a long drag, let it drift out. "We'll have to wait and see," he said. "I don't know. But at least half a dozen of the plans put forward tonight we won't have to bother to vote on. The situation has changed again-how much, I couldn't say."

"What do you mean?"

"Well," Lazarus drawled, "it seems the Federation Administrator wanted to talk to Zack Barstow right away. He asked for him by name . . . and he called over our secret Families' circuit."

"Huh? That's impossible!"

"Yep. So is a baby, son."

Chapter 4

ZACCUR BARSTOW TRIED to quiet himself down as he hurried into the phone booth.

At the other end of the same videophone circuit the Honorable Slayton Ford was doing the same thing-trying to calm his nerves. He did not underrate himself. A long and brilliant public career crowned by years as Administrator for the Council and under the Covenant of the Western Administration had made Ford aware of his own superior ability and unmatched experience; no ordinary man could possibly make him feel at a disadvantage in negotiation.

But this was different.

What would a man be like who had lived more than two ordinary lifetimes? Worse than that-a man who had had four or five times the adult experience that Ford himself had had? Slayton Ford knew that his own opinions had changed and changed again since his own boyhood; he knew that the boy he had been, or even the able young man he had been, would be no match for the mature man he had become. So what would this Barstow be like? Presumably he was the most able, the most astute, of a group all of whom had had much more experience than Ford could possibly have-how could he guess such a man's evaluations, intentions, ways of thinking, his possible resources?

Ford was certain of only one thing: he did not intend to trade Manhattan Island for twenty-four dollars and a case of whisky, nor sell humanity's birthright for a mess of pottage.

He studied Barstow's face as the image appeared in his phone. A good face and strong . . . it would be useless to try to bully this man. And the man looked young-why, he looked younger than Ford himself! The subconscious image of the Administrator's own stern and implacable grandfather faded out of his mind and his tension eased off. He said quietly, "You are Citizen Zaccur Barstow?"

"Yes, Mister Administrator."

"You are chief executive of the Howard Families?"

"I am the current speaker trustee of our Families' Foundation. But I am responsible to my cousins rather than in authority over them."

Ford brushed it aside. "I assume that your position carries with it leadership. I can't negotiate with a hundred thousand people."

Barstow did not blink. He saw the power play in the sudden admission that the administration knew the true numbers of the Families and discounted it. He had already adjusted himself to the shock of learning that the Families' secret headquarters was no longer secret and the still more upsetting fact that the Administrator knew how to tap into their private communication system; it simply proved that one or more Members had been caught and forced to talk.

So it was now almost certain that the authorities already knew every important fact about the Families.

Therefore it was useless to try to bluff-just the same, don't volunteer any information; they might not have all the facts this soon.

Barstow answered without noticeable pause. "What is it you wish to discuss with me, sir?"

"The policy of the Administration toward your kin group. The welfare of yourself and your relatives."

Barstow shrugged. "What can we discuss? The Covenant has been tossed aside and you have been given power to do as you like with us-to squeeze a secret out of us that we don't have. What can we do but pray for mercy?"

"Please!" The Administrator gestured his annoyance. "Why fence with me? We have a problem, you and I. Let's discuss it openly and try to reach a solution. Yes?"

Barstow answered slowly, "I would like to . . . and I believe that you would like to, also. But the problem is based on a false assumption, that we, the Howard Families, know how to lengthen human life. We don't."

"Suppose I tell you that I know there is no such secret?"

"Mmm . . . I would like to believe you. But how can you reconcile that with the persecution of my people? You've been harrying us like rats."

Ford made a wry face. "There is an old, old story about a theologian who was asked to reconcile the doctrine of Divine mercy with the doctrine of infant damnation. 'The Almighty,' he explained, 'finds it necessary to do things in His official and public capacity which in His private and personal capacity He deplores.'"

Barstow smiled in spite of himself. "I see the analogy. Is it actually pertinent?"

"I think it is."

"So. You didn't call me simply to make a headsman's apology?"

"No. I hope not. You keep in touch with politics? I'm sure you must; your position would require it." Barstow nodded; Ford explained at length:

Ford's administration had been the longest since the signing of the Covenant; he had lasted through four Councils. Nevertheless his control was now so shaky that he could not risk forcing a vote of confidence-certainly not over the Howard Families. On that issue his nominal majority was already a minority. If he refused the present decision of the Council, forced it to a vote of confidence, Ford would be out of office and the present minority leader would take over as administrator. "You follow me? I can either stay in office and try to cope with this problem while restricted by a Council directive with which I do not agree . . . or I can drop out and let my successor handle it."

"Surely you're not asking my advice?"

"No, no! Not on that. I've made my decision. The Action-in-Council would have been carried out in any case, either by me or by Mr. Vanning-so I decided to do it. The question is: will I have your help, or will I not?"

Barstow hesitated, while rapidly reviewing Ford's political career in his mind. The earlier part of Ford's long administration had been almost a golden age of statesmanship. A wise and practical man, Ford had shaped into workable rules the principles of human freedom set forth by Novak in the language of the Covenant. It had been a period of good will, of prosperous expansion, of civilizing processes which seemed to be permanent, irreversible.

Nevertheless a setback had come and Barstow understood the reasons at least as well as Ford did. Whenever the citizens fix their attention on one issue to the exclusion of others, the situation is ripe for scalawags, demagogues, ambitious men on horseback. The Howard Families, in all innocence, had created the crisis in public morals from which they now suffered, through their own action, taken years earlier, in letting the short-lived learn of their existence. It mattered not at all that the "secret" did not exist; the corrupting effect did exist. Ford at least understood the true situation- "We'll help," Barstow answered suddenly. "Good. What do you suggest?"

Barstow chewed his lip. "Isn't there some way you can stall off this drastic action, this violation of the Covenant itself?"

Ford shook his head. "It's too late."

"Even if you went before the public and told the citizens, face to face, that you knew that-"

Ford cut him short. "I wouldn't last in office long enough to make the speech. Nor would I be believed. Besides that- understand me clearly, Zaccur Barstow-no matter what sympathy I may have personally for you and your people, I would not do so if I could. This whole matter is a cancer eating into vitals of our society; it must be settled. I have had my hand forced, true . . . but there is no turning back. It must be pressed on to a solution."

In at least one respect Barstow was a wise man; he knew that another man could oppose him and not be a villain. Nevertheless he protested, "My people are being persecuted."

"Your people," Ford said forcefully, "are a fraction of a tenth of one per cent of all the people . . . and I must find a solution for all! I've called on you to find out if you have any suggestions toward a solution for everyone. Do you?"

"I'm not sure," Barstow answered slowly. "Suppose I concede that you must go ahead with this ugly business of arresting my people, of questioning them by unlawful means-I suppose I have no choice about that-"

"You have no choice. Neither have I." Ford frowned. "It will be carried out as humanely as I can manage it-I am not a free agent."

"Thank you. But, even though you tell me it would be useless for you yourself to go to the people, nevertheless you have enormous propaganda means at your disposal. Would it be possible, while we stall along, to build up a campaign to convince the people of the true facts? Prove to them that there is no secret?" Ford answered, "Ask yourself: will it work?"

Barstow sighed. "Probably not."

"Nor would I consider it a solution even if it would! The people-even my trusted assistants-are clinging to their belief in a fountain of youth because the only alternative is too bitter to think about. Do you know what it would mean to them? For them to believe the bald truth?"

"Go on?'

"Death has been tolerable to me only because Death has been the Great Democrat, treating all alike. But now Death plays favorites. Zaccur Barstow, can you understand the bitter, bitter jealousy of the ordinary man of-oh, say 'fifty'- who looks on one of your sort? Fifty years . . . twenty of them he is a child, he is well past thirty before he is skilled in his profession. He is forty before he is established and respected. For not more than the last ten years of his fifty he has really amounted to something."

Ford leaned forward in the screen and spoke with sober emphasis: "And now, when he has reached his goal, what is his prize? His eyes are failing him, his bright young strength is gone, his heart and wind are 'not what they used to be.' He is not senile yet . . . but he feels the chill of the first frost. He knows what is in store for him. He knows-he knows!

"But it was inevitable and each man learned to be resigned to it."

"Now you come along," Ford went on bitterly. "You shame him in his weakness, you humble him before his children. He dares not plan for the future; you blithely undertake plans that will not mature for fifty years-for a hundred. No matter what success

he has achieved, what excellence he has attained, you will catch up with him, pass him-outlive him. In his weakness you are kind to him.

"Is it any wonder that he hates you?"

Barstow raised his head wearily. "Do you hate me, Slayton Ford?"

"No. No, I cannot afford to hate anyone. But I can tell you this," Ford added suddenly, "had there been a secret, I would have it out of you if I had to tear you to pieces!"

"Yes. I understand that." Barstow paused to think. "There is little that we of the Howard Families can do. We did not plan it this way; it was planned for us. But there is one thing we can offer."

"Yes?"

Barstow explained.

Ford shook his head. "Medically what you suggest is feasible and I have no doubt that a half interest in your heritage would lengthen the span of human life. But even if women were willing to accept the germ plasm of your men-I do not say that they would-it would be psychic death for all other men. There would be an outbreak of frustration and hatred that would split the human race to ruin. No, no matter what we wish, our customs are what they are. We can't breed men like animals; they won't stand for it."

"I know it," agreed Barstow, "but it is all we have to offer . . . a share in our fortune through artificial impregnation."

"Yes. I suppose I should thank you but I feel no thanks and I shan't. Now let's be practical. Individually you old ones are doubtless honorable, lovable men. But as a group you are as dangerous as carriers of plague. So you must be quarantined."

Barstow nodded. "My cousins and I had already reached that conclusion."

Ford looked relieved. "I'm glad you're being sensible about it."

"We can't help ourselves. Well? A segregated colony? Some remote place that would be a Coventry of our own? Madagascar, perhaps? Or we might take the British Isles, build them up again and spread from there into Europe as the radioactivity died down."

Ford shook his head. "Impossible. That would simply leave the problem for my grandchildren to solve. By that time you and yours would have grown in strength; you might defeat us. No, Zaccur Barstow, you and your kin must leave this planet entirely!"

Barstow looked bleak. "I knew it would come to that. Well where shall we go?"

"Take your choice of the Solar System. Anywhere you like."

"But where? Venus is no prize, but even if we chose it, would they accept us? The Venerians won't take orders from Earth; that was settled in 2020. Yes, they now accept screened immigrants under the Four Planets Convention but would they accept a hundred thousand whom Earth found too dangerous to keep? I doubt it."

"So do I. Better pick another planet."

"What planet? In the whole system there is not another body that will support human life as it is. It would take almost superhuman effort, even with unlimited money and the best of modern engineering, to make the most promising of them fit for habitation."

"Make the effort. We will be generous with help."

"I am sure you would. But is that any better solution in the long run than giving us a reservation on Earth? Are you going to put a stop to space travel?"

Ford sat up suddenly. "Oh! I see your thought. I had not followed it through, but let's face it. Why not? Would it not be better to give up space travel than to let this situation degenerate into open war? It was given up once before."

"Yes, when the Venerians threw off their absentee landlords. But it started up again and Luna City is rebuilt and ten times more tonnage moves through the sky than ever did before. Can you stop it? If you can, will it stay stopped?"

Ford turned it over and over in his mind. He could not stop space travel, no administration could. But could an interdict be placed on whatever planet these oldsters were shipped to? And would it help? One generation, two, three . . . what difference would it make? Ancient Japan had tried some solution like that; the foreign devils had come sailing in anyhow. Cultures could not be kept apart forever, and when they did come in contact, the hardier displaced the weaker; that was a natural law.

A permanent and effective quarantine was impossible. That left only one answer-an ugly one. But Ford was toughminded; he could accept what was necessary. He started making plans, Barstow's presence in the screen forgotten. Once he gave the Chief Provost the location of the Howard Families headquarters it should be reduced in an hour, two at the most unless they had extraordinary defenses-but anywise it was just a matter of time. From those who would be arrested at their headquarters it should be possible to locate and arrest every other member of their group. With luck he would have them all in twenty-four to forty-eight hours.

The only point left undecided in his mind was whether to liquidate them all, or simply to sterilize them. Either would be a final solution and there was no third solution. But which was the more humane?

Ford knew that this would end his career. He would leave office in disgrace, perhaps be sent to Coventry, but he gave it no thought; he was so constituted as to be unable to weigh his own welfare against his concept of his public duty.

Barstow could not read Ford's mind but he did sense that Ford had reached a decision and he surmised correctly how bad that decision must be for himself and his kin. Now was the time, he decided, to risk his one lone trump.

"Mister Administrator---"

"Eh? Oh, sorry! I was preoccupied." That was a vast understatement; he was shockingly embarrassed to find himself still facing a man he had just condemned to death. He gathered formality about him like a robe. "Thank you, Zaccur Barstow, for talking with me. I am sorry that-"

"Mister Administrator!"

"Yes?"

"I propose that you move us entirely out of the Solar System."

"What?" Ford blinked. "Are you speaking seriously?"

Barstow spoke rapidly, persuasively, explaining Lazarus Long's half-conceived scheme, improvising details as he went along, skipping over obstacles and emphasizing advantages.

"It might work," Ford at last said slowly. "There are difficulties you have not mentioned, political difficulties and a terrible hazard of time. Still, it might." He stood up. "Go back to your people. Don't spring this on them yet. I'll talk with you later."

Barstow walked back slowly while wondering what he could tell the Members. They would demand a full report; technically he had no right to refuse. But he was strongly inclined to cooperate with the Administrator as long as there was any chance of a favorable outcome. Suddenly making up his mind, he turned, went to his office, and sent for Lazarus.

"Howdy, Zack," Long said as he came in. "How'd the palaver go?"

"Good and bad," Barstow replied. "Listen-" He gave him a brief, accurate résumé. "Can you go back in there and tell them something that will hold them?"

"Mmm . . . reckon so."

"Then do it and hurry back here."

They did not like the stall Lazarus gave them. They did not want to keep quiet and they did not want to adjourn the meeting. "Where is Zaccur?"-"We demand a report!"-"Why all the mystification?"

Lazarus shut them up with a roar. "Listen to me, you damned idiots! Zack'll talk when he's ready-don't joggle his elbow. He knows what he's doing."

A man near the back stood up. "I'm going home!"

"Do that," Lazarus urged sweetly. "Give my love to the proctors."

The man looked startled and sat down.

"Anybody else want to go home?" demanded Lazarus. "Don't let me stop you. But it's time you bird-brained dopes realized that you have been outlawed. The only thing that stands between you and the proctors is Zack Barstow's ability to talk sweet to the Administrator. So do as you like the meeting's adjourned."

"Look, Zack," said Lazarus a few minutes later, "let's get this straight. Ford is going to use his extraordinary powers to help us glom onto the big ship and make a getaway. Is that right?"

"He's practically committed to it."

"Hmmm- He'll have to do this while pretending to the Council that everything he does is just a necessary step in squeezing the 'secret' out of us-he's going to double-cross 'em. That right?"

"I hadn't thought that far ahead. I-"

"But that's true, isn't it?"

"Well . . . yes, it must be true."

"Okay. Now, is our boy Ford bright enough to realize what he is letting himself in for and tough enough to go through with it?"

Barstow reviewed what he knew of Ford and added his impressions from the interview. "Yes," he decided, "he knows and he's strong enough to face it."

"All right. Now how about you, pal? Are you up to it, too?" Lazarus' voice was accusing.

"Me? What do you mean?"

"You're planning on double-crossing your crowd, too, aren't you? Have you got the guts to go through with it when the going gets tough?"

"I don't understand you, Lazarus," Barstow answered worriedly. "I'm not planning to deceive anyone-at least, no member of the Families."

"Better look at your cards again," Lazarus went on remorselessly. "Your part of the deal is to see to it that every man, woman and child takes part in this exodus. Do you

expect to sell the idea to each one of them separately and get a hundred thousand people to agree? Unanimously? Shucks, you couldn't get that many to whistle 'Yankee Doodle' unanimously."

"But they will have to agree," protested Barstow. "They have no choice. We either emigrate, or they hunt us down and kill us. I'm certain that is what Ford intends to do. And he will."

"Then why didn't you walk into the meeting and tell 'em that? Why did you send me in to give 'em a stall?"

Barstow rubbed a hand across his eyes. "I don't know."

"I'll tell you why," continued Lazarus. "You think better with your hunches than most men do with the tops of their minds. You sent me in there to tell 'em a tale because you knew damn well the truth wouldn't serve. If you told 'em it was get out or get killed, some would get panicky and some would get stubborn. And some old-woman-in-kilts would decide to go home and stand on his Covenant rights. Then he'd spill the scheme before it ever dawned on him that the government was playing for keeps. That's right, isn't it?"

Barstow shrugged and laughed unhappily. "You're right. I didn't have it figured out but you're absolutely right."

"But you did have it figured out," Lazarus assured him. "You had the right answers. Zack, I like your hunches; that's why I'm stringing along. All right, you and Ford are planning to pull a whizzer on every man jack on this globe-I'm asking you again: have you got the guts to see it through?"

Chapter 5

THE MEMBERS STOOD AROUND in groups, fretfully. "I can't understand it," the Resident Archivist was saying to a worried circle around her. "The Senior Trustee never interfered in my work before. But he came bursting into my office with that Lazarus Long behind him and ordered me out."

"What did he say?" asked one of her listeners.

"Well, I said, 'May I do you a service, Zaccur Barstow? and be said, 'Yes, you may. Get out and take your girls with you.' Not a word of ordinary courtesy!"

"A lot you've got to complain about," another voice added gloomily. It was Cecil Hedrick, of the Johnson Family, chief communications engineer. "Lazarus Long paid a call on me, and he was a damned sight less polite."

"What did he do?"

"He walks into the communication cell and tells me he is going to take over my board-Zaccur's orders. I told him that nobody could touch my burners but me and my operators, and anyhow, where was his authority? You know what he did? You won't believe it but he pulled a blaster on me."

"You don't mean it!"

"I certainly do. I tell you, that man is dangerous. He ought to go for psycho adjustment. He's an atavism if I ever saw one."

Lazarus Long's face stared out of the screen into that of the Administrator. "Got it all canned?" he demanded.

Ford cut the switch on the facsimulator on his desk. "Got it all," he confirmed.

"Okay," the image of Lazarus replied. "I'm clearing." As the screen went blank Ford spoke into his interoffice circuit.

"Have the High Chief Provost report to me at once-in corpus."

The public safety boss showed up as ordered with an expression on his lined face in which annoyance struggled with discipline. He was having the busiest night of his career, yet the Old Man had sent orders to report in the flesh. What the devil were viewphones for, anyway, he thought angrily-and asked himself why he had ever taken up police work. He rebuked his boss by being coldly formal and saluting unnecessarily. "You sent for me, sir."

Ford ignored it. "Yes, thank you. Here." He pressed a stud a film spool popped out of the facsimulator. "This is a complete list of the Howard Families. Arrest them."

"Yes, sir." The Federation police chief stared at the spool and debated whether or not to ask how it had been obtained-it certainly hadn't come through his office . . . did the Old Man have an intelligence service he didn't even know about?

"It's alphabetical, but keyed geographically," the Administrator was saying. "After you put it through sorters, send the-no, bring the original back to me. You can stop the psycho interviews, too," he added. "Just bring them in and hold them. I'll give you more instructions later."

The High Chief Provost decided that this was not a good time to show curiosity. "Yes, sir." He saluted stiffly and left.

Ford turned back to his desk controls and sent word that he wanted to see the chiefs of the bureaus of land resources and of transportation control. On afterthought he added the chief of the bureau of consumption logistics.

Back in the Families' Seat a rump session of the trustees was meeting; Barstow was absent. "I don't like it," Andrew Weatherall was saying. "I could understand Zaccur deciding to delay reporting to the Members but I had supposed that he simply wanted to talk to us first. I certainly did expect him to consult us. What do you make of it, Philip?"

Philip Hardy chewed his lip. "I don't know. Zaccur's got a head on his shoulders . . . but it certainly seems to me that he should have called us together and advised with us. Has he spoken with you, Justin?"

"No, he has not," Justin Foote answered frigidly.

"Well, what should we do? We can't very well call him in and demand an accounting unless we are prepared to oust him from office and if he refuses. I, for one, am reluctant to do that."

They were still discussing it when the proctors arrived.

Lazarus heard the commotion and correctly interpreted it-no feat, since he had information that his brethren lacked. He was aware that he should submit peacefully and conspicuously to arrest-set a good example. But old habits die hard; he postponed the inevitable by ducking into the nearest men's 'fresher.

It was a dead end. He glanced at the air duct-no, too small. While thinking he fumbled in his pouch for a cigarette; his hand found a strange object, he pulled it out. It was the brassard he bad "borrowed" from the proctor in Chicago.

When the proctor working point of the mop-squad covering that wing of the Seat stuck his head into that 'fresher, he found another "proctor" already there. "Nobody in here," announced Lazarus. "I've checked it."

"How the devil did you get ahead of me?'

"Around your flank. Stoney Island Tunnel and through their air vents." Lazarus trusted that the real cop would be unaware that there was no Stoney Island Tunnel "Got a cigarette on you?"

"Huh? This is no time to catch a smoke."

"Shucks," said Lazarus, "my legate is a good mile away."

"Maybe so," the proctor replied, "but mine is right behind us."

"So? Well, skip it-I've got something to tell him anyhow." Lazarus started to move past but the proctor did not get out of his way. He was glancing curiously at Lazarus' kilt. Lazarus had turned it inside out and its blue lining made a fair imitation of a proctor's service uniform-if not inspected closely.

"What station did you say you were from?" inquired the proctor.

"This one," answered Lazarus and planted a short jab under the man's breastbone. Lazarus' coach in rough-and-tumble had explained to him that a solar plexus blow was harder to dodge than one to the jaw; the coach bad been dead since the roads strike of 1966, his skill lived on.

Lazarus felt more like a cop with a proper uniform kilt and a bandolier of paralysis bombs slung under his left arm. Besides, the proctor's kilt was a better fit. To the right the passage outside led to the Sanctuary and a dead end; he went to the left by Hobson's choice although he knew he would run into his unconscious benefactor's legate. The passage gave into a hall which was crowded with Members herded into a group of proctors. Lazarus ignored his kin and sought out the harassed officer in charge. "Sir," he reported, saluting smartly, "There's sort of a hospital back there. You'll need fifty or sixty stretchers."

"Don't bother me, tell your legate. We've got our hands full."

Lazarus almost did not answer; he had caught Mary Sperling's eye in the crowd-she stared at him and looked away. He caught himself and answered, "Can't tell him, sir. Not available."

"Well, go on outside and tell the first-aid squad."

"Yes, sir." He moved away, swaggering a little, his thumbs hooked in the band of his kilt. He was far down the passage leading to the transbelt tunnel serving the Waukegan outlet when he heard shouts behind him. Two proctors were running to overtake him.

Lazarus stopped in the archway giving into the transbelt tunnel and waited for them. "What's the trouble?' he asked easily as they came up.

"The legate--"began one. He got no further; a paralysis bomb tinkled and popped at his feet. He looked surprised as the radiations wiped all expression from his face; his mate fell across him.

Lazarus waited behind a shoulder of the arch, counted seconds up to fifteen: "Number one jet fire! Number two jet fire! Number three jet fire!"-added a couple to be sure the paralyzing effect had died away. He had cut it finer than he liked. He had not ducked quite fast enough and his left foot tingled from exposure.

He then checked. The two were unconscious, no one else was in sight. He mounted the transbelt. Perhaps they had not been looking for him in his proper person, perhaps no one had given him away. But he did not hang around to find out. One thing he was damn' well certain of, he told himself, if anybody had squealed on him, it wasn't Mary Sperling.

It took two more parabombs and a couple of hundred words of pure fiction to get him out into the open air. Once he was there and out of immediate observation the brassard and the remaining bombs went into his pouch and the bandolier ended up behind some bushes; he then looked up a clothing store in Waukegan.

He sat down in a sales booth and dialed the code for kilts. He let cloth designs flicker past in the screen while he ignored the persuasive voice of the catalogue until a pattern showed up which was distinctly unmilitary and not blue, whereupon he stopped the display and punched an order for his size. He noted the price, tore an open-credit voucher from his wallet, stuck it into the machine and pushed the switch. Then he enjoyed a smoke while the tailoring was done.

Ten minutes later he stuffed the proctor's kilt into the refuse hopper of the sales booth and left, nattily and loudly attired. He had not been in Waukegan the past century but he found a middle-priced autel without drawing attention by asking questions, dialed its registration board for a standard suite and settled down for seven hours of sound sleep.

He breakfasted in his suite, listening with half an ear to the news box; he was interested, in a mild way, in hearing what might be reported concerning the raid on the Families. But it was a detached interest; he had already detached himself from it in his own mind. It had been a mistake, he now realized, to get back in touch with the Families-a darn good thing he was clear of it all with his present public identity totally free of any connection with the whing-ding.

A phrase caught his attention: "-including Zaccur Barstow, alleged to be their tribal chief.

"The prisoners are being shipped to a reservation in Oklahoma, near the ruins of the Okla-Orleans road city about twenty-five miles east of Harriman Memorial Park. The Chief Provost describes it as a 'Little Coventry,' and has ordered all aircraft to avoid it by ten miles laterally. The Administrator could not be reached for a statement but a usually reliable source inside the administration informs us that the mass arrest was accomplished in order to speed up the investigations whereby the administration expects to obtain the 'Secret of the Howard Families'-their techniques for indefinitely prolonging life. This forthright action in arresting and transporting every member of the outlaw group is expected to have a salutary effect in breaking down the resistance of their leaders to the legitimate demands of society. It will bring home forcibly to them that the civil rights enjoyed by decent citizens must not be used as a cloak behind which to damage society as a whole.

"The chattels and holdings of the members of this criminal conspiracy have been declared subject to the Conservator General and will be administered by his agents during the imprisonment of-"

Lazarus switched it off. "Damnation!" he thought. "Don't fret about things you can't help." Of course, he had expected to be arrested himself . . . but he had escaped. That was that. It wouldn't do the Families any good for him to turn himself in-and besides, he owed the Families nothing, not a tarnation thing.

Anyhow, they were better off all arrested at once and quickly placed under guard. If they had been smelled out one at a time, anything could have happened-lynchings, even pogroms. Lazarus knew from hard experience how close under the skin lay lynch law and mob violence in the most sweetly civilized; that was why he had advised Zack to rig it-that and the fact that Zack and the Administrator had to have the Families in one compact group to stand a chance of carrying out their scheme. They were well off . . . and no skin off his nose.

But he wondered how Zack was getting along, and what he would think of Lazarus' disappearance. And what Mary Sperling thought-it must have been a shock to her when he turned up making a noise like a proctor. He wished he could straighten that out with her.

Not that it mattered what any of them thought. They would all either be light-years away very soon . . . or dead. A closed book.

He turned to the phone and called the post office. "Captain Aaron Sheffield," he announced, and gave his postal number. "Last registered with Goddard Field post office. Will you please have my mail sent to-" He leaned closer and read the code number from the suite's mail receptacle.

"Service," assented the voice of the clerk. "Right away, Captain."

"Thank you."

It would take a couple of hours, he reflected, for his mail to catch up with him-a half hour in trajectory, three times that in fiddle-faddle. Might as well wait here . . . no doubt the search for him had lost itself in the distance but there was nothing in Waukegan he wanted. Once the mail showed up he would hire a U-push-it and scoot down to--

To where? What was he going to do now?

He turned several possibilities over in his mind and came at last to the blank realization that there was nothing, from one end of the Solar System to the other, that he really wanted to do.

It scared him a little. He had once heard, and was inclined to credit, that a loss of interest in living marked the true turning point in the battle between anabolisim and catabolism-old age. He suddenly envied normal short-lived people-at least they could go make nuisances of themselves to their children. Filial affection was not customary among Members of the Families; it was not a feasible relationship to maintain for a century or more. And friendship, except between Members, was bound to be regarded as a passing and shallow matter. There was no one whom Lazarus wanted to see.

Wait a minute . . . who was that planter on Venus? The one who knew so many folk songs and who was so funny when he was drunk? He'd go look him up. It would make a nice hop and it would be fun, much as he disliked Venus.

Then he recalled with cold shock that he had not seen the man for-how long? In any case, he was certainly dead by now.

Libby had been right, he mused glumly, when he spoke of the necessity for a new type of memory association for the long-lived. He hoped the lad would push ahead with the necessary research and come up with an answer before Lazarus was reduced to

counting on his fingers. He dwelt on the notion for a minute or two before recalling that he was most unlikely ever to see Libby again.

The mail arrived and contained nothing of importance. He was not surprised; he expected no personal letters. The spools of advertising went into the refuse chute; he read only one item, a letter from Pan-Terra Docking Corp. telling him that his convertible cruiser I Spy had finished her overhaul and had been moved to a parking dock, rental to start forthwith. As instructed, they had not touched the ship's astrogational controls-was that still the Captain's pleasure?

He decided to pick her up later in the day and head out into space. Anything was better than sitting Earthbound and admitting that he was bored.

Paying his score and finding a jet for hire occupied less than twenty minutes. He took off and headed for Goddard Field, using the low local-traffic level to avoid entering the control pattern with a flight plan. He was not consciously avoiding the police because he had no reason to think that they could be looking for "Captain Sheffield"; it was simply habit, and it would get him to Goddard Field soon enough.

But long before he reached there, while over eastern Kansas, he decided to land and did so.

He picked the field of a town so small as to be unlikely to rate a full-time proctor and there he sought out a phone booth away from the field. Inside it, he hesitated. How did you go about calling up the head man of the entire Federation-and get him? If he simply called Novak Tower and asked for Administrator Ford, he not only would not be put through to him but his call would be switched to the Department of Public Safety for some unwelcome inquiries, sure as taxes.

Well, there was only one way to beat that, and that was to call the Department of Safety himself and, somehow, get the Chief Provost on the screen-after that he would play by ear.

"Department of Civil Safety," a voice answered. "What service, citizen?"

"Service to you," he began in his best control-bridge voice. "I am Captain Sheffield. Give me the Chief." He was not overbearing; his manner simply assumed obedience.

Short silence-- "What is it about, please?"

"I said I was Captain Sheffield." This time Lazarus' voice showed restrained annoyance.

Another short pause-- "I'll connect you with Chief Deputy's office," the voice said doubtfully.

This time the screen came to life. "Yes?" asked the Chief Deputy, looking him over.

"Get me the Chief-hurry."

"What's it about?"

"Good Lord, man-get me the Chief! I'm Captain Sheffield!"

The Chief Deputy must be excused for connecting him; he had had no sleep and more confusing things had happened in the last twenty-four hours than he had been able to assimilate. When the High Chief Provost appeared in the screen, Lazarus spoke first. "Oh, there you are! I've had the damnedest time cutting through your red tape. Get me the Old Man and move! Use your closed circuit."

"What the devil do you mean? Who are you?"

"Listen, brother," said Lazarus in tones of slow exasperation, "I would not have routed through your damned hidebound department if I hadn't been in a jam. Cut me in to the Old Man. This is about the Howard Families."

The police chief was instantly alert. "Make your report."

"Look," said Lazarus in tired tones, "I know you would like to look over the Old Man's shoulder, but this isn't a good time to try. If you obstruct me and force me to waste two hours by reporting in corpus, I will. But the Old Man will want to know why and you can bet your pretty parade kit, I'll tell him."

The Chief Provost decided to take a chance-cut this character in on a three-way; then, if the Old Man didn't burn this joker off the screen in about three seconds, he'd know he had played safe and guessed lucky. If he did-well, you could always blame it on a cross-up in communications. He set the combo.

Administrator Ford looked flabbergasted when he recognized Lazarus in the screen. "You?' he exclaimed. "How on Earth--Did Zaccur Barstow--"

"Seal your circuit!" Lazarus cut in.

The Chief Provost blinked as his screen went dead and silent. So the Old Man did have secret agents outside the department . . . interesting-and not to be forgotten.

Lazarus gave Ford a quick and fairly honest account of how he happened to be at large, then added, "So you see, I could have gone to cover and escaped entirely. In fact I still can. But I want to know this: is the deal with Zaccur Barstow to let us emigrate still on?"

"Yes, it is."

"Have you figured out how you are going to get a hundred thousand people inboard the New Frontiers without tipping your hand? You can't trust your own people, you know that."

"I know. The present situation is a temporary expedient while we work it out."

"And I'm the man for the job. I've got to be, I'm the only agent on the loose that either one of you can afford to trust. Now listen-"

Eight minutes later Ford was nodding his head slowly and saying, "It might work. It might. Anyway, you start your preparations. I'll have a letter of credit waiting for you at Goddard."

"Can you cover your tracks on that? I can't flash a letter of credit from the Administrator; people would wonder."

"Credit me with some intelligence. By the time it reaches you it will appear to be a routine banking transaction."

"Sorry. Now how can I get through to you when I need to?"

"Oh, yes-note this code combination." Ford recited it slowly. "That puts you through to my desk without relay. No, don't write it down; memorize it."

"And how can I talk to Zack Barstow?

"Call me and I'll hook you in. You can't call him directly unless you can arrange a sensitive circuit."

"Even if I could, I can't cart a sensitive around with me. Well, cheerio-I'm clearing."

"Good luck!"

Lazarus left the phone booth with restrained haste and hurried back to reclaim his hired ship. He did not know enough about current police practice to guess whether or not

the High Chief Provost had traced the call to the Administrator; he simply took it for granted because he himself would have done so in the Provosts' shoes. Therefore the nearest available proctor was probably stepping on his heels-time to move, time to mess up the trail a little.

He took off again and headed west, staying in the local, uncontrolled low level until he reached a cloud bank that walled the western horizon. He then swung back and cut air for Kansas City, staying carefully under the speed limit and flying as low as local traffic regulations permitted. At Kansas City he turned his ship in to the local U-push-it agency and flagged a ground taxi, which carried him down the controlway to Joplin. There he boarded a local jet bus from St. Louis without buying a ticket first, thereby insuring that his flight would not be recorded until the bus's trip records were turned in on the west coast.

Instead of worrying he spent the time making plans.

One hundred thousand people with an average mass of a hundred and fifty-no, make it a hundred and sixty pounds, Lazarus reconsidered-a hundred and sixty each made a load of sixteen million pounds, eight thousand tons. The I Spy could boost such a load against one gravity but she would be as logy as baked beans, It was out of the question anyhow; people did not stow like cargo; the I Spy could lift that dead weight-but "dead" was the word, for that was what they would be.

He needed a transport.

Buying a passenger ship big enough to ferry the Families from Earth up to where the New Frontiers hung in her construction orbit was not difficult; Four Planets Passenger Service would gladly unload such a ship at a fair price. Passenger trade competition being what it was, they were anxious to cut their losses on older ships no longer popular with tourists. But a passenger ship would not do; not only would there be unhealthy curiosity in what he intended to do with such a ship, but-and this settled it-he could not pilot it single-handed. Under the Revised Space Precautionary Act, passenger ships were required to be built for human control throughout on the theory that no automatic safety device could replace human judgment in an emergency.

It would have to be a freighter.

Lazarus knew the best place to find one. Despite efforts to make the Moon colony ecologically self-sufficient, Luna City still imported vastly more tonnage than she exported. On Earth this would have resulted in "empties coming back"; in space transport it was sometimes cheaper to let empties accumulate, especially on Luna where an empty freighter was worth more as metal than it had cost originally as a ship back Earthside.

He left the bus when it landed at Goddard City, went to the space field, paid his bills, and took possession of the I Spy, filed a request for earliest available departure for Luna. The slot he was assigned was two days from then, but Lazarus did not let it worry him; he simply went back to the docking company and indicated that he was willing to pay liberally for a swap, in departure time. In twenty minutes he had oral assurance that he could boost for Luna that evening.

He spent the remaining several hours in the maddening red tape of interplanetary clearance. He first picked up the letter of credit Ford had promised him and converted it into cash. Lazarus would have been quite willing to use a chunk of the cash to speed up his processing just as he had paid (quite legally) for a swap in slot with another ship. But he found himself unable to do so. Two centuries of survival had taught him that a bribe

must be offered as gently and as indirectly as a gallant suggestion is made to a proud lady; in a very few minutes he came to the glum conclusion that civic virtue and public honesty could be run into the ground-the functionaries at Goddard Field seemed utterly innocent of the very notion of cumshaw, squeeze, or the lubricating effect of money in routine transactions. He admired their incorruptibility; he did not have to like it-most especially when filling out useless forms cost him the time he had intended to devote to a gourmet's feast in the Skygate Room.

He even let himself be vaccinated again rather than go back to the I Spy and dig out the piece of paper that showed he had been vaccinated on arrival Earthside a few weeks earlier.

Nevertheless, twenty minutes before his revised slot time, he lay at the controls of the I Spy, his pouch bulging with stamped papers and his stomach not bulging with the sandwich he had managed to grab. He had worked out the "Hohmann's-S" trajectory he would use; the results had been fed into the autopilot. All the lights on his board were green save the one which would blink green when field control started his count down. He waited in the warm happiness that always filled him when about to boost.

A thought hit him and he raised up against his straps. Then he loosened the chest strap and sat up, reached for his copy of the current Terra Pilot and Traffic Hazards Supplement. Mmm...

New Frontiers hung in a circular orbit of exactly twenty-four hours, keeping always over meridian 106 degrees west at declination zero at a distance from Earth center of approximately twenty-six thousand miles.

Why not pay her a call, scout out the lay of the land?

The I Spy, with tanks topped off and cargo spaces empty, had many mile-seconds of reserve boost. To be sure, the field had cleared him for Luna City, not for the interstellar ship . . . but, with the Moon in its present phase, the deviation from his approved flight pattern would hardly show on a screen, probably would not be noticed until the film record was analyzed at some later time-at which time Lazarus would receive a traffic citation, perhaps even have his license suspended. But traffic tickets had never worried him . . . and it was certainly worthwhile to reconnoitre.

He was already setting up the problem in his ballistic calculator. Aside from checking the orbit elements of the New Frontiers in the Terra Pilot Lazarus could have done it in his sleep; satellite-matching maneuvers were old hat for any pilot and a doubly-tangent trajectory for a twenty-four hour orbit was one any student pilot knew by heart.

He fed the answers into his autopilot during the count down, finished with three minutes to spare, strapped himself down again and relaxed as the acceleration hit him. When the ship went into free fall, he checked his position and vector via the field's transponder. Satisfied, he locked his board, set the alarm for rendezvous, and went to sleep.

Chapter 6

ABOUT FOUR HOURS LATER the alarm woke him. He switched it off; it continued to ring-a glance at his screen showed him why. The Gargantuan cylindrical

body of the New Frontiers lay close aboard. He switched off the radar alarm circuit as well and completed matching with her by the seat of his pants, not bothering with the ballistic calculator. Before he had completed the maneuver the communications alarm started beeping. He slapped a switch; the rig hunted frequencies and the vision screen came to life. A man looked at him. "New Frontiers calling: what ship are you?"

"Private vessel I Spy, Captain Sheffield. My compliments to your commanding officer. May I come onboard to pay a call?"

They were pleased to have visitors. The ship was completed save for inspection, trials, and acceptance; the enormous gang which had constructed her had gone to Earth and there was no one aboard but the representatives of the Jordan Foundation and a half dozen engineers employed by the corporation which had been formed to build the ship for the foundation. These few were bored with inactivity, bored with each other, anxious to quit marking time and get back to the pleasures of Earth; a visitor was a welcome diversion.

When the I Spy's airlock had been sealed to that of the big ship, Lazarus was met by the engineer in charge-technically "captain" since the New Frontiers was a ship under way even though not under power. He introduced himself and took Lazarus on a tour of the ship. They floated through miles of corridors, visited laboratories, storerooms, libraries containing hundreds of thousands of spools, acres of hydroponic tanks for growing food and replenishing oxygen, and comfortable, spacious, even luxurious quarters for a crew colony of ten thousand people. "We believe that the Vanguard expedition was somewhat undermanned," the skipper-engineer explained. "The socio-dynamicists calculate that this colony will be able to maintain the basics of our present level of culture."

"Doesn't sound like enough," Lazarus commented. "Aren't there more than ten thousand types of specialization?"

"Oh, certainly! But the idea is to provide experts in all basic arts and indispensable branches of knowledge. Then, as the colony expands, additional specializations can be added through the aid of the reference libraries-anything from tap-dancing to tapestry weaving. That's the general idea though it's out of my line. Interesting subject, no doubt, for those who like it."

"Are you anxious to get started?" asked Lazarus.

The man looked almost shocked. "Me? D'you mean to suggest that I would go in this thing? My dear sir, I'm an engineer, not a damn' fool."

"Sorry."

"Oh, I don't mind a reasonable amount of spacing when there's a reason for it-I've been to Luna City more times than I can count and I've even been to Venus. But you don't think the man who built the Mayflower sailed in her, do you? For my money the only thing that will keep these people who signed up for it from going crazy before they get there is that it's a dead cinch they're all crazy before they start."

Lazarus changed the subject. They did not dally in the main drive space, nor in the armored cell housing the giant atomic converter, once Lazarus learned that they were unmanned, fully-automatic types. The total absence of moving parts in each of these divisions, made possible by recent developments in parastatics, made their inner workings of intellectual interest only, which could wait. What Lazarus did want to see

was the control room, and there he lingered, asking endless questions until his host was plainly bored and remaining only out of politeness.

Lazarus finally shut up, not because he minded imposing on his host but because he was confident that he had learned enough about the controls to be willing to chance conning the ship.

He picked up two other important data before he left the ship: in nine Earth days the skeleton crew was planning a weekend on Earth, following which the acceptance trials would be held. But for three days the big ship would be empty, save possibly for a communications operator-Lazarus was too wary to be inquisitive on this point. But there would be no guard left in her because no need for a guard could be imagined. One might as well guard the Mississippi River.

The other thing he learned was how to enter the ship from the outside without help from the inside; he picked that datum up through watching the mail rocket arrive just as he was about to leave the ship.

At Luna City, Joseph McFee, factor for Diana Terminal Corp., subsidiary of Diana Freight Lines, welcomed Lazarus warmly. "Well! Come in, Cap'n, and pull up a chair. What'll you drink?" He was already pouring as he talked-tax-free paint remover from his own amateur vacuum still. "Haven't seen you in . . . well, too long. Where d'you raise from last and what's the gossip there? Heard any new ones?"

"From Goddard," Lazarus answered and told him what the skipper had said to the V.I.P. McFee answered with the one about the old maid in free fall, which Lazarus pretended not to have heard. Stories led to politics, and McFee expounded his notion of the "only possible solution" to the European questions, a solution predicated on a complicated theory of McFee's as to why the Covenant could not be extended to any culture below a certain level of industrialization. Lazarus did not give a hoot either way but he knew better than to hurry McFee; he nodded at the right places, accepted more of the condemned rocket juice when offered, and waited for the right moment to come to the point.

"Any company ships for sale now, Joe?"

"Are there? I should hope to shout. I've got more steel sitting out on that plain and cluttering my inventory than I've had in ten years. Looking for some? I can make you a sweet price."

"Maybe. Maybe not. Depends on whether you've got what I want."

"You name it, I've got it. Never saw such a dull market. Some days you can't turn an honest credit." McFee frowned. "You know what the trouble is? Well, I'll tell you-it's this Howard Families commotion. Nobody wants to risk any money until he knows where he stands. How can a man make plans when he doesn't know whether to plan for ten years or a hundred? You mark my words: if the administration manages to sweat the secret loose from those babies, you'll see the biggest boom in long-term investments ever. But if not well, long-term holdings won't be worth a peso a dozen and there will be an eat-drink-and-be-merry craze that will make the Reconstruction look like a tea party."

He frowned again. "What kind of metal you looking for?"

"I don't want metal, I want a ship."

McFee's frown disappeared, his eyebrows shot up. "So? What sort?"

"Can't say exactly. Got time to look 'em over with me?"

They suited up and left the dome by North Tunnel, then strolled around grounded ships in the long, easy strides of low gravity. Lazarus soon saw that just two ships had both the lift and the air space needed. One was a tanker and the better buy, but a mental calculation showed him that it lacked deck space, even including the floor plates of the tanks, to accommodate eight thousand tons of passengers. The other was an older ship with cranky piston-type injection meters, but she was fitted for general merchandise and had enough deck space. Her pay load was higher than necessary for the job, since passengers weigh little for the cubage they clutter-but that would make her lively, which might be critically important.

As for the injectors, he could baby them-he had herded worse junk than this.

Lazarus haggled with McFee over terms, not because he wanted to save money but because failure to do so would have been out of character. They finally reached a complicated three-cornered deal in which McFee bought the I Spy for himself, Lazarus delivered clear title to it unmortgaged and accepted McFee's unsecured note in payment, then purchased the freighter by endorsing McFee's note back to him and adding cash. McFee in turn would be able to mortgage the I Spy at the Commerce Clearance Bank in Luna City, use the proceeds plus cash or credit of his own to redeem his own paper-presumably before his accounts were audited, though Lazarus did not mention that.

It was not quite a bribe. Lazarus merely made use of the fact that McFee had long wanted a ship of his own and regarded the I Spy as the ideal bachelor's go-buggy for business or pleasure; Lazarus simply held the price down to where McFee could swing the deal. But the arrangements made certain that McFee would not gossip about the deal, at least until he had had time to redeem his note. Lazarus further confused the issue by asking McFee to keep his eyes open for a good buy in trade tobacco . . . which made McFee sure that Captain Sheffield's mysterious new venture involved Venus, that being the only major market for such goods. Lazarus got the freighter ready for space in only four days through lavish bonuses and overtime payments. At last he dropped Luna City behind him, owner and master of the City of Chillicothe. He shortened the name in his mind to Chili in honor of a favorite dish he had not tasted in a long time-fat red beans, plenty of chili powder, chunks of meat . . . real meat, not the synthetic pap these youngsters called "meat." He thought about it and his mouth watered. He had not a care in the world.

As he approached Earth, he called traffic control and asked for a parking orbit, as he did not wish to put the Chili down; it would waste fuel and attract attention. He had no scruples about orbiting without permission but there was a chance that the Chili might be spotted, charted, and investigated as a derelict during his absence; it was safer to be legal.

They gave him an orbit; he matched in and steadied down, then set the Chili's identification beacon to his own combination, made sure that the radar of the ship's gig could trip it, and took the gig down to the auxiliary small-craft field at Goddard. He was careful to have all necessary papers with him this time; by letting the gig be sealed in bond he avoided customs and was cleared through the space port quickly. He had no destination in mind other than to find a public phone and check in with Zack and Ford-then, if there was time, try to find some real chili. He had not called the Administrator from space because ship-to-ground required relay, and the custom of privacy certainly would not protect them if the mixer who handled the call overheard a mention of the Howard Families.

The Administrator answered his call at once, although it was late at night in the longitude of Novak Tower. From the puffy circles under Ford's eyes Lazarus judged that he had been living at his desk. "Hi," said Lazarus, "better get Zack Barstow on a three-way. I've got things to report."

"So it's you," Ford said grimly. "I thought you had run out on us. Where have you been?"

"Buying a ship," Lazarus answered. "As you knew. Let's get Barstow."

Ford frowned, but turned to his desk. By split screen, Barstow joined them. He seemed surprised to see Lazarus and not altogether relieved. Lazarus spoke quickly:

"What's the matter, pal? Didn't Ford tell you what I was up to?"

"Yes, he did," admitted Barstow, "but we didn't know where you were or what you were doing. Time dragged on and you didn't check in . . . so we decided we had seen the last of you."

"Shucks," complained Lazarus, "you know I wouldn't ever do anything like that. Anyhow, here I am and here's what I've done so far-" He told them of the Chili and of his reconnaissance of the New Frontiers. "Now here's how I see it: sometime this weekend, while the New Frontiers is sitting out there with nobody inboard her, I set the Chili down in the prison reservation, we load up in a hurry, rush out to the New Frontiers, grab her, and scoot. Mr. Administrator, that calls for a lot of help from you. Your proctors will have to look the other way while I land and load. Then we need to sort of slide past the traffic patrol. After that it would be a whole lot better if no naval craft was in a position to do anything drastic about the New Frontiers-if there is a communication watch left in her, they may be able to holler for help before we can silence them."

"Give me credit for some foresight," Ford answered sourly. "I know you will have to have a diversion to stand any chance of getting away with it. The scheme is fantastic at the best."

"Not too fantastic," Lazarus disagreed, "if you are willing to use your emergency powers to the limit at the last minute."

"Possibly. But we can't wait four days." "Why not?'

"The situation won't hold together that long."

"Neither will mine," put in Barstow.

Lazarus looked from one to the other. "Huh? What's the trouble? What's up?"

They explained:

Ford and Barstow were engaged in a preposterously improbable task, that of putting over a complex and subtle fraud; a triple fraud with a different face for the Families, for the public, and for the Federation Council. Each aspect presented unique and apparently insurmountable difficulties.

Ford had no one whom he dared take into his confidence, for even his most trusted personal staff member might be infected with the mania of the delusional Fountain of Youth . . . or might not be, but there was no way to know without compromising the conspiracy. Despite this, he had to convince the Council that the measures he was taking were the best for achieving the Council's purpose.

Besides that, he had to hand out daily news releases to convince the citizens that their government was just about to gain for them the "secret" of living forever. Each day the statements had to be more detailed, the lies more tricky. The people were getting restless at the delay; they were sloughing off the coat of civilization, becoming mob.

The Council was feeling the pressure of the people. Twice Ford had been forced to a vote of confidence; the second he had won by only two votes. "I won't win another one-we've got to move."

Barstow's troubles were different but just as sticky. He had to have confederates, because his job was to prepare all the hundred thousand members for the exodus. They had to know, before the time came to embark, if they were to leave quietly and quickly. Nevertheless he did not dare tell them the truth too soon because among so many people there were bound to be some who were stupid and stubborn . . . and it required just one fool to wreck the scheme by spilling it to the proctors guarding them.

Instead he was forced to try to find leaders who he could trust, convince them, and depend on them to convince others. He needed almost a thousand dependable "herdsmen" to be sure of getting his people to follow him when the time came. Yet the very number of confederates he needed was so great as to make certain that somebody would prove weak.

Worse than that, he needed other confederates for a still touchier purpose. Ford and he had agreed on a scheme, weak at best, for gaining time. They were doling out the techniques used by the Families in delaying the symptoms of senility under the pretense that the sum total of these techniques was the "secret." To put over this fraud Barstow had to have the help of the biochemists, gland therapists, specialists in symbiotics and in metabolism, and other experts among the Families, and these in turn had to be prepared for police interrogation by the Families' most skilled psychotechnicians . . . because they had to be able to put over the fraud even under the influence of babble drugs. The hypnotic false indoctrination required for this was enormously more complex than that necessary for a simple block against talking. Thus far the swindle had worked . . . fairly well. But the discrepancies became more hard to explain each day.

Barstow could not keep these matters juggled much longer. The great mass of the Families, necessarily kept in ignorance, were getting out of hand even faster than the public outside. They were rightfully angry at what had been done to them; they expected anyone in authority to do something about it-and do it now!

Barstow's influence over his kin was melting away as fast as that of Ford over the Council.

"It can't be four days," repeated Ford. "More like twelve hours . . . twenty-four at the outside. The Council meets again tomorrow afternoon."

Barstow looked worried. "I'm not sure I can prepare them in so short a time. I may have trouble getting them aboard."

"Don't worry about it," Ford snapped.

"Why not?"

"Because," Ford said bluntly, "any who stay behind will be dead-if they're lucky."

Barstow said nothing and looked away. It was the first time that either one of them had admitted explicitly that this was no relatively harmless piece of political chicanery but a desperate and nearly hopeless attempt to avoid a massacre and that Ford himself was on both sides of the fence.

"Well," Lazarus broke in briskly, "now that you boys have settled that, let's get on with it. I can ground the Chili in-" He stopped and estimated quickly where she would be in orbit, how long it would take him to rendezvous. "-well, by twenty-two Greenwich.

Add an hour to play safe. How about seventeen o'clock Oklahoma time tomorrow afternoon? That's today, actually."

The other two seemed relieved. "Good enough," agreed Barstow. "I'll have them in the best shape I can manage."

"All right," agreed Ford, "if that's the fastest it can be done." He thought for a moment. "Barstow, I'll withdraw at once all proctors and government personnel now inside the reservation barrier and shut you off. Once the gate contracts, you can tell them all."

"Right. I'll do my best."

"Anything else before we clear?" asked Lazarus. "Oh, yes-Zack, we'd better pick a place for me to land, or I may shorten a lot of lives with my blast."

"Uh, yes. Make your approach from the west. I'll rig a standard berth marker. Okay?"

"Okay."

"Not okay," denied Ford. "We'll have to give him a pilot beam to come in on."

"Nonsense," objected Lazarus. "I could set her down on top of the Washington Monument."

"Not this time, you couldn't. Don't be surprised at the weather."

As Lazarus approached his rendezvous with the Chili he signaled from the gig; the Chili's transponder echoed, to his relief-he had little faith in gear he had not personally overhauled and a long search for the Chili at this point would have been disastrous.

He figured the relative vector, gunned the gig, flipped, and gunned to brake-homed-in three minutes off estimate, feeling smug. He cradled the gig, hurried inside, and took her down.

Entering the stratosphere and circling two-thirds of the globe took no longer than he had estimated. He used part of the hour's leeway he had allowed himself by being very stingy in his maneuvers in order to spare the worn, obsolescent injection meters. Then he was down in the troposphere and making his approach, with skin temperatures high but not dangerously so. Presently he realized what Ford had meant about the weather. Oklahoma and half of Texas were covered with deep, thick clouds. Lazarus was amazed and somehow pleased; it reminded him of other days, when weather was something experienced rather than controlled. Life had lost some flavor, in his opinion, when the weather engineers had learned how to harness the elements. He hoped that their planet-if they found one!-would have some nice, lively weather.

Then he was down in it and too busy to meditate. In spite of her size the freighter bucked and complained. Whew! Ford must have ordered this little charivari the minute the time was set-and, at that, the integrators must have had a big low-pressure area close at hand to build on.

Somewhere a pattern controlman was shouting at him; he switched it off and gave all his attention to his approach radar and the ghostly images in the infra-red rectifier while comparing what they told him with his inertial tracker. The ship passed over a miles-wide scar on the landscape-the ruins of the Okla-Orleans Road City. When Lazarus had last seen it, it had been noisy with life. Of all the mechanical monstrosities the human race had saddled themselves with, he mused, those dinosaurs easily took first prize.

Then the thought was cut short by a squeal from his board; the ship had picked up the pilot beam.

He wheeled her in, cut his last jet as she scraped, and slapped a series of switches; the great cargo ports rumbled open and rain beat in.

Eleanor Johnson huddled into herself, half crouching against the storm, and tried to draw her cloak more tightly about the baby in the crook of her left arm. When the storm had first hit, the child had cried endlessly, stretching her nerves taut. Now it was quiet, but that seemed only new cause for alarm.

She herself had wept, although she had tried not to show it. In all her twenty-seven years she had never been exposed to weather like this; it seemed symbolic of the storm that had overturned her life, swept her away from her cherished first home of her own with its homey old-fashioned fireplace, its shiny service cell, its thermostat which she could set to the temperature she liked without consulting others-a tempest which had swept her away between two grim proctors, arrested like some poor psychotic, and landed her after terrifying indignities here in the cold sticky red clay of this Oklahoma field.

Was it true? Could it possibly be true? Or had she not yet borne her baby at all and this was another of the strange dreams she had while carrying it?

But the rain was too wetly cold, the thunder too loud; she could never have slept through such a dream. Then what the Senior Trustee had told them must be true, too-it had to be true; she had seen the ship ground with her own eyes, its blast bright against the black of the storm. She could no longer see it but the crowd around her moved slowly forward; it must in front of her. She was close to the outskirts of the crowd she would be one of the last to get aboard.

It was very necessary to board the ship-Elder Zaccur Barstow had told them with deep solemnness what lay in store for them if they failed to board. She had believed earnestness; nevertheless she wondered how it could possibly be true-could anyone be so wicked, so deeply and terribly wicked as to want to kill anyone as harmless and helpless as herself and her baby?

She was struck by panic terror-suppose there was no room left by the time she got up to the ship? She clutched her baby more tightly; the child cried again at the pressure.

A woman in the crowd moved closer and spoke to her "You must be tired. May I carry the baby for a while?"

"No. No, thank you. I'm all right." A flash of lightning showed the woman's face; Eleanor Johnson recognized her Elder Mary Sperling.

But the kindness of the offer steadied her. She knew now what she must do. If they were filled up and could take no more, she must pass her baby forward, hand to hand over the heads of the crowd. They could not refuse space to anything as little as her baby.

Something brushed her in the dark. The crowd was moving forward again.

When Barstow could see that loading would be finished in a few more minutes he left his post at one of the cargo doors and ran as fast as he could through the splashing sticky mud to the communications shack. Ford had warned him to give notice just before they raised ship; it was necessary to Ford's plan for diversion. Barstow fumbled with an

awkward un-powered door, swung it open and rushed up. He set the private combination which should connect him directly to Ford's control desk and pushed the key.

He was answered at once but it was not Ford's face on the screen. Barstow burst out with, "Where is the Administrator? I want to talk with him," before he recognized the face in front of him.

It was a face well known to all the public-Bork Vanning, Leader of the Minority in the Council. "You're talking to the Administrator," Vanning said and grinned coldly. "The new Administrator. Now who the devil are you and why are you calling?"

Barstow thanked all gods, past and present, that recognition was onesided. He cut the connection with one unaimed blow and plunged out of the building.

Two cargo ports were already closed; stragglers were moving through the other two. Barstow hurried the last of them inside with curses and followed them, slammed pell-mell to the control room. "Raise ship!" he shouted to Lazarus. "Fast!"

"What's all the shoutin' fer?" asked Lazarus, but he was already closing and sealing the ports. He tripped the acceleration screamer, waited a scant ten seconds . . . and gave her power.

"Well," he said conversationally six minutes later, "I hope everybody was lying down. If not, we've got some broken bones on our hands. What's that you were saying?"

Barstow told him about his attempt to report to Ford.

Lazarus blinked and whistled a few bars of Turkey in the Straw. "It looks like we've run out of minutes. It does look like it." He shut up and gave his attention to his instruments, one eye on his ballistic track, one on radar-aft.

Chapter 7

LAZARUS HAD his hands full to jockey the Chili into just the right position against the side of the New Frontiers; the overstrained meters made the smaller craft skittish as a young horse. But he did it. The magnetic anchors clanged home; the gas-tight seals slapped into place; and their ears popped as the pressure in the Chili adjusted to that in the giant ship. Lazarus dived for the drop hole in the deck of the control room, pulled himself rapidly hand over hand to the port of contact, and reached the passenger lock of the New Frontiers to find himself facing the skipper-engineer.

The man looked at him and snorted. "You again, eh? Why the deuce didn't you answer our challenge? You can't lock onto us without permission; this is private property. What do you mean by it?"

"It means," said Lazarus, "that you and your boys are going back to Earth a few days early-in this ship."

"Why, that's ridiculous!"

"Brother," Lazarus said gently, his blaster suddenly growing out his left fist, "I'd sure hate to hurt you after you were so nice to me . . . but I sure will, unless you knuckle under awful quick."

The official simply stared unbelievingly. Several of his juniors had gathered behind him; one of them sunfished in the air, started to leave. Lazarus winged him in the

leg, at low power; he jerked and clutched at nothing. "Now you'll have to take care of him," Lazarus observed.

That settled it. The skipper called together his men from the announcing system microphone at the passenger lock; Lazarus counted them as they arrived-twenty-nine, a figure he had been careful to learn on his first visit. He assigned two men to hold each of them. Then he took a look at the man he had shot.

"You aren't really hurt, bub," he decided shortly and turned to the skipper-engineer. "Soon as we transfer you, get some radiation salve on that burn. The Red Cross kit's on the after bulkhead of the control room."

"This is piracy! You can't get away with this."

"Probably not," Lazarus agreed thoughtfully. "But I sort of hope we do." He turned his attention back to his job. "Shake it up there! Don't take all day."

The Chili was slowly being emptied. Only the one exit could be used but the pressure of the half hysterical mob behind them forced along those in the bottleneck of the trunk joining the two ships; they came boiling out like bees from a disturbed hive.

Most of them had never been in free fall before this trip; they burst out into the larger space of the giant ship and drifted helplessly, completely disoriented. Lazarus tried to bring order into it by grabbing anyone he could see who seemed to be able to handle himself in zero gravity, ordered him to speed things up by shoving along the helpless ones-shove them anywhere, on back into the big ship, get them out of the way, make room for the thousands more yet to come. When he had conscripted a dozen or so such herdsmen he spotted Barstow in the emerging throng, grabbed him and put him in charge. "Keep 'em moving, just anyhow. I've got to get for'ard to the control room. If you spot Andy Libby, send him after me."

A man broke loose, from the stream and approached Barstow. "There's a ship trying to lock onto ours. I saw it through a port."

"Where?" demanded Lazarus.

The man was handicapped by slight knowledge of ships and shipboard terms, but he managed to make himself understood. "I'll be back," Lazarus told Barstow. "Keep 'em moving-and don't let any of those babies get away-our guests there." He holstered his blaster and fought his way back through the swirling mob in the bottleneck.

Number three port seemed to be the one the man had meant. Yes, there was something there. The port had an armor-glass bull's-eye in it, but instead of stars beyond Lazarus saw a lighted space. A ship of some sort had locked against it.

Its occupants either had not tried to open the Chili's port or just possibly did not know how. The port was not locked from the inside; there had been no reason to bother. It should have opened easily from either side once pressure was balanced . . . which the tell-tale, shining green by the latch, showed to be the case.

Lazarus was mystified.

Whether it was a traffic control vessel, a Naval craft, or something else, its presence was bad news. But why didn't, they simply open the door and walk in? He was tempted to lock the port from the inside, hurry and lock all the others, finish loading and try to run for it.

But his monkey ancestry got the better of him; he could not leave alone something he did not understand. So he compromised by kicking the blind latch into place that

would keep them from opening the port from outside, then slithered cautiously alongside the bull's-eye and sneaked a peep with one eye.

He found himself staring at Slayton Ford.

He pulled himself to one side, kicked the blind latch open, pressed the switch to open the port. He waited there, a toe caught in a handihold, blaster in one hand, knife in the other.

One figure emerged. Lazarus saw that it was Ford, pressed the switch again to close the port, kicked the blind latch into place, while never taking his blaster off his visitor. "Now what the hell?" he demanded. "What are you doing here? And who else is here? Patrol?"

"I'm alone."

"Huh?"

"I want to go with you . . . if you'll have me."

Lazarus looked at him and did not answer. Then he went back to the bull's-eye and inspected all that he could see. Ford appeared to be telling the truth, for no one else was in sight. But that was not what held Lazarus' eye.

Why the ship wasn't a proper deep-space craft at all. It did not have an air1ock but merely a seal to let it fasten to a larger ship; Lazarus was staring right into the body of the craft. It looked like-yes, it was a "Joy-boat Junior," a little private strato-yacht, suitable only for point-to-point trajectory, or at the most for rendezvous with a satellite provided the satellite could refuel it for the return leg.

There was no fuel for it here. A lightning pilot possibly could land that tin toy without power and still walk away from it provided he had the skill to play Skip-to-M'Lou in and out of the atmosphere while nursing his skin temperatures-but Lazarus wouldn't want to try it. No, sir! He turned to Ford. "Suppose we turned you down. How did you figure on getting back?"

"I didn't figure on it," Ford answered simply.

"Mmm-- Tell me about it, but make it march; we're minus on minutes."

Ford had burned all bridges. Turned out of office only hours earlier, he had known that, once all the facts came out, life-long imprisonment in Coventry was the best he could hope for-if he managed to avoid mob violence or mindshattering interrogation.

Arranging the diversion was the thing that finally lost him his thin margin of control. His explanations for his actions were not convincing to the Council. He had excused the storm and the withdrawing of proctors from the reservation as a drastic attempt to break the morale of the Families-a possible excuse but not too plausible. His orders to Naval craft, intended to keep them away from the New Frontiers, had apparently not been associated in anyone's mind with the Howard Families affair; nevertheless the apparent lack of sound reason behind them had been seized on by the opposition as another weapon to bring him down. They were watching for anything to catch him out-one question asked in Council concerned certain monies from the Administrator's discretionary fund which had been paid indirectly to one Captain Aaron Sheffield; were these monies in fact expended in the public interest?

Lazarus' eyes widened. "You mean they were onto me?"

"Not quite. Or you wouldn't be here. But they were close behind you. I think they must have had help from a lot of my people at the last."

"Probably. But we made it, so let's not fret. Come on. The minute everybody is out of this ship and into the big girl, we've got to boost." Lazarus turned to leave.

"You're going to let me go along?"

Lazarus checked his progress, twisted to face Ford. "How else?" He had intended at first to send Ford down in the Chili. It was not gratitude that changed his mind, but respect. Once he had lost office Ford had gone straight to Huxley Field north of Novak Tower, cleared for the vacation satellite Monte Carlo, and had jumped for the New Frontiers instead. Lazarus liked that. "Go for broke" took courage and character that most people didn't have. Don't grab a toothbrush, don't wind the cat-just do it! "Of course you're coming along," he said easily: "You're my kind of boy, Slayton."

The Chili was more than half emptied now but the spaces near the interchange were still jammed with frantic mobs. Lazarus cuffed and shoved his way through, trying not to bruise women and children unnecessarily but not letting the possibility slow him up. He scrambled through the connecting trunk with Ford hanging onto his belt, pulled aside once they were through and paused in front of Barstow.

Barstow stared past him. "Yeah, it's him," Lazarus confirmed. "Don't stare-it's rude. He's going with us. Have you seen Libby?"

"Here I am, Lazarus." Libby separated himself from the throng and approached with the ease of a veteran long used to free fall. He had a small satchel strapped to one wrist.

"Good. Stick around. Zack, how long till you're all loaded?"

"God knows. I can't count them. An hour, maybe."

"Make it less. If you put some husky boys on each side of the hole, they can snatch them through faster than they are coming. We've got to shove out of here a little sooner than is humanly possible. I'm going to the control room. Phone me there the instant you have everybody in, our guests here out, and the Chili broken loose. Andy! Slayton! Let's go."

"Later, Andy. We'll talk when we get there?'

Lazarus took Slayton Ford with him because he did not know what else to do with him and felt it would be better to keep him out of sight until some plausible excuse could be dreamed up for having him along. So far no one seemed to have looked at him twice, but once they quieted down, Ford's well-known face would demand explanation.

The control room was about a half mile forward of where they had entered the ship. Lazarus knew that there was a passenger belt leading to it but he didn't have time to look for it; he simply took the first passageway leading forward. As soon as they got away from the crowd they made good time even though Ford was not as skilled in the fishlike maneuvers of free fall as were the other two.

Once there, Lazarus spent the enforced wait in explaining to Libby the extremely ingenious but unorthodox controls of the starship. Libby was fascinated and soon was putting himself through dummy runs. Lazarus turned to Ford. "How about you, Slayton? Wouldn't hurt to have a second relief pilot."

Ford shook his head. "I've been listening but I could never learn it. I'm not a pilot"

"Huh? How did you get here?"

"Oh. I do have a license, but I haven't had time to keep in practice. My chauffeur always pilots me. I haven't figured a trajectory in many years."

Lazarus looked him over. "And yet you plotted an orbit rendezvous? With no reserve fuel?"

"Oh, that. I had to."

"I see. The way the cat learned to swim. Well, that's one way." He turned back to speak to Libby, was interrupted by Barstow's voice over the announcing system:

"Five minutes, Lazarus! Acknowledge."

Lazarus found the microphone, covered the light under it with his hand and answered, "Okay, Zack! Five minutes." Then he said, "Cripes, I haven't even picked a course. What do you think, Andy? Straight out from Earth to shake the busies off our tail? Then pick a destination? How about it, Slayton? Does that fit with what you ordered Navy craft to do? "No, Lazarus, no!" protested Libby. "Huh? Why not?"

"You should head right straight down for the Sun."

"For the Sun? For Pete's sake, why?"

"I tried to tell you when I first saw you. It's because of the space drive you asked me to develop."

"But, Andy, we haven't got it."

"Yes, we have. Here." Libby shoved the satchel he had been carrying toward Lazarus.

Lazarus opened it.

Assembled from odd bits of other equipment, looking more like the product of a boy's workshop than the output of a scientist's laboratory, the gadget which Libby referred to as a "space drive" underwent Lazarus' critical examination. Against the polished sophisticated perfection of the control room it looked uncouth, pathetic, ridiculously inadequate.

Lazarus poked at it tentatively. "What is it?' he asked. "Your model?"

"No, no. That's it. That's the space drive."

Lazarus looked at the younger man not unsympathetically. "Son," he asked slowly, "have you come unzipped?"

"No, no, no!" Libby sputtered. "I'm as sane as you are. This is a radically new notion. That's why I want you to take us down near the Sun. If it works at all, it will work best where light pressure is strongest."

"And if it doesn't work," inquired Lazarus, "what does that make us? Sunspots?"

"Not straight down into the Sun. But head for it now and as soon as I can work out the data, I'll give you corrections to warp you into your proper trajectory. I want to pass the Sun in a very fiat hyperbola, well inside the orbit of Mercury, as close to the photosphere as this ship can stand. I don't know how close that is, so I couldn't work it out ahead of time. But the data will be here in the ship and there will be time to correlate them as we go."

Lazarus looked again at the giddy little cat's cradle of apparatus. "Andy . . . if you are sure that the gears in your head are still meshed, I'll take a chance. Strap down, both of you." He belted himself into the pilot's couch and called Barstow. "How about it, Zack?" "Right now!"

"Hang on tight!" With one hand Lazarus covered a light in his leftside control panel; acceleration warning shrieked throughout the ship. With the other he covered another; the hemisphere in front of them was suddenly spangled with the starry firmament, and Ford gasped.

Lazarus studied it. A full twenty degrees of it was blanked out by the dark circle of the nightside of Earth. "Got to duck around a corner, Andy. We'll use a little Tennessee windage." He started easily with a quarter gravity, just enough to shake up his passengers and make them cautious, while he started a slow operation of precessing the enormous ship to the direction he needed to shove her in order to get out of Earth's shadow. He raised acceleration to a half gee, then to a gee.

Earth changed suddenly from a black silhouette to a slender silver crescent as the half-degree white disc of the Sun came out from behind her. "I want to clip her about a thousand miles out, Slipstick," Lazarus said tensely, "at two gees. Gimme a temporary vector." Libby hesitated only momentarily and gave it to him. Lazarus again sounded acceleration warning and boosted to twice Earth-normal gravity. Lazarus was tempted to raise the boost to emergency-full but he dared not do so with a shipload of groundlubbers; even two gees sustained for a long period might be too much of a strain for some of them. Any Naval pursuit craft ordered to intercept them could boost at much higher gee and their selected crews could stand it. But it was just a chance they would have to take . . . and anyhow, he reminded himself, a Navy ship could not maintain a high boost for long; her mile-seconds were strictly limited by her reaction-mass tanks.

The New Frontiers had no such old-fashioned limits, no tanks; her converter accepted any mass at all, turned it into pure radiant energy. Anything would serve-meteors, cosmic dust, stray atoms gathered in by her sweep field, or anything from the ship herself, such as garbage, dead bodies, deck sweepings, anything at all. Mass was energy. In dying, each tortured gram gave up nine hundred million trillion ergs of thrust. The crescent of Earth waxed and swelled and slid off toward the left edge of the hemispherical screen while the Sun remained dead ahead. A little more than twenty minutes later, when they were at closest approach and the crescent, now at half phase, was sliding out of the bowl screen, the ship-to-ship circuit came to life. "New Frontiers!" a forceful voice sounded. "Maneuver to orbit and lay to! This is an official traffic control order."

Lazarus shut it off. "Anyhow," he said cheerfully, "if they try to catch us, they won't like chasing us down into the Sun! Andy, it's a clear road now and time we corrected, maybe; You want to compute it? Or will you feed me the data?"

"I'll compute it," Libby answered. He had already discovered that the ship's characteristics pertinent to astrogation, including her "black body" behavior, were available at both piloting stations. Armed with this and with the running data from instruments he set out to calculate the hyperboloid by which he intended to pass the Sun. He made a half-hearted attempt to use the ship's ballistic calculator but it baffled him; it was a design he was not used to, having no moving parts of any sort, even in the exterior controls. So he gave it up as a waste of time and fell back on the strange talent for figures lodged in his brain. His brain had no moving parts, either, but he was used to it.

Lazarus decided to check on their popularity rating. He switched on the ship-to-ship again, found that it was still angrily squawking, although a little more faintly. They knew his own name now-one of his names-which caused him to decide that the boys in the Chili must have called traffic control almost at once. He tut-tutted sadly when he learned that "Captain Sheffield's" license to pilot had been suspended. He shut it off and tried the Naval frequencies . . . then shut them off also when he was able to raise nothing

but code and scramble, except that the words "New Frontiers" came through once in clear.

He said something about "sticks and stones may break my bones-" and tried another line of investigation. Both by long-range radar and by paragravitic detector he could tell that there were ships in their neighborhood but this alone told him very little; there were bound to be ships this close to Earth and he had no easy way to distinguish, from these data alone, an unarmed liner or freighter about her lawful occasions from a Naval cruiser in angry pursuit.

But the New Frontiers had more resources for analyzing what was around her than had an ordinary ship; she had been specially equipped to cope unassisted with any imaginable strange conditions. The hemispherical control room in which they lay was an enormous multi-screened television receiver which could duplicate the starry heavens either in view-aft or view-forward at the selection of the pilot. But it also had other circuits, much more subtle; simultaneously or separately it could act as an enormous radar screen as well, displaying on it the blips of any body within radar range.

But that was just a starter. Its inhuman senses could apply differential analysis to doppler data and display the result in a visual analog. Lazarus studied his lefthand control bank, tried to remember everything be had been told about it, made a change in the set up.

The simulated stars and even the Sun faded to dimness; about a dozen lights shined brightly.

He ordered the board to check them for angular rate; the bright lights turned cherry red, became little comets trailing off to pink tails-all but one, which remained white and grew no tail. He studied the others for a moment, decided that their vectors were such that they would remain forever strangers, and ordered the board to check the line-of-sight doppler on the one with a steady bearing.

It faded to violet, ran halfway through the spectrum and held steady at blue-green. Lazarus thought a moment, subtracted from the inquiry their own two gees of boost; it turned white again. Satisfied he tried the same tests with view-aft.

"Lazarus-"

"Yeah, Lib?"

"Will it interfere with what you are doing if I give you the corrections now?"

"Not at all. I was just taking a look-see. If this magic lantern knows what it's talking about, they didn't manage to get a pursuit job on our tail in time."

"Good. Well, here are the figures . . ."

"Feed 'em in yourself, will you? Take the conn for a while. I want to see about some coffee and sandwiches. How about you? Feel like some breakfast?"

Libby nodded absent-mindedly, already starting to revise the ship's trajectory. Ford spoke up eagerly, the first word he had uttered in a long, time. "Let me get it. I'd be glad to." He seemed pathetically anxious to be useful.

"Mmm . . . you might get into some kind of trouble, Slayton. No matter what sort of a selling job Zack did, your name is probably 'Mud' with most of the members. I'll phone aft and raise somebody."

"Probably nobody would recognize me under these circumstances," Ford argued. "Anyway, it's a legitimate errand-I can explain that."

Lazarus saw from his face that it was necessary to the man's morale. "Okay . . . if you can handle yourself under two gees."

Ford struggled heavily up out of the acceleration couch he was in. "I've got space legs. What kind of sandwiches?"

"I'd say corned beef, but it would probably be some damned substitute. Make mine cheese, with rye if they've got it, and use plenty of mustard. And a gallon of coffee. What are you having, Andy?"

"Me? Oh, anything that is convenient,"

Ford started to leave, bracing himself heavily against double weight, then he added, "Oh-it might save time if you could tell me where to go." -

"Brother," said Lazarus, "if this ship isn't pretty well crammed with food, we've all made a terrible mistake. Scout around. You'll find some."

Down, down, down toward the Sun, with speed increasing by sixty-four feet per second for every second elapsed. Down and still down for fifteen endless hours of double weight. During this time they traveled seventeen million miles and reached the inconceivable speed of six hundred and forty miles per second. The figures mean little-think instead of New York to Chicago, a half hour's journey even by stratomail, done in a single heartbeat.

Barstow had a rough time during heavy weight. For all of the others it was a time to lie down, try hopelessly to sleep, breathe painfully and seek new positions in which to rest from the burdens of their own bodies. But Zaccur Barstow was driven by his sense of responsibility; he kept going though the Old Man of the Sea sat on his neck and raised his weight to three hundred and fifty pounds.

Not that he could do anything for them, except crawl wearily from one compartment to another and ask about their welfare. Nothing could be done, no organization to relieve their misery was possible, while high boost continued. They lay where they could, men, women, and children crowded together like cattle being shipped, without even room to stretch out, in spaces never intended for such extreme overcrowding.

The only good thing about it, Barstow reflected wearily, was that they were all too miserable to worry about anything but the dragging minutes. They were too beaten down to make trouble. Later on there would be doubts raised, he was sure, about the wisdom of fleeing; there would be embarrassing questions asked about Ford's presence in the ship, about Lazarus' peculiar and sometimes shady actions, about his own contradictory role. But not yet.

He really must, he decided reluctantly, organize a propaganda campaign before trouble could grow. If it did-and it surely would if he didn't move to offset it, and . . . well, that would be the last straw. It would be.

He eyed a ladder in front of him, set his teeth, and struggled up to the next deck. Picking his way through the bodies there he almost stepped on a woman who was clutching a baby too tightly to her. Barstow noticed that the infant was wet and soiled and he thought of ordering its mother to take care of the matter, since she seemed to be awake. But he let it go-so far as he knew there was not a clean diaper in millions of miles. Or there might be ten thousand of them on the deck above . . . which seemed almost as far away.

He plodded on without speaking to her. Eleanor Johnson had not been aware of his concern. After the first great relief at realizing that she and her baby were safe inside the ship she had consigned all her worries to her elders and now felt nothing but the apathy of emotional reaction and of inescapable weight. Baby had cried when that awful weight had hit them, then had become quiet, too quiet. She had roused herself enough to listen for its heartbeat; then, sure that he was alive, she had sunk back into stupor.

Fifteen hours out, with the orbit of Venus only four hours away, Libby cut the boost. The ship plunged on, in free fall, her terrific speed still mounting under the steadily increasing pull of the Sun. Lazarus was awakened by no weight. He glanced at the copilot's couch and said, "On the curve?"

"As plotted."

Lazarus looked him over. "Okay, I've got it. Now get out of here and get some sleep. Boy, you look like a used towel."

"I'll just stay here and rest."

"You will like hell. You haven't slept even when I had the com; if you stay here, you'll be watching instruments and figuring. So beat it! Slayton, chuck him out."

Libby smiled shyly and left. He found the spaces abaft the control room swarming with floating bodies but he managed to find an unused corner, passed his kilt belt through a handihold, and slept at once.

Free fall should have been as great a relief to everyone else; it was not, except to the fraction of one per cent who were salted spacemen. Free-fall nausea, likes seasickness, is a joke only to those not affected; it would take a Dante to describe a hundred thousand cases of it. There were anti-nausea drugs aboard, but they were not found at once; there were medical men among the Families, but they were sick, too. The misery went on.

Barstow, himself long since used to free flight, floated forward to the control room to pray relief for the less fortunate. "They're in bad shape," he told Lazarus. "Can't you put spin on the ship and give them some let-up? It would help a lot."

"And it would make maneuvering difficult, too. Sorry. Look, Zack, a lively ship will be more important to them in a pinch than just keeping their suppers down. Nobody dies from seasickness anyhow . . . they just wish they could."

The ship plunged on down, still gaining speed as it fell toward the Sun. The few who felt able continued slowly to assist the enormous majority who were ill.

Libby continued to sleep, the luxurious return-to-the-womb sleep of those who have learned to enjoy free fall. He had had almost no sleep since the day the Families had been arrested; his overly active mind had spent all its time worrying the problem of a new space drive.

The big ship precessed around him; he stirred gently and did not awake. It steadied in a new attitude and the acceleration warning brought him instantly awake. He oriented himself, placed himself flat against the after bulkhead, and waited; weight hit him almost at once-three gees this time and he knew that something was badly wrong. He had gone almost a quarter mile aft before he found a hide-away; nevertheless he struggled to his feet and started the unlikely task of trying to climb that quarter mile-now straight up-at three times his proper weight, while blaming himself for having let Lazarus talk him into leaving the control room.

He managed only a portion of the trip . . . but an heroic portion, one about equal to climbing the stairs of a ten-story building while carrying a man on each shoulder . . . when resumption of free fall relieved him. He zipped the rest of the way like a salmon returning home and was in the control room quickly. "What happened?"

Lazarus said regretfully, "Had to vector, Andy." Slayton Ford said nothing but looked worried.

"Yes, I know. But why?' Libby was already strapping himself against the copilot's couch while studying the astrogational situation.

"Red lights on the screen." Lazarus described the display, giving coordinates and relative vectors.

Libby nodded thoughtfully. "Naval craft. No commercial vessels would be in such trajectories. A minelaying bracket."

"That's what I figured. I didn't have time to consult you; I had to use enough mile-seconds to be sure they wouldn't have boost enough to reposition on us."

"Yes, you had to." Libby looked worried. "I thought we were free of any possible Naval interference."

"They're not ours," put in Slayton Ford. "They can't be ours no matter what orders have been given since I-uh, since I left. They must be Venerian craft."

"Yeah," agreed Lazarus, "they must be. Your pal, the new Administrator, hollered to Venus for help and they gave it to him-just a friendly gesture of interplanetary good will."

Libby was hardly listening. He was examining data and processing it through the calculator inside his skull. "Lazarus. . . this new orbit isn't too good."

"I know," Lazarus agreed sadly. "I had to duck . . . so I ducked the only direction they left open to me-closer to the Sun."

"Too close, perhaps."

The Sun is not a large star, nor is it very hot. But it is hot with reference to men, hot enough to strike them down dead if they are careless about tropic noonday ninety-two million miles away from it, hot enough that we who are reared under its rays nevertheless dare not look directly at it.

At a distance of two and a half million miles the Sun beats out with a flare fourteen hundred times as bright as the worst ever endured in Death Valley, the Sahara, or Aden. Such radiance would not be perceived as heat or light; it would be death more sudden than the full power of a blaster. The Sun is a hydrogen bomb, a naturally occurring one; the New Frontiers was skirting the limits of its circle of total destruction.

It was hot inside the ship. The Families were protected against instant radiant death by the armored walls but the air temperature continued to mount. They were relieved of the misery of free fall but they were doubly uncomfortable, both from heat and from the fact that the bulkheads slanted crazily; there was no level place to stand or lie, The ship was both spinning on its axis and accelerating now; it was never intended to do both at once and the addition of the two accelerations, angular and linear, met "down" the direction where outer and after bulkheads met. The ship was being spun through necessity to permit some of the impinging radiant energy to re-radiate on the "cold" side. The forward acceleration was equally from necessity, a forlorn-hope maneuver to pass the Sun as far out as possible and as fast as possible, in order to spend least time at perihelion, the point of closest approach.

It was hot in the control room. Even Lazarus had voluntarily shed his kilt and shucked down to Venus styles. Metal was hot to the touch. On the great stellarium screen an enormous circle of blackness marked where the Sun's disc should have been; the receptors had cut out automatically at such a ridicubus demand.

Lazarus repeated Libby's last words. "'Thirty-seven minutes to perihelion.' We can't take it, Andy. The ship can't take it."

"I know. I never intended us top this close."

"Of course you didn't. Maybe I shouldn't have maneuvered. Maybe we would have missed the mines anyway. Oh, well-" Lazarus squared his shoulders and filed it with the might-have-beens. "It looks to me, son, about time to try out your gadget." He poked a thumb at Libby's uncouth-looking "space drive." "You say that all you have to do is to hook up that one connection?"

"That is what is intended. Attach that one lead to any portion of the mass to be affected. Of course I don't really know that it will work," Libby admitted. "There is no way to test it."

"Suppose it doesn't?'

"There are three possibilities." Libby answered methodically. "In the first place, nothing may happen."

"In which case we fry."

"In the second place, we and the ship may cease to exist as mattei as we know it."

"Dead, you mean. But probably a pleasanter way."

"I suppose so. I don't know what death is. In the third place, if my hypotheses are correct, we will recede from the Sun at a speed just under that of light."

Lazarus eyed the gadget and wiped sweat from his shoulders. "It's getting hotter, Andy. Hook it up-and it has better be good!"

Andy hooked it up.

"Go ahead," urged Lazarus. "Push the button, throw the switch, cut the beam. Make it march."

"I have," Libby insisted. "Look at the Sun."

"Huh? Oh!"

The great circle of blackness which had marked the position of the Sun on the star-speckled stellarium was shrinking rapidly. In a dozen heartbeats it lost half its diameter; twenty seconds later it had dwindled to a quarter of its original width.

"It worked," Lazarus said softly. "Look at it, Slayton! Sign me up as a purple baboon-it worked!"

"I rather thought it would," Libby answered seriously. "It should, you know."

"Hmm- That may be evident to you, Andy. It's not to me. How fast are we going?"

"Relative to what?"

"Uh, relative to the Sun."

"I haven't had opportunity to measure it, but it seems to be just under the speed of light. It can't be greater."

"Why not? Aside from theoretical considerations."

"We still see." Libby pointed at the stellarium bowl.

"Yeah, so we do," Lazarus mused. "Hey! We shouldn't be able to. I ought to doppler out."

Libby looked blank, then smiled. "But it dopplers right back in. Over on that side, toward the Sun, we're seeing by short radiations stretched to visibility. On the opposite side we're picking up something around radio wavelengths dopplered down to light."

"And in between?"

"Quit pulling my leg, Lazarus. I'm sure you can work out relatively vector additions quite as well as I can."

"You work it out," Lazarus said firmly. "I'm just going to sit here and admire it. Eh, Slayton?"

"Yes. Yes indeed."

Libby smiled politely. "We might as well quit wasting mass on the main drive." He sounded the warner, then cut the drive. "Now we can return to normal conditions." He started to disconnect his gadget.

Lazarus said hastily, "Hold it, Andy! We aren't even outside the orbit of Mercury yet. Why put on the brakes?"

'Why, this won't stop us. We have acquired velocity; we will keep it."

Lazarus pulled at his cheek and stared. "Ordinarily I would agree with you. First Law of Motion. But with this pseudospeed I'm not so sure. We got it for nothing and we haven't paid for it-in energy, I mean. You seem to have declared a holiday with respect to inertia; when the holiday is over, won't all that free speed go back where it came from?"

"I don't think so," Libby answered. "Our velocity isn't 'pseudo' anything; it's as real as velocity can be. You are attempting to apply verbal anthropomorphic logic to a field in which it is not pertinent. You would not expect us to be transported instantaneously back to the lower gravitational potential from which we started, would you?"

"Back to where you hooked in your space drive? No, we've moved."

"And we'll keep on moving. Our newly acquired gravitational potential energy of greater height above the Sun is no more real than our present kinetic energy of velocity. They both exist."

Lazarus looked baffled. The expression did not suit him. '~I guess you've got me, Andy. No matter how I slice it, we seemed to have picked up energy from somewhere. But where? When I went to school, they taught me to honor the Flag, vote the straight party ticket, and believe in the law of conservation of energy. Seems like you've violated it. How about it?"

"Don't worry about it," suggested Libby. "The so-called law of conservation of energy was merely a working hypothesis, unproved and unprovable, used to describe gross phenomena. Its terms apply only to the older, dynamic concept of the world. In a plenum conceived as a static grid of relationships, a 'violation' of that 'law' is nothing more startling than a discontinuous function, to be noted and described. That's what I did. I saw a discontinuity in the mathematical model of the aspect of mass-energy called inertia. I applied it. The mathematical model turned out to be similar to the real world. That was the only hazard, really-one never knows that a mathematical model is similar to the real world until you try it."

"Yeah, yeah, sure, you can't tell the taste till you bite it- but, Andy, I still don't see what caused it!" He turned toward Ford. "Do you, Slayton?"

Ford shook his head. "No. I would like to know . . . but I doubt if I could understand it."

"You and me both. Well, Andy?"

Now Libby looked baffled. ~'But, Lazarus, causality has nothing to do with the real plenum. A fact simply is. Causality is merely an old-fashioned-postulate of a pre-scientific philosophy."

"I guess," Lazarus said slowly, "I'm old-fashioned."

Libby said nothing. He disconnected his apparatus.

The disc of black continued to shrink. When it had shrunk to about one sixth its greatest diameter, it changed suddenly from black to shining white, as the ship's distance from the Sun again was great enough to permit the receptors to manage the load.

Lazarus tried to work out in his head the kinetic energy of the ship-one half the square of the velocity of light (minus a pinch, he corrected) times the mighty tonnage of - the New Frontiers. The answer did not comfort him, whether he called it ergs or apples.

Chapter 8

"FIRST THINGS FIRST," interrupted Barstow. "I'm as fascinated by the amazing scientific aspects of our present situation as any of you, but we've got work to do. We've got to plan a pattern for daily living at once. So let's table mathematical physics and talk about organization."

He was not speaking to the trustees but to his own personal lieutenants, the key people in helping him put over the complex maneuvers which had made their escape possible-Ralph Schultz, Eve Barstow, Mary Sperling, Justin Foote, Clive Johnson, about a dozen others.

Lazarus and Libby were there. Lazarus had left Slayton Ford to guard the control room, with orders to turn away all visitors and, above all, not to let anyone touch the controls. It was a make-work job, it being Lazarus' notion of temporary occupational therapy. He bad sensed in Ford a mental condition that he did not like. Ford seemed to have withdrawn into himself. He answered when spoken to, but that was all. It worried Lazarus.

"We need an executive," Barstow went on, "someone who, for the time being will have very broad powers to give orders and have them carried out. He'll have to make decisions, organize us, assign duties and responsibilities, get the internal economy of the ship working. It's a big job and I would like to have our brethren hold an election and do it democratically. That'll have to wait; somebody has to give orders now. We're wasting food and the ship is-well, I wish you could have seen the 'fresher I tried to use today."

"Zaccur . . .

"Yes, Eve?"

"It seems to me that the thing to do is to put it up to the trustees. We haven't any authority; we were just an emergency group for something that is finished now."

"Ahrruniph-" It was Justin Foote, in tones as dry and formal as his face. "I differ somewhat from our sister. The trustees are not conversant with the full background; it would take time we can ill afford to put them into the picture, as it were, before they would be able to judge the matter. Furthermore, being one of the trustees myself, I am

able to say without bias that the trustees, as an organized group, can have no jurisdiction because legally they no longer exist."

Lazarus looked interested. "How do you figure that, Justin?"

"Thusly: the board of trustees were the custodians of a foundation which existed as a part of and in relation to a society. The trustees were never a government; their sole duties had to do with relations between the Families and the rest of that society. With the ending of relationship between the Families and terrestrial society, the board of trustees, ipso facto, ceases to exist. it is one with history. Now we in this ship are not yet a society, we are an anarchistic group. This present assemblage has as much-or as little-authority to initiate a society as has any part group.

Latarus cheered and clapped. "Justin," he applauded, "that is the neatest piece of verbal juggling I've heard in a century. Let's get together sometime and have a go at solipsism."

Justin Foote looked pained. "Obviously-" he began.

"Nope! Not another word! You've convinced me, don't spoil it. If that's how it is, let's get busy and pick a bull moose. How about you, Zack? You look like the logical candidate."

Barstow shook his head. "I know my limitations. I'm an engineer, not a political executive; the Families were just a hobby with me. We need an expert in social administration."

When Barstow had convinced them that he meant it, other names were proposed and their qualifications debated at length. In a group as large as the Families there were many who had specialized in political science, many who had served in public office with credit.

Lazarus listened; he knew four of the candidates. At last he got Eve Barstow aside and whispered with her. She looked startled, then thoughtful, finally nodded.

She asked for the floor. "I have a candidate to propose," she began in her always gentle tones, "who might not ordinarily occur to you, but who is incomparably better fitted, by temperament, training, and experience, to do this job than is anyone as yet proposed. For civil administrator of the ship I nominate Slayton Ford."

They were flabbergasted into silence, then everybody tried to talk at once. "Has Eve lost her mind? Ford is back on Earth!"-"No, no, he's not. I've seen him-here-in the ship."-"But it's out of the question!"-"Him? The Families would never accept him!"-"Even so, he's not one of us."

Eve patiently kept the floor until they quieted. "I know my nomination sounds ridiculous and I admit the difficulties. But consider the advantages. We all know Slayton Ford by reputation and by performance. You know, every member of the Families knows, that Ford is a genius in his field. It is going to be hard enough to work out plans for living together in this badly overcrowded ship; the best talent we can draw on will be no more than enough."

Her words impressed them because Ford was that rare thing in history, a statesman whose worth was almost universally acknowledged in his own lifetime. Contemporary historians credited him with having saved the Western Federation in at least two of its major development crises; it was his misfortune rather than his personal failure that his career was wrecked on a crisis not solvable by ordinary means.

"Eve," said Zaccur Barstown "1 agree with your opinion of Ford and I myself would be glad to have him as our executive. But how about all of the others? To the Families-everyone except ourselves here present-Mr. Administrator Ford symbolizes the persecution they have suffered. I think that makes him an impossible candidate."

Eve was gently stubborn. "I don't think so. We've already agreed that we will have to work up a campaign to explain away a lot of embarrassing facts about the last few days. Why don't we do it thoroughly and convince them that Ford is a martyr who sacrificed himself to save them? He is, you know."

"Mmm . . . yes, he is. He didn't sacrifice himself primarily on our account, but there is no doubt in my mind that his personal sacrifice saved us. But whether or not we can convince the others, convince them strongly enough that they will accept him and take orders from him . . . when he is now a sort of personal devil to them-well, I just don't know. I think we need expert advice. How about it, Ralph? Could it be done?'

Ralph Schultz hesitated. "The truth of a proposition has little or nothing to do with its psychodynamics. The notion that 'truth will prevail' is merely a pious wish; history doesn't show it. The fact that Ford really is a martyr to whom we owe gratitude is irrelevant to the purely technical question you put to me." He stopped to think. "But the proposition per se has certain sentimentally dramatic aspects which lend it to propaganda manipulation, even in the face of the currently accepted strong counterproposition. Yes . . . yes, I think it could be sold."

"How long would it take you to put it over?"

"Mmm . . . the social space involved is both 'tight' and 'hot' in the jargon we use; I should be able to get a high positive 'k' factor on the chain reaction-if it works at all. But it's an unsurveyed field and I don't know what spontaneous rumors are running around the ship. If you decide to do this, I'll want to prepare some rumors before we adjourn, rumors to repair Ford's reputation-then about twelve hours from now I can release another one that Ford is actually aboard . Because he intended from the first to throw his lot in with us."

"Ub, I hardly think he did, Ralph." -

"Are you sure, Zaccur?"

"No, but- Well . . .

"You see? The truth about his original intentions is a secret between him - and his God. You don't know and neither do I. But the dynamics of the proposition are a separate matter. Zaccur, by the time my rumor gets back to you three or four times, even you will begin to wonder." The psychornetrician paused to stare at nothing while he consulted an intuition refined by almost a century of mathematical study of human behavior. "Yes, it will work. If you all want to do it, you will be able to make a public announcement inside of twenty-four hours."

"I so move!" someone called out.

A few minutes later Barstow had Lazarus fetch Ford to the meeting place. Lazarus did not explain to him why his presence was required; Ford entered the compartment like a man come to judgment, one with a bitter certainty that the outcome will be against him. His manner showed fortitude but not hope. His eyes were unhappy.

Lazarus had studied those eyes during the long hours they had been shut up together in the control room. They bore an expression Lazarus had seen many times

before in his long life. The condemned man who has lost his final appeal, the fully resolved suicide, little furry things exhausted and defeated by struggle with the unrelenting steel of traps-the eyes of each of these hold a single expression, born of hopeless conviction that his time has run out.

Ford's eyes had it.

Lazarus had seen it grow and had been puzzled by it. To be sure, they were all in a dangerous spot, but Ford no more I than the rest. Besides, awareness of danger brings a live expression; why should Ford's eyes hold the signal of death? Lazarus finally decided that it could only be because Ford had reached the dead-end state of mind where suicide is necessary. But why? Lazarus mulled it over during the long watches in the control room and reconstructed the logic of it to his own satisfaction. Back on Earth, Ford had been important among his own kind, the short-lived. His paramount position had rendered him then almost immune to the feeling of defeated inferiority which the long-lived stirred up in normal men. But now he was the only ephemeral in a race of Methuselas.

Ford had neither the experience of the elders nor the expectations of the young; he felt inferior to them both, hopelessly outclassed. Correct or not, he felt himself to be a useless pensioner, an impotent object of charity.

To a person of Ford's busy useful background the situation was intolerable. His very pride and strength of character were driving him to suicide.

As he came into the conference room Ford's glance sought out Zaccur Barstow.

"You sent for me, sir?'

"Yes, Mr. Administrator." Barstow explained briefly the situation and the responsibility thel wanted him to assume. "You are under no compulsion," he concluded, "but we need your services if you are willing to serve. Will you?"

Lazarus' heart felt light as he watched Ford's expression change to amazement. "Do you really mean that?" Ford answered slowly. "You're not joking with me?"

"Most certainly we mean it!"

Ford did not answer at once and when he did, his answer seemed irrelevant.

"May I sit down?"

A place was found for him; he settled heavily into the chair and covered his face with his hands. No one spoke. Presently he raised his head and said in a steady voice, "If that is your will, I will do my best to carry out your wishes."

The ship required a captain as well as a civil administrator. Lazarus had been, up to that time, her captain in a very practical, piratical sense but he balked when Barstow proposed that it be made a formal title. "Huh uh! Not me. I may just spend this trip playing checkers. Libby's your man. Seriousminded, conscientious, former naval officer-just the type for the job."

Libby blushed as eyes turned toward him. "Now, really," he protested, "while it is true that I have had to command ships in the course of my duties, it has never suited me. I am a staff officer by temperament. I don't feel like a commanding officer."

"Don't see how you can duck out of it," Lazarus persisted. "You invented the go-fast gadget and you are the only one who understands how it works. You've got yourself a job, boy."

"But that does not follow at all," pleaded Libby. "1 am perfectly willing to be astrogator, for that is consonant with my talents. But I very much prefer to serve under a commanding officer."

Lazarus was smugly pleased then to see how Slayton Ford immediately moved in and took charge; the sick man was gone, here again was the executive. "It isn't a matter of your personal preference, Commander Libby; we each must do what we can. I have agreed to direct social and civil organization; that is consonant with my training. But I can't command the ship as a ship; I'm not trained for it. You are. You must do it."

Libby blushed pinker and stammered. "I would if I were the only one. But there are hundreds of spacemen among the Families and dozens of them certainly have more experience; and talent for command than I have. If you'll look for him, you'll find the right man."

Ford said, "What do you think, Lazarus?"

"Um. Andy's got something. A captain puts spine into his ship . . . or doesn't, as the case may be. If Libby doesn't hanker to command, maybe we'd better look around."

Justin Foote had a microed roster with him but there was no scanner at hand with which to sort it. Nevertheless the memories of the dozen and more present produced many candidates. They finally settled on Captain Rufus "Ruthless" King.

Libby was explaining the consequences of his light-pressure drive to his new commanding officer. "The loci of our attainable destinations is contained in a sheaf of paraboloids having their apices tangent to our present course. This assumes that acceleration by means of the ship's normal drive will always be applied so that the magnitude our present vector, just under the speed of light, will be held constant. This will require that the ship be slowly precessed during the entire maneuvering acceleration. But it will not be too fussy because of the enormous difference in magnitude between our present vector and the maneuvering vectors being impressed on it. One may think of it roughly as accelerating at right angles to Our course."

"Yes, yes, I see that," Captain King cut in, "but why do you assume that the resultant vectors must always be equal to our present vector?"

"Why, it need not be if the Captain decides otherwise," Libby answered, looking puzzled, "but to apply a component that would reduce the resultant vector below our present speed would simply be to cause us to backtrack a little without increasing the scope of our present loci of possible destinations. The effect would only increase our flight time, to generations, even to centuries, if the resultant-"

"Certainly, certainly! I understand basic ballistics, Mister. But why do you reject the other alternative? Why not increase our speed? Why can't I accelerate directly along my present course if I choose?"

Libby looked worried. "The Captain may, if he so orders. But it would be an attempt to exceed the speed of light. That has been assumed to be impossible-"

"That's exactly what I was driving at: 'Assumed.' I've always wondered if that assumption was justified. Now seems like a good time to find out."

Libby hesitated, his sense of duty struggling against the ecstatic temptations of scientific curiosity. "If this were a research ship, Captain, I would be anxious to try it. I can't visualize what the conditions would be if we did pass the speed of light, but it seems

to me that we would be cut off entirely from the electromagnetic spectrum insofar as other bodies are concerned. How could we see to astrogate?"

Libby had more than theory to worry him; they were "seeing" now only by electronic vision. To the human eye itself the hemisphere behind them along their track was a vasty black; the shortest radiations had dopplered to wavelengths too long for the eye. In the forward direction stars could still be seen but their visible "light" was made up of longest Hertzian waves crowded in by the ship's incomprehensible speed. Dark "radio stars" shined at first magnitude; stars poor in radio wavelengths had faded to obscurity. The familiar constellations were changed beyond easy recognition. The fact that they were seeing by vision distorted by Doppler's effect was confirmed by spectrum analysis; Fraunhofer's lines had not merely shifted toward the violet end, they had passed beyond, out of sight, and previously unknown patterns replaced them.

"Hmm . . ." King replied. "I see what you mean. But I'd certainly like to try it, damn if I wouldn't! But I admit it's out of the question with passengers inboard. Very well, prepare for me roughed courses to type '0' stars lying inside this trumpet-flower locus of yours and not too far away. Say ten light-years for your first search."

"Yes, sir. I have. I can't offer anything in that range in the '0' types."

"So? Lonely out here, isn't it? Well?'

"We have Tau Ceti inside the locus at eleven light-years." -

"A 05, eh? Not too good."

"No, sir. But we have a true Sol type, a 02-catalog ZD9817. But it's more than twice as far away."

Captain King chewed a knuckle. "I suppose I'll have to put it up to the elders. How much subjective time advantage are we enjoying?"

"I don't know, sir."

"Eh? Well~ work it out! Or give me the data and I will. I don't claim to be the mathematician you are, but any cadet could solve that one. The equations are simple enough." -

"So they are, sir. But I don't have the data to substitute in the time-contraction equation . . -. because I have no way now to measure the ship's speed. The violet shift is useless to use; we don't know what the lines mean. I'm afraid we must wait until we have worked up a much longer baseline."

King sighed. "Mister, I sometimes wonder why I got into this business. Well, are you willing to venture a best guess? Long time? Short time?"

"Uh . . . a long time, sir. Years."

"So? Well, I've sweated it out in worse ships. Years, eh? Play any chess?"

"I have, sir." Libby did not mention that he had given up the game long ago for lack of adequate competition.

"Looks like we'd have plenty of time to play. King's pawn;to king four."

"King's knight to bishop three."

"An unorthodox player, eh? Well, I'll answer you later. I suppose I'd better try to sell them the 02 eyen though it takes longer . . . and I suppose I'd better caution Ford to start some contests and things. Can't have 'em getting coffin fever."

"Yes, sir. Did I mention deceleration time? It works out to just under one Earth year, subjective, at a negative one-gee, to slow us to stellar speeds."

"Eh? We'll decelerate the same way we accelerated-with your light-pressure drive."

Libby shook his head. "I'm sorry, sir. The drawback of the light-pressure drive is that it makes no difference what your previous course and speed may be; if you go inertialess in the near neighborhood of a star, its light pressure kicks you away from it like a cork hit by a stream of water. Your previous momentum is canceled out when you cancel your inertia."

"Well," King conceded, "let's assume that we will follow your schedule. I can't argue with you yet; there are still some things about that gadget of yours that I don't understand."

"There are lots of things about it," Libby answered seriously, "that I don't understand either."

The ship had flicked by Earth's orbit less than ten minutes after Libby cut in his space drive. Lazarus and he had discussed the esoteric physical aspects of it all the way to the orbit of Mars-less than a quarter hour. Jupiter's path was far distant when Barstow called the organization conference. But it killed an hour to find them all in the crowded ship; by the time he called them to order they were a billion miles out beyond the orbit of Saturn-elapsed time from "Go!" less than an hour and a half.

But the blocks get longer after Saturn. Uranus found them still in discussion. Nevertheless Ford's name was agreed on and he had accepted before the ship was as far from the Sun as is Neptune. King had been named captain, had toured his new command with Lazarus as guide, and was already in conference with his astrogator when the ship passed the orbit of Pluto nearly four billion miles deep into space, but still less than six hours after the Sun's light had blasted them away.

Even then they were not outside the Solar System, but between them and the stars lay nothing but the winter homes of Sol's comets and hiding places of hypothetical trans-Plutonian planets-space in which the Sun holds options but can hardly be said to own in fee simple. But even the nearest stars were still light-years away. New Frontiers was headed for them at a pace which crowded the heels of light-weather cold, track fast.

Out, out, and still farther out . . . out to the lonely depths where world lines are almost straight, undistorted by gravitation. Each day, each month . . . each year . . . their headlong flight took them farther from all humanity.

PART TWO

The ship lunged on, alone in the desert of night, each lightyear as empty as the last. The Families built up a way of life in her.

The New Frontiers was approximately cylindrical. When not under acceleration, she was spun on her axis to give pseudo-weight to passengers near the outer skin of the ship; the outer or "lower" compartments were living quarters while the innermost or "upper" compartments were store-rooms and so forth. Between compartments were shops, hydroponic farms and such. Along the axis, fore to aft, were the control room, the converter, and the main drive.

The design will be recognized as similar to that of the larger free-flight interplanetary ships in use today, but it is necessary to bear in mind her enormous size.

She was a city, with ample room for a colony of twenty thousand, which would have allowed the planned complement of ten thousand to double their numbers during the long voyage to Proxima Centauri.

Thus, big as she was, the hundred thousand and more of the Families found themselves overcrowded fivefold.

They put up with it only long enough to rig for cold-sleep. By converting some recreation space on the lower levels to storage, room was squeezed out for the purpose. Somnolents require about one per cent the living room needed by active, functioning humans; in time the ship was roomy enough for those still awake. Volunteers for cold-sleep were not numerous at first-these people were more than commonly aware of death because of their unique heritage; cold-sleep seemed too much like the Last Sleep. But the great discomfort of extreme overcrowding combined with the equally extreme monotony of the endless voyage changed their minds rapidly enough to provide a steady supply for the little death as fast as they could be accommodated.

Those who remained awake were kept humping simply to get the work done-the ship's houskeeping, tending the hydroponic farms and the ship's auxiliary machinery and, most especially, caring for the somnolents themselves. Biomechanicians have worked out complex empirical formulas describing body deterioration and the measures which must be taken to offset it under various conditions of impressed acceleration, ambient temperature, the drugs used, and other factors such as metabolic age, body mass, sex, and so forth. By using the upper, low-weight compartments, deterioration caused by acceleration (that is to say, the simple weight of body tissues on themselves, the wear that leads to flat feet or bed sores) could be held to a minimum. But all the care of the somnolents had to be done by hand-turning them, massaging them, checking on blood sugar, testing the slow-motion heart actions, all the tests and services necessary to make sure that extremely reduced metabolism does not slide over into death. Aside from a dozen stalls in the ship's infirmary she had not been designed for cold-sleep passengers; no automatic machinery had been provided. All this tedious care of tens of thousands of somnolents had to be done by hand.

Eleanor Johnson ran across her friend, Nancy Weatheral, in Refectory 9-D--called "The Club" by its habitués, less flattering things by those who avoided it. Most of its frequenters were young and noisy. Lazarus was the only elder who ate there often. He did not mind noise, he enjoyed it.

Eleanor swooped down on her friend and kissed the back of her neck. "Nancy! So you are awake again! My, I'm glad to see you!"

Nancy disentangled herself. "H'lo, b~e. Don't spill my coffee."

"Well! Aren't you glad to see me?"

"Of course I am. But you forget that while it's been a year to you, it's only yesterday to me. And I'm still sleepy."

"How long have you been awake, Nancy?"

"A couple of hours. How's that kid of yours?"

"Oh, he's fine!" Eleanor Johnson's face brightened. "You wouldn't know him-he's shot up fast this past year. Almost up to my shoulder and looking more like his father every day."

Nancy changed the subject. Eleanor's friends made a point of keeping Eleanor's deceased husband out of the conversation. "What have you been doing while I was snoozing? Still teaching primary?" -

"Yes. Or rather 'No.' I stay with the age group my Hubert is in. He's in junior secondary now."

"Why don't you catch a few months' sleep and skip some of that drudgery, Eleanor? You'll make an old woman out of yourself if you keep it up;" - -

"No," Eleanor refused, "not until Hubert is old enough not to need me."

"Don't be sentimental. Half the female volunteers are women with young children. I don't blame 'em a bit. Look at me-from my point of view the trip so far has lasted only seven months. I could do the rest of it standing on my head."

Eleanor looked stubborn. "No, thank you. That may be all right for you, but I am doing very nicely as I am."

Lazarus had been sitting at the same counter doing drastic damage to a sirloin steak surrogate. "She's afraid she'll miss something," he explained. "I don't blame her. So am I."

Nancy changed her tack. "Then have another child, Eleanor. That'll get you relieved from routine duties."

"It takes two to arrange that," Eleanor pointed out.

"That's no hazard. Here's Lazarus, for example. He'd make a A plus father."

Eleanor dimpled. Lazarus blushed under his permanent tan. "As a matter of fact," Eleanor stated evenly, "I proposed to him and was turned down."

Nancy sputtered into her coffee and looked quickly from Lazarus to Eleanor.

"Sorry. I didn't know."

"No harm," answered Eleanor. "It's simply because I am one of his granddaughters, four times removed."

"But . . ." Nancy fought a losing fight with the custom of privacy. "Well, goodness me, that's well within the limits of permissible consanguinity. What's the hitch? Or should I shut up?"

"You should," Eleanor agreed.

Lazarus shifted uncomfortably. "I know I'm oldfashioned," he admitted, "but I soaked up some of my ideas a long time ago. Genetics or no genetics, I just wouldn't feel right marrying one of my own grandchildren."

Nancy looked amazed. "I'll say you're old-fashioned!" She added, "Or maybe you're just shy. I'm tempted to propose to you myself and find out."

Lazarus glared at her. "Go ahead and see what a surprise you get!"

Nancy looked him over coolly. "Mmn . . ." she meditated.

Lazarus tried to outstare her, finally dropped his eyes: "I'll have to ask you ladies to excuse me," he said nervously. "Work to do."

Eleanor laid a gentle hand on his arm. "Don't go, Lazarus. Nancy is a cat and can't help it. Tell her about the plans for landing."

"What's that? Are we going to land? When? Where?"

Lazarus, willing to be mollified, told her. The type G2, or Sol-type star, toward which they had bent their course years earlier was now less than a light-year away-a little over seven light-months-and it was now possible to infer by parainterferometric methods that the star (ZD9817, or simply "our" star) had planets of some sort.

In another month, when the star would be a half light-year away, deceleration would commence. Spin would be taken off the ship and for one year she would boost backwards at one gravity, ending near the star at interplanetary rather than interstellar speed, and a search would be made for a planet fit to support human life. The search would be quick and easy as the only planets they were interested in would shine out brilliantly then, like Venus from Earth; they were not interested in elusive cold planets, like Neptune or Pluto, lurking in distant shadows, nor in scorched cinders ilke Mercury, hiding in the flaming skirts of the mother star.

If no Earthlike planet was to be had, then they must continue on down really close to the strange sun and again be kicked away by light pressure, to resume hunting for a home elsewhere-with the difference that this time, not harassed by police, they could select a new course with care.

Lazarus explained that the New Frontiers would not actually land in either case; she was too big to land, her weight would wreck her. Instead, if they found a planet, she would be thrown into a parking orbit around her and exploring parties would be sent down in ship's boats. - -

As soon as face permitted Lazarus left the two young women and went to the laboratory where the Families continued their researches in metabolism and gerontology. He expected to find Mary Sperling there; the brush with Nancy Weatheral had made him feel a need for her company. If he ever did marry again, he thought to himself, Mary was more his style. Not that he seriously considered it; he felt that a iiaison between Mary and himself would have a ridiculous flavor of lavender and old lace.

Mary Sperling, finding herself cooped up in the ship and not wishing to accept the symbolic death of cold-sleep, had turned her fear of death into constructive channels by volunteering to be a laboratory assistant in the continuing research into longevity. She was not a trained biologist but she had deft fingers and an agile mind; the patient years of the trip had shaped her into a valuable assistant to Dr. Gordon Hardy, chief of the research.

Lazarus found her servicing the deathless tissue of chicken heart known to the laboratory crew as "Mrs. 'Avidus." Mrs. 'Avidus was older than any member of the Families save possibly Lazarus himself; she was a growing piece of the original tissue obtained by the Families from the Rockefeller Institute in the twentieth century, and the tissues had been alive since early in the twentieth century even then. Dr. Hardy and his predecessors had kept their bit of it alive for more than two centuries now, using the Carrel-Lindbergh-O'Shaug techniques and still Mrs. 'Avidus flourished.

Gordon Hardy had insisted on taking the tissue and the apparatus which cherished it with him to the reservation when he was arrested; he had been equally stubborn about taking the living tissue along during the escape in the Chili. Now Mrs. 'Avidus still lived and grew in the New Frontiers, fifty or sixty pounds of her-blind, deaf, and brainless, but still alive.

Mary Sperling was reducing her size. "Hello, Lazarus," she greeted him. "Stand back. I've got the tank open."

He watched her slice off excess tissue. "Mary," he mused, "what keeps that silly thing alive?"

"You've got the question inverted," she answered, not looking up; "the proper form is: why should it die? Why shouldn't it go on forever?" -

"I wish to the Devil it would die!" came the voice of Dr. Hardy from behind them. "Then we could observe and find out why." - -

"You'll never find out why from Mrs. 'Avidus, boss," Mary answered, hands and eyes still busy. "The key to the matter is in the gonads-she hasn't any."

'Hummph! What do you know about it?"

"A woman's intuition. What do you know about it?"

"Nothing, -absolutely nothing!-which puts me ahead of you and your intuition."

"Maybe. At least," Mary added slyly, "1 knew you before you were housebroken."

"A typical female argument. Mary, that lump of muscle cackled and laid eggs before either one of us was born, yet it doesn't know anything." He scowled at it. "Lazarus, I'd gladly trade it for one pair of carp. male and female." -

"Why carp?" asked Lazarus.

"Because carp don't seem to die. They get killed, or eaten, or starve to death, or succumb to infection, but so far as we know they don't die."

"Why not?"

"That's what I was trying to find out when we were rushed off on this damned safari. They have unusual intestinal flora and it may have something to do with that. But I think it has to do with the fact that they never stop growing."

Mary said something inaudibly. Hardy said, "What are you muttering about? Another intuition?"

"I said, 'Amoebas don't die.' You said yourself that every amoeba now alive has been alive for, oh, fifty million years or so. Yet they don't grow indefinitely larger and they certainly can't have intestinal flora."

"No guts," said Lazarus and blinked.

"What a terrible pun, Lazarus. But what I said is true. They don't die. They just twin and keep on living."

"Guts or no guts," Hardy said impatiently, "there may be a structural parallel. But I'm frustrated for lack of experimental subjects. Which reminds me: Lazarus, I'm glad you dropped in. I want you to do me a favor."

"Speak up. I might be feeling mellow."

"You're an interesting case yourself, you know. You didn't follow our genetic pattern; you anticipated it. I don't want your body to go into the converter; I want to examine it."

Lazarus snorted. "'Sail right with me, bud. But you'd better tell your successor what to look for-you may not live that long. And I'll bet you anything that you like that nobody'll find it by poking around in my cadaver!"

The planet they had hoped for was there when they looked for it, green, lush, and young, and looking as much like Earth as another planet could. Not only was it Earthlike but the rest of the system duplicated roughly the pattern of the Solar System-small terrestrial planets near this sun, large Jovian planets farther out. Cosmologists had never been able to account for the Solar System; they had alternated between theories of origin which had failed to stand up and sound mathematico-physical "proofs" that such a system could never have originated in the first place. Yet here was another enough like it to suggest that its paradoxes were not unique, might even be common.

But more startling and even more stimulating and certainly more disturbing was another fact brought out by telescopic observation as they got close to the planet. The planet held life . . , intelligent life . . . civilized life.

Their cities could be seen. Their engineering works, strange in form and purpose, were huge enough to be seen from space just as ours can be seen.

Nevertheless, though it might mean that they must again pursue their weary hegira, the dominant race did not appear to have crowded the available living space. There might be room for their little colony on those broad continents. If a colony was welcome. . .

"To tell the truth," Captain King fretted, "I hadn't expected anything like this. Primitive aborigines perhaps, and we certainly could expect dangerous animals, but I suppose I unconsciously assumed that man was the only really civilized race. We're going to have to be very cautious."

King made up a scouting party headed by Lazatus; he had come to have confidence in Lazarus' practical sense and will to survive. King wanted to head the party himself, but his concept of his duty as a ship's captain forced him to forego it. But Slayton Ford could go; Lazarus chose him and Ralph Schultz and his lieutenants. The rest of the party were specialists-biochemist, geologist, ecologist, stereographer, several sorts of psychologists and sociologists to study the natives including one authority in McKelvy's structural theory of communication whose task would be to find some way to talk with the natives.

No weapons.

King flatly refused to arm them. "Your scouting party is expendable, he told Lazarus bluntly; "for we can not risk offending them by any sort of fighting for any reason, even in self-defense. You are ambassadors, not soldiers. Don't forget it."

Lazarus returned to his stateroom, came back and gravely delivered to King one blaster. He neglected to mention the one still strapped to his leg under his kilt.

As King was about to tell them to man the boat and carry out their orders they were interrupted by Janice Schmidt, chief nurse to the Families' congenital defectives. She pushed her way past and demanded the Captain's attention. -

Only a nurse could have obtained it at that moment; she had professional stubbornness to match his and half a century more practice at being balky. He glared at her. "What's the meaning of this interruption?"

"Captain, I must speak with you about one of my children."

"Nurse, you are decidedly out of order. Get out. See me in my office-after taking it up with the Chief Surgeon."

She put her hands on her hips. "You'll see me now. This is the landing party, isn't it? I've got something you have to hear before they leave."

King started to speak, changed his mind, merely said, "Make it brief."

She did so. Hans Weatheral, a youth of some ninety years and still adolescent in appearance through a hyper-active thymus gland, was one of her charges. He had inferior but not moronic mentality, a chronic apathy, and a neuro-muscular deficiency which made him too weak to feed himself-and an acute sensitivity to telepaths.

He had told Janice that he knew all about the planet around which they orbited. His friends on the planet had told him about it . . . and they were expecting him.

The departure of the landing boat was delayed while King and Lazarus investigated. Hans was matter of fact about his information and what little they could check of what he said was correct. But he was not too helpful about his "friends." "Oh, just people," he said, shrugging at their stupidity. "Much like back home. Nice people. Go to work, go to school, go to church. Have kids and enjoy themselves. You'll like them."

But he was quite clear about one point: his friends were expecting-him; therefore he must go along.

Against his wishes and his better judgment Lazarus saw added to his party Hans Weatheral, Janice Schmidt, and a stretcher for Hans.

When the party returned three days later Lazarus made a long private report to King while the specialist reports were being analyzed and combined. "It's amazingly like Earth, Skipper, enough to make you homesick. But it's also different enough to give you the willies-llke looking at your own face in the mirror and having it turn out to have three eyes and no nose. Unsettling."

"But how about the natives?"

"Let me tell it. We made a quick swing of the day side, for a bare eyes look. Nothing you haven't seen through the 'scopes. Then I put her down where Hans told me to, in a clearing near the center of one of their cities. I wouldn't have picked the place myself; I would have preferred to land in the bush and reconnoitre. But you told me to play Hans' hunches."

"You were free to use your judgment," King reminded

"Yes, yes. Anyhow we did it. By the time the techs had sampled the air and checked for hazards there was quite a crowd around us. They-well, you've seen the stereographs."

"Yes. Incredibly android."

"Android, hell! They're men. Not humans, but men just the same." Lazarus looked puzzled. "I don't like it."

King did not argue. The pictures had shown bipeds seven to eight feet tall, bilaterally symmetric, possessed of internal skeletal framework, distinct heads, lens-and-camera eyes. Those eyes were their most human and appealing features; they were large, limpid, and tragic, like those of a Saint Bernard dog.

It was well to concentrate on the eyes; their other features were not as tolerable. King looked away from the loose, toothless mouths, the bifurcated upper lips. He decided that it might take a long, long time to learn to be fond of these creatures. "Go ahead," he told Lazarus.

"We opened up and I stepped out alone, with my hands empty and. trying to look friendly and peaceable. Three of them stepped forward-eagerly, I would say. But they lost interest in me at once; they seemed to be waiting for somebody else to come out. So I gave orders to carry Hans out.

"Skipper, you wouldn't believe it. They fawned over Hans like a long lost brother. No, that doesn't describe it. More like a king returning home in triumph. They were polite enough with the rest of us, in an offhand way, but they fairly slobbered over Hans." Lazarus hesitated. "Skipper? Do you believe in reincarnation?"

"Not exactly. I'm open-minded about it. I've read the report of the Frawling Committee, of course."

"I've never had any use for the notion myself. But how else could you account for the reception they gave Hans?"

"I don't account for it. Get on with your report. Do you think it is going to be possible for us to colonize here?"

"Oh," said Lazarus, "they left no doubt on that point. You see, Hans really can talk to them, telepathically. Hans tells us that their gods have authorized us to live here-and the natives have already made plans to receive us."

"That's right. They want us."

"Well! That's a relief."

"Is it?"

King studied Lazarus' glum features. "You've made a report favorable on every point. Why the sour look?"

"I don't know. I'd just rather we found a planet of our own. Skipper, anything this easy has a hitch in it."

Chapter 2

THE Jockaira (or Zhacheira, as some prefer) turned an entire city over to the colonists.

Such astounding cooperation, plus the sudden discovery by almost every member of the Howard Families that he was sick for the feel of dirt under foot and free air in his lungs, greatly speeded the removal from ship to ground. It had been anticipated that at least an Earth year would be needed for such transition and that somnolents would be waked only as fast as they could be accommodated dirtside, But the limiting factor now was the scanty ability of the ship's boats to transfer a hundred thousand people as they were roused.

The Jockaira city was not designed to fit the needs of human beings. The Jockaira were not human beings, their physical requirements were somewhat different, and their cultural needs as expressed in engineering were vastly different. But a city, any city, is a machine to accomplish certain practical ends: shelter, food supply, sanitation, communication; the internal logic of these prime requirements. as applied by diiferent creatures to different environments, will produce an unlimited number of answers. But, as applied by any race of warm-blooded, oxygen-breathing androidal creatures to a particular environment, the results, although strange, are necessarily such that Terran humans can use them. In some ways the Jockaira city looked as wild as a pararealist painting, but humans have lived in igloos, grass shacks, and even in the cybernautomated burrow under Antarctina; these humans could and did move into the Jockaira city-and of course at once set about reshaping it to suit them better.

It was not difficult even though there was much to be done. There were buildings already standing-shelters with roofs on them, the artificial cave basic to all human shelter requirements. It did not matter what the Jockaira had used such a structure for; humans could use it for almost anything: sleeping, recreation, eating, storage, production. There

were actual "caves" as well, for the Jockaira dig in more than we do. But humans easily turn troglodyte on occasion, in New York as readily as in Antarctica.

There was fresh potable water piped in for drinking and for limited washing. A major lack lay in plumbing; the city had no overall drainage system. The "Jocks" did not waterbathe and their personal sanitation requirements differed from ours and were taken care of differently. A major effort had to be made to jury-rig equivalents of shipboard refreshers and adapt them to hook in with Jockaira disposal arrangements. Minimum necessity ruled; baths would remain a rationed luxury until water supply and disposal could be increased at least tenfold. But baths are not a necessity.

But such efforts at modification were minor compared with the crash program to set up hydroponic farming, since most of the somnolents could not be waked until a food supply was assured. The do-it-now crowd wanted to tear out every bit of hydroponic equipment in the New Frontiers at once, ship it down dirtside, set it up and get going, while depending on stored supplies during the change-over; a more cautious minority wanted to move only a pilot plant while continuing to grow food in the ship; they pointed out that unsuspected fungus or virus on the strange planet could result in disaster . . .starvation.

The minority, strongly led by Ford and Barstow and supported by Captain King, prevailed; one of the ship's hydroponic farms was drained and put out of service. Its machinery was broken down into parts small enough to load into ship's boats.

But even this never reached dirtside. The planet's native farm products turned out to be suitable for human food and the Jockaira seemed almost pantingly anxious to give them away. Instead, efforts were turned to establishing Earth crops in native soil in order to supplement Jockaira foodstuffs with sorts the humans were used to. The Jockaira moved in and almost took over that effort; they were superb "natural" farmers (they had no need for synthetics on their undepleted planet) and seemed delighted to attempt to raise anything their guests wanted.

Ford transferred his civil headquarters to the city as soon as a food supply for more than a pioneer group was assured, while King remained in the ship. Sleepers were awakened and ferried to the ground as fast as facilities were made ready for them and their services could be used. Despite assured food, shelter, and drinking water, much needed to be done to provide minimum comfort and decency. The two cultures were basicially different. The Jockaira seemed always anxious to be endlessly helpful but they were often obviously baffled at what the humans tried to do. The Jockaira culture did not seem to include the idea of privacy; the buildings of the city had no partitions in them which were not loadbearing-and few that were; they tended to use columns or posts. They could not understand why the humans would break up these lovely open spaces into cubicles and passageways; they simply could not comprehend why any individual would ever wish to be alone for any purpose whatsoever.

Apparently (this is not certain, for abstract communication with them never reached a subtle level) they decided eventually that being alone held a religious significance for Earth people. In any case they were again helpful; they provided thin sheets of material which could be shaped into partitions-with their tools and only with their tools. The stuff frustrated human engineers almost to nervous collapse. No corrosive known to our technology affected it; even the reactions that would break down the rugged

fluorine plastics used in handling uranium compounds had no effect on it. Diamond saws went to pieces on it, heat did not melt it, cold did not make it brittle. It stopped light, sound, and all radiation they were equipped to try on it. Its tensile strength could not be defined because they could not break it. Yet Jockaira tools, even when handled by humans, could cut it, shape it, reweld it.

The human engineers simply had to get used to such frustrations. From the criterion of control over environment through technology the Jockaira were as civilized as humans. But their developments had been along other lines.

The important differences between the two cultures went much deeper than engineering technology. Although ubiquitously friendly and helpful the Jockaira were not human. They thought differently, they evaluated differently; their social structure and language structure reflected their unhuman quality and both were incomprehensible to human beings.

Oliver Johnson, the semantician who had charge of developing a common language, found his immediate task made absurdly easy by the channel of communication through Hans Weatheral. "Of course," he explained to Slayton Ford and to Lazarus, "Hans isn't exactly a genius; he just misses being a moron. That limits the words I can translate through him to ideas he can understand. But it does give me a basic vocabulary to build on."

"Isn't that enough?" asked Ford. "It seems to me that - I have heard that eight hundred words will do to convey any idea."

"There's some truth in that," admitted Johnson. "Less than a thousand words will cover all ordinary situations. I have selected not quite seven hundred of their terms, operationals and substantives, to give us a working lingua franca. But subtle distinctions and fine discriminations will have to wait until we know them better and understand them. A short vocabulary cannot handle high abstractions."

"Shucks," said Lazarus, "seven hundred words ought to be enough. Me, I don't intend to make love to 'em, or try to discuss poetry."

This opinion seemed to be justified; most of the members picked up basic Jockairan in two weeks to a month after being ferried down and chattered in it with their hosts as if they had talked it all their lives. All of the Earthmen had had the usual sound grounding in mnemonics and semantics; a short-vocabulary auxiliary language was quickly learned under the stimulus of need and the circumstance of plenty of chance to practice-except, of course, by the usual percentage of unshakable provincials who felt that it was up to "the natives" to learn English.

The Jockaira did not learn English. In the first place not one of them showed the slightest interest. Nor was it reasonable to expect their millions to learn the language of a few thousand. But in any case the split upper lip of a Jockaira could not cope with "m," "p," and "b," whereas the gutturals, sibilants, dentals, and clicks they did use could be approximated by the human throat.

Lazarus was forced to revise his early bad impression of the Jockaira. It was impossible not to like them once the strangeness of their appearance had worn off. They were so hospitable, so generous, so friendly, so anxious to please. He became particularly attached to Kreei Sarloo, who acted as a sort of liaison officer between the Families and the Jockaira. Sarloo held a position among his own people which could be trans1ated roughly as "chief," "father," "priest," or "leader" of the Kreel family or tribe. He invited

Lazarus to visit him in the Jockaira city nearest the colony. "My people will like to see you and smell your skin," he said. "It will be a happymaking thing. The gods will be pleased."

Sarloo seemed almost unable to form a sentence without making reference to his gods. Lazarus did not mind; to another's religion he was tolerantly indifferent. "I will come, Sarloo, old bean. It will be a happy-making thing for me, too."

Sarloo took him in the common vehicle of the Jockaira, a wheelless wain shaped much like a soup bowl, which moved quietly and rapidly over the ground, skimming the surface in apparent contact. Lazarus squatted on the floor of the vessel while Sarloo caused it to speed along at a rate that made Lazarus' eyes water.

"Sasloo," Lazarus asked, shouting to make himself heard against the wind, "how does this thing work? What moves it?'

"The gods breathe on the-" Sarloo used a word not in their common language. "- and cause it to need to change its place."

Lazarus started to ask for a fuller explanation, then shut up. There had been something familiar about that answer and he now placed it; he had once given a very similar answer to one of the water people of Venus when he was asked to explain the diesel engine used in an early type of swamp tractor. Lazarus had not meant to be mysterious; he had simply been tongue-tied by inadequate common language. Well, there was a way to get around that- "Sarloo, I want to see pictures of what happens inside," Lazarus persisted, pointing. "You have pictures?"

"Pictures are," Sarloo acknowledged, "in the temple. You must not enter the temple." His great eyes looked mournfully at Lazarus, giving him a strong feeling that the Jockaira chief grieved over his friend's lack of grace. Lazarus hastily dropped the subject.

But the thought of Venerians brought another puzzler to mind. The water people, cut off from the outside world by the eternal clouds of Venus, simply did not believe in astronomy. The arrival of Earthmen had caused them to readjust their concept of the cosmos a little, but there was reason to believe that their revised explanation was no closer to the truth. Lazarus wondered what the Jackaira thought about visitors from space. They had shown no surprise-~-or had they?

"Sarloo," he asked, "do you know where my brothers and I come from?'

"I know," Sarloo answered. "You come from a distant sun -so distant that many seasons would come and go while light traveled that long journey." -

Lazarus felt mildly astonished. "Who told you that?'

"The gods tell us. Your brother Libby spoke on it."

Lazarus was willing to lay odds that the gods had not got around to mentioning it until after Libby explained it to Kreel Sarloo. But he held his peace. He still wanted to ask Sarloo if he had been surprised to have visitors arrive from the skies but he could think of no Jockairan term for surprise or wonder. He was still trying to phrase the question when Sarloo spoke again:

"The fathers of my people flew through the skies as you did, but that was before the coming of the gods. The gods, in their wisdom, bade us stop."

And that, thought Lazarus, is one damn big lie, from pure panic. There was not the slightest indication that the Jockaira had ever been off the surface of their planet.

At Sarloo's home that evening Lazarus sat through a long session of what he assumed was entertainment for the guest of honor, himself. He squatted beside Sarloo on

a raised portion of the floor of the vast common room of the clan Kreel and listened to two hours of howling that might have been intended as singing. Lazarus felt that better music would result from stepping on the tails of fifty assorted dogs but he tried to take it in the spirit in which it seemed to be offered.

Libby, Lazarus recalled, insisted that this mass howling which the Jockaira were wont to indulge in was, in fact, music, and that men could learn to enjoy it by studying its interval relationships.

Lazarus doubted it.

But he had to admit that Libby understood the Jockaira better than he did in some ways. Libby had been delighted to discover that the Jockaira were excellent and subtle mathematicians. In particular they had a grasp of number that paralleled his own wild talent. Their arithmetics were incredibly involved for normal humans. A number, any number was to them a unique entity, to be grasped in itself and not simply as a grouping of smaller numbers. In consequence they used any convenient positional or exponential notation with any base, rational irrational, or variable-or none at all. It was supreme luck, Lazarus mused, that Libby was available to act as mathematical interpreter between the Jockaira and the Families, else it would have been impossible to grasp a lot of the new technologies the Jockaira were showing them.

He wondered why the Jockaira showed no interest in learning human technologies they were offered in return?

The howling discord died away and Lazarus brought his thoughts back to the scene around him. Food was brought; the Kreel family tackled it with the same jostling enthusiasm with which Jockaira did everything. Dignity, thought Lazarus--lean idea which never caught on here. A large bowl, full two feet across and brimful of an amorpheous meal, was placed in front of Kreel Sarloo. A dozen Kreels crowded atound it and started grabbing~giving no precedence to their senior. But Sadoo casually slapped a few of them out of the way and plunged a hand into the dish, brought forth a gob of the ration and rapidly kneaded it into a ball in the palm of his double-thumbed hand. Done, he shoved it towards Lazarus' mouth.

Lmarus war not squeamish-but he had to remind bimself first, that food for Jockaira was food for men, and second that he could not catch anything from them anyhow, before he could bring himself to try the proffered morsel.

He took a large bite. Mmmm. . . not too bad-bland and sticky, no particular flavor. Not good either-but could be swallowed. Grimly determined to uphold the honor of his race, he ate on, while promising himself a proper meal in the near future. When lie' (cit that to swallow another mouthful would be to invite physical and social disaster, he thought of a possible way out. Reaching into the common plate he scooped up a large handful of the stuff, molded it inot a ball, and offered it to Sarloo.

It was inspired diplomacy. For the rest of the mast Lazarus fed Sexton, fed him until his arms were tired, until he marveled at his host's ability to tuck it away.

After eating they slept and Lazarus slept with the family, literally. They slept where they had eaten, without beds, disposed as casually as leaves on a path or puppies. To his aurprise, Lazarus slept well and did not awoke until false suns in the cavern roof glowed in mysterious sympathy to new dawn. Sarloo was still asleep near him and giving out most humanlike snores. Lazarus found that one infant Jockaira was cuddled spoon fashion against his own stomach. He felt a movement behind his back~ a rustle at his

thigh. He turned cautiously and found that another Jockaira-a six-year-old in human equivalence- had extracted his blaster from its holster and was now gazing curiously into its muzzle.

With hasty caution Lazarus removed the deadly toy from the child's unwilling fingers, noted with relief that the safety was still on and reholstered it. Lazarus received a reproach for look; the kid seemed about to cry. "Hush," whispered Lazarus, "you'll wake your o1d man. Here--"- He gathered the child into his left arm, and cradled it against his side. The little Jockaira snuggled up to him, laid a soft moist mouth against his side, and promptly went to sleep.

Lazarus looked down at him. "You're a cute little devil," he said softly. "I-could grow right fond of you if 1 could ever get used to your smell."

Some of the incidents between the two races would bave been funny bad they not been charged with potential trouble: for example, the case of Eleanor Johnson's son Hubert This gangling adolescent was a confirmed sidewalk-superintendent. One day he was watching two technicians, one human and one Jockaira, adapt a Jockaira power source to the feed of Earth-type machinery. Tbe Jockaira was apparently amused by the boy and, in an obviously friendly spirit, picked him up.

Hubert began to scream.

His mother, never far from him, joined battle. She lacked strength and skill to do the utter destruction she was bent on; the big nonhuman was unhurt, but it created a nasty situation.

Administrator Ford and Oliver Johnson tried very hard to explain the incident to the amazed Jockaira. Fortunately, they seemed grieved rather than vengeful.

Ford then called in Eleanor Johnson. "You have endangered the entire colony by your stupidity-"

"But I-"

"Keep quiet! If you hadn't spoiled the boy rotten, he would have behaved himself. If you weren't a maudlin fool. you would have kept your hands to yourself. The boy goes to the regular development classes henceforth and you are to let him alone. At the lightest sign of animosity on your part toward any of the natives, I'll have you subjected to a few years' cold-rest. Now get out!"

Ford was forced to use almost as strong measures on Janice Schmidt. The interest shown in Hans Weatheral by the Jockaira extended to all the telepathic defectives. The natives seemed to be reduced to a state of quivering adoration by the mere fact that these could communicate with them directly. Kreel Sarloo informed Ford that he wanted the sensitives to be housed separately from the other defectives in the evacuated temple of the Earthmen's city and that the Jockaira wished to wait on them personally. It was more of an order than a request.

Janice Schmidt submitted ungracefully to Ford's insistence that the Jockaira be humored in the matter in return for all that they had done, and Jockaira nurses took over under her jealous eyes.

Every sensitive of intelligence level higher than the semimoronic Hans Weatheral promptly developed spontaneous and extreme psychoses while being attended by Jockaira.

So Ford had another headache to straighten out. Janice Schmidt was more powerfully and more intelligently vindictive than was Eleanor Johnson. Ford was s-tpr~d to bind Janice over to keep the peace under the threat of retiring her completely from the care of her beloved "children." Kreel Sarloo, distressed and apparently shaken to his core, accepted a compromise whereby Janice and her junior nurses resumed care of the poor psychotics while Jockaira continued to minister to sensitives of moron level and below.

But the greatest difficulty arose over . . . surnames. Jockaira each had an individual name and a surname. Surnames were limited in number, much as they were in the Families. A native's surname referrect equally to his tribe and to the temple in which he worshipped.

Kreel Sarloo took up the matter with Ford. "High Father of the Strange Brothers," he said, "the time has come for you and your children to choose your surnames." (The rendition of Sarloo's speech into English necessarily contains inherent errors.)

Ford was used to difficulties in understanding the Jockaira. "Sarloo, brother and friend," he answered, "I hear your words but I do not understand. Speak more fully."

Sarloo began over. "Strange brother, the seasons come and the seasons go and there is a time of ripening. The gods tell us that you, the Strange Brothers, have reached the time in your education (?) when you must select your tribe and your temple. I have come to arrange with you the preparations (ceremonies?) by which each will choose his surname. I speak for the gods in this. But let me say for myself that it would make me happy if you, my brother Ford, were to choose the temple Kreel."

Ford stalled while he tried to understand what was implied. "I am happy that you wish me to have your surname. But my people already have their own surnames."

Sarloo dismissed that with a flip of his lips. "Their present surnames are words and nothing more. Now they must choose their real surnames, each the name of his temple and of the god whom he will worship. Children grow up and are no longer children."

Ford decided that he needed advice. "Must this be done at once?"

"Not today, but in the near future. The gods are patient."

Ford called in Zaccur Barstow, Oliver Johnson, Lazarus Long, and Ralph Schultz, and described the interview. Johnson played back the recording of the conversation and strained to catch the sense of the words. He prepared several possible translations but failed to throw any new light on the matter.

"It looks," said Lazarus, "like a case of join the church or get out."

"Yes," agreed Zaccur Barstow, "that much seems to come through plainly. Well, I think we can afford to go through the motions. Very few of our people have religious prejudices strong enough to forbid their paying lip service to the native gods in the interests of the general welfare."

"I imagine you are correct," Ford said. "I, for one, have no objection to adding Kreel to my name and taking part in their genuflections if it will help us to live in peace." He frowned. "But I would not want to see our culture submerged in theirs."

"You can forget that," Ralph Schultz assured him. "No matter what we have to do to please them, there is absolutely no chance of any real cultural assimilation. Our brains are not like theirs-just how different I am only beginning to guess."

"Yeah," said Lazarus, " 'just how different.'"

Ford turned to Lazarus. "What do you mean by that? What's troubling you?"

"Nothing. Only," he added, "I never did share the general enthusiasm for this place."

They agreed that one man should take the plunge first, then report back. Lazarus tried to grab the assignment on seniority, Schultz claimed it as a professional right; Ford overruled them and appointed himself, asserting that it was his duty as the responsible executive. -

Lazarus went with him to the doors of the temple where the induction was to take place. Ford was as bare of clothing as the Jockaira, but Lazarus, since he was not to enter the temple, was able to wear his kilt. Many of the colonists, sunstarved after years in the ship, went bare when it suited them, just as the Jockaira did. But Lazarus never did. Not only did his habits run counter to it, but a blaster is an extremely conspicuous object on a bare thigh.

Kreel Sarloo greeted them and escorted Ford inside. Lazarus called out after them, "Keep your chin up, pal!"

He waited. He struck a cigarette and smoked it. He walked up and down. He had no way to judge how long it would be; it seemed, in consequence, much longer than it was.

At last the doors slid back and natives crowded out through them. They seemed curiously worked up about something and none of them came near Lazarus. The press that still existed in the great doorway separated, formed an aisle, and a figure came running headlong through it and out into the open.

Lazarus recognized Ford.

Ford did not stop where Lazarus waited but plunged blindly on past. He tripped and fell down. Lazarus hurried to him.

Ford made no effort to get up. He lay sprawled face down, his shoulders heaving violently, his frame shaking with sobs. Lazarus knelt by him and shook him. "Slayton," he demanded, "what's happened? What's wrong with you?" Ford turned wet and horror-stricken eyes to him, checking his sobs momentarily. He did not speak but he seemed to recognize Lazarus. He flung himself on Lazarus, clung to him, wept more violently than before.

Lazarus wrenched himself free and slapped Ford hard. "Snap out of it!" he ordered. "Tell me what's the matter."

Ford jerked his head at the slap and stopped his outcries but he said nothing. His eyes looked dazed. A shadow fell across Lazarus' line of sight; he spun around, covering with his blaster. Kreel Sarloo stood a few feet away and did not come closer-not because of the weapon; he had never seen one before.

"You!" said Lazarus. "For the- What did you do to him?"

He checked himself and switched to speech that Sarloo could understand. "What has happened to my brother Ford?"

"Take him away," said Sarloo, his lips twitching. "This is a bad thing. This is a very bad thing."

"You're telling me!" said Lazarus. He did not bother to translate.

Chapter 3

THE SAME CONFERENCE as before, minus its chairman, met as quickly as possible. Lazarus told his story, Shultz reported on Ford's condition. "The medical staff can't find anything wrong with him. All I can say with certainty is that the Administrator is suffering from an undiagnosed extreme psychosis. We can't get into communication with him."

"Won't he talk at all?" asked Barstow.

"A word or two, on subjects as simple as food or water. Any attempt to reach the cause of his trouble drives him into incoherent hysteria."

"No diagnosis?"

"Well, if you want an unprofessional guess in loose language, I'd say he was scared out of his wits. But," Schultz added, "I've seen fear syndromes before. Never anything like this."

"I have," Lazarus said suddenly.

"You have? Where? What were the circumstances?'

"Once," said Lazarus, "when I was a kid, a couple of hundred years back, I caught a grown coyote and penned him up. I had a notion I could train him to be a hunting dog. It didn't work.

"Ford acts just the way that coyote did."

An unpleasant silence followed. Schultz broke it with, "I don't quite see what you mean. What is the parallel?'

"Well," Lazarus answered slowly, "this is just my guess. Slayton is the only one who knows the true answer and he can't talk. But here's my opinion: we've had these Jockaira doped out all wrong from scratch. We made the mistake of thinking that because they looked like us, in a general way, and were about as civilized as we are, that they were people. But they aren't people at all. They are . . . domestic animals.

"Wait a minute now!" he added. "Don't get in a rush. There are people on this planet, right enough. Real people. They lived in the temples and the Jockaira called them gods. They are gods!"

Lazarus pushed on before anyone could interrupt. "I know what you're thinking. Forget it. I'm not going metaphysical on you; I'm just putting it the best I can. I mean that there is something living in those temples and whatever it is, it is such heap big medicine that it can pinch-hit for gods, so you might as well call 'em that. Whatever they are, they are the true dominant race on this planet-its people! To them, the rest of us, Jocks or us, are just animals, wild or tame. We made the mistake of assuming that a local religion was merely superstition. It ain't."

Barstow said slowly, "And you think this accounts for what happened to Ford?'

"I do. He met one, the one called Kreel, and it drove him crazy."

"I take it," said Schultz, "that it is your theory that any man exposed to this . . . this presence . . . would become psychotic?"

"Not exactly," answered Lazarus. "What scares me a damn' sight more is the fear that I might not go crazy!"

That same day the Jockaira withdrew all contact with the Earthmen. It was well that they did so, else there would have been violence. Fear hung over the city, fear of horror worse than death, fear of some terrible nameless thing, the mere knowledge of which would turn a man into a broken mindless animal. The Jockaira no longer seemed

harmless friends, rather clownish despite their scientific attainments, but puppets, decoys, bait for the unseen potent beings who lurked in the "temples."

There was no need to vote on it; with the single-mindedness of a crowd stampeding from a burning building the Earthmen wanted to leave this terrible place. Zaccur Barstow assumed command. "Get King on the screen. Tell him to send down every boat at once. We'll get out of here as fast as we can." He ran his fingers worriedly through his hair. "What's the most we can load each trip, Lazarus? How long will the evacuation take?"

Lazarus muttered.

"What did you say?

"I said, 'It ain't a case of how long; it's a case of will we be let.' Those things in the temples may want more domestic animals-us!"

Lazarus was needed as a boat pilot but he was needed more urgently for his ability to manage a crowd. Zaccur Barstow was telling him to conscript a group of emergency police when Lazarus looked past Zaccur's shoulder and exclaimed, "Oh oh! Hold it, Zack-school's out."

Zaccur turned his head quickly an4 saw, approaching with stately dignity across the council hail, Kreel Sarloo. No one got in his way.

They soon found out why. Zaccur moved forward to greet him, found himself stopped about ten feet from the Jockaira. No clue to the cause; just that-stopped.

"I greet you, unhappy brother," Sarloo began.

"I greet you, Krecl Sarloo."

"The gods have spoken. Your kind can never be civilized (?).You and your brothers are to leave this world."

Lazarus let out a deep sigh of relief. -

"We are leaving, Kreel Sarloo," Zaccur answered soberly.

"The gods require that you leave. Send your bother Libby to me."

Zaccur sent for Libby, then turned back to Sarloo. But the Jockaira had nothing more to say to them; he seemed indifferent to their presence. They waited.

Libby arrived. Sarloo held him in a long conversation. Barstow and Lazarus were both in easy earshot and could see their lips move, but heard nothing. Lazarus found the circumstance very disquieting. Damn my eyes, he thought, I could figure several ways to pull that trick with the right equipment but I'll bet none of 'em is the right answer-and I don't see any equipment.

The silent discussion ended, Sarloo stalked off without farewell. Libby turned to the others and spoke; now his voice could be heard. "Sarloo tells me," he began, brow wrinkled in puzzlement, "that we are to go to a planet, uh, over thirtytwo light-years from here. The gods have decided it." He stopped and bit his lip.

"Don't fret about it," advised Lazarus. "Just be glad they want us to leave. My guess is that they could have squashed us flat just as easily. Once we're out in space we'll pick our. own destination."

"I suppose so. But the thing that puzzles me is that he mentioned a time about three hours~away as being our departure from this system."

"Why, that's utterly unreasonable," protested Barstow. "Impossible. We haven't the boats to do it."

Lazarus said nothing. He was ceasing to have opinions.

Zaccur changed his opinion quickly. Lazarus acquired one, born of experience. While urging his cousins toward the field where embarkation was proceeding, he found himself lifted up, free of the ground. He struggled, his arms and legs met no resistance but the ground dropped away. He closed his eyes, counted ten jets, opened them again. He was at least two miles in the air.

Below him, boiling up from the city like bats from a cave, were uncountable numbers of dots and shapes, dark against the sunlit ground. Some were close enough for him to see that they were men, Earthmen, the Families.

The horizon dipped down, the planet became a sphere, the sky turned black. Yet his breathing seemed normal, his blood vessels did not burst.

They were sucked into clusters around the open ports of the New Frontiers like bees swarming around a queen. Once inside the ship Lazarus gave himself over to a case of the shakes. Whew! he sighed to himself, watch that first step-it's a honey!

Libby sought out Captain King as soon as he was inboard and had recovered his nerve. He delivered Sarloo's message.

King seemed undecided. "I don't know," he said. "You know more about the natives than I do, inasmuch as I have hardly put foot to ground. But between ourselves, Mister, the way they sent my passengers back has me talking to myself. That was the most remarkable evolution I have ever seen performed."

"I might add that it was remarkable to experience, sir," Libby answered unhumorously. "Personally I would prefer to take up ski jumping. I'm glad you had the ship's access ports open."

"I didn't," said King tersely. "They were opened for me."

They went to the control room with the intention of getting the ship under boost and placing a long distance between it and the planet from which they had been evicted; thereafter they would consider destination and course. "This planet that Sarloo described to you," said King, "does it belong to a G-type star?"

"Yes," Libby confirmed, "an Earth-type planet accompanying a Sol-type star. I have its coordinates and could. identify from the catalogues. But we can forget it; it is too far away.'

"So . . ." King activated the vision system for the stellarium. Then neither of them said anything for several long moments. The images of the heavenly bodies told their own story.

With no orders from King, with no hands at the controls, the New Frontiers was on her long way again, headed out, as if she had a mind of her own.

"I can't tell you much," admitted Libby some hours later to a group consisting of King, Zaccur Barstow, and Lazarus Long. "I was able to determine, before we passed the speed of light-or appeared to-that our course then was compatible with the idea that we have been headed toward the star named by Kreel Sarloo as the destination ordered for us by his gods. We continued to accelerate and the stars faded out. I no longer have any astrogational reference points and I am unable to say where we are or where we are going,"

"Loosen up, Andy," suggested Lazarus. "Make a guess."

"Well . . . if our world line is a smooth function-if it is, and I have no data-then we may arrive in the neighborhood of star PK3722, where Kreel Sarloo said we were going."

"Rummph!" Lazarus turned to King. "Have you tried slowing down?"

"Yes," King said shortly. "The controls are dead."

"Mmmm . . . Andy, when do we get there?"

Libby shrugged helplessly. "I have no frame of reference. What is time without a space reference?"

Time and space, inseparable and one- Libby thought about it long after the others had left. To be sure, he had the space framework of the ship itself and therefore there necessarily was ship's time. Clocks in the ship ticked or hummed or simply marched; people grew hungry, fed themselves, got tired, rested. Radioactives deteriorated, physio-chemical processes moved toward states of greater entropy, his own consciousness perceived duration.

But the background of the stars, against which every timed function in the history of man had been measured, was gone. So far as his eyes or any instrument in the ship could tell him, they had become unrelated to the rest of the universe.

What universe?

There was no universe. It was gone.

Did they move? Can there be motion when there is nothing to move past?

Yet the false weight achieved by the spin of the ship persisted. Spin with reference to what? thought Libby. Could it be that space held a true, absolute, nonrelational texture of its own, like that postulated for the long-discarded "ether" thatthe classic Michelson-Morley experiments had failed to detect? No, more than that-had denied the very possibility of its existence? -had for that matter denied the possibility of speed greater than light. Had the ship actually passed the speed of light? Was it not more likely that this was a coffin, with ghosts as passengers, going nowhere at no time?

But Libby itched between his shoulder blades and was forced to scratch; his left leg had gone to sleep; his stomach was beginning to speak insistently for food-if this was death, he decided, it did not seem materially different from life.

With renewed tranquility, he left the control room and headed for his favorite refectory, while starting to grapple with the problem of inventing a new mathematics which would include all the new phenomena. The mystery of how the hypothetical gods of the Jockaira had teleported the Families from ground to ship he discarded. There had been no opportunity to obtain significant data, measured data; the best that any honest scientist could do, with epistemological rigor, was to include a note that recorded the fact and stated that it was unexplained. It was a fact; here he was who shortly before had been on the planet; even now Schultz's assistants were overworked trying to administer depressant drugs to the thousands who had gone to pieces emotionally under the outrageous experience. But Libby could not explain it and, lacking data, felt no urge to try. What he did want to do was to deal with world lines in a plenum, the basic problem of field physics.

Aside from his penchant for mathematics Libby was a simple person. He preferred the noisy atmosphere of the "Club," refectory 9-D, for reasons different from those of Lazarus. The company of people younger than himself reassured him; Lazarus was the only elder he felt easy with.

Food, he learned, was not immediately available at the Club; the commissary was still adjusting to the sudden change. But Lazarus was there and others whom he knew; Nancy Weatheral scrunched over and made room for him. "You're just the man I want to see," she said. "Lazarus is being most helpful. Where are we going this time and when do we get there?" -

Libby explained the dilemma as well as he could. Nancy wrinkled her nose. "That's a pretty prospect, I must say! Well, I guess that means back to the grind for little Nancy."

"What do you mean?"

"Have you ever taken care of a somnolent? No, of course you haven't. It gets tiresome. Turn them over, bend their arms, twiddle their tootsies, move their heads, close the tank and move on to the next one. I get so sick of human bodies that I'm tempted to take a vow of chastity."

"Don't commit yourself too far," advised Lazarus. "Why would you care, you old false alarm?"

Eleanor Johnson spoke up. "Fm glad to be in the ship again. Those slimy Jockaira-ugh!"

Nancy shrugged. "You're prejudiced, Eleanor. The Jocks are okay, in their way. Sure, they aren't exactly like us, but neither are dogs. You don't dislike dogs, do you?'

"That's what they are," Lazarus said soberly. "Dogs."

"Huh?"

"I don't mean that they are anything like dogs in most ways-they aren't even vaguely canine and they certainly are our equals and possibly our superiors in some things . . . but they are dogs just the same. Those things they call their 'gods' are simply their masters, their owners. We couldn't be domesticated, so the owners chucked us out."

Libby was thinking of the inexplicable telekinesis the Jockaira-or their masters-had used. "I wonder what it would have been like," he said thoughtfully, "if they had been able to domesticate us. They could have taught us a lot of wonderful things"

"Forget it," Lazarus said sharply. "It's not a man's place to be property."

"What is a man's place?"

"It's a man's business to be what he is . . . and be it in style!" Lazarus got up. "Got to go."

Libby started to leave also, but Nancy stopped him. "Don't go. I want to ask you some questions. What year is it back on~ Earth?"

Libby started to answer, closed his mouth. He started to answer a second time, finally said, "I don't know how to answer that question. It's like saying, 'How high is up?"

"I know I probably phrased it wrong," admitted Nancy. '1 didn't do very well in basic physics, but I did gather the idea that time is relative and simultaneity is an idea which applies only to two points close together in the same framework. But just the same, I want to know something. We've traveled a lot faster and farther than anyone ever did before, haven't we? Don't our clocks slow down, or something?"

Libby got that completely baffled look which mathematical-physicists wear whenever laymen try to talk about physics in nonmathematical language. "You're referring to the Lorentz-2 FitzGerald contraction. But, if you'll pardon me, anything one says about it in words is necessarily nonsense."

"Why?" she insisted.

"Because . . . well, because the language is inappropriate. The formulae used to describe the effect loosely called a contraction presuppose that the observer is part of the phenomenon. But verbal language contains the implicit assumption that we can stand outside the whole business and watch what goes on. The mathematical language denies the very possibility of any such outside viewpoint. Every observer has his own world line; he can't get outside it for a detached viewpoint."

"But suppose he did? Suppose we could see Earth right now?"

'~There I go again," Libby said miserably. "I tried to talk about it in words and all I did was to add to the confusion. There is no way to measure time in any absolute sense when two events are separated in a continuum. All you can measure is interval."

"Well, what is interval? So much space and so much time."

"No, no, no! It isn't that at all. Interval is . . . well, it's interval. I can write down formulae about it and show you how we use it, but it can't be defined in words. Look, Nancy, can you write the score for a full orchestration of a symphony in words?" -

"No. Well, maybe you could but it wonld take thousands of times as long."

"And musicians still could not play it until you put it back into musical notation. That's what I meant," Libby went on, "when I said that the language was inappropriate. I got into a difficulty like this once before in trying to describe the lightpressure drive. I was asked why, since the drive depends on loss of inertia, we people inside the ship had felt no loss of inertia. There was no answer, in words. Inertia isn't a word; it is a mathematical concept used in mathematically certain aspects of a plenum. I was stuck."

Nancy looked baffled but persisted doggedly. "My question still means something, even if I didn't phrase it right. You can't just tell me to run along and play. Suppose we turned around and went back the way we came, all the way to Earth, exactly the same trip but in reverse-just double the ship's time it has been so far. All right, what year would it be on Earth when we got there?'

"It would be . . . let me see, now-" The almost automatic processes of Libby's brain started running off the unbelievably huge and complex problem in accelerations, intervals, difform motion. He was approaching the answer in a warm glow of mathematical revery when the problem suddenly fell to pieces on him, became indeterminate. He abruptly realized that the problem had an unlimited number of equally valid answers.

But that was impossible. In the real world, not the fantasy world of mathematics, such a situation was absurd. Nancy's question had to have just one answer, unique and real.

Could the whole beautiful structure of relativity be an absurdity? Or did it mean that it was physically impossible ever to backtrack an interstellar distance?

"I'll have to give some thought to that one," Libby said hastily and left before Nancy could object.

But solitude and contemplation gave him no clue to the problem. It was not a failure of his mathematical ability; he was capable, he knew, of devising a mathematical description of any group of facts, whatever they might be. His difficulty lay in having too few facts. Until some observer traversed interstellar distances at speeds approximating the speed of light and returned to the planet from which he had started there could be no answer. Mathematics alone has no content, gives no answers.

Libby found himself wondering if the hills of his native Ozarks were still green, if the smell of wood smoke still clung to the trees in the autumn, then he recalled that the question lacked any meaning by any rules he knew of. He surrendered to an attack of homesickness such as he had not experienced since he was a youth in the Cosmic Construction Corps, making his first deep-space jump.

This feeling of doubt and uncertainty, the feeling of lostness and nostalgia, spread throughout the ship. On the first leg of their journey the Families had had the incentive that had kept the covered wagons crawling across the plains. But now they were going nowhere, one day led only to the next. Their long lives were become a meaningless burden.

Ira Howard, whose fortune established the Howard Foundation, was born in 1825 and died in 1873-of old age. He sold groceries to the Forty-niners in San Francisco, became a wholesale sutler in the American War of the Secession, multiplied his fortune during the tragic Reconstruction.

Howard was deathly afraid of dying. He hired the best doctors of his time to prolong his life. Nevertheless old age plucked him when most men are still young. But his will commanded that his money be used to lengthen human life. The administrators of the trust found no way to carry out his wishes other than by seeking out persons whose family trees showed congenital predispositions toward long life and then inducing them to reproduce in kind. Their method anticipated the work of Burbank; they may or may not have known of the illuminating researches of the Monk Gregor Mendel.

Mary Sperling put down the book she had been reading when Lazarus entered her stateeoom. He picked it up. "What are you reading, Sis? 'Ecclesiastes.' Hmm . . . I didn't know you were religious." He read aloud:

"'Yea, though he live a thousand years twice told, yet hath he seen no good: do not all go to one place?'

"Pretty grim stuff, Mary. Can't you find something more cheerful? Even in The Preacher?' His eyes skipped on down. "How about this one? 'For to him that is joined to all the living there is hope-' Or . . . mnunm, not too many cheerful spots. Try this: 'Therefore remove sorrow from thy heart, and put away evil from thy flesh: for childhood and youth are vanity.' That's more my style; I wouldn't be young again for overtime wages."

"I would."

"Mary, what's eating you? I find you sitting here, reading the most depressing book in the Bible, nothing but death and funerals. Why?"

She passed a hand wearily across her eyes. "Lazarus, I'm getting old. What else is there to think about?'

"You? Why, you're fresh as a daisy!"

She looked at him. She knew that he lied; her mirror showed her the greying hair, the relaxed skin; she felt it in her bones. Yet Lazarus was older than she . . . although she knew, from what she had learned of biology during the years she had assisted in the longevity research, that Lazarus should never have lived to be as old as he was now. When he was born the program had reached only the third generation, too few generations to eliminate the less durable strains-except through some wildly unlikely chance shuffling of genes.

But there he stood. "Lazarus," she asked, "how long do you expect to live?"

"Me? Now that's an odd question. I mind a time when I asked a chap that very same question-about me, I mean, not about him. Ever hear of Dr. Hugo Pinero?"

"'Pinero... Pinero.. .' Oh, yes, 'Pinero the Charlatan.'"

"Mary, he was no charlatan. He could do it, no foolin'. He could predict accurately when a man would die."

"But- Go ahead. What did he tell you?"

"Just a minute. I want you to realize that he was no fake. His predictions checked out right on the button-if he hadn't died, the life insurance companies would have been ruined. That was before you were born, but I was there and I know. Anyhow, Pinero took my reading and it seemed to bother him. So he took it again. Then he returned my money."

"What did he say?"

"Couldn't get a word out of him. He looked at me and he looked at his machine and he just frowned and clammed up. So I can't rightly answer your question."

"But what do you think about it, Lazarus? Surely you don't expect just to go on forever?"

"Mary," he said softly, "Fm not planning on dying. I'm not giving it any thought at all."

There was silence. At last she said, "Lazarus, I don't want to die. But what is the purpose of our long lives? We don't seem to grow wiser as we grow older. Are we simply hanging on after our tune has passed? Loitering in the kindergarten when we should be moving on? Must we die and be born again?"

"I don't know," said Lazarus, "and I don't have any way to find out. . . and I'm damned if I see any sense in my worrying about it. Or you either. I propose to hang onto this life as long as I can and learn as much as I can. Maybe wishing and understanding are reserved for a later existence and maybe they aren't for us at all, ever. Either way, I'm satisfied to be living and enjoying it. Mary my sweet, carpe that old diem! It's the only game in town."

The ship slipped back into the same monotonous routine that had obtained during the weary years of the first jump. Most of the Members went into cold-rest; the others tended them, tended the ship, tended the hydroponds. Among the somnolents was Slayton Ford; cold-rest was a common last resort therapy for functional psychoses.

The flight to star PK3722 took seventeen months and three days, ship's time.

The ship's officers had as little choice about the journey's end as about its beginning. A few hours before their arrival star images flashed back into being in the stellarium screens and the ship rapidly decelerated to interplanetary speeds. No feeling of slowing down was experienced; whatever mysterious forces were acting on them acted on all masses alike. The New Frontiers slipped into an orbit around a live green planet some hundred million miles from its sun; shortly Libby reported to Captain King that they were in a stable parking orbit.

Cautiously King tried the controls, dead since their departure. The ship surged; their ghostly pilot had left them.

Libby decided that the simile was incorrect; this trip had undoubtedly been planned for them but it was not necessary to assume that anyone or anything had shepherded them here. Libby suspected that the "gods" of the dog-people saw the plenum

as static; their deportation was an accomplished fact to them before it happened-a concept regrettably studded with unknowns-but there were no appropriate words. Inadequately and incorrectly put into words, his concept was that of a "cosmic cam," a world line shaped for them which ran out of normal space and back into it; when the ship reached the end of its "cam" it returned to normal operation.

He tried to explain his concept to Lazarus and to the Captain, but he did not do well. He lacked data and also had not had time to refine his mathematical description into elegance; it satisfied neither him nor them.

Neither King nor Lazarus had time to give the matter much thought. Barstow's face appeared on an interstation viewscreen. "Captain!" he called out. "Can you come aft to lock seven? We have visitors!"

Barstow had exaggerated; there was only one. The creature reminded Lazarus of a child in fancy dress, masqueraded as a rabbit. The little thing was more android than were the Jockaira, though possibly not mammalian. It was unclothed but not naked, for its childlike body was beautifully clothed in short sleek golden fur. Its eyes were bright and seemed both merry and intelligent.

But King was too bemused to note such detail. A voice, a thought, was ringing in his head: ". . . so you are the group leader . . ." it said. ". . . welcome to our world . . . we have been expecting you . . . the (blank.) told us of your coming..."

Controlled telepathy. A creature, a race, so gentle, so civilized, so free from enemies, from all danger and strife that they could afford to share their thoughts with others-to share more than their thoughts; these creatures were so gentle and so generous that they were offering the humans a homestead on their planet. This was why this messenger had come: to make that offer.

To King's mind this seemed remarkably like the prize package that had been offered by the Jockaira; he wondered what the boobytrap might be in this proposition.

The messenger seemed to read his thought". . . look into our hearts. . . we hold no malice toward you . . . we share your love of life and we love the life in you . . .

"We thank you," King answered formally and aloud. "We will have to confer." He turned to speak to Barstow, glanced back. The messenger was gone.

The Captain said to Lazarus, "Where did he go?"

"Huh? Don't ask me."

"But you were in front of the lock."

"I was checking the tell-tales. There's no boat sealed on outside this lock-so they show. I was wondcring if they were working right. They are. How did he get into the ship? Where's his rig?'

"How did he leaver'

"Not past me!"

"Zaccur, he came in through this lock, didn't he?

"I don't know."

"But he certainly went out through it"

"Nope," denied Lazarus. "This lock hasn't been opened. The deep-space seals are still in place. See for yourself."

King did. "You don't suppose," he said slowly, "that he can pass through-"

"Don't look at me," said Lazarus. "I've got no more prejudices in the matter than the Red Queen. Where does a phone image go when you cut the circuit?" He left,

whistling softly to himself. King did not recognize the tune. Its words, which Lazarus did not sing, started with:

"Last night I saw upon the stair
A little man who wasn't there-"

Chapter 4

THERE WAS NO CATCH to the offer. The people of the planet-they had no name since they had no spoken language and the Earthmen simply called them "The Little People"-the little creatures really did welcome them and help them. They convinced the Families of this without difficulty for there was no trouble in communication such as there had been with the Jockaira. The Little People could make even subtle thoughts kndwn directly to the Earthmen and in turn could sense correctly any thought directed at them. They appeared either to ignore or not to be able to read any thought not directed at them; communicatibn with them was as controlled as spoken speech. Nor did the Earthmen acquire any telepathic powers among themselves.

Their planet was even more like Earth than was the planet of the Jockaira. It was a little larger than Earth but had a slightly lower surface gravitation, suggesting a lower average density-the Little People made slight use of metals in their culture, which may be indicative.

The planet rode upright in its orbit; it had not the rakish tilt of Earth's axis. Its orbit was nearly circular; aphelion differed from perihelion by less than one per cent. There were no seasons. Nor was there a great heavy moon, such as Earth has, to wrestle its oceans about and to disturb the isostatic balance of its crust. Its hills were low, its winds were gentle, its seas were placid. To Lazarus' disappointment, their new home, had no lively weather; it hardly had weather at all; it had climate, and that of the sort that California patriots would have the rest of the Earth believe exists in their part of the globe.

But on the planet of the Little People it really exists.

They indicated to the Earth people where they were to land, a wide sandy stretch of beach running down to the sea. Back of the low break of the bank lay mile on mile of lush meadowland, broken by irregular clumps of bushes and trees. The landscape had a careless neatness, as if it were a planned park, although there was no evidence of cultivation. It was here, a messenger told the first scouting party, that they were welcome to live.

There seemed always to be one of the Little People present when his help might be useful-not with the jostling inescapable overhelpfulness of the Jockaira, but with the unobtrusive readiness to hand of a phone or a pouch knife. The one who accompanied the first party of explorers confused Lazarus and Barstow by assuming casually that he had met them before, that he had visited them in the ship. Since his fur was rich mahogany rather than golden, Barstow attributed the error to misunderstanding, with a mental reservation that these people might possibly be capable of chameleonlike changes in color. Lazarus reserved his judgment.

Barstow asked their guide whether or not his people had any preferences as to where and how the Earthmen were to erect buildings. The question had been bothering him because a preliminary survey from the ship had disclosed no cities. It seemed likely that the natives lived underground-in which case he wanted to avoid getting off on the wrong foot by starting something which the local government might regard as a slum.

He spoke aloud in words directed at their guide, they having learned already that such was the best way to insure that the natives would pick up the thought.

In the answer that the little being flashed back Barstow caught the emotion of surprise. ". . . must you sully the sweet countryside with interruptions? . . . to what purpose do you need to form buildings? . .

"We need buildings for many purposes," Barstow explained. "We need them as daily shelter, as places to sleep at night. We need them to grow our food and prepare it for eating." He considered trying to explain the processes of hydroponic farming, of food processing, and of cooking, then dropped it, trusting to the subtle sense of telepathy to let his "listener" understand. "We need buildings for many other uses, for workshops and laboratories, to house the machines whereby we communicate, for almost everything we do in our everyday life."

"Be patient with me . . ." the thought came, since I know so little of your ways . . . but tell me do you prefer to sleep in such as that? . . ." He gestured toward the ship's boats they had come down in, where their bulges showed above the low bank. The thought he used for the boats was too strong to be bound by a word; to Lazarus' mind came a thought of a dead, constricted space-a jail that had once harbored him, a smelly public phone booth.

"It is our custom."

The creature leaned down and patted the turf. ". . . is this not a good place to sleep? . . ."

Lazarus admitted to himself that it was. The ground was covered with a soft spring turf, grasslike but finer than grass, softer, more even, and set more closely together. Lazarus took off his sandals and let his bare feet enjoy it, toes spread and working. It was, he decided, more like a heavy fur rug than a lawn. -

"As for food . . ."" their guide went on, ". . . why struggle for that which the good soil gives freely? . . come with me. . ."

He took them across a reach of meadow to where low bushy trees hung over aT meandering brook. The "leaves" were growths the size of a man's hand, irregular in shape, and an inch or more in thickness. The little person broke off one and nibbled at it daintily.

Lazarus plucked one and examined it. It broke easily, like a well-baked cake. The inside was creamy yellow, spongy but crisp, and had a strong pleasant odor, reminiscent of mangoes.

"Lazarus, don't, eat that!" warned Barstow. "It hasn't been analyzed~"

". . . it is harmonious with your body . .

Lazarus sniffed it again. "I'm willing to be a test case, Zack."

"Oh, well-" Barstow shrugged. "I warned you. You will anyhow."

Lazarus did. The stuff was oddly pleasing, firm enough to suit the teeth, piquant though elusive in flavor. It settled down happily in his stomach and made itself at home.

Barstow refused to let anyone else try the fruit until its effect on Lazarus was established. Lazarus took advantage of his exposed and privileged position to make a full meal-the best, he decided, that he had had in years.

". . . will you tell me what you are in the habit of eating? . . ." inquired their little friend. Barstow started to reply but was checked by the creature's thought: ". . . all of you think about it . ." no further thought message came from him for a few moments, then he flashed, ". . . that is enough . . -. my wives will take care of it . . ."

Lazarus was not sure the image meant "wives" but some similar close relationship was implied. It had not yet been established that the Little People were bisexual-or what.

Lazarus slept that night out under the stars and let their clean impersonal light rinse from him the claustrophobia of the ship. The constellations here were distorted out of easy recognition, although he could recognize, he decided, the cool blue of Vega and the orange glow of Antares. -The one certainty was the Milky Way, spilling its cloudy arch across the sky just as at home. The Sun, he knew, could not be visible to the naked eye even if he knew where to look for it; its low absolute magnitude would not show up across the light-years. Have to get hold of Andy, he thought sleepily, work out its coordinates and pick it out with instruments. He fell asleep before it could occur to him to wonder why he should bother.

Since no shelter was needed at night they landed everyone as fast as boats could shuttle them down. The crowds were dumped on the friendly soil and allowed to rest, picnic fashion, until the colony could be organized. At first they ate supplies brought down from the ship, but Lazarus' continued good health caused the rule against taking chances with natural native foods to be re1axed shortly. After that they ate mostly of the boundlein rai'gesse of the plants and used ship's food only to vary their diets.

Several days after the last of them had been landed Lazarus was exploring alone some distance from the camp. He came across one of the Little People; the native greeted him with the same assumption of earlier acquaintance which all of them seemed to show and led Lazarus to a grove of low trees still farther from base. He indicated to Lazarus that he wanted him to eat.

Lazarus was not particularly hungry but he felt compelled to humor such friendliness, so he plucked and ate.

He almost choked in his astonishment. Mashed potatoes and brown gravy!

". . . didn't we get it right? - . ." came an anxious thought.

"Bub," Lazarus said solemnly, "I don't know what you planned to do, but this is just fine!"

A warm burst of pleasure invaded his mind. ". . . try the next tree . .

Lazarus did so, with cautious eagerness. Fresh brown bread and sweet butter seemed to be the combination, though a dash of ice cream seemed to have crept in from somewhere.

He was hardly surprised when the third tree gave strong evidence of having both mushrooms and charcoal-broiled steak in its ancestry. ". . . we used your thought images almost entirely . . ." explained his companion. ". . . they were much stronger than those of any of your wives . . ."

Lazarus did not bother to explain that he was not married. The little person added, ". . . there has not yet been time to simulate the appearances and colors your thoughts showed does it matter much to you? .

Lazarus gravely assured him that it mattered very little.

When he returned to the base, he had considerable difficulty in convincing others of the seriousness of his report.

One who benefited greatly from the easy, lotus-land quality of their new home was Slayton Ford. He had awakened from cold rest apparently recovered from his breakdown except in one respect: he had no recollection of whatever it was he had experienced in the temple of Kreel. Ralph Schultz considered this a healthy adjustment to an intolerable experience and dismissed him as a patient.

Ford seemed younger and happier than he had appeared before his breakdown. He no longer held formal office among the Members-indeed there was little government of any sort; the Families lived in cheerful easy-going anarchy on this favored planet-but he was still addressed by his title and continued to be treated as an elder, one whose advice was sought, whose judgment was deferred to, along with Zaccur Barstow, Lazarus, Captain King, and others. The Families paid little heed to calendar ages; close friends might differ by a century. For years they had benefited from his skilled administration; now they continued to treat him as an elder statesman, even though two-thirds of them were older than was he.

The endless picnic stretched into weeks, into months. After being long shut up in the ship, sleeping or working, the temptation to take a long vacation was too strong to resist and there was nothing to forbid it. Food in abundance, ready to eat and easy to handle, grew almost everywhere; the water in the numerous streams was clean and potable. As for clothing, they had plenty if they wanted to dress but the need was esthetic rather, than utilitarian; the Elysian climate made clothing for protection as silly as suits for swimming. Those who liked clothes wore them; bracelets and beads and flowers in the hair were quite enough for most of them and not nearly so much nuisance if one chose to take a dip in the sea.

Lazarus stuck to his kilt.

The culture and degree of enlightenment of the Little People was difficult to understand all at once, because their ways were subtle. Since they lacked outward signs, in Earth terms, of high scientific attainment-no great buildings, no complex mechanical transportation machines, no throbbing power plants-it was easy to mistake them for Mother Nature's children, living in a Garden of Eden.

Only one-eighth of an iceberg shows above water.

Their knowledge of physical science was not inferior to that of the colonists; it was incredibly superior. They toured the ship's boats with polite interest, but confounded their guides by inquiring why things were done this way rather than that?-and the way suggested invariably proved to be simpler and more efficient than Earth technique. . . when the astounded human technicians managed to understand what they were driving at.

The Little Pedple understood machinery and all that machinery implies, but they simply had little use for it. They obviously did not need it for communication and had little need for it for transportation (although the full reason for that was not at once evident), and they had very little need for machinery in any of their activities. But when they had a specific need for a mechanical device they were quite capable of inventing,

building it, using it once, and destroying it, performing the whole process with a smooth cooperation quite foreign to that of men.

But in biology their preeminence was the most startling. The Little People were masters in the manipulation of life forms. Developing plants in a matter of days which bore fruit duplicating not only in flavor but in nutrition values the foods humans were used to was not a miracle to them but a routine task any of their biotechnicians could handle. They did it more easily than an Earth horticulturist breeds for a certain strain of color or shape in a flower.

But their methods were different from those of any human plant breeder. Be it said for them that they did try to explain their methods, but the explanations simply did not come through. In our terms, they claimed to "think" a plant into the shape and character they desired. Whatever they meant by that, it is certainly true that they could take a dormant seedling plant and, without touching it or operating on it in any way perceptible to their human students, cause it to bloom and burgeon into maturity in the space of a few hours-with new characteristics not found in the parent line . . and which bred true thereafter.

However the Little People differed from Earthmen only in degree with respect to scientific attainments. In an utterly basic sense they differed from humans in kind.

They were not individuals.

No single body of a native housed a discrete individual. Their individuals were multi-bodied; they had group "souls." The basic unit of their society was a telepathic rapport group of many parts. The number of bodies and brains housing one individual ran as high as ninety or more and was never less than thirty-odd.

The colonists began to understand much that had been utterly puzzling about the Little People only after they learned this fact. There is much reason to believe that the Little People found the Earthmen equally puzzling, that they, too, had assumed that their pattern of existence must be mirrored in others. The eventual discovery of the true facts on each side, brought about mutual misunderstandings over identity, seemed to arouse horror in the minds of the Little People. They withdrew themselves from the neighborhood of the Families' settlement and remained away for several days.

At length a messenger entered the camp site and sought out Barstow. ". . .We are sorry we shunned you . . . in our haste we mistook your fortune for your fault . . . we wish to help you . . . we offer to teach you that you may become like ourselves . . ."

Barstow pondered how to answer this generous overture. "We thank you for your wish to help us," he said at last, "but what you call our misfortune seems to be a necessary part of our makeup. Our ways are not your ways. I do not think we could understand your ways."

The thought that came back to him was very troubled. "We have aided the beasts of the air and of the ground to cease their strife . . . but if~you do not wish our help we will not thrust it on you . . ."

The messenger went away, leaving Zaccur Barstow troubled in his mind. Perhaps, he thought, ha had been hasty in answering without taking time to consult the elders. Telepathy was certainly not a gift to be scorned; perhaps the Little People could train them in telepathy without any loss of human individualism. But what he knew of the sensitives among the Families did not encourage such hope; there was not a one of them

who was emotionally healthy, many of them were mentally deficient as well-it did not seem like a safe path for humans.

It could be discussed later, he decided; no need to hurry. "No need to hurry" was the spirit throughout the settlement. There was no need to strive, little that had to be done and rarely any rush about that little. The sun was warm and pleasant, each day was much like the next, and there was always the day after that. The Members, predisposed by their inheritance to take a long view of things, began to take an eternal view. Time no longer mattered. Even the longevity research, which had continued throughout their memories, languished. Gordon Hardy tabled his current experimentation to pursue the vastly more fruitful occupation of learning what the Little People knew of the nature of life. He was forced to take it slowly, spending long hours in digesting new knowledge. As time trickled on, he was hardly aware that his hours of contemplation were becoming longer, his bursts of active study less frequent.

One thing he did learn, and its implications opened up whole new fields of thought: the Little People had, in one sense, conquered death.

Since each of their egos was shared among many bodies, the death of one body involved no death for the ego. All memory experiences of that body remained intact, the personality associated with it was not lost, and the physical loss could be made up by letting a young native "marry" into the group. But a group ego, one of the personalities which spoke to the Earthmen, could not die, save possibly by the destruotion of every body it lived in. They simply went on, apparently forever.

Their young, up to the time of "marriage" or group assimilation, seemed to have little personality and only rudimentary or possibly instinctive mental processes. Their elders expected no more of them in the way of intelligent behavior than a human expects of a child still in the womb. There were always many such uncompleted persons attached to any ego group; they were cared for like dearly beloved pets or helpless babies, although they were often as large and as apparently mature to Earth eyes as were their elders.

Lazarus grew bored with paradise more quickly than did the majority of his cousins. "It can't always," he complained to Libby, who was lying near him on the fine grass, "be time for tea."

"What's fretting you, Lazarus?"

"Nothing in particular." Lazarus set the point of his knife on his right elbow, flipped it with his other hand, watched it bury its point in the ground. "It's just that -this place reminds me of a well-run zoo. It's got about as much future." He grunted scornfully. "It's 'Never-Never Land."

"But what in particular is worrying you?"

"Nothing. That's what worries me. Honest to goodness, Andy, don't you see anything wrong in being turned out to pasture like this?"

Libby grinned sheepishly. "I guess it's my hillbilly blood. 'When it don't rain, the roof don't leak; when it rains, I cain't fix it nohow," he quoted. "Seems to me we're doing tolerably well. What irks you?"

"Well-" Lazarus' pale-blue eyes stared far away; he paused in his idle play with his knife. "When I was a young man a long time ago, I was beached in the South Seas-"

"Hawaii?'

"No. Farther south. Damned if I know what they call it today. I got hard up, mighty hard up, and sold my sextant. Pretty soon-or maybe quite a while-I could have passed for a native. I lived like one. It didn't seem to matter. But one day I caught a look at myself in a mirror." Lazarus sighed gustily. "I beat my way out of that place shipmate to a cargo of green hides, which may give you some idea how. scared and desperate I was!"

Libby did not comment. "What do you do with your time, Lib?" Lazarus persisted.

"Me? Same as always. Think about mathematics. Try to figure out a dodge for a space drive like' the one that got us here."

"Any luck on that?" Lazarus was suddenly alert.

"Not yet. Gimme time. Or I just watch the clouds integrate. There are amusing mathematical relationships everywhere if you are on the lookout for them. In the ripples on the water, or the shapes of busts-elegant fifth-order functions."

"Huh? You mean 'fourth order."

"Fifth order. You omitted the time variable. I like fifth-order equations," Libby said dreamily. "You find 'em in fish, too."

"Huinmph!" said Lazarus, and stood up suddenly. "That may be all right for you, but it's not my pidgin."

"Going some place?"

"Goin' to take a walk."

Lazarus walked north. He walked the rest of that day, slept on the ground as usual that night, and was up and moving, still to the north, at dawn. The next day was followed by another like it, and still another. The going"was easy, much like strolling in a park . . . too easy, in Lazarus' opinion. For the sight of a volcano, or a really worthwhile waterfall, he felt willing to pay four bits and throw in a jackknife.

The food plants were sometimes strange, but abundant and satisfactory. He occasionally met one or more of the Little People going about their mysterious affairs: they never bothered him nor asked why he was traveling but simply greeted him with the usual assumption of previous acquaintanceship. He began to long for one who would turn out to be a stranger; he felt watched.

Presently the nights grew colder, the days less balmy, and the Little People less numerous. When at last he had not seen one for an entire day, he camped for the night, remained there the next day-took out his soul and examined it.

He had to admit that he could find no reasonable fault with the planet nor its inhabitants. But just as definitely it was not to his taste. No philosophy that he had ever heard or read gave any reasonable purpose for man's existence, nor any rational clue to his proper conduct. Basking in the sunshine might be as good a thing to do with one's life as any other- but it was not for him and he knew it, even if he could not define how he knew it.

The hegira of the Families had been a mistake. It would have been a more human, a mqre mature and manly thing, to have stayed and fought for their rights, even if they had died insisting on them. Instead they had fled across half a universe (Lazarus was reckless about his magnitudes) looking for a place to light. They had found one, a good one-but already occupied by beings so superior as to make them intolerable for men. . .

yet so supremely indifferent in their superiority to men that they had not even bothered to wipe them out, but had whisked them away to this-this -over-manicured country club.

And that in itself was the unbearable humiliation. The New Frontiers was the culmination of five hundred years of human scientific research, the best that men could do-but it had been flicked across the deeps of space as casually as a man might restore a baby bird to its nest.

The Little People did not seem to want to kick them out but the Little People, in their own way, were as demoralizing to men as were the gods of the Jockaira. One at a time they might be morons - but taken as groups each rapport group was a genius that threw the best minds that men could offer into the shade. Even Andy. Human beings could not hope to compete with that type of organization any more than a backroom shop could compete with an automated cybernated factory. Yet to form any such group identities, even if they could which he doubted, would be, Lazarus felt very sure, to give up whatever it was that made them men.

He admitted that he was prejudiced in favor of men. He was a man.

The uncounted days slid past while he argued with himself over the things that bothered him-problems that had made sad the soul of his breed since the first apeman had risen to self-awareness, questions never solved by full belly nor fine machinery. And the endless quiet days did no more to give him final answers than did all the soul searchings of his ancestors. Why? What shall it profit a man? No answer came back -save one: a firm unreasoned conviction that he was not intended for, or not ready for, this timeless snug harbor of ease.

His troubled reveries were interrupted by the appearance of one of the Little People. ". . . greetings, old friend your wife King wishes you to return to your home . . . he has need of your advice . . ."

"What's the trouble?" Lazarus demanded.

But the little creature either could or would not tell him. Lazarus gave his belt a hitch and headed south. ". . . there is no need to go slowly . . ." a thought came after him.

Lazarus let himself be led to a clearing beyond a clump of trees. There he found an egg-shaped object about six feet long, featureless except for a door in the side. The native went in through the door, Lazarus squeezed his larger bulk in after him; the door closed.

It opened almost at once and Lazarus saw that they were on the beach just below the human settlement. He had to admit that it was a good trick.

Lazarus hurried to the ship's boat parked on the beach in which Captain King shared with Barstow a semblance of community headquarters. "You sent for me, Skipper. What's up?"

King's austere face was grave. "It's about Mary Sperling."

Lazarus felt a sudden cold tug at his heart. "Dead?"

"No. Not exactly. She's gone over to the Little People. 'Married' into one of their groups."

"What? But that's impossible!"

Lazarus was wrong. There was no faint possibility of interbreeding between Earthmen and natives but there was no barrier, if sympathy existed, to a human merging into one of their rapport groups, drowning his personality in the ego of the many.

Mary Sperling, moved by conviction of her own impending death, saw in the deathless group egos a way out. Faced with the eternal problem of life and death, she had escaped the problem by choosing neither . . . selflessness. She had found a group willing to receive her, she had crossed over.

"It raises a lot of new problems," concluded King. "Slayton and Zaccur and I all felt that you had better be here."

"Yes, yes, sure-but where is Mary?" Lazarus demanded and then ran out of the room without waiting for an answer. He charged through the settlement ignoring both greetings and attempts to stop him. A short distance oustide the camp he ran across a native He skidded to a stop. "Where is Mary Sperling?"

". . . I am Mary Sperling . .

"For the love of- You can't be."

"I am Mary Sperling and Mary Sperling is myself do you not know me, Lazarus? . . . I know you.

Lazarus waved his hands. "No! I want to see Mary Sperling who looks like an Earthman-Iike me!"

The native hesitated.". . . follow me, then . . .

Lazarus found her a long way from the camp; it was obvious that she had been avoiding the other colonists. "Mary!"

She answered him mind to mind: ". . I am sorry to see you troubled . . . Mary Sperling is gone except in that she is part of us . . ."

"Oh, come off it, Mary! Don't give me that stuff! Don't you know me?"

". . . of course I know you, Lazarus . . . it is you who do not know me . . . do not trouble your soul or grieve your heart with the sight of this body in front of you . . . I am not one of your kind . . . I am native to this planet.

"Mary," he insisted, "you've got to undo this. You've got to come out of there!"

She shook her head, an oddly human gesture, for the face no longer held any trace of human expression; it was a mask of otherness. ". . . that is impossible . . .Mary Sperling is gone . . . the one who speaks with you is inextricably myself and not of your kind." The creature who had been Mary Sperling turned and walked away.

"Mary!" he cried. His heart leapt across the span of centuries to the night his mother had died. He covered his face with his hands and wept the unconsolable grief of a child,

Chapter S

LAZAIWS found both King and Barstow waiting for him when he returned. King looked at his face. "I could have told you," he said soberly, "but you wouldn't wait."

"Forget it," Lazatus said harshly. "What now?"

"Lazarus, there is something else you have to see before we discuss anything," Zaccur Barstow answered.

"Okay. What?"

"Just come and, see." They led him to a compartment in the ship's boat which was used as a headquarters. Contrary to Families' custom it was locked; King let them in.

There was a woman inside, who, when she saw the three, quietly withdrew, locking the door again as she went out.

"Take a look at that," directed Barstow.

It was a living creature in an incubator-a child, but no such child as had ever been seen before. Lazarus stared at it, then said angrily, "What the devil is it?"

"See for yourself. Pick it up. You won't hurt it."

Lazarus did so, gingerly at first, then without shrinking from the contact as his curiosity increased. What it was, he could not say. It was not human; it was just as certainly not offspring of the Little People. Did this planet, like the last, contain some previously unsuspected race? It was manlike, yet certainly not a man child. It lacked even the button nose of a baby, nor were there evident external ears. There were organs in the usual locations of each but flush with the skull and protected with many ridges. Its hands had too many fingers and there was an extra large one near each wrist which ended in a cluster of pink worms.

There was something odd about the torso of the infant which Lazarus could not define. But two other gross facts were evident: the legs ended not in human feet but in horny, toeless pediments-hoofs. And the creature was hermaphroditic-not in deformity but in healthy development, an androgyne.

"What is it?" he repeated, his mind filled with lively suspicion.

"That," said Zaccur, "is Marion Schmidt, born three weeks ago."

"Huh? What do you mean?"

"It means that the Little People are just as clever in manipulating us as they are in manipulating plants."

"What? But they agreed to leave us alone!"

"Don't blame them too quickly. We let ourselves in for it. The origihal idea was simply a few improvements."

"Improvements!' That thing's an obscenity."

"Yes and no. My stomach turns whenever I have to took at it . . . but actually-well, it's sort of a superman. Its body architecture has been redesigned for greater efficiency, our useless simian hangovers have been left out, and its organs have been rearranged in a more sensible fashion. You can't say it's not human, for it is . . - an improved model. Take that extra appendage at the wrist. That's another hand, a miniature one . . - backed up by a microscopic eye. You can see how useful that would be, once you get used to the idea." Barstow stared at it. "But it looks horrid, to me~'

"It'd look horrid to anybody," Lazarus stated. "It may be an improvement, but damn it, I say it ain't humans"

"In any case it creates a problem."

"I'll say it does!" Lazarus looked at it again. "You say it has a second set of eyes in those tiny bands? That doesn't seem possible."

Barstow shrugged. "I'm no biologist. But every cell in the body contains a full bundle of chromosomes. I suppose that you could grow eyes, or bones, or anything you liked anywhere, if you knew how to manipulate the genes in the chromosomes. And they know."

"I don't want to be manipulated!"

"Neither do I."

Lazarus stood on the bank and stared out over the broad beach at a full meeting of- the Families. "I am-" he started formally, then looked puzzled. "Come here a moment, Andy." He whispered to Libby; Libby looked pained and whispered back. Lazarus looked exasperated and whispered again. Finally he straightened up and started over.

"I am two hundred and forty-one years old-at least," he stated. "Is there anyone here who is older?" It was empty formality; he knew that he was the eldest; he felt twice that old. "The meeting is opened,~' he went on, his big voice rumbling on down the beach assisted by speaker systems from the ship's boats. "Who is your chairman?"

"Get on with it," someone called from the crowd.

"Very well," said Lazarus. "Zaccur Barstow!"

Behind Lazarus a technician aimed a directional pickup at Barstow. "Zaccur Barstow," his voice boomed out, "speaking for myself. Some of us have come to believe that this planet, pleasant as it is, is not the place for us. You all know about Mary Sperling, you've seen stereos of Marion Schmidt; there have been other things and I won't elaborate. But emigrating again poses another question, the question of where? Lazarus Long proposes that we return to Earth. In such a-" His words were drowned by noise from the crowd.

Lazarus shouted them down. "Nobody is going to be forced to leave. But if enough of us want to leave to justify taking the ship, then we can. I say go back to Earth. Some say look for another planet. That'll have to be decided. But first-how many of you think as I do about leaving here?"

"I do!" The shout was echoed by many others. Lazarus peered toward the first man to answer, tried to spot him, glanced over his shoulder at the tech, then pointed. "Go ahead, bud," he ruled. "The rest of you pipe down."

"Name of Oliver Schmidt. I've been waiting for months for somebody to suggest this. I thought I was the only sorehead in the Families. I haven't any real reason for leaving-I'm not scared out by the Mary Sperling matter, nor Marion Schmidt. Anybody who likes such things is welcome to them-live and let live. But I've got a deep down urge to see Cincinnati again. I'm fed up with this place. I'm tired of being a lotus eater. Damn it, I want to work for my living! According to the Families' geneticists I ought to be good for another century at least. I can't see spending that much time lying in the inn and daydreaming."

When he shut up, at least a thousand more tried to get the floor. "Easy! Easy!" bellowed Lazarus. "If everybody wants to talk, I'm going to have to channel it through your Family representatives. But let's get a sample here and there." He picked out another man, told him to sound off.

"I won't take long," the new speaker said, "as I agree with Oliver Schmidt I just wanted to mention my own reason. Do any of you miss the Moon? Back home I used to sit out on my balcony on warm summer nights and smoke and look at the Moon. I didn't know it was important to me, but it is. I want a planet with a moon."

The next speaker said only, "This case of Mary Sperling has given me a case of nerves. I get nightmares that I've gone over myself."

The arguments went on and on. Somebody pointed out that they had been chased off Earth; what made anybody think that they would be allowed to return? Lazarus answered that himself. "We learned a lot from the Jockaira and now we've learned a lot more from the Little People-things that put us way out ahead of anything scientists back

on Earth had even dreamed of. We can go back to Earth loaded for bear. We'll be in shape to demand our rights, strong enough to defend them."

"Lazarus Long-" came another voice.

"Yes," acknowledged Lazarus.

"You over there, go ahead."

"I am too old to make any more jumps from star to star and much too old to fight at the end of such a jump. Whatever the rest of you do, I'm staying."

"In that case," said Lazarus, "there is no need to discuss it, is there?"

"I am entitled to speak." -

"All right, you've spoken. Now give sotheone else a chance."

The sun set and the stars came out and still the talk went on. Lazarus knew that it would never end unless he moved to end it. "All right," he shouted, ignoring the many who still, wanted to speak. "Maybe we'll have to turn this back to the Family councils, but let's take a trial vote and see where we are. Everybody who wants to go back to Earth move way over to my right. Everybody who wants to stay here move down the beach to my left. Everybody who wants to go exploring for still another planet gather right here in front of me." He dropped back and said to the sound tech, "Give them some music to speed 'em up."

The tech nodded and the homesick strains of Valse Triste sighed over the beach. It was followed by The Green Hills of Earth. Zaccur Barstow turned toward Lazarus. "You picked that music."

"Me?" Lazarus answered with bland innocence. "You know I ain't musical, Zack."

Even with music the separation took a long time. The last movement of the immortal Fifth had died away long before they at last had sorted themselves into three crowds.

On the left about a tenth of the total number were gathered, showing thereby their intention of staying. They were mostly the old and the tired, whose sands had run low. With them were a few youngsters who had never seen Earth, plus a bare sprinkling of other ages.

In the center was a very small group, not over three hundred, mostly men and a few younger women, who voted thereby for still newer frontiers.

But the great mass was on Lazarus' right. He looked at them and saw new animation in their faces; it lifted his heart, for he had been bitterly afraid that he was almost alone in his wish to leave.

He looked back at the small group nearest him. "It looks like you're outvoted," he said to them alone, his voice unamplifled. "But never mind, there always comes another day." He waited.

Slowly the group in the middle began to break up. By ones and twos and threes they moved away. A very few drifted over to join those who were staying; most of them merged with the group on the right.

When this secondary division was complete Lazarus spoke to the smaller group on his left. "All right," he said very gently, "You . . . you old folks might as well go back up to the meadows and get your sleep. The rest of us have things to make."

Lazarus then gave Libby the floor and let him explain to the majority crowd that the trip home would not be the weary journey the flight from Earth had been, nor even the tedious second jump. Libby placed all of the credit where most of it belonged, with

the Little People. They had straightened him out with his difficulties in dealing with the problem of speeds which appeared to exceed the speed of light. If the Little People knew what they were talking about -and Libby was sure that they did-there appeared to be no limits to what Libby chose to call "para-acceleration"-"para-" because, like Libby's own light-pressure drive, it acted on the whole mass uniformly and could no more be perceived by the senses than can gravitation, and "para-" also because the ship would not go "through" but rather around or "beside" normal space. "it is not so much a matter of driving the ship as it is a selection of appropriate potential level in an n-dimensional hyperplenum of n-plus-one possible-"

Lazarus firmly cut him off. "That's your department, son, and everybody trusts you in it. We ain't qualified to discuss the fine points."

"I was only going to add-"

"I know. But you were already out of the world when I stopped you."

Someone from the crowd shouted one more question. "When do we get there?"

"I don't know," Libby admitted, thinking of the question the way Nancy Weatheral had put it to him long ago. "I can't say what year it will be . . . but it will seem like about three weeks from now."

The preparations consumed days simply because many round trips of the ship's boats were necessary to embark them. There was a marked lack of ceremonious farewell because those remaining behind tended to avoid those who were leaving. Coolness had sprung up between the two groups; the division on the beach had split friendships, had even broken up contemporary marriages, had caused many hurt feelings, unresolvable bitterness. Perhaps the only desirable aspect of the division was that the parents of the mutant Marion Schmidt had elected to remain behind.

Lazarus was in charge of the last boat to leave. Shortly before he planned to boost he felt a touch at his elbow. "Excuse me," a young man said. "My name's Hubert Johnson. 1 want to go along but I've had to stay back with the other crowd to keep my mother from throwing fits. If I show up at the last minute, can 1 still go along?"

Lazirus looked him over. "You look old enough to decide without asking me."

"You don't understand. I'm an only child and my mother tags me around. I've got to sneak back before she misses me. How much longer-"

"I'm not holding this boat for anybody. And you'll never break away any younger. Get into the boat"

"But. . ."

"Oft!" The young man did so, with one worried backward glance at the bank. There was a lot, thought Lazarus, to be said for ectogenesis.

Once inboard the New Frontiers Lazarus reported to Captain King in the control room. "All inboard?" asked King.

"Yeah. Some late deciders, pro and con, and one more passenger at the last possible split second-woman named Eleanor Johnson. Let's go!"

King turned to Libby. "Let's go, Mister."

The stars blinked out.

They flew blind, with only Libby's unique talent to guide them. If he had doubts as to his ability to lead them through the featureless blackness of other space he kept

them to himself. On the twenty-third ship's day of the reach and the eleventh day of para-deceleration the stars reappeared, all in their old familiar ranges-the Big Dipper, giant Orion, lopsidecL Crux, the fairy Pleiades, and dead ahead of them, blazing against the frosty backdrop of the Milky Way, was a golden light that had to be the Sun.

Lazarus had tears in his eyes for the second time in a month.

They could not simply rendezvous with Earth, set a parking orbit, and disembark; they had-to throw their hats in first. Besides that, they needed first to know what time it was.

Libby was able to establish quickly, through proper motions of nearest stars, that it was not later than about 3700 A.D.; without precise observatory instruments he refused to commit himself further. But once they were close enough to see the Solar planets he had another clock to read; the planets themselves make a clock with nine hands.

For any date there is a unique configuration of those "hands" since no planetary period is exactly commensurate with another. Pluto marks off an "hour" of a quarter of a millennium; Jupiter's clicks a cosmic minute of twelve years; Mercury whizzes a "second" of about ninety days. The other "hands" can refine these readings-Neptune's period is so cantankerously different from that of Pluto that the two fall into approximately repeated configuration only once in seven hundred and fifty-eight years. The great clock can be read with any desired degree of accuracy over any period-but it is not easy to read.

Libby started to read it as soon as any of the planets could be picked out. He muttered over the problem. "There's not a chance that we'll pick up Pluto," he complained to Lazarus, "and I doubt if we'll have Neptune. The inner planets give me an infinite series of approximations-you know as well as I do that "infinite" is a question-begging term. Annoying!"

"Aren't you looking at it the hard way, son? You can get a practical answer. Or move over and I'll get one." -

"Of course I can get a practical answer," Libby said petulantly, "if you're satisfied with that But-"

"But me no 'buts'-what year is it, man!"

"Eh? Let's put it this way. The time rate in the ship and duration on Earth have been unrelated three times. But now they are effectively synchronous again, such that slightly over seventy-four years have passed since we 1eft.'

Lazarus heaved a sigh. "Why didn't you say so?" He had been fretting that Earth might - not be recognizable . . . they might have torn down New York or something like that.

"Shucks, Andy, you shouldn't have scared me like that."

"Mmm . . ." said Libby. It was one of no further interest to him. There remained only the delicious problem of inventing a mathematics which would describe elegantly two apparently irreconcilable groups of facts: the Michelson-Morley experiments and the log of the New Frontiers. He set happily about it. Mmm . . . what was the least number of pamdimensions indispeMably necessary to contain the augmented plenum using a sheaf of postulates affirming- It kept him contented for a considerable time-subjective time, of course.

The ship was placed in a temporary orbit half a billion miles from the Sun with a radius vector normal to the plane of the ecliptic. Parked thus at right angles to and far

outside the flat pancake of the Solar System they were safe from any long chance of being discovered. A ship's boat had been fitted with thç neo-Libby drive during the jump and a negotiating party was sent down.

Lazarus wanted to go along; King refused to let him, which sent Lazarus into sulks. King had said curtly, "This isn't a raiding party, Lazarus; this is a diplomatic mission."

"Hell, man, I can be diplomatic when it pays!"

"No doubt But we'll send a man who doesn't go armed to the 'fresher."

Ralph Schultz headed the party, since psychodynamic factors back on Earth were of first importance, but he was aided by legal voluntary and technical specialists. If the Families were going to have to fight for living room it was necessary to know what sort of technology, what sort of weapons, they would have to meet-but it was even more necessary to find out whether or not a peaceful landing could be arranged.

Schultz had been authorized by the elders to offer a plan under which the Families would colonize the thinly settled and retrograded European continent. But it was possible, even likely, that this had already been done in their absence, in view of the radioactive half-lifes involved. Schultz would probably have to improvise some other compromise, depending on the conditions he found.

Again there was nothing to do but wait.

Lazarus endured it in nail-chewing uncertainty. He had claimed publicly that the Families had such great scientific advantage that they could meet and defeat the best that Earth could offer. Privately, he knew that this was sophistry and so did any other Member competent to judge the matter. Knowledge alone did not win wars. The ignorant fanatics of Europe's Middle Ages had defeated the incomparably higher Islamic culture; Archimedes had been struck down by a common soldier; barbarians had sacked Rome. Libby, or some one, might devise an unbeatable, weapon from their mass of new knowledge-or might not and who knew what strides military art had made on earth in three quarters of a century?

King, trained in military art, was worried by the same thing and still more worried by the personnel he would have to work with. The Families were anything but trained legions; the prospect of trying to whip those cranky individualists into some semblance of a disciplined fighting machine ruined his sleep.

These doubts and fears King and Lazarus did not mention even to each other; each was afraid that to mention such things would be to spread a poison of fear through the ship. But they were not alone in their worries; half of the ship's company realized the weaknesses of their position and kept silent only because a bitter resolve to go home, no matter what, made them willing to accept the dangers..

"Skipper,". Lazarus said to King two weeks after Schultz's party had headed Earthside, "have you wondered how they're going to feel about the New Frontiers herself?"

"Eh? What do you mean?'

"Well, we hijacked her. Piracy."

King looked astounded. "Bless me, so we did! Do you know, it's been so long ago that it is hard for me to realize that she was ever anything but my ship . . . or to recall that

I first came into her through an act of piracy." He looked thoughtful, then smiled grimly. "I wonder how conditions are in Coventry these days?"

"Pretty thin rations, I imagine," said Lazarus. "But we'll team up and make out. Never mind-they haven't caught us yet."

"Do you suppose that Slayton Ford will be connected with the matter? That would be hard lines after all he has gone through."

"There may not be any trouble about it at all," Lazarus answered soberly. "While the way we got this ship was kind of irregular, we have used it for the purpose for which it was built-to explore the stars. And we're returning it intact, long before they could have expected any results, and with a slick new space drive to boot. It's more for their money than they had any reason to expect-so they may just decide to forget it and trot out the fatted calf."

"I hope so," King answered doubtfully.

The scouting party was two days late. No signal was received from them until they emerged into normal spacetime, just before rendezvous, as no method had yet been devised for signalling from para-space to ortho-space. While they were maneuvering to rendezvous, King received Ralph Schultz's face on the control-room screen. "Hello, Captain! We'll be boarding shortly to report."

"Give me a summary now!"

"I wouldn't know where to start. But it's all right-we can go home!"

"Huh? How's that? Repeat!"

"Everything's all right. We are restored to the Covenant. You see, there isn't any difference any more. Everybody is a member of the Families now."

"What do you mean?" King demanded.

"They've got it."

"Got what?"

"Got the secret of longevity."

"Huh? Talk sense. There isn't any secret. There never was any secret."

"We didn't have any secret-but they thought we had. So they found it."

"Expiain yourself," insisted Captain King.

"Captain, can't this wait until we get back into the ship?' Ralph Schultz protested. "I'm no biologist. We've brought along a government reptesentative-you can quiz him, instead?

Chapter 6

KING RECEWED Terra's representative in his cabin. He had notified Zaccur Barstow and Justin Foote to be present for the Families and had invited Doctor Gordon Hardy because the nature of the startling news was the biologist's business. Libby was there as the ship's chief officer; Slayton Ford was invited because of his unique status, although he had held no public office in the Families since his breakdown in the temple of Kreel.

Lazarus was there because Lazarus wanted to be there, in his own strictly private capacity. He had not been invited, but even Captain King was somewhat diffident about interfering with the assumed prerogatives of the eldest Member.

Ralph Schultz introduced Earth's ambassador to the assembled company. "This is Captain King, our commanding officer and this is Miles Rodney, representing the Federation Council-minister plenipotentiary and ambassador extraordinary, I guess you would call him."

"Hardly that," said Rodney; "although I can agree to the 'extraordinary' part. This situation is quite without preccdent. it is an honor to know you, Captain."

"Glad to have you inboard, sir."

"And this is Zaccur Barstow, representing the trustees of the Howard Families, and Justin Foote, secretary tO the trustees-"

"Service."

"Service to you, gentlemen."

"Andrew Jackson Libby, chief astrogational officer, Doctor Gordon Hardy, biologist in charge of our research into the causes of old age and death."

"May I do you a service?" Hardy acknowledged formally."Service to you, sir. So you are the chief biologist-there was a time when you could have done a service to the whole human race. Think of it, sir-think how different things could have been. But, happily, the human race was able to worry out the secret of extending life without the aid of the Howard Families."

Hardy looked vexed. "What do you mean, sir? Do you mean to say that you are still laboring under the delusion that we had some miraculous secret to impart, if we chose?"

Rodney shrugged and spread his hands. "Really, now, there is no need to keep up the pretense, is there? Your results have been duplicated, independently."

Captain King cut in. "Just a moment-Ralph Schultz, is the Federation still under the impression that there is some 'secret' to our long lives? Didn't you tell them?"

Schultz was looking bewildered. "Uh-this is ridiculous. The subject hardly came up. They themselves had achieved controlled longevity; they were no longer interested in us in that respect. It is true that there still existed a belief that our long lives derived from manipulation rather than from heredity, but I corrected that impression."

"Apparently not very thoroughly, from what Miles Rodney has just said."

"Apparently not. I did not spend much effort on it; it was beating a dead dog. The Howard Families add their long lives are no longer an issue on Earth. Interest, both public and official, is centered on the fact that we have accomplished a successful interstellar jump."

"I can confirm that," agreed Miles Rodney. "Every official, every news service, every citizen, every scientist in the system is waiting with utmost eagerness the arrival of the New Frontiers. It's the greatest, most sensational thing that has happened since the first trip to the Moon. You are famous, gentlemen-all of you."

Lazarus pulled Zaccur Barstow aside and whispered to him. Barstow looked perturbed, then nodded thoughtfully. "Captain---" Barstow said to King.

"Yes, Zack?"

"I suggest that we ask our guest to excuse us while we receive Ralph Schultz' report."

"Why?"

Barstow glanced at Rodney. "I think we will be better prepared to discuss matters if we are brief by our own representative."

King turned to Rodney. "Will you excuse us~~ sir?"

Lazarus broke in. "Never mind, Skipper. Zack means well but he's too polite. Might as well let Comrade Rodney stick around and we'll lay it on the line. Tell me this, Miles; what proof have you got that you and your pals have figured out a way to live as long as we do?'

"Proof?' Rodney seemed dumbfounded. "Why do you ask - Whom am I addressing? Who are you, sir?"

Ralph Schultz intervened. "Sorry-I didn't get a chance to finish the introductions. Miles Rodney, this is Lazarus Long, the Senior."

"Service. 'The Senior' what?'

"He just means 'The Senior,' period," answered Lazarus. "I'm the-oldest Member. Otherwise I'm a private citizen."

"The oldest one of the Howard Families! Why-why, you must be the oldest man alive-think of that!"

"You think about it," retorted Lazarus. "I quit worrying about it a couple of centuries ago. How about answering my question?'

"But I can't help being impressed. You make me feel like an infant-and I'm not a young man myself; I'll be a hundred and five this coming June."

"If you can prove that's your age, you can answer my question. I'd say you were about forty. How about it?"

'Well, - dear me, I hardly expected to be interrogated on this point. Do you wish to see my identity card?"

"Are you kidding? I've had fifty-odd identity cards in my time, all with phony birth dates. What else can you offer?'

"Just a minute, Lazarus," put in Captain King. 'What is the purpose of your question?"

Lazarus Long turned away from Rodney. "It's like this, Skipper-we hightailed it out of the Solar System to save our necks, because the rest of the yokels thought we had invented some way to live forever and proposed to squeeze it out of us if they had to kill every one of us. Now everything is sweetness and light~-so they say. But it seems mighty funny that the bird they send up to smoke the pipe of peace with us should still be convinced that we have that so-called secret.

"It got me to wondering.

"Suppose they hadn't figured out a way to keep from dying from old age but were still clinging to the idea that we had? What better way to keep us calmed down and unsuspicious than to tell us they had until they could get us where they wanted us in order to put the question to us again?"

Rodney snorted. "A preposterous ideal Captain, I don't think I'm called on to put up with this."

Lazarus stared coldly. "It was preposterous the first time, but-but it happened. The burnt child is likely to be skittish."

"Just a moment, both of you," ordered King. "Ralph, how about it? Could you have been taken in by a put-up job?"

Schultz thought about it, painfully. "I don't think so." He paused. "It's rather difficult to say. I couldn't tell from appearance of course, any more than our own Members could be picked out from a crowd of normal persons."

"But you are a psychologist. Surely you could have detected indications of fraud, if there had been one."

"I may be a psychologist, but I'm not a miracle man and I'm not telepathic. I wasn't looking for fraud." He grinned I sheepishly. "There was another factor. I was so excited over being home that I was not in the best emotional condition to note discrepancies, if there were any."

"Then you aren't sure?" -'

"No. I am emotionally convinced that Miles Rodney is telling the truth-"

"Lam!"

"-and I believe that a few questions could clear the matter up. He claims to be one hundred and five years old. We can test that."

"I see," agreed King. "Hmm . . . you put the questions, Ralph?"

"Very well. You will permit, Miles Rodney?"

"Go ahead," Rodney answered stiffly.

"You must have been about thirty years old when we left Earth, since we have been gone nearly seventy-five years, Earth time. Do you remember the event?"

"Quite clearly. I was a clerk in Novak Tower at the time, I in the offices of the Administrator."

Slayton Ford had remained in the background throughout the discussion, and had done nothing to call attention to himself. At Rodney's answer he sat up. "Just a moment, Captain-"

"Eh? Yes?"

"Perhaps I can cut this short. You'll pardon me, Ralph?" He turned to Terra's representative. "Who am I?"

Rodney looked at him in some puzzlement. His expression changed from one of simple surprise at the odd question to complete and unbelieving bewilderment. "Why, you . . . you are Administrator Ford!"

Chapter 7

"ONE AT A TIME! One at a time," Captain King was saying. "Don't everybody try to talk at once. Go on, Slayton; you have the floor. You know this man?" Ford looked Rodney over. "No, I can't say that I do."

"Then it is a frame up." King turned to Rodney."Suppose you recognized Ford from historical stereos-is that right?" -

Rodney seemed about to burst. "No! I recognized him. He's changed but I knew him. Mr. Administrator-look at me, please! Don't you know me? I worked for you!"

"It seems fairly obvious that he doesn't," King said dryly.

Ford shook his head. "It doesn't prove anything, one way or the other, Captain. There were over two thousand civil service employes in my office. Rodney might have been one of them. His face looks vaguely familiar, but so do most faces."

"Captain-" Master Gordon Hardy was speaking. "If I can question Miles Rodney I might be able to give an opinion as to whether or not they actually have discovered anything new about the causes of old age and death."

Rodney shook his head. "I am not a biologist. You could trip me up in no time. Captain King, I ask you to arrange my return to Earth as quickly as possible. I'll not be subjected to any more of this. And let me add that I do not care a minim whether you and your-your pretty crew ever get back to civilization or not. I came here to help you, but I'm disgusted." He stood up.

Slayton Ford went toward him. "Easy, Miles Rodney, please! Be patient. Put yourself in their place. You would be just as cautious if you had been through what they have been through."

Rodney hesitated. "Mr. Administrator, what are you doing here?"

"It's a long and complicated story. I'll tell you later."

"You are a member of the Howard Families-you must be. That accounts for a lot of odd things."

Ford shook his head. "No, Miles Rodney, I am not. Later, please-I'll explain it. You -worked for me once-when?"

"From 2109 until you, uh, disappeared."

"What was your job?"

"At the time of the crisis of 2113 I was an assistant correlation clerk in the Division of Economic Statistics, Control Section."

"Who was your section chief?"

"Leslie Waldron."

"Old Waldron, eh? What was the color of his hair?"

"His hair? The Walrus was bald as an egg."

Lazarus whispered to Zaccur Barstow, "Looks like I was off base, Zack."

"Wait a moment," Barstow whispered back. "It still could be thorough preparation-they may have known that Ford escaped with us."

Ford was continuing, "What was The Sacred Cow?'

"The Sacred- Chief, you weren't even supposed to know that there was such a publication!"

"Give my intelligence staff credit for some activity, at least," Ford said dryly. "I got my copy every week."

"But what was it?" demanded Lazarus.

Rodney answered, "An office comic and gossip sheet that was passed from hand to hand."

"Devoted to ribbing the bosses," Ford added, "especially me." He put an arm around Rodney's shoulders. "Friends, there is no doubt about it. Miles and I were fellow workers."

"I still want to find out about the new rejuvenation process," insisted Master Hardy some time later.

"I think we all do," agreed King. He reached out and refilled their guest's wine glass. "Will you tell us about it, sir?'

"I'll try," Miles Rodney answered, "though I must ask Master Hardy to bear with me. It's not one process, but several-one basic process and several dozen others, some of

them purely cosmetic, especially for women. Nor is the basic process truly a rejuvenation process. You can arrest the progress of old age, but you can't reverse it to any significant degree-you can't turn a senile old man into a boy."

"Yes, yes," agreed Hardy. "Naturally-but what is the basic process?"

"It consists largely in replacing the entire blood tissue in an old person with new, young blood. Old age, so they tell me, is primarily a matter of the progressive accumulation of the waste poisons of metabolism. The blood is supposed to carry them away, but presently the blood gets so clogged with the poisons that the scavenging process doesn't take place properly. Is that right, Doctor Hardy?'

"That's an odd way of putting it, but-"

"I told you I was no biotechnician."

"-essentially correct. It's a matter of diffusion pressure deficit-the d.p.d. on the blood side of a cell wall must be such as to maintain a fairly sharp gradient or there will occur progressive autointoxication of the individual cells. But I must say that I feel somewhat disappointed, Miles Rodney. The basic idea of holding off death by insuring proper scavenging of waste products is not new-I have a bit of chicken heart which has been alive for two and one half centuries through equivalent techniques. As to the use of young blood-yes, that will work. I've kept experimental animals alive by such blood donations to about twice their normal span-" He stopped and looked troubled.

"Yes, Doctor Hardy?"

Hardy chewed his lip. "I gave up that line of research. I found it necessary to have several young donors in order to keep one beneficiary from growing any older. There was a small, but measurable, unfavorable effect on each of the donors. Racially it was self-defeating; there would never be enough donors to go around. Am I to understand, sir that this method is thereby limited to a small, select part of the population?"

"Oh, no! I did not make myself clear, Master Hardy. There are no donors."

"Huh?'

"New blood, enough for everybody, grown outside the body-the Public Health and Longevity Service can provide any amount of it, any type."

Hardy looked startled. "To think we came so close . . . so that's it." He paused, then went on. "We tried tissue culture of bone marrow in vitro. We should have persisted."

"Don't feel badly about it. Billions of credits and tens of thousands of technicians engaged in this project before there were any significant results. I'm told that the mass of accumulated art in this field represents more effort than even the techniques of atomic engineering." Rodney smiled. "You see, they had to get some results; it was politically necessary-so there was an all-out effort." Rodney turned to Ford. 'When the news about the escape of the Howard Families reached the public, Chief, your precious successor had to be protected from the mobs."

Hardy persisted with questions about subsidiary techniques -tooth budding, growth inhibiting, hormone therapy, many others-until King came to Rodney's rescue by pointing out that the prime purpose of the visit was to arrange details of the return of the Families to Earth.

Rodney nodded. "I think we should get down to business. As I understand it, Captain, a large proportion of your people are now in reduced-temperature somnolence?"

("Why can't he say 'cold-rest'?" Lazarus said to Libby.)

"Yes, that is so."

"Then it would be no hardship on them to remain in that state for a time."

"Eh? Why do you say that, sir?"

Rodney spread his hands. "The administration finds itself in a somewhat embarrassing position. To put it bluntly, there is a housing shortage. Absorbing one hundred and ten thousand displaced persons can't be done overnight."

Again King had to hush them. He then nodded to Zaccur Barstow, who addressed himself to Rodney. "I fail to see the problem, sir. What is the present population of the North American continent?"

"Around seven hundred million."

"And you can't find room to tuck away one-seventieth of one per cent of that number? It sounds preposterous."

"You don't understand, sir," Rodney protested. "Population pressure has become our major problem. Co-incident with it, the right to remain undisturbed in the enjoyment of one's own homestead, or one's apartment, has become the most jealously guarded of all civil rights. Before we can find you adequate living room we must make over some stretch of desert, or make other major arrangements."

"I get it," said Lazarus. "Politics. You don't dare disturb anybody for fear they will squawk."

"That's hardly an adequate statement of the case."

"It's not, eh? could be you've got a general election coming up, maybe?'

"As a matter of fact we have, but that has nothing to do with the case."

Lazarus snorted.

Justin Foote spoke up. "It seems to me that the administration has looked at this problem in the most superficial light. It is not as if we were homeless immigrants. Most of the Members own their own homes. As you doubtless know, the Families were well-to-do; even wealthy, and for obvious reasons we built our homes to endure. I feel sure that most of those structures are still standing."

"No doubt," Rodney conceded, "but you will find them occupied."

Justin Foote shrugged. "What has that to do with us? That is a problem for the government to settle with the persons it has allowed illegally to occupy our homes. As for myself, I shall land as soon as possible, obtain an eviction ørder from the nearest court, and repossess my home."

"It's not that easy. You can make omelet from eggs, but not eggs from omelet. You have been legally dead for many years; the present oácupant of your house holds a good title."

Justin Foote stood up and glared at the Federation's envoy, looking, as Lazarus thought, "like a cornered mouse." "Legally dead! By whose act, sir, by whose act? Mine? I was a respected solicitor, quietly and honorably pursuing my profession, harming no one, when I was arrested without cause and forced to flee for my life. Now I am blandly told that my property is confiscated and my very legal existence as a person and as a citizen has been taken from ,me beckuse of that sequence of events. What manner of justice is this? Does the Covenant still stand?"

"You misunderstand me. I-"

"I misunderstood nothing. If justice is measured out only when it is convenient, then the Covenant is not worth the parchment it is written on. I shall make of myself a

test case, sir, a test case for every Member of the Families. Unless my property is returned to me in full and at once I shall bring personal suit against every obstructing official. I will make of it a cause celebre. For many years I have suffered inconvenience and indignity and peril; I shall not be put off with words. I will shout it from the housetops." He paused for breath.

"He's right, Miles," Slayton Ford put in quietly. "The government had better find some adequate way to handle this- and quickly."

Lazarus caught Libby's eye and silently motioned toward the door. The two slipped outside. "Justin'll keep 'em busy for the next hour," he said. "Let's slide down to the Club and grab some calories."

"Do you really think we ought to leave?'

"Relax. If the skipper wants us, he can holler."

Chapter 8

LAZARUS TUCKED AWAY three sandwiches, a double order of ice cream, and some cookies while Libby contented himself with somewhat less. Lazarus would have eaten more but he was forced to respond to a barrage of questions from the other habitués of the Club.

"The commissary department ain't really back on its feet," he complained, as he poured his third cup of coffee. "The Little People made life too easy for them. Andy, do you like chili con carne?"

"It's all right."

Lazarus wiped his mouth. "There used to be a restaurant in Tijuana that served the best chili I ever tasted. I wonder if it's still there?"

"Where's Tijuana?" demanded Margaret Weatheral.

"You don't remember Earth, do you, Peggy? Well, darling, it's in Lower California. You know where that is?"

"Don't you think I studied geography? It's in Los Angeles."

"Near enough. Maybe you're right-by now." The ship's announcing system blared out:

"Chief Astrogator-report to the Captain in the Control Room!"

"That's me!" said Libby, and hurriedly got up.

The call was repeated, then was followed by, "All hands prepare for acceleration! All hands prepare for acceleration!"

"Here we go again, kids." Lazarus stood up, brushed off his kilt, and followed Libby, whistling as he went

"California, here I come,
Right back where I started from-"

The ship was underway, the stars had faded out. Captain King had left the control room, taking with him his guest, the Earth's envoy. Miles Rodney had been much impressed; it seemed likely that he would need a drink.

Lazarus and Libby remained in the control room. There was nothing to do; for approximately four hours, ship's time, the ship would remain in para-space, before returning to normal space near Earth.

Lazarus struck a cigaret. 'What d'you plan to do when you get back, Andy?"

"Hadn't thought about it."

"Better start thinking. Been some changes."

"I'll probably head back home for a while. I can't imagine the Ozarks having changed very much."

"The hills will look the same, I imagine. You may find the people changed."

"How?"

"You remember I told you that I had gotten fed up with the Families and had kinda lost touch with them for a century? By and large, they had gotten so smug and soft in their ways that I couldn't stand them. I'm afraid we'll find most everybody that way, now that they expect to live forever. Long term investments, be sure to wear your rubbers when it rains . . that sort of thing."

"It didn't aifect you that way."

"My approach is different. I never did have any real reason to last forever-after all, as Gordon Hardy has pointed out, I'm only a third generation result of the Howard plan. I just did my living as I went along and didn't worry my head about it. But that's not the usual attitude. Take Miles Rodney- scared to death to tackle a new situation with both hands for fear of upsetting precedent and stepping on established privileges."

"I was glad to see Justin stand up to him." Libby chuckled. "I didn't think Justin had it in him."

"Ever see a little dog tell a big dog to get the hell out of the little dog's yard?"

"Do you think Justin will win his point?"

"Sure he will, with your help."

"Mine?" -

"Who knows anything about the para-drive, aside from what you've taught me?"

"I've dictated full notes into the records."

"But you haven't turned those records over to Miles Rodney. Earth needs your starship drive, Andy. You heard what Rodney said about population pressure. Ralph was telling me you have to get a government permit now before you can have a baby."

"The hell you say!"

"Fact. You can count on it that there would be tremendous emigration if there were just some decent planets to emigrate to. And that's where your drive comes in. With it, spreading out to the stars becomes really practical. They'll have to dicker."

"It's not really my drive, of course. The Little People worked it out."

"Don't be so modest. You've got it. And you want to back up Justin, don't you?"

"Oh, sure."

'~Then we'll use it to bargain with. Maybe I'll do the bargaining, personally. But that's beside the point. Somebody is going to have to do a little exploring before any large-scale emigration starts. Let's go into the real estate business, Andy. We'll stake out this corner of the Galaxy and see what it has to offer."

Libby scratched his nose and thought about it. "Sounds all right, I guess after I pay a visit home."

"There's no rush. I'll find a nice, clean little yacht, about ten thousand tons and we'll refit with your drive."

"What'll we use for money?"

"We'll have money. I'll set up a parent corporation, while I'm about it, with a loose enough charter to let us do anything we want to do. There will be daughter corporations for various purposes and we'll unload the minor interest in each.. Then-"

"You make it sound like work, Lazarus. I thought it was going to be fun."

"Shucks, we won't fuss with that stuff. I'll collar somebody to run the home office and worry about the books and the legal end-somebody about like Justin. Maybe Justin himself."

"Well, all right then."

"You and I will rampage around and see what there is to be seen. It'll be fun, all right."

They were both silent for a long time, with no need to talk. Presently Lazarus said, "Andy-"

"Yeah?"

"Are you going to look into this new-blood-for-old caper?"

"I suppose so, eventually."

"I've been thinking about it. Between ourselves, I'm not as fast with my fists as I was a century back. Maybe my natural span is wearing out. I do know this: I didn't start planning our real estate venture till I head about this new process. It gave me a new perspective. I find myself thinking about thousands of years-and I never used to worry about anything further ahead than a week from next Wednesday."

Libby chuckled again. "Looks like you're growing up."

"Some would say it was about time. Seriously, Andy, I think that's just what I have been doing. The last two and a half centuries have just been my adolescence, so to speak. Long as I've hung around, I don't know any more. about the final amwers, the important answers, than Peggy Weatheral does. Men-our kind of men-Earth men-never have had enough time to tackle the important questions. Lots of capacity and not time enough to use it properly. When it came to the important questions we might as well have still been monkeys."

"How do you propose to tackle the important questions?"

"How should I know? Ask me again in about five hundred years."

"You think that will make a difference?"

"I do. Anyhow it'll give me time to poke around and pick up some interesting facts. Take those Jockaira gods- "

"They weren't gods, Lazarus. You shouldn't call them that."

"Of course they weren't-I think. My guess is that they are creatures who have had time enough to do a little hard thinking. Someday, about a thousand years from now, I intend to march straight into the temple of Kreel, look him in the eye, and say, 'Howdy, Bub-what do you know that 1 don't know?'"

"It might not be healthy."

'We'll have a showdown, anyway. I've never been satisfied with the outcome there. There ought not to be anything in the whole universe that man can't poke his nose into-that's the way we're built and I assume that there's some reason for it."

"Maybe there aren't any reasons."

"Yes, maybe it's just one colossal big joke, with no point to it."' Lazarus stood up and stretched and scratched his ribs. "But I can tell you this, Andy, whatever the answers are, here's one monkey that's going to keep on climbing, and locking around him to see what he can see, as long as the tree holds out."

PODKAYNE OF MARS

This is a work of fiction. All the characters and events portrayed in this book are fictional, and any resemblance to real people or incidents is purely coincidental.

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For Gale and Astrid
I

All my life I've wanted to go to Earth. Not to live, of course-just to see it. As evei body knows, Terra is a wonderful place to visit but not to live. Not truly suited to human habitation.

Personally, I'm not convinced that the human race originated ~n Earth. I mean to say, how much reliance should you place on the evidence of a few pounds of old bones

plus the opinions of anthropologists who usually contradict each other anyhow when what you are being asked to swallow so obviously flies in the face of all common sense?

Think it through- The surface acceleration of Terra is clearly too great for the human structure; it is known to result in flat feet and hernias and heart trouble. The incident solar radiation on Terra will knock down dead an unprotected human in an amazingly short time- and do you know of any other organisll which has to be artificially protected~from what is alleged to be its own natural environment in order to stay alive? As to Terran ecolo~i-

Never mind. We humans just couldn't have originated on Earth. Nor (I admit) on Mars, for that matter-although Mars is certainly as near ideal as you can find in this planetary system today. Possibly the Missing Planet was our first home-even though I think of Mars as "home" and will always want to return to it no matter how far I travel in later years . . . and I intend to travel a long, long way.

But I do want to visit Earth as a starter, not only to see how in the world eight billion people manage to live almost sitting in each other's laps (less than half of the land area of Terra is even marginally habitable) but mostly to see oceans ... from a safe distance. Oceans are not only fantasically unlikely but to me the very thought of them is terrifying. All that unimaginable amount of water, unconfined. And so deep that if you fell into it, it would be over your head. Incredible!

But now we are going there!

Perhaps I should introduce us. The Fries Family, I mean. Myself: Podkayne Fries- "Poddy" to my friends and we might as well start off being friendly. Adolescent female: I'm eight plus a few months, at a point in my development described by my Uncle Tom as "frying size and just short of husband high"-.a fairenough description since a female citizen of Mars may contract plenary marriage without guardian's waiver on her ninth birthday, and I stand 157 centimeters tall in my bare feet and mass 49 kilograms. "Five feet two and eyes of blue" my daddy calls me, but he is a historian and romantic. But I am not romantic and would not consider even a limited marriage on my ninth birthday; I have other plans.

Not that I am opposed to marriage in due time, nor do I expect to have any trouble snagging the male of my choice. In these memoirs I shall be frank rather than modest because they will not be published until I am old and famous, and I will certainly revise them
before then. In the meantime I am taking the precaution of writing English in Martian Oldsctipt-a combination which I'm sure Daddy could puzzle out, only he wouldn't do such a thing unless I invited him to. Daddy is a dear and does not snoopervise me. My brother Clark would pry, but he regards English as a dead language and would never bother his head with Oldscript anyhow.

Perhaps you have seen a book titled: Eleven Years Old: The Pre-Adolescent Adjustment Crisis in the Male. I read it, hoping that it would help me to cope with my brother. Clark is just six, but the "Eleven Years" referred to in that title are Terran years because it was written on Earth. If you will apply the conversion factor of 1.8808 to attain real years, you will see that my brother is exactly eleven of those undersized Earth years old.

That book did not help me much. It talks about "cushioning the transition into the social group"-but there is no present indication that Clark ever intends to join the human

race. He is more likely to devise a way to blow up the universe just to hear the bang. Since I am responsible for him much of the time and since he has an I.Q. of 160 while mine is only 145, you can readily see that I need all the advantage that greater age and maturity can give me. At present my standing rule with him is: Keep your guard up and never offer hostages.

Back to me-I'm colonial mongrel in ancestry, but the Swedish part is dominant in my looks, with Polynesian and Asiatic fractions adding no more than a notunpleasing exotic flavor. My legs are long for my height, my waist is 48 centimeters and my chest is 90-not all of which is rib cage, I assure you, even though we old colonial families all run to hypertrophied lung development; some of it is burgeoning secondary sex characteristic. Besides that, my hair is pale
blond and wavy and I'm pretty. Not beautiful-Praxiteles would not have given me a second look-but real beauty is likely to scare a man off, or else make him quite unmanageable, whereas prettiness, properly handled, is an asset.

Up till a couple of years ago I used to regret not being male (in view of my ambitions), but I at last realized how silly I was being; one might as well wish for wings. As Mother says: "One works with available materials" . .. and I found that the materials available were adequate. In fact I found that I like being female; my hormone balance is okay and I'm quite well adjusted to the world and vice versa. I'm smart enough not unnecessarily to show that I am smart; I've got a long upper lip and a short nose, and when I wrinkle my nose and look baffled, a man is usually only too glad to help me, especially if he is about twice my age. There are more ways of computing a ballistic than by counting it on your fingers.

That's me: Poddy Fries, free citizen of Mars, female. Future pilot and someday commander of deep-space exploration parties. Watch for me in the news.

Mother is twice as good-looking as I am and much taller than I ever will be; she looks like a Valkyrie about to gallop off into the sky. She holds a systemwide license as a Master Engineer, Heavy Construction, Surface or Free Fall, and is entitled to wear both the Hoover Medal with cluster and the Christiana Order, Knight Commander, for bossing the rebuilding of Deimos and Phobos. But she's more than just the traditional hairy engineer; she has a social presence which she can switch from warmly charming to frostily intimidating at will, she holds honorary degrees galore, and she publishes popular little gems such as "Design Criteria with Respect to the Effects of Radiation on the Bonding of Pressure-Loaded Sandwich Structures."

It is because Mother is often away from home for professional reasons that Lam, from time to time, the reluctant custodian of my younger brother. Still, I suppose it is good practice, for how can I ever expect to command my own ship if I can't tame a six-year-old savage? Mother says that a boss who is forced to part a man's hair with a wrench has failed at some point, so I try to control our junior nihilist without resorting to force. Besides, using force on Clark is very chancy; he masses as much as I do and he fights dirty.

It was the job Mother did on Deimos that accounts for Clark and myself. Mother was determined to meet her construction dates; and Daddy, on leave from Ares U. with a Guggenheim grant, was even more frantically determined to save every scrap of the ancient Martian artifacts no matter how much it delayed construction; this threw them

into such intimate and bitter conflict that they got married and for a while Mother had babies.

Daddy and Mother are Jack Spratt and his wife; he is interested in everything that has already happened, she is interested only in what is going to happen, especially if she herself is making it happen. Daddy's title is Van Loon Professor of Terrestrial History but his real love is Martian history, especially if it happened fifty million years ago. But do not think that Daddy is a cloistered don given only to contemplation and study. When he was even younger than I am now, he lost an arm one chilly night in the attack on the Company Offices during the Revolution-and he can still shoot straight and fast with the hand he has left.

The rest of our family is Great-Uncle Tom, Daddy's father's brother. Uncle Tom is a parasite. So he says. It is true that you don't see him work much, but he was an old man before I was born. He is a Revolutionary veteran, same as Daddy, and is a Past Grand Commander of the Martian Legion and a Senator-at-Large
of the Republic, but he doesn't seem to spend much time on either sort of politics, Legion or public; instead he hangs out at the Elks Club and plays pinochle with other relics of the past. Uncle Tom is really my closest relative, for he isn't as intense as my parents, nor as busy, and will always take time to talk with me. Furthermore he has a streak of Original Sin which makes him sympathetic to my problems. He says that I have such a streak, too, much wider than his. Concerning this, I reserve my opinion.

That's our family and we are all going to Earth. Wups! I left out three-the infants. But they hardly count now and it is easy to forget them. When Daddy and Mother got married, the PEG Board-Population, Ecology, & Genetics-pegged them at five and would have allowed them seven had they requested it, for, as you may have gathered, my parents are rather highgrade citizens even among planetary colonials all of whom are descended from, or are themselves, highly selected and drastically screened stock.

But Mother told the Board that five was all that she had time for and then had us as fast as possible, while fidgeting at a desk job in the Bureau of Planetary Engineering. Then she popped her babies into deep-freeze as fast as she had them, all but me, since I was the first. Clark spent two years at constant entropy, else he would be almost as old as I am-deep-freeze time doesn't count, of course, and his official birthday is the day he was decanted. I remember how jealous I was- Mother was just back from conditioning Juno and it didn't seem fair to me that she would immediately start raising a baby.

Uncle Tom talked me out of that, with a lot of lap sitting, and I am no longer jealous of Clark-merely wary.

So we've got Gamma, Delta, and Epsilon in the subbasement of the crèche at Marsopolis, and we'll uncork
and name at least one of them as soon as we get back from Earth. Mother is thinking of revivifying Gamma and Epsilon together and raising them as twins (they're girls) and then launching Delta, who is a boy, as soon as the girls are housebroken. Daddy says that is not fair, because Delta is entitled to be older than Epsilon by natural priority of birth date. Mother says that is mere worship of precedent and that she does wish Daddy would learn to leave his reverence for the past on the campus when he comes home in the evening.

Daddy says that Mother has no sentimental feelings-and Mother says she certainly hopes not, at least with any problem requiring rational analysis-and Daddy says let's be

rational, then . . . twin older sisters would either break a boy's spirit or else spoil him rotten.

Mother says that is unscientific and unfounded. Daddy says that Mother merely wants to get two chores out of the way at once-whereupon Mother heartily agrees and demands to know why proved production engineering principles should not be applied to domestic economy?

Daddy doesn't answer this. Instead he remarks thoughtfully that he must admit that two little girls dressed just alike would be kind of cute ... name them "Margret" and "Marguerite" and call them "Peg" and "Meg"- Clark muttered to me, "Why uncork them at all?

Why not just sneak down some night and open the valves and call it an accident?"

I told him to go wash out his mouth with prussic acid and not let Daddy hear him talk that way. Daddy would have walloped him properly. Daddy, although a historian, is devoted to the latest, most progressive theories of child psychology and applies them by canalizing the cortex through pain association whenever he really wants to ensure that a lesson will not be

forgotten. As he puts it so neatly: "Spare the rod and spoil the child."

I canalize most readily and learned very early indeed how to predict and avoid incidents which would result in Daddy's applying his theories and his hand. But in Clark's case it is almost necessary to use a club simply to gain his divided attention.

So it is now clearly evident that we are going to have twin baby sisters. But it is no headache of mine, I am happy to say, for Clark is quite enough maturing trauma for one girl's adolescence. By the time the twins are a current problem I expect to be long gone and far away.

Interlude

Hi, Pod.

So you think I can't read your worm tracks.

A lot you know about me! Poddy-oh, excuse me, "Captain" Podkayne Fries, I mean, the famous Space Explorer and Master of Men-Captain Poddy dear, you probably will never read this because it wouldn't occur to you that I not only would break your "code" but also write comments in the big, wide margins you leave.

Just for the record, Sister dear, I read Old Anglish just as readily as I do System Ortho. Anglish isn't all that hard and I learned it as soon as I found out that a lot of books I wanted to read had never been translated. But it doesn't pay to tell eveiything you know, or somebody comes along and tells you to stop doing whatever it is you are doing. Probably your older sister.

But imagine calling a straight substitution a "code"! Poddy, if you had actually been able to write Old Martian, it would have taken me quite a lot longer. But

you can't. Shucks, even Dad can't write it without stewing over it and he probably knows more about Old Martian than anyone else in the System.

But you won't crack my code-because I haven't any.

Try looking at this page under ultraviolet light-a sun lamp, for example.

II

Oh, Unspeakables!

Dirty ears! Hangnails! Snel-frockey! Spit! WE AREN'T GOING!

At first I thought that my brother Clark had managed one of his more charlatanous machinations of malevolent legerdemain. But fortunately (the only fortunate thing about the whole miserable mess) I soon perceived that it was impossible for him to be in fact guilty no matter what devious subversions roil his id. Unless he has managed to invent and build in secret a time machine, which I misdoubt he would do if he could . . . nor am I prepared to offer odds that he can't. Not since the time he rewired the delivery robot so that it would serve him midnight snacks and charge them to my code number without (so far as anyone could ever prove) disturbing the company's seal on the control box.

We'll never know how he did that one, because, despite the fact that the company offered to Forgive All and pay a cash bonus to boot if only he would please tell them how he managed to beat their unbeatable seal-despite this, Clark looked blank and would not talk. That left only circumstantial evidence, i.e~, it was clearly evident to anyone who knew us both (Daddy and Mother, namely) that I would never order candy-stripe ice cream smothered in hollandaise sauce, or-no, I can't go on; I feel ill. Whereas Clark is widely known to eat anything which does not eat him first.

Even this clinching psychological evidence would never have convinced the company's adjuster had not their own records proved that two of these obscene feasts had taken place while I was a house guest of friends in Syrtis Major, a thousand kilometers away. Never mind, I simply want to warn all girls not to have a Mad Genius for a baby brother. Pick instead a stupid, stolid, slightly subnormal one who will sit quietly in front of the solly box, mouth agape at cowboy classics, and never wonder what makes the pretty images.

But I have wandered far from my tragic tale.

We aren't going to have twins.

We already have triplets.

Gamma, Delta, and Epsilon, throughout all my former life mere topics of conversation, are now Grace, Duncan, and Elspeth in all too solid flesh-unless Daddy again changes his mind before final registration; they've had three sets of names already. But what's in a name?-they are here, already in our home with a nursery room sealed on to shelter them . . . three helpless unfinished humans about canal-worm pink in color and no features worthy of the name. Their limbs squirm aimlessly, their eyes don't track, and a faint, queasy odor of sour milk permeates every room even when they are freshly bathed. Appalling sounds come from one end of each-in which they heterodyne each other-and even more appalling conditions prevail at
the other ends. (I've yet to find all three of them dry at the same time.)

And yet there is something decidedly engaging about the little things; were it not that they are the proximate cause of my tragedy I could easily grow quite fond of them. I'm sure Duncan is beginning to recognize me already.

But, if I am beginning to be reconciled to their presence, Mother's state can only be described as atavistically maternal. Her professional journals pile up unread, she has that soft Madonna look in her eyes, and she seems somehow both shorter and wider than she did a week ago.

First consequence: she won't even discuss going to Earth, with or without the triplets.

Second consequence: Daddy won't go if she won't go-he spoke quite sharply to Clark for even suggesting it.

Third consequence: since they won't go, we can't go. Clark and me, I mean. It is conceivably possible that I might have been permitted to travel alone (since Daddy agrees that I am now a "young adult" in maturity and judgment even though my ninth birthday lies still some months in the fttture), but the question is formal and without content since I am not considered quite old enough to accept full responsible control of my brother with both my parents some millions of kilometers away (nor am I sure that I would wish to, unless armed with something at least as convincing as a morning star) and Daddy is so dismayingly fair with that he would not even discuss permitting one of us to go and not the other when both of us had been promised the trip.

Fairness is a priceless virtue in a parent-but just at the moment I could stand being spoiled and favored instead.

But the above is why I am sure that Clark does not
have a time machine concealed in his wardrobe. This incredible contretemps, this idiot's dream of interlocking mishaps, is as much to his disadvantage as it is to mine.

How did it happen? Gather ye round- Little did we dream that, when the question of a family trip to Earth was being planned in our household more than a month ago, this disaster was already complete and simply waiting the most hideous moment to unveil itself. The facts are these: the crèche at Marsopolis has thousands of newborn babies marbleized at just short of absolute zero, waiting in perfect safety until their respective parents are ready for them. It is said, and I believe it, that a direct hit with a nuclear bomb would not hurt the consigned infants; a thousand years later a rescue squad could burrow down and find that automatic, self-maintaining machinery had not permitted the tank temperatures to vary a hundredth of a degree.

In consequence, we Marsmen (not "Martians," please!-Martians are a non-human race, now almost extinct)-Marsmen tend to marry early, have a full quota of babies quickly, then rear them later, as money and time permit. It reconciles that discrepancy, so increasingly and glaringly evident ever since the Terran Industrial Revolution, between the best biological age for having children and the best social age for supporting and rearing them.

A couple named Breeze did just that, some ten years ago-married on her ninth birthday and just past his tenth, while he was still a pilot cadet and she was attending Ares U. They applied for three babies, were pegged accordingly, and got them all out of the way while they were both finishing school. Very sensible.

The years roll past, he as a pilot and later as master, she as a finance clerk in his ship and later as purser- a happy life. The spacelines like such an arrangement;
married couples spacing together mean a taut, happy ship.

Captain and Mrs. Breeze serve their ten-and-a-half (twenty Terran) years and put in for half-pay retirement, have it confirmed-and immediately radio the crèche to uncork their babies, all three of them.

The radio order is received, relayed back for confirmation; the crèche accepts it. Five weeks later the happy couple pick up three babies, sign for them, and start the second half of a perfect life.

So they thought- But what they had deposited was two boys and a girl; what they got was two girls and a boy. Ours.

Believe this you must-it took them the better part of a week to notice it. I will readily concede that the difference between a brand-new boy baby and a brand-new girl baby is, at the time, almost irrelevant. Nevertheless there is a slight difference. Apparently it was a case of too much help-between a mother, a mother-in-law, a temporary nurse, and a helpful neighbor, and much running in and out, it seems unlikely that any one person bathed all three babies as one continuous operation that first week. Certainly Mrs. Breeze had not done so-until the day she did . . . and noticed ... and fainted-and dropped one of our babies in the bath water, where it would have drowned had not her scream fetched both her husband and the neighbor lady.

So we suddenly had month-old triplets.

The lawyer man from the crèche was very vague about how it happened; he obviously did not want to discuss how their "foolproof" identification system could result in such a mixup. So I don't know myself- but it seems logically certain that, for all their serial numbers, babies' footprints, record machines, et cetera, there is some point in the system where one clerk read aloud "Breeze" from the radioed order and another clerk checked a file, then punched "Fries" into a machine that did the rest.

But the fixer man did not say. He was simply achingly anxious to get Mother and Daddy to settle out of court-accept a check and sign a release under which they agreed not to publicize the error.

They settled for three years of Mother's established professional earning power while the little fixer man gulped and looked relieved.

But nobody offered to pay me for the mayhem that had been committed on my life, my hopes, and my ambitions.

Clark did offer a suggestion that was almost a sensible one, for him. He proposed that we swap even with the Breezes, let them keep the warm ones, we could keep the cold ones. Everybody happy-and we all go to Earth.

My brother is far too self-centered to realize it, but the Angel of Death brushed him with its wings at that point. Daddy is a truly noble soul ... but he had had almost more than he could stand.

And so have I. I had expected today to be actually on my way to Earth, my first space trip farther than Phobos-which was merely a school field trip, our "Class Honeymoon." A nothing thing.

Instead, guess what I'm doing.

Do you have any idea how many times a day three babies have to be changed?

III

Hold it! Stop the machines! Wipe the, tapes! Cancel all bulletins- WE ARE GOING TO EARTH AFTER ALL!!!!

Well, not all of us. Daddy and Mother aren't going, and of course, the triplets are not. But- Never mind; I had better tell it in order.

Yesterday things just got to be Too Much. I had changed them in rotation, only to find as I got the third one dry and fresh that number one again needed service. I had been thinking sadly that just about that moment I should have been entering the dining saloon of S.S. Wanderlust to the strains of soft music. Perhaps on the arm of one of the officers

perhaps even on the arm of the Captain himself had I the chance to arrange an accidental Happy Encounter, then make judicious use of my "puzzled kitten" expression.

And, as I reached that point in my melancholy daydream, it was then that I discovered that my chores

had started all over again. I thought of the Augean Stables and suddenly it was just Too Much and my eyes got blurry with tears.

Mother came in at that point and I asked if I could please have a couple of hours of recess?

She answered, "Why, certainly dear," and didn't even glance at me. I'm sure that she didn't notice that I was crying; she was already doing over, quite unnecessarily, the one that I had just done. She had been tied up on the phone, telling someone firmly that, while it was true as reported that she was not leaving Mars, nevertheless she would not now accept another commission even as a consultant-and no doubt being away from the infants for all of ten minutes had made her uneasy, so she just had to get her hands on one of them.

Mother's behavior had been utterly unbelievable. Her cortex has tripped out of circuit and her primitive instincts are in full charge. She reminds me of a cat we had when I was a little girl-Miss Polka Dot Ma'am and her first litter of kittens. Miss Pokie loved and trusted all of us-except about kittens. If we touched one of them, she was uneasy about it. If a kitten was taken out of her box and placed on the floor to be admired, she herself would hop out, grab the kitten in her teeth and immediately return it to the box, with an indignant waggle to her seat that showed all too plainly what she thought of irresponsible people who didn't know how to handle babies.

Mother is just like that now. She accepts my help simply because there is too much for her to do alone. But she doesn't really believe that I can even pick up a baby without close supervision.

So I left and followed my own blind instincts, which told me to go look up Uncle Tom.

I found him at the Elks Club, which was reasonably certain at that time of day, but I had to wait in the

ladies' lounge until he came out of the card room. Which he did in about ten minutes, counting a wad of money as he came. "Sbny to make you wait," he said, "but I was teaching a fellow citizen about the uncertainties in the laws of chance and I had to stay long enough to collect the tuition. How marches it, Podkayne mavourneen?"

I tried to tell him and got all choked up, so he walked me to the park under the city hail and sat me on a bench and bought us both packages of Chokiatpops and I ate

mine and most of his and watched the stars on the ceiling and told him all about it and felt better.

He patted my hand. "Cheer up, Flicka. Always remember that, when things seem darkest, they usually get considerably worse." He took his phone out of a pocket and made a call. Presently he said, "Never mind the protocol routine, miss. This is Senator Fries. I want the Director." Then he added, in a moment, "Hymie? Tom Fries here. How's Judith? Good, good... Hymie, I just called to tell you that I'm coming over to stuff you into one of your own liquid helium tanks. Oh, say about fourteen or a few minutes after. That'll give you time to get out of town. Clearing." He pocketed his phone. "Let's get some lunch. Never commit suicide on an empty stomach, my dear; it's bad for the digestion."

Uncle Tom took me to the Pioneers Club where I have been only once before and which is even more impressive than I had recalled- It has real waiters

men so old that they might have been pioneers themselves, unless they met the first ship. Everybody fussed over Uncle Tom and he called them all by their first names and they all called him "Tom" but made it sound like "Your Majesty" and the master of the hostel came over and prepared my sweet himself with about six other people standing around to hand him

things, like a famous surgeon operating against the swift onrush of death.

Presently Uncle Tom belched behind his napkin and I thanked everybody as we left while wishing that I had had the forethought to wear my unsuitable gown that Mother won't let me wear until I'm nine and almost made me take back-one doesn't get to the Pioneers Club every day.

We took the James Joyce Fogarty Express Tunnel and Uncle Tom sat down the whole way, so I had to sit, too, although it makes me restless; I prefer to walk in the direction a tunnel is moving and get there a bit sooner. But Uncle Tom says that he gets plenty of exercise watching other people work themselves to death.

I didn't really realize that we were going to the Marsopolis Crèche until we were there, so bemused had I been earlier with my own tumultuous emotions. But when we were there and facing a sign reading: OFFICE OF THE DIRECTOR-PLEASE USE OTHER DOOR, Uncle Tom said, "Hang around somewhere; I'll need you later," and went on in.

The waiting room was crowded and the only magazines not in use were Kiddie Kapers and Modern Homemaker, so I wandered around a bit and presently found a corridor that led to the Nursery.

The sign on the door said that visiting hours were from 16 to 18.30. Furthermore, it was locked, so I moved on and found another door which seemed much more promising. It was marked: POSITIVELY NO ADMITFANCE-but it didn't say "This Means You" and it wasn't locked, so I went in.

You never saw so many babies in your whole life!

Row upon row upon row, each in its own little transparent cubicle. I could really see only the row nearest me, all of which seemed to be about the same age- and much more finished than the three we had at

home. Little brown dumplings they were, cute as puppies. Most of them were asleep, some w~re awake and kicking and cooing and grabbing at dangle toys that were just in

reach. If there had not been a sheet of glass between me and them I would have grabbed me a double armful of babies.

There were a lot of girls in the room, too-well, young women, really. Each of them seemed to be busy with a baby and they didn't notice me. But shortly one of the babies nearest me started to cry whereupon a light came on over its cubicle, and one of the nurse girls hurried over, slid back the cover, picked it up and started patting its bottom. It stopped crying.

"Wet?" I inquired.

She looked up, saw me. "Oh, no, the machines take care of that. Just lonely, so I'm loving it." Her voice came through clearly in spite of the glass-a hear and speak circuit, no doubt, although the pickups were not in evidence. She made soft noises to the baby, then added, "Are you a new employee? You seem to be lost.

"Oh, no," I said hastily, "I'm not an employee. I just-'

"Then you don't belong here, not at this hour. Unless"-she looked at me rather skeptically-"just possibly you are looking for the instruction class for young mothers?"

"Oh, no, no!" I said hastily. "Not yet." Then I added still more hastily, "I'm a guest of the Director."

Well, it wasn't a fib. Not quite. I was a guest of a guest of the Director, one who was with him by appointment. The relationship was certainly concatenative, if not equivalent.

It seemed to reassure her. She asked, "Just what did you want? Can I help you?"

"Uh, just information. I'm making a sort of a survey. What goes on in this room?"

"These are age six-month withdrawal contracts," she told me. "All these babies will be going home in a few days." She put the baby, quiet now, back into its private room, adjusted a nursing nipple for it, made some other sort of adjustments on the outside of the cubicle so that the padding inside sort of humped up and held the baby steady against the milk supply, then closed the top, moved on a few meters and picked up another baby. "Personally," she added, "I think the age sixmonth contract is the best one. A child twelve months old is old enough to notice the transition. But these aren't. They don't care who comes along and pets them when they cry ... but nevertheless six months is long enough to get a baby well started and take the worst of the load off the mother. We know how, we're used to it, we stand our watches in rotation so that we are never exhausted from being 'up with the baby all night' ... and in consequence we aren't short-tempered and we never yell at them-and don't think for a minute that a baby doesn't understand a cross tone of voice simply because he can't talk yet. He knows! And it can start him off so twisted that he may take it out on somebody else, years and years later. There, there, honey," she went on but not to me, "feel better now? Feeling sleepy, huh? Now you just hold still and Martha will keep her hand on you until you are fast asleep."

She watched the baby for a moment longer, then withdrew her hand, closed the box and hurried on to where another light was burning. "A baby has no sense of time," she added as she removed a squalhing lump of fury from its crib. "When it needs love, it needs it right now. It can't know that-" An older woman had come up behind her. "Yes, Nurse?"

"Who is this you're chatting with? You know the rules."

"But . .. she's a guest of the Director."

The older woman looked at me with a stern nononsense look. "The Directpr sent you in here?"

I was making a split-second choice among three non-responsive answers when I was saved by Fate. A soft voice coming from everywhere at once announced: "Miss Podkayne Fries is requested to come to the office of the Director. Miss Podkayne Fries, please come to the office of the Director."

I tilted my nose in the air and said with dignity, "That is I. Nurse, will you be so kind as to phone the Director and tell him that Miss Fries is on her way?" I exited with deliberate haste.

The Director's office was four times as big and sixteen times as impressive as the principal's office at school. The Director was short and had a dark brown skin and a gray goatee and a harried expression. In addition to him and to Uncle Tom, of course, there was present the little lawyer man who had had a bad time with Daddy a week earlier-and my brother Clark. I couldn't figure out how he got there. . . except that Clark has an infallible homing instinct for trouble.

Clark looked at me with no expression; I nodded. The Director and his legal beagle stood up. Uncle Tom didn't but he said, "Dr. Hyman Schoenstein, Mr. Poon Kwai Yau-my niece Podkayne Fries. Sit down, honey; nobody is going to bite you. The Director has a proposition to offer you."

The lawyer man interrupted. "I don't think-"

"Correct," agreed Uncle Tom. "You don't think. Or it would have occurred to you that ripples spread out from a splash."

"But- Dr. Schoenstein, the release I obtained from Professor Fries explicitly binds him to silence, for separate good and sufficient consideration, over and above damages conceded by us and made good. This is tantamount to blackmail. I-"

Then Uncle Tom did stand up. He seemed twice as tall as usual and was grinning like a fright mask. "What was that last word you used?"

"I?" The lawyer looked startled. "Perhaps I spoke hastily. I simply meant-"

"I heard you," Uncle Tom growled. "And so did three witnesses. Happens to be one of the words a man can be challenged for on this still free planet. But, since I'm getting old and fat, I may just sue you for your shirt instead. Come along, kids."

The Director spoke quickly. "Tom ... sit down, please. Mr. Poon ... please keep quiet unless I ask for your advice. Now, Tom, you know quite well that you can't challenge nor sue over a privileged communication, counsel to client."

"I can do both or either. Question is: will a court sustain me? But I can always find out."

"And thereby drag out into the open the very point you know quite well I can't afford to have dragged out. Simply because my lawyer spoke in an excess of zeal. Mr. Poon?"

"I tried to withdraw it. I do withdraw it."

"Senator?"

Uncle Tom bowed stiffly to Mr. Poon, who returned it. "Accepted, sir. No offense meant and none taken." Then Uncle Tom grinned merrily, let his potbelly slide back down out of his chest, and said in his normal voice, "Okay, Hymie, let's get on with the crime. Your move."

Dr. Schoenstein said carefully, "Young lady, I have just learned that the recent disruption of family planning in your home-which we all deeply regret- caused an additional sharp disappointment to you and your brother."

"It certainly did!" I answered, rather shrilly I'm afraid.

"Yes. As your uncle put it, the ripples spread out.
Another of those ripples could wreck this establishment, make it insolvent as a private business. This is an odd sort of business we are in here, Miss Fries. Superficially we perform a routine engineering function, plus some not unusual boarding nursery services. But in fact what we do touches the most primitive of human emotions. If confidence in our integrity, or in the perfection with which we carry out the service entrusted to us, were to be shaken-" He spread his hands helplessly. "We couldn't last out the year. Now I can show you exactly how the mishap occurred which affected your family, show you how wildly unlikely it was to have it happen even under the methods we did use ... prove to you how utterly impossible it now is and always will be in the future for such a mistake to take place again, under our new procedures. Nevertheless"- he looked helpless again-"if you were to talk, merely tell the simple truth about what did indeed happen once ... you could ruin us."

I felt so sorry for him that I was about to blurt out that I wouldn't even dream of talking!-even though they had ruined my life-when Clark cut in. "Watch it, Pod! It's loaded."

So I just gave the Director my Sphinx expression and said nothing. Clark's instinctive self-interest is absolutely reliable.

Dr. Schoenstein motioned Mr. Poon to keep quiet. "But, my dear lady, I am not asking you not to talk. As your uncle the Senator says, you are not here to blackmail and I have nothing with which to bargain. The Marsopolis Crèche Foundation, Limited, always carries out its obligations even when they do not result from formal contract. I asked you to come in here in order to suggest a measure of relief for the damage we have unquestionably-though unwittingly-done you and your brother. Your uncle tells me that he had intended to travel with you and your family . .. but
that now he intends to go via the next Triangle Line departure. The Tricorn, I believe it is, about ten days from now. Would you feel less mistreated if we were to pay first-class fares for your brother and you-round trip, of course-in the Triangle Line?"

Would I! The Wanderlust has, as her sole virtue, the fact that she is indeed a spaceship and she was shaping for Earth. But she is an old, slow freighter. Whereas the Triangle Liners, as everyone knows, are utter palaces! I could but nod.

"Good. It is our privilege and we hope you have a wonderful trip. But, uh, young lady ... do you think it possible that you could give us some assurance, for no consideration and simply out of kindness, that you wouldn't talk about a certain regrettable mishap?"

"Oh? I thought that was part of the deal?"

"There is no deal. As your uncle pointed out to me, we owe you this trip, no matter what."

"Why-why, Doctor, I'm going to be so busy, so utterly rushed, just to get ready in time, that I won't have time to talk to anyone about any mishaps that probably weren't your fault anyhow!"

"Thank you." He turned to Clark. "And you, son?" Clark doesn't like to be called "son" at best. But don't think it affected his answer. He ignored the vocative and said coldly, "What about our expenses?"

Dr. Schoenstein flinched. Uncle Tom guffawed and said, "That's my boy! Doc, I told you he had the simple rapacity of a sand gator. He'll go far-if somebody doesn't poison him."

"Any suggestions?"

"No trouble. Clark. Look me in the eye. Either you stay behind and we weld you into a barrel and feed you through the bunghole so that you can't talk-while your sister goes anyhow-or you accept these terms. Say a thousand each-no, fifteen hundred-for travel expenses, and you keep your snapper shut forever
about the baby mix-up ... or I personally, with the aid of four stout, blackhearted accomplices, will cut your tongue out and feed it to the cat. A deal?"

"I ought to get ten percent commission on Sis's fifteen hundred. She didn't have sense enough to ask for it."

"No cumshaw. I ought to be charging you commission on the whole transaction. A deal?"

"A deal," Clark agreed.

Uncle Tom stood up. "That does it, Doc. In hjs own unappetizing way he is as utterly reliable as she is. So relax. You, too, Kwai Yau, you can breathe again. Doe, you can send a cheek around to me in the morning. Come on, kids."

"Thanks, Tom. If that is the word. I'll have the cheek over before you get there. Uh ... just one thing . .

"What, Doe?"

"Senator, you were here long before I was born, so
I don't know too much about your early life. Just the
traditional stories and what it says about you in Who's
Who on Mars. Just what were you transported for?
You were transported? Weren't you?"

Mr. Poon looked horror-stricken, and I was. But Uncle Tom didn't seem offended. He laughed heartily and answered, "I was accused of freezing babies for profit. But it was a frameup-I never did no such thing nohow. Come on, kids. Let's get out of this ghouls' nest before they smuggle us down into the subbasement."

Later that night in bed I was dreamily thinking over the trip. There hadn't even been the least argument with Mother and Daddy; Uncle Tom had settled it all by phone before we got home. I heard a sound from the nursery, got up and paddled in. It was Duncan, the little darling, not even wet but lonely. So I picked
him up and cuddled him and he cooed and then he was wet, so I changed him.

I decided that he was just as pretty or prettier than all those other babies, even though he was five months younger and his eyes didn't track. When I put him down again, he was sound asleep; I started back to bed.

And stopped- The Triangle Line gets its name from serving the three leading planets, of course, but which direction a ship makes the Mars-Venus-Earth route depends on just where we all are in our orbits.

But just where were we?

I hurried into the living room and searched for the Daily War Whoop-found it, thank goodness, and fed it into the viewer, flipped to the shipping news, found the predicted arrivals and departures.

Yes, yes, yes! I am going not only to Earth-but to Venus as well!

Venus! Do you suppose Mother would let me- No, best just say nothing now. Uncle Tom will be more tractable, after we get there.

I'm going to miss Duncan-he's such a little doll.

Iv

I haven't had time to write in this journal for days. Just getting ready to leave was almost impossible-and would have been truly impossible had it not been that most preparations-all the special Terra inoculations and photographs and passports and such-were mostly done before Everything Came Unstuck. But Mother came out of her atavistic daze and was very helpful. She would even let one of the triplets cry for a few moments rather than leave me half pinned up.

I don't know how Clark got ready or whether he had any preparations to make. He continued to creep around silently, answering in grunts if he answered at all. Nor did Uncle Tom seem to find it difficult. I saw him only twice during those frantic ten days (once to borrow baggage mass from his allowance, which he let me have, the dear!) and both times I had to dig him out of the card room at the Elks Club. I asked him how he managed to get ready for so important a trip and still have time to play cards?

"Nothing to it," he answered. "I bought a new toothbrush. Is there something else I should have done?"

So I hugged him and told him he was an utterly utter beast and he chuckled and mussed my hair.

Query: Will I ever become that blasé about space travel? I suppose I must if I am to be an astronaut. But Daddy says that getting ready for a trip is half the fun ... so perhaps I don't want to become that sophisticated.

Somehow Mother delivered me, complete with baggage and all the myriad pieces of paper-tickets and medical records and passport and universal identification complex and guardians' assignment-and-guarantee and three kinds of money and travelers' cheques and birth record and police certification and security clearance and I don't remember-all checked off, to the city shuttle port. I was juggling one package of things that simply wouldn't go into my luggage, and I had one hat on my head and one in my hand; otherwise everything came out even.

(I don't know where that second hat went. Somehow it never got aboard with me. But I haven't missed it.)

Good-bye at the shuttle port was most teary and exciting. Not just with Mother and Daddy, which was to be expected (when Daddy put his arm around me tight, I threw both mine around him and for a dreadful second I didn't want to leave at all), but also because about thirty of my classmates showed up (which I hadn't in the least expected), complete with a banner that two of them were carrying reading:

BON VOYAGE-PODKAYNE

I got kissed enough times to start a fair-sized epidemic if any one of them had had anything, which apparently they didn't. I got kissed by boys who had never even tried to, in the past-and I assure you that
it is not utterly impossible to kiss me, if the project is approached with confidence and finesse, as I believe that one's instincts should be allowed to develop as well as one's overt cortical behavior.

The corsage Daddy had given me for going away got crushed and I didn't even notice it until we were aboard the shuttle. I suppose it was somewhere about then that I lost that hat, but I'll never know-I would have lost the last-minute package, too, if Uncle Tom had not rescued it. There were photographers, too, but not for me-for Uncle Tom. Then suddenly we had to scoot aboard the shuttle right now because a shuttle can't wait; it has to boost on the split second even though Deimos moves so much more slowly than Phobos. A reporter from the War Whoop was still trying to get a statement out of Uncle Tom about the forthcoming Three-Planets conference but he just pointed at his throat and whispered, "Laryngitis"- then we were aboard just before they sealed the airlock.

It must have been the shortest case of laryngitis on record; Uncle Tom's voice had been all right until we got to the shuttle port and it was okay again once we were in the shuttle.

One shuttle trip is exactly like another, whether to Phobos or Deimos. Still, that first tremendous whoosh! of acceleration is exciting as it pins you down into your couch with so much weight that you can't breathe, much less move-and free fall is always strange and eerie and rather stomach fluttering even if one doesn't tend to be nauseated by it, which, thank you, I don't.

Being on Deimos is just like being in free fall, since neither Deimos nor Phobos has enough surface gravitation for one to feel it. They put suction sandals on us before they unstrapped us so that we could walk, just as they do on Phobos. Nevertheless Deimos is different from Phobos for reasons having nothing to do
with natural phenomena. Phobos is, of course, legally a part of Mars; there are no formalities of any sort about visiting it. All that is required is the fare, a free day, and a yen for a picnic in space.

But Deimos is a free port, leased in perpetuity to Three-Planets Treaty Authority. A known criminal, with a price on his head in Marsopolis, could change ships there right under the eyes of our own police- and we couldn't touch him. Instead, we would have to start most complicated legal doings at the Interplanetary High Court on Luna, practically win the case ahead of time and, besides that, prove that the crime was a crime under Three-Planet rules and not just under our own laws ... and then all that we could do would be to ask the Authority's proctors to arrest the man if he was still around-which doesn't seem likely.

I knew about this, theoretically, because there had been about a half page on it in our school course Essentials of Martian Government in the section on "Extraterritoriality." But now I had plenty of time to think about it because, as soon as we left the shuttle, we found ourselves locked up in a room misleadingly called the "Hospitality Room" while we waited until they were ready to "process" us. One wall of the room was glass and I could see lots and lots of people hurrying around in the

concourse beyond, doing all manner of interesting and mysterious things. But all we had to do was to wait beside our baggage and grow bored.

I found that I was growing furious by the minute, not at all like my normally sweet and lovable nature. Why, this place had been built by my own mother!- and here I was, caged up in it like white mice in a bio lab.

(Well, I admit that Mother didn't exactly build Deimos; the Martians did that, starting with a spare asteroid that they happened to have handy. But some millions of years back they grew tired of space travel and devoted all their time to the whichness of what and how to unscrew the inscrutable-so when Mother took over the job, Deimos was pretty run down; she had to start in from the ground up and rebuild it completely.)

In any case, it was certain that everything that I could see through that transparent wall was a product of Mother~s creative, imaginative and hardheaded engineering ability. I began to fume. Clark was off in a corner, talking privately to some stranger-"stranger" to me, at least; Clark, for all his antisocial disposition, always seems to know somebody, or to know somebody who knows somebody, anywhere we go. I sometimes wonder if he is a member of some vast underground secret society; he has such unsavory acquaintances and never brings any of them home.

Clark is, however, a very satisfactory person to fume with, because, if he isn't busy, he is always willing to help a person hate anything that needs hating; he can even dig up reasons why a situation is even more vilely unfair than you thought it was. But he was busy, so that left Uncle Tom. So I explained to him bitterly how outrageous I thought it was that we should be penned up like animals-free Mars citizens on one of Mars' own moons!-simply because a sign read: Passengers must wait until called-by order of ThreePlanets Treaty Authority.

"Politics!" I said bitterly. "I could run it better myself."

"I'm sure you could," he agreed gravely, "but, Flicka, you don't understand."

"I understand all too well!"

"No, honey bun. You understand that there is no good reason why you should not walk straight through that door and enjoy yourself by shopping until it is time to go inboard the Tricorn. And you are right about that, for there is no need at all for you to be locked up in here when you could be out there making some freeport shopkeeper happy by paying him a high price which seems to you a low price. So you say 'Politics!' as if it were a nasty word-and you think that settles it."

He sighed. "But you don't understand. Politics is not evil; politics is the human race's most magnificent achievement. When politics is good, it's wonderful and when politics is bad-well, it's still pretty good."

"I guess I don't understand," I said slowly.

"Think about it. Politics is just a name for the way we get things done ... without fighting. We dicker and compromise and everybody thinks he has received a raw deal, but somehow after a tedious amount of talk we come up with some jury-rigged way to do it without getting anybody's head bashed in. That's politics. The only other way to settle a dispute is by bashing a few heads in ... and that is what happens when one or both sides is no longer willing to dicker. That's why I say politics is good even when it is bad because the only alternative is force-and somebody gets hurt."

"Uh ... it seems to me that's a funny way for a revolutionary veteran to talk. From what I've heard, Uncle Tom, you were one of the bloodthirsty ones who started the shooting. Or so Daddy says."

He grinned. "Mostly I ducked. If dickering won't work, then you have to fight. But I think maybe it takes a man who has been shot at to appreciate how much better it is to fumble your way through a political compromise rather than have the top of your head blown off." He frowned and suddenly looked very old. "When to talk and when to fight- That is the most difficult decision to make wisely of all the decisions in life." Then suddenly he smiled and the years dropped away. "Mankind didn't invent fighting; it was here long
before we were. But we invented politics. Just think of it, hon- Homo sapiens is the most cruel, the most vicious, the most predatory, and certainly the most deadly of all the animals in this solar system. Yet he invented politics! He figured out a way to let most of us, most of the time, get along well enough so that we usually don't kill each other. So don't let me hear you using 'politics' as a swear word again."

"I'm sony, Uncle Tom," I said humbly.

"Like fun you are. But if you let that idea soak for twenty or thirty years, you may- Oh, oh! There's your villain, baby girl-the politically appointed bureaucrat who has most unjustly held you in durance vile. So scratch his eyes out. Show him how little you think of his silly rules."

I answered this with dignified silence. It is hard to tell when Uncle Tom is serious because he loves to pull my leg, always hoping that it will come off in his hand. The Three-Planets proctor of whom he was speaking had opened the door to our bullpen and was looking around exactly like a zookeeper inspecting a cage for cleanliness. "Passports!" he called out. "Diplomatic passports first." He looked us over, spotted Uncle Tom. "Senator?"

Uncle Tom shook his head. "I'm a tourist, thanks."

"As you say, sir. Line up, please-reverse alphabetical order"-which put us near the tail of the line instead of near the head. There followed maddening delays for fully two hours-passports, health clearance, outgoing baggage inspection-Mars Republic does not levy duties on exports but just the same there is a whole long list of things you can't export without a license, such as ancient Martian artifacts (the first explorers did their best to gut the place and some of the most priceless are in the British Museum or the Kremlin; I've heard Daddy fume about it), some things you can't export under any circumstances, such as
certain narcotics, and some things you can take aboard ship only by surrendering them for safekeeping by the purser, such as guns and other weapons.

Clark picked outgoing inspection for some typical abnormal behavior. They had passed down the line copies of a long list of things we must not have in our baggage-a fascinating list; I hadn't known that there were so many things either illegal, immoral, or deadly. When the Fries contingent wearily reached the inspection counter, the inspector said, all in one word:
"Nything-t'-d'clare?" He was a Marsman and as he looked up he recognized Uncle Tom. "Oh. Howdy, Senator. Honored to have you with us. Well, I guess we needn't waste time on your baggage. These two young people with you?"

"Better search my kit," Uncle Tom advised. "I'm smuggling guns to an out-planet branch of the Legion. As for the kids, they're my niece and nephew. But I don't vouch for them; they're both subversive characters. Especially the girl. She was soap-boxing revolution just now while we waited."

The inspector smiled and said, "I guess we can allow you a few guns, Senator-you know how to use them. Well, how about it, kids? Anything to declare?"

I said, "Nothing to declare," with icy dignity-when suddenly Clark spoke up.

"Sure!" he piped, his voice cracking. "Two kilos of happy dust! And whose business is it? I paid for it. I'm not going to let it be stolen by a bunch of clerks." His voice was surly as only he can manage and the expression on his face simply ached for a slap.

That did it. The inspector had been just about to glance into one of my bags, a purely formal inspection, I think-when my brattish brother deliberately stirred things up. At the very word "happy dust" four other inspectors closed in. Two were Venusmen, to judge by
their accents, and the other two might have been from Earth.

Of course, happy dust doesn't matter to us Marsmen. The Martians use it, have always used it, and it is about as important to them as tobacco is to humans, but apparently without any ill effects. What they get out of it I don't know. Some of the old sand rats among us have picked up the habit from the Martians-but my entire botany class experimented with it under our teacher's supervision and nobody got any thrill out of it and all I got was blocked sinuses that wore off before the day was out. Strictly zero squared.

But with the native Venerians it is another matter- when they can get it. It turns them into murderous maniacs and they'll do anything to get it. The (black market) price on it there is very high indeed . .. and possession of it by a human on Venus is at least an automatic life sentence to Saturn's moons.

They buzzed around Clark like angry' jetta wasps.

But they did not find what they were looking for. Shortly Uncle Tom spoke up and said, "Inspector? May I make a suggestion?"

"Eh? Certainly, Senator."

"My nephew, I am sorry to say, has caused a disturbance. Why don't you put him aside-chain him up, I would-and let all these other good people go through?"

The inspector blinked. "I think that is an excellent idea."

"And I would appreciate it if you would inspect myself and my niece now. Then we won't hold up the others."

"Oh, that's not necessary." The inspector slapped seals on all of Uncle's bags, closed the one of mine he had started to open, and said, "I don't need to paw through the young lady's pretties. But I think we'll
take this smart boy and search him to the skin and X-ray him."

"Do that."

So Uncle and I went on and checked at four or five other desks-fiscal control and migration and reservations and other nonsense-and finally wound up with our baggage at the centrifuge for weighing in. I never did get a chance to shop.

To my chagrin, when I stepped off the merry-goround the record showed that my baggage and myself were nearly three kilos over my allowance, which didn't seem

possible. I hadn't eaten more breakfast than usual-less actually-and I hadn't drunk any water because, while I do not become ill in free fall, drinking in free fall is very tricky; you are likely to get water up your nose or something and set off an embarrassing chain reaction.

So I was about to protest bitterly that the weight-
master had spun the centrifuge too fast and produced
a false mass reading. But it occurred to me that I did
not know for surely certain that the scales Mother and
I had used were perfectly accurate. So I kept quiet.

Uncle Tom just reached for his purse and said, "How much?"

The weightmaster said, "Mmm ... let's spin you first, Senator."

Uncle Tom was almost two kilos under his allowance. The weightmaster shrugged and said, "Forget it, Senator. I'm minus on a couple of other things; I think I can swallow it. If not, I'll leave a memo with the purser. But I'm fairly sure I can."

"Thank you. What did you say your name was?"

"Mio. Miles M. Milo-Aasvogel Lodge number seventy-four. Maybe you saw our crack drill team at the Legion convention two years ago- I was left pivot."

"I certainly did, I certainly did!" They exchanged that secret grip that they think other people don't
know and Uncle Tom said, "Well, thanks, Miles. Be seeing you."

"Not at all-Tom. No, don't bother with your baggage." Mr. Mio touched a button and called out, "In the Tricorn! Get somebody out here fast for the Senator's baggage."

It occurred to me, as we stopped at the passenger tube sealed to the transfer station to swap our suction sandals for little magnet pads that clipped to our shoes, that we need not have waited for anything at anytime-if only Uncle Tom had been willing to use the special favors he so plainly could demand.

But, even so, it pays to travel with an important person-even though it's just your Uncle Tom whose stomach you used to jump up and down on when you were small enough for such things. Our tickets simply read FIRST CLASS-Im sure, for I saw all three of them-but where we were placed was in what they call the "Owner's Cabin," which is actually a suite with three bedrooms and a living room. I was dazzled!

But I didn't have time to admire it just then. First they strapped our baggage down, then they strapped us down-to seat couches which were against one wall of the living room. That wall plainly should have been the floor, but it slanted up almost vertically with respect to the tiny, not-quite-nothing weight that we had. The warning sirens were already sounding when someone dragged Clark in and strapped him to one of the couches. He was looking mussed up but cocky.

"Hi, smuggler," Uncle Tom greeted him amiably. "They find it on you?"

"Nothing to find."

"That's what I thought. I trust they gave you a rough time."

"Naah!"

I wasn't sure I believed Clark's answer; I've heard that a skin and person search can be made quite
annoying indeed, without doing anything the least bit illegal, if the proctors are feeling unfriendly. A "rough time" would be good for Clark's soul, I am sure-but he certainly did

not act as if the experience had caused him any discomfort. I said, "Clark, that was a very foolish remark you made to the inspector. And it was a lie, as well-a silly, useless lie."

"Sign off," he said curtly. "If I'm smuggling anything, it's up to them to find it; that's what they're paid for. 'Any-thing-t'-d'clare?' "he added in a mimicking voice. "What nonsense! As if anybody would declare something he was trying to smuggle."

"Just the same," I went on, "if Daddy had heard you say-"

"Podkayne."

"Yes, Uncle Tom?"

"Table it. We're about to start. Let's enjoy it."

"But- Yes, Uncle."

There was a slight drop in pressure, then a sudden surge that would have slid us out of our couches if we had not been strapped-but not a strong one, not at all like that giant whoosh! with which we had left the surface. It did not last long, then we were truly in free fall for a few moments ... then there started a soft, gentle push in the same direction, which kept on.

Then the room started very slowly to turn around
almost unnoticeable except for a slight dizziness it gave one.

Gradually, gradually (it took almost twenty minutes) our weight increased, until at last we were back to our proper weight ... at which time the floor, which had been all wrong when we came in, was where it belonged, under us, and almost level. But not quite- Here is what had happened. The first short boost was made by the rocket tugs of Deimos Port picking up the Tricorn and hurling her out into a free orbit of her own. This doesn't take much, because the
attraction between even a big ship like the Tricorn and a tiny, tiny satellite such as Deimos isn't enough to matter; all that matters is getting the very considerable mass of the ship shoved free.

The second gentle shove, the one that kept up and never went away, was the ship's own main drive-onetenth of a standard gee. The Tricorn is a constantboost ship; she doesn't dillydally around with economical orbits and weeks and months in free fall. She goes very fast indeed ... because even 0.1 gee adds up awfully fast.

But one-tenth gee is not enough to make comfortable passengers who have been used to more. As soon as the Captain had set her on her course, he started to spin her and kept it up until the centrifugal force and the boost added up (in vector addition, of course) to exactly the surface gravitation of Mars (or 37 percent of a standard gee) at the locus of the first-class staterooms.

But the floors will not be quite level until we approach Earth, because the inside of the ship had been constructed so that the floors would feel perfectly level when the spin and the boost added up to exactly one standard gravity-or Earth-Normal.

Maybe this isn't too clear. Well, it wasn't too clear to me, in school; I didn't see exactly how it worked out until (later) I had a chance to see the controls used to put spin on the ship and how the centrifugal force was calculated. Just remember that the Tricorn- and her sisters, the Trice and the Triad and the Triangulum and the Tricolor are enormous cylinders. The thrust is straight along the main axis; it has to be. Centrifugal force pushes away from the main axis- how else? The two forces add up to make the ship's "artificial gravity" in passenger country-but, since one force (the boost) is kept constant and the other (the spin) can be varied, there can be only one rate of spin

which will add in with the boost to make those floors perfectly level.

For the Tricorn the spin that will produce level floors and exactly one Earth gravity in passenger country is 5.42 revolutions per minute-I know because the Captain told me so.. . and I checked his arithmetic and he was right. The floor of our cabin is just over thirty meters from the main axis of the ship, so it all comes out even.

As soon as they had the floor back under us and had announced the "all clear" I unstrapped me and hurried out. I wanted a quick look at the ship; I didn't even wait to unpack.

There's a fortune awaiting the man who invents a really good deodorizer for a spaceship. That's the one thing you can't fail to notice.

Oh, they try, I grant them that. The air goes through precipitators each time it is cycled; it is washed, it is perfumed, a precise fraction of ozone is added, and the new oxygen that is put in after the carbon dioxide is distilled out is as pure as a baby's mind; it has to be, for it is newly released as a by-product of the photosynthesis of living plants. That air is so pure that it really ought to be voted a medal by the Society for the Suppression of Evil Thoughts.

Besides that, a simply amazing amount of the crew's time is put into cleaning, polishing, washing, sterilizing-oh, they try!

But nevertheless, even a new, extra-fare luxury liner like the Tricorn simply reeks of human sweat and ancient sin, with undefinable overtones of organic decay and unfortunate accidents and matters best forgotten. Once I was with Daddy when a Martian tomb was being unsealed-and I found out why xenoarchaeologists always have gas masks handy. But a spaceship smells even worse than that tomb.

It does no good to complain to the purser. He'll listen with professional sympathy and send a crewman around to spray your stateroom with something which (I suspect) merely deadens your nose for a while. But his sympathy is not real, because the poor man simply cannot smell anything wrong himself. He has lived in ships for years; it is literally impossible for him to smell the unmistakable reek of a ship that has been lived in-and, besides, he knows that the air is pure; the ship's instruments show it. None of the professional spacers can smell it.

But the purser and all of them are quite used to having passengers complain about the "unbearable stench"-so they pretend sympathy and go through the motions of correcting the matter.

Not that I complained. I was looking forward to having this ship eating out of my hand, and you don't accomplish that sort of coup by becoming known first thing as a complainer. But other first-timers did, and I certainly understood why-in fact I began to have a glimmer of a doubt about my ambitions to become skipper of an explorer ship.

But- Well, in about two days it seemed to me that they had managed to clean up the ship quite a bit, and shortly thereafter I stopped thinking about it. I began to understand why the ship's crew can't smell the things the passengers complain about. Their nervous systems simply cancel out the old familiar stinks-like a cybernetic skywatch canceling out and ignoring any object whose predicted orbit has previously been programmed into the machine.

But the odor is still there. I suspect that it sinks right into polished metal and can never be removed, short of scrapping the ship and melting it down. Thank goodness the human nervous system is endlessly adaptable.

* * *

But my own nervous system didn't seem too adaptable during that first hasty tour of the Tricorn; it is a good thing that I had not eaten much breakfast and had refrained from drinking anything. My stomach did give me a couple of bad moments, but I told it sternly that I was busy-I was very anxious to look over the ship; I simply didn't have time to cater to the weaknesses to which flesh is heir.

Well, the Tricorn is lovely all right-every bit as nice as the travel folders say that she is . . . except for that dreadful ship's odor. Her ballroom is gorgeous and so big that you can see that the floor curves to match the ship. . . only it is not curved when you walk across it. It is level, too-it is the only room in the ship where they jack up the floor to match perfectly with whatever spin is on the ship. There is a lounge with a simulated sky of outer space, or it can be switched to blue sky and fleecy clouds. Some old biddies were already in there, gabbling.

The dining saloon is every bit as fancy, but it seemed hardly big enough-which reminded me of the warning in the travel brochure about first and second tables, so I rushed back to our cabin to urge Uncle Tom to make reservations for us quickly before all the best tables were filled.

He wasn't there. I took a quick look in all the rooms and didn't find him-but I found Clark in my room, just closing one of my bags!

"What are you doing?" I demanded.

He jumped and then looked perfectly blank. "I was just looking to see if you had any nausea pills." He said woodenly.

"Well, don't dig into my things! You know better." I came up and felt his cheek; he wasn't feverish. "I don't have any. But I noticed where the surgeon's office is. If you are feeling ill, I'll take you straight there and let him dose you."

He pulled away. "Aw, I'm all right-now."

"Clark Fries, you listerj to me. If you-" But he wasn't listening; he slid past me, ducked into his own room and closed the door; I heard the lock click.

I closed the bag he had opened-and noticed something. It was the bag the inspector had been just about to search when Clark had pulled that silly stunt about "happy dust."

My younger brother never does anything without a reason. Never.

His reasons may be, and often are, inscrutable to others. But if you just dig deeply enough, you will always find that his mind is never a random-choice machine, doing things pointlessly. It is as logical as a calculator-and about as cold.

I now knew why he had made what seemed to be entirely unnecessary trouble for himself at outgoing inspection.

I knew why I had been unexpectedly three kilos over my allowance on the centrifuge.

The only thing I didn't know was: What had he smuggled aboard in my baggage? And why?

Interlude

Well, Pod, I am glad to see that you've resumed keeping your diary. Not only do I find your girlish viewpoints entertaining but also you sometimes (not often) provide me with useful bits of information.

If I can do anything for you in return, do let me know, Perhaps you would like help in straightening out your grammar? Those incomplete sentences you are so fond of indicate incomplete thinking. You know that, don't you?

For example, let us consider a purely hypothetical case: a delivery robot with an unbeatable seal. Since the seal is in fact unbeatable, thinking about the seal simply leads to frustration. But a complete analysis of the situation leads one to the obvious fact that any cubical or quasi-cubical object has six sides, and that the seal applies to only one of these six sides.

Pursuing this line of thought one may note that, while the quasi cube may not be moved without cutting its connections, the floor under it may be lowered as much as forty-eight centimeters-if one has all afternoon in which to work.

Were this not a hypothetical case I would now suggest the use of a mirror and light on an extension handle and some around-the-corner tools, plus plenty of patience.

That's what you lack, Pod-patience.

I hope this may shed some light on the matter of the hypothetical happy dust-and do feel free to come to me with your little problems.

V

Clark kept his stateroom door locked all the time the first three days we were in the Tn corn-I know, because I tried it every time he left the suite.

Then on the fourth day he failed to lock it at a time when it was predictable that he would be gone at least an hour, as he had signed up for a tour of the ship- the parts passengers ordinarily are not allowed in, I mean. I didn't mind missing it myself, for by then I had worked out my own private "Poddy special" escort service. Nor did I have to worry about Uncle Tom; he wasn't making the tour, it would have violated his noexercise rule, but he had acquired new pinochle cronies and he was safely in the smoking room.

Those stateroom door locks are not impossible to pick-not for a girl equipped with a nail file, some bits of this and that, and free run of the purser's office-me, I mean.

But I found I did not have to pick the lock; the catch had not quite caught. I breathed the conventional sigh of relief, as I figured that the happy accident put me at least twenty minutes ahead of schedule.

I shan't detail the search, but I flatter myself that the Criminal Investigation Bureau could not have done it more logically nor more quickly if limited, as I was, to bare hands and no equipment. It had to be something forbidden by that list they had given us on Deimos-and I had carefully kept and studied my copy. It had to mass slightly over three kilos. It had to bulk so large and be sufficiently fixed in its shape and dimensions

that Clark was forced to hide it in baggage-otherwise I am sure he would have concealed it on his person and coldly depended on his youth and "innocence," plus the chaperonage of Uncle Tom, to breeze him through the outgoing inspection. Otherwise he would never have taken the calculated risk of hiding it in my baggage, since he couldn't be sure of recovering it without my knowing.

Could he have predicted that I would at once go sightseeing without waiting to unpack? Well, perhaps he could, even though I had done so on the spur of the moment. I must reluctantly admit that Clark can outguess me with maddening regularity. As an opponent, he is never to be underrated. But still it was for him a "calculated risk," albeit a small one.

Very well. Largish, rather massy, forbidden-but I didn't know what it looked like and I had to assume that anything which met the first two requirements might be disguised to appear innocent.

Ten minutes later I knew that it had to be in one of his three bags, which I had left to the last on purpose as the least likely spots. A stateroom aboard ship has many cover plates, access holes, removable fixtures, and the like, but I had done a careful practice run in my own room; I knew which ones were worth opening, which ones could not be opened without power tools, which ones could not be opened without leaving unmistakable signs of tampering. I checked these all in great haste, then congratulated Clark on having the good sense not to use such obvious hiding places.

Then I checked everything readily accessible-out in the open, in his wardrobe, etc.-using the classic "Purloined Letter" technique, i.e., I never assumed that a book was a book simply because it looked like a book, nor that a jacket on a hanger was simply that and nothing more.

Null, negative, nothing- Reluctantly, I tackled his three pieces of luggage, first noting carefully exactly how they were stacked and in what order.

The first was empty. Oh, the linings could have been tampered with, but the bag was no heavier than it should have been and any false pocket in the linings could not have held anything large enough to meet the specifications.

The second bag was the same-and the bag on the bottom seemed to be the same ... until I found an envelope in a pocket of it. Oh, nothing nearly mass enough, nor gross enough; just an ordinary envelope for a letter-but nevertheless I glanced at it.

And was immediately indignant!

It had printed on it:

MIsS PODKAYNE FRIES
PASSENGER, S.S. Tricorn
For delivery in ship

Why, the little wretch! He had been intercepting my mail! With fingers trembling with rage so badly that I could hardly do so I opened it-and discovered that it had already been opened and was angrier than ever. But, at least, the note was still inside. Shaking, I pulled it out and read it.

Just six words-

Hi, Pod. Snooping again, I see.

-in Clark's handwriting.

I stood there, frozen, for a long moment, while I blushed scarlet and chewed the bitter realization that I had been hoaxed to perfection-again.

There are only three people in the world who can make me feel stupid-and Clark is two of them.

I heard a throat-clearing sound behind me and whirled around. Lounging in the open doorway (I had left it closed) was my brother. He smiled at me and said, "Hello, Sis. Looking for something? Need any help?"

I didn't waste time pretending that I didn't have jam all over my face; I simply said, "Clark Fries, what did you smuggle into this ship in my baggage?"

He looked blank-a look of malignant idiocy which has been known to drive well-balanced teachers to their therapists. "What in the world are you talking about, Pod?"

"You know what I'm talking about! Smuggling!"

"Oh!" His face lit up in a sunny smile. "You mean those two kilograms of happy dust. Goodness, Sis, is that still worrying you? There never were any two kilos of happy dust; I was just having my little joke with that stuffy inspector. I thought you knew that."

"I do not mean any 'two kilos of happy dust'! I am talking about at least three kilos of something else that you hid in my baggage!"

He looked worried. "Pod, do you feel well?"

"Oooooh!-dandruffl Clark Fries, you stop that! You know what I mean! When I was centrifuged, my bags and I weighed three kilos over my allowance. Well?"

He looked at me thoughtfully, sympathetically. "It has seemed to me that you were getting a bit fat- but I didn't want to mention it. I thought it was all
this rich food you've been tucking away here in the ship. You really ought to watch that sort of thing, Pod. After all, if a girl lets her figure go to pieces- Well, she doesn't have much else. So I hear.'

Had that envelope been a blunt instrument I would have blunted him. I heard a low growling sound, and realized that I was making it. So I stopped. "Where's the letter that was in this envelope?"

Clark looked surprised. "Why, it's right there, in your other hand."

"This? This is all there was? No letter from somebody else?"

"Why, just that note from me, Sis. Didn't you like it? I thought that it just suited the occasion. .. I knew you would find it your very first chance." He smiled. "Next time you want to paw through my things, let me know and I'll help. Sometimes I have experiments running-and you might get hurt. That can happen to people who aren't very bright and don't look before they leap. I wouldn't want that to happen to you, Sis."

I didn't bandy any more words; I brushed past him and went to my own room and locked the door and bawled.

Then I got up and did very careful things to my face. I know when I'm licked; I don't have to have a full set of working drawings. I resolved never to mention the matter to Clark again.

But what was I to do? Go to the Captain? I already knew the Captain pretty well; his imagination extended as far as the next ballistic prediction and no further. Tell him that my brother had been smuggling something, I didn't know what-and that he had better search the entire ship most carefully, because, whatever it was, it was not in my brother's

room? Don't be triple silly, Poddy. In the first place, he would laugh at you; in the second place, you don't want Clark to be caught- Mother and Daddy wouldn't like it.

Tell Uncle Tom about it? He might be just as unbelieving ... or, if he did believe me, he might go to the Captain himself-with just as disastrous results.

I decided not to go to Uncle Tom-at least not yet. Instead I would keep my eyes and ears open and try to find an answer myself.

In any case I did not waste much time on Clark's sins (if any, I had to admit in bare honesty); I was in my first real spaceship-halfway to my ambition thereby-and there was much to learn and do.

Those travel brochures are honest enough, I guess- but they do not give you the full picture.

For example, take this phrase right out of the text of the Triangle Line's fancy folder ... romantic days in ancient Marsopolis, the city older than time; exotic nights under the hurtling moons of Mars

Let's rephrase it into everyday language, shall we? Marsopolis is my hometown and I love it-but it is as romantic as bread and butter with no jam. The parts people live in are new and were designed for function, not romance. As for the ruins outside town (which the Martians never called "Marsopolis"), a lot of high foreheads including Daddy have seen to it that the best parts are locked off so that tourists will not carve their initials in something that was old when stone axes were the last thing in superweapons. Furthermore, Martian ruins are neither beautiful, nor picturesque, nor impressive, to human eyes. The way to appreciate them is to read a really good book with illustrations, diagrams, and simple explanations-such as Daddy's Other Paths Than Ours. (Adv.)

As for those exotic nights, anybody who is outdoors after sundown on Mars other than through sheer necessity needs to have his head examined. It's chilly out there. I've seen Deimos and Phobos at night exactly twice, each time through no fault of my own-

and I was so busy keeping from freezing to death that I wasted no thought on "hurtling moons."

This advertising brochure is just as meticulously accurate and just as deceptive in effect-concerning the ships themselves. Oh, the Tricorn is a palace; I'll vouch for that. It really is a miracle of engineering that anything so huge, so luxurious, so fantastically adapted to the health and comfort of human beings, should be able to "hurtle" (pardon the word) through space.

But take those pictures- You know the ones I mean: full color and depth,
showing groups of handsome young people of both sexes chatting or playing games in the lounge, dancing gaily in the ballroom-or views of a "typical stateroom."

That "typical stateroom" is not a fake. No, it has simply been photographed from an angle and with a lens that makes it look at least twice as big as it is. As for those handsome, gay, young people-well, they aren't along on the trip I'm making. It's my guess that they are professional models.

In the Tricor'n this trip the young and handsome passengers like those in the pictures can be counted on the thumb of one hand. The typical passenger we have with us is a great-grandmother, Terran citizenship, widowed, wealthy, making her first trip into space-and probably her last, for she is not sure she likes it.

Honest, I'm not exaggerating; our passengers look like refugees from a geriatrics clinic. I am not scoffing at old age. I understand that it is a condition I will one day attain myself, if I go on breathing in and out enough times-say about 900,000,000 more times, not counting heavy exercise. Old age can be a charming condition, as witness Uncle Tom. But old age is not an accomplishment; it is just something that happens to you despite yourself, like falling downstairs.

And I must say that I am getting a wee bit tired of having youth treated as a punishable offense.

Our typical male passenger is the same sort, only not nearly so numerous. He differs from his wife primarily in that, instead of looking down his nose at me, he is sometimes inclined to pat me in a "fatherly" way that I do not find fatherly, don't like, avoid if humanly possible-and which nevertheless gets me talked about.

I suppose I should not have been surprised to find the Tnicorn a super-deluxe old folks' home, but (I may as well admit it) my experience is still limited and I was not aware of some of the economic facts of life.

The Tricorn is expensive. It is very expensive. Clark and I would not be in it at all if Uncle Tom had not twisted Dr. Schoenstein's arm in our behalf. Oh, I suppose Uncle Tom can afford it, but, by age group though not by temperament, he fits the defined category. But Daddy and Mother had intended to take us in the Wanderlust, a low-fare, economy-orbit freighter. Daddy and Mother are not poor, but they are not rich-and after they finish raising and educating five children it is unlikely that they will ever be rich.

Who can afford to travel in luxury liners? Ans.: Rich old widows, wealthy retired couples, high-priced executives whose time is so valuable that their corporations gladly send them by the fastest ships-and an occasional rare exception of some other sort.

Clark and I are such exceptions. We have one other exception in the ship, Miss-well, I'll call her Miss Girdle Fitz-Snugglie, because if I used her right name and perchance anybody ever sees this, it would be all too easily recognizable. I think Girdie is a good sort. I don't care what the gossips in this ship say. She doesn't act jealous of me even though it appears that the younger officers in the ship were all her personal property until I boarded-all the trip out from Earth,
I mean. I've cut into her monopoly quite a bit, but she isn't catty to me; she tre~ats me warmly woman-towoman, and I've learned quite a lot about Life and Men from her... more than Mother ever taught me.

(It is just possible that Mother is slightly naïve on subjects that Girdie knows best. A woman who tackles engineering and undertakes to beat men at their own game might have had a fairly limited social life, wouldn't you think? I must study this seriously because it seems possible that much the same might happen to a female space pilot and it is no part of my Master Plan to become a soured old maid.)

Girdle is about twice my age, which makes her awfully young in this company; nevertheless it may be that I cause her to look just a bit wrinkled around the eyes. Contrariwise, my somewhat unfinished look may make her more mature contours appear even more Helen-of-Troyish. As may be, it is certain that my presence has relieved the pressure on her by giving the gossips two targets instead of one.

And gossip they do. I heard one of them say about her: "She's been in more laps than a napkin!"

If so, I hope she had fun.

Those gay ship's dances in the mammoth ballroom! Like this: they happen every Tuesday and Saturday night, when the ship is spacing. The music starts at 20.30 and the Ladies' Society for Moral Rectitude is seated around the edge of the floor, as if for a wake. Uncle Tom is there, as a concession to me, and very proudsome and distinguished he looks in evening formal. I am there in a party dress which is not quite as girlish as it was when Mother helped me pick it out, in consequence of some very careful retailoring I have done with my door locked. Even Clark attends because there is nothing else going on and he's afraid he might miss something-and looking so nice I'm proud of him, because he has to climb into his own monkey suit or he can't come to the ball.

Over by the punch bowl are half a dozen of the ship's junior officers, dressed in mess jacket uniforms and looking faintly uncomfortable.

The Captain, by some process known only to him, selects one of the widows and asks her to dance. Two husbands dance with their wives. Uncle Tom offers me his arm and leads me to the floor. Two or three of the junior officers follow the Captain's example. Clark takes advantage of the breathless excitement to raid the punch bowl.

But nobody asks Girdle to dance.

This is no accident. The Captain has given the Word (I have this intelligence with utter certainty through My Spies) that no ship's officer shall dance with Miss Fitz-Snugglie until he has danced at least two dances with other partners-and I am not an "other partner," because the proscription, since leaving Mars, has been extended to me.

This should be proof to anyone that a captain of a ship is, in sober fact, the Last of the Absolute Monarchs.

There are now six or seven couples on the floor and the fun is at its riotous height. The floor will never again be so crowded. Nevertheless nine-tenths of the chairs are still occupied and you could ride a bicycle around the floor without endangering the dancers. The spectators look as if they were knitting at the tumbrels. The proper finishing touch would be a guillotine in the empty space in the middle of the floor.

The music stops; Uncle Tom takes me back to my chair, then asks Girdie to dance-since he is a Cash Customer, the Captain has not attempted to make him toe the mark. But I am still out of bounds, so I walk over to the punch bowl, take a cup out of Clark's

hands, finish it, and say, "Come on, Clark. I'll let you practice on me."

"Aw, it's a waltz!" (Or a "flea hop," or a "chassé," or "five step"-but whatever it is, it is just too utterly impossible.)

"Do it-or I'll tell Madame Grew that you want to dance with her, only you're too shy to ask her."

"You do and I'll trip her! I'll stumble and trip her."

However, Clark is weakening, so I move in fast. "Look, Bub, you either take me out there and walk on my feet for a while-or I'll see to it that Girdle doesn't dance with you at all."

That does it. Clark is in the throes of his first case of puppy love, and Girdle is such a gent that she treats him as an equal and accepts his attentions with warm courtesy. So Clark dances with me. Actually he is quite a good dancer and I have to lead him only a tiny bit. He likes to dance-but he wouldn't want anyone, especially me, to think that he

likes to dance with his sister. We don't look too badly matched, since I am short. In the meantime Girdle is looking very good indeed with Uncle Tom, which is quite an accomplishment, as Uncle Tom dances with great enthusiasm and no rhythm. But Girdle can follow anyone-if her partner broke his leg, she would follow, fracturing her own at the same spot. But the crowd is thinning out now; husbands that danced the first dance are too tired for the second and no one has replaced them.

Oh, we have gay times in the luxury liner Tricorn!

Truthfully we do have gay times. Starting with the third dance Girdle and I have our pick of the ship's officers, most of whom are good dancers, or at least have had plenty of practice. About twenty-two o'clock the Captain goes to bed and shortly after that the chaperones start putting away their whetstones and fading, one by one. By midnight there is just Girdie and myself and half a dozen of the younger officers-
and the Purser, who has dutifully danced with every woman and now feels that he owes himself the rest of the night. He is quite a good dancer, for an old man.

Oh, and there is usually Mrs. Grew, too-but she isn't one of the chaperones and she is always nice to Girdie. She is a fat old woman, full of sin and chuckles. She doesn't expect anyone to dance with her but she likes to watch-and the officers who aren't dancing at the moment like to sit with her; she's fun.

About one o'clock Uncle Tom sends Clark to tell me to come to bed or he'll lock me out. He wouldn't but I do-my feet are tired.
Good old Tricorn!
VI

The Captain is slowly increasing the spin of the ship to make the fake gravity match the surface gravitation of Venus, which is 84 percent of one standard gravity or more than twice as much as I have been used to all my life. So, when I am not busy studying astrogation or ship handling, I spend much of my time in the ship's gymnasium, hardening myself for what is coming, for I have no intention of being at a disadvantage on Venus in either strength or agility.

If I can adjust to an acceleration of 0.84 gee, the later transition to the full Earth-normal of one gee should be sugar pie with chocolate frosting. So I think.
I iis~tall~ l,~r~e (J~~ ~VTrI1t~ISiliIT1 ~ili to nivcclf. \Eoct ç~f
passengt'rs are Fart1~ ~neii or \enht~II1en \\ ho feel
need to prepare for the iiea~ V gravitation of Venus.

if th~ dozen-odd Marsmeii I aiii the only one who ani~ to take senouslv the coming burden-and the lociudhil of aliens in the ship we never see; each rtn iiains in his specially conditioned stateroom. The
ship's officers do i~ise the gym; some of them are quite fanatic about keeping fit. But they use it mostly at hours when passengers are not likely to use it.

So, on this day (Ceres thirteenth actually but the Tricorn uses Earth dates and time, which made it March ninth-I don't mind the strange dates but the short Earth day is costing me a half-hour's sleep each night)-on Ceres thirteenth I went charging into the

gym, so angry I could spit venom and intending to derive a double benefit by working off my mad (at least to the point where I would not be clapped in irons for assault), and by strengthening my muscles, too.

And found Clark inside, dressed in shorts and with a massy barbell.

I stopped short and blurted out, "What are you doing here?"

He grunted, "Weakening my mind."

Well, I had asked for it; there is no ship's regulation forbidding Clark to use the gym. His answer made sense to one schooled in his devious logic, which I certainly should be. I changed the subject, tossed aside my robe, and started limbering exercises to warm up. "How massy?" I asked.

"Sixty kilos."

I glanced at a weight meter on the wall, a loaded spring scale marked to read in fractions of standard gee; it read 52%. I did a fast rough in my mind-fiftytwo thirty-sevenths of sixty-or unit sum, plus nine hundred over thirty-seven, so add about a ninth, top and bottom for a thousand over forty, to yield twentyfive-or call it the same as lifting eighty-five kilos back home on Mars. "Then why are you sweating?"

"I am not sweating!" He put the barbell down. "Let's see you lift it."

"All right." As he moved I squatted down to raise the barbell-and changed my mind.

Now, believe me, I work out regularly with ninety kilos at home and I had been checkii~ig that weight meter on the wall each day and loading that same barbell to match the weight I use at home, plus a bit extra each day. My objective (hopeless, it is beginning to seem) is eventually to lift as much mass under Venus conditions as I had been accustomed to lifting at home.

So I was certain I could lift sixty kilos at 52 percent of standard gee.

But it is a mistake for a girl to beat a male at any test of physical strength ... even when it's. your brother. Most especially when it's your brother and he has a fiendish disposition and you've suddenly had a glimmering of a way to put his fiendish proclivities to work. As I have said, if you're in a mood to hate something or somebody, Clark is the perfect partner.

So I grunted and strained, making a good show, got it up to my chest, started it on up-and squeaked, "Help me!"

Clark gave a one-handed push at the center of the bar and we got it all the way up. Then I said, "Catch for me," through clenched teeth, and he eased it down. I sighed. "Gee, Clark, you must be getting awful strong."

"Doing all right."

It works; Clark was now as mellow as his nature permits. I suggested companion tumbling-if he didn't mind being the bottom half of the team?-because I wasn't sure I could hold him, not at point-five-two gee

did he mind?

He didn't mind at all; it gave him another chance to be muscular and masculine-and I was certain he could lift me; I massed eleven kilos less than the barbell he had just been lifting. When he was smaller, we used to do quite a bit of it, with me lifting him-it was a way to keep him quiet when I was in charge of
him. Now that he is as big as I am (and stronger, I fear), we still tumble a little, but taking turns at the ground-and-air parts-back home, I mean.

But with my weight almost half again what it ought to be I didn't risk any fancy capers. Presently, when he had me in a simple handstand over his head, I broached the subject on my mind. "Clark, is Mrs. Royer any special friend of yours?"

"Her?" He snorted and added a rude noise. "Why?"

"I just wondered. She-Mmm, perhaps I shouldn't repeat it."

He said, "Look, Pod, you want me to leave you standing on the ceiling?"

"Don't you dare!"

"Then don't start to say something and not finish it."

"All right. But steady while I swing my feet down to your shoulders." He let me do so, then I hopped down to the floor. The worst part about high acceleration is not how much you weigh, though that is bad enough, but how fast you fall-and I suspected that Clark was quite capable of leaving me head downwards high in the air if I annoyed him.

"What's this about Mrs. Royer?" he asked.

"Oh, nothing much. She thinks Marsmen are trash, that's all."

"She does, huh? That makes it mutual."

"Yes. She thinks it's disgraceful that the Line allows us to travel first class-and the Captain certainly ought not to allow us to eat in the same mess with decent people."

"Tell me more."

"Nothing to tell. We're riffraff, that's all. Convicts. You know."

"Interesting. Very, very interesting."

"And her friend Mrs. Garcia agrees with her. But I suppose I shouldn't have repeated it. After all, they are entitled to their own opinions. Arei~'t they?"

Clark didn't answer, which is a very bad sign. Shortly thereafter he left without a word. In a sudden panic that I might have started more than I intended to, I called after him but he just kept going. Clark is not hard of hearing but he can be very hard of listening.

Well, it was too late now. So I put on a weight harness, then loaded myself down all over until I weighed as much as I would on Venus and started trotting on the treadmill until I was covered with sweat and ready for a bath and a change.

Actually I did not really care what bad luck overtook those two harpies; I simply hoped that Clark's sleightof-hand would be up to its usual high standards so that it could not possibly be traced back to him. Nor even guessed at. For I had not told Clark half of what was said.

Believe you me, I had never guessed, .until we were in the Tri corn, that anyone could despise other persons simply over their ancestry or where they lived. Oh, I had encountered tourists from Earth whose manners left something to be desired-but Daddy had told me that all tourists, everywhere, seem obnoxious simply because tourists are strangers who do not know local customs ... and I believed it, because Daddy is never wrong. Certainly the occasional visiting professor that Daddy brought home for dinner was always charming, which proves that Earthmen do not have to have bad manners.

I had noticed that the passengers in the Tnicorn seemed a little bit stand-offish when we first boarded, but I did not think anything of it. After all, strangers do not run up and kiss you, even on Mars-and we Marsmen are fairly informal, I suppose; we're still a frontier society. Besides that, most passengers had been in the ship at least from Earth; they had already

formed their friendships and cliques. We were like new kids in a strange school.

But I said "Good morning!" to anyone I met in the passageway and if I was not answered I just checked it off to hard-of-hearing-so many of them obviously could be hard of hearing. Anyhow, I wasn't terribly interested in getting chummy with passengers; I wanted to get acquainted with the ship's officers, pilot officers especially, so that I could get some practical experience to chink in what I already knew from reading. It's not easy for a girl to get accepted for pilot training; she has to be about four times as good as a male candidate-and every little bit helps.

I got a wonderful break right away. We were seated at the Captain's table!

Uncle Tom, of course. I am not conceited enough to think that "Miss Podkayne Fries, Marsopolis" means anything on a ship's passenger list (but wait ten years!)-whereas Uncle Tom, even though he is just my pinochle-playing, easygoing oldest relative, is nevertheless senior Senator-at-Large of the Republic, and it is certain that the Marsopolis General Agent for the Triangle Line knows this and no doubt the agent would see to it that the Purser of the Triconn would know it if he didn't already.

As may be-I am not one to scorn gifts from heaven, no matter how they arrive. At our very first meal I started working on Captain Darling. That really is his name, Barrington Babcock Darling-and does his wife call him "Baby Darling"?

But of course a captain does not have a name aboard ship; he is "the Captain," "the Master," "the Skipper," or even "the Old Man" if it is a member of the ship's company speaking not in his august presence. But never a name-simply a majestic figure of impersonal authority.

(I wonder if I will someday be called "the Old
Woman" when I am not in earshot? Somehow it doesn't sound quite the same.)

But Captain Darling is not too majestic or impersonal with me. I set out to impress him with the idea that I was awfully sweet, even younger than I am, terribly impressed by him and overawed ... and not too bright. It does not do to let a male of any age know that one has brains, not on first acquaintance; intelligence in a woman is likely to make a man suspicious and uneasy, much like Caesar's fear of Cassius' "lean and hungry look." Get a man solidly on your side first; after that it is fairly safe to let him become gradually aware of your intellect. He may even feel unconsciously that it rubbed off from his own.

So I set out to make him feel that it was a shame that I was not his daughter. (Fortunately he only has sons.) Before that first meal was over I confided in him my great yearning to take pilot training ... suppressing, of course, any higher ambition.

Both Uncle Tom and Clark could see what I was up to. But Uncle Tom would never give me away and Clark just looked bored and contemptuous and said nothing, because Clark would not bother to interfere with Armageddon unless there was ten percent in it for him.

But I do not mind what my relatives think of my tactics; they work. Captain Darling was obviously amused at my grandiose and "impossible" ambition... but he offered to show me the control room.

Round one to Poddy, on points.

I am now the unofficial ship's mascot, with free run of the control room-and I am almost as privileged in the engineering department. Of course the Captain does not really want to spend hours teaching me the practical side of astrogation. He did show me

through the control room and gave me a kindergarten explanation of the work-which I followed with wide-eyed
awe-but his interest in me is purely social. He wants to not-quite hold me in his lap (he is much too practical and too discreet to do anything of the sort!), so I not-quite let him and make it a point to keep up my social relations with him, listening with my best astonished-kitten look to his anecdotes while he feeds me liters of tea. I really am a good listener because you never can tell when you will pick up something useful-and all in the world any woman has to do to be considered "charming" by men is to listen while they talk.

But Captain Darling is not the only astrogator in the ship.

He gave me the run of the control room; I did the rest. The second officer, Mr. Savvonavong, thinks it is simply amazing how fast I pick up mathematics. You see, he thinks he taught me differential equations. Well, he did, when it comes to those awfully complicated ones used in correcting the vector of a constant-boost ship, but if I hadn't worked hard in the supplementary course I was allowed to take last semester, I wouldn't know what he was talking about. Now he is showing me how to program a ballistic computer.

The junior third, Mr. Clancy, is still studying for his unlimited license, so he has all the study tapes and reference books I need and is just as helpful. He is near enough my age to develop groping hands .. . but only a very stupid male will make even an indirect pass unless a girl manages to let him know that it won't be resented, and Mr. Clancy is not stupid and I am very careful to offer neither invitation nor opportunity.

I may kiss him-two minutes before I leave the ship for the last time. Not sooner.

They are all very helpful and they think it is cute of nie to be so dead serious about it. But, in truth, practical astrogation is much harder than I had ever dreamed.

* * *

I had guessed that part of the resentment I sensed- resentment that I could not fail to notice despite my cheery "Good mornings!"-lay in the fact that we were at the Captain's table. To be sure, the Welcome in the Tn corn! booklet in each stateroom states plainly that new seating arrangements are made at each port and that it is the ship's custom to change the guests at the Captain's table each time, making the selections from the new passengers.

But I don't suppose that warning makes it any pleasanter to be bumped, because I don't expect to like it when I'm bumped off the Captain's table at Venus.

But that is only part- Only three of the passengers were really friendly to
me: Mrs. Grew, Girdie, and Mrs. Rover. Mrs. Royer I met first and at first I thought that I was going to like her, in a bored sort of way, as she was awfully friendly and I have great capacity for enduring boredom if it suits my purpose. I met her in the lounge the first day and she immediately caught my eye, smiled, invited me to sit by her, and quizzed me about myself.

I answered her questions, mostly. I told her that Daddy was a teacher and that Mother was raising babies and that my brother and I were traveling with our uncle. I didn't boast about our family; boasting is not polite and it often is not believed-far better to let people find out nice things on their own and hope they won't notice any unnice things. Not that there is anything imnice about i)addv and Mother.

I told her that tun name \Va~ Poddv Fries.

Poddv~ she said. "I thought I saw something else
the passenger list."

"Oh. It's really 'Podkavne,' " I explained. "For the \lartian saint. you know."

But she didn't know. She answered, "It seems very odd to give a girl a man's name."

Well, my name is odd, even among Marsmen. But not for that reason. "Possibly," I agreed. "But with Martians gender is rather a matter of opinion, wouldn't you say?"

She blinked. "You're jesting."

I started to explain-how a Martian doesn't select which of three sexes to be until just before it matures

and how, even so, the decision is operative only during a relatively short period of its life.

But I gave up, as I could see that I was talking to a blank wall. Mrs. Royer simply could not imagine any pattern other than her own. So I shifted quickly. "Saint Podkayne lived a very long time ago. Nobody actually knows whether the saint was male or female. There are just traditions."

Of course the traditions are pretty explicit and many living Martians claim descent from Saint Podkayne. Daddy says that we know Martian history of millions of years ago much more accurately than we know human history a mere two thousand years ago. In any case, most Martians include "Podkayne" in their long lists of names (practically genealogies in synopsis) because of the tradition that anyone named for Saint Podkayne can call on him (or "her"-or "it") in time of trouble.

As I have said, Daddy is romantic and he thought it would be nice to give a baby the luck, if any, that is attached to the saint's name. I am neither romantic nor superstitious, but it suits me just fine to have a name that belongs to me and to no other human. I like being Podkayne "Poddy" Fries- It's better than being one of a multitude of Elizabeths, or Dorothys, or such.

But I could see that it simply puzzled Mrs. Royer, so we passed to other matters, speaking from her seniority as an "old space hand," based on her one
just-completed trip out from Earth, she told me a great many things about ships . and space fravel, most of which weren't so, but I indulged her. She introduced me to a number of people and handed me a large quantity of gossip about passengers, ship's officers, et cetera. Between times she filled me in on her aches, pains, and symptoms, what an important executive her son was, what a very important person her late husband had been, and how, when I reached Earth, she really must see to it that I met the Right People. "Perhaps such things don't matter in an outpost like Mars, my dear child, but it is Terribly Important to get Started Right in New York."

I tabbed her as garrulous, stupid, and well intentioned.

But I soon found that I couldn't get rid of her. If I passed through the lounge-which I had to do in order to reach the control room-she would snag me and I couldn't get away short of abrupt rudeness or flat lies.

She quickly started using me for chores. "Podkayne darling, would you mind just slipping around to my stateroom and fetching my mauve wrap? I feel a tiny chill. It's on the bed, I think-or perhaps in the wardrobe-that's a dear." Or, "Poddy child, I've rung and I've rung and the stewardess simply won't answer. Would you get my book and my

knitting? Oh, and while you're at it, you might bring me a nice cup of tea from the pantry."

Those things aren't too bad; she is probably creaky in the knees and I'm not. But it went on endlessly... and shortly, in addition to being her personal stewardess, I was her private 'nurse. First she asked me to read her to sleep. "Such a blinding headache and your voice is so soothing, my sweet."

I read to her for an hour and then found myself rubbing her head and temples for almost as long. Oh
well, a person ought to manage a little kindness now and then, just for practice-and Mother sometimes has dreadful headaches when she has been working too hard; I know that a rub does help.:

That time she tried to tip me. I refused it. She insisted. "Now, now, child, don't argue with your Aunt Flossie."

I said, "No, really, Mrs. Royer. If you want to give it to the fund for disabled spacemen as a thank-you, that's all right. But I can't take it."

She said pish and tosh and tried to shove it into my pocket. So I slid out and went to bed.

I didn't see her at breakfast; she always has a tray in her room. But about midmorning a stewardess told me that Mrs. Royer wanted to see me in her room. I was hardly gruntled at the summons, as Mr. Savvonavong had told me that if I showed up just before ten during his watch, I could watch the whole process of a ballistic correction and he would explain the steps to me. If she wasted more than five minutes of my time, I would be late.

But I called on her. She was as cheery as ever. "Oh, there you are, darling! I've been waiting ever so long! That stupid stewardess- Poddy dear, you did such wonders for my head last night ... and this morning I find that I'm positively crippled with my back. You can't imagine, dear; it's ghastly! Now if you'll just be an angel and give me a few minutes massage-oh, say a half hour-I'm sure it'll do wonders for me. You'll find the cream for it over there on the dressing table, I think ... And now, if you'll just help me slide out of this robe . .

"Mrs. Royer-"

"Yes, dear? The cream is in that big pink tube. Use just-"

"Mrs. Royer, I can't do it. I have an appointment."

"What, dear? Oh, tosh, let them wait. No one is
ever on time aboard ship. Perhaps you had better warm your hands before-'

"Mrs. Royer, I am not going to do it. If something is wrong with your back, I shouldn't touch it; I might injure you. But I'll take a message to the Surgeon if you like and ask him to come see you."

Suddenly she wasn't at all cheery. "You mean you won't do it!"

"Have it your way. Shall I tell the Surgeon?"

"Why, you impertinent-Get out of here!"

I got.

I met her in a passageway on my way to lunch. She stared straight through me, so I dldn t speak either. She was walking as nimbly as I was; I guess her back had taken a turn for the better. I saw her twice more that day and twice more she simply couldn't see me.

The following morning I was using the viewer in the lounge to scan one of Mr. Clancy's study tapes, one on radar approach and contact. The viewer is off in a corner, behind a screen of fake potted palms, and perhaps they didn't notice me. Or perhaps they didn't care.

I stopped the scan to give my eyes and ears a rest, and heard Mrs. Garcia talking to Mrs. Royer.

"... that I simply can't stand about Mars is that it is so commercialized. Why couldn't they have left it primitive and beautiful?"

MRS. ROYER: "What can you expect? Those dreadful people!"

The ship's official language is Ortho but many passengers talk English among themselves-and often act as if no one else could possibly understand it. These two weren't keeping their voices down. I went on listening.

MRS. GARCIA: "Just what I was saying to Mrs. Rimski. After all, they're all criminals."

MRS. ROYER: "Or worse. Have you noticed that
little Martian girl? The niece_-or so they claim-of that big black savage?"

I counted ten backwards in Old Martian and reminded myself of the penalty for murder. I didn't mind being called a "Martian." They didn't know any better, and anyhow, it's no insult; the Martians were civilized before humans learned to walk. But "big black savage"!- Uncle Tom is as dark as I am blond; his Maori blood and desert tan make him the color of beautiful old leather . . . and I love the way he looks. As for the rest-he is learned and civilized and gentle . . . and highly honored wherever he goes.

MRS. GARCIA: "I've seen her. Common, I would say. Flashy but cheap. A type that attracts a certain sort of man."

MRS. ROYER: "My dear, you don't know the half of it. I've tried to help her-I really felt sorry for her, and I always believe in being gracious, especially to one's social inferiors."

MRS. GARCIA: "Of course, dear."

MRS. ROYER: "I tried to give her a few hints as to proper conduct among gentle people. Why, I was even paying her for little trifles, so that she wouldn't be uneasy among her betters. But she's an utterly ungrateful little snip-she thought she could squeeze more money out of me. She was rude about it, so rude that I feared for my safety. I had to order her out of my room, actually."

MRS. GARCIA: "You were wise to drop her. Blood will tell-bad blood or good blood-blood will always tell. And mixed blood is the Very Worst Sort. Criminals to start with ... and then that Shameless Mixing of Races. You can see it right in that family. The boy doesn't look a bit like his sister, and as for the unclehmmm- My dear, you halfway hinted at something.
Do you suppose that she is not his niece but something, shall we say, a bit closer?"

MRS. ROYER: "I wouldn't put it past one of them!" MRS. GARCIA: "Oh, come, 'fess up, Flossie. Tell me what you found out."

MRS. ROYER: "I didn't say a word. But I have eyes-and so have you."

MRS. GARCIA: "Right in front of everyone!"

MRS. ROYER: "What I can't understand is why the Line permits them to mix with us. Perhaps they have to sell them passage-treaties or some such nonsense-but we shouldn't be forced to associate with them ... and certainly not to eat with them!"

MRS. GARCIA: "I know. I'm going to write a very strong letter about it as soon as I get home. There are limits. You know, I had thought that Captain Darling was a gentleman ... but when I saw those creatures actually seated at the Captain's table . . . well, I didn't believe my eyes. I thought I would faint."

MRS. ROYER: "I know. But after all, the Captain does come from Venus."

MRS. GARCIA: "Yes, but Venus was never a prison colony. That boy ... he sits in the very chair I used to sit in, right across from the Captain."

(I made a mental note to ask the Chief Steward for a different chair for Clark; I didn't want him contaminated.)

After that they dropped us "Martians" and started dissecting Girdle and complaining about the food and the service, and even stuck pins in some of their shipboard coven who weren't present. But I didn't listen:
I simply kept quiet and prayed for strength to go on doing so, because if I had made my presence known I feel sure that I would have stabbed them both with their own knitting needles.

Eventually they left-to rest a while to fortiI~' themselves for lunch-and I rushed out and changed into
my gym suit and hurried to the gymnasium to work up a good sweat instead of engaging in violent crime.

It was there that I found Clark and told him just enough-or maybe too much.

VII

Mr. Savvonavong tells me that we are likely to have a radiation storm almost any time now and that we'll have an, emergency drill today to practice for it. The solar weather station on Mercury reports that "flare" weather is shaping up and has warned all ships in space and all manned satellites to be ready for it. The flares are expected to continue for about- Wups! The emergency alarm caught me in the middle of a sentence. We've had our drill and I think the Captain has all the passengers properly scared now. Some ignored the alarm, or tried to, whereupon crewmen in heavy armor fetched them. Clark got fetched. He was the very last they tracked down, and Captain Darling gave him a public scolding that was a work of art and finished by warning Clark that if he failed to be the first passenger to reach shelter the next time the alarm sounded, Clark could expect to spend the rest of the trip in the shelter, twenty-four hours of the day, instead of having free run of passenger country.

Clark took it with his usual wooden face, but I think it hit home, especially the threat to confine him. I'm sure the speech impressed the other passengers; it was the sort that raises blisters at twenty paces. Perhaps the Captain intended it mostly for their benefit.

Then the Captain changed his tone to that of a patient teacher and explained in simple words what we could expect, why it was necessary to reach shelter at once even if one were taking a bath, why we would be perfectly safe if we did.

The solar flares trigger radiation, he told us, quite ordinary radiation, much like X-rays ("and other sorts," I mentally added), the sort of radiation which is found in space at all times. But the intensity reaches levels from a thousand to ten thousand times as high as "normal" space radiation-and, since we are already inside the orbit of Earth, this is bad medicine indeed; it would kill an unprotected man about as quickly as shooting him through the head.

Then he explained why we would not require a thousand to ten thousand times as much shielding in order to be safe. It's the cascade principle. The outer hull stops over 90 percent of any radiation; then comes the "cofferdam" (cargo holds and water tanks) which absorbs some more; then comes the inner hull which is actually the floor of the cylinder which is first-class passenger country.

This much shielding is plenty for all normal conditions; the radiation level in our staterooms is lower than it is at home, quite a lot lower than it is most places on Earth, especially in the mountains. (I'm looking forward to seeing real mountains. Scary!)

Then one day comes a really bad storm on the Sun and the radiation level jumps suddenly to 10,000 times
normal-and you could get a killing dose right in your own bed and wake up dying.

No trouble. The emergehcy shelter is at the center of the ship, four shells farther in, each of which stops more than 90 percent of what hits it. Like this:

10,000
1,000 (after the first inner shell, the ceiling of passenger country.)
100 (after the second inner shell)
10 (third)
1 (fourth-and you're inside the shelter)

But actually the shielding is better than that and it is safer to be in the ship's shelter during a bad solar storm than it is to be in Marsopolis.

The only trouble is-and no small matter-the shelter space is the geometrical core of the ship, just abaft the control room and not a whole lot bigger; passengers and crew are stacked into it about as intimately as puppies in a basket. My billet is a shelf space half a meter wide, half a meter deep, and just a trifle longer than I am-with other females brushing my elbows on each side of me. I am not a claustrophobe, but a coffin would be roomier.

Rations are canned ones, kept there against emergencies; sanitary facilities can only be described as "dreadful." I hope this storm is only a solar squall and is followed by good weather on the Sun. To finish the trip to Venus in the shelter would turn a wonderful experience into a nightmare.

The Captain finished by saying, "We will probably have five to ten minutes' warning from Hermes Station. But don't take five minutes getting here. The instant the alarm sounds head for the shelter at once as fast as possible. If you are not dressed, be sure you have clothes ready to grab-and dress when you get
here. If you stop to worry about anything, it may kill you.

"Crewmen will search all passenger spaces the moment the alarm sounds-and each one is ordered to use force to send to shelter any passenger who fails to move fast. He won't argue with you-he'll hit you, kick you, drag you-and I'll back him up.

"One last word. Some of you have not been wearing your personal radiation meters. The law permits me to levy a stiff fine for such failure. Ordinarily I overlook such technical offenses-it's your health, not mine. But during this emergency, this regulation will be enforced. Fresh personal meters are now being passed out to each of you; old ones will be turned over to the Surgeon, examined, and exposures entered in your records for future guidance."

He gave the "all clear" order then and we all went back down to passenger country, sweaty and mussed- at least I was. I was just washing my face when the alarm sounded again, and I swarmed up those four decks like a frightened cat.

But I was only a close second. Clark passed me on the way.

It was just another drill. This time all passengers were in the shelter within four minutes. The Captain seemed pleased.

I've been sleeping raw but I'm going to wear pajamas tonight and all nights until this is over, and leave a robe where I can grab it. Captain Darling is a darling but I think he means exactly what he says-and I won't play Lady Godiva; there isn't a horse in the whole ship.

Neither Mrs. Royer nor Mrs. Garcia were at dinner this evening, although they were both amazingly agile both times the alarm sounded. They weren't in the lounge after dinner; their doors are closed,
and I saw the Surgeon coming out of Mrs. Garcia's room.

I wonder. Surely Clark' wouldn't poison them? Or would he? I don't dare ask him because of the remote possibility that he might tell me.

I don't want to ask the Surgeon, either, because it might attract attention to the Fries family. But I surely would like to have ESP sight (if there truly is such a thing) long enough to find out what is behind those two closed doors.

I hope Clark hasn't let his talents run away with him. Oh, I'm as angry at those two as ever. . . because there is just enough truth in the nasty things they said to make it hurt. I am of mixed races and I know that some people think that is bad, even though there is no bias against it on Mars. I do have "convicts" among my ancestors-but I've never been ashamed of it. Or not much, although I suppose I'm inclined to dwell more on the highly selected ones. But. a "convict" is not always a criminal. Admittedly there was that period in the early history of Mars when the commissars were running things on Earth, and Mars was used as a penal colony; everybody knows that and we don't try to hide
it.

But the vast majority of the transportees were political prisoners- "counterrevolutionists," "enemies of the people." Is this bad?

In any case there was the much longer period, involving fifty times as many colonists, when every new Marsman was selected as carefully as a bride selects her wedding gown and much more scientifically. And finally, there is the current period, since our Revolution and Independence, when we dropped all bars to immigration and welcome anyone who is healthy and has normal intelligence.

No, I'm not ashamed of my ancestors or my people, whatever their skin shades or backgrounds; I'm proud
of them. It makes me boiling mad to hear anyone sneer at them. Why, I'll bet those two couldn't qualify for permanent visa even under our present "open door" policy! Feeble-minded- But I do hope Clark hasn't done anything too drastic. I wouldn't want Clark to have to spend the rest of his life on Titan; I love the little wretch.

Sort of.

VIII

We've had that radiation storm. I prefer hives. I don't mean the storm itself, it wasn't too bad. Radiation jumped to about 1500 times normal for where we are now-about eight-tenths of an astronomical unit from the Sun, say 120,000,000 kilometers in units you can get your teeth in. Mr. Savvonavong says that we would have been all right if the first-class passengers had simply gone up one deck to second-class passenger country-which certainly would have been more comfortable than stuffing all the passengers and crew into that maximum-safety mausoleum at the center of the ship. Second-class accommodations are cramped and cheerless, and as for third class, I would rather be shipped as freight. But either one would be a picnic compared with spending eighteen hours in the radiation shelter.

For the first time I envied the half-dozen aliens aboard. They don't take shelter; they simply remain locked in their specially conditioned staterooms as

0')

usual. No, they aren't allowed to fry; those X-numbered rooms are almost at the center of the ship anyhow, in officers' and crew's country, and they have their own extra layer of shielding, because you can't expect a Martian, for example, to leave the pressure and humidity he requires and join us humans in the shelter; it would be equivalent to dunking him in a bathtub and holding his head under. If he had a head, I mean.

Still, I suppose eighteen hours of discomfort is better than being sealed into one small room for the whole trip. A Martian can simply contemplate the subtle difference between zero and nothing for that long or longer and a Venerian just estivates. But not me. I need unrest oftener than I need rest-or my circuits get tangled and smoke pours out of my ears.

But Captain Darling couldn't know ahead of time that the storm would be short and relatively mild; he had to assume the worst and protect his passengers and crew. Eleven minutes would have been long enough for us to be in the shelter, as shown later by instrument records. But that is hindsight ... and a captain doesn't save his ship and the lives depending on him by hindsight.

I am beginning to realize that being a captain isn't all glorious adventure and being saluted and wearing four gold stripes on your shoulders. Captain Darling is younger than Daddy and yet he has worry lines that make him look years older.

QUERY: Poddy, are you sure you have what it takes to captain an explorer ship?

ANSWERS: What did Columbus have that you don't? Aside from Isabella, I mean. Semper toujours, girl!

I spent a lot of time before the storm in the control room. Hermes Solar Weather Station doesn't actually
warn us when the storm is coming; what they do is fail to warn us that the storm is not coming. That sounds silly but here is how it works:

The weathermen at Hermes are perfectly safe, as they are underground on the dark side of Mercury. Their instruments peek cautiously over the horizon in the twilight zone, gather data about Solar weather including running telephotos at several wave lengths.

But the Sun takes about twenty-five days to turn around, so Hermes Station can't watch all of it all the time. Worse yet. Mercury is going around the Sun in the same direction that the Sun rotates, taking eightyeight days for one lap, so when the Sun again faces where Mercury was, Mercury has moved on. What this adds up to is that Hermes Station faces exactly the same face of the Sun about every seven weeks.

Which is obviously not good enough for weatherpredicting storms that can gather in a day or two, peak in a few minutes, and kill you dead in seconds or less.

So the Solar weather is watched from Earth's Luna and from Venus' satellite station as well, plus some help from Deimos. But there is speed-of-light lag in getting information from these more distant stations back to the main station on Mercury. Maybe fifteen minutes for Luna and as high as a thousand seconds for Deimos ... not good when seconds count.

But the season of bad storms is only a small part of the Sun's cycle as a variable star-say about a year out of each six. (Real years, I mean-Martian years. The Sun's cycle is about eleven of those Earth years that astronomers still insist on using.)

That makes things a lot easier; five years out of six a ship stands very little chance of being hit by a radiation storm.

But during the stormy season a careful skipper (the only sort who lives to draw a pension) will plan his orbit so that he is in the worst danger zone, say inside
the orbit of Earth, only during such time as Mercury lies between him and the Sun, so that Hermes Station can always warn him of coming trouble. That is exactly what Captain Darling had done; the Tricorn waited at Deimos nearly three weeks longer than the guaranteed sightseeing time on Mars called for by the Triangle Line's advertising, in order to place his approach to Venus so that Hermes Station could observe and warn-because we are right in the middle of the stormy season.

I suppose the Line's business office hates these expensive delays. Maybe they lose money during the stormy season. But three weeks' delay is better than losing a whole shipload of passengers.

But when the storm does start, radio communication goes all to pieces at once-Hermes Station can't warn the ships in the sky.

Stalemate? Not quite. Hermes Station can see a storm shaping up; they can spot the conditions on the Sun which are almost certainly going to produce a radiation storm very shortly. So they send out a storm warning-and the Tricorn and other ships hold

radiation-shelter drills. Then we wait. One day, two days, or a whole week, and the storm either fails to develop, or it builds up and starts shooting nasty stuff in great quantities.

All during this time the space guard radio station on the dark side of Mercury sends a continuous storm warning, never an instant's break, giving a running account of how the weather looks on the Sun.

and suddenly it stops.

Maybe it's a power failure and the stand-by transmitter will cut in. Maybe it's just a "fade" and the storm hasn't broken yet and transmission will resume with reassuring words.

But it may be that the first blast of the storm has hit Mercury with the speed of light, no last-minute
warning at all, and the station's eyes are knocked out and its voice is swallowed up.in enormously more powerful radiation.

The officer-of-the-watch in the control room can't be sure and he dare not take a chance. The instant he loses Hermes Station he slaps a switch that starts a big clock with just a second hand. When that clock has ticked off a certain number of seconds-and Hermes Station is still silent-the general alarm sounds. The exact number of seconds depends on where the ship is, how far from the Sun, how much longer it will take the first blast to reach the ship after it has already hit Hermes Station.

Now here is where a captain bites his nails and gets gray hair and earns his high pay.. . because he has to decide how many seconds to set that clock for. Actually, if the first and worst blast is at the speed of light, he hasn't any warning time at all because the break in the radio signal from Hermes and that first wave front from the Sun will reach him at the same instant. Or, if the angle is unfavorable, perhaps it is his own radio reception that has been clobbered, and Hermes Station is still trying to reach him with a last-moment warning. He doesn't know.

But he does know that if he sounds the alarm and chases everybody to shelter every time the radio fades for a few seconds, he will get people so worn out and disgusted from his crying "Wolfi" that when the trouble really comes they may not move fast enough.

He knows, too, that the outer hull of his ship will stop almost anything in the electromagnetic spectrum. Among photons (and nothing else travels at speed-oflight) only the hardest X-radiation will get through to, passenger country and not much of that. But traveling along behind, falling just a little behind each second, is the really dangerous stuff-big particles, little particles, middle-sized particles, all the debris of nuclear explosion. This stuff is moving very fast but not quite at speed-of-light. He has to get his people safe before it hits.

Captain Darling picked a delay of twenty-five seconds, for where we were and what he expected from the weather reports. I asked him how he picked it and he just grinned without looking happy and said, "I asked my grandfather's ghost."

Five times while I was in the control room the officer of the watch started that clock ... and five times contact with Hermes Station was picked up again before time ran out and the switch was opened.

The sixth time the seconds trickled away while all of us held our breaths ... and contact with Hermes wasn't picked up again and the alarm sounded like the wakeful trump of doom.

The Captain looked stony-faced and turned to duck down the hatch into the radiation shelter. I didn't move, because I expected to be allowed to remain in the control room. Strictly speaking, the control room is part of the radiation shelter, since it is just above it and is enclosed by the same layers of cascade shielding.

(It's amazing how many people think that a captain controls his ship by peering out a port as if he were driving a sand wagon. But he doesn't, of course. The control room is inside, where he can watch things much more accurately and conveniently by displays and instruments. The only viewport in the Tricorn is one at the top end of the main axis, to allow passengers to look out at the stars. But we have never been headed so that the mass of the ship would protect that sightseeing room from solar radiation, so it has been locked off this whole trip.)

I knew I was safe where I was, so I hung back, intending to take advantage of being "teacher's pet"- for I certainly didn't want to spend hours or days
stretched out on a shelf with gabbling and maybe hysterical women crowding me on both sides~

I should have known. The Captain hesitated a split second as he started down the hatch and snapped, "Come along, Miss Fries."

I came. He always calls me "Poddy"-and his voice had spank in it.

Third-class passengers were already pouring in, since they have the shortest distance to go, and crew members were mustering them into their billets. The crew has been on emergency routine ever since we first were warned by Hermes Station, with their usual one watch in three replaced by four hours on and four hours off. Part of the crew had been staying dressed in radiation armor (which must be very uncomfortable) and simply hanging around passenger country. They can't take that heavy armor off for any reason at all until their reliefs show up, dressed also in armor. These crewmen are the "chasers" who bet their lives that they can check every passenger space, root out stragglers, and still reach the shelter fast enough not to accumulate radiation poisoning. They are all volunteers and the chasers on duty when the alarm sounds get a big bonus and the other half of them who were lucky enough not to be on duty get a little bonus.

The, Chief Officer is in charge of the first section of chasers and the Purser is in charge of the second- but they don't get any bonus even though the one on duty when the alarm sounds is by tradition and law the last man to enter the safety of the shelter. This hardly seems fair ... but it is considered their honor as well as their duty.

Other crewmen take turns in the radiation shelter and are equipped with mustering lists and billeting diagrams.

Naturally, service has been pret'ty skimpy of late, with so many of the crew pulled off their regular
duties in order to do just one thing and do it fast at the first jangle of the alarm. Most of these emergencyduty assignments have to be made from the stewards and clerks; engineers and communicators and such usually can't be spared. So staterooms may not be made up until late afternoon-unless you make your own bed and tidy your room yourself, as I had been doing-and serving meals takes about twice as long as usual, and lounge service is almost non-existent.

But of course the passengers realize the necessity for this temporary mild austerity and are grateful because it is all done for safety.

You think so? My dear, if you believe that, you will believe anything. You haven't Seen Life until you've seen a rich, elderly Earthman deprived of something he feels is his rightful due, because he figures he paid for it in the price of his ticket. I saw one man, perhaps as old as Uncle Tom and certainly old enough to know better, almost have a stroke. He turned purple, really purple and gibbered-all because the bar steward didn't show up on the bounce to fetch him a new deck of playing cards.

The bar steward was in armor at the time and couldn't leave his assigned area, and the lounge steward was trying to be three places at once and answer stateroom rings as well. This didn't mean anything to our jolly shipmate; he was threatening to sue the Line and all its directors, when his speech became incoherent.

Not everybody is that way, of course. Mrs. Grew, fat as she is, has been making her own bed and she is never impatient. Some others who are ordinarily inclined to demand lots of service have lately been making a cheerful best of things.

But some of them act like children with tantrums- which isn't pretty in children and is even uglier in grandparents.

The instant I followed the Captain into the radiation shelter I discovered just hçw efficient Tricorn service can be when it really matters. I was snatched- snatched like a ball, right out of the air-and passed from hand to hand. Of course I don't weigh much at one-tenth gravity, all there is at the main axis; but it is rather breath-taking. Some more hands shoved me into my billet, already stretched out, as casually and impersonally as a housewife stows clean laundry, and a voice called out, "Fries, Podkayne!" and another voice answered, "Check."

The spaces around me, and above and below and across from me, filled up awfully fast, with the crewmen working with the unhurried efficiency of automatic machinery sorting mail capsules. Somewhere a baby was crying and through it I heard the Captain saying, "Is that the last?"

"Last one, Ca~tain," I heard the Purser answer. "How's the time?'

"Two minutes thirty-seven seconds-and your boys can start figuring their payoff, because this one is no drill."

"I didn't think it was, Skipper-and I've won a small bet from the Mate myself." Then the Purser walked past my billet carrying someone, and I tried to sit up and bumped my head and my eyes bugged out.

The passenger he was carrying had fainted; her head lolled loosely over the crook of his arm. At first I couldn't tell who it was, as the face was a bright, bright red. And then I recognized her and I almost fainted. Mrs. Royer- Of course the first symptom of any bad radiation

exposure is emythema. Even with a sunburn, or just carelessness with an ultraviolet lamp, the first thing you see is the skin turning pink or bright red.

But was it possible that Mrs. Royer had been hit with such extremely sharp radiation in so very little

time that her skin had already turned red in the worst "sunburn" imaginable? Just from being last man in?

In that case she hadn't fainted; she was dead.

And if that was true, then it was equally true that the passengers who were last to reach the shelter must all have received several times the lethal dosage. They might not

feel ill for hours yet; they might not die for days. But they were just as dead as if they were already stretched out still and cold.

How many? I had no way of guessing. Possibly- probably I corrected myself-all the first-class passengers; they had the farthest to go and were most exposed to start with. Uncle Tom and Clark- I felt sudden sick sorrow and wished that I had not
been in the control, room. If my brother and Uncle Tom were dying, I didn't want to be alive myself.

I don't think I wasted any sympathy on Mrs. Royer. I did feel a shock of horror when I saw that flaming red face, but truthfully, I didn't like her, I thought she was a parasite with contemptible opinions, and if she had died of heart failure instead, I can't honestly say that it would have affected my appetite. None of us goes around sobbing over the millions and billions of people who have died in the past ... nor over those still living and yet to be born whose single certain heritage is death (including Podkayne Fries herself). So why should you cry foolish tears simply because you happen to be in the neighborhood when someone you don't like-despise, in fact-comes to the end of her string?

In any case, I did not have time to feel sorrow for Mrs. Royer; my heart was filled with grief over my brother and my uncle. I was sony that I hadn't been sweeter to Uncle Tom, instead of imposing on him and expecting him always to drop whatever he was doing to help me with my silly problems. I regretted
all the many times I had fought with my brother. After all, he was a child and I am a woman; "I should have made allowances.

Tears were welling out of my eyes and I almost missed the Captain's first words:

"Shipmates,' he said, in a voice firm and very soothing, "my crew and our guests aboard . . . this is not a drill; this is indeed a radiation storm.

"Do not be alarmed; we are all, each and every one of us, perfectly safe. The Surgeon has examined the personal radiation exposure meter of the very last one to reach the shelter. It is well within safe limits. Even if it were added to the accumulated exposure of the most exposed person aboard-who is not a passenger, by the way, but one of the ship's company-the total would still be inside the conservative maximum for personal health and genetic hygiene.

"Let me say it again. No one has been hurt, no one is going to be hurt. We are simply going to suffer a mild inconvenience. I wish I could tell you how long we will have to remain here in the safety of the shelter. But I do not know. It might be a few hours, it might be several days. The longest radiation storm of record lasted less than a week. We hope that Old Sol is not that bad-tempered this time. But until we receive word from Hermes Station that the storm is over, we will all have to stay inside here. Once we know a storm is over it usually does not take too long to check the ship and make sure that your usual comfortable quarters are safe. Until then, be patient and be patient with each other."

I started to feel better as soon as the Captain started to talk. His voice was almost hypnotic; it had the soothing all-better-now effect of a mother reassuring a child. I relaxed and was simply weak with the aftereffects of my fears.

But presently I began to wonder. Would Captain
Darling tell us that everything was all right when really everything was All Wrong simply because it was too late and nothing could be done about it?

I thought over everything I had ever learned about radiation poisoning, from the simple hygiene they teach in kindergarten to a tape belonging to Mr. Clancy that I had scanned only that week.

And I decided that the Captain had been telling the truth.

Why? Because, even if my very worst fears had been correct, and we had been hit as hard and unexpectedly as if a nuclear weapon had exploded by us, nevertheless something can always be done about it. There would be three groups of us-those who hadn't been hurt at all and were not going to die (certainly everybody who was in the control room or in the shelter when it happened, plus all or almost all the third-class passengers if they had moved fast), a second group so terribly exposed that they were certain to die, no matter what (let's say everybody in first class country), and a third group, no telling how large, which had been dangerously exposed but could be saved by quick and drastic treatment.

In which case that quick and drastic action would be going on.

They would be checking our exposure meters and reshuffling us-sorting out the ones in danger who required rapid treatment, giving morphine shots to the ones who were going to die anyhow and moving them off by themselves, stacking those of us who were safe by ourselves to keep us from getting in the way, or drafting us to help nurse the ones who could be helped.

That was certain. But there was nothing going on, nothing at all-just some babies crying and a murmur of voices. Why, they hadn't even looked at the exposure meters of most of us; it seemed likely that the
Surgeon had checked only the last few stragglers to reach the shelter.

Therefore the Captain had told us the simple, heartwarming truth.

I felt so good that I forgot to wonder why Mrs. Royer had looked like a ripe tomato. I relaxed and soaked in the warm and happy fact that darling Uncle Tom wasn't going to die and that my kid brother would live to cause me lots more homey grief. I almost went to sleep

and was yanked out of it by the woman on my right starting to scream: "Let me out of here! Let me out of here!"

Then I did see some fast and drastic emergency action.

Two crewmen swarmed up to our shelf and grabbed her; a stewardess was right behind them. She slapped a gag over the woman's mouth and gave her a shot in the arm, all in one motion. Then they held her until she stopped struggling. When she was quiet, one of the crewmen picked her up and took her somewhere.

Shortly thereafter a stewardess showed up who was collecting exposure meters and passing out sleeping pills. Most people took them but I resisted-I don't like pills at best and I certainly won't take one to knock me out so that I won't know what is going on. The stewardess was insistent but I can be awfully stubborn, so she shrugged and went away. After that there were three or four more cases of galloping claustrophobia or maybe just'plain screaming funk; I wouldn't know. Each was taken care of promptly with no fuss and shortly the shelter was quiet except for snores, a few voices, and' fairly continuous sounds of babies crying.

There aren't any babies in first class and not many children of any age. Second class has quite a few kids, but third class is swarming with them and every family seems to have at least one young baby. It's why they

are there, of course; almost all of third class are Earth people emigrating to Venus. With Earth so crowded, a man with a big family can easily reach the point where emigration to Venus looks like the best way out of an impossible situation, so he signs a labor contract and Venus Corporation pays for their tickets as an advance against his wages.

I suppose it's all right. They need to get away and Venus needs all the people they can get. But I'm glad Mars Republic doesn't subsidize immigration, or we would be swamped. We take immigrants but they have to pay their own way and have to deposit return tickets with the PEG board, tickets they can't cash in for two of our years.

A good thing, too. At least a third of the immigrants who come to Mars just can't adjust. They get homesick and despondent and use those return tickets to go back to Earth. I can't understand anyone's not liking Mars, but if they don't then it's better if they don't stay.

I lay there, thinking about such things, a little bit excited and a little bit bored, and mostly wondering why somebody didn't do something about those poor babies.

The lights had been dimmed and when somebody came up to my shelf I didn't see who it was at first. "Poddy?" came Girdle's voice, softly but clearly. "Are you in there?"

"I think so. What's up, Girdie?" I tried to keep my voice down too.

"Do you know how to change a baby?"

"I certainly do!" Suddenly I wondered how Duncan was doing ... and realized that I hadn't really thought about him in days. Had he forgotten me? Would he know Grandmaw Poddy the next time he saw her?

"Then come along, chum. There's work to be done." There certainly was! The lowest part of the shelter, four catwalks below my billet and just over the engineering spaces, was cut like a pie into four quarters-sanitary units, two sick bays, for 'men and for women and both crowded~~L~and jammed into a little corner between the infirmaries was a sorry pretense for a nursery, not more than two meters in any dimension. On three walls of it babies were stacked high in canvas crib baskets snap-hooked to the walls, and more overflowed into the women's sick bay. A sweeping majority of those babies were crying.

In the crowded middle of this pandemonium two harassed stewardesses were changing babies, working on a barely big enough shelf let down out of one wall. Girdle tapped one of them on the shoulder. "All right, girls, reinforcements have landed. So get some rest and a bite to eat."

The older one protested feebly, but they were awfully glad to take a break; they backed out and Girdle and I moved in and took over. I 'don't know how long we worked, as we never had time to think abut it-there was always more than we could do and we never quite got caught up. But it was better than lying on a shelf and staring at another shelf just centimeters above your nose. The worst of it was that there simply wasn't enough room. I worked with both elbows held in close, to keep from bumping Girdie on one side and a basket crib that was nudging me on the other side.

But I'm not complaining about that. The engineer who designed that shelter into the Tricorn had been forced to plan as many people as possible into the smallest possible space; there wasn't any other way to do it and still give us all enough levels of shielding during a storm. I doubt if he worried much about getting babies changed and dry; he had enough to do just worrying about how to keep them alive.

But you can't tell that to a baby.

Girdle worked with an easy, no-lost-motions efficiency
that surprised me; I would never have guessed that she had ever had her hands on a 'baby. But she knew what she was doing and was faster than I was. "Where are their mothers?" I asked, meaning: "Why aren't those lazy slobs down here helping instead of leaving it to the stewardesses and some volunteers?"

Girdle understood me. "Most of them-all of them, maybe-have other small children to keep quiet; they have their hands full. A couple of them went to pieces themselves; they're in there sleeping it off." She jerked her head toward the sick bay.

I shut up, as it made sense. You couldn't possibly take care of an infant properly in one of those shallow niches the passengers were stacked in, and if each mother tried to bring her own baby down here each time, the traffic jam would be indescribable. No, this assembly-line system was necessary. I said, "We're running out of Disposies."

"Stacked in a cupboard behind you. Did you see what happened to Mrs. Garcia's face?"

"Huh?' I squatted and got out more supplies. "You mean Mrs. Royer, don't you?"

"I mean both of them. But I saw milady Garcia first and got a better look at her, while they were quieting her down. You didn't see her?"

"Sneak a look into the women's ward first chance you get. Her face is the brightest, most amazing chrome yellow I've ever seen in a paint pot, much less on a human face."

I gasped. "Gracious! I did see Mrs. Royer-bright red instead of yellow. Girdle-what in the world happened to them?"

"I'm fairly sure I know what happened," Girdle answered slowly, "but no one can figure out how it happened."

"I don't follow you."

"The colors tell the story. Those are the exact shades of two of the water-act vated dyes used in photography. Know anything about photography, hon?"

"Not much," I answered. I wasn't going to admit what little I did know, because Clark is a very accomplished amateur photographer. And I wasn't going to mention that, either!

"Well, surely you've seen someone taking snapshots. You pull out the tab and there is your picture-only there's no picture as yet. Clear as glass. So you dip it in water and slosh it around for about thirty seconds. Still no picture. Then you lay it anywhere in the light and the picture starts to show... and when the colors are bright enough to suit you, you cover it up and let it finish drying in darkness, so that the colors won't get too garish." Girdie suppressed a chuckle. "From the results, I would say that they didn't cover their faces in time to stop the process. They probably tried to scrub it off and made it worse."

I said, in a puzzled tone-and I was puzzled, about part of it-"I still don't see how it could happen."

"Neither does anybody else. But the Surgeon has a theory. Somebody booby-trapped their washcloths."

"Huh?"

"Somebody in the ship must have a supply of the pure dyes. That somebody soaked two washcloths in the inactive dyes-colorless, I mean-and dried them carefully, all

in total darkness. Then that same somebody sneaked those two prepared washcloths into those two staterooms and substituted them for washcloths they found there on the stateroom wash trays. That last part wouldn't be hard for anyone with cool nerves-service in the staterooms has been pretty haphazard the last day or two, what with this flap over the radiation storm. Maybe a fresh washcloth appears in your room, maybe it doesn't-and all the
ship's washcloths and towels are the same pattern. You just wouldn't know."

I certainly hope not! I said to myself-and added aloud, "I suppose not."

"Certainly not. It could be one of the stewardesses-or any of the passengers. But the real mystery is: where did the dyes come from? The ship's shop doesn't carry them .. . just the rolls of prepared film

and the Surgeon says that he knows enough about chemistry to be willing to stake his life that no one but a master chemist, using a special laboratory, could possibly separate out pure dyes from a roll of film. He thinks, too, that since the dyes aren't even manufactured on Mars, this somebody must be somebody who came aboard at Earth." Girdle glanced at me and smiled. "So you're not a suspect, Poddy. But I am."

"Why are you a suspect?" (And if I'm not a suspect then my brother isn't a suspect!) "Why, that's silly!"

"Yes, it is ... because I wouldn't have known how
even if I'd had the dyes. But it isn't, inasmuch as I
could have bought them before I left Earth, and I
don't have reason to like either of those women."

"I've never heard you say a word against them."

"No, but they've said a few thousand words about me-and other people have ears. So I'm a hot suspect, Poddy. But don t fret about it. I didn t do it, so there is no possible way to show that I did." She chuckled. "And I hope they never catch the somebody who did!"

I didn't even answer, "Me, too!" I could think of one person who might figure out a way to get pure dyes out of a roll of film without a complete chemistry laboratory, and I was checking quickly through my mind every item I had seen when I searched Clark's room.

There hadn't been anything in Clark's room which could have been photographic dyes. No, not even film.

Which proves precisely nothing where Clark is
concerned. I just hope that he was careful about fingerprints.

Two other stewardesses came in presently and we fed all the babies, and then Girdle and I managed a sort of a washup and had a snack standing up, and then I went back up to my assigned shelf and surprised myself by falling asleep.

I must have slept three or four hours, because I missed the happenings when Mrs. Dirkson had her baby. She is one of the Terran emigrants to Venus and she shouldn't have had her baby until long after we reach Venus-I suppose the excitement stirred things up. Anyhow, when she started to groan they carried her down to that dinky infirmary, and Dr. Torland took one look at her and ordered her carried up into the control room because the control room was the only place inside the radiation-safe space roomy enough to let him do what needed to be done.

So that's where the baby was born, on the deck of the control room, right between the chart tank and the computer. Dr. Torland and Captain Darling are godfathers and the senior stewardess is godmother and the baby's name is "Radiant," which is a poor pun but rather pretty.

They jury-rigged an incubator for Radiant right there in the control room before they moved Mrs. Dirkson back to the infirmary and gave her something to make her sleep. The baby was still there when I woke up and heard about it.

I decided to take a chance that the Captain was feeling more mellow now, and sneaked up to the control room and stuck my head in. "Could I please see the baby?"

The Captain looked annoyed, then he barely smiled and said, "All right, Poddy. Take a quick look and get out."

So I did. Radiant masses about a kilo and, frankly, she looks like cat meat, not worth saving. But Dr. Torland says that she is doing well and that she will grow up to be a fine, healthy girl-prettier than I am. I suppose he knows what he is talking about, but if she is ever going to be prettier than I am, she has lots of kilometers to go. She is almost the color of Mrs. Royer and she's mostly wrinkles.

But no doubt she'll outgrow it, because she looks like one of the pictures toward the end of the series in a rather goody-goody schoolbook called The Miracle of Life-and the earlier pictures in that series were even less appetizing. It is probably just as well that we can't possibly see babies until they are ready to make their debut, or the human race would lose interest and die out.

It would probably 'be still better to lay eggs. Human engineering isn't all that it might be, especially for us female types.

I went back down where the more mature babies were to see if they needed me. They didn't, not right then, as the babies had been fed again and a stewardess and a young woman I had never met were on duty and claimed that they had been working only a few minutes. I hung around anyhow, rather than go back up to my shelf. Soon I was pretending to be useful by reaching past the two who really were working and checking the babies, then handing down the ones who needed servicing as quickly as shelf space was cleared.

It speeded things up a little. Presently I pulled a little wiggler out of his basket and was cuddling him; the stewardess looked up and said, "I'm ready for him."

"Oh, he's not wet," I answered. "Or 'she' as the case may be. Just lonely and needs loving."

"We haven't time for that."

"I wonder." The worst thing about the midget nursery was the high noise leyel. The babies woke each other and egged each other on and the decibels were something fierce. No doubt they were all lonely and probably frightened-I'm sure I would be. "Most of the babies need loving more than they need anything else."

"They've all had their bottles."

"A bottle can't cuddle."

She didn't answer, just started checking the other infants. But I didn't think what I had said was silly. A baby can't understand your words and he doesn't know where he is if you put him in a strange place, nor what has happened. So he cries. Then he needs to be soothed.

Girdie showed up just then. "Can I help?"

"You certainly can. Here ... hold this one."

In a few minutes I rounded up three girls about my age and I ran across Clark prowling around the catwalks instead of staying quietly in his assigned billet so I drafted him, too. He wasn't exactly eager to volunteer, but doing anything was slightly better than doing nothing; he came along.

I couldn't use any more help as standing room was almost nonexistent. We worked it only by having two baby-cuddllers sort of back into each of the infirmaries with the mistress of ceremonies (me) standing in the little space at the bottom of the ladder, ready to scrunch in any direction to let people get in and out of the washrooms and up and down the ladder-and with Girdie, because she was tallest, standing back of the two at the changing shelf and dealing out babies, the loudest back to me for further assignment and the wet ones down for service-and vice versa: dry ones back to their baskets unless they started to yell; ones that had fallen asleep from being held and cuddled.

At least seven babies could receive personal
attention at once, and sometimes as high as ten or eleven, because at one-tenth gee your feet never get tired and a baby doesn't weigh anything at all worth mentioning; it was possible to hold one in each arm and sometimes we did.

In ten minutes we had that racket quieted down to an occasional whimper, quickly soothed. I didn't think Clark would stick it out, but he did-probably because Girdle was part of the team. With a look of grim nobility on his face, the like of which I have never before seen there, he cuddled babies and presently was saying "Kitchy-koo ldtchy-koo!" and "There, there, honey bun," as if he had been doing it all his life. Furthermore, the babies seemed to like him; he could soothe one down and put it to sleep quickest of any of us. Hypnotism, maybe?

This went on for several hours, with volunteers moving in and tired ones moving out and positions rotating. I was relieved once and had another snatched meal and then stretched out on my shelf for about an hour before going back on duty.

I was back at the changing shelf when the Captain called us all by speaker: "Attention, please. In five minutes power will be cut and the ship will be in free fall while a repair is made outside the ship. All passengers strap down. All crew members observe precautions for free fall."

I went right on changing the baby under my hands; you can't walk off on a baby. In the meantime, babies that had been being cuddled were handed back and stowed, and the cuddling team was chased back to their shelves to strap down-and spin was being taken off the ship. One rotation every twelve seconds you simply don't notice at the center of the ship, but you do notice when the unspinning starts. The stewardess with me on the changing bench said, "Poddy, go up and strap down. Hurry."

I said, "Don't be silly, Bergitta, there's work to be done," and popped the baby I had just' dried into its basket and fastened the zipper.

"You're a passenger. That's an order-please!"

"Who's going to check all these babies? You? And how about those four in on the floor of the women's sick bay?"

Bergitta looked startled and hurried to fetch them. All the other stewardesses were busy checking on strap-down; she didn't bother me any more with That's-an-order; she'

was too busy hooking up the changing shelf and fastening baby baskets to the space. I was checking all the others and almost all of them had been left unzipped-logical enough while we were working with them, but zipping the cover on a baby basket is the same as strapping down for a grown-up. It holds them firmly but comfortably with just their heads free.

I still hadn't finished when the siren 'sounded and the Captain cut the power.

Oh, brother! Pandemonium. The siren woke the babies who were asleep and scared any who were awake, and every single one of those squirmy little worms started to cry at the top of its lungs-and one I hadn't zipped yet popped right out of its basket and floated out into the middle of the space and I snagged it by one leg and was loose myself, and the baby and I bumped gently against the baskets on one wall-only it wasn't a wall any longer, it was just an obstacle to further progress. Free fall can be very confusing when you are not used to it, which I admit I am not. Or wasn't.

The stewardess grabbed us both and shoved the elusive little darling back into her straitjacket and zipped it while I hung onto a handhold. And by then two more were loose.

I did better this time-snagged one without letting
go and just kept it captive while Bergitta took care of the other one. Bergitta really knew how to handle herself in zero gravity, with unabrupt graceful movements like a dancer in a slow-motion solly. I made a mental note that this was a skill I must acquire.

I thought the emergency was over; I was wrong. Babies don't like free fall; it frightens them. It also makes their sphincters most erratic. Most of the latter we could ignore-but Disposies don't catch everything; regrettably some six or seven of them had been fed in the last hour.

I know now why stewardesses are all graduate nurses; we kept five babies from choking to death in the next few minutes. That is, Bergitta cleared the throat of the first one that upchucked its milk and, seeing what she had done, I worked on the second one in trouble while she grabbed the third. And so on.

Then we were very busy trying to clear the air with clean Disposies because-Listen, dear, if you think you've had it tough because your baby brother threw up all over your new party dress, then you should try somewhat-used baby formula in free fall, where it doesn't settle anywhere in particular but just floats around like smoke until you either get it or it gets you.

From six babies. In a small compartment.

By the time we had that mess cleaned up, or 95 percent or so anyway, we were both mostly sour milk from hair part to ankle and the Captain was warning us to stand by for acceleration, which came almost at once to my great relief. The Chief Stewardess showed up and was horrified that I had not strapped down and I told her in a ladylike way to go to hell, using a more polite idiom suitable to my age and sex-and asked her what Captain Darling would think about a baby passenger choking to death simply because I had strapped down all regulation-like and according to orders? And Bergitta backed me up and told her that
I had cleared choke from at least two and maybe more-she had been too busy to count.

Mrs. Peal, the C.S., changed her tune in a hurry and was sony and thanked me, and sighed and wiped her forehead and trembled and you could see that she was dead on her feet. But nevertheless, she checked all the babies herself and hurried out. Pretty

quickly we were relieved and Bergitta and I crowded into the women's washroom and tried to clean up some. Not much good, as we didn't have any clean clothes to change into.

The "All Clear" felt like a reprieve from purgatory, and a hot bath was heaven itself with the Angels singing. "A" deck had already been checked for radiation level and pronounced safe while the repair outside the ship was being made. The repair itself, I learned, was routine. Some of the antennas and receptors and things outside the ship can't take a flare storm; they burn out-so immediately after a storm, men go outside in armored space suits and replace them. This is normal and unavoidable,' like replacing lighting tubes at home. But the men who do it get the same radiation bonus that the passenger chasers get, because old Sol could burn them down with one tiny little afterthought.

I soaked in warm, clean water and thought how miserable an eighteen hours it had been. Then I decided that it hadn't been so bad after all.

It's lots better to be miserable than to be bored.

Ix

I am now twenty-seven years old.

Venus years, of course, but it sounds so much better. All is relative.

Not that I would stay here on Venus even if guaranteed the Perfect Age for a thousand years. Venusberg is sort of an organized nervous breakdown and the country outside the city is even worse. What little I've seen of it. And I don't want to see much of it. Why they ever named this dreary, smog-ridden place for the Goddess of Love and Beauty I'll never know. This planet appears to have been put together from the scrap left over after the rest of the Solar System was finished.

I don't think I would go outside Venusberg at all except that I've just got to see fairies in Right. The only one I've seen so far is in the lobby of the hilton we are staying in and is stuffed.

Actually I'm just marking time until we shape for Earth, because Venus is a Grave Disappointment-
and now I'm keeping my fingers crossed that Earth will not be a G.D., too. But I don't see how it can be; there is something deliciously primitive about the very thought of a planet where one can go outdoors without any special preparations. Why, Uncle Tom tells me that there are places along the Mediterranean (that's an ocean in La Belle France) where the natives bathe in the ocean itself without any clothing of any sort, much less insulasuits or masks.

I wouldn't like that. Not that I'm body proud; I enjoy a good sauna sweat-out as well as the next Marsman. But it would scare me cross-eyed to bathe in an ocean; I don't ever intend to get wet all over in anything larger than a bathtub. I saw a man fished out of the Grand Canal once, in early spring. They had to thaw him before they could cremate him.

But it is alleged that, along the Mediterranean shore, the air in the summertime is often blood temperature and the water not much cooler. As may be. Podkayne is not going to take any silly chances.

Nevertheless I am terribly eager to see Earth, in all its fantastic unlikeliness. It occurs to me that my most vivid conceptions of Earth come from the Oz stories- and when you come right down to it, I suppose that isn't too reliable a source. I mean, Dorothy's conversations with the Wizard are instructive-but about what? When I was a child I believed every word of my Oz tapes; but now I am no longer a child and I do not truly suppose that a whirlwind is a reliable means of transportation, nor that one is likely to encounter a Tin Woodman on a road of yellow brick.

Tik-Tok, yes-because we have Tik-Toks in Marsopolis for the simpler and more tedious work. Not precisely like Tik-Tok of Oz, of course, and not called "Tik-Toks" by anyone but children, but near enough, near enough, quite sufficient to show that the Oz stories are founded on fact if not precisely historical.

And I believe in the Hungry Tiger, too, in the most practical way possible, because there was one in the municipal zoo when I was a child, a gift from the Calcutta Kiwanis KIub to Marsopolis Kiwanians. It always looked at me as if it were sizing me up as an appetizer. It died when I was about five and I didn't know whether to be sorry or glad. It was beautiful .
and so very Hungry.

But Earth is still many weeks away and, in the meantime, Venus does have some points of interest for the newcomer, such as I.

In traveling I strongly recommend traveling with my Uncle Tom. On arriving here, there were no silly waits in "Hospitality" (!) rooms; we were given the "courtesy of the port" at once-to the extreme chagrin of Mrs. Royer. "Courtesy of the port" means that your baggage isn't examined and that nobody bothers to look at that bulky mass of documents-passport and health record and security clearance and solvency proof and birth certificate and I.D.s, and nineteen other silly forms. Instead we were whisked from satellite station to spaceport in the private yacht of the Chairman of the Board and were met there by the Chairman himself!- and popped into his Rolls and wafted royally to Hilton Tannhäuser.

We were invited to stay at his official residence (his "cottage," that being the Venus word for a palace) but I don't think he really expected us to accept, because Uncle Tom just cocked his left or satirical eyebrow and, "Mr. Chairman, I don't think you would want me to appear to be bribed even if you manage it."

And the Chairman didn't seem offended at all; he just chuckled till his belly shook like Saint Nicholas' (whom he strongly resembles even to the beard and the red cheeks, although his eyes are cold even when he laughs, which is frequently).

"Senator," he said, "you know me better than that.
My attempt to bribe you will be much more subtle. Perhaps through this young lady. Miss Podkayne, are you fond of jewelry?"

I told him honestly that I wasn't, very, because I always lose it. So he blinked and said to Clark, "How about you, son?"

Clark said, "I prefer cash."

The Chairman blinked again and said nothing.

Nor had he said anything to his driver when Uncle Tom declined the offer of his roof nevertheless we flew straight to our hilton-which is why I don't think he ever expected us to stay with him.

But I am beginning to realize that this is not entirely a pleasure trip for Uncle Tom ... and to grasp emotionally a fact known only intellectually in the past, i.e., Uncle Tom is not merely the best pinochle player in Marsopolis, he sometimes plays other games for higher stakes. I must confess that the what or why lies outside my admittedly youthful horizon-save that everyone knows that the Three-Planets conference is coming up.

Query: Could U.T. conceivably be involved in this? As a consultant or something? I hope not, as it might keep him tied up for weeks on Luna and I have no wish to waste time on a dreary ball of slag while the Wonders of Terra await me-and Uncle Tom just might be difficult about letting me go down to Earth without him.

But I wish still more strongly that Clark had not answered the Chairman truthfully.

Still, Clark would not sell out his own uncle for mere money.
On the other hand, Clark does not regard money as "mere." I must think about this- But it is some comfort to realize that anyone who
handed Clark a bribe would find that Clark had not only taken the bribe but the hand as well.

* * *

Possibly our suite at the Tannhäuser is intended as a bribe, too. Are we paying for it? I'm almost afraid to ask Uncle Tom, but I do know this: the servants that come with it won't accept tips. Not any. Although I very carefully studied up on the subject of tipping, both for Venus and Earth, so that I would know what to do when the time came-and it had been my understanding that anyone on Venus always accepts tips, even ushers in churches and bank tellers.

But not the servants assigned to us. I have two tiny little amber dolls, identical twins, who shadow me and would bathe me if I let them. They speak Portuguese but not Ortho-and at present my Portuguese is limited to "gobble-gobble" (which means "Thank you") and I have trouble explaining to them that I can dress and undress myself and I'm not too sure about their names-they both answer to "Maria."

Or at least I don't think they speak. Ortho. I must think about this, too.

Venus is officially bilingual, Ortho and Portuguese, but I'll bet I heard at least twenty other languages the first hour we were down. German sounds like a man being choked to death, French sounds like a cat fight, while Spanish sounds like molasses gurgling gently out of a jug. Cantonese- Well, think of a man trying to vocalize Bach who doesn't like Bach very much to start with.

Fortunately almost everybody understands Ortho as well. Except Maria and Maria. If true.

I could live a long time without the luxury of personal maids but I must admit that this hilton suite is quite a treat to a plain-living, wholesome Mars girl, namely me. Especially as I am in it quite a lot of the time and will be for a while yet. The ship's Surgeon, Dr. Torland, gave me many of the special inoculations needed for Venus on the trip here-an unpleasant

subject I chose not to mention-but there still remain many more before it will be safe for me to go outside the city, or even very much into the city. As soon as we reached our suite a physician appeared and played chess on my back with scratches, red to move and mate in five moves-and three hours later I had several tens of welts, with something horrid that must be done about each of them.

Clark ducked out and didn't get his scratch tests until the next morning and I misdoubt he will die of Purple Itch or some such, were it not that his karma is so clearly reserving him for hanging. Uncle Tom refused the tests. He was through all this routine more than twenty years ago, and anyhow he claims that the too, too mortal flesh is merely a figment of the imagination.

So I am more or less limited for a few days to lavish living here in the Tannhäuser. If I got out, I must wear. gloves and a mask even in the city. But one whole wall of the suite's salon becomes a stereo stage simply by voice request, either taped or piped live from any theater or club in Venusberg-and some of the "entertainment" has widened my sophistication unbelievably, especially when Uncle Tom is not around. I am beginning to realize that Mars is an essentially puritanical culture. Of course Venus doesn't actually have laws, just company regulations, none of which seems to be concerned with personal conduct. But I had been brought up to believe that Mars Republic is a free society-and I suppose it is. However, there is "freedom" and "freedom."

Here the Venus Corporation owns everything worth owning and runs everything that shows a profit, all in a fashion that would make Marsmen swoon. But I guess Venusmen would swoon at how straitlaced we are. I know this Mars girl blushed for the first time in I don't
know when and switched off a show that I didn't really believe.

But the solly screen is far from being the only astonishing feature of this suite. It is so big that one should carry food and water when exploring it, and the salon is so huge that local storms appear distinctly possible. My private bath is a suite in itself, with so many gadgets in it that I ought to have an advanced degree in engineering before risking washing my hands. But I've learned how to use them all and purely love them! I had never dreamed that I had been limping along all my life without Utter Necessities.

Up to now my top ambition along these lines has been not to have to share a washstand with Clark, because it has never been safe to reach for my own Christmas-present cologne without checking to see that it is not nitric acid or worse! Clark regards a bathroom as an auxiliary chemistry lab; he's not much interested in staying clean.

But the most astonishing thing in our suite is the piano. No, no, dear, I don't mean a keyboard hooked into the sound system; I mean a real piano. Three legs. Made out of wood. Enormous. That odd awkwardgraceful curved shape that doesn't fit anything else and can't be put in a corner. A top that opens up and lets you see that it really does have a harp inside and very complex machinery for making it work.

I think that there are just four real pianos on all of Mars, the one in the Museum that nobody plays and probably doesn't work, the one in Lowell Academy that no longer has a harp inside it, just wiring connections that make it really the same as any other piano, the one in the Rose House (as if any President ever had time to play a piano!), and the one in the Beaux Arts Hall that actually is played sometimes by visiting artists although I've never heard it. I don't think there
can be another one, or it would have been bannerlined in the news, wouldn't you think?

This one was made by a man named Steinway and it must have taken him a lifetime. I played Chopsticks on it (that being the best opus in my limited repertoire) until Uncle asked me to stop. Then I closed it up, keyboard and top, because I had seen Clark eying the machinery inside, and warned him sweetly but firmly that if he touched one finger to it I would break all his fingers while he was asleep. He wasn't listening but he knows I mean it. That piano is Sacred to the Muses and is not to be taken apart by our Young Archimedes.

I don't care what the electronics engineers say; there is a vast difference between a "piano" and a real piano. No matter if their silly oscilloscopes "prove" that the sound is identical. It is like the difference between being warmly clothed-or climbing up in your Daddy's lap and getting really warm.

I haven't been under house arrest all the time; I've been to the casinos, with Girdle and with Dexter Cunha, Dexter being the son of Mr. Chairman of the Board Kurt Cunha. Girdie is leaving us here, going to stay on Venus, and it makes me sad.

I asked her, "Why?"

We were sitting alone in our palatial salon. Girdle is staying in this same hilton, in a room not very different nor much larger than her cabin in the Tricorn, and I guess I'm just mean enough that I wanted her to see the swank we were enjoying. But my excuse was to have her help me dress. For now I am wearing (Shudder!) support garments. Arch supports in my shoes and tight things here and there intended to keep me from spreading out like an amoeba-and I won't say what Clark calls them because Clark is rude, crude, unrefined, and barbaric.

I hate them. But at 84 percent of one standard gee,
I need them despite all that exercise I took aboard ship. This alone is reason enough not to live on Venus, or on Earth, even if they~were as delightful as Mars.

Girdle did help me-she had bought them for me in the first place-but she also made me change my makeup, one which I had most carefully copied out of the latest issue of Aphrodite. She looked at me and said, "Go wash your face, Poddy. Then we'll start over."

I pouted out my lip and said, "Won't!" The one thing I had noticed most and quickest was that every female on Venus wears paint like a Red Indian shooting at the Good Guys in the sollies-even Maria and Maria wear three times as much makeup just to work in as Mother wears to a formal reception-and Mother doesn't wear any when working.

"Poddy, Poddy! Be a good girl."

"I am being a good girl. I learned that when I was just a child. And look at yourself in the mirror!" Girdie was wearing as High-styled a Venusberg face-do as any in that magazine.

"I know what I look like. But I am more than twice your age and no one even suspects me of being young and sweet and innocent. Always be what you are, Poddy. Never pretend. Look at Mrs. Grew. She's a comfortable fat old woman. She isn't kittenish, she's just nice to be around."

"You want me to look like a hick tourist!"

"I want you to look like Poddy. Come, dear, we'll find a happy medium. I grant you that even the girls your age here wear more makeup than grown-up women do on Mars-so we'll compromise. Instead of painting you like a Venusberg trollop, we'll make

you a young lady of good family and gentle breeding, one who is widely traveled and used to all sorts of customs and manners, and so calmly sure of herself that she knows what is best for her-totally uninfluenced by local fads."

Girdle is an artist, I must admit. She started with a blank canvas and worked on me for more than an hour-and when she got through, you couldn't see that I was wearing any makeup at all.

But here is what you could see: I was at least two years older (real years, Mars years, or about six Venus years); my face was thinner and my nose not pug at all and I looked ever so slightly world-weary in a sweet and tolerant way. My eyes were enormous.

"Satisfied?" she asked.

"I'm beautiful!"

"Yes, you are. Because you are still Poddy. All I've done is make a picture of Poddy the way she is going to be. Before long."

My eyes filled with tears and we had to blot them up very hastily and she repaired the damage. "Now," she said briskly, "all we need is a club. And your mask."

"What's the club for? And I won't wear a mask, not on top of this."

"The club is to beat off wealthy stockholders who will throw themselves at your feet. And you will wear your mask, or else we won't go."

We compromised. I wore the mask until we got there and Girdle promised to repair any damage to my face-and promised that she would coach me as many times as necessary until I could put on that lovely, lying face myself. The casinos are safe, or supposed to be-the air not merely filtered and conditioned but freshly regenerated, free of any trace of pollen, virus, colloidal suspension or whatever. This is because lots of tourists don't like to take all the long list of immunizations necessary actually to live on Venus; but the Corporation wouldn't think of letting a tourist get away unbled. So the hiltons are safe and

the casinos are safe and a tourist can buy a health insurance policy from the corporation fbr a very modest premium. Then he finds that he can cash his policy back in for gambling chips any time he wants to. I understand that the Corporation hasn't had to pay off on one of these policies very often.

Venusberg assaults the eye and ear even from inside a taxi. I believe in free enterprise; all Marsmen do, it's an article of faith and the main reason we won't federate with Earth (and be outvoted five hundred to one). But free enterprise is not enough excuse to blare in your ears and glare in your eyes every time you leave your own roof. The shops never close (I don't think anything ever closes in Venusberg) and full color and stereo ads climb right inside your taxi and sit in your lap and shout in your ear.

Don't ask me how this horrid illusion is produced. The engineer who invented it probably flew off on his own broom. This red devil about a meter high appeared between us and the partition separating us from the driver (there wasn't a sign of a solly receiver) and started jabbing at us with a pitchfork. "Get the Hi-Ho Habit!" it shrieked. "Everybody drinks Hi-Ho! Soothing, Habit-Forming. Deelishus! Get High with Hi-Ho!"

I shrank back against the cushions.

Girdie phoned the driver. "Please shut that thing off."

It faded down to just a pink ghost and the commercial dropped to a whisper while the driver answered, "Can't, madam. They rent the concession." Devil and noise came back on full blast.

And I learned something about tipping. Girdie took money from her purse, displayed one note. Nothing happened and she added a second; noise and image faded down again. She passed them through a slot to the driver and we weren't bothered any more. Oh, the

transparent ghost of the red devil remained and a nagging whisper of his voice, until both were replaced by another and just as faint~-but we could talk. The giant ads in the street outside were noisier and more dazzling; I didn't see how the driver could see or hear to drive, especially as traffic was unbelievably thick and heart-stoppingly fast and frantic and he kept cutting in and out of lanes and up and down in levels as if he were trying utmostly to beat Death to a hospital.

By the time we slammed to a stop on the roof of Dom Pedro Casino I figure Death wasn't more than half a lap behind.

I learned later why they drive like that. The hackle is an employee of the Corporation, like most everybody-but he is an "enterprise-employee," not on wages. Each day he has to take in a certain amount in fares to "make his nut"-the Corporation gets all of this. After he has rolled up that fixed number of paid kilometers, he splits the take with the Corporation on all other fares the rest of the day. So he drives like mad to pay off the nut as fast as possible and start making some money himself-then keeps on driving fast because he's got to get his while the getting is good.

Uncle Tom says that most people on Earth have much the same deal, except it's done by the year and they call it income tax.

In Xanadu did Kubla Khan

A stately pleasure dome decree- Dom Pedro Casino is like that. Lavish. Beautiful. Exotic. The arch over the entrance proclaims EVERY
DIVERSION IN THE KNOWN UNIVERSE, and
from what I hear this may well be true. However, all
Girdie and I visited were the gaming rooms. I never saw so much money in my whole life!

A sign outside the gambling sector read:

HELLO, SUCKER!
All Games Are Honest
All Games Have a House Percentage
You CAN'T WIN!
So Come On In and Have Fun-
(While We Prove It)
Checks Accepted. All Credit
Cards Honored. Free Breakfast
and a Ride to Your Hilton When
You Go Broke. Your Host,
DOM PEDRO

I said, "Girdie, there really is somebody named Dom Pedro?"

She shrugged. "He's an employee and that's not his real name. But he does look like an emperor. I'll point him out. You can meet him if you like and he'll kiss your hand. If you like that sort of thing. Come on."

She headed for the roulette tables while I tried to see everything at once. It was like being on the inside of a kaleidoscope. People beautifully dressed (employees mostly), people dressed every sort of way, from formal evening wear to sports shorts (tourists mostly), bright lights, staccato music, click and tinkle and shuffle and snap, rich hangings, armed guards in comicopera uniforms, trays of drinks and food, nervous excitement, and money everywhere- I stopped suddenly, so Girdle stopped. My brother

Clark. Seated at a crescent-shaped table at which a beautiful lady was dealing cards. In front of him several tall stacks of chips and an imposing pile of paper money.

I should not have been startled. If you think that a six-year-old boy (or eighteen-year-old boy if you use their years) wouldn't be allowed to gamble in Venusberg, then you haven't been to Venus. Never mind what we do in Marsopolis, here there are just two requirements to gamble: a) you have to be alive; b) you have to have money. You don't have to be able to talk Portuguese or Ortho, nor any known language; as long as you can nod, wink, grunt, or flip a tendril, they'll take your bet. And your shirt.

No, I shouldn't have been surprised. Clark heads straight for money the way ions head for an electrode. Now I knew where he had ducked out to the first night and where he had been most of the time since.

I went up and tapped him on the shoulder. He didn't look around at once but a man popped up out of the rug like a genie from a lamp and had me by the arm. Clark said to the dealer, "Hit me," and looked around. "Hi, Sis. It's all right, Joe, she's my sister."

"Okay?" the man said doubtfully, still holding my arm.

"Sure, sure. She's harmless. Sis, this is Josie Mendoza, company cop, on lease to me for tonight. Hi, Girdle!" Clark's voice was suddenly enthusiastic. But he remembered to say, "Joe, slip into my seat and watch the stuff. Girdie, this is swell! You gonna play black jack? You can have my seat."

(It must be love, dears. Or a high fever.)

She explained that she was about to play roulette. "Want me to come help?" he said eagerly. "I'm pretty good on the wheel, too."

She explained to him gently that she did not want help because she was working on a system, and promised to see him later in the evening. Girdle is unbelievably patient with Clark. I would have- Come to think of it, she's unbelievably patient with me.

If Girdie has a system for roulette, it didn't show.

We found two stools together and she tried to give me a few chips. I didn't want to gamble and told her so, and she explained that I would have to stand up if I didn't. Considering what 84 percent gee does to my poor feet I bought a few chips of my own and did just what she did, which was to place minimum bets on the colors, or on odd or even. This way you don't win, you don't lose-except that once in a long while the little ball lands on zero and you lose a chip permanently (that "house percentage" the sign warned

against). -/

The croupier could see what we were doing but we actually were gambling and inside the rules; he didn't object. I discovered almost at once that the trays of food circulating and the drinks were absolutely free-to anyone who was gambling. Girdie had a glass of wine. I don't touch alcoholic drinks even on birthdays-and I certainly wasn't going to drink Hi-Ho, after that obnoxious ad!-but I ate two or three sandwiches and asked for, and got-they had to go get it-a glass of milk. I tipped the amount I saw Girdie tip.

We had been there over an hour and I was maybe three or four chips ahead when I happened to sit up straight-and knocked a glass out of the hand of a man standing behind me, all over him, some over me.

"Oh, dear!" I said, jumping down from my stool and trying to dab off the wet spots on him with my kerchief. "I'm terribly sorry!"

He bowed. "No harm done to me. Merely soda water. But I fear my clumsiness has ruined milady's gown."

Out of one corner of her mouth Girdle said, "Watch it, kid!" but I answered, "This dress? Huh uh! If that was just water, there won't be a wrinkle or a spot in ten minutes. Travel clothes."

"You are a visitor to our city? Then permit me to introduce myself less informally than by soaking you to the skin." He whipped out a card. Girdle was looking grim but I rather liked his looks. Actually not impossibly older than I am (I guessed at twelve Mars years, or say thirty-six of his own-and it turned out he was only thirty-two). He was dressed in the very elegant Venus evening wear, with cape and stick and formal ruff... and the cutest little waxed mustaches. The card read:

DEXTER KURT CUNHA, STK.

I read it, then reread it, then said, "Dexter Kurt Cunha- Are you any relation to-" "My father."

"Why, I know your father!"-and put out my hand. Ever had your hand kissed? It makes chill bumps that race up your arm, across your shoulders, and down the other arm-and of course nobody would ever do it on Mars. This is a distinct shortcoming in our planet and one I intend to correct, even if I have to bribe Clark to institute the custom.

By the time we had names straight, Dexter was urging us to share a bite of supper and some dancing with him in the roof garden. But Girdle was balky. "Mr. Cunha," she said, "that is a very handsome calling card. But I am responsible for Podkayne to her uncle-and I would rather see your I.D."

For a split second he looked chilly. Then he smiled warmly at her and said, "I can do better," and held up one hand.

The most imposing old gentleman I have ever seen hurried over. From the medals on his chest I would say that he had won every spelling contest from first grade on. His bearing was kingly and his costume unbelievable. "Yes, Stockholder?"

"Dom Pedro, will you please identify me to these ladies?"

"With pleasure, sir." 56 Dexter was really Dexter and I got my hand kissed again. Dom Pedro does it with great flourish but it didn't have quite the same effect- I don't think he puts his heart into it the way Dexter does.

Girdle insisted on stopping to collect Clark-and Clark suffered an awful /moment of spontaneous schizophrenia, for he was still winning. But love won out and Girdle went up on Clark's arm, with Josie trailing us with the loot. I must say I admire my brother in some ways; spending cash money to protect his winnings must have caused even deeper conflict in his soui, if any, than leaving the game while he was winning.

The roof garden is the Brasilia Room and is even more magnificent than the casino proper, with a nightsky roof to match its name, stars and the Milky Way and the Southern Cross such as nobody ever in history actually saw from anywhere on Venus. Tourists were lined up behind a velvet rope waiting to get in-but not us. It was, "This way, if you please, Stockholder," to an elevated table right by the floor and across from the orchestra and a perfect view of the floor show.

We danced and we ate foods I've never heard of and I let a glass of champagne be poured for me but didn't try to drink it because the bubbles go up my nose-and wished for a glass of milk or at least a glass of water because some of the food was quite spicy, but didn't ask for it.

But Dexter leaned over me and said, "Poddy, my spies tell me that you like milk."

"I do!"

"So do I. But I'm too shy to order it unless I have somebody to back me up." He raised a finger and two glasses of milk appeared instantly.

But I noticed that he hardly touched his.

However, I did not realize I had been hoaxed until later. A singer, part of the floor show, a tall handsome dark girl dressed as a gypsy-if gypsies did ever dress that way, which I doubt, but she was billed as "Romany Rose"-toured the ringside tables singing topical verses to a popular song.

She stopped in front of us, looked right at me and smiled, struck a couple of chords and sang:

"Poddy Fries-uh came to town, Pretty, winsome Poddy- Silver shoes and sky blue gown, Lovely darling Podkayne- "She has sailed the starry sea, Pour another toddy! Lucky Dexter, lucky we! Drink a toast to Poddy!"

And everybody clapped and Clark pounded on the table and Romany Rose curtsied to me and I started to cry and covered my face with my hands and suddenly remembered that I mustn't cry because of my makeup and dabbed at my eyes with my napkin and hoped I hadn't ruined it, and suddenly silver buckets with champagne appeared all over that big room and everybody did drink a toast to me, standing up when Dexter stood up in a sudden silence brought on by a roll of drums and a crashing chord from the orchestra.

I was speechless and just barely knew enough to stay seated myself and nod and try to smile when he looked at me-

-and he broke his glass, just like story tapes, and everybody imitated him and for a while there was crash and tinkle all over the room, and I felt like Ozma just after she stops being Tip and is Ozma again and I had to remember my makeup very hard indeed!

Later on, after I had gulped my stomach back into place and could stand up without trembling, I danced with Dexter again. He is a dreamy dancer-a firm, sure lead

without ever turning it into a wrestling match. During a slow waltz I said, "Dexter? You spilled that glass of soda water. On purpose."

"Yes. How dld~ you know?"

"Because it is a sky-blue dress-or the color that is called 'sky-blue,' for Earth, although I've never seen a sky this color. And my shoes are silvered. So it couldn't have been an accident. Any of it."

He just grinned, not a bit ashamed. "Only a little of it. I went first to your hilton-and it took almost half an hour to find out who had taken you where and I was furious, because Papa would have been most vexed. But I found you."

I chewed that over and didn't like the taste. "Then you did it because your daddy told you to. Told you to entertain me because I'm Uncle Tom's niece."

"No, Poddy."

"Huh? Better check through the circuits again. That's how the numbers read."

"No, Poddy. Papa would never order me to entertain a lady-other than formally, at our cottage-lady on my arm at dinner, that sort of thing. What he did do was show me a picture of you and ask me if I wanted to. And I decided I did want to. But it wasn't a very good picture of you, didn't do you justice-just one snapped by one of the servants of the Tannhäuser when you didn't know it."

(I decided I had to find some way to get rid of Maria and Maria, a girl needs privacy. Although this hadn't turned out too dry.)

But he was still talking. "... and when I did find you I almost didn't recognize you, you were so much
more dazzling than the photograph. I almost shied off from introducing myself. Then I got the wonderful idea of turning it into an accident. I stood behind you with that glass of soda water almost against your elbow for so long the bubbles all went out of it-and when you did move, you bumped me so gently I had to slop it over myself to make it enough of an accident to let me be properly apologetic." He grinned most disarmingly.

"I see," I said. "But look, Dexter, the photograph was probably a very good one. This isn't my own face." I explained what Girdle had done.

He shrugged. "Then someday wash it for me and let me look at the real Poddy. I'll bet I'll recognize her. Look, dear, the accident was only half fake, too. We're even."

"What do you mean?"

"They named me 'Dexter' for my maternal grandfather, before they found out I was left-handed. Then it was a case of either renaming me 'Sinister,' which doesn't sound too well-or changing me over to righthanded. But that didn't work out either; it just made me the clumsiest man on three planets." (This while twirling me through a figure eight!)

"I'm always spilling things, knocking things over. You can follow me by the sound of fractured frangibles. The problem was not to cause an accident, but to keep from spilling that water until the right instant." He grinned that impish grin. "I feel very triumphant about it. But forcing me out of left-handedness did something else to me too. It's made me a rebel-and I think you are one, too."

"Uh ... maybe."

"I certainly am. I am expected to be Chairman oc the Board someday, like my papa and my grandpapa. But I shan't. I'm going to space!"

"Oh! So am I!" We stopped dancing and chattered

about spacing. Dexter intends to be an explorer captain, just like me-only I didn't quite. admit that my plans for spacing included pilot and master; it is never well in dealing with a male to let him know that you think you can do whatever it is he can do best or wants to do most. But Dexter intends to go to Cambridge and study paramagnetics and Davis mechanics and be ready when the first true starships are ready. Goodness!

"Poddy, maybe we'll even do it together. Lots of billets for women in starships."

I agreed that that was so.

"But let's talk about you. Poddy, it wasn't that you looked so much better than your picture."

"No?" (I felt vaguely disappointed.)

"No. Look. I know your background, I know you've lived all your life in Marsopolis. Me, I've been everywhere. Sent to Earth for school, took the Grand Tour while I was there, been to Luna, of course, and all over Venus-and to Mars. When you were a little girl and I wish I had met you then."

"Thank you." (I was beginning to feel like a poor relation.)

"So I know exactly what a honky-tonk town Venusberg is ... and what a shock it is to people the first time. Especially anyone reared in a gentle and civilized place like Marsopolis. Oh, I love my hometown but I know what it is- I've been other places. Poddy? Look at me, Poddy. The thing that impressed me about you was your aplomb."

"Me?"

"Your amazing and perfect savoir-faire ... under conditions I knew were strange to you. Your uncle has been everywhere-and Girdie, I take it, has been, too. But lots of strangers here, older women, become quite giddy when first exposed to the fleshpots of Venusberg
and behave frightfully. But you carry yourself like a queen. Savoir-falre."

(This man I liked! Definitely. After years and years of "Beat it, runt!" it does something to a woman to be told she has savoir-faire. I didn't even stop to wonder if he told all the girls that- I didn't want to!)

We dldn't stay much longer; Girdle made it plain that I had to get my "beauty sleep." So Clark went back to his game (Josie appeared out of nowhere at the right time- and I thought of telling Clark he had better git fer home too, but I decided that wasn't "savoir-faire" and anyhow he wouldn't have listened) and Dexter took us to the Tannhäuser in his papa's Rolls (or maybe his own, I don't know) and bowed over our hands and kissed them as he left us.

I was wondering if he would try to kiss me good night and had made up my mind to be cooperative about it. But he didn't try. Maybe it's not a Venusberg custom, I don't know.

Girdle went up with me because I wanted to chatter. I bounced myself on a couch and said, "Oh, Girdle, it's been the most wonderful night of my life!"

"It hasn't been a bad night for me," she said quietly. "It certainly can't hurt me to have met the son of the Chairman of the Board." It was then that she told me that she was staying on Venus.

"But, Girdle-why?"

"Because I'm broke, dear. I need a job."

"You? But you're rich. Everybody knows that."

She smiled. "I was rich, dear. But my last husband went through it all. He was an optimistic man and excellent company. But not nearly the businessman he thought he was. So now Girdle must gird her loins and get to work. Venusberg is better than Earth for that. Back home I could either be a parasite on my old friends until they got sick of me-the chronic house guest-or get one of them to give me a job that would really be charity, since I don't know anything. Or disappear into the lower depths and change my name. Here, nobody cares and there is always work for anyone who wants to work. I don't drink and I don't gamble-Venusberg is made to order for me."

"But what will you do?" It was hard to imagine her as anything but the rich society girl whose parties and pranks were known even on Mars.

"Croupier, I hope. They make the highest wages... and I've been studying it. But I've been practicing dealing, too-for black jack, or faro, or chemin de fer. But I'll probably have to start as a change girl."

"Change girl? Girdie-would you dress that way?"

She shrugged. "My figure is still good ... and I'm quite quick at counting money. It's honest work, Poddy-it has to be. Those change girls often have as much as ten thousand on their trays."

I decided I had fubbed and shut up. I guess you can take the girl out of Marsopolis but you can't quite take Marsopolis out of the girl. Those change girls practically don't wear anything but the trays they carry money on-but it certainly was honest work and Girdle has a figure that had all the junior officers in the Tricorn running in circles and dropping one wing. I'm sure she could have married any of the bachelors and insured her old age thereby with no effort.

Isn't it more honest to work? And, if so, why shouldn't she capitalize her assets?

She kissed me good night soon after and ordered me to go right to bed and to sleep. Which I did-all but the sleep. Well, she wouldn't be a change girl long; she'd be a croupier in a beautiful evening gown and saving her wages and her tips ... and. someday she would be a stockholder, one share anyway, which is all anybody needs for old age in the Venus Corporation. And I would come back and visit her when I was famous.

I wondered if I could ask Dexter to put in a word for her to Dom Pedro?

Then I thought about Dexter- I know that can't be love; I was in love once and it feels entirely different. It hurts.

This just feels grand.

x

I hear that Clark has been negotiating to sell me (black market, of course) to one of the concessionaires who ship wives out to contract colonists in the bush. Or so they say. I do not know the truth. But There Are Rumors.

What infuriates me is that he is said to be offering me at a ridiculously low price!

But in truth it is this very fact that convinces me that it is just a rumor, carefully planted by Clark himself, to annoy me-because, while I would not put it past Clark to sell me into what is tantamount to chattel slavery and a Life of Shame if he could get away

with it, nevertheless he would wring out of the sordid transaction every penny the traffic would bear. This is certain.

It is much more likely that he is suffering a severe emotional reaction from having opened up and become almost human with me the other night-and therefore found it necessary to counteract it with this
rumor in order to restore our relations to their normal, healthy, cold-war status.

Actually I don't think he could get away with it, even on the black market, because I don't have any contract with the Corporation and even if he forged one, I could always manage to get a message to Dexter, and Clark knows this. Girdie tells me that the black market in wives lies mostly in change girls or clerks or hilton chambermaids who haven't managed to snag husbands in Venusberg (where men are in short supply) and are willing to cooperate in being sold out back (where women are scarce) in order to jump their contracts. They don't squawk and the Corporation overlooks the matter.

Most of the bartered brides, of course, are single women among the immigrants, right off a ship. The concessionaires pay their fare and squeeze whatever cumshaw they can out of the women themselves and the miners or ranchers to whom their contracts are assigned. All Kosher.

Not that I understand it- I don't understand anything about how this planet really works. No laws, just Corporate regulations. Want to get married? Find somebody who claims to be a priest or a preacher and have any ceremony you like-but it hasn't any legal standing because it is not a contract with the Corporation. Want a divorce? Pack your clothes and get out, leaving a note or not as you see fit. Illegitimacy? They've never heard of it. A baby is a baby and the Corporation won't let one want, because that baby will grow up and be an employee and Venus has a chronic labor shortage. Polygamy? Polyandiy? Who cares? The Corporation doesn't.

Bodily assault? Don't try it in Venusberg; it is the most thoroughly policed city in the system-violent crime is bad for business. I don't wander around alone in some parts of Marsopolis, couth as my hometown
is, because some of the old sand rats are a bit sunstruck and not really responsible. Bi~t I'm perfectly safe alone anywhere in Venusberg; the only assault I risk is from super salesmanship.

(The bush is another matter. Not the people so much, but Venus itself is lethal-and there is always a chance of encountering a Venerian who has gotten hold of a grain of happy dust. Even the little wingety fairies are bloodthirsty if they sniff happy dust.)

Murder? This is a very serious violation of regulations. You'll have your pay checked for years and years and years to offset both that employee's earning power for what would have been his working life ... and his putative value to the Corporation, all calculated by the company's actuaries who are widely known to have no hearts at all, just liquid helium pumps.

So if you are thinking of killing anybody on Venus, don't do it! Lure him to a planet where murder is a social matter and all they do is hang you or something. No future in it on Venus.

There are three classes of people on Venus: stockholders, employees, and a large middle ground. Stockholder-employees (Girdle's ambition), enterprise employees (taxi drivers, ranchers, prospectors, some retailers, etc.), and of course future employees, children still being educated. And there are tourists but tourists aren't people; they have

more the status of steers in a cattle pen-valuable assets to be treated with great consideration but no pity.

A person from out-planet can be a tourist for an hour or a lifetime-just as long as his money holds out. No visa, no rules of any sort, everybody welcome. But you must have a return ticket and you can't cash it in until after you sign a contract with the Corporation. If you do. I wouldn't.

I still don't understand how the system works even though Uncle Tom has been very patient in explaining.

But he says he doesn't understand it either. He calls it "corporate fascism"-which explains nothing-and says that he can't make up his mind whether it is the grimmest tyranny the human race has ever known

or the most perfect democracy in history.

He says that nothing here is as bad in many ways as the conditions over 90 percent of the people on Earth endure, and that it isn't even as bad in creature comforts and standard of living as lots of people on Mars, especially the sand rats, even though we never knowingly let anyone starve or lack medical attention.

I Just Don't Know. I can see now that all my life I have simply taken for granted the way we do things on Mars. Oh, sure, I learned about other systems in school-but it didn't soak in. Now I am beginning to grasp emotionally that There Are Other Ways Than Ours ... and that people can be happy under them. Take Girdie. I can see why she didn't want to stay on Earth, not the way things had changed for her. But she could have stayed on Mars; she's just the sort of high-class immigrant we want. But Mars didn't tempt her at all.

This bothered me because (as you may have gathered) I think Mars is just about perfect. And I think Girdle is just about perfect.

Yet a horrible place like Venusberg is what she picked. She says it is a Challenge.

Furthermore Uncle Tom says that she is Dead Right; Girdie will have Venusberg eating out of her hand in two shakes and be a stockholder before you can say Extra Dividend.

I guess he's right. I felt awfully sorry for Girdle when I found out she was broke. "I wept that I had no shoes-till I met a man who had no feet." Like that, I mean. I've never been broke, never missed any meals, never worried about the future-yet I used to feel sony for Poddy when money was a little tight

around home and I couldn't have a new party dress. Then I found out that the rich and .glamorous Miss FitzSnugglie (I still won't use her right name, it wouldn't be fair) had only her ticket back to Earth and had borrowed the money for that. I was so sony I hurt.

But now I'm beginning to realize that Girdle has "feet" no matter what-and will always land on them.

She has indeed been a change girl, for two whole nights-and asked me please to see to- it that Clark did not go to Dom Pedro Casino those nights. I don't think she cared at all whether or not I saw her .

but she knows what a horrible case of puppy love Clark has on her and she's just so sweet and good all through that she did not want to risk making it worse and/or shocking him.

But she's a dealer now and taking lessons for croupier-and Clark goes there every night. But she won't let him play at her table. She told him point-blank that he could

know her socially or professionally, but not both-and Clark never argues with the inevitable; he plays at some other table and tags her around whenever possible.

Do you suppose that my kid brother actually does possess psionic powers? I know he's not a telepath, else he would have cut my throat long since. But he is still winning.

Dexter assures me that a) the games are absolutely honest, and b) no one can possibly beat them, not in the long run, because the house collects its percentage no matter what. "Certainly you can win, Poddy," he assured me. "One tourist came here last year and took home over half a million. We paid it happily-and advertised it all over Earth-and still made money the very week he struck it rich. Don't you even suspect that we are giving your brother a break. If he keeps it up long enough, we will not only win it all back but
take every buck he started with. If he's as smart as you say he is, he'll quit while he's ahead. But most people aren't that smart-and Venus Corporation never gambles on anything but a sure thing."

Again, I don't know. But it was both Girdle and winning that caused Clark to become almost human with me. For a while.

It was last week, the night I met Dexter-and Girdle told me to go to bed and I did but I couldn't sleep and I left my door open so that I could hear Clark come in-or if I didn't, phone somebody and have him chased home because, while Uncle Tom is responsible for both of us, I'm responsible for Clark and always have been. I wanted Clark to be home and in bed before Uncle Tom got up. Habit, I guess.

He did come sneaking in about two hours after I did and I psst'd to him and he came into my room.

You never saw a six-year-old boy with so much money!

Josie had seen him to our door, so he said. Don't ask me why he didn't put it in the Tannhäuser's vault-or do ask me: I think he wanted to fondle it.

He certainly wanted to boast. He laid it out in stacks on my bed, counting it and making sure that I knew how much it was. He even shoved a pile toward me. "Need some, Poddy? I won't even charge you interest-plenty more where this came from."

I was breathless. Not the money, I didn't need any money. But the offer. There have been times in the past when Clark has lent me money against my allowance-and charged me exactly 100 percent interest come allowance day. Till Daddy caught on and spanked us both.

So I thanked him most sincerely and hugged him. Then he said, "Sis, how old would you say Girdle is?"

I began to understand his off-the-curve behavior. "I
really couldn't guess," I answered carefully. (Didn't need to guess, I knew.) "Why don't yau ask her?"

"I did. She just smiled at me and said that women don't have birthdays."

"Probably an Earth custom," I told him and let it go at that. "Clark, how in the world did you win so much money?"

"Nothing to it," he said. "All those games, somebody wins, somebody loses. I just make sure I'm one who wins."

"But how?"

He just grinned his worst grin.

"How much money did you start with?"

He suddenly looked guarded. But he was still amazingly mellow, for Clark, so I pushed ahead. I said, "Look, if I know you, you can't get all your fun out of it unless somebody knows, and you're safer telling me than anyone else. Because I've never told on you yet. Now have I?"

He admitted that this was true by not answering- and it is true. When he was small enough, I used to clip him one occasionally. But I never tattled on him. Lately clipping him has become entirely too dangerous; he can give me a fat lip quicker than I can give him one. But I've never tattled on him. "Loosen up," I urged him. "I'm the only one you dare boast to. How much were you paid to sneak those three kilos into the Tricorn in my baggage?"

He looked very smug. "Enough."

"Okay. I won't pry any further about that. But what was it you smuggled? You've had me utterly baffled."

"You would have found it if you hadn't been so silly anxious to explore the ship. Poddy, you're stupid. You know that, don't you? You're as predictable as the law of gravity. I can always outguess you."

I didn't get mad. If Clark gets you sore, he's got you.

"Guess maybe," I admitted. "Are you ~oing to tell me what it was? Not happy dust, I hope?'

"Oh, no!" he said and looked shocked. "You know what they do to you for happy dust around here? They turn you over to natives who are hopped up with it, that's what they do-and then they don't even have to bother to cremate you."

I shuddered and returned to the subject. "Going to tell me?"

"Mmm . .

"I swear by Saint Podkayne Not to Tell." This is my own private oath, nobody else would or could use it.

"By Saint Podkayne!" (And I should have kept my lip zipped.)

"Okay," he said. "But you swore it. A bomb."

"A what?"

"Oh, not much of a bomb. Just a little squeezer job. Total destruction not more than a kilometer. Nothing much."

I reswallowed my heart. "Why a bomb? And what did you do with it?"

He shrugged. "They were stupid. They paid me this silly amount, see? Just to sneak this little package aboard. Gave me a lot of north wind about how it was meant to be a surprise for the Captain-and that I should give it to him at the Captain's party, last night out. Gift wrapped and everything. 'Sonny,' this silly zero says to me, 'just keep it out of sight and let him be surprised-because last night out is not only the Captain's party, it's his birthday.'

"Now, Sis, you know I wouldn't swallow anything like that. If it had really been a birthday present they would just have given it to the Purser to hold-no need to bribe me. So I just played stupid and kept jacking up the price. And the idiots paid me. They got real jumpy when time came to shove us through passport clearance and paid all I asked. So I shoved it into
your bag while you were yakking to Uncle Tom-then saw to it you didn't get inspected.

"Then the minute we were aboard I went to get it-and got held up by a stewardess spraying your cabin and had to do a fast job and go back to relock your bag because

Uncle Tom came back in looking for his pipe. That first night I opened the thing in the dark-and opened it from the bottom; I already had a hunch what it might be."

"Why?"

"Sis, use your brain. Don't just sit there and let it rust out. First they offer me what they probably figured was big money to a kid. When I turn it down, they start to sweat and up the ante. I kept crowding it and the money got important. And more important. They don't even give me a tale about how a man with a flower in his lapel will come aboard at Venus and give me a password. It has to be that they don't care what happens to it as long as it gets .into the ship. What does that add up to? Logic."

He added, "So I opened it and took it apart. Time bomb. Set for three days after we space. Blooey!"

I shivered, thinking about it.

"What a horrible thing to do!"

"It could have turned out pretty dry," he admitted, "if I had been as stupid as they thought I was."

"But why would anybody want to do such a thing?"

"Didn't want the ship to get to Venus."

"But why?"

"You figure it out. I have."

"Uh ... what did you do with it?"

"Oh, I saved it. The essential pieces. Never know when you might need a bomb."

And that's all I got out of him-and here I am stuck with a Saint Podkayne oath. And nineteen questions left unanswered. Was there really a bomb? Or was I swindled by my brother's talent for improvising
explanations that throw one off the obvious track? If there was where is it? Still in the Tricorn? Right here in this suite? In an innocent-looking package in the safe of the Tannhäuser? Or parked with his private bodyguard, Josie? Or a thousand other places in this big city? Or is it still more likely that I simply made a mistake of three kilograms in my excitement and that Clark was snooping just to be snooping? (Which he will always do if not busy otherwise.)

No way to tell. So I decided to squeeze what else I could from this Moment of Truth-if it was one. "I'm awful glad you found it," I said. "But the slickest thing you ever dld was that dye job on Mrs. Garcia and Mrs. Royer. Girdle admires it, too."

"She does?" he said eagerly.

"She certainly does. But I never let on you did it. So you can still tell her yourself, if you want to."

"Mmm .. ." He looked quite happy. "I gave Old Lady Royer a little extra, just for luck. Put a mouse in her bed."

"Clark! Oh, wonderful! But where did you get a mouse?"

"Made a deal with the ship's cat."

I wish II had a nice, normal, slightly stupid family. It would be a lot more comfortable. Still, Clark has
his points. -

But I haven't had too much time to worry about my brother's High Crimes and Misdemeanors; Venusberg offers too much to divert the adolescent female with a hitherto

unsuspected taste for high living. Especially Dexter- I am no longer a leper; I can now go anywhere,
even outside the city, without wearing a filter snout that makes me look like a blue-eyed pig-and dashing, darling Dexter has been most flatteringly eager to escort me everywhere. Even shopping. Using both hands a girl could spend a national debt there on

clothes alone. But I am being (almost) sensible and spending only that portion of my cash assets earmarked for Venus. If I were not firm with him, Dexter would buy me anything I admire, just by lifting his finger. (He never carries any money, not even a credit card, and even his tipping is done by some unobvious credit system.) But I haven't let him buy me anything more important than a fancy ice cream sundae; I have no intention of jeopardizing my amateur status for some pretty clothes. But I don't feel too compromised over ice cream and fortunately I do not as yet have to worry about my waistline-I'm hollow clear to my ankles.

- So, after a hard day of sweating over the latest Rio styles Dexter takes me to an ice cream parlor-one that bears the same relation to our Plaza Sweet Shoppe that the Tricorn does to a sand car-and he sits and toys with café au lait and watches in amazement while I eat. First some little trifle like an everlasting strawberry soda, then more serious work on a sundae composed by a master architect from creams and syrups and imported fruits and nuts of course, and perhaps a couple of tens of scoops of ice cream in various flavors and named "The Taj Mahal" or "The Big Rock Candy Mountain" or such.

(Poor Girdie! She diets like a Stylite every day of the year. Query: Will I ever make that sacrifice to remain svelte and glamorous? Or will I get comfortably fat like Mrs. Grew? Echo Answereth Not and I'm not afraid to listen.)

I've had to be firm with him in other ways, too, but much less obviously. Dexter turns out to be a master of seductive logic and is ever anxious to tell me a bedtime story. But I have no intention of being a Maid Betrayed, not at my age. The tragedy about Romeo and Juliet is not that they died so young but that the boy-meets-girl reflex should be so overpowering as to defeat all common sense.

My own reflexes are fine, thank you, and my hormonal balance is just dandy. Dexter's fruitless overtures give me a nice warm feeling at the pit of my stomach and hike up my metabolism. Perhaps I should feel insulted at his dastardly intentions toward meand possibly I would, at home, but this is Venusberg, where the distinction between a shameful proposition and a formal proposal of honorable marriage lies only in the mind and would strain a semantician to define. For all I know, Dexter already has seven wives at home, numbered for the days of the week. I haven't asked him, as I have no intention of becoming number eight, on any basis.

I talked this over with Girdle and asked why I didn't feel "insulted." Had they left the moral circuits out of my cybernet, as they so obviously did with my brother Clark? -

Girdle smiled her sweet and secret smile that always means she is thinking about something she doesn't intend to be fully frank about. Then she said, "Poddy, girls are taught to be 'insulted' at such offers for their own protection-and it is a good idea, quite as good an idea as keeping a fire extinguisher handy even though you don't expect a fire. But you are right; it is not an insult, it is never an insult-it is the one utterly honest tribute to a woman's charm and femininity that a man can offer her. The rest of what they tell us

is mostly polite lies .. . but on this one subject a man is nakedly honest. I don't see any reason ever to be insulted if a man is polite and gallant about it."

I thought about it. "Maybe you're right, Girdle. I guess it is a compliment, in a way. But why is it that that is all a boy is ever after? Nine times out of ten anyhow."

"You've got it just backwards, Poddy. Why should he ever be after anything else? Millions of years of evolution is the logic behind every proposition. Just be glad that the dears have learned to approach the matter with handkissing instead of a club. Some of them, anyhow. It gives us more choice in the matter than we've ever had before in all history. It's a woman's world today, dear-enjoy it and be grateful."

I had never thought of it that way. When I've thought of it at all, I've mostly been groused because it is so hard for a girl to break into a "male" profession, such as piloting.

I've been doing some hard thinking about piloting- and have concluded that there are more ways of skinning a cat than buttering it with parsnips. Do I really want to be a "famous explorer captain"? Or would I be just as happy to be some member of his crew? Oh, I want to space, let there be no doubt about that! My one little trip from Mars to Venus makes me certain that travel is for me. I'd rather be a junior stewardess in the Tricorn than President of the Republic. Shipboard life is fun; you take your home and your friends along with you while you go romantic new places-and with Davis-drive starships being built those places are going to be newer and more romantic every year. And Poddy is going to go, somehow. I was born to roam- But let's not kid ourselves, shall we? Is anybody going to let Poddy captain one of those multimegabuck ships?

Dexter's chances are a hundred times as good as mine. He's as smart as I am, or almost; he'll have the best education for it that money can buy (while I'm loyal to Ares U., I know it is a hick college compared with where he plans to go); and also it is quite possible that his daddy could buy him a Star Rover ship. But the clincher is that Dexter is twice as big as I am and male. Even if you leave his father's wealth out of the equation, which one of us gets picked?

But all is not lost. Consider Theodora, consider Catherine the Great. Let a man boss the job ... then boss that man. I am not opposed to marriage. (But if Dexter wants to many me-or anything-he'll have to follow me to Marsopolis where we are pretty oldfashioned about such things. None of this lighthearted Venusberg stuff. Marriage should be every woman's end-but not her finish. I do not regard marriage as a sort of death.

Girdle says always to "be what you are." All right, let's look at ourselves in a mirror, dear, and forget "Captain Podkayne Fries, the famous Explorer" for the nonce. What do we see?

Getting just a touch broad-shouldered in the hips, aren't we, dear? No longer any chance of being mistaken for a boy in a dim light. One might say that we were designed for having babies. And that doesn't seem too bad an idea, now does it? Especially if we could have one as nice as Duncan. Fact is, all babies are pretty nice even when they're not.

Those eighteen miserable hours during the storm in the Tricorn-weren't they just about the most fun you ever had in your life? A baby is lots more fun than differential equations.

Every starship has a crèche. So which is better? To study crèche engineering and pediatrics-and be a department head in a starship? Or buck for pilot training and make it ... and wind up as a female pilot nobody wants to hire?

Well, we don't have to decide now- I'm getting pretty anxious for us to shape for Earth. Truth is, Venusberg's fleshpots can grow monotonous to one of my wholesome (or should I say "limited") tastes. I haven't any more money for shopping, not if I am to have any to shop in Paris; I don't think I could ever get addicted to gambling (and don't want to; I'm one of those who lose and thereby offset in part Clark's winning); and the incessant noise and lights are going to put wrinkles where I now have dimples. And I think Dexter is beginning to be just a bit bored with my naïve inability to understand what he is driving at.

If there is any one thing I have learned about males in my eight and a half years, it is that one should sign off before he gets bored. I look forward to just one last encounter with Dexter now: a tearful farewell just before I must enter the Tricovn's loading tube, with a kiss so grown-up, so utterly passionate and all-out giving, that he will believe the rest of his life that Things Could Have Been Different if Only He Had Played His Cards Right.

I've been outside the city just once, in a sealed tourist bus. Once is more than enough; this ball of smog and swamp should be given back to the natives, only they wouldn't take it. Once a fairy in flight was pointed out, so they said, but I didn't see anything. Just smog.

I'll settle now for just one fairy, in flight or even perched. Dexter says that he knows of a whole colony, a thousand or more, less than two hundred kilometers away, and wants to show it to me in his Rolls. But I'm not warm to that idea; he intends to drive it himself- and that dratted thing has automatic controls. If I can sneak Girdle, or even Clark, into the picnic-well, maybe.

But I have learned a lot on Venus and would not have missed it for anything. The Art of Tipping, especially, and now I feel like an Experienced Traveler. Tipping can be a nuisance but it is not quite the vice Marsmen think it is; it is a necessary lubricant for perfect service.

Let's admit it; service in Marsopolis varies from indifferent to terrible-and I simply had not realized it. A clerk waits on you when he feels like it and goes on gossiping with another clerk, not even able to see you until he does feel like it.

Not like that in Venusberg! However, it is not just the money-and here follows the Great Secret of Happy Travel. I haven't soaked up much Portuguese and not everybody speaks Ortho. But it isn't necessary to be a linguist if you will learn just one word-in as many languages as possible. Just "thank you."

I caught onto this first with Maria and Maria-I say "gobble-gobble" to them a hundred times a day, only the word is actually "obrigado" which sounds like "gobble-gobble" if you say it quickly. A small tip is much more savoir-fairish-and gets better, more willing service-when accompanied by "thank you" than a big tip while saying nothing.

So I've learned to say "thank you" in as many languages as possible -and I always try to say it in the home language of the person I'm dealing with, if I can guess it, which I usually can. Doesn't matter much if you miss, though; porters and clerks and taxi drivers

and such usually know that one word in several languages and can spot it even if you can't talk with them at all in any other way. I've written a lot of them down and memorized them:

Obrigado
Donkey shane
Mare-see
Key toss
M 'goy
Graht-see-eh
Arigato
Spawseebaw
Gathee-oss
Tock

Or "money tock" and Clark says this one means "money talks." But Clark is wrong; he ~has to tig too high because he won't bother to say "thank you. Oh, yes, Clark tips. It hurts him, but he soon discovered that he couldn't get a taxi and that even automatic vending machines were rude to him if he tried to buck the local system. But it infuriates him so much that he won't be pleasant about it and that costs him.

If you say "tock" instead of "key toss" to a Finn, he still understands it. If you mistake a Japanese for a Cantonese and say "m'goy" instead of "arigato"-well, that is the one word of Cantonese he knows. And "obrigado" everybody understands.

However, if you do guess right and pick their home language, they roll out the red carpet and genuflect, all smiles. I've even had tips refused-and this in a city where Clark's greediness about money is considered only natural.

All those other long, long lists of hints on How to Get Along While Traveling that I studied so carefully before I left turn out not to be necessary; this one rule does it all.

Uncle Tom is dreadfully worried about something. He's absent-minded and, while he will smile at me if I manage to get his attention (not easy), the smile soon fades and the worry lines show again. Maybe it's something here and things will be all right once we leave. I wish we were back in the happy ThreeCornered Hat with next stop Luna City.

XI

Things are really grim. Clark hasn't been home for two nights, and Uncle Tom is almost out of his mind. Besides that, I've had a quarrel with Dexter-which isn't important compared with Brother being missing but I could surely use a shoulder to cry on.

And Uncle Tom has had a real quarrel with Mr. Chairman-which was what led to my quarrel with Dexter because I was on Uncle Tom's side even though I didn't know what was going on and I discovered that Dexter was just as blind in his loyalty to his father as I am to Uncle Tom. I saw only a bit of the quarrel with Mr. Chairman and it was

one of those frightening, cold, bitter, formally polite, grown-men quarrels of the sort that used to lead inevitably to pistols at dawn.

I think it almost did. Mr. Chairman arrived at our suite, looking not at all like Santa Claus, and I heard Uncle say coldly, "I would rather your friends had called on me, sir."

But Mr. Chairman ignored that and about then Uncle noticed that I was there-back of the piano, keeping quiet and trying to look small-and he told me to go to my room. Which I did.

But I know what part of it is. I had thought that both Clark and I had been allowed to run around loose in Venusberg-although I have usually had either Girdle or Dexter with me. Not so. Both of us have been guarded night and day, every instant we have been out of the Tannhäuser, by Corporation police. I never suspected this and I'm sure Clark didn t or he would never have hired Josie to watch his boodle. But Uncle did know it and had accepted it as a courtesy from Mr. Chairman, one that left him free to do whatever these things are that have kept him so busy here, without riding herd on two kids, one of them nutty as Christmas cake. (And I don't mean me.)

As near as I can reconstruct it Uncle blames Mr. Chairman for Clark's absence-although this is hardly fair as Clark, if he knew he was being watched, could evade eighteen private eyes, the entire Space Corps, and a pack of slavering bloodhounds. Or is it "wolfhounds"?

But, on top of this, Dexter says that they disagree completely on how to locate Clark. Myself, I think that Clark is missing because Clark wants to be missing because he intends to miss the ship and stay here on Venus where a) Girdle is, and b) where all that lovely money is. Although perhaps I have put them in the wrong order.

I keep telling myself this, but Mr. Chairman says that it is a kidnapping, that it has to be a kidnapping, and that there is only one way to handle a kidnapping on Venus if one ever expects to see the kidnappee alive again.

On Venus, kidnapping is just about the only thing a stockholder is afraid of. In fact they are so afraid of it
that they have brought the thing down almost to a ritual. If the kidnapper plays by the rules and doesn't hurt his victim, he not only won't be punished but he had the Corporation's assurance that he can keep any ransom agreed on.

But if he doesn~'t play by the rules and they do catch him, well, it's pretty grisly. Some of the things Dexter just hinted at. But I understand that the mildest punishment is something called a "four-hour death." He wouldn't give me any details on this, either-except that there is some drug that is just the opposite of anesthesia; it makes pain hurt worse.

Dexter says that Clark is absolutely safe as long as Uncle Tom doesn't insist on meddling with things he doesn't understand. "Old fool" is one term that he used and that was when I slapped him.

Long sigh and a wish for my happy girlhood in Marsopolis, where I understood how things worked. I don't here. All I really know is that I can no longer leave the suite save with Uncle Tom-and must leave it and stay with him when he does and wherever he goes.

Which is how I at last saw the Cunha "cottage"- and would have been much interested if Clark hadn't been missing. A modest little place only slightly smaller than

the Tannhäuser but much more lavish. Our President's Rose House would fit into its ballroom. That is where I quarreled with Dexter while Uncle and Mr. Chairman were continuing their worst quarrel elsewhere in that "cottage."

Presently Uncle Tom took me back to the Tannhäuser and I've never seen him look so old-fifty at least, or call it a hundred and fifty of the years they use here. We had dinner in the suite and neither of us ate anything and after dinner I went over and sat by the living window. The view was from Earth, I guess. The Grand Canyon of El Dorado, or El
Colorado, or whatever it is. Grand, certainly. But all I got was acrophobia and tears.

Uncle was just sitting, looking like Prometheus enduring the eagles. I put my hand in his and said, "Uncle Tom? I wish you would spank me."

"Eh?" He shook his head and seemed to see me. "Flicka! Why?"

"Because it's my fault."

"What do you mean, dear?"

"Because I'm responsibu-bul for Clark. I always have been. He hasn't any sense. Why, when he was a baby I must have kept him from falling in the Canal at least a thousand times."

He shook his head, negatively this time. "No, Poddy. It is my responsibility and not yours at all. I am in loco parentis to both of you-which means that your parents were loco ever to trust me with it."

"But I feel responsible. He's my Chinese obligation." He shook his head still again. "No. In sober truth no person can ever be truly responsible for another human being. Each one of us faces up to the universe alone, and the universe is what it is and it doesn't soften the rules for any of us-and eventually, in the long run, the universe always wins and takes all. But that doesn't make it any easier when we try to be responsible for another-as you have, as I have-and then look back and see how we could have done it better." He sighed. "I should not have blamed Mr. Cunha. He tried to take care of Clark, too. Of both of you. I knew it."

He paused and added, "It was just that I had a foul suspicion, an unworthy one, that he was using Clark to bring pressure on me. I was wrong. In his way and by his rules, Mr. Cunha is an honorable man-and his rules do not include using a boy for political purposes."

"Political purposes?"

Uncle looked around at me, as if surprised that I
was still in the room. "Poddy, I should have told you more than I have. I keep forgetting that you are now a woman. I always think of you as the baby who used to climb on my knee and ask me to tell her 'The Poddy Story.'" He took a deep breath. "I still won't burden you with all of it. But I owe Mr. Cunha an abject apology-because I was using Clark for political purposes. And you, too."

"Huh?"

"As a cover-up, dear. Doddering great-uncle escorts beloved niece and nephew on pleasure tour. I'm sony, Poddy, but it isn't that way at all. The truth is I am Ambassador Extraordinary and Minister Plenipotentiary for the Republic. To the Three Planets Summit. But it seemed desirable to keep it a secret until I present my credentials."

I didn't answer because I was having a little trouble soaking this in. I mean, I know Uncle Tom is pretty special and has done some important things, but all my life he

has been somebody who always had time to hold a skein of yarn for me while I wound it and would take serious interest in helping me name paper dolls.

But he was talking. "So I used you, Flicka. You and your brother. Because- Poddy, do you really want to know all the ins and outs and snarls of the politics behind this?"

I did, very much. But I tried to be grown up. "Just whatever you think best to tell me, Uncle Tom."

"All right. Because some of it is sordid and all of it is complex and would take hours to explain-and some of it really isn't mine to tell; some of it involves commitments Bozo-sony, the President- Some of it has to do with promises he made. Do you know who our Ambassador is now, at Luna City?"

I tried to remember. "Mr. Suslov?"

"No, that was last administration. Artie Finnegan.
Artie isn't too bad a boy... but he thinks he should have been President and he's certain he knows more about interplanetary affairs and what is good for Mars than the President does. Means well, no doubt."

I didn't comment because the name "Arthur Finnegan" I recognized at once- I had once heard Uncle Tom sound off about him to Daddy when I was supposed to be in bed and asleep. Some of the milder expressions were "a head like a sack of mud," "larceny in his heart," and a "size twelve ego in a size nine soul."

"But even though he means well," Uncle Tom went on, "he doesn't see eye to eye with the President- and myself-on matters that will come before this conference. But unless the President sends a special envoy-me, in this case-the Ambassador in residence automatically speaks for Mars. Poddy, what do you know about Switzerland?"

"Huh? William Tell. The apple."

"That's enough, I guess, although there probably never was an apple. Poddy, Mars is the Switzerland of the solar System-or it isn't anything at all. So the President thinks, and so I think. A small man (and a small country, like Mars or Switzerland) can stand up to bigger, powerful neighbors only by being willing to fight. We've never had a war and I pray we never do, because we would probably lose it. But if we are willing enough, we may never have to fight."

He sighed. "That's the way I see it. But Mr. Finnegan thinks that, because Mars is small and weak, Mars should join up with the Terran Federation. Perhaps he's right and this really is the wave of the future. But I don't think so; I think it would be the end of Mars as an independent country and a free society. Furthermore, I think it is logical that if Mars gives up its independence, it is only a matter of time until Venus goes the same way. I've been spending the time
since we got here trying to convince Mr. Cunha of this, cause him to have his Resident Commissioner make a common cause with us against Terra. This could persuade Luna to come in with us too, since both Venus and Mars can sell to Luna cheaper than Terra can. But it wasn't at all easy; the Corporation has such a long-standing policy of never meddling in politics at all. 'Put not your faith in princes'-which means to them that they buy and they sell and they ask no questions.

"But I have been trying to make Mr. Cunha see that if Luna and Mars and Terra (the Jovian moons hardly count), if those three were all under the same rules, in short order Venus Corporation would be no more free than is General Motors or I.G.

Farbenindustrie. He got the picture too, I'm sure-until I jumped to conclusions about Clark's disappearance and blew my top at him." He shook his head. "Poddy, I'm a poor excuse for a diplomat."

"You aren't the only one who got sore," I said, and told him about slapping Dexter.

He smiled for the first time. "Oh, Poddy, Poddy, we'll never make a lady out of you. You're as bad as I am."

So I grinned back at him and started picking my teeth with a fingernail. This is an even ruder gesture than you might think-and utterly private between Uncle Tom and myself. We Maori have a very bloodthirsty history .and I won't even- hint at what it is we are supposed to be picking out of our teeth. Uncle Tom used to use this vulgar pantomime on me when I was a little girl, to tell me I wasn't being lady-like.

Whereupon he really smiled and mussed my hair. "You're the blondest blue-eyed savage I ever saw. But you're a savage, all right. And me, too. Better tell him you're sorry, hon, because, much as I appreciate your gallant defense of me, Dexter was perfectly right. I
was an 'old fOol.' I'll apologize to his father, doing the last hundred meters on my belly if he wants it that way; a man should admit it in full when he's wrong, and make amends. And you kiss and make up with Dexter- Dexter is a fine boy."

"I'll say I'm sony and make up-but I don't think I'll kiss him. I haven't yet."

He looked surprised. "So? Don't you like him? Or have we brought too much Norse blood into the family?"

"I like Dexter just fine and you're crazy with the smog if you think Svenska blood is any colder than Polynesian. I could go for Dexter in a big way-and that's why I haven't kissed him."

He considered this. "I think you're wise, hon. Better do your practice kisses on boys who don't tend to cause your gauges to swing over into the red. Anyhow, although he's a good lad, he's not nearly good enough for my savage niece."

"Maybe so, maybe not. Uncle ... what are you going to do about Clark?"

His halfway happy mood vanished. "Nothing. Nothing at all."

"But we've got to do something!"

"But what, Podkayne?"

There he had me. I had already chased it through all the upper and lower segments of my brain. Tell the police? Mr. Chairman is the police-they all work for him. Hire a private detective? If Venus has any (I don't know), then they all are under contract to Mr. Cunha, or rather, the Venus Corporation.

Run ads in newspapers? Question all the taxi drivers? Put Clark's picture in the sollies and offer rewards? It didn't matter what you thought of, everything on Venus belongs to Mr. Chairman. Or, rather, to the corporation he heads. Same thing, really, although Uncle Tom tells me that the Cunhas actually own only a fraction of the, stock.

"Poddy, I've been over everything I could think of with Mr. Cunha-and he is either already doing it, or he has convinced me that there, under conditions he knows much better than I do, it should not be done."

"Then what do we do?"

"We wait. But if you think of anything-anything- that you think might help, tell me and if it isn't already being done, we'll call Mr. Cunha and find out if it should be done. If I'm asleep, wake me."

"I will." I doubted if he would be asleep. Or me. But something else had been bothering me. "If time comes for the Tricorn to shape for Earth-and Clark isn't back-what do you do then?"

He didn't answer; the lines in his face just got deeper. I knew what the Awful Decision was-and I knew how he had decided it.

But I had a little Awful Decision of my own to make

and I had talked to Saint Podkayne about it for quite a while and had decided that Poddy had to break a Saint-Podkayne oath. Maybe this sounds silly but it isn't silly to me. Never in my life had I broken one

and never in my life will I be utterly sure about Poddy again.

So I told Uncle all about the smuggled bomb.

Somewhat to my surprise he took it seriously-when I had about persuaded myself that Clark had been pulling my leg just for exercise. Smuggling-oh, sure, I understand that every ship in space has smuggling. But not a bomb. Just something valuable enough that it was worthwhile to bribe a boy to get it aboard

and probably Clark had been paid off again when he passed it along to a steward, or a cargo hand, or somebody. If I know Clark- But Uncle wanted me to describe exactly the person

I had seen talking to Clark at Deimos Station.

"Uncle, I can't! I barely glanced at him. A man. Not short, not tall, not especially fat or skinny, not dressed in any way that made me remember-and I'm not sure I looked at his face at all. Uh, yes, I did but I can't call up any picture of it."

"Could it have been one of the passengers?"

I thought hard about that. "No. Or I would have noticed his face later when it was still fresh in my mind. Mmm ... I'm almost certain he didn't queue up with us. I think he headed for the exit, the one that takes you back to the shuttle ship."

"That is likely," he agreed. "Certain-if it was a bomb. And not just a product of Clark's remarkable imagination."

"But, Uncle Tom, why would it be a bomb?"

And he didn't answer and I already knew why. Why would anybody blow up the Tricorn and kill everybody in her, babies and all? Not for insurance like you sometimes find in adventure stories; Lloyd's won't insure a ship for enough to show a profit on that sort of crazy stunt-or at least that's the way it was explained to me in my high school economics class.

Why, then?

To keep the ship from getting to Venus.

But the Tricorn had been to Venus tens and tens of times- To keep somebody in the ship from getting to Venus (or perhaps to Luna) that trip.

Who? Not Podkayne Fries. I wasn't important to anybody but me.

For the next couple of hours Uncle Tom and I searched that hilton suite. We didn't find anything, nor did I expect us to. If there was a bomb (which I still didn't fully believe) and if Clark had indeed brought it off the ship and hidden it there (which seemed

unlikely with all of the Tricorn at one end and all of the city at the other end to choose from), nevertheless
he had had days and days in which to make it look like anything from a vase of flowers to a-a anything.

We searched Clark's room last on the theory that it was the least likely place. Or rather, we started to search it together and Uncle had to finish it. Pawin through Clark's things got to be too much for me an Uncle sent me back into the salon to lie down.

I was all cried out by the time he gave up; I even had a suggestion to make. "Maybe if we sent for a Geiger counter?"

Uncle shook his head and sat down. "We aren't looking for a bomb, honey."

"We aren't?"

"No. If we found it, it would simply confirm that Clark had told you the truth, and I'm already using that as least hypothesis. Because . . . well because I know more about this than the short outline I gave to you ... and I know just how deadly serious this is to some people, how far they might go. Politics is neither a game nor a bad joke the way some people think it is. War itself is merely an extension of politics ... so I don't find anything surprising about a bomb in politics; bombs have been used in politics hundreds and even thousands of times in the past. No, we aren't looking for a bomb, we are looking for a man-a man you saw for a few seconds once. And probably not even for that man but for somebody that man might lead us back to. Probably somebody inside the President's office, somebody he trusts."

"Oh, gosh, I wish I had really looked at him!"

"Don't fret about it, hon. You didn't know and there was no reason to look. But you can bet that Clark knows what he looks like. If Clark-I mean, when Clark comes back, in time we will have him search the ID. files at Marsopolis. And all the visa photographs for the past ten years, if necessary. The man will be found. And through him the person the President has
been trusting who should not to be trusted." Uncle Tom suddenly looked all Maori and very savage. "And when we do, I may take care of the matter personally. We'll see."

Then he smiled and added, "But right now Poddy is going to bed. You're up way past your bedtime, even with all the dancing and late-sleeping you've been doing lately."

"Uh ... what time is it in Marsopolis?"

He looked at his other watch. "Twenty-seventeen. You weren't thinking of phoning your parents? I hope not."

"Oh, no! I won't say a word to them unless-until Clark is back. And maybe not then. But if it's only twenty-seventeen, it's not late at all, real time, and I don't want to go to bed. Not until you do."

"I may not go to bed."

"I don't care. I want to sit with you."

He blinked at me, then said very gently, "All right, Poddy. Nobody ever grows up without spending at least one night of years."

We just sat then for quite a while, with nothing to say that had not already been said and would just hurt to say over again.

At last I said, "Unka Tom? Tell me the Poddy story-"

"At your age?"

"Please." I crawled up on his knees. "I want to sit in your lap once more and hear it. I need to."

"All right," he said, and put his arm around me. "Once upon a time, long, long ago when the world was young, in a specially favored city there lived a little girl named Poddy. All day long she was busy like a ticking clock. Tick tick tick went her heels, tick tick tick went her knitting needles, and, most especially, tick tick tick went her busy little mind. Her hair was the color of butter blossoms in the spring when the ice leaves canals, her eyes were the changing blue of sunshine playing down through the spring floods, her nose had not yet made up its mind what it would be, and her mouth was shaped like a question mark. She greeted the world as an unopened present and there was no badness in her anywhere.

"One day Poddy-"

I stopped him. "But I'm not young any longer and I don't think the world was ever young!"

"Here's my handky," he said. "Blow your nose. I never did tell you the end of it, Poddy; you always fell asleep. It ends with a miracle."

"A truly miracle?"

"Yes. This is the end. Poddy grew up and had another Poddy. And then the world was young again."

"Is that all?"

"That's all there ever is. But it's enough."

XII

I guess Uncle Tom put me to bed, for I woke up with just my shoes off and very rumpled. He was gone but he had left a note saying that I could reach him, if I needed to, on Mr. Chairman's private code. I didn't have any excuse to bother him and didn't want to face anyone, so I chased Maria and Maria out and ate breakfast in bed. Ate quite a lot, too, I must admit- the body goes on ticking anyhow.

Then I dug out my journal for the first time since landing. I don't mean I haven't been keeping it; I mean I've been talking it instead of writing it. The library in our suite has a recorder built into its desk and I discovered how easy it was to keep a diary that way. Well, I had really found out before that, because Mr. Clancy let me use the recorder they use to keep the log on.

The only shortcoming of the recorder in the library was that Clark might drop in most any time. But the first day I went shopping I found the most darling little minirecorder at Venus Macy-only ten-fifty and it just fits in the palm of your hand and you can talk into it without even being noticed if you want to and I just couldn't resist it. I've been carrying it in my purse ever since.

But now I wanted to look way back in my journal, the early written part, and see if I had said anything that might remind me of what That Man had looked like or anything about him.

I hadn't. No clues. But I FOUND A NOTE FROM CLARK.

It read:

POD,

If you find this at all, it's time you read it. Because I'm using 24-hr. ink and I expect to lift this out of here and you'll never see it.

Girdle is in trouble and I'm going to rescue her. I haven't told anybody because this is one job that is all mine and I don't want you or anybody horning in on it.

However, a smart gambler hedges his bets, if he can. If I'm gone long enough for you to read this, it's time to get hold of Uncle Tom and have him get hold of Chairman Cunha. All I can tell you is that there is a newsstand right at South Gate. You buy a copy of the Daily Merchandiser and ask if they carry Everlites. Then say, "Better give me two- it's quite dark where I'm going."

But don't you do this, I don't want it muffed up.

If this turns out dry, you can have my rock collection.

Count your change. Better use
your fingers.
CLARK

I got all blurry. That last line-I know a holographic
last will and testament when I see one, even though I had never seen one before. Then I straightened up and counted ten seconds backwards including the rude word at the end that discharges nervous tension, for I knew this was no time to be blurry and weak; there was work to be done.

So I called Uncle Tom right away, as I agreed perfectly with Clark on one point: I wasn't going to try to emulate Space Ranger Stalwart, Man of Steel, the way Clark evidently had; I was going to get all the help I could get! With both Clark and Girdle in some sort of pinch I would have welcomed two regiments of Patrol Marines and the entire Martian Legion.

So I called Mr. Chairman's private code-and it didn't answer; It simply referred me to another code. This one answered all right ... but with a recording. Uncle Tom. And this time all he said was to repeat something he had said in the note, that he expected to be busy all day and that I was not to leave the suite under any circumstances whatever until he got back- only this time he added that I was not to let anyone into the suite, either, not even a repairman, not even a servant except those who were already there, like Maria and Maria.

When the recording started to play back for the third time, I switched off. Then I called Mr. Chairman the public way, through the Corporation offices. A dry deal that was! By pointing out that I was Miss Fries, niece of Senator Fries, Mars Republic, I did get as far as his secretary, or maybe his secretary's secretary.

"Mr. Cunha cannot be reached. I am veree sorree, Miss Fries."

So I demanded that she locate Uncle Tom. "I do not have that information. I am veree sorree, Miss
Fries." -

Then I demanded to be patched in to Dexter. "Mr.
Dexter is on an inspection trip for Mr. Cunha. I am veree soree."

She either couldn't, or wouldn't, tell me when Dexter was expected back-and wouldn't, or couldn't, find some way for me to call him. Which I just plain didn't believe, because if I owned a planetwide corporation there would be some way to phone every mine, every ranch, every factory, every air boat the company owned. All the time. And I don't even suspect that Mr. Chairman is less smart about how to run such a lash-up than I am.

I told her so, using the colorful rhetoric of sand rats and canal men. I mean I really got mad and used idioms I hadn't known I even remembered. I guess Uncle is right; scratch my Nordic skin and a savage is just underneath. I wanted to pick my teeth at her, only she wouldn't have understood it.

But would you believe it? I might as well have been cussing out a sand gator; it had no effect on her at all. She just repeated, "I'm-veree-sorree-Miss-Fries," and I growled and switched off.

Do you suppose Mr. Chairman uses an androidal Tik-Tok as his phone monitor? I wouldn't put it past him-and any live woman should have shown some reaction at some of the implausibiities I showered on her, even if she didn't understand most of the words. (Well, I don't understand some of them myself. But they are not compliments.)

I thought about phoning Daddy; I knew he would accept the charges, even if he had to mortgage his salary. But Mars was eleven minutes away; it said so, right on a dial of the phone. And the relays via Hermes Station and Luna City were even worse. With twentytwo minutes between each remark it would take me most of the day just to tell him what was wrong, even though they don't charge you for the waiting time.

But I still might have called except-well, what
could Daddy do, three hundred million kilometers away? All it would do would be to turn his last six hairs white.
It wasn't until then that I steadied down enough to realize that there had been something else amiss about that note written into my journal-besides Clark's childish swashbuckling. Girdie- It was true that I had not seen Girdle for a couple
of days; she was on a shift that caused her to zig while I zagged; newly hired dealers don't get the best shifts. But I had indeed talked to her at a time when Clark was probably already gone even though at the time I had simply assumed that he had gotten up early for some inscrutable reason of his own, rather than not coming home at all that night.

But Uncle Tom had talked to her just before we had gone to the Cunha cottage the day before, asked her specifically if she had seen Clark-and she hadn't. Not as recently as we had.

I didn't have any trouble reaching Dom Pedro-not the Dom Pedro I met the night I met Dexter but the Dom Pedro of that shift. However, by now all the Dom Pedros know who Poddy Fries is; she's the girl that is seen with Mr. Dexter. He told me at once that Girdle had gone off shift half an hour earlier and I should try her hilton. Unless-he stopped and made some inquiries; somebody seemed to think that Girdle had gone shopping.

As may be. I already knew that she was not at the little hilton she had moved to from the stylish (and expensive) Tannhäuser; a message I had already recorded there was guaranteed to fetch a call back in seconds, if and when.

That ended it. There was no one left for me to turn to, nothing at all left for me to do, save wait in the suite until Uncle returned, as he had ordered me to do.

So I grabbed my purse and a coat and left.

And got all of three meters outside the door of the suite. A tall, wide, muscular character got in my way. When I tried to duck around him, he said, "Now, now,
- Miss Fries. Your uncle left orders."

I scurried the other way and found that he was awfully quick on his feet, for such a big man. So there I was, arrested! Shoved back into our own suite and held in durance vile. You know, I don't think Uncle entirely trusts me.

I went back to my room and closed the door and thought about it. The room was still not made up and still cluttered with dirty dishes because, despite the language barrier, I have made clear to Maria and Maria that Miss Fries becomes quite vexed if anybody disturbs my room until I signal that I no longer want privacy by leaving the door open.

The clumsy, two-decker, roll-around table that had fetched my breakfast was still by my bed, looking like a plundered city.

I took everything off the lower shelf, stowed it here and there in my bath, covered the stuff on top of the table with the extra cloth used to shield the tender eyes of cash customers from the sight of dirty dishes.

Then I grabbed the house phone and told them I wanted my breakfast dishes cleared away immediately.

I'm not very big. I mean you can fit forty-nine mass kilos only one hundred fifty-seven centimeters long into a fairly small space if you scrunch a little. That lower shelf was hard but not too cramped. It had some ketchup on it I hadn't noticed.

Uncle's orders (or perhaps Mr. Cunha's) were being followed meticulously, however. Ordinarily a pantry boy comes to remove the food wagon; this time the two Marias took it out the service entrance and as far as the service lift-and in the course of it I learned something interesting but not really surprising. Maria
said something in Portuguese; the other Maria answered her in Ortho as glib as mine: '~She's probably soaking in the tub, the lazy brat."

I made a note not to remember her on birthdays and at Christmas.

Somebody wheeled me off the lift many levels down and shoved me into a corner. I waited a few moments, then crawled out. A man in a well-spotted apron was looking astonished. I said, "Obrigado!" handed him a deuce note and walked out the service entrance with my nose in the air. Two minutes later I was in a taxi.

I've been catching up on this account while the taxi scoots to South Gate in order not to chew my nails back to the elbows. I must admit that I feel good even though nervous. Action is better than waiting. No amount of bad can stonker me, but not knowing drives me nuts.

The spool is almost finished, so I think I'll change spools and mail this one back to Uncle at South Gate. I should have left a note, I know-but this is better than a note. I hope.

XIII

Well, I can't complain about not having seen fairies. They are every bit as cute as they are supposed to be-but I don't care greatly if I never see another one.
Throwing myself bravely into the fray against fearful odds, by sheer audacity I overcameIt wasn't that way at all. I fubbed. Completely. So
here I am, some nowhere place out in the bush, in a room with no windows, and only one door. That door isn't much use to me as there is a fairy perched over
it. She's a cute little thing and the green part of her fur looks exactly like a ballet tutu. She doesn't look quite like a miniature human with wings-but they do say that the longer you stay here the more human they look. Her eyes slant up, like a cat's, and she has a very pretty built-in smile.

I call her "Titania" because I can't pronounce her real name. She speaks a few words of Ortho, not much because those little skulls are only about twice the brain capacity of a cat's skull-actually, she's an idiot studying to be a moron and not studying very hard.

Most of the time she just stays perched and nurses her baby-the size of a kitten and twice as cute. I call it "Ariel" although I'm not sure of its sex. I'm not dead sure of Titania's sex; they say that both males and females do this nursing thing, which is not quite nursing but serves the same purpose; they are not mammahans. Ariel hasn't learned to fly yet, but Titania is teaching it-tosses it into the air and it sort of flops and glides to the floor and then stays there, mewing piteously until she comes to get it and flies back to her perch.

I'm spending most of my time a) thinking, b) bringing this journal up to date, c) trying to persuade Titania to let me hold Ariel (making some progress; she now lets me pick it up and hand it to her-the baby isn't a bit, afraid of me), and d) thinking, which seems to be a futile occupation.

Because I can go anywhere in the room and do anything as long as I stay a couple of meters away from that door. Guess why? Give up? Because fairies
have very sharp teeth and claws; they're carnivorous. I have a nasty bite and two deep scratches on my left arm to prove it-red and tender and don't seem to want to heal. If I get close to that door, she dives on me.

Completely friendly otherwise- Nor do I have anything physically to complain about. Often enough a native comes in with a tray of really quite good food. But I never watch him come in and I never watch him take it away-because Venerians look entirely too human to start with and the more you look at them the worse it is for your stomach. No doubt you have seen pictures but pictures don't give you the smell and that drooling loose mouth, nor the impression that this thing has been dead a long time and is now animated by obscene arts.

I call him "Pinhead" and to him that is a compliment.
No doubt as to its being a "him" either. It's enough to make a girl enter a nur1nery.

I eat the food because I feel sure Pinhead didn't cook it. I think I know who does. She would be a good cook.

Let me back up a little. I told the news vendor:
"Better give me two-it's quite dark where I'm going." He hesitated and looked at me and I repeated it.
So pretty soon I am in another air car and headed out over the bush. Ever make a wide, sweeping turn in smog? That did it. I haven't the slightest idea where I am, save that it is

somewhere within two hours' flight of Venusberg and that there is a small colony of fairies nearby. I saw them flying shortly before we landed and was so terribly interested that I didn't really get a good look at the spot before the car stopped and the door opened. Not that it would have done any good- I got out and the car lifted at once, mussing me up with its fans . .. and here was an open door to a house and a familiar voice was saying, "Poddy! Come in, dear, come in!"

- And I was suddenly so relieved that I threw myself into her arms and hugged her and she hugged me back. It was Mrs. Grew, fat and friendly as ever.

And looked around and here was Clark, just sitting-and he looked at me and said, "Stupid," and looked away. And then I saw Uncle-sitting in another chair and was about to throw myself at him with wild shouts of glee-when Mrs. Grew's arms were suddenly awfully strong and she said soothingly, "No, no, dear, not quite so fast" and held me until somebody (Pinhead, it was) did something to the back of my neck.

Then I had a big comfortable chair all to myself and didn't want it because I couldn't move from my neck down. I felt all right, aside from some odd tingles, but I couldn't stir.

Uncle looked like Mr. Lincoln grieving over the deaths at Waterloo. He didn't say anything.

Mrs. Grew said cheerfully, "Well, now we've got the whole family together. Feel a bit more like discussing things rationally, Senator?"

Uncle shook his head half a centimeter.

She said, "Oh, come now! We do want you to attend the conference. We simply want you to attend it in the right frame of mind. If we can't agree-well, it's hardly possible to let any of you be found again. Isn't that obvious? And that would be such a shame especially for the children."

Uncle said, "Pass the hemlock."

"Oh, I'm sure you don't mean that."

"He certainly does mean it!" Clark said shrilly. "You illegal obscenity! I delete all over your censored!" And I knew he was really worked up, because Clark is contemptuous of vulgar idioms; he says they denote an inferior mind.

Mrs. Grew looked at Clark placidly, even tenderly. Then she called in Pinhead again. "Take him out and keep him awake till he dies." Pinhead picked Clark up and carried him out. But Clark had the last word. "And besides that," he yelled, "you cheat at solitaire! I've watched you!"

For a split moment Mrs. Grew looked really annoyed. Then she put her face back into its usual kindly expression and said to Uncle, "Now that I have both of the kids I think I can afford to expend one of them. Especially as you are quite fond of Poddy. Too fond of her, some people would say. Psychiatrists, I mean."

I mulled that over.. . and decided that if I ever got out of this mess, I would make a rug out of her hide and give it to Uncle.

Uncle ignored it. Presently there was a most dreadful racket, metal on resounding metal. Mrs. Grew

smiled. "It's crude but it works. It is what used to be a water heater when this was a ranch. Unfortunately it isn't quite big enough eIther to sit down or stand up in-but a boy that rude really shouldn't expect comfort. The noise comes from pounding on the outside of it with a piece of pipe." She blinked and looked thoughtful. "I don't see how we can talk

things over with such a racket going on. I think I should have the tank moved farther away-or perhaps our talk would march even more quickly if I had it brought nearer, so that you could hear the sounds he makes inside the tank, too. What do you think, Senator?"

I cut in. "Mrs. Grew!"

"Yes, dear? Poddy, I'm sony but I'm really quite busy. Later we'll have a nice cup of tea together. Now, Senator-"

"Mrs. Grew, you don't understand my Uncle Tom at all! You'll never get anything out of him this way."

She considered it. "I think you exaggerate, dear. Wishful thinking."

"No, no, no! There isn't any way you could possibly get my Uncle Tom to do anything against Mars. But if you hurt Clark-or me-you'll just make him more adamant. Oh, he loves me and he loves Clark, too. But if you try to budge him by hurting either one of us, you're just wasting your time!" I was talking rapidly and just as sincerely as I know how. I seemed to hear Clark's screams. Not likely, I guess, not over that infernal clanging. But once when he was a baby he fell into a wastebasket ... and screamed something dreadful before I rescued him. I guess I was hearing that in my mind.

Mrs. Grew smiled pleasantly. "Poddy dear, you are only a girl and your head has been filled with nonsense. The Senator is going to do just what I want him to do."

"Not if you kill Clark, he won't!"

"You keep quiet, dear. Do keep quiet and let me explainr I shall have to slap you a few times to keep you quiet. Poddy, I am not going to kill your brother-"

"But you said-"

"Quiet! That native who took your brother away
didn't understand what I said; he knows only trade
Ortho, a few words, never a full sentence. I said what
I did for the benefit of your brother... so that, when
I do have him fetched back in, he'll be groveling, begging your uncle to do anything I want him to do."

She smiled warmly. "One piece of nonsense you've apparently been taught is that patriotism, or something silly like that, will overpower a man's own self-interest. Believe me, I have no slightest fear that an old political hack like your uncle will give any real weight to such a silly abstraction. What does wony him is his own political ruin if he does what I want him to do. What he is going to do. Eh, Senator?"

"Madam," Uncle Tom answered tightly, "I see no point in bandying words with you."

"Nor do I. Nor shall we. But you can listen while I explain it to Poddy. Dear, your uncle is a stubborn man and he won't accomplish his own political downfall lightly. I need a string to make him dance-and in you I have that string, I'm sure."

"I'm not!"

"Want a slap? Or would you rather be gagged? I like you, dear; don't force me to be forceful. In you, I said. Not your brother. Oh, no doubt your uncle goes through the solemn farce of treating his niece and his nephew just alike-Christmas presents and birt-hday presents and such like pretenses. But it is obvious that no one could love your brother. . . not even his own mother, I venture to say. But the Senator does love you-

rather more than he wants anyone to suspect. So now I am hurting your brother a little-oh, just
a smidgen, at worst he'll be deaf-to let your uncle see what will happen to you. Unless he is a good boy and speaks his piece just the way I tell him to."

She looked thoughtfully at Uncle. "Senator, I can't decide which of two methods might work the better
on you. You see, I want to keep you reminded-after - -you agree to cooperate-that you did agree. Sometimes a politician doesn't stay bought. After I turn you loose, would it be better for me to send your nephew along with you, to keep you reminded? Or would it be better to keep him here and work on him just a little each day-with his sister watching? So that she would have a clear idea of what happens to her... if you try any tricks at Luna City. What's your opinion, sir?"

"Madam, the question does not arise."

"Really, Senator?"

"Because I will not be at Luna City unless both children are with me. Unhurt."

Mrs. Grew chuckled. "Campaign promises, Senator. I'll reason with you later. But now"-she glanced at an antique watch pinned to her gross bosom-"I think I had better put a stop to that dreadful racket, it's giving me a headache. And I doubt if your nephew can hear it any longer, save possibly through his bones." She got up and left, moving with surprising agility and grace for a woman her age and mass.

Suddenly the noise stopped.

It was such a surprise that I would have jumped if anything below my neck could jump. Which it couldn't.

Uncle was looking at me. "Poddy, Poddy-" he said softly.

I said, "Uncle, don't you give in a millimeter to that dreadful woman!"

He said, "Poddy, I can't give in to her. Not at all. You understand that? Don't you?"

"I certainly do! But look-you could fake it. Tell her anything. Get loose yourself and take Clark along, as she suggested. Then you can rescue me. I'll hold out. You'll see!"

He looked terribly old. "Poddy ... Poddy darling

I'm very much afraid ... that this is the end. Be brave, dear."

"Uh, I haven't had very much practice at that. But I'll try to be." I pinched myself, mentally, to see if I was scared-and I wasn't, not really. Somehow I couldn't be scared with Uncle there, even though he was helpless just then. "Uncle, what is it she wants? Is she some kind of a fanatic?"

He didn't answer because we both heard Mrs. Grew's jolly, belly-deep laugh. "'Fanatic'!" she repeated, came over and tweaked my cheek. "Poddy dear, I'm not any sort of fanatic and I don't really care any more about polities than your uncle does. But I learned many years ago when I was just a girl-and quite attractive, too, dear, much more so than you will ever be-that a girl's best friend is cash. No, dear, I'm a paid professional and a good one."

She went on briskly, "Senator, I think the boy is deaf but I can't be sure; he's passed out now. We'll discuss it later, it's time for my nap. Perhaps we had all better rest a little."

And she called in Pinhead and I was carried into the room I am in now. When he picked me up, I really was truly aghast!-and found that I could move my arms and legs

just a little bit-pins and needles you wouldn't believe!-and I struggled feebly. Did me no good, I was dumped in here anyhow.

After a while the drug wore off and I felt almost normal, though shaky. Shortly thereafter I discovered that Titania is a very good watchdog indeed and I haven't tried to reach that door since; my arm and shoulder are quite sore and getting stiff.

Instead I inspected the room. Not much in it. A bed with a mattress but nq bedclothes; not that you need any in this climate. A sort of a table suspended from one wall and a chair fastened to the floor by it. Glow tubes around the upper corners of the room. I checked all these things at once after learning the hard way that Titania was not just a cutie with gauzy wings. It was quite clear that Mrs. Grew, or whoever had outfitted that room, had no intention of leaving anything in it that could be used as a weapon, against Titania or anybody. And I no longer had even my coat and purse.

I particularly regretted losing my purse, because I always cany a number of useful things in it. A nail file for example-if I had had even my nail file I night have considered taking on that bloodthirsty little fairy. But I didn't waste time thinking about it; my purse was where I had dropped it when I was drugged.

I did find one thing very interesting: this room had been used to prison Clark before I landed in it. One of his two bags was there-and I suppose I should have missed it from his room the night before, only I got upset and left Uncle to finish the search. The bag held a very odd collection for a knight errant venturing forth to rescue a damsel in distress: some clothing- three T-shirts and two pairs of shorts, a spare pair of shoes-a slide rule, and three comic books.

If I had found a flame gun or supplies of mysterious
chemicals, I would not have been surprised-more Clarkish. I suppose, when you get right down to it, for
all his brilliance Clark is just a little boy.

I worried a bit then about the possibility-or probability-that he was deaf. Then I quit thinking about
it. If true, I couldn't help it-and he would miss his ears less than anything, since he hardly ever listens anyhow.

So I lay down on the bed and read his comic books.
I am not a comic-book addict but these were quite entertaining, especially as the heroes were always getting out of predicaments much worse than the one I was in.

After a while I fell asleep and had heroic dreams.

I was awakened by "breakfast" (more like dinner but quite good). Pinhead took the tray away, and light plastic dishes and a plastic spoon offered little in the way of lethal weapons. However, I was delighted to find that he had fetched my purse!

Delighted for all of ten seconds, that is- No nail file. No penknife. Not a darn thing in it more deadly than lipstick and handky. Mrs. Grew hadn't disturbed any money or my tiny minirecorder but she had taken everything that could conceivably do any good (harm). So I gritted my teeth and ate and then brought this useless journal up to date. That's about all I've done since-just sleep and eat and make friends with Ariel. It reminds me of Duncan. Oh, not alike really-but all babies are sort of alike, don't you think?

I had dozed off from lack of anything better to do when I was awakened. "Poddy, dear-"

"Oh! Hello, Mrs. Grew."

"Now, now, no quick moves," she said chidingly. I wasn't about to make any quick moves; she had a gun pointed at my belly button. I'm very fond of it, it's the only one I have.

"Now be a good girl and turn over and cross your wrists behind you." I did so and in a moment she had them tied, quite firmly. Then she looped the line around my neck and had me on a leash-and if I struggled, all I accomplished was choking myself. So I didn't struggle.

Oh, I'm sure there was at least a moment when she
didn't have that gun pointed at me and my wrists were not yet tied. One of those comic-book heroes would
have snatched that golden instant, rendered her helpless, tied her with her own rope.

Regrettably, none of those heroes was named "Poddy Fries." My education has encompassed cooking, sewing, quite a lot of math and history and science, and such useful tidbits as freehand drawing and how to dip candles and make soap. But hand-to-hand combat I have learned sketchily if at all from occasional border clashes with Clark. I know that Mother feels that this is a lack (she is skilled in both karate and kill-quick, and can shoot as well as Daddy does) but Daddy has put off sending me to classes-I've gathered the impression that he doesn't really want his "baby girl" to know such things.

I vote with Mother, it's a lack. There must have been a split second when I could have lashed out with a heel, caught Mrs. Grew in her solar plexus, then broken her neck while she was still helpless-and run down the Jolly Roger and run up the Union Jack, just like in Treasure Island.

Oppernockity tunes but once-and I wasn't in tune with it.

Instead I was led away like a puppy on a string. Titania eyed us as we went through the door but Mrs. Grew clucked at her and she settled back on her perch and cuddled Ariel to her.

She had me walk in front of her down a hallway, through that living room where I had last seen Uncle Tom and Clark, out another door and a passage and into a large room-

-and I gasped and suppressed a scream!

Mrs. Grew said cheerfully, "Take a good look, dear. He's your new roommate."

Half the room was closed off with heavy steel bars, like a cage in a zoo. Inside was-well, it was Pinhead, that's what it was, though it took me a long moment of fright to realize it. You may have gathered that I
do not consider Pinhead handsome. Well, dear, he was Apollo Belvedere before compared with the red-eyed maniacal horror he had become.

Then I was lying on the floor and Mrs. Grew was giving me smelling salts. Yes, sir, Captain Podkayne Fries the Famous Explorer had keeled over like a silly girl. All right, go ahead and laugh; I don't mind. You haven't ever been shoved into a room with a thing like that and had it introduced to you as "your new roommate."

Mrs. Grew was chuckling. "Feel better, dear?"

"You're not going to put me in there with him!"

"What? Oh, no, no, that was just my little joke. I'm sure your uncle will never make it necessary actually to do it." She looked at Pinhead thoughtfully-and he was straining one arm through the bars, trying again and again to reach us. "He's had only five milligrams, and for a long-time happy dust addict that's barely enough to make him

tempeiy. If I ever do have to put you-or your brother-in with him. I've promised him at least fifteen. I need your advice, dear. You see, I'm about to send your uncle back to Venusberg so that he can catch his ship. Now which do you think would work best with your uncle? To put your brother in there right now, while your uncle watches? He's watching this, you know; he saw you faint-and that couldn't have been better if you had practiced. Or to wait and-"

"My uncle is watching us?"

"Yes, of course. Or to-"

"Uncle Tom!"

"Oh, do keep quiet, Poddy. He can see you but he can't hear you and he can't possibly help you. Hmm- You're such a silly billy that I don't think I want your advice. On your feet, now!"

She walked me back to my cell.

* * *

That was only hours ago; it merely seems like years. But it is long enough. Long enough for Poddy to lose her nerve. Look, I don't have to tell this, nobody knows but me. But I've been truthful all through these memoirs and I'll be truthful now: I have made up my mind that as soon as I get a chance to talk with Uncle I will beg him, plead with him, to do anything to keep me from being locked up with a happy-dusted native.

I'm not proud of it. I'm not sure Ill ever be proud of Poddy a~ain. But there it is and you can rub my nose in it. I ye come up against something that frightens me so much I've cracked.

I feel a little better about it to have admitted it baldly. I sort of hope that, when the time comes, I won't whimper and I won~t plead. But I ... just don't ... know.

And then somebody was shoved in with me and it was Clark!

I jumped up off the bed and threw my arms around him and lifted him right off his feet and was blubbering over him. "Oh, Clarkie! Brother, brother, are you hurt? What did they do to you? Speak to me! Are you deaf?"

Ri~ht in my ear he said, "Cut out the sloppy stuff, Pod.'

So I knew he wasn't too badly hurt, he sounded just like Clark. I repeated, more quietly, "Are you deaf?"

He barely whispered in my ear, "No, but she thinks I am, so we'll go on letting her think so." He untangled himself from me, took a quick look in his bag, then rapidly and very thoroughly went over every bit of the room-giving Titania just wide enough berth to keep her from diving on him.

Then he came back, shoved his face close to mine and said, "Poddy,. can you read lips?"

"No. Why?"

"The hell you can't, you just did."

Well, it wasn't quite true; Clark had barely whispered-and I did find that I was "hearing" him as much from watching his mouth as I was from truly hearing him. This is a very funny thing but Clark says that almost everybody reads lips more than they think

they do, and he had noticed it and practiced it and can really read lips-only he never told anybody because sometimes it is most useful.

He had me talk so low that I couldn't hear it myself and he didn't talk much louder. He told me, "Look, Pod, I don't know that Old Lady Grew"-he didn't say "Lady"- "has this room wired. I can't find any changes in it since she had me in it before. But there are at least four places and maybe more where a mike could be. So we keep quiet- because it stands to reason she put us together to hear what we have to say to each other. So talk out loud all you want to... but just static. How scared you are and how dreadful it is that I can't hear anything and such-like noise."

So we did and I moaned and groaned and wept over my poor baby brother and he complained that he couldn t hear a word I was saying and kept asking me to find a pencil and write what I was saying-and in between we really did talk, important talk that Clark didn't want her to hear.

I wanted to know why he wasn't deaf-had he actually been in that tank? "Oh, sure," he told me, "but I wasn't nearly as limp by then as she thought I was, either. I had some paper in my pocket and I chewed it up into pulp and corked my ears." He looked pained. "A twenty-spot note. Most expensive earplugs anybody ever had, I'll bet. Then I wrapped my shirt around my head and ignored it. But stow that and listen."

He was even more vague about how he had managed to get himself trapped. "Okay, okay, so I got
hoaxed. You and Uncle don't look so smart, either- and anyhow, you're responsible."

"I am - not either responsible!" I whispered indignantly.

"If you're not responsible, then you're irresponsible, which is worse. Logic. But forget it, we've got important things to do now. Look, Pod, we're going to crush out of here."

"How?" I glanced up at Titania. She was nursing Ariel but she never took her eyes off us.

Clark followed my glance. "I'll take care of that insect when the time comes, forget it. It has to be soon and it has to be at night."

"Why at night?" I was thinking that this smoggy paradise was bad enough when you could see a little, but in pitch-darkness- "Pod, let that cut in your face heal; you're making a draft. It's got to be while Jojo is locked up."

"Jojo?"

"That set of muscles she has working for her. The
native." -

"Oh, you mean Pinhead."

"Pinhead, Jojo, Albert Einstein. The happy-duster. He serves supper, then he washes the dishes, then she locks him up and gives him his night's ration of dust. Then he stays locked up until he sleeps it off, because she's as scared of him when he's high as anybody else is. So we make our try for it while he is caged-and maybe she'll be asleep, too. With luck the bloke who drives her sky wagon will be away, too; he doesn't always sleep here. But we can't count on it and it has got to be before the Tricorn shapes for Luna. When is that?"

"Twelve-seventeen on the eighth, ship Greenwich."

"Which is?"

"Local? Nine-sixteen Venusberg, Wednesday the twentieth."

"Check," he answered. "On both."

"But why?"

"Shut up." He had taken his slide rule from his bag and was setting it. For the conversion, I assumed, so I asked, "Do you want to know the Venus second for this Terran year?" I was rather proud to have it on the tip of my tongue, like a proper pilot; Mr. Clancy's time hadn't been entirely wasted even though I had never let him get cuddly.

"Nope. I know it." Clark reset the rule, read it and announced, "We both remember both figures the same way and the conversion checks. So check timepieces." We both looked at our wrists. "Mark!"

We agreed, within a few seconds, but that wasn't what I noticed; I was looking at the date hand. "Clark! Today's the nineteenth!"

"Maybe you thought it was Christmas," he said sourly. "And don't yip like that again. I can read you if you don't make a sound."

"But that's tomorrow!" (I did make it soundless.)

"Worse. It's less than seventeen hours from now... and we can't make a move until that brute is locked up. We get just one chance, no more."

"Our Uncle Tom doesn't get to the conference."

Clark shrugged. "Maybe so, maybe not. Whether he decides to go-or sticks around and tries to find us- I couldn't care less."

Clark was being very talkative, for Clark. But at best he grudges words and I didn't understand him. "What do you mean-if he sticks around?"

Apparently Clark thought he had told me, or that I already knew-but he hadn't and I didn't. Uncle Tom was already gone. I felt suddenly lost and forlorn. "Clark, are you sure?"

"Sure, I'm sure. She darn well saw to it that I saw him go. Jojo loaded him in like a sack of meal and I
saw the wagon take off into the smog. Uncle Tom is in Venusberg by now."
I suddenly felt much better. "Then he'll rescue us!" Clark looked bored. "Pod, don't be stupid squared." "But he will! Uncle Tom ... and Mr. Chairman
and Dexter-"
He cut me off. "Oh, for Pete's sake, Poddy! Analyze
it. You're Uncle Tom, you're in Venusberg, you've got all the help possible. How do you find this place?"

"Uh ...' I stopped. "Uh . . ." I said again. Then I closed my mouth and left it closed.

"Uh," he agreed. "Exactly Uh. You don't find it. Oh, in eight or ten years with a few thousand people doing nothing but searching, you could find it by elimination. Fat lot of good that would do. Get this through your little head, Sis: nobody is going to rescue us, nobody can possibly help us. We either break out of here tonightr we've had it." -

"Why tonight? Oh, tonight's all right with me. But if we don't get a chance tonight-"

"Then at nine-sixteen tomorrow," he interrupted, "we're dead."

"Huh? Why?"

"Figure it out yourself, Pod. Put yourself in old Gruesome's place. Tomorrow the Tricorn leaves. Figure it both ways: Uncle Tom leaves in it, or Uncle Tom won't leave.

Okay, you've got his niece and nephew. What do you do with them? Be logical about it. Her sort of logic."

I tried, I really tried. But maybe I've been brought up wrong for that sort of logic; I can't seem to visualize killing somebody just because he or she had become a nuisance to me.

But I could see that Clark was right that far: after ship's departure tomorrow we will simply be nuisances to Mrs. Grew. If Uncle Tom doesn't leave, we are most special nuisances-and if he does leave and she
is counting on his worry about us to keep him in line at Luna City (it wouldn't, of course, but that is what she is counting on anyway), in that case every day she risks the possibility that we might escape and get word to Uncle.

All right, maybe I can't imagine just plain murder; it's outside my experience. But suppose both Clark and I came down with green pox and died- That would certainly be convenient for Mrs. Grew-now, wouldn't it?

"I scan it," I agreed.

"Good," he said. "I'll teach you a thing or four yet, Pod. Either we make it tonight ... or just past nine tomorrow she chills us both ... and she chills Jojo, too, and sets fire to the place."

"Why Jojo? I mean Pinhead."

"That's the real tipoff, Pod. The happy-duster. This is Venus . . . and yet she let us see that she was suppl~zing dust to a duster. She won't leave any witnesses.'

"Uncle Tom is a witness, too."

"What if he is? She's counting on his keeping his lip zipped until the conference is over.. . and by then she's back on Earth and has lost herself among eight billion people. Hang around here and risk being caught? Pod, she's going to wait here only long enough to find out whether or not Uncle Tom catches the Tricorn. Then she'll carry out either Plan A, or Plan B-but both plans cancel us out. Get that through your fuzzy head."

I shivered. "All right. I've got it."

He grinned. "But we don't wait. We execute our own plan-my plan-first." He looked unbearably smug and added, "You fubbed utterly and came out here without doing any of the things I told you to
and Uncle Tom fubbed just about as badly, thinking he could make a straight payoff ... but I came out here prepared!"

"You did? With what? Your slide rule? Or maybe those comic books?"

Clark said, "Pod, you know I never read comic books; they were just protective coloration."

(And this is true, so far as I know- I thought I had uncovered his Secret Vice.)

"Then what?" I demanded.

"Just compose your soul in patience, Sister dear. All in good time." He moved his bag back of the bed, then added, "Move around here where you can watch down the hallway. If Lady Macbeth shows up, I'm reading comic books."

I did as he told me to but asked him one more questionn another subject, as quizzing Clark when he doesn't want to answer is as futile as slicing water. "Clark? You figure Mrs. Grew is part of the gang that smuggled the bomb?"

He blinked and looked stupid. "What bomb?"

"The one they paid you to sneak aboard the Tn corn, of course! What bomb indeed!"

"Oh, that. Golly, Poddy, you believe everything you're told. When you get to Terra, don't let anybody sell you the Pyramids-they're not for sale." He went on working and I smothered my annoyance.

Presently he said, "She couldn't possibly know anything about any bombs in the Tricorn, or she wouldn't have been a passenger in it herself."

Clark can always make me feel stupid. This was so obvious (after he pointed it out) that I refrained from comment. "How do you figure it, then?"

"Well, she could have been hired by the same people and not have known that they were just using her as a reserve."

My mind raced and another answer came up. "In which case there could be still a third plot to get Uncle Tom between here and Luna!"

"Could be. Certainly a lot of people are taking an interest in him. But I figure it for two groups. One group-almost certainly from Mars-doesn t want Uncle Tom to be there. at all. Another group-from Earth probably, at least old Gruesome actually did come from Earth-wants him to be there but wants him to sing their song. Otherwise when she had Uncle Tom, she would never have .turned him loose; she would just have had Jojo shove him into a soft spot and wait for the bubbles to stop coming up." Clark dug out something and looked at it. "Pod, repeat this back and don't make a' sound. You are exactly twentythree kilometers from South Gate and almost due south of it-south seven degrees west."

I repeated it. "How do you know?"

He held -up a small black object about as big as two
• - packs of cigarettes. "Inertial tracker, infantry model. You can buy them anywhere here, anybody who ever goes out into the bush carries one." He handed it to me.

I looked at it with interest; I had never seen one that small. Sand rats use them, of course, but they use bigger, more accurate ones mounted in their sand buggies-and anyhow, on Mars you- can always see either the stars or the Sun. Not like this gloomy place!

I even knew how it' worked, more or less, because inertial astrogation is a commonplace for spaceships and guided missiles-vector integration of accelera tions and times. But whereas the Tn corn's inertial
• tracker is- supposed to be good for one part in a mil lion, this little gadget probably couldn't be read closer than one in a thousand.

But it improved our chances at least a thousand to one! . -

"Clark! Did Uncle Tom have one of these? 'Cause if he did-"

He shook his hetid. "If he did, he never 'got a chance
- to read it. I figure they gassed him at once; he was limp when they lifted him out of the air wagon. And I never had a chance to tell him whefe this dump is because this has been my first chance to look at mine. Now put it in your purse; you're going to use it to get back to Venusberg.'

"Uh ... it'll be bulky in my purse, it'll show. You better hide it wherever you had it. You won't lose me, I'm ~oing to hang onto your hand every step of the way.'

"Why not?"

"In the first place I'm not going to drag this bag with me and that's where it was hidden; I built a false bottom into it. In the second place we aren't going back together-"

"What? Why not? We certainly are! Clark, I'm responsible for you."

"That's a matter of opinion. Your opinion. Look, Poddy, I'm going to get you out of this silly mess. But don't try to use your head, it leaks. Just your memory. Listen to what I say and then do it exactly the way I tell you to-and you'll be all right."

"But-"

"Do you have a plan to get us out?"

"Then shut up. You start pulling your Big Sister act now and you'll get us both killed."

I shut up. And I must confess that his plan made considerable sense. According to Clark there is nobody in this house but us, Mrs. Grew, Titania and Ariel, Pinhead-and sometimes her drive. I certainly haven't seen or heard any evidences of anybody else and I suppose that Mrs. Grew has been doing it with an absolute minimum of witnesses-I know I would if I were (God forbid!) ever engaged in anything so outrageously criminal.

I've never seen the driver's face and neither has
Clark-on purpose, I'm sure. But Clark says that the driver sometimes stays overnight, so we must be prepared to cope with him.

Okay, assume that we cope. As soon as we are out of the house we split up; I go east, he goes west, for a couple of kilometers, in straight lines as near as bogs and swamps permit, which may be not very.

Then we both turn north-and Clark says that the ring road around the city is just three kilometers north of us; he drew me a sketch from memory of a map he had studied before he set out to "rescue Girdle."

At the ring road I go right, he goes left-and we each make use of the first hitchhike transportation, ranch house phone, or whatever, to reach Uncle Tom and/or Chairman Cunha and get lots of reinforcements in a hurry! -

The idea of splitting up is the most elementary of tactics, to make sure that at least one of us gets through and gets help. Mrs. Grew is so fat she couldn't chase anybody on a race track, much less a swamp. We plan to do it when she doesn't dare unlock Pinhead for fear of her own life. If we are chased, it will probably be the driver-and he can't chase two directions at once. Maybe there are other natives she can call on for help, but even so, splitting up doubles our chances.

So I get the inertial tracker because Clark doesn't think I can maneuver in the bush without one, even if I wait for it to get light. He's probably right. But he claims that he can steer well enough to find that road using just his watch, a wet finger for the breeze, and polarized spectacles-which, so help me, he has with him.

I shouldn't have sneered at his comic books; he actually did come prepared, quite a lot of ways. If they hadn't gassed him while he was still locked in the passenger compartment of Mrs. Grew's air buggy, I think he could have given them a very busy, bad time. A

flame gun in his bag, a Remington pistol hidden on his person, knives, stun bombs-even a isecond inertial tracker, openly in the bag along with his clothes and comic books and slide rule.

I asked him why, and he put on his best superior look. "If anything went wrong and they grabbed me, they would expect me to have one. So I had one- and it hadn't even been started ... poor little tenderfoot who doesn't even know enough to switch the thing on when he leaves his base position. Old Gruesome got a fine chuckle out of that." He sneered. "She thinks I'm half-witted and I've done my best to help the idea along."

So they did the same thing with his bag that they did with my purse-cleaned everything out of it that looked even faintly useful for mayhem and murder, let him keep what was left.

And most of what was left was concealed by a false bottom so beautifully faked that the ~manufacturer wouldn't have noticed it.

Except, possibly, for the weight-I asked Clark about that. He shrugged. "Calculated risk," he said. "If you don't bet, you can't win. Jojo carried it in here still packed and she searched it in here-and didn't pick it up afterwards; she had both arms full of junk I didn't mind her confiscating."

(And suppose she had picked it up and noticed? Well, Brother would still have had his brain and his hands-and I think he could take a sewing machine apart and put it back together as a piece of artillery. Clark is a trial to me-but I have great confidence in him.)

I'm going to get some sleep now-or try to-as Pinhead has just fetched in our supper and we have a busy time ahead of us, later. But first I'm going to backtrack this tape and copy it; I have one fresh spool left in my purse. I'm going to give the copy to Clark
to give to Uncle, just in case. Just in case Poddy turns out to be bubbles in a swamp, I mean. But I'm not worried about that; it's a much nicer prospect than being Pinhead's roommate. In fact I'm not worried about anything; Clark has the situation well in hand.

But he warned me very strongly about one thing; "Tell them to get here well before nine-sixteen ... or don't bother to come at all."

"Why?" I wanted to know.

"Just do it."

"Clark, you know perfectly well that two grown men won't pay any attention unless I can give them a sound reason for it."

He blinked. "All right. There is a very sound reason. A half-a-kiloton bomb isn't very much ... but it still isn't healthy to be around when it goes off. Unless they can get in here and disarm it before that time- up she goes!"

He has it. I've seen it. Snugly fitted into that false bottom. That same three kilograms of excess mass I couldn't account for at Deimos. Clark showed me the timing mechanism and how the shaped charges were nestled around it to produce the implosion squeeze.

But he did not show me how to disarm it. I ran into his blankest, most stubborn wall. He expects to escape, yes-and he expects to come back here with plenty of help and in plenty of time and disarm the thing. But he is utterly convinced that Mrs. Grew intends to kill us, and if anything goes wrong and we don't break out
of here, or die trying, or anything . . . well, he intends to take her with us.

I told him it was wrong, I said that he mustn't take the law in his own hands. "What law!" he said. "There isn't any law here. And you aren't being logical, Pod. Anything that is right for a group to do is right for one person to do."

That one was too slippery for me to answer so I tried simply pleading with him and he got sore. "Maybe you would rather be in the cage with JojoW'

"Well ... no." -

"Then shut up about it. Look, Pod, I planned all this out when she had me in that tank, trying to beat my ears:in, make me dea~ I kept my sanityby;ignoring what was being done to me-and concentrating on -when and how I would blow her to bits."

I wondered if he had indeed kept his sanity but I kept my doubts to myself and shut up. Besides I'm not sure that he's wrong; it may be that I'm just squeamish about blood-shed. "Anything that is moral for a group to do is moral for one person to do." There must be -a flaw in that, since I've always been taught that it is wrong to take the law in your own hands. But I can't find the- flaw and it sounds axiomatic, selfevident. Switch it ,around. If something is wrong for one person to do, can it possibly be made right by having a lot of people (a government) agree to do it together? Even unanimously?

If a thing is wrong, it is wrong-and vox populi can't change it~ -

Just the same, I'm not sure I can nap with an atom bomb under by bed. -

Postludes

Putnam's was unhappy with Heinlein's original ending to Podkayne of Mars. In the originally published version Poddy survives. As originally written, she does not. Here follow both versions. First Heinlein's original . .

Postlude
(As Originally Written)

I guess I had better finish this.

My sister got right to sleep after I rehearsed her in what we were going to do. I stretched out on the floor but didn't go right to sleep. I'm a worrier, she isn't. I reviewed my plans, trying to make them tighter. Then slept.

I've got one of those built-in alarm clocks and I woke just when I planned to, an hour before dawn. Any later and there would be too much chance that Jojo might be loose, any earlier and there would be too much time in the dark. The Venus bush is chancy even when you can see well; I didn't want Poddy to step into something sticky, or step on something that would turn and bite her leg off. Nor me, either.

But we had to risk the bush, or stay and let old Gruesome kill us at her convenience. The first was a sporting chance; the latter was a dead certainty, even though

I had a terrible time convincing Poddy that Mrs. Grew would kill us. Poddy's greatest weakness- the really soft place in her head, she's not too stupid otherwise-is her almost total inability to grasp that some people are as bad as they are. Evil. Poddy never has understood evil. Naughtiness is• about as far as her imagination reaches.

But I understand evil, I can get right inside the skull of a person like Mrs. Grew and understand how she thinks.

Perhaps you infer from this that I am evil, or partly so. All right, want to make something of it? Whatever I am, I knew Mrs. Grew was evil before we ever left the Tniconn ... when Poddy (and even Girdle!) thought the slob was just too darling for words.

I don't trust a person who laughs when there is nothing to laugh about. Or is good-natured no matter what happens. If it's that perfect, it's an act, a phony. So I watched her ... and cheating at solitaire wasn't the only giveaway.

So between the bush and Mrs. Grew, I chose the bush, both for me and my sister.

Unless the air car was there and we could swipe it. This would be a mixed blessing, as it would mean two of them to cope with, them armed and us not. (I don't count a bomb as an arm, you can't point it at a person's head.)

Before I woke Poddy I took care of that alate pseudosimian, that "fairy." Vicious little beast. I didn't have a gun. But I didn't really want one at that point; they understand about guns and are hard to hit, they'll dive on you at once.

Instead I had shoe trees in my spare shoes, elastic bands around my spare clothes, and more elastic bands in my pockets, and several two-centimeter steel ball bearings.

Shift two wing nuts, and the long parts of the shoe trees become a steel fork. Add elastic bands and you have a sling shot. And don't laugh at a slingshot; many a sand rat has kept himself fed with only a sling shot. They are silent and you us,ually get your ammo back.

I aimed almost three times as high as I would at home, to allow for the local gravity, and got it right on the sternum, knocked it off its perch-crushed the skull with my heel and gave it an extra twist for the nasty bite on Poddy's arm. The young one started to whine, so I pushed the carcass over in the corner, somewhat out of sight, and put the cub on it. It shut up. I took care of all this before I woke Poddy because I knew she had sentimental fancies about these "fairies" and I didn't want her jittering and maybe grabbing my elbow. As it was-clean and fast.

She was still snoring, so I slipped off my shoes and made a fast reconnoiter.

Not so good- Our local witch was already up and reaching for her broom; in a few minutes she would be unlocking Jojo if she hadn't already. I didn't have a chance to see if the sky car was outside; I did well not to get caught. I hurried back and woke Poddy.

"Pod!" I whispered. "You awake?"

"Yes."

"Wide awake? You've got to do your act, right now. Make it loud and make it good."

"Check."

"Help me up on the perch. Can your sore arm take it?

She nodded, slid quickly off the bed and took position at the door, hands ready. I grabbed her hands, bounced to her shoulders, steadied, and she grabbed my calves as I let go her hands-and then I was up on the perch, over the door. I waved her on.

Poddy went running out the door, screaming, "Mrs. Grew! Mrs. Grew! Help, help! My brother!" She did make it good.

And came running back in almost at once with Mrs. Grew puffing after her.

I landed on Gruesome's shoulders, knocking her to the floor and knocking her gun out of her hand. I twisted and snapped her neck before she could catch her breath.

Pod was right on the ball, I have to give her credit. She had that gun before it stopped sliding. Then she held it, looking dazed.

I took it carefully from her. "Grab your purse. We go, right now! Stick close behind me."

Jojo was loose, I had cut it too fine. He was in the living room, looking, I guess, to see what the noise was about. I shot him.

Then I looked for the air car while keeping the gun ready for the driver. No sign of either one-and I didn't know whether to groan or cheer. I was all keyed up to shoot him but maybe he would have shot me first. But a car would have been mighty welcome compared with heading into the bush.

I almost changed my plan at that point and maybe I should have. Kept together, I mean, and headed straight north for the ring road.

It was the gun that decided me. Poddy could protect herself with it-and I would just be darn careful what I stepped on or in. I handed it to her and told her to move slowly and carefully until there was more light- but get going!

She was wobbling the gun around. "But, Brother, I've never shot anybody!"

"Well, you can if you have to."

"I guess so."

"Nothing to it. Just point it at 'em and press the button. Better use both hands. And don't shoot unless you really need to."

"All right."

I smacked her behind. "Now get going. See you later."

And I got going. I looked behind once, but she was already vanished in the smog. I put a little distance between me and the house, just in case', then concentrated on approximating course west.

And I got lost. •That's all. I needed that tracker but I had figured I could get along without it and Pod had to have it. I got hopelessly lost. There wasn't breeze enough for me to tell anything by wetting my finger and that polarized light trick for finding the Sun is

- harder than you would think. Hours after I should have reached the ring road I was still skirting boggy places and open water and trying to keep from being somebody's lunch.

And suddenly there was the most dazzling light possible and I went down flat and stayed there with my eyes buried in my arm and started to count.

I wasn't hurt at all. The blast wave covered me with mud and the noise was pretty rough but I was well outside the real trouble. Maybe half an hour later I was picked up by a cop car. -

Certainly, I should have disarmed that bomb. I had intended to, if everything went well; it was just meant to be a "Samson in the Temple" stunt if things turned out dry. A last resort.

Maybe I should have stopped to disarm it as soon as I broke old Gruesome's neck-and maybe Jojo would have caught both of us if I had and him still with a happy-oust hangover. Anyhow I didn't and then I was very busy shooting Jojo and deciding what to do and telling Poddy how to use that gun and getting her started. I didn't think about the bomb until I was several hundred meters from the house-and I certainly didn't want to go back then, even if I could have found it again in the smog, which is doubtful. -

But apparently Poddy did just that. Went back to the house, I mean. She was found later that day, about a kilometer from the house, outside the circle of total destruction-but caught by the blast.

With a live baby fairy in her arms-her body had protected it; it doesn't appear to have been hurt at all.

That's why I think she went back to the house. I don't know that this baby fairy is the one she called "Ariel." It might have been one that she picked up in the bush. But that doesn't seem at all likely; a wild one would have clawed her and its parents would have torn her to pieces.

I think she intended to save that baby fairy all along and decided not to mention it to me. It is just the kind of sentimental stunt that Poddy would do. She knew I was going to have to kill the adult-and she never said a word against that; Pod could always be sensible when absolutely necessary.

Then in the excitement of breaking out she forgot to grab it, just as I forgot to disarm the bomb after we no longer needed it. So she went back for it.

And lost the inertial tracker, somehow. At least it wasn't found on her or near her. Between the gun and her purse and the baby fairy and the tracker she must have dropped it in a bog. Must be, because she had plenty of time to go back and still get far away from the house. She should have been ten kilometers away by then, so she must have lost the tracker fairly soon and walked in a circle.

I told Uncle Tom all about it and was ready to tell the Corporation people, Mr. Cunha and so forth, and take my medicine. But Uncle told me to keep my mouth shut. He agreed that I had fubbed it, mighty dry indeed-but so had he-and so had everybody. He was gentle with me. I wish he had hit me.

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I wish I knew how to cry.

Her little recorder was still in her purse and part of the tape could be read. Doesn't mean much, though;

she doesn't tell what she did, she was babbling, sort of:

". . . very dark where I'm going. No man is an island, complete in himself. Remember that, Clarkie. Oh, I'm sorry I fubbed it but remember that; it's important. They all have to be cuddled sometimes. My shoulder- Saint Podkayne! Saint Podkayne, are you listening? Unka Tom, Mother, Daddy-is anybody listening? Do listen, please, because this is important. I love-"

• It cuts off there. So we don't know whom she loved. Everybody maybe.

Mr. Cunha made them hold the Triconn and now Uncle Tom and I are on our way again. The baby fairy is still alive and Dr. Torland says it doesn't have radiation sickness. I call it "Ariel" and I guess I'll be taking care of it a long time; they say these fairies live as long as we do. It is taking to shipboard life all right but it gets lonely and has to be held and cuddled or it cries.

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It cuts off there. So we don't know whom she loved. Everybody, maybe.

I'm alone here, now. Mr. Cunha made them hold the Tnicorn until it was certain whether Poddy would die or get well, then Uncle Tom left and left me behind-alone, that is, except for doctors, and nurses, and Dexter Cunha hanging around all the time, and a whole platoon of guards. I can't go anywhere without one. I can't go to the casinos at all any more-not that I want to, much.

I heard part of what Uncle Tom told Dad about it. Not all of it, as a phone conversation with a bounce time of over twenty minutes is episodic. I heard none of what Dad said and only one monologue of Uncle's:

"Nonsense, sir! I am not dodging my own load of guilt; it will be with me always. Nor can I wait here until you arrive and you know it and you know why- and both children will be safer in Mr. Cunha's hands and not close to me ... and you know that, too! But I have a message for you, sir, one that you should pass on to your wife. Just this: people who will not take the trouble to raise children should not have them. You with your nose always in a book, your wife gallivanting off God knows where-between you, your daughter was almost killed. No credit to either of you that she wasn't. Just blind luck. You should tell your wife, sir, that building bridges and space stations and such gadgets is all very well ... but that a woman has more
important work to do. I tried to suggest this to you years ago... and was told to mind my own business. Now I am saying it. Your daughter will get well, no thanks to either of you. But I have my doubts about Clark. With him it may be too late. God may give you a second chance if you hurry. Ending transmission!"

I faded into - the woodwork then and didn't get caught. But what did Uncle Tom mean by that-hying to scare Dad about me? I wasn't hurt at all and he knows it. I just got a load of mud on me, not even a burn ... whereas Poddy still looks like a corpse and they've ~ot her piped and wired like a crèche.

I don t see what he was driving at.

I'm taking care of that baby fairy because Poddy will want to see it when she gets well enough to notice things again; she's always been a sentimentalist. It needs a lot of attention because it gets lonely and has to be held and cuddled, or it cries.

So I'm up a lot in the night-I guess it thinks I'm its mother. I don't mind, I don't have much else to do.

It seems to like me.

The Puppet Masters
Robert A. Heinlein

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Chapter 1

Were they truly intelligent? By themselves, that is? I don't know and I don't know how we can ever find out. I'm not a lab man; I'm an operator.

With the Soviets it seems certain that they did not invent anything. They simply took the communist power-for-power's-sake and extended it without any "rotten liberal sentimentality" as the commissars put it. On the other hand, with animals they were a good deal more than animal.

(It seems strange no longer to see dogs around. When we finally come to grips with them, there will be a few million dogs to avenge. And cats. For me, one particular cat.)

If they were not truly intelligent, I hope I never live to see us tangle with anything at all like them, which is intelligent. I know who will lose. Me. You. The so-called human race.

For me it started much too early on July 12, '07, with my phone shrilling in a frequency guaranteed to peel off the skull. I felt around my person, trying to find the thing to shut it off, then recalled that I had left it in my jacket across the room. "All right," I growled. "I hear you. Shut off that damned noise."

"Emergency," a voice said in my ear. "Report in person."

I told him what to do with his emergency. "I'm on a seventy-two hour pass."

"Report to the Old Man," the voice persisted, "at once."

That was different. "Moving," I acknowledged and sat up with a jerk that hurt my eyeballs. I found myself facing a blonde. She was sitting up, too, and staring at me round-eyed.

"Who are you talking to?" she demanded.

I stared back, recalling with difficulty that I had seen her before. "Me? Talking?" I stalled while trying to think up a good lie, then, as I came wider-awake, realized that it did not have to be a very good lie as she could not possibly have heard the other half of the conversation. The sort of phone my section uses is not standard; the audio relay was buried surgically under the skin back of my left ear-bone conduction. "Sorry, babe," I went on. "Had a nightmare. I often talk in my sleep."

"Sure you're all right?"

"I'm fine, now that I'm awake," I assured her, staggering a bit as I stood up. "You go back to sleep."

"Well, uh-" She was breathing regularly almost at once. I went into the bath, injected a quarter grain of "Gyro" in my arm, then let the vibro shake me apart for three minutes while the drug put me back together. I stepped out a new man, or at least a good mock-up of one, and got my jacket. The blonde was snoring gently.

I let my subconscious race back along its track and realized with regret that I did not owe her a damned thing, so I left her. There was nothing in the apartment to give me away, nor even to tell her who I was.

I entered our section offices through a washroom booth in MacArthur Station. You won't find our offices in the phone lists. In fact, it does not exist. Probably I don't exist either. All is illusion. Another route is through a little hole-in-the-wall shop with a sign reading RARE STAMPS & COINS. Don't try that route either-they'll try to sell you a Tu'penny Black.

Don't try any route. I told you we didn't exist, didn't I?

There is one thing no head of a country can know and that is: how good is his intelligence system? He finds out only by having it fail him. Hence our section. Suspenders and belt. United Nations had never heard of us, nor had Central Intelligence-I think. I heard once that we were blanketed into an appropriation for the Department of Food Resources, but I would not know; I was paid in cash.

All I really knew about was the training I had received and the jobs the Old Man sent me on. Interesting jobs, some of them-if you don't care where you sleep, what you eat, nor how long you live. I've totaled three years behind the Curtain; I can drink vodka without blinking and spit Russian like a cat-as well as Cantonese, Kurdish, and some other bad-tasting tongues. I'm prepared to say that they've got nothing behind the Curtain that Paducah, Kentucky doesn't have bigger and better. Still, it's a living.

If I had had any sense, I'd have quit and taken a working job.

The only trouble with that would be that I wouldn't have been working for the Old Man any longer. That made the difference.

Not that he was a soft boss. He was quite capable of saying, "Boys, we need to fertilize this oak tree. Just jump in that hole at its base and I'll cover you up."

We'd have done it. Any of us would.

And the Old Man would bury us alive, too, if he thought that there was as much as a 53 percent probability that it was the Tree of Liberty he was nourishing.

He got up and limped toward me as I came in. I wondered again why he did not have that leg done over. Pride in how he had gotten the limp was my guess, not that I would ever know. A person in the Old Man's position must enjoy his pride in secret; his profession does not allow for public approbation.

His face split in a wicked smile. With his big hairless skull and his strong Roman nose he looked like a cross between Satan and Punch of Punch-and-Judy. "Welcome, Sam," he said. "Sorry to get you out of bed."

The deuce he was sorry! "I was on leave," I answered shortly. He was the Old Man, but leave is leave-and damned seldom!

"Ah, but you still are. We're going on a vacation."

I didn't trust his "vacations" so I did not rise to the bait. "So my name is 'Sam'," I answered. "What's my last name?"

"Cavanaugh. And I'm your Uncle Charlie-Charles M. Cavanaugh, retired. Meet your sister Mary."

I had noticed that there was another person in the room, but had filed my one glance for future reference. When the Old Man is present he gets full attention as long as he wants it. Now I looked over my "sister" more carefully and then looked her over again. It was worth it.

I could see why he had set us up as brother and sister if we were to do a job together; it would give him a trouble-free pattern. An indoctrinated agent can't break his assumed

character any more than a professional actor can intentionally muff his lines. So this one I must treat as my sister-a dirty trick if I ever met one!

A long, lean body, but unquestionably and pleasingly mammalian. Good legs. Broad shoulders for a woman. Flaming, wavy red hair and the real redheaded saurian bony structure to her skull. Her face was handsome rather than beautiful; her teeth were sharp and clean. She looked me over as if I were a side of beef.

I was not yet in character; I wanted to drop one wing and run in circles. It must have showed, for the Old Man said gently, "Tut tut, Sammy-there's no incest in the Cavanaugh family. You were both carefully brought up, by my favorite sister-in-law. Your sister dotes on you and you are extremely fond of your sister, but in a healthy, clean-cut, sickeningly chivalrous, All-American-Boy sort of way."

"As bad as that?" I asked, still looking at my "sister".

"Worse."

"Oh, well-howdy, Sis. Glad to know you."

She stuck out a hand. It was firm and seemed as strong as mine. "Hi, Bud." Her voice was deep contralto, which was all I needed. Damn the Old Man!

"I might add," the Old Man went on in the same gentle tones, "that you are so devoted to your sister that you would gladly die to protect her. I dislike to tell you so, Sammy, but your sister is a little more valuable, for the present at least, to the organization than you are."

"Got it," I acknowledged. "Thanks for the polite qualification."

"Now, Sammy-"

"She's my favorite sister; I protect her from dogs and strange men. I don't have to be slapped with an ax. Okay, when do we start?"

"Better stop over in Cosmetics; I think they have a new face for you."

"Make it a whole new head. See you. 'By, Sis."

They did not quite do that, but they did fit my personal phone under the overhang of my skull in back and then cemented hair over it. They dyed my hair to the same shade as that of my newly acquired sister, bleached my skin, and did things to my cheekbones and chin. The mirror showed me to be as good an authentic redhead as Sis. I looked at my hair and tried to recall what its natural shade had been, way back when. Then I wondered if Sis were what she seemed to be along those lines. I rather hoped so. Those teeth, now-Stow it, Sammy! She's your sister.

I put on the kit they gave me and somebody handed me a jump bag, already packed. The Old Man had evidently been in Cosmetics, too; his skull was now covered by crisp curls of a shade just between pink and white. They had done something to his face, for the life of me I could not tell just what-but we were all three clearly related by blood and were all of that curious sub-race, the redheads.

"Come, Sammy," he said. "Time is short. I'll brief you in the car." We went up by a route I had not known about and ended up on the Northside launching platform, high above New Brooklyn and overlooking Manhattan Crater.

I drove while the Old Man talked. Once we were out of local control he told me to set it automatic on Des Moines, Iowa. I then joined Mary and "Uncle Charlie" in the lounge. He gave us our personal histories briefly and filled in details to bring us up to date. "So here we are," he concluded, "a merry little family party-tourists. And if we should happen

to run into unusual events, that is how we will behave, as nosy and irresponsible tourists might."

"But what is the problem?" I asked. "Or do we play this one entirely by ear?"

"Mmmm . . . possibly."

"Okay. But when you're dead, it's nice to know why you're dead, I always say. Eh, Mary?"

"Mary" did not answer. She had that quality, rare in babes and commendable, of not talking when she had nothing to say. The Old Man looked me over, his manner not that of a man who can't make up his mind, but rather as if he were judging me as I was at that moment and feeding the newly acquired data into the machine between his ears.

Presently he said, "Sam, you've heard of 'flying saucers'."

"Huh? Can't say that I have."

"You've studied history. Come, now!"

"You mean those? The flying-saucer craze, 'way back before the Disorders? I thought you meant something recent and real; those were mass hallucinations."

"Were they?"

"Well, weren't they? I haven't studied much statistical abnormal psychology, but I seem to remember an equation. That whole period was psychopathic; a man with all his gaskets tight would have been locked up."

"But this present day is sane, eh?"

"Oh, I wouldn't go so far as to say that." I pawed back through the unused drawers of my mind and found the answer I wanted. "I remember that equation now-Digby's evaluating integral for second and higher order data. It gave a 93.7 percent certainty that the flying-saucer myth, after elimination of explained cases, was hallucination. I remember it because it was the first case of its type in the history of science in which the instances had been systematically collected and evaluated. Some sort of a government project, God knows why."

The Old Man looked benignly avuncular. "Brace yourself, Sammy. We are going to inspect a flying saucer today. Maybe we'll even saw off a piece for a souvenir, like true tourists."

Chapter 2

"Seen a newscast lately?" the Old Man went on.

I shook my head. Silly question-I'd been on leave.

"Try it sometime," he suggested. "Lots of interesting things on the 'casts. Never mind. Seventeen hours-" he glanced at his finger watch and added, "-and twenty-three minutes ago an unidentified spaceship landed near Grinnell, Iowa. Type, unknown. Approximately disc-shaped and about one hundred fifty feet across. Origin, unknown, but-"

"Didn't they track a trajectory on it?" I interrupted.

"They did not," he answered, spacing his words. "Here is a photo of it taken after landing by Space Station Beta."

I looked it over and passed it to Mary. It was as unsatisfactory as a telephoto taken from five thousand miles out usually is. Trees looking like moss . . . a cloud shadow that loused up the best part of the pie . . . and a gray circle that might have been a disc-shaped

space ship and could just as well have been an oil tank or a water reservoir. I wondered how many times we had bombed hydroponics plants in Siberia, mistaking them for atomic installations.

Mary handed the pic back. I said, "Looks like a tent for a camp meeting to me. What else do we know?"

"Nothing."

"Nothing! After seventeen hours! We ought to have agents pouring out of their ears!"

"Ah, yes. We did have. Two within reach and four that were sent in. They failed to report back. I dislike losing agents, Sammy, especially with no results."

Up to then I had not stopped to wonder about the Old Man himself being risked on a job-it had not looked like risk. But I had a sudden cold realization that the situation must be so serious that the Old Man had chosen to bet his own brain against the loss of the organization-for he was the Section. Nobody who knew him doubted his guts, but they did not doubt his horse sense, either. He knew his own value; he would not risk himself unless he believed coldly that it would take his own skill to swing it and that the job had to be done.

I felt suddenly chilly. Ordinarily an agent has a duty to save his own neck, in order to complete his mission and report back. On this job it was the Old Man who must come back-and after him, Mary. I stood number three and was as expendable as a paper clip. I didn't like it.

"One agent made a partial report," the Old Man went on. "He went in as a casual bystander and reported by phone that it must be a space ship although he could not determine its motive power. We got the same thing from the newscasts. He then reported that the ship was opening and that he was going to try to get closer, past the police lines. The last thing he said was, 'Here they come. They are little creatures, about-' Then he shut off."

"Little men?"

"He said, 'creatures'."

"Peripheral reports?"

"Plenty of them. The Des Moines stereocasting station reported the landing and sent mobile units in for spot cast. The pictures they sent out were all fairly long shots, taken from the air. They showed nothing but a disc-shaped object. Then, for about two hours, no pictures and no news, followed later by close ups and a new news slant."

The Old Man shut up. I said, "Well?"

"The whole thing was a hoax. The 'space ship' was a sheet metal and plastic fraud, built by two farm boys in some woods near their home. The fake reports originated with an announcer with more sense of humor than good judgment and who had put the boys up to it to make a story. He has been fired and the latest 'invasion from outer space' turns out to be a joke."

I squirmed. "So it's a hoax-but we lose six men. We're going to look for them?"

"No, for we would not find them. We are going to try to find out why triangulation of this photograph-" He held up the teleshot taken from the space station. "-doesn't quite jibe with the news reports-and why Des Moines stereo station shut up for a while."

Mary spoke up for the first time. "I'd like to talk with those farm boys."

I roaded the car about five miles this side of Grinnell and we started looking for the McLain farm-the news reports had named Vincent and George McLain as the culprits. It wasn't hard to find. At a fork in the road was a big sign, professional in appearance: THIS WAY TO THE SPACESHIP. Shortly the road was parked both sides with duos and groundcars and triphibs. A couple of hastily built stands dispensed cold drinks and souvenirs at the turn-off into the McLain place. A state cop was directing traffic.

"Pull up," directed the Old Man. "Might as well see the fun, eh?"

"Right, Uncle Charlie," I agreed.

The Old Man bounced out with only a trace of limp, swinging his cane. I handed Mary out and she snuggled up to me, grasping my arm. She looked up at me, managing to look both stupid and demure. "My, but you're strong. Buddy."

I wanted to slap her, but gave a self-conscious smirk instead. That poor-little-me routine from an agent, from one of the Old Man's agents. A smile from a tiger.

"Uncle Charlie" buzzed around, bothering state police, buttonholing people to give them unasked-for opinions, stopping to buy cigars at one of the stands, and in general giving a picture of a well-to-do, senile old fool, out for a holiday. He turned back to us and waved his cigar at a state sergeant. "The inspector says the whole thing is a fraud, my dears-a prank thought up by some boys. Shall we go?"

Mary looked disappointed. "No space ship?"

"There's a space ship, if you want to call it that," the cop answered. "Just follow the suckers, and you'll find it. It's 'sergeant', not 'inspector'."

"Uncle Charlie" pressed a cigar on him and we set out, across a pasture and into some woods. It cost a dollar to get through the gate and many of the potential suckers turned back. The path through the woods was rather deserted. I moved carefully, wishing for eyes in the back of my head instead of a phone. According to the book six agents had gone down this path and-none had come back. I didn't want it to be nine.

Uncle Charlie and Sis walked ahead, Mary chattering like a fool and somehow managing to be both shorter and younger than she had been on the trip out. We came to a clearing and there was the "space ship".

It was the proper size, more than a hundred feet across, but it was whipped together out of light-gauge metal and sheet plastic, sprayed with aluminum. It was roughly the shape of two giant pie plates, face to face. Aside from that, it looked like nothing in particular. Nevertheless Mary squealed. "Oh, how exciting!"

A youngster, eighteen or nineteen, with a permanent sunburn and a pimply face, stuck his head out of a sort of hatch in the top of the monstrosity. "Care to see inside?" he called out. He added that it would be fifty cents a piece more and Uncle Charlie shelled out.

Mary hesitated at the hatch. Pimple face was joined by what appeared to be his twin and they started to hand her down in. She drew back and I moved in fast, intending to do any handling myself. My reasons were 99 percent professional; I could feel danger all through the place. "It's dark in there," she quavered.

"It's perfectly safe," the second young man said. "We've been taking sightseers through all day. I'm Vine McLain, one of the owners. Come on, lady."

Uncle Charlie peered down the hatch, like a cautious mother hen. "Might be snakes in there," he decided. "Mary, I don't think you had better go in."

"Nothing to fear," the first McLain said insistently. "It's safe as houses."

"Just keep the money, gentlemen." Uncle Charlie glanced at his finger. "We're late as it is. Let's go, my dears."

I followed them back up the path, my hackles up the whole way.

We got back to the car and I pulled out into the road. Once we were rolling, the Old Man said sharply, "Well? What did you see?"

I countered with, "Any doubt about that first report? The one that broke off?"

"None."

"That thing over in the woods wouldn't have fooled an agent, even in the dark. This wasn't the ship he saw."

"Of course not. What else?"

"How much would you say that fake cost? That was new sheet metal, fresh paint, and from what I saw of the inside through the hatch, probably a thousand feet, more or less, of lumber to brace it."

"Go on."

"Well, the McLain house hadn't been painted in years, not even the barn. The place had 'mortgage' spelled out all over it. If the boys were in on the gag, they didn't foot the bill."

"Obviously. You, Mary?"

"Uncle Charlie, did you notice the way they treated me?"

"Who?" I said sharply.

"Both the state sergeant and the two boys. When I use the sweet-little-bundle-of-sex routine, something should happen. Nothing did."

"They were all attentive," I objected.

"You don't understand. You can't understand-but I know. I always know. Something was wrong with them. They were dead inside. Harem guards, if you know what I mean."

"Hypnosis?" asked the Old Man.

"Possibly. Or drugs perhaps." She frowned and looked puzzled.

"Hmm-" he answered. "Sammy, take the next turn to the left. We're investigating a point about two miles south of here."

"The triangulated location by the pic?"

"What else?"

But we didn't get there. First it was a bridge out and I didn't have room enough to make the car hop it, quite aside from the small matter of traffic regulations for a duo on the ground. We circled to the south and came in again, the only remaining route. We were stopped by a highway cop and a detour sign. A brush fire, he told us; go any farther and we would probably be impressed into firefighting. He didn't know but what he ought to send me up to the firelines anyhow.

Mary waved her lashes and other things at him and he relented. She pointed out that neither she nor Uncle Charlie could drive, a double lie.

After we pulled away I asked her, "How about that one?"

"What about him?"

"Harem guard?"

"Oh, my, no! A most attractive man."

Her answer annoyed me.

The Old Man vetoed taking to the air and making a pass over the triangulated spot. He said it was useless. We headed for Des Moines. Instead of parking at the toll gates we paid to take the car into the city proper, and ended up at the main studios of Des Moines

stereo. "Uncle Charlie" blustered his way into the office of the general manager, us in tow. He told several lies-or perhaps Charles M. Cavanaugh was actually a big wheel with the Federal Communications Authority. How was I to know?

Once inside and the door shut he continued the Big Brass act. "Now, sir, what is all this nonsense about a spaceship hoax? Speak plainly, sir; I warn you your license may depend on it."

The manager was a little round-shouldered man, but he did not seem cowed, merely annoyed. "We've made a full explanation over the channels," he said. "We were victimized by one of our own people. The man has been discharged."

"Hardly adequate, sir."

The little man-Barnes, his name was-shrugged. "What do you expect? Shall we string him up by his thumbs?"

Uncle Charlie pointed his cigar at him. "I warn you, sir, that I am not to be trifled with. I have been making an investigation of my own and I am not convinced that two farm louts and a junior announcer could have pulled off this preposterous business. There was money in it, sir. Yes, sir-money. And where would I expect to find money? Here at the top. Now tell me, sir, just what did you-"

Mary had seated herself close by Barnes's desk. She had done something to her costume, which exposed more skin, and her pose put me in mind of Goya's Disrobed Lady. She made a thumbs-down signal to the Old Man.

Barnes should not have caught it; his attention appeared to be turned to the Old Man. But he did. He turned toward Mary and his face went dead. He reached for his desk.

"Sam! Kill him!" the Old Man rapped.

I burned his legs off and his trunk fell to the floor. It was a poor shot; I had intended to burn his belly.

I stepped quickly to him and kicked his gun away from his still-groping fingers. I was about to give him the coup de grace-a man burned that way is dead, but it takes him a while to die-when the Old Man snapped, "Don't touch him! Mary, stand back!"

We did so. The Old Man sidled toward the body, like a cat cautiously investigating the unknown. Barnes gave a long bubbling sigh and was quiet-shock death; a gun burn doesn't bleed much, not that much. The Old Man looked him over and poked him gently with his cane.

"Boss," I said, "about time to git, isn't it?"

Without looking around he answered, "We're as safe here as anywhere. Safer, probably. This building may be swarming with them."

"Swarming with what?"

"How would I know? Swarming with whatever he was." He pointed to Barnes's body. "That's what I've got to find out."

Mary gave a choked sob, the first honest feminine thing I had known her to do, and gasped, "He's still breathing. Look!"

The body lay facedown; the back of the jacket heaved as if the chest were rising. The Old Man looked at it and poked at it with his cane. "Sam. Come here."

I came. "Strip it," he went on. "Use your gloves. And be careful."

"Booby trap?"

"Shut up. Use care."

I don't know what he expected me to find, but he must have had a hunch that was close to truth. I think the bottom part of the Old Man's brain has a built-in integrator which arrives at a logical necessity from minimum facts the way a museum johnny reconstructs an extinct animal from a single bone.

I took him at his word. First pulling on gloves-agent's gloves; I could have stirred boiling acid with my gloved hand, yet I could feel a coin in the dark and call heads or tails-once gloved, I started to turn him over to undress him.

The back was still heaving; I did not like the look of it-unnatural. I placed a palm between the shoulder blades.

A man's back is bone and muscle. This was jelly soft and undulating. I snatched my hand away.

Without a word Mary handed me a fancy pair of scissors from Barnes's desk. I took them and cut the jacket away. Presently I folded it back and we all looked. Underneath the jacket the body was dressed in a light single, almost transparent. Between this shirt and the skin, from the neck halfway down the back, was something which was not flesh. A couple of inches thick, it gave the corpse a round-shouldered, or slightly humped, appearance.

It pulsed like a jellyfish.

As we watched, it slid slowly off the back, away from us. I reached out to peel up the singlet, to let us at it; my hand was knocked away by the Old Man's cane. "Make up your mind," I said and rubbed my knuckles.

He did not answer but tucked the end of his cane under the bottom of the shirt and worried it up the trunk. The thing was uncovered.

Grayish, faintly translucent, and shot through with darker structure, shapeless-it reminded me of a giant clot of frogs' eggs. It was clearly alive, for it pulsed and quivered and moved by flowing. As we watched it flowed down into the space between Barnes's arm and chest, filled it and stayed there, unable to go farther.

"The poor devil," the Old Man said softly.

"Huh? That?"

"No. Barnes. Remind me to see to it that he gets the Purple Heart, when this is over. If it ever is over." The Old Man straightened up and slumped around the room, as if he had forgotten completely the gray horror nestling in the crook of Barnes's arm.

I drew back a bit and continued to stare at it, my gun ready. It could not move fast; it obviously could not fly; but I did not know what it could do and I was not taking chances. Mary moved closer to me and pressed her shoulder against mine, as if for human comfort. I put my free arm around her.

On a side table there was an untidy stack of cans, the sort used for stereo tapes. The Old Man took a double program can, spilled the reels on the floor, and came back with it. "This will do, I think." He placed the can on the floor, near the thing, and began chivvying it with his cane, trying to irritate it into crawling into the can.

Instead it oozed back until it was almost entirely under the body. I grabbed the free arm and heaved what was left of Barnes away from the spot; the thing clung momentarily, then flopped to the floor. After that, under dear old Uncle Charlie's directions, Mary and I used our guns set at lowest power to force it, by burning the floor close to it, into the can. We got it in, a close fit, and I slapped the cover on.

The Old Man tucked the can under his arm. "On our way, my dears."

On the way out he paused in the partly open door to call out a parting to Barnes, then, after closing the door, stopped at the desk of Barnes's secretary. "I'll be seeing Mr. Barnes again tomorrow," he told her. "No, no appointment. I'll phone first."

Out we went, slow march, the Old Man with the can full of thing under his arm and me with my ears cocked for alarums. Mary played the silly little moron, with a running monologue. The Old Man even paused in the lobby, bought a cigar, and inquired directions, with bumbling, self-important good nature.

Once in the car he gave me directions, then cautioned me against driving fast. The directions led us into a garage. The Old Man sent for the manager and said to him, "Mr. Malone wants this car-immediately." It was a signal I had had occasion to use myself, only then it had been "Mr. Sheffield" who was in a hurry. I knew that the duo would cease to exist in about twenty minutes, save as anonymous spare parts in the service bins.

The manager looked us over, then answered quietly, "Through that door over there." He sent the two mechanics in the room away on errands and we ducked through the door.

We ended up presently in the apartment of an elderly couple; there we became brunets and the Old Man got his bald head back. I acquired a moustache which did nothing for my looks, but I was surprised to find that Mary looked as well dark as she had as a redhead. The "Cavanaugh" combination was dropped; Mary got a chic nurse's costume and I was togged out as a chauffeur while the Old Man became our elderly, invalid employer, complete with shawl and temper tantrums.

A car was waiting for us when we were ready. The trip back was no trouble; we could have remained the carrot-topped Cavanaughs. I kept the screen turned on to Des Moines, but, if the cops had turned up the late Mr. Barnes, the newsboys hadn't heard about it.

We went straight down to the Old Man's office-straight as one can go, that is-and there we opened the can. The Old Man sent for Dr. Graves, the head of the Section's bio lab, and the job was done with handling equipment.

We need not have bothered. What we needed were gas masks, not handling equipment. A stink of decaying organic matter, like the stench from a gangrenous wound, filled the room and forced us to slap the cover back on and speed up the blowers. Graves wrinkled his nose. "What in the world was that?" he demanded. "Puts me in mind of a dead baby."

The Old Man was swearing softly. "You are to find out," he said. "Use handling equipment. Work it in suits, in a germ-free compartment, and don't assume that it is dead."

"If that is alive, I'm Queen Anne."

"Maybe you are, but don't take chances. Here is all the help I can give. It's a parasite; it's capable of attaching itself to a host, such as a man, and controlling the host. It is almost certainly extra-terrestrial in origin and metabolism."

The lab boss sniffed. "Extra-terrestrial parasite on a terrestrial host? Ridiculous! The body chemistries would be incompatible."

The Old Man grunted. "Damn your theories. When we captured it, it was living on a man. If that means it has to be a terrestrial organism, show me where it fits into the scheme of things and where to look for its mates. And quit jumping to conclusions; I want facts."

The biologist stiffened. "You'll get them!"

"Get going. Wait-don't use more of it than necessary for your investigations; I need the major portion as evidence. And don't persist in the silly assumption that the thing is dead; that perfume may be a protective weapon. That thing, if alive, is fantastically dangerous. If it gets on one of your laboratory men, I'll almost certainly have to kill him."

The lab director said nothing more, but he left without some of his cockiness.

The Old Man settled back in his chair, sighed, and closed his eyes. He seemed to have gone to sleep; Mary and I kept quiet. After five minutes or so he opened his eyes, looked at me, and said, "How many mustard plasters the size of that thing Doc just carted out of here can arrive in a space ship as big as that fraud we looked at?"

"Was there a space ship?" I asked. "The evidence seems slim."

"Slim but utterly incontrovertible. There was a ship. There still is a ship."

"We should have examined the site."

"That site would have been our last sight. The other six boys weren't fools. Answer my question."

"I can't. How big the ship was doesn't tell me anything about its payload, when I don't know its propulsion method, the jump it made, or what supply load the passengers require. It's a case of how long is a piece of rope? If you want a horseback guess, I'd say several hundred, maybe several thousand."

"Mmm . . . yes. So there are several hundred, maybe several thousand zombies in the State of Iowa tonight. Or harem guards, as Mary puts it." He thought for a moment. "But how am I to get past them to the harem? We can't go around shooting every round-shouldered man in Iowa; it would cause talk." He smiled feebly.

"I'll put you another question with no answer," I said. "If one space ship lands in Iowa yesterday, how many will land in North Dakota tomorrow? Or in Brazil?"

"Yes, there's that." He looked still more troubled. "I'll answer it by telling you how long is your piece of rope."

"Huh?"

"Long enough to choke you to death. You kids go wash up and enjoy yourselves; you may not have another chance. Don't leave the offices."

I went back to Cosmetics, got my own skin color back and in general resumed my normal appearance, had a soak and a massage, and then went to the staff lounge in search of a drink and some company. I looked around, not knowing whether I was looking for a blonde, brunette, or redhead, but feeling fairly sure that I could spot the right chassis.

It was a redhead. Mary was in a booth, sucking on a drink and looking much as she had looked when she was introduced to me as my sister. "Hi, Sis," I said, sliding in beside her.

She smiled and answered, "Hello, Bud. Drag up a rock," while moving to make room for me.

I dialed for bourbon and water which I needed for medicinal purposes and then said, "Is this your real appearance?"

She shook her head. "Not at all. Zebra stripes and two heads. What's yours?"

"My mother smothered me with a pillow the first time she saw me, so I never got a chance to find out."

She again looked me over with that side-of-beef scrutiny, then said, "I can understand her actions, but I am probably more hardened than she was. You'll do, Bud."

"Thanks." I went on, "Let's drop this 'Bud-and-Sis' routine; I find it gives me inhibitions."

"Hmm . . . I think you need inhibitions."

"Me? Not at all. Never any violence with me; I'm more the 'Barkis-is-willing' type." I might have added that, if I laid a hand on her and she happened not to like it. I'd bet that I would draw back a bloody stump. The Old Man's kids are never sissies.

She smiled. "So? Well, note it down that Miss Barkis is not willing, at least not this evening." She put down her glass. "Drink up and let's reorder."

We did so and continued to sit there, feeling warm and good, and, for the moment, not worried. There aren't many hours like that, especially in our profession; it makes one savor them.

One of the nicest things about Mary was that she did not turn on the sex, except for professional purposes. I think she knew-I'm sure she knew-what a load of it she possessed. But she was too much of a gentleman to use it socially. She kept it turned down low, just enough to keep us both warm and comfortable.

While we sat there, not saying much, I got to thinking how well she would look on the other side of a fireplace. My job being what it was, I had never thought seriously about getting married-and after all, a babe is just a babe; why get excited? But Mary was an agent herself; talking to her would not be like shouting off Echo Mountain. I realized that I had been lonely for one hell of a long time.

"Mary-"

"Yes?"

"Are you married?"

"Eh? Why do you ask? As a matter of fact I'm not-now. But what business-I mean, why does it matter?"

"Well, it might," I persisted.

She shook her head.

"I'm serious," I went on. "Look me over. I've got both hands and both feet. I'm fairly young, and I don't track mud in the house. You could do worse."

She laughed, but her laugh was kindly. "And you could work up better lines than that. I am sure they must have been extemporaneous."

"They were."

"And I won't hold them against you. In fact, I'll forget them. Listen, wolf, your technique is down; just because a woman tells you that she is not going to sleep with you tonight is no reason to lose your head and offer her a contract. Some women would be just mean enough to hold you to it."

"I meant it," I said peevishly.

"So? What salary do you offer?"

"Damn your pretty eyes. If you want that type of contract, I'll go along; you can keep your pay and I'll allot half of mine to you . . . unless you want to retire."

She shook her head. "I didn't mean it; I'd never insist on a settlement contract, not with a man I was willing to marry in the first place-"

"I didn't think you would."

"I was just trying to make you see that you yourself were not serious." She looked me over soberly. "But perhaps you are," she added in a warm, soft voice.

"I am."

She shook her head again. "Agents should not marry. You know that."

"Agents shouldn't marry anyone but agents."

She started to answer, but stopped suddenly. My own phone was talking in my ear, the Old Man's voice, and I knew she was hearing the same thing. "Come into my office," he said.

We both got up without saying anything. Mary stopped me at the door, put a hand on my arm, and looked up into my eyes. "That is why it is silly to talk about marriage. We've got this job to finish. All the time we've been talking, you've been thinking about the job and so have I."

"I have not."

"Don't play with me! Consider this, Sam-suppose you were married and you woke up to find one of those things on your wife's shoulders, possessing her." There was horror in her eyes as she went on, "Suppose I woke up and found one of them on your shoulders."

"I'll chance it. And I won't let one get to you."

She touched my cheek. "I don't believe you would."

We went on into the Old Man's office.

He looked up just long enough to say, "Come along. We're leaving."

"Where to?" I answered. "Or shouldn't I ask?"

"White House. See the President. Shut up."

I shut.

Chapter 3

At the beginning of a forest fire or an epidemic there is a short time when a minimum of correct action will contain and destroy. The B. W. boys express it in exponential equations, but you don't need math to understand it; it depends on early diagnosis and prompt action before the thing gets out of hand. What the President needed to do the Old Man had already figured out-declare a national emergency, fence off the Des Moines area, and shoot anybody who tried to slip out, be it a cocker spaniel or grandma with her cookie jar. Then let them out one at a time, stripping them and searching them for parasites. Meantime, use the radar screen, the rocket boys, and the space stations to spot and smash any new landings.

Warn all the other nations including those behind the Curtain, ask for their help-but don't be fussy about international law, for this was a fight for racial survival against an outside invader. For the moment it did not matter where they came from-Mars, Venus, the Jovian satellites, or outside the system entirely. Repel the invasion.

The Old Man had cracked the case, analyzed it, and come up with the right answer in a little more than twenty-four hours. His unique gift was the ability to reason logically with unfamiliar, hard-to-believe facts as easily as with the commonplace. Not much, eh? I have never met anyone else who could do it wholeheartedly. Most minds stall dead when faced with facts which conflict with basic beliefs; "I-just-can't-believe-it" is all one word to highbrows and dimwits alike.

But not to the Old Man-and he had the ear of the President.

The Secret Service guards gave us the works, politely. An X-ray went beep! and I surrendered my heater. Mary turned out to be a walking arsenal; the machine gave four beeps and a hiccough, although you would have sworn she couldn't hide a tax receipt under what she was wearing. The Old Man surrendered his cane without waiting to be asked; I got the notion he did not want it to be X-rayed.

Our audio capsules gave them trouble. They showed up both by X-ray and by metal detector, but the guards weren't equipped for surgical operations. There was a hurried conference with a presidential secretary and the head guard ruled that anything embedded in the flesh need not be classed as a potential weapon.

They printed us, photographed our retinas, and ushered us into a waiting room. The Old Man was whisked out and in to see the President alone.

"I wonder why we were brought along?" I asked Mary. "The Old Man knows everything we know."

She did not answer, so I spent the time reviewing in my mind the loopholes in the security methods used to guard the President. They do such things much better behind the Curtain; an assassin with any talent could have beaten our safeguards with ease. I got to feeling indignant about it.

After a while we were ushered in. I found I had stage fright so badly I was stumbling over my feet. The Old Man introduced us and I stammered. Mary just bowed.

The President said he was glad to see us and turned on that smile, the way you see it in the stereocasts-and he made us feel that he was glad to see us. I felt all warm inside and no longer embarrassed.

And no longer worried. The President, with the Old Man's help, would take action and the dirty horror we had seen would be cleaned up.

The Old Man directed me to report all that I had done and seen and heard on this assignment. I made it brief but complete. I tried to catch his eye when it came to the part about killing Barnes, but he wasn't having any-so I left out the Old Man's order to shoot and made it clear that I had shot to protect another agent-Mary-when I saw Barnes reach for his gun. The Old Man interrupted me. "Make your report complete."

So I filled in the Old Man's order to shoot. The President threw the Old Man a glance at the correction, the only expression he showed. I went on about the parasite thing, went on, in fact, up to that present moment, as nobody told me to stop.

Then it was Mary's turn. She fumbled in trying to explain to the President why she expected to get some sort of response out of normal men-and had not gotten it out of the McLain boys, the state sergeant, and Barnes. The President helped her . . . by smiling warmly, managing to bow without getting up, and saying, "My dear young lady, I quite believe it."

Mary blushed, then went on. The President listened gravely while she finished. He asked a couple of questions, then sat still for several minutes.

Presently he looked up and spoke to the Old Man. "Andrew," he said, "your section has been invaluable. On at least two occasions your reports have tipped the balance in crucial occasions in history."

The Old Man snorted. "So it's 'no', is it?"

"I did not say so."

"You were about to."

The President shrugged. "I was going to suggest that your young people withdraw, but now it does not matter. Andrew, you are a genius, but even geniuses make mistakes. They overwork themselves and lose their judgment. I'm not a genius but I learned to relax about forty years ago. How long has it been since you had a vacation?"

"Damn your vacations! See here, Tom, I anticipated this; that's why I brought witnesses. They are neither drugged nor instructed. Call in your psych crew; try to shake their stories."

The President shook his head. "You wouldn't have brought witnesses who could be cracked. I'm sure you are cleverer about such things than anyone whom I could bring in to test them. Take this young man-he was willing to risk a murder charge to protect you. You inspire loyalty, Andrew. As for the young lady, really, Andrew, I can't start what amounts to war on a woman's intuition."

Mary took a step forward. "Mr. President," she said very earnestly, "I do know. I know every time. I can't tell you how I know-but those were not normal male men."

He hesitated, then answered, "I do not dispute you. But you have not considered an obvious explanation-that they actually were, ah, 'harem guards'. Pardon me, Miss. There are always such unfortunates in the population. By the laws of chance you ran across four in one day."

Mary shut up. The Old Man did not. "God damn it, Tom-" I shuddered; you don't talk to the President that way. "-I knew you when you were an investigating senator and I was a key man in your investigations. You know I wouldn't bring you this fairy tale if there were any way to explain it away. Facts can't be ignored; they've got to be destroyed, or faced up to. How about that space ship? What was in it? Why couldn't I even reach the spot where it landed?" He hauled out the photograph taken by Space Station Beta and shoved it under the President's nose.

The President seemed unperturbed. "Ah, yes, facts. Andrew, both you and I have a passion for facts. But I have several sources of information other than your section. Take this photo-you made quite a point of it when you phoned. I've checked the matter. The metes and bounds of the McLain farm as recorded in the local county courthouse check precisely with the triangulated latitude and longitude of this object on this photograph." The President looked up. "Once I absent-mindedly turned off a block too soon and got lost in my own neighborhood. You weren't even in your own neighborhood, Andrew."

"Tom-"

"Yes, Andrew?"

"You did not trot out there and check those courthouse maps yourself?"

"Of course not."

"Thank God for that-or you would be carrying three pounds of pulsing tapioca between your shoulder blades this minute-and God save the United States! You can be sure of this: the courthouse clerk and whatever agent was sent to see him, both are hag-ridden by filthy parasites this very moment." The Old Man stared at the ceiling. "Yes, and the Des Moines chief of police, newspaper editors around there, dispatchers, cops, all sorts of key people. Tom, I don't know what we are up against, but they know what we are, and they are pinching off the nerve cells of our social organism before true messages can get back-or they cover up the true reports with false ones, just as they did with Barnes. Mr. President, you must order an immediate, drastic quarantine of the whole area. There is no other hope!"

"Barnes," the President repeated softly, as if he had heard nothing else. "Andrew, I had hoped to spare you this, but-" He broke off and flipped a key at his desk. "Get me stereo station WDES, Des Moines, the manager's office."

Shortly a screen lighted on his desk; he touched another switch and a solid display in the wall lighted up. We were looking into the room we had been in only a few hours before.

Looking into it past the shoulders of a man who filled most of the screen-Barnes.

Or his twin. When I kill a man, I expect him to stay dead. I was shaken but I still believed in myself-and my heater.

The man in the display said, "You asked for me, Mr. President?" He sounded as if he were dazzled by the honor.

"Yes, thank you. Mr. Barnes, do you recognize any of these people?"

He looked surprised. "I'm afraid not. Should I?"

The Old Man interrupted. "Tell him to call in his office force."

The President looked quizzical but did just that. "Barnes" looked puzzled but complied. They trooped in, girls mostly, and I recognized the secretary who sat outside the manager's door. One of them squealed, "Ooh-it's the President," and they all fell to buzzing.

None of them identified us-not surprising with the Old Man and me, but Mary's appearance was just as it had been in that same office, and I will bet that Mary's looks would be burned into the mind of any woman who had ever seen her.

But I noticed one thing about them-every single one of them was round-shouldered.

The President eased us out. He put a hand on the Old Man's shoulder. "Seriously, Andrew, take that vacation." He flashed the famous smile. "The Republic won't fall-I'll worry it through till you get back."

Ten minutes later we were standing in the wind on the Rock Creek platform. The Old Man seemed shrunken and, for the first time, old. "What now, boss?"

"Eh? For you two, nothing. You are both on leave until recalled."

"I'd like to take another look at Barnes's office."

"Don't go near the place. Stay out of Iowa. That's an order."

"Mmm-what are you going to do, if I may ask?"

"You heard the President, didn't you? I am going down to Florida and lie in the sun and wait for the world to go to hell. If you have any sense, you'll do the same. There's damned little time."

He squared his shoulders and stumped away. I turned to speak to Mary, but she was gone. His advice seemed awfully good, and it had suddenly occurred to me that waiting for the end of the world might not be too bad, with her help.

I looked around quickly but could not spot her. I trotted off and overtook the Old Man. "Excuse me, Boss. Where did Mary go?"

"Huh? On leave no doubt. Don't bother me."

I considered trying to relay to her through the Section circuit, when I remembered that I did not know her right name, nor her code, nor her I. D. number. I thought of trying to bull it through by describing her, but that was foolishness. Only Cosmetics Records knows the original appearance of an agent-and they won't talk. All I knew about her was

that she had twice appeared as a redhead, at least once by choice-and that, for my taste, she was "why men fight". Try punching that into a phone!

Instead I found a room for the night. After I found it I wondered why I had not left the Capital and gone back to my own apartment. Then I wondered if the blonde were still in it. Then I wondered who the blonde was, anyway? Then I went to sleep.

Chapter 4

I woke up at dusk. The room I was in had a real window-the Section pays well and I could afford little luxuries. I looked out over the Capital as it came to life for the night. The river swept away in a wide bend past the Memorial; it was summer and they were adding fluorescine to the water above the District so the river stood out in curving sweeps of glowing rose and amber and emerald and shining fire. Little pleasure boats cut through the colors, each filled, I had no doubt, with couples up to no good and enjoying it.

On the land, here and there among the older buildings, the bubble domes were lighting up, giving the city a glowing fairyland look. Off to the east, where the Bomb had landed, there were no old buildings at all and the area was an Easter basket of color giant Easter eggs, lighted from within.

I've seen the Capital at night oftener than most, because of my business, and, while I like the place, I had not thought much about it. But tonight I had that "Last Ride Together" feeling. It was so beautiful it hurt but it was not its beauty that choked me up; it was knowing that down under those warm lights were people, alive and individual people, going about their lawful occasions, making love or having spats, whichever suited them . . . doing whatever they damn well pleased, each under his own vine and his own fig tree with nobody to make him afraid, as it says.

I thought about all those gentle, kindly people (with only an occasional heel) and I thought about them each with a gray slug clinging to the back of his neck, twitching his legs and arms, making his voice say what the slug wished, going where the slug wanted to go.

Hell's bells-life under the commissars couldn't be that bad. I know-I've been behind the Curtain.

I made myself a solemn promise: if the parasites won. I'd arrange to be dead before I would let one of those things ride me the way one had ridden Barnes. For an agent it would be simple; just bite my nails- or, if your hands happen to be off, there are a couple of other ways. The Old Man planned for all professional necessities.

But the Old Man had not planned such arrangements for such a purpose and I knew it. It was the Old Man's business-and mine-to keep those people down there safe, not to run out on them when the going got rough.

I turned away from the window. There was not a confounded thing I could do about it now; I decided that what I needed was company. The room contained the usual catalog of "escort bureaus" and "model agencies" that you'll find in almost any big hotel except maybe the Martha Washington. I thumbed through it, looking the girls over, then slammed it shut. I didn't want a whoopee girl; I wanted one particular girl-one who would as soon shoot as shake hands and would bite in the clinches. And I did not know where she had gone.

I always carry a tube of "tempus fugit" pills; most agents do, as one never knows when giving your reflexes a jolt will get you through a tight spot. Despite the scare propaganda, tempos pills are not habit-forming, not the way the original hashish is.

Nevertheless a purist would say I was addicted to them, for I had the habit of taking them occasionally to make a twenty-four hour leave seem like a week. I admit that I enjoyed the mild euphoria which the pills induced as a side effect. Primarily, though, they just stretch out your subjective time by a factor of ten or more, chop time into finer bits so that you live longer for the same amount of clock and calendar.

What's wrong with that? Sure, I know the horrible example story of the man who died of old age in a calendar month through taking the pills steadily, but I took them only once in a while.

Maybe he had the right idea. He lived a long and happy life-you can be sure it was happy-and died happy at the end. What matter that the sun rose only thirty times? Who is keeping score and what are the rules anyhow?

I sat there, staring at my tube of pills and thinking that I had enough to keep me hopped up and contented for what would be, to me, at least two "years". If I wanted to, I could crawl in my hole and pull it in after me.

I took out two pills and got a glass of water. Then I put them carefully back in the tube, put on my gun and phone, left the hotel and headed for the Library of Congress.

On the way I stopped in a bar for a quick one and looked at a newscast. There was no news from Iowa, but when is there any news from Iowa?

At the Library I went to the general catalog, put on blinkers, and started scanning for references. "Flying Saucers" led to "Flying Discs", then to "Project Saucer", then "Lights in the Sky", "Fireballs", "Cosmic Diffusion Theory of Life Origins", and two dozen blind alleys and screwball branches of literature. I needed some sort of a Geiger counter to tell me what was pay dirt and what was not, especially as what I wanted was almost certain to carry a semantic-content code key classing it somewhere between Aesop's fables and the Lost Continent myths.

Nevertheless, in an hour I had a double handful of selector cards. I handed them to the vestal virgin at the desk and waited while she fed them into the hopper. Presently she said, "Most of the films you want are in use. The rest will be delivered to study room 9-A. Take the south escalator, puhlease."

Room 9-A had one occupant-who looked up as I came in and said, "Well! The wolf in person, how did you manage to pick me up again? I could swear I gave you a clean miss."

I said, "Hello, Mary."

"Hello," she answered, "and now, good-by. Miss Barkis still ain't willin' and I've got work to do."

I got annoyed. "Listen, you conceited little twerp, odd as it may seem to you, I did not come here looking for your no-doubt beautiful white body. I occasionally do some work myself and that is why I'm here. If you will put up with my unwelcome presence until my spools arrive, I'll get the hell out and find another study room,fa stag one."

Instead of flaring back, she immediately softened, thereby proving that she was more of a gentleman than I was. "I'm sorry, Sam. A woman hears the same thing so many thousand times that she gets to thinking that no other topic is possible. Sit down."

"No," I answered, "thanks, but I'll take my spools to an unoccupied room. I really do want to work."

"Stay here," she insisted. "Read that notice on the wall. If you remove spools from the room to which they are delivered, you will not only cause the sorter to blow a dozen tubes, but you'll give the chief reference librarian a nervous breakdown."

"I'll bring them back when I'm through with them."

She took my arm and warm tingles went up it. "Please, Sam. I'm sorry."

I sat down and grinned at her. "Nothing could persuade me to leave. I did not expect to find you here, but now that I have, I don't intend to let you out of sight until I know your phone code, your home address, and the true color of your hair."

"Wolf," she said softly, wrinkling her nose. "You'll never know any of them." She made a great business of fitting her head back into her study machine while ignoring me. But I could see that she was not displeased.

The delivery tube went thunk! and my spools spilled into the basket. I gathered them up and stacked them on the table by the other machine. One of them rolled over against the ones Mary had stacked up and knocked them down. Mary looked up.

I picked up what I thought was my spool and glanced at the end-the wrong end, as all it held was the serial number and that little pattern of dots which the selector reads. I turned it over, read the label, and placed it in my pile.

"Hey!" said Mary. "That's mine."

"In a pig's eye," I said politely.

"But it is--I read the label when it was faced toward me. It's the one I want next."

Sooner or later, I can see the obvious. Mary wouldn't be there to study the history of footgear through the Middle Ages. I picked up three or four more of hers and read the labels. "So that's why nothing I wanted was in," I said. "But you didn't do a thorough job; I found some that you missed." I handed her my selection.

Mary looked them over, then pushed all the spools into a single pile. "Shall we split them fifty-fifty, or both of us see them all?"

"Fifty-fifty to weed out the junk, then we'll both go over the remainder," I decided. "Let's get busy."

Even after having seen the parasite on poor Barnes's back, even after being solemnly assured by the Old Man that a "flying saucer" had in fact landed, I was not prepared for the monumental pile of evidence to be found buried in a public library. A pest on Digby and his evaluating formula! Digby was a floccinaucinihilipilificator at heart-which is an eight-dollar word meaning a joker who does not believe in anything he can't bite.

The evidence was unmistakable; Earth had been visited by ships from outer space not once but many times.

The reports long antedated our own achievement of space travel; some of them ran back into the seventeenth century-earlier than that, but it was impossible to judge the quality of reports dating back to a time when "science" meant an appeal to Aristotle. The first systematic data came from the United States itself in the 1940's and '50's. The next flurry was in the 1980's, mostly from Russo-Siberia. These reports were difficult to judge as there was no direct evidence from our own intelligence agents and anything that came from behind the Curtain was usually phony, ipso facto.

I noticed something and started taking down dates. Strange objects in the sky appeared to hit a cycle with crests at thirty-year intervals, about. I made a note about it; a statistical

analyst might make something of it-or more likely, if I fed it to the Old Man, he would see something in that crystal ball he uses for a brain.

"Flying saucers" were tied in with "mysterious disappearances" not only through being in the same category as sea serpents, bloody rain, and such like wild data, but also because in at least three well-documented instances pilots had chased "saucers" and never come back, or down, anywhere, i.e., officially classed as crashed in wild country and not recovered- an "easy out" or "happy hurdle" type of explanation.

I got another wild hunch and tried to see whether or not there was a thirty-year cycle in mysterious disappearances, and, if so, did it phase-match the objects in-the-sky cycle? There seemed to be but I could not be sure-too much data and not enough fluctuation; there are too many people disappearing every year for other reasons, from amnesia to mothers-in-law.

But vital records have been kept for a long time and not all were lost in the bombings. I noted it down to farm out for professional analysis.

The fact that groups of reports seemed to be geographically and even politically concentrated I did not try very hard to understand. I tabled it, after trying one hunch hypothesis on for size; put yourself in the invaders' place; if you were scouting a strange planet, would you study all of it equally, or would you pick out areas that looked interesting by whatever standards you had and then concentrate?

It was just a guess and I was ready to chuck it before breakfast, if necessary.

Mary and I did not exchange three words all night. Eventually we got up and stretched, then I lent Mary change to pay the machine for the spools of notes she had taken (why don't women carry change?) and got my wires out of hock, too. "Well, what's the verdict?" I asked.

"I feel like a sparrow who has built a nice nest and discovers that it is in a rain spout."

I recited the old jingle. "And we'll do the same thing-refuse to learn and build again in the spout."

"Oh, no! Sam, we've got to do something, fast. The President has to be convinced. It makes a full pattern; this time they are moving in to stay."

"Could be. In fact I think they are."

"Well, what do we do?"

"Honey chile, you are about to learn that in the Country of the Blind the one-eyed man is in for a hell of a rough ride."

"Don't be cynical. There isn't time."

"No. There isn't. Gather up your gear and let's get out of here."

Dawn was on us as we left and the big library was almost deserted. I said, "Tell you what-let's find a barrel of beer, take it to my hotel room, bust in the head, and talk this thing over."

She shook her head. "Not to your hotel room."

"Damn it, this is business."

"Let's go to my apartment. It's only a couple of hundred miles away; I'll fix you breakfast when we get there."

I recalled my basic purpose in life in time to remember to leer. "That's the best offer I've had all night. But seriously-why not the hotel? We'd get breakfast there and save a half hour's travel."

"You don't want to come to my apartment? I won't bite you."

"I was hoping you would-so I could bite back. No, I was just wondering why the sudden switch?"

"Well-perhaps I wanted to show you the bear traps I have arranged tastefully around my bed. Or perhaps I just wanted to prove to you I could cook." She dimpled for a moment.

I flagged a taxi and we went to her apartment.

When we got inside she left me standing, while she made a careful search of the place, then she came back and said, "Turn around. I want to feel your back."

"Why do-"

"Turn around!"

I shut up and did so. She gave it a good knuckling, all over, then said, "Now you can feel mine."

"With pleasure!" Nevertheless I did a proper job, for I saw what she was driving at. There was nothing under her clothes but girl-girl and assorted items of lethal hardware.

She turned around and let a deep sigh. "That's why I didn't want to go to your hotel room. Now we're safe. Now I know we are safe for the first time since I saw that thing on the station manager's back. This apartment is tight; I turn off the air and leave it sealed like a vault every time I leave it."

"Say-how about the air conditioning? Could one get in through the ducts?"

"Possibly-but I didn't turn on the conditioner system; I cracked one of the air-raid reserve bottles instead. Never mind; what would you like to eat?"

I wanted to suggest Mary herself, served up on lettuce and toast, but I thought better of it. "Any chance of about two pounds of steak, just warmed through?"

We split a five-pound steak between us and I swear I ate the short half. While we chomped, we watched the newscast. Still no news from Iowa.

Chapter 5

I did not get to see the bear traps; she locked her bedroom door. I know; I tried it. Three hours later she woke me and we had a second breakfast. Presently we struck cigarettes and I reached over and switched off the newscast. It was devoted principally to a display of the states' entries for "Miss America." Ordinarily I would have watched with interest but since none of the babes was round-shouldered and their contest costumes could not possibly have concealed humps bigger than mosquito bites, it seemed to lack importance that day.

I said, "Well?"

Mary said, "We've got to arrange the facts we have dug up and rub the President's nose in them. Action has to be on a national scale-global, really."

"How?"

"We've got to see him again."

I repeated, "How?"

She had no answer for that one.

I said, "We've got only one route-via official channels. Through the Old Man."

I put in the call, using both our codes so that Mary could hear, too. Presently I heard, "Chief Deputy Oldfield, speaking for the Old Man. He's not available. Shoot."

"It's got to be the Old Man."

There was a pause, then, "I don't have either one of you down as on assignment. Is this official or unofficial?"

"Uh, I guess you'd call it unofficial."

"Well, I won't put you through to the Old Man for anything unofficial. And anything official I am handling. Make up your mind."

I thanked him and switched off before I used any bad language. Then I coded again. The Old Man has a special code, in addition to regular channels, which is guaranteed to cause him to rise up out of his coffin-but God help the agent who uses it unnecessarily. I hadn't used it in five years.

He answered with a burst of profanity.

"Boss," I said, "on the Iowa matter-"

He broke off short. "Yes?"

"Mary and I spent all night digging former data out of the files. We want to talk it over with you."

The profanity resumed. Presently he told me to brief it and turn it in for analysis and added that he intended to have my ears fried for a sandwich.

"Boss!" I said sharply.

"Eh?"

"If you can run out on the job, so can we. Both Mary and I are resigning from the Section right now-and that's official!"

Mary's eyebrows went up but she said nothing. There was a silence so long that I thought he had cut me off, then he said, in a tired, whipped voice, "Palmglade Hotel, North Miami Beach. I'll be the third sunburn from the end."

"Right away." I sent for a taxi and we went up on the roof. I had the hackie swing out over the ocean to avoid the Carolina speed trap; we made good time.

The Old Man was sunburned all right. He lay there, looking sullen and letting sand dribble through his fingers, while we reported. I had brought along a little buzz box so that he could get it directly off the wire.

He looked up sharply when we came to the point about thirty-year cycles, but he allowed it to ride until he came to my later query about possible similar cycles in disappearances, whereupon he stopped me and called the Section. "Get me Analysis. Hello, Peter? This is the boss. I want a curve on unexplained disappearances, quantitative, starting with 1800. Huh? People, of course--did you think I meant latch keys? Smooth out known factors and discount steady load-what I want to see is humps and valleys. When? I want it two hours ago; what are you waiting for?"

After he switched off he struggled to his feet, let me hand him his cane and said, "Well, back to the jute mill. We've no facilities here."

"To the White House?" Mary asked eagerly.

"Eh? Be your age. You two have picked up nothing that would change the President's mind."

"Oh. Then what?"

"I don't know. Keep quiet, unless you have a bright idea."

The Old Man had a car at hand, of course, and I drove us back. After I turned it over to block control I said, "Boss, I've got a caper that might convince the President, if you can get him to hold still."

He grunted. "Like this," I went on, "send two agents in, me and one other. The other agent carries a portable scanning rig and keeps it trained on me the whole time. You get the President to watch what happens."

"Suppose nothing happens?"

"I plan to make it happen. First, I am going where the space ship landed, bull my way on through. We'll get close-up pix of the real ship, piped right into the White House. After that I plan to go back to Barnes's office and investigate those round shoulders. I'll tear shirts off right in front of the camera. There won't be any finesse to the job; I'll just bust things wide open with a sledge hammer."

"You realize you would have the same chance as a mouse at a cat convention."

"I'm not so sure. As I see it, these things haven't any superhuman powers. I'll bet they are strictly limited to whatever the human being they are riding can do-maybe less. I don't plan on being a martyr. In any case I'll get you pix, good ones."

"Hmm-"

"It might work," Mary put in. "I'll be the other agent, I can-"

The Old Man and I said, "No," together-and then I flushed; it was not my prerogative to say so. Mary went on, "I was going to say that I am the logical one because of the, uh, talent I have for spotting a man with a parasite on him."

"No," the Old Man repeated, "It won't be necessary. Where he's going they'll all have riders-assumed so until proved otherwise. Besides, I am saving you for something."

She should have shut up, but for once did not. "For what? This is important."

Instead of snapping at her the Old Man said quietly, "So is the other job. I'm planning to make you a presidential bodyguard, as soon as I can get it through his head that this is serious."

"Oh." She thought about it and answered, "uh, boss-"

"Eh?"

"I'm not certain I could spot a woman who was possessed. I'm not, uh, equipped for it."

"So we take his women secretaries away from him. Ask me a hard one. And Mary-you'll be watching him, too. He's a man, you know."

She turned that over in her mind. "And suppose I find that one has gotten to him, in spite of everything?"

"You take necessary action, the Vice President succeeds to the chair, and you get shot for treason. Simple. Now about this mission. We'll send Jarvis with the scanner and I think I'll include Davidson as an extra hatchet man. While Jarvis keeps the pick-up on you, Davidson can keep his eyes on Jarvis-and you can try to keep one eye on him. Ring-around the-rosy."

"You think it will work, then?"

"No-but any plan of action is better than no plan. Maybe it will stir up something."

While we headed for Iowa-Jarvis, Davidson, and I-the Old Man went back to Washington. He took Mary along. She cornered me as we were about to leave, grabbed me by the ears, kissed me firmly and said, "Sam-try to come back."

I got all tingly and felt like a fifteen-year-old. Second childhood, I guess.

Davidson roaded the car beyond the place where I had found a bridge out. I was navigating, using a large-scale ordnance map on which had been pinpointed the exact landing site of the real space ship. The bridge, which was still out, gave a close-by and precise reference point. We turned off the road two tenths of a mile due east of the site and jeeped through the scrub to the spot. Nobody tried to stop us.

Almost to the spot, I should say. We ran into freshly burned-over ground and decided to walk. The site as shown by the space station photograph was included in the brush fire area-and there was no "flying saucer". It would have taken a better detective than I will ever be to show that one had ever landed there. The fire had destroyed the traces, if any.

Jarvis scanned everything, anyhow, but I knew that the slugs had won another round. As we came out we ran into an elderly farmer; following doctrine we kept a wary distance, although he looked harmless.

"Quite a fire," I remarked, sidling away.

"Sure was," he said dolefully. "Killed two of my best milk cows, the poor dumb brutes. You fellows reporters?"

"Yes," I agreed, "but we've been sent out on a wild-goose chase." I wished Mary were along. Probably this character was naturally round-shouldered. On the other hand, assuming that the Old Man was right about the space ship-and he had to be right-then this all-too-innocent bumpkin must know about it and was covering it up. Ergo, he was hag-ridden.

I decided that I had to do it. The chances of capturing a live parasite and getting its picture on the channels back to the White House were better here than they would be in a crowd. I threw a glance at my teammates; they were both alert and Jarvis was scanning.

As the farmer turned to go I tripped him. He went face down and I was on his back like a monkey, clawing at his shirt. Jarvis moved in and got a close up; Davidson moved over to cover point. I had his back bare before he got his wind.

And it was bare. It was as clean as mine, no parasite, no sign of one. Nor any place on his body, which I made sure of before I let him up.

I helped him up and brushed him off; his clothes were filthy with ashes and so were mine. "I'm terribly sorry," I said. "I've made a bad mistake."

He was trembling with anger. "You young-" He couldn't seem to find a word bad enough for me. He looked at all of us and his mouth quivered. "I'll have the law on you. If I were twenty years younger I'd lick all three of you."

"Believe me, old timer, it was a mistake."

"Mistake!" His face broke and I thought he was going to cry. "I come back from Omaha and find my place burned, half my stock gone, and my son-in-law no place around. I come out to find out why strangers are snooping around my land and I like to get torn to pieces. Mistake! What's the world coming to?"

I thought I could answer that last one, but I did not try to. I did try to pay him for the indignity but he slapped my money to the ground. We tucked in our tails and got out.

When we were back in the car and rolling again, Davidson said to me, "Are you and the Old Man sure you know what you are up to?"

"I can make a mistake," I said savagely, "but have you ever known the Old Man to?"

"Mmm. . . no. Can't say as I have. Where next?"

"Straight in to WDES main station. This one won't be a mistake."

"Anyhow," Jarvis commented. "I got good pick-up throughout."

I did not answer.

At the toll gates into Des Moines the gatekeeper hesitated when I offered the fee. He glanced at a notebook and then at our plates. "Sheriff has a call out for this car," he said. "Pull over to the right." He left the barrier down.

"Right it is," I agreed, backed up about thirty feet and gunned her for all she was worth. The Section's cars are beefed up and hopped up, too-a good thing, for the barrier was stout. I did not slow down on the far side.

"This," said Davidson dreamily, "is interesting. Do you still know what you are doing?"

"Cut the chatter," I snapped. "I may be crazy but I am still agent-in-charge. Get this, both of you: we aren't likely to get out of this. But we are going to get those pix."

"As you say, chief."

I was running ahead of any pursuit. I slammed to a stop in front of the station and we poured out. None of "Uncle Charlie's" indirect methods-we swarmed into the first elevator that was open and punched for the top floor-Barnes's floor. When we got there I left the door of the car open, hoping to use it later.

As we came into the outer office the receptionist tried to stop us but we pushed on by. The girls looked up, startled. I went straight to Barnes's inner door and tried to open it; it was locked. I turned to his secretary. "Where's Barnes?"

"Who is calling, please?" She said, polite as a fish.

I looked down at the fit of the sweater across her shoulders. Humped. By God, I said to myself, this one has to be. She was here when I killed Barnes. I bent over and pulled up her sweater.

I was right. I had to be right. For the second time I stared at the raw flesh of one of the parasites.

I wanted to throw up, but I was too busy. She struggled and clawed and tried to bite. I judo-cut the side of her neck, almost getting my hand in the filthy mess, and she went limp. I gave her three fingers in the pit of her stomach for good measure, then swung her around. "Jarvis," I yelled, "get a close up."

The idiot was fiddling with his gear, bending over it, his big hind end between me and the pick up. He straightened up. "School's out," he said. "Blew a tube."

"Replace it-hurry!"

A stenographer stood up on the other side of the room and fired, not at me, not at Jarvis, but at the scanner. Hit it, too-and both Davidson and I burned her down. As if it had been a signal about six of them jumped Davidson. They did not seem to have guns; they just swarmed over him.

I still hung onto the secretary and shot from where I was. I caught a movement out of the corner of my eye and turned to find Barnes-"Barnes" number two-standing in his doorway. I shot him through the chest to be sure to get the slug I knew was on his back. I turned back to the slaughter.

Davidson was up again. A girl crawled toward him; she seemed wounded. He shot her full in the face and she stopped. His next bolt was just past my ear. I looked around and said, "Thanks! Now let's get out of here. Jarvis-come on!"

The elevator was still open and we rushed in, me still burdened with Barnes's secretary. I slammed the door closed and started it. Davidson was trembling and Jarvis

was dead white. "Buck up," I said, "you weren't shooting people, you were shooting things. Like this." I held the girl's body up and looked down at her back myself.

Then I almost collapsed. My specimen, the one I had grabbed with its host to take back alive, was gone. Slipped to the floor, probably, and oozed away during the ruckus. "Jarvis," I said, "did you get anything up there?" He shook his head and said nothing. Neither did I. Neither did Davidson.

The girl's back was covered with a red rash, like a million pinpricks, in the area where the thing had ridden her. I pulled her sweater down and settled her on the floor against the wall of the car. She was still unconscious and likely to stay that way. When we reached street level we left her in the car. Apparently nobody noticed, for there was no hue-and-cry as we went through the lobby to the street.

Our car was still standing there and a policeman had his foot on it while making out a ticket. He handed it to me as we got in. "You know you can't park in this area, Mac," he said reprovingly.

I said, "Sorry," and signed his copy as it seemed the safest and quickest thing to do. Then I gunned the car away from the curb, got as clear as I could of traffic-and blasted her off, right from a city street. I wondered whether or not he added that to the ticket. When I had her up to altitude I remembered to switch the license plates and identification code. The Old Man thinks of everything.

But he did not think much of me when we got back. I tried to report on the way in but he cut me short and ordered us into the Section offices. Mary was there with him. That was all I needed to know; if despite my flop the Old Man had convinced the President she would have stayed.

He let me tell what had happened with only an occasional grunt. "How much did you see?" I asked when I had finished.

"Transmission cut off when you hit the toll barrier," he informed me. "I can't say that the President was impressed by what he saw."

"I suppose not."

"In fact he told me to fire you."

I stiffened. I had been ready to offer my resignation, but this took me by surprise. "I am perfectly will-" I started out.

"Pipe down!" the Old Man snapped. "I told him that he could fire me, but that he could not fire my subordinates. You are a thumb-fingered dolt," he went on more quietly, "but you can't be spared, not now."

"Thanks."

Mary had been wandering restlessly around the room. I had tried to catch her eye, but she was not having any. Now she stopped back of Jarvis's chair-and gave the Old Man the same sign she had given about Barnes.

I hit Jarvis in the side of the head with my heater and he sagged out of his chair.

"Stand back, Davidson!" the Old Man rapped. His own gun was out and pointed at Davidson's chest. "Mary, how about him?"

"He's all right."

"And him."

"Sam's clean."

The Old Man's eyes moved from one of us to the other and I have never felt closer to death. "Both of you peel off your shirts," he said sourly.

We did-and Mary was right on both counts. I had begun to wonder whether or not I would know it if I did have a parasite on me. "Now him," the Old Man ordered. "Gloves, both of you."

We stretched Jarvis out on his face and very carefully cut his clothing away. We had our live specimen.

Chapter 6

I felt myself ready to retch. The thought of that thing travelling right behind me in a closed car all the way from Iowa was almost more than my stomach could stand. I'm not squeamish-I hid once for four days in the sewers of Moscow-but you don't know what the sight of one can do to you unless you yourself have seen one while knowing what it was.

I swallowed hard and said, "Let's see what we can do to work it off. Maybe we can still save Jarvis." I did not really think so; I had a deep-down hunch that anyone who had been ridden by one of those things was spoiled, permanently. I guess I had a superstitious notion that they "ate souls" whatever that means.

The Old Man waved us back. "Forget about Jarvis!"

"But-"

"Stow it! If he can be saved, a bit longer won't matter. In any case-" He shut up and so did I. I knew what he meant; the principle which declared that the individual was all important now called for canceling Jarvis out as a factor, i.e., we were expendable; the people of the United States were not.

Pardon the speech. I liked Jarvis.

The Old Man, gun drawn and wary, continued to watch the unconscious agent and the thing on his back. He said to Mary, "Get the President on the screen. Special code zero zero zero seven."

Mary went to his desk and did so. I heard her talking into the muffler, but my own attention was on the parasite. It made no move to leave its host, but pulsed slowly while iridescent ripples spread across it.

Presently Mary reported, "I can't get him, sir. One of his assistants is on the screen."

"Which one?"

"Mr. McDonough."

The Old Man winced and so did I. McDonough was an intelligent, likeable man who hadn't changed his mind on anything since he was housebroken. The President used him as a buffer.

The Old Man bellowed, not bothering with the muffler.

No, the President was not available. No, he could not be reached with a message. No, Mr. McDonough was not exceeding his authority; the President had been explicit and the Old Man was not on the list of exceptions-if there was such a list, which Mr. McDonough did not concede. Yes, he would be happy to make an appointment; he would squeeze the Old Man in somehow and that was a promise. How would next Friday do? Today? Quite out of the question. Tomorrow? Equally impossible.

The Old Man switched off and I thought he was going to have a stroke. But after a moment he took two deep breaths, his features relaxed, and he slumped back to us, saying, "Dave, slip down the hall and ask Doc Graves to step in. The rest of you keep your distance and your eyes peeled."

The head of the biological lab came in shortly, wiping his hands as he came. "Doc," said the Old Man, "there is one that isn't dead."

Graves looked at Jarvis, then more closely at Jarvis's back. "Interesting," he said. "Unique, possibly." He dropped to one knee.

"Stand back!"

Graves looked up. "But I must have an opportunity-" he said reasonably.

"You and my half-wit aunt! Listen-I want you to study it, yes, but that purpose has low priority. First, you've got to keep it alive. Second, you've got to keep it from escaping. Third, you've got to protect yourself."

Graves smiled. "I'm not afraid of it. I-"

"Be afraid of it! That's an order."

"I was about to say that I think I must rig up an incubator to care for it after we remove it from the host. The dead specimen you gave me did not afford much opportunity for studying its chemistry, but it is evident that these things need oxygen. You smothered the other one. Don't misunderstand me, not free oxygen, but oxygen from its host. Perhaps a large dog would suffice."

"No," snapped the Old Man. "Leave it right where it is."

"Eh?" Graves looked surprised. "Is this man a volunteer?"

The Old Man did not answer. Graves went on, "Human laboratory subjects must be volunteers. Professional ethics, you know."

These scientific laddies never do get broken to harness; I think they keep their bags packed. The Old Man calmed himself and said quietly, "Doctor Graves, every agent in this Section is a volunteer for whatever I find necessary. That is what they sign up for. Please carry out my orders. Get a stretcher in here and take Jarvis out. Use care."

The Old Man dismissed us after they had carted Jarvis away, and Davidson and Mary and I went to the lounge for a drink or four. We needed them. Davidson had the shakes. When the first drink failed to fix him I said, "Look, Dave, I feel as bad about those girls as you do-but it could not be helped. Get that through your head; it could not be helped."

"How bad was it?" asked Mary.

"Pretty bad. I don't know how many we killed, maybe six, maybe a dozen. There was no time to be careful. We weren't shooting people, not intentionally; we were shooting parasites." I turned to Davidson. "Don't you see that?"

He seemed to take a brace. "That's just it. They weren't human." He went on, "I think I could shoot my own brother, if the job required it. But these things aren't human. You shoot and they keep coming toward you. They don't-" He broke off.

All I felt was pity. After a bit he got up to go to the dispensary to get a shot for what ailed him. Mary and I talked a while longer, trying to figure out answers and getting nowhere. Then she announced that she was sleepy and headed for the women's dormitory. The Old Man had ordered all hands to sleep in that night, so, after a nightcap, I went to the boys' wing and crawled in a sack.

I did not get to sleep at once. I could hear the rumble of the city above us and I kept imagining it in the state Des Moines was already in.

The air-raid alarm woke me. I stumbled into my clothes as the blowers sighed off, then the intercom bawled in the Old Man's voice, "Anti-gas and anti-radiation procedures! Seal everything-all hands gather in the conference hall. Move!"

Being a field agent I was a supernumerary with no local duties. I shuffled down the tunnel from the living quarters to the Offices. The Old Man was in the big hall, looking grim. I wanted to ask him what was up, but there was a mixed dozen of clerks, agents, stenos, and such there before me and I decided not to. After a bit the Old Man sent me out to get the door tally from the guard on watch. The Old Man called the roll himself and presently it was clear that every living person listed on the door tally was now inside the hall, from old Miss Haines, the Old Man's private secretary, down to the steward of the staff lounge-except the door guard on watch and Jarvis. The tally had to be right; we keep track of who goes in and out a good bit more carefully than a bank keeps track of money.

I was sent out again for the door guard. It took a call back to the Old Man to persuade him it was all right for him to leave his post; he then threw the bolt switch and followed me. When we got back Jarvis was there, being attended by Graves and one of his lab men. He was on his feet and wrapped in a hospital robe, conscious apparently, but he seemed dopey.

When I saw him I began to have some notion of what it was all about. The Old Man did not leave us in doubt. He was facing the assembled staff and keeping his distance; now he drew his gun. "One of the invading parasites is loose among us," he said. "To some of you that means something-too much. To the rest of you I will have to explain, as the safety of all of us-and of our whole race-depends this moment on complete cooperation and utter obedience." He went on to explain briefly but with ugly exactness what a parasite was, what the situation was. "In other words," he concluded, "the parasite is almost certainly here in this room. One of us looks human but is actually an automaton, moving at the will of our deadliest and most dangerous enemy."

There was a murmur from the staff. People stole glances at each other. Some tried to draw away. A moment before we had been a team, picked for temperament compatibility; we were now a mob, each suspicious of the other. I felt it myself and found myself edging away from the man closest to me-Ronald the lounge steward, it was; I had known him for years.

Graves cleared his throat. "Chief," he started in, "I want you to understand that I took every reasonable-"

"Stow it. I don't want excuses. Bring Jarvis out in front. Take his robe off."

Graves shut up and he and his assistant complied. Jarvis did not seem to mind; he seemed only partly aware of his surroundings. There was a nasty blue welt across his left cheekbone and temple, but that was not the cause; I did not hit him that hard. Graves must have drugged him.

"Turn him around," the Old Man ordered. Jarvis let himself be turned; there was the mark of the slug, a red rash on the shoulders and neck. "You can all see," the Old Man went on, "where the thing rode him." There had been some whispers and one embarrassed giggle when Jarvis had been stripped; now there was a dead hush.

"Now," said the Old Man, "we are going to get that slug! Furthermore, we are going to capture it alive. That warning is for you eager boys with itchy trigger fingers. You have all seen where a parasite rides on a man. I'm warning you; if the parasite gets burned, I'll burn the man who did it. If you have to shoot the host to catch it, shoot low. Come here!" He pointed his gun at me.

I started toward him; he halted me halfway between the crowd and himself. "Graves! Take Jarvis out of the way. Sit him down behind me. No, leave his robe off," Jarvis was led across the room, still docile, and Graves and his helper rejoined the group. The Old Man turned his attention back to me. "Take out your gun. Drop it on the floor."

The Old Man's gun was pointed at my belly button; I was very careful how I drew mine. I slid it some six feet away from me. "Take off your clothes-all of them."

I am no shrinking violet, but that is an awkward order to carry out. The Old Man's gun overcame my inhibitions.

It did not help any to have some of the younger girls giggling at me as I got down to the buff. One of them said, not too sotto voce, "Not bad!" and another replied, "Knobby, I'd say."

I blushed like a bride.

After he looked me over the Old Man told me to pick up my gun and stand beside him. "Back me up," he ordered, "and keep an eye on the door. You! Dotty Something-or-other-you're next."

Dotty was a girl from the clerical pool. She had no gun, of course, and she had evidently been in bed when the alarm sounded; she was dressed in a floor length negligee. She stepped forward, stopped, but did nothing more.

The Old Man waved his gun at her. "Come on-get 'em off! Don't take all night."

"You really mean it?" she said incredulously. "Move!"

She started-almost jumped. "Well!" she said, "no need to take a person's head off." She bit her lower lip and then slowly unfastened the clasp at her waist. "I ought to get a bonus for this," she said defiantly, then threw the robe from her all in one motion.

Whereupon she ruined her buildup by posing for an instant-not long, but you couldn't miss it. I concede that she had something to display, although I was in no mood to appreciate it.

"Over against the wall," the Old Man said savagely. "Renfrew!"

I don't know whether the Old Man alternated men and women on purpose or not, but it was a good idea, as it kept resistance to a minimum. Oh, shucks, I do know-the Old Man never did anything by accident. After my ordeal the men were businesslike though some were obviously embarrassed. As to the women, some giggled and some blushed, but none of them objected too much. I would have found it interesting if the circumstances had been different. As it was, we were all bound to learn things about each other that we had not known. For instance there was a girl whom we used to call "Chesty"-never mind. In twenty minutes or so there were more square yards of gooseflesh exposed than I had ever seen before and the pile of guns on the floor looked like an arsenal.

When Mary's turn came, she set a good example by taking off her clothes quickly and in a completely unprovocative manner-the Old Man should have called her first, instead of that Dotty baggage. Bare, Mary made nothing of it, and wore her skin with quiet dignity. But what I saw did nothing to cool down my feelings about her.

Mary had added considerably to the pile of hardware. I decided she just plain liked guns. Me, I've never found use for more than one.

Finally we were all mother naked and quite evidently free of parasites, except the Old Man himself and his secretary, Miss Haines. I think he was a bit in awe of Miss Haines; she was older than he and inclined to boss him. It dawned on me whom it had to be-if the

Old Man were right. He could have been wrong; for all we knew the parasite might be on a ceiling girder, waiting to drop on someone's neck.

The Old Man looked distressed and poked about in the pile of clothing with his cane. He knew that there was nothing in it-or perhaps be was really making sure. Finally he looked up at his secretary. "Miss Haines-if you please. You are next."

I thought to myself. Brother, this time you are going to have to use force.

She did not move. She stood there, facing him down, a statue of offended virginity. I could see that he was about to take action, so I moved closer to him and said, out of the corner of my mouth, "Boss-how about yourself? Take 'em off."

He jerked his head around and looked startled. "I mean it," I said. "It's you or she. It might be either. Get out of those duds."

The Old Man can relax to the inevitable. He said, "Have her stripped. And I'm next." He began fumbling at his zippers, looking grim.

I told Mary to take a couple of the women and peel Miss Haines. When I turned back the Old Man had his trousers at half mast-and Miss Haines chose to make a break for it.

The Old Man was between me and her and I couldn't get in a clean shot-and every other agent in the place was disarmed! Again, I don't think it was accident; the Old Man did not trust them not to shoot when the parasite was discovered. He wanted that slug, alive.

She was out the door and running down the passage by the time I could get organized. I could have winged her in the passageway but I was inhibited by two things-first, I could not shift gears emotionally that fast. I mean to say she was to me still old Lady Haines, the spinster secretary to the boss, the one who bawled me out for poor grammar in my reports. In the second place, if she was carrying a parasite I did not want to risk burning it, not after what we had been told. I am not the world's best shot, anyhow.

She ducked into a room; I came up to it and again I hesitated-sheer habit; it was the ladies' room.

But only a moment. I slammed the door open and looked around, gun ready.

Something hit me back of my right ear. It seemed to me that I took a long leisurely time in getting to the floor.

I can give no clear account of the next few moments. In the first place I was out cold, for a time at least. I remember a struggle and some shouts: "Look out!" "Damn her-she's bitten me!" "Watch your hands! Watch your hands!" Then somebody said more quietly, "Bind her hands and feet, now-careful." Somebody said, "How about him?" and someone else answered, "Later. He's not really hurt."

I was still practically out as they left, but I began to feel a flood of life stirring back into me. I sat up, feeling extreme urgency about something. I got up, staggering a little, and went to the door. I hesitated there, looked out cautiously; nobody was in sight. I stepped out and trotted down the corridor, away from the direction of the conference hall.

I slowed down momentarily at the outer door, then realized with a shock that I was naked and tore on down the hallway toward the men's wing. There I grabbed the first clothes I could find and pulled them on. I found a pair of shoes much too small for me, but it did not seem to matter.

I ran back toward the exit, fumbled, and found the switch; the door opened.

I thought I had made a clean escape, but somebody shouted, "Sam!" just as I was going out. I did not wait, but plunged on out. At once I had my choice of six doors and then three more beyond the one I picked. The warren we called the "Offices", being arranged to permit any number of people to come and go without being noticed, was served by a spaghetti-like mess of tunnels. I came up finally inside a subway fruit and bookstall, nodded to the proprietor-who seemed unsurprised-and swung the counter gate up and mingled with the crowd. It was not a route I had used before.

I caught the up-river jet express and got off at the first station. I crossed over to the down-river side, waited around the change window until a man came up who displayed quite a bit of money as he bought his counter. I got on the same train he did and got off when he did. At the first dark spot I rabbit-punched him. Now I had money and was ready to operate. I did not know quite why I had to have money, but I knew that I needed it for what I was about to do.

Chapter 7

Language grows, so they say, to describe experience of the race using it. Experience first-language second. How can I tell how I felt?

I saw things around me with a curious double vision, as if I stared at them through rippling water-yet I felt no surprise and no curiosity about this. I moved like a sleepwalker, unaware of what I was about to do-but I was wide-awake, fully aware of who I was, where I was, what my job at the Section had been. There was no amnesia; my full memories were available to me at any moment. And, although I did not know what I was about to do, I was always aware of what I was doing and sure that each act was the necessary, purposeful act at that moment.

They say that post-hypnotic commands work something like that. I don't know; I am a poor hypnotic subject.

I felt no particular emotion most of the time, except the mild contentment that comes from being at work which needs to be done. That was up on the conscious level-and, I repeat, I was fully awake. Someplace, more levels down than I understand about, I was excruciatingly unhappy, terrified, and filled with guilt-but that was down, 'way down, locked, suppressed; I was hardly aware of it and in no practical way affected by it.

I knew that I had been seen to leave. That shout of "Sam!" had been intended for me; only two persons knew me by that name and the Old Man would have used my right name. So Mary had seen me leave-it was a good thing, I thought, that she had let me find out where her private apartment was. It would be necessary presently to booby-trap it against her next use of it. In the meantime I must get on with work and keep from being picked up.

I was in a warehouse district, moving through it cautiously, all my agent's training at work to avoid being conspicuous. Shortly I found what seemed to be a satisfactory building; there was a sign: LOFT FOR LEASE-SEE RENTAL AGENT ON GROUND FLOOR. I scouted it thoroughly, noted the address, then doubled back to the nearest Western Union booth two squares behind me. There I sat down at a vacant machine and sent the following message: EXPEDITE TWO CASES TINY TOTS TALKY TALES SAME DISCOUNT CONSIGNED TO JOEL FREEMAN and added the address of the

empty loft. I sent it to Roscoe and Dillard, Jobbers and Manufacturers Agents, Des Moines, Iowa.

As I left the booth the sight of one of the Kwikfede chain of all-night restaurants reminded me that I was very hungry, but the reflex cut off at once and I thought no more about it. I returned to the warehouse building, found a dark corner in the rear, and settled quietly back to wait for dawn and business hours.

I must have slept; I have a dim recollection of ever repeating, claustrophobic nightmares.

From daylight until nine o'clock I hung around a hiring hall, studying the notices; it was the one place in the neighborhood where a man of no occupation would not attract attention. At nine o'clock I met the rental agent as he unlocked his office, and leased the loft, paying him a fat squeeze on the side for immediate possession while the paperwork went through on the deal. I went up to the loft, unlocked it, and waited.

About ten-thirty my crates were delivered. I let the teamsters leave; three were too many for me and I was not yet ready in any case. After they were gone, I opened one crate, took out one cell, warmed it, and got it ready. Then I went downstairs, found the rental agent again, and said, "Mr. Greenberg, could you come up for a moment? I want to see about making some changes in the lighting."

He fussed, but agreed to do so. When we entered the loft I closed the door behind us and led him over to the open crate. "Here," I said, "if you will just lean over there, you will see what I mean. If I could just-"

I got him around the neck with a grip that cut off his wind, ripped his jacket and shirt up, and, with my free hand, transferred a master from the cell to his bare back, then held him tight for a moment until his struggles stopped. Then I let him up, tucked his shirt back in and dusted him off. When he had recovered his breath, I said, "What news from Des Moines?"

"What do you want to know?" he asked. "How long have you been out?"

I started to explain, but he interrupted me with, "Let's have a direct conference and not waste time." I skinned up my shirt; he did the same; and we sat down on the edge of the unopened case, back to back, so that our masters could be in contact. My own mind was merely blank and I have no idea how long the conference went on. I watched a fly droning around a dusty cobweb, seeing it but not thinking about it.

The building superintendent was our next recruit. He was a large Swede and it took both of us to hold him. After that Mr. Greenberg called up the owner of the building and insisted that he simply had to come down and see some horrendous mishap that had occurred to the structure-just what, I don't know; I was busy with the super, opening and warming several more cells.

The owner of the building was a real prize and we all felt quiet satisfaction, including, of course, he himself. He belonged to the Constitution Club, the membership list of which read like the index of Who's Who in Finance, Government, and Industry. Better still, the club boasted the most famous chef in town; it was an even chance that any given member would be lunching there if he were in the city.

It was pushing noon; we had no time to lose. The super went out to buy suitable clothes and a satchel for me and sent the owner's chauffeur up to be recruited as he did

so. At twelve-thirty we left, the owner and I, in his own car; the satchel contained twelve masters, still in their cells but ready.

The owner signed: J. Hardwick Potter & Guest. One of the flunkies tried to take my bag but I insisted that I needed it to change my shirt before lunch. We fiddled around in the washroom until we had it to ourselves, save for the attendant-whereupon we recruited him and sent him out with a message to the resident manager that a guest had taken ill in the washroom.

After we took care of the manager he obtained a white coat for me and I became another washroom attendant. I had only ten masters left but I knew that the cases would be picked up from the warehouse loft and delivered to the club shortly. The regular attendant and I used up the rest of those I had been able to bring before the lunch hour rush was over. One guest surprised us while we were busy and I had to kill him, as there was no time to save him for recruiting. We stuffed him into the mop closet.

There was a lull after that, as the cases had not yet arrived. Hunger reflex nearly doubled me over, then it dropped off sharply but still persisted; I told the manager, who had me served one of the best lunches I have ever eaten, in his office. The cases arrived just as I was finishing.

During the drowsy period that every gentlemen's club has in the mid-afternoon we secured the place. By four o'clock everyone present in the building-members, staff, and guests-were with us; from then on we simply processed them in the lobby as the doorman passed them in. Later in the day the manager phoned Des Moines for four more cases.

Our big prize came that evening-a guest, the Assistant Secretary of the Treasury. We saw a real victory in that; the Treasury Department is charged with the safety of the President.

Chapter 8

The jubilation caused by the capture of a high key official was felt by me only as absent-minded satisfaction, then I thought no more about it. We-the human recruits, I mean-hardly thought at all; we knew what we were to do each instant, but we knew it only at the moment of action, as a "high school" horse gets his orders, responds to them instantly, and is ready for the next signal from his rider.

High school horse and rider is a good comparison, as far as it goes-but it goes not nearly far enough. The horseman has partly at his disposal the intelligence of the horse; the masters had at their disposal not only our full intelligences, but also tapped directly our memory and experiences. We communicated for them between masters, too; sometimes we knew what we were talking about; sometimes we did not-such spoken words went through the servant, but the servant had no part in more important, direct, master-to-master conferences. During these we sat quietly and waited until our riders were through conferring, then rearranged our clothing to cover them up and did whatever was necessary. There was such a conference on a grand scale after the Assistant Secretary of the Treasury was recruited; I know no more of it than you do, although I sat in on it.

I had no more to do with words spoken by me for my master than had the audio relay buried behind my ear to do with words it sounded-the relay was silent all this time, incidentally; my phone proper I had left behind me. I, like it, was a communication instrument, nothing more. Some days after I was recruited I gave the club manager new

instructions about how to order shipments of masters' carrying cells. I was fleetingly aware, as I did so, that three more ships had landed, but I was not aware of their locations; my overt knowledge was limited to a single address in New Orleans.

I thought nothing about it; I went on with my work. After the day spent at the club, I was a new "special assistant to Mr. Potter" and spent the days in his office-and the nights, too. Actually, the relationship may have reversed; I frequently gave oral instructions to Potter. Or perhaps I understand the social organization of the parasites as little now as I did then; the relationship may have been more flexible, more anarchistic, and vastly more subtle than I have the experience to imagine.

I knew-and my master certainly knew-that it was well for me to stay out of sight. Through me, my master knew as much of the organization we called the "Section" as I did; it knew that I was one human known to the Old Man to have been recruited-and my master knew, I am sure, that the Old Man would not cease to search for me, to recapture me or kill me.

It seems odd that it did not choose to change bodies and to kill mine; we had vastly more potential recruits available than we had masters. I do not think it could have felt anything parallel to human squeamishness; masters newly delivered from their transit cells frequently damaged their initial hosts; we always destroyed the damaged host and found a new one for the master.

Contrariwise, my master, by the time he chose me, had controlled not less than three human hosts-Jarvis, Miss Haines, and one of the girls in Barnes's office, probably the secretary-and in the course of it had no doubt acquired both sophistication and skill in the control of human hosts. It could have "changed horses" with ease.

On the other hand, would a skilled cowhand have destroyed a well-trained workhorse in favor of an untried, strange mount? That may have been why I was hidden and saved-or perhaps I don't know what I am talking about; what does a bee know about Beethoven?

After a time the city was "secured" and my master started taking me out on the streets. I do not mean to say that every inhabitant of the city wore a hump-no, not by more than 99 percent; the humans were very numerous and the masters still very few-but the key positions in the city were all held by our own recruits, from the cop on the comer to the mayor and the chief of police, not forgetting ward bosses, church ministers, board members, and any and all who were concerned with public communications and news. The vast majority continued with their usual affairs, not only undisturbed by the masquerade but unaware that anything had happened.

Unless, of course, one of them happened to be in the way of some purpose of a master-in which case he was disposed of to shut his mouth. This used up potential hosts but there was no need to be economical.

One of the disadvantages we worked under in serving our masters-or perhaps I should say one of the disadvantages our masters worked under-was the difficulty of long-distance communication. It was limited to what human hosts could say in human speech over ordinary communication channels, and was further limited, unless the channel was secured throughout, to conventionalized code messages such as the one I had sent ordering the first two shipments of masters. Oh, no doubt the masters could communicate ship-to-ship and probably ship-to-home-base, but there was no ship nearby; this city had

been stormed as a prize-of-opportunity, as a direct result of my raid on Des Moines in my previous life.

Such communication through servants was almost certainly not adequate to the purposes of the masters; they seemed to need frequent direct body-to-body conference to coordinate their actions. I am no expert in exotic psychologies; some of those who are maintain that the parasites are not discrete individuals, but cells of a larger organism, in which case-but why go on? They seemed to need direct-contact conferences.

I was sent to New Orleans for such a conference.

I did not know I was going. I went out on the street as usual one morning, then went to the uptown launching platform and ordered a cab. Cabs were scarce; I thought about moving over to the other side and catching the public shuttle but the thought was immediately suppressed. After a considerable wait my cab was lifted to the loading ramp and I started to get in-I say "started to" as an old gentleman hustled up and climbed into it ahead of me.

I received an order to dispose of him, which order was immediately countermanded by one telling me to go slow and be careful, as if even the masters were not always sure of themselves. I said, "Excuse me, sir, but this cab is taken."

"Quite," the elderly man replied. "I've taken it." He was a picture of self-importance, from briefcase to dictatorial manner. He could easily have been a member of the Constitution Club, but he was not one of our own, as my master knew and told me.

"You will have to find another," I said reasonably. "Let's see your queue ticket." I had taken my ticket from the rack as soon as I reached the platform; the cab carried the launching number shown by my ticket.

I had him, but he did not stir. "Where are you going?" he demanded.

"New Orleans," I answered and learned for the first time my destination.

"Then you can drop me off in Memphis."

I shook my head. "It's out of my way."

"All of fifteen minutes!" He seemed to have difficulty controlling his temper, as if he were not often crossed. "You, sir, must know the rules about sharing cabs in these days of shortages. You cannot preempt a public vehicle unreasonably." He turned from me. "Driver! Explain to this person the rules."

The driver stopped picking his teeth just long enough to say, "It's nothing to me. I pick 'em up, I take 'em, I drop 'em. Settle it between yourselves or I'll ask the dispatcher for another fare."

I hesitated, not yet having been instructed. Then I found myself chucking my bag in and climbing inside. "New Orleans," I said, "with stop at Memphis." The driver shrugged and signaled the control tower. The other passenger snorted and paid me no further attention.

Once in the air he opened his briefcase and spread papers across his knees. I watched him with disinterest. Presently I found myself shifting my position to let me get at my gun easily. The elderly man shot out a hand and grabbed my wrist. "Not so fast, son," he said, and his features broke into the Satanic grin of the Old Man himself.

My reflexes are fast, but I was at the disadvantage of having everything routed from me to my master, passed on by it, and action routed back to me. How much delay is that? A millisecond? I don't know. As I was drawing, I felt the bell of a gun against my ribs. "Take it easy."

With his other hand he thrust something against my side; I felt a prick, and then through me spread the warm tingle of a jolt of "morpheus" taking hold. I've been knocked out by that drug twice before and I've given it more times than that; I knew what it was.

I made one more attempt to pull my gun free and sank forward.

I was vaguely aware of voices-voices which had been going on for some time before I got around to sorting them out as meaning. Someone was handling me roughly and someone was saying, "Watch out for that ape!" Another voice replied, "It's all right; his tendons are cut," to which the first voice retorted, "He's still got teeth, hasn't he?"

Yes, I thought fretfully, and if you get close enough I'll bite you with them, too. The remark about cut tendons seemed to be true; none of my limbs would move, but that did not worry me as much as being called an ape and not being able to resent it. It was a shame, I thought, to call a man names when he can't protect himself.

I wept a little and then fell into a stupor.

"Feeling better, son?"

The Old Man was leaning over the end of my bed, staring at me thoughtfully. His chest was bare and covered with grizzled hair; he showed a slight paunch.

"Unh," I said, "pretty good, I guess." I started to sit up and found I could not move.

The Old Man came around to the side of the bed. "We can take those restraints off now," he said, fiddling with clasps. "Didn't want you hurting yourself. There!"

I sat up, rubbing myself. I was quite stiff. "Now," said the Old Man, "how much do you remember? Report."

"Remember?"

"You were with them-remember? They caught you. Do you remember anything after the parasite got to you?"

I felt a sudden wild fear and clutched at the sides of the bed. "Boss! Boss-they know where this place is! I told them."

"No, they don't," he answered quietly, "because these aren't the Section offices you remember. Once I was convinced that you had made a clean getaway, I had the old offices evacuated. They don't know about this hang-out-I think. So you remember?"

"Of course I remember. I got out of here-I mean out of the old offices and went up-" My thoughts raced ahead of my words; I had a sudden full image of holding a live, moist master in my bare hand, ready to place it on the back of the rental agent.

I threw up on the sheet. The Old Man took a corner of it, wiped my mouth, and said gently, "Go ahead."

I swallowed and said, "Boss-they're all over the place! They've got the city."

"I know. Same as Des Moines. And Minneapolis, and St. Paul, and New Orleans, and Kansas City. Maybe more. I don't know-I can't be every place." He looked sour and added, "It's like fighting with your feet in a sack. We're losing, fast." He scowled and added, "We can't even clamp down on the cities we know about. It's very-"

"Good grief! Why not?"

"You should know. Because 'older and wiser heads' than mine are still to be convinced that there is a war on. Because when they take over a city, everything goes on as before."

I stared at him. "Never mind," he said gently. "You are the first break we've had. You're the first victim to be recaptured alive-and now we find you remember what

happened to you. That's important. And your parasite is the first live one we've managed to capture and keep alive. We'll have a chance to-"

He broke off. My face must have been a mask of terror; the notion that my master was still alive-and might get to me again-was more than I could stand.

The Old Man took my arm and shook it. "Take it easy, son," he said mildly. "You are still pretty sick and pretty weak."

"Where is it?"

"Eh? The parasite? Don't worry about it. You can see it, if you wish; it's living off your opposite number, a red orangutan, name of Napoleon. It's safe."

"Kill it!"

"Hardly-we need it alive, for study."

I must have gone to pieces, for he slapped me a couple of times. "Take a brace," he said. "I hate to bother you when you are sick, but it's got to be done. We've got to get everything you remember down on wire. So level off and fly right."

I pulled myself together and started making a careful, detailed report of all that I could remember. I described renting the loft and recruiting my first victim, then how we moved on from there to the Constitution Club. The Old Man nodded. "Logical. You were a good agent, even for them. "

"You don't understand," I objected. "I didn't do any thinking. I knew what was going on, but that was all. It was as if, uh, as if-" I paused, stuck for words.

"Never mind. Get on with it."

"After we recruited the club manager the rest was easy. We took them as they came in and-"

"Names?"

"Oh, certainly. Myself, Greenberg-M. C. Greenberg, Thor Hansen, J. Hardwick Potter, his chauffeur Jim Wakeley, a little guy called 'Jake' who was washroom attendant at the club but I believe he had to be disposed of later-his master would not let him take time out for necessities. Then there was the manager; I never did get his name." I paused, letting my mind run back over that busy afternoon and evening in the club, trying to make sure of each recruit. "Oh my God!"

"What is it?"

"The Secretary-The Assistant Secretary of the Treasury."

"You mean you got him!"

"Yes. The first day. What day was that? How long has it been? God, chief, the Treasury Department protect the President"

But I was not talking to anyone; there was just a hole in the air where the Old Man had been.

I lay back exhausted. I started sobbing softly into my pillow. After a while I went to sleep.

Chapter 9

I woke up with my mouth foul, my head buzzing, and a vague sense of impending disaster. Nevertheless I felt fine, by comparison. A cheerful voice said, "Feeling better?"

A small brunet creature was bending over me. She was as cute a little bug as I have ever seen and I was well enough to appreciate the fact, however faintly. She was dressed

in a very odd costume, what there was of it-skin-tight white shorts, a wisp of practically transparent stuff that restrained her breasts, but not much, and a sort of metal carapace that covered the back of her neck, her shoulders, and went on down her spine.

"Better," I admitted, then made a wry face.

"Mouth taste unpleasant?"

"Like a Balkan cabinet meeting."

"Here." She gave me some stuff in a glass; it was spicy and burned a little, and it washed away the bad taste at once. "No," she went on, "don't swallow it. 'Pit it out like a little man and I'll get you some water." I obeyed.

"I'm Doris Marsden," she went on, "your day nurse."

"Glad to know you, Doris," I answered and stared at her with increasing appreciation. "Say-why the get up? Not that I don't like it, but you look like a refugee from a comic book."

She looked down at herself and giggled. "I feel like a chorus girl. But you'll get used to it-I did."

"I'm already used to it. I like it fine. But why?"

"The Old Man's orders."

I started to ask why again, then I knew why, and I started feeling worse again. I shut up. Doris went on, "Now for some supper." She got a tray and sat down on my bed.

"I don't believe I want anything to eat."

"Open up," she said firmly, "or I'll rub it in your hair. There! That's a good boy."

Between gulps, taken in self-defense, I managed to get out, "I feel pretty good. Give me one jolt of 'gyro' and I'll be back on my feet."

"No stimulants for you," she said flatly, still shoveling it in. "Special diet and lots of rest, with maybe a sleepy pill later. That's what the man says."

"What's wrong with me?"

"Extreme exhaustion, starvation, and the first case of scurvy I ever saw in all my born days. As well as scabies and lice-but we got those whipped. There, now you know-and if you tell the doctor I told you, I'll call you a liar to your face. Turn over on your tummy."

I did so and she started changing dressings. I appeared to be spotted with sores; the stuff she used stung a bit, then felt cool. I thought about what she had told me and tried to remember just how I had lived under my master.

"Stop trembling," she said. "Are you having a bad one?"

"I'm all right," I told her. I did manage to stop shaking and to think it over calmly. As near as I could remember I had not eaten during that period oftener than every second or third day. Bathing? Let me see- why, I hadn't bathed at all! I had shaved every day and put on a clean shirt; that was a necessary part of the masquerade and the master knew it.

On the other hand, so far as I could remember, I had never taken off my shoes from the time I had stolen them until the Old Man had recaptured me-and they had been too tight to start with. "What sort of shape are my feet in?" I asked.

"Don't be nosy," Doris advised me. "Now turn over on your back."

I like nurses; they are calm and earthy and very tolerant. Miss Briggs, my night nurse, was not the mouth-watering job that Doris was; she had a face like a jaundiced horse-but she had a fine figure for a woman her age, hard and well cared for. She wore the same

sort of musical-comedy rig that Doris sported, but she wore it with a no-nonsense air and walked like a grenadier guard. Doris, bless her heart, jiggled pleasantly as she walked.

Miss Briggs refused to give me a second sleeping pill when I woke up in the night and had the horrors, but she did play poker with me and skinned me out of half a month's pay. I tried to find out from her about the President matter, for I figured the Old Man had either won or lost by that time. But she wasn't talking. She would not admit that she knew anything about parasites, flying saucers, or what not-and she herself sitting there dressed in a costume that could have only one purpose!

I asked her what the public news was, then? She maintained that she had been too busy lately to look at a 'cast. So I asked to have a stereo box moved into my room, so I could catch a newscast. She said I would have to ask the doctor about that; I was on the 'quiet' list. I asked when in the deuce I was going to see this so-called doctor? She said she didn't know; the doctor had been very busy lately. I asked how many other patients there were in the infirmary anyway? She said she really didn't remember. About then her call bell sounded and she left, presumably to see another patient.

I fixed her. While she was gone, I cold-decked the next deal, so that she got a pat hand-then I wouldn't bet against her.

I got to sleep later on and was awakened by Miss Briggs slapping me in the face with a cold, wet washcloth. She got me ready for breakfast, then Doris relieved her and brought it to me. This time I fed myself and while I was chomping I tackled her for news, with the same perfect score I had made with Miss Briggs. Nurses run a hospital as if it were a nursery for backward children.

Davidson came around to see me after breakfast. "Heard you were here," he said. He was wearing shorts and nothing else, except that his left arm was covered by a dressing.

"More than I've heard," I complained. "What happened to you?"

"Bee stung me."

I dropped that subject; if he didn't want to tell how he had gotten burned, that was his business. I went on, "The Old Man was in here yesterday, getting my report, when he left very suddenly. Seen him since?"

"Yep."

"Well?" I answered.

"Well, how about you. Are you straightened out? Have the psych boys cleared you for classified matters, or not?"

"Is there any doubt about it?"

"You're darn tootin' there's doubt. Poor old Jarvis never did pull out of it."

"Huh?" I hadn't thought about Jarvis. "How is he now?"

"He isn't. Never did get right in his head. Dropped into a coma and died the next day-the day after you left. I mean the day after you were captured. No apparent reason-just died." Davidson looked me over. "You must be tough."

I did not feel tough. I felt tears of weakness welling up again and I blinked them back. Davidson pretended not to see and went on conversationally, "You should have seen the ruckus after you gave us the slip. The Old Man took out after you wearing nothing but a gun and a look of grim determination. He would have caught you, too, my money says-but the civil police picked him up and we had to get him out of hock." Davidson grinned.

I grinned feebly myself. There was something both gallant and silly about the Old Man charging out to save the world single-handed dressed in his birthday suit. "Sorry I missed it. But what else has happened- lately?"

Davidson looked me over carefully, then said, "Wait a minute." He stepped out of the room and was gone a short time. When he came back, he said, "The Old Man says it's all right. What do you want to know?"

"Everything! What happened yesterday?"

"I was in on that one," he answered, "That's how I got this." He waved his damaged wing at me, "I was lucky," he added, "three agents were killed. Quite a fracas."

"But how did it come out? How about the President? Was he-"

Doris hustled into the room. "Oh, there you are!" she said to Davidson. "I told you to stay in bed. You're due in prosthetics at Mercy Hospital right now. The ambulance has been waiting for ten minutes."

He stood up, grinned at her, and pinched her cheek with his good hand. "The party can't start until I get there."

"Well, hurry!"

"Coming." He started out the door with her.

I called out, "Hey! How about the President?"

Davidson paused and looked back over his shoulder. "Oh, him? He's all right-not a scratch on him." He went on.

Doris came back a few minutes later, fuming. "Patients!" she said, like a swear word. "Do you know why they call them 'patients'? Because it's patience you have to have to put up with them. I should have had at least twenty minutes for his injection to take hold; as it was I gave it to him when he got into the ambulance."

"Injection for what?"

"Didn't he tell you?"

"No."

"Well . . . no reason not to tell you. Amputation and graft, lower left arm."

"Oh." Well, I thought, I won't hear the end of the story from Davidson; grafting on a new limb is a shock. They usually keep the patient hopped up for at least ten days. I wondered about the Old Man: had he come out of it alive? Of course he had, I reminded myself; Davidson checked with him before he talked.

But that didn't mean he hadn't been wounded. I tackled Doris again. "How about the Old Man? Is he on the sick list? Or would it be a violation of your sacred run-around rules to tell me?"

"You talk too much," she answered. "It's time for your morning nourishment and your nap." She produced a glass of milky slop, magician fashion.

"Speak up, wench, or I'll spit it back in your face."

"The Old Man? You mean the Chief of Section?"

"Who else?"

"He's not on the sick list, at least not here." She shivered and made a face. "I wouldn't want him as a patient."

I was inclined to agree with her.

Chapter 10

For two or three more days I was kept wrapped in swaddling clothing and treated like a child. I did not care; it was the first real rest I had had in years. Probably they were slipping me sedatives; I noticed that I was always ready to sleep each time after they fed me. The sores got much better and presently I was encouraged-"required" I should say-by Doris to take light exercise around the room.

The Old Man called on me. "Well," he said, "still malingering, I see."

I flushed. "Damn your black, flabby heart," I told him. "Get me a pair of pants and I'll show you who is malingering."

"Slow down, slow down." He took my chart from the foot of my bed and looked it over. "Nurse," he said, "get this man a pair of shorts. I'm restoring him to duty."

Doris faced up to him like a banty hen. "Now see here," she said, "you may be the big boss, but you can't give orders here. The doctor will-"

"Stow it!" he said, "and get those drawers. When the doctor comes in, send him to me."

"But-"

He picked her up, swung her around, paddled her behind, and said, "Git!"

She went out, squawking and sputtering, and came back shortly, not with clothes for me, but with the doctor. The Old Man looked around and said mildly, "Doc, I sent for pants, not for you."

The medico said stiffly, "I'll thank you not to interfere with my patients."

"He's not your patient. I need him, so I am restoring him to duty."

"Yes? Sir, if you do not like the way I run my department, you may have my resignation at once."

The Old Man is stubborn but not bull-headed. He answered, "I beg your pardon, sir. Sometimes I become too preoccupied with other problems to remember to follow correct procedure. Will you do me the favor of examining this patient? I need him; if he can possibly be restored to duty, it would help me to have his services at once."

The doctor's jaw muscles were jumping, but all he said was, "Certainly, sir!" He went through a show of studying my chart, then had me sit on the bed while he tested my reflexes. Personally, I thought they were mushy. He peeled back my eyelids, flashed a light in my eye, and said, "He needs more recuperation time-but you may have him. Nurse-fetch clothing for this man."

Clothing consisted of shorts and shoes; I had been better dressed in a hospital gown. But everybody else was dressed the same way, and it was downright comforting to see all those bare shoulders with no masters clinging to them. I told the Old Man so. "Best defense we've got," he growled, "even if it does make the joint look like a ruddy summer colony. If we don't win this set-to before winter weather, we're licked."

The Old Man stopped at a door with a freshly lettered sign: BIOLOGICAL LABORATORY-STAY OUT! He dilated the door.

I hung back. "Where are we going?"

"Going to take a look at your twin brother, the ape with your parasite."

"That's what I thought. Not for me-no point in it. No, thanks!" I could feel myself begin to tremble.

The Old Man paused. "Now, look, son," he said patiently, "you've got to get over your panic. The best way is to face up to it. I know it's hard-I've spent a good many hours in here myself, just staring at the thing, getting used to it."

"You don't know-you can't know!" I had the shakes so badly now that I had to steady myself by the doorframe.

He looked at me. "I suppose it's different," he said slowly, "when you've actually had it. Jarvis-" He broke off.

"You're darn right it's different! You're not going to get me in there]"

"No, I guess not. Well, the doctor was right. Go on back, son, and turn yourself in at the infirmary." His tones were regretful rather than angry. He turned and started into the laboratory.

He had gotten three or four steps away before I called out, "Boss!"

He stopped and turned, his face expressionless. "Wait," I added, "I'm coming."

"You don't have to."

"I know. I'll do it. It-It just takes . . . a while-to get your nerve back."

He did not answer but, as I came alongside him, he grasped my upper arm, warmly and affectionately, and continued to hold it as we walked, as if I were a girl. We went on in, through another locked door and into a room that was conditioned warm and moist. The ape was there, caged.

He sat facing us, his torso supported and restrained by a strap-metal framework. His arms and legs hung limply, as if he had no control over them-which he did not have, as I learned.

As we came in he looked up and at us. For an instant his eyes were malevolent and intelligent; then the fire died out and they were merely the eyes of a dumb brute, a brute in pain.

"Around to the side," the Old Man said softly. I would have hung back but he still had me by the arm. We moved around; the ape followed us with his eyes, but his body was held by the frame. From the new position I could see-it.

My master. The thing that had ridden my back for an endless time, spoken with my mouth-thought with my brain. My master.

"Steady," the Old Man said softly. "Steady. You'll get used to it." He shook my arm. "Look away for a bit. It helps."

I did so and it did help. Not much, but some. I took a couple of deep breaths, then held it and managed to slow my heart down a little. I made myself stare at it.

It is not the appearance of a parasite which arouses horror. True, they are disgustingly ugly, but not more so than slime in a pond-not as much so as maggots in garbage.

Nor was the horror entirely from knowing what they could do-for I felt the horror the first time I saw one, before I really knew what one was. I tried to tell the Old Man about it, letting the talk steady me. He nodded, his eyes still on the parasite. "It's the same with everybody," he said. "Unreasoned fear, like a bird with a snake. Probably its prime weapon." He let his own eyes drift away, as if too long a sight of it were too much even for his rawhide nerves.

I stuck with him, trying to get used to it and gulping at my breakfast but not losing it. I kept telling myself that I was safe from it, that it couldn't harm me.

I looked away again and found the Old Man's eyes on me. "How about it?" he said. "Getting hardened to it?"

I looked back at it. "A little." I went on savagely, "All I want to do is to kill it! I want to kill all of them-I could spend my whole life killing them and killing them." I began to shake again.

The Old Man continued to study me. "Here," he said, and handed me his gun.

It startled me. I was unarmed myself, having come straight from bed. I took it but looked back at him questioningly. "Huh? What for?"

"You want to kill it, don't you? If you feel that you have to, go ahead. Kill it. Right now."

"Huh? But-Look here, boss, you told me you needed this one for study."

"I do. But if you need to kill it, if you feel that you have to kill it, do so. I figure this particular one is your baby; you're entitled to it. If you need to kill it, to make you a whole man again, go ahead."

" 'To make me a whole man again-' " The thought rang through my head. The Old Man knew, better than I knew, what was wrong with me, what medicine it would take to cure me. I was no longer trembling; I stood there, the gun cradled in my hand, ready to spit and kill. My master . . .

If I killed this one I would be a free man again-but I would never be free as long as it lived. Surely, I wanted to kill them, every one of them, search them out, burn them, kill them-but this one above all.

My master . . . still my master unless I killed it. I had a dark and certain thought that if I were alone with it, I would be able to do nothing, that I would freeze and wait while it crawled up me and settled again between my shoulder blades, searched out my spinal column, took possession of my brain and my very inner self.

But now I could kill it!

No longer frightened but fiercely exultant I raised the gun, ready to squeeze the trigger.

The Old Man watched me.

I lowered the gun a little and said uncertainly, "Boss, suppose I do kill it. You've got others?"

"No."

"But you need it."

"Yes."

"Well, but-For the love o' God, why did you give me the gun?"

"You know why. This one is yours; you've got first claim. If you have to kill it, go ahead. If you can pass it up, then the Section will use it."

I had to kill it. Even if we killed all the others, while this one was still alive I would still crouch and tremble in the dark. As for the others, for study-why, we could capture a dozen any time at the Constitution Club. With this one dead I'd lead the raid myself. Breathing rapidly, I raised the gun again.

Then I turned and chucked the gun to the Old Man; he plucked it out of the air and put it away. "What happened?" he asked. "You were all set."

"Uh? I don't know. When it got right down to it, it was enough to know that I could."

"I figured that it would be."

I felt warm and relaxed, as if I had just killed a man or had a woman-as if I had just killed it. I was able to turn my back on it and face the Old Man. I was not even angry with him for what he had done; instead I felt warm toward him, even affectionate. "I know you did, damn you. How does it feel to be a puppet master?"

He did not take the jibe as a joke. Instead he answered soberly, "Not me. The most I ever do is to lead a man on the path he wants to follow. There is the puppet master." He hooked a thumb at the parasite.

I looked around at it. "Yes," I agreed softly, " 'the puppet master'. You think you know what you mean by that-but you don't. And boss . . . I hope you never do."

"I hope so, too," he answered seriously.

I could look now without trembling. I even started to put my hands in my pockets, but the shorts had no pockets. Still staring at it, I went on, "Boss, when you are through with it, if there is anything left, then I'll kill it."

"That's a promise."

We were interrupted by a man bustling into the cage room. He was dressed in shorts and a lab coat; it made him look silly. I did not recognize him-it was not Graves; I never saw Graves again; I imagine the Old Man ate him for lunch.

"Chief," he said, trotting up, "I did not know you were in here. I-"

"Well, I am," the Old Man cut in. "What are you doing wearing a coat?" The Old Man's gun was out and pointed at the man's chest.

The man stared at the gun as if it were a bad joke. "Why, I was working, of course. There is always a chance of splattering one's self. Some of our solutions are rather-"

"Take it off!"

"Eh?"

The Old Man waggled his gun at him. To me he said, "Get ready to take him."

The man took his coat off. He stood there holding it and biting his lip. His back and shoulders were bare, nor was there the telltale rash. "Take that damned coat and burn it," the Old Man told him. "Then get back to your work."

The man hurried away, his face red, then hesitated, glanced at me, and said to the Old Man, "Chief, are you ready for that, uh, procedure?"

"Shortly. I'll let you know."

The man opened his mouth, closed it, and left. The Old Man wearily put his gun away. "Post an order," he muttered. "Read it aloud. Make everybody sign for it-tattoo it on their narrow little chests-and some smart Aleck thinks it doesn't apply to him. Scientists!" He said the last word in the way in which Doris had said, "Patients!"

I turned back to looking at my former master. It still revolted me, but there was a gusty feeling of danger, too, that was not totally unpleasant-like standing on a very high place. "Boss," I asked, "what are you going to do with this thing?"

He looked at me, rather than at the slug. "I plan to interview it."

"To what? But how can you-What I want to say is: the ape, I mean-"

"No, the ape can't talk. That's the hitch. We'll have to have a volunteer-a human volunteer."

When his words sank in and I began to visualize what he meant by them the horror struck me again almost full force. "You can't mean that. You wouldn't do that-not to anybody."

"I could and I'm going to. What needs to be done will be done."

"You won't get any volunteers!"

"I've already got one."

"You have? Who?"

"But I don't want to use the volunteer I've got. I'm still looking for the right man."

I was disgusted and showed it. "You ought not to be looking for anyone, volunteer or not. And if you've got one, I'll bet you won't find another; there can't be two people that far out of their minds."

"Possibly," he agreed. "But I still don't want the one I've got. The interview is a necessity, son; we are fighting a war with a total lack of military intelligence. We don't know anything, really, about our enemy. We can't negotiate with him, we don't know where he comes from, nor what makes him tick. We've got to find out; our racial existence depends on it. The only, the only way to talk to these critters is through a human volunteer. So it will be done. But I'm still looking for a volunteer."

"Well, don't look at me!"

"I am looking at you."

My answer had been half wisecrack; his answer turned it dead serious and startled me speechless. I finally managed to splutter, "You're crazy! I should have killed it when I had your gun-and I would have if I had known what you wanted it for. But as for me volunteering to let you put that thing-No! I've had it."

He ploughed on through as if he had not heard me. "It can't be just any volunteer; it has to be a man who can take it. Jarvis wasn't stable enough, nor tough enough in some fashion to stand up under it. We know you are."

"Me? You don't know anything of the sort. All you know is that I lived through it once. I . . . I couldn't stand it again."

"Well, maybe it will kill you," he answered calmly, "but it is less likely to kill you than someone else. You are proved and salted; you ought to be able to do it standing on your head. With anyone else I run more risk of losing an agent."

"Since when did you worry about risking an agent?" I said bitterly.

"Since always, believe me. I am giving you one more chance, son: are you going to do this, knowing that it has to be done and that you stand the best chance of anybody-and can be of most use to us, because you are used to it-or are you going to let some other agent risk his reason and probably his life in your place?"

I started to try to explain how I felt, that I was not afraid to die, no more than is normal, but that I could not stand the thought of dying while possessed by a parasite. Somehow I felt that to die so would be to die already consigned to an endless and unbearable hell. Even worse was the prospect of not dying once the slug touched me. But I could not say it; there were still no words to describe what the race had not experienced.

I shrugged. "You can have my appointment back. There is a limit to what one man can be expected to go through and I've reached it. I won't do it."

He turned to the intercom phone on the wall. "Laboratory," he called out, "we'll start the experiment right now. Hurry it up!"

The answering voice I recognized as that of the man who had walked in on us. "Which subject?" he asked. "It affects the measurements."

"The original volunteer."

"That's the smaller rig?" the voice asked doubtfully.

"Right. Get it in here."

I started for the door. The Old Man snapped, "Where do you think you are going?"

"Out," I snapped back. "I'm having no part of this."

He grabbed me and spun me around as if he had been the bigger and younger. "No, you don't. You know more about these things than the rest of us; your advice could be of help."

"Let go of me."

"You'll stay and watch!" he said savagely, "strapped down or free to move, as you choose. I've made allowance for your illness but I've had enough of your nonsense."

I was too weary to buck him; I felt nervously exhausted, tired in my bones. "You're the boss."

The lab people wheeled in a metal framework, a sort of chair, more like a Sing Sing special than anything else. There were metal clamps for ankles and knees, more of the same on the chair arms for the wrists and elbows. There was a corselet effect to restrain the waist and the lower part of the chest, but the back was cut away so that the shoulders of the person unfortunate enough to sit in it would be free.

They brought it over and placed it beside the ape's cage, then removed the back panel of the cage and the panel on the side nearest the "chair" rig.

The ape watched the procedure with intent, aware eyes, but his limbs still dangled helplessly. Nevertheless, I became still more disturbed at the cage being thus opened. Only the Old Man's threat of placing me under restraint kept me from leaving.

The technicians stood back and waited, apparently ready for the job. The outer door opened and several people came in; among them was Mary.

I was caught off balance by her sudden appearance; I had been wanting to see her and had tried several times to get word to her through the nurses-but they either honestly could not identify her or had received instructions. Now I saw her first under these circumstances. I cursed the Old Man to myself, knowing it was useless to object. It was no sort of a show to bring a woman to, even if the woman was an agent. There ought to be some sort of decent limits somewhere.

Mary saw me, looked surprised, and nodded. I let it go with a nod myself; it was no time for small talk. She was looking good, as always, though very sober. She was dressed in the same sort of costume as the nurses had worn, shorts and a skimpy halter, but she did not have on the ludicrous metal helmet and back plate.

The others in the party were men. They wore shorts, like the Old Man and myself. They were loaded with recording and stereo equipment as well as other apparatus.

"Ready?" inquired the lab chief.

"Get going," answered the Old Man.

Mary walked straight to the metal chair and sat down in it. Two of the technicians knelt at her feet and started busying themselves with the clamps. Mary reached behind her, unfastened her halter and let it fall, leaving her back bare.

I looked at this in a frozen daze, as if caught in a nightmare. Then I had grabbed the Old Man by the shoulders and had literally thrown him aside and I was standing by the chair, kicking the technicians out of the way. "Mary!" I screamed, "get up out of there!"

Now the Old Man had his gun on me and was motioning me back with it. "Away from her," he ordered. "You three-grab him and tie him up."

I looked at the gun, then I looked down at Mary. She said nothing and did not move; in fact her feet were already bound. She simply looked at me with compassionate eyes. "Get up from there, Mary," I said dully, "I want to sit down."

They removed the chair Mary had sat in and brought in another, larger one. I could not have used hers; both of them were tailored to size. When they finished clamping me in place I might as well have been cast into concrete. Once secured, my back began to itch unbearably, although nothing, as yet, had touched it.

Mary was no longer in the room; whether she had left or had been ordered out by the Old Man I do not know and it did not seem to matter. The Old Man stepped up to me after I had been prepared, laid a hand on my arm, and said quietly, "Thanks, son."

I did not bother to answer.

I did not see them handle the parasite as it took place behind my back. There was a rig which I had seen them bring in which appeared to be modified from the remote-handling gear used on radioactives; no doubt they used that. I was not interested enough to look, even if I had been able to turn my head far enough, which I couldn't.

Once the ape barked and screamed and someone shouted, "Watch it!"

There was a dead silence as if everyone was holding his breath-then something moist touched the back of my neck and I fainted.

I came out of it with the same tingling energy I had experienced once before. I knew I was in a tight spot, but I was warily determined to think my way out of it. I was not afraid; I was contemptuous of those around me and sure that in the long run I could outwit them.

The Old Man said sharply, "Can you hear me?"

I answered, "Of course I can. Quit shouting."

"Do you remember what we are here for?"

I said, "Naturally I remember. You want to ask some questions. What are you waiting for?"

"What are you?"

"Now that's a silly question. Take a look at me. I'm six feet one, more muscle than brain, and I weigh-"

"Not you. You know to whom I am talking-you."

"Guessing games?"

The Old Man waited a bit before replying, "It will do you no good to pretend that I don't know what you are-"

"Ah, but you don't."

"Or, rather, that I don't know that you are a parasite talking through the body of a man. You know that I have been studying you all the time you have been living on the body of that ape. I know things about you which give me an advantage over you. One-" He started ticking them off.

"You can be killed.

"Two, you can be hurt. You don't like electric shock and you can't stand the amount of heat even a man can stand.

"Three, you are helpless without your host. I could have you removed from this man and you would die.

"Four, you have no powers except those you borrow from your host-and your host is helpless. Try your bonds; then be sensible. You must cooperate-or die."

I listened with half an ear; I had already been trying my bonds, neither hoping nor fearing, but finding them, as I expected, impossible to escape. This did not worry me; I had neither worries nor fears. I was oddly contented to be back with my master, to be free of troubles and tensions. My business was to serve and the future would take care of itself.

In the meantime I must be alert, ready to serve him.

One ankle strap seemed less tight than the other; possibly I might drag my foot through it. I checked on the arm clamps; perhaps if I relaxed my muscles completely-

But I made no effort to escape. An instruction came at once-or, I made a decision, for the words mean the same; I tell you there was no conflict between my master and me; we were one-instruction or decision, I knew it was not time to risk an escape. I ran my eyes around the room, trying to figure who was armed and who was not. It was my guess that only the Old Man was armed; that bettered the chances.

Somewhere, deep down, was that dull ache of guilt and despair never experienced by any but the servants of the masters-but I was much too busy with the problem at hand to be troubled by it.

"Well?" the Old Man went on. "Do you answer my questions, or do I punish you?"

"What questions?" I asked. "Up to now, you've been talking nonsense."

The Old Man turned to one of the technicians. "Give me the tickler."

I felt no apprehension although I did not understand what it was he had asked for. I was still busy checking my bonds. If I could tempt him into placing his gun within my reach-assuming that I could get one arm free-then I might be able to-

He reached past my shoulders with a rod. I felt a shocking, unbearable pain. The room blacked out as if a switch had been thrown and for an undying instant I was jolted and twisted by hurt. I was split apart by it; for the moment I was masterless.

The pain left, leaving only its searing memory behind. Before I could speak, or even think coherently for myself, the splitting away had ended and I was again safe in the arms of my master. But for the first and only time in my service to him I was not myself free of worry; some of his own wild fear and pain was passed on to me, the servant.

I looked down and saw a line of red welling out of my left wrist; in my struggles I had cut myself on the clamp. It did not matter; I would tear off hands and feet and escape from there on bloody stumps, if escape for my master were possible that way.

"Well," asked the Old Man, "how did you like the taste of that?"

The panic that possessed me washed away; I was again filled with an unworried sense of well being, albeit wary and watchful. My wrists and ankles, which had begun to pain me, stopped hurting. "Why did you do that?" I asked. "Certainly, you can hurt me-but why?"

"Answer my questions."

"Ask them."

"What are you?"

The answer did not come at once. The Old Man reached for the rod; I heard myself saying, "We are the people."

"The people? What people?"

"The only people. We have studied you and we know your ways. We-" I stopped suddenly.

"Keep talking," the Old Man said grimly, and gestured with the rod.

"We come," I went on, "to bring you-"

"To bring us what?"

I wanted to talk; the rod was terrifyingly close. But there was some difficulty with words. "To bring you peace," I blurted out.

The Old Man snorted.

" 'Peace'," I went on, "and contentment-and the joy of-of surrender." I hesitated again; "surrender" was not the right word. I struggled with it the way one struggles with a poorly grasped foreign language. "The joy," I repeated, "-the joy of . . .nirvana." That was it; the word fitted. I felt like a dog being patted for fetching a stick; I wriggled with pleasure.

"Let me get this," the Old Man said thoughtfully. "You are promising the human race that, if we will just surrender to your kind, you will take care of us and make us happy. Right?"

"Exactly!"

The Old Man studied me for a long moment, looking, not at my face, but past my shoulders. He spat upon the floor. "You know," he said slowly, "me and my kind, we have often been offered that bargain, though maybe not on such a grand scale. It never worked out worth a damn."

I leaned forward as much as the rig would allow. "Try it yourself," I suggested. "It can be done quickly-and then you will know."

He stared at me, this time in my face. "Maybe I should," he said thoughtfully. "Maybe I owe it to-somebody, to try it. And maybe I will, someday. But right now," he went on briskly, "you have more questions to answer. Answer them quick and proper and stay healthy. Be slow about it and I'll step up the current." He brandished the rod.

I shrank back, feeling dismay and defeat. For a moment I had thought he was going to accept the offer and I had been planning the possibilities of escape that could develop. "Now," he went on, "where do you come from?"

No answer . . . I felt no urge to answer.

The rod came closer. "Far away!" I burst out.

"That's no news. Tell me where? Where's your home base, your own planet?"

I had no answer. The Old Man waited a moment, then said, "I see I'll have to touch up your memory." I watched dully, thinking nothing at all. He was interrupted by one of the bystanders. "Eh?" said the Old Man.

"There may be a semantic difficulty," the other repeated. "Different astronomical concepts."

"Why should there be?" asked the Old Man. "That slug is using borrowed language throughout. He knows what his host knows; we've proved that." Nevertheless he turned back and started a different tack. "See here-you savvy the solar system; is your planet inside it or outside it?"

I hesitated, then answered, "All planets are ours."

The Old Man pulled at his lip. "I wonder," he mused, "just what you mean by that?" He went on, "Never mind; you can claim the whole damned universe; I want to know where your nest is? Where is your home base? Where do your ships come from?"

I could not have told him and did not; I sat silent.

Before I could anticipate it he reached behind me with the rod; I felt one smashing blow of pain, then it was gone. "Now, talk, damn you! What planet? Mars? Venus? Jupiter? Saturn? Uranus? Neptune? Pluto? Kalki?" As he ticked them off, I saw them-and I have never been as far off Earth as the space stations. When he came to the right one, I knew-and the thought was instantly snatched from me.

"Speak up," he went on, "or feel the whip."

I heard myself saying, "None of them. Our home is much farther away. You could never find it."

He looked past my shoulders and then into my eyes. "I think you are lying. I think you need some juice to keep you honest."

"No, no!"

"No harm to try." Slowly he thrust the rod past me, behind me. I knew the answer again and was about to give it, when something grabbed my throat. Then the pain started.

It did not stop. I was being torn apart; I tried to talk, to tell, anything to stop the pain-but the hand still clutched my throat and I could not.

Through a clearing blur of pain I saw the Old Man's face, shimmering and floating. "Had enough?" he asked. "Ready to talk?" I started to answer, but I choked and gagged. I saw him reach out again with the rod.

I burst into pieces and died.

They were leaning over me. Someone said, "He's coming around. Watch him; he might be violent."

The Old Man's face was over mine, his expression worried. "Are you all right, son?" he asked anxiously. I turned my face away.

"One side, please," another voice said. "Let me give him the injection."

"Will his heart stand it?"

"Certainly-or I wouldn't give it to him." The speaker knelt by me, took my arm, and gave me a shot. He stood up, looked at his hands, then wiped them on his shorts; they left bloody streaks.

I felt strength flowing back into me. "Gyro", I thought absently, or something like it. Whatever it was, it was pulling me back together. Shortly I sat up, unassisted.

I was still in the cage room, directly in front of that damnable chair. The cage, I noticed without interest, was closed again. I started to get to my feet; the Old Man stepped forward and gave me a hand. I shook him off. "Don't touch me!"

"Sorry," he answered, then snapped, "Jones! You and Ito-get the litter. Take him back to the infirmary. Doc, you go along."

"Certainly." The man who had given me the shot stepped forward and started to take my arm. I drew away from him.

"Keep your hands off me!"

He stopped. "Get away from me-all of you. Just leave me alone." The doctor looked at the Old Man, who shrugged, then motioned them all back. Alone, I went to the door, through it, and on out through the outer door into the passageway.

I paused there, looked at my wrists and ankles and decided that I might as well go back to the infirmary. Doris would take care of me, I was sure, and then maybe I could sleep. I felt as if I had gone fifteen rounds and lost every one of them.

"Sam, Sam!"

I looked up; I knew that voice. Mary hurried up and was standing before me, looking at me with great sorrowful eyes. "I've been waiting," she said. "Oh, Sam! What have they done to you?" Her voice was so choked that I could hardly understand her.

"You should know," I answered, and found I had strength enough left to slap her.

"Bitch," I added.

The room I had had was still empty, but I did not find Doris. I was aware that I had been followed, probably by the doctor, but I wanted no part of him nor any of them just then; I closed the door. Then I lay face down on the bed and tried to stop thinking or feeling anything.

Presently I heard a gasp, and opened one eye; there was Doris. "What in the world?" she exclaimed and came over to me. I felt her gentle hands on me. "Why, you poor, poor baby!" Then she added, "Just stay there, don't try to move. I'll get the doctor."

"No!"

"But you've got to have the doctor."

"No. I won't see him. You help me."

She did not answer. Presently I heard her go out. She came back shortly-I think it was shortly-and started to bathe my wounds. The doctor was not with her.

She was not more than half my size but she lifted me and turned me when she needed to as if I had been the baby she had called me. I was not surprised by it; I knew she could take care of me.

I wanted to scream when she touched my back. But she dressed it quickly and said, "Over easy, now."

"I'll stay face down."

"No," she denied, "I want you to drink something, that's a good boy."

I turned over, with her doing most of the work, and drank what she gave me. After a bit I went to sleep.

I seem to remember being awakened later, seeing the Old Man and cursing him out. The doctor was there too-or it could just as well have been a dream.

Miss Briggs woke me up and Doris brought me breakfast; it was as if I had never been off the sick list. Doris wanted to feed me but I was well able to do it myself. Actually I was not in too bad shape. I was stiff and sore and felt as if I had gone over Niagara Falls in a barrel; there were dressings on both arms and both legs where I had cut myself on the clamps, but no bones were broken. Where I was sick was in my soul.

Don't misunderstand me. The Old Man could send me into a dangerous spot-and had done so, more than once-and I would not hold it against him. That I had signed up for. But I had not signed up for what he had done to me. He knew what made me tick and he had deliberately used it to force me into something I would never have agreed to, had I not been jockeyed into it. Then after he had gotten me where he wanted me, he had used me unmercifully.

Oh, I've slapped men around to make them talk. Sometimes you have to. But this was different. Believe me.

It was the Old Man that really hurt. Mary? After all, what was she? Just another babe. True, I was disgusted with her to the bottom of my soul for letting the Old Man talk her into being used as bait. It was all right for her to use her femaleness as an agent; the

Section had to have female operatives; they could do things men could not do. There have always been female spies and the young and pretty ones had always used the same tools.

But she should not have agreed to use them against another agent, inside her own Section-at least, she should not have used them against me.

Not very logical, is it? It was logical to me. Mary shouldn't have done it.

I was through, I was finished. They could go ahead with Operation Parasite without me; I'd had it. I owned a cabin up in the Adirondacks; I had enough stuff there in deep freeze to carry me for years-well, a year, anyhow. I had plenty of tempus pills and could get more; I would go up there and use them-and the world could save itself, or go to hell, without me.

If anyone came within a hundred yards of me, he would either show a bare back or be burned down.

Chapter 11

I had to tell somebody about it and Doris was the goat. It may have been classified information but I did not give a hoot. It turned out that Doris knew all about Operation Parasite; there was no reason to try to keep any part of it secret. The trouble was to make it not a secret-but I am ahead of myself.

Doris was indignant-shucks, she was sore as a boiled owl. She had dressed what they had done to me. Of course, as a nurse, she had dressed a lot worse, but this had been done by our own people. I blurted out how I felt about Mary's part in it. "You know that old slaughterhouse trick," I asked her, "where they train one animal to lead the others in? That's what they got Mary to do to me."

She had not heard of it, but she understood me. "Do I understand you that you had wanted to marry this girl?"

"Correct. Stupid, ain't I?"

"All men are, about women-but that's not the point. It does not make any difference whether she wanted to marry you or not; her knowing that you wanted to marry her makes what she did about eight thousand times worse. She knew what she could do to you. It wasn't fair." She stopped massaging me, her eyes snapping. "I've never met your redhead, not yet-but if I ever do, I'll scratch her face!"

I smiled at her. "You're a good kid, Doris. I believe you would play fair with a man."

"Oh, I'm no angel, and I've pulled some fast ones in my time. But if I did anything halfway like that. I'd have to break every mirror I own. Turn a bit, and I'll get the other leg."

Mary showed up. The first I knew about it was hearing Doris say angrily, "You can't come in."

Mary's voice answered, "I'm going in. Try to stop me."

Doris squealed, "Stay where you are-or I'll pull that hennaed hair out by the roots!"

There was a short silence, sounds of a scuffle-and the smack! of someone getting slapped, hard. I yelled out, "Hey! What goes on?"

They appeared in the doorway together. Doris was breathing hard and her hair was mussed. Mary managed to look dignified and composed, but there was a bright red patch

on her left cheek the size and shape of Doris's hand. She looked at me and ignored the nurse.

Doris caught her breath and said, "You get out of here. He doesn't want to see you."

Mary said, "I'll hear that from him."

I looked at them both, then said, "Oh, what the hell-Doris, she's here; I'll talk to her. I've got some things to tell her, in any case. Thanks for trying."

Doris waited a moment, then said, "You're a fool!" and flounced out.

Mary came over to the bed. "Sam," she said. "Sam."

"My name isn't 'Sam'."

"I've never known your right name."

I hesitated. It was no time to explain to her that my parents had been silly enough to burden me with 'Elihu'. I answered, "What of it? 'Sam' will do."

"Sam," she repeated. "Oh Sam, my dear."

"I am not your 'dear'."

She inclined her head. "Yes, I know that. I don't know why. Sam, I came here to find out why you hate me. Perhaps I can't change it, but I must know why."

I made some sound of disgust. "After what you did, you don't know why? Mary, you may be a cold fish, but you aren't stupid. I know; I've worked with you."

She shook her head. "Just backwards, Sam. I'm not cold, but I'm frequently stupid. Look at me, please-I know what they did to you. I know that you let it be done to save me from the same thing. I know that and I'm deeply grateful. But I don't know why you hate me. You did not have to do it, I did not ask you to do it, and I did not want you to do it."

I didn't answer; presently she said, "You don't believe me?"

I reared up on one elbow. "I believe you. I believe you have yourself convinced that that is how it was. Now I'll tell you how it was."

"Do, please."

"You sat down in that trick chair knowing that I would never let you go through with it. You knew that, whether that devious female mind of yours admitted it to itself or not. The Old Man could not have forced me into that chair, not with a gun, not even with drugs. But you could. You did. You were the one who forced me to go through with something which I would rather have been dead than touched... a thing that now leaves me dirty and spoiled. You did it."

She had grown steadily whiter as I talked, until her face was almost green against her hair. She caught her breath and said, "You believe that, Sam?"

"What else?"

"Sam, that is not the way it was. I did not know you were going to be in there. I was terribly startled. But there was nothing to do but go through with it; I had promised."

"'Promised'," I repeated. "That covers everything, a schoolgirl promise."

"Hardly a schoolgirl promise."

"No matter. And it doesn't matter whether you are telling the truth or not about knowing that I would be in there-you aren't, of course, but it doesn't matter. The point is: you were there and I was there-and you could figure what would happen if you did what you did do."

"Oh." She waited a bit, then went on, "That's the way it looks to you and I can't dispute the facts."

"Hardly."

She stood very still for a long time. I let her. Finally she said, "Sam-once you said something to me about wanting to marry me."

"I remember something of the sort. That was another day."

"I didn't expect you to renew the offer. But there was something else, a sort of corollary. Sam, no matter what you think of me, I want to tell you that I am deeply grateful for what you did for me. Uh, Miss Barkis is willing, Sam-you understand me?"

This time I grinned at her. "A female to the very end! Honest so help me, the workings of the female mind continue to delight and astound me. You always think you can cancel out the score and start over with that one trump play." I continued to grin at her while she turned red. "It won't work. Not this time. I won't inconvenience you by taking up your no-doubt generous offer."

She continued to blush but she came back at me in a steady, level voice, "I let myself in for that. Nevertheless, it's true. That-or anything else I can ever do for you."

My elbow was going to sleep; I sank back and lay down. "Sure, you can do something for me."

Her face lit up. "What?"

"Go away and quit bothering me. I'm tired." I turned my face away. I did not hear her leave, but I heard Doris come back in. She was bristling like a fox terrier; they must have passed in the hall. She faced me, fists on her hips, looking cute and adorable and very indignant. "She got around you, didn't she?"

"I don't think so."

"Don't lie to me. You went soft on her. I know-men always do. The idiots! A woman like that, all she has to do is shake her fanny at a man and he rolls over and plays dead."

"Well, I didn't. I gave her what for."

"You're sure you did?"

"I did-and sent her packing."

Doris looked doubtful. "I hope you did. Maybe you did-she wasn't looking too pert as she came out." She dismissed the matter. "How do you feel?"

"Pretty good"-it was a lie, net.

"Want some massage?"

"No, just come here and sit on the bed and talk to me. Want a cigarette?"

"Well-as long as the doctor doesn't catch me." She perched up on the bed; I struck cigarettes for both of us and stuck hers in her mouth. She took a deep drag, swelling out her chest and pushing her arrogant breasts against her halter almost to the breaking point. I thought again what a sweet dish she was; she was just what I needed to take my mind off Mary.

We talked for a while. Doris gave her views on women-it appeared she disapproved of them on principle, although she was not in the least apologetic about being one herself-on the contrary! "Take women patients," she said. "One of the reasons I took this job was because we don't get a woman patient once in a coon's age. A man patient appreciates what is done for him. A woman just expects it and boilers for more."

"Would you be that sort of patient?" I asked, just to tease her.

"I hope not. I'm healthy, thank the Lord." She crushed out her cigarette and jumped off the bed, bouncing a little. "Got to get out of here. Scream if you want anything."

"Doris-"

"Yes?"

"You got any leave coming up?"

"I plan to take two weeks shortly. Why?"

"I was thinking. I'm going on leave-at least. I've got a shack in the Adirondacks. How about it? We could have a nice time and forget this madhouse."

She dimpled. "You know, that's mighty white of you, podnuh." She came over and kissed me full on the mouth, the first time she had done so. "And if I weren't an old married lady, with a pair of twins in the bargain, I might take you up."

"Oh."

"Sorry. But thanks for the compliment. You've made my day."

She started for the door. I called out, "Doris, wait a minute." When she stopped I added, "I didn't know. Look, why don't you take me up on it anyhow? The cabin, I mean-take your old man and the kids up there and give 'em a good time. I'll give you the combo and the transponder code."

"You mean that?"

"Of course I do."

"Well-I'll talk to you later. Thanks." She came back and kissed me again and it made me wish she had not been married, or, at least, not working at it. Then she left.

The doctor came in a bit later. While he was fiddling with the futile things doctors do, I said, "That nurse. Miss Marsden-is she married?"

"What business is it of yours?"

"I just wanted to know."

"You keep your hands off my nurses-or I'll fit you with mittens. Now stick out your tongue."

The Old Man put his head in late that afternoon. My immediate response was pleasure; the Old Man's personality is hard to shake off. Then I remembered and went cold.

"I want to talk to you," he started in.

"I don't want to talk to you. Get out."

He ignored my remarks and came in, dragging his bad leg. "Mind if I sit down?"

"You seem to be doing so."

He ignored that, too. He wrinkled his face and scowled. "You know, son, you are one of my best boys, but sometimes you are a little hasty."

"Don't let that worry you," I answered, "as soon as the doctor lets me out of here. I'm through." I had not really decided up until then, but it seemed as necessary as syrup with buckwheat cakes. I no longer trusted the Old Man; the rest was obvious.

He was not hearing anything that he did not choose to hear. "You're too hasty. You jump to conclusions. Now take this girl Mary-"

"Mary who?"

"You know who I mean; you know her as 'Mary Cavanaugh'."

"You take her."

"You jumped all over her without knowing the score. You've got her all upset. Matter of fact, you may have ruined a good agent for me."

"Hmmph! I'm in tears about it."

"Listen, you young snot, you didn't have any call to be rough on her. You don't know the facts."

I did not answer; explanations are a poor defense.

"Oh, I know that you think you do," he went on. "You think she let herself be used as bait to get you to take part in that job we did. Well, you've got it slightly wrong. She was being used as bait, but I was using her. I planned it that way."

"I know you did."

"Then why blame her?"

"Because, although you planned it, you couldn't have carried it out without her active cooperation. It's mighty big of you, you no-good, heartless bastard, to take all the blame-but you can't."

He did not hear my profanity, either. He went on, "You understand everything about it but the key point, which is-the girl didn't know."

"Hell's bells, she was there."

"So she was. Son, did you ever know me to lie to you?"

"No," I admitted, "but I don't think you would hesitate."

He looked pained but answered, "Maybe I deserve that. I'd lie to one of my own people if the country's safety depended on it. I haven't found it necessary up till now because I've been choosy about who works for me. But this time the country's welfare doesn't depend on it and I'm not lying and you'll just have to test it for yourself, any way you can figure out, and make up your mind whether or not I'm lying. That girl didn't know. She didn't know you were going to be in that room. She didn't know why you were in there. She didn't know that there was any question about who was going to sit in that chair. She didn't have the faintest suspicion that I didn't mean for her to go through with it, or that I had already decided that you were the only party who would suit me, even if I had to have you tied down and forced-which I would have done, if I hadn't had a double whammy up my sleeve to trick you into volunteering. Hell's bells yourself, son; she didn't even know you were off the sick list."

I wanted to believe it, so I did my damnedest not to believe it. If it were a lie, it would be just the shape of lie he would tell. As to whether he would bother to lie-well, getting two prime agents back into the groove might be something he would class, just now, as involving the country's safety. The Old Man had a complex mind.

"Look at me!" he added. I snapped out of my brown study and looked up. "There is something else I want you to know and I want to rub your nose in it. First off, let me say that everybody-including me-appreciates what you did, regardless of your motives. I'm putting in a letter about it and no doubt there will be a medal in due time. That stands, whether you stay with the Section or not. And if you go, I'll help you with any transfer or such you may want."

He paused for breath, then went on. "But don't go giving yourself airs as a little tin hero-"

"I won't!"

"-because that medal is going to the wrong person. Mary ought to get it.

"Now hush up; I'm not through. You had to be forced into it, like building a fire under a mule. No criticism; you had been through plenty. But Mary was a real, honest-to-God, Simon-pure volunteer. When she sat down in that chair, she didn't know what was going to happen to her. She didn't expect any last minute reprieve and she had every reason to believe that, if she got up alive, her reason would be gone, which is worse. But she did it-because she is a hero, which you miss by a couple of points."

He went on without waiting for me to reply; "Listen, son-most women are damn fools and children. But they've got more range than we've got. The brave ones are braver, the good ones are better and the vile ones are viler, for that matter. What I'm trying to tell you is: this one is more of a man than you are and you've done her a serious wrong."

I was so churned up inside that I could not judge for the life of me whether he was telling the truth, or manipulating me again. I said, "Maybe so. Maybe I lashed out at the wrong person. But if what you say is true-"

"It is."

"-it doesn't make what you did any sweeter; it makes it worse."

He took it without flinching. "Son, I'm sorry if I've lost your respect. But I'd do it again under the same circumstances. I can't be choosy about such things any more than can a commander in battle. Less, because I fight with different weapons. I've always been able to shoot my own dog. Maybe that's good; maybe that's bad-but that is what my job takes. If you are ever in my shoes, you'll have to do it, too."

"I'm not likely to be."

"Why don't you take leave, rest up, and think about it?"

"I'll take leave-terminal leave."

"Very well." He started to leave; I said,

"Wait-"

"Yes?"

"You made me one promise and I'm holding you to it. About that parasite-you said I could kill it, personally. Are you through with it?"

"Yes, I'm through with it, but-"

I started to get out of bed. "No 'buts'. Give me your gun; I'm going to kill it now."

"But you can't. It's already dead."

"What! You promised me."

"I know I did. But it died while we were trying to force you-to force it-to talk."

I sat down and started to shake with laughter. I got started and could not stop. I was not enjoying it; I could not help it.

The Old Man grasped my shoulders and shook me. "Snap out of it! You'll get yourself sick. I'm sorry about it, but there's nothing to laugh at. It could not be helped."

"Ah, but there is," I answered, still sobbing and chuckling. "It's the funniest thing that ever happened to me. All that-and all for nothing. You dirtied yourself and you loused up me and Mary-and all for no use."

"Huh? Whatever gave you that idea?"

"Eh? I know-I know everything that went on. And you didn't even get small change out of it-out of us, I should say. You didn't learn anything you didn't know before."

"The hell we didn't!"

"And the hell you did."

"It was a bigger success than you'd ever guess, son. True, we didn't squeeze anything out of it directly, before it died-but we got something out of you."

"Me?"

"Last night. We put you through it last night. You were doped, psyched, brain-waved, analyzed, wrung out, and hung out to dry. The parasite spilled things to you and they were still there for the hypno-analysts to pick up after you were free of it."

"What?"

"Where they live. We know where they come from and can fight back-Titan, sixth satellite of Saturn."

When he said it, I felt a sudden gagging constriction of my throat-and I knew that he was right.

"You certainly fought before we could get it out of you," he went on reminiscently. "We had to hold you down to keep you from hurting yourself-more."

Instead of leaving he threw his game leg over the edge of the bed and struck a cigarette. He seemed anxious to be friendly. As for me, I did not want to fight with him further; my head was spinning and I had things to get straight. Titan-that was a long way out. Mars was the farthest men had ever been, unless the Seagraves Expedition, the one that never came back, got out to the Jovian moons.

Still, we could get there, if there were a reason for it. We would burn out their nest!

Finally he got up to go. He had limped almost to the door when I stopped him again. "Dad-"

I had not called him that in years. He turned and his face held a surprised and defenseless expression. "Yes, son?"

"Why did you and mother name me 'Elihu'?"

"Eh? Why, it seemed the thing to do at the time. It was your maternal grandfather's name."

"Oh. Not enough reason. I'd say."

"Perhaps not." He turned again and again I stopped him.

"Dad-what sort of a person was my mother?"

"Your mother? I don't exactly know how to tell you. Well-she was a great deal like Mary. Yes, sir, a great deal like her." He turned and stumped out without giving me any further chance to talk.

I turned my face to the wall. After a while I steadied down.

Chapter 12

This is a personal account of my angle of view on events known to everybody. I'm not writing history. For one thing, I don't have the broad viewpoint.

Maybe I should have been sweating about the fate of the world when I was actually stewing about my own affairs. Maybe. But I never heard of a man with a blighty wound caring too much about how the battle turned out.

Anyhow, there did not seem much to worry about. I knew that the President had been saved under circumstances which would open up anybody's eyes, even a politician's, and that was, as I saw it, the last real hurdle. The slugs-the titans, that is-were dependent on secrecy; once out in the open they could not possibly hold out against the massed strength of the United States. They had no powers except those they borrowed from their slaves, as I knew better than anybody.

Now we could clean up their beachhead here; then we could go after them where they lived. But planning interplanetary expeditions was hardly my job. I knew as much about that subject as I knew about Egyptian art.

When the doctor released me I went looking for Mary. I still had nothing but the Old Man's word for it, but I had more than a suspicion that I had made a big hairy thing of myself. I did not expect her to be glad to see me, but I had to speak my piece.

You would think that a tall, handsome redhead would be as easy to find as fiat ground in Kansas. She would have been had she been a member of the in staff, but she was a field agent. Field agents come and go and the resident personnel are encouraged to mind their own business. Doris had not seen her again-so she said-and was annoyed that I should want to find her.

The personnel office gave me the bland brush off. I was not inquiring officially, I did not know the agent's name, and just who did I think I was, anyway? They referred me to Operations, meaning the Old Man. That did not suit me.

I had no more luck and met with even more suspicion when I tried the door tally; I began to feel like a spy in my own section.

I went to the bio lab, could not find its chief, and talked to an assistant. He did not know anything about a girl in connection with Project Interview; the subject had been a man-he knew; he had seen the stereo. I told him to take a close look at me. He did and said, "Oh, were you that guy? Pal, you sure took a beating." He went back to scratching himself and shuffling reports.

I left without saying thank you and went to the Old Man's office. There seemed to be no choice.

There was a new face at Miss Haines's desk. I never saw Miss Haines again after the night I got taken. Nor did I ask what had become of her; I did not want to know. The new secretary passed in my I.D. code and, for a wonder, the Old Man was in and would see me.

"What do you want?" he said grumpily.

I said, "Thought you might have some work for me," which was not at all what I intended to say.

"Matter of fact, I was just fixing to send for you. You've loafed long enough." He barked something at his desk phone, stood up and said, "Come!"

I felt suddenly at peace, and followed him. "Cosmetics?" I asked.

"Your own ugly face will do. We're headed for Washington." Nevertheless we did stop in Cosmetics, but only for street clothes. I drew a gun-my own had gone where the woodbine twineth-and had my phone checked.

The door guard made us bare our backs before he would let us approach and check out. Then we tucked our shirts in and went on up, coming out in the lower levels of New Philadelphia, the first I had known as to the location of the Section's new base. "I take it this burg is clean?" I said to the Old Man.

"If you do, you are rusty in the head," he answered. "Keep your eyes peeled."

There was no opportunity for more questions. The presence of so many fully clothed humans bothered me; I found myself drawing away from people and watching for round shoulders. Getting into a crowded elevator to go up to the launching platform seemed downright reckless. When we were in our car and the controls set, I said so. "What in the devil do the authorities in that dump think they are doing? I could swear that at least one cop we passed was wearing a hump."

"Possibly. Even probably."

"Well, for crying in church! What goes on? I thought you had this job taped and that we were fighting back on all fronts."

"We're trying to. What would you suggest we do about it?"

"Why, it's obvious-even if it were freezing cold, we ought not to see a back covered up anywhere, not until we know they are all dead."

"That's right."

"Well, then-Look, the President knows the score, doesn't he? I understand that-"

"He knows it."

"What's he waiting for? For the whole country to be taken over? He should declare martial law and get action. You told him, a long time ago."

"So I did." The Old Man stared down at the countryside. "Son, are you under the impression that the President runs the country?"

"Of course not. But he is the only man who can act."

"Mmmm-They sometimes call Premier Tsvetkov 'the Prisoner of the Kremlin'. True or not, the President is the prisoner of Congress."

"You mean Congress hasn't acted?"

"I have spent my time the past several days-ever since we stopped the attempt on the President-trying to help the President convince them. Ever been worked over by a congressional committee, son?"

I tried to figure it out. Here we sat, as stupid as dodoes walking up a gangplank to be slugged-yes, and Homo sapiens would be as extinct as the dodo if we did not move. Presently the Old Man said, "It's time you learned the political facts of life. Congresses have refused to act in the face of dangers more obvious than this one. This one isn't obvious, not until a man has had it in his lap, the way we have. The evidence is slim and hard to believe."

"But how about the Assistant Secretary of the Treasury? They can't ignore that."

"Can't they? The Assistant Secretary had one snatched off his back, right in the East Wing, and we killed two of his Secret Service guards. And now the honorable gent is in Walter Reed with a nervous breakdown and can't recall what happened. The Treasury Department gave out that an attempt to assassinate the President had been foiled-true, but not the way they meant it."

"And the President held still for that?"

"His advisers told him to wait until he can get congressional support. His majority is uncertain at best and there are stalwart statesmen in both houses who want his head on a platter. Party politics is a rough game."

"Good Lord, partisanship doesn't figure in a case like this!"

The Old Man cocked an eyebrow. "You think not, eh?"

I finally managed to ask him the question I had come into his office to ask: where was Mary?

"Odd question from you," he grunted. I let it ride; he went on, "Where she should be. Guarding the President."

We went first to a room where a joint special committee was going over evidence. It was a closed session but the Old Man had passes. When we got there they were running stereos; we slipped into seats and watched.

The films were of my anthropoid friend. Napoleon-the ape himself, shots of him with the titan on his back, then close-ups of the titan. It made me sick to see it. One parasite looks like another; but I knew which one this was and I was deeply glad it was dead.

The ape gave way to me myself. I saw myself being clamped into the chair. I hate to admit how I looked; real funk is not pretty. A voice off screen told what was going on.

I saw them lift the titan off the ape and onto my own bare back. Then I fainted in the picture-and almost fainted again. I won't describe it and it upsets me to tell about it. I saw myself writhing under the shocks given the titan-and I writhed again. At one point I tore my right hand free of the clamps, something I had not known, but which explained why my wrist was still not healed.

And I saw the thing die. That was worth sitting through the rest.

The film ended and the chairman said, "Well, gentlemen?"

"Mr. Chairman!"

"The gentleman from Indiana is recognized."

"Speaking without prejudice to the issue, I must say that I have seen better trick photography from Hollywood." They tittered and someone called out, "Hear! Hear!" I knew the ball game was gone.

The head of our bio lab testified, then I found myself called to the stand. I gave my name, address, and occupation, then perfunctorily was asked a number of questions, about my experiences under the titans. The questions were read from a sheet and the chairman obviously was not familiar with them.

The thing that got me was that they did not want to hear. Two of them were reading newspapers.

There were only two questions from the floor. One senator said to me, "Mr. Nivens-your name is Nivens?"

I agreed that it was. "Mr. Nivens," he went on, "you say that you are an investigator?"

"Yes."

"F.B.I., no doubt?"

"No, my chief reports directly to the President."

The senator smiled. "Just as I thought. Now Mr. Nivens, you say you are an investigator-but as a matter of fact you are an actor, are you not?" He seemed to be consulting notes.

I tried to tell too much truth. I wanted to say that I had once acted one season of summer stock but that I was, nevertheless, a real, live, sure-enough investigator. I got no chance. "That will do, Mr. Nivens. Thank you."

The other question was put to me by an elderly senator whose name I should have known. He wanted to know my views on using tax money to arm other countries-and he used the question to express his own views. My views on that subject are cloudy but it did not matter, as I did not get to express them. The next thing I knew the clerk was saying, "Stand down, Mr. Nivens."

I sat tight. "Look here," I said, "all of you. It's evident that you don't believe me and think this is a put-up job. Well, for the love of heaven, bring in a lie detector! Or use the sleep test. This hearing is a joke."

The chairman banged his gavel. "Stand down, Mr. Nivens."

I stood.

The Old Man had told me that the purpose of the meeting was to report out a joint resolution declaring total emergency and vesting war powers in the President. The chairman asked if they were ready to consider the resolution. One of the newspaper readers looked up long enough to say, "Mr. Chairman, I call for clearing the committee room."

So we were ejected. I said to the Old Man, "It looks bad to this boy."

"Forget it," he said. "The President knew this gambit had failed when he heard the names of the committee."

"Where does that leave us? Do we wait for the slugs to take over Congress, too?"

"The President goes right ahead with a message to Congress and a request for full powers."

"Will he get them?"

The Old Man screwed up his face. "Frankly, I don't think he stands a chance."

The joint session was secret, of course, but we were present-direct orders of the President, probably. The Old Man and I were on that little balcony business back of the Speaker's rostrum. They opened it with full rigamarole and then went through the ceremony of appointing two members from each house to notify the President.

I suppose he was right outside for he came in at once, escorted by the delegation. His guards were with him-but they were all our men.

Mary was with him, too. Somebody set up a folding chair for her, right by the President. She fiddled with a notebook and handed papers to him, pretending to be a secretary. But the disguise ended there; she had it turned on full blast and looked like Cleopatra on a warm night-and as out of place as a bed in church. I could feel them stir; she got as much attention as the President did.

Even the President noticed it. You could see that he wished that he had left her at home, but it was too late to do anything about it without greater embarrassment.

You can bet I noticed her. I caught her eye-and she gave me a long, slow, sweet smile. I grinned like a collie pup until the Old Man dug me in the ribs. Then I settled back and tried to behave but I was happy.

The President made a reasoned explanation of the situation, why we knew it to be so and what had to be done. It was as straightforward and rational as an engineering report, and about as moving. He simply stated facts. He put aside his notes at the end. "This is such a strange and terrible emergency, so totally beyond any previous experience, that I must ask very broad powers to cope with it. In some areas, martial law must be declared. Grave invasions of civil guarantees will be necessary, for a time. The right of free movement must be abridged. The right to be secure from arbitrary search and seizure must give way to the right of safety for everyone. Because any citizen, no matter how respected or how loyal, may be the unwilling servant of these secret enemies, all citizens must face some loss of civil rights and personal dignities until this plague is killed.

"With utmost reluctance, I ask that you authorize these necessary steps." With that he sat down.

You can feel a crowd. They were made uneasy, but he did not carry them. The president of the Senate took the gavel and looked at the Senate majority leader; it had been programmed for him to propose the emergency resolution.

Something slipped. I don't know whether the floor leader shook his head or signaled, but he did not take the floor. Meanwhile the delay was getting awkward and there were cries of, "Mister President!" and "Order!"

The Senate president passed over several others and gave the flow to a member of his own party. I recognized the man-Senator Gottlieb, a wheelhorse who would vote for his own lynching if it were on his party's program. He started out by yielding to none in his respect for the Constitution, the Bill of Rights, and, probably, the Grand Canyon. He

pointed modestly to his own long and faithful service and spoke well of America's place in history.

I thought he was beating the drum while the boys worked out a new shift-when I suddenly realized that his words were adding up to meaning: he was proposing to suspend the order of business and get on with the impeachment and trial of the President of the United States!

I think I tumbled to it as quickly as anyone; the senator had his proposal so decked out in ritualistic verbiage that it was a wonder that anyone noticed what he was actually saying. I looked at the Old Man.

The Old Man was looking at Mary.

She was looking back at him with an expression of extreme urgency.

The Old Man snatched a pad out of his pocket, scrawled something, wadded it up, and threw it down to Mary. She caught it, opened it, and read it-and passed it to the President.

He was sitting, relaxed and easy-as if one of his oldest friends were not at that moment tearing his name to shreds and, with it, the safety of the Republic. He put on his old-fashioned specs and read the note. He then glanced unhurriedly around at the Old Man and lifted his eyebrows. The Old Man nodded.

The President nudged the Senate president, who, at the President's gesture, bent over him. The President and he exchanged whispers.

Gottlieb was still rumbling along about his deep sorrow, but that there came times when old friendship must give way to a higher duty and therefore-The Senate president banged his gavel. "If the senator please!"

Gottlieb looked startled and said, "I do not yield."

"The senator is not asked to yield. At the request of the President of the United States, because of the importance of what you are saying, the senator is asked to come to the rostrum to speak."

Gottlieb looked puzzled but there was nothing else he could do. He walked slowly toward the front of the house.

Mary's chair blocked the little stairway up to the rostrum. Instead of getting quietly out of the way, she bumbled around, turning and picking up the chair, so that she got even more in the way. Gottlieb stopped and she brushed against him. He caught her arm, as much to steady himself as her. She spoke to him and he to her, but no one else could hear the words. Finally they got around each other and he went on to the front of the rostrum.

The Old Man was quivering like a dog in point. Mary looked up at him and nodded. The Old Man said, "Take him!"

I was over that rail in a flying leap, as if I had been wound up like a crossbow. I landed on Gottlieb's shoulders.

I heard the Old Man shout, "Gloves, son! Gloves!" I did not stop for them. I split the senator's jacket with my bare hands and I could see the slug pulsing under his shirt. I tore the shirt away and anybody could see it.

Six stereo cameras could not have recorded what happened in the next few seconds. I slugged Gottlieb back of the ear to stop his thrashing. Mary was sitting on his legs. The President was standing over me and pointing, while shouting, "There! There! Now you can all see." The Senate president was standing stupefied, waggling his gavel.

The Congress was just a mob, men yelling and women screaming. Above me the Old Man was shouting orders to the presidential guards as if he were standing on a bridge.

We had this in our favor; doors were locked and there were no armed and disciplined men present except the Old Man's own boys. Sergeants-at-arms, surely-but what are they? One elderly Congressman pulled a hogleg out of his coat that must have been a museum piece, but that was a mere incident.

Between the guns of the guards and the pounding of the gavel something like order was restored. The President started to talk. He told them that an amazing accident had given them a chance to see the true nature of the enemy and he suggested that they file past and see for themselves one of the titans from Saturn's largest moon. Without waiting for their consent, he pointed to the front row and told them to come up.

They came.

I squatted back out of the way and wondered what was accidental about it. With the Old Man you can never tell. Had he known that Congress was infested? I rubbed a bruised knee and wondered.

Mary stayed on the platform. About twenty had filed by and a female Congressman had gotten hysterics when I saw Mary signal the Old Man again. This time I was a hair ahead of his order.

I might have had quite a fight if two of the boys had not been close by; this one was young and tough, an ex-marine. We laid him beside Gottlieb, and again the Old Man and the President and the Senate president, shouting their lungs out, restored order.

Then it was "inspection and search" whether they liked it or not. I patted the women on the back as they came by and caught one. I thought I had caught another, but it was an embarrassing mistake; she was so blubber fat that I guessed wrong.

Mary spotted two more, then there was a long stretch, three hundred or more, with no jackpots. It was soon evident that some were hanging back.

Don't let anyone tell you that Congressmen are stupid. It takes brains to get elected and it takes a practical psychologist to stay elected. Eight men with guns were not enough-eleven, counting the Old Man, Mary, and me. Most of the slugs would have gotten away if the Whip of the House had not organized help.

With their assistance, we caught thirteen, ten alive. Only one of the hosts was badly wounded.

But the Congress of the United States has not been such a shambles since Jefferson Davis announced his momentous decision. No, not even after the Bombing.

Chapter 13

So the President got the authority he needed and the Old Man was his de facto chief of staff; at last we could move fast and effectively. Oh, yes? Did you ever try to hurry a project through a bureaucracy?

"Directives" have to be "implemented"; "agencies" have to be "coordinated"-and everything has to go to the files.

The Old Man had a simple enough campaign in mind. It could not be the straightforward quarantine he had proposed when the infection was limited to the Des Moines area; before we could fight back, we had to locate them. But government agents couldn't search two hundred million people; the people had to do it themselves.

Schedule Bare Back was to be the first phase of the implementation of Operation Parasite-which makes me talk like a bureaucrat. Never mind-the idea was that everybody,

everybody was to peel to the waist and stay peeled, until all titans were spotted and killed. Oh, women could have halter strings across their backs, but a parasite could not hide under a bra string.

We whipped up a visual presentation to go with the stereocast speech the President would make to the nation. Fast work had saved seven of the parasites we had flushed in the sacred halls of Congress and now they were alive on animal hosts. We could show them and we could show the less grisly parts of the film taken of me. The President himself would appear in the 'cast in shorts, and models would demonstrate what the Well Undressed Citizen Would Wear This Season, including the metal head-and-spine armor which was intended to protect a person even if a parasite got to him in his sleep.

We got it ready in one black-coffee night and the President's writers had his lines ready for him. The smash finish was to show Congress in session, discussing the emergency, and every man, woman, and page boy showing a bare back to the camera.

With twenty-eight minutes left until stereocast time the President got a call from up the street. I was present; the Old Man had been with the President all night, and had kept me around for chores. Mary was there, of course; the President was her special charge. We were all in shorts; Schedule Bare Back had already started in the White House. The only ones who looked comfortable in the get-up were Mary, who can wear anything, the colored doorman, who carried himself like a Zulu king, and the President himself, whose innate dignity could not be touched.

When the call came in the President did not bother to cut us out of his end of the conversation. "Speaking," he said. Presently he added, "You feel certain? Very well, John, what do you advise . . . . I see. No, I don't think that would work. . . . I had better come up the street. Tell them to be ready." He pushed back the phone, his face still serene, and turned to an assistant. "Tell them to hold up the broadcast." He turned to the Old Man. "Come, Andrew, we must go to the Capitol."

He sent for his valet and retired into a dressing room adjoining his office; when he came out, he was formally dressed for a state occasion. He offered no explanation, the Old Man raised an eyebrow but said nothing and I did not dare say anything. The rest of us stayed in our gooseflesh specials and so we went to the Capitol.

It was a joint session, the second in less than twenty-four hours. We trooped in, and I got that no-pants-in-church nightmare feeling, for the Congressmen and senators were dressed as usual. Then I saw that the page boys were in shorts without shirts and felt somewhat better.

I still don't understand it. It seems that some people would rather be dead than lose dignity, with senators high on the list. Congressmen, too-a Congressman is a man who wants to be a senator. They had given the President all the authority he asked for; Schedule Bare Back itself had been discussed and approved-but they did not see where it applied to them. After all, they had been searched and cleaned out; Congress was the only group in the country known to be free of titans.

Maybe some saw the holes in the argument, but not one wanted to be first in a public striptease. Face and dignity are indispensable to an office holder. They sat tight, fully dressed.

When the President took the rostrum, he simply looked at them until he got dead silence. Then slowly, calmly, he started taking off clothes.

He stopped when he was bare to the waist. He had had me worried for a moment; I think he had others worried. He then turned slowly around, lifting his arms. At last he spoke.

"I did that," he said, "so that you might see for yourself that your Chief Executive is not a prisoner of the enemy." He paused.

"But how about you?" That last word was flung at them.

The President punched a finger at the junior Whip. "Mark Cummings-how about you? Are you a loyal citizen or are you a zombie spy? Get up! Get your shirt off!"

"Mister President-" It was Charity Evans, from the State of Maine, looking like a pretty schoolteacher. She stood and I saw that, while she was fully dressed, she was in evening dress. Her gown reached to the floor, but was cut as deep as could be above. She turned like a mannequin; in back the dress ended at the base of her spine; in front it came up in two well-filled scallops. "Is this satisfactory, Mr. President?"

"Quite satisfactory, madam."

Cummings was on his feet and fumbling at his jacket; his face was scarlet. Someone stood up in the middle of the hall.

It was Senator Gottlieb. He looked as if he should have been in bed; his cheeks were gray and sunken; his lips showed cyanosis. But he held himself erect and, with incredible dignity, followed the President's example. His old-fashioned underwear was a one-piece job; he wriggled his arms out and let it dangle over his galluses. Then he, too, turned all the way around; on his back, scarlet against his fish-white flesh, was the mark of the parasite.

He spoke. "Last night I stood here and said things I would rather have been flayed alive than utter. But last night I was not my own master. Today I am. Can you not see that Rome is burning?" Suddenly he had a gun in his hand. "Up on your feet, you wardheelers, you courthouse loafers! Two minutes to get your duds off and show a bare back-then I shoot!"

Men close to him sprang up and tried to grab his arm, but he swung the gun around like a flyswatter, smashing one of them in the face. I had my own out, ready to back his play, but it was not necessary. They could see that he was as dangerous as an old bull and they backed away.

It hung in balance, then they started shucking clothes like Doukhobors. One man bolted for a door; he was tripped. No, he was not wearing a parasite.

But we did catch three. After that, the show went on the channels, ten minutes late, and Congress started the first of its "bare back" sessions.

Chapter 14

"LOCK YOUR DOORS!"

"CLOSE THE DAMPERS ON YOUR FIREPLACES!"

"NEVER ENTER A DARK PLACE!"

"BE WARY OF CROWDS!"

"A MAN WEARING A COAT IS AN ENEMY-SHOOT!"

We should have had every titan in the country spotted and killed in a week. I don't know what more we could have done. In addition to a steady barrage of propaganda the country was being quartered and sectioned from the air, searching for flying saucers on

the ground. Our radar screen was on full alert for unidentified blips. Military units, from airborne troops to guided-rocket stations, were ready to smear any that landed.

Then nothing happened. There was no work for them to do. The thing fizzled like a damp firecracker.

In the uncontaminated areas people took off their shirts, willingly or reluctantly, looked around them and found no parasites. They watched their newscasts and wondered and waited for the government to tell them that the danger was over. But nothing happened and both laymen and local officials began to doubt the necessity of running around the streets in sunbathing costumes. We had shouted "Wolf!" and no wolf came.

The contaminated areas? The reports from the contaminated areas were not materially different from the reports from other areas.

Our stereocast and the follow-ups did not reach those areas. Back in the days of radio it could not have happened; the Washington station where the 'cast originated could have blanketed the country. But stereo-video rides wavelengths so short that horizon-to-horizon relay is necessary and local channels must be squirted out of local stations; it's the price we pay for plenty of channels and high resolution pictures.

In the infected areas the slugs controlled the local stations; the people never heard the warning.

But in Washington we had every reason to believe that they had heard the warning. Reports came back from-well, Iowa, for example, just like those from California. The governor of Iowa was one of the first to send a message to the President, promising full cooperation. The Iowa state police were already cruising the roads, he reported, stopping everybody and requiring them to strip to the waist. Air travel above Iowa was stopped for the duration of the emergency, just as the President had urged.

There was even a relayed stereo of the governor addressing his constituents, bare to the waist. He faced the camera and I wanted to tell him to turn around. But presently they cut to another camera and we had a close up of a bare back, while the governor's voice went cheerfully on, urging all citizens to work with the police.

If any place in the Union was a pest house of slugs, Iowa should have been it. Had they evacuated Iowa and concentrated on heavier centers of population?

We were gathered in a conference room off the President's office. The President had kept the Old Man with him, I tagged along, and Mary was still on watch. Secretary of Security Martinez was there as well as the Supreme Chief of Staff, Air Marshal Rexton. There were others from the President's "fishing cabinet", but they weren't important.

The President watched the 'cast from Iowa and turned to the Old Man. "Well, Andrew? I thought Iowa was a place we would have to fence off."

The Old Man grunted.

Marshal Rexton said, "As I figure it-mind you, I have not had much time to evaluate this situation-they have gone underground. We may have to comb every inch of every suspicious area."

The Old Man grunted again. "Combing Iowa, corn shock by corn shock, does not appeal to me."

"How else would you tackle it, sir?"

"Figure your enemy! He can't go underground. He can't live without a host."

"Very well-assuming that is true, how many parasites would you say are in Iowa?"

"Damn it, how should I know? They didn't take me into their confidence."

"Suppose we make a top estimate. If-"

The Old Man interrupted him. "You've got no basis for an estimate. Can't you folks see that the titans have won another round?"

"Eh?"

"You just heard the governor; they let us look at his back-or somebody's back. Did you notice that he didn't turn around in front of the camera?"

"But he did," someone said. "I saw him."

"I certainly had the impression that I saw him turn," said the President slowly. "You are suggesting that Governor Packer is himself possessed?"

"Correct. You saw what you were meant to see. There was a camera cut just before he was fully turned; people hardly ever notice them; they are used to them. Depend on it. Mister President, every message out of Iowa is faked."

The President looked thoughtful. Secretary Martinez shook his head emphatically and said, "Impossible. Granted that the governor's message could have been faked-a clever character actor could have faked it. Remember the inaugural address in the crisis of '96, when the President Elect was laid up with pneumonia? Granted that one such 'cast could be faked, we've had our choice of dozens of 'casts from Iowa. How about that street scene in Des Moines? Don't tell me you can fake hundreds of people dashing around stripped to their waists-or do your parasites practice mass hypnotic control?"

"They can't that I know of," conceded the Old Man. "If they can, we might as well throw in the towel and admit that the human race has been superseded. But what made you think that that 'cast came from Iowa?"

"Eh? Why, damn it, sir, it came over the Iowa channel."

"Proving what? Did you read any street signs? It looked like any typical street in a downtown retail district. Never mind what city the announcer told you it was; what city was it?"

The Secretary let his mouth hang open. I've got fairly close to the "camera eye" that detectives are supposed to have; I let that picture run through my mind-and I not only could not tell what city, I could not even place the part of the country. It could have been Memphis, Seattle, or Boston-or none of them. Allowing for special cases like Canal Street in New Orleans, or Denver's Civic Center, the downtown districts in American cities are as standardized as barber shops.

"Never mind," the Old Man went on. "I couldn't tell and I was looking for landmarks. The explanation is simple; the Des Moines station picked up a Schedule Bare Back street scene from some city not contaminated and rechanneled it under their own commentary. They chopped out anything that would localize it . . . and we swallowed it. Gentlemen, this enemy knows us, inside and out. This campaign has been planned in great detail and they are ready to outwit us in almost any move we can make."

"Aren't you being an alarmist, Andrew?" said the President. "There is another possibility, that the titans have moved somewhere else."

"They are still in Iowa," the Old Man said flatly, "but you won't prove it with that thing." He gestured at the stereo tank.

Secretary Martinez squirmed. "This is ridiculous!" he exclaimed. "You are saying that we can't get a correct report out of Iowa, as if it were occupied territory."

"That is what it is."

"But I stopped off in Des Moines two days ago, coming back from Alaska. Everything was normal. Mind you, I grant the existence of your parasites, though I haven't seen one. But let's find them where they are and root them out, instead of dreaming up fantasies."

The Old Man looked tired and I felt tired. I wondered how many ordinary people were taking it seriously, if this was what we ran into at the top.

Finally the Old Man replied, "Control the communications of a country and you control the country; that's elementary. You had better take fast steps. Mister Secretary, or you won't have any communications left."

"But I was merely-"

"You root 'em out!" the Old Man said rudely. "I've told you they are in Iowa and in New Orleans, and a dozen other spots. My job is finished. You are Secretary of Security; you root 'em out." He stood up and said, "Mister President, I've had a long pull for a man my age; when I lose sleep I lose my temper. Could I be excused?"

"Certainly, Andrew." He had not lost his temper and I think the President knew it. He doesn't lose his temper; he makes other people lose theirs.

Before the Old Man could say goodnight. Secretary Martinez interrupted. "Wait a moment! You've made some flat-footed statements. Let's check up on them." He turned to the Chief of Staff. "Rexton!"

"Uh, yes, sir."

"That new post near Des Moines, Fort something-or-other, named after what's-his-name?"

"Fort Patton."

"That's it, that's it. Well, let's not dally; get them on the command circuit-"

"With visual," put in the Old Man.

"With visual, of course, and we'll show this-I mean we'll get the true situation in Iowa."

The Air Marshal handed a by-your-leave-sir to the President, went to the stereo tank and patched in with Security General Headquarters. He asked for the officer of the watch at Fort Patton, Iowa.

Shortly thereafter the stereo tank showed the inside of a military communications center. Filling the foreground was a young officer. His rank and corps showed on his cap, but his chest was bare. Martinez turned triumphantly to the Old Man. "You see?"

"I see."

"Now to make certain. Lieutenant!"

"Yes, sir!" The young fellow looked awestruck and kept glancing from one famous face to another. Reception and bi-angle were in synch; the eyes of the image looked where they seemed to look, as if he were actually sitting in the receiver tank.

"Stand up and turn around," Martinez continued.

"Uh? Why, certainly, sir." He seemed puzzled, but he did so-and it took him almost out of scan. We could see his bare back, up to about the short ribs-no higher.

"Confound it!" shouted Martinez. "Sit down and turn around."

"Yessir!" The youth seemed flustered. He leaned over the desk and added, "Just a moment while I widen the view angle, sir."

The picture suddenly melted and rippling rainbows chased across the tank. The young officer's voice was still coming over the audio channel. "There-is that better, sir?"

"Damn it, we can't see a thing!"

"You can't? Just a moment, sir."

We could hear him breathing heavily. Suddenly the tank came to life and I thought for a moment that we were back at Fort Patton. But it was a major on the screen this time and the place looked larger. "Supreme Headquarters," the image announced, "Communications officer of the watch. Major Donovan."

"Major," Martinez said in controlled tones, "I was hooked in with Fort Patton. What happened?"

"Yes, sir; I was monitoring it. We've had a slight technical difficulty on that channel. We'll put your call through again in a moment."

"Well, hurry!"

"Yes, sir." The tank rippled and went empty.

The Old Man stood up again. "Call me when you've cleared up that 'slight technical difficulty'. Meantime, I'm going to bed."

Chapter 15

If I have given the impression that Secretary Martinez was stupid, I am sorry. Everyone had trouble at first believing what the slugs could do. You have to see one, then you believe in the pit of your stomach.

There were no flies on Air Marshal Rexton, either. The two must have worked all night, after convincing themselves by more calls to known danger spots that "technical interruptions" do not occur so conveniently. They called the Old Man about four a.m. and he called me, using our special phones. Those flesh-embedded receptors should not be used as alarm clocks; it's too rough a way to wake a man.

They were in the same conference room, Martinez, Rexton, a couple of his high brass, and the Old Man. The President came in, wearing a bathrobe and followed by Mary, just as I arrived. Martinez started to speak but the Old Man cut in. "Let's see your back, Tom!"

The President looked surprised and Mary signaled that everything was okay, but the Old Man chose not to see her. "I mean it," he persisted.

The President said quietly, "Perfectly correct, Andrew," and slipped his robe off his shoulders. His back was clean. "If I don't set an example, how can I expect others to cooperate?"

The Old Man started to help him back into the robe, but the President shrugged him off and hung it over a chair. "I'll just have to acquire new habits. Difficult, at my age. Well, gentlemen?"

I thought myself that bare skin would take getting used to; we made an odd group. Martinez was lean and tanned, carved smooth from mahogany. I'd judge he was part Indian. Rexton had a burned-in, high-altitude tan on his face, but from his collar line down he was as white as the President. On his chest was a black cross of hair, armpit to armpit and chin to belly, while the President and the Old Man were covered front and back with grizzled, wiry fur. The Old Man's mat was so thick that mice could have nested in it.

Mary looked like a publicity pic-low angle shot to bring out the legs and careful posing, that sort. Me-well. I'm the spiritual type.

Martinez and Rexton had been shoving push pins into a map, red for bad, green for good, and a few amber ones. Reports were still coming and Rexton's assistants kept adding new pins.

Iowa looked like measles; New Orleans and the Teche country were as bad. So was Kansas City. The upper end of the Missouri-Mississippi system, from Minneapolis and St. Paul down to St. Louis, was clearly enemy territory. There were fewer red pins from there down to New Orleans-but there were no green ones.

There was another hot spot around El Paso and two on the East Coast.

The President looked it over calmly. "We shall need the help of Canada and Mexico," he said. "Any reports?"

"None that mean anything, sir."

"Canada and Mexico," the Old Man said seriously, "will be just a start. You are going to need the whole world with you on this job."

Rexton said, "We will, eh? How about Russia?"

Nobody had an answer to that one; nobody ever has. Too big to occupy and too big to ignore-World War III had not settled the Russian problem and no war ever would. The parasites might feel right at home behind the Curtain.

The President said, "We'll deal with that when we come to it." He drew a finger across the map. "Any trouble getting messages through to the Coast?"

"Apparently not, sir," Rexton told him. "They don't seem to interfere with straight-through relay. But all military communications I have shifted to one-link relay through the space stations." He glanced at his watch finger. "Space Station Gamma, at the moment."

"Hmmm-" said the President. "Andrew, could these things storm a space station?"

"How would I know?" the Old Man answered testily. "I don't know whether their ships are built for it or not. More probably they would do it by infiltration, through the supply rockets."

There was discussion as to whether or not the space stations could already have been taken over; Schedule Bare Back did not apply to the stations. Although we had built them and paid for them, since they were technically United Nations territory, the President had to wait until the United Nations acted on the entire matter.

"Don't worry about it," Rexton said suddenly.

"Why not?" the President asked.

"I am probably the only one here who has done duty in a space station. Gentlemen, the costume we are now wearing is customary in a station. A man fully dressed would stand out like an overcoat on the beach. But we'll see." He gave orders to one of his assistants.

The President resumed studying the map. "So far as we know," he said, pointing to Grinnell, Iowa, "all this derives from a single landing, here."

The Old Man answered, "Yes-so far as we know."

I said, "Oh, no!"

They all looked at me and I was embarrassed. "Go ahead," said the President.

"There were at least three more landings-I know there were-before I was rescued."

The Old Man looked dumbfounded. "Are you sure, son? We thought we had wrung you dry."

"Of course I'm sure."

"Why didn't you mention it?"

"I never thought of it before." I tried to explain how it feels to be possessed, how you know what is going on, but everything seems dreamy, equally important and equally unimportant. I grew quite upset. I am not the jittery type, but being ridden by a master does something to you.

The Old Man put his hand on me and said, "Steady down, son." The President said something soothing and gave me a reassuring smile. That stereocast personality of his is not put on; he's really got it.

Rexton said, "The important point is: where did they land? We might still capture one."

"I doubt it," the Old Man answered. "They did a cover-up on the first one in a matter of hours. If it was the first one," he added thoughtfully.

I went to the map and tried to think. Sweating, I pointed to New Orleans. "I'm pretty sure one was about here." I stared at the map. "I don't know where the others landed. But I know they did."

"How about here?" Rexton asked, pointing to the East Coast.

"I don't know. I don't know."

The Old Man pointed to the other East Coast danger spot. "We know this one is a secondary infection." He was kind enough not to say that I had been the means of infecting it.

"Can't you remember anything else?" Martinez said testily. "Think, man!"

"I just don't know. We never knew what they were up to, not really." I thought until my skull ached, then pointed to Kansas City. "I sent several messages here, but I don't know whether they were shipment orders, or not."

Rexton looked at the map; around Kansas City was almost as pin-studded as Iowa. "We'll assume a landing near Kansas City, too. The technical boys can do a problem on it. It may be subject to logistic analysis; we might derive the other landing."

"Or landings," added the Old Man.

"Eh? 'Or landings'. Certainly. But we need more reports." He turned back to the map and stared at it thoughtfully.

Chapter 16

Hindsight is confoundedly futile. At the moment the first saucer landed the menace could have been stamped out by one determined man and a bomb. At the time "The Cavanaughs"-Mary, the Old Man, and I-reconnoitered around Grinnell and in Des Moines, we three alone might have killed every slug had we been ruthless and, more important, known where they all were.

Had Schedule Bare Back been ordered during the fortnight after the first landing it alone might have turned the trick. But by the next day it was clear that Schedule Bare Back had failed as an offensive measure. As a defense it was useful; the uncontaminated areas could be kept so, as long as the slugs could not conceal themselves. It had even had mild success in offense; areas contaminated but not "secured" by the parasites were cleaned up at once... Washington itself, for example, and New Philadelphia. New Brooklyn, too-there I had been able to give specific advice. The entire East Coast turned from red to green.

But as the area down the middle of the country filled in on the map, it filled in red, and stayed so. The infected areas stood out in ruby light now, for the simple wall map studded

with push pins had been replaced by a huge electronic military map, ten miles to the inch, covering one wall of the conference room. It was a repeater map, the master being located down in the sublevels of the New Pentagon.

The country was split in two, as if a giant had washed red pigment down the Central Valley. Two zigzag amber paths bordered the great band held by the slugs; these were overlap, the only areas of real activity, places where line-of-sight reception was possible from both stations held by the enemy and from stations still in the hands of free men. One such started near Minneapolis, swung west of Chicago and east of St. Louis, then meandered through Tennessee and Alabama to the Gulf. The other cut a wide path through the Great Plains and came out near Corpus Christi. El Paso was the center of a ruby area as yet unconnected with the main body.

I looked at the map and wondered what was going on in those border strips. I had the room to myself; the Cabinet was meeting and the President had taken the Old Man with him. Rexton and his brass had left earlier. I stayed there because I had not been told where to go and I hesitated to wander around in the White House. So I stayed and fretted and watched amber lights blink red and, much less frequently, red lights blink amber or green.

I wondered how an overnight visitor with no status managed to get breakfast? I had been up since four and my total nourishment so far had been one cup of coffee, served by the President's valet. Even more urgently I wanted to find a washroom. I knew where the President's washroom was, but I did not have the nerve to use it, feeling vaguely that to do so would be somewhere between high treason and disorderly conduct.

There was not a guard in sight. Probably the room was being scanned from a board somewhere; I suppose every room in the White House has an "eye & ear" in it; but there was no one physically in view.

At last I got desperate enough to start trying doors. The first two were locked; the third was what I was looking for. It was not marked "Sacred to the Chief" nor did it appear to be booby-trapped, so I used it.

When I came back into the conference room, Mary was there.

I looked at her stupidly for a moment. "I thought you were with the President?"

She smiled. "I was, but I got chased out. The Old Man took over for me."

I said, "Say, Mary, I've been wanting to talk with you and this is the first chance I've had. I guess I-Well, anyway, I shouldn't have, I mean, according to the Old Man-" I stopped, my carefully rehearsed speech in ruins. "Anyhow, I shouldn't have said what I did," I concluded miserably.

She put a hand on my arm. "Sam. Sam, my very dear, do not be troubled. What you said and what you did was fair enough from what you knew. The important thing, to me, is what you did for me. The rest does not matter-except that I am happy again to know that you don't despise me."

"Well, but-Damn it, don't be so noble! I can't stand it!"

She gave me a merry, lively smile, not at all like the gentle one with which she had greeted me. "Sam, I think you like your women to be a little bit bitchy. I warn you, I can be so." She went on, "You are still worried about that slap, too, I think. All right, I'll pay it back." She reached up and patted me gently on the cheek, once. "There, it's paid back and you can forget it."

Her expression suddenly changed, she swung on me-and I thought the top of my head was coming off. "And that," she said in a tense, hoarse whisper, "pays you back the one I got from your girlfriend!"

My ears were ringing and my eyes did not want to focus. If I had not seen her bare palm, I would have sworn that she had used at least a two-by-four.

She looked at me, wary and defiant, not the least apologetic-angry, rather, if dilated nostrils meant anything. I raised a hand and she tensed-but I just wanted to touch my stinging cheek. It was very sore. "She's not my girlfriend," I said lamely.

We eyed each other and simultaneously burst out laughing. She put both her hands on my shoulders and let her head collapse on my right one, still laughing. "Sam," she managed to say, "I'm so sorry. I shouldn't have done it-not to you, Sam. At least I shouldn't have slapped you so hard."

"The devil you're sorry," I growled, "but you shouldn't have put English on it. You damn near took the hide off."

"Poor Sam!" She reached up and touched it; it hurt. "She's really not your girlfriend?"

"No, worse luck. But not from lack of my trying."

"I'm sure it wasn't. Who is your girlfriend, Sam?" The words seem coquettish; she did not make them so.

"You are, you vixen!"

"Yes," she said comfortably, "I am-if you'll have me. I told you that before. And I meant it. Bought and paid for."

She was waiting to be kissed; I pushed her away. "Confound it, woman, I don't want you 'bought and paid for'."

It did not faze her. "I put it badly. Paid for-but not bought. I'm here because I want to be here. Now will you kiss me, please?"

So help me, up to that moment she had not turned on the sex, not really. When she saw that the answer was yes, she did so and it was like summer sun coming out from a cloud. That is inadequate but it will have to do.

She had kissed me once before; this time she kissed me. The French are smart; they have two words for it . . . this was the other one. I felt myself sinking into a warm golden haze and I did not ever want to come up.

Finally I had to break and gasped. "I think I'll sit down for a minute."

She said, "Thank you, Sam," and let me.

"Mary," I said presently, "Mary, my dear, there is something you possibly could do for me."

"Yes?" she said eagerly.

"Tell me how in the name of Ned a person gets anything to eat around here? I'm starved. No breakfast."

She looked startled; I suppose she had expected something else. But she answered, "Why, certainly!"

I don't know where she went nor how she did it. She may have butted into the White House pantry and helped herself. But she returned in a few minutes with a tray of sandwiches and two bottles of beer. Corned beef and rye put the roses back in my cheeks. I was cleaning up my third when I said, "Mary, how long do you figure that meeting will last?"

"Let me see," she answered, "fourteen people, including the Old Man. I give it a minimum of two hours. Why?"

"In that case," I said, swallowing the last bite, "we have time to duck out of here, find a registry office, get married, and get back before the Old Man misses us."

She did not answer and she did not look at me. Instead she stared at the bubbles in her beer. "Well?" I insisted.

She raised her eyes. "I'll do it if you say so. I'm not welshing. But I'm not going to start out by lying to you. I would rather we didn't."

"You don't want to marry me?"

"Sam, I don't think you are ready to get married."

"Speak for yourself!"

"Don't be angry, my dear. I'm not holding out-honest. You can have me with or without a contract, anywhere, anywhen, anyway. But you don't know me yet. Get acquainted with me; you might change your mind."

"I'm not in the habit of changing my mind." She glanced up without answering, then looked away sadly. I felt my face get hot. "That was a very special circumstance," I protested. "It could not happen to us again in a hundred years. That wasn't really me talking; it was-"

She stopped me. "I know, Sam. And now you want to prove to me that it didn't really happen or at least that you are sure of your own mind now. But you don't have to prove anything. I won't run out on you and I don't mistrust you. Take me away on a weekend; better yet, move into my apartment. If you find that I wear well, there's always time to make me what great grandmother called an 'honest woman', heaven knows why."

I must have looked sullen; I felt so. She put a hand on mine and said seriously, "Take a look at the map, Sam."

I turned my head and looked. Red as ever, or more so-it seemed to me that the danger zone around El Paso had increased. She went on, "Let's get this mess cleaned up first, dear. Then, if you still want to, ask me again. In the meantime, you can have the privileges without the responsibilities."

What could be fairer than that? The only trouble was that it was not the way I wanted it. Why will a man who has been avoiding marriage like the plague suddenly decide that nothing less will suit him? I had seen it happen a hundred times and never understood it; now I was doing it myself.

Mary had to go back on duty as soon as the meeting was over. The Old Man collared me and took me for a walk. Yes, a walk, though we went only as far as the Baruch Memorial Bench. There he sat down, fiddled with his pipe, and stared into space. The day was as muggy as only Washington can get, but the park was almost deserted. People were not yet used to Schedule Bare Back.

He said, "Schedule Counter Blast starts at midnight."

I said nothing; questioning him was useless.

Presently he added, "We swoop down on every relay station, broadcast station, newspaper office, and Western Union office in 'Zone Red'."

"Sounds good," I answered. "How many men does it take?"

He did not answer; instead he said, "I don't like it. I don't like it a little bit."

"Huh?"

"See here, bub-the President went on the channels and told everybody to peel off their shirts. We find that the message did not get through into infected territory. What's the next logical development?"

I shrugged. "Schedule Counter Blast, I suppose."

"That hasn't happened yet. Think, it has been more than twenty-four hours: what should have happened and hasn't?"

"Should I know?"

"You should, if you are ever going to amount to anything on your own. Here-" He handed me a combo key. "Scoot out to Kansas City and take a looksee. Stay away from comm stations, cops, and-shucks, you know their attack points better than I do. Stay away from them. Take a look at anything else. And don't get caught." He looked at his finger and added, "Be back here a half hour before midnight, or sooner. Get going."

"A lot of time you allow me to case a whole city," I complained. "It will take nearly three hours just to drive to Kansas City."

"More than three hours," he answered. "Don't attract attention by picking up a ticket."

"You know dam well I'm a careful driver."

"Move."

So I moved, stopping by the White House to pick up my kit. I wasted ten minutes convincing a new guard that I really had been there overnight and actually had possessions to pick up.

The combo was to the car we had come down in; I picked it up at Rock Creek Park platform. Traffic was light and I commented on it to the dispatcher as I handed in the combo. "Freight and commercial carriers are grounded," he answered. "The emergency-you got a military clearance?"

I knew I could get one by phoning the Old Man, but bothering him about minutiae does not endear one to him. I said, "Check the number."

He shrugged and slipped the combo in his machine. My hunch had been right; his eyebrows shot up and he handed it back. "How you rate!" he commented. "You must be the President's fair-haired boy."

He did not ask for my destination and I did not offer it. His machine probably broke into "Hail, Columbia!" when the Old Man's number hit it.

Once launched, I set the controls for Kansas City at legal max and tried to think. The transponder beeped as radar beams hit it each time I slid from one control block into the next, but no faces appeared on the screen. Apparently the Old Man's combo was good for the route, emergency or not.

I began to wonder what would happen when I slipped over into the red areas-and then realized what he had been driving at when he talked about "the next logical development". Would the control net pass me on through into areas we knew darn well were infested by titans?

One tends to think of communications as meaning the line-of-sight channels and nothing else. But "communications" means all traffic of every sort, even dear old Aunt Mamie, headed for California with her head stuffed with gossip. The slugs had seized the channels and the President's proclamation had not gotten through, or so we assumed-but news can't be stopped that easily; such measures merely slow it down. Behind the Soviet Curtain Aunt Sonya does not go on long trips; it ain't healthy. Ergo, if the slugs expected to retain control where they were, seizing the channels would be just their first step.

It stood to reason that they were not numerous enough to interfere with all traffic, but what would they do?

I reached only the unhelpful conclusion that they would do something and that I, being a part of "communications" by definition, had better be prepared for evasive action if I wanted to save my pretty pink skin.

In the meantime the Mississippi River and Zone Red were sliding closer by the minute. I wondered what would happen the first time my recognition signal was picked up by a station controlled by masters. I tried to think like a titan-impossible, I found, even though I had been a slave to one. The idea revolted me.

Well, then, what would a security commissar do if an unfriendly craft flew past the Curtain? Have it shot down, of course. No, that was not the answer; I was probably safe in the air.

But I had better not let them spot me landing. Elementary.

"Elementary" in the face of a traffic control net which was described proudly as the No-Sparrow-Shall-Fall plan. They boasted that a butterfly could not make a forced landing anywhere in the United States without alerting the search & rescue system. Not quite true-but I was no butterfly.

What I wanted was to land short of the infested area and go in on the ground. On foot I will make a stab at penetrating any security screen, mechanical, electronic, manned, or mixed. But how can you use misdirection in a car making westing a full degree every seven minutes? Or hang a stupid, innocent look on the nose of a duo?

If I went in on foot the Old Man would get his report come next Michaelmas; he wanted it before midnight.

Once, in a rare mellow mood, the Old Man told me that he did not bother his agents with detailed instructions-give a man a mission; let him sink or swim. I suggested that his method must use up a lot of agents.

"Some," he had admitted, "but not as many as the other way. I believe in the individual and I try to pick individuals who are survivor types."

"And how in the hell," I had asked him, "do you know when you've got a 'survivor type'."

He had grinned at me wickedly. "A survivor type is an agent who comes back. Then I know."

I had to reach a decision in the next few minutes. Elihu, I said to myself, you are about to find out which type you are-and damn his icy heart!

My course would take me in toward St. Louis, swing me in the city loop around St. Louis, and on to Kansas City. But St. Louis was in Zone Red. The military-situation map had showed Chicago as still green; as I remembered it the amber line had zigzagged west somewhere above Hannibal, Missouri-and I wanted very badly to cross the Mississippi while still in Zone Green. A car crossing that mile-wide river would make a radar blip as sharp as a desert star.

I signaled block control for permission to descend to local-traffic level, then did so without waiting, resuming manual control and cutting my speed. I headed north.

Short of the Springfield loop I headed west again, staying low. When I reached the river I crossed slowly, close to the water, with my transponder shut down. Sure, you can't

shut off your radar recognition signal in the air, not in a standard rig-but the Section's cars were not standard. The Old Man was not above using gangster tricks.

I had hopes, if local traffic were being monitored while I crossed, that my blip would be mistaken for a boat on the river. I did not know certainly whether the next block station across the river was Zone Red or Zone Green, but, if my memory was correct, it should be green.

I was about to cut in the transponder again on the assumption that it would be safer, or at least less conspicuous, to get back into the traffic system when I noticed the shoreline opening up ahead of me. The map did not show a tributary there; I judged it to be an inlet, or possibly a new channel cut in the spring floods and not yet mapped. I dropped almost to water level and headed into it. The stream was narrow, meandering, and almost overhung by trees and I had no more business taking a sky car into it than a bee has of flying down a trombone-but it afforded perfect radar "shadow"; I could get lost in it.

In a few minutes I was lost, not only from any monitoring technician, but lost myself, right off the map. The channel switched and turned and cut back and I was so busy bucking the car by hand, trying to keep from crashing that I lost all track of navigation. I swore and wished that the car were a triphib so that I could land on water.

The trees suddenly broke on the left bank; I saw a stretch of level land, kicked her over and squatted her in with a deceleration that nearly cut me in two against my safety belt. But I was down and no longer trying to play catfish in a muddy stream.

I wondered what to do. There seemed to be nobody around; I judged that I was on the back end of someone's farm. No doubt there was a highway close by. I had better find it and stay on the ground.

But I knew that was silly even as I thought it. Three hours from Washington to Kansas City by air-I had completed almost all the trip and now I was how far away from Kansas City? By land, about three hours. At that rate, all I needed to make the trip complete was to park the car ten or twelve miles outside Kansas City and walk; then I would still have three hours to go.

I felt like the frog who jumped halfway to the end of the log with each hop, but never got there. I must get back into the air.

But I did not dare do so until I knew positively whether traffic here was being controlled by free men, or by slugs.

It suddenly occurred to me that I had not turned on the stereo since leaving Washington. I am not much for stereo; between the commercials and the junk they sandwich between them I sometimes wonder about "progress". But a newscast may have uses.

I could not find a newscast. I got (a) a lecture by Myrtle Doolightly, Ph.D., on Why Husbands Grow Bored, sponsored by the Uth-a-gen Hormone Company-I decided that she probably had plenty of experience in her subject; (b) a trio of girl hepsters singing 'If You Mean What I think You Mean, What are We Waiting For?' (c) an episode in 'Lucretia Learns About Life'.

Dear Doctor Myrtle was fully dressed and could have hidden half a dozen titans around her frame. The trio were dressed about the way one would expect them to be, but they did not turn their backs to the camera. Lucretia appeared to alternate having her clothes torn off with taking them off willingly, but the camera always cut or the lights always went out just before I could check on whether or not her back was bare-of slugs, that is.

And none of it meant anything. Those programs could have been taped weeks or months before the President announced Schedule Bare Back. I was still switching channels, trying to find a newscast-or any live program-when I found myself staring into the professionally unctuous smile of an announcer. He was fully dressed.

Shortly I realized it was one of those silly give-away shows. He was saying: "-and some lucky little woman sitting by her screen right this minute is about to receive, absolutely free, a General Atomics Six-in-One Automatic Home Butler. Who will it be? You? You? Or lucky you! He turned away from scan; I could see his shoulders. They were covered by shirt and jacket and distinctly rounded, almost humped. I was inside Zone Red.

When I switched off I realized that I was being watched-by a male urchin about nine years old. He was wearing nothing but shorts, but the brown of his shoulders showed that such was his custom. I threw back the windscreen. "Hey, bub, where's the highway?"

He continued to stare before replying, "Road to Macon's up there yonder. Say, mister, that's a Cadillac Zipper, ain't it?"

"Sure thing. Where yonder?"

"Give me a ride, huh, will you?"

"Haven't got time. Where's the road?"

He sized me up before answering, "Take me along and I'll show you."

I gave in. While he climbed in and looked around, I opened my kit, got out shirt, trousers, and jacket, and put them on. I said conversationally, "Maybe I shouldn't put on this shirt. Do people around here wear shirts?"

He scowled. "I've got shirts!"

"I didn't say you didn't; I just asked if people around here wore shirts."

"Of course they do. Where do you think you are, mister; Arkansas?"

I gave up and asked again about the road. He said, "Can I punch the button when we take off, huh?"

I explained that we were going to stay on the ground. He was frankly annoyed but condescended to point out a direction. I drove cautiously as the car was heavy for unpaved countryside. Presently he told me to turn. Quite a bit later I stopped the car and said, "Are you going to show me where that road is, or am I going to wallop your backsides?"

He opened the door and slid out. "Hey!" I yelled.

He looked back. "Over that way," he admitted. I turned the car, not really expecting to find a highway, but finding one, nevertheless, only fifty yards away. The brat had caused me to drive around three sides of a large square.

If you could call it a highway-there was not an ounce of rubber in the paving. Still, it was a road; I followed it to the west. All in all, I had wasted more than an hour.

Macon, Missouri seemed normal-much too normal to be reassuring, as Schedule Bare Back obviously had not been heard of here. There were a number of bare backs, but it was a hot day. There were more backs that were covered and any of them might have concealed a slug. I gave serious thought to checking this town, rather than Kansas City, then beating back the way I had come, while I could. Pushing further into country which I knew to be controlled by the masters made me as nervous as a preacher at a stag party; I wanted to run.

But the Old Man had said "Kansas City"; he would take a dim view of a substitute. Finally I drove the belt around Macon and pulled into a landing flat on the far side. There I queued up for local traffic launching and headed for Kansas City in a mess of farmers' copters and suchlike local craft. I would have to hold local speeds all across the state, but that was safer than getting into the hot pattern with my transponder identifying my car to every block control station.

The field was automatically serviced, no attendants, not even at the fuelling line. It seemed probable that I had managed to enter the Missouri traffic pattern without arousing suspicion. True, there was a block control station back in Illinois which might be wondering where I had gone, but that did not matter.

Chapter 17

Kansas City is an old-fashioned city; it was not hurt in the bombings; except on the East Side where Independence used to be. Consequently, it was never rebuilt. From the southeast you can drive almost downtown, as far as Swope Park, without having to choose between parking or paying toll to enter the city proper.

One can fly in and make another choice: land in the landing flats north of the Missouri River and take the tunnels into the city, or land on the downtown platforms south of Memorial Hill.

I decided against both of these; I wanted the car near me but I did not want to have to pick it up through a checking system. If it came to a pinch, I could not shoot my way out while offering my combo to a parking attendant. I did not like tunnels in a pinch, either- nor launching platform elevators. A man can be trapped in such.

Frankly I did not want to go into the city at all.

I roaded the car on Route 40 and drove into the Meyer Boulevard toll gate. The line waiting to pay toll for the doubtful privilege of driving on a city street was quite long; I began to feel hemmed in as soon as another car filled in behind me and wished mightily that I had decided to park and go in by the public passenger ways. But the gatekeeper took my toll without glancing at me. I glanced at him, all right, but could not tell whether or not he was being ridden.

I drove through the gate with a sigh of relief-only to be stopped just beyond the gate. A barrier dropped in front of me and I just managed to stop the car, whereupon a cop stuck his head in the side I had open. "Safety check," he said. "Climb out."

I protested that my car had just been inspected. "No doubt," he agreed, "but the city is having a safety drive. Here's your car check. Pick it up just beyond the barrier. Now get out and go in that door." He pointed to a low building a few steps from the curb.

"What for?"

"Eyesight and reflexes," he explained. "Come on. You're holding up the line."

In my mind's eye, I saw the map, with Kansas City glowing red. That the city was "secured" I was sure; therefore this mild-mannered policeman was almost surely hag-ridden. I did not need to look at his shoulders.

But, short of shooting him and making an emergency take-off from that spot, there was nothing I could do but comply. With a normal, everyday cop I would have tried the bribe direct, slipping him money as he handed me my car check. But titans don't use money.

Or do they?

I got out, grumbling, and walked slowly toward the building. The door near me was marked "IN"; there was one at the far end marked "OUT"; a man came out from it as I approached. I wanted very badly to ask him what he had found.

It was a temporary building with an old-style unpowered door. I pushed it open with a toe and glanced both sides and up before I entered. It seemed safe. Inside was an empty anteroom with open door beyond.

Someone inside called out, "Come in." Still as cautious as the setup permitted, I went in.

There were two men, both in white coats, one with a doctor's speculum strapped to his head. He looked up and said briskly, "This won't take a minute. Step over here." He closed the door I had entered; I heard the latch click.

It was a sweeter setup than we had worked out for the Constitution Club; had I had time I would have admired it. Spread out on a long table were transit cells for masters, already opened and warmed. The second man had one ready-for me, I knew-and was holding it tilted toward him, so that I could not see the slug inside. The transit cells would not arouse alarm in the minds of victims; medical men always have things at hand which are odd to the layman.

As for the rest, I was being invited to place my eyes against the goggles of a quite ordinary visual acuity tester. The "doctor" would keep me there, blindfolded without knowing it and reading test figures, while his "assistant" fitted me with a master. No violence, no slips, no protests.

It was not even necessary, as I had learned during my own "service", to bare the victim's back. Just touch the master to the bare neck, then let the new recruit himself adjust his clothing to cover his master before he left.

"Right over here," the "doctor" repeated. "Place your eyes against the eyepieces."

Moving very quickly I went to the bench on which was mounted the acuity tester and started to comply. Then I turned suddenly around.

The assistant had moved in closer: the cell was ready in his hands. As I turned he tilted it away from me. "Doctor," I said, "I wear contact lenses. Should I take them off?"

"No, no," he snapped. "Let's not waste time."

"But, Doctor," I protested, "I want you to see how they fit. Now I've had a little trouble with this left one-" I lifted both hands and pulled back the upper and lower lids of my left eye. "See?"

He said angrily, "This is not a clinic. Now, if you please-" They were both within reach; lowering my arms in a mighty bear hug I got them both-and grabbed with clutched fingers at the spot between each set of shoulder blades. With each hand I struck something soft and mushy under the coats and felt revulsion shake me at the touch.

Once I saw a cat struck by a ground car; the poor thing leapt straight up about four feet with its back arched the wrong way and all limbs flying. These two unlucky men did the same sort of thing; they contorted in every muscle in a grand spasm as if every motor cell in each body had been stimulated at once.

Which is perhaps just what happened when I clutched and crushed their masters.

I could not hold them; they jerked out of my arms and flopped to the floor. But there was no need to hold them; after that first boneshaking convulsion they went limp, unconscious, possibly dead.

Someone was knocking at the door. I called out, "Just a moment. The doctor is busy." The knocking stopped. I made sure that the door was fastened, then went back, bent over the "doctor" and pulled up his coat to see what I had done to his master.

The thing was a ruptured, slimy mess, already beginning to stink. So was the one on the other man-which facts pleased me heartily as I was determined to bum the slugs if they were not already dead and I was not sure that I could do so without killing the hosts as well. I left the men, to live or die-or be seized again by titans, as might be. I had no way to help them.

The masters waiting in their cells were another matter. With a fan beam and a max charge I burned them all in seconds only. There were two large crates against the wall. I did not know that they contained masters but I had no reason to believe otherwise; I beamed them through and through until the wood charred.

The knocking at the door resumed. I looked around hastily for somewhere to hide the two men. There was nowhere at all, so I decided to execute the classic military maneuver. As I was about to go out the exit, I felt that something was missing. I hesitated and looked around again.

The room was almost bare; there seemed to be nothing suited to my purpose. I could use clothing from the "doctor" or his helper, but I did not want to touch them. Then I noticed the dust cover for the acuity tester lying on the bench. I loosened my shirt, snatched up the dust cover, wadded it up, and stuffed it under my shirt between my shoulder blades. With my shirt collar fastened and my jacket zipped tightly it made a bulge of the proper size.

Then I went out, "-a stranger and afraid, into a world I never made."

As a matter of fact I was feeling pretty cocky.

Another cop took my car check. He glanced sharply at me, then motioned me to climb in. I did so and he said, "Go to police headquarters, under the City Hall."

" 'Police headquarters, the City Hall'," I repeated and gunned her ahead. I started in that direction and turned onto Nichols Freeway. I came to a stretch where traffic thinned out and punched the button to shift license plates, hoping that no one would notice. It seemed possible that there was already a call out for the plates I had been showing at the toll gate. I wished that I had been able to change the car's colors and body lines as well.

Before the freeway reached Magee Traffic Way, I turned into a down ramp and stuck thereafter to residential side streets. It was eighteen hundred, zone six time, and I was due in Washington in four and one-half hours.

Chapter 18

The city did not look right. I tried to discount my own keyed-up state and to see what was actually there-not what I expected to see nor what I was expected to see. Superficially there was nothing wrong, but it did not have the right flavor, as if it were a clumsily directed play. I kept trying to put my finger on it; it kept slipping away.

Kansas City has many wide neighborhoods made up of family units a century old or more. Time seems to have passed them by; kids roll on lawns and householders sit in the cool of the evening on their front porches, just as their great-grandparents did. If there are bomb shelters around, they do not show. The queer, old, bulky houses, fitted together

piece by piece by guildsmen long since dead, have homely charm. Seeing them, one wonders how Kansas City got its gamy reputation; those old neighborhoods feel like an enclave of security, impregnable, untouchable.

I cruised through, dodging dogs and rubber balls and toddlers who chased after each, and tried to get the feel of the place. It was the slack of the day, time for the first drink, for watering lawns, and for neighborly chatting.

And so it seemed. Ahead of me I saw a woman bending over a flower bed. She was wearing a sun suit and her back was bare as mine-more so, for I had that wad of cloth stuffed under my jacket. But clearly she was not wearing a master, nor were the two young kids with her. So what could be wrong?

It was a hot day, hotter even than Washington had been; I began to look for bare shoulders, sun-suited women and men in shorts and sandals. Kansas City, despite its reputation, is in the Bible Belt and feels its puritanical influence. People there do not strip to the weather with the cheerful unanimity of Laguna Beach or Coral Gables. An adult fully covered up is never conspicuous, even on the hottest day.

So I found people dressed both ways-but the proportions were wrong. Sure, there were plenty of kids dressed for the weather, but in several miles of driving I saw the bare backs of only five adult women and two adult men.

I should have seen more like five hundred. It was a hot day.

Cipher it out. While some jackets undoubtedly did not cover masters, by simple proportion well over ninety percent of the population must be possessed.

This city was not "secured" the way we had secured New Brooklyn; this city was saturated. The masters did not simply hold key points and key officials; the masters were the city.

I felt a panicky urge to blast off right from the street and streak out of Zone Red at emergency maximum. They knew that I had escaped the toll gate trap; they would be looking for me. I might be the only free man driving a car in the entire city-and they were all around me!

I fought it down. An agent who gets the wind up is no use to himself or his boss and is not likely to get out of a tight spot. But I had not fully recovered from what it had done to me to be possessed; it was hard to be calm.

I counted ten, delayed my reactions, and tried to figure the situation. It seemed that I must be wrong; there could not possibly be enough masters available to permit them to saturate a city with a million population. I remembered my own experiences hardly two weeks earlier; I recalled how we picked our recruits and made each new host count. Of course that had been a secondary invasion in which we had depended on shipments, whereas Kansas City almost certainly had had a flying saucer land nearby.

Still it did not make sense; it would have taken, I felt sure, not one saucer but a dozen or more, to carry enough masters to saturate Kansas City. If there had been that many surely the space stations would have spotted them, radar-tracked their landing orbits.

Or could it be that they had no trajectories to track? That they simply appeared instead of swooping down like a rocket? Maybe they used that hypothetical old favorite, the "space-time warp"? I did not know what a space-time warp was and I doubted if anyone knew, but it would do to tag a type of landing which could not be spotted by radar. We did not know what the masters were capable of in the way of engineering and it was not safe to judge their limitations by our own.

But the data I had led to a conclusion which contradicted common logic; therefore I must check before I reported back. One thing seemed sure: if I assumed that the masters had in fact almost saturated this city, then it was evident that they were still keeping up the masquerade. For the time being they were permitting the city to look like a city of free human beings. Perhaps I was not as conspicuous as I feared.

While I was thinking I had moseyed along another mile or so, going nowhere. Once I found myself heading into the retail district around the Plaza; I swung away; where there are crowds, there are cops. But I skimmed the edge of the district and in so doing passed a public swimming pool. I observed it and filed what I had seen. My mind works by delays and priorities; an item having a low priority is held until the circuits are cleared and ready for it.

To put it bluntly, I am subject to doubletakes.

I was several blocks away before I reviewed the swimming pool datum; it had not been much: the gates were locked and it carried a sign-"CLOSED FOR THE SEASON".

A swimming pool closed down during the hottest part of the summer? What did it mean? Nothing at all; swimming pools have gone out of business before and will again. On the other hand it was contrary to the logic of economics to close such an enterprise during the season of greatest profit except through utter necessity. The odds against it were long.

But a swimming pool was the one place where the masquerade could not possibly be maintained. From the viewpoint of humans a closed pool was less conspicuous than a pool unpatronized in hot weather. And I knew that the masters noted and followed the human point of view in their maneuvers-shucks, I had been there!

Item: a trap at the city's toll gates; item: too few sun suits; item: a closed swimming pool.

Conclusion: the slugs were incredibly more numerous than had been dreamed by anyone-including myself who had been possessed by them.

Corollary: Schedule Counter Blast was based on a mistaken estimate of the enemy and would work as well as hunting rhinoceri with a slingshot.

Counter argument: what I thought I saw was physically impossible. I could hear Secretary Martinez's restrained sarcasm tearing my report to shreds. My guesses referred only to Kansas City and were insufficiently grounded even there. Thank you kindly for your interest but what you need is a long rest and freedom from nervous strain. Now, gentlemen-

Pfui!

I had to have something strong enough for the Old Man to convince the President over the reasonable objections of his official advisers-and I had to have it right away. Even with a total disregard of traffic laws I could not clip much off two and a half hours running time back to Washington.

What could I dig up that would be convincing? Go farther downtown, mingle with crowds, and then tell Martinez that I was sure that almost every man I passed was possessed? How could I prove it? For that matter, how could I myself be certain; I did not have Mary's special talent. As long as the titans kept up the farce of "business as usual" the tell-tales would be subtle, a superabundance of round shoulders, a paucity of bare ones.

True, there was the toll gate trap. I had some notion now of how the city had been saturated, granting a large enough supply of slugs. I felt sure that I would encounter another such trap on the way out and that there would be others like it on launching platforms and at every other entrance and exit to the city proper. Every person leaving would be a new agent for the masters; every person entering would be a new slave.

This I felt sure of without being inclined to test it by visiting a launching platform. I had once set up such a trap in the Constitution Club; no one who entered it had escaped.

I had noticed a vendo-printer for the Kansas City Star on the last corner I had passed. Now I swung around the block and came back to it, pulled up, and got out. I shoved a dime in the slot and waited for my paper to be printed. It seemed to take unusually long, but that was my own nervousness, I felt that every passer-by was staring at me.

The Star's format had its usual dull respectability-no excitement, no mention of an emergency, no reference to Schedule Bare Back. The lead news story was headed PHONE SERVICE DISRUPTED BY SUNSPOT STORM, with a subhead City Semi-Isolated by Solar Static. There was a 3-col, semi-stereo, trukolor of the sun, its face disfigured by cosmic acne. The pic carried a Palomar date line, as did one of the substories.

The picture was a good fake-or perhaps they pulled a real one out of the paper's library. It added up to a convincing and unexciting explanation of why Mamie Schultz, herself free of parasites, could not get her call through to Grandma in Pittsburgh.

The rest of the paper looked normal. I tucked it under my arm to study later and turned back to my car . . . just as a police car glided silently up and cramped in across the nose of it. A cop got out.

A police car seems to condense a crowd out of air. A moment before the comer was deserted-else I would never have stopped. Now there were people all around and the cop was coming toward me. My hand crept closer to my gun; I would have dropped him had I not been sure that most, if not all, of those around me were equally dangerous.

He stopped in front of me. "Let me see your license," he said pleasantly.

"Certainly, officer," I agreed, "It's clipped to the instrument board of my car." I stepped past him, letting it be assumed that he would follow me. I could feel him hesitate, then take the bait. I led him around to the far side, between my car and his. This let me see that he did not have a mate in his car, a most welcome variation from human practice. More important, it placed my car between me and the too-innocent bystanders.

"Right there," I said, pointing inside, "it's fastened down." Again he hesitated, then looked-just long enough for me to use the new technique I had developed through necessity. My left hand slapped down on his shoulders and I clutched with all my strength.

It was the "struck cat" all over again. His body seemed to explode so violent was the spasm. I was in the car and gunning it almost before he hit the pavement.

And none too soon. The masquerade broke as suddenly as it had in Barnes's outer office; the crowd closed in. One young woman clung by her nails to the smooth outside of the car for fifty feet or more before she fell off. By then I was making speed and still accelerating. I cut in and out of oncoming traffic, ready to take to the air but lacking space.

A cross street showed up on the left; I slammed into it. It was a mistake; trees arched over it and I could not take off. The next turn was even worse; I cursed the city planners who had made Kansas City so parklike.

Of necessity I slowed down. Now I was cruising at a conservative city speed, still watching for a street which would carry me to some boulevard wide enough for an illegal take-off. My thoughts began to catch up with me and I realized that there was no sign of pursuit. My own too-intimate knowledge of the masters came to my aid. Except for "direct conference" a titan lives in and through his host; he sees what the host sees; receives and passes on information through whatever organs and by whatever means are available to the host.

I knew that. So I knew that it was unlikely that any of the slugs at the corner had been looking for that particular car other than the one inhabiting the body of a policeman-and I had settled with it!

Now, of course, the other parasites present would be on the lockout for me, too-but they had only the bodily abilities and facilities of their hosts. I decided that I need treat them with no more respect, or only a little more respect, than I would give to any casual crowd of witnesses, i.e., ignore them; change neighborhoods and forget it.

For I had nearly thirty minutes of grace left and I had decided what it was I needed as proof; a prisoner, a man who had been possessed and could tell what had happened to the city. I had to rescue a host.

I had to capture a man who was possessed, capture him without hurting him, kill or remove his rider, and kidnap him back to Washington. I had not time to pick a victim, to make plans; I must act now. Even as I decided, I saw a man walking in the block ahead. He was carrying a briefcase and stepping along like a man who sees home and supper ahead. I pulled alongside him and said, "Hey!"

He stopped. "Eh?"

I said, "I've just come from City Hall. No time to explain-slide in here and we'll have a direct conference."

He answered, "City Hall? What are you talking about?"

I said, "Change in plans. Don't waste time. Get in!"

He backed away. I jumped out of the car and grabbed at his hunched shoulders.

Nothing happened-nothing, save that my hand struck bony human flesh, and the man began to yell.

I jumped back into the car and got out of there fast. When I was blocks away I slowed and thought it over. Could it be that I was wrong, that my nerves were so overwrought that I saw signs of titans where there were none?

No! For the moment I had the Old Man's indomitable will to face facts, to see them as they were. The toll gate, the sun suits, the swimming pool, the cop at the vendo-printer . . . those facts I knew-and this last fact simply meant that I had hit the double-zero, rolled boxcars, picked the one man in ten, or whatever the odds were, who was not yet recruited. I speeded up, looking for a new victim.

He was a middle-aged man watering his lawn, a figure so bucolic and out-of-this-century that I was half a mind to pass him by. But I had no time left-and he wore a heavy sweater which bulged suspiciously. Had I seen his wife on the veranda I would have gone past, for she was dressed in bra and skirt and so could not have been possessed.

He looked up inquiringly as I stopped. "I've just come from City Hall," I repeated. "You and I need a direct conference right away. Get in."

He said quietly, "Come in the house for it. That car is too public."

I wanted to refuse but he had already turned and was heading for the house. As I came up by him he whispered, "Careful. The woman is not of us."

"Your wife?"

"Yes."

We stopped on the porch and he said, "My dear, this is Mr. O'Keefe. We have some business to discuss. We'll be in the study."

She smiled and answered, "Certainly, my love. Good evening, Mr. O'Keefe. Sultry, isn't it?"

I agreed that it was and she went back to her knitting. We went on inside and the man ushered me into his study. Since we were both keeping the masquerade I went in first, as befitted a visitor being escorted. I did not like turning my back on him.

For that reason I was half expecting it. He hit me near the base of the neck. But I rolled with it and went down almost unhurt. I continued to roll and fetched up on my back.

In training school they used to slap us with sandbags for trying to get up, once down. I recall my savate instructor saying in a flat Belgian accent, "Brave men get up again-and die. Be a coward-fight from the floor."

So I was on my back and threatening him with my heels as soon as I hit. He danced back out of range. Apparently he did not have a gun and I could get at mine. But there was an open fireplace in the room, a real one, complete with poker, shovel, and tongs. He circled toward it.

There was a small table just out of my reach. I half rolled, half lunged, grabbed a leg and threw it. It caught him in the face as he was grabbing the poker. Then I was on him.

His master was dying in my fingers and he himself was convulsing under its last, terrible command when I became aware of nerve-shattering screams. His wife was standing in the doorway. I bounced up and let her have one, right about her double chin. She went down in mid scream and I returned to her husband.

A limp man is amazingly hard to lift; it took me longer to get him up and across my shoulders than it had to silence him. He was heavy. Fortunately I am a big husky, all hands and feet; I managed a lumbering dog trot toward the car. I doubt if the noise of our fight disturbed anyone but my victim's wife, but her screams must have aroused half that end of town. There were people popping out of doors on both sides of the street. So far, none of them was near, but I was glad to see that I had left the car door open. I hurried toward it.

Then I was sorry; a brat who looked like the twin of the one who had given me trouble earlier was inside fiddling with the controls. Cursing, I dumped my prisoner in the lounge circle and grabbed at the kid. The boy shrank back and struggled, but I tore him loose and threw him out-straight into the arms of the first of my pursuers.

That saved me. He was still untangling himself as I slammed into the driver's seat and shot forward without bothering with door or safety belt. As I took the first corner the door swung shut and I almost went out of my seat; I then held a straight course long enough to fasten the belt. I cut sharp on another corner, nearly ran down a ground car coming out, and went on.

I found the wide boulevard I needed-the Paseo, I think-and jabbed the take-off key. Possibly I caused several wrecks; I had no time to worry about it. Without waiting to reach altitude I wrestled her to course east and continued to climb as I made easting. I kept her on manual across Missouri and expended every launching unit in her racks to give her more speed. That reckless and illegal action may have saved my neck; somewhere over Columbia, just as I fired the last one, I felt the car shake to concussion. Someone had launched an interceptor, a devil-chaser would be my guess-and the pesky thing had fused where I had just been.

There were no more shots, which was good, as I would have been a duck on water from then on. My starboard impeller began to run hot immediately thereafter, possibly from the near miss or perhaps simply from abuse. I let it heat, praying that it would not fly apart, for another ten minutes. Then, with the Mississippi behind me and the indicator way up into "danger" I cut it out and let the car limp along on the port unit. Three hundred was the best she would do-but I was out of Zone Red and back among free men.

Up until then I had not had time to give my passenger more than a glance. He lay where I had slung him, sprawled on the floor pads, unconscious or dead. Now that I was back among men and no longer had the power for illegal speeds there was no reason not to go automatic. I flipped on the transponder, signaled a request for block assignment, and put the controls on automatic without waiting for permission. A block control technician might curse me out and even note my signal for a citation, but they would fit me into the system somehow. I swung around into the lounge and looked my man over.

He was breathing but still out. There was a welt on his face where I had clipped him with the table, but no bones seemed broken and I doubted that he would be unconscious from that cause. I slapped his face and dug my thumbnails into his ear lobes but I could not rouse him.

The dead slug was beginning to stink but I had no way to dispose of it. I let him be and went back to the control seat.

The chronometer read twenty-one thirty-seven Washington time-and I still had better than six hundred miles to go. At my best speed on one power plant, allowing nothing for landing, for tearing over to the White House and finding the Old Man, I would reach Washington a few minutes after midnight. So I had already failed to carry out the letter of my orders and the Old Man was sure as the devil going to make me stay in after school for it.

I took a chance and tried to start the starboard impeller. No dice-it was probably frozen solid and needing a major overhaul. Perhaps just as well, as anything that goes that fast can be explosively dangerous if it gets out of balance-so I desisted and tried to raise the Old Man by phone.

The phone would not work. Perhaps I had jiggered it in one of the spots of exercise I had been forced to take that day but I had never had one fail me before. Printed circuits, transistors, and the whole works being embedded in plastic made those units almost as shock resistant as a proximity fuse. I put it back in my pocket, feeling that this was one of those days when it was just not worthwhile to get out of bed. I turned to the car's communicator and punched the emergency tab.

"Control," I called out. "Control! This is an emergency!"

The screen lighted up and I was looking at a young man. He was, I saw with relief, bare-skinned so far as he appeared in the screen. "Control answering-Block Fox Eleven. What are you doing in the air? I've been trying to raise you ever since you entered my block."

"Never mind!" I snapped. "Patch me into the nearest military circuit. This is crash priority!"

He looked uncertain, but the screen flickered and went blank. Shortly another picture built up showing a military message center-and that did my heart good, as every person in sight was stripped to the waist. The foreground was occupied by a young watch officer; I could have kissed him. Instead I said, "Military emergency-patch me through to the Pentagon and there to the White House."

"Who are you?"

"No time, no time! I'm a civil agent and you wouldn't recognize my I.D. if you saw it. Hurry!"

I might have talked him into it but he was shouldered out of scan by an older man, a wing commander by his cap insignia. "Land at once!" was all that he said.

"Look, skipper," I said. "This is a military emergency; you've got to put me through. I-"

"This is a military emergency," he interrupted, "and all civil craft have been grounded for the past three hours. Land at once."

"But I've got to-"

"Land or be shot down. We are tracking you; I am about to launch an interceptor to burst a half mile ahead of you. Hold your course, or make any maneuver but landing, and the next one will burst on."

"Will you listen, please? I'll land, but I've got to get-" He switched off, leaving me with my jaw pumping air.

The first burst seemed considerably short of a half mile ahead of me; I landed.

I cracked up in doing it, but without hurting myself or my passenger. I did not have long to wait. They had me flare-lighted and were swooping down on me before I had satisfied myself that the boat wouldn't move. They took me in and I met the wing commander personally. He even put my message through after his psych squad got through giving me the antidote for the sleep test. By then it was one-thirteen, zone five-and Schedule Counter Blast had been underway for exactly that hour and thirteen minutes.

The Old Man listened to a summary, grunted, then told me to shut up and see him in the morning.

Chapter 19

If the Old Man and I had gone to the National Zoological Gardens instead of sitting around in the park, it would not have been necessary for me to go to Kansas City. The ten titans we had captured at the joint session of Congress, plus two the next day, had been entrusted to the director of the zoo to be placed on the shoulders of unlucky anthropoids-chimps and orangutans, mostly. No gorillas.

The director had had the apes locked up in the zoo's veterinary hospital. Two chimpanzees, Abelard and Heloise, were caged together; they had always been mates and there seemed to be no reason to separate them. Maybe that sums up our psychological difficulty in dealing with the titans; even the men who transplanted the slugs to the apes still thought of the result as apes, rather than as titans.

The treatment cage next to that of the two chimps was occupied by a family of tuberculous gibbons. They were not used as hosts, since they were sick, and there was no communication between cages. They were shut one from another by sliding, gasketed panels and each cage had its own air-conditioning. I've been in worse hospitals; I remember one in the Ukraine-

Anyhow, the next morning the panel had been slid back and the gibbons and the chimps were all in together. Abelard, or possibly Heloise, had found some way to pick the lock. The lock was supposed to be monkey proof, but it was not ape-cum-titan proof. Don't blame the designer of the lock.

Two chimps plus two titans plus five gibbons-the next morning there were seven apes ridden by seven titans.

This was discovered two hours before I left for Kansas City, but the Old Man had not been notified. Had he been, he would have known that Kansas City was saturated. I might have figured it out for myself. Had the Old Man known about the gibbons, Schedule Counter Blast would not have taken place.

Schedule Counter Blast was the worst wet firecracker in military history. The evolution was beautifully worked out and the drops were made simultaneously just at midnight, zone five, on over ninety-six hundred communication points-newspaper offices, block controls, relay stations, and so forth. The raiding squad were the cream of our sky-borne forces, mostly veteran non-coms, and with them, technicians to put each communication point back into service.

Whereupon the President's speech and the visual display would go out from each local station; Schedule Bare Back would take effect all through the infected territory; and the war would be over, save for minor mopping up.

Ever see a bird hurt itself by flying into a glass window? The bird is not stupid; he simply did not have all the data.

By twenty-five minutes after midnight reports started coming in that such-and-such points were secured. A little later there were calls for help from other points. By one in the morning most of the reserves had been committed but the operation was clearly going well-so well, indeed, that unit commanders were landing and were reporting from the ground.

That was the last anybody ever heard of them.

Zone Red swallowed up the task force as if it had never existed-over eleven thousand military craft, more than a hundred and sixty thousand fighting men and technicians, seventy-one group commanders and-why go on? The United States had received its worst military setback since Black Sunday. Not in numbers, for there was not a city bombed, but in selected quality.

Let me make it clear that I am not criticizing Martinez, Rexton, the General Staff, or those poor devils who made the drop. The program was properly planned, it was based on what appeared to be a true picture, and the situation called for fast action with the best we

had. If Rexton had sent any but his best boys he would have earned a court martial; the Republic was at stake and he had the sense to realize it.

But he did not know about the seven apes.

It was nearly daylight, so I understand, before Martinez and Rexton got it through their heads that the messages they had gotten back about successes were actually faked, fakes sent by their own men-our own men-but hag-ridden, possessed, and brought into the masquerade. After my report, more than an hour too late to stop the raids, the Old Man had tried to get them not to send in any more men, but they were flushed with success and anxious to make a clean sweep.

The Old Man asked the President to insist on visual checks of what was happening, but the operation was being controlled by relay through Space Station Alpha and there just aren't enough channels to parallel audio with video through a space station. Rexton had said, "They know what they are up against; quit worrying. As fast as we get local stations back in our hands, our boys will patch back into the ground relay net and you will have all the visual evidence you want."

The Old Man had pointed out that by then it would be too late. Rexton had burst out, "Confound it, man! -I can't stop soldiers in action to have them take pictures of bare backs. Do you want a thousand men to let themselves be killed just to quiet your jitters?"

The President had backed him up.

By early morning they had their visual evidence. Stereo stations in the Central Valley were giving out with the same old pap; Rise and Shine with Mary Sunshine, Breakfast with the Browns, and such junk. There was not a station with the President's stereocast, not one that even conceded that anything had happened. The military dispatches tapered off and stopped around four o'clock and Rexton's frantic calls were not answered. Task Force Redemption of Schedule Counter Blast ceased to exist-spurlos versenkt.

I got this not from the Old Man but from Mary. Being the President's little shadow who went in and out with him, she had a box seat. I did not get to see the Old Man until nearly eleven the next morning. He let me report without comment, and without bawling me out, which was worse.

He was about to dismiss me when I put in, "How about my prisoner? Didn't he confirm my conclusions?"

"Oh, him? Still unconscious, by the last report. They don't expect him to live. The psychotechnicians can't get anything out of him."

"I'd like to see him."

"You stick to things you understand."

"Well-have you got something for me to do?"

"Not at the moment. I think you had better-No, do this: trot down to the National Zoo. You'll see some things that may put a different light on what you picked up in Kansas City."

"Huh?"

"Look up Doctor Horace, he's the Assistant Director. Tell him I sent you."

So I went down to see the animals. I tried to find Mary, but she was tied up.

Horace was a nice little guy who looked like one of his own baboons; he turned me over to a Doctor Vargas who was a specialist in exotic biologies-the same Vargas who

was on the Second Venus Expedition. He told me what had happened and I looked at the gibbons, meantime rearranging my prejudices.

"I saw the President's broadcast," he said conversationally, "weren't you the man who-I mean, weren't you the-"

"Yes, I was 'the man who'," I agreed shortly.

"Then you can tell us a great deal about these phenomena. Your opportunities have been unique."

"Perhaps I should be able to," I admitted slowly, "but I can't."

"Do you mean that no cases of fission reproduction took place while you were, uh, their prisoner?"

"That's right." I thought about it and went on, "At least, I think that's right."

"Don't you know? I was given to understand that, uh, victims have full memory of their experiences?"

"Well, they do and they don't." I tried to explain the odd detached frame of mind of a servant of the masters.

"I suppose it could happen while you sleep."

"Maybe. Besides sleep, there is another time, or rather times, which are difficult to remember. During conference."

"Conference?"

So I explained. His eyes lit up, "Oh, you mean 'conjugation'."

"No, I mean 'conference'."

"We mean the same thing. Don't you see? Conjugation and fission-they reproduce at will, whenever the food supply, that is to say the supply of hosts, permits. Probably one contact for each fission; then, when the opportunity exists, fission-two fully adult daughter parasites in a matter of hours. . . or less, possibly."

I thought it over. If that were true-and looking at the gibbons, I could not doubt it-then why had we depended on shipments at the Constitution Club? Or had we? In fact I did not know; I did what my master wanted done and saw only what came under my eyes. But why had we not saturated New Brooklyn as Kansas City had been saturated. Lack of time?

It was clear how Kansas City had been saturated. With plenty of "livestock" at hand and a space ship loaded with transit cells to draw from the titans had reproduced to match the human population.

I am no biologist, exotic or otherwise, but I can do simple arithmetic. Assume a thousand slugs in that space ship, the one we believed to have landed near Kansas City; suppose that they could reproduce when given the opportunity every twenty-four hours.

First day, one thousand slugs.

Second day, two thousand.

Third day, four thousand.

At the end of the first week, the eighth day, that is-a hundred and twenty-eight thousand slugs.

After two weeks, more than sixteen million slugs.

But we did not know that they were limited to spawning once a day; on the contrary the gibbons proved they weren't. Nor did we know that a flying saucer could lift only a thousand transit cells; it might be ten thousand-or more-or less. Assume ten thousand as breeding stock with fission every twelve hours. In two weeks the answer comes out-

MORE THAN TWO AND A HALF TRILLION!!!!

The figure did not mean anything; it was cosmic. There aren't anything like that many people on the whole globe, not even if you counted in apes.

We were going to be knee deep in slugs-and that before long. I felt worse than I had in Kansas City.

Dr. Vargas introduced me to a Doctor McIlvaine of the Smithsonian Institution; McIlvaine was a comparative psychologist, the author, so Vargas told me, of 'Mars, Venus, and Earth: A Study in Motivating Purposes'. Vargas seemed to expect me to be impressed but I was not as I had not read it. Anyhow, how can anyone study the motives of Martians when they were all dead before we swung down out of trees?

They started swapping trade talk not intelligible to an outsider; I continued to watch the gibbons. Presently McIlvaine asked me, "Mr. Nivens, how long does a conference last?"

"Conjugation," Vargas corrected him.

"Conference," McIlvaine repeated. "Keep your mind on the more important aspect."

"But, Doctor," Vargas insisted, "there are parallels in terrestrial biology. In primitive reproduction, conjugation is the means of gene exchange whereby mutation is spread through the body of the-"

"You are being anthropocentric. Doctor. You do not know that this life form has genes."

Vargas turned red. "I presume you will allow me gene equivalents?" he said stiffly.

"Why should I? I repeat, sir, that you are reasoning by analogy where there is no reason to judge that analogy exists. There is one and only one characteristic common to all life forms and that is the drive to survive."

"And to reproduce," insisted Vargas.

"Suppose the organism is immortal and has no need to reproduce?"

"But-" Vargas shrugged. "Your question is not germane; we know that they reproduce." He gestured at the apes.

"And I am suggesting," McIlvaine came back, "that this is not reproduction, but a single organism availing itself of more space, as a man might add a wing to his house. No, really. Doctor, I do not wish to be offensive, but it is possible to get so immersed in the idea of the zygote-gamete cycle that one forgets that there may be other patterns."

Vargas started out, "But throughout the entire system-"

McIlvaine cut him short. "Anthropocentric, terrocentric, solocentric-it is still a provincial approach. These creatures may be from outside the solar system entirely."

I said, "Oh, no!" I had had a sudden flash picture of the planet Titan and with it a choking sensation.

Neither one paid any attention to me. McIlvaine continued, "If you must have analogy, take the amoeba-an earlier, more basic, and much more successful life form than ours. The motivational psychology of the amoeba-"

I switched off my ears; I suppose free speech gives a man the right to talk about the 'psychology' of an amoeba, but I don't have to listen. They never did get back to asking me how long a conference takes, not that I could have told them. A conference is, well-timeless.

They did do some direct experimentation which raised my opinion of them a little. Vargas ordered brought in a baboon who was wearing a slug and had him introduced into the cage with the gibbons and the chimps. Up to then the gibbons had been acting like gibbons, grooming each other and such, except that they seemed rather quiet-and kept a sharp eye on our movements. As soon as the newcomer was dumped in they gathered in a ring facing outwards and went into direct conference, slug to slug. McIlvaine jabbed his finger excitedly at them. "You see? You see? Conference is not for reproduction, but for exchange of memory. The organism, temporarily divided, has now re-identified itself."

I could have told him the same thing without the double talk; a master who has been out of touch always gets into direct conference as soon as possible.

"Hypothesis!" Vargas snorted. "Pure hypothesis-they have no opportunity to reproduce just now. George!" He ordered the boss of the handling crew to bring in another ape.

"Little Abe?" asked the crew boss.

"No, I want one which is not supporting a parasite. Let me see-make it Old Red."

The crew boss glanced at the gibbons, looked away at once, and said, "Gripes, Doc, I'd rather you didn't pick on Old Red."

"This won't hurt him."

"Why can't I bring in Satan? He's a mean bastard anyway."

"All right, all right! But hurry it up; you are keeping Dr. McIlvaine waiting."

So they brought in Satan, a coal black chimp. He may have been aggressive elsewhere; he was not so here. They dumped him inside, he took one look around, shrank back against the door, and began to whine. It was like watching an execution; I could not stand to look but I couldn't look away. I had had my nerves under control-a man can get used to anything; there are people who make their livings by pumping out cesspools-but the ape's hysteria was contagious. I wanted to run.

At first the hag-ridden apes did nothing; they simply stared at him like a jury. It went on that way for a long while. Satan's whines changed to low, sobbing moans and he covered his face with his hands. Presently Vargas said, "Doctor! Look!"

"Where?"

"Lucy-the old female. There." He pointed.

It was the matriarch of the family of consumptive gibbons. Her back was toward us; I could see that the slug thereon had humped itself together. An iridescent line ran down the center of it.

It began to split as an egg splits. In a few minutes only, the division was complete. One new slug centered itself over her spine; the other flowed down her back. She was squatting, buttocks almost to the floor; it slithered off and plopped gently on the concrete.

It crept slowly toward Satan. The ape must have peeked through his fingers, for he screamed hoarsely-and swarmed up into the top of the cage.

So help me, they sent a squad to arrest him. Four of the biggest-two gibbons, a chimp, and a baboon. They tore him loose and hauled him down and held him face down on the floor.

The slug slithered closer.

It was a good two feet away when it grew a pseudopod-slowly, at first-a slimy stalk that weaved around like a cobra. Then it lashed out and struck the ape on the foot. The others promptly let go of him but Satan did not move.

The titan seemed to pull itself in by the extension it had formed and attached itself to Satan's foot. From there it crawled up; when it reached the base of his spine the ape stirred. Before it was settled at the top of his back Satan sat up. He shook himself and joined the others, stopping only to look us over.

Vargas and McIlvaine started talking excitedly, apparently quite unmoved otherwise. I wanted to smash something-for me, for Satan, for the whole simian race.

Vargas was insisting that nothing had been proved, while McIlvaine maintained that we were seeing something new to our concepts; an intelligent creature which was, by the fashion in which it was organized, immortal and continuous in its personal identity-or its group identity; the argument grew confused. In any case McIlvaine was theorizing that such a creature would have continuous memory of all its experiences, not just from the moment of fission, but back to its racial beginning. He described the slug as a four dimensional worm in space-time, intertwined with itself as a single organism, and the talk grew so esoteric as to be silly.

As for me, I did not know and did not care. All very interesting, no doubt, but the only way I cared about slugs was to kill them. I wanted to kill them, early and often and as many as possible.

About that uninterrupted "racial memory" idea: wouldn't it be rather cumbersome to be able to recall exactly what you did the second Wednesday in March a million years ago?

Chapter 20

For a wonder, when I got back the Old Man was available and wanted to talk. The President had left to address a secret session of the United Nations and the Old Man had not been included in the party. I wondered if he had fallen out of official favor, but I did not say so.

He had me report fully on what I had seen at the zoo and questioned me closely; he had not been down there himself. I added my opinion of Vargas and McIlvaine. "A couple of boy scouts," I complained, "comparing stamp collections. They don't realize it's serious."

The Old Man took time out before answering. "Don't sell those boys short, son," he advised me. "They are more likely to come up with the answer than are you and I."

"Humph!" I said, or something stronger. "They are more likely to let those slugs escape. Remember Graves?"

"I do remember Graves. You don't understand scientific detachment."

"I hope I never do!"

"You won't. But it's the ignition system of the world; without it, we're sunk. Matter of fact, they did let one escape."

"Huh?"

"Didn't they tell you about the elephant?"

"What elephant? They damn near didn't tell me anything; they got interested in each other and ignored me."

"Sure that's not what's biting you? About the elephant: an ape with a rider got out, somehow. Its body was found trampled to death in the elephant house. And one of the elephants was gone."

"You mean there is an elephant loose with a slug on him!" I had a horrid vision of what that could mean-something like a tank with a cybernetic brain.

"Her," the Old Man corrected me, "it was a cow elephant. I didn't say so, anyhow. They found her over in Maryland, quietly pulling up cabbages. No parasite."

"Where did the slug get to?" Involuntarily I glanced around. The Old Man chuckled.

"Don't worry; I don't have it in here. But a duo was stolen in the adjoining village. I'd say the slug is somewhere west of the Mississippi by now."

"Anybody missing?"

He shrugged again. "How can you tell, in a free country? At least, the titan can't hide on a human host anywhere short of Zone Red."

That seemed true; Schedule Bare Back appeared to be operating one hundred percent. That made me think of something else, something I had seen at the zoo and had not reasoned through. Whatever it was, it eluded me. The Old Man went on, "It's taken drastic action to make the bare-shoulders order stick, though. The President has had a flood of protests on moral grounds, not to mention the National Association of Men's Haberdashers."

"Huh?"

"You would think we were trying to sell their daughters down to Rio, the way some of them carry on. There was a delegation in, called themselves The Mothers of the Republic, or some such nonsense."

"The President's time is being wasted like that, at a time like this?"

"McDonough handled them. But he roped me in on it, damn his eyes." The Old Man looked pained. "We told them that they could not see the President unless they stripped absolutely naked. That stopped 'em."

The thought that had been bothering me came to the surface. "Say, boss, you might have to."

"'Have to what?"

"Make people strip naked."

He chewed his lip and looked worried. "What are you driving at?"

"Do we know, as a certainty, that a slug can attach itself to its host only near the base of the brain?"

"You should know, better than I do."

"I thought I did, but now I'm not sure. That's the way we always did it, when I was, uh, with them." I recounted again, in more detail, what I had seen when Vargas had had poor old Satan exposed to a slug. "That ape moved as soon as the thing reached the base of his spine, clear down at his tail bone. Maybe they prefer to ride up near the brain-I'm sure they do. But maybe they don't have to. Maybe they could ride down inside a man's pants and just put out an extension to the end of his spinal cord."

"Hmm . . . you'll remember, son, that the first time I had a crowd searched for one I made everybody peel clear down to the buff. That was not accidental; I wanted to be sure."

"I think you were justified. See here; they might be able to conceal themselves anywhere on the body, if they have to. Inside a pair of shorts, for example. Of course you couldn't hide anything under some shorts-" I was thinking of the skin-tight things that Mary wore. "-but take those droopy drawers you've got on. One could hide in them and it would just make you look a bit satchel fannied-a bit more, I should say."

"Want me to take 'em off?"

"I can do better than that; I'll give you the Kansas City Clutch." My words were joking but I was not; I grabbed at the bunchiness of his pants and made sure he was clean. If he had not been, he would have contorted and gone unconscious had I clutched a parasite. He submitted to it with good grace, then gave me the same treatment.

"But we can't," he complained as he sat down, "go around slapping women on the rump. It won't do."

"You may have to," I pointed out, "or make everybody strip."

"We'll run some experiments."

"How?" I asked.

"You know that head-and-spine armor deal? It's not worth much, except to give a feeling of security to anybody who bothers to wear one. I'll tell Doctor Horace to take an ape, fit an armor to him so that a slug can't reach anything but his legs, say-and see what happens. Or use some other method to limit the area of attack, and vary the areas, too. We'll find out."

"Uh, yes. But don't have him use an ape, boss."

"Why not?"

"Well-they're too human."

"Damn it, bub, you can't make an omelet-"

"-without breaking eggs. Okay, okay, but I don't have to like it. Anyhow, we'll find out."

I could see that he did not like what he was thinking. "I hope it turns out that you are wrong. Yes, sir, I surely do. It has been hard enough to get their shirts off; I'd hate like the very deuce to try to get 'em to take off their drawers as well." He looked worried.

"Well, maybe it won't be necessary."

"I hope not."

"By the way, we're moving back to the old nest."

"How about the New Philadelphia hide-out?" I asked.

"We'll keep both. This war may go on a long time."

"Speaking of such, what have you got for me now?"

"Well, now, as I said, this is likely to prove a long war. Why don't you take some leave? Indefinite-I'll call you back when I need you."

"You always have," I pointed out. "Is Mary going on leave?"

"What's that got to do with it?"

"I asked you a straight question. Boss."

"Mary is on duty, with the President."

"Why? She's done her job, and nobly. You aren't depending on her being able to smell out a slug, not if I know you. You don't need her as a guard; she's too good an agent to waste on such work."

"See here-when did you get so big that you are telling me how to use other agents? Answer that and make it good."

"Oh, skip it, skip it," I told him, my temper very much out of hand. "Let it lay that if Mary isn't taking leave, I don't want leave-and none of your business why."

"That's a nice girl."

"Did I say she wasn't? Keep your nose out of my affairs. In the meantime, give me a job to do."

"I say you need to take leave."

"So you can make damn sure that I don't have any free time when Mary has? What is this? A YWCA?

"I say you need leave because you are worn out."

"Hunh!"

"You are a fair-to-good agent when you are in shape. Right now you aren't; you've been through too much. No, shut up and listen: I send you out on a simple assignment. Penetrate an occupied city, look it over and see everything there is to see and report back by a certain time. What do you do? You are so jittery that you hang around in the suburbs and are afraid to go downtown. You don't keep your eyes open and you damn near get caught three times. Then when you do head back, you get so nervy that you burn out your ship and fail to get back in time to be of any use. Your nerve is shot and your judgment with it. Take leave-sick leave, in fact."

I stood there with my ears burning. He did not directly blame me for the failure of Schedule Counter Blast but he might as well have. I felt that it was unfair-and yet I knew that there was truth in it. My nerves used to be like rock, and now my hands trembled when I tried to strike a cigarette.

Nevertheless he let me have an assignment-the first and only time I have ever won an argument with him.

A hell of an assignment-I spent the next several days lecturing to brass, answering fool questions about what titans eat for lunch, explaining how to tackle a man who was possessed. I was billed as an "expert" but half the time my pupils seemed sure that they knew more about slugs than I did.

Why do people cherish their preconceptions? Riddle me that.

Chapter 21

Operation Parasite seemed to come to a dead stop during this period. The titans continued to hold Zone Red, but they could not break out without being spotted. And we did not try to break in for the good reason that every slug held one of our own people as hostage. It was a situation which might go on for a long time.

The United Nations were no help. The President wanted a simple act of cooperation-Schedule Bare Back on a global scale. They hemmed and hawed and sent the matter to committee for investigation. The plain truth was they did not believe us; that was always the enemy's great advantage-only the burned believed in the fire.

Some nations were safe from the slugs through their own customs. A Finn who did not strip down and climb into a steam bath, in company, every day or so would have been conspicuous. The Japanese, too, were casual about undressing. The South Seas were relatively safe, as were large parts of Africa. France had gone enthusiastically nudist, on weekends at least, right after World War III-a slug would have a tough time hiding in France.

But in countries where the body-modesty taboo meant something a slug could stay hidden until his host began to stink. The United States itself, Canada-England, most particularly England. "Aren't you getting excited over nothing, old chap? Take off my weskit? Now, really!"

They flew three slugs (with apes) to London; I understand that the King wanted to set an example as the President had, but the Prime Minister, egged on by the Archbishop of Canterbury, would not let him. The Archbishop had not even bothered to look; moral behavior was more important than mundane peril. Nothing about this appeared in the news and the story may not be true, but English skin was not exposed to the cold stares of neighbors.

The Cominform propaganda system began to blast us as soon as they had worked out a new line. The whole thing was an "American Imperialist fantasy" intended to "enslave the workers"; the "mad dogs of capitalism" were at it again.

I wondered why the titans had not attacked Russia first; Stalinism seemed tailor-made for them. On second thought, I wondered if they had. On third thought I wondered what difference it would make; the people behind the Curtain had had their minds enslaved and parasites riding them for three generations. There might not be two kopeks difference between a commissar with a slug and a commissar without a slug.

There would be one change: their intermittent purges would take a different form; a "deviationist" would be "liquidated" by plastering a titan on his neck. It wouldn't be necessary to send him to the gas chamber.

Except when the Old Man picked me to work with him I was not close to the center of things; I saw the war with the titans as a man sees hurricanes-his small piece only. I did not see the Old Man soon and I got my assignments from Oldfield, his deputy. Consequently I did not know of it when Mary was relieved from special duty with the President. I ran into her in the lounge of the Section offices. "Mary!" I yelped and fell over my feet getting to her.

She gave me that long, slow, sweet smile and moved over to make room for me. "Hello, darling!" she whispered. She did not ask me what I had been doing, nor scold me that I had not been in touch with her, nor even comment on how long it had been. Mary always let the water over the dam take care of itself.

Not me-I babbled. "This is wonderful! I thought you were still tucking the President into his beddy-bye. How long have you been here? Do you have to go back right away? Say, can I dial you a drink--no, you've got one." I started to dial for an old-fashioned and discovered that Mary had already done so; it popped out almost into my hand. "Huh? How'd this get here?"

"I ordered it when you came in the door."

"You did? Mary, did I tell you that you are wonderful?"

"No."

"Very well, then, I will: You're wonderful."

"Thank you."

I went on, "This calls for a celebration! How long are you free? Say, couldn't you possibly get some leave? They can't expect you to be on duty twenty-four hours a day, week after week, with no time off. I think I'll go right straight to the Old Man and tell him just what-"

"I'm on leave, Sam."

"-just what I think of that sort of-Huh?"

"I'm on leave now."

"You are? For how long?"

"Subject to call. All leaves read that way now."

"But-How long have you been on leave?"

"Since yesterday. I've been sitting here, waiting for you to show up."

"Yesterday!" And I had spent yesterday giving more kindergarten lectures to brass hats who did not want them. "Oh, for the love of-" I stood up. "Stay right where you are. Don't move. I'll be right back."

I rushed over to the operations office. I got in to see the chief deputy by insisting that I had a very urgent matter that he had to attend to. Oldfield looked up when I came in and said in a surly tone, "What do you want?"

"Look, chief, that series of bedtime stories I'm scheduled to tell: better cancel them."

"Why?"

"I'm a sick man; I've been due for sick leave for a long time. Now I've just got to take it."

"You're sick in the head, if you ask me."

"That's right; I'm sick in the head. Sometimes I hear voices. People have been following me around. I keep dreaming I'm back with the titans." That last point was regrettably true.

"But since when has this being crazy been any handicap in this section?" He leaned back and waited for me to argue the point.

"Look-do I get leave or don't I?"

He fumbled through papers on his desk, found one and tore it up. "Okay. Keep your phone handy; you're subject to recall. Get out."

I got. Mary looked up when I came in and gave me the soft warm treatment again. I said, "Grab your things; we're leaving."

She did not ask where; she simply stood up. I snatched my drink, gulped half of it and spilled the rest. We went up and were out on the pedestrian level of the city before either one of us said anything. Then I asked, "Now-where do you want to get married?"

"Sam, we discussed that before."

"Sure we did and now we are going to do it. Where?"

"Sam, Sam my very dear-I will do what you say. But I am bound to tell you that I am still opposed to it."

"Why?"

"Sam, let's go straight to my apartment. I'd like to cook dinner for you."

"Okay, you can cook dinner-but not in your apartment. And we get married first."

"Please, Sam!"

I heard somebody say, "Keep pitching, kid. She's weakening." I looked around and found that we were playing to a good-sized gallery.

I swept an arm wide, almost clipping the youngster who had given me the advice and shouted irritably, "Haven't you people got anything else to do? Go get drunk!"

Somebody else said, "I'd say he ought to take her offer; he won't get a better one."

I grabbed Mary by the arm and hurried her away from there. I did not say another word until I had gotten her into a cab and closed off the driver's compartment from the lounge. "All right," I said gruffly, "why not get married? Let's have your reasons."

"Why get married, Sam? I'm yours; you don't need a contract."

"Why? Because I love you; that's one reason, damn it!"

She did not answer for quite a while; I thought I had offended her. When she did I could hardly hear her. "You hadn't mentioned that before, Sam."

"Hadn't I? Oh, I must have. I'm sure I have."

"No, I'm sure, quite sure, that you haven't. Why didn't you?"

"Unh, I don't know. Just an oversight, I guess. I'm not right sure what the word 'love' means."

"Neither am I," she said softly, "but I love to hear you say it. Say it again, please."

"Huh? Okay. I love you. I love you, Mary."

"Oh, Sam!"

She snuggled in against my shoulder and began to tremble. I shook her a little. "How about you?"

"Me? Oh, I love you, Sam. I do love you. I've loved you ever since-"

"Ever since when?"

I thought she was going to say that she had loved me ever since I took her place in Project Interview; what she said was, "I've loved you ever since you slapped me."

Is that logic?

The driver was cruising slowly east along the Connecticut coast; I had told him just to drive around. I had to wake him up before I could get him to land us in Westport. We went straight to the City Hall.

I stepped up to a counter in the Bureau of Sanctions and Licenses and said to a clerk there, "Is this where we get married?"

"That's up to you," he answered. "Hunting licenses on the left, dog licenses on the right, this desk is the happy medium-I hope." He leered at me.

I don't like smart boys and the gag was ancient. "Very well," I said stiffly, "will you oblige by issuing us a license?"

"Sure thing. Everybody ought to get married at least once; that's what I keep telling my old lady." He got out a large printed form. "Let's have your serial numbers."

We gave them to him. He slid the form into a typer and recorded them. "Now-are either of you married in any other state?" We said that we weren't; he went on, "You're sure, now? If you are and don't tell me, so I can put a rider on this showing the other contracts, this contract ain't valid."

We told him again that we weren't married anywhere. He shrugged and went on, "Term, renewable, or lifetime? If it's over ten years, the fee is the same as for lifetime; if it's under six months, you don't need this; you get the short form from that vendo machine over there by the wall."

I looked at Mary; she said in a very small voice, "Lifetime."

The clerk looked surprised. "Lady, are you sure you know what you're doing? The renewable contract, with the automatic option clause, is just as permanent and you don't have to go through the courts if you change your mind."

I said, "You heard the lady! Put it down."

"Okay, okay-either party, mutual consent, or binding?"

"Binding," I answered and Mary nodded.

"Binding it is," he agreed, stroking the typer. "Now we come to the meat of the matter: who pays and how much? And is it salary or endowment?"

I said, "Salary"; I didn't own enough to set up a fund.

At the same time and in a firm voice Mary said, "Neither."

The clerk said, "Huh?"

"Neither one," Mary repeated. "This is not a financial contract."

The clerk stopped completely, looked at me, and then looked at Mary. "Now, look, lady," he said reasonably, "don't be foolish. You heard the gentleman say that he was willing to do the right thing."

"No."

"Hadn't you better talk it over with your lawyer before you go ahead with this? There's a public communicator out in the hall."

"No!"

"Well-I'm darned if I see what you need a license for."

"Neither do I," Mary told him.

"You mean you don't want this?"

"No! Put it down the way I told you to. 'No salary'. "

The clerk looked helpless but bent over the typer again. "I guess that's all we need," he said finally. "You've kept it simple, I'll say that for you. 'Do-you both-solemnly-swear-that-the-above-facts-are-true-to-the-best-of-your-knowledge-and-belief-that-you-aren't-entering-into-this-agreement-uninfluenced-by-drugs-or-other-illegal-inducements-and-that-there-exists-no-other-covenants-nor-other-legal-impediments-to-the-execution-and-registration-of-the-above-contract?' "

We both said that we did and we were and it was and there weren't. He pulled the form out of the typer. "Let's have your thumb prints. . . okay; that'll be ten dollars, including the federal tax." I paid him and he shoved the form into the copier and threw the switch. "Copies will be mailed to each of you," he announced, "at your serial-number addresses. Now-what type of ceremony are you looking for? Maybe I can be of help."

"We don't want a religious ceremony," Mary told him and I agreed.

He nodded. "Then I've got just what you're looking for. Old Doctor Chamleigh. He's completely non-sectarian, best stereo accompaniment in town, all four walls and full orchestra. He gives you the whole works, fertility rites and everything, but dignified. And he tops it off with a fatherly straight-from-the-shoulder word of advice. Makes you feel married."

"No." This time I said it.

"Oh, come, now!" the clerk said to me. "Think of the little lady. If she sticks by what she just swore to-and I'm not saying she won't-she'll never have another chance. Every girl is entitled to a formal wedding. Honest-I don't get much of a commission out of it."

I said, "See here, you can marry us, can't you? Go ahead. Get it over with!"

He looked surprised and said, "Didn't you know? In this state you marry yourself. You've been married, ever since you thumb-printed the license."

I said, "Oh-" Mary didn't say anything. We left.

I hired a duo at the landing flat north of town; the heap was ten years old and smelled of it but it had full-automatic and that was all that really mattered. I looped around the city, cut across Manhattan Crater, and set the controls. We didn't talk much; there didn't seem to be much to say just yet. I was happy but terribly nervous-and then Mary put her arms around me and after a bit I wasn't nervous any longer but happier than ever. After a long time that seemed short I heard the BEEEEP! beep-beep BEEEEP! of the beacon at

my shack in the mountains, whereupon I unwound myself, took over manual, and landed. Mary said sleepily, "Where are we?"

"At my cabin in the mountains," I told her.

"I didn't know you had a cabin in the mountains. I thought you were headed for my apartment."

"What, and risk those bear traps? Anyhow, it's not mine; it's ours."

She kissed me again and I loused up the landing. She slid out ahead of me while I was securing the board, then I followed and found her staring at my shack. "Sweetheart, it's beautiful!"

"You can't beat the Adirondacks," I agreed. There was a slight haze with the sun low in the west, giving that wonderful, depth upon depth, stereo look that you never get anywhere else. "I picked this place for the view."

She glanced at it and said, "Yes, yes-but I didn't mean that. I meant your-our cabin. Let's go inside, right now."

"Suits," I agreed, "but it's really just a simple shack." Which it was-not even an indoor pool. I had kept it that way on purpose; when I came up here I didn't want to feel that I had brought the city with me. The shell was conventional steel-and-fiberglass construction but I had had it veneered in duroslabs which could not be told from real logs unless you took a knife to them. The inside was just as simple-a big living room with a real, wood-burning fireplace, deep plain-colored rugs, and plenty of low chairs. The services were all in a Kompacto special, the shell of which was buried under the foundation-air-conditioner, power pack, cleansing system, sound equipment, plumbing, radiation alarm, servos-everything but the deep-freeze and the other kitchen equipment, out of sight and out of mind. Even the stereo screens were covered up and would not be noticed unless in use. It was about as near as a man could get to a real log cabin and still have inside plumbing.

"I think it's just lovely," Mary said seriously. "I wouldn't want to have an ostentatious place."

"You and me both." I worked the combo and the front door dilated; Mary was inside at once. "Hey! Come back here!" I yelled.

She did so. "What's the matter, Sam? Did I do something wrong?"

"You sure did." I dragged her back to me, then swung her up in my arms and carried her across the threshold. I kissed her as I put her down. "There. Now you are in your own house, properly."

The lights had come on as we entered the house. She looked around her, then turned and threw her arms around my neck. "Oh, darling, darling! I can't see-my eyes are all blurry."

Mine were blurry, too, so we took time out for mutual treatment. Then she started wandering around, touching things. "Sam, if I had planned it all myself, it would have been just this way."

"It hasn't but one bathroom," I apologized. "We'll have to rough it a bit."

"I don't mind. In fact I'm glad; now I know you didn't bring any of those women of yours up here."

"What women?"

"You know darn well what women. If you had been planning this as a nest, you would have included a woman's bathroom."

"You know too much."

She did not answer but wandered on out into the kitchen. I heard her squeal. "What's the matter?" I asked, following her out.

"I never expected to find a real kitchen in a bachelor's lodge."

"I'm not a bad cook myself. I wanted a kitchen so I bought one."

"I'm so glad. Now I will cook you dinner."

"It's your kitchen; suit yourself. But don't you want to wash up? You can have first crack at the shower if you want it. And tomorrow we'll get a catalog and you can pick out a bathroom of your own. We'll have it flown in."

"No hurry," she said. "You take the first shower. I want to start dinner."

So I did. I guess she did not have any trouble figuring out the controls and filing system in the kitchen, for about fifteen minutes later while I was whistling away in the shower, letting the hot water soak in, I heard a tap on the shower door. I looked through the translucent panel and saw Mary silhouetted there.

"May I come in?" she called out.

"Sure, sure!" I said, "Plenty of room." I opened the door and looked at her. She looked good. For a moment she stood there, letting me look but with a sweet shyness on her face that I had never seen before.

I put on an expression of utter surprise and said, "Honey! What's the matter? Are you sick?"

She looked startled out of her wits and said, "Me? What do you mean?"

"There's not a gun on you anywhere."

She giggled and came at me. "Idiot!" she squealed and started to tickle me. I got her left arm in a bonebreaker but she countered with one of the nastiest judo tricks that ever came out of Japan. Fortunately I knew the answer to it and then we were both on the bottom of the shower and she was yelling, "Let me up! You're getting my hair all wet."

"Does it matter?" I asked, not moving. I liked it there.

"I guess not," she answered softly and kissed me. So I let her up and we rubbed each other's bruises and giggled. It was quite the nicest shower I have ever had.

Mary and I slipped into domesticity as if we had been married for twenty years. Oh, not that our honeymoon was humdrum, far from it, nor that there weren't a thousand things we still had to learn about each other-the point was that we already seemed to know the necessary things about each other that made us married. Especially Mary.

I don't remember those days too clearly, yet I remember every second of them. I went around feeling gay and a bit confused. My Uncle Egbert used to achieve much the same effect with a jug of corn liquor, but we did not even take tempus pills, not then. I was happy; I had forgotten what it was like to be happy, had not known that I was not happy. Interested, I used to be-yes. Diverted, entertained, amused-but not happy.

We did not turn on a stereo, we did not read a book-except that Mary read aloud some Oz books that I had. Priceless items, they were, left to me by my great-grandfather; she had never seen any. But that did not take us back into the world; it took us farther out.

The second day we did go down to the village; I wanted to show Mary off. Down there they think I am a writer and I encourage the notion, so I stopped to buy a couple of tubes and a condenser for my typer and a roll of copy tape, though I certainly had no intention of doing any writing, not this trip. I got to talking with the storekeeper about the slugs

and Schedule Bare Back-sticking to my public persona of course. There had been a local false alarm and a native in the next town had been shot by a trigger-happy constable for absent-mindedly showing up in public in a shirt. The storekeeper was indignant. I suggested that it was his own fault; these were war conditions.

He shook his head. "The way I see it we would have had no trouble at all if we had tended to our own business. The Lord never intended men to go out into space. We should junk the space stations and stay home; then we would be all right."

I pointed out that the slugs came here in their own ships; we did not go after them-and got a warning signal from Mary not to talk too much.

The storekeeper placed both hands on the counter and leaned toward me. "We had no trouble before space travel; you'll grant that?"

I conceded the point. "Well?" he said triumphantly.

I shut up. How can you argue?

We did not go into town after that and saw no one and spoke to no one. On the way home (we were on foot) we passed close to the shack of John the Goat, our local hermit. Some say that John used to keep goats; I know he smelled like one. He did what little caretaking I required and we respected each other, that is, we saw each other only when strictly necessary and then as briefly as possible. But, seeing him, I waved.

He waved back. He was dressed as usual, stocking cap, an old army blouse, shorts, and sandals. I thought of warning him that a man had been shot nearby for not complying with the bare-to-the-waist order, but decided against it. John was the perfect anarchist; advice would have made him only more stubborn. Instead I cupped my hands and shouted, "Send up the Pirate!" He waved again and we went on without coming within two hundred feet of him, which was about right unless he was downwind.

"Who's the Pirate, darling?" Mary asked.

"You'll see."

Which she did; as soon as we got back the Pirate came in, for I had his little door keyed to his own meow so that he could let himself in and out-the Pirate being a large and rakish torn cat, half red Persian and half travelling salesman. He came in strutting, told me what he thought of people who stayed away so long, then headbumped my ankle in forgiveness. I reached down and roughed him up, then he inspected Mary.

I was watching Mary. She had dropped to her knees and was making the sounds used by people who understand cat protocol, but the Pirate was looking her over suspiciously. Suddenly he jumped into her arms and commenced to buzz like a faulty fuel meter, while bumping her under the chin.

I sighed loudly. "That's a relief," I announced. "For a moment I didn't think I was going to be allowed to keep you."

Mary looked up and smiled. "You need not have worried; I get along with cats. I'm two-thirds cat myself."

"What's the other third?"

She made a face at me. "You'll find out." She was scratching the Pirate under the chin; he was stretching his neck and accepting it, with an expression of indecent and lascivious pleasure. I noticed that her hair just matched his fur.

"Old John takes care of him while I'm away," I explained, "but the Pirate belongs to me-or vice versa."

"I figured that out," Mary answered, "and now I belong to the Pirate, too; don't I, Pirate?"

The cat did not answer but continued his shameless lallygagging-but it was clear that she was right. Truthfully I was relieved; aelurophobes cannot understand why cats matter to aelurophiles, but if Mary had turned out not to be one of the lodge it would have fretted me.

From then on the cat was with us-or with Mary-almost all the time, except when I shut him out of our bedroom. That I would not stand for, though both Mary and the Pirate thought it small of me. We even took him with us when we went down the canyon for target practice. I suggested to Mary that it was safer to leave him behind but she said, "See to it that you don't shoot him. I won't."

I shut up, somewhat stung. I am a good shot and remain so by unrelenting practice at every opportunity-even on my honeymoon. No, that's not quite straight; I would have skipped practice on that occasion had it not turned out that Mary really liked to shoot. Mary is not just a good trained shot; she is the real thing, an Annie Oakley. She tried to teach me, but it can't be taught, not that sort of shooting.

I asked why she carried more than one gun. "You might need more than one," she told me. "Here-take my gun away from me."

I went through the motions of a standing, face-to-face disarm, bare hands against gun. She avoided it easily and said sharply, "What are you doing? Disarming me, or asking me to dance? Make it good."

So I made it good. I'll never be a match-medal shot but I stood at the top of my class in barroom. If she had not given in to it, I would have broken her wrist.

I had her gun. Then I realized that a second gun was pressing against my belly button. It was a lady's social gun, but perfectly capable of making two dozen widows without recharging. I looked down, saw that the safety was off, and knew that my beautiful bride had only to tense one muscle to burn a hole through me. Not a wide one, but sufficient.

"Where in the deuce did you find that?" I asked-and well I might, for neither one of us had bothered to dress when we came out. The area was very deserted and often it did not seem worthwhile to take the trouble; it was my land.

So I was much surprised as I would have sworn that the only gun Mary had with her was the one she had carried in her sweet little hand.

"It was high up on my neck, under my hair," she said demurely. "See?" I looked. I knew a phone could be hidden there but I had not thought of it for a gun-though of course I don't use a lady-size weapon and I don't wear my hair in long flame-colored curls.

Then I looked again, for she had a third gun shoved against my ribs. "Where did that one come from?" I asked.

She giggled. "Sheer misdirection; it's been in plain sight all the time." She would not tell me anything further and I never did figure it out. She should have clanked when she walked-but she did not. Oh my, no!

I found I could teach her a few things about hand-to-hand, which salved my pride. Bare hands are more useful than guns anyhow; they will save your life oftener. Not that Mary was not good at it herself; she packed sudden death in each hand and eternal sleep in her feet. However, she had the habit, whenever she lost a fall, of going limp and kissing me. Once, instead of kissing her back, I shook her and told her she was not taking it seriously. Instead of cutting out the nonsense, she continued to remain limp, let her

voice go an octave lower, and said, "Don't you realize, my darling, that these are not my weapons?"

I knew that she did not mean that guns were her weapons; she meant something older and more primitive. True, she could fight like a bad-tempered Kodiak bear and I respected her for it, but she was no Amazon. An Amazon doesn't look that way with her head on a pillow. Mary's true strength lay in her other talents.

Which reminds me; from her I learned how it was that I was rescued from the slugs. Mary herself had prowled the city for days, not finding me, but reporting accurately the progress with which the city was being "secured". Had she not been able to spot a possessed man, we might have lost many agents fruitlessly-and I might never have gotten free from my master. As a result of the data she brought in, the Old Man drew back and concentrated on the entrances and exits to the city. And I was rescued, though they weren't waiting for me in particular . . . at least I don't suppose they were.

Or maybe they were. Something Mary said led me to think that the Old Man and she had worked watch on and watch off, heel-and-toe, covering the city's main launching platform, once it was evident that there was a focal point active in the city. But that could not have been correct-the Old Man would not have neglected his job to search for one agent. I must have misunderstood her.

I never got a chance to pursue the subject; Mary did not like digging into the past. I asked her once why the Old Man had relieved her as a presidential guard. She said, "I stopped being useful at it," and would not elaborate. She knew that I eventually would learn the reason: that the slugs had found out about sex, thus rendering her no longer useful as a touchstone for possessed males. But I did not know it then; she found the subject repulsive and refused to talk about it. Mary spent less time borrowing trouble than anyone I ever knew.

So little that I almost forgot, during that holiday from the world, what it was we were up against.

Although she would not talk about herself, she let me talk about myself. As I grew still more relaxed and still happier I tried to explain what had been eating me all my life. I told her about resigning from the service and the knocking around I had done before I swallowed my pride and went to work for the Old Man. "I'm a peaceable guy," I told her, "but what's the matter with me? The Old Man is the only one I've ever been able to subordinate myself to-and I still fight with him. Why, Mary? Is there something wrong with me?"

I had my head in her lap; she picked it up and kissed me. "Heavens, boy, don't you know? There's nothing really wrong with you; it's what has been done to you."

"But I've always been that way-until now."

"I know, ever since you were a child. No mother and an arrogantly brilliant father-you've been slapped around so much that you have no confidence in yourself."

Her answer surprised me so much that I reared up. Me? No confidence in myself? "Huh?" I said. "How can you say that? I'm the cockiest rooster in the yard."

"Yes. Or you used to be. Things will be better now." And there's where it stood for she took advantage of my change in position to stand up and say, "Let's go look at the sunset."

"Sunset?" I answered. "Can't be-we just finished breakfast." But she was right and I was wrong, a common occurrence.

The mix-up about the time of day jerked me back to reality. "Mary, how long have we been up here? What's the date?"

"Does it matter?"

"You're dam right it matters. It's been more than a week. I'm sure. One of these days our phones will start screaming and then it's back to the treadmill."

"In the meantime what difference does it make?"

She was right but I still wanted to know what day it was. I could have found out by switching on a stereo screen, but I would probably have bumped into a newscast-and I did not want that; I was still pretending that Mary and I were away in a different world, a safe world, where titans did not exist. "Mary," I said fretfully, "how many tempus pills have you?"

"None."

"Well-I've got enough for both of us. Let's stretch it out, make it last a long time. Suppose we have just twenty-four more hours; we could fine it down into a month, subjective time."

"No."

"Why not? Let's carpe that old diem before it gets away from us."

She put a hand on my arm and looked up into my eyes. "No, darling, it's not for me. I must live each moment as it comes and not let it be spoiled by worrying about the moment ahead." I suppose I looked stubborn for she went on, "If you want to take them, I won't mind, but please don't ask me to."

"Confound it. I'm not going on a joy ride alone." She did not answer, which is the damnedest way of winning an argument I know of.

Not that we argued. If I tried to start one-which I did, more than once-Mary would give in and somehow it would work out that I was mistaken. I did try several times to find out more about her; it seemed to me that I ought to know something about the woman I was married to. To one question she looked thoughtful and answered presently, "I sometimes wonder whether I ever did have a childhood-or was it something I dreamed last night?"

I asked her point blank what her name was. "Mary," she said tranquilly.

"Mary really is your name, then?" I had long since told her my right name, but we had agreed to go on using "Sam".

"Certainly it's my name, dear. I've been 'Mary' since you first called me that."

"Oh. All right, your name is Mary. You are my beloved Mary. But what was your name before?"

Her eyes held an odd, hurt look, but she answered steadily, "I was once known as 'Allucquere'."

"'Allucquere'," I repeated, savoring it. "Allucquere. What a strange and beautiful name. Allucquere. It has a rolling majesty about it. My darling Allucquere."

"My name is Mary, now." And that was that. Somewhere, somewhen, I was becoming convinced, Mary had been hurt, badly hurt. But it seemed unlikely that I was ever going to know about it. She had been married before, I was fairly certain; perhaps that was it.

Presently I ceased to worry about it. She was what she was, now and forever, and I was content to bask in the warm light of her presence. "Age cannot wither her nor custom stale her infinite variety."

I went on calling her "Mary" since she obviously preferred it and that was how I thought of her anyhow, but the name that she had once had kept running through my mind. Allucquere... Allucquere... I rolled it around my tongue and wondered how it was spelled.

Then suddenly I knew how it was spelled. My pesky packrat memory had turned up the right tab and now was pawing away at the shelves in the back of my mind where I keep the useless junk that I don't think about for years on end and am helpless to get rid of. There bad been a community, a colony that used an artificial language, even to given names-

The Whitmanites, that was it-the anarchist-pacifist cult that got kicked out of Canada, then failed to make a go of it in Little America. There was a book, written by their prophet. The Entropy of Joy-I had not read it but I had skimmed it once; it was full of pseudomathematical formulas for achieving happiness.

Everybody is for "happiness", just as they are against "sin", but the cult's practices kept getting them in hot water. They had a curious and yet very ancient solution to their sexual problems, a solution which appeared to suit them but which produced explosive results when the Whitmanite culture touched any other pattern of behavior. Even Little America had not been far enough away for them; I had heard somewhere that the remnants had emigrated to Venus-in which case they must all be dead by now.

I put it out of my mind. If Mary were a Whitmanite, or had been reared that way, that was her business. I certainly was not going to let the cult's philosophy cause us a crisis now or ever; marriage is not ownership and wives are not property.

If that were all there was to what Mary did not want me to know about her, then I simply would not know it. I had not been looking for virginity wrapped in a sealed package; I had been looking for Mary.

Chapter 22

The next time I mentioned tempos pills, she did not argue but suggested that we hold it down to a minimum dose. It was a fair compromise-and we could always take more.

I prepared it as injections so that it would take hold faster. Ordinarily I watch a clock after I've taken tempus; when the second hand stops I know that I'm loaded. But my shack has no clocks and neither of us was wearing ringwatches. It was just sunrise and we had been awake all night, cuddled upon a big low half-moon couch in front of the fireplace.

We continued to lie there for a long time, feeling good and dreamy, and I was half considering the idea that the drug had not worked. Then I realized that the sun had stopped rising. I watched a bird fluttering past the view window. If I stared at him long enough, I could see his wings move.

I looked back from it to my wife, admired the long sweep of her limbs and the sudden, rising curves. The Pirate was curled up on her stomach, a cubical cat, with his paws tucked in as a muff. Both of them seemed asleep. "How about some breakfast?" I said, "I'm starved."

"You fix it," she answered. "If I move, I'll disturb Pirate."

"You promised to love, honor, and fix me breakfast," I replied and tickled the soles of her feet. She gasped and drew up her legs; the cat squawked and landed on the floor.

"Oh dear!" she said, sitting up. "You made me move too fast and now I've offended him."

"Never mind the cat, woman; you're married to me." But I knew that I had made a mistake. In the presence of others, people not under the drug, one should move with great care. I simply hadn't thought about the cat; no doubt he thought we were behaving like drunken jumping jacks. I intentionally slowed down and tried to woo him.

No use-he was streaking toward his door. I could have stopped him, for to me his movement was a molasses crawl, but had I done so I would simply have frightened him more. I let him go and went to the kitchen.

Do you know, Mary was right; tempus fugit drug is no good for honeymoons. The ecstatic happiness that I had felt before was masked by the euphoria of the drug, though I did not feel the loss at the time because the drug's euphoria is compelling. But the loss was real; I had substituted for the true magic a chemical fake.

And there are some precious things which cannot or should not be hurried. Mary was right, as usual. Nevertheless it was a good day-or month, however you care to look at it. But I wished that I had stuck to the real thing.

Late that evening we came out of it. I felt the slight irritability which marks the loosening hold of the drug, found my ringwatch and timed my reflexes. When they were back to normal I timed Mary's, whereupon she informed me that she had been out of it for twenty minutes or so-pretty accurate matching of dosage to have been based on body weights alone.

"Do you want to go under again?" she asked me.

I pulled her to me and kissed her. "No; frankly, I'm glad to be back."

"I'm so glad."

I had the usual ravenous appetite that one has afterward no matter how many times one eats while under; I mentioned it. "In a minute," she said. "I want to call Pirate. He has not been in all day."

I had not missed him during the day-or "month"-just past; the euphoria is like that. "Don't worry about it," I told her. "He often stays out all day."

"He has not before."

"He has with me," I answered.

"I think I offended him-I know I did."

"Then he is probably down at Old John's. That is his usual way of punishing me when he does not like the service. He'll be all right."

"But it's late at night-I'm afraid a coyote might get him."

"Don't be silly; there are no coyotes this far east."

"A fox, then-or something. Do you mind, darling? I'll just step out and call him." She headed for the door.

"Put on something, then," I ordered. "It will be nippy out there."

She hesitated, then went back to the bedroom and got a negligee I had bought for her the day we had gone down to the village. She went out; I put more wood on the fire and went into the kitchen.

She must have left the door dilated for, while I was trying to make up my mind between convenience of a "Soup-to-Nuts" and the pleasure of planning a meal from separate units, I heard her saying, "Bad, bad cat! You worried mama," in that cooing voice suitable for babies and felines.

I called out, "Fetch him in and close the door-and mind the penguins!" She did not answer and I did not hear the door relax, so I went back into the living room.

She was just coming in and did not have the cat with her. I started to speak and then caught sight of her eyes. They were staring, filled with unspeakable horror. I said, "Mary!" and started toward her.

She seemed to see me and turned back toward the door; her movements were jerky, spasmodic. As she turned I saw her shoulders.

Under the negligee was a hump.

I don't know how long I stood there. Probably a split second but it is burned into me as endless. I jumped toward her and grabbed her by the arms. She looked at me and her eyes were no longer wells of horror but merely dead.

She gave me the knee.

I squeezed and managed to avoid the worst of it. Look-I know you don't tackle a dangerous opponent by grabbing his upper arms, but this was my wife. I couldn't come at Mary with a feint-shift-and-kill.

But the slug had no compunctions about me. Mary-or it-was giving me everything she had and I had all I could do to keep from killing her. I had to keep her from killing me-and I had to kill the slug-and I had to keep the slug from getting at me or I would not be able to save her.

I let go with one hand and jabbed at her chin. The blow should have knocked her out but it did not even slow her down. I grabbed again, with both arms and legs, trying to encase her in a bear hug to immobilize her without injuring her. We went down together, Mary on top. I shoved the top of my head into her face to stop her biting me.

I held her so, curbing her strong body by sheer bulk of muscle. Then I tried to paralyze her with nerve pressure, but she knew what I was up to, knew the key spots as well as I did-and I was lucky that I was not myself paralyzed.

There was one thing left that I could do: clutch the slug itself-but I knew the shattering effect that had on the host. It might not kill her; again it might. It was sure to hurt her horribly. I wanted to make her unconscious, then remove the slug gently before I killed it . . . drive it off with heat or force it to turn loose with mild shocks.

Drive it off with heat-

But I was given no time to develop the idea; she got her teeth in my ear. I shifted my right arm and grabbed at the slug. Nothing happened. Instead of sinking my fingers into a slimy mess I found that this slug had a horny, leathery covering; it was as if I had clutched a football. Mary jerked when I touched it and took away part of my ear, but there was no bone-crushing spasm; the slug was still alive and in control of her.

I tried to get my fingers under it, to pry it loose; it clung like a suction cup. My fingers would not go under.

In the meantime I was suffering damages in other places. I rolled over and got to my knees, still hugging her. I had to let her legs free and that was bad, but I bent her across a knee and then struggled to my feet. I dragged and carried her to the fireplace.

She knew what I was doing and almost got away from me; it was like trying to wrestle a mountain lion. But I got her there, grabbed her by her mop of hair and slowly forced her shoulders over the fire.

I meant-I swear that I meant only to singe it, force it to drop off to escape that heat. But she struggled so hard that I slipped, banging my own head against the arch of the opening and dropping her shoulders against the coals.

She screamed and bounded out of the fire, carrying me with her. I struggled to my feet, still dazed by the wallop I had taken in the head, and saw her collapsed on the floor. Her hair, her beautiful hair, was burning.

So was her negligee. I slapped at them both with my hands. The slug was no longer on her. Still crushing the flames with my hands I glanced around and saw it lying on the floor in front of the fireplace-and the Pirate was sniffing at it.

"Get away from there!" I yelled. "Pirate! Stop that!" The cat looked up inquiringly, as if this were some new and interesting game. I went on doing what I had to do, making absolutely certain that the fire was out, both hair and clothing. When I was sure, I left her; there was not even time to make certain that she was still alive. There was something more urgent to do.

What I wanted was the fireplace shovel; I did not dare risk touching the thing with my hands. I turned to get the shovel.

But the slug was no longer on the floor; it had gotten Pirate. The cat was standing rigid, feet wide apart, and the slug was settling into place.

Perhaps it would have been better had I been a few seconds later; perhaps the slug, mounted on the cat, would have escaped outdoors. I would not have pursued it into the dark. I don't think I would have. But I dived at Pirate and got him by his hind legs just as he made his first controlled movement.

Handling a frenzied, full-grown cat with bare hands is reckless at best; controlling one which is already controlled by a titan is impossible. Hands and arms being slashed by claws and teeth at every step, I hurried again to the fireplace.

This time I made sure. Despite Pirate's wails and struggles I forced the slug against the coals and held it there, cat fur and my hands alike burning, until the slug dropped off directly into the flames. Then I took Pirate out and laid him on the floor. He was no longer struggling. I did for him what I had done for Mary, made sure that he was no longer burning anywhere and went back to Mary.

She was still unconscious. I squatted down beside her and sobbed.

An hour later I had done what I could for Mary. Her hair was almost gone from the left side of her head and there were burns on her shoulders and neck. But her pulse was strong, her respiration steady though fast and light, and I did not judge that she would lose much body fluid. I dressed her burns-I keep a rather full stock out there in the country-and gave her an injection to make her sleep. Then I had time for Pirate.

He was still on the floor where I had left him and he did not look good. He had gotten it much worse than Mary and probably flame in his lungs as well. I thought he was dead, but he lifted his head when I touched him. "I'm sorry, old fellow," I whispered. I think I heard him mew.

I did for him what I had done for Mary, except that I was afraid to give him a soporific. After that I went into the bathroom and looked myself over.

The ear had stopped bleeding and I decided to ignore it, for the time being. Someday, when I had time, it would need to be rebuilt. My hands were what bothered me. I stuck

them under hot water and yelped, then dried them in the air blast and that hurt, too. I could not figure out how I could dress them, and, besides, I needed to use them.

Finally I dumped about an ounce of the jelly for burns into each of a pair of plastic gloves and put them on. The stuff included a local anesthetic; I could get by. Then I went to the stereophone and called the village medical man. I explained to him carefully and correctly what had happened and what I had done about it and asked him to come at once.

"At night?" he said. "You must be joking."

I said that I decidedly was not joking.

He answered, "Don't ask the impossible, man. Yours makes the fourth alarm in this county; nobody goes out at night. You've done everything that can be done tonight; I'll stop in and see your wife first thing in the morning."

I told him to go straight to the devil first thing in the morning and switched off.

Pirate died a little after midnight. I buried him at once so that Mary would not see him. Digging hurt my hands but he did not take a very big hole. I said goodbye to him and came back in. Mary was resting quietly; I brought a chair to the bed and watched over her. Probably I dozed from time to time; I can't be sure.

Chapter 23

About dawn Mary began to struggle and moan. I stepped to the bed and put a hand on her. "There, baby, there-It's all right. Sam's here."

Her eyes opened and for a moment held the same horror they had held when she was first possessed. Then she saw me and relaxed. "Sam! Oh, darling, I've had the most terrible dream."

"It's all right," I repeated.

"Why are you wearing gloves?" She became aware of her own dressings; she looked dismayed and said, "It wasn't a dream!"

"No, dearest, it wasn't a dream. But it's all right; I killed it."

"You killed it? You're sure it's dead?"

"Quite sure." The house still reeked with the stench of its dying.

"Oh. Come here, Sam. Hold me tight."

"I'll hurt your shoulders."

"Hold me!" So I did, while trying to be careful of her burns, although she seemed indifferent to them. Presently her trembling slowed down and stopped almost completely. "Forgive me, darling-I'm being weak and womanish."

"You should have seen the shape I was in when they got me back."

"I did see. Now tell me what happened; I must know. The last I remember you were trying to force me into the fireplace."

"Look. Mary, I couldn't help it; I had to-I couldn't get it off!"

She shook my shoulders and now it was she comforting me. "I know, darling, I know-and thank you for doing it! Thank you from the bottom of my heart. Again I owe you everything."

We both cried a bit and presently I blew my nose and went on, "You did not answer when I called you, so I went into the living room and there you were."

"I remember-oh darling, I tried so hard!"

I stared at her. "I know you did-you tried to leave. But how did you? Once a slug gets you, that's it. There's no way to fight it."

"Well, I lost-but I tried." There was no answer to the mystery. Somehow, Mary had forced her will against that of a parasite-and that can't be done. I know. True, she had succumbed, but I knew then that I was married to a human who was tougher and stronger than I was, despite her lovely curves and her complete femininity.

I had a sneaking hunch that had Mary not been able to resist the slug by some amount, however slight, I would have lost the struggle, handicapped as I was by what I could not do.

"I should have used a light, Sam," she went on, "but it never occurred to me to be afraid here." I nodded; this was the safe place, like crawling into bed or into sheltering arms. "Pirate came to me at once. I didn't see the thing until I had reached down and touched him. Then it was too late." She sat up, supporting herself on one arm. "Where is he, Sam? Is he all right? Call him in."

So I had to tell her about Pirate. She listened without expression, nodded and never referred to him again. I changed the subject by saying, "Now that you are awake I had better fix you some breakfast."

"Don't go!" I stopped. "Don't go out of my sight at all," she went on, "Not for any reason. I'll get up in a moment and get breakfast."

"The hell you will. You'll stay right in that bed, like a good little girl."

"Come here and take off those gloves. I want to see your hands." I did not take them off-could not bear to think about it; the anesthesia had worn off. She nodded and said grimly, "Just as I thought. You were burned worse than I was."

So she got breakfast. Furthermore she ate-I wanted nothing but a pot of coffee. I did insist that she drink a lot, too; large area burns are no joke. Presently she pushed aside her plate, looked at me and said, "Darling, I'm not sorry it happened. Now I know. Now we've both been there." I nodded humbly, knowing what she meant. Sharing happiness is not enough. She stood up and said, "Now we must go."

"Yes," I agreed, "now we must go. I want to get you to a doctor as soon as possible."

"I did not mean that."

"I know you didn't." There was no need to discuss it further; we both knew that the music had stopped and that now was time to go back to work. The heap we had arrived in was still sitting on my landing flat, piling up rental charges. It took about three minutes to burn the dishes, switch off everything but the permanent circuits, and get ready. I could not find my shoes but Mary remembered where I had left them.

Mary drove, because of my hands. Once in the air she turned to me and said, "Let's go straight to the Section offices. We'll get treatment there and find out what has been going on-or are your hands hurting too badly?"

"Suits," I agreed. My hands were hurting but they would not be any worse for another hour of waiting. I wanted to learn the situation as soon as possible-and I wanted to get back to work. I asked Mary to switch on the squawk screen; I was as anxious to catch a newscast now as I had been anxious to avoid them before. But the car's communication equipment was as junky as the rest of it; we could not even pick up audio. Fortunately the remote-control circuits were still okay, or Mary would have had to buck it through traffic by hand.

A thought had been fretting me for some time; I mentioned it to Mary. "A slug would not mount a cat just for the hell of it, would it?"

"I suppose not."

"But why? It doesn't make sense. But it has to make sense; everything they do makes sense, grisly sense, from their viewpoint."

"But it did make sense. They caught a human that way."

"Yes, I know. But how could they plan it? Surely there aren't enough of them that they can afford to place themselves on cats on the off chance that the cat might catch a human. Or are there enough?" I remembered the speed with which a slug on an ape's back had turned itself into two, I remembered Kansas City, saturated, and shivered.

"Why ask me, darling? I don't have an analytical brain." Which was true, in a way; there is nothing wrong with Mary's brain but she jumps logic and arrives at her answers by instinct. Me, I have to worry it out by logic.

"Drop the modest little girl act and try this on for size: the first question is, 'Where did the slug come from?' It didn't walk; it had to get to the Pirate on the back of another host. What host? I'd say it was Old John-John the Goat. I doubt if Pirate would have let any other human get close to him."

"Old John?" Mary closed her eyes, then opened them. "I can't get any feeling about it. I was never close to him."

"It does not matter; by elimination I think it must be true. Old John wore a coat when everyone else was complying with the Bare Back order . . . getting away with it because he shuns people. Ergo, he was hag-ridden before Schedule Bare Back. But that does not get me any further. Why would a slug single out a hermit way up in the mountains?"

"To capture you."

"Me?"

"To recapture you."

It made some sense. Possibly any host that ever escaped them was a marked man; in that case the dozen-odd Congressmen and any others we had rescued-including Mary-were in special danger. I'd mark that down to report for analysis. No, not Mary-the only slug that knew she had been possessed was dead.

On the other hand they might want me in particular. What was special about me? I was a secret agent. More important, the slug that had ridden me must have known what I knew about the Old Man and known that I had access to him. That would be reason enough to try to get me back. I held an emotional certainty that the Old Man was their principal antagonist; the slug must have known that I thought so; he had full use of my mind.

That slug had even met the Old Man, talked with him. Wait a minute, that slug was dead. And my theory came tumbling down.

And built up again at once. "Mary," I asked, "have you used your apartment since the morning you and I had breakfast there?"

"No. Why?"

"Don't. Don't go back there for any purpose. I recall thinking, while I was with them, that I would have to booby-trap it."

"Well, you didn't, did you? Or did you?"

"No, I did not. But it may have been booby-trapped since then. There may be the equivalent of Old John waiting, spider fashion, for you-or me-to return there." I explained

to her McIlvaine's theory about the slugs, the "group memory" idea. "I thought at the time he was spinning the dream stuff scientists are so fond of. But now I don't know; it's the only hypothesis I can think of that covers everything . . . unless we assume that the titans are so stupid that they would as soon try to catch fish in a bathtub as in a brook. Which they aren't."

"Just a moment, dear-by Dr. McIlvaine's theory each slug is really every other slug; is that it? In other words that thing that caught me last night was just as much the one that rode you when you were with them as was the one that actually did ride you-Oh, dear, I'm getting confused. I mean-"

"That's the general idea. Apart, they are individuals; in direct conference they merge their memories and Tweedledum becomes exactly like Tweedledee. Then, if that is true, this one last night remembers everything it learned from me provided it had direct conference with the slug that rode me, or any other slug that had had, or a slug that had been linked through any number of slugs by direct conference to the slug that had ridden me, after the time it did-which you can bet it did, from what I know of their habits. It would have-the first one, I mean . . . wait a minute; this is getting involved. Take three slugs; Joe, Moe, and uh, Herbert. Herbert is the one last night; Moe is the one which-"

"Why give them names if they are not individuals?" Mary wanted to know.

"Just to keep them-No reason; let it lie that if McIlvaine is right there are hundreds of thousands, maybe millions, of slugs who know exactly who you and I are, by name and by sight and everything, know where your apartment is, where my apartment is, and where our cabin is. They've got us on a list."

"But-" She frowned. "That's a horrid thought, Sam. How would they know when to find us at the cabin? You didn't tell anybody we were going and I did not even know. Would they simply stake it out and wait? Yes, I suppose they would."

"They must have. We don't know that waiting matters to a slug; time may mean something entirely different to them."

"Like Venerians," she suggested. I nodded; a Venerian is likely as not to "marry" his own great-great-granddaughter-and be younger than his descendants. It depends on how they estivate, of course.

"In any case," I went on, "I've got to report this, including our guesses as to what is behind it, for the boys in the analytical group to play with."

I was about to go on to say that, if we were right, the Old Man would have to be especially careful, as it was he and not Mary and myself that they were after. But my phone sounded for the first time since my leave had started. I answered and the Old Man's voice cut in ahead of the talker's: "Report in person."

"We're on our way," I acknowledged. "About thirty minutes."

"Make it sooner. You use Kay Five; tell Mary to come in by Ell One. Move." He switched off before I could ask him how he had known that Mary was with me.

"Did you get it?" I asked Mary.

"Yes, I was in the circuit."

"Sounds as if the party was about to start."

It was not until we had landed that I began to realize how drastically the situation had changed. We were complying with Schedule Bare Back; we had not heard of Schedule

Sun Tan. Two cops stopped us as we got out. "Stay where you are!" one of them ordered. "Don't make any sudden moves."

You would not have known they were cops, except for the manner and the drawn guns. They were dressed in gun belts, shoes, and skimpy breech clouts-little more than straps. A second glance showed their shields clipped to their belts. "Now," the same one went on, "Off with those pants, buddy."

I did not move quickly enough to suit him. He barked, "Make it snappy! There have been two shot trying to escape already today; you may be the third." "Do it, Sam," Mary said quietly. I did it. My shorts were a one-piece garment, with the underwear part built in; without them, I stood dressed in my shoes and a pair of gloves, feeling like a fool-but I had managed to keep both my phone and my gun covered up as I took off my shorts.

The cop made me turn around. His mate said, "He's clean. Now the other one." I started to put my shorts back on and the first cop stopped me.

"Hey! You looking for trouble? Leave 'em off."

I said reasonably, "You've searched me. I don't want to get picked up for indecent exposure."

He looked surprised, then guffawed and turned to his mate. "You hear that. Ski? He's afraid he'll be arrested for indecent exposure."

The second one said patiently, "Listen, yokel, you got to cooperate, see? You know the rules. You can wear a fur coat for all of me-but you won't get picked up for indecent exposure; you'll get picked up DOA. The Vigilantes are a lot quicker to shoot than we are." He turned to Mary. "Now, lady, if you please."

Without argument Mary started to remove her shorts. The second cop said kindly, "That isn't necessary lady, not the way those things are built. Just turn around slowly."

"Thank you," Mary said and complied. The policeman's point was well taken; Mary's briefies appeared to have been sprayed on, and her halter also quite evidently contained nothing but Mary.

"How about those bandages?" the first one commented. "Her clothes sure can't cover anything." I thought, brother, how wrong you are; I'll bet she's packing at least two guns this minute, besides the one in her purse-and I'll bet one of them is ready to heat up quicker than yours! But what I said was,

"She's been badly burned. Can't you see that?" He looked doubtfully at the sloppy job I had done on the dressings; I had worked on the principle that, if a little is good, more is better, and the dressing across her shoulders where she had been burned the worst undoubtedly could have concealed a slug, if that had been the purpose. "Mmmm . . ." he said, "If she was burned."

"Of course she was burned!" I felt my judgment slipping away; I was the perfect heavy husband, unreasonable where my wife was concerned. I knew it-and I liked it that way. "Damn it, look at her hair! Would she ruin a head of hair like that just to fool you?"

The first cop said darkly, "One of them would."

The more patient one said, "Carl is right. I'm sorry, lady; we'll have to disturb those bandages."

I said excitedly, "You can't do that! We're on our way to a doctor. You'll just-"

Mary said, "Help me, Sam. I can't take them off myself."

I shut up and started to peel up one corner of the big dressing, my hands trembling with rage. Presently the older, more kindly one whistled and said, "I'm satisfied. How about you, Carl?"

"Me, too. Ski. Gripes, girlie, it looks like somebody tried to barbecue you. What happened?"

"Tell them, Sam."

So I did. The older cop finally commented, "I'd say you got off easy-no offense, madam. So it's cats, now, eh? Dogs I knew about. Horses, yes. But cats-you wouldn't think the ordinary cats could carry one." His face clouded. "We got a cat and now we'll have to get rid of it. My kids won't like that."

"I'm sorry," Mary told him and sounded as if she meant it.

"It's a bad time for everybody. Okay, folks, you can go-"

"Wait a minute," the first one said. "Ski, if she goes through the streets with that thing on her back somebody is likely to burn her."

The older one scratched his chin. "That's true," he said to Mary. "I'd say you couldn't stand to have that dressing off. We'll just have to dig up a prowl car for you."

Which they did-one was just landing and they hailed it. I had to pay the charges on the rented wreck, then I went along, as far as Mary's entrance. It was in a hotel, through a private elevator; I got in with her to avoid explanations, then went back up after she had gotten out at a level lower than the obvious controls of the car provided for. I was tempted to go on in with her, but the Old Man had ordered me to come in by Kay Five, so Kay Five it was.

I was tempted, too, to put my shorts back on. In the prowl car and during a quick march through a side door of the hotel, with police around us to keep Mary from being shot, I had not minded so much-but it took nerve to step out of the elevator and face the world without pants.

I need not have worried. The short distance I had to go was enough to show me that a fundamental custom had gone with last year's frost. Most men were wearing straps-codpieces, really-as the cops had been, but I was not the only man in New Brooklyn stark naked to his shoes. One in particular I remember; he was leaning against a street roof stanchion and searching with cold eyes every passer-by. He was wearing nothing but slippers and a brassard lettered with "VIG"-and he was carrying an Owens mob gun under his arm.

I saw three more like him before I reached Kay Five; I was glad that I was carrying my shorts.

Some women were naked, some were not-but those who were not might as well have been-string brassieres, translucent plastic trunks, nothing that could possibly hide a slug.

Most of the women, I decided, would have looked better in clothes, preferably togas. If this was what the preachers had been worrying about all these years, then they had been barking up the wrong tree; it was nothing to arouse the happy old beast in men. The total effect was depressing. That was my first impression-but before I got to my destination even that had worn off. Ugly bodies weren't any more noticeable than ugly taxicabs; the eye discounted them automatically. And so it appeared to be with everybody else, too; those on the streets seemed to have acquired utter indifference. Maybe Schedule Bare Back got them ready for it.

One thing I did not notice consciously until much later: after the first block I was unaware of my own nakedness. I noticed other people long after I had forgotten my own bare skin. Somehow, some way, the American community had been all wrong about the modesty taboo and had been wrong for centuries.

When tackled firmly, it was as empty as the ghost that turns out to be a flapping window drape. It did not mean a thing, either pro or con, moral or immoral. Skin was skin and what of it?

I was let in to see the Old Man at once. He looked up and growled, "You're late."

I answered, "Where's Mary?"

"In the infirmary, getting treated and dictating her report. Let's see your hands."

"I'll show them to the doctor, thanks," I replied, making no move to take off the gloves. "What's up?"

"If you would ever bother to listen to a newscast," he grumbled, "you would know what was up."

Chapter 24

I'm glad I had not looked at a newscast; our honeymoon would never have gotten to first base. While Mary and I had each been telling the other how wonderful the other one was the war had almost been lost -and I was not sure about that "almost". My suspicion that the slugs could, if necessary, hide themselves on any part of the body and still control hosts had proved to be right-but I had guessed that from my own experience on the streets. It had been proved by experiments at the National Zoo before Mary and I had holed up on the mountain, although I had not seen the report. I suppose the Old Man knew it; certainly the President knew it and the other top VIPs.

So Schedule Sun Tan replaced Schedule Bare Back and everybody skinned down to the buff.

Like hell they did! The matter was still "Top Secret" and the subject of cabinet debates at the time of the Scranton Riot. Don't ask me why it was top secret, or even restricted; our government has gotten the habit of classifying anything as secret which the all-wise statesmen and bureaucrats decide we are not big enough boys and girls to know, a Mother-Knows-Best-Dear policy. I've read that there used to be a time when a taxpayer could demand the facts on anything and get them. I don't know; it sounds Utopian.

The Scranton Riot should have convinced anybody that the slugs were loose in Zone Green despite Schedule Bare Back, but even that did not bring on Schedule Sun Tan. The fake air-raid alarm on the east coast took place, as I figure it, the third day of our honeymoon; there had not been any special excitement in the village when we visited it the day before that and certainly no vigilante activity. After the false air-raid alarm it took a while to figure out what had happened, even though it was obvious that lighting could not fail by accident in so many different shelters.

It gives me the leaping horrors to think about it even now-all those people crouching in the darkness, waiting for the all-clear, while zombies moved among them, slapping slugs on them. Apparently in some air raid bunkers the recruitment was one hundred percent. They did not have a chance.

So there were more riots the next day and we were well into the Terror, though we did not know it. Technically, the start of vigilantism came the first time a desperate citizen

pulled a gun on a cop-Maurice T. Kaufman of Albany and the cop was Sergeant Malcolm MacDonald. Kaufman was dead a half second later and MacDonald followed him in a few minutes, torn to pieces by the mob, along with his titan master. But the Vigilantes did not really get going until the air-raid wardens put organization into the movement.

The wardens, being mostly aboveground at the time the coup in the bunkers took place, largely escaped- but they felt responsible. Not that all Vigilantes were wardens, nor all wardens Vigilantes-but a stark naked, armed man on the street was as likely to be wearing a warden's armband as the "VIG" brassard. Either way, you could count on him shooting at any unexplained excrescence on a human body-shoot and investigate afterward.

While my hands were being treated and dressed I was brought up to date concerning the period (it turned out to be two weeks) that Mary and I had spent at the cabin. By the Old Man's orders the doctor gave me a short shot of tempus before he worked on me and I spent the time-subjective, about three days; objective, less than an hour-studying stereo tapes through an over-speed scanner. This gadget has never been released to the public, though I have heard that it is bootlegged at some of the colleges around examination week. You adjust the speed to match your subjective time rate, or a little faster, and use an audio frequency step-down to let you hear what is being said. It is hard on the eyes and usually results in a splitting headache-but it is a big help in my profession.

It was hard to believe that so much could have happened in so short a time. Take dogs. A Vigilante would kill a dog on sight, even though it was not wearing a slug-because it was even money that it would be wearing one before next sunrise, that it would attack a man and that the titan would change riders in the dark.

A hell of a world where you could not trust dogs!

Apparently cats were hardly ever used because of their smaller size. Poor old Pirate was an exceptional case.

In Zone Green dogs were almost never seen now, at least by day. They filtered out of Zone Red at night, traveled in the dark and hid out in the daytime. They kept showing up, even on the coasts. It made one think of the werewolf legends. I made a mental note to apologize to the village doctor who had refused to come to see Mary at night-after I pasted him one.

I scanned dozens of tapes which had been monitored from Zone Red; they fell into three time groups: the masquerade period, when the slugs had been continuing the "normal" broadcasts; a short period of counter-propaganda during which the slugs had tried to convince citizens in Zone Green that the government had gone crazy-it had not worked as we had not relayed their casts, just as they had not relayed the President's proclamation-and, finally, the current period in which pretense had been dropped, the masquerade abandoned.

According to Dr. McIlvaine the titans have no true culture of their own; they are parasitic even in that and merely adapt the culture they find to their own needs. Maybe he assumes too much, but that is what they did in Zone Red. The slugs would have to maintain the basic economic activity of their victims since the slugs themselves would starve if the hosts starved. To be sure, they continued that economy with variations that we would not use-that business of processing damaged and excess people in fertilizer plants, for example-but in general farmers stayed farmers, mechanics went on being

mechanics, and bankers were still bankers. That last seems silly, but the experts claim that any "division-of-labor" economy requires an accounting system, a "money" system.

I know myself that they use money behind the Curtain, so he may be right-but I never heard of "bankers" or "money" among ants or termites. However, there may be lots of things I've never heard of.

It is not so obvious why they continued human recreations. Is the desire to be amused a universal need? Or did they learn it from us? The "experts" on each side of the argument are equally emphatic-and I don't know. What they picked from human ideas of fun to keep and "improve on" does not speak well for the human race although some of their variations may have merit-that stunt that they pulled in Mexico, for example, of giving the bull an even break with the matador.

But most of it just makes one sick at the stomach and I won't elaborate. I am one of the few who saw even transcriptions on such things, except for foolhardy folk who still held out in Zone Amber; I saw them professionally. The government monitored all stereocasts from Zone Red but the transcriptions were suppressed under the old Comstock "Indecency" Law -another example of "Mother-Knows-Best", though perhaps Mother did know best in this case. I hope that Mary, in her briefing, did not have to look at such things, but Mary would never say so if she had.

Or perhaps "Mother" did not "Know Best"; if anything more could have added to the determination of men still free to destroy this foul thing it would have been the "entertainment" stereocast from stations inside Zone Red. I recall a boxing match cast from the Will Rogers Memorial Auditorium at Fort Worth-or perhaps you would call it a wrestling match. In any case there was a ring and a referee and two contestants pitted against each other. There were even fouls, i.e., doing anything which might damage the opponent's manager-I mean "master", the opponent's slug.

Nothing else was a foul-nothing! It was a man versus a woman, both of them big and husky. She gouged out one of his eyes in the first clinch, but he broke her left wrist which kept the match on even enough terms to continue. It ended only when one of them had been so weakened by loss of blood that the puppet master could no longer make the slave dance. The woman lost-and died, I am sure, for her left breast was almost torn away and she had bled so much that only immediate surgery and massive transfusions could have saved her. Which she did not get; the slugs were transferred to new hosts at the end of the match and the inert contenders were dragged out.

But the male slave had remained active a little longer than the female, slashed and damaged though he was, and he finished the match with a final act of triumph over her which I soon learned was customary. It seemed to be a signal to turn it into an "audience participation show", an orgy which would make a witches' Sabbat seem like a sewing circle.

Oh, the slugs had discovered sex, all right!

There was one more thing which I saw in this and other tapes, a thing so outrageous, so damnably disgusting that I hesitate even to mention it, though I feel I must-there were men and women here and there among the slaves, humans (if you could call them that) without slugs . . . trusties . . . renegades-

I hate slugs but I would turn from killing a slug to kill one such. Our ancestors believed that there were men who would willingly sign compacts with the Devil; our ancestors were partly right: there are men who would, given the chance.

Some people refuse to believe that any human being turned renegade; those who disbelieve did not see the suppressed transcriptions. There was no chance for mistake; as everyone knows, once the masquerade was no longer useful to the slugs, the wearing of clothes was dropped in Zone Red even more thoroughly than it was under Schedule Sun Tan in Zone Green; one could see. In the Fort Worth horror which I have faintly sketched above the referee was a renegade; he was much in the camera and I was able to be absolutely sure. I knew him by sight, a well-known amateur sportsman, a "gentleman" referee. I shan't mention his name, not to protect him but to protect myself; later on I killed him.

We were losing ground everywhere; that I knew before they finished treating my hands. Ours was a holding action only; our methods were effective only in stopping the spread of the infection and not fully effective in that. To fight them directly we would have to fight our own people, bomb our own cities, with no certainty of killing the humps. What we needed was a selective weapon, one that would kill slugs but not men, or something that would disable humans or render unconscious without killing and thereby permit us to rescue our compatriots. No such weapon was available, though the scientists were all busy on the problem, from the comedy team of McIlvaine & Vargas down to the lowliest bottle-washer in the Bureau of Standards. A "sleep" gas would have been perfect, but it is lucky that no such gas was known before the invasion, or the slugs could have used it against us; it would have cut both ways. It must be remembered that the slugs then had as much, or more, of the military potential of the United States at their disposal as had the free men.

Stalemate-with time on the side of the enemy. There were the fools who wanted to H-bomb the cities of the Mississippi Valley right out of existence, like curing a lip cancer by cutting off the head, but they were offset by their twins who had not seen slugs, did not believe in slugs, and felt that the whole matter was a violation of states' rights and Schedule Sun Tan a tyrannical Washington plot. These second sort were fewer each day, not because they changed their minds but because the Vigilantes were awfully eager.

Then there was the tertium quid, the flexible mind, the "reasonable" man who hardly had a mind to change-he favored negotiation; he thought we could "do business" with the titans. One such committee, a delegation from the caucus of the opposition party in Congress, actually attempted negotiation. Bypassing the State Department they got in touch via a linkage rigged across Zone Amber with the Governor of Missouri, and were assured of safe conduct and diplomatic immunity-"guarantees" from a titan, but they accepted them; they went to St. Louis-and never came back. They sent messages back; I saw one such, a good rousing speech adding up to, "Come on in; the water is fine!"

Do steers sign treaties with meat packers?

North America was still the only known center of infection. The only action by the United Nations, other than placing the space stations at our disposal, was to remove temporarily to Geneva. No aggression by any other nation was involved and it was even argued that the slugs-if they existed-were technically an epidemic disease rather than a potential source of war and therefore of no interest to the Security Council. It was voted, with twenty-three nations abstaining, to define it as "civil disorder" and to urge each

member nation to give such aid as it saw fit to the legitimate governments of the United States, Mexico, and Canada.

What each might have "seen fit" was academic; we did not know what to ask for.

It remained a creeping war, a silent war, with battles lost before we knew they were joined. After the debacle of Schedule Counter Blast, conventional weapons were hardly used, except in police action in Zone Amber-which was now a double no-man's-land on each side of Zone Red, from the trackless Canadian forests to the Mexican deserts. It was almost deserted in the daytime of any life larger than birds and mice, save for our own patrols. At night our scouts drew back and the dogs came through-and other things, perhaps.

At the time Mary and I arrived back only one atom bomb had been used in the entire war and that against a flying saucer that landed near San Francisco just south of Burlingame. Its destruction was according to doctrine, but the doctrine was now under criticism; the saucer should have been captured for study, so it was argued, if we were to learn enough about our foe to fight successfully. I found my sympathies with those who wanted to shoot first and study later.

By the time the dose of tempus was beginning to wear off I had a picture of the United States in a shape that I had not imagined even when I was in saturated Kansas City-a country undergoing a Terror. Friend might shoot friend, or wife denounce husband. Rumor of a titan could drum up a mob on any street, with Old Judge Lynch baying in their van. To rap on a door at night was to invite a blast through the door rather than a friendly response. Honest folk stayed home; at night the dogs were out-and others.

The fact that most of the rumored discoveries of slugs were baseless made the rumors no less dangerous. It was not exhibitionism which caused many people to prefer outright nudity to the tight and scanty clothing permitted under Schedule Sun Tan; even the skimpiest clothing invited a doubtful second look, a suspicion that might be decided too abruptly. The head-and-spine armor was never worn now; the slugs had faked it and used it almost at once. And there had been the case of a girl in Seattle; she had been dressed in sandals and a big purse, nothing else-but a Vigilante who apparently had developed a nose for the enemy followed her and noticed that she never, under any circumstances, moved the purse from her right hand, even when she opened it to make change.

She lived, for he burned her arm off at the wrist, and I suppose that she had a new one grafted on; the supply of such spare parts was almost a glut. The slug was alive, too, when the Vigilante opened the purse- but not for long.

When I came across this in the briefing I realized with a shudder that I had not been too safe even in carrying my shorts through the streets; any slug-sized burden was open to suspicion.

The drug had worn off by the time I scanned this incident and I was back in contact with my surroundings. I mentioned the matter to the nurse. "Mustn't worry," she told me. "It does no good. Now flex the fingers of your right hand, please."

I flexed them, while she helped the doctor spray on surrogate skin. I noticed that she was taking no chances; she wore no bra at all and her so-to-speak shorts were actually more of a G-string. The doctor was dressed about the same. "Wear gloves for rough work," the doctor cautioned, "and come back next week."

I thanked them and went to the operations office. I looked for Mary first, but found that she was busy in Cosmetics.

Chapter 25

Hands all right?" the Old Man asked when they let me in.

"They'll do. False skin for a week. They do a graft job on my ear tomorrow."

He looked vexed. "I forgot your ear. There's no time for a graft to heal; Cosmetics will have to fake one for you."

"The ear doesn't matter," I told him, "but why bother to fake it? Impersonation job?"

"Not exactly. Now that you've been briefed, what do you think of the situation?"

I wondered what answer he was fishing for. "Not good," I conceded. "Everybody watching everybody else. Might as well be behind the Curtain. Shucks," I admitted, going overboard, "this is worse. You can usually bribe a communist, but what bribe can you offer a slug?"

"Hmm-" he commented. "That's an interesting thought. What would constitute a bribe inducement to a titan?"

"Look, that was a rhetorical question. I-"

"And my restatement of it was not rhetorical; we'll farm it out for theoretical investigation."

"Grabbing at straws these days, aren't you?"

"Precisely. Now about the rest of your comment; would you say that it was easier to penetrate and maintain surveillance in the Soviet Union or in Zone Red. Which would you rather tackle?"

I eyed him suspiciously. "There's a catch in this. You don't let a man pick his assignment."

"I asked you for a professional opinion."

"Mmmm . . . I don't have enough data. Tell me; are there slugs behind the Curtain?"

"That," he answered, "is just what I would like to find out."

I realized suddenly that Mary had been right; agents should not marry. If this job were ever finished, I wanted to hire out to count sheep for a rich insomniac or, something equally soft. "This time of year," I said, "I think I'd want to enter through Canton. Unless you were figuring on a drop?"

"What makes you think I want you to go into the USSR?" he asked. "We might find out what we want to know quicker and easier in Zone Red."

"Huh?"

"Certainly. If there is infection anywhere but in this continent, the titans in Zone Red must know about it. Why go half around the globe to find out?"

I put aside the plans I had been forming to be a Hindu merchant, travelling with his wife, and thought about what he was saying. Could be . . . could be. "How in the devil can Zone Red be penetrated now?" I asked. "Do I wear a plastic imitation slug on my shoulder blades? They'd catch me the first time I was called on for direct conference. Or before."

"Don't be a defeatist. Four agents have gone in already."

"And come back?"

"Well, no, not exactly. That's the rub."

"And you want me to be the fifth? Have you decided that I've cluttered up the payroll long enough?"

"I think the others used the wrong tactics-"

"Obviously!"

"The trick is to convince them that you are a renegade. Got any ideas?"

The idea was overwhelming, so much so that I did not answer at once. Finally I burst out, "Why not start me easy? Can't I impersonate a Panama pimp for a while? Or practice being an ax murderer? I have to get into the mood for this."

"Easy," he said. "It may not be practical-"

"Hmmph!"

"But you might bring it off. You've had more experience with their ways than any agent I've got. You must be rested up, aside from that little singe you got on your fingers. Or maybe we should drop you near Moscow and let you take a direct look. Think it over. Don't get into a fret about it for maybe another day."

"Thanks. Thank you too much." I changed the subject. "What have you got planned for Mary?"

"Why don't you stick to your own business?"

"I'm married to her."

"Yes."

"Well, for the love of Pete! Is that all you've got to say? Don't you even want to wish me luck?"

"It strikes me," he said slowly, "that you have had all the luck one man could ask for. You have my blessing, for whatever it's worth."

"Oh. Well, thanks." I am slow in some ways, but I plead the excuse that I had had much on my mind-up to that moment it had not occurred to me that the Old Man might have had something directly to do with Mary's leave and mine falling together so conveniently. I said, "Look here. Dad-"

"Huh?" It was the second time I had called him that in a month; it seemed to put him on the defensive.

"You meant for Mary and me to marry all along. You planned it that way."

"Eh? Don't be ridiculous. I believe in free will, son-and free choices."

"Provided the choice suits you."

"See here, we discussed this once before-"

"I know we did. Never mind; I'm hardly in a position to be angry about it. It's just that I feel like a prize stallion being led into the pen. Why did you do it? It wasn't sentiment about 'young love' and such twaddle; I know you better than that."

"I did not do anything, I tell you. As for approving of it-well, the race must go on, so they tell me. If it doesn't, everything else we do is pointless-even this war."

"Like that, eh? You would send two agents on leave in the middle of a battle-to catch yourself a grandson?" I did a rapid summing up and added, "I'll bet you used a slide rule."

He colored. "I don't know what you are talking about. You both were entitled to leave; the rest was accidental."

"Hmm! Accidents don't happen; not around you. Never mind; I'm a willing victim. Now about the job; give me a bit longer to size up the possibilities, if you really mean to let me pick my own method. Meantime, I'll see Cosmetics about a rubber ear."

I did not see a man about an ear, not then, for, as I was heading into Cosmetics, I met Mary coming out. I had not intended to let myself be surprised into endearments around the Section, but I was caught off guard. "Darling! They fixed you!"

She turned slowly around and let me look. "Good job, isn't it?"

It was a good job. I could not tell that her hair had ever been burned. Besides that, they had done a make-up job on her shoulders over the temporary skin that was quite convincing, but I had expected that. It was the hair that fooled me. I touched it gently and examined the hair line on the left side. "They must have taken it all off and started fresh."

"No, they simply matched it."

"Now you've got your favorite gun cache back."

"Like this?" she said, dimpling. She adjusted her curls with her left hand-then suddenly she had a gun in each hand. And again I did not know where the second one had come from.

"That's papa's good girl! If you ever have to, you can make a living as a night-club magician. But seriously, don't let a Vigilante catch you doing that trick; he might get jumpy."

"One won't catch me," she assured me solemnly. I wondered about the verb. We went to the staff lounge and found a quiet place to talk. We did not order drinks; we did not seem to need such. We talked over the situation and found that each had been briefed. I did not tell Mary about my proposed assignment, and, if she had one, she did not mention it; we were back with the Section and indoctrinated habits are hard to break.

"Mary," I said suddenly, "are you pregnant?"

"It's too early to tell, dear," she answered, searching my eyes. "Do you want me to be?"

"Yes."

"Then I'll try very hard to be."

Chapter 26

We finally decided to attempt to penetrate the Curtain rather than Zone Red. The evaluation group had advised that there was no chance of impersonating a renegade; their advice would not have stopped the Old Man, but it agreed with his opinion and mine. The question hinged on, "How does a man get to be a renegade? Why do the titans trust him?"

The question answers itself; a slug knows its host's mind. Verbal guarantees would mean nothing to a titan-but if the titan, through once possessing a man's mind, knows that he is a natural renegade, a man who can be had, then it may suit the slug's purposes to let him be renegade rather than host. But first the slug had to plumb the vileness in the man's mind and be sure of its quality.

We did not know this as fact but as logical necessity. Human logic-but it had to be slug logic, too, since it fitted what the slugs could and could not do. As for me, it was not possible even under deep hypnotic instruction to pass myself off to a slug in possession of my mind as a candidate for renegade. So the psycho lads decided-and to which I said "Amen!"; it saved me from telling the Old Man that I would not volunteer to let myself be caught by a slug and it saved him from rigging some damned logical necessity which would force me into "volunteering".

It may seem illogical that titans would "free" a host even though they knew that the host was the sort who could be owned. But the advantages to them show up through

analogy: the commissars will not willingly let any of their slave-citizens escape; nevertheless they send out thousands of fifth columnists into the territory of free men. Once outside, these agents can choose freedom and many do, but most of them don't-as we all know too well. They prefer slavery.

In the renegades the slugs had a supply of "trustworthy" fifth columnists-"trustworthy" is not the right word but the English language has no word for this form of vileness. That Zone Green was being penetrated by renegades was certain-but it is hard to tell a fifth columnist from a custard head; it always has been. The ratio of damn fools to villains is high.

So I got ready to go. I took under light hypnosis a refresher in the languages I would need with emphasis on shibboleth phrases of the latest meanderings of the Party Line. I was provided with a personality and coached in a trade which would permit me to travel, repairman for irrigating pumps-and given much money. If it suited me, my trade would let me hint that a pump had been sabotaged. Coercion, intimidation, blackmail, and bribery are especially useful behind the Curtain; the people have lived under a terror so long that they have no defenses; their puppet strings are always at hand.

I was to be dropped, rather than let to crawl under the Curtain. If I failed to report back, other agents would follow. Probably other agents would anyhow-or already had gone. I was not told; what an agent does not know he cannot divulge, even under drugs.

The reporting equipment was a new model and a joy to have. Ultramicrowave stuff with the directional cavity no bigger than a teacup and the rest, power pack and all, hardly larger than a loaf of bread, with the whole thing so well shielded that it would not make a Geiger counter even nervous. Strictly horizon range-I was to aim it at whatever space station was above the horizon. It had to be aimed closely, which required me to seal into my mind the orbital tables of all three space stations and a navigational grid of the territory I was to operate in. The handicap was really its prime advantage; the highly directional quality of the sender meant that it would not be detected save by wild accident.

I had to drop through their screen but it would be under a blanket of anti-radar "window" to give their search technicians fits. They would know that something was being dropped, but they would not know what, nor where, nor when, for mine would not be the only blanket, nor the only night of such tactics.

Once I had made up my mind whether the USSR was or was not slug infested I was to dictate a report to whatever space station was in sight, the line-of-sight, that is; I can't pick out a space station by eye and I doubt those who say they can. Report made, I was free to walk, ride, crawl, sneak and/or bribe my way out if I could.

The only trouble was that I never had a chance to use these preparations; the Pass Christian saucer landed.

The Pass Christian saucer was only the third to be seen after landing. Of the first two, the Grinnell saucer had been concealed by the slugs-or perhaps it took off again-and the Burlingame saucer was a radioactive memory. But the Pass Christian saucer was tracked and was seen on the ground almost at once.

It was tracked by Space Station Alpha-and recorded as an extremely large meteorite believed to have landed in or near the Gulf of Mexico. Which fact was not connected

with the Pass Christian saucer until later but which, when it was, told us why we had failed to spot other landings by radar screen . . . the saucers came in too fast.

The saucers could be "seen" by radar-the primitive radar of sixty-odd years ago had picked them up many times, especially when cruising at atmospheric speeds while scouting this planet. But our modern radar had been "improved" to the point where saucers could not be seen; our instruments were too specialized. Electronic instruments follow an almost organic growth toward greater and greater selectivity. All our radar involves discriminator circuits and like gimmicks to enable each type to "see" what it is supposed to see and not bother with what it should ignore. Traffic block control sees atmospheric traffic only; the defense screen and fire control radars see what they are supposed to see-the fine screen "sees" a range from atmospheric speeds up to orbiting missiles at five miles a second; the coarse screen overlaps the fine screen, starting down at the lowest wingless-missile speed and carrying on up into the highest spaceship speeds relative to Earth and somewhat higher-about ten miles per second.

There are other selectivities-weather radar, harbor radar, and so forth. The point is none of them sees objects at speeds over ten miles per second . . . with the single exception of meteor-count radars in the space stations, which are not military but a research concession granted by the U.N. to the Association for the Advancement of Science.

Consequently the "giant meteor" was recorded as such and was not associated with flying saucers until later.

But the Pass Christian saucer was seen to land. The submersible cruiser U.N.S. Robert Fulton on routine patrol of Zone Red out of Mobile was ten miles off Gulfport with only her receptors showing when the saucer decelerated and landed. The spaceship popped up on the screens of the cruiser as it dropped from outer-space speed (around fifty-three miles per second by the space station record) to a speed the cruiser's radars would accept.

It came out of nothing, slowed to zero, and disappeared from the screen--but the operator had a fix on the last blip, less than twenty miles away on the Mississippi coast. The cruiser's skipper was puzzled. The radar track surely could not be a ship, since ships don't decelerate at fifty gravities. It did not occur to him that g's might not matter to a slug. He swung his ship over and took a look.

His first dispatch read: SPACESHIP LANDED BEACH WEST OF PASS CHRISTIAN MISSISSIPPI. His second was: LANDING FORCE BEACHING TO CAPTURE.

If I had not been in the Section offices I suppose I would have been left out of the party. As it was my phone shrilled so, that I bumped my head on the study machine I was using and swore. The Old Man said, "Come at once. Move!"

It was the same party we had started with so many weeks-or was it years?-before, the Old Man, Mary, and myself. We were in the air and heading south at emergency maximum, paying no attention to block controls and with our transponder sending out the police warning, before the Old Man told us why.

When he did tell us, I said, "Why the family group? You need a full-scale air task force."

"It will be there," he answered grimly. Then he grinned, his old wicked grin, an expression I had not seen since it started. "What do you care?" he jibed. "The 'Cavanaughs' are riding again. Eh, Mary?"

I snorted. "If you want that sister-and-brother routine, you had better get another boy."

"Just the part where you protect her from dogs and strange men," he answered soberly. "And I do mean dogs and I do mean strange men, very strange men. This may be the payoff, son."

I started to ask him more but he went into the operator's compartment, closed the panel, and got busy at the communicator. I turned to Mary. She snuggled up with a little sigh and said, "Howdy, Bud."

I grabbed her. "Don't give me that 'Bud' stuff or somebody's going to get a paddling."

Chapter 27

We were almost shot down by our own boys, then we picked up an escort of two Black Angels who throttled back and managed to stay with us. They turned us over to the command ship from which Air Marshal Rexton was watching the action. The command ship matched speeds with us and took us inboard with an anchor loop-I had never had that done before; it's disconcerting.

Rexton wanted to spank us and send us home, since we were technically civilians-but spanking the Old Man is a chore. They finally unloaded us and I squatted our car down on the sea-wall roadway which borders the Gulf along there-scared out of my wits, I should add, for we were buffeted by A.A. on the way down. There was fighting going on above and all around us, but there was a curious calm near the saucer itself.

The outlander ship loomed up almost over us, not fifty yards away. It was as convincing and as ominous as the plastic-board fake in Iowa had been phony. It was a discus in shape and of great size; it was tilled slightly toward us, for it had grounded partly on one of the magnificent high-stilted old mansions which line that coast. The house had collapsed but the saucer was partly supported by the wreckage and by the six-foot-thick trunk of a tree that had shaded the house.

The ship's canted attitude let us see that the upper surface and what was surely its airlock-a metal hemisphere, a dozen feet across, at the main axis of the ship, where the hub would have been had it been a wheel. This hemisphere was lifted straight out or up from the body of the ship some six or eight feet. I could not see what held it out from the hull but I assumed that there must be a central shaft or piston; it came out like a poppet valve.

It was easy to see why the masters of the saucer had not closed up again and taken off from there; the airlock was fouled, held open by a "mud turtle", one of those little amphibious tanks which are at home on the bottom of a harbor or crawling up onto a beach-part of the landing force of the Fulton.

Let me set down now what I learned later; the tank was commanded by Ensign Gilbert Calhoun of Knoxville; with him was Powerman 2/c Florence Berzowski and a gunner named Booker T. W. Johnson. They were all dead, of course, before we got there.

The car, as soon as I roaded it, was surrounded by a landing force squad commanded by a pink-cheeked lad who seemed anxious to shoot somebody or anybody. He was less anxious when he got a look at Mary but he still refused to let us approach the saucer until

he had checked with his tactical commander-who in turn consulted the skipper of the Fulton. We got an answer back in a short time, considering that the demand must have been referred to Rexton and probably clear back to Washington.

While waiting I watched the battle and, from what I saw, was well pleased to have no part of it. Somebody was going to get hurt-a good many had already. There was a male body, stark naked, just behind the car-a boy not more than fourteen. He was still clutching a rocket launcher and across his shoulders was the mark of the beast, though the slug was nowhere around. I wondered whether the slug had crawled away and was dying, or whether, perhaps, it had managed to transfer to the person who had bayoneted the boy.

Mary had walked west on the highway with the downy young naval officer while I was examining the corpse. The notion of a slug, possibly still alive, being around caused me to hurry to her. "Get back into the car," I said.

She continued to look west along the road. "I thought I might get in a shot or two," she answered, her eyes bright.

"She's safe here," the youngster assured me. "We're holding them, well down the road."

I ignored him. "Listen, you bloodthirsty little hellion," I snapped, "get back in that car before I break every bone in your body!"

"Yes, Sam." She turned and did so.

I looked back at the young salt. "What are you staring at?" I demanded, feeling edgy and needing someone to take it out on. The place smelled of slugs and the wait was making me nervous.

"Nothing much," he said, looking me over. "In my part of the country we don't speak to ladies that way."

"Then why in the hell don't you go back where you come from?" I answered and stalked away. The Old Man was missing, too; I did not like it.

An ambulance, coming back from the west, ground to a halt beside me. "Has the road to Pascagoula been opened?" the driver called out.

The Pascagoula River, thirty miles or so east of where the saucer had landed, was roughly "Zone Amber" for that area; the town of that name was east of the river's mouth and, nominally at least, in Zone Green-while sixty or seventy miles west of us on the same road was New Orleans, the heaviest concentration of titans south of St. Louis. Our opposition came from New Orleans while our nearest base was in Mobile.

"I haven't heard," I told the driver.

He chewed a knuckle. "Well . . . I made it through once; maybe I'll make it back all right." His turbines whined and he was away. I continued to look for the Old Man.

Although the ground fighting had moved away from the site, the air fighting was all around and above us. I was watching the vapor trails and trying to figure out who was what and how they could tell, when a big transport streaked into the area, put on the brakes with a burst of rato units, and spilled a platoon of sky boys. Again I wondered; it was too far away to tell whether they wore slugs or not. At least it came in from the east, but that did not necessarily prove anything.

I spotted the Old Man, talking with the commander of the landing force. I went up and interrupted. "We ought to get out of here, boss. This place is due to be atom-bombed about ten minutes ago."

The commander answered me. "Relax," he said blandly, "the concentration does not merit A-bombing, not even a pony bomb."

I was just about to ask him sharply how he knew that the slugs would figure it that way, when the Old Man interrupted. "He's right, son." He took me by the arm and walked me back toward the car. "He's perfectly right, but for the wrong reasons."

"Huh?"

"Why haven't we bombed the cities they hold? They won't bomb this area, not while that ship is intact. They don't want to damage it; they want it back. Now go on back to Mary. Dogs and strange men-remember?"

I shut up, unconvinced. I expected us all to be clicks in a Geiger counter any second. Slugs, fighting as individuals, fought with gamecock recklessness-perhaps because they were really not individuals. Why should they be any more cautious about one of their own ships? They might be more anxious to keep it out of our hands than to save it.

We had just reached the car and spoken to Mary when the still-damp little snottie came trotting up. He halted, caught his breath, and saluted the Old Man. "The commander says that you are to have anything you want, sir-anything at all!"

From his manner I gathered that the answering dispatch had probably been spelled out in asterisks, accompanied by ruffles and flourishes. "Thank you, sir," the Old Man said mildly. "We merely want to inspect the captured ship."

"Yes, sir. Come with me, sir." He came with us instead, having difficulty making up his mind whether to escort the Old Man or Mary. Mary won. I came along behind, keeping my mind on watching out and ignoring the presence of the youngster. The country on that coast, unless gardened constantly, is practically jungle; the saucer lapped over into a brake of that sort and the Old Man took a shortcut through it. The kid said to him. "Watch out, sir. Mind where you step."

I said, "Slugs?"

He shook his head. "Coral snakes."

At that point a poisonous snake would have seemed as pleasant as a honey bee, but I must have been paying some attention to his warning for I was looking down when the next thing happened.

I first heard a shout. Then so help me, a Bengal tiger was charging us.

Probably Mary got in the first shot. I know that mine was not behind that of the young officer; it might even have been ahead. I'm sure it was-fairly sure, anyhow. It was the Old Man who shot last.

Among the four of us we cut that beast so many ways that it would never be worth anything as a rug. And yet the slug on it was untouched; I fried it with my second bolt. The young fellow looked at it without surprise. "Well," he said, "I thought we had cleaned up that load."

"Huh? What do you mean?"

"One of the first transport tanks they sent out. Regular Noah's Ark. We were shooting everything from gorillas to polar bears. Say, did you ever have a water buffalo come at you?"

"No and I don't want to."

"Not near as bad as the dogs, really. If you ask me, those things don't have much sense." He looked at the slug, quite unmoved, while I was ready as usual to throw up.

We got up out of there fast and onto the titan ship-which did not make me less nervous, but more. Not that there was anything frightening in the ship itself, not in its appearance.

But its appearance wasn't right. While it was obviously artificial, one knew without being told that it was not made by men. Why? I don't know. The surface of it was dull mirror, not a mark on it-not any sort of a mark; there was no way to tell how it had been put together. It was as smooth as a Jo block.

I could not tell of what it was made. Metal? Of course, it had to be metal. But was it? You would expect it to be either bitterly cold-or possibly intensely hot from its landing. I touched it and it was not anything at all, neither cold nor hot. Don't tell me it just happened to be exactly ninety-eight and six-tenths. I noticed another thing presently; a ship that size, landing at high speed, should have blasted a couple of acres. There was no blast area at all; the brake around it was green and rank.

We went up to the parasol business, the air lock, if that is what it was. The edge was jammed down tight on the little mud turtle; the armor of the tank was crushed in, as one might crush a pasteboard box with the hand. Those mud turtles are built to launch five hundred feet deep in water; they are strong.

Well, I suppose this one was strong. The parasol arrangement had damaged it, but the air lock had not closed. On the other hand the metal, or whatever the spaceship's door was made of, was unmarked by the exchange.

The Old Man turned to me. "Wait here with Mary."

"You're not going in there by yourself?"

"Yes. There may be very little time."

The kid spoke up. "I'm to stay with you, sir. That's what the commander said."

"Very well, sir," the Old Man agreed. "Come along." He peered over the edge, then knelt and lowered himself by his hands. The kid followed him. I felt burned up-but had no desire to argue the arrangements.

They disappeared into the hole. Mary turned to me and said, "Sam-I don't like this. I'm afraid."

She startled me. I was afraid myself-but I had not expected her to be. "I'll take care of you."

"Do we have to stay? He did not say so, quite."

I considered it. "If you want to go back to the car I'll take you back."

"Well . . . no, Sam, I guess we have to stay. Come closer to me." She was trembling.

I don't know how long it was before they stuck their heads over the rim. The youngster climbed out and the Old Man told him to stand guard. "Come on," he said to us, "it's safe-I think."

"The hell it is," I told him, but I went because Mary was already starting. The Old Man helped her down.

"Mind your head," he said. "Low bridge all the way."

It is a platitude that unhuman races produce unhuman works, but very few humans have ever been inside a Venerian labyrinth and still fewer have seen the Martian ruins-and I was not one of the few. I don't know what I expected. Superficially the inside of the saucer was not, I suppose, too startling, but it was strange. It had been thought out by unhuman brains, ones which did not depend on human ideas in fabricating, brains which had never heard of the right angle and the straight line or which regarded them as

unnecessary or undesirable. We found ourselves in a very small oblate chamber and from there we crawled through a tube about four feet thick, a tube which seemed to wind down into the ship and which glowed from all its surface with a reddish light.

The tube held an odd and somewhat distressing odor, as if of marsh gas, and mixed with it faintly was the reek of dead slugs. That and the reddish glow and the total lack of heat response from the wall of the tube as my palms pressed against it gave me the unpleasant fancy that I was crawling through the gut of some unearthly behemoth rather than exploring a strange machine.

The tube branched like an artery and there we came across our first Titanian androgyne. He-let me call it "he"-was sprawled on his back, like a child sleeping, his head pillowed on his slug. There was a suggestion of a smile on the little rosebud mouth; at first I did not realize that he was dead.

At first sight the similarities between the Titanian people and ourselves are more noticeable than the differences; we impress what we expect to see on what we do see, as a wind-sculptured rock may look like a human head or a dancing bear. Take the pretty little "mouth" for example; how was I to know that it was an organ for breathing solely?

Conceded that they are not human and that, despite the casual similarities of four limbs and a head-like protuberance, we are less like them than is a bullfrog like a bullpup; nevertheless the general effect is pleasing, not frightening, and faintly human. "Elfin" I should say-the elves of Saturn's moons. Had we met them before the slugs we call titans possessed them I think we could have gotten along with them. Judged by their ability to build the saucers they were our equals-if they did build them. (Certainly the slugs did not build them; slugs are not builders but thieves, cosmic cuckoos.)

But I am letting my own later thoughts get in the way. When I saw the little fellow I managed to draw my gun. The Old Man, anticipating my reaction, turned and said, "Take it easy. It's dead-they are all dead, smothered in oxygen when the tank ruined their air seal."

I still had my gun out. "I want to burn the slug," I insisted. "It may still be alive." It was not covered by the horny shell we had lately come to expect but was naked, moist and ugly.

He shrugged. "Suit yourself. It can't possibly hurt you."

"Why not?"

"Wrong chemistry. That slug can't live on an oxygen breather." He crawled across the little body, giving me no chance to shoot had I decided to. Mary, always so quick with a gun, had not drawn but had shrunk against my side and was breathing in sharp little sobbing gasps. The Old Man stopped and said patiently, "Coming, Mary?"

She choked and then gasped, "Let's go back! Let's get out of here!"

I said, "She's right. This is no job for three people; this is something for a research team and proper equipment."

He paid no attention to me. "It has to be done, Mary. You know that. And you have to be the one to do it."

"Why does she have to do it?" I demanded angrily.

Again he ignored me. "Well, Mary?"

From somewhere inside herself she called on reserves. Her breathing became normal, her features relaxed, and she crawled across the slug-ridden elfin body with the serenity

of a queen going to the gallows. I lumbered after them, still hampered by my gun and trying not to touch the body.

We came at last to a large chamber. It may have been the control room, for there were many of the dead little elfin creatures in it, though I saw nothing resembling (to my eye) instruments or machinery. Its inner surface was cavitated and picked out with lights much brighter than the reddish illumination and the chamber space was festooned with processes as meaningless to me as the convolutions of a brain. I was troubled again with the thought-completely wrong, I know now-that the ship itself was a living organism.

The Old Man paid no attention but crawled on through and into another ruddy-glowing tube. We followed its contortions to a place where it widened out to ten feet or more with a "ceiling" overhead almost tall enough to let us stand erect. But that was not what caught our eyes; the walls were no longer opaque.

On each side of us, beyond transparent membranes, were thousands on thousands of slugs, swimming, floating, writhing in some fluid which sustained them. Each tank had an inner diffuse light of its own and I could see back into the palpitating mass-and I wanted to scream.

I still had my gun out. The Old Man reached back and placed his hand over the bell of it. "Don't yield to temptation," he warned me. "You don't want to let that loose in here. Those are for us."

Mary looked at them with a face too calm. Thinking back, I doubt that she was fully conscious in the ordinary sense. I looked at her, glanced back at the walls of that ghoulish aquarium, and said urgently, "Let's get out of here if we can-then just bomb it out of existence."

"No," he said quietly, "there is more. Come." The tube narrowed in again, then enlarged and we were again in a somewhat smaller chamber like that of the slugs. Again there were transparent walls and again there were things floating beyond them.

I had to look twice before I could fully make out and believe what I saw.

Floating just beyond the wall, face down, was the body of a man-a human. Earth-born man-about forty to fifty years old. He was grizzled and almost bald. His arms were curved across his chest and his knees were drawn up, as if he were sleeping safe in bed-or in the womb.

I watched him, thinking terrible thoughts. He was not alone; there were more beyond him, male and female, young and old-but he was the only one I could see properly and he got my attention. I was sure that he was dead; it did not occur to me to think otherwise-then I saw his mouth working-and then I wished he were dead.

Mary was wandering around in that chamber as if she were drunk-no, not drunk but preoccupied and dazed. She went from one transparent wall to the other, peering intently into the crowded, half-seen depths. The Old Man looked only at her. "Well, Mary?" he said softly.

"I can't find them!" she said piteously in a voice like a little girl's. She ran back to the other side.

The Old Man grasped her arm and stopped her. "You're not looking for them in the right place," he said firmly. "Go back where they are. Remember?"

She stopped and her voice was a wail. "I can't remember!"

"You must remember . . . now. This is what you can do for them. You must return to where they are and look for them."

Her eyes closed and tears started leaking from them. She gasped and choked. I pushed myself between them and said, "Stop this! What are you doing to her?"

He grabbed me with his free hand and pushed me away. "No, son," he whispered fiercely. "Keep out of this-you must keep out."

"But-"

"No!" He let go of Mary and led me away to the entrance. "Stay there. And, as you love your wife, as you hate the titans, do not interfere. I shan't hurt her-that's a promise."

"What are you going to do?" But he had turned away. I stayed, unwilling to let it go on, afraid to tamper with what I did not understand.

Mary had sunk down to the floor and now squatted on it like a child, her face covered with her hands. The Old Man went back to her, knelt down and touched her arm. "Go back," I heard him say. "Go back to where it started."

I could barely hear her answer, "No . . . no."

"How old were you? You seemed to be about seven or eight when you were found. It was before that?"

"Yes-yes, it was before that." She sobbed and collapsed completely to the floor. "Mama! Mama!"

"What is your mama saying?" he asked gently.

"She doesn't say anything. She's looking at me so queerly. There's something on her back. I'm afraid, I'm afraid!"

I got up and hurried toward them, crouching to keep from hitting the low ceiling. Without taking his eyes off Mary the Old Man motioned me back. I stopped, hesitated. "Go back," he ordered. "Way back."

The words were directed at me and I obeyed them-but so did Mary. "There was a ship," she muttered, "a big shiny ship-" He said something to her; if she answered I could not hear it. I stayed back this time and made no attempt to interfere. I could see that he was doing her no physical hurt and, despite my vastly disturbed emotions, I realized that something important was going on, something big enough to absorb the Old Man's full attention in the very teeth of the enemy.

He continued to talk to her, soothingly but insistently. Mary quieted down, seemed to sink almost into a lethargy, but I could hear that she answered him. After a while she was talking in the monotonous logorrhea of emotional release. Only occasionally did the Old Man prompt her.

I heard something crawling along the passage behind me. I turned and drew my gun, with a wild feeling that we were trapped. I almost shot him before I realized that it was the ubiquitous young officer we had left outside. "Come on out!" he said urgently. He pushed on past me out into the chamber and repeated the demand to the Old Man.

The Old Man looked exasperated beyond endurance. "Shut up and don't bother me," he said.

"You've got to, sir," the youngster insisted. "The commander says that you must come out at once. We're falling back; the commander says he may have to use demolition at any moment. If we are still inside-blooie! That's it."

"Very well," the Old Man agreed in unhurried tones. "We're coming. You go out and tell your commander that he must hold off until we get out; I have vitally important information. Son, help me with Mary."

"Aye, aye, sir!" the youngster acknowledged. "But hurry!" He scrambled away. I picked up Mary and carried her to where the chamber narrowed into a tube; she seemed almost unconscious. I put her down.

"We'll have to drag her," the Old Man said. "She may not come out of this soon. Here-let me get her up on your back, you can crawl with her."

I paid no attention but shook her. "Mary," I shouted, "Mary! Can you hear me?"

Her eyes opened. "Yes, Sam?"

"Darling-we've got to get out of here, fast! Can you crawl?"

"Yes, Sam." She closed her eyes again. I shook her again. "Mary!"

"Yes, darling? What is it? I'm so tired."

"Listen, Mary-you've got to crawl out of here. If you don't the slugs will get us-do you understand?"

"All right, darling." Her eyes stayed open this time but were vacant. I got her headed up the tube and came along after her. Whenever she faltered or slowed I slapped at her. I lifted and dragged her through the chamber of the slugs and again through the control room, if that is what it was. When we came to the place where the tube was partly blocked by the dead elfin creature she stopped; I wormed my way past her and moved it, stuffing it into the branching tube. There was no doubt, this time, that its slug was dead; I gagged at the job. Again I had to slap her into cooperation.

After an endless nightmare of leaden-limbed striving we reached the outer door and the young officer was there to help us lift her out, him pulling and the Old Man and me lifting and pushing. I gave the Old Man a leg up, jumped out myself, and took her away from the youngster. It was quite dark.

We went back the long way past the crushed house, avoiding the jungle like brake, and thence down to the beach road. Our car was no longer there; it did not matter for we found ourselves hurried into a "mud turtle" tank-none too soon, for the fighting was almost on top of us. The tank commander buttoned up and the craft lumbered off the stepped-back seawall and into the water. Fifteen minutes later we were inside the Fulton.

And an hour later we disembarked at the Mobile base. The Old Man and I had bad coffee and sandwiches in the wardroom of the Fulton, some of the Wave officers had taken Mary and cared for her in the women's quarters. She joined us as we left and seemed entirely normal. I said, "Mary, are you all right?"

She smiled at me. "Of course, darling. Why shouldn't I be?"

A small command ship and an escort took us out of there. I had supposed that we were headed back to the Section offices, or more likely to Washington. I had not asked; the Old Man was in no mood to talk and I was satisfied simply to hold Mary's hand and feel relieved.

The pilot put us into a mountainside hangar in one of those egg-on-a-plate maneuvers that no civilian craft can accomplish-in the sky at high speed, then in a cave and stationary. Like that. "Where are we?" I asked.

The Old Man did not answer but got out; Mary and I followed. The hangar was small, just parking space for about a dozen craft, an arresting platform, and a single launching rack; it contained only two other ships besides ours. Guards met us and directed us on

back to a door set in the living rock; we went through and found ourselves in an anteroom. An unseen metallic voice told us to strip off what little we wore. I did not mind being naked but I hated to part with my gun and phone.

We went on inside and were met by a young fellow whose total clothing was an armband showing three chevrons and crossed retorts. He turned us over to a girl who was wearing even less, as her armband had only two chevrons. Both of them noticed Mary, each with typical gender response. I think the corporal was glad to pass us on to the captain who received us.

"We got your message," the captain said. "Dr. Steelton is waiting."

"Thank you, ma'am," the Old Man answered. "The sooner, the better. Where?"

"Just a moment," she said, went to Mary and felt through her hair. "We have to be sure, you know," she said apologetically. If she was aware of the falseness of much of Mary's hair, she did not mention it and Mary did not flinch. "All right," she decided, "let's go." Her own hair was cut mannishly short, in crisp gray waves.

"Right," agreed the Old Man. "No, son, this is as far as you go."

"Why?" I asked.

"Because you dam near loused up the first try," he explained briefly. "Now pipe down."

The captain said, "The officers' mess is straight down the first passageway to the left. Why don't you wait there?"

So I did. On the way I passed a door decorated primly in large red skull-and-crossbones and stenciled with: WARNING-LIVE PARASITES BEYOND THIS DOOR; in smaller letters it added Qualified Personnel Only-Use Procedure "A".

I gave the door a wide berth.

The officers' mess was the usual clubroom and there were three or four men and two women lounging in it. No one seemed interested in my presence, so I found an unoccupied chair, sat down, and wondered just who you had to be to get a drink around this joint. After a time I was joined by a large male extrovert wearing a colonel's insignia on a chain around his neck; with it was a Saint Christopher's medal and an I.D. dog tag. "Newcomer?" he asked.

I admitted it. "Civilian expert?" he went on.

"I don't know about 'expert'," I replied. "I'm a field operative."

"Name? Sorry to be officious," he apologized, "but I'm alleged to be the security officer around here. My name's Kelly."

I told him mine. He nodded. "Matter of fact I saw your party coming in. Mine was the voice of conscience, coming out of the wall. Now, Mr. Nivens, how about a drink? From the brief we had on you, you could use one."

I stood up. "Whom do I have to kill to get it?"

"-though as far as I can see," Kelly went on sometime later, "this place needs a security officer the way a horse needs roller skates. We should publish our results as fast as we get them. This isn't like fighting a human enemy."

I commented that he did not sound like the ordinary brass hat. He laughed and did not take offense. "Believe me, son, not all brass hats are as they are pictured-they just seem to be."

I remarked that Air Marshal Rexton struck me as a pretty sharp citizen.

"You know him?" the colonel asked.

"I don't know him exactly, but my work on this job has thrown me in his company a good bit-I last saw him earlier today."

"Hmm-" said the colonel. "I've never met the gentleman. You move in more rarefied strata than I do, sir."

I explained that it was mere happenstance, but from then on he showed me more respect. Presently he was telling me about the work the laboratory did. "By now we know more about those foul creatures than does Old Nick himself. But do we know how to kill them without killing their hosts? We do not.

"Of course," he went on, "if we could lure them one at a time into a small room and douse them with anesthetics, we could save the hosts-but that is like the old saw about how to catch a bird: naturally it's no trouble if you can sneak up close enough to put salt on its tail. I'm not a scientist myself-just the son of a cop and a cop myself under a different tag-but I've talked to the scientists here and I know what we need. This is a biological war and it will be won by biological warfare. What we need is a bug, one that will bite the slug and not the host. Doesn't sound too hard, does it? It is. We know a hundred things that will kill the slug-smallpox, typhus, syphilis, encephalitis lethargica, Obermeyer's virus, plague, yellow fever, and so on. But they kill the host, too."

"Couldn't they use something that everyone is immune to?" I asked. "Take typhoid-everybody has typhoid shots. And almost everybody is vaccinated for smallpox."

"No good-if the host is immune, the parasite doesn't get exposed to it. Now that the slugs have developed this outer cuticle the parasite's environment is the host. No, we need something the host will catch and that will kill the slug, but won't give the host more than a mild fever or a splitting headache."

I started to answer with some no-doubt brilliant thought when I saw the Old Man standing in the doorway. I excused myself and went to him. "What was Kelly grilling you about?" he asked.

"He wasn't grilling me," I answered.

"That's what you think. Don't you know what Kelly that is?"

"Should I?"

"You should. Or perhaps you shouldn't; he never lets his picture be taken. That's B. J. Kelly, the greatest scientific criminologist of our generation."

"That Kelly! But he's not in the army."

"Reserve, probably. But you can guess how important this laboratory is. Come on."

"Where's Mary?"

"You can't see her now. She's recuperating."

"Is she-hurt?"

"I promised you she would not be hurt. Steelton is the best in his line. But we had to go down deep, against a great deal of resistance. That's always rough on the subject."

I thought about it. "Did you get what you were after?"

"Yes and no. We got a great deal, but we aren't through."

"What were you after?"

We had been walking along one of the endless underground passageways of which the place was made. Now he turned us into a small, empty office and we sat down. The Old Man touched the communicator on the desk and said, "Private conference."

"Yes, sir," a voice answered. "We will not record." A green light came on in the ceiling.

"Not that I believe them," the Old Man complained, "but it may keep anyone but Kelly from playing it back. Now, son, about what you want to know; I'm not sure you are entitled to it. You are married to the girl, but that does not mean that you own her soul-and this stuff comes from down so deep that she did not know she had it herself."

I said nothing; there was nothing to say. He went on presently in worried tones, "Still-it might be better to tell you enough so that you will understand. Otherwise you would be bothering her to find out. That I don't want to happen, I don't ever want that to happen. You might throw her into a bad wingding. I doubt if she'll remember anything herself-Steelton is a very gentle operator-but you could stir up things."

I took a deep breath. "You'll have to judge. I can't."

"Yes, I suppose so. Well, I'll tell you a bit and answer your questions-some of them-in exchange for a solemn promise never to bother your wife with it. You don't have the skill."

"Very well, sir. I promise."

"Well-there was a group of people, a cult you might call them, that got into disrepute."

"I know-the Whitmanites."

"Eh? How did you know? From Mary? No, she couldn't have; she didn't know herself."

"No, not from Mary. I just figured it out."

He looked at me with odd respect. "Maybe I've been underestimating you, son. As you say, the Whitmanites. Mary was one of them, as a kid in Antarctica."

"Wait a minute!" I said. "They left Antarctica in-" The wheels buzzed in my mind and the number came up. "-in 1974."

"Surely. What about it?"

"But that would make Mary around forty years old. She can't be."

"Do you care?"

"Huh? Why, no-but she can't be."

"She is and she isn't. Just listen. Chronologically her age is about forty. Biologically she is in her middle twenties. Subjectively she is even younger, because she doesn't remember anything, not to know it, earlier than about 1990."

"What do you mean? That she doesn't remember I can understand-she never wants to remember. But what do you mean by the rest?"

"Just what I said. She is no older than she is because-you know that room where she started to remember? She spent ten years and probably more floating in suspended animation in just such a tank as that."

Chapter 28

Time was when I was immune to emotional shocks. But as I get older, I don't get tougher; I get softer. Being in love has a lot to do with it, too. The thought of Mary, my beloved Mary, swimming in that artificial womb, neither dead nor alive but preserved like a pickled grasshopper, was too much for me.

I heard the Old Man saying, "Take it easy, son. She's all right."

I said, "Go ahead."

Mary's overt history was simple, although mystifying. She had been found in the swamps near Kaiserville at the North Pole of Venus-a little girl who could give no account of herself and who knew only her name-Allucquere. Nobody spotted the significance of the name and a child of her (apparent) age could not be associated with the Whitmanites debacle in any case; the 1980 supply ship had not been able to find any survivor of their "New Zion" colony. Its plantations had returned to the swamp; the dwellings were ruptured shells, hidden in rank growth. More than ten years of time and more than two hundred miles of jungle separated the little waif of Kaiserville from the God-struck colonists of New Zion.

At that time, an unaccounted-for Earth child on Venus was little short of incredible. Like finding the cat locked in the icebox, it called for explanation. But there was no one around with the intellectual curiosity to push the matter. Kaiserville still does not have a sweet reputation; in those days it was made up of miners, doxies, company representatives of the Two Planets Corporation-and nothing else. I don't suppose that shoveling radioactive mud in the swamps leaves much energy for wonder.

Apparently she grew up using poker chips for toys and calling every woman in crib row "mother" or "auntie". In turn they shortened her name to "Lucky". The Old Man did not go into detail about who paid her way back to Earth and why, and he avoided my questions. The real question was where she had been from the time New Zion was eaten up by the Venerian jungle and just what had happened to the colony.

The only record of those things was buried in Mary's mind, locked tight with terror and despair.

Sometime before 1980-about the same time as the flying saucer reports from Russo-Siberia, or a year or so earlier-the titans had discovered the New Zion colony. If you place it one Saturn year earlier than the invasion of Earth, the times fit fairly well. It does not seem likely that the titans were looking for Earthmen on Venus; more probably they were scouting Venus as they had long scouted Earth. Or they may have known just where to look; we know that they kidnapped Earthmen at intervals over the course of two or more centuries; they may have captured someone on Earth whose brain could tell them where to find the New Zion colony. Mary's dark memories could contain no clue to that.

Mary saw the colony captured, saw her parents turned into zombies who no longer cared for her. Apparently she herself was not possessed, or she may have been possessed and turned loose, the titans finding a weak and ignorant young girl an unsuitable slave. In any case, for what was to her baby mind an endlessly long time, she hung around the slave colony, unwanted, uncared for, but unmolested, scavenging like a mouse for her living. On Venus the slugs were moving in to stay; their principal slaves were Venerians and the New Zion colonists were only incidental. It is sure that Mary saw her parents being placed in suspended animation-for later use in the invasion of Earth? Probable, but not certain.

In due course she herself was grabbed and placed in the tanks. Inside a titan ship? At a titan base on Venus itself? More probably the latter, as when she awoke, she was still on Venus. There are many such gaps. Were the slugs that rode the Venerians identical with the slugs which rode the colonists? Possible-since both Earth and Venus have oxy-carbon economy. The slugs seem to be endlessly protean but they surely have to adapt

themselves to the biochemistry of their hosts. Had Venus an oxy-silicon economy like Mars, or a fluorine economy, the same parasite type could not possibly have fed on both.

But the gist of the matter lay in the situation as it was when Mary was removed from the artificial incubator. The titan invasion of Venus had failed, or was failing. Almost certainly she was possessed as soon as they removed her from the tank-but Mary had outlived the slug that possessed her.

Why had the slugs died? Why had the invasion of Venus failed? It was for clues to these that the Old Man and Dr. Steelton had gone fishing in Mary's brain.

I said, "Is that all?"

He answered, "Isn't that enough?"

"It raises as many questions as it answers," I complained.

"Of course there is more," he told me, "a great deal more. But you aren't a Venerian expert of any sort, nor a psychologist, so you won't be called on to evaluate it. I've told you what I have so that you will know why we have to work on Mary and so that you won't question her about it. Be good to her, boy; she's had more than her share of grief."

I ignored the advice; I can get along or not get along with my own wife without help, thank you. "What I can't figure out," I answered, "is why you ever had Mary linked up with flying saucers in the first place? I can see now that you took her along on that first trip to Iowa on purpose. You were right, granted-but why? And don't give me any malarkey."

The Old Man himself looked puzzled. "Son, do you ever have hunches?"

"Lord, yes!"

"What is a 'hunch'?"

"Eh? It's a belief that something is so, or isn't so, without evidence. Or a premonition that something is going to happen-or a compulsion to do something."

"Sloppy definitions. I'd call a hunch the result of automatic reasoning below the conscious level on data you did not know you possessed."

"Sounds like the black cat in the coal cellar at midnight. You didn't have any data, not then. Don't tell me that your unconscious mind works on data you are going to get, next week. I won't believe it."

"Ah, but I did have data."

"Huh?"

"What's the last thing that happens to a candidate before he is certified as an agent in our section?"

"The personal interview with you."

"No, no!"

"Oh-the trance analysis." I had forgotten hypno-analysis for the simple reason that the subject never remembers it; he's off somewhere else, wherever it is you go when you're asleep. "You mean you had this data on Mary then. It wasn't a hunch at all."

"No again. I had some, a very little of it-Mary's defenses are strong. And I had forgotten what little I knew, in my conscious memory. But I knew that Mary was the agent for this job. Later on I played back her hypno interview; then I knew that there must be more. We tried for it-and did not get it. But I knew that there had to be more."

I thought it over. "You must have been pretty cocky certain that it was worth digging out; you sure put her over the bumps to get it."

"I had to. I'm sorry."

"Okay, okay." I waited a moment, then said, "Look-what was there in my hypno record?"

"That's not a proper question."

"Nuts."

"And I couldn't tell you if I would. I have never listened to your analysis, son."

"Huh?"

"I had my deputy play it, then asked him if there were anything in it which I should know. He said there wasn't so I never played it."

"So? Well-thanks."

He merely grunted, but I felt warmer toward him than I had in a long time. Dad and I have always managed to embarrass each other.

Chapter 29

The slugs had died from something they contracted on Venus. That much we knew, or thought we knew. We weren't likely to get another chance in a hurry to collect direct information as a dispatch came in while the Old Man and I were still talking, telling us that Rexton had finally ordered the Pass Christian saucer bombed to keep it from falling back in the hands of the titans. I think that the Old Man had hoped to get at those human beings whom we knew to be inanimate prisoners in that ship, find some way to breathe life into them, and question them.

Well, that chance was gone-what they could dig out of Mary had better be the answer. Assuming that some infection peculiar to Venus was fatal to slugs but not fatal to humans-at least Mary had lived through it-then the thing to do was to test them all and determine which one. Just dandy! -it was like examining every grain of sand on a wide beach to locate the one with square edges!

The problem was somewhat simplified by there being no need to check the Venus diseases known to be fatal to Earthmen. Perhaps it had been one of such, but, if so, no matter; we could as well use smallpox. But the list of diseases native to Venus which kill Earthmen is surprisingly short and the list of those which are not fatal but merely nastily annoying is very long-from the standpoint of a Venerian bug we must be too strange a diet to suit his taste. If a Venerian bug has a viewpoint, which I doubt, Mcllvaine's silly ideas notwithstanding.

The problem was made harder by the fact that the types of diseases native to Venus which were represented by living cultures on Earth were strictly limited in number, i.e., the grain of sand we sought might not be on this beach. To be sure, such an omission could be repaired-in a century or so of exploration and research on a strange planet.

In the meantime there was beginning to be a breath of frost in the air; Schedule Sun Tan could not go on forever.

They had to go back where they hoped the answer was-into Mary's brain. I did not like it, but I could not stop it. She did not appear to know why she was being asked to submit, over and over again, to hypnotics-or perhaps she would not tell. She seemed serene, but the strain showed-circles under her eyes, things like that. Finally I went to the Old Man and told him that it had to stop. "You know better than that, son," he said mildly.

"The hell I do! If you haven't gotten what you want from her by now, you'll never get it."

"Have you any idea of how long it takes to search all the memories in a person's mind, even if you limit yourself to a particular period? It takes exactly as long as the period itself. What we need-if it's there at all-may be subtle."

"If it's there at all,'" I repeated. "You don't know that it is. See here-if Mary miscarries as a result of this, I'll break your neck personally."

"And if we don't succeed," he answered gently, "you will wish to heaven that she had. Or do you want to raise up kids to be hosts to titans?"

I chewed my lip. "Why didn't you send me to the USSR as you planned to, instead of keeping me around?"

"Oh, that-In the first place I want you here, with Mary, keeping her morale up-instead of acting like a spoiled brat! In the second place, it isn't necessary, or I would have sent you."

"Huh? What happened? Did some other agent report in?"

He stood up and started to leave. "If you would ever learn to show a grown-up interest in the news of the world, you would know."

I said, "Huh?" again, but he did not answer; he left.

I hurried out of there and brought myself up to date. My one-track mind has never been able to interest itself in the daily news; for my taste this dinning into the ears and eyes of trivia somewhere over the horizon is the bane of so-called civilization and the death of serious thinking. But I do miss things.

This time I had managed to miss the first news of the Asiatic plague. I had had my back turned on the biggest-no, the second biggest-news story of the century, the only continent-wide epidemic of the Black Death since the seventeenth century.

I could not understand it. Communists are crazy, granted-but I had been behind the Curtain enough to know that their public health measures were as good as ours and even better in some ways, for they were carried out "by the numbers" and no nonsense tolerated. And a country has to be, quite literally, lousy to permit the spread of plagues-rats, lice, and fleas, the historical vectors. In such respects the commissars had even managed to clean up China to the point, at least, that bubonic plague and typhus were sporadically endemic rather than epidemic.

Now both plagues were spreading like gossip across the whole Sino-Russo-Siberian axis, to the point where the soviet government system had broken down and pleas were being sent via the space stations for U.N. help. What had happened?

Out of my own mind I put the pieces together; I looked up the Old Man again. "Boss-there were slugs behind the Curtain."

"Yes."

"You knew? Well, for cripes sake-we'd better do something fast, or the whole Mississippi Valley will be in the shape that Asia is in. Just one rat, one little rat-" I was thinking back to my own time among the slugs, something I avoided doing when possible. The titans did not bother about human sanitation. My own master had not caused me to bathe, not once. I doubted if there had been a bath taken between the Canadian border and New Orleans since the slugs dropped the masquerade as unnecessary. Lice-Fleas-

The Old Man sighed. "Maybe that's the best solution. Maybe it's the only one."

"You might as well bomb them, if that's the best we have to offer. It would be a cleaner way to die."

"So it would. But you know that we won't. As long as there is a chance of cleaning out the vermin without burning down the barn, we'll keep on trying."

I mulled it over at great length. We were in still another race against time. Fundamentally the slugs must be too stupid to keep slaves; perhaps that was why they moved from planet to planet-they spoiled what they touched. After a while their hosts would die out and then they needed new hosts.

Theory, just theory-I brushed it aside. One thing was sure: what had happened behind the Curtain would happen in Zone Red unless we found a way to kill off the slugs, and that mighty soon! Thinking about it, I made up my mind to do something I had considered before-force myself into the mind-searching sessions being conducted on Mary. If there were something in her hidden memories which could be used to kill slugs, possibly I might see it where others had failed. In any case I was going in, whether Steelton and the Old Man liked it or not. I was tired of being treated like a cross between a prince consort and an unwelcome child.

Chapter 30

Since our arrival Mary and I had been living in a cubicle about the size of a bass drum. It had been intended for one junior officer; the laboratory had not been planned for married couples. We were as crowded as a plate of smorgasbord but we did not care.

I woke up first the next morning and made my usual quick check to be sure that a slug had not gotten to her. While I was doing so, she opened her eyes and smiled drowsily. "Go back to sleep," I said. "You've got another thirty minutes."

But she did not go back to sleep. After a while I said, "Mary, do you know the incubation period for bubonic plague?"

She answered, "Should I know? One of your eyes is slightly darker than the other."

I shook her. "Pay attention, wench. I was in the lab library last night, doing some rough figuring. As I get it, the slugs must have moved in on our commie pals at least three months before they invaded us."

"Yes, of course."

"You knew? Why didn't you say so?"

"Nobody asked me. Besides, it's obvious."

"Oh, for heaven's sake! Let's get up; we'll be late for breakfast."

Before we left the cubicle I said, "Parlor games at the usual time this morning?"

"Yes."

"Mary, you never talk about what they ask you."

She looked surprised. "But I never know."

"That's what I gathered. Deep trance with a 'forgetter' order, eh?"

"I suppose so."

"Hmm . . . well, there will be some changes made. Today I am going in with you."

All she said was, "Yes, dear."

They were gathered as usual in Dr. Steelton's office, the Old Man, Steelton himself, a Colonel Gibsy who was chief of staff, a lieutenant colonel whom I knew only by sight,

and an odd lot of sergeant-technicians, j.o.'s, and flunkies. In the army it seems to take an eight-man working party to help a brass hat blow his nose; that is one reason why I left the service.

The Old Man's eyebrows shot up when he saw me but he said nothing. A sergeant who seemed to be doorman tried to stop me. "Good morning, Mrs. Nivens," he said to Mary; then to me he added, "I don't seem to have you on the list."

"I'm putting myself on the list," I announced to the entire room and pushed on past him.

Colonel Gibsy glared at me and turned to the Old Man with one of those "Hrrumph-hrrumph-what's-all-this?" noises. The Old Man did not answer but his eyebrows went still higher. The rest looked frozen faced and tried to pretend they weren't there-except one WAC sergeant who could not keep from grinning.

The Old Man got up, said to Gibsy, "Just a moment. Colonel." and limped over to me. In a voice that reached me alone, he said, "Son, you promised me."

"And I withdraw it. You had no business exacting a promise from a man about his wife. You were talking out of turn."

"You've no business here, son. You are not skilled in these matters. For Mary's sake, get out."

Up to that moment it had not occurred to me to question the Old Man's right to stay-but I found myself announcing my decision as I made it. "You are the one with no business here-you are not an analyst. So get out."

The Old Man glanced at Mary and so did I. Nothing showed in her face; she might have been waiting for me to make change. The Old Man said slowly, "You been eating raw meat, son?"

I answered, "It's my wife who is being experimented on; from here on I make the rules-or there won't be any experiments."

Colonel Gibsy butted in with, "Young man, are you out of your mind?"

I said, "What's your status here?" I glanced at his hands and added, "That's a V.M.I, ring, isn't it? Have you any other qualifications? Are you an M.D.? Or a psychologist?"

He drew himself up and tried to look dignified-pretty difficult dressed in your skin, unless your dignity is built in, the way Mary's is. "You seem to forget that this is a military reservation."

"And you seem to forget that my wife and I aren't military personnel!" I added, "Come on, Mary. We're leaving."

"Yes, Sam."

I added to the Old Man, "I'll tell the offices where to send our mail." I started for the door with Mary following me.

The Old Man said, "Just a moment, as a favor to me." I stopped and he went on to Gibsy, "Colonel, will you step outside with me? I'd like a word in private."

Colonel Gibsy gave me a general-court-martial look but he went. We all waited. Mary sat down but I did not. The juniors continued to be poker-faced, the lieutenant colonel looked perturbed, and the little sergeant seemed about to burst. Steelton was the only one who appeared unconcerned. He took papers out of his "incoming" basket and commenced quietly to work on them.

It was ten or fifteen minutes later that a sergeant came in. "Dr. Steelton, the Commanding Officer says to go ahead."

"Very well. Sergeant," he acknowledged, then looked at me, and said, "Let's go into the operating room."

I said, "Not so fast. Who are the rest of these supernumeraries? How about them?" I indicated the lieutenant colonel.

"Eh? He's Dr. Hazelhurst-two years on Venus."

"Okay, he stays." I caught the eye of the sergeant with the grin and said, "What's your job here, sister?"

"Me? Oh, I'm sort of a chaperone."

"I'm taking over the chaperone business. Now, Doctor, suppose you sort out the spare wheels from the people you actually need for your work."

"Certainly, sir." It turned out that he wanted no one but Colonel Hazelhurst. I gathered an impression that he was glad to get rid of the gallery. We went on inside-Mary, myself, and the two specialists.

The operating room contained a psychiatrist's couch surrounded by a semi-circle of chairs. The double snout of a tri-dim camera poked unobtrusively out of the overhead; I suppose the mike was hidden in the couch. Mary went to the couch and sat down; Dr. Steelton got out an injector. "We'll try to pick up where we left off, Mrs. Nivens."

I said, "Just a moment. You have records of the earlier attempts?"

"Of course."

"Let's play them over first. I want to come up to date."

He hesitated, then answered, "If you wish. Mrs. Nivens, I suggest that you wait in my office. No, it will take quite a long time; suppose I send for you later?"

It was probably just the contrary mood that I was in; bucking the Old Man had gotten me hiked up with adrenaline. "Let's find out first if she wants to leave."

Steelton looked surprised. "You don't know what you are suggesting. These records would be emotionally disturbing to your wife, even harmful."

Hazelhurst put in, "Very questionable therapy, young man."

I said, "This isn't therapy and you know it. If therapy had been your object you would have used eidetic recall technique instead of drugs."

Steelton looked worried. "There was not time for that. We had to use rough methods for quick results. I'm not sure that I can authorize the subject to see the records."

Hazelhurst put in, "I agree with you. Doctor."

I exploded. "Damn it, nobody asked you to authorize anything and you haven't got any authority in the matter. Those records were snitched right out of my wife's head and they belong to her. I'm sick of you people trying to play God. I don't like it in a slug and I don't like it any better in a human being. She'll make up her own mind whether or not she wants to see them and whether or not I or anybody else will see them. Now ask her!"

Steelton said, "Mrs. Nivens, do you wish to see your records?"

Mary answered, "Yes, Doctor, I'd like very much to see them."

He seemed surprised. "Uh, to be sure. Do you wish to see them by yourself?" He glanced at me.

"My husband and I will see them. You and Dr. Hazelhurst are welcome to remain, if you wish."

Which they did. Presently a whole stack of tape spools were brought in, each labeled with attributed dates and ages. It would have taken us hours to go through them all, so I

discarded those which concerned Mary's life after about 1991. I could not see how they could affect the problem and Mary could see them later if she wished.

We started out with her very early life. Each record started with the subject-Mary, that is-choking and groaning and struggling the way people always do when they are being forced back on a memory track which they would rather not follow, then would come the reconstruction, both in Mary's voice and in other voices. What surprised me most was Mary's face-in the tank, I mean. We had the magnification stepped up so that the stereo image of her face was practically in our laps and one could follow every change of expression.

First her face became that of a little girl-oh, her features were the same grown-up features but I knew that I was seeing my darling as she must have been when she was very small. It made me hope that we would have a little girl ourselves.

Then her expression would change to match when other actors out of her memory took over. It was like watching an incredibly able monologist playing many parts.

Mary took it with apparent serenity but her hand stole into mine. When we came to the terrible part when her parents changed, became not her parents but slaves of slugs, she clamped down on my fingers so hard that it would have crushed a hand less hamlike than my own. But she controlled herself.

I skipped over the spools marked "period of suspended animation". I was surprised to find that there were a great many of them; I would have thought that there was nothing to dig out of the memory of a person in such a condition. Be that as it may, I could not see how she could have learned anything during that period which would tell us how the slugs had died, so I left them out and proceeded to the group concerned with the time from her resuscitation to the group concerned with her rescue from the swamps.

One thing was certain from her expressions in the imaged record: she had been possessed by a slug as soon as she was revived. The dead quality of her face was that of a slug not bothering to keep up a masquerade; the stereocasts from Zone Red were full of that expression. The barren qualities of her memories from that period confirmed it.

Then, rather suddenly, she was no longer hag-ridden but was again a little girl, a very sick and frightened little girl. There was a delirious quality to her remembered thoughts, but, at the last, a new voice came out loud and clear; "Well, skin me alive come Sunday! Look, Pete-it's a little girl!"

Another voice answered, "Alive?" and the first voice answered, "I don't know."

The rest of that tape carried on into Kaiserville, her recovery, and many new voices and memories; presently it ended.

"I suggest," Dr. Steelton said as he took the tape out of the projector, "that we play another one of the same period. They are all slightly different and this period is the key to the whole matter."

"Why, Doctor?" Mary wanted to know.

"Eh? Of course you need not see them if you don't want to-but this period is the one which we are actually investigating. From your memories we must build up a picture of what happened to the parasites on Venus, why they died. In particular, if we could tell just what killed the titan which, uh, possessed you before you were found-what killed it and left you alive-we might well have the weapon we need."

"But don't you know?" Mary asked wonderingly.

"Eh? Not yet, not yet-but we'll get it. The human memory is an amazingly complete record, even though unhandy to use."

"But I can tell you now-I thought you knew. It was 'nine-day fever'."

"What?" Hazelhurst was out of his chair as if prodded.

"But of course. Couldn't you tell from my face? It was utterly characteristic-the mask, I mean. I saw it several times; I used to nurse it back ho-back in Kaiserville, because I had had it once and was immune to it."

Steelton said, "How about it Doctor? Have you ever seen a case of it?"

"Seen a case? No, I can't say that I have; by the time of the second expedition they had the vaccine for it. I'm thoroughly acquainted with its clinical characteristics, of course."

"But can't you tell from this record?"

"Well," Hazelhurst answered carefully, "I would say that what we have seen is consistent with it-but not conclusive, not conclusive."

"What's not conclusive?" Mary said sharply. "I told you it was 'nine-day fever'."

"We must be sure," Steelton said apologetically.

"How sure can you get? There is no question about it. I was told that I had had nine-day fever, that I had been sick with it when Pete and Frisco found me. I nursed other cases later and I never caught it again. I remember what their faces looked like when they were ready to die-just like my own face in the record. Anyone who has ever seen a case never forgets it and could not possibly mistake it for anything else. What more do you want? Fiery letters in the sky?" I have never seen Mary so close to losing her temper-except once. I said to myself: look out, gentlemen, better duck!

Steelton said, "I think you have proved your point, dear lady-but tell me: you were believed to have no memory of this period and my own experience with you leads me to think so. Now you speak as if you had direct, conscious memory-yes?"

Mary looked puzzled. "I remember it now-I remember it quite clearly. I haven't thought about it in many years."

"I think I understand." He turned to Hazelhurst. "Well, Doctor? Do we have a culture of it in the laboratory? Have your boys done any work on it?"

Hazelhurst seemed stunned. "Work on it? Of course not! It's utterly out of the question-nine-day fever! We might as well use polio-or typhus. I'd rather treat a hangnail with an ax!"

I touched Mary's arm and said, "Let's go, darling. I think we have done all the damage we can." As we left I saw that she was trembling and that her eyes were full of tears. I took her into the messroom for systemic treatment-distilled.

Later on I bedded Mary down for a nap and sat with her until I was sure she was asleep. Then I looked up my father; he was in the office they had assigned to him. The green privacy light was already on. "Howdy," I said.

He looked at me speculatively. "Well, Elihu, I hear that you hit the jackpot."

"I prefer to be called 'Sam'," I answered.

"Very well, Sam. Success is its own excuse; nevertheless the jackpot appears to be disappointingly small. The situation seems to be almost as hopeless as before. Nine-day fever, no wonder the colony died out and the slugs as well. I don't see how we can use it. We can't expect everyone to have Mary's indomitable will to live."

I understood him; the fever carried a 98-percent plus death rate among unprotected Earthmen. With those who had taken the shots the rate was an effective zero-but that did not figure. We needed a bug that would just make a man sick-but would kill his slug. "I can't see that it makes much difference," I pointed out. "It's odds-on that you will have typhus-or plague-or both-throughout the Mississippi Valley in the next six weeks."

"Or the slugs may have learned a lesson from the setback they took in Asia and will start taking drastic sanitary measures," he answered. I had not thought of that; the idea startled me so that I almost missed the next thing he said, which was: "No, Sam, you'll have to devise a better plan than that."

"I'll have to? I just work here."

"You did once-but now you've taken charge. I don't mind; I was ready to retire anyhow."

"Huh? What the devil are you talking about? I'm not in charge of anything-and don't want to be. You are head of the Section."

He shook his head. "A boss is the man who does the bossing. Titles and insignia usually come after the fact, not before. Tell me-do you think Oldfield could take over my job?"

I considered it and shook my head; Dad's chief deputy was the executive officer type, a "carry-outer", not a "think-upper". "I've known that you would take over, some day," he went on. "Now you've done it-by bucking my judgment on an important matter, forcing your own on me, and by being justified in the outcome."

"Oh, rats! I got bull-headed and forced one issue. It never occurred to you big brains that you were failing to consult the one real Venus expert you had on tap-Mary, I mean. But I didn't expect to find out anything; I had a lucky break."

He shook his head. "I don't believe in luck, Sam. Luck is a tag given by the mediocre to account for the accomplishments of genius."

I placed my hands on the desk and leaned toward him. "Okay, so I'm a genius-just the same you are not going to get me to hold the sack. When this is over Mary and I are going up in the mountains and raise kittens and kids. We don't intend to spend our time bossing screwball agents."

He smiled gently as though he could see farther into the future than I could. I went on, "I don't want your job-understand me?"

"That is what the Devil said to the Deity after he displaced him-but he found he could not help himself. Don't take it so hard, Sam. I'll keep the title for the present and give you all the help I can. In the meantime, what are your orders, sir?"

Chapter 31

The worst of it was, he meant it. I tried to correct matters by going limp on him, but it did not work. A top-level conference was called late that afternoon; I was notified but I stayed away. Shortly a very polite little WAC came to tell me that the commanding officer was waiting and would I please come at once?

So I went-and tried to stay out of the discussion. But my father has a way of conducting any meeting he is in, even if he is not in the chair, by looking expectantly at the one he wants to hear from. It's a subtle trick, as the group does not know that it is being led.

But I knew. With every eye in the room on you, it is easier to voice an opinion than to keep quiet. Particularly as I found that I had opinions.

The meeting was largely given over to moaning and groaning about the utter impossibility of using nineday fever against the slugs. Admitted that it would kill slugs-it would even kill Venerians who can be chopped in two and still survive. But it was sure death to any human-or almost any human; I was married to one who had survived-death to the enormous majority. Seven to ten days after exposure, then curtains.

"Yes, Mr. Nivens?" It was the commanding general, addressing me. I hadn't said anything but Dad's eyes were on me, waiting.

"I think there has been a lot of despair voiced at this session," I said, "and a lot of opinions given that were based on assumptions. The assumptions may not be correct."

"Yes?"

I did not have an instance in mind; I had been shooting from the hip. I continued to do so. "Well . . . for example-I hear constant reference to nine-day fever as if the 'nine-day' part were an absolute fact. It's not."

The boss brass shrugged impatiently. "It's a convenient tag-it averages nine days."

"Yes-but how do you know it lasts nine days-for a slug?"

By the murmur with which it was received I knew that I had hit the jackpot again.

A few minutes later I was being invited to explain why I thought the fever might run a different time in slugs and, if so, why it mattered. I began to feel like the after-dinner speaker who wishes he had not gotten up in the first place. But I bulled on ahead. "As to the first point," I said, "according to the record I saw this morning in the only case we know about the slug did die in less than nine days-quite a lot less. Those of you who have seen the records on my wife-and I gather that entirely too many of you have-are aware that her parasite left her, presumably dropped off and died, long before the eighth-day crisis. One datum does not fair a curve, but if it is true and experiments show it to be, then the problem is very different. A man infected with the fever might be rid of his slug in-oh, call it four days. That gives you five days to catch him and cure him."

The general whistled. "That's a pretty heroic solution, Mr. Nivens. How do you propose to cure him? For that matter, how do you propose to catch him? I mean to say, suppose we do plant an epidemic of nineday fever in Zone Red, it would take some incredibly fast footwork-in the face of stubborn resistance, remember-to locate and treat more than fifty million people before they died of the fever."

It was a hot potato, so I slung it right back. I wondered as I did so how many "experts" made their names by passing the buck. "As to the second question, that is a logistical and tactical problem-your problem, not mine. As to the first, there is your expert." I pointed to Dr. Hazelhurst. "Ask him."

Hazelhurst huffed and puffed and I knew how he felt. Insufficient former art . . . more research needed . . . experiments would be required . . . he seemed to recall that some work had been done toward an antitoxin treatment but the vaccine for immunizing had proven so successful that he was not sure the antitoxin had ever been perfected. Anyway, everyone who went to Venus nowadays was immunized before leaving. He concluded lamely by saying that the study of the exotic diseases of Venus was necessarily still in its infancy.

The general interrupted him as he was finishing. "This antitoxin business-how soon can you find out about it?"

Hazelhurst said he would get after it at once, there was a man at the Sorbonne he wanted to phone.

"Do so," his commanding officer said. "You are excused."

Hazelhurst came buzzing at our door before breakfast the next morning. I was annoyed but tried not to show it when I stepped out into the passage to see him. "Sorry to wake you," he said, "but you were right about that antitoxin matter."

"Huh?"

"They are sending me some from Paris; it should arrive any minute now. I do hope it's still potent."

"And if it isn't?"

"Well, we have the means to make it. We'll have to make it, of course, if this wild scheme is used-millions of units of it."

"Thanks for telling me," I said. "I know the general will be pleased." I started to turn away; he stopped me.

"Uh, Mr. Nivens-"

"Yes?"

"About the matter of vectors-"

"Vectors?" At the moment all the word meant to me was little arrows pointing in various directions.

"Disease vectors. We can't use rats or mice or anything like that. Do you happen to know how the fever is transmitted on Venus? By a little flying rotifer, the Venerian equivalent of an insect-but we don't have such here and that is the only way it can be carried."

"Do you mean to say you couldn't give it to me if you tried? Even with a jugful of live culture?"

"Oh, yes-I could inject you with it. But I can't picture a million paratroopers dropping into Zone Red and asking the parasite-ridden population to hold still while they gave them injections." He spread his hands helplessly.

Something started turning slowly over in my brain . . . a million men, in a single drop. "Why ask me?" I said. "It seems to be a medical problem."

"Uh, yes, it is of course. I just thought-Well, you seemed to have a ready grasp-" He paused.

"Thanks." My mind was struggling with two problems at once and beginning to have traffic problems. How many people were there in Zone Red? "Let me get this straight: suppose you had the fever and I didn't; I could not catch it from you?" The drop could not be medical men; there weren't that many.

"Not very easily. If I took a live smear from my throat and placed it in your throat, you might contract it. If I opened a vein of mine and made a trace transfusion to your veins, you would be sure to be infected with it."

"Direct contact, eh?" How many people could one paratrooper service? Ten? Twenty? Thirty? Or more? "If that is what it takes, you don't have any problem."

"Eh?"

"What's the first thing one slug does when he runs across another slug he hasn't seen lately?"

"Conjugation!"

" 'Direct conference', I've always called it-but then I use the sloppy old slug language for it. Do you think that would pass on the disease?"

"Think so? I'm sure of it! We have demonstrated, right here in this laboratory, that there is actual exchange of living protein during conjugation. They could not possibly escape direct transmission; we can infect the whole colony as if it were one body. Now why didn't I think of that?"

His words roused out a horrid memory, something about, "Would that my subjects had but one neck-" But I refrained from quoting it. "Don't go off half cocked," I said. "Better try it first. But I suspect that it will work."

"It will, it will!" He started to go, then stopped. "Oh, Mr. Nivens, would you mind very much-I know it's a great deal to ask-"

"What is? Speak up; I'm getting hungry." Actually I was anxious to work out the rest of the other problem.

"Well, would you consider permitting me to announce this method of vectoring in my report this morning? I'll give you full credit, but the general expects so much and this is just what I need to make my report complete." He looked so anxious that I almost laughed.

"Not at all," I said. "It's your department."

"That's decent of you. I'll try to return the favor." He turned away feeling happy and I turned back feeling the same way. I was beginning to like being a "genius".

I waited before reopening the door to our cubicle until I had straightened out in my mind all the main features of the big drop. Then I went in. Mary opened her eyes when I came in and gave me that long heavenly smile. I reached down and smoothed her hair. "Howdy, flame top, did you know that your husband is a genius?"

"Yes."

"You did? You never said so."

"You never asked me."

Hazelhurst gave credit all right; he referred to it as the "Nivens vector". I suppose it was natural that I should be asked to comment, though Dad looked my way first.

"I agree with Dr. Hazelhurst," I started out, "subject to experimental confirmation as outlined. However, he has properly left open for discussion certain aspects which are tactical rather than medical. While it is true that the entire body of titans might be infected from one contact, important considerations of timing-crucial, I should say-" I had worked out my whole opening speech, even to the hesitations, while eating breakfast. Mary does not chatter at breakfast, thank goodness!

"-require vectoring from many focal points. If we are to save a nominal hundred percent of the population of Zone Red, it is necessary that all the parasites be infected at as nearly the same time as possible in order that rescue squads may enter Zone Red after the slugs are no longer dangerous and before any host has passed the point where antitoxin can save him. The problem is susceptible to mathematical analysis-" Sam boy, I said to myself, you old phony, you could not solve it with an electronic integrator and twenty years of sweat. "-and should be turned over to your analytical section. However, let me sketch out the factors. Call the number of vector origins 'X'; call the number of rescue workers who much be dropped 'Y'. There will be an indefinitely large number of simultaneous solutions, with the optimum solution depending on logistic factors.

Speaking in advance of rigorous mathematical treatment-" I had done my very damndest with a slipstick, but I did not mention that. "-and basing my opinions on my own unfortunately-too-intimate knowledge of their habits, I would estimate that-"

They let me go right ahead. You could have heard a pin drop, if anybody in that bare-skinned crew had had a pin. The general interrupted me once when I placed a rather low estimate on "X"; "Mr. Nivens. I think we can assure you of any number of volunteers for vectoring."

I shook my head. "You can't accept volunteers, General."

"I think I see your objection. The disease would have to be given time to establish itself in the volunteer and the timing might be dangerously close for his safety. But I think we could get around that-a gelatin capsule with the antitoxin embedded in tissue, or something of the sort. I'm sure the staff could work it out."

I thought they could, too, but I did not say that my real objection was a deep-rooted aversion to any additional human soul having to be possessed by a slug. "You must not use human volunteers, sir. The slug will know everything that his host knows-and he simply will not go into direct conference; he'll warn the others by word of mouth instead." I did not know that I was right but it sounded plausible. "No, sir, we will use animals-apes, dogs, anything large enough to carry a slug but incapable of human speech, and in sufficient quantities to infect the whole group before any slug knows that it is sick."

I went on to give a fast sketch of the final drop, Schedule Mercy, as I visualized it. "We can assume that the first drop-Schedule Fever-can start as soon as we are sure that we will have enough units of antitoxin for the second drop. In less than a week thereafter there should be no slug left alive on this continent."

They did not applaud, but it felt that way. The general adjourned the meeting and hurried away to call Air Marshal Rexton, then sent his aide back to invite me to lunch. I sent word that I would be pleased provided the invitation included my wife, otherwise I would be unable to accept.

Dad waited for me outside the conference room. "Well, how did I do?" I asked him, more anxiously than I tried to sound.

He shook his head. "Sam, you wowed 'em. You have the makings of a politician. No, I think I'll sign you up for twenty-six weeks of stereo instead."

I tried not to show how much I was pleased. I had gotten through the whole performance without once stammering; I felt like a new man.

Chapter 32

That ape Satan which had wrung my heart so back at the National Zoo turned out to be as mean as he was billed, once he was free of his slug. Dad had volunteered to be the test case for the Nivens-Hazelhurst theories, but I put my foot down and Satan drew the short straw.

Dad made an issue out of it; he had some silly idea that it was up to him to be possessed by a slug, at least once. I told him that we had no time to waste on his sinful pride. He grew huffy but I made it stick.

It was neither filial affection nor its neo-Freudian antithesis that caused me to balk him; I was afraid of the combination of Dad-cum-slug. I did not want him on their side

even temporarily and under laboratory conditions. Not with his shifty, tricky mind! I did not know how he would manage to escape nor what he would do to wreck our plans, but I was morally certain he would, once possessed.

People who have never experienced possession, even those who have seen it, cannot appreciate that the host is utterly against us-with all his abilities intact. We could not risk having Dad against us-and I swung enough weight to overrule him.

So we used anthropoid apes for the experiments. We had on hand not only apes from the National Zoological Gardens but simian citizens from half a dozen zoos and a couple of circuses. I did not select Satan for the job; I would have let the poor beast be. The look of patient suffering on his face made one forget the slug on his back.

Satan was injected with nine-day fever on Wednesday the 13th. By Friday the fever had established; another chimp-cum-slug was introduced into his cage; the two slugs immediately went into direct conference, after which the second ape was removed.

On Sunday the 17th Satan's master shriveled up and fell off-dead. Satan was immediately injected with the antitoxin. Late Monday the other slug died and its host was dosed.

By Wednesday Satan was well though a bit thin and the second ape, Lord Fauntleroy, was on the road to recovery. I gave Satan a banana to celebrate and he took off the first joint of my left index finger and me with no time for a repair job. It was no accident either; that ape was nasty.

But a minor injury could not depress my spirits. After I had it dressed I looked for Mary, as I wanted to crow; I failed to find her and ended up in the messroom, wanting someone with whom to share a toast.

The place was empty; everyone in the labs-except me-was working harder than ever, mounting Schedule Fever and Schedule Mercy. By order of the President all possible preparations were taking place in this one lab in the Smoky Mountains. The apes for vectoring, some two hundred of them, were here, and both the culture and the antitoxin were being "cooked" here; the horses needed for serum were stalled in what had been an underground handball court.

The million-plus men necessary for the Schedule Mercy drop could not be here, but they would know nothing about it until alerted a few hours before the drop, at which time each would be issued a hand gun and two bandoleers of individual dose antitoxin injectors. Those who had never parachuted before would not be given a chance to practice; they would each be pushed, if necessary, by some sergeant with a large foot. Everything possible was being done to keep the secret close; the only way I could see that we could lose (now that we knew that our theories worked) would be for the titans to find out our plans, through a renegade or by whatever means. Too many good plans have failed because some fool told his wife about it in bed.

If we failed to keep this secret, our ape disease vectors would never get into direct conference; they would be shot on sight wherever they appeared in the titan nation. But I relaxed over my first drink, happy and reasonably sure that the secret could not leak. Traffic with the laboratory was "incoming only" until after Drop Day and Colonel Kelly censored or monitored all communication outward-Kelly was no fool.

As for a leak from outside, the chances were slight. The general, Dad, Colonel Gibsy, and myself had gone to the White House the week before, there to see the President and

Marshal Rexton. I had already convinced Dad that the way to keep this secret was not to share it with anybody; he put on a histrionic exhibition of belligerence and exasperation that got him what we wanted; in the end even Secretary Martinez was bypassed. If the President and Rexton could keep from talking in their sleep for another week, I did not see how we could miss.

A week would be none too soon; Zone Red was spreading. The counterattack they had launched at Pass Christian had not stopped there. The slugs had pushed on and now held the Gulf coast past Pensacola and there were signs that more was to come. Perhaps the slugs were growing tired of our resistance and might decide to waste human raw material by A-bombing the cities we still held. If so, we would find it hard to stop; a radar screen can alert your defenses, but it won't stop a determined attack.

But I refused to worry about that. One more week-

Colonel Kelly came in, looked around the otherwise empty room, came over and sat down beside me. "How about a drink?" I suggested. "I feel like celebrating."

He examined the hairy paunch bulging out in front of him and said, "I suppose one more beer wouldn't put me in any worse shape."

"Have two beers. Have four-a dozen." I dialed for him, and told him about the success of the experiments with the apes.

He nodded. "Yes, I had heard. Sounds good."

" 'Good', the man says! Colonel, we are on the one yard line and goal to go. A week from now the game will be won."

"So?"

"Oh, come now!" I answered, irritated by his manner. "In a short time you'll be able to put your clothes back on and lead a normal life. Or don't you think our plans will work?"

"Yes, I think they will work."

"Then why the crepe-hanging?"

Instead of answering directly he said, "Mr. Nivens, you don't think that a man with my pot belly enjoys running around without his clothes, do you?"

"I suppose not. As for myself, I'm beginning to find it pleasant. I may hate to have to give it up-saves time and it's comfortable."

"You need not worry about having to give it up. This is a permanent change."

"Huh? I don't get you. You said our plans would work and now you talk as if Schedule Sun Tan would go on forever."

"In a modified way, it will."

I said, "Pardon me? I'm stupid today."

He dialed for another beer. "Mr. Nivens, I never expected to live to see a military reservation turned into a ruddy nudist camp. Having seen it happen, I never expect to see us change back-because we can't. Pandora's box has a one-way lid. All the king's horses and all the king's men-"

"Conceded," I answered. "Things never go back quite to what they were before. Just the same, you are exaggerating. The day after the President rescinds Schedule Sun Tan the suspended blue laws will go into effect and a man without pants will be liable to arrest."

"I hope not."

"Huh? Make up your mind."

"It's made up for me. Mr. Nivens, as long as there exists a possibility that a slug is alive the polite man must be willing to bare his entire body on request-or risk getting shot. Not just this week and next week but twenty years from now, or a hundred. No, no!" he said, seeing that I was about to interrupt, "I am not disparaging your fine plans-but pardon me if I say that you have been too busy with their details to notice that they are strictly local and temporary. For example-have you made any plans for combing the Amazonian jungles, tree by tree?"

He went on apologetically, "Just a rhetorical inquiry. This globe has nearly sixty million square miles of dry land; we can't begin to search it and clean out the slugs. Shucks, man, we haven't made a dent in the rats and we've been at that a long time. Titans are trickier and more prolific than rats."

"Are you trying to tell me it's hopeless?" I demanded.

"Hopeless? Not at all. Have another drink. I'm trying to say that we are going to have to learn to live with this horror, the way we had to learn to live with the atom bomb."

I went away feeling dashed and not at all cocky. I wanted to find Mary. Some days, it occurred to me, the "genius" business wasn't worth the trouble.

Chapter 33

We were gathered in the same conference room in the White House; it put me in mind of the night after the President's message many weeks before. Dad was there; so were Mary and Rexton and Martinez. None of the "fishing cabinet" was present but their places were filled by our own lab general, by Dr. Hazelhurst, and by Colonel Gibsy. Martinez was busy trying to restore his face after having been told that he had been shunted out of the biggest show of his own department.

Nobody paid him any attention. Our eyes were on the big map still mounted across one wall; it had been four and a half days since the vector drop of Schedule Fever but the Mississippi Valley still glowed in ruby lights.

I was getting jittery, although the drop had been an apparent success and we had lost only three craft. According to the equations every slug within reach of direct conference should have been infected three days ago, with an estimated twenty-three percent overlap. The operation had been computed to contact about eighty percent of the slugs in the first twelve hours alone, mostly in the large cities.

Soon, slugs should start dying a dam sight faster than flies ever did-if we were right.

I forced myself to sit still and wondered whether those ruby lights covered a few million very sick slugs-or merely two hundred dead apes. Had somebody skipped a decimal point? Or blabbed? Or had there been an error in our reasoning so colossal that we could not see it?

Suddenly a light blinked green, right in the middle of the board; everybody sat up. Right on top of it a voice began to come out of the stereo gear though no picture built up. "This is Station Dixie, Little Rock," a very tired southern voice said. "We need help very badly. Anyone who is listening, please be good enough to pass on this message: Little Rock, Arkansas, is in the grip of a terrible epidemic. Notify the Red Cross. We have been in the hands of-" The voice trailed off, whether from weakness or transmission failure I could not be sure.

I remembered to breathe. Mary patted my hand and I sat back, relaxing consciously. It was joy too great to be pleasure. I saw now that the green light had not been Little Rock, but farther west in Oklahoma. Two more lights blinked green, one in Nebraska and one north of the Canadian line. Another voice came over, a twangy New England voice; I wondered how he had gotten into Zone Red.

"A little like election night, eh, chief?" Martinez said heartily.

"A little," the President agreed, "but we do not usually get returns from Old Mexico." He pointed to the board; a pair of green lights were showing in Chihuahua.

"By George, you're right. Well, I guess 'State' will have some international incidents to straighten out when this is over, eh?"

The President did not answer and he shut up, to my relief. The President seemed to be talking to himself; he noticed me watching him, smiled, and spoke out loud:

" ' 'Tis said that fleas have little fleas,
Upon their backs to bite 'em,
And little fleas have lesser fleas,
And so, ad infinitum.' "

I smiled to be polite though I thought the notion was gruesome, under the circumstances. The President looked away and said, "Would anyone like supper? I find that I am hungry, for the first time in days."

By late the next afternoon the board was more green than red. Rexton had caused to be set up two annunciators keyed into the command center in the New Pentagon; one showed percentage of completion of the complicated score deemed necessary before the big drop; the other showed the projected time of drop. The figures on it changed from time to time, sometimes up, sometimes down. For the past two hours they had been holding fairly steady around 17.43, East Coast time.

Finally Rexton stood up. "I'm going to freeze it at seventeen forty-five," he announced. "Mr. President, if you will excuse me?"

"Certainly, sir."

Rexton turned to Dad and myself. "If you two Don Quixote's are still determined to go, now is the time."

I stood up. "Mary, you wait for me."

She asked, "Where?" It had already been settled-and not peacefully! -that she was not to go.

The President interrupted. "I suggest that Mrs. Nivens stay here. After all, she is a member of the family."

With the invitation he gave us his best smile and I said, "Thank you, sir." Colonel Gibsy got a very odd look.

Two hours later we were coming in on our target and the jump door was open. Dad and I were last in line, after the kids who would do the real work. My hands were sweaty and I stunk with the old curtain going-up stink. I was scared as hell-I never like to jump.

Chapter 34

Gun in my left hand, antitoxin injector ready in my right, I went from door to door in my assigned block. It was an older section of Jefferson City, slums almost; it consisted of

apartment houses built fifty years ago. I had given two dozen injections and had three dozen to go before it would be time for me to rendezvous at the State House. I was getting sick of it.

I knew why I had come-it was not just curiosity; I wanted to see them die! I wanted to watch them die, see them dead, with a weary hate that passed all other needs. But now I had seen them dead and I wanted no more of it; I wanted to go home, take a bath, and forget it.

It was not hard work, just monotonous and nauseating. So far I had not seen one live slug, though I had seen many dead ones. I had burned one skulking dog that appeared to have a hump; I was not sure as the light had been bad. We had hit shortly before sundown and now it was almost full dark.

The worst of it was the smells. Whoever compared the odor of unwashed, lousy, diseased humans with that of sheep was no friend to decent sheep.

I finished checking the rooms of the apartment building I was in, shouted to make sure, and went out into the street. It was almost deserted; with the whole population sick with the fever we found few on the streets. The lone exception was a man who came weaving toward me, eyes vacant. I yelled, "Hey!"

He stopped. I said, "You are sick, but I've got what you need to get well. Hold out your arm."

He struck at me feebly. I hit him carefully with my gun and he went face down. Across his back was the red rash of the slug; I avoided that area, picked a reasonably clean and healthy patch over his kidney and stuck in the injector, bending it to break the point after it was in. The units were gas-loaded; nothing more was needed. I did not even withdraw it, but left him.

The first floor of the next house held seven people, most of them so far gone that I did not bother to speak but simply gave them their shots and hurried on. I had no trouble. The second floor was like the first.

The top floor had three empty apartments, at one of which I had to bum out the lock to enter. The fourth flat was occupied, in a manner of speaking. There was a dead woman on the floor of the kitchen, her head bashed in. Her slug was still on her shoulders, but merely resting there, for it was dead, too, and beginning to reek. I left them quickly and looked around.

In the bathroom, sitting in an old-fashioned bathtub, was a middle-aged man. His head slumped on his chest and his wrist veins were open. I thought he was dead but he looked up as I bent over him. "You're too late," he said dully. "I killed my wife."

-or too soon, I thought. From the appearance of the bottom of the tub and by his gray face, five minutes later would have been better. I looked at him, wondering whether or not to waste an injection. He spoke again. "My little girl-"

"You have a daughter?" I said loudly. "Where is she?"

His eyes flickered but he did not speak. His head slumped forward again. I shouted at him, then felt his jaw line and dug my thumb into his neck, but could find no pulse. As a favor to him I burned him carefully through the base of the brain before I left.

The child was in bed in one of the rooms, a girl of eight or so who would have been pretty had she been well. She roused and cried and called me Daddy. "Yes, yes," I said soothingly, "Daddy's going to take care of you." I gave her the injection in her leg; I don't think she noticed it.

I turned to go but she called out again. "I'm thirsty. Want a drink of water." So I had to go back into that bathroom again.

As I was giving it to her my phone shrilled and I spilled some of it. "Son! Can you hear me?"

I reached for my belt and switched on my phone. "Yes. What's up?"

"I'm in that little park just north of you. Can you come? I'm in trouble."

"Coming!" I put down the glass and started to leave-then caught by indecision, I turned back. I could not leave my new friend to wake up in that charnel house, a parent dead in each room. I gathered her up in my arms and stumbled down to the second floor. There I entered the first door I came to and laid her on a sofa. There were people in the flat, probably too sick to bother with her, but it was all I could do.

"Hurry, son!"

"On my way!" I dashed out of there and wasted no more breath talking to him, but made speed. Dad's assignment was directly north of mine, paralleling it and fronting on one of those pint-sized downtown parks. When I got around the block I did not see him at first and ran on past him.

"Here, son, over here-at the car!" This time I could hear him both through the phone and my bare ear. I swung around and spotted the car, a big Cadillac duo much like the Section often used. There was someone inside but it was too dark for me to see whether or not it was the Old Man. I approached cautiously until I heard him say, "Thank God! I thought you would never come," and knew that it was he.

I had to duck to get in through the door. It was then that he clipped me.

I came to, to find my hands tied and my ankles as well. I was in the second driver's seat of the car and the Old Man was in the other, at the controls. The wheel on my side was latched up out of the way. The sudden realization that the car was in the air brought me fully awake.

He turned and said cheerfully, "Feeling better?" I could see his slug, riding high on his shoulders.

"Some better," I admitted.

"Sorry I had to hit you," he went on, "but there was no other way."

"I suppose not."

"I'll have to leave you tied up for the present; you know that. Later on we can make better arrangements." He grinned, his old wicked grin. Most amazingly his own personality came through with every word the slug said.

I did not ask what "better arrangements" were possible; I did not need nor want to know. I concentrated on checking my bonds; I need not have bothered-the Old Man had given them his personal attention.

"Where are we going?" I asked.

"South." He fiddled with the controls. "'Way south. Just give me a moment to lay this heap in the groove and I will explain what's in store for us." He was busy for a few seconds, then said, "There-that will hold her until she levels off at thirty thousand."

The mention of that much altitude caused me to take a quick look at the control board. The duo did not merely look like one of the Section's cars; it actually was one of our souped-up jobs. "Where did you get this car?" I asked.

"The Section had it cached in Jefferson City. I looked, and, sure enough, nobody had found it. Fortunate, wasn't it?"

There could be a second opinion on that point, I thought, but I did not argue. I was still checking the possibilities-and finding them somewhere between slim and hopeless. My own gun was gone, as I could tell by the pressure. He was probably carrying his on the side away from me; it was not in sight.

"But that was not the best of it," he went on; "I had the good luck to be captured by what was almost certainly the only healthy master in the whole of Jefferson City-not that I believe in luck. So we win after all." He chuckled. "It's like playing both sides of a very difficult chess game."

"You did not tell me where we are going?" I persisted. I did not know that it would help, but I was getting nowhere fast and talking was the only action open to me.

He considered. "Out of the United States, certainly. My master may be the only one free of nine-day fever in the whole continent and I don't dare take a chance. I think the Yucatan peninsula would suit us-that's where I've got her pointed. We can hole up there and increase our numbers and work on south. When we do come back-and we will! -we won't make the same mistakes."

I said, "Dad, can't you take these ties off me? I'm losing circulation. You know you can trust me."

"Presently, presently-all in good time. Wait until we go full automatic." The car was still climbing; souped up or not, thirty thousand was a long pull for a car that had started out as a family model.

I said, "You seem to forget that I was with the masters a long time. I know the score-and I give you my word of honor."

He grinned. "Don't teach grandma how to steal sheep. If I let you loose now, you'll kill me or I'll have to kill you. And I want you alive. We're going places, son-you and me. We're fast and we're smart and we are just what the doctor ordered."

I did not have an answer. He went on, "Just the same-about you knowing the score: why didn't you tell me the score, son? Why did you hold out on me?"

"Huh?"

"You didn't tell me how it felt. Son, I had no idea that a man could feel such a sense of peace and contentment and well-being. This is the happiest I've been in years, the happiest since-" he suddenly looked puzzled, and then went on, "since your mother died. But never mind that; this is better. You should have told me."

Disgust suddenly poured over me and I forgot the cautious game I was playing. "Maybe I didn't see it that way. And neither would you, you crazy old fool, if you didn't have a filthy slug riding you, talking through your mouth, thinking with your brain!"

"Take it easy, son," he said gently-and so help me, his voice did soothe me. "You'll know better in a little while. Believe me, this is what we were intended for, this is our destiny. Mankind has been divided, warring with himself. The masters will make him whole again."

I thought to myself that there were probably custard heads just screwy enough to fall for such a line-surrender their souls willingly for a promise of security and peace. But I did not say so; I was clamping my jaws to keep from throwing up.

"But you need not wait much longer," he said suddenly, glancing at the board. "I'll nail her down in the groove." He adjusted his dead-reckoner bug, checked his board, and set

his controls. "That's a relief. Next stop: Yucatan. Now to work." He got out of his chair and knelt beside me in the crowded space. "Got to be safe," he said, as he strapped the safety belt across my middle.

I brought my knees up in his face.

He reared up and looked at me without anger. "Naughty, naughty. I could resent that-but the masters don't go in for resentment. Now be good." He went ahead, checking my wrists and feet. His nose was bleeding but he did not bother to wipe it. "You'll do," he said. "Now be patient; it won't be long."

He went back to the other control seat, sat down and leaned forward, elbows on knees. It brought his master directly into my view.

Nothing happened for some minutes, nor could I think of anything to do other than strain at my bonds. By his appearance, the Old Man was asleep, but I placed no trust in that.

A line formed straight down the middle of the horny brown covering of the slug.

As I watched it, it widened. Presently I could see the clotted opalescent horror underneath. The space between the two halves of the shell widened-and I realized that the slug was fissioning, sucking life and matter out of the body of my father to make two of itself.

I realized, too, with rigid terror, that I had no more than five minutes of individual life left to me. My new master was being born and soon would be ready to mount me.

Had it been humanly possible for flesh and bone to break the ties on me I would have broken them. I did not succeed. The Old Man paid no attention to my struggles. I doubt if he were conscious; the slugs must surely give up some measure of control while they are occupied with splitting. It must be that they simply immobilize the slave. As may be-the Old Man did not move.

By the time I had given up, worn out and sure that I could not break loose, I could see the ciliated silvery line down the center of the slug proper which means that fission is about to be complete. It was that which changed my line of reasoning, if there were reason left in my churning skull.

My hands were tied behind me, my ankles were tied, and I was belted tight across the middle to the chair. But my legs, even though fastened together, were free from my waist down; the seat had no knee belts.

I slumped down in the chair to get even more reach and swung my legs up high. I brought them down smashingly across the board-and set off every launching unit in her racks at once.

That adds up to a lot of g's-how many, I don't know, for I don't know how full her racks were. But there were plenty. We were both slammed back against the seats. Dad much harder than I was, since I was strapped down. He was thrown against the back of his seat, with his slug, open and helpless, crushed between the two masses.

It splashed.

And Dad himself was caught in that terrible, total reflex, that spasm of every muscle that I had seen three times before. He bounced forward against the wheel, face contorted, fingers writhing.

The car dived.

I sat there and watched it dive, if you call it sitting when you are held in place only by the belt. If Dad's body had not hopelessly fouled the controls I might have been able to do

something about it-gotten her headed up again perhaps-with my bound feet. As it was, I tried but with no success at all. The controls were probably jammed as well as fouled.

The altimeter was clicking away busily. We had dropped to eleven thousand feet before I found time to glance at it. Then it was nine . . . seven . . . six-and we entered our last mile.

At fifteen hundred the radar interlock with the altimeter cut in and the nose units fired one at a time. The belt buffeted me across the stomach each time and I finally did throw up. I was thinking that I was saved, that now the ship would level off-though I should have known better. Dad being jammed up against the wheel as he was.

I was still thinking so as we crashed.

I came to by becoming slowly aware of a gently rocking motion. I was annoyed by it, I wanted it to stop; even a slight motion seemed to cause me more pain than I could bear. I managed to get one eye open-the other would not open at all-and looked dully around for the source of my annoyance.

Above me was the floor of the car, but I stared at it for a long time before I placed it as such. By the time I figured out what it was I was somewhat aware of where I was and what had happened. I remembered the dive and the crash-and realized that we must have crashed not into the ground but into some body of water-the Gulf of Mexico-but I did not really care.

With a sudden burst of grief I mourned my father.

The broken belt of my seat was flapping uselessly just above me. My hands were still tied and so were my ankles, and one arm at least seemed to be broken. One eye was stuck shut and it hurt me to breathe; I quit taking stock of my injuries. Dad was no longer plastered against the wheel and that puzzled me. With painful effort I rolled my head over to see the rest of the car with my one good eye. He was lying not far from me, three feet or so, from my head to his. He was bloody and cold and I was sure that he was dead. I think it took me about a half hour to cross that three feet.

I lay face to face with him, almost cheek to cheek. So far as I could tell there was no trace of life, nor, from the odd and twisted way in which he lay, did it seem possible.

"Dad," I said hoarsely. Then I screamed it. "Dad!"

His eyes flickered but did not open. "Hello, son," he whispered. "Thanks, boy, thanks-" His voice died out.

I wanted to shake him but all I could do was shout. "Dad! Wake up-are you all right?"

He spoke again, as if every word were a painful task. "Your mother-said to tell you . . . she was-proud of you." His voice died out again and his breathing was labored in that ominous dry-stick sound.

"Dad," I sobbed, "don't die-I can't get along without you."

His eyes opened wide. "Yes, you can, son." He paused and labored, then added, "I'm hurt, boy." His eyes closed again.

I could not get any more out of him, though I shouted and screamed. Presently I lay my face against his and let my tears mix with the dirt and blood.

Chapter 35

And now to clean up Titan!

Each of us who are going is writing one of these reports, for we know that we may not come back. If not, this is our legacy to free human beings-all that we learned and all that we know of how the titan parasites operate and what must be guarded against. For Kelly was right; there is no getting Humpty-Dumpty back together. In spite of the almost complete success of Schedule Mercy there is no way to be sure that the slugs are all gone. No longer ago than last week it was reported that a bear was shot, up Yukon way, wearing a hump.

The race will have to be always on guard; most especially it will have to be on guard about twenty-five years from now if we don't come back-but the flying saucers do. We don't know why the titan monsters follow the twenty-nine year cycle of Saturn's "year", but they do. The human race has many cycles which match the Earth year; the reasons may be equally simple for the titans. We hope that they are active only at one period of their "year"; if they are. Operation Vengeance may have easy pickings. Not that we are counting on it. I am going out, heaven help us, as an "applied psychologist (exotic)", but I am also a combat trooper, as is every one of us, from chaplain to cook. This is for keeps and we intend to show those slugs that they made the mistake of tangling with the toughest, meanest, deadliest, most unrelenting-and ablest-form of life in this section of space, a critter that can be killed but can't be tamed.

(I have a private hope that we will find some way to save the little elf creatures, the androgynes. We weren't able to save any of those in the saucer we found near Kansas City when the fighting was over, but that doesn't prove anything. I think we could get along with the elves. They are probably the real natives of Titan, anyhow; certainly they aren't related to the slugs.)

Whether we make it, or not, the human race has got to keep up its well-earned reputation for ferocity. If the slugs taught us anything, it was that the price of freedom is the willingness to do sudden battle, anywhere, any time, and with utter recklessness. If we did not learn that, well-"Dinosaurs, move over! We are ready to become extinct."

For who knows what dirty tricks may be lurking around this universe? The slugs may be simple and open and friendly compared with, let us say, the natives of the planets of Sirius. If this is just the opener, we had better learn from it for the main event. We thought space was empty and that we were automatically the lords of creation-even after we "conquered" space we thought so; Mars was already dead and Venus had not really gotten started. Well, if Man wants to be top dog-or even a respected neighbor-he'll have to fight for it. Beat the plowshares back into swords; the other was a maiden aunt's fancy.

Every one of us who is going has been possessed at least once. Only those who have been hag-ridden can know how tricky the slugs are, how constantly one must be on guard-or how deeply one must hate. The trip, they tell me, will take about twelve years, which will give Mary and me time to finish our honeymoon. Oh, yes, Mary is going; most of us are married couples and the single men are balanced by an equal number of single women. Twelve years isn't a trip; it's a way of living.

When I told Mary that we were going to Saturn her single comment was, "Yes, dear."

We'll have time for two or three kids, too. As Dad says, "The race must go on, even if it doesn't know where."

This report is loose-jointed in spots, and I can see that some must be cut and some must be censored before it is transcribed. But I have put everything into it, as I saw it and

as I felt it, for war with another race is psychological war, not war of gadgets, and what I thought and what I felt may be more important than what I did.

I am finishing this report in Space Station Beta, from which we will transship to our vessel U.N.S. Avenger. I will not have time to make corrections; this will have to go as is, for the historians to have fun with. We said good-by to Dad last night at Pikes Peak Port and left our little girl with him. She did not understand and that was hard. But it was better so-and Mary and I will look into the matter of having another, at once.

When I said good-by Dad corrected me. "So long, you mean. You'll be back and I intend to hang on, getting crankier and meaner every year, until you do." I said I hoped so. He nodded. "You'll make it. You're too tough and mean to die. I've got a lot of confidence in you and the likes of you, son."

We are about to transship. I feel exhilarated. Puppet masters-the free men are coming to kill you!

Death and Destruction!

About the Author

ROBERT ANSON HEINLEIN was born in Butler, Missouri, in 1907. A graduate of the U.S. Naval Academy, he was retired, disabled, in 1934. He studied mathematics and physics at the graduate school of the University of California and owned a silver mine before beginning to write science fiction, in 1939. In 1947 his first book of fiction, ROCKET SHIP GALILEO, was published. His novels include DOUBLE STAR (1956), STARSHIP TROOPERS (1959), STRANGER IN A STRANGE LAND (1961), and THE MOON IS A HARSH MISTRESS (1966), all winners of the Hugo Award. Heinlein was guest commentator for the Apollo II first lunar landing. In 1975 he received the Grand Master Nebula Award for lifetime achievement. Mr. Heinlein died in 1988.

Requiem

On a high hill in Samoa there is a grave. Inscribed on the marker are these words:

"Under the wide and starry sky
Dig my grave and let me lie
Glad did I live and gladly die
And I lay me down with a will!

"This be the verse which you grave for me:
'Here he lies where he longed to be,
Home is the sailor, home from the sea,
And the hunter home from the hill.'"

These lines appear another place -- scrawled on a shipping tag torn from a compressed-air container, and pinned to the ground with a knife.

It wasn't much of a fair, as fairs go. The trottin' races didn't promise much excitement, even though several entries claimed the blood of the immortal Dan Patch. The tents and concession booths barely covered the circus grounds, and the pitchmen seemed discouraged.

D.D. Harriman's chauffeur could not see any reason for stopping. They were due in Kansas City for a directors' meeting, that is to say, Harriman was. The chauffeur had private reasons for promptness, reasons involving darktown society on Eighteenth Street. But the Boss not only stopped, but hung around.

Bunting and a canvas arch made the entrance to a large enclosure beyond the race track. Red and gold letters announced:

This way to the MOON ROCKET!!!!
See it in actual flight!
Public Demonstration Flights
Twice Daily
This is the ACTUAL TYPE used by the
First Man to reach the MOON!!!
YOU can ride in it!! -- $50.OO

A boy, nine or ten years old, hung around the entrance and stared at the posters.

"Want to see the ship, son?"

The kid's eyes shone. "Gee, mister. I sure would."

"So would I. Come on." Harriman paid out a dollar for two pink tickets which entitled them to enter the enclosure and examine the rocket ship. The kid took his and ran on ahead with the single-mindedness of youth. Harriman looked over the stubby curved lines of the ovoid body. He noted with a professional eye that she was a single-jet type with fractional controls around her midriff. He squinted through his glasses at the name

painted in gold on the carnival red of the body, _Care Free_. He paid another quarter to enter the control cabin.

When his eyes had adjusted to the gloom caused by the strong ray filters of the ports he let them rest lovingly on the keys of the console and the semi-circle of dials above. Each beloved gadget was in its proper place. He knew them, graven in his heart.

While he mused over the instrument board, with the warm liquid of content soaking through his body, the pilot entered and touched his arm.

"Sorry, sir. We've got to cast loose for the flight."

"Eh?" Harriman started, then looked at the speaker. Handsome devil, with a good skull and strong shoulders, reckless eyes and a self-indulgent mouth, but a firm chin. "Oh, excuse me, Captain."

"Quite all right."

"Oh, I say, Captain, er, uh. . ."

"McIntyre."

"Captain McIntyre, could you take a passenger this trip?" The old man leaned eagerly toward him.

"Why, yes, if you wish. Come along with me." He ushered Harriman into a shed marked OFFICE which stood near the gate. "Passenger for a check over, doc."

Harriman looked startled but permitted the medico to run a stethoscope over his thin chest, and to strap a rubber bandage around his arm. Presently he unstrapped it, glanced at McIntyre, and shook his head.

"No go, doc?"

"That's right, Captain."

Harriman looked from face to face. "My heart's all right -- that's just a flutter."

The physician's brows shot up. "Is it? But it's not just your heart; at your age your bones are brittle, too brittle to risk a take-off."

"Sorry, sir," added the pilot, "but the Bates County Fair Association pays the doctor here to see to it that I don't take anyone up who might be hurt by the acceleration."

The old man's shoulders drooped miserably. "I rather expected it."

"Sorry, sir." McIntyre turned to go, but Harriman followed him out.

"Excuse me, Captain--"

"Yes?"

"Could you and your, uh, engineer have dinner with me after your flight?"

The pilot looked at him quizzically. "I don't see why not. Thanks."

"Captain McIntyre, it is difficult for me to see why anyone would quit the Earth-Moon run." Fried chicken and hot biscuits in a private dining room of the best hotel the little town of Butler afforded, three-star Hennessey and Corona-Coronas had produced a friendly atmosphere in which three men could talk freely.

"Well, I didn't like it."

"Aw, don't give him that, Mac -- you know damn well it was Rule G that got you." McIntyre's mechanic poured himself another brandy as he spoke.

McIntyre looked sullen. "Well, what if I did take a couple o' drinks? Anyhow, I could have squared that -- it was the damn persnickety regulations that got me fed up. Who are you to talk? -- Smuggler!"

"Sure I smuggled! Who wouldn't with all those beautiful rocks just aching to be taken back to Earth. I had a diamond once as big as... But if I hadn't been caught I'd be in Luna City tonight. And so would you, you drunken blaster ... with the boys buying us drinks, and the girls smiling and making suggestions..." He put his face down and began to weep quietly.

McIntyre shook him. "He's drunk."

"Never mind." Harriman interposed a hand. "Tell me, are you really satisfied not to be on the run any more?"

McIntyre chewed his lip. "No, he's right of course. This barnstorming isn't what it's all cracked up to be. We've been hopping junk at every pumpkin doin's up and down the Mississippi valley -- sleeping in tourist camps, and eating at grease burners. Half the time the sheriff has an attachment on the ship, the other half the Society for the Prevention of Something or Other gets an injunction to keep us on the ground. It's no sort of a life for a rocket man."

"Would it help any for you to get to the Moon?"

"Well. . . Yes. I couldn't get back on the Earth-Moon run, but if I was in Luna City, I could get a job hopping ore for the Company -- they're always short of rocket pilots for that, and they wouldn't mind my record. If I kept my nose clean, they might even put me back on the run, in time."

Harriman fiddled with a spoon, then looked up. "Would you young gentlemen be open to a business proposition?"

"Perhaps. What is it?"

"You own the _Care Free_?"

"Yeah. That is, Charlie and I do -- barring a couple of liens against her. What about it?"

"I want to charter her... for you and Charlie to take me to the Moon!"

Charlie sat up with a jerk. "D'joo hear what he said, Mac? He wants us to fly that old heap to the Moon!"

McIntyre shook his head. "Can't do it, Mister Harriman. The old boat's worn out. You couldn't convert to escape fuel. We don't even use standard juice in her -- just gasoline and liquid air. Charlie spends all of his time tinkering with her at that She's going to blow up some day."

"Say, Mister Harriman," put in Charlie, "what's the matter with getting an excursion permit and going in a Company ship?"

"No, son," the old man replied, "I can't do that. You know the conditions under which the U. N. granted the Company a monopoly on lunar exploitation -- no one to enter space who was not physically qualified to stand up under it. Company to take full responsibility for the safety and health of all citizens beyond the stratosphere. The official reason for granting the franchise was to avoid unnecessary loss of life during the first few years of space travel."

"And you can't pass the physical exam?" Harriman shook his head.

"Well, what the hell -- if you can afford to hire us, why don't you just bribe yourself a brace of Company docs? It's been done before."

Harriman smiled ruefully. "I know it has, Charlie, but it won't work for me. You see, I'm a tad too prominent. My full name is Delos D. Harriman."

"What? You are old D.D.? But hell's bells, you own a big slice of the Company yourself -- you practically are the Company; you ought to be able to do anything you like, rules or no rules."

"That is a not unusual opinion, son, but it is incorrect. Rich men aren't more free than other men; they are less free, a good deal less free. I tried to do what you suggest, but, the other directors would not permit me. They are afraid of losing their franchise. It costs them a good deal in -- uh -- political contact expenses to retain it, as it is."

"Well, I'll be a-- Can you tie that, Mac? A guy with lots of dough, and he can't spend it the way he wants to." McIntyre did not answer, but waited for Harriman to continue.

"Captain McIntyre, if you had a ship, would you take me?"

McIntyre rubbed his chin. "It's against the law."

"I'd make it worth your while."

"Sure he would, Mr. Harriman. Of course you would, Mac. Luna City! Oh, baby!"

"Why do you want to go to the Moon so badly, Mister Harriman?"

"Captain, it's the one thing I've really wanted to do all my life -- ever since I was a young boy. I don't know whether I can explain it to you, or not. You young fellows have grown up to rocket travel the way I grew up to aviation. I'm a great deal older than you are, at least fifty years older. When I was a kid practically nobody believed that men would ever reach the Moon. You've seen rockets all your lives, and the first to reach the Moon got there before you were a young boy. When I was a boy they laughed at the idea.

"But I believed -- I believed. I read Verne, and Wells, and Smith, and I believed that we could do it -- that we would do it. I set my heart on being one of the men to walk the surface of the Moon, to see her other side, and to look back on the face of the Earth, hanging in the sky.

"I used to go without my lunches to pay my dues in the American Rocket Society, because I wanted to believe that I was helping to bring the day nearer when we would reach the Moon. I was already an old man when that day arrived. I've lived longer than I should, but I would not let myself die... I will not! -- until I have set foot on the Moon."

McIntyre stood up and put out his hand. "You find a ship, Mister Harriman. I'll drive 'er."

"Atta' boy, Mac! I told you he would, Mister Harriman."

Harriman mused and dozed during the half-hour run to the north into Kansas City, dozed in the light troubled sleep of old age. Incidents out of a long life ran through his mind in vagrant dreams. There was that time... oh, yes, 1910 ... A little boy on a warm spring night;

"What's that, Daddy?" -- "That's Halley's comet, Sonny." -- "Where did it come from?" -- "I don't know, Son. From way out in the sky somewhere." -- "It's _beyoootiful_, Daddy. I want to touch it." -- "'Fraid not, Son."

"Delos, do you mean to stand there and tell me you put the money we had saved for the house into that crazy rocket company?" -- "Now, Charlotte, please! It's not crazy; it's a sound business investment. Someday soon rockets will fill the sky. Ships and trains will be obsolete. Look what happened to the men that had the foresight to invest in Henry Ford." -- "We've been all over this before." -- "Charlotte, the day will come when men will rise up off the Earth and visit the Moon, even the planets. This is the beginning." --

"Must you shout?" -- "I'm sorry, but--" -- "I feel a headache coming on. Please try to be a little quiet when you come to bed."

He hadn't gone to bed. He had sat out on the veranda all night long, watching the full Moon move across the sky. There would be the devil to pay in the morning, the devil and a thin-lipped silence. But he'd stick by his guns. He'd given in on most things, but not on this. But the night was his. Tonight he'd be alone with his old friend. He searched her face. Where was Mare Crisium? Funny, he couldn't make it out. He used to be able to see it plainly when he was a boy. Probably needed new glasses -- this constant office work wasn't good for his eyes.

But he didn't need to see, he knew where they all were; Crisium, Mare Fecunditatis, Mare Tranquilitatis -- that one had a satisfying roll! -- the Apennines, the Carpathians, old Tycho with it's mysterious rays.

Two hundred and forty thousand miles -- ten times around the Earth. Surely men could bridge a little gap like that. Why, he could almost reach out and touch it, nodding there behind the elm trees. Not that he could help. He hadn't the education.

"Son, I want to have a little serious talk with you." -- "Yes, Mother." -- "I know you had hoped to go to college next year--" (Hoped! He had lived for it. The University of Chicago to study under Moulton, then on to the Yerkes Observatory to work under the eye of Dr. Frost himself) -- "and I had hoped so too. But with your father gone, and the girls growing up, it's harder to make ends meet. You've been a good boy, and worked hard to help out. I know you'll understand." -- "Yes, Mother."

"Extra! Extra! STRATOSPHERE ROCKET REACHES PARIS. Read aaaaallllll about 't." The the little man in the bifocals snatched at the paper and hurried back to the office. -- "Look at this, George." -- "Huh? Hmm, interesting, but what of it?" -- "Can't you see? The next stage is to the Moon!" -- "God, but you're a sucker, Delos. The trouble with you is, you read too many of those trashy magazines. Now I caught my boy reading one of 'em just last week, _Stunning Stories_, or some such title, and dressed him down proper. Your folks should have done you the same favor." -- Harriman squared his narrow, middle-aged shoulders. "They will so reach the Moon!" -- His partner laughed. "Have it your own way. If baby wants the Moon, papa bring it for him. But you stick to your discounts and commissions; that's where the money is."

The big car droned down the Paseo, and turned off on Armour Boulevard. Old Harriman stirred uneasily in his sleep and muttered to himself.

"But Mister Harriman--" The young man with the notebook was plainly perturbed. The old man grunted.

"You heard me. Sell 'em. I want every share I own realized in cash as rapidly as possible; Spaceways, Spaceways Provisioning Company, Artemis Mines, Luna City Recreations, the whole lot of them."

"It will depress the market. You won't realize the full value of your holdings."

"Don't you think I know that? I can afford it."

"What about the shares you had earmarked for Richardson Observatory, and for the Harriman Scholarships?"

"Oh, yes. Don't sell those. Set up a trust. Should have done it long ago. Tell young Kamens to draw up the papers. He knows what I want"

The interoffice visor flashed into life. "The gentlemen are here, Mr. Harriman."

"Send 'em in. That's all, Ashley. Get busy." Ashley went out as McIntyre and Charlie entered. Harriman got up and trotted forward to greet them.

"Come in, boys, come in. I'm so glad to see you. Sit down. Sit down. Have a cigar."

"Mighty pleased to see you, Mr. Harriman," acknowledged Charlie. "In fact, you might say we need to see you."

"Some trouble, gentlemen?" Harriman glanced from face to face. McIntyre answered him.

"You still mean that about a job for us, Mr. Harriman?"

"Mean it? Certainly, I do. You're not backing out on me?"

"Not at all. We need that job now. You see the _Care Free_ is lying in the middle of the Osage River, with her jet split clear back to the injector."

"Dear me! You weren't hurt?"

"No, aside from sprains and bruises. We jumped."

Charlie chortled. "I caught a catfish with my bare teeth."

In short order they got down to business. "You two will have to buy a ship for me. I can't do it openly; my colleagues would figure out what I mean to do and stop me. I'll supply you with all the cash you need. You go out and locate some sort of a ship that can be refitted for the trip. Work, up some good story about how you are buying it for some playboy as a stratosphere yacht, or that you plan to establish an arctic-antarctic tourist route. Anything as long as no one suspects that she is being-outfitted for space flight.

"Then, after the Department of Transport licenses her for strato flight, you move out to a piece of desert out west -- I'll find a likely parcel of land and buy it -- and then I'll join you. Then we'll install the escape-fuel tanks, change the injectors, and timers, and so forth, to fit her for the hop. How about it?"

McIntyre looked dubious. "It'll take a lot of doing. Charlie, do you think you can accomplish that changeover without a dockyard and shops?"

"Me? Sure I can -- with your thick-fingered help. Just give me the tools and materials I want, and don't hurry me too much. Of course, it won't be fancy--"

"Nobody wants it to be fancy. I just want a ship that won't blow when I start slapping the keys. Isotope fuel is no joke."

"It won't blow, Mac."

"That's what you thought about the _Care Free_."

"That ain't fair, Mac. I ask you, Mr. Harriman -- That heap was junk, and we knew it. This'll be different. We're going to spend some dough and do it right. Ain't we, Mr. Harriman?"

Harriman patted him on the shoulder. "Certainly we are, Charlie. You can have all the money you want. That's the least of our worries. Now do the salaries and bonuses I mentioned suit you? I don't want you to be short."

"--as you know, my clients are his nearest relatives and have his interests at heart. We contend that Mr. Harriman's conduct for the past several weeks, as shown by the evidence here adduced, gives clear indication that a mind, once brilliant in the world of

finance, has become senile. It is, therefore, with the deepest regret that we pray this honorable court, if it pleases, to declare Mr. Harriman incompetent and to assign a conservator to protect his financial interests and those of his future heirs and assigns." The attorney sat down, pleased with himself.

Mr. Kamens took the floor. "May it please the court, if my esteemed friend is quite through, may I suggest that in his last few words be gave away his entire thesis. '-- the financial interests of future heirs and assigns.' It is evident that the petitioners believe that my client should conduct his affairs in such a fashion as to insure that his nieces and nephews, and their issue, will be supported in unearned luxury for the rest of their lives. My client's wife has passed on, he has no children. It is admitted that he has provided generously for his sisters and their children in times past, and that he has established annuities for such near kin as are without means of support.

"But now like vultures, worse than vultures, for they are not content to let him die in peace, they would prevent my client from enjoying his wealth in whatever manner best suits him for the few remaining years of his life. It is true that he has sold his holdings; is it strange that an elderly man should wish to retire? It is true that he suffered some paper losses in liquidation. 'The value of a thing is what that thing will bring.' He was retiring and demanded cash. Is there anything strange about that?

"It is admitted that he refused to discuss his actions with his so-loving kinfolk. What law, or principle, requires a man to consult with his nephews on anything?

"Therefore, we pray that this court will confirm my client in his right to do what he likes with his own, deny this petition, and send these meddlers about their business."

The judge took off his spectacles .and polished them thoughtfully.

"Mr. Kamens, this court has as high a regard for individual liberty as you have, and you may rest assured that any action taken will be solely in the interests of your client. Nevertheless, men do grow old, men do become senile, and in such cases must be protected.

"I shall take this matter under advisement until tomorrow. Court is adjourned."

From the Kansas City Star:

"ECCENTRIC MILLIONAIRE DISAPPEARS"

"--failed to appear for the adjourned hearing. The bailiffs returned from a search of places usually frequented by Harriman with the report that he had not been seen since the previous day. A bench warrant under contempt proceedings has been issued and--"

A desert sunset is a better stimulant for the appetite than a hot dance orchestra. Charlie testified to this by polishing the last of the ham gravy with a piece of bread. Harriman handed each of the younger men cigars and took one himself.

"My doctor claims that these weeds are bad for my heart condition," he remarked as he lighted it, "but I've felt so much better since I joined you boys here on the ranch that I am inclined to doubt him." He exhaled a cloud of blue-grey smoke and resumed. "I don't think a man's health depends so much on what he does as on whether he wants to do it. I'm doing what I want to do."

"That's all a man can ask of life," agreed McIntyre.

"How does the work look now, boys?"

"My end's in pretty good shape," Charlie answered. "We finished the second pressure tests on the new tanks and the fuel lines today. The ground tests are all done, except the calibration runs. Those won't take long -- just the four hours to make the runs if I don't run into some bugs. How about you, Mac?"

McIntyre ticked them off on his fingers. "Food supplies and water on board. Three vacuum suits, a spare, and service kits. Medical supplies. The buggy already had all the standard equipment for strato flight. The late lunar ephemerides haven't arrived as yet."

"When do you expect them?"

"Any time -- they should be here now. Not that it matters. This guff about how hard it is to navigate from here to the Moon is hokum to impress the public. After all you can see your destination -- it's not like ocean navigation. Gimme a sextant and a good radar and I'll set you down any place on the Moon you like, without cracking an almanac or a star table, just from a general knowledge of the relative speeds involved."

"Never mind the personal buildup, Columbus," Charlie told him, "we'll admit you can hit the floor with your hat. The general idea is, you're ready to go now. Is that right?"

"That's it."

"That being the case, I could run those tests tonight. I'm getting jumpy -- things have been going too smoothly. If you'll give me a hand, we ought to be in bed by midnight."

"O.K., when I finish this cigar."

They smoked in silence for a while, each thinking about the coming trip and what it meant to him. Old Harriman tried to repress the excitement that possessed him at the prospect of immediate realization of his life-long dream.

"Mr. Harriman--"

"Eh? What is it, Charlie?"

"How does a guy go about getting rich, like you did?"

"Getting rich? I can't say; I never tried to get rich. I never wanted to be rich, or well known, or anything like that."

"Huh?"

"No, I just wanted to live a long time and see it all happen. I wasn't unusual; there were lots of boys like me -- radio hams, they were, and telescope builders, and airplane amateurs. We had science clubs, and basement laboratories, and science-fiction leagues -- the kind of boys who thought there was more romance in one issue of the _Electrical Experimenter_ than in all the books Dumas ever wrote. We didn't want to be one of Horatio Alger's Get-Rich heroes either, we wanted to build space ships. Well, some of us did."

"Jeez, Pop, you make it sound exciting."

"It was exciting, Charlie. This has been a wonderful, romantic century, for all of its bad points. And it's grown more wonderful and more exciting every year. No, I didn't want to be rich; I just wanted to live long enough to see men rise up to the stars, and, if God was good to me, to go as far as the Moon myself." He carefully deposited an inch of white ash in a saucer. "It has been a good life. I haven't any complaints."

McIntyre pushed back his chair. "Come on, Charlie, if you're ready."

They all got up. Harriman started to speak, then grabbed at his chest, his face a dead grey-white. "Catch him, Mac!"

"Where's his medicine?"

"In his vest pocket."

They eased him over to a couch, broke a small glass capsule in a handkerchisf, and held it under his nose. The volatile released by the capsule seemed to bring a little color into his face. They did what little they could for him, then waited for him to regain consciousness.

Charlie broke the uneasy silence. "Mac, we ain't going through with this."

"Why not?"

"It's murder. He'll never stand up under the initial acceleration."

"Maybe not, but it's what he wants to do. You heard him."

"But we oughtn't to let him."

"Why not? It's neither your business, nor the business of this damn paternalistic government, to tell a man not to risk his life doing what he really wants to do."

"All the same, I don't feel right about it. He's such a swell old duck."

"Then what d'yuh want to do with him -- send him back to Kansas City so those old harpies can shut him up in a laughing academy till he dies of a broken heart?"

"N-no-o-o -- not that."

"Get out there, and make your set-up for those test runs. I'll be along."

A wide-tired desert runabout rolled in the ranch yard gate the next morning and stopped in front of the house. A heavy-set man with a firm, but kindly, face climbed out and spoke to McIntyre, who approached to meet him.

"You James Mcintyre?"

"What about it?"

"I'm the deputy federal marshal hereabouts. I got a warrant for your arrest."

"What's the charge?"

"Conspiracy to violate the Space Precautionary Act."

Charlie joined the pair. "What's up, Mac?"

The deputy answered. "You'd be Charles Cummings, I guess. Warrant here for you. Got one for a man named Harriman, too, and a court order to put seals on your space ship."

"We've no space ship."

"What d'yuh keep in that big shed?"

"Strato yacht."

"So? Well, I'll put seals on her until a space ship comes along. Where's Harriman?"

"Right in there." Charlie obliged by pointing, ignoring McIntyre's scowl.

The deputy turned his head. Charlie couldn't have missed the button by a fraction of an inch for the deputy collapsed quietly to the ground. Charlie stood over him, rubbing his knuckles and mourning.

"Damn it to hell -- that's the finger I broke playing shortstop. I'm always hurting that finger."

"Get Pop into the cabin," Mac cut him short, "and strap him into his hammock."

"Aye aye, Skipper."

They dragged the ship by tractor out of the hangar, turned, and went out the desert plain to find elbow room for the take-off. They climbed in. McIntyre saw the deputy from his starboard conning port. He was staring disconsolately after them.

Mcintyre fastened his safety belt, settled his corset, and spoke into the engineroom speaking tube. "All set, Charlie?"

"All set, Skipper. But you can't raise ship yet, Mac -- _She ain't named!_"

"No time for your superstitions!"

Harriman's thin voice reached them. "Call her the _Lunatic_ -- It's the only appropriate name!"

McIntyre settled his head into the pads, punched two keys, then three more in rapid succession, and the _Lunatic_ raised ground.

"How are you, Pop?"

Charlie searched the old man's face anxiously. Harriman licked his lips and managed to speak. "Doing fine, son. Couldn't be better."

"The acceleration is over; it won't be so bad from here on. I'll unstrap you so you can wiggle around a little. But I think you'd better stay in the hammock." He tugged at buckles. Harriman partially repressed a groan.

"What is it, Pop?"

"Nothing. Nothing at all. Just go easy on that side."

Charlie ran his fingers over the old man's side with the sure, delicate touch of a mechanic. "You ain't foolin' me none, Pop. But there isn't much I can do until we ground."

"Charlie--"

"Yes, Pop?"

"Can't I move to a port? I want to watch the Earth."

"Ain't nothin' to see yet; the ship hides it. As soon as we turn ship, I'll move you. Tell you what; I'll give you a sleepy pill, and then wake you when we do."

"No!"

"Huh?"

"I'll stay awake."

"Just as you say, Pop."

Charlie clambered monkey fashion to the nose of the ship, and anchored to the gymbals of the pilot's chair. McIntyre questioned him with his eyes.

"Yeah, he's alive all right," Charlie told him, "but he's in bad shape."

"How bad?"

"Couple of cracked ribs anyhow. I don't know what else. I don't know whether he'll last out the trip, Mac. His heart was pounding something awful."

"He'll last, Charlie. He's tough."

"Tough? He's delicate as a canary."

"I don't mean that. He's tough way down inside where it counts."

"Just the same you'd better set her down awful easy if you want to ground with a full complement aboard."

"I will. I'll make one full swing around the Moon and ease her in on an involute approach curve. We've got enough fuel, I think."

They were now in a free orbit; after McIntyre turned ship, Charlie went back, unslung the hammock, and moved Harriman, hammock and all, to a side port. Mcliityre steadied the ship about a transverse axis so that the tail pointed toward the sun, then gave a short blast on two tangential jets opposed in couple to cause the ship to spin slowly about her longitudinal axis, and thereby create a slight artificial gravity. The initial weightlessness when coasting commenced had knotted the old man with the characteristic nausea of free flight, and the pilot wished to save his passenger as much discomfort as possible.

But Harriman was not concerned with the condition of his stomach. There it was, all as he had imagined it so many times.

The Moon swung majestically past the view port, wider than he had ever seen it before, all of her familiar features cameo clear. She gave way to the Earth as the ship continued its slow swing, the Earth itself as he had envisioned her, appearing like a noble moon, many times as wide as the Moon appears to the Earthbound, and more luscious, more sensuously beautiful than the silver Moon could be. It was sunset near the Atlantic seaboard -- the line of shadow cut down the coast line of North America, slashed through Cuba, and obscured all but the west coast of South America. He savored the mellow blue of the Pacific Ocean, felt the texture of the soft green and brown of the continents, admired the blue-white cold of the polar caps. Canada and the northern states were obscured by cloud, a vast low pressure area that spread across the continent. It shone with an even more satisfactory dazzling white than the polar caps.

As the ship swung slowly, around, Earth would pass from view, and the stars would march across the port the same stars he had always known, but steady, brighter, and unwinking against a screen of perfect, live black. Then the Moon would swim into view again to claim his thoughts.

He was serenely happy in a fashion not given to most men, even in a long lifetime. He felt as if he were every man who has ever lived, looked up at the stars, and longed.

As the long hours came and went he watched and dozed and dreamed. At least once he must have fallen into deep sleep, or possibly delirium, for he came to with a start, thinking that his wife, Charlotte, was calling to him. "Delos!" the voice had said. "Delos! Come in from there! You'll catch your death of cold in that night air."

Poor Charlotte! She had been a good wife to him, a good wife. He was quite sure that her only regret in dying had been her fear that he could not take proper care of himself. It had not been her fault that she had not shared his dream, and his need.

Charlie rigged the hammock in such a fashion that Harriman could watch from the starboard port when they swung around the far face of the Moon. He picked out the landmarks made familiar to him by a thousand photographs with nostalgic pleasure, as if he were returning to his own country. Mcintyre brought her slowly down as they came back around to the Earthward face, and prepared to land east of Mare Fecunditatis, about ten miles from Luna City.

It was not a bad landing, all things considered. He had to land without coaching from the ground, and he had no second pilot to watch the radar for him. In his anxiety to make it gentle he missed his destination by some thirty miles, but he did his cold-sober

best. But at that it was bumpy. As they grounded and the pumice dust settled around them, Charlie came up to the control station.

"How's our passenger?" Mac demanded.

"I'll see, but I wouldn't make any bets. That landing stunk, Mac."

"Damn it, I did my best."

"I know you did, Skipper. Forget it."

But the passenger was alive and conscious although bleeding from the nose and with a pink foam on his lips. He was feebly trying to get himself out of his cocoon. They helped him, working together.

"Where are the vacuum suits?" was his first remark.

"Steady, Mr. Harriman. You can't go out there yet. We've got to give you some first aid."

"_Get me that suit!_ First aid can wait."

Silently they did as he ordered. His left leg was practically useless, and they had to help him through the lock, one on each side. But with his inconsiderable mass having a lunar weight of only twenty pounds, he was no burden.. They found a place some fifty yards from the ship where they could prop him up and let him look, a chunk of scoria supporting his head.

Mcintyre put his helmet against the old man's and spoke. "We'll leave you here to enjoy the view while we get ready for the trek into town. It's a forty-miler, pretty near, and we'll have to break out spare air bottles and rations and stuff. We'll be back soon."

Harriman nodded without answering, and squeezed their gauntlets with a grip that was surprisingly strong.

He sat very quietly, rubbing his hands against the soil of the Moon and sensing the curiously light pressure of his body against the ground. At long last there was peace in his heart. His hurts had ceased to pain him. He was where he had longed to be -- he had followed his need.

Over the western horizon hung the Earth at last quarter, a green-blue giant moon. Overhead the Sun shone down from a black and starry sky. And underneath the Moon, the soil of the Moon itself. He was on the Moon!

He lay back still while a bath of content flowed over him like a tide at flood, and soaked to his very marrow.

His attention strayed momentarily, and he thought once again that his name was called. Silly, he thought, I'm getting old -- my mind wanders.

Back in the cabin Charlie and Mac were rigging shoulder yokes on a stretcher. "There. That will do," Mac commented. "We'd better stir Pop out; we ought to be going."

"I'll get him," Charlie replied. "I'll just pick him up and carry him. He don't weigh nothing."

Charlie was gone longer than Mcintyre had expected him to be. He returned alone. Mac waited for him to close the lock, and swing back his helmet. "Trouble?"

"Never mind the stretcher, Skipper. We won't be needin' it.

"Yeah, I mean it," he continued. "Pop's done for. I did what was necessary."

Mcintyre bent down without a word and picked up the wide skis necessary to negotiate the powdery ash. Charlie followed his example. Then they swung the spare air bottles over their shoulders, and passed out through the lock.

They didn't bother to close the outer door of the lock behind them.

The Roads Must Roll

"Who makes the roads roll?"

The speaker stood still on the rostrum and waited for his audience to answer him. The reply came in scattered shouts that cut through the ominous, discontented murmur of the crowd.

"We do!" - "We do!" - "Damn right!"

"Who does the dirty work 'down inside' - so that Joe Public can ride at his ease?"

This time it was a single roar, "We do!"

The speaker pressed his advantage, his words tumbling out in a rasping torrent. He leaned toward the crowd, his eyes picking out individuals at whom to fling his words. "What makes business? The roads! How do they move the food they eat? The roads! How do they get to work? The roads! How do they get home to their wives? The roads!" He paused for effect, then lowered his voice. "Where would the public be if you boys didn't keep them roads rolling? Behind the eight ball and everybody knows it. But do they appreciate it? Pfui! Did we ask for too much? Were our demands unreasonable? 'The right to resign whenever we want to.' Every working stiff in other lines of work has that. 'The same pay as the engineers.' Why not? Who are the real engineers around here? D'yuh have to be a cadet in a funny little hat before you can learn to wipe a bearing, or jack down a rotor? Who earns his keep: The 'gentlemen' in the control offices, or the boys 'down inside'? What else do we ask? 'The right to elect our own engineers.' Why the hell not? Who's competent to pick engineers? The technicians? - or some damn, dumb examining board that's never been 'down inside', and couldn't tell a rotor bearing from a field coil?"

He changed his pace with natural art, and lowered his voice still further. "I tell you, brother, it's time we quit fiddlin' around with petitions to the Transport Commission, and use a little direct action. Let 'em yammer about democracy; that's a lot of eye wash - we've got the power, and we're the men that count!"

A man had risen in the back of the hall while the speaker was haranguing. He spoke up as the speaker paused. "Brother Chairman," he drawled, "may I stick in a couple of words?"

"You are recognized, Brother Harvey."

"What I ask is: what's all the shootin' for? We've got the highest hourly rate of pay of any mechanical guild, full insurance and retirement, and safe working conditions, barring the chance of going deaf." He pushed his anti-noise helmet further back from his ears. He was still in dungarees, apparently just up from standing watch. "Of course we have to give ninety days notice to quit a job, but, cripes, we knew that when we signed up. The roads have got to roll - they can't stop every time some lazy punk gets bored with his billet.

"And now Soapy-" The crack of the gavel cut him short. "Pardon me, I mean Brother Soapy - tells us how powerful we are, and how we should go in for direct action. Rats! Sure we could tie up the roads, and play hell with the whole community-but so could any screwball with a can of nitroglycerine, and he wouldn't have to be a technician to do it, neither.

"We aren't the only frogs in the puddle. Our jobs are important, sure, but where would we be without the farmers - or the steel workers - or a dozen other trades and professions?"

He was interrupted by a sallow little man with protruding upper teeth, who said, "Just a minute, Brother Chairman, I'd like to ask Brother Harvey a question," then turned to Harvey and inquired in a sly voice, "Are you speaking for the guild, Brother - or just for yourself? Maybe you don't believe in the guild? You wouldn't by any chance be" - he stopped and slid his eyes up and down Harvey's lank frame - "a spotter, would you?"

Harvey looked over his questioner as if he had found something filthy in a plate of food. "Sikes," he told him, "if you weren't a runt, I'd stuff your store teeth down your throat. I helped found this guild. I was on strike in 'sixty-six. Where were you in 'sixty-six? With the finks?"

The chairman's gavel pounded. "There's been enough of this," he said. "Nobody who knows anything about the history of this guild doubts the loyalty of Brother Harvey. We'll continue with the regular order of business." He stopped to clear his throat. "Ordinarily we don't open our floor to outsiders, and some of you boys have expressed a distaste for some of the engineers we work under, but there is one engineer we always like to listen to whenever he can get away from his pressing duties. I guess maybe it's because he's had dirt under his nails the same as us. Anyhow, I present at this time Mr. Shorty Van Kleeck-"

A shout from the floor stopped him. "Brother Van Kleeck!"

"O.K.-Brother Van Kleeck, Chief Deputy Engineer of this road-town."

"Thanks, Brother Chairman." The guest speaker came briskly forward, and grinned expansively at the crowd, seeming to swell under their approval. "Thanks, Brothers. I guess our chairman is right. I always feel more comfortable here in the Guild Hall of the Sacramento Sector - or any guild hail, for that matter - than I do in the engineers' dubhouse. Those young punk cadet engineers get in my hair. Maybe I should have gone to one of the fancy technical institutes, so I'd have the proper point of view, instead of coming up from 'down inside'.

"Now about those demands of yours that the Transport Commission just threw back in your face - Can I speak freely?"

"Sure you can, Shorty!" - "You can trust us!"

"Well, of course I shouldn't say anything, but I can't help but understand how you feel. The roads are the big show these days, and you are the men that make them roll. It's the natural order of things that your opinions should be listened to, and your desires met. One would think that even politicians would be bright enough to see that. Sometimes, lying awake at night, I wonder why we technicians don't just take things over, and-"

"Your wife is calling, Mr. Gaines."

"Very well." He picked up the handset and turned to the visor screen.

"Yes, darling, I know I promised, but ... You're perfectly right, darling, but Washington has especially requested that we show Mr. Blekinsop anything be wants to see. I didn't know he was arriving today.... No, I can't turn him over to a subordinate. It wouldn't be courteous. He's Minister of Transport for Australia. I told you that.... Yes, darling, I know that courtesy begins at home, but the roads must roll. It's my job; you knew that when you married me. And this is part of my job. That's a good girl. We'll

positively have breakfast together. Tell you what, order horses and a breakfast pack and we'll make it a picnic. I'll meet you in Bakersfield - usual place.... Goodbye, darling. Kiss Junior goodnight for me."

He replaced the handset on the desk whereupon the pretty, but indignant, features of his wife faded from the visor screen. A young woman came into his office. As she opened the door she exposed momentarily the words printed on its outer side; "DIEGO-RENO ROADTOWN, Office of the Chief Engineer." He gave her a harassed glance.

"Oh, it's you. Don't marry an engineer, Dolores, marry an artist. They have more home life."

"Yes, Mr. Gaines. Mr. Blekinsop is here, Mr. Gaines."

"Already? I didn't expect him so soon. The Antipodes ship must have grounded early."

"Yes, Mr. Gaines."

"Dolores, don't you ever have any emotions?"

"Yes, Mr. Gaines."

"Hmmm, it seems incredible, but you are never mistaken. Show Mr. Blekinsop in."

"Very good, Mr. Gaines."

Larry Gaines got up to greet his visitor. Not a particularly impressive little guy, he thought, as they shook hands and exchanged formal amenities. The rolled umbrella, the bowler hat were almost too good to be true.

An Oxford accent partially masked the underlying clipped, flat, nasal twang of the native Australian. "It's a pleasure to have you here, Mr. Blekinsop, and I hope we can make your stay enjoyable."

The little man smiled. "I'm sure it will be. This is my first visit to your wonderful country. I feel at home already. The eucalyptus trees, you know, and the brown hills-"

"But your trip is primarily business?"

"Yes, yes. My primary purpose is to study your roadcities, and report to my government on the advisability of trying to adapt your startling American methods to our social problems Down Under. I thought you understood that such was the reason I was sent to you."

"Yes, 1 did, in a general way. I don't know just what it is that you wish to find out. I suppose that you have heard about our road towns, how they came about, how they operate, and so forth."

"I've read a good bit, true, but I am not a technical man, Mr. Gaines, not an engineer. My field is social and political. I want to see how this remarkable technical change has affected your people. Suppose you tell me about the roads as if I were entirely ignorant. And I will ask questions."

"That seems a practical plan. By the way, how many are there in your party?"

"Just myself. I sent my secretary on to Washington."

"I see." Gaines glanced at his wrist watch. "It's nearly dinner time. Suppose we run up to the Stockton strip for dinner. There is a good Chinese restaurant up there that I'm partial to. It will take us about an hour and you can see the ways in operation while we ride."

"Excellent."

Gaines pressed a button on his desk, and a picture formed on a large visor screen mounted on the opposite wall. It showed a strong-boned, angular young man seated at a semi-circular control desk, which was backed by a complex instrument board. A cigarette was tucked in one corner of his mouth.

The young man glanced up, grinned, and waved from the screen. "Greetings and salutations, Chief. What can I do for you?"

"Hi, Dave. You've got the evening watch, eh? I'm running up to the Stockton sector for dinner. Where's Van Kleeck?"

"Gone to a meeting somewhere. He didn't say."

"Anything to report?"

"No, sir. The roads are rolling, and all the little people are going ridey-ridey home to their dinners."

"O.K.-keep 'em rolling."

"They'll roll, Chief."

Gaines snapped off the connection and turned to Blekinsop. "Van Kleeck is my chief deputy. I wish he'd spend more time on the road and less on politics. Davidson can handle things, however. Shall we go?"

They glided down an electric staircase, and debauched on the walkway which bordered the northbound five mile-an-hour strip. After skirting a stairway trunk marked OVERPASS TO SOUTHBOUND ROAD, they paused at the edge of the first strip. "Have you ever ridden a conveyor strip before?" Gaines inquired. "It's quite simple. Just remember to face against the motion of the strip as you get on."

They threaded their way through homeward-bound throngs, passing from strip to strip. Down the center of the twenty-mile-an-hour strip ran a glassite partition which reached nearly to the spreading roof. The Honorable Mister Blekinsop raised his eyebrows inquiringly as
he looked at it.

"Oh, that?" Gaines answered the unspoken inquiry as he slid back a panel door and ushered his guest through.

"That's a wind break. If we didn't have some way of separating the air currents over the strips of different speeds, the wind would tear our clothes off on the hundred-mile-an-hour strip." He bent his head to Blekinsop's as he spoke, in order to cut through the rush of air against the road surfaces, the noise of the crowd, and the muted roar of the driving mechanism concealed beneath the moving strips. The combination of noises inhibited further conversation as they proceeded toward the middle of the roadway. After passing through three more wind screens located at the forty, sixty, and eighty-mile-an-hour strips respectively, they finally reached the maximum speed strip, the hundred-mile-an-hour strip, which made the round trip, San Diego to Reno and back, in twelve hours.

Blekinsop found himself on a walkway twenty feet wide facing another partition. Immediately opposite him an illuminated show window proclaimed:

JAKE'S STEAK HOUSE No. 4
The Fastest Meal on the Fastest Road!
"To dine on the fly Makes the miles roll by!!"

"Amazing!" said Mr. Blekinsop. "It would be like dining in a tram. Is this really a proper restaurant?"

"One of the best. Not fancy, but sound."

"Oh, I say, could we-"

Gaines smiled at him. "You'd like to try it, wouldn't you, sir?"

"I don't wish to interfere with your plans-"

"Quite all right. I'm hungry myself, and Stockton is a long hour away. Let's go in."

Gaines greeted the manageress as an old friend. "Hello, Mrs. McCoy. How are you tonight?"

"If it isn't the chief himself! It's a long time since we've had the pleasure of seeing your face." She led them to a booth somewhat detached from the crowd of dining commuters. "And will you and your friend be having dinner?"

"Yes, Mrs. McCoy-suppose you order for us-but be sure it includes one of your steaks."

"Two inches thick-from a steer that died happy." She glided away, moving her fat frame with surprising grace.

With sophisticated foreknowledge of the chief engineer's needs, Mrs. McCoy had left a portable telephone at the table. Gaines plugged it in to an accommodation jack at the side of the booth, and dialed a number.

"Hello-Davidson? Dave, this is the chief. I'm in Jake's beanery number four for supper. You can reach me by calling ten-six-six."

He replaced the handset, and Blekinsop inquired politely: "Is it necessary for you to be available at all times?"

"Not strictly necessary," Gaines told him, "but I feel safer when I am in touch. Either Van Kleeck, or myself, should be where the senior engineer of the watch - that's Davidson this shift - can get hold of us in a pinch. If it's a real emergency, I want to be there, naturally."

"What would constitute a real emergency?"

"Two things, principally. A power failure on the rotors would bring the road to a standstill, and possibly strand millions of people a hundred miles, or more, from their homes. If it happened during a rush hour we would have to evacuate those millions from the road-not too easy to do."

"You say millions-as many as that?"

"Yes, indeed. There are twelve million people dependent on this roadway, living and working in the buildings adjacent to it, or within five miles of each side."

The Age of Power blends into the Age of Transportation almost imperceptibly, but two events stand out as landmarks in the change: the achievement of cheap sun power and the installation of the first mechanized road.

The power resources of oil and coal of the United States had - save for a few sporadic outbreaks of common sense - been shamefully wasted in their development all through the first half of the twentieth century. Simultaneously, the automobile, from its humble start as a one-lunged horseless carriage, grew into a steel-bodied monster of over a hundred horsepower and capable of making more than a hundred miles an hour. They

boiled over the countryside, like yeast in ferment. In 1955 it was estimated that there was a motor vehicle for every two persons in the United States.

They contained the seeds of their own destruction. Eighty million steel juggernauts, operated by imperfect human beings at high speeds, are more destructive than war. In the same reference year the premiums paid for compulsory liability and property damage insurance by automobile owners exceeded in amount the sum paid that year to purchase automobiles. Safe driving campaigns were chronic phenomena, but were mere pious attempts to put Humpty-Dumpty together again. It was not physically possible to drive safely in those crowded metropolises. Pedestrians were sardonically divided into two classes, the quick, and the dead.

But a pedestrian could be defined as a man who had found a place to park his car. The automobile made possible huge cities, then choked those same cities to death with their numbers. In 1900 Herbert George Wells pointed out that the saturation point in the size of a city might be mathematically predicted in terms of its transportation facilities. From a standpoint of speed alone the automobile made possible cities two hundred miles in diameter, but traffic congestion, and the inescapable, inherent danger of high-powered, individually operated vehicles cancelled out the possibility.

In 1955 Federal Highway #66 from Los Angeles to Chicago, "The Main Street of America", was transformed into a superhighway for motor vehicles, with an underspeed limit of sixty miles per hour. It was planned as a public works project to stimulate heavy industry; it had an unexpected by-product. The great cities of Chicago and St. Louis stretched out urban pseudopods toward each other, until they met near Bloomington, Illinois. The two parent cities actually shrunk in population.

That same year the city of San Francisco replaced its antiquated cable cars with moving stairways, powered with the Douglas-Martin Solar Reception Screens. The largest number of automobile licenses in history had been issued that calendar year, but the end of the automobile era was in sight, and the National Defense Act of 1957 gave fair warning.

This act, one of the most bitterly debated ever to be brought out of committee, declared petroleum to be an essential and limited material of war. The armed forces had first call on all oil, above or below the ground, and eighty million civilian vehicles faced short and expensive rations. The "temporary" conditions during World War II had become permanent.

Take the superhighways of the period, urban throughout their length. Add the mechanized streets of San Francisco's hills. Heat to boiling point with an imminent shortage of gasoline. Flavor with Yankee ingenuity. The first mechanized road was opened in 1960 between Cincinnati and Cleveland.

It was, as one would expect, comparatively primitive in design, being based on the ore belt conveyors of ten years earlier. The fastest strip moved only thirty miles per hour and was quite narrow, for no one had thought of the possibility of locating retail trade on the strips themselves. Nevertheless, it was a prototype of social pattern which was to dominate the American scene within the next two decades-neither rural, nor urban, but partaking equally of both, and based on rapid, safe, cheap, convenient transportation.

Factories - wide, low buildings whose roofs were covered with solar power screens of the same type that drove the road-lined the roadway on each side. Back of them and interspersed among them were commercial hotels, retail stores, theatres, apartment houses. Beyond this long, thin, narrow strip was the open country-side, where the bulk of the population lived. Their homes dotted the hills, hung on the banks of creeks, and nestled between the farms. They worked in the "city" but lived in the "country" - and the two were not ten minutes apart.

Mrs. McCoy served the chief and his guest in person. They checked their conversation at the sight of the magnificent steaks.

Up and down the six hundred mile line, Sector Engineers of the Watch were getting in their hourly reports from their subsector technicians. "Subsector one-check!" "Subsector two-check!" Tensionometer readings, voltage, load, bearing temperatures, synchrotachometer readings-"Subsector seven-check!" Hard-bitten, able men in dungarees, who lived much of their lives 'down inside' amidst the unmuted roar of the hundred mile strip, the shrill whine of driving rotors, and the complaint of the relay rollers.

Davidson studied the moving model of the road, spread out before him in the main control room at Fresno Sector. He watched the barely perceptible crawl of the miniature hundred mile strip and subconsciously noted the reference number on it which located Jake's Steak House No. 4. The chief would be getting in to Stockton soon; he'd give him a ring after the hourly reports were in. Everything was quiet; traffic tonnage normal for rush hour; he would be sleepy before this watch was over. He turned to his Cadet Engineer of the Watch. "Mr. Barnes."

"Yes, sir."

"I think we could use some coffee."

"Good idea, sir. I'll order some as soon as the hourlies are in."

The minute hand of the control board chronometer reached twelve. The cadet watch officer threw a switch. "All sectors, report!" he said, in crisp, self-conscious tones.

The faces of two men flicked into view on the visor Screen. The younger answered him with the same air of acting under supervision. "Diego Circle - rolling!"

They were at once replaced by two more. Angeles Sector - rolling!"

Then: "Bakersfield Sector - rolling!"

And: "Fresno Sector - rolling!".

Finally, when Reno Circle had reported, the cadet turned to Davidson and reported: "Rolling, sir."

"Very well-keep them rolling!"

The visor screen flashed on once more. "Sacramento Sector, supplementary report."

"Proceed."

"Cadet Guenther, while on visual inspection as cadet sector engineer of the watch, found Cadet Alec Jeans, on watch as cadet subsector technician, and R. J. Ross, technician second class, on watch as technician for the same subsector, engaged in playing cards. It was not possible to tell with any accuracy how long they had neglected to patrol their subsector."

"Any damage?"

"One rotor running hot, but still synchronized. It was jacked down, and replaced."

"Very well. Have the paymaster give Ross his time, and turn him over to the civil authorities. Place Cadet Jeans under arrest and order him to report to me."

"Very well, sir."

"Keep them rolling!"

Davidson turned back to the control desk and dialed Chief Engineer Gaines' temporary number.

"You mentioned that there were two things that could cause major trouble on the road, Mr. Gaines, but you spoke only of power failure to the rotors."

Gaines pursued an elusive bit of salad before answering. "There really isn't a second major trouble-it won't happen. However - we are travelling along here at one hundred miles per hour. Can you visualize what would happen if this strip under us should break?"

Mr. Blekinsop shifted nervously in his chair. "Hmm - rather a disconcerting idea, don't you think? I mean to say, one is hardly aware that one is travelling at high speed, here in this snug room. What would the result be?"

"Don't let it worry you; the strip can't part. It is built up of overlapping sections in such a fashion that it has a safety factor of better than twelve to one. Several miles of rotors would have to shut down all at once, and the circuit breakers for the rest of the line fail to trip out before there could possibly be sufficient tension on the strip to cause it to part.

"But it happened once, on the Philadelphia-Jersey City Road, and we aren't likely to forget it. It was one of the earliest high speed roads, carrying a tremendous passenger traffic, as well as heavy freight, since it serviced a heavily industrialized area. The strip was hardly more than a conveyor belt, and no one had foreseen the weight it would carry. It happened under maximum load, naturally, when the high speed way was crowded. The part of the strip behind the break buckled for miles, crushing passengers against the roof at eighty miles per hour. The section forward of the break cracked like a whip, spilling passengers onto the slower ways, dropping them on the exposed rollers and rotors down inside, and snapping them up against the roof.

"Over three thousand people were killed in that one accident, and there was much agitation to abolish the roads. They were even shut down for a week by presidential order, but he was forced to reopen them again. There was no alternative."

"Really? Why not?"

"The country bad become economically dependent on the roads. They were the principal means of transportation in the industrial areas-the only means of economic importance. Factories were shut down; food didn't move; people got hungry-and the President was forced to let them roll again. It was the only thing that could be done; the social pattern had crystallized in one form, and it couldn't be changed overnight. A large, industrialized population must have large-scale transportation, not only for people, but for trade."

Mr. Blekinsop fussed with his napkin, and rather diffidently suggested, "Mr., Gaines, I do not intend to disparage the ingenious accomplishments of your great people,

but isn't it possible that you may have put too many eggs in one basket in allowing your whole economy to become dependent on the functioning of one type of machinery?"

Gaines considered this soberly. "I see your point. Yes-and no. Every civilization above the peasant and village type is dependent on some key type of machinery. The old South was based on the cotton gin. Imperial England was made possible by the steam engine. Large populations have to have machines for power, for transportation, and for manufacturing in order to live. Had it not been for machinery the large populations could never have grown up. That's not a fault of the machine; that's its virtue.

"But it is true that whenever we develop machinery to the point where it will support large populations at a high standard of living we are then bound to keep that machinery running, or suffer the consequences. But the real hazard in that is not the machinery, but the men who run the machinery. These roads, as machines, are all right. They are strong and safe and will do everything they were designed to do. No, it's not the machines, it's the men.

"When a population is dependent on a machine, they are hostages of the men who tend the machines. If their morale is high, their sense of duty strong-"

Someone up near the front of the restaurant had turned up the volume control of the radio, letting out a blast of music that drowned out Gaines' words. When the sound had been tapered down to a more nearly bearable volume, he was saying:

"Listen to that. It illustrates my point."

Blekinsop turned an ear to the music. It was a swinging march of compelling rhythm, with a modern interpretive arrangement. One could hear the roar of machinery, the repetitive clatter of mechanisms. A pleased smile of recognition spread over the Australian's face. "It's your Field Artillery Song, The Roll of the Caissons, isn't-it? But I don't see the connection."

"You're right; it was the Roll of the Caissons, but we
adapted it to our own purposes. It's the Road Song of the Transport Cadets. Wait."

The persistent throb of the march continued, and seemed to blend with the vibration of the roadway underneath into a single tympani. Then a male chorus took up the verse:

"Hear them hum!
Watch them run!
Oh, our job is never done,
For our roadways go rolling along!
While you ride;
While you glide;
We are watching 'down inside',
So your roadways keep rolling along!

"Oh, it's Hie! Hie! Hee!
The rotor men are we-
Check off the sectors loud and strong!
(spoken) One! Two! Three!
Anywhere you go
You are bound to know

That your roadways are rolling along!
(Shouted) KEEP THEM ROLLING!
That your roadways are rolling along!"

"See said Gaines, with more animation in his voice, "See? That is the real purpose of the United States Academy of Transport. That is the reason why the transport engineers are a semi-military profession, with strict discipline. We are the bottle neck, the sine qua non, of all industry, all economic life. Other industries can go on strike, and only create temporary and partial dislocations. Crops can fail here and there, and the country takes up the slack. But if the roads stop rolling, everything else must stop; the effect would be the same as a general strike-with this important difference: It takes a majority of the population, fired by a real feeling of grievance, to
create a general strike; but the men that run the roads, few as they are, can create the same complete paralysis.

"We had just one strike on the roads, back in 'sixty-six. It was justified, I think, and it corrected a lot of real, abuses-but it mustn't happen again."

"But what is to prevent it happening again, Mr. Gaines?"

"Morale-esprit de corps. The technicians in the road service are indoctrinated constantly with the idea that their job is a sacred trust. Besides which we do everything we can to build up their social position. But even more important is the Academy. We try to turn out graduate engineers imbued with the same loyalty, the same iron self-discipline, and determination to perform their duty to the community at any cost, that Annapolis and West Point and Goddard are so successful in inculcating in their graduates."

"Goddard? Oh, yes, the rocket field. And have you been successful, do you think?"

"Not entirely, perhaps, but we will be. It takes time to build up a tradition. When the oldest engineer is a man who entered the Academy in his teens, we can afford to relax a little and treat it as a solved problem."

"I suppose you are a graduate?"

Gaines grinned. "You flatter me-I must look younger than I am. No, I'm a carry-over from the army. You see, the Department of Defense operated the roads for some three months during reorganization after the strike in 'sixty-six. I served on the conciliation board that awarded pay increases and adjusted working conditions, then I was assigned-"

The signal light of the portable telephone glowed red. Gaines said, "Excuse me," and picked up the handset.'

"Yes?"

Blekinsop could overhear the voice at the other end. "This is Davidson, Chief. The roads are rolling."

"Very well. Keep them rolling!"

"Had another trouble report from the Sacramento Sector."

"Again? What this time?"

Before Davidson could reply he was cut off. As Gaines reached out to dial him back, his coffee cup, half full, landed in his lap. Blekinsop was aware, even as he was

rocked against the edge of the table, of a disquieting change in the hum of the roadway.

"What has happened, Mr. Gaines?"

"Don't know. Emergency stop-God knows why." He was dialing furiously. Shortly he flung the phone down, without bothering to return the handset to its cradle. "Phones are out. Come on! No- You'll be safe here. Wait."

"Must I?"

"Well, come along then, and stick close to me." He turned away, having dismissed the Australian cabinet minister from his mind. The strip ground slowly to a stop, the giant rotors and myriad rollers acting as fly wheels in preventing a disastrous sudden stop. Already a little knot of commuters, disturbed at their evening meal, were attempting to crowd out the door of the restaurant.

"Halt!"

There is something about a command issued by one who is used to being obeyed which enforces compliance. It may be intonation, or possibly a more esoteric power, such as animal tamers are reputed to be able to exercise in controlling ferocious beasts. But it does exist, and can be used to compel even those not habituated to obedience.

The commuters stopped in their tracks.

Gaines continued, "Remain in the restaurant until we are ready to evacuate you. I am the Chief Engineer. You will be in no danger here. You!" He pointed to a big fellow near the door. "You're deputized. Don't let anyone leave without proper authority. Mrs. McCoy, resume serving dinner."

Gaines strode out the door, Blekinsop tagging along. The situation outside permitted no such simple measures.

The hundred mile strip alone had stopped; a few feet away the next strip flew by at an unchecked ninety-five miles an hour. The passengers on it flickered past, unreal cardboard figures.

The twenty-foot walkway of the maximum speed strip had been crowded when the breakdown occurred. Now the customers of shops, of lunchstands, and of other places of business, the occupants of lounges, of television theatres-all came crowding out onto the walkway to see what had happened. The first disaster struck almost immediately.

The crowd surged, and pushed against a middle-aged woman on its outer edge. In attempting to recover her balance she put one foot over the edge of the flashing ninety-five mile strip. She realized her gruesome error, for she screamed before her foot touched the ribbon.

She spun around, and landed heavily on the moving strip, and was rolled by it, as the strip attempted to impart to her mass, at one blow, a velocity of ninety-five miles per hour-one hundred and thirty-nine feet per second: As she rolled she mowed down some of the cardboard figures as a sickle strikes a stand of grass. Quickly, she was out of sight, her identity, her injuries, and her fate undetermined, and already remote.

But the consequences of her mishap were not done with. One of the flickering cardboard figures bowled over by her relative momentum fell toward the hundred mile strip, slammed into the shockbound crowd, and suddenly appeared as a live man-but broken and bleeding, amidst the luckless, fallen victims whose bodies had checked his wild flight.

Even there it did not end. The disaster spread from its source, each hapless human ninepin more likely than not to knock down others so that they fell over the danger-laden boundary, and in turn ricocheted to a dearly bought equilibrium.

But the focus of calamity sped out of sight, and Blekinsop could see no more. His active mind, accustomed to dealing with large' numbers of individual human beings, multiplied the tragic sequence he had witnessed by twelve hundred miles of thronged conveyor strip, and his stomach chilled.

To Blekinsop's surprise, Gaines made no effort to succor the fallen, nor to quell the fear-infected mob, but turned an expressionless face back to the restaurant. When Blekinsop saw that he was actually re-entering the restaurant, he plucked at his sleeve. "Aren't we going to help those poor people?"

The cold planes of the face of the man who answered him bore no resemblance to his genial, rather boyish, host of a few minutes before. "No. Bystanders can help them - I've got the whole road to think of. Don't bother me."

Crushed, and somewhat indignant, the politician did as he was ordered. Rationally, he knew that the Chief Engineer was right-a man responsible for the safety of millions cannot turn aside from his duty to render personal service to one-but the cold detachment of such viewpoint was repugnant to him.

Gaines was back in the restaurant "Mrs. McCoy, where is your get-away?"

"In the pantry, sir."

Gaines hurried there, Blekinsop at his heels. A nervous Filipino salad boy shrank out of his way as he casually swept a supply of prepared green stuffs onto the floor and stepped up on the counter where they had rested. Directly above his head and within reach was a circular manhole, counterweighted and operated by a handwheel set in its center. A short steel ladder, hinged to the edge of the opening was swung up flat to ceiling and secured by a hook.

Blekinsop lost his hat in his endeavor to clamber quickly enough up the ladder after Gaines. When he emerged on the roof of the building. Gaines was searching the ceiling of the roadway with a pocket flashlight He was shuffling along, stooped double in the awkward four feet of space between the roof underfoot and ceiling.

He found what he sought, some fifty feet away-another manhole similar to the one they had used to escape
from below. He spun the wheel of the lock and stood up in the space, then rested his hands on the sides of the opening and with a single. lithe movement vaulted to the roof of the roadways. His companion followed him with more difficulty.

They stood in darkness, a fine, cold rain feeling at their faces. But underfoot, and stretching beyond sight on each hand, the sun power screens glowed with a faint opalescent radiance, their slight percentage of inefficiency as transformers of radiant sun power to available electrical power being evidenced as a mild phosphorescence. The effect was not illumination, but rather like the ghostly sheen of a snow covered plain seen by starlight.

The glow picked out the path they must follow to reach the rain-obscured wall of buildings bordering the ways. The path was a narrow black stripe which arched away into the darkness over the low curve of the roof. They started away on this path at a dog trot, making as much speed as the slippery footing and the dark permitted, while Blekinsop's mind still fretted at the problem of Gaines' apparently callous detachment. Although

possessed of a keen intelligence his nature was dominated by a warm, human sympathy, without which no politician, irrespective of other virtues or shortcomings, is long successful.

Because of this trait he distrusted instinctively any mind which was guided by logic alone. He was aware that, from a standpoint of strict logic, no reasonable case could be made out for the continued existence of the human race, still less for the human values he served.

Had he been able to pierce the preoccupation of his companion, he would have been reassured. On the surface Gaines' exceptionally intelligent mind was clicking along with the facile ease of an electronic integrator-arranging data at hand, making tentative decisions, postponing judgments without prejudice until necessary data were available, exploring alternatives. Underneath, in a compartment insulated by stern self-discipline from the acting theatre of his mind, his emotions were a torturing storm of self-reproach. He was heartsick at suffering he had seen, and which he knew too well was duplicated up and down the line. Although he was not aware of any personal omission, nevertheless, the fault was somehow his, for authority creates responsibility.

He had carried too long the superhuman burden of kingship - which no sane mind can carry light-heartedly - and was at this moment perilously close to the frame of mind which sends captains down with their ships. Only the need for immediate, constructive action sustained him.

But no trace of this conflict reached his features.

At the wall of buildings glowed a green line of arrows, pointing to the left. Over them, at the terminus of the narrow path, shone a sign: "ACCESS DOWN." They pursued this, Blekinsop puffing in Gaines' wake, to a door let in the wall, which gave in to a narrow stairway lighted by a single glowtube. Gaines plunged down this, still followed, and they emerged on the crowded, noisy, stationary walkway adjoining the northbound road.

Immediately adjacent to the stairway, on the right, was a public tele-booth. Through the glassite door they could see a portly, well-dressed man speaking earnestly to his female equivalent, mirrored in the visor screen. Three other citizens were waiting outside the booth.

Gaines pushed past them, flung open the door, grasped the bewildered and indignant man by the shoulders, and hustled him outside, kicking the door closed after him. He cleared the visor screen with one sweep of his hand, before the matron pictured therein could protest, and pressed the emergency-priority button.

He dialed his private code number, and was shortly looking into the troubled face of his Engineer of the Watch, Davidson.

"Report!"

"It's you, Chief! Thank God! Where are you?" Davidson's' relief was pathetic.

"Report!"

The Senior Watch Officer repressed his emotion and complied in direct, clipped phrases, "At seven-oh-nine p.m. the consolidated tension reading, strip twenty, Sacramento Sector, climbed suddenly. Before action could be taken, tension on strip twenty passed emergency level; the interlocks acted, and power to subject strip cut out. Cause of failure, unknown. Direct communication to Sacramento control office has

failed. They do not answer the auxiliary, nor the commercial line. Effort to re-establish communication continues. Messenger dispatched from Stockton Subsector Ten.

"No casualties reported. Warning broadcast by public announcement circuit to keep clear of strip nineteen.
Evacuation has commenced."

"There are casualties," Gaines cut in. "Police and hospital emergency routine. Move!"

"Yes, sir!" Davidson snapped back, and hooked a thumb over his shoulder-but his Cadet Officer of the Watch had already jumped to comply. "Shall I cut out the rest of the road, Chief?"

"No. No more casualties are likely after the first disorder. Keep up the broadcast warnings. Keep, those other strips rolling, or we will have a traffic jam the devil himself couldn't untangle." - Gaines had in mind the impossibility of bringing the strips up to speed under load. The rotors were not powerful enough to do this. If the entire road was stopped, he would have to evacuate every strip, correct the trouble on strip twenty, bring all strips up to speed, and then move the accumulated peak load traffic. In the meantime, over five million stranded passengers would, constitute a tremendous police problem. It was simpler to evacuate passengers on strip twenty over the roof, and allow them to return home via the remaining strips. "Notify the Mayor and the Governor that I have assumed emergency authority. Same to the Chief of Police and place him under your orders. Tell the Commandant to arm all cadets available and await orders. Move!"

"Yes, sir. Shall I recall technicians off watch?"

"No. This isn't an engineering failure. Take a look at your readings; that entire sector went out simultaneously. Somebody cut out those rotors by hand. Place offwatch technicians on standby status-but don't arm them, and don't send them down inside. Tell the Commandant to rush all available senior-class cadets to Stockton Subsector Office number ten to report in. I want them equipped with tumblebugs, pistols, and sleepy bombs."

"Yes, sir." A clerk leaned over Davidson's shoulder and said something in his ear. "The Governor wants to talk to you, Chief."

"Can't do it-nor can you. Who's your relief? Have you sent for him?"

"Hubbard-he's just come in."

"Have him talk to the Governor, the Mayor, the press - anybody that calls - even the White House. You stick to your watch. I'm cutting off. I'll be back in communication as quickly as I can locate a reconnaissance car." He was out of the booth almost before the screen cleared.

Blekinsop did not venture to speak, but followed him out to the northbound twenty-mile strip. There Gaines stopped, short of the wind break, turned, and kept his eyes on the wall beyond the stationary walkway. He picked out some landmark, or sign - not apparent to his companion - and did an Eliza-crossing-the-ice back to the walkway, so rapidly that Blekinsop was carried some hundred feet beyond him, and almost failed to follow when Gaines ducked into a doorway and ran down a flight of stairs.

They came out on a narrow lower walkway, 'down inside'. The pervading din claimed them, beat upon their bodies as well as their ears. Dimly, Blekinsop perceived their surroundings, as he struggled to face that wall of sound. Facing him, illuminated by the yellow monochrome of a sodium arc, was one of the rotors that drove the five-mile

strip, its great, drum-shaped armature revolving slowly around the stationary field coils in its core. The upper surface of the drum pressed against the under side of the moving way and imparted to it its stately progress.

To the left and right, a hundred yards each way, and beyond at similar intervals, farther than he could see, were other rotors. Bridging the gaps between the rotors were the slender rollers, crowded together like cigars in a box, in order that the strip might have a continuous rolling support. The rollers were supported by steel girder arches through the gaps of which he saw row after row of rotors in staggered succession, the rotors in each succeeding row turning over more rapidly than the last.

Separated from the narrow walkway by a line of supporting steel pillars, and lying parallel to it on the side away from the rotors, ran a shallow paved causeway, joined to the walk at this point by a ramp. Gaines peered up and down this tunnel in evident annoyance. Blekinsop started to ask him what troubled him, but found his voice snuffed out by the sound: He could not cut through the roar of thousands of rotors and the whine of hundreds of thousands of rollers.

Gaines saw his lips move and guessed at the question.' He cupped his hands around Blekinsop's right ear, and shouted, "No car - I expected to find a car here."

The Australian, wishing to be helpful, grasped Gaines' arm and pointed back into the jungle of machinery.

Gaines' eye followed the direction indicated and picked out something that he had missed in his preoccupation - a half dozen men working around a rotor several strips away. They had jacked down a rotor until it was no longer in contact with the road surface and were preparing to replace it in toto. The replacement rotor was standing by on a low, heavy truck.

The Chief Engineer gave a quick smile of acknowledgment and thanks and aimed his flashlight at the group, the beam focused down to a slender, intense needle of light.

One of the technicians looked up, and Gaines snapped the light on and off in a repeated, irregular pattern. A figure detached itself from the group, and ran toward them.

It was a slender young man, dressed in dungarees and topped off with earpads and an incongruous, pillbox cap, bright with gold braid and Insignia. He recognized the Chief Engineer and saluted, his face falling into humorless, boyish intentness.

Gaines stuffed his torch into a pocket and commenced to gesticulate rapidly with both hands-clear, clean gestures, as involved and as meaningful as deaf-mute language. Blekinsop dug into his own dilettante knowledge of anthropology and decided that it was most like American Indian sign language, with some of the finger movements of hula. But it was necessarily almost entirely strange, being adapted for a particular terminology.

The cadet answered him in kind, stepped to the edge of the causeway, and flashed his torch to the south. He picked out a car, still some distance away, but approaching at headlong speed. It braked, and came to a stop alongside them.

It was a small affair, ovoid in shape, and poised on two centerline wheels. The forward, upper surface swung up and disclosed the driver, another cadet. Gaines addressed him briefly in sign language, then hustled Blekinsop ahead of him into the cramped passenger compartment.

As the glassite hood was being swung back into place, a blast of wind smote them, and the Australian looked up in time to glimpse the last of three much larger vehicles hurtle past them. They were headed north, at a speed of not less than two hundred miles per hour. Blekinsop thought that he had made out the little hats of cadets through the windows of the last of the three, but he could not be sure.

He had no time to wonder - so violent was the driver's getaway. Gaines ignored the accelerating surge; he was already calling Davidson on the built-in communicator. Comparative silence had settled down once the car was closed. The face of a female operator at the relay station showed on the screen.

"Get me Davidson-Senior Watch Office!"

"Oh! It's Mr. Gaines! The Mayor wants to talk to you, Mr. Gaines."

"Refer him-and get me Davidson. Move!"

"Yes, sir!"

"And see here-leave this circuit hooked in to Davidson's board until I tell you personally to cut it."

"Right." Her face gave way to the Watch Officer's.

"That you, Chief? We're moving-progress O.K.-no change."

"Very well You'll be able to raise me on this circuit, or at Subsector Ten office. Clearing now." Davidson's face gave way to the relay operator.

"Your wife is calling, Mr. Gaines. Will you take it?"

Gaines muttered something not quite gallant, and answered, "Yes."

Mrs. Gaines flashed into facsimile. He burst into speech before she could open her mouth. "Darling I'm all right don't worry I'll be home when I get there I've go to go now." It was all out in one breath, and he slapped the control that cleared the screen.

They slammed to a breath-taking stop alongside the stair leading to the watch office of Subsector Ten, and piled out. Three big lorries were drawn up on the ramp, and three platoons of cadets were ranged in restless ranks alongside them.

A cadet trotted up to Gaines, and saluted. "Lindsay, sir-Cadet Engineer of the Watch. The Engineer of the Watch requests that you come at once to the control room."

The Engineer of the Watch looked up as they came in. "Chief-Van Kleeck is calling you."

"Put him on."

When Van Kleeck appeared in the big visor, Gaines greeted him with, "Hello, Van. Where are you?"

"Sacramento Office. Now, listen-"

"Sacramento? That's good! Report."

Van Kleeck looked disgruntled. "Report, hell! I'm not your deputy any more, Gaines. Now, you-"

"What the hell are you talking about?"

"Listen, and don't interrupt me, and you'll find out. You're through, Gaines. I've been picked as Director of the Provisional Central Committee for the New Order."

"Van, have you gone off your rocker? What do you mean-the New Order?"

"You'll find out. This is it-the functionalist revolution. We're in; you're out. We stopped strip twenty just to give you a little taste of what we can do."

Concerning Function: A Treatise on the Natural Order

in Society, the bible of the functionalist movement, was first published in 1930. It claimed to be a scientifically accurate theory of social relations. The author, Paul Decker, disclaimed the "outworn and futile" ideas of democracy and human equality, and substituted a system in which human beings were evaluated "functionally" - that is to say, by the role each filled in the economic sequence. The underlying thesis was that it was right and proper for a man to exercise over his fellows whatever power was inherent in his function, and that any other form of social organization was silly, visionary, and contrary to the "natural order."

The complete interdependence of modern economic life seems to have escaped him entirely.

His ideas were dressed up with a glib mechanistic psendopsychology based on the observed orders of precedence among barnyard fowls, and on the famous Pavlov conditioned-reflex experiments on dogs. He failed to note that human beings are neither dogs, nor chickens. Old Doctor Pavlov ignored him entirely, as he had ignored so many others who had, blindly and unscientifically dogmatized about the meaning of his important, but strictly limited, experiments.

Functionalism did not take hold at once-during the thirties almost everyone, from truckdriver to hatcheck girl, had a scheme for setting the world right in six easy lessons; and a surprising percentage managed to get their schemes published. But it gradually spread. Functionalism was particularly popular among little people everywhere who could persuade themselves that their particular jobs were the indispensable ones, and that, therefore, under the "natural order" they would be top dog. With so many different functions actually indispensable such self-persuasion was easy.

Gaines stared at Van Kleeck for a moment before replying. "Van," he said slowly, "you don't really think you can get away with this, do you?"

The little man puffed out his chest. "Why not? We have gotten away with it. You can't start strip twenty until I am ready to let you, and I can stop the whole road, if necessary."

Gaines was becoming uncomfortably aware that he was dealing with unreasonable conceit, and held himself patiently in check. "Sure you can, Van-but how about the rest of the country? Do you think the United States Army will sit quietly by and let you run California as your private kingdom?"

Van Kleeck looked sly. "I've planned for that. I've just finished broadcasting a manifesto to all the road technicians in the country, telling them what we have done, and telling them to arise, and claim their rights. With every road in the country stopped, and people getting hungry, I reckon the President will think twice before sending the army to tangle with us. Oh, he could send a force to capture, or kill me - I'm not afraid to die! - but he doesn't dare start shooting down road technicians as a class, because the country can't get along without us - consequently, he'll have to get along with us - on our terms!"

There was much bitter truth in what he said. If an uprising of the road technicians became general, the government could no more attempt to settle it by force than a man could afford to cure a headache by blowing out his brains. But was the uprising general?

"Why do you think that the technicians in the rest of the country will follow your lead?"

"Why not? It's the natural order of things. This is an age of machinery; the real power everywhere is in the technicians, but they have been kidded into not using their

power with a lot of obsolete catch-phrases. And of all the classes of technicians, the most important, the absolutely essential, are the road technicians. From now on they run the show - it's the natural order of things!" He turned away for a moment, and fussed with some papers on the desk before him, then be added, "That's all for now, Gaines - I've got to call the White House, and let the President know how things stand. You carry on, and behave yourself, and you won't get hurt."

Gaines sat quite still for some minutes after the screen cleared. So that's how it was. He wondered what effect, if any, Van Kleeck's invitation to strike had had on road technicians elsewhere. None, he thought - but then he had not dreamed that it could happen among his own technicians. Perhaps he had made a mistake in refusing. to take time to talk to anyone outside the road. No - if he had stopped to talk to the Governor, or the newspapermen, he would still be talking. Still - He dialed Davidson.

"Any trouble in any other sectors, Dave?"

"No, Chief."

"Or on any other road?"

"None reported."

"Did you hear my talk with Van Kleeck?"

"I was cut in-yes."

"Good. Have Hubbard call the President and the Governor, and tell them that I am strongly opposed to the use of military force as long as the outbreak is limited to this road. Tell them that I will not be responsible if they move in before I ask for help."

Davidson looked dubious. "Do you think that is wise, Chief?"

"I do! If we try to blast Van and his red-hots out of their position, we may set off a real, country-wide uprising. Furthermore, he could wreck the road so that God himself couldn't put it back together. What's your rolling tonnage now?"

"Fifty-three percent under evening peak."

"How about strip twenty?"

"Almost evacuated."

"Good. Get the road clear of all traffic as fast as possible. Better have the Chief of Police place a guard on all entrances to the road to keep out new traffic. Van may stop all strips at any time - or I may need to, myself. Here is my plan: I'm going 'down inside' with these armed cadets. We will work north, overcoming any resistance we meet. You arrange for watch technicians and maintenance crews to follow immediately behind us. Each rotor, as they come to it, is to be cut out, then hooked in to the Stockton control board. It will be a haywire rig, with no safety interlocks, so use enough watch technicians to be able to catch trouble before it happens.

"If this scheme works, we can move control of the Sacramento Sector right out from under Van's feet, and he can stay in this Sacramento control office until he gets hungry enough to be reasonable."

He cut off and turned to the Subsector Engineer of the Watch. "Edmunds, give me a helmet - and a pistol."

"Yes, sir." He opened a drawer, and handed his chief a slender, deadly looking weapon. Gaines belted it on, and accepted a helmet, into which he crammed his head, leaving the anti-noise ear flaps up. Blekinsop cleared his throat.

"May - uh - may I have one of those helmets?" he inquired.

"What?" Gaines focused his attention. "Oh - You won't need one, Mr. Blekinsop. I want you to remain right here until you hear from me."

"But-" The Australian statesman started to speak, thought better of it, and subsided.

From the doorway the Cadet Engineer of the Watch demanded the Chief Engineer's attention. "Mr. Gaines, there is a technician out here who insists on seeing you - a man named Harvey."

"Can't do it."

"He's from the Sacramento Sector, sir."

"Oh! Send him in."

Harvey quickly advised Gaines of what he had seen and heard at the guild meeting that afternoon. "I got disgusted and left while they were still jawin', Chief. I didn't think any more about it until twenty stopped rolling. Then I heard that the trouble was in Sacramento Sector, and decided to look you up."

"How long has this been building up?"

"Quite some time, I guess. You know how it is - there are a few soreheads everywhere and a lot of them are functionalists. But you can't refuse to work with a man just because he holds different political views. It's a free country."

"You should have come to me before, Harvey." Harvey looked stubborn. Gaines studied his face. "No, I guess you are right. It's my business to keep tab on your mates, not yours. As you say, it's a free country. Anything else?"

"Well - now that it has come to this, I thought maybe I could help you pick out the ringleaders."

"Thanks. You stick with me. We're going 'down inside' and try to clear up this mess."

The office door opened suddenly, and a technician and a cadet appeared, lugging a burden between them. They deposited it on the floor, and waited.

It was a young man, quite evidently dead. The front of his dungaree jacket was soggy with blood. Gaines looked at the watch officer. "Who is he?"

Edmunds broke his stare and answered, "Cadet Hughes-he's the messenger I sent to Sacramento when communication failed. When he didn't report, I sent Marston and Cadet Jenkins after him."

Gaines muttered something to himself, and turned away. "Come along, Harvey."

The cadets waiting below had changed in mood. Gaines noted that the boyish intentness for excitement had been replaced by something uglier. 'There was much exchange of hand signals and several appeared to be checking the loading of their pistols.

He sized them up, then signaled to the cadet leader. There was a short interchange of signals. The cadet saluted, turned to his men, gesticulated - briefly, and brought his arm down smartly. They filed upstairs and into an empty standby room, Gaines following.

Once inside, and the noise shut out, he addressed them, "You saw Hughes brought in-how many of you want a chance to kill the louse that did it?"

Three of the cadets reacted almost at once, breaking ranks and striding forward. Gaines looked at them coldly. "Very well. You three turn in your weapons, and return to your quarters. Any of the rest of you that think this is a matter of private revenge, or, a

hunting party, may join them." He permitted a short silence to endure before continuing. "Sacramento Sector has been seized by unauthorized persons. We are going to retake it - if possible, without loss of life on either side, and, if possible, without stopping the roads. The plan is to take over 'down inside', rotor by rotor, and cross-connect through Stockton, The task assignment of this group is to proceed north 'down inside', locating and overpowering all persons in your path. You will bear in mind the probability that most of the persons you will arrest are completely innocent. Consequently, you will favor the use of sleep gas bombs, and will shoot to kill only as a last resort.

"Cadet Captain, assign your men in squads of ten each, with a squad leader. Each squad is to form a skirmish line across 'down inside', mounted on tumblebugs, and will proceed north at fifteen miles per hour. Leave an interval of one hundred yards between successive waves of skirmishers. Whenever a man is sighted, the entire leading wave will converge on him, arrest him, and deliver him to a transport car and then fall in as the last wave. You will assign the transports that delivered you here to receive prisoners. Instruct the drivers to keep abreast of the second wave.

"You will assign an attack group to recapture subsector control offices, but no office is to be attacked until its subsector has been cross-connected with Stockton. Arrange liaison accordingly.

"Any questions?" He let his eyes run over the faces of the young men. When no one spoke up, he turned back to the cadet in charge. "Very well, sir. Carry out your orders!"

By the time the dispositions bad been completed, the follow-up crew of technicians had arrived, and Gaines had given the engineer in charge his instructions. The cadets "stood to horse" alongside their poised tumblebugs. The Cadet Captain looked expectantly at Gaines. He nodded, the cadet brought his arm down smartly, and the first wave mounted and moved out.

Gaines and Harvey mounted tumblebugs, and kept abreast of the Cadet Captain, some twenty-five yards behind the leading wave. It had been a long time since the Chief Engineer had ridden one of these silly-looking little vehicles, and he felt awkward. A tumblebug does not give a man dignity, since it is about the size and shape of a kitchen stool, gyro-stabilized on a single wheel. But it is perfectly adapted to patrolling the maze of machinery 'down inside', since it can go through an opening the width of a man's shoulders, is easily controlled, and will stand patiently upright, waiting, should its rider dismount.

The little reconnaissance car followed Gaines at a short interval, weaving in and out among the rotors, while the television and audio communicator inside continued as Gaines' link to his other manifold responsibilities.

The first two hundred yards of the Sacramento Sector passed without incident, then one of the skirmishers sighted a tumblebug parked by a rotor. The technician it served was checking the gauges at the rotor's base, and did not see them approach. He was unarmed and made no resistance, but seemed surprised and indignant, as well as very bewildered.

The little command group dropped back and permitted the new leading wave to overtake them.

Three miles farther along the score stood thirty-seven men arrested, none killed. Two of the cadets had received minor wounds, and had been directed to retire. Only four

of the prisoners had been armed, one of these Harvey had been able to identify definitely as a ringleader. Harvey expressed a desire to attempt to parley with the outlaws, if any occasion arose. Gaines agreed tentatively. He knew of Harvey's long and honorable record as a labor leader, and was willing to try anything that offered a hope of success with a minimum of violence.

Shortly thereafter the first wave flushed another technician. He was on the far side of a rotor; they were almost on him before he was, seen. He did not attempt to resist, although he was armed, and the incident would not have been worth recording, had he not been talking into a hush-a-phone which he had plugged into the telephone jack at the base of the rotor.

Gaines reached the group as the capture was being effected. He snatched at the soft rubber mask of the phone, jerking it away from the man's mouth so violently that he could feel the bone-conduction receiver grate between the man's teeth. The prisoner spat out a piece of broken tooth and glared, but ignored attempts to question him.
Swift as Gaines had been, it was highly probable that they had lost the advantage of surprise. It was necessary to assume that the prisoner had succeeded in reporting the attack going on beneath the ways. Word was passed down the line to proceed with increased caution.

Gaines' pessimism was justified shortly. Riding toward them appeared a group of men, as yet several hundred feet away. There were at least a score, but their exact strength could not be determined, as they took advantage of the rotors for cover as they advanced. Harvey looked at Gaines, who nodded, and signaled the Cadet Captain to halt his forces.

Harvey went on ahead, unarmed, his hands held high above his head, and steering by balancing the weight of his body. The outlaw party checked its speed uncertainly, and finally stopped. Harvey approached within a couple of rods of them and stopped likewise. One of them, apparently the leader, spoke to him in sign language, to which he replied.

They were too far away and the yellow light too uncertain to follow the discussion. It continued for several minutes, then ensued a pause. The leader seemed uncertain what to do. One of his party rolled forward, returned his pistol to its holster, and conversed with the leader. The leader shook his head at the man's violent gestures.

The man renewed his argument, but met the same negative response. With a final disgusted wave of his hands, he desisted, drew his pistol, and shot at Harvey. Harvey grabbed at his middle and leaned forward. The man shot again; Harvey jerked, and slid to the ground.

The Cadet Captain beat Gaines to the draw. The killer looked up as the bullet bit him. He looked as if he were puzzled by some strange occurrence-being too freshly dead to be aware of it.

The cadets came in shooting. Although the first wave was outnumbered better than two to one, they were helped by the comparative demoralization of the enemy. The odds were nearly even after the first ragged volley. Less than thirty seconds after the first treacherous shot all of the insurgent party were dead, wounded, or under arrest. Gaines' losses were two dead (including the murder of Harvey) and two wounded.

Gaines modified his tactics to suit the changed conditions. Now that secrecy was gone, speed and striding power were of first importance. The second wave was directed to close in practically to the heels of the first. The third wave was brought up to within

twenty-five yards of the second. These three waves were to ignore unarmed men, leaving them to be picked up by the fourth wave, but they were directed to shoot on sight any person carrying arms.
Gaines cautioned them to shoot to wound, rather than to kill, but he realized that his admonishment was almost impossible to obey. There would be killing. Well, he had not wanted it, but he felt that he had no choice. Any armed outlaw was a potential killer - he could not, in fairness to his own men, lay too many restrictions on them.

When the arrangements for the new marching order were completed, he signed the Cadet Captain to go ahead, and the first and second waves started off together at the top speed of which the tumblebugs were capable - not quite eighteen miles per hour. Gaines followed them.

He swerved to avoid Harvey's body, glancing involuntarily down as he did so. The face was an ugly jaundiced yellow under the sodium arc, but it was set in a death mask of rugged beauty in which the strong fibre of the dead man's character was evident. Seeing this, Gaines did not regret so much his order to shoot, but the deep sense of loss of personal honor lay more heavily on him than before.

They passed several technicians during the next few minutes, but had no occasion to shoot. Gaines was beginning to feel somewhat hopeful of a reasonably bloodless victory, when he noticed a change in the pervading throb of machinery which penetrated even through the heavy anti-noise pads of his helmet. He lifted an ear pad in time to hear the end of a rumbling diminuendo as the rotors and rollers slowed to rest.

The road was stopped.
He shouted, "Halt your men!" to the Cadet Captain. His words echoed hollowly in the unreal silence.

The top of the reconnaissance car swung up as he turned and hurried to it.
"Chief!" the cadet within called out, "relay station calling you."

The girl in the visor screen gave way to Davidson as soon as she recognized Gaines' face. "Chief," Davidson said at once, "Van Kleeck's calling you."

"Who stopped the road?"

"He did."

"Any other major change in the situation?"

"No-the road was practically empty when he stopped it."

"Good. Give me Van Kleeck."
The chief conspirator's face was livid with uncurbed anger when he identified Gaines. He burst into speech. "So! You thought I was fooling, eh? What do you think now, Mister Chief Engineer Gaines?"

Gaines fought down an impulse to tell him exactly what
he thought, particularly about Van Kleeck. Everything about the short man's manner affected him like a squeaking slate pencil.

But he could not afford the luxury of speaking his mind. He strove to get just the proper tone into his voice which would soothe the other man's vanity. "I've got to admit that you've won this trick, Van - the roadway is stopped - but don't think I didn't take you seriously. I've watched your work too long to underrate you. I know you mean what you say."

Van Kleeck was pleased by the tribute, but tried not to show it. "Then why don't you get smart, and give up?" he demanded belligerently. "You can't win."

"Maybe not, Van, but you know I've got to try. Besides," he went on, "why can't I win? You said yourself that I could call on the whole United States Army."

Van Kleeck grinned triumphantly. "You see that?" He held up a pear-shaped electric push button, attached to a long cord. "If I push that, it will blow a path right straight across the ways-blow it to Kingdom Come. And just for good measure I'll take an ax, and wreck this control station before I leave."

Gaines wished wholeheartedly that he knew more about psychiatry. Well - he'd just have to do his best, and trust to horse sense to give him the right answers. "That's pretty drastic, Van, but I don't see how we can give up."

"No? You'd better have another think. If you force me to blow up the road, how about all the people that will be blown up along with it?"

Gaines thought furiously. He did not doubt that Van Kleeck would carry out his threat; his very phraseology, the childish petulance of "If you force me to do this-" betrayed the dangerous irrationality of his mental processes. And such an explosion anywhere in the thickly populated Sacramento Sector would be likely to wreck one, or more, apartment houses, and would be certain to kill shopkeepers on the included segment of strip twenty, as well as chance bystanders. Van was absolutely right; he dare not risk the lives of bystanders who were not aware of the issue and had not consented to the hazard - even if the road never rolled again.

For that matter, he did not relish chancing major damage to the road itself-but it was the danger to innocent life that left him helpless.

A tune ran through his head-"Hear them hum; watch them run. Oh, our work is never done-" What to do? What to do? "While you ride; while you glide; we are-" This wasn't getting anyplace.

He turned back to the screen. "Look, Van, you don't want to blow up the road unless you have to, I'm sure. Neither do I. Suppose I come up to your headquarters, and we talk this thing over. Two reasonable men ought to be able to make a settlement."

Van Kleeck was suspicious. "Is this some sort of a trick?"

"How can it be? I'll come alone, and unarmed, just as fast as my car can get there."

"How about your men?"

"They will sit where they are until I'm back. You can put out observers to make sure of it."

Van Kleeck stalled for a moment, caught between the fear of a trap, and the pleasure of having his erstwhile superior come to him to sue for terms. At last he grudgingly consented.

Gaines left his instructions and told Davidson what he intended to do. "If I'm not back within an hour, you're on your own, Dave."

"Be careful, Chief."

"I will."

He evicted the cadet driver from the reconnaissance car and ran it down the ramp into the causeway, then headed north and gave it the gun. Now he would have a chance to collect his thoughts, even at two hundred miles per hour. Suppose he pulled off this trick-there would still have to be some changes made. Two lessons stood out like sore thumbs:

First, the strips must be cross-connected with safety interlocks so that adjacent strips would slow down, or stop, if a strip's speed became dangerously different from those adjacent. No repetition of what happened on twenty!

But that was elementary, a mere mechanical detail. The real failure had been in men, Well, the psychological classification tests must be improved to insure that the roads employed only conscientious, reliable men. But hell's bells - that was just exactly what the present classification tests were supposed to insure beyond question. To the best of his knowledge there had never been a failure from the improved Hunim-Wadsworth-Burton method - not until today in the Sacramento Sector. How had Van Kleeck gotten one whole sector of temperament - classified men to revolt?

It didn't make sense.

Personnel did not behave erratically without a reason. One man might be unpredictable, but in large numbers, they were as dependable as machines, or figures. They could be measured, examined, classified. His inner eye automatically pictured the personnel office, with its rows of filing cabinets, its clerks - He'd got it! He'd got it! Van Kleeck, as Chief Deputy, was ex officio personnel officer for the entire road!

It was the only solution that covered all the facts. The personnel officer alone had the perfect opportunity to pick out all the bad apples and concentrate them in one barrel. Gaines was convinced beyond any reasonable doubt that there had been skullduggery, perhaps for years, with the temperament classification tests, and that Van Kleeck had deliberately transferred the kind of men he needed to one sector, after falsifying their records.

And that taught another lesson-tighter tests for officers, and no officer to be trusted with classification and assignment without close supervision and inspection. Even he, Gaines, should be watched in that respect. Qui custodiet ipsos custodes? Who will guard those selfsame guardians? Latin might be obsolete, but those old Romans weren't dummies.

He at last knew wherein he had failed, and he derived melancholy pleasure from the knowledge. Supervision and inspection, check and re-check, was the answer. It would be cumbersome and inefficient, but it seemed that adequate safeguards always involved some loss of efficiency.

He should not have entrusted so much authority to Van Kleeck without knowing more about him. He still should know more about him- He touched the emergency-stop button, and brought the car to a dizzying halt. "Relay station! See if you can raise my office."

Dolores' face looked out from the screen. "You're still there-good!" he told her. "I was afraid you'd gone home."

"I came back, Mr. Gaines."

"Good girl. Get me Van Kleeck's personal file jacket. I want to see his classification record."

She was back with it in exceptionally short order and read from it the symbols and percentages. He nodded repeatedly as the data checked his hunches - masked introvert-inferiority complex. It checked.

"'Comment of the Board:'" she read, "'In spite of the potential instability shown by maxima A, and D on the consolidated profile curve, the Board is convinced that this officer is, nevertheless, fitted for duty. He has an exceptionally fine record, and is

especially adept in handling men. He is therefore recommended for retention and promotion."

"That's all, Dolores. Thanks."

"Yes, Mr. Gaines!"

"I'm off for a showdown. Keep your fingers crossed."

"But Mr. Gaines-" Back in Fresno, Dolores stared wide-eyed at an empty screen.

"Take me to Mr. Van Kleeck!"

The man addressed took his gun out of Gaines' ribs - reluctantly, Gaines thought - and indicated that the Chief Engineer should precede him up the stairs. Gaines climbed out of the car, and complied.

Van Kleeck had set himself up in the sector control room proper, rather than the administrative office. With him were half a dozen men, all armed.

"Good evening, Director Van Kleeck." The little man swelled visibly at Gaines' acknowledgment of his assumed rank.

"We don't go in much around here for titles," he said, with ostentatious casualness. "Just call me Van. Sit down, Gaines."

Gaines did so. It was necessary to get those other men out. He looked at them with an expression of bored amusement. "Can't you handle one unarmed man by yourself, Van? Or don't the functionalists trust each other?"

Van Kleeck's face showed his annoyance, but Gaines' smile was undaunted. Finally the smaller man picked up a pistol from his desk, and motioned toward the door. "Get out, you guys!"

"But Van-"

"Get out, I said!"

When they were alone, Van Kleeck picked up the electric push button which Gaines had seen in the visor screen, and pointed his pistol at his former chief. "O.K.," he growled, "try any funny stuff, and off it goes! What's your proposition?"

Gaines' irritating smile grew broader. Van Kleeck scowled. "What's so damn funny?" he said.

Gaines granted him an answer. "You are, Van - honest, this is rich. You start a functionalist revolution, and the only function you can think of to perform is to blow up the road that justifies your title. Tell me," he went on, "what is it you are so scared of?"

"I am not afraid!"

"Not afraid? You? Sifting there, ready to commit hara-kari with that toy push button, and you tell me that you aren't afraid. If your buddies knew how near you are to throwing away what they've fought for, they'd shoot you in a second. You're afraid of them, too, aren't you?"

Van Kleek thrust the push button away from him, and stood up; "I am not afraid!" he screamed, and came around the desk toward Gaines.

Gaines sat where he was, and laughed. "But you are! You're afraid of me, this minute. You're afraid I'll have you on the carpet for the way you do your job. You're afraid the cadets won't salute you. You're afraid they are laughing behind your back. You're afraid of using the wrong fork at dinner. You're afraid people are looking at you - and you are afraid that they won't notice you."

"I am not!" he protested. "You - You dirty, stuck-up snob! Just because you went to a high-hat school you think you're better than anybody." He choked, and became incoherent, fighting to keep back tears of rage. "You, and your nasty little cadets-"

Gaines eyed him cautiously. The weakness in the man's character was evident now - he wondered why he had not seen it before. He recalled how ungracious Van Kleeck had been one time when he had offered to help him with an intricate piece of figuring.

The problem now was to play on his weakness, to keep him so preoccupied that he would not remember the peril-laden push button. He must be caused to center the venom of his twisted outlook on Gaines, to the exclusion of every other thought.

But he must not goad him too carelessly, or a shot from across the room might put an end to Gaines, and to any chance of avoiding a bloody, wasteful struggle for control of the road.

Gaines chuckled. "Van," he said, "you are a pathetic little shrimp. That was a dead give-away. I understand you perfectly; you're a third-rater, Van, and all your life you've been afraid that someone would see through you, and send you back to the foot of the class. Director - phiu! If you are the best the functionalists can offer, we can afford to ignore them - they'll fold up from their own rotten inefficiency." He swung around in his chair, deliberately turning his back on Van Kleeck and his gun.

Van Kleeck advanced on his tormentor, halted a few feet away, and shouted: "You - I'll show you. - I'll put a bullet in you; that's what I'll do!"

Gaines swung back around, got up, and walked steadily toward him. "Put that popgun down before you hurt yourself."

Van Kleeck retreated a step. "Don't you come near me!" he screamed. "Don't you come near me - or I'll shoot you - see if I don't!"

This is it, thought Gaines, and dived.

The pistol went off alongside his ear. Well, that one didn't get him. They were on the floor. Van Kleeck was hard to hold, for a little man. Where was the gun? There! He had it. He broke away.

Van Kleeck did not get up. He lay sprawled on the floor, tears streaming out of his closed eyes, blubbering like a frustrated child.

Gaines looked at him with something like compassion in his eyes, and hit him carefully behind the ear with the butt of the pistol. He walked over to the door, and listened for a moment, then locked it cautiously.

The cord from the push button led to the control board. He examined the hookup, and disconnected it carefully. That done, he turned to the televisor at the control desk, and called Fresno.

"Okay, Dave," he said, "Let 'em attack now - and for the love of Pete, hurry!" Then he cleared the screen, not wishing his watch officer to see how he was shaking.

Back in Fresno the next morning Gaines paced around the Main Control Room with a fair degree of contentment in his heart. The roads were rolling - before long they would be up to speed again. It had been a long night. Every engineer, every available cadet, had been needed to, make the inch-by-inch inspection of Sacramento Sector which he had required. Then they had to cross-connect around two wrecked subsector control boards. But the roads were rolling - he could feel their rhythm up through the floor.

He stopped beside a haggard, stubbly-bearded man. "Why don't you go home, Dave?" be asked. "McPherson can carry on from here."

"How about yourself, Chief? You don't look like a June bride."

"Oh, I'll catch a nap in my office after a bit. I called my wife, and told her I couldn't make it. She's coming down here to meet me."

"Was she sore?"

"Not very. You know how women are." He turned back to the instrument board, and watched the clicking 'busy-bodies' assembling the data from six sectors. San Diego Circle, Angeles Sector, Bakersfield Sector, Fresno Sector, Stockton-Stockton? Stockton! Good grief! - Blekinsop! He had left a cabinet minister of Australia cooling his heels in the Stockton office all night long!

He started for the door, while calling over his shoulder, "Dave, will you order a car for me? Make it a fast one!" He was across the hail, and had his head inside his private office before Davidson could acknowledge the order.

"Dolores!"

"Yes, Mr. Gaines."

"Call my wife, and tell her I had to go to Stockton. If she's already left home, just have her wait here. And Dolores-"

"Yes, Mr. Gaines?"

"Calm her down."

She bit her lip, but her face was impassive. "Yes, Mr. Gaines."

"That's a good girl." He was out and started down the stairway. When he reached road level, the sight of the rolling strips warmed him inside and made him feel almost cheerful.

He strode briskly away toward a door marked ACCESS DOWN, whistling softly to himself. He opened the door, and the rumbling, roaring rhythm from 'down inside' seemed to pick up the tune even as it drowned out the sound of his whistling.

"Hie! Hie! Hee!
The rotor men are we-
Check off your sectors loud and strong! One! Two! Three!
Anywhere you go
You are bound to know
That your roadways are rolling along!"

Rocket Ship Galileo

Chapter 1 :: "LET THE ROCKET ROAR"

"EVERYBODY ALL SET?" Young Ross Jenkins glanced nervously at his two chums. "How about your camera, Art? You sure you got the lens cover off this time?"

The three boys were huddled against a thick concrete wall, higher than their heads and about ten feet long. It separated them from a steel stand, anchored to the ground, to which was bolted a black metal shape, a pointed projectile, venomous in appearance and an ugly rocket. There were fittings on each side to which stub wings might be attached, but the fittings were empty; the creature was chained down for scientific examination.

"How about it, Art?" Ross repeated. The boy addressed straightened up to his full five feet three and faced him.

"Look," Art Mueller answered, "of course I took the cover off, it's on my check-off list. You worry about your rocket, last time it didn't fire at all and I wasted twenty feet of film."

"But you forgot it once, okay, how about your lights?"

For answer Art switched on his spot lights; the beams shot straight up, bounced against highly polished stainless-steel mirrors and brilliantly illuminated the model rocket and the framework which would keep it from taking off during the test.

A third boy, Maurice Abrams, peered at the scene through a periscope which allowed them to look over the reinforced concrete wall which shielded them from the rocket test stand.

"Pretty as a picture," he announced, excitement in his voice. "Ross, do you really think this fuel mix is what we're looking for?"

Ross shrugged, "I don't know. The lab tests looked good, we'll soon know. All right, places everybody! Check-off lists, Art?"

"Complete."

"Morrie?"

"Complete."

"And mine's complete. Stand by! I'm going to start the clock. Here goes!" He started checking off the seconds until the rocket was fired. "Minus ten . . minus nine . . . minus eight . . . minus seven . . . minus six . . . minus five . . . minus four. . . ."

Art wet his lips and started his camera.

"Minus three! Minus two! Minus one! Contact!"

"Let it roar!" Morrie yelled, his voice already drowned by the ear-splitting noise of the escaping rocket gas.

A great plume of black smoke surged out the orifice of the thundering rocket when it was first fired, billowed against an earth ramp set twenty feet behind the rocket test stand and filled the little clearing with choking fumes. Ross shook his head in dissatisfaction at this and made an adjustment in the controls under his hand. The smoke cleared away; through the periscope in front of him he could see the rocket exhaust on the other side of the concrete barricade. The flame had cleared of the wasteful smoke and was almost transparent, save for occasional sparks. He could actually see trees and

ground through the jet of flame. The images shimmered and shook but the exhaust gases were smoke-free.

"What does the dynamometer read?" he shouted to Morrie without taking his eyes away from the periscope. Morrie studied the instrument, rigged to the test stand itself, by means of a pair of opera glasses and his own periscope. "I can't read it!" he shouted. "Yes, I can -- wait a minute. Fifty-two -- no, make it a hundred and fifty-two; it's second time around. Hunderfiftytwo, fif'three, four. Ross, you've done it! You've done it! That's more than twice as much thrust as the best we've ever had."

Art looked up from where he was nursing his motion-picture camera. It was a commercial 8-millimeter job, modified by him to permit the use of more film so that every second of a test could be recorded. The modification worked, but was cantankerous and had to be nursed along. "How much more time?," he demanded.

"Seventeen seconds," Ross yelled at him. "Stand by, I'm going to give her the works." He twisted his throttle-monitor valve to the right, wide open. The rocket responded by raising its voice from a deepthroated roar to a higher pitch with an angry overtone almost out of the audible range. It spoke with snarling menace.

Ross looked up to see Morrie back away from his periscope and climb on a box, opera glasses in hand.

"Morrie-get your head down!" The boy did not hear him against the scream of the jet, intent as he was on getting a better view of the rocket. Ross jumped away from the controls and dived at him, tackling him around the waist and dragging him down behind the safety of the barricade. They hit the ground together rather heavily and struggled there. It was not a real fight; Ross was angry, though not fighting mad, while Morrie was merely surprised.

"What's the idea ?," he protested, when he caught his breath.

"You crazy idiot!," Ross grunted in his ear. "What were you trying to do? Get your head blown off?"

"But I wasn't-" But Ross was already clambering to his feet and returning to his place at the controls; Morrie's explanation, if any, was lost in the roar of the rocket.

"What goes on ?" Art yelled. He had not left his place by his beloved camera, not only from a sense of duty but at least partly from indecision as to which side of the battle he should join. Ross heard his shout and turned to speak. "This goon," he yelled bitterly, jerking a thumb at Morrie, "tried to-"

Ross's version of the incident was lost; the snarling voice of the rocket suddenly changed pitch, then lost itself in a boneshaking explosion. At the same time there was a dazzling flash which would have blinded the boys had they not been protected by the barricade, but which nevertheless picked out every detail of the clearing in the trees with brilliance that numbed the eyes.

They were still blinking at the memory of the ghastly light when billowing clouds of smoke welled up from beyond the barricade, surrounded them, and made them cough.

"Well," Ross said bitterly and looked directly at Morrie, "that's the last of the Starstrack V."

"Look, Ross," Morrie protested, his voice sounding shrill in the strange new stillness, "I didn't do it. I was only trying to- "

"I didn't say you did," Ross cut him short. "I know you didn't do it. I had already made my last adjustment. She was on her own and she couldn't take it. Forget it. But keep your head down after this-you darn near lost it. That's what the barricade is for."

"But I wasn't going to stick my head up. I was just going to try-"

"Both of you forget it," Art butted in. "So we blew up another one. So what? We'll build another one. Whatever happened, I got it right here in the can." He patted his camera. "Let's take a look at the wreck." He started to head around the end of the barricade.

"Wait a minute," Ross commanded. He took a careful look through his periscope, then announced: "Seems okay. Both fuel chambers are split. There can't be any real danger now. Don't burn yourselves. Come on."

They followed him around to the test stand.

The rocket itself was a complete wreck but the test stand was undamaged; it was built to take such punishment. Art turned his attention to the dynamometer which measured the thrust generated by the rocket. "I'll have to recalibrate this," he announced. "The loop isn't hurt, but the dial and the rackand-pinion are shot."

The other two boys did not answer him; they were busy with the rocket itself. The combustion chamber was split wide open and it was evident that pieces were missing.

"How about it, Ross?" Morrie inquired. "Do you figure it was the metering pump going haywire, or was the soup just too hot for it?"

"Hard to tell," Ross mused absently. "I don't think it was the pump. The pump might jam and refuse to deliver fuel at all, but I don't see how it could deliver too much fuel unless it reared back and passed a miracle."

"Then it must have been the combustion chamber. The throat is all right. It isn't even pitted much," he added as he peered at it in the gathering twilight.

"Maybe. Well, let's throw a tarp over it and look it over tomorrow morning. Can't see anything now. Come on, Art."

"Okay. Just a sec while I get my camera." He detached his camera from its bracket and placed it in its carrying case, then helped the other two drag canvas tarpaulins over all the test gear-one for the test stand, one for the barricade with its controls, instruments, and periscopes. Then the three turned away and headed out of the clearing.

The clearing was surrounded by a barbed wire fence, placed there at the insistence of Ross's parents, to whom the land belonged, in order to keep creatures, both four-legged and two-legged, from wandering into the line of fire while the boys were experimenting. The gate in this fence was directly behind the barricade and about fifty feet from it.

They had had no occasion to glance in the direction of the gate since the beginning of the test run-indeed, their attentions had been so heavily on the rocket that anything less than an earthquake would hardly have disturbed them.

Ross and Morrie were a little in front with Art close at their heels, so close that, when they stopped suddenly, he stumbled over them and almost dropped his camera. "Hey, watch where you're going, can't you ?" he protested. "Pick up your big feet!"

They did not answer but stood still, staring ahead and at the ground. "What gives?," he went on. "Why the trance? Why do-oh!" He had seen it too.

"It" was the body of a large man, crumpled on the ground, half in and half out the gate. There was a bloody wound on his head and blood on the ground. They all rushed

forward together, but it was Morrie who shoved them back and kept them from touching the prone figure. "Take it easy!," he ordered.

"Don't touch him. Remember your first aid. That's a head wound. If you touch him, you may kill him."

"But we've got to find out if he's alive," Ross objected.

"I'll find out. Here-give me those." He reached out and appropriated the data sheets of the rocket test run from where they stuck out of Ross's pocket. These he rolled into a tube about an inch in diameter, then cautiously placed it against the back of the still figure, on the left side over the heart. Placing his ear to the other end of the improvised stethoscope he listened. Ross and Art waited breathlessly. Presently his tense face relaxed into a grin. "His motor is turning over," he announced. "Good and strong. At least we didn't kill him."

"We?"

"Who do you think? How do you think he got this way? Take a look around and you'll probably find the piece of the rocket that konked him." He straightened up. "But never mind that now. Ross, you shag up to your house and call an ambulance. Make it fast! Art and I will wait here with . . . with, uh, him. He may come to and we'll have to keep him quiet."

"Okay." Ross was gone as he spoke. Art was staring at the unconscious man. Morrie touched him on the arm. "Sit down, kid. No use getting in a sweat. We'll have trouble enough later. Even if this guy isn't hurt much I suppose you realize this about winds up the activities the Galileo Marching-and-Chowder Society, at least the rocketry-and-loud-noises branch of it."

Art looked unhappy. "I suppose so."

"`Suppose' nothing. It's certain. Ross's father took a very dim view of the matter the time we blew all the windows out of his basement -- not that I blame him. Now we hand him this. Loss of the use of the land is the least we can expect. We'll be lucky not to have handed him a suit for damages too. Art agreed miserably. "I guess it's back to stamp collecting for us," he assented, but his mind was elsewhere. Law suit. The use of the land did not matter. To be sure the use of the Old Ross Place on the edge of town had been swell for all three of them, what with him and his mother living in back of the store, and Morrie's folks living in a flat, but-law suit! Maybe Ross's parents could afford it; but the little store just about kept Art and his mother going, even with the afterschool jobs he had had ever since junior high -- a law suit would take the store away from them.

His first feeling of frightened sympathy for the wounded man was beginning to be replaced by a feeling of injustice done him. What was the guy doing there anyhow? It wasn't just.

"Let me have a look at this guy," he said.

"Don't touch him," Morrie warned.

"I won't. Got your pocket flash?" It was becoming quite dark in the clearing.

"Sure. Here . . . catch." Art took the little flashlight and tried to examine the face of their victim-hard to do, as he was almost face down and the side of his face that was visible was smeared with blood.

Presently Art said in an odd tone of voice, "Morrie-would it hurt anything to wipe some of this blood away?"

"You're dern tootin' it would! You let him be till the doctor comes." "All right, all right. Anyhow I don't need to -- I'm sure anyhow. Morrie, I know who he is."

"You do? Who?"

"He's my uncle."

"Your uncle!"

"Yes, my uncle. You know-the one I've told you about. He's my Uncle Don. Doctor Donald Cargraves, my `Atomic Bomb' uncle."

Chapter 2 :: A MAN-SIZED CHALLENGE

"AT LEAST I'M PRETTY SURE it's my uncle," Art went on. "I could tell for certain if I could see his whole face."

"Don't you know whether or not he's your uncle? After all, a member of your own family-"

"Nope. I haven't seen him since he came through here to see Mother, just after the war. That's been a long time. I was just a kid then. But it looks like him."

"But he doesn't look old enough," Morrie said judiciously. "I should think- Here comes the ambulance!"

It was indeed, with Ross riding with the driver to show him the road and the driver cussing the fact that the road existed mostly in Ross's imagination. They were all too busy for a few minutes, worrying over the stranger as a patient, to be much concerned with his identity as an individual. "Doesn't look too bad," the interne who rode with the ambulance announced. "Nasty scalp wound. Maybe concussion, maybe not. Now over with him- easy! -while I hold his head." When turned face up and lifted into the stretcher, the patient's eyes flickered; he moaned and seemed to try to say something. The doctor leaned over him.

Art caught Morrie's eye and pressed a thumb and forefinger together. There was no longer any doubt as to the man's identity, now that Art had seen his face.

Ross started to climb back in the ambulance but the interne waved him away. "But all of you boys show up at the hospital. We'll have to make out an accident report on this."

As soon as the ambulance lumbered away Art told Ross about his discovery. Ross looked startled. "Your uncle, eh? Your own uncle. What was he doing here?"

"I don't know. I didn't know he was in town."

"Say, look- I hope he's not hurt bad, especially seeing as how he's your uncle -- but is this the uncle, the one you were telling us about who has been mentioned for the Nobel Prize?"

"That's what I've been trying to tell you. He's my Uncle Donald Cargraves."

"Doctor Donald Cargraves!," Ross whistled. "Jeepers! When we start slugging people we certainly go after big game, don't we?"

"It's no laughing matter. Suppose he dies? What'll I tell my mother?"

"I wasn't laughing. Let's get over to the hospital and find out how bad he's hurt before you tell her anything. No use in worrying her unnecessarily." Ross sighed, "I

guess we might as well break the news to my folks. Then I'll drive us over to the hospital."

"Didn't you tell them when you telephoned?," Morrie asked. "No. They were out in the garden, so I just phoned and then leaned out to the curb to wait for the ambulance. They may have seen it come in the drive but I didn't wait to find out."

"I'll bet you didn't."

Ross's father was waiting for them at the house. He answered their greetings, then said, "Ross-"

"Yes, sir?"

"I heard an explosion down toward your private stamping ground. Then I saw an ambulance drive in and drive away. What happened?"

"Well, Dad, it was like this: We were making a full-power captive run on the new rocket and-" He sketched out the events.

Mr. Jenkins nodded and said, "I see. Come along, boys." He started toward the converted stable which housed the family car. "Ross, run tell your mother where we are going. Tell her I said not to worry." He went on, leaning on his cane a bit as he walked. Mr. Jenkins was a retired electrical engineer, even-tempered and taciturn.

Art could not remember his own father; Morrie's father was still living but a very different personality. Mr. Abrams ruled a large and noisy, children-cluttered household by combining a loud voice with lavish affection.

When Ross returned, puffing, his father waved away his offer to drive. "No, thank you. I want us to get there."

The trip was made in silence. Mr. Jenkins left them in the foyer of the hospital with an injunction to wait.

"What do you think he will do?" Morrie asked nervously.

"I don't know. Dad'll be fair about it."

"That's what I'm afraid of," Morrie admitted. "Right now I don't want justice; I want charity."

"I hope Uncle Don is all right," Art put in.

"Huh? Oh, yes, indeed! Sorry, Art, I'm afraid we've kind of forgotten your feelings. The principal thing is for him to get well, of course."

"To tell the truth, before I knew it was Uncle Don, I was more worried over the chance that I might have gotten Mother into a law suit than I was over what we might have done to a stranger."

"Forget it," Ross advised. "A person can't help worrying over his own troubles. Dad says the test is in what you do, not in what you think. We all did what we could for him."

"Which was mostly not to touch him before the doctor came," Morrie pointed out.

"Which was what he needed."

"Yes," agreed Art, "but I don't check you, Ross, on it not mattering what you think as long as you act all right. It seems to me that wrong ideas can be just as bad as wrong ways to do things."

"Easy, now. If a guy does something brave when he's scared to death is he braver than the guy who does the same thing but isn't scared?"

"He's less . . . . no, he's more. . . . You've got me all mixed up. It's not the same thing."

"Not quite, maybe. Skip it."

They sat in silence for a long time. Then Morrie said, "Anyhow, I hope he's all right."

Mr. Jenkins came out with news. "Well, boys, this is your lucky day. Skull uninjured according to the X-ray. The patient woke when they sewed up his scalp. I talked with him and he has decided not to scalp any of you in return." He smiled.

"May I see him?" asked Art.

"Not tonight. They've given him a hypo and he is asleep. I telephoned your mother, Art."

"You did? Thank you, sir."

"She's expecting you. I'll drop you by."

Art's interview with his mother was not too difficult; Mr. Jenkins had laid a good foundation. In fact, Mrs. Mueller was incapable of believing that Art could be "bad." But she did worry about him and Mr. Jenkins had soothed her, not only about Art but also as to the welfare of her brother. Morrie had still less trouble with Mr. Abrams. After being assured that the innocent bystander was not badly hurt, he had shrugged. "So what? So we have lawyers in the family for such things. At fifty cents a week it'll take you about five hundred years to pay it off. Go to bed."

"Yes, Poppa."

The boys gathered at the rocket testing grounds the next morning, after being assured by a telephone call to the hospital that Doctor Cargraves had spent a good night. They planned to call on him that afternoon; at the moment they wanted to hold a post-mortem on the ill-starred Starstruck V.

The first job was to gather up the pieces, try to reassemble them, and then try to figure out what had happened. Art's film of the event would be necessary to complete the story, but it was not yet ready.

They were well along with the reassembling when they heard a whistle and a shout from the direction of the gate. "Hello there! Anybody home?"

"Coming!" Ross answered. They skirted the barricade to where they could see the gate. A tall, husky figure waited there -- a man so young, strong, and dynamic in appearance that the bandage around his head seemed out of place, and still more so in contrast with his friendly grin.

"Uncle Don!" Art yelled as he ran up to meet him.

"Hi," said the newcomer. "You're Art. Well, you've grown a lot but you haven't changed much." He shook hands.

"What are you doing out of bed? You're sick."

"Not me," his uncle asserted. "I've got a release from the hospital to prove it. But introduce me -- are these the rest of the assassins?"

"Oh-excuse me. Uncle Don, this is Maurice Abrams and this is Ross Jenkins. . . Doctor Cargraves."

"How do you do, sir?"

"Glad to know you, Doctor."

"Glad to know you, too." Cargraves started through the gate, then hesitated. "Sure this place isn't booby-trapped?"

Ross looked worried. "Say, Doctor-we're all sorry as can be. I still can't see how it happened. This gate is covered by the barricade."

"Ricochet shot probably. Forget it. I'm not hurt. A little skin and a little blood-that's all. If I had turned back at your first warning sign, it wouldn't have happened."

"How did you happen to be coming here?"

"A fair question. I hadn't been invited, had I?"

"Oh, I didn't mean that."

"But I owe you an explanation. When I breezed into town yesterday, I already knew of the Galileo Club; Art's mother had mentioned it in letters. When my sister told me where Art was and what he was up to, I decided to slide over in hope of getting here in time to watch your test run. Your hired girl told me how to find my way out here."

"You mean you hurried out here just to see this stuff we play around with?"

"Sure. Why not? I'm interested in rockets."

"Yes, but-we really haven't got anything to show you. These are just little models."

"A new model," Doctor Cargraves answered seriously, "of anything can be important, no matter who makes it nor how small it is. I wanted to see how you work. May I?"

"Oh, certainly, sir-we'd be honored." Ross showed their guest around, with Morrie helping out and Art chipping in. Art was pink-faced and happy -- this was his uncle, one of the world's great, a pioneer of the Atomic Age. They inspected the test stand and the control panel. Cargraves looked properly impressed and tut-tutted over the loss of Starstruck V.

As a matter of fact he was impressed. It is common enough in the United States for boys to build and take apart almost anything mechanical, from alarm clocks to hiked-up jaloppies. It is not so common for them to understand the sort of controlled and recorded experimentation on which science is based.

Their equipment was crude and their facilities limited, but the approach was correct and the scientist recognized it.

The stainless steel mirrors used to bounce the spotlight beams over the barricade puzzled Doctor Cargravcs. "Why take so much trouble to protect light bulbs ?" he asked. "Bulbs are cheaper than stainless steel."

"We were able to get the mirror steel free," Ross explained. "The spotlight bulbs take cash money."

The scientist chuckled. "That reason appeals to me. Well, you fellows have certainly thrown together quite a set-up. I wish I had seen your rocket before it blew up."

"Of course the stuff we build," Ross said diffidently, "can't compare with a commercial unmanned rocket, say like a mailcarrier. But we would like to dope out something good enough to go after the junior prizes."

"Ever competed?"

"Not yet. Our physics class in high school entered one last year in the novice classification. It wasn't much -- just a powder job, but that's what got us started, though we've all been crazy about rockets ever since I can remember."

"You've got some fancy control equipment. Where do you do your machine-shop work? Or do you have it done?"

"Oh, no. We do it in the high-school shop. If the shop instructor okays you, you can work after school on your own."

"It must be quite a high school," the physicist commented. "The one I went to didn't have a machine shop."

"I guess it is a pretty progressive school," Ross agreed. "It's a mechanical-arts-and-science high school and it has more courses in math and science and shop work than most. It's nice to be able to use the shops. That's where we built our telescope."

"Astronomers too, eh?"

"Well-Morrie is the astronomer of the three of us."

"Is that so?," Cargraves inquired, turning to Morrie.

Morrie shrugged. "Oh, not exactly. We all have our hobbies. Ross goes in for chemistry and rocket fuels. Art is a radio ham and a camera nut. You can study astronomy sitting down."

"I see," the physicist replied gravely. "A matter of efficient self-protection. I knew about Art's hobbies. By the way, Art, I owe you an apology; yesterday afternoon I took a look in your basement. But don't worry-I didn't touch anything."

"Oh, I'm not worried about your touching stuff, Uncle Don," Art protested, turning pinker, "but the place must have looked a mess."

"It didn't look like a drawing room but it did look like a working laboratory. I see you keep notebooks -- no, I didn't touch them, either!"

"We all keep notebooks," Morrie volunteered. "That's the influence of Ross's old man."

"Dad told me he did not care," Ross explained, "how much I messed around as long as I kept it above the tinker-toy level. He used to make me submit notes to him on everything I tried and he would grade them on clearness and completeness. After a while I got the idea and he quit."

"Does he help you with your projects?"

"Not a bit. He says they're our babies and we'll have to nurse them."

They prepared to adjourn to their clubhouse, an out-building left over from the days when the Old Ross Place was worked as a farm. They gathered up the forlorn pieces of Starstruck V, while Ross checked each item. "I guess that's all," he announced and started to pick up the remains.

"Wait a minute," Morrie suggested. "We never did search for the piece that clipped Doctor Cargraves."

"That's right," the scientist agreed. "I have a personal interest in that item, blunt instrument, missile, shrapnel, or whatever. I want to know how close I came to playing a harp."

Ross looked puzzled. "Come here, Art," he said in a low voice.

"I am here. What do you want?"

"Tell me what piece is still missing-"

"What difference does it make?" But he bent over the box containing the broken rocket and checked the items. Presently he too looked puzzled.

"Ross-"

"Yeah?"

"There isn't anything missing."

"That's what I thought. But there has to be."

"Wouldn't it be more to the point," suggested Cargraves, "to look around near where I was hit?"

"I suppose so."

They all searched, they found nothing. Presently they organized a system which covered the ground with such thoroughness that anything larger than a medium-small ant should have come to light. They found a penny and a broken Indian arrowhead, but nothing resembling a piece of the exploded rocket.

"This is getting us nowhere," the doctor admitted. "Just where was I when you found me?"

"Right in the gateway," Morrie told him. "You were collapsed on your face and-"

"Just a minute. On my face?"

"Yes. You were-"

"But how did I get knocked on my face? I was facing toward your testing ground when the lights went out. I'm sure of that. I should have fallen backwards."

"Well . . . I'm sure you didn't, sir. Maybe it was a ricochet, as you said."

"Hmm. . . maybe." The doctor looked around. There was nothing near the gate which would make a ricochet probable. He looked at the spot where he had lain and spoke to himself.

"What did you say, doctor?"

"Uh? Oh, nothing, nothing at all. Forget it. It was just a silly idea I had. It couldn't be." He straightened up as if dismissing the whole thing.

"Let's not waste any more time on my vanishing `blunt instrument.' It was just curiosity. Let's get on back."

The clubhouse was a one-story frame building about twenty feet square. One wall was filled with Ross's chemistry workbench with the usual clutter of test-tube racks, bunsen burners, awkward-looking, pretzel-like arrangements of glass tubing, and a double sink which looked as if it had been salvaged from a junk dealer. A home-made hood with a hinged glass front occupied one end of the bench. Parallel to the adjacent wall, in a little glass case, a precision balance' of a good make but of very early vintage stood mounted on its own concrete pillar.

"We ought to have air-conditioning," Ross told the doctor, "to do really good work."

"You haven't done so badly," Cargraves commented. The boys had covered the rough walls with ply board; the cracks had been filled and the interior painted with washable enamel. The floor they had covered with linoleum, salvaged like the sink, but serviceable. The windows and door were tight. The place was clean.

"Humidity changes could play hob with some of your experiments, however," he went on. "Do you plan to put in air-conditioning sometime?"

"I doubt it. I guess the Galileo Club is about to fold up."

"What? Oh, that seems a shame."

"It is and it isn't. This fall we all expect to go away to Tech."

"I see. But aren't there any other members?"

"There used to be, but they've moved, gone away to school, gone in the army. I suppose we could have gotten new members but we didn't try. Well . . we work together well and,. . . you know how it is."

Cargraves nodded. He felt that he knew more explicitly than did the boy. These three were doing serious work; most of their schoolmates, even though mechanically

minded, would be more interested in needling a stripped-down car up to a hundred miles an hour than in keeping careful notes.

"Well, you are certainly comfortable here. It's a shame you can't take it with you." A low, wide, padded seat stretched from wall to wall opposite the chemistry layout. The other two boys were sprawled on it, listening. Behind them, bookshelves had been built into the wall. Jules Verne crowded against Mark's Handbook of Mechanical Engineering. Cargraves noted other old friends: H.G. Wells' Seven Famous Novels, The Handbook of Chemistry and Physics, and Smyth's Atomic Energy for Military Purposes. Jammed in with them, side by side with Ley's Rockets and Eddington's Nature of the Physical World, were dozens of puip magazines of the sort with robot men or space ships on their covers.

He pulled down a dog-eared copy of Haggard's When the Earth Trembled and settled his long body between the boys. He was beginning to feel at home. These boys he knew; he had only to gaze back through the corridors of his mind to recognize himself.

Ross said, "If you'll excuse me, I want to run up to the house." Cargraves grunted, "Sure thing," with his nose still in the book. Ross came back to announce, "My mother would like all of you to stay for lunch."

Morrie grinned, Art looked troubled. "My mother thinks I eat too many meals over here as it is," he protested feebly, his eyes on his uncle. Cargraves took him by the arm. "I'll go your bail on this one, Art," he assured him; then to Ross, "Please tell your mother that we are very happy to accept."

At lunch the adults talked, the boys listened. The scientist, his turban bandage looking stranger than ever, hit it off well with his elders. Any one would hit it off well with Mrs. Jenkins, who could have been friendly and gracious at a cannibal feast, but the boys were not used to seeing Mr. Jenkins in a chatty mood.

The boys were surprised to find out how much Mr. Jenkins knew about atomics. They had the usual low opinion of the mental processes of adults; Mr. Jenkins they respected but had subconsciously considered him the anachronism which most of his generation in fact was, a generation as a whole incapable of realizing that the world had changed completely a few years before, at Alamogordo, New Mexico, on July 16, 1945. Yet Mr. Jenkins seemed to know who Doctor Cargraves was and seemed to know that he had been retained until recently by North American Atomics. The boys listened carefully to find out what Doctor Cargraves planned to do next, but Mr. Jenkins did not ask and Cargraves did not volunteer the information.

After lunch the three and their guest went back to the clubhouse. Cargraves spent most of the afternoon spread over the bunk, telling stories of the early days at Oak Ridge when the prospect of drowning in the inescapable, adhesive mud was more dismaying than the ever-present danger of radioactive poisoning, and the story, old but ever new and eternally exciting, of the black, rainy morning in the New Mexico desert when a great purple-and-golden mushroom had climbed to the stratosphere, proclaiming that man had at last unloosed the power of the suns.

Then he shut up, claiming that he wanted to re-read the old H. Rider Haggard novel he had found. Ross and Morrie got busy at the bench; Art took a magazine. His eyes kept returning to his fabulous uncle. He noticed that the man did not seem to be turning the pages very often.

Quite a while later Doctor Cargraves put down his book. "What do you fellows know about atomics ?"

The boys exchanged glances before Morrie ventured to answer. "Not much I guess. High-school physics can't touch it, really, and you can't mess with it in a home laboratory."

"That's right. But you are interested?"

"Oh, my, yes! We've read what we could -- Pollard and Davidson, and Gamov's new book. But we don't have the math for atomics."

"How much math do you have?"

"Through differential equations."

"Huh?" Cargraves looked amazed. "Wait a minute. You guys are still in high school?"

"Just graduated."

"What kind of high school teaches differential equations? Or am I an old fuddy-duddy?"

Morrie seemed almost defensive in his explanation. "It's a new approach. You have to pass a test, then they give you algebra through quadratics, plane and spherical trigonometry, plane and solid geometry, and plane and solid analytical geometry all in one course, stirred in together. When you finish that course- and you take it as slow or as fast as you like -you go on."

Cargraves shook his head. "There've been some changes made while I was busy with the neutrons. Okay, Quiz Kids, at that rate you'll be ready for quantum theory and wave mechanics before long. But I wonder how they go about cramming you this way? Do you savvy the postulational notion in math?"

"Why, I think so."

"Tell me."

Morrie took a deep breath. "No mathematics has any reality of its own, not even common arithmetic. All mathematics is purely an invention of the mind, with no connection with the world around us, except that we find some mathematics convenient in describing things."

"Go on. You're doing fine!"

"Even then it isn't real- or isn't `true' -the way the ancients thought of it. Any system of mathematics is derived from purely arbitrary assumptions, called `postulates', the sort of thing the ancients called `axioms.'"

"Your jets are driving, kid! How about the operational notion in scientific theory? No . . . Art-you tell me."

Art looked embarrassed; Morrie looked pleased but relieved. "Well, uh . . . the operational idea is, uh, it's building up your theory in terms of the operations you perform, like measuring, or timing, so that you don't go reading into the experiments things that aren't there."

Cargraves nodded. "That's good enough -- it shows you know what you're talking about." He kept quiet for a long time, then he added, "You fellows really interested in rockets?"

Ross answered this time, "Why, er, yes, we are. Rockets among other things. We would certainly like to have a go at those junior prizes."

"That's all?"

"Well, no, not exactly. I guess we all think, well, maybe some day . . ." His voice trailed off.

"I think I see." Cargraves sat up. "But why bother with the competition? After all, as you pointed out, model rockets can't touch the full-sized commercial jobs. The prizes are offered just to keep up interest in rocketry -- it's like the model airplane meets they used to have when I was a kid. But you guys can do better than that -- why don't you go in for the senior prizes?"

Three sets of eyes were fixed on him. "What do you mean ?" Cargraves shrugged. "Why don't you go to the moon with me?"

Chapter 3 - CUT-RATE COLUMBUS

THE SILENCE THAT FILLED THE clubhouse had a solid quality, as if one could slice it and make sandwiches. Ross recovered his voice first. "You don't mean it," he said in a hushed tone.

"But I do," Doctor Cargraves answered evenly. "I mean it quite seriously. I propose to try to make a trip to the moon. I'd like to have you fellows with me. Art," he added, "close your mouth. You'll make a draft."

Art gulped, did as he was told, then promptly opened it again. "But look," he said, his words racing, "Uncle Don, if you take us -- I mean, how could we-or if we did, what would we use for -- how do you propose-"

"Easy, easy!" Cargraves protested. "All of you keep quiet and I'll tell you what I have in mind. Then you can think it over and tell me whether or not you want to go for it."

Morrie slapped the bench beside him. "I don't care," he said, "I don't care if you're going to try to fly there on your own broom -- I'm in. I'm going along."

"So am I," Ross added quickly, moistening his lips.

Art looked wildly at the other two. "But I didn't mean that I wasn't -- I was just asking -- Oh, shucks! Me, too! You know that."

The young scientist gave the impression of bowing without getting up.

"Gentlemen, I appreciate the confidence you place in me. But you are not committed to anything just yet."

"But-"

"So kindly pipe down," he went on, "and I'll lay out my cards, face up. Then we'll talk. Have you guys ever taken an oath ?"

"Oh, sure -- Scout Oath, anyhow."

"I was a witness in court once."

"Fine. I want you all to promise, on your honor, not to spill anything I tell you without my specific permission, whether we do business or not. It is understood that you are not bound thereby to remain silent if you are morally obligated to speak up -- you are free to tell on me if there are moral or legal reasons why you should. Otherwise, you keep mum -- on your honor. How about it?"

"Yes, sir!"

"Right!"

"Check."

"Okay," agreed Cargraves, settling back on his spine. "That was mostly a matter of form, to impress you with the necessity of keeping your lips buttoned. You'll understand why, later. Now here is the idea: All my life I've wanted to see the day when men would conquer space and explore the planets -- and I wanted to take part in it. I don't have to tell you how that feels." He waved a hand at the book shelves. "Those books show me you understand it; you've got the madness yourselves. Besides that, what I saw out on your rocket grounds, what I see here, what I saw yesterday when I sneaked a look in Art's lab, shows me that you aren't satisfied just to dream about it and read about it -- you want to do something. Right?"

"Right!" It was a chorus.

Cargraves nodded. "I felt the same way. I took my first degree in mechanical engineering with the notion that rockets were mechanical engineering and that I would need the training. I worked as an engineer after graduation until I had saved up enough to go back to school. I took my doctor's degree in atomic physics, because I had a hunch-oh, I wasn't the only one! -I had a hunch that atomic power was needed for practical space ships. Then came the war and the Manhattan Project. When the Atomic Age opened up a lot of people predicted that space flight was just around the corner. But it didn't work out that way-nobody knew how to harness the atom to a rocket. Do you know why?"

Somewhat hesitantly Ross spoke up. "Yes, I think I do."

"Go ahead."

"Well, for a rocket you need mass times velocity, quite a bit of mass in what the jet throws out and plenty of velocity. But in an atomic reaction there isn't very much mass and the energy comes out in radiations in all directions instead of 2 nice, lined-up jet. Just the same-"

"`Just the same' what?"

"Well, there ought to be a way to harness all that power. Darn it -- with so much power from so little weight, there ought to be some way."

"Just what I've always thought," Cargraves said with a grin. "We've built atomic plants that turn out more power than Boulder Dam. We've made atomic bombs that make the two used in the war seem like firecrackers. Power to burn, power to throw away. Yet we haven't been able to hook it to a rocket. Of course there are other problems. An atomic power plant takes a lot of shielding to protect the operators -- you know that. And that means weight. Weight is everything in a rocket. If you add another hundred pounds in dead load, you have to pay for it in fuel. Suppose your shield weighed only a ton -- how much fuel would that cost you, Ross?"

Ross scratched his head. "I don't know what kind of fuel you mean nor what kind of a rocket you are talking about -- what you want it to do."

"Fair enough," the scientist admitted. "I asked you an impossible question. Suppose we make it a chemical fuel and a moon rocket and assume a mass-ratio of twenfy to one. Then for a shield weighing a ton we have to carry twenty tons of fuel."

Art sat up suddenly. "Wait a minute, Uncle Don."

"Yes?"

"If you use a chemical fuel, like alcohol and liquid oxygen say, then you won't need a radiation shield."

"You got me, kid. But that was just for illustration. If you had a decent way to use atomic power, you might be able to hold your mass-ratio down to, let's say, one-to-one. Then a one-ton shield would only require one ton of fuel to carry it. That suit you better?"

Art wriggled in excitement. "I'll say it does. That means a real space ship. We could go anywhere in it!"

"But we're still on earth," his uncle pointed out dryly. "I said `if.' Don't burn out your jets before you take off. And there is still a third hurdle: atomic power plants are fussy to control -- hard to turn on, hard to turn off. But we can let that one alone till we come to it. I still think we'll get to the moon."

He paused. They waited expectantly.

"I think I've got a way to apply atomic power to rockets." Nobody stood up. Nobody cheered. No one made a speech starting, "On this historic occasion-" Instead they held their breaths, waiting for him to go on.

"Oh, I'm not going into details now. You'll find out all about it, if we work together."

"We will!"

"Sure thing!"

"I hope so. I tried to interest the company I was with in the scheme, but they wouldn't hold still."

"Gee whillickers! Why not?"

"Corporations are in business to make money; they owe that to their stockholders. Do you see any obvious way to make money out of a flight to the moon?"

"Shucks." Art tossed it off. "They ought to be willing to risk going broke to back a thing like this."

"Nope. You're off the beam, kid. Remember they are handling other people's money. Have you any idea how much it would cost to do the research and engineering development, using the ordinary commercial methods, for anything as big as a trip to the moon?"

"No," Art admitted. "A good many thousands, I suppose."

Morrie spoke up. "More like a hundred thousand."

"That's closer. The technical director of our company made up a tentative budget of a million and a quarter."

"Whew!"

"Oh, he was just showing that it was not commercially practical. He wanted to adapt my idea to power plants for ships and trains. So I handed in my resignation."

"Good for you!"

Morrie looked thoughtful. "I guess I see," he said slowly, "why you swore us to secrecy. They own your idea."

Cargraves shook his head emphatically, "No, not at all. You certainly would be entitled to squawk if I tried to get you into a scheme to jump somebody else's patent rights -- even if they held them by a yellow-dog, brain-picking contract." Cargraves spoke with vehemence. "My contract wasn't that sort. The company owns the idea for the purposes for which the research was carried out -- power. And I own anything else I see in it. We parted on good terms. I don't blame them. When the Queen staked Columbus, nobody dreamed that he would come back with the Empire State Building in his pocket."

"Hey," said Ross, "these senior prizes -- they aren't big enough. That's why nobody has made a real bid for the top ones. The prize wouldn't pay the expenses, not for the kind of budget you mentioned. It's a sort of a swindle, isn't it?"

"Not a swindle, but that's about the size of it," Cargraves conceded. "With the top prize only $250,000 it won't tempt General Electric, or du Pont, or North American Atomic, or any other big research corporation. They can't afford it, unless some other profit can be seen. As a matter of fact, a lot of the prize money comes from those corporations." He sat up again. "But we can compete for it!"

"How?"

"I don't give a darn about the prize money. I just want to go!" "Me too!" Ross made the statement; Art chimed in.

"My sentiments exactly. As to how, that's where you come in. I can't spend a million dollars, but I think there is a way to tackle this on a shoestring. We need a ship. We need the fuel. We need a lot of engineering and mechanical work. We need overhead expenses and supplies for the trip. I've got a ship."

"You have? Now? A space ship?" Art was wide-eyed.

"I've got an option to buy an Atlantic freighter-rocket at scrap prices. I can swing that. It's a good rocket, but they are replacing the manned freighters with the more economical robot-controlled jobs. It's a V-17 and it isn't fit to convert to passenger service, so we get it as scrap. But if I buy it, it leaves me almost broke. Under the UN trusteeship for atomics, a senior member of the Global Association of Atomic Scientists -- that's me!" he stuck in, grinning, "can get fissionable material for experimental purposes, if the directors of the Association approve. I can swing that. I've picked thorium, rather than uranium-235, or plutonium-never mind why. But the project itself had me stumped, just too expensive. I was about ready to try to promote it by endorsements and lecture contracts and all the other clap- trap it sometimes takes to put over scientific work -when I met you fellows."

He got up and faced them. "I don't need much to convert that old V-17 into a space ship. But I do need skilled hands and brains and the imagination to know what is needed and why. You'd be my mechanics and junior engineers and machine-shop workers and instrument men and presently my crew. You'll do hard, dirty work for long hours and cook your own meals in the bargain. You'll get nothing but coffee-and-cakes and a chance to break your necks. The ship may never leave the ground. If it does, chances are you'll never live to tell about it. It won't be one big adventure. I'll work you till you're sick of me and probably nothing will come of it. But that's the proposition. Think it over and let me know."

There was the nerve-tingling pause which precedes an earthquake. Then the boys were on their feet, shouting all at once. It was difficult to make out words, but the motion had been passed by acclamation; the Galileo Club intended to go to the moon.

When the buzzing had died down, Cargraves noticed that Ross's face was suddenly grave. "What's the matter, Ross? Cold feet already ?"

"No," Ross shook his head. "I'm afraid it's too good to be true."

"Could be, could be. I think I know what's worrying you. Your parents?"

"Uh, huh. I doubt if our folks will ever let us do it."

Chapter 4 - THE BLOOD OF PIONEERS

CARGRAVES LOOKED AT THEIR woebegone faces. He knew what they were faced with; a boy can't just step up to his father and say, "By the way, old man, count me out on those plans we made for me to go to college. I've got a date to meet Santa Claus at the North Pole." It was the real reason he had hesitated before speaking of his plans. Finally he said, "I'm afraid it's up to each of you. Your promise to me does not apply to your parents, but ask them to respect your confidence. I don't want our plans to get into the news."

"But look, Doctor Cargraves," Morrie put in, "why be so secret about it? It might make our folks feel that it was just a wild-eyed kid's dream. Why can't you just go to them and explain where we would fit into it?"

"No," Cargraves answered, "they are your parents. When and if they want to see me, I'll go to them and try to give satisfactory answers. But you will have to convince them that you mean business. As to secrecy, the reasons are these: there is only one aspect of my idea that can be patented and, under the rules of the UN Atomics Convention, it can be licensed by any one who wants to use it. The company is obtaining the patent, but not as a rocket device. The idea that I can apply it to a cheap, shoestring venture into space travel is mine and I don't want any one else to beat me to it with more money and stronger backing. Just before we are ready to leave we will call in the reporters -- probably to run a story about how we busted our necks on the take-off."

"But I see your point," he went on. "We don't want this to look like a mad-scientist-and-secret-laboratory set-up. Well, I'll try to convince them."

Doctor Cargraves made an exception in the case of Art's mother, because she was his own sister. He cautioned Art to retire to his basement laboratory as soon as dinner was over and then, after helping with the dishes, spoke to her. She listened quietly while he explained. "Well, what do you think of it?

She sat very still, her eyes everywhere but on his face, her hands busy twisting and untwisting her handkerchief. "Don, you can't do this to me." He waited for her to go on.

"I can't let him go, Don. He's all I've got. With Hans gone. . . ."

"I know that," the doctor answered gently. "But Hans has been gone since Art was a baby. You can't limit the boy on that account."

"Do you think that makes it any easier?" She was close to tears.

"No, I don't. But it is on Hans' account that you must not keep his son in cotton batting. Hans had courage to burn. If he had been willing to knuckle under to the Nazis he would have stayed at Kaiser Wilhelm Institute. But Hans was a scientist. He wouldn't trim his notion of truth to fit political gangsters. He-"

"And it killed him!"

"I know, I know. But remember, Grace, it was only the fact that you were an American girl that enabled you to pull enough strings to get him out of the concentration camp."

"I don't see what that's got to do with it. Oh, you should have seen him when they let him out!" She was crying now.

"I did see him when you brought him to this country," he said gently, "and that was bad enough. But the fact that you are American has a lot to do with it. We have a tradition of freedom, personal freedom, scientific freedom. That freedom isn't kept alive by caution and unwillingness to take risks. If Hans were alive he would be going with me -- you know that, Sis. You owe it to his son not to keep him caged. You can't keep him tied to your apron strings forever, anyhow. A few more years and you will have to let him follow his own bent."

Her head was bowed. She did not answer. He patted her shoulder. "You think it over, Sis. I'll try to bring him back in one piece." When Art came upstairs, much later, his mother was still sitting, waiting for him. "Arthur?"

"Yes, Mother."

"You want to go to the moon?"

"Yes, Mother."

She took a deep breath, then replied steadily. "You be a good boy on the moon, Arthur. You do what your uncle tells you to."

"I will, Mother."

Morrie managed to separate his father from the rest of the swarming brood shortly after dinner. "Poppa, I want to talk to you man to man."

"And how else ?"

"Well, this is different. I know you wanted me to come into the business, but you agreed to help me go to Tech."

His father nodded. "The business will get along. Scientists we are proud to have in the family. Your Uncle Bernard is a fine surgeon. Do we ask him to help with the business ?"

"Yes, Poppa, but that's just it-I don't want to go to Tech."

"So? Another school?"

"No, I don't want to go to school." He explained Doctor Cargraves' scheme, blurting it out as fast as possible in an attempt to give his father the whole picture before he set his mind. Finished, he waited.

His father rocked back and forth. "So it's the moon now, is it? And maybe next week the sun. A man should settle down if he expects to accomplish anything, Maurice."

"But, Poppa, this is what I want to accomplish!"

"When do you expect to start?"

"You mean you'll let me? I can?"

"Not so fast, Maurice. I did not say yes; I did not say no. It has been quite a while since you stood up before the congregation and made your speech, `Today I am a man-' That meant you were a man, Maurice, right that moment. It's not for me to let you; it's for me to advise you. I advise you not to. I think it's foolishness."

Morrie stood silent, stubborn but respectful.

"Wait a week, then come back and tell me what you are going to do. There's a pretty good chance that you will break your neck on this scheme, isn't there?"

"Well . . . yes, I suppose so."

"A week isn't too long to make up your mind to kill yourself. In the meantime, don't talk to Momma about this."

"Oh, I won't!"

"If you decide to go ahead anyway, I'll break the news to her. Momma isn't going to like this, Maurice."

Doctor Donald Cargraves received a telephone call the next morning which requested him, if convenient, to come to the Jenkins' home. He did so, feeling, unreasonably he thought, as if he were being called in on the carpet. He found Mr. and Mrs. Jenkins in the drawing room; Ross was not in sight. Mr. Jenkins shook hands with him and offered him a chair.

"Cigarette, Doctor? Cigar?"

"Neither, thank you."

"If you smoke a pipe," Mrs. Jenkins added, "please do so." Cargraves thanked her and gratefully stoked up his old stinker.

"Ross tells me a strange story," Mr. Jenkins started in. "If he were not pretty reliable I'd think his imagination was working overtime. Perhaps you can explain it."

"I'll try, sir."

"Thanks. Is it true, Doctor, that you intend to try to make a trip to the moon."

"Quite true."

"Well! Is it also true that you have invited Ross and his chums to go with you in this fantastic adventure?"

"Yes, it is." Doctor Cargraves found that he was biting hard on the stem of his pipe.

Mr. Jenkins stared at him. "I'm amazed. Even if it were something safe and sane, your choice of boys as partners strikes me as outlandish." Cargraves explained why he believed the boys could be competent junior partners in the enterprise. "In any case," he concluded, "being young is not necessarily a handicap. The great majority of the scientists in the Manhattan Project were very young men."

"But not boys, Doctor."

"Perhaps not. Still, Sir Isaac Newton was a boy when he invented the calculus. Professor Einstein himself was only twenty-six when he published his first paper on relativity -- and the work had been done when he was still younger. In mechanics and in the physical sciences, calendar age has nothing to do with the case; it's solely a matter of training and ability."

"Even if what you say is true, Doctor, training takes time and these boys have not had time for the training you need for such a job. It takes years to make an engineer, still more years to make a toolmaker or an instrument man. Tarnation, I'm an engineer myself. I know what I'm talking about."

"Ordinarily I would agree with you. But these boys have what I need. Have you looked at their work?"

"Some of it."

"How good is it?"

"It's good work -- within the limits of what they know."

"But what they know is just what I need for this job. They are rocket fans now. They've learned in their hobbies the specialties I need." Mr. Jenkins considered this, then shook his head. "I suppose there is something in what you say. But the scheme is fantastic. I don't say that space flight is fantastic; I expect that the engineering problems involved will some day be solved. But space flight is not a back-yard enterprise. When it

comes it will be done by the air forces, or as a project of one of the big corporations, not by half-grown boys."

Cargraves shook his head. "The government won't do it. It would be laughed off the floor of Congress. As for corporations, I have reason to be almost certain they won't do it, either."

Mr. Jenkins looked at him quizzically. "Then it seems to me that we're not likely to see space flight in our lifetimes."

"I wouldn't say so," the scientist countered. "The United States isn't the only country on the globe. It wouldn't surprise me to hear some morning that the Russians had done it. They've got the technical ability and they seem to be willing to spend money on science. They might do it."

"Well, what if they do?"

Cargraves took a deep breath. "I have nothing against the Russians; if they beat me to the moon, I'll take off my hat to them. But I prefer our system to theirs; it would be a sour day for us if it turned out that they could do something as big and as wonderful as this when we weren't even prepared to tackle it, under our set-up. Anyhow," he continued, "I have enough pride in my own land to want it to be us, rather than some other country."

Mr. Jenkins nodded and changed his tack. "Even if these three boys have the special skills you need, I still don't see why you picked boys. Frankly, that's why the scheme looks rattlebrained to me. You should have experienced engineers and mechanics and your crew should be qualified rocket pilots."

Doctor Cargraves laid the whole thing before them, and explained how he hoped to carry out his plans on a slim budget. When he had finished Mr. Jenkins said, "Then as a matter of fact you braced these three boys because you were hard up for cash?"

"If you care to put it that way."

"I didn't put it that way; you did. Candidly, I don't altogether approve of your actions. I don't think you meant any harm, but you didn't stop to think. I don't thank you for getting Ross and his friends stirred up over a matter unsuited to their ages without consulting their parents first." Donald Cargraves felt his mouth grow tense but said nothing; he felt that he could not explain that he had lain awake much of the night over misgivings of just that sort.

"However," Mr. Jenkins went on, "I understand your disappointment and sympathize with your enthusiasm." He smiled briefly. "I'll make you a deal. I'll hire three mechanics- you pick them -and one junior engineer or physicist, to help you in converting your ship. When the time comes, I'll arrange for a crew. Hiring will not be needed there, in my opinion -- we will be able to pick from a long list of volunteers. Wait a minute," he said, as Cargraves started to speak, "you'll be under no obligation to me. We will make it a business proposition of a speculative sort. We'll draw up a contract under which, if you make it, you assign to me a proper percentage of the prize money and of the profits from exclusive news stories, books, lectures, and so forth. Does that look like a way out?"

Cargraves took a deep breath. "Mr. Jenkins," he said slowly, "if I had had that proposition last week, I would have jumped at it. But I can't take it."

"Why not?"

"I can't let the boys down. I'm already committed."

"Would it make a difference if I told you there was absolutely no chance of Ross being allowed to go?"

"No. I will have to go looking for just such a backer as yourself, but it can't be you. It would smack too much of allowing myself to be bought off- No offense intended, Mr. Jenkins! -to welch on the proposition I made Ross."

Mr. Jenkins nodded. "I was afraid you would feel that way. I respect your attitude, Doctor. Let me call Ross in and tell him the outcome." He started for the door.

"Just a moment, Mr. Jenkins-"

"Yes?"

"I want to tell you that I respect your attitude, too. As I told you, the project is dangerous, quite dangerous. I think it is a proper danger but I don't deny your right to forbid your son to risk his neck with me."

"I am afraid you don't understand me, Doctor Cargraves. It's dangerous, certainly, and naturally that worries me and Mrs. Jenkins, but that is not my objection. I would not try to keep Ross out of danger. I let him take flying lessons; I even had something to do with getting two surplus army trainers for the high school. I haven't tried to keep him from playing around with explosives. That's not the reason."

"May I asked what it is ?"

"Of course. Ross is scheduled to start in at the Technical Institute this fall. I think it's more important for him to get a sound basic education than for him to be first man on the moon." He turned away again.

"Wait a minute! If it's his education you are worried about, would you consider me a competent teacher ?"

"Eh? Well . . . yes."

"I will undertake to tutor the boys in technical and engineering subjects. I will see to it that they do not fall behind."

Mr. Jenkins hesitated momentarily. "No, Doctor, the matter is settled. An engineer without a degree has two strikes against him to start with. Ross is going to get his degree." He stepped quickly to the door and called out,

"Ross!"

"Coming, Dad." The center of the argument ran downstairs and into the room. He looked around, first at Cargraves, then anxiously at his father, and finally at his mother, who looked up from her knitting and smiled at him but did not speak. "What's the verdict?" he inquired.

His father put it bluntly. "Ross, you start in school in the fall. I cannot okay this scheme."

Ross's jaw muscles twitched but he did not answer directly. Instead he said to Cargraves, "How about Art and Morrie?"

"Art's going. Morrie phoned me and said his father didn't think much of it but would not forbid it."

"Does that make any difference, Dad?"

"I'm afraid not. I don't like to oppose you, son, but when it comes right down to cases, I am responsible for you until you are twenty-one. You've got to get your degree."

"But . . . but . . . look, Dad. A degree isn't everything. If the trip is successful, I'll be so famous that I won't need a tag on my name to get a job. And if I don't come back, I won't need a degree!"

Mr. Jenkins shook his head. "Ross, my mind is made up." Cargraves could see that Ross was fighting to keep the tears back. Somehow it made him seem older, not younger. When he spoke again his voice was unsteady. "Dad?"

"Yes, Ross?"

"If I can't go, may I at least go along to help with the rebuilding job? They'll need help."

Cargraves looked at him with new interest. He had some comprehension of what the proposal would cost the boy in heartache and frustration. Mr. Jenkins looked surprised but answered quickly. "You may do that up till the time school opens."

"Suppose they aren't through by then? I wouldn't want to walk out on them."

"Very well. If necessary you can start school the second semester. That is my last concession." He turned to Doctor Cargraves. "I shall count on you for some tutoring." Then to his son, "But that is the end of the matter, Ross. When you are twenty-one you can risk your neck in a space ship if you like. Frankly, I expect that there will still be plenty of chance for you to attempt the first flight to the moon if you are determined to try it." He stood up.

"Albert."

"Eh? Yes, Martha?," he turned deferentially to his wife.

She laid her knitting in her lap and spoke emphatically. "Let him go, Albert!"

"Eh? What do you mean, my dear?"

"I mean, let the boy go to the moon, if he can. I know what I said, and you've put up a good argument for me. But I've listened and learned. Doctor Cargraves is right; I was wrong. We can't expect to keep them in the nest."

"Oh, I know what I said," she went on, "but a mother is bound to cry a little. Just the same, this country was not built by people who were afraid to go. Ross's great-great-grandfather crossed the mountains in a Conestoga wagon and homesteaded this place. He was nineteen, his bride was seventeen. It's a matter of family record that their parents opposed the move." She stirred suddenly and one of her knitting needles broke.

"I would hate to think that I had let the blood run thin." She got up and went quickly from the room.

Mr. Jenkins' shoulders sagged. "You have my permission, Ross," he said presently. "Doctor, I wish you good luck. And now, if you will excuse me.

He followed his wife.

Chapter 5 - GROWING PAINS

"HOW MUCH FARTHER?" The noise of the stripped-down car combined with desert wind caused Art to shout. "Look at the map," Ross said, his hands busy at the wheel in trying to avoid a jack rabbit. "It's fifty-three miles from Route 66 to the turn-off, then seven miles on the turn-off."

"We left Highway 66 about thirty-nine, forty miles back," Art replied. "We oughtto be in sight of the turn-off before long." He squinted out across bare, colorful New Mexico countryside. "Did you ever see so much wide-open, useless country? Cactus and coyotes -- what's it good for?"

"I like it," Ross answered. "Hang on to your hat." There was a flat, straight stretch ahead, miles along; Ross peeled off and made the little car dig . . . seventy . . . eighty . . . ninety . . . ninety-five. The needle quivered up toward three figures."

"Hey, Ross?"

"Yeah?"

"This rig ain't young any more. Why crack us up?"

"Sissy," said Ross, but he eased up on the gas.

"Not at all," Art protested. "If we kill ourselves trying to get to the moon, fine -- we're heroes. But if we bust our fool necks before we start, we'll just look silly."

"Okay, okay -- is that the turn-off?"

A dirt road swung off to the right and took out over the desert. They followed it about a quarter of a mile, then pulled up at a steel gate barring the road. A strong fence, topped by barbed wire, stretched out in both directions. There was a sign on the gate:

DANGER
Unexploded Shells
Enter this area at your own risk. Disturb nothing - report all suspicious objects to the District Forester.

"This is it," Ross stated. "Got the keys?" The area beyond was an abandoned training ground of the war, part of more than 8,000,000 acres in the United States which had been rendered useless until decontaminated by the hazardous efforts of army engineer specialists. This desert area was not worth the expense and risk of decontamination, but it was ideal for Cargraves; it assured plenty of room and no innocent bystanders -- and it was rent free, loaned to the Association of Atomic Scientists, on Cargraves' behalf.

Art chucked Ross some keys. Ross tried them, then said, "You've given me the wrong keys."

"I don't think so. Nope," he continued, "those are the keys Doc sent."

"What do we do?"

"Bust the lock, maybe."

"Not this lock. Do we climb it?"

"With the rig under one arm? Be your age."

A car crawled toward them, its speed lost in the vastness of the desert. It stopped near them and a man in a military Stetson stuck his head out. "Hey, there!"

Art muttered, "Hey, yourself," then said, "Good morning."

"What are you trying to do?"

"Get inside."

"Don't you see the sign? Wait a minute -- either one of you named Jenkins?"

"He's Ross Jenkins. I'm Art Mueller."

"Pleased to know you. I'm the ranger hereabouts. Name o' Buchanan. I'll let you in, but I don't rightly know as I should."

"Why not?" Ross's tone was edgy. He felt that they were being sized up as youngsters.

"Well . . . we had a little accident in there the other day. That's why the lock was changed."

"Accident?"

"Man got in somehow -- no break in the fence. He tangled with a land mine about a quarter of a mile this side of your cabin."

"Did it . . . kill him?"

"Deader `n a door nail. I spotted it by the buzzards. See here -- I'll let you in; I've got a copy of your permit. But don't go exploring. You stay in the marked area around the cabin, and stay on the road that follows the power line."

Ross nodded. "We'll be careful."

"Mind you are. What are you young fellows going to do in there, anyway? Raise jack-rabbits?"

"That's right. Giant jack-rabbits, eight feet tall."

"So? Well, keep `em inside the marked area, or you'll have jack-rabbit hamburger."

"We'll be careful," Ross repeated. "Any idea who the man was that had the accident? Or what he was doing here?"

"None, on both counts. The buzzards didn't leave enough to identify. Doesn't make sense. There was nothing to steal in there; it was before your stuff came."

"Oh, it's here!"

"Yep. You'll find the crates stacked out in the open. He wasn't a desert man," the Ranger went on. "You could tell by his shoes. Must `a' come by car, but there was no car around. Doesn't make sense." "No, it doesn't seem to," Ross agreed, "but he's dead, so that ends it." "Correct. Here are your keys. Oh, yes-" He put his hand back in his pocket. "Almost forgot. Telegram for you."

"For us? Oh, thanks!"

"Better put up a mail box out at the highway," Buchanan suggested. "This reached you by happenstance."

"We'll do that," Ross agreed absently, as he tore open the envelope.

"So long." Buchanan kicked his motor into life.

"So long, and thanks again."

"For Heaven's sake, what does it say?," Art demanded.

"Read it:"

PASSED FINAL TESTS TODAY. LEAVING SATURDAY. PLEASE PROVIDE BRASS BAND, DANCING GIRLS, AND TWO FATTED CALVES -- ONE RARE, ONE MEDIUM. (signed) DOC AND MORRIE.

Ross grinned. "Imagine that! Old Morrie a rocket pilot! I'll bet his hat doesn't fit him now."

"I'll bet it doesn't. Darn! We all should have taken the course."

"Relax, relax. Don't be small about it -- we'd have wasted half the summer." Ross dismissed the matter.

Art himself did not understand his own jealousy. Deep inside, it was jealousy of the fact that Morrie had been able to go to Spaatz Field in the company of Art's idolized uncle, rather than the purpose of the trip. All the boys had had dual-control airplane

instruction; Morrie had gone on and gotten a private license. Under the rules- out of date, in Art's opinion -an airplane pilot could take a shortened course for rocket pilot. Doctor Cargraves held a slightly dusty aircraft license some fifteen years old. He had been planning to qualify for rocket operation; when he found that Morrie was eligible it was natural to include him.

This had left Ross and Art to carry out numerous chores for the enterprise, then to make their own way to New Mexico to open up the camp.

The warning to follow the power line had been necessary; the boys found the desert inside pock-marked by high explosive and criss-crossed with tracks, one as good as another, carved years before by truck and tank and mobile carrier. The cabin itself they found to be inside a one-strand corral a quarter of a mile wide and over a mile long. Several hundred yards beyond the corral and stretching away for miles toward the horizon was an expanse which looked like a green, rippling lake -- the glassy crater of the atom bomb test of 1951, the UN's Doomsday Bomb.

Neither the cabin nor the piled-up freight could hold their attention until they had looked at it. Ross drove the car to the far side of the enclosure and they stared.

Art gave a low respectful whistle. "How would you like to have been under that?" Ross inquired in a hushed voice.

"Not any place in the same county -- or the next county. How would you like to be in a city when one of those things goes off?"

Ross shook his head. "I want to zig when it zags. Art, they better never have to drop another one, except in practice. If they ever start lobbing those things around, it `ud be the end of civilization."

"They won't," Art assured him. "What d'you think the UN police is for? Wars are out. Everybody knows that."

"You know it and I know it. But I wonder if everybody knows it ?"

"It'll be just too bad if they don't."

"Yeah -- too bad for us."

Art climbed out of the car. "I wonder if we can get down to it?

"Well, don't try. We'll find out later."

"There can't be any duds in the crater or anywhere in the area -- not after that."

"Don't forget our friend that the buzzards ate. Duds that weren't exposed to the direct blast might not go off. This bomb was set off about five miles up."

"Huh? I thought-"

"You were thinking about the test down in Chihuahua. That was a ground job. Come on. We got work to do." He trod on the starter.

The cabin was pre-fab, moved in after the atom bomb test to house the radioactivity observers. It had not been used since and looked it.

"Whew! What a mess," Art remarked. "We should have brought a tent."

"It'll be all right when we get it fixed up. Did you see kerosene in that stuff outside?"

"Two drums of it."

"Okay. I'll see if I can make this stove work. I could use some lunch." The cabin was suitable, although dirty. It had drilled well; the water was good, although it had a strange taste. There were six rough bunks needing only bedding rolls. The kitchen was the end of the room, the dining room a large pine table, but there were shelves, hooks on

the walls, windows, a tight roof overhead. The stove worked well, even though it was smelly; Ross produced scrambled eggs, coffee, bread and butter, German-fried potatoes, and a bakery apple pie with only minor burns and mishaps.

It took all day to clean the cabin, unload the car, and uncrate what they needed at once. By the time they finished supper, prepared this time by Art, they were glad to crawl into their sacks. Ross was snoring gently before Art closed his eyes. Between Ross's snores and the mournful howls of distant coyotes Art was considering putting plugs in his ears, when the morning sun woke him up.

"Get up, Ross!"

"Huh? What? Wassamatter?"

"Show a leg. We're burning daylight."

"I'm tired," Ross answered as he snuggled back into the bedding. "I think I'll have breakfast in bed."

"You and your six brothers. Up you come -- today we pour the foundation for the shop."

"That's right." Ross crawled regretfully out of bed. "Wonderful weather -- I think I'll take a sun bath."

"I think you'll get breakfast, while I mark out the job."

"Okay, Simon Legree."

The machine shop was a sheet metal and stringer affair, to be assembled. They mixed the cement with the sandy soil of the desert, which gave them a concrete good enough for a temporary building. It was necessary to uncrate the power tools and measure them before the fastening bolts could be imbedded in the concrete. Ross watched as Art placed the last bolt. "You sure we got `em all?"

"Sure. Grinder, mill, lathe-" He ticked them off. "Drill press, both saws-"

They had the basic tools needed for almost any work. Then they placed bolts for the structure itself, matching the holes in the metal sills to the bolts as they set them in the wet concrete. By nightfall they had sections of the building laid out, each opposite its place, ready for assembly. "Do you think the power line will carry the load?" Art said anxiously, as they knocked off.

Ross shrugged. "We won't be running all the tools at once. Quit worrying, or we'll never get to the moon. We've got to wash dishes before we can get supper."

By Saturday the tools had been hooked up and tested, and Art had rewound one of the motors. The small mountain of gear had been stowed and the cabin was clean and reasonably orderly. They discovered in unpacking cases that several had been broken open, but nothing seemed to have been hurt. Ross was inclined to dismiss the matter, but Art was worried. His precious radio and electronic equipment had been gotten at.

"Quit fretting," Ross advised him. "Tell Doc about it when he comes. The stuff was insured."

"It was insured in transit," Art pointed out. "By the way, when do you think they will get here?"

"I can't say," Ross answered. "If they come by train, it might be Tuesday or later. If they fly to Albuquerque and take the bus, it might be tomorrow -- what was that?" He glanced up.

"Where?" asked Art.

"There. Over there, to your left. Rocket."

"So it is! It must be a military job; we're off the commercial routes. Hey, he's turned on his nose jets!"

"He's going to land. He's going to land here!"

"You don't suppose?"

"I don't know. I thought -- there he comes! It can't-" His words were smothered when the thunderous, express-train roar reached them, as the rocket decelerated. Before the braking jets had been applied, it was traveling ahead of its own din, and had been, for them, as silent as thought. The pilot put it down smoothly not more than five hundred yards from them, with a last blast of the nose and belly jets which killed it neatly.

They began to run.

As they panted up to the sleek, gray sides of the craft, the door forward of the stub wings opened and a tall figure jumped down, followed at once by a smaller man.

"Doc! Morrie!"

"Hi, sports!" Cargraves yelled. "Well, we made it. Is lunch ready?"

Morrie was holding himself straight, almost popping with repressed emotion.

"I made the landing," he announced.

"You did?" Art seemed incredulous.

"Sure. Why not? I got my license. Want to see it?"

"`Hot Pilot Abrams,' it says here," Ross alleged, as they examined the document. "But why didn't you put some glide on it? You practically set her down on her jets."

"Oh, I was practicing for the moon landing."

"You were, huh? Well, Doc makes the moon landing or I guarantee I don't go."

Cargraves interrupted the kidding. "Take it easy. Neither one of us will try an airless landing."

Morrie looked startled. Ross said, "Then who-"

"Art will make the moon landing."

Art gulped and said, "Who? Me?"

"In a way. It will have to be a radar landing; we can't risk a crack-up on anything as hard as an all jet landing when there is no way to walk home. Art will have to modify the circuits to let the robot-pilot do it. But Morrie will be the stand-by," he went on, seeing the look on Morrie's face. "Morrie's reaction time is better than mine. I'm getting old. Now how about lunch? I want to change clothes and get to work."

Morrie was dressed in a pilot's coverall, but Cargraves was wearing his best business suit. Art looked him over. "How come the zoot suit, Uncle? You don't look like you expected to come by rocket. For that matter, I thought the ship was going to be ferried out?"

"Change in plans. I came straight from Washington to the field and Morrie took off as soon as I arrived. The ship was ready, so we brought it out ourselves, and saved about five hundred bucks in ferry pilot charges." "Everything on the beam in Washington?" Ross asked anxiously.

"Yes, with the help of the association's legal department. Got some papers for each of you to sign. Let's not stand here beating our gums. Ross, you and I start on the shield right away. After we eat."

"Good enough."

Ross and the doctor spent three days on the hard, dirty task of tearing out the fuel system to the tail jets. The nose and belly jets, used only in maneuvering and landing,

were left unchanged. These operated on aniline and nitric fuel; Cargraves wanted them left as they were, to get around one disadvantage of atomic propulsion-the relative difficulty in turning the power off and on when needed.

As they worked, they brought each other up to date. Ross told him about the man who had tangled with a dud land mine. Cargraves paid little attention until Ross told him about the crates that had been opened. Cargraves laid down his tools and wiped sweat from his face. "I want the details on that," he stated.

"What's the matter, Doc? Nothing was hurt."

"You figure the dead man had been breaking into the stuff?"

"Well, I thought so until I remembered that the Ranger had said flatly that this bozo was already buzzard meat before our stuff arrived."

Cargraves looked worried and stood up. "Where to, Doc?"

"You go ahead with the job," the scientist answered absently. "I've got to see Art."

Ross started to speak, thought better of it, and went back to work.

"Art," Cargraves started in, "what are you and Morrie doing now?"

"Why, we're going over his astrogation instruments. I'm tracing out the circuits on the acceleration integrator. The gyro on it seems to be off center, by the way."

"It has to be. Take a look in the operation manual. But never mind that. Could you rig an electric-eye circuit around this place?"

"I could if I had the gear."

"Never mind what you might do `if' -- what can you do with the stuff you've got?"

"Wait a minute, Uncle Don," the younger partner protested. "Tell me what you want to do -- I'll tell you if I can wangle it."

"Sorry. I want a prowler circuit around the ship and cabin. Can you do it?"

Art scratched his ear. "Let me see. I'd need photoelectric cells and an ultraviolet light. The rest I can piece together. I've got two light meters in my photo kit; I could rig them for the cells, but I don't know about UV light. If we had a sun lamp, I could filter it. How about an arc? I could jimmy up an arc."

Cargraves shook his head. "Too uncertain. You'd have to stay up all night nursing it. What else can you do?"

"Mmmm. . . . Well, we could use thermocouples maybe. Then I could use an ordinary floodlight and filter it down to infra-red."

"How long would it take? Whatever you do, it's got to be finished by dark, even if it's only charging the top wire of the fence."

"Then I'd better do just that," Art agreed, "if that -- Say!"

"Say what?"

"Instead of giving the fence a real charge and depending on shocking anybody that touches it, I'll just push a volt or two through it and hook it back in through an audio circuit with plenty of gain. I can rig it so that if anybody touches the fence it will howl like a dog. How's that?"

"That's better. I want an alarm right now. Get hold of Morrie and both of you work on it." Cargraves went back to his work, but his mind was not on it. The misgivings which he had felt at the time of the mystery of the missing `blunt instrument' were returning. Now more mysteres -- his orderly mind disliked mysteries.

He started to leave the rocket about an hour later to see how Art was making out. His route led him through the hold into the pilot compartment. There he found Morrie. His eyebrows went up. "Hi, sport," he said. "I thought you were helping Art."

Morrie looked sheepish. "Oh, that!" he said. "Well, he did say something about it. But I was busy." He indicated the computer, its cover off.

"Did he tell you I wanted you to help him?"

"Well, yes -- but he didn't need my help. He can do that sort of work just as well alone."

Cargraves sat down. "Morrie," he said slowly, "I think we had better have a talk. Have you stopped to think who is going to be second-in-command of this expedition?"

Morrie did not answer. Cargraves went on. "It has to be you, of course. You're the other pilot. If anything happens to me the other two will have to obey you. You realize that?"

"Art won't like that." Morrie's voice was a mutter.

"Not as things stand now. Art's got his nose out of joint. You can't blame him -- he was disappointed that he didn't get to take pilot training, too."

"But that wasn't my fault."

"No, but you've got to fix it. You've got to behave so that, if the time comes, they'll want to take your orders. This trip is no picnic. There will be times when our lives may depend on instant obedience. I put it to you bluntly, Morrie -- if I had had a choice I would have picked Ross for my second-incommand -- he's less flighty than you are. But you're it, and you've got to live up to it. Otherwise we don't take off."

"Oh, we've got to take off! We can't give up now!"

"We'll make it. The trouble is, Morrie," he went on, "American boys are brought up loose and easy. That's fine. I like it that way. But there comes a time when loose and easy isn't enough, when you have to be willing to obey, and do it wholeheartedly and without argument. See what I'm driving at?"

"You mean you want me to get on back to the shop and help Art."

"Correct." He swung the boy around and faced him toward the door, slapped him on the back and said, "Now git!"

Morrie "got." He paused at the door and flung back over his shoulder,

"Don't worry about me, Doc. I can straighten out and fly right."

"Roger!" Cargraves decided to have a talk with Art later.

Chapter 6 - DANGER IN THE DESERT

THE SPACE SUITS WERE delivered the next day, causing another break in the work, to Cargraves' annoyance. However, the boys were so excited over this evidence that they were actually preparing to walk on the face of the moon that he decided to let them get used to the suits.

The suits were modified pressurized stratosphere suits, as developed for the air forces. They looked like diving suits, but were less clumsy. The helmets were "goldfish bowls" of Plexiglas, laminated with soft polyvinyl-butyral plastic to make them nearly shatter-proof. There were no heating arrangements. Contrary to popular belief, vacuum of outer space has no temperature; it is neither hot nor cold. Man standing on the airless moon would gain or lose heat only by radiation, or by direct contact with the surface of

the moon. As the moon was believed to vary from extreme sub-zero to temperatures hotter than boiling water, Cargraves had ordered thick soles of asbestos for the shoes of the suits and similar pads for the seats of the pants of each suit, so that they could sit down occasionally without burning or freezing. Overgloves of the same material completed the insulation against contact. The suits were so well insulated, as well as air-tight, that body heat more than replaced losses through radiation. Cargraves would have preferred thermostatic control, but such refinements could be left to the pioneers and colonists who would follow after. Each suit had a connection for an oxygen bottle much larger and heavier than the jump bottle of an aviator, a bottle much too heavy to carry on earth but not too heavy for the surface of the moon, where weight is only one-sixth that found on earth.

The early stratosphere suits tended to starfish and become rigid, which made the simplest movements an effort. In trying on his own suit, Cargraves was pleased to find that these suits were easy to move around in, even when he had Ross blow him up until the suit was carrying a pressure of three atmospheres, or about forty-five pounds to the square inch. The constant-volume feature, alleged for the de-Camp joints, appeared to be a reality.

Cargraves let them experiment, while seeing to it that as many field tests as possible were made to supplement the manufacturer's laboratory tests. Then the suits were turned over to Art for installation of walky-talky equipment.

The following day the doctor turned all the boys to work on the conversion of the drive mechanism. He was expecting delivery of the atomic fission element thorium; the anti-radiation shield had to be ready. This shield was constructed of lead, steel, and organic plastic, in an arrangement which his calculations indicated would be most effective in screening the alpha, beta, and gamma radiations and the slippery neutrons, from the forward part of the rocket.

Of these radiations, the gamma are the most penetrating and are much like X-rays. Alpha particles are identical with the nuclei of helium atoms; beta particles are simply electrons moving at extremely high speeds. Neutrons are the electrically uncharged particles which make up much of the mass of most atomic nuclei and are the particles which set off or trigger the mighty explosions of atomic bombs.

All of these radiations are dangerous to health and life.

The thorium drive unit was to be shielded only on the forward side, as radiations escaping to outer space could be ignored. Morrie had landed the rocket with one side facing the cabin, inside the corral. It was now necessary to jack the rocket around until the tubes pointed away from the cabin, so that radiations, after the thorium was in place, would go harmlessly out across the crater of the Doomsday Bomb and, also, so that the rocket would be in position for a captive test run with the exhaust directed away from the cabin.

The jacking-around process was done with hydraulic jacks, muscle, and sweat, in sharp contrast to the easy-appearing, powered manipulation of rockets by dolly and cradle and mobile sling, so familiar a sight on any rocket field. It took all of them until late afternoon. When it was over Cargraves declared a holiday and took them on a long-promised trip into the Doomsday Crater.

This bomb site has been pictured and described so much and the boys were so used to seeing it in the distance that the thrill of being in it was limited. Nevertheless the

desolation, the utter deadness, of those miles and miles of frozen, glassy waste made their flesh creep. Cargraves marched ahead, carrying a Geiger radiation counter, of the sort used to prospect for uranium in Canada during the war. This was largely to impress the boys with the necessity for unsleeping watchfulness in dealing with radioactive elements. He did not really expect to hear the warning rattle of danger in the ear phones; the test had been made so long before that the grim lake was almost certainly as harmless as the dead streets of Hiroshima.

But it put them in the mood for the lecture he had in mind. "Now, listen, sports," he started in when they got back, "day after tomorrow the thorium arrives. From then on the holiday is over. This stuff is poison. You've got to remember that all the time."

"Sure," agreed Morrie. "We all know that."

"You know it at the tops of your minds. I want you to know it every minute, way down in your guts. We'll stake out the unshielded area between the ship and the fence. If your hat blows into that stretch, let it stay there, let it rot -- but don't go after it."

Ross looked perturbed. "Wait a second, Doc. Would it really hurt anything to expose yourself for just a few seconds?"

"Probably not," Cargraves agreed, "provided that were all the dosage you ever got. But we will all get some dosage all the time, even through the shield. Radioactivity accumulates its poisonous effect. Any exposure you can possibly avoid, you must avoid. It makes your chances better when you get a dose of it accidentally. Art!"

"Uh? Yes, sir!"

"From now on you are the medical officer. You must see to it that everybody wears his X-ray film all the time- and I mean all the time -and his electroscope. I want you to change the films and develop them and check the electroscopes according to the dose in the manual. Complete charts on everything, and report to me each Friday morning -- oftener if you find anything outside the limits. Got me?"

"Got you, Doc."

"Besides that, you arrange for blood counts once a week for everybody, over in town."

"I think I could learn to do a blood count myself," Art offered.

"You let the regular medic do it. You've got enough to worry about to keep all the electronic equipment purring along properly. One more thing." He looked around him, waiting to get their full attention. "If any one shows the possibility of overdosage of radiation, by film or by blood count or whatever, I will have to send him home for treatment. It won't be a case of `just one more chance.' You are dealing with hard facts herd -- not me, but natural laws. If you make a mistake, out you go and we'll have to find somebody to take your place."

They all nodded solemnly. Art said, "Doc?"

"Suppose it's your film that shows the overdosage?"

"Me? Not likely! If it does you can kick me all the way to the gate -- I'm afraid of that stuff!

"Just the same," he went on more seriously, "you run the same checks on me as on everybody else. Now let's have supper. I want you and Morrie to do the KP tonight, so that Ross can start his study period right after supper. Ross, you and I are getting up at five, so let's hit the sack early." "Okay. What's cookin'?"

"Trip into Albuquerque -- shopping." He was reluctant to explain. The place had no firearms. They had seemed a useless expense -- many a man has spent years in the desert without shooting off anything but his mouth, he had reasoned. As for the dreamed of trip, what could one shoot on the moon? But signs of prowlers, even in this fenced and forbidding area, had him nervous. Art's watch-dog fence was tested each night and Art slept with the low power-hum of the hot circuit in his ears; thus far there had been no new alarm. Still he was nervous.

Cargraves was awakened about three A.M. to find Art shaking his shoulder and light pouring in his eyes. "Doc! Doc! Wake up!"

"Huh? Wassamatter?"

"I got a squawk over the loudspeaker."

Cargraves was out of bed at once. They bent over the speaker. "I don't hear anything."

"I've got the volume low, but you'd hear it. There it is again -- get it?" There had been an unmistakable squawk from the box. "Shall I wake the others?"

"Mmmm . . . no. Not now. Why did you turn on the light?"

"I guess I wanted it," Art admitted.

"I see." Cargraves hauled on trousers and fumbled with his shoes. "I want you to turn out the lights for ten seconds. I'm going out that window. If I'm not back in twenty minutes, or if you hear anything that sounds bad, wake the boys and come get me. But stay together. Don't separate for any reason." He slipped a torch in his pocket. "Okay."

"You ought not to go by yourself."

"Now, Art. I thought we had settled such matters."

"Yes, but -- oh, well !" Art posted himself at the switch.

Cargraves was out the window and had cat-footed it around behind the machine shop before the light came on again. He lurked in the shadow and let his eyes get used to the darkness.

It was a moonless night, clear and desert sharp. Orion blazed in the eastern sky. Cargraves soon was able to pick out the sage bushes, the fence posts, the gloomy bulk of the ship a hundred yards away.

The padlock on the machine shop was undisturbed and the shop's windows were locked. Doing his best to take advantage of the scanty cover, he worked his way down to the ship.

The door was ajar. He could not remember whether he or Ross had been last man out. Even if it had been Ross, it was not like Ross to fail to lock the door.

He found that he was reluctant to enter the craft. He wished that he had not put off buying guns; a forty-five in his hand would have comforted him. He swung the door open and scrambled in fast, ducking quickly away from the door, where his silhouette would make a target. He crouched in the darkness, listening and trying to slow his pounding heart. When he was sure he could hear nothing, he took the flashlight, held it at arm's length away from him and switched it on.

The piloting compartment was empty. Somewhat relieved, he sneaked back through the hold, empty also, and into the drive compartment. Empty. Nothing seemed disturbed.

He left the ship cautiously, this time making sure that the door was locked. He made a wide sweep around the cabin and machine shop and tried to assure himself that no

one was inside the corral. But in the starlight, fifty men might have hidden in the sage, simply by crouching down and holding still.

He returned to the cabin, whistling to Art as he approached. "About time you got back," Art complained. "I was just about to roust out the others and come and get you. Find anything?"

"No. Anything more out of the squawk box?"

"Not a peep."

"Could it have been a coyote brushing against the wire?"

"How would a coyote get through the outer fence ?" Art wanted to know.

"Dig under it. There are coyotes in here. We've heard them."

"You can't tell how far a coyote is from you by its howl."

"Listen to the old desert rat! Well, leave the light on, but go back to bed. I'll be awake. I've got to be up in another hour in any case. Crawl in the sack." Cargraves settled down to a pipe and some thought.

Cargraves was too busy on the trip to Albuquerque to worry about the preceding night. Ross's style of herding his hot rod left little time to think about anything but the shortness of life and the difficulty of hanging on to his hat. But Ross poured them into the city with plenty of time for shopping.

Cargraves selected two Garand rifles, Army surplus stock at a cheap price, and added a police thirty-eight special, on a forty-five frame. His mouth watered at a fancy sporting rifle with telescopic sights, but money was getting short; a few more emergency purchases or any great delay in starting would bankrupt the firm.

He ordered a supply of army-style C-rations and K-rations for the trip. Ross remarked privately, while the clerk wrote up the order, "In most stories about space travel, they just eat pills of concentrated food. Do you think it will ever come to that?"

"Not with my money," the physicist answered. "You guys can eat pills if you want to. I want food I can get my teeth in."

"Check," said Ross.

They stopped at a nursery where Cargraves ordered three dozen young rhubarb plants. He planned to use a balanced oxygen-carbon-dioxide air-refreshing system during the stay on the moon, if possible, and the plants were to supply the plantlife half of the cycle. Enough liquid oxygen would be carted along for breathing throughout the round trip, but a "balanced aquarium" arrangement for renewing their air supply would enable them to stay on the moon as long as their food lasted.

The chemical fertilizers needed for hydroponic farming of the rhubarb were ordered also. This done, they grabbed a chocolate malt and a hamburger apiece and high-tailed it for the camp.

Morrie and Art swarmed out of the machine shop as they arrived. "Hi, Doc!

Hi, Ross! What's the good word?"

Ross showed them the guns. Art was eager to try them and Cargraves okayed it. Morrie hung back and said, "By the way, Doc, the CAB inspector was here today."

"The what?"

"The Civil Aeronautics inspector. He had a letter from you."

"From me? What did it say?"

"Why, it requested them to send an inspector to go over the rebuilt parts of the rocket and approve it for flight. I told him it wasn't ready." "What else did you say? Did you tell him it was atomic-powered?"

"No, but he seemed to know it. He knew that we planned a space flight, too. What's the pitch, Doc? I thought you were going to keep it quiet a while longer?"

"So did I," Cargraves said bitterly. "What did you tell him?"

"Nothing -- so help me. I decided you ought to handle it, so I played stupid. I tipped Art and he did the same. Did we do wrong?" he went on anxiously. "I know he was CAB, but it seemed to me he ought to talk to you. Do you suppose we offended him?"

"I hope you gave him apoplexy," Cargraves said savagely. "He was no CAB inspector, Morrie. He was a phony."

"Huh? Why. . . . But he had your letter."

"Faked. I'll bet he's been holed up somewhere outside the gate, waiting for me to be away. Did you leave him alone at any time?"

"No. Wait a minute -- only once, for about five minutes. We were down at the ship and he sent me back for a flashlight. I'm sorry." The boy looked miserable.

"Forget it. It was the natural, polite thing to do. You didn't know he was phony. I wonder how he got through the gate? Did he come in a car?"

"Yes. I . . . Was the gate locked?"

"Yes, but he might have bulldozed the forester into letting him in." They had been moving down toward the ship as they talked. Cargraves made a quick examination of the ship, but found nothing amiss. It seemed likely that the intruder had not found what he was looking for, probably because the drive was not yet installed.

He still worried about the matter of the locked gate. "I'm going to run down to the gate," he announced, heading for the car. "Tell the boys." "I'll drive you." None of the boys approved the way Cargraves drove a car; it was one respect in which they did not look up to him. Privately, they considered his style stuffy.

"Okay. Snap it up."

Morrie ran down toward where the other two were wasting ammunition on innocent tin cans and bellowed at them. Seconds later he had the engine revved up and was ready to gun the rig when Cargraves slid into the seat beside him.

The padlock was intact, but one link of the bullchain had been hack-sawed away and replaced with wire. "So that's that," Cargraves dismissed the matter.

"Hadn't we better put on a new chain?" inquired Morrie.

"Why bother? He's still got the hacksaw."

The trip back was gloomy. Cargraves was worried. Morrie felt responsible for not having unmasked and made prisoner the impostor. In retrospect he could think of a dozen dramatic ways to have done it. Cargraves told him to keep his lip buttoned until after supper. When the dishes were out of the way, he brought the others up to date on the ominous happenings. Art and Ross took it with grave faces but without apparent excitement. "So that's how it is," Ross said. "Seems like somebody doesn't like us."

"Why that dirty so-and-so," Art said softly. "I thought he was too smooth.

I'd like to have him on the other end of one of those Garands."

"Maybe you will," Cargraves answered him soberly. "I might as well admit, fellows, that I've been worried. . . ."

"Shucks, we knew that when you ordered that watch-dog hook-up."

"I suppose so. I can't figure out why anybody would do this. Simple curiosity I can understand, once the fact leaked out- as it seems to have done -that we are after space flight. But whoever it is has more than curiosity eating him, considering the lengths he is willing to go to."

"I'll bet he wants to steal your space drive, Uncle Don."

"That would make a swell adventure yarn, Art; but it doesn't make sense. If he knows I've got a rocket drive, all he has to do is apply for a license to the commission and use it."

"Maybe he thinks you are holding out some secrets on the commission?"

"If he thinks so, he can post a bond for the costs and demand an examination. He wouldn't have to fake letters, or bust open gates. If he proves it on me, I go to jail."

"The point is," Morrie asserted, "not why he's snooping but what we can do to stop him. I think we ought to stand watches at night." He glanced at the two rifles.

"No," Cargraves disagreed. "Art's squawk circuit is better than a guard. You can't see enough at night. I found that out."

"Say," put in Art. "Look -- I could take the pilot radar and mount it on the roof of the cabin. With it set to scan for a landing it'll pick up anything in the neighborhood."

"No," Cargraves answered, "I wouldn't want to risk jimmying up the equipment. It's more important to have it just right for the moon landing than it is to use it for prowlers."

"Oh, I won't hurt it!"

"I still think," insisted Morrie, "that getting a shot at him is the best medicine."

"So much the better," Art pointed out. "I'll spot him in the scope. You wear phones with about a thousand feet of cord and I'll coach you right up to him, in the dark. Then you got `im."

"Sounds good," Morrie agreed.

"Take it easy," Cargraves cautioned. "You fellows may think this is the Wild West but you will find that a judge will take a very sour attitude if you plug a man engaged in simple trespassing. You boys've read too many comic books."

"I never touch the things," Art denied fiercely. "Anyhow. Not often," he amended.

"If we can't shoot, then why did you buy the guns?" Ross wanted to know.

"Fair enough. You can shoot -- but you have to be certain it's self-defense; I'll take those guns back to the shop before I'll have a bunch of wild men running around with blood in their eyes and an itch in their trigger fingers. The other use for the guns is to throw a scare into any more prowlers. You can shoot, but shoot where he isn't -- unless he shoots first."

"Okay."

"Suits."

"I hope he shoots first!"

"Any other ideas?"

"Just one," Art answered. "Suppose our pal cut our power line. We've got everything on it -- light, radio, even the squawk box. He could cut the line after we went to sleep and loot the whole place without us knowing it."

Cargraves nodded. "I should have thought of that." He considered it. "You and I will string a temporary line right now from the ship's batteries to your squawk box.

Tomorrow we'll hook up an emergency lighting circuit." He stood up. "Come on, Art. And you guys get busy. Study hour."

"Study hour?" Ross protested. "Tonight? We can't keep our minds on books -- not tonight."

"You can make a stab at it," the doctor said firmly. "Guys have been known to write books while waiting to be hanged."

The night passed quietly. Ross and Doc were down at the ship early the next morning, leaving Art and Morrie to work out an emergency lighting circuit from the battery of the car. Doc planned to have everything ready for the thorium when it arrived. He and Ross climbed into the rocket and got cheerfully to work. Cargraves started laying out tools, while Ross, whistling merrily off key, squeezed himself around the edge of the shield. Cargraves looked up just in time to see a bright, bright flash, then to be hit in the face by a thunderous pressure which threw him back against the side of the ship.

Chapter 7 - "WE'LL GO IF WE HAVE TO WALK"

ART WAS SHAKING HIS SHOULDER. "Doc!" he was pleading. "Doc! Wake up-are you hurt bad ?"

"Ross . . ." Cargraves said vaguely. "It's not Ross; it's Art."

"But Ross -- how's Ross? Did it, did it kill him?"

"I don't know. Morrie's with him."

"Go find out."

"But you're-"

"Go find out, I said!" Whereupon he passed out again.

When he came to a second time, Art was bending over him. "Uncle," he said, "the thorium has come. What do we do?"

Thorium. Thorium? His head ached, the word seemed to have no meaning.

"Uh, I'll be out in a . . . what about Ross? Is he dead?"

"No, he's not dead."

"How bad is he hurt?"

"It seems to be his eyes, mostly. He isn't cut up any, but he can't see. What'll I tell them about the thorium, Uncle?"

"Oh, hang the thorium! Tell them to take it back."

"What?"

He tried to get up, but he was too dizzy, too weak. He let his head fall back and tried to collect his spinning thoughts.

"Don't be a dope, Art," he muttered peevishly. "We don't need thorium. The trip is off, the whole thing was a mistake. Send it back -- it's poison." His eyes were swimming; he closed them. "Ross . . ." he said.

He was again brought back to awareness by the touch of hands on his body. Morrie and Art were gently but firmly going over him. "Take it easy, Doc," Morrie warned him.

"How's Ross?" "Well . . ." Morrie wrinkled his brow. "Ross seems all right, except for his eyes. He says he's all right."

"But he's blind?"

"Well, he can't see."

"We've got to get him to a hospital." Cargraves sat up and tried to stand up. "Ow!" He sat down suddenly.

"It's his foot," said Art.

"Let's have a look at it. Hold still, Doc." They took his left shoe off gently and peeled back the sock. Morrie felt it over. "What do you think, Art?"

Art examined it. "It's either a sprain or a break. We'll have to have an X-ray."

"Where's Ross?" Cargraves persisted. "We've got to get him to a hospital."

"Sure, sure," Morrie agreed. "We've got to get you to one, too. We moved Ross up to the cabin."

"I want to see him."

"Comin' up! Have a seet, while I get the car."

With Art's help Cargraves managed to get up on his good foot and hobble to the door. Getting down from the ship's door was painful, but he made it, and fell thankfully into the seat of the car.

"Who's there?" Ross called out, as they came in with Cargraves leaning on the two boys.

"All of us," Art told him.

Cargraves saw that Ross was lying in his bunk with his eyes covered with a handkerchief. Cargraves hobbled over to him. "How is it, kid?" he said huskily.

"Oh, it's you, Doc. I'll get by. It'll take more than that to do me in. How are you?"

"I'm all right. How about your eyes?"

"Well," Ross admitted, "to tell the truth, they don't work too well. All I see is purple and green lights." He kept his voice steady, almost cheerful, but the pulse in his neck was throbbing visibly. Cargraves started to remove the bandage. Morrie stopped him.

"Let the bandage alone, Doc," he said firmly. "There's nothing to see. Wait till we get him to a hospital."

"But . . . Okay, okay. Let's get on with it."

"We were just waiting for you. Art will drive you."

"What are you going to do?"

"I," said Morrie, "am going to climb up on the roof of this shack with a load of sandwiches and a gun. I'll still be there when you get back."

"But-" Cargraves shrugged and let the matter pass.

Morrie scrambled down when they got back and helped Cargraves hobble into the cabin. Ross was led in by Art; his eyes were bandaged professionally and a pair of dark glasses stuck out of his shirt pocket. "What's the score?" Morrie demanded of all of them, but his eyes were fastened on Ross.

"It's too early to tell," Cargraves said heavily, as he eased into a chair.

"No apparent damage, but the optic nerve seems paralyzed."

Morrie clucked and said nothing. Ross groped at a chair and sat down.

"Relax," he advised Morrie. "I'll be all right. The flash produced a shock in the eyes. The doctor told me all about it. Sometimes a case like this goes on for three months or so, then it's all right."

Cargraves bit his lip. The doctor had told him more than he had told Ross; sometimes it was not all right; sometimes it was permanent.

"How about you, Doc?"

"Sprain, and a wrenched back. They strapped me up."

"Nothing else?"

"No. Anti-tetanus shots for both of us, but that was just to be on the safe side."

"Well," Morrie announced cheerfully, "it looks to me as if the firm would be back in production in short order."

"No," Cargraves denied. "No, it won't be. I've been trying to tell these goons something ever since we left the hospital, but they wouldn't listen. We're through. The firm is busted."

None of the boys said anything. He went on, raising his voice. "There won't be any trip to the moon. Can't you see that?"

Morrie looked at him impassively. "You said, `The firm is busted.' You mean you're out of money?"

"Well, not quite, but that's a factor. What I meant-"

"I've got some E-bonds," Ross announced, turning his bandaged head.

"That's not the point," Cargraves answered, with great gentleness. "I appreciate the offer; don't think I don't. And don't think I want to give up. But I've had my eyes opened. It was foolish, foolish from the start, sheer folly. But I let my desires outweigh my judgment. I had no business getting you kids into this. Your father was right, Ross. Now I've got to do what I can to make amends."

Ross shook his head. Morrie glanced at Art and said, "How about it, medical officer?"

Art looked embarrassed, started to speak, and changed his mind. Instead he went to the medicine cabinet, and took out a fever thermometer. He came back to Cargraves. "Open your mouth, Uncle."

Cargraves started to speak. Art popped the tube in his mouth. "Don't talk while I'm taking your temperature," he warned, and glanced at his wrist watch.

"Why, what the-"

"Keep your mouth closed!"

Cargraves subsided, fuming. Nobody said anything until Art reached again for the thermometer. "What does it say ?" Morrie demanded.

"A tenth over a hundred."

"Let me see that," Cargraves demanded. Art held it away from him. The doctor stood up, absent-mindedly putting his weight on his injured foot. He then sat down quite suddenly. Art shook down the thermometer, cleaned it and put it away.

"It's like this," Morrie said firmly. "You aren't boss; I'm boss."

"Huh? What in the world has got into you, Morrie?"

Morrie said, "How about it, Art?"

Art looked embarrassed but said stubbornly, "That's how it is, Uncle."

"Ross?"

"I'm not sure of the pitch," Ross said slowly, "but I see what they are driving at. I'm stringing along with Art and Morrie."

Cargraves' head was beginning to ache again. "I think you've all gone crazy. But it doesn't make any difference; we're washed up anyhow."

"No," Morrie said, "we're not crazy, and it remains to be seen whether or not we're washed up. The point is: you are on the sick list. That puts me in charge; you set it up that way yourself. You can't give any orders or make any decisions for us until you are off the sick list."

"But-" He stopped and then laughed, his first laugh in hours. "This is nuts. You're hijacking me, with a technicality. You can't put me on the sick list for a little over a degree of temperature."

"You weren't put on the sick list for that; you are being kept on the sick list for it. Art put you on the sick list while you were unconscious. You stay there until he takes you off -- you made him medical officer."

"Yes, but- Look here, Art -you put me on the sick list earlier? This isn't just a gag you thought up to get around me?"

"No, Uncle," Art assured him, "when I told Morrie that you said not to accept the thorium, he tried to check with you. But you were out like a light. We didn't know what to do, until Morrie pointed out that I was medical officer and that I had to decide whether or not you were in shape to carry out your job. So-"

"But you don't have. . . . Anyway, all this is beside the point. I sent the thorium back; there isn't going to be any trip; there isn't any medical officer; there isn't any second-in-command. The organization is done with." "But that's what I've been trying to tell you, Uncle. We didn't send the thorium back."

"Huh?"

"I've signed for it," Morrie explained, "as your agent."

Cargraves rubbed his forehead. "You kids -- you beat me! However, it doesn't make any difference. I have made up my mind that the whole idea was a mistake. I am not going to the moon and that puts the kibosh on it. Wait a minute, Morrie! I'm not disputing that you are in charge, temporarily -- but I can talk, can't I?"

"Sure. You can talk. But nothing gets settled until your temperature is down and you've had a night's sleep."

"Okay. But you'll see that things settle themselves. You have to have me to build the space drive. Right?"

"Mmmm . . . yes."

"No maybes about it. You kids are learning a lot about atomics, fast. But you don't know enough. I haven't even told you, yet, how the drive is supposed to work."

"We could get a license on your patent, even without your permission," Ross put in. "We're going to the moon."

"Maybe you could -- if you could get another nuclear physicist to throw in with you. But it wouldn't be this enterprise. Listen to me, kids. Never mind any touch of fever I've got. I'm right in the head for the first time since I got banged on the head at your rocket test. And I want to explain some things. We've got to bust up, but I don't want you sore at me."

"What do you mean: `since you got banged in the head' ?"

Cargraves spoke very soberly. "I knew at that time, after we looked over the grounds, that that `accident' was no accident. Somebody put a slug on me, probably with a blackjack. I couldn't see why then and I still don't see why. I should have seen the light when we started having prowlers. But I couldn't believe that it was really serious. Yesterday I knew it was. Nobody impersonates a federal inspector unless he's playing for

high stakes and willing to do almost anything. It had me worried sick. But I still didn't see why anybody would want anything we've got and I certainly didn't think they would try to kill us."

"You think they meant to kill us?" asked Ross.

"Obviously. The phony inspector booby-trapped us. He planted some sort of a bomb."

"Maybe he meant to wreck the ship rather than to kill us."

"What for?"

"Well," said Art, "maybe they're after the senior prizes."

"Wrecking our ship won't win him any prize money."

"No, but it could keep us from beating him."

"Maybe. It's far-fetched but it's as good an answer as any. But the reason doesn't matter. Somebody is out to get us and he's willing to go to any lengths. This desert is a lonely place. If I could afford a squadron of guards around the place we might bull it through. But I can't. And I can't let you kids get shot or bombed. It's not fair to you, nor to your parents."

Art looked stubborn and unhappy.

Morrie's face was an impassive mask. Finally he said, "If that's all you've got to say, Doc, I suggest we eat and adjourn until tomorrow."

"All right."

"Not just yet." Ross had stood up. He groped for the back of his chair and tried to orient himself. "Where are you, Doc?"

"I'm here -- to your left."

"All right. Now I've got some things to say. I'm going to the moon. I'm going to the moon, somehow, whether you want to go or not. I'm going to the moon even if I never get back the use of my eyes. I'm going to the moon even if Morrie or Art has to lead me around. You can do as you please."

"But I'm surprised at you, Doc," he went on. "You're afraid to take the responsibility for us, aren't you? That's the size of it?"

"Yes, Ross, that's the size of it."

"Yet you were willing to take the responsibility of leading us on a trip to the moon. That's more dangerous than anything that could happen here, isn't it? Isn't it?"

Cargraves bit his lip. "It's different."

"I'll tell you how it's different. If we get killed trying to make the jump, Einety-nine chances out of a hundred we all get killed together. You don't have to go back and explain anything to our parents. That's how it's different!"

"Now, Ross!"

"Don't `Now, Ross' me. Want the deuce, Doc?" he went on bitterly. "Suppose it had happened on the moon; would you be twittering around, your morale all shot? Doc, I'm surprised at you. If you are going to have an attack of nerves every time the going gets a little tough, I vote for Morrie for permanent captain."

"That's about enough, Ross," Morrie put in quietly.

"Okay. I was through, anyway." Ross sat down.

There was an uncomfortable silence. Morrie broke it by saying, "Art, let's you and me throw together some food. Study hour will be late as it is." Cargraves looked

surjrised. Morrie saw his expression and continued, "Sure. Why not? Art and I can take turns reading aloud."

Cargraves pretended to be asleep that night long before he was. Thus he was able to note that Morrie and Art stood alternate watches all night, armed and ready. He refrained from offering any advice.

The boys both went to bed at sunrise. Cargraves got painfully but quietly out of bed and dressed. Leaning on a stick he hobbled down to the ship. He wanted to inspect the damage done by the bomb, but he noticed first the case containing the thorium, bulking large because of its anti-radiation shipping shield. He saw with relief that the seal of the atomics commission was intact. Then he hunched himself inside the ship and made his way slowly to the drive compartment.

The damage was remarkably light. A little welding, he thought, some swaging, and some work at the forge would fix it. Puzzled, he cautiously investigated further.

He found six small putty-like pieces of a plastic material concealed under the back part of the shield. Although there were no primers and no wiring attached to these innocentappearing little objects he needed no blueprint to tell him what they were. It was evident that the saboteur had not had time to wire more than one of his deadly little toys in the few minutes he had been alone. His intentions had certainly been to wreck the drive compartment -- and kill whoever was unlucky enough to set off the trap.

With great care, sweating as he did so, he removed the chunks of explosive, then searched carefully for more. Satisfied, he slipped them into his shirt pocket and went outside. The scramble, hampered by his game leg, out of the door of the rocket, made him shaky; he felt like a human bomb. Then he limped to the corral fence and threw them as far as he could out into the already contaminated fields. He took the precaution of removing them all from his person before throwing the first one, as he wanted to be ready to fall flat. But there was no explosion; apparently the stuff was relatively insensitive to shock. Finished, he turned away, content to let sun and rain disintegrate the stuff.

He found Ross outside the cabin, turning his bandaged face to the morning sun. "That you, Doc?" the young man called out.

"Yes. Good morning, Ross."

"Good morning, Doc." Ross moved toward the scientist, feeling the ground with his feet. "Say, doc -- I said some harsh things last night. I'm sorry. I was upset, I guess."

"Forget it. We were all upset." He found the boy's groping hand and pressed it. "How are your eyes?"

Ross's face brightened. "Coming along fine. I slipped a peek under the bandage when I got up. I can see-"

"Good!"

"I can see, but everything's fuzzy and I see double, or maybe triple. But the light hurt my eyes so I put the bandage back."

"It sounds as if you were going to be all right," Cargraves ventured. "But take it easy."

"Oh, I will. Say, Doc . . ."

"Yes, Ross ?"

"Nnnn . . . Oh, nothing. Never mind."

"I think I know, Ross. I've changed my mind. I changed my mind last night before I got to sleep. We're going through with it."

"Good!"

"Maybe it's good, maybe it's bad. I don't know. But if that's the way you fellows feel about it, I'm with you. We'll go if we have to walk."

Chapter 8 - SKYWARD!

"THAT SOUNDS MORE LIKE you, Doc!"

"Thanks. Are the others up yet?"

"Not yet. They didn't get much sleep."

"I know. Let's let them sleep. We'll sit out in the car. Take my arm."

When they had settled themselves Ross asked, "Doc, how much longer will it take to get ready?"

"Not long. Why?"

"Well, I think the key to our problems lies in how fast we can get away. If these attempts to stop us keep up, one of them is going to work. I wish we would leave today."

"We can't do that," Cargraves answered, "but it shouldn't be long. First I've got to install the drive, but it's really just a matter of fitting the parts together. I had almost everything prepared before I ever laid eyes on you guys."

"I wish my blinkers weren't on the fritz."

"It's one job I'll have to do myself. Not that I am trying to keep you out of it, Ross," he added hastily, seeing the boy's expression. "I've never explained it because I thought it would be easier when we had all the gear in front of us."

"Well, how does it work?"

"You remember Heron's turbine in elementary physics? Little boiler on the bottom and a whirligig like a lawn sprinkler on top? You heat the boiler, steam comes up through the whirligig, and makes it whirl around. Well, my drive works like that. Instead of fire, I use a thorium atomic power pile; instead of water, I use zinc. We boil the zinc, vaporize it, get zinc `steam.' We let the `steam' exhaust through the jet. That's the works."

Ross whistled. "Simple -- and neat. But will it work?"

"I know it'll work. I was trying for a zinc `steam' power plant when I hit on it. I got the hard, hot jet I wanted, but I couldn't get a turbine to stand up under it. Broke all the blades. Then I realized I had a rocket drive."

"It's slick, Doc! But say -- why don't you use lead? You'd get more mass with less bulk."

"A good point. Concentrated mass means a smaller rocket motor, smaller tanks, smaller ship, less dead weight all around. But mass isn't our main trouble; what we've got to have is a high-velocity jet. I used zinc because it has a lower boiling point than lead. I want to superheat the vapor so as to get a good, fast jet, but I can't go above the stable limit of the moderator I'm using."

"Carbon?"

"Yes, carbon-graphite. We use carbon to moderate the neutron flow and cadmium inserts to control the rate of operation. The radiations get soaked up in a bath of liquid zinc. The zinc boils and the zinc `steam' goes whizzing out the jet as merry as can be."

"I see. But why don't you use mercury instead of zinc? It's heavier than lead and has a lower boiling point than either one of them."

"I'd like to, but it's too expensive. This is strictly a cut-rate show." Doc broke off as Morrie stuck his head out the cabin door.

"Hi, there! Come to breakfast, or we'll throw it out!"

"Don't do that!" Cargraves slipped a leg over the side of the car- the wrong leg- touched the ground and said, "Ouch!"

"Wait a minute, and lean on me," Ross suggested.

They crept back, helping each other. "Aside from the pile," Cargraves went on, "there isn't much left. The thorium is already imbecided in the graphite according to my calculations. That leaves just two major jobs: the air lock and a test-stand run."

The rocket, although it had operated on the trans-Atlantic run above the atmosphere, had no air lock, since it's designers had never intended it to be opened up save on the ground. If they were to walk the face of the moon, an air lock, a small compartment with two doors, was necessary. Cargraves planned to weld a steel box around the inside of the present door frame, with a second air-tight door, opening inward.

"I can weld the lock," Ross offered, "while you rig the pile. That is, if my eyes clear up in time."

"Even if they do, I don't think it would be smart to stare at a welding arc. Can't the others weld?"

"Well, yes, but just between us chickens, I run a smoother seam."

"We'll see . . ."

At breakfast Cargraves told the other two of his decision to go ahead. Art turned pink and got his words twisted. Morrie said gravely, "I thought your temperature would go down over night. What are the plans?"

"Just the same, only more so. How's your department?"

"Shucks, I could leave this afternoon. The gyros are purring like kittens; I've calculated Hohmann orbits and S-trajectories till I'm sick of `em; the computer and me are like that." He held out two fingers.

"Fine. You concentrate on getting the supplies in, then. How about you, Art?"

"Who, me? Why, I've got everything lined up, I guess. Both radars are right on the beam. I've got a couple wrinkles I'd like to try with the FM circuit."

"Is it all right the way it is?"

"Good enough, I guess."

"Then don't monkey with the radios. I can keep you busy."

"Oh, sure."

"How about the radar screen Art was going to rig?" Morrie inquired.

"Eh? Oh, you mean the one for our friend the prowler. Hm. . . .," Cargraves studied the matter. "Ross thinks and I agree that the best way to beat the prowler is to get out of here as fast as we can. I don't want that radar out of the ship. It would waste time and always with the chance of busting a piece of equipment we can't afford to replace and can't get along without."

Morrie nodded. "Suits. I still think that a man with a gun in his hands is worth more than a gadget anyhow. See here -- there are four of us. That's two hours a' night. Let's stand guard."

Cargraves agreed to this. Various plans were offered to supplement the human guard and the charged fence, but all were voted down as too time-consuming, too expensive or impractical. It was decided to let the matter stand, except that lights would be left burning at night, including a string to be rigged around the ship. All of these lines were to be wired to cut over automatically to the ship's batteries.

Cargraves sat down to lunch on Wednesday of the following week with a feeling of satisfaction. The thorium power pile was in place, behind the repaired shield. This in itself was good; he disliked the finicky, ever-dangerous work of handling the radioactive element, even though he used body shields and fished at it with tongs.

But the pile was built; the air lock had been welded in place and tested for air-tightness; almost all the supplies were aboard. Acceleration hammocks had been built for Art and Ross (Cargraves and Morrie would ride out the surges of power in the two pilot seats). The power pile had been operated at a low level; all was well, he felt, and the lights on the board were green.

The phony inspector had not showed up again, nor were the night watches disturbed. Best of all, Ross's eyesight had continued to improve; the eye specialist had pronounced him a cure on Monday, subject to wearing dark glasses for a couple of weeks.

Cargraves' sprain still made him limp, but he had discarded his stick. Nothing bothered him. He tackled Aggregate a la Galileo (hash to ordinary mortals) with enthusiasm, while thinking about a paper he would write for the Physical Review. Some Verified Experimental Factors in Space Flight seemed like a good title -- by Doctor Donald Morris Cargraves, B.S., Sc.D., LL.D., Nobel Prize, Nat. Acad., Fr. Acad., etc. The honors were not yet his -- he was merely trying them on for size.

The car ground to a stop outside and Art came in with the mail. "Santa Claus is here!" he greeted them. "One from your folks, Ross, and one from that synthetic blonde you're sweet on."

"I'm not sweet on her and she's a natural blonde," Ross answered emphatically.

"Have it your own way -- you'll find out. Three for you, Morrie -- all business. The rest are yours, Doc," he finished, holding back the one from his mother. "Hash again," he added.

"It's to soften you up for what you're going to eat on the moon," said the cook. "Say, Doc-"

"Yes, Morrie?"

"The canned rations are at the express office in town, it says here. I'll pick `em up this afternoon. The other two are bills. That finishes my check-off list."

"Good," he answered absently, as he tore open a letter. "You can help Ross and me on the test stand. That's the only big job left." He unfolded the letter and read it.

Then he reread it. Presently Ross noticed that he had stopped eating and said, "What's the matter, Doc?"

"Well, nothing much, but it's awkward. The Denver outfit can't supply the dynamometers for the test stand run." He tossed the letter to Ross.

"How bad off does that leave us?" asked Morrie.

"I don't know, yet. I'll go with you into town. Let's make it right after lunch; I have to call the East Coast and I don't want to get boxed in by the time difference."

"Can do."

Ross handed the letter back. "Aren't there plenty of other places to buy them?"

"Hardly `plenty.' Half-a-million-pound dynamometers aren't stock items. We'll try Baldwin Locomotives."

"Why don't we make them?" asked Art. "We made our own for the Starstruck series.'"

Cargraves shook his head. "High as my opinion is of you lugs as good, all-around jack-leg mechanics and pretzel benders, some jobs require special equipment. But speaking of the Starstruck series," he went on, intentionally changing the subject, "do you guys realize we've never named the ship? How does Starstruck VI appeal to you ?"

Art liked it. Morrie objected that it should be Moonstruck. But Ross had another idea. "Starstruck was a good enough name for our model rockets, but we want something with a little more -- oh, I don't know; dignity, I guess-for the moon ship."

"The Pioneer?"

"Corny."

"The Thor -- for the way she's powered."

"Good, but not enough."

"Let's call it Einstein."

"I see why you want to name it for Doctor Einstein," Cargraves put in, "but maybe I've got another name that will symbolize the same thing to you. How about the Galileo?"

There was no dissension; the members of the Galileo Club again were unanimous. The man who had first seen and described the mountains of the moon, the man whose very name had come to stand for steadfast insistence on scientific freedom and the freely inquiring mind -- his name was music to them.

Cargraves wondered whether or not their own names would be remembered after more than three centuries. With luck, with lots of luck -- Columbus had not been forgotten. If the luck ran out, well, a rocket crash was a fast clean death.

The luck appeared to be running out, and with nothing as gallant and spectacular as a doomed and flaming rocket. Cargraves sweated in a phone booth until after five o'clock, East Coast time, and then another hour until it was past five in Chicago as well before he admitted that dynamometers of the size he needed were not to be had on short notice.

He blamed himself for having slipped up, while neglecting to credit himself with having planned to obtain the instruments from the Denver firm for reasons of economy; he had expected to get them second-hand. But blaming himself comforted him.

Morrie noted his long face as he climbed into the heavily loaded little car. "No soap, eh?"

"No soap. Let's get back to camp."

They sped along the desert road in worried silence for several minutes. Finally Morrie spoke up. "How about this, Doc? Make a captive run on the ground with the same yoke and frame you planned to use, but without dynamometers."

"What good would that do? I have to know what the thrust is."

"I'm getthig to that. We put a man inside. He watches the accelerometer -- the pendulum accelerometer of course; not the distance-integrating one. It reads in g's. Figure

the number of gravities against the gross weight of the ship at the time and you come out with your thrust in pounds."

Cargraves hesitated. The boy's mistake was so obvious and yet so easy to make that he wished to point it out without hurting his pride. "It's a clever plan, except that I would want to use remote control -- there's always the chance that a new type of atomic-fission power plant will blow up. But that's not the hitch; if the ship is anchored to the ground, it won't be accelerating no matter how much thrust is developed."

"Oh!" said Morrie. "Hmm. I sure laid an egg on that one, Doc."

"Natural mistake."

After another five miles Morrie spoke again. "I've got it, Doc. The Galileo has to be free to move to show thrust on the accelerometer. Right? Okay, I'll test-fly it. Hold it, hold it," he went on quickly, "I know exactly what you are going to say: you won't let any one take a risk if you can help it. The ship might blow up, or it might crash. Okay, so it might. But it's my job. I'm not essential to the trip; you are. You have to have Ross as flight engineer; you have to have Art for the radar and radio; you don't have to have a second pilot. I'm elected."

Cargraves tried to make his voice sound offhand. "Morrie, your analysis does your heart credit, but not your head. Even if what you said is true, the last part doesn't quite add up. I may be essential, if the trip is made. But if the test flight goes wrong, if the power pile blows, or if the ship won't handle and crashes, then there won't be any trip and I'm not essential."

Morrie grinned. "You're sharp as a tack, Doc."

"Tried to frame me, eh? Well, I may be old and feeble but I'm not senile. Howsoever, you've given me the answer.

"We skip the captive run and test-fly it. I test-fly it." Morrie whistled, "When?"

"Just as soon as we get back."

Morrie pushed the accelerator down to the floor boards; Cargraves wished that he had kept quiet until they reached the camp.

Forty minutes later he was handing out his final instructions. "Drive outside the reservation and find some place at least ten miles away where you can see the camp and where you can huddle down behind a road cut or something. If you see a Hiroshima mushroom, don't try to come back. Drive on into town and report to the authorities." He handed Ross a briefcase. "In case I stub my toe, give this stuff to your father. He'll know what to do with it. Now get going. I'll give you twenty minutes. My watch says seven minutes past five."

"Just a minute, Doc."

"What is it, Morrie?" His tones showed nervous irritability. "I've polled the boys and they agree with me. The Galileo is expendable but you aren't. They want you left around to try it again."

"That's enough on that subject, Morrie."

"Well, I'll match you for it."

"You're on thin ice, Morrie!"

"Yes, sir." He climbed in the car. The other two squeezed in beside him.

"So long!"

"Good luck!"

He waved back at them as they drove away, then turned toward the open door of the Galileo. He was feeling suddenly very lonely.

The boys found such a spot and crouched down behind a bank, like soldiers in a trench. Morrie had a small telescope; Art and Ross were armed with the same opera glasses they had used in their model rocket tests. "He's closed the door," announced Morrie.

"What time is it?"

"I've got five twenty-five."

"Any time now. Keep your eyes peeled." The rocket was tiny even through the opera glasses; Morrie's view was slightly better. Suddenly he yelled, "That's it! Geronimo!"

The tail jet, bright silver even in the sun light, had flared out. The ship did not move. "There go his nose jets!" Red and angry, the aniline-and-nitric reached out in front. The Galileo, being equipped with nose and belly maneuvering jets, could take off without a launching platform or catapult. He brought his belly jets into play now; the bow of the Galileo reared up, but the opposing nose and tail jets kept her nailed to one spot.

"He's off!" The red plumes from the nose were suddenly cut and the ship shot away from the ground. It was over their heads almost before they could catch their breaths. Then it was beyond them and shooting toward the horizon. As it passed over the mountains, out of sight, the three exhaled simultaneously. "Gosh!" said Art, very softly.

Ross started to run.

"Hey, where y' going?"

"Back to the camp! We want to be there before he is!"

"Oh!" They tore after him.

Ross set a new high in herding the rig back to the camp site, but his speed did not match their urgency. Nor were they ahead of time. The Galileo came pouring back over the horizon and was already braking on her nose jets when the car slammed to a stop.

She came in at a steep dive, with the drive jet already dead. The nose jets splashed the ground on the very spot where she had taken off. He kicked her up with the belly jets and she pancaked in place. Morrie shook his head. "What a landing!" he said reverently.

Cargraves fell out of the door into a small mob. The boys yelled and pounded him on the back.

"How did she behave? How did she handle?"

"Right on the button! The control of the drive jet is laggy, but we expected that. Once she's hot she doesn't want to cool off. You have to get rid of your head of `steafli.'(<-- SeaGull/Zopharnal - Is this right?) I was half way to Oklahoma City before I could slow down enough to turn and come back."

"Boy, oh boy! What a ship!"

"When do we start?"

Cargraves' face sobered. "Does staying up all night to pack suit you?"

"Does it! Just try us!"

"It's a deal. Art, get in the ship and get going with the radio. Get the Associated Press station at Salt Lake. Get the United Press. Call up the radio news services. Tell them to get some television pick-ups out here. The lid is off now. Make them realize there is a story here."

"On my way!" He scrambled up into the ship, then paused in the door. "Say -- what if they don't believe me?"

"Make them believe you. Tell them to call Doctor Larksbee at the commission for confirmation. Tell them that if they miss they'll be scooped on the biggest story since the war. And say -- call up Mr. Buchanan on the forestry frequency. He's kept his mouth shut for us; he ought to be in on it."

By midnight the job was practically complete and Cargraves insisted that they take turns lying down, two at a time, not to sleep, but just to keep from starting the trip completely tired out. The fuel tanks for the belly and nose jets were topped off and the specially installed reserve tanks were filled. The tons of zinc which served the main drive were already aboard as well as an equal weight of powdered reserve. The food was aboard; the carefully rationed water was aboard. (Water was no problem; the air-conditioner would scavenge the vapor of their own exhalations.) The liquid oxygen tanks were full. Cargraves himself had carried aboard the two Garands, excusing it to himself on the pretext that they might land in some wild spot on the return trip . . . that, despite the fact they had ripped the bindings from their few books in order to save space and weight.

He was tired. Only the carefully prepared lists enabled him to be sure that the ship was in all respects ready -- or would be soon.

The boys were tired, confused, and excited. Morrie had worked the problem of their departure trajectory three times and then had gotten nerves over it, although it had checked to the last decimal each time. He was gnawed by fear that he had made some silly and fatal mistake and was not satisfied until Cargraves had gotten the same answer, starting with a clear board.

Mr. Buchanan, the Ranger, showed up about one o'clock, "Is this the Central New Mexico Insane Asylum?" he inquired pleasantly.

Cargraves admitted it. "I've wondered what you folks were up to," the Ranger went on. "Of course I saw your ship, but your message surely surprised me. I hope you don't mind me thinking you're crazy; I wish you luck just the same."

"Thanks." Cargraves showed him the ship, and explained their plans. The moon was full and an hour past its greatest elevation. They planned to take off shortly after daybreak, as it was sinking in the west. This would lose them the earth's spin, but, after the trial run, Cargraves did not care; he had power to throw away. Waiting twelve hours to save a difference of about 1600 miles per hour was more than his nerves could stand.

He had landed the rocket faced west; it would save jacking her around as well.

Buchanan looked the layout over and asked where the jets would splash. Cargraves showed him. Whereupon Buchanan asked, "Have you arranged for any guards?"

In truth, Cargraves had forgotten it. "Never mind," said Buchanan, "I'll call Captain Taylor and get some state police over."

"Never mind calling; we'll radio. Art!"

The press started showing up at four; by the time the state police arrived, Cargraves knew that he had been saved real grief. The place was crowded. Escorts were necessary from the outer gate to the corral to make sure that no one drove on the danger-

studded mock-battle fields. Once in the corral it took the firm hand of the state police to keep them there -- and to keep them from swarming over the ship.

At five they ate their last breakfast in the camp, with a guard at the door to give them some peace. Cargraves refused to be interviewed; he had prepared a typed hand-out and given copies to Buchanan to distribute. But the boys were buttonholed whenever his back was turned. Finally Captain Taylor assigned a bodyguard to each.

They marched in a hollow square of guards to the ship. Flash guns dazzled their eyes and television scanners followed their movements. It seemed impossible that this was the same lonely spot where, only hours before, they had worried about silent prowlers in the dark.

Cargraves had the boys climb in, then turned to Buchanan and Captain Taylor. "Ten minutes, gentlemen. Are you sure you can keep everybody clear? Once I get in the seat I can't see the ground near me."

"Don't worry, Captain Cargraves," Taylor assured him. "Ten minutes it is."

Buchanan stuck out his hand. "Good luck, Doctor. Bring me back some green cheese." `

A man came puffing up, dodged past a guard, and thrust a folded paper in Cargraves' hand.

"Here, what's this?" demanded Taylor. "Get back where you belong."

The man shrugged. "It's a court order."

"Eh? What sort?"

"Temporary injunction against flying this ship. Order to appear and show cause why a permanent injunction should not be issued to restrain him from willfully endangering the lives of minors."

Cargraves stared. It felt to him as if the world were collapsing around him. Ross and Art appeared at the door behind him. "Doc, what's up?"

"Hey, there! You boys-come down out of there," yelled the stranger, and then said to Captain Taylor, "I've got another paper directing me to take them in charge on behalf of the court."

"Get back in the ship," Cargraves ordered firmly, and opened the paper. It seemed in order. State of New Mexico and so forth. The stranger began to expostulate. Taylor took him by the arm.

"Take it easy," he said.

"Thanks," said Cargraves. "Mr. Buchanan, can I have a word with you? Captain, will you hang on to this character?"

"Now, I don't want any beef," protested the stranger. "I'm just carrying out my duty."

"I wonder," Cargraves said thoughtfully. He led Buchanan around the nose of the craft and showed him the paper.

"It seems to be in order," Buchanan admitted.

"Maybe. This says it's the order of a state court. This is federal territory, isn't it? As a matter of fact, Captain Taylor and his men are here only by your invitation and consent. Isn't that right?"

"Hmmm.. . yes. That's so." Buchanan suddenly jammed the paper in his pocket. "I'll fix his clock!"

"Just a minute." Cargraves told him rapidly about the phony inspector, and the prowlers, matters which he had kept to himself, save for a letter to the Washington CAB office. "This guy may be a phony, or a stooge of a phony. Don't let him get away until you check with the court that supposedly issued this order."

"I won't!"

They went back, and Buchanan called Taylor aside. Cargraves took the stranger by the arm, not gently. The man protested. "How would you like a poke in the eye?" Cargraves inquired.

Cargraves was six inches taller, and solid. The man shut up. Taylor and Buchanan came back in a moment or two. The state policeman said, "You are due to take off in three minutes, Captain. I had better be sure the crowd is clear." He turned and called out, "Hey! Sergeant Swanson!"

"Yes, sir!'

"Take charge of this guy." It was the stranger, not Cargraves, whom he indicated.

Cargraves climbed in the ship. As he turned to close the door a cheer, ragged at first but growing to a solid roar, hit him. He clamped the door and locked it, then turned. "Places, men."

Art and Ross trotted to their hammocks, directly behind the pilots' seats. These hammocks were vertical, more like stretchers braced upright than garden hammocks. They snapped safety belts across their knees and chests.

Morrie was already in his chair, legs braced, safety belts buckled, head back against the shock pad. Cargraves slipped into the seat beside him, favoring his bad foot as he did so. "All set, Morrie." His eyes glanced over the instrument board, particularly noticing the temperature of the zinc and the telltale for position of the cadmium damping plates.

"All set, Captain. Give her the gun when you are ready."

He buckled himself in and glanced out the quartz glass screen ahead of him. The field was clear as far as he could see. Staring straight at him, round and beautiful, was their destination. Under his right hand, mounted on the arm rest, was a large knurled knob. He grasped it. "Art?"

"Ready sir."

"Ross?"

"Ready, Captain."

"Co-pilot?"

"Ready, Captain. Time, six-oh-one."

He twisted the knob slowly to the right. Back behind him, actuated by remote control, cadmium shields slowly withdrew from between lattices of graphite and thorium; uncountable millions of neutrons found it easier to seek atoms of thorium to destroy. The tortured nuclei, giving up the ghost, spent their energy in boiling the molten zinc.

The ship began to tremble.

With his left hand he cut in the nose rockets, balancing them against the increasing surge from the rear. He slapped in the belly jets; the ship reared. He let the nose jets die.

The Galileo leaped forward, pressing them back into their pads.

They were headed skyward, out and far.

Chapter 9 - INTO THE LONELY DEPTHS

TO ROSS AND ART THE WORLD seemed to rotate dizzily through ninety degrees. They had been standing up, strapped to their upright hammocks, and staring straight forward past Cargraves and Morrie out through the conning port at the moon and the western horizon.

When the rocket took off it was as if they had been suddenly forced backwards, flat on their backs and pushed heavily into the cushions and springs. Which, in a way, was exactly what had happened to them. It was the powerful thrust of the jet which had forced them back against the springs and held them there. The force of the drive made the direction they were traveling "up."

But the moon still stared back at them, dead ahead through the port; "up" was also "west." From where they lay, flat on their backs, Cargraves and Morrie were above them and were kept from falling on them by the heavy steel thrust members which supported the piloting chairs.

The moon shimmered and boiled under the compression waves of air. The scream of the frantic molecules of air against the skin of the craft was louder and even more nerve-racking than steady thunder of the jet below them. The horizon dropped steadily away from the disk of the moon as they shot west and gained altitude. The sky, early morning gray as they took off, turned noonday blue as their flat climb took them higher and higher into the sunlight.

The sky started to turn purple and the stars came out. The scream of the air was less troublesome. Cargraves cut in his gyros and let Joe the Robot correct his initial course; the moon swung gently to the right about half its width and steadied. "Everybody all right ?," he called out, his attention free of the controls for a moment.

"Swell!" Art called back.

"Somebody's sitting on my chest," Ross added.

"What's that?"

"I say, somebody's sitting on my chest!" Ross shouted.

"Well, wait a bit. His brother will be along in a minute."

"What did you say?"

"Never mind!" Cargraves shouted. "It wasn't important. Copilot!"

"Yes, Captain!"

"I'm going into full automatic. Get ready to check our course."

"Aye, aye, sir." Morrie clamped his octant near his face and shifted his head a little so that he could see the scope of the belly radar easily. He dug his head into the pads and braced his arms and hands; he knew what was coming. "Astrogator ready!"

The sky was black now and the stars were sharp. The image of the moon had ceased to shake and the unearthly scream of the air had died away, leaving only the tireless thunder of the jet. They were above the atmosphere, high above -- free.

Cargraves yelled, "Hang on to your hats, boys! Here we go! He turned full control over to Joe the Robot pilot. That mindless, mechanical-and-electronic worthy figuratively shook his non-existent head and decided he did not like the course. The image of the moon swung "down" and toward the bow, in terms of the ordinary directions in the ship, until the rocket was headed in a direction nearly forty degrees further east than was the image of the moon.

Having turned the ship to head for the point where the moon would be when the Galileo met it, rather than headed for where it now was, Joe turned his attention to the jet. Thee cadmium plates were withdrawn a little farther; the rocket really bit in and began to dig.

Ross found that there was indeed a whole family on his chest. Breathing was hard work and his eyes seemed foggy.

If Joe had had feelings he need have felt no pride in what he had just done, for his decisions had all been made for him before the ship left the ground. Morrie had selected, with Cargraves' approval, one of several three-dimensional cams and had installed it in Joe's innards. The cam "told" Joe what sort of a course to follow to the moon, what course to head first, how fast to gun the rocket and how long to keep it up. Joe could not see the moon- Joe had never heard of the moon -but his electronic senses could perceive how the ship was headed in relation to the steady, unswerving spin of the gyros and then head the ship in the direction called for by the cam in his tummy.

The cam itself had been designed by a remote cousin of Joe's, the gteat "Eniac" computer at the University of Pennsylvania. By means of the small astrogation computer in the ship either Morrie or Cargraves could work out any necessary problem and control the Galileo by hand, but Joe, with the aid of his cousin, could do the same thing better, faster, more accurately and with unsleeping care -- provided the human pilot knew what to ask of him and how to ask it.

Joe had not been invented by Cargraves; thousands of scientists, engineers, and mathematicians had contributed to his existence. His grandfathers had guided the Nazi V-2 rockets in the horror-haunted last days of World War II. His fathers had been developed for the deadly, ocean-spanning guidedmissiles of the UN world police force. His brothers and sisters were found in every rocket ship, private and commercial, passenger-carrying or unmanned, that cleft the skies of earth.

Trans-Atlantic hop or trip to the moon, it was all one to Joe. He did what his cam told him to do. He did not care, he did not even know.

Cargrave called out, "How you making out down there?"

"All right, I guess," Ross answered, his voice laboring painfully.

"I feel sick," Art admitted with a groan.

"Breathe through your mouth. Take deep breaths."

"I can't."

"Well, hang on. It won't be long."

In fact it was only fifty-five seconds at full drive until Joe, still advised by his cam, decided that they had had enough of full drive. The cadmium plates slid farther back into the power pile, thwarting the neutrons; the roar of the rocket drive lessened.

The ship did not slow down; it simply ceased to accelerate so rapidly. It maintained all the speed it had gained and the frictionless vacuum of space did nothing to slow its headlong plunge. But the acceleration was reduced to one earth-surface gravity, one g, enough to overcome the powerful tug of the earth's mighty weight and thereby permit the ship to speed ahead unchecked -- a little less than one g, in fact, as the grasp of the earth was already loosening and would continue to drop off to the change-over, more than 200,000 miles out in space, where the attraction of the moon and that of the earth are equal.

For the four in the ship the reduction in the force of the jet had returned them to a trifle less than normal weight, under an artificial gravity produced by the drive of the jet.

This false "gravity" had nothing to do with the pull of the earth; the attraction of the earth can be felt only when one is anchored to it and supported by it, its oceans, or it's air.

The attraction of the earth exists out in space but the human body has no senses which can perceive it. If a man were to fall from a tremendous height, say fifty thousand miles, it would not seem to him that he was falling but rather that the earth was rushing up to meet him.

After the tremendous initial drive had eased off, Cargraves called out again to Art. "Feeling any better, kid?"

"I'm all right now," Art replied.

"Fine. Want to come up here where you can see better?"

"Sure!" responded both Art and Ross, with one voice.

"Okay. Watch your step."

"We will." The two unstrapped themselves and climbed up to the control station by means of hand and toe holds welded to the sides of the ship. Once there they squatted on the supporting beams for the pilots' chairs, one on each side. They looked out.

The moon had not been visible to them from their hammock positions after the change in course. From their new positions they could see it, near the "lower" edge of the conning port. It was full, silver white and so dazzling bright that it hurt their eyes, although not sufficiently nearer to produce any apparent increase in size. The stars around it in the coalblack sky were hard bright diamonds, untwinkling.

"Look at that," breathed Ross. "Look at old Tycho shining out like a searchlight. Boy!"

"I wish we could see the earth," said Art. "This bucket ought to have more than one view port."

"What do you expect for a dollar-six-bits ?" asked Ross. "Chimes? The Galileo was a freighter."

"I can show it to you in the scope," Morrie offered, and switched on the piloting radar in the belly. The screen lit up after a few seconds but the picture was disappointing. Art could read it well enough- it was his baby -but esthetically it was unsatisfying. It was no more than a circular plot reading in bearing and distance; the earth was simply a vague mass of light on that edge of the circle which represented the astern direction.

"That's not what I want," Art objected. "I want to see it. I want to see it shape up like a globe and see the continents and the oceans."

"You'll have to wait until tomorrow, then, when we cut the drive and swing ship. Then you can see the earth and the sun, too."

"Okay. How fast are we going? Never mind -- I see," he went on, peering at the instrument board. "3,300 miles per hour."

"You're looking at it wrong," Ross corrected him. "It says 14,400 miles per hour."

"You're crazy."

"Like fun. Your eyes have gone bad."

"Easy, boys, easy," Cargraves counseled. "You are looking at different instruments. What kind of speed do you want?"

"I want to know how fast we're going," Art persisted.

"Now, Art, I'm surprised at you. After all you've had every one of these instruments apart. Think what you're saying."

Art stared at the instrument board again, then looked sheepish. "Sure, I forgot. Let's see now -- we've gained 14,000 and some, close to 15,000 now, miles per hour in free fall -- but we're not falling."

"We're always falling," Morrie put in, smug for the moment in his status as a pilot. "You fall all the time from the second you take off, but you drive to beat the fall."

"Yes, yes, I know," Art cut him off. "I was just mixed up for a moment. Thirty-three hundred is the speed I want -- 3310 flow."

'Speed' in space is a curiously slippery term, as it is relative to whatever point you select as 'fixed' -- but the points in space are never fixed. The speed Art settled for was the speed of the Galileo along a line from the earth to their meeting place with the moon. This speed was arrived at deep inside Joe the Robot by combining by automatic vector addition three very complicated figures: first was the accumulated acceleration put on the ship by its jet drive, second the motions imposed on the ship by its closeness to the earth -- its 'free fall' speed of which Art had spoken. And lastly, there was the spin of the earth itself, considered both in amount and direction for the time of day of the take-off and the latitude of the camp site in New Mexico. The last was subtracted, rather than added, insofar as the terms of ordinary arithmetic apply to this sort of figuring.

The problem could be made vastly more complicated. The Galileo was riding with the earth and the moon in their yearly journey around the sun at a speed of about 19 miles per second or approximately 70,000 miles per hour as seen from outer space. In addition, the earth-moon line was sweeping around the earth once each month as it followed the moon -- but Joe the Robot had compensated for that when he set them on a course to where the moon would be rather than where it was.

There were also the complicated motions of the sun and its planets with reference to the giddily whirling 'fixed' stars, speeds which could be nearly anything you wanted, depending on which types of stars you selected for your reference points, but all of which speeds are measured in many miles per second.

But Joe cared nothing for these matters. His cam and his many circuits told him how to get them from the earth to the moon; he knew how to do that and Doctor Einstein's notions of relativity worried him not. The mass of machinery and wiring which made up his being did not have worry built into it. It was, however, capable of combining the data that came to it to show that the Galileo was now moving somewhat more than 3300 miles per hour along an imaginary line which joined earth to the point where the moon would be when they arrived.

Morrie could check this figure by radar observations for distance, plus a little arithmetic. If the positions as observed did not match what Joe computed them to be, Morrie could feed Joe the corrections and Joe would accept them and work them into his future calculations as placidly and as automatically as a well-behaved stomach changes starch into sugar.

"Thirty-three hundred miles per hour," said Art. "That's not so much. The V-2 rockets in the war made more than that. Let's open her up wide and see what she'll do. How about it, Doc?"

"Sure," agreed Ross, "we've got a clear road and plenty of room. Let's bust some space."

Cargraves sighed. "See here," he answered, "I did not try to keep you darned young speed demons from risking your necks in that pile of bailing wire you call an automobile, even when I jeopardized my own life by keeping quiet. But I'm going to run this rocket my way. I'm in no hurry."

"Okay, okay, just a suggestion," Ross assured him. He was quiet for a moment, then added, "But there's one thing that bothers me . . ."

"What?"

"Well, if I've read it once, I've read it a thousand times, that you have to go seven miles per second to get away from the earth. Yet here we are going only 3300 miles per hour."

"We're moving, aren't we?"

"Yeah, but-"

"As a matter of fact we are going to build up a lot more speed before we start to coast. We'll make the first part of the trip much faster than the last part. But suppose we just held our present speed -- how long would it take to get to the moon?"

Ross did a little fast mental arithmetic concerning the distance of the moon from the earth, rounding the figure off to 240,000 miles. "About three days."

"What's wrong with that? Never mind," Cargraves went on. "I'm not trying to be a smart-Aleck. The misconception is one of the oldest in the book, and it keeps showing up again, every time some non-technical man decides to do a feature story on the future of space travel. It comes from mixing up shooting with rocketry. If you wanted to fire a shot at the moon, the way Jules Verne proposed, it would have to go seven miles per second when it left the gun or it would fall back. But with a rocket you could make the crossing at a slow walk if you had enough power and enough fuel to keep on driving just hard enough to keep from falling back. Of course it would raise Cain with your mass-ratio. But we're doing something of that sort right now. We've got tower to spare; I don't see why we should knock ourselves out with higher acceleration than we have to just to get there a little sooner. The moon will wait. It's waited a long time.

"Anyhow," he added, "no matter what you say and no matter how many physics textbooks are written and studied, people still keep mixing up gunnery and rocketry. It reminds me of that other old chestnut -- about how a rocket can't work out in empty space, because it wouldn't have anything to push on."

"Go ahead and laugh!" Cargraves continued, seeing their expressions, "It strikes you as funny as a The-World-Is-Flat theory. But I heard an aeronautical engineer, as late as 1943, say just that."

"No! Not really!"

"I certainly did. He was a man with twenty-five years of professional experience and he had worked for both Wright Field and the Navy. But he said that in it. Next year the Nazis were bombing London with V-2s. Yet according to him it couldn't be done!"

"I'd think any man who had ever felt the kick of a shotgun would understand how a rocket works," Ross commented.

"It doesn't work out that way. Mostly it has no effect on his brain cells; it just gives him a sore shoulder." He started to lift himself out of his semi-reclining position in his pilot's chair. "Come on. Let's eat. Wow! My foot's gone to sleep. I want to stock up and then get some sleep. Breakfast wasn't much good for me -- too many people staring down our necks."

"Sleep?" said Art. "Did you say `sleep'? I can't sleep; I'm too excited. I don't suppose I'll sleep the whole trip."

"Suit yourself. Me, I'm going to soak up shut-eye just as soon as we've eaten. There's nothing to see now, and won't be until we go into free fall. You've had better views of the moon through a telescope."

"It's not the same thing," Art pointed out.

"No, it's not," Cargraves conceded. "Just the same, I intend to reach the moon rested up instead of worn out. Morrie, where did you stow the can openers?"

"I-" Morrie stopped and a look of utter consternation came over his face. "I think I left them behind. I put them down on the sink shelf and then some female reporter started asking me some fool question and-"

"Yeah, I saw," Ross interrupted him. "You were practically rolling over and playing dead for her. It was cute."

Cargraves whistled tunelessly. "I hope that we find out that we haven't left behind anything really indispensable. Never mind the can openers, Morrie. The way I feel I could open a can with my bare teeth."

"Oh, you won't have to do that, Doc," Morrie said eagerly. "I've got a knife with a gadget for-" He was feeling in his pocket as he talked. His expression changed abruptly and he withdrew his hand. "Here are the can openers, Doc."

Ross looked at him innocently. "Did you get her address, Morrie?"

Supper, or late breakfast, as the case may be, was a simple meal, eaten from ration cans. Thereafter Cargraves got out his bedding roll and spread it on the bulkhead- now a deck -which separated the pilot compartment from the hold. Morrie decided to sleep in his co-pilot's chair. It, with its arm rests, head support, and foot rest, was not unlike an extremely well-padded barber's chair for the purpose, one which had been opened to a semi-reclining position. Cargraves let him try it, cautioning him only to lock his controls before going to sleep.

About an hour later Morrie climbed down and spread his roll beside Cargraves. Art and Ross slept on their acceleration hammocks, which were very well adapted to the purpose, as long as the occupant was not strapped down.

Despite the muted roar of the jet, despite the excitement of being in space, they all were asleep in a few minutes. They were dead tired and needed it.

During the 'night' Joe the Robot slowly reduced the drive of the jet as the pull of the earth grew less.

Art was first to awaken. He had trouble finding himself for a moment or two and almost fell from his hammock on to the two sleepers below before he recollected his surroundings. When he did it brought him wide awake with a start. Space! He was out in space! -- Headed for the moon!

Moving with unnecessary quiet, since he could hardly have been heard above the noise of the jet in any case and since both Ross and Cargraves were giving very fair imitations of rocket motors themselves, he climbed out of the hammock and monkey-footed up to the pilots' seats. He dropped into Morrie's chair, feeling curiously but pleasantly light under the much reduced acceleration.

The moon, now visibly larger and almost painfully beautiful, hung in the same position in the sky, such that he had to let his gaze drop as he lay in the chair in order to

return its stare. This bothered him for a moment -- how were they ever to reach the moon if the moon did not draw toward the point where they were aiming?

It would not have bothered Morrie, trained as he was in a pilot's knowledge of collision bearings, interception courses, and the like. But, since it appeared to run contrary to common sense, Art worried about it until he managed to visualize the situation somewhat thus: if a car is speeding for a railroad crossing and a train is approaching from the left, so that their combined speeds will bring about a wreck, then the bearing of the locomotive from the automobile will not change, right up to the moment of the collision.

It was a simple matter of similar triangles, easy to see with a diagram but hard to keep straight in the head. The moon was speeding to their meeting place at about 2000 miles an hour, yet she would never change direction; she would simply grow and grow and grow until she filled the whole sky.

He let his eyes rove over her face, naming the lovely names in his mind, Mare Tranquilitatis, Oceanus Procellarum, the lunar Apennines, LaGrange, Ptolemous, Mare Imbrium, Catharina. Beautiful words, they rolled on the tongue.

He was not too sure of the capitals of all the fifty-one United States and even naming the United Nations might throw him, but the geography- or was it lunography? - of the moon was as familiar to him as the streets of his home town.

This face of the moon, anyway -- he wondered what the other face was like, the face the earth has never seen.

The dazzle of the moon was beginning to hurt his eyes; he looked up and rested them on the deep, black velvet of space, blacker by contrast with the sprinkle of stars.

There were few of the really bright stars in the region toward which the Galileo was heading. Aldebaran blazed forth, high and aft, across the port from the moon. The right-hand frame of the port slashed through the Milky Way and a small portion of that incredible river of stars was thereby left visible to him. He picked out the modest lights of Aries, and near mighty Aldebaran hung the ghostly, fairy Pleiades, but dead ahead, straight up, were only faint stars and a black and lonely waste.

He lay back, staring into this remote and solitary depth, vast and remote beyond human comprehension, until he was fascinated by it, drawn into it. He seemed to have left the warmth and safety of the ship and to be plunging deep into the silent blackness ahead.

He blinked his eyes and shivered, and for the first time felt himself wishing that he had never left the safe and customary and friendly scenes of home. He wanted his basement lab, his mother's little shop, and the humdrum talk of ordinary people, people who stayed home and did not worry about the outer universe.

Still, the black depths fascinated him. He fingered the drive control under his right hand. He had only to unlock it, twist it all the way to the right, and they would plunge ahead, nailed down by unthinkable acceleration, and speed on past the moon, too early for their date in space with her. On past the moon, away from the sun and the earth behind them, on an on and out and out, until the thorium burned itself cold or until the zinc had boiled away, but not to stop even then, but to continue forever into the weary years and the bottomless depths.

He blinked his eyes and then closed them tight, and gripped both arms of the chair.

Chapter 10 - THE METHOD OF SCIENCE

"ARE YOU ASLEEP?" THE VOICE in his ear made Art jump; he had still had his eyes closed -- it startled him. But it was only Doc, climbing up behind him.

"Oh! Good morning, Doc. Gee, I'm glad to see you. This place was beginning to give me the jim-jams."

"Good morning to you, if it is morning. I suppose it is morning, somewhere." He glanced at his watch. "I'm not surprised that you got the willies, up here by yourself. How would you like to make this trip by yourself?"

"Not me."

"Not me, either. The moon will be just about as lonely but it will feel better to have some solid ground underfoot. But I don't suppose this trip will be really popular until the moon has some nice, noisy night clubs and a bowling alley or two." He settled himself down in his chair.

"That's not very likely, is it?"

"Why not? The moon is bound to be a tourists' stop some day -- and have you ever noticed how, when tourists get somewhere new, the first thing they do is to look up the same kind of entertainments they could find just as easily at home?"

Art nodded wisely, while tucking the notion away in his mind. His own experience with tourists and travel was slight -- until now! "Say, Uncle, do you suppose I could get a decent picture of the moon through the port?"

Cargraves squinted up at it. "Might. But why waste film? They get better pictures of it from the earth. Wait until we go into a free orbit and swing ship. Then you can get some really unique pics -- the earth from space. Or wait until we swing around the moon."

"That's what I really want! Pictures of the other side of the moon."

"That's what I thought." Cargraves paused a moment and then added, "But how do you know you can get any?"

"But -- Oh, I see'. what you mean. It'll be dark on that side."

"That's not exactly what I meant, although that figures in, too, since the moon will be only about three days past `new moon' -- `new moon,' that is, for the other side. We'll try to time it to get all the pics you want on the trip back. But that isn't what I mean: how do you know there is any back side to the moon? You've never seen it. Neither has any one else, for that matter."

"But- there has to -I mean, you can see . . ."

"Did I hear you say there wasn't any other side to the moon, Doc?" It was Ross, whose head had suddenly appeared beside Cargraves'.

"Good morning, Ross. No, I did not say, there was no other side to the moon. I had asked Art to tell me what leads him to think there is one."

Ross smiled. "Don't let him pull your leg, Art. He's just trying to rib you."

Cargraves grinned wickedly. "Okay, Aristotle, you picked it. Suppose you try to prove to me that there is a far side to the moon."

"It stands to reason."

"What sort of reason? Have you ever been there? Ever seen it?"

"No, but-"

"Ever met anybody who's ever seen it? Ever read any accounts by anybody who claimed to have seen it?"

"No, I haven't, but I'm sure there is one."

"Why?"

"Because I can see the front of it."

"What does that prove? Isn't your experience, up to now, limited to things you've seen on earth? For that matter I can name a thing you've seen on earth that hasn't any back side."

"Huh? What sort of a thing? What are you guys talking about?" It was Morrie this time, climbing up on the other side.

Art said, "Hi, Morrie. Want your seat?"

"No, thanks. I'll just squat here for the time being." He settled himself, feet dangling. "What's the argument?"

"Doc," Ross answered, "is trying to prove there isn't any other side to the moon."

"No, no, no," Cargraves hastily denied. "And repeat `no.' I was trying to get you to prove your assertion that there was one. I was saying that there was a phenomenon even on earth which hasn't any back side, to nail down Ross's argument from experience with other matters -- even allowing that earth experience necessarily applies to the moon, which I don't."

"Whoops! Slow up! Take the last one first. Don't natural laws apply anywhere in the universe?"

"Pure assumption, unproved."

"But astronomers make predictions, eclipses and such, based on that assumption -- and they work out."

"You've got it backwards. The Chinese were predicting eclipses long before the theory of the invariability of natural law was popular. Anyhow, at the best, we notice certain limited similarities between events in the sky and events on earth. Which has nothing to do with the question of a back side of the moon which we've never seen and may not be there."

"But we've seen a lot of it," Morrie pointed out.

"I get you," Cargraves agreed. "Between librations and such -- the eccentricity of the moon's orbit and its tilt, we get to peek a little way around the edges from time to time and see about 6o per cent of its surface -- if the surface is globular. But I'm talking about that missing 40 per cent that we've never seen."

"Oh," said Ross, "you mean the side we can't see might just be sliced off, like an apple with a piece out of it. Well, you may be right, but I'll bet you six chocolate malts, payable when we get back, that you're all wet."

"Nope," Cargrave answered, "this is a scientific discussion and betting is inappropriate. Besides, I might lose. But I did not mean anything of the slice-out-of-an-apple sort. I meant just what I said: no back side at all. The possibility that when we swing around the moon to look at the other side, we won't find anything at all, nothing, just empty space-that when we try to look at the moon from behind it, there won't be any moon to be seen -- not from that position. I'm not asserting that that is what we will find; I'm asking you to prove that we will find anything."

"Wait a minute," Morrie put in, as Art glanced wildly at the moon as if to assure himself that it was still there -- it was! "You mentioned something of that sort on earth -- a thing with no back. What was it? I'm from Missouri."

"A rainbow. You can see it from just one side, the side that faces the sun. The other side does not exist."

"But you can't get behind it."

"Then try it with a garden spray some sunny day. Walk around it. When you get behind it, it ain't there."

"Yes, but Doc," Ross objected, "you're just quibbling. The cases aren't parallel. A rainbow is just light waves; the moon is something substantial."

"That's what I'm trying to get you to prove, and you haven't proved it yet. How do you know the moon is substantial? All you have ever seen of it is just light waves, as with the rainbow."

Ross thought about this. "Okay, I guess I see what you're getting at. But we do know that the moon is substantial; they bounced radar off it, as far back as `46."

"Just light waves again, Ross. Infra-red light, or ultra-shortwave radio, but the same spectrum. Come again."

"Yes, but they bounced."

"You are drawing an analogy from earth conditions again. I repeat, we know nothing of moon conditions except through the insubstantial waves of the electromagnetic spectrum."

"How about tides?"

"Tides exist, certainly. We have seen them, wet our feet in them. But that proves nothing about the moon. The theory that the moon causes the tides is a sheer convenience, pure theory. We change theories as often as we change our underwear. Next year it may be simpler to assume that the tides cause the moon. Got any other ideas?"

Ross took a deep breath. "You're trying to beat me down with words. All right, so I haven't seen the other side of the moon. So I've never felt the moon, or taken a bite out of it. By the way, you can hang on to the theory that the moon is made of green cheese with that line of argument."

"Not quite," said Cargraves. "There is some data on that, for what it's worth. An astronomer fellow made a spectrograph of green cheese and compared it with a spetcrograph of the moon. No resemblance."

Art chortled. "He didn't, really?"

"Fact. You can look it up."

Ross shrugged. "That's no better than the radar data," he said correctly. "But to get on with my proof. Granted that there is a front side to the moon, whatever it's nature, just as long as it isn't so insubstantial that it won't even reflect radar, then there has to be some sort of a back, flat, round, square, or wiggly. That's a matter of certain mathematical deduction."

Morrie snorted.

Cargraves limited himself to a slight smile. "Now, Ross. Think it over. What is the content of mathematics?"

"The content of mathe-" He collapsed suddenly. "Oh."

"I guess I finally get it. Mathematics doesn't have any content. If we found there wasn't any other side, then we would just have to invent a new mathematics."

"That's the idea. Fact of the matter is, we won't know that there is another side to the moon until we get there. I was just trying to show you," he went on, "just how insubstantial a `common sense' idea can be when you pin it down. Neither `common sense' nor `logic' can prove anything. Proof comes from experiment, or to put it another way, from experience, and from nothing else. Short lecture on the scientific method -- you can count it as thirty minutes on today's study time. Anybody else want breakfast but me? Or has the low weight made you queasy?" He started to climb out of his chair.

Ross was very thoughtful while they made preparations for breakfast. This was to be a proper meal, prepared from their limited supply of non-canned foods. The Galileo had been fitted with a galley of sorts, principally a hot plate and a small refrigerator. Dishes and knives, forks, and spoons could be washed, sparingly, with the water which accumulated in the dump of the air-conditioner, and then sterilized on the hot plate. The ship had everything necessary to life, even a cramped but indispensable washroom. But every auxiliary article, such as dishes, was made of zinc-reserve mass for the hungry jet.

They sat, or rather squatted, down to a meal of real milk, cereal, boiled eggs, rolls, jam, and coffee. Cargraves sighed contentedly when it had been tucked away. "We won't get many like that," he commented, as he filled his pipe. "Space travel isn't all it's cracked up to be, not yet."

"Mind the pipe, Skipper!" Morrie warned.

Cargraves looked startled. "I forgot," he admitted guiltily. He stared longingly at the pipe. "Say, Ross," he inquired, "do you think the air-conditioner would clean it out fast enough?"

"Go ahead. Try it," Ross urged him. "One pipeful won't kill us. But say, Doc-"

"Yes?"

"Well, uh, look -- don't you really believe there is another side to the moon?"

"Huh? Still on that, eh? Of course I do."

"But it's just my opinion. I believe it because all my assumptions, beliefs, prejudices, theories, superstitions, and so forth, tend that way. It's part of the pattern of fictions I live by, but that doesn't prove it's right. So if it turns out to be wrong I hope I am sufficiently emotionally braced not to blow my top."

"Which brings us right back to study time," he went on. "You've all got thirty minutes credit, which gives you an hour and a half to go. Better get busy."

Art looked dumfounded. "I thought you were kidding Uncle. You don't mean to run such a schedule on the moon, do you?"

"Unless circumstances prevent. Now is a good time to work up a little reserve, for that matter, while there is nothing to see and no work to do."

Art continued to look astonished, then his race cleared. "I m afraid we can't, Uncle. The books are all packed down so far that we can't get at them till we land."

"So? Well, we won't let that stop us. A school," he quoted, "is a log with a pupil on one end and a teacher on the other. We'll have lectures and quizzes -- starting with a review quiz. Gather round, victims."

They did so, sitting cross-legged in a circle on the hold bulkhead. Cargraves produced a pencil and a reasonably clean piece of paper from his always bulging pockets. "You first, Art. Sketch and describe a cyclotron. Basic review -- let's see how much you've forgotten."

Art commenced outlining painfully the essential parts of a cyclotron. He sketched two hollow half-cylinders, with their open sides facing each other, close together. "These are made of copper," he stated, "and each one is an electrode for a very high frequency, high voltage power source. It's actually a sort of short-wave radio transmitter -- I'll leave it out of the sketch. Then you have an enormously powerful electromagnet with its field running through the opening between the dees, the half-cylinders, and vertical to them. The whole thing is inside a big vacuum chamber. You get a source of ions-"

"What sort of ions?"

"Well, maybe you put a little hydrogen in the vacuum chamber and kick it up with a hot filament at the center point of the two dees. Then you get hydrogen nuclei-protons."

"Go ahead."

"The protons have a positive charge, of course. The alternating current would keep them kicking back and forth between the two electrodes -- the dees. But the magnetic field, since the protons are charged particles, tends to make them whirl around in circles. Between the two of them, the protons go whirling around in a spiral, gaining speed each revolution until they finally fly out a little thin, metal window in the vacuum chamber, going to beat the band."

"But why bother?"

"Well, if you aim this stream of high-speed protons at some material, say a piece of metal, things begin to happen. It can knock electrons off the atoms, or it can even get inside and stir up the nuclei and cause transmutations or make the target radioactive -- things like that."

"Good enough," Cargraves agreed, and went on to ask him several more questions to bring out details. "Just one thing," he said afterwards. "You know the answers, but just between ourselves, that sketch smells a bit. It's sloppy."

"I never did have any artistic talent," Art said defensively. "I'd rather take a photograph any day."

"You've taken too many photographs, maybe. As for artistic talent, I haven't any either, but I learned to sketch. Look, Art- the rest of you guys get this, too -if you can't sketch, you can't see. If you really see what you're looking at, you can put it down on paper, accurately. If you really remember what you have looked at, you can sketch it accurately from memory."

"But the lines don't go where I intend them to."

"A pencil will go where you push it. It hasn't any life of its own. The answer is practice and more practice and thinking about what you are looking at. All of you lugs want to be scientists. Well, the ability to sketch accurately is as necessary to a scientist as his slipstick. More necessary, you can get along without a slide rule. Okay, Art. You're next, Ross. Gimme a quick tell on the protoactinium radioactive series."

Ross took a deep breath. "There are three families of radioactive isotopes: the uranium family, the thorium family, and the protoactinium family. The last one starts with isotope U-235 and-" They kept at it for considerably longer than an hour and a half, for Cargraves had the intention of letting them be as free as possible later, while still keeping to the letter and spirit of his contract with Ross's father.

At last he said, "I think we had better eat again. The drive will cut out before long. It's been cutting down all the time -- notice how light you feel?"

"How about a K-ration?" inquired Morrie, in his second capacity as commissary steward.

"No, I don't think so," Cargraves answered slowly. "I think maybe we had better limit this meal to some amino acids and some gelatine." He raised his eyebrows.

"Umm -- I see," Morrie agreed, glancing at the other two. "Maybe you are right." Morrie and Cargraves, being pilots, had experienced free fall in school. The stomachs of Ross and Art were still to be tried.

"What's the idea?" Art demanded.

Ross looked disgusted. "Oh, he thinks we'll toss our cookies. Why, we hardly weigh anything now. What do you take us for, Doc? Babies?"

"No," said Cargraves, "but I still think you might get dropsick. I did. I think predigested foods are a good idea."

"Oh, shucks. My stomach is strong. I've never been air sick."

"Ever been seasick?"

"I've never been to sea."

"Well, suit yourself," Cargraves told him. "But one thing I insist on. Wear a sack over your face. I don't want what you lose in the air-conditioner." He turned away and started preparing some gelatine for himself by simply pouring the powder into water, stirring, and drinking.

Ross made a face but he did not dig out a K-ration. Instead he switched on the hot plate, preparatory to heating milk for amino-acid concentrates.

A little later Joe the Robot awoke from his nap and switched off the jet completely.

They did not bounce up to the ceiling. The rocket did not spin wildly. None of the comic-strip things happened to them. They simply gradually ceased to weigh anything as the thrust died away. Almost as much they noticed the deafening new silence. Cargraves had previously made a personal inspection of the entire ship to be sure that everything was tied, clamped, or stored firmly so that the ship would not become cluttered `up with loosely floating bric-a-brac.

Cargraves lifted himself away from his seat with one hand, turned in the air like a swimmer, and floated gently down, rather across- up and down had ceased to exist -to where Ross and Art floated, loosely attached to their hammocks by a single belt as an added precaution. Cargraves checked his progress with one hand and steadied himself by grasping Art's hammock. "How's everybody?"

"All right, I guess," Art answered, gulping. "It feels like a falling elevator." He was slightly green.

"You, Ross?"

"I'll get by," Ross declared, and suddenly gagged. His color was gray rather than green.

Space sickness is not a joke, as every cadet rocket pilot knows. It is something like seasickness, like the terrible, wild retching that results from heavy pitching of a ship at sea -- except that the sensation of everything dropping out from under one does not stop!

But the longest free-flight portions of a commercial rocket flight from point to point on earth last only a few minutes, with the balance of the trip on thrust or in glide, whereas the course Cargraves had decided on called for many hours of free fall. He could

have chosen, with the power at his disposal, to make the whole trip on the jet, but that would have prevented them from turning ship, which he proposed to do now, until the time came to invert and drive the jet toward the moon to break their fall.

Only by turning the ship would they be able to see the earth from space; Cargraves wanted to do so before the earth was too far away.

"Just stay where you are for a while," he cautioned them.. "I'm about to turn ship."

"I want to see it," Ross said stoutly. "I've been looking forward to it." He unbuckled his safety belt, then suddenly he was retching again. Saliva overflowed and drooled out curiously, not down his chin but in large droplets that seemed undecided where to go.

"Use your handkerchief," Cargraves advised him, feeling none too well himself. "Then come along if you feel like it." He turned to Art.

Art was already using his handkerchief.

Cargraves turned away and floated back to the pilot's chair. He was aware that there was nothing that he could do for them, and his own stomach was doing flip-flops and slow, banked turns. He wanted to strap his safety belt across it. Back in his seat, he noticed that Morrie was doubled up and holding his stomach, but he said nothing and gave his attention to turning the ship. Morrie would be all right.

Swinging the ship around was a very simple matter. Located at the center of gravity of the ship was a small, heavy, metal wheel. He had controls on the panel in front of him whereby he could turn this wheel to any axis, as it was mounted freely on gymbals, and then lock the gymbals. An electric motor enabled him to spin it rapidly in either direction and to stop it afterwards.

This wheel by itself could turn the ship when it was in free fall and then hold it in the new position. (It must be clearly understood that this turning had no effect at all on the course or speed of the Galileo, but simply on its attitude, the direction it faced, just as a fancy diver may turn and twist in falling from a great height, without thereby disturbing his fall.)

The little wheel was able to turn the huge vessel by a very simple law of physics, but in an application not often seen on the earth. The principle was the conservation of momentum, in this case angular momentum or spin. Ice skaters understand the application of this law; some of their fanciest tricks depend on it.

As the little wheel spun rapidly in one direction the big ship spun slowly in the other direction. When the wheel stopped, the ship stopped and just as abruptly.

"Dark glasses, boys!" Cargraves called out belatedly as the ship started to nose over and the stars wheeled past the port. In spite of their wretched nausea they managed to find their goggles, carried on their persons for this event, and get them on.

They needed them very soon. The moon slid away out of sight. The sun and the earth came in to view. The earth was a great shining crescent like a moon, two days past new. At this distance- one-fourth the way to the moon -it appeared sixteen times as wide as the moon does from the earth and many times more magnificent. The horns of the crescent were blue-white from the polar ice caps. Along its length showed the greenish blue of sea and the deep greens and sandy browns of ocean and forest and field . . . for the line of light and dark ran through the heart of Asia and down into the Indian Ocean. This they could plainly see, as easily as if it had been a globe standing across a school room from them. The Indian Ocean was partly obscured by a great cloud bank, stormy to

those underneath it perhaps, but blazing white as the polar caps to those who watched from space.

In the arms of the crescent was the nightside of earth, lighted dimly but plainly by the almost full moon behind them. But- and this is never seen on the moon when the new moon holds the old moon in her arms -the faintly lighted dark face was picked out here and there with little jewels of light, the cities of earth, warm and friendly and beckoning!

Halfway from equator to northern horn were three bright ones, not far apart -- London, and Paris, and reborn Berlin. Across the dark Atlantic, at the very edge of the disk, was one especially bright and rosy light, the lights of Broadway and all of Greater New York.

All three of the boys were seeing New York for the first time, not to mention most of the rest of the great globe.

But, although it was their home, although they were it from a glorious vantage point new to mankind, their attention was torn away from the earth almost at once. There was a still more breath-taking object in the sky -- the sun.

Its apparent width was only one-sixteenth that of the mighty crescent earth, but it brooked no competition. It hung below the earth- below when referred to the attitude of the Galileo, not in the sense of "up" or "down" -and about four times the width of the earth away. It was neither larger nor smaller than it appears from the earth and not appreciably brighter than it is on a clear, dry desert noon. But the sky was black around it in the airless space; its royal corona shone out; its prominences could be seen; its great infernal storms showed on its face.

"Don't look too directly at it," Cargraves warned, "even when you have the polarizer turned to maximum interference." He referred to the double lenses the boys wore, polaroid glass with thick outer lens that were rotatable.

"I gotta have a picture of this!" Art declared, and turned and swam away. He had forgotten that he was space sick.

He was back shortly with his Contax and was busy fitting his longest lens into it. The camera was quite old, being one of the few things his mother had managed to bring out of Germany, and was his proudest possession. The lens in place, he started to take his Weston from its case. Cargraves stopped him.

"Why burn out your light meter?" he cautioned.

Art stopped suddenly. "Yes, I guess I would," he admitted. "But how am I going to get a picture?"

"Maybe you won't. Better use your slowest film, your strongest filter, your smallest stop, and your shortest exposure. Then pray."

Seeing that the boy looked disappointed, he went on, "I wouldn't worry too much about pictures of the sun. We can be sure that to the astronomers who will follow us after we've blazed the trail. But you ought to be able to get a swell picture of the earth. Waste a little film on the sun first, then we will try it. I'll shade your lens from the sunlight with my hand."

Art did so, then prepared to photograph the earth. "I can't get a decent light reading on it, either," he complained. "Too much interference from the sun."

"Well, you know how much light it is getting -- the works. Why not assume it's about like desert sunlight, then shoot a few both above and below what that calls for?"

When Art had finished Cargraves said, "Mind the sunburn, boys." He touched the plastic inner layer of the quartz port. "This stuff is supposed to filter out the worst of it -- but take it easy."

"Shucks, we're tanned." And so they were; New Mexico sun had left its mark.

"I know, but that's the brightest sunshine you ever saw. Take it easy."

"How much chance is there," asked Morrie, "that this pure stuff is dangerous? I mean aside from bad sunburn."

"You read the same papers I did. We're getting more cosmic radiation, too. Maybe it'll knock us down dead. Maybe it'll cause your children to have long green tendrils. That's one of the chances we take."

"Well, Columbus took a chance."

"And look how far he got!," put in Art.

"Yeah, thrown in the hoosegow for his trouble."

"Be that as it may," said Cargraves, "I'm going to turn the ship again so that the sun doesn't shine in so directly. This tub is getting too hot." It was no trouble to keep the Galileo warm enough, but how to get rid of unwanted heat was another matter. Her polished sides reflected most of the heat that struck them, but sunshine pouring directly in the view port produced a most uncomfortable greenhouse effect. Refrigeration, in the ordinary sense, was no answer; the ship was a closed system and could lose heat only by radiation to outer space. At the moment she was absorbing radiant heat from the sun much faster than she was radiating it.

"I want to take some more pictures," Art protested.

"I'll keep the earth in sight," Cargraves promised, and set the controls of the spinning wheel to suit his purpose. Then he floated back to the view port and joined the others, who were swimming in front of it like goldfish in a bowl.

Ross touched the transparent wall with a finger tip; the light contact pushed him back from the port. "Doc, what do you think would happen if a meteor hit this port?"

"I don't like to think about it. However, I wouldn't worry too much about it. Ley has calculated that the chance of being hit by a meteor on a trip out to the moon and back is about one in a half a million. I figure I was in much graver danger every time I climbed into that alleged automobile you guys drive.

"That's a good car."

"I'll admit it performs well." He turned away with a motion much like that of a sprint swimmer turning on the side of a pool. "Art, when you are through snapping that Brownie, I've got something better for you to do. How about trying to raise earth?"

"Just one more of -- Huh? What did you say?"

"How about heating up your tubes and seeing if there is anybody on the air-or lack-of-air, as the case may be?"

No attempt had been made to use the radios since blasting off. Not only did the jet interfere seriously, but also the antenna were completely retracted, even spike antenna, during the passage through the atmosphere. But now that the jet was silent an attempt at communication seemed in order.

True, the piloting radar had kept them in touch by radio, in a manner of speaking, during the early part of the journey, but they were now beyond the range of the type of equipment used for piloting. It bore little resemblance to the giant radars used to bounce signals against the moon. The quartz windows through which it operated would have

been quite inadequate for the large antenna used to fling power from the earth to the moon.

Art got busy at once, while stating that he thought the chances of picking up anything were slim. "It would have to be beamed tight as a, as a, well -- tight. And why would anybody be beaming stuff out this way?"

"At us, of course," Ross offered.

"They can't find us. Radar won't pick up anything as small as this ship at this distance -- too little mirror cross section." Art spoke authoritatively. "Not the radars they've got so far. Maybe some day, if -- hey!"

"What have you got?"

"Keep quiet!" Art stared ahead with that look of painful, unseeing concentration found only under a pair of earphones. He twiddled his dials carefully, then fumbled for pencil and paper. Writing, he found, was difficult without gravity to steady himself and his hand. But he scribbled.

"Get a load of this," he whispered a few minutes later. He read:

RADIO PARIS CALLING ROCKET SHIP GALILEO

RADIO PARIS CALLING ROCKET SHIP GALILEO
RADIO PARIS CALLING ROCKET SHIP GALILEO
DOCTOR DONALD CARGRAVES ARTHUR MUELLER
MAURICE ABRAMS ROSS JENKINS GREETINGS YOUR
FLIGHT FOLLOWED UNTIL OH ONE ONE THREE
GREENWICH TIME SEPTEMBER TWENTYFIFTH
CONTACT LOST WILL CONTINUE TO CALL YOU ON
THIS BEAM AND FREQUENCY FOLLOWING PROB-
ABLE TRAJECTORY GOOD LUCK TO YOU RADIO
PARIS CALLING ROCKET SHIP GALILEO RADIO
PARIS-

"And then they repeat. It's a recording." His voice was shaky.

"Gosh!" Ross had no other comment.

"Well, boys, it looks like we're celebrities." Cargraves tried to make his words sound casual. Then he found that he was holding a piece of his pipe in each hand; he had broken it in two without knowing it. Shrugging, he let the pieces float away from him.

"But how did they find us?" persisted Art.

"The message shows it," Morrie pointed out. "See that time? That's the time we went into free fall. They followed the jet."

"How? By telescope?"

"More likely," Cargraves put in, "by anti-rocket radiation tracer."

"Huh? But the UN patrol are the only ones with that sort of gear."

Cargraves permitted himself a grin. "And why shouldn't the UN be interested in us? See here, kid -- can you squirt anything back at them?"

"I'll sure try!"

Chapter 11 - ONE ATOM WAR TOO MANY?

ART GOT BUSY AT HIS TASK, but nothing came back which would tell him whether or not his attempts had been successful. The recording continued to come in whenever he listened for it, between attempts to send, for the next three and a half hours. Then it faded out -- they were off the beam.

Nevertheless, it was the longest direct communication of record in human history.

The Galileo continued her climb up from the earth, toward that invisible boundary where the earth ceased to claim title and the lesser mass of the moon took charge. Up and up, out and farther out, rising in free flight, slowing from the still effective tug of the earth but still carried on by the speed she had attained under the drive of the jet, until at last the Galileo slipped quietly over the border and was in the moon's back yard. From there on she accelerated slowly as she fell toward the silvery satellite.

They ate and slept and ate again. They stared at the receding earth. And they slept again.

While they slept, Joe the Robot stirred, consulted his cam, decided that he had had enough of this weightlessness, and started the jet. But first he straightened out the ship so that the jet faced toward the moon, breaking their fall, while the port stared back at earth.

The noise of the jet woke them up. Cargraves had had them strap themselves down in anticipation of weight. They unstrapped and climbed up to the control station. "Where's the moon?" demanded Art.

"Under us, of course," Morrie informed him.

"Better try for it with radar, Morrie," Cargraves directed.

"Cheek!" Morrie switched on the juice, waited for it to warm, then adjusted it. The moon showed as a large vague mass on one side of the scope. "About fifteen thousand miles," he declared. "We'd better do some checking, Skipper."

They were busy for more than an hour, taking sights, taking readings, and computing. The bearing and distance of the moon, in relation to the ship, were available by radar. Direct star sights out the port established the direction of drive of the ship. Successive radar readings established the course and speed of the ship for comparison with the courses and speeds as given by the automatic instruments showing on the board. All these factors had to be taken into consideration in computing a check on the management of Joe the Robot.

Minor errors were found and the corrections were fed to the automatic pilot. Joe accepted the changes in his orders without comment.

While Morrie and Cargraves did this, Art and Ross were preparing the best meal they could throw together. It was a relief to have weight under their feet and it was a decided relief to their stomachs. Those organs had become adjusted to free fall, but hardly reconciled. Back on firm footing they hollered for solid food.

The meal was over and Cargraves was thinking sadly of his ruined pipe, when the control alarm sounded. Joe the Robot had completed his orders, his cam had run out, he called for relief.

They all scrambled up to the control station. The moon, blindingly white and incredibly huge was shouldering its way into one side of the port. They were so close to it now that their progress was visible, if one looked closely, by sighting across the frame of the port at some fixed object, a crater or a mountain range.

"Whee!" Art yelled.

"Kinda knocks your eyes out, doesn't it?" Ross said, gazing in open wonder.

"It does," agreed Cargraves. "But we've got work to do. Get back and strap yourselves down and stand by for maneuvering."

While he complied, he strapped himself into his chair and then flipped a switch which ordered Joe to go to sleep; he was in direct, manual command of the rocket. With Morrie to coach him by instrument, he put the ship through a jockeying series of changes, gentle on the whole and involving only minor changes in course at any one time, but all intended to bring the ship from the flat conoid trajectory it had been following into a circular orbit around the moon.

"How'm I doin'?" he demanded, a long time later.

"Right in the groove," Morrie assured him, after a short delay.

"Sure enough of it for me to go automatic and swing ship?"

"Let me track her a few more minutes." Presently Morrie assured him as requested. They had already gone into free flight just before Cargraves asked for a check. He now called out to Art and Ross that they could unstrap. He then started the ship to swinging so that the port faced toward the moon and switched on a combination which told Joe that he must get back to work; it was now his business to watch the altitude by radar and to see to it that altitude and speed remained constant.

Art was up at the port, with his camera, by the time he and Morrie had unstrapped.

"Goshawmighty," exclaimed Art, "this is something!" He unlimbered his equipment and began snappihg frantically, until Ross pointed out that his lens cover was still on. Then he steadied down.

Ross floated face down and stared out at the desolation. They were speeding silently along, only two hundred miles above the ground, and they were approaching the sunrise line of light and darkness. The shadows were long on the barren wastes below them, the mountain peaks and the great gaping craters more horrendous on that account. "It's scary," Ross decided. "I'm not sure I like it."

"Want off at the next corner?" Cargraves inquired.

"No, but I'm not dead certain I'm glad I came."

Morrie grasped his arm, to steady himself apparently, but quite as much for the comfort of solid human companionship. "You know what I think, Ross," he began, as he stared out at the endless miles of craters. "I think I know how it got that way. Those aren't volcanic craters, that's certain -- and it wasn't done by meteors. They did it themselves!"

"Huh? Who?"

"The moon people. They did it. They wrecked themselves. They ruined themselves. They had one atomic war too many."

"Huh? What the-" Ross stared, then looked back at the surface as if to read the grim mystery there. Art stopped taking pictures.

"How about it, Doc?"

Cargraves wrinkled his brow. "Could be," he admitted. "None of the other theories for natural causes hold water for one reason or another. It would account for the relatively smooth parts we call `seas.' They really were seas; that's why they weren't hit very hard."

"And that's why they aren't seas any more," Morrie went on. "They blew their atmosphere off and the seas boiled away at Tycho. That's where they set off the biggest ammunition dump on the planet. It cracked the whole planet. I'll bet somebody worked out a counter-weapon that worked too well. It set off every atom bomb on the moon all at once and it ruined them! I'm sure of it."

"Well," said Cargraves, "I'm not sure of it, but I admit the theory is attractive. Perhaps we'll find out when we land. That notion of setting off all the bombs at once-there are strong theoretical objections to that. Nobody has any idea how to do it."

"Nobody knew how to make an atom bomb a few years ago," Morrie pointed out.

"That's true." Cargraves wanted to change the subject; it was unpleasantly close to horrors that had haunted his dreams since the beginning of World War II. "Ross, how do you feel about the other side of the moon now?"

"We'll know pretty soon," Ross chuckled. "Say -- this is the Other Side!"

And so it was. They had leveled off in their circular orbit near the left limb of the moon as seen from the earth and were coasting over the mysterious other face. Ross scanned it closely. "Looks about the same."

"Did you expect anything different?"

"No, I guess not. But I had hoped." Even as he spoke they crossed the sunrise line and the ground below them was dark, not invisible, for it was still illuminated by faint starlight -- starlight only, for the earthshine never reached this face. The suncapped peaks receded rapidly in the distance. At the rate they were traveling, a speed of nearly 4000 miles per hour necessary to maintain them in a low-level circular orbit, the complete circuit of the planet would take a little over an hour and a half.

"No more pictures, I guess," Art said sadly. "I wish it was a different time of the month."

"Yes," agreed Ross, still peering out, "it's a dirty shame to be this close and not see anything."

"Don't be impatient," Cargraves told him; "When we start back in eight or nine days, we swing around again and you can stare and take pictures till you're cross-eyed."

"Why only eight or nine days? We've got more food than that."

"Two reasons. The first is, if we take off at new moon we won't have to stare into the sun on the way back. The second is, I'm homesick and I haven't even landed yet." He grinned. In utter seriousness he felt that it was not wise to stretch their luck by sticking around too long.

The trip across the lighted and familiar face of the moon was delightful, but so short that it was like window shopping in a speeding car. The craters and the "seas" were old familiar friends, yet strange and new. It reminded them of the always strange experience of seeing a famous television star on a personal appearance tour-recognition with an odd feeling of unreality.

Art shifted over to the motion-picture camera once used to record the progress of the Starstruck series, and got a complete sequence from Mare Fecunditatis to the crater Kepler, at which point Cargraves ordered him emphatically to stop at once and strap himself down.

They were coming into their landing trajectory. Cargraves and Morrie had selected a flat, unnamed area beyond Oceanus Procellarum for the landing because it was just on the border between the earth side and the unknown side, and thereby fitted two

plans: to attempt to establish radio contact with earth, for which direct line-of-sight would be necessary, and to permit them to explore at least a portion of the unknown side.

Joe the Robot was called again and told to consult a second cam concealed in his dark insides, a cam which provided for the necessary braking drive and the final ticklish contact on maneuvering jets and radar. Cargraves carefully leveled the ship at the exact altitude and speed Joe would need for the approach and flipped over to automatic when Morrie signaled that they were at the exact, precalculated distance necessary for the landing.

Joe took over. He ffipped the ship over, using the maneuvering rockets, then started backing in to a landing, using the jet in the tail to kill their still tremendous speed. The moon was below them now and Cargraves could see nothing but the stars, the stars and the crescent of the earth -- a quarter of a million miles away and no help to him now.

He wondered if he would ever set foot on it again.

Morrie was studying the approach in the radar scope. "Checking out to nine zeros, Captain," he announced proudly and with considerable exaggeration. "It's in the bag."

The ground came up rapidly in the scope. When they were close and no longer, for the moment, dropping at all, Joe cut the main jet and flipped them over.

When he had collected, himself from the wild gyration of the somersault, Cargraves saw the nose jets reach out and splash in front of them and realized that the belly jets were in play, too, as the surge of power pushed the seat of the chair up against him. He felt almost as if he could land it himself, it seemed so much like his first wild landing on the New Mexico desert.

Then for one frantic second he saw the smooth, flat ground ahead of the splash of the plowing nose jets give way to a desolation of rocky ridges, sharp crevasses, loose and dangerous cosmic rubble . . . soil from which, if they landed without crashing, they could not hope to take off.

The sunlight had fooled them. With the sun behind them the badlands had cast no shadows they could see; the flat plain had appeared to stretch to the mountains ahead. These were no mountains, but they were quite sufficient to wreck the Galileo.

The horrible second it took him to size up the situation was followed by frantic action. With one hand he cut the automatic pilot; with the other he twisted violently on the knob controlling the tail jet. He slapped the belly jets on full.

Her nose lifted.

She hung there, ready to fall, kept steady on her jets only by her gyros. Then slowly, slowly, slowly the mighty tail jet reached out -- so slowly that he knew at that moment that the logy response of the atoumatic pilot would never serve him for what he had to do next, which was to land her himself.

The Galileo pulled away from the surface of the moon.

"That was close," Morrie said mildly.

Cargrave swiped the sweat from his eyes and shivered.

He knew what was called for now, in all reason. He knew that he should turn the ship away from the moon, head her in the general direction of the earth and work out a return path, a path to a planet with an atmosphere to help a pilot put down his savage ship. He knew right then that he was not the stuff of heroes, that he was getting old and knew it.

But he hated to tell Morrie.

"Going to put her down on manual?" the boy inquired.

"Huh?"

"That's the only way we'll get her down on a strange field. I can see that now you've got to be able to see your spot at the last half minute -- nose jet,and no radar."

"I can't do it, Morrie."

The younger man said nothing. He simply sat and stared ahead without expression.

"I'm going to head her back to earth, Morrie."

The boy gave absolutely no sign of having heard him. There was neither approval nor disapproval on his face, nor any faint suggestion.

Cargraves thought of the scene when Ross, blind and bandaged, had told him oft. Of Art, quelling his space sickness to get his pictures. He thought, too, of the hot and tiring days when he and Morrie had qualified for piloting together.

The boy said nothing, neither did he look at him.

These kids, these damn kids! How had he gotten up here, with a rocket under his hand and a cargo of minors to be responsible for? He was a laboratory scientist, not a superman. If it had been Ross, if Ross were a pilot -- even where he now was, he shivered at the recollection of Ross's hair-raising driving. Art was about as bad. Morrie was worse.

He knew he would never be a hot pilot -- not by twenty years. These kids, with their casual ignorance, with their hot rod rigs, it was for them; piloting was their kind of a job. They were too young and too ignorant to care and their reflexes were not hobbled by second thoughts. He remembered Ross's words: "I'll go to the moon if I have to walk!"

"Land her, Morrie."

"Aye, aye, sir!"

The boy never looked, at him. He flipped her up on her tail, then let her drop slowly by easing off on the tail jet. Purely by the seat of his pants, by some inner calculation- for Cargraves could see nothing through the port but stars, and neither could the boy -he flipped her over again, cutting the tail jet as he did so.

The ground was close to them and coming up fast.

He kicked her once with the belly jets, placing them thereby over a smooth stretch of land, and started taking her down with quick blasts of the nose jets, while sneaking a look between blasts.

When he had her down so close that Cargraves was sure that he was going to land her on her nose, crushing in the port and killing them, he gave her one more blast which made her rise a trifle, kicked her level and brought her down on the belly jets, almost horizontal, and so close to the ground that Cargraves could see it ahead of them, out the port.

Glancing casually out the port, Morrie gave one last squirt with the belly jets and let her settle. They grated heavily and were stopped. The Galileo sat on the face of the moon.

"Landed, sir. Time: Oh-eight-three-four."

Cargraves drew in a breath. "A beautiful, beautiful landing, Morrie."

"Thanks, Captain."

Chapter 12 - THE BARE BONES

ROSS AND ART WERE ALREADY out of their straps and talking loudly about getting out the space suits when Cargraves climbed shakily out of his chair -- and then nearly fell. The lowered gravitation, one-sixth earth-normal, fooled him. He was used to weightlessness by now, and to the chest-binding pressure of high acceleration; the pseudo-normal weight of a one-g drive was no trouble, and maneuvering while strapped down was no worse than stunting in an airplane.

This was different and required a little getting used to, he decided. It reminded him a little of walking on rubber, or the curiously light-footed feeling one got after removing snow shoes or heavy boots.

Morrie remained at his post for a few moments longer to complete and sign his log. He hesitated over the space in the log sheet marked 'position'. They had taught him in school to enter here the latitude and longitude of the port of arrival -- but what were the latitude and longitude of this spot?

The moon had its north and south poles just as definitely as the earth, which gave any spot a definite latitude, nor was longitude uncertain once a zero meridian was selected. That had been done; Tycho was to be the Greenwich of the moon.

But his navigation tables were tables for the earth.

The problem could be solved; he knew that. By spherical trigonometry the solutions of celestial triangles on which all navigation was based could be converted to the special conditions of Luna, but it would require tedious calculation, not at all like the precalculated short cuts used by all pilots in the age of aircraft and rocket. He would have to go back to the Marc St. Hilaire method, obsolete for twenty years, after converting laboriously each piece of data from earth reference terms to moon reference terms.

Well, he could do it later, he decided, and get Cargraves to check him. The face of the moon called him.

He joined the little group huddled around the port. In front of them stretched a dun and lifeless floor, breaking into jagged hills a few miles beyond them. It was hot, glaring hot, under the oblique rays of the sun, and utterly still. The earth was not in sight; they had dropped over the rim into the unknown side in the last minutes of the impromptu landing.

Instead of the brassy sky one might expect over such a scene of blistering desert desolation, a black dome of night, studded brilliantly with stars, hung over it. At least, thought Morrie, his mind returning to his problem in navigation, it would be hard to get lost here. A man could set a course by the stars with no trouble.

"When are we going out?" demanded Art.

"Keep your shirt on," Ross told him and turned to Cargraves. "Say, Doc, that was sure a slick landing. Tell me- was that first approach just a look around on manual, or did you feed that into the automatic pilot, too?"

"Neither one, exactly." He hesitated. It had been evident from their first remarks that neither Ross nor Art had been aware of the danger, nor of his own agonizing indecision. Was it necessary to worry them with it now? He was aware that, if he did not speak, Morrie would never mention it.

That decided him. The man- man was the word, he now knew, not "boy" -was entitled to public credit. "Morrie made that landing," he informed them. "We had to cut out the robot and Morrie put her down."

Ross whistled.

Art said, "Huh? What did you say? Don't tell me that radar cut out -- I checked it six ways."

"Your gadgets all stood up," Cargraves assured him, "but there are some things a man can do that a gadget can't. This was one of them." He elaborated what had happened.

Ross looked Morrie up and down until Morrie blushed. "Hot Pilot I said, and Hot Pilot it is," Ross told him. "But I'm glad I didn't know." He walked aft, whistling Danse Macabre, off key again, and began to fiddle with his space suit.

"When do we go outside?," Art persisted.

"Practically at once, I suppose."

"Whoopee!"

"Don't get in a hurry. You might be the man with the short straw and have to stay with the ship."

"But . . . Look, Uncle, why does anybody have to stay with the ship? Nobody's going to steal it."

Cargraves hesitated. With automatic caution, he had intended always to keep at least one man in the ship, as a safety measure. On second thought there seemed no reason for it. A man inside the ship could do nothing for a man outside the ship without first donning a pressure suit and coming outside. "We'll compromise," he said. "Morrie and I -- no, you and I." He realized that he could not risk both pilots at once.

"You and I will go first. If it's okay, the others can follow us. All right, troops," he said, turning. "Into your space suits!"

They helped each other into them, after first applying white sunburn ointment liberally over the skin outside their goggles. It gave them an appropriate out-of-this-world appearance. Then Cargraves had them cheek their suits at twice normal pressure while he personally inspected their oxygen-bottle back packs. All the while they were checking their walky-talkies; ordinary conversation could be heard, but only faintly, through the helmets as long as they were in the air of the ship; the radios were louder.

"Okay, sports," he said at last. "Art and I will go into the lock together, then proceed around to the front, where you can see us. When I give you the high sign, come on out. One last word: stay together. Don't get more than ten yards or so away from me. And remember this. When you get out there, every last one of you is going to want to see how high you can jump; I've heard you talking about it. Well, you can probably jump twenty-five or thirty feet high if you try. But don t do it.

"Why not?" Ross's voice was strange, through the radio.

"Because if you land on your head and crack your helmet open, we'll bury you right where you fall! Come on, Morrie. No, sorry -- I mean `Art'."

They crowded into the tiny lock, almost filling it. The motor which drove the impeller to scavenge the air from the lock whirred briefly, so little was the space left unoccupied by their bodies, then sighed and stopped. The scavenger valve clicked into place and Cargraves unclamped the outer door.

He found that he floated, rather than jumped, to the ground. Art came after him, landing on his hands and knees and springing lightly up.

"Okay, kid?"

"Swell!"

They moved around to the front, boots scuffing silently in the loose soil. He looked at it and picked up a handful to see if it looked like stuff that had been hit by radioactive blast. He was thinking of Morrie's theory. They were on the floor of a crater; that was evident, for the wall of hills extended all around them. Was it an atomic bomb crater?

He could not tell. The moon soil did have the boiled and bubbly look of atom-scorched earth, but that might have been volcanic action, or, even, the tremendous heat of the impact of a giant meteor. Well, the problem could wait.

Art stopped suddenly. "Say! Uncle, I've got to go back."

"What's the matter?"

"I forgot my camera!"

Cargraves chuckled. "Make it next time. Your subject won't move." Art's excitement had set a new high, he decided; there was a small school of thought which believed he bathed with his camera.

Speaking of baths, Cargraves mused, I could stand one. Space travel had its drawbacks. He was beginning to dislike his own smell, particularly when it was confined in a space suit!

Ross and Morrie were waiting for them, not patiently, at the port. Their radio voices, blanked until now by the ship's sides, came clearly through the quartz. "How about it, Doc?," Ross sang out, pressing his nose to the port.

"Seems all right," they heard him say.

"Then here we come!"

"Wait a few minutes yet. I want to be sure."

"Well -- okay." Ross showed his impatience, but discipline was no longer a problem. Art made faces at them, then essayed a little dance, staying close to the ground but letting each step carry him a few feet into the air -- or, rather, vacuum. He floated slowly and with some grace. It was like a dance in slow motion, or a ballet under water.

When he started rising a little higher and clicking his boot heels together as he sailed, Cargraves motioned for him to stop. "Put down your flaps, chum," he cautioned, "and land. You aren't Nijinsky."

"Who's Nijinsky?"

"Never mind. Just stay planted. Keep at least one foot on the ground. Okay, Morrie," he called out, "come on out. You and Ross."

The port was suddenly deserted.

When Morrie set foot on the moon and looked around him at the flat and unchanging plain and at the broken crags beyond he felt a sudden overwhelming emotion of tragedy and of foreboding welling up inside him. "It's the bare bones," he muttered, half to himself, "the bare bones of a dead world."

"Huh?" said Ross. "Are you coming, Morrie?"

"Right behind you."

Cargraves and Art had joined them. "Where to?" asked Ross, as the captain came up.

"Well, I don't want to get too far from the ship this first time," Cargraves declared. "This place might have some dirty tricks up its sleeve that we hadn't figured on. How much pressure you guys carrying?"

"Ship pressure."

"You can cut it down to about half that without the lower pressure bothering you. It's oxygen, you know."

"Let's walk over to those hills," Morrie suggested. He pointed astern where the rim of the crater was less than half a mile from the ship. It was the sunward side and the shadows stretched from the rim to within a hundred yards or so of the ship.

"Well, part way, anyhow. That shade might feel good. I'm beginning to sweat."

"I think," said Morrie, "if I remember correctly, we ought to be able to see earth from the top of the rim. I caught a flash of it, just as we inverted. We aren't very far over on the back side."

"Just where are we?"

"I'll have to take some sights before I can report," Morrie admitted. "Some place west of Ocean us Procellarum and near the equator."

"I know that."

"Well, if you're in a hurry, Skipper, you had better call up the Automobile Club."

"I'm in no hurry. Injun not lost -- wigwam lost. But I hope the earth is visible from there. It would be a good spot, in that case, to set up Art's antenna, not too far from the ship. Frankly, I'm opposed to moving the ship until we head back, even if we miss a chance to try to contact earth."

They were in the shadows now, to Cargraves' relief. Contrary to popular fancy, the shadows were not black, despite the lack of air-dispersed sunlight. The dazzle of the floor behind them and the glare of the hills beyond all contrived to throw quite a lot of reflected light into the shadows.

When they had proceeded some distance farther toward the hills, Cargraves realized that he was not keeping his party together too well. He had paused to examine a place, discovered by Ross, where the base rock pushed up through the waste of the desert floor, and was trying in the dim light to make out its nature, when he noticed that Morrie was not with them.

He restrained his vexation; it was entirely possible that Morrie, who was in the lead, had not seen them stop. But he looked around anxiously.

Morrie was about a hundred yards ahead, where the first folds of the hills broke through. "Morrie!"

The figure stood up, but no answer came over the radio. He noticed then that Morrie was veering, weaving around. "Morrie! Come back here! Are you all right?"

"All right? Sure, I'm all right." He giggled.

"Well, come back here."

"Can't come back. I'm busy -- I've found it!" Morrie took a careless step, bounded high in the air, came down, and staggered.

"Morrie! Stand still." Cargraves was hurrying toward him.

But he did not stand still. He began bounding around, leaping higher and higher. "I've found it!" he shrieked. "I've found it!" He gave one last bound and while he floated lazily down, he shouted, "I've found . . . the bare bones-" His voice trailed off. He lit feet first, bounced through a complete forward flip and collapsed.

Cargraves was beside him almost as he fell, having himself approached in great flying leaps.

First the helmet -- no, it was not cracked. But the boy's eyes stared out sightlessly. His head lolled, his face was gray.

Cargraves gathered him up in his arms and began to run toward the Galileo. He knew the signs though he had seen it only in the low-pressure chamber used for pilot training -- anoxia! Something had gone wrong; Morrie was starved for oxygen. He might die before he could be helped, or, still worse, he might live with his brain permanently damaged, his fine clear intellect gone.

It had happened before that way, more than once during the brave and dangerous days when man was conquering high-altitude flying.

The double burden did not siow him down. The two together, with their space suits, weighed less than seventy pounds. It was just enough to give him stability.

He squeezed them into the lock, holding Morrie close to his chest and waited in agonizing impatience as the air hissed through the valve. All his strength would not suffice to force that door open until the pressure equalized.

Then he was in and had laid him on the deck. Morrie was still out. He tried to remove the suit with trembling, glove-hampered fingers, then hastily got out of his own suit and un-clamped Morrie's helmet. No sign of life showed as the fresh air hit the patient.

Cussing bitterly he tried to give the boy oxygen directly from his suit but found that the valve on Morrie's suit, for some reason, refused to respond. He turned then to his own suit, disconnected the oxygen line and fed the raw oxygen directly to the boy's face while pushing rhythmically on his chest.

Morrie's eyes flickered and he gasped.

"What happened? Is he all right?" The other two had come through the lock while he worked.

"Maybe he is going to be all right. I don't know."

In fact he came around quickly, sat up and blinked his eyes. "Whassa matter?" he wanted to know.

"Lie down," Cargraves urged and put a hand on his shoulder.

"All right . . . hey! I'm inside."

Cargraves explained to him what had happened. Morrie blinked. "Now that's funny. I was all right, except that I was feeling exceptionally fine-"

"That's a symptom."

"Yes, I remember. But it didn't occur to me then. I had just picked up a piece of metal with a hole in it, when-"

"A what? You mean worked metal? Metal that some one made-"

"Yes, that's why I was so ex-" He stopped and looked puzzled. "But it couldn't have been."

"Possible. This planet might have been inhabited . . . or visited.

"Oh, I don't mean that." Morrie shrugged it off, as if it were of no importance. "I was looking at it, realizing what it meant, when a little bald-headed short guy came up and . . but it couldn't have been."

"No," agreed Cargraves, after a short pause, "it couldn't have been. I am afraid you were beginning to have anoxia dreams by then. But how about this piece of metal?"

Morrie shook his head. "I don't know," he admitted "I remember holding it and looking at it, just as clearly as I remember anything, ever. But I remember the little guy just as well. He was standing there and there were others behind him and I knew that they

were the moon people. There were buildings and trees." He stopped. "I guess that settles it."

Cargraves nodded, and turned his attention to Morrie's oxygen pack. The valve worked properly now. There was no way to tell what had been wrong, whether it had frosted inside when Morrie walked on into the deeper shadows, whether a bit of elusive dirt had clogged it, or whether Morrie himself had shut it down too far when he had reduced pressure at Cargraves' suggestion and thereby slowly suffocated himself. But it must not happen again. He turned to Art.

"See here, Art. I want to rig these gimmicks so that you can't shut them off below a certain limit. Mmmm . . no, that isn't enough. We need a warning signal too -- something to warn the wearer if his supply stops. See what you can dream up."

Art got the troubled look on his face that was habitual with him whenever his gadget-conscious mind was working at his top capacity. "I've got some peanut bulbs among the instrument spares," he mused. "Maybe I could mount one on the neck ring and jimmy it up so that when the flow stopped it would-" Cargraves stopped listening; he knew that it was only a matter of time until some unlikely but perfectly practical new circuit would be born.

Chapter 13 - SOMEBODY IS NUTS!

THE TOP OF THE RING OF HILLS showed them the earth, as Morrie had thought. Cargraves, Art, and Ross did the exploring, leaving Morrie back to recuperate and to work on his celestial navigation problem. Cargraves made a point of going along because he did not want the two passengers to play mountain goat on the steep crags -- a great temptation under the low gravity conditions.

Also, he wanted to search over the spot where Morrie had had his mishap. Little bald men, no; a piece of metal with a hole in it -- possible. If it existed it might be the first clue to the greatest discovery since man crawled up out of the darkness and became aware of himself.

But no luck -- the spot was easy to find; footprints were new to this loose soil! But search as they might, they found nothing. Their failure was not quite certain, since the gloom of the crater's rim still hung over the spot. In a few days it would be daylight here; he planned to search again.

But it seemed possible that Morrie might have flung it away in his anoxia delirium, if it ever existed. It might have carried two hundred yards before it fell, and then buried itself in the loose soil.

The hill top was more rewarding. Cargraves told Art that they would go ahead with the attempt to try to beam a message back to earth . . . and then had to restrain him from running back to the ship to get started. Instead they searched for a place to install the "Dog House".

The Dog House was a small pre-fab building, now resting in sections fitting snugly to the curving walls of the Galileo. It had been Ross's idea and was one of the projects he and Art had worked on during the summer while Cargraves and Morrie were training. It was listed as a sheet-metal garage, with a curved roof, not unlike a Quonset hut, but it had the special virtue that each panel could be taken through the door of the Galileo.

It was not their notion simply to set it up on the face of the moon; such an arrangement would have been alternately too hot and then too cold. Instead it was to be the frame for a sort of tailor-made cave.

They found a place near the crest, between two pinnacles of rock with a fairly level floor between and of about the right size. The top of one of the crags was easily accessible and had a clear view of earth for line-of-sight, beamed transmission. There being no atmosphere, Art did not have to worry about horizon effects; the waves would go where he headed them. Having settled on the location, they returned for tools and supplies.

Cargraves and Ross did most of the building of the Dog House. It would not have been fair to Art to require him to help; he was already suffering agonies of indecision through a desire to spend all his time taking pictures and an equally strong desire to get his set assembled with which he hoped to raise earth. Morrie, at Cargraves' request, stayed on light duty for a few days, cooking, working on his navigation, and refraining from the strain of space-suit work.

The low gravitational pull made light work of moving the building sections, other materials, and tools to the spot. Each could carry over five hundred pounds, earth-weight, of the total each trip, except on the steeper portions of the trail where sheer bulk and clumsiness required them to split the loads.

First they shoveled the sandy soil about in the space between the two rocks until the ground was level enough to receive the metal floor, then they assembled the little building in place. The work went fast; wrenches alone were needed for this and the metal seemed light as cardboard. When that was done, they installed the "door," a steel drum, barrel-sized, with an air-tight gasketed head on each end.

Once the door was in place they proceeded to shovel many earth-tons of lunar soil down on top of the roof, until the space between the rock walls was filled, some three feet higher than the roof of the structure. When they were finished, nothing showed of the Dog House but the igloo-style door, sticking out between the rocky spires. The loose soil of Luna, itself a poor conductor of heat, and the vacuum spaces in it, would be their insulation.

But it was not yet air-tight. They installed portable, temporary lights, then dragged in sealed canisters and flat bales. From the canisters came sticky, tacky sheets of a rubbery plastic. This they hung like wallpaper, working as rapidly as possible in order to finish before the volatiles boiled out of the plastic. They covered ceiling, walls and floor, then from the bales they removed aluminum foil, shiny as mirrors, and slapped it on top of the plastic, all except the floor, which was covered with heavier duraluminum sheets.

It was ready for a pressure test. There were a few leaks to patch and they were ready to move in. The whole job had taken less than two 'days'.

The Dog House was to be Art's radio shack, but that was not all. It was to be also a storeroom for everything they could possibly spare from the ship, everything not necessary to the brief trip back. The cargo space would then be made available for specimens to take back to earth, even if the specimens were no more than country rock, lunar style.

But to Cargraves and to the three it was more than a storeroom, more than a radio shack. They were moving their personal gear into it, installing the hydroponic tank for the

rhubarb plants to make the atmosphere self-refreshing, fitting it out as completely as possible for permanent residence.

To them it was a symbol of man's colonization of this planet, his intention to remain permanently, to fit it to his needs, and wrest a living from it.

Even though circumstances required them to leave it behind them in a few days, they were declaring it to be their new home, they were hanging up their hats.

They celebrated the completion of it with a ceremony which Cargraves had deliberately delayed until the Dog House was complete. Standing in a semicircle in front of the little door, they were addressed by Cargraves:

"As commander of this expedition, duly authorized by a commission of the United Nations and proceeding in a vessel of United States registry, I take possession of this planet as a colony, on behalf of the United Nations of earth in accordance with the laws thereof and the laws of the United States. Run `em up, Ross!"

On a short and slender staff the banner of the United Nations and the flag of the United States whipped to the top. No breeze disturbed them in that airless waste -- but Ross had taken the forethought to stiffen the upper edges of each with wire; they showed their colors.

Cargraves found himself gulping as he watched the flag and banner hoisted. Privately he thought of this little hole in the ground as the first building of Luna City. He imagined that in a year or so there would be dozens of such cave dwellings, larger and better equipped, clustered around this spot. In them would live prospectors, scientists, and tough construction workers. Workers who would be busy building the permanent Luna City down under the floor of the crater, while other workers installed a great rocket port up on the surface.

Nearby would be the beginnings of the Cargraves Physical Laboratory, the Galileo Lunar Observatory.

He found that tears were trickling down his cheeks; he tried futilely to wipe them away through his helmet. He caught Ross's eye and was embarrassed. "Well, sports," he said with forced heartiness, "let's get to work. Funny," he added, looking at Ross, "what effect a few little symbols can have on a man."

Ross looked from Cargraves to the bits of gay bunting. "I don't know," he said slowly. "A man isn't a collection of chemical reactions; he is a collection of ideas."

Cargraves stared. His "boys" were growing up!

"When do we start exploring?" Morrie wanted to know. "Any reason why we shouldn't get going, now that the Dog House is finished ?"

"Before long, I think," Cargraves answered uncomfortably. He had been stalling Morrie's impatience for the last couple of days; Morrie was definitely disappointed that the rocket ship was not to be used, as originally planned, for point to point exploration. He felt confident that he could repeat his remarkable performance in making the first landing.

Cargraves, on the other hand, was convinced that a series of such landings would eventually result in a crash, leaving them marooned to starve or suffocate even if they were not killed in the crash. Consequently he had not budged from his decision to limit exploradon to trips on foot, trips which could not be more than a few hours in duration.

"Let's see how Art is getting on," he suggested. "I don't want to leave him behind -- he'll want to take pictures. On the other hand, he needs to get on with his radio work. Maybe we can rally around and furnish him with some extra hands."

"Okay." They crawled through the air lock and entered the Dog House. Art and Ross had already gone inside.

"Art," Cargraves inquired when he had taken off his clumsy suit, "how long will it be until you are ready to try out your Earth sender?"

"Well, I don't know, Uncle. I never did think we could get through with the equipment we've got. If we had been able to carry the stuff I wanted-"

"You mean if we had been able to afford it," put in Ross. "Well . . . anyhow, I've got another idea. This place is an electronics man's dream -- all that vacuum! I'm going to try to gimmick up some really big power tubes -- only they won't be tubes. I can just mount the elements out in the open without having to bother with glass. It's the easiest way to do experimental tube design anybody ever heard of."

"But even so," Morrie pointed out, "that could go on indefinitely. Doc, you've got us scheduled to leave in less than ten earth-days. Feel like stretching the stay?" he added hopefully.

"No, I don't," Cargraves stated. "Hmmm . . . Art, let's skip the transmitter problem for a moment. After all, there isn't any law that says we've got to establish radio contact with the earth. But how long would it take to get ready to receive from the earth?"

"Oh, that!" said Art. "They have to do all the hard work for that. Now that I've got everything up here I can finish that hook-up in a couple of hours."

"Fine! We'll whip up some lunch."

It was nearer three hours when Art announced he was ready to try. "Here goes," he said. "Stand by."

They crowded around. "What do you expect to get?" Ross asked eagerly.

Art shrugged. "Maybe nothing. NAA, or Berlin Sender, if they are beamed on us. I guess Radio Paris is the best bet, if they are still trying for us." He adjusted his controls with the vacant stare that always came over him.

They all kept very quiet. If it worked, it would be a big moment in history, and they all knew it.

He looked suddenly startled.

"Got something?"

He did not answer for a moment. Then he pushed a phone off one ear and said bitterly, "One of you guys left the power on your walky-talky."

Cargraves checked the suits himself. "No, Art, they are all dead."

Art looked around the little room. "But . . . but . . there's nothing else it could be. Somebody is nuts!"

"What's the matter?"

"What's the matter? I'm getting a power hum from somewhere and it's from somewhere around here . . . close!"

Chapter 14 - NO CHANCE AT ALL!

"ARE YOU sure?," CARGRAVES demanded.

"Of course I'm sure!"

"It's probably Radio Paris," Ross suggested. "You don't know how far away it is."

Art looked indignant. "Suppose you sit down here and try your luck, Mr. de Forrest. It was close. It couldn't have been an earth station."

"Feed back?"

"Don't be silly!" He tried fiddling with his dials a bit more. "It's gone now."

"Just a minute," said Cargraves. "We've got to be sure about this. Art, can you get any sort of a transmitter rigged?"

"Not very easy, but yes, I can, too. The homing set is all set to go." The homing set was a low-power transmitter intended simply for communication between the Dog House and any member of the party outside in a suit.

"Gimme half a second to hook it up." It took more than half a second but shortly he was leaning toward the microphone, shouting, "Hello! Hello! Is there anybody there! Hello!"

"He must have been dreaming," Morrie said quietly to Cargraves. "There couldn't be anybody out there."

"Shut up," Art said over his shoulder and went back to calling, "Hello! Hello, hello."

His expression suddenly went blank, then he said sharply, "Speak English! Repeat!"

"What was it?" demanded Cargraves, Ross, and Art.

"Quiet . . . please!" Then, to the mike, "Yes, I hear you.

"Who is this? What? Say that again? . . . This is the Space Ship Galileo, Arthur Mueller transmitting. Hold on a minute."

Art flipped a switch on the front of the panel. "Now go ahead. Repeat who you are."

A heavy, bass voice came out of the transmitter: "This is Lunar Expedition Number One," the voice said. "Will you be pleased to wait one minute while I summon our leader?"

"Wait a minute," yelled Art. "Don't go away!" But the speaker did not answer.

Ross started whistling to himself. "Stop that whistling," Art demanded.

"Sorry," Ross paused, then added, "I suppose you know what this means?"

"Huh? I don't know what anything means!"

"It means that we are too late for the senior prizes. Somebody has beaten us to it."

"Huh? How do you figure that?"

"Well, it's not certain, but it's likely."

"I'll bet we landed first."

"We'll see. Listen!" It was the speaker again, this time a different voice, lighter in timbre, with a trace of Oxford accent. "Are you there? This is Captain James Brown of the First Lunar Expedition. Is this the Rocket Ship Galileo?"

Cargraves leaned over to the mike. "Rocket Ship Galileo, Captain Cargraves speaking. Where are you?"

"Some distance away, old chap. But don't worry. We are locating you. Keep sending, please."

"Let us know where we are in reference to you."

"Do not worry about that. We will come to you. Just remain where you are and keep sending."

"What is your lunar latitude and longitude?"

The voice seemed to hesitate, then went on, "We have you located now. We can exchange details later. Good-by."

Thereafter Art shouted "hello" until he was hoarse, but there was no answer. "Better stay on the air, Art," Cargraves decided. "Ross and I will go back to the ship. That's what they will see. I don't know, though. They might not show up for a week." He mused. "This presents a lot of new problems."

"Somebody ought to go to the ship," Morrie pointed out, "without waiting. They may be just coming in for a landing. They may show up any time."

"I don't think it was ship transmission," said Art, then turned back to his microphone.

Nevertheless it was decided that Cargraves and Ross would go back to the ship. They donned their suits and crawled through the air lock, and had no more than started down the steep and rocky slope when Ross saw the rocket.

He did not hear it, naturally, but he had glanced back to see if Cargraves was behind him. "Look!" he called into his helmet mike, and pointed.

The ship approached them from the west, flying low and rather slowly. The pilot was riding her on her jet, for the blast shot more downward than to the stern. "We had better hurry!," Ross shouted, and went bounding ahead.

But the rocket did not come in for a landing. It nosed down, forward jets driving hard against the fall, directly toward the Galileo. At an altitude of not more than five hundred feet the pilot kicked her around, belly first, and drove away on his tail jet.

Where the Galileo lay, there was a flash, an utterly silent explosion, and a cloud of dust which cleared rapidly away in the vacuum. The sound reached them through their feet, after a long time -- it seemed to them.

The Galileo lay on her side, a great gaping hole in her plates. The wound stretched from shattered view port to midships.

Cargraves stood perfectly still, staring at the unbelievable. Ross found his voice first. "They gave us no chance," he said, shaking both fists at the sky. "No chance at all!"

Chapter 15 - WHAT POSSIBLE REASON?

HE TURNED AND STUMBLED back up the slope to where Cargraves still stood forlorn and motionless. "Did you see that, Doc?" he demanded. "Did you see that? The dirty rats bombed us -- they bombed us. Why? Why, Doc? Why would they do such a thing?"

Tears were streaming down his face. Cargraves patted him clumsily. "I don't know," he said slowly. "I don't know," he repeated, still trying to readjust himself to the shock.

"Oh, I want to kill somebody!"

"So do I." Cargraves turned away suddenly. "Maybe we will. Come on -- we've got to tell the others." He started up the slope.

But Art and Morrie were already crawling out of the lock when they reached it. "What happened?" Morrie demanded. "We felt a quake."

Cargraves did not answer directly. "Art, did you turn off your transmitter?"

"Yes, but what happened?"

"Don't turn it on again. It will lead them to us here." He waved a hand out at the floor of the crater. "Look!"

It took a minute or two for what they saw to sink in. Then Art turned helplessly to Cargraves. "But, Uncle," he pleaded, "what happened? Why did the ship blow up?"

"They blitzed us," Cargraves said savagely. "They bombed us out. If we had been aboard they would have killed us. That's what they meant to do."

"But why?"

"No possible reason. They didn't want us here." He refrained from saying what he felt to be true: that their unknown enemy had failed only temporarily in his intent to kill. A quick death by high explosive would probably be a blessing compared with what he felt was in store for them marooned . . . on a dead and airless planet.

How long would they last? A month? Two months? Better by far if the bomb had hit them.

Morrie turned suddenly back toward the lock. "What are you doing, Morrie?"

"Going to get the guns!"

"Guns are no good to us."

But Morrie had not heard him. His antenna was already shielded by the metal drum.

Ross said, "I'm not sure that guns are no good, Doc."

"Huh? How do you figure?"

"Well, what are they going to do next? Won't they want to see what they've done? They didn't even see the bomb hit; they were jetting away."

"If they land we'll hijack their ship!"

Art came up closer. "Huh? Hey, Ross, that's tellin' `em! We'll get them! We'll show them! Murderers!" His words tumbled over one another, squeaking and squawking in their radios.

"We'll try!" Cargraves decided suddenly. "We'll try. If they land we won't go down without a fight. We can't be any worse off than we are." He was suddenly unworried; the prospect of a gun fight, something new to his experience, did not upset him further. It cheered him. "Where do you think we ought to hide, Ross? In the Galileo?"

"If we have to -- There they come!" The rocket had suddenly appeared over the far rim.

"Where's Morrie?"

"Here." He came up from behind them, burdened with the two rifles and the revolver. "Here, Ross, you take . . . hey!" He had caught sight of the strangers' rocket. "We've got to hurry," he said.

But the rocket did not land. It came down low, dipping below the level of the crater's rim, then scooted on its tail across near the wreckage of the Galileo, up, out, and away.

"And we didn't even get a crack at them," Morrie said bitterly.

"Not yet," Ross answered, "but I think they'll be back. This was a second bombing run, sure as anything, in case they missed the first time. They'll still come back to see what they've done. How about it, Doc?"

"I think they will," Cargraves decided. "They will want to look over our ship and to kill us off if they missed any of us. But we don't go to the Galileo."

"Why not?"

"We haven't time. They will probably turn as fast as they can check themselves, come back and land. We might be caught out in the open."

"That's a chance we'll have to take."

It was decided for them. The rocket appeared again from the direction it had gone. This time it was plainly a landing trajectory. "Come on!" shouted Cargraves, and went careening madly down the slope.

The rocket landed about halfway between the Galileo and the shadows, now close to the foot of the hills, for the sun had climbed four 'days' higher in the sky. The ship was noticeably smaller than the Galileo even at that distance.

Cargraves did not notice such details. His immediate intent was to reach the door of the craft before it opened, to be ready to grapple with them as they came out.

But his good sense came to his aid before he was out in the sunlight. He realized he had no gun. Morrie had kept one, Ross had the other, and Art was waving the revolver around. He paused just short of the dazzling, sunlighted area. "Hold it," he ordered. "I don't think they have seen us. I don't think they will -- yet."

"What are your plans?" Morrie demanded.

"Wait for them to get out, then rush the ship -- after they get well away from it. Wait for my signal."

"Can't they hear us?"

"Maybe. If they are on this frequency, we're goners. Switch off your talkies, everybody." He did so himself; the sudden silence was chilling.

The rocket was almost tail towards them. He now saw three suit-clad figures pile out from a door that swung out from the side. The first looked around briefly, but he appeared not to see them. Since it was almost certain that he was wearing sun goggles, it was doubtful if he could see much inside the shadows.

He motioned to the other two and moved toward the Galileo, using a long, loping gallop that the Galileo's crew had learned was the proper way to walk on the moon. That alone was enough to tell Cargraves that these men, their enemies, were not grounding on the moon for the first time.

Cargraves let them get all the way to the Galileo, and, in fact, to disappear behind it, before he got up from where he had been crouching. "Come on!" he yelled into a dead microphone, and slammed ahead in great leaps that took him fifty feet at a stride.

The outer door of the lock stood open. He swarmed into it and closed it after him. It clamped by means of a wheel mounted in its center; the operation was obvious. That done he looked around. The tiny lock was dimly illuminated by a pane of glass set in the inner door. In this feeble light he looked and felt for what he needed next -- the spill valve for air.

He found it and heard the air hissing into the compartment. He leaned his weight against the inner door and waited.

Suddenly it gave way; he was in the rocket and blinking his eyes.

There was a man still seated in the pilot's chair. He turned his head, and appeared to say something. Cargraves could not hear it through his helmet and was not interested.

Taking all advantage of the low gravity he dived at the man and grappled him about the head and shoulders.

The man was too surprised to put up much of a fight -- not that it would have mattered; Cargraves felt ready to fight anything up to and including tigers.

He found himself banging the man's head against the soft padding of the acceleration chair. That, he realized, was no good. He drew back a gauntleted fist and buried it in the pit of the man's stomach.

The man grunted and seemed to lose interest. Cargraves threw a short jab straight to the unguarded chin. No further treatment was needed. Cargraves pushed him down to the floor, noticing without interest that the belt of his victim carried a holster with what appeared to be a heavy-caliber Mauser, and then stood on him. He looked out the conning port.

There was a figure collapsed on the ground near the broken bow of the Galileo, whether friend or foe it was impossible to say. But another was standing over him and concerning him there was no doubt. It was not alone the unfamiliar cut of his space suit, it was the pistol in his hand. He was firing in the direction of the rocket in which Cargraves stood.

He saw the blaze of a shot, but no answering report. Another shot followed it -- and this one almost deafened him; it struck the ship containing him, making it ring like a giant bell.

He was in a dilemma. He wanted very urgently to join the fight; the weapon on the person of his disabled opponent offered a way. Yet he could not leave his prisoner inside the ship while he went out, nor did he, even in the heat of fighting, have any stomach for killing an unconscious man.

He had already decided, in the space of a breath, to slug his man heavily and get outside, when the fast drama beyond the port left him no time. The space-suited stranger at the bow of the Galileo was suddenly without a helmet. Around his neck was only a jagged collar.

He dropped his pistol and clutched at his face. He stood there for a moment, as if puzzled by his predicament, took two hesitant steps forward, and sank gently to the ground.

He thrashed around a bit but did not get up. He was still convulsing when a third man appeared around the end of the ship. He did not last long. He appeared confused, unable to comprehend the turn of events, which was quite likely, in view of the ghostly stillness of the gun fight. It was entirely possible that he never knew what hit him, nor why. He was still reaching for his iron when he was struck twice, first in the chest and the second shot lower down.

He bowed forward, until his helmet touched the ground, then collapsed.

Cargraves heard a noise behind him. Snatching the gun he had taken to the ready, and turning, he watched the door of the air lock open.

It was Art, wild-eyed and red. "Any more in here?" the boy called out to him, while swinging his revolver in a wide arc. His voice reached Cargraves faintly, muffled by their two helmets.

"No. Turn on your radio," he shouted back, then realized his own was still off. Switching it on, he repeated his statement.

"Mine is on," Art replied. "I turned it on while the lock filled. How are they doing outside?"

"All right, it looks like. Here, you guard this guy." He pointed down at his feet. "I'm going outside."

But it was unnecessary. The lock opened again and both Ross and Morrie bulged out of it. Cargraves wondered absently how the two had managed to squeeze into that coffin-like space.

"Need any help?" demanded Morrie.

"No. It doesn't look like you guys did, either."

"We ambushed `em," Ross said jubilantly. "Hid in the shadow of the ship and picked `em off as they showed up. All but the second one. He darn near got us before we got him. Do you know," he went on conversationally, as if he had spent a lifetime shooting it out, "it's almost impossible to sight a gun when you're wearing one of these fish bowls over your head?"

"Hmm . . . You made out all right."

"Pure luck. Morrie was shooting from the hip."

"I was not," Morrie denied. "I aimed and squeezed off every shot."

Cargraves cautioned them to keep an eye on the prisoner, as he wanted to take a look around outside. "Why," demanded Art, "bother to guard him? Shoot him and chuck him out, I say."

"Cool down," Cargraves told him. "Shooting prisoners isn't civilized."

Art snorted. "Is he civilized?"

"Shut up, Art. Morrie -- take charge." He shut himself in the air lock.

The examination took little time. Two of the strangers had received wounds which would have been fatal in any case, it seemed to him, but their suits were deflated in any event. The third, whose helmet had been struck, was equally beyond help. His eyes bulged sightlessly at the velvet sky. Blood from his nose still foamed. He was gone -- drowned in vacuum.

He went back to the little ship, without even a glance at the dismal pile of junk that had been the sleekly beautiful Galileo.

Back in the ship, he threw himself in one of the acceleration chairs and sighed. "Not so bad," he said. "We've got a ship."

"That's what you think," Art said darkly. "Take a look at that instrument board."

Chapter 16 - THE SECRET BEHIND THE MOON

"WHAT?" SAID CARGRAVES and looked where he was pointing.

"This is no space ship," Art said bitterly. "This thing is a jeep. Look at that." He indicated two gauges. One was marked SAUERSTOFF, the other ALKOHOL. "Oxygen and alcohol. This thing is just a kiddy wagon."

"Maybe those are just for the maneuvering jets," Cargraves answered, not very hopefully.

"Not a chance, Doc," Ross put in. "I've already given her the once-over, with Art translating the Jerry talk for me. Besides, did you notice that this boat hasn't any wings of any sort? It's purely a station wagon for the moon. Look, we've got company."

The prisoner had opened his eyes and was trying to sit up. Cargraves grabbed him by a shoulder, yanked him to his feet, and shoved him into the chair he had just vacated. "Now, you," he snapped. "Talk!"

The man looked dazed and did not answer. "Better try German on him, Uncle," Art suggested. "The labels are all in German."

Cargraves reached far back into his technical education and shifted painfully to German. "What is your name?"

"My name is Friedrich Lenz, sergeant-technician of the second class. To whom am I speaking?"

"Answer the questions you are asked. Why did you bomb our ship?"

"In line of duty. I was ordered."

"That is not a reason. Why did you bomb a peaceful ship?" The man simply looked sullen. "Very well," Cargraves went on, still speaking in German. "Get the air lock open, Art. We'll throw this trash out on the face of the moon."

The self-styled sergeant-technician suddenly began talking very rapidly. Cargraves wrinkled his forehead. "Art," he said, returning to English, "you'll have to help me out. He's slinging it too fast for me."

"And translate!" protested Ross. "What does he say?"

"I'll try," Art agreed, then shifted to German. "Answer the question over again. Speak slowly."

"Ia-" the man agreed, addressing his words to Cargraves.

"Herr Kapitan!," Art thundered at him.

"Ja, Herr Kapitan," the man complied respectfully, "I was trying to explain to you-" He went on at length.

Art translated when he paused. "He says that he is part of the crew of this rocket. He says that it was commanded by Lieutenant -- I didn't catch the name; it's one of the guys we shot -- and that they were ordered by their leader to seek out and bomb a ship at this location. He says that it was not a -- uh, a wanton attack because it was an act of war."

"War?" demanded Ross. "What in thunder does he mean, `war'? There's no war. It was sheer attempted murder."

Art spoke with the prisoner again.

"He says that there is a war, that there always has been a war. He says that there will always be war until the National Socialist Reich is victorious." He listened for a moment. "He says that the Reich will live a thousand years."

Morrie used some words that Cargraves had never heard him use before. "Ask him how he figures that one."

"Never mind," put in Cargraves. "I'm beginning to get the picture." He addressed the Nazi directly. "How many are there in your party, how long has it been on the moon, and where is your base?"

Presently Art said, "He claims he doesn't have to answer questions of that sort, under international law."

"Hummph! You might tell him that the laws of warfare went out when war was abolished. But never mind -- tell him that, if he wants to claim prisoner-of-war privileges, we'll give him his freedom, right now!" He jerked a thumb at the air lock.

He had spoken in English, but the prisoner understood the gesture. After that he supplied details readily.

He and his comrades had been on the moon for nearly three months. They had an underground base about thirteen miles west of the crater in which the shattered Galileo lay. There was one rocket at the base, much larger than the Galileo, and it, too, was atom-powered. He regarded himself as a member of the army of the Nazi Reich. He did not know why the order had been given to blast the Galileo, but he supposed that it was an act of military security to protect their plans.

"What plans?"

He became stubborn again. Cargraves actually opened the inner door of the lock, not knowing himself how far he was prepared to go to force information out of the man, when the Nazi cracked.

The plans were simple -- the conquest of the entire earth. The Nazis were few in number, but they represented some of the top military, scientific, and technical brains from Hitler's crumbled empire. They had escaped from Germany, established a remote mountain base, and there had been working ever since for the redemption of the Reich. The sergeant appeared not to know where the base was; Cargraves questioned him closely. Africa? South America? An island? But all that he could get out of him was that it was a long submarine trip from Germany.

But it was the objective, der Tag, which left them too stunned to worry about their own danger. The Nazis had atom bombs, but, as long as they were still holed up in their secret base on earth, they dared not act, for the UN had them, too, and in much greater quantity.

But when they achieved space flight, they had an answer. They would sit safely out of reach on the moon and destroy the cities of earth one after another by guided missiles launched from the moon, until the completely helpless nations of earth surrendered and pleaded for mercy.

The announcement of the final plan brought another flash of arrogance back into their prisoner. "And you cannot stop it," he concluded. "You may kill me, but you cannot stop it! Heil dem Führer!"

"Mind if I spit in his eye, Doc?" Morrie said conversationally.

"Don't waste it," Cargraves counseled. "Let's see if we can think ourselves out of this mess. Any suggestions?" He hauled the prisoner out of the chair and made him lie face down on the deck. Then he sat down on him. "Go right ahead," he urged. "I don't think he understands two words of English. How about it, Ross?"

"Well," Ross answered, "it's more than just saving our necks now. We've got to stop them. But the notion of tackling fifty men with two rifles and two pistols sounds like a job for Tarzan or Superman. Frankly, I don't know how to start."

"Maybe we can start by scouting them out. Thirteen miles isn't much. Not on the moon."

"Look," said Art, "in a day or two I might have a transmitter rigged that would raise earth. What we need is reinforcements."

"How are they going to get here?" Ross wanted to know. "We had the only space ship -- except for the Nazis."

"Yes, but listen -- Doc's plans are still available. You left full notes with Ross's father -- didn't you, Doc? They can get busy and rebuild some more and come up here and blast those skunks out."

"That might be best," Cargraves answered. "We can't afford to miss, that's sure. They could raid the earth base of the Nazis first thing and then probably bust this up in a few weeks, knowing that our ship did work and having our plans."

Morrie shook his head. "It's all wrong. We've got to get at them right now. No delay at all, just the way they smashed us. Suppose it takes the UN six weeks to get there. Six weeks might be too long. Three weeks might be too long. A week might be too long. An atom war could be all over in a day."

"Well, let's ask our pal if he knows when they expect to strike, then," Ross offered.

Morrie shook his head and stopped Art from doing so. "Useless. We'll never get a chance to build a transmitter. They'll be swarming over this crater like reporters around a murder trial. Look -- they'll be here any minute. Don't you think they'll miss this rocket?"

"Oh, my gosh!" It was Art. Ross added, "What time is it, Doc?"

To their complete amazement it was only forty minutes from the time the Galileo had been bombed. It had seemed like a full day.

It cheered them up a little but not much. The prisoner had admitted that the rocket they were in was the only utility, short-jump job. And the Nazi space ship- the Wotan, he termed it -would hardly be used for search. Perhaps they had a few relatively free hours.

"But I still don't see it," Cargraves admitted. "Two guns and two pistols -- four of us. The odds are too long -- and we can't afford to lose. I know you sports aren't afraid to die, but we've got to win."

"Why," inquired Ross, "does it have to be rifles?"

"What else?"

"This crate bombed us. I'll bet it carries more than one bomb."

Cargraves looked startled, then turning to the prisoner, spoke rapidly in German. The prisoner gave a short reply. Cargraves nodded and said, "Morrie, do you think you could fly this clunker?"

"I could sure make a stab at it."

"Okay. You are it. We'll make Joe Masterrace here take it off, with a gun in his ribs, and you'll have to feel her out. You won't get but one chance and no practice. Now let's take a look at the bomb controls."

The bomb controls were simple. There was no bombsight, as such. The pilot drove the ship on a straight diving course and kicked it out just before his blast upwards. There was a gadget to expel the bomb free of the ship; it continued on the ship's previous trajectory. Having doped it out, they checked with the Nazi pilot who gave them the same answers they had read in the mechanism.

There were two pilot seats and two passenger seats, directly behind the pilot seats. Morrie took one pilot seat; the Nazi the other. Ross sat behind Morrie, while Cargraves sat with Art in his lap, one belt around both. This squeezed Art up close to the back of the Nazi's chair, which was good, for Art reached around and held a gun in the Nazi's side.

"All set, Morrie?"

"All set. I make one pass to get my bearings and locate the mouth of their hideaway. Then I come back and give `em the works."

"Right. Try not to hit their rocket ship, if you can. it would be nice to go home. Blast off! Achtung! Aufstieg!"

The avengers raised ground.

"How is it going?" Cargraves shouted a few moments later. "Okay!" Morrie answered, raising his voice to cut through the roar. "I could fly her down a chimney. There's the hill ahead, I think -- there!"

The silvery shape of the Wotan near the hill they were shooting towards put a stop to any doubts. It appeared to be a natural upthrust of rock, quite different from the craters, and lay by itself a few miles out in one of the 'seas'.

They were past it and Morrie was turning, blasting heavily to kill his momentum, and pressing them hard into their seats. Art fought to steady the revolver without firing it.

Morrie was headed back on his bombing run, coming in high for his dive. Cargraves wondered if Morrie had actually seen the air lock of the underground base; he himself had had no glimpse of it.

There was no time left to wonder. Morrie was diving; they were crushed against the pads as he fought a moment later to recover from the dive, kicking her up and blasting. They hung for a second and Cargraves thought that Morrie had played it too fine in his anxiety to get in a perfect shot; he braced himself for the crash.

Then they were up. When he had altitude, Morric kicked her over again, letting his jet die. They dropped, view port down, with the ground staring at them.

They could see the splash of dust and sand still rising. Suddenly there was a whoosh from the middle of it, a mighty blast of air, bits of debris, and more sand. It cleared at once in the vacuum of that plain, and they saw the open wound, a black hole leading downward.

He had blown out the air lock with a bull's-eye.

Morrie put her down to Cargraves' plan, behind the Wotan and well away from the hole. "Okay, Doc!"

"Good. Now let's run over the plan -- I don't want any slipup. Ross comes with me. You and Art stay with the jeep. We will look over the Wotan first, then scout out the base. If we are gone longer than thirty minutes, you must assume that we are dead or captured. No matter what happens, under no circumstances whatever are you to leave this rocket. If any one comes toward you, blast off. Don't even let us come near you unless we are by ourselves. Blast off. You've got one more bomb -- you know what to do with it."

Morrie nodded. "Bomb the Wotan. I hate to do that." He stared wistfully at the big ship, their one chain to the earth.

"But you've got to. You and Art have got to run for it, then, and get back to the Dog House and hole up. It'll be your business, Art, to manage somehow or other to throw together a set that can get a message back to earth. That's your only business, both of you. Under no circumstances are you to come back here looking for Ross and me. If you stay holed up, they may not find you for weeks -- and that will give you your chance, the earth's chance. Agreed?"

Morrie hesitated. "Suppose we get a message through to earth. How about it then?"

Cargraves thought for a moment, then replied, "We can't stand here jawing -- there's work to be done. If you get a message through with a reply that makes quite clear

that they believe you and are getting busy, then you are on your own. But I advise you not to take any long chances. If we aren't back here in thirty minutes, you probably can't help us." He paused for a moment and decided to add one more thing -- the boy's personal loyalty had made him doubtful about one point. "You know, don't you, that when it comes to dropping that bomb, if you do, you must drop it where it has to go, even if Ross and I are standing on your target?"

"I suppose so."

"Those are orders, Morrie."

"I understand them."

"Morrie!"

"Aye aye, Captain!"

"Very well, sir -- that's better. Art, Morrie is in charge. Come on, Ross."

Nothing moved on the rocket field. The dust of the bombing, with no air to hold it up, had dissipated completely. The broken air lock showed dark and still across the field; near them the sleek and mighty Wotan crouched silent and untended.

Cargraves made a circuit of the craft, pistol ready in his gloved fist, while Ross tailed him, armed with one of the Garands. Ross kept well back, according to plan.

Like the Galileo, the Wotan had but one door, on the port side just aft the conning compartment. He motioned Ross to stay back, then climbed a little metal ladder or staircase and tried the latch. To his surprise the ship was not locked -- then he wondered why he was surprised. Locks were for cities.

While the pressure in the air chamber equalized, he unsnapped from his belt a flashlight he had confiscated from the Nazi jeep rocket and prepared to face whatever lay beyond the door. When the door sighed open, he dropped low and to one side, then shot his light around the compartment. Nothing . . . nobody.

The ship was empty of men from stem to stern. It was almost too much luck. Even if it had been a rest period, or even if there had been no work to do in the ship, he had expected at least a guard on watch.

However a guard on watch would mean one less pair of hands for work . . . and this was the moon, where every pair of hands counted for a hundred or a thousand on earth. Men were at a premium here; it was more likely, he concluded, that their watch was a radar, automatic and unsleeping.

Probably with a broad-band radio alarm as well, he thought, remembering how promptly their own call had been answered the very first time they had ever sent anything over the rim of their crater.

He went through a passenger compartment equipped with dozens of acceleration bunks, through a hold, and farther aft. He was looking for the power plant.

He did not find it. Instead he found a welded steel bulkhead with no door of any sort. Puzzled, he went back to the control station. What he found there puzzled him still more. The acceleration chairs were conventional enough; some of the navigational instruments were common types and all of them not too difficult to figure out; but the controls simply did not make sense.

Although this bewildered him, one point was very clear. The Nazis had not performed the nearly impossible task of building a giant space ship in a secret hide-out, any more than he and the boys had built the Galileo singlehanded. In each case it had been a job of conversion plus the installation of minor equipment.

For the Wotan was one of the finest, newest, biggest ships ever to come out of Detroit!

The time was getting away from him. He had used up seven minutes in his prowl through the ship. He hurried out and rejoined Ross. "Empty," he reported, saving the details for later; "let's try their rat hole." He started loping across the plain.

They had to pick their way carefully through the rubble at the mouth of the hole. Since the bomb had not been an atom bomb but simply ordinary high explosive, they were in no danger of contamination, but they were in danger of slipping, sliding, falling, into the darkness.

Presently the rubble gave way to an excellent flight of stairs leading deep into the moon. Ross flashed his torch around.

The walls, steps, and ceiling were covered with some tough lacquer, sprayed on to seal the place. The material was transparent, or nearly so, and they could see that it covered carefully fitted stonework.

"Went to a lot of trouble, didn't they?" Ross remarked.

"Keep quiet!" answered Cargraves.

More than two hundred feet down the steep passageway ended, and they came to another door, not an air lock, but intended apparently as an air-tight safety door. It had not kept the owners safe; the blast followed by a sudden letting up of normal pressure had been too much for it. It was jammed in place but so bulged and distorted that there was room for them to squeeze through.

There was some light in the room beyond. The blast had broken most of the old-fashioned bulbs the Nazis had used, but here and there a light shone out, letting them see that they were in a large hail. Cargraves went cautiously ahead.

A room lay to the right from the hall, through an ordinary non-air-tight door, now hanging by one hinge. In it they found the reason why the field had been deserted when they had attacked.

The room was a barrack room; the Nazis had died in their bunks. 'Night' and 'day' were arbitrary terms on the moon, in so far as the working times and eating times and sleeping times of men are concerned. The Nazis were on another schedule; they had had the bad luck to be sleeping when Morrie's bomb had robbed them of their air.

Cargraves stayed just long enough in the room to assure himself that all were dead. He did not let Ross come in at all. There was some blood, but not much, being mostly bleeding from mouths and bulging eyes. It was not this that caused his squeamish consideration; it was the expressions which were frozen on their dead faces.

He got out before he got sick.

Ross had found something. "Look here!" he demanded. Cargraves looked. A portion of the wall had torn away under the sudden drop in pressure and had leaned crazily into the room. It was a metal panel, instead of the rock masonry which made up the rest of the walls. Ross had pulled and pried at it to see what lay behind, and was now playing his light into the darkness behind it.

It was another corridor, lined with carefully dressed and fitted stones. But here the stone had not been covered with the sealing lacquer.

"I wonder why they sealed it off after they built it?" Ross wanted to know. "Do you suppose they have stuff stored down there? Their A-bombs maybe?"

Cargraves studied the patiently fitted stones stretching away into the unfathomed darkness. After a long time he answered softly, "Ross, you haven't discovered a Nazi storeroom. You have discovered the homes of the people of the moon."

Chapter 17 - UNTIL WE ROT

FOR ONCE ROSS WAS ALMOST as speech-bound as Art. When he was able to make his words behave he demanded, "Are you sure? Are you sure, Doc?"

Cargraves nodded. "As sure as I can be at this time. I wondered why the Nazis had built such a deep and extensive a base and why they had chosen to use fitted stone masonry. It would be hard to do, working in a space suit. But I assigned it to their reputation for doing things the hard way, what they call `efficiency.' I should have known better." He peered down the mysterious, gloomy corridor. "Certainly this was not built in the last few months."

"How long ago, do you think?"

"How long? How long is a million years? How long is ten million years? I don't know -- I have trouble imagining a thousand years. Maybe we'll never know."

Ross wanted to explore. Cargraves shook his head. "We can't go chasing rabbits. This is wonderful, the biggest thing in ages. But it will wait. Right now," he said, glancing at his watch, "we've got eleven minutes to finish the job and get back up to the surface -- or things will start happening up there!"

He covered the rest of the layout at a fast trot, with Ross guarding his rear from the central hall. He found the radio 'shack', with a man dead in his phones, and noted that the equipment did not appear to have suffered much damage when the whirlwind of escaping air had slammed out of the place. Farther on, an arsenal contained bombs for the jeep, and rifles, but no men.

He found the storeroom for the guided missiles, more than two hundred of them, although the cradles were only half used up. The sight of them should have inspired terror, knowing as he did that each represented a potentially dead and blasted city, but he had no time for it. He rushed on.

There was a smaller room, well furnished, which seemed to be sort of a wardroom or common room for the officers. It was there that he found a Nazi who was not as the others.

He was sprawled face down and dressed in a space suit. Although he did not move Cargraves approached him very cautiously.

The man was either dead or unconscious. However, he did not have the grimace of death on his face and his suit was still under pressure. Wondering what to do, Cargraves knelt over him. There was a pistol in his belt; Cargraves took it and stuck it in his own.

He could feel no heart beat through the heavy suit and his own gauntlet, nor could he listen for it, while wearing a helmet himself.

His watch showed five minutes of the agreed time left; whatever he did must be done fast. He grappled the limp form by the belt and dragged it along.

"What have you got there?" Ross demanded.

"Souvenir. Let's get going. No time." He saved his breath for the climb. The sixty-pound weight that he and his burden made, taken together, flew up the stairs six at a time.

At the top his watch still showed two minutes to go. "Leg it out to the jeep," he commanded Ross. "I can't take this item there, or Morrie may decide it's a trap. Meet me in the Wotan. Get going!" Heaving his light burden over one shoulder, he set out for the big ship at a gallop.

Once inside he put his load down and took the man out of his space suit. The body was warm but seemed dead. However, he found he could detect a faint heart-beat. He was starting an artificial respiration when the boys piled out of the lock.

"Hi," he said, "who wants to relieve me here? I don't know much about it."

"Why bother?" asked Morrie.

Cargraves paused momentarily and looked at him quizzically. "Well, aside from the customary reasons you have been brought up to believe in, he might be more use to us alive than dead."

Morrie shrugged. "Okay. I'll take over." He dropped to his knees, took Cargraves' place, and started working.

"Did you bring them up to date?," Cargraves asked Ross.

"I gave them a quick sketch. Told them the place seemed to be ours and I told them what we found -- the ruins."

"Not very ruined," Cargraves remarked.

"Look, Uncle," demanded Art. "Can I go down there? I've got to get some pictures."

"Pictures can wait," Cargraves pointed out. "Right now we've got to find out how this ship works. As soon as we get the hang of it, we head back. That comes first."

"Well, sure," Art conceded, "but . . . after all -- I mean. No pictures at all?"

"Well . . . Let's put it this way. It may take Ross and Morrie and me, not to mention yourself, quite some time to figure out how they handle this craft. There might be twenty minutes when we could spare you. In the meantime, table the motion. Come on, Ross. By the way, what did you do with the prisoner?"

"Oh, him," Morrie answered, "we tied him up and left him."

"Huh? Suppose he gets loose? He might steal the rocket."

"He won't get loose. I tied him myself and I took a personal interest in it. Anyhow he won't try to get away -- no space suit, no food. That baby knows his chance of living to a ripe old age depends on us and he doesn't want to spoil it."

"That's right, Uncle," Art agreed. "You should have heard what he promised me."

"Good enough, I guess," Cargraves conceded. "Come on, Ross." Morrie went on with his job, with Art to spell him.

Cargraves returned, with Ross, to the central compartment a few minutes later. "Isn't that pile of meat showing signs of life yet?," he asked.

"No. Shall I stop?"

"I'll relieve you. Sometimes they come to after an hour or more. Two of you go over to the jeep with an additional space suit and bring back Sergeant What's-his-name. Ross and I are as much in the dark as ever," he explained. "The sergeant bloke is a pilot. We'll sweat it out of him."

He had no more than gotten firmly to work when the man under him groaned. Morrie turned back at the lock. "Go ahead," Cargraves confirthed. "Ross and I can handle this guy."

The Nazi stirred and moaned. Cargraves turned him over. The man's eyelids flickered, showing bright blue eyes. He stared up at Cargraves. "How do you do?" he said in a voice like a stage Englishman. "May I get up from here?"

Cargraves backed away and let him up. He did not help him.

The man looked around. Ross stood silently, covering him with a Garand. "That isn't necessary, really," the Nazi protested. Ross glanced at Cargraves but continued to cover the prisoner. The man turned to Cargraves. "Whom have I the honor of addressing?" he asked. "Is it Captain Cargraves of the Galileo?"

"That's right. Who are you?"

"I am Helmut von Hartwick, Lieutenant Colonel, Elite Guard." He pronounced lieutenant "leftenant."

"Okay, Helmut, suppose you start explaining yourself. Just what is the big idea?"

The self-styled colonel laughed. "Really, old man, there isn't much to explain, is there? You seem to have eluded us somehow and placed me at a disadvantage. I can see that."

"You had better see that, but that is not what I mean, and that is not enough." Cargraves hesitated. The Nazi had him somewhat baffled; he did not act at all like a man who has just come out of a daze. Perhaps he had been playing possum -- if so, for how long?

Well, it did not matter, he decided. The Nazi was still his prisoner. "Why did you order my ship bombed?"

"Me? My dear chap, why do you think I ordered it?"

"Because you sound just like the phony English accent we heard over our radio. You called yourself `Captain James Brown.' I don't suppose there is more than one fake Englishman in this crowd of gangsters."

Von Hartwick raise his eyebrows. "`Gangsters' is a harsh term, old boy. Hardly good manners. But you are correct on one point; I was the only one of my colleagues who had enjoyed the questionable advantage of attending a good English school. I'll ask you not to call my accent `phony.' But, even if I did borrow the name `Captain James Brown,' that does not prove that I ordered your ship bombed. That was done under the standing orders of our Leader -- a necessary exigency of war. I was not personally responsible."

"I think you are a liar on both counts. I don't think you ever attended an English school; you probably picked up that fake accent from Lord Haw-Haw, or from listening to the talkies. And your Leader did not order us bombed, because he did not know we were there. You ordered it, just as soon as you could trace a bearing on us, as soon as you found out we were here."

The Nazi spread his. hands, palms down, and looked pained. "Really, you Americans are so ready to jump to conclusions. Do you truly think that I could fuel a rocket, call its crew, and equip it for bombing, all in ten minutes? My only function was to report your location."

"You expected us, then?"

"Naturally. If a stupid radarman had not lost you when you swung into your landing orbit, we would have greeted you much sooner. Surely you don't think that we would have established a military base without preparing to defend it? We plan, we plan for everything. That is why we will win."

Cargraves permitted himself a thin smile. "You don't seem to have planned for this."

The Nazi tossed it off. "In war there are setbacks. One expects them."

"Do you call it `war' to bomb an unarmed, civilian craft without even a warning?"

Hartwick looked pained. "Please, my dear fellow! It ill befits you to split hairs. You seemed to have bombed us without warning. I myself would not be alive this minute had I not had the good fortune to be just removing my suit when you struck. I assure you I had no warning. As for your claim to being a civilian, unarmed craft, I think it very strange that the Galileo was able to blast our base if you carried nothing more deadly than a fly swatter. You Americans amaze me. You are always so ready to condemn others for the very things you do yourselves."

Cargraves was at a loss for words at the blind illogic of the speech. Ross looked disgusted; he seemed about to say something. Cargraves shook his head at him.

"That speech," he announced, "had more lies, half-truths, and twisted statements per square inch than anything you've said yet. But I'll put you straight on one point: the Galileo didn't bomb your base; she's wrecked. But your men were careless. We seized your rocket and turned your own bombs on you-"

"Idioten!"

"They were stupid, weren't they? The Master Race usually is stupid when it comes to a showdown. But you claimed we bombed you without warning. That is not true; you had all the warning you were entitled to and more. You struck the first blow. It's merely your own cocksureness that led you to think we couldn't or wouldn't strike back."

Von Hartwick started to speak. "Shut up!" Cargraves said sharply. "I'm tired of your nonsense. Tell me how you happen to have this American ship. Make it good."

"Oh, that! We bought it."

"Don't be silly."

"I am not being silly. Naturally we did not walk in and place an order for one military space ship, wrapped and delivered. The transaction passed through several hands and eventually our friends delivered to us what we needed."

Cargraves thought rapidly. It was possible; something of the sort had to be true. He remembered vaguely an order for twelve such ships as the Wotan had originally been designed to be, remembered it because the newspapers had hailed the order as a proof of post-war recovery, expansion, and prosperity.

He wondered if all twelve of those rockets were actually operating on the run for which they had supposedly been purchased.

"That is the trouble with you stupid Americans," von Hartwick went on. "You assume that every one shares your silly belief in such rotten things as democracy. But it is not true. We have friends everywhere. Even in Washington, in London, yes, even in Moscow. Our friends are everywhere. That is another reason why we will win."

"Even in New Mexico, maybe?"

Von Hartwick laughed. "That was a droll comedy, my friend. I enjoyed the daily reports. It would not have suited us to frighten you too much, until it began to appear that you might be successful. You were very lucky, my friend, that you took off as soon as you did."

"Don't call me `my friend'," Cargraves said testily. "I'm sick of it."

"Very well, my dear Captain." Cargraves let the remark pass. He was getting worried by the extended absence of Art and Morrie. Was it possible that some other of the Nazis were still around, alive and capable of making trouble?

He was beginning to think about tying up the prisoner here present and going to look for them when the lock sighed open. Morrie and Art stepped out, prodding the other prisoner before them. "He didn't want to come, Uncle," Art informed him. "We had to convince him a little." He chuckled. "I don't think he trusts us."

"Okay. Get your suits off."

The other prisoner seemed completely dumfounded by the sight of von Hartwick. Hastily he unclamped his helmet, threw it back, and said in German, "Herr Oberst -- it was not my fault. I was-"

"Silence!" shouted the Nazi officer, also in German. "Have you told these pig-dogs anything about the operation of this ship?"

"Nein, nein, Herr Oberst -- I swear it!"

"Then play stupid or I'll cut your heart out!"

Cargraves listened to this interesting little exchange with an expressionless face, but it was too much for Art. "Uncle," he demanded, "did you hear that? Did you hear what he said he'd do?"

Von Hartwick looked from nephew to uncle. "So you understand German?" he said quietly. "I was afraid that you might." Ross had let the muzzle of his gun wander away from von Hartwick when the boys came in with their prisoner. Cargraves had long since shoved the pistol he had appropriated into his belt.

Von Hartwick glanced from one to another. Morrie and Art were both armed, one with a Garand, the other with revolver, but they had them trained on the Nazi pilot. Von Hartwick lunged suddenly at Cargraves and snatched the pistol from his belt.

Without appearing to stop to take aim he fired once. Then Cargraves was at him, clawing at his hands.

Von Hartwick brought the pistol down on his head, club fashion, and moved in to grapple him about the waist.

The Nazi pilot clasped his hands to his chest, gave a single bubbly moan, and sank to the floor. No one paid him any attention. After a split second of startled inaction, the three boys were milling around, trying to get in a shot at von Hartwick without hitting Cargraves. Cargraves himself had jerked and gone limp when the barrel of the pistol struck his head. Von Hartwick held the doctor's thirty pounds of moon-weight up with one arm. He shouted, "Silence!"

His order would have had no effect had not the boys seen something else: Von Hartwick was holding the pistol to Cargraves' head. "Careful, gentlemen," he said, speaking very rapidly. "I have no wish to harm your leader and will not do so unless you force me. I am sorry I was forced to strike him; I was forced to do so when he attacked me."

"Watch out!" commanded Morrie. "Art! Ross! Don't try to shoot."

"That is sensible," von Hartwick commended him. "I have no wish to try to shoot it out with you. My only purpose was to dispose of him." He indicated the body of the Nazi pilot.

Morrie glanced at it. "Why?"

"He was a soft and foolish pig. I could not afford to risk his courage. He would have told you what you want to know." He paused, and then said suddenly, "And now -- I am your prisoner again!" The pistol sailed out of his hand and clanged against the floor.

"Get Doc out of my way," Ross snapped. "I can't get a shot in."

"No!" Morrie thundered. "Art, pick up the pistol. Ross, you take care of Doc."

"What are you talking about?" Ross objected. "He's a killer. I'll finish him off."

"No!"

"Why not?"

"Well -- Doc wouldn't like it. That's reason enough. Don't shoot. That's an order, Ross. You take care of Doc. Art, you tie up the mug. Make it good."

"It'll be good!" promised Art.

The Nazi did not resist and Morrie found himself able to give some attention to what Ross was doing. "How bad is it?" he inquired, bending over Cargraves.

"Not too bad, I think. I'll know better when I get some of this blood wiped away."

"You will find dressings and such things," von Hartwick put in casually, as if he were not in the stages of being tied up, "in a kit under the instrument board in the control room."

"Go look for them, Ross," Morrie directed. "I'll keep guard. Not," he said to von Hartwick, "that it will do you any good if he dies. If he does, out you go, outside, without a suit. Shooting's too good for you."

"He won't die. I hit him very carefully."

"You had better hope he doesn't. You won't outlive him more than a couple of minute."

Von Hartwick shrugged. "It is hardly possible to threaten me. We are all dead men. You realize that, don't you?"

Morrie looked at him speculatively. "Finished with him, Art? Sure he's tied up tight?"

"He'll choke himself to death if he tries to wiggle out of that one."

"Good. Now you," he went on to von Hartwick, "you may be a dead man. I wouldn't know. But we're not. We are going to fly this ship back to earth. You start behaving yourself and we might take you with us."

Von Hartwick laughed. "Sorry to disillusion you, dear boy, but none of us is going back to earth. That is why I had to dispose of that precious pilot of mine."

Morrie turned away, suddenly aware that no one had bothered to find out how badly the sergeant-pilot was wounded. He was soon certain; the man was dead, shot through the heart. "I can't see that it matters," he told von Hartwick.. "We've still got you. You'll talk, or I'll cut your ears off and feed them to you."

"What a distressing thought," he was answered, "but it. won't help you. You see, I am unable to tell you anything; I am not a pilot."

Art stared at him. "He's kidding you, Morrie."

"No," von Hartwick denied. "I am not. Try cutting my ears off and you will see. No, my poor boys, we are all going to stay here a long time, until we rot, in fact. Heil dem Führer!"

"Don't touch him, Art," Morrie warned. "Doc wouldn't like it."

Chapter 18 - TOO LITTLE TIME

CARGRAVES WAS WIDE ENOUGH awake to swear by the time Ross swabbed germicide on the cut in his hair line. "Hold still, Doc I-"

"I am holding still. Take it easy."

They brought him up to date as they bandaged him. "The stinker thinks he's put one over on us," Ross finished. "He thinks we can't run this boat without somebody to show us."

"He may be perfectly right," Cargraves admitted. "So far it's got us stumped. We'll see. Throw him in the hold, and we'll have another look. Morrie, you did right not to let him be shot."

"I didn't think you would want him killed until you had squeezed him dry."

Cargraves gave him an odd smile. "That wasn't your only reason, was it?

"Well -- shucks !" Morrie seemed almost embarrassed. "I didn't want to just shoot him down after he dropped the gun. That's a Nazi trick."

Cargraves nodded approvingly. "That's right. That's one of the reasons they think we are soft. But we'll have a little surprise for him." He got up, went over, and stirred von Hartwick with his toe. "Listen to me, you. If possible, I am going to take you back to earth to stand trial... If not, we'll try you here."

Von Hartwick lifted his eyebrows. "For making war on you? How delightfully American!"

"No, not for making war. There isn't any war, and there hasn't been any war. The Third Reich disappeared forever in the spring of 1945 and today there is peace between Germany and the United States, no matter how many pipsqueak gangsters may still be hiding out. No, you phony superman, you are going to be tried for the murder of your accomplice -- that poor dupe lying over there." He turned away. "Chuck him in the hold, boys. Come on, Ross."

Three hours later Cargraves was quite willing to admit that von Hartwick was correct when he said that the operation of the Wotan could not be figured out by a stranger. There were strange controls on the arms of the piloting seats which certainly had to be the flight controls, but no matter what they twisted, turned or moved, nothing happened. And the drive itself was sealed away behind a bulkhead which, from the sound it gave off when pounded, was inches thick.

Cargraves doubted whether he could cut through even with a steel-cutting flame. He was very reluctant to attempt to do so in any case; an effort to solve the mysteries of the ship by such surgery might, as likely as not, result in disabling the ship beyond any hope of repairing it.

There should be an operation manual somewhere. They all searched for it. They opened anything that would open, crawled under anything that could be crawled under, lifted everything that would move. There was no control manual in the ship.

The search disclosed something else. There was no food in the ship. This latter point was becoming important.

"That's enough, sports," he announced when he was certain that further search would be useless. "We'll try their barracks next. We'll find it. Not to mention food. You come with me, Morrie, and pick out some groceries."

"Me too!" Art shouted. "I'll get some pictures. The moon people! Oh, boy!"

Cargraves wished regretfully that he were still young enough for it to be impossible to stay worried. "Well, all right," he agreed, "but where is your camera?"

Art's face fell. "It's in the Dog House," he admitted.

"I guess the pictures will have to wait. But come along; there is more electronic equipment down there than you can run and jump over. Maybe raising earth by radio will turn out to be easy."

"Why don't we all go?" Ross wanted to know. "I found the ruins, but I haven't had a chance to look at them."

"Sorry, Ross; but you've got to stay behind and stand guard over Stinky. He might know more about this ship than he admits. I would hate to come up that staircase and find the ship missing. Stand guard over him. Tell him that if he moves a muscle you'll slug him. And mean it."

"Okay. I hope he does move. How long will you be gone?"

"If we can't find it in two hours we'll come back."

Cargraves searched the officers' room first, as it seemed the most likely place. He did not find it, but he did find that some of the Nazis appeared to have some peculiar and unpleasant tastes in books and pictures. The barrack room he took next. It was as depressing a place as it had been earlier, but he was prepared for it. Art he had assigned to the radio and radar room and Morrie to the other spaces; there seemed to be no reason for any one but himself to have to touch the bloating corpses.

He drew a blank in the barrack room. Coming out, he heard Art's voice in his phones. "Hey, Uncle, look what I've found!"

"What is it?," he said, and Morrie's voice cut in at once.

"Found the manual, Art?"

"No, but look!" They converged in the central hail. 'It' was a Graflex camera, complete with flash gun. "There is a complete darkroom off the radio room. I found it there. How about it, Uncle? Pictures?"

"Well, all right. Morrie, you go along -- it may be your only chance to see the ruins. Thirty minutes. Don't go very far, don't bust your necks, don't take any chances, and be back on time, or I'll be after you with a Flit gun." He watched them go regretfully, more than a little tempted to play hookey himself. If he had not been consumed with the urgency of his present responsibilities -- But he was. He forced himself to resume the dreary search.

It was all to no good. If there was an instruction manual in existence he had to admit that he did not know how to find it. But he was still searching when the boys returned.

He glanced at his watch. "Forty minutes," he said. "That's more prompt than I thought you would be; I expected to have to go look for you. What did you find? Get any good pictures?"

"Pictures? Did we get pictures! Wait till you see!"

"I never saw anything like it, Doc," Morrie stated impressively. "The place is a city. It goes down and down. Great big arched halls, hundreds of feet across, corridors running every which way, rooms, balconies -- I can't begin to describe it."

"Then don't try. Write up full notes on what you saw as soon as we get back."

"Doc, this thing's tremendous!"

"I realize it. But it's so big I'm not even going to try to comprehend it, not yet. We've got our work cut out for us just to get out of here alive. Art, what did you find in the radio room? Anything you can use to raise earth?"

"Well, Uncle, that's hard to say, but the stuff doesn't look promising."

"Are you sure? We know that they were in communication -- at least according to our nasty-nice boy friend."

Art shook his head. "I thought you said they received from earth. I found their equipment for that but I couldn't test it out because I couldn't get the earphones inside my suit. But I don't see how they could send to earth."

"Why not? They need two-way transmission."

"Maybe they need it but they can't afford to use it. Look, Uncle, they can beam towards the moon from their base on earth -- that's all right; nobody gets it but them. But if the Nazis on this end try to beam back, they can't select some exact spot on earth. At that distance the beam would fan out until it covered too much territory -- it would be like a broadcast."

"Oh!" said Cargraves, "I begin to see. Chalk up one for yourself, Art; I should have thought of that. No matter what sort of a code they used, if people started picking up radio from the direction of the moon, the cat would be out of the bag."

"That's what I thought, anyhow."

"I think you're dead right. I'm disappointed; I was beginning to pin my hopes on getting a message across." He shrugged. "Well, one thing at a time. Morrie, have you picked out the supplies you want to take up?"

"All lined up." They followed him into the kitchen space and found he had stacked three piles of tin cans in quantities to make three good-sized loads. As they were filling their arms Morrie said. "How many men were there here, Doc?"

"I counted forty-seven bodies not counting the one von Hartwick shot. Why?"

"Well, I noticed something funny. I've sort of acquired an eye for estimating rations since I've been running the mess. There isn't food enough here to keep that many men running two weeks. Does that mean what I think it means?"

"Hunnh . . . Look, Morrie, I think you've hit on something important. That's why von Hartwick is so cocky. It isn't just whistling in the dark. He actually expects to be rescued."

"What do you mean, Uncle?" Art wanted to know.

"He is expecting a supply ship, almost any time."

Art whistled. "He thinks we'll be caught by surprise!"

"And we would have been. But we won't be now." He put down his load of groceries. "Come along."

"Where?"

"I just remembered something." In digging through the officers' quarters he had come across many documents, books, manuals, records, and papers of many sorts. He had scanned them very briefly, making certain only that no one of them contained anything which would give a clue to the operation of the Wotan.

One of them was the day book or journal of the task-force commander. Among other things it had given the location of the Nazi base on earth; Cargraves had marked it as something he wanted to study later. Now he decided to do it at once.

It was long. It covered a period of nearly three months with Teutonic thoroughness. He read rapidly, with Art reading over his shoulder. Morrie stood around impatiently and finally pointed out that the time was approaching when they had promised Ross to return.

"Go ahead," Cargraves said absently. "Take a load of food. Get a meal started." He read on.

There was a roster of the party. He found von Hartwick listed as executive officer. He noted that as an indication that the Nazi was lying when he claimed not to understand the piloting of the Wotan. Not proof, but a strong indication. But falsehood was all that he expected of the creature.

He was beginning to find what he was looking for. Supply trips had been made each month. If the schedule was maintained- and the state of supplies certainly indicated it -the next ship should be along in six or seven days.

But the most important fact he was not sure of until he had finished the journal: there was more than one big rocket in their possession; the Wotan was not about to leave to get supplies; she would not leave, if the schedule had been followed, until the supply ship landed. Then she would be taken back empty and the other ship would be unloaded. By such an arrangement the party on the moon was never left without a means of escape -- or, at least, that was the reason he read into the account.

There were just two and only two Nazi moon rockets -- the Wotan and the Thor. The Thor was due in a week, as nearly as he could make out, which meant that she would leave her home base in about five days. The transit times for each trip had been logged in; forty-six hours plus for the earthmoon jump was the way the record read.

Fast time! he thought.

If the Thor ever took off, it might be too late for good intentions, too late for warnings. The Nazis were certainly aware that the techniques of space flight were now an open secret; there was reference after reference to the Galileo including a last entry noting that she had been located. They would certainly strike at the earliest possible moment.

He could see in his mind's eye the row upon row of A-bomb guided-missiles in a near-by cavern. He could see them striking the defenseless cities of earth.

No time to rig a powerful transmitter. No time for anything but drastic measures.

Not time enough, he was afraid!

Chapter 19 - SQUEEZE PLAY

"SOUP'S ON!" MORRIE GREETED him as he came hurrying into the Wotan. Cargraves started shucking off his suit as he answered.

"No time for that -- no, gimme a couple of those sandwiches."

Morrie complied.

Ross inquired, "What's the rush?"

"Got to see the prisoner." He turned away, then stopped. "No -- wait. Come here, guys." He motioned them into a football huddle. "I'm going to try something." He whispered urgently for a few minutes. "Now play up. I'll leave the door open."

He went into the hold and prodded von Hartwick with his boot. "Wake up, you." He took a bite of sandwich.

"I am awake." Von Hartwick turned his head with some difficulty as he was trussed up with his ankles pulled up toward his wrists, which were tied behind him. "Ah, food," he said cheerfully. "I was wondering when you would remember the amenities in dealing with prisoners."

"It's not for you," Cargraves informed him. "The other sandwich is for me. You won't need one."

Von Hartwick looked interest but not frightened. "So?"

"Nope," said Cargraves, wiping his mouth with his sleeve, "you won't. I had intended to take you to earth for trial, but I find I won't have time for that. I'll try you myself -- now."

Von Hartwick shrugged under his bonds. "You are able to do as you like. I've no doubt you intend to kill me, but don't dignify it with the name of a trial. Call it a lynching. Be honest with yourself. In the first place my conduct has been entirely correct. True, I was forced to shoot one of my own men, but it was a necessary emergency military measure-"

"Murder," put in Cargraves.

"-in defense of the security of the Reich," von Hartwick went on unhurriedly, "and no concern of yours in any case. It was in my own ship, entirely out of jurisdiction of any silly laws of the corrupt democracies. As for the bombing of your ship, I have explained to you-"

"Shut up," Cargraves said. "You'll get a chance to say a few words later. Court's in session. Just to get it straight in your head, this entire planet is subject to the laws of the United Nations. We took formal possession and have established a permanent base. Therefore-"

"Too late, Judge Lynch. The New Reich claimed this planet three months ago."

"I told you to keep quiet. You're in contempt of court. One more peep and we'll think up a way to keep you quiet. Therefore, as the master of a vessel registered under the laws of the United Nations it is my duty to see that those laws are obeyed. Your so-called claim doesn't hold water. There isn't any New Reich, so it can't claim anything. You and your fellow thugs aren't a nation; you are merely gangsters. We aren't bound to recognize any fictions you have thought up and we don't. Morrie! Bring me another sandwich."

"Coming up, Captain!"

"Now as master of the Galileo," Cargraves went on, "I have to act for the government when I'm off by myself, as I am now. Since I haven't time to take you back to earth for trial, I'm trying you now. Two charges: murder in the first degree and piracy."

"Piracy? My dear fellow!"

"Piracy. You attacked a vessel of UN register. On your own admission you took part in it, whether you gave the orders or not. All members of a pirate crew are equally guilty, and it's a capital offense. Murder in the first degree is another one. Thanks for the sandwich, Morrie. Where did you find fresh bread?"

"It was canned."

"Clever, these Nazis. There was some doubt in my mind as to whether to charge you with first or second degree. But you had to grab the gun away from me first, before you could shoot your pal. That's premeditation. So you're charged -- piracy and first-degree murder. How do you plead? Guilty or not guilty?"

Von Hartwick hesitated a bit before replying. "Since I do not admit the jurisdiction of this so-called court, I refuse to enter a plea. Even if I concede- which I don't -that you honestly believe this to be United Nations territory, you still are not a court."

"A ship's master has very broad powers in an emergency. Look it up some time. Get a ouija board and look it up."

Von Hartwick raised his eyebrows. "From the nature of that supposedly humorous remark I can see that I am convicted before the trial starts."

Cargraves chewed reflectively. "In a manner of speaking, yes," he conceded. "I'd like to give you a jury, but we don't really need one. You see, there aren't any facts to be established because there aren't any facts in doubt. We were all there. The only question is: What do those facts constitute under the law? This is your chance to speak your piece if you intend to."

"Why should I bother? You mongrel nations prate of justice and equality under law. But you don't practice it. You stand there with your hands dripping with the blood of my comrades, whom you killed in cold blood, without giving them a chance -- yet you speak to me of piracy and murder!"

"We discussed that once before," Cargraves answered carefully. "There is a world of difference, under the laws of free men, between an unprovoked attack and striking back in your own defense. If a footpad assaults you in a dark alley, you don't have to get a court order to fight back. Next. Got any more phony excuses?"

The Nazi was silent. "Go ahead," Cargraves persisted. "You could still plead not guilty by reason of insanity and you might even convince me. I always have thought a man with a MasterRace complex was crazy as a hoot owl. You might convince me that you were crazy in a legal sense as well."

For the first time, von Hartwick's air of aloof superiority seemed to crack. His face got red and he appeared about to explode. Finally he regained a measure of control and said, "Let's have no more of this farce. Do whatever it is you intend to do and quit playing with me."

"I assure you that I am not playing. Have you anything more to say in your own defense?"

"I find you guilty on both charges. Have you anything to say before sentence is passed?"

The accused did not deign to answer.

"Very well. I sentence you to death."

Art took a quick, gasping breath and backed out of the doorway where he had been huddled, wide-eyed, with Ross and Morrie. There was no other sound.

"Have you anything to say before the sentence is executed?"

Von Hartwick turned his face away. "I am not sorry. At least I will have a quick and merciful death. The best you four swine can hope for is a slow and lingering death."

"Oh," said Cargraves, "I intended to explain to you about that. We aren't going to die."

"You think not?" There was undisguised triumph in von Hartwick's voice.

"I'm sure of it. You see, the Thor arrives in six or seven days-"

"What? How did you find that out?" The Nazi seemed stunned for a moment, then muttered, "Not that it matters to the four of you -- but I see why you decided to kill me. You were afraid I would escape you."

"Not at all," returned Cargraves. "You don't understand. If it were practical to do so, I would take you back to earth to let you appeal your case before a higher court. Not for your sake- you're guilty as sin! -but for my own. However, I do not find it possible. We will be very busy until the Thor gets here and I have no means of making sure that you are securely imprisoned except by standing guard over you every minute. I can't do that; we haven't time enough. But I don't intend to let you escape punishment. I don't have a cell to put you in. I had intended to drain the fuel from your little rocket and put you in there, without a suit. That way, you would have been safe to leave alone while we worked. But, now that the Thor is coming, we will need the little rocket."

Von Hartwick smiled grimly. "Think you can run away, eh? That ship will never take you home. Or haven't you found that out yet?"

"You still don't understand. Keep quiet and let me explain. We are going to take several of the bombs such as you used on the Galileo and blow up the room containing your guided missiles. It's a shame, for I see it's one of the rooms built by the original inhabitants. Then we are going to blow up the Wotan."

"The Wotan? Why?" Von Hartwick was suddenly very alert.

"To make sure it never flies back to earth. We can't operate it; I must make sure that no one else does. For then we intend to blow up the Thor."

"The Thor? You can't blow up the Thor!"

"Oh, yes, we can -- the same way you blew up the Galileo. But I can't chance the possibility of survivors grabbing the Wotan -- so she must go first. And that has a strong bearing on why you must die at once. After we blast the Wotan we are going back to our own base- you didn't know about that, did you ? -but it is only one room. No place for prisoners. I had intended, as I said, to keep you in the jeep rocket, but the need to blast the Thor changes that. We'll have to keep a pilot in it all times, until the Thor lands. And that leaves no place for you. Sorry," he finished, and smiled.

"Anything wrong with it?" he added.

Von Hartwick was beginning to show the strain. "You may succeed-"

"Oh, we will!"

"But if you do, you are still dead men. A quick death for me, but a long and slow and lingering death for you. If you blast the Thor, you lose your own last chance. Think of it," he went on, "starving or suffocating or dying with cold. I'll make a pact with you. Turn me loose now and I'll give you my parole. When the Thor arrives, I'll intercede with the captain on your behalf. I'll-"

Cargraves cut him off with a gesture. "The word of a Nazi! You wouldn't intercede for your own grandmother! You haven't gotten it through your thick head yet that we hold all the aces. After we kill you and take care of your friends, we shall sit tidy and cozy and warm, with plenty of food and air, until we are picked up. We won't even be lonesome; we were just finishing our earth sender when you picked up one of our local signals. We'll-"

"You lie!" shouted von Hartwick. "No one will pick you up. Yours was the only ship. I know, I know. We had full reports."

"Was the only ship." Cargraves smiled sweetly. "But under a quaint old democratic law which you wouldn't understand, the plans and drawings and notes for my ship were being studied eagerly the minute we took off. We'll be able to take our pick of ships before long. I hate to disappoint you but we are going to live. I am afraid I must disappoint you on another score. Your death will not be as clean and pleasant as you had hoped."

"What do you mean?"

"I mean I am not going to get this ship all bloodied up again by shooting you. I'm going to-"

"Wait. A dying man is entitled to a last request. Leave me in the Wotan. Let me die with my ship!"

Cargraves laughed full in his face. "Lovely, von Nitwit. Perfectly lovely. And have you take off in her. Not likely!"

"I am no pilot -- believe me!"

"Oh, I do believe. I would not think of doubting a dying man's last words. But I won't risk a mistake. Ross!"

"Yes, sir!"

"Take this thing and throw it out on the face of the moon."

"Dee-lighted!"

"And that's all." Cargraves had been squatting down; he got up and brushed the crumbs from his hands. "I shan't even have you untied so that you can die in a comfortable position. You are too handy at grabbing guns. You'll just have to flop around as you are. It probably won't take long," he went on conversationally. "They say it's about like drowning. In seven or eight minutes you won't know a thing. Unless your heart ruptures through your lungs and finishes you a little sooner."

"Swine!"

"Captain Swine, to you."

Ross was busily zipping his suit into place. "Okay, Doc?"

"Go ahead. No, on second thought," he added, "I'll do this job myself. I might be criticized for letting a boy touch it. My suit, Morrie."

He whistled as they helped him dress. He was still whistling as he picked up von Hartwick like a satchel, by the line which bound his ankles to his wrists, and walked briskly to the lock. He chucked his bundle in ahead of him, stepped in, waved to the boys, said, "Back soon!" and clamped the door.

As the air started whistling out von Hartwick began to gasp. Cargraves smiled at him, and said, "Drafty, isn't it?" He shouted to make himself heard through the helmet.

Von Hartwick's mouth worked.

"Did you say something?"

The Nazi opened his mouth again, gasped, choked, and sprayed foam out on his chest. "You'll have to talk louder," Cargraves shouted. "I can't hear you." The air whistled away.

"I'm a pilot!"

"What?"

"I'm a pilot! I'll teach you-"

Cargraves reached up and closed the exhaust valve. "I can't hear with all that racket. What were you saying?"

"I'm a pilot!" gasped von Hartwick.

"Yes? Well, what about it?"

"Air. Give me air-"

"Shucks," said Cargraves. "You've got plenty of air. I can still hear you talking. Must be four or five pounds in here."

"Give me air. I'll tell you how it works."

"You'll tell me first," Cargraves stated. He reached for the exhaust valve again.

"Wait! There is a little plug, in the back of the instrument-" He paused and gasped heavily. "The instrument panel. Starboard side. It's a safety switch. You wouldn't notice it; it looks just like a mounting stud. You push it in." He stopped to wheeze again.

"I think you'd better come show me," Cargraves said judicially. "If you aren't lying again, you've given me an out to take you back to earth for your appeal. Not that you deserve it."

He reached over and yanked on the spill valve; the air rushed back into the lock.

Ten minutes later Cargraves was seated in the left-hand pilot's chair, with his safety belt in place. Von Hartwick was in the right-hand chair. Cargraves held a pistol in his left hand and cradled it over the crook of his right arm, so that it would remain pointed at von Hartwick, even under drive. He called out, "Morrie! Everybody ready?"

"Ready, Captain," came faintly from the rear of the ship. The boys had been forced to use the acceleration bunks in the passenger compartment. They resented it, especially Morrie, but there was no help for it. The control room could carry just two people under acceleration.

"Okay! Here we go!" He turned again to von Hartwick. "Twist her tail, Swine -- Colonel Swine, I mean."

Von Hartwick glared at him. "I don't believe," he said slowly, "that you ever intended to go through with it."

Cargraves grinned and rubbed the chair arm. "Want to go back and see?" he inquired.

Von Hartwick swiveled his head around to the front. "Achtung!" he shouted. "Prepare for acceleration! Ready?" Without waiting for a reply he blasted off.

The ship had power to spare with the light load; Cargraves had him hold it at two g's for five minutes and then go free. By that time, having accelerated at nearly 64 feet per second for each second of the five minutes, even with due allowance for loss of one-sixth g to the pull of the moon at the start, they were making approximately 12,000 miles per hour.

They would have breezed past earth in twenty hours had it not been necessary to slow down in order to land. Cargraves planned to do it in a little less than twenty-four hours.

Once in free fall, the boys came forward and Cargraves required of von Hartwick a detailed lecture on the operation of the craft. When he was satisfied, he said, "Okay. Ross, you and Art take the prisoner aft and lash him to one of the bunks. Then strap yourselves down. Morrie and I are going to practice."

Von Hartwick started to protest. Cargraves cut him short. "Stow it! You haven't been granted any pardon; we've simply been picking your brains. You are a common criminal, going back to appeal your case."

They felt out the ship for the next several hours, with time out only to eat. The result of the practice on the course and speed were null; careful check was kept by instrument to see that a drive in one direction was offset by the same amount of drive in the opposite direction. Then they slept.

They needed sleep. By the time they got it they had been awake and active at an unrelenting pace for one full earth-day.

When they woke Cargraves called Art. "Think you could raise earth on this Nazi gear, kid?"

"I'll try. What do you want me to say and who do you want to talk to?"

Cargraves considered. Earth shone gibbous, more than half full, ahead. The Nazi base was not in line-of-sight. That suited him. "Better make it Melbourne, Australia," he decided, "and tell them this-" Art nodded. A few minutes later, having gotten the hang of the strange set, he was saying endlessly: "Space Ship City of Detroit calling UN police patrol, Melbourne; Space Ship City of Detroit calling UN police patrol, Melbourne-"

He had been doing this for twenty-five minutes when a querulous voice answered: "Pax, Melbourne; Pax, Melbourne -- calling Space Ship City of Detroit. Come in, City of Detroit."

Art pushed up one phone and looked helpless. "You better talk to `em, Uncle."

"Go ahead. You tell them what I told you. It's your show."

Art shut up and did so.

Morrie let her down carefully and eased her over into a tight circular orbit just outside the atmosphere. Their speed was still nearly five miles per second; they circled the globe in ninety minutes. From that orbit he killed her speed slowly and dipped down cautiously until the stub wings of the City of Detroit, Wotan, began to bite the tenuous stratosphere in a blood-chilling thin scream.

Out into space again they went and then back in, each time deeper and each time slower. On the second of the braking orbits they heard the broadcast report of the UN patrol raid on the Nazi nest and of the capture of the Thor. On the next lap two chains bid competitively for an exclusive broadcast from space. On the third there was dickering for television rights at the field. On the fourth they received official instructions to attempt to land at the District-of-Columbia Rocket Port.

"Want me to take her down?" Morrie yelled above the scream of the skin friction.

"Go right ahead," Cargraves assured him. "I'm an old I want a chauffeur."

Morrie nodded and began his approach. They were somewhere over Kansas.

The ground of the rocket port felt strange and solid under the ship. Eleven days-only eleven days? -away from the earth's massive pull had given them new habits. Cargraves found that he staggered a little in trying to walk. He opened the inner door of the lock and waited for the boys to get beside him. Latching the outer door and broke the inner door open, he stepped to the seal.

As he swung it open, the face, an endless mass of guns flickered like heat "Oh, my gosh!" he said. 'Want to take the bows?' a solid wall of sound beat him in of eager eyes looked up at him. Flash lightning. He turned back to Ross. "This is awful! Say -- don't you guys want to take the bows?"

Sixth Column

Robert Heinlein

A NATIONAL SURVEY . . .

He gradually built up a picture of a people being systematically and thoroughly enslaved, a picture of a nation as helpless as a man completely paralyzed, its defenses destroyed, its communications entirely in the hands of the invaders.

Everywhere he found boiling resentment, a fierce willingness to fight against the tyranny, but it was undirected, uncoordinated, and, in any modern sense, unarmed. Sporadic rebellion was as futile as the scurrying of ants whose hill has been violated. PanAsians could be killed, yes, and there were men willing to shoot on sight, even in the face of the certainty of their own deaths. But their hands were bound by the greater certainty of brutal multiple retaliation against their own kind. As with the Jews in Germany before the final blackout in Europe, bravery was not enough, for one act of violence against the tyrants would be paid for by other men, women, and children at unspeakable compound interest.

SIXTH COLUMN

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For John S. Arvvine

CHAPTER ONE

"What the hell goes on here?" Whitey Ardmore demanded.

They ignored his remark as they had ignored his arrival. The man at the television receiver said, "Shut up. We're listening," and turned up the volume. The announcer's voice blared out: "-- Washington destroyed completely before the government could escape. With Manhattan in ruins, that leaves no --"

There was a click as the receiver was turned off. "That's that," said the man near it. "The United States is washed up." Then he added, "Anybody got a cigarette?"

Getting no answer, he pushed his way out of the small circle gathered around the receiver and felt through the pockets of a dozen figures collapsed by a table. It was not too easy, as rigor mortis had set in, but he finally located a half-empty pack, from which he removed a cigarette and lighted it.

"Somebody answer me!" commanded Ardmore. "What's happened here?"

The man with the cigarette looked him over for the first time. "Who are you?"

"Ardmore, major, intelligence. Who are you?"

"Calhoun, colonel in research."

"Very well, Colonel -- I have an urgent message for your commanding officer. Will you please have someone tell him that I am here and see to it that I am taken to him?" He spoke with poorly controlled exasperation.

Calhoun shook his head. "Can't do it. He's dead." He seemed to derive some sort of twisted pleasure from the announcement.

"Huh?"

"That's right -- dead. They're all dead, all the rest. You see before you, my dear Major, all that are left of the personnel of the Citadel -- perhaps I should say of the emergency research laboratory, department of defense, this being in the nature of an official report." He smiled with half his face, while his eye took in the handful of living men in the room.

Ardmore took a moment to comprehend the statement, then inquired, "The PanAsians?"

"No. No, not the PanAsians. So far as I know, the enemy does not suspect the existence of the Citadel. No, we did it ourselves -- an experiment that worked too well. Dr. Ledbetter was engaged in research in an attempt to discover a means of --"

"Never mind that, Colonel. Whom does command revert to? I've got to carry out my orders. "

"Command? Military command? Good Lord, man, we haven't had time to think about that yet. Wait a moment."

His eye roved around the room, counting noses. "Hm-m-m -- I'm senior to everyone here-and they are all here. I suppose that makes me commanding officer."

"No line officers present?"

"No. All special commissions. That leaves me it. Go ahead with your report."

Ardmore looked about at the faces of the half a dozen men in the room. They were following the conversation with apathetic interest. Ardmore worried to himself before replying over how to phrase the message. The situation had changed; perhaps he should not deliver it at all.

"I was ordered," he said, picking his words, "to inform your general that he was released from superior command. He was to operate independently and prosecute the war against the invader according to his own judgment. You see," he went on, "when I left Washington twelve hours ago we knew they had us. This concentration of brain power in the Citadel was about the only remaining possible military asset."

Calhoun nodded. "I see. A defunct government sends orders to a defunct laboratory. Zero plus zero equals zero. It's all very funny if one only knew when to laugh."

"Colonel!"

"Yes?"

"They are your orders now. What do you propose to do with them?"

"Do with them? What the hell is there to do? Six men against four hundred million. I suppose," he added "to make everything nice and tidy for the military mind I should write out a discharge from the United States army for everybody left and kiss 'em good-by. I don't know where that leaves me -- harakiri, perhaps. Maybe you don't get it. This is all the United States there is left. And it's left because the PanAsians haven't found it."

Ardmore wet his lips. "Apparently I did not clearly convey the order. The order was to take charge, and prosecute the war!"

"With what?"

He measured Calhoun before answering. "It is not actually your responsibility. Under the changed situation, in accordance with the articles of war, as senior line officer present I am assuming command of this detachment of the United States army!"

It hung in the balance for twenty heartbeats. At last Calhoun stood up and attempted to square his stooped shoulders. "You are perfectly correct, sir. What are your orders?"

"What are your orders?" he asked himself. Think fast, Ardmore, you big Junk, you've shot off your face -- now where are you? Calhoun was right when he asked "With what?" -- yet he could not stand still and see the remnant of military organization fall to pieces.

You've got to tell 'em something, and it's got to be good; at least good enough to hold 'em until you think of something better. Stall, brother, stall! "I think we had best examine the new situation here, first. Colonel, will you oblige me by having the remaining personnel gather around -- say around that big table? That will be convenient."

"Certainly, sir." The others, having heard the order, moved toward the table. "Graham! And you, what's your name? Thomas, isn't it? You two

remove Captain MacAllister's body to some other place. Put him in the corridor for now."

The commotion of getting one of the ubiquitous corpses out of the way and getting the living settled around a table broke the air of unreality and brought things into focus. Ardmore felt more self-confidence when he turned again to Calhoun. "You had better introduce me to those here present. I want to know what they do and something about them, as well as their names."

It was a corporal's guard, a forlorn remnant. He had expected to find, hidden here safely and secretly away under an unmarked spot in the Rocky Mountains, the most magnificent aggregation of research brains ever gathered together for one purpose. Even in the face of complete military disaster to the regular forces of the United States, there remained a reasonable outside chance that two hundred-odd keen scientific brains, secreted in a hide-away whose very existence was unsuspected by the enemy and equipped with every modern facility for research, might conceivably perfect and operate some weapon that would eventually drive out the PanAsians.

For that purpose he had been sent to tell the commanding general that he was on his own, no longer responsible to higher authority. But what could half a dozen men do in any case?

For it was a scant half a dozen. There was Dr. Lowell Calhoun, mathematician, jerked out of university life by the exigencies of war and called a colonel. There was Dr. Randall Brooks, biologist and bio-chemist, with a special commission of major. Ardmore liked his looks; he was quiet and mild, but gave the impression of an untroubled strength of character superior to that of a more extroverted man-he would do, and his advice would be useful.

Ardmore mentally dubbed Robert Wilkie a "punk kid." He was young and looked younger, having an overgrown collie-dog clumsiness, and hair that would not stay in place. His field, it developed, was radiation, and the attendant branches of physics too esoteric for a layman to understand. Ardmore had not the slightest way of judging whether or not he was any good in his specialty. He might be a genius, but his appearance did not encourage the idea.

No other scientist remained. There were three enlisted men: Herman Scheer, technical sergeant. He had been a mechanic, a die maker, a tool maker. When the army picked him up he had been making precision instruments for the laboratories of the Edison Trust. His brown, square hands and lean fingers backed up his account of himself. His lined, set

face and heavy jaw muscles made Ardmore judge him to be a good man to have at his back in a tight place. He would do.

There remained Edward Graham, private first-class, specialist rating officers' cook. Total war had turned him from his profession as an artist and interior decorator to his one other talent, cooking. Ardmore was unable to see how he could fit into the job, except, of course, that somebody had to cook.

The last man was Graham's helper, Jeff Thomas, private -- background: none. "He wandered in here one day," explained Calhoun. "We had to enlist him and keep him here to protect the secret of the place."

Acquainting Ardmore with the individuals of his "command" had used up several minutes during which he had thought furiously with half his mind about what he should say next. He knew what he had to accomplish, some sort of a shot in the arm that would restore the morale of this badly demoralized group, some of the old hokum that men live by. He believed in hokum, being a publicity man by trade and an army man only by necessity. That brought to mind another worry -- should he let them know that he was no more a professional than they, even though he happened to hold a line commission? No, that would not be very bright; they needed just now to regard him with the faith that the layman usually holds for the professional.

Thomas was the end of the list: Calhoun had stopped talking. Here's your chance, son, better not muff it!

Then he had it fortunately it would take only a short build-up. "It will be necessary for us to continue our task

assignment independently for an indefinite period. I want to remind you that we derive our obligations not from

our superior officers who were killed in Washington, but from the people of the United States, through their

Constitution. That Constitution is neither captured nor destroyed -- it cannot, for it is not a piece of paper, but the

joint contract of the American people. Only the American people can release us from it."

Was he right? He was no lawyer, and he didn't know -- but he did know that they needed to believe it. He turned to Calhoun. "Colonel Calhoun, will you now swear me in as commanding officer of this detachment of the

United States army?" Then he added, as an apparent afterthought, "I think it would be well for us all to renew our oaths at the same time. "

It was a chanted chorus that echoed through the nearly empty room. " 'I do solemnly swear -- to carry out the duties of my office -- and to uphold and defend the Constitution of the United States -- against all of its enemies, domestic and foreign!'

"So help me God."

"'So help me God!'"

Ardmore was surprised to discover that the show he had staged brought tears to his own cheeks. Then he noticed them in Calhoun's eyes. Maybe there was more to it than he had thought.

"Colonel Calhoun, you, of course, become director of research. You are second in command, but I will carry out the duties of executive officer myself in order to leave you free to pursue your scientific inquiries. Major Brooks and Captain Wilkie are assigned to you. Scheer!"

"Yes, sir!"

"You work for Colonel Calhoun. If he does not need all of your service, I will assign additional duties later. Graham!"

"Yes, sir."

"You will continue your present duties. You are also mess sergeant, mess officer, supply officer -- in fact, you are the whole commissary department. Bring me a report later today estimating the number of rations available and the condition of perishables. Thomas works for you, but is subject to call by any member of the scientific staff any time they want him. That may delay meals, but it can't be helped."

"Yes, sir."

"You and I and Thomas will perform all duties among us that do not directly apply to research, and will assist the scientists in any way and at any time that they need us. That specifically includes myself, Colonel," he emphasized, turning to Calhoun, "if another pair of untrained hands is useful at any point, you are directed to call on me."

"Very well, Major."

"Graham, you and Thomas will have to clear out the bodies around the

place before they get too high -- say by tomorrow night. Put them in an unused room and hermetically seal it. Scheer will show you how." He glanced at his wrist. "Two o'clock. When did you have lunch?"

"There . . . uh . . . was none today."

"Very well. Graham, serve coffee and sandwiches here in twenty minutes."

"Very good, sir. Come along, Jeff."

"Coming. "

As they left, Ardmore turned back to Calhoun. "In the meantime, Colonel, let's go to the laboratory where the catastrophe originated. I still want to find out what happened here!"

The other two scientists and Scheer hesitated; he picked them up with a nod, and the little party filed out.

"You say nothing in particular happened, no explosion, no gas -- yet they died?" They were standing around Dr. Ledbetter's last set-up. The martyred scientist's body still lay where it had fallen, a helpless, disorganized heap. Ardmore took his eyes from it and tried to make out the meaning of the set-up apparatus. It looked simple, but called no familiar picture to mind.

"No, nothing but a little blue flame that persisted momentarily. Ledbetter had just closed this switch." Calhoun pointed to it without touching it. It was open now, a self-opening, spring-loaded type. "I felt suddenly dizzy. When my head cleared, I saw that Ledbetter had fallen and went to him, but there was nothing that I could do for him. He was dead -- without a mark on him."

"It knocked me out," offered Wilkie. "I might not have made it if Scheer hadn't given me artificial respiration. "

"You were here?" Ardmore asked.

"No, I was in the radiation laboratory over at the other end of the plant. It killed my chief."

Ardmore frowned and pulled a chair out from the wall. As he started to sit down there was a scurrying sound, a small gray shape flashed across the floor and out the open door. A rat, he thought, and dismissed the matter. But Dr. Brooks stared at it in amazement, and ran out the door himself, calling out behind him: "Wait a minute -- right back!"

"I wonder what's gotten into him?" Ardmore inquired of no one in particular. The thought flashed through his mind that the strain of events had finally been too much for the mild little biologist.

They had less than a minute to wait in order to find out. Brooks returned as precipitately as he had left. The exertion caused him to pant and interfered with articulation. "Major Ardmore! Dr. Calhoun! Gentlemen!" He paused and caught his breath. "My white mice are alive!"

"Huh? What of it?"

"Don't you see? It's an important datum, perhaps a crucially important datum. None of the animals in the biological laboratory was hurt! Don't you see?"

"Yes, but -- Oh! Perhaps I do -- the rat was alive and your mice weren't killed, yet men were killed all around them."

"Of course! Of course!" Brooks beamed at Ardmore.

"Hm-m-m. An action that kills a couple of hundred men through rock walls and metal, with no fuss and no excitement, yet passes by mice and the like. I've never before heard of anything that would kill a man but not a mouse." He nodded toward the apparatus. "It looks as if we had big medicine in that little gadget, Calhoun."

"So it does," Calhoun agreed, "if we can learn to control it."

"Any doubt in your mind?"

"Well -- we don't know why it killed, and we don't know why it spared six of us, and we don't know why it doesn't harm animals."

"So -- Well, that seems to be the problem." He stared again at the simple-appearing enigma. "Doctor, I don't like to interfere with your work right from scratch, but I would rather you did not close that switch without notifying me in advance." His gaze dropped to Ledbetter's still figure and hurriedly shifted.

Over the coffee and sandwiches he pried further into the situation. "Then no one really knows what Ledbetter was up to?"

"You could put it that way," agreed Calhoun. "I helped him with the mathematical considerations, but he was a genius and somewhat impatient with lesser minds. If Einstein were alive, they might have talked as

equals, but with the rest of us he discussed only the portions he wanted assistance on, or details he wished to turn over to assistants."

"Then you don't know what he was getting at?"

"Well, yes and no. Are you familiar with general field theory?"

"Criminy, no!"

"Well! -- that makes it rather hard to talk, Major Ardmore. Dr. Ledbetter was investigating the theoretically possible additional spectra --"

"Additional spectra?"

"Yes. You see, most of the progress in physics in the last century and a half has been in dealing with the electromagnetic spectrum, light, radio, X-ray --"

"Yes, yes, I know that, but how about these additional spectra?"

"That's what I am trying to tell you," answered Calhoun with a slight note of annoyance. "General field theory predicts the possibility of at least three more entire spectra. You see, there are three types of energy fields known to exist in space: electric, magnetic, and gravitic or gravitational. Light, X-rays, all such radiations, are part of the electromagnetic spectrum. Theory indicates the possibility of analogous spectra between magnetic and gravitic, between electric and gravitic, and finally, a three-phase type between electric-magnetio-gravitic fields. Each type would constitute a complete new spectrum, a total of three new fields of learning.

"If there are such, they would presumably have properties quite as remarkable as the electromagnetic spectrum and quite different. But we have no instruments with which to detect such spectra, nor do we even know that such spectra exist."

"You know," commented Ardmore, frowning a little, "I'm just a layman in these matters and don't wish to set my opinion up against yours, but this seems like a search for the little man who wasn't there. I had supposed that this laboratory was engaged in the single purpose of finding a military weapon to combat the vortex beams and A-bomb rockets of the PanAsians. I am a bit surprised to find the man whom you seem to regard as having been your ace researcher engaged in an attempt to discover things that he was not sure existed and whose properties were totally unknown. It doesn't seem reasonable. "

Calhoun did not answer; he simply looked supercilious and smiled irritatingly. Ardmore felt put in the wrong and was conscious of a warm flush spreading up toward his face. "Yes, yes," he said hastily, "I know I'm wrong -- whatever it was that Ledbetter found, it killed a couple of hundred men. Therefore it is a potential military weapon -- but wasn't he just mugging around in the dark?"

"Not entirely," Calhoun replied, with a words-of-one-syllable air. "The very theoretical considerations that predict additional spectra allow of some reasonable probability as to the general nature of their properties. I know that

Ledbetter had originally been engaged in a search for a means of setting up tractor and pressor beams -- that would be in the magneto-gravitic spectrum -- but the last couple of weeks he appeared to be in a condition of intense excitement and radically changed the direction of his experimentation. He was close-mouthed; I got no more than a few hints from the transformations and developments which he had me perform for him. However" -- Calhoun drew a bulky loose-leaf notebook from an inner pocket "he kept complete notes of his experiments. We should be able to follow his work and perhaps infer his hypotheses."

Young Wilkie, who was seated beside Calhoun, bent toward him. "Where did you find these, doctor?" he asked excitedly.

"On a bench in his laboratory. If you had looked you would have seen them."

Wilkie ignored the thrust; he was already eating up the symbols set down in the opened book. "But that is a radiation formula --"

"Of course it is -- d'you think I'm a fool?"

"But it's all wrong!"

"It may be from your standpoint; you may be sure that it was not to Dr. Ledbetter."

They branched off into argument that was totally meaningless to Ardmore; after some minutes he took advantage of a pause to say, "Gentlemen! Gentlemen! just a moment. I can see that I am simply keeping you from your work; I've learned all that I can just now. As I understand it, your immediate task is to catch up with Dr. Ledbetter and to discover what it is that his apparatus does -- without killing yourselves in the process. Is that right?"

"I would say that is a fair statement," Calhoun agreed cautiously.

"Very well, then -- carry on, and keep me advised at your convenience." He got up; the others followed his example. "Oh just one more thing."

"Yes?"

"I happened to think of something else. I don't know whether it is important or not, but it came to mind because of the importance that Dr. Brooks attached to the matter of the rats and mice." He ticked points off on his fingers.

"Many men were killed; Dr. Wilkie was knocked out and very nearly died; Dr. Calhoun experienced only a momentary discomfort; the rest of those who lived apparently didn't suffer any effects of any sort weren't aware that anything had happened except that their companions mysteriously died. Now, isn't that data of some sort?"

He awaited a reply anxiously, being subconsciously afraid that the scientists would consider his remarks silly, or obvious.

Calhoun started to reply, but Dr. Brooks cut in ahead of him. "Of course, it is! Now why didn't I think of that? Dear me, I must be confused today. That establishes a gradient, an ordered relationship in the effect of the unknown action." He stopped and thought, then went on almost at once. "I really must have your permission, Major, to examine the cadavers of our late colleagues, then by examining for differences between them and those alive, especially those hard hit by the unknown action --" He broke off short and eyed Wilkie speculatively.

"No, you don't!" protested Wilkie. "You won't make a guinea pig out of me. Not while I know it!" Ardmore was unable to tell whether the man's apprehension was real or facetious. He cut it short.

"The details will have to be up to you gentlemen. But remember -- no chances to your lives without notifying me."

"You hear that, Brooksie?" Wilkie persisted.

Ardmore went to bed that night from sheer sense of duty, not because he felt ready to sleep. His immediate job was accomplished; he had picked up the pieces of the organization known as the Citadel and had thrown it together into some sort of a going concern -- whether or not it was going any place he was too tired to judge, but at least it was going. He had given them a pattern to live by, and, by assuming leadership and

responsibility, had enabled them to unload their basic worries on him and thereby acquire some measure of emotional security. That should keep them from going crazy in a world which had gone crazy.

What would it be like, this crazy new world -- a world in which the superiority of western culture was not a casually accepted 'Of course,' a world in which the Stars and Stripes did not fly, along with the pigeons, over every public building?

Which brought to mind a new worry: if he was to maintain any pretense of military purpose, he would have to have some sort of a service of information.

He had been too busy in getting them all back to work to think about it, but he would have to think about it tomorrow, he told himself, then continued to worry about it.

An intelligence service was as important as a new secret weapon -- more important; no matter how fantastic and powerful a weapon might be developed from Dr. Ledbetter's researches, it would be no help until they knew just where and how to use it against the enemy's weak points. A ridiculously inadequate military intelligence had been the prime characteristic of the United States as a power all through its history. The most powerful nation the globe had ever seen -- but it had stumbled into wars like a blind giant. Take this present mess: the atom bombs of PanAsia weren't any more powerful than our own but we had been caught flat-footed and had never gotten to use a one.

We had had how many stock-piled? A thousand, he had heard. Ardmore didn't know, but certainly the PanAsians had known, just how many, just where they were. Military intelligence had won the war for them, not secret weapons. Not that the secret weapons of the PanAsians were anything to sneer at particularly when it was all too evident that they really were "secret." Our own so-called intelligence services had fallen down on the job.

O. K., Whitey Ardmore, it's all yours now! You can build any sort of an intelligence service your heart desires -- using three near-sighted laboratory scientists, an elderly master sergeant, two kitchen privates, and the bright boy in person. So you are good at criticizing -- "If you're so smart, why ain't you rich?"

He got up, wished passionately for just one dose of barbiturate to give him a night's sleep, drank a glass of hot water instead, and went back to bed.

Suppose they did dig up a really powerful and new weapon? That gadget of Ledbetter's certainly looked good, if they could learn to handle it but what then? One man couldn't run a battle cruiser -- he couldn't even get it off the ground -- and six men couldn't whip an empire, not even with seven-league boots and a death ray. What was that old crack of Archimedes? "If I had a lever long enough and a fulcrum on which to rest it, I could move the Earth."

How about the fulcrum? No weapon was a weapon without an army to use it.

He dropped into a light sleep and dreamed that he was flopping around on the end of the longest lever conceivable, a useless lever, for it rested on nothing. Part of the time he was Archimedes, and part of the time Archimedes stood beside him, jeering and leering at him with a strongly Asiatic countenance.

CHAPTER TWO

Ardmore was too busy for the next couple of weeks to worry much about anything but the job at hand. The underlying postulate of their existence pattern -- that they were, in fact, a military organization which must some day render an accounting to civil authority -- required that he should comply with, or closely simulate compliance with, the regulations concerning paperwork, reports, records, pay accounts, inventories, and the like. In his heart he felt it to be waste motion, senseless, yet as a publicity man, he was enough of a jackleg psychologist to realize intuitively that man is a creature that lives by symbols. At the moment these symbols of government were all important.

So he dug into the regulation manual of the deceased paymaster and carefully closed out the accounts of the dead, noting in each case the amounts due each man's dependents "in lawful money of the United States," even while wondering despondently if that neat phrase would ever mean anything again. But he did it, and he assigned minor administrative jobs to each of the others in order that they might realize indirectly that the customs were being maintained.

It was too much clerical work for one man to keep up. He discovered that Jeff Thomas, the cook's helper, could use a typewriter with facility and had a fair head for figures. He impressed him into the job. It threw more work on Graham, who complained, but that was good for him, he thought -- a dog needs fleas. He wanted every member of his command to go to bed tired every night.

Thomas served another purpose. Ardmore's highstrung disposition required someone to talk to. Thomas turned out to be intelligent and passively

sympathetic, and he found himself speaking with more and more freedom to the man. It was not in character for the commanding officer to confide in a private, but he felt instinctively that Thomas would not abuse his trust -- and he needed nervous release.

Calhoun brought up the matter which forced Ardmore to drop his preoccupation with routine and turn his attention to more difficult matters. Calhoun had called to ask permission to activate Ledbetter's apparatus, as modified to suit their current hypotheses, but he added another and embarrassing question.

"Major Ardmore, can you give me some idea as to how you intend to make use of the 'Ledbetter effect'?"

Ardmore did not know; he answered with another question. "Are you near enough to results to make that question urgent? If so, can you give me some idea of what you have discovered so fax?"

"That will be difficult," Calhoun replied in an academic and faintly patronizing manner, "since I am constrained not to speak in the mathematical language which, of necessity, is the only way of expressing such things --"

"Now, Colonel, please," Ardmore broke in, irritated more than he would admit to himself and inhibited by the presence of Private Thomas, "you can kill a man with it or you can't and you can control whom you kill or you can't."

"That's an oversimplification," Calhoun argued. "However, we think that the new set-up will be directional in its effect. Dr. Brook's investigations caused him to hypothecate an asymmetrical relationship between the action and organic life it is applied to, such that an inherent characteristic of the life form determines the effect of the action as well as the inherent characteristics of the action itself. That is to say, the effect is a function of the total factors of the process, including the life form involved, as well as the original action --"

"Easy, easy, Colonel. What does that mean as a weapon?"

"It means that you could turn it on two men and decide which one it is to kill -- with proper controls," Calhoun answered testily. "At least, we think so. Wilkie has volunteered to act as a control on it, with mice as the object."

Ardmore granted permission for the experiment to take place, subject to

precautions and restrictions.

When Calhoun had gone, his mind returned at once to the problem of what he was going to do with the weapon -- if any. And that required data that he did not have. Damn it! -- he had to have a service of information; he had to know what was going on outside.

The scientists were out, of course. And Scheer, for the scientific staff needed his skill. Graham? No, Graham was a good cook, but nervous and irritable, emotionally not stable, the very last man to pick for a piece of dangerous espionage. It left only himself. He was trained for such things; he would have to go.

"But you can't do that, sir," Thomas reminded him.

"Huh? What's that?" He had been unconsciously expressing his thoughts aloud, a habit he had gotten into when he was alone, or with Thomas only. The man's manner encouraged using him for a sounding board.

"You can't leave your command, sir. Not only is it against regulations, but, if you will let me express an opinion, everything you have done so far will fall to pieces."

"Why should it? I'll be back in a few days."

"Well, sir, maybe it would hold together for a few days -- though I'm not sure of that. Who would be in charge in your absence?"

"Colonel Calhoun -- of course."

"Of course." Thomas expressed by raised eyebrows and ready agreement an opinion which military courtesy did not permit him to say aloud. Ardmore knew that Thomas was right. Outside of his specialty, Calhoun was a bad-tempered, supercilious, conceited old fool, in Ardmore's opinion. Ardmore had had to intercede already to patch up trouble which Calhoun's arrogance had caused. Scheer worked for Calhoun only because Ardmore had talked with him, calmed him down, and worked on his strong sense of duty.

The situation reminded him of the time when he had worked as press agent for a famous and successful female evangelist. He had signed on as director of public relations, but he had spent two-thirds of his time straightening out the messes caused by the vicious temper of the holy harridan.

"But you have no way of being sure that you will be back in a few days," Thomas persisted. "This is a very dangerous assignment; if you get

killed on it, there is no one here who can take over your job."

"Oh, now, that's not true, Thomas. No man is irreplaceable."

"This is no time for false modesty, sir. That may be true in general, but you know that it is not true in this case. There is a strictly limited number to draw from, and you are the only one from whom all of us will take direction. In particular, you are the only one from whom Dr. Calhoun will take direction. That is because you know how to handle him. None of the others would be able to, nor would he be able to handle them."

"That's a pretty strong statement, Thomas."

Thomas said nothing. At length Ardmore went on.

"All right, all right suppose you are right. I've got to have military information. How am I going to get it if I don't go myself?"

Thomas was a little slow in replying. Finally, he said quietly, "I could try it."

"You?" Ardmore looked him over and wondered why he had not considered Thomas. Perhaps because there was nothing about the man to suggest his potential ability to handle such a job -- that, combined with the fact that he was a private, and one did not assign privates to jobs requiring dangerous independent action. Yet perhaps

"Have you ever done any work of that sort?"

"No, but my experience may be specially adapted in a way to such work."

"Oh, yes! Scheer told me something about you. You were a tramp, weren't you, before the army caught up with you?"

"Not a tramp," Thomas corrected gently, "a hobo."

"Sorry -- what's the distinction?"

"A tramp is a bum, a parasite, a man that won't work. A hobo is an itinerant laborer who prefers casual freedom to security. He works for his living, but he won't be tied down to one environment."

"Oh, I see. Hm-m-m -- yes, and I begin to see why you might be especially well adapted to an intelligence job. I suppose it must require a good deal of adaptability and resourcefulness to stay alive as

a hobo. But wait a minute, Thomas -- I guess I've more or less taken you for granted; I need to know a great deal more about you, if you are to be entrusted with this job. You know, you don't act like a hobo."

"How does a hobo act?"

"Eh? Oh, well, skip it. But tell me something about your background. How did you happen to take up hoboing?"

Ardmore realized that he had, for the first time, pierced the man's natural reticence. Thomas fumbled for an answer, finally replying, "I suppose it was that I did not like being a lawyer."

"What?"

"Yes. You see, it was like this: I went from the law into social administration. In the course of my work I got an idea that I wanted to write a thesis on migratory labor and decided that in order to understand the subject I would have to experience the conditions under which such people lived."

"I see. And it was while you were doing your laboratory work, as it were, that the army snagged you. "

"Oh, no," Thomas corrected him. "I've been on the road more than ten years. I never went back. You see, I found I liked being a hobo."

The details were rapidly arranged. Thomas wanted nothing in the way of equipment but the clothes he had been wearing when he had stumbled into the Citadel. Ardmore had suggested a bedding roll, but Thomas would have none of it. "It would not be in character," he explained. "I was never a bindlestiff. Bindlestiffs are dirty, and a self-respecting hobo doesn't associate with them. All I want is a good meal in my belly and a small amount of money on my person."

Ardmore's instructions to him were very general. "Almost anything you hear or see will be data for me," he told him. "Cover as much territory as you ran, and try to be back here within a week. If you are gone much longer than that, I will assume that you are dead or imprisoned, and will have to try some other plan.

"Keep your eyes open for some means by which we can establish a permanent service of information. I can't suggest what it is you are to look for in that connection, but keep it in mind. Now as to details: anything and everything about the PanAsians, how they are armed, how they police occupied territory, where they have set up headquarters,

particularly their continental headquarters, and, if you can make any sort of estimate, how many of them there are and how they're distributed. That would keep you busy for a year, at least; just the same, be back in a week. "

Ardmore showed Thomas how to operate one of the outer doors of the Citadel; two bars of "Yankee Doodle," breaking off short, and a door appeared in what seemed to be a wall of country rock -- simple, and yet foreign to the Asiatic mind. Then he shook hands with him and wished him good luck.

Ardmore found that Thomas had still one mare surprise for him; when he shook hands, he did so with the grip of the Dekes, Ardmore's own fraternity! Ardmore stood staring at the closed portal, busy arranging his preconceptions.

When he turned around, Calhoun was behind him. He felt somewhat as if he had been caught stealing jam. "Oh, hello, Doctor," he said quickly.

"How do you do, Major," Calhoun replied with deliberation. "May I inquire as to what is going on?"

"Certainly. I've sent Lieutenant Thomas out to reconnoiter. "

"Lieutenant?"

"Brevet lieutenant. I was forced to use him for work fax beyond his rank; I found it expedient to assign him the rank and pay of his new duties."

Calhoun pursued that point no further, but answered with another, in the same faintly critical tone of voice. "I suppose you realize that it jeopardizes all of us to send anyone outside? I am a little surprised that you should act in such a matter without consulting with others."

"I am sorry you feel that way about it, Colonel," Ardmore replied, in a conscious attempt to conciliate the older man, "but I am required to make the final decision in any case, and it is of prime importance to our task that nothing be permitted to distract your attention from your all-important job of research. Have you completed your experiment?" he went on quickly.

"Yes."

"Well?"

"The results were positive. The mice. died."

"How about Wilkie?"

"Oh, Wilkie was unhurt, naturally. That is in accordance with my predictions."

Jefferson Thomas. Bachelor of Arts magna cum laude, University of California, Bachelor of Law, Harvard Law School, professional hobo, private and cook's helper, and now a brevet lieutenant, intelligence, United States army, spent his first night outside shivering on pine needles where dark had overtaken him. Early the next morning he located a ranchhouse.

They fed him, but they were anxious for him to move along. "You never can tell when one of those heathens is going to come snooping around," apologized his host, "and I can't afford to be arrested for harboring refugees. I got the wife and kids to think about." But he followed Thomas out to the road, still talking, his natural garrulity prevailing over his caution. He seemed to take a grim pleasure in bewailing the catastrophe.

"God knows what I'm raising those kids up to. Some nights it seems like the only reasonable thing to do is to put them all out of their sorrow. But Jessie -- that's my wife -- says it's a scandal and a sin to talk that way, that the Lord will take care of things all in His own good time. Maybe so -- but I know it's no favor to a child to raise it up to be bossed around and lorded over by those monkeys." He spat. "It's not American."

"What's this about penalties for harboring refugees?"

The rancher stared at him. "Where've you been, friend?"

"Up in the hills. I haven't laid eyes on one of the so-and-so's yet."

"You will. But then you haven't got a number, have you? You'd better get one. No, that won't do you any good; you'd just land in a labor camp if you tried to get one."

"Number?

"Registration number. Like this." He pulled a glassine-covered card out of his pocket and displayed it. It had axed to it a poor but recognizable picture of the rancher, his fingerprints, and pertinent data as to his occupation, marital status, address, etcetera. There was

a long, hyphenated number running across the top. The rancher indicated it with a work-stained finger. "That first part is my number. It means I have permission from the emperor to stay alive and enjoy the air and sunshine," he added bitterly. "The second part is my serial classification. It tells where I live and what I do. If I want to cross the county line, I have to have that changed. If I want to go to any other town than the one I'm assigned to do my marketing in, I've got to get a day's special permit. Now I ask you -- is that any way for a man to live?"

"Not for me," agreed Thomas. "Well, I guess I had better be on my way before I get you in trouble. Thanks for the breakfast."

"Don't mention it. It's a pleasure to do a favor for a fellow American these days."

He started off down the road at once, not wishing the kindly rancher to see how thoroughly he had been moved by the picture of his degradation. The implications of that registration card had shaken his free soul in a fashion that the simple, intellectual knowledge of the defeat of the United States had been unable to do.

He moved slowly for the first two or three days, avoiding the towns until he had gathered sufficient knowledge of the enforced new customs to be able to conduct himself without arousing suspicion. It was urgently desirable that he be able to enter at least one big city in order to snoop around, read the bulletin boards, and find a chance to talk with persons whose occupations permitted them to travel. From a standpoint of personal safety he was quite willing to chance it without an identification card but he remembered clearly a repeated injunction of Ardmore's "Your paramount duty is to returns Don't go making a hero of yourself. Don't take any chance you can avoid and come back!"

Cities would have to wait.

Thomas skirted around towns at night, avoiding patrols as he used to avoid railroad cops. The second night out he found the first of his objectives, a hobos' jungle. It was just where he had expected to find it, from his recollection of previous trips through the territory. Nevertheless, he almost missed it, for the inevitable fire was concealed by a jury-rigged oil-can stove, and shielded from chance observation.

He slipped into the circle and sat down without comment, as custom required, and waited for them to look him over.

Presently a voice said plaintively: "It's Gentleman Jeff. Cripes, Jeff,

you gave me a turn. I thought you was a flatface. Whatcha been doin' with yourself, Jeff?"

"Oh, one thing and another. On the dodge."

"Who isn't these days?" the voice returned. "Everywhere you try, those slant-eyes --" He broke into a string of attributions concerning the progenitors and personal habits of the PanAsians about which he could not possibly have had positive knowledge.

"Stow it, Moe," another voice commanded. "Tell us the news, Jeff."

"Sorry," Thomas refused affably, "but I've been up in the hills, kinda keeping out of the army and doing a little fishing."

"You should have stayed there. Things are bad everywhere. Nobody dares give an unregistered man a day's work and it takes everything you've got just to keep out of the labor camps. It makes the big Red hunt look like a picnic."

"Tell me about the labor camps," Thomas suggested. "I might get hungry enough, to try one for a while." .

"You don't know. Nobody could get that hungry." The voice paused, as if the owner were turning the unpleasant subject over in his mind. "Did you know the Seattle Kid?"

"Seem to recall. Little squint-eyed guy, handy with his hands?"

"That's him. Well, he was in one, maybe a week, and got out. Couldn't tell us how; his mind was gone. I saw him the night he died. His body was a mass of sores, blood poisoning, I guess." He paused. then added reflectively: "The smell was pretty bad."

Thomas wanted to drop the subject but he needed to know more. "Who gets sent to these camps?"

"Any man that isn't already working at an approved job. Boys from fourteen on up. All that was left alive of the army after we folded up. Anybody that's caught without a registration card."

"That ain't the half of it," added Moe. "You should see what they do with unassigned women. Why, a woman was telling me just the other day -- a nice old gel; gimme a handout. She was telling me about her niece used to be a schoolteacher, and the flatfaces don't want any American schools or teachers. When they registered her they --"

"Shut up, Moe. You talk too much."

It was disconnected, fragmentary, the more so as he was rarely able to ask direct questions concerning the things he really wanted to know. Nevertheless he gradually built up a picture of a people being systematically and thoroughly enslaved, a picture of a nation as helpless as a man completely paralyzed, its defenses destroyed, its communications entirely in the hands of the invaders.

Everywhere he found boiling resentment, a fierce willingness to fight against the tyranny, but it was undirected, uncoordinated, and, in any modern sense, unarmed. Sporadic rebellion was as futile as the scurrying of ants whose hill has been violated. PanAsians could be killed, yes, and there were men willing to shoot on sight, even in the face of the certainty of their own deaths. But their hands were bound by the greater certainty of brutal multiple retaliation against their own kind. As with the Jews in Germany before the final blackout in Europe, bravery was not enough, for one act of violence against the tyrants would be paid for by other men, women, and children at unspeakable compound interest.

Even more distressing than the miseries he saw and heard about were the reports of the planned elimination of the American culture as such. The schools were closed. No word might be printed in English. There was a suggestion of a time, one generation away, when English would be an illiterate language, used orally alone by helpless peons who would never be able to revolt for sheer lack of a means of communication on any wide scale.

It was impossible to form any rational estimate of the numbers of Asiatics now in the United States.

Transports, it was rumored, arrived daily on the West coast, bringing thousands of administrative civil servants, most of whom were veterans of the amalgamation of India. Whether or not they could be considered as augmenting the armed forces who had conquered and now policed the country it was difficult to say, but it was evident that they would replace the white minor officials who now assisted in civil administration at pistol point. When those white officials were "eliminated" it would be still more difficult to organize resistance.

Thomas found the means to enter the cities in one of the hobo jungles.

Finny -- surname unknown -- was not, properly speaking, a knight of the road, but one who had sought shelter among them and who paid his way by practicing his talent. He was an old anarchist comrade who had served

his concept of freedom by engraving really quite excellent Federal Reserve notes without complying with the formality of obtaining permission from the treasury department. Some said that his name had been Phineas; others connected his moniker with his preference for manufacturing five-dollar bills -- "big enough to be useful; not big enough to arouse suspicion."

He made a registration card for Thomas at the request of one of the 'bos. He talked while Thomas watched him work. "It's only the registration number that we really have to worry about, son. Practically none of the Asiatics you will run into can read English, so it really doesn't matter a lot we say about you. 'Mary had a little lamb --' would probably do.

Same for the photograph. To them, all white men look alike." He picked up a handful of assorted photographs from his kit and peered at them nearsightedly through thick spectacles. "Here -- pick out one of these that looks not unlike you and we will use it. Now for the number --"

The old man's hands were shaky, almost palsied, yet they steadied down to a deft sureness as he transferred India ink to cardboard in amazing simulation of machine printing. And this he did without proper equipment, without precision tools, under primitive conditions. Thomas understood why the old artist's masterpieces caused headaches for bank clerks. "There!" he announced. "I've given you a serial number which states that you were registered shortly after the change, and a classification number which permits you to travel. It also says that you are physically unfit for manual labor, and are permitted to peddle or beg. It's the same thing to their minds."

"Thanks, awfully," said Thomas. "Now. . . uh . . . what do I owe you for this?"

Finny's reaction made him feel as if he had uttered some indecency. "Don't mention payment, my son! Money is wrong -- it's the means whereby man enslaves his brother."

"I beg your pardon, sir," Thomas apologized sincerely. "Nevertheless, I wish there were some way for me to do something for you."

"That is another matter. Help your brother when you can, and help will come to you when you need it. "

Thomas found the old anarchist's philosophy confused, confusing, and impractical, but he spent considerable time drawing him out, as he seemed to know more about the PanAsians than anyone else he had met.

Finny seemed unafraid of them and completely confident of his own ability to cope with them when necessary. Of all the persons Thomas had met since the change, Finny seemed the least disturbed by it in fact, disturbed not at all, and completely lacking in any emotion of hate or bitterness. This was hard for him to understand at first in a person as obviously warm-hearted as Finny, but he came to realize that, since. the anarchist believed that all government was wrong and that all men were to him in fact brothers, the difference to him was one of degree only. Looking at the PanAsians through Finny's eyes there was nothing to hate; they were simply more misguided souls whose excesses were deplorable.

Thomas did not see it from such Olympian detachment. The PanAsians were murdering and oppressing a once-free people. A good PanAsian was a dead PanAsian, he told himself, until the last one was driven back across the Pacific. If Asia was overpopulated, let them limit their birth rate.

Nevertheless, Finny's detachment and freedom from animus enabled Thomas more nearly to appreciate the nature of the problem. "Don't make the mistake of thinking of the PanAsians as bad -- they're not, but they are different. Behind their arrogance is a racial inferiority complex, a mass paranoia, that makes it necessary for them to prove to themselves by proving to us that a yellow man is just as good as a white man, and a damned sight better. Remember that, son, they want the outward signs of respect more than they want anything else in the world."

"But why should they have an inferiority complex about us? We've been completely out of touch with them for more than two generations -- ever since the Nonintercourse Act."

"Do you think racial memory is that short-lived? The seeds of this are way back in the nineteenth century. Do you recall that two high Japanese officials had to commit honorable suicide to wipe out a slight that was done Commodore Perry when he opened up Japan? Now those two deaths are being paid for by the deaths of thousands of American officials."

"But the PanAsians aren't Japanese."

"No, and they are not Chinese. They are a mixed race, strong, proud, and prolific. From the American standpoint they have the vices of both and the virtues.. of neither. But from my standpoint they are simply human beings, who have been duped into the old fallacy of the State as a super-entity. Ich habe einen Kameraden.' Once you understand the nature of --" He went off into a long dissertation, a mixture of Rousseau, Rocker, Thoreau, and others. Thomas found it inspirational, but unconvincing.

But the discussion with Finny was of real use to Thomas in comprehending what they were up against. The Nonintercourse Act had kept the American people from knowing anything important about their enemy. Thomas wrinkled his brow, trying to recall what he knew about the history of it.

At the time it had been passed, the Act had been no more than a de jure recognition of a de facto condition. The sovietizing of Asia had excluded westerners, particularly Americans, from Asia more effectively than could any Act of Congress. The obscure reasons that had led the Congress of that period to think that the United States gained in dignity by passing a law confirming what the commissars had already done to us baled Thomas; it smacked of Sergeant Dogberry's policy toward thieves. He supposed that it had simply seemed cheaper to wish Red Asia out of existence than to fight a war.

The policy behind the Act had certainly seemed to justify itself for better than half a century; there had been no war. The proponents of the measure had maintained that China was a big bite even for Soviet Russia to digest and that the United States need fear no war while the digesting was taking place. They had been correct as far as they went but as a result of the Nonintercourse Act we had our backs turned when China digested Russia . . . leaving America to face a system even stranger to western ways of thinking than had been the Soviet system it displaced.

On the strength of the forged registration card and Finny's coaching as to the etiquette of being a serf, Thomas ventured into a medium-sized city. The cleverness of Finny's work was put to test almost immediately.

He had stopped at a street corner to read a posted notice. It was a general order to all Americans to be present at a television receiver at eight each evening in order to note any instructions that their rulers might have for them. It was not news; the order had been in effect for some days and he had heard of it. He was about to turn away when he felt a sharp, stinging blow across his shoulder blades. He whirled around and found himself facing a PanAsian wearing the green uniform of a civil administrator and carrying a swagger cane.

"Keep out of the way, boy!" He spoke in English, but in a light, singing tone which lacked the customary American accentuation.

Thomas jumped into the gutter -- "They like to look down, not up" -- and clasped his hands together in the form required. He ducked his head and replied, "The master speaks; the servant obeys."

"That's better," acknowledged the Asiatic, apparently somewhat

mollified. "Your ticket."

The man's accent was not bad, but Thomas did not comprehend immediately, possibly because the emotional impact of his experience in the role of slave was all out of proportion to what he had expected. To say that he raged inwardly is meaninglessly inadequate.

The swagger cane cut across his face. "Your ticket!"

Thomas produced his registration card. The time the Oriental spent in examining it gave Thomas an opportunity to pull himself together to some extent. At the moment he did not care greatly whether the card passed muster or not; if it came to trouble, he would take this one apart with his bare hands.

But it passed. The Asiatic grudgingly handed it back and strutted away, unaware that death had brushed his elbow.

It turned out that there was little to be picked up in town that he had not already acquired secondhand in the hobo jungles. He had a chance to estimate for himself the proportion of rulers to ruled, and saw for himself that the schools were closed and the newspapers had vanished. He noted with interest that church services were still held, although any other gathering together of white men in assembly was strictly forbidden.

But it was the dead, wooden faces of the people, the quiet children, that got under his skin and made him decide to sleep in the jungles rather than in town.

Thomas ran across an old friend at one of the hobo hideouts. Frank Roosevelt Mitsui was as American as Will Rogers, and much more American than that English aristocrat, George Washington. His grandfather had brought his grandmother, half Chinese and half wahini, from Honolulu to Los Angeles, where he opened a nursery and raised flowers, plants, and little yellow children, children that knew neither Chinese nor Japanese, nor cared.

Frank's father met his mother, Thelma Wang, part Chinese but mostly Caucasian, at the International Club at the University of Southern California. He took her to the Imperial Valley and installed her on a nice ranch with a nice mortgage. By the time Frank was raised, so was the mortgage.

Jet Thomas had cropped lettuce and honeydew melon for Frank Mitsui three seasons and knew him as a good boss. He had become almost intimate with his employer because of his liking for the swarm of brown kids that were

Frank's most important crop. But the sight of a flat, yellow face in a hobo jungle made Thomas' hackles rise and almost interfered with his recognizing his old acquaintance.

It was an awkward meeting. Well as he knew Frank, Thomas was in no mood to trust an Oriental. It was Frank's eyes that convinced him; they held a tortured look that was even more intense than that found in the eyes of white men, a look that did not lessen even while he smiled and shook hands.

"Well, Frank," Jeff improvised inanely, "who'd expect to find you here? I should think you'd find it easy to get along with the new regime."

Frank Mitsui looked still more unhappy and seemed to be fumbling for words. One of the other hobos cut in. "Don't be a fool, Jeff. Don't you know what they've done to people like Frank?"

"No, I don't."

"Well, you're on the dodge. If they catch you, it's the labor camp. So is Frank. But if they catch him, it's curtains -- right now. They'll shoot him on sight --."

"So? What did you do, Frank?"

Mitsui shook his head miserably.

"He didn't do anything," the other continued. "The empire has no use for American Asiatics. They're liquidating them."

It was quite simple. The Pacific coast Japanese, Chinese, and the like did not fit into the pattern of serfs and overlords -- particularly the half-breeds. They were a danger to the stability of the pattern. With cold logic they were being hunted down and killed.

Thomas listened to Frank's story. "When I got home they were dead -- all of them. My little Shirley, Junior, Jimmy, the baby -- and Alice." He put his face in his hands and wept. Alice was his wife. Thomas remembered her as a brown, stocky woman in overalls and straw hat, who talked very little but smiled a lot.

"At first I thought I would kill myself," Mitsui went on when he had sufficient control of himself, "then I knew better. I hid in an irrigation ditch for two days, and then I got away over the mountains. Then some whites almost killed me before I could convince them I was on their side."

Thomas could understand how that would happen, and could think of nothing to say. Frank was damned two ways; there was no hope for him. "What do you intend to do now, Frank?"

He saw a sudden return of the will to live in the man's face. "That is why I will not let myself die! Ten for each one" -- he counted them off on his brown fingers -- "ten of those devils for each one of my babies -- and twenty for Alice. Then maybe ten more for myself, and I can die."

"Hm-m-m. Any luck?"

"Thirteen, so far. It is slow, for I have to be very sure, so that they won't kill me before I finish."

Thomas pondered it in his mind, trying to fit this new knowledge into his own purpose. Such fixed determination should be useful, if directed. But it was some hours later before he approached Mitsui again.

"How would you," he asked gently, "like to raise your quota from ten to a thousand each -- two thousand for Alice?"

CHAPTER THREE

The exterior alarms brought Ardmore to the portal long before Thomas whistled the tune that activated the door. Ardmore watched the door by televisor from the guard room, his thumb resting on a control, ready to burn out of existence any unexpected visitor. When he saw Thomas enter his thumb relaxed, but at the sight of his companion it tightened again. A PanAsian! He almost blasted them in sheer reflex before he checked himself. It was possible, barely possible, that Thomas had brought a prisoner to question..

"Major! Major Ardmore! It's Thomas."

"Stand where you are. Both of you."

"It's all right, Major. He's an American. I vouch for him."

"Maybe." The voice that reached Thomas over the announcing phone was still grimly suspicious. "Just the same -- peel off all of your clothes, both of you." They did so, Thomas biting his lip in humiliation, Mitsui trembling in agitation. He did not understand it and he felt trapped. "Now turn around slowly and let me look you over," the voice commanded.

Having satisfied himself that they were unarmed, Ardmore told them to

stand still and wait, then called Graham on the intercommunication circuit. "Graham!"

"Yes, sir."

"Report to me at once in the guard room."

"But, Major, I can't. Dinner will be --"

"Never mind dinner! Move!"

"Yes, sir!"

Ardmore pointed out the situation to him in the screen. "You go down there and handcuff both of them from behind. Secure the Asiatic first. Make him back up to you, and watch yourself. If he tries to jump you, I may have to wing you, too."

"I don't like this, Major," Graham protested. "Thomas is all right. He wouldn't be up to any hanky-panky."

"Sure, man, 1 know he's all right, too. But he may be drugged and under control. This set-up could be a Trojan Horse gag. Now get down and do as you are told. "

While Graham was gingerly carrying out his unwelcome assignment and making himself, in fact, eligible for a

Congressional Medal which he would never receive, for his artist's imagination perceived too clearly the potential danger and forced him to call up courage for the task -- Ardmore phoned Brooks.

"Doctor, can you drop what you are doing?"

"Why, perhaps I can. Yes, I may say so. What is it you wish?"

"Then come to my office. Thomas is back. I want to know whether or not he is under the influence of drugs."

"But I am not a medical man --"

"I know that, but you are the nearest thing we've got to one."

"Very well, sir."

Dr. Brooks examined Thomas' pupils, tried his knee jerks, and checked

his pulse and respiration. "I should say that he was perfectly normal, though exhausted and laboring under excitement. Naturally, this is not a positive diagnosis. If I had more time --"

"It will do for now. Thomas, I trust you won't hold it against me if we leave you locked up until we have examined your Asiatic pal."

"Certainly not, Major," Thomas told him with a wry grin, "since you're going to, anyhow."

Frank Mitsui's flesh quivered and sweat dripped from his face when Brooks stuck the hypodermic into him, but he did not draw away. Presently he relaxed under the influence of the drug that releases inhibitions, and strips from the speech centers the protection of cortical censorship. His face became peaceful.

But it was not peaceful a few minutes later when they began to question him, nor was there peace in any of their faces. This was truth, too raw and too brutal for any man to stand. Deep lines carved themselves from nose to jaw in Ardmore's face as he listened to the little man's pitiful story. No matter what line they started him on, he always came back to the scene of his dead children, his broken household. Finally Ardmore put a stop to it.

"Give him the antidote, doe. I can't stand any more of this. I've found out all I need to know."

Ardmore shook hands with him solemnly after he had returned to full awareness. "We are glad to have you with us, Mr. Mitsui. And we'll put you to some work that will give you a chance to get some of your own back. Right now I want Dr. Brooks to give you a soporific that will let you get about sixteen hours' sleep; then we can think about swearing you in and what kind of work you can be most useful doing."

"I don't need any sleep, Mister . . . Major."

"Just the same, you are going to get some. And so is Thomas, as soon as he has reported. In fact --" He broke off and studied the apparently impassive face. "In fact, I want you to take a sleeping pill every night. Those are orders. You'll draw them from me and take them in my presence every night before you go to bed." There are certain bonus advantages to military absolutism. Ardmore could not tolerate the idea of the little yellow man lying awake and staring at the ceiling.

Brooks and Graham would quite plainly have liked to stay and hear Thomas' report, but Ardmore refused to notice the evident fact and

dismissed them. He wished first to evaluate the data himself.

"Well, Lieutenant, I'm damn glad you're back."

"I'm glad to be back. Did you say 'lieutenant'? I assume that my rank reverts."

"Why should it? As a matter of fact, I am trying to figure out a plausible reason for commissioning Graham and Scheer. It would simplify things around here to eliminate social differences. But that is a side issue. Let's hear what you've done. I suppose you've come back with all our problems solved and tied up with string?"

"Not likely." Thomas grinned and relaxed.

"I didn't expect it. But seriously, between ourselves, I've got to pull something out of the hat, and it's got to be good. The scientific staff is beginning to crowd me, particularly Colonel Calhoun. There's no damn sense in their making miracles in the laboratory unless I can dope out some way to apply those miracles in strategy and tactics."

"Have they really gone so far?"

"You'd be surprised. They've taken that so-called 'Ledbetter effect' and shaken it the way a terrier shakes a rat. They can do anything with it but peel the potatoes and put out the cat."

"Really?"

"Really. "

"What sort of things can they do?"

"Well --" Ardmore took a deep breath. "Honestly, I don't know where to begin. Wilkie has tried to keep me posted with simplified explanations, but, between ourselves, I didn't understand more than every other word. One way of putting it is to say that they've discovered atomic control -- oh, I don't mean atom-splitting, or artificial radioactivity. Look -- we speak of space, and time, and matter, don't we?"

"Yes. There's Einstein's space-time concept, of course. "

"Of course. Space-time is standard stuff in high school these days. But these men really mean it. They really mean that space and time and mass and energy and radiation and gravity are all simply different ways of thinking about the same thing. And if you once catch on to how just one

of them works, you have the key to all of them. According to Wilkie, physicists up to now, even after the A-bomb was developed, were just fooling around the edges of the subject; they had the beginnings of a unified field theory, but they didn't really believe it themselves; they usually acted as if these were all as different as the names for them.

"Apparently Ledbetter hit on the real meaning of radiation, and that has given Calhoun and Wilkie the key to everything else in physics. Is that clear?" he added with a grin.

"Not very," Thomas admitted. "Can you give me some idea of what they can do with it?"

"Well, to begin with, the original Ledbetter effect, the thing that killed most of the personnel here, Wilkie calls an accidental side issue. Brooks says that the basic radiation affected the colloidal dispersal of living tissue; those that were killed were coagulated by it. It might just as well have been set to release surface tension -- in fact, they did that the other day, exploded a half of beefsteak like so much dynamite."

"Huh?"

"Don't ask me how; I'm just repeating the explanation given me. But the point is, they seem to have found out what makes matter tick. They can explode it -- sometimes -- and use it for a source of power. They can transmute it into any element they want. They seem to be confident that they know what to do to find out how gravity works, so that they will be able to handle gravity the way we now handle electricity. "

"I thought gravity was not considered a force in the modern concepts."

"So it isn't but, then, 'force' isn't force, either, in unified field theory. Hell's bells, you've got me bogged down in

language difficulties. Wilkie says that mathematics is the only available language for these ideas."

"Well, I guess I'll just have to get along without understanding it. But, frankly, I don't see how they managed to come so far so fast. That changes just about everything we thought we knew. Honestly, how is it that it took a hundred fifty years to go from Newton to Edison, yet these boys can knock out results like that in a few weeks?"

"I don't know myself. The same point occurred to me, and I asked Calhoun about it. He informed me in that schoolmaster way of his that it was

because those pioneers did not have the tensor calculus, vector analysis, and matrix algebra."

"Well, I wouldn't know," observed Thomas. "They don't teach that stuff in law school."

"Nor me," admitted Ardmore. "I tried looking over some of their work sheets. I can do simple algebra, and I've had some calculus, though I haven't used it for years, but I couldn't make sense out of this stuff. It looked like Sanskrit; most of the signs were different, and even the old ones didn't seem to mean the same things. Look -- I thought that a times b always equaled b times a."

"Doesn't it?"

"Not when these boys get through kicking it around. But we are getting way off the subject. Bring me up to date."

"Yes, sir." Jeff Thomas talked steadily for a long time, trying very hard to paint a detailed picture of everything he had seen and heard and felt. Ardmore did not interrupt him except with questions intended to clarify points. There was a short silence when he had concluded. Finally Ardmore said:

"I think I must have had a subconscious belief that you would come back with some piece of information that would fall right into place and tell me what to do. But I don't see much hope in what you have told me. How to win back a country that is as completely paralyzed and as carefully guarded as you describe the United States to be is beyond me."

"Of course, I didn't see the whole country. About two hundred miles from here is as far as I got."

"Yes, but you got reports from the other hobos that covered the whole country, didn't you?"

"Yes. "

"And it was all about the same. I think we can safely assume that what you heard, confirmed by what you saw, gives a fairly true picture. How recent do you suppose was the dope you got by the grapevine telegraph?"

"Well -- maybe three or four days old news from the East coast -- no more than that."

"That seems reasonable. News always travels by the fastest available

route. It's certainly not very encouraging. And yet --" He paused and scowled in evident puzzlement. "And yet I have a feeling that you said something that was the key to the whole matter. I can't put my finger on it. I began to get an idea while you were talking, then some other point came up and diverted my mind, and I lost it."

"Maybe it would help if I started in again at the beginning," suggested Thomas.

"No need to. I'll play the recording back piece by piece sometime tomorrow, if I don't think of it in the meantime. "

They were interrupted by peremptory knocking at the door. Ardmore called out, "Come in!" Colonel Calhoun entered.

"Major Ardmore, what's this about a PanAsiatic prisoner?"

"Not quite that, Colonel, but we do have an Asiatic here now. He's American-born."

Calhoun brushed aside the distinction. "Why wasn't I informed? I have notified you that I urgently require a man of Mongolian blood for test experimentation."

"Doctor, with the skeleton staff we have, it is difficult to comply with all the formalities of military etiquette. You were bound to learn of it in the ordinary course of events -- in fact, it seems that you were informed in some fashion."

Calhoun snorted. "Through the casual gossip of subordinates!"

"I'm sorry, Colonel, but it couldn't be helped. Just at the moment I am trying to receive Thomas' reconnaissance report."

"Very well, sir." Calhoun was icily formal. "Will you be good enough to have the Asiatic report to me at once?"

"I can't do that. He is asleep, drugged, and there is no way to produce him for you before tomorrow. Besides, while I am quite sure that he will be entirely cooperative in any useful experimentation, he is an American citizen and a civilian under our protection -- not a prisoner. We'll have to take it up with him."

Calhoun left as abruptly as he had come. "Jeff," mused Ardmore, glancing after him, "speaking strictly off the record -- oh, strictly! -- if there ever comes a time when we are no longer bound down by military

necessity, I'm going to paste that old beezer right in the puss!"

"Why don't you clamp down on him?"

"I can't, and he knows it. He's invaluable, indispensable. We've absolutely got to have his brains for research, and you can't conscript brains just by handing out orders. Y'know, though, in spite of his brilliance, I sometimes think he's just a little bit cracked."

"Shouldn't be surprised. What does he want Frank Mitsui so bad for?"

"Well, that's somewhat involved. They've proved that the original Ledbetter effect depends on a characteristic of the life form involved -- you might call it a natural frequency. It seems that everybody has his own wavelength, or wavelengths. The notion seemed like so much astrology to me, but Dr. Brooks says that it is not only the straight dope; it isn't even new. He showed me a paper by a chap named Fox, at the University of London, 'way back in 1945 -- Fox showed that each individual rabbit had hemoglobin with its own individual wavelength; it absorbed that wavelength in spectroscopic analysis, that one wavelength and no other. You could tell two rabbits apart with it, or you could tell a rabbit from a dog, simply by the spectra of their hemoglobins.

"This Dr. Fox tried to do the same thing with humans, but it didn't work -- no distinguishable difference in wavelengths. But Calhoun and Wilkie have rigged a spectroscope for the spectrum Ledbetter was playing with, and it shows clearly separate wavelengths for each sample of human blood. Conversely, if they set up a tuned Ledbetter projector and start running down or up the scale, when they come to your individual, unique frequency, your red blood cells start absorbing energy, the hemoglobins protein breaks down and -- Spung! -- you're dead. I'm standing right beside you and I'm not even hurt; they haven't come to my frequency. Now Brooks has an idea that these frequencies come by groups according to races. He thinks they can tune it to discriminate by races, to knock over all the Asiatics in a group and not touch the white men, and vice versa."

Thomas shivered. "Whew! That would be a weapon. "

"Yes, it would. It's just on paper so far, but they want to test it on Mitsui. As I gather what they intended to do, they don't intend to kill him, but it's bound to be dangerous as all hell to Mitsui."

"Frank won't mind chancing it," Thomas commented.

"No, I don't suppose he would." It seemed to Ardmore that it would

probably be a favor to Mitsui to give him a clean, painless death in the laboratory. "Now about another matter. It seems to me we ought to be able to work up a sort of permanent secret service, using your hobo pals and their sources of information. Let's talk about it."

Ardmore gained a few days' respite in which to consider further the problem of military use of the weapons at his disposal while the research staff tested their theories concerning the interrelation between racial types and the improved Ledbetter effect. The respite did him no good. He had a powerful weapon, yes; in fact, many powerful weapons, for it seemed that the new principles they had tapped had fully as protean possibilities as electricity. It seemed extremely likely that if the United States defense forces had had, one year earlier, the tools now available in the Citadel, the United States would never have fallen.

But six men cannot whip an empire -- not by brute force. The emperor could, if necessary, expend six million men to defeat six. The hordes of the empire could come at them barehanded and win, move over them as an avalanche moves, until they were buried under a mountain of dead flesh. Ardmore had to have an army to fight with his wonderful new weapons.

The question was: how to recruit and train such an army?

Certain it was that the PanAsians would not hold still while he went into the highways and byways and got his forces together. The thoroughness with which they had organized police surveillance of the entire population made it evident that they were acutely aware of the danger of revolution and would stamp out any such activity before it could possibly reach proportions dangerous to them.

There remained one clandestine group, the hobos.

He consulted with Thomas as to the possibility of organizing them for military purposes. Thomas shook his head at the idea.

"You can't understand the hobo temperament, Chief. There is not one in a hundred who could be depended on to observe the strict self-discipline necessary for such an enterprise. Suppose you were able to arm all of them with projectors -- I don't say that is possible, but suppose you could -- you still would not have an army; you would simply have an undisciplined rabble."

"Wouldn't they fight?"

"Oh, sure, they'd fight. They'd fight as individuals, and they would do quite a bit of slaughter until some flatface caught them off guard and

winged them. "

"I wonder if we can depend on them as sources of information. "

"That's another matter. Most of the road kids won't have any idea that they are being used to obtain military information. I'll handpick not over a dozen to act as reporters to me, and I won't tell them anything they don't have to know."

Any way he looked at it, simple, straightforward military use of the new weapons was not expedient. Brutal frontal attack was for the commander who had men to expend. General U. S. Grant could afford to say, "I will fight it out on this line if it takes all summer," because he could lose three men to the enemy's one and still win. Those tactics were not for the commander who could not afford to lose any men. For him it must be deception, misdirection -- feint and slash and run away --"and live to fight another day." The nursery rhyme finished itself in his mind. That was it. It had to be something totally unexpected, something that the PanAsians would not realize was warfare until they were overwhelmed by it.

It would have to be something like the "fifth columns" that destroyed the European democracies from within in the tragic days that led to the final blackout of European civilization. But this would not be a fifth column of traitors, bent on paralyzing a free country; but the antithesis of that, a sixth column of patriots whose privilege it would be to destroy the morale of invaders, make them afraid, unsure of themselves.

And misdirection was the key to it, the art of fooling!

Ardmore felt a little better when he had reached that conclusion. It was something he could understand, a job suited to an advertising man. He had been trying to crack it as a military problem, but he was not a field marshal and it had been silly of him to try to make a noise like one. His mind did not work that way. This was primarily a job in publicity, a matter of mob psychology. A former boss of his, under whom he had learned the racket, used to tell him, "I can sell dead cats to the board of health with a proper budget and a free hand."

Well, he had a free hand, all right, and the budget was no problem. Of course, he could not use the newspapers and the old channels of advertising, but there would be a way. The problem now was to figure out the weak points of the PanAsians and decide how Calhoun's little gadgets could be used to play on those weak points until the PanAsians were sick of the whole deal and anxious to go home.

He did not have a plan as yet. When a man is at a loss for a course of action, he usually calls for a conference. Ardmore did.

He sketched out to them the situation up to date, including all that Thomas had learned and all that had come in by television through the conquerors' "educational" broadcasts. Then he discussed the powers that were made available to them by the research staff, and the various obvious ways in which they could be applied as military weapons, emphasizing the personnel necessary to use each type of weapon effectively. Having done so, he asked for suggestions.

"Do I understand, Major," Calhoun began, "that after rather pointedly telling us that you would make all military decisions you are now asking us to make up your mind for you?"

"Not at all, Colonel. I have still the responsibility for any decision, but this is a new sort of military situation. A suggestion from any source may prove valuable. I don't flatter myself that I have a monopoly on common sense, nor on originality. I would like for every one of us to tackle this problem and let the others criticize it. "

"Do you yourself have any plan to offer us?"

"I am reserving my opinions until the rest of you have spoken."

"Very well, sir" -- Dr. Calhoun straightened himself up -- "since you have asked for it, I will tell you what I think should be done in this situation -- what, in fact, is the only thing that can be done.

"You are aware of the tremendous power of the forces I have made available." Ardmore noticed Wilkie's mouth tighten at this allocation of credit, but neither of them interrupted. "In your resume, you underestimated them, if anything. We have a dozen fast scout cars housed here in the Citadel. By refitting them with power units of the Calhoun type they can be made faster than anything the enemy can put into the air. We will mount on them the heaviest projectors and attack. With overwhelmingly superior weapons it is only a matter of time until we will have the PanAsiatic empire beaten to its knees!"

Ardmore wondered how any man could be so blind. He did not himself wish to argue against Calhoun; he said, "Thank you, Colonel. I'll ask you to submit that plan written up in more detail. In the meantime does anyone wish to amplify or criticize the colonel's suggestion?" He waited hopefully, then added, "Come now, no plan is perfect. You must have some details to add, at least."

Graham took the, plunge. "How often do you expect to come down to eat?"

Calhoun cut in before Ardmore could call on him. "Well, I'm damned! I must say that I consider this no time for facetiousness."

"Wait a minute," protested Graham, "I didn't mean to be funny. I'm quite serious. That's my department. Those scout cars are not equipped to keep the air very long, and it seems to me that it will take quite a long time to reconquer the United States with a dozen scout cars, even if we located enough men to keep them in the air all the time. That means you have to come back to base to eat."

"Yes, and that means the base will have to be held against attack," Scheer put in suddenly.

"The base can be defended with other projectors." Calhoun's tone was scornful. "Major, I really must ask that the discussion be confined to sensible issues."

Ardmore rubbed his chin and said nothing.

Randall Brooks, who had been listening thoughtfully, pulled a piece of paper out of his pocket and began to sketch. "I think Scheer has something, Dr. Calhoun. If you will look here for a moment here, at this point, is your base. The PanAsians can encircle the base with ships at a distance greater than the range of the base projectors.

The greater speed of your scout cars will be unimportant, for the enemy can well afford to use as many ships as necessary to insure our craft not getting past the blockade. It's sure that the scout cars will have the projectors with which to fight, but they can't fight a hundred ships at once, and the enemies' weapons are powerful, too -- we mustn't forget that."

"You're right they're powerful!" added Wilkie. "We can't afford to have a known base. With their bombardment rockets they could stand back a thousand miles and blow this whole mountain out of the ground, if they knew we were under it."

Calhoun stood up. "I'm not going to remain here and listen to misgivings of pusillanimous fools. My plan assumed that men would execute it." He walked stiffly out of the room.

Ardmore ignored his departure and went hurriedly on, "The objections made to Colonel Calhoun's scheme seem to me to apply to every plan for

open, direct combat at this time. I have considered several and rejected them for approximately those reasons, at least for reasons of logistics -- that is to say, the problem of military supply. However, I may not have thought of some perfectly feasible solution. Does anyone have a direct warfare method to suggest, a method which will not risk personnel?"

No one answered. "Very well, bring it up later if you think of one. It seems to me that we must necessarily work by misdirection. If we can't fight the enemy directly at this time, we must fool 'em until we can."

"I see," agreed Dr. Brooks, "the bull wears himself out on the cape and never sees the sword."

"Exactly. Exactly. I only wish it were as easy as that. Now do any of you have any ideas as to how we can use what we've got without letting them know who we are, where we are, or how many we are? And now I'm going to take time out for a cigarette while you think about it."

Presently, he added, "You might bear in mind that we have two real advantages: the enemy apparently has not the slightest idea that we even exist, and our weapons are strange to them, even mysterious. Wilkie, didn't you compare the Ledbetter effect to magic?"

"I should hope to shout, Chief! It's safe to say that, aside from the instruments in our laboratories, there just isn't any way in existence to detect the forces we are working with now. You don't even know they're there. It's like trying to hear radio with your bare ears."

"That's what I mean. Mysterious. Like the Indians when they first met up with the white man's fire arms, they died and they didn't know why. Think about it. I'll shut up and let you."

Graham produced the first suggestion. "Major?"

"Yes?"

"Why couldn't we kidnap 'em?"

"How do you mean?"

"Well, your idea is to throw a scare into 'em, isn't it? How about a surprise raiding party, using the Ledbetter effect. We could go in one of the scout cars at night and pick out some really big shot, maybe the prince royal himself. We knock out everybody we come in contact with the projectors, and we walk right in and snatch him."

"Any opinions about that, gentlemen?" Ardmore said, reserving his own.

"It seems to have something to it," commented Brooks. "I would suggest that the projectors be set to render unconscious for a number of hours rather than to kill. It seems to me that the psychological effect would be heightened if they simply awoke and found their big man gone. One has no recollection of what has happened under such circumstances, as Wilkie and Mitsui can testify."

"Why stop at the prince royal?" Wilkie wanted to know. "We could set up four raiding parties, two to a car, and make maybe twelve raids in a single night. That way we could knock over enough of their number-one men to really cause some disorganization."

"That seems like a good idea," Ardmore agreed. "We may not be able to pull off these raids more than once. If we could do enough damage right at the top in one blow, we might both demoralize them and set off a general uprising. What's the matter, Mitsui?"

He had noticed the Oriental looking unhappy as the plan was developed. Mitsui spoke reluctantly, "It will not work, I am afraid."

"You mean we can't kidnap them that way? Do you know something we don't about their guard methods?"

"No, no. With a force that reaches through walls and knocks a man down before he knows you are there I believe you can capture them, all right: But the results will not be as you foresee them."

"Why not?"

"Because you will gain no advantage. They will not assume that you are holding their chief men as prisoners; they will assume that each one has committed suicide. The results will be horrible."

It was purely a psychological point, with room for difference of opinion. But the white men could not believe that the PanAsians would dare to retaliate if it were made unmistakably plain to them that their sacred leaders were not dead, but at the mercy of captors. Besides, it was a plan that offered immediate action, which they were spoiling for. Ardmore finally agreed to its adoption for want of something better, although he had a feeling of misgiving which he suppressed.

For the next few days all effort was bent toward preparing the scout cars for the projected task. Scheer performed Herculean mechanical jobs,

working eighteen and twenty hours a day, with the others working joyfully under his supervision. Calhoun even came off his high horse and agreed to take part in the raid, although he did not help with the "menial" work. Thomas went out on a quick scouting trip and made certain of the location of twelve well-scattered PanAsian seats of government.

In the buoyancy of spirit which resulted from a plan of campaign, any plan of campaign, Ardmore failed to remember his own decision that what was required was a sixth column, an underground, or at least, unsuspected organization which would demoralize the enemy from within. This present plan was not such a one, but an essentially military plan. He began to think of himself as, if not Napoleon, at least as a modern Swamp Rat, or Sandino, striking through the night at the professional soldiers and fading away.

But Mitsui was right.

The television receiver was used regularly, with full recording, to pick up anything that the overlords had to broadcast to their slaves. It had become something of a custom to meet in the common room at eight in the evening to listen to the regular broadcast in which new orders were announced to the population. Ardmore encouraged it; the "hate session" it inspired was, he believed, good for morale.

Two nights before the projected raid they were gathered as usual. The ugly, broad face of the usual propaganda artist was quickly replaced by another and older PanAsian whom he introduced as the "heavenly custodian of peace and order." The older man came quickly to the point. The American servants of a provincial government had committed the hideous sin of rebelling against their wise rulers and had captured the sacred person of the governor and held him prisoner in his own palace. The soldiers of the heavenly emperor had brushed aside the insane profaners in the course of which the governor had most regrettably gone to his ancestors.

A period of mourning was announced, commencing at once, which would be inaugurated by permitting the people of the province to expiate the sins of their cousins. The television scene cut from the room from which he spoke.

It came to rest on great masses of humanity, men, women, children, huddled, jammed, behind barbed wire. The pick-up came down close enough to permit the personnel of the Citadel to see the blind misery on the faces of the crowd, the wept-out children, the mothers carrying babies, the helpless fathers.

They did not have to watch those faces long. The pick-up panned over the packed mob, acre on acre of helpless human animals, then returned to a steady close-up of one section.

They used the epileptigenic ray on them. Now they no longer resembled anything human. It was, instead, as if tens of thousands of monstrous chickens had had their necks wrung all at once and had been thrown into the same pen to jerk out their death spasms. Bodies bounded into the air in bone-breaking, spine-smashing fits. Mothers threw their infants from them, or crushed them in uncontrollable, viselike squeeze.

The scene cut back to the placid face of the Asiatic dignitary. He announced with what seemed to be regret in his voice that penance for sins was not sufficient, it was necessary also to be educational, in this case to the extent of one in every thousand.

Ardmore did a quick calculation in his head. A hundred fifty thousand people! It was unbelievable.

But it was soon believed. The pick-up cut again, this time to a residential street in an American city. It followed a squad of PanAsian soldiers into the living room of a family. They were gathered about a television receiver, plainly stunned by what they had just seen. The mother was huddling a young girl child to her shoulder, trying to quiet her hysteria. They seemed stupefied, rather than frightened, when the soldiers burst into their home. The father produced his card without argument; the squad leader compared it with a list, and the soldiers attended to him.

They had evidently been instructed to use a method of killing that was not pretty.

Ardmore shut off the receiver. "The raid is off," he announced. "Go to bed, all of you. And each of you take a sleeping pill tonight. That's an order!"

They left at once. No one said anything. After they were gone, Ardmore turned the receiver back on and watched it through to the end. Then he sat alone for a long time, trying to get his thoughts back into coherence. Those who order sleeping drafts won't take them.

CHAPTER POUR

Ardmore kept very much to himself for the next two days, taking his meals in his quarters, and refusing anything but the briefest interviews. He saw his error plainly enough now; it was small solace to

him that it had been another's mistake which had resulted in the massacres -- he felt symbolically guilty.

But the problem remained with him. He knew now that he had been right when he had decided on a sixth column. A sixth column! Something which would conform in every superficial way to the pattern set up by the rulers, yet which would have in it the means of their eventual downfall. It might take years, but there must be no repetition of the ghastly mistake of direct action.

He knew intuitively that somewhere in Thomas' report was the idea he needed. He played it back again and again, but still he couldn't get it, even though he now knew it by heart. "They are systematically stamping out everything that is typically American in culture. The schools are gone, so are the newspapers. It is a capital offense to print anything in English. They have announced the early establishment of a system of translators for all business correspondence into their language; in the meantime all mail must be approved as necessary. All meetings are forbidden except religious meetings."

"I suppose that is a result of their experience in India. Keeps the slaves quiet." That was his own voice, sounding strange in reproduction.

"I suppose so, sir. Isn't it an historical fact that all successful empires have tolerated the local religions, no matter what else they suppressed?"

"I suppose so. Go ahead."

"The real strength of their system, I believe, is in their method of registration. They apparently were all set to put it into force, and pressed forward on that to the exclusion of other matters. It's turned the United States into one big prison camp in which it is almost impossible to move or communicate without permission from the jailers."

Words, words, and more words! He had played them over so many times that the significance was almost lost. Perhaps there was nothing in the report, after all -- nothing but his imagination.

He responded to a knock at the door. It was Thomas. "They asked me to speak to you, sir," he said diffidently.

"What about?"

"Well -- they are all gathered in the common room. They'd like to talk with you."

Another conference -- and not of his choosing, this time. Well, he would have to go. "Tell them I will be in shortly."

"Yes, sir."

After Thomas had gone, he sat for a moment, then went to a drawer and took out his service side arm. He could smell mutiny in the very fact that someone had dared to call a general meeting without his permission. He buckled it on, then tried the slide and the change, and stood looking at it. Presently he unbuckled it and put it back into the drawer. It wouldn't help him in this mess.

He entered, sat down in his chair at the head of the table, and waited.

"Well?"

Brooks glanced around to see if anyone else wished to answer, cleared his throat, and said, "Uh -- we wanted to ask you if you had any plan for us to follow."

"I do not have -- as yet."

"Then we do have!" It was Calhoun.

"Yes, Colonel?"

"There is no sense in hanging around here with our hands tied. We have the strongest weapons the world has ever seen, but they need men to operate them. "

"Well?"

"We are going to evacuate and go to South America! There we can find a government which will be interested in superior weapons."

"What good will that do the United States?"

"It's obvious. The empire undoubtedly intends to extend its sway over this entire hemisphere. We can interest them in a preventive war. Or perhaps we can raise up an army of refugees."

"No!"

"I am afraid you can't help yourself, Major." The tone held malicious satisfaction.

He turned to Thomas. "Are you with them on this?"

Thomas looked unhappy. "I had hoped that you would have a better plan, sir."

"And you, Dr. Brooks?"

"Well -- it seems feasible. I feel much as Thomas does."

"Graham?"

The man gave him answer by silence. Wilkie looked up and then away again.

"Mitsui?"

"I'll go back outside, sir. I have things to finish."

"Scheer?"

Scheer's jaw muscles quivered. "I'll stick if you do, sir."

"Thanks." He turned to the rest. "I said, 'No!' and I mean it. If any of you leave here, it will be in direct violation of your oaths. That goes for you, Thomas! I'm not being arbitrary about this. The thing you propose to do is on all fours with the raid I canceled. So long as the people of the United States are hostages at the mercy of the PanAsians we can not take direct military action! It doesn't make any difference whether the attack comes from inside or outside, thousands, maybe millions, of innocent people will pay for it with their lives!"

He was very much wrought up, but not too much so to look around and see what effect his words were having. He had them back -- or would have them in a few minutes. All but Calhoun. They were looking disturbed.

"Supposing you are right, sir" -- it was Brooks speaking very gravely -- "supposing you are right, is there anything we can do?"

"I explained that once before. We have to form what I called a 'sixth column,' lie low, study out their weak points, and work on them."

"I see. Perhaps you are right. Perhaps it is necessary. But it calls for a sort of patience more suited to gods than to men."

He almost had it then. What was it?

"So 'There'll be pie in the sky by and by,' " quoted Calhoun. "You should have been a preacher, Major Ardmore. We prefer action."

That was it! That was it!

"You're almost right," Ardmore answered. "Have you listened to Thomas' report?"

"I listened to the play-back."

"Do you recall the one respect in which white men are still permitted to organize?"

"Why, no, I don't recall that there was one."

"None? Nowhere that they were permitted to assemble?"

"I know!" Thomas burst in. "Churches!"

Ardmore waited a moment for it to sink in, then he said very softly, "Has it ever occurred to any of you to think of the possibilities in founding a new religion?"

There was a short and startled silence. Calhoun broke it.

"The man's gone mad!"

"Take it easy, Colonel," Ardmore said mildly. "I don't blame you for thinking that I've gone crazy. It does sound crazy to talk about founding a new religion when what we want is military action against the PanAsians. But consider -- what we need is an organization that can be trained and armed to fight. That and a communication system which will enable us to coordinate the whole activity. And we have to do the whole thing under the eyes of the PanAsians without arousing their suspicions. If we were a religious sect instead of a military organization, all that would be possible."

"It's preposterous! I'll have nothing to do with it."

"Please, Colonel. We need you badly. On that matter of a communication system now -- Imagine temples in every city in the country hooking together with a communication system and the whole thing hooked in here at the Citadel."

Calhoun snorted. "Yes, and the Asiatics listening in to everything you say!"

"That's why we need you, Colonel. Couldn't you devise a system that they couldn't trap? Something like a radio, maybe, but operating in one of the additional spectra so that their instruments could not detect it? Or couldn't you?"

Calhoun snorted again but with a different intonation. "Why, certainly I could. The problem is elementary."

"That's exactly why we have to have you, Colonel -- to solve problems that are elementary to a man of your genius", Ardmore felt slightly nauseated inside: this was worse than writing advertising copy

"but which are miracles for the rest of us. That's what a religion needs -- miracles! You'll be called on to produce effects that will strain even your genius, things that the PanAsians cannot possibly understand, and will think supernatural." Seeing Calhoun still hesitate, he added, "You can do it, can't you?"

"Certainly, I can, my dear Major."

"Fine. How soon can you let me have a communication method which can't be compromised or detected?"

"Impossible to say, but it won't take long. I still don't see the sense to your scheme, Major, but I will turn my attention to the research you say you require." He got up and went out, a procession of one.

"Major?" Wilkie asked for attention.

"What? Oh, yes, Wilkie."

"I can design such a communication system for you."

"I don't doubt it a damn bit, but we are going to need all the talent we can stir up for this job. There will be plenty for you to do, too. Now as to the rest of the scheme, here's what I have in mind just a rough idea, and I want you all to kick it around as much as possible until we get it as nearly foolproof as possible.

"We'll go through all the motions of setting up an evangelical religion, and try to get people to come to our services. Once we get 'em in where we can talk to 'em, we can pick out the ones that can be trusted and enlist them in the army. We'll make them deacons, or something, in the church. Our big angle will be charity -- you come in on that, Wilkie with the transmutation process. You will turn out a lot of precious

metal, gold mostly, so that we will have ready cash to work with. We feed the poor and the hungry -- the PanAsians have provided us with plenty of those! and pretty soon we'll have 'em coming to us in droves.

"But that isn't the half of it. We really will go in for miracles in a big way. Not only to impress the white population -- that's secondary but to confuse our lords and masters. We'll do things they can't understand, make them uneasy, uncertain of themselves. Never anything against them, you understand. We'll be loyal subjects of the Empire in every possible way, but we'll be able to do things that they can't. That will upset them and make them nervous."

It was taking shape in his mind like a well-thought out advertising campaign. "By the time we are ready to strike in force, we should have them demoralized, afraid of us, half hysterical."

They were beginning to be infected with some of his enthusiasm; but the scheme was conceived from a viewpoint more or less foreign to their habits of thought. "Maybe this will work, Chief," objected Thomas, " I don't say that it won't, but how do you propose to get it underway? Won't the Asiatic administrators smell a rat in the sudden appearance of a new religion?"

"Maybe so, but I don't think it likely. All Western religions look equally screwy to them. They know we have dozens of religions and they don't know anything about most of them. That's one respect in which the Era of Nonintercourse will be useful to us. They don't know much about our institutions since the Nonintercourse Act. This will just look like any one of half a dozen cockeyed cults of the sort that spring up overnight in Southern California."

"But about that springing-up business, Chief -- How do we start out? We can't just walk out of the Citadel, buttonhole one of the yellow boys, and say, 'I'm John the Baptist.' "

"No, we can't. That's a point that has to be worked out. Has anybody any ideas?"

The silence that followed was thick with intense concentration. Finally Graham proposed, "Why not just set up in business, and wait to be noticed?"

"How do you mean?"

"Well, we've got enough people right here to operate on a small scale. If we had a temple somewhere, one of us could be the priest, and the

others could be disciples or something. Then just wait to be noticed. "

"H-m-m-m. You've got something there, Graham. But we'll open up on the biggest scale we can manage. We'll all be priests and altar attendants and so forth, and I'll send Thomas out to stir up a congregation for us among his pals. No, wait. Let 'em come in as pilgrims. We'll start this off with a whispering campaign among the hobos, send it over the grapevine. We'll have 'em say, 'The Disciple is coming!'"

"What does that mean?" Scheer inquired.

"Nothing, yet. But it will, when the time comes. Now look -- Graham, you're an artist. You're going to have to get dinner with your left hand for a few days. Your right will be busy sketching out ideas for robes and altars and props in general -- sacerdotal stuff. Guess the interior and exterior of the temple will be mostly up to you, too."

"Where will the temple be located?"

"Well, now, that's a question. It shouldn't be too far from here unless we abandon the Citadel entirely. That doesn't seem expedient; we need it for a base and a laboratory. But the temple can't be too close, for we can't afford to attract special attention to this mountainside." Ardmore drummed on the table. "It's a difficult matter."

"Why not," offered Dr. Brooks, "make this the temple?"

"Huh?"

"I don't mean this room, of course, but why not put the first temple right on top of the Citadel? It would be very convenient."

"So it would, doctor, but it would certainly draw a lot of unhealthy attention to -- Wait a minute! I think I see what you mean." He turned to Wilkie. "Bob, how could you use the Ledbetter effect to conceal the existence of the Citadel, if the Mother Temple sat right on top of it? Could it be done?"

Wilkie looked more puzzled and collie-doggish than ever. "The Ledbetter effect wouldn't do it. Do you especially want to use the Ledbetter effect? Because if you don't it wouldn't be hard to rig a type-seven screen in the magneto-gravitic spectrum so that electromagnetic type instruments would be completely blanked out. You see --"

"Of course I don't care what you use! I don't even know the names of the -- stuff you laboratory boys use -- all I want is the results. O. K. --

you take care of that. We'll completely design the temple here, get all the materials laid out and ready to assemble down below, then break through to the surface and run the thing up as fast as possible. Anyone have any idea how long that will take? I'm afraid my own experience doesn't run to building construction."

Wilkie and Scheer engaged in a whispered consultation. Presently Wilkie broke off and said, "Don't worry too much about that, Chief. It will be a power job."

"What sort?"

"You've got a memorandum on your desk about the stuff. The traction and pressure control we developed from the earlier Ledbetter experiments."

"Yes, Major," Scheer added, "you can forget it; I'll take care of the job. With tractors and pressors in an aggravitic field, it won't take any longer than assembling a cardboard model. Matter of fact, I'll practice on a cardboard model before we run up the main job."

"O.K., troops," Ardmore smilingly agreed, with the lightheartedness that comes from the prospect of plenty of hard work, "that's the way I like to hear you talk. The powwow is adjourned for now. Get going! Thomas, come with me."

"Just a second, Chief," Brooks added as he got up to follow him, "couldn't we --" They went out the door, still talking.

Despite Scheer's optimism the task of building a temple on the mountain top above the Citadel developed unexpected headaches. None of the little band had had any real experience with large construction jobs. Ardmore, Graham, and Thomas knew nothing at all of such things, although Thomas had done plenty of work with his hands, some of it carpentry. Calhoun was a mathematician and by temperament undisposed to trouble himself with such menial pursuits in any case. Brooks was willing enough but he was a biologist, not an engineer. Wilkie was a brilliant physicist and, along lines related to his specialty, a competent engineer; he could design a piece of new apparatus necessary to his work quite handily.

However, Wilkie had built no bridges, designed no dams, bossed no gangs of sweating men. Nevertheless the job devolved on him by Hobson's choice. Scheer was not competent to build a large building; he thought that he was, but he thought in terms of small things, tools, patterns, and other items that fitted into a machine shop. He could build a scale model of a large building, but he simply did not understand heavy construction.

It was up to Wilkie.

He showed up in Ardmore's office a few days later with a roll of drawings under his arm. "Uh, Chief?"

"Eh? Oh, come in, Bob. Sit down. What's eating on you? When do we start building the temple? See here -- I've been thinking about other ways to conceal the fact that the Citadel will be under the temple. Do you suppose you could arrange the altar so that --"

"Excuse me, Chief."

"Eh?

"We can incorporate most any dodge you want into the design, but I've got to know something more about the design first."

"That's your problem -- yours and Graham's."

"Yes, sir. But how big do you want it to be?"

"How big? Oh, I don't know, exactly. It has to be big." Ardmore made a sweeping motion with both hands that took in floor, walls, and ceiling. "It has to be impressive."

"How about thirty feet in the largest dimension?"

"Thirty feet? Why, that's ridiculous! You aren't building a soft-drinks stand; you're building the mother temple of a great religion -- of course you aren't, but you've got to think of it that way. It's got to knock their eyes out. What's the trouble? Materials?"

Wilkie shook his head. "No, with Ledbetter-type transmutation materials are not a problem. We can use the mountain itself for materials."

"That's what I thought you intended to do. Carve out big chunks of granite and use your tractor and pressor beams to lay them up like giant bricks."

"Oh, no!

"No? Why not?"

"Well, we could, but when we got through it wouldn't look like much -- and I don't know how we would roof it over. What I intended to do was to

use the Ledbetter effect not just for cutting or quarrying, but to make -- transmute -- the materials I want. You see, granite is principally oxides of silicon. That complicates things a little because both elements are fairly near the lower end of the periodic table. Unless we go to a lot of trouble and get rid of a lot of excess energy -- a tremendous amount; darn near as much as the Memphis power pile develops -- as I say, unless we arrange to bleed off all that power, and right now I don't see just how we could do it, then --"

"Get to the point, man!"

"I was getting to the point, sir," Wilkie answered in hurt tones. "Transmutations from the top or the bottom of the periodic scale toward the middle give off power; contrariwise, they absorb energy. Way back in the middle of the last century they found out how to do the first sort; that's what atom bombs are based on. But to handle transmutations for building materials, you don't want to give off energy like an atom bomb or a power pile. It would be embarrassing."

"I should think so!"

"So I'll use the second sort, the energy-absorbing sort. As a matter of fact I'll balance them. Take magnesium for instance. It lies between silicon and oxygen. The binding energies involved --"

"Wilkie!"

"Yes, Sir?"

"Just assume that I never got through third grade. Now can you make the materials you need, or can't you?"

"Oh, yes, sir, I can make them."

"Then how can I be of help to you?"

"Well, sir, it's the matter of putting the roof on and the size. You say a thirty-foot over-all dimension is no good --"

"No good at all. Did you see the North American Exposition? Remember the General Atomics Exhibit?"

"I've seen pictures of it."

"I want something as gaudy and impressive as that, only bigger. Now why are you limited to thirty feet?"

"Well, sir, a panel six by thirty is the biggest I can squeeze out through the door, allowing for the turn in the passage."

"Take 'em up through the scout-car lift."

"I thought of that. It will take a panel thirteen feet wide, which is good, but the maximum length is then only twenty-seven feet. There's a corner to turn between the hangar and the lift."

"Hmm -- Look, can you weld with that magic gimmick? I thought you could build the temple in sections, down below here, then assemble it above ground?"

"That was the idea. Yes, I suppose we could weld walls as big as you want. But look, major, how big a building do you want?"

"As big as you can manage."

"But how big do you want?"

Ardmore told him. Wilkie whistled. "I suppose it's possible to give you walls that big, but I don't see any way to roof it over."

"Seems to me I've seen buildings with that much clear span."

"Yes, of course. You give me the services of construction engineers and architects and heavy industry to build the trusses needed to take that span and I'll build you as big a temple as you want. But Scheer and I can't do it alone, even with pressors and tractors to do all the heavy work. I'm sorry, sir, but I don't see an answer."

Ardmore stood up and put a hand on Wilkie's arm. "You mean you don't see an answer yet. Don't get upset, Bob. I'll take whatever you build. But just remember -- This is going to be our first public display. A lot depends on it. We can't expect to make much impression on our overlords with a hotdog stand. Make it as big as you can. I'd like something about as impressive as the Great Pyramid -- but don't take that long to build it."

Wilkie looked worried. "I'll try, sir. I'll go back and think about it."

"Fine!"

When Wilkie had gone Ardmore turned to Thomas. "What do you think about it, Jeff? Am I asking too much?"

"I was just wondering," Thomas said slowly, "why. you set so much store by this temple?"

"Well, in the first place it gives a perfect cover up for the Citadel. If we are going to do anything more than sit here and die of old age, the time will come when a lot of people will have to be going in and out of here. We can't keep the location secret under those circumstances so we will have to have a reason, a cover up. People are always going in and out of a church building -- worship and so forth. I want to cover up the 'and so forth.' "

"I understand that. But a building with thirty-foot maximum dimensions can cover up a secret stairway quite as well as the sort of convention-hall job you are asking young Wilkie to throw up."

Ardmore squirmed. Damn it -- couldn't anyone but himself see the value of advertising? "Look, Jeff, this whole deal depends on making the right impression at the start. If Columbus had come in asking for a dime, he would have been thrown out of the palace on his ear. As it was, he got the crown jewels. We've got to have an impressive front."

"I suppose so," Thomas answered without conviction.

Several days later Wilkie asked permission for Scheer and himself to go outside. Finding that they did not intend to go far, Ardmore gave permission, after impressing on them the need for extreme caution.

He encountered them some time later proceeding down the main passage toward the laboratories. They had an enormous granite boulder. Scheer was supporting it clear of walls and floor by means of tractors and pressors generated by a portable Ledbetter projector strapped as a pack on his shoulders. Wilkie had tied a line around the great chunk of rock and was leading it as if it were a cow. "Great Scott!" said Ardmore. "What y' got there?"

"Uh, a piece of mountain, sir."

"So I see. But why?"

Wilkie looked mysterious. "Major, could you spare some time later in the day? We might have something to show you."

"If you won't talk, you won't talk. Very well."

Wilkie phoned him later, much later, asked him to come and suggested

that Thomas come, too. When they arrived in the designated shop room everyone was present except Calhoun. Wilkie greeted them and said, "With your permission, we'll start, Major."

"Don't be so formal. Aren't you going to wait for Colonel Calhoun?"

"I invited him, but he declined."

"Go ahead then."

"Yes, sir." Wilkie turned to the rest. "This piece of granite represents the mountain top above us. Go ahead, Scheer. "

Wilkie took position at a Ledbetter projector. Scheer was already at one; it had been specially fitted with sights and some other gadgetry that Ardmore could not identify. Scheer pressed a couple of studs; a pencil beam of light sprang out.

Using it as if it were a saw he sliced the top off the boulder. Wilkie caught the separated portion with a tractor-pressor combination and moved it aside. He set his controls and it hung in air; where it had been the stone was flat and of mirror polish. "That's the temple's base," said Wilkie.

Scheer continued carving with his pencil beam, trucking his projector around as necessary. The flat top had now been squared off; the square was the summit of a four-sided truncated pyramid. That done, he started carving steps down one side of the figure. "That's enough, Scheer," Wilkie commanded. "Let's make a wall. Prepare the surface."

Scheer did something with his projector. No beam could be seen, but the flat upper surface turned black. "Carbon," announced Wilkie. "Industrial diamonds probably. That's our work bench. O. K., Scheer. " Wilkie moved the detached chunk back over the "bench"; Scheer carved off apiece; it turned molten, dripped down on the flat surface, spread to the edges and stopped. It now had a white metallic sheen. As it doled Scheer nipped each corner, then, using one pressor as a vise to hold it firmly to the boulder and another as a moving wedge, he turned each corner up. It was now a shallow, open box, two feet square and an inch deep. Wilkie whisked it aside and hung it in air.

The process was repeated, but this time a single sheet rather than a box was formed. Wilkie put it out of the way and put the box back on the pedestal. "Let's stuff the turkey," announced Wilkie.

He transferred the chopped-off chunk back to a position over the open

box. Scheer carved off a piece and lowered it into the box, then played a beam on it. It melted down and spread over the bottom. "Granite is practically glass," lectured Wilkie, "and what we want is foamed glass, so we use no transmutation in this step-except the least, little bit to make the gases to foam it. Let's have a shot of nitrogen, Scheer." The master sergeant nodded and irradiated the mess for a split second; it foamed up like boiling fudge, filling the shallow box to the rim, and froze.

Wilkie snagged the simple sheet out of the air and caused it to hover over the filled box, then to settle so that it lay, somewhat unevenly, as a cover. "Iron it down, Scheer."

The sheet glowed red and settled in place, pressed flat by an invisible hand. Scheer walked his projector around, welding the cover of the box to the box proper. When he had finished Wilkie set the filled box up on edge at one edge of the pedestal. Leaving the controls of his projector set to hold it there, he walked over to the far side of the room where a tarpaulin covered a pile of something on a bench.

"To save your time and for practice we made four others earlier," he explained and whipped off the tarpaulin. Disclosed were a stack of sandwich panels exactly like that one just created. He did not touch them; instead Scheer lifted them off by projector one at a time and built a cube, using the newly made panel as the first face and the pedestal as the bottom of the cube. Wilkie returned to his projector and held the structure rigid while Scheer welded each seam. "Scheer is much more accurate than I am," he explained. "I give him all the tough parts. O. K., Scheer -- how about a door?"

"How big?" grunted the sergeant, speaking for the first time.

"Use your judgment. Eight inches high would be all right."

Scheer grunted again and carved a rectangular opening in the side facing the slope on which he had begun earlier to carve steps. When he finished Wilkie announced, "There's your temple, boss."

No human hand had touched the boulder nor anything made from it, from start to finish.

The applause sounded like considerably more than five people. Wilkie turned pink; Scheer worked his jaw muscles: They crowded around it. "Is it 'hot'?" inquired Brooks.

"No," answered Mitsui, "I touched it."

"I didn't mean that."

"No, it's not 'hot'," Wilkie reassured him, "not with the Ledbetter process. Stable isotopes, all of them."

Ardmore straightened up from a close inspection. "I take it you intend to do the whole thing outdoors?"

"Is that all right, Major? Of course we could work down below and assemble it up above, from small panels -- but I'm sure that would take just as long as to work from scratch with big panels. And I'm not sure about assembling the roof from small units. Sandwich panels like these are the lightest, strongest, stiffest structure we can use. It was the problem of that big roof span you want that caused us to work out this system."

"Do it your way. I'm sure you know what you're doing. "

"Of course," admitted Wilkie, "we can't finish it in this short a time. This is just the shell. I don't know how long it will take to dress it up."

"Dress it up?" inquired Graham. "When you've got a fine, great simple shape why belittle it with decoration? The cube is one of the purest and most beautiful shapes possible. "

"I agree with Graham," Ardmore commented. "That's your temple, right there. Nothing makes a more effective display than great, unbroken masses. When you've got something simple and effective, don't louse it up."

Wilkie shrugged. "I wouldn't know. I thought you wanted something fancy."

"This is fancy. But see here, Bob, one thing puzzles me. Mind you, I'm not criticizing -- I'd as soon think of criticizing the Days of Creation -- but tell me this: why did you take a chance on going outside? Why didn't you just go into one of the unoccupied rooms, peel off the wall coating and use that magic knife to carve a chunk of granite right out of the heart of the mountain?"

Wilkie looked thunderstruck. "I never thought of that. "

CHAPTER FIVE

A patrol helicopter cruised slowly south from Denver. The PanAsian

lieutenant commanding it consulted a recently constructed aerial mosaic map and indicated to the pilot that he was to hover. Yes, there it was, a great cubical building rising from the shoulder of a mountain. It had been picked up by the cartographical survey of the Heavenly Emperor's new Western Realm and he had been sent to investigate.

The lieutenant regarded the job as a simple routine matter. Although the building did not appear in the records of the administrative district in which it was located there was nothing surprising in that. The newly conquered territory was enormous in extent, the aborigines, with their loose undisciplined ways -- so characteristic of all the inferior races -- kept no proper records of anything. It might be years before everything in this wild new country was properly indexed and cross-filed, particularly as this pale anemic people was almost childishly resistant to the benefits of civilization.

Yes, it would be a long job, perhaps longer than the Amalgamation of India. He sighed to himself. He had received a letter that morning from his principal wife informing him that his second wife had presented him with a man-child. Should he request that he be reclassified as a permanent colonist in order that his family might join him here, or should he pray for leave, long overdue?

Those were no thoughts for a man on the Heavenly Emperor's duty! He recited over to himself the Seven Principles of the Warrior Race and indicated to the pilot an alp in which to land.

The building was more impressive from the ground, a great square featureless mass, fully two hundred yards across in every dimension. The face toward him shone with a clear monochromatic emerald green, although it faced away from the afternoon sun. He could see a little of the wall to the right; it was golden.

His task group of one squad filed out of the helicopter after him and were followed by the mountain guide who had been impressed for this service. He spoke to the white man in English. "Have you seen this building before?"

"No, Master."

"Why not?"

"This part of the mountains is new to me."

The man was probably lying, but it was useless to punish him. He dropped the matter. "Lead on."

They trudged steadily up the slope toward the immense cube to where a broad flight of steps, wider still than the cube itself, led to its nearer face. The lieutenant hesitated momentarily before starting to mount them. He was aware of a general feeling of unease, a sense of mild disquietude, as if a voice were warning him of unnamed danger.

He set foot on the first step. A single deep clear note rolled across the canyon; the feeling of uneasiness swelled to an irrational dread. He could see that his men were infected with it. Resolutely he mounted the second step. Another and different tone echoed through the hills.

He marched steadily up the long flight, his men following reluctantly. A slow, ponderous and infinitely tragic largo kept time to his labored steps, labored because the treads were just too broad and the lifts just too high for comfort. The feeling of impending disaster, of inescapable doom, grew steadily greater as he approached the building.

Two doors of heroic size swung slowly open as the lieutenant ascended. In the archway thus created stood a human figure, a man, dressed in emerald robes that brushed the floor. White hair and flowing beard framed a face of benign dignity. He moved majestically forward from the doorway, reaching the top of the flight of steps just as the lieutenant attained it. The lieutenant noted with amazement that a halo flickered unsubstantially around the old man's head. But he had little time to consider it; the old man raised his right hand in benediction and spoke:

"Peace be unto you!"

And it was so! The feeling of dread, of irrational fright, dropped away from the PanAsian as if someone had turned a switch. In his relief he found himself regarding this member of an inferior race -- so evidently a priest with a warmth reserved for equals. He recalled the Admonitions for dealing with inferior religions.

"What is this place, Holy One?"

"You stand at the threshold of the Temple of Mota, Lord of Lords and Lord of All!"

"Mota-h-m-m-m." He could not recall such a god, but it did not matter. These sallow creatures had a thousand strange gods. Three things only do slaves require, food, work, and their gods, and of the three their gods must never be touched, else they grow troublesome. So said the Precepts for Ruling. "Who are you?"

"I am an humble priest, First Server of Shaam, Lord of Peace."

"Shaam? I thought you said Mota was your god?"

"We serve the Lord Mota in six of his thousand attributes. You serve him in your way. Even the Heavenly Emperor serves him in his. My duty is to the Lord of Peace."

This was perilously close to treason, the lieutenant thought, if not to blasphemy. Still, it may be that the gods have many names, and the native did not seem disposed to make trouble. "Very well, old Holy One, the Heavenly Emperor permits you to serve your god as you see him, but I must inspect for the Empire. Stand aside."

The old man did not move, but answered regretfully, "I am sorry, Master. It cannot be."

"It must be. Stand aside!"

"Please, Master, I beg of you! It is not possible for you to enter here. In these attributes Mota is Lord of the white men. You must go to your own temple; you cannot enter this one. It is death to any but his followers."

"You threaten me?"

"No, Master, no -- we serve the Emperor, as our faith requires. But this thing the Lord Mota Himself forbids. I cannot save you if you offend."

"On the Heavenly Emperor's service -- stand aside!" He strode steadily across the broad terrace toward the door, his squad clomping stolidly after him. The panic dread clutched at him as he marched and increased in intensity as he approached the great door. His heart seemed constricted, and a mad longing to flee clamored through him senselessly. Only the fatalistic courage of his training made him go on. Through the door he saw a vast empty hall and on the far side an altar, large in itself, but dwarfed by the mammoth proportions of the room. The inner walls shone, each with its own light, red, blue, green, golden. The ceiling was a perfect, flawless white, the floor an equally perfect black.

There was nothing to be afraid of here, he told himself, this illogical but horribly real dread was a sickness, unworthy of a warrior. He stepped across the threshold. A momentary dizziness, a flash of terrifying insecurity and he collapsed.

His squad, close at his heels, had no more warning.

Ardmore came trotting out of concealment. "Nice work, Jeff," he called out, "you should be on the stage!"

The old priest relaxed. "Thanks, Chief. What happens next?"

"We'll have time to figure that out." He turned toward the altar and shouted, "Scheer!"

"Yes, sir!"

"Turn off the fourteen-cycle note!" He added to Thomas, "Those damned subsonics give me the creeping horrors even when I know what's going on. I wonder what effect it had on our pal here?"

"He was cracking up, I believe. I never thought he'd make it to the doorway."

"I don't blame him. It made me want to howl like a dog, and 1 ordered it turned on. There's nothing like the fear of something you can't understand to break a man down. Well, we got a bear by the tail. Now to figure out a way to turn loose --"

"How about him?" Thomas jerked his head toward the mountaineer, who still stood near the head of the great flight of steps.

"Oh, yes." Ardmore whistled at him and shouted, "Hey you -- come here!"

The man hesitated, and Ardmore added, "Damn it -- we're white men! Can't you see that?"

The man answered, "I see it, but I don't like it." Nevertheless he slowly approached.

Ardmore said, "This is a piece of razzle-dazzle for the benefit of our yellow brethren. Now that you're in it, you're in it! Are you game?"

The other members of the personnel of the Citadel had gathered around by this time. The mountain guide glanced around at their faces. "It doesn't look as if I had much choice."

"Maybe not, but we would rather have a volunteer than a prisoner."

The mountaineer shifted tobacco from left cheek to right, glanced around the immaculate pavement for a place to spit, decided not to, and

answered. "What's the game?"

"It's a frame-up on our Asiatic bosses. We plan to give them the run-around-with the help of God and the great Lord Mota."

The guide looked them over again, then suddenly stuck out his hand and said, "I'm in."

"Fine," agreed Ardmore, taking his hand. "What's your name?"

"Howe. Alexander Hamilton Howe. Friends call me Alec."

"O.K., Alec. Now what can you do? Can you cook?" he added.

"Some. "

"Good." He turned away. "Graham, he's your man for now. I'll talk with him later. Now -- Jeff, did it seem to you that one of those monkeys went down a little slowly?"

"Maybe. Why?"

"This one; wasn't it?" He touched one of the quiet, sprawled figures with his shoe.

"I think so."

"All right, I want to check up on him before we bring them to. If he's a Mongolian he should have keeled over quicker. Dr. Brooks, will you give this laddie's reflexes a work-out? And don't be too gentle about it."

Brooks managed to produce some jerks in short order. Seeing this, Ardmore reached down and set his thumb firmly on the exposed nerve under the ear. The soldier came to his knees, writhing. "All right, bud -- explain yourself." The soldier stared impassively. Ardmore studied his face for a moment, then made a quick gesture, which was protected from the gaze of the others by his body.

"Why didn't you say so?" asked the PanAsian soldier.

"I must say it's a good make-up job," commented Ardmore admiringly. "What's your name and rank?"

"Tattoo and plastic surgery," the other returned. "Name's Downer, captain, United States army."

"Mine's Ardmore. Major Ardmore."

"Glad to know you, Major." They shook hands. "Very glad, I should say. I've been hanging on for months, wondering who to report to and how."

"Well, we can certainly use you. It's a scratch organization. I've got to get busy now -- we'll talk later." He turned away. "Places, gentlemen. Second act. Check each other's make-up. Wilkie, see to it that Howe and Downer are out of sight. We are going to bring our drowsy guests back to consciousness."

They started to comply. Downer touched Ardmore's sleeve.

"Just a moment, Major. I don't know your layout, but before we go any further, are you sure you don't want me to stay on my present assignment?"

"Eh? H-m-m-m -- you've got something there. Are you willing to do it?"

"I'm willing to do it, if it's useful," Downer replied soberly.

"It would be useful. Thomas, come here." The three of them went into a short conference and arranged a way for Downer to report through the grapevine, and Ardmore told him as much about the set-up as he needed to know. "Well, good luck, old man," he concluded. "Get back down there and play dead, and we'll reanimate your messmates."

Thomas, Ardmore, and Calhoun attended the Asiatic lieutenant as his eyes flickered open. "Praise be!" intoned Thomas. "The Master lives!"

The lieutenant stared around him, shook his head, then reached for his sidearm. Ardmore, impressive in the red robes of Dis, Lord of Destruction, held up a hand. "Careful, Master, please! I have beseeched my Lord Dis to return you to us. Do not offend him again."

The Asiatic hesitated, then asked, "What happened?"

"The Lord Mota, acting through Dis, the Destroyer, took you for his own. We prayed and wept and beseeched Tamar, Lady of Mercy, to intercede for us." He swept an arm toward the open door. Wilkie, Graham, and Brooks, appropriately clad, were still busily genuflecting before the altar. "Graciously, our prayer was answered. Go in peace!"

Scheer, at the control board, picked this moment to increase the volume on the fourteen-cycle note. With nameless fear pressing his heart, confused, baffled, the lieutenant took the easy way out. He gathered his

men about him and marched back down the broad flight of stairs, colossal organ music still following him in awful, inescapable accompaniment.

"Well, that's that," Ardmore commented as the little group disappeared in the distance. "First round to God's chilluns. Thomas, I want you to start into town at once."

"So?"

"In your robes and full paraphernalia. Seek out the district boss and register formal complaint that Lieutenant Stinkyface did wrongfully profane our sacred places to the great indignation of our gods, and pray for assurance that it will not happen again. You want to be on your high horse about the whole matter -- righteous indignation, you know -- but, oh, very respectful to temporal authority."

"I appreciate the confidence you place in me," Thomas said with sardonic grimness. Ardmore grinned at him.

"I know it's a tough assignment, fella, but a lot depends on it. If we can make use of their own customs and rules to establish a precedent right now which sets us up as a legitimate religion, entitled to all the usual immunities, we've got half the battle won."

"Suppose they ask for my identification card?"

"If you carry yourself with sufficient arrogance they will never get around to asking for it. Just think about the typical clubwoman and try to show that much bulge. I want 'em to get used to the idea that anyone with the staff and the robes and the halo carries his identification just in his appearance. It will save us trouble later."

"I'll try -- but I'm not promising anything."

"I think you can do it. Anyhow, you are going out equipped with enough stuff to keep you safe. Keep your shield turned on whenever you are around any of 'em. Don't try to account for it in any way; just let 'em bounce off it, if they close in on you. It's a miracle -- no need to explain."

"O. K. "

The lieutenant's report was not satisfactory to his superiors. As for that, it was not satisfactory to himself. He felt an acute sense of loss of personal honor, of face, which the words of his immediate superior did nothing to lessen. "You, an officer in the army of the Heavenly

Emperor, have permitted yourself to look small in the eyes of a subject race. What have you to say?"

"Your forgiveness, sire!"

"Not for me -- it is a matter for you to settle with your ancestors."

"I hear, sire!" He caressed the short sword which hung at his side.

"Let there be no haste; I intend for you to tell your tale in person to the Imperial Hand."

The local Hand of the Emperor, military governor of that region which included Denver and the Citadel, was no more pleased than his junior. "What possessed you to enter their holy place? These people are childlike, excitable. Your action could be the regrettable cause of assassinations of many more valuable than yourself. We cannot be forever wasting slaves to teach them lessons."

"I am unworthy, sire."

"I do not dispute that. You may go." The lieutenant departed, to join, not his family, but his ancestors.

The Imperial Hand turned to his adjutant. "We will probably be petitioned by this cult. See that the petitioners are pacified and assured that their gods will not be disturbed. Note the characteristics of the sect and send out a general warning to deal gently with it." He sighed. "These savages and their false gods! I grow weary of them. Yet they are necessary; the priests and the gods of slaves always fight on the side of the Masters. It is a rule of nature."

"You have spoken, sire."

Ardmore was glad to see Thomas return to the Citadel. In spite of his confidence in Jeff's ability to handle himself in a tight place, in spite of the assurance that Calhoun had given him that the protective shield, properly handled, would protect the wearer from anything that the PanAsian could bring on it, he had been in a state of nerves ever since Thomas had set out to register a complaint with the Asiatic authorities. After all, the attitude of the PanAsians toward local religions might be one of bare toleration rather than special encouragement.

"Welcome home, old boy!" he shouted, pounding him on the back. "I'm glad to see your ugly face tell me what happened?"

"Give me time to get out of this bloody bathrobe, and I'll tell you. Got a cigarette? That's a bad point about being a holy man; they don't smoke."

"Sure. Here. Had anything to eat?"

"Not recently."

Ardmore flipped the intercommunicator to Kitchen. "Alec, rustle up some groceries for Lieutenant Thomas. And tell the troops they can hear his story if they come around to my office."

"Ask him if he has any avocados."

Ardmore did so. "He says they're still in quick freeze, but he'll thaw one out. Now let's have your story. What did Little Red Riding Hood say to the wolf?"

"Well -- you'll hardly believe it, Chief, but I didn't have any trouble at all. When I got into town, I marched right straight up to the first PanAsian policeman I found, stepped off the curb, and struck the old benediction pose -- staff in my left hand, right hand pawing the air; none of this hands folded and head down stuff that white men are supposed to use. Then I said, 'Peace be unto you! Will the Master direct his servant to the seat of the Heavenly Emperor's government?'

"I don't think he understood much English. He seemed startled at my manner, and got hold of another flatface to help him. This one knew more English and I repeated my request. They palavered in that damned singsong tongue of theirs, then conducted me to the palace of the Emperor's Hand. We made quite a procession -- one on each side and me walking fast so that I kept about even or a little in front of them."

"Good advertising," Ardmore approved.

"That's what I thought. Anyway, they got me there and I told my story to some underofficial. The results astounded me. I was whisked right straight up to the Hand himself."

"The hell you say!"

"Wait a minute -- here's the pay-off: I'll admit I was scared, but I said to myself 'Jeff, old boy, if you start to crawl now, you'll never get out of here alive.' I knew a white man is expected to drop to his knees before an official of that rank. I didn't; I gave him the same

standing benediction I had given his flunkies. And he let me get away with it! He looked me over and said, 'I thank you for your blessing, Holy One. You may approach.' He speaks excellent English, by the way.

"Well, I gave him a reasonably accurate version of what happened here -- the official version, you understand -- and he asked me a few questions."

"What sort of questions?"

"In the first place he wanted to know if my religion recognized the authority of the Emperor. I assured him that it did, that our followers were absolutely bound to obey temporal authority in all temporal matters, but that our creed commanded us to worship the true gods in our own fashion. Then I gave him a long theological spiel. I told him that all men worshipped God, but that God had a thousand attributes, each one a mystery. God in his wisdom had seen fit to appear to different races in different attributes because it was not seemly for servant and master to worship in the same fashion. Because of that, the six attributes of Mota, of Shaam, of Mens, of Tamar, of Barmac, and of Dis had been set aside for the white men, just as the Heavenly Emperor was an attribute reserved for the race of Master."

"How did he take it?"

"I gathered that he thought it was very sound doctrine -- for slaves. He asked me what my church did besides holding services, and I told him that our principal desire is to minister to the poor and sick. He seemed pleased at that. I have an impression that our gracious overlords are finding relief a very serious problem."

"Relief? Do they give any relief?"

"Not exactly. But if you load prisoners into concentration camps you have to feed them something. The internal economy has largely broken down and they haven't got it straightened out yet. I think they would welcome a movement which would relieve them from worrying too much over how to feed the slaves. "

"H-m-m-m. Anything else?"

"Nothing much. I assured him again that we, as spiritual leaders, were forbidden by our doctrines to have anything to do with politics, and he told me that we would not be molested in the future. Then he dismissed me. I repeated my benediction, turned my back on him, and stomped out."

"It seems to me," said Ardmore, "that you pretty thoroughly sold him a

bill of goods."

"I wouldn't be too sure, Chief. That old scoundrel is shrewd and Machiavellian. I shouldn't call him a scoundrel,

because he's not by his standards. He's a statesman. I've got to admit he impressed me. Look -- these PanAsians can't be stupid; they've conquered and held half a world, hundreds of millions of people. If they tolerate local

religions, it's because they have found it to be smart politics. We've got to keep them thinking so in our case, in

the face of smart and experienced administrators."

"No doubt you're right. We certainly must be careful not to underestimate them."

"I hadn't quite finished. Another escort picked me up on the way out of the palace and stayed with me. I walked along, paying no attention to them. My route out of town took me through the central market. There were hundreds of whites there, lined up in queues, waiting for a chance to buy food on their ration cards. I got an idea and decided to find out just how far my immunity extended. I stopped and climbed up on a box and started to preach to them."

Ardmore whistled. "Cripes, Jeff, you shouldn't have taken a chance like that!"

"But, Major, we needed to know, and I was fairly certain that the worst that could happen would be that they would make me stop."

"Well . . . yes, I suppose so. Anyhow the job requires that we take chances and you have to use your own judgment. Boldness may be the safest policy. Sorry I spoke -- what happened?"

"My escort seemed dumbfounded at first, and not certain what to do. I went right ahead, watching them out of the corner of my eye. Pretty soon they were joined by a chappie who seemed to be senior to them. They held a confab, and the senior cop went away. He came back in about five minutes, and just stood there, watching me. I gathered that he had phoned in and had received instructions to let me alone. "

"How did the crowd take it?"

"I think they were most impressed by the apparent fact that a white man

was breaking one of the rules of the overlords and getting away with it. I didn't try to tell them much. I took as my text, The Disciple is coming!' and embroidered it with a lot of glittering generalities. I told them to be good boys and girls and not to be afraid, for the Disciple was coming to feed the hungry and heal the sick and console the bereaved."

"H-m-m-m. Now that you've started making promises, we had better get set to deliver."

"I was coming to that. Chief, I think that we had better set up a branch church in Denver right away."

"We've hardly got the personnel yet to start branching out."

"Are you sure? I don't like to set my opinion up against yours, but I don't see how we can gain many recruits unless we go where the recruits are. They're all set for it now; you may be sure that every white man in Denver is talking about the old beezer in the halo -- in a halo, mind you! -- who preached in the market place and the Asiatics didn't dare stop him. We'll pack 'em in!"

"Well . . . maybe you're right --"

I think I am. Admitting that you can't spare the regular personnel from the Citadel, here's how we can work it; I'll go down to the city with Alec, locate a building that we can turn into a temple and start holding services. We can get along with the power units in the staffs at first, and Scheer can follow along and rebuild the interior of the temple and set up a proper unit in the altar. Once things are rolling I can turn the routine over to Alec. He'll be the local priest for Denver."

The others had drifted in one by one while Ardmore and Thomas were talking. Ardmore turned now to Alec Howe.

"How about it, Alec? Do you think you can make a noise like a priest, preach 'em sermons, organize charities, and that sort of thing?"

The mountain guide was slow to answer. "I think, Major, that I would rather stay on the job I have now. "

"It won't be so hard," Ardmore reassured him. "Thomas or I can write your sermons for you. The rest of it would consist largely in keeping your mouth shut and your eyes open, and in shooing likely prospects up here to be enlisted."

"It's not the sermons, Major. I can preach a sermon -- I used to be a lay preacher in my youth. It's just that I can't reconcile this false religion with my conscience. I know you are working toward a worthy purpose and I've agreed to serve, but I'd rather stay in the kitchen."

Ardmore considered his words before replying. "Alec," he said at length, in a grave voice, "I think I can appreciate your viewpoint. I wouldn't want to ask any man to do anything against his own conscience. As a matter of fact, we would not have adopted the cloak of a religion had we seen any other practical way to fight for the United States. Does your faith forbid you to fight for your country?"

"No, it does not."

"Most of your work as a priest of this church would be to help the helpless. Doesn't that fit into your creed?"

"Naturally it does. That is exactly why I cannot do it in the name of a false God."

"But is it a false God? Do you believe that God cares very much what name you call Him as long as the work you perform is acceptable to Him? Now mind you," he added hastily, "I don't say that this so-called temple we have erected here is necessarily a House of the Lord, but isn't the worship of God a matter of how you feel in your heart rather than the verbal forms and the ceremonials used?"

"That's true, Major, every word you've said is gospel -- but I just don't feel right about it."

Ardmore could see that Calhoun had been listening to this discussion with poorly concealed impatience. He decided to terminate it. "Alec, I want you to go now and think this over by yourself. Come see me tomorrow. If you can't reconcile this work to your conscience, I'll give you an unprejudiced discharge as a conscientious objector. It won't even be necessary for you to serve in the kitchen."

"I wouldn't want to go that far, Major. It seems to me --"

"No, really. If one is wrong, so is the other. I don't want to be responsible for requiring a man to do anything that might be a sin against his faith. Now you get along and think about it."

Ardmore hustled him out without giving him a chance to talk further.

Calhoun could contain himself no longer. "Well, really, Major, I must

say! Is it your policy to compromise with superstition in the face of military necessity?"

"No, Colonel, it is not -- but that superstition, as you call it, is in this case a military fact. Howe's case is the first example of something we are going to have to deal with -- the attitude of the orthodox religions to the one we have trumped up."

"Maybe," suggested Wilkie, "we should have imitated the more usual religions."

"Perhaps. Perhaps. I thought of that, but somehow I couldn't see it. I can't picture one of us standing up and pretending to be a minister, say, of one of the regular protestant churches. I'm not much of a churchgoer, but I didn't think I could stomach it. Maybe when it comes right down to it, I'm bothered by the same thing that bothers Howe. But we've got to deal with it. We've got to consider the attitude of the other churches. We mustn't tread on their toes in any way we can help."

"Maybe this would help," Thomas suggested. "It could be one of the tenets of our church that we included and tolerated, even encouraged, any other form of worship that a man might favor. Besides that, every church, especially these days, has more social work than it can afford. We'll give the others financial assistance with no strings attached."

"Both of those things will help," Ardmore decided, "but it will be ticklish business. Whenever possible, we'll enlist the regular ministers and priests themselves. You can bet that every American will be for us, if he understands what we are aiming toward. The problem will be to decide which ones can be trusted with the whole secret. Now about Denver, Jeff, do you want to start back right away, tomorrow, maybe?"

"How about Howe?"

"He'll come around, I think."

"Just a moment, Major." It was Dr. Brooks, who had been sitting quietly, as usual, while the others talked. " I think it would be a good idea if we waited a day or two, until Scheer can make certain changes in the power units of the staffs."

"What sort of changes?"

"You will remember that we established experimentally that the Ledbetter effect could be used as a sterilizing agent?"

"Yes, of course."

"That is why we felt safe in predicting that we would help the sick. As a matter of fact we underestimated the potentialities of the method. I infected myself with anthrax earlier this week --"

"Anthrax! For God's sake, Doctor, what in the world do you mean by taking a chance like that?"

Brooks turned his mild eyes on Ardmore. "But it was obviously necessary," he explained patiently. "The guinea pig tests were positive, it is true, but human experimentation was necessary to establish the method. As I was saying, I infected myself with anthrax and permitted the disease to establish itself, then exposed myself to the Ledbetter effect in all wave lengths except that band of frequencies fatal to warm-blooded vertebrates. The disease disappeared. In less than an hour the natural balance of anabolism over catabolism had cleared up the residue of pathological symptoms. I was well."

"I'll be a cross-eyed intern! Do you think it will work on other diseases just as quickly?"

"I feel sure of it. Not only has such been the result with other diseases in the animal experimentation that I have conducted, but because of another unanticipated, though experimentally predictable, result. I've suffered from a rather severe cold in the head lately, as some of you may have noticed. The exposure not only cured the anthrax, it completely cleared up my cold. The cold virus involves a dozen or more known pathogenic organisms, and probably as many more unknown ones. The exposure killed them all, indiscriminately."

"I'm delighted to get this report, Doctor," Ardmore answered. "In the long run this one development may be of more importance to the human race than any military use we may make of it now. But how does it affect the matter of establishing the branch church in Denver?"

"Well, sir, perhaps it doesn't. But I took the liberty of having Scheer modify one of the portable power units in order that healing might be conveniently carried on by any one of our agents even though equipped only with the staff. I thought you might prefer to wait until Scheer could add the same modification to the staffs designed to be used by Thomas and Howe."

"I think you are right, if it does not take too long. May I see the modification?"

Scheer demonstrated the staff he had worked over. Superficially it looked no different from the others. A six-foot rod was surmounted by a capital in the form of an ornate cube about four inches through. The faces of the cube were colored to correspond with the sides of the great temple. The base of the cube and the staff itself were covered with intricate designs in golden scroll-work, formal arabesques, and delicate bas-relief -- all of which effectively concealed the controls of the power unit and projector located in the cubical capital.

Scheer had not changed the superficial appearance of the staff; he had simply added an additional circuit internally to the power unit in the cube which constrained it to oscillate only outside the band of frequencies fatal to vertebrate life. This circuit controlled the action of the power unit and projector whenever a certain leaf in the decorative design of the staff was pressed.

Scheer and Graham had labored together to create the staff's designing and redesigning to achieve an integrated whole in which mechanical action would be concealed in artistic camouflage. They made a good team. As a matter of fact their talents were not too far apart; the artist is two-thirds artisan and the artisan has essentially the same creative urge as the artist.

"I would suggest," added Brooks, when the new control had been explained and demonstrated, "that this new effect be attributed to Tamar, Lady of Mercy, and that her light be turned on when it is used."

"That's right. That's the idea," Ardmore approved. "Never use the staff for any purpose without turning on the color light associated with the particular god whose help you are supposed to be invoking. That's an invariable rule. Let 'em break their hearts trying to figure out how a simple monochromatic light can perform miracles."

"Why bother with the rigamarole?" inquired Calhoun. "The PanAsians can't possibly detect the effects we use in any case."

"There is a double reason, Colonel. By giving them a false lead to follow we hope to insure that they will bend their scientific efforts in the wrong direction. We can't afford to underestimate their ability. But even more important is the psychological effect on nonscientific minds, both white and yellow. People think things are wonderful that look wonderful. The average American is completely unimpressed by scientific wonders; he expects them, takes them as a matter of course with an attitude of 'So what? That's what you guys are paid for.'

"But add a certain amount of flubdub and hokum and don't label it

'scientific' and he will be impressed. It's wonderful advertising."

"Well," said Calhoun, dismissing the matter, "no doubt you know best -- you have evidently had a great deal of experience in fooling the public. I've never turned my attention to such matters; my concern is with pure science. If you no longer need me here, Major, I have work to do."

"Certainly, Colonel, certainly! Go right ahead, your work is of prime importance . . .

"Still," he added meditatively, when Calhoun had gone, "I don't see why mass psychology shouldn't be a scientific field. If some of the scientists had taken the trouble to formulate some of the things that salesmen and politicians know already, we might never have gotten into the mess we're in."

"I think I can answer that," Dr. Brooks said diffidently.

"Huh? Oh, yes, Doctor -- what were you going to say?"

"Psychology is not a science because it is too difficult. The scientific mind is usually orderly, with a natural love for order. It resents and tends to ignore fields in which order is not readily apparent. It gravitates to fields in which order is easily found such as the physical sciences, and leaves the more complex fields to those who play by ear, as it were. Thus we have a rigorous science of thermodynamics but are not likely to have a science of psychodynamics for many years yet to come."

Wilkie swung around so that he faced Brooks. "Do you really believe that, Brooksie?"

"Certainly, my dear Bob."

Ardmore rapped on his desk, "It's an interesting subject, and I wish we could continue the discussion, but it looks like rain, and the crops still to get in. Now about this matter of founding a church in Denver -- anybody got any ideas?"

CHAPTER SIX

Wilkie said, " I'm glad I don't have to tackle it. I wouldn't have the slightest idea where to start."

"Ah, but you may have to tackle it, Bob," Ardmore countered. "We may all have to tackle it. Damn it -- if we only had a few hundred that we could

depend on! But we haven't; there are only nine of us." He sat still for a moment, drumming the table. "Just nine."

"You'll never get Colonel Calhoun to make noises like a preacher," commented Brooks.

"Okay, then -- eight. Jeff, how many cities and towns are there in the United States?"

"And you can't use Frank Mitsui," persisted Brooks. "For that matter, while I'm willing enough I don't see how you can use me. I haven't any more idea of how to go about setting up a fake church than I have about how to teach ballet dancing."

"Don't fret about it, Doctor, neither have I. We'll play by ear. Fortunately there aren't any rules. We can cook it up to suit ourselves."

"But how are you going to be convincing?"

"We don't have to be convincing -- not in the sense of getting converts. Real converts might prove to be a nuisance. We just have to be convincing enough to look like a legitimate religion to our overlords. And that doesn't have to be very convincing. All religions look equally silly from the outside. Take the --" Ardmore caught a look on Scheer's face and said, "Sorry! I don't mean to tread on anybody's toes. But it's a fact just the same and one that we will make military use of. Take any religious mystery, any theological proposition: expressed in ordinary terms it will read like sheer nonsense to the outsider, from the ritualistic, symbolic eating of human flesh and blood practiced by all the Christian sects to the outright cannibalism practiced by some savages."

"Wait a minute, now!" he went on. "Don't throw anything at me. I'm not passing judgments on any religious beliefs or practices; I'm just pointing out that we are free to do anything at all, so long as we call it a religious practice and so long as we don't tread on the toes of the monkey men. But we have to decide what it is we are going to do and what it is we are going to say."

"It's not the double-talk that worries me," said Thomas. "I just stuck to saying nothing in big words and it worked out all right. It's the matter of getting an actual toe hold in the cities. We just haven't got enough people to do it. Was that what you were thinking about when you asked me how many cities and towns there are in the country?"

"Mmm, yes. We can't act we don't dare act, until we cover the United

States like a blanket. We'll have to make up our minds to a long war."

"Major, why do you want to cover every city and town?"

Ardmore looked interested. "Keep talking."

"Well," Thomas went on diffidently, "from what we've already learned the PanAsians don't maintain real military force in every hamlet. There are between sixty and seventy-five places that they have garrisoned. Most towns just have a sort of combination tax collector, mayor, and chief of police to see that the orders of the Hand are carried out. The local panjandrum isn't even a soldier, properly speaking, even though he goes armed and wears a uniform. He's sort of an M. P., a civil servant acting as a military governor. I think we can afford to ignore him; his power wouldn't last five minutes if he weren't backed up by the troops and weapons in the garrisoned cities."

Ardmore nodded. "I see your point. You feel that we should concentrate on the garrisoned towns and cities and ignore the rest. But look, Jeff, we mustn't underestimate the enemy. If the Great God Mota shows up nowhere but in the garrisoned spots it's going to look mighty funny to some intelligence officer among the PanAsians when he gets to fiddling with the statistics of the occupied country. I think we've got to show up elsewhere and. anywhere."

"And I respectfully suggest that we can't, sir. We haven't men enough to pull it off. We'll have trouble enough recruiting and training enough men to set up a temple in each of the garrisoned cities."

Ardmore chewed a thumbnail and looked frustrated. "You're probably right. Well, confound it, we won't get anywhere at all if we sit here worrying about the difficulties. I said we'd have to play by ear and that's what we'll do. The first job is to get a headquarters set up in Denver. Jeff, what are you going to need?"

Thomas frowned. "I don't know. Money, I suppose."

"No trouble about that," said Wilkie. "How much? I can make you half a ton of gold as easily as half a pound."

"I don't think I can carry more than about fifty pounds."

"I don't think he can spend bullion very easily," Ardmore commented. "It should be in coin."

"I can use bullion," Thomas insisted. "All I have to do is to take it to

the Imperial bank. Panning gold is encouraged; our gracious masters charge one hell of a stiff seigniorage."

Ardmore shook his head. "You're missing the propaganda aspect. A priest in long robes and a flowing beard doesn't whip out a check book and a fountain pen; it's out of character. I don't want you to have a bank account anyhow; it will give the enemy detailed records of just what you are doing. I want you to pay for things with beautiful, shiny golden coins, stacks of them. It will make a tremendous impression. Scheer, are you any good at counterfeiting?"

"I've never tried it, sir."

"No time like the present. Every man needs an alternative profession. Jeff, you didn't have any chance to pick up an Imperial gold coin, did you? We need a model."

"No, I didn't. But I suppose I could get one, if I sent word out among the Us that I needed one."

"I hate to wait. But you've got to have money to tackle Denver."

"Does it have to be Imperial money?" asked Doctor Brooks.

"Eh?"

The biologist hauled a five dollar gold piece from his pocket. "Here's a lucky piece I've carried since I was a kid. I guess this is a lucky time to let it go."

"Hmm . . . How about it, Jeff? Can you pass American money?"

"Well, American paper money is no good, but gold coin -- My guess is that those leeches probably won't object, so long as it's gold -- at the bullion price, at least. I'm sure that Americans will take it."

"We don't care how much they discount it." Ardmore took the coin and chucked it to Scheer. "How long will it take you to make forty or fifty pounds of those?"

The master sergeant studied it. "Not long if I pour them rather than stamp them. You want them all just alike, sir?"

"Why not?"

"Well, sir, there's the matter of the date."

"Oh! I get you. Well, that's the only pattern we have; I guess we'll just have to hope that they either won't notice or won't care."

"If you can allow me just a little more time I think I could fix it, sir. I make about twenty or so with this as a pattern, then I'll do a little hand work and put a different date on each one. That will give me twenty different patterns instead of one."

"Scheer, you have the soul of an artist. Do it that way. While you are about it, you had better vary the scratches and wear marks on each."

"I had thought of that, sir."

Ardmore grinned. "This team is going to be a headache to His Imperial Nastiness yet. Well, how about it, Jeff? Any more points to settle before we adjourn the meeting?"

"Just one, boss. How do I get to Denver? .Or how do we get there, assuming that Howe comes along?"

"I thought you would bring that up. It's a sticky question; we can't expect the Hand to provide you with a helicopter. How are your feet? Any broken arches? Corns and bunions?"

"I'll be switched if I want to walk. It's a long way. "

"Don't blame you. And the devil of it is that it's a problem we're going to have with us from now on, if we are going to organize all over the country."

"I don't understand the difficulty," put in Brooks. "I thought citizens were still allowed to ride anything but aircraft?"

"Sure -- with travel permits and endless red tape. Never mind," Ardmore continued, "the day will come when the costume of a priest of Mota will be all the travel permit we'll need. If we work this right, we'll be teacher's pet with all sorts of special privileges. In the meantime the trick is to get Jeff into Denver without attracting undue attention and without wearing out his feet. Say, Jeff, you never did tell me how you traveled. Somehow we missed that."

"I hitch-hiked. Quite a chore, too. Most of the truckers are too scared of the security police to risk it."

"You did? You shouldn't have, Jeff: The priests of Mota do not

hitch-hike. It doesn't fit in with miracle working."

"Well, what do they do? Dawggone it, Major, if I had walked I would still be on the way -- or more likely arrested by some flunky who hadn't gotten the news yet." Thomas' face showed irritation most unusual in him.

"Sorry. I shouldn't second-guess you. But we will have to figure out a better way."

"Why don't I just run him down in one of the scout cars?" asked Wilkie. "At night, of course."

"Night doesn't mean anything to radar, Bob. They would shoot you out of the sky."

"I don't think so. We have an almost unlimited amount of power at our disposal -- sometimes it scares me when I try to think how much. I believe I can rig a radar beacon effect that will burn out any radar set that is turned on us."

"Giving notice to the enemy that there is still someone around capable of hanky-panky with electronics? We mustn't tip our hand so soon, Bob."

Wilkie shut up, crestfallen. Ardmore thought it over. "And yet we've got to take chances. You rig your rig, Bob -- then plan on hedgehopping all the way. We'll do it about three or four o'clock in the morning and there's a chance that you won't be noticed at all. Use your rig if you have to but if you do then everyone is to return to base. The incident must not be connected with the priests of Mota, even in the matter of timing. The same applies after Wilkie sets you down, Jeff. If by any chance you are surprised, use the Ledbetter effect to kill off all the enemy anywhere close to you -- then go underground. Jungle up. Under no circumstances is any PanAsian to be permitted to suspect that the priests of Mota are anything but what they seem. Kill off your witnesses and escape."

"Right, boss."

The little scout car hovered over Lookout Mountain a few feet away from Buffalo Bill's grave. The door opened and a robed priest dropped to the ground, stumbling because of the heavy money belt slung from his shoulders and waist. A similar figure followed him and landed a bit more surefootedly. "You all right, Jeff"

"Sure."

Wilkie left the car on automatic long enough to lean out and say, "Good luck!"

"Thanks. But shut up and get going."

"Okay." The door closed and the car disappeared into the night.

It was growing light by the time Thomas and Howe reached the foot of the mountain and started into Denver. So far as they knew they had not been detected although once they had crouched in bushes for several minutes, afraid to breathe, while a patrol passed. Jeff had kept his staff ready, a thumb resting lightly on a golden leaf in the decorations below the cube of Mota. But the patrol passed on, unaware of the curbed lightnings trained on them.

Once in the city and in daylight they made no further attempt to avoid attention. Few PanAsians were about so early; members of the slave race scurried along the streets, on their way to their labors, but the master race still slept. The Americans who saw them stared briefly but did not stop them nor speak to them; native Americans had already learned the first law of police states: mind your own business; don't be nosy!

Jeff deliberately sought out an encounter with a PanAsian policeman. He and Alec stepped down from the curb, switched on their shields and waited. No Americans were nearby; the presence of occupation police caused them to melt into walls. Jeff wet his lips and said "I'll do the talking, Alec. "

"Suits me."

"Here he comes. Oh, my god, Alec, switch on your halo!"

"Huh?" Howe reached a finger up under his turban behind his right ear; the halo, shimmering iridescent light, sprang into being over his head. It was a mere ionization effect, a parlor trick of the additional spectra, less mysterious than natural aurora, but it looked good.

"That's better," Jeff acknowledged, from the side of his mouth. "What's the matter with your beard?"

"It keeps coming unstuck. I sweat."

"Don't let it come unstuck now! Here he comes --" Thomas struck the benediction pose; Howe followed suit. Jeff intoned, "Peace be unto you, Master!"

The Asiatic cop stopped. His knowledge of English was limited to halt, come along, and show your card; he depended on his club to keep the dogs in line. On the other hand he recognized the get up; it matched a picture on a notice newly posted in the barracks, this was one of the many silly things the slaves were allowed to do.

Still, a slave was a slave and must be kept in line. All slaves must bow; these slaves were not bowing. He cracked his club at the midriff of the nearer slave.

The nightstick bounced off before it reached the robed figure; the cop's fingers tingled as if he swung on something quite hard. "Peace be unto you!" Jeff rumbled again and watched him narrowly. The fellow was armed with a vortex pistol; Jeff was not afraid of it but it was no part of his plan to let the creature discover that he was immune to the Emperor's weapons. He was sorry that he had to use the shield against a blow from a stick and hoped that the PanAsian would not be able to believe the evidence of his own senses.

Certainly the man was startled. He looked at his stick, started to draw it back as if to swing again, then appeared to change his mind. He resorted to his meager supply of English. "Come along!"

Jeff raised his hand again. "Peace be unto you! It is not meet that the farjon should ripsnipe the cuskapads in the sight of the great lord Mota! Franchope!" He pointed to Howe.

The cop looked doubtful, then moved a few feet away to the street corner, glanced up and down and blew his whistle. Alec whispered, "What did you point to me for?"

"I don't know. It seemed like a good idea. Watch it!"

Another cop came trotting up; the pair approached Howe and Thomas. The new one seemed to be in authority over the first; they held a short discussion in meaningless singsong, then the later arrival came close, drawing his pistol as he did so. "You fellow boys, come along now quick!"

"Come, Alec." Thomas fell in with the policemen, switching off his shield as he did so. He hoped that Alec would notice that he had done so and conformed, it seemed a good notion not to advertise the existence of the shields -- not yet, at least.

The PanAsian conducted them to the nearest police station. Jeff walked briskly along, giving unctuous blessings to one and all. As they neared the station the senior cop sent the other trotting on ahead. When the

party arrived they found the officer in charge waiting in the doorway, apparently curious to see these queer fish his men had hooked.

He was both curious and very much on his toes; the officer knew the circumstances under which the unfortunate lieutenant who had first turned up these strange holy men had gone to his ancestors. He was determined not to make a mistake which would cause him to lose face.

Jeff marched up to him, struck his pose and said, "Peace be unto you! Master, I have a complaint to make about your servants. They have stopped us from carrying out our holy work, work which is blessed by His Serene Highness himself, the Imperial Hand!"

The officer fingered his swagger stick, then spoke in his own language to his subordinates. He turned back to Jeff. "Who are you?"

"A priest of the great god Mota. "

The PanAsian asked the same question of Alec; Jeff interceded. "Master," he said hastily, "he is a most holy man who has taken a vow of silence. If you force him to break it the sin will be on your head."

The officer hesitated. The bulletin concerning these crazy savages had been most pointed, but it had given no clear precedents for dealing with them. He hated to establish precedents; those who did so were sometimes promoted, more frequently they joined their ancestors. "He need not break his holy vow. But show me your cards, both of you."

Jeff looked amazed. "We are humble, nameless holy men, serving the great god Mota. What have we to do with such?"

"Hurry up!"

Jeff tried to look sad rather than nervous. He had rehearsed this speech in his mind; much depended on it getting across. "I am sorry for you, young Master. I will pray to Mota on your behalf. But now I must insist that you take me before the Hand of the Emperor -- at once!"

"That's impossible."

"His Highness has seen me before; he will see me again. The Hand of the Emperor is always ready to see the servers of the great god Mota."

The officer looked at him, turned and went back into the station house. They waited.

"Do you suppose he'll actually have us taken before the prince?" Howe whispered.

"I hope not. I don't think so."

"Well, what will you do if he does?"

"Whatever I have to. Shut up -- you're supposed to be under a vow of silence."

The officer came back after several minutes and said curtly, "You are free to go."

"To the Imperial Hand?" Jeff inquired maliciously.

"No, no! Just go. Get out of my district.,"

Jeff stepped back one pace and delivered a last benediction. The two "priests" turned away. From the corner of his eye Jeff saw the officer lift his swagger stick and cut savagely at the senior of the two policemen; he pretended not to see. He walked about a block before he spoke to Howe. "There! We should have no more trouble for a while."

"How do you figure? You sure got him sore at us."

"That's not the point. We can't afford to have him or any other cop thinking he can push us around like the others. By the time we have gone three blocks the word will be all over town that I'm back and to lay off. That's the way we've got to have it."

"Maybe so. I still think it's dangerous to have the cops on the alert for us."

"You don't understand," Jeff said impatiently. "There isn't any other safe way to do it. Cops are cops, no matter what is the color of their skin. They deal in fear and they understand fear. Once they understand we can't be touched, that it is very bad medicine to bother us, they'll be as polite to us as they are to their superiors. You'll see."

"I hope you're right."

"I'm right. Cops are cops. Pretty soon we'll have them on our payroll. Oh, oh! Watch it, Alec -- here comes another one." A PanAsian policeman was dogtrotting up behind them. However, instead of overtaking them or calling to them to halt, he crossed over and kept abreast with them on the other side of the street. He ignored them determinedly.

"What's up, d'you think, Jeff?"

"We're being chaperoned. A good thing, Alec the rest of the monkeys won't bother us now. We'll just get on with our job. You know this town pretty well, don't you? Where do you think we ought to locate the temple?"

"I guess that depends on what you are looking for."

"I don't know exactly." He stopped and wiped sweat from his face; the robes were hot and the money belt made it worse. "Now that I'm here, this whole deal seems silly. I guess I wasn't meant to be a secret agent. How about out in the west end, in the expensive neighborhood? We want to make a big impression.

"No, I don't think so, Jeff. There are just two kinds of people out in the rich neighborhoods now."

"Yes?"

"PanAsians and traitors -- black market dealers and other sorts of collaborationists."

Thomas looked shocked. "I guess I've been out of circulation too long. Alec, until this very minute it never occurred to me that an American -- any American -- would go along with the invaders."

"Well, I wouldn't have believed it either, if I hadn't seen it. I guess some people will do anything, born pimps."

They settled on an empty warehouse downtown near the river in a. populous, poor neighborhood. The area had long been rundown; now it was depressed. Three out of four shops were boarded up; trade had stagnated. The building was one of many empty warehouses; Thomas picked it because of its almost cubical shape, matching that of the mother temple and the cube on his staff, and the fact that it was detached from other buildings by an alley on one side and a vacant lot on the other.

The main door was broken. They peered in, entered and snooped around. The place was a mess but the plumbing was intact and the walls were sound. The ground floor was a single room with a twenty foot ceiling and few pillars; it would do for "worship."

"I think it will do," Jeff decided. A rat jumped out of a pile of rubbish heaped against one wall. Almost absentmindedly he trained his

staff on it; the animal leaped high and dropped dead. "How do we go about buying it?"

"Americans can't own real estate. We'll have to find out what official holds the squeeze on it."

"That oughtn't to . be hard." They went outside; their police chaperone waited across the street. He looked the other way.

The streets were fairly well filled by now, even in this neighborhood. Thomas reached out and snagged a passing boy -- a child of not more than twelve but with the bitter, knowing eyes of a cynical man. "Peace be unto you, son. Who rents this building?"

"Hey, you let go of me!"

"I mean you no harm." He handed the boy one of Scheer's best five dollar gold pieces.

The boy looked at it, let his eyes slide past them to the Asiatic guard across the street. The PanAsian did not seem to be watching; the lad caused the coin to disappear. "Better see Konsky. He has all the angles on things like that."

"Who is Konsky?"

"Everybody knows Konsky. Say, grandpa, what's the idea of the funny clothes? The slanties'll make trouble for you."

"I am a priest of the great god Mota. The Lord Mota takes care of his own. Take us to this Konsky."

"Nothing doing. I don't want to tangle with the slanties." The boy tried to wriggle away; Jeff held his arm firmly and produced another coin. He did not hand it over.

"Fear not. The Lord Mota will protect you, too."

The youngster looked at it, glanced around, and said, "Okay. Come along."

He led them around a corner and to a walk-up office building located over a saloon. "He's up there if he's in." Jeff gave the boy the second coin and told him to come see him again, at the warehouse, as the Lord Mota had gifts for him. Alec questioned the wisdom of this as they climbed the stairs.

"The kid's all right," said Jeff. "Sure, the things that have happened to him have turned him into a guttersnipe. But he's on our side. He'll advertise us -- and not to the PanAsians."

Konsky turned out to be a blandly suspicious man. It was soon evident that he "had connections," but he was slow to talk until he saw the red gold color of money. After that he was not in the least put off by the odd dress and odd manners of his clients (Thomas gave him the full treatment, with benedictions thrown in, aware that Konsky would discount it but for the purpose of staying in character). He made sure of the building Thomas meant, dickered over the rental and the bribe -- he called it "charges for special services" -- and left them.

Thomas and Howe were glad to be left alone. Being a "holy man" had disadvantages; they had had nothing to eat since leaving the Citadel. Jeff dug sandwiches out from under his robes; they munched them. Best of all, there was a washroom adjoining Konsky's office.

Three hours later they were in possession of a document, the English translation of which stated that the Heavenly Emperor was graciously pleased to grant to his faithful subjects etc., etc., -- a lease paid up on the warehouse. In exchange for another unreasonable amount of money Konsky agreed to stir up enough labor to clean the place at once, that very day, and to provide certain repairs and materials. Jeff thanked him and with a straight face invited him to attend the first services to be held in the new temple.

They trudged back to the warehouse. Once out of Konsky's earshot Jeff said, "Y' know, Alec, we're going to make lots of use of that character -- but when the day comes, well, I've got a little list and he's at the top of it. I mean to take care of him myself."

"Split him with me," was Howe's only comment.

The street urchin popped up from nowhere when they reached the warehouse. "Any more errands, grandpa?"

"Bless you, son. Yes, several." After another financial transaction the boy left to find cots and bedding for them. Jeff watched his departure and said, " I think I'll make an altar boy out of that lid. He can go places and do things that we can't -- and the cops aren't so likely to stop a person that age."

"I don't think you should trust him."

"I won't. So far as he will ever know we are a couple of crackpots,

firmly convinced that we are priests of the

great god Mota. We can't afford to trust anybody, Alec, until we are sure of them. Come on let's kill ail the rats in

this place before the cleaners get here. Want me to check the setting on your staff?"

By nightfall the First Temple of Denver of the Lord Mota was a going concern, even though it still looked like a warehouse and had no congregation. The place reeked of disinfectant, the rubbish was gone, and the front door would lock. There were two beds of sorts and groceries enough to last two men a fortnight.

Their chaperone from the police force was still across the street.

The police guard stayed with them for four days. Twice squads of police came and searched through the place. Thomas let them; as yet there was nothing to hide. Their staffs were still their only source of power and the only Ledbetter communicator they had with them gave Howe a slightly hunch-backed appearance in the day time; he wore it while Thomas wore the money belt.

In the meantime through Konsky they acquired a fast and powerful ground car -- and permission to drive it, or have it driven, anywhere in the jurisdiction of the Hand. The "charge for special services" was quite high. The driver they hired for it was root acquired through Konsky, but indirectly through Peewee Jenkins, the boy who had helped them on the first day.

The watch was withdrawn from them around noon on the fourth day. That afternoon Jeff left Howe to hold the place and went back to the Citadel by car. He returned with Scheer, who looked vastly uncomfortable and out of character in priestly vestments and beard but who bore with him a cubical chest enameled in the six sacred colors of Mota. Once inside the warehouse with the door locked Scheer opened the chest with great care and in a particular fashion which prevented it from exploding and taking them and the building with it. He got very busy on the newly constructed "altar." He finished shortly after midnight; there was more work to do outside, with Thomas and Howe standing guard, ready to stun or kill if necessary to prevent the sergeant being interrupted.

The morning sun fell on a front wall of emerald green, the other walls were red and golden and deep sky blue. The temple of Mota was ready for converts -- and for others.

Most important, none but a Caucasian could now pass through its door with impunity.

An hour before daylight Jeff posted himself at the door and waited nervously. The sudden transformation was sure to stir up another search squad; if necessary he must stop them, stun, or even kill -- but no search could be permitted. He hoped to dissuade; the temple must be established as an enclave used only by the slave race. But a slight excess of zeal on the part of an underling could force him to violent means, and thereby destroy the hope of peaceful penetration.

Howe came up behind him and made him jump. "Uh? Oh, Alec! Don't do that. I'm nervous as a cat already. "

"Sorry. Major Ardmore is on the circuit. He wants to know how you are making out."

"You'll have to talk to him. I can't leave the door."

"He wants to know when Scheer will be back, too."

"Tell him I'll send him back just as soon as I know it's safe to step outside this door and not a minute sooner."

"O. K. " Howe turned away. Jeff looked back at the street and felt the hair on his neck stand up. A PanAsian in uniform was staring curiously at the building. The foreigner stood for a moment, then went away at the dog trot they all affected when moving on duty.

"Mota, old boy," Jeff said to himself. "It's time to do your stuff."

Less than ten minutes later a squad arrived commanded by the same officer who had searched the building before. "Stand aside, Holy One."

"No, Master," Jeff said firmly, "the temple is now consecrated. None may enter but worshipers of the Lord Mota."

"We will not harm your temple, Holy One. Stand aside. "

"Master, if you enter I cannot save you from the wrath of the Lord Mota. Nor can I save you from the wrath of the Imperial Hand." Before the officer had time to turn this over in his mind Jeff went quickly on, "The Lord Mota expected this visit from you and greets you. He bids me, his humble servant, to make you three gifts."

"Gifts?

"For yourself --" Jeff laid a heavy purse in his hand. "For your superior officer, may his name be blessed -- " A second purse followed. "-- and for your men." A third purse was added; the PanAsian was forced to use both hands.

He stood there for a moment. There could be no doubt in his mind, from the weight alone, as to what the purses contained. It was more gold than he had ever handled in his life. Shortly he turned, barked an order at his men, and strode away.

Howe came up again. "You made it, Jeff?"'

"This round, at least." Thomas watched the squad move up the street. "Cops are all alike, the world over. Reminds me of a railroad dick I once knew."

"Do you think he'll share it out the way you suggested?"

"The men won't get any, that's sure. He may split with his boss, to keep him quiet. He'll probably find some way to hide the third lot of loot before he gets back to the station. What I'm wondering is: is he an honest politician?"

"Huh?"

"'An honest politician is one that stays bought.' Come on, let's get ready for customers."

They held their first services that evening. As church services they were nothing much, since Jeff was still feeling out the art. They conformed to the good old skid-road mission principle: sing a hymn and eat a meal. But the meal was good red meat and white bread -- and the recipients had not eaten that well in many months.

CHAPTER SEVEN

"Hello? Hello? Jeff, are you there? Can you hear me?"

"Sure I can hear. you. Don't shout, Major."

"I wish these damn rigs were regular telephones. I like to see a man I'm talking to."

"If they were ordinary phones our Asiatic pals could listen in on us. Why don't you ask Bob and the colonel to whip up a vision circuit? I'll

bet they could do it."

"Bob has already done so, Jeff, but Scheer is so busy machining parts for altar installations that I don't like to ask him to make it. Do you suppose you could recruit some assistants for Scheer? A machinist or two, maybe, and a radio technician? The manufacturing end of this enterprise is getting out of hand and Scheer is going to crack up from overwork. Every night I have to go around and order him to go to bed."

Thomas thought about it. "I have one man in mind. Used to be a watchmaker."

"A watchmaker! That's swell!"

"I don't know. He's a little bit balmy; his whole family was wiped out. A sad case, almost as sad as Frank Mitsui. Say, how. is Frank? Is he feeling any better?"

"Seems to be. Not down inside of course, but he seems happy enough at his work. He's taken over the kitchen and the clerical work you used to do for me, both."

"Give him my best."

"I will. Now about this watchmaker -- you don't have to be as careful in recruiting personnel for the Citadel as you have to be in picking field workers, since once they are inside they can't get out."

"I know that, boss. I didn't use any special tests when I sent you Estelle Devens. Of course I wouldn't have sent her if she hadn't been about to be shipped out as a pleasure girl."

"You did all right. Estelle is a fine woman. She helps Frank in the kitchen, she helps Graham sew the robes, and Bob Wilkie is training her as a pararadio operator." Ardmore chuckled. "Sex is rearing its interesting head. I think Bob is sweet on her."

Thomas's voice was suddenly grave. "How about that, boss? Is it likely to louse things up?"

"I don't think so. Bob is a gentleman and Estelle is a nice girl if I ever saw one. If biology starts getting in the way of their work, I'll just up and marry them, in my capacity as high priest of the supercolossal god Mota."

"Bob won't go for that. He's a bit of a puritan, if you ask me."

"All right then, in my capacity as chief magistrate of this thriving little village. Don't be stuffy. Or send me up a real preacher."

"How about sending up more women, Major? I sent Estelle on impulse, more or less, but there are many more young women just as badly in need of help as she was."

There was a long wait before Ardmore replied, "Captain, that is a very difficult question. Most reluctantly I am forced to say that this is a military organization at war, not a personal rescue mission. Unless a female is being recruited for a military function to which she is adapted, you are not to recruit her, even to save her from the PanAsians' pleasure cities."

"Yes, sir. I will comply. I shouldn't have sent Estelle. "

"What's done is done. She's working out all right. Don't hesitate to recruit suitable women. This is going to be a long war and I think we can maintain morale better with a mixed organization than with a strictly stag setup. Men without women go to pieces; they lose purpose. But try to make the next one an older woman, something between a mother superior and a chaperone. An elderly trained nurse would be the type. She could be lab assistant to Brooks and house mother to the babes, both."

"I'll see what I can find."

"And send up that watchmaker. We really need him."

"I'll give him a hypo test tonight."

"Is that necessary, Jeff? If the PanAsians killed his family you can be sure of his sentiments."

"That's his story. I'll feel a lot safer if I hear him tell it when he's doped. He might be a ringer you know."

"O.K., you're right, as usual. You run your show; I'll run mine. When are you going to be able to turn the temple over to Alec, Jeff? I need you here."

"Alec could take it now, just to run it. But as I understand it, my prime duty is to locate and recruit more 'priests,' ones capable of going out in the field and starting a new cell alone."

"That's true, but can't Alec do that? After all, the final tests will be given here. We agreed that never, under any circumstances, would the true nature of what we are doing be revealed to anyone except after we got him inside the Citadel and under our thumbs. If Alec makes a mistake in picking a man it won't be fatal."

Jeff turned over in his mind what he wanted to say. "Look, boss, it may seem simple from where you sit; it doesn't look simple from here. I --" He paused.

"What's the matter, Jeff? Got the jitters?"

"I guess so."

"Why? It seems to me the operation is proceeding according to plan."

"Well, yes -- maybe. Major, you said this would be a long war."

"Yes?"

"Well, it can't be. If it's a long war, we'll lose it." "But it's got to be. We don't dare move until we have enough trusted people to strike all over the country at once."

"Yes, yes, but that's got to be the shortest possible time. What would you say was the greatest danger that faces us?"

"Huh? Why the chance that someone might give us away, either accidentally or on purpose."

"I don't agree, sir -- not at all. That's your opinion because you see it from the Citadel. From here I see an entirely different danger -- and it worries me all the time."

"Well, what is it, Jeff? Give."

"The worst danger -- and it hangs like a sword over our heads all the time -- is that the PanAsian authorities may grow suspicious of us. They may decide that we can't be what we pretend to be -- just another phony western religion, good to keep the slaves quiet. If they once get that idea before we are ready, we're finished."

"Don't let it get you nervy, Jeff: In a pinch, you've got enough stuff to fight your way back to base. They can't use an atom bomb on you in one of their own capitals -- and Calhoun says that the new shield on the Citadel will stop even an atom bomb."

"I doubt it. But what good would it do us if it did? Suppose we could hole up there until we died of old age: if we don't dare stick our noses out we can't win back the country!"

"Mmm . . . no -- but it might give us time to think of something else."

"Don't kid yourself, Major. If they catch on, we're licked -- and the American people lose their last chance this generation, at least. There are still too few of us, no matter what weapons Calhoun and Wilkie can cook up."

"Suppose I concede your point: you knew all this when you went out. Why the panic? Battle fatigue?"

"You can call it that. But I want to discuss the dangers as I see them here in the field. If we really were a religious sect, with no military power, they'd leave us alone till hell froze. Right?"

"Check. "

"Then the danger lies in the things we have to do to cover up the fact that we've got a lot of stuff we aren't supposed to have. Those dangers are all out here in the field. First --" Thomas ticked them off on his fingers, oblivious to the fact that his commanding officer could not see him. "-- is the shield of the temple. We've got to have it; this place can't stand a search. But it would be almost as bad if we had to use it. If any senior PanAsian gets the notion to inspect in spite of our immunity, school is out for sure; I don't dare kill him and I don't dare let him come in. So far, by the grace of God, a lot of doubletalk, and the liberal use of bribes, I've been able to turn them away."

"They already know that we've got the temple shields, Jeff; they've known it from the first day we made contact here."

"Do they, now? I don't think so. Thinking back over my interview with the Hand I'm convinced that that officer who tried to force his way into the mother temple wasn't believed when he made his report. And you can bet your last cookie he is dead now; that's the way they work. The common soldiers that were there don't count. The second hazard is the personal shield that we 'priests' carry. I've used mine just once and I'm sorry I did. Fortunately he was just a common soldier, too. He wouldn't report it; he wouldn't be believed and he would lose face."

"But, Jeff, the 'priests' have got to wear shields; we can't let a staff fall into enemy hands -- not to mention the fact that the monkeys might

be able to drug an unshielded 'priest' before he could suicide."

"You're telling me! We've got to have them; we don't dare use them -- and that calls for some fast double-talk in a pinch. The next hazard is the halo; the halo was a mistake, boss."

"Why do you say that?"

"O. K., it impresses the superstitious. But the bigshot PanAsians are no more superstitious than you are. Take the Hand -- I wore it in his presence. He wasn't impressed; it was my great good luck that he apparently regarded it as nothing important, just a gadget to impress my followers. But suppose he had really thought about it and decided to find out how I did it?"

"Maybe," said Ardmore, "we had better omit the halo effect in the next city we penetrate."

"Too late. Our official designation here is 'holy men who wear halos.' It's our trademark."

"So? Jeff, I think you've done a wonderfully good job of covering up."

"There is one more hazard. It's a slow one, a time bomb."

"Eh?"

"Money. We've got too much money. That's a suspicious circumstance."

"But you had to have money to operate."

"How well I know it. It has been the only thing that enabled us to get away with it so far. These people are even more corruptible than Americans, Chief; with us it is a frowned-upon dereliction; with them it's an essential part of their culture. A good thing, too -- we now have the respected position of the goose that lays the golden eggs."

"But why do you call it a time bomb? Why is it a hazard at all?"

"Remember what happened to the goose in the story? Some day some smart laddie is going to wonder where the goose gets all that gold and take him apart to find out. In the meantime all the recipients of our cumshaw are closing their eyes to the suspicious circumstances and getting as much as they can while the getting is good. I'm betting that each one will keep his mouth shut about his take, as long as he can get away with it. I doubt if the Hand knows that we seem to have an unlimited supply

of American gold coins. But some day he will find out; that's the time bomb element. Unless he can be bribed, too -- in a polite way, of course -- he will start some very embarrassing investigations. Somewhere up the line we'll run into an official more interested in knowing the facts than in sticking out his palm. Before that day rolls around we had better be set to move!"

"Hmm . . . I suppose so. Well, Jeff, do the best you can and get us some 'priest' recruits up here as fast as you can. If we had one hundred dependable men, as talented in handling people as you are, we could set 'D' Day a month from now. But it may take years and, as you say, events may trip us up before we can move."

"You can see why I have trouble finding 'priest' recruits? Loyalty isn't enough; a special aptitude for kidding the public is necessary. I learned it as a hobo. Alec really hasn't got it; he's too honest. However I may have one recruit now -- a chap named Johnson."

"Yes? What about him?"

"He used to be a real estate salesman and he has a very convincing manner. The PanAsians put him out of business, of course, and he's anxious to avoid the labor camps. I've been feeling him out."

"Well, if you think he'll do, send him up. Perhaps I can look him over there."

"Huh?

"I've been thinking while I listened. Jeff, I don't know enough about the field situation; I've got to come see for myself. If I am going to direct this show, I've got to understand it. I can't do it from a hole in the ground; I'm falling out of touch."

"I thought that was settled a long time ago, boss."

"What do you mean?"

"Are you going to leave Calhoun as acting C. O. ?"

Ardmore remained silent for several moments, then said, "Damn you, jet"

"Well, are you?"

"Oh, very well! Let's drop the matter!"

"Don't get sore, boss. I've been trying to give you the whole picture; that's why I've talked so long. "

"I'm glad you did. I want you to repeat it, in much more detail. I'll put Estelle on and have her make a recording of everything you've got to say. We'll work up an instruction manual for student 'priests' from your lecture."

"O. K., but let me call you back. I've got a service in ten minutes."

"Can't Alec even run a service?" '

"He does and he's O. K. He preaches a better sermon than I do. But it's my best recruiting time, Major; I study the crowd and talk to them individually afterwards."

"OK, OK -- I'm switching off." 'Bye."

Services were crowded by now. Thomas did not fool himself that the creed of the great god Mota was the drawing card; even while the service proceeded, at the sides of the hall tables were being piled high with food, purchased with Scheer's fine gold. But Alec put on a good show. It seemed to Jeff, as. he listened to him preach, that the old mountain man had somehow reconciled his strange new job with his conscience so thoroughly that he actually believed that he was preaching his own religion, in symbols of course and with odd ritual -- but his voice carried conviction.

"If he keeps that up," Jeff told himself, "we'll have women fainting in the aisles. Maybe I should tell him to soft-pedal it."

But without untoward incident Alec reached the final hymn. The congregation sang with verve, then trooped toward the tables. Sacred music had at first been a problem until Jeff had hit on the dodge of putting new words to the commonest American patriotic music. It served a double purpose; anyone who listened closely could hear the old words, the true words, being sung by the bolder spirits present.

Jeff circulated around among his flock while they ate, patting the heads of children, pronouncing blessings -- and listening. As he passed a man got up from his place and stopped him. It was Johnson, the former real estate salesman. "A word with you, Holy One?"

"What is it, my son?"

Johnson indicated that he wanted to speak privately; they drew away from

the crowd over into the shadow of the altar. "Holy One, I don't dare go back to my room tonight."

"Why not, my son?"

"I still haven't been able to get my work card validated. Today was my last day of grace. If I go home it's the camps for me."

Jeff looked grave. "You know that the servers of Mota do not preach resistance to mundane authority."

"You wouldn't turn me out to be arrested("

"We do not refuse sanctuary. Perhaps it is not as bad as you think it is, my son; perhaps if you stay here tonight, tomorrow you may find someone to hire you and validate your card."

"I can stay, then?"

"You may stay." Thomas decided that Johnson might as well stay from then on; if he measured up, he would be sent to the Citadel for final test. If not, Johnson could stay as an unenlightened helper around the temple -- the temple needed more help every day, especially in the kitchen.

When the crowd had gone Jeff locked the door, then checked through the building personally to make sure that none but the resident help and those who had been granted overnight sanctuary were still inside. There were more than a dozen of these refugees; Jeff was studying some of them as prospective recruits.

Inspection completed and the place tidied up, Jeff shooed everyone but Alec upstairs to the second-floor dormitory rooms; he locked the door to the staircase after them. This was a nightly routine; the altar with its many marvelous gadgets was safe from snoopers, as it had a shield of its own, controlled by a switch in the basement nonetheless Jeff did not want anyone attempting to get at it. The avowed reason for the nightly lock up was, of course, a piece of holy mumbo jumbo having to do with the "sacredness" of the lower floor.

Alec and Jeff went down into the basement, locking after them a heavy, steel-sheathed door. Their apartment was a large room, housing the power unit for the altar, the communicator back to the base, and the same two cots Peewee Jenkins had gotten for them on their first day in Denver. Alec undressed, went into the adjoining bath, and got ready for bed. Jeff peeled off his robes and turban, but not his beard; it was now homegrown. He put on overalls, stuck a cigar in his mouth, and called

the base.

For the next three hours he dictated, over Alec's snores. Then he, too, went to bed.

Jeff woke up with a feeling of unease. The lights had not switched on; therefore it was not the morning alarm that had wakened him. He lay very still for a moment, then reached down beside him on the floor and recovered his staff.

Someone was in the room, other than Alec, still snoring on the other cot. He knew it, although at the moment he could hear no sound. Working by touch alone he carefully set his shield to cover both cots. He switched on the lights.

Johnson was standing in front of the communicator. Some sort of complicated goggles covered his eyes; in his hand was a black-light projector.

"Stand where you are," Jeff said quietly.

The man whirled around, then shoved the goggles up on his forehead. He stood for a moment, blinking at the light.

Quite suddenly a vortex pistol appeared in his other hand. "Don't make any sudden moves, Pop," he snapped. "This is no toy."

"Alec!" Jeff called out. "Alec! Wake up."

Alec sat up, at once alert. He glanced around and dived for his staff. "I've got us both screened," Jeff said rapidly. "Now you grab him but don't kill him."

"Make a move and you get it," warned Johnson.

"Don't be foolish, my son," Jeff answered. "The great god Mota protects his own. Put down that gun.

Without wasting time on speech Alec was setting the controls on his staff. It took him some time; he had had only practice drills in the use of the tractor and pressor beams. Johnson watched him fumbling, looked uncertain, then bred at him point blank.

Nothing happened; Jeff's shield soaked up the energy.

Johnson looked amazed; he looked still more amazed and rubbed his hand a

moment later when Alec snatched the gun from his hand with a tractor beam. "Now," said Jeff, "tell us, my son, why you saw fit to violate the mysteries of Mota?"

Johnson looked around at him, his eyes showing apprehension but still defiant. "Stow that Mota stuff. I wasn't kidded.."

"The Lord Mota is not mocked."

"Stow it, I tell you. How do you explain that stuff?" He hooked a thumb at the communicator.

"The Lord Mota need not explain. Sit down, my son, and make your peace with him."

"Sit down, my eye. I'm walking straight out of here. If you birds don't want this place swarming with slanties, you won't try to stop me. I wouldn't turn in a white man unless he made trouble for me."

"You are implying that you are a common thief?"

"Watch what you call me. You guys have been throwing gold around; anybody is bound to take an interest in it."

"Sit down."

"I'm leaving."

He turned away. Jeff said, "Nail him, Alec! -- but don't hurt him."

The injunction slowed Alec down. Johnson was halfway up the stairs before Alec snatched his feet from under him. Johnson fell heavily, striking his head.

Unhurriedly Jeff got up and put on his robes. "Sit on him, Alec, with your staff. I'll reconnoiter." He went upstairs, was gone a few minutes, and returned. Johnson was stretched on Alec's cot, dormant. "Not much damage," Jeff reported. "The upper door's lock was merely picked. No one was awake; I relocked it. The lower door's lock will have to be replaced; he used something or other that melted it. That door really should have a shield; I must speak to Bob about that." He glanced at the figure. "Still out?"

"Not really. He was coming to; I gave him sodium pentothal."

"Good! I want to question him."

"So I figured."

"Anesthesia?"

"No, just a babble dose."

Thomas nipped one of Johnson's earlobes with a thumbnail and twisted viciously. The victim stirred. "Darn near anesthesia -- must be the knock on his head. Johnson! Can you hear me?"

"Mmm, Yes."

Thomas questioned him patiently for many minutes. Finally Alec stopped him. "Jeff, do we have to listen to any more of this? It's like staring down into a cesspool."

"It makes me want to .vomit, too, but we've got to get the dope." He went on. Who paid him? What did the PanAsians expect to find out? How did he report back? When was he due to report next? Who else was in the organization? What did the PanAsians think of the temple of Mota? Did his boss know that he was here tonight?

And finally: what had induced him to go against his own people?

The drug was wearing oil' now. Johnson was almost aware of his surroundings, but his censors were still down and he spoke with a savage disregard of what his hearers might think of him. "A man's got to look out for himself, doesn't he? If you're smart you can get along anywhere."

"I guess we just aren't smart, Alec," Thomas commented. He sat still for several minutes, then said, "I think he's told us everything he knows. I'm trying to decide just what to do with him."

"If I give him another shot he may talk some more."

Johnson said, "You can't make me talk!" He seemed unaware that he already had talked.

Thomas struck him across the face with the back of his hand. "Shut up, you. You'll talk whenever we give you the needle. Right now you'll keep quiet." He went on to Alec, "There is a bare chance that they might get more out of him if we shipped him back to base. But I don't think so and it would be difficult and dangerous. If we got caught with him or if he escaped, the jig would be up. I think we had best dispose of him here and now."

Johnson looked stunned and tried to sit up, but Alec's staff kept him pinned to the cot. "Hey! What are you talking about? That's murder!"

"Give him another shot, Alec. We can't have him raising Cain while we work."

Howe said nothing, but quickly made the injection. Johnson tried to squirm away from it, then struggled a little before he gave in to the drug. Howe straightened up. His face was almost as disturbed as Johnson's had been. "Did you mean that the way it sounded, Jeff? If so, I didn't sign up for murder, either."

"It's not murder, Alec. We are executing a spy."

Howe chewed his lip. "It wouldn't bother me a bit, I guess, to kill a man in a fair fight. But to tie him down and butcher him, like he was a hog, turns my stomach."

"Executions are always like that, Alec. Ever see a man die in a gas chamber?"

"But it is murder, Jeff. We don't have the authority to execute him."

"1 have the authority, Alec. I am a commanding officer, acting independently, in war time."

"But consarn it, Jeff, you didn't even give him a drumhead court-martial."

"A trial is for the purpose of establishing guilt or innocence. Is he guilty?"

"Oh, he's guilty all right. But a man's entitled to a trial. "

Jeff took a long breath. "Alec, I used to be a lawyer. The whole purpose of the complicated structure of western jurisprudence in criminal matters, as built up over the centuries, has been to keep the innocent from being convicted and punished through error. It sometimes lets the guilty go free in the process, but that's not the purpose. I don't have the personnel nor the time to form a military court and give this man a formal trial -- but his guilt has been established with much more certainty than a court could possibly establish it and I don't propose to endanger my command and risk the ultimate outcome of the war by extending to him the protections that were devised to protect the innocent.

"If I could cut out his memory and turn him loose to report back that all he found was a screwy church and a lot of hungry people eating, I would do it, not to avoid the chore of killing him, but because it would confuse the enemy. I can't possibly turn him loose --"

"I didn't want you to do that, Jeff!"

"Shut up, soldier, and listen. If I turn him loose with the knowledge he has gained, the PanAsians will get it, the same way we made him talk, even if he tried to hold it back. We haven't the facilities to keep him here; it is dangerous to ship him back to base. I intend to execute him now." He paused.

Alec said diffidently, "Captain Thomas?"

"Yes?"

"Why don't you call up Major Ardmore and see what he thinks?"

"Because there is no reason to. If I have to ask him to make up my mind for me I'm no good on this job. I've just one thing more to add: you are too soft and mush-headed for this job. You apparently think that the United States can win this war without anyone getting hurt you don't even have the guts to watch a traitor die. I had hoped to turn this command over to you shortly; instead I am shipping you back to the Citadel tomorrow with a report to the commander-in-chief that you are utterly unfit to be trusted with work in the face of the enemy. In the meantime you will carry out orders. Help me lug that hulk into the bathroom. "

Howe's mouth quivered, but he said nothing. The two carried the unconscious man into the adjoining room. Before the temple was "consecrated" Thomas had had a partition knocked out between the janitor's toilet and the space adjoining and in that space had had an old-fashioned bath tub installed. They dumped him in the tub.

Howe wet his lips. "Why in the tub?"

"Because it will be a bloody mess."

"You aren't going to use your staff?"

"No, it would take me an hour to disassemble it and take out the suppressor circuit for the white-man band of frequencies. And I'm not sure I could get it back together right. Give me that straight razor of

yours and get out."

Howe got the razor and came back. He did not hand it over. "You ever butchered a hog?" he inquired.

"No."

"Then I know more about how to do it." Stooping, he lifted Johnson's chin. The man breathed heavily and grunted. Howe made one quick slash and the man's throat was cut. He dropped the head, stood up and stared at the spreading red stream. He spat in it, then stepped to the wash stand and cleaned his razor.

Jeff said, "I guess I spoke too hastily, Alec."

Alec did not look up. "No," he said slowly, "not a bit too hastily. I guess it takes some time to get used to the notion of war."

"Yeah, I guess so. Well, let's dispose of this thing."

Despite a very short night Jeff Thomas was up unusually early as he wanted to report to Ardmore before the morning service. Ardmore listened carefully to the account, then said, "I'll send Scheer down to install a shield on the basement door. Some such rig will be standard for ail temple installations from now on. How about Howe? Do you want to send him back?"

"No," Thomas decided, "I think he's over the hump now. He's squeamish by nature, but he's got plenty of moral courage. Damn it, boss, we've got to trust somebody."

"Are you willing to turn the temple over to him?"

"Well . . . yes, I am -- now. Why?"

"Because I want you to move on to Salt Lake City practically at once. I lay awake most of the night thinking over what you told me yesterday. You stirred me up, Jeff; I had been getting fat and sloppy in my thinking. How many potential recruits have you got now?"

"Thirteen, now that Johnson is out of it. Not all of them candidates for 'priesthood,' of course."

"I want you to send them all here, at once."

"But, boss, I haven't examined them."

"I'm making a radical revision in procedure. We'll cut out examination under drugs except at the Citadel. You haven't the facilities to do it gracefully. I'm assigning Brooks to it; he will do all of it from now on and I will pass on the ones who get by his elimination. From now on the 'priests' will have the prime duty of locating likely candidates and sending them in to the mother temple."

Thomas thought about it. "How about characters like Johnson? We sure don't want his type penetrating into the Citadel."

"I've anticipated that -- and that's why the examinations will be held here. A candidate will be doped before he goes to bed, but he won't know it. He will be given a hypo, roused, and examined during the night. If he passes, well and good. If he doesn't then he never will know he has been examined under drugs but he will be allowed to think that he has passed. "

"That's the beauty of it. He will be accepted into the service of the great god Mota, sworn in as a lay brother -- and then we will work the tail off him! He'll sleep in a bare cell, scrub floors, eat poor food and damn little of it, and spend hours each day on his knees at his devotions. He'll be regimented so thoroughly that he will never have a chance to suspect that there is anything under this mountain but country rock. When he's got his bellyful, he will be sorrowfully allowed to give up his vows, then he can trot back and tell his Masters anything he jolly well pleases."

Thomas looked pleased. "It sounds swell, Major. It sounds like fun -- and it sounds as if it would work."

"I think it will and it will turn their agents to our advantage. After the war is over we'll round them up and shoot 'em -- the actual spies, I mean, not the soft heads. But that's a sideshow; let's talk about the candidates that pass. I want recruits and I want them fast. I want several hundred right away. Out of that several hundred I want to get at least sixty satisfactory candidates for 'priesthood'; I want to train them simultaneously and send them all out into the field at once. You've thoroughly sold me on the dangers of waiting, Jeff; I want to penetrate every major PanAsian center at the same time. You've convinced me that this is our only chance to pull off this masquerade."

Thomas whistled. "You don't want much, do you, loss?"

"It can be done. Here is the new doctrine for recruiting. Turn on your recorder."

"It's on."

"Good. Send in only such candidates as have lost immediate members of their families as a result of the PanAsian invasion, or have other superficial, prima facie evidences that they are likely to be loyal under stress. Eliminate obviously unstable persons but leave any other psychological elimination to the staff at the Citadel. Send in candidates from the following categories only: for the 'priesthood' -- salesmen, advertising men, publicity men, newspapermen, preachers, politicians, psychologists, carnival pitch men or talkers, personnel managers, psychiatrists, trial lawyers, theatrical managers; for work not in contact with the public nor the enemy -- skilled metal workers of all sorts, electronics technicians, jewelers, watchmakers, skilled precision workers in any engineering art, cooks, stenographers, laboratory technicians, physicists, seamstresses. Any of the latter group may be female."

"No female priests?"

"What do you think?"

"I'm against it. These babies rate women as zero or even minus. I don't think a female 'priest' could possibly operate in contact with them."

"I feel the same way. Now, can Alec take over the recruiting under this doctrine?"

"Hmm . . . boss, I hate, to throw him on his own just yet."

"He wouldn't make a slip and give us away, would he?"

"No, but he might not get much in the way of results, either."

"Well, you'll just have to push him in, sink or swim. From here on we force the moves, Jeff. Turn the temple over to Alec and report here. You and Scheer will leave for Salt Lake City at once, publicly. Buy another car and use the driver you have now. Alec can recruit another driver. I want Scheer back here in forty-eight hours and I want your first recruits headed this way a couple of days thereafter. Two weeks from now I'll send someone out to relieve you, either Graham or Brooks --"

"Huh? Neither one of them has the temperament for it."

"They can pinch hit after you've broken the ground. We'll relieve the one I send as soon as possible with the proper type. You'll come back

here and start a school for 'priests' -- or, rather, continue it and improve it. I'm starting it now, with the people at hand. That's your job; I don't expect to send you into the field again, except possibly as a trouble shooter."

Thomas sighed. "I sure talked myself into a job, didn't I?"

"You did indeed. Get moving."

"Just a minute. Why Salt Lake City?"

"Because I think it's a good spot for recruiting. Those Mormons are shrewd, practical people and I don't think you'll find a traitor among them. If you work at it, I think you can convince their Elders that the great god Mota is a good thing to have around and no menace to their own faith. We haven't made half enough use of the legitimate churches; they should be the backbone of the movement. Take the Mormons -- they run to lay missionaries; if you work it right you can recruit a number of them with such experience, courageous, used to organizing in hostile territory, good talkers, smart. Get it?"

"I get you. Well, I'll sure try."

"You can do it. As soon as possible we'll send someone to relieve Alec and let him try his hand alone in Cheyenne. It's not a big place; if he flops it won't matter too much. But I'm betting he can take Cheyenne. Now you go take Salt Lake City."

CHAPTER EIGHT

Denver, Cheyenne, Salt Lake City, Portland, Seattle, San Francisco. Kansas City, Chicago, Little Rock. New Orleans, Detroit, Jersey City. Riverside, Five Points, Butler, Hackettstown, Natick, Long Beach, Yuma, Fresno, Amarillo, Grants, Parktown, Bremerton, Coronado, Worcester, Wickenberg, Santa Ana, Vicksburg, LaSalle, Morganfield, Blaisville, Barstow, Wallkyll, Boise, Yakima, St. Augustine, Walla Walla, Abilene, Chattahoochee, Leeds, Laramie, Globe, South Norwalk, Corpus Christi.

"Peace be unto you! Peace, it's wonderful! Come, all you sick and heavy laden! Come! Bring your troubles to .the temple of the Lord Mota. Enter the sanctuary where the Masters dare not follow. Hold up your heads as white men, for 'The Disciple is Coming!'

"Your baby daughter is dying from typhoid? Bring her in! Bring her in! Let the golden rays of Tamar make her well again. Your job is gone and you face the labor camps? Come in! Come in! Sleep on the benches and eat

at the table that is never bare. There will be work aplenty for you to do; you can be a pilgrim and carry the word to others. You need only profit by instruction.

"Who pays for it all? Why, Lord love you, man, gold is the gift of Mota! Hurry! 'The Disciple is coming!' "

They poured in. At first they came through curiosity, because this new and startling and cockeyed religion was a welcome diversion from painful and monotonous facts of their slavelike existences. Ardmore's instinctive belief in flamboyant advertising justified itself in results; a more conventional, a more dignified cult would never have received the "house" that this one did.

Having come to be entertained, they came back for other reasons. Free food, and no questions asked who minded singing a few innocuous hymns when they could stay for supper? Why, those priests could afford to buy luxuries that Americans rarely saw on their own tables, butter, oranges, good lean meat, paying for them at the Imperial storehouses with hard gold coin that brought smiles to the faces of the Asiatic bursars.

Besides that, the local priest was always good for a touch if a man was really hard up for the necessary. Why be fussy about creeds? Here was a church that did not ask a man to subscribe to its creeds; you could come and enjoy all the benefits and never be asked to give up your old-time religion -- or even be asked if you had a religion. Sure, the priests and their acolytes appeared to take their god-with-six-attributes pretty seriously, but what of it? That was their business. Haven't we always believed in religious freedom? Besides, you had to admit they did good work.

Take Tamar, Lady of Mercy, now -- maybe there was something to it. If you've seen a child choking to death with diphtheria, and seen it put to sleep by the server of Shaam, then washed in the golden rays of Tamar, and then seen it walk out an hour later, perfectly sound and whole, you begin to wonder. With half the doctors dead, with the army and a lot of the rest sent to concentration camps, anyone who could cure disease had to be taken seriously. What if it did look like superstitious mumbo jumbo? Aren't we a practical people? It's results that count.

But cutting more deeply than the material advantages, were the psychological benefits. The temple of Mota was a place -- where a man could hold up his head and not be afraid, something he could not do even in his own home. "Haven't you heard? Why, they say that no flatface has ever set foot in one of their temples, even to inspect. They can't even get in by disguising themselves as white men; something knocks them out

cold, right at the door. Personally, I think those apes are scared to death of Mota. I don't know what it is they've got, but you can breathe easy in the temple. Come along with me -- you'll see!"

The Rev. Dr. David Wood called on his friend the equally reverend Father Doyle. The older man let him in himself. "Come in, David, come in," he greeted him. "You're a pleasant sight. It's been too many days since I've seen you." He brought him into his little study and sat him down and offered tobacco. Wood refused it in a preoccupied manner.

Their conversation drifted in a desultory way from one unimportant subject to another. Doyle could see that Wood had something on his mind, but the old priest was accustomed to being patient. When it became evident that the younger man could not, or would not, open the subject, he steered him to it. "You seem like a man with something preying on his mind, David. Should I ask what it is?"

David Wood took the plunge. "Father, what do you think of this outfit that call themselves the priests of Mota?"

"Think of it? What should I think of it?"

"Don't evade me, Francis. Doesn't it matter to you when a heathen heresy sets up in business right under your nose?"

"Well, now, it seems to me that you have raised some points for discussion there, David. just what is a heathen religion?"

Wood snorted. "You know what I mean! False gods! Robes, and bizarre temple, and mummeries!"

Doyle smiled gently. "You were about to say 'papist mummeries,' were you not, David? No, I can't say that I am greatly concerned over odd paraphernalia. But as to the definition of the word 'heathen' -- from a strict standpoint of theology I am forced to consider any sect that does not admit authority of the Vicar on Earth --"

"Don't play with me, man! I'm in no mood for it."

"I am not playing with you, David. I was about to add that in spite of the strict logic of theology, God in His mercy and infinite wisdom will find some way to let even one like yourself into the Holy City. Now as for these priests of Mota, I have not searched their creed for flaws, but it seems to me that they are doing useful work; work that I have not been able to accomplish."

"That is exactly what worries me, Francis. There was a woman in my congregation who was suffering from an incurable cancer. I knew of cases like hers that had apparently been helped by . . . by those charlatans! What was I to do? I prayed and found no answer."

"What did you do?"

"In a moment of weakness I sent her to them."

"Well?"

"They cured her."

"Then I wouldn't worry about it too much. God has more vessels than you and me."

"Wait a moment. She came back to my church just once. Then she went away again. She entered the sanctuary, if you can call it that, that they have set up for women. She's gone, lost entirely to those idolaters! It has tortured me, Francis. What does it avail to heal her mortal body if it jeopardizes her soul?"

"Was she a good woman?"

"One of the best."

"Then I think God will look out for her soul, without your assistance, or mine. Besides, David," he continued, refilling his pipe, "those so-called priests -- They are not above seeking your help, or mine, in spiritual matters. They don't perform weddings, you know. If you should wish to use their buildings, I am sure you would find it easy --"

"I can't imagine it!"

"Perhaps, perhaps, but I found a listening device concealed in my confessional -- " The priest's mouth became momentarily a thin angry line. "Since then I've been borrowing a corner of the temple to listen to anything which might possibly be of interest to our Asiatic masters."

"Francis, you haven't!" Then, more moderately, "Does your bishop know of this?"

"Well, now, the bishop is a very busy man --"

"Really, Francis --"

"Now, now -- I did write him a letter, explaining the situation as clearly as possible. One of these days I will find someone who is traveling in that direction and can carry it to him. I dislike to turn church business over to a public translator; it might be garbled. "

"Then you haven't told him?"

"Didn't I just say that I had written him a letter? God has seen that letter; it won't harm the bishop to wait to read it."

It was nearly two months later that David Wood was sworn into the Secret Service of the United States Army. He was only mildly surprised when he found that his old friend, Father Doyle, was able to exchange recognition signals with him.

It grew and it grew. Organization -- and communication -- underneath each gaudy temple, shielded from any possible detection by orthodox science, operators stood watch and watch, heel and toe, at the pararadio equipment operating in one band of additional spectra-operators who never saw the light of day, who never saw anyone but the priest of their own temple; men marked as missing in the fields of the Asiatic warlords; men who accepted their arduous routine philosophically as the necessary exigency of war. Their morale was high, they were free men again, free and fighting, and they looked forward to the day when their efforts would free all men, from coast to coast.

Back in the Citadel women in headphones neatly typed everything that the pararadio operators had to report; typed it, classified it, condensed it, cross-indexed it. Twice a day the communication watch officer laid a brief of the preceding twelve hours on Major Ardmore's desk. Constantly throughout the day dispatches directed to Ardmore himself poured in from a dozen and a half dioceses and piled up on his desk. In addition to these myriad sheets of flimsy paper, each requiring his personal attention, reports piled up from the laboratories, for Calhoun now had enough assistants to fill every one of those ghost crowded rooms and he worked them sixteen hours a day.

The personnel office crowded more reports on him, temperament classifications, requests for authorization, notifications that this department or that required such and such additional personnel; would the recruiting service kindly locate them? Personnel there was a headache! How many men can keep a secret? There were three major divisions of personnel, inferiors in routine jobs such as the female secretaries and clerks who were kept completely insulated from any contact with the outside world; local temple personnel in contact with the public who were told only what they needed to know and were never

told that they were serving in the army, and the "priests" themselves who of necessity had to be in the know.

These latter were sworn to secrecy, commissioned in the United States army, and allowed to know the real significance of the entire set-up. But even they were not trusted with the underlying secret, the scientific principles behind the miracles they performed. They were drilled in the use of the apparatus entrusted to them, drilled with care, with meticulous care, in order that they might handle their deadly symbols of office without error. But, save for the rare sorties of the original seven, no person having knowledge of the Ledbetter effect and its corollaries ever left the Citadel.

Candidates for priesthood were sent in as pilgrims from temples everywhere to the Mother Temple near Denver. There they sojourned in the monastery, located underground on a level between the temple building and the Citadel. There they were subjected to every test of temperament that could be devised. Those who failed were sent back to their local temples to serve as lay brothers, no wiser than when they had left home.

Those who passed, those who survived tests intended to make them angry, to make them loquacious, to strain their loyalty, to crack their nerve, were interviewed by Ardmore in his persona as High Priest of Mota, Lord of All. Over half of them he turned down for no reason at all, hunch alone, some vague uneasiness that. this was not the man.

In spite of these precautions he never once commissioned a new officer and sent him forth to preach without a deep misgiving that here perhaps was the weak link that would bring ruin to them all.

The strain was getting him. It was too much responsibility for one man, too many details, too many decisions. He found it increasingly difficult to concentrate on the matter at hand, hard to make even simple decisions. He became uncertain of himself and correspondingly irritable. His mood infected those in contact with him and spread throughout the organization.

Something had to be done.

Ardmore was sufficiently honest with himself to recognize, if not to diagnose, his own weakness. He called Thomas into his office, and unburdened his soul. Concluding, he asked, "What do you think I should do about it, Jeff? Has the job got too big for me? Should I try to pick out somebody else to take over?"

Thomas shook his head slowly. "I don't think you ought to do that,

Chief. Nobody could work any harder than you do -- there are just twenty-four hours in a day. Besides, whoever relieved you would have the same problems without your intimate knowledge of the background and your imaginative grasp of what we are trying to accomplish."

"Well, I've got to do something. We're about to move into the second phase of this show, when we start in systematically trying to break the nerve of the PanAsians. When that reaches a crisis, we've got to have the congregation of every temple ready to act as a military unit. That means more work, not less. And I'm not ready to handle it! Good grief, man you'd think that somebody somewhere would have worked out a science of executive organization so that a big organization could be handled without driving the man at the top crazy! For the past two hundred years the damned scientists have kept hauling gadget after gadget out of their laboratories, gadgets that simply demand big organizations to use them -- but never a word about how to make those organizations run." He struck a match savagely. "It's not rational!"

"Wait a minute, Chief, wait a minute." Thomas wrinkled his brow in an intense effort to remember. "Maybe there has been such work done -- I seem to recall something I read once, something about Napoleon being the last of the generals."

"Huh?"

"It's pertinent. This chap's idea was that Napoleon was the last of the great generals to exercise direct command, because the job got too big. A few years later the Germans invented the principle of staff command, and, according to this guy, generals were through: as generals. He thought that Napoleon wouldn't have stood a chance against an army headed by a general staff. Probably what you need is a staff:"

"For Pete's sake, I've got a staff! A dozen secretaries and twice that many messengers and clerks -- I fall over 'em."

"I don't think it was that kind of a staff he was talking about. Napoleon must have had that kind of a staff."

"Well, what did he mean?"

"I don't know exactly, but apparently it was a standard notion in modern military organization. You're not a graduate of the War College?"

"You know damn well I'm not." It was true. Thomas had guessed from very early in their association that Ardmore was a layman, improvising as he went along, and Ardmore knew that he knew; yet each had kept his mouth

closed.

"Well, it seems to me that a graduate of the War College might be able to give us some hints about organization."

"Fat chance. They either died in battle, or were liquidated after the collapse. If any escaped, they are lying very low and doing their best to conceal their identity -- for which you can't blame them."

"No, you can't. Well, forget it -- I guess it wasn't such a good idea after all."

"Don't be hasty. It was a good idea. Look -- armies aren't the only big organizations. Take the big corporations, like Standard Oil and U. S. Steel and General Motors -- they must have worked out the same principles."

"Maybe. Some of them, anyhow -- although some of them burn their executives out pretty young. Generals have to be killed with an ax, it seems to me."

"Still, some of them must know something. Will you see if you can stir out a few?"

Fifteen minutes later a punched-card selector was rapidly rifling through the personnel files of every man and woman who had been reported on by the organization. It turned out that several men of business executive experience were actually then working in the Citadel in jobs of greater or lesser administrative importance. Those were called in, and dispatches were sent out summoning about a dozen more to "make a pilgrimage" to the Mother Temple.

The first trouble shooter turned out sour. He was a high-pressure man, who had run his own business much along the lines of personal supervision which Ardmore had been using up to then. His suggestions had to do with routing and forms and personal labor savers -- rather than any basic change in principles. But in time several placid unhurried men were located who knew instinctively and through practice the principle of doctrinal administration.

One of them, formerly general manager of the communications trust, was actually a student and an admirer of modern military organizational methods. Ardmore made him Chief of Staff. With his help, Ardmore selected several others: the former personnel manager of Sears, Roebuck; a man who had been permanent undersecretary of the department of public works in one of the Eastern states; executive secretary of an insurance

company. Others were added as the method was developed.

It worked. Ardmore had a little trouble getting used to it at first; he had been a one-man show all his life and it was disconcerting to find himself split up into several alter egos, each one speaking with his authority, and signing his name "by direction." But in time he realized that these men actually were able to apply his own policy to a situation and arrive at a decision that he might have made himself. Those who could not he got rid of, at the suggestion of his Chief of Staff: But it was strange to be having time enough to watch other men doing HIS work HIS way under the simple but powerful scientific principle of general staff command.

He was free at last to give his attention to perfecting that policy and to deal thoroughly with the occasional really new situation which his staff referred to him for solution and development of new policy. And he slept soundly, sure that one, or more, of his "other brains" was alert and dealing with the job. He knew now that, even if he should be killed, his extended brain would continue until the task was completed.

It would be a mistake to assume that the PanAsian authorities had watched the growth and spread of the new religion with entire satisfaction, but at the critical early stage of its development they simply had not realized that they were dealing with anything dangerous. The warning of the experience of the deceased lieutenant who first made contact with the cult of Mota went unheeded, the simple facts of his tale unbelieved.

Having once established their right to travel and operate, Ardmore and Thomas impressed on each missionary the importance of being tactful and humble and of establishing friendly relations with the local authorities. The gold of the priests was very welcome to the Asiatics, involved as they were in making a depressed and recalcitrant country pay dividends, and this caused them to be more lenient with the priests of Mota than they otherwise would have been. They felt, not unreasonably, that a slave who helps to make the books balance must be a good slave. The word went around at first to encourage the priests of Mota, as they were aiding in consolidating the country.

True, some of the PanAsian police and an occasional minor official had very disconcerting experiences in dealing with priests, but, since these incidents involved loss of face to the PanAsians concerned, they were strongly disposed not to speak of them.

It took some time for enough unquestioned data to accumulate to convince the higher authorities that the priests of Mota, all of them, had

several annoying -- yes, even intolerable characteristics. They could not be touched. One could not even get very close to one of them -- it was as if they were surrounded by a frictionless pellucid wall of glass. Vortex pistols had no effect on them. They would submit passively to arrest but somehow they never stayed in jail. Worst of all, it had become certain that a temple of Mota could not, under any circumstances, be inspected by a PanAsian.

It was not to be tolerated.

CHAPTER NINE

It was not tolerated. The Prince Royal himself ordered the arrest of Ardmore.

It was not done as crudely as that. Word was sent to the Mother Temple that the Grandson of Heaven desired the High Priest of the Lord of Mota to attend him. The message reached Ardmore in his office in the Citadel, delivered to him by his Chief of Staff, Kendig, who for the first time in their relationship showed signs of agitation. "Chief," he burst out, "a battle cruiser has landed in front of the temple, and the commanding officer says he has orders to take you along!"

Ardmore put down the papers he had been studying. "Hmm-m-m," he said, "it looks like we're getting down to the slugging. A little bit earlier than I had counted on." He frowned.

"What are you going to do about it?"

"You know my methods. What do you think I'll do about it?"

"Well -- I guess you'll probably go along with him, but it worries me. I wish you wouldn't."

"What else can I do? We aren't ready yet for an open breach; a refusal would be out of character. Orderly!"

"Yes, sir!"

"Send my striker in. Tell him full robes and paraphernalia. Then present my compliments to Captain Thomas and ask him to come here at once."

"Yes, sir." The orderly was already busy with the viewphone.

Ardmore talked with Kendig and Thomas as his striker robed him. "Jeff, here's the sack -- you're holding it."

"Huh?"

"If anything happens so that I lose communication with headquarters, you are commanding officer. You'll find your appointment in, my desk, signed and sealed."

"But Chief"

"Don't 'But Chief' me. I made my decision on this a long time ago. Kendig knows about it; so does the rest of the staff. I'd have had you in the staff before this if I hadn't needed you as Chief of Intelligence." Ardmore glanced in a mirror and brushed at his curly blond beard. They had all grown beards, all those who appeared in public as priests. It tended to give the comparatively hairless Asiatics a feeling of womanly inferiority while at the same time arousing a vague unallocated repugnance. "You may have noticed that no one holding a line commission has ever been made senior to you. I had this eventuality in mind."

"How about Calhoun?"

"Oh, yes -- Calhoun. Your commission as a line-officer automatically makes you senior to him, of course. But I'm afraid that won't cut much ice in handling him. You just have to deal with him as best you can. You've got force majeure at your disposal, but go easy. But I don't have to tell you that."

A messenger, dressed as an acolyte, hurried in and saluted. "Sir, the temple officer of the watch says that the PanAsian Commander is getting very impatient."

"Good. I want him to be. Are the subsonics turned on?"

"Yes, sir, they make us all very nervous."

"You can stand it; you know what it is. Tell the watch officer to have the engineer on duty vary the volume erratically with occasional complete let-ups. I want those Asiatics to be fit to be tied by the time I get there."

"Yes, sir. Any word to the cruiser commander?"

"Not directly. Have the watch officer tell him that I am at my devotions and can't be disturbed."

"Very good, sir." The messenger trotted away. This was something like! He would hang around where he could see the face of that skunk when he heard that one!

"I'm glad we got these new headsets fitted out in time," Ardmore observed as his striker fitted his turban to his head.

The turbans had originally been intended simply to conceal the mechanism which produced the shining halo which floated above the heads of all priests of Mota. The turban and the halo together made a priest look about seven feet tall with consequent unfavorable effect on the psyche of the Asiatics. But Scheer had seen the possibility of concealing a short range transmitter and receiver under the turban as well; they were now standard equipment.

He settled the turban with his hands, made sure that the bone conduction receiver was firm against his mastoid, and spoke in natural low tones, apparently to no one, "Commanding officer -- testing."

Apparently inside his head, a voice, muffled but distinct, answered him, "Communication watch officer -- test check."

"Good," he approved. "Have direction finders crossed on me until further notice. Arrange your circuits to hook me in through the nearest temple to headquarters here. I may want Circuit A at any moment. "

Circuit A was a general broadcast to every temple in the country. "Any news from Captain Downer?"

"One just this moment came in, sir; I've just sent it to your office," the inner voice informed him.

"So? Yes, I see." Ardmore stepped to his desk, flipped a switch which turned off a shining red transparency reading Priority, and tore a sheet of paper from the facsimile recorder.

"Tell the Chief," the message ran, "that something is about to bust. I can't find out what it is, but all the brasshats are looking very cocky. Watch everything and be careful." That was all, and that little possibly garbled in word of mouth relay.

Ardmore frowned and pursed his mouth, then signaled his orderly. "Send for Mr. Mitsui."

When Mitsui came in, Ardmore handed him the message. "I suppose you've heard that I am to be arrested?"

"It's all over the place," Mitsui acknowledged soberly, and handed the message back.

"Frank, if you were Prince Royal, what would you be trying to accomplish by arresting me?"

"Chief," protested Mitsui, distress in his eyes, "you act as if I were one of those . . . those murdering --"

"Sorry -- but I still want your advice."

"Well -- I guess I'd be intending to put you on ice, then clamp down on your church."

"Anything else?"

"I don't know. I don't guess I'd be doing it unless I was fairly sure that I had some .way to get around your protections."

"No, I suppose so." He spoke again to the air. "Communication office, priority for Circuit A."

"Direct, or relay?"

"You send it out. I want every priest to return to his temple, if he is now out of it, and I want him to do it fast. Priority, urgent, acknowledge and report." He turned back to those with him.

"Now for a bite to eat, and I'll go. Our yellow friend upstairs ought to be about done to a turn by then. Anything else we should take up before I leave?"

Ardmore entered the main hall of the temple from the door in the rear of the altar. His approach to the great doors, now standing open, was a stately progress. He knew that the Asiatic commander could see him coming; he covered the two hundred yards with leisured dignity, attended by a throng of servers clad in robes of red, of green, of blue, and golden. His own vestments were immaculate white. His attendants fanned out as they neared the great archway; he marched out and up to the fuming Asiatic alone. "Your master wishes to see me?"

The PanAsian had difficulty in composing himself sufficiently to speak in English. Finally he managed to get out, "You were ordered to report to me. How dare you --"

Ardmore cut him short. "Does your master wish to see me?"

"Decidedly! Why didn't you --"

"Then you may escort me to him." He moved on past the officer and marched down the steps, giving the Asiatics the alternatives of running to catch up with him, or trailing after. The commander of the cruiser obeyed his first impulse to hurry, nearly fell on the broad steps, and concluded by bringing up ignominiously in the rear, his guard attending him.

Ardmore had been in the city chosen by the Prince Royal as his capital before, but not since the Asiatics had moved in. When they debarked on the municipal landing platform he looked about him with concealed eagerness to see what changes had been made. The skyways seemed to be running -- probably because of the much higher percentage of Asiatic population here. Otherwise there was little apparent change. The dome of the State capitol was visible away to the right; he knew it to be the palace of the

warlord. They had done something to its exterior; he could not put his finger on the change but it no longer looked like Western architecture.

He was too busy for the next few minutes to look at the city. His guard, now caught up with him and surrounding him, marched him to the escalator and down into the burrows of the city. They passed through many doors, each with its guard of soldiers. Each guard presented arms to Ardmore's captor as the party passed. Ardmore solemnly returned each, salute with a gesture of benediction, acting as if the salute had been intended for him and him alone. His custodian was indignant but helpless; it soon developed into a race to see which could acknowledge a salute first. The commander won, but at the cost of saluting his startled juniors first.

Ardmore took advantage of a long unbroken passageway to check his communications. "Great Lord Mota," he said, "dost thou hear thy servant?" The commander glanced at him, but said nothing.

The muffled inner voice answered at once, "Got you, Chief. You are hooked in through the temple in the capitol." It was Thomas' voice.

"The Lord Mota speaks, the servant hears. Truly it is written that little pitchers have long ears.'

"You mean the monkeys can overhear you?"

"Yea, verily, now and forever. The Lord Mota will understand igpay

atinlay?"

"Sure, Chief -- pig latin. Take it slow if you can."

"At-thay is oodgay. Ore-may aterlay." Satisfied, he desisted. Perhaps the PanAsians had a mike and a recorder on him even now. He hoped so, for he thought it would give them a useless headache. A man has to grow up in a language to be able to understand it scrambled.

The Prince Royal had been impelled by curiosity as much as by concern when he ordered the apprehension of the High Priest of Mota. It was true that affairs were not entirely to his liking, but he felt that his advisers were hysterical old women. When had a slave religion proved anything but an aid to the conqueror? Slaves needed a wailing wall; they went into their temples, prayed to their gods to deliver them from oppression, and came out to work in the fields and factories, relaxed and made harmless by the emotional catharsis of prayer.

"But," one of his advisers had pointed out, "it is always assumed that the gods do nothing to answer those prayers."

That was true; no one expected a god to climb down off his pedestal and actually perform. "What, if anything, has this god Mota done? Has anyone seen him?"

"No, Serene One, but --"

"Then what has he done?"

"It is difficult to say. It is impossible to enter their temples --"

"Did I not give orders not to disturb the slaves in their worship?" The Prince's tones were perilously sweet.

"True. Serene One, true," he was hastily assured, "nor have they been, but your secret police have been totally unable to enter in order to check up for you, no matter how cleverly they were disguised."

"So? Perhaps they were clumsy. What stopped them?"

The adviser shook his head. "That is the point, Serene One. None can remember what happened."

"What is that you say? -- but that is ridiculous. Fetch me one to question."

The adviser spread his hands. "I regret, sire --"

"So? Of course, of course -- peace be to their spirits." He smoothed an embroidered silken panel that streamed down his chest. While he thought, his eye was caught by ornately and amusingly carved chessmen set up on a table at his elbow. Idly he tried a pawn in a different square. No, that was not the solution; white to move and checkmate in four moves -- that took five. He turned back. "It might be well to tax them."

"We have already tried --"

"Without my permission?" The Prince's voice was gentler than before. Sweat showed on the face of the other.

"If it were an error, Serene One, we wished the error to be ours."

"You think me capable of error?" The Prince was the author of the standard text on the administration of subject races, written while a young provincial governor in India. "Very well, we will pass it. You taxed them, heavily I presume -- what then?"

"They paid it, sire."

"Triple it."

"I am sure they would pay it, for --"

"Make it tenfold. Set it so high they can not pay it. "

"But Serene One, that is the point. The gold with which they pay is chemically pure. Our doctors of temporal wisdom tell us that this gold is made, transmuted. There is no limit to the tax they can pay. In fact," he went on hurriedly, "it is our opinion, subject always to the correction of superior wisdom" -- he bowed quickly -- "that this is not a religion at all, but scientific forces of an unknown sort!"

"You are suggesting that these barbarians have greater scientific attainments than the Chosen Race?"

"Please, sire, they have something, and that something is demoralizing your people. The incidence of honorable suicide has climbed to an alarming high, and there have been far too many petitions to return to the land of our fathers.

"No doubt you have found means to discourage such requests?"

"Yes, Serene One, but it has only resulted in a greater number of honorable suicides among those thrown in contact with the priests of Mota. I fear to say it, but such contact seems to weaken the spirit of your children."

"Hm-m-m. I think, yes, I think that I will see this High Priest of Mota."

"When will the Serene One see him?"

"That I will tell you. In the meantime, let it be said that my learned doctors, if they have not lived too many years and passed their usefulness, will be able to duplicate and counteract any science the barbarians may have."

"The Serene One has spoken."

The Prince Royal watched with great interest as Ardmore approached him. The man walked without fear. And, the Prince was forced to admit, the man had a certain dignity about him, for a barbarian. This would be interesting. What was that shining thing around his head? -- an amusing conceit, that.

Ardmore stopped before him and pronounced a benediction, hand raised high. Then -- "You asked that I visit you, Master."

"So I did." Was the man unaware that he should kneel?

Ardmore glanced around. "Will the Master cause his servants to fetch me a chair?"

Really, the man was delightful -- regrettable that he must die. Or would it be possible to keep him around the palace for diversion? Of course, that would entail the deaths of all who had watched this scene and perhaps more such expedient deaths later, if his delicious vagaries continued. The Prince concluded that it was not the initial cost, but the upkeep.

He raised a hand. Two scandalized menials hastened up with a stool. Ardmore sat down. His eye rested on the chess table by the Prince. The Prince followed his glance and inquired, "Do you play the Battle Game?"

"A little, Master."

"How would you solve this problem?"

Ardmore got up and stood over the board. He studied it for a few

moments, while the Oriental watched him. The courtiers were as silent as the pieces on the board -- waiting.

"I would move this pawn -- so," Ardmore announced at last.

"In such a fashion? That is a most unorthodox move."

"But necessary. From there it is mate in three moves -- but, of course, the Master sees that.",

"Of course. Yes, of course. But I did not fetch you here for chess," he added, turning away. "We must speak of other matters. I learn with sorrow that there have been complaints about your followers."

"The Master's sorrow is my sorrow. May the servant ask in what manner. his children have erred?"

But the Prince was again studying the chessboard. He raised a finger; a servant was kneeling beside him with writing board. He dipped a brush in ink and quickly executed a group of ideographs, sealing. the letter with his ring. The servant bowed himself away, while a messenger sped out with the dispatch.

"What was that? Oh, yes -- it is reported that they lack in grace. Their manner is unseemly in dealing with the Chosen Ones."

"Will the Master help an humble priest by telling him which of his children have been guilty of lapses from propriety and in what respects that he may correct them?"

This request, the Prince admitted to himself, was awkward. In some manner this uncouth creature had managed to put him on the defensive. He was not used to being asked for details; it was improper. Furthermore there was no answer; the conduct of the priests of Mota had been impeccable, flawless, in every fashion that could be cited.

Yet his court stood there, waiting, to hear what answer he would make to this crude indecency. How went the ancient lines? " . . . Kung F'tze confounded by the question of a dolt!"

"It is not meet that the servant should question the master. At this moment you err in the fashion of your followers."

"Your pardon, Master. Though the slave may not question, is it not written that he may pray for mercy and help? We are simple servants, possessing not the wisdom of the Sun and of the Moon. Are you not our

father and our mother? Will you not, from your heights, instruct us?"

The Prince refrained from biting his lip. How had this happened? By some twist of words this barbarian had put him in the wrong again. It was not safe to let the man open his mouth! Still -- this must be met; when a slave cries for mercy, honor requires an answer.

"We consent to instruct you in one particular; learn the lesson well and other aspects of wisdom will come to you of themselves." He paused and considered his words. "The manner of address used by you and your lesser priests in greeting the Chosen Ones is not seemly. This afront corrupts the character of all who see it."

"Am I to believe that the Chosen Race disdains the blessing of the Lord Mota?"

He had twisted it -- again! Sound policy required that the ruler assume that the gods of the slaves were authentic. "The blessing is not refused, but the form of greeting must be that of servant to master."

Ardmore was suddenly aware that he was being called with urgency. Ringing in his head was the voice of Thomas: "Chief! Chief! Can you hear me? There's a squad of police at every temple, demanding the surrender of the priests -- we're getting reports in from all over the country!"

"The Lord Mota hears!" It was addressed to the Prince; would Jeff understand also?

Jeff again -- "Was that to me, Chief?"

"See to it that his followers understand." The Prince had answered too quickly for Ardmore to devise another double meaning in which to speak to Thomas. But he knew something that the Prince did not know he knew. Now to use it.

"How can I instruct my priests when you are even now arresting them?" Ardmore's manner changed suddenly from humble to accusatory.

The face of the Prince was impassive, his eyes alone gave away his astonishment. Had the man guessed the nature of that dispatch? "You speak wildly."

"I do not! Even while you have been instructing me in the way that I must instruct my priests, your soldiers have been knocking at the gates of all the temples of Mota. Wait! I have a message to you from the Lord Mota: His priests do not fear worldly power. You have not succeeded in

arresting them, nor would you, did not the Lord Mota bid them to surrender. In thirty minutes, after the priests have cleansed themselves spiritually and girded themselves for the ordeal, each will surrender himself at the threshold of his temple. Until then, woe to the soldier who attempts to violate the House of Mota!"

"'At's telling 'em Chief! 'At's telling 'em! You mean for each temple priest to hold off thirty more minutes, then surrender -- is that right? And for them to be loaded for bear, power units, communicators, and all the latest gadgets. Acknowledge, if you can."

"In the groove, Jeff." He had to chance it four meaningless syllables to the Prince, but Jeff would understand.

"O. K., Chief. I don't know what you're up to, but we'll go along a thousand percent!"

The face of the Prince was a frozen mask. "Take him away."

For some minutes after Ardmore was gone the Serene One sat staring at the chessboard and pulling at his underlip.

They placed Ardmore in a room underground, a room with metal walls and massive locks on the door. Not content with that, he was hardly inside when he heard a soft hissing noise and saw a point at the edge of the door turn cherry red. Welding! They evidently intended to make sure that no possible human weakness of his guards could result in escape. He called the Citadel.

"Lord Mota, hear thy servant!"

"Yes, Chief."

"A wink is as good as a nod."

"Got you, Chief. You are still where you can be overheard. Slang it up. I'll get your drift!"

"The headman witch doctor hankers to chew the rag with the rest of the sky pilots."

"You want Circuit A?"

"Most bodaciously."

There was a brief pause, then Thomas answered. "O. K., Chief, you've got

it. I'll stay cut in to interpret it

probably won't be necessary, since the boys have practiced this kind of double talk. Go ahead you've got five minutes, if they are to surrender on time."

Any cipher can be broken, any code can be compromised. But the most exact academic knowledge of a language gives no clue to its slang, its colloquial allusions, its half statements, over statements, and inverted meanings. Ardmore felt logically certain that the PanAsians had planted a microphone in his cell. Very well, since they were bound to listen to his end of the conversation, let them be confused and baled by it, uncertain whether he spoke in gibberish to his god, or had possibly lost his mind.

"Look, cherubs -- mamma wants baby to go to the nice man. It's all hunkydory as long as baby-bunting carries his nice new rattle. Yea, verily, rattle is the watchword -- you don't and they do. Deal this cold deck the way it's stacked and the chopstick laddies are stonkered and discombobulated. The stiff upper lip does it."

"Check me if I'm wrong, Chief. You want the priests to give themselves up, and to rattle the PanAsians by their apparent unconcern. You want them to carry it off the way you did, cool as a cucumber, and bold as brass. I also take it that you want them to hang on to their staffs, but not to use them unless you tell them to. Is that right?"

"Elementary, my dear Watson!"

"What happens after that?"

"No thirty."

"What's that? Oh, 'No thirty' -- more to come on this story; you'll tell us later. All right, Chief -- it's time!"

"Okey-dokey!"

Ardmore waited until he was reasonably certain that all the PanAsians not immediately concerned with guarding the prisoners would be asleep, or at least in their quarters. What he proposed to do would be effective fully only in the event that no one knew just what had happened. The chances were better at night.

He called Thomas by whistling a couple of bars of "Anchors Aweigh." He responded at once -- he had not gone off duty, but had remained at the

pararadio, giving the prisoners an occasional fight talk and playing records of martial music. "Yes, Chief?"

"The time has come to take a powder. Allee-allee out's in free!"

"Jailbreak?"

"In the manner of the proverbial Arab -- the exact manner."

They had discussed this technique before; Thomas gave itemized instructions and then said, "Say when, Chief. "

"When!"

He could almost see Thomas nod. "Right -- oh! O. K., troops, get going!"

Ardmore stood up and stretched his cramped limbs. He walked over to one wall of his prison and stood so that the single light cast a shadow on the wall. That would be about right there! He set the controls of his staff for maximum range in the primary Ledbetter effect, checked to see that the frequency band covered the Mongolian race, and adjusted it to stun rather than kill. Then he turned on power.

A few moments later he turned it off, and again regarded his shadow on the wall. This required an entirely different setting, directional and with fine discrimination. He turned on the red ray of Dis to guide him in his work, completed his set-up, and again turned on power.

Quietly and without fuss, atoms of metal rearranged themselves and appeared as nitrogen, to mix harmlessly with the air. Where there had been a solid wall was now an opening the size and shape of ,a tall man dressed in priestly robes. He looked at it, and, as an after thought, he meticulously traced an ellipse over the head of the representation, an ellipse the size and shape of his halo. That done, he reset the controls of his staff to that he had used before, turned on power, and stepped through the opening. It was a close fit; he had to wriggle through sideways.

Outside it was necessary to step over the piled-up bodies of a dozen or more PanAsian soldiers. This was not the side of the welded-up entrance; he guessed that he would have found guards outside each and any of the four walls, probably floor and ceiling as well.

There were more doors to pass, more bodies to clamber over before he found himself outside. When he did, he was completely unoriented. "Jeff," he called, "where am I?"

"Just a second, Chief. You're -- No, we can't get a fix on you, but you are on a line of bearing almost due south of the nearest temple. Are you still near the palace?"

"Just outside it."

"Then head north -- it's about nine squares."

"Which way is north? I'm all turned around. No wait a minute -- I just located the Big Dipper, I'm all right."

"Hurry, Chief."

"I will." He set out at a quick dogtrot, kept it up for a couple of hundred yards, then dropped into a fast walk. Damn it, he thought, a man gets out of condition with all this desk work.

Ardmore encountered several Asiatic police, but they were in no condition to notice him; he had kept the primary effect turned on. There were no whites about -- the curfew was strict with the exception of a pair of startled street cleaners. It occurred to him that he should induce them to go with him to the temple, but he decided against it; they were in no more danger than a hundred fifty million others.

There was the temple! -- its four walls glowing with the colors of attributes. He broke into a run and burst inside. The local priest was almost at his heels, arriving from the other direction.

He greeted the priest heartily, suddenly realizing the strain he had been under in finding how good it was to speak to a man of his own kind -- a comrade. The two of them ducked around back of the altar and went down below to the control and communication room, where the pararadio operator and his opposite number were almost hysterically glad to see them. They offered him black coffee, which he accepted gratefully. Then he told the operator to cut out of Circuit A and establish direct two-way connection with headquarters with vision converted into the circuit.

Thomas appeared to be about to jump out of the screen. "Whitey!" he yelled. It was the first time since the Collapse that anyone had called Ardmore by his nickname. He was not even aware that Thomas knew it. But he felt warmed by the slip.

"Hi, Jeff," he called to the image, "good to see you. Any reports in yet?"

"Some. They are coming in all the time."

"Shift to relay through the diocese offices; Circuit A is too clumsy. I want a quick report."

It was forthcoming. Within less than twenty minutes the last diocese had reported in. Every priest was back in his own temple. "Good," he told Thomas. "Now I want the proprietor in each temple set for counteraction, and wake all those monkeys up. They ought to be able to use a directional concentration down the line each priest returned on, and reach clear back to the local jailhouse."

"O.K., if you say so, Chief. May I ask why you don't simply let 'em wake up when the effect wears off?'

"Because," he explained, "if they simply come to before anybody finds them the effect will be much more mysterious than if they are found apparently dead. The object of the whole caper was to break the morale of the Asiatics. This increases the effect."

"Right -- as usual, Chief. The word is going out."

"Fine. When that's done, have them check the shielding of their temples, turn on the fourteen-cycle note, and go to bed -- all that aren't on duty. I imagine we'll have a busy day tomorrow."

"Yes, sir. Aren't you coming back here, Chief?"

Ardmore shook his head. "It's an unnecessary risk. I can supervise just as effectively through television as I could if I were standing right beside you."

"Scheer is all set to fly over and pick you up. 'He could set her down right on the temple roof."

"Tell him thanks, but to forget it. Now you turn it over to the staff duty officer and get some sleep."

"Just as you say, Chief."

He had a midnight lunch with the local priest and some conversation, then. let the priest show him to a stateroom down underground.

CHAPTER TEN

Ardmore was awakened by the off duty pararadio operator shaking him vigorously. "Major Ardmore! Major! Wake up!"

"Unnh . . . . M-m-m-m . . . . Wassa matter?"

"Wake up -- the Citadel is calling you -- urgently!"

"What time is it?"

"About eight. Hurry, sir!"

He was reasonably wide awake by the time he reached the phone. Thomas was there, on the other end, and started to talk as soon as he saw Ardmore. "A new development, Chief -- and a bad one. The PanAsian police are rounding up every member of our congregations -- systematically."

"H-m-m-m -- it was an obvious next move, I guess. How far along are they?"

"I don't know. I called you when the first report came in; they are coming in steadily now from all over the country."

"Well, I reckon we had better get busy." It was one thing for a priest, armed and protected, to risk arrest; these people were absolutely helpless.

"Chief -- you remember what they did after the first uprising? This looks bad, Chief -- I'm scared!"

Ardmore understood Thomas' fear; he felt it himself. But he did not permit his expression to show it.

"Take it easy, old son," he said in a gentle voice.

"Nothing has happened to our people yet and I don't think we'll let anything happen."

"But, Chief, what are you going to do about it? There aren't enough of us to stop them before they kill a lot of people."

"Not enough to do it directly, perhaps, but there is a way. You stick to collecting data and warn everybody not to go off half-cocked. I'll call you back in about fifteen minutes." He flipped the disconnect switch before Thomas could answer.

It required some thought. If he could equip each man with a staff, it

would be simple. The shielding effect from a staff could theoretically protect a man against almost anything; except, perhaps, an A-bomb or the infiltration of poison gas. But the construction and repair department had been hard pushed to provide enough staffs to equip each new priest; one for each man was out of the question, since they lacked factory mass production. Anyhow, he needed them now -- this morning.

A priest could extend his shield to include any given area or number of people, but in great extension the field became so tenuous that a well-thrown snowball would break through it. Nuts!

He realized suddenly that he was thinking of the problem in direct terms again, in spite of his conscious knowledge that such an approach was futile. What he wanted was psychological jiu-jitsu -- some way to turn their own strength against them. Misdirection -- that was the idea! Whatever it was they expected him to do, don't do it! Do something else.

But what else? When he thought he had found an answer to that question he called Thomas to the screen. "Jeff," he said at once, "give me Circuit A."

He spoke for some minutes to his priests, slowly and in detail, and emphasizing certain points. "Any questions?" he then asked, and spent several more minutes in dealing with such as they were relayed in from the diocese stations.

Ardmore and the local priest left the temple together. The priest attempted to persuade him to stay behind, but he brushed the objections aside. The priest was right; he knew in his heart that he should not take personal risks that could be avoided, but it was a luxury to be out from under Jeff Thomas' restraining influence.

"How do you plan to find out where they have taken our people?" asked the priest. He was a former real-estate operator named Ward, a man of considerable native intelligence. Ardmore liked him.

"Well, what would you do if I weren't along?"

"I don't know. I suppose I would walk into a police station and try to scare the information out of the flatface in charge."

"That's sound enough. Where is one?"

The central police station of the PanAsian police lay in the shadow of the palace, between eight and nine blocks to the south. They encountered many PanAsians en route, but were not interfered with. The Asiatics

seemed dumbfounded to see two priests of Mota striding along in apparent unconcern. Even those garbed as police appeared uncertain what to do, as if their instructions had not covered the circumstance.

However, someone had phoned ahead; they were met on the steps by a nervous Asiatic officer who demanded of them, "Surrender! You are under arrest!"

They walked straight toward him. Ward lifted one, hand in blessing and intoned, "Peace! Take me to my people."

"Don't you understand my language?" snapped the PanAsian, his voice becoming shrill. "You are under arrest!" His hand crept nervously toward his holster.

"Your earthly weapons avail you not," said Ardmore calmly, "in dealing with the great Lord Mota. He commands you to lead me to my people. Be warned!" He continued to advance until his personal screen pushed against the man's body.

It -- the disembodied pressure of the invisible screen -- was more than the PanAsian could stand. He fell back a pace, jerked his sidearm clear and fired point-blank. The vortex ring struck harmlessly against the screen, was absorbed by it.

"Lord Mota is impatient," remarked Ardmore in a mild tone. "Lead his servant, before the Lord Mota sucks the soul from your body." He shifted to another effect, never before used in dealing with the PanAsians.

The principle involved was very simple; a cylindrical tractor-pressor stasis was projected, forming in effect a tube. Ardmore let it rest over the man's face, then applied a tractor beam down the tube. The unfortunate PanAsian gasped for air where there was no air and pawed at his face. When his nose began to bleed, Ardmore let up on him. "Where are my children?" he inquired again as softly as before.

The police officer, probably in sheer reflex, tried to run. Ardmore nailed him with a pressor beam against the door and again applied momentarily the suction tube, this time to the fellow's midriff. "Where are they?"

"In the park," the man gasped, and regurgitated violently.

They turned with leisured dignity, and headed back down the steps, sweeping those who had pressed too close casually out of the way with the pressor beam.

The park surrounded the erstwhile State capitol building. They found the congregation herded into a hastily erected bull pen which was surrounded by ranks of Asiatic soldiers. On a platform nearby, technicians were installing television pick-up. It was easy to infer that another public "lesson" was to be given the serfs. Ardmore saw no evidence of the rather bulky apparatus used to produce the epileptogenetic ray; either it had not been brought up, or some other method of execution was to be used -- perhaps the soldiers present were an enormous firing squad.

Momentarily he was tempted to use the staff to knock out all the soldiers present they were standing at ease with arms stacked, and it was conceivably possible that he might be able to do so before they could harm, not

Ardmore, but the helpless members of the congregation. But he decided against it; he had been right when he gave his orders to his priests -- this was a game of bluff; he could not combat all of the soldiers that the PanAsian authorities could bring to bear, yet he must get this crowd safely inside the temple.

The massed people in the bull pen recognized Ward, and perhaps the high priest as well, at least by reputation. He could see sudden hope wipe despair from their faces -- they surged expectantly. But he passed on by them with the briefest of blessing, Ward in his train, and hope gave way to doubt and bewilderment as they saw him stride up to the PanAsian commander and offer him the same blessing.

"Peace!" cried Ardmore. "I come to help you."

The PanAsian barked an order in his own tongue. Two PanAsians ran up to Ardmore and attempted to seize him. They slithered off the screen, tried again, and then stood looking to their superior officer for instructions, like a dog bewildered by an impossible command.

Ardmore ignored them and continued his progress until he stood immediately in front of the commander. "I am told that my people have sinned," he announced. "The Lord Mota will deal with them."

Without waiting for an answer, he turned his back on the perplexed official and shouted, "In the name of Shaam, Lord of Peace!" and turned on the green ray from his staff.

He played it over the imprisoned congregation. Down they went, as if the ray were a strong gale striking a stand of wheat. In seconds' time, every man, woman and child lay limp on the ground, to all appearance

dead. Ardmore turned back to the PanAsian officer and bowed low. "The servant asks this penance be accepted."

To say that the Oriental was disconcerted is to expose the inadequacy of language. He knew how to deal with opposition, but this whole-hearted cooperation left him without a plan; it was not in the rules.

Ardmore left him no time to think of a plan. "The Lord Mota is not content," he informed him, "and directs that I give you and your men presents, presents of gold!"

With that he switched on a dazzling white light and played it over the stacked arms of the soldiers to his right. Ward followed his motions, giving his attention to the left flank. The stacked small arms glowed and scintillated under the ray. Wherever it touched, the metal shone with a new luster, rich and ruddy. Gold! Raw gold!

The PanAsian common soldier was paid no better than common soldiers usually are. Their lines shifted uneasily, like race horses at the barrier. A sergeant stepped up to the weapons, examined one and held it up. He called out something in his own tongue, his voice showing high excitement.

The soldiers broke ranks.

They shouted and swarmed and danced. They fought each other for possession of the useless, precious weapons. They paid no attention to their officers; nor were their officers free of the gold fever.

Ardmore looked at Ward and nodded. "Let 'em have it!" he commanded, and turned his knockout ray on the PanAsian commander.

The Asiatic toppled over without learning what had hit him, for his agonized attention was on his demoralized command. Ward had gone to work on the staff officers.

Ardmore gave the American prisoners the counteracting effect while Ward disintegrated a large gate in the bull pen. There developed the most unexpected difficult part of the task -- to persuade three hundred-odd, dazed and disorganized people to listen and to move all in one direction. But two loud voices and a fixed determination accomplished it. It was necessary to clear a path through the struggling, wealth-mad Orientals with the aid of the tractor and pressor beams. This gave Ardmore an idea; he used the beams an his own followers much as a goose girl touches up a flock of geese with her switch.

They made the nine blocks to the temple in ten minutes, moving at a dogtrot that left many gasping and protesting. But they made it, made it without interruption by major force, although both Ward and Ardmore found it necessary to knock out an occasional PanAsian en route.

Ardmore wiped sweat from his face when he finally stumbled in the temple door, sweat that was not due entirely to precipitate progress. "Ward," he asked with a sigh, "have you got a drink in the place?"

Thomas was calling him again before he had had time to finish a cigarette. "Chief," he said, "we are beginning to get some reports in. I thought you would like to know."

"Go ahead."

"It looks successful -- so far. Maybe twenty percent of the priests have reported so far through their bishops that they are back with their congregations."

"Any casualties?"

"Yes. We lost the entire congregation in Charleston, South Carolina. They were dead before the priest got there. He tore into the PanAsians with his staff at full power and killed maybe two or three times as many of the apes as they had killed of us before he beat his way to his temple and reported."

Ardmore shook his head at this. "Too bad. I'm sorry about his congregation, but I'm sorrier that he cut loose and killed a bunch of PanAsians. It tips my hand before I'm ready."

"But, Chief, you can't blame him -- his wife was in that crowd!"

"I'm not blaming him. Anyhow, it's done -- the gloves had to come off sooner or later; this just means that we will have to work a little faster. Any other trouble?"

"Not much. Several places they fought a sort of rear-guard action getting back to the temples and lost some people." Ardmore saw a messenger in the screen hand a sheaf of_ flimsies to Thomas. Thomas glanced at them and continued. "A bunch more reports, Chief. Want to hear 'em?"

"No. Give me a consolidated report when they are all in. Or when most of them are in, not later than an hour from now. I'm cutting off."

The consolidated report showed that over ninety-seven percent of the members of the cult of Mota had been safely gathered into the temples. Ardmore called a staff meeting and outlined his immediate plans. The meeting was, in effect, face to face, as Ardmore's place at the conference table was taken by the pick-up and the screen of the receiver. "We've had our hands forced," he told them. "As you know, we had not expected to start action of our own volition for another two weeks, perhaps three. But we have no choice now. As I see it, we have to act and act so fast that we will always have the jump on them."

He threw the situation open to general discussion; there was agreement that immediate action was necessary, but some disagreement as to methods. After listening to their several opinions Ardmore selected Disorganization Plan IV and told them to go ahead with preparations. "Remember," he cautioned, "once we start, it's too late to turn back. This thing moves fast and accelerates. How many basic weapons have been provided?"

The "basic weapon" was the simplest Ledbetter projector that had been designed. It looked very much like a pistol and was intended to be used in similar fashion. It projected a directional beam of the primary Ledbetter effect in the frequency band fatal in those of Mongolian blood and none other. It could be used by a layman after three minutes' instruction, since all that was required was to point it and press a trigger, but it was practically foolproof -- the user literally could not harm a fly with it, much less a Caucasian man. But it was sudden death to Asiatics.

The problem of manufacturing and distributing quantities of weapons to be used in the deciding conflict had been difficult. The staffs used by the priests were out of the question; each was a precision instrument comparable to a fine Swiss watch. Scheer himself had laboriously fashioned by hand the most delicate parts of each staff, and, nevertheless, required the assistance of many other skilled metalsmiths and toolmakers to keep pace with the demand. It was all handwork; mass production was impossible until Americans once more controlled their own factories.

Furthermore, detailed instruction and arduous supervised practice were indispensable in order for a priest to become even moderately skillful in the use of the remarkable powers of his staff.

The basic weapon was the pragmatic answer. It was simple and rugged and contained no moving parts other than the activating switch, or trigger. Even so, it could not be manufactured in quantity at the Citadel, as there would have been no way to distribute the weapons to widely

separated parts of the country without attracting unhealthy attention from the PanAsian authorities. Each priest carried to his own temple one sample of the basic weapon; it was then his responsibility to locate and enlist in his own community, workmen with the necessary skill in metalwork for producing the comparatively simple device.

In the secret places down underneath each temple, workmen had been busy for weeks at the task grinding, polishing, shaping, reproducing by hand row on row of the lethal little gadgets.

The supply staff officer gave Ardmore the information he had requested. "Very well," Ardmore acknowledged, "that's fewer weapons than we have members of our congregations, but it will have to do. There will be a lot of dead wood, anyway. This damned cult business has attracted every screwball and crackpot in the country -- all the long-haired men and short-haired women. By the time we count them out we may have a few basic weapons left over. Which reminds me -- if we do have any left over, there ought to be some women in every congregation who are young and strong and tough-minded enough to be useful in a fight. We'll arm them. About the crackpots you'll find a note in the general indoctrination plan as to how each priest is to break the news to his flock that the whole thing is really a hoax for military purposes. I want to add to it. Nine people out of ten will be overjoyed to hear the truth and strongly cooperative. That tenth one may cause trouble, get hysterical, maybe try to do a bunk out of the temple. Caution each priest, for God's sake, to be careful; break the news to them in small numbers at a time, and be ready to turn the sleepy ray on anybody that looks like a source of trouble. Then lock 'em up until the fun is over -- we haven't time to try to reorient the soft-minded.

"Now get on with it. The priests will need the rest of the day to indoctrinate their congregations and to get them organized into something resembling military lines. Thomas, I want the scout car assigned tonight to the job involving the Prince Royal to stop here first and pick me up. Have Wilkie and Scheer man it."

"Very well, sir. But I had planned to be in that car myself. Do you object to that slight change?"

"I do," Ardmore said dryly. "If you will look at Disorganization Plan IV you will see that it calls for the commanding officer to remain in the Citadel. Since I am already here, outside the Citadel, you will remain in my place."

"But, Chief --"

"We are not going to risk both of us, not at this stage of the game. Now pipe down."

"Yes, sir."

Ardmore was called back to the communicator later that morning. The face of the headquarters communication watch officer peered out of the screen at him. "Oh! -- Major Ardmore, Salt Lake City is trying to reach you with a priority routing."

"Put them on."

The face gave way to that of the priest at Salt Lake City.

"Chief," he began, "we've got a most extraordinary prisoner. I'm of the opinion you'd better question him yourself."

"I'm short of time. Why?"

"Well, he's a PanAsian, but claims he is a white man and that you will know him. The funny thing about it is that he got past our screen. I thought that was impossible."

"So it is. Let me see him."

It was Downer, as Ardmore had begun to suspect. Ardmore introduced him to the local priest and as cured that official that his screens had not failed him. "Now, Captain, out with it."

"Sir, I decided to come in and report to you in detail because things are coming to a head."

"I know it. Give me all the details you can."

"I will, sir. I wonder if you have any idea how much damage you've done the enemy already? -- their morale is cracking up like rotten ice in a thaw. They axe all nervous, uncertain of themselves. What happened?"

Ardmore sketched out briefly the events of the past twenty -- four hours, his own arrest, the arrest of the priests, the arrest of the entire cult of Mota, and the subsequent delivery. Downer nodded. "That explains it. I couldn't really tell what had happened; they never tell a common soldier anything -- but I could see them going to pieces, and I thought you had better know."

"What happened?"

"Well -- I guess I had better just tell you what I saw, and let you make your own inferences. The second battalion of the Dragon Regiment at Salt Lake City is under arrest. I heard a rumor that every officer in it had committed suicide. I suppose that is the outfit that let the local congregation escape, but I don't know."

"Probably. Go ahead."

"All I know is what I saw. They were marched in about the middle of the morning with their banners reversed and confined to their barracks, with a heavy guard around the buildings. But that's not all. It affects more than the one outfit under arrest. Chief, you know how an entire regiment will go to pieces if the colonel starts losing his grip?"

"I do. Is that the way they act?"

"Yes -- at least the command stationed at Salt Lake City. I'm damned well certain that the big shot there is afraid of something he can't understand, and his fear has infected his troops, right down to the ordinary soldiers. Suicides, lots of 'em, even among the common soldiers. A man will get moody for about a day, then sit down facing toward the Pacific and rip out his guts.

"But here is the tip-off, the thing that proves that morale is bad all over the country. There has been a general order issued by the Prince Royal, in the name of the Heavenly Emperor, forbidding any more honorable suicides."

"What effect did that have?"

"Too soon to tell -- it just came out today. But you don't appreciate what that means, Chief. You have to live among these people, as I have, to appreciate it. With the PanAsians, everything is face -- everything. They care more for appearances than an American can possibly understand. To tell a man who has lost face that he can't balance the books and get square with his ancestors by committing suicide is to take the heart right out of him. It jeopardizes his most precious possession.

"You can count on it that the Prince Royal is scared, too, or he would never have resorted to any such measures. He must have lost an incredible number of his officers lately ever to have thought of such a thing."

"That is reassuring. Before this night is out, I think we will have damaged their morale at least as much more as we have already. So you

think we've got them on the run?"

"I didn't say that, Major -- don't ever think so. These damned yellow baboons" -- he spoke quite earnestly, evidently forgetting his own exact physical resemblance to the Asiatics -- "are just about four times as deadly and dangerous as their present frames of mine as they were when they were cock o' the walk. They are likely to run amuck with just a slight push and start slaughtering right and left -- babies, women -- indiscriminately!"

"H-m-m. Any recommendations?"

"Yes, Chief, I have. Hit 'em with everything you've got just as soon as possible, and before they start in on a general massacre. You've got 'em softened up now -- sock it to 'em! before they have time to think about the general population. Otherwise you'll have a blood letting that will make the Collapse look like a tea party.

"That's the other reason I came in," he added. "I didn't want to find myself ordered out to butcher my own kind."

Downer's report left Ardmore plenty to worry about. He conceded that Downer was probably right in his judgment of the workings of the Oriental mind. The thing that Downer warned against retaliation against the civilian population always had been the key to the whole problem -- that was why the religion of Mota had been founded; because they dare not strike directly for fear of systematic retaliation against the helpless. Now -- if Downer was a judge in attacking indirectly, Ardmore had rendered an hysterical retaliation almost as probable.

Should he call off Plan IV and attack today?

No -- it simply was not practicable. The priests had to have a few hours at least in which to organize the men of their flocks into guerrilla warriors. That being the case, one might as well go ahead with Plan IV and soften up the war lords still further. Once it was under way, the PanAsians would be much too busy to plan massacres.

A small, neat scout car dropped from a great height and settled softly and noiselessly on the roof of the temple in the capital city of the Prince Royal. Ardmore stepped up to it as the wide door in its side opened and Wilkie climbed out. He saluted. "Howdy, Chief!"

"H'lo, Bob. Right on time, I see -- just midnight. Think you were spotted?"

"I don't think so; at least, no one turned a spot on us. And we cruised high and fast; this gravitic control is great stuff." As they climbed in, Scheer gave his C.O. a brief nod accompanied by, "Evening, sir," with his hands still on the controls. As soon as the safety belts were buckled he shot the car vertically into the air.

"Orders, sir?"

"Roof of the palace -- and be careful."

Without lights, at great speed, with no power source the enemy could detect, the little car plummeted to the roof designated. Wilkie started to open the door. Ardmore checked him. "Look around first."

An Asiatic cruiser, on routine patrol over the residence of the vice-royal, changed course and stabbed out with a searchlight. The radar-guided beam settled on the scout car.

"Can you hit him at this range?" inquired Ardmore, whispering unnecessarily.

"Easiest thing in the world, Chief." Cross hairs matched on the target; Wilkie depressed his thumb. Nothing seemed to happen, but the beam of the searchlight swept on .past them.

"Are you sure you hit him?" Ardmore inquired doubtfully.

"Certain. That ship'll go ahead on automatic control till her fuel gives out. But it's a dead hand at the helm."

"O. K. , Scheer, you take Wilkie's place at the projector. Don't let fly unless you are spotted. If we aren't back in thirty minutes, return to the Citadel. Come on, Wilkie -- now for a little hocus-pocus."

Scheer acknowledged the order, but it was evident from the way his powerful jaw muscles worked that he did not like it. Ardmore and Wilkie, each attired in the full regalia of a priest, moved out across the roof in search of a way down. Ardmore kept his staff set and projecting in the wave band to which Mongolians were sensitive, but at a power-level anesthetic rather than lethal in its effect. The entire palace had been radiated with a cone of these frequencies before they had landed, using the much more powerful projector mounted in the scout car. Presumably every Asiatic in the building was unconscious -- Ardmore was not taking unnecessary chances.

They found an access door to the roof, which saved them cutting a hole,

and crept down a steep iron stairway intended only for janitors and repair men. Once inside, Ardmore had trouble orienting himself and feared that he would be forced to find a PanAsian, resuscitate him, and wring the location of the Prince's private chambers out of him by most ungentle methods. But luck favored them; he happened on the right floor and correctly inferred the portal of the Prince's apartment by the size and nature of the guard collapsed outside of it.

The door was not locked; the Prince depended on a military watch being kept rather than keys and bolts -- he had never turned a key in his life. They found him lying in his bed, a book fallen from his limp fingers. A personal attendant lay crumpled in each of the four corners of the spacious room.

Wilkie eyed the Prince with interest. "So that's his nibs. What do we do now, Major?"

"You get on one side of the bed; I'll get on the other. I want him to be forced to divide his attention two ways. And stand up close so that he will have to look up at you. I'll talk all the business, but you throw in a remark or two every now and then to force him to split his attention."

"What sort of a remark?"

"Just priestly mumbo-jumbo. Impressive and no real meaning. Can you do it?"

"I think so -- I used to sell magazine subscriptions."

"O. K. This guy is a tough nut really tough. I am going to try to get at him with the two basic congenital fears common to everybody; fear of constriction and fear of falling. I could handle it with my staff but it will be simpler if you do it with yours. Do you think you can follow my motions and catch what I want done?"

"Can you make it a little clearer than that?"

Ardmore explained in detail, then added, "All right let's get busy. Take your place." He turned on the four colored

lights of his staff. Wilkie did likewise. Ardmore stepped across the room and switched out the lights of the room.

When the PanAsian Prince Royal, Grandson of the Heavenly One and ruler in his name of the Imperial Western Realm, came to his senses, he saw

standing. over him in the darkness two impressive figures. The taller was garbed in robes of shimmering, milky luminescence. His turban, too, glowed with a soft white fire -- a halo.

The staff in his left hand streamed light from all four faces of its cubical capital -- ruby, golden, emerald, and sapphire.

The second figure was like the first, save that his robes glowed ruddy like iron on an anvil. The face of each was partially illuminated by the rays from their wands.

The figure in shining white raised his right hand in a gesture not benign, but imperious. "We meet again, O unhappy Prince!"

The Prince had been trained truly and well; fear was not natural to him. He started to sit up, but an impalpable force shoved against his chest and thrust him back against the bed. He started to speak.

The air was sucked from his throat. "Be silent, child of iniquity! The Lord Mota speaks through me. You will listen in peace."

Wilkie judged it to be about time to divert the Asiatic's attention. He intoned, "Great is the Lord Mota!"

Ardmore continued, "Your hands are wet with the blood of innocence. There must be an end to it!"

"Just is the Lord Mota!"

"You have oppressed his people. You have left the land of your fathers, bringing with you fire and sword. You must return!"

"Patient is the Lord Mota!"

"But you have tried his patience," agreed Ardmore. "Now he is angry with you. I bring you warning; see that you heed it!"

"Merciful is the Lord Mota!"

"Go back to the place whence you came -- go back at once, taking with you all your people -- and return not again!" Ardmore thrust out a hand and closed it slowly. "Heed not this warning -- the breath will be crushed from your body!" The pressure across the chest of the Oriental increased intolerably, his eyes bulged out, he gasped for air.

"Heed not this warning -- you will be cast down from your high place!"

The Prince felt himself suddenly become light; he was cast into the air, pressed hard against the high ceiling. Just . as suddenly his support left him; he fell heavily back to the bed.

"So speaks my Lord Mota!"

"Wise is the man who heeds him!" Wilkie was running short of choruses.

Ardmore was ready to conclude. His eye swept around the room and noted something he had seen before -- the Prince's ubiquitous chess table. It was set up by the head of the bed, as if the Prince amused himself with it on sleepless nights. Apparently the man set much store by the game. Ardmore added a postscript. "My Lord Mota is done -- but heed the advice of an old man: men and women are not pieces in a game!" An invisible hand swept the costly, beautiful chessmen to the floor. In spite of his rough handling, the Prince had sufficient spirit left in him to glare.

"And now my Lord Shaam bids you sleep." The green light flared up to greater brilliance; the Prince went limp.

"Whew!" sighed Ardmore. "I'm glad that's over. Nice cooperation, Wilkie -- I was never cut out to be an actor." He hoisted up one side of his robes and dug a package of cigarettes out of his pants-pocket. "Better have one," he offered. "We've got a really dirty job ahead of us."

"Thanks," said Wilkie, accepting the offer. "Look, Chief -- is it really necessary to kill everybody here? I don't relish it."

"Don't get chicken, son," admonished Ardmore with an edge in his voice. "This is war -- and war is no joke. There is no such thing as humane war. This is a military fortress we are in; it is necessary to our plans that it be reduced completely. We couldn't do it from the air because the plan requires keeping the Prince alive."

"Why wouldn't it do just as well to leave them unconscious?"

"You argue too much. Part of the disorganization plan is to leave the Prince still alive and in command, but cut off from all his usual assistants. That will create a turmoil of inefficiency much greater than if we had simply killed him and let their command devolve to their number-two man. You know that. Get on with your job."

With the lethal ray from their staffs turned to maximum power, they swept the walls and floor and ceiling, varying death to Asiatics for hundreds of feet -- through rock and metal, plaster and wood. Wilkie did his job with white-lipped efficiency.

Five minutes later they were carving the stratosphere for home -- the Citadel.

Eleven other scout cars were hurrying through the night. In Cincinnati, in Chicago, in Dallas, in major cities across the breadth of the continent they dove out of the darkness, silencing opposition where they found it, and landed little squads of intent and resolute men. In they went, past sleeping guards, and dragged out local senior officials of the PanAsians provincial governors, military commanders, the men on horseback. They dumped each unconscious kidnapped Oriental on the roof of the local temple of Mota, there to be received and dragged down below by the arms of a robed and bearded priest.

Then to the next city to repeat it again, as long as the night lasted.

CHAPTER ELEVEN

Calhoun buttonholed Ardmore almost as soon as he was back in the Citadel. "Major Ardmore," he announced, clearing his throat, "I have waited up to discuss a matter of import with you."

This man, Ardmore thought, can pick the damnedest times for a conference. "Yes?"

"I believe you expect a rapid culmination of events?"

"Things are coming to a head, yes."

"I presume the issue will be decided very presently. I have not been able to get the details I want from your man Thomas -- he is not very cooperative; I fail to see why you have thrust him up to the position of speaking for you in your absence -- but that is beside the point," Calhoun conceded with a magnanimous gesture. "What I wanted to say is this: Have you given any thought to the form of government after we drive out the Asiatic invader?"

What the devil was the man getting at? "Not particularly -- why should I? Of course, there will have to be a sort of provisional interim period, military government of sorts, while we locate all the old officials left alive and get them back on the job and arrange for a national election. But that ought not to be too hard -- we'll have the local priests to work through."

Calhoun's eyebrows shot up. "Do you really mean to tell me, my dear man, that you are seriously contemplating returning to the outmoded

inefficiencies of elections and all that sort of thing?"

Ardmore stared at him. "What else are you suggesting?"

"It seems obvious. We have here a unique opportunity to break with the stupidities of the past and substitute a truly scientific rule, headed by a man chosen for his intelligence and scientific training rather than for his skill in catering to the prejudices of the mob. "

"Dictatorship, eh? And where would I find such a man?" Ardmore's voice was disarmingly, dangerously gentle.

Calhoun did not speak, but indicated by the slightest of smug self-deprecatory gestures that Ardmore would not have far to look to find the right man.

Ardmore chose not to notice Calhoun's implied willingness to serve. "Never mind," he said, and his voice was no longer gentle, but sharp. "Colonel Calhoun, I dislike to have to remind you of your duty -- but understand this: you and I are military men. It is not the business of military men to monkey with politics. You and I hold our commissions by grace of a constitution, and our sole duty is to that constitution. If the people of the United States want to streamline their government, they will let us know!

"In the meantime, you have military duties, and so do I. Go ahead with yours."

Calhoun seemed about to burst into speech. Ardmore cut him short. "That is all. Carry out your orders, sir!"

Calhoun turned abruptly and left.

Ardmore called his Chief of Intelligence to him. "Thomas," he said, "I want a close, but discreet, check kept on Colonel Calhoun's movements."

"Yes, sir."

"The last of the scout cars are in, sir."

"Good. How does the tally stand now?" Ardmore asked.

"Just a moment, sir. It was running about six raids to a ship -- with this last one that makes a total of . . . uh . . . nine and two makes eleven-seventy-one prisoners in sixty-eight raids. Some of them doubled up...

"Any casualties?"

"Only to the PanAsians --"

"Damn it that's what I meant! No, I mean to our men, of course."

"None, Major. One man got a broken arm when he fell down a staircase in the dark."

"I guess we can stand that. We should get some reports on the local demonstrations -- at least from the East coast cities -- before long. Let me know."

"I will. "

"Would you mind telling my orderly to step in as you leave? I want to send for some caffeine tablets, better have one yourself; this is going to be a big day."

"A good notion, Major." The communications aide went out.

In sixty-eight cities throughout the land, preparations were in progress for the demonstrations that constituted Phase 2 of Disorganization Plan IV. The priest of the temple in Oklahoma City had delegated part of his local task to two men, Patrick Minkowski, taxi driver, and John W. (Jack) Smyth, retail merchant. They were engaged in fitting leg irons to the ankles of the Voice of the Hand, PanAsian administrator of Oklahoma City. The limp, naked body of the Oriental lay on a long table in a workshop down under the temple.

"There," announced Minkowski, "that's the best job of riveting I can do without heating tools. It'll take him a while to get it off, anyway. Where's that stencil?"

"By your elbow. Captain Isaacs said he'd weld those joints with his staff after we finished; I wouldn't worry about them. Say, it seems odd to call the priest Captain Isaacs, doesn't it? Do you think we're really in the army -- legally, I mean?"

"I wouldn't know about that -- and as long as it gives me a chance to take a crack at those flat-faced apes, I don't care. I suppose we are, though -- if you admit that Isaacs is an army officer, I guess he can take recruits. Look -- do we put this stencil on his back or on his stomach?"

"I'd say to put it on both sides. It does seem funny, though, about this army business, I mean. One day you're going to church; the next you're told it's a military outfit, and they swear you in."

"Personally, I like it," commented Minkowski. "Sergeant Minkowski -- it sounds good. They wouldn't take me before on account o' my heart. As for the church part, I never took any stock in this great God Mota business, anyhow; I came for the free food and the chance to breathe in peace." He removed the stencil from the back of the Asiatic; Smyth commenced filling in the traced design of an ideograph with quick-drying indelible paint. "I wonder what that heathen writing means?"

"Didn't you hear?" asked Smyth, and told him.

A delighted grin came over Minkowski's face. "Well, I'll be damned," he said. "If anybody called me that, it wouldn't do him no good to smile when he said it. You wouldn't kid me?"

"No, indeed. I was in the communications office when they were getting the design from the Mother Temple -- I mean general headquarters. Here's another funny thing, too. I saw the chap in the screen who was passing out the design, and he was Asiatic as this monkey" -- Smyth indicated the unconscious voice of the Hand -- "but they called him Captain Downer and treated him like one of us. What do you make of that?"

"Couldn't say. He must be on our side, or else he wouldn't be loose in headquarters. What'll we do with the rest of the paint?"

Between them they found something to do with it, which Captain Isaacs noticed at once when he came in to see how they were progressing. He suppressed a smile. "I see you have elaborated on your instructions a bit," he commented, trying to keep his voice soberly official.

"It seemed a pity to waste the paint," Minkowski explained ingenuously. "Besides, he looked so naked the way he was."

"That's a matter of opinion. Personally, I would say that he looks nakeder now. We'll drop the point; hurry up and get his head shaved. I want to leave any time now."

Minkowski and Smyth waited at the door of the temple five minutes later, the Voice of the Hand rolled in a blanket on the floor between them. They saw a sleek duocycle station wagon come shooting up to the curb in front of the temple and brake to a sudden stop. Its bell sounded, and Captain Isaacs' face appeared in the window of the driver's compartment. Minkowski threw down the butt of a cigarette and grabbed the shoulders

of the muffled figure at their feet; Smyth took the legs and they trotted clumsily and heavily out to the car.

"Dump him in the back," ordered Captain Isaacs.

That done, Minkowski took the wheel while Isaacs and Smyth crouched in the back with the subject of the pending demonstration.

"I want you to find a considerable gathering of PanAsians almost anywhere," directed the captain. "If there are Americans present, too, so much the better. Drive fast and pay no attention to anyone. I'll take care of any difficulties with my staff." He settled himself to watch the street over Minkowski's shoulder.

"Right, Captain! Say, this is a sweet little buggy," he added as the car shot forward. "How did you pick it up so fast?"

"I knocked out a few of our Oriental friends;" answered Isaacs briefly. "Watch that signal!"

"Got it!" The car dewed around and dodged under the nose of oncoming cross traffic. A PanAsian policeman was left futilely waving at them.

A few seconds later Minkowski demanded, "How about that spot up ahead, Captain?" and hooked his chin in the indicated direction. It was the square of the civic center.

"O. K. " He bent over the silent figure on the floor of the car, busy with his staff.

The Asiatic began to struggle. Smyth fell on him and pinned the blanket more firmly about the head and shoulders of their victim. "Pick your spot. When you stop, we'll be ready."

The car lurched to a stomach-twisting halt. Smyth slammed open the rear door; he and Isaacs grabbed corners of the blanket and rolled the now-conscious official into the street. "Take it away, Pal"

The car jumped forward, leaving startled and scandalized Asiatics to deal with an utterly disgraceful situation as best they might. Twenty minutes later a brief but explicit account of their exploit was handed to Ardmore in his office at the Citadel. He glanced over it and passed it to Thomas. "Here's a crew with imagination, Jeff."

Thomas took the report and read it, then nodded agreement. "I hope they all do as well. Perhaps we should have given more detailed instructions."

"I don't think so. Detailed instructions are the death of initiative. This way we have them all striving to think up some particularly annoying way to get under the skins of our slant-eyed lords. I expect some very amusing arid ingenious results."

By nine a.m., headquarters time, each one of the seventy-odd PanAsian major officials had been returned alive, but permanently, unbearably disgraced, to his racial brethren. In all cases, so far as the data at hand went, there had been no cause given to the Asiatics to associate their latest trouble directly with the cult of Mota. It was simply catastrophe, psychological catastrophe of the worst sort, which had struck in the night without warning and without trace.

"You have not set the time for Phase 3 as yet, Major," Thomas reminded Ardmore when all reports were in.

"I know it. I don't expect it to be more than two hours from now at the outside. We've got to give them a little time to appreciate what has happened to them. The force of demoralization will be. many times as great when they have had time to compare notes around the country and realize that all of their top men have been publicly humiliated. That, combined with the fact that we crippled their continental headquarters almost to the limit, should produce as sweet a case of mass hysteria as one could wish: But we'll have to give it time to spread. Is Downer on deck?"

"He's standing by in the communications watch office."

"Tell them to cut in a relay circuit from him to my office. I want to listen to what he picks up here."

Thomas dialed with the interoffice communicator and spoke briefly. Very shortly Downer's pseudoAsiatic countenance showed on the screen above Ardmore's desk. Ardmore spoke to him. Downer slipped an earphone off one ear and gave him an inquiring look.

"I said, 'Are you getting anything yet? " repeated Ardmore.

"Some. They're in quite an uproar. What I've been able to translate is being canned." He flicked a thumb toward the microphone which hung in front of his face. A preoccupied, listening look came into his eyes, and he added, "San Francisco is trying to raise the palace --"

"Don't let me interrupt you," said Ardmore, and closed his own transmitter.

"-- the Emperor's Hand there is reported dead. San Francisco wants some sort of authorization Wait a minute; the comm office wants me to try another wave length. There it comes -- they're using the Prince Royal's signal, but it's in the provincial governor's frequency. I can't get what they're saying; it's either coded or in a dialect I don't know. Watch officer, try another wave band -- I'm just wasting time on that one . . . . That's better." Downer's face became intent, then suddenly lit up. "Chief, get this: Somebody is saying that the Governor of the gulf province has lost his mind and asks permission to supersede him! Here's another -- wants to know what's wrong with the palace circuits and how to reach the palace, wants to report an uprising --"

Ardmore cut back in. "Where?"

"Couldn't catch it. Every frequency is jammed with traffic, and about half of it is incoherent. They don't give each other time to clear -- send right through another message."

There was a gentle knock at the outer door of Ardmore's office. It opened a few inches and Dr. Brooks' head appeared. "May I come in?"

"Oh -- certainly, Doctor. Come in. We are listening to what Captain Downer can pick up from the radio."

"Too bad we haven't a dozen of him -- translators, I mean. "

"Yes, but there doesn't seem to be much to pick up but a general impression." They listened to what Downer could pick up for the better part of an hour, mostly disjointed or partial messages, but it was made increasingly evident that the sabotage of the palace organization, plus the terrific emotional impact of the disgrace of key administrators, had played hob with the normal, smooth functioning of the PanAsian government. Finally Downer said, "Here's a general order going out Wait a minute -- It orders a radio silence on all clear-speech messages; everything has to be coded."

Ardmore glanced at Thomas. "I guess that is about the right point, Jeff. Somebody with horse sense and poise is trying to whip them back into shape -- probably our old pal, the Prince. Time to stymie him." He rang the communications office. "O.K., Steeves," he said to the face of the watch officer, "give them power!"

"Jam 'em?

"That's right. Warn all temples through Circuit A, and let them all do

it at once."

"They are standing by now, sir. Execute?"

"Very well -- execute!"

Wilkie had developed a simple little device whereby the tremendous power of the temple projectors could be rectified, if desired, to undifferentiated electromagnetic radiation in the radio frequencies -- static. Now they cut loose like sunspots, electrical storms, and aurora, all hooked up together.

Downer was seen to snatch the headphones from his ears. "For the love o' -- Why didn't somebody warn me?" He reapproached one receiver cautiously to an ear, and shook his head. "Dead. I'll bet we've burned out every receiver in the country."

"Maybe so," observed Ardmore to those in his office, "but we'll keep jamming them just the same. " At that moment, in all the United States, there remained no general communication system but the pararadio of the cult of Mota. The Asiatic rulers could not even fall back on wired telephony; the obsolete ground lines had long since been salvaged for their copper.

"How much longer, Chief?" asked Thomas.

"Not very long. We let 'em talk long enough for them to know something, hellacious is happening all over the country. Now we've cut 'em off. That should produce a feeling of panic. I want to let that panic have time to ripen and spread to every PanAsian in the country. When I figure they are ripe, we'll sock it to 'em!"

"How will you tell?"

"I can't. It will be on hunch, between ourselves.

We'll let the little darlings run around in circles for a while, not over an hour, then give 'em the works."

Dr. Brooks nervously attempted to make conversation. "It certainly will be a relief to have this entire matter settled once and for always. It's been very trying at times --" His voice trailed off.

Ardmore turned on him. "Don't ever think we can settle things 'once and for always.' "

"But surely -- if we defeat the PanAsians decisively --"

"That's where you are wrong about it." The nervous strain he was under showed in his brusque manner. "We got into this jam by thinking we could settle things once and for always.. We met the Asiatic threat by the Nonintercourse Act and by big West coast defenses -- so they came at us over the north pole!

"We should have known better; there were plenty of lessons in history. The old French Republic tried to freeze events to one pattern with the Versailles Treaty. When that didn't work they built the Maginot Line and went to sleep behind it. What did it get them? Final blackout!

"Life is a dynamic process and can't be made static. '-- and they all lived happily ever after' is fairy-tale stu --" He was interrupted by the jangling of a bell and the red flashing of the emergency transparency.

The face of the communications watch officer snapped into view on the reflectophone screen. "Major Ardmore!"

It was gone and replaced by the features of Frank

Mitsui, contorted .with apprehension. "Major!" he burst out. "Colonel Calhoun -- he's gone crazy!" "Easy, man, easy! What's happened?" "He gave me the slip -- he's gone up the temple. He thinks he's the god Mota!"

666CHAPTER TWELVE

Ardmore cut frank off by switching to the communications watch officer. "Get me the control board in the great altar -- move!"

He got it, but it was not the operator on watch that Ardmore saw. Instead it was Calhoun, bending over the console of controls. The operator was collapsed in his chair, head lolled to the right. Ardmore cut the connection at once and dived for the door.

Thomas and Brooks competed for second place, leaving the orderly a hopelessly outdistanced fourth. The three swept up the gravity chute to the temple level at maximum acceleration, and slammed out onto the temple floor. The altar lay before them, a hundred feet away.

"I assigned Frank to watch him," Thomas was trying to say when Calhoun stuck his head over the upper rail of the altar.

"Stand fast!"

They stood. Brooks whispered, "He's got the heavy projector trained on us. Careful, Major!"

"I know it," Ardmore acknowledged, letting the words slip out of one side of his mouth. He cleared his throat. "Colonel Calhoun!"

"I am the great Lord Mota. Careful how you speak to me!"

"Yes, certainly, Lord Mota. But tell thy servant something -- isn't Colonel Calhoun one of your attributes?"

Calhoun considered this. "Sometimes," he finally answered, "sometimes I think that he is. Yes, he is."

"Then I wish to speak to Colonel Calhoun." Ardmore eased forward a few steps.

"Stand still!" Calhoun crouched rigid over the projector. "My lightnings are set for white men -- take care!"

"Watch it, Chief," whispered Thomas, "he can blast the whole damn place with that thing."

"Don't I know it!" Ardmore answered voicelessly, and started to resume the verbal tight-rope walk. But something had diverted Calhoun's attention. They saw him turn his head, then hastily swing the heavy projector around and depress its controls with both hands. He raised his head almost immediately, seemed to make some readjustment of the projector, and depressed the controls again. Almost simultaneously some heavy body struck him; he fell from sight behind the rail.

On the floor of the altar platform they found Calhoun struggling. But his arms were held, his legs pinioned by the limbs of a short stocky brown man -- Frank Mitsui. Frank's eyes were lifeless china, his muscles rigid.

It took four men to force Calhoun into an improvised straitjacket and to carry him down to sick bay. "As I figure it," said Thomas, watching the work party remove their psychotic burden, "Dr. Calhoun had the projector set to kill white men. The first blast didn't harm Frank, and he had to stop to reset the controls. That saved us."

"Yes -- but not Frank."

"Well -- you know his story. That second blast must have hit him while he was actually in the air -- full power. Did you feel his arms? Coagulated instantaneously -- like a hard-boiled egg."

But they had no time to dwell on the end of little Mitsui's tragic life; more minutes had passed. Ardmore and company hurried back to his office, where he found Kendig, his Chief of Staff, calmly handling the traffic of dispatches. Ardmore demanded a quick verbal resume.

"One change, Major -- they tried to A-bomb the temple in Nashville. A near miss, but it wrecked the city district south of it. Have you set the zero hour? Several dioceses have inquired."

"Not yet, but very soon. Unless you have some more data for me, I'll give them their final instructions right away on Circuit A."

"No, sir, you might as well go ahead."

When Circuit A was reported back as ready, Ardmore cleared his throat. He felt suddenly nervous. "Action in twenty minutes, gentlemen," he started in. "I want to review the main points of the plan.'

He ran over it; the twelve scout cars were assigned one each to the twelve largest cities, or, rather, what was almost the same list, the twelve heaviest concentrations of PanAsian military power. The attack of the scout cars would be the signal to attack on the ground in those areas.

The scout cars, with one exception, were poised even as he spoke, in the stratosphere over their objectives.

The heavy projectors mounted in the scout cars were to inflict as much quick damage as possible on military objectives on the ground, especially barracks and air fields. Priests, being nearly invulnerable, would supplement them on the ground, as would the projectors in the temples. The "troops" made up from the congregations would harry and hunt. "Tell them when in doubt to shoot, and shoot first. Don't wait to see the whites of their eyes. The basic weapons are good for thousands of activations without recharging, and they can't possibly hurt a white man with them. Shoot anything that moves!

"Also," he added, "tell them not to be alarmed at anything strange. If it looks impossible, one of our boys is responsible; we specialize in miracles!

"That's all -- good hunting!"

His last precaution referred to a special task assignment for Wilkie, Graham, Scheer, and Downer. Wilkie had been working on some special effects, with Graham's artistic collaboration. The task in battle required a team of four, but was not a part of the regular plan. Wilkie himself did not know just how well it would work, but Ardmore had assigned a scout car to them and had given them their head in the matter.

His striker had been dressing him in his robes as he spoke. He settled his turban in place, checked his personal pararadio hook-up with the communications office, and turned to say good-by to Kendig and Thomas. He noticed a queer look in Thomas' eyes, and felt his neck turn red. "You want to go, don't you, Jeff?"

Thomas did not say anything. Ardmore added, "Sure -- I'm a heel. I know that. But only one of us can go to this party, and it's going to be me!"

"You've got me wrong, Chief -- I don't like killing."

"So? I don't know that I do, either. Just the same I'm going out and finish Frank Mitsui's bookkeeping for him." He shook hands with both of them.

Thomas gave the signal of execution before Ardmore reached the PanAsian capital city. His pilot set him down on the roof of the temple there after the fighting in the capital had commenced, then gunned his craft away to take up his own task assignment.

Ardmore looked around. It was quiet in the immediate neighborhood of the temple; the big projector in the temple would have seen to that. He had seen one PanAsian cruiser crash while they were landing, but the speedy little scout car assigned to that task he had not been able to notice. He went down inside the temple.

It seemed deserted. A man was standing near a duocycle car parked garagelike on the temple floor. He came up and announced, "Sergeant Bryan, sir. The priest -- I mean Lieutenant Rogers -- told me to wait for you."

"Very well, then -- let's go." He climbed into the car. Bryan put his little fingers to his lips and whistled piercingly.

"Joel" he shouted. A man stuck his head over the top of the altar. "Going out, Joe." The head disappeared; the great doors of the temple opened. Bryan climbed in beside Ardmore and asked, "Where to?"

"Find me the heaviest fighting -- or, rather, PanAsians, lots of them."

"It's the same thing." The car trundled down the wide temple steps, turned right and picked up speed.

The street ran into a little circular parkway set with bushes. There were four or five figures crouched behind those bushes, and one sprawled prone on the ground. As the car slowed, Ardmore heard the sharp ping! of a vortex rifle or pistol -- he could not tell which -- and one of the crouching figures jerked and fell.

"They're in that office building," yelled Bryan in his ear.

He set his staff to radiate a narrow, thin wedge and fanned the beam up and down the building. The pinging noise stopped. An Asiatic dashed out a door that he had not yet touched and fled up the street. Ardmore cut the beam and used another setting, aiming at the figure by means of a thin bright beam of light. The light touched the man; there was a dull, heavy boom and the man disappeared. In his place was a great oily cloud which swelled and dispersed.

"Jumping Judas! What was that?" Bryan demanded.

"Colloidal explosion. I released the surface tension of his body cells. We've been saving it for this day."

"But what made him explode?"

"The pressure in his cells. They can run as high as several hundred pounds. But let's go."

The next few blocks were deserted of all but bodies; however, Ardmore kept his projector turned on and swept the buildings they passed as systematically as the speed would allow. He took advantage of the lull to call headquarters. "Any reports yet, Jeff?"

"Nothing much yet, Chief. It's too soon."

They shot out into the open before Ardmore realized where Bryan was taking him. It was the State university campus on the edge of the city, now used as barracks by the imperial army. The athletic fields and golf course adjoining had been turned into an airport.

Here for the first time he realized clearly how pitifully few were the Americans whom he had armed to destroy the PanAsians. There appeared to be a skirmish line of sorts in position off to the right: he could see

the toll they were taking of the Asiatics. But there were thousands of them, enough to engulf the Americans by sheer multitude. Damn it, why hadn't the scout car assigned reduced this place? Had it met with a mishap?

He decided that the crew of the scout car had been kept busy with aircraft, too busy to clean out the barracks. He thought now that he should have fought city by city, using all available scout cars as a unit, and trusting to the jamming of the radio to permit him to do it that way. Was it too late now to change? Yes -- the gage was thrown, the battle was on all over the country. Now it must be fought.

He was already busy with his staff in an attempt to swing the issue. He cut into the lines of Asiatics with the primary effect set at full power, doing a satisfying amount of slaughter. Then he decided on a change in tactics -- colloidal explosion. It was slower and clumsy, but the effect on morale should be advantageous.

He omitted the guide ray to make it more mysterious and sighted through a deep hole in the cube of the staff. There! One of the rats was smoke! He had them ranged now -- two! Three! Four! Again and again -- a dozen or more.

It was too much for the Orientals. They were brave and seasoned soldiers, but they could not fight what they did not understand. They broke and ran, back toward their barracks. Ardmore heard cheers from the scattered Americans, dominated by an authentic rebel yell. Figures rose up from cover and took out after the disorganized Asiatics.

Ardmore called headquarters again. "Circuit AI"

A few seconds' delay and he was answered, "You've got it."

"All officers, attention! Use the organic explosion as much as possible. It scares the hell out of 'em!" He repeated the message and released the circuit.

He directed Bryan to go closer to the buildings. Bryan bumped the car over a curb and complied, weaving in and out between trees. They were conscious of a terrific explosion; the car rose a few feet in the air and came lurching down on its side. Ardmore pulled himself together and attempted to get up. It was then that he realized that somehow he had held his staff clear.

The door above him was jammed. He burned his way clear with the staff and clambered out. He looked back in to Bryan. "Are you hurt?"

"Not much." Bryan shook himself. "Cracked my left collarbone, maybe."

"Here -- grab my hand. Can you make it? I've got to hang on to my staff." Between them they got him out. "I'll have to leave you. Got your basic weapon?"

"Yes, sir."

"All right. Good luck.',' He glanced at the crater as he moved away. It was well, he thought, that he had had his shield turned on.

A few dozen Americans were moving cautiously among the buildings, shooting as they went. Twice Ardmore was fired on by men who had been told to shoot first. Good boys! Shoot anything that moves!

A PanAsian aircraft, flying low, cut slowly across the edge of the campus. It trailed a plume of heavy yellow fog. Gas! They were gassing their own troops in order to kill a handful of Americans. The bank of mist settled slowly toward the ground and rolled in his direction. He suddenly realized that this was serious, for him as well as for others. His shield was little protection against gas, for it was necessary to let air filter through it.

But he was attempting to get a line on the aircraft even as he decided that his own turn had come. The craft wavered and crashed before he could line up on it. So the scout car was on the job after all -- good!

The gas came on. Could he run around the edge of it? No. Perhaps he could hold his breath and run through it, trusting to his shield for all other matters. Not likely.

Some unconscious recess of his brain gave him the answer -- transmutation. A few seconds later, his staff set to radiate in a wide cone, he was blasting a hole in the deadly cloud. Back and forth he swept the cone, as if playing a stream of water with a hose, and the foggy particles changed to harmless, life-giving oxygen.

"Jeff!"

"Yes, Chief?"

"Any trouble with gas?"

"Quite a bit. In --"

"Never mind. Broadcast this on Circuit A: Set staff to --" He went on to describe how to fight that most intangible weapon.

The scout car came screaming down out of heaven, hovered, and began cruising back and forth over the dormitory barracks. The campus became suddenly very silent. That was better; apparently the pilot had just had too much to do at one time. Ardmore felt suddenly alone, the fight had moved past him while he was dealing with the gas threat. He looked around for transportation to commandeer in order to scout around and check up on the fighting in the rest of the city. The trouble with this damn battle, he thought to himself, is that it hasn't any coherence; it's every place at once. No help for it; it was in the nature of the problem.

"Chief?" It was Thomas calling.

"Go ahead, Jeff. "

"Wilkie is heading your way."

"Good. Has he had any luck?"

"Yes, but just wait till you see! I caught a glimpse of it in the screen, transmitted from Kansas City. That's all now."

"O.K." He looked around again for transportation. He wanted to be around some PanAsians, some live PanAsians, when Wilkie arrived. There was a monocycle standing at the curb, abandoned, about a block from the campus. He appropriated it.

There were PanAsians, he discovered, in plenty near the palace -- and the battle was not going too well for the Americans. He added the effort of his staff and was very busy picking out individuals and exploding them when Wilkie arrived.

Enormous, incredible, a Gargantuan manlike figure of perfect black -- more than a thousand feet high, it came striding across the buildings, its feet filling the streets. It was as if the Empire State Building had gone for a stroll -- a giant, three-dimensional shadow of a priest of Mota, complete with robes and staff.

It had a voice.

It had a voice that rolled with thunder, audible and distinct for miles. "Americans, arise! The day is at hand! The Disciple has come! Rise up and smite your masters!"

Ardmore wondered how the men in the car, could stand the noise, wondered also if they were flying inside the projection, or somewhere above it.

The voice changed to the PanAsian tongue. Ardmore could not understand the words, but he knew the general line it would take. Downer was telling the war lords that vengeance was upon them, and that any who wished to save their yellow skins would be wise to flee at once. He was telling them that, but with a great deal more emphasis and attention to detail and with an acute knowledge of their psychological weaknesses.

The gross and horrifying pseudo-creature stopped in the park before the palace, and, leaning over, touched a massive finger to a fleeing Asiatic. The man disappeared. He straightened up and again addressed the world in PanAsian -- but the square no longer contained PanAsians.

The fighting continued sporadically for hours, but it was no longer a battle; it was more in the nature of vermin extermination. Some of the Orientals surrendered; more died by their own hand; most died purposefully at the hands of their late serfs. A consolidated report from Thomas to Ardmore concerning the degree of progress in mopping up throughout the country was interrupted by the communications officer. "Urgent call from the priest in the capital city, sir."

"Put him on."

A second voice continued, "Major Ardmore?"

"Yes. Go ahead."

"We have captured the Prince Royal --"

"The hell you say!"

"Yes, sir. I request your permission to execute him."

"What was that, sir?"

"No! You heard me. I'll see him at your headquarters. Mind you don't let anything happen to him!"

Ardmore took time to shave off his beard and to change into uniform before he had the Prince Royal brought before him. When at last the PanAsian ruler stood before him he looked up and said without ceremony, "Any of your people I can save will be loaded up and shipped back where they came from."

"You are gracious."

"I suppose you know by now that you were tricked, hoaxed, by science that your culture can't match. You could have wiped us out any time, almost up to the last."

The Oriental remained impassive. Ardmore hoped fervently that the calm was superficial. He continued, "What I said about your people does not apply to you. I shall hold you as a common criminal."

The Prince's brows shot up. "For making war?"

"No -- you might argue your way out of that. For the mass murder you ordered in the territory of the United States --
your 'educational' lesson. You will be tried by a jury, like any other common criminal, and, I strongly suspect
hanged by the neck until you are dead!
"That's all. Take him away."

"One moment, please."

"What is it?"

"You recall the chess problem you saw in my palace?"

"What of it?"

"Could you give me the four-move solution?"

"Oh, that." Ardmore laughed heartily. "You'll believe anything, won't you? I had no solution; I was simply bluffing."

It was clear for an instant that something at last had cracked the Prince's cold self-control.

He never came to trial. They found him the next morning, his head collapsed across the chess-board he had asked for.

Space Jockey

JUST AS THEY WERE LEAVING the telephone called his name. "Don't answer it," she pleaded. "We'll miss the curtain."

"Who is it?" he called out. The viewplate lighted; he recognized Olga Pierce, and behind her the Colorado Springs office of Trans-Lunar Transit.

"Calling Mr. Pemberton. Calling-Oh, it's you, Jake. You're on. Flight 27, Supra-New York to Space Terminal. I'll have a copter pick you up in twenty minutes."

"How come?" he protested. "I'm fourth down on the call board."

"You were fourth down. Now you are standby pilot to Hicks-and he just got a psycho down-check."

"Hicks got psychoed? That's silly!"

"Happens to the best, chum. Be ready. "Bye now."

His wife was twisting sixteen dollars worth of lace handkerchief to a shapeless mass. "Jake, this is ridiculous. For three months I haven't seen enough of you to know what you look like."

"Sorry, kid. Take Helen to the show."

"Oh, Jake, I don't care about the show; I wanted to get you where they couldn't reach you for once."

"They would have called me at the theater."

"Oh, no! I wiped out the record you'd left."

"Phyllis! Are you trying to get me fired?"

"Don't look at me that way." She waited, hoping that he would speak, regretting the side issue, and wondering how to tell him that her own fretfulness was caused, not by disappointment, but by gnawing worry for his safety every time he went out into space.

She went on desperately, "You don't have to take this flight, darling; you've been on Earth less than the time limit. Please, Jake!"

He was peeling off his tux. "I've told you a thousand times: a pilot doesn't get a regular run by playing space-lawyer with the rule book. Wiping out my follow-up message-why did you do it, Phyllis? Trying to ground me?"

"No, darling, but I thought just this once-"

"When they offer me a flight I take it." He walked stiffly out of the room.

He came back ten minutes later, dressed for space and apparently in good humor; he was whistling: "-the caller called Casey at half past four; he kissed his-" He broke off when he saw her face, and set his mouth. "Where's my coverall?"

"I'll get it. Let me fix you something to eat."

'You know I can't take high acceleration on a full stomach. And why lose thirty bucks to lift another pound?"

Dressed as he was, in shorts, singlet, sandals, and pocket belt, he was already good for about minus-fifty pounds in weight bonus; she started to tell him the weight penalty on a sandwich and -a cup of coffee did not matter to them, but it was just one more possible cause for misunderstanding.

Neither of them said much until the taxicab clumped on the roof. He kissed her goodbye and told her not to come outside. She obeyed-until she heard the helicopter take off. Then she climbed to the roof and watched it out of sight.

The traveling-public gripes at the lack of direct Earth-to-Moon service, but it takes three types of rocket ships and two space-station changes to make a fiddling quarter-million-mile jump for a good reason: Money.

The Commerce Commission has set the charges for the present three-stage lift from here to the Moon at thirty dollars a pound. Would direct service be cheaper? A ship designed to blast off from Earth, make an airless landing on the Moon, return and make an atmosphere landing, would be so cluttered up with heavy special equipment used only once in the trip that it could not show a profit at a thousand dollars a pound! Imagine combining a ferry boat, a subway train, and an express elevator. So Trans-Lunar uses rockets braced for catapulting, and winged for landing on return to Earth to make the terrific lift from Earth to our satellite station Supra-New York. The long middle lap, from there to where Space Terminal circles the Moon, calls for comfort-but no landing gear. The Flying Dutchman and the Philip Nolan never land; they were even assembled in space, and they resemble winged rockets like the Skysprite and the Firefly as little as a Pullman train resembles a parachute.

The Moonbat and the Gremlin are good only for the jump from Space Terminal down to Luna . . . no wings, cocoon-like acceleration-and-crash hammocks, fractional controls on their enormous jets.

The change-over points would not have to be more than air-conditioned tanks. Of course Space Terminal is quite a city, what with the Mars and Venus traffic, but even today Supra-New York is still rather primitive, hardly more than a fueling point and a restaurant-waiting room. It has only been the past five years that it has even been equipped to offer the comfort of one-gravity centrifuge service to passengers with queasy stomachs.

Pemberton weighed in at the spaceport office, then hurried over to where the Skysprite stood cradled in the catapult. He shucked off his coverall, shivered as he handed it to the gateman, and ducked inside. He went to his acceleration hammock and went to sleep; the lift to Supra-New York was not his worry-his job was deep space.

He woke at the surge of the catapult and the nerve-tingling rush up the face of Pikes Peak. When the Skysprite went into free flight, flung straight up above the Peak, Pemberton held his breath; if the rocket jets failed to fire, the ground-to-space pilot must try to wrestle her into a glide and bring her down, on her wings.

The rockets roared on time; Jake went back to sleep.

When the Skysprite locked in with Supra-New York, Pemberton went to the station's stellar navigation room. He was pleased to find Shorty Weinstein, the computer, on duty. Jake trusted Shorty's computations-a good thing when your ship, your passengers, and your own skin depend thereon. Pemberton had to be a better than average mathematician himself in order to be a pilot; his own limited talent made him appreciate the genius of those who computed the orbits.

"Hot Pilot Pemberton, the Scourge of the Spaceways - Hi!" Weinstein handed him a sheet of paper.

Jake looked at it, then looked amazed. "Hey, Shorty- you've made a mistake."

"Huh? Impossible. Mabel can't make mistakes." Weinstein gestured at the giant astrogation computer filling the far wall.

"You made a mistake. You gave me an easy fix - 'Vega, Antares, Regulus.' You make things easy for the pilot and your guild'll chuck you out." Weinstein looked

sheepish but pleased. "I see I don't blast off for seventeen hours. I could have taken the morning freight." Jake's thoughts went back to Phyllis.

"UN canceled the morning trip."

"Oh-" Jake shut up, for he knew Weinstein knew as little as he did. Perhaps the flight would have passed too close to an A-bomb rocket, circling the globe like a policeman. The General Staff of the Security Council did not give out information about the top secrets guarding the peace of the planet. Pemberton shrugged. "Well, if I'm asleep, call me three hours minus."

"Right. Your tape will be ready."

While he slept, the Flying Dutchman nosed gently into her slip, sealed her airlocks to the Station, discharged passengers and freight from Luna City. When he woke, her holds were filling, her fuel replenished, and passengers boarding. He stopped by the post office radio desk, looking for a letter from Phyllis. Finding none, he told himself that she would have sent it to Terminal. He went on into the restaurant, bought the facsimile Herald-Tribune, and settled down grimly to enjoy the comics and his breakfast.

A man sat down opposite him and proceeded to plague him with silly questions about rocketry, topping it by misinterpreting the insignia embroidered on Pemberton's singlet and miscalling him "Captain." Jake hurried through breakfast to escape him, then picked up the tape from his automatic pilot, and went aboard the Flying Dutchman.

After reporting to the Captain he went to the control room, floating and pulling himself along by the handgrips. He buckled himself into the pilot's chair and started his check off.

Captain Kelly drifted in and took the other chair as Pemberton was finishing his checking runs on the ballistic tracker. "Have a Camel, Jake."

"I'll take a rain check." He continued. Kelly watched him with a slight frown. Like captains and pilots on Mark Twain's Mississippi-and for the same reasons-a spaceship captain bosses his ship, his crew, his cargo, and his passengers, but the pilot is the final, legal, and unquestioned boss of how the ship is handled from blast-off to the end of the trip. A captain may turn down a given pilot-nothing more. Kelly fingered a slip of paper tucked in his pouch and turned over in his mind the words with which the Company psychiatrist on duty had handed it to him.

"I'm giving this pilot clearance, Captain, but you need not accept it."

"Pemberton's a good man. What's wrong?"

The psychiatrist thought over what he had observed while posing as a silly tourist bothering a stranger at breakfast. "He's a little more anti-social than his past record shows. Something on his mind. Whatever it is, he can tolerate it for the present. We'll keep an eye on him."

Kelly had answered, "Will you come along with him as pilot?"

"If you wish."

"Don't bother-I'll take him. No need to lift a deadhead." Pemberton fed Weinstein's tape into the robot-pilot, then turned to Kelly. "Control ready, sir."

"Blast when ready, Pilot." Kelly felt relieved when he heard himself make the irrevocable decision.

Pemberton signaled the Station to cast loose. The great ship was nudged out by an expanding pneumatic ram until she swam in space a thousand feet away, secured by a single line. He then turned the ship to its blast-off direction by causing a flywheel,

mounted on gimbals at the ship's center of gravity, to spin rapidly. The ship spun slowly in the opposite direction, by grace of Newton's Third Law of Motion.

Guided by the tape, the robot-pilot tilted prisms of the pilot's periscope so that Vega, Antares, and Regulus would shine as one image when the ship was headed right; Pemberton nursed the ship to that heading . . . fussily; a mistake of one minute of arc here meant two hundred miles at destination.

When the three images made a pinpoint, he stopped the flywheels and locked in the gyros. He then checked the heading of his ship by direct observation of each of the stars, just as a salt-water skipper uses a sextant, but with incomparably more accurate instruments. This told him nothing about the correctness of the course Weinstein had ordered-he had to take that as Gospel-but it assured him that the robot and its tape were behaving as planned. Satisfied, he cast off the last line.

Seven minutes to go-Pemberton flipped the switch permitting the robot-pilot to blast away when its clock told it to. He waited, hands poised over the manual controls, ready to take over if the robot failed, and felt the old, inescapable sick excitement building up inside him.

Even as adrenaline poured into him, stretching his time sense, throbbing in his ears, his mind kept turning back to Phyllis.

He admitted she had a kick coming-spacemen shouldn't marry. Not that she'd starve if he messed up a landing, but a gal doesn't want insurance; she wants a husband-minus six minutes. If he got a regular run she could live in Space Terminal.

No good-idle women at Space Terminal went bad. Oh, Phyllis wouldn't become a tramp or a rum bum; she'd just go bats.

Five minutes more-he didn't care much for Space Terminal himself. Nor for space! "The Romance of Interplanetary Travel" - it looked well in print, but he knew what it was: A job. Monotony. No scenery. Bursts of work, tedious waits. No home life.

Why didn't he get an honest job and stay home nights?

He knew! Because he was a space jockey and too old to change.

What chance has a thirty-year-old married man, used to important money, to change his racket? (Four minutes) He'd look good trying to sell helicopters on commission, now, wouldn't he?

Maybe he could buy a piece of irrigated land and - Be your age, chum! You know as much about farming as a cow knows about cube root! No, he had made his bed when he picked rockets during his training hitch. If he had bucked for the electronics branch, or taken a 01 scholarship-too late now. Straight from the service into Harriman's Lunar Exploitations, hopping ore on Luna. That had torn it.

"How's it going, Doc?" Kelly's voice was edgy.

"Minus two minutes some seconds." Damnation-Kelly knew better than to talk to the pilot on minus time.

He caught a last look through the periscope. Antares seemed to have drifted. He unclutched the gyro, tilted and spun the flywheel, braking it savagely to a stop a moment later. The image was again a pinpoint. He could not have explained what he did: it was virtuosity, exact juggling, beyond textbook and classroom.

Twenty seconds . . . across the chronometer's face beads of light trickled the seconds away while he tensed, ready to fire by hand, or even to disconnect and refuse the

trip if his judgment told him to. A too-cautious decision might cause Lloyds' to cancel his bond; a reckless decision could cost his license or even his life-and others.

But he was not thinking of underwriters and licenses, nor even of lives. In truth he was not thinking at all; he was feeling, feeling his ship, as if his nerve ends extended into every part of her. Five seconds . . . the safety disconnects clicked out. Four seconds . . . three seconds. . . two seconds. . . one-

He was stabbing at the hand-fire button when the roar hit him.

Kelly relaxed to the pseudo-gravity of the blast and watched. Pemberton was soberly busy, scanning dials, noting time, checking his progress by radar bounced off Supra-New York. Weinstein's figures, robot-pilot, the ship itself, all were clicking together.

Minutes later, the critical instant neared when the robot should cut the jets. Pemberton poised a finger over the hand cut-off, while splitting his attention among radarscope, accelerometer, periscope, and chronometer. One instant they were roaring along on the jets; the next split second the ship was in free orbit, plunging silently toward the Moon. So perfectly matched were human and robot that Pemberton himself did not know which had cut the power.

He glanced again at the board, then unbuckled. "How about that cigarette, Captain? And you can let your passengers unstrap."

No co-pilot is needed in space and most pilots would rather share a toothbrush than a control room. The pilot works about an hour at blast off, about the same before contact, and loafs during free flight, save for routine checks and corrections. Pemberton prepared to spend one hundred and four hours eating, reading, writing letters, and sleeping-especially sleeping.

When the alarm woke him, he checked the ship's position, then wrote to his wife. "Phyllis my dear," he began, "I don't blame you for being upset at missing your night out. I was disappointed, too. But bear with me, darling, I should be on a regular run before long. In less than ten years I'll be up for retirement and we'll have a chance to catch up on bridge and golf and things like that. I know it's pretty hard to-"

The voice circuit cut in "Oh, Jake-put on your company face. I'm bringing a visitor to the control room."

"No visitors in the control room, Captain."

"Now, Jake. This lunkhead has a letter from Old Man Harriman himself. 'Every possible courtesy-' and so forth."

Pemberton thought quickly. He could refuse-but there was no sense in offending the big boss. "Okay, Captain. Make it short."

The visitor was a man, jovial, oversize-Jake figured him for an eighty pound weight penalty. Behind him a thirteen year-old male counterpart came zipping through the door and lunged for the control console. Pemberton snagged him by the arm and forced himself to speak pleasantly. "Just hang on to that bracket, youngster. I don't want you to bump your head."

"Leggo me! Pop-make him let go."

Kelly cut in. "I think he had best hang on, Judge."

"Umm, uh-very well. Do as the Captain says, Junior."

"Aw, gee, Pop!"

"Judge Schacht, this is First Pilot Pemberton," Kelly said rapidly. "He'll show you around."

"Glad to know you, Pilot. Kind of you, and all that."

"What would you like to see, Judge?" Jake said carefully.

"Oh, this and that. It's for the boy-his first trip. I'm an old spacehound myself-probably more hours than half your crew." He laughed. Pemberton did not.

"There's not much to see in free flight."

"Quite all right. We'll just make ourselves at home-eh, Captain?"

"I wanna sit in the control seat," Schacht Junior announced.

Pemberton winced. Kelly said urgently, "Jake, would you mind outlining the control system for the boy? Then we'll go."

"He doesn't have to show me anything. I know all about it. I'm a Junior Rocketeer of America-see my button?" The boy shoved himself toward the control desk.

Pemberton grabbed him, steered him into the pilot's chair, and strapped him in. He then flipped the board's disconnect.

"Whatcha doing?"

"I cut off power to the controls so I could explain them."

"Aintcha gonna fire the jets?"

"No." Jake started a rapid description of the use and purpose of each button, dial, switch, meter, gimmick, and scope.

Junior squirmed. "How about meteors?" he demanded.

"Oh, that-maybe one collision in half a million EarthMoon trips. Meteors are scarce."

"So what? Say you hit the jackpot? You're in the soup."

"Not at all. The anti-collision radar guards all directions five hundred miles out. If anything holds a steady bearing for three seconds, a direct hook-up starts the jets. First a warning gong so that everybody can grab something solid, then one second later - Boom! - We get out of there fast."

"Sounds corny to me. Lookee, I'll show you how Commodore Cartwright did it in The Comet Busters-"

"Don't touch those controls!"

"You don't own this ship. My pop says-"

"Oh, Jake!" Hearing his name; Pemberton twisted, fish-like, to face Kelly.

"Jake, Judge Schacht would like to know-" From the corner of his eye Jake saw the boy reach for the board. He turned, started to shout-acceleration caught him, while the jets roared in his ear.

An old spacehand can usually recover, catlike, in an unexpected change from weightlessness to acceleration. But Jake had been grabbing for the boy, instead of for anchorage. He fell back and down, twisted to try to avoid Schacht, banged his head on the frame of the open air-tight door below, and fetched up on the next deck, out cold. - Kelly was shaking him. ".You all right, Jake?"

He sat up. "Yeah. Sure." He became aware of the thunder, the shivering deckplates. "The jets! Cut the power!"

He shoved Kelly aside and swarmed up into the control room, jabbed at the cut-off button. In sudden ringing silence, they were again weightless.

Jake turned, unstrapped Schacht Junior, and hustled him to Kelly. "Captain, please remove this menace from my control room."

"Leggo! Pop-he's gonna hurt me!"

The elder Schacht bristled at once. "What's the meaning of this? Let go of my son!"

"Your precious son cut in the jets."

"Junior-did you do that?"

The boy shifted his eyes. "No, Pop. It . . . it was a meteor."

Schacht looked puzzled. Pemberton snorted. "I had just told him how the radar-guard can blast to miss a meteor. He's lying."

Schacht ran through the process he called "making up his mind", then answered, "Junior never lies. Shame on you, a grown man, to try to put the blame on a helpless boy. I shall report you, sir. Come, Junior."

Jake grabbed his arm. "Captain, I want those controls photographed for fingerprints before this man leaves the room. It was not a meteor; the controls were dead, until this boy switched them on. Furthermore the anti-collision circuit sounds an alarm."

Schacht looked wary. "This is ridiculous. I simply objected to the slur on my son's character. No harm has been done."

"No harm, eh? How about broken arms-or necks? And wasted fuel, with more to waste before we're back in the groove. Do you know, Mister 'Old Spacehound,' just how precious a little fuel will be when we try to match orbits with Space Terminal-if we haven't got it? We may have to dump cargo to save the ship, cargo at $60,000 a ton on freight charges alone. Fingerprints will show the Commerce Commission whom to nick for it."

When they were alone again Kelly asked anxiously, "You won't really have to jettison? You've got a maneuvering reserve."

"Maybe we can't even get to Terminal. How long did she blast?"

Kelly scratched his head. "I was woozy myself."

"We'll open the accelerograph and take a look."

Kelly brightened. "Oh, sure! If the brat didn't waste too much, then we just swing ship and blast back the same length of time."

Jake shook his head. "You forgot the changed mass-ratio."

"Oh ... oh, yes!" Kelly looked embarrassed. Mass-ratio under power, the ship lost the weight of fuel burned. The thrust remained constant; the mass it pushed shrank. Getting back to proper position, course, and speed became a complicated problem in the calculus of ballistics. "But you can do it, can't you?"

"I'll have to. But I sure wish I had Weinstein here."

Kelly left to see about his passengers; Jake got to work. He checked his situation by astronomical observation and by radar. Radar gave him all three factors quickly but with limited accuracy. Sights taken of Sun, Moon, and Earth gave him position, but told nothing of course and speed, at that time-nor could he afford to wait to take a second group of sights for the purpose.

Dead reckoning gave him an estimated situation, by adding Weinstein's predictions to the calculated effect of young Schacht's meddling. This checked fairly well with the radar and visual observations, but still he had no notion of whether or not he

could get back in the groove and reach his destination; it was now necessary to calculate what it would stake and whether or not the remaining fuel would be enough to brake his speed and match orbits.

In space, it does no good to reach your journey's end if you flash on past at miles per second, or even crawling along at a few hundred miles per hour. To catch an egg on a plate - don't bump!

He started doggedly to work to compute how to do it using the least fuel, but his little Marchant electronic calculator was no match for the tons of IBM computer at Supra-New York, nor was he Weinstein. Three hours later he had an answer of sorts. He called Kelly. "Captain? You can start by jettisoning Schacht & Son."

"I'd like to. No way out, Jake?"

"I can't promise to get your ship in safely without dumping. Better dump now, before we blast. It's cheaper."

Kelly hesitated; he would as cheerfully lose a leg. "Give me time to pick out what to dump."

"Okay." Pemberton returned sadly to his figures, hoping to find a saving mistake, then thought better of it. He called the radio room. "Get me Weinstein at Supra-New York."

"Out of normal range."

"I know that. This is the Pilot. Safety priority-urgent. Get a tight beam on them and nurse it."

"Uh . . . aye aye, sir. I'll try."

Weinstein was doubtful. "Cripes, Jake, I can't pilot you."

"Dammit, you can work problems for me!"

"What good is seven-place accuracy with bum data?"

"Sure, sure. But you know what instruments I've got; you know about how well I can handle them. Get me a better answer."

"I'll try." Weinstein called back four hours later. "Jake? Here's the dope: You planned to blast back to match your predicted speed, then made side corrections for position. Orthodox but uneconomical. Instead I had Mabel solve for it as one maneuver."

"Good!"

"Not so fast. It saves fuel but not enough. You can't possibly get back in your old groove - and then match T without dumping."

Pemberton let it sink in, then said, "I'll tell Kelly."

"Wait a minute, Jake. Try this. Start from scratch."

"Huh?"

"Treat it as a brand-new problem. Forget about the orbit on your tape. With your present course, speed, and position compute the cheapest orbit to match with Terminal's. Pick it!, new groove."

Pemberton felt foolish. "I never thought of that."

"Of course not. With the ship's little one-lung calculator it'd take you three weeks to solve it. You set to record?"

"Sure."

"Here's your data." Weinstein started calling it off. When they had checked it, Jake said, "That'll get me there?"

"Maybe. If the data you gave me is up to your limit of accuracy; if you can follow instructions as exactly as a robot, if you can blast off and make contact so precisely that you don't need side corrections, then you might squeeze home. Maybe. Good luck, anyhow." The wavering reception muffled their goodbyes.

Jake signaled Kelly. "Don't jettison, Captain. Have your passengers strap down. Stand by to blast. Minus fourteen minutes."

"Very well, Pilot."

The new departure made and checked, he again had time to spare. He took out his unfinished letter, read it, then tore it up.

"Dearest Phyllis," he started again, "I've been doing some hard thinking this trip and have decided that I've just been stubborn. What am I doing way out here? I like my home. I like to see my wife.

"Why should I risk my neck and your peace of mind to herd junk through the sky? Why hang around a telephone - waiting to chaperon fatheads to the Moon -numbskulls who couldn't pilot a rowboat and should have stayed at home in the first place?

"Money, of course. I've been afraid to risk a change. I won't find another job that will pay half as well, but, if you are game, I'll ground myself and we'll start over. All my love, "Jake"

He put it away and went to sleep, to dream that an entire troop of Junior Rocketeers had been quartered in his control room.

The closeup view of the Moon is second only to the spaceside view of the Earth as a tourist attraction; nevertheless Pemberton insisted that all passengers strap down during the swing around to Terminal. With precious little fuel for the matching maneuver, he refused to hobble his movements to please sightseers.

Around the bulge of the Moon, Terminal came into sight - by radar only, for the ship was tail foremost. After each short braking blast Pemberton caught a new radar fix, then compared his approach with a curve he had plotted from Weinstein's figures-with one eye on the time, another on the 'scope, a third on the plot, and a fourth on his fuel gages.

"Well, Jake?" Kelly fretted. "Do we make it?"

"How should I know? You be ready to dump." They had agreed on liquid oxygen as the cargo to dump, since it could be let boil out through the outer valves, without handling.

"Don't say it, Jake."

"Damn it-I won't if I don't have to." He was fingering his controls again; the blast chopped off his words. When it stopped, the radio maneuvering circuit was calling him.

"Flying Dutchman, Pilot speaking," Jake shouted back.

"Terminal Control-Supro reports you short on fuel."

"Right."

"Don't approach. Match speeds outside us. We'll send a transfer ship to refuel you and pick up passengers."

"I think I can make it."

"Don't try it. Wait for refueling."

"Quit telling me how to pilot my ship!" Pemberton switched off the circuit, then stared at the board, whistling morosely. Kelly filled in the words in his mind: "Casey said to the fireman, 'Boy, you better jump, cause two locomotives are agoing to bump!'"

"You going in the slip anyhow, Jake?"

"Mmm-no, blast it. I can't take a chance of caving in the side of Terminal, not with passengers aboard. But I'm not going to match speeds fifty miles outside and wait for a piggyback."

He aimed for a near miss just outside Terminal's orbit, conning by instinct, for Weinstein's figures meant nothing by now. His aim was good; he did not have to waste his hoarded fuel on last minute side corrections to keep from hitting Terminal. When at last he was sure of sliding safely on past if unchecked, he braked once more. Then, as he started to cut off the power, the jets coughed, sputtered, and quit.

The Flying Dutchman floated in space, five hundred yards outside Terminal, speeds matched.

Jake switched on the radio. "Terminal-stand by for my line. I'll warp her in."

He had filed his report, showered, and was headed for the post office to radiostat his letter, when the bullhorn summoned him to the Commodore-Pilot's office. Oh, oh, he told himself, Schacht has kicked the Brass-I wonder just how much stock that bliffy owns? And there's that other matter - getting snotty with Control.

He reported stiffly. "First Pilot Pemberton, sir."

Commodore Soames looked up. "Pemberton-oh, yes. You hold two ratings, space-to-space and airless-landing."

Let's not stall around, Jake told himself. Aloud he said, "I have no excuses for anything this last trip. If the Commodore does not approve the way I run my control room, he may have my resignation."

"What are you talking about?"

"I, well-don't you have a passenger complaint on me?"

"Oh, that!" Soames brushed it aside. "Yes, he's been here. But I have Kelly's report, too-and your chief jetman's, and a special from Supra-New York. That was crack piloting, Pemberton."

"You mean there's no beef from the Company"

"When have I failed to back up my pilots? You were perfectly right; I would have stuffed him out the air lock. Let's get down to business: You're on the space-to-space board, but I want to send a special to Luna City. Will you take it, as a favor to me?"

Pemberton hesitated; Soames went on, "That oxygen you saved is for the Cosmic Research Project. They blew the seals on the north tunnel and lost tons of the stuff. The work is stopped-about $130,000 a day in overhead, wages, and penalties. The Gremlin is here, but no pilot until the Moonbat gets in-except you. Well?"

"But I-look, Commodore, you can't risk people's necks on a jet landing of mine. I'm rusty; I need a refresher and a checkout."

"No passengers, no crew, no captain-your neck alone."

"I'll take her."

Twenty-eight minutes later, with the ugly, powerful hull of the Gremlin around him, he blasted away. One strong shove to kill her orbital speed and let her fall toward the Moon, then no more worries until it came time to "ride 'er down on her tail".

He felt good-until he hauled out two letters, the one he had failed to send, and one from Phyllis, delivered at Terminal.

The letter from Phyllis was affectionate-and superficial. She did not mention his sudden departure; she ignored his profession completely. The letter was a model of correctness, but it worried him.

He tore up both letters and started another. It said, in part: "-never said so outright, but you resent my job.

"I have to work to support us. You've got a job, too. It's an old, old job that women have been doing a long time-crossing the plains in covered wagons, waiting for ships to come back from China, or waiting around a mine head after an explosion-kiss him goodbye with a smile, take care of him at home.

"You married a spaceman, so part of your job is to accept my job cheerfully. I think you can do it, when you realize it. I hope so, for the way things have been going won't do for either of us. Believe me, I love you. Jake"

He brooded on it until time to bend the ship down for his approach. From twenty miles altitude down to one mile he let the robot brake her, then shifted to manual while still falling slowly. A perfect airless-landing would be the reverse of the take-off of a war rocket-free fall, then one long blast of the jets, ending with the ship stopped dead as she touches the ground. In practice a pilot must feel his way down, not too slowly; a ship could burn all the fuel this side of Venus fighting gravity too long.

Forty seconds later, falling a little more than 140 miles per hour, he picked up in his periscopes the thousand-foot static towers. At 300 feet he blasted five gravities for more than a second, cut it, and caught her with a one-sixth gravity, Moon-normal blast. Slowly he eased this off, feeling happy.

The Gremlin hovered, her bright jet splashing the soil of the Moon, then settled with dignity to land without a jar.

The ground crew took over; a sealed runabout jeeped Pemberton to the tunnel entrance. Inside Luna City, he found himself paged before he finished filing his report. When he took the call, Soames smiled at him from the viewpláte. "I saw that landing from the field pick-up, Pemberton. You don't need a refresher course."

Jake blushed. "Thank you, sir."

"Unless you are dead set on space-to-space, I can use you on the regular Luna City run. Quarters here or Luna City? Want it?"

He heard himself saying, "Luna City. I'll take it."

He tore up his third letter as he walked into Luna City post office. At the telephone desk he spoke to a blonde in a blue moonsuit. "Get me Mrs. Jake Pemberton, Suburb six-four-oh-three, Dodge City, Kansas, please."

She looked him over. "You pilots sure spend money."

"Sometimes phone calls are cheap. Hurry it, will you?"

Phyllis was trying to phrase the letter she felt she should have written before. It was easier to say in writing that she was not complaining of loneliness nor lack of fun, but that she could not stand the strain of worrying about his safety. But then she found herself quite unable to state the logical conclusion. Was she prepared to face giving him up entirely if he would not give up space? She truly did not know . . . the phone call was a welcome interruption.

The viewplate stayed blank. "Long distance," came a thin voice. "Luna City calling."

Fear jerked at her heart. "Phyllis Pemberton speaking."

An interminable delay-she knew it took nearly three seconds for radio waves to make the Earth-Moon round trip, but she did not remember it and it would not have reassured her. All she could see was a broken home, herself a widow, and Jake, beloved Jake, dead in space. "Mrs. Jake Pemberton?"

"Yes, yes! Go ahead." Another wait-had she sent him away in a bad temper, reckless, his judgment affected? Had he died out there, remembering only that she fussed at him for leaving her to go to work? Had she failed him when he needed her? She knew that her Jake could not be tied to apron strings; men - grown-up men, not mammas' boys - had to break away from mother's apron strings. Then why had she tried to tie him to hers? She had known better; her own mother had warned her not to try it.

She prayed.

Then another voice, one that weakened her knees with relief: "That you, honey?"

"Yes, darling, yes! What are you doing on the Moon?"

"It's a long story. At a dollar a second it will keep. What I want to know is-are you willing to come to Luna City?"

It was Jake's turn to suffer from the inevitable lag in reply. He wondered if Phyllis were stalling, unable to make up her mind. At last he heard her say, "Of course, darling. When do I leave?"

"When-say, don't you even want to know why?"

She started to say that it did not matter, then said, "Yes, tell me." The lag was still present but neither of them cared. He told her the news, then added, "Run over to the Springs and get Olga Pierce to straighten out the red tape for you. Need my help to pack?"

She thought rapidly. Had he meant to come back anyhow, he would not have asked. "No. I can manage."

"Good girl. I'll radiostat you a long letter about what to bring and so forth. I love you. 'Bye now!"

"Oh, I love you, too. Goodbye, darling."

Pemberton came out of the booth whistling. Good girl, Phyllis. Staunch. He wondered why he had ever doubted her.

Robert A. Heinlein. Starship Troopers

Robert A.Heinlein. 1959

CHAPTER 1

> Come on, you apes! You wanta live forever?
> -- Unknown platoon sergeant, 1918

I always get the shakes before a drop. I've had the injections, of course, and hypnotic preparation, and it stands to reason that I can't really be afraid. The ship's psychiatrist has checked my brain waves and asked me silly questions while I was asleep and he tells me that it isn't fear, it isn't anything important -- it's just like the trembling of an eager race horse in the starting gate.

I couldn't say about that; I've never been a race horse. But the fact is: I'm scared silly, every time.

At D-minus-thirty, after we had mustered in the drop room of the Rodger Young, our platoon leader inspected us. He wasn't our regular platoon leader, because Lieutenant Rasczak had bought it on our last drop; he was really the platoon sergeant, Career Ship's Sergeant Jelal. Jelly was a Finno-Turk from Iskander around Proxima -- a swarthy little man who looked like a clerk, but I've seen him tackle two berserk privates so big he had to reach up to grab them, crack their heads together like coconuts, step back out of the way while they fell.

Off duty he wasn't bad -- for a sergeant. You could even call him "Jelly" to his face. Not recruits, of course, but anybody who had made at least one combat drop.

But right now he was on duty. We had all each inspected our combat equipment (look, it's your own neck -- see?), the acting platoon sergeant had gone over us carefully after he mustered us, and now Jelly went over us again, his face mean, his eyes missing nothing. He stopped by the man in front of me, pressed the button on his belt that gave readings on his physicals. "Fall out!"

"But, Sarge, it's just a cold. The Surgeon said -- "

Jelly interrupted. " `But Sarge!' " he snapped. "The Surgeon ain't making no drop -- and neither are you, with a degree and a half of fever. You think I got time to chat with you, just before a drop? Fall out!"

Jenkins left us, looking sad and mad -- and I felt bad, too. Because of the Lieutenant buying it, last drop, and people moving up, I was assistant section leader, second section, this drop, and now I was going to have a hole in my section and no way to fill it. That's not good; it means a man can run into something sticky, call for help and have nobody to help him.

Jelly didn't downcheck anybody else. Presently he stepped out in front of us, looked us over and shook his head sadly. "What a gang of apes!" he growled. "Maybe if you'd all buy it this drop, they could start over and build the kind of outfit the Lieutenant expected you to be. But probably not -- with the sort of recruits we get these days." He suddenly straightened up, shouted, "I just want to remind you apes that each and every one of you has cost the gov'ment, counting weapons, armor, ammo, instrumentation, and training, everything, including the way you overeat -- has cost, on the hoof, better'n half a million. Add in the thirty cents you are actually worth and that runs to quite a sum." He glared at us. "So bring it back! We can spare you, but we can't spare that fancy suit you're wearing. I don't want any heroes in this outfit; the Lieutenant wouldn't like it. You got a job to do, you go down, you do it, you keep your ears open for recall, you show up for retrieval on the bounce and by the numbers. Get me?"

He glared again. "You're supposed to know the plan. But some of you ain't got any minds to hypnotize so I'll sketch it out. You'll be dropped in two skirmish lines, calculated two-thousand-yard intervals. Get your bearing on me as soon as you hit, get your bearing and distance on your squad mates, both sides, while you take cover. You've wasted ten seconds already, so you smash-and-destroy whatever's at hand until the flankers hit dirt." (He was talking about me -- as assistant section leader I was going to be left flanker, with nobody at my elbow. I began to tremble.)

"Once they hit -- straighten out those lines! -- equalize those intervals! Drop what you're doing and do it! Twelve seconds. Then advance by leapfrog, odd and even, assistant section leaders minding the count and guiding the envelopment." He looked at me. "If you've done this properly -- which I doubt -- the flanks will make contact as recall sounds . . . at which time, home you go. Any questions?"

There weren't any; there never were. He went on, "One more word -- This is just a raid, not a battle. It's a demonstration of firepower and frightfulness. Our mission is to let the enemy know that we could have destroyed their city -- but didn't -- but that they aren't safe even though we refrain from total bombing. You'll take no prisoners. You'll kill only when you can't help it. But the entire area we hit is to be smashed. I don't want to see any of you loafers back aboard here with unexpended bombs. Get me?" He glanced at the time. "Rasczak's Roughnecks have got a reputation to uphold. The Lieutenant told me before he bought it to tell you that he will always have his eye on you every minute . . . and that he expects your names to shine!"

Jelly glanced over at Sergeant Migliaccio, first section leader. "Five minutes for the Padre," he stated. Some of the boys dropped out of ranks, went over and knelt in front of Migliaccio, and not necessarily those of his creed, either -- Moslems, Christians, Gnostics, Jews, whoever wanted a word with him before a drop, he was there. I've heard tell that there used to be military outfits whose chaplains did not fight alongside the others, but I've never been able to see how that could work. I mean, how can a chaplain

bless anything he's not willing to do himself? In any case, in the Mobile Infantry, everybody drops and everybody fights chaplain and cook and the Old Man's writer. Once we went down the tube there wouldn't be a Roughneck left aboard -- except Jenkins, of course, and that not his fault.

I didn't go over. I was always afraid somebody would see me shake if I did, and, anyhow, the Padre could bless me just as handily from where he was. But he came over to me as the last stragglers stood up and pressed his helmet against mine to speak privately. "Johnnie," he said quietly, "this is your first drop as a non-com."

"Yeah." I wasn't really a non-com, any more than Jelly was really an officer.

"Just this, Johnnie. Don't buy a farm. You know your job; do it. Just do it. Don't try to win a medal."

"Uh, thanks, Padre. I shan't."

He added something gently in a language I don't know, patted me on the shoulder, and hurried back to his section. Jelly called out, "Tenn . . . shut!" and we all snapped to.

"Platoon!"

"Section!" Migliaccio and Johnson echoed.

"By sections-port and starboard-prepare for drop!"

"Section! Man your capsules! Move!"

"Squad!" -- I had to wait while squads four and five manned their capsules and moved on down the firing tube before my capsule showed up on the port track and I could climb into it. I wondered if those old-timers got the shakes as they climbed into the Trojan Horse? Or was it just me? Jelly checked each man as he was sealed in and he sealed me in himself. As he did so, he leaned toward me and said, "Don't goof off, Johnnie. This is just like a drill."

The top closed on me and I was alone. "Just like a drill," he says! I began to shake uncontrollably.

Then, in my earphones, I heard Jelly from the center-line tube: "Bridge! Rasczak's Roughnecks . . . ready for drop!"

"Seventeen seconds, Lieutenant!" I heard the ship captain's cheerful contralto replying -- and resented her calling Jelly "Lieutenant." To be sure, our lieutenant was dead and maybe Jelly would get his commission . . . but we were still "Rasczak's Roughnecks."

She added, "Good luck, boys!"

"Thanks, Captain."

"Brace yourselves! Five seconds."

I was strapped all over-belly, forehead, shins. But I shook worse than ever.

It's better after you unload. Until you do, you sit there in total darkness, wrapped like a mummy against the accelerations, barely able to breathe -- and knowing that there is just nitrogen around you in the capsule even if you could get your helmet open, which you can't -- and knowing that the capsule is surrounded by the firing tube anyhow and if the ship gets hit

before they fire you, you haven't got a prayer, you'll just die there, unable to move, helpless. It's that endless wait in the dark that causes the shakes -- thinking that they've forgotten you . . . the ship has been hulled and stayed in orbit, dead, and soon you'll buy it, too, unable to move, choking. Or it's a crash orbit and you'll buy it that way, if you don't roast on the way down.

Then the ship's braking program hit us and I stopped shaking. Eight gees, I would say, or maybe ten. When a female pilot handles a ship there is nothing comfortable about it; you're going to have bruises every place you're strapped. Yes, yes, I know they make better pilots than men do; their reactions are faster and they can tolerate more gee. They can get in faster, get out faster, and thereby improve everybody's chances, yours as well as theirs. But that still doesn't make it fun to be slammed against your spine at ten times your proper weight.

But I must admit that Captain Deladrier knows her trade. There was no fiddling around once the Rodger Young stopped braking. At once I heard her snap, "Center-line tube . . . fire!" and there were two recoil bumps as Jelly and his acting platoon sergeant unloaded -- and immediately: "Port and starboard tubes -- automatic fire!" and the rest of us started to unload.

Bump! and your capsule jerks ahead one place -- bump! and it jerks again, precisely like cartridges feeding into the chamber of an old-style automatic weapon. Well, that's just what we were . . . only the barrels of the gun were twin launching tubes built into a spaceship troop carrier and each cartridge was a capsule big enough (just barely) to hold an infantryman with all field equipment.

Bump! -- I was used to number three spot, out early; now I was Tail-End Charlie, last out after three squads. It makes a tedious wait, even with a capsule being fired every second; I tried to count the bumps -- bump! (twelve) bump! (thirteen) bump! (fourteen -- with an odd sound to it, the empty one Jenkins should have been in) bump! --

And clang! -- it's my turn as my capsule slams into the firing chamber -- then WHAMBO! the explosion hits with a force that makes the Captain's braking maneuver feel like a love tap.

Then suddenly nothing.

Nothing at all. No sound, no pressure, no weight. Floating in darkness . . . free fall, maybe thirty miles up, above the effective atmosphere, falling weightlessly toward the surface of a planet you've never seen. But I'm not shaking now; it's the wait beforehand that wears. Once you unload, you can't get hurt -- because if anything goes wrong it will happen so fast that you'll buy it without noticing that you're dead, hardly.

Almost at once I felt the capsule twist and sway, then steady down so that my weight was on my back . . . weight that built up quickly until I was at my full weight (0.87 gee, we had been told) for that planet as the capsule reached terminal velocity for the thin upper atmosphere. A pilot who is a real artist (and the Captain was) will approach and brake so that your launching speed as you shoot out of the tube places you just dead in space

relative to the rotational speed of the planet at that latitude. The loaded capsules are heavy; they punch through the high, thin winds of the upper atmosphere without being blown too far out of position -- but just the same a platoon is bound to disperse on the way down, lose some of the perfect formation in which it unloads. A sloppy pilot can make this still worse, scatter a strike group over so much terrain that it can't make rendezvous for retrieval, much less carry out its mission. An infantryman can fight only if somebody else delivers him to his zone; in a way I suppose pilots are just as essential as we are.

I could tell from the gentle way my capsule entered the atmosphere that the Captain had laid us down with as near zero lateral vector as you could ask for. I felt happy -- not only a tight formation when we hit and no time wasted, but also a pilot who puts you down properly is a pilot who is smart and precise on retrieval.

The outer shell burned away and sloughed off -- unevenly, for I tumbled. Then the rest of it went and I straightened out. The turbulence brakes of the second shell bit in and the ride got rough . . . and still rougher as they burned off one at a time and the second shell began to go to pieces. One of the things that helps a capsule trooper to live long enough to draw a pension is that the skins peeling off his capsule not only slow him down, they also fill the sky over the target area with so much junk that radar picks up reflections from dozens of targets for each man in the drop, any one of which could be a man, or a bomb, or anything. It's enough to give a ballistic computer nervous breakdowns -- and does.

To add to the fun your ship lays a series of dummy eggs in the seconds immediately following your drop, dummies that will fall faster because they don't slough. They get under you, explode, throw out "window," even operate as transponders, rocket sideways, and do other things to add to the confusion of your reception committee on the ground.

In the meantime your ship is locked firmly on the directional beacon of your platoon leader, ignoring the radar "noise" it has created and following you in, computing your impact for future use.

When the second shell was gone, the third shell automatically opened my first ribbon chute. It didn't last long but it wasn't expected to; one good, hard jerk at several gee and it went its way and I went mine. The second chute lasted a little bit longer and the third chute lasted quite a while; it began to be rather too warm inside the capsule and I started thinking about landing.

The third shell peeled off when its last chute was gone and now I had nothing around me but my suit armor and a plastic egg. I was still strapped inside it, unable to move; it was time to decide how and where I was going to ground. Without moving my arms (I couldn't) I thumbed the switch for a proximity reading and read it when it flashed on in the instrument reflector inside my helmet in front of my forehead.

A mile and eight-tenths -- A little closer than I liked, especially without company. The inner egg had reached steady speed, no more help to be

gained by staying inside it, and its skin temperature indicated that it would not open automatically for a while yet -- so I flipped a switch with my other thumb and got rid of it.

The first charge cut all the straps; the second charge exploded the plastic egg away from me in eight separate pieces -- and I was outdoors, sitting on air, and could see! Better still, the eight discarded pieces were metal-coated (except for the small bit I had taken proximity reading through) and would give back the same reflection as an armored man. Any radar viewer, alive or cybernetic, would now have a sad time sorting me out from the junk nearest me, not to mention the thousands of other bits and pieces for miles on each side, above, and below me. Part of a mobile infantryman's training is to let him see, from the ground and both by eye and by radar, just how confusing a drop is to the forces on the ground -- because you feel awful naked up there. It is easy to panic and either open a chute too soon and become a sitting duck (do ducks really sit? -- if so, why?) or fail to open it and break your ankles, likewise backbone and skull.

So I stretched, getting the kinks out, and looked around . . . then doubled up again and straightened out in a swan dive face down and took a good look. It was night down there, as planned, but infrared snoopers let you size up terrain quite well after you are used to them. The river that cut diagonally through the city was almost below me and coming up fast, shining out clearly with a higher temperature than the land. I didn't care which side of it I landed on but I didn't want to land in it; it would slow me down.

I noticed a dash off to the right at about my altitude; some unfriendly native down below had burned what was probably a piece of my egg. So I fired my first chute at once, intending if possible to jerk myself right off his screen as he followed the targets down in closing range. I braced for the shock, rode it, then floated down for about twenty seconds before unloading the chute -- not wishing to call attention to myself in still another way by not falling at the speed of the other stuff around me. It must have worked; I wasn't burned.

About six hundred feet up I shot the second chute . . . saw very quickly that I was being carried over into the river, found that I was going to pass about a hundred feet up over a flat-roofed warehouse or some such by the river . . . blew the chute free and came in for a good enough if rather bouncy landing on the roof by means of the suit's jump jets. I was scanning for Sergeant Jelal's beacon as I hit.

And found that I was on the wrong side of the river; Jelly's star showed up on the compass ring inside my helmet far south of where it should have been -- I was too far north. I trotted toward the river side of the roof as I took a range and bearing on the squad leader next to me, found that he was over a mile out of position, called, "Ace! dress your line," tossed a bomb behind me as I stepped off the building and across the river. Ace answered as I could have expected -- Ace should have had my spot but he didn't want to give up his squad; nevertheless he didn't fancy taking orders

from me.

The warehouse went up behind me and the blast hit me while I was still over the river, instead of being shielded by the buildings on the far side as I should have been. It darn near tumbled my gyros and I came close to tumbling myself. I had set that bomb for fifteen seconds . . . or had I? I suddenly realized that I had let myself get excited, the worst thing you can do once you're on the ground. "Just like a drill," that was the way, just as Jelly had warned me. Take your time and do it right, even if it takes another half second.

As I hit I took another reading on Ace and told him again to realign his squad. He didn't answer but he was already doing it. I let it ride. As long as Ace did his job, I could afford to swallow his surliness -- for now. But back aboard ship (if Jelly kept me on as assistant section leader) we would eventually have to pick a quiet spot and find out who was boss. He was a career corporal and I was just a term lance acting as corporal, but he was under me and you can't afford to take any lip under those circumstances. Not permanently.

But I didn't have time then to think about it; while I was jumping the river I had spotted a juicy target and I wanted to get it before somebody else noticed it -- a lovely big group of what looked like public buildings on a hill. Temples, maybe . . . or a palace. They were miles outside the area we were sweeping, but one rule of a smash & run is to expend at least half your ammo outside your sweep area; that way the enemy is kept confused as to where you actually are -- that and keep moving, do everything fast. You're always heavily outnumbered; surprise and speed are what saves you.

I was already loading my rocket launcher while I was checking on Ace and telling him for the second time to straighten up. Jelly's voice reached me right on top of that on the all-hands circuit: "Platoon! By leapfrog! Forward!"

My boss, Sergeant Johnson, echoed, "By leapfrog! Odd numbers! Advance!"

That left me with nothing to worry about for twenty seconds, so I jumped up on the building nearest me, raised the launcher to my shoulder, found the target and pulled the first trigger to let the rocket have a look at its target -- pulled the second trigger and kissed it on its way, jumped back to the ground. "Second section, even numbers!" I called out . . . waited for the count in my mind and ordered, "Advance!"

And did so myself, hopping over the next row of buildings, and, while I was in the air, fanning the first row by the river front with a hand flamer. They seemed to be wood construction and it looked like time to start a good fire -- with luck, some of those warehouses would house oil products, or even explosives. As I hit, the Y-rack on my shoulders launched two small H. E. bombs a couple of hundred yards each way to my right and left flanks but I never saw what they did as just then my first rocket hit -- that unmistakable (if you've ever seen one) brilliance of an atomic explosion. It was just a peewee, of course, less than two kilotons nominal yield, with tamper and implosion squeeze to produce results from a less-than-critical

mass -- but then who wants to be bunk mates with a cosmic catastrophe? It was enough to clean off that hilltop and make everybody in the city take shelter against fallout. Better still, any of the local yokels who happened to be outdoors and looking that way wouldn't be seeing anything else for a couple of hours -- meaning me. The dash hadn't dazzled me, nor would it dazzle any of us; our face bowls are heavily leaded, we wear snoopers over our eyes -- and we're trained to duck and take it on the armor if we do happen to be looking the wrong way.

So I merely blinked hard -- opened my eyes and stared straight at a local citizen just coming out of an opening in the building ahead of me. He looked at me, I looked at him, and he started to raise something -- a weapon, I suppose -- as Jelly called out, "Odd numbers! Advance!"

I didn't have time to fool with him; I was a good five hundred yards short of where I should have been by then. I still had the hand flamer in my left hand; I toasted him and jumped over the building he had been coming out of, as I started to count. A hand flamer is primarily for incendiary work but it is a good defensive anti-personnel weapon in tight quarters; you don't have to aim it much.

Between excitement and anxiety to catch up I jumped too high and too wide. It's always a temptation to get the most out of your jump gear -- but don't do it! It leaves you hanging in the air for seconds, a big fat target. The way to advance is to skim over each building as you come to it, barely clearing it, and taking full advantage of cover while you're down -- and never stay in one place more than a second or two, never give them time to target in on you. Be somewhere else, anywhere. Keep moving.

This one I goofed -- too much for one row of buildings, too little for the row beyond it; I found myself coming down on a roof. But not a nice flat one where I might have tarried three seconds to launch another peewee A-rocket; this roof was a jungle of pipes and stanchions and assorted ironmongery -- a factory maybe, or some sort of chemical works. No place to land. Worse still, half a dozen natives were up there. These geezers are humanoid, eight or nine feet tall, much skinnier than we are and with a higher body temperature; they don't wear any clothes and they stand out in a set of snoopers like a neon sign. They look still funnier in daylight with your bare eyes but I would rather fight them than the arachnids -- those Bugs make me queezy.

If these laddies were up there thirty seconds earlier when my rocket hit, then they couldn't see me, or anything. But I couldn't be certain and didn't want to tangle with them in any case; it wasn't that kind of a raid. So I jumped again while I was still in the air, scattering a handful of ten-second fire pills to keep them busy, grounded, jumped again at once, and called out, "Second section! Even numbers! . . . Advance!" and kept right on going to close the gap, while trying to spot, every time I jumped, something worth expending a rocket on. I had three more of the little A-rockets and I certainly didn't intend to take any back with me. But I had had pounded into me that you must get your money's worth with atomic weapons -- it was only

the second time that I had been allowed to carry them.

Right now I was trying to spot their waterworks; a direct hit on it could make the whole city uninhabitable, force them to evacuate it without directly killing anyone -- just the sort of nuisance we had been sent down to commit. It should -- according to the map we had studied under hypnosis -- be about three miles upstream from where I was.

But I couldn't see it; my jumps didn't take me high enough, maybe. I was tempted to go higher but I remembered what Migliaccio had said about not trying for a medal, and stuck to doctrine. I set the Y-rack launcher on automatic and let it lob a couple of little bombs every time I hit. I set fire to things more or less at random in between, and tried to find the waterworks, or some other worth-while target.

Well, there was something up there at the proper range -- waterworks or whatever, it was big. So I hopped on top of the tallest building near me, took a bead on it, and let fly. As I bounced down I heard Jelly: "Johnnie! Red! Start bending in the flanks."

I acknowledged and heard Red acknowledge and switched my beacon to blinker so that Red could pick me out for certain, took a range and bearing on his blinker while I called out, "Second Section! Curve in and envelop! Squad leaders acknowledge!"

Fourth and Fifth squads answered, "Wilco"; Ace said, "We're already doin' it -- pick up your feet."

Red's beacon showed the right flank to be almost ahead of me and a good fifteen miles away. Golly! Ace was right; I would have to pick up my feet or I would never close the gap in time -- and me with a couple of hundredweight of ammo and sundry nastiness still on me that I just had to find time to use up. We had landed in a V formation, with Jelly at the bottom of the V and Red and myself at the ends of the two arms; now we had to close it into a circle around the retrieval rendezvous . . . which meant that Red and I each had to cover more ground than the others and still do our full share of damage.

At least the leapfrog advance was over with once we started to encircle; I could quit counting and concentrate on speed. It was getting to be less healthy to be anywhere, even moving fast. We had started with the enormous advantage of surprise, reached the ground without being hit (at least I hoped nobody had been hit coming in), and had been rampaging in among them in a fashion that let us fire at will without fear of hitting each other while they stood a big chance of hitting their own people in shooting at us -- if they could find us to shoot at, at all. (I'm no games-theory expert but I doubt if any computer could have analyzed what we were doing in time to predict where we would be next.)

Nevertheless the home defenses were beginning to fight back, co-ordinated or not. I took a couple of near misses with explosives, close enough to rattle my teeth even inside armor and once I was brushed by some sort of beam that made my hair stand on end and half paralyzed me for a moment -- as if I had hit my funny bone, but all over. If the suit hadn't

already been told to jump, I guess I wouldn't have got out of there.

Things like that make you pause to wonder why you ever took up soldiering -- only I was too busy to pause for anything. Twice, jumping blind over buildings, I landed right in the middle of a group of them -- jumped at once while fanning wildly around me with the hand flamer.

Spurred on this way, I closed about half of my share of the gap, maybe four miles, in minimum time but without doing much more than casual damage. My Y-rack had gone empty two jumps back; finding myself alone in sort of a courtyard I stopped to put my reserve H.E. bombs into it while I took a bearing on Ace -- found that I was far enough out in front of the flank squad to think about expending my last two A-rockets. I jumped to the top of the tallest building in the neighborhood.

It was getting light enough to see; I flipped the snoopers up onto my forehead and made a fast scan with bare eyes, looking for anything behind us worth shooting at, anything at all; I had no time to be choosy.

There was something on the horizon in the direction of their spaceport -- administration & control, maybe, or possibly even a starship. Almost in line and about half as far away was an enormous structure which I couldn't identify even that loosely. The range to the spaceport was extreme but I let the rocket see it, said, "Go find it, baby!" and twisted its tail -- slapped the last one in, sent it toward the nearer target, and jumped.

That building took a direct hit just as I left it. Either a skinny had judged (correctly) that it was worth one of their buildings to try for one of us, or one of my own mates was getting mighty careless with fireworks. Either way, I didn't want to jump from that spot, even a skimmer; I decided to go through the next couple of buildings instead of over. So I grabbed the heavy flamer off my back as I hit and dipped the snoopers down over my eyes, tackled a wall in front of me with a knife beam at full power. A section of wall fell away and I charged in. And backed out even faster.

I didn't know what it was I had cracked open. A congregation in church -- a skinny flophouse -- maybe even their defense headquarters. All I knew was that it was a very big room filled with more skinnies than I wanted to see in my whole life.

Probably not a church, for somebody took a shot at me as I popped back out just a slug that bounced off my armor, made my ears ring, and staggered me without hurting me. But it reminded me that I wasn't supposed to leave without giving them a souvenir of my visit. I grabbed the first thing on my belt and lobbed it in -- and heard it start to squawk. As they keep telling you in Basic, doing something constructive at once is better than figuring out the best thing to do hours later.

By sheer chance I had done the right thing. This was a special bomb, one each issued to us for this mission with instructions to use them if we found ways to make them effective. The squawking I heard as I threw it was the bomb shouting in skinny talk (free translation): "I'm a thirty-second bomb! I'm a thirty-second bomb! Twenty-nine! . . . twenty-eight! . . . twenty-seven! -- "

It was supposed to frazzle their nerves. Maybe it did; it certainly frazzled mine. Kinder to shoot a man. I didn't wait for the countdown; I jumped, while I wondered whether they would find enough doors and windows to swarm out in time.

I got a bearing on Red's blinker at the top of the jump and one on Ace as I grounded. I was falling behind again -- time to hurry.

But three minutes later we had closed the gap; I had Red on my left flank a half mile away. He reported it to Jelly. We heard Jelly's relaxed growl to the entire platoon: "Circle is closed, but the beacon is not down yet. Move forward slowly and mill around, make a little more trouble -- but mind the lad on each side of you; don't make trouble for him. Good job, so far -- don't spoil it. Platoon! By sections . . . Muster!"

It looked like a good job to me, too; much of the city was burning and, although it was almost full light now, it was hard to tell whether bare eyes were better than snoopers, the smoke was so thick.

Johnson, our section leader, sounded off: "Second section, call off!"

I echoed, "Squads four, five, and six -- call off and report!" The assortment of safe circuits we had available in the new model comm units certainly speeded things up; Jelly could talk to anybody or to his section leaders; a section leader could call his whole section, or his non-coms; and the platoon could muster twice as fast, when seconds matter. I listened to the fourth squad call off while I inventoried my remaining firepower and lobbed one bomb toward a skinny who poked his head around a corner. He left and so did I -- "Mill around," the boss man had said.

The fourth squad bumbled the call off until the squad leader remembered to fill in with Jenkins' number; the fifth squad clicked off like an abacus and I began to feel good . . . when the call off stopped after number four in Ace's squad. I called out, "Ace, where's Dizzy?"

"Shut up," he said. "Number six! Call off!"

"Six!" Smith answered.

"Seven !"

"Sixth squad, Flores missing," Ace completed it. "Squad leader out for pickup."

"One man absent," I reported to Johnson. "Flores, squad six."

"Missing or dead?"

"I don't know. Squad leader and assistant section leader dropping out for pickup."

"Johnnie, you let Ace take it."

But I didn't hear him, so I didn't answer. I heard him report to Jelly and I heard Jelly cuss. Now look, I wasn't bucking for a medal -- it's the assistant section leader's business to make pickup; he's the chaser, the last man in, expendable. The squad leaders have other work to do. As you've no doubt gathered by now the assistant section leader isn't necessary as long as the section leader is alive.

Right that moment I was feeling unusually expendable, almost expended, because I was hearing the sweetest sound in the universe, the beacon the

retrieval boat would land on, sounding our recall. The beacon is a robot rocket, fired ahead of the retrieval boat, just a spike that buries itself in the ground and starts broadcasting that welcome, welcome music. The retrieval boat homes in on it automatically three minutes later and you had better be on hand, because the bus can't wait and there won't be another one along.

But you don't walk away on another cap trooper, not while there's a chance he's still alive -- not in Rasczak's Roughnecks. Not in any outfit of the Mobile Infantry. You try to make pickup.

I heard Jelly order: "Heads up, lads! Close to retrieval circle and interdict! On the bounce!"

And I heard the beacon's sweet voice: " -- to the everlasting glory of the infantry, shines the name, shines the name of Rodger Young!" and I wanted to head for it so bad I could taste it.

Instead I was headed the other way, closing on Ace's beacon and expending what I had left of bombs and fire pills and anything else that would weigh me down. "Ace! You got his beacon?"

"Yes. Go back, Useless!"

"I've got you by eye now. Where is he?"

"Right ahead of me, maybe quarter mile. Scram! He's my man ."

I didn't answer; I simply cut left oblique to reach Ace about where he said Dizzy was.

And found Ace standing over him, a couple of skinnies flamed down and more running away. I lit beside him. "Let's get him out of his armor -- the boat'll be down any second!"

"He's too bad hurt!"

I looked and saw that it was true -- there was actually a hole in his armor and blood coming out. And I was stumped. To make a wounded pickup you get him out of his armor . . . then you simply pick him up in your arms -- no trouble in a powered suit -- and bounce away from there. A bare man weighs less than the ammo and stuff you've expended. "What'll we do?"

"We carry him," Ace said grimly. "Grab ahold the left side of his belt." He grabbed the right side, we manhandled Flores to his feet. "Lock on! Now . . . by the numbers, stand by to jump -- one -- two!"

We jumped. Not far, not well. One man alone couldn't have gotten him off the ground; an armored suit is too heavy. But split it between two men and it can be done.

We jumped -- and we jumped -- and again, and again, with Ace calling it and both of us steadying and catching Dizzy on each grounding. His gyros seemed to be out.

We heard the beacon cut off as the retrieval boat landed on it -- I saw it land . . . and it was too far away. We heard the acting platoon sergeant call out: "In succession, prepare to embark!"

And Jelly called out, "Belay that order!"

We broke at last into the open and saw the boat standing on its tail, heard the ululation of its take-off warning -- saw the platoon still on the

ground around it, in interdiction circle, crouching behind the shield they had formed.

Heard Jelly shout, "In succession, man the boat -- move!"

And we were still too far away! I could see them peel off from the first squad, swarm into the boat as the interdiction circle tightened.

And a single figure broke out of the circle, came toward us at a speed possible only to a command suit.

Jelly caught us while we were in the air, grabbed Flores by his Y-rack and helped us lift.

Three jumps got us to the boat. Everybody else was inside but the door was still open. We got him in and closed it while the boat pilot screamed that we had made her miss rendezvous and now we had all bought it! Jelly paid no attention to her; we laid Flores down and lay down beside him. As the blast hit us Jelly was saying to himself, "All present, Lieutenant. Three men hurt -- but all present!"

I'll say this for Captain Deladrier: they don't make any better pilots. A rendezvous, boat to ship in orbit, is precisely calculated. I don't know how, but it is, and you don't change it. You can't.

Only she did. She saw in her scope that the boat had failed to blast on time; she braked back, picked up speed again -- and matched and took us in, just by eye and touch, no time to compute it. If the Almighty ever needs an assistant to keep the stars in their courses, I know where he can look.

Flores died on the way up.

CHAPTER 2

It scared me so, I hooked it off,
Nor stopped as I remember,
Nor turned about till I got home,
Locked up in mother's chamber.
Yankee Doodle, keep it up,
Yankee Doodle dandy,
Mind the music and the step,
And with the girls be handy.

I never really intended to join up.

And certainly not the infantry! Why, I would rather have taken ten lashes in the public square and have my father tell me that I was a disgrace to a proud name.

Oh, I had mentioned to my father, late in my senior year in high school, that I was thinking over the idea of volunteering for Federal Service. I suppose every kid does, when his

eighteenth birthday heaves into sight -- and mine was due the week I graduated. Of course most of them just think about it, toy with the idea a little, then go do something else -- go to college, or get a job, or something. I suppose it would have been that way with me . . . if my best

chum had not, with dead seriousness, planned to join up.

Carl and I had done everything together in high school -- eyed the girls together, double-dated together, been on the debate team together, pushed electrons together in his home lab. I wasn't much on electronic theory myself, but I'm a neat hand with a soldering gun; Carl supplied the skull sweat and I carried out his instructions. It was fun; anything we did together was fun. Carl's folks didn't have anything like the money that my father had, but it didn't matter between us. When my father bought me a Rolls copter for my fourteenth birthday, it was Carl's as much as it was mine; contrariwise, his basement lab was mine.

So when Carl told me that he was not going straight on with school, but serve a term first, it gave me to pause. He really meant it; he seemed to think that it was natural and right and obvious.

So I told him I was joining up, too.

He gave me an odd look. "Your old man won't let you."

"Huh? How can he stop me?" And of course he couldn't, not legally. It's the first completely free choice anybody gets (and maybe his last); when a boy, or a girl, reaches his or her eighteenth birthday, he or she can volunteer and nobody else has any say in the matter.

"You'll find out." Carl changed the subject.

So I took it up with my father, tentatively, edging into it sideways.

He put down his newspaper and cigar and stared at me. "Son, are you out of your mind?"

I muttered that I didn't think so.

"Well, it certainly sounds like it." He sighed. "Still . . . I should have been expecting it; it's a predictable stage in a boy's growing up. I remember when you learned to walk and weren't a baby any longer -- frankly you were a little hellion for quite a while. You broke one of your mother's Ming vases -- on purpose, I'm quite sure . . . but you were too young to know that it was valuable, so all you got was having your hand spatted. I recall the day you swiped one of my cigars, and how sick it made you. Your mother and I carefully avoided noticing that you couldn't eat dinner that night and I've never mentioned it to you until now -- boys have to try such things and discover for themselves that men's vices are not for them. We watched when you turned the corner on adolescence and started noticing that girls were different -- and wonderful."

He sighed again. "All normal stages. And the last one, right at the end of adolescence, is when a boy decides to join up and wear a pretty uniform. Or decides that he is in love, love such as no man ever experienced before, and that he just has to get married right away. Or both." He smiled grimly. "With me it was both. But I got over each of them in time not to make a fool of myself and ruin my life."

"But, Father, I wouldn't ruin my life. Just a term of service -- not career."

"Let's table that, shall we? Listen, and let me tell you what you are going to do -- because you want to. In the first place this family has

stayed out of politics and cultivated its own garden for over a hundred years -- I see no reason for you to break that fine record. I suppose it's the influence of that fellow at your high school -- what's his name? You know the one I mean."

He meant our instructor in History and Moral Philosophy -- a veteran, naturally. "Mr. Dubois."

"Hmmph, a silly name -- it suits him. Foreigner, no doubt. It ought to be against the law to use the schools as undercover recruiting stations. I think I'm going to write a pretty sharp letter about it -- a taxpayer has some rights!"

"But, Father, he doesn't do that at all! He -- " I stopped, not knowing how to describe it. Mr. Dubois had a snotty, superior manner; he acted as if none of us was really good enough to volunteer for service. I didn't like him. "Uh, if anything, he discourages it."

"Hmmph! Do you know how to lead a pig? Never mind. When you graduate, you're going to study business at Harvard; you know that. After that, you will go on to the Sorbonne and you'll travel a bit along with it, meet some of our distributors, find out how business is done elsewhere. Then you'll come home and go to work. You'll start with the usual menial job, stock clerk or something, just for form's sake -- but you'll be an executive before you can catch your breath, because I'm not getting any younger and the quicker you can pick up the load, the better. As soon as you're able and willing, you'll be boss. There! How does that strike you as a program? As compared with wasting two years of your life?"

I didn't say anything. None of it was news to me; I'd thought about it. Father stood up and put a hand on my shoulder. "Son, don't think I don't sympathize with you; I do. But look at the real facts. If there were a war, I'll be the first to cheer you on -- and to put the business on a war footing. But there isn't, and praise God there never will be again. We've outgrown wars. This planet is now peaceful and happy and we enjoy good enough relations with other planets. So what is this so called `Federal Service'? Parasitism, pure and simple. A functionless organ, utterly obsolete, living on the taxpayers. A decidedly expensive way for inferior people who otherwise would be unemployed to live at public expense for a term of years, then give themselves airs for the rest of their lives. Is that what you want to do?"

"Carl isn't inferior!"

"Sorry. No, he's a fine boy . . . but misguided." He frowned, and then smiled. "Son, I had intended to keep something as a surprise for you -- a graduation present. But I'm going to tell you now so that you can put this nonsense out of your mind more easily. Not that I am afraid of what you might do; I have confidence in your basic good sense, even at your tender years. But you are troubled. I know -- and this will clear it away. Can you guess what it is?"

"Uh, no."

He grinned. "A vacation trip to Mars."

I must have looked stunned. "Golly, Father, I had no idea -- "

"I meant to surprise you and I see I did. I know how you kids feel about travel, though it beats me what anyone sees in it after the first time out. But this is a good time for you to do it -- by yourself; did I mention that? -- and get it out of your system . . . because you'll be hard-pressed to get in even a week on Luna once you take up your responsibilities." He picked up his paper. "No, don't thank me. Just run along and let me finish my paper -- I've got some gentlemen coming in this evening, shortly. Business."

I ran along. I guess he thought that settled it . . . and I suppose I did, too. Mars! And on my own! But I didn't tell Carl about it; I had a sneaking suspicion that he would regard it as a bribe. Well, maybe it was. Instead I simply told him that my father and I seemed to have different ideas about it.

"Yeah," he answered, "so does mine. But it's my life."

I thought about it during the last session of our class in History and Moral Philosophy. H. & M. P. was different from other courses in that everybody had to take it but nobody had to pass it -- and Mr. Dubois never seemed to care whether he got through to us or not. He would just point at you with the stump of his left arm (he never bothered with names) and snap a question. Then the argument would start.

But on the last day he seemed to be trying to find out what we had learned. One girl told him bluntly: "My mother says that violence never settles anything."

"So?" Mr. Dubois looked at her bleakly. "I'm sure the city fathers of Carthage would be glad to know that. Why doesn't your mother tell them so? Or why don't you?"

They had tangled before -- since you couldn't flunk the course, it wasn't necessary to keep Mr. Dubois buttered up. She said shrilly, "You're making fun of me! Everybody knows that Carthage was destroyed!"

"You seemed to be unaware of it," he said grimly. "Since you do know it, wouldn't you say that violence had settled their destinies rather thoroughly? However, I was not making fun of you personally; I was heaping scorn on an inexcusably silly idea -- a practice I shall always follow. Anyone who clings to the historically untrue -- and thoroughly immoral -- doctrine that `violence never settles anything' I would advise to conjure up the ghosts of Napoleon Bonaparte and of the Duke of Wellington and let them debate it. The ghost of Hitler could referee, and the jury might well be the Dodo, the Great Auk, and the Passenger Pigeon. Violence, naked force, has settled more issues in history than has any other factor, and the contrary opinion is wishful thinking at its worst. Breeds that forget this basic truth have always paid for it with their lives and freedoms."

He sighed. "Another year, another class -- and, for me, another failure. One can lead a child to knowledge but one cannot make him think." Suddenly he pointed his stump at me. "You. What is the moral difference, if any, between the soldier and the civilian?"

"The difference," I answered carefully, "lies in the field of civic virtue. A soldier accepts personal responsibility for the safety of the body politic of which he is a member, defending it, if need be, with his life. The civilian does not."

"The exact words of the book," he said scornfully. "But do you understand it? Do you believe it?"

"Uh, I don't know, sir."

"Of course you don't! I doubt if any of you here would recognize `civic virtue' if it came up and barked in your face!" He glanced at his watch. "And that is all, a final all. Perhaps we shall meet again under happier circumstances. Dismissed."

Graduation right after that and three days later my birthday, followed in less than a week by Carl's birthday -- and I still hadn't told Carl that I wasn't joining up. I'm sure he assumed that I would not, but we didn't discuss it out loud -- embarrassing. I simply arranged to meet him the day after his birthday and we went down to the recruiting office together.

On the steps of the Federal Building we ran into Carmencita Ibanez, a classmate of ours and one of the nice things about being a member of a race with two sexes. Carmen wasn't my girl -- she wasn't anybody's girl; she never made two dates in a row with the same boy and treated all of us with equal sweetness and rather impersonally. But I knew her pretty well, as she often came over and used our swimming pool, because it was Olympic length -- sometimes with one boy, sometimes with another. Or alone, as Mother urged her to -- Mother considered her "a good influence." For once she was right.

She saw us and waited, dimpling. "Hi, fellows!"

"Hello, Ochee Chyornya," I answered. "What brings you here?"

"Can't you guess? Today is my birthday."

"Huh? Happy returns!"

"So I'm joining up."

"Oh . . ." I think Carl was as surprised as I was. But Carmencita was like that. She never gossiped and she kept her own affairs to herself. "No foolin'?" I added, brilliantly.

"Why should I be fooling? I'm going to be a spaceship pilot -- at least I'm going to try for it."

"No reason why you shouldn't make it," Carl said quickly. He was right -- I know now just how right he was. Carmen was small and neat, perfect health and perfect reflexes -- she could make a competitive diving routine look easy -- and she was quick at mathematics. Me, I tapered off with a "C" in algebra and a "B" in business arithmetic; she took all the math our school offered and a tutored advance course on the side. But it had never occurred to me to wonder why. Fact was, little Carmen was so ornamental that you just never thought about her being useful.

"We -- Uh, I," said Carl, "am here to join up, too."

"And me," I agreed. "Both of us." No, I hadn't made any decision; my mouth was leading its own life.

"Oh, wonderful!"

"And I'm going to buck for space pilot, too," I added firmly.

She didn't laugh. She answered very seriously, "Oh, how grand! Perhaps in training we'll run into each other. I hope."

"Collision courses?" asked Carl. "That's a no-good way to pilot."

"Don't be silly, Carl. On the ground, of course. Are you going to be a pilot, too?"

"Me?" Carl answered. "I'm no truck driver. You know me -- Starside R & D, if they'll have me. Electronics."

" `Truck driver' indeed! I hope they stick you out on Pluto and let you freeze. No, I don't -- good luck! Let's go in, shall we?"

The recruiting station was inside a railing in the rotunda. A fleet sergeant sat at a desk there, in dress uniform, gaudy as a circus. His chest was loaded with ribbons I couldn't read. But his right arm was off so short that his tunic had been tailored without any sleeve at all . . . and, when you came up to the rail, you could see that he had no legs.

It didn't seem to bother him. Carl said, "Good morning. I want to join up."

"Me, too," I added.

He ignored us. He managed to bow while sitting down and said, "Good morning, young lady. What can I do for you?"

"I want to join up, too."

He smiled. "Good girl! If you'll just scoot up to room 201 and ask for Major Rojas, she'll take care of you." He looked her up and down. "Pilot?"

"If possible."

"You look like one. Well, see Miss Rojas."

She left, with thanks to him and a see-you-later to us; he turned his attention to us, sized us up with a total absence of the pleasure he had shown in little Carmen. "So?" he said. "For what? Labor battalions?"

"Oh, no!" I said. "I'm going to be a pilot."

He stared at me and simply turned his eyes away. "You?"

"I'm interested in the Research and Development Corps," Carl said soberly, "especially electronics. I understand the chances are pretty good."

"They are if you can cut it," the Fleet Sergeant said grimly, "and not if you don't have what it takes, both in preparation and ability. Look, boys, have you any idea why they have me out here in front?"

I didn't understand him. Carl said, "Why?"

"Because the government doesn't care one bucket of swill whether you join or not! Because it has become stylish, with some people -- too many people -- to serve a term and earn a franchise and be able to wear a ribbon in your lapel which says that you're a vet'ran . . . whether you've ever seen combat or not. But if you want to serve and I can't talk you out of it, then we have to take you, because that's your constitutional right. It says that everybody, male or female, shall have his born right to pay his service and assume full citizenship but the facts are that we are getting hard pushed to find things for all the volunteers to do that aren't just glorified K. P. You can't all be real military men; we don't need that many

and most of the volunteers aren't number-one soldier material anyhow. Got any idea what it takes to make a soldier?"

"No," I admitted.

"Most people think that all it takes is two hands and two feet and a stupid mind. Maybe so, for cannon fodder. Possibly that was all that Julius Caesar required. But a private soldier today is a specialist so highly skilled that he would rate `master' in any other trade; we can't afford stupid ones. So for those who insist on serving their term -- but haven't got what we want and must have -- we've had to think up a whole list of dirty, nasty, dangerous jobs that will either run `em home with their tails between their legs and their terms uncompleted . . . or at the very least make them remember for the rest of their lives that their citizenship is valuable to them because they've paid a high price for it. Take that young lady who was here -- wants to be a pilot. I hope she makes it; we always need good pilots, not enough of `em. Maybe she will.

But if she misses, she may wind up in Antarctica, her pretty eyes red from never seeing anything but artificial light and her knuckles callused from hard, dirty work."

I wanted to tell him that the least Carmencita could get was computer programmer for the sky watch; she really was a whiz at math. But he was talking.

"So they put me out here to discourage you boys. Look at this." He shoved his chair around to make sure that we could see that he was legless. "Let's assume that you don't wind up digging tunnels on Luna or playing human guinea pig for new diseases through sheer lack of talent; suppose we do make a fighting man out of you. Take a look at me -- this is what you may buy . . . if you don't buy the whole farm and cause your folks to receive a `deeply regret' telegram. Which is more likely, because these days, in training or in combat, there aren't many wounded. If you buy it at all, they likely throw in a coffin -- I'm the rare exception; I was lucky . . . though maybe you wouldn't call it luck."

He paused, then added, "So why don't you boys go home, go to college, and then go be chemists or insurance brokers or whatever? A term of service isn't a kiddie camp; it's either real military service, rough and dangerous even in peacetime . . . or a most unreasonable facsimile thereof. Not a vacation. Not a romantic adventure. Well?"

Carl said, "I'm here to join up."

"Me, too."

"You realize that you aren't allowed to pick your service?"

Carl said, "I thought we could state our preferences?"

"Certainly. And that's the last choice you'll make until the end of your term. The placement officer pays attention to your choice, too. First thing he does is to check whether there's any demand for left-handed glass blowers this week -- that being what you think would make you happy. Having reluctantly conceded that there is a need for your choice -- probably at the bottom of the Pacific -- he then tests you for innate ability and

preparation. About once in twenty times he is forced to admit that everything matches and you get the job . . . until some practical joker gives you dispatch orders to do something very different. But the other nineteen times he turns you down and decides that you are just what they have been needing to field-test survival equipment on Titan." He added meditatively, "It's chilly on Titan. And it's amazing how often experimental equipment fails to work. Have to have real field tests, though -- laboratories just never get all the answers."

"I can qualify for electronics," Carl said firmly, "if there are jobs open in it."

"So? And how about you, bub?"

I hesitated -- and suddenly realized that, if I didn't take a swing at it, I would wonder all my life whether I was anything but the boss's son. "I'm going to chance it."

"Well, you can't say I didn't try. Got your birth certificates with you? And let's see your I. D.'s."

Ten minutes later, still not sworn in, we were on the top floor being prodded and poked and fluoroscoped. I decided that the idea of a physical examination is that, if you aren't ill, then they do their darnedest to make you ill. If the attempt fails, you're in.

I asked one of the doctors what percentage of the victims flunked the physical. He looked startled. "Why, we never fail anyone. The law doesn't permit us to."

"Huh? I mean, Excuse me, Doctor? Then what's the point of this goose-flesh parade?"

"Why, the purpose is," he answered, hauling off and hitting me in the knee with a hammer (I kicked him, but not hard), "to find out what duties you are physically able to perform. But if you came in here in a wheel chair and blind in both eyes and were silly enough to insist on enrolling, they would find something silly enough to match. Counting the fuzz on a caterpillar by touch, maybe. The only way you can fail is by having the psychiatrists decide that you are not able to understand the oath."

"Oh. Uh . . . Doctor, were you already a doctor when you joined up? Or did they decide you ought to be a doctor and send you to school?"

"Me?" He seemed shocked. "Youngster, do I look that silly? I'm a civilian employee."

"Oh. Sorry, sir."

"No offense. But military service is for ants. Believe me. I see `em go, I see `em come back -- when they do come back. I see what it's done to them. And for what? A purely nominal political privilege that pays not one centavo and that most of them aren't competent to use wisely anyhow. Now if they would let medical men run things -- but never mind that; you might think I was talking treason, free speech or not. But, youngster, if you've got savvy enough to count ten, you'll back out while you still can. Here, take these papers back to the recruiting sergeant -- and remember what I said."

I went back to the rotunda. Carl was already there. The Fleet Sergeant looked over my papers and said glumly, "Apparently you both are almost insufferably healthy-except for holes in the head. One moment, while I get some witnesses." He punched a button and two female clerks came out, one old battle-ax, one kind of cute.

He pointed to our physical examination forms, our birth certificates, and our I. D.'s said formally: "I invite and require you, each and severally, to examine these exhibits, determine what they are and to determine, each independently, what relation, if any, each document bears to these two men standing here in your presence."

They treated it as a dull routine, which I'm sure it was; nevertheless they scrutinized every document, they took our fingerprints -- again! -- and the cute one put a jeweler's loupe in her eye and compared prints from birth to now. She did the same with signatures. I began to doubt if I was myself.

The Fleet Sergeant added, "Did you find exhibits relating to their present competence to take the oath of enrollment? If so, what?"

"We found," the older one said, "appended to each record off physical examination a duly certified conclusion by an authorized and delegated board of psychiatrists stating that each of them is mentally competent to take the oath and that neither one is under the influence of alcohol, narcotics, other disabling drugs, nor of hypnosis."

"Very good." He turned to us, "Repeat after me -- "

"I, being of legal age, of my own free will -- "

" `I,' " we each echoed, " `being of legal age, of my own free will -- ' "

" -- without coercion, promise, or inducement of any sort, after having been duly advised and warned of the meaning and consequences of this oath -- "

" -- do now enroll in the Federal Service of the Terran Federation for a term of not less than two years and as much longer as may be required by the needs of the Service -- "

(I gulped a little over that part. I had always thought of a "term" as two years, even though I knew better, because that's the way people talk about it. Why, we were signing up for life.)

"I swear to uphold and defend the Constitution of the Federation against all its enemies on or off Terra, to protect and defend the Constitutional liberties and privileges of all citizens and lawful residents of the Federation, its associated states and territories, to perform, on or off Terra, such duties of any lawful nature as may be assigned to me by lawful direct or delegated authority -- "

" -- and to obey all lawful orders of the Commander-in-Chief of the Terran Service and of all officers or delegated persons placed over me -- "

" -- and to require such obedience from all members of the Service or other persons or non-human beings lawfully placed under my orders -- "

" -- and, on being honorably discharged at the completion of my full term of active service or upon being placed on inactive retired status after

having completed such full term, to carry out all duties and obligations and to enjoy all privileges of Federation citizenship including but not limited to the duty, obligation and privilege of exercising sovereign franchise for the rest of my natural life unless stripped of honor by verdict, finally sustained, of court of my sovereign peers."

(Whew!) Mr. Dubois had analyzed the Service oath for us in History and Moral Philosophy and had made us study it phrase by phrase -- but you don't really feel the size of the thing until it comes rolling over you, all in one ungainly piece, as heavy and unstoppable as Juggernaut's carriage.

At least it made me realize that I was no longer a civilian, with my shirttail out and nothing on my mind. I didn't know yet what I was, but I knew what I wasn't.

"So help me God!" we both ended and Carl crossed himself and so did the cute one.

After that there were more signatures and fingerprints, all five of us, and flat colorgraphs of Carl and me were snapped then and there and embossed into our papers. The Fleet Sergeant finally looked up. "Why, it's `way past the break for lunch. Time for chow, lads."

I swallowed hard. Uh...Sergeant?"

"Eh? Speak up."

"Could I flash my folks from here? Tell them what I -- Tell them how it came out?"

"We can do better than that."

"Sir?"

"You go on forty-eight hours leave now." He grinned coldly. "Do you know what happens if you don't come back?"

"Uh . . . court-martial?"

"Not a thing. Not a blessed thing. Except that your papers get marked, Term not completed satisfactorily, and you never, never, never get a second chance. This is our cooling-off period, during which we shake out the overgrown babies who didn't really mean it and should never have taken the oath. It saves the government money and it saves a power of grief for such kids and their parents -- the neighbors needn't guess. You don't even have to tell your parents." He shoved his chair away from his desk. "So I'll see you at noon day after tomorrow. If I see you. Fetch your personal effects."

It was a crumby leave. Father stormed at me, then quit speaking to me; Mother took to her bed. When I finally left, an hour earlier than I had to, nobody saw me off but the morning cook and the houseboys.

I stopped in front of the recruiting sergeant's desk, thought about saluting and decided I didn't know how. He looked up. "Oh. Here are your papers. Take them up to room 201; they'll start you through the mill. Knock and walk in."

Two days later I knew I was not going to be a pilot. Some of the things the examiners wrote about me were: insufficient intuitive grasp of spatial relationships . . . insufficient mathematical talent . . . deficient mathematical preparation . . . reaction time adequate . . . eyesight good.

I'm glad they put in those last two; I was beginning to feel that counting on my fingers was my speed.

The placement officer let me list my lesser preferences, in order, and I caught four more days of the wildest aptitude tests I've ever heard of. I mean to say, what do they find out when a stenographer jumps on her chair and screams, "Snakes!" There was no snake, just a harmless piece of plastic hose.

The written and oral tests were mostly just as silly, but they seemed happy with them, so I took them. The thing I did most carefully was to list my preferences. Naturally I listed all of the Space Navy jobs (other than pilot) at the top; whether I went as power-room technician or as cook, I knew

that I preferred any Navy job to any Army job -- I wanted to travel.

Next I listed Intelligence -- a spy gets around, too, and I figured that it couldn't possibly be dull. (I was wrong, but never mind.) After that came a long list: psychological warfare, chemical warfare, biological warfare, combat ecology (I didn't know what it was, but it sounded interesting), logistics corps (a simple mistake; I had studied logic for the debate team and "logistics" turns out to have two entirely separate meanings), and a dozen others. Clear at the bottom, with some hesitation, I put K-9 Corps, and Infantry.

I didn't bother to list the various non-combatant auxiliary corps because, if I wasn't picked for a combat corps, I didn't care whether they used me as an experimental animal or sent me as a laborer in the Terranizing of Venus -- either one was a booby prize.

Mr. Weiss, the placement officer, sent for me a week after I was sworn in. He was actually a retired psychological-warfare major, on active duty for procurement, but he wore mufti and insisted on being called just "Mister" and you could relax and take it easy with him. He had my list of preferences and the reports on all my tests and I saw that he was holding my high school transcript -- which pleased me, for I had done all right in school; I had stood high enough without standing so high as to be marked as a greasy grind, having never flunked any courses and dropped only one, and I had been rather a big man around school otherwise: swimming team, debate team, track squad, class treasurer, silver medal in the annual literary contest, chairman of the homecoming committee, stuff like that. A well-rounded record and it's all down in the transcript.

He looked up as I came in, said, "Sit down, Johnnie," and looked back at the transcript, then put it down. "You like dogs?"

"Huh? Yes, sir"

"How well do you like them? Did your dog sleep on your bed? By the way, where is your dog now?"

"Why, I don't happen to have a dog just at present. But when I did -- well, no, he didn't sleep on my bed. You see, Mother didn't allow dogs in the house."

"But didn't you sneak him in?"

"Uh -- " I thought of trying to explain Mother's not-angry-but-terribly-terribly-hurt routine when you tried to buck her on something she had her mind made up about. But I gave up. "No, sir."

"Mmm . . . have you ever seen a neodog?"

"Uh, once, sir. They exhibited one at the Macarthur Theater two years ago. But the S. P. C. A. made trouble for them."

"Let me tell you how it is with a K-9 team. A neodog is not just a dog that talks."

"I couldn't understand that neo at the Macarthur. Do they really talk?"

"They talk. You simply have to train your ear to their accent. Their mouths can't shape `b,' `m,' `p,' or `v' and you have to get used to their equivalents -- something like the handicap of a split palate but with different letters. No matter, their speech is as clear as any human speech. But a neodog is not a talking dog; he is not a dog at all, he is an artificially mutated symbiote derived from dog stock. A neo, a trained Caleb, is about six times as bright as a dog, say about as intelligent as a human moron -- except that the comparison is not fair to the neo; a moron is a defective, whereas a neo is a stable genius in his own line of work."

Mr. Weiss scowled. "Provided, that is, that he has his symbiote. That's the rub. Mmm . . . you're too young ever to have been married but you've seen marriage, your own parents at least. Can you imagine being married to a Caleb?"

"Huh? No. No, I can't."

"The emotional relationship between the dog-man and the man-dog in a K-9 team is a great deal closer and much more important than is the emotional relationship in most marriages. If the master is killed, we kill the neodog -- at once! It is all that we can do for the poor thing. A mercy killing. If the neodog is killed . . . well, we can't kill the man even though it would be the simplest solution. Instead we restrain him and hospitalize him and slowly put him back together." He picked up a pen, made a mark. "I don't think we can risk assigning a boy to K-9 who didn't outwit his mother to have his dog sleep with him. So let's consider something else."

It was not until then that I realized that I must have already flunked every choice on my list above K-9 Corps -- and now I had just flunked it, too. I was so startled that I almost missed his next remark. Major Weiss said meditatively, with no expression and as if he were talking about someone else, long dead and far away: "I was once half of a K-9 team. When my Caleb became a casualty, they kept me under sedation for six weeks, then rehabilitated me for other work. Johnnie, these courses you've taken -- why didn't you study something useful?"

"Sir?"

"Too late now. Forget it. Mmm . . . your instructor in History and Moral Philosophy seems to think well of you."

"He does?" I was surprised. "What did he say?"

Weiss smiled. "He says that you are not stupid, merely ignorant and

prejudiced by your environment. From him that is high praise -- I know him."

It didn't sound like praise to me! That stuck-up stiff-necked old --

"And," Weiss went on, "a boy who gets a `C-minus' in Appreciation of Television can't be all bad. I think we'll accept Mr. Dubois' recommendation. How would you like to be an infantryman?"

I came out of the Federal Building feeling subdued yet not really unhappy. At least I was a soldier; I had papers in my pocket to prove it. I hadn't been classed as too dumb and useless for anything but make-work.

It was a few minutes after the end of the working day and the building was empty save for a skeleton night staff and a few stragglers. I ran into a man in the rotunda who was just leaving; his face looked familiar but I couldn't place him.

But he caught my eye and recognized me. "Evening!" he said briskly. "You haven't shipped out yet?"

And then I recognized him -- the Fleet Sergeant who had sworn us in. I guess my chin dropped; this man was in civilian clothes, was walking around on two legs and had two arms. "Uh, good evening, Sergeant," I mumbled.

He understood my expression perfectly, glanced down at himself and smiled easily. "Relax, lad. I don't have to put on my horror show after working hours -- and I don't. You haven't been placed yet?"

"I just got my orders."

"For what?"

"Mobile Infantry."

His face broke in a big grin of delight and he shoved out his hand. "My outfit! Shake, son! We'll make a man of you -- or kill you trying. Maybe both."

"It's a good choice?" I said doubtfully.

" `A good choice'? Son, it's the only choice. The Mobile Infantry is the Army. All the others are either button pushers or professors, along merely to hand us the saw; we do the work." He shook hands again and added, "Drop me a card -- `Fleet Sergeant Ho, Federal Building,' that'll reach me. Good luck! And he was off, shoulders back, heels clicking, head up.

I looked at my hand. The hand he had offered me was the one that wasn't there -- his right hand. Yet it had felt like flesh and had shaken mine firmly. I had read about these powered prosthetics, but it is startling when you first run across them.

I went back to the hotel where recruits were temporarily billeted during placement -- we didn't even have uniforms yet, just plain coveralls we wore during the day and our own clothes after hours. I went to my room and started packing, as I was shipping out early in the morning -- packing to send stuff home, I mean; Weiss had cautioned me not to take along anything but family photographs and possibly a musical instrument if I played one (which I didn't). Carl had shipped out three days earlier, having gotten the R & D assignment he wanted. I was just as glad, as he would have been just too confounded understanding about the billet I had drawn. Little Carmen had shipped out, too, with the rank of cadet midshipman

(probationary) -- she was going to be a pilot, all right, if she could cut it . . . and I suspected that she could.

My temporary roomie came in while I was packing. "Got your orders?" he asked.

"Yup."

"What?"

"Mobile Infantry."

"The Infantry? Oh, you poor stupid clown! I feel sorry for you, I really do."

I straightened up and said angrily, "Shut up! The Mobile Infantry is the best outfit in the Army -- it is the Army! The rest of you jerks are just along to hand us the saw -- we do the work."

He laughed. "You'll find out!"

"You want a mouthful of knuckles?"

CHAPTER 3

He shall rule them with a rod of iron.
-- Revelations II:25

I did Basic at Camp Arthur Currie on the northern prairies, along with a couple of thousand other victims -- and I do mean "Camp," as the only permanent buildings there were to shelter equipment. We slept and ate in tents; we lived outdoors -- if you call that "living," which I didn't, at the time. I was used to a warm climate; it seemed to me that the North Pole was just five miles north of camp and getting closer. Ice Age returning, no doubt.

But exercise will keep you warm and they saw to it that we got plenty of that.

The first morning we were there they woke us up before daybreak. I had had trouble adjusting to the change in time zones and it seemed to me that I had just got to sleep; I couldn't believe that anyone seriously intended that I should get up in the middle of the night.

But they did mean it. A speaker somewhere was blaring out a military march, fit to wake the dead, and a hairy nuisance who had come charging down the company street yelling, "Everybody out! Show a leg! On the bounce!" came marauding back again just as I had pulled the covers over my head, tipped over my cot and dumped me on the cold hard ground.

It was an impersonal attention; he didn't even wait to see if I hit.

Ten minutes later, dressed in trousers, undershirt, and shoes, I was lined up with the others in ragged ranks for setting-up exercises just as the Sun looked over the eastern horizon. Facing us was a big broad-shouldered, mean-looking man, dressed just as we were -- except that while I looked and felt like a poor job of embalming, his chin was shaved blue, his trousers were sharply creased, you could have used his shoes for mirrors, and his manner was alert, wide-awake, relaxed, and rested. You got

the impression that he never needed to sleep -- just ten-thousand-mile checkups and dust him off occasionally.

He bellowed, "C'pnee! Atten . . . shut! I am Career Ship's Sergeant Zim, your company commander. When you speak to me, you will salute and say, `Sir' -- you will salute and `sir' anyone who carries an instructor's baton -- " He was carrying a swagger cane and now made a quick reverse moulinet with it to show what he meant by an instructor's baton; I had noticed men carrying them when we had arrived the night before and had intended to get one myself -- they looked smart. Now I changed my mind. " -- because we don't have enough officers around here for you to practice on. You'll practice on us. Who sneezed?"

No answer --

"WHO SNEEZED?"

"I did," a voice answered.

" `I did' what?"

"I sneezed."

" `I sneezed,' SIR!"

"I sneezed, sir. I'm cold, sir."

"Oho!" Zim strode up to the man who had sneezed, shoved the ferrule of the swagger cane an inch under his nose and demanded, "Name?"

"Jenkins . . . sir."

"Jenkins . . ." Zim repeated as if the word were somehow distasteful, even shameful. "I suppose some night on patrol you're going to sneeze just because you've got a runny nose. Eh?"

"I hope not, sir."

"So do I. But you're cold. Hmm . . . we'll fix that." He pointed with his stick. "See that armory over there?" I looked and could see nothing but prairie except for one building that seemed to be almost on the skyline.

"Fall out. Run around it. Run, I said. Fast! Bronski! Pace him."

"Right, Sarge." One of the five or six other baton carriers took out after Jenkins, caught up with him easily, cracked him across the tight of his pants with the baton. Zim turned back to the rest of us, still shivering at attention. He walked up and down, looked us over, and seemed awfully unhappy. At last he stepped out in front of us, shook his head, and said, apparently to himself but he had a voice that carried: "To think that this had to happen to me!"

He looked at us. "You apes -- No, not `apes'; you don't rate that much. You pitiful mob of sickly monkeys . . . you sunken-chested, slack-bellied, drooling refugees from apron strings. In my whole life I never saw such a disgraceful huddle of momma's spoiled little darlings in -- you, there! Suck up the gut! Eyes front! I'm talking to you!"

I pulled in my belly, even though I was not sure he had addressed me. He went on and on and I began to forget my goose flesh in hearing him storm. He never once repeated himself and he never used either profanity or obscenity. (I

learned later that he saved those for very special occasions, which

this wasn't.) But he described our shortcomings, physical, mental, moral, and genetic, in great and insulting detail.

But somehow I was not insulted; I became greatly interested in studying his command of language. I wished that we had had him on our debate team.

At last he stopped and seemed about to cry. "I can't stand it," he said bitterly. "I've just got to work some of it off -- I had a better set of wooden soldiers when I was six ALL RIGHT! Is there any one of you jungle lice who thinks he can whip me? Is there a man in the crowd? Speak up !"

There was a short silence to which I contributed. I didn't have any doubt at all that he could whip me; I was convinced.

I heard a voice far down the line, the tall end. "Ah reckon ah can . . . suh."

Zim looked happy. "Good! Step out here where I can see you." The recruit did so and he was impressive, at least three inches taller than Sergeant Zim and broader across the shoulders. "What's your name, soldier?"

"Breckinridge, suh -- and ah weigh two hundred and ten pounds an' theah ain't any of it `slack-bellied.' "

"Any particular way you'd like to fight?"

"Suh, you jus' pick youah own method of dyin'. Ah'm not fussy."

"Okay, no rules. Start whenever you like." Zim tossed his baton aside.

It started -- and it was over. The big recruit was sitting on the ground, holding his left wrist in his right hand. He didn't say anything.

Zim bent over him. "Broken?"

"Reckon it might he . . . suh."

"I'm sorry. You hurried me a little. Do you know where the dispensary is? Never mind -- Jones! Take Breckinridge over to the dispensary." As they left Zim slapped him on the right shoulder and said quietly, "Let's try it again in a month or so. I'll show you what happened." I think it was meant to be a private remark but they were standing about six feet in front of where I was slowly freezing solid.

Zim stepped back and called out, "Okay, we've got one man in this company, at least. I feel better. Do we have another one? Do we have two more? Any two of you scrofulous toads think you can stand up to me?" He looked back and forth along our ranks. "Chicken-livered, spineless -- oh, oh! Yes? Step out."

Two men who had been side by side in ranks stepped out together; I suppose they had arranged it in whispers right there, but they also were far down the tall end, so I didn't hear. Zim smiled at them. "Names, for your next of kin, please."

"Heinrich."

"Heinrich what?"

"Heinrich, sir. Bitte." He spoke rapidly to the other recruit and added politely, "He doesn't speak much Standard English yet, sir."

"Meyer, mein Herr," the second man supplied.

"That's okay, lots of `em don't speak much of it when they get here -- I didn't myself. Tell Meyer not to worry, he'll pick it up. But he

understands what we are going to do?"

"Jawohl," agreed Meyer.

"Certainly, sir. He understands Standard, he just can't speak it fluently."

"All right. Where did you two pick up those face scars? Heidelberg?"

"Nein -- no, sir. Ko:nigsberg."

"Same thing." Zim had picked up his baton after fighting Breekinridge; he twirled it and asked, "Perhaps you would each like to borrow one of these?"

"It would not be fair to you, sir," Heinrich answered carefully. "Bare hands, if you please."

"Suit yourself. Though I might fool you. Ko:nigsberg, eh? Rules?"

"How can there be rules, sir, with three?"

"An interesting point. Well, let's agree that if eyes are gouged out they must be handed back when it's over. And tell your Korpsbruder that I'm ready now. Start when you like." Zim tossed his baton away; someone caught it.

"You joke, sir. We will not gouge eyes."

"No eye gouging, agreed. `Fire when ready, Gridley.' "

"Please?"

"Come on and fight! Or get back into ranks!"

Now I am not sure that I saw it happen this way; I may have learned part of it later, in training. But here is what I think happened: The two moved out on each side of our company commander until they had him completely flanked but well out of contact. From this position there is a choice of four basic moves for the man working alone, moves that take advantage of his own mobility and of the superior co-ordination of one man as compared with two -- Sergeant Zim says (correctly) that any group is weaker than a man alone unless they are perfectly trained to work together. For example, Zim could have feinted at one of them, bounced fast to the other with a disabler, such as a broken kneecap then finished off the first at his leisure.

Instead he let them attack. Meyer came at him fast, intending to body check and knock him to the ground, I think, while Heinrich would follow through from above, maybe with his boots. That's the way it appeared to start.

And here's what I think I saw. Meyer never reached him with that body check. Sergeant Zim whirled to face him,

while kicking out and getting Heinrich in the belly -- and then Meyer was sailing through the air, his lunge helped along with a hearty assist from Zim.

But all I am sure of is that the fight started and then there were two German boys sleeping peacefully, almost end to end, one face down and one face up, and Zim was standing over them, not even breathing hard. "Jones," he said. "No, Jones left, didn't he? Mahmud! Let's have the water bucket, then stick them back into their sockets. Who's got my toothpick?"

A few moments later the two were conscious, wet, and back in ranks. Zim looked at us and inquired gently, "Anybody else? Or shall we get on with setting-up exercises?"

I didn't expect anybody else and I doubt if he did. But from down on the left flank, where the shorties hung out, a boy stepped out of ranks, came front and center. Zim looked down at him. "Just you? Or do you want to pick a partner?"

"Just myself, sir."

"As you say. Name?"

"Shujumi, sir."

Zim's eyes widened. "Any relation to Colonel Shujumi?"

"I have the honor to be his son, sir."

"Ah so! Well! Black Belt?"

"No, sir. Not yet."

"I'm glad you qualified that. Well, Shujumi, are we going to use contest rules, or shall I send for the ambulance?"

"As you wish, sir. But I think, if I may be permitted an opinion, that contest rules would be more prudent."

"I don't know just how you mean that, but I agree." Zim tossed his badge of authority aside, then, so help me, they backed off, faced each other, and bowed.

After that they circled around each other in a half crouch, making tentative passes with their hands, and looking like a couple of roosters.

Suddenly they touched -- and the little chap was down on the ground and Sergeant Zim was flying through the air over his head. But he didn't land with the dull, breath-paralyzing thud that Meyer had; he lit rolling and was on his feet as fast as Shujumi was and facing him. "Banzai!" Zim yelled and grinned.

"Arigato," Shujumi answered and grinned back.

They touched again almost without a pause and I thought the Sergeant was going to fly again. He didn't; he slithered straight in, there was a confusion of arms and legs and when the motion slowed down you could see that Zim was tucking Shujumi's left foot in his right ear -- a poor fit.

Shujumi slapped the ground with a free hand; Zim let him up at once. They again bowed to each other.

"Another fall, sir?"

"Sorry. We've got work to do. Some other time, eh? For fun . . . and honor. Perhaps I should have told you; your honorable father trained me."

"So I had already surmised, sir. Another time it is."

Zim slapped him hard on the shoulder. "Back in ranks, soldier. C'pnee!"

Then, for twenty minutes, we went through calisthenics that left me as dripping hot as I had been shivering cold. Zim led it himself, doing it all with us and shouting the count. He hadn't been mussed that I could see; he wasn't breathing hard as we finished. He never led the exercises after that morning (we never saw him again before breakfast; rank hath its privileges), but he did that morning, and when it was over and we were all bushed, he led

us at a trot to the mess tent, shouting at us the whole way to "Step it up! On the bounce! You're dragging your tails!"

We always trotted everywhere at Camp Arthur Currie. I never did find out who Currie was, but he must have been a trackman.

Breckinridge was already in the mess tent, with a cast on his wrist but thumb and fingers showing. I heard him say, "Naw, just a greenstick fractchuh -- ah've played a whole quahtuh with wuss. But you wait -- ah'll fix him."

I had my doubts. Shujumi, maybe -- but not that big ape. He simply didn't know when he was outclassed. I disliked Zim from the first moment I laid eyes on him. But he had style.

Breakfast was all right -- all the meals were all right; there was none of that nonsense some boarding schools have of making your life miserable at the table. If you wanted to slump down and shovel it in with both hands, nobody bothered you -- which was good, as meals were practically the only time somebody wasn't riding you. The menu for breakfast wasn't anything like what I had been used to at home and the civilians that waited on us slapped the food around in a fashion that would have made Mother grow pale and leave for her room -- but it was hot and it was plentiful and the cooking was okay if plain. I ate about four times what I normally do and washed it down with mug after mug of coffee with cream and lots of sugar -- I would have eaten a shark without stopping to skin him.

Jenkins showed up with Corporal Bronski behind him as I was starting on seconds. They stopped for a moment at a table where Zim was eating alone, then Jenkins slumped onto a vacant stool by mine. He looked mighty seedy-pale, exhausted, and his breath rasping. I said, "Here, let me pour you some coffee."

He shook his head.

"You better eat," I insisted. "Some scrambled eggs -- they'll go down easily."

"Can't eat. Oh, that dirty, dirty so-and-so." He began cussing out Zim in a low, almost expressionless monotone. "All I asked him was to let me go lie down and skip breakfast. Bronski wouldn't let me -- said I had to see the company commander. So I did and I told him I was sick, I told him. He just felt my cheek and counted my pulse and told me sick call was nine o'clock. Wouldn't let me go back to my tent. Oh, that rat! I'll catch him on a dark night, I will."

I spooned out some eggs for him anyway and poured coffee. Presently he began to eat. Sergeant Zim got up to leave while most of us were still eating, and stopped by our table. "Jenkins."

"Uh? Yes, sir."

"At oh-nine-hundred muster for sick call and see the doctor."

Jenkins' jaw muscles twitched. He answered slowly, "I don't need any pills -- sir. I'll get by."

"Oh-nine-hundred. That's an order." He left.

Jenkins started his monotonous chant again. Finally he slowed down,

took a bite of eggs and said somewhat more loudly, "I can't help wondering what kind of a mother produced that. I'd just like to have a look at her, that's all. Did he ever have a mother?"

It was a rhetorical question but it got answered. At the head of our table, several stools away, was one of the instructor-corporals. He had finished eating and was smoking and picking his teeth, simultaneously; he had evidently been listening. "Jenkins -- "

"Uh -- sir?"

"Don't you know about sergeants?"

"Well . . . I'm learning."

"They don't have mothers. Just ask any trained private." He blew smoke toward us. "They reproduce by fission . . . like all bacteria."

CHAPTER 4

And the LORD said unto Gideon, The people that are with thee are too many . . . Now therefore go to, proclaim in the ears of the people, saying, Whosoever is fearful and afraid, let him return . . . And there returned of the people twenty and two thousand; and there remained ten thousand. And the LORD said unto Gideon, The people are yet too many; bring them down unto the water, and I will try them for thee there . . . so he brought down the people unto the water: and the LORD said unto Gideon, Every one that lappeth of the water with his tongue, as a dog lappeth, him shalt thou set by himself; likewise everyone that boweth down upon his knees to drink. And the number of them that drank, putting their hand to their mouth, were three hundred men . . .

And the LORD said unto Gideon, By the three hundred . . . will I save you . . . let all the other people go . . .

-- Judges VII:2-7

Two weeks after we got there they took our cots away from us. That is to say that we had the dubious pleasure of folding them, carrying them four miles, and stowing them in a warehouse. By then it didn't matter; the ground seemed much warmer and quite soft -- especially when the alert sounded in the middle of the night and we had to scramble out and play soldier. Which it did about three times a week. But I could get back to sleep after one of those mock exercises at once; I had learned to sleep any place, any time -- sitting up, standing up, even marching in ranks. Why, I could even sleep through evening parade standing at attention, enjoy the music without being waked by it -- and wake instantly at the command to pass in review. I made a very important discovery at Camp Currie. Happiness consists in getting enough sleep. Just that, nothing more. All the wealthy, unhappy people you've ever met take sleeping pills; Mobile Infantrymen don't need them. Give a cap trooper a bunk and time to sack out in it and he's as happy as a worm in an apple -- asleep.

Theoretically you were given eight full hours of sack time every night and about an hour and a half after evening chow for your own use. But in

fact your night sack time was subject to alerts, to night duty, to field marches, and to acts of God and the whims of those over you, and your evenings, if not ruined by awkward squad or extra duty for minor offenses, were likely to be taken up by shining shoes, doing laundry, swapping haircuts (some of us got to be pretty fair barbers but a clean sweep like a billiard ball was acceptable and anybody can do that) -- not to mention a thousand other chores having to do with equipment, person, and the demands of sergeants. For example we learned to answer morning roll call with: "Bathed!" meaning you had taken at least one bath since last reveille. A man might lie about it and get away with it (I did, a couple of times) but at least one in our company who pulled that dodge in the face of convincing evidence that he was not recently bathed got scrubbed with stiff brushes and floor soap by his squad mates while a corporal-instructor chaperoned and made helpful suggestions.

But if you didn't have more urgent things to do after supper, you could write a letter, loaf, gossip, discuss the myriad mental and moral shortcomings of sergeants and, dearest of all, talk about the female of the species (we became convinced that there were no such creatures, just mythology created by inflamed imaginations one boy in our company claimed to have seen a girl, over at regimental headquarters; he was unanimously judged a liar and a braggart). Or you could play cards. I learned, the hard way, not to draw to an inside straight and I've never done it since. In fact I haven't played cards since.

Or, if you actually did have twenty minutes of your very own, you could sleep. This was a choice very highly thought of; we were always several weeks minus on sleep.

I may have given the impression that boot camp was made harder than necessary. This is not correct.

It was made as hard as possible and on purpose.

It was the firm opinion of every recruit that this was sheer meanness, calculated sadism, fiendish delight of witless morons in making other people suffer.

It was not. It was too scheduled, too intellectual, too efficiently and impersonally organized to be cruelty for the sick pleasure of cruelty; it was planned like surgery for purposes as unimpassioned as those of a surgeon. Oh, I admit that some of the instructors may have enjoyed it but I don't know that they did -- and I do know (now) that the psych officers tried to weed out any bullies in selecting instructors. They looked for skilled and dedicated craftsmen to follow the art of making things as tough as possible for a recruit; a bully is too stupid, himself too emotionally involved, and too likely to grow tired of his fun and slack off, to be efficient.

Still, there may have been bullies among them. But I've heard that some surgeons (and not necessarily bad ones) enjoy the cutting and the blood which accompanies the humane art of surgery.

That's what it was: surgery. Its immediate purpose was to get rid of,

run right out of the outfit, those recruits who were too soft or too babyish ever to make Mobile Infantrymen. It accomplished that, in droves. (They darn near ran me out.) Our company shrank to platoon size in the first six weeks. Some of them were dropped without prejudice and allowed, if they wished, to sweat out their terms in the non-combatant services; others got Bad Conduct Discharges, or Unsatisfactory Performance Discharges, or Medical Discharges.

Usually you didn't know why a man left unless you saw him leave and he volunteered the information. But some of them got fed up, said so loudly, and resigned, forfeiting forever their chances of franchise. Some, especially the older men, simply couldn't stand the pace physically no matter how hard they tried. I remember one, a nice old geezer named Carruthers, must have been thirty-five; they carried him away in a stretcher while he was still shouting feebly that it wasn't fair! -- and that he would be back.

It was sort of sad, because we liked Carruthers and he did try -- so we looked the other way and figured we would never see him again, that he was a cinch for a medical discharge and civilian clothes. Only I did see him again, long after. He had refused discharge (you don't have to accept a medical) and wound up as third cook in a troop transport. He remembered me and wanted to talk old times, as proud of being an alumnus of Camp Currie as Father is of his Harvard accent -- he felt that he was a little bit better than the ordinary Navy man. Well, maybe he was.

But, much more important than the purpose of carving away the fat quickly and saving the government the training costs of those who would never cut it, was the prime purpose of making as sure as was humanly possible that no cap trooper ever climbed into a capsule for a combat drop unless he was prepared for it -- fit, resolute, disciplined, and skilled. If he is not, it's not fair to the Federation, it's certainly not fair to his teammates, and worst of all it's not fair to him.

But was boot camp more cruelly hard than was necessary?

All I can say to that is this: The next time I have to make a combat drop, I want the men on my flanks to be graduates of Camp Currie or its Siberian equivalent. Otherwise I'll refuse to enter the capsule.

But I certainly thought it was a bunch of crumby, vicious nonsense at the time. Little things -- When we were there a week, we were issued undress maroons for parade to supplement the fatigues we had been wearing. (Dress and full-dress uniforms came much later.) I took my tunic back to the issue shed and complained to the supply sergeant. Since he was only a supply sergeant and rather fatherly in manner I thought of him as a semi-civilian -- I didn't know how, as of then, to read the ribbons on his chest or I wouldn't have dared speak to him. "Sergeant, this tunic is too large. My company commander says it fits like a tent."

He looked at the garment, didn't touch it. "Really?"

"Yeah. I want one that fits."

He still didn't stir. "Let me wise you up, sonny boy. There are just two sizes in this army -- too large and too small."

"But my company commander -- "

"No doubt."

"But what am I going to do?"

"Oh, it's a choice you want! Well, I've got that in stock -- new issue, just today. Mmm . . . tell you what I'll do. Here's a needle and I'll even give you a spool of thread. You won't need a pair of scissors; a razor blade is better. Now you tight `em plenty across the hips but leave cloth to loose `em again across the shoulders; you'll need it later."

Sergeant Zim's only comment on my tailoring was: "You can do better than that. Two hours extra duty."

So I did better than that by next parade.

Those first six weeks were all hardening up and hazing, with lots of parade drill and lots of route march. Eventually, as files dropped out and went home or elsewhere, we reached the point where we could do fifty miles in ten hours on the level -- which is good mileage for a good horse in case you've never used your legs. We rested, not by stopping, but by changing pace, slow march, quick march, and trot. Sometimes we went out the full distance, bivouacked and ate field rations, slept in sleeping bags and marched back the next day.

One day we started out on an ordinary day's march, no bed bags on our shoulders, no rations. When we didn't stop for lunch, I wasn't surprised, as I had already learned to sneak sugar and hard bread and such out of the mess tent and conceal it about my person, but when we kept on marching away from camp in the afternoon I began to wonder. But I had learned not to ask silly questions.

We halted shortly before dark, three companies, now somewhat abbreviated. We formed a battalion parade and marched through it, without music, guards were mounted, and we were dismissed. I immediately looked up Corporal-Instructor Bronski because he was a little easier to deal with than the others . . . and because I felt a certain amount of responsibility; I happened to be, at the time, a recruit-corporal myself. These boot chevrons didn't mean much -- mostly the privilege of being chewed out for whatever your squad did as well as for what you did yourself -- and they could vanish as quickly as they appeared. Zim had tried out all of the older men as temporary non-coms first and I had inherited a brassard with chevrons on it a couple of days before when our squad leader had folded up and gone to hospital.

I said, "Corporal Bronski, what's the straight word? When is chow call?"

He grinned at me. "I've got a couple of crackers on me. Want me to split `em with you?"

"Huh? Oh, no, sir. Thank you." (I had considerably more than a couple of crackers; I was learning.) "No chow call?"

"They didn't tell me either, sonny. But I don't see any copters approaching. Now if I was you, I'd round up my squad and figure things out. Maybe one of you can hit a jack rabbit with a rock."

"Yes, sir. But -- Well, are we staying here all night? We don't have our bedrolls."

His eye brows shot up. "No bedrolls? Well, I do declare!" He seemed to think it over. "Mmm . . . ever see sheep huddle together in a snowstorm?"

"Uh, no, sir."

"Try it. They don't freeze, maybe you won't. Or, if you don't care for company, you might walk around all night. Nobody'll bother you, as long as you stay inside the posted guards. You won't freeze if you keep moving. Of course you may be a little tired tomorrow." He grinned again.

I saluted and went back to my squad. We divvied up, share and share alike -- and I came out with less food than I had started; some of those idiots either hadn't sneaked out anything to eat, or had eaten all they had while we marched. But a few crackers and a couple of prunes will do a lot to quiet your stomach's sounding alert.

The sheep trick works, too; our whole section, three squads, did it together. I don't recommend it as a way to sleep; you are either in the outer layer, frozen on one side and trying to worm your way inside, or you are inside, fairly warm but with everybody else trying to shove his elbows, feet, and halitosis on you. You migrate from one condition to the other all night long in sort of a Brownian movement, never quite waking up and never really sound asleep. All this makes a night about a hundred years long.

We turned out at dawn to the familiar shout of: "Up you come! On the bounce!" encouraged by instructors' batons applied smartly on fundaments sticking out of the piles . . . and then we did setting-up exercises. I felt like a corpse and didn't see how I could touch my toes. But I did, though it hurt, and twenty minutes later when we hit the trail I merely felt elderly. Sergeant Zim wasn't even mussed and somehow the scoundrel had managed to shave.

The Sun warmed our backs as we marched and Zim started us singing, oldies at first, like "Le Regiment de Sambre et Meuse" and "Caissons" and "Halls of Montezuma" and then our own "Cap Trooper's Polka" which moves you into quickstep and pulls you on into a trot. Sergeant Zim couldn't carry a tune in a sack; all he had was a loud voice. But Breckinridge had a sure, strong lead and could hold the rest of us in the teeth of Zim's terrible false notes. We all felt cocky and covered with spines.

But we didn't feel cocky fifty miles later. It had been a long night; it was an endless day -- and Zim chewed us out for the way we looked on parade and several boots got gigged for failing to shave in the nine whole minutes between the time we fell out after the march and fell back in again for parade. Several recruits resigned that evening and I thought about it but didn't because I had those silly boot chevrons and hadn't been busted yet.

That night there was a two-hour alert.

But eventually I learned to appreciate the homey luxury of two or three dozen warm bodies to snuggle up to, because twelve weeks later they dumped me down raw naked in a primitive area of the Canadian Rockies and I had to

make my way forty miles through mountains. I made it -- and hated the Army every inch of the way.

I wasn't in too bad shape when I checked in, though. A couple of rabbits had failed to stay as alert as I was, so I didn't go entirely hungry . . . nor entirely naked; I had a nice warm thick coat of rabbit fat and dirt on my body and moccasins on my feet -- the rabbits having no further use for their skins. It's amazing what you can do with a flake of rock if you have to -- I guess our cave-man ancestors weren't such dummies as we usually think.

The others made it, too, those who were still around to try and didn't resign rather than take the test -- all except two boys who died trying. Then we all went back into the mountains and spent thirteen days finding them, working with copters overhead to direct us and all the best communication gear to help us and our instructors in powered command suits to supervise and to check rumors -- because the Mobile Infantry doesn't abandon its own while there is any thin shred of hope.

Then we buried them with full honors to the strains of "This Land Is Ours" and with the posthumous rank of PFC, the first of our boot regiment to go that high -- because a cap trooper isn't necessarily expected to stay alive (dying is part of his trade) . . . but they care a lot about how you die. It has to be heads up, on the bounce, and still trying.

Breckinridge was one of them; the other was an Aussie boy I didn't know. They weren't the first to die in training; they weren't the last.

CHAPTER 5

He's bound to be guilty `r he
wouldn't be here!
Starboard gun . . . FIRE!

Shooting's too good for `im, kick
the louse out!
Port gun . . . FIRE!
-- Ancient chanty used to
time saluting guns

But that was after we had left Camp Currie and a lot had happened in between. Combat training, mostly -- combat drill and combat exercises and combat maneuvers, using everything from bare hands to simulated nuclear weapons. I hadn't known there were so many different ways to fight. Hands and feet to start with -- and if you think those aren't weapons you haven't seen Sergeant Zim and Captain Frankel, our battalion commander, demonstrate la savate, or had little Shujumi work you over with just his hands and a toothy grin -- Zim made Shujumi an instructor for that purpose at once and required us to take his orders, although we didn't have to salute him and say "sir."

As our ranks thinned down Zim quit bothering with formations himself,

except parade, and spent more and more time in personal instruction, supplementing the corporal-instructors. He was sudden death with anything but he loved knives, and made and balanced his own, instead of using the perfectly good general-issue ones. He mellowed quite a bit as a personal teacher, too, becoming merely unbearable instead of downright disgusting -- he could be quite patient with silly questions.

Once, during one of the two-minute rest periods that were scattered sparsely through each day's work, one of the boys -- a kid named Ted Hendrick -- asked, "Sergeant? I guess this knife throwing is fun . . . but why do we have to learn it? What possible use is it?"

"Well," answered Zim, "suppose all you have is a knife? Or maybe not even a knife? What do you do? Just say your prayers and die? Or wade in and make him buy it anyhow? Son, this is real -- it's not a checker game you can concede if you find yourself too far behind."

"But that's just what I mean, sir. Suppose you aren't armed at all? Or just one of these toadstickers, say? And the man you're up against has all sorts of dangerous weapons? There's nothing you can do about it; he's got you licked on showdown."

Zim said almost gently, "You've got it all wrong, son. There's no such thing as a `dangerous weapon.' "

"Huh? Sir?"

"There are no dangerous weapons; there are only dangerous men. We're trying to teach you to be dangerous -- to the enemy. Dangerous even without a knife. Deadly as long as you still have one hand or one foot and are still alive. If you don't know what I mean, go read `Horatius at the Bridge' or `The Death of the Bon Homme Richard'; they're both in the Camp library. But take the case you first mentioned; I'm you and all you have is a knife. That target behind me -- the one you've been missing, number three -- is a sentry, armed with everything but an H-bomb. You've got to get him . . . quietly, at once, and without letting him call for help." Zim turned slightly -- thunk! -- a knife he hadn't even had in his hand was quivering in the center of target number three. "You see? Best to carry two knives -- but get him you must, even barehanded."

"Uh -- "

"Something still troubling you? Speak up. That's what I'm here for, to answer your questions."

"Uh, yes, sir. You said the sentry didn't have any H-bomb. But he does have an H-bomb; that's just the point. Well, at least we have, if we're the sentry . . . and any sentry we're up against is likely to have them, too. I don't mean the sentry, I mean the side he's on."

"I understood you."

"Well . . . you see, sir? If we can use an H-bomb -- and, as you said, it's no checker game; it's real, it's war and nobody is fooling around -- isn't it sort of ridiculous to go crawling around in the weeds, throwing knives and maybe getting yourself killed . . . and even losing the war . . . when you've got a real weapon you can use to win? What's the point in a

whole lot of men risking their lives with obsolete weapons when one professor type can do so much more just by pushing a button?"

Zim didn't answer at once, which wasn't like him at all. Then he said softly, "Are you happy in the Infantry, Hendrick? You can resign, you know." Hendrick muttered something; Zim said, "Speak up!"

"I'm not itching to resign, sir. I'm going to sweat out my term."

"I see. Well, the question you asked is one that a sergeant isn't really qualified to answer . . . and one that you shouldn't ask me. You're supposed to know the answer before you join up. Or you should. Did your school have a course in History and Moral Philosophy?"

"What? Sure -- yes, sir."

"Then you've heard the answer. But I'll give you my own -- unofficial -- views on it. If you wanted to teach a baby a lesson, would you cut its head off?"

"Why . . . no, sir!"

"Of course not. You'd paddle it. There can be circumstances when it's just as foolish to hit an enemy city with an H-bomb as it would be to spank a baby with an ax. War is not violence and killing, pure and simple; war is controlled violence, for a purpose. The purpose of war is to support your government's decisions by force. The purpose is never to kill the enemy just to be killing him . . . but to make him do what you want him to do. Not killing . . . but controlled and purposeful violence. But it's not your business or mine to decide the purpose or the control. It's never a soldier's business to decide when or where or how -- or why -- he fights; that belongs to the statesmen and the generals. The statesmen decide why and how much; the generals take it from there and tell us where and when and how. We supply the violence; other people -- `older and wiser heads,' as they say -- supply the control. Which is as it should be. That's the best answer I can give you. If it doesn't satisfy you, I'll get you a chit to go talk to the regimental commander. If he can't convince you -- then go home and be a civilian! Because in that case you will certainly never make a soldier."

Zim bounced to his feet. "I think you've kept me talking just to goldbrick. Up you come, soldiers! On the bounce! Man stations, on target -- Hendrick, you first. This time I want you to throw that knife south of you. South, get it? Not north. That target is due south of you and I want that knife to go in a general southerly direction, at least. I know you won't hit the target but see if you can't scare it a little. Don't slice your ear off, don't let go of it and cut somebody behind you -- just keep what tiny mind you have fixed on the idea of `south'! Ready on target! Let fly!"

Hendrick missed it again.

We trained with sticks and we trained with wire (lots of nasty things you can improvise with a piece of wire) and we learned what can be done with really modern weapons and how to do it and how to service and maintain the equipment -- simulated nuclear weapons and infantry rockets and various sorts of gas and poison and incendiary and demolition. As well as other

things maybe best not discussed. But we learned a lot of "obsolete" weapons, too. Bayonets on dummy guns for example, and guns that weren't dummies, too, but were almost identical with the infantry rifle of the XXth century -- much like the sporting rifles used in hunting game, except that we fired nothing but solid slugs, alloyjacketed lead bullets, both at targets on measured ranges and at surprise targets on booby-trapped skirmish runs. This was supposed to prepare us to learn to use any aimed weapon and to train us to be on the bounce, alert, ready for anything. Well. I suppose it did. I'm pretty sure it did.

We used these rifles in field exercises to simulate a lot of deadlier and nastier aimed weapons, too. We used a lot of simulation; we had to. An "explosive" bomb or grenade, against materiel or personnel, would explode just enough to put out a lot of black smoke; another sort of gave off a gas that would make you sneeze and weep that told you that you were dead or paralyzed . . . and was nasty enough to make you careful about anti-gas precautions, to say nothing of the chewing out you got if you were caught by it.

We got still less sleep; more than half the exercises were held at night, with snoopers and radar and audio gear and such.

The rifles used to simulate aimed weapons were loaded with blanks except one in five hundred rounds at random, which was a real bullet. Dangerous? Yes and no. It's dangerous just to be alive . . . and a nonexplosive bullet probably won't kill you unless it hits you in the head or the heart and maybe not then. What that one-in-five-hundred "for real" did was to give us a deep interest in taking cover, especially as we knew that some of the rifles were being fired by instructors who were crack shots and actually trying their best to hit you -- if the round happened not to be a blank. They assured us that they would not intentionally shoot a man in the head . . . but accidents do happen.

This friendly assurance wasn't very reassuring. That 500th bullet turned tedious exercises into large-scale Russian roulette; you stop being bored the very first time you hear a slug go wheet! past your ear before you hear the crack of the rifle.

But we did slack down anyhow and word came down from the top that if we didn't get on the bounce, the incidence of real ones would be changed to one in a hundred . . . and if that didn't work, to one in fifty. I don't know whether a change was made or not -- no way to tell -- but I do know we tightened up again, because a boy in the next company got creased across his buttocks with a live one, producing an amazing scar and a lot of half-witty comments and a renewed interest by all hands in taking cover. We laughed at this kid for getting shot where he did . . . but we all knew it could have been his head or our own heads.

The instructors who were not firing rifles did not take cover. They put on white shirts and walked around upright with their silly canes, apparently calmly certain that even a recruit would not intentionally shoot an instructor -- which may have been overconfidence on the part of some of

them. Still, the chances were five hundred to one that even a shot aimed with murderous intent would not be live and the safety factor increased still higher because the recruit probably couldn't shoot that well anyhow. A rifle is not an easy weapon; it's got no target-seeking qualities at all -- I understand that even back in the days when wars were fought and decided with just such rifles it used to take several thousand fired shots to average killing one man. This seems impossible but the military histories agree that it is true -- apparently most shots weren't really aimed but simply acted to force the enemy to keep his head down and interfere with his shooting.

In any case we had no instructors wounded or killed by rifle fire. No trainees were killed, either, by rifle bullets; the deaths were all from other weapons or things -- some of which could turn around and bite you if you didn't do things by the book. Well, one boy did manage to break his neck taking cover too enthusiastically when they first started shooting at him -- but no bullet touched him.

However, by a chain reaction, this matter of rifle bullets and taking cover brought me to my lowest ebb at Camp Currie. In the first place I had been busted out of my boot chevrons, not over what I did but over something one of my squad did when I wasn't even around . . . which I pointed out. Bronski told me to button my lip. So I went to see Zim about it. He told me coldly that I was responsible for what my men did, regardless . . . and tacked on six hours of extra duty besides busting me for having spoken to him about it without Bronski's permission. Then I got a letter that upset me a lot; my mother finally wrote to me. Then I sprained a shoulder in my first drill with powered armor (they've got those practice suits rigged so that the instructor can cause casualties in the suit at will, by radio control; I got dumped and hurt my shoulder) and this put me on light duty with too much time to think at a time when I had many reasons, it seemed to me, to feel sorry for myself.

Because of "light duty" I was orderly that day in the battalion commander's office. I was eager at first, for I had never been there before and wanted to make a good impression. I discovered that Captain Frankel didn't want zeal; he wanted me to sit still, say nothing, and not bother him. This left me time to sympathize with myself, for I didn't dare go to sleep.

Then suddenly, shortly after lunch, I wasn't a bit sleepy; Sergeant Zim came in, followed by three men. Zim was smart and neat as usual but the expression on his face made him look like Death on a pale horse and he had a mark on his right eye that looked as if it might be shaping up into a shiner -- which was impossible, of course. Of the other three, the one in the middle was Ted Hendrick. He was dirty -- well, the company had been on a field exercise; they don't scrub those prairies and you spend a lot of your time snuggling up to the dirt. But his lip was split and there was blood on his chin and on his shirt and his cap was missing. He looked wild-eyed.

The men on each side of him were boots. They each had rifles; Hendrick

did not. One of them was from my squad, a kid named Leivy. He seemed excited and pleased, and slipped me a wink when nobody was looking.

Captain Frankel looked surprised. "What is this, Sergeant?"

Zim stood frozen straight and spoke as if he were reciting something by rote. "Sir, H Company Commander reports to the Battalion Commander. Discipline. Article nine-one-oh-seven. Disregard of tactical command and doctrine, the team being in simulated combat. Article nine-one-two-oh. Disobedience of orders, same conditions."

Captain Frankel looked puzzled. "You are bringing this to me, Sergeant? Officially?"

I don't see how a man can manage to look as embarrassed as Zim looked and still have no expression of any sort in his face or voice. "Sir. If the Captain pleases. The man refused administrative discipline. He insisted on seeing the Battalion Commander."

"I see. A bedroll lawyer. Well, I still don't understand it, Sergeant, but technically that's his privilege. What was the tactical command and doctrine?"

"A `freeze,' sir." I glanced at Hendrick, thinking: Oh, oh, he's going to catch it. In a "freeze" you hit dirt, taking any cover you can, fast, and then freeze don't move at all, not even twitch an eyebrow, until released. Or you can freeze when you're already in cover. They tell stories about men who had been hit while in freeze . . . and had died slowly but without ever making a sound or a move.

Frankel's brows shot up. "Second part?"

"Same thing, sir. After breaking freeze, failing to return to it on being so ordered."

Captain Frankel looked grim. "Name?"

Zim answered. "Hendrick, T. C., sir. Recruit Private R-P-seven-nine-six-oh-nine-two-four."

"Very well. Hendrick, you are deprived of all privileges for thirty days and restricted to your tent when not on duty or at meals, subject only to sanitary necessities. You will serve three hours extra duty each day under the Corporal of the Guard, one hour to be served just before taps, one hour just before reveille, one hour at the time of the noonday meal and in place of it. Your evening meal will be bread and water -- as much bread as you can eat. You will serve ten hours extra duty each Sunday, the time to be adjusted to permit you to attend divine services if you so elect."

(I thought: Oh my! He threw the book.)

Captain Frankel went on: "Hendrick, the only reason you are getting off so lightly is that I am not permitted to give you any more than that without convening a court-martial . . . and I don't want to spoil your company's record. Dismissed." He dropped his eyes back to the papers on his desk, the incident already forgotten --

-- and Hendrick yelled, "You didn't hear my side of it!"

The Captain looked up. "Oh. Sorry. You have a side?"

"You darn right I do! Sergeant Zim's got it in for me! He's been riding

me, riding me, riding me, all day long from the time I got here! He -- "

"That's his job," the Captain said coldly. "Do you deny the two charges against you?"

"No, but -- He didn't tell you I was lying on an anthill!"

Frankel looked disgusted. "Oh. So you would get yourself killed and perhaps your teammates as well because of a few little ants?"

"Not `just a few' -- there were hundreds of `em. Stingers."

"So? Young man, let me put you straight. Had it been a nest of rattlesnakes you would still have been expected -- and required -- to freeze." Frankel paused. "Have you anything at all to say in your own defense?"

Hendrick's mouth was open. "I certainly do! He hit me! He laid hands on me! The whole bunch of `em are always strutting around with those silly batons, whackin' you across the fanny, punchin' you between the shoulders and tellin' you to brace up and I put up with it. But he hit me with his hands -- he knocked me down to the ground and yelled, `Freeze! you stupid jackass!' How about that?"

Captain Frankel looked down at his hands, looked up again at Hendrick. "Young man, you are under a misapprehension very common among civilians. You think that your superior officers are not permitted to `lay hands on you,' as you put it. Under purely social conditions, that is true -- say if we happened to run across each other in a theater or a shop, I would have no more right, as long as you treated me with the respect due my rank, to slap your face than you have to slap mine. But in line of duty the rule is entirely different -- "

The Captain swung around in his chair and pointed at some loose-leaf books. "There are the laws under which you live. You can search every article in those books, every court-martial case which has arisen under them, and you will not find one word which says, or implies, that your superior officer may not `lay hands on you' or strike you in any other manner in line of duty. Hendrick, I could break your jaw . . . and I simply would be responsible to my own superior officers as to the appropriate necessity of the act. But I would not be responsible to you. I could do more than that. There are circumstances under which a superior officer, commissioned or not, is not only permitted but required to kill an officer or a man under him, without delay and perhaps without warning -- and, far from being punished, be commended. To put a stop to pusillanimous conduct in the face of the enemy, for example."

The Captain tapped on his desk. "Now about those batons -- They have two uses. First, they mark the men in authority. Second, we expect them to be used on you, to touch you up and keep you on the bounce. You can't possibly be hurt with one, not the way they are used; at most they sting a little. But they save thousands of words. Say you don't turn out on the bounce at reveille. No doubt the duty corporal could wheedle you, say `pretty please with sugar on it,' inquire if you'd like breakfast in bed this morning -- if we could spare one career corporal just to nursemaid you.

We can't, so he gives your bedroll a whack and trots on down the line, applying the spur where needed. Of course he could simply kick you, which would be just as legal and nearly as effective. But the general in charge of training and discipline thinks that it is more dignified, both for the duty corporal and for you, to snap a late sleeper out of his fog with the impersonal rod of authority. And so do I. Not that it matters what you or I think about it; this is the way we do it."

Captain Frankel sighed. "Hendrick, I have explained these matters to you because it is useless to punish a man unless he knows why he is being punished. You've been a bad boy -- I say `boy' because you quite evidently aren't a man yet, although we'll keep trying -- a surprisingly bad boy in view of the stage of your training. Nothing you have said is any defense, nor even any mitigation; you don't seem to know the score nor have any idea of your duty as a soldier. So tell me in your own words why you feel mistreated; I want to get you straightened out. There might even be something in your favor, though I confess that I cannot imagine what it could be."

I had sneaked a look or two at Hendrick's face while the Captain was chewing him out -- somehow his quiet, mild words were a worse chewing-out than any Zim had ever given us. Hendrick's expression had gone from indignation to blank astonishment to sullenness.

"Speak up!" Frankel added sharply.

"Uh . . . well, we were ordered to freeze and I hit the dirt and I found I was on this anthill. So I got to my knees, to move over a couple of feet, and I was hit from behind and knocked flat and he yelled at me -- and I bounced up and popped him one and he -- "

"STOP!" Captain Frankel was out of his chair and stand -- ten feet tall, though he's hardly taller than I am. He stared at Hendrick.

"You . . . struck . . . your . . . company commander?"

"Huh? I said so. But he hit me first. From behind, I didn't even see him. I don't take that off of anybody. I popped him and then he hit me again and then -- "

"Silence!"

Hendrick stopped. Then he added, "I just want out of this lousy outfit."

"I think we can accommodate you," Frankel said icily. "And quickly, too."

"Just gimme a piece of paper, I'm resigning."

"One moment. Sergeant Zim."

"Yes, sir." Zim hadn't said a word for a long time. He just stood, eyes front and rigid as a statue, nothing moving but his twitching jaw muscles. I looked at him now and saw that it certainly was a shiner -- a beaut. Hendrick must have caught him just right. But he hadn't said anything about it and Captain Frankel hadn't asked -- maybe he had just assumed Zim had run into a door and would explain it if he felt like it, later.

"Have the pertinent articles been published to your company, as

required?"

"Yes, sir. Published and logged, every Sunday morning"

"I know they have. I asked simply for the record."

Just before church call every Sunday they lined us up and read aloud the disciplinary articles out of the Laws and Regulations of the Military Forces. They were posted on the bulletin board, too, outside the orderly tent. Nobody paid them much mind -- it was just another drill; you could stand still and sleep through it. About the only thing we noticed, if we noticed anything, was what we called "the thirty-one ways to crash land." After all, the instructors see to it that you soak up all the regulations you need to know, through your skin. The "crash landings" were a worn-out joke, like "reveille oil" and "tent jacks" . . . they were the thirty-one capital offenses. Now and then somebody boasted, or accused somebody else, of having found a thirty-second way -- always something preposterous and usually obscene.

"Striking a Superior Officer -- !"

It suddenly wasn't amusing any longer. Popping Zim? Hang a man for that? Why, almost everybody in the company had taken a swing at Sergeant Zim and some of us had even landed . . . when he was instructing us in hand-to-hand combat. He would take us on after the other instructors had worked us over and we were beginning to feel cocky and pretty good at it -- then he would put the polish on. Why, shucks, I once saw Shujumi knock him unconscious. Bronski threw water on him and Zim got up and grinned and shook hands -- and threw Shujumi right over the horizon.

Captain Frankel looked around, motioned at me. "You. Flash regimental headquarters."

I did it, all thumbs, stepped back when an officer's face came on and let the Captain take the call. "Adjutant," the face said.

Frankel said crisply, "Second Battalion Commander's respects to the Regimental Commander. I request and require an officer to sit as a court."

The face said, "When do you need him, Ian?"

"As quickly as you can get him here."

"Right away. I'm pretty sure Jake is in his HQ. Article and name?"

Captain Frankel identified Hendrick and quoted an article number. The face in the screen whistled and looked grim. "On the bounce, Ian. If I can't get Jake, I'll be over myself -- just as soon as I tell the Old Man."

Captain Frankel turned to Zim. "This escort -- are they witnesses?"

"Yes, sir."

"Did his section leader see it?"

Zim barely hesitated. "I think so, sir."

"Get him. Anybody out that way in a powered suit?"

"Yes, sir."

Zim used the phone while Frankel said to Hendrick, "What witnesses do you wish to call in your defense?"

"Huh? I don't need any witnesses, he knows what he did! Just hand me a piece of paper -- I'm getting out of here."

"All in good time."

In very fast time, it seemed to me. Less than five minutes later Corporal Jones came bouncing up in a command suit, carrying Corporal Mahmud in his arms. He dropped Mahmud and bounced away just as Lieutenant Spieksma came in. He said, "Afternoon, Cap'n. Accused and witnesses here?"

"All set. Take it, Jake."

"Recorder on?"

"It is now."

"Very well. Hendrick, step forward." Hendrick did so, looking puzzled and as if his nerve was beginning to crack. Lieutenant Spieksma said briskly: "Field Court-Martial, convened by order of Major F. X. Malloy, commanding Third Training Regiment, Camp Arthur Currie, under General Order Number Four, issued by the Commanding General, Training and Discipline Command, pursuant to the Laws and Regulations of the Military Forces, Terran Federation. Remanding officer: Captain Ian Frankel, M. I., assigned to and commanding Second Battalion, Third Regiment. The Court: Lieutenant Jacques Spieksma, M. I., assigned to and commanding First Battalion, Third Regiment. Accused: Hendrick, Theodore C., Recruit Private RP7960924. Article 9080. Charge: Striking his superior officer, the Terran Federation then being in a state of emergency."

The thing that got me was how fast it went. I found myself suddenly appointed an "officer of the court" and directed to "remove" the witnesses and have them ready. I didn't know how I would "remove" Sergeant Zim if he didn't feel like it, but he gathered Mahmud and the two boots up by eye and they all went outside, out of earshot. Zim separated himself from the others and simply waited; Mahmud sat down on the ground and rolled a cigarette -- which he had to put out; he was the first one called. In less than twenty minutes all three of them had testified, all telling much the same story Hendrick had. Zim wasn't called at all.

Lieutenant Spieksma said to Hendrick, "Do you wish to cross-examine the witnesses? The Court will assist you, if you so wish."

"No."

"Stand at attention and say `sir' when you address the Court."

"No, sir." He added, "I want a lawyer."

"The Law does not permit counsel in field courts-martial. Do you wish to testify in your own defense? You are not required to do so and, in view of the evidence thus far, the Court will take no judicial notice if you choose not to do so. But you are warned that any testimony that you give may be used against you and that you will be subject to cross-examination."

Hendrick shrugged. "I haven't anything to say. What good would it do me?"

"The Court repeats: Will you testify in your own defense?"

"Uh, no, sir."

"The Court must demand of you one technical question. Was the article under which you are charged published to you before the time of the alleged offense of which you stand accused? You may answer yes, or no, or stand mute

-- but you are responsible for your answer under Article 9167 which relates to perjury."

The accused stood mute.

"Very well, the Court will reread the article of the charge aloud to you and again ask you that question. `Article 9080: Any person in the Military Forces who strikes or assaults, or attempts to strike or assault --
"

"Oh, I suppose they did. They read a lot of that stuff, every Sunday morning -- a whole long list of things you couldn't do."

"Was or was not that particular article read to you?"

"Uh . . . yes, sir. It was."

"Very well. Having declined to testify, do you have any statement to make in mitigation or extenuation?"

"Sir?"

"Do you want to tell the Court anything about it? Any circumstance which you think might possibly affect the evidence already given? Or anything which might lessen the alleged offense? Such things as being ill, or under drugs or medication. You are not under oath at this point; you may say anything at all which you think may help you. What the Court is trying to find out is this: Does anything about this matter strike you as being unfair? If so, why?"

"Huh? Of course it is! Everything about it is unfair! He hit me first! You heard `em! -- he hit me first!"

"Anything more?"

"Huh? No, sir. Isn't that enough?"

"The trial is completed. Recruit Private Theodore C. Hendrick, stand forth!" Lieutenant Spieksma had been standing at attention the whole time; now Captain Frankel stood up. The place suddenly felt chilly.

"Private Hendrick, you are found guilty as charged."

My stomach did a flip-flop. They were going to do it to him . . . they were going to do the "Danny Deever" to Ted Hendrick. And I had eaten breakfast beside him just this morning.

"The Court sentences you," he went on, while I felt sick, "to ten lashes and Bad Conduct Discharge."

Hendrick gulped. "I want to resign!"

"The Court will not permit you to resign. The Court wishes to add that your punishment is light simply because this Court possesses no jurisdiction to assign greater punishment. The authority which remanded you specified a field court-martial -- why it so chose, this Court will not speculate. But had you been remanded for general court-martial, it seems certain that the evidence before this Court would have caused a general court to sentence you to hang by the neck until dead. You are very lucky -- and the remanding authority has been most merciful." Lieutenant Spieksma paused, then went on, "The sentence will be carried out at the earliest hour after the convening authority has reviewed and approved the record, if it does so approve. Court is adjourned. Remove and confine him."

The last was addressed to me, but I didn't actually have to do anything about it, other than phone the guard tent and then get a receipt for him when they took him away.

At afternoon sick call Captain Frankel took me off orderly and sent me to see the doctor, who sent me back to duty. I got back to my company just in time to dress and fall in for parade -- and to get gigged by Zim for "spots on uniform." Well, he had a bigger spot over one eye but I didn't mention it.

Somebody had set up a big post in the parade ground just back of where the adjutant stood. When it came time to publish the orders, instead of "routine order of the day" or other trivia, they published Hendrick's court-martial.

Then they marched him out, between two armed guards, with his hands cuffed together in front of him.

I had never seen a flogging. Back home, while they do it in public of course, they do it back of the Federal Building -- and Father had given me strict orders to stay away from there. I tried disobeying him on it once. . . . but it was postponed and I never tried to see one again.

Once is too many.

The guards lifted his arms and hooked the manacles over a big hook high up on the post. Then they took his shirt off and it turned out that it was fixed so that it could come off and he didn't have an undershirt. The adjutant said crisply, "Carry out the sentence of the Court."

A corporal-instructor from some other battalion stepped forward with the whip. The Sergeant of the Guard made the count.

It's a slow count, five seconds between each one and it seems much longer. Ted didn't let out a peep until the third, then he sobbed.

The next thing I knew I was staring up at Corporal Bronski. He was slapping me and looking intently at me. He stopped and asked, "Okay now? All right, back in ranks. On the bounce; we're about to pass in review." We did so and marched back to our company areas. I didn't eat much dinner but neither did a lot of them.

Nobody said a word to me about fainting. I found out later that I wasn't the only one -- a couple of dozen of us had passed out.

CHAPTER 6

What we obtain too cheap, we
esteem too lightly . . . it would be
strange indeed if so celestial an
article as FREEDOM should not be
highly rated.
-- Thomas Paine

It was the night after Hendrick was kicked out that I reached my lowest slump at Camp Currie. I couldn't sleep -- and you have to have been through

boot camp to understand just how far down a recruit has to sink before that can happen. But I hadn't had any real exercise all day so I wasn't physically tired, and my shoulder still hurt even though I had been marked "duty," and I had that letter from my mother preying on my mind, and every time I closed my eyes I would hear that crack! and see Ted slump against the whipping post.

I wasn't fretted about losing my boot chevrons. That no longer mattered at all because I was ready to resign, determined to. If it hadn't been the middle of the night and no pen and paper handy, I would have done so right then.

Ted had made a bad mistake, one that lasted all of half a second. And it really had been just a mistake, too, because, while he hated the outfit (who liked it?), he had been trying to sweat it out and win his franchise; he meant to go into politics -- he talked a lot about how, when he got his citizenship, "There will be some changes made -- you wait and see."

Well, he would never be in public office now; he had taken his finger off his number for a single instant and he was through.

If it could happen to him, it could happen to me. Suppose I slipped? Next day or next week? Not even allowed to resign . . . but drummed out with my back striped.

Time to admit that I was wrong and Father was right, time to put in that little piece of paper and slink home and tell Father that I was ready to go to Harvard and then go to work in the business -- if he would still let me. Time to see Sergeant Zim, first thing in the morning, and tell him that I had had it. But not until morning, because you don't wake Sergeant Zim except for something you're certain that he will class as an emergency -- believe me, you don't! Not Sergeant Zim.

Sergeant Zim --

He worried me as much as Ted's case did. After the court-martial was over and Ted had been taken away, he stayed behind and said to Captain Frankel, "May I speak with the Battalion Commander, sir?"

"Certainly. I was intending to ask you to stay behind for a word. Sit down."

Zim flicked his eyes my way and the Captain looked at me and I didn't have to be told to get out; I faded. There was nobody in the outer office, just a couple of civilian clerks. I didn't dare go outside because the Captain might want me; I found a chair back of a row of files and sat down.

I could hear them talking, through the partition I had my head against. BHQ was a building rather than a tent, since it housed permanent communication and recording equipment, but it was a "minimum field building," a shack; the inner partitions weren't much. I doubt if the civilians could hear as they each were wearing transcriber phones and were bent over typers -- besides, they didn't matter. I didn't mean to eavesdrop. Uh, well, maybe I did.

Zim said: "Sir, I request transfer to a combat team."

Frankel answered: "I can't hear you, Charlie. My tin ear is bothering

me again."

Zim: "I'm quite serious, sir. This isn't my sort of duty."

Frankel said testily, "Quit bellyaching your troubles to me, Sergeant. At least wait until we've disposed of duty matters. What in the world happened?"

Zim said stiffly, "Captain, that boy doesn't rate ten lashes."

Frankel answered, "Of course he doesn't. You know who goofed -- and so do I."

"Yes, sir. I know."

"Well? You know even better than I do that these kids are wild animals at this stage. You know when it's safe to turn your back on them and when it isn't. You know the doctrine and the standing orders about article nine-oh-eight-oh -- you must never give them a chance to violate it. Of course some of them are going to try it -- if they weren't aggressive they wouldn't be material for the M. I. They're docile in ranks; it's safe enough to turn your back when they're eating, or sleeping, or sitting on their tails and being lectured. But get them out in the field in a combat exercise, or anything that gets them keyed up and full of adrenaline, and they're as explosive as a hatful of mercury fulminate. You know that, all you instructors know that; you're trained -- trained to watch for it, trained to snuff it out before it happens. Explain to me how it was possible for an untrained recruit to hang a mouse on your eye? He should never have laid a hand on you; you should have knocked him cold when you saw what he was up to. So why weren't you on the bounce? Are you slowing down?"

"I don't know," Zim answered slowly. "I guess I must be."

"Hmm! If true, a combat team is the last place for you. But it's not true. Or wasn't true the last time you and I worked out together, three days ago. So what slipped?"

Zim was slow in answering. "I think I had him tagged in my mind as one of the safe ones."

"There are no such."

"Yes, sir. But he was so earnest, so doggedly determined to sweat it out -- he didn't have any aptitude but he kept on trying -- that I must have done that, subconsciously." Zim was silent, then added, "I guess it was because I liked him."

Frankel snorted. "An instructor can't afford to like a man."

"I know it, sir. But I do. They're a nice bunch of kids. We've dumped all the real twerps by now -- Hendrick's only shortcoming, aside from being clumsy, was that he thought he knew all the answers. I didn't mind that; I knew it all at that age myself. The twerps have gone home and those that are left are eager, anxious to please, and on the bounce -- as cute as a litter of collie pups. A lot of them will make soldiers."

"So that was the soft spot. You liked him . . . so you failed to clip him in time. So he winds up with a court and the whip and a B. C. D. Sweet."

Zim said earnestly, "I wish to heaven there were some way for me to take that flogging myself, sir."

"You'd have to take your turn, I outrank you. What do you think I've been wishing the past hour? What do you think I was afraid of from the moment I saw you come in here sporting a shiner? I did my best to brush it off with administrative punishment and the young fool wouldn't let well enough alone. But I never thought he would be crazy enough to blurt out that he had hung one on you -- he's stupid; you should have eased him out of the outfit weeks ago . . . instead of nursing him along until he got into trouble. But blurt it out he did, to me, in front of witnesses, forcing me to take of official notice of it -- and that licked us. No way to get it off the record, no way to avoid a court . . . just go through the whole dreary mess and take our medicine, and wind up with one more civilian who'll be against us the rest of his days. Because he has to be flogged; neither you nor I can take it for him, even though the fault was ours. Because the regiment has to see what happens when nine-oh-eight-oh is violated. Our fault . . . but his lumps."

"My fault, Captain. That's why I want to be transferred. Uh, sir, I think it's best for the outfit."

"You do, eh? But I decide what's best for my battalion, not you, Sergeant. Charlie, who do you think pulled your name out of the hat? And why? Think back twelve years. You were a corporal, remember? Where were you?"

"Here, as you know quite well, Captain. Right here on this same godforsaken prairie -- and I wish I had never come back to it!"

"Don't we all. But it happens to be the most important and the most delicate work in the Army -- turning unspanked young cubs into soldiers. Who was the worst unspanked young cub in your section?"

"Mmm . . ." Zim answered slowly. "I wouldn't go so far as to say you were the worst, Captain."

"You wouldn't, eh? But you'd have to think hard to name another candidate. I hated your guts, `Corporal' Zim."

Zim sounded surprised, and a little hurt. "You did, Captain? I didn't hate you -- I rather liked you."

"So? Well, `hate' is the other luxury an instructor can never afford. We must not hate them, we must not like them; we must teach them. But if you liked me then -- mmm, it seemed to me that you had very strange ways of showing it. Do you still like me? Don't answer that; I don't care whether you do or not -- or, rather, I don't want to know, whichever it is. Never mind; I despised you then and I used to dream about ways to get you. But you were always on the bounce and never gave me a chance to buy a nine-oh-eight-oh court of my own. So here I am, thanks to you. Now to handle your request: You used to have one order that you gave to me over and over again when I was a boot. I got so that I loathed it almost more than anything else you did or said. Do you remember it? I do and now I'll give it back to you: `Soldier, shut up and soldier!' "

"Yes, sir."

"Don't go yet. This weary mess isn't all loss; any regiment of boots

needs a stern lesson in the meaning of nine-oh-eight-oh, as we both know. They haven't yet learned to think, they won't read, and they rarely listen -- but they can see . . . and young Hendrick's misfortune may save one of his mates, some day, from swinging by the neck until he's dead, dead, dead. But I'm sorry the object lesson had to come from my battalion and I certainly don't intend to let this battalion supply another one. You get your instructors together and warn them. For about twenty-four hours those kids will be in a state of shock. Then they'll turn sullen and the tension will build. Along about Thursday or Friday some boy who is about to flunk out anyhow will start thinking over the fact that Hendrick didn't get so very much, not even the number of lashes for drunken driving . . . and he's going to start brooding that it might be worth it, to take a swing at the instructor he hates worst. Sergeant -- that blow must never land! Understand me?"

"Yes, sir."

"I want them to be eight times as cautious as they have been. I want them to keep their distance, I want them to have eyes in the backs of their heads. I want them to be as alert as a mouse at a cat show. Bronski -- you have a special word with Bronski; he has a tendency to fraternize."

"I'll straighten Bronski out, sir."

"See that you do. Because when the next kid starts swinging, it's got to be stop-punched -- not muffed, like today. The boy has got to be knocked cold and the instructor must do so without ever being touched himself or I'll damned well break him for incompetence. Let them know that. They've got to teach those kids that it's not merely expensive but impossible to violate nine-oh-eight-oh . . . that even trying it wins a short nap, a bucket of water in the face, and a very sore jaw -- and nothing else."

"Yes, sir. It'll be done."

"It had better be done. I will not only break the instructor who slips, I will personally take him `way out on the prairie and give him lumps . . . because I will not have another one of my boys strung up to that whipping post through sloppiness on the part of his teachers. Dismissed."

"Yes, sir. Good afternoon, Captain."

"What's good about it? Charlie -- "

"Yes, sir?"

"If you're not too busy this evening, why don't you bring your soft shoes and your pads over to officers' row and we'll go waltzing Matilda? Say about eight o'clock."

"Yes, sir."

"That's not an order, that's an invitation. If you really are slowing down, maybe I'll be able to kick your shoulder blades off."

"Uh, would the Captain care to put a small bet on it?"

"Huh? With me sitting here at this desk getting swivel-chair spread? I will not! Not unless you agree to fight with one foot in a bucket of cement. Seriously, Charlie, we've had a miserable day and it's going to be worse before it gets better. If you and I work up a good sweat and swap a few

lumps, maybe we'll be able to sleep tonight despite all of mother's little darlings."

"I'll be there, Captain. Don't eat too much dinner -- I need to work off a couple of matters myself."

"I'm not going to dinner; I'm going to sit right here and sweat out this quarterly report . . . which the Regimental Commander is graciously pleased to see right after his dinner . . . and which somebody whose name I won't mention has put me two hours behind on. So I may be a few minutes late for our waltz. Go `way now, Charlie, and don't bother me. See you later."

Sergeant Zim left so abruptly that I barely had time to lean over and tie my shoe and thereby be out of sight behind the file cases as he passed through the outer office. Captain Frankel was already shouting, "Orderly! Orderly! ORDERLY! -- do I have to call you three times? What's your name? Put yourself down for an hour's extra duty, full kit. Find the company commanders of E, F, and G, my compliments and I'll be pleased to see them before parade. Then bounce over to my tent and fetch me a clean dress uniform, cap, side arms, shoes, ribbons -- no medals. Lay it out for me here. Then make afternoon sick call -- if you can scratch with that arm, as I've seen you doing, your shoulder can't be too sore. You've got thirteen minutes until sick call on the bounce, soldier!"

I made it . . . by catching two of them in the senior instructors -- showers (an orderly can go anywhere) and the third at his desk; the orders you get aren't impossible, they merely seem so because they nearly are. I was laying out Captain Frankel's uniform for parade as sick call sounded. Without looking up he growled, "Belay that extra duty. Dismissed." So I got home just in time to catch extra duty for "Uniform, Untidy in, Two Particulars" and see the sickening end of Ted Hendrick's time in the M. I.

So I had plenty to think about as I lay awake that night. I had known that Sergeant Zim worked hard, but it had never occurred to me that he could possibly be other than completely and smugly self-satisfied with what he did. He looked so smug, so self-assured, so at peace with the world and with himself.

The idea that this invincible robot could feel that he had failed, could feel so deeply and personally disgraced that he wanted to run away, hide his face among strangers, and offer the excuse that his leaving would be "best for the outfit," shook me up as much, and in a way even more, than seeing Ted flogged.

To have Captain Frankel agree with him -- as to the seriousness of the failure, I mean -- and then rub his nose in it, chew him out. Well! I mean really. Sergeants don't get chewed out; sergeants do the chewing. A law of nature.

But I had to admit that what Sergeant Zim had taken, and swallowed, was so completely humiliating and withering as to make the worst I had ever heard or overhead from a sergeant sound like a love song. And yet the Captain hadn't even raised his voice.

The whole incident was so preposterously unlikely that I was never even

tempted to mention it to anyone else.

And Captain Frankel himself -- Officers we didn't see very often. They showed up for evening parade, sauntering over at the last moment and doing nothing that would work up a sweat; they inspected once a week, making private comments to sergeants, comments that invariably meant grief for somebody else, not them; and they decided each week what company had won the honor of guarding the regimental colors. Aside from that, they popped up occasionally on surprise inspections, creased, immaculate, remote, and smelling faintly of cologne -- and went away again.

Oh, one or more of them did always accompany us on route marches and twice Captain Frankel had demonstrated his virtuosity at la savate. But officers didn't work, not real work, and they had no worries because sergeants were under them, not over them.

But it appeared that Captain Frankel worked so hard that he skipped meals, was kept so busy with something or other that he complained of lack of exercise and would waste his own free time just to work up a sweat.

As for worries, he had honestly seemed to be even more upset at what had happened to Hendrick than Zim had been. And yet he hadn't even known Hendrick by sight; he had been forced to ask his name.

I had an unsettling feeling that I had been completely mistaken as to the very nature of the world I was in, as if every part of it was something wildly different from what it appeared to be -- like discovering that your own mother isn't anyone you've ever seen before, but a stranger in a rubber mask.

But I was sure of one thing: I didn't even want to find out what the M. I. really was. If it was so tough that even the gods-that-be -- sergeants and officers -- were made unhappy by it, it was certainly too tough for Johnnie! How could you keep from making mistakes in an outfit you didn't understand? I didn't want to swing by my neck till I was dead, dead, dead! I didn't even want to risk being flogged . . . even though the doctor stands by to make certain that it doesn't do you any permanent injury. Nobody in our family had ever been flogged (except paddlings in school, of course, which isn't at all the same thing). There were no criminals in our family on either side, none who had even been accused of crime. We were a proud family; the only thing we lacked was citizenship and Father regarded that as no real honor, a vain and useless thing. But if I were flogged -- Well, he'd probably have a stroke.

And yet Hendrick hadn't done anything that I hadn't thought about doing a thousand times. Why hadn't I? Timid, I guess. I knew that those instructors, any one of them, could beat the tar out of me, so I had buttoned my lip and hadn't tried it. No guts, Johnnie. At least Ted Hendrick had had guts. I didn't have . . . and a man with no guts has no business in the Army in the first place.

Besides that, Captain Frankel hadn't even considered it to be Ted's fault. Even if I didn't buy a 9080, through lack of guts, what day would I do something other than a 9080 something not my fault -- and wind up slumped

against the whipping post anyhow? Time to get out, Johnnie, while you're still ahead.

My mother's letter simply confirmed my decision. I had been able to harden my heart to my parents as long as they were refusing me -- but when they softened, I couldn't stand it. Or when Mother softened, at least. She had written:

> -- but I am afraid I must tell you that your father will still not permit your name to be mentioned. But, dearest, that is his way of grieving, since he cannot cry. You must understand, my darling baby, that he loves you more than life itself -- more than he does me -- and that you have hurt him very deeply. He tells the world that you are a grown man, capable of making your own decisions, and that he is proud of you. But that is his own pride speaking, the bitter hurt of a proud man who has been wounded deep in his heart by the one he loves best. You must understand, Juanito, that he does not speak of you and has not written to you because he cannot -- not yet, not till his grief becomes bearable. When it has, I will know it, and then I will intercede for you -- and we will all be together again.
>
> Myself? How could anything her baby boy does anger his mother? You can hurt me, but you cannot make me love you the less. Wherever you are, whatever you choose to do, you are always my little boy who bangs his knee and comes running to my lap for comfort. My lap has shrunk, or perhaps you have grown (though I have never believed it), but nonetheless it will always be waiting, when you need it. Little boys never get over needing their mother's laps -- do they, darling? I hope not. I hope that you will write and tell me so.
>
> But I must add that, in view of the terribly long time that you have not written, it is probably best (until I let you know otherwise) for you to write to me care of your Aunt Eleanora. She will pass it on to me at once -- and without causing any more upset. You understand?
>
> A thousand kisses to my baby,
>
> YOUR MOTHER

I understood, all right -- and if Father could not cry, I could. I did.

And at last I got to sleep . . . and was awakened at once by an alert. We bounced out to the bombing range, the whole regiment, and ran through a simulated exercise, without ammo. We were wearing full unarmored kit otherwise, including ear-plug receivers, and we had no more than extended when the word came to freeze.

We held that freeze for at least an hour -- and I mean we held it, barely breathing. A mouse tiptoeing past would have sounded noisy. Something did go past and ran right over me, a coyote I think. I never twitched. We got awfully cold holding that freeze, but I didn't care; I knew it was my last.

I didn't even hear reveille the next morning; for the first time in weeks I had to be whacked out of my sack and barely made formation for morning jerks. There was no point in trying to resign before breakfast anyhow, since I had to see Zim as the first step. But he wasn't at breakfast. I did ask Bronski's permission to see the C. C. and he said, "Sure. Help yourself," and didn't ask me why.

But you can't see a man who isn't there. We started a route march after breakfast and I still hadn't laid eyes on him. It was an out-and-back, with lunch fetched out to us by copter -- an unexpected luxury, since failure to issue field rations before marching usually meant practice starvation except for whatever you had cached . . . and I hadn't; too much on my mind.

Sergeant Zim came out with the rations and he held mail call in the field -- which was not an unexpected luxury. I'll say this for the M. I.; they might chop off your food, water, sleep, or anything else, without warning, but they never held up a person's mail a minute longer than circumstances required. That was yours, and they got it to you by the first transportation available and you could read it at your earliest break, even on maneuvers. This hadn't been too important for me, as (aside from a couple of letters from Carl) I hadn't had anything but junk mail until Mother wrote to me.

I didn't even gather around when Zim handed it out; I figured now on not speaking to him until we got in -- no point in giving him reason to notice me until we were actually in reach of headquarters. So I was surprised when he called my name and held up a letter. I bounced over and took it.

And was surprised again -- it was from Mr. Dubois, my high school instructor in History and Moral Philosophy. I would sooner have expected a letter from Santa Claus

Then, when I read it, it still seemed like a mistake. I had to check the address and the return address to convince myself that he had written it and had meant it for me.

MY DEAR BOY,

I would have written to you much sooner to express my delight and my pride in learning that you had not only volunteered to serve but also had chosen my own service. But not to express surprise it is what I expected of you except, possibly, the additional and very personal bonus that you chose the M. I. This is the sort of consummation, which does not happen too often, that nevertheless makes all of a teacher's efforts worth while. We necessarily sift a great many pebbles, much sand, for each nugget -- but the nuggets are the reward.

By now the reason I did not write at once is obvious to you. Many young men, not necessarily through any reprehensible fault, are dropped during recruit training. I have waited (I have kept in touch through my own connections) until you had `sweated it out' past the hump (how well we all know that hump!) and were certain,

barring accidents or illness, of completing your training and your term.

You are now going through the hardest part of your service -- not the hardest physically (though physical hardship will never trouble you again; you now have its measure), but the hardest spiritually . . . the deep, soul-turning readjustments and re-evaluations necessary to metamorphize a potential citizen into one in being.

Or, rather I should say: you have already gone through the hardest part, despite all the tribulations you still have ahead of you and all the hurdles, each higher than the last, which you still must clear. But it is that "hump" that counts -- and, knowing you, lad, I know that I have waited long enough to be sure that you are past your "hump" or you would be home now.

When you reached that spiritual mountaintop you felt something, a new something. Perhaps you haven't words for it (I know I didn't, when I was a boot). So perhaps you will permit an older comrade to lend you the words, since it often helps to have discrete words.

Simply this: The noblest fate that a man can endure is to place his own mortal body between his loved home and the war's desolation.

The words are not mine, of course, as you will recognize. Basic truths cannot change and once a man of insight expresses one of them it is never necessary, no matter how much the world changes, to reformulate them. This is an immutable, true everywhere, throughout all time, for all men and all nations.

Let me hear from you, please, if you can spare an old man some of your precious sack time to write an occasional letter. And if you should happen to run across any of my former mates, give them my warmest greetings.

Good luck, trooper! You've made me proud.

JEAN V. DUBOIS

Lt.-Col., M. I., rtd.

The signature was as amazing as the letter itself. Old Sour Mouth a short colonel? Why, our regimental commander was only a major. Mr. Dubois had never used any sort of rank around school. We had supposed (if we thought about it at all) that he must have been a corporal or some such who had been let out when he lost his hand and had been fixed up with a soft job teaching a course that didn't have to be passed, or even taught -- just audited. Of course we had known that he was a veteran since History and Moral Philosophy must be taught by a citizen. But an M. I.? He didn't look it. Prissy, faintly scornful, a dancing-master type -- not one of us apes.

But that was the way he had signed himself.

I spent the whole long hike back to camp thinking about that amazing letter. It didn't sound in the least like anything he had ever said in class. Oh, I don't mean it contradicted anything he had told us in class; it was just entirely different in tone. Since when does a short colonel call a recruit private "comrade"?

When he was plain "Mr. Dubois" and I was one of the kids who had to take his course he hardly seemed to see me -- except once when he got me sore by implying that I had too much money and not enough sense. (So my old man could have bought the school and given it to me for Christmas -- is that a crime? It was none of his business.)

He had been droning along about "value," comparing the Marxist theory with the orthodox "use" theory. Mr. Dubois had said, "Of course, the Marxian definition of value is ridiculous. All the work one cares to add will not turn a mud pie into an apple tart; it remains a mud pie, value zero. By corollary, unskillful work can easily subtract value; an untalented cook can turn wholesome dough and fresh green apples, valuable already, into an inedible mess, value zero. Conversely, a great chef can fashion of those same materials a confection of greater value than a commonplace apple tart, with no more effort than an ordinary cook uses to prepare an ordinary sweet.

"These kitchen illustrations demolish the Marxian theory of value -- the fallacy from which the entire magnificent fraud of communism derives -- and to illustrate the truth of the common-sense definition as measured in terms of use."

Dubois had waved his stump at us. "Nevertheless -- wake up, back there! -- nevertheless the disheveled old mystic of Das Kapital, turgid, tortured, confused, and neurotic, unscientific, illogical, this pompous fraud Karl Marx, nevertheless had a glimmering of a very important truth. If he had possessed an analytical mind, he might have formulated the first adequate definition of value . . . and this planet might have been saved endless grief.

"Or might not," he added. "You!"

I had sat up with a jerk.

"If you can't listen, perhaps you can tell the class whether `value' is a relative, or an absolute?"

I had been listening; I just didn't see any reason not to listen with eyes closed and spine relaxed. But his question caught me out; I hadn't read that day's assignment. "An absolute," I answered, guessing.

"Wrong," he said coldly. " `Value' has no meaning other than in relation to living beings. The value of a thing is always relative to a particular person, is completely personal and different in quantity for each living human -- `market value' is a fiction, merely a rough guess at the average of personal values, all of which must be quantitatively different or trade would be impossible." (I had wondered what Father would have said if he had heard "market value" called a "fiction" -- snort in disgust, probably.)

"This very personal relationship, `value,' has two factors for a human being: first, what he can do with a thing, its use to him . . . and second, what he must do to get it, its cost to him. There is an old song which asserts that `the best things in life are free.' Not true! Utterly false! This was the tragic fallacy which brought on the decadence and collapse of the democracies of the twentieth century; those noble experiments failed

because the people had been led to believe that they could simply vote for whatever they wanted . . . and get it, without toil, without sweat, without tears.

"Nothing of value is free. Even the breath of life is purchased at birth only through gasping effort and pain." He had been still looking at me and added, "If you boys and girls had to sweat for your toys the way a newly born baby has to struggle to live you would be happier . . . and much richer. As it is, with some of you, I pity the poverty of your wealth. You! I've just awarded you the prize for the hundred-meter dash. Does it make you happy?"

"Uh, I suppose it would."

"No dodging, please. You have the prize -- here, I'll write it out: `Grand prize for the championship, one hundred-meter sprint.' " He had actually come back to my seat and pinned it on my chest. "There! Are you happy? You value it -- or don't you?"

I was sore. First that dirty crack about rich kids -- a typical sneer of those who haven't got it -- and now this farce. I ripped it off and chucked it at him.

Mr. Dubois had looked surprised. "It doesn't make you happy?"

"You know darn well I placed fourth!"

"Exactly! The prize for first place is worthless to you . . . because you haven't earned it. But you enjoy a modest satisfaction in placing fourth; you earned it. I trust that some of the somnambulists here understood this little morality play. I fancy that the poet who wrote that song meant to imply that the best things in life must be purchased other than with money -- which is true -- just as the literal meaning of his words is false. The best things in life are beyond money; their price is agony and sweat and devotion . . . and the price demanded for the most precious of all things in life is life itself -- ultimate cost for perfect value."

I mulled over things I had heard Mr. Dubois -- Colonel Dubois -- say, as well as his extraordinary letter, while we went swinging back toward camp. Then I stopped thinking because the band dropped back near our position in column and we sang for a while, a French group -- "Marseillaise," of course, and "Madelon" and "Sons of Toil and Danger," and then "Legion Etrangere" and "Mademoiselle from Armentieres."

It's nice to have the band play; it picks you right up when your tail is dragging the prairie. We hadn't had anything but canned music at first and that only for parade and calls. But the powers-that-be had found out early who could play and who couldn't; instruments were provided and a regimental band was organized, all our own -- even the director and the drum major were boots.

It didn't mean they got out of anything. Oh no! It just meant they were allowed and encouraged to do it on their own time, practicing evenings and Sundays and such -- and that they got to strut and countermarch and show off at parade instead of being in ranks with their platoons. A lot of things that we did were run that way. Our chaplain, for example, was a boot. He was

older than most of us and had been ordained in some obscure little sect I had never heard of. But he put a lot of passion into his preaching whether his theology was orthodox or not (don't ask me) and he was certainly in a position to understand the problems of a recruit. And the singing was fun. Besides, there was nowhere else to go on Sunday morning between morning police and lunch.

The band suffered a lot of attrition but somehow they always kept it going. The camp owned four sets of pipes and some Scottish uniforms, donated by Lochiel of Cameron whose son had been killed there in training -- and one of us boots turned out to be a piper; he had learned it in the Scottish Boy Scouts. Pretty soon we had four pipers, maybe not good but loud. Pipes seem very odd when you first hear them, and a tyro practicing can set your teeth on edge -- it sounds and looks as if he had a cat under his arm, its tail in his mouth, and biting it.

But they grow on you. The first time our pipers kicked their heels out in front of the band, skirling away at "Alamein Dead," my hair stood up so straight it lifted my cap. It gets you -- makes tears.

We couldn't take a parade band out on route march, of course, because no special allowances were made for the band. Tubas and bass drums had to stay behind because a boy in the band had to carry full kit, same as everybody, and could only manage an instrument small enough to add to his load. But the M. I. has band instruments which I don't believe anybody else has, such as a little box hardly bigger than a harmonica, an electronic gadget which does an amazing job of faking a big horn and is played the same way. Comes band call when you are headed for the horizon, each bandsman sheds his kit without stopping, his squadmates split it up, and he trots to the column position of the color company and starts blasting.

It helps.

The band drifted aft, almost out of earshot, and we stopped singing because your own singing drowns out the beat when it's too far away.

I suddenly realized I felt good.

I tried to think why I did. Because we would be in after a couple of hours and I could resign?

No. When I had decided to resign, it had indeed given me a measure of peace, quieted down my awful jitters and let me go to sleep. But this was something else -- and no reason for it, that I could see.

Then I knew. I had passed my hump!

I was over the "hump" that Colonel Dubois had written about. I actually walked over it and started down, swinging easily. The prairie through there was flat as a griddle cake, but just the same I had been plodding wearily uphill all the way out and about halfway back. Then, at some point -- I think it was while we were singing -- I had passed the hump and it was all downhill. My kit felt lighter and I was no longer worried.

When we got in, I didn't speak to Sergeant Zim; I no longer needed to. Instead he spoke to me, motioned me to him as we fell out.

"Yes, sir?"

"This is a personal question . . . so don't answer it unless you feel like it!" He stopped, and I wondered if he suspected that I had overheard his chewing-out, and shivered.

"At mail call today," he said, "you got a letter. I noticed -- purely by accident, none of my business -- the name on the return address. It's a fairly common name, some places, but -- this is the personal question you need not answer -- by any chance does the person who wrote that letter have his left hand off at the wrist?"

I guess my chin dropped. "How did you know? Sir?"

"I was nearby when it happened. It is Colonel Dubois? Right?"

"Yes, sir." I added, "He was my high school instructor in History and Moral Philosophy."

I think that was the only time I ever impressed Sergeant Zim, even faintly. His eyebrows went up an eighth of an inch and his eyes widened slightly. "So? You were extraordinarily fortunate." He added, "When you answer his letter -- if you don't mind -- you might say that Ship's Sergeant Zim sends his respects."

"Yes, sir. Oh . . . I think maybe he sent you a message, sir."

"What?"

"Uh, I'm not certain." I took out the letter, read just: " ` -- if you should happen to run across any of my former mates, give them my warmest greetings.' Is that for you, sir?"

Zim pondered it, his eyes looking through me, somewhere else. "Eh? Yes, it is. For me among others. Thanks very much." Then suddenly it was over and he said briskly, "Nine minutes to parade. And you still have to shower and change. On the bounce, soldier."

CHAPTER 7

The young recruit is silly -- `e
thinks o' suicide.
`E's lost `is gutter-devil; `e `asin't
got `is pride;
But day by day they kicks `im,
which `elps `im on a bit,
Till `e finds `isself one mornin'
with a full an' proper kit.
Gettin' clear o' dirtiness, gettin'
done with mess,
Gettin' shut o' doin' things
rather-more-or-less.
-- Rudyard Kipling

I'm not going to talk much more about my boot training. Mostly it was simply work, but I was squared away -- enough said.

But I do want to mention a little about powered suits, partly because I was fascinated by them and also because that was what led me into trouble.

No complaints -- I rated what I got.

An M. I. lives by his suit the way a K-9 man lives by and with and on his doggie partner. Powered armor is one-half the reason we call ourselves "mobile infantry" instead of just "infantry." (The other half are the spaceships that drop us and the capsules we drop in.) Our suits give us better eyes, better ears, stronger backs (to carry heavier weapons and more ammo), better legs, more intelligence ("intelligence" in the military meaning; a man in a suit can be just as stupid as anybody else only he had better not be), more firepower, greater endurance, less vulnerability.

A suit isn't a space suit -- although it can serve as one. It is not primarily armor -- although the Knights of the Round Table were not armored as well as we are. It isn't a tank -- but a single M. I. private could take on a squadron of those things and knock them off unassisted if anybody was silly enough to put tanks against M. I. A suit is not a ship but it can fly, a little on the other hand neither spaceships nor atmosphere craft can fight against a man in a suit except by saturation bombing of the area he is in (like burning down a house to get one flea!). Contrariwise we can do many things that no ship -- air, submersible, or space -- can do.

"There are a dozen different ways of delivering destruction in impersonal wholesale, via ships and missiles of one sort or another, catastrophes so widespread, so unselective, that the war is over because that nation or planet has ceased to exist. What we do is entirely different. We make war as personal as a punch in the nose. We can be selective, applying precisely the required amount of pressure at the specified point at a designated time -- we've never been told to go down and kill or capture all left-handed redheads in a particular area, but if they tell us to, we can. We will.

We are the boys who go to a particular place, at H-hour, occupy a designated terrain, stand on it, dig the enemy out of their holes, force them then and there to surrender or die. We're the bloody infantry, the doughboy, the duckfoot, the foot soldier who goes where the enemy is and takes him on in person. We've been doing it, with changes in weapons but very little change in our trade, at least since the time five thousand years ago when the foot sloggers of Sargon the Great forced the Sumerians to cry "Uncle!"

Maybe they'll be able to do without us someday. Maybe some mad genius with myopia, a bulging forehead, and a cybernetic mind will devise a weapon that can go down a hole, pick out the opposition, and force it to surrender or die -- without killing that gang of your own people they've got imprisoned down there. I wouldn't know; I'm not a genius, I'm an M. I. In the meantime, until they build a machine to replace us, my mates can handle that job and I might be some help on it, too.

Maybe someday they'll get everything nice and tidy and we'll have that thing we sing about, when "we ain't a-gonna study war no more." Maybe. Maybe the same day the leopard will take off his spots and get a job as a Jersey cow, too. But again, I wouldn't know; I am not a professor of

cosmo-politics; I'm an M. I. When the government sends me, I go. In between, I catch a lot of sack time.

But, while they have not yet built a machine to replace us, they've surely thought up some honeys to help us. The suit, in particular.

No need to describe what it looks like, since it has been pictured so often. Suited up, you look like a big steel gorilla, armed with gorilla-sized weapons. (This may be why a sergeant generally opens his remarks with "You apes -- " However, it seems more likely that Caesar's sergeants used the same honorific.)

But the suits are considerably stronger than a gorilla. If an M. I. in a suit swapped hugs with a gorilla, the gorilla would be dead, crushed; the M. I. and the suit wouldn't be mussed.

The "muscles," the pseudo-musculature, get all the publicity but it's the control of all that power which merits it. The real genius in the design is that you don't have to control the suit; you just wear it, like your clothes, like skin. Any sort of ship you have to learn to pilot; it takes a long time, a new full set of reflexes, a different and artificial way of thinking. Even riding a bicycle demands an acquired skill, very different from walking, whereas a spaceship oh, brother! I won't live that long. Spaceships are for acrobats who are also mathematicians.

But a suit you just wear.

Two thousand pounds of it, maybe, in full kit -- yet the very first time you are fitted into one you can immediately walk, run, jump, lie down, pick up an egg without breaking it (that takes a trifle of practice, but anything improves with practice), dance a jig (if you can dance a jig, that is, without a suit) -- and jump right over the house next door and come down to a feather landing.

The secret lies in negative feedback and amplification.

Don't ask me to sketch the circuitry of a suit; I can't. But I understand that some very good concert violinists can't build a violin, either. I can do field maintenance and field repairs and check off the three hundred and forty-seven items from "cold" to ready to wear, and that's all a dumb M. I. is expected to do. But if my suit gets really sick, I call the doctor -- a doctor of science (electromechanical engineering) who is a staff Naval officer, usually a lieutenant (read "captain" for our ranks), and is part of the ship's company of the troop transport -- or who is reluctantly assigned to a regimental headquarters at Camp Currie, a fate-worse-than-death to a Navy man.

But if you really are interested in the prints and stereos and schematics of a suit's physiology, you can find most of it, the unclassified part, in any fairly large public library. For the small amount that is classified you must look up a reliable enemy agent -- "reliable" I say, because spies are a tricky lot; he's likely to sell you the parts you could get free from the public library.

But here is how it works, minus the diagrams. The inside of the suit is a mass of pressure receptors, hundreds of them. You push with the heel of

your hand; the suit feels it, amplifies it, pushes with you to take the pressure off the receptors that gave the order to push. That's confusing, but negative feedback is always a confusing idea the first time, even though your body has been doing it ever since you quit kicking helplessly as a baby. Young children are still learning it; that's why they are clumsy. Adolescents and adults do it without knowing they ever learned it -- and a man with Parkinson's disease has damaged his circuits for it.

The suit has feedback which causes it to match any motion you make, exactly -- but with great force.

Controlled force . . . force controlled without your having to think about it. You jump, that heavy suit jumps, but higher than you can jump in your skin. Jump really hard and the suit's jets cut in, amplifying what the suit's leg "muscles" did, giving you a three-jet shove, the axis of pressure of which passes through your center of mass. So you jump over that house next door. Which makes you come down as fast as you went up . . . which the suit notes through your proximity & closing gear (a sort of simple-minded radar resembling a proximity fuse) and therefore cuts in the jets again just the right amount to cushion your landing without your having to think about it.

And that is the beauty of a powered suit: you don't have to think about it. You don't have to drive it, fly it, conn it, operate it; you just wear it and it takes its orders directly from your muscles and does for you what your muscles are trying to do. This leaves you with your whole mind free to handle your weapons and notice what is going on around you . . . which is supremely important to an infantryman who wants to die in bed. If you load a mud foot down with a lot of gadgets that he has to watch, somebody a lot more simply equipped -- say with a stone ax -- will sneak up and bash his head in while he is trying to read a vernier.

Your "eyes" and your "ears" are rigged to help you without cluttering up your attention, too. Say you have three audio circuits, common in a marauder suit. The frequency control to maintain tactical security is very complex, at least two frequencies for each circuit both of which are necessary for any signal at all and each of which wobbles under the control of a cesium clock timed to a micromicrosecond with the other end -- but all this is no problem of yours. You want circuit A to your squad leader, you bite down once -- for circuit B, bite down twice -- and so on. The mike is taped to your throat, the plugs are in your ears and can't be jarred out; just talk. Besides that, outside mikes on each side of your helmet give you binaural hearing for your immediate surroundings just as if your head were bare -- or you can suppress any noisy neighbors and not miss what your platoon leader is saying simply by turning your head.

Since your head is the one part of your body not involved in the pressure receptors controlling the suit's muscles, you use your head -- your jaw muscles, your chin, your neck -- to switch things for you and thereby leave your hands free to fight. A chin plate handles all visual displays the way the jaw switch handles the audios. All displays are thrown on a mirror

in front of your forehead from where the work is actually going on above and back of your head. All this helmet gear makes you look like a hydrocephalic gorilla but, with luck, the enemy won't live long enough to be offended by your appearance, and it is a very convenient arrangement; you can flip through your several types of radar displays quicker than you can change channels to avoid a commercial -- catch a range & bearing, locate your boss, check your flank men, whatever.

If you toss your head like a horse bothered by a fly, your infrared snoopers go up on your forehead -- toss it again, they come down. If you let go of your rocket launcher, the suit snaps it back until you need it again. No point in discussing water nipples, air supply, gyros, etc. -- the point to all the arrangements is the same: to leave you free to follow your trade, slaughter.

Of course these things do require practice and you do practice until picking the right circuit is as automatic as brushing your teeth, and so on. But simply wearing the suit, moving in it, requires almost no practice. You practice jumping because, while you do it with a completely natural motion, you jump higher, faster, farther, and stay up longer. The last alone calls for a new orientation; those seconds in the air can be used -- seconds are jewels beyond price in combat. While off the ground in a jump, you can get a range & bearing, pick a target, talk & receive, fire a weapon, reload, decide to jump again without landing and override your automatics to cut in the jets again. You can do all of these things in one bounce, with practice.

But, in general, powered armor doesn't require practice; it simply does it for you, just the way you were doing it, only better. All but one thing -- you can't scratch where it itches. If I ever find a suit that will let me scratch between my shoulder blades, I'll marry it.

There are three main types of M. I. armor: marauder, command, and scout. Scout suits are very fast and very long-range, but lightly armed. Command suits are heavy on go juice and jump juice, are fast and can jump high; they have three times as much comm & radar gear as other suits, and a dead-reckoning tracker, inertial. Marauders are for those guys in ranks with the sleepy look -- the executioners.

As I may have said, I fell in love with powered armor, even though my first crack at it gave me a strained shoulder. Any day thereafter that my section was allowed to practice in suits was a big day for me. The day I goofed I had simulated sergeant's chevrons as a simulated section leader and was armed with simulated A-bomb rockets to use in simulated darkness against a simulated enemy. That was the trouble everything was simulated -- but you are required to behave as if it is all real.

We were retreating -- "advancing toward the rear," I mean -- and one of the instructors cut the power on one of my men by radio control, making him a helpless casualty. Per M. I. doctrine, I ordered the pickup, felt rather cocky that I had managed to get the order out before my number two cut out to do it anyhow, turned to do the next thing I had to do, which was to lay down a simulated atomic ruckus to discourage the simulated enemy overtaking

us.

Our flank was swinging; I was supposed to fire it sort of diagonally but with the required spacing to protect my own men from blast while still putting it in close enough to trouble the bandits. On the bounce, of course. The movement over the terrain and the problem itself had been discussed ahead of time; we were still green -- the only variations supposed to be left in were casualties.

Doctrine required me to locate exactly, by radar beacon, my own men who could be affected by the blast. But this all had to be done fast and I wasn't too sharp at reading those little radar displays anyhow. I cheated just a touch -- flipped my snoopers up and looked, bare eyes in broad daylight. I left plenty of room. Shucks, I could see the only man affected, half a mile away, and all I had was just a little bitty H. E. rocket, intended to make a lot of smoke and not much else. So I picked a spot by eye, took the rocket launcher and let fly.

Then I bounced away, feeling smug -- no seconds lost.

And had my power cut in the air. This doesn't hurt you; it's a delayed action, executed by your landing. I grounded and there I stuck, squatting, held upright by gyros but unable to move. You do not repeat not move when surrounded by a ton of metal with your power dead.

Instead I cussed to myself -- I hadn't thought that they would make me a casualty when I was supposed to be leading the problem. Shucks and other comments.

I should have known that Sergeant Zim would be monitoring the section leader.

He bounced over to me, spoke to me privately on the face to face. He suggested that I might be able to get a job sweeping floors since I was too stupid, clumsy, and careless to handle dirty dishes. He discussed my past and probable future and several other things that I did not want to hear about. He ended by saying tonelessly, "How would you like to have Colonel Dubois see what you've done?"

Then he left me. I waited there, crouched over, for two hours until the drill was over. The suit, which had been feather-light, real seven-league boots, felt like an Iron Maiden. At last he returned for me, restored power, and we bounced together at top speed to BHQ.

Captain Frankel said less but it cut more.

Then he paused and added in that flat voice officers use when quoting regulations: "You may demand trial by court-martial if such be your choice. How say you?"

I gulped and said, "No, sir!" Until that moment I hadn't fully realized just how much trouble I was in.

Captain Frankel seemed to relax slightly. "Then we'll see what the Regimental Commander has to say. Sergeant, escort the prisoner." We walked rapidly over to RHQ and for the first time I met the Regimental Commander face to face -- and by then I was sure that I was going to catch a court no matter what. But I remembered sharply how Ted Hendrick had talked himself

into one; I said nothing.

Major Malloy said a total of five words to me. After hearing Sergeant Zim, he said three of them: "Is that correct?"

I said, "Yes, sir," which ended my part of it.

Major Malloy said, to Captain Frankel: "Is there any possibility of salvaging this man?"

Captain Frankel answered, "I believe so, sir."

Major Malloy said, "Then we'll try administrative punishment," turned to me and said:

"Five lashes."

Well, they certainly didn't keep me dangling. Fifteen minutes later the doctor had completed checking my heart and the Sergeant of the Guard was outfitting me with that special shirt which comes off without having to be pulled over the hands -- zippered from the neck down the arms. Assembly for parade had just sounded. I was feeling detached, unreal . . . which I have learned is one way of being scared right out of your senses. The nightmare hallucination --

Zim came into the guard tent just as the call ended. He glanced at the Sergeant of the Guard -- Corporal Jones -- and Jones went out. Zim stepped up to me, slipped something into my hand. "Bite on that," he said quietly. "It helps. I know."

It was a rubber mouthpiece such as we used to avoid broken teeth in hand-to-hand combat drill. Zim left. I put it in my mouth. Then they handcuffed me and marched me out.

The order read: " -- in simulated combat, gross negligence which would in action have caused the death of a teammate." Then they peeled off my shirt and strung me up.

Now here is a very odd thing: A flogging isn't as hard to take as it is to watch. I don't mean it's a picnic. It hurts worse than anything else I've ever had happen to me, and the waits between strokes are worse than the strokes themselves. But the mouthpiece did help and the only yelp I let out never got past it.

Here's the second odd thing: Nobody ever mentioned it to me, not even other boots. So far as I could see, Zim and the instructors treated me exactly the same afterwards as they had before. From the instant the doctor painted the marks and told me to go back to duty it was all done with, completely. I even managed to eat a little at dinner that night and pretend to take part in the jawing at the table.

Another thing about administrative punishment: There is no permanent black mark. Those records are destroyed at the end of boot training and you start clean. The only record is one where it counts most.

You don't forget it.

CHAPTER 8

Train up a child in the way he

should go; and when he is old he
will not depart from it.
-- Proverbs XXII:6

There were other floggings but darn few. Hendrick was the only man in our regiment to be flogged by sentence of court-martial; the others were administrative punishment, like mine, and for lashes it was necessary to go all the way up to the Regimental Commander -- which a subordinate commander finds distasteful, to put it faintly. Even then, Major Malloy was much more likely to kick the man out, "Undesirable Discharge," than to have the whipping post erected. In a way, an administrative flogging is the mildest sort of a compliment; it means that your superiors think that there is a faint possibility that you just might have the character eventually to make a soldier and a citizen, unlikely as it seems at the moment.

I was the only one to get the maximum administrative punishment; none of the others got more than three lashes. Nobody else came as close as I did to putting on civilian clothes but still squeaked by. This is a social distinction of sorts. I don't recommend it.

But we had another case, much worse than mine or Ted Hendrick's -- a really sick-making one. Once they erected gallows.

Now, look, get this straight. This case didn't really have anything to do with the Army. The crime didn't take place at Camp Currie and the placement officer who accepted this boy for M. I. should turn in his suit.

He deserted, only two days after we arrived at Currie. Ridiculous, of course, but nothing about the case made sense -- why didn't he resign? Desertion, naturally, is one of the "thirty-one crash landings" but the Army doesn't invoke the death penalty for it unless there are special circumstances, such as "in the face of the enemy" or something else that turns it from a highly informal way of resigning into something that can't be ignored.

The Army makes no effort to find deserters and bring them back. This makes the hardest kind of sense. We're all volunteers; we're M. I. because we want to be, we're proud to be M. I. and the M. I. is proud of us. If a man doesn't feel that way about it, from his callused feet to his hairy ears, I don't want him on my flank when trouble starts. If I buy a piece of it, I want men around me who will pick me up because they're M. I. and I'm M. I. and my skin means as much to them as their own. I don't want any ersatz soldiers, dragging their tails and ducking out when the party gets rough. It's a whole lot safer to have a blank file on your flank than to have an alleged soldier who is nursing the "conscript" syndrome. So if they run, let `em run; it's a waste of time and money to fetch them back.

Of course most of them do come back, though it may take them years -- in which case the Army tiredly lets them have their fifty lashes instead of hanging them, and turns them loose. I suppose it must wear on a man's nerves to be a fugitive when everybody else is either a citizen or a legal resident, even when the police aren't trying to find him. "The wicked flee when no man pursueth." The temptation to turn yourself in, take your lumps,

and breathe easily again must get to be overpowering.

But this boy didn't turn himself in. He was gone four months and I doubt if his own company remembered him, since he had been with them only a couple of days; he was probably just a name without a face, the "Dillinger, N. L." who had to be reported, day after day, as absent without leave on the morning muster.

Then he killed a baby girl.

He was tried and convicted by a local tribunal but identity check showed that he was an undischarged soldier; the Department had to be notified and our commanding general at once intervened. He was returned to us, since military law and jurisdiction take precedence over civil code.

Why did the general bother? Why didn't he let the local sheriff do the job?

In order to "teach us a lesson"?

Not at all. I'm quite sure that our general did not think that any of his boys needed to be nauseated in order not to kill any baby girls. By now I believe that he would have spared us the sight -- had it been possible.

We did learn a lesson, though nobody mentioned it at the time and it is one that takes a long time to sink in until it becomes second nature:

The M. I. take care of their own -- no matter what.

Dillinger belonged to us, he was still on our rolls. Even though we didn't want him, even though we should never have had him, even though we would have been happy to disclaim him, he was a member of our regiment. We couldn't brush him off and let a sheriff a thousand miles away handle it. If it has to be done, a man -- a real man -- shoots his own dog himself; he doesn't hire a proxy who may bungle it.

The regimental records said that Dillinger was ours, so taking care of him was our duty.

That evening we marched to the parade grounds at slow march, sixty beats to the minute (hard to keep step, when you're used to a hundred and forty), while the band played "Dirge for the Unmourned." Then Dillinger was marched out, dressed in M. I. full dress just as we were, and the band played "Danny Deever" while they stripped off every trace of insignia, even buttons and cap, leaving him in a maroon and light blue suit that was no longer a uniform. The drums held a sustained roll and it was all over.

We passed in review and on home at a fast trot I don't think anybody fainted and I don't think anybody quite got sick, even though most of us didn't eat much dinner that night and I've never heard the mess tent so quiet. But, grisly as it was (it was the first time I had seen death, first time for most of us), it was not the shock that Ted Hendrick's flogging was -- I mean, you couldn't put yourself in Dillinger's place; you didn't have any feeling of: "It could have been me." Not counting the technical matter of desertion, Dillinger had committed at least four capital crimes; if his victim had lived, he still would have danced Danny Deever for any one of the other three -- kidnapping, demand of ransom, criminal neglect, etc.

I had no sympathy for him and still haven't. That old saw about "To

understand all is to forgive all" is a lot of tripe. Some things, the more you understand the more you loathe them. My sympathy is reserved for Barbara Anne Enthwaite whom I had never seen, and for her parents, who would never again see their little girl.

As the band put away their instruments that night we started thirty days of mourning for Barbara and of disgrace for us, with our colors draped in black, no music at parade, no singing on route march. Only once did I hear anybody complain and another boot promptly asked him how he would like a full set of lumps? Certainly, it hadn't been our fault -- but our business was to guard little girls, not kill them. Our regiment had been dishonored; we had to clean it. We were disgraced and we felt disgraced.

That night I tried to figure out how such things could be kept from happening. Of course, they hardly ever do nowadays -- but even once is `way too many. I never did reach an answer that satisfied me. This Dillinger -- he looked like anybody else, and his behavior and record couldn't have been too odd or he would never have reached Camp Currie in the first place. I suppose he was one of those pathological personalities you read about -- no way to spot them.

Well, if there was no way to keep it from happening once, there was only one sure way to keep it from happening twice. Which we had used.

If Dillinger had understood what he was doing (which seemed incredible) then he got what was coming to him . . . except that it seemed a shame that he hadn't suffered as much as had little Barbara Anne -- he practically hadn't suffered at all.

But suppose, as seemed more likely, that he was so crazy that he had never been aware that he was doing anything wrong? What then?

Well, we shoot mad dogs, don't we?

Yes, but being crazy that way is a sickness --

I couldn't see but two possibilities. Either he couldn't be made well -- in which case he was better dead for his own sake and for the safety of others -- or he could be treated and made sane. In which case (it seemed to me) if he ever became sane enough for civilized society . . . and thought over what he had done while he was "sick" -- what could be left for him but suicide? How could he live with himself?

And suppose he escaped before he was cured and did the same thing again? And maybe again? How do you explain that to bereaved parents? In view of his record?

I couldn't see but one answer.

I found myself mulling over a discussion in our class in History and Moral Philosophy. Mr. Dubois was talking about the disorders that preceded the breakup of the North American republic, back in the XXth century. According to him, there was a time just before they went down the drain when such crimes as Dillinger's were as common as dogfights. The Terror had not been just in North America -- Russia and the British Isles had it, too, as well as other places. But it reached its peak in North America shortly before things went to pieces.

"Law-abiding people," Dubois had told us, "hardly dared go into a public park at night. To do so was to risk attack by wolf packs of children, armed with chains, knives, homemade guns, bludgeons . . . to be hurt at least, robbed most certainly, injured for life probably -- or even killed. This went on for years, right up to the war between the Russo-Anglo-American Alliance and the Chinese Hegemony. Murder, drug addiction, larceny, assault, and vandalism were commonplace. Nor were parks the only places -- these things happened also on the streets in daylight, on school grounds, even inside school buildings. But parks were so notoriously unsafe that honest people stayed clear of them after dark."

I had tried to imagine such things happening in our schools. I simply couldn't. Nor in our parks. A park was a place for fun, not for getting hurt. As for getting killed in one -- "Mr. Dubois, didn't they have police? Or courts?"

"They had many more police than we have. And more courts. All overworked."

"I guess I don't get it." If a boy in our city had done anything half that bad . . . well, he and his father would have been flogged side by side. But such things just didn't happen.

Mr. Dubois then demanded of me, "Define a `juvenile delinquent.' "

"Uh, one of those kids -- the ones who used to beat up people."

"Wrong."

"Huh? But the book said -- "

"My apologies. Your textbook does so state. But calling a tail a leg does not make the name fit `Juvenile delinquent' is a contradiction in terms, one which gives a clue to their problem and their failure to solve it. Have you ever raised a puppy?"

"Yes, sir."

"Did you housebreak him?"

"Err . . . yes, sir. Eventually." It was my slowness in this that caused my mother to rule that dogs must stay out of the house.

"Ah, yes. When your puppy made mistakes, were you angry?"

"What? Why, he didn't know any better; he was just a puppy.

"What did you do?"

"Why, I scolded him and rubbed his nose in it and paddled him."

"Surely he could not understand your words?"

"No, but he could tell I was sore at him!"

"But you just said that you were not angry."

Mr. Dubois had an infuriating way of getting a person mixed up. "No, but I had to make him think I was. He had to learn, didn't he?"

"Conceded. But, having made it clear to him that you disapproved, how could you be so cruel as to spank him as well? You said the poor beastie didn't know that he was doing wrong. Yet you indicted pain. Justify yourself! Or are you a sadist?"

I didn't then know what a sadist was -- but I knew pups. "Mr. Dubois, you have to! You scold him so that he knows he's in trouble, you rub his

nose in it so that he will know what trouble you mean, you paddle him so that he darn well won't do it again -- and you have to do it right away! It doesn't do a bit of good to punish him later; you'll just confuse him. Even so, he won't learn from one lesson, so you watch and catch him again and paddle him still harder. Pretty soon he learns. But it's a waste of breath just to scold him." Then I added, "I guess you've never raised pups."

"Many. I'm raising a dachshund now -- by your methods. Let's get back to those juvenile criminals. The most vicious averaged somewhat younger than you here in this class . . . and they often started their lawless careers much younger. Let us never forget that puppy. These children were often caught; police arrested batches each day. Were they scolded? Yes, often scathingly. Were their noses rubbed in it? Rarely. News organs and officials usually kept their names secret -- in many places the law so required for criminals under eighteen. Were they spanked? Indeed not! Many had never been spanked even as small children; there was a widespread belief that spanking, or any punishment involving pain, did a child permanent psychic damage."

(I had reflected that my father must never have heard of that theory.)

"Corporal punishment in schools was forbidden by law," he had gone on. "Flogging was lawful as sentence of court only in one small province, Delaware, and there only for a few crimes and was rarely invoked; it was regarded as `cruel and unusual punishment.' " Dubois had mused aloud, "I do not understand objections to `cruel and unusual' punishment. While a judge should be benevolent in purpose, his awards should cause the criminal to suffer, else there is no punishment -- and pain is the basic mechanism built into us by millions of years of evolution which safeguards us by warning when something threatens our survival. Why should society refuse to use such a highly perfected survival mechanism? However, that period was loaded with pre-scientific pseudo-psychological nonsense.

"As for `unusual,' punishment must be unusual or it serves no purpose." He then pointed his stump at another boy. "What would happen if a puppy were spanked every hour?"

"Uh . . . probably drive him crazy!"

"Probably. It certainly will not teach him anything. How long has it been since the principal of this school last had to switch a pupil?"

"Uh, I'm not sure. About two years. The kid that swiped -- "

"Never mind. Long enough. It means that such punishment is so unusual as to be significant, to deter, to instruct. Back to these young criminals -- They probably were not spanked as babies; they certainly were not flogged for their crimes. The usual sequence was: for a first offense, a warning -- a scolding, often without trial. After several offenses a sentence of confinement but with sentence suspended and the youngster placed on probation. A boy might be arrested many times and convicted several times before he was punished -- and then it would be merely confinement, with others like him from whom he learned still more criminal habits. If he kept out of major trouble while confined, he could usually evade most of even that mild punishment, be given probation -- `paroled' in the jargon of the

times.

"This incredible sequence could go on for years while his crimes increased in frequency and viciousness, with no punishment whatever save rare dull-but-comfortable confinements. Then suddenly, usually by law on his eighteenth birthday, this so-called `juvenile delinquent' becomes an adult criminal -- and sometimes wound up in only weeks or months in a death cell awaiting execution for murder. You -- "

He had singled me out again. "Suppose you merely scolded your puppy, never punished him, let him go on making messes in the house . . . and occasionally locked him up in an outbuilding but soon let him back into the house with a warning not to do it again. Then one day you notice that he is now a grown dog and still not housebroken -- whereupon you whip out a gun and shoot him dead. Comment, please?"

"Why . . . that's the craziest way to raise a dog I ever heard of!"

"I agree. Or a child. Whose fault would it be?"

"Uh . . . why, mine, I guess."

"Again I agree. But I'm not guessing."

"Mr. Dubois," a girl blurted out, "but why? Why didn't they spank little kids when they needed it and use a good dose of the strap on any older ones who deserved it -- the sort of lesson they wouldn't forget! I mean ones who did things really bad. Why not?"

"I don't know," he had answered grimly, "except that the time-tested method of instilling social virtue and respect for law in the minds of the young did not appeal to a pre-scientific pseudo-professional class who called themselves `social workers' or sometimes `child psychologists.' It was too simple for them, apparently, since anybody could do it, using only the patience and firmness needed in training a puppy. I have sometimes wondered if they cherished a vested interest in disorder -- but that is unlikely; adults almost always act from conscious `highest motives' no matter what their behavior."

"But -- good heavens!" the girl answered. "I didn't like being spanked any more than any kid does, but when I needed it, my mama delivered. The only time I ever got a switching in school I got another one when I got home and that was years and years ago. I don't ever expect to be hauled up in front of a judge and sentenced to a flogging; you behave yourself and such things don't happen. I don't see anything wrong with our system; it's a lot better than not being able to walk outdoors for fear of your life -- why, that's horrible!"

"I agree. Young lady, the tragic wrongness of what those well-meaning people did, contrasted with what they thought they were doing, goes very deep. They had no scientific theory of morals. They did have a theory of morals and they tried to live by it (I should not have sneered at their motives) but their theory was wrong -- half of it fuzzy-headed wishful thinking, half of it rationalized charlatanry. The more earnest they were, the farther it led them astray. You see, they assumed that Man has a moral instinct."

"Sir? But I thought -- But he does! I have."

"No, my dear, you have a cultivated conscience, a most carefully trained one. Man has no moral instinct. He is not born with moral sense. You were not born with it, I was not -- and a puppy has none. We acquire moral sense, when we do, through training, experience, and hard sweat of the mind. These unfortunate juvenile criminals were born with none, even as you and I, and they had no chance to acquire any; their experiences did not permit it. What is `moral sense'? It is an elaboration of the instinct to survive. The instinct to survive is human nature itself, and every aspect of our personalities derives from it. Anything that conflicts with the survival instinct acts sooner or later to eliminate the individual and thereby fails to show up in future generations. This truth is mathematically demonstrable, everywhere verifiable; it is the single eternal imperative controlling everything we do."

"But the instinct to survive," he had gone on, "can be cultivated into motivations more subtle and much more complex than the blind, brute urge of the individual to stay alive. Young lady, what you miscalled your `moral instinct' was the instilling in you by your elders of the truth that survival can have stronger imperatives than that of your own personal survival. Survival of your family, for example. Of your children, when you have them. Of your nation, if you struggle that high up the scale. And so on up. A scientifically verifiable theory of morals must be rooted in the individual's instinct to survive -- and nowhere else! -- and must correctly describe the hierarchy of survival, note the motivations at each level, and resolve all conflicts."

"We have such a theory now; we can solve any moral problem, on any level. Self-interest, love of family, duty to country, responsibility toward the human race -- we are even developing an exact ethic for extra-human relations. But all moral problems can be illustrated by one misquotation: `Greater love hath no man than a mother cat dying to defend her kittens.' Once you understand the problem facing that cat and how she solved it, you will then be ready to examine yourself and learn how high up the moral ladder you are capable of climbing.

"These juvenile criminals hit a low level. Born with only the instinct for survival, the highest morality they achieved was a shaky loyalty to a peer group, a street gang. But the do-gooders attempted to `appeal to their better natures,' to `reach them,' to `spark their moral sense.' Tosh! They had no `better natures'; experience taught them that what they were doing was the way to survive. The puppy never got his spanking; therefore what he did with pleasure and success must be `moral.'

"The basis of all morality is duty, a concept with the same relation to group that self-interest has to individual. Nobody preached duty to these kids in a way they could understand -- that is, with a spanking. But the society they were in told them endlessly about their `rights.' "

"The results should have been predictable, since a human being has no natural rights of any nature."

Mr. Dubois had paused. Somebody took the bait. "Sir? How about `life, liberty, and the pursuit of happiness'?"

"Ah, yes, the `unalienable rights.' Each year someone quotes that magnificent poetry. Life? What `right' to life has a man who is drowning in the Pacific? The ocean will not hearken to his cries. What `right' to life has a man who must die if he is to save his children? If he chooses to save his own life, does he do so as a matter of `right'? If two men are starving and cannibalism is the only alternative to death, which man's right is `unalienable'? And is it `right'? As to liberty, the heroes who signed that great document pledged themselves to buy liberty with their lives. Liberty is never unalienable; it must be redeemed regularly with the blood of patriots or it always vanishes. Of all the so-called `natural human rights' that have ever been invented, liberty is least likely to be cheap and is never free of cost.

"The third `right'? -- the `pursuit of happiness'? It is indeed unalienable but it is not a right; it is simply a universal condition which tyrants cannot take away nor patriots restore. Cast me into a dungeon, burn me at the stake, crown me king of kings, I can `pursue happiness' as long as my brain lives -- but neither gods nor saints, wise men nor subtle drugs, can insure that I will catch it."

Mr. Dubois then turned to me. "I told you that `juvenile delinquent' is a contradiction in terms. `Delinquent' means `failing in duty.' But duty is an adult virtue -- indeed a juvenile becomes an adult when, and only when, he acquires a knowledge of duty and embraces it as dearer than the self-love he was born with. There never was, there cannot be a `juvenile delinquent.' But for every juvenile criminal there are always one or more adult delinquents -- people of mature years who either do not know their duty, or who, knowing it, fail."

"And that was the soft spot which destroyed what was in many ways an admirable culture. The junior hoodlums who roamed their streets were symptoms of a greater sickness; their citizens (all of them counted as such) glorified their mythology of `rights' . . . and lost track of their duties. No nation, so constituted, can endure."

I wondered how Colonel Dubois would have classed Dillinger. Was he a juvenile criminal who merited pity even though you had to get rid of him? Or was he an adult delinquent who deserved nothing but contempt?

I didn't know, I would never know. The one thing I was sure of was that he would never again kill any little girls.

That suited me. I went to sleep.

CHAPTER 9

We've got no place in this outfit
for good losers. We want tough
hombres who will go in there and
win!

-- Admiral Jonas Ingram,
1926

When we had done all that a mud foot can do in flat country, we moved into some rough mountains to do still rougher things -- the Canadian Rockies between Good Hope Mountain and Mount Waddington. Camp Sergeant Spooky Smith was much like Camp Currie (aside from its rugged setting) but it was much smaller. Well, the Third Regiment was much smaller now, too less than four hundred whereas we had started out with more than two thousand. H Company was now organized as a single platoon and the battalion paraded as if it were a company. But we were still called "H Company" and Zim was "Company Commander," not platoon leader.

What the sweat-down meant, really, was much more personal instruction; we had more corporal-instructors than we had squads and Sergeant Zim, with only fifty men on his mind instead of the two hundred and sixty he had started with, kept his Argus eyes on each one of us all the time -- even when he wasn't there. At least, if you goofed, it turned out he was standing right behind you.

However, the chewing-out you got had almost a friendly quality, in a horrid sort of way, because we had changed, too, as well as the regiment -- the one-in-five who was left was almost a soldier and Zim seemed to be trying to make him into one, instead of running him over the hill.

We saw a lot more of Captain Frankel, too; he now spent most of his time teaching us, instead of behind a desk, and he knew all of us by name and face and seemed to have a card file in his mind of exactly what progress each man had made on every weapon, every piece of equipment -- not to mention your extra-duty status, medical record, and whether you had had a letter from home lately.

He wasn't as severe with us as Zim was; his words were milder and it took a really stupid stunt to take that friendly grin off his face -- but don't let that fool you; there was beryl armor under the grin. I never did figure out which one was the better soldier, Zim or Captain Frankel -- I mean, if you took away the insignia and thought of them as privates. Unquestionably they were both better soldiers than any of the other instructors -- but which was best? Zim did everything with precision and style, as if he were on parade; Captain Frankel did the same thing with dash and gusto, as if it were a game. The results were about the same and it never turned out to be as easy as Captain Frankel made it look.

We needed the abundance of instructors. Jumping a suit (as I have said) was easy on flat ground. Well, the suit jumps just as high and just as easily in the mountains -- but it makes a lot of difference when you have to jump up a vertical granite wall, between two close-set fir trees, and override your jet control at the last instant. We had three major casualties in suit practice in broken country, two dead and one medical retirement.

But that rock wall is even tougher without a suit, tackled with lines and pitons. I didn't really see what use alpine drill was to a cap trooper but I had learned to keep my mouth shut and try to learn what they shoved at

us. I learned it and it wasn't too hard. If anybody had told me, a year earlier, that I could go up a solid chunk of rock, as flat and as perpendicular as a blank wall of a building, using only a hammer, some silly little steel pins, and a chunk of clothesline, I would have laughed in his face; I'm a sea-level type. Correction: I was a sea-level type. There had been some changes made.

Just how much I had changed I began to find out. At Camp Sergeant Spooky Smith we had liberty-to go to town, I mean. Oh, we had "liberty" after the first month at Camp Currie, too. This meant that, on a Sunday afternoon, if you weren't in the duty platoon, you could check out at the orderly tent and walk just as far away from camp as you wished, bearing in mind that you had to be back for evening muster. But there was nothing within walking distance, if you don't count jack rabbits -- no girls, no theaters, no dance halls, et cetera.

Nevertheless, liberty, even at Camp Currie, was no mean privilege; sometimes it can be very important indeed to be able to go so far away that you can't see a tent, a sergeant, nor even the ugly faces of your best friends among the boots . . . not have to be on the bounce about anything, have time to take out your soul and look at it. You could lose that privilege in several degrees; you could be restricted to camp . . . or you could be restricted to your own company street, which meant that you couldn't go to the library nor to what was misleadingly called the "recreation" tent (mostly some Parcheesi sets and similar wild excitements) . . . or you could be under close restriction, required to stay in your tent when your presence was not required elsewhere.

This last sort didn't mean much in itself since it was usually added to extra duty so demanding that you didn't have any time in your tent other than for sleep anyhow; it was a decoration added like a cherry on top of a dish of ice cream to notify you and the world that you had pulled not some everyday goof-off but something unbecoming of a member of the M. I. and were thereby unfit to associate with other troopers until you had washed away the stain.

But at Camp Spooky we could go into town -- duty status, conduct status, etc., permitting. Shuttles ran to Vancouver every Sunday morning, right after divine services (which were moved up to thirty minutes after breakfast) and came back again just before supper and again just before taps. The instructors could even spend Saturday night in town, or cop a three-day pass, duty permitting.

I had no more than stepped out of the shuttle, my first pass, than I realized in part that I had changed. Johnnie didn't fit in any longer. Civilian life, I mean. It all seemed amazingly complex and unbelievably untidy.

I'm not running down Vancouver. It's a beautiful city in a lovely setting; the people are charming and they are used to having the M. I. in town and they make a trooper welcome. There is a social center for us downtown, where they have dances for us every week and see to it that junior

hostesses are on hand to dance with, and senior hostesses to make sure that a shy boy (me, to my amazement -- but you try a few months with nothing female around but lady jack rabbits) gets introduced and has a partner's feet to step on.

But I didn't go to the social center that first pass. Mostly I stood around and gawked -- at beautiful buildings, at display windows filled with all manner of unnecessary things (and not a weapon among them), at all those people running around, or even strolling, doing exactly as they pleased and no two of them dressed alike -- and at girls.

Especially at girls. I hadn't realized just how wonderful they were. Look, I've approved of girls from the time I first noticed that the difference was more than just that they dress differently. So far as I remember I never did go through that period boys are supposed to go through when they know that girls are different but dislike them; I've always liked girls.

But that day I realized that I had long been taking them for granted.

Girls are simply wonderful. Just to stand on a corner and watch them going past is delightful. They don't walk. At least not what we do when we walk. I don't know how to describe it, but it's much more complex and utterly delightful. They don't move just their feet; everything moves and in different directions . . . and all of it graceful.

I might have been standing there yet if a policeman hadn't come by. He sized us up and said, "Howdy, boys. Enjoying yourselves?"

I quickly read the ribbons on his chest and was impressed. "Yes, sir!"

"You don't have to say `sir' to me. Not much to do here. Why don't you go to the hospitality center?" He gave us the address, pointed the direction and we started that way -- Pat Leivy, "Kitten" Smith, and myself. He called after us, "Have a good time, boys . . . and stay out of trouble." Which was exactly what Sergeant Zim had said to us as we climbed into the shuttle.

But we didn't go there. Pat Leivy had lived in Seattle when he was a small boy and wanted to take a look at his old home town. He had money and offered to pay our shuttle fares if we would go with him. I didn't mind and it was all right; shuttles ran every twenty minutes and our passes were not restricted to Vancouver. Smith decided to go along, too.

Seattle wasn't so very different from Vancouver and the girls were just as plentiful; I enjoyed it. But Seattle wasn't quite as used to having M. I. around in droves and we picked a poor spot to eat dinner, one where we weren't quite so welcome a bar-restaurant, down by the docks.

Now, look, we weren't drinking. Well, Kitten Smith had had one repeat one beer with his dinner but he was never anything but friendly and nice. That is how he got his name; the first time we had hand-to-hand combat drill Corporal Jones had said to him disgustedly: "A kitten would have hit me harder than that!" The nickname stuck.

We were the only uniforms in the place; most of the other customers were merchant marine sailors -- Seattle handles an awful lot of surface tonnage. I hadn't known it at the time but merchant sailors don't like us.

Part of it has to do with the fact that their guilds have tried and tried to get their trade classed as equivalent to Federal Service, without success -- but I understand that some of it goes way back in history, centuries.

There were some young fellows there, too, about our age the right age to serve a term, only they weren't -- long-haired and sloppy and kind of dirty looking. Well, say about the way I looked, I suppose, before I joined up.

Presently we started noticing that at the table behind us, two of these young twerps and two merchant sailors (to judge by clothes) were passing remarks that were intended for us to overhear. I won't try to repeat them.

We didn't say anything. Presently, when the remarks were even more personal and the laughs louder and everybody else in the place was keeping quiet and listening, Kitten whispered to me, "Let's get out of here."

I caught Pat Leivy's eye; he nodded. We had no score to settle; it was one of those pay-as-you-get-it places. We got up and left.

They followed us out.

Pat whispered to me, "Watch it." We kept on walking, didn't look back.

They charged us.

I gave my man a side-neck chop as I pivoted and let him fall past me, swung to help my mates. But it was over. Four in, four down. Kitten had handled two of them and Pat had sort of wrapped the other one around a lamppost from throwing him a little too hard.

Somebody, the proprietor I guess, must have called the police as soon as we stood up to leave, since they arrived almost at once while we were still standing around wondering what to do with the meat -- two policemen; it was that sort of a neighborhood.

The senior of them wanted us to prefer charges, but none of us was willing -- Zim had told us to "stay out of trouble." Kitten looked blank and about fifteen years old and said, "I guess they stumbled."

"So I see," agreed the police officer and toed a knife away from the outflung hand of my man, put it against the curb and broke the blade. "Well, you boys had better run along . . . farther uptown."

We left. I was glad that neither Pat nor Kitten wanted to make anything of it. It's a mighty serious thing, a civilian assaulting a member of the Armed Forces, but what the deuce? -- the books balanced. They jumped us, they got their lumps. All even.

But it's a good thing we never go on pass armed . . . and have been trained to disable without killing. Because every bit of it happened by reflex. I didn't believe that they would jump us until they already had, and I didn't do any thinking at all until it was over.

But that's how I learned for the first time just how much I had changed.

We walked back to the station and caught a shuttle to Vancouver.

We started practice drops as soon as we moved to Camp Spooky -- a platoon at a time, in rotation (a full platoon, that is -- a company), would shuttle down to the field north of Walla Walla, go aboard, space, make a

drop, go through an exercise, and home on a beacon. A day's work. With eight companies that gave us not quite a drop each week, and then it gave us a little more than a drop each week as attrition continued, whereupon the drops got tougher -- over mountains, into the arctic ice, into the Australian desert, and, before we graduated, onto the face of the Moon, where your capsule is placed only a hundred feet up and explodes as it ejects -- and you have to look sharp and land with only your suit (no air, no parachute) and a bad landing can spill your air and kill you.

Some of the attrition was from casualties, deaths or injuries, and some of it was just from refusing to enter the capsule -- which some did, and that was that; they weren't even chewed out; they were just motioned aside and that night they were paid off. Even a man who had made several drops might get the panic and refuse . . . and the instructors were just gentle with him, treated him the way you do a friend who is ill and won't get well.

I never quite refused to enter the capsule -- but I certainly learned about the shakes. I always got them, I was scared silly every time. I still am.

But you're not a cap trooper unless you drop.

They tell a story, probably not true, about a cap trooper who was sight-seeing in Paris. He visited Les Invalides, looked down at Napoleon's coffin and said to a French guard there: "Who's he?"

The Frenchman was properly scandalized. "Monsieur does not know? This is the tomb of Napoleon! Napoleon Bonaparte -- the greatest soldier who ever lived!"

The cap trooper thought about it. Then he asked, "So? Where were his drops?"

It is almost certainly not true, because there is a big sign outside there that tells you exactly who Napoleon was. But that is how cap troopers feel about it.

Eventually we graduated.

I can see that I've left out almost everything. Not a word about most of our weapons, nothing about the time we dropped everything and fought a forest fire for three days, no mention of the practice alert that was a real one, only we didn't know it until it was over, nor about the day the cook tent blew away -- in fact not any mention of weather and, believe me, weather is important to a doughboy, rain and mud especially. But though weather is important while it happens it seems to me to be pretty dull to look back on. You can take descriptions of most any sort of weather out of an almanac and stick them in just anywhere; they'll probably fit.

The regiment had started with 2009 men; we graduated 187 -- of the others, fourteen were dead (one executed and his name struck) and the rest resigned, dropped, transferred, medical discharge, etc. Major Malloy made a short speech, we each got a certificate, we passed in review for the last time, and the regiment was disbanded, its colors to be cased until they would be needed (three weeks later) to tell another couple of thousand civilians that they were an outfit, not a mob.

I was a "trained soldier," entitled to put "TP" in front of my serial number instead of "RP." Big day.

The biggest I ever had.

CHAPTER 10

The Tree of Liberty must be re-
freshed from time to time with the
blood of patriots . . .
-- Thomas Jefferson,
1787

That is, I thought I was a "trained soldier" until I reported to my ship. Any law against having a wrong opinion?

I see that I didn't make any mention of how the Terran Federation moved from "peace" to a "state of emergency" and then on into "war." I didn't notice it too closely myself. When I enrolled, it was "peace," the normal condition, at least so people think (who ever expects anything else?). Then, while I was at Currie, it became a "state of emergency" but I still didn't notice it, as what Corporal Bronski thought about my haircut, uniform, combat drill, and kit was much more important -- and what Sergeant Zim thought about such matters was overwhelmingly important. In any case, "emergency" is still "peace."

"Peace" is a condition in which no civilian pays any attention to military casualties which do not achieve page-one, lead-story prominence-unless that civilian is a close relative of one of the casualties. But, if there ever was a time in history when "peace" meant that there was no fighting going on, I have been unable to find out about it. When I reported to my first outfit, "Willie's Wildcats," sometimes known as Company K, Third Regiment, First M. I. Division, and shipped with them in the Valley Forge (with that misleading certificate in my kit) the fighting had already been going on for several years.

The historians can't seem to settle whether to call this one "The Third Space War" (or the "Fourth"), or whether "The First Interstellar War" fits it better. We just call it "The Bug War" if we call it anything, which we usually don't, and in any case the historians date the beginning of "war" after the time I joined my first outfit and ship. Everything up to then and still later were "incidents," "patrols," or "police actions." However, you are just as dead if you buy a farm in an "incident" as you are if you buy it in a declared war.

But, to tell the truth, a soldier doesn't notice a war much more than a civilian does, except his own tiny piece of it and that just on the days it is happening. The rest of the time he is much more concerned with sack time, the vagaries of sergeants, and the chances of wheedling the cook between meals. However, when Kitten Smith and Al Jenkins and I joined them at Luna Base, each of Willie's Wildcats had made more than one combat drop; they were soldiers and we were not. We weren't hazed for it -- at least I was not

-- and the sergeants and corporals were amazingly easy to deal with after the calculated frightfulness of instructors.

It took a little while to discover that this comparatively gentle treatment simply meant that we were nobody, hardly worth chewing out, until we had proved in a drop -- a real drop -- that we might possibly replace real Wildcats who had fought and bought it and whose bunks we now occupied.

Let me tell you how green I was. While the Valley Forg was still at Luna Base, I happened to come across my section leader just as he was about to hit dirt, all slicked up in dress uniform. He was wearing in his left ear lobe a rather small earring, a tiny gold skull beautifully made and under it, in stead of the conventional crossed bones of the ancient Jolly Roger design, was a whole bundle of little gold bones, almost too small to see.

Back home, I had always worn earrings and other jewelry when I went out on a date -- I had some beautiful ear clips, rubies as big as the end of my little finger which had belonged to my mother's grandfather. I like jewelry and had rather resented being required to leave it all behind when I went to Basic . . . but here was a type of jewelry which was apparently okay to wear with uniform. My ears weren't pierced -- my mother didn't approve of it, for boys -- but I could have the jeweler mount it on a clip . . . and I still had some money left from pay call at graduation and was anxious to spend it before it mildewed. "Unh, Sergeant? Where do you get earrings like that one? Pretty neat."

He didn't look scornful, he didn't even smile. He just said, "You like it?"

"I certainly do!" The plain raw gold pointed up the gold braid and piping of the uniform even better than gems would have done. I was thinking that a pair would be still handsomer, with just crossbones instead of all that confusion at the bottom. "Does the base PX carry them?"

"No, the PX here never sells them." He added, "At least I don't think you'll ever be able to buy one here -- I hope. But I tell you what -- when we reach a place where you can buy one of your own, I'll see to it you know about it. That's a promise."

"Uh, thanks!"

"Don't mention it."

I saw several of the tiny skulls thereafter, some with more "bones," some with fewer; my guess had been correct, this was jewelry permitted with uniform, when on pass at least. Then I got my own chance to "buy" one almost immediately thereafter and discovered that the prices were unreasonably high, for such plain ornaments.

It was Operation Bughouse, the First Battle of Klendathu in the history books, soon after Buenos Aires was smeared. It took the loss of B. A. to make the groundhogs realize that anything was going on, because people who haven't been out don't really believe in other planets, not down deep where it counts. I know I hadn't and I had been space-happy since I was a pup.

But B. A. really stirred up the civilians and inspired loud screams to bring all our forces home, from everywhere -- orbit them around the planet

practically shoulder to shoulder and interdict the space Terra occupies. This is silly, of course; you don't win a war by defense but by attack -- no "Department of Defense" ever won a war; see the histories. But is seems to be a standard civilian reaction to scream for defensive tactics as soon as they do notice a war. They then want to run the war -- like a passenger trying to grab the controls away from the pilot in an emergency.

However, nobody asked my opinion at the time; I was told. Quite aside from the impossibility of dragging the troops home in view of our treaty obligations and what it would do to the colony planets in the Federation and to our allies, we were awfully busy doing something else, to wit: carrying the war to the Bugs. I suppose I noticed the destruction of B. A. much less than most civilians did. We were already a couple of parsecs away under Cherenkov drive and the news didn't reach us until we got it from another ship after we came out of drive.

I remember thinking, "Gosh, that's terrible!" and feeling sorry for the one Porteno in the ship. But B. A. wasn't my home and Terra was a long way off and I was very busy, as the attack on Klendathu, the Bugs' home planet, was mounted immediately after that and we spent the time to rendezvous strapped in our bunks, doped and unconscious, with the internal-gravity field of the Valley Forge off, to save power and give greater speed.

The loss of Buenos Aires did mean a great deal to me; it changed my life enormously, but this I did not know until many months later.

When it came time to drop onto Klendathu, I was assigned to PFC Dutch Bamburger as a supernumerary. He managed to conceal his pleasure at the news and as soon as the platoon sergeant was out of earshot, he said, "Listen, boot, you stick close behind me and stay out of my way. You go slowing me down, I break your silly neck."

I just nodded. I was beginning to realize that this was not a practice drop.

Then I had the shakes for a while and then we were down --

Operation Bughouse should have been called "Operation Madhouse." Everything went wrong. It had been planned as an all-out move to bring the enemy to their knees, occupy their capital and the key points of their home planet, and end the war. Instead it darn near lost the war.

I am not criticizing General Diennes. I don't know whether it's true that he demanded more troops and more support and allowed himself to be overruled by the Sky Marshal-in-Chief -- or not. Nor was it any of my business. Furthermore I doubt if some of the smart second-guessers know all the facts.

What I do know is that the General dropped with us and commanded us on the ground and, when the situation became impossible, he personally led the diversionary attack that allowed quite a few of us (including me) to be retrieved -- and, in so doing, bought his farm. He's radioactive debris on Klendathu and it's much too late to court-martial him, so why talk about it?

I do have one comment to make to any armchair strategist who has never made a drop. Yes, I agree that the Bugs' planet possibly could have been

plastered with H-bombs until it was surfaced with radioactive glass. But would that have won the war? The Bugs are not like us. The Pseudo-Arachnids aren't even like spiders. They are arthropods who happen to look like a madman's conception of a giant, intelligent spider, but their organization, psychological and economic, is more like that of ants or termites; they are communal entities, the ultimate dictatorship of the hive. Blasting the surface of their planet would have killed soldiers and workers; it would not have killed the brain caste and the queens -- I doubt if anybody can be certain that even a direct hit with a burrowing H-rocket would kill a queen; we don't know how far down they are. Nor am I anxious to find out; none of the boys who went down those holes came up again.

So suppose we did ruin the productive surface of Klendathu? They still would have ships and colonies and other planets, same as we have, and their HQ is still intact -- so unless they surrender, the war isn't over. We didn't have nova bombs at that time; we couldn't crack Klendathu open. If they absorbed the punishment and didn't surrender, the war was still on.

If they can surrender --

Their soldiers can't. Their workers can't fight (and you can waste a lot of time and ammo shooting up workers who wouldn't say boo!) and their soldier caste can't surrender. But don't make the mistake of thinking that the Bugs are just stupid insects because they look the way they do and don't know how to surrender. Their warriors are smart, skilled, and aggressive -- smarter than you are, by the only universal rule, if the Bug shoots first. You can burn off one leg, two legs, three legs, and he just keeps on coming; burn off four on one side and he topples over -- but keeps on shooting. You have to spot the nerve case and get it . . . whereupon he will trot right on past you, shooting at nothing, until he crashes into a wall or something.

The drop was a shambles from the start. Fifty ships were in our piece of it and they were supposed to come out of Cherenkov drive and into reaction drive so perfectly co-ordinated that they could hit orbit and drop us, in formation and where we were supposed to hit, without even making one planet circuit to dress up their own formation. I suppose this is difficult. Shucks, I know it is. But when it slips, it leaves the M. I. holding the sack.

We were lucky at that, because the Valley Forge and every Navy file in her bought it before we ever hit the ground. In that tight, fast formation (4.7 miles/sec. orbital speed is not a stroll) she collided with the Ypres and both ships were destroyed. We were lucky to get out of her tubes -- those of us who did get out, for she was still firing capsules as she was rammed. But I wasn't aware of it; I was inside my cocoon, headed for the ground. I suppose our company commander knew that the ship had been lost (and half his Wildcats with it) since he was out first and would know when he suddenly lost touch, over the command circuit, with the ship's captain.

But there is no way to ask him, because he wasn't retrieved. All I ever had was a gradually dawning realization that things were in a mess.

The next eighteen hours were nightmare. I shan't tell much about it

because I don't remember much, just snatches, stop-motion scenes of horror. I have never liked spiders, poisonous or otherwise; a common house spider in my bed can give me the creeps. Tarantulas are simply unthinkable, and I can't eat lobster, crab, or anything of that sort. When I got my first sight of a Bug, my mind jumped right out of my skull and started to yammer. It was seconds later that I realized that I had killed it and could stop shooting. I suppose it was a worker; I doubt if I was in any shape to tackle a warrior and win.

But, at that, I was in better shape than was the K-9 Corps. They were to be dropped (if the drop had gone perfectly) on the periphery of our entire target and the neodogs were supposed to range outward and provide tactical intelligence to interdiction squads whose business it was to secure the periphery. Those Calebs aren't armed, of course, other than their teeth. A neodog is supposed to hear, see, and smell and tell his partner what he finds by radio; all he carries is a radio and a destruction bomb with which he (or his partner) can blow the dog up in case of bad wounds or capture.

Those poor dogs didn't wait to be captured; apparently most of them suicided as soon as they made contact. They felt the way I do about the Bugs, only worse. They have neodogs now that are indoctrinated from puppyhood to observe and evade without blowing their tops at the mere sight or smell of a Bug. But these weren't.

But that wasn't all that went wrong. Just name it, it was fouled up. I didn't know what was going on, of course; just stuck close behind Dutch, trying to shoot or flame anything that moved, dropping a grenade down a hole when ever I saw one. Presently I got so that I could kill a Bug without wasting ammo or juice, although I did not learn to distinguish between those that were harmless and those that were not. Only about one in fifty is a warrior but he makes up for the other forty-nine. Their personal weapons aren't as heavy as ours but they are lethal just the same -- they've got a beam that will penetrate armor and slice flesh like cutting a hard-boiled egg, and they co operate even better than we do . . . because the brain that is doing the heavy thinking for a "squad" isn't where you can reach it; it's down one of the holes.

Dutch and I stayed lucky for quite a long time, milling around over an area about a mile square, corking up holes with bombs, killing what we found above surface, saving our jets as much as possible for emergencies. The idea was to secure the entire target and allow the reinforcements and the heavy stuff to come down without important opposition; this was not a raid, this was a battle to establish a beachhead, stand on it, hold it, and enable fresh troops and heavies to capture or pacify the entire planet.

Only we didn't.

Our own section was doing all right. It was in the wrong pew and out of touch with the other section -- the platoon leader and sergeant were dead and we never re-formed. But we had staked out a claim, our special-weapons squad had set up a strong point, and we were ready to turn our real estate over to fresh troops as soon as they showed up.

Only they didn't. They dropped in where we should have dropped, found unfriendly natives and had their own troubles. We never saw them. So we stayed where we were, soaking up casualties from time to time and passing them out ourselves as opportunity offered -- while we ran low on ammo and jump juice and even power to keep the suits moving. This seemed to go on for a couple of thousand years.

Dutch and I were zipping along close to a wall, headed for our special-weapons squad in answer to a yell for help, when the ground suddenly opened in front of Dutch, a Bug popped out, and Dutch went down.

I flamed the Bug and tossed a grenade and the hole closed up, then turned to see what had happened to Dutch. He was down but he didn't look hurt. A platoon sergeant can monitor the physicals on every man in his platoon, sort out the dead from those who merely can't make it unassisted and must be picked up. But you can do the same thing manually from switches right on the belt of a man's suit.

Dutch didn't answer when I called to him. His body temperature read ninety-nine degrees, his respiration, heartbeat, and brain wave read zero -- which looked bad but maybe his suit was dead rather than he himself. Or so I told myself, forgetting that the temperature indicator would give no reading if it were the suit rather than the man. Anyhow, I grabbed the can-opener wrench from my own belt and started to take him out of his suit while trying to watch all around me.

Then I heard an allhands call in my helmet that I never want to hear again. "Sauve qui peut! Home! Home! Pickup and home! Any beacon you can hear. Six minutes! All hands, save yourselves, pick up your mates. Home on any beacon! Sauve qui -- "

I hurried.

His head came off as I tried to drag him out of his suit, so I dropped him and got out of there. On a later drop I would have had sense enough to salvage his ammo, but I was far too sluggy to think; I simply bounced away from there and tried to rendezvous with the strong point we had been heading for.

It was already evacuated and I felt lost . . . lost and deserted. Then I heard recall, not the recall it should have been "Yankee Doodle" (if it had been a boat from the Valley Forge) -- but "Sugar Bush," a tune I didn't know. No matter, it was a beacon; I headed for it, using the last of my jump juice lavishly -- got aboard just as they were about to button up and shortly thereafter was in the Voortrek, in such a state of shock that I couldn't remember my serial number.

I've heard it called a "strategic victory" -- but I was there and I claim we took a terrible licking.

Six weeks later (and feeling about sixty years older) at Fleet Base on Sanctuary I boarded another ground boat and reported for duty to Ship's Sergeant Jelal in the Rodger Young. I was wearing, in my pierced left ear lobe, a broken skull with one bone. Al Jenkins was with me and was wearing one exactly like it (Kitten never made it out of the tube). The few

surviving Wildcats were distributed elsewhere around the Fleet; we had lost half our strength, about, in the collision between the Valley Forge and the Ypres; that disastrous mess on the ground had run our casualties up over 80 per cent and the powers-that-be decided that it was impossible to put the outfit back together with the survivors -- close it out, put the records in the archives, and wait until the scars had healed before reactivating Company K (Wildcats) with new faces but old traditions.

Besides, there were a lot of empty files to fill in other outfits. Sergeant Jelal welcomed us warmly, told us that we were joining a smart outfit, "best in the Fleet," in a taut ship, and didn't seem to notice our ear skulls. Later that day he took us forward to meet the Lieutenant, who smiled rather shyly and gave us a fatherly little talk. I noticed that Al Jenkins wasn't wearing his gold skull. Neither was I -- because I had already noticed that nobody in Rasczak's Roughnecks wore the skulls.

They didn't wear them because, in Rasczak's Roughnecks, it didn't matter in the least how many combat drops you had made, nor which ones; you were either a Roughneck or you weren't -- and if you were not, they didn't care who you were. Since we had come to them not as recruits but as combat veterans, they gave us all possible benefit of doubt and made us welcome with no more than that unavoidable trace of formality anybody necessarily shows to a house guest who is not a member of the family.

But, less than a week later when we had made one combat drop with them, we were full fledged Roughnecks, members of the family, called by our first names, chewed out on occasion without any feeling on either side that we were less than blood brothers thereby, borrowed from and lent to, included in bull sessions and privileged to express our own silly opinions with complete freedom -- and have them slapped down just as freely. We even called non-coms by their first names on any but strictly duty occasions. Sergeant Jelal was always on duty, of course, unless you ran across him dirtside, in which case he was "Jelly" and went out of his way to behave as if his lordly rank meant nothing between Roughnecks.

But the Lieutenant was always "The Lieutenant" -- never "Mr. Rasczak," nor even "Lieutenant Rasczak." Simply "The Lieutenant," spoken to and of in the third person. There was no god but the Lieutenant and Sergeant Jelal was his prophet. Jelly could say "No" in his own person and it might be subject to further argument, at least from junior sergeants, but if he said, "The Lieutenant wouldn't like it," he was speaking ex cathedra and the matter was dropped permanently. Nobody ever tried to check up on whether or not the Lieutenant would or would not like it; the Word had been spoken.

The Lieutenant was father to us and loved us and spoiled us and was nevertheless rather remote from us aboard ship -- and even dirtside . . . unless we reached dirt via a drop. But in a drop well, you wouldn't think that an officer could worry about every man of a platoon spread over a hundred square miles of terrain. But he can. He can worry himself sick over each one of them. How he could keep track of us all I can't describe, but in the midst of a ruckus his voice would sing out over the command circuit:

"Johnson! Check squad six! Smitty's in trouble," and it was better than even money that the Lieutenant had noticed it before Smith's squad leader.

Besides that, you knew with utter and absolute certainty that, as long as you were still alive, the Lieutenant would not get into the retrieval boat without you. There have been prisoners taken in the Bug War, but none from Rasczak's Roughnecks.

Jelly was mother to us and was close to us and took care of us and didn't spoil us at all. But he didn't report us to the Lieutenant -- there was never a court-martial among the Roughnecks and no man was ever flogged. Jelly didn't even pass out extra duty very often; he had other ways of paddling us. He could look you up and down at daily inspection and simply say, "In the Navy you might look good. Why don't you transfer?" -- and get results, it being an article of faith among us that the Navy crew members slept in their uniforms and never washed below their collar lines.

But Jelly didn't have to maintain discipline among privates because he maintained discipline among his non-coms and expected them to do likewise. My squad leader, when I first joined, was "Red" Greene. After a couple of drops, when I knew how good it was to be a Roughneck, I got to feeling gay and a bit too big for my clothes -- and talked back to Red. He didn't report me to Jelly; he just took me back to the washroom and gave me a medium set of lumps, and we got to be pretty good friends. In fact, he recommended me for lance, later on.

Actually we didn't know whether the crew members slept in their clothes or not; we kept to our part of the ship and the Navy men kept to theirs, because they were made to feel unwelcome if they showed up in our country other than on duty -- after all, one has social standards one must maintain, mustn't one? The Lieutenant had his stateroom in male officers' country, a Navy part of the ship, but we never went there, either, except on duty and rarely. We did go forward for guard duty, because the Rodger Young was a mixed ship, female captain and pilot officers, some female Navy ratings; forward of bulkhead thirty was ladies' country -- and two armed M. I. day and night stood guard at the one door cutting it. (At battle stations that door, like all other gastight doors, was secured; nobody missed a drop.)

Officers were privileged to go forward of bulkhead thirty on duty and all officers, including the Lieutenant, ate in a mixed mess just beyond it. But they didn't tarry there; they ate and got out. Maybe other corvette transports were run differently, but that was the way the Rodger Young was run -- both the Lieutenant and Captain Deladrier wanted a taut ship and got it.

Nevertheless guard duty was a privilege. It was a rest to stand beside that door, arms folded, feet spread, doping off and thinking about nothing . . . but always warmly aware that any moment you might see a feminine creature even though you were not privileged to speak to her other than on duty. Once I was called all the way into the Skipper's office and she spoke to me -- she looked right at me and said, "Take this to the Chief Engineer, please."

My daily shipside job, aside from cleaning, was servicing electronic equipment under the close supervision of "Padre" Migliaccio, the section leader of the first section, exactly as I used to work under Carl's eye. Drops didn't happen too often and everybody worked every day. If a man didn't have any other talent he could always scrub bulkheads; nothing was ever quite clean enough to suit Sergeant Jelal. We followed the M. I. rule; everybody fights, everybody works. Our first cook was Johnson, the second section's sergeant, a big friendly boy from Georgia (the one in the western hemisphere, not the other one) and a very talented chef. He wheedled pretty well, too; he liked to eat between meals himself and saw no reason why other people shouldn't.

With the Padre leading one section and the cook leading the other, we were well taken care of, body and soul -- but suppose one of them bought it? Which one would you pick? A nice point that we never tried to settle but could always discuss.

The Rodger Young kept busy and we made a number of drops, all different. Every drop has to be different so that they never can figure out a pattern on you. But no more pitched battles; we operated alone, patrolling, harrying, and raiding. The truth was that the Terran Federation was not then able to mount a large battle; the foul-up with Operation Bughouse had cost too many ships, `way too many trained men. It was necessary to take time to heal up, train more men.

In the meantime, small fast ships, among them the Rodger Young and other corvette transports, tried to be everywhere at once, keeping the enemy off balance, hurting him and running. We suffered casualties and filled our holes when we returned to Sanctuary for more capsules. I still got the shakes every drop, but actual drops didn't happen too often nor were we ever down long -- and between times there were days and days of shipboard life among the Roughnecks.

It was the happiest period of my life although I was never quite consciously aware of it -- I did my full share of beefing just as everybody else did, and enjoyed that, too.

We weren't really hurt until the Lieutenant bought it.

I guess that was the worst time in all my life. I was already in bad shape for a personal reason: My mother had been in Buenos Aires when the Bugs smeared it.

I found out about it one time when we put in at Sanctuary for more capsules and some mail caught up with us a note from my Aunt Eleanora, one that had not been coded and sent fast because she had failed to mark for that; the letter itself came. It was about three bitter lines. Somehow she seemed to blame me for my mother's death. Whether it was my fault because I was in the Armed Services and should have therefore prevented the raid, or whether she felt that my mother had made a trip to Buenos Aires because I wasn't home where I should have been, was not quite clear; she managed to imply both in the same sentence.

I tore it up and tried to walk away from it. I thought that both my

parents were dead -- since Father would never send Mother on a trip that long by herself. Aunt Eleanora had not said so, but she wouldn't have mentioned Father in any case; her devotion was entirely to her sister. I was almost correct -- eventually I learned that Father had planned to go with her but something had come up and he stayed over to settle it, intending to come along the next day. But Aunt Eleanora did not tell me this.

A couple of hours later the Lieutenant sent for me and asked me very gently if I would like to take leave at Sanctuary while the ship went out on her next patrol -- he pointed out that I had plenty of accumulated R&R and might as well use some of it. I don't know how he knew that I had lost a member of my family, but he obviously did. I said no, thank you, sir; I preferred to wait until the outfit all took R&R together.

I'm glad I did it that way, because if I hadn't, I wouldn't have been along when the Lieutenant bought it . . . and that would have been just too much to be borne. It happened very fast and just before retrieval. A man in the third squad was wounded, not badly but he was down; the assistant section leader moved in to pick up -- and bought a small piece of it himself. The Lieutenant, as usual, was watching everything at once -- no doubt he had checked physicals on each of them by remote, but we'll never know. What he did was to make sure that the assistant section leader was still alive; then made pickup on both of them himself, one in each arm of his suit.

He threw them the last twenty feet and they were passed into the retrieval boat -- and with everybody else in, the shield gone and no interdiction, was hit and died instantly.

I haven't mentioned the names of the private and of the assistant section leader on purpose. The Lieutenant was making pickup on all of us, with his last breath. Maybe I was the private. It doesn't matter who he was. What did matter was that our family had had its head chopped off. The head of the family from which we took our name, the father who made us what we were.

After the Lieutenant had to leave us Captain Deladrier invited Sergeant Jelal to eat forward, with the other heads of departments. But he begged to be excused. Have you ever seen a widow with stern character keep her family together by behaving as if the head of the family had simply stepped out and would return at any moment? That's what Jelly did. He was just a touch more strict with us than ever and if he ever had to say: "The Lieutenant wouldn't like that," it was almost more than a man could take. Jelly didn't say it very often.

He left our combat team organization almost unchanged; instead of shifting everybody around, he moved the assistant section leader of the second section over into the (nominal) platoon sergeant spot, leaving his section leaders where they were needed -- with their sections -- and he moved me from lance and assistant squad leader into acting corporal as a largely ornamental assistant section leader. Then he himself behaved as if the Lieutenant were merely out of sight and that he was just passing on the

Lieutenant's orders, as usual.

It saved us.

CHAPTER 11

I have nothing to offer but
blood, toil, tears, and sweat.
-- W. Churchill, XXth century
soldier-statesman

As we came back into the ship after the raid on the Skinnies-the raid in which Dizzy Flores bought it, Sergeant Jelal's first drop as platoon leader -- a ship's gunner who was tending the boat lock spoke to me: "How'd it go?"

"Routine," I answered briefly. I suppose his remark was friendly but I was feeling very mixed up and in no mood to talk -- sad over Dizzy, glad that we had made pickup anyhow, mad that the pickup had been useless, and all of it tangled up with that washed-out but happy feeling of being back in the ship again, able to muster arms and legs and note that they are all present. Besides, how can you talk about a drop to a man who has never made one?

"So?" he answered. "You guys have got it soft. Loaf thirty days, work thirty minutes. Me, I stand a watch in three and turn to."

"Yeah, I guess so," I agreed and turned away. "Some of us are born lucky."

"Soldier, you ain't peddlin' vacuum," he said to my back.

And yet there was much truth in what the Navy gunner had said. We cap troopers are like aviators of the earlier mechanized wars; a long and busy military career could contain only a few hours of actual combat facing the enemy, the rest being: train, get ready, go out -- then come back, clean up the mess, get ready for another one, and practice, practice, practice, in between. We didn't make another drop for almost three weeks and that on a different planet around another star -- a Bug colony. Even with Cherenkov drive, stars are far apart.

In the meantime I got my corporal's stripes, nominated by Jelly and confirmed by Captain Deladrier in the absence of a commissioned officer of our own. Theoretically the rank would not be permanent until approved against vacancy by the Fleet M. I. repple-depple, but that meant nothing, as the casualty rate was such that there were always more vacancies in the T. O. than there were warm bodies to fill them. I was a corporal when Jelly said I was a corporal; the rest was red tape.

But the gunner was not quite correct about "loafing"; there were fifty-three suits of powered armor to check, service, and repair between each drop, not to mention weapons and special equipment. Sometimes Migliaccio would downcheck a suit, Jelly would confirm it, and the ship's weapons engineer, Lieutenant Farley, would decide that he couldn't cure it short of base facilities -- whereupon a new suit would have to be broken out

of stores and brought from "cold" to "hot," an exacting process requiring twenty-six man-hours not counting the time of the man to whom it was being fitted.

We kept busy.

But we had fun, too. There were always several competitions going on, from acey-deucy to Honor Squad, and we

had the best jazz band in several cubic light-years (well, the only one, maybe), with Sergeant Johnson on the trumpet leading them mellow and sweet for hymns or tearing the steel right off the bulkheads, as the occasion required. After that masterful (or should it be "mistressful"?) retrieval rendezvous without a programmed ballistic, the platoon's metalsmith, PFC Archie Campbell, made a model of the Rodger Young for the Skipper and we all signed and Archie engraved our signatures on a base plate: To Hot Pilot Yvette Deladrier, with thanks from Rasczak's Roughnecks, and we invited her aft to eat with us and the Roughneck Downbeat Combo played during dinner and then the junior private presented it to her. She got tears and kissed him -- and kissed Jelly as well and he blushed purple.

After I got my chevrons I simply had to get things straight with Ace, because Jelly kept me on as assistant section leader. This is not good. A man ought to fill each spot on his way up; I should have had a turn as squad leader instead of being bumped from lance and assistant squad leader to corporal and assistant section leader. Jelly knew this, of course, but I know perfectly well that he was trying to keep the outfit as much as possible the way it had been when the Lieutenant was alive -- which meant that he left his squad leaders and section leaders unchanged.

But it left me with a ticklish problem; all three of the corporals under me as squad leaders were actually senior to me -- but if Sergeant Johnson bought it on the next drop, it would not only lose us a mighty fine cook, it would leave me leading the section. There mustn't be any shadow of doubt when you give an order, not in combat; I had to clear up any possible shadow before we dropped again.

Ace was the problem. He was not only senior of the three, he was a career corporal as well and older than I was. If Ace accepted me, I wouldn't have any trouble with the other two squads.

I hadn't really had any trouble with him aboard. After we made pickup on Flores together he had been civil enough. On the other hand we hadn't had anything to have trouble over; our shipside jobs didn't put us together, except at daily muster and guard mount, which is all cut and dried. But you can feel it. He was not treating me as somebody he took orders from.

So I looked him up during off hours. He was lying in his bunk, reading a book, Space Rangers against the Galaxy -- a pretty good yarn, except that I doubt if a military outfit ever had so many adventures and so few goof-offs. The ship had a good library.

"Ace. Got to see you."

He glanced up. "So? I just left the ship, I'm off duty."

"I've got to see you now. Put your book down."

"What's so aching urgent? I've got to finish this chapter."

"Oh, come off it, Ace. If you can't wait, I'll tell you how it comes out."

"You do and I'll clobber you." But he put the book down, sat up, and listened.

I said, "Ace, about this matter of the section organization -- you're senior to me, you ought to be assistant section leader."

"Oh, so it's that again!"

"Yep. I think you and I ought to go see Johnson and get him to fix it up with Jelly."

"You do, eh?"

"Yes, I do. That's how it's got to be."

"So? Look, Shortie, let me put you straight. I got nothing against you at all. Matter of fact, you were on the bounce that day we had to pick up Dizzy; I'll hand you that. But if you want a squad, you go dig up one of your own. Don't go eying mine. Why, my boys wouldn't even peel potatoes for you."

"That's your final word?"

"That's my first, last, and only word."

I sighed. "I thought it would be. But I had to make sure. Well, that settles that. But I've got one other thing on my mind. I happened to notice that the washroom needs cleaning . . . and I think maybe you and I ought to attend to it. So put your book aside . . . as Jelly says, non-coms are always on duty."

He didn't stir at once. He said quietly, "You really think it's necessary, Shortie? As I said, I got nothing against you."

"Looks like."

"Think you can do it?"

"I can sure try."

"Okay. Let's take care of it."

We went aft to the washroom, chased out a private who was about to take a shower he didn't really need, and locked the door. Ace said, "You got any restrictions in mind, Shortie?"

"Well . . . I hadn't planned to kill you."

"Check. And no broken bones, nothing that would keep either one of us out of the next drop -- except maybe by accident, of course. That suit you?"

"Suits," I agreed. "Uh, I think maybe I'll take my shirt off."

"Wouldn't want to get blood on your shirt." He relaxed. I started to peel it off and he let go a kick for my kneecap. No wind up. Flat-footed and not tense.

Only my kneecap wasn't there -- I had learned.

A real fight ordinarily can last only a second or two, because that is all the time it takes to kill a man, or knock him out, or disable him to the point where he can't fight. But we had agreed to avoid inflicting permanent damage; this changes things. We were both young, in top condition, highly trained, and used to absorbing punishment. Ace was bigger, I was maybe a

touch faster. Under such conditions the miserable business simply has to go on until one or the other is too beaten down to continue -- unless a fluke settles it sooner. But neither one of us was allowing any flukes; we were professionals and wary.

So it did go on, for a long, tedious, painful time. Details would be trivial and pointless; besides, I had no time to take notes.

A long time later I was lying on my back and Ace was flipping water in my face. He looked at me, then hauled me to my feet, shoved me against a bulkhead, steadied me. "Hit me!"

"Huh?" I was dazed and seeing double.

"Johnnie . . . hit me."

His face was floating in the air in front of me; I zeroed in on it and slugged it with all the force in my body, hard enough to mash any mosquito in poor health. His eyes closed and he slumped to the deck and I had to grab at a stanchion to keep from following him.

He got slowly up. "Okay, Johnnie," he said, shaking his head, "I've had my lesson. You won't have any more lip out of me . . . nor out of anybody in the section. Okay?"

I nodded and my head hurt.

"Shake?" he asked.

We shook on it, and that hurt, too.

Almost anybody else knew more about how the war was going than we did, even though we were in it. This was the period, of course, after the Bugs had located our home planet, through the Skinnies, and had raided it, destroying Buenos Aires and turning "contact troubles" into all-out war, but before we had built up our forces and before the Skinnies had changed sides and become our co-belligerents and de facto allies. Partly effective interdiction for Terra had been set up from Luna (we didn't know it), but speaking broadly, the Terran Federation was losing the war.

We didn't know that, either. Nor did we know that strenuous efforts were being made to subvert the alliance against us and bring the Skinnies over to our side; the nearest we came to being told about that was when we got instructions, before the raid in which Flores was killed, to go easy on the Skinnies, destroy as much property as possible but to kill inhabitants only when unavoidable.

What a man doesn't know he can't spill if he is captured; neither drugs, nor torture, nor brainwash, nor endless lack of sleep can squeeze out a secret he doesn't possess. So we were told only what we had to know for tactical purposes. In the past, armies have been known to fold up and quit because the men didn't know what they were fighting for, or why, and therefore lacked the will to fight. But the M. I. does not have that weakness. Each one of us was a volunteer to begin with, each for some reason or other -- some good, some bad. But now we fought because we were M. I. We were professionals, with esprit de corps. We were Rasczak's Roughnecks, the best unprintable outfit in the whole expurgated M. I.; we climbed into our capsules because Jelly told us it was time to do so and we fought when we

got down there because that is what Rasczak's Roughnecks do.

We certainly didn't know that we were losing.

Those Bugs lay eggs. They not only lay them, they hold them in reserve, hatch them as needed. If we killed a warrior -- or a thousand, or ten thousand -- his or their replacements were hatched and on duty almost before we could get back to base. You can imagine, if you like, some Bug supervisor of population flashing a phone to somewhere down inside and saying, "Joe, warm up ten thousand warriors and have `em ready by Wednesday . . . and tell engineering to activate reserve incubators N, O, P, Q, and R; the demand is picking up."

I don't say they did exactly that, but those were the results. But don't make the mistake of thinking that they acted purely from instinct, like termites or ants; their actions were as intelligent as ours (stupid races don't build spaceships!) and were much better co ordinated. It takes a minimum of a year to train a private to fight and to mesh his fighting in with his mates; a Bug warrior is hatched able to do this.

Every time we killed a thousand Bugs at a cost of one M. I. it was a net victory for the Bugs. We were learning, expensively, just how efficient a total communism can be when used by a people actually adapted to it by evolution; the Bug commissars didn't care any more about expending soldiers than we cared about expending ammo. Perhaps we could have figured this out about the Bugs by noting the grief the Chinese Hegemony gave the Russo-Anglo-American Alliance; however the trouble with "lessons from history" is that we usually read them best after falling flat on our chins.

But we were learning. Technical instructions and tactical doctrine orders resulted from every brush with them, spread through the Fleet. We learned to tell the workers from the warriors -- if you had time, you could tell from the shape of the carapace, but the quick rule of thumb was: If he comes at you, he's a warrior; if he runs, you can turn your back on him. We learned not to waste ammo even on warriors except in self-protection; instead we went after their lairs. Find a hole, drop down it first a gas bomb which explodes gently a few seconds later, releasing an oily liquid which evaporates as a nerve gas tailored to Bugs (it is harmless to us) and which is heavier than air and keeps on going down -- then you use a second grenade of H. E. to seal the hole.

We still didn't know whether we were getting deep enough to kill the queens -- but we did know that the Bugs didn't like these tactics; our intelligence through the Skinnies and on back into the Bugs themselves was definite on this point. Besides, we cleaned their colony off Sheol completely this way. Maybe they managed to evacuate the queens and the brains . . . but at least we were learning to hurt them.

But so far as the Roughnecks were concerned, these gas bombings were simply another drill, to be done according to orders, by the numbers, and on the bounce.

Eventually we had to go back to Sanctuary for more capsules. Capsules are expendable (well, so were we) and when they are gone, you must return to

base, even if the Cherenkov generators could still take you twice around the Galaxy. Shortly before this a dispatch came through breveting Jelly to lieutenant, vice Rasczak. Jelly tried to keep it quiet but Captain Deladrier published it and then required him to eat forward with the other officers. He still spent all the rest of his time aft.

But we had taken several drops by then with him as platoon leader and the outfit had gotten used to getting along without the Lieutenant -- it still hurt but it was routine now. After Jelal was commissioned the word was slowly passed around among us and chewed over that it was time for us to name ourselves for our boss, as with other outfits.

Johnson was senior and took the word to Jelly; he picked me to go along with him as moral support. "Yeah?" growled Jelly.

"Uh, Sarge -- I mean Lieutenant, we've been thinking -- "

"With what?"

"Well, the boys have sort of been talking it over and they think -- well, they say the outfit ought to call itself: `Jelly's Jaguars.' "

"They do, eh? How many of `em favor that name?"

"It's unanimous," Johnson said simply.

"So? Fifty-two ayes . . . and one no. The noes have it." Nobody ever brought up the subject again.

Shortly after that we orbited at Sanctuary. I was glad to be there, as the ship's internal pseudo-gravity field had been off for most of two days before that, while the Chief Engineer tinkered with it, leaving us in free fall -- which I hate. I'll never be a real spaceman. Dirt underfoot felt good. The entire platoon went on ten days' rest & recreation and transferred to accommodation barracks at the Base.

I never have learned the co-ordinates of Sanctuary, nor the name or catalogue number of the star it orbits -- because what you don't know, you can't spill; the location is ultra-top-secret, known only to ships' captains, piloting officers, and such . . . and, I understand, with each of them under orders and hypnotic compulsion to suicide if necessary to avoid capture. So I don't want to know. With the possibility that Luna Base might be taken and Terra herself occupied, the Federation kept as much of its beef as possible at Sanctuary, so that a disaster back home would not necessarily mean capitulation.

But I can tell you what sort of a planet it is. Like Earth, but retarded.

Literally retarded, like a kid who takes ten years to learn to wave bye-bye and never does manage to master patty-cake. It is a planet as near like Earth as two planets can be, same age according to the planetologists and its star is the same age as the Sun and the same type, so say the astrophysicists. It has plenty of flora and fauna, the same atmosphere as Earth, near enough, and much the same weather; it even has a good-sized moon and Earth's exceptional tides.

With all these advantages it barely got away from the starting gate. You see, it's short on mutations; it does not enjoy Earth's high level of

natural radiation.

Its typical and most highly developed plant life is a very primitive giant fern; its top animal life is a proto-insect which hasn't even developed colonies. I am not speaking of transplanted Terran flora and fauna -- our stuff moves in and brushes the native stuff aside.

With its evolutionary progress held down almost to zero by lack of radiation and a consequent most unhealthily low mutation rate, native life forms on Sanctuary just haven't had a decent chance to evolve and aren't fit to compete. Their gene patterns remain fixed for a relatively long time; they aren't adaptable -- like being forced to play the same bridge hand over and over again, for eons, with no hope of getting a better one.

As long as they just competed with each other, this didn't matter too much -- morons among morons, so to speak. But when types that had evolved on a planet enjoying high radiation and fierce competition were introduced, the native stuff was outclassed.

Now all the above is perfectly obvious from high school biology . . . but the high forehead from the research station there who was telling me about this brought up a point I would never have thought of.

What about the human beings who have colonized Sanctuary?

Not transients like me, but the colonists who live there, many of whom were born there, and whose descendants will live there, even into the umpteenth generation -- what about those descendants? It doesn't do a person any harm not to be radiated; in fact it's a bit safer -- leukemia and some types of cancer are almost unknown there. Besides that, the economic situation is at present all in their favor; when they plant a field of (Terran) wheat, they don't even have to clear out the weeds. Terran wheat displaces anything native.

But the descendants of those colonists won't evolve. Not much, anyhow. This chap told me that they could improve a little through mutation from other causes, from new blood added by immigration, and from natural selection among the gene patterns they already own -- but that is all very minor compared with the evolutionary rate on Terra and on any usual planet. So what happens? Do they stay frozen at their present level while the rest of the human race moves on past them, until they are living fossils, as out of place as a pithecanthropus in a spaceship?

Or will they worry about the fate of their descendants and dose themselves regularly with X-rays or maybe set off lots of dirty-type nuclear explosions each year to build up a fallout reservoir in their atmosphere? (Accepting, of course, the immediate dangers of radiation to themselves in order to provide a proper genetic heritage of mutation for the benefit of their descendants.)

This bloke predicted that they would not do anything. He claims that the human race is too individualistic, too self-centered, to worry that much about future generations. He says that the genetic impoverishment of distant generations through lack of radiation is something most people are simply incapable of worrying about. And of course it is a far-distant threat;

evolution works so slowly, even on Terra, that the development of a new species is a matter of many, many thousands of years.

I don't know. Shucks, I don't know what I myself will do more than half the time; how can I predict what a colony of strangers will do? But I'm sure of this: Sanctuary is going to be fully settled, either by us or by the Bugs. Or by somebody. It is a potential utopia, and, with desirable real estate so scarce in this end of the Galaxy, it will not be left in the possession of primitive life forms that failed to make the grade.

Already it is a delightful place, better in many ways for a few days R & R than is most of Terra. In the second place, while it has an awful lot of civilians, more than a million, as civilians go they aren't bad. They know there is a war on. Fully half of them are employed either at the Base or in war industry; the rest raise food and sell it to the Fleet. You might say they have a vested interest in war, but, whatever their reasons, they respect the uniform and don't resent the wearers

thereof. Quite the contrary. If an M. I. walks into a shop there, the proprietor calls him "Sir," and really seems to mean it, even while he's trying to sell something worthless at too high a price.

But in the first place, half of those civilians are female.

You have to have been out on a long patrol to appreciate this properly. You need to have looked forward to your day of guard duty, for the privilege of standing two hours out of each six with your spine against bulkhead thirty and your ears cocked for just the sound of a female voice. I suppose it's actually easier in the all-stag ships . . . but I'll take the Rodger Young. It's good to know that the ultimate reason you are fighting actually exists and that they are not just a figment of the imagination.

Besides the civilian wonderful 50 per cent, about 40 per cent of the Federal Service people on Sanctuary are female. Add it all up and you've got the most beautiful scenery in the explored universe.

Besides these unsurpassed natural advantages, a great deal has been done artificially to keep R & R from being wasted. Most of the civilians seem to hold two jobs; they've got circles under their eyes from staying up all night to make a service man's leave pleasant. Churchill Road from the Base to the city is lined both sides with enterprises intended to separate painlessly a man from money he really hasn't any use for anyhow, to the pleasant accompaniment of refreshment, entertainment, and music.

If you are able to get past these traps, through having already been bled of all valuta, there are still other places in the city almost as satisfactory (I mean there are girls there, too) which are provided free by a grateful populace -- much like the social center in Vancouver, these are, but even more welcome.

Sanctuary, and especially Espiritu Santo, the city, struck me as such an ideal place that I toyed with the notion of asking for my discharge there when my term was up after all, I didn't really care whether my descendants (if any) twenty-five thousand years hence had long green tendrils like everybody else, or just the equipment I had been forced to get by with. That

professor type from the Research Station couldn't frighten me with that no radiation scare talk; it seemed to me (from what I could see around me) that the human race had reached its ultimate peak anyhow.

No doubt a gentleman wart hog feels the same way about a lady wart hog -- but, if so, both of us are very sincere.

There are other opportunities for recreation there, too. I remember with particular pleasure one evening when a table of Roughnecks got into a friendly discussion with a group of Navy men (not from the Rodger Young) seated at the next table. The debate was spirited, a bit noisy, and some Base police came in and broke it up with stun guns just as we were warming to our rebuttal. Nothing came of it, except that we had to pay for the furniture -- the Base Commandant takes the position that a man on R & R should be allowed a little freedom as long as he doesn't pick one of the "thirty-one crash landings."

The accommodation barracks are all right, too -- not fancy, but comfortable and the chow line works twenty-five hours a day with civilians doing all the work. No reveille, no taps, you're actually on leave and you don't have to go to the barracks at all. I did, however, as it seemed downright preposterous to spend money on hotels when there was a clean, soft sack free and so many better ways to spend accumulated pay. That extra hour in each day was nice, too, as it meant nine hours solid and the day still untouched -- I caught up sack time clear back to Operation Bughouse.

It might as well have been a hotel; Ace and I had a room all to ourselves in visiting non-com quarters. One morning, when R & R was regrettably drawing to a close, I was just turning over about local noon when Ace shook my bed. "On the bounce, soldier! The Bugs are attacking."

I told him what to do with the Bugs.

"Let's hit dirt," he persisted.

"No dinero." I had had a date the night before with a chemist (female, of course, and charmingly so) from the Research Station. She had known Carl on Pluto and Carl had written to me to look her up if I ever got to Sanctuary. She was a slender redhead, with expensive tastes. Apparently Carl had intimated to her that I had more money than was good for me, for she decided that the night before was just the time for her to get acquainted with the local champagne. I didn't let Carl down by admitting that all I had was a trooper's honorarium; I bought it for her while I drank what they said was (but wasn't) fresh pineapple squash. The result was that I had to walk home, afterwards -- the cabs aren't free. Still, it had been worth it. After all, what is money? -- I'm speaking of Bug money, of course.

"No ache," Ace answered. "I can juice you -- I got lucky last night. Ran into a Navy file who didn't know percentages."

So I got up and shaved and showered and we hit the chow line for half a dozen shell eggs and sundries such as potatoes and ham and hot cakes and so forth and then we hit dirt to get something to eat. The walk up Churchill Road was hot and Ace decided to stop in a cantina. I went along to see if their pineapple squash was real. It wasn't, but it was cold. You can't have

everything.

We talked about this and that and Ace ordered another round. I tried their strawberry squash -- same deal. Ace stared into his glass, then said, "Ever thought about greasing for officer?"

I said, "Huh? Are you crazy?"

"Nope. Look, Johnnie, this war may run on quite a piece. No matter what propaganda they put out for the folks at home, you and I know that the Bugs aren't ready to quit. So why don't you plan ahead? As the man says, if you've got to play in the band, it's better to wave the stick than to carry the big drum."

I was startled by the turn the talk had taken, especially from Ace. "How about you? Are you planning to buck for a commission?"

"Me?" he answered. "Check your circuits, son -- you're getting wrong answers. I've got no education and I'm ten years older than you are. But you've got enough education to hit the selection exams for O. C. S. and you've got the I. Q. they like. I guarantee that if you go career, you'll make sergeant before I do . . . and get picked for O. C. S. the day after."

"Now I know you're crazy!"

"You listen to your pop. I hate to tell you this, but you are just stupid and eager and sincere enough to make the kind of officer that men love to follow into some silly predicament. But me -- well, I'm a natural non-com, with the proper pessimistic attitude to offset the enthusiasm of the likes of you. Someday I'll make sergeant . . . and presently I'll have my twenty years in and retire and get one of the reserved jobs -- cop, maybe -- and marry a nice fat wife with the same low tastes I have, and I'll follow the sports and fish and go pleasantly to pieces."

Ace stopped to wet his whistle. "But you," he went on. "You'll stay in and probably make high rank and die gloriously and I'll read about it and say proudly, `I knew him when. Why, I used to lend him money -- we were corporals together.' Well?"

"I've never thought about it," I said slowly. "I just meant to serve my term."

He grinned sourly. "Do you see any term enrollees being paid off today? You expect to make it on two years?"

He had a point. As long as the war continued, a "term" didn't end -- at least not for cap troopers. It was mostly a difference in attitude, at least for the present. Those of us on "term" could at least feel like short-timers; we could talk about: "When this flea-bitten war is over." A career man didn't say that; he wasn't going anywhere, short of retirement or buying it.

On the other hand, neither were we. But if you went "career" and then didn't finish twenty . . . well, they could be pretty sticky about your franchise even though they wouldn't keep a man who didn't want to stay.

"Maybe not a two-year term," I admitted. "But the war won't last forever."

"It won't?"

"How can it?"

"Blessed if I know. They don't tell me these things. But I know that's not what is troubling you, Johnnie. You got a girl waiting?"

"No. Well, I had," I answered slowly, "but she `Dear-Johned' me." As a lie, this was no more than a mild decoration, which I tucked in because Ace seemed to expect it. Carmen wasn't my girl and she never waited for anybody -- but she did address letters with "Dear Johnnie" on the infrequent occasions when she wrote to me.

Ace nodded wisely. "They'll do it every time. They'd rather marry civilians and have somebody around to chew out when they feel like it. Never you mind, son -- you'll find plenty of them more than willing to marry when you're retired . . . and you'll be better able to handle one at that age. Marriage is a young man's disaster and an old man's comfort." He looked at my glass. "It nauseates me to see you drinking that slop."

"I feel the same way about the stuff you drink," I told him.

He shrugged. "As I say, it takes all kinds. You think it over."

"I will."

Ace got into a card game shortly after, and lent me some money and I went for a walk; I needed to think.

Go career? Quite aside from that noise about a commission, did I want to go career? Why, I had gone through all this to get my franchise, hadn't I? -- and if I went career, I was just as far away from the privilege of voting as if I had never enrolled . . . because as long as you were still in uniform you weren't entitled to vote. Which was the way it should be, of course why, if they let the Roughnecks vote, the idiots might vote not to make a drop. Can't have that.

Nevertheless I had signed up in order to win a vote.

Or had I?

Had I ever cared about voting? No, it was the prestige, the pride, the status . . . of being a citizen.

Or was it?

I couldn't to save my life remember why I had signed up. Anyhow, it wasn't the process of voting that made a citizen -- the Lieutenant had been a citizen in the truest sense of the word, even though he had not lived long enough ever to cast a ballot. He had "voted" every time he made a drop.

And so had I!

I could hear Colonel Dubois in my mind: "Citizenship is an attitude, a state of mind, an emotional conviction that the whole is greater than the part . . . and that the part should be humbly proud to sacrifice itself that the whole may live."

I still didn't know whether I yearned to place my one-and-only body "between my loved home and the war's desolation" -- I still got the shakes every drop and that "desolation" could be pretty desolate. But nevertheless I knew at last what Colonel Dubois had been talking about. The M. I. was mine and I was theirs. If that was what the M. I. did to break the monotony, then that was what I did. Patriotism was a bit esoteric for me, too

large-scale to see. But the M. I. was my gang, I belonged. They were all the family I had left; they were the brothers I had never had, closer than Carl had ever been. If I left them, I'd be lost.

So why shouldn't I go career?

All right, all right -- but how about this nonsense of greasing for a commission? That was something else again. I could see myself putting in twenty years and then taking it easy, the way Ace had described, with ribbons on my chest and carpet slippers on my feet . . . or evenings down at the Veterans Hall, rehashing old times with others who belonged. But O. C. S.? I could hear Al Jenkins, in one of the bull sessions we had about such things: "I'm a private! I'm going to stay a private! When you're a private they don't expect anything of you. Who wants to be an officer? Or even a sergeant? You're breathing the same air, aren't you? Eating the same food. Going the same places, making the same drops. But no worries."

Al had a point. What had chevrons ever gotten me? -- aside from lumps.

Nevertheless I knew I would take sergeant if it was ever offered to me. You don't refuse, a cap trooper doesn't refuse anything; he steps up and takes a swing at it. Commission, too, I supposed.

Not that it would happen. Who was I to think that I could ever be what Lieutenant Rasczak had been?

My walk had taken me close to the candidates' school, though I don't believe I intended to come that way. A company of cadets were out on their parade ground, drilling at trot, looking for all the world like boots in Basic. The sun was hot and it looked not nearly as comfortable as a bull session in the drop room of the Rodger Young -- why, I hadn't marched farther than bulkhead thirty since I had finished Basic; that breaking-in nonsense was past.

I watched them a bit, sweating through their uniforms; I heard them being chewed out -- by sergeants, too. Old Home Week. I shook my head and walked away from there -- went back to the accommodation barracks, over to the B. O. Q. wing, found Jelly's room.

He was in it, his feet up on a table and reading a magazine. I knocked on the frame of the door. He looked up and growled, "Yeah?"

"Sarge -- I mean, Lieutenant -- "

"Spit it out!"

"Sir, I want to go career."

He dropped his feet to the desk. "Put up your right hand."

He swore me, reached unto the drawer of the table and pulled out papers.

He had my papers already made out, waiting for me, ready to sign. And I hadn't even told Ace. How about that?

CHAPTER 12

It is by no means enough that an officer should be capable . . . .

He should be as well a gentleman of liberal education, refined

manners, punctilious courtesy, and the nicest sense of personal honor . . . . No meritorious act of a subordinate should escape his attention, even if the reward be only one word of approval. Conversely, he should not be blind to a single fault in any subordinate.

True as may be the political principles for which we are now contending . . . the ships themselves must be ruled under a system of absolute despotism.

I trust that I have now made clear to you the tremendous responsibilities . . . . We must do the best we can with what we have.

-- John Paul Jones, September 14, 1775;
excerpts from a letter to the naval committee of
the N. A. insurrectionists.

The Rodger Young was again returning to Base for replacements, both capsules and men. Al Jenkins had bought his farm, covering a pickup and that one had cost us the Padre, too. And besides that, I had to be replaced. I was wearing brand-new sergeant's chevrons (vice Migliaccio) but I had a hunch that Ace would be wearing them as soon as I was out of the ship -- they were mostly honorary, I knew; the promotion was Jelly's way of giving me a good send-off as I was detached for O. C. S.

But it didn't keep me from being proud of them. At the Fleet landing field I went through the exit gate with my nose in the air and strode up to the quarantine desk to have my orders stamped. As this was being done I heard a polite, respectful voice behind me: "Excuse me, Sergeant, but that boat that just came down -- is it from the Rodger -- "

I turned to see the speaker, flicked my eyes over his sleeves, saw that it was a small, slightly stoop-shouldered corporal, no doubt one of our --

"Father!"

Then the corporal had his arms around me. "Juan! Juan! Oh, my little Johnnie!"

I kissed him and hugged him and started to cry. Maybe that civilian clerk at the quarantine desk had never seen two non-coms kiss each other before. Well, if I had noticed him so much as lifting an eyebrow, I would have pasted him. But I didn't notice him; I was busy. He had to remind me to take my orders with me.

By then we had blown our noses and quit making an open spectacle of ourselves. I said, "Father, let's find a corner somewhere and sit down and talk. I want to know . . . well, everything!" I took a deep breath. "I thought you were dead."

"No. Came close to buying it once or twice, maybe. But, Son . . . Sergeant -- I really do have to find out about that landing boat. You see -- "

"Oh, that. It's from the Rodger Young. I just --

He looked terribly disappointed. "Then I've got to bounce, right now. I've got to report in." Then he added eagerly, "But you'll be back aboard

soon, won't you, Juanito? Or are you going on R & R?"

"Uh, no." I thought fast. Of all the ways to have things roll! "Look, Father, I know the boat schedule. You can't go aboard for at least an hour and a bit. That boat is not on a fast retrieve; she'll make a minimum-fuel rendezvous when the Rog completes this pass -- if the pilot doesn't have to wait over for the next pass after that; they've got to load first."

He said dubiously, "My orders read to report at once to the pilot of the first available ship's boat."

"Father, Father! Do you have to be so confounded regulation? The girl who's pushing that heap won't care whether you board the boat now, or just as they button up. Anyhow they'll play the ship's recall over the speakers in here ten minutes before boost and announce it. You can't miss it."

He let me lead him over to an empty corner. As we sat down he added, "Will you be going up in the same boat, Juan? Or later?"

"Uh -- " I showed him my orders; it seemed the simplest way to break the news. Ships that pass in the night, like the Evangeline story -- cripes, what a way for things to break!

He read them and got tears in his eyes and I said hastily, "Look, Father, I'm going to try to come back -- I wouldn't want any other outfit than the Roughnecks. And with you in them . . . oh, I know it's disappointing but -- "

"It's not disappointment, Juan."

"Huh?"

"It's pride. My boy is going to be an officer. My little Johnnie -- Oh, it's disappointment, too; I had waited for this day. But I can wait a while longer." He smiled through his tears. "You've grown, lad. And filled out, too."

"Uh, I guess so. But, Father, I'm not an officer yet and I might only be out of the Rog a few days. I mean, they sometimes bust `em out pretty fast and -- "

"Enough of that, young man!"

"Huh?"

"You'll make it. Let's have no more talk of `busting out.' " Suddenly he smiled. "That's the first time I've been able to tell a sergeant to shut up."

"Well . . . I'll certainly try, Father. And if I do make it, I'll certainly put in for the old Rog. But -- " I trailed off.

"Yes, I know. Your request won't mean anything unless there's a billet for you. Never mind. If this hour is all we have, we'll make the most of it -- and I'm so proud of you I'm splitting my seams. How have you been, Johnnie?"

"Oh, fine, just fine." I was thinking that it wasn't all bad. He would be better off in the Roughnecks than in any other outfit. All my friends . . . they'd take care of him, keep him alive. I'd have to send a gram to Ace -- Father like as not wouldn't even let them know he was related. "Father, how long have you been in?"

"A little over a year."

"And corporal already!"

Father smiled grimly. "They're making them fast these days."

I didn't have to ask what he meant. Casualties. There were always vacancies in the T. O.; you couldn't get enough trained soldiers to fill them. Instead I said, "Uh . . . but, Father, you're -- Well, I mean, aren't you sort of old to be soldiering? I mean the Navy, or Logistics, or -- "

"I wanted the M. I. and I got it!" he said emphatically. "And I'm no older than many sergeants -- not as old, in fact. Son, the mere fact that I am twenty-two years older than you are doesn't put me in a wheel chair. And age has its advantages, too."

Well, there was something in that. I recalled how Sergeant Zim had always tried the older men first, when he was dealing out boot chevrons. And Father would never have goofed in Basic the way I had -- no lashes for him. He was probably spotted as non-com material before he ever finished Basic. The Army needs a lot of really grown-up men in the middle grades; it's a paternalistic organization.

I didn't have to ask him why he had wanted M. I., nor why or how he had wound up in my ship -- I just felt warm about it, more `flattered by it than any praise he had ever given me in words. And I didn't want to ask him why he had joined up; I felt that I knew. Mother. Neither of us had mentioned her -- too painful.

So I changed the subject abruptly. "Bring me up to date. Tell me where you've been and what you've done."

"Well, I trained at Camp San Martin -- "

"Huh? Not Currie?"

"New one. But the same old lumps, I understand. Only they rush you through two months faster, you don't get Sundays off. Then I requested the Rodger Young -- and didn't get it -- and wound up in McSlattery's Volunteers. A good outfit."

"Yes, I know." They had had a reputation for being rough, tough, and nasty -- almost as good as the Roughnecks.

"I should say that it was a good outfit. I made several drops with them and some of the boys bought it and after a while I got these." He glanced at his chevrons. "I was a corporal when we dropped on Sheol -- "

"You were there? So was I!" With a sudden warm flood of emotion I felt closer to my father than I ever had before in my life.

"I know. At least I knew your outfit was there. I was around fifty miles north of you, near as I can guess. We soaked up that counterattack when they came boiling up out of the ground like bats out of a cave." Father shrugged. "So when it was over I was a corporal without an outfit, not enough of us left to make a healthy cadre. So they sent me here. I could have gone with King's Kodiak Bears, but I had a word with the placement sergeant -- and, sure as sunrise, the Rodger Young came back with a billet for a corporal. So here I am."

"And when did you join up?" I realized that it was the wrong remark as

soon as I had made it -- but I had to get the subject away from McSlattery's Volunteers; an orphan from a dead outfit wants to forget it.

Father said quietly, "Shortly after Buenos Aires."

"Oh. I see."

Father didn't say anything for several moments. Then he said softly, "I'm not sure that you do see, Son."

"Sir?"

"Mmm . . . it will not be easy to explain. Certainly, losing your mother had a great deal to do with it. But I didn't enroll to avenge her -- even though I had that in mind, too. You had more to do with it -- "

"Me?"

"Yes, you. Son, I always understood what you were doing better than your mother did -- don't blame her; she never had a chance to know, any more than a bird can understand swimming. And perhaps I knew why you did it, even though I beg to doubt that you knew yourself, at the time. At least half of my anger at you was sheer resentment . . . that you had actually done something that I knew, buried deep in my heart, I should have done. But you weren't the cause of my joining up, either . . . you merely helped trigger it and you did control the service I chose."

He paused. "I wasn't in good shape at the time you enrolled. I was seeing my hypnotherapist pretty regularly -- you never suspected that, did you? -- but we had gotten no farther than a clear recognition that I was enormously dissatisfied. After you left, I took it out on you -- but it was not you, and I knew it and my therapist knew it. I suppose I knew that there was real trouble brewing earlier than most; we were invited to bid on military components fully a month before the state of emergency was announced. We had converted almost entirely to war production while you were still in training.

"I felt better during that period, worked to death and too busy to see my therapist. Then I became more troubled than ever." He smiled. "Son, do you know about civilians?"

"Well . . . we don't talk the same language. I know that."

"Clearly enough put. Do you remember Madame Ruitman? I was on a few days leave after I finished Basic and I went home. I saw some of our friends, said good-by -- she among them. She chattered away and said, `So you're really going out? Well, if you reach Faraway, you really must look up my dear friends the Regatos.' "

"I told her, as gently as I could, that it seemed unlikely, since the Arachnids had occupied Faraway.

"It didn't faze her in the least. She said, `Oh, that's all right -- they're civilians!' " Father smiled cynically.

"Yes, I know."

"But I'm getting ahead of my story. I told you that I was getting still more upset. Your mother's death released me for what I had to do . . . even though she and I were closer than most, nevertheless it set me free to do it. I turned the business over to Morales -- "

"Old man Morales? Can he handle it?"

"Yes. Because he has to. A lot of us are doing things we didn't know we could. I gave him a nice chunk of stock -- you know the old saying about the king that tread the grain -- and the rest I split two ways, in a trust: half to the Daughters of Charity, half to you whenever you want to go back and take it. If you do. Never mind. I had at last found out what was wrong with me." He stopped, then said very softly, "I had to perform an act of faith. I had to prove to myself that I was a man. Not just a producing-consuming economic animal . . . but a man."

At that moment, before I could answer anything, the wall speakers around us sang: " -- shines the name, shines the name of Rodger Young!" and a girl's voice added, "Personnel for F. C. T. Rodger Young, stand to boat. Berth H. Nine minutes."

Father bounced to his feet, grabbed his kit roll. "That's mine! Take care of yourself, Son -- and hit those exams. Or you'll find you're still not too big to paddle."

"I will, Father."

He embraced me hastily. "See you when we get back!" And he was gone, on the bounce.

In the Commandant's outer office I reported to a fleet sergeant who looked remarkably like Sergeant Ho, even to lacking an arm. However, he lacked Sergeant Ho's smile as well. I said, "Career Sergeant Juan Rico, to report to the Commandant pursuant to orders."

He glanced at the clock. "Your boat was down seventy-three minutes ago. Well?"

So I told him. He pulled his lip and looked at me meditatively. "I've heard every excuse in the book. But you've just added a new page. Your father, your own father, really was reporting to your old ship just as you were detached?"

"The bare truth, Sergeant. You can check it -- Corporal Emilio Rico."

"We don't check the statements of the `young gentlemen' around here. We simply cashier them if it ever turns out that they have not told the truth. Okay, a boy who wouldn't be late in order to see his old man off wouldn't be worth much in any case. Forget it."

"Thanks, Sergeant. Do I report to the Commandant now?"

"You've reported to him." He made a check mark on a list. "Maybe a month from now he'll send for you along with a couple of dozen others. Here's your room assignment, here's a checkoff list you start with -- and you can start by cutting off those chevrons. But save them; you may need them later. But as of this moment you are `Mister,' not `Sergeant.' "

"Yes, sir."

"Don't call me `sir.' I call you `sir.' But you won't like it."

I am not going to describe Officer Candidates School. It's like Basic, but squared and cubed with books added. In the mornings we behaved like privates, doing the same old things we had done in Basic and in combat and being chewed out for the way we did them -- by sergeants. In the afternoons

we were cadets and "gentlemen," and recited on and were lectured concerning an endless list of subjects: math, science, galactography, xenology, hypnopedia, logistics, strategy and tactics, communications, military law, terrain reading, special weapons, psychology of leadership, anything from the care and feeding of privates to why Xerxes lost the big one. Most especially how to be a one-man catastrophe yourself while keeping track of fifty other men, nursing them, loving them, leading them, saving them -- but never babying them. We had beds, which we used all too little; we had rooms and showers and inside plumbing; and each four candidates had a civilian servant, to make our beds and clean our rooms and shine our shoes and lay out our uniforms and run errands. This service was not intended as a luxury and was not; its purpose was to give the student more time to accomplish the plainly impossible by relieving him of things any graduate of Basic can already do perfectly.

Six days shalt thou work and do all thou art able,
The seventh the same and pound on the cable.

Or the Army version ends: -- and clean out the stable, which shows you how many centuries this sort of thing has been going on. I wish I could catch just one of those civilians who think we loaf and put them through one month of O. C. S.

In the evenings and all day Sundays we studied until our eyes burned and our ears ached -- then slept (if we slept) with a hypnopedic speaker droning away under the pillow.

Our marching songs were appropriately downbeat: "No Army for mine, no Army for mine! I'd rather be behind the plow any old time!" and "Don't wanta study war no more," and "Don't make my boy a soldier, the weeping mother cried," and -- favorite of all -- the old classic "Gentlemen Rankers" with its chorus about the Little Lost Sheep: " -- God ha' pity on such as we. Baa! Yah! Bah!"

Yet somehow I don't remember being unhappy. Too busy, I guess. There was never that psychological "hump" to get over, the one everybody hits in Basic; there was simply the ever-present fear of flunking out. My poor preparation in math bothered me especially. My roommate, a colonial from Hesperus with the oddly appropriate name of "Angel," sat up night after night, tutoring me.

Most of the instructors, especially the officers, were disabled. The only ones I can remember who had a full complement of arms, legs, eyesight, hearing, etc., were some of the non-commissioned combat instructors -- and not all of those. Our coach in dirty fighting sat in a powered chair, wearing a plastic collar, and was completely paralyzed from the neck down. But his tongue wasn't paralyzed, his eye was photographic, and the savage way in which he could analyze and criticize what he had seen made up for his minor impediment.

At first I wondered why these obvious candidates for physical retirement and full-pay pension didn't take it and go home. Then I quit wondering.

I guess the high point in my whole cadet course was a visit from Ensign Ibanez, she of the dark eyes, junior watch officer and pilot-under-instruction of the Corvette Transport Mannerheim. Carmencita showed up, looking incredibly pert in Navy dress whites and about the size of a paperweight, while my class was lined up for evening meal muster -- walked down the line and you could hear eyeballs click as she passed -- walked straight up to the duty officer and asked for me by name in a clear, penetrating voice.

The duty officer, Captain Chandar, was widely believed never to have smiled at his own mother, but he smiled down at little Carmen, straining his face out of shape, and admitted my existence . . . whereupon she waved her long black lashes at him, explained that her ship was about to boost and could she please take me out to dinner?

And I found myself in possession of a highly irregular and totally unprecedented three-hour pass. It may be that the Navy has developed hypnosis techniques that they have not yet gotten around to passing on to the Army. Or her secret weapon may be older than that and not usable by M. I. In any case I not only had a wonderful time but my prestige with my classmates, none too high until then, climbed to amazing heights.

It was a glorious evening and well worth flunking two classes the next day. It was somewhat dimmed by the fact that we had each heard about Carl -- killed when the Bugs smashed our research station on Pluto -- but only somewhat, as we had each learned to live with such things.

One thing did startle me. Carmen relaxed and took off her hat while we were eating, and her blue-black hair was all gone. I knew that a lot of the Navy girls shaved their heads -- after all, it's not practical to take care of long hair in a war ship and, most especially, a pilot can't risk having her hair floating around, getting in the way, in any free-fall maneuvers. Shucks, I shaved my own scalp, just for convenience and cleanliness. But my mental picture of little Carmen included this mane of thick, wavy hair.

But, do you know, once you get used to it, it's rather cute. I mean, if a girl looks all right to start with, she still looks all right with her head smooth. And it does serve to set a Navy girl apart from civilian chicks -- sort of a lodge pin, like the gold skulls for combat drops. It made Carmen look distinguished, gave her dignity, and for the first time I fully realized that she really was an officer and a fighting man -- as well as a very pretty girl.

I got back to barracks with stars in my eyes and whiffing slightly of perfume. Carmen had kissed me good-by.

The only O. C. S. classroom course the content of which I'm even going to mention was: History and Moral Philosophy.

I was surprised to find it in the curriculum. H. & M. P. has nothing to do with combat and how to lead a platoon; its connection with war (where it is connected) is in why to fight -- a matter already settled for any candidate long before he reaches O. C. S. An M. I. fights because he is M. I.

I decided that the course must be a repeat for the benefit of those of us (maybe a third) who had never had it in school. Over 20 per cent of my cadet class were not from Terra (a much higher percentage of colonials sign up to serve than do people born on Earth -- sometimes it makes you wonder) and of the three quarters or so from Terra, some were from associated territories and other places where H. & M. P. might not be taught. So I figured it for a cinch course which would give me a little rest from tough courses, the ones with decimal points.

Wrong again. Unlike my high school course, you had to pass it. Not by examination, however. The course included examinations and prepared papers and quizzes and such -- but no marks. What you had to have was the instructor's opinion that you were worthy of commission.

If he gave you a downcheck, a board sat on you, questioning not merely whether you could be an officer but whether you belonged in the Army at any rank, no matter how fast you might be with weapons -- deciding whether to give you extra instruction . . . or just kick you out and let you be a civilian.

History and Moral Philosophy works like a delayed-action bomb. You wake up in the middle of the night and think: Now what did he mean by that? That had been true even with my high school course; I simply hadn't known what Colonel Dubois was talking about. When I was a kid I thought it was silly for the course to be in the science department. It was nothing like physics or chemistry; why wasn't it over in the fuzzy studies where it belonged? The only reason I paid attention was because there were such lovely arguments.

I had no idea that "Mr." Dubois was trying to teach me why to fight until long after I had decided to fight anyhow.

Well, why should I fight? Wasn't it preposterous to expose my tender skin to the violence of unfriendly strangers? Especially as the pay at any rank was barely spending money, the hours terrible, and the working conditions worse? When I could be sitting at home while such matters were handled by thick-skulled characters who enjoyed such games? Particularly when the strangers against whom I fought never had done anything to me personally until I showed up and started kicking over their tea wagon -- what sort of nonsense is this?

Fight because I'm an M. I.? Brother, you're drooling like Dr. Pavlov's dogs. Cut it out and start thinking.

Major Reid, our instructor, was a blind man with a disconcerting habit of looking straight at you and calling you by name. We were reviewing events after the war between the Russo-Anglo-American Alliance and the Chinese Hegemony, 1987 and following. But this was the day that we heard the news of the destruction of San Francisco and the San Joaquin Valley; I thought he would give us a pep talk. After all, even a civilian ought to be able to figure it out now -- the Bugs or us. Fight or die.

Major Reid didn't mention San Francisco. He had one of us apes summarize the negotiated treaty of New Delhi, discuss how it ignored prisoners of war . . . and, by implication, dropped the subject forever; the

armistice became a stalemate and prisoners stayed where they were -- on one side; on the other side they were turned loose and, during the Disorders, made their way home -- or not if they didn't want to.

Major Reid's victim summed up the unreleased prisoners: survivors of two divisions of British paratroopers, some thousands of civilians, captured mostly in Japan, the Philippines, and Russia and sentenced for "political" crimes.

"Besides that, there were many other military prisoners," Major Reid's victim went on, "captured during and before the war -- there were rumors that some had been captured in an earlier war and never released. The total of unreleased prisoners was never known. The best estimates place the number around sixty-five thousand."

"Why the `best'?"

"Uh, that's the estimate in the textbook, sir."

"Please be precise in your language. Was the number greater or less than one hundred thousand?"

"Uh, I don't know, sir."

"And nobody else knows. Was it greater than one thousand?"

"Probably, sir. Almost certainly."

"Utterly certain -- because more than that eventually escaped, found their ways home, were tallied by name. I see you did not read your lesson carefully. Mr. Rico!"

Now I was the victim. "Yes, sir."

"Are a thousand unreleased prisoners sufficient reason to start or resume a war? Bear in mind that millions of innocent people may die, almost certainly will die, if war is started or resumed."

I didn't hesitate. "Yes, sir! More than enough reason."

" `More than enough.' Very well, is one prisoner, unreleased by the enemy, enough reason to start or resume a war?"

I hesitated. I knew the M. I. answer -- but I didn't think that was the one he wanted. He said sharply, "Come, come, Mister! We have an upper limit of one thousand; I invited you to consider a lower limit of one. But you can't pay a promissory note which reads `somewhere between one and one thousand pounds' -- and starting a war is much more serious than paying a trifle of money. Wouldn't it be criminal to endanger a country -- two countries in fact -- to save one man? Especially as he may not deserve it? Or may die in the meantime? Thousands of people get killed every day in accidents . . . so why hesitate over one man? Answer! Answer yes, or answer no -- you're holding up the class."

He got my goat. I gave him the cap trooper's answer. "Yes, sir!"

" `Yes' what?"

"It doesn't matter whether it's a thousand -- or just one, sir. You fight."

"Aha! The number of prisoners is irrelevant. Good. Now prove your answer."

I was stuck. I knew it was the right answer. But I didn't know why. He

kept hounding me. "Speak up, Mr. Rico. This is an exact science. You have made a mathematical statement; you must give proof. Someone may claim that you have asserted, by analogy, that one potato is worth the same price, no more, no less, as one thousand potatoes. No?"

"No, sir!"

"Why not? Prove it."

"Men are not potatoes."

"Good, good, Mr. Rico! I think we have strained your tired brain enough for one day. Bring to class tomorrow a written proof, in symbolic logic, of your answer to my original question. I'll give you a hint. See reference seven in today's chapter. Mr. Salomon! How did the present political organization evolve out of the Disorders? And what is its moral justification?"

Sally stumbled through the first part. However, nobody can describe accurately how the Federation came about; it just grew. With national governments in collapse at the end of the XXth century, something had to fill the vacuum, and in many cases it was returned veterans. They had lost a war, most of them had no jobs, many were sore as could be over the terms of the Treaty of New Delhi, especially the P. O. W. foul-up -- and they knew how to fight. But it wasn't revolution; it was more like what happened in Russia in 1917 -- the system collapsed; somebody else moved in.

The first known case, in Aberdeen, Scotland, was typical. Some veterans got together as vigilantes to stop rioting and looting, hanged a few people (including two veterans) and decided not to let anyone but veterans on their committee. Just arbitrary at first -- they trusted each other a bit, they didn't trust anyone else. What started as an emergency measure became constitutional practice . . . in a generation or two.

Probably those Scottish veterans, since they were finding it necessary to hang some veterans, decided that, if they had to do this, they weren't going to let any "bleedin', profiteering, black-market, double-time-for-overtime, army-dodging, unprintable" civilians have any say about it. They'd do what they were told, see? -- while us apes straightened things out! That's my guess, because I might feel the same way . . . and historians agree that antagonism between civilians and returned soldiers was more intense than we can imagine today.

Sally didn't tell it by the book. Finally Major Reid cut him off. "Bring a summary to class tomorrow, three thousand words. Mr. Salomon, can you give me a reason -- not historical nor theoretical but practical -- why the franchise is today limited to discharged veterans?"

"Uh, because they are picked men, sir. Smarter."

"Preposterous!"

"Sir?"

"Is the word too long for you? I said it was a silly notion. Service men are not brighter than civilians. In many cases civilians are much more intelligent. That was the sliver of justification underlying the attempted coup d'etat just before the Treaty of New Delhi, the so-called `Revolt of

the Scientists': let the intelligent elite run things and you'll have utopia. It fell flat on its foolish face of course. Because the pursuit of science, despite its social benefits, is itself not a social virtue; its practitioners can be men so self-centered as to be lacking in social responsibility. I've given you a hint, Mister; can you pick it up?"

Sally answered, "Uh, service men are disciplined, sir."

Major Reid was gentle with him. "Sorry. An appealing theory not backed up by facts. You and I are not permitted to vote as long as we remain in the Service, nor is it verifiable that military discipline makes a man self-disciplined once he is out; the crime rate of veterans is much like that of civilians. And you have forgotten that in peacetime most veterans come from non-combatant auxiliary services and have not been subjected to the full rigors of military discipline; they have merely been harried, overworked, and endangered -- yet their votes count."

Major Reid smiled. "Mr. Salomon, I handed you a trick question. The practical reason for continuing our system is the same as the practical reason for continuing anything: It works satisfactorily.

"Nevertheless, it is instructive to observe the details. Throughout history men have labored to place the sovereign franchise in hands that would guard it well and use it wisely, for the benefit of all. An early attempt was absolute monarchy, passionately defended as the `divine right of kings.'

"Sometimes attempts were made to select a wise monarch, rather man leave it up to God, as when the Swedes picked a Frenchman, General Bernadotte, to rule them. The objection to this is that the supply of Bernadottes is limited.

"Historic examples range from absolute monarch to utter anarch; mankind has tried thousands of ways and many more have been proposed, some weird in the extreme such as the antlike communism urged by Plato under the misleading title The Republic. But the intent has always been moralistic: to provide stable and benevolent government.

"All systems seek to achieve this by limiting franchise to those who are believed to have the wisdom to use it justly. I repeat `all systems'; even the so-called `unlimited democracies' excluded from franchise not less than one quarter of their populations by age, birth, poll tax, criminal record, or other."

Major Reid smiled cynically. "I have never been able to see how a thirty-year old moron can vote more wisely than a fifteen-year-old genius . . . but that was the age of the `divine right of the common man.' Never mind, they paid for their folly.

"The sovereign franchise has been bestowed by all sorts of rules -- place of birth, family of birth, race, sex, property, education, age, religion, et cetera. All these systems worked and none of them well. All were regarded as tyrannical by many, all eventually collapsed or were overthrown.

"Now here are we with still another system . . . and our system works

quite well. Many complain but none rebel; personal freedom for all is greatest in history, laws are few, taxes are low, living standards are as high as productivity permits, crime is at its lowest ebb. Why? Not because our voters are smarter than other people; we've disposed of that argument. Mr. Tammany can you tell us why our system works better than any used by our ancestors?"

I don't know where Clyde Tammany got his name; I'd take him for a Hindu. He answered, "Uh, I'd venture to guess that it's because the electors are a small group who know that the decisions are up to them . . . so they study the issues."

"No guessing, please; this is exact science. And your guess is wrong. The ruling nobles of many another system were a small group fully aware of their grave power. Furthermore, our franchised citizens are not everywhere a small fraction; you know or should know that the percentage of citizens among adults ranges from over eighty per cent on Iskander to less than three per cent in some Terran nations yet government is much the same everywhere. Nor are the voters picked men; they bring no special wisdom, talent, or training to their sovereign tasks. So what difference is there between our voters and wielders of franchise in the past? We have had enough guesses; I'll state the obvious: Under our system every voter and officeholder is a man who has demonstrated through voluntary and difficult service that he places the welfare of the group ahead of personal advantage.

"And that is the one practical difference."

"He may fail in wisdom, he may lapse in civic virtue. But his average performance is enormously better than that of any other class of rulers in history."

Major Reid paused to touch the face of an old-fashioned watch, "reading" its hands. "The period is almost over and we have yet to determine the moral reason for our success in governing ourselves. Now continued success is never a matter of chance. Bear in mind that this is science, not wishful thinking; the universe is what it is, not what we want it to be. To vote is to wield authority; it is the supreme authority from which all other authority derives -- such as mine to make your lives miserable once a day. Force, if you will! -- the franchise is force, naked and raw, the Power of the Rods and the Ax. Whether it is exerted by ten men or by ten billion, political authority is force."

"But this universe consists of paired dualities. What is the converse of authority? Mr. Rico."

He had picked one I could answer. "Responsibility, sir."

"Applause. Both for practical reasons and for mathematically verifiable moral reasons, authority and responsibility must be equal -- else a balancing takes place as surely as current `flows between points of unequal potential. To permit irresponsible authority is to sow disaster; to hold a man responsible for anything he does not control is to behave with blind idiocy. The unlimited democracies were unstable because their citizens were not responsible for the fashion in which they exerted their sovereign

authority . . . other than through the tragic logic of history. The unique `poll tax' that we must pay was unheard of. No attempt was made to determine whether a voter was socially responsible to the extent of his literally unlimited authority. If he voted the impossible, the disastrous possible happened instead -- and responsibility was then forced on him willy-nilly and destroyed both him and his foundationless temple."

"Superficially, our system is only slightly different; we have democracy unlimited by race, color, creed, birth, wealth, sex, or conviction, and anyone may win sovereign power by a usually short and not too arduous term of service -- nothing more than a light workout to our cave-man ancestors. But that slight difference is one between a system that works, since it is constructed to match the facts, and one that is inherently unstable. Since sovereign franchise is the ultimate in human authority, we insure that all who wield it accept the ultimate in social responsibility -- we require each person who wishes to exert control over the state to wager his own life -- and lose it, if need be -- to save the life of the state. The maximum responsibility a human can accept is thus equated to the ultimate authority a human can exert. Yin and yang, perfect and equal."

The Major added, "Can anyone define why there has never been revolution against our system? Despite the fact that every government in history has had such? Despite the notorious fact that complaints are loud and unceasing?"

One of the older cadets took a crack at it. "Sir, revolution is impossible."

"Yes. But why?"

"Because revolution -- armed uprising -- requires not only dissatisfaction but aggressiveness. A revolutionist has to be willing to fight and die -- or he's just a parlor pink. If you separate out the aggressive ones and make them the sheep dogs, the sheep will never give you trouble."

"Nicely put! Analogy is always suspect, but that one is close to the facts. Bring me a mathematical proof tomorrow. Time for one more question -- you ask it and I'll answer. Anyone?"

"Uh, sir, why not go -- well, go the limit? Require everyone to serve and let everybody vote?"

"Young man, can you restore my eyesight?"

"Sir? Why, no, sir!"

"You would find it much easier than to instill moral virtue -- social responsibility -- into a person who doesn't have it, doesn't want it, and resents having the burden thrust on him. This is why we make it so hard to enroll, so easy to resign. Social responsibility above the level of family, or at most of tribe, requires imagination -- devotion, loyalty, all the higher virtues -- which a man must develop himself; if he has them forced down him, he will vomit them out. Conscript armies have been tried in the past. Look up in the library the psychiatric report on brainwashed prisoners

in the so called `Korean War,' circa 1950 -- the Mayer Report. Bring an analysis to class." He touched his watch. "Dismissed."

Major Reid gave us a busy time.

But it was interesting. I caught one of those master's thesis assignments he chucked around so casually; I had suggested that the Crusades were different from most wars. I got sawed off and handed this: Required: to prove that war and moral perfection derive from the same genetic inheritance.

Briefly, thus: All wars arise from population pressure. (Yes, even the Crusades, though you have to dig into trade routes and birth rate and several other things to prove it.) Morals -- all correct moral rules derive from the instinct to survive; moral behavior is survival behavior above the individual level -- as in a father who dies to save his children. But since population pressure results from the process of surviving through others, then war, because it results from population pressure, derives from the same inherited instinct which produces all moral rules suitable for human beings.

Check of proof: Is it possible to abolish war by relieving population pressure (and thus do away with the all-too evident evils of war) through constructing a moral code under which population is limited to resources?

Without debating the usefulness or morality of planned parenthood, it may be verified by observation that any breed which stops its own increase gets crowded out by breeds which expand. Some human populations did so, in Terran history, and other breeds moved in and engulfed them.

Nevertheless, let's assume that the human race manages to balance birth and death, just right to fit its own planets, and thereby becomes peaceful. What happens?

Soon (about next Wednesday) the Bugs move in, kill off this breed which "ain'ta gonna study war no more" and the universe forgets us. Which still may happen. Either we spread and wipe out the Bugs, or they spread and wipe us out -- because both races are tough and smart and want the same real estate.

Do you know how fast population pressure could cause us to fill the entire universe shoulder to shoulder? The answer will astound you, just the flicker of an eye in terms of the age of our race.

Try it -- it's a compound-interest expansion.

But does Man have any "right" to spread through the universe?

Man is what he is, a wild animal with the will to survive, and (so far) the ability, against all competition. Unless one accepts that, anything one says about morals, war, politics -- you name it -- is nonsense. Correct morals arise from knowing what Man is -- not what do gooders and well-meaning old Aunt Nellies would like him to be.

The universe will let us know -- later -- whether or not Man has any "right" to expand through it.

In the meantime the M. I. will be in there, on the bounce and swinging, on the side of our own race.

Toward the end each of us was shipped out to serve under an experienced

combat commander. This was a semifinal examination, your `board-ship instructor could decide that you didn't have what it takes. You could demand a board but I never heard of anybody who did; they either came back with an upcheck or we never saw them again.

Some hadn't failed; it was just that they were killed -- because assignments were to ships about to go into action. We were required to keep kit bags packed -- once at lunch, all the cadet officers of my company were tapped; they left without eating and I found myself cadet company commander.

Like boot chevrons, this is an uncomfortable honor, but in less than two days my own call came.

I bounced down to the Commandant's office, kit bag over my shoulder and feeling grand. I was sick of late hours and burning eyes and never catching up, of looking stupid in class; a few weeks in the cheerful company of a combat team was just what Johnnie needed!

I passed some new cadets, trotting to class in close formation, each with the grim look that every O. C. S. candidate gets when he realizes that possibly he made a mistake in bucking for officer, and I found myself singing. I shut up when I was within earshot of the office.

Two others were there, Cadets Hassan and Byrd. Hassan the Assassin was the oldest man in our class and looked like something a fisherman had let out of a bottle, while Birdie wasn't much bigger than a sparrow and about as intimidating.

We were ushered into the Holy of Holies. The Commandant was in his wheel chair -- we never saw him out of it except Saturday inspection and parade, I guess walking hurt. But that didn't mean you didn't see him -- you could be working a prob at the board, turn around and find that wheel chair behind you, and Colonel Nielssen reading your mistakes.

He never interrupted -- there was a standing order not to shout "Attention!" But it's disconcerting. There seemed to be about six of him.

The Commandant had a permanent rank of fleet general (yes, that Nielssen); his rank as colonel was temporary, pending second retirement, to permit him to be Commandant. I once questioned a paymaster about this and confirmed what the regulations seemed to say: The Commandant got only the pay of a colonel -- but would revert to the pay of a fleet general on the day he decided to retire again.

Well, as Ace says, it takes all sorts -- I can't imagine choosing half pay for the privilege of riding herd on cadets.

Colonel Nielssen looked up and said, "Morning, gentlemen. Make yourselves comfortable." I sat down but wasn't comfortable. He glided over to a coffee machine, drew four cups, and Hassan helped him deal them out. I didn't want coffee but a cadet doesn't refuse the Commandant's hospitality.

He took a sip. "I have your orders, gentlemen," he announced, "and your temporary commissions." He went on, "But I want to be sure you understand your status."

We had already been lectured about this. We were going to be officers just enough for instruction and testing -- "supernumerary, probationary, and

temporary." Very junior, quite superfluous, on good behavior, and extremely temporary; we would revert to cadet when we got back and could be busted at any time by the officers examining us.

We would be "temporary third lieutenants" -- a rank as necessary as feet on a fish, wedged into the hairline between fleet sergeants and real officers. It is as low as you can get and still be called an "officer." If anybody ever saluted a third lieutenant, the light must have been bad.

"Your commission reads `third lieutenant,' " he went on, "but your pay stays the same, you continue to be addressed as `Mister,' the only change in uniform is a shoulder pip even smaller than cadet insignia. You continue under instruction since it has not yet been settled that you are fit to be officers." The Colonel smiled. "So why call you a `third lieutenant'?"

I had wondered about that. Why this whoopty-do of "commissions" that weren't real commissions?

Of course I knew the textbook answer.

"Mr. Byrd?" the Commandant said.

"Uh . . . to place us in the line of command, sir."

"Exactly!" Colonel glided to a T. O. on one wall. It was the usual pyramid, with chain of command defined all the way down. "Look at this -- " He pointed to a box connected to his own by a horizontal line; it read: ASSISTANT TO COMMANDANT (Miss Kendrick).

"Gentlemen," he went on, "I would have trouble running this place without Miss Kendrick. Her head is a rapid-access file to everything that happens around here." He touched a control on his chair and spoke to the air. "Miss Kendrick, what mark did Cadet Byrd receive in military law last term?"

Her answer came back at once: "Ninety-three per cent, Commandant."

"Thank you." He continued, "You see? I sign anything if Miss Kendrick has initialed it. I would hate to have an investigating committee find out how often she signs my name and I don't even see it. Tell me, Mr. Byrd . . . if I drop dead, does Miss Kendrick carry on to keep things moving?"

"Why, uh -- " Birdie looked puzzled. "I suppose, with routine matters, she would do what was necess -- "

"She wouldn't do a blessed thing!" the Colonel thundered. "Until Colonel Chauncey told her what to do -- his way. She is a very smart woman and understands what you apparently do not, namely, that she is not in the line of command and has no authority."

He went on, " `Line of command' isn't just a phrase; it's as real as a slap in the face. If I ordered you to combat as a cadet the most you could do would be to pass along somebody else's orders. If your platoon leader bought it and you then gave an order to a private -- a good order, sensible and wise -- you would be wrong and he would be just as wrong if he obeyed it. Because a cadet cannot be in the line of command. A cadet has no military existence, no rank, and is not a soldier. He is a student who will become a soldier -- either an officer, or at his formal rank. While he is under Army discipline, he is not in the Army. That is why -- "

A zero. A nought with no rim. If a cadet wasn't even in the Army -- "Colonel!"

"Eh? Speak up, young man. Mr. Rico."

I had startled myself but I had to say it. "But . . . if we aren't in the Army . . . then we aren't M. I. Sir?"

He blinked at me. "This worries you?"

"I, uh, don't believe I like it much, sir." I didn't like it at all. I felt naked.

"I see." He didn't seem displeased. "You let me worry about the space-lawyer aspects of it, son."

"But -- "

"That's an order. You are technically not an M. I. But the M. I. hasn't forgotten you; the M. I. never forgets its own no matter where they are. If you are struck dead this instant, you will be cremated as Second Lieutenant Juan Rico, Mobile Infantry, of -- " Colonel Nielssen stopped. "Miss Kendrick, what was Mr. Rico's ship?"

"The Rodger Young."

"Thank you." He added, " -- in and of TFCT Rodger Young, assigned to mobile combat team Second Platoon of George Company, Third Regiment, First Division, M. I. -- the `Roughnecks,' " he recited with relish, not consulting anything once he had been reminded of my ship. "A good outfit, Mr. Rico -- proud and nasty. Your Final Orders go back to them for Taps and that's the way your name would read in Memorial Hall. That's why we always commission a dead cadet, son -- so we can send him home to his mates."

I felt a surge of relief and homesickness and missed a few words. ". . . lip buttoned while I talk, we'll have you back in the M. I. where you belong. You must be temporary officers for your `prentice cruise because there is no room for dead-heads in a combat drop. You'll fight -- and take orders -- and give orders. Legal orders, because you will hold rank and be ordered to serve in that team; that makes any order you give in carrying out your assigned duties as binding as one signed by the C-in-C.

"Even more, " the Commandant went on, "once you are in line of command, you must be ready instantly to assume higher command. If you are in a one-platoon team -- quite likely in the present state of the war -- and you are assistant platoon leader when your platoon leader buys it . . . then . . . you . . . are . . . It!"

He shook his head. "Not `acting platoon leader.' Not a cadet leading a drill. Not a `junior officer under instruction.' Suddenly you are the Old Man, the Boss, Commanding Officer Present -- and you discover with a sickening shock that fellow human beings are depending on you alone to tell them what to do, how to fight, how to complete the mission and get out alive. They wait for the sure voice of command -- while seconds trickle away -- and it's up to you to be that voice, make decisions, give the right orders . . . and not only the right ones but in a calm, unworried tone. Because it's a cinch, gentlemen, that your team is in trouble -- bad trouble! -- and a strange voice with panic in it can turn the best combat

team in the Galaxy into a leaderless, lawless, fear-crazed mob.

"The whole merciless load will land without warning. You must act at once and you'll have only God over you. Don't expect Him to fill in tactical details; that's your job. He'll be doing all that a soldier has a right to expect if He helps you keep the panic you are sure to feel out of your voice."

The Colonel paused. I was sobered and Birdie was looking terribly serious and awfully young and Hassan was scowling. I wished that I were back in the drop room of the Rog, with not too many chevrons and an after-chow bull session in full swing. There was a lot to be said for the job of assistant section leader -- when you come right to it, it's a lot easier to die than it is to use your head.

The Commandant continued: "That's the Moment of Truth, gentlemen. Regrettably there is no method known to military science to tell a real officer from a glib imitation with pips on his shoulders, other than through ordeal by fire. Real ones come through -- or die gallantly; imitations crack up.

"Sometimes, in cracking up, the misfits die. But the tragedy lies in the loss of others . . . good men, sergeants and corporals and privates, whose only lack is fatal bad fortune in finding themselves under the command of an incompetent.

"We try to avoid this. First is our unbreakable rule that every candidate must be a trained trooper, blooded under fire, a veteran of combat drops. No other army in history has stuck to this rule, although some came close. Most great military schools of the past -- Saint Cyr, West Point, Sandhurst, Colorado Springs didn't even pretend to follow it; they accepted civilian boys, trained them, commissioned them, sent them out with no battle experience to command men . . . and sometimes discovered too late that this smart young `officer' was a fool, a poltroon, or a hysteric.

"At least we have no misfits of those sorts. We know you are good soldiers -- brave and skilled, proved in battle else you would not be here. We know that your intelligence and education meet acceptable minimums. With this to start on, we eliminate as many as possible of the not-quite-competent -- get them quickly back in ranks before we spoil good cap troopers by forcing them beyond their abilities. The course is very hard -- because what will be expected of you later is still harder.

"In time we have a small group whose chances look fairly good. The major criterion left untested is one we cannot test here; that undefinable something which is the difference between a leader in battle . . . and one who merely has the earmarks but not the vocation. So we field-test for it.

"Gentlemen! -- you have reached that point. Are you ready to take the oath?"

There was an instant of silence, then Hassan the Assassin answered firmly, "Yes, Colonel," and Birdie and I echoed.

The Colonel frowned. "I have been telling you how wonderful you are -- physically perfect, mentally alert, trained, disciplined, blooded. The very

model of the smart young officer -- " He snorted. "Nonsense! You may become officers someday. I hope so . . . we not only hate to waste money and time and effort, but also, and much more important, I shiver in my boots every time I send one of you half-baked not-quite-officers up to the Fleet, knowing what a Frankensteinian monster I may be turning loose on a good combat team. If you understood what you are up against, you wouldn't be so all-fired ready to take the oath the second the question is put to you. You may turn it down and force me to let you go back to your permanent ranks. But you don't know.

"So I'll try once more. Mr. Rico! Have you ever thought how it would feel to be court-martialed for losing a regiment?"

I was startled silly. "Why -- No, sir, I never have." To be court-martialed -- for any reason -- is eight times as bad for an officer as for an enlisted man. Offenses which will get privates kicked out (maybe with lashes, possibly without) rate death in an officer. Better never to have been born!

"Think about it," he said grimly. "When I suggested that your platoon leader might be killed, I was by no means citing the ultimate in military disaster. Mr. Hassan! What is the largest number of command levels ever knocked out in a single battle?"

The Assassin scowled harder than ever. "I'm not sure, sir. Wasn't there a while during Operation Bughouse when a major commanded a brigade, before the Sove-ki-poo?"

"There was and his name was Fredericks. He got a decoration and a promotion. If you go back to the Second Global War, you can find a case in which a naval junior officer took command of a major ship and not only fought it but sent signals as if he were admiral. He was vindicated even though there were officers senior to him in line of command who were not even wounded. Special circumstances -- a breakdown in communications. But I am thinking of a case in which four levels were wiped out in six minutes -- as if a platoon leader were to blink his eyes and find himself commanding a brigade. Any of you heard of it?"

Dead silence.

"Very well. It was one of those bush wars that hared up on the edges of the Napoleonic wars. This young officer was the most junior in a naval vessel -- wet navy, of course -- wind-powered, in fact. This youngster was about the age of most of your class and was not commissioned. He carried the title of temporary third lieutenant' -- note that this is the title you are about to carry. He had no combat experience; there were four officers in the chain of command above him. When the battle started his commanding officer was wounded. The kid picked him up and carried him out of the line of fire. That's all -- make pickup on a comrade. But he did it without being ordered to leave his post. The other officers all bought it while he was doing this and he was tried for `deserting his post of duty as commanding officer in the presence of the enemy.' Convicted. Cashiered."

I gasped. "For that? Sir."

"Why not? True, we make pickup. But we do it under different circumstances from a wet-navy battle, and by orders to the man making pickup. But pickup is never an excuse for breaking off battle in the presence of the enemy. This boy's family tried for a century and a half to get his conviction reversed. No luck, of course. There was doubt about some circumstances but no doubt that he had left his post during battle without orders. True, he was green as grass -- but he was lucky not to be hanged." Colonel Nielssen fixed me with a cold eye. "Mr. Rico -- could this happen to you?"

I gulped. "I hope not, sir."

"Let me tell you how it could on this very `prentice cruise. Suppose you are in a multiple-ship operation, with a full regiment in the drop. Officers drop first, of course. There are advantages to this and disadvantages, but we do it for reasons of morale; no trooper ever hits the ground on a hostile planet without an officer. Assume the Bugs know this -- and they may. Suppose they work up some trick to wipe out those who hit the ground first . . . but not good enough to wipe out the whole drop. Now suppose, since you are a supernumerary, you have to take any vacant capsule instead of being fired with the first wave. Where does that leave you?"

"Uh, I'm not sure, sir."

"You have just inherited command of a regiment. What are you going to do? With your command, Mister? Talk fast -- the Bugs won't wait!"

"Uh . . ." I caught an answer right out of the book and parroted it. "I'll take command and act as circumstances permit, sir, according to the tactical situation as I see it."

"You will, eh?" The Colonel grunted. "And you'll buy a farm too that's all anybody can do with a foul-up like that. But I hope you'll go down swinging -- and shouting orders to somebody, whether they make sense or not. We don't expect kittens to fight wildcats and win -- we merely expect them to try. All right, stand up. Put up your right hands."

He struggled to his feet. Thirty seconds later we were officers -- "temporary, probationary, and supernumerary."

I thought he would give us our shoulder pips and let us go. We aren't supposed to buy them -- they're a loan, like the temporary commission they represent. Instead he lounged back and looked almost human.

"See here, lads -- I gave you a talk on how rough it's going to be. I want you to worry about it, doing it in advance, planning what steps you might take against any combination of bad news that can come your way, keenly aware that your life belongs to your men and is not yours to throw away in a suicidal reach for glory . . . and that your life isn't yours to save, either, if the situation requires that you expend it. I want you to worry yourself sick before a drop, so that you can be unruffled when the trouble starts.

"Impossible, of course. Except for one thing. What is the only factor that can save you when the load is too heavy? Anyone?"

Nobody answered.

"Oh, come now!" Colonel Nielssen said scornfully. "You aren't recruits. Mr. Hassan!"

"Your leading sergeant, sir," the Assassin said slowly.

"Obviously. He's probably older than you are, more drops under his belt, and he certainly knows his team better than you do. Since he isn't carrying that dreadful, numbing load of top command, he may be thinking more clearly than you are. Ask his advice. You've got one circuit just for that.

"It won't decrease his confidence in you; he's used to being consulted. If you don't, he'll decide you are a fool, a cocksure know-it-all -- and he'll be right.

"But you don't have to take his advice. Whether you use his ideas, or whether they spark some different plan -- make your decision and snap out orders. The one thing -- the only thing! -- that can strike terror in the heart of a good platoon sergeant is to find that he's working for a boss who can't make up his mind.

"There never has been an outfit in which officers and men were more dependent on each other than they are in the M. I., and sergeants are the glue that holds us together. Never forget it."

The Commandant whipped his chair around to a cabinet near his desk. It contained row on row of pigeonholes, each with a little box. He pulled out one and opened it. "Mr. Hassan -- "

"Sir?"

"These pips were worn by Captain Terence O'Kelly on his `prentice cruise. Does it suit you to wear them?"

"Sir?" The Assassin's voice squeaked and I thought the big lunk was going to break into tears. "Yes, sir!"

"Come here." Colonel Nielssen pinned them on, then said, "Wear them as gallantly as he did . . . but bring them back. Understand me?"

"Yes, sir. I'll do my best."

"I'm sure you will. There's an air car waiting on the roof and your boat boosts in twenty-eight minutes. Carry out your orders, sir!"

The Assassin saluted and left; the Commandant turned and picked out another box. "Mr. Byrd, are you superstitious?"

"No, sir."

"Really? I am, quite. I take it you would not object to wearing pips which have been worn by five officers, all of whom were killed in action?"

Birdie barely hesitated. "No, sir."

"Good. Because these five officers accumulated seventeen citations, from the Terran Medal to the Wounded Lion. Come here. The pip with the brown discoloration must always be worn on your left shoulder -- and don't try to buff it off! Just try not to get the other one marked in the same fashion. Unless necessary, and you'll know when it is necessary. Here is a list of former wearers. You have thirty minutes until your transportation leaves. Bounce up to Memorial Hall and look up the record of each."

"Yes, sir."

"Carry out your orders, sir!"

He turned to me, looked at my face and said sharply, "Something on your mind, son? Speak up!"

"Uh -- " I blurted it out. "Sir, that temporary third lieutenant -- the one that got cashiered. How could I find out what happened?"

"Oh. Young man, I didn't mean to scare the daylights out of you; I simply intended to wake you up. The battle was on one June 1813 old style between USF Chesapeake and HMF Shannon. Try the Naval Encyclopedia; your ship will have it." He turned back to the case of pips and frowned.

Then he said, "Mr. Rico, I have a letter from one of your high school teachers, a retired officer, requesting that you be issued the pips he wore as a third lieutenant. I am sorry to say that I must tell him `No.' "

"Sir?" I was delighted to hear that Colonel Dubois was still keeping track of me -- and very disappointed, too.

"Because I can't! I issued those pips two years ago -- and they never came back. Real estate deal. Hmm -- " He took a box, looked at me. "You could start a new pair. The metal isn't important; the importance of the request lies in the fact that your teacher wanted you to have them."

"Whatever you say, sir."

"Or" -- he cradled the box in his hand -- "you could wear these. They have been worn five times . . . and the last four candidates to wear them have all failed of commission -- nothing dishonorable but pesky bad luck. Are you willing to take a swing at breaking the hoodoo? Turn them into goodluck pips instead?"

I would rather have petted a shark. But I answered, "All right, sir. I'll take a swing at it."

"Good." He pinned them on me. "Thank you, Mr. Rico. You see, these were mine, I wore them first . . . and it would please me mightily to have them brought back to me with that streak of bad luck broken, have you go on and graduate."

I felt ten feet tall. "I'll try, sir!"

"I know you will. You may now carry out your orders, sir. The same air car will take both you and Byrd. Just a moment -- Are your mathematics textbooks in your bag?"

"Sir? No, sir."

"Get them. The Weightmaster of your ship has been advised of your extra baggage allowance."

I saluted and left, on the bounce. He had me shrunk down to size as soon as he mentioned math.

My math books were on my study desk, tied into a package with a daily assignment sheet tucked under the cord. I gathered the impression that Colonel Nielssen never left anything unplanned -- but everybody knew that.

Birdie was waiting on the roof by the air car. He glanced at my books and grinned. "Too bad. Well, if we're in the same ship, I'll coach you. What ship?"

"Tours."

"Sorry, I'm for the Moskva." We got in, I checked the pilot, saw that

it had been pre-set for the field, closed the door and the car took off. Birdie added, "You could be worse off. The Assassin took not only his math books but two other subjects."

Birdie undoubtedly knew and he had not been showing off when he offered to coach me; he was a professor type except that his ribbons proved that he was a soldier too.

Instead of studying math Birdie taught it. One period each day he was a faculty member, the way little Shujumi taught judo at Camp Currie. The M. I. doesn't waste anything; we can't afford to. Birdie had a B. S. in math on his eighteenth birthday, so naturally he was assigned extra duty as instructor -- which didn't keep him from being chewed out at other hours.

Not that he got chewed out much. Birdie had that rare combo of brilliant intellect, solid education, common sense, and guts, which gets a cadet marked as a potential general. We figured he was a cinch to command a brigade by the time he was thirty, what with the war.

But my ambitions didn't soar that high. "It would be a dirty, rotten shame," I said, "if the Assassin flunked out," while thinking that it would be a dirty, rotten shame if I flunked out.

"He won't," Birdie answered cheerfully. "They'll sweat him through the rest if they have to put him in a hypno booth and feed him through a tube. Anyhow," he added, "Hassan could flunk out and get promoted for it."

"Huh?"

"Didn't you know? The Assassin's permanent rank is first lieutenant -- field commission, naturally. He reverts to it if he flunks out. See the regs."

I knew the regs. If I flunked math, I'd revert to buck sergeant, which is better than being slapped in the face with a wet fish any way you think about it . . . and I'd thought about it, lying awake nights after busting a quiz.

But this was different. "Hold it," I protested. "He gave up first lieutenant, permanent grade . . . and has just made temporary third lieutenant . . . in order to become a second lieutenant? Are you crazy? Or is he?"

Birdie grinned. "Just enough to make us both M. I."

"But -- I don't get it."

"Sure you do. The Assassin has no education that he didn't pick up in the M. I. So how high can he go? I'm sure he could command a regiment in battle and do a real swingin' job provided somebody else planned the operation. But commanding in battle is only a fraction of what an officer does, especially a senior officer. To direct a war, or even to plan a single battle and mount the operation, you have to have theory of games, operational analysis, symbolic logic, pessimistic synthesis, and a dozen other skull subjects. You can sweat them out on your own if you've got the grounding. But have them you must, or you'll never get past captain, or possibly major. The Assassin knows what he is doing."

"I suppose so," I said slowly. "Birdie, Colonel Nielssen must know that

Hassan was an officer -- is an officer, really."

"Huh? Of course."

"He didn't talk as if he knew. We all got the same lecture."

"Not quite. Did you notice that when the Commandant wanted a question answered a particular way he always asked the Assassin?"

I decided it was true. "Birdie, what is your permanent rank?"

The car was just landing; he paused with a hand on the latch and grinned. "PFC -- I don't dare flunk out!"

I snorted. "You won't. You can't!" I was surprised that he wasn't even a corporal, but a kid as smart and well educated as Birdie would go to O. C. S. just as quickly as he proved himself in combat . . . which with the war on, could be only months after his eighteenth birthday.

Birdie grinned still wider. "We'll see."

"You'll graduate. Hassan and I have to worry, but not you."

"So? Suppose Miss Kendrick takes a dislike to me." He opened the door and looked startled. "Hey! They're sounding my call. So long!"

"See you, Birdie."

But I did not see him and he did not graduate. He was commissioned two weeks later and his pips came back with their eighteenth decoration -- the Wounded Lion, posthumous.

CHAPTER 13

Youse guys think this deleted
outfit is a blankety-blank nursery.
Well, it ain't! See?
-- Remark attributed to a Hellenic
corporal before the walls of Troy,
1194 B. C.

The Rodger Young carries one platoon and is crowded; the Tours carries six -- and is roomy. She has the tubes to drop them all at once and enough spare room to carry twice that number and make a second drop. This would make her very crowded, with eating in shifts, hammocks in passageways and drop rooms, rationed water, inhale when your mate exhales, and get your elbow out of my eye! I'm glad they didn't double up while I was in her.

But she has the speed and lift to deliver such crowded troops still in fighting condition to any point in Federation space and much of Bug space; under Cherenkov drive she cranks Mike 400 or better -- say Sol to Capella, forty-six lightyears, in under six weeks.

Of course, a six-platoon transport is not big compared with a battle wagon or passenger liner; these things are compromises. The M. I. prefers speedy little one-platoon corvettes which give flexibility for any operation, while if it was left up to the Navy we would have nothing but regimental transports. It takes almost as many Navy files to run a corvette as it does to run a monster big enough for a regiment -- more maintenance and housekeeping, of course, but soldiers can do that. After all, those lazy

troopers do nothing but sleep and eat and polish buttons -- do `em good to have a little regular work. So says the Navy.

The real Navy opinion is even more extreme: The Army is obsolete and should be abolished.

The Navy doesn't say this officially -- but talk to a Naval officer who is on R & R and feeling his oats; you'll get an earful. They think they can fight any war, win it, send a few of their own people down to hold the conquered planet until the Diplomatic Corps takes charge.

I admit that their newest toys can blow any planet right out of the sky -- I've never seen it but I believe it. Maybe I'm as obsolete as Tyrannosaurus Rex. I don't feel obsolete and us apes can do things that the fanciest ship cannot. If the government doesn't want those things done, no doubt they'll tell us.

Maybe it's just as well that neither the Navy nor the M. I. has the final word. A man can't buck for Sky Marshal unless he has commanded both a regiment and a capital ship -- go through M. I. and take his lumps and then become a Naval officer (I think little Birdie had that in mind), or first become an astrogator-pilot and follow it with Camp Currie, etc.

I'll listen respectfully to any man who has done both.

Like most transports, the Tours is a mixed ship; the most amazing change for me was to be allowed "North of Thirty." The bulkhead that separates ladies' country from the rough characters who shave is not necessarily No. 30 but, by tradition, it is called "bulkhead thirty" in any mixed ship. The wardroom is just beyond it and the rest of ladies' country is farther forward. In the Tours the wardroom also served as messroom for enlisted women, who ate just before we did, and it was partitioned between meals into a recreation room for them and a lounge for their officers. Male officers had a lounge called the cardroom just abaft thirty.

Besides the obvious fact that drop & retrieval require the best pilots (i.e., female), there is very strong reason why female Naval officers are assigned to transports: It is good for trooper morale.

Let's skip M. I. traditions for a moment. Can you think of anything sillier than letting yourself be fired out of a spaceship with nothing but mayhem and sudden death at the other end? However, if someone must do this idiotic stunt, do you know of a surer way to keep a man keyed up to the point where he is willing than by keeping him constantly reminded that the only good reason why men fight is a living breathing reality?

In a mixed ship, the last thing a trooper hears before a drop (maybe the last word he ever hears) is a woman's voice, wishing him luck. If you don't think this is important, you've probably resigned from the human race.

The Tours had fifteen Naval officers, eight ladies and seven men; there were eight M. I. officers including (I am happy to say) myself. I won't say "bulkhead thirty" caused me to buck for O. C. S. but the privilege of eating with the ladies is more incentive than any increase in pay. The Skipper was president of the mess, my boss Captain Blackstone was vice-president -- not

because of rank; three Naval officers ranked him but as C. O. of the strike force he was de facto senior to everybody but the Skipper.

Every meal was formal. We would wait in the cardroom until the hour struck, follow Captain Blackstone in and stand behind our chairs; the Skipper would come in followed by her ladies and, as she reached the head of the table, Captain Blackstone would bow and say, "Madam President . . . ladies," and she would answer, "Mr. Vice . . . gentlemen," and the man on each lady's right would seat her.

This ritual established that it was a social event, not an officers' conference; thereafter ranks or titles were used, except that junior Naval officers and myself alone among the M. l. were called "Mister" or "Miss" -- with one exception which fooled me.

My first meal aboard I heard Captain Blackstone called "Major," although his shoulder pips plainly read "captain." I got straightened out later. There can't be two captains in a Naval vessel so an Army captain is bumped one rank socially rather than commit the unthinkable of calling him by the title reserved for the one and only monarch. If a Naval captain is aboard as anything but skipper, he or she is called "Commodore" even if the skipper is a lowly lieutenant.

The M. I. observes this by avoiding the necessity in the wardroom and paying no attention to the silly custom in our own part of the ship.

Seniority ran downhill from each end of the table, with the Skipper at the head and the strike force C. O. at the foot, the junior midshipman at his right and myself at the Skipper's right. I would most happily have sat by the junior midshipman; she was awfully pretty but the arrangement is planned chaperonage; I never even learned her first name.

I knew that I, as the lowliest male, sat on the Skipper's right -- but I didn't know that I was supposed to seat her. At my first meal she waited and nobody sat down -- until the third assistant engineer jogged my elbow. I haven't been so embarrassed since a very unfortunate incident in kindergarten, even though Captain Jorgenson acted as if nothing had happened.

When the Skipper stands up the meal is over. She was pretty good about this but once she stayed seated only a few minutes and Captain Blackstone got annoyed. He stood up but called out, "Captain -- "

She stopped. "Yes, Major?"

"Will the Captain please give orders that my officers and myself be served in the cardroom?"

She answered coldly, "Certainly, sir." And we were. But no Naval officer joined us.

The following Saturday she exercised her privilege of inspecting the M. I. aboard-which transport skippers almost never do. However, she simply walked down the ranks without commenting. She was not really a martinet and she had a nice smile when she wasn't being stern. Captain Blackstone assigned Second Lieutenant "Rusty" Graham to crack the whip over me about math; she found out about it, somehow, and told Captain Blackstone to have

me report to her office for one hour after lunch each day, whereupon she tutored me in math and bawled me out when my "homework" wasn't perfect.

Our six platoons were two companies as a rump battalion; Captain Blackstone commanded Company D, Blackie's Blackguards, and also commanded the rump battalion. Our battalion commander by the T. O., Major Xera, was with A and B companies in the Tours' sister ship Normandy Beach -- maybe half a sky away; he commanded us only when the full battalion dropped together -- except that Cap'n Blackie routed certain reports and letters through him. Other matters went directly to Fleet, Division, or Base, and Blackie had a truly wizard fleet sergeant to keep such things straight and to help him handle both a company and a rump battalion in combat.

Administrative details are not simple in an army spread through many light-years in hundreds of ships. In the old Valley Forge, in the Rodger Young, and now in the Tours I was in the same regiment, the Third ("Pampered Pets") Regiment of the First ("Polaris") M. I. Division. Two battalions formed from available units had been called the "Third Regiment" in Operation Bughouse but I did not see "my" regiment; all I saw was PFC Bamburger and a lot of Bugs.

I might be commissioned in the Pampered Pets, grow old and retire in it -- and never even see my regimental commander. The Roughnecks had a company commander but he also commanded the first platoon ("Hornets") in another corvette; I didn't know his name until I saw it on my orders to O. C. S. There is a legend about a "lost platoon" that went on R & R as its corvette was decommissioned. Its company commander had just been promoted and the other platoons had been attached tactically elsewhere. I've forgotten what happened to the platoon's lieutenant but R & R is a routine time to detach an officer -- theoretically after a relief has been sent to understudy him, but reliefs are always scarce.

They say this platoon enjoyed a local year of the fleshpots along Churchill Road before anybody missed them.

I don't believe it. But it could happen.

The chronic scarcity of officers strongly affected my duties in Blackie's Blackguards. The M. I. has the lowest percentage of officers in any army of record and this factor is just part of the M. I.'s unique "divisional wedge." "D. W." is military jargon but the idea is simple: If you have l0,000 soldiers, how many fight? And how many just peel potatoes, drive lorries, count graves, and shuffle papers?

In the M. I., 10,000 men fight.

In the mass wars of the XXth century it sometimes took 70,000 men (fact!) to enable 10,000 to fight.

I admit it takes the Navy to place us where we fight; however, an M. I. strike force, even in a corvette, is at least three times as large as the transport's Navy crew. It also takes civilians to supply and service us; about 10 per cent of us are on R & R at any time; and a few of the very best of us are rotated to instruct at boot camps.

While a few M. I. are on desk jobs you will always find that they are

shy an arm or leg, or some such. These are the ones -- the Sergeant Hos and the Colonel Nielssens -- who refuse to retire, and they really ought to count twice since they release able-bodied M. I. by filling jobs which require fighting spirit but not physical perfection. They do work that civilians can't do or we would hire civilians. Civilians are like beans; you buy `em as needed for any job which merely requires skill and savvy.

But you can't buy fighting spirit.

It's scarce. We use all of it, waste none. The M. I. is the smallest army in history for the size of the population it guards. You can't buy an M. I., you can't conscript him, you can't coerce him -- you can't even keep him if he wants to leave. He can quit thirty seconds before a drop, lose his nerve and not get into his capsule, and all that happens is that he is paid off and can never vote.

At O. C. S. we studied armies in history that were driven like galley slaves. But the M. I. is a free man; all that drives him comes from inside -- that self-respect and need for the respect of his mates and his pride in being one of them called morale, or esprit de corps.

The root of our morale is: "Everybody works, everybody fights." An M. I. doesn't pull strings to get a soft, safe job; there aren't any. Oh, a trooper will get away with what he can; any private with enough savvy to mark time to music can think up reasons why he should not clean compartments or break out stores; this is a soldier's ancient right.

But all "soft, safe" jobs are filled by civilians; that goldbricking private climbs into his capsule certain that everybody, from general to private, is doing it with him. Light-years away and on a different day, or maybe an hour or so later -- -no matter. What does matter is that everybody drops. This is why he enters the capsule, even though he may not be conscious of it.

If we ever deviate from this, the M. I. will go to pieces. All
that holds us together is an idea-one that binds more strongly
than steel but its magic power depends on keeping it intact.

It is this "everybody fights" rule that lets the M. I. get by with so few officers.

I know more about this than I want to, because I asked a foolish question in Military History and got stuck with an assignment which forced me to dig up stuff ranging from De Bello Gallico to Tsing's classic Collapse of The Golden Hegemony. Consider an ideal M. I. division -- on paper, because you won't find one elsewhere. How many officers does it require? Never mind units attached from other corps; they may not be present during a ruckus and they are not like M. I. -- the special talents attached to Logistics & Communications are all ranked as officers. If it will make a memory man, a telepath, a senser, or a lucky man happy to have me salute him, I'm glad to oblige; he is more valuable than I am and I could not replace him if I lived to be two hundred. Or take the K-9 Corps, which is 50 per cent "officers" but whose other 50 per cent are neodogs.

None of these is in the line of command, so let's consider only us apes

and what it takes to lead us.

This imaginary division has 10,800 men in 216 platoons, each with a lieutenant. Three platoons to a company calls for 72 captains; four companies to a battalion calls for 18 majors or lieutenant colonels. Six regiments with six colonels can form two or three brigades, each with a short general, plus a medium-tall general as top boss.

You wind up with 317 officers out of a total, all ranks, of 11,117.

There are no blank files and every officer commands a team. Officers total 3 per cent -- which is what the M. I. does have, but arranged somewhat differently. In fact a good many platoons are commanded by sergeants and many officers "wear more than one hat" in order to fill some utterly necessary staff jobs.

Even a platoon leader should have "staff" -- his platoon sergeant.

But he can get by without one and his sergeant can get by without him. But a general must have staff; the job is too big to carry in his hat. He needs a big planning staff and a small combat staff. Since there are never enough officers, the team commanders in his flag transport double as his planning staff and are picked from the M. I.'s best mathematical logicians then they drop with their own teams. The general drops with a small combat staff, plus a small team of the roughest, on-the-bounce troopers in the M. I. Their job is to keep the general from being bothered by rude strangers while he is managing the battle. Sometimes they succeed.

Besides necessary staff billets, any team larger than a platoon ought to have a deputy commander. But there are never enough officers so we make do with what we've got. To fill each necessary combat billet, one job to one officer, would call for a 5 per cent ratio of officers -- but 3 per cent is all we've got.

In place of that optimax of 5 per cent that the M. I. never can reach, many armies in the past commissioned 10 per cent of their number, or even 15 per cent -- and sometimes a preposterous 20 per cent! This sounds like a fairy tale but it was a fact, especially during the XXth century. What kind of an army has more "officers" than corporals? (And more non-coms than privates!)

An army organized to lose wars -- if history means anything. An army that is mostly organization, red tape, and overhead, most of whose "soldiers" never fight.

But what do "officers" do who do not command fighting men?

Fiddlework, apparently -- officers' club officer, morale officer, athletics officer, public information officer, recreation officer, PX officer, transportation officer, legal officer, chaplain, assistant chaplain, junior assistant chaplain, officer-in-charge of anything anybody can think of, even -- nursery officer!

In the M. I., such things are extra duty for combat officers or, if they are real jobs, they are done better and cheaper and without demoralizing a fighting outfit by hiring civilians. But the situation got so smelly in one of the XXth century major powers that real officers, ones who

commanded fighting men, were given special insignia to distinguish them from the swarms of swivel-chair hussars.

The scarcity of officers got steadily worse as the war wore on, because the casualty rate is always highest among officers . . . and the M. I. never commissions a man simply to fill vacancy. In the long run, each boot regiment must supply its own share of officers and the percentage can't be raised without lowering the standards. The strike force in the Tours needed thirteen officers -- six platoon leaders, two company commanders and two deputies, and a strike force commander staffed by a deputy and an adjutant.

What it had was six . . . and me.

Table of Organization
"Rump Battalion" Strike Force --
Cpt. Blackstone
("first hat")
Fleet Sergeant

[Image72.gif]

I would have been under Lieutenant Silva, but he left for hospital the day I reported, ill with some sort of twitching awfuls. But this did not necessarily mean that I would get his platoon. A temporary third lieutenant is not considered an asset; Captain Blackstone could place me under Lieutenant Bayonne and put a sergeant in charge of his own first platoon, or even "put on a third hat" and take the platoon himself.

In fact, he did both and nevertheless assigned me as platoon leader of the first platoon of the Blackguards. He did this by borrowing the Wolverine's best buck sergeant to act as his battalion staffer, then he placed his fleet sergeant as platoon sergeant of his first platoon -- a job two grades below his chevrons. Then Captain Blackstone spelled it out for me in a head-shrinking lecture: I would appear on the T. O. as platoon leader, but Blackie himself and the fleet sergeant would run the platoon.

As long as I behaved myself, I could go through the motions. I would even be allowed to drop as platoon leader -- but one word from my platoon sergeant to my company commander and the jaws of the nutcracker would close.

It suited me. It was my platoon as long as I could swing it -- and if I couldn't, the sooner I was shoved aside the better for everybody. Besides, it was a lot less nerve-racking to get a platoon that way than by sudden catastrophe in battle.

I took my job very seriously, for it was my platoon -- the T. O. said so. But I had not yet learned to delegate authority and, for about a week, I was around troopers' country much more than is good for a team. Blackie called me into his stateroom. "Son, what in Ned do you think you are doing?"

I answered stiffly that I was trying to get my platoon ready for action.

"So? Well, that's not what you are accomplishing. You are stirring them like a nest of wild bees. Why the deuce do you think I turned over to you

the best sergeant in the Fleet? If you will go to your stateroom, hang yourself on a hook, and stay there! . . . until `Prepare for Action' is sounded, he'll hand that platoon over to you tuned like a violin."

"As the Captain pleases, sir," I agreed glumly.

"And that's another thing -- I can't stand an officer who acts like a confounded kaydet. Forget that silly third-person talk around me -- save it for generals and the Skipper. Quit bracing your shoulders and clicking your heels. Officers are supposed to look relaxed, son."

"Yes, sir."

"And let that be the last time you say `sir' to me for one solid week. Same for saluting. Get that grim kaydet look off your face and hang a smile on it."

"Yes, s -- Okay."

"That's better. Lean against the bulkhead. Scratch yourself. Yawn. Anything but that tin-soldier act."

I tried . . . and grinned sheepishly as I discovered that breaking a habit is not easy. Leaning was harder work than standing at attention. Captain Blackstone studied me. "Practice it," he said. "An officer can't look scared or tense; it's contagious. Now tell me, Johnnie, what your platoon needs. Never mind the piddlin' stuff; I'm not interested in whether a man has the regulation number of socks in his locker."

I thought rapidly. "Uh . . . do you happen to know if Lieutenant Silva intended to put Brumby up for sergeant?"

"I do happen to know. What's your opinion?"

"Well . . . the record shows that he has been acting section leader the past two months. His efficiency marks are good."

"I asked for your recommendation, Mister."

"Well, s -- Sorry. I've never seen him work on the ground, so I can't have a real opinion; anybody can soldier in the drop room. But the way I see it, he's been acting sergeant too long to bust him back to chaser and promote a squad leader over him. He ought to get that third chevron before we drop or he ought to be transferred when we get back. Sooner, if there's a chance for a spaceside transfer."

Blackie grunted. "You're pretty generous in giving away my Blackguards -- for a third lieutenant."

I turned red. "Just the same, it's a soft spot in my platoon. Brumby ought to be promoted, or transferred. I don't want him back in his old job with somebody promoted over his head; he'd likely turn sour and I'd have an even worse soft spot. If he can't have another chevron, he ought to go to repple-depple for cadre. Then he won't be humiliated and he gets a fair shake to make sergeant in another team -- instead of a dead end here."

"Really?" Blackie did not quite sneer. "After that masterly analysis, apply your powers of deduction and tell me why Lieutenant Silva failed to transfer him three weeks ago when we arrived around Sanctuary."

I had wondered about that. The time to transfer a man is the earliest possible instant after you decide to let him go -- and without warning; it's

better for the man and the team -- so says the book. I said slowly, "Was Lieutenant Silva already ill at that time, Captain?"

"No."

The pieces matched. "Captain, I recommended Brumby for immediate promotion."

His eyebrows shot up. "A minute ago you were about to dump him as useless."

"Uh, not quite. I said it had to be one or the other -- but I didn't know which. Now I know."

"Continue."

"Uh, this assumes that Lieutenant Silva is an efficient officer -- "

"Hummmph! Mister, for your information, `Quick' Silva has an unbroken string of `Excellent -- Recommended for Promotion' on his Form Thirty-One."

"But I knew that he was good," I plowed on, "because I inherited a good platoon. A good officer might not promote a man for oh, for many reasons -- and still not put his misgivings in writing. But in this case, if he could not recommend him for sergeant, then he wouldn't keep him with the team -- so he would get him out of the ship at the first opportunity. But he didn't. Therefore I know he intended to promote Brumby." I added, "But I can't see why he didn't push it through three weeks ago, so that Brumby could have worn his third chevron on R & R."

Captain Blackstone grinned. "That's because you don't credit me with being efficient."

"S -- I beg pardon?"

"Never mind. You've proved who killed Cock Robin and I don't expect a still-moist kaydet to know all the tricks. But listen and learn, son. As long as this war goes on, don't ever promote a man just before you return to Base."

"Uh . . . why not, Captain?"

"You mentioned sending Brumby to Replacement Depot if he was not to be promoted. But that's just where he would have gone if we had promoted him three weeks ago. You don't know how hungry that non-com desk at repple-depple is. Paw through the dispatch file and you'll find a demand that we supply two sergeants for cadre. With a platoon sergeant being detached for O. C. S. and a buck sergeant spot vacant, I was under complement and able to refuse." He grinned savagely. "It's a rough war, son, and your own people will steal your best men if you don't watch `em." He took two sheets of paper out of a drawer. "There -- "

One was a letter from Silva to Cap'n Blackie, recommending Brumby for sergeant; it was dated over a month ago.

The other was Brumby's warrant for sergeant dated the day after we left Sanctuary.

"That suit you?" he asked.

"Huh? Oh, yes indeed!"

"I've been waiting for you to spot the weak place in your team, and tell me what had to be done. I'm pleased that you figured it out -- but only

middlin' pleased because an experienced officer would have analyzed it at once from the T. O. and the service records. Never mind, that's how you gain experience. Now here's what you do. Write me a letter like Silva's; date it yesterday. Tell your platoon sergeant to tell Brumby that you have put him up for a third stripe -- and don't mention that Silva did so. You didn't know that when you made the recommendation, so we'll keep it that way. When I swear Brumby in, I'll let him know that both his officers recommended him independently -- which will make him feel good. Okay, anything more?"

"Uh . . . not in organization -- unless Lieutenant Silva planned to promote Naidi, vice Brumby. In which case we could promote one PFC to lance . . . and that would allow us to promote four privates to PFC, including three vacancies now existing. I don't know whether it's your policy to keep the T. O. filled up tight or not?"

"Might as well," Blackie said gently, "as you and I know that some of those lads aren't going to have many days in which to enjoy it. Just remember that we don't make a man a PFC until after he has been in combat -- not in Blackie's Blackguards we don't. Figure it out with your platoon sergeant and let me know. No hurry . . . any time before bedtime tonight. Now . . . anything else?"

"Well -- Captain, I'm worried about the suits."

"So am I. All platoons."

"I don't know about the other platoons, but with five recruits to fit, plus four suits damaged and exchanged, and two more downchecked this past week and replaced from stores -- well, I don't see how Cunha and Navarre can warm up that many and run routine tests on forty-one others and get it all done by our calculated date. Even if no trouble develops -- "

"Trouble always develops."

"Yes, Captain. But that's two hundred and eighty-six man-hours just for warm & fit, plus a hundred and twenty-three hours of routine checks. And it always takes longer."

"Well, what do you think can be done? The other platoons will lend you help if they finish their own suits ahead of time. Which I doubt. Don't ask to borrow help from the Wolverines; we're more likely to lend them help."

"Uh . . . Captain, I don't know what you'll think of this, since you told me to stay out of troopers' country. But when I was a corporal, I was assistant to the Ordnance & Armor sergeant."

"Keep talking."

"Well, right at the last I was the O & A sergeant. But I was just standing in another man's shoes -- I'm not a finished O & A mechanic. But I'm a pretty darn good assistant and if I was allowed to, well, I can either warm new suits, or run routine checks -- and give Cunha and Navarre that much more time for trouble."

Blackie leaned back and grinned. "Mister, I have searched the regs carefully . . . and I can't find the one that says an officer mustn't get his hands dirty." He added, "I mention that because some `young gentlemen' who have been assigned to me apparently had read such a regulation. All

right, draw some dungarees -- no need to get your uniform dirty along with your hands. Go aft and find your platoon sergeant, tell him about Brumby and order him to prepare recommendations to close the gaps in the T. O. in case I should decide to confirm your recommendation for Brumby. Then tell him that you are going to put in all your time on ordnance and armor -- and that you want him to handle everything else. Tell him that if he has any problems to look you up in the armory. Don't tell him you consulted me -- just give him orders. Follow me?"

"Yes, s -- Yes, I do."

"Okay, get on it. As you pass through the cardroom, please give my compliments to Rusty and tell him to drag his lazy carcass in here."

For the next two weeks I was never so busy -- not even in boot camp. Working as an ordnance & armor mech about ten hours a day was not all that I did. Math, of course -- and no way to duck it with the Skipper tutoring me. Meals -- say an hour and a half a day. Plus the mechanics of staying alive -- shaving, showering, putting buttons in uniforms and trying to chase down the Navy master-at-arms, get him to unlock the laundry to locate clean uniforms ten minutes before inspection. (It is an unwritten law of the Navy that facilities must always be locked when they are most needed.)

Guard mount, parade, inspections, a minimum of platoon routine, took another hour a day. But besides, I was "George." Every outfit has a "George." He's the most junior officer and has the extra jobs -- athletics officer, mail censor, referee for competitions, school officer, correspondence courses officer, prosecutor courts-martial, treasurer of the welfare mutual loan fund, custodian of registered publications, stores officer, troopers' mess officer, et cetera ad endless nauseam.

Rusty Graham had been "George" until he happily turned it over to me. He wasn't so happy when I insisted on a sight inventory on everything for which I had to sign. He suggested that if I didn't have sense enough to accept a commissioned officer's signed inventory then perhaps a direct order would change my tune. So I got sullen and told him to put his orders in writing -- with a certified copy so that I could keep the original and endorse the copy over to the team commander.

Rusty angrily backed down -- even a second lieutenant isn't stupid enough to put such orders in writing. I wasn't happy either as Rusty was my roommate and was then still my tutor in math, but we held the sight inventory. I got chewed out by Lieutenant Warren for being stupidly officious but he opened his safe and let me check his registered publications. Captain Blackstone opened his with no comment and I couldn't tell whether he approved of my sight inventory or not.

Publications were okay but accountable property was not. Poor Rusty! He had accepted his predecessor's count and now the count was short -- and the other officer was not merely gone, he was dead. Rusty spent a restless night (and so did I!), then went to Blackie and told him the truth.

Blackie chewed him out, then went over the missing items, found ways to

expend most of them as "lost in combat." It reduced Rusty's shortages to a few days' pay -- but Blackie had him keep the job, thereby postponing the cash reckoning indefinitely.

Not all "George" jobs caused that much headache. There were no courts-martial; good combat teams don't have them. There was no mail to censor as the ship was in Cherenkov drive. Same for welfare loans for similar reasons. Athletics I delegated to Brumby; referee was "if and when." The troopers' mess was excellent; I initialed menus and sometimes inspected the galley, i.e., I scrounged a sandwich without getting out of dungarees when working late in the armory. Correspondence courses meant a lot of paperwork since quite a few were continuing their educations, war or no war -- but I delegated my platoon sergeant and the records were kept by the PFC who was his clerk.

Nevertheless "George" jobs soaked up about two hours every day -- there were so many.

You see where this left me -- ten hours O & A, three hours math, meals an hour and a half, personal one hour, military fiddlework one hour, "George" two hours, sleep eight hours total, twenty-six and a half hours. The ship wasn't even on the twenty-five-hour Sanctuary day; once we left we went on Greenwich standard and the universal calendar.

The only slack was in my sleeping time.

I was sitting in the cardroom about one o'clock one morning, plugging away at math, when Captain Blackstone came in. I said, "Good evening, Captain."

"Morning, you mean. What the deuce ails you, son? Insomnia?"

"Uh, not exactly."

He picked up a stack of sheets, remarking, "Can't your sergeant handle your paperwork? Oh, I see. Go to bed."

"But, Captain -- "

"Sit back down. Johnnie, I've been meaning to talk to you. I never see you here in the cardroom, evenings. I walk past your room, you're at your desk. When your bunkie goes to bed, you move out here. What's the trouble?"

"Well . . . I just never seem to get caught up."

"Nobody ever does. How's the work going in the armory?"

"Pretty well. I think we'll make it."

"I think so, too. Look, son, you've got to keep a sense of proportion. You have two prime duties. First is to see that your platoon's equipment is ready -- you're doing that. You don't have to worry about the platoon itself, I told you that. The second -- and just as important -- you've got to be ready to fight. You're muffing that."

"I'll be ready, Captain."

"Nonsense and other comments. You're getting no exercise and losing sleep. Is that how to train for a drop? When you lead a platoon, son, you've got to be on the bounce. From here on you will exercise from sixteen-thirty to eighteen hundred each day. You will be in your sack with lights out at twenty-three hundred -- and if you lie awake fifteen minutes two nights in a

row, you will report to the Surgeon for treatment. Orders."

"Yes, sir." I felt the bulkheads closing in on me and added desperately, "Captain, I don't see how I can get to bed by twenty-three -- and still get everything done."

"Then you won't. As I said, son, you must have a sense of proportion. Tell me how you spend your time."

So I did. He nodded. "Just as I thought." He picked up my math "homework," tossed it in front of me. "Take this. Sure, you want to work on it. But why work so hard before we go into action?"

"Well, I thought -- "

" `Think' is what you didn't do. There are four possibilities, and only one calls for finishing these assignments. First, you might buy a farm. Second, you might buy a small piece and be retired with an honorary commission. Third, you might come through all right . . . but get a downcheck on your Form Thirty-One from your examiner, namely me. Which is just what you're aching for at the present time -- why, son, I won't even let you drop if you show up with eyes red from no sleep and muscles flabby from too much chair parade. The fourth possibility is that you take a grip on yourself . . . in which case I might let you take a swing at leading a platoon. So let's assume that you do and put on the finest show since Achilles slew Hector and I pass you. In that case only -- you'll need to finish these math assignments. So do them on the trip back.

"That takes care of that -- I'll tell the Skipper. The rest of those jobs you are relieved of, right now. On our way home you can spend your time on math. If we get home. But you'll never get anywhere if you don't learn to keep first things first. Go to bed!"

A week later we made rendezvous, coming out of drive and coasting short of the speed of light while the fleet exchanged signals. We were sent Briefing, Battle Plan, our Mission & Orders -- a stack of words as long as a novel -- and were told not to drop.

Oh, we were to be in the operation but we would ride down like gentlemen, cushioned in retrieval boats. This we could do because the Federation already held the surface; Second, Third, and Fifth M. I. Divisions had taken it -- and paid cash.

The described real estate didn't seem worth the price. Planet P is smaller than Terra, with a surface gravity of 0.7, is mostly arctic-cold ocean and rock, with lichenous flora and no fauna of interest. Its air is not breathable for long, being contaminated with nitrous oxide and too much ozone. Its one continent is about half the size of Australia, plus many worthless islands; it would probably require as much terra-forming as Venus before we could use it.

However we were not buying real estate to live on; we went there because Bugs were there -- and they were there on our account, so Staff thought. Staff told us that Planet P was an uncompleted advance base (prob. 87+-6 per cent) to be used against us.

Since the planet was no prize, the routine way to get rid of this Bug base would be for the Navy to stand off at a safe distance and render this ugly spheroid uninhabitable by Man or Bug. But the C-in-C had other ideas.

The operation was a raid. It sounds incredible to call a battle involving hundreds of ships and thousands of casualties a "raid," especially as, in the meantime, the Navy and a lot of other cap troopers were keeping things stirred up many light-years into Bug space in order to divert them from reinforcing Planet P.

But the C-in-C was not wasting men; this giant raid could determine who won the war, whether next year or thirty years hence. We needed to learn more about Bug psychology. Must we wipe out every Bug in the Galaxy? Or was it possible to trounce them and impose a peace? We did not know; we understood them as little as we understand termites. To learn their psychology we had to communicate with them, learn their motivations, find out why they fought and under what conditions they would stop; for these, the Psychological Warfare Corps needed prisoners.

Workers are easy to capture. But a Bug worker is hardly more than animate machinery. Warriors can be captured by burning off enough limbs to make them helpless -- but they are almost as stupid without a director as workers. From such prisoners our own professor types had learned important matters -- the development of that oily gas that killed them but not us came from analyzing the biochemistries of workers and warriors, and we had had other new weapons from such research even in the short time I had been a cap trooper. But to discover why Bugs fight we needed to study members of their brain caste. Also, we hoped to exchange prisoners.

So far, we had never taken a brain Bug alive. We had either cleaned out colonies from the surface, as on Sheol, or (as had too often been the case) raiders had gone down their holes and not come back. A lot of brave men had been lost this way.

Still more had been lost through retrieval failure. Sometimes a team on the ground had its ship or ships knocked out of the sky. What happens to such a team? Possibly it dies to the last man. More probably it fights until power and ammo are gone, then survivors are captured as easily as so many beetles on their backs.

From our co belligerents the Skinnies we knew that many missing troopers were alive as prisoners -- thousands we hoped, hundreds we were sure. Intelligence believed that prisoners were always taken to Klendathu; the Bugs are as curious about us as we are about them -- a race of individuals able to build cities, starships, armies, may be even more mysterious to a hive entity than a hive entity is to us.

As may be, we wanted those prisoners back!

In the grim logic of the universe this may be a weakness. Perhaps some race that never bothers to rescue an individual may exploit this human trait to wipe us out. The Skinnies have such a trait only slightly and the Bugs don't seem to have it at all -- nobody ever saw a Bug come to the aid of another because he was wounded; they cooperate perfectly in fighting but

units are abandoned the instant they are no longer useful.

Our behavior is different. How often have you seen a headline like this? -- TWO DIE ATTEMPTING RESCUE OF DROWNING CHILD. If a man gets lost in the mountains, hundreds will search and often two or three searchers are killed. But the next time somebody gets lost just as many volunteers turn out.

Poor arithmetic . . . but very human. It runs through all our folklore, all human religions, all our literature a racial conviction that when one human needs rescue, others should not count the price.

Weakness? It might be the unique strength that wins us a Galaxy.

Weakness or strength, Bugs don't have it; there was no prospect of trading fighters for fighters.

But in a hive polyarchy, some castes are valuable or so our Psych Warfare people hoped. If we could capture brain Bugs, alive and undamaged, we might be able to trade on good terms.

And suppose we captured a queen!

What is a queen's trading value? A regiment of troopers? Nobody knew, but Battle Plan ordered us to capture Bug "royalty," brains and queens, at any cost, on the gamble that we could trade them for human beings.

The third purpose of Operation Royalty was to develop methods: how to go down, how to dig them out, how to win with less than total weapons. Trooper for warrior, we could now defeat them above ground; ship for ship, our Navy was better; but, so far, we had had no luck when we tried to go down their holes.

If we failed to exchange prisoners on any terms, then we still had to: (a) win the war, (b) do so in a way that gave us a fighting chance to rescue our own people, or (c) -- might as well admit it -- die trying and lose. Planet P was a field test to determine whether we could learn how to root them out.

Briefing was read to every trooper and he heard it again in his sleep during hypno preparation. So, while we all knew that Operation Royalty was laying the groundwork toward eventual rescue of our mates, we also knew that Planet P held no human prisoners -- it had never been raided. So there was no reason to buck for medals in a wild hope of being personally in on a rescue; it was just another Bug hunt, but conducted with massive force and new techniques. We were going to peel that planet like an onion, until we knew that every Bug had been dug out.

The Navy had plastered the islands and that unoccupied part of the continent until they were radioactive glaze; we could tackle Bugs with no worries about our rear. The Navy also maintained a ball-of-yarn patrol in tight orbits around the planet, guarding us, escorting transports, keeping a spy watch on the surface to make sure that Bugs did not break out behind us despite that plastering.

Under the Battle Plan, the orders for Blackie's Blackguards charged us with supporting the prime Mission when ordered or as opportunity presented,

relieving another company in a captured area, protecting units of other corps in that area, maintaining contact with M. I. units around us -- and smacking down any Bugs that showed their ugly heads.

So we rode down in comfort to an unopposed landing. I took my platoon out at a powered-armor trot. Blackie went ahead to meet the company commander he was relieving, get the situation and size up the terrain. He headed for the horizon like a scared jack rabbit.

I had Cunha send his first section's scouts out to locate the forward corners of my patrol area and I sent my platoon sergeant off to my left to make contact with a patrol from the Fifth Regiment. We, the Third Regiment, had a grid three hundred miles wide and eighty miles deep to hold; my piece was a rectangle forty miles deep and seventeen wide in the extreme left flank forward corner. The Wolverines were behind us, Lieutenant Khoroshen's platoon on the right and Rusty beyond him.

Our First Regiment had already relieved a Vth Div. regiment ahead of us, with a "brick wall" overlap which placed them on my corner as well as ahead. "Ahead" and "rear," "right flank" and "left," referred to orientation set up in deadreckoning tracers in each command suit to match the grid of the Battle Plan. We had no true front, simply an area, and the only fighting at the moment was going on several hundred miles away, to our arbitrary right and rear.

Somewhere off that way, probably two hundred miles, should be 2nd platoon, G Co, 2nd Batt, 3rd Reg -- commonly known as "The Roughnecks."

Or the Roughnecks might be forty light-years away. Tactical organization never matches the Table of Organization; all I knew from Plan was that something called the "2nd Batt" was on our right flank beyond the boys from the Normandy Beach. But that battalion could have been borrowed from another division. The Sky Marshal plays his chess without consulting the pieces.

Anyhow, I should not be thinking about the Roughnecks; I had all I could do as a Blackguard. My platoon was okay for the moment -- safe as you can be on a hostile planet -- but I had plenty to do before Cunha's first squad reached the far corner. I needed to:

1. Locate the platoon leader who had been holding my area.
2. Establish corners and identify them to section and squad leaders.
3. Make contact liaison with eight platoon leaders on my sides and corners, five of whom should already be in position (those from Fifth and First Regiments) and three (Khoroshen of the Blackguards and Bayonne and Sukarno of the Wolverines) who were now moving into position.
4. Get my own boys spread out to their initial points as fast as possible by shortest routes.

The last had to be set up first, as the open column in which we disembarked would not do it. Brumby's last squad needed to deploy to the left flank; Cunha's leading squad needed to spread from dead ahead to left oblique; the other four squads must fan out in between.

This is a standard square deployment and we had simulated how to reach it quickly in the drop room; I called out: "Cunha! Brumby! Time to spread `em out," using the non-com circuit.

"Roger sec one!" -- "Roger sec two!"

"Section leaders take charge . . . and caution each recruit. You'll be passing a lot of Cherubs. I don't want `em shot at by mistake!" I bit down for my private circuit and said, "Sarge, you got contact on the left?"

"Yes, sir. They see me, they see you."

"Good. I don't see a beacon on our anchor corner -- "

"Missing."

" -- so you coach Cunha by D. R. Same for the lead scout -- that's Hughes -- and have Hughes set a new beacon." I wondered why the Third or Fifth hadn't replaced that anchor beacon -- my forward left corner where three regiments came together.

No use talking. I went on: "D. R. check. You bear two seven five, miles twelve."

"Sir, reverse is nine six, miles twelve scant."

"Close enough. I haven't found my opposite number yet, so I'm cutting out forward at max. Mind the shop."

"Got `em, Mr. Rico."

I advanced at max speed while clicking over to officers' circuit: "Square Black One, answer. Black One, Chang's Cherubs -- do you read me? Answer." I wanted to talk with the leader of the platoon we were relieving -- and not for any perfunctory I-relieve-you-sir: I wanted the ungarnished word.

I didn't like what I had seen.

Either the top brass had been optimistic in believing that we had mounted overwhelming force against a small, not fully developed Bug base -- or the Blackguards had been awarded the spot where the roof fell in. In the few moments I had been out of the boat I had spotted half a dozen armored suits on the ground -- empty I hoped, dead men possibly, but `way too many any way you looked at it.

Besides that, my tactical radar display showed a full platoon (my own) moving into position but only a scattering moving back toward retrieval or still on station. Nor could I see any system to their movements.

I was responsible for 680 square miles of hostile terrain and I wanted very badly to find out all I could before my own squads were deep into it. Battle Plan had ordered a new tactical doctrine which I found dismaying: Do not close the Bugs tunnels. Blackie had explained this as if it had been his own happy thought, but I doubt if he liked it.

The strategy was simple, and, I guess, logical . . . if we could afford the losses. Let the Bugs come up. Meet them and kill them on the surface. Let them keep on coming up. Don't bomb their holes, don't gas their holes -- let them out. After a while -- a day, two days, a week if we really did have overwhelming force, they would stop coming up. Planning Staff estimated (don't ask me how!) that the Bugs would expend 70 per cent to 90 per cent of

their warriors before they stopped trying to drive us off the surface.

Then we would start the unpeeling, killing surviving warriors as we went down and trying to capture "royalty" alive. We knew what the brain caste looked like; we had seen them dead (in photographs) and we knew they could not run -- barely functional legs, bloated bodies that were mostly nervous system. Queens no human had ever seen, but Bio War Corps had prepared sketches of what they should look like -- obscene monsters larger than a horse and utterly immobile.

Besides brains and queens there might be other "royalty" castes. As might be -- encourage their warriors to come out and die, then capture alive anything but warriors and workers.

A necessary plan and very pretty, on paper. What it meant to me was that I had an area 17 x 40 miles which might be riddled with unstopped Bug holes. I wanted co-ordinates on each one.

If there were too many . . . well, I might accidentally plug a few and let my boys concentrate on watching the rest. A private in a marauder suit can cover a lot of terrain, but he can look at only one thing at a time; he is not superhuman.

I bounced several miles ahead of the first squad, still calling the Cherub platoon leader, varying it by calling any Cherub officer and describing the pattern of my transponder beacon (dah-di-dah-dah).

No answer --

At last I got a reply from my boss: "Johnnie! Knock off the noise. Answer me on conference circuit."

So I did, and Blackie told me crisply to quit trying to find the Cherub leader for Square Black One; there wasn't one. Oh, there might be a non-com alive somewhere but the chain of command had broken.

By the book, somebody always moves up. But it does happen if too many links are knocked out. As Colonel Nielssen had once warned me, in the dim past . . . almost a month ago.

Captain Chang had gone into action with three officers besides himself; there was one left now (my classmate, Abe Moise) and Blackie was trying to find out from him the situation. Abe wasn't much help. When I joined the conference and identified myself, Abe thought I was his battalion commander and made a report almost heartbreakingly precise, especially as it made no sense at all.

Blackie interrupted and told me to carry on. "Forget about a relief briefing. The situation is whatever you see that it is -- so stir around and see."

"Right, Boss!" I slashed across my own area toward the far corner, the anchor corner, as fast as I could move, switching circuits on my first bounce. "Sarge! How about that beacon?"

"No place on that corner to put it, sir. A fresh crater there, about scale six."

I whistled to myself. You could drop the Tours into a size six crater. One of the dodges the Bugs used on us when we were sparring, ourselves on

the surface, Bugs underground, was land mines. (They never seemed to use missiles, except from ships in space.) If you were near the spot, the ground shock got you; if you were in the air when one went off, the concussion wave could tumble your gyros and throw your suit out of control.

I had never seen larger than a scale-four crater. The theory was that they didn't dare use too big an explosion because of damage to their troglodyte habitats, even if they cofferdammed around it.

"Place an offset beacon," I told him. "Tell section and squad leaders."

"I have, sir. Angle one one oh, miles one point three. Da-di-dit. You should be able to read it, bearing about three threežfive from where you are." He sounded as calm as a sergeant-instructor at drill and I wondered if I were letting my voice get shrill.

I found it in my display, above my left eyebrow -- long and two shorts. "Okay. I see Cunha's first squad is nearly in position. Break off that squad, have it patrol the crater. Equalize the areas -- Brumby will have to take four more miles of depth." I thought with annoyance that each man already had to patrol fourteen square miles; spreading the butter so thin meant seventeen square miles per man -- and a Bug can come out of a hole less that five feet wide.

I added, "How `hot' is that crater?"

"Amber-red at the edge. I haven't been in it, sir."

"Stay out of it. I'll check it later." Amber-red would kill an unprotected human but a trooper in armor can take it for quite a time. If there was that much radiation at the edge, the bottom would no doubt fry your eyeballs. "Tell Naidi to pull Malan and Bjork back to amber zone, and have them set up ground listeners." Two of my five recruits were in that first squad -- and recruits are like puppies; they stick their noses into things.

"Tell Naidi that I am interested in two things: movement inside the crater . . . and noises in the ground around it." We wouldn't send troopers out through a hole so radioactive that mere exit would kill them. But Bugs would, if they could reach us that way. "Have Naidi report to me. To you and me. I mean."

"Yes, sir." My platoon sergeant added, "May I make a suggestion?"

"Of course. And don't stop to ask permission next time."

"Navarre can handle the rest of the first section. Sergeant Cunha could take the squad at the crater and leave Naidi free to supervise the ground-listening watch."

I know what he was thinking. Naidi, so newly a corporal that he had never before had a squad on the ground, was hardly the man to cover what looked like the worst danger point in Square Black One; he wanted to pull Naidi back for the same reasons I had pulled the recruits back.

I wonder if he knew what I was thinking? That "nut-cracker" -- he was using the suit he had worn as Blackie's battalion staffer, he had one more circuit than I had, a private one to Captain Blackstone.

Blackie was probably patched in and listening via that extra circuit.

Obviously my platoon sergeant did not agree with my disposition of the platoon. If I didn't take his advice, the next thing I heard might be Blackie's voice cutting in: "Sergeant, take charge. Mr. Rico, you're relieved."

But -- Confound it, a corporal who wasn't allowed to boss his squad wasn't a corporal . . . and a platoon leader who was just a ventriloquist's dummy for his platoon sergeant was an empty suit!

I didn't mull this. It flashed through my head and I answered at once. "I can't spare a corporal to baby-sit with two recruits. Nor a sergeant to boss four privates and a lance."

"But -- "

"Hold it. I want the crater watch relieved every hour. I want our first patrol sweep made rapidly. Squad leaders will check any hole reported and get beacon bearings so that section leaders, platoon sergeant and platoon leader can check them as they reach them. If there aren't too many, we'll put a watch on each -- I'll decide later."

"Yes, sir."

"Second time around, I want a slow patrol, as tight as possible, to catch holes we miss on the first sweep. Assistant squad leaders will use snoopers on that pass. Squad leaders will get bearings on any troopers -- or suits -- on the ground; the Cherubs may have left some live wounded. But no one is to stop even to check physicals until I order it. We've got to know the Bug situation first."

"Yes, sir."

"Suggestions?"

"Just one," he answered. "I think the squad chasers should use their snoopers on that first fast pass."

"Very well, do it that way." His suggestion made sense as the surface air temperature was much lower than the Bugs use in their tunnels; a camouflaged vent hole should show a plume like a geyser by infrared vision. I glanced at my display. "Cunha's boys are almost at limit. Start your parade.'

"Very well, sir!"

"Off." I clicked over to the wide circuit and continued to make tracks for the crater while I listened to everybody at once as my platoon sergeant revised the pre-plan -- cutting out one squad, heading it for the crater, starting the rest of the first section in a two-squad countermarch while keeping the second section in a rotational sweep as pre-planned but with four miles increased depth; got the sections moving, dropped them and caught the first squad as it converged on the anchor corner crater, gave it its instructions; cut back to the section leaders in plenty of time to give them new beacon bearings at which to make their turns.

He did it with the smart precision of a drum major on parade and he did it faster and in fewer words than I could have done it. Extended-order powered-suit drill, with a platoon spread over many miles of countryside, is much more difficult than the strutting precision of parade -- but it has to

be exact, or you'll blow the head off your mate in action . . . or, as in this case, you sweep part of the terrain twice and miss another part.

But the drillmaster has only a radar display of his formation; he can see with his eyes only those near him. While I listened, I watched it in my own display -- glowworms crawling past my face in precise lines, "crawling" because even forty miles an hour is a slow crawl when you compress a formation twenty miles across into a display a man can see.

I listened to everybody at once because I wanted to hear the chatter inside the squads.

There wasn't any. Cunha and Brumby gave their secondary commands -- and shut up. The corporals sang out only as squad changes were necessary; section and squad chasers called out occasional corrections of interval or alignment -- and privates said nothing at all.

I heard the breathing of fifty men like muted sibilance of surf, broken only by necessary orders in the fewest possible words. Blackie had been right; the platoon had been handed over to me "tuned like a violin."

They didn't need me! I could go home and my platoon would get along just as well.

Maybe better --

I wasn't sure I had been right in refusing to cut Cunha out to guard the crater; if trouble broke there and those boys couldn't be reached in time, the excuse that I had done it "by the book" was worthless. If you get killed, or let some-

body else get killed, "by the book" it's just as permanent as any other way.

I wondered if the Roughnecks had a spot open for a buck sergeant.

Most of Square Black One was as flat as the prairie around Camp Currie and much more barren. For this I was thankful; it gave us our only chance of spotting a Bug coming up from below and getting him first. We were spread so widely that four-mile intervals between men and about six minutes between waves of a fast sweep was as tight a patrol as we could manage. This isn't tight enough; any one spot would remain free of observation for at least three or four minutes between patrol waves -- and a lot of Bugs can come out of a very small hole in three to four minutes.

Radar can see farther than eye, of course, but it cannot see as accurately.

In addition we did not dare use anything but short-range selective weapons -- our own mates were spread around us in all directions. If a Bug popped up and you let fly with something lethal, it was certain that not too far beyond that Bug was a cap trooper; this sharply limits the range and force of the frightfulness you dare use. On this operation only officers and platoon sergeants were armed with rockets and, even so, we did not expect to use them. If a rocket fails to find its target, it has a nasty habit of continuing to search until it finds one . . . and it cannot tell friend from foe; a brain that can be stuffed into a small rocket is fairly stupid.

I would happily have swapped that area patrol, with thousands of M. I. around us, for a simple one-platoon strike in which you know where your own people are and anything else is an enemy target.

I didn't waste time moaning; I never stopped bouncing toward that anchor-corner crater while watching the ground and trying to watch the radar picture as well. I didn't find any Bug holes but I did jump over a dry wash, almost a canyon, which could conceal quite a few. I didn't stop to see; I simply gave its co ordinates to my platoon sergeant and told him to have somebody check it.

That crater was even bigger than I had visualized; the Tours would have been lost in it. I shifted my radiation counter to directional cascade, took readings on floor and sides -- red to multiple red right off the scale, very unhealthy for long exposure even to a man in armor; I estimated its width and depth by helmet range finder, then prowled around and tried to spot openings leading underground.

I did not find any but I did run into crater watches set out by adjacent platoons of the Fifth and First Regiments, so I arranged to split up the watch by sectors such that the combined watch could yell for help from all three platoons, the patch-in to do this being made through First Lieutenant Do Campo of the "Head Hunters" on our left. Then I pulled out Naidi's lance and half his squad (including the recruits) and sent them back to platoon, reporting all this to my boss, and to my platoon sergeant.

"Captain," I told Blackie, "we aren't getting any ground vibrations I'm going down inside and check for holes. The readings show that I won't get too much dosage if I -- "

"Youngster, stay out of that crater."

"But Captain, I just meant to -- "

"Shut up. You can't learn anything useful. Stay out."

"Yes, sir."

The next nine hours were tedious. We had been preconditioned for forty hours of duty (two revolutions of Planet P) through forced sleep, elevated blood sugar count, and hypno indoctrination, and of course the suits are self-contained for personal needs. The suits can't last that long, but each man was carrying extra power units and super H. P. air cartridges for recharging. But a patrol with no action is dull, it is easy to goof off.

I did what I could think of, having Cunha and Brumby take turns as drill sergeant (thus leaving platoon sergeant and leader free to rove around): I gave orders that no sweeps were to repeat in pattern so that each man would always check terrain that was new to him. There are endless patterns to cover a given area, by combining the combinations. Besides that, I consulted my platoon sergeant and announced bonus points toward honor squad for first verified hole, first Bug destroyed, etc. -- boot camp tricks, but staying alert means staying alive, so anything to avoid boredom.

Finally we had a visit from a special unit, three combat engineers in a utility air car, escorting a talent -- a spatial senser. Blackie warned me to expect them. "Protect them and give them what they want."

"Yes, sir. What will they need?"

"How should I know? If Major Landry wants you to take off your skin and dance in your bones, do it!"

"Yes, sir. Major Landry."

I relayed the word and set up a bodyguard by sub-areas. Then I met them as they arrived because I was curious; I had never seen a special talent at work. They landed inside my right flank rear and got out. Major Landry and two officers were wearing armor and hand flamers but the talent had no armor and no weapons -- just an oxygen mask. He was dressed in a fatigue uniform without insignia and he seemed terribly bored by everything. I was not introduced to him. He looked like a sixteen-year old boy . . . until I got close and saw a network of wrinkles around his weary eyes.

As he got out he took off his breathing mask. I was horrified, so I spoke to Major Landry, helmet to helmet without radio. "Major -- the air around here is `hot.' Besides that, we've been warned that -- "

"Pipe down," said the Major. "He knows it."

I shut up. The talent strolled a short distance, turned and pulled his lower lip. His eyes were closed and he seemed lost in thought.

He opened them and said fretfully, "How can one be expected to work with all those silly people jumping around?"

Major Landry said crisply, "Ground your platoon."

I gulped and started to argue -- then cut in the all-hands circuit: "First Platoon Blackguards -- ground and freeze!"

It speaks well for Lieutenant Silva that all I heard was a double echo of my order, as it was repeated down to squad. I said, "Major, can I let them move around on the ground?"

"No. And shut up."

Presently the senser got back in the car, put his mask on. There wasn't room for me, but I was allowed -- ordered, really -- to grab on and be towed; we shifted a couple of miles. Again the senser took off his mask and walked around. This time he spoke to one of the other combat engineers, who kept nodding and sketching on a pad.

The special-mission unit landed about a dozen times in my area, each time going through the same apparently pointless routine; then they moved on into the Fifth Regiment's grid. Just before they left, the officer who had been sketching pulled a sheet out of the bottom of his sketch box and handed it to me. "Here's your sub map. The wide red band is the only Bug boulevard in your area. It is nearly a thousand feet down where it enters but it climbs steadily toward your left rear and leaves at about minus four hundred fifty. The light blue net-work joining it is a big Bug colony; the only places where it comes within a hundred feet of the surface I have marked. You might put some listeners there until we can get over here and handle it."

I stared at it. "Is this map reliable?"

The engineer officer glanced at the senser, then said very quietly to me, "Of course it is, you idiot! What are you trying to do? Upset him?"

They left while I was studying it. The artist-engineer had done double sketching and the box had combined them into a stereo picture of the first thousand feet under the surface. I was so bemused by it that I had to be reminded to take the platoon out of "freeze" -- then I withdrew the ground listeners from the crater, pulled two men from each squad and gave them bearings from that infernal map to have them listen along the Bug highway and over the town.

I reported it to Blackie. He cut me off as I started to describe the Bug tunnels by co-ordinates. "Major Landry relayed a facsimile to me. Just give me co-ordinates of your listening posts."

I did so. He said, "Not bad, Johnnie. But not quite what I want, either. You've placed more listeners than you need over their mapped tunnels. String four of them along that Bug race track, place four more in a diamond around their town. That leaves you four. Place one in the triangle formed by your right rear corner and the main tunnel; the other three go in the larger area on the other side of the tunnel."

"Yes, sir." I added, "Captain, can we depend on this map?"

"What's troubling you?"

"Well . . . it seems like magic. Uh, black magic."

"Oh. Look, son, I've got a special message from the Sky Marshal to you. He says to tell you that map is official . . . and that he will worry about everything else so that you can give full time to your platoon. Follow me?"

"Uh, yes, Captain."

"But the Bugs can burrow mighty fast, so you give special attention to the listening posts outside the area of the tunnels. Any noise from those four outside posts louder than a butterfly's roar is to be reported at once, regardless of its nature."

"Yes, sir."

"When they burrow, it makes a noise like frying bacon -- in case you've never heard it. Stop your patrol sweeps. Leave one man on visual observation of the crater. Let half your platoon sleep for two hours, while the other half pairs off to take turns listening."

"Yes, sir."

"You may see some more combat engineers. Here's the revised plan. A sapper company will blast down and cork that main tunnel where it comes nearest the surface, either at your left flank, or beyond in `Head Hunter' territory. At the same time another engineer company will do the same where that tunnel branches about thirty miles off to your right in the First Regiment's bailiwick. When the corks are in, a long chunk of their main street and a biggish settlement will be cut off. Meanwhile, the same sort of thing will be going on a lot of other places. Thereafter -- we'll see. Either the Bugs break through to the surface and we have a pitched battle, or they sit tight and we go down after them, a sector at a time."

"I see." I wasn't sure that I did, but I understood my part: rearrange my listening posts; let half my platoon sleep. Then a Bug hunt -- on the surface if we were lucky, underground if we had to.

"Have your flank make contact with that sapper company when it arrives. Help `em if they want help."

"Right, Cap'n," I agreed heartily. Combat engineers are almost as good an outfit as the infantry; it's a pleasure to work with them. In a pinch they fight, maybe not expertly but bravely. Or they go ahead with their work, not even lifting their heads, while a battle rages around them. They have an unofficial, very cynical and very ancient motto: "First we dig `em, then we die in `em," to supplement their official motto: "Can do!" Both mottoes are literal truth.

"Get on it, son."

Twelve listening posts meant that I could put a half squad at each post, either a corporal or his lance, plus three privates, then allow two of each group of four to sleep while the other two took turns listening. Navarre and the other section chaser could watch the crater and sleep, turn about, while section sergeants could take turns in charge of the platoon. The redisposition took no more than ten minutes once I had detailed the plan and given out bearings to the sergeants; nobody had to move very far. I warned everybody to keep eyes open for a company of engineers. As soon as each section reported its listening posts in operation I clicked to the wide circuit: "Odd numbers! Lie down, prepare to sleep . . . one . . . two . . . three . . . four . . . five -- sleep!"

A suit is not a bed, but it will do. One good thing about hypno preparation for combat is that, in the unlikely event of a chance to rest, a man can be put to sleep instantly by post hypnotic command triggered by someone who is not a hypnotist -- and awakened just as instantly, alert and ready to fight. It is a life-saver, because a man can get so exhausted In battle that he shoots at things that aren't there and can't see what he should be fighting.

But I had no intention of sleeping. I had not been told to and I had not asked. The very thought of sleeping when I knew that perhaps many thousands of Bugs were only a few hundred feet away made my stomach jump. Maybe that senser was infallible, perhaps the Bugs could not reach us without alerting our listening posts.

Maybe -- But I didn't want to chance it.

I clicked to my private circuit. "Sarge -- "

"Yes, sir?"

"You might as well get a nap. I'll be on watch. Lie down and prepare to sleep . . . one . . . two -- "

"Excuse me, sir. I have a suggestion."

"Yes?"

"If I understand the revised plan, no action is expected for the next four hours. You could take a nap now, and then -- "

"Forget it, Sarge! I am not going to sleep; I am going to make the rounds of the listening posts and watch for that sapper company."

"Very well, sir."

"I'll check number three while I'm here. You stay there with Brumby and

catch some rest while I -- "

"Johnnie!"

I broke off. "Yes, Captain?" Had the Old Man been listening?

"Are your posts all set?"

"Yes, Captain, and my odd numbers are sleeping. I am about to inspect each post. Then -- "

"Let your sergeant do it. I want you to rest."

"But, Captain -- "

"Lie down. That's a direct order. Prepare to sleep . . . one . . . two . . . three -- Johnnie!"

"Captain, with your permission, I would like to inspect my posts first. Then I'll rest, if you say so, but I would rather remain awake. I -- "

Blackie guffawed in my ear. "Look, son, you've slept for an hour and ten minutes."

"Sir?"

"Check the time." I did so and felt foolish. "You wide awake, son?"

"Yes, sir. I think so."

"Things have speeded up. Call your odd numbers and put your even numbers to sleep. With luck, they may get an hour. So swap `em around, inspect your posts, and call me back."

I did so and started my rounds without a word to my platoon sergeant. I was annoyed at both him and Blackie -- at my company commander because I resented being put to sleep against my wishes; and as for my platoon sergeant, I had a dirty hunch that it wouldn't have been done if he weren't the real boss and myself just a figurehead.

But after I had checked posts number three and one (no sounds of any sort, both were forward of the Bug area), I cooled down. After all, blaming a sergeant, even a fleet sergeant, for something a captain did was silly. "Sarge-"

"Yes, Mr. Rico?"

"Do you want to catch a nap with the even numbers? I'll wake you a minute or two before I wake them."

He hesitated slightly. "Sir, I'd like to inspect the listening posts myself."

"Haven't you already?"

"No, sir. I've been asleep the past hour."

"Huh?"

He sounded embarrassed. "The Captain required me to do so. He placed Brumby temporarily in charge and put me to sleep immediately after he relieved you."

I started to answer, then laughed helplessly. "Sarge? Let's you and I go off somewhere and go back to sleep. We're wasting our time; Cap'n Blackie is running this platoon."

"I have found, sir," he answered stiffly, "that Captain Blackstone invariably has a reason for anything he does."

I nodded thoughtfully, forgetting that I was ten miles from my

listener. "Yes. You're right, he always has a reason. Mmm . . . since he had us both sleep, he must want us both awake and alert now."

"I think that must be true."

"Mmm . . . any idea why?"

He was rather long in answering. "Mr. Rico," he said slowly, "if the Captain knew he would tell us; I've never known him to hold back information. But sometimes he does things a certain way without being able to explain why. The Captain's hunches -- well, I've learned to respect them."

"So? Squad leaders are all even numbers; they're asleep."

"Yes, sir."

"Alert the lance of each squad. We won't wake anybody . . . but when we do, seconds may be important."

"Right away."

I checked the remaining forward post, then covered the four posts bracketing the Bug village, jacking my phones in parallel with each listener. I had to force myself to listen, because you could hear them, down there below, chittering to each other. I wanted to run and it was all I could do not to let it show.

I wondered if that "special talent" was simply a man with incredibly acute hearing.

Well, no matter how he did it, the Bugs were where he said they were. Back at O. C. S. we had received demonstrations of recorded Bug noises; these four posts were picking up typical nest noises of a large Bug town -- that chittering which may be their speech (though why should they need to talk if they are all remotely controlled by the brain caste?), a rustling like sticks and dry leaves, a high background whine which is always heard at a settlement and which had to be machinery -- their air conditioning perhaps.

I did not hear the hissing, crackling noise they make in cutting through rock.

The sounds along the Bug boulevard were unlike the settlement sounds -- a low background rumble which increased to a roar every few moments, as if heavy traffic were passing. I listened at post number five, then got an idea -- checked it by having the stand-by man at each of the four posts along the tunnel call out "Mark!" to me each time the roaring got loudest.

Presently I reported. "Captain -- "

"Yeah, Johnnie?"

"The traffic along this Bug race is all moving one way, from me toward you. Speed is approximately a hundred and ten miles per hour, a load goes past about once a minute."

"Close enough," he agreed. "I make it one-oh-eight with a headway of fifty-eight seconds."

"Oh." I felt dashed, and changed the subject. "I haven't seen that sapper company."

"You won't. They picked a spot in the middle rear of `Head Hunter'

area. Sorry, I should have told you. Anything more?"

"No, sir." We clicked off and I felt better. Even Blackie could forget . . . and there hadn't been anything wrong with my idea. I left the tunnel zone to inspect the listening post to right and rear of the Bug area, post twelve.

As with the others, there were two men asleep, one listening, one stand-by. I said to the stand-by, "Getting anythin?"

"No, sir."

The man listening, one of my five recruits, looked up and said, "Mr. Rico, I think this pickup has just gone sour."

"I'll check it," I said. He moved to let me jack in with him.

"Frying bacon" so loud you could smell it!

I hit the all-hands circuit. "First platoon up! Wake up, call off, and report!"

-- And clicked over to officers' circuit. "Captain! Captain Blackstone! Urgent!"

"Slow down, Johnnie. Report."

" `Frying bacon' sounds, sir," I answered, trying desperately to keep my voice steady. "Post twelve at co-ordinates Easter Nine, Square Black One."

"Easter Nine," he agreed. "Decibels?"

I looked hastily at the meter on the pickup. "I don't know, Captain. Off the scale at the max end. It sounds like they're right under my feet!"

"Good!" he applauded -- and I wondered how he could feel that way. "Best news we've had today! Now listen, son. Get your lads awake -- "

"They are, sir!"

"Very well. Pull back two listeners, have them spot-check around post twelve. Try to figure where the Bugs are going to break out. And stay away from that spot! Understand me?"

"I hear you, sir," I said carefully. "But I do not understand."

He sighed. "Johnnie, you'll turn my hair gray yet. Look, son, we want them to come out, the more the better. You don't have the firepower to handle them other than by blowing up their tunnel as they reach the surface -- and that is the one thing you must not do! If they come out in force, a regiment can't handle them. But that's just what the General wants, and he's got a brigade of heavy weapons in orbit, waiting for it. So you spot that breakthrough, fall back, and keep it under observation. If you are lucky enough to have a major breakthrough in your area, your reconnaissance will be patched through all the way to the top. So stay lucky and stay alive! Got it?"

"Yes, sir. Spot the breakthrough. Fall back and avoid contact. Observe and report."

"Get on it!"

I pulled back listeners nine and ten from the middle stretch of "Bug Boulevard" and had them close in on co-ordinates Easter Nine from right and left, stopping every half mile to listen for "frying bacon." At the same

time I lifted post twelve and moved it toward our rear, while checking for a dying away of the sound.

In the meantime my platoon sergeant was regrouping the platoon in the forward area between the Bug settlement and the crater -- all but twelve men who were ground-listening. Since we were under orders not to attack, we both worried over the prospect of having the platoon spread too widely for mutual support. So he rearranged them in a compact line five miles long, with Brumby's section on the left, nearer the Bug settlement. This placed the men less than three hundred yards apart (almost shoulder to shoulder for cap troopers), and put nine of the men still on listening stations within support distance of one flank or the other. Only the three listeners working with me were out of reach of ready help.

I told Bayonne of the Wolverines and Do Campo of the Head Hunters that I was no longer patrolling and why, and I reported our regrouping to Captain Blackstone.

He grunted. "Suit yourself. Got a prediction on that breakthrough?"

"It seems to center about Easter Ten, Captain, but it is hard to pin down. The sounds are very loud in an area about three miles across and it seems to get wider. I'm trying to circle it at an intensity level just barely on scale." I added, "Could they be driving a new horizontal tunnel just under the surface?"

He seemed surprised. "That's possible. I hope not -- we want them to come up." He added, "Let me know if the center of noise moves. Check on it."

"Yes, sir. Captain -- "

"Huh? Speak up."

"You told us not to attack when they break out. If they break out. What are we to do? Are we just spectators?"

There was a longish delay, fifteen or twenty seconds, and he may have consulted "upstairs." At last he said, "Mr. Rico, you are not to attack at or near Easter Ten. Anywhere else -- the idea is to hunt Bugs."

"Yes, sir." I agreed happily. "We hunt Bugs."

"Johnnie!" he said sharply. "If you go hunting medals instead of Bugs -- and I find out -- you're going to have a mighty sad-looking Form Thirty-One!"

"Captain," I said earnestly, "I don't ever want to win a medal. The idea is to hunt Bugs."

"Right. Now quit bothering me."

I called my platoon sergeant, explained the new limits under which we would work, told him to pass the word along and to make sure that each man's suit was freshly charged, air and power.

"We've just finished that, sir. I suggest that we relieve the men with you." He named three reliefs.

This was reasonable, as my ground listeners had had no time to recharge. But the reliefs he named were all scouts.

Silently I cussed myself for utter stupidity. A scout's suit is as fast as a command suit, twice the speed of a marauder. I had been having a

nagging feeling of something left undone, and had checked it off to the nervousness I always feel around Bugs.

Now I knew. Here I was, ten miles away from my platoon with a party of three men each in a marauder suit. When the Bugs broke through, I was going to be faced with an impossible decision . . . unless the men with me could rejoin as fast as I could. "That's good," I agreed, "but I no longer need three men. Send Hughes, right away. Have him relieve Nyberg. Use the other three scouts to relieve the listening posts farthest forward."

"Just Hughes?" he said doubtfully.

"Hughes is enough. I'm going to man one listener myself. Two of us can straddle the area; we know where they are now." I added, "Get Hughes down here on the bounce."

For the next thirty-seven minutes nothing happened. Hughes and I swung back and forth along the forward and rear arcs of the area around Easter Ten, listening five seconds at a time, then moving on. It was no longer necessary to seat the microphone in rock; it was enough to touch it to the ground to get the sound of "frying bacon" strong and clear. The noise area expanded but its center did not change. Once I called Captain Blackstone to tell him that the sound had abruptly stopped, and again three minutes later to tell him it had resumed; otherwise I used the scouts' circuit and let my platoon sergeant take care of the platoon and the listening posts near the platoon.

At the end of this time everything happened at once.

A voice called out on the scouts' circuit, " `Bacon Fry'! Albert Two!"

I clicked over and called out, "Captain! `Bacon Fry' at Albert Two, Black One!" -- clicked over to liaison with the platoons surrounding me: "Liaison flash! `Bacon frying' at Albert Two, Square Black One" -- and immediately heard Do Campo reporting: " `Frying Bacon' sounds at Adolf Three, Green Twelve."

I relayed that to Blackie and cut back to my own scouts' circuit, heard: "Bugs! Bugs! HELP!"

"Where?"

No answer. I clicked over. "Sarge! Who reported Bugs?"

He rapped back, "Coming up out of their town -- about Bangkok Six."

"Hit `em!" I clicked over to Blackie. "Bugs at Bangkok Six, Black One -- I am attacking!"

"I heard you order it," he answered calmly. "How about Easter Ten?"

"Easter Ten is -- " The ground fell away under me and I was engulfed in Bugs.

I didn't know what had happened to me. I wasn't hurt; it was a bit like falling into the branches of a tree -- but these branches were alive and kept jostling me while my gyros complained and tried to keep me upright. I fell ten or fifteen feet, deep enough to be out of the daylight.

Then a surge of living monsters carried me back up into the light -- and training paid off; I landed on my feet, talking and fighting:

"Breakthrough at Easter Ten -- no, Easter Eleven, where I am now. Big hole and they're pouring up. Hundreds. More than that." I had a hand flamer in each hand and was burning them down as I reported.

"Get out of there, Johnnie!"

"Wilco!" -- and I started to jump.

And stopped. Checked the jump in time, stopped flaming, and really looked -- for I suddenly realized that I ought to be dead. "Correction," I said, looking and hardly believing. "Breakthrough at Easter Eleven is a feint. No warriors."

"Repeat."

"Easter Eleven, Black One. Breakthrough here is entirely by workers so far. No warriors. I am surrounded by Bugs and they are still pouring out, but not a one of them is armed and those nearest me all have typical worker features. I have not been attacked." I added, "Captain, do you think this could be just a diversion? With their real breakthrough to come somewhere else?"

"Could be," he admitted. "Your report is patched through right to Division, so let them do the thinking. Stir around and check what you've reported. Don't assume that they are all workers -- you may find out the hard way."

"Right, Captain." I jumped high and wide, intending to get outside that mass of harmless but loathsome monsters.

That rocky plain was covered with crawly black shapes in all directions. I overrode my jet controls and increased the jump, calling out, "Hughes! Report!"

"Bugs, Mr. Rico! Zillions of `em! I'm a-burnin' `em down!"

"Hughes, take a close look at those Bugs. Any of them fighting back? Aren't they all workers?"

"Uh -- " I hit the ground and bounced again. He went on, "Hey! You're right, sir! How did you know?"

"Rejoin your squad, Hughes." I clicked over. "Captain, several thousand Bugs have exited near here from an unestimated number of holes. I have not been attacked. Repeat, I have not been attacked at all. If there are any warriors among them, they must be holding their fire and using workers as camouflage."

He did not answer.

There was an extremely brilliant flash far off to my left, followed at once by one just like it but farther away to my right front; automatically I noted time and bearings. "Captain Blackstone answer!" At the top of my jump I tried to pick out his beacon, but that horizon was cluttered by low hills in Square Black Two.

I clicked over and called out, "Sarge! Can you relay to the Captain for me?"

At that very instant my platoon sergeant's beacon blinked out.

I headed on that bearing as fast as I could push my suit. I had not been watching my display closely; my platoon sergeant had the platoon and I

had been busy, first with ground-listening and, most lately, with a few hundred Bugs. I had suppressed all but the non-com's beacons to allow me to see better.

I studied the skeleton display, picked out Brumby and Cunha, their squad leaders and section chasers. "Cunha! Where's the platoon sergeant?"

"He's reconnoitering a hole, sir."

"Tell him I'm on my way, rejoining." I shifted circuits without waiting. "First platoon Blackguards to second platoon -- answer!"

"What do you want?" Lieutenant Khoroshen growled.

"I can't raise the Captain."

"You won't, he's out."

"Dead?"

"No. But he's lost power -- so he's out."

"Oh. Then you're company commander?"

"All right, all right, so what? Do you want help?"

"Uh . . . no. No, sir."

"Then shut up," Khoroshen told me, "until you do need help. We've got more than we can handle here."

"Okay." I suddenly found that I had more than I could handle. While reporting to Khoroshen, I shifted to full display and short range, as I was almost closed with my platoon -- and now I saw my first section disappear one by one, Brumby's beacon disappearing first.

"Cunha! What's happening to the first section?"

His voice sounded strained. "They are following the platoon sergeant down."

If there's anything in the book that covers this, I don't know what it is. Had Brumby acted without orders? Or had he been given orders I hadn't heard? Look, the man was already down a Bug hole, out of sight and hearing -- is this a time to go legal? We would sort such things out tomorrow. If any of us had a tomorrow --

"Very well," I said. "I'm back now. Report." My last jump brought me among them; I saw a Bug off to my right and I got him before I hit. No worker, this -- it had been firing as it moved.

"I've lost three men," Cunha answered, gasping. "I don't know what Brumby lost. They broke out three places at once -- that's when we took the casualties. But we're mopping them -- "

A tremendous shock wave slammed me just as I bounced again, slapped me sideways. Three minutes thirty-seven seconds -- call it thirty miles. Was that our sappers "putting down their corks"? "First section! Brace yourselves for another shock wave!" I landed sloppily, almost on top of a group of three or four Bugs. They weren't dead but they weren't fighting; they just twitched. I donated them a grenade and bounced again. "Hit `em now!" I called out. "They're groggy. And mind that next -- "

The second blast hit as I was saying it. It wasn't as violent. "Cunha! Call off your section. And everybody stay on the bounce and mop up."

The call-off was ragged and slow -- too many missing files as I could

see from my physicals display. But the mop-up was precise and fast. I ranged around the edge and got half a dozen Bugs myself -- the last of them suddenly became active just before I flamed it. Why did concussion daze them more than it did us? Because they were unarmored? Or was it their brain Bug, somewhere down below, that was dazed?

The call-off showed nineteen effectives, plus two dead, two hurt, and three out of action through suit failure -- and two of these latter Navarre was repairing by vandalizing power units from suits of dead and wounded. The third suit failure was in radio & radar and could not be repaired, so Navarre assigned the man to guard the wounded, the nearest thing to pickup we could manage until we were relieved.

In the meantime I was inspecting, with Sergeant Cunha, the three places where the Bugs had broken through from their nest below. Comparison with the sub map showed, as one could have guessed, that they had cut exits at the places where their tunnels were closest to the surface.

One hole had closed; it was a heap of loose rock. The second one did not show Bug activity; I told Cunha to post a lance and a private there with orders to kill single Bugs, close the hole with a bomb if they started to pour out it's all very well for the Sky Marshal to sit up there and decide that holes must not be closed, but I had a situation, not a theory.

Then I looked at the third hole, the one that had swallowed up my platoon sergeant and half my platoon.

Here a Bug corridor came within twenty feet of the surface and they had simply removed the roof for about fifty feet. Where the rock went, what caused that "frying bacon" noise while they did it, I could not say. The rocky roof was gone and the sides of the hole were sloped and grooved. The map showed what must have happened; the other two holes came up from small side tunnels, this tunnel was part of their main labyrinth -- so the other two had been diversions and their main attack had come from here.

Can those Bugs see through solid rock?

Nothing was in sight down that hole, neither Bug nor human. Cunha pointed out the direction the second section had gone. It had been seven minutes and forty seconds since the platoon sergeant had gone down, slightly over seven since Brumby had gone after him. I peered into the darkness, gulped and swallowed my stomach. "Sergeant, take charge of your section," I said, trying to make it sound cheerful. "If you need help, call Lieutenant Khoroshen."

"Orders, sir?"

"None. Unless some come down from above. I'm going down and find the second section -- so I may be out of touch for a while." Then I jumped down into the hole at once, because my nerve was slipping.

Behind me I heard: "Section!"

"First squad!" -- "Second squad!" -- "Third squad!"

"By squads! Follow me!" -- and Cunha jumped down, too.

It's not nearly so lonely that way.

I had Cunha leave two men at the hole to cover our rear, one on the floor of the tunnel, one at surface level. Then I led them down the tunnel the second section had followed, moving as fast as possible -- which wasn't fast as the roof of the tunnel was right over our heads. A man can move in sort of a skating motion in a powered suit without lifting his feet, but it is neither easy nor natural; we could have trotted without armor faster.

Snoopers were needed at once -- whereupon we confirmed something that had been theorized: Bugs see by infrared. That dark tunnel was well lighted when seen by snoopers. So far it had no special features, simply glazed rock walls arching over a smooth, level door.

We came to a tunnel crossing the one we were in and I stopped short of it. There are doctrines for how you should dispose a strike force underground -- but what good are they? The only certainty was that the man who had written the doctrines had never himself tried them . . . because, before Operation Royalty, nobody had come back up to tell what had worked and what had not.

One doctrine called for guarding every intersection such as this one. But I had already used two men to guard our escape hole; if I left l0 per cent of my force at each intersection, mighty soon I would be ten-percented to death.

I decided to keep us together . . . and decided, too, that none of us would be captured. Not by Bugs. Far better a nice, clean real estate deal . . . and with that decision a load was lifted from my mind and I was no longer worried.

I peered cautiously into the intersection, looked both ways. No Bugs. So I called out over the non-coms' circuit: "Brumby!"

The result was startling. You hardly hear your own voice when using suit radio, as you are shielded from your output. But here, underground in a network of smooth corridors, my output came back to me as if the whole complex were one enormous wave guide:

"BRRRRUMMBY!"

My ears rang with it.

And then rang again: "MR. RRRICCCO!"

"Not so loud," I said, trying to talk very softly myself. "Where are you?"

Brumby answered, not quite so deafeningly, "Sir, I don't know. We're lost."

"Well, take it easy. We're coming to get you. You can't be far away. Is the platoon sergeant with you?"

"No, sir. We never -- "

"Hold it." I clicked in my private circuit. "Sarge -- "

"I read you, sir." His voice sounded calm and he was holding the volume down. "Brumby and I are in radio contact but we have not been able to make rendezvous."

"Where are you?"

He hesitated slightly. "Sir, my advice is to make rendezvous with

Brumby's section -- then return to the surface."

"Answer my question."

"Mr. Rico, you could spend a week down here and not find me . . . and I am not able to move. You must -- "

"Cut it, Sarge! Are you wounded?"

"No, sir, but -- "

"Then why can't you move? Bug trouble?"

"Lots of it. They can't reach me now . . . but I can't come out. So I think you had better -- "

"Sarge, you're wasting time! I am certain you know exactly what turns you took. Now tell me, while I look at the map. And give me a vernier reading on your D. R. tracer. That's a direct order. Report."

He did so, precisely and concisely. I switched on my head lamp, flipped up the snoopers, and followed it on the map. "All right," I said presently. "You're almost directly under us and two levels down -- and I know what turns to take. We'll be there as soon as we pick up the second section. Hang on." I clicked over. "Brumby -- "

"Here, sir."

"When you came to the first tunnel intersection, did you go right, left, or straight ahead?"

"Straight ahead, sir."

"Okay. Cunha, bring `em along. Brumby, have you got Bug trouble?"

"Not now, sir. But that's how we got lost. We tangled with a bunch of them . . . and when it was over, we were turned around."

I started to ask about casualties, then decided that bad news could wait; I wanted to get my platoon together and get out of there. A Bug town with no Bugs in sight was somehow more upsetting than the Bugs we had expected to encounter. Brumby coached us through the next two choices and I tossed tanglefoot bombs down each corridor we did not use. "Tanglefoot" is a derivative of the nerve gas we had been using on Bugs in the past -- instead of killing, it gives any Bug that trots through it a sort of shaking palsy. We had been equipped with it for this one operation, and I would have swapped a ton of it for a few pounds of the real stuff. Still, it might protect our flanks.

In one long stretch of tunnel I lost touch with Brumby -- some oddity in reflection of radio waves, I guess, for I picked him up at the next intersection.

But there he could not tell me which way to turn. This was the place, or near the place, where the Bugs had hit them.

And here the Bugs hit us.

I don't know where they came from. One instant everything was quiet. Then I heard the cry of "Bugs! Bugs!" from back of me in the column, I turned -- and suddenly Bugs were everywhere. I suspect that those smooth walls are not as solid as they look; that's the only way I can account for the way they were suddenly all around us and among us.

We couldn't use flamers, we couldn't use bombs; we were too likely to

hit each other. But the Bugs didn't have any such compunctions among themselves if they could get one of us. But we had hands and we had feet --

It couldn't have lasted more than a minute, then there were no more Bugs, just broken pieces of them on the door . . . and four cap troopers down.

One was Sergeant Brumby, dead. During the ruckus the second section had rejoined. They had been not far away, sticking together to keep from getting further lost in that maze, and had heard the fight. Hearing it, they had been able to trace it by sound, where they had not been able to locate us by radio.

Cunha and I made certain that our casualties were actually dead, then consolidated the two sections into one of four squads and down we went -- and found the Bugs that had our platoon sergeant besieged.

That fight didn't last any time at all, because he had warned me what to expect. He had captured a brain Bug and was using its bloated body as a shield. He could not get out, but they could not attack him without (quite literally) committing suicide by hitting their own brain.

We were under no such handicap; we hit them from behind.

Then I was looking at the horrid thing he was holding and I was feeling exultant despite our losses, when suddenly I heard close up that "frying bacon" noise. A big piece of roof fell on me and Operation Royalty was over as far as I was concerned.

I woke up in bed and thought that I was back at O. C. S. and had just had a particularly long and complicated Bug nightmare. But I was not at O. C. S.; I was in a temporary sickbay of the transport Argonne, and I really had had a platoon of my own for nearly twelve hours.

But now I was just one more patient, suffering from nitrous oxide poisoning and overexposure to radiation through being out of armor for over an hour before being retrieved, plus broken ribs and a knock in the head which had put me out of action.

It was a long time before I got everything straight about Operation Royalty and some of it I'll never know. Why Brumby took his section underground, for example. Brumby is dead and Naidi bought the farm next to his and I'm simply glad that they both got their chevrons and were wearing them that day on Planet P when nothing went according to plan.

I did learn, eventually, why my platoon sergeant decided to go down into that Bug town. He had heard my report to Captain Blackstone that the "major breakthrough" was actually a feint, made with workers sent up to be slaughtered. When real warrior Bugs broke out where he was, he had concluded (correctly and minutes sooner than Staff reached the same conclusion) that the Bugs were making a desperation push, or they would not expend their workers simply to draw our fire.

He saw that their counterattack made from Bug town was not in sufficient force, and concluded that the enemy did not have many reserves -- and decided that, at this one golden moment, one man acting alone might have

a chance of raiding, finding "royalty" and capturing it. Remember, that was the whole purpose of the operation; we had plenty of force simply to sterilize Planet P, but our object was to capture royalty castes and to learn how to go down in. So he tried it, snatched that one moment -- and succeeded on both counts.

It made it "mission accomplished" for the First Platoon of the Blackguards. Not very many other platoons, out of many, many hundreds, could say that; no queens were captured (the Bugs killed them first) and only six brains. None of the six were ever exchanged, they didn't live long enough. But the Psych Warfare boys did get live specimens, so I suppose Operation Royalty was a success.

My platoon sergeant got a field commission. I was not offered one (and would not have accepted) -- but I was not surprised when I learned that he had been commissioned. Cap'n Blackie had told me that I was getting "the best sergeant in the fleet" and I had never had any doubt that Blackie's opinion was correct. I had met my platoon sergeant before. I don't think any other Blackguard knew this -- not from me and certainly not from him. I doubt if Blackie himself knew it. But I had known my platoon sergeant since my first day as a boot.

His name is Zim.

My part in Operation Royalty did not seem a success to me. I was in the Argonne more than a month, first as a patient, then as an unattached casual, before they got around to delivering me and a few dozen others to Sanctuary; it gave me too much time to think -- mostly about casualties, and what a generally messed-up job I had made of my one short time on the ground as platoon leader. I knew I hadn't kept everything juggled the way the Lieutenant used to why, I hadn't even managed to get wounded still swinging; I had let a chunk of rock fall on me.

And casualties -- I didn't know how many there were; I just knew that when I closed ranks there were only four squads where I had started with six. I didn't know how many more there might have been before Zim got them to the surface, before the Blackguards were relieved and retrieved.

I didn't even know whether Captain Blackstone was still alive (he was -- in fact he was back in command about the time I went underground) and I had no idea what the procedure was if a candidate was alive and his examiner was dead. But I felt that my Form Thirty-One was sure to make me a buck sergeant again. It really didn't seem important that my math books were in another ship.

Nevertheless, when I was let out of bed the first week I was in the Argonne, after loafing and brooding a day I borrowed some books from one of the junior officers and got to work. Math is hard work and it occupies your mind -- and it doesn't hurt to learn all you can of it, no matter what rank you are; everything of any importance is founded on mathematics.

When I finally checked in at O. C. S. and turned in my pips, I learned that I was a cadet again instead of a sergeant. I guess Blackie gave me the

benefit of the doubt.

My roommate, Angel, was in our room with his feet on the desk -- and in front of his feet was a package, my math books. He looked up and looked surprised. "Hi, Juan! We thought you had bought it!"

"Me? The Bugs don't like me that well. When do you go out?"

"Why, I've been out," Angel protested. "Left the day after you did, made three drops and been back a week. What took you so long?"

"Took the long way home. Spent a month as a passenger."

"Some people are lucky. What drops did you make?"

"Didn't make any," I admitted.

He stared. "Some people have all the luck!"

Perhaps Angel was right; eventually I graduated. But he supplied some of the luck himself, in patient tutoring. I guess my "luck" has usually been people -- Angel and Jelly and the Lieutenant and Carl and Lieutenant Colonel Dubois, yes and my father, and Blackie . . . and Brumby . . . and Ace -- and always Sergeant Zim. Brevet Captain Zim, now, with permanent rank of First Lieutenant. It wouldn't have been right for me to have wound up senior to him.

Bennie Montez, a classmate of mine, and I were at the Fleet landing field the day after graduation, waiting to go up to our ships. We were still such brand-new second lieutenants that being saluted made us nervous and I was covering it by reading the list of ships in orbit around Sanctuary -- a list so long that it was clear that something big was stirring, even though they hadn't seen fit to mention it to me. I felt excited. I had my two dearest wishes, in one package -- posted to my old outfit and while my father was still there, too. And now this, whatever it was, meant that I was about to have the polish put on me by "makee-learnee" under Lieutenant Jelal, with some important drop coming up.

I was so full of it all that I couldn't talk about it, so I studied the lists. Whew, what a lot of ships! They were posted by types, too many to locate otherwise. I started reading off the troop carriers, the only ones that matter to an M. I.

There was the Mennerheim! Any chance of seeing Carmen? Probably not, but I could send a dispatch and find out.

Big ships -- the new Valley Forge and the new Ypres, Merathon, El Alamein, Iwo, Gallipoli, Leyte, Marne, Tours, Gettysburg, Hastings, Alamo, Waterloo -- all places where mud feet had made their names to shine.

Little ships, the ones named for foot sloggers: Horatius, Alvin York, Swamp Fox, the Rog herself, bless her heart, Colonel Bowie, Devereux, Vercingetorix, Sandino, Aubrey Cousens, Kamehameha, Audie Murphy, Xenophon, Aguinaldo --

I said, "There ought to be one named Magsaysay."

Bennie said, "What?"

"Ramon Magsaysay," I explained. "Great man, great soldier -- probably be chief of psychological warfare if he were alive today. Didn't you ever

study any history?"

"Well," admitted Bennie, "I learned that Simon Bolivar built the Pyramids, licked the Armada, and made the first trip to the Moon."

"You left out marrying Cleopatra."

"Oh, that. Yup. Well, I guess every country has its own version of history."

"I'm sure of it." I added something to myself and Bennie said, "What did you say?"

"Sorry, Bernardo. Just an old saying in my own language. I suppose you could translate it, more or less, as: `Home is where the heart is.' "

"But what language was it?"

"Tagalog. My native language."

"Don't they talk Standard English where you come from?"

"Oh, certainly. For business and school and so forth. We just talk the old speech around home a little. Traditions. You know."

"Yeah, I know. My folks chatter in Espanol the same way. But where do you -- " The speaker started playing "Meadowland"; Bennie broke into a grin. "Got a date with a ship! Watch yourself, fellow! See you."

"Mind the Bugs." I turned back and went on reading ships' names: Pal Maleter, Montgomery, Tchaka, Geronimo --

Then came the sweetest sound in the world: " -- shines the name, shines the name of Rodger Young!"

I grabbed my kit and hurried. "Home is where the heart is" -- I was going home.

CHAPTER 14

Am I my brother's keeper?
-- Genesis IV:9
How think ye? If a man have
an hundred sheep, and one of
them be gone astray, doth he not
leave the ninety and nine, and goeth
into the mountains, and seeketh
that which is gone astray?
-- Matthew XII:12
How much then is a man better than a sheep?
-- Matthew XII:12
In the Name of God, the Beneficent,
the Merciful . . . whoso saveth
the life of one, it shall be as if
he had saved the life of all mankind.
-- The Koran, Surah V, 32

Each year we gain a little. You have to keep a sense of proportion.

"Time, sir." My j. o. under instruction, Candidate or "Third Lieutenant" Bearpaw, stood just outside my door. He looked and sounded

awfully young, and was about as harmless as one of his scalp-hunting ancestors.

"Right, Jimmie." I was already in armor. We walked aft to the drop room. I said, as we went, "One word, Jimmie. Stick with me and keep out of my way. Have fun and use up your ammo. If by any chance I buy it, you're the boss -- but if you're smart, you'll let your platoon sergeant call the signals."

"Yes, sir."

As we came in, the platoon sergeant called them to attention and saluted. I returned it, said, "At ease," and started down the first section while Jimmie looked over the second. Then I inspected the second section, too, checking everything on every man. My platoon sergeant is much more careful than I am, so I didn't find anything, I never do. But it makes the men feel better if their Old Man scrutinizes everything -- besides, it's my job.

Then I stepped out in the middle. "Another Bug hunt, boys. This one is a little different, as you know. Since they still hold prisoners of ours, we can't use a nova bomb on Klendathu -- so this time we go down, stand on it, hold it, take it away from them. The boat won't be down to retrieve us; instead it'll fetch more ammo and rations. If you're taken prisoner, keep your chin up and follow the rules -- because you've got the whole outfit behind you, you've got the whole Federation behind you; we'll come and get you. That's what the boys from the Swamp Fox and the Montgomery have been depending on. Those who are still alive are waiting, knowing that we will show up. And here we are. Now we go get `em.

"Don't forget that we'll have help all around us, lots of help above us. All we have to worry about is our one little piece, just the way we rehearsed it.

"One last thing. I had a letter from Captain Jelal just before we left. He says that his new legs work fine. But he also told me to tell you that he's got you in mind . . . and he expects your names to shine!

"And so do I. Five minutes for the Padre."

I felt myself beginning to shake. It was a relief when I could call them to attention again and add: "By sections . . . port and starboard . . . prepare for drop!"

I was all right then while I inspected each man into his cocoon down one side, with Jimmie and the platoon sergeant taking the other. Then we buttoned Jimmie into the No. 3 center-line capsule. Once his face was covered up, the shakes really hit me.

My platoon sergeant put his arm around my armored shoulders. "Just like a drill, Son."

"I know it, Father." I stopped shaking at once. "It's the waiting, that's all."

"I know. Four minutes. Shall we get buttoned up, sir?"

"Right away, Father." I gave him a quick hug, let the Navy drop crew seal us in. The shakes didn't start up again. Shortly I was able to report:

"Bridge! Rico's Roughnecks . . . ready for drop!"

"Thirty-one seconds, Lieutenant." She added, "Good luck, boys! This time we take `em !"

"Right, Captain."

"Check. Now some music while you wait?" She switched it on:

"To the everlasting glory of the Infantry -- "

HISTORICAL NOTE

YOUNG, RODGER W., Private, 148th Infantry, 37th Infantry Division (the Ohio Buckeyes); born Tiffin, Ohio, 28 April 1918; died 31 July 1943, on the island New Georgia, Solomons, South Pacific, while single-handedly attacking and destroying an enemy machine-gun pillbox. His platoon had been pinned down by intense fire from this pillbox; Private Young was wounded in the first burst. He crawled toward the pillbox, was wounded a second time but continued to advance, firing his rifle as he did so. He closed on the pillbox, attacked and destroyed it with hand grenades, but in so doing he was wounded a third time and killed.

His bold and gallant action in the face of overwhelming odds enabled his teammates to escape without loss; he was awarded posthumously the Medal of Honor.

NOTICE: All men, gods; and planets in this story are imaginary, Any coincidence of names is regretted.

Part One HIS MACULATE ORIGIN, 5
Part Two HIS PREPOSTEROUS HERITAGE, 81
Part Three HIS ECCENTRIC EDUCATION, 261
Part Four HIS SCANDALOUS CAREER, 363
Part Five HIS HAPPY DESTINY, 425

Preface

IF YOU THINK that this book appears to be thicker and contain more words than you found in the first published edition of Stranger in a Strange Land, your observation is correct. This edition is the original one-the way Robert Heinlein first conceived it, and put it down on paper.

The earlier edition contained a few words over 160,000, while this one runs around 220,000 words. Robert's manuscript copy usually contained about 250 to 300 words per page, depending on the amount of dialogue on the pages. So, taking an average of about 275 words, with the manuscript running 800 pages, we get a total of 220,000 words, perhaps a bit more.

This book was so different from what was being sold to the general public, or to the science fiction reading public in 1961 when it was published, that the editors required some cutting and removal of a few scenes that might then have been offensive to public taste.

The November 1948 issue of Astounding Science Fiction contained a letter to the editor suggesting titles for the issue of a year hence. Among the titles was to be a story by Robert A. Heinlein-"Gulf."

In a long conversation between that editor, John W. Campbell, Jr., and Robert, it was decided that there would be sufficient lead time to allow all the stories that the fan had titled to be written, and the magazine to come out in time for the November 1949 date. Robert promised to deliver a short story to go with the title. Most of the other authors also went along with the gag. This issue came to be known as the "Time Travel" issue.

Robert's problem, then, was to find a story to fit the title assigned to him.

So we held a "brainstorming" session. Among other unsuitable notions, I suggested a story about a human infant, raised by an alien race. The idea was just too big for a short story, Robert said, but he made a note about it. That night he went into his study, and wrote some lengthy notes, and set them aside.

For the title "Gulf" he wrote quite a different story.

The notes sat in a file for several years, at which time Robert began to write what was to be Stranger in a Strange Land. Somehow, the story didn't quite jell, and he set it aside. He returned to the manuscript a few times, but it was not finished until 1960: this was the version you now hold in your hands.

In the context of 1960, Stranger in a Strange Land was a book that his publishers feared-it was too far off the beaten path. So, in order to minimize possible losses, Robert was asked to cut the manuscript down to 150,000 words-a loss of about 70,000 words. Other changes were also requested, before the editor was willing to take a chance on publication.

To take out about a quarter of a long, complicated book was close to an impossible task. But, over the course of some months, Robert accomplished it. The final word count came out at 160,087 words. Robert was convinced that it was impossible to cut out any more, and the book was accepted at that length.

For 28 years it remained in print in that form.

In 1976, Congress passed a new Copyright Law, which said, in part, that in the event an author died, and the widow or widower renewed the copyright, all old contracts were cancelled. Robert died in 1988, and the following year the copyright for Stranger in a Strange Land came up for renewal.

Unlike many other authors, Robert had kept a copy of the original typescript, as submitted for publication, on file at the library of the University of California at Santa Cruz, his archivists. I asked for a copy of that manuscript, and read that and the published versions side by side. And I came to the conclusion that it had been a mistake to cut the book.

So I sent a copy of the typescript to Eleanor Wood, Robert's agent. Eleanor also read the two versions together, and agreed with my verdict. So, after the notification to the publisher, she presented them with a copy of the new/old version.

No one remembered the fact that such drastic cutting had been done on this book; over the course of years all the editors and senior officers at the publishing house had changed. So this version was a complete surprise to them.

They decided to publish the original version, agreeing that it was better than the cut one.

You now have in your hands the original version of Stranger in a Strange Land, as written by Robert Anson Heinlein.

The given names of the chief characters have great importance to the plot. They were carefully selected: Jubal means "the father of all," Michael stands for "Who is like God?" I leave it for the reader to find out what the other names mean. -Virginia Heinlein Carmel, California

Part one HIS MACULATE ORIGIN

I

ONCE UPON A TIME when the world was young there was a Martian named Smith.

Valentine Michael Smith was as real as taxes but he was a race of one.

The first human expedition from Terra to Mars was selected on the theory that the greatest danger to man in space was man himself. At that time, only eight Terran years after the founding of the first human colony on Luna, any interplanetary trip made by humans necessarily had to be made in weary free-fail orbits, doubly tangent semi-ellipses--from Terra to Mars, two hundred fifty-eight days, the same for the return journey, plus four hundred fifty-five days waiting at Mars while the two planets crawled slowly back into relative positions which would permit shaping the doubly-tangent orbit-a total of almost three Earth years.

Besides its wearing length, the trip was very chancy. Only by refueling at a space station, then tacking back almost into Earth's atmosphere, could this primitive flying coffin, the Envoy, make the trip at all. Once at Mars she might be able to return-if she did not crash in landing, if water could be found on Man to fill her reaction-mass tanks, if some sort of food could be found on Mars, if a thousand other things did not go wrong.

But the physical danger was judged to be less important than the psychological stresses. Eight humans, crowded together like monkeys for almost three Terran years, had better get along much better than humans usually did. An all-male crew had been vetoed as unhealthy and sociaily unstable from lessons learned earlier. A ship's company of four married couples had been decided on as optimum, if the necessary specialties could be found in such a combination.

The University of Edinburgh, prime contractor, sub-contracted crew selection to the Institute for Social Studies. After discarding the chaff of volunteers useless through age, health, mentality, training, or temperament, the Institute still had over nine thousand candidates to work from, each sound in mind and body and having at least one of the necessary special skills. It was expected that the Institute would report several acceptable four-couple crews.

No such crew was found. The major skills needed were astrogator, medical doctor, cook, machinist, ship's commander, semantician, chemical engineer, electronics engineer, physicist, geologist, biochemist, biologist, atomics engineer, photographer, hydroponicist, rocket engineer. Each crew member would have to possess more than one skill, or be able to acquire extra skills in time. There were hundreds of possible combinations of eight people possessing these skills; there turned up three combinations of four married couples possessing them, plus health and intelligence.-but in all three cases the group-dynamicists who evaluated the temperament factors for compatibility threw up their hands in horror.

The prime contractor suggested lowering the compatibility figure-ofmerit; the Institute stiffly offered to return its one dollar fee. In the meantime a computer programmer whose name was not recorded had the machines hunt for three-couple rump crews. She found several dozen compatible combinations, each of which defined by its own characteristics the couple needed to complete it. In the meantime the machines continued to review the data changing through deaths, withdrawals, new volunteers, etc.

Captain Michael Brunt, M.S., Cmdr. D. F. Reserve, pilot (unlimited license), and veteran at thirty of the Moon run, seems to have had an inside track at the Institute, someone who was willing to look up for him the names of single female volunteers who might (with him) complete a crew, and then pair his name with these to run trial problems through the machines to determine whether or not a possible combination would be acceptable. This would account for his action in jetting to Australia and proposing

marriage to Doctor Winifred Coburn, a horse-faced spinster semantician nine years his senior. The Carlsbad Archives pictured her with an expression of quiet good humor but otherwise lacking in attractiveness.

Or Brant may have acted without inside information, solely through that trait of intuitive audacity necessary to command an exploration. In any case lights blinked, punched cards popped out, and a crew for the Envoy had been found:

Captain Michael Brant, commanding-pilot, astrogator, relief cook, relief photographer, rocketry engineer;

Dr. Winifred Coburn Brant, forty-one, semantician, practical nurse, stores officer, historian;

Mr. Francis X. Seeney, twenty-eight, executive officer, second pilot, astrogator, astrophysicist, photographer;

Dr. Olga Kovalic Seeney, twenty-nine, cook, biochemist, hydroponicist;

Dr. Ward Smith, forty-five, physician and surgeon, biologist;

Dr. Mary Jane Lyle Smith, twenty-six, atomics engineer, electronics and power technician;

Mr. Sergei Rimsky, thirty-five, electronics engineer, chemical engineer, practical machinist & instrumentation man, cryologist;

Mrs. Eleanora Alvarez Rimsky, thirty-two, geologist and selenologist, hydroponicist.

The crew had a well-rounded group of skills, although in some cases their secondary skills had been acquired by intensive coaching during the last weeks before blast-off. More important, they were mutually compatible in their temperaments.

Too compatible, perhaps.

The Envoy departed on schedule with no mishaps. During the early part of the voyage her daily reports were picked up with ease by private listeners. As she drew away and signals became fainter, they were picked up and rebroadcast by Earth's radio satellites. The crew seemed to be both healthy and happy. An epidemic of ringworm was the worst that Dr. Smith had to cope with-the crew adapted to free fall quickly and no antinausea drugs were used after the first week. If Captain Brant had any disciplinary problems, he did not choose to report them to Earth.

The Envoy achieved a parking orbit just inside the orbit of Phobos and spent two weeks in photographic survey. Then Captain Brant radioed: "We will attempt a landing at 1200 tomorrow GST just south of Lacus Soli." No further message was ever received.

II

IT WAS A QUARTER of an Earth century before Mars was again visited by humans. Six years after the Envoy was silent, the drone probe Zombie, sponsored jointly by the Geographic Society and La Société Astronautique Internationale, bridged the void and took up an orbit for the waiting period, then returned. The photographs taken by the robot vehicle showed a land unattractive by human standards; her recording instruments confirmed the thinness and unsuitability of the Arean atmosphere to human life.

But the Zombie's pictures showed clearly that the "canals" were engineering works of some sort and there were other details which could only be interpreted as ruins

of cities. A manned expedition on a major scale and without delay surely would have been mounted had not World War III intervened.

But the war and the delay resulted eventually in a much stronger, safer expedition than that of the lost En my. The Federation Ship Champion, manned by an all-male crew of eighteen experienced spacemen and carrying more than that number of male pioneers, made the crossing under Lyle Drive in only nineteen days. The Champion landed just south of Lacus Soli, as Captain van Tromp intended to search for the Envoy. The second expedition reported to Earth by radio daily, but three despatches were of more than scientific interest. The first was:

"Rocket Ship Envoy located. No survivors."

The second worldshaker was: "Mars is inhabited."

The third was: "Correction to despatch 23-105: One survivor of Envoy located."

III

CAPTAIN WILLEM VAN TROMP was a man of humanity and good sense. He radioed ahead: "My passenger must not, repeat, must not be subjected to the strain of a public reception. Provide low-gee shuttle, stretcher and ambulance service, and anned guard."

He sent his ship's surgeon Dr. Nelson along to make sure that Valentine Michael Smith was installed in a suite in Bethesda Medical Center, transferred gently into a hydraulic bed, and protected from outside contact by marine guards. Van Tromp himself went to an extraordinary session of the Federation High Council.

At the moment when Valentine Michael Smith was being lifted into bed, the High Minister for Science was saying testily, "Granted, Captain, that your authority as military commander of what was nevertheless primarily a scientific expedition gives you the right to order unusual medical service to protect a person temporarily in your charge, I do not see why you now presume to interfere with the proper functions of my department. Why, Smith is a veritable treasure trove of scientific information!"

"Yes. I suppose he is, sir."

"Then why-" The science minister broke off and turned to the High Minister for Peace and Military Security. "David? This matter is obviously now in my jurisdiction. Will you issue the necessary instructions to your people? After all, one can't keep persons of the caliber of Professor Kennedy and Doctor Okajima, to mention just two, cooling their heels indefinitely. They won't stand for it."

The peace minister did not answer but glanced inquiringly at Captain van Tromp. The captain shook his head. "No, sir."

"Why not?" demanded the science minister. "You have admitted that he isn't sick."

"Give the captain a chance to explain, Pierre," the peace minister advised. "Well, Captain?"

"Smith isn't sick, sir," Captain van Tromp said to the peace minister, "but he isn't well, either. He has never before been in a one-gravity field. He now weighs more than two and one half times what he is used to and his muscles aren't up to it. He's not used to Earth-normal air pressure. He's not used to anything and the strain is likely to be too

much for him. Hell's bells, gentlemen, I'm dog tired myself just from being at one-gee again-and I was born on this planet."

The science minister looked contemptuous. "If acceleration fatigue is all that is worrying you, let me assure you, my dear Captain, that we had anticipated that. His respiration and heart action will be watched carefully. We are not entirely without imagination and forethought. After all, I've been out myself. I know how it feels. This man Smith must-"

Captain van Tromp decided that it was time to throw a tantrum. He could excuse it by his own fatigue-very real fatigue, he felt as if he had just landed on Jupiter-and he was smugly aware that even a high councilor could not afford to take too stiff a line with the commander of the first successful Martian expedition.

So he interrupted with a snort of disgust. "link! 'This man Smith-' This 'man!' Can't you see that that is just what he is not?"

"Eh?"

"Smith ... is . . . not . . . a . . . man."

"Huh? Explain yourself, Captain."

"Smith is not a man. He is an intelligent creature with the genes and ancestry of a man, but he is not a man. He's more a Martian than a man. Until we came along he had never laid eyes on a human being. He thinks like a Martian, he feels like a Martian. He's been brought up by a race which has nothing in common with us. Why, they don't even have sex. Smith has never laid eyes on a woman-still hasn't if my orders have been carried out. He's a man by ancestry, a Martian by environment. Now, if you want to drive him crazy and waste that 'treasure trove of scientific information,' call in your fat-headed professors and let them badger him. Don't give him a chance to get well and strong and used to this madhouse planet. Just go ahead and squeeze him like an orange. It's no skin off me; I've done my job!"

The ensuing silence was broken smoothly by Secretary General Douglas himself. "And a good job, too, Captain. Your advice will be weighed, and be assured that we will not do anything hastily. If this man, or manMartian, Smith, needs a few days to get adjusted, I'm sure that science can wait-so take it easy, Pete. Let's table this part of the discussion, gentlemen, and get on to other matters. Captain van Tromp is tired."

"One thing won't wait," said the Minister for Public Information.

"Eh, Jock?"

"If we don't show the Man from Mars in the stereo tanks pretty shortly, you'll have riots on your hands, Mr. Secretary."

"Hmm- You exaggerate, Jock. Mars stuff in the news, of course. Me decorating the captain and his brave crew-tomorrow, that had better be. Captain van Tromp telling of his experiences-after a night's rest of course, Captain."

The minister shook his head.

"No good, Jock?"

"The public expected the expedition to bring back at least one real live Martian for them to gawk at. Since they didn't, we need Smith and need him badly."

"'Live Martians?'" Secretary General Douglas turned to Captain van Tromp. "You have movies of Martians, haven't you?"

"Thousands of feet."

"There's your answer, Jock. When the live stuff gets thin, trot on the movies of Martians. The people will love it. Now, Captain, about this possibility of extraterritoriality: you say the Martians were not opposed to it?"

"Well, no, sir-but they were not for it, either."

"I don't follow you?"

Captain van Tromp chewed his lip. "Sir, I don't know just how to explain it. Talking with a Martian is something like talking with an echo. You don't get any argument but you don't get results either."

"Semantic difficulty? Perhaps you should have brought what's-hisname, your semantician, with you today. Or is he waiting outside?"

"Mahmoud, sir. No, Doctor Mahmoud is not well. A-a slight nervous breakdown, sir." Van Tromp reflected that being dead drunk was the moral equivalent thereof.

"Space happy?"

"A little, perhaps." These damned groundhogs!

"Well, fetch him around when he's feeling himself. young man Smith should be of help as an interpreter."

"Perhaps," van Tromp said doubtfully.

This young man Smith was busy at that moment just staying alive. His body, unbearably compressed and weakened by the strange shape of space in this unbelievable place, was at last somewhat relieved by the softness of the nest in which these others had placed him. He dropped the effort of sustaining it, and turned his third level to his respiration and heart beat.

He saw at once that he was about to consume himself. His lungs were beating almost as hard as they did at home, his heart was racing to distribute the influx, ail in an attempt to cope with the squeezing of space-and this in a situation in which he was smothered by a poisonously rich and dangerously hot atmosphere. He took immediate steps.

When his heart rate was down to twenty per minute and his respiration almost imperceptible, he set them at that and watched himself long enough to assure himself that he would not inadvertently discorporate while his attention was elsewhere. When he was satisfied that they were running properly, he set a tiny portion of his second level on guard and withdrew the rest of himself. It was necessary to review the configurations of these many new events in order to fit them to himself, then cherish and praise them-lest they swallow him up.

Where should he start? When he had left home, enfolding these others who were now his own nestlings? Or simply at his arrival in this crushed space? He was suddenly assaulted by the lights and sounds of that arrival, feeling it again with mind-shaking pain. No, he was not yet ready to cherish and embrace that configuration-back! back! back beyond his first sight of these others who were now his own. Back even before the healing which had followed his first grokking of the fact that he was not as his nestling brothers . . . back to the nest itself.

None of his thinkings had been in Earth symbols. Simple English he had freshly learned to speak, but much less easily than a Hindu uses it to trade with a Turk. Smith used English as one might use a code book, with tedious and imperfect translation for

each symbol. Now his thoughts, pure Martian abstractions from half a million years of wildly alien culture, traveled so far from any human experience as to be utterly untranslatable.

In the adjoining room an intern, Dr. "Tad" Thaddeus, was playing cribbage with Tom Meechum, Smith's special nurse. Thaddeus had one eye on his dials and meters and both eyes on his cards; nevertheless he noted every heart beat of his patient. When a flickering light changed from ninety-two pulsations per minute to less than twenty, he pushed the cards aside, jumped to his feet, and hurried into Smith's room with Meechum at his heels.

The patient floated in the flexible skin of the hydraulic bed. He appeared to be dead. Thaddeus swore briefly and snapped, "Get Doctor Nelson!"

Meechum said, "Yessir!" and added, "How about the shock gear, Doc? He's far gone."

"Get Doctor Nelson!"

The nurse rushed out. The interne examined the patient as closely as possible but refrained from touching him. He was still doing so when an older doctor came in, walking with the labored awkwardness of a man long in space and not yet adjusted to high gravity. "Well, Doctor?"

"Patient's respiration, temperature, and pulse dropped suddenly, uh, about two minutes ago, sir."

"What have you done for him, or to him?"

"Nothing, sir. Your instructions-"

"Good." Nelson looked Smith over briefly, then studied the instruments back of the bed, twins of those in the watch room. "Let me know if there is any change." He started to leave.

Thaddeus looked startled. "But, Doctor-" He broke off.

Nelson said grimly, "Go ahead, Doctor. What is your diagnosis?"

"Uh, I don't wish to sound off about your patient, sir."

"Never mind. I asked for your diagnosis."

"Very well, sir. Shock-atypical, perhaps," he hedged, "but shock, leading to termination."

Nelson nodded. "Reasonable enough. But this isn't a reasonable case. Relax, son. I've seen this patient in this condition half a dozen times during the trip back. It doesn't mean a thing. Watch." Nelson lifted the patient's right arm, let it go. It stayed where he had left it.

"Catalepsy?" asked Thaddeus.

"Call it that if you like. Calling a tail a leg doesn't make it one. Don't worry about it, Doctor. There is nothing typical about this case. Just keep him from being bothered and call me if there is any change." He replaced Smith's arm.

When Nelson had left, Thaddeus took one more look at the patient, shook his head and joined Meechum in the watch room. Meechum picked up his cards and said, "Crib?"

"No."

Meechuin waited, then added, "Doc, if you ask me, that one in there is a case for the basket before morning."

"No one asked you."

"My mistake."

"Go out and have a cigarette with the guards. I want to think."

Meechum shrugged and left. Thaddeus opened a bottom drawer, took out a bottle and poured himself a dose intended to help his thinking. Meechum joined the guards in the corridor; they straightened up, then saw who it was and relaxed. The taller marine said, "Howdy, pal. What was the excitement just now?"

"Nothing much. The patient just had quintuplets and we were arguing about what to name them. Which one of you monkeys has got a butt? And a light?"

The other marine dug a pack of cigarettes out of a pocket. "How're you fixed for Suction?" he asked bleakly.

"Just middlin'. Thanks." Meechum stuck the cigarette in his face and talked around it. "Honest to God, gentlemen, I don't know anything about this patient. I wish I did."

"What's the idea of these orders about 'Absolutely No Women'? Is he some kind of a sex maniac?"

"Not that I know of. All that I know is that they brought him in from the Champion and said that he was to have absolute quiet."

"'The Champion!' "the first marine said. "Of course! That accounts for it."

"Accounts for what?"

"It stands to reason. He ain't had any, he ain't seen any, he ain't touched any-for months. And he's sick, see? If he was to lay hands on any, they're afraid he'd kill hisself." He blinked and blew out a deep breath. "I'll bet I would, under similar circumstances. No wonder they don't want no bims around him."

Smith had been aware of the visit by the doctors but he had grokked at once that their intentions were benign; it was not necessary for the major part of him to be jerked back from where he was.

At the hour in the morning when human nurses slap patient's faces with cold, wet cloths under the pretense of washing them, Smith returned from his journey. He speeded up his heart, increased his respiration, and again took note of his surroundings, viewing them with serenity. He looked the room over, noting without discrimination and with praise all its details, both important and unimportant. He was, in fact, seeing it for the first time, as he had been incapable of enfolding it when he had been brought there the day before. This commonplace room was not commonplace to him; there was nothing remotely like it on all Mars, nor did it resemble the wedge-shaPed~ metal-walled compartments of the Champion. But, having relived the events linking his nest to this place, he was now prepared to accept it, commend it, and in some degree to cherish it.

He became aware that there was another living creature in the room with him. A granddaddy longlegs was making a futile journey down from the ceiling, spinning as it went. Smith watched it with delight and wondered if it were a nestling form of man.

Doctor Archer Frame, the interne who had relieved Thaddeus, walked in at that moment. "Good morning," he said. "How do you feel?"

Smith turned the question over in his mind. The first phrase he recognized as a formal sound, requiring no answer but which could be repeated-or might not be. The second phrase was listed in his mind with several possible translations. If Doctor Nelson

used it, it meant one thing; if Captain van Tromp used it, it was a formal sound, needing no reply.

He felt that dismay which so often overtook him in trying to communicate with these creatures-a frightening sensation unknown to him before he met men. But he forced his body to remain calm and risked an answer. "Feel good."

"Good!" the creature echoed. "Doctor Nelson will be along in a minute. Feel like some breakfast?"

All four symbols in the query were in Smith's vocabulary but he had trouble believing that he had heard them rightly. He knew that he was food, but he did not "feel like" food. Nor had he had any warning that he might be selected for such an honor. He had not known that the food supply was such that it was necessary to reduce the corporate group. He was filled with mild regret, since there was still so much to grok of these new events, but no reluctance.

But he was excused from the effort of translating an answer by the entrance of Dr. Nelson. The ship's doctor had had little rest and less sleep; he wasted no time on speech but inspected Smith and the array of dials in silence.

Then he turned to Smith. "Bowels move?" he asked.

Smith understood this; Nelson always asked about it. "No, not yet."

"We'll take care of that. But first you eat. Orderly, fetch in that tray."

Nelson fed him two or three bites, then required him to hold the spoon and feed himself. It was tiring but gave him a feeling of gay triumph, for it was the first unassisted action he had taken since reaching this oddly distorted space. He cleaned out the bowl and remembered to ask, "Who is this?" so that he could praise his benefactor.

"What is this, you mean," Nelson answered. "It's a synthetic food jelly, based on amino acids-and now you know as much as you did before. Finished? All right, climb out of that bed."

"Beg pardon?" It was an attention symbol which he had learned was useful when communication failed.

"I said get out of there. Sit up. Stand up. Walk around. You can do it. Sure, you're weak as a kitten but you'll never put on muscle floating in that bed." Nelson opened a valve at the head of the bed; water drained out. Smith restrained a feeling of insecurity, knowing that Nelson cherished him. Shortly he lay on the floor of the bed with the watertight cover wrinkled around him. Nelson added, "Doctor Frame, take his other elbow. We'll have to help him and steady him."

With Dr. Nelson to encourage him and both of them to help him, Smith stood up and stumbled over the rim of the bed. "Steady. Now stand up on your own," Nelson directed. "Don't be afraid. We'll catch you if necessary."

He made the effort and stood alone-a slender young man with underdeveloped muscles and overdeveloped chest. His hair had been cut in the Champion and his whiskers removed and inhibited. His most marked feature was his bland, expressionless, almost babyish face-set with eyes which would have seemed more at home in a man of ninety.

He stood alone for a moment, trembling slightly, then tried to walk. He managed three shuffling steps and broke into a sunny, childlike smile. "Good boy!" Nelson applauded.

He tried another step, began to tremble violently and suddenly collapsed. They barely managed to break his fall. "Damn!" Nelson fumed. "He's gone into another one. Here, help me lift him into the bed. No-fill it first."

Frame did so, cutting off the flow when the cover skin floated six inches from the top. They lugged him into it, awkwardly because he had frozen into the foetal position. "Get a collar pillow under his neck," instructed Nelson, "and call me when he comes out of it. No-let me sleep, I need it. Unless something worries you. We'll walk him again this afternoon and tomorrow we'll start systematic exercise. In three months I'll have him swinging through the trees like a monkey. There's nothing really wrong with him."

"Yes, Doctor," Frame answered doubtfully.

"Oh, yes, when he comes out of it, teach him how to use the bathroom. Have the nurse help you; I don't Want him to fall."

"Yes, sir. Uh, any particular method-I mean, how-"

"Eh? Show him, of course! Demonstrate. He probably won't understand much that you say to him, but he's bright as a whip. He'll be bathing himself by the end of the week."

Smith ate lunch without help. Presently a male orderly came in to remove his tray. The man glanced around, then came to the bed and leaned over him. "Listen," he said in a low voice, "I've got a fat proposition for you."

"Beg pardon?"

"A deal, a bargain, a way for you to make a lot of money fast and easy."

"'Money?' What is 'money'?"

"Never mind the philosophy; everybody needs money. Now listen I'll have to talk fast because I can't stay in here long-and it's taken a lot of fixing to get me in here at all. I represent Peerless Features. We'll pay you sixty thousand for your exclusive story and it won't be a bit of trouble to you-we've got the best ghost writers in the business. You just talk and answer questions; they put it together." He whipped out a piece of paper. "Just read this and sign it. I've got the down payment with me."

Smith accepted the paper, stared thoughtfully at it, holding it upside down. The man looked at him and muffled an exclamation. "Lordyl Don't you read English?"

Smith understood this well enough to answer. "No."

"Well- Here, I'll read it to you, then you just put your thumb print in the square and I'll witness it. 'I, the undersigned, Valentine Michael Smith, sometimes known as the Man from Mars, do grant and assign to Peerless Features, Limited, all and exclusive rights in my true-fact story to be titled I Was a Prisoner on Mars in exchange for-"

"Orderly!"

Dr. Frame was standing in the door of the watch room; the paper disappeared into the man's clothes. "Coming, sir. I was just getting this tray."

"What were you reading?"

"Nothing."

"I saw you. Never mind, come out of there quickly. This patient is not to be disturbed." The man obeyed; Dr. Frame closed the door behind them. Smith lay motionless for the next half hour, but try as he might he could not grok it at all.

IV

GILLIAN BOARDMAN WAS CONSIDERED professionally competent as a nurse; she was judged competent in wider fields by the bachelor internes and she was judged harshly by some other women. There was no harm in her and her hobby was men. When the grapevine carried the word that there was a patient in special suite K-12 who had never laid eyes on a woman in his life, she did not believe it. When detailed explanation convinced her, she resolved to remedy it. She went on duty that day as floor supervisor in the wing where Smith was housed. As soon as possible she went to pay a call on the strange patient.

She knew of the "No Female Visitors" rule and, while she did not Consider herself to be a visitor of any sort, she sailed on past the marine guards without attempting to use the door they guarded-marines, she had found, had a stuffy habit of construing their orders literally. Instead she went into the adjacent watch room. Dr. "Tad" Thaddeus was on duty there alone.

He looked up. "Well, if it ain't 'Dimples!' Hi, honey, what brings you here?"

She sat on the corner of his desk and reached for his cigarettes. "'Miss Dimples,' to you, chum; I'm on duty. This call is part of my rounds. What about your patient?"

"Don't worry your fuzzy head about him, honey chile; he's not your responsibility. See your order book."

"I read it. I want to have a look at him."

"In one word-no."

"Oh, Tad, don't go regulation on me. I know you."

He gazed thoughtfully at his nails. "Ever worked for Doctor Nelson?"

"No. Why?"

"If I let you put your little foot inside that door, I'd find myself in Antarctica early tomorrow, prescribing for penguins' chilblains. So switch your fanny out of here and go bother your own patients. I wouldn't want him even to catch you in this watch room."

She stood up. "Is Doctor Nelson likely to come popping in?"

"Not likely, unless I send for him. He's still sleeping off low-gee fatigue."

"So? Then what's the idea of being so duty struck?"

"That's all, Nurse."

"Very well, Doctor!" She added, "Stinker."

"Jill!"

"And a stuffed shirt, too."

He sighed. "Still okay for Saturday night?"

She shrugged. "I suppose so. A girl can't be fussy these days." She went back to her duty station, found that her services were not in immediate demand, picked up the pass key. She was balked but not beaten, as she recalled that suite K- 12 had a door joining it to the room beyond it, a room sometimes used as a sitting room when the suite was occupied by a Very Important Person. The room was not then in use, either as part of the suite or separately. She let herself into it. The guards at the door beyond paid no attention, unaware that they had been flanked.

She hesitated at the inner door between the two rooms, feeling some of the sharp excitement she used to feel when sneaking out of student nurses' quarters. But, she told herself, Dr. Nelson was asleep and Tad wouldn't tell on her even if he caught her. She

didn't blame him for keeping his finger on his number-but he wouldn't report her. She unlocked the door and looked in.

The patient was in bed, he looked at her as the door opened. Her first impression was that here was a patient too far gone to care. His lack of expression seemed to show the complete apathy of the desperately ill. Then she saw that his eyes were alive with interest; she wondered if his face were paralysed? No, she decided; the typical sags were lacking.

She assumed her professional manner. "Well, how are we today? Feeling better?"

Smith translated and examined the questions. The inclusion of herself in the first query was confusing, but he decided that it might symbolize a wish to cherish and grow close. The second part matched Nelson's speech forms. "Yes," he answered.

"Good!" Aside from his odd lack of expression she saw nothing strange about him-and if women were unknown to him, he was certainly managing to conceal it. "Is there anything I can do for you?" She glanced around, noted that there was no glass on the bedside shelf. "May I get you water?"

Smith had spotted at once that this creature was different from the others who had come to see him. Almost as quickly he compared what he was seeing with pictures Nelson had shown him on the trip from home to this place-pictures intended to explain a particularly difficult and puzzling configuration of this people group. This, then, was a "woman."

He felt both oddly excited and disappointed. He suppressed both in order that he might grok deeply, with such success that Dr. Thaddeus noticed no change in the dial readings in the next room.

But when he translated the last query he felt such a surge of emotion that he almost let his heartbeat increase. He caught it in time and chided himself for an undisciplined nestling. Then he checked his translation.

No, he was not mistaken. This woman creature had offered him the water ritual. It wished to grow closer.

With great effort, scrambling for adequate meanings in his pitifully poor list of human words, he attempted to answer with due ceremoniousness. "I thank you for water. May you always drink deep."

Nurse Boardman looked startled. "Why, how sweetl" She found a glass, filled it, and handed it to him.

He said, "You drink."

Wonder if he thinks I'm trying to poison him? she asked herself-but there was a compelling quality to his request. She took a sip, whereupon he took the glass from her and took one also, after which he seemed content to sink back into the bed, as if he had accomplished something important.

Jill told herself that, as an adventure, this was a fizzle. She said, "Well, if you don't need anything else, I must get on with my work."

She started for the door. He called out, "Not"

She stopped. "Eh? What do you want'~"

"Don't go away."

"Well I have to go, pretty quickly." But she came back to the bedside, "Is there anything you want?"

He looked her up and down. "You are ... 'woman'?"

The question startled Jill Boardxnafl. Her sex had not been in doubt to the most casual observer for many years. Her first impulse was to answer flippantly.

But Smith's grave face and oddly disturbing eyes checked her. She became aware emotionallY that the impossible fact about this patient was true: he did not know what a woman was. She answered carefully, "Yes, I am a woman."

Smith continued to stare at her without expression. Jill began to be embarrassed by it. To be looked at appreciativelY by a male she expected and sometimes enjoyed, but this was more like being examined under a microscope. She stirred restively. "Well? I look like a woman, don't I?"

"I do not know," Smith answered slowly. "How does woman look? What makes you woman?"

"Well, for pity's sake!" Jill realized confusedly that this conversation was further out of hand than any she had had with a male since about her twelfth birthday. "You don't expect me to take off my clothes and show you!"

Smith took time to examine these verbal symbols and try to translate them. The first group he could not grok at all. It might be one of those formal sound groups these people so often used . . . yet it had been spoken with surprising force, as if it might be a last communication before withdrawaL Perhaps he had so deeply mistaken right conduct in dealing with a woman creature that the creature might be ready to discorporate at once.

He knew vaguely that he did not want the nurse to die at that moment, even though it was certainly its right and possibly its obligation to do so. The abrupt change from the rapport of the Water ritual to a situation in which a newly won water brother might possibly be considering withdrawal or discorporatiOn would have thrown him into panic had he not been consciously suppressing such disturbance. But he decided that if Jill died now he must die at once also-he could not grok it in any other wise, not after the giving of water.

The second half of the communication contained only symbols that he had encountered before. He grokked imperfectly the intention but there seemed to be an implied way Out for him to avoid this crisis-by acceding to the suggested wish. Perhaps if the woman took its clothes off neither of them need discorporate. He smiled happily. "Please."

Jill opened her mouth, closed it hastily. She opened it again. "Huh? Well, I'll be darned!"

Smith could grok emotional violence and knew that somehow he had offered the wrong reply. He began to compose his mind for discorporation, savoring and cherishing all that he had been and seen, with especial attention to this woman creature. Then he became aware that the woman was bending over him and he knew somehow that it was not about to die. It looked into his face. "Correct me if I am wrong," it said, "but were you asking me to take my clothes off?"

The inversions and abstractions required careful translation but Smith managed it. "Yes," he answered, while hoping that it would not stir up a new crsis.

"That's what I thought you said. Brother, you aren't ill."

The word "brother" he considered first-the woman was reminding him that they had been joined in the water ritual. He asked the help of his nestlings that he might measure up to whatever this new brotheT wanted. "I am not ill," he agreed.

"Though I'm darned if I know how to cope with whatever is wrong with you. But I won't peel down. And I've got to get out of here." It straightened up and turned again toward the side door-then stopped and looked back with a quizzical smile. "You might ask me again, real prettily, under other circumstances. I'm curious to see what I might do."

The woman was gone. Smith relaxed into the water bed and let the room fade away from him. He felt sober triumph that he had somehow comforted himself so that it was not necessary for them to die . . . but there was much new to grok. The woman's last speech had contained many symbols new to him and those which were not new had been arranged in fashions not easily understood. Out he was happy that the emotional flavor of them had been suitable for communication between water brothers-although touched with something else both disturbing and terrifyingly pleasant. He thought about his new brother, the woman creature, and felt odd tingles run through him. The feeling reminded him of the first time he had been allowed to be present at a discorporatiOn and he felt happy without knowing why.

He wished that his brother Doctor Mahmoud were here. There was so much to grok, so little to grok from.

Jill Boardman spent the rest of her watch in a mild daze. She managed to avoid any mistakes in medication and she answered from reflex the usual verbal overtures made to her. But the face of the Man from Mars stayed in her mind and she mulled over the crazy things he had said. No, not "crazy," she corrected-she had done her Stint ~fl psychiatric wards and she felt certain that his remarks had not been psychotic.

She decided that "innocent" was the proper term-then she decided that the word was not adequate. His expression was innocent, but his eyes were not. What sort of creature had a face like that?

She had once worked in a Catholic hospital; she suddenly saw the face of the Man from Mars surrounded by the head dress of a nursing Sister, a nun. The idea disturbed her, for there was nothing female about Smith's face.

She was changing into Street clothes when another nurse stuck her head into the locker room. "Phone, Jill. For you." Jill accepted the call, sound without vision, while she continued to dress.

"Is this Florence Nightingale?" a baritone voice asked.

"Speaking. That you, Ben?"

"The stalwart upholder of the freedom of the press in person. Little one, are you busy?"

"What do you have in mind?"

"I have in mind taking you out, buying you a bloody steak, plying you with liquor, and asking you a question."

"The answer is still 'No.'

"Not that question. Another one."

"Oh, do you know another one? If so, tell me."

"Later. I want you softened up by food and liquor first."

"Real steak? Not syntho?"

"Guaranteed. When you stick a fork into it, it will turn imploring eyes on you."

"You must be on an expense account, Ben."

"That's irrelevant and ignoble. How about it?"

"You've talked me into it."

"The roof of the medical center. Ten minutes."

She put the street suit she had changed into back into her locker and put on a dinner dress kept there for emergencies. It was a demure little number, barely translucent and with bustle and bust pads so subdued that they merely re-created the effect she would have produced had she been wearing nothing. The dress had cost her a month's pay and did not look it, its subtle power being concealed like knock-out drops in a drink. Jill looked at herself with satisfaction and took the bounce tube up to the roof.

There she pulled her cape around her against the wind and was looking for Ben Caxton when the roof orderly touched her arm. "There is a car over there paging you, Miss Boardman-that Talbot saloon."

"Thanks, Jack." She saw the taxi spotted for take-off, with its door open. She went to it, climbed in, and was about to hand Ben a backhanded compliment on gallantry when she saw that he was not inside. The taxi was on automatic; its door closed and it took to the air, swung Out of the circle, and sliced across the Potomac. Jill sat back and waited.

The taxi stopped on a public landing flat over Alexandria and Ben Caxton got in; it took off again. Jill looked him over grimly. "My, aren't we getting important! Since when has your time become so valuable that you send a robot to pick up your women?"

He reached over, patted her knee, and said gently, "Reasons, little one, reasons-I can't afford to be seen picking you up-"

"Welll"

"-and you can't afford to be seen being picked up by me. So simmer down. I apologize. I bow in the dust. I kiss your little foot. But it was necessary."

"Hmm ... which one of us has leprosy?"

"Both of us, in different ways. Jill, I'm a newspaperman."

"I was begimiing to think you were something else."

"And you are a nurse at the hospital where they are holding the Man from Mars." He spread his hands and shrugged.

"Keep talking. Does that make me unfit to meet your mother?"

"Do you need a map, Jill? There are more than a thousand reporters in this area, not counting press agents, ax grinders, winchells, lippmanns, and the stampede that headed this way when the Champion landed. Every one of them has been trying to interview the Man from Mars, including me. So far as I know, none has succeeded. Do you think it would be Smart for us to be seen leaving the hospital together?"

"Umm, maybe not. But I don't really see that it matters. I'm not the Man from Mars."

He looked her over. "You certainly aren't. But maybe you are going to help me see him-which is why I didn't want to be seen picking you

"Huh? Ben, you've been out in the sun without your hat. They've got a marine guard around him." She thought about the fact that she herself had not found the guard too hard to circumvent, decided not to mention it.

"So they have. So we talk it over."

"I don't see what there is to talk about."

"Later. I didn't intend to let the subject come up until I had softened you with animal proteins and ethanol. Let's eat first."

"Now you sound rational. Where? Would your expense account run to the New Mayflower? You are on an expense account, aren't you?"

Caxton frowned. "Jill, if we eat in a restaurant, I wouldn't want to risk one closer than Louisville. It would take this hack more than two hours to get us that far. How about dinner in my apartment?"

"'-Said the Spider to the Fly.' Ben, I remember the last time. I'm too tired to wrestle."

"Nobody asked you to. Strictly business. King's X, cross my heart and hope to die."

"I don't know as I like that much better. If I'm safe alone with you, I must be slipping. Well, all right, King's X."

Caxton leaned forward and punched buttons; the taxi, which had been circling under a "hold" instruction, woke up, looked around, and headed for the apartment hotel where Ben lived. He then dialed a phone number and said to Jill, "How much time do you want to get liquored up, sugar foot? I'll tell the kitchen when to have the steaks ready."

Jill considered it. "Ben, your mousetrap has a private kitchen."

"Of sorts. I can grill a steak, if that is what you mean."

"I'll grill the steak. Hand me the phone." She gave orders, stopping to make sure that Ben liked endive.

The taxi dropped them on the roof and they went down to his flat. It was unstylish and old-fashioned; its one luxury was a live grass lawn in the living room. Jill stopped in the entrance hail, slipped off her shoes, then stepped bare-footed into the living room and wiggled her toes among the cool green blades. She sighed. "My, that feels good. My feet have hurt ever since I entered training."

"Sit down."

"No, I want my feet to remember this tomorrow, when I'm on duty."

"Suit yourself." He went into his pantry and mixed drinks.

Presently she pattered after him and became domestic. The steak was waiting in the package lift; with it were pre-baked potatoes ready to be popped into short-wave. She tossed the salad, handed it to the refrigerator, then set up a combination on the stove to grill the steak and have the potatoes hot simultaneously, but did not start the cycle. "Ben, doesn't this stove have a remote control?"

"Of course."

"Well, I can't find it."

He studied the setup on the control panel, then flipped an unmarked switch. "Jill, what would you do if you had to cook over an open fire?"

"I'd do darn well. I was a Girl Scout and a good one. How about you, smarty?"

He ignored it, picked up a tray and went back to the living room; she followed and sat down at his feet, spreading her skirt to avoid grass stains. They applied themselves seriously to martinis. Opposite his chair was a stereovision tank disguised as an aquarium; he switched it on from his chair, guppies and tetras faded out and gave way to the face of a commentator, the well-known winchell Augustus Greaves.

"-it can be stated authoritatively," the stereo image was saying, "that the Man from Mars is being kept constantly under hypnotic drugs to keep him from disclosing these facts. The administration would find it extremely embarrassing if-"

Canon flipped it off. "Gus old boy," he said pleasantly, "you don't know a durn thing more about it than I do." He frowned. "Though you might be right about the government keeping him under drugs."

"No, they aren't," Jill said suddenly.

"Eh? How's that, little one?"

"The Man from Mars isn't being kept under hypnotics." Having blurted more than she had meant to, she added carefully, "He's got a nurse and a doctor all to himself on continuous watch, but there aren't any orders for sedation."

"Are you sure? You aren't one of his nurses-or are you?"

"No. They're male nurses. Uh ... matter of fact, there's an order to keep women away from him entirely and a couple of tough marines to make sure of it."

Caxton nodded. "I heard about that. Fact is, you don't know whether they are drugging him or not. Do you?"

Jill stared into her empty glass. She felt annoyed to have her word doubted but realized she would have to tell on herself to back up what she had said. "Ben? You wouldn't give me away? Would you?"

"Give you away? How?"

"Any way at all."

"Hmm ... that covers a lot of ground, but I'll go along."

"All right. Pour me another one first." He did so, Jill went on. "I know they don't have the Man from Mars hopped up-because I talked with him."

Caxton gave a slow whistle. "I knew it. When I got up this morning I said to myself, 'Go see Jill. She's the ace up my sleeve.' Honey lamb, have another drink. Have six. Here, take the pitcher."

"Not so fast, thanks."

"Whatever you like. May I rub your poor tired feet? Lady, you are about to be interviewed. Your public waits with quivering impatience. Now let's begin at the beginning. How-"

"No, Ben! You promised-remember? You quote me just one little quote and I'll lose my job."

"Mmm ... probably. How about 'from a usually reliable source'?"

"I'd be scared."

"Well? Are you going to tell Uncle Ben? Or are you going to let him die of frustration and then eat that steak by yourself?"

"Oh, I'll talk-now that I've talked this much. But you can't use it." Ben kept quiet and did not press his luck; Jill described how she had outflanked the guards.

He interrupted. "Say! Could you do that again?"

"Huh? I suppose so, but I won't. It's risky."

"Well, could you slip me in that way? Of course you could! Look, I'll dress up like an electrician-greasy coveralls, union badge, tool kit. You just slip me the pass key and-"

"No!"

"Huh? Look, baby girl, be reasonable. I'll bet you four to one that half the hospital staffers around him are ringers, stuck in there by one news service or another. This is the greatest human-interest story since Colombo conned Isabella into hocking her jewels. The only thing that worries me is that I may find another phony electrician-"

"The only thing that worries me is me," Jill interrupted. "To you it's just a story; to me it's my career. They'd take away my cap, my pin, and ride me out of town on a rail. I'd be finished as a nurse."

"Mmm ... there's that."

"There sure is that."

"Lady, you are about to be offered a bribe."

"How big a bribe? It'll take quite a chunk to keep me in style the rest of my life in Rio."

"Well ... the story is worth money, of course, but you can't expect me to outbid Associated Press, or Reuters. How about a hundred?"

"What do you think I am?"

"We settled that, we're dickering over the price. A hundred and fifty?"

"Pour me another drink and look up the phone number of Associated Press for me, that's a lamb."

"It's Capitol 10-9000. Jill, will you marry me? That's as high as I can

She looked up at him, startled. "What did you say?"

"Will you marry me? Then, when they ride you out of town on a rail, I'll be waiting at the city line and take you away from your sordid existence. You'll come back here and cool your toes in my grass-our grass- and forget your ignominy. But you've durn well got to sneak me into that hospital room first."

"Ben, you almost sound serious. If I phone for a Fair Witness, will you repeat the offer?"

Caxton sighed. "Jill, you're a hard woman. Send for a Witness."

She stood up. "Ben," she said softly, "I won't hold you to it." She rumpled his hair and kissed him. "But don't ever joke about marriage to a spinster."

"I wasn't joking."

"I wonder. Wipe off the lipstick and I'll tell you everything I know, then we'll consider how you can use it without getting me ridden on that rail. Fair enough?"

"Fair enough."

She gave him a detailed account. "I'm sure he wasn't drugged. I'm equally sure that he was rational-although why I'm sure I don't know, for he talked in the oddest fashion and asked the darnedest questions. But I'm sure. He isn't psychotic."

"It would be odder still if he hadn't talked in an odd fashion."

"Huh?"

"Use your head, Jill. We don't know much about Mars but we do know that Mars is very unlike Earth and that Martians, whatever they are, certainly are not human. Suppose you were suddenly popped into a tribe so far back in the jungle that they had never laid eyes on a white woman. Would you know all the sophisticated small talk that comes from a lifetime in a culture? Or would your conversation sound odd? That's a very mild analogy; the truth in this case is at least forty million miles stranger."

Jill nodded. "I figured that out ... and that is why I discounted his odd remarks. I'm not dumb."

"No, you're real bright, for a female."

"Would you like this martini poured in your thinning hair?"

"I apologize. Women are lots smarter than men; that is proved by our whole cultural setup. Gimme, I'll fill it."

She accepted the peace offerings and went on, "Ben, that order about not letting him see women, it's silly. He's no sex fiend."

"No doubt they don't want to hand him too many shocks at once."

"He wasn't shocked. He was just ... interested. It wasn't like having a man look at me at all."

"If you had humored him on that request for a private viewing, you might have had your hands full. He probably has all the instincts and no inhibitions."

"Huh? I don't think so. I suppose they've told him about male and female; he just wanted to see how women are different."

"'Vive Ia difference!'" Caxton answered enthusiastically.

"Don't be more vulgar than you have to be."

"Me? I wasn't being vulgar, I was being reverent. I was giving thanks to all the gods that I was born human and not Martian."

"Be serious."

"I was never more serious."

"Then be quiet. He wouldn't have given me any trouble. He would probably have thanked me gravely. You didn't see his face-I did."

"What about his face?"

Jill looked puzzled. "I don't know how to express it. Yes, I do!-Ben, have you ever seen an angel?"

"You, cherub. Otherwise not."

"Well, neither have I-but that is what he looked like. He had old, wise eyes in a completely placid face, a face of unearthly innocence." She shivered.

"'Unearthly' is surely the right word," Ben answered slowly. "I'd like to see him."

"I wish you had. Ben, why are they making such a thing out of keeping him shut up? He wouldn't hurt a fly. I'm sure of it."

Caxton fitted his fingertips together. "Well, in the first place they want to protect him. He grew up in Mars gravity; he's probably weak as a cat."

"Yes, of course. You could see it, just looking at him. But muscular weakness isn't dangerous; myasthenia gravis is much worse and we manage all right with such cases."

"They would want to keep him from catching things, too. He's like those experimental animals at Notre Dame; he's never been exposed."

"Sure, sure-no antibodies. But from what I hear around the mess hail, Doctor Nelson-the surgeon in the Champion, I mean-Doctor Nelson took care of that on the trip back. Repeated mutual transfusion until he had replaced about half of his blood tissue."

"Really? Can I use that, Jill? That's news."

"All right, just don't quote me. They gave him shots for everything but housemaid's knee, too. But, Ben, even if they want to protect him from infection, that doesn't take armed guards outside his door."

"Mmmm ... Jill, I've picked up a few tidbits you may not know. I haven't been able to use them because I've got to protect my sources, just as with you. But I'll tell you; you've earned it-just don't talk."

"Oh, I won't."

"It's a long story. Want a refill?"

"No, let's start the steak. Where's the button?"

"Right here."

"Well, push it."

"Me? You offered to cook dinner. Where's that Girl Scout spirit you were boasting about?"

"Ben Caxton, I will lie right here in the grass and starve before I will get up to push a button that is six inches from your right forefinger."

"As you wish." He pressed the button to tell the stove to carry out its pre.set orders. "But don't forget who cooked dinner. Now about Valentine Michael Smith. In the first place there is grave doubt as to his right to the name 'Smith.'"

"Repeat, please?"

"Honey, your pal appears to be the first interplanetary bastard of record. I mean 'love child.'"

"The hell you say!"

"Please be more ladylike in your speech. Do you remember anything about the crew of the Envoy? Never mind, I'll hit the high points. Eight people, four married couples. Two couples were Captain and Mrs. Brant, Doctor and Mrs. Smith. Your friend with the face of an angel appears to be the son of Mrs. Smith by Captain Brant."

"How do they know? And, anyhow, who cares?" Jill sat up and said indignantly, "It's a pretty snivelin' thing to dig up a scandal after all this time. They're all dead-let 'em alone, I say!"

"As to how they know, you can figure that out. Blood typing, Rh factor, hair and eye color, all those genetic things-you probably know more about them than I do. Anyhow it is a mathematical certainty that Mary Jane Lyle Smith was his mother and Captain Michael Brant was his father. All the factors are matters of record for the entire crew of the Envoy; there probably never were eight people more thoroughly measured and typed. Also it gives Valentine Michael Smith a wonderfully fine heredity; his father had an I.Q. of 163, his mother 170, and both were tops in their fields.

"As to who cares," Ben went on, "a lot of people care very much- and a lot more will care, once this picture shapes up. Ever heard of the Lyle Drive?"

"Of course. That's what the Champion used."

"And every other space ship, these days. Who invented it?"

"I don't-Wait a minute! You mean she-"

"Hand the little lady a cigar! Dr. Mary Jane Lyle Smith. She knew she had something important, even though development work remained to be done on it. So before she left on the expedition, she applied for a dozenodd basic patents and placed it all in a corporate trust-not a non-profit corporation, mind you-then assigned control and interim income to the Science Foundation. So eventually the government got control of it-but your friend with the face of an angel owns it. No possible doubt. It's worth millions, maybe hundreds of millions; I couldn't guess."

They brought in dinner. Caston used ceiling tables to protect his lawn; he lowered one down in front of his chair and another to Japanese height so that Jill could sit on the grass. "Tender?" he asked.

"Ongerful!" she answered with her mouth full.

"Thanks. Remember, I cooked it."

"Ben," she said after swallowing, "how about Smith being a-I mean, being illegitimate? Can he inherit?"

"He's not illegitimate. Doctor Mary Jane was at Berkeley, and California laws deny the concept of bastardy. Same for Captain Brant, as New Zealand also has civilized laws on the subject. While under the laws of the home State of Doctor Ward Smith, Mary Jane's husband, a child born in wedlock is legitimate, come hell or high water. We have here. Jill, a man who is the Simon-pure legitimate child of three different parents.

"Huh? Now wait a minute, Ben; he can't be it both ways. One or the other but not both. I'm not a lawyer but-"

"You sure ain't. Such legal fictions bother a lawyer not at all. Smith is legitimate different ways in different jurisdictions, all kosher and all breaking his way-even though he is probably a bastard in his physical ancestry. So he inherits. Besides that, while his mother was wealthy, both his fathers were at least well to do. Brant was a bachelor until just before the expedition; he had ploughed most of his scandalous salary as a pilot on the Moon run back into Lunar Enterprises, Limited. You know how that stuff has boomed-they just declared another three-way stock dividend. Brant had one vice, gambling-but the bloke won regularly and invested that, too. Ward Smith had family money; he was a medical man and scientist by choice. Smith is heir to both of them."

"Whew!"

"That ain't half, honey. Smith is heir to the entire crew."

"Huh?"

"All eight signed a 'Gentlemen Adventurers' contract, making them all mutually heirs to each other-all of them and their issue. They did it with great care, using as models similar contracts in the sixteenth and seventeenth centuries that had stood up against every effort to break them. Now these were all high-powered people; among them they had quite a lot. Happened to include considerable Lunar Enterprises stock, too, besides what Brant held. Smith might turn out to own a controlling interest, or at least a key bloc in a proxy fight."

Jill thought about the childlike creature who had made such a touching ceremony out of just a drink of water and felt sorry for him. But Caxton went on: "I wish I could sneak a look at the Envoy's log. I know they recovered it-but I doubt if they'll ever release it."

"Why not, Ben?"

"Because it's a nasty story. I got Just enough to be sure before my informant sobered up and clammed up. Dr. Ward Smith delivered his wife of child by Caesarian section-and she died on the table. He seems to have worn his horns complacently until then. But what he did next shows that he knew the score; with the same scalpel he cut Captain Brant's throat- then cut his own. Sorry, hon."

Jill shivered. "I'm a nurse. I'm immune to such things."

"You're a liar and I love you for it. I was on police beat for three years, Jill; I never got hardened to it."

"What happened to the others?"

"I wish I knew. If we don't break the bureaucrats and high brass loose from that log, we'll never know-and I am enough of a starry-eyed newsboy to think we should know. Secrecy begets tyranny."

"Ben, he might be better off if they gypped him out of his inheritance. He's very . . . uh, unworldly."

"The exact word, I'm sure. Nor does he need all that money; the Man from Mars will never miss a meal. Any of the governments and any of a thousand-odd universities and scientific institutions would be delighted to have him as a permanent, privileged guest."

"He'd better sign it over and forget it."

"It's not that easy. Jill, you know about the famous case of General Atomics versus Larkin, et al?"

"Uh, not really. You mean the Larkin Decision. I had to study it in school, same as everybody. But what's it got to do with Smith?"

"Think back. The Russians sent the first rocket to the Moon, it crashed. The United States and Canada combine to send another one; it gets back but leaves nobody on the Moon. So when the United States and the Commonwealth are getting set to send a colonizing one jointly under the nominal sponsorship of the Federation and Russia is mounting the same deal on their own, General Atomics steals a march by sending one of their own from an island leased from Ecuador-and their men are still there, sitting pretty and looking smug when the Federation vessel shows up . . . followed by the Russian one.

"You know what happened. General Atomics, a Swiss corporation American controlled, claimed the Moon. The Federation couldn't just brush them off; that would have been too raw and anyhow the Russians wouldn't have held still. So the High Court ruled that a corporate person, a mere legal fiction, could not own a planet; therefore the real owners were the flesh-and-blood men who had maintained the occupation-Larkin and associates. So they recognized them as a sovereign nation and took them into the Federation-with some melon slicing for those on the inside and fat concessions to General Atomics and its daughter corporation, Lunar Enterprises. This did not entirely suit anybody and the Federation High Court was not all powerful in those days-but it was a compromise everybody could swallow. It resulted in some tight rules for colonizing planets, all based on the Larkin Decision and intended to avoid bloodshed. Worked, too-it's a matter of history that World War Three did not result from conflict over space travel and such. So now the Larkin Decision is solidly a part of our planetary law and applies to Smith."

Jill shook her head. "I don't see the connection. Martinis-"

"Think, Jill. By our laws, Smith is a sovereign nation in himself-and sole owner of the planet Mars."

V

JILL LOOKED ROUND-EYED. "I've certainly had too many martinis Ben. I would swear that you said that that patient owns the planet Mars."

"He does. He maintained occupation of it, unassisted, for the required length of time. Smith is the planet Mars-King, President, sole civic body, what you will. If the skipper of the Champion had not left colonists behind, Smith's tenure might have failed. But he did, and that continues occupation even though Smith came to Earth. But Smith doesn't have to split with them; they are mere immigrants until he grants them Martian citizenship."

"Fantastic!"

"It surely is. Also it's legal. Honey, do you now see why so many people are interested in who Smith is and where he came from? And why the administration is so damned anxious to keep him under a rug? What they are doing isn't even vaguely legal. Smith is also a citizen of the United States and of the Federation, by derivation-dual citizenship with no conflict. It's illegal to hold a citizen, even a convicted criminal, incommunicado anywhere in the Federation; that's one of the things we settled in World War Three. But I doubt if Smith knows his rights. Also, it has been considered an unfriendly act all through history to lock up a visiting friendly monarch-which is what he is-and not to let him see people, especially the press, meaning me. You still won't sneak me in as a thumbfingered electrician?"

"Huh? You've got me worse scared than ever. Ben, if they had caught me this morning, what do you think they would have done to me?"

"Mmm ... nothing rough. Just locked you in a padded cell, with a certificate signed by three doctors, and allowed you mail on alternate leap years. They aren't mad at you. I'm wondering what they are going to do to him."

"What can they do?"

"Well, he might just happen to die-from gee-fatigue, say. That would be a fine out for the administration."

"You mean murder him?"

"Tut, tut! Don't use nasty words. I don't think they will. In the first place he is a mine of information; even the public has some dim notion of that. He might be worth more than Newton and Edison and Einstein and six more like them all rolled into one. Or he may not be. I don't think they would dare touch him until they were sure. In the second place, at the very least, he is a bridge, an ambassador, a unique interpreter, between the human race and the only other civilized race we have as yet encountered. That is certainly important but there is no way to guess just how important. How are you on the classics? Ever read H. G. Wells' The War of the Worlds?"

"A long time ago, in school."

"Consider the idea that the Martians might decide to make war on us-and win. They might, you know, and we have no way of guessing how big a club they can swing. Our boy Smith might be the go-between, the peacemaker, who could make the First Interplanetary War unnecessary. Even if this possibility is remote, the administration can't afford to ignore it until they know. The discovery of intelligent life on Mars is something that, politically, they haven't figured out yet."

"Then you think he is safe?"

"Probably, for the time being. The Secretary General has to guess and guess right. As you know, his administration is shaky."

"I don't pay any attention to politics."

"You should. It's only barely less important than your own heartbeat."

"I don't pay any attention to that, either."

"Don't talk when I'm orating. The majority headed by the United States could slip apart overnight-Pakistan would bolt at a nervous cough. In which case there would be a vote of no conlidence, a general election, and Mr. Secretary General Douglas would be out and back to being a cheap lawyer again. The Man from Mars can make or break him. Are you going to sneak me in?"

"I am not. I'm going to enter a nunnery. Is there more coffee?"

"I'll see."

They both stood up. Jill stretched and said, "Oh, my ancient bones! And, Lordy, look at the time! Never mind the coffee, Ben; I've got a hard day tomorrow, being polite to nasty patients and standing clear of internes. Run me home, will you? Or send me home, I guess that's safer. Call a cab, that's a lamb."

"Okay, though the evening is young." He went into his bedroom, caine out carrying an object about the size and shape of a small cigarette lighter. "Sure you won't sneak me in?"

"Gee, Ben, I want to, but-"

"Never mind. I wouldn't let you. It really is dangerous-and not just to your career. I was just softening you up for this." He showed her the little object. "Will you put a bug on him?"

"Huh? What is it?"

"The greatest boon to divorce lawyers and spies since the Mickey Finn. A microminiaturized wire recorder. The wire is spring driven so that it can't be spotted by a snooper circuit. The insides are transistors and resistors and capacitors and stuff, all packed in plastic-you could drop it Out of a cab and not hurt it. The power is about as much radioactivity as you would find in a watch dial, but shielded, The wire is good for twentyfour hours. Then you slide out a spool and stick in another one-the spring is part of the spool, already wound."

"Will it explode?" she asked nervously.

"You could bake it in a cake."

"But, Ben, you've got me scared to go back into his room now."

"Unnecessary. You can go into the room next door, can't you?"

"I suppose so."

"This thing has donkey's ears. Fasten the concave side flat against a wall-surgical tape will do nicely-and it picks up every word spoken in the room beyond. Is there a closet or something?"

She thought about it. "I'm bound to be noticed if I duck in and out of that adjoining room too much; it's really part of the suite he's in. Or they may start using it. Look, Ben, his room has a third wall in common with a room on another corridor. Will that do?"

"Perfect. Then you'll do it?"

"Umm ... give it to me. I'll think it over and see how the land lies."

Caxton stopped to polish it with his handkerchief. "Put on your gloves."

"Why?"

"Possession of it is slightly illegal, good for a short vacation behind bars. Always use gloves on it and the spare spools-and don't get caught with it."

"You think of the nicest thingsl"

"Want to back out?"

Jill let out a long breath. "No. I've always wanted a life of crime. Will you teach me gangster lingo? I want to be a credit to you."

"Good girl!" A light blinked over the door, he glanced up. "That must be your cab. I rang for it when I went to get this."

"Oh. Find my shoes, will you? No, don't come up to the roof. The less I'm seen with you from here on the better."

"As you wish."

As he straightened up from putting her shoes on, she took his head in both hands and kissed him. "Dear Ben! No good can come of this and I hadn't realized you were a criminal type-but you're a good cook, as long as I set up the combination . . . and I just might marry you if I can trap you into proposing again."

"The offer remains open."

"Do gangsters marry their molls? Or is it 'frails'? We'll see" She left hurriedly.

Jill Boardman placed the bug without difficulty. The patient in the adjacent room in the next corridor was bedfast; Jill often Stopped to gossip. She stuck it against the wall over a closet shelf while chattering about how the maids just never dusted high in the closets.

Removing the spool the next day and inserting a fresh one was just as easy; the patient was asleep. She woke while Jill was still perched on a chair and seemed surprised; Jill diverted her with a spicy and imaginary ward rumor.

Jill sent the exposed wire by mail, using the hospital's post office as the impersonal blindness of the postal System seemed safer than a cloak & dagger ruse. But her attempt to insert a third fresh spool she muffed. She had waited for a time when the patient was asleep but had just mounted the chair when the patient woke up. "Oh! Hello, Miss Boardman."

Jill froze with one hand on the wire recorder. "Hello, Mrs. Fritschlie," she managed to answer. "Have a nice nap?"

"Fair," the woman answered peevishly. "My back aches."

"I'll rub it."

"Doesn't help much. Why are you always fiddling around in my closet? Is something wrong?"

Jill tried to reswallow her stomach. The woman wasn't really suspicious, she told herself. "Mice," she said vaguely.

"'Mice?' Oh, I can't abide mice! I'll have to have another room, right away!"

Jill tore the little instrument off the closet wall and stuffed it into her pocket, jumped down from the chair and spoke to the patient. "Now, now, Mrs. Fritschlie-I was just looking to see if there were any mouse holes in that closet. There aren't."

"You're sure?"

"Quite sure. Now let's rub the back, shall we? Easy over."

Jill decided she could not plant the bug in that room again and concluded that she would risk attempting to place it in the empty room which was part of K-12, the Suite of the Man from Mars. But it was almost time for her relief before she was free again. She got the pass key.

Only to find that she did not need it; the door was unlocked and held two more marines; the guard had been doubled. One of them glanced up as she opened the door. "Looking for someone?"

"No. Don't sit on the bed, boys," she said crisply. "If you need more chairs, we'll send for them." She kept her eye on the guard while he got reluctantly up; then she left, trying to conceal her trembling.

The bug was still burning a hole in her pocket when she went off duty; she decided to return it to Caxton at once. She changed clothes, shifted it to her bag, and went to the roof. Once in the air and headed toward Ben's apartment she began to breathe easier. She phoned him in flight.

"Caxton speaking."

"Jill, Ben. I want to see you. Are you alone?"

He answered slowly, "I don't think it's smart, kid. Not now."

"Ben, I've got to see you. I'm on my way over."

"Well, okay, if that's how it's got to be."

"Such enthusiasm!"

"Now look, hon, it isn't that I-"

"'Bye!" She switched off calmed down and decided not to take it out on poor Ben-fact was they both were playing out of their league. At least she was-she should have stuck to nursing and left politics alone.

She felt better when she saw Ben and better yet when she kissed him and snuggled into his arms. Ben was such a dear-maybe she really should marry him. But when she tried to speak he put a hand over her mouth, then whispered close against her ear, "Don't talk. No names and nothing but trivialities. I may be wired by now."

She nodded and he led her into the living room. Without speaking she got out the wire recorder and handed it to him. His eyebrows went up when he saw that she was returning not just a spool but the whole works but he made no comment. Instead he handed her a copy of the afternoon Post.

"Seen the paper?" he said in a natural voice. "You might like to glance at it while I wash up."

"Thanks." As she took it he pointed to a column; he then left, taking with him the recorder. Jill saw that the column was Ben's own syndicated outlet.

THE CROW'S NEST by Ben Caxton

Everyone knows that jails and hospitals have one thing in common: they both can be very hard to get out of. In some ways a prisoner is less cut off than a patient; a prisoner can send for his lawyer, can demand a Fair Witness, he can invoke habeas corpus and require the jailor to show cause in Open court.

But it takes only a simple NO VISITORS sign, ordered by one of the medicine men of our peculiar tribe, to consign a hospital patient to oblivion more thoroughly than ever was the Man in the Iron Mask.

To be sure, the patient's next of kin cannot be kept out by this device -but the Man from Mars seems to have no next of kin. The crew of the ill-fated Envoy had few ties on Earth; if the Man in the Iron Mask- pardon me I mean the "Man from Mars"-has any relative who is guarding his interests, a few thousand inquisitive reporters (such as your present scrivener) have been unable to verify it.

Who speaks for the Man from Mars? Who ordered an armed guard placed around him? What is his dread disease that no one may catch a glimpse of him, nor ask him a question? I address you, Mr. Secretary General; the explanation about "physical weakness" and "gee-fatigue" won't wash; if that were the answer, a ninety-pound nurse would do as well as an armed guard.

Could this disease be financial in nature? Or (let's say it softly) is it political?

There was more, all in the same vein; Jill could see that Ben was deliberately baiting the administration, trying to force them to bring Smith out into the open. What that would accomplish she did not know, her own horizon not encompassing high politics and high finance. She felt, rather than knew, that Caxton was taking serious risk in challenging the established authorities, but she had no notion of the size of the danger, nor of what form it might take.

She thumbed through the rest of the paper. It was well loaded with follow-up stories on the return of the Champion. with pictures of Secretary General Douglas pinning medals on the crew, interviews with Captain van Tromp and other members of his brave company, pictures of Martians and Martian cities. There was very little about Smith, merely a medical bulletin that he was improving slowly but satisfactorily from the effects of his trip.

Ben came out and dropped some sheets of onion skin in her lap. "Here's another newspaper you might like to see," he remarked and left agan.

Jill soon saw that the other "newspaper" was a transcription of what her first wire had picked up. As typed out, it was marked "First Voice," "Second Voice," and so on, but Ben had gone back and written in names wherever he had been able to make attributions later. He had written across the top: "All voices, identified or not, are masculine."

Most of the items were of no interest. They simply showed that Smith had been fed, or washed, or massaged, and that each morning and afternoon he had been required to get up and exercise under the supervision of a voice identified as "Doctor Nelson" and a second voice marked "second doctor." Jill decided that this must be Dr. Thaddeus.

But one longish passage had nothing to do with the physical care of the patient. Jill read it and reread it:

Doctor Nelson: How are you feeling, boy? Are you strong enough to talk for a while?

Smith: Yes.

Doctor Nelson: A man wants to talk to you.

Smith: (pause) Who? (Caxton had written in: All of Smith's speeches are preceded by long pauses, some longer than others.)

Nelson: This man is our great (untranscribable guttural word-Martian?). He is our oldest Old One. Will you talk with him?

Smith: (very long pause) I am great happy. The Old One will talk and I will listen and grow.

Nelson: No, no! He wants to ask you questions.

Smith: I cannot teach an Old One.

Nelson: The Old One wishes it. Will you let him ask you questions?

Smith: Yes.

(Background noises, short delay.)

Nelson: This way, sir. Uh, I have Doctor Mahmoud standing by, ready to translate for you.

Jill read "New Voice." Caxton had scratched this out and had written in: "Secretary General Douglasilt"

Secretary General: I won't need him. You say Smith understands English.

Nelson: Well, yes and no, Your Excellency. He knows quite a number of words, but, as Mahmoud says, he doesn't have any cultural context to hang the words on. It can be rather confusing.

Secretary General: Oh, we'll get along all right, I'm sure. When I was a youngster I hitchhiked all through Brazil, without knowing a word of Portuguese when I started. Now, if you will just introduce us-then leave us alone.

Nelson: Sir? I think I had better stay with my patient.

Secretary General: Really, Doctor? I'm afraid I must insist. Sorry.

Nelson: And I am afraid that I must insist. Sorry, sir. Medical ethics-

Secretary General: (interrupting) As a lawyer, I know a little something of medical jurisprudence-so don't give me that "medical ethics" mumbo-jumbo, really. Did this patient select you?

Nelson: Not exactly, but-

Secretary General: Just as I thought. Has he had any opportunity to make a choice of physicians? I doubt it. His present status is that of ward of the state. I am acting as his next of kin, defacto-and, you will find, de jure as well. I wish to interview him alone.

Nelson: (long pause, then very stiffly) If you put it that way, Your Excellency, I withdraw from the case.

Secretary General: Don't take it that way, Doctor; I didn't mean to get your back hair up. I'm not questioning your treatment. But you wouldn't try to keep a mother from seeing her son alone, now would you? Are you afraid that I might hurt him?

Nelson: No, but- Secretary General: Then what is your objection? Come now, introduce us and let's get on with it. This fussing may be upsetting your patient.

Nelson: Your Excellency, I will introduce you. Then you must select another doctor for your . . . ward.

Secretary General: I'm sorry, Doctor, I really am. I can't take that as final-we'll discuss it later. Now, if you please?

Nelson: Step over here, sir. Son, this is the man who wants to see you. Our great Old One.

Smith: (untranscribable)

Secretary General: What did he say?

Nelson: Sort of a respectful greeting. Mahmoud says it translates: "I am only an egg." More or less that, anyway. He used to use it on me. It's friendly. Son, talk man-talk.

Smith: Yes.

Nelson: And you had better use simple one-syllable words, if I may offer a last advice.

Secretary General: Oh, I will.

Nelson: Good-by, Your Excellency. Good-by, son.

Secretary General: Thanks, Doctor. See you later.

Secretary General: (continued) How do you feel?

Smith: Feel fine.

Secretary General: Good. Anything you want, just ask for it. We want you to be happy. Now I have something I want you to do for me. Can you write?

Smith: 'Write?' What is 'write?'

Secretary General: Well, your thumb print will do. I want to read a paper to you. This paper has a lot of lawyer talk, but stated simply it says that you agree that in leaving Mars you have abandoned-I mean, given up-any claims that you may have there. Understand me? You assign them in trust to the government.

Smith: (no answer)

Secretary General: Well, let's put it this way. You don't own Mars, do you?

Smith: (longish pause) I do not understand.

Secretary General: Mmm . . . let's try it this way. You want to stay here, don't you?

Smith: I do not know. I was sent by the Old Ones. (Long untranscribable speech, sounds like a bullfrog fighting a cat.)

Secretary General: Damn it, they should have taught him more English by now. See here, son, you don't have to worry about these things. Just let me have your thumb print here at the bottom of this page. Let me have your right hand. No, don't twist around that way. Hold still! I'm not going to hurt you . . . Doctor! Doctor Nelson!

Second Doctor: Yes, sir?

Secretary General: Get Doctor Nelson.

Second Doctor: Doctor Nelson? But he has left, sir. He said you took him off the case.

Secretary General: Nelson said that? Damn him! Well, do something. Give him artificial respiration. Give him a shot. Don't just stand there- can't you see the man is dying?

Second Doctor: I don't believe there is anything to be done, sir. Just let him alone until he comes out of it. That's what Doctor Nelson always did.

Secretary General: Blast Doctor Nelson!

The Secretary General's voice did not appear again, nor that of Doctor Nelson. Jill could guess, from gossip she had picked up around the hospital, that Smith had gone into one of his cataleptic withdrawals. There were only two more entries, neither of them attributed. One read: No need to whisper. He Can't hear you. The other read: Take that tray away. We'll feed him when he comes out of it.

Jill was giving the transcription a third reading when Ben reappeared. He was carrying more onionskin sheets but he did not offer them to her; instead he said, "Hungry?"

She glanced inquiringly at the papers in his hand but answered, "Starved."

"Let's get out of here and shoot a cow."

He said nothing more while they went to the roof and took a taxi, and he still kept quiet during a flight to the Alexandria platform, where they switched to another cab. Ben selected one with a Baltimore serial number. Once in the air he set it for Hagerstown, Maryland, then settled back and relaxed. "Now we can talk."

"Ben, why all the mystery?"

"Sorry, pretty foots. Probably just nerves and my bad conscience. I don't know that there is a bug in my apartment-but if I can do it to them, they can do it to me . . . and I've been showing an unhealthy interest in things the administration wants kept doggo. Likewise, while it isn't likely that a cab signaled from my flat would have a recorder hidden in the cushions, still it might have; the Special Service squads are thorough. But this cab-" He patted its seat cushions. "They can't gimmick thousands of cabs. One picked at random should be safe."

Jill shivered. "Ben, you don't really think they would..." She let it trail off.

"Don't I, now! You saw my column. I filed that copy nine hours ago. Do you think the administration will let me kick it in the stomach without doing something about it?"

"But you have always opposed this administration."

"That's okay. The duty of His Majesty's Loyal Opposition is to oppose. They expect that. But this is different; I have practically accused them of holding a political prisoner . . . one the public is very much interested in. Jill, a government is a living organism. Like every living thing its prime characteristic is a blind, unreasoned instinct to survive. You hit it, it will fight back. This time I've really hit it." He gave her a sidelong look. "I shouldn't have involved you in this."

"Me? I'm not afraid. At least not since I turned that gadget back over to you."

"You're associated with me. If things get rough, that could be enough."

Jill shut up. She had never in her life experienced the giant ruthlessness of giant power. Outside of her knowledge of nursing and of the joyous guerilla warfare between the sexes, Jill was almost as innocent as the Man from Mars. The notion that she, Jill Ooardman, who had never experienced anything worse than a spanking as a child and an occasional harsh word as an adult, could be in physical danger was almost impossible for her to believe. As a nurse, she had seen the consequences of ruthlessness, violence, brutality-but it could not happen to her.

Their cab was circling for a landing in Hagerstown before she broke the moody silence. "Ben? Suppose this patient does die. What happens?"

"Huh?" He frowned. "That's a good question, a very good question. I'm glad you asked it; it shows you are taking an interest in the work. Now if there are no other questions, the class is dismissed."

"Don't try to be funny."

"Hmm ... Jill, I've been awake nights when I should have been dreaming about you, trying to answer that one. It's a two-part question, political and financial-and here are the best answers I have now: If Smith dies, his odd legal claim to the planet Mars vanishes. Probably the pioneer group the Champion left behind on Mars starts a new claim-and almost certainly the administration worked out a deal with them before they left Earth. The Champion is a Federation ship but it is more than possible that the deal, if there was one, leaves all the strings in the hands of that redoubtable defender of human rights, Mr. Secretary General Douglas. Such a deal could keep him in power for a long time. On the other hand, it might mean nothing at all."

"Huh? Why?"

"The Larkin Decision might not apply. Luna was uninhabited, but Mars is inhabited-by Martians. At the moment, Martians are a legal zero. But the High Court

might take a look at the political situation, stare at its collective navel, and decide that human occupancy meant nothing on a planet already inhabited by non-human natives. Then rights on Mars, if any, would have to be secured from the Martians themselves."

"But, Ben, that would logically be the case anyhow. This notion of a single man owning a planet ...it' s fantastic!"

"Don't use that word to a lawyer; he won't understand you. Straining at gnats and swallowing camels is a required course in all law schools. Besides, there is a case in point. In the fifteenth century the Pope deeded the entire western hemisphere to Spain and Portugal and nobody paid the slightest attention to the fact that the real estate was already occupied by several million Indians with their own laws, customs, and notions of property rights. His grant deed was pretty effective, too. Take a look at a western hemisphere map sometime and notice where Spanish is spoken and where Portuguese is spoken-and see how much land the Indians have left."

"Yes, but- Ben, this isn't the fifteenth century."

"It is to a lawyer. They still cite Blackwell, Code Napoleon, or even the laws of Justinian. Mark it down, Jill; if the High Court rules that the Larkin Decision applies, Smith is in a position to grant or withhold concessions on Mars which may be worth millions, or more likely billions. If he assigns his claim to the present administration, then Secretary Douglas is the man who will hand out the plums. Which is just what Douglas is trying to rig. You saw that bug transcript."

"Ben, why should anybody want that sort of power?"

"Why does a moth fly toward a light? The drive for power is even less logical than the sex urge . . . and stronger. But I said this was a two-part question. Smith's financial holdings are almost as important as his special position as nominal king-emperor of Mars. Possibly more important, for a High Court decision could knock out his squatter's rights on Mars but I doubt if anything could shake his ownership of the Lyle Drive and a major chunk of Lunar Enterprises; the eight wills are a matter of public record- and in the three most important cases he inherits with or without a will. What happens if he dies? I don't know. A thousand alleged cousins would pop up, of course, but the Science Foundation has fought off a lot of such money-hungry vermin in the past twenty years. It seems possible that, if Smith dies without making a will, his enormous fortune will revert to the state."

"'The state?' Do you mean the Federation or the United States?"

"Another very good question to which I do not know the answer. His natural parents come from two different member countries of the Federation and he was born outside all of them . . . and it is going to make a crucial difference to some people who votes those blocks of stock and who licenses those patents. It won't be Smith; he won't know a stock proxy from a traffic ticket. It is likely to be whoever can grab him and hang onto him. In the meantime I doubt if Lloyd's would write a policy on his life; he strikes me as a very poor risk."

"The poor baby! The poor, poor infant!"

VI

THE RESTAURANT IN HAGERSTOWN had "atmosphere" as well as good food, which meant that it had tables scattered not only over a lawn leading down to the edge of a little lake but also had tables in the boughs of three enormous old trees. Over all was a force field roof which kept the outdoors dining area perpetually summer even in rain and snow.

Jill wanted to eat up in the trees, but Ben ignored her and bribed the maître d'hôtel to set up a table near the water in a spot of his choice, then ordered a portable stereo tank placed by their table.

Jill was miffed. "Ben, why bother to come here and pay these prices if we can't eat in the trees and have to endure that horrible jitterbox?"

"Patience, little one. The tables up in the trees all have microphone circuits; they have to have them for service. This table is not gimmicked- I hope-as I saw the waiter take it from a stack of unused ones. As for the tank, not only is it unAmerican and probably subversive to eat without watching stereo but also the racket from it would interfere even with a directional mike aimed at us from a distance . . . assuming that Mr. Douglas's investigators are beginning to take an interest in us, which I misdoubt they are."

"Do you really think they might be shadowing us, Ben?" Jill shivered. "I don't think I'm cut out for a life of crime."

"Pish and likewise tush! When I was working on the General Synthetics bribery scandals I never slept twice in the same place and ate nothing but packaged food I had bought myself. After a while you get to like it- stimulates the metabolism."

"My metabolism doesn't need it, thank you. All I require is one elderly, wealthy private patient."

"Not going to marry me, Jill?"

"After my future husband kicks off, yes. Or maybe I'll be so rich I can afford to keep you as a pet."

"Best offer I've had in months. How about starting tonight?"

"After he kicks off."

During their cocktails the musical show plus lavish commercials which had been banging their eardrums from the stereo tank suddenly stopped. An announcer's head and shoulders filled the tank; he smiled sincerely and said, "NWNW, New World Networks and its sponsor of the hour, Wise Girl Maithusian Lozenges, is honored and privileged to surrender the next few minutes to a special, history-making broadcast by the Federation Government. Remember, friends, every wise girl uses Wise Girls. Easy to carry, pleasant to take, guaranteed no-fail, and approved for sale without prescription under Public Law 1312, Why take a chance on old-fashioned, unesthetic, harmful, unsure methods? Why risk losing his love and respect? Remember The lovely, lupine announcer glanced aside and hurried through the rest of his commercial: "I give you the Wise Girl, who in turn brings you the Secretary General-and the Man from Mars!"

The 3-D picture dissolved into that of a young woman, so sensuous, so unbelievably mammalian, so seductive, as to make every male who saw her unsatisfied with local talent. She stretched and wiggled and said in a bedroom voice, "I always use Wise Girl."

The picture dissolved and a full orchestra played the opening bars of Hail to Sovereign Peace. Ben said, "Do you use Wise Girl?"

"None o' your business!" She looked ruffled and added, "It's a quack nostrum. Anyhow, what makes you think I need it?"

Caxton did not answer; the tank had filled with the fatherly features of Mr. Secretary General Douglas. "Friends," he began, "fellow citizens of the Federation, I have tonight a unique honor and privilege. Since the triumphant return of our trail-blazing ship Champion-" He continued in a few thousand well-chosen words to congratulate the citizens of Earth on their successful contact with another planet, another civilized race. He managed to imply that the exploit of the Champion was the personal accomplishment of every citizen of the Federation, that any one of them could have led the expedition had he not been busy with other serious work-and that he, Secretary Douglas, had been chosen by them as their humble instrument to work their will. The flattering notions were never stated baldly, but implied; the underlying assumption being that the common man was the equal of anyone and better than most-and that good old Joe Douglas embodied the common man. Even his mussed cravat and cowlicked hair had a "just folks" quality.

Bert Caxton wondered who had written the speech. Jim Sanforth, probably-Jim had the most subtle touch of any member of Douglas' staff in selecting the proper loaded adjective to tickle and soothe an audience; he had written advertising commercials before he went into politics and had absolutely no compunctions. Yes, that bit about "the hand that rocks the cradle" was clearly Jim's work-Jim was the sort of jerk who would entice a young girl with candy and consider it a smart operation.

"Turn it off!" Jill said urgently.

"Huh? Shut up, pretty foots. I've got to hear this."

"-and so, friends, I have the honor to bring you now our fellow citizen Valentine Michael Smith, the Man from Mars! Mike, we all know you are tired and have not been well-but will you say a few words to your friends? They all want to see you."

The stereo scene in the tank dissolved to a semi-close-up of a man in a wheel chair. Hovering over him like a favorite uncle was Douglas and on the other side of the chair was a nurse, stiff, starched, and photogenic.

Jill gasped. Ben whispered fiercely, "Keep quiet! I don't want to miss a word of this."

The interview was not long. The smooth babyface of the man in the chair broke into a shy smile; he looked at the cameras and said, "Hello, folks. Excuse me for sitting down. I'm still weak." He seemed to speak with difficulty and once the nurse interrupted to take his pulse.

In answer to questions from Douglas he paid compliments to Captain van Tromp and the crew of the Champion, thanked everyone for his rescue, and said that everyone on Mars was terribly excited over contact with Earth and that he hoped to help in welding strong and friendly relations between the two planets. The nurse interrupted again, but Douglas said gently. "Mike, do you feel strong enough for just one more question?"

"Sure, Mr. Douglas-if I can answer it."

"Mike? What do you think of the girls here on Earth?"

"Gee!"

The baby face looked awestruck and ecstatic and turned pink. The scene dissolved again to the head and shoulders of the Secretary General. "Mike asked me to tell you," he

went on in fatherly tones, "that he will be back to see you as soon as he can. He has to build up his muscles, you know. The gravity of Earth is as rough on him as the gravity of Jupiter would be to us. Possibly next week, if the doctors say he is strong enough." The scene shifted back to the exponents of Wise Girl lozenges and a quick one-act playlet made clear that a girl who did not use them was not only out of her mind but undoubtedly a syntho in the hay as well; men would cross the street to avoid her. Ben switched to another channel, then turned to Jill and said moodily, "Well, I can tear up tomorrow's column and look around for a new subject to plug. They not only made my today's squawk look silly but it appears that Douglas has him safely under his thumb."

"Ben!"

"Huh?"

"That's not the Man from Mars!"

"What? Baby, are you sure?"

"Sure I'm sure! Oh, it looked like him, it looked a great deal like him. Even the voice was similar. But it was not the patient I saw in that guarded room."

Ben tried to shake her conviction. He pointed out that several dozen other persons were known to have seen Smith-guards, internes, male nurses, the captain and crew members of the Champion, probably others. Quite a few of that list must have seen this newscast-or at least the administration would have to assume that some of them would see it and spot the substitution . . . if there had been a substitution. It did not make sense-too great a risk.

Jill did not offer logical rebuttal; she simply stuck Out her lower lip and insisted that the person on Stereo was not the patient she had met. Finally she said angrily, "All right, all right, have it your own way! I can't prove I'm right-so I must be wrong. Men!"

"Now, Jill ..."

"Please take me home."

Ben silently went for a cab. He did not accept one from outside the restaurant even though he no longer thought that anyone would be taking interest in his movements; he selected one from the landing flat of a hotel across the way. Jill remained chilly on the flight back. Presently Ben got out the transcripts of the sounds picked up from Smith's hospital room and reread them. He read them still again, thought for a while, and said, "Jill?"

"Yes, Mr. Caxton?"

"I'll 'mister' you! Look, Jill, I'm sorry, I apologize. I was wrong."

"And what leads you to this momentous conclusion?"

He slapped the folded papers against his palm. "This. Smith could not possibly have been showing this behavior yesterday and the day before and then have given that interview tonight. He would have flipped his controls and gone into one of those trance things."

"I am gratified that you have finally seen the obvious."

"Jill, will you kindly kick me in the face a couple of times, then let up? This is serious. Do you know what this means?"

"It means they used an actor to fake an interview. I told you that an hour ago."

"Sure. An actor and a good one, carefully typed and coached. But it implies much more than that. As I see it, there are two possibilities. The first is that Smith is dead and-"

"Dead!" Jill suddenly was back in that curious water-drinking ceremony and felt the strange, warm, unworldly flavor of Smith's personality, felt it with unbearable sorrow.

"Maybe. In which case this ringer will be allowed to stay 'alwe' for a week or ten days, until they have time to draw up whatever papers they want him to sign. Then the ringer will 'die' and they will ship him Out of town, probably with a hypnotic injunction not to talk so strong that he would choke up with asthma if he tried to spill it-or maybe even a transorbital lobotomy if the boys are playing for keeps. But if Smith is dead, we can just forget it; we'll never be able to prove the truth. So let's assume that he is still alive."

"Oh, I do hope so!"

"What is Hecuba to you, or you to Hecuba?" Caxton misquoted. "If he is still alive, it could be that there is nothing especially sinister about it. After all, a lot of public figures use doubles for some of their appearances;•. it does not even annoy the public because every time a yokel thinks that he has spotted a double it makes him feel smart and in the know, So it may be that the administration has just yielded to public demand and given them that look at the Man from Mars we have all been yapping for. It could be that in two or three weeks our friend Smith will be in shape to stand the strain of public appearances, at which time they will trot him Out. But I doubt it like hell!"

"Why?"

"Use your pretty curly head. The Honorable Joe Douglas has already made one attempt to squeeze out of Smith what he wants . . . and failed miserably. But Douglas can't afford to fail. So I think he will bury Smith deeper than ever . . . and that is the last we will ever see of the true Man from Mars."

"Kill him?" Jill said slowly.

"Why be rough about it? Lock him in a private nursing home and never let him learn anything. He may already have been removed from Bethesda Center."

"Oh, dear! Ben, what are we going to do?"

Caxton scowled and thought. "I don't have a good plan. They own both the bat and the ball and are making the rules. But what I am going to do is this~ I'm going to walk into that hospital with a Fair Witness on one side and a tough lawyer on the other and demand to see Smith. Maybe I can force them to drag it out into the open."

"I'll be right behind you!"

"Like mischief you will. You stay Out of this. As you pointed Out, it would ruin you professionally."

"But you need me to identify him."

"Not so. I flatter myself that I can tell a man who was raised by nonhumans from an actor pretending to be such a man in the course of a very short interview. But if anything goes wrong, you are my ace in the hole-a person who knows that they are pulling hanky-panky concerning the Man from Mars and who has access to the inside of Bethesda Center. Honey, if you don't hear from me, you are on your own."

"Ben, they wouldn't hurt you?"

"I'm fighting Out of my weight, youngster. There is no telling."

"Uh ... oh, Ben, I don't like this. Look, if you do get in to see him, what are you going to do?"

"I'm going to ask him if he wants to leave the hospital. If he says he does, I'm going to invite him to come along with me. In the presence of a Fair Witness they won't dare stop him. A hospital isn't a prison; they don't have any legal right to hold him."

"Uh ... then what? He really does need medical attention, Ben; he's not able to take care of himself. I know."

Caxton scowled again. "I've been thinking of that. I can't nurse him. You could, of course, if you had the facilities. We could put him in my flat-"

"-and I could nurse him. We'll do it, Ben!"

"Slow down. I thought of that. Douglas would pull some legal rabbit out of his hat, a deputation in force would call, and Smith would go right back to pokey. And so would both of us, maybe." He wrinkled his brow. "But I know one man who could give him shelter and possibly get away with it."

"Ever heard of Jubal Harshaw?"

"Huh? Who hasn't?"

"That's one of his advantages; everybody knows who he is. It makes him hard to shove around. Being both a doctor of medicine and a lawyer he is three times as hard to shove around. But most important he is so rugged an individualist that he would fight the whole Federation Departtflent of Security with just a potato knife if it suited his fancy- and that makes him eight times as hard to shove around. But the point is that I got well acquainted with him during the disaffection trials; he is a friend I can count on in a pinch. If I can get Smith out of Bethesda, I'll take him to Harshaw's place over in the Poconos- and then just let those jerks try to hide him under a rug again! Between my column and Harshaw's love for a fight we'll give 'em a bad time."

VII

DESPITE A LATE EVENING Jill was ready to relieve the night floor nurse ten minutes early the next morning. She intended to obey Ben's order to stay out of his proposed attempt to see the Man from Mars but she was determined to be close by when it happened . . . just in case. Ben might need reinforcements.

There were no longer marine guards in the corridor. Trays, medications, and two patients to be prepared for surgery kept her busy the first two hours; she had only time to check the knob of the door to suite K- 12. It was locked, as was the door to the adjoining sitting room. The door to the watch room on its other side was closed. She considered sneaking in again to see Smith through the connecting sitting room, now that the guards were gone, but decided to postpone it; she was too busy. Nevertheless she managed to keep a close check on everyone who came Onto her floor.

Ben did not show up and discreet questions asked of her assistant on the switchboard reassured her that neither Ben nor anyone else had gone in to see the Man from Mars while Jill was busy elsewhere. It puzzled her; while Ben had not set a time, she had had the impression that he had intended to storm the citadel as early in the day as possible.

Presently she felt that she just had to snoop a bit. During a lull she knocked at the door of the Suite's watch room, then stuck her head in and pretended surprise. "Oh! Good morning, Doctor. I thought Doctor Frame was in here."

The physician at the watch desk was strange to Jill. He turned away from the displayed physio data, looked at her, then smiled as he looked her up and down. "I haven't seen Dr. Frame, Nurse. I'm Dr. Brush. Can I help?"

At the typical male reaction Jill relaxed. "Nothing special. To tell the truth I was curious. How is the Man from Mars?"

She smiled and winked. "It's no secret to the staff, Doctor. Your patient-" She gestured at the inner door.

"Huh?" He looked startled. "Did they have him in this suite?"

"What? Isn't he here now?"

"Not by six decimal places. Mrs. Rose Bankerson-Dr. Garner's patient. We brought her in early this morning."

"Really? But what happened to the Man from Mars? Where did they put him?"

"I haven't the faintest. Say, did I realiy just miss seeing Valentine Smith?"

"He was here yesterday. That's all I know."

"And Dr. Frame was on his case? Some people have all the luck. Look what I'm stuck with." He switched on the Peeping Tom above his desk; Jill saw framed in it, as if she were looking down, a water bed; floating in it was a tiny old woman. She seemed to be asleep.

"What's her trouble?"

"Mmm ... Nurse, if she didn't have more money than any person ought to have, you might be tempted to call it senile dementia. As it is, she is in for a rest and a check-up."

Jill made small talk for a few moments more, then pretended to see a call light. She went back to her desk, dug out the night log-yes, there it was: V M. Smith, K-12-zransfer. Below that entry was another: Rose ~ Bankerson (Mrs.)-red K-12 (diet kitchen instrd by Dr. Garner-no orders-fir nt respnbl).

Having noted that the rich old gal was no responsibility of hers, Jill turned her mind back to Valentine Smith. Something about Mrs. Bankerson's case struck her as odd but she could not put her finger on it, so she put it Out of her mind and thought about the matter that did interest her. Why had they moved Smith in the middle of the night? To avoid any possible contact with outsiders, probably. But where had they taken him? Ordinarily she would simply have called "Reception" and asked, but Ben's opinions plus the phony broadcast of the night before had made her jumpy about showing curiosity; she decided to wait until lunch and see what she could pick up on the gossip grapevine.

But first Jill went to the floor's public booth and called Ben. His office informed her that Mr. Caxton had just left town, to be gone a few days. She was startled almost speechless by this-then pulled herself together and left word for Ben to call her.

She then called his home. He was not there; she recorded the same message.

Ben Caxton had wasted no time in preparing his attempt to force his way into the presence of Valentine Michael Smith. He was lucky in being able to retain James Oliver Cavendish as his Fair Witness. While any Fair Witness would do, the prestige of

Cavendish was such that a lawyer was hardly necessary-the old gentleman had testified many times before the High Court of the Federation and it was said that the wills locked up in his head represented not billions but trillions. Cavendish had received his training in total recall from the great Dr. Samuel Renshaw himself and his professional hypnotic instruction had been undergone as a fellow of the Rhine Foundation. His fee for a day or fraction thereof was more than Ben made in a week, but Ben expected to charge it off to the Post syndicate-in any case, the best was none too good for this job.

Caxton picked up the junior Frisby of Biddle, Frisby, Frisby, Biddle, & Reed as that law firm represented the Post syndicate, then the two younger men called for Witness Cavendish. The long, spare form of Mr. Cavendish, wrapped chin to ankle in the white cloak of his profession, reminded Ben of the Statue of Liberty . . . and was almost as conspicuous. Ben had already explained to Mark Fnsby what he intended to try (and Frisby had already pointed Out to him that he had no status and no rights) before they called for Cavendish; once in the Fair Witness's presence they conformed to protocol and did not discuss what he might be expected to see and hear.

The cab dropped them on top of Bethesda Center; they went down to the Director's office. Ben handed in his card and said that he wanted to see the Director.

An imperious female with a richly cultivated accent asked if he had an appointment. Ben admitted that he had none.

"Then I am afraid that your chance of seeing Dr. Broemer is very slight. Will you state your business?"

"Just tell him," Caxton said loudly, so that others waiting would hear, "that Caxton of the Crow's Nest is here with a lawyer and a Fair Witness to interview Valentine Michael Smith, the Man from Mars."

She was startled almost out of her professional hauteur. But she recovered and said frostily, "I shall inform him. Will you be seated, please?"

"Thanks, I'll wait right here."

They waited. Frisby broke out a cigar, Cavendish waited with the calm patience of one who has seen all manner of good and evil and now counts them both the same, Caxton uttered and tried to keep from biting his nails. At last the snow queen behind the desk announced, "Mr. Berquist will see you."

"Berquist? Gil Berquist?"

"I believe his name is Mr. Gilbert Berquist."

Caxton thought about it-Gil Berquist was one of Secretary Douglas's large squad of stooges, or "executive assistants." He specialized in chaperoning official visitors. "I don't want to see Berquist; I want the Director."

But Berquist was already coming out, hand shoved out before him, greeter's grin plastered on his face. "Benny Caxton! How are you, chum? Long time and so forth. Still peddling the same old line of hoke?" He glanced at the Fair Witness, but his expression admitted nothing.

Ben shook hands briefly. "Same old hoke, sure. What are you doing here, Gil?"

"If I ever manage to get Out of public service I'm going to get me a column, too-nothing to do but phone in a thousand words of rumors each day and spend the rest of the day in debauchery. I envy you, Ben."

"I said, 'What are you doing here, Gil?' I want to see the Director, then get five minutes with the Man from Mars. I didn't come here for your high-level brush off."

"Now, Ben, don't take that attitude. I'm here because Dr. Broemer has been driven almost crazy by the press-so the Secretary General sent me over to take some of the load off his shoulders."

"Okay. I want to see Smith."

"Ben, old boy, don't you realize that every reporter, special correspondent, feature writer, commentator, free-lance, and sob sister wants the same thing? You winchells are just one squad in an army; if we let you all have your way, you would kill off the poor jerk in twenty-four hours. Polly Peepers was here not twenty minutes ago. She wanted to interview him on love life among the Martians." Berquist threw up both hands and looked helpless.

"I want to see Smith, Do I see him, or don't I?"

"Ben, let's find a quiet place where we can talk over a long, tall glass. You can ask me anything you want to."

"I don't want to ask you anything; I want to see Smith. By the way, this is my attorney, Mark Frisby-Biddle & Frisby." As was customary, Ben did not introduce the Fair Witness; they all pretended that he was not present.

"I've met Frisby," Berquist acknowledged. "How's your father, Mark? Sinuses still giving him fits?"

"About the same."

"This foul Washington climate. Well, come along, Ben. You, too,Mark."

"Hold it," said Caxton. "I don't want to interview you, Gil. I want to see Valentine Michael Smith. I'm here as a member of the press, directly representing the Post syndicate and indirectly representing over two hundred million readers. Do I see him? If I don't, say so out loud and state your legal authority for refusing me."

Berquist sighed. "Mark, will you tell this keyhole historian that he can't go busting into a sick man's bedroom just because he has a syndicated column? Valentine Smith made one public appearance just last night -against his physician's advice I might add. The man is entitled to peace and quiet and a chance to build up his strength and get oriented. That appearance last night was enough, more than enough."

"There are rumors," Caxton said carefully, "that the appearance last night was a fake."

Berquist stopped smiling. "Frisby," he said coldly, "do you want to advise your client on the law concerning slander?"

"Take it easy, Ben."

"I know the law on slander, Gil. In my business I have to. But whom am I slandering? The Man from Mars? Or somebody else? Name a name. I repeat," he went on, raising his voice, "that I have heard that the man interviewed on TV last night was not the Man from Mars. I want to see him myself and ask him."

The crowded reception hail was very quiet as everyone present bent an ear to the argument. Berquist glanced quickly at the Fair Witness, then got his expression under control and said smilingly to Caxton, "Ben, it's just possible that you talked yourself into the interview you wanted-as well as a lawsuit. Wait a moment."

He disappeared into the inner office, came back fairly soon. "I arranged it," he said wearily, "though God knows why. You don't deserve it, Ben. Come along. Just you-Mark, I'm sorry but we can't have a crowd of people; after all, Smith is a sick man."

"No," said Caxton.

"Huh?"

"All three of us, or none of us. Take your choice."

"Ben, don't be silly; you're receiving a very special privilege. Tell you what-Mark can come along and wait outside the door But you certainly don't need him." Berquist glanced toward Cavendish; the Witness seemed not to hear.

"Maybe not. But I've paid his fee to have him along. My column will state tonight that the administration refused to permit a Fair Witness to see the Man from Mars."

Berquist shrugged. "Come along, then. Ben, I hope that slander suit really clobbers you."

They took the patients' elevator rather than the bounce tube out of deference to Cavendish's age, then rode a slide-away for a long distance past laboratories, therapy rooms, solaria, and ward after ward. They were stopped once by a guard who phoned ahead, then let them through; they were at last ushered into a physio-data display room used for watching critically ill patients. "This is Dr. Tanner," Berquist announced. "Doctor, this is Mr. Caxton and Mr. Frisby." He did not, of course, introduce Cavendish.

Tanner looked worried. "Gentlemen, I am doing this against my better judgment because the Director insists. I must warn you of one thing. Don't do or say anything that might excite my patient. He is in an extremely neurotic condition and falls very easily into a state of pathological withdrawal-a trance, if you choose to call it that."

"Epilepsy?" asked Ben.

"A layman might easily mistake it for that. It is more like catalepsy. But don't quote me; there is no clinical precedent for this case."

"Are you a specialist, Doctor? Psychiatry, maybe?"

Tanner glanced at Berquist. "Yes," he admitted.

"Where did you do your advanced work?"

Berquist said, "Look, Ben, let's see the patient and get it over with. You can quiz Dr. Tanner afterwards."

"Okay."

Tanner glanced over his dials and graphs, then flipped a switch and stared into a Peeping Tom, He left the desk, unlocked a door and led them into an adjoining bedroom, putting a finger to his lips as he did so. The other four followed him in. Caxton felt as if he were being taken to "view the remains" and suppressed a nervous need to laugh.

The room was quite gloomy. "We keep it semi-darkened because his eyes are not accustomed to our light levels," Tanner explained in a hushed voice. He turned to a hydraulic bed which filled the center of the room. "Mike, I've brought some friends to see you."

Caxton pressed closer, Floating therein, half concealed by the way his body sank into the plastic skin covering the liquid in the tank and farther concealed by a sheet up to his armpits, was a young man. He looked back at them but said nothing; his smooth, round face was expressionless.

So far as Ben could tell this was the man who had been on stereo the night before. He had a sudden sick feeling that little Jill, with the best of intentions, had tossed him a live grenade-a slander suit that might very well bankrupt him. "You are Valentine Michael Smith?"

"Yet"

"The Man from Mars?"

"Yet"

"You were on stereo last night?"

The man in the tank bed did not answer. Tanner said, "I don't think he knows the word. Let me try. Mike, you remember what you did with Mr. Douglas last night?"

The face looked petulant. "Bright lights. Hurt."

"Yes, the lights hurt your eyes. Mr. Douglas had you say hello to people."

The patient smiled slightly. "Long ride in chair."

"Okay," agreed Caxton. "I catch on. Mike, are they treating you all right here?"

"Yes."

"You don't have to stay here, you know. Can you walk?"

Tanner said hastily, "Now see here, Mr. Caxton-" Berquist put a hand on his arm and he shut up.

"I can walk ... a little. Tired."

"I'll see that you have a wheel chair. Mike, if you don't want to stay here, I'll help you get out of bed and take you anywhere you want to go."

Tanner shook off Berquist's hand and said, "I can't have you interfering with my patient!"

"He's a free man, isn't he?" Caxton persisted. "Or is he a prisoner here?"

Berquist answered, "Of course he is a free man! Keep quiet, Doctor. Let the fool dig his own grave."

"Thanks, Gil. Thanks all to pieces. So he is free to leave if he wants to. You heard what he said, Mike. You don't have to stay here. You can go anywhere you like. I'll help you."

The patient glanced fearfully at Tanner. "No! No, no, no!"

"Okay, okay."

Tanner snapped, "Mr. Berquist, this has gone quite far enough! My patient will be upset the rest of the day."

"All right, Doctor. Ben, let's get the show on the road. You've had enough, surely."

"Ub ... just one more question." Caxton thought hard, trying to think what he could squeeze out of it. Apparently Jill had been wrong- yet she had not been wrong!-or so it had seemed last night. But something did not quite fit although he could not tell what it was.

"One more question," Berquist begrudged.

"Thanks. Uh ... Mike, last night Mr. Douglas asked you some questions." The patient watched him but made no comment. "Let's see, he asked you what you thought of the girls here on Earth, didn't he?"

The patient's face broke into a big smile. "Gee!"

"Yes. Mike ... when and where did you see these girls?"

The smile vanished. The patient glanced at Tanner, then he stiffened, his eyes rolled up, and he drew himself into the foetal position, knees drawn up, head bent, and arms folded across his chest.

Tanner snapped, "Get them out of here!" He moved quickly to the tank bed and felt the patient's wrist.

Berquist said savagely, "That tears it! Caxton, will you get out? Or shall I call the guards and have you thrown out?"

"Oh, we're getting out all right," Caxton agreed. All but Tanner left the room and Berquist closed the door.

"Just one point, Gil," Caxton insisted. "You've got him boxed up in there . . . so just where did he see those girls?"

"Eh? Don't be silly. He's seen lots of girls. Nurses ... laboratory technicians. You know."

"But I don't know. I understood he had nothing but male nurses and that female visitors had been rigidly excluded."

"Eh? Don't be any more preposterous than you have to be." Berquist looked annoyed, then suddenly grinned. "You saw a nurse with him on stereo just last night."

"Oh. So I did." Caxton shut up and let himself be led out.

They did not discuss it further until the three were in the air, headed for Cavendish's home. Then Frisby remarked, "Ben, I don't suppose the Secretary General will demean himself to sue you, since you did not print it. Still, if you really do have a source for that rumor you mentioned, we had better perpetuate the evidence. You don't have much of a leg to stand on, you know."

"Forget it Mark. He won't sue." Ben glowered at the floor of the cab. "How do we know that was the Man from Mars?"

"Eh? Come off it, Ben."

"How do we know? We saw a man about the right age in a hospital bed. We have Berquist's word for it-and Berquist got his start in politics issuing denials; his word means nothing. We saw a total stranger, supposed to be a psychiatrist . . . and when I tried to find out where he had studied psychiatry I got euchred out. How do we know? Mr. Cavendish, did you see or hear anything that convinced you that this bloke was the Man from Mars?"

Cavendish answered carefully, "It is not my function to form opinions. I see, I hear-that is all."

"Sorry."

"By the way, are you through with me in my professional capacity?"

"Huh? Oh, sure. Thanks, Mr. Cavendish."

"Thank you, sir. It was an interesting assignment." The old gentleman took off the cloak that set him apart from ordinary mortals, folded it carefully and laid it on the seat. He sighed, relaxed, and his features lost professional detachment, warmed and mellowed. He took out cigars, offered them to the others; Frisby took one and they shared a light. "I do not smoke," Cavendish remarked through a thick cloud, "while on duty. It interferes with optimum functioning of the senses."

"If I had been able to bring along a crew member of the Champion," Caxton persisted, "I could have tied it down. But I thought surely I could tell."

"I must admit," remarked Cavendish, "that I was a little surprised at one thing you did not do."

"Huh? What did I miss?"

"Calluses"

"Calluses?"

"Surely. A man's life history can be told from his calluses. I once did a monograph on them, published in The Witness Quarterly- like Sherlock Holmes' famous monograph on tobacco ash. This young man from Mars since he has never worn our sort of shoes and has lived in gravity about one third of ours, should display foot calluses consonant with his former environment. Even the time he recently spent in space should have left their traces. Very interesting."

"Damn! Good Lord, Mr. Cavendish, why didn't you suggest it to me?"

"Sir?" The old man drew himself up and his nostrils dilated. "It would not have been ethical. I am a Fair Witness, not a participant. My professional association would suspend me for much less. Surely you know that."

"Sorry. I forgot myself." Caxton frowned. "Let's wheel this buggy around and go back. We'll take a look at his feet-or I'll bust the place down with Berquist's fat head!"

"I'm afraid you will have to find another Witness ... in view of my indiscretion in discussing it, even after the fact."

"Uh, yes, there's that." Caxton frowned.

"Better just calm down, Ben," advised Frisby. "You're in deep enough now. Personally, I'm convinced it was the Man from Mars. Occam's razor, least hypothesis, just plain horse sense."

Caxton dropped them, then set the cab to cruise while he thought. Presently he punched the combination to take him back to Bethesda Medical Center.

He was less than half way back to the Center when he realized that his trip was useless. What would happen? He would get as far as Berquist, no farther. He had been allowed in once-with a lawyer, with a Fair Witness. To demand to be allowed to see the Man from Mars a second time, all in one morning, was unreasonable and would be refused. Nor, since it was unreasonable, could he make anything effective out of it in his column.

But he bad not acquired a widely syndicated column through being balked. He intended to get in.

How? Well, at least he now knew where the putative "Man from Mars" was being kept. Get in as an electrician? Or as a janitor? Too obvious; he would never get past the guard, not even as far as "Dr. Tanner."

Was "Tanner" actually a doctor? It seemed unlikely. Medical men, even the worst of them, tended to shy away from hanky-panky contrary to their professional code. Take that ship's surgeon, Nelson-he had quit, washed his hands of the case simply because- Wait a minute! Dr. Nelson was one man who could tell offhand whether that young fellow was the Man from Mars, without checking calluses, using trick questions, or anything. Caxton reached for buttons, ordered his cab to ascend to parking level and hover, and immediately tried to phone Dr. Nelson, relaying through his office for the purpose since he neither knew where Dr. Nelson was, nor had with him the means to find out. Nor did his assistant Osbert Kilgallen know where he was, either, but he did have at hand resources to find out; it was not even necessary to draw on Caxton's large account of uncollected favors in the Enclave, as the Post syndicate's file on Important Persons placed him at once in the New Mayflower. A few minutes later Caxton was talking with him.

To no purpose-Dr. Nelson had not seen the broadcast. Yes, he had heard about it; no, he had no reason to think the broadcast had been faked. Did Dr. Nelson know that an

attempt had been made to coerce Valentine Smith into surrendering his rights to Mars under the Larkin Decision? No, he did not know it, had no reason to believe so . . . and would not be interested if it were true; it was preposterous to talk about anyone "owning" Mars; Mars belonged to the Martians. So? Let's propose a hypothetical question, Doctor; if someone were trying to- But Dr. Nelson had switched off. When Caxton tried to reconnect, a recorded voice stated sweetly: "The subscriber has voluntarily suspended service temporarily. If you care to record-" Caxton switched off.

Caxton made a foolish statement concerning Dr. Nelson's parentage. But what he did next was much more foolish; he phoned the Executive Palace, demanded to speak to the Secretary General.

His action was more a reflex than a plan. In his years as a snooper, first as a reporter, then as a lippmann, he had learned that close-held secrets could often be cracked by going all the way to the top and there making himself unbearably unpleasant. He knew that such twisting of the tiger's tail was dangerous, for he understood the psychopathology of great power as thoroughly as Jill Boardman lacked knowledge of it- but he had habitually relied on his relative safety as a dealer in still another sort of power almost universally feared and appeased by the powerful.

What he forgot was, that in phoning the Palace from a taxicab, he was not doing so publicly.

Caxton was not put through to the Secretary General, nor had he expected to be. Instead he spoke with half a dozen underlings and became more aggressive with each one. He was so busy that he did not notice it when his cab ceased to hover and left the parking level.

When he did notice it, it was too late; the cab refused to obey the orders he at once punched into it. Caxton realized bitterly that he had let himself be trapped by a means no professional hoodlum would fall for: his call had been traced, his cab identified, its idiot robot pilot placed under orders of an over-riding police frequency-and the cab itself was being used to arrest him and fetch him in, all most privately and with no fuss,

He wished keenly that he had kept Fair Witness Cavendish with him. But he wasted no time on this futility but cleared the useless call from the radio and tried at once to call his lawyer, Mark Frisby.

He was still trying when the taxicab landed inside a courtyard landing fiat and his signal was cut off by its walls. He then tried to leave the cab, found that the door would not open-and was hardly surprised to discover that he was becoming very light-headed and was fast losing consciousness-

VIII

JILL TRIED TO TELL HERSELF that Ben had gone charging off on another Scent and simply had forgotten (or had not taken time) to let her know. But she did not believe it. Ben, incredibly busy as he was, owed much of his success, both professional and social, to meticulous attention to human details. He remembered birthdays and would rather have weiched on a poker debt than have forgotten to write a bread-and-butter note. No matter where he had gone, nor how urgent the errand, he could have-and would

have!-at least taken two minutes while in the air to record a reassuring message to her at her home or at the Center. It was an unvarying characteristic of Ben, she reminded herself, the thing that made him a lovable beast in spite of his many faults.

He must have left word for her! She called his office again at her lunch break and spoke with Ben's researcher and office chief, Osbert Kilgallen. He assured her solemnly that Ben had left no message for her, nor had any come in since she had called earlier.

She could see past his head in the screen that there were other people in the office; she decided it was a poor time to mention the Man from Mars. "Did he say where he was going? Or when he would be back?"

"No. But that is not unusual. We always have a few spare columns on the hook to fill in when one of these things comes up."

"Well ... where did he call you from? Or am I being too snoopy?"

"Not at all, Miss floardman. He did not call; it was a statprint message, filed from Paoli Flat in Philadelphia as I recall."

Jill had to be satisfied with that. She lunched in the nurses' dining room and tried to interest herself in food. It wasn't, she told herself, as if anything were really wrong . . . or as if she were in love with the lunk or anything silly like that.

"Hey! Boardman! Snap out of the fog-I asked you a question."

Jill looked up to find Molly Wheelwright, the wing's dietician, looking at her. "Sorry. I was thinking about something else."

"I said, 'Since when does your floor put charity patients in luxury suites?'

"Isn't K-12 on your floor? Or have they moved you?"

"K-12? Certainly. But that's not a charity case; it's a rich old woman, wealthy that she can pay to have a doctor watch every breath she draws."

"Humph! If she's wealthy, she must have come into money awfully suddenly. She's been in the N.P. ward of the geriatrics sanctuary for the past seventeen months."

"Must be some mistake."

"Not mine-I don't let mistakes happen in my diet kitchen. That tray is a tricky one and I check it myself-fat-free diet (she's had her gall bladder out) and a long list of sensitivities, plus concealed medication. Believe me, dear, a diet order can be as individual as a fingerprint." Miss Wheelwright stood up. "Gotta run, chicks. I wish they would let me run this kitchen for a while. Hogwallow Cafeteria!"

"What was Molly sounding off about?" one of the nurses asked.

"Nothing. She's just mixed up." But Jill continued to think about it. It occurred to her that she might locate the Man from Mars by making inquiries around the diet kitchens. She put the idea out of her mind; it would take a full day to visit all the diet kitchens in the acres of ground covered by the sprawling buildings. Bethesda Center had been founded as a naval hospital back in the days when wars were fought on oceans; it had been enormous even then. It had been transferred later to Health, Education, & Welfare and had expanded; now it belonged to the Federation and was still larger, a small city.

But there was something odd about Mrs. Bankerson's case. The hospital accepted all classes of patients, private, charity, and government; the floor Jill was working on usually had only government patients and its luxury suites were occupied by Federation Senators or other official guests able to command flossy service. It was unusual for a paying private patient to have a suite on her floor, or to be on her floor in any status.

Of course Mrs. Bankerson could be overflow, if the part of the Center open to the fee-paying public had no such suite available. Yes, probably that was it.

She was too rushed for a while after lunch to think about it, being busy with incoming patients. Shortly a situation came up in which she needed a powered bed. The routine action would be to phone for one to be sent up-but the storage room was in the basement a quarter of a mile away and Jill wanted the bed at once. She recalled that she had seen the powered bed which was normally in the bedroom of suite K-l2 parked in the sitting room of that suite; she remembered telling one of those marine guards not to sit on it. Apparently it had Simply been shoved in there to get it out of the way when the flotation bed had been installed for Smith.

Possibly it was still sitting there, gathering dust and still charged out to the floor. Powered beds were always in short supply and cost six times as much as an ordinary bed. While, strictly speaking, it was the wing superintendent's worry, Jill saw no reason to let overhead charges for her floor run up unnecessarily-and besides, if it was still there, she could get it at once. She decided to find out.

The sitting room door was still locked. She was startled to find that her pass key would not open it. Making a mental note to tell maintenance to repair the lock, she went on down the corridor to the watch room of the suite, intending to find out about the bed from the doctor watching over Mrs. Bankerson.

The physician on watch was the same one she had met before, Dr. Brush. He was not an intern, nor a resident, but had been brought in for this patient, Jill had learned from him, by Dr. Garner. Brush looked up as she put her head in. "Miss Boardman! Just the person I want to see!"

"Why didn't you ring? How's your patient?"

"She's all right," he answered, glancing up at the Peeping Tom, "But I definitely am not."

"Trouble?"

"Some trouble. About five minutes' worth. And my relief is not in the building. Nurse, could you spare me about that many minutes of your valuable time? And then keep your mouth shut afterwards?"

"I suppose so. I told my assistant floor supervisor I would be away for a few minutes. Let me use your phone and I'll tell her where to find me."

"No!" he said urgently. "Just lock that door after I leave and don't let anybody in until you hear me rap 'Shave and a Haircut' on it, that's a good girl."

"All right, sir," Jill said dubiously. "Am I to do anything for your patient?"

"No, no, just sit there at the desk and watch her in the screen. You won't have to do anything. Don't disturb her."

"Well, if anything does happen, where will you be? In the doctors' lounge?"

"I'm not going that far-just to the men's washroom down the corridor. Now shut up, please, and let me go-this is urgent."

He left and Jill obeyed his order to lock the door after him. Then she looked at the patient through the viewer and ran her eye over the dials. The elderly woman was again asleep and the displays showed her pulse strong and her breathing even and normal; Jill wondered why Dr. Garner considered a "death watch" necessary?

Then she remembered why she had come in there in the first place and decided that she might as well find out if the bed was in the far room without bothering Dr. Brush

about it. While it was not quite according to Dr. Brush's instructions, she would not be disturbing his patient-certainly she knew how to walk through a room without waking a sleeping patient!-and she had decided years ago that what doctors did not know rarely hurt them. She opened the door quietly and went in.

A quick glance assured her that Mrs. Bankerson was in the typical sleep of the senile. Walking noiselessly she went past her to the door to the sitting room. It was locked but her pass key let her in.

She was pleased to see that the powered bed was there. Then she saw that the room was occupied-sitting in an arm chair with a picture book in his lap was the Man from Mars.

Smith looked up and gave her the beaming smile of a delighted baby.

Jill felt dizzy, as if she had been jerked out of sleep. Jumbled ideas raced through her mind. Valentine Smith here? But he couldn't be; he had been transferred somewhere else; the log showed it. But he was here.

Then all the ugly implications and possibilities seemed to line themselves up . - - the fake "Man from Mars" on stereo ... the old woman out there, ready to die, but in the meantime covering the fact that there was another patient in here . . . the door that would not open to her pass-key-and, lastly, a horrid vision of the "meat wagon" wheeling out of here some night, with a sheet concealing the fact that it carried not one cadaver, but two.

When this last nightmare rushed through her mind, it carried in its train a cold wind of fear, the realization that she herself was in peril through having stumbled Onto this top-secret fact.

Smith got clumsily up from his chair, held out both hands while still smiling and said, "Water brother!"

"Hello. Uh ... how are you?"

"I am well. I am happy." He added something in a strange, choking speech, then corrected himself and said carefully, "You are here, my brother. You were away. Now you are here. I drink deep of you."

Jill felt herself helplessly split between two emotions, one that crushed and melted her heart-and an icy fear of being caught here. Smith did not seem to notice. Instead he said, "See? I walk! I grow strong." He demonstrated by taking a few steps back and forth, then stopped, triumphant, breathless, and smiling in front of her.

She forced herself to smile. "We are making progress, aren't we? You keep growing stronger, that's the spirit! But I must go now-I just stopped in to say hello."

His expression changed instantly to distress. "Do not go!"

"Oh, but I must!"

He continued to look woebegone, then added with tragic certainty, "I have hurted you. I did not know."

"Hurt me? Oh, no, not at all! But I must go-and quickly!"

His face was without expression. He stated rather than asked, "Take me with you, my brother."

"What? Oh, I can't. And I must go, at once. Look, don't tell anyone that I was in here, please!"

"Not tell that my water brother was here?"

"Yes. Don't tell anyone. Uh, I'll try to come back, I really will. You be a good boy and wait and don't tell anyone."

Smith digested this, looked serene. "I will wait. I will not tell."

"Good!" Jill wondered how the devil she possibly could get back in to see him-she certainly couldn't depend on Dr. Brush having another convenient case of trots. She realized now that the "broken" lock had not been broken and her eye swept around to the corridor door-and she saw why she had not been able to get in. A hand bolt had been screwed to the surface of the door, making a pass key useless. As was always the case with hospitals, bathroom doors and other doors that could be bolted were so arranged as to open also by pass key, so that patients irresponsible or unruly could not lock themselves away from the nurses. But here the locked door kept Smith in, and the addition of a simple hand bolt of the sort not permitted in hospitals served to keep out even those with pass keys.

Jill walked over and opened the bolt. "You wait. I'll come back."

"I shall waiting."

When she got back to the watch room she heard already knocking the Tock! Tocki Ti-toe/c tocki - . . Tock, tock! signal that Brush had said he would use; she hurried to let him in.

He burst in, saying savagely, "Where the hell were you, nurse? I knocked three times." He glanced suspiciously at the inner door.

"I saw your patient turn over in her sleep," she lied quickly. "I was in arranging her collar pillow."

"Damn it, I told you simply to sit at my desk!"

Jill knew suddenly that the man was even more frightened than she was-and with more reason. She counter-attacked. "Doctor, I did you a favor," she said coldly. "Your patient is not properly the responsibility of the floor supervisor in the first place. But since you entrusted her to me, I had to do what seemed necessary in your absence. Since you have questioned what I have done, let's get the wing superintendent and settle the matter."

"Huh? No, no-forget it."

"No, sir. I don't like to have my professional actions questioned without cause. As you know very well, a patient that old can smother in a water bed; I did what was necessary. Some nurses will take any blame from a doctor, but I am not one of them. So let's call the superintendent."

"What? Look, Miss Boardman, I'm sorry I said anything. I was upset and I popped off without thinking. I apologize."

"Very well, Doctor," Jill answered stiffly. "Is there anything more I can do for you?"

"Uh? No, thank you. Thanks for standing by for me. Just ... well, be sure not to mention it, will you?"

"I won't mention it." You can bet your sweet life I won't mention it, Jill added silently. But what do I do now? Oh, I wish Ben were in town! She got back to her duty desk, nodded to her assistant, and pretended to look over some papers. Finally she remembered to phone for the powered bed she had been after in the first place. Then she sent her assistant to look at the patient who needed the bed (now temporarily resting in the ordinary type) and tried to think.

Where was Ben? If he were only in touch, she would take ten minutes relief, call him, and shift the worry onto his broad shoulders. But Ben, damn him, was oft' skyoodling somewhere and letting her carry the ball.

Or was he? A fretful suspicion that had been burrowing around in her subconscious all day finally surfaced and looked her in the eye, and this time she returned the stare: Ben Caxton would not have left town without letting her know the outcome of his attempt to see the Man from Mars. As a fellow conspirator it was her right to receive a report and Ben always played fair . . . always.

She could hear sounding in her head something he had said on the ride back from Hagerstown: "-if anything goes wrong, you are my ace in the hole . . . honey. ~f you don't hear from me, you are on your own,"

She had not thought seriously about it at the time, as she had not really believed that anything could happen to Ben. Now she thought about it for a long time, while trying to continue her duties. There comes a time in the life of every human when he or she must decide to risk "his life, his fortune, and his sacred honor" on an outcome dubious. Those who fail the challenge are merely overgrown children, can never be anything else. Jill Boardman encountered her personal challenge-and accepted it-at 3:47 that afternoon while convincing a ward visitor that he simply could not bring a dog onto the floor even though he had managed to slip it past the receptionist and even if the sight of this dog was just what the patient needed.

The Man from Mars sat down again when Jill left. He did not pick up the picture book they had given him but simply waited in a fashion which may be described as "patient" only because human language does not embrace Martian emotions nor attitudes. He merely held still with quiet happiness because his brother had said that he would return. He was prepared to wait, without doing anything, without moving, for several years if necessary.

He had no clear idea how long it had been since he had first shared water with this brother; not only was this place curiously distorted in time and shape, with sequences of sights and sounds and experiences new to him and not yet grokked, but also the culture of his nest took a different grasp of time from that which is human. The difference lay not in their much longer lifetimes as counted in Earth years, but in a basically different attitude. The sentence, "It is later than you think," could not have been expressed in Martian-nor could "Haste makes waste," though for a different reason: the first notion was inconceivable while the latter was an unexpressed Martian basic, as unnecessary as telling a fish to bathe. But the quotation, "As it was in the Beginning, is now and ever shall be," was so Martian in mood that it could be translated more easily than "two plus two makes four"-which was not a truism on Mars.

Smith waited.

Brush came in and looked at him; Smith did not move and Brush went away.

When Smith heard a key in the Outer door, he recalled that this sound had been one that he had heard somewhat before the last visit of his water brother, so he shifted his metabolism in preparation, in case the sequence occurred again. He was astonished when the door opened and Jill slipped in, as he had not been aware that the outer door was a door. But he grokked it at once and gave himself over to the joyful fullness which comes

only in the presence of one's own nestlings, one's chosen water brothers, and (under certain circumstances) in the presence of the Old Ones.

His joy was somewhat sullied by immediate awareness that his brother did not fully share it . . - in truth, he seemed more distressed than was possible save in one about to discorporate because of some shameful lack or failure.

But Smith had already learned that these creatures, so much like himself in some ways, could endure emotions dreadful to contemplate and still not die. His Brother Mahmoud underwent a spiritual agony five times daily and not only did not die but had urged the agony on him as a needful thing. His Brother Captain van Tromp suffered terrifying spasms unpredictably, any one of which should have, by Smith's standards, produced immediate discorporation to end the conflict-yet that brother was still corporate so far as he knew.

So he ignored Jill's agitation.

Jill handed him a bundle. "Here, put these on. Hurry!"

Smith accepted the bundle and stood waiting. Jill looked at him and said, "Oh, dear! All right, get your clothes off. I'll help you."

She was forced to do more than help; she had to undress and dress him. He had been wearing a hospital gown, a bathrobe, and slippers, not because he wanted them but because he had been told to wear them. He could handle them himself by now, but not fast enough to Suit Jill; she skinned him quickly. She being a nurse and he never having heard of the modesty taboo-nor would he have grasped an explanation-they were not slowed up by irrelevancies; the difficulties were purely mechanical. He was delighted and surprised by the long false skins Jill drew over his legs, but she gave him no time to cherish them, but taped the women's stockings to his thighs in lieu of a garter belt. The nurse's uniform she dressed him in was not her own, but one that she had borrowed from a larger woman on the excuse that a cousin of hers needed one for a masquerade party. Jill hooked a nurse's cape around his neck and reflected that its all-enclosing straight drape covered most of the primary and secondary sex characteristics-at least she hoped that it would. The shoes were more difficult, as they did not fit well and Smith still found standing and walking in this gravity field an effort even barefooted.

But at last she got him covered and pinned a nurse's cap on his head. "Your hair isn't very long," she said anxiously, "but it is practically as long as a lot of the girls wear it and it will have to do." Smith did not answer as he had not understood much of the remark. He tried to think his hair longer but realized that it would take time.

"Now," said Jill. "Listen carefully. No matter what happens, don't say a word. I'll do all the talking. Do you understand me?"

"Don't talk. I will not talk."

"Just come with me-I'll hold your hand. And don't say a word. But if you know any prayers, pray!"

"Pray?"

"Never mind. You just come along and don't talk." She opened the quick glance outside, then took his hand and led him out into the corridor.

No one seemed especially interested. Smith found the many strange configurations upsetting in the extreme; he was assaulted by images he could not bring into focus. He stumbled blindly along beside Jill, with his eyes and senses almost disconnected to protect himself against chaos.

She led him to the end of the corridor and stepped on a slide-away leading crosswise. He almost fell down and would have done so if Jill had not caught him. A chambermaid looked curiously at them and Jill cursed under her breath-then was very careful in helping him off. They took an elevator to the roof, Jill being quite sure that she could never pilot him up a bounce tube.

On the roof they encountered a major crisis, though Smith was not aware of it. He was undergoing the keen delight of seeing sky; he had not seen sky since the sky of Mars. This sky was bright and colorful and joyful -it being a typical overcast Washington grey day. In the meantime Jill was looking around helplessly for a taxi. The roof was almost deserted, something she had counted on, since most of the nurses who came off duty when she did were already headed home fifteen minutes ago and the afternoon visitors were gone. But the taxis were, of course, gone too. She did not dare risk an air bus, even though one which went her way would be along in a few minutes.

She was about to call a taxi when one headed in for a landing. She called to the roof attendant. "Jack! Is that cab taken? I need one."

"It's probably the one I called for Dr. Phipps."

"Oh, dear! Jack, see how quick you can get me another one, will you? This is my cousin Madge-she works over in South Wing-and she has a terrible laryngitis and I want to get her out of this wind."

The attendant looked dubiously toward the phone in his booth and scratched his head. "Well ... seeing it's you, Miss Boardman, I'll let you take this one and call another one for Dr. Phipps. How's that?"

"Oh, Jack, you're a lamb! No, Madge, don't try to talk; I'll thank him. Her voice is gone completely; I'm going to take her home and bake it out with hot rum."

"That ought to do it. Old-fashioned remedies are always best, my mother used to say." He reached into the cab and punched the combination for Jill's home from memory, then helped them in. Jill managed to get in the way and thereby cover up Smith's unfamiliarity with this common ceremonial. "Thanks, Jack. Thanks loads."

The cab took off and Jill took her first deep breath. "You can talk

"What should I say?"

"Huh? Nothing. Anything. Whatever you like."

Smith thought this over. The scope of the invitation obviously called for a worthy answer, suitable to brothers. He thought of several, discarded them because he did not know how to translate them, then settled on one which he thought he could translate fairly well but which nevertheless conveyed even in this strange, flat speech some of the warm growing-closer brothers should enjoy. "Let our eggs share the same nest."

Jill looked startled. "Huh? What did you say?"

Smith felt distressed at the failure to respond in kind and interpreted it as failure on his own part. He realized miserably that, time after time, he had managed to bring agitation to these other creatures when his purpose had been to create oneness. He tried again, rearranging his sparse vocabulary to enfold the thought somewhat differently. "My nest is yours and your nest is mine."

This time Jill managed to smile. "Why, how sweet! My dear, I am not sure that I understand you, but if I do, that is the nicest offer I have had in a long time." She added, "But right now we are up to our ears in trouble- so let's wait a while, shall we?"

Smith had understood Jill hardly more than Jill had understood him, but he caught his water brother's pleased mood and understood the suggestion to wait. Waiting was something he did without effort, so he sat back, satisfied that all was well between himself and his brother, and enjoyed the scenery. It was the first time he had seen this place from the air and on every side there was a richness of new things to try to grok. It occurred to him that the apportation used at home did not permit this delightful viewing of what lay between. This thought almost led him to a comparison of Martian and human methods not favorable to the Old Ones, but his mind automatically shied away from heresy.

Jill kept quiet, too, and tried to get her thoughts straight. Suddenly she realized that the cab was heading down the final traffic leg toward the apartment house where she lived-and she realized just as quickly that home was the last place for her to go, it being the first place they would look once they figured out how Smith had escaped and who had helped him. She did not kid herself that she had covered her tracks. While she knew nothing of police methods, she supposed that she must have left fingerprints in Smith's room, not to mention the people who had seen them walk out. It was even possible (so she had heard) for a technician to read the tape in this cab's pilot and tell exactly what trips it had made that day and where and when.

She reached forward, slapped the order keys, and cleared the instruction to go to her apartment house. She did not know whether that would wipe the tape or not-but she was not going to head for a place where the police might already be waiting.

The cab checked its forward motion, rose out of the traffic lane and hovered. Where could she go? Where in all this swarming city could she hide a grown man who was half idiot and could not even dress himself?-a man who was the most sought-after person on the globe? Oh, if Ben were only here! Ben - - - where are you?

She reached forward again, picked up the phone and rather hopelessly punched Ben's number, expecting to hear the detached voice of an automation inviting her to record a message. Her spirits jumped when a man's voice answered . - . then slumped again when she realized that it was not Ben but his majordomo, Osbert Kilgallen. "Oh. Sorry, Mr. Kilgallen. This is Jill Boardman. I thought I had called Mr. Caxton's home."

"You did. But I always have his home calls relayed to the office when he is away more than twenty-four hours."

"Then he is still away?"

"I'm afraid so. Is there anything I can do for you?"

"Uh, no. Look, Mr. Kilgallen, isn't it strange that Ben should just drop out of sight? Aren't you worried about him?"

"Eh? Why should I be? His message said that he did not know how long he would be away."

"Isn't that rather odd in itself?"

"Not in Mr. Caxton's work, Miss Boardman."

"Well ... I think there is something very odd about his being away this time! I think you ought to report it. You ought to spread it over every news service in the country-in the world!"

Even though the cab's phone had no vision circuit Jill felt Osbert Kilgallen draw himself up. "I'm afraid, Miss Boardman, that I will have to interpret my employer's instructions myself. Uh - - . if you don't mind my saying so, there is always some . . 'good friend' phoning Mr. Caxton frantically every time he leaves town."

Some babe trying to get a hammer lock on him, Jill interpreted angrily-and this Osbert character thinks I'm the current one. It put out of her mind the half-formed thought of asking Kilgallen for help; she switched off as quickly as possible.

But where could she go? The obvious solution popped into her mind. If Ben was missing-and the authorities had a hand in it-the last place they would be likely to look for Valentine Smith would be Ben's apartment. Unless, she corrected, they connected her with Ben, which she did not think that they did.

They could dig a bite to eat out of Ben's buttery-she wouldn't risk ordering anything from the basement; they might know he was away. And she could borrow some of Ben's clothes for her idiot child. The last point settled it; she set the combination for Ben's apartment house. The cab picked out the new lane and dropped into it.

Once outside the door to Ben's fiat Jill put her face to the hush box by the door and said emphatically, "Karthago delenda est!"

Nothing happened. Oh damn him! she said frantically to herself; he's changed the combo. She stood there for a moment, knees weak, and kept her face away from Smith. Then she again spoke into the hush box. It was a Raytheon lock, the same voice circuit actuated the door or announced callers. She announced herself on the forlorn chance that Ben might have returned. "Ben, this is Jill."

The door slid open.

They went inside and the door closed. Jill thought for an instant that Ben had let them in, then she realized that she had accidentally hit on his new door combination . . . intended, she guessed, as a gracious compliment combined with a wolf tactic. She felt that she could have dispensed with the compliment to have avoided the awful panic she had felt when the door had refused to open.

Smith stood quietly at the edge of the thick green lawn and looked at the room. It again was a place so new to him as not to be grokked at once, but he felt immediately pleased with it. It was less exciting than the moving place they had just been in, but in many ways more suited for enfolding together the self. He looked with interest at the view window at one end but did not recognize it as a window, mistaking it for a living picture like those he had been used to at home-the suite he had been in at Bethesda contained no windows, it being in one of the newer wings, and thus far he had never acquired the idea of "window."

He noticed with approval that the simulation of depth and movement in the "picture" was perfect-some very great artist among these people must have created it. Up until this time he had seen nothing to cause him to think that these people possessed art; his grokldng of them was increased by this new experience and he felt warmed.

A movement caught his eye; he turned to find his brother removing the false skins as well as the slippers from its legs.

Jill sighed and wiggled her toes in the grass. "Gosh, how my feet do hurt!" She glanced up and saw Smith watching her with that curiously disturbing baby-faced stare. "Do it yourself if you want to. You'll love it."

He blinked. "How do?"

"I keep forgetting. Come here, I'll help you." She got his shoes off, untaped the stockings and peeled them off. "There, doesn't that feel good?"

Smith wiggled his toes in the cool grass, then said timidly, "But these live?"

"Sure, they're alive. It's real live grass. Ben paid a lot to have it that way. Why, the special lighting circuits alone cost more than I make in a month. So walk around and let your feet enjoy it."

Smith missed much of the speech but he did understand that the grass was made up of living beings and that he was being invited to walk on them. "Walk on living things?" he asked with incredulous horror.

"Huh? Why not? It doesn't hurt this grass; it was specially developed for house rugs."

Smith was forced to remind himself that a water brother could not lead him into wrongful action. Apprehensively he let himself be encouraged to walk around-and found that he did enjoy it and that the living creatures did not protest. He set his sensitivity for such things as high as possible; his brother was right, this was their proper being-to be walked on. He resolved to enfold it and praise it; the effort was much like that of a human trying to appreciate the merits of cannibalism-a custom which Smith found perfectly proper.

Jill let out a sigh. "Well, I had better stop playing. I don't know how long we will be safe here."

"Safe?"

"We can't stay here, not very long. They may be checking on every conveyance that left the Center this very minute." She frowned and thought. Her place would not do, this place would not do-and Ben had intended to take him to Jubal Harshaw. But she did not know Harshaw; she was not even sure where he lived-somewhere in the Poconos, Ben had said. Well, she would just have to try to find out where he lived and call him. It was Hobson's choice; she had nowhere else to turn.

"Why are you not happy, my brother?"

Jill snapped out of her mood and looked at Smith. Why, the poor infant didn't even know anything was wrong! She made a real effort to look at it from his point of view. She failed, but she did grasp that he had no notion that they were running away from . . - from what? The cops? The hospital authorities? She was not sure quite what she had done, or what laws she had broken; she simply knew that she had pitted her own puny self against the combined will of the Big People, the Bosses, the ones who made decisions.

But how could she tell the Man from Mars what they were up against when she did not understand it herself? Did they have policemen on Mars? Half the time she found talking to him like shouting down a rain barrel.

Heavens, did they even have rain barrels on Mars? Or rain?

"Never you mind," she said soberly. "You just do what I tell you to do."

"Yes."

It was an unmodified, unlimited acceptance, an eternal yea. Jill suddenly had the feeling that Smith would unhesitatingly jump out the window if she told him to-in which belief she was correct; he would have jumped, enjoyed every scant second of the twenty-storey drop, and accepted without surprise or resentment the discorporation on impact. Nor would he have been unaware that such a fall would kill him; fear of death was an

idea utterly beyond him. If a water brother selected for him such a strange discorporation, he would cherish it and try to grok.

"Well, we can't stand here pampering our feet. I've got to feed us, I've got to get you into different clothes, and we've got to leave. Take those off." She left to check Ben's wardrobe.

She selected for him an inconspicuous travel suit, a beret, shirt, underclothes, and shoes, then returned. Smith was as snarled as a kitten in knitting; he had tried to obey but now had one arm prisoned by the nurse's uniform and his face wrapped in the skirt. He had not even removed the cape before trying to take off the dress.

Jill said, "Oh, dear!" and ran to help him.

She got him loose from the clothes, looked at them, then decided to stuff them down the oubliette . . . she could pay Etta Schere for the loss of them later and she did not want cops finding them here-just in case. "But you are going to have to have a bath, my good man, before I dress you in Ben's clean clothes. They've been neglecting you. Come along." Being a nurse, she was inured to bad odors, but (being a nurse) she was fanatic about soap and water . . and it seemed to her that no one had bothered to bathe this patient recently. While Smith did not exactly stink, he did remind her of a horse on a hot day. Soap suds were indicated.

He watched her fill the tub with delight. There had been a tub in the bathroom of the suite he had been in but Smith had not known it was used to hold water; bed baths were all that he had had and not many of those; his trancelike withdrawals had interfered.

Jill tested the water's temperature. "All right, climb in."

Smith did not move. Instead he looked puzzled.

"Hurry!" Jill said sharply. "Get in the water."

The words she used were firmly parts of his human vocabulary and Smith did as she ordered, emotion shaking him. This brother wanted him to place his whole body in the water of life. No such honor had ever come to him; to the best of his knowledge and belief no one had ever before been offered such a holy privilege. Yet he had begun to understand that these others did have greater acquaintance with the stuff of life . . . a fact not yet grokked but which he had to accept.

He placed one trembling foot in the water, then the other . . . and slipped slowly down into the tub until the water covered him completely.

"Hey!" yelled Jill, and reached in and dragged his head and shoulders above water-then was shocked to find that she seemed to be handling a corpse. Good Lord! he couldn't drown, not in that time. But it frightened her and she shook him. "Smith! Wake up! Snap out of it."

Smith heard his brother call from far away and returned. His eyes ceased to be glazed, his heart speeded up and he resumed breathing. "Are you all right?" Jill demanded.

"I am all right. I am very happy ... my brother."

"You sure scared me. Look, don't get under the water again. Just sit up, the way you are now."

"Yes, my brother." Smith added several words in a curious croaking meaningless to Jill, cupped a handful of water as if it were precious jewels and raised it to his lips. His mouth touched it, then he offered the handful to Jill.

"Hey, don't drink your bath water! No, I don't want it, either."

"Not drink?"

His look of defenseless hurt was such that Jill again did not know what to do. She hesitated, then bent her head and barely touched her lips to the offering. "Thank you."

"May you never thirst!"

"I hope you are never thirsty, too. But that's enough. If you want a drink of water, I'll get you one. But don't drink any more of this water."

Smith seemed satisfied and sat quietly. By now Jill was convinced that he had never taken a tub bath before and did not know what was expected of him. She considered the problem. No doubt she could coach him but they were already losing precious time. Maybe she should have let him go dirty.

Oh, well! It was not as bad as tending a disturbed patient in an N.P. ward. She had already got her blouse wet almost to the shoulders in dragging Smith off the bottom; she took it off and hung it up. She had been dressed for the street when she had crushed Smith out of the Center and was wearing a little, pleated pediskirt that floated around her knees. Her jacket she had dropped in the living room. She glanced down at the skirt. Although the pleats were guaranteed permanized, it was silly to get it wet. She shrugged and zipped it off; it left her in brassiere and panties.

Jill looked at Smith. He was staring at her with the innocent, interested eyes of a baby. She found herself blushing, which surprised her, as she had not known that she could. She believed herself to be free of morbid modesty and had no objection to nudity at proper times and places-she recalled suddenly that she had gone on her first bareskin swimming party at fifteen. But this childlike stare from a grown man bothered her; she decided to put up with clammily wet underwear rather than do the obvious, logical thing.

She covered her discomposure with heartiness. "Let's get busy now and scrub the hide." She dropped to her knees beside the tub, sprayed soap on him, and started working it into a lather.

Presently Smith reached out and touched her right mammary gland. Jill drew back hastily, almost dropping the sprayer. "Hey! None of that stuff!"

He looked as if she had slapped him. "Not?" he said tragically.

"'Not,'" she agreed firmly. She looked at his face and added softly. "It's all right. Just don't distract me with things like that when I'm busy."

He took no more inadvertent liberties and Jill cut the bath short, letting the water drain and having him stand up while she showered the soap off him. Then she dressed with a feeling of relief while the blast dried him. The warm air startled him at first and he began to tremble, but she told him not to be afraid and had him hold onto the grab rail back of the tub while he dried and she dressed.

She helped him out of the tub. "There, you smell a lot better and I'll bet you feel better."

"Feel fine."

"Good. Let's get some clothes on you." She led him into Ben's bedroom where she had left the clothes she had selected. But before she could even explain, demonstrate, or assist in getting shorts on him, she was shocked almost out of the shoes she had not yet put back on.

"OPEN UP IN THERE!"

Jill dropped the shorts. She was frightened nearly Out of her senses, feeling the same panic she felt when a patient's respiration stopped and blood pressure dropped in

the middle of surgery. But the discipline she had learned in operating theater came to her aid. Did they actually know anyone was inside? Yes, they must know-else they would never have come here. That damned robo-cab must have given her away.

Well, should she answer? Or play 'possum?

The shout over the announcing circuit was repeated. She whispered to Smith, "Stay here!" then went into the living room. "Who is it?" she called out, striving to keep her voice normal.

"Open in the name of the law!"

"Open in the name of what law? Don't be silly. Tell me who you are and what you want before I call the police."

"We are the police. Are you Gillian Boardman?"

"Me? Of course not. I'm Phyllis O'Toole and I'm waiting for Mr. Caxton to come home. Now you had better go away, because I'm going to call the police and report an invasion of privacy."

"Miss Boardman, we have a warrant for your arrest. Open up at once or it will go hard with you."

"I'm not your 'Miss Boardman' and I'm calling the policel"

The voice did not answer. Jill waited, swallowing. Shortly she felt radiant heat against her face. A small area around the door's lock began to glow red, then white; something crunched and the door slid open. Two men were there; one of them stepped in, grinned at Jill and said, "That's the babe, all right. Johnson, look around and find him."

"Okay, Mr. Berquist."

Jill tried to make a road block of herself. The man called Johnson, twice her mass, put a hand on her shoulder, brushed her aside and went on back toward the bedroom. Jill said shrilly, "Where's your warrant? Let's see your credentials-this is an outrage!"

Berquist said soothingly, "Don't be difficult, sweetheart. We don't really want you; we just want him. Behave yourself and they might go easy on you."

She kicked at his shin. He stepped back nimbly, which was just as well, as Jill was still barefooted. "Naughty, naughty," he chided. "Johnson! You find him?"

"He's here, Mr. Berquist. And naked as an oyster. Three guesses what they were up to."

"Never mind that. Bring him here."

Johnson reappeared, shoving Smith ahead of him, controlling him by twisting one arm behind his back. "He didn't want to come."

"He'll come, he'll come!"

Jill ducked past Berquist, threw herself at Johnson. With his free hand he slapped her aside. "None of that, you little slut!"

Johnson should not have slapped her. He had not hit her hard, not even as hard as he used to hit his wife before she went home to her parents, and not nearly as hard as he had often hit prisoners who were reluctant to talk. Up to this time Smith had shown no expression at all and had said nothing; he had simply let himself be forced into the room with the passive, futile resistance of a puppy who does not want to be walked on a leash. But he had understood nothing of what was happening and had tried to do nothing at all.

When he saw his water brother struck by this other, he twisted and ducked, got free-and reached in an odd fashion for Johnson.

Johnson was not there any longer.

He was not anywhere. The room did not contain him. Only blades of grass, straightening up where his big feet had been, showed that he had ever been there. Jill stared through the space he had occupied and felt that she might faint.

Berquist closed his mouth, opened it again, said hoarsely, "What did you do with him?" He looked at Jill rather than Smith.

"Me? I didn't do anything."

"Don't give me that. What's the trick? You got a trap door or something?"

"Where did he go?"

Berquist licked his lips. "I don't know." He took a gun from under his coat. 'But don't try any of your tricks with me. You stay here-I'm taking him along."

Smith had relapsed into his attitude of passive waiting. Not understanding what it was all about, he had done only the minimum he had to do. But guns he had seen before, in the hands of men on Mars, and the expression on Jill's face at having one aimed at her he did not like. He grokked that this was one of the critical cusps in the growth of a being wherein contemplation must bring forth right action in order to permit further growth. He acted.

The Old Ones taught him well. He stepped toward Berquist; the gun swung to cover him. Nevertheless he reached out-and Berquist was no longer there. Smith turned to look at his brother.

Jill put a hand to her mouth and screamed.

Smith's face had been completely blank. Now it became tragically forlorn as he realized that he must have chosen wrong action at the cusp. He looked imploringly at Jill and began to tremble. His eyes rolled up; he slipped slowly down to the grass, pulled himself tightly into a foetal ball and was motionless.

Jill's own hysteria cut off as if she had thrown a switch. The change was an indoctrinated reflex: here was a patient who needed her; she had no time for her own emotions, no time even to worry or wonder about the two men who had disappeared. She dropped to her knees and examined Smith.

She could not detect respiration, nor could she find a pulse; she pressed an ear against his ribs. She thought at first that heart action had stopped completely, but, after a long time, she heard a lazy tub-dub, followed in four or five seconds by another.

The condition reminded her of schizoid withdrawal, but she had never seen a trance so deep, not even in class demonstrations of hypnoanesthesia. She had heard of such deathlike states among East Indian fakirs but she had never really believed the reports.

Ordinarily she would not have tried to rouse a patient in such a state but would have sent for a doctor at once. But these were not ordinary circumstances. Far from shaking her resolve, the events of the past few minutes had made her more determined than ever not to let Smith fall back into the hands of the authorities. But ten minutes of trying everything she knew convinced her that she could not rouse this patient with means at hand without injuring him-and perhaps not even then. Even the sensitive, exposed nerve in the elbow gave no response.

In Ben's bedroom she found a battered flight case, almost too big to be considered hand luggage, too small to be a trunk. She opened it, found it packed with voicewriter, toilet kit, a complete outfit of male clothing, and everything else that a busy reporter might need if called out of town suddenly-even to a licensed audio link to permit him to

patch into phone service wherever he might be. Jill reflected that the presence of this packed bag alone tended strongly to prove that Ben's absence was not what Kilgallen thought it was, but she wasted no time thinking about it; she simply emptied the bag and dragged it into the living room.

Smith outweighed her, but muscles acquired handling patients twice her size enabled her to dump him into the big bag. Then she had to refold him somewhat to allow her to close it. His muscles resisted force, but under gentle pressure steadily applied he could be repositioned like putty. She padded the corners with some of Ben's clothes before she closed him up. She tried to punch some air holes but the bag was a glass laminate, tough as an absentee landlord's heart. She decided that he could not suffocate quickly with his respiration so minimal and his metabolic rate down as low as it must be.

She could barely lift the packed bag, straining as hard as she could with both hands, and she could not possibly carry it any distance. But the bag was equipped with "Red Cap" casters. They cut two ugly scars in Ben's grass rug before she got it to the smooth parquet of the little entrance way.

She did not go to the lobby on the roof, since another air cab was the last thing she wanted to risk, but went out instead by the service door in the basement. There was no one there but a young man who was checking an incoming kitchen delivery. He moved slowly aside and let her roll the bag out onto the pavement. "Hi, sister. What you got in the kiester?"

"A body," she snapped.

He shrugged. "Ask a jerky question, get a jerky answer. I should learn."

PART TWO : HIS PREPOSTEROUS HERITAGE IX

THE THIRD PLANET OUT from Sol was in its normal condition. It had on it 230,000 more human souls today than yesterday, but, among the five billion terrestrials such a minute increase was not noticeable. The Kingdom of South Africa, Federation associate member, had again been cited before the High Court for persecution of its white minority. The lords of women's fashions, gathered in solemn conclave in Rio, had decreed that hem lines would go down and that navels would again be covered. The three Federation defense stations swung silently in the sky, promising instant death to any who disturbed the planet's peace. Commercial space stations swung not so silently, disturbing the planet's peace with endless clamor of the virtues of endless trademarked trade goods. Half a million more mobile homes had set down on the shores of Hudson Bay than had migrated by the same date last year, the Chinese rice belt had been declared an emergency malnutrition area by the Federation Assembly, and Cynthia Duchess, known as the Richest Girl in the World, had dismissed and paid off her sixth husband. All was normal.

The Reverend Doctor Daniel Digby, Supreme Bishop of the Church of the New Revelation (Fosterite) had announced that he had nominated the Angel Azreel to guide Federation Senator Thomas Boone and that he expected Heavenly confirmation of his choice some time today; all the news services carried the announcement as straight news, the Fosterites having wrecked too many newspaper offices in the past. Mr. and Mrs. Harrison Campbell VI had a son and heir by host-mother at Cincinnati Children's

Hospital while the happy parents were vacationing in Peru. Dr. Horace Quackenbush, Professor of Leisure Arts at Yale Divinity School, issued a stirring call for a return to faith and a cultivation of spiritual values; there was a betting scandal involving half the permanent professionals of the West Point football squad and its line coach; three bacterial warfare chemists were suspended at Toronto for presumption of emotional instability-all three announced that they would carry their cases, if necessary, to the Federation High Court. The High Court upset a ruling of the Supreme Court of the United States in re eligibility to vote in primaries involving Federation Assemblymen in the case of Reinsberg vs. the State of Missouri.

His Excellency, the Most Honorable Joseph E. Douglas, Secretary General of the World Federation of Free States, picked at his breakfast omelet and wondered peevishly why a man could not get a decent cup of coffee these days. In front of him his morning newspaper, prepared by the night shift of his information staff, moved past his eyes at his optimum reading speed in a feedback executive scanner, custom-built by Sperry. The words would flow on as long as he looked in that direction; if he turned his head, the machine would note it and stop instantly.

He was looking that way now and the projected print moved along the screen, but he was not really reading but simply avoiding the eyes of his boss across the table. Mrs. Douglas did not read newspapers; she had other ways of finding Out what she needed to know.

"Joseph-"

He looked up and the machine stopped. "Yes, my dear?"

"You have something on your mind"

"Eh? What makes you say that, my dear?"

"Joseph, I haven't watched you and coddled you and darned your socks and kept you Out of trouble for thirty-five years for nothing. I know when there is something on your mind."

The hell of it is, he admitted to himself, she does know. He looked at her and wondered why he had ever let her bully him into no-termination contract. Originally she had been only his secretary, back in the days (he thought of them as "The Good Old Days") when he had been a state legislator, beating the bushes for individual votes. Their first contract had been a simple ninety-day cohabitation agreement, supposedly to economize scarce campaign funds by saving on hotel bills; both of them had agreed that it was merely a convenience, with "cohabitation" to be construed simply as living under one roof . . . and she hadn't darned his socks even then!

He tried to remember how and when the situation had changed. Mrs. Douglas's official biography, Shadow of Greatness: One Woman's Story, stated that he had proposed to her during the counting of ballots in his first election to office-and that such was his romantic need that nothing would do but old-fashioned, death-do-us-part marriage.

Well, he didn't remember it that way-but there was no use arguing with the official version.

"Joseph! Answer me!"

"Eh? Nothing at all, my dear. I spent a restless night."

"I know you did. When they wake you up in the middle of the night, don't you think I know it?"

He reflected that her suite was a good fifty yards across the palace from his. "How do you know it, my dear?"

"Hunh? Woman's intuition, of course. What was the message Bradley brought you?"

"Please, my dear-I've got to finish the morning news before the Council meeting."

"Joseph Edgerton Douglas, don't try to evade me."

He sighed. "The fact is, we've lost sight of that beggar Smith."

"Smith? Do you mean the Man from Mars? What do you mean: '-lost sight of-?' That's ridiculous."

"Be that as it may, my dear, he's gone. He disappeared from his hospital room sometime late yesterday."

"Preposterous! How could he do that?"

"Disguised as a nurse, apparently. We aren't sure."

"But- Never mind. He's gone, that's the main thing. What muddleheaded scheme are you using to get him back?"

"Well, we have some of our own people searching for him. Trusted ones, of course. Berquist-"

"Berquist! That garbage head! When you should have every police officer from the FDS down to precinct truant officers searching for him you send Berquist!"

"But, my dear, you don't see the situation. We can 't. Officially he isn't lost at all. You see there's--well, the other chap. The, uh, 'official' Man from Mars,"

"Oh ..." She drummed the table. "I told you that substitution scheme would get us in trouble."

"But, my dear, you suggested it yourself."

"I did not. And don't contradict me, Mmm ... send for Berquist. I must talk to him at once."

"Uh, Berquist is out on his trail. He hasn't reported back yet."

"Uh? Berquist is probably half way to Zanzibar by now. He's sold us out, I never did trust that man. I told you when you hired him that-"

"When I hired him?"

"Don't interrupt. -that any man who would take money two ways would take it three ways just as quickly." She frowned. "Joseph, the Eastern Coalition Is behind this. It's a logical certainty. You can expect a vote-of-confidence move in the Assembly before the day is out."

"Eli? I don't see why. Nobody knows about it."

"Oh, for Heaven's sake! Everyone will know about it; the Eastern Coalition will see to that. Now keep quiet and let me think." Douglas shut up and went back to his newspaper. He read that the Los Angeles City-County Council had voted to petition the Federation for aid in their smog problems on the grounds the Ministry of Health had failed to provide something or other, it did not matter what_-but a sop must be thrown to them as Charlie was going to have a difficult time being re-elected with the Fosterites running their own candidate-he needed Charlie. Lunar Enterprises was off two points at closing, probably, he decided, because of- "Joseph."

"Yes, my dear?"

"Our own 'Man from Mars' is the one and only; the one the Eastern Coalition will pop up with is a fake. That is how it must be."

"But, my dear, we can't make it stick."

"What do you mean, we can't? We're stuck with it, so we've got to make it stick."

"But we can 't. Scientists would spot the substitution at once. I've had the devil's own time keeping them away from him this long."

"Scientists!"

"But they can, you know."

"I don't know anything of the sort. Scientists indeed! Half guess work and half sheet superStit~0fl. They ought to be locked up; they ought to be prohibited by law. Joseph, I've told you repeatedly the only true science is astrology."

"Well, I don't know, my dear. Mind you, I'm not running down astrology-"

"You'd better not! After all it's done for you."

"-but I am saying that some of these science professors are pretty sharp. One of them was telling me the other day that there is a star that weighs six thousand times as much as lead. Or was it sixty thousand? Let me see-"

"Bosh! How could they possibly know a thing like that? Keep quiet, Joseph, while I finish this. We admit nothing. Their man is a fake. But in the meantime we make full use of our Special Service squads and grab him back, if possible~ before the Eastern Coalition makes its disclosure. If it is necessary to use strong measures and this Smith person gets shot resisting arrest, or something like that, well, it's too bad, but I for one won't mourn very long. He's been a nuisance all along."

"Agnes! Do you know what you are suggesting?"

"I'm not suggesting anything. People get hurt every day. This matter must be cleared up, Joseph, for everybody. The greatest good of the greatest number, as you are so fond of quoting."

"But I don't want to see the lad hurt."

"Who said anything about hurting him? But you must take firm steps, Joseph; it's your duty. History will justify you. Which is more important? -to keep things running on an even keel for five billion people, or to go soft and sentimental about one man who isn't even properly a citizen?"

Douglas didn't answer. Mrs. Douglas stood up. "Well, I can't waste the rest of the morning arguing intangibles with you, Joseph; I've got to get hold of Madame Vesant at once and have a new horoscope cast for this emergency. But I can tell you this: I didn't give the best years of my life putting you where you are today just to have you throw it away through lack of backbone. Wipe the egg off your chin." She turned and left.

The chief executive of the planet remained at the table through two more cups of coffee before he felt up to going to the Council Chamber. Poor old Agnes! So ambitious. He guessed he had been quite a disappointment to her . . . and no doubt the change of life wasn't making things any easier for her. Well, at least she was loyal, right to her toes . . . and we all have our 5hortcomingS; she was probably as sick of him as he-no point in that!

He straightened up. One damn sure thing! He wasn't going to let them he rough with that Smith lad. He was a nuisance, granted~ but he was a nice lad and rather appealing in a helpless, half-witted way. Agnes should have seen how easily he was frightened, then she wouldn't talk that way. Smith would appeal to the maternal in her.

But as a matter of strict fact, did Agnes have any "maternal" in her? When she set her mouth that way, it was hard to see it. Oh shucks, all women had maternal instincts; science had proved that. Well, hadn't they?

Anyhow, damn her guts, he wasn't going to let her push him around. She kept reminding him that she had put him into the top spot, but he knew better, and the responsibility was his and his alone. He got up, squared his shoulders, pulled in part of his middle, and went to the Council Chamber.

All during the long session he kept expecting someone to drop the other shoe. But no one did and no aide came in with any message for him. He was forced to conclude that the fact that Smith was missing actually was close held in his own personal staff unlikely as that seemed.

The Secretary General wanted very badly to close his eyes and hope that the whole horrid mess would go away, but events would not let him. Nor would his wife let him.

Agnes Douglas' personal saint, by choice, was Evita Peron, whom she fancied she resembled. Her own persona, the mask that she held out to the world, was that of helper and satellite to the great man she was privileged to call husband. She even held this mask up to herself, for she had the Red Queen's convenient ability to believe anything she wished to believe. Nevertheless, her own political philosophy could have been stated baldly (which it never was) as a belief that men should rule the world and women should rule men.

That all of her beliefs and actions derived from a blind anger at a fate that had made her female never crossed her mind . . . still less could she have believed that there was any connection between her behavior and her father's wish for a son . . or her own jealousy of her mother. Such evil thoughts never entered her head. She loved her parents and had fresh flowers put on their graves on all appropriate occasions; she loved her husband and often said so publicly; she was proud of her womanhood and said so publicly almost as often-P--she frequently joined the two assertions.

Agnes Douglas did not wait for her husband to act in the case of the missing Man from Mars. All of her husband's personal staff took orders as readily from her as from him . . . in some cases, even more readily. She sent for the chief executive assistant for civil information, as Mr. Douglas's press agent was called, then turned her attention to the most urgent emergency measure, that of getting a fresh horoscope cast. There was a private, scrambled link from her suite in the Palace to Madame Vesant's studio; the astrologer's plump, bland features and shrewd eyes came on the screen almost at once. "Agnes? What is it, dear? I have a client with me."

"Your circuit is hushed?"

"Of course."

"Get rid of the client at once. This is an emergency."

Madame Alexandra Vesant bit her lip, but her expression did not change otherwise and her voice showed no annoyance. "Certainly. Just a moment." Her features, faded out of the screen, were replaced by the "Hold" signal. A man entered the room, stood waiting by the side of Mrs. Douglas' desk; she turned and saw that it was James Sanforth, the press agent she had sent for.

"Have you heard from Berquist?" she demanded without preamble.

"Eh? I wasn't handling that; that's McCrary's pidgin."

She brushed the irrelevancy aside. "You've got to discredit him before he talks."

"Huh? You think Berquist has sold us out?"

"Don't be naive. You should have checked with me before you used him."

"But I didn't. It was McCrary's job."

"You are supposed to know what is going on. I-" Madame Vesant's face came back on the screen. "Sit down over there," Mrs. Douglas said to Sanforth. "Wait." She turned back to the screen. "Allie dear, I want fresh horoscopes for Joseph and myself, just as quickly as you possibly can cast them."

"Very well." The astrologer hesitated. "I can be of much greater assistance to you, dear, if you will tell me something of the nature of the emergency."

Mrs. Douglas drummed on the desk. "You don't actually have to know, do you?"

"Of course not. Anyone possessing the necessary rigorous training, mathematical skill, and knowledge of the stars could calculate a horoscope, knowing nothing more than the exact hour and place of birth of the subject. You know that, dear. You could learn to do it yourself. . . if you weren't so terribly busy. But remember: the stars incline but they do not compel. You enjoy free will. If I am to make the extremely detailed and difficult analysis necessary to advise you in a crisis, I must know in what sector to look. Are we most concerned with the influence of Venus? Or possibly with Mars? Or will the-"

Mrs. Douglas decided. "With Mars," she interrupted. "Allie, I want you to cast a third horoscope."

"Very well. Whose?"

"Uh ... Allie, can I trust you?"

Madame Vesant looked hurt. "Agnes, if you do not trust me, it would be far better for you not to consult me. There are others who can give you scientific readings. I am not the only student of the ancient knowledge. I understand that Professor von Krausemeyer is well thought of, even though he is sometimes inclined to..." She let her voice trail oft

"Please, please! Of course I trust you! I wouldn't think of letting anyone else perform a calculation for me. Now listen carefully. No one can hear from your side?"

"Of course not, dear."

"I want you to cast a horoscope for Valentine Michael Smith."

"'Valentine Mich-' The Man from Mars?"

"Yes, yes. Allie, he's been kidnapped. We've got to find him."

Some two hours later Madame Alexandra Vesant pushed herself back from her work table and sighed. She had had her secretary cancel all appointments and she really had tried; several sheets of paper, covered with diagrams and figures, and a dog-eared nautical almanac were in front of her and testified to her efforts. Alexandra Vesant differed from some other practicing astrologers in that she really did attempt to calculate the "influences" of the heavenly bodies, using a paper-backed book titled The Arcane Science of Judicial Astrology and Key to Solomon's Stone which had been given to her by her late husband, Professor Simon Magus, the well known mentalist, stage hypnotist and illusionist, and student of the secret arts.

She trusted the book as she had trusted him; there was no one who could cast a horoscope like Simon, when he was sober-half the time he had not even needed to refer to the book, he knew it so well. She knew that she would never have that degree of skill, so she always referred to the almanac and to the manual. Her calculations were sometimes a little fuzzy, for the same reason that her checkbook sometimes did not

balance; Becky Vesey (as she had been known as a child) had never really mastered the multiplication tables and she was inclined to confuse sevens with nines.

Nevertheless her horoscopes were eminently satisfactory; Mrs. Douglas was not her only distinguished client.

But this time she had been a touch panicky when the wife of the Secretary General demanded that she cast a horoscope for the Man from Mars. She had felt the way she used to feel when some officious idiot from the audience committee had insisted on retying her blindfold just before the Professor was to ask her questions. But she had discovered 'way back then, as a mere child, that she had natural stage presence and inner talent for the right answer; she had suppressed her panic and gone on with the show.

Now she had demanded of Agnes the exact hour, date, and place of birth of the Man from Mars, being fairly sure that the data could not be supplied.

But the information had been supplied, and most precisely, after a short delay, from the log of the Envoy. By then she was no longer panicky, had simply accepted the information and promised to call back as soon as the horoscopes were ready.

But now, after two hours of painful arithmetic, although she had completed new findings for Mr. and Mrs. Douglas, she was no farther ahead with Smith than when she had started. The trouble was very simple-and insuperable. Smith had not been born on Earth.

Her astrological bible did not include the idea of human beings born anywhere else; its anonymous author had lived and died before even the first rocket to the Moon. She had tried very hard to find a logical way out of the dilemma, on the assumption that all the principles were included in her manual and that what she must do was to find a way to correct for the lateral displacement. But she found herself lost in a mass of unfamiliar relationships; when it came right down to it she was not even sure whether or not the signs of the Zodiac were the same when seen from Mars and what could one possibly do without the signs of the Zodiac?

She could just as easily have tried to extract a cube root, that being the hurdle that had caused her to quit school.

She got out from a bottom desk drawer a tonic she kept at hand for such difficult occasions. She took one dose quickly, measured out a second, and thought about what Simon would have done. After a while she could hear his even, steady tones: "Confidence, kiddo, confidence! Have confidence in yourself and the yokels will have confidence in you. You owe it to them."

She felt much better now and started writing out the results of the two horoscopes for the Douglases. That done, it turned out to be easy to write one for Smith, and she found, as she always did, that the words on paper proved themselves-they were all so beautifully true! She was just finishing as Agnes Douglas called again. "Allie? Haven't you finished yet?"

"Just completed," Madame Vesant answered with brisk self-confidence. "You realize, of course, that young Smith's horoscope presented an unusual and very difficult problem in the Science. Born, as he was, on another planet, every aspect and attitude had to be recalculated. The influence of the Sun is lessened; the influence of Diana is missing almost completely. Jupiter is thrown into a novel, perhaps I should say 'unique,' aspect, as I am sure you will see. This required computation of-"

"Allie! Never mind that. Do you know the answers?"

"Naturally."

"Oh, thank goodness! I thought perhaps you were trying to tell me that it was too much for you."

Madame Vesant showed and sincerely felt injured dignity. "My dear, the Science never alters; only the configurations alter. The means that predicted the exact instant and place of the birth of Christ, that told Julius Caesar the moment and method of his death . . . how could it fail now? Truth is Truth, unchanging."

"Yes, of course."

"Are you ready for the readings?"

"Let me switch on 'recording'-go ahead."

"Very well. Agnes, this is a most critical period in your life; only twice before have the heavens gathered in such strong configuration. Above all, you must be calm, not hasty, and think things through. On the whole the portents are in your favor . . . provided you do not fight them and avoid ill-considered action. Do not let your mind be distressed by surface appearances-" She went on at length, giving good advice. Becky Vesey always gave good advice and she gave it with great conviction because she always believed it. She had learned from Simon that, even when the stars seemed darkest, there was always some way to soften the blow, some aspect which the client could use toward greater happiness . . . if she would only find it and point it Out.

The tense face opposite her in the screen calmed and began nodding agreement as she made her points. "So you see," she concluded, "the mere temporary absence of young Smith at this time is not a bad thing, but a necessity, resulting from the joint influences of your three horoscopes. Do not worry and do not be afraid; he will be back-or you will hear from him-very shortly. The important thing is to take no drastic or irrevocable action until that time. Be calm."

"Yes, I see that."

"Just one more point. The aspect of Venus is most favorable and potentially dominant over that of Mars. In this case, Venus symbolizes yourself, of course, but Mars is both your husband and young Smith-as a result of the unique circumstance of his birth. This throws a double burden on you and you must rise to the challenge; you must demonstrate those qualities of calm wisdom and restraint which are peculiarly those of woman. You must sustain your husband, guide him through this crisis, and soothe him. You must supply the earth-mother's calm wells of wisdom. That is your special genius . . . and now is the time you must use it."

Mrs. Douglas sighed. "Allie, you are simply wonderful! I don't know how to thank you."

"Don't thank me. Thank the Ancient Masters whose humble student I am."

"I can't thank them so I'll thank you. This isn't covered by your retainer, Allie. There will be a present."

"Not necessary at all, Agnes. It is my privilege to serve."

"And it is my privilege to appreciate service. No, Allie, not another word!" Madame Vesant let herself be coaxed, then switched off, feeling warmly content from having given a reading that she just knew was right. Poor Agnes! Such a good woman inside . . . and so twisted up with conflicting desires. It was a privilege to smooth her path a little, make her heavy burdens a little easier to carry. It made her feel good to help Agnes.

It made Madame Vesant feel good to be treated as an almost-equal by the wife of the Secretary General, too, although she did not think of it that way, not being snobbish at heart. But young Becky Vesey had been so insignificant that the precinct committeeman could never remember her name even though he noticed her bust measurement. Becky Vesey had not resented it; Becky liked people. She liked Agnes Douglas now.

Becky Vesey liked everybody.

She sat a while longer, enjoying the warm glow and the respite from pressure and just a nip more of the tonic, while her shrewd and able brain shuffled the bits and pieces she had picked up. Presently, without consciously making a decision, she called her stockbroker and instructed him to sell Lunar Enterprises short.

He snorted. "Allie, you're crazy. That reducing diet is weakening your mind."

"You listen to me, Ed. When it is down ten points, cover me, even if it is still slipping. Wait for it to turn. When it rallies three points, buy into it again . . . then sell when it gets back to today's closing."

There was a long silence while he looked at her. "Allie, you know something. Tell Uncle Ed."

"The stars tell me, Ed."

Ed made a suggestion astronomically impossible and added, "All right, if you won't, you won't. Mmm . . . I never did have sense enough to stay out of a crooked game, Mind if I ride along with you on it, Allie?"

"Not at all, Ed, as long as you don't go heavy enough to let it show. This is a delicate special situation, with Saturn just balanced between Virgo and Leo."

"As you say, Allie."

Mrs. Douglas got busy at once, happy that Allie had confirmed all her judgments. She gave orders about the campaign to destroy the reputation of the missing Berquist, after sending for his dossier and looking it over; she closeted herself with Commandant Twitchell of the Special Service squads for twenty minutes-he left her looking thoughtfully unhappy and immediately made life unbearable for his executive officer. She instructed Sanforth to release another of the "Man from Mars" stereocasts and to include with it a rumor "from a source close to the administration" that Smith was about to be transferred, or possibly had already been transferred, to a sanitarium high in the Andes, in order to provide him with a climate for convalescence as much like that of Mars as possible. Then she sat back and thought about how to nail down the Pakistan votes for Joseph.

Presently she got hold of him and urged him to support Pakistan's claim to the lion's share of the Kashmir thorium. Since he had been wanting to do so all along but had not, up to now, convinced her of the necessity, he was not hard to persuade, although a little nettled by her assumption that he had been opposing it. With that settled, she left to address the Daughters of the Second Revolution on Motherhood in the New World.

X

WHILE MRS. DOUGLAS WAS SPEAKING too freely on a subject she knew too little about, Jubal E. Harshaw, LL.B., M.D., Sc.D., bon vivant, gourmet, sybarite, popular author extraordinary, and neopessimist philosopher, was sitting by his swimming

pool at his home in the Poconos, scratching the thick grey thatch on his chest, and watching his three secretaries splash in the pool. They were all three amazingly beautiful; they were also amazingly good secretaries. In Harshaw's opinion the principle of least action required that utility and beauty be combined.

Anne was blonde, Miriam was red-headed, and Dorcas was dark; in each case the coloration was authentic. They ranged, respectively, from pleasantly plump to deliciously slender. Their ages spread over fifteen years but it was hard to tell off hand which was the eldest. They undoubtedly had last names but Harshaw's household did not bother much with last names, One of them was rumored to be Harshaw's own granddaughter but opinions varied as to which one it was.

Harshaw was working as hard as he ever worked. Most of his mind was occupied with watching pretty girls do pretty things with sun and water~ one small, shuttered, sound-proofed compartment was composing. He claimed that his method of literary composition was to hook his gonads in parallel with his thalamus and disconnect his cerebrum entirely; his habits lent some credibility to the theory.

A microphone on a table at his right hand was hooked to a voicewriter in his study but he used the voicewriter only for notes. When he was ready to wnte he used a human stenographer and watched her reactions. He was ready now. "Front!" he shouted.

"Anne is 'front,' "answered Dorcas. "But I'll take it. That splash was Anne."

"Dive in and get her. I can wait." The little brunette cut the water; a few moments later Anne climbed out, put on a towel robe, dried her hands on it, and sat down on the other side of the table. She said nothing, nor did she make any preparations; Anne had total recall, never bothered with recording devices.

Harshaw picked up a bucket of ice cubes over which brandy had been poured, took a deep swig. "Anne, I've got a really sick-making one. It's about a little kitten that wanders into a church on Christmas Eve to get warm. Besides being starved and frozen and lost, the kitten has-God knows why-an injured paw. All right; start: 'Snow had been falling since-'

"What pen name?"

"Mmm ... better use 'Molly Wadsworth' again. This one is pretty icky. And title it The Other Manger. Start again." He went on talking while watching her closely. When tears started to leak out of her closed eyes he smiled slightly and closed his own eyes. By the time he finished, tears were running down his cheeks as well as hers, both bathed in a catharsis of schmaltz.

"Thirty," he announced. "You can blow your nose. Send it off and for God's sake don't let me see it or I'll tear it up."

"Jubal, aren't you ever ashamed?"

"No."

"Someday I'm going to kick you right in your fat stomach for one of these."

"I know. But I can't pimp for my sisters; they'd be too old and I never had any. Get your fanny indoors and take care of it before I change my mind."

"Yes, boss."

She kissed his bald spot as she passed behind his chair. Harshaw yelled, "Front!" again and Miriam started toward him. But a loudspeaker mounted on the house behind him came to life:

"Boss!"

Harshaw uttered one word and Miriam clucked at him reprovingly. He added, "Yes, Larry?"

The speaker answered, "There's a dame down here at the gate who wants to see you-and she's got a corpse with her."

Harshaw considered this for a moment. "Is she pretty?" he said to the microphone.

"Uh ... yes."

"Then why are you sucking your thumb? Let her in." Harshaw sat back. "Start," he said. "City montage dissolving into a medium two-shot, interior. A cop is seated in a straight chair, no cap, collar open, face covered with sweat. We see only the back of the other figure, which is depthed between us and the cop. The figure raises a hand, bringing it back and almost out of the tank. He slaps the cop with a heavy, meaty sound, dubbed." Harshaw glanced up and said, "We'll pick up from there." A ground car was rolling up the hill toward the house.

Jill was driving the car; a young man was seated beside her. As the car stopped near Harshaw the man jumped out at once, as if happy to divorce himself from car and contents. "There she is, Jubal."

"So I see. Good morning, little girl. Larry, where is this corpse?"

"In the back seat, Boss. Under a blanket."

"But it's not a corpse," Jill protested. "It's ... Ben said that you... I mean-" She put her head down on the controls and started to cry.

"There, my dear," Harshaw said gently. "Very few corpses are worth it. Dorcas-Miriam-take care of her. Give her a drink . . . and wash her face."

He turned his attention to the back seat, started to lift the blanket. Jill shrugged off Miriam's proffered arm and said shrilly, "You've got to listen! He's not dead. At least I hope not. He's . . . oh dear!" She started to cry again. "I'm so dirty ... and so scared!"

"Seems to be a corpse," Harshaw said meditatively. "Body temperature is down to air temperature, I should judge. The rigor is not typical. How long has he been dead?"

"But he's not dead! Can't we get him out of there? I had an awful time getting him in."

"Surely. Larry, give me a hand. And quit looking so green, Larry. If you puke, you'll clean it up." Between them they got Valentine Michael Smith out of the back seat and laid him on the grass by the pool; his body remained stiff, still huddled together. Without being told Dorcas had gone in and fetched Dr. Harshaw's stethoscope; she set it on the ground by Smith, switched it on and stepped up the gain.

Harshaw stuck the headpiece in his ears, started sounding for heart beat. "I'm afraid you're mistaken," he said gently to Jill. "This one is beyond my help. Who was he?"

Jill sighed. Her face was drained of expression and she answered in a fiat voice, "He was the Man from Mars. I tried so hard."

"I'm sure you did-the Man from Mars?"

"Yes. Ben ... Ben Caxton said you were the one to come to."

"Ben Caxton, eh? I appreciate the confid-hush/" Harshaw emphasized the demand for silence with a hand upheld while he continued to frown and listen. He looked puzzled, then surprise burst over his face. "Heart action! I'll be a babbling baboon. Dorcas-upstairs, the clinic- third drawer down in the locked part of the cooler; the code is 'sweet dreams.' Bring the whole drawer and pick up a 1 cc. hypo from the sterilizer."

"Right away!"

"Doctor, no stimulants!"

Harshaw turned to Jill. "Eh?"

"I'm sorry, sir. I'm just a nurse ... but this case is different. I know."

"Mmm ... he's my patient now, nurse. But about forty years ago I found Out I wasn't God, and about ten years thereafter I discovered I wasn't even Aesculapius. What do you want to try?"

"I just want to try to wake him up. If you do anything to him, he just goes deeper into it."

"Hmm ... go ahead. Just as long as you don't use an ax. Then we'll try my methods."

"Yes, sir." Jill knelt beside him, Started gently trying to straighten out his limbs. Harshaw's eyebrows went up when he saw that she had succeeded. Jill took Smith's head in her lap and cradled it gently in her hands. "Please wake up," she said softly. "This is Jill ... your water brother."

The body stirred. Very slowly the chest lifted. Then Smith let out a long bubbling sigh and his eyes opened. He looked up at Jill and smiled his baby smile. Jill smiled back. Then he looked around and the smile left him.

"It's all right," Jill said quickly. "These are all friends."

"All friends?"

"That's right. All of them are your friends. Don't worry-and don't go away again. Everything is all right."

He did not answer but lay still with his eyes open, staring at everything and everyone around him. He seemed as content as a cat in a lap.

Twenty-five minutes later Harshaw had both of his patients in bed. Jill had managed to tell him, before the pill he gave her took hold, enough of the situation to let him know that he had a bear by the tail. Ben Caxton was missing-he'd have to try to figure out something to do about that- and young Smith was as hot as a dry bearing . . . although he had been able to guess that when he heard who he was. Oh, well, life might be amusing for a while; it would keep back that grey boredom that lay always just around the corner.

He looked at the little utility car that Jill had arrived in. Lettered across its sides was: READING RENTALS-Permapowered Ground Equipment of All Sorts-"Deal with the Dutchman!"

"Larry, is the fence hot?"

"Switch it on. Then before it gets dark I want you to polish every possible fingerprint off that heap. As soon as it is dark, drive it over the other side of Reading-better go almost to Lancaster-and leave it in a ditch. Then go to Philadelphia, catch the shuttle for Scranton, come home from Scranton."

"Sure thing, Jubal. Say-is he really the Man from Mars?"

"You had better hope that he isn't, because if he is and they catch you before you dump that wagon and they associate you with him, they'll probably interrogate you with a blow torch. But I think he is."

"I scan it. Should I rob a few banks on the way back?"

"Probably the safest thing you can do."

"Okay, Boss." Larry hesitated. "Do you mind if I stay over night in Philly?"

"What in God's name can a man find to do at night in Philadelphia?"

"Plenty, if you know where to look."

"Suit yourself." Harshaw turned away. "Front!"

Jill slept until shortly before dinner, which in that household was a comfortable eight o'clock. She awoke refreshed and feeling alert, so much so that she sniffed the air incoming from the grille over her head and surmised correctly that the doctor had offset the hypnotic she had been given with a stimulant. While she was asleep someone had removed the dirty and torn street clothes she had been wearing and had left a simple, off-white dinner dress and sandals. The clothes fit her fairly well; Jill concluded that they must belong to the one the doctor had called Miriam. She bathed and painted her face and combed her hair and went down to the big living room feeling like a new woman.

Dorcas was curled in a big chair, doing needle point; she looked up, nodded in a friendly manner as if Jill were always part of the household, turned her attention back to her fancy work. Harshaw was standing and stirring gently a mixture in a tall and frosty pitcher. "Drink?" he said.

'Uh, yes, thank you."

He poured two large cocktail glasses to their brims, handed her one. "What is it?" she asked.

"My own recipe, a comet cocktail. One third vodka, one third muriatic acid, one third battery water-two pinches of salt and add a pickled beetle."

"Better have a highball," Dorcas advised. Jill noticed that the other girl had a tall glass at her elbow.

"Mind your own business," Harshaw advised without rancor. "The hydrochloric acid is good for the digestion; the beetle adds vitamins and protein." He raised his glass to Jill and said solemnly, "Here's to our noble selves! There are damned few of us left." He almost emptied his glass, replenished it before he set it down.

Jill took a cautious sip, then a much bigger one. Whatever the true ingredients, the drink seemed to be exactly what she needed; a warm feeling of well-being spread gently from her center of gravity toward her extremities. She drank about half of it, let Harshaw add a dividend. "Look in on our patient?" he asked.

"No, sir. I didn't know where he was."

"I checked him a few minutes ago. Sleeping like a baby-I think I'll rename him Lazarus. Do you think he would like to come down to dinner?"

Jill looked thoughtful. "Doctor, I really don't know."

"Well, if he wakes I'll know it. Then he can join us, or have a tray, as he wishes. This is Freedom Hall, my dear. Everyone does absolutely as he pleases . . . then if he does something I don't like, I just kick him the hell out. Which reminds me: I don't like to be called 'Doctor.'"

"Sir?"

"Oh, I'm not offended. But when they began handing out doctorates for comparative folk dancing and advanced fly-fishing, I became too stink in' proud to use the title. I won't touch watered whiskey and I take no pride in watered-down degrees. Call me Jubal."

"Oh. But the degree in medicine hasn't been watered down, as you call it."

"No. But it is time they called it something else, so as not to have it mixed up with playground supervisors. Never mind. Little girl, just what is your interest in this patient?"

"Eh? I told you. Doct-Jubal."

"You told me what happened; you didn't tell me why. Jill, I saw the way you looked at him and spoke to him. Do you think you are in love with him?"

Jill was startled. She glanced at Dorcas; the other girl appeared not to be hearing the conversation. "Why, that's preposterous!"

"I don't see anything preposterous about it. You're a girl; he's a boy- that's usually a nice setup."

"But- No, Jubal, it's not that at all. I .. well, I thought he was being held a prisoner and I thought-or Ben thought-that he might be in danger. I wanted to see him get his rights."

"Mmmm ... my dear, I'm always suspicious of a disinterested interest. You look as if you had a normal glandular balance, so it is my guess that it is either Ben, or this poor boy from Mars, or both. You had better take your motives out in private and have a look at them. Then you will be better able to judge which way you are going. In the meantime, what do you want me to do?"

The unqualified scope of the question made it difficult for Jill to answer. What did she want? What did she expect? From the time she had crossed her Rubicon she had thought of nothing but escape-and getting to Harshaw's home. She had no plans. "I don't know."

"I thought not. You had told me enough to let me know that you were A.W.O.L. from your hospital, so, on the assumption that you might wish to protect your license, I took the liberty, while you were asleep, of having a message Sent from Montreal to your Chief of Nursing. You asked for two weeks emergency leave because of sudden illness in your family. Okay? You can back it up with details later."

Jill felt sudden and shaking relief. By temperament she had buried all worry about her own welfare once she had made her decision; nevertheless down inside her was a heavy lump caused by what she had done to an on the whole excellent professional standing. "Oh, Jubal, thank you!" She added, "I'm not really delinquent in watch standing yet; today was my day off."

"Good. Then you are covered like a tent. What do you want to do?"

"I haven't had time to think. Uh, I suppose I should get in touch with my bank and get some money-" She paused, trying to recall what her bank balance was. It was never large and sometimes she forgot to- Jubal cut in on her thoughts. "If you get in touch with your bank, you will have cops pouring out of your ears. Hadn't you better stay here until things level off?"

"Uh, Jubal, I wouldn't want to impose on you."

"You already have imposed on me. Don't worry about it, child. There are always free-loaders around here, coming and going . . . one family stayed seventeen months. But nobody imposes on me against my will, so relax about it. If you turn out to be useful as well as ornamental, you can stay forever. Now about our patient: you said you wanted him to get his 'rights.' I suppose you expected my help in that?"

"Well, I ... Ben said-Ben seemed to think that you would help."

"I like Ben but he does not speak for me. I am not in the slightest interested in whether or not this lad gets his so-called rights. I don't go for the 'True Prince' nonsense. His claim to Mars is lawyers' hogwash; as a lawyer myself I need not respect it. As for the wealth that is supposed to be coming to him, the situation results from other people's

inflamed passions and our odd tribal customs; he has earned none of it. In my opinion he would be lucky if they bilked him out of it-but I would not bother to scan a newspaper to find out which outcome eventuated. If Ben expected me to fight for Smith's 'rights,' you have come to the wrong house."

"Oh." Jill felt suddenly forlorn. "I guess I had better make arrangements to move him."

"Oh, no! Not unless you wish, that is."

"But I thought you said-"

"I said I was not interested in a web of legal fictions. But a patient and guest under my roof is another matter. He can stay, if he likes. I just wanted to make it clear that I had no intention of meddling with politics to suit any romantic notions you or Ben Caxton may have. My dear, I used to think I was serving humanity . . . and I pleasured in the thought. Then I discovered that humanity does not want to be served; on the contrary it resents any attempt to serve it. So now I do what pleases Jubal Harshaw." He turned to Dorcas as if the subject were closed. "Time for dinner, isn't it, Dorcas? Is anyone doing anything about it?"

"Miriam." She put down her needlepoint and stood up.

"I've never been able to figure out just how these girls divide up the work."

"Boss, how would you know?-since you never do any." Dorcas patted him on the stomach. "But you never miss any meals."

A gong sounded and they went in to eat. If the redheaded Miriam had cooked dinner, she had apparently done so with all modern shortcuts; she was already seated at the foot of the table and looked cool and beautiful. In addition to the three secretaries, there was a young man slightly older than Larry who was addressed as "Duke" and who included Jill in the conversation as if she had always lived there. There was also a middle-aged couple who were not introduced at all, who ate as if they were in a restaurant and left the table as soon as they were finished without ever having spoken to the others.

But the table talk among the others was lively and irreverent. Service was by non~android serving machines, directed by controls at Miriam's end of the table. The food was excellent and, so far as Jill could tell, none of it was syntho.

But it did not seem to suit Harshaw. He complained that his knife was dull, or the meat was tough, or both; he accused Miriam of serving leftovers. No one seemed to hear him but Jill was becoming embarrassed on Miriam's account when Anne put down her knife and fork. "He mentioned his mother's cooking," she stated bleakly.

"He is beginning to think he is boss again," agreed Dorcas.

"How long has it been?"

"About ten days."

"Too long." Anne gathered up Dorcas and Miriam with her eyes; they all stood up. Duke went on eating.

Harshaw said hastily, "Now see here, girls, not at meals. Wait until-" They paid no attention to his protest but moved toward him; a serving machine scurried out of the way. Anne took his feet, each of the other two an arm; French doors slid out of the way and they carried him out, squawking.

A few seconds later the squawks were cut short by a splash.

The three women returned at once, not noticeably mussed. Miriam sat down and turned to Jill. "More salad, Jill?"

Harshaw returned a few minutes later, dressed in pajamas and robe instead of the evening jacket he had been wearing. One of the machines had covered his plate as soon as he was dragged away from the table; it now uncovered it for him and he went on eating. "As I was saying," he remarked, "a woman who can't cook is a waste of skin. If I don't start having some service around here I'm going to swap all of you for a dog and shoot the dog. What's the dessert, Miriam?"

"Strawberry shortcake."

"That's more like it. You are all reprieved till Wednesday."

Gillian found that it was not necessary to understand how Jubal Harshaw's household worked; she could do as she pleased and nobody cared. After dinner she went into the living room with the intention of viewing a stereocast of the evening news, being anxious to find out if she herself played a part in it. But she could find no stereo receiver, nor was there anything which could have concealed a tank. Thinking about it, she could not recall having seen one anywhere in the house. Nor were there any newspapers, although there were plenty of books and magazines.

No one joined her. After a while she began to wonder what time it was. She had left her watch upstairs with her purse, so she looked around for a clock. She failed to find one, then searched her excellent memory and could not remember having seen either clock or calendar in any of the rooms she had been in.

But she decided that she might as well go to bed no matter what time it was. One whole wall was filled with books, both shelves and spindle racks. She found a spool of Kipling's Just So Stories and took it happily upstairs with her.

Here she found another small surprise. The bed in the room she had been given was as modern as next week, complete with automassage, coffee dispenser, weather control, reading machine, etc.-but the alarm circuit was missing, there being only a plain cover plate to show where it had been. Jill shrugged and decided that she would probably not oversleep anyway, crawled into bed, slid the spool into the reading machine, lay back and scanned the words streaming across the ceiling. Presently the speed control slipped out of her relaxed fingers, the lights went out, and she slept.

Jubal Harshaw did not get to sleep as easily; he was vexed with himself. His initial interest in the situation had cooled off and reaction had set in. Well over a half century earlier he had sworn a mighty oath, full of fireworks, never again to pick up a stray cat-and now, so help him, by the multiple paps of Venus Genetrix, he had managed to pick up two at once no, three, if he counted Ben Caxton.

The fact that he had broken his oath more times than there were years intervening did not trouble him; his was not a small mind bothered by logic and consistency. Nor did the mere presence of two more pensioners sleeping under his roof and eating at his table bother him. Pinching pennies was not in him. In the course of nearly a century of gusty living he had been broke many times, had several times been wealthier than he now was; he regarded both conditions as he did shifts in the weather, and never Counted his change.

But the silly foofooraw that he knew was bound to ensue when the busies caught up with these children disgruntled him in prospect. He considered it certain that catch up

they would; a naive child like that Gillian infant would leave a trail behind her like a club-footed cow! Nothing else could be expected.

Whereupon people would come barging into his sanctuary, asking stupid questions and making stupid demands . . - and he, Jubal Harshaw, would have to make decisions and take action. Since he was philosophically convinced that all action was futile, the prospect irritated him.

He did not expect reasonable conduct from human beings; he considered most people fit candidates for protective restraint and wet packs. He simply wished heartily that they would leave him alone!-aU but the few he chose for playmates. He was firmly convinced that, left to himself, he would have long since achieved nirvana . . . dived into his own belly button and disappeared from view, like those Hindu jokers. Why couldn't they leave a man alone?

Around midnight he wearily put out his twenty-seventh cigarette and sat up; the lights came on. "Front!" he shouted at the microphone beside his bed.

Shortly Dorcas came in, dressed in robe and slippers. She yawned widely and said, "Yes, Boss?"

"Dorcas, for the last twenty or thirty years I've been a worthless, useless, no-good parasite."

She nodded and yawned again. "Everybody knows that."

"Never mind the flattery. There comes a time in every man's life when he has to stop being sensible-a time to stand up and be counted- strike a blow for liberty-smite the wicked."

"Ummm..."

"SO quit yawning, the time has come."

She glanced down at herself. "Maybe I had better get dressed."

"Yes. Get the other girls up, too; we're going to be busy. Throw a bucket of cold water over the Duke and tell him I said to dust off the babble machine and hook it up in my study. I want the news, all of it."

Dorcas looked startled and all over being sleepy. "You want Duke to hook up stereovision?"

"You heard me. Tell him I said that if it's out of order, he should pick a direction and start walking. Now get along with you; we've got a busy night ahead."

"All right," Dorcas agreed doubtfully, "but I think I ought to take your temperature first."

"Peace, woman!"

Duke had Jubal Harshaw's stereo receiver hooked up in time to let Jubal see a late rebroadcast of the second phony interview with the "Man from Mars." The commentary included the rumor about moving Smith to the Andes. Jubal put two and two together and got twenty-two, after which he was busy calling people until morning. At dawn Dorcas brought him his breakfast, six raw eggs beaten into brandy. He slurped them down while reflecting that one of the advantages of a long and busy life was that eventually a man got to know pretty near everybody of real importance- and could call on them in a pinch.

Harshaw had prepared a time bomb but did not propose to trigger it until the powers-that-be forced him to do so. He had realized at once that the government could haul Smith back into captivity on the grounds that he was incompetent to look out for himself . . . an opinion with which Harshaw agreed. His snap opinion was that Smith was

both legally insane and medically psychopathic by all normal standards, the victim of a double-barreled situational psychosis of unique and monumental extent, first from being raised by non-humans and second from having been translated suddenly into a society which was completely alien to him.

Nevertheless he regarded both the legal notion of sanity and the medical notion of psychosis as being irrelevant to this case. Here was a human animal who had made a profound and apparently successful adjustment to an alien society . . . but as a malleable infant. Could the same subject, as an adult with formed habits and canalized thinking, make another adjustment just as radical, and much more difficult for an adult to make than for an infant? Dr. Harshaw intended to find out; it was the first time in decades he had taken real interest in the practice of medicine.

Besides that, he was tickled at the notion of balking the powers-that-be. He had more than his share of that streak of anarchy which was the political birthright of every American; pitting himself against the planetary government fined him with sharper zest for living than he had felt in a generation.

XI

AROUND A MINOR G-TYPE STAR fairly far out toward one edge of a medium-sized galaxy the planets of that star swung as usual, just as they had for billions of years, under the influence of a slightly modified inverse square law that shaped the space around them. Three of them were big enough, as planets go, to be noticeable; the rest were mere pebbles, concealed in the fiery skirts of the primary or lost in the black outer reaches of space. All of them, as is always the case, were infected with that oddity of distorted entropy called life~, in the cases of the third and fourth planets their surface temperatures cycled around the freezing point of hydrogen monoxide-in consequence they had developed life forms similar enough to permit a degree of social contact.

On the fourth pebble out the ancient Martians were not in any important sense disturbed by the contact with Earth. The nymphs of the race still bounced joyously around the surface of Mars, learning to live, and eight out of nine of them dying in the process. The adult Martians, enormously different in body and mind from the nymphs, still huddled in or under the faerie, graceful cities, and were as quiet in their behavior as the nymphs were boisterous-yet were even busier than the nymphs, busy with a complex and rich life of the mind.

The lives of the adults were not entirely free of work in the human sense; they had still a planet to take care of and supervise, plants must be told when and where to grow, nymphs who had passed their 'prenticeships by surviving must be gathered in, cherished, fertilized, the resultant eggs must be cherished and contemplated to encourage them to ripen properly, the full3.lled nymphs must be persuaded to give up childish things and then metamorphosed into adults. All these things must be done-but they were no more the "life" of Mars than is walking the dog twice a day the "life" of a man who controls a planet-wide corporation in the hours between those pleasant walks . . . even though to a being from Arcturus III those daily walks might seem to be the tycoon's most significant activity-no doubt as a slave to the dog.

Martians and humans were both self-aware life forms but they had gone in vastly different directions. All human behavior, all human motivations, all man's hopes and fears, were heavily colored and largely controlled by mankind's tragic and oddly beautiful pattern of reproduction. The same was true of Mars, but in mirror corollary. Mars had the efficient bipolar pattern so common in that galaxy, but the Martians had it in a form so different from the Terran form that it would have been termed "sex" only by a biologist, and it emphatically would not have been "sex" to a human psychiatrist. Martian nymphs were female, all the adults were male.

But in each case in function only, not in psychology. The man-woman polarity which controlled all human lives could not exist on Mars. There was no possibility of "marriage." The adults were huge, reminding the first humans to see them of ice boats under sail; they were physically passive, mentally active. The nymphs were fat, furry spheres, full of bounce and mindless energy. There was no possible parallel between human and Martian psychological foundations. Human bipolarity was both the binding force and the driving energy for all human behavior, from sonnets to nuclear equations. If any being thinks that human psychologists exaggerate on this point, let it search Terran patent offices, libraries, and art galleries for creations of eunuchs.

Mars, being geared unlike Earth, paid little attention to the Envoy and the Champion. The two events had happened too recently to be of significance-if Martians had used newspapers, one edition a Terran century would have been ample. Contact with other races was nothing new to Martians; it had happened before, would happen again. When the new other race had been thoroughly grokked, then (in a Terran millennium or so) would be time for action, if needed.

On Mars the currently important event was of a different sort. The discorpOrate Old Ones had decided almost absent-mindedly to send the nestling human to grok what he could of the third planet, then turned attention back to serious matters. Shortly before, around the time of the Terran Caesar Augustus, a Martian artist had been engaged in composing a work of art. It could have been called with equal truth a poem, a musical opus, or a philosophical treatise; it was a series of emotions arranged in tragic, logical necessity. Since it could have been experienced by a human only in the sense in which a man blind from birth could have a sunset explained to him, it does not matter much to which category of human creativity it might be assigned. The important point was that the artist had accidentally discorporated before he finished his masterpiece.

Unexpected discorporation was always rare on Mars; Martian taste in such matters called for life to be a rounded whole, with physical death taking place at the appropriate and selected instant. This artist, however, had become so preoccupied with his work that he had forgotten to come in out of the cold; by the time his absence was noticed his body was hardly fit to eat. He himself had not noticed his own discorporation and had gone nght on composing his sequence.

Martian art was divided sharply into two categories, that sort created by living adults, which was vigorous, often quite radical, and primitive, and that of the Old Ones, which was usually conservative, extremely complex, and was expected to show much higher standards of technique; the two sorts were judged separately.

By what standards should this opus be judged? It bridged from the corporate to the discorporate; its final form had been set throughout by an Old One-yet on the other hand the artist, with the detachment of all artists everywhere, had not even noticed the

change in his status and had Continued to work as if he were corporate. Was it possibly a new sort of art? Could more such pieces be produced by surprise discorporation of artists while they were working? The Old Ones had been discussing the exciting possibilities in ruminative rapport for centuries and all corporate Martians were eagerly awaiting their verdict.

The question was of greater interest because it had not been abstract art, but religious (in the Terran sense) and strongly emotional~ it described the contact between the Martian Race and the people of the fifth planet, an event that had happened long ago but which was alive and important to Martians in the sense in which one death by crucifixion remained alive and important to humans after two Terran millennia. The Martian Race had encountered the people of the fifth planet, grokked them completelY, and in due course had taken action; the asteroid ruins were all that remained, save that the Martians continued to cherish and praise the people they had destroyed. This new work of art was one of many attempts to grok all parts of the whole beautiful experience in all its complexity in one opus. But before it could be judged it was necessary to grok how to judge it.

It was a very pretty problem.

On the third planet Valentine Michael Smith was not concerned with the burning issue on Mars; he had never heard of it. Ills Martian keeper and his keeper's water brothers had not mocked him with things he could not grasp. Smith knew of the destruction of the fifth planet and its etnotional importance~ just as any human school boy learns of Troy and Plymouth Rock, but he had not been exposed to art that he could not grok. His education had been unique, enormOuSlY greater than that of his nestlings, enormOuslY less than that of an adult; his keeper and his keeper's advisers among the Old Ones had taken a large passing interest in seeing just how much and of what sort this nestling alien could learn. The results had taught them more about the potentialities of the human race than that race had yet learned about itself, for Smith had grokked very readily things that no other human being had ever learned.

But just at present Smith W95 simply enjoying himself with a lightheartedness he had not experienced in many years. He had won a new water brother in JubaL he had acquired many new friends, he was enjoying delightful new experiences in such kaleidoscopic quantity that he had no time to grok them; he could only file them away to be relived at leisure.

His brother Jubal had assured him that be would grok this strange and beautiful place more quickly if he would learn to read, so he had taken a full day off to learn to read really well and quickly, with Jill pointing to words and pronouncing them for him. It had meant staying out of the swimming pool all that day, which had been a great sacrifice, as swimming (once he got it through his head that it was actually permitted) was not merely an exuberant, sensuous delight but almost unbearable religious ecstasy. If Jill and Jubal had not told him to do otherwise, he would never have come out of the pool at all.

Since he was not permitted to swim at night he read all night long. He was zipping through the Encyclopedia Britannica and was sampling Jubal's medicine and law libraries as dessert. His brother Jubal had seen him leafing rapidly through one of the

books, had stopped him and questioned him about what he had read. Smith had answered carefully, as it reminded him of the tests the Old Ones had occasionally given him. His brother had seemed a bit upset at his answers and Smith had found it necessary to go into an hour's contemplation on that account, for he bad been quite sure that he had answered with the words written in the book even though he did not grok them all.

But he preferred the pool to the books, especially when Jill and Miriam and Larry and Anne and the rest were all splashing each other. He had not learned at once to swim as they did, but had discovered the first time that he could do 5~mething they could not. He had simply gone down to the bottom and lain there, immersed in quiet bliss~_~wbereUP0~~ they had hauled him out with such excitement that he had almost been forced to withdraw himself, had it not been evident that they were concerned for his welfare.

Later that day he had demonstrated the matter to Jubal, remaining on the bottom for a delicious time, and he had tried to teach it to his brother Jill . . . but she had become disturbed and he had desisted. It was his first clear realization that there were things that he could do that these new friends could not. He thought about it a long time, trying to grok its fullness.

Smith was happy; Harshaw was not. He continued his usual routine of aimless loafing, varied only by casual and unplanned observation of his laboratory animal, the Man from Mars. He arranged no schedule for Smith, no programme of study, no regular physical examinations, but simply allowed Smith to do as he pleased, run wild, like a puppy growing up on a ranch. What supervision Smith received came from Jill: more than enough, in Jubal's grumpy opinions as he took a dim view of males being reared by females.

However, Gillian Boardman did little more than coach Valentine Smith in the rudiments of human social behavior-and he needed very little coaching. He ate at the table with the others now, dressed himself (at least Jubal thought he did; he made a mental note to ask Jill if she still had to assist him); he conformed acceptably to the household's very informal customs and appeared able to cope with most new experiences on a "monkey~see~monkeYd0" basis. Smith started his first meal at the table using only a spoon and Jill had cut up his meat for hint By the end of the meal he was attempting to eat as the others ate. At the next meal his table manners were a precise imitation of Jill's, including superfluous mannerisms.

Even the twin discovery that Smith had taught himself to read with the speed of electronic scanning and appeared to have total recall of all that he read did not tempt Jubat HarshaW to make a "project" of Smith, one with controls, measurements, and curves of progress. Harshaw had the arrogant humility of the man who has learned so much that he is aware of his own ignorance and he saw no point in "measurements" when he did not know what he was measuring. Instead he limited himself to notes made privately, without even any intention of publishing his observations.

But, while Harshaw enjoyed watching this unique animal develop into a mimicry copy of a human being, his pleasure afforded him no happiness.

Like Secretary General Douglas, Harshaw was waiting for the other shoe to drop.

Waiting with increasing tenseness- Having found himself coerced into action by the expectation of action against him on the part of the government, it annoyed and exasperated him that nothing as yet had happened. Damn it, were the Federation cops so stupid that they couldn't track an unsophisticated girl dragging an unconscious man all across the countryside? Or (as seemed more likely) had they been on her heels the whole way?-and even now were keeping a stake-out on his place? The latter thought was infuriating; to Harshaw the notion that the government might be spying on his home, his castle, with anything from binoculars to radar, was as repulsive as the idea of having his mail opened.

And they might be doing that, toOt he reminded himself morosely. Government! Three fourths parasitic and the other fourth Stupid fumbling -oh, he conceded that man, a social animal, could not avoid having government, any more than an individual man could escape his lifelong bondage to his bowels. But Harshaw did not have to like it. Simply because an evil was inescapable was no reason to term it a "good." He wished that government would wander off and get lost?

But it was certainly possible, or even probable, that the administration knew exactly where the Man from Mars was hiding . . . and for reasons of their own preferred to leave it that way, while they prepared- what?

If so, how long would it go on? And how long could he keep his defensive "time bomb" armed and ready?

And where the devil was that reckless young idiot Ben Caxton?

Jill Boardman forced him out of his spiritual thumb-twiddling. "Jubal?"

"Eh? Oh, it's you, bright eyes. Sorry, I was preoccupied. Sit down. Have a drink?"

"Uh, no, thank you. Jubal, I'm worried."

"Normal. Who isn't? That was a mighty pretty swan dive you did. Let's see another one just like it."

Jill bit her lip and looked about twelve years old. "Jubal? Please listen! I'm terribly worried."

He sighed. "In that case, dry yourself off. The breeze is getting chilly."

"I'm warm enough. Uh, Jubal? Would it be all right if I left Mike here? Would you take care of him?"

Harshaw blinked. "Of course he can stay here. You know that. The girls will look out for him-and I'll keep an eye on him from time to time. He's no trouble. I take it you're leaving?"

She didn't meet his eye. "Yes."

"Mmmm ... you're welcome here. But you're welcome to leave, too, if that's what you want."

"Huh? But, Jubal-I don't want to leave!"

"Then don't."

"But I must!"

"Better play that back. I didn't scan it."

"Don't you see, Jubal? I like it here-you've been wonderful to us! But I can't stay any longer. Not with Ben missing. I've got to go look for him."

Harshaw said one word, emotive, earthy, and vulgar, then added, "How do you propose to look for him?"

She frowned. "I don't know. But I can't just lie around here any longer, loafing and swimming-with Ben missing."

"Gillian, as I pointed out to you before, Ben is a big boy now. You're not his mother-and you're not his wife. And I'm not his keeper. Neither of us is responsible for him . . . and you haven't any call to go looking for him. Have you?"

Jill looked down and twisted one toe in the grass. "No," she admitted. "I haven't any claim on Ben. I just know ... that if I turned up missing Ben would look for me-until he found me. So I've got to look for him!"

Jubal breathed a silent malediction against all elder gods in any way involved in contriving the follies of the human race, then said aloud, "All right, all right, if you must, then let's try to get some logic into it. Do you plan to hire professionals? Say a private detective firm that specializes in missing persons?"

She looked unhappy. "I suppose that's the way to go about it. Uh, I've never hired a detective. Are they expensive?"

"Quite."

Jill gulped. "Do you suppose they would let me arrange to pay, uh, in monthly installments? Or something?"

"Cash at the stairs is their usual way. Quit looking so grim, child; I brought that up to dispose of it. I've already hired the best in the business to try to find Ben-so there is no need for you to hock your future to hire the second best."

"You didn't tell me!"

"No need to tell you."

"But- Jubal, what did they find out?"

"Nothing," he said shortly. "Nothing worth reporting, so there was no need to put you any further down in the dumps by telling you." Jubal scowled. "When you showed up here, I thought you were unnecessarily nervy about Ben-I figured the same as his assistant, that fellow Kilgallen, that Ben had gone yipping off on some new trail . . . and would check in when he had the story wrapped up. Ben does that sort of stunt-it's his profession." He sighed. "But now I don't think so. That knothead Kilgallen-he really does have a statprint message on file, apparently from Ben, telling Kilgallen that Ben would be away a few days; my man not only saw it but sneaked a photograph and checked. No fake-the message was sent."

Jill looked puzzled. "I wonder why Ben didn't send me a statprint at the same time? It isn't like him-Ben's very thoughtful."

Jubal repressed a groan. "Use your head, Gillian. Just because a package says 'Cigarettes' on the outside does not prove that the package contains cigarettes. You got here last Friday; the code groups on that statprint message show that it was filed from Philadelphia-Paoli Station Landing Flat, to be exact-just after ten thirty the morning before-lO.34 AM. Thursday. It was transmitted a couple of minutes after it was filed and was received at once, because Ben's office has its own statprinter. All right, now you tell me why Ben sent a printed message to his own office-during working hours-instead of telephoning?"

"Why, I don't think he would, ordinarily. At least I wouldn't. The telephone is the normal-"

"But you aren't Ben. I can think of half a dozen reasons, for a man in Ben's business. To avoid garbles. To insure a printed record in the files of I.T.&T. for legal purposes. To send a delayed message. All sorts of reasons. Kilgallen saw nothing odd about it-and the simple fact that Ben, or the syndicate he sells to, goes to the expense of maintaining a private statprinter in his office shows that Ben uses it regularly.

"However," Jubal went on, "the snoops I hired are a suspicious lot; that message placed Ben at Paoli flat at ten thirty-four on Thursday-so one of them went there. Jill, that message was not sent from there."

"But-"

"One moment. The message was filed from there but did not originate there. Messages are either handed over the counter or telephoned. If one is handed over the counter, the customer can have it typed or he can ask for facsimile transmission of his handwriting and signature . . . but if it is filed by telephone, it has to be typed by the filing office before it can be photographed."

"Yes, of course."

"Doesn't that suggest anything, Jill?"

"Uh ... Jubal, I'm so worried that I'm not thinking straight. What should it suggest?"

"Quit the breast-beating; it wouldn't have suggested anything to me, either. But the pro who was working for me is a very sneaky character; he arrived at Paoli with a convincing statprint made from the photograph that was taken under Kilgallen's nose-and with business cards and credentials that made it appear that he himself was 'Osbert Kilgallen,' the addressee. Then, with his fatherly manner and sincere face, he hornswoggled a young lady employee of I.T.&T. into telling him things which, under the privacy amendment to the Constitution, she should have divulged only under court order-very sad. Anyhow, she did remember receiving that message for file and processing. Ordinarily she wouldn't remember one message out of hundreds-they go in her ears and out her fingertips and are gone, save for the filed microprint. But, luckily, this young lady is one of Ben's faithful fans; she reads his 'Crow's Nest' column every night-a hideous vice." Jubal blinked his eyes thoughtfully at the horizon. "Front!"

Anne appeared, dripping. "Remind me," Jubal said to her, "to write a popular article on the compulsive reading of news. The theme will be that most neuroses and some psychoses can be traced to the unnecessary and unhealthy habit of daily wallowing in the troubles and sins of five billion strangers. The title is 'Gossip Unlimited'-no, make that 'Gossip Gone Wild.'"

"Boss, you're getting morbid."

"Not me. But everybody else is. See that I write it some time next week. Now vanish; I'm busy." He turned back to Gillian. "She noticed Ben's name, so she remembered the message-quite thrilled about it, because it let her speak to one of her heroes . . . and was irked, I gather, because Ben hadn't paid for vision as well as voice. Oh, she remembers it and she remembers, too, that the service was paid for by cash from a public booth-in Washington."

"'In Washington'?" repeated Jill. "But why would Ben call from-"

"Of course, of course!" Jubal agreed pettishly. "If he's at a public phone booth anywhere in Washington, he can have both voice and vision direct to his office, face to face with his assistant, cheaper, easier, and. quicker than he could phone a stat message to

be sent back to Washington from a point nearly two hundred miles away. It doesn't make sense. Or, rather, it makes just one kind of sense. Hanky-panky. Ben is as used to hanky-panky as a bride is to kisses. He didn't get to be one of the best winchells in the business through playing his cards face up."

"Ben is not a winchell! He's a Lippmann!"

"Sorry, I'm color-blind in that range. Keep quiet. He might have believed that his phone was tapped but his statprinter was not. Or he might have suspected that both were tapped-and I've no doubt they are, by now, if not then-and that he could use this round-about relay to convince whoever was tapping him that he really was away from Washington and would not be back for several days." Jubal frowned. "In the latter case we would be doing him no favor by finding him. We might be endangering his life."

"Jubal! No!"

"Jubal, yes," he answered wearily. "That boy skates close to the edge, he always has. He's utterly fearless and that's how he's made his reputation. But the rabbit is never more than two jumps ahead of the coyote and this time maybe one jump. Or none, Jill, Ben has never tackled a more dangerous assignment than this. If he has disappeared voluntarily-and he may have-do you want to risk stirring things up by bumbling around in your amateur way, calling attention to the fact that he has dropped out of sight? Kilgallen still has him covered, as Ben's column has appeared every day. I don't ordinarily read it-but I've made it my business to know, this time."

"Canned columns! Mr. Kilgallen told me so."

"Of course. Some of Ben's perennial series on corrupt campaign funds. That's a subject as safe as being in favor of Christmas. Maybe they're kept on file for such emergencies-or perhaps Kilgallen is writing them. In any case, Ben Caxton, the ever-ready Advocate of the Peepul, is still officially on his usual soap box. Perhaps he planned it that way, my dear-because he found himself in such danger that he did not dare get in touch even with you. Well?"

Gillian glanced fearfully around her-at a scene almost unbearably peaceful, bucolic, and beautiful-then covered her face with her hands. "Jubal ... I don't know what to do!"

"Snap out of it," he said gruffly. "Don't bawl over Ben-not in my presence. The worst that can possibly have happened to him is death and that we are all in for-if not this morning, then in days, or weeks, or years at most. Talk to your protégé Mike about it. He regards 'discorporation' as less to be feared than a scolding-and he may be right. Why, if I told Mike we were going to roast him and serve him for dinner tonight, he would thank me for the honor with his voice choked with gratitude."

"I know he would," Jill agreed in a small voice, "but I don't have his philosophical attitude about such things."

"Nor do I," Harshaw agreed cheerfully, "but I'm beginning to grasp it-and I must say that it is a consoling one to a man of my age. A capacity for enjoying the inevitable-why, I've been cultivating that all my life . . . but this infant from Mars, barely old enough to vote and too unsophisticated to stand clear of the horse cars, has me convinced that I've just reached the kindergarten class in this all-important subject. Jill, you asked if Mike was welcome to stay on. Child, he's the most welcome guest I've ever had. I want to keep that boy around until I've found out what it is that he knows and I don't! This 'discorporation' thing in particular it's not the Freudian 'death-wish' cliché, I'm sure of

that. It has nothing to do with life being unbearable. None of that 'Even the weariest river' stuff -it's more like Stevenson's 'Glad did I live and gladly die and I lay me down with a will!' Only I've always suspected that Stevenson was either whistling in the dark, or, more likely, enjoying the compensating euphoria of consumption. But Mike has me halfway convinced that he really knows what he is talking about."

"I don't know," Jill answered dully. "I'm just worried about Ben."

"So am I," agreed Jubal. "So let's discuss Mike another time. Jill, I don't think that Ben is simply hiding any more than you do."

"But you said-"

"Sorry. I didn't finish. My hired men didn't limit themselves to Ben's office and Paoli Flat. On Thursday morning Ben called at Bethesda Medical Center in company with the lawyer he uses and a Fair Witness-the famous James Oliver Cavendish, in case you follow such things."

"I don't, I'm afraid."

"No matter. The fact that Ben retained Cavendish shows how seriously he took the matter; you don't hunt rabbits with an elephant gun. The three were taken to see the 'Man from Mars'-"

Gillian gaped, then said explosively, "That's impossible! They couldn't have come on that floor without my knowing it!"

"Take it easy, Jill. You're disputing a report by a Fair Witness and not just any Fair Witness. Cavendish himself. If he says it, it's gospel."

"I don't care if he's the Twelve Apostles! He wasn't on my floor last Thursday morning!"

"You didn't listen closely. I didn't say that they were taken to see our friend Mike-I said they were taken to see 'The Man from Mars.' The phony one, obviously-that actor fellow they stereovised."

"Oh. Of course, And Ben caught them out!"

Jubal looked pained. "Little girl, count to ten thousand by twos while I finish this. Ben did not catch them out. In fact, even the Honorable Mr. Cavendish did not catch them out-at least he won't say so. You know how Fair Witnesses behave."

"Well ... no, I don't. I've never had any dealings with Fair Witnesses."

"So? Perhaps you weren't aware of it. Anne!"

Anne was seated on the springboard; she turned her head. Jubal called out, "That new house on the far hilltop-can you see what color they've painted it?"

Anne looked in the direction in which Jubal was pointing and answered, "It's white on this side." She did not inquire why Jubal had asked, nor make any comment.

Jubal went on to Jill in normal tones, "You see? Anne is so thoroughly indoctrinated that it doesn't even occur to her to infer that the other side is probably white, too. All the King's horses and all the King's men couldn't force her to commit herself as to the far side - . . unless she herself went around to the other side and looked-and even then she wouldn't assume that it stayed whatever color it might be after she left because they might repaint it as soon as she turned her back,"

"Anne is a Fair Witness?"

"Graduate, unlimited license, and admitted to testify before the High Court. Sometime ask her why she decided to give up public practice. But don't plan on anything else that day-the wench will recite the truth, the whole truth, and nothing but the truth,

and that takes time. Back to Mr. Cavendish- Ben retained him for open witnessing, full disclosure, without enjoining him to privacy. So when Cavendish was questioned, he answered, in full and boring detail. I've got a tape of it upstairs. But the interesting part of his report is what he does not say. He never states that the man they were taken to see was not the Man from Mars . . . but not one word can be construed as indicating that Cavendish accepted the exhibit he was called to view as being in fact the Man from Mars. If you knew Cavendish-and I do-this would be conclusive. If Cavendish had seen Mike, even for a few minutes, he would have reported what he had seen with such exactness that you and I, who know Mike, would know that he had seen him. For example, Cavendish reports in precise professional jargon the shape of this exhibit's ears ... and it does not match Mike's ear shape at all. Q.E.D.; he didn't see Mike. Nor did Ben. They were shown a phony. Furthermore Cavendish knows it, even though he is professionally restrained from giving opinions or conclusions."

"But I told you so. They never came near my floor."

"Yes. But it tells us something more. This occurred hours before you pulled your jail break for Mike-about eight hours earlier, as Cavendish sets their arrival in the presence of the phony 'Man from Mars' at 9.14 Thursday morning. That is to say, the government still had Mike under their thumb at that moment. In the same building. They could have exhibited him. Yet they took the really grave risk of offering a phony for inspection by the most noted Fair Witness in Washington-in the country. Why?"

He waited. Jill answered slowly, "You're asking me? I don't know. Ben told me that he intended to ask Mike if he wanted to leave the hospital-and help him to do so if he said, 'Yes.'"

"Which Ben did try, with the phony."

"So? Out, Jubal, they couldn't have known that Ben intended to do that . . . and, anyhow, Mike wouldn't have left with Ben."

"Why not? Later that day he left with you."

"Yes-but I was already his 'water brother,' just as you are now. He has this crazy Martian idea that he can trust utterly anyone with whom he has shared a drink of water. With a 'water brother' he is completely docile and with anybody else he is stubborn as a mule. Ben couldn't have budged him." She added, "At least that is the way he was last week-he's changing awfully fast."

"So he is. Too fast, maybe. I've never seen muscle tissue develop so rapidly-I'm sorry I didn't weigh him the day you arrived. Never mind, back to Ben-Cavendish reports that lien dropped him and the lawyer, a chap named Frisby, at nine thirty-one, and Ben kept the cab. We don't know where Ben went then. But an hour later he-or let's say somebody who said he was Ben-phoned that message to Paoli Flat."

"You don't think it was Ben?"

"I do not. Cavendish reported the license number of the cab and my scouts tried to get a look at the daily trip tape for that cab. If Ben used his credit card, rather than feeding coins into the cab's meter, his charge number should be printed on the tape-but even if he paid cash the tape should show where the cab had been and when."

"Well?"

Harshaw shrugged. "The records show that that cab was in for repairs and was never in use Thursday morning. That gives us two choices: either a Fair Witness misread or misremembered a cab's serial number or somebody tampered with the record." He

added grimly, "Maybe a jury would decide that even a Fair Witness could glance at a cab's serial number and misread it, especially if he had not been asked to remember it-but I don't believe it . . . not when the Witness is James Oliver Cavendish. Cavendish would either be certain of that serial number-or his report would never mention it."

Harshaw scowled and went on, "Jill, you're forcing me to rub my own nose in it-and I don't like it, I don't like it at all! Granted that Ben could have sent that message, it is most unlikely that he could have tampered with the daily record of that cab . . and still less believable that he had any reason to. No, let's face it. Ben went somewhere in that cab- and somebody who could get at the records of a public carrier went to a lot of trouble to conceal where he went . . and sent a phony message to keep anyone from realizing that he had disappeared."

"'Disappeared!' Kidnapped, you mean!"

"Softly, Jill. 'Kidnapped' is a dirty word."

"It's the only word for it! Jubal, how can you sit there and do nothing when you ought to be shouting it from the-"

"Stop it, Jill! There's another word. Instead of kidnapped, he might be dead."

Gillian slumped. "Yes," she agreed dully. "That's what I'm really afraid of."

"So am I. But we'll assume he is not, until we have seen his bones. But it's one or the other-so we assume that he is kidnapped. Jill, what's the greatest danger about kidnapping? No, don't bother your pretty head; I'll tell you. The greatest danger to the victim is a hue-and-cry-because if a kidnapper is frightened, he will almost always kill his victim. Had you thought of that?"

Gillian looked woeful and did not answer. Harshaw went on gently, "I am forced to say that I think it is extremely likely that Ben is dead. He has been gone too long. But we've agreed to assume that he is alive-until we know otherwise. Now you intend to look for him. Gillian, can you tell me how you will go about this? Without increasing the risk that lien will be done away with by the unknown party or parties who kidnapped him?"

"Uh- But we know who they are!"

"Do we?"

"Of course we do! The same people who were keeping Mike a prisoner-the government!"

Harshaw shook his head. "We don't know it. That's an assumption based on what Ben was doing when last seen. But it's not a certainty. Ben has made lots of enemies with his column and by no means all of them are in the government. I can think of several who would willingly kill him if they could get away with it. However-" Harshaw frowned. "Your assumption is all we have to go on. But not 'the government'-that's too sweeping a term. 'The government' is several million people, nearly a million in Washington alone. We have to ask ourselves: Whose toes were being stepped on? What person or persons? Not 'the government'-but what individuals?"

"Why, that's plain enough, Jubal. I told you, just as Ben told it to me. It's the Secretary General himself."

"No," Harshaw denied. "While that may be true, it's not useful to us. No matter who did what, if it is anything rough or illegal, it won't be the Secretary General who did it, even if he benefits by it. Nobody would ever be able to prove that he even knew about it. It is likely that he would not know about it-not the rough stuff. No, Jill, we need to find out which lieutenant in the Secretary General's large staff' of stooges handled this

operation. But that isn't as hopeless as it sounds-I think. When Ben was taken in to see that phony 'Man from Mars,' one of Mr. Douglas's executive assistants was with him-tried to talk him out of it, then went with him. It now appears that this same top-level stooge also dropped out of sight last Thursday - . . and I don't think it is a coincidence, not when he appears to have been in charge of the phony 'Man from Mars.' If we find him, we may find Ben, Gilbert Berquist is his name and I have reason-"

"Berquist?"

"That's the name. And I have reason to suspect that-Jill, what's the trouble? Stop it! Don't faint, or sweip me, I'll dunk you in the pool!"

"Jubal. This 'Berquist.' Is there more than one Berquist?"

"Eh? I suppose so ... though from all I can find out he does seem to be a bit of a bastard; there might be only one. Out I mean the one on the Executive staff. Why? Do you know him?"

"I don't know. But if it is the same one ... I don't think there's any use looking for him."

"Mmm ... talk, girl."

"Jubal, I'm sorry-I'm terribly sorry-but I didn't tell you quite everything."

"People rarely do. All right, out with it."

Stumbling, stuttering, and stammering, Gillian managed to tell about the two men who suddenly were not there. Jubal Simply listened. "And that's all," she concluded sadly. "I screamed and scared Mike ... and he went into that trance you saw him in-and then I had a simply terrible time getting here. But I told you about that."

"Mmm ... yes, so you did. I wish that you had told me about this, too."

She turned red. "I didn't think anybody would believe me. And I was scared. Jubal, can they do anything to us?"

"Eh?" Jubal seemed surprised. "Do what?"

"Send us to jail, or something?"

"Oh. My dear, it has not yet been declared a crime to be present at a miracle. Nor to work one. But this matter has more aspects than a cat has hair. Keep quiet and let me think."

Jill kept quiet. Jubal held still about ten minutes. At last he opened his eyes and said, "I don't see your problem child. He's probably lying on the bottom of the pool again-"

"He is."

"-so dive in and get him. Dry him off and bring him up to my study. I want to find Out if he can repeat this stunt at will . . . and I don't think we need an audience. No, we do need an audience. Tell Anne to put on her Witness robe and come along-tell her I want her in her official capacity. I want Duke, too."

"Yes, Boss."

"You're not privileged to call me 'Boss'; you're not tax deductible."

"Yes, Jubal."

"That's better. Mmm ... I wish we had somebody here who never would be missed. Regrettably we are all friends. Do you suppose Mike can do this Stunt with inanimate objects?"

"I don't know."

"We'll find out. Well, what are you standing there for? Haul that boy out of the water and wake him up." Jubal blinked thoughtfully. "What a way to dispose of-no, I mustn't be tempted. See you upstairs, girl."

XII

A FEW MINUTES LATER Jill reported to Jubal's study. Anne was there, seated and enveloped in the long white robe of her guild; she glanced at Jill, said nothing. Jill found a chair and kept quiet, as Jubal was at his desk and dictating to Dorcas; he did not appear to notice Jill's arrival and went on dictating:

"-from under the sprawled body, soaking one corner of the rug and seeping out beyond it in a spreading dark red pool on the tiled hearth, where it was attracting the attention of two unemployed flies. Miss Simpson clutched at her mouth. 'Dear me!' she said in a distressed small voice, 'Daddy's favorite rug! . . . and Daddy, too, I do believe.' End of chapter, Dorcas, and end of first installment. Mail it off. Git."

Dorcas stood up and left, taking along her shorthand machine, and nodding and smiling to Jill as she did so. Jubal said, "Where's Mike?"

"In his room," answered Gillian, "dressing. He'll be along soon."

"'Dressing'?" Jubal repeated peevishly. "I didn't say the party was formal."

"But he has to get dressed."

"Why? It makes no never-mind to me whether you kids wear skin or fleece-lined overcoats-and it's a warm day. Chase him in here."

"Please, Jubal. He's got to learn how to behave. I'm trying so hard to train him."

"Hmmph! You're trying to force on him your own narrow-minded, middle class, Bible Belt morality. Don't think I haven't been watching."

"I have not! I haven't concerned myself with his morals; I've simply been teaching him necessary customs."

"Customs, morals-is there a difference? Woman, do you realize what you are doing? Here, by the grace of God and an inside straight, we have a personality untouched by the psychotic taboos of our tribe-.--and you want to turn him into a carbon copy of every fourth-rate conformist in this frightened land! Why don't you go whole hog? Get him a brief case and make him carry it wherever he goes-make him feel shame if he doesn't have it."

"I'm not doing anything of the sort! I'm just trying to keep him out of trouble. It's for his own good."

Jubal snorted. "That's the excuse they gave the tomcat just before his operation."

"Oh!" Jill stopped and appeared to be counting ten. Then she said formally and blealdy, "This is your house, Doctor Harshaw, and we are in your debt. If you will excuse me, I will fetch Michael at once." She got up to leave.

"Hold it, Jill."

"Sir?"

"Sit back down-and for God's sake quit trying to be as nasty as I am; you don't have my years of practice. Now let me get something straight: you are not in my debt. You can't be. Impossible-because I never do anything I don't want to do. Nor does anyone, but in my case I am always aware of it. So please don't invent a debt that does

not exist, or before you know it you will be trying to feel gratitude-and that is the treacherous first step downward to complete moral degradation. You grok that? Or don't you?"

Jill bit her lip, then grinned. "I'm not sure I know what 'grok' means."

"Nor do I. But I intend to go on taking lessons from Mike until I do. But I was speaking dead seriously. Gratitude is a euphemism for resentment. Resentment from most people I do not mind-but from pretty little girls it is distasteful to me."

"Why, Jubal, I don't resent you-that's silly."

"I hope you don't... but you certainly will if you don't root out of your mind this delusion that you are indebted to me. The Japanese have five different ways to say 'thank you'-and every one of them translates literally as resentment, in various degrees. Would that English had the same built-in honesty on this point! Instead, English is capable of defining sentiments that the human nervous system is quite incapable of experiencing. 'Gratitude,' for example."

"Jubal, you're a cynical old man. I do feel grateful to you and I shall go on feeling grateful."

"And you are a sentimental young girl. That makes us a perfect complementary pair. Hmm - let's run over to Atlantic City for a weekend of illicit debauchery, just us two."

"Why, Jubal!"

"You see how deep your gratitude goes when I attempt to draw on it?"

"Oh. I'm ready. How soon do we leave?"

"Hmmmphtt We should have left forty years ago. Shut up. The second point I want to make is that you are right; the boy does indeed have to learn human customs. He must be taught to take off his shoes in a mosque and to wear his hat in a synagogue and to cover his nakedness when taboo requires it, or our tribal shamans will burn him for deviationism. But, child, by the myriad deceptive aspects of Ahrilflafl, don't brainwash him in the process. Make sure he is cynical about each part of it."

"Uh, I'm not sure how to go about that, Jubal. Well, Mike just doesn't seem to have any cynicism in him."

"So? Yes. Well, I'll take a band in it. What's keeping him? Shouldn't he be dressed by now?"

"I'll go see."

"In a moment. Jill, I explained to you why I had not been anxious to accuse anyone of kidnapping Ben . . . and the reports I have had since Serve to support the probability that that was a tactically correct decision. If Ben is being unlawfully detained (to put it at its sweetest), at least we have not crowded the opposition into getting rid of the evidence by getting rid o~ Ben. If he is alive he stands a chance of staying alive. But I took 0ther steps the Ilrst night you were here. Do you know your Bible?"

"Uh, not very well."

"It merits study, it contains very practical advice for most emergencies. '-every one that doeth evil hateth the light-' John something or other, Jesus speaking to Nicodeus. I have been expecting at any moment an attempt to get Mike away from us, for it didn't seem likely that you had managed to cover your tracks perfectly. And if they do try? Well, this is a lonely place and we haven't any heavy artillery. But there is one weapon that might balk them. Light. The glaring spotlight of publicity. So I made some phone

calls and arranged for any ruckus here to have publicity. Not just a little publicity that the administration might be able to hush up, but great gobs of publicity worldwide and all at once. The details do not matter-where and how the cameras are mounted and what line of sight linkages have been rigged, I mean. But if a fight breaks out here, it will be picked up by three networks and, at the same time, a number of hold for release messages will be delivered to a wide spread of V.I.P.s, all of whom would like very much to catch our Honorable Secretary General with his pants down."

Harshaw frowned. "The weakness in this defense is that I can't maintain it indefinitely. Truthfully, when I set it up, my worry was to set up fast enough-I expected whatever popped' to pop inside of twenty four hours. Now my worry is reversed and I think we are going to have to force some action quickly while I can still keep a spotlight on us."

"What sort of action, Jubal?"

"I don't know. I've been fretting about it the past three days, to the point where I can't enjoy my food. But you gave me a glitn1Uefl0~ of a new approach when you told me that remarkable story about what happened when they tried to grab you two in Ben's apartment."

"I'm sorry I didn't tell you sooner, Jubal. But I didn't think anybody would believe me and I must say that it makes me feel good that you do believe me."

"I didn't say I believed you."

"What? But you-"

"I think you were telling the truth, Jill. But a dream IS a true experience of a sort and so is a hypnotic delusion. But what happens in this room during the next half hour will be seen by a Fair Witness and by cameras which are" he leaned forward and pressed a button. "rolling right now. I don't think Anne can be hypnotized when she's on duty and I'll lay long odds that cameras can't be. We should be able to find out what kind of truth we're dealing with-after which we should be able to decide how to go about forcing the powers-that-be to drop the other shoe . . . and maybe figure a way that will help Ben at the same time. Go get Mike."

Mike's delay was not mysterious, merely worrisome to him. He had managed to tie his left shoestring to his right-then had stood up, tripped himself, fallen flat, and, in so doing, jerked the knots almost hopelessly tight. He had spent the rest of the time analysing his predicament, concluding correctly why he had failed, and slowly, slowly, slowly getting the snarl untied and the strings correctly tied, one bow to each shoe, unlinked. He had not been aware that his dressing had taken long; he had simply been troubled that he had failed to repeat correctly something which Jill had already taught him. He confessed his failure abjectly to her even though he had repaired it by the time she came to fetch him.

She soothed and reassured him, combed his hair, and herded him in to see Jubal. Harshaw looked up. "Hi, son. Sit down."

"Hi, Jubal," Valentine Michael Smith answered gravely, sat down- waited. Jill had to rid herself of the impression that Smith had bowed deeply, when in fact he had not even nodded.

Harshaw put aside a hush-mike and said, "Well, boy what have you learned today?"

Smith smiled happily, then answered-as always with a slight pause. "I have today learned to do a one-and-a-half gainer. That is a jumping, a dive, for entering our water by-"

"I know, I saw you doing it. But you splashed. Keep your toes pointed, your knees straight, and your feet together."

Smith looked unhappy. "I rightly did not it do?"

"You did it very rightly, for a first time. Watch how Dorcas does it. Hardly a ripple in the water."

Smith considered this slowly. "The water groks Dorcas. It cherishes him."

"'Her.' Dorcas is a 'her,' not a 'him.'"

"'Her,' " Smith corrected. "Then my speaking was false? I have read in Webster's New International Dictionary of the English Language, Third Edition, published in Springfield, Massachusetts, that the masculine gender includes the feminine gender in speaking. In Hagworth's Law of Contracts, Fifth Edition, Chicago, Illinois, 1978, on page 1012, it says-"

"Hold it," Harshaw said hastily. "The trouble is with the English language, not with you. Masculine speech forms do include the feminine, when you are speaking in general-but not when you are talking about a particular person. Dorcas is always 'she' or 'her'-never 'he' or 'him.' Remember it."

"I will remember it."

"You had better remember it-~r you may provoke Dorcas into proving just how female she is." Harshaw blinked thoughtfully. "Jill, is the lad sleeping with you? Or with one of you?"

She barely hesitated, then answered flatly, "SO far as I know, Mike doesn't sleep."

"You evaded my question."

"Then perhaps you had better assume that I intended to evade it. However, he is not sleeping with me."

"Mmm .. damn it, my interest is scientific. However, we'll pursue another line of inquiry. Mike, what else have you learned today?"

"I have learned two ways to tie my shoes. One way is only good for lying down. The other way is good for walking. And I have learned conjugations. 'I am, thou art, he is, we are, you are, they are, I was, thou wast-"

"Okay, that's enough. What else?"

Mike smiled delightedly. "To yesterday I am learning to drive the tractor, brightly, brightly, and with beauty."

"Eh?" Jubal turned to Jill. 'When did this happen?"

"Yesterday afternoon while you were napping, Jubal. It's all right- Duke was very careful not to let him get hurt."

"Umm ... well, obviously he did not get hurt. Mike, have you been reading?"

"Yes, Jubal."

"What?"

"I have read," Mike recited carefully, "three more volumes of the Encyclopedia, Maryb to Mushe, Mushr to Ozon, P to Planti. You have told me not to read too much of the Encyclopedia at one reading, so I then stopped. I then read the Tragedy of Romeo and

Juliet by Master William Shakespeare of London. I then read the Memoirs of Jacques Casanova de Sein gait as translated into English by Arthur Machen. I then read The Art of Cross-Exam mat ion by Francis Weilman. I then tried to grok what I had read until Jill told me that I must come to breakfast."

"And did you grok it?"

Smith looked troubled. "Jubal, I do not know."

"Is anything bothering you, Mike?"

"I do not grok all fullness of what I read. In the history written by Master William Shakespeare I found myself full of happiness at the death of Romeo. Then I read on and learned that he had discorporated too soon-or so I thought I grokked. Why?"

"He was a blithering young idiot."

"Beg pardon?"

"I don't know, Mike."

Smith considered this. Then he muttered something in Martian and added, "I am only an egg."

"Eh? You usually say that when you want to ask a favor, Mike. What is it this time? Speak up."

Smith hesitated. Then he blurted out, "Jubal my brother, would please you ask Romeo why he discorporated? I cannot ask him; I am only an egg. But you can-and then you could teach me the grokking of it."

For the next several minutes the conversation became very tangled. Jubal saw at once that Mike believed that Romeo of Montague had been a living, breathing person, and Jubal managed with no special shock to his own concepts to realize that Mike expected him to be able, somehow, to conjure up Romeo's ghost and demand of him explanations for his conduct when in the flesh.

But to get over to Mike the idea that none of the Capulets and Montagues had ever had any sort of corporate existence was another matter. The concept of fiction was nowhere in Mike's experience; there was nothing on which it could rest, and Jubal's attempts to explain the idea were so emotionally upsetting to Mike that Jill was afraid that he was about to roll up into a ball and withdraw himself.

But Mike himself saw how perilously close he was coming to that necessity and he had already learned that he must not resort to this refuge in the presence of his friends, because (with the exception of his brother Doctor Nelson) it always caused them emotional disturbance. So he made a mighty effort, slowed down his heart, calmed his emotions, and smiled. "I will waiting till a grokking comes of itself."

"That's better," agreed Jubal. "But hereafter, before you read anything, ask me or ask Jill, or somebody, whether or not it is fiction. I don't want you to get mixed up."

"I will ask, Jubal." Mike decided that, when he did grok this strange idea, that he must report the fullness to the Old Ones . . . and suddenly found himself wondering if the Old Ones knew about "fiction." The completely incredible idea that there might be something which was as strange to the Old Ones as it was to himself was so much more revolutionary (indeed heretically so) than the sufficiently weird concept of fiction that he hastily put it aside to cool, saved it for future deep contemplation.

"-but I didn't," his brother Jubal was saying, "call you in here to discuss literary forms. Mike, you remember the day that Jill took you away from the hospital?"

"'Hospital'?" Mike repeated.

"I'm not sure, Jubal," Jill interrupted, "that Mike ever knew that it was a hospital-at least I never told him it was one. Let me try it."

"Go ahead."

"Mike, you remember the place where you were, where you lived alone in a room, before I dressed you and took you away."

"Yes, Jill."

"Then we went to another place and I undressed you and gave you a bath."

Smith smiled in pleased recollection. "Yes. It was a great happiness."

"Then I dried you off-and then two men came."

Smith's smile wiped away. He relived that critical cusp of decision and the horror of his discovery that, somehow, he had chosen wrong action and hurt his water brother. He began to tremble and huddle into himself.

Jill said loudly, "Mike! Stop it! Stop it at once! Don't you dare go away!"

Mike took control of his being and did what his water brother required of him. "Yes, Jill," he agreed.

"Listen to me, Mike. I want you to think about that time-but you mustn't get upset or go away. Just remember it. There were two men there. One of them pulled you Out into the living room."

"The room with the joyful grasses on the floor," he agreed.

"That's right. He pulled you Out into the room with the grass on the floor and I tried to stop him. He hit me. Then he was gone. Y~u remember?"

"You are not angry?"

"What? No, no, not at all. But I was frightened. One man disappeared, then the other one pointed a gun at me-and then he was gone, too. I was very frightened-but I was not angry."

"You are not angry with me now?"

"Mike, dear-I have never been angry with you. But sometimes I have been frightened. I was frightened that time-but I am not afraid now. Jubal and I want to know what happened. Those two men were there, in that room with us. And then you did something . . . and they were gone. You did it twice. What was it you did? Can you tell us?"

"Yes, I will tell you. The man-the big man-hit you ... and I was frightened, too. So I-" He croaked a phrase in Martian, then looked puzzled. "I do not know words."

Jubal said, "Mike, can you use a lot of words and explain it a little at a time?"

"I will try, Jubal. Something is there, in front of me. It is a wrong thing and it must not be there. It must go. So I reach out and-" He stopped again and looked perplexed. "It is such a simple thing, such an easy thing. Anyone can do it. Tying shoe laces is much more hard. But the words not are. I am very sorry. I will learn more words." He considered it. "Perhaps the words are in Plants to Raym, or Rayn to Sarr, or Sars to Sorc. I will read them tonight and tell you at breakfast."

"Maybe," Jubal admitted. "Just a minute, Mike." He got up from his desk, went to a corner and returned with a large carton which had lately contained twelve fifths of brandy. "Can you make this go away?"

"This is a wrong thing and it must not be here?"

"Well, assume that it is."

"But-Jubal, I must know that it is a wrong thing. This is a box. I do not grok that it exists wrongly."

"Mmm- I see. I think I see. Suppose I picked up this box and threw it at Jill's head? Threw it hard, so that it would hurt her?"

Smith said with gentle sadness, "Jubal, you would not do that to Jill."

"Uh ... damn it. I guess I wouldn't. Jill, will you throw the box at me? Good and hard-a scalp wound at least, if Mike can't protect me."

"Jubal, I don't like the idea much better than you do."

"Oh, come on! In the interest of science ... and Ben Caxton."

"But-" Jill jumped up suddenly, grabbed the box, threw it right at Jubal's head. Jubal intended to stand and take it-but instinct and habit won out; he ducked.

"Missed me," he said. "But where is it?" He looked around. "Confound it, I wasn't watching. I meant to keep my eyes right on it." He looked at Smith. "Mike, is that the way-what's the matter, boy?"

The Man from Mars was trembling and looking unhappy. Jill hurried to him and put her arms around his shoulders. "There, there, it's all right, dear! You did it beautifully-whatever it is. It never touched Jubal. It simply vanished."

"I guess it did," Jubal admitted, looking all around the room and chewing his thumb. "Anne, were you watching?"

"Yes."

"What did you see?"

"The box did not simply vanish. The process was not quite instantaneous but lasted some measurable fraction of a second. From where I am sitting it appeared to shrink very, very rapidly, as if it were disappearing into the far distance. But it did not go outside the room, for I could see it right up to the instant it disappeared."

"But where did it go?"

"That is all I can report."

"Mmm ... we'll run off the films later-but I'm convinced. Mike-"

"Yes, Jubal?"

"Where is that box now?"

"The box is-" Smith paused. "Again I have not words. I am sorry."

"I'm not sorry, but I'm certainly confused. Look, son, can you reach in again and haul it out? Bring the box back here?"

"Beg pardon?"

"You made it go away; now make it come back."

"How can I do that? The box is nor."

Jubal looked very thoughtful. "If this method ever becomes popular, we'll have to revise the rules concerning corpus delecti. 'I've got a little list they never will be missed.' Jill, let's find something else that will make a not-quite-lethal weapon; this time I'm going to keep my eyes open. Mike, how close do you have to be to do this trick?"

"Beg pardon?"

"What's your range? If you had been standing out there in the hallway and I had been clear back by the window-oh, say thirty feet-could you have stopped that box from hitting me?"

Smith appeared mildly surprised. "Yes."

"Hmm ... come over here by the window. Now look down there at the swimming poo1. Suppose that Jill and I had been over on the far side of the pool and you had been standing right where you are. Could you have stopped the box from here?"

"Yes, Jubal."

"Well ... suppose Jill and I were clear down the road there at the gate, a quarter of a mile away. Suppose we were standing just this side of those bushes that shield the gate, where you could see us clearly. Is that too far?"

Smith hesitated a long time, then spoke slowly. "Jubal, it is not the distance. It is not the seeing. It is the knowing."

"Hmm ... let's see if I grok it. Or grok part of it. It doesn't matter how far or how close a thing is. You don't even have to see it happening. But if you know that a bad thing is happening, you can reach out and stop it. Right?"

Smith looked slightly troubled. "Almost it is right. But I am not long out of the nest. For knowing I must see. But an Old One does not need eyes to know. He knows. He groks. He acts. I am sorry."

"I don't know what you are sorry about, son," Jubal said gruffly. "The High Minister for Peace would have declared you Top Secret ten minutes ago."

"Beg pardon?"

"Never mind. What you do is quite good enough in this vicinity." Jubal returned to his desk, looked around thoughtfully and picked up a ponderous metal ash tray. "Jill, don't aim at my face this time; this thing has sharp corners. Okay, Mike, you stand clear out in the hallway."

"Jubal ... my brother . . . please not!"

"What's the trouble, son? You did it beautifully a few minutes ago. I want one more demonstration-and this time I won't take my eyes off it."

"Jubal-"

"Yes, Jill?"

"I think I grok what is bothering Mike."

"Well, tell me then, for I don't."

"We set up an experiment where I was about to hurt you by hitting you with that box. But both of us are his water brothers-so it upset Mike that I even tried to hurt you. I think there is something very unMartian about such a situation. It puts Mike in a dilemma. Divided loyalty."

Harshaw frowned. "Maybe it should be investigated by the Committee on un-Martian Activities."

"I'm not joking, Jubal."

"Nor was I-for we may need such a committee all too soon. I won. der how Mrs. O'Leary's cow felt as she kicked the lantern? All right, Jill, you sit down and I'll re-rig the experiment." Harshaw handed the ash tray to Mike. "Feel how heavy it is, son, and see those sharp corners."

Smith examined it somewhat gingerly. Harshaw went on, "I'm going to throw it straight up in the air, clear to the ceiling-and let it hit me in the head as it comes down."

Mike stared at him. "My brother ... you will now discorporate?"

"Eh? No, no! It won't kill me and I don't want to die. But it will cut me and hurt me-unless you stop it. Here we go!" Harshaw tossed it straight up within inches of the high ceiling, tracking it with his eyes like a soccer player waiting to pass the ball with his

head. He concentrated on watching it, while one part of his mind was considering jerking his head aside at the last instant rather than take the nasty scalp wound the heavy, ugly thing was otherwise sure to give him-and another small piece of his mind reckoned cynically that he would never miss this chattel; he had never liked it-but it had been a gift.

The ash tray topped its trajectory, and stayed there.

Harshaw looked at it, with a feeling that he was stuck in one frame of a motion picture. Presently he remembered to breathe and found that he needed to, badly. Without taking his eyes off it he croaked, "Anne. What do you see?"

She answered in a flat voice, "That ash tray is five inches from the ceiling. I do not see anything holding it up." Then she added in tones less certain, "Jubal, I think that's what I'm seeing ... but if the cameras don't show the same thing, I'm going to turn in my robe and tear up my license."

"Um. Jill?"

"It floats. It just floats."

Jubal sighed, Went to his chair and sat down heavily, all without taking his eyes off the unruly ash tray. "Mike," he said, "what went wrong? Why didn't it disappear like the box?"

"But, Jubal," Mike said apologetically, "you said to stop it; you did not say to make it go away. When I made the box go away, you wanted it to be again. Have I done wrongly?"

"Oh. No, you have done exactly right. I keep forgetting that you always take things literally." Harshaw recalled certain colloquial insults common in his early years-and reminded himself forcefully never, never to use any of such to Michael Valentine Smith-for, if he told the boy to drop dead or to get lost, Harshaw now felt certain that the literal meaning of his words would at once ensue.

"I am glad," Smith answered soberly. "I am sorry I could not make the box be again. I am sorry twice that I wasted so much food. But I did not know how to help it. Then a necessity was. Or so I grokked."

"Eh? What food?"

Jill said hastily, "He's talking about those two men, Jubal. Berquist and the cop with him-if he was a cop. Johnson."

"Oh, yes." Harshaw reflected that he himself still retained unMartian notions of food, subconsciously at least. "Mike, I wouldn't worry about wasting that 'food.' They probably would have been tough and poor flavor. I doubt if a meat inspector would have passed them. In fact," he added, recalling the Federation convention about "long pig," "I am certain that they would have been condemned as unfit for food. So don't worry about it. Besides, as you say, it was a necessity. You grokked the fullness and acted rightly."

"I am much comforted," Mike answered with great relief in his voice. 'Only an Old One can always be sure of right action at a cusp ... and I have much learning to learn and much growing to grow before I may join the Old Ones. Jubal? May I move it? I am tiring."

"You want to make it go away now? Go ahead."

"But now I cannot."

"Eh? Why not?"

"Your head is no longer under it. I do not grok wrongness in its being, where it is."

"Oh. All right. Move it." Harshaw continued to watch it, expecting that it would float to the spot now over his head and thus regain a wrongness. Instead the ash tray moved downward at a slow, steady speed, moved sideways until it was close above his desk top, hovered for a moment, then slid to an empty spot and came in to an almost noiseless landing.

"Thank you, Jubal," said Smith.

"Eh? Thank YOU, Son!" Jubal picked up the ash tray, examined it curiously. It was neither hot nor cold nor did it make his fingers tingle-it was as ugly, over-decorated, commonplace, and dirty as it had been five minutes earlier. "Yes, thank you. For the most amazing experience I've had since the day the hired girl took me up into the attic." He looked up. "Anne, you trained at Rhine."

"Yes."

"Have you seen levitation before?"

She hesitated slightly. "I've seen what was called telekinesis with dice -but I'm no mathematician and I could not testify that what I saw was telekinesis."

"Hell's bells, you wouldn't testify that the sun had risen if the day was cloudy."

"How could I? Somebody might be supplying artificial light from above the cloud layer. One of my classmates could apparently levitate objects about the mass of a paper clip-but he had to be just three drinks drunk and sometimes he couldn't do it at all. I was never able to examine the phenomenon closely enough to be competent to testify about it partly because I usually had three drinks in me by then, too."

"Then you've never seen anything like this?"

"No."

"Mmm...I'm through with you professionally; I'm convinced. But if you want to stay and see what else happens, hang up your robe and drag up a chair."

"Thanks, I will-both. But, in view of the lecture you gave Jill about mosques and synagogues, I'll go to my room first. I wouldn't want to cause a hiatus in the indoctrination."

"Suit yourself. While you're out, wake up Duke and tell him I want the cameras serviced again."

"Yes, Boss. Don't let anything startling happen until I get back." Anne headed for the door.

"No promises. Mike, sit down here at my desk. You, too, Jill-gather 'round. Now, Mike, can you pick up that ash tray? Show me."

"Yes, Jubal." Smith reached out and took it in his hand.

"No, no!"

"I did wrongly?"

"No, it was my mistake. Mike, put it back down. I want to know if you can lift that ash tray without touching it?"

"Yes, Jubal."

"Well? Are you too tired?"

"No, Jubal. I am not too tired."

"Then what's the matter? Does it have to have a 'wrongness' about it?"

"No, Jubal."

"Jubal," Jill interrupted, "you haven't told him to do it-you've just asked him if he could."

"Oh." Jubal looked as sheepish as he was capable of looking, which was not much. "I should learn. Mike, will you please, without touching it with your hands, lift that ash tray a foot above the desk?"

"Yes, Jubal." The ash tray raised, floated steadily above the desk. "Will you measure, Jubal?" Mike said anxiously. "If I did wrongly, I will move it up or down."

"That's just fine! Can you hold it there? If you get tired, tell me."

"I can. I will tell."

"Can you lift something else at the same time? Say this pencil? If you can, then do it."

"Yes, Jubal," The pencil ranged itself neatly by the ash tray.

By request, Mike added other small articles from the desk to the layer of floating objects. Anne returned, pulled up a chair and watched the performance without speaking. Duke came in, carrying a step ladder, glanced at the group, then looked a second time, but said nothing and set the ladder in one corner. At last Mike said uncertainly, "I am not sure, Jubal. I-" He stopped and seemed to search for a word. "I am idiot in these things."

"Don't wear yourself out."

"I can think one more. I hope." A paper weight across the desk from Mike stirred, lifted-and all the dozen-odd floating objects fell down at once. Mike seemed about to weep although no tears formed. "Jubal, I am sorry. I am utmostly sorry."

Harshaw patted his shoulder. "You should be proud, not sorry. Son, you don't seem to realize it, but what you just did is-" Jubal searched for a comparison, rapidly discarded the many that sprang to his mind because he realized that they touched nothing in Mike's experience. "What you did is much harder than tying shoestrings, much more wonderful to us than doing a one.and-a-half gainer perfectly. You did it, uh, 'brightly, brightly, and with beauty.' You grok?"

Mike looked surprised. "I am not sure, Jubal. I should not feel shame?"

"You must not feel shame. You should feel proud."

"Yes, Jubal," he answered contentedly. "I feel proud."

"Good. Mike, I cannot lift even one ash tray without touching it."

Smith looked startled. "You cannot?"

"No. Can you teach me?"

"Yes, Jubal. You-" Smith stopped speaking, looked embarrassed. "I again have not words. I am sorry. But I will read and I will read and I will read, until I find the words. Then I will teach my brother."

"Don't set your heart on it."

"Beg pardon?"

"Mike, don't be disappointed if you do not find the right words. You may not find them in the English language."

Smith considered this quite a long time. "Then I will teach my brother the language of my nest."

"Maybe. I would like to try-but you may have arrived about fifty years too late."

"I have acted wrongly?"

"Not at all. I'm proud of you. You might start by trying to teach Jill your language."

"It hurts my throat," put in Jill.

"Try gargling with aspirin." Jubal looked at her. "That's a silly excuse, nurse-but it occurs to me that this gives me an excuse to put you on the payroll . . . for I doubt if they will ever take you back at Bethesda. All right, you're my staff research assistant for Martian linguistics which includes such extra duties as may be necessary. Take that up with the girls. Anne, put her on the payroll-and be sure it gets entered in the tax records."

"She's been doing her share in the kitchen since the day after she got here. Shall I date it back?"

Jubal shrugged. "Don't bother me with details."

"But, Jubal," Jill protested shrilly, "I don't think I can learn Martian!"

"You can try, can't you? That's all Columbus did."

"But-"

"What was that idle chatter you were giving me about 'gratitude'? Do you take the job? Or don't you?"

Jill bit her lip. "I'll take it. Yes ... Boss."

Smith timidly reached out and touched her hand. "Jill ... I will teach."

Jill patted his. "Thanks, Mike." She looked at Harshaw. "And I'm going to learn it just to spite you!"

He grinned warmly at her. "That's a motive I grok perfectly-you'll learn it all right. Now back to business- Mike, what else can you do that we can't do? Besides making things go away-when they have a 'wrongness'-and lifting things without touching them."

Smith looked puzzled. "I do not know."

"How could he know," protested Jill, "when he doesn't really know what we can and can't do?"

"Mmm .-. yes. Anne, change that job title to 'staff research assistant for Martian linguistics, culture, and techniques.' Jill, in learning their language you are bound to stumble Onto Martian things that are different, really different-and when you do, tell me. Everything and anything about a culture can be inferred from the shape of its language-and you're probably young enough to learn to think like a Martian . . . which I misdoubt I am not. And you, Mike, if you notice anything which you can do but we don't do, tell me."

"I will tell, Jubal. What things will be these?"

"I don't know. Things like you just did ... and being able to stay on the bottom of the pool much longer than we can. Hmm . . . Duke!"

"Yes, Boss? I've got both hands full of flim. Don't bother me."

"You can talk, can't you? I noticed the pool is pretty murky."

"Yeah. I'm going to add precipitant tonight and vacuum it in the morning."

"How's the count?"

"The count is okay, the water is safe enough to serve at the table. It just looks messy."

"Let it stay murky for the time being. Test it as usual. I'll let you know when I want it cleaned up."

"Hell, Boss, nobody likes to swim in a pool that looks like dishwater. I would have tidied it up long before this if there hadn't been so much hooraw around here this week."

"Anybody too fussy to swim in it can stay dry. Quit jawing about it, Duke; I'll explain later. Films ready?"

"Five minutes."

"Good. Mike, do you know what a gun is?"

"A gun," Smith answered carefully, "is a piece of ordnance for throwing projectiles by the force of some explosive, as gunpowder, consisting of a tube or barrel closed at one end, where the-"

"Okay, okay. Do you grok it?"

"I am not sure."

"Have you ever seen a gun?"

"I do not know."

"Why, certainly you have," Jill interrupted. "Mike, think back to that time we were talking about, in the room with the grass on the floor-but don't get upset now! The big man hit me, you remember."

"Yes."

"The other man pointed something at me. In his hand."

"Yes. He pointed a bad thing at you."

"That was a gun."

"I had thinked that the word for that bad thing might be 'gun.' The Webster's New International Dictionary of the English Language, Third Edition, published in-"

"That's fine, son," Harshaw said hastily. "That was certainly a gun. Now listen to me carefully. If someone points a gun at Jill again, what will you do?"

Smith paused rather longer than usual. "You will not be angry if I waste food?"

"No, I would not be angry. Under those circumstances no one would be angry at you. But I am trying to find out something else. Could you make just the gun go away, without making the man who is pointing it go away?"

Smith considered it. "Save the food?"

"Uh, that isn't quite what I mean. Could you cause the gun to go away without hurting the man?"

"Jubal, he would not hurt at all. I would make the gun go away, but the man I would just stop. He would feel no pain. He would simply be discorporate. The food he leaves after him would not damage at all."

Harshaw sighed. "Yes, I'm sure that's the way it would be. But could you cause to go away just the gun? Not do anything else? Not 'stop' the man, not kill him, just let him go on living?"

Smith considered it. "That would be much easier than doing both at once. But, Jubal, if I left him still corporate, he might still hurt Jill. Or so I grok it."

Harshaw stopped long enough to remind himself that this baby innocent was neither babyish nor innocent-was in fact sophisticated in a culture which he was beginning to realize, however dimly, was far in advance of human culture in some very mysterious ways . . . and that these naive remarks came from a superman-or what would do in place of a "superman" for the time being. Then he answered Smith, choosing his words most carefully as he had in mind a dangerous experiment and did not want disaster to follow from semantic mishap.

"Mike ... if you reach a-'cusp'----where you must do something in order to protect Jill, you do it."

"Yes, Jubal. I will."

"Don't worry about wasting food. Don't worry about anything else. Protect Jill."

"Always I will protect Jill."

"Good. But suppose a man pointed a gun at someone-or simply had it in his hand. Suppose you did not want or need to kill him . . , but you needed to make the gun go away. Could you do it?"

Mike paused only briefly. "I think I grok it. A gun is a wrong thing. But it might be needful for the man to remain corporate." He thought. "I can do if."

"Good. Mike, I am going to show you a gun. A gun is a wrong thing."

"A gun is a very wrong thing. I will make it go away."

"Don't make it go away as soon as you see it."

"Not?"

"Not. I will lift the gun and start to point it at you. Like this. Before I can get it pointed at you, make it go away. But don't stop me, don't hurt me, don't kill me, don't do anything to me. Just the gun. Don't waste me as food, either."

"Oh, I never would," Mike said earnestly. "When you discorporate, my brother Jubal, I hope to be allowed to eat of you myself, praising and cherishing you with every bite . . . until I grok you in fullness."

Harshaw controlled a seasick reflex he had not felt in decades and answered gravely, "Thank you, Mike."

"It is I who must thank you, my brother-and if it should come to be that I am selected before you, I hope that you will find me worthy of grokking. Sharing me with Jill. You would share me with Jill? Please?"

Harshaw glanced at Jill, saw that she had kept her face serene- reflected that she probably was a rock-steady scrub nurse. "I will share you with Jill," he said solemnly. "But, Mike, no one of us will be food today, nor any time soon. Right now I am going to show you this gun- and you wait until I say . . . and then you be very careful, because I have, many things to do before I am ready to discorporate."

"I will be careful, my brother."

"All right." Harshaw leaned over, grunting slightly, and opened a~ lower drawer of his desk. "Look in here, Mike. See the gun? I'm going to pick it up. But don't do anything until I tell you to. Girls-get up and move away to the left; I don't want it pointed at you. Okay. Mike, not yet." Harshaw reached for the gun, a very elderly police special, took it out of the drawer. "Get ready, Mike. Now!"-and Harshaw did his very best to get the weapon aimed at the Man from Mars.

His hand was suddenly empty. No shock, no jar, no twisting-the gun was gone and that was all.

Jubal found that he was shaking, so he stopped it. "Perfect," he said to Mike. "You got it before I had it aimed at you. That's utterly perfect."

"I am happy."

"So am I. Duke, did that get in the camera?"

"Yup. I put in fresh film cartridges. You didn't say."

"Good." Harshaw sighed and found that he was very tired. "That's all today, kids. Run along. Go swimming. You, too, Anne."

Anne said, "Boss? You'll tell me what the films show?"

"Want to stay and see them?"

"Oh, no! I couldn't, not the parts I Witnessed. But I would like to know-later-whether or not they show that I've slipped my clutches."

"All right."

XIII

WHEN THEY HAD GONE, Harshaw started to give instructions to Duke- then instead said grumpily, "What are you looking sour about?"

"Boss, when are we going to get rid of that ghoul?"

"'Ghoul'? Why, you provincial lout!"

"Okay, so I come from Kansas. You won't find any cases of cannibalism in Kansas-they were all farther west. I've got my own opinions about who is a lout and who isn't . . . but I'm eating in the kitchen until we get rid of him."

Harshaw said icily, "So? Don't put yourself out. Anne can have your closing check ready in five minutes . . . and it ought not to take you more than ten minutes to pack up your comic books and your other shirt."

Duke had been setting up a projector. He stopped and straightened up. "Oh, I didn't mean that I was quitting."

"It means exactly that to me, son."

"But-I mean, what the hell? I've eaten in the kitchen lots of times."

"So you have. For your own convenience, or to keep from making extra work for the girls. Or some such. You can have breakfast in bed, for all of me, if you can bribe the girls to serve it to you. But nobody who sleeps under my roof refuses to eat at my table because he doesn't want to eat with others who eat there. I happen to be of an almost extinct breed, an old-fashioned gentleman-which means I can be a real revolving son of bitch when it suits me. And it suits me right now . . . which is to say that no ignorant, superstitious, prejudiced bumpkin is permitted to tell me who is, or is not, fit to eat at my table. If I choose to dine with publicans and sinners, that is my business. But I do not choose to break bread with Pharisees."

Duke turned red and said slowly, "I ought to pop you one-and I would, if you were my age."

"Don't let that stop you, Duke. I may be tougher than you think and if I'm not, the commotion will probably bring the others in. Do you think you can handle the Man from Mars?"

"Him? I could break him in two with one hand!" "Probably ... if you could lay a hand on him." "Huh?"

"You saw me try to point a pistol at him. Duke-where's that pistol? Before you go flexing your biceps, stop and think-or whatever it is you do in place of thinking. Find that pistol. Then tell me whether or not you still think you can break Mike in two. But find the pistol first."

Duke wrinkled his forehead, then went ahead setting up the projector. "Some sort of sleight-of-hand. The films will show it."

Harshaw said, "Duke. Stop fiddling with that projector. Sit down. I'll take care of it after you've left and run off the films myself. But I want to talk to you a few moments first."

"Huh? Jubal, I don't want you touching this projector. Every time you do, you get it out of whack. It's a delicate piece of machinery."

"Sit down, I said."

"But-"

"It's my projector, Duke. I'll bust the damned thing if it suits me. Or: I'll get Larry to run it for me. But I do not accept service from a man alter he has resigned from my employ."

"Hell, I didn't resign! You got nasty and sounded off and fired me- for no reason."

"Sit down, Duke," Harshaw said quietly. "Either sit down ... and let me try to save your life-or get off this place as fast as you can and let me send your clothes and wages after you. Don't stop to pack; it's too risky. You might not live that long."

"What the hell do you mean?"

"Exactly what I say. Duke, it's irrelevant whether you resigned or were fired; you terminated your employment here when you announced that you would no longer eat at my table. Nevertheless I would find it distasteful for you to be killed on my premises. So sit down and I will do my best to avoid it."

Duke looked startled, opened his mouth-closed it and sat down. Harshaw went on, "Are you Mike's water brother?"

"Huh? Of course not. Oh, I've heard such chatter-but it's nonsense, if you ask me."

"It is not nonsense and nobody asked you; you aren't competent to have an opinion about it." Harshaw frowned. "That's too bad. I can see that I am not only going to have to let you go-and, Duke, I don't want to fire you; you do a good job of keeping the gadgetry around here working properly and thereby save me from being annoyed by mechanical buffoonery I am totally uninterested in. But I must not only get you safely off the place but I must also find out at once who else around here is not a water brother to Mike . . . and either see to it that they become such-or get them off the place before anything happens to them." Jubal chewed his lip and stared at the ceiling. "Maybe it would be sufficient to exact a solemn promise from Mike not to hurt anyone without my specific permission. Mmmm . . . no, I can't risk it. Too much horse play around here-and there is always the chance that Mike might misinterpret something that was meant in fun. Say if you-or Larry, rather, since you won't be here- picked up Jill and tossed her into the pool, Larry might wind up where that pistol went, before I could explain to Mike that it was all in fun and Jill was not in danger. I wouldn't want Larry to die through my oversight. Larry is entitled to work out his own damn foolishness without having it cut short through my carelessness. Duke, I believe in everyone's working out his own damnation his own way . . . but nevertheless that is no excuse for an adult to give a dynamite cap to a baby as a toy."

Duke said slowly, "Boss, you sound like you've come unzipped. Mike wouldn't hurt anybody-shucks, this cannibalism talk makes me want to throw up but don't get me wrong; I know he's just a savage, he doesn't know any better. Hell, Boss, he's gentle as a lamb. He would never hurt anybody."

"You think so?"

"I'm sure of it."

"So. You've got two or three guns in your room. I say he's dangerous. It's open season on Martians, so pick a gun you trust, go down to the swimming pool, and kill him.

Don't worry about the law; I'll be your attorney and I guarantee that you'll never be indicted. Go ahead, do it!"

"Jubal ... you don't mean that."

"No. No, I don't really mean it. Because you can't. If you tried it, your gun would go where my pistol went-and if you hurried him you'd probably go with it. Duke, you don't know what you are fiddling with- and I don't either except that I know it's dangerous and you don't. Mike is not 'gentle as a lamb' and he is not a savage. I suspect we are the savages. Ever raise snakes?"

"Uh ... no."

"I did, when I was a kid. Thought I was going to be a zoologist then. One winter, down in Florida, I caught what I thought was a scarlet snake. Know what they look like?"

"I don't like snakes."

"Prejudice again, rank prejudice. Most snakes are harmless, useful, and fun to raise. The scarlet snake is a beauty-red, and black and yellow-docile and makes a fine pet. I think this little fellow was fond of me, in its dim reptilian fashion. Of course I knew how to handle snakes, how not to alarm them and not give them a chance to bite, because the bite of even a non-poisonous snake is a nuisance. But I was fond of this baby; he was the prize of my collection. I used to take him out and show him to people, holding him back of his head and letting him wrap himself around my wrist.

"One day I got a chance to show my collection to the herpetologist of the Tampa zoo-and I showed him my prize first. He almost had hysterics. My pet was not a scarlet snake-it was a young coral snake. The American cobra . . . the most deadly snake in North America. Duke, do You see my point?"

"I see that raising snakes is dangerous. I could have told you."

"Oh, for Pete's sake! I already had rattlesnakes and water moccasins In my collection. A poisonous snake is not dangerous, not any more than a loaded gun is dangerous-in each case, if you handle it properly. The thing that made that coral snake dangerous was that I hadn't known what it was, what it could do. If, in my ignorance, I had handled it carelessly, it would have killed me as casually and as innocently as a kitten scratches. And that's what I'm trying to tell you about Mike. He seems as gentle as a lamb-and I'm convinced that he really is gentle and unreservedly friendly with anyone he trusts. But if he doesn't trust you-well, he's not what he seems to be. He seems like an ordinary young male human, rather underdeveloped, decidedly clumsy, and abysmally ignorant...but bright and very docile and eager to learn. All of which is true and not surprising, in view of his ancestry and his strange background. But, like my pet snake, Mike is more than he appears to be. If Mike does not trust you, blindly and all out, he can be instantly aggressive and much more deadly than that coral snake. Especially if he thinks you are harming one of his water brothers, such as Jill-or me."

Harshaw shook his head sadly. "Duke, if you had given way to your natural impulse to take a poke at me, a few minutes ago when I told you some homely truths about yourself, and if Mike had been standing in that doorway behind you . . . well, I'm convinced that you would have stood no chance at all. None. You would have been dead before you knew it, much too quickly for me to stop him. Mike would then have been sorrowfully apologetic over having 'wasted food'-namely your big, beefy carcass. Oh, he would feel guilty about that; you heard him a while ago. But he wouldn't feel guilty about killing you; that would just be a necessity you had forced on him . . . and not a matter of

any great importance anyhow, even to you. You see, Mike believes that your soul is immortal."

"Huh? Well, hell, so do I. But-"

"Do you?" Jubal said bleakly. "I wonder."

"Why, certainly I do! Oh, I admit I don't go to church much, but I was brought up right. I'm no infidel. I've got faith."

"Good. Though I've never been able to understand 'faith' myself, nor to see how a just God could expect his creatures to pick the one true religion Out of an infinitude of false ones-by faith alone. It strikes me as a sloppy way to run an organization, whether a universe or a smaller one. However, since you do have faith and it includes belief in your own immortality, we need not trouble further over the probability that your prejudices will result in your early demise. Do you want to be cremated or buried?"

"Huh? Oh, for cripe's sake, Jubal, quit trying to get my goat."

"Not at all. I can't guarantee to get you off my place safely as long as you persist in thinking that a coral snake is a harmless scarlet snake-any blunder you make may be your last. But I promise you I won't let Mike eat you."

Duke's mouth dropped open. At last he managed to answer, explosively, profanely, and quite incoherently. Harshaw listened, then said testily, "All right, all right, but pipe down. You can make any arrangements with Mike you like. I thought I was doing you a favor." Harshaw turned and bent over the projector. "I want to see these pictures. Stick around, if you want to, until I'm through. Prob'ly safer. Damn!" he added. "The pesky thing savaged me."

"You tried to force it. Here-" Duke completed the adjustment Harshaw had muffed, then went ahead and inserted the first film cartridge. Neither of them re-opened the question of whether Duke was, or was not, still working for Jubal. The cameras were Mitchell servos; the projector was a Yashinon tabletop tank, with an adapter to permit it to receive Land Solid-Sight-Sound 4 mm. film. Shortly they were listening to and watching the events leading up to the disappearance of the empty brandy case.

Jubal watched the box being thrown at his head, saw it wink out in midair. "That's enough," he said. "Anne will be pleased to know that the cameras back her up. Duke, let's repeat that last bit in slow motion."

"Okay." Duke spooled back, then announced, "This is ten-to-one."

The scene was the same but the slowed-down sound was useless; Duke switched it off. The box floated slowly from Jill's hands toward Jubal's head, then quite suddenly ceased to be. But it did not simply wink out; under slow-motion projection it could be seen shrinking, smaller and smaller until it was no longer there.

Jubal nodded thoughtfully. "Duke, can you slow it down still more?"

"Just a sec. Something is fouled up with the stereo."

"What?"

"Darned if I can figure it out. It looked all right on the fast run. But when I slowed it down, the depth effect was reversed. You saw it. That box went away from us fast, mighty fast-but it always looked closer than the wall. Swapped parallax, of course. But I never took that cartridge off the spindle. Gremlins."

"Oh. Hold it, Duke. Run the film from the other camera."

"Unh ... oh, I see, That'll give us a ninety-degree cross on it and we'll see properly even if I did jimmy this film somehow." Duke changed cartridges. "Zip through the first part, okay? Then undercranked ten-to-one on the part that counts."

"Go ahead."

The scene was the same save for angle. When the image of Jill grabbed the box, Duke slowed down the show and again they watched the box go away. Duke cursed. "Something was fouled up with the second camera too."

"So?"

"Of course. It was looking at it around from the side so the box~ should have gone out of the frame to one side or the other. Instead it went ~ straight away from us again. Well, didn't it? You saw it. Straight away from us."

"Yes," agreed Jubal. "'Straight away from us.'"

"Out it can't-not from both angles."

"What do you mean, it can't? It already did." Harshaw added, "If we I had used doppler-radar in place of each of those cameras, I wonder what ~ they would have shown?"

"How should I know? I'm going to take both these cameras apart."

"Don't bother."

"But-"

"Don't waste your time, Duke; the cameras are all right. What is exactly ninety degrees from everything else?"

"I'm no good at riddles."

"It's not a riddle and I meant it seriously. I could refer you to Mr. A. Square from Flatland, but I'll answer it myself. What is exactly at right angles to everything else? Answer: two dead bodies, one old pistol, and an empty liquor case."

"What the deuce do you mean, Boss?"

"I never spoke more plainly in my life. Try believing what the cameras see instead of insisting that the cameras must be at fault because what they saw was not what you expected. Let's see the other films."

Harshaw made no comment as they were shown; they added nothing ~ to what he already knew but did confirm and substantiate. The ash tray when floating near the ceiling had been out of camera angle, but its leisurely descent and landing had been recorded. The pistol's image in the:' stereo tank was quite small but, so far as could be seen, the pistol had done just what the box appeared to have done: shrunk away into the far distance~ without moving. Since Harshaw had been gripping it tightly when it had shrunk out of his hand, he was satisfied-if "satisfied" was the right word, he added grumpily to himself. "Convinced" at least.

"Duke, when you get time, I want duplicate prints of all of those."

Duke hesitated. "You mean I'm still working here?"

"What? Oh, damn it! You can't eat in the kitchen, and Duke, try to cut your local prejudices out of the circuit and just while. Try really hard."

"I'll listen."

"When Mike asked for the privilege of eating my stringy old carcass, he was doing me the greatest honor that he knew of-by the only rules he knows. What he had 'learned at his mother's knee,' so to speak. Do you savvy that? You heard his tone of voice, you saw his manner. He was paying me his highest compliment-and asking of me

a boon. You see? Never mind what they think of such things in Kansas; Mike uses the values taught him on Mars."

"I think I'll take Kansas."

"Well," admitted Jubal, "so do I. But it is not a matter of free choice for me, nor for you-nor for Mike. All three of us are prisoners of our early indoctrinations, for it is hard, very nearly impossible, to shake off one's earliest training. Duke, can you get it through your skull that if you had been born on Mars and brought up by Martians, you yourself would have exactly the same attitude toward eating and being eaten that Mike has?"

Duke considered it, then shook his head. "I won't buy it, Jubal. Sure, about most things it's just Mike's hard luck that he wasn't brought up in civilization-and my good luck that I was. I'm willing to make allowances for him. But this is different, this is an instinct."

"'Instinct,' dreck!"

"But it is. I didn't get any 'training at my mother's knee' not to be a cannibal. Hell, I didn't need it; I've always known it was a sin-a nasty one. Why, the mere thought of it makes my stomach do a flip-flop. It's a basic instinct."

Jubal groaned. "Duke, how could you learn so much about machinery and never learn anything about how you yourself tick? That nausea you feel-that's not an instinct; that's a conditioned reflex. Your mother didn't have to say to you, 'Mustn't eat your playmates, dear; that's not nice,' because you soaked it up from our whole culture-and so did I. Jokes about cannibals and missionaries, cartoons, fairy tales, horror stories, endless little things. But it has nothing to do with instinct. Shucks, son, it couldn't possibly be instinct . . . because cannibalism is historically one of the most widespread of human customs, extending through every branch of the human race. Your ancestors, my ancestors, everybody."

"Your ancestors, maybe. Don't bring mine into it."

"Um. Duke, didn't you tell me you had some Indian blood?"

"Huh? Yeah, an eighth. In the Army they used to call me 'Chief.' What of it? I'm not ashamed of it. I'm proud of it,"

"No reason to be ashamed-nor proud, either, for that matter, But, while both of us certainly have cannibals in our family trees, chances are that you are a good many generations closer to cannibals than I am, because-"

"Why, you bald-headed old-"

"Simmer down! You were going to listen; remember? Ritual cannibalism was a widespread custom among aboriginal American cultures. But don't take my word for it; look it up. Besides that, both of us, simply as North Americans, stand a better than even chance of having a touch of the Congo in us without knowing it . . . and there you are again. But even if both of us were Simon-pure North European stock, certified by the American Kennel Club, (a silly notion, since the amount of casual bastardy among humans is far in excess of that ever admitted)-but even if we were, such ancestry would merely tell us which cannibals we are descended from. . because every branch of the human race, without any exception, has practiced cannibalism in the course of its history. Duke, it's silly to talk about a practice being 'against instinct' when hundreds of millions of human beings have followed that practice."

"But- All right, all right, I should know better than to argue with you, Jubal; you can always twist things around your way. But suppose we all did come from savages who didn't know any better-I'm not admitting it but just supposing. Suppose we did. What of it? We're civilized now. Or at least I am."

Jubal grinned cheerfully. "Implying that I am not. Son, quite aside from my own conditioned reflex against munching a roast haunch of- well, you, for example-quite aside from that trained-in emotional prejudice, for coldly practical reasons I regard our taboo against cannibalism as an excellent idea . . . because we are not civilized."

"Huh?"

"Obvious. If we didn't have a tribal taboo about the matter so strong that you honestly believed it was an instinct, I can think of a long list of people I wouldn't trust with my back turned, not with the price of beef what it is today. Eh?"

Duke grudged a grin. "Maybe you've got something there. I wouldn't want to take a chance on my ex-mother-in-law. She hates my guts."

"You see? Or how about our charming neighbour on the south, who is so casual about other people's fences and live stock during the hunting season? I wouldn't want to bet that you and I wouldn't wind up in his freezer if we didn't have that taboo. But Mike I would trust utterly- because Mike is civilized."

"Huh?"

"Mike is utterly civilized, Martian style. Duke, I don't understand the Martian viewpoint and probably never shall. But I've talked enough with Mike on this subject to know that the Martian practice isn't at all dog-eat-dog . . . or Martian-eat-Martian. Surely they eat their dead, instead of burying them, or burning them, or exposing them to vultures. But the custom is highly formalized and deeply religious. A Martian is never grabbed and butchered against his will. In fact, so far as I have been able to find out, the idea of murder isn't even a Martian concept. Instead, a Martian dies when he decides to die, having discussed it with and been advised by his friends and having received the consent of his ancestors' ghosts to join them. Having decided to die, he does so, as easily as you close your eyes-no violence, no lingering illness, not even an overdose of sleeping pills. One second he is alive and well, the next second he's a ghost, with a dead body left over. Then, or maybe later (Mike is always vague about time factors) his closest friends eat what he no longer has any use for, 'grokking' him, as Mike would say, and praising his virtues as they spread the mustard. The new ghost attends the feast himself, as it is sort of a bar mitzvah or confirmation service by which the ghost attains the status of 'Old One'-becomes an elder statesman, if I understand it."

Duke made a face of disgust. "God, what superstitious junk! Turns my stomach."

"Does it? To Mike it's a most solemn-but joyful-religious ceremony."

Duke snorted, "Jubal, you don't believe that stuff about ghosts, do you? Oh, I know you don't. It's just cannibalism combined with the rankest sort of superstition."

"Well, now, I wouldn't go that far. I admit that I find these Martian 'Old Ones' a little hard to swallow-but Mike speaks of them as matter-offactly as we talk about last Wednesday. As for the rest-Duke, what church were you brought up in?" Duke told him; Jubal nodded and went on: "I thought it might be; in Kansas most belong to yours or to one enough like it that you would have to look at the sign out in front to tell the difference. Tell me . . . how did you feel when you took part in the symbolic cannibalism that plays so paramount a part in your church's rituals?"

Duke stared at him. "What the devil do you mean?"

Jubal blinked solemnly back. "Were you actually a church member? Or were you simply sent to Sunday School as a kid?"

"Huh? Why, certainly I was a church member. My whole family was. I still am . . . even though I don't go much."

"I thought perhaps you weren't entitled to receive it, But apparently you are, so you know what I'm talking about, if you stop to think." Jubal Stood up suddenly. "But I don't belong to your church nor to Mike's, so I shan't attempt to argue the subtle differences between one form of ritual cannibalism and another. Duke, I've got urgent work to do; I can't spend any more time trying to shake you loose from your prejudices. Are you leaving? If you are, I think I had better chaperone you off the place, make sure you're safe. Or do you want to stay? Stay and behave yourself, I mean-eat at the table with the rest of us cannibals." Duke frowned. "Reckon I'll stay."

"Suit yourself. Because from this moment forward I wash my hands of any responsibility for your safety. You saw those movies; if you're bright enough to hit the floor with your hat, you've figured out that this man-Martian we've got staying with us can be unpredictably dangerous."

Duke nodded. "I got the point. I'm not as stupid as you think I am, Jubal. But I'm not letting Mike run me off the place, either." He added, "You say he's dangerous ... and I see how he could be, if he got stirred up. But I'm not going to stir him up. Shucks, Jubal, I like the little dope, most ways."

"Mmm ... damn it, I still think you underestimate him, Duke. See here, if you really do feel friendly toward him, the best thing you can do is to offer him a glass of water. Share it with him. Understand me? Become his 'Water brother.'"

"Um. I'll think about it."

"But if you do, Duke, don't fake it. If Mike accepts your offer of water-brotherhood, he'll be dead serious about it. He'll trust you utterly, no matter what-so don't do it unless you are equally willing to trust him and stand by him, no matter how rough things get. Either all out-or don't do it."

"I understood that. That's why I said, 'I'll think about it.'"

"Okay. But don't take too long making up your mind ... because I expect things to get very rough before long."

XIV

IN THE VOLANT LAND OF LAPUTA, according to the journal of Lemuel Gulliver recounting his Travels into Several Remote Nations of the World, no person of importance ever listened or spoke without the help of a servant, known as a "climenole" in Laputian-or "flapper" in rough English translation, as such a Servant's only duty was to flap the mouth and ears of his master with a dried bladder whenever, in the opinion of the servant, it was desirable for his master to speak or listen.

Without the consent of his flapper it was impossible to gain the attention of any Laputian of the master class.

Gulliver's journal is usually regarded by Terrans as a pack of lies composed by a sour churchman. As may be, there can be no doubt that, at this time, the "flapper" system

was widely used on the planet Earth and had been extended, refined, and multiplied until a Laputian would not have recognized it other than in spirit.

In an earlier, simpler day one prime duty of any Ten~an sovereign was to make himself publicly available on frequent occasions so that even the lowliest might come before him without any intermediary of any sort and demand judgment. Traces of this aspect of primitive sovereignty persisted on Earth long after kings became scarce and impotent. It continued to be the right of an Englishman to "Cry Harold!" although few knew it and none did it. Successful city political bosses held open court all through the twentieth century, leaving wide their office doors and listening to any gandy dancer or bindlestiff who came in.

The principle itself was never abolished, being embalmed in Articles I & IX of the Amendments to the Constitution of the United States of America-and therefore nominal law for many humans-even though the basic document had been almost superseded in actual practice by the Articles of World Federation.

But at the time the Federation Ship Champion returned to Terra from Mars, the "flapper system" had been expanding for more than a century and had reached a stage of great intricacy, with many persons employed solely in carrying out its rituals. The importance of a public personage could be estimated by the number of layers of flappers cutting him off from ready congress with the plebian mob. They were not called "flappers," but were known as executive assistants, private secretaries, secretaries to private secretaries, press secretaries, receptionists, appointment clerks, et cetera. In fact the titles could be anything-or (with some of the most puissant) no title at all, but they could all be identified as "flappers" by function: each one held arbitrary and concatenative veto over any attempted communication from the outside world to the Great Man who was the nominal superior of the flapper.

This web of intermediary officials surrounding every V.I.P. naturally caused to grow up a class of unofficials whose function it was to flap the ear of the Great Man without permission from the official flappers, doing so (usually) on social or pseudo-social occasions or (with the most successful) via back-door privileged access or unlisted telephone number. These unofficials usually had no formal titles but were called a variety of names: "golfing companion," "kitchen cabinet," "lobbyist," "elder statesman," "five-percenter," and so forth. They existed in benign Symbiosis with the official barricade of flappers, since it was recognized almost universally that the tighter the system the more need for a safety valve.

The most successful of the unofficials often grew webs of flappers of their own, until they were almost as hard to reach as the Great Man whose unofficial contacts they were . . . in which case secondary unofficials sprang up to circumvent the flappers of the primary unofficial. With a personage of foremost importance, such as the Secretary General of the World Federation of Free States, the maze of by-passes through unofficials would be as formidable as were the official phalanges of flappers surrounding a person merely very important.

Some Terran students have suggested that the Laputians must have been, in fact, visiting Martians, citing not only their very unworldly obsession with the contemplative life but also two concrete matters: the Laputians were alleged to have known about Mars' two moons at least a century and half before they were observed by Terran astronomers, and, secondly, Laputa itself was described in size and shape and propulsion such that the

only English term that fits is "flying saucer." But that theory will not wash, as the flapper system, basic to Laputian society, was unknown on Mars. The Martian Old Ones, not hampered by bodies subject to space-time, would have had as little use for flappers as a snake has for shoes. Martians still corporate conceivably could use flappers but did not; the very concept ran contrary to their way of living.

A Martian having need of a few minutes or years of contemplation simply took it. If another Martian wished to speak with him, this friend would simply wait, as long as necessary. With all eternity to draw on there could be no reason for hurrying-in fact "hurry" was not a concept that could be symbolized in the Martian language and therefore must be presumed to be unthinkable. Speed, velocity, simultaneity, acceleration, and other mathematical abstractions having to do with the pattern of eternity were part of Martian mathematics, but not of Martian emotion, Contrariwise, the unceasing rush and turmoil of human existence came not from mathematical necessities of time but from the frantic urgency implicit in human sexual bipolarity.

Dr. Jubal Harshaw, professional clown, amateur subversive, and parasite by choice, had long attempted to eliminate "hurry" and all related emotions from his pattern. Being aware that he had but a short time left to live and having neither Martian nor Kansan faith in his own immortality, it was his purpose to live each golden moment as if it were eternity- without fear, without hope, but with sybaritic gusto. To this end he found that he required something larger than Diogenes' tub but smaller than Kubla's pleasure dome and its twice five miles of fertile ground with walls and towers girdled round; his was a simple little place, a few acres kept private with an electrified fence, a house of fourteen rooms or so, with running secretaries laid on and all other modern conveniences. To support his austerely upholstered nest and its rabble staff he put forth minimum effort for maximum return simply because it was easier to be rich than to be poor-Harshaw merely wished to live exactly as he liked, doing whatever he thought was best for him.

In consequence he felt honestly aggrieved that circumstances had forced on him a necessity for hurry and would not admit that he was enjoying himself more than he had in years.

This morning he found it needful to speak to the third planet's chief executive. He was fully aware of the flapper system that made such contact with the head of government all but impossible for the ordinary citizen, even though Harshaw himself disdained to surround himself with buffers suitable to his own rank-Harshaw answered his telephone himself if he happened to be at hand when it signalled because each call offered good odds that he would be justified in being gratifyingly rude to some stranger for daring to invade his privacy without cause-"cause" by Harshaw's definition, not by the stranger's.

Jubal knew that he could not hope to find the same conditions obtaining at the Executive Palace; Mr. Secretary General would not answer his own phone. But Harshaw had many years of practice in the art of outwitting human customs; he tackled the matter cheerfully, right after breakfast.

Much later he was tired and very frustrated. His name alone had carried him past three layers of the official flapper defense, and he was sufficiently a narrow-gauge V.I.P. that he was never quite switched off. Instead he was referred from secretary to secretary and wound up speaking voice-&-vision to a personable, urbane young man who seemed

willing to discuss the matter endlessly and without visible irritation no matter what Harshaw said-but would not agree to connect him with the Honorable Mr. Douglas.

Harshaw knew that he would get action if he mentioned the Man from Mars and that he certainly would get very quick action if he claimed to have the Man from Mars with him, but he was far from certain that the resultant action would be a face-to-face hookup with Douglas. On the Contrary, he calculated that any mention of Smith would kill any chance of reaching Douglas but would at once produce violent reaction from subordinates-which was not what he wanted. He knew from a lifetime of experience that it was always easier to dicker with the top man. With Ben Caxton's life very possibly at stake Harshaw could not risk failure through a subordinate's lack of authority or excess of ambition.

But this soft brush-off was trying his patience. Finally he snarled, "Young man, if you have no authority yourself, let me speak to someone who has! Put me through to Mr. Berquist."

The face of the staff stooge suddenly lost its smile and Jubal thought gleefully that he had at last pinked him in the quick. So he pushed his advantage. "Well? Don't just sit there! Get Gil on your inside line and tell him you've been keeping Jubal Harshaw waiting. Tell him how long you've kept me waiting." Jubal reviewed in his own excellent memory all that Witness Cavendish had reported concerning the missing Berquist, plus the report on him from the detective service. Yup, he thought happily, this lad is at least three rungs down the ladder from where Berquist was-so let's shake him up a little . . . and climb a couple of rungs in the process.

The face said woodenly, "We have no Mr. Berquist here."

"I don't care where he is. Get him! If you don't know Gil Berquist personally, ask your boss. Mr. Gilbert Berquist, personal assistant to Mr. Douglas. If you've been around the Palace more than two weeks you've at least seen Mr. Berquist at a distance-thirty-five years old, about six feet and a hundred and eighty pounds, sandy hair a little thin on top, smiles a lot and has perfect teeth. You've seen him. If you don't dare disturb him yourself, dump it in your boss's lap. But quit biting your nails and do something. I'm getting annoyed."

Without expression the young man said, "Please hold on. I will enquire."

"I certainly will hold on. Get me Gil." The image in the phone was replaced by a moving abstract pattern; a pleasant female voice recorded, said, "Please wait while your call is completed. This delay is not being charged to your account. Please relax while-" Soothing music came up and covered the voice; Jubal sat back and looked around. Anne was waiting, reading, and safely out of the telephone's vision angle. On his other side the Man from Mars was also out of the telephone's sight pickup and was watching images in stereovision and listening via ear plugs.

Jubal reflected that he must remember to have that obscene babble box placed in the basement where it belonged, once this emergency was over. "What you got, son?" he asked, leaned over and turned on the speaker to low gain.

Mike answered, "I don't know, Jubal."

The sound confirmed what Jubal had suspected from his glance at the image: Smith was listening to a broadcast of a Fosterite service. The imaged Shepherd was not preaching but seemed to be reading church notices:"-junior Spirit-in-Action team will give a practice demonstration before the supper, so come early and see the fur fly! Our

team coach, Brother Hornsby, has asked me to tell you boys on the team to fetch only your helmets, gloves, and sticks-we aren't going after sinners this time. However, the Little Cherubim will be on hand with their first-aid kits in case of excessive zeal." The Shepherd paused and smiled broadly, "And now wonderful news, My Children! A message from the Angel Ramzai for Brother Arthur Renwick and his good wife Dorothy. Your prayer has been approved and you will go to heaven at dawn Thursday morning! Stand up, Art! Stand up, Dottie! Take a bow!"

The camera angle made a reverse cut, showing the congregation and centering on Brother and Sister Renwick. To wild applause and shouts of "Hallelujah!" Brother Renwick was responding with a boxer's handshake over his head, while his wife blushed and smiled and dabbed at her eyes beside him.

The camera cut back as the Shepherd held up his hand for silence. He went on briskly, "The Bon Voyage party for the Renwicks will start promptly at midnight and the doors will be locked at that time-so get here early and let's make this the happiest revelry our flock has ever seen, for we're all proud of Art and Dottie. Funeral services will be held thirty minutes after dawn, with breakfast immediately following for the benefit of those who have to get to work early." The Shepherd suddenly looked very stern and the camera panned in until his head filled the tank. "After our last Ban Voyage, the Sexton found an empty pint bottle in one of the Happiness rooms . . . of a brand distilled by sinners. That's past and done, as the brother who slipped has confessed and paid penance sevenfold, even refusing the usual cash discount-I'm sure he won't backslide. But stop and think, My Children- Is it worth risking eternal happiness to save a few pennies on an article of worldly merchandise? Always look for that happy, holy seal-of-approval with Bishop Digby's smiling face on it. Don't let a sinner palm off on you something 'just as good.' Our sponsors support us; they deserve your support. Brother Art, I'm sorry to have to bring up such a subject-"

"That's okay, Shepherd! Pour it on!"

"-at a time of such great happiness. But we must never forget that-" Jubal reached over and switched off the speaker circuit.

"Mike, that's not anything you need to see."

"Not?"

"Uh-" Jubal thought about it. Shucks, the boy was going to have to learn about such things sooner or later. "All right, go ahead. But come talk to me about it later."

"Yes, Jubal."

Harshaw was about to add some advice intended to offset Mike's tendency to take literally anything he saw or heard. But the telephone's soothing "hold" music suddenly went down and out, and the screen filled with an image-a man in his forties whom Jubal at once labeled in his mind as "cop."

Jubal said aggressively, "You aren't Gil Berquist."

The man said, "What is your interest in Gilbert Berquist?"

Jubal answered with pained patience, "I wish to speak to him. See here, my good man, are you a public employee?"

The man barely hesitated. "Yes. You must-"

"I 'must' nothing! I am a citizen in good standing and my taxes go to pay your wages. All morning I have been trying to make a simple phone call-and I have been passed from one butterfly-brained bovine to another, and every one of them feeding out

of the public trough. I am sick of it and I do not intend to put up with it any longer. And now you. Give me your name, your job title, and your pay number. Then I'll speak to Mr. Berquist."

"You didn't answer my question."

"Come, come! I don't have to answer your questions; I am a private citizen. But you are not . . . and the question I asked you any citizen may demand of any public servant. O'Kelly versus State of California 1972. I demand that you identify yourself-name, job, number."

The man answered tonelessly, "You are Doctor Jubal Harshaw. You are calling from-"

"So that's what took so long? Stopping to have this call traced. That was stupid. I am at home and my address can be obtained from any public library, post office, or telephone information service. As to who I am, everyone knows who I am. Everyone who can read, that is. Can you read?"

The man went on, "Dr. Harshaw, I am a police officer and I require your cooperation. What is your reason-"

"Pooh to you, sir! I am a lawyer. A private citizen is required to cooperate with the police under certain specified conditions only. For example, during hot pursuit-in which case the police officer may still be required to show his credentials. Is this 'hot pursuit,' sir? Are you about to dive through this blasted instrument? Second, a private citizen may be required to cooperate within reasonable and lawful limits in the course of police investigation-"

"This is an investigation."

"Of what, sir? Before you may require my cooperation in an investigation, you must identify yourself, satisfy me as to your bona-fides, state your purpose, and-if I so require-cite the code and show that a 'reasonable necessity' exists. You have done none of these. I wish to speak to Mr. Berquist."

The man's jaw muscles were jumping but he answered quietly, "Dr. Harshaw, I am Captain Heinrich of the Federation S.S. Bureau. The fact that you reached me by calling the Executive Palace should be ample proof that I am who I say I am. However-" He took out a wallet, flipped it open, and held it close to his own vision pickup. The picture blurred, then quickly refocused. Harshaw glanced at the I. D. thus displayed; it looked authentic enough, he decided-especially as he did not care whether it was authentic or not.

"Very well, Captain," he growled. "Will you now explain to me why you are keeping me from speaking with Mr. Berquist?"

"Mr. Berquist is not available."

"Then why didn't you say so? In that case, transfer my call to someone of Berquist's rank. I mean one of the half-dozen people who work directly with the Secretary General, as Gil does. I don't propose again to be fobbed off On some junior assistant flunky with no authority to blow his own nose! If Gil isn't there and can't handle it, then for God's sake get me someone of equal rank who can!"

"You have been trying to telephone the Secretary General."

"Precisely."

"Very well, you may explain to me what business you have with the Secretary General."

"And I may not. Are you a confidential assistant to the Secretary General? Are you privy to his secrets?"

"That's beside the point."

"That's exactly the point. As a police officer, you should know better. I shall explain, to some person known to me to be cleared for sensitive material and in Mr. Douglas' confidence, just enough to make sure that the Secretary General speaks to me. Are you sure Mr. Berquist can't be reached?"

"Quite sure."

"That's too bad, he could have handled it quickly. Then it will have to be Someone else-of his rank."

"If it's that secret, you shouldn't be calling over a public phone."

"My good Captain! I was not born yesterday-and neither were you. Since you had this call traced, I am sure you are aware that my personal I phone is equipped to receive a maximum-security return call."

The Special Service officer made no direct reply. Instead he answered, "Doctor, I'll be blunt and save time. Until you explain your business, you aren't going to get an~ where. If you switch off and call the Palace again, your call will be routed to this office. Call a hundred times . . . or a month from now. Same thing. Until you decide to cooperate."

Jubal smiled happily. "It won't be necessary now, as you have let slip - unwittingly, or was it intentional?-the one datum needed before we act. If we do. I can hold them off the rest of the day . . . but the code word is no longer 'Berquist.'"

"What the devil do you mean?"

"My dear Captain, please! Not over an unscrambled circuit surely? But you know, or should know, that I am a senior philosophunculist on active duty."

"Repeat?"

"Haven't you studied amphigory? Gad, what they teach in schools these days! Go back to your pinochle game; I don't need you." Jubal switched off at once, set the phone for ten minutes refusal, said, "Come along, kids," and returned to his favorite loafing spot near the pool. There he cautioned Anne to keep her Witness robe at hand day and night until further notice, told Mike to stay in earshot, and gave Miriam instructions concerning the telephone. Then he relaxed.

He was not displeased with his efforts. He had not expected to be able to reach the Secretary General at once, through official channels. He felt that his morning's reconnaissance had developed at least one weak spot in the wall surrounding the Secretary and he expected-or hoped-that his stormy session with Captain Heinrich would bring a return call . . . from a higher level.

Or something.

If not, the exchange of compliments with the S.S. cop had been rewarding in itself and had left him in a warm glow of artistic post-fructification. Harshaw held that certain feet were made for stepping on, in order to improve the breed, promote the general welfare, and minimize the ancient insolence of office; he had seen at once that Heinrich had such feet.

But, if no action developed, Harshaw wondered how long he could afford to wait? In addition to the pending collapse of his "time bomb" and the fact that he had, in effect, promised Jill that he would take steps on behalf of Ben Caxton (why couldn't the child

see that Ben probably could not be helped-indeed, was almost certainly beyond help-and that any direct or hasty action minimized Mike's chance of keeping his freedom?)- in addition to these two factors, something new was crowding him: Duke was gone.

Gone for the day, gone for good (or gone for bad), Jubal did not know. Duke had been present at dinner the night before, had not shown up for breakfast. Neither event was noteworthy in Harshaw's loosely coupled household and no one else appeared to have missed Duke. Jubal himself would not ordinarily have noticed unless he had had occasion to yell for Duke. But this morning Jubal had, of course, noticed . . . and he had refrained from shouting for Duke at least twice on occasions when he normally would have done so.

Jubal looked glumly across the pool, watched Mike attempt to perform a dive exactly as Dorcas had just performed it, and admitted to himself that he had not shouted for Duke when he needed him, on purpose. The truth was that he simply did not want to ask the Bear what had happened to Algy. The Bear might answer.

Well, there was only one way to cope with that sort of weakness. "Mike! Come here."

"Yes, Jubal." The Man from Mars got out of the pool and trotted over like an eager puppy, waited. Harshaw looked him over, decided that he must weigh at least twenty pounds more than he had on arrival . . . and all of it appeared to be muscle. "Mike, do you know where Duke is?"

"No, Jubal."

Well, that settled it; the boy didn't know how to lie-wait, hold it! Jubal reminded himself of Mike's computer-like habit of answering exactly the question asked . . . and Mike had not known, or had not appeared to know, where that pesky box was, once it was gone. "Mike, when did you see him last?"

"I saw Duke go upstairs when Jill and I came downstairs, this morning when time to cook breakfast." Mike added proudly, "I helped cooking."

"That was the last time you saw Duke?"

"I am not see Duke since, Jubal. I proudly burned toast."

"I'll bet you did. You'll make some woman a fine husband yet, if you aren't careful."

"Oh, I burned it most carefully."

"Jubal-"

"Huh? Yes, Anne?"

"Duke grabbed an early breakfast and lit out for town. I thought you knew."

"Well," Jubal temporized, "he did say something about it. I thought he intended to leave after lunch today. No matter, it'll keep." Jubal realized suddenly that a great load had been lifted from his mind. Not that Duke meant anything to him, other than as an efficient handyman-no, of course not! For many years he had avoided letting any human being be important to him-but, just the same, he had to admit that it would have troubled him. A little, anyhow.

What statute was violated, if any, in turning a man exactly ninety degrees from everything else?

Not murder, not as long as the lad used it only in self-defense or in the proper defense of another, such as Jill. Possibly the supposedly obsolete Pennsylvania laws

against witchcraft would apply . . . but it would be interesting to see how a prosecutor would manage to word an indictment.

A civil action might lie- Could harboring the Man from Mars be construed as "maintaining an attractive nuisance?" Possibly. But it was more likely that radically new rules of law must evolve. Mike had already kicked the bottom out of both medicine and physics, even though the practitioners of such were still innocently unaware of the chaos facing them. Harshaw dug far back into his memory and recalled the personal tragedy that relativistic mechanics had proved to be for many distinguished scientists. Unable to digest it through long habit of mind, they had taken refuge in blind anger at Einstein himself and any who dared to take him seriously. But their refuge had been a dead end; all that inflexible old guard could do was to die and let younger minds, still limber, take over.

Harshaw recalled that his grandfather had told him of much the same thing happening in the field of medicine when the germ theory came along; many older physicians had gone to their graves calling Pasteur a liar, a fool, or worse-and without examining evidence which their "common sense" told them was impossible.

Well, he could see that Mike was geing to cause more hooraw than Pasteur and Einstein combined-squared and cubed. Which reminded him- "Larry! Where's Larry?"

"Here, Boss," the loudspeaker mounted under the eaves behind him announced. "Down in the shop."

"Got the panic button?"

"Sure thing. You said to sleep with it on me. I do. I did."

"Bounce up here to the house and let me have it. No, give it to Anne. Anne, you keep it with your robe."

She nodded. Larry's voice answered, "Right away, Boss. Count down coming up?"

"Just do it." Jubal looked up and was startled to find that the Man from Mars was still standing in front of him, quiet as a sculptured figure. Sculpture? Yes, he did remind one of sculpture . . . uh- Jubal searched his memory. Michelangelo's "David," that was it! Yes, even to the puppyish hands and feet, the serenely sensual face, the tousled, too-long hair. "That was all I wanted, Mike."

"Yes, Jubal."

But Mike continued to stand there. Jubal said, "Something on your mind?"

"About what I was seeing in that goddam-noisy-box. You said, 'All right, go ahead. But come talk to me about it later.'"

"Oh." Harshaw recalled the broadcast services of the Church of the New Revelation and winced. "Yes, we will talk. But first- Don't call that thing a goddam noisy box. It is a stereovision receiver. Call it that."

Mike looked puzzled. "It is not a goddam-noisy-box? I heard you not rightly?"

"You heard me rightly and it is indeed a goddam noisy box. You'll hear me call it that again. And other things. But you must call it a stereovision receiver."

"I will call it a 'stereovision receiver.' Why, Jubal? I do not grok."

Harshaw sighed, with a tired feeling that he had climbed these same stairs too many times. Any conversation with Smith turned up at least one bit of human behavior which could not be justified logically, at least in terms that Smith could understand, and

attempts to do so were endlessly time-consuming. "I do not grok it myself, Mike," he admitted, "but Jill wants you to say it that way."

"I will do it, Jubal. Jill wants it."

"Now tell me what you saw and heard in that stereovision receiver- and what you grok of it."

The conversation that followed was even more lengthy, confused, and rambling than a usual talk with Smith. Mike recalled accurately every word and action he had heard and seen in the babble tank, including all commercials. Since he had almost completed reading the encyclopedia, he had read its article on "Religion," as well as ones on "Christianity," "Islam," "Judaism," "Confucianism," "Buddhism," and many others concerning religion and related subjects. But he had grokked none of this.

Jubal at last got certain ideas clear in his own mind: (a) Mike did not know that the Fosterite service was a religious one; (b) Mike remembered what he had read about religions but had filed such data for future contemplation, having recognized that he did not understand them; (c) in fact, Mike had only the most confused notion of what the word "religion" meant, even though he could quote all nine definitions for same as given in the unabridged dictionary; (d) the Martian language contained no word (and no concept) which Mike was able to equate with any of these nine definitions; (e) the customs which Jubal had described to Duke as Martian "religious ceremonies" were nothing of the sort to Mike; to Mike such matters were as matter-of-fact as grocery markets were to Jubal; (f) it was not possible to express as separate ideas in the Martian tongue the human concepts: "religion," "philosophy," and "science"-and, since Mike still thought in Martian even though he now spoke English fluently, it was not yet possible for him to distinguish any one such concept from the other two. All such matters were simply "learnings" which came from the "Old Ones." Doubt he had never heard of and research was unnecessary (no Martian word for either); the answer to any question should be obtained from the Old Ones, who were omniscient (at least within Mike's scope) and infallible, whether the subject be tomorrow's weather or cosmic teleology. (Mike had seen a weather forecast in the babble box and had assumed without question that this was a message from human "Old Ones" being passed around for the benefit of those still corporate. Further inquiry disclosed that he held a similar assumption concerning the authors of the Encyclopedia Britannica.)

But last, and worst to Jubal, causing him baffled consternation, Mike had grokked the Fosterite service as including (among things he had not grokked) an announcement of an impending discorporation of two humans who were about to join the human "Old Ones"-~and Mike was tremendously excited at this news. Had he grokked it rightly? Mike knew that his comprehension of English was less than perfect; he continued to make mistakes through his ignorance, being "only an egg." But had he grokked this correctly? He had been waiting to meet the human "Old Ones," for he had many questions to ask. Was this an opportunity? Or did he require more learnings from his water brothers before he was ready?

Jubal was saved by the bell. Dorcas arrived with sandwiches and coffee, the household's usual fair-weather picnic lunch. Jubal ate silently, which suited Smith as his rearing had taught him that eating was a time for contemplation-he had found rather upsetting the chatter that usually took place at the table.

Jubal stretched out his meal while he pondered what to tell Mike- and cursed himself for the folly of having permitted Mike to watch stereo in the first place. Oh, he supposed the boy had to come up against human religions at some point-couldn't be helped if he was going to spend the rest of his life on this dizzy planet. But, damn it, it would have been better to wait until Mike was more used to the overall cockeyed pattern of human behavior . . . and, in any case, certainly not Fosterites as his first experience!

As a devout agnostic, Jubal consciously evalued all religions, from the animism of the Kalahari Bushmen to the most sober and intellectualized of the major western faiths, as being equal. But emotionally he disliked some more than others . . . and the Church of the New Revelation set his teeth on edge. The Fosterites' fiat-footed claim to utter gnosis through a direct pipeline to Heaven, their arrogant intolerance implemented in open persecution of all other religions wherever they were strong enough to get away with it, the sweaty football-rally & sales-convention flavor of their services-all these ancillary aspects depressed him. If people must go to church, why the devil couldn't they be dignified about it, like Catholics, Christian Scientists, or Quakers?

If God existed (a question concerning which Jubal maintained a meticulous intellectual neutrality) and if He desired to be worshipped (a proposition which Jubal found inherently improbable but conceivably possible in the dim light of his own ignorance), then (stipulating affirmatively both the above) it nevertheless seemed wildly unlikely to Jubal to the point of reductio ad absurdum that a God potent to shape galaxies would be titillated and swayed by the whoop-te-do nonsense the Fosterites offered Him as "worship."

But with bleak honesty Jubal admitted to himself that the Universe (correction: that piece of the Universe he himself had seen) might very well be in toto an example of reduction to absurdity. In which case the Fosterites might be possessed of the Truth, the exact Truth, and nothing but the Truth. The Universe was a damned silly place at best . . . but the least likely explanation for its existence was the no-explanation of random chance, the conceit that some abstract somethings "just happened" to be some atoms that "just happened" to get together in configurations which "just happened" to look like consistent laws and then some of these configurations "just happened" to possess self-awareness and that two such "just happened" to be the Man from Mars and the other a bald-headed old coot with Jubal himself inside.

No, Jubal would not buy the "just happened" theory, popular as it was with men who called themselves scientists. Random chance was not a sufficient explanation of the Universe-in fact, random chance was not sufficient to explain random chance; the pot could not hold itself.

What then? "Least hypothesis" held no place of preference; Occam's razor could not slice the prime problem, the Nature of the Mind of God (might as well call it that to yourself, you old scoundrel; it's a short, simple, Anglo-Saxon monosyllable, not banned by having four letters- and as good a tag for what you don't understand as any).

Was there any basis for preferring any one sufficient hypothesis over another? When you simply did not understand a thing: No! And Jubal readily admitted to himself that a long lifetime had left him completely. and totally not understanding the basic problems of the Universe.

So the Fosterites might be right. Jubal could not even show that they were probably wrong.

But, he reminded himself savagely, two things remained to him~ his own taste and his own pride. If indeed the Fosterites held a monopoly on Truth (as they claimed), if Heaven were open only to Fosterites, then he, Jubal Harshaw, gentleman and free citizen, preferred that eternity of pain. filled damnation promised to all "sinners" who refused the New Revela..1 tion. He might not be able to see the naked Face of God . . but his ~ eyesight was good enough to pick out his social equals-and those Foster~ ites, by damn, did not measure up!

But he could see how Mike had been misled; the Fosterite "going to Heaven" at a pre-selected time and place did sound like the voluntary and planned "discorporation" which, Jubal did not doubt, was the accepted~ practice on Mars. Jubal himself held a dark suspicion that a better term for.~ the Fosterite practice was "murder"-but such had never been proved and~ had rarely been publicly hinted, much less charged, even when the cult was young and relatively small. Foster himself had been the first to "go to Heaven" on schedule, dying publicly at a self-prophesied instant. Since that first example, it had been a Fosterite mark of special grace . . . and it had been years since any coroner or district attorney had had the temerity to pry into such deaths.

Not that Jubal cared whether they were spontaneous or induced. In his opinion a good Fosterite was a dead Fosterite. Let them be!

But it was going to be hard to explain to Mike.

No use stalling, another cup of coffee wouldn't make it any easier-~ "Mike, who made the world?"

"Beg pardon?"

"Look around you. All this. Mars, too. The stars. Everything. Yo~ and me and everybody. Did the Old Ones tell you who made it?"

Mike looked puzzled. "No, Jubal."

"Well, you have wondered about it, haven't you? Where did the Silt come from? Who put the stars in the sky? Who started it all? All of it, everything, the whole world, the Universe . - . so that you and I are I talking." Jubal paused, surprised at himself. He had intended to make thc~ usual agnostic approach . . . and found himself compulsively followin~ his legal training, being an honest advocate in spite of himself, attempti~ to support a religious belief he did not hold but which was believed most human beings. He found that, willy-nilly, he was attorney for the orthodoxies of his own race against-he wasn't sure what. An unhuman viewpoint. "How do your Old Ones answer such questions?"

"Jubal, I do not grok ... that these are questions. I am sorry."

"Eh? I don't grok your answer."

Mike hesitated a long time. "I will try. But words are ... are not rightly. Not 'putting.' Not 'mading.' A nowing. World is. World was. World shall be. Now."

"'As it was in the beginning, so it now and ever shall be, World without end-'"

Mike smiled happily. "You grok it!"

"I don't grok it," Jubal answered gruffly, "I was quoting something, uh, an 'Old One' said." He decided to back off and try a new approach; apparently God the Creator was not the easiest aspect of Deity to try to explain to Mike as an opening . . . since Mike did not seem to grasp the idea of Creation itself. Well, Jubal wasn't sure that he did, either-he had long ago made a pact with himself to postulate a Created Universe on even-numbered days, a tail-swallowing eternal-and-uncreated Universe on odd-numbered

days-since each hypothesis, while equally paradoxical, neatly avoided the paradoxes of the other-with, of course, a day off each leap year for sheer solipsist debauchery. Having thus tabled an unanswerable question he had given no thought to it for more than a generation.

Jubal decided to try to explain the whole idea of religion in its broadest sense and then tackle the notion of Deity and Its aspects later.

Mike readily agreed that learnings came in various sizes, from little learnings that even a nestling could grok on up to great learnings which only an Old One could grok in perfect fullness. But Jubal's attempt to draw a line between small learnings and great learnings so that "great learnings" would have the human meaning of "religious questions" was not successful, as some religious questions did not seem to Mike to be questions with any meaning to them (such as "Creation") and others seemed to him to be "little" questions, with obvious answers known even to nestlings-such as life after death.

Jubal was forced to let it go at that and passed on to the multiplicity of human religions. He explained (or tried to explain) that humans had hundreds of different ways by which these "great learnings" were taught, each with its own answers and each claiming to be the truth.

"What is 'truth'?" Mike asked.

("What is Truth?" asked a Roman judge, and washed his hands of a troublesome question. Jubal wished that he could do likewise.) "An answer is truth when you speak rightly, Mike. How many hands do I have?"

"Two hands. I see two hands," Mike amended.

Anne glanced up from her knitting. "In six weeks I could make a Witness of him."

"You keep out of this, Anne. Things are tough enough without your help. Mike, you spoke rightly; I have two hands. Your answer was truth. Suppose you said that I had seven hands?"

Mike looked troubled. "I do not grok that I could say that."

"No, I don't think you could. You would not speak rightly if you did; your answer would not be truth. But, Mike-now listen carefully-each religion claims to be truth, claims to speak rightly. Yet their answers to the same question are as different as two hands and seven hands. The Fosterites say one thing, the Buddhists say another, the Moslems say still another-many answers, all different."

Mike seemed to be making a great effort to understand. "All speak rightly? Jubal, I do not grok it."

"Nor do I."

The Man from Mars looked greatly troubled, then suddenly he smiled. "I will ask the Fosterites to ask your Old Ones and then we will know, my brother. How will I do this?"

A few minutes later Jubal found, to his great disgust, that he had promised Mike an interview with some Fosterite bigmouth-or Mike seemed to think that he had, which came to the same thing. Nor had he been able to do more than dent Mike's assumption that the Fosterites were in close touch with human "Old Ones." It appeared that Mike's difficulty in understanding the nature of truth was that he didn't know what a lie was--the dictionary definitions of "lie" and "falsehood" had been filed in his mind with no trace of grokking. One could "speak wrongly" only by accident or misunderstanding. So he necessarily had taken what he had heard of the Fosterite service at its bald, face value.

Jubal tried to explain that all human religions claimed to be in touch with "Old Ones" in one way or another; nevertheless their answers were all different.

Mike looked patiently troubled. "Jubal my brother, I try ... but I do not grok how this can be might speaking. With my people, the Old Ones speak always rightly. Your people-"

"Hold it, Mike."

"Beg pardon?"

"When you said, 'my people' you were talking about Martians. Mike, you are not a Martian; you are a man."

"What is 'Man'?"

Jubal groaned inwardly. Mike could, he was sure, quote the full list of dictionary definitions. Yet the lad never asked a question simply to be annoying; he asked always for information-and he expected his water brother Jubal to be able to tell him. "I am a man, you are a man, Larry is a man."

"But Anne is not a man?"

"Uh ... Anne is a man, a female man. A woman."

("Thanks, Jubal."-"Shut up, Anne.")

"A baby is a man? I have not seen babies, but I have seen pictures- and in the goddam-noi-in stereovision. A baby is not shaped like Anne and Anne is not shaped like you . . . and you are not shaped like I. But a baby is a nestling man?"

"Uh ... yes, a baby is a man."

"Jubal ... I think I grok that my people-'Martians'-are man. Not shape, Shape is not man. Man is grokking. I speak rightly?"

Jubal made a fierce resolve to resign from the Philosophical Society and take up tatting. What was "grokking"? He had been using the word himself for a week now-and he still didn't grok it. But what was "Man"? A featherless biped? God's image? Or simply a fortuitous result of the "survival of the fittest" in a completely circular and tautological definition? The heir of death and taxes? The Martians seemed to have defeated death, and he had already learned that they seemed to have neither money, property, nor government in any human sense-so how could they have taxes?

And yet the boy was right; shape was an irrelevancy in defining "Man," as unimportant as the bottle containing the wine. You could even take a man out of his bottle, like the poor fellow whose life those Russians had persisted in "saving" by placing his living brain in a vitreous envelope and wiring him like a telephone exchange. Gad, what a horrible joke! He wondered if the poor devil appreciated the grisly humor of what had been

But how, in essence, from the unprejudiced viewpoint of a Martian, did Man differ from other earthly animals? Would a race that could levitate (and God knows what else) be impressed by engineering? And, if so, would the Aswan Dam, or a thousand miles of coral reef, win first prize? Man's self-awareness? Sheer local conceit; the upstate counties had not reported, for there was no way to prove that sperm whales or giant sequoias were not philosophers and poets far exceeding any human merit.

There was one field in which man was unsurpassed; he showed unlimited ingenuity in devising bigger and more efficient ways to kill off, enslave, harass, and in all

ways make an unbearable nuisance of himself to himself. Man was his own grimmest joke on himself. The very bedrock of humor was-

"Man is the animal who laughs," Jubal answered.

Mike considered this seriously. "Then I am not a man."

"Huh?"

"I do not laugh. I have heard laughing and it frighted me. Then I grokked that it did not hurt. I have tried to learn-" Mike threw his head back and gave out a raucous cackle, more nerve-racking than the idiot call of a kookaburra.

Jubal covered his ears. "Stop! Stop!"

"You heard," Mike agreed sadly. "I cannot rightly do it. So I am not man."

"Wait a minute, son. Don't give up so quickly. You simply haven't learned to laugh yet . . . and you'll never learn just by trying. But you will learn, I promise you. If you live among us long enough, one day you will see how funny we are-and you will laugh."

"I will?"

"You will. Don't worry about it and don't try to grok it; just let it come. Why, son, even a Martian would laugh once he grokked us."

"I will wait," Smith agreed placidly.

"And while you are waiting, don't ever doubt that you are a man. You are. Man born of woman and born to trouble . . . and some day you will grok its fullness and you will laugh-because man is the animal that laughs at himself. About your Martian friends, I do not know. I have never met them, I do not grok them. But I grok that they may be 'man.'"

"Yes, Jubal."

Harshaw thought that the interview was over and felt relieved. He decided that he had not been so embarrassed since a day long gone when his father had undertaken to explain to him the birds and the bees and the flowers-much too late.

But the Man from Mars was not quite done. "Jubal my brother, you were ask me, 'Who made the World?' and I did not have words to say why I did not rightly grok it to be a question. I have been thinking words."

"So?"

"You told me, 'God made the World.'"

"No, no!" Harshaw said hastily. "I told you that, while all these many religions said many things, most of them said, 'God made the World.' I told you that I did not grok the fullness, but that 'God' was the word that was used."

"Yes, Jubal," Mike agreed. "Word is 'God'" He added. "You grok."

"No, I must admit I don't grok."

"You grok," Smith repeated firmly. "I am explain. I did not have the word. You grok. Anne groks. I grok. The grass under my feet groks in happy beauty. But I needed the word. The word is God."

Jubal shook his head to clear it. "Go ahead."

Mike pointed triumphantly at Jubal. "Thou art God!"

Jubal slapped a hand to his face. "Oh, Jesus H.- What have I done? Look, Mike, take it easy! Simmer down! You didn't understand me. I'm sorry. I'm very sorry! Just forget what I've been saying and we'll start over again on another day. But-"

"Thou art God," Mike repeated serenely. "That which groks. Anne is God. I am God. The happy grass are God, Jill groks in beauty always. Jill is God. All shaping and making and creating together-." He croaked something in Martian and smiled.

"All right, Mike. But let it wait. Anne, have you been getting all this?"

"You bet I have, Boss!"

"Make me a tape. I'll have to work on it. I can't let it stand. I must-" Jubal glanced up, said, "Oh, my God! General Quarters, everybody! Anne! Set the panic button on 'dead-man' setting-and for God's sake keep your thumb on it; they may not be coming here." He glanced up again, at two large air cars approaching from the south. "But I'm afraid they are. Mike! Hide in the pool! Remember what I told you-down in the deepest part, stay there, hold still-and don't come up until I send Jill to get you."

"Yes, Jubal."

"Right now! Move!"

"Yes, Jubal." Mike ran the few steps, cut the water and disappeared. He remembered to keep his knees straight, his toes pointed and his feet together.

"Jill!" Jubal called out. "Dive in and climb Out. You too, Larry. If anybody saw that, I want 'em confused as to how many are using the pool. Dorcast Climb Out fast, child, and dive in again. Anne- No, you've got the panic button; you can't."

"I can take my cloak and go to the edge of the pool. Boss, do you want some delay on this 'dead-man' setting?"

"Uh, yes, thirty seconds. If they land here, put on your Witness cloak at once and get your thumb back on the button. Then wait-and if I call you over to me, let the balloon go up. But I don't dare shout 'Wolf!' on this unless-" He shielded his eyes. "One of them is certainly going to land and it's got that Paddy-wagon look to it, all right. Oh, damn, I had thought they would parley first."

The first car hovered, then dropped vertically for a landing in the garden area around the pool; the second started slowly circling the house at low altitude. The cars were black, squad carriers in size, and showed only a small, inconspicuous insignia: the stylized globe of the Federation.

Anne put down the radio relay link that would let "the balloon go up," got quickly into her professional garb, picked the link up again and put her thumb back on the button. The door of the first car started to open as it touched and Jubal charged toward it with the cocky belligerence of a Pekingese. As a man stepped out, Jubal roared, "Get that God damned heap off my rose hushes!"

The man said, "Jubal Harshaw?"

"You heard me! Tell that oaf you've got driving for you to raise that bucket and move it back! Off the garden entirely and onto the grass! Anne!"

"Coming, Boss."

"Jubal Harshaw, I have a warrant here for-"

"I don't care if you've got a warrant for the King of England; first you'll move that junk heap off my flowers! Then, so help me, I'll sue you for-" Jubal glanced at the man who had landed, appeared to see him for the first time. "Oh, so it's you," he said with bitter contempt. "Were you born stupid, Heinrich, or did you have to study for it? And when did that uniformed jackass working for you learn to fly? Earlier today? Since I talked to you?"

"Please examine this warrant," Captain Heinrich said with careful patience. "Then-"

"Get your go-cart out of my flower beds at once or I'll make a civil rights case out of this that will cost you your pension!"

Heinrich hesitated. 'Wow!" Jubal screamed. "And tell those other yokels getting out to pick up their big feet! That idiot with the buck teeth is standing on a prize Elizabeth M. Hewitt!"

Heinrich turned his head. "You men-careful of those flowers. Paskin, you're standing on one. Rogers! Raise the car and move it back about fifty feet, clear of the garden." He turned his attention back to Harshaw. "Does that satisfy you?"

"Once he actually moves it-but you'll still pay damages. Let's see your credentials . . and show them to the Fair Witness and state loud and clearly to her your name, rank, organization, and pay number."

"You know who I am. Now I have a warrant to-"

"I have a common-law warrant to part your hair with a shotgun unless you do things legally and in order! I don't know who you are. You look remarkably like a stuffed shirt I saw over the telephone earlier today -but that's not evidence and I don't identify you. You must identify yourself, in the specified legal fashion, World Code paragraph 1602, part II, before you can serve a warrant. And that goes for all those other apes, too, and that pithecan parasite piloting for you."

"They are police officers, acting under my orders."

"I don't know that they are anything of the sort. They might have hired those ill-fitting clown suits at a costumer's. The letter of the law, sir! You've come barging into my castle. You say you are a police officer-and you allege that you have a warrant for this intrusion. But I say you are trespassers until you prove otherwise . . . which invokes my sovereign right to use all necessary force to eject you-which I shall start to do in about three seconds."

"I wouldn't advise it."

"Who are you to advise? If I am hurt in attempting to enforce this my right, your action becomes constructive assault-with deadly weapons, if those things those mules are toting are guns, as they appear to be. Civil and criminal, both-why, my man, I'll wind up with your hide for a door mat!" Jubal drew back a skinny arm and clenched a bony fist. "Off my property!"

"Hold it, Doctor. We'll do it your way." Heinrich had turned bright red, but he kept his voice under tight control. He offered his identification, which Jubal glanced at, then turned back to him for him to show to Anne. Heinrich then stated his full name, said that he was a captain of police, Federation Special Service Bureau, and recited his pay number. One by one, the other six men who had left the car, and at last the driver, went through the same rigamarole at Heinrich's frozen-faced orders.

When they were done, Jubal said sweetly, "And now, Captain Heinrich, how may I help you?"

"I have a search warrant here for Gilbert Berquist, which warrant names this property, its buildings and grounds."

"Show it to me, then show it to the Witness."

"I will do so. But I have another search warrant, similar to the first, for Gillian Boardman."

"Who?"

"Gillian Boardman. The charge is kidnapping."

"My goodness!"

"And another for Hector C. Johnson ... and one for Valentine Michael Smith . . . and one for you, Jubal Harshaw."

"Me? Taxes again?"

"No. Look at it. Accessory to this and that ... and material witness on some other things . . . and I'd take you in on my own for obstructing justice if the warrant didn't make it unnecessary."

"Oh, come now, Captain! I've been most cooperative since you identified yourself and started behaving in a legal manner. And I shall continue to be. Of course, I shall still sue all of you-and your immediate superior and the government-for your illegal acts before that time . . and I am not waiving any rights or recourses with respect to anything any of you may do hereafter. Mmm . . . quite a list of victims. I see why you brought an extra wagon. But-dear me! something odd here. This, uh, Mrs. Borkmann?-I see that she is charged with kidnapping this Smith fellow . . . but in this other warrant he seems to be charged with fleeing custody. I'm confused."

"It's both. He escaped-and she kidnapped him."

"Isn't that rather difficult to manage? Both, I mean? And on what charge was he being held? The warrant does not seem to state?"

"How the devil do I know? He escaped, that's all. He's a fugitive."

"Gracious me! I rather think I shall have to offer my services as counsel to each of them. Interesting case. If a mistake has been made-or mistakes-it could lead to other matters."

Heinrich grinned coldly. "You won't find it easy. You'll be in the pokey, too."

"Oh, not for long, I trust." Jubal raised his voice more than necessary and turned his head toward the house. "I do know another lawyer. I rather think, if Judge Holland were listening to this, habeas corpus proceedings- for all of us-might be rather prompt. And if the Associated Press just happened to have a courier car nearby, there would be no time lost in knowing where to serve such writs."

"Always the shyster, eh, Harshaw?"

"Slander, my dear sir. I take notice."

"A fat lot of good it will do you. We're alone."

"Are We?"

XV

VALENTINE MICHAEL SMITH SWAM through the murky water to the deepest part of the pool, under the diving board, and settled himself on the bottom. He did not know why his water brother Jubal had told him to hide there; indeed he did not know that he was hiding. His water brother Jubal had told him to do this and to remain there until his water brother Jill came for him; that was sufficient.

As soon as he was sure that he was at the deepest part, he curled himself into the foetal position, let most of the air out of his lungs, swallowed his tongue, rolled his eyes

up, slowed his heart down to almost nothing, and became effectively "dead" save that he was not actually discorporate and could start his engines again at will. He also elected to stretch his time sense until seconds flowed past like hours, as he had much to contemplate and did not know how quickly Jill would come to get him.

He knew that he had failed again in an attempt to achieve the perfect understanding, the mutually merging rapport-the grokking-that should exist between water brothers. He knew that the failure was his, caused by his using wrongly the oddly variable human language, because Jubal had become upset as soon as he had spoken to him.

He now knew that his human brothers could suffer intense emotion without any permanent damage, nevertheless Smith was wistfully sorry that he had been the cause of such upset in Jubal. At the time, it had seemed to him that he had at last grokked perfectly a most difficult human word. He should have known better because, early in his learnings under his brother Mahmoud, he had discovered that long human words (the longer the better) were easy, unmistakable, and rarely changed their meanings . . but short words were slippery, unpredictable, changing their meanings without any pattern. Or so he seemed to grok. Short human words were never like a short Martian word-such as "grok" which forever meant exactly the same thing. Short human words were like trying to lift water with a knife.

And this had been a very short word.

Smith still felt that he had grokked rightly the human word "God"- the confusion had come from his own failure in selecting other human words. The concept was truly so simple, so basic, so necessary that any nestling could have explained it perfectly-in Martian. The problem, then, was to find human words that would let him speak rightly, make sure that he patterned them rightly to match in fullness how it would be said in his own people's language.

He puzzled briefly over the curious fact that there should be any difficulty in saying it, even in English, since it was a thing everyone knew else they could not grok alive. Possibly he should ask the human Old Ones how to say it, rather than struggle with the shifting meanings of human words. If so, he must wait until Jubal arranged it, for here he was only an egg and could not arrange it himself.

He felt brief regret that he would not be privileged to be present at the coming discorporation of brother Art and brother Dottie.

Then he settled down to reread in his mind Webster's New International Dictionary of the English Language, Third Edition, published in Springfield, Massachusetts.

From a long way off Smith was interrupted by an uneasy awareness that his water brothers were in trouble. He paused between "sherbacha" and "sherbet" to ponder this knowledge. Should he start himself up, leave the enfolding water of life, and join them to grok and share their trouble? At home there could have been no question about it; trouble is shared, in joyful closeness.

But this place was strange in every way . . and Jubal had told him to wait until Jill came.

He reviewed Jubal's words, trying them Out in long contemplation against other human words, making sure that he grokked. No, Jubal had spoken rightly and he had grokked rightly; he must wait until Jill came.

Nevertheless he was made so uneasy by the certain knowledge of his brothers' trouble that he could not go back to his word hunt. At last an idea came to him that was filled with such gay daring that he would have trembled had his body not been unready for trembling.

Jubal had told him to place his body under water and leave it there until Jill came . . . but had Jubal said that he himself must wait with the body?

Smith took a careful long time to consider this, knowing that the slippery English words that Jubal had used could easily lead him (and often had led him) into mistakes. He concluded that Jubal had not specifically ordered him to stay with his body . . . and that left a way Out of the wrongness of not sharing his brothers' trouble.

So Smith decided to take a walk.

He was a bit dazed at his own audacity, for, while he had done it before, twice, he had never "soloed." Each time an Old One had been with him, watching over him, making sure that his body was safe, keeping him from becoming disoriented at the new experience, staying with him until he returned to his body and started it up again.

There was no Old One to help him now. But Smith had always been quick to learn; he knew how to do it and was confident that he could do it alone in a fashion that would fill his teacher with pride. So first he checked over every part of his body, made certain that it would not be damaged while he was gone, then got cautiously Out of it, leaving behind only that trifle of himself needed as watchman and caretaker.

Then he rose up and stood on the edge of the pool, remembering to behave as if his body were still with him, as a guard against disorienting- against losing track of the pool, the body, everything, and wandering off into unknown places where he could not find his way back.

Smith looked around.

An air car was just landing in the garden by the pool and beings under it were complaining of injuries and indignities done them. Perhaps this was the trouble he could feel? Grasses were for walking on, flowers and bushes were not-this was a wrongness.

No, there was more wrongness. A man was just stepping out of the air car, one foot about to touch the ground, and Jubal was running toward him. Smith could see the blast of icy anger that Jubal was hurling toward the man, a blast so furious that, had one Martian hurled it toward another, both would have discorporated at once.

Smith noted it down as something he must ponder and, if it was a cusp of necessity as it seemed to be, decide what he must do to help his brother. Then he looked over the others.

Dorcas was climbing out of the pool; she was puzzled and rather troubled but not too much so; Smith could feel her confidence in Jubal. Larry was at the edge of the pool and had just gotten out; drops of water falling from him were in the air. Larry was not troubled but excited and pleased; his confidence in Jubal was absolute. Miriam was near him and her mood was midway between those of Dorcas and Larry. Anne was standing where she had been seated and was dressed in the long white garment she had had with her all day. Smith could not fully grok her mood; he felt in her some of the cold

unyielding discipline of mind of an Old One. It startled him, as Anne was always soft and gentle and warmly friendly.

He saw that she was watching Jubal closely and was ready to help him. And so was Larry! . . . and Dorcas! . . . and Miriam! With a sudden burst of empathic catharsis Smith learned that all these friends were water brothers of Jubal-and therefore of him. This unexpected release from blindness shook him so that he almost lost anchorage on this place. Calming himself as he had been taught, he stopped to praise and cherish them all, one by one and together.

Jill had one arm over the edge of the pooi and Smith knew that she had been down under, checking on his safety. He had been aware of her when she had done it . . . but now he knew that she had not alone been worried about his safety; Jill felt other and greater trouble, trouble that was not relieved by knowing that her charge was safe under the water of life. This troubled him very much and he considered going to her, making her know that he was with her and sharing her trouble.

He would have done so had it not been for a faint, uneasy feeling of guilt: he was not absolutely certain that Jubal had intended to permit him to walk around while his body was hidden in the pool. He compromised by telling himself that he would share their trouble-and let them know that he was present if it became needful.

Smith then looked over the man who was stepping out of the air car, felt his emotions and recoiled from them, forced himself nevertheless to examine him carefully, inside and out.

In a shaped pocket strapped around his waist by a belt the man was carrying a gun.

Smith was almost certain it was a gun. He examined it in great detail, comparing it with two guns that he had seen briefly, checking what it appeared to be against the definition in Webster's New International Dictionary of the English Language, Third Edition, published in Springfield, Massachusetts.

Yes, it was a gun-not alone in shape but also in wrongness that surrounded and penetrated it. Smith looked down the barrel, saw how it must function, and wrongness stared back at him.

Should he turn it and let it go elsewhere, taking its wrongness with it? Do it at once before the man was fully out of the car? Smith felt that he should . . . and yet Jubal had told him, at another time, not to do this to a gun until Jubal told him that it was time to do it.

He knew now that this was indeed a cusp of necessity . . . but he resolved to balance on the point of the cusp until he grokked all of it- since it was possible that Jubal, knowing that a cusp was approaching, had sent him under water to keep him from acting wrongly at the cusp.

He would wait . . . but in the meantime he would hold this gun and its wrongness carefully under his eye. Not at the moment being limited to two eyes facing always one way, being able to see all around him if needful, he continued to watch the gun and the man stepping out of the car while he went inside the car.

More wrongness than he would have believed possible! Other men were in there, all but one of them crowding toward the door. Their minds smelled like a pack of Khaugha who had scented an unwary nymph and each one held in his hands a something having wrongness.

As he had told Jubal, Smith knew that shape alone was never a prime determinant; it was necessary to go beyond shape to essence in order to grok. His own people passed through five major shapes: egg, nymph, nestling, adult-and Old One which had no shape. Yet the essence of an Old One was already patterned in the egg.

These somethings that these men carried seemed like guns. But Smith did not assume that they were guns; he examined one most carefully first. It was much larger than any gun he had ever seen, its shape was very different, and its details were quite different.

It was a gun.

He examined each of the others, separately and just as carefully. They were guns.

The one man who was still seated had strapped to him a small gun.

The car itself had built into it two enormous guns-plus other things which Smith could not grok but which he felt had wrongness also.

He stopped and seriously considered twisting the car, its contents, and all-letting it topple away. But, in addition to his lifelong inhibition against wasting food, he knew that he did not fully grok what was happening. Better to move slowly, watch carefully, and help and share at the cusp by following Jubal's lead * . . and if right action for him was to remain passive, then go back to his body when the cusp had passed and discuss it all with Jubal later.

He went back outside the car and watched and listened and waited.

The first man to get out talked with Jubal concerning many things which Smith could only file without grokking; they were beyond his experience. The other men got out and spread out; Smith spread his attention to watch all of them. The car raised, moved backwards, stopped again, which relieved the beings it had sat on; Smith grokked with them to the extent that he could spare attention, trying to soothe their hurtings.

The first man handed papers to Jubal; in turn they were passed to Anne. Smith read them along with her. He recognized their word shapings as being concerned with certain human rituals of healing and balance, but, since he had encountered these rituals only in Jubal's law library, he did not try to grok the papers then, especially as Jubal seemed quite untroubled by them-the wrongness was elsewhere. He was delighted to recognize his own human name on two of the papers; he always got an odd thrill out of reading it, as if he were two places at once-impossible as that was for any but an Old One.

Jubal and the first man turned and walked toward the pool, with Anne close behind them. Smith relaxed his time sense a little to let them move faster, keeping it stretched just enough so that he could comfortably watch all the men at once. Two of the men closed in and flanked the little group.

The first man stopped near the group of his friends by the pool, looked at them, then took a picture from his pocket, looked at it, and looked at Jill. Smith felt her fear and trouble mount and he became very alert. Jubal had told him, "Protect Jill. Don't worry about wasting food. Don't worry about anything else. Protect Jill."

Of course, he would protect Jill in any case, even at the risk of acting wrongly in some other fashion. But it was good to have Jubal's blanket reassurance; it left his mind undivided and untroubled.

When the first man pointed at Jill and the two men flanking him hurried toward her with their guns of great wrongness. Smith reached out through his Doppelganger and gave them each that tiny twist which causes to topple away.

The first man stared at where they had been and reached for his gun -and he was gone, too.

The other four started to close in. Smith did not want to twist them. He felt that Jubal would be more pleased with him if he simply stopped them. But stopping a thing, even an ash tray, is work-and Smith did not have his body at hand. An Old One could have managed it, all four together, but Smith did what he could do, what he had to do.

Four feather touches-they were gone.

He felt more intense wrongness from the direction of the car on the ground and went at once to it-grokked to a quick decision, and car and pilot were gone.

He almost overlooked the car riding cover patrol in the air. Smith started to relax when he had disposed of the car on the ground-when suddenly he felt wrongness and trouble increase, and he looked up.

The second car was coming in for a landing right where he was.

Smith stretched his time sense to his personal limit and went to the car in the air, inspected it carefully, grokked that it was as choked with utter wrongness as the first had been . . . tilted it into nevemess. Then he returned to the group by the pool.

All his friends seemed quite excited; Dorcas was sobbing and Jill was holding her and soothing her. Anne alone seemed untouched by the emotions Smith felt seething around him. But wrongness was gone, all of it, and with it the trouble that had disturbed his meditations earlier. Dorcas, he knew, would be healed faster and better by Jill than by anyone-Jill always grokked a hurting fully and at once. Disturbed by emotions around him, slightly apprehensive that he might not have acted in all ways rightly at the point of cusp-or that Jubal might to grok him-Smith decided that he was now free to leave. He slipped back into the pool, found his body, grokked that it was still as he had left it, unharmed-slipped it back on.

He considered contemplating the events at the cusp, But they were too new, too recent; he was not ready to enfold them, not ready to praise and cherish the men he had been forced to move. Instead he returned happily to the task he had been on. "Sherbet" Sherbetlee" "Sherbetzide"- He had reached "Tinwork" and was about to consider "Tiny" when he felt Jill's touch approaching him. He unswallowed his tongue and made himself ready, knowing that his brother Jill could not remain very long under water without distress.

As she touched him, he reached out, took her face in his hands and kissed her. It was a thing he had learned to do quite lately and he did not feel that he grokked it perfectly. It had the growing-closer of the water ceremony. But it had something else, too . . . something he wanted very much to grok in perfect fullness.

XVI

JUBAL HARSHAW DID NOT WAIT for Gillian to dig her problem child out of the pool; he left instructions for Dorcas to be given a sedative and hurried to his study,

leaving Anne to explain (or not explain) the events of the last ten minutes. "Front!" he called out over his shoulder.

Miriam turned and caught up with him. "I guess I must be 'front,'" she said breathlessly. "But, Boss, what in the-"

"Girl, not one word."

"But, Boss-"

"Zip it, I said. Miriam, about a week from now we'll all sit down and get Anne to tell us what we really did see. But right now everybody and his cousins will be phoning here and reporters will be crawling out of the trees-and I've got to make a couple of calls first. I need help. Are you the sort of useless female who comes unstuck when she's needed? That reminds me- Make a note to dock Dorcas's pay for the time she spent having hysterics."

Miriam gasped. "Boss! You just dare do that and every single one of us will quit cold!"

"Nonsense."

"I mean it. Quit picking on Dorcas. Why, I would have had hysterics myself if she hadn't beaten me to it." She added, "I think I'll have hysterics now."

Harshaw grinned. "You do and I'll spank you. All right, put Dorcas down for a bonus for 'extra hazardous duty.' Put all of you down for a bonus. Me, especially. I earned it."

"All right. But who pays your bonus?"

"The taxpayers, of course. We'll find a way to clip- Damn!" They had reached his study door; the telephone was already demanding attention. He slid into the seat in front of it and keyed in. "Harshaw speaking. Who the devil are you?"

"Skip the routine, Doc," a face answered cheerfully. "You haven't frightened me in years. How's everything going?"

Harshaw recognized the face as belonging to Thomas Mackenzie, production manager-in-chief for New World Networks; he mellowed slightly. "Well enough, Tom. But I'm rushed as can be, so-"

"You're rushed? Come try my forty-eight-hour day. I'll make it brief. Do you still think you are going to have something for us? I don't mind the expensive equipment you've got tied up; I can overhead that. But business is business-and I have to pay three full crews just to stand by for your signal. Union rules-you know how it is. I want to do you any favor I can. We've used lots of your script in the past and we expect to use still more in the future-but I'm beginning to wonder what I'm going to tell our comptroller."

Harshaw stared at him. "Don't you think the spot coverage you just got was enough to pay the freight?"

"What spot coverage?"

A few minutes later Harshaw said good-by and switched off, having been convinced that New World Networks had seen nothing of recent events at his home. He stalled off Mackenzie's questions about it, because he was dismally certain that a factual recital would simply convince Mackenzie that poor old Harshaw had at last gone to pieces. Nor could Harshaw have blamed him.

Instead they agreed that, if nothing worth picking up happened in the next twenty-four hours, New World could break the linkage and remove their cameras and other equipment.

As the screen cleared Harshaw ordered, "Get Larry. Have him fetch that panic button-Anne probably has it." He then started making another call, followed it with a third. By the time Larry arrived, Harshaw was convinced that no network had been watching when the Special Service squads attempted to raid his home. It was not necessary to check on whether or not the two dozen "hold" messages that he had recorded had been sent; their delivery depended on the same signal that had failed to reach the news channels.

As he turned away from the phone Larry offered him the "panic button" portable radio link. "You wanted this, Boss?"

"I just wanted to sneer at it and see if it sneered back. Larry, let this be a lesson to us: never trust any machinery more complicated than a knife and fork."

"Okay. Anything else?"

"Larry, is there a way to check that dingus and see if it's working properly? Without actually hauling three networks out of their beds, I mean?"

"Sure. The techs set up the transceiver down in the shop and it's got a switch on it for that very purpose. Throw the switch, push the button; a light comes on. To test on through, you simply call 'em, right from the transceiver and tell 'em you want a hot test clear through to the cameras and back to the monitor stations."

"And suppose the test shows that we aren't getting through? If the trouble is here, can you spot what's wrong?"

"Well, I might," Larry said doubtfully, "if it wasn't anything more than a loose connection. But Duke is the electron pusher around here- I'm more the intellectual type."

"I know, son-I'm not too bright about practical matters, either. Well, do the best you can. Let me know."

"Anything else, Jubal?"

"Yes, if you see the man who invented the wheel, send him up; I want to give him a piece of my mind. Meddler!"

Jubal spent the next few minutes in umbilical contemplation. He considered the possibility that Duke had sabotaged the "panic button" but rejected the thought as time wasting, if not unworthy. He allowed himself to wonder for a moment just what had really happened down in his garden and how the lad had done it-from ten feet under water. For he had no doubt that the Man from Mars had been behind those impossible shenanigans.

Admittedly, what he had seen only the day before in this very room was just as intellectually stupefying as these later events-but the emotional impact was something else. A mouse was as much a miracle of biology as was an elephant; nevertheless there was an important difference -an elephant was bigger.

To see an empty carton, just rubbish, disappear in midair logically implied the possibility that a squad car full of men could vanish in the same fashion. But one event kicked your teeth in-the other didn't.

Well, he wasn't going to waste tears on those Cossacks. Jubal conceded that cops qua cops were all right; he had met a number of honest cops in his life . . . and even a fee-splitting village constable did not deserve to be snuffed out like a candle. The Coast Guard was a fine example of what cops ought to be and frequently were.

But to be a member of the S.& squads a man had to have larceny in his heart and sadism in his soul. Gestapo. Storm troopers in the service of whatever politico was in

power. Jubal longed for the good old days when a lawyer could cite the Bill of Rights and not have some over-riding Federation trickery defeat him.

Never mind- What would logically happen now? Heinrich's task force certainly had had radio contact with its base; ergo, its loss would be noted, if only by silence. Shortly more S.S. troops would come looking for them-were already headed this way if that second car had been chopped off in the middle of an action report. "Miriam-"

"Yes, Boss."

"I want Mike, Jill, and Anne here at once. Then find Larry-in the shop, probably- and both of you come to the house, lock all doors, and all ground floor windows."

"More trouble?"

"Get movin', gal."

If the S.S. apes showed up again-no, when they showed up-they probably would not have duplicate warrants. If their leader was silly enough to break into a locked house without a warrant, well, he might have to turn Mike loose on them. But this blind warfare of attrition had to be stopped-which meant that Jubal simply had to get through to the Secretary General.

How?

Call the Executive Palace again? Heinrich had probably been telling the simple truth when he said that a renewed attempt would simply be referred to Heinrich-or to whatever 5.5. boss was now warming that chair that Heinrich would never need again. Well? It would surely surprise them to have a man they had sent a squad to arrest blandly phoning in, face to face-he might be able to bull his way all the way up to the top. Commandant What's-his-name, chap with a face like a well-fed ferret, Twitchell. And certainly the commanding officer of the S.S. buckos would have direct access to the boss.

No good. You had to have a feeling for what makes the frog jump. It would be a waste of breath to tell a man who believes in guns that you've got something better than guns and that he can't arrest you and might as well give up trying. Twitchell would keep on throwing men and guns at them till he ran out of both-but he would never admit he couldn't bring in a man whose location was known.

Well, when you couldn't use the front door you got yourself slipped in through the back door-elementary politics. Jubal regretted mildly that he had ignored politics the last quarter century or so. Damn it, he needed Ben Caxton-Ben would know who had keys to the back door . - - and Jubal would know somebody who knew one of them.

But Ben's absence was the whole reason for this silly donkey derby. Since he couldn't ask Ben, whom did he know who would know?

Hell's halfwit, he had just been talking to one! Jubal turned back to the phone and tried to raise Tom Mackenzie again, running into only three layers of interference on the way, all of whom knew him and passed him along quickly. While he was doing this, his staff and the Man from Mars came in; Jubal ignored them and they sat down, Miriam first stopping to write on a scratch pad: "Doors and windows locked."

Jubal nodded to her and wrote below it: "Larry-panic button?" then said to the screen, "Tom, sorry to bother you again."

"A pleasure, Jubal."

"Tom, if you wanted to talk to Secretary General Douglas, how would you go about it?"

"Eh? I'd phone his press secretary, Jim Sanforth. Or possibly Jock Dumont, depending on what I wanted. But I wouldn't talk to the Secretary General at all. Jim would handle it."

"But suppose you wanted to talk to Douglas himself."

"Why, I'd tell Jim and let him arrange it. Be quicker just to tell Jim my problem, though; it might be a day or two before he could squeeze me in . . . and even then I might be bumped for something more urgent. Look, Jubal, the network is useful to the administration-and we know it and they know it. But we don't presume on it unnecessarily."

"Tom ... assume that it is necessary. Suppose you just had to speak to Douglas. Right now. Not next week. In the next ten minutes."

Mackenzie's eyebrows went up. "Well - . - if I just had to, I would explain to Jim why it was so urgent-"

"No."

"Be reasonable."

"No. That's just what I can't be. Assume that you had caught Jim Sanforth stealing the spoons, so you couldn't tell him what the emergency was. But you had to speak to Douglas immediately."

Mackenzie sighed. "I suppose I would tell Jim that I simply had to talk to the boss . - . and that if I wasn't put through to him right away, the administration would never get another trace of support from the network, Politely, of course. But make him understand that I meant it. Sanforth is nobody's fool; he would never serve his own head up on a platter."

"Okay, Tom, do it."

"Huh?"

"Leave this call on. Call the Palace on another instrument-and have your boys ready to cut me in instantly. I've got to talk to the Secretary General right now!"

Mackenzie looked pained. "Jubal, old friend-"

"Meaning you won't."

"Meaning I can't. You've dreamed up a hypothetical situation in which a-pardon me-major executive of an intercontinental network could speak to the Secretary General under conditions of dire necessity. But I can't hand this entrée over to somebody else. Look, Jubal, I respect you. Besides that, you are probably four of the six most popular writers alive today. The network would hate to lose you and we are painfully aware that you Won't let us tie you down to a contract. But I can't do it, even to please you. You must realize that one does not telephone the World chief of government unless he wants to speak to you."

"Suppose I do sign an exclusive seven-year contract?"

Mackenzie looked as if his teeth hurt, "I still couldn't do it. I'd lose my job-and you would still have to carry out your contract."

Jubal considered calling Mike over into the instrument's visual pickup and naming him. He discarded the idea at once. Mackenzie's own program mes had run the fake 'Man from Mars' interviews-and Mackenzie was either crooked and in on the hoax . . . or he was honest, as Jubal thought he was, and simply would not believe that he himself had been hoaxed. "All right, Tom, I won't twist your arm. But you know your way around in

the government better than I do. Who calls Douglas whenever he likes-and gets him? I don't mean Sanforth"

"No one."

"Damn it, no man lives in a vacuum! There must be at least a dozen people who can phone him and not get brushed off by a secretary."

"Some of his cabinet, I suppose. And not all of them."

"I don't know any of them, either; I've been out of touch. But I don't mean professional politicos. Who knows him so well that they can call him on a private line and invite him to play poker?"

"Umm ... you don't want much, do you? Well, there's Jake Allenby. Not the actor, the other Jake Allenby. Oil."

"I've met him. He doesn't like me. I don't like him. He knows it."

"Douglas doesn't have very many intimate friends. His wife rather discourages-.- Say, Jubal - . . how do you feel about astrology?"

"Never touch the stuff. Prefer brandy."

"Well, that's a matter of taste. But-see here, Jubal, if you ever let on to anyone that I told you this, I'll cut your lying throat with one of your own manuscripts."

"Noted. Agreed. Proceed."

"Well, Agnes Douglas does touch the stuff.., and I know where she gets it. Her astrologer can call Mrs. Douglas at any time-and, believe you me, Mrs. Douglas has the ear of the Secretary General whenever she chooses. You can call her astrologer - . . and the rest is up to you."

"I don't seem to recall any astrologers on my Christmas card list," Jubal answered dubiously. "What's his name?"

"Her. And you might try crossing her palm with silver in convincing denominations. Her name is Madame Alexandra Vesant. Washington Exchange. That's V, E, S, A, N, T."

"I've got it," Jubal said happily. "And, Tom, you've done me a world of good!"

"Hope so. Anything for the network soon?"

"Hold it." Jubal glanced at a note Miriam had placed at his elbow some moments ago. It read: "Larry says the transceiver won't trans-and he doesn't know why." Jubal went on, "That spot coverage failed earlier through a transceiver failure here-and I don't have anyone who can repair it."

"I'll send somebody."

"Thanks. Thanks twice."

Jubal switched off, placed the call by name and instructed the operator to use hush & scramble if the number was equipped to take it. It was, not to his surprise. Very quickly Madame Vesant's dignified features appeared in his screen. He grinned at her and called, "Hey, Rube!"

She looked startled, then looked more closely. "Why, Doe Harshaw, you old scoundrel! Lord love you, it's good to see you. Where have you been hiding?"

"Just that, Becky-hiding. The clowns are after me."

Becky Vesey didn't ask why; she answered instantly, "What can I do to help? Do you need money?"

"I've got plenty of money, Becky, but thanks a lot. Money won't help; I'm in much more serious trouble than that-and I don't think anyone can help me but the Secretary

General himself, Mr. Douglas. I need to talk to him-and right away. Now - . . or even sooner."

She looked blank. "That's tall order, Doc."

"Becky, I know it is-because I've been trying for a week to get through to him . . and I can't. But don't you get mixed up in it yourself, Becky . . . because, girl, I'm hotter than a smoky bearing. I just took a chance that you might be able to advise me-a phone number, maybe, where I could reach him. But I don't want you to mix into it personally. You'd get hurt-and I'd never be able to look the Professor in the eye if I ever meet him again . . . God rest his soul."

"I know what the Professor would want me to do!" she said sharply. "So let's knock off the nonsense, Doc. The Professor always swore that you were the only sawbones fit to carve people; the rest were butchers. He never forgot that time in Elkton."

"Now, Becky, we won't bring that up. I was paid."

"You saved his life."

"I did no such thing. It was his rugged constitution and his will to fight back-and your nursing."

"Uh ... Doc, we're wasting time. Just how hot are you?"

"They're throwing the book at me ... and anybody near me is going to get splashed. There's a warrant out for me-a Federation warrant- and they know where I am and I can't run. It will be served any minute now . . . and Mr. Douglas is the only person who can stop it."

"You'll be sprung. I guarantee that."

"Becky, I'm sure you would. But it might take a few hours. It's that 'back room' I'm afraid of, Becky. I'm too old for a session in the back room."

"But- Oh, goodness! Doe, can't you give me some details? I really ought to cast a horoscope on you, then I'd know what to do. You're Mercury, of course, since you're a doctor. But if I knew what house to look in to find your trouble, I could do better."

"Girl, there isn't time for that. But thanks." Jubal thought rapidly. Whom to trust? And when? "Becky, just knowing could put you in as much trouble as I am in . . . unless I convince Mr. Douglas."

"Tell me, Doc. I've never taken a powder at a clem yet-and you know it."

"All right. So I'm 'Mercury.' But the trouble lies in Mars."

She looked at him sharply. "How?"

"You've seen the news. You know that the Man from Mars is supposed to be making a retreat some place high up in the Andes. Well, he's not. That's just to hoax the yokels."

Becky seemed startled but not quite as Jubal had expected her to be. "Just where do you figure in this, Doc?"

"Becky, there are people all over this sorry planet who want to lay hands on that boy. They want to use him, they want to make him geek for them, their way. But he's my client and I don't propose to hold still for it. If I can help it. But my only chance is to talk with Mr. Douglas himself, face to face."

"The Man from Mars is your client? You can turn him up?"

"Yes. But only to Mr. Douglas. You know how it is Becky-the mayor can be a good Joe, kind to children and dogs. But he doesn't necessarily know everything his town clowns are up to-especially if they haul a man in and take him into that back room."

She nodded. "I've had my troubles with cops. Cops!"

"So I need to dicker with Mr. Douglas before they haul me in."

"All you want is to talk to him on the telephone?"

"Yes. If you can swing it. Here, let me give you my number-and I'll be sitting right here, hoping for a call . . . until they pick me up. If you can't swing it . . . thanks anyway, Becky, thanks a lot. I'll know you tried."

"Don't switch off!" she said sharply.

"Eh?"

"Keep the circuit, Doc, while I see what I can do. If I have any luck, they can patch right through this phone and save time. So hold on." Madame Vesant left the screen without saying good-by, then called Agnes Douglas. She spoke with calm confidence, pointing out to Agnes that this was precisely the development foretold by the stars-and exactly on schedule. Now had come the critical instant when Agnes must guide and sustain her husband, using all her womanly wit and wisdom to see that he acted wisely and without delay. "Agnes dear, this configuration will not be repeated in a thousand years-Mars, Venus and Mercury in perfect trine, just as Venus reaches the meridian, making Venus dominant. Thus you see-"

"Allie, what do the Stars tell me to do? You know I don't understand the scientific part."

This was hardly surprising, since the described relationship did not obtain at the moment. Madame Vesant had not had time to compute a new horoscope and was improvising. But she was untroubled by it; she was speaking a "higher truth," giving good advice and helping her friends. To be able to help two friends at once made Becky Vesey especially happy. "Dear, you really do understand it, you have born talent for it. You are Venus, as always, and Mars is reinforced, being both your husband and that young man Smith for the duration of this crisis. Mercury is Dr. Harshaw. To offset the imbalance caused by the reinforcement of Mars, Venus must sustain Mercury until the crisis is past. But you have very little time for it; Venus waxes in influence until reaching meridian, only seven minutes from now-after that your influence will decline. You must act quickly."

"You should have warned me sooner."

"My dear, I have been waiting here by my phone all thy, ready to act instantly. The Stars tell us the nature of each crisis; they never tell us the details. But there is still time. I have Dr. Harshaw waiting on the telephone here; all that is necessary is to bring them face to face-if possible before Venus reaches meridian."

"Well- All right, Allie. I've got to dig Joseph out of some silly conference but I'll get him. Keep this line open. Give me the number of the phone you have this Doctor Rackshaw on-or can you transfer the call there?"

"I can switch it over here. Just get Mr. Douglas. Hurry, dear."

"I will."

When Agnes Douglas' face left the screen, Becky went to still another phone. Her profession required ample phone service; it was her largest single business expense. Humming happily she called her broker.

XVII

As MADAME VESANT LEFT THE SCREEN Jubal Harshaw leaned back from his phone. "Front," he said.

"Okay, Boss," Miriam acknowledged.

"This is one for the 'Real-Experiences' group. Specify on the cover sheet that I want the narrator to have a sexy contralto voice-"

"Maybe I should try out for it."

"Not that sexy. Shut up. Dig out that list of null surnames we got from the Census Bureau, pick one and put an innocent, mammalian first name with it, for the pen name. A girl's name ending in 'a'-that always suggests a 'C' cup."

"Huh! And not one of us with a name ending in 'a.' Why, you louse!"

"Flat-chests bunch, aren't you? 'Angela.' Her name is 'Angela.' Title: 'I Married a Martian.' Start: All my life I had longed to become an astronaut. Paragraph. When I was just a tiny thing, with freckles on my nose and stars in my eyes, I saved box tops just as my brothers did-and cried when Mummy wouldn't let me wear my Space Cadet helmet to bed. Paragraph. In those carefree childhood days I did not dream to what strange, bittersweet fate my tomboy ambition would-"

"Boss!"

"Yes, Dorcas?"

"Here come two more loads."

Jubal got up from the telephone chair. "Hold for continuation. Miriam, sit down at the phone." He went to the window, saw the two air cars Dorcas had spotted, decided that they could be squad cars, and might be about to land on his property. "Larry, bolt the door to this room. Anne, put on your robe. Watch them but stand back from the window; I want them to think the house is empty. Jill, you stick close to Mike and don't let him make any hasty moves. Mike, you do what Jill tells you to."

"Yes, Jubal. I will do."

"Jill, don't turn him loose unless you have to. To keep one of us from being shot, I mean. If they bust down doors, let them-I rather hope they do. Jill, if it comes to scratch, I'd much rather he snatched just the guns and not the men."

"Yes, Jubal."

"Make sure he understands. This indiscriminate elimination of cops has got to stop."

"Telephone, Boss!"

"Coming." Jubal went unhurriedly back to the phone. "All of you stay out of pickup. Dorcas, you can take a nap. Miriam, note down another title for later: 'I Married a Human.' " He slid into the seat as Miriam vacated it and said, "Yes?"

A blandly handsome man looked back at him. "Doctor Harshaw?"

"Yes."

"Please hold on. The Secretary General will speak with you." The tone implied that a genuflection was in order.

"Okay."

The screen flickered, then rebuilt in the tousled image of His Excellency the Honorable Joseph Edgerton Douglas, Secretary General of the World Federation of Free Nations. "Dr. Harshaw? Understand you need to speak with me. Shoot."

"No, sir."

"Eh? But I understood-"

"Let me rephrase it precisely, Mr. Secretary. You need to speak with me."

Douglas looked surprised, then grinned. "Pretty sure of yourself, aren't you? Well, Doctor, you have just ten seconds to prove that. I have other things to do."

"Very well, sir. I am attorney for the Man from Mars."

Douglas suddenly stopped looking tousled. "Repeat that."

"I am attorney for Valentine Michael Smith, known as the Man from Mars. Attorney with full power. In fact, it may help to think of me as defacto Ambassador from Mars . . . in the spirit of the Larkin Decision, that is to say."

Douglas stared at him. "Man, you must be out of your mind!"

"I've often thought so, lately. Nevertheless I am acting for the Man from Mars. And he is prepared to negotiate."

"The Man from Mars is in Ecuador."

"Please, Mr. Secretary. This is a private conversation. He is not in Ecuador, as both of us know. Smith-the real Valentine Michael Smith, not the one who has appeared in the newscasts-escaped from confinement-and, I should add, illegal confinement-at Bethesda Medical Center on Thursday last, in company with Nurse Gillian Boardman. He kept his freedom and is now free-and he will continue to keep it. If any of your large staff of assistants has told you anything else, then someone has been lying to you . . . which is why I am speaking to you yourself. So that you can straighten it out."

Douglas looked very thoughtful. Someone apparently spoke to him from off screen, but no words came over the telephone. At last he said, "Even if what you said were true, Doctor, you can't be in a position to speak for young Smith. He's a ward of the State."

Jubal shook his head. "Impossible. The Larkin Decision."

"Now see here, as a lawyer myself, I assure you-"

"As a lawyer myself, I must follow my own opinion-and protect my client."

"You are a lawyer? I thought that you meant that you claimed to be attorney-in-fact, rather than counsellor."

"Both. You'll find that I am an attorney at law, in good standing, and admitted to practice before the High Court. I don't hang my shingle these days, but I am." Jubal heard a dull boom from below and glanced aside. Larry whispered, "The front door, I think. Boss- Shall Igo look?"

Jubal shook his head in negation and spoke to the screen. "Mr. Secretary, while we quibble, time is running out. Even now your men-your S.S. hooligans-are breaking into my house. It is most distasteful to be under siege in my own home. Now, for the first and last time, will you abate this nuisance? So that we can negotiate peaceably and equitably? Or shall we fight it out in the High Court with all the stink and scandal that would ensue?"

Again the Secretary appeared to speak with someone off screen. He turned back, looking troubled. "Doctor, if the Special Service police are trying to arrest you, it is news to me. I do not see-"

"If you'll listen closely, you'll hear them tromping up my staircase, sir! Mike! Anne! Come here." Jubal shoved his chair back to allow the camera angle to include three people. "Mr. Secretary General Douglas- the Man from Mars!" He did not, of course, introduce Anne, but she and her white cloak of probity were fully in view.

Douglas stared at Smith; Smith looked back at him and seemed uneasy. "Jubal-"

"Just a moment, Mike. Well, Mr. Secretary? Your men have broken into my house-I hear them pounding on my study door this moment." Jubal turned his head. "Larry, unbolt the door. Let them in." He put a hand on Mike. "Don't get excited, lad, and don't do anything unless I tell you to."

"Yes, Jubal. That man. I have know him."

"And he knows you." Over his shoulder Jubal called out to the now open door, "Come in, Sergeant. Right over here."

The S.S. sergeant standing in the doorway, mob gun at the ready, did not come in. Instead he called out, "Major! Here they are!"

Douglas said, "Let me speak to the officer in charge of them, Doctor." Again he spoke off screen.

Jubal was relieved to see that the major for whom the sergeant had shouted showed up with his sidearm still in its holster; Mike's shoulder had been trembling under Jubal's hand ever since the sergeant's gun had come into view-and, while Jubal lavished no fraternal love on these troopers, he did not want Smith to display his powers . . . and cause awkward questions.

The major glanced around the room. "You're Jubal Harshaw?"

"Yes. Come over here. Your boss wants you."

"None of that. You come along. I'm also looking for-"

"Come here! The Secretary General himself wants a word with you- on this phone."

The S.S. major looked startled, then came on into the study, around Jubal's desk, and in sight of the screen-looked at it, suddenly came smartly to attention and saluted. Douglas nodded. "Name, rank, and duty."

"Sir, Major C. D. Bloch, Special Service Squadron Cheerio, Maryland Enclave Barracks."

"Now tell me what you are doing where you are, and why."

"Sir, that's rather complicated. I-"

"Then unravel it for me. Speak up, Major."

"Yes, sir. I came here pursuant to orders. You see-"

"I don't see."

"Well, sir, about an hour and a half ago a flying squad was sent here to make several arrests. They didn't report in when they should have and when we couldn't raise them by radio, I was sent with the reserve squad to find them and render assistance as needed."

"Whose orders?"

"Uh, the Commandant's, sir."

"And did you find them?"

"No, sir. Not a trace of them."

Douglas looked at Harshaw. "Counsellor, did you see anything of another squad, earlier?"

"It's no part of my duties to keep track of your servants, Mr. Secretary. Perhaps they got the wrong address. Or simply got lost."

"That is hardly an answer to my question."

"You are correct, sir. I am not being interrogated. Nor will I be, other than by due process. I am acting for my client; I am not nursemaid to these uniformed, uh, persons. But I suggest, from what I have seen of them, that they might not be able to find a pig in a bath tub."

"Mmm ... possibly. Major, round up your men and return. I'll confirm that via channels."

"Yes, sir!" The major saluted.

"Just a moment!" Harshaw said sharply. "These men broke into my house. I demand to see their warrant."

"Oh. Major, show him your search warrant."

Major Bloch turned brick red. "Sir, the officer ahead of me had the warrants. Captain Heinrich. The one who's missing."

Douglas stared at him. "Young man ... do you mean to stand there and tell me that you broke into a citizen's home without a Warrant?"

"But- Sir, you don't understand! There was a warrant-there are warrants. I saw them. But, of course, Captain Heinrich took them with him. Sir."

Douglas just looked at him. "Get on back. Place yourself under arrest when you get there. I'll see you later."

"Yes, sir."

"Hold it," Harshaw demanded. "Under the circumstances I shan't let him leave. I exercise my right to make a citizen's arrest. I shall take him down and charge him in this township and have him placed in our local lockup. 'Armed breaking and entering.'"

Douglas blinked thoughtfully. "Is this necessary, sir?"

"I think it is. These fellows seem to be awfully hard to find when you want them-so I don't want to let this one leave our local jurisdiction. Why, aside from the serious criminal charges, I haven't even had opportunity to assess the damage to my property."

"You have my assurance, sir, that you will be fully compensated."

"Thank you, sir. But what is to prevent another uniformed joker from coming along twenty minutes from now, perhaps this time with a warrant? Why, he wouldn't even need to break down the door! My castle stands violated, open to any intruder. Mr. Secretary, only the few precious moments of delay afforded by my Once-stout door kept this scoundrel from dragging me away before I could reach you by telephone . . . and you heard him say that there was still another like him at large-with, so he says, warrants."

"Doctor, I assure you that I know nothing of any such warrant."

"Warrants, sir. He said 'warrants for several arrests.' Though perhaps a better term would be 'lettres de cachet.'"

"That's a serious imputation."

"This is a serious matter. You see what has already been done to me."

"Doctor, I know nothing of these warrants, if they exist. But I give you my personal assurance that I will look into it at once, find Out why they were issued, and act as the merits of the matter may appear. Can I say more?"

"You can say a great deal more, sir. I can reconstruct exactly why those warrants were issued. Some one in your service, in an excess of zeal, caused a pliant judge to issue them . . . for the purpose of seizing the persons of myself and my guests in order to question us, safely out of your sight. Out of anyone's sight, sir! We will discuss all issues with you but we will not be questioned by such as this creature-" Jubal hooked a thumb at the S.S. major "-in some windowless back room! Sir, I hope for, and expect, justice at your hands . . . but if those warrants are not canceled at once, if I am not assured by you personally beyond any possibility of quibble that the Man from Mars, Nurse Boardman, and myself will be left undisturbed in our persons, free to come and go, then-" Jubal stopped and shrugged helplessly. "-I must seek a champion elsewhere. There are, as you know, persons and powers outside the administration who hold deep interest in the affairs of the Man from Mars."

"You threaten me."

"No, sir. I plead with you. I have come to you first. We wish to negotiate. But we cannot speak easily while we are being hounded. I beg of you, sir-call off your dogs!"

Douglas glanced down, looked up again. "Those warrants, if any, will not be served. As soon as I. can track them down they will be canceled."

"Thank you, sir."

Douglas glanced at Major Bloch. "You still insist on booking him locally?"

Jubal looked at him contemptuously. "Him? Oh, let him go, he's merely a fool in uniform. And let's forget the damages, too. You and I have more serious matters to discuss."

"You may go, Major." The S.S. officer saluted and left very abruptly. Douglas continued, "Counsellor, it is my thought that we now need conversations face to face. The matters you raise can hardly be settled over the telephone."

"I agree."

"You and your, uh, client will be my guests at the Palace. I'll send my yacht to pick you up. Can you be ready in an hour?"

Harshaw shook his head. "Thank you, Mr. Secretary. But that won't be necessary. We'll sleep here . . . and when it comes time to meet I'll dig up a dog sled, or something. No need to send your yacht."

Mr. Douglas frowned. "Come, Doctor! As you yourself pointed out, these conversations will be quasi-diplomatic in nature. In proffering proper protocol I have, in effect, conceded this. Therefore I must be allowed to provide official hospitality."

"Well, sir, I might point out that my client has had entirely too much official hospitality already-he had the Devil's own time getting shut of it."

Douglas' face became rigid. "Sir, are you implying-"

"I'm not implying anything. I'm simply saying that Smith has been through quite a lot and is not used to high-level ceremony. He'll sleep sounder here, where he feels at home. And so shall I. I am a crochety old man, sir, and I prefer my own bed. Or I might point out that our talks may break down and my client and I would be forced to look elsewhere-in which case I would find it embarrassing to be a guest under your roof."

The Secretary General looked very grim. "Threats again. I thought you trusted me, sir? And I distinctly heard you say that you were 'ready to negotiate.'"

"I do trust you, sir." (-about as far as I could throw a fit!) "And we are indeed ready to negotiate. But I use 'negotiate' in its original sense, not in this new-fangled

meaning of 'appeasement.' However, we intend to be reasonable. But we can't start talks at once in any case; we're shy one factor and we must wait. How long, I don't know."

"What do you mean?"

"We expect the administration to be represented at these talks by whatever delegation you choose-and we have the same privilege."

"Surely. But let's keep it small. I shall handle this myself, with only an assistant or two. The Solicitor General, I think . . . and our experts in space law. But to transact business you require a small group-the smaller the better."

"Most certainly. Our group will be small Smith himself-myself-I'll bring a Fair Witness-"

"Oh, come now!"

"A Witness does not slow things up. I suggest you retain one also. We'll have one or two others perhaps-but we lack one key man. I have firm instructions from my client that a fellow named Ben Caxton must be present . . . and I can't find the beggar."

Jubal, having spent hours of most complex maneuvering in order to toss in this one remark, now waited with his best poker face to see what would happen. Douglas stared at him. 0 'Ben Caxton?' Surely you don't mean that cheap winchell?"

"The Ben Caxton I refer to is a newspaperman. He has a column with one of the syndicates."

"Absolutely out of the question!"

Harshaw shook his head. "Then that's all, Mr. Secretary. My instructions are firm and give me no leeway. I'm sorry to have wasted your time. I beg to be excused now." He reached out as if to switch off the phone.

"Hold it."

"Sir?"

"Don't cut that circuit; I'm not through speaking to you!"

"I most humbly beg the Secretary General's pardon. We will, of course, wait until he excuses us."

"Yes, yes, but never mind the formality. Doctor, do you read the tripe that comes out of this Capitol labeled as news?"

"Good Heavens, not"

"I wish I didn't have to. It's preposterous to talk about having a journalist present at these talks in any case. We'll let them in later, after everything is settled. But even if we were to have any of them present, Caxton would not be one of them. The man is utterly poisonous . . . a keyhole sniffer of the worst sort."

"Mr. Secretary, we have no objection to the full glare of publicity throughout. In fact, we shall insist on it."

"Ridiculous!"

"Possibly. But I serve my client as I think best. If we reach agreement affecting the Man from Mars and the planet which is his home, I want every person on this planet to have opportunity to know exactly how it was done and what was agreed. Contrariwise, if we fail to agree, people must hear how and where the talks broke down. There will be no star chamber proceedings, Mr. Secretary."

"Damn it, man, I wasn't speaking of a star chamber and you know it! I simply meant quiet, orderly talks without our elbows being jostled!"

"Then let the press in, sir, through their cameras and microphones but with their feet and elbows outside. Which reminds me-we will be interviewed, my client and I, over one of the networks later today-and I shall announce that we want full publicity on these coming talks."

"What? You mustn't give out interviews now-why, that's contrary to the whole spirit of this discussion."

"I can't see that it is. We won't discuss this private conversation, of course-but are you suggesting that a private citizen must have your permission to speak to the press?"

"No, of course not, but-"

"I'm afraid it's too late, in any case. The arrangements have all been made and the only way you could stop it now would be by sending more carloads of your thugs-with or without warrants. But I'm afraid they would be too late, even so. My only reason for mentioning it is that it occurs to me that you might wish to give out a news release-in advance of this coming interview-telling the public that the Man from Mars has returned from his retreat in the Andes . . . and is now vacationing in the Poconos. So as to avoid any possible appearance that the government was taken by surprise. You follow me?"

"I follow you-quite well." The Secretary General stared silently at Harshaw for several moments, then said, "Please wait." He left the screen entirely.

Harshaw motioned Larry to him while he reached up with his other hand and covered the telephone's sound pickup. "Look, son," he whispered, "with that transceiver out I'm bluffing on a busted flush. I don't know whether he's left to issue that news release I suggested . . . or has gone to set the dogs on us again while he keeps me tied up on the phone. And I won't know, either way. You high tail it out of here, get Tom Mackenzie on the phone, and tell him that if be doesn't get the setup here working at once, he's going to miss the biggest story since the Fall of Troy. Then be careful coming home-there may be cops crawling out of the cracks."

"Got it. But how do I call Mackenzie?"

"Uh-" Douglas was just sitting back down on screen. "Speak to Miriam. Git."

"Dr. Harshaw, I took your suggestion. A news release much as you worded it . . . plus a few substantiating details." Douglas smiled warmly in a good simulation of his homespun public persona. "And there is no use in half measures. I can see that, if you insist on publicity, there is no way to stop you, foolish as it is to hold exploratory talks in public. So I added to the release that the administration had arranged to discuss future interplanetary relations with the Man from Mars-as soon as he had rested from his trip-and would do so publicly . . . quite publicly." His smile became chilly and he stopped looking like good old Joe Douglas.

Harshaw grinned jovially, in honest admiration-why, the old thief had managed to roll with the punch and turn a defeat into a coup for the administration. "That's just perfect, Mr. Secretary! Much better if such matters come officially from the government. We'll back you right down the line!"

"Thank you. Now about this Caxton person- Letting the press in does not apply to him. He can Sit at home, watch it over stereovision, and make up his lies from that-and no doubt he will. But he will not be present at the talks. I'm sorry. No."

"Then there will be no talks. Mr. Secretary, no matter what you have told the press."

"I don't believe you understand me, Counsellor. This man is offensive to me. Personal privilege."

"You are correct, sir. It is a matter of personal privilege."

"Then we'll say no more about it."

"You misunderstand me. It is indeed personal privilege. But not yours. Smith's."

"You are privileged to select your advisers to be present at these talks -and you can fetch the Devil himself and we shall not complain. Smith is privileged to select his advisers and have them present. If Caxton is not present, we will not be there. In fact, you will find us across the street, at some quite different conference. One where you won't be welcome, Even if you speak fluent Hindi. Now do you understand me?"

There was a long silence, during which Harshaw thought clinically that a man of Douglas' age really should not indulge in such evident rage. Douglas did not leave the screen but he consulted offscreen and silently. At last he spoke-to the Man from Mars.

Mike had stayed on screen the whole time, as silently and at least as patiently as the Witness. Douglas said to him, "Smith, why do you insist on this ridiculous condition?"

Harshaw put a hand on Mike and said instantly, "Don't answer, Mike!" -then to Douglas: "Tut, tut, Mr. Secretary! The Canons, please! You may not inquire why my client has instructed me. And let me add that the Canons are violated with exceptional grievance in that my client has but lately learned English and cannot be expected to hold his own against you. If you will first take the trouble to learn Martian, I may permit you to put the question again . . . in his language. Or I may not. But certainly not today."

Douglas sighed. "Very well. It might be pertinent to inquire into what Canons you have played fast and loose with, too-but I haven't time; I have a government to run. I yield. But don't expect me to shake hands with this Caxton!"

"As you wish, sir. Now back to the first point. We are held up. I haven't been able to find Caxton. His office says that he is out of town."

Douglas laughed. "That's hardly my problem. You insisted on a privilege-one I find personally offensive. Bring whom you like. But round them up yourself."

"Reasonable, sir, very reasonable. But would you be willing to do the Man from Mars a favor?"

"Eh? What favor?"

"The talks will not begin until Caxton is located-that is flat and is not subject to argument. But I have not been able to find him . . . and my client is getting restive. I am merely a private citizen . . . but you have resources."

"What do you mean?"

"Some minutes ago I spoke rather disparagingly of the Special Service squadrons-check it off to the not unnatural irk of a man who has just had his front door broken down. But in truth I know that they can be amazingly efficient . . . and they have the ready cooperation of police forces everywhere, local, state, national, and all Federation departments and bureaus. Mr. Secretary, if you were to call in your S.S. Commandant and tell him that you were anxious to locate a certain man as quickly as was humanly

possible-well, sir, it would produce more meaningful activity in the next hour than I myself could hope to produce in a century."

"Why on Earth should I alert all police forces everywhere to find one scandal-mongering reporter?"

"Not 'on Earth,' my dear sir-on Mars. I asked you to regard this as a favor to the Man from Mars."

"Well ...it's a preposterous request but I'll go along." Douglas looked directly at Mike. "As a favor to Smith, only. But I shall expect similar cooperation when we get down to cases."

"You have my assurance that it will ease the situation enormously."

"Well, I can't promise anything. You say the man is missing. If he is, he may have fallen in front of a truck; he may be dead-and I, for one, would not mourn."

Harshaw looked very grave. "Let us hope not, for all of our sakes."

"What do you mean?"

"I've tried to point out that sad possibility to my client-but it is like shouting into the wind. He simply won't listen to the idea." Harshaw sighed. "A shambles, sir. If we can't find this Caxton, that is what we will both have on our bands: a shambles."

"Well, I'll try. But don't expect miracles, Doctor."

"Not I, sir. My client. He has the Martian viewpoint ... and he does expect miracles. So let's pray for one."

"You'll hear from me. That's all I can say."

Harshaw bowed without getting up. "Your servant, sir."

As the Secretary General's image cleared from the screen Jubal sighed and stood up, and at once found Gillian's arms around his neck. "Oh, Jubal, you were wonderful!"

"We aren't out of the woods yet, child."

"I know. But if anything can save Ben, you've just done it." She kissed him.

"Hey, none of that stuff! I swore off smooching before you were born. So kindly show respect for my years." He kissed her carefully and thoroughly. "That's just to take the taste of Douglas out of my mouth- between kicking him and kissing him I was getting nauseated. Now go smooch Mike instead. He deserves it-for holding still to my damned lies."

"Oh, I shall!" Jill let go of Harshaw, put her arms around the Man from Mars. "Such wonderful lies, Jubal!" She kissed Mike.

Jubal watched with deep interest as Mike initiated a second section of the kiss himself, performing it very solemnly but not quite as a novice- clumsy, Harshaw decided, but he did not bump noses nor hang back. Harshaw awarded him a B-minus, with an A for effort.

"Son," he said, "you continue to amaze me. I would have expected that to cause you to curl up in one of your faints."

"I so did," Mike answered seriously, without letting go of Jill, "on the first kissing time."

"Well! Congratulations, Jill. A.C., or D.C.?"

She looked at Harshaw. "Jubal, you're a tease but I love you anyhow and refuse to let you get my goat. Mike got a little upset once-but no longer, as you can see."

"Yes," Mike agreed, "it is a goodness. For water brothers it is a growing-closer. I will show you. Yes?" He let go of Jill.

Jubal hastily put up a palm. "No."

"No?"

"Don't be hurt. But you would be disappointed, son. It's a growingcloser for water brothers only if they are young girls and pretty-such as Jill."

"My brother Jubal, you speak rightly?"

"I speak very rightly. Kiss girls all you want to-it beats the hell Out of card games."

"Beg pardon?"

"It's a fine way to grow closer ... but just with girls. Hmmm . . Jubal looked around the room. "I wonder if that first-time phenomenon would repeat? Dorcas, I want your help in a scientific experiment."

"Boss, I am not a guinea pig! You go to hell."

"In due course, I shall. Don't be difficult, girl; Mike has no communicable diseases, or I wouldn't let him use the pool-which reminds me: Miriam, when Larry gets back, tell him I want the pool drained and refilled tonight-we're through with murkiness, Well, Dorcas?"

"How do you know it would be our first time?" "Mmm, there's that. Mike, have you ever kissed Dorcas?"

"No, Jubal. Only today did I learn that Dorcas is my water brother."

"She is?"

"Yes. Dorcas and Anne and Miriam and Larry. They are your water brothers, my brother Jubal."

"Mmm, yes. Correct in essence."

"Yes. It is essence, the grokking-not sharing of water. I speak rightly?"

"Very rightly, Mike."

"They are your water brothers." Mike paused to think words. "In catenative assemblage, they are my brothers." Mike looked at Dorcas. "For brothers, growing-closer is good. But I did not know."

Jubal said, "Well, Dorcas?"

"Huh? Oh, Heavens! Boss, you're the world's worst tease. But Mike isn't teasing. He's sweet." She walked up to him, stood on tiptoes, and held up her arms. "Kiss me, Mike."

Mike did. For some seconds they "grew closer."

Dorcas fainted.

Jubal spotted it and kept her from falling, Mike being far too inexperienced to cope with it. Then Jill had to speak sharply to Mike to keep him from trembling into withdrawal when he saw what had happened to Dorcas. Luckily Dorcas came out of it shortly and was able to reassure Mike that she was all right, that she had indeed "grown closer" and would happily grow closer again-but she needed to catch her breath. "Whew!"

Miriam had watched round-eyed. "I wonder if I dare risk it?"

Anne said, "By seniority, please. Boss, are you through with me as a Witness?"

"For the time being, at least."

"Then hold my cloak." She slipped out of it. "Want to bet on it?"

"Which way?"

"I'll give you seven-to-two I don'! faint-but I wouldn't mind losing."

"Done."

"Dollars, not hundreds. Mike dear ... let's grow lots closer."

In time Anne was forced to give up through simple hypoxia, although Mike, with his Martian training, could have gone without oxygen much longer. She gasped for air and said, "I don't think I was Set just right. Boss, I'm going to give you another chance for your money."

She started to offer her face again but Miriam tapped her on the shoulder. "Out."

"Don't be so eager."

"'Out,' I said. The foot of the line for you, wench," Miriam insisted.

"Oh, well!" Anne pecked Mike hastily and gave way. Miriam moved in, smiled at him, and said nothing. It was not necessary; they grew close and continued to grow closer.

"Front!"

Miriam looked around. "Boss, can't you see I'm busy?"

"All right, all right! But get out of the pickup angle-I'll answer the phone myself."

"Honest, I didn't even hear it."

"Obviously. But for a while we've got to pretend to a modicum of dignity around here-it might be the Secretary General. So get out of range."

But it was Mr. Mackenzie. "Jubal, what in the devil is going on?"

"Trouble?"

"A short while ago I got a wild phone call from a young man claiming to speak for you who urged me to drop everything and get cracking, because you've finally got something for me. Since I had already ordered a mobile unit to your place-"

"Never got here."

"I know. They called in, after wandering around somewhere north of you. Our despatcher straightened them out and they should be there any moment now. I tried twice to call you and your circuit was busy. What have I missed?"

"Nothing yet." Jubal considered it. Damnation, he should have had someone monitor the babble box. Had Douglas actually made that news release? Was Douglas committed? Or would a new passel of cops show up? While the kids played post office! Jubal, you're getting senile. "I'm not sure that there's going to be, just yet. Has there been anything special in the way of a news flash this past hour?"

"Why, no-oh, one item: the Palace announced that the Man from Mars had returned north and was vacationing in the-Jubal! Are you mixed up in that?"

"Just a moment. Mike, come to the phone. Anne, grab your robe."

"Got it, Boss."

"Mr. Mackenzie-meet the Man from Mars."

Mackenzie's jaw dropped, then his professional reflexes came to his aid. "Hold it. Just hold it right there and let me get a camera on this! We'll pick it up in flat, right off the phone-and we'll repeat in stereo just as quick as those jokers of mine get there. Jubal, I'm safe on this? You wouldn't- You wouldn't-"

"Would I swindle you with a Fair Witness at my elbow? Yes, I would, if necessary. But I'm not forcing this interview on you. Matter of fact, we should wait and tie in Argus and Trans-Planet."

"Jubal! You can't do this to me."

"And I won't. The agreement with all of you was to monitor what the cameras saw . . . when I signalled. And use it if it was newsworthy. But! didn't promise not to give out interviews in addition to that-and New World can have this interview, oh, say thirty minutes ahead of Argus and Trans-P . . . if you want it." Jubal added, "Not only did you loan us all the equipment for the tie-in, but you've been very helpful personally, Tom. I can't express how helpful you've been."

"You mean, uh, that telephone number?"

"Correct!"

"And it got results?"

"It did. But no questions about that, Tom. Not on the air. Ask me privately-next year."

"Oh, I wouldn't think of it. You keep your lip buttoned and I'll keep mine. Now don't go away-"

"One more thing. That spool of messages you're holding for me against the same signal. Make damn sure they don't go out. Send them back to me."

"Eh? All right, all right-I've been keeping them in my desk, you were so fussy about it. Jubal, I've got a camera on this phone screen right now. Can we start?"

"Shoot."

"And I'm going to do this one myself!" Mackenzie turned his face away and apparently looked at the camera. "flash news! This is your NWNW reporter on the spot while its hot! The Man from Mars has just phoned you right here in your local station and wants to talk to you! Cut. Monitor, insert flash-news plug and acknowledgment to sponsor. Jubal, anything special I should ask him?"

"Don't ask him questions about South America-he's not a tourist. Swimming is your safest subject. You can ask me about his future plans."

"Okay. End of cut. Friends, you are now face to face and voice to voice with Valentine Michael Smith, the Man from Mars! As NWNW, always first with the burst, told you earlier, Mr. Smith has just returned from his solitary retreat high in the Andes-and we welcome him back! Wave to your friends, Mr. Smith-"

("Wave at the telephone, son. Smile and wave at it.")

"Thank you, Valentine Michael Smith. We're all happy to see you looking so healthy and tan. I understand that you have been gathering strength by learning to swim?"

"Boss! Visitors. Or something."

"Cut before interruption-after the word 'swim.' What the hell, Juhal?"

"I'll have to see. Jill, ride herd on Mike again-it might be General Quarters."

But it was not. It was the NWNW mobile stereovision unit landing- and again rose bushes were damaged-Larry returning from phoning Mackenzie from the village, and Duke, returning. Mackenzie decided to finish the flat black & white interview quickly, since he was now assured of depth and color through his mobile unit, and in the meantime its technical crew could check the trouble with the equipment on loan to Jubal. Larry and Duke went with them.

The interview was finished with inanities, Jubal fielding any questions Mike failed to understand; Mackenzie signed off with a promise to the public that a color & depth special interview with the Man from Mars would follow in thirty minutes. "Stay synched with this station!" He stayed on the phone and waited for his technicians to report.

Which the crew boss did, almost at once: "Nothing wrong with that transceiver, Mr. Mackenzie, nor with any part of this field setup."

"Then what was wrong with it before?"

The technician glanced at Larry and Duke, then grinned. "Nothing. But it helps quite a bit to put power through it. The breaker was open at the board."

Harshaw intervened to stop a wrangle between Larry and Duke, one which seemed concerned with the relative merits of various sorts of idiocy more than with the question of whether Duke had, or had not, told Larry that a certain tripped circuit breaker must be reset if it was anticipated that the boirowed equipment was going to be used. The showman's aspect of Jubal's personality regretted that the "finest unrehearsed spectacular since Elijah bested the Priests of Baal" had been missed by the cameras. But the political finagler in him was relieved that mischance had kept Mike's curious talents still a close secret-Jubal anticipated that he still might need them, as a secret weapon . . . not to mention the undesirability of trying to explain to skeptical strangers the present whereabouts of certain policemen plus two squad cars.

As for the rest, it merely confirmed his own conviction that science and invention had reached its peak with the Model-T Ford and had been growing steadily more decadent ever since. And besides, Mackenzie wanted to get on with the depth & color interview- They got through that with a minimum of rehearsing, Jubal simply making sure that no question would be asked which could upset the public fiction that the Man from Mars had just returned from South America. Mike sent greetings to his friends and brothers of the Champion, including one to Dr. Mahmoud delivered in croaking, throat rasping Martian Jubal decided that Mackenzie had his money's worth.

At last the household could quiet down. Jubal set the telephone for two hours refusal, stood up, stretched, sighed, and felt a great weariness, wondered if he were getting old. "Where's dinner? Which one of you wenches was supposed to get dinner tonight? And why didn't you? Gad, this household is falling to wrack and ruin!"

"It was my turn to get dinner tonight," Jill answered, "but-"

"Excuses, always excuses."

"Boss," Anne interrupted sharply, "how do you expect anyone to cook when you've kept every single one of us penned up here in your study all afternoon?"

"That's the moose's problem," Jubal said dourly. "I want it clearly understood that, even if Armageddon is held on these premises I expect meals to be hot and on time right up to the ultimate trump. Furthermore-"

"Furthermore," Anne completed, "it is now only seven-forty and plenty of time to have dinner by eight. So quit yelping, Boss, until you have something to yelp about. Cry-baby."

"Is it really only twenty minutes of eight? Seems like a week since lunch. Anyhow ~OU haven't left me a civilized amount of time to have a pre-dinner drink."

"Poor you?'

"Somebody get me a drink. Get everybody a drink. On second thought let's skip a formal dinner tonight and drink our dinners; I feel like getting as tight as a tent rope on a rainy day. Anne, how are we fixed for smorgasbord?"

"Plenty."

"Then why not thaw out eighteen or nineteen kinds and spread 'em around and let anybody eat what he feels like when he feels like it? What's all the argument about?"

"Right away," agreed Jill.

Anne stopped to kiss him on his bald spot. "Boss, you've done nobly. We'll feed you and get you drunk and put you to bed. Wait, Jill, I'm going to help."

"I may to help, too?" Smith said eagerly.

"Sure, Mike. You can carry trays. Boss, dinner will be by the pool. It's a hot night."

"How else?" When they had left, Jubal said to Duke, "Where the hell have you been all day?"

"Thinking."

"Doesn't pay to. Just makes you discontented with what you see around you. Any results?"

"Yes," said Duke, "I've decided that what Mike eats, or doesn't eat, is no business of mine."

"Congratulations. A desire not to butt into other people's business is at least eighty percent of all human 'wisdom . . . and the other twenty percent isn't very important."

"You butt into other people's business. All the time."

"Who said I was Wise? I'm a professional bad example. You can learn a lot by watching me. Or listening to me. Either one."

"Jubal, if I walked up to Mike and offered him a glass of water, do you suppose he would go through that lodge routine?"

"I feel certain that he would. Duke, almost the only human characteristic Mike seems to possess is an 0verwhelming desire to be liked. But I want to make sure that you know how Serious it is to him. Much more serious than getting married. I myself accepted water brotherhood with Mike before I understood it-and I've become more and more deeply entangled with its responsibilities the more I've grokked it. You'll be committing yourself never to lie to him, never to mislead or deceive him in any way, to stick by him come what may-because that is just what he will do with you. Better think about it."

"I have been thinking about it, all day. Jubal, there's something about Mike that makes you want to take care of him."

"I know. You've probably never encountered complete honesty before -I know I hadn't. Innocence. Mike has never tasted the fruit of the Tree of Knowledge of Good and Evil . . . so we, who have, don't understand what makes him tick. Well, on your own head be it. I hope you never regret it." Jubal looked up. "Oh, there you are! I thought you had stopped to distill the stuff."

Larry answered, "Couldn't find a cork screw, at first."

"Machinery again. Why didn't you bite the neck off? Duke, you'll find some glasses stashed behind The Anatomy of Melancholy up there-"

"I know where you hide them."

"-and we'll all have a quick one, neat, before we get down to serious drinking." Duke got the glasses; Jubal poured and held up his own. "The golden sunshine of Italy congealed into tears. Here's to alcoholic brotherhood . . . much more suited to the frail human soul, if any, than any other sort."

"Health."

"Cheers."

Jubal poured his slowly down his throat. "Ah~" he said happily, and belched. "Offer some of that to Mike, afterwards, Duke, and let him learn how good it is to be human. Makes me feel creative. Front! Why are those girls never around when I need them? Ftvnt!!"

"I'm still 'Front,' " Miriam answered, at the door, "but-"

"I know. And I was saying: '-to what strange, bittersweet fate my tomboy ambition-'"

"But I finished that story while you were chatting on the telephone with the Secretary General."

"Then you are no longer 'Front.' Send it off."

"Don't you want to read it first? Anyhow, I've got to revise it- kissing Mike gave me a new insight on it."

Jubal shuddered. "Read it?' Good God, no! It's bad enough to write such a thing. And don't even consider revising it, certainly not to fit the facts. My child, a true-confession story should never be tarnished by any taint of truth."

"Okay, Boss. And Anne says if you want to come down to the pool and have a bite before you eat, come on."

"I can't think of a better time. Shall we adjourn to the terrace, gentlemen'?"

At the pool the party progressed liquidly with bits of fish and other Scandinavian high-caloric comestibles added to taste. At Jubal's invitation Mike tried brandy, somewhat cut with water. Mike found the resulting sensation extremely disquieting, so he analysed his trouble, added oxygen to the ethanol in an inner process of reversed fermentation and converted it to glucose and water, which gave him no trouble.

Jubal had been observing with interest the effect of his first drink of liquor on the Man from Mars-saw him become drunk almost at once, saw him sober up even more quickly. In an attempt to understand what had happened, Jubal urged more brandy on Mike-which he readily accepted since his water brother offered it. Mike sopped up an extravagant quantity of fine imported liquor before Jubal was willing to concede that it was impossible to get him drunk.

Such was not the case with Jubal, despite his years of pickling; staying sociable with Mike during the experiment dulled the edge of his wits. So, when he attempted to ask Mike what he had done, Mike thought that he was inquiring about the events during the raid by the S.S.-concerfling which Mike still felt latent guilt. He tried to explain and, if needed, receive Jubal's pardon.

Jubal interrupted when at last he figured out what the boy was talking about. "Son, I don't want to know what you did, nor how you did it. What you did was just what was needed-perfect, just perfect. But-" He blinked owlishly. "-don't tell me about it. Don't ever tell anybody about it."

"Not?"

"'Not.' It was the damnedest thing I've seen since my uncle with the two heads debated free silver and triumphantly refuted himself. An explanation would spoil it."

"I do not grok rightly?"

"Nor do I. So let's not worry and have another drink."

Reporters and other newsmen started arriving while the party was still climbing. Jubal received each of them with courteous dignity, invited them to eat, drink, and relax-but to refrain from badgering himself or the Man from Mars.

Those who failed to heed his injunction were tossed into the pool.

At first Jubal kept Larry and Duke at flank to administer the baptism as necessary. But, while some of the unfortunate importunates became angry and threatened various things which did not interest Jubal (other than to caution Mike not to take any steps), others relaxed to the inevitable and added themselves to the dousing squad on a volunteer basis, with the fanatic enthusiasm of proselytes-Jubal had to stop them from ducking the doyen lippmann of the New York Times for a third time.

During the evening Dorcas came out of the house, sought out Jubal and whispered in his ear: "Telephone, Boss. For you."

"Take a message."

"You must answer it, Boss."

"I'll answer it with an ax! Duke, get me an ax. I've been intending to get rid of that Iron Maiden for some time-and tonight I'm in the mood for it."

"Boss ... you want to answer this one. It's the man you spoke to for quite a long time this afternoon."

"Oh. Why didn't you say so?" Jubal lumbered upstairs, made sure his study door was bolted behind him, went to the phone. Another of Douglas' sleek acolytes was on the screen but was replaced quickly by Douglas. "It took you long enough to answer your phone."

"It's my phone, Mr. Secretary. Sometimes I don't answer it at all."

"So it would seem. Why didn't you tell me that this Caxton fellow is an alcoholic?"

"Is he?"

"He certainly is! He isn't missing-not in the usual sense. He's been off on one of his periodic benders. He was located, sleeping it off, in a fleabag in Sonora."

"I'm glad to hear that he has been found. Thank you, sir."

"He's been picked up on a technical charge of 'vagrancy.' The charge won't be pressed-instead we are releasing him to you."

"I am very much in your debt, sir."

"Oh, it's not entirely a favor! I'm having him delivered to you in the state in which he was found-filthy, unshaven, and, I understand, smelling like a brewery. I want you to see for yourself what sort of a tramp he is."

"Very well, sir. When may I expect him?"

"Almost at once, I fancy. A courier arrow left Nogales some time ago. At Mach three or better it should be overhead soon. The pilot has instructions to deliver him to you and get a receipt."

"He shall have it."

"Now, Counsellor ... having delivered him, I wash my hands of it. I shall expect you, and your client, to appear for talks whether you fetch along that drunken libeller or not."

"Agreed. When?"

"Shall we say tomorrow at ten? Here."

"'Twere best done quickly.' Agreed."

Jubal went back downstairs and paused at his broken door. "Jill! Come here, child."

"Yes, Jubal." She trotted toward him, a reporter in close formation with her.

Jubal waved the man back. "Private," he said firmly. "Family matter. Go have a drink."

"Whose family?"

"A death in yours, if you insist. Scat!" The newsman grinned and accepted it. Jubal leaned over Gillian and said softly, "It worked. He's safe."

"Ben?"

"Yes. He'll be here soon."

"Oh, Jubal!" She started to bawl.

He took her shoulders. "Stop it," he said firmly. "Go inside and lock your door until you get control of yourself. This is not for the press."

"Yes, Jubal. Yes, Boss."

"That's better. Go cry in your pillow, then wash your face." He went on out to the pool. "Quiet everybody! Quite! I have an announcement to make. We've enjoyed having you-but the party is over."

"Boo!"

"Toss him in the pool, somebody. I've got work to do early tomorrow morning, I'm an old man and I need my rest, And so does my family. Please leave quietly and as quickly as possible. Black coffee for any who need it-but that's all. Duke, cork those bottles. Girls, clear the food away."

There was minor grumbling, but the more responsible quieted their colleagues. In ten minutes they were alone.

In twenty minutes Ben Caxton arrived. The S.S. officer commanding the courier car silently accepted Harshaw's signature and thumb print on a prepared receipt, then left at once while Jill continued to sob on Ben's shoulder.

Jubal looked him over in the light from the pool. "Ben, you're a mess. I hear you've been drunk for a week-and you look it."

Ben cursed, fluently and well, while continuing to pat Jill's back.

"'M drunk, awri'-but haven' had a drink."

"What happened?"

"I don't know. I don't know!"

An hour later Ben's stomach had been pumped out (alcohol and gastric juices, no food); Jubal had given him shots to offset alcohol and barbiturates; he was bathed, shaved, dressed in clean clothes that did not fit him, had met the Man from Mars, and was sketchily brought up to date, while ingesting milk and bland food.

But he was unable to bring them up to date. For Ben, the past week had not happened-he had become unconscious in a taxicab in Washington; he had been shaken into drunken wakefulness two hours earlier. "Of course I know what happened. They kept me doped and in a completely dark room . . . and wrung rue out. I vaguely remember some of it. But I can't prove anything. And there's the village Jefe and the madam of this dive they took me to-plus, I'm sure, plenty of other witnesses-'tO swear just how this gringo spent his time. And there's nothing I can do about it."

"Then don't fight it," Jubal advised. "Relax and be happy."

"The hell I will! I'll get that-"

"Tut, tut! You've won, Ben. And you're alive ... which I would have given long odds against, earlier today. Douglas is going to do exactly what we want him to-and smile and like it."

"I want to talk about that. I think-"

"I think you're going to bed. Now. With a glass of warm milk to conceal Old Doe Harshaw's Secret Ingredient for secret drinkers."

Shortly thereafter Caxton was in bed and beginning to snore. Jubal was puttering around, heading for bed himself, and encountered Anne in the upper hall. He shook his head tiredly. "Quite a day, lass."

"Yes, quite. I wouldn't have missed it ... and I don't want to repeat it. You go to bed, Boss."

"In a moment. Anne, tell me something. What's so special about the way that lad kisses?"

Anne looked dreamy and then dimpled. "You should have tried it when he invited you to."

"I'm too old to change my ways. But I'm interested in everything about the boy. Is this actually something different, too?"

Anne pondered it. "Yes."

"How?"

"Mike gives a kiss his whole attention."

"Oh, rats! I do myself. Or did."

Anne shook her head. "No. Some men try to. I've been kissed by men who did a very good job of it indeed. But they don't really give kissing a woman their whole attention. They can't No matter how hard they try, some parts of their minds are on something else. Missing the last bus, maybe-Or how their chances are for making the gal-Or their own techniques in kissing-Or maybe worry about their jobs, or money, or will husband or papa or the neighbors catch on. Or something. Now Mike doesn't have any technique . . . but when Mike kisses you he isn't doing anything else. Not anything. You're his whole universe for that moment and the moment is eternal because he doesn't have any plans and he isn't going anywhere. Just kissing you." She shivered. "A woman notices. It's overwhelming."

"Hmm-"

"Don't 'Hmm' at me, you old lecher! You don't understand."

"No. And I'm sorry to say I probably never will. Well, goodnight- and, oh, by the way . . . I told Mike to bolt his door tonight."

She made a face at him. "Spoilsport!"

"He's learning quite fast enough. Mustn't rush him."

XVIII

THE CONFERENCE WAS POSTPONED to the afternoon, then quickly re-postponed to the following morning, which gave Caxton an extra twenty-four hours of badly needed recuperation, a chance to hear in detail about his missing week, a chance to "grow closer" with the Man from Mars-for Mike grokked at once that Jill and Ben were "water brothers," consulted Jill about it, and solemnly offered water to Ben.

Ben had been adequately briefed by Jill. He accepted it just as solemnly and without mental reservations . . . after soul searching in which he decided that his own

destiny was, in truth, interwoven with that of the Man from Mars-through his own initiative before he ever met Mike.

Ben had had to chase down, in the crannies of his soul, one uneasy feeling before he was able to do this. He at last decided that it was simple jealousy, and, being such, had to be cauterized. He had discovered that he felt irked at the closeness between Mike and Jill. His own bachelor persona, he learned, had been changed by a week of undead oblivion; he found that he wanted to be married, and to Jill. He proposed to her again, without a trace of joking about it, as soon as he got her alone.

Jill had looked away. "Please, Ben."

"Why not? I'm solvent, I've got a fairly good job, I'm in good health-or I will be, as soon as I get their condemned 'truth' drugs washed out of my system . . . and since I haven't, quite, I feel an overpowering compulsion to tell the truth right now. I love you. I want you to marry me and let me rub your poor tired feet. So why not? I don't have any vices that you don't share with me and we get along together better than most married couples. Am I too old for you? I'm not that old! Or are you planning to marry somebody else?"

"No, neither one! Dear Ben ... Ben, I love you. But don't ask me to marry you now. I have . . . responsibilities."

He could not shake her firmness. Admittedly, Mike was more nearly Jill's age-almost exactly her age, in fact, which made Ben slightly more than ten years older than they were. But he believed Jill when she denied that age was a factor; the age difference wasn't too great and it helped, all things considered, for a husband to be older than his wife.

But he finally realized that the Man from Mars couldn't be a rival- he was simply Jill's patient. And at that point Ben accepted that a man who marries a nurse must live with the fact that nurses feel maternal toward their charges-live with it and like it, he added, for if Gillian had not had the character that made her a nurse, he would not love her. It was not the delightful figure-eight in which her pert fanny waggled when she walked, nor even the still pleasanter and very mammalian view from the other direction-he was not, thank God, the permanently infantile type, interested solely in the size of the mammary glands! No, it was Jill herself he loved.

Since what she was would make it necessary for him to take second place from time to time to patients who needed her (unless she retired, of course, and he could not be sure it would stop completely even then, Jill being Jill), then he was bloody-be-damned not going to start by being jealous of the patient she had now! Mike was a nice kid-just as innocent and guileless as Jill had described him to be.

And besides, he wasn't offering Jill any bed of roses; the wife of a working newspaperman had things to put up with, too. He might be-he would be-gone for weeks at times and his hours were always irregular. He wouldn't like it if Jill bitched about it. But Jill wouldn't. Not Jill.

Having reached this summing up, Ben accepted the water ceremony from Mike whole-heartedly.

Jubal needed the extra day to plan tactics. "Ben, when you dumped this hot potato in my lap I told Gililan that I would not lift a finger to get this boy his so-called 'rights.' But I've changed my mind. We're not going to let the government have the swag."

"Certainly not this administration!"

"Nor any other administration, as the next one will probably be worse. Ben, you undervalue Joe Douglas."

"He's a cheap, courthouse politician, with morals to match!"

"Yes. And besides that, he's ignorant to six decimal places. But he is also a fairly able and usually conscientious world chief executive-better than we could expect and probably better than we deserve. I would enjoy a session of poker with him . . . for he wouldn't cheat and he wouldn't welch and he would pay up with a smile. Oh, he's an S.O.B.-but you can read that as 'Swell Old Boy,' too. He's middlin' decent."

"Jubal, I'm damned if I understand you. You told me yesterday that you had been fairly certain that Douglas had had me killed . . . and, believe me, it wasn't far from it! . . . and that you had juggled eggs to get me out alive if by any chance I still was alive . . . and you did get me out and God knows I'm grateful to you! But do you expect me to forget that Douglas was behind it all? It's none of his doing that I'm alive-he would rather see me dead."

"I suppose he would. But, yup, just that-forget it."

"I'm damned if I will!"

"You'll be silly if you don't. In the first place, you can't prove anything. In the second place, there's no call for you to be grateful to me and I won't let you lay this burden on me. I didn't do it for you."

"Huh?"

"I did it for a little girl who was about to go charging out and maybe get herself killed much the same way-if I didn't do something. I did it because she was my guest and I temporarily stood in loco parentis to her. I did it because she was all guts and gallantry but too ignorant to be allowed to monkey with such a buzz saw; she'd get hurt. But you, my cynical and sin-stained chum, know all about those buzz saws. If your own asinine carelessness caused you to back into one, who am I to tamper with your karma? You picked it."

"Mmm ... I see your point. Okay, Jubal, you can go to hell-for monkeying with my karma. If I have one."

"A moot point. The predestinationers and the free-willers were still tied in the fourth quarter, last I heard. Either way, I have no wish to disturb a man sleeping in a gutter; I assume until proved otherwise that he belongs there. Most do-gooding reminds me of treating hemophilia-the only real cure for hemophilia is to let hemophiliacs bleed to death . before they breed more hemophiliacs."

"You could sterilize them."

"You would have me play God? But we're veering off the subject. Douglas didn't try to have you assassinated."

"Says who?"

"Says the infallible Jubal Harshaw, speaking ex cathedra from his belly button. See here, son, if a deputy sheriff beats a prisoner to death, it's sweepstakes odds that the county commissioners didn't order it, didn't know it, and wouldn't have permitted it had they known. At worst they shut their eyes to it-afterwards-rather than upset their own applecarts. But assassination has never been an accepted policy in this country."

"I'd like to show you the backgrounds of quite a number of deaths I've looked into."

Jubal waved it aside. "I said it wasn't a policy. We've always had political assassination-from prominent ones like Huey Long to men beaten to death on their own front steps with hardly a page-eight story in passing. But it's never been a policy here and the reason you are sitting in the sunshine right now is that it is not Joe Douglas' policy. Consider. They snatched you clean, no fuss, no inquiries. They squeezed you dry-then they had no more use for you . . . and they could have disposed of you as quietly as flushing a dead mouse down a toilet. But they didn't. Why not? Because they knew their boss didn't really like for them to play that rough and if he became convinced that they had (whether in court or out), it would cost their jobs if not their necks."

Jubal paused for a swig. "But consider. Those S.S. thugs are just a tool; they aren't yet a Praetorian Guard that picks the new Caesar. Such being, whom do you really want for Caesar? Courthouse Joe whose basic indoctrination goes back to the days when this country was a nation and not just a satrapy in a polyglot empire of many traditions . . . Douglas, who really can't stomach assassination? Or do you want to toss him out of office (we can, you know, tomorrow-just by double-crossing him on the deal I've led him to expect-toss him out and thereby put in a Secretary General from a land where life has always been cheap and political assassination a venerable tradition? If you do this, Ben-tell me what happens to the next snoopy newsman who is careless enough to walk down a dark alley?"

Caxton didn't answer.

"As I said, the S.S. is just a tool. Men are always for hire who like dirty work. How dirty will that work become if you nudge Douglas out of his majority?"

"Jubal, are you telling me that I ought not to criticize the administration? When they're wrong? When I know they're wrong?"

"Nope. Gadflies such as yourself are utterly necessary. Nor am I opposed to 'turning the rascals out'-it's usually the soundest rule of politics. But it's well to take a look at what new rascals you are going to get before you jump at any chance to turn your present rascals out. Democracy is a poor system of government at best; the only thing that can honestly be said in its favor is that it is about eight times as good as any other method the human race has ever tried. Democracy's worst faults is that its leaders are likely to reflect the faults and virtues of their constituents-a depressingly low level, but what else can you expect? So take a look at Douglas and ponder that, in his ignorance, stupidity, and self-seeking, he much resembles his fellow Americans, including you and me . . . and that in fact he is a notch or two above the average. Then take a look at the man who will replace him if his government topples."

"There's precious little choice."

"There's always a choice! This one is a choice between 'bad' and 'worse'-which is a difference much more poignant than that between 'good' and 'better.'"

"Well, Jubal? What do you expect me to do?"

"Nothing," Harshaw answered. "Because I intend to run this show myself. Or almost nothing. I expect you to refrain from chewing out Joe Douglas over this coming settlement in that daily poop you write-maybe even praise him a little for 'statesmanlike restraint-'"

"You're making me vomit!"

"Not in the grass, please. Use your hat. -because I'm going to tell you ahead of time what I'm going to do, and why, and why Joe Douglas is going to agree to it. The first principle in riding a tiger is to hang on tight to its ears."

"Quit being pompous. What's the deal?"

"Quit being obtuse and listen. If this boy were a penniless nobody, there would be no problem. But he has the misfortune to be indisputably the heir to more wealth than Croesus ever dreamed of . . . plus a highly disputable claim to political power even greater through a politico-judicial precedent unparalleled in pure jug-headedness since the time Secretary Fall was convicted of receiving a bribe that Doheny was acquitted of having given him."

"Yes, but-"

"I have the floor. As I told Jill, I have no slightest interest in 'True Prince' nonsense. Nor do I regard all that wealth as 'his'; he didn't produce a shilling of it. Even if he had earned it himself-impossible at his age -'property' is not the natural and obvious and inevitable concept that most people think it is."

"Come again?"

"Ownership, of anything, is an extremely sophisticated abstraction, a mystical relationship, truly. God knows our legal theorists make this mystery complicated enough-but I didn't begin to see how subtle it was until I got the Martian slant on it. Martians don't have property. They don't own anything . . . not even their own bodies."

"Wait a minute, Jubal. Even animals have property. And the Martians aren't animals; they're a highly developed civilization, with great cities and all sorts of things."

"Yes. 'Foxes have holes and the birds of the air have nests.' And nobody understands a property line and the 'meus-et-tuus' involved better than a watch dog. But not Martians. Unless you regard an undistributed joint ownership of everything by a few millions or billions of senior citizens -'ghosts' to you, my friend-as being 'property.'"

"Say, Jubal, how about these 'Old Ones' Mike talks about?"

"Do you want the official version? Or my private opinion?"

"Huh? Your private opinion. What you really think."

"Then keep it to yourself. I think it is a lot of pious poppycock, suitable for enriching lawns. I think it is a superstition burned into the boy's brain at so early an age that he stands no chance of ever breaking loose from it."

"Jill talks as if she believed it."

"At all other times you will hear me talk as if I believed it, too. Ordinary politeness. One of my most valued friends believes in astrology; I would never offend her by telling her what I think of it. The capacity of a human mind to believe devoutly in what seems to me to be the highly improbable-from table tapping to the superiority of their own children- has never been plumbed. Faith strikes me as intellectual laziness, but I don't argue with it-.--especially as I am rarely in a position to prove that it is mistaken. Negative proof is usually impossible. Mike's faith in his 'Old Ones' is surely no more irrational than a conviction that the dynamics of the universe can be set aside through prayers for rain. Furthermore, he has the weight of evidence on his side; he has been there. I haven't."

"Mmm, Jubal, I'll confess to a sneaking suspicion that immortality is a fact-but I'm glad that my grandfather's ghost doesn't continue to exercise any control over me. He was a cranky old devil."

"And so was mine. And so am I. But is there any really good reason why a citizen's franchise should be voided simply because he happens to be dead? Come to think of it, the precinct I was raised in had a very large graveyard vote-almost Martian. Yet the town was a pleasant one to live in. As may be, our lad Mike can't own anything because the 'Old Ones' already own everything. So you see why I have had trouble explaining to him that he owns over a million shares of Lunar Enterprises~ plus the Lyle Drive, plus assorted chattels and securities? It doesn't help that the original owners are dead; that makes it worse, they are 'Old Ones'-and Mike wouldn't dream of sticking his nose into the business of 'Old Ones.'"

"Uh ... damn it, he's obviously legally incompetent."

"Of course he is. He can't manage property because he doesn't believe in its mystique-any more than I believe in his ghosts. Ben, all that Mike owns at the present time is a toothbrush I gave him-and he doesn't know he owns that. If you took it away from him, he wouldn't object, he wouldn't even mention it to me-he would simply assume conclusively that the 'Old Ones' had authorized the change."

Jubal sighed. "So he is incompetent ... even though he can recite the law of property verbatim. Such being the case I shan't allow his competency to be tried . . . nor even mentioned-for what guardian would be appointed?"

"Huh? Douglas. Or, rather, one of his stooges."

"Are you certain, Ben? Consider the present makeup of the High Court. Might not the appointed guardian be named Savvonavong? Or Nadi? Or Kee?"

"Uh ... you could be right."

"In which case the lad might not live very long. Or he might live to a ripe old age in some pleasantly gardened prison-for-one a great deal more difficult to escape from than Bethesda Hospital."

"What do you plan to do?"

"The power the boy nominally owns is far too dangerous and cumbersome for him to handle. So we throw it away."

"How the hell do you go about giving away that much money?"

"You don't. You can't. It's impossible. The very act of giving it away would be an exercise of its latent power, it would change the balance of power-and any attempt to do so would cause the boy to be examined on his competence to manage in jig time. So, instead, we let the tiger run like hell while hanging onto its ears for dear life. Ben, let me outline the fait accornpli I intend to hand to Douglas . . . then you do your damnedest to pick holes in it. Not the legality of it, as Douglas' legal staff will write the double-talk and I'll check it for boobytraps-dOn't worry about that; the idea is to give Douglas a plan be won't want to booby-trap because he'll like it. I want you to sniff it for its political feasibility, whether or not we can put it over. Now here's what we are going to do-"

XIX

THE MARTIAN DIPLOMATIC DELEGATION & Inside Straight Sodality, Unlimited, as organized by Jubal HarshaW, landed on the flat of the Executive Palace shortly before ten o'clock the next morning. The unpretentious pretender to the Martian

throne, Mike Smith, had not worried about the purpose of the trip; he had simply enjoyed every minute of the short flight south, with utter and innocent delight.

The trip was made in a chartered Flying Greyhound, and Mike sat up in the astrodome above the driver, with Jill on one side and Dorcas on his other, and stared and stared in awed wonderment as the girls pointed out sights to him and chattered in his ears. The seat, being intended for two people, was very crowded, but Mike did not mind, as a warming degree of growing closer necessarilY resulted. He sat with an arm around each, and looked and listened and tried to grok and could not have been happier if he had been ten feet under water.

It was, in fact, his first view of Terran civilization He had seen nothing at all in being removed from the Champion to suite K-12 at Bethesda Center; he had indeed spent a few minutes in a taxi ten days earlier going from the hospital to Ben's apartment but at the time he had grokked none of it. Since that time his world had been bounded by a house and a swimming pool, plus 5urroundiflg garden and grass and trees-he had not been as far as Jubal's gate.

But now he was enormously more sophisticated than he had been ten days ago. He understood windows, realized that the bubble surrounding him was a window and meant for looking out of and that the changing sights he saw were indeed the cities of these people. He understood maps and could pick out, with the help of the girls, where they were and what they were seeing on the map flowing across the lap board in front of them. But of course he had always known about maps; he simply had not known until recently that humans knew about maps. It had given him a twinge of happy homesickness the first time he had grokked a human map. Sure, it was static and dead compared with the maps used by his people-but it was a map. Mike was not disposed by nature and certainly not by training to invidious comparisons even human maps were very Martian in essence -he liked them.

Now he saw almost two hundred miles of countryside, much of it sprawling world metropolis, and savored every inch of it, tried to grok it. He was startled by the enormous size of human cities and by their bustling activity visible even from the air, so very different from the slow motion, monestary-garden pace of cities of his own people. It seemed to him that a human city must wear out almost at once, becoming so choked with living experience that only the strongest of the Old Ones could bear to visit its deserted streets and grok in contemplation the events and emotions piled layer on endless Layer in it. He himself had visited abandoned cities at home only on a few wonderful and dreadful occasionS, and then his teachers had stopped having him do so, grokking that he was not strong enough for such experience.

Careful questions to Jill and Dorcas, the answers of which he then related to what he had read, enabled him to grok in part enough to relieve his mind sotnewbat the city was very young; it had been founded only a little over two Earth centuries ago. Since Earth time units had no real flavor for him, he converted to Martian years and Martian numbers years (3^4 + 3^3 = 108 Martian years).

Terrifying and beautiful! Why, these people must even now be preparing to abandon the city to its thoughts before it shattered under the strain and became not. And yet, by mere time, the city was only an egg.

Mike looked forward to returning to Washington in a century or two to walk its empty streets and try to grow close to its endless pain and beauty, grokking thirstily until

he was Washington and the city was himself-if he were strong enough by then. Then he firmly filed the thought away as he knew that he must grow and grow and grow before he would be able to praise and cherish the city's mighty anguish.

The Greyhound driver swung far east at one point in response to a temporary rerouting of unscheduled traffic (caused, unknown to Mike, by Mike's own presence)~ and Mike, for the first time, saw the sea.

Jill had to point it out to him and tell him that it was water, and Dorcas added that it was the Atlantic Ocean and traced the shore line on the map. Mike was not ignorant: he had known since he was a nestling that the planet next nearer the Sun was almost covered with the water of life and lately he had learned that these people accepted this lavish richness casually. He had even taken, unassisted, the much more difficult hurdle of grokking at last the Martian orthodoxy that the water ceremony did not require water, that water was merely symbol for the essence beautiful but not indispensable.

But, like many a human still virgin toward some major human experience, Mike discovered that knowing a fact in the abstract was not at all the same thing as experiencing its physical reality; the sight of the Atlantic Ocean filled him with such awe that Jill squeezed him and said sharply, "Stop it, Mike! Don't you dare!"

Mike chopped off his emotion and stored it away for later use. Then he stared at the ocean, stretching out to an unimaginably distant horizon, and tried to measure its size in his mind until his head was buzzing with threes and powers of threes and superpowers of powers.

As they landed Jubal called out, "Now remember, girls, form a square around him and don't be at all backward about planting a heel in an instep or jabbing an elbow into some oaf's solar plexus. Anne, I realize you'll be wearing your cloak but that's no reason not to step on a foot if you're crowded. Or is it?"

"Quit fretting, Boss; nobody crowds a Witness-but I'm wearing spike heels and I weigh more than you do."

"Okay. Duke, you know what to do-but get Larry back here with the bus as soon as possible. I don't know when I'll need it."

"I grok it, Boss. Quit jittering."

"I'll jitter as I please. Let's go." Harshaw, the four girls with Mike, and Caxton got out; the bus took off at once. To Harshaw's mixed relief and apprehension the landing flat was not crowded with newsmen.

But it was far from empty. A man picked him out at once, stepped briskly forward and said heartily, "Dr. Harshaw? I'm Tom Bradley, senior executive assistant to the Secretary General. You are to go directly to Mr. Douglas' private office. He will see you for a few moments before the conference starts."

"No."

Bradley blinked. "I don't think you understood me. These are instructions from the Secretary General. Oh, he said that it was all right for Mr. Smith to come with you-the Man from Mars, I mean-"

"No. This party stays together, even to go to the washroom. Right now we're going to that conference room. Have somebody lead the way. And have all these people stand back; they're crowding us. In the meantime, I have an errand for you. Miriam, that letter."

"But, Dr. Harshaw-"

"I said, 'No!' Can't you understand plain English? But you are to deliver this letter to Mr. Douglas at once and to him ersonal1Ya1~ fetch back his receipt to me." Harshaw paused to write his signature across the flap of the envelope Miriam had handed to him, pressed his thumb print over the signature, and handed it to Bradley. "Tell him that it is most urgent that he read this at once-before the meeting."

"But the Secretary General specifically desires-"

"The Secretary desires to see that letter. Young man, I am endowed with second sight . . . and I predict that you won't be working here later today if you waste any time getting it to him."

Bradley locked eyes with Jubal, then said, "Jim, take over," and left, with the letter. Jubal sighed inwardly. He had sweated over that letter; Anne and he had been up most of the night preparing draft after draft. Jubal had every intention of arriving at an open settlement, in full view of the world's news cameras and microphones-but he bad no intention of letting Douglas be taken by surprise by any proposal.

Another man stepped forward in answer to Bradley's order; Jubal sized him up as a prime specimen of the clever, conscienceless young-men-on-the-way-up who gravitate to those in power and do their dirty work; he disliked him on sight. The man smiled heartily and said smoothly, "The name's Jim Sanforth, Doctor-I'm the Chief's press secretary. I'll be buffering for you from now on-arranging your press interviews and so forth. I'm sorry to say that the conference room is not quite ready; there have been last minute changes and we've had to move to a larger room. Now it's my thought that-"

"It's my thought that we'll go to that conference room right now. We'll stand up until chairs are fetched for us."

"Doctor, I'm sure you don't understand the situation. They are still stringing wires and things, and that room is swarming with reporters and commentators."

"Very well. We'll chat with 'em till you're ready."

"No, Doctor. I have instructions"

"Youngster, you can take your instructions, fold them until they are all corners and shove them in your oubliette. We are not at your beck and call. You will not arrange press interviews for us. We are here for just one purpose: a public conference. If the conference is not ready to meet, we'll see the press now-in the conference room."

"But-"

"And that's not all. You're keeping the Man from Mars standing on a windy roof" Harshaw raised his voice. "Is there anyone here smart enough to lead us straight to this conference room without getting lost?"

Sanforth swallowed and said, 'Follow me, Doctor."

The conference room was indeed crowded with newsmen and technicians but there was a big oval table, plenty of chairs, and several smaller tables. Mike was spotted at once and Sanforth's protests did not keep them from crowding in on him. But Mike's flying wedge of amateur Amazons got him as far as the big table; Jubal sat him against it with Dorcas and Jill in chairs flanking him and the Fair Witness and Miriam seated behind him. Once this was done, Jubal made no attempt to fend oft questions or pictures. Mike had been warned that he would meet lots of people and that many of them would do strange things and Jubal had most particularly warned him to take no sudden actions (such as causing persons or things to go away, or to stop) unless Jill told him to.

Mike took the confusion gravely, without apparent upset; Jill was holding his hand and her touch reassured him.

Jubal wanted news pictures taken, the more the better; as for questions put directly to Mike, Jubal did not fear them and made no attempt to field them. A week of trying to talk with Mike had convinced him that no reporter could possibly get anything of importance out of Mike in only a few minutes-without expert help. Mike's habit of answering a question as asked, answering it literally and stopping, would be enough to nullify most attempts to pump him.

And so it proved. Most questions Mike answered with a polite: "I do not know," or an even less committal; "Beg pardon?"

But one question backfired on the questioner. A Reuters correspondent, anticipating a monumental fight over Mike's status as an heir, tried to sneak in his own test of Mike's competence: "Mr. Smith? What do you know about the laws of inheritance here?"

Mike was aware that he was having trouble grokking in fullness the human concept of property and, in particular, the ideas of bequest and inheritance. So he most carefully avoided inserting his own ideas and stuck to the book-a book which Jubal recognized shortly as Ely on Inheritance and Bequest, chapter one.

Mike related what he had read, with precision and careful lack of expression, like a boring but exact law professor, for page after tedious page, while the room gradually settled into stunned silence and his interrogator gulped.

Jubal let it go on until every newsman there knew more than he wanted to know about dower and curtesy, consanguinean and uterine, per stirpes and per capita, and related mysteries. At last Jubal touched his shoulder, "That's enough, Mike."

Mike looked puzzled. "There is much more."

"Yes, but later. Does someone have a question on some other subject?"

A reporter for a London Sunday paper of enormous circulation jumped in with a question closer to his employer's pocketbook: "Mr. Smith, we understand you like the girls here on Earth. But have you ever kissed a girl?"

"Yes."

"Did you like it?"

"Yes."

"How did you like it?"

Mike barely hesitated over his answer. "Kissing girls is a goodness," he explained very seriously. "It is a growing-closer. It beats the hell out of card games."

Their applause frightened him. But he could feel that Jill and Dorcas were not frightened, that indeed they were both trying to restrain that incomprehensible noisy expression of pleasure which he himself could not learn. So he calmed his fright and waited gravely for whatever might happen next.

By what did happen next he was saved from further questions, answerable or not, and was granted a great joy; he saw a familiar face and figure just entering by a side door, "My brother Dr. Mahmoud!" Mike went on talking in overpowering excitement-but in Martian.

The Champion's staff semanticist waved and smiled and answered in the same jarring language while hurrying to Mike's side. The two continued talking in unhuman

symbols, Mike in an eager torrent, Mahmoud not quite as rapidly, with sound effects like a rhinoceros ramming an ironmonger's lorry.

The newsmen stood it for some time, those who operated by sound recording it and the writers noting it as local color. But at last one interrupted. "Dr. Mahmoud! What are you saying? Clue us!"

Mahmoud turned, smiled briefly and said in clipped Oxonian speech, "For the most part, I've been saying, 'Slow down, my dear boy-do, please.'

"And what does he say?"

"The rest of our conversation is personal, private, of no possible intrest to others, I assure you. Greetings, y'know. Old friends." He turned back to Mike and continued to chat-in Martian.

In fact, Mike was telling his brother Malimoud all that had happened to him in the fortnight since he had last seen him, so that they might grok closer-but Mike's abstraction of what to tell was purely Martian in concept, it being concerned primarily with new water brothers and the unique flavor of each . . . the gentle water that was Jill . . . the depth of Anne . . . the strange not-yet-fully-grokked fact that Jubal tasted now like an egg, then like an Old One, but was neither-the ungrokkable vastness of ocean-

Mahmoud had less to tell Mike since less had happened in the interim to him, by Martian standards-one Dionysian excess quite unMartian and of which he was not proud, one long day spent lying face down in Washington's Suleiman Mosque, the results of which he had not yet grokked and was not ready to discuss. No new water brothers.

He stopped Mike presently and offered his hand to Jubal. "You're Dr. Harshaw, I know. Valentine Michael thinks he has introduced me to all of you-and he has, by his rules."

Harshaw looked him over as he shook hands with him. Chap looked and sounded like a huntin', shootin', sportin' Britisher, from his tweedy, expensively casual clothes to a clipped grey moustache . . . but his skin was naturally swarthy rather than ruddy tan and the genes for that nose came from somewhere close to the Levant. Harshaw did not like fake anything and would choose to eat cold compone over the most perfect syntho "sirloin."

But Mike treated him as a friend, so "friend" he was, until proved otherwise.

To Mahmoud, Harshaw looked like a museum exhibit of what he thought of as a "Yank"-vulgar, dressed too informally for the occasion, loud, probably ignorant and almost certainly provincial. A professional man, too, which made it worse, as in Dr. Mahmoud's experience most American professional men were under-educated and narrow, mere technicians. He held a vast but carefully concealed distaste for all things American. Their incredible polytheistic babel of religions, of course, although they were hardly to be blamed for that . . . their cooking (cooking/Il), their manners, their bastard architecture and sickly arts . . . and their blind, pathetic, arrogant belief in their superiority long after their sun had set. Their women. Their women most of all, their immodest, assertive women, with their gaunt, starved bodies which nevertheless reminded him disturbingly of houris. Four of them here, crowded around Valentine Michael-at a meeting which certainly should be all male- But Valentine Michael had offered him all these people-including these ubiquitous female creatures-offered them proudly and eagerly as his water brothers, thereby laying on Mahmoud a family obligation closer and more binding than that owed to the sons of one's father's brother-

since Mahmoud understood the Martian term for such accretive relationships from direct observation of what it meant to Martians and did not need to translate it clumsily and inadequately as "catenative assemblage," nor even as "things equal to the same thing are equal to each other." He had seen Martians at home; he knew their extreme poverty (by Earth standards); he had dipped into-and had guessed at far more-of their cultural extreme wealth; and had grokked quite accurately the supreme value that Martians place on interpersonal relationships.

Well, there was nothing else for it-he had shared water with Valentine Michael and now he must justify his friend's faith in him . . . he simply hoped that these Yanks were not complete bounders.

So he smiled warmly and shook hands firmly. "Yes. Valentine Michael has explained to me-most proudly-that you are all in-" (Mahmoud used one word of Martian.) "-to him."

"Eh?"

"Water brotherhood. You understand?"

"I grok it."

Mahmoud strongly doubted if Harshaw did, but he went on smoothly, "Since I myself am already in that relationship to him, I must ask to be considered a member of the family. I know your name, and I have guessed that this must be Mr. Caxton-in fact I have seen your face pictured at the head of your column, Mr. Caxton; I read it when I have opportunity-but let me see if I have the young ladies straight. This must be Anne."

"Yes. But she's cloaked at the moment."

"Yes, of course. I'll pay my respects to her when she is not busy professionally."

Harshaw introduced him to the other three . . . and Jill startled him by addressing him with the correct honorific for a water brother, pronouncing it about three octaves higher than any adult Martian would talk but with sore-throat purity of accent. It was one of the scant dozen Martian words she could speak out of the hundred-odd that she was beginning to understand-but this one she had down pat because it was used to her and by her many times each day.

Dr. Mahmoud's eyes widened slightly-perhaps these people would turn out not to be mere uncircumcised barbarians after all . . . and his young friend did have strong intuitions. Instantly he offered Jill the correct honorific in response and bowed over her hand.

Jill saw that Mike was obviously delighted; she managed, slurringly but passably, to croak the shortest of the nine forms by which a water brother may return the response-although she did not grok it fully and would not have considered suggesting (in English) the nearest human biological equivalent . . . certainly not to a man she had Just met!

However, Mahmoud, who did understand it, took it in its symbolic meaning rather than its (humanly impossible) literal meaning, and spoke rightly in response. But Jill had passed the limit of her linguistic ability; she did not understand his answer at all and could not reply, even in pedestrian English.

But she got a sudden inspiration. At intervals around the huge table were placed the age-old furniture of human palavers-water pitchers each with its clump of glasses. She stretched and got a pitcher and a tumbler, filled the latter.

She looked Mahmoud in the eye, said earnestly, "Water. Our nest is yours." She touched it to her lips and handed it to Mahmoud.

He answered her in Martian, saw that she did not understand him and translated, "Who shares water shares all." He took a sip and started to hand the glass back to Jill-checked himself, looked at Harshaw and offered him the glass.

Jubal said, "I can't speak Martian, son-but thanks for water. May you never be thirsty." He took a sip, then drank about a third of it. "Ak!" He passed the glass to Ben.

Caxton looked at Mahmoud and said very soberly, "Grow closer. With the water of life we grow closer." He wet his lips with it and passed it to Dorcas.

In spite of the precedents already set, Dorcas hesitated. "Dr. Mahmoud? You do know how serious this is to Mike?"

"I do, Miss."

"Well ...it's just as serious to us. You understand? You grok?"

"I grok its fullness ... or I would have refused to drink."

"All right. May you always drink deep. May our eggs share a nest." Tears started down her cheeks: she drank and passed the glass hastily to Miriam.

Miriam whispered, "Pull yourself together, kid," then spoke to Mike, "With water we welcome our brother,"-then added to Mahmoud, "Nest, water, life." She drank. "Our brother." She offered him the glass.

Mahmoud finished what was left in it and spoke, neither in Martian nor English, but Arabic: "'And if ye mingle your affairs with theirs, then they are your brothers.'"

"Amen," Jubal agreed.

Dr. Mahmoud looked quickly at him, decided not to enquire just then whether Harshaw had understood him, or was simply being polite; this was neither the time nor the place to say anything which might lead to unbottling his own troubles, his own doubts. Nevertheless he felt warmed in his soul-as always-by water ritual . . . even though it smelled of heresy.

His thoughts were cut short by the assistant chief of protocol bustling up to them. "You're Dr. Mahmoud. You belong over on the far side of the table, Doctor. Follow me."

Mahmoud looked at him, then looked at Mike and smiled. "No, I belong here, with my friends. Dorcas, may I pull a chair in here and sit between you and Valentine Michael?"

"Certainly, Doctor. Here, I'll scrunch over."

The a.c. of p. was almost tapping his foot in impatience. "Dr. Mahmoud, please! The chart places you over on the other side of the room! The Secretary General will be here any moment-and the place is still simply swarming with reporters and goodness knows who else who doesn't belong here . . . and I don't know what I'm going to do!"

"Then go do it someplace else, bub," Jubal suggested.

"What? Who are you? Are you on the list?" He worriedly consulted the seating chart he carried.

"Who are you?" Jubal answered. "The head waiter? I'm Jubal Harshaw. If my name is not on that list, you can tear it up and start over. And look, buster, if the Man from Mars wants his friend Dr. Mahmoud to sit by him, that settles it."

"But he can't sit here! Seats at the main conference table are reserved for High Ministers, Chiefs of Delegations, High Court Justices, and equal ranks-and I don't know how I can squeeze them all in if any more show up-and the Man from Mars, of course."

"'Of course,'" Jubal agreed dryly.

"And of course Dr. Mahmoud has to be near the Secretary General- just back of him, so that he'll be ready to interpret as needed. I must say you're not being helpful."

"I'll help." Jubal plucked the paper out of the official's hand, sat down at the table and studied it. "Mmm ... lemme see now. The Man from Mars will sit directly opposite the Secretary General, just about where he happens to be sitting. Then-" Jubal got out a heavy soft pencil and attacked the seating chart. "-this entire half of the main table, from here clear over to here, belongs to the Man from Mars." Jubal scratched two big black cross marks to show the limits and joined them with a thick black arc, then began scratching out names assigned to seats on that side of the table. "That takes care of half of your work ... because I'll seat anybody who sits on our side of the table."

The protocol officer was too shocked to talk. His mouth worked but no meaningful noises came out. Jubal looked at him mildly. "Something the matter? Oh-I forgot to make it official." He scrawled under his amendments: "J. Harshaw for V At Smith." "Now trot back to your top sergeant, son, and show him that. Tell him to check his rule book on official visits from heads of friendly planets."

The man looked at it, opened his mouth-then left very rapidly without stopping to close it. But he was back very quickly on the heels of another, older man. The newcomer said in a firm, no-nonsense manner, "Dr. Harshaw, I'm LaRue, Chief of Protocol. Do you actually need half the main table? I understood that your delegation was quite small."

"That's beside the point."

LaRue smiled briefly. "I'm afraid it's not beside the point to me, sir. I'm at my wit's end for space. Almost every official of first rank in the Federation has elected to be present today. If you are expecting more people-though I do wish you had notified me-I'll have a table placed behind these two seats reserved for Mr. Smith and yourself."

"No."

"I'm afraid that's the way it must be. I'm sorry."

"So am I-for you. Because if half the main table is not reserved for the Mars delegation, we are leaving right now. Just tell the Secretary General that you busted up his conference by being rude to the Man from Mars."

"Surely you don't mean that?"

"Didn't you get my message?"

"Uh ... well, I took it as a jest. A rather clever one, I admit."

"Son, I can't afford to joke at these prices. Smith is either top man from another planet paying an official visit to the top man of this planet- in which case he is entitled to all the side boys and dancing girls you can dig up-or he is just a simple tourist and gets no official courtesies of any sort. You can't have it both ways. But I suggest that you look around you, count the 'officials of first rank' as you called them, and make a quick guess as to whether they would have bothered to show up if, in their minds, Smith is just a tourist."

LaRue said slowly, "There's no precedent."

Jubal snorted. "I saw the Chief of Delegation from the Lunar Republic come in a moment ago-go tell him there's no precedent. Then duck!- I hear he's got a quick temper." He sighed. "But, son, I'm an old man and I had a short night and it's none of my business to teach you your job. Just tell Mr. Douglas that we'll see him another day . . . when he's ready to receive us properly. Come on, Mike." He started to roust himself painfully out of his chair.

LaRue said hastily, "No, no, Dr. Harshaw! We'll clear this side of the table. I'll- Well, I'll do something. It's yours."

"That's better." But Harshaw remained poised to get up. "But where's the Flag of Mars? And how about honors?"

"I'm afraid I don't understand you."

"Never seen a day when I had so much trouble with plain English. Look- See that Federation Banner back of where the Secretary is going to sit? Where's the one like it over here, for Mars?"

LaRue blinked. "I must admit you've taken me by surprise. I didn't know the Martians used flags."

"They don't. But you couldn't possibly whop up what they use for high state occasions." (And neither could I, boy, but that's beside the point.) "So we'll let you off easy and take an attempt for the deed. Piece of paper, Miriam-now, like this." Harshaw drew a rectangle, sketched in it the traditional human symbol for Mars, a circle with an arrow leading out from it to the upper right "Make the field in white and the sigil of Mars in red-should be sewed in bunting of course, but with a clean sheet and a bucket of paint any Boy Scout could improvise one in ten minutes. Were you a Scout?"

"Uh, some time ago."

"Good. Then you know the Scout's motto. Now about honors- maybe you're caught unprepared there, too, eh? You expect to play 'Hail to Sovereign Peace' as the Secretary comes in?"

"Oh, we must. It's obligatory."

"Then you'll want to follow it with the anthem for Mars."

"I don't see how I can. Even if there were one ... we don't have it. Dr. Harshaw, be reasonable!"

"Look, son, I am being reasonable. We came here for a quiet, small, informal meeting-strictly business. We find you've turned it into a circus. Well, if you're going to have a circus, you've got to have elephants and there's no two ways about it. Now we realize you can't play Martian music, any more than a boy with a tin whistle can play a symphony. But you can play a symphony-'The Ten Planets Symphony.' Grok it? I mean, 'Do you catch on?' Have the tape cut in at the beginning of the Mars movement; play that . . . or enough bars to let the theme be recognized."

LaRue looked thoughtful. "Yes, I suppose we could-but, Dr. Harshaw, I promised you half the table . . . but I don't see how I can promise sovereign honors-the flag and the music-even on this improvised, merely symbolic scale. I- I don't think I have the authority."

"Nor the guts," Harshaw said bitterly. "Well, we didn't want a circus -so tell Mr. Douglas that we'll be back when he's not so busy . . . and not so many visitors. Been nice chatting with you, son. Be sure to stop by the Secretary's office and say hello when we come back-if you're still here." He again went through the slow, apparently painful act of being a man too old and feeble to get out of a chair easily.

LaRue said, "Dr. Harshaw, please don't leave! Uh ... the Secretary won't come in until I send word that we are ready for him-so let me see what I can do. Yes?"

Harshaw relaxed with a grunt. "Suit yourself. But one more thing, while you're here. I heard a ruckus at the main door a moment ago-what I could catch, one of the crew members of the Champion wanted to come in. They're all friends of Smith, so let 'em in.

We'll accommodate 'em. Help to fill up this side of the table." Harshaw sighed and rubbed a kidney.

"Very well, sir," LaRue agreed stiffly and left.

Miriam said out of the corner of her mouth: "Boss-did you sprain your back doing hand stands night before last?"

"Quiet, girl, or I'll paddle you." With grim satisfaction Jubal surveyed the room, which was continuing to fill with high officials. He had told Douglas that he wanted a "small, informal" talk-no formality while knowing with utter certainty that the mere announcement of such talks would fetch all the powerful and power-hungry as surely as light attracts moths. And now (he felt sure) Mike was about to be treated as a sovereign by each and every one of those nabobs-with the whole world watching. Just let 'em try to roust the boy around after this!

Sanforth was still trying mightily to shoo out the remaining newsmen, and the unfortunate assistant chief of protocol, deserted by his boss, was jittering like a nervous baby-sitter in his attempt to play musical chairs with too few chairs and too many notables, They continued to come in and Jubal concluded that Douglas had never intended to convene this public meeting earlier than eleven o'clock, and that everyone else had been so informed-the earlier hour given Jubal was to permit the private preconference that Douglas had demanded and that Jubal had refused. Well, the delay suited Jubal's plans.

The leader of the Eastern Coalition came in. Since Mr. King was not, by his own choice, the nominal Chief of Delegation for his nation, his status under strict protocol was merely that of Assemblyman-but Jubal was not even mildly surprised to see the harried assistant chief of protocol drop what he was doing and rush to seat Douglas' chief political enemy at the main table and near the seat reserved for the Secretary General; it simply reinforced Jubal's opinion that Douglas was no fool.

Dr. Nelson, surgeon of the Champion, and Captain van Tromp, her skipper, came in together, and were greeted with delight by Mike. Jubal was pleased, too, as it gave the boy something to do, under the cameras, instead of just sitting still like a dummy. Jubal made use of the disturbance to rearrange the seating since there was now no longer any need to surround the Man from Mars with a bodyguard. He placed Mike precisely opposite the Secretary General's chair and himself took the chair on Mike's left-not only to be close to him as his counsel but to be where he could actually touch Mike inconspicuously. Since Mike had only the foggiest notions of human customary manners, Jubal had arranged with him signals as imperceptible as those used by a rider in putting a high-schooled horse through dressage maneuvers-"stand up," "sit down," "bow," "shake hands"-with the difference that Mike was not a horse and his training had required only five minutes to achieve utterly dependable perfection.

Mahmoud broke away from the reunion of shipmates, came around, and spoke to Jubal privately. "Doctor, I must explain that the Skipper and the Surgeon are also water brothers of our brother-and Michael Valentine wanted to confirm it at once by again using the ritual, all of us. I told him to wait. Do you approve?"

"Eh? Yes. Yes, certainly. Not in this mob." Jubal worried it for a moment. Damn it, how many water brothers did Mike have? How long was this daisy chain? "Maybe you three can come with us when we leave? And have a bite and a talk in private."

"I shall be honored. And I feel sure the other two will come also, if possible."

"Good. Dr. Mahmoud, do you know of any other brothers of our young brother who are likely to show up?"

"No. Not from the company of the Champion, at least; there are no more." Mahmoud hesitated, then decided not to ask the obvious complementary question, as it would hint at how disconcerted he had been-at first-to discover the extent of his own conjugational commitments. "I'll tell Sven and the Old Man." He went back to them.

Harshaw saw the Papal Nuncio come in, saw him seated at the main table, and smiled inwardly-if that long-eared debit, LaRue, had any lingering doubts about the official nature of this meeting, he would do well to forget them!

A man came up behind Harshaw, tapped him on the shoulder. "Is this where the Man from Mars hangs out?"

"Yes," agreed Jubal.

"Which one is he? I'm Tom Boone-Senator Boone, that is-and I've got a message for him from Supreme Bishop Digby."

Jubal suppressed his personal feelings and let his cortex go into emergency high speed. "I'm Jubal Harshaw, Senator-" He signalled Mike to stand up and offer to shake hands. "-and this is Mr. Smith. Mike, this is Senator Boone."

"How do you do, Senator Boone," Mike said in perfect dancingschool form. He looked at Boone with interest. He had already had it straightened out for him that "Senator" did not mean "Old One" as the words seemed to shape; nevertheless he was interested in seeing just what a "Senator" was. He decided that he did not yet grok it.

"Pretty well, thank you, Mr. Smith. But I won't take up your time; they seem to be about to get this shindig started. Mr. Smith, Supreme Bishop Digby sent me to give you a personal invite to attend services at the Archangel Foster Tabernacle of the New Revelation."

"Beg pardon?"

Jubal moved in on it. "Senator, as you know, many things here- everything-is new to the Man from Mars. But it so happens that Mr. Smith has already seen one of your church services by stereovision-"

"Not the same thing."

"I know. But he expressed great interest in it and asked many questions about it-many of which I could not answer."

Boone looked keenly at him. "You're not one of the faithful?"

"I must admit that I am not."

"Come along yourself. Always hope for a sinner."

"Thank you, I will." (You're right, I will, friend!-for I certainly won't let Mike go into your trap alone!)

"Next Sunday then-I'll tell Bishop Digby."

"Next Sunday if possible," Jubal corrected. "We might be in jail by then."

Boone grinned. "There's always that, ain't th'r? But send word around to me or the Supreme Bishop and you won't stay in long." He looked around the crowded room. "Seem to be kind o' short on chairs in here. Not much chance for a plain senator with all those muckamucks elbowing each other."

"Perhaps you would honor us by joining us, Senator," Jubal answered smoothly, "at this table?"

"Eh? Why, thank you, sir! Don't mind if I do-ringside seat."

"That is," Harshaw added, "if you don't mind the political implications of being seen seated with the official Mars delegation. We aren't trying to crowd you into an embarrassing situation."

Boone barely hesitated. "Not at all! Who cares what people think? Matter of fact, between you and I, the Bishop is very, very interested in this young man."

"Fine. There's a vacant chair there by Captain van Tromp-that man there . . . but probably you know him."

"Van Tromp? Sure, sure, old friends, know him well-met him at the reception." Senator Boone nodded at Smith, swaggered down and seated himself.

Most of those present were seated now and fewer were getting past the guards at the doors. Jubal watched one argument over seating and the longer he watched it the more it made him fidget. At last he felt that he simply could not stand it; he could not sit still and watch this indecency go on. So he leaned over and spoke very privately with Mike, made sure that, if Mike did not understand why, at least he understood what Jubal wanted him to do.

Mike listened. "Jubal, I will do."

"Thanks, son." Jubal got up and approached a group of three: the assistant chief of protocol, the Chief of the Uruguayan Delegation, and a third man who seemed angry but baffled. The Uruguayan was saying forcefully: "-seat him, then you must find seats for any and all other local chiefs of state-eighty or more. You've admitted that you can't do that. This is Federation soil we stand on . . . and no chief of state has precedence over any other chief of state. If any exceptions are made-"

Jubal interrupted by addressing the third man, "Sir-" He waited just long enough to gain his attention, plunged on. "-the Man from Mars has instructed me to ask you to do him the great honor of sitting with him if your presence is not required elsewhere."

The man looked startled, then smiled broadly. "Why, yes, that would be satisfactory."

The other two, both the palace official and the Uruguayan dignitary, started to object. Jubal turned his back on them. "Let's hurry, sir-I think we have very little time." He had seen two men coming in with what appeared to be a stand for a Christmas tree and a bloody sheet-but what was almost certainly the "Martian Flag." As they hurried to where he was, Mike got up and was standing, waiting for them.

Jubal said, "Sir, permit me to present Valentine Michael Smith. Michael-the President of the United States!"

Mike bowed very low.

There was barely time to seat him on Mike's right, as the improvised flag was even then being set up behind them. Music started to play, everyone stood, and a voice proclaimed:

"The Secretary General!"

XX

JUBAL HAD CONSIDERED HAVING Mike remain seated while Douglas came in, but had rejected the idea; he was not trying to place Mike a notch higher than Douglas but merely to establish that the meeting was between equals. So, when he stood up, he

signaled Mike to do so likewise. The great double doors at the back of the conference hall had opened at the first strains of "Hail to Sovereign Peace" and Douglas came in. He went straight to his chair and started to sit down.

Instantly Jubal signaled Mike to sit down, the result being that Mike and the Secretary General sat down simultaneously-with a long, respectful pause of some seconds before anyone else resumed his seat. Jubal held his breath. Had LaRue done it? Or not? He hadn't quite promised- Then the first fortissimo tocsin of the "Mars" movement filled the room-the "War God" theme that startles even an audience expecting it. With his eyes on Douglas and with Douglas looking back at him, Jubal was at once up out of his chair again, like a scared recruit snapping to attention. Douglas stood up, too, not as quickly but promptly.

But Mike did not get up; Jubal had not signalled him to do so. He sat quietly, impassively, quite unembarrassed by the fact that everyone else without any exception got quickly back on his feet when the Secretary General stood up. Mike did not understand any of it and was quite content to do what his water brother told him to do. Jubal had puzzled over this bit, after he had demanded the "Martian Anthem." If the demand was met, what should Mike do while it was played? It was a nice point, and the answer depended on just what role Mike was playing in this comedy- The music stopped. On Jubal's signals Mike then stood up, bowed quickly, and sat down, seating himself about as the Secretary General and the rest were seated. They were all back in their seats much more quickly this time, as no one could have missed the glaring point that Mike had remained seated through the "anthem." Jubal sighed with relief. He had gotten away with it. A great many years earlier he had seen one of that vanishing tribe of royalty (a reigning queen) receive a parade-and he had noticed that the royal lady had bowed after her anthem was played, i.e., she had acknowledged a salute offered to her own sovereign self.

But the political head of a democracy stands and uncovers for his nation's anthem like any other citizen-for he is not a sovereign.

But, as Jubal had pointed out to LaRue, one couldn't have it two ways. Either Mike was merely a private citizen (in which case this silly gymkhana should never have been held; Douglas should have had the guts to tell all these overdressed parasites to stay home!)-or, by the preposterous legal theory inherent in the Larkin Decision, the kid was a sovereign all by his little lonesome.

Jubal felt tempted to offer LaRue a pinch of snuff. Well, the point had not been missed by at least one-the Papal Nuncio was keeping his face straight but his eyes were twinkling.

Douglas started to speak: "Mr. Smith, we are honored and happy to have you here as our guest today. We hope that you will consider the planet Earth your home quite as much as the planet of your birth, our neighbor-our good neighbor-Mars-" He went on at some length, in careful, rounded, pleasant periods, which did not quite say anything. Mike was welcome-but whether he was welcome as a sovereign, as a tourist from abroad, or as a citizen returning home, was quite impossible to determine (Jubal decided) from Douglas' words.

Jubal watched Douglas, hoping to catch his eye, looking for some nod or expression that would show how Douglas had taken the letter Jubal had sent to him by

hand immediately on arrival. But Douglas never looked at him. Presently Douglas concluded, still having said nothing and said it very well.

Jubal said quietly, "Now, Mike."

Smith addressed the Secretary General-in Martian.

But he cut it off before consternation could build up and said gravely: "Mr. Secretary General of the Federation of Free Nations of the Planet Earth-" then went on again in Martian.

Then in English: "-we thank you for our welcome here today. We bring greetings to the peoples of Earth from the Ancient Ones of Mars-" and shifted again into Martian.

Jubal felt that "Ancient Ones" was a good touch; it carried more bulge than "Old Ones" and Mike had not objected to the change in terminology. In fact, while Mike had insisted on "speaking rightly," Jubal's draft had not required much editing. It had been Jill's idea to alternate, sentence by sentence, a Martian version and an English version-and Jubal admitted with warm pleasure that her gimmick puffed up a formal little speech as devoid of real content as a campaign promise into something as rollingly impressive as Wagnerian opera. (And about as hard to figure out, Jubal added.)

It didn't matter to Mike. He could insert the Martian translation as easily as he could memorize and recite the edited English version, i.e., without effort for either. If it would please his water brothers to say these sayings, it made Mike happy.

Someone touched Jubal on the shoulder, shoved an envelope in his hand, and whispered, "From the Secretary General." Jubal looked up, saw that it was Bradley, hurrying silently away. Jubal opened the envelope in his lap, glanced at the single sheet inside.

The note was one word: "Yes," and had been signed with initials "J.E.D."-all in the famous green ink.

Jubal looked up, found that Douglas' eyes were now on him; Jubal nodded ever so slightly and Douglas looked away. The conference was now over; all that remained was to let the world know it.

Mike concluded the sonorous nullities he had been given; Jubal heard his own words: "-growing closer, with mutual benefit to both worlds-" and "-each race according to its own nature-" but did not listen. Douglas then thanked the Man from Mars, briefly but warmly. There was a pause.

Jubal stood up. "Mr. Secretary General-"

"Yes, Dr. Harshaw?"

"As you know, Mr. Smith is here today in a dual role. Like some visiting prince in the past history of our own great race, traveling by caravan and sailing across uncharted vastnesses to a distant realm, he brings to Earth the good wishes of the Ancient Powers of Mars. But he is also a human being, a citizen of the Federation and of the United States of America. As such, he has rights and properties and obligations." Jubal shook his head. "Pesky ones, I'm sorry to say. As attorney for him in his capacity as a citizen and a human being, I have been puzzling over his business affairs and I have not even managed a complete list of what he owns-much less decide what to tell tax collectors-"

Jubal stopped to wheeze. "I'm an old man, I might not live to complete the task. Now you know that my client has had no business experience in the human sense-Martians do these things differently. But he is a young man of great intelligence-the whole world knows that his parents were geniuses-and blood will tell. There's no doubt

that in a few years, he could, if he wished, do very nicely on his own without the aid of one old, broken-down lawyer. But his affairs need attention today; business won't wait.

"But, in fact, he is more eager to learn the history and the arts and the ways of the people of this, his second home, than he is to bury himself in debentures and stock issues and royalties-and I think in this he is wise. Although without business experience, Mr. Smith possesses a direct and simple wisdom that continues to astonish me . . . and to astonish all who meet him. When I explained to him the trouble I was having, he simply looked at me with a clear, calm gaze and said, 'Why, that's no problem, Jubal-we'll ask Mr. Douglas.'" Jubal paused and said anxiously, "The rest of this is just personal business, Mr. Secretary. Should I see you about it privately? And let the rest of these ladies and gentlemen go home?"

"Go right ahead, Dr. Harshaw." Douglas added, "Protocol is dispensed with as of now. Anyone who wishes to leave please feel free to do so."

No one left. "All right," Jubal went on. "I can wrap it up in one sentence. Mr. Smith wants to appoint you his attorney-in-fact, with full power to handle all his business affairs. Just that."

Douglas looked convincingly astonished. "That's a tall order, Doctor."

"I know it is, sir. I pointed out to him that it was an imposition, that you are the busiest man on this planet and didn't have time for his affairs." Jubal shook his head and smiled. "I'm afraid it didn't impress him-seems on Mars the busier a person is the more is expected of him. Mr. Smith simply said, 'We can ask him.' So I'm asking you. Of course we don't expect an answer off hand-that's another Martian trait: Martians are never in a hurry. Nor are they inclined to make things complicated. No bond, no auditing, none of that claptrap-a written power of attorney if you want it. But it does not matter to him; he would do it just as readily, orally and right now-Chinese style. That's another Martian trait; if a Martian trusts you, he trusts you all the way. He doesn't come prying around to see if you're keeping your word. Oh, I should add: Mr. Smith is not making this request of the Secretary General; he's asking a favor of Joseph Edgerton Douglas, you personally. If you should retire from public life, it would not affect this in the slightest. Your successor in office, whoever he might be, doesn't figure in it. It's you he trusts ... not just whoever happens to occupy the Octagon Office in this Palace."

Douglas nodded. "Regardless of my answer, I feel honored .. and humble."

"Because if you decline to serve, or can't serve, or do take on this chore and want to drop it later, or anything, Mr. Smith has his own second choice for the job-Ben Caxton, it is. Stand up for a second, Ben; let people see you. And if both you and Caxton can't or won't, his next choice is-well, I'll guess we'll reserve that name for the moment; just let it rest that there are successive choices. Uh, let me see now-" Jubal looked fuddled- "I'm out of the habit of talking on my feet. Miriam, where is that piece of paper we listed things on?"

Jubal accepted a sheet from her, and added, "Better give me the other copies, too-" She passed over to him a thick stack of sheets. "This is a little memo we prepared for you, sir-or for Caxton, if it turns out that way. Mmm, lemme see-oh yes, steward to pay himself what he thinks the job is worth but not less than-well, a considerable sum, nobody else's business, really. Steward to deposit monies in a drawing account for living expenses of party of the first part-uh, oh yes, I thought maybe you would want to use the

Bank of Shanghai, say, as your depository, and, say, Lloyd's as your business agent-or maybe the other way around-just to protect your own name and fame. But Mr. Smith won't hear of any fixed instructions-just an unlimited assignment of power, revocable by either side at choice. But I won't read all this; that's why we wrote it out-" Jubal turned and looked vacantly around. "Uh, Miriam-trot around and give this to the Secretary General, that's a good girl. Urn, these other copies, I'll leave them here. You may want to pass 'em out to people ... or you may need them yourself. Oh, I'd better give one to Mr. Caxton though- here, Ben-"

Jubal looked anxiously around. "Uh, I guess that's all I have to say, Mr. Secretary. Did you have anything more to say to us?'

"Just a moment. Mr. Smith?"

"Yes, Mr. Douglas?"

"Is this what you want? Do you want me to do what it says on this paper?"

Jubal held his breath, avoided even glancing at his client- Mike had been carefully coached to expect such a question - . - but there had been no telling what form it would take, nor any way to tell in advance how Mike's literal interpretations could trip them.

"Yes, Mr. Douglas." Mike's voice rang out clearly in the big room- and in a billion rooms around a planet.

"You want me to handle your business affairs?"

"Please, Mr. Douglas. It would be a goodness. I thank you-"

Douglas blinked. "Well, that's clear enough. Doctor, I'll reserve my answer-but you shall have it promptly."

"Thank you, sir. For myself as well as for my client."

Douglas started to stand up. Assemblyman Kung's voice sharply interrupted. "One moment! How about the Larkin Decision?"

Jubal grabbed it before Douglas could speak. "Ah, yes, the Larkin Decision. I've heard quite a lot of nonsense talked about the Larkin Decision-but mostly from irresponsible persons. Mr. Kung, what about the Larkin Decision?"

"I'm asking you. Or your .. client. Or the Secretary General."

Jubal said gently, "Shall I speak, Mr. Secretary?"

"Please do."

"Very well." Jubal paused, slowly took out a big handkerchief and blew his nose in a prolonged blast, producing a minor chord three octaves below middle C. He then fixed Kung with his eye and said solemnly, "Mr. Assemblyman, I'll address this to you-because I know it is unnecessary to address it to the government in the person of the Secretary. Once a long, long tine ago, when I was a little boy, another little boy, equally young and foolish, and I formed a club. Just the two of us. Since we had a club, we had to have rules . . - and the first rule we passed, unanimously, I should add-was that henceforth we would always call our mothers, 'crosspatch.' Silly, of course . . . but we were very young. Mr. Kung, can you deduce the outcome of that 'rule'?"

"I won't guess, Dr. Harshaw."

"I tried to implement our 'Crosspatch' decision once. Once was enough and it saved my chum from making the same mistake. All it got me was my young bottom well warmed with a peach switch. And. that was the end of the 'crosspatch' decision."

Jubal cleared his throat. "Just a moment Mr. Kung. Knowing that someone was certain to raise this non-existent issue I tried to explain the Larkin Decision to my client.

At first be had trouble realizing that anyone could think that this legal fiction would apply to Mars. After all, Mars is inhabited, by an old and wise race-much older than yours, sir, and possibly wiser. But when he did understand it, he was amused. Just that, sir-tolerantly amused. Once-just once-I under-rated my mother's power to punish a small boy's impudence. That lesson was cheap, a bargain- But this planet cannot afford such a lesson on a planetary scale. Before we attempt to parcel out lands which do not belong to us, it behooves us to be very sure what peach switches are hanging in the Martian kitchen."

Kung looked blandly unconvinced- "Dr. Harshaw, if the Larkin Decision is no more than a small boy's folly . . . why were national honors rendered to Mr. Smith?"

Jubal shrugged- "That question should be put to the government, not me. But I can tell you how I interpreted them-as elementary politeness to the Ancient Ones of Mars."

"Please?"

"Mr. Kung, those honors were no hollow echo of the Larkin Decision. In a fashion quite beyond human experience, Mr. Smith is the Planet Mars."

Kung did not even blink. "Continue."

"Or, rather, the entire Martian race. In Smith's person, the Ancient Ones of Mars are visiting us. Honors rendered to him are honors rendered to them-and harm done to him is harm done to them. This is true in a very literal but utterly unhuman sense. It was wise and prudent for us to render honors to our neighbors today-but the wisdom in it has nothing to do with the Larkin Decision. No responsible person has argued that the Larkin precedent applies to an inhabited planet-I venture to say that no one ever will." Jubal paused and looked up, as if asking Heaven for help. "But, Mr. Kung, be assured that the ancient rulers of Mars do not fail to notice how we treat their ambassador. The honors rendered to them through him were a gracious symbol. I am certain that the government of this planet showed wisdom thereby. In time, you will learn that it was a most prudent act as well."

Kung answered blandly, "Doctor, if you are trying to frighten me, you have not succeeded."

"I did not expect to. But, fortunately for the welfare of this planet, your opinion did not control." Jubal turned back to Douglas. "Mr. Secretary, this is the longest public appearance I have made in years . . and I find that I am fatigued. Could we recess these talks? While we await your decision?"

XXI

THE MEETING ADJOURNED. Jubal found his intention of getting his flock out of the Palace balked by the presence of the American President and of Senator Boone; both wanted to chat with Mike, both were practical politicians who realized fully the freshly enhanced value of being seen on intimate terms with the Man from Mars-and both were well aware that the eyes of the world, via stereovision, were still on them.

And other hungry politicos were closing in.

Jubal said quickly, "Mr. President, Senator-we're leaving at once to have lunch. Can you join us?" He reflected that two in private would be easier to handle than two dozen in public-and he had to get Mike out of there before anything came unstuck.

To his relief both had other duties elsewhere. Jubal found himself promising not only to fetch Mike to that obscene Fosterite service but also to bring him to the White House-ob, well, the boy could always get sick, if necessary. "Places, girls."

With his escort again around him Mike was convoyed to the roof, Anne leading the way since she would remember it-and creating quite a bow wave with her height, her Valkyrie blonde beauty, and her impressive cloak of a Fair Witness. Jubal, Ben, and the three officers from the Champion covered the rear. Larry and the Greyhound bus were waiting on the roof; a few minutes later the driver left them on the roof of the New Mayflower. Newsmen caught up with them there, of course, but the girls guarded Mike on down to the suite Duke had taken earlier. They were becoming quite good at it and were enjoying it; Miriam and Dorcas in particular displayed ferocity that reminded Jubal of a mother cat defending her young-only they made a game of it, keeping score against each other. A reporter that closed within three feet of either of them courted a spiked instep.

They found their corridor patrolled by S.S. troopers and an officer outside the door of their suite.

Jubal's back hair rose, but he realized (or "hoped," he corrected himself) that their presence meant that Douglas was carrying out his half of the bargain in full measure. The letter Jubal had sent to Douglas before the conference, explaining what he was going to do and say, and why, had included a plea to Douglas to use his power and influence to protect Mike's privacy from here on-so that the unfortunate lad could begin to lead a normal life. (If a "normal" life was possible for Mike, Jubal again corrected himself.)

So Jubal merely called out, "Jill! Keep Mike under control. It's okay."

"Right, Boss."

And so it was. The officer at the door simply saluted. Jubal glanced at him, "Well! Howdy, Major. Busted down any doors lately?"

Major Bloch turned red but kept his eyes forward and did not answer. Jubal wondered if the assignment was punishment? No, likely just coincidence; there probably wouldn't be more than a handful of S.S. officers of appropriate rank available for the chore in this area. Jubal considered rubbing it in by saying that a skunk had wandered in that door and ruined his living room furniture-and what was the major going to do about that? But he decided against it; it would not only be ungracious but untrue- Duke had rigged a temporary closure out of plywood before the party got too wet for such tasks.

Duke was waiting inside. Jubal said, "Sit down, gentlemen. How about it, Duke?"

Duke shrugged. "Who knows? Nobody has bugged this suite since I took it; I guarantee that. I turned down the first suite they offered me, just as you said to, and I picked this one because it's got a heavy ceiling-the ballroom is above us. And I've spent the time since searching the place. But, Boss, I've pushed enough electrons to know that any dump can be bugged, so that you can't find it without tearing the building down."

"Fine, fine-but I didn't mean that. They can't keep a hotel this big bugged throughout just on the chance that we might take a room in it-at least, I don't think they can. I mean, 'How about the supplies?' I'm hungry, boy, and very thirsty-and we've three more for lunch."

"Oh, that. That stuff was unloaded under my eyes, carried down the same way, placed just inside the door; I put it all in the pantry. You've got a suspicious nature, Boss."

"I sure have-and you'd better acquire one if you want to live as long as I have." Jubal had just trusted Douglas with a fortune equivalent to a medium-sized national debt-but he had not assumed that Douglas' overeager lieutenants would not tamper with food and drink. So to avoid the services of a food taster he had fetched all the way from the Poconos plenty of food, more than a plenty of liquor-and a little water. And, of course, ice cubes. He wondered how Caesar had licked the Gauls without ice cubes.

"I don't hanker to," Duke answered.

"Matter of taste. I've had a pretty good time, on the whole. Get crackin', girls. Anne, douse your cloak and get useful. First girl back in here with a drink for me skips her next turn at 'Front.' After our guests, I mean. Do please sit down, gentlemen. Sven, what's your favorite poison? Akvavit, I suppose-Larry, tear down, find a liquor store and fetch back a couple of bottles of akvavit. Fetch Bols gin for the captain, too."

"Hold it, Jubal," Nelson said firmly. "I won't touch akvavit unless it's chilled overnight-and I'd rather have Scotch."

"Me, too," agreed van Tromp.

"All right. Got enough of that to drown a horse. Dr. Mahmoud? If you prefer soft drinks, I'm pretty sure the girls tucked some in."

Mahmoud looked wistful. "I should not allow myself to be tempted by strong drink."

"No need to be. Let me prescribe for you, as a physician." Jubal looked him over. "Son, you look as if you had been under considerable nervous strain. Now we could alleviate that with meprobamate but since we don't have that at hand, I'm forced to substitute two ounces of ninety proof ethanol, repeat as needed. Any particular flavor you prefer to kill the medicinal taste? And with or without bubbles?"

Mahmoud smiled and suddenly did not look at all English. "Thank you, Doctor-but I'll sin my own sins, with my eyes open. Gin, please, with water on the side. Or vodka. Or whatever is available."

"Or medicinal alcohol," Nelson added. "Don't let him pull your leg, Jubal. Stinky drinks anything-and always regrets it."

"I do regret it," Mahmoud said earnestly, "because I know it is sinful."

"Then don't needle him about it, Sven," Jubal said brusquely. "If Stinky gets more mileage out of his sins by regretting them, that's his business. My own regretter burned out from overload during the market crash in '29 and I've never replaced it-and that's my business. To each his own. How about victuals, Stinky? Anne probably stuffed a ham into one of those hampers-and there might be other unclean items not as clearly recognizable. Shall I check?"

Mahmoud shook his head. "I'm not a traditionalist, Jubal. That legislation was given a long time ago, according to the needs of the time. The times are different now."

Jubal suddenly looked sad. "Yes. But for the better? Never mind, this too shall pass and leave not a rack of mutton behind. Eat what you will, my brother-God forgives necessity."

"Thank you. But, truthfully, I often do not eat in the middle of the day."

"Better eat, or the prescribed ethanol will do more than relax you. Besides, these kids who work for me may sometimes misspell words but they are all superb cooks."

Miriam had come up behind Jubal with a tray bearing four drinks, orders having been filled at once while Jubal ranted. "Boss," she broke in, "I heard that. Will you put it in writing?"

"What?" He whirled around and glared at her. "Snooping! You stay in after school and write one thousand times~ 'I will not flap my ears at private conversations.' Stay until you finish it."

"Yes, Boss. This is for you, Captain .. and for you, Dr. Nelson and this is yours, Dr. Mahmoud. Water on the side, you said?"

"Yes, Miriam. Thank you."

"Usual Harshaw service-sloppy but fast. Here's yours, Boss." "You put water in it!"

"Anne's orders. She says you're too tired to have it on the rocks."

Jubal looked long-suffering. "You see what I have to put up with, gentlemen? We should never have put shoes on 'em. Miriam, make that 'one thousand times' in Sanskrit."

"Yes, Boss. Just as soon as I find time to learn it." She patted him on the head. "You go right ahead and have your tizzy, dear; you've earned it. We're all proud of you."

"Back to the kitchen, woman. Hold it-has everybody else got a drink? Where's Ben's drink? Where's Ben?"

"They have by now. Ben is phoning in his column, His drink is at his elbow."

"Very well. You may back out quietly, without formality-and send Mike in. Gentlemen! Me ke aloha pau ole!-for there are fewer of us every year." He drank, they joined him.

"Mike's helping. He loves to help-I think he's going to be a butler when he grows up."

"I thought you had left. Send him in anyhow; Dr. Nelson wants to give him a physical examination."

"No hurry," put in the ship's surgeon. "Jubal, this is excellent Scotch -but what was the toast?"

"Sorry. Polynesian. 'May our friendship be everlasting.' Call it a footnote to the water ceremony this morning. By the way, gentlemen, both Larry and Duke are water brothers to Mike, too, but don't let it fret you. They can't cook . . - but they're the sort to have at your back in a dark alley."

"If you vouch for them, Jubal," van Tromp assured him, "admit them and tyle the door. But let's drink to the girls while we're alone. Sven, what's that toast of yours to the flickas?"

"You mean the one to all pretty girls everywhere? Let's drink just to the four who are here. Skim!!" They drank to their female water brothers and Nelson continued, "Jubal, where do you find them?"

"Raise 'em in my own cellar. Then just when I've got 'em trained and some use to me, some city slicker always comes along and marries them. It's a losing game."

"I can see how you suffer," Nelson said sympathetically.

"I do. I trust all of you gentlemen are married?"

Two were. Mahmoud was not. Jubal looked at him bleakly. "Would you have the grace to discorporate yourself? After lunch, of course-I wouldn't want you to do it on an empty stomach."

"I'm no threat, I'm a permanent bachelor."

"Come, come, sir! I saw Dorcas making eyes at you ... and you were purring."

"I'm safe, I assure you." Mahmoud thought of telling Jubal that he would never marry out of his faith, decided that a gentile would take it amiss-even a rare exception like Jubal. He changed the subject. "But, Jubal, don't make a suggestion like that to Mike. He wouldn't grok that you were joking-and you might have a corpse on your hands. I don't know . . . I don't know that Mike can actually think himself dead. But he would try . . . and if he were truly a Martian, it would work."

"I'm sure he can," Nelson said firmly. "Doctor-'Jubal,' I mean- have you noticed anything odd about Mike's metabolism?"

"Uh, let me put it this way. There isn't anything about his metabolism which I have noticed that is not odd. Very."

"Exactly."

Jubal turned to Mahmoud. "But don't worry that I might invite Mike to suicide. I've learned not to joke with him, not ever. I grok that he doesn't grok joking." Jubal blinked thoughtfully. "But I don't grok 'grok' -not really. Stinky, you speak Martian."

"A little."

"You speak it fluently, I heard you. Do you grok 'grok'?"

Mahmoud looked very thoughtful. "No. Not really. 'Grok' is the most important word in the Martian language-and I expect to spend the next forty years trying to understand it and perhaps use some millions of printed words trying to explain it. But I don't expect to be successful. You need to think in Martian to grok the word 'grok.' Which Mike does and I don't. Perhaps you have noticed that Mike takes a rather veering approach to some of the simplest human ideas?"

"Have I! My throbbing head!"

"Mine, too."

"Food," announced Jubal. "Lunch, and about time, too. Girls, put it down where we can reach it and maintain a respectful silence. Go on talking, Doctor, if you will. Or does Mike's presence make it better to postpone it?"

"Not at all." Mahmoud spoke briefly in Martian to Mike. Mike answered him, smiled sunnily; his expression became blank again and he applied himself to food, quite content to be allowed to eat in silence. "I told him what I was trying to do and he told me that I would speak rightly; this was not his opinion but a simple statement of fact, a necessity. I hope that if I fail to, he will notice and tell me. But I doubt if he will. You see, Mike thinks in Martian-and this gives him an entirely different 'map' of the universe from that which you and I use. You follow me?"

"I grok it," agreed Jubal. "Language itself shapes a man's basic ideas."

"Yes, but- Doctor, you speak Arabic, do you not?"

"Eh? I used to, badly, many years ago," admitted Jubal. "Put in a while as a surgeon with the American Field Service, in Palestine. But I don't now. I still read it a little . . . because I prefer to read the words of the Prophet in the original."

"Proper. Since the Koran cannot be translated-the 'map' changes on translation no matter how carefully one tries. You will understand, then, how difficult I found English.

It was not alone that my native language has much simpler inflections and more limited tenses; the whole 'map' changed. English is the largest of the human tongues, with several times the vocabulary of the second largest language-this alone made it inevitable that English would eventually become, as it did, the lingua franca of this planet, for it is thereby the richest and the most flexible-despite its barbaric accretions . . . or, I should say, because of its barbaric accretions. English swallows up anything that comes its way, makes English out of it. Nobody tried to stop this process, the way some languages are policed and have official limits . . probably because there never has been, truly, such a thing as 'the King's English'-for 'the King's English' was French. English was in truth a bastard tongue and nobody cared how it grew . . . and it did!-enormously. Until no one could hope to be an educated man unless he did his best to embrace this monster.

"Its very variety, subtlety, and utterly irrational, idiomatic complexity makes it possible to say things in English which simply cannot be said in any other language. It almost drove me crazy . . . until I learned to think in it-and that put a new 'map' of the world on top of the one I grew up with. A better one, in many ways-certainly a more detailed one.

"But nevertheless there are things which can be said in the simple Arabic tongue that cannot be said in English."

Jubal nodded agreement. "Quite true. That's why I've kept up my reading of it, a little."

"Yes. But the Martian language is so much more complex than is English-and so wildly different in the fashion in which it abstracts its picture of the universe-that English and Arabic might as well be considered one and the same language, by comparison. An Englishman and an Arab can learn to think each other's thoughts, in the other's language. But I'm not certain that it will ever be possible for us to think in Martian (other than by the unique fashion Mike learned it)-oh, we can learn a sort of a 'pidgin' Martian, yes-that is what I speak.

"Now take this one word: 'grok.' Its literal meaning, one which I suspect goes back to the origin of the Martian race as thinking, speaking creatures-and which throws light on their whole 'map'-is quite easy. 'Grok' means 'to drink.'"

"Huh?" said Jubal. "But Mike never says 'grok' when he's just talking about drinking. He-"

"Just a moment." Mahmoud spoke to Mike in Martian.

Mike looked faintly surprised and said, "'Grok' is drink," and dropped the matter.

"But Mike would also have agreed," Mahmoud went on, "if I had named a hundred other English words, words which represent what we think of as different concepts, even pairs of antithetical concepts. And 'grok' means all of these, depending on how you use it. It means 'fear,' it means 'love,' it means 'hate'-proper hate, for by the Martian 'map' you cannot possibly hate anything unless you grok it completely, understand it so thoroughly that you merge with it and it merges with you-then and only then can you hate it. By hating yourse1f~ But this also implies, by necessity, that you love it, too, and cherish it and would not have it otherwise. Then you can hate- and (I think) that Martian hate is an emotion so black that the nearest human equivalent could only be called a mild distaste."

Mahmoud screwed up his face. "It means 'identically equal' in the mathematical sense. The human cliché, 'This hurts me worse than it does you' has a Martian flavor to it,

if only a trace. The Martians seem to know instinctively what we learned painfully from modern physics, that the observer interacts with the observed simply through the process of observation. 'Grok' means to understand so thoroughly that the observer becomes a part of the process being observed-to merge, to blend, to intermarry, to lose personal identity in group experience. It means almost everything that we mean by religion, philosophy, and science-and it means as little to us as color means to a blind man." Mahmoud paused. "Jubal, if I chopped you up and made a Stew of you, you and the stew, whatever else was in it, would grok-and when I ate you, we would grok together and nothing would be lost and it would not matter which one of us did the chopping up and eating."

"It would to me!" Jubal said firmly.

"You aren't a Martian." Mahmoud stopped again to talk to Mike in Martian.

Mike nodded. "You spoke rightly, my brother Dr. Mahmoud. I am been saying so. Thou art God."

Mahmoud shrugged helplessly. "You see how hopeless it is? All I got was a blasphemy. We don't think in Martian. We can't"

"Thou art God," Mike said agreeably. "God groks."

"Hell, let's change the subject! Jubal, could I impose on my fraternal status for some more gin?"

"I'll get it," said Dorcas, and jumped up.

It was a pleasant family picnic, made easy by Jubal's gift for warm informality, a gift shared by his staff, plus the fact that the three newcomers were themselves the same easy sort of people-each learned, acclaimed, and with no need to strive. And all four men shared a foster-father interest in Mike. Even Dr. Mahmoud, rarely truly off guard with those who did not share with him the one true faith in submission to the Will of God, always beneficent, merciful, found himself relaxed and happy. It had pleased him very much to learn that Jubal read the words of the Prophet and, now that he stopped to notice it, the women of Jubal's household were really much plumper than he had thought at first glance. That dark one- But he put the thought out of his mind; he was a guest.

But it pleased him very much that these women did not chatter, did not intrude themselves into the sober talk of men, but were very quick with food and drink in warm hospitality. He had been shocked at Miriam's casual disrespect toward her master-then recognized it for what it was: liberty permitted cats and favorite children in the privacy of the home.

Jubal explained early that they were doing nothing but waiting on word from the Secretary General. "If he means business-and I think he's ready to deal-we may hear from him yet today. If not, we'll go home this evening . . and come back if we have to. But if we had stayed in the Palace, he might have been tempted to dicker. Here, dug into our own hole, we can refuse to dicker."

"Dicker for what?" asked Captain van Tromp. "You gave him what he wanted."

"Not all that he wanted. Douglas would rather have that power of attorney be utterly irrevocable . . . instead of on his good behavior, with the power reverting to a man he despises and is afraid of-namely that scoundrel there with the innocent smile, our brother Ben, But there are others besides Douglas who are certain to want to dicker, too. That bland buddha Kung-hates my guts, I've just snatched the rug out from under him. But if he could figure a deal that might tempt us-before Douglas nails this down-he

would offer it. So we stay out of his way, too. Kung is one reason why we are eating and drinking nothing that we did not fetch with us."

"You really feel that's something to worry about?" asked Nelson. "Truthfully, Jubal, I had assumed that you were a gourmet who insisted on his own cuisine even away from home. I can't imagine being poisoned, in a major hotel such as this."

Jubal shook his head sorrowfully. "Sven, you're the sort of honest man who thinks everybody else is honest-and you are usually right. No, nobody is going to try to poison you . . . but your wife might collect your insurance simply because you shared a dish with Mike."

"You really think that?"

"Sven, I'll order anything you want. But I won't touch it and I won't let Mike touch it. For I'll lay heavy odds that any waiter who comes to this suite will be on Kung's payroll . . . and maybe on two or three others'. I'm not seeing boogie men behind bushes; they know where we are-and they've had a couple of hours in which to act. Sven, in cold seriousness, my principal worry has been to keep this lad alive long enough to figure out a way to sterilize and stabilize the power he represents . . . so that it would be to no one's advantage to have him dead."

Jubal sighed. "Consider the black widow spider. It's a timid little beastie, useful and, for my taste, the prettiest of the arachnids, with its shiny, patent-leather finish and its red hourglass trademark. But the poor thing has the fatal misfortune of possessing enormously too much power for its size. So everybody kills it on sight.

"The black widow can't help it, it has no way to avoid its venomous power.

"Mike is in the same dilemma. He isn't as pretty as a black widow spider-"

"Why, Jubal!" Dorcas said indignantly. "What a mean thing to say! And how utterly untrue!"

"Sorry, child. I don't have your glandular bias in the matter. Pretty or not, Mike can't get rid of that money, nor is it safe for him to have it. And not just Kung. The High Court is not as 'non-political' as it might be although their methods would probably make a prisoner out of him rather than kill him-a fate which, for my taste, is worse. Not to mention a dozen other interested parties, in and out of public office . . . persons who might or might not kill him, but who have certainly turned over in their minds just how it would affect their fortunes if Mike were guest of honor at a funeral. I-"

"Telephone, Boss."

"Anne, you have just interrupted a profound thought. You hail from Porlock."

"No, Dallas."

"And I will not answer the phone for anyone."

"She said to tell you it was Becky."

"Why didn't you say so?" Jubal hurried out of the living room, found Madame Vesant's friendly face in the screen. "Becky! I'm glad to see you, girl!" He did not bother to ask how she had known where to call him.

"Hi, Doc. I caught your act-and I just had to call and tell you so."

"How'd it look?"

"The Professor would have been proud of you. I've never seen a tip turned more expertly. Then you spilled 'em before the marks knew what had hit 'em. Dot, the profession lost a great talker when you weren't born twins."

"That's high praise, coming from you, Becky." Jubal thought rapidly. "But you set up the act; I just cashed in on it-and there's plenty of cash. So name your fee, Becky, and don't be shy." He decided that, whatever figure she picked, he would double it. That drawing account he had demanded for Mike would never feel it . . . and it was better, far better, to pay Becky off lavishly than to let the obligation stay open.

Madame Vesant frowned. "Now you've hurt my feelings."

"Becky, Becky! You're a big girl now, dear. Anybody can clap and cheer-but applause worthwhile will be found in a pile of soft, green, folding money. Not my money. The Man from Mars picks up this tab and, believe me, he can afford it." He grinned. "But all you'll get from me is thanks, and a hug and a kiss that will crack your ribs the first time I see you."

She relaxed and smiled. "I'll hold you to it. I remember how you used to pat my fanny while you assured me that the Professor was sure to get well-you always could make a body feel better."

"I can't believe that I ever did anything so unprofessional."

"You did, you know you did. And you weren't very fatherly about it, either."

"Maybe so. Maybe I thought it was the treatment you needed. I've given up fanny-patting for Lent-but I'll make an exception in your case."

"You'd better."

"And you'd better figure out that fee. Don't forget the zeroes."

"Uh, I'll think about it. But, truthfully, Doc, there are more ways of collecting a fee than by making a fast count on the change. Have you been watching the market today?"

"No, and don't tell me about it. Come over and have a drink instead."

"Uh, I'd better not. I promised, well, a rather important client that I would be available for instant consultation."

"I see. Mmm ... Becky do you suppose that the stars would show that this whole matter would turn out best for everybody if it were all wrapped up, signed, sealed, and notarized today? Maybe just after the stock market closes?"

She looked thoughtful. "I could look into it."

"You do that. And come stay with us when you aren't so busy. Stay as long as you like and never wear your hurtin' shoes the whole time. You'll like the boy. He's as weird as snake's suspenders but sweet as a stolen kiss, too."

"Uh... I will. As soon as I can. Thanks, Doc."

They said good-by and Jubal returned to find that Dr. Nelson had taken Mike into one of the bedrooms and was checking him over. He joined them to offer Nelson the use of his kit since Nelson had not had with him his professional bag.

Jubal found Mike stripped down and the ship's surgeon looking baffled. "Doctor," Nelson said, almost angrily, "I saw this patient only ten days ago. Tell me where he got those muscles?"

"Why, he sent in a coupon from the back cover of Rut: The Magazine for He-Men. You know, the ad that tells how a ninety-pound weakling can-"

"Doctor, please!"

"Why don't you ask him?" Jubal suggested.

Nelson did so. "I thinked them," Mike answered.

"That's right," Jubal agreed. "He 'thinked' 'em. When I got him, just over a week ago, he was a mess, slight, flabby, and pale. Looked as if he had been raised in a cave-which I gather he was, more or less. So I told him he had to grow strong. So he did."

"Exercises?" Nelson said doubtfully.

"Nothing systematic. Swimming, when and as he wished."

"A week of swimming won't make a man look as if he had been sweating over bar bells for years!" Nelson frowned. "I am aware that Mike has voluntary control over the so-called 'involuntary' muscles, But that is not entirely without precedent. This, on the other hand, requires one to assume that-"

"Doctor," Jubal said gently, "why don't you just admit that you don't grok it and save the wear and tear?"

Nelson sighed. "I might as well. Put your clothes on, Michael."

Somewhat later, Jubal, under the mellowing influence of congenial company and the grape, was unburdening to the three from the Champion his misgivings about his morning's work. "The financial end was simple enough: just tie up Mike's money so that a struggle over it couldn't take place. Not even if he dies, because I've let Douglas know privately that Mike's death ends his stewardship whereas a rumour from a usually reliable source-me, in this case-has reached Kung and several others to the effect that Mike's death will give Douglas permanent control. Of course, if I had had magical powers, I would have stripped the boy not only of all political significance but also of every penny of his inheritance. That-"

"Why would you have done that, Jubal?" the captain inteirupted.

Harshaw looked surprised. "Are you wealthy, Skipper? I don't mean: 'Are your bills paid and enough in the sock to buy any follies your taste runs to?' I mean rich . . . so loaded that the floor sags when you walk around to take your place at the head of a board-room table."

"Me?" Van Tromp snorted. "I've got my monthly check, a pension eventually, a house with a mortgage and two girls in college. I'd like to try being wealthy for a while, I don't mind telling you!"

"You wouldn't like it."

"Huh! You wouldn't say that ... if you had two daughters in school."

"For the record, I put four daughters through college, and I went in debt to my armpits to do it. One of them justified the investment; she's a leading light in her profession which she practices under her husband's name because I'm a disreputable old bum who makes money writing popular trash instead of having the grace to be only a revered memory in her paragraph in Who's Who. The other three are nice people who always remember my birthday and don't bother me otherwise I can't say that an education hurt them. But my offspring are not relevant save to show that I understand that a man often needs more than he's got. But you can fix that easily; you can resign from the service and take a job with some engineering firm that will pay you several times what you're getting just to put your name on their letterhead General Atomics. Several others, You've had offers, haven't you?"

"That's beside the point," Captain van Tromp answered stiffly. "I'm a professional man."

"Meaning there isn't enough money on this planet to tempt you into giving up ~0~mafl lg space ships. i understand that."

"But I wouldn't mind having money, too."

"A little more money won't do you any good, because daughters can use up ten percent more than a man can make in any normal occupation regardless of the amount. That's a widely experienced but previously unformulated law of nature, to be known henceforth as 'Harshaw's Law.' But, Captain, real wealth, on the scale that causes its owner to hire a battery of finaglers to hold down his taxes, would ground you just as certainly as resigning would."

"Why should it? I would put it all in bonds and just clip coupons."

"Would you? Not if you were the sort of person who acquires great wealth in the first place. Big money isn't hard to come by. All it costs is a lifetime of singlem1~ed devotion to acquiring it and making it grow into more money, to the utter exclusion of all other interests. They say that the age of opportunity has passed. Nonsense! Seven out of ten of the wealthiest men on this planet started life without a shilling_-and there are plenty more such strivers on the way up. Such people are not stopped by high taxation nor even by socialism; they simply adapt themselves to new rules and presently they change the rules. But no premiere ballerina ever works harder, nor more narrowly, than a man who acquires riches. Captain, that's not your style; you don't want to make money, you simply want to have money-in order to spend it."

"Correct, sir! Which is why I can't see why you should want to take Mike's wealth away from him."

"Because Mike doesn't need it and it would cripple him worse than any physical handicap. Wealth-great wealth-is a curse . . . unless you are devoted to the money making game for its own sake. And even then it has serious drawbacks."

"Oh, nonsense, Jubal, you talk like a harem guard trying to convince a whole man of the advantages of being a eunuch. Pardon me."

"Very possibly." agreed Jubal, "and perhaps for the same reason; the human mind's ability to rationalize its own shortcomings into virtues is unlimited, and I am no exception. Since I, like yourself, sir, have no interest in money other than to spend it, there has never been the slightest chance that I would acquire any significant degree of wealth just enough for my vices. Nor any teal danger that I would fail to scrounge that modest amount, since anyone with the savvy not to draw to a small pair can always manage to feed his vices, whether they be tithing or chewing betel nut. But great wealth? You saw that performance this morning. Now answer me truthfully. Do you think I could have revised it slightly so that I myself acquired all that plunder-become its sole manager and de-facto owner while milking off for my own use any income I cared to name-and still have rigged the other issues so that Douglas would have supported the outcome? Could I have done that, sir? Mike trusts me; I am his water brother. Could I have stolen his fortune and so arranged it that the government in the person of Mr. Douglas would have condoned it?"

"Uh ... damn you, Jubal, I suppose you could have."

"Most certainly I could have. Because our sometimes estimable Secretary General is no more a money-seeker than you are. His drive is political power-a drum whose beat I do not hear. Had I guaranteed to Douglas (oh, gracefully, of course-there is decorum even among thieves) that the Smith estate would continue to bulwark his administration, then I would have been left undisturbed to do as I liked with the income and had my acting guardianship made legal."

Jubal shuddered. "I thought that I was going to have to do exactly that, simply to protect Mike from the vultures gathered around him-and I was panic-stricken. Captain, you obviously don't know what an Old Man of the Sea great wealth is. It is not a fat purse and time to spend it. Its owner finds himself beset on every side, at every hour, wherever he goes, by persistent pleaders, like beggars in Bombay, each demanding that he invest or give away part of his wealth. He becomes suspicious of honest friendship-indeed honest friendship is rarely offered him; those who could have been his friends are too fastidious to be jostled by beggars, too proud to risk being mistaken for one.

"Worse yet, his life and the lives of his family are always in danger. Captain, have your daughters ever been threatened with kidnapping?"

"What? Good Lord, I should hope not!"

"If you possessed the wealth Mike had thrust on him, you would have those girls guarded night and day-and even then you would not rest, because you would never be sure that those very guards were not tempted. Look at the records of the last hundred or so kidnappings in this country and note how many of them involved a trusted employee -- and note, too, how few victims escaped alive. Then ask yourself: is there any luxury wealth can buy which is worth having your daughters' pretty necks always in a noose?"

Van Tromp looked thoughtful. "No. I guess I'll keep my mortgaged house-it's more my speed. Those girls are all I've got, Jubal."

"Amen. I was appalled at the prospect. Wealth holds no charm for me. All I want is to live my own lazy, useless life, sleep in my own bed- and not be bothered! Yet I thought I was going to be forced to spend my last few years sitting in an office, barricaded by buffers, and working long hours as Mike's man of business.

"Then I had an inspiration. Douglas already lived behind such barricades, already had such a staff. Since I was forced to surrender the power of that money to Douglas merely to ensure Mike's continued health and freedom, why not make the beggar pay for it by assuming all the headaches, too? I was not afraid that Douglas would steal from Mike; only pipsqueak, second-rate politicians are money hungry-and Douglas, whatever his faults, is no pipsqueak. Quit scowling, Ben, and hope that he never dumps the load on you.

"So I dumped the whole load on Douglas-and now I can go back to my garden. But, as I have said, the money was relatively simple, once I figured it out. It was the Larkin Decision that fretted me."

Caxton said, "I thought you had lost your wits on that one, Jubal. That silly business of letting them give Mike sovereign 'honors.' Honors indeed! For God's sake, Jubal, you should simply have had Mike sign over all right, title, and interest, if any, under that ridiculous Larkin theory. You knew Douglas wanted him to-Jill told you."

"Ben m'boy," Jubal said gently, "as a reporter you are hard-working and sometimes readable."

"Gee, thanks! My fan."

"But your concepts of strategy are Neanderthal."

Caxton sighed. "I feel better, Jubal. For a moment there I thought you had become softly sentimental in your old age."

"When I do, please shoot me. Captain, how many men did you leave on Mars?"

"Twenty-three."

"And what is their status, under the Larkin Decision?"

Van Tromp looked troubled. "I'm not supposed to talk."

"Then don't," Jubal reassured him. "I can deduce it, and so can Ben."

Dr. Nelson said, "Skipper, both Stinky and I are civilians again. I shall talk where and how I please-"

"And shall I," agreed Mahmoud.

"-and if they want to make trouble for me, they know what they can do with my reserve commission. What business has the government, telling us we can't talk? Those chair-warmers didn't go to Mars. We did."

"Stow it, Sven. I intended to talk-these are our water brothers. But, Ben, I would rather not see this in your column. I would like to command a space ship again."

"Captain, I know the meaning of 'off the record.' But if you'll feel easier, I'll join Mike and the girls for a while-I want to see Jill anyhow."

"Please don't leave. But ... this is among water brothers. The government is in a stew about that nominal colony we left behind. Every man in it joined in signing away his so-called Larkin rights-assigned them to the government-before we left Earth. Mike's presence when we got to Mars confused things enormously. I'm no lawyer, but I understood that, if Mike did waive his rights, whatever they might be, that would put the administration in the driver's seat when it came to parceling out things of value."

"What things of value?" demanded Caxton. "Other than pure science, I mean. Look, Skipper, I'm not running down your achievement, but from all I've seen and heard, Mars isn't exactly valuable real estate for human beings. Or are there assets that are still classified 'drop dead before reading'?"

Van Tromp shook his head. "No, the scientific and technical reports are all declassified, I believe. But, Ben, the Moon was a worthless hunk of rock when we first got it. Now look at it."

"Touché," Caxton admitted. "I wish my grandpappy had bought Lunar Enterprises instead of Canadian uranium. I don't have Jubal's objections to being rich." He added, "But, in any case, Mars is already inhabited."

Van Tromp looked unhappy. "Yes. But- Stinky, you tell him."

Mahmoud said, "Ben, there is plenty of room on Mars for human colonization . . . and, so far as I was ever able to find out, the Martians would not interfere. They did not object when we told them we intended to leave a colony behind. Nor did they seem pleased. Not even interested. We're flying our flag and claiming extraterritoriality right now. But our status may be more like that of one of those ant cities under glass one sometimes sees in school rooms. I was never able to grok it."

Jubal nodded. "Precisely. Myself, too. This morning I did not have the slightest idea of the true situation . . . except that I knew that the government was anxious to get those so-called Larkin rights from Mike. Beyond that I was ignorant. So I assumed that the government was equally ignorant and went boldly ahead. 'Audacity, always audacity'-soundest principle of strategy. In practicing medicine I learned that when you are most at loss is the time when you must appear confident. In law I had learned that, when your case seems hopeless, you must impress the jury with your relaxed certainty."

Jubal grinned. "Once, when I was a kid in high school, I won a debate on shipping subsidies by quoting an overwhelming argument from the files of the British Colonial Shipping Board. The opposition was totally unable to refute me-because there never was a 'British Colonial Shipping Board.' I had made it up, whole cloth.

"I was equally shameless this morning. The administration wanted Mike's 'Larkin rights' and was scared silly that we might make a deal with Kung or somebody. So I used their greed and worry to wring out of them that ultimate logical absurdity of their fantastic legal theory, a public acknowledgment in unmistakable diplomatic protocol that Mike was a sover eign equal of the Federation itself-and must be treated accordingly!" Jubal looked smug.

"Thereby," Ben said dryly, "putting yourself up the well-known creek without a paddle."

"Ben, Ben," Jubal said chidingly. "Wrong metaphor. Not a canoe, but a tiger. Or a throne. By their own logic they had publicly crowned Mike. Need I point out that, despite the old saw about uneasy heads and crowns, it is nevertheless safer to be publicly a king than it is to be a pretender in hiding? A king can usually abdicate to save his neck; a pretender may renounce his pretensions but it makes his neck no safer-less so, in fact; it leaves him naked to his enemies. No, Ben, Kung saw that Mike's position had been enormously strengthened by a few bars of music and an old sheet, even if you did not-and Kung did not like it a bit.

"But I acted through necessity, not choice, and, while Mike's position was improved, it was still not an easy one. Mike was, for the nonce, the acknowledged sovereign of Mars under the legalistic malarky of the Larkin precedent . . . and, as such, was empowered to hand out concessions, trading rights, enclaves, ad nauseam. He must either do these things himself . . . and thus be subjected to pressures even worse than those attendant on great wealth and for which he is even less fitted-or he must abdicate his titular position and allow his Larkin rights to devolve on those twenty-three men now on Mars, i.e., to Douglas."

Jubal looked pained. "I disliked these alternatives almost equally, since each was based on the detestable doctrine that the Larkin Decision could apply to inhabited planets. Gentlemen, I have never met any Martians, I have no vocation to be their champion-but I could not permit a client of mine to be trapped into such a farce. The Larkin Decision itself had to be rendered void, and all 'rights' under it, with respect to the planet Mars-while the matter was still in our hands and without giving the High Court a chance to rule."

Jubal grinned boyishly. "So I appealed to a higher court for a decision that would nullify the Larkin precedent-I cited a mythical 'British Colonial Shipping Board.' I lied myself blue in the face to create a new legal theory. Sovereign honors had been rendered Mike; that was fact, the world had seen it. But sovereign honors may be rendered to a sovereign . . . or to a sovereign's alter ego, his viceroy or ambassador. So I asserted that Mike was no cardboard sovereign under a silly human precedent not in point-but in awful fact the ambassador of the great Martian nation!"

Jubal sighed. "Sheer bluff ... and I was scared silly that I would be required to prove my claims. But I was staking my bluff on my hope and strong belief that others-Douglas, and in particular, Kung-would be no more certain of the facts than was I." Jubal looked around him. "But I ventured to risk that bluff because you three were sitting with us, were Mike's water brethren. If you three sat by and did not challenge my lies, then Mike must be accepted as the Martian equivalent of ambassador- and the Larkin Decision was a dead issue."

"I hope it is," Captain van Tromp said soberly, "but I did not take your statements as lies, Jubal; I took them as simple truth."

"Eh? But I assure you they were not. I was spinning fancy words, extemporizing."

"No matter. Inspiration or deduction-I think you told the truth." The skipper of the Champion hesitated. "Except that I would not call Mike an ambassador-I think he's an expeditionary force."

Caxton's jaw dropped. Harshaw did not dispute him but answered with equal soberness. "In what way, sir?"

Van Tromp said, "I'll amend that. It would be better to say that I think he's a scout for an expeditionary force, reconnoitering us for his Martian masters. It is even possible that they are in telepathic contact with him at all times, that he doesn't even need to report back. I don't know- but I do know that, after visiting Mars, I find such ideas much easier to swallow . . . and I know this: everybody seems to take it for granted that, finding a human being on Mars, we would of course bring him home and that he would be anxious to come home. Nothing could be further from the truth. Eh, Sven?"

"Mike hated the idea," agreed Nelson. "We couldn't even get close to him at first; he was afraid of us. Then he was ordered to go back with us and from then on he did exactly what we told him to do. He behaved like a soldier carrying out with perfect discipline orders that scared him silly."

"Just a moment," Caxton protested. "Captain, even so-Mars attack us? Mars? You know more about these things than I do, but wouldn't that be about like us attacking Jupiter? I mean to say, we have about two and a half times the surface gravity that Mars has, just as Jupiter has about two and a half times our surface gravity. Somewhat analogous differences, each way, on pressure, temperature, atmosphere, and so forth. We couldn't stay alive on Jupiter . . . and I don't see how Martians could stand our conditions. Isn't that true?"

"Close enough," admitted van Tromp.

"Then tell me why we should attack Jupiter? Or Mars attack us?"

"Mmm ... Ben, have you seen any of the proposals to attempt a beach head on Jupiter?"

"Yes, but- Well, nothing has ever gotten beyond the dream stage. It isn't practical."

"Space flight wasn't practical less than a century ago. Go back in the files and see what your own colleagues said about it-oh, say about 1940. These Jupiter proposals are, at best, no farther than drawing board-but the engineers working on them are quite serious. They think that, by using all that we've learned from deep ocean exploration, plus equipping men with powered suits in which to float, it should be possible to put human beings on Jupiter. And don't think for a moment that the Martians are any less clever than we are. You should see their cities."

"Uh-" said Caxton. "Okay, I'll shut up. I still don't see why they would bother."

"Captain?"

"Yes, Jubal?"

"I see another objection-a cultural one. You know the rough division of cultures into 'Apollonian' and 'Dionysian.'"

"I know in general what you mean."

"Well, it seems to me that even the Zuni culture would be called 'Dionysian' on Mars. Of course, you've been there and I haven't-but I've been talking steadily with Mike. That boy was raised in an extremely Apollonian culture-and such cultures are not aggressive."

"Mmm ... I see your point-but I wouldn't count on it."

Mahmoud said suddenly, "Skipper, there's strong evidence to support Jubal's conclusion. You can analyse a culture from its language, every time -and there isn't any Martian word for 'war.'" He stopped and looked puzzled. "At least, I don't think there is. Nor any word for 'weapon' nor for 'fighting.' If a word for a concept isn't in a language, then its culture simply doesn't have the referent the missing word would symbolize."

"Oh, twaddle, Stinky! Animals fight-and ants even conduct wars. Are you trying to tell me they have to have words for it before they can do it?"

"I mean exactly that," Mahmoud insisted, "when it applies to any verbalizing race. Such as ourselves. Such as the Martians-even more highly verbalized than we are. A verbalizing race has words for every old concept . . . and creates new words or new definitions for old words whenever a new concept comes along. Always! A nervous system that is able to verbalize cannot avoid verbalizing; it's automatic. If the Martians know what 'war' is, then they have a word for it."

"There is a quick way to settle it," Jubal suggested. "Call in Mike.

"Just a moment, Jubal," van Tromp objected. "I learned years ago never to argue with a specialist; you can't win. But I also learned that the history of progress is a long, long list of specialists who were dead wrong when they were most certain-SOr1~Y, Stinky."

"You're quite right, Captain-Only I'm not wrong this time."

"As may be, all Mike can settle is whether or not he knows a certain word . . . which might be like asking a two-year-old to define 'calculus.' Proves nothing. I'd like to stick to facts for a moment. Sven? About Agnew?"

Nelson answered, "It's up to you, Captain"

"Well ... this is still private conversation among water brothers, gentlemen. Lieutenant Agnew was our junior medical officer. Quite brilliant in his line, Sven tells me, and I had no complaints about him otherwise; he was well-enough liked. But he had an unsuspected latent xenophobia. Not against humans. But he couldn't stand Martians. Now I bad given orders against going armed outside the ship once it appeared that the Martians were peaceful-too much chance of an incident.

"Apparently young Agnew disobeyed me-at least we were never able to find his personal side arm later and the two men who last saw him alive say that he was wearing it. But all my log shows is: 'Missing and presumed dead.'

"Here is why. Two crewmen saw Agnew go into a sort of passage between two large rocks_rather scarce on Mars; mostly it's monotonous. Then they saw a Martian enter the same way . . whereupon they hurried, as Dr. Agnew's peculiarity was well known.

"Both say that they heard a shot. One says that he reached this opening in time to glimpse Agnew past the Martian, who pretty well filled the space between the rocks; they're so big. And then he didn't see him. The second man says that when he got there the Martian was just exiting, simply sailed on past them and went his way-which is characteristically Martian; if he has no business with you, he simply ignores you. With

the Martian out of the way they could both see the space between the two rocks . . . and it was a dead end, empty.

"That's all, gentlemen ... except to say that Agnew might have jumped that rock wall, under Mars' low surface gravity and the impetus of fear-but I could not and I tried-and to mention that these two crewmen were wearing breathing gear-have to, on Mars-and hypoxia can make a man's senses quite unreliable. I don't know that the first crewman was drunk through oxygen shortage; I just mention it because it is an explanation easier to believe than what he reported . . . which is that Agnew simply disappeared~ in the blink of an eye. In fact I suggested as much to him and ordered him to check the demand valve and the rest of his breather gear before he went outside again.

"You see, I thought Agnew would show up presently ... and I was looking forward to chewing him out and slapping him under hack for going armed (if he was) and for going alone (which seemed certain), both being flagrant breaches of discipline.

"But he never returned, we never found him nor his body. I do not know what happened. But my own misgivings about Martians date to that incident. They never again seemed to me to be just big, gentle~ harmless, rather comical creatures, even though we never had any trouble with them and they always gave us anything we wanted, once Stinky figured out how to ask for it. I played down the incident-Can't let men panic when you're a hundred million miles from home. Oh, I couldn't play down the fact that Dr. Agnew was missing and the whole ship's company searched for him. But I squelched any suggestion that there had been anything mysterious about it-Agnew had gotten lost among those rocks. had eventually died, no doubt, when his oxygen ran out . . . and was buried under sand drift or something. You do get quite a breeze both at sunrise and sundown on Mars; it does cause the sand to drift. So I used it as a reason to clamp down ever harder on always traveling in company, always staying in radio contact with the ship, always checking breather gear . . . with Agnew as a horrible example. I did not tell that crewman to keep his mouth shut; I simply hinted that his story was unbelievable, especially as his mate was not able to back it up. I think the official version prevailed."

Mahmond said slowly, "It did with me, Captain-this is the first time I've heard that there was any mystery about Agnew. And truthfully, I prefer your 'ofticial' version-I'm not inclined to be superstitious."

Van Tromp nodded. "That's what I had hoped for. Only Sven and myself heard that crewman's wild tale-and we kept it to ourselves. But, just the same-" The space ship captain suddenly looked old. "-I still wake up in the night and ask myself: 'What became of Agnew?'"

Jubal listened to the story without comment. He was still wondering what he should add to it when it ended. He wondered, too, if Jill had told Ben about Berquist and that other fellow-JOhThsO~~ He knew that he bad not. There hadn't been time the night Ben had been rescued . . . and in the sober light of the following dawn it had seemed better to let such things ride.

Had the kids told Ben about the battle of the swimming pool? And the two carloads of cops who were missing afterwards? Again, it seemed most unlikely; the kids knew that the "official" version was that the first task force had never showed up~ they had all heard his phone call with Douglas. All Jubal's family were discreet; whether guests or employees, gossipy persons were quickly ousted-Jubal regarded gossip as his own prerogative, solely. But Jill might have told Ben-Well, if she had, she must have

bound him to silence; Ben had not mentioned disappearances to Jubal . . . and he wasn't trying to catch Jubal's eye now.

Damn it, the only thing to do was to keep quiet and go on trying to impress on the boy that he simply must not go around making unpleasant strangers disappear!

Jubal was saved from further soul-searching (and the stag conversation was broken up) by Anne's arrival. "Boss, that Mr. Bradley is at the door. The one who called himself 'senior executive assistant to the Secretary General.'

"You didn't let him in?"

"No. I looked at him through the one-way and talked to him through the speakie. He says he has papers to deliver to you, personally, and that he will wait for an answer."

"Have him pass them through the flap. And you tell him that you are my 'senior executive assistant' and that you will fetch my receipt acknowledging personal delivery if that is what he wants. This is still the Martian Embassy-until I check what's in those papers."

"Just let him stand in the corridor?"

"I've no doubt that Major Bloch can find him a chair. Anne, I am aware that you were gently reared-but this is a situation in which rudeness pays off. We don't give an inch, nor a kind word, until we get exactly what we want."

"Yes, Boss."

The package was bulky because there were many copies; there was one document only. Jubal called in everyone and passed them around. "Girls, I am offering one lollipop for each loophole, boobytrap, or ambiguity-prizes of similar value to males. Now everybody keep quiet."

Presently Jubal broke the silence. "He's an honest politician-he stays bought."

"Looks that way," admitted Caxton.

"Anybody?" No one claimed a prize; Douglas had kept it simple and straightforward, merely implementing the agreement reached earlier. "Okay," said Jubal, "everybody is to witness every copy, after Mike signs it-especially you, Skipper, and Sven and Stinky. Get your seal, Miriam. Hell, let Bradley in now and have him witness, too-then give the poor guy a drink. Duke, call the desk and tell 'em to send up the bill; we're checking out. Then call Greyhound and tell 'em we want our go-buggy. Sven, Skipper, Stinky-we're getting out of here the way Lot left Sodom...why don't you three come up in the country with us, take off your shoes, and relax? Plenty of beds, home cooking, and no worries."

The two married men asked for, and received, rain checks; Dr. Mahmoud accepted. The signing took rather long, mostly because Mike enjoyed signing his name, drawing each letter with great care and artistic satisfaction. The salvageable remains of the picnic (mostly unopened bottles) had been sent up and loaded by the time all copies were signed and sealed, and the hotel bill had arrived.

Jubal glanced at the fat total and did not bother to add it. Instead he wrote on it: "Approved for payment-J. Harshaw for V. M. Smith," and handed it to Bradley.

"This is your boss's worry now," he told Bradley.

Bradley blinked. "Sir?"

"Oh, just to keep it 'via channels.' Mr. Douglas will doubtless turn it over to the Chief of Protocol. Isn't that the usual procedure? I'm rather green about these things."

Bradley accepted the bill. "Yes," he said slowly. "Yes, that's right. LaRue will voucher it-I'll give it to him."

"Thank you, Mr. Bradley. Thanks for everything!"

PART THREE HIS ECCENTRIC EDUCATION

XXII

IN ONE LIMB OF A SPIRAL GALAXY, close to a star known as "Sol" to some of its dependents, another star of the same type underwent catastrophic readjustment and became nova. Its glory would be seen on Mars in another three-replenished (729) years, or 1370 Terran years. The Old Ones noted the coming event as being useful, shortly, for instruction of the young, while never ceasing the exciting and crucial discussion of esthetic problems concerning the new epic woven around the death of the Fifth Planet.

The departure of the spaceship Champion for its home planet was noted without comment and a watch was kept on the strange nestling sent back in it, but nothing more, since it would be some time yet before it would be fruitful to grok the outcome. The twenty-three humans left behind on Mars coped, successfully in most ways, with an environment lethal to naked humans but less difficult, on the whole, than that in the Free State of Antarctica. One of them discorporated through an undiagnosed illness sometimes called "heartbreak" and at other times "homesickness." The Old Ones cherished the wounded spirit and sent it back where it belonged for further healing; aside from that the Martians left the Terrans alone.

On Earth the exploding neighbor star was not noticed at all, human astronomers still being limited by speed of light. The Man from Mars, having been briefly back in the news, had dropped out of the news again. The minority leader in the Federation Senate called for "a bold, new approach" to the twin problems of population and malnutrition in southeast Asia, starting with increased emergency grants-in-aid to families with more than five children. Mrs. Percy B. S. Souchek sued the supervisors of Los Angeles City-County over the death of her pet poodle Piddle which had taken place during a five-day period of stationary inversion layer. Cynthia Duchess announced that she was going to have the Perfect Baby by a scientifically selected anonymous donor and an equally perfect host mother just as soon as a battery of experts completed calculating the exact instant for conception to insure that the wonder child would be equally a genius in music, art, and statesmanship-and that she would (with the aid of hormonal treatments) nurse her child herself. She gave out a statement to the press on the psychological benefits of natural feeding and permitted, or insisted, that the press take pictures of her to prove that she was physically endowed for this happy duty-a fact that her usual publicity pictures had never really left undecided-

Supreme Bishop Digby denounced her as the Harlot of Babylon and forbade any Fosterite to accept the commission, either as donor or hostmother. Alice Douglas was quoted as saying: "While I do not know Miss Duchess personally, one cannot help but admire her. Her brave example should be an inspiration to mothers everywhere."

By accident, Jubal Harshaw saw one of the pictures and the accompanying story in a magazine some visitor had left in his house- He chuckled over it and posted it on the bulletin board in the kitchen ... then noted (as he had expected) that it did not stay up long, which made him chuckle again.

He did not have too many chuckles that week; the world had been too much with him. The working press soon ceased bothering Mike and the Harshaw household when it was clear that the story was over and that Harshaw did not intend to let any fresh news happen-but a great many thousands of other people, not in the news business, did not forget Mike. Douglas honestly tried to insure Mike's privacy; S. S. troopers now patrolled Harshaw's fence and an S.S. car circled over the grounds and challenged any car that tried to land. But Harshaw resented the necessity of having guards.

Guards kept people out; the mail and the telephone came through. The telephone Jubal coped with by changing his call number and having all calls routed through an answering service to which was given a very limited list of persons from whom Harshaw would accept calls-and, at that, he kept the instrument in the house set on "refuse & record" most of the time.

But the mail always comes through.

At first, Harshaw told Jill that the problem was Mike's. The boy had to grow up someday; he could start by handling his own mail and she could help and advise him. "But don't bother me with it; I have enough trouble with screwball mail of my own!"

Jubal could not make his decision stick; there was too much of it and Jill simply did not know how.

Just sorting the mail into categories was a headache. Jubal solved that by first making a phone call to the local postmaster (which got no results), then by a phone call to Bradley, which did get results after a "suggestion" from on high trickled back down to local level; thereafter mail for Mike arrived sacked as first class, second class, third class, and fourth class, with mail for everyone else in the household in still another sack.

Second and third class mail was used to insulate a new root cellar north of the house, the old root cellar having been dug by the former owner as a fallout shelter and never having been satisfactory as root cellar. Once the new root cellar was heavily over-insulated and could use no more, Jubal told Duke to dump such mail as fill to check erosion in gullies; combined with a small amount of brush such mail compacted very nicely.

Fourth class mail was a problem, especially as one package exploded prematurely in the village post office, blowing several years of "Wanted" announcements off the notice board and ruining one "Use Next Window" sign-by great good luck the postmaster was out for coffee and his assistant, an elderly lady with weak kidneys, was safe in the washroom. Jubal considered having all fourth class mail addressed to Mike processed by the bomb-disposal specialists of the S.S, who performed the same service for the Secretary General.

This turned out not to be necessary; Mike could spot a "wrongness" about a package without opening it. Thereafter all fourth class mail was unsacked in a heap just inside the gate; then, after the postman had left, Mike would pry through the pile from a distance, cause to disappear any harmful parcel; then Larry would truck the remainder to the house. Jubal felt that this method was far better than soaking suspect packages, opening them in darkness, X-raying them, or any other conventional method.

Mike loved opening the harmless packages; it made every day Christmas for him. He particularly enjoyed reading his own name on address labels. The plunder inside might or might not interest him; usually he gave it to one of the others-and, in the process, at last learned what "property" was in discovering that he could make gifts to his friends. Anything that nobody wanted wound up in a gully; this included, by definition, all gifts of food, as Jubal was not certain that Mike's nose for "wrongness" extended to poisons - especially after Mike had drunk, through error, a beaker of a poisonous solution Duke had left in the refrigerator he used for his photographic work. Mike had simply said mildly that the "Iced tea" had a flavor he was not sure that he liked.

Jubal told 'iii that it was otherwise all right to keep anything that caine to Mike by parcel post provided that none of it was (a) ever paid for, (b) ever acknowleged, (c) nor ever returned no matter how marked. Some of the items were legitimatly gifts; more of it was unordered merchandise. Either way, Jubal assumed conclusively that unsolicted chattels from strangers always represented efforts to make use of the Man from Mars and therefore merited no thanks.

An exception was made for live stock, from baby chicks to baby alligators which Jubal advised her to return unless she was willing to guarantee the care and feeding thereof, and the responsibilitY of keeping same from falling into the pool.

First class mail was a separate headache. After looking over a bushel or so of Mike's first class mail Jubal set up a list of categories:

A. Begging letters, personal and institutionaa-erosion fill.

B. Threatening letters-file unanswered. Second and later letters

from any one source to be turned over to S.S.

C. Offers of business deals of any nature forward to Douglas

unanswered.

D. Crackpot letters not containing threat-Pass around any real

dillies; the rest to go in a gully.

E. Friendly letters-answer only if accompanied by stamped, self

addressed envelope, in which case use one of several form

letters to be signed by Jill (Jubal pointed out that

letters signed by the Man from Mars were valuable per se,

and an open invitation to more useless mail.)

F. Scatological letters-Pass to Jubal (who had a bet with himself

that no such letter would ever show the faintest sign of

literary novelty) for further disposition- i.e., gully.

G. Proposals of marriage and propositions not quite so formal --

ignore and file. Use procedure under "B" on third offense.

H. Letters from scientific and educatiional institutions-handle

as under "E"; if answered at all, use form letter

explaining that the Man from Mars was not available for

anything; if Jill felt that a form brushoff would not do,

pass along to Jubal.

I. Letters from persons who actually had met Mike, such as all

the crew of the Champion, the President of the United

States, and a few others-let Mike answer them exactlY as

he pleased; the exercise in penmanship would be good for

him and the exercise in humam personal relations he needed

even more (and if he wanted advice, let him ask for it).

This guide cut the number of letters that had to be answered down to manageable size-a few each day for Jill, seldom even one for Mike. Just opening the mail took a major effort, but Jill found that she could skim and classify in about one hour each day, after she got used to it. The first four categofles remained large at all times; category "G" waS very large during the fortnight following the world stereocast from the Palace, then dwindled and the curve flattened to a steady trickle.

Jubal cautioned Jill that, while Mike should himself answer letters only from acquaintances and friends, mail addressed to him was his to read if he wished.

The third morning after the category system had gone into effect Jill brought a letter, category "G," to Jubal. More than half of the ladies and other females (plus a few misguided males) who supplied this category included pictures alleged to be of themselves; some of these pictures left little to the imagination, as did the letters themselves in many cases-

This letter enclosed a picture which managed not only to leave nothing to the imagination, but started over by stimulating fresh imaginings. Jill said, "Look at this, Boss! I ask you!"

Jubal read the letter, then looked at the picture. "She seems to know what she wants. What does Mike think of it?"

"He hasn't seen it. That's why I brought it to you."

Jubal glanced again at the picture. "A type which, in my youth, we referred to as 'stacked.' Well, her sex is not in doubt, nor her agility. But why are you showing it to me? I've seen better, I assure you."

"But what should I do with it? The letter is bad enough ... but that disgusting picture-should I tear it up? Before Mike sees it?"

"Oh- Siddown, Nurse. What does it say on the envelope?"

"Nothing. Just the address and the return address."

"How does the address read?"

"Huh? 'Mr. Valentine Michael Smith, the Man from-"

"Oh. Then it's not addressed to you."

"Why, no, of course-"

"That's all I wanted to be sure of. Now let's get something straight. I am not Mike's guardian. You are neither his mother nor his chaperon. I've simply co-opted you as his secretary. If Mike wants to read everything that comes in here addressed to him, including third class junk mail, he is free to do so."

"Well, he does read almost all of those ads. But surely you don't want him to see filth? Jubal, Mike doesn't know what the world is like. He's innocent.

"So? How many men has he killed so far, Jill?"

Jill did not answer; she looked unhappy. Jubal went on: "If you want to help him, you will concentrate on teaching him that casual killing is frowned on in this society. Otherwise he is bound to be unpleasantly conspicuous when he goes out into the world."

"Uh, I don't think he wants to 'go out into the world.'"

"Well, I'm damned well going to push him out of the nest as soon as I think he can fly. He can come back later, if he wishes -- But I shan't make it possible for him to live out his life here, as an arrested infant. For one thing, I can't even if I wanted to . . because Mike will probably outlive me by sixty or seventy years and this nest will be gone. But you are correct; Mike is innocent our standards. Nurse, have you ever seen that sterile laboratory at Notre Dame?"

"No. I've read about it."

"Healthiest animals in the world_hut they can't ever leave the laboratory. Child, I'm not running a sterile laboratorY. Mike has got to get acquainted with 'filth,' as you call it-and get immunized to it. One day he's going to meet the gal who wrote this letter, or her spiritual twin sister -in fact he's going to meet her by the dozens and hundreds ~hucks, with his notoriety and his looks he can spend his life skipping from one warm bed to another, if he likes. You can't stop it, I can't stop it; it's up to Mike. Furthermore, I wouldn't want to stop it, although for my taste it's a silly way to spend one's life-doing the same monotonous exercises over and over again, I mean- What do you think?"

"I-" Jill stopped and blushed.

"I withdraw the question. Maybe you don't find them monotonous but none of my business, either way. But if you don't want Mike's feet kicked out from under him by the first five hundred women that get him alone_and I don't regard it as a good idea, either; he should have other interests as well-then don't try to intercept his mail. Letters like that may vaccinate him a little - . . or at least tend to put him on guard. Don't make a thing out of it; just pass it along in the stack, cum 'filthy' picture. Answer his questionS if he asks them . . . and try not to blush."

"Uh, all right. Boss, you're infuriating when you're logical." "Yes, a most uncouth way to argue. Now run along."

"All right. But I'm going to tear up that picture after Mike has seen it."

"Oh, don't do that!"

"What? Do you want it, Boss?"

"Heaven forbid! I told you I bad seen much better. But Duke is not as jaundiced as I am; he collects such pictures- If Mike doesn't want it-and five-to-one he doesn't-give it to Duke- He'll be delighted."

"Duke collects such trash? But he seems such a nice person.

"He is. A very nice person indeed. Or I'd kick him out."

"But- I don't understand it"

Jubal sighed. "And 1 could sit here all day explaining it and you still wouldn't understand it. My dear, there are aspects of sex on which it is jmpossible to communicate between the two sexes of our race. They are sometimes grokked by intuition across the gulf that separates us, by a few exceptionally gifted individuals. But words are useless, so I won't try. Just take my word for it: Duke is a perfect knight, sans peur et sans reproche-and he would like to have that picture."

"All right, he can have it if Mike doesn't keep it. But I'll just pass it along to you. I won't give it to Duke myself_be might get ideas."

"Sissy. You might enjoy his ideas- Anything startling in the mail otherwise?"

"No. The usual crop of people who want Mike to endorse this and that, or peddle 'Official Man-from-Mars this's and that's-one character had the nerve to ask for a five-year monopoly royalty free, on the name, but wants Mike to finance it as well."

"I admire that sort of whole-hearted thief. Encourage him. Tell him that Mike is so rich that he makes crepes suzettes with Napoleon brandy and needs some tax losses-so how much guarantee would he like?"

"Are YOU serious, Boss? I'll have to dig it out of the group already sacked for Mr. Douglas."

"Of course I'm not serious. The gonif would show up here tomorrow, with his family. But you've given me a fine Idea for a story, so run along. Front!"

Mike was not uninterested in the "disgusting" picture. He grokked correctly (if only theoreticly) what the letter and the picture symbolized-and studied the picture with the clear-eyed delight With which he studied each passing butterfly. He found both butterflies and women tremendously interesting-in fact, all the grokking world around him was enchanting and he wanted to drink so deep of it all that his own grokking would be perfect.

He understood, intellectually, the mechanical and biological processes being offered to him in these letters but he wondered why these strangers wanted his help in quickening their eggs? Mike understood (without grokking it) that these people made ritual of this simple necessity, a "growing closer" possibly almost as important and precious as the water ceremony. He was eager to grok it.

But he was not in a hurry, "hurry" being one human concept he had failed to grok at all. He was sensitively aware of the key importance of correct timing in all acts-but with the Martian approach: correct timing was accomplished by waiting. He had noticed, of course, that his human brothers lacked his own fine discrimination of time and often were forced to wait a little faster than a Martian would-but he did not hold their innocent awkwardness against them; he simply learned to wait faster himself to cover their lack.

In fact, he sometimes waited faster so efficiently that a human would have concluded that he was hurrying at breakneck speed. But the human would have been mistaken-Mike was simply adjusting his own waiting in warm consideration for the needs

of others.

So he accepted Jill's edict that he was not to reply to any of these brotherly offers from female humans, but he accepted it not as a final veto but as a waiting-possibly a century hence would be better; in any case now was not the correct time since his water brother Jill spoke rightly.

Mike readily assented when Jill suggested, quite firmly, that he give this picture to Duke. He went at once to do so and would have done so anyhow; Mike knew about Duke's collection, he had seen it, looked through it with deep interest, trying to grok why Duke said, "That one ain't much in the face, but look at those legs-brother!" It always made Mike feel good to be called "brother" by one of his water brothers but legs were just legs, save that his own people had three each while humans each had only two- without being crippled thereby, he reminded himself~ two legs were proper for humans, he must always grok that this was correct.

As for faces, Jubal had the most beautiful face Mike had ever seen, clearly and distinctly his own. It seemed to Mike that these human females in Duke's picture collection could hardly be said to have grown faces as yet, so much did one look like the other in the face. All young human females had much the same face-how could it be otherwise? Of course he had never had any trouble recognizing Jill's face; she was not only the first woman he had ever seen but, most important, his first female water brother- Mike knew every pore on her nose, every incipient wrinkle in her face and had praised each one in happy meditation.

But, while he now knew Anne from Dorcas and Dorcas from Miriam by their faces alone, it had not been so when first he came here. For several days Mike had distinguished between them by size and coloration-and, of course, by voice, since no two voices were ever alike. But, as sometimes did happen, all three females would be quiet at once and then it was well that Anne was so much bigger, Dorcas so small, and that Miriam, who was bigger than Dorcas but smaller than Anne, nevertheless need not be mistaken for the missing one if either Anne or Dorcas was absent because Miriam had unmistakable hair called "red," even though it was not the color called "red" when speaking of anything but hair.

This special meaning for "red" did not trouble Mike; he knew before he reached Earth that every English word held more than one meaning. It was a fact one could get used to, without grokking, just as the sameness of all girl faces could be gotten used to . . . and, after waiting, they were no longer quite the same. Mike now could call up Anne's face in his mind and count the pores in her nose as readily as with Jill's. In essence, even an egg was uniquely itself, different from all other eggs any where and when- Mike had always known that. So each girl had her own face, no matter how small those differences might be.

Mike gave the "disgusting" picture to Duke and was warmed by Duke's pleasure. Mike did not feel that he was depriving himself in parting with the picture; he had seen it once, he could see it in his mind whenever he wished-even the face in that picture, as it had glowed with a most unusual expression of beautiful pain.

He accepted Duke's thanks gravely and went happily back to read the rest of his mail.

Mike did not share Jubal's annoyance at the avalanche of mail; he reveled in it, the insurance ads quite as much as the marriage proposals. His trip to the Palace had opened his eyes to the enonnous variety in this world and he was resolved to grok it all. He could see that it would take him several centuries and that he must grow and grow and grow, but he was undaunted and in no hurry-he grokked that eternity and the everbeautifully-changing now were identical.

He had decided not to reread the Encyclopedia Britannica; the flood of mail gave him brighter glimpses of the world. He read it, grokked what he could, remembered the rest for contemplation at night while the household slept.

From these nights of meditation he was beginning, he thought, to grok "business," and "money," and "buying," and "selling," and related unMartian activities-the articles in the Encyclopedia had always left him feeling unfilled, as (he now grokked) each one had assumed that he knew many things that he did not know. But there arrived in the mail, from Mr. Secretary General Joseph Edgerton Douglas, a check book and other papers, and his brother Jubal had taken great pains to explain to him what money was and how it was used.

Mike had failed utterly to understand it at first, even though Jubal showed him how to make out his first check, gave him "money" in exchange for it, taught him how to count it.

Then suddenly, with a grokking so blinding that he trembled and forced himself not to withdraw, he understood the abstract symbolic nature of money. These pretty pictures and bright medallions were not "money"; they were concrete symbols for an abstract idea which spread all through these people, all through their world. But these things were not money, any more than water shared in water ceremony was the growingcloser. Water was not necessary to the ceremony . . . and these pretty things were not necessary to money. Money was an idea, as abstract as an Old One's thoughts-money was a great structured symbol for balancing and healing and growing closer.

Mike was dazzled with the magnificent beauty of money.

The flow and change and countennarching of the symbols was another matter, beautiful in small, but reminding him of games taught to nestlings to encourage them to learn to reason correctly and grow. It was the total structure that dazzled him, the idea that an entire world could be reflected in one dynamic, completely interconnected, symbol structure. Mike grokked then that the Old Ones of this race were very old indeed to have composed such beauty, and he wished humbly that he might soon be allowed to meet one of them.

Jubal encouraged him to spend some of his money and Mike did so, with the timid, uncertain eagerness of a bride being brought to bed. Jubal suggested that he "buy presents for his friends" and Jill helped him with it, starting by placing arbitrary limits: only one present for each friend and a total cost that was not even a reciprocal filled-three of the sum that had been placed to his account-Mike's original intention had been to spend all of that pretty balance on his friends.

He quickly learned how difficult it is to spend money. There were so many things from which to choose, all of them wonderful and most of them incomprehensible. Surrounded by thick catalogs from Marshall Field's to the Ginza, and back by way of Bombay and Copenhagen, he felt smothered in a plethora of riches. Even the Sears & Montgomery catalog was too much for him.

But Jill helped. "No, Mike, Duke would not want a tractor."

"Duke likes tractors."

"Um, maybe-but he's got one, or Jubal has, which is the same thing. He might like one of those cute little Belgian unicycles-be could take it apart and put it together and shine it all day long. But even that is too expensive, what with the taxes. Mike dear, a present ought not to be very expensive-unless you are trying to get a girl to marry you, or something. Especially 'something.' But a present should show that you thought about it and considered that person's tastes. Something he would enjoy but probably would not buy for himself."

"How?"

"That's always the problem. Wait a minute. I just remembered something in this morning's mail-I hope Larry hasn't carted it oft' yet." She was back quickly. "Found it! Listen to this: 'Living Aphrodite: A de-luxe Album of Feminine Beauty in Gorgeous Stereo-Color by the World's Greatest Artists of the Camera. Notice: this item will not be sent by mail. It will be forwarded at purchaser's risk by prepaid express only. Orders cannot be accepted from addresses in the following states-' Um, Pennsylvania is on the verboten list-but don't let that worry you; if it is addressed to you, it will be delivered-and if I know Duke's vulgar tastes, this is just what he would like."

Duke did like it. It was delivered, not by express, but via the S.S. patrol car capping the house-and the next ad for the same item to arrive in the house boasted: "-exactly as supplied to the Man from Mars, by special appointment," which pleased Mike and annoyed Jill.

Other presents were just as difficult, but picking a present for Jubal was supremely difficult. Jill was stumped. What does one buy for a man who has everything-everything~ that is to say, that be wants which money can buy? The Sphinx? Three Wishes? The fountain that Ponce de Leon failed to find? Oil for his ancient bones, or one golden day of youth? Jubal had long ago even foresworn pets, because he outlived them, or (worse yet) it was now possible that a pet would outlive him, be orphaned.

Privately they consulted the others. "Shucks," Duke told them, "didn't you know? The boss likes statues."

"Really?" Jill answered. "I don't see any sculpture around."

"That's because most of the stuff he likes isn't for sale. He says that the crud they're making nowdays looks like disaster in a junk yard and any idiot with a blow torch and astigmatism can set himself up as a sculptor."

Anne nodded thoughtfully. "I think Duke is right. You can tell what Jubal's tastes in sculpture are by looking at the books in his study. But I doubt if it will help much."

Nevertheless they looked, Anne and Jill and Mike, and Anne picked out three books as bearing evidence (to her eyes) of having been looked at most often. "Hmm .." she said. "It's clear that the Boss would like anything by Rodin. Mike, if you could buy one of these for Jubal, which one would you pick? Oh, here's a pretty one-'Eternal Springtime.'"

Mike barely glanced at it and turned the page. "This one."

"What?" Jill looked at it and shuddered. "Mike, that one is perfectly dreadful! I hope I die long before I look like that."

"That is beauty," Mike said firmly.

"Mike!" Jill protested. "You've got a depraved taste-you're worse than Duke. Or else you just don't know any better."

Ordinarily such a rebuke from a water brother, most especially from Jill, would have shut Mike up, forced him to spend the following night in trying to understand his fault. But this was art in which he was sure of himself. The portrayed statue was the first thing he had seen on Earth which felt like a breath of home to him. Although it was clearly a picture of a human woman it gave him a feeling that a Martian Old One should be somewhere around, responsible for its creation. "It is beauty," he insisted stubbornly. "She has her own face. I grok."

"Jill," Anne said slowly, "Mike is right."

"Huh? Anne! Surely you don't like that?"

"It frightens me. But Mike knows what Jubal likes. Look at the book itself. It falls open naturally to any one of three places. Now look at the pages-this page has been handled more than the other two. Mike has picked the Boss's favorite. This other one-'The Caryatid Who has Fallen under the Weight of Her Stone'-he likes almost as well. But Mike's choice is Jubal's pet."

"I buy it," Mike said decisively.

But it was not for sale. Anne telephoned the Rodin Museum in Paris on Mike's behalf and only Gallic gallantry and her beauty kept them from laughing in her face. Sell one of the Master's works? My dear lady, they are not only not for sale but they may not be reproduced. Non, non, non! Quelle idét!

But for the Man from Mars some things are possible which are not possible for others. Anne called Bradley; a couple of days later he called her back. As a compliment from the French government-no fee, but a strongly couched request that the present never be publicly exhibited- Mike would receive, not the original, but a full-size, microscopically-exact replica, a bronze photopantogram of "She Who Used to Be the Beautiful Heaulmiêre."

Jill helped Mike select presents for the girls, here she knew her ground. But when he asked her what he should buy for her; she not only did not help but insisted that he must not buy her anything.

Mike was beginning to realize that, while a water brother always spoke rightly, sometimes they spoke more rightly than others, i.e., that the English language had depths to it and it was sometimes necessary to probe to reach the right depth. So he consulted Anne.

"Go ahead and buy her a present, dear. She has to tell you that but you give her a present anyhow. Hmm...Anne vetoed clothes and jewelry, finally selected for him a present which puzzled hint-Jill already smelled exactly the way Jill should smell.

The small size and apparent unimportance of the present, when it arrived, added to his misgivings-and when Anne let him whiff it before having him give it to Jill, Mike was more in doubt than ever; the odor was very strong and smelled not at all like Jill.

Nevertheless, Anne was right; Jill was delighted with the perfume and insisted on kissing him at once. In kissing her he grokked fully that this gift was what she wanted and that it made them grow closer.

When she wore it at dinner that night, he discovered that the fragrance truly did not differ from that of Jill herself; in some unclear fashion it simply made Jill smell more deliciously like Jill than ever. Still stranger, it caused Dorcas to kiss him and whisper,

"Mike hon ... the negligee is lovely and just what I wanted-but perhaps someday you'll give me perfume?"

Mike could not grok why Dorcas would want it, since Dorcas did not smell at all like Jill and therefore perfume would not be proper for her nor, he realized, would he want Dorcas to smell like Jill; he wanted Dorcas to smell like Dorcas.

Jubal interrupted with: "Quit nuzzling the lad and let him eat his dinned Dorcas, you already reek like a Marseilles cat house; don't wheedle Mike for more stinkum."

"Doss, you mind your own business."

It was all very puzzling-both that Jill could smell still more like Jill and that Dorcas should wish to smell like Jill when she already smelled like herself . . . and that Jubal would say that Dorcas smelled like a cat when she did not. There was a cat who lived on the place (not as a pet, but as co-owner); on rare occasion it came to the house and deigned to accept a handout. The cat and Mike had grokked each other at once, and Mike had found its carniverous thoughts most pleasing and quite Martian. He had discovered, too, that the cat's name (Friedrich Wilhelm Nietzsche) was not the cat's name at all, but he had not told anyone this because he could not pronounce the cat's real name; he could only hear it in his head.

The cat did not smell like Dorcas.

Giving presents was a great goodness and the buying thereof taught Mike much about the true value of money. But he had not forgotten even momentarily that there were other things he was eager to grok. Jubal had put off Senator Boone's invitation to Mike twice without mentioning it to Mike and Mike had not noticed, since his quite different grasp of time made "next Sunday" no particular date.

But the next repetition of the invitation came by mall and was addressed to Mike; Senator Boone was under pressure from Supreme Bishop Digby to produce the Man from Mars and Boone had sensed that Harshaw was stalling him and might stall indefinitely.

Mike took it to Jubal, stood waiting. "Well?" Jubal growled. "Do you want to go, or don't you? You don't have to attend a Fosterite service. We can tell 'em to go to hell."

So a Checker Cab with a human driver (Harshaw refused to trust his life to an autocab) picked them up the next Sunday morning and delivered Mike, Jill, and Jubal to a public landing fiat just outside the sacred grounds of Archangel Foster Tabernacle of the Church of the New Revelation.

XXIII

JUBAL HAD BEEN TRYING to warn Mike all the way to church; of what, Mike was not certain. He had listened, he always listened-but the landscape below them tugged for attention, too; he had compromised by storing what Jubal said. "Now look, boy," Jubal had admonished, "these Fosterites are after your money. That's all right, most everybody is after your money; you just have to be firm. Your money and the prestige of having the Man from Mars join their church. They're going to work on you-and you have to be firm about that, too."

"Beg pardon?"

"Damn it, I don't believe you've been listening."

"I am sorry, Jubal."

"Well ... look at it this way. Religion is a solace to many people and it is even conceivable that some religion, somewhere, really is Ultimate Truth. But in many cases, being religious is merely a form of conceit. The Bible Belt faith in which I was brought up encouraged me to think that I was better than the rest of the world; I was 'saved' and they were 'damned' -we were in a state of grace and the rest of the world were 'heathens' and by 'heathen' they meant such people as our brother Mahmoud. It meant that an ignorant, stupid lout who seldom bathed and planted his corn by the phase of the Moon could claim to know the final answers of the Universe. That entitled him to look down his nose at everybody else. Our hymn book was loaded with such arrogance-mindless, conceited, self-congratulation on how cozy we were with the Almighty and what a high opinion he had of us and us alone, and what hell everybody else was going to catch come Judgment Day. We peddled the only authentic brand of Lydia Pinkham's-"

"Jubal!" Jill said sharply. "He doesn't grok it."

"Uh? Sorry. I got carried away. My folks tried to make a preacher out of me and missed by a narrow margin; I guess it still shows."

"It does."

"Don't rub it in, girl. I would have made a good one if I hadn't fallen into the fatal folly of reading anything I could lay hands on. With just a touch more self confidence and a liberal helping of ignorance I could have been a famous evangelist. Shucks, this place we're headed for today would have been known as the 'Archangel Jubal Tabernacle.'"

Jill made a face. "Jubal, please! Not so soon after breakfast."

"I mean it. A confidence man knows that he's lying; that limits his scope. But a successful shaman ropes himself first; he believes what he says -and such belief is contagious; there is no limit to his scope. But I lacked the necessary confidence in my own infallibility; I could never become a prophet . . . just a critic-which is a poor thing at best, a sort of fourthrate prophet suffering from delusions of gender." Jubal frowned. "That's what worries me about Fosterites, Jill. I think that they are utterly sincere and you and I know that Mike is a sucker for sincerity."

"What do you think they'll try to do to him?"

"Convert him, of course. Then get their hands on his fortune."

"I thought you had things fixed so that nobody could do that?"

"No, I just fixed it so that nobody could take it away from him against his will. Ordinarily he couldn't even give it away without the government stepping in. But giving it to a church, especially a politically powerful church like the Fosterites, is another matter."

"I don't see why."

Jubal sighed. "My dear, religion is practically a null area under the law. A church can do anything any other human organization can do- and has no restrictions. It pays no taxes, need not publish records, is effectively immune to search, inspection, or control- and a church is anything that calls itself a church. Attempts have been made to distinguish between 'real' religions entitled to these immunities and 'cults.' This can't be done, short of establishing a state religion . . . which is a cure worse than the disease. In any case, we haven't done it, and both under what's left of the old United States Constitution and under the Treaty of Federation, all churches are equal and equally

immune-especially if they swing a big bloc of votes. If Mike is converted to Fosterism . . . and makes a will in favor of his church . . . and then 'goes to heaven' some sunrise, it will all be, to put it in the correct tautology, 'as legal as church on Sunday.'"

"Oh, dear! I thought we had him safe at last."

"There is no safety this side of the grave."

"Well ... what are you going to do about it, Jubal?"

"Nothing. Just fret, that's all."

Mike stored their conversation without any effort to grok it. He recognized the subject as one of utter simplicity in his own language but amazingly slippery in English. Since his failure to achieve mutual grokking on this subject, even with his brother Mahmoud, with his admittedly imperfect translation of the all-embracing Martian concept as: "Thou art God," be had simply waited until grokking was possible. He knew that the waiting would fructify at its time; his brother Jill was learning his language and he would be able to explaln it to her. They would grok together.

In the meantime the scenery flowing beneath him was a never-ending delight, and he was filled with eagerness for experience to come. He expected, or hoped, to meet a human Old One.

Senator Tom Boone was waiting to meet them at the landing flat. "Howdy, folks! And may the Good Lord bless you on this beautiful Sabbath. Mr. Smith, I'm happy to see you again. And you, too, Doctor." He took his cigar out of his mouth and looked at Jill. "And this little lady- didn't I see you at the Palace?"

"Yes, Senator. I'm Gillian Boardman."

"Thought so, m'dear. Are you saved?"

"Uh, I guess not, Senator."

"Well, it's never too late. We'll be very happy to have you attend the seekers' service in the Outer Tabernacle-I'll find a Guardian to guide you. Mr. Smith and the Doc will be going into the Sanctuary, of course." The Senator looked around.

"Senator-"

"Uh, what, Doc?"

"If Miss Boardmnan can't go into the Sanctuary, I think we had all better attend the seekers' service. She's his nurse and translator."

Boone looked slightly perturbed. "Is he ill? He doesn't look it. And why does he need a translator? He speaks English-I heard him."

Jubal shrugged. "As his physician, I prefer to have a nurse to assist me, if necessary. Mr. Smith is not entirely adjusted to the conditions of this planet. An interpreter may not be necessary. But why don't you ask hint? Mike, do you want Jill to come with you?"

"Yes, Jubal."

"But- Very well, Mr. Smith." Boone again removed his cigar, put two fingers between his lips and whistled. "Cherub here!"

A youngster in his early teens came dashing up. He was dressed in a short robe, tights, and slippers, and had what appeared to be pigeon's wings (because they were) fastened, spread, on his shoulders. He was bareheaded, had a crop of tight golden curls, and a sunny smile. Jill thought that he was as cute as a ginger ale ad.

Boone ordered, "Fly up to the Sanctum office and tell the Warden on duty that I want another pilgrim's badge sent to the Sanctuary gate right away. The word is Mars."

"'Mars,'" the kid repeated, threw Boone a Boy Scout salute, turned and made a mighty sixty-foot leap over the heads of the crowd. Jill realized why the short robe had looked so bulky; it concealed a personal jump harness.

"Have to be careful of those badges," Boone remarked. "You'd be surprised how many sinners would like to sneak in and sample a little of God's Joy without having their sins washed away first. Now we'll just mosey along and sight-see a little while we wait for the third badge. I'm glad you folks got here early."

They pushed through the crowd and entered the huge building, found themselves in a long high hallway. Boone stopped. "I want you to notice something. There is economics in everything, even in the Lord's work. Any tourist coming here, whether he attends seekers' service or not-and services run twenty-four hours a day-has to come in through here. What does he see? These happy chances." Boone waved at slot machines lining both walls of the hall. "The bar and quick lunch is at the far end, he can't even get a drink of water without running this gauntlet. And let me tell you, it's a remarkable sinner who can get that far without shedding his loose change.

"But we don't take his money and give him nothing. Take a look-" Boone shouldered his way to a machine, tapped the woman playing it on the shoulder; she was wearing around her neck a Fosterite rosary. "Please, Daughter."

She looked up, her annoyance changed to a smile. "Certainly, Bishop."

"Bless you. You'll note," Boone went on, as he fed a quarter into the machine, "that no matter whether it pays off in worldly goods or not, a sinner playing this machine is always rewarded with a blessing and an appropriate souvenir text."

The machine stopped whirring and, lined up in the windows, was: GOD-WATCHES-YOU.

"That pays three for one," Boone said briskly and fished the pay-off out of the receptacle, "and here's your souvenir text." He tore a paper tab off that had extruded from a slot, and handed it to Jill. "Keep it, little lady, and ponder it."

Jill sneaked a glance at it before putting it into her purse: "But the Sinner's belly is filled with filth- N.R. XXII 17"

"You'll note," Boone went on, "that the pay-off is in tokens, not in coin-and the bursar's cage is clear back past the bar . . . and there is plenty of opportunity there to make love offerings for charity and other good works. So the sinner probably feeds them back in . . . with a blessing each time and another text to take home. The cumulative effect is tremendous, really tremendous! Why, some of our most diligent and pious sheep got their start right here in this room."

"I don't doubt it," agreed Jubal.

"Especially if they hit a jackpot. You understand, every combination is a complete sentence, a blessing. All but the jackpot. That's the three Holy Eyes. I tell you, when they see those eyes all lined up and starin' at 'em and all that manna from Heaven coming down, it really makes 'em think. Sometimes they faint. Here, Mr. Smith-" Boone offered Mike one of the slugs the machine had just paid. "Give it a whirl."

Mike hesitated. Jubal quickly took the proffered token himself- damn it, he didn't want the boy getting hooked by a one-armed bandit! "I'll try it, Senator." He fed the machine.

Mike really hadn't intended to do anything. He had extended his time sense a little and was gently feeling around inside the machine trying to discover what it did and why they were stopping to look at it. But he had been too timid to play it himself.

But when Jubal did so, Mike watched the cylinders spin around, noted the single eye pictured on each, and wondered what this "jackpot" was when all three were lined up. The word had only three meanings, so far as he knew, and none of them seemed to apply. Without really thinking about it, certainly without intending to cause any excitement, he slowed and stopped each wheel so that the eyes looked out through the window.

A bell tolled, a choir sang hosannas, the machine lighted up and started spewing slugs into the receptacle and on into a catch basin below it, in a flood. Boone looked delighted. "Well, bless you! Doc, this is your day! Here, I'll help you-and put one back in to take the jackpot off." He did not wait for Jubal but picked up one of the flood and fed it back in.

Mike was wondering why all this was happening, so he lined up the three eyes again. The same events repeated, save that the flood was a mere trickle. Boone stared at the machine. "Well, I'll be-blessedl It's not supposed to hit twice in a row. But never mind; it did-and I'll see that you're paid on both of them." Quickly he put a slug back in.

Mike still wanted to see why this was a "jackpot." The eyes lined up again.

Boone stared at them. Jill suddenly squeezed Mike's hand and whispered, "Mike ... stop it!"

"But, Jill, I was seeing-"

"Don't talk about it. Just stop. Oh, you just wait till I get you home!" Boone said slowly, "I'd hesitate to call this a miracle. Machine probably needs a repairman." He shouted, "Cherub here!" and added, "We'd better take the last one off, anyhow," and fed in another slug.

Without Mike's intercession, the wheels slowed down on their own and announced: "FOSTER-LOVES-YOU," and the mechanism tried, but failed, to deliver ten more slugs. A Cherub, older and with sleek black hair, came up and said, "Happy day. You need help?"

"Three jackpots," Boone told him.

"'Three'?"

"Didn't you hear the music? Are you deef? We'll be at the bar; fetch the money there. And have somebody check this machine."

"Yes, Bishop."

They left the Cherub scratching his head while Boone hurried them on through the Happiness Room to the bar at the far end. "Got to get you out of here," Boone said jovially, "before you bankrupt the Church. Doc, are you always that lucky?"

"Always," Harshaw said solemnly. He had not looked at Mike and did not intend to-he told himself that he did not know that the boy had anything to do with it . . . but he wished mightily that this ordeal were over and all of them home again.

Boone took them to a stretch of the bar counter marked "Reserved" and said, "This'll do-or would the little lady like to sit down?"

"This is fine." (-and if you call me "little lady" just once more I'll turn Mike loose on you!)

A bartender hurried up. "Happy day. Your usual, Bishop?"

"Double. What'll it be, Doc? And Mr. Smith? Don't be bashful; you're the Supreme Bishop's guests."

"Brandy, thank you. Water on the side."

"Brandy, thank you," Mike repeated ... thought about it, and added, "No water for me, please." While it was true that the water of life was not the essence in the water ceremony, nevertheless he did not wish to drink water here.

"That's the spirits" Boone said heartily. "That's the proper spirit with spirits! No water. Get it? It's a joke." Re dug Jubal in the ribs. "Now what'll it be for the little lady? Cola? Milk for your rosy cheeks? Or do you want a real Happy Day drink with the big folks?"

"Senator," Jill said carefully, "Would your hospitality extend to a martini?"

"Would it! Best martinis in the whole world right here-we don't use any vermouth at all. We bless 'em instead. Double martini for the little lady. Bless you, son, and make it fast." He turned to the others. "We've just about tIme for a quick one, then pay our respects to Archangel Foster and on into the Sanctuary in time to hear the Supreme Bishop."

The drinks arrived and the jackpots' payoff. They drank with Boone's blessing, then he wrangled in a friendly fashion with Jubal over the three hundred dollars just delivered, insisting that all three prizes belonged to Jubal even though Boone had inserted the slugs on the second and third. Jubal settled it by scooping up all the money and depositing it in a loveoffering bowl near them on the bar.

Boone nodded approvingly. "That's a mark of grace, Doc. We'll save you yet. Another round, folks?"

Jill hoped that someone would say yes. The gin was watered, she decided, and the flavor was poor; nevertheless it was starting a small flame of tolerance in her middle. But nobody spoke up, so she trailed along as Boone led them away, up a flight of stairs, past a sign reading: POSITIVELY NO SEEKERS NOR SINNERS ALLOWED ON THIS LEVEL-THIS MEANS YOU!

Beyond the sign was a heavy grilled gate. Boone said to it: "Bishop Boone and three pilgrims, guests of the Supreme Bishop."

The gate swung open. He led them around a curved passage and into a room.

It was a moderately large room, luxuriously appointed in a style that reminded Jill of undertakers' parlors, but it was filled with cheerful music. The basic theme seemed to be "Jingle Bells" but a Congo beat had been added and the arrangement so embroidered that its ancestry was not certain. Jill found that she liked it and that it made her want to dance.

The far wall of the room was clear glass and appeared to be not even that. Boone said briskly, "Here we are, folks-in the Presence." He knelt quickly, facing the empty wall. "You don't have to kneel, you'rt pilgrims -but do so if it makes you feel better. Most pilgrims do. And there he is just as he was when he was called up to Heaven."

Boone gestured with his cigar. "Don't he look natural? Preserved by a miracle, his flesh incorruptible. That's the very chair he used to sit in when he wrote his Messages . . . and that's just the pose he was in when he went to Heaven. He never moved and he's never been moved-we just built the Tabernacle right around him . . . removing the old church, naturally, and preserving its sacred stones." Opposite them about twenty feet away, facing them, seated in a big arm chair remarkably like a throne, was an old man.

Re looked as if he were alive - . and he reminded Jill strongly of an old goat that had been on the farm where she had spent her childhood summers-Yes, even to the out-thrust lower lip, the cut of the whiskers, and the fierce, brooding eyes. Jill felt her skin prickle; the Archangel Foster made her uneasy. Mike said to her in Martian, "My brother, this is an Old One?"

"I don't know, Mike. They say he is."

He answered in Martian, "I do not grok an Old One here."

"I don't know, I tell you."

"I grok wrongness."

"Mike! Remember!"

"Yes, Jill."

Boone said, "What was he saying, little lady? What was your question, Mr. Smith?"

Jill said quickly, "It wasn't anything. Senator, can I get out of here? I feel faint." She glanced back at the corpse. There were billowing clouds above it and one shaft of light always cut through and sought out the face. The light changed enough so that the face seemed to change and the eyes seemed bright and alive.

Boone said soothingly, "It sometimes has that effect, the first time. But you ought to look at him from the seekers' gallery below us-looking up at him and with entirely different music. Entirely. Heavy music, with subsonics in it, I believe it is-reminds 'em of their sins. Now this room is a Happy Thoughts meditation chamber for high officials of the Church-I often come here and sit and smoke a cigar for an hour if I'm feeling the least bit low."

"Please, Senator!"

"Oh, certainly. You just wait outside, m'dear. Mr. Smith, you stay as long as you like."

Jubal said, "Senator, hadn't we best get on into the services?"

They all left. Jill was shaking and squeezed Mike's hand-she had been scared silly that Mike might do something to that grisly exhibit-and get them all lynched, or worse.

Two guards, dressed in uniforms much like the Cherubim but more ornate, thrust crossed spears in their path when they reached the portal of the Sanctuary. Boone said reprovingly, "Come, come! These pilgrims are the Supreme Bishop's personal guests. Where are their badges?"

The confusion was straightened out, the badges produced~ and with them their door prize numbers. A respectful usher said, "This way, Bishop," and led them up wide stairs and to a center box directly facing the stage.

Boone stood back for them to go in. "You first, little lady." There followed a tussle of wills; Boone wanted to sit next to Mike in order to answer his questions. }larshaW won and Mike sat between Jill and Jiib~~l, with Boone on the aisle.

The box was roomy and luxurious, with very comfortable, self-adjusting seats, ash trays for each seat and drop tables for refreshments folded against the rail in front of them. Their balcony position placed them about fifteen feet over the heads of the congregation and not more than a hundred feet from the altar. In front of it a young priest was warming up the crowd, shuffling to the music and shoving his heavily muscled arms back and forth, fists clenched, like pistons. His strong bass voice joined the choir from time to time, then he would lift it in ex.hortatiofl:

"Up off your behinds! What are you waiting for? Gonna let the Devil catch you napping'?"

The aisles were very wide and a snake dance was moving down the right aisle, across in front of the altar, and weaving back up the center aisle, feet stomping in time with the priest's piston-like jabs and with the syncopated chant of the choir. Clumps clump, moan! . . . clump, clump, moan! Jill felt the beat of it and realized sheepishly that it would be fun to get into that snake dance-as more and more people were doing under the brawny young priest's taunts.

"That boy's a corner," Boone said approvinglY. "I've team.pteached with him a few times and I can testify that he turns the crowd over to you already sizzlin'. The Reverend 'Jug' Jackerman-used to play left tackle for the Rams. You've seen him play."

"I'm afraid not," Jubal admitted. "I don't follow football."

"Really? You don't know what you're missing. Why, during the season most of the faithful stay after services, eat their lunches in their pews, and watch the game. The whole back wall behind the altar slides away and you're looking right into the biggest stereo tank ever built~ Puts the plays right in your lap. Better reception than you get at home-and it's more of a thrill to watch with a crowd around you." He stopped and whistled. "Hey, Cherub! Over here!"

An usher hurried over. "Yes, Bishop?"

"Son, you ran away so fast when you seated us, I didn't have time to put in my order."

"I'm sorry, Bishop."

"Being sorry won't get you into Heaven. Get happy, son. Get that old spring into your step and stay on your toes. Same thing all around, folks? Fine!" He gave the order and added, "and bring me back a handful of my cigars -- just ask the chief barkeep."

"Right away, Bishop."

"Bless you, son. Hold it-" The head of the snake dance was just about to pass under them; Boone leaned over the rail, made a megaphone of his hands and cut through the high noise level. "Dawn! Hey, Dawn!" A woman looked up; he caught her eye, motioned her to come up. She smiled. "Add a whiskey sour to that order. Fly."

The woman showed up quickly, as did the drinks. Boone swung a seat out of the box's back row and put it cornerwise in front of him so that she could visit more easily. "Folks, meet Miss Dawn Ardent. M'dear, that's Miss Boardnlan, the little lady down in the corner-and this is the famous Doctor Jubal Harshaw here by me-"

"Really? Doctor, I think your stories are simply divine~"

"Thank you."

"Oh, I really do. I put one of your tapes on my player and let it lull me to sleep almost every night."

"Higher praise a writer cannot expect," Jubal said with a straight face.

"That's enough, Dawn," put in Boone. "The young man sitting between them is . . . Mr. Valentine Smith the Man from Mars."

He eyes came open wider as her mouth opened. "Oh, my goodness!"

Boone roared. "Bless you, child! I guess I really snuck up on you that time."

She said, "Are you really the Man from Mars?"

"Yes, Miss Dawn Ardent."

"Just call me 'Dawn.' Oh, goodness!"

Boone patted her hand. "Don't you know it's a sin to doubt the word of a Bishop? M'dear, how would you like to help lead the Man from Mars ta the light?"

"Oh, I'd love it!"

(You certainly would, you sleek bitch! Jill said to herself~ She had been growing increasingly angry ever since Miss Ardent had joined them. The dress the woman was wearing was long sleeved, high necked, and opaque-and covered nothing. It was a knit fabric almost exactly the shade of her tanned skin and Jill was certain that skin was all there was under it-other than Miss Ardent, which was really quite a lot, in all departments. The dress was ostentatiously modest compared with the extreme styles worn by many of the female half of the congregation, some of whom, in the snake dance, seemed about to jounce out of their clothes.

Jill thought that, despite being dressed, Miss Ardent looked as if she had just wiggled out of bed and was anxious to crawl back in. With Mike. Quit squirming your carcass at him, you cheap hussy!

Boone said, "I'll speak to the Supreme Bishop about it, m'dear. Now you'd better get back downstairs and lead that parade. Jug needs your help."

She stood up obediently. "Yes, Bishop. Pleased to meet you, Doctor, and Miss Broad. I hope I'll see you again, Mr. Smith. I'll pray for you." She undulated away.

"A fine girl, that," Boone said happily. "Ever catch her act, Doctor?"

"I think not. What does she do?"

Boone seemed unable to believe his ears. "You don't know?"

"Didn't you hear her name? That's Dawn Ardent-she's simply the highest paid peeler in all Baja California, that's who she is. Men have committed suicide over her-very sad. Works under an irised spotlight and by the time she's down to her shoes, the light is just on her face and you really can't see anything else. Very effective. Highly spiritual. Would you believe it, looking at that sweet face now, that she used to be a most immoral woman?"

"I can't believe it."

"Well, she was. Ask her. She'll tell you. Better yet, come to a cleansing for seekers-I'll let you know when she's going to be on. When she confesses, it gives other women courage to stand up and tell about their sins. She doesn't hold anything back-and, of course, it does her good, too, to know that she's helping other people. Very dedicated woman now-flies her own car up here every Saturday night right after her last show, so as to be here in time to teach Sunday School. She teaches the Young Men's Happiness Class and attendance has more than tripled since she took over."

"I can believe that," Jubal agreed. "How old are these lucky 'Young Men'?"

Boone looked at him and laughed. "You're not fooling me, you old devil-somebody told you the motto of Dawn's class: 'Never too old to be young.'"

"No, truly."

"In any case you can't attend her class until you've seen the light and gone through cleansing and been accepted. Sorry. This is the One True Church, Pilgrim, nothing at all like those traps of Satan, those foul pits of iniquity that call themselves 'churches' in order to lead the unwary into idolatry and other abominations. You can't just walk in here because you want to kill a couple hours out of the rain-you gotta be saved first. In fact-

Oh, oh, camera warning." Red lights were blinking in each corner of the great hail. "And Jug's got 'em done to a turn. Now you'll see some action."

The snake dance picked up more volunteers and the few left seated were clapping the cadence and bouncing up and down. Pairs of ushers were hurrying to pick up the fallen, some of whom were quiet but others, mostly women, were writhing and foaming at the mouth. These were dumped hastily in front of the altar and left to flop like freshly caught fish. Boone pointed his cigar at a gaunt redhead, a woman apparently about forty whose dress was badly torn by her exertions. "See that woman? It has been at least a year since she has gone all through a service without being possessed by the Spirit. Sometimes Archangel Foster uses her mouth to talk to us . . . and when that happens it takes four husky acolytes to hold her down. She could go to heaven any time, she's ready. But she's needed here. Anybody need a refill? Bar service is likely to be a little slow once the cameras are switched on and things get lively."

Almost absently Mike let his glass be replenished. He shared none of Jill's disgust with the scene. He had been deeply troubled when he had discovered that the "Old One" had been no Old One at all but mere spoiled food, with no Old One anywhere near. But he had tabled that matter and was drinking deep of the events around him.

The frenzy going on below him was so Martian in its flavor that he felt both homesick and warmly at home. No detail of the scene was Martian, all was wildly different, yet he grokked correctly that this was a growing-closer as real as water ceremony, and in numbers and intensity that he had never met before outside his own nest. He wished forlornly that someone would invite him to join that jumping up and down. His feet tingled with an urge to merge himself with them.

He spotted Miss Dawn Ardent again in its van and tried to catch her eye-perhaps she would invite him. He did not have to recognize her-by size and proportions even though he had noted when he had first seen her that she was exactly as tall as his brother Jill with very nearly the same shapings and masses throughout. But Miss Dawn Ardent had her own face, with her pains and sorrows and growings graved on it under her warm smile. He wondered if Miss Dawn Ardent might some day be willing to share water with him and grow closer. Senator Bishop Boone had made him feel wary and he was glad that Jubal had not permitted them to sit side by side. But Mike was sony when Miss Dawn Ardent had been sent away.

Miss Dawn Ardent did not feel him looking at her. The snake dance carried her away.

The man on the platform had both his arms raised; the great cave became quieter. Suddenly he brought them down. "Who's happy?"

"WE'RE HAPPY!"

"Why?"

"GOD... LOVES US!"

"How d'you know?"

"FOSTER TOLD US!"

He dropped to his knees, raised one clenched fist. "Let's hear that Lion ROAR!"

The congregation roared and shrieked and screamed while he controlled the din using his fist as a baton, raising the volume, lowering it, squeezing it down to a subvocal growl, then suddenly driving it to crescendo that shook the balcony. Mike felt it beat on him and he wallowed in it, with ecstasy so painful that he feared that he would be forced

to withdraw. But Jill had told him that he must not ever do so again, except in the privacy of his own room; he controlled it and let the waves wash over him.

The man stood up. "Our first hymn," he said briskly, "is sponsored by Manna Bakeries, makers of Angel Bread, the loaf of love with our Supreme Bishop's smiling face on every wrapper and containing a valuable premium coupon redeemable at your nearest neighborhood Church of the New Revelation, Brothers and Sisters, tomorrow Manna Bakeries with branches throughout the land start a giant, price-slashing sale of pre-equinox goodies. Send your child to school tomorrow with a bulging box of Archangel Foster cookies, each one blessed and wrapped in an appropriate text-and pray that each goodie he gives away may lead a child of sinners nearer to the light.

"And now let's really live it up with the holy words of that old favorite: 'Forward, Foster's Children!' All together-"

"Forward, Foster's Chil-dren! Smash apart your foes

Faith our Shield and Ar-mar! Strike them down by rows-!"

"Second verse!"

"Make no peace with sin-nen! God is on our side!"

Mike was so joyed by it all that he did not stop then to translate and weigh and try to grok the words. He grokked that the words were not of essence; it was a growing-closer. The snake dance started moving again, the marchers chanting the potent sounds along with the choir and those too feeble to march.

After the hymn they caught their breaths while there were announcements, Heavenly messages, another commercial, and the awarding of door prizes. Then a second hymn, "Happy Faces Uplifted," was sponsored by Dattelbaum's Department Stores where the Saved Shop in Safety since no merchandise is offered which competes with a sponsored brand-a children's Happy Room in each branch supervised by a Saved sister. The young priest moved out to the very front of the platform and cupped his ear, listening- "We ... want . . . .Digby!"

"Who?"

"We-Want--DIG-BY!"

"Louder! Make him hear you!"

"WE-WANT-DIG-BY!" Clap, clap, stomp, stomp.

"WE- WANT-DIG-BY!" Clap, clap, stomp, stomp- It went on and on, getting louder as the building rocked with it. Jubal leaned to Boone and said, "Much of that and you'll do what Samson did." "Never fear," Boone told him, around his cigar. "Reinforced, fireproof, and sustained by faith. Besides, it's built to shake; it was designed that way. Helps."

The lights went down, curtains behind the altar parted, and a blinding radiance from no visible source picked out the Supreme Bishop, waving his clasped hands over his head and smiling at them.

They answered with the lion's roar and he threw them kisses. On his way to the pulpit he stopped, half raised one of the possessed women still writhing slowly near the altar, kissed her on the forehead, lowered her gently, started on-stopped again and knelt by the bony redhead. The Supreme Bishop reached behind him and a portable microphone was instantly placed in his hand.

He put his other arm around the woman's shoulders, placed the pickup near her lips.

Mike could not understand her words. Whatever they were, he was reasonably sure that they were not English.

But the Supreme Bishop was translating, interjecting his words quickly at each pause in the foaming spate. "Archangel Foster is with us today- "He is especially pleased with you. Kiss the sister on your right- "Archangel Foster loves you all. Kiss the sister on your left-

"He has a special message for one of us here today."

The woman spoke again; Digby seemed to hesitate. "What was that? Louder, I pray you." She muttered and screamed at length.

Digby looked up and smiled. "His message is for a pilgrim from another planet- Valentine Michael Smith the Man from Mars! Where are you, Valentine Michael! Stand up, stand up!"

Jill tried to stop him but Jubal growled, "Easier to do it than to fight it. Let him stand up, Jill. Wave, Mike. Now you can sit down." Mike did so, amazed to find that they were now chanting: "Man from Mars! Man from Mars!"

The sermon that followed seemed to be directed at him, too, but try as he would, he could not understand it. The words were English, or most of them were, but they seemed to be put together wrongly and there was so much noise, so much clapping, and so many shouts of "Hallelujah!" and "Happy Day!" that he grew quite confused. He was glad when it was over.

As soon as the sermon was finished, Digby turned the service back to the young priest and left; Boone stood up. "Come on, folks. We pull a sneak now-ahead of the crowd."

Mike followed along, Jill's hand in his. Presently they were going through an elaborately arched tunnel with the noise of the crowd left behind them. Jubal said, "Does this way lead to the parking lot? I told my driver to wait."

"Eh?" Boone answered. "It does if you go straight ahead. But we're going to see the Supreme Bishop first."

"What?" Jubal replied. "No, I don't think we can. It's time for us to get on home."

Boone stared. "Doctor, you don't mean that. The Supreme Bishop is waiting for us right now. You can't just walk out on him-you must pay your respects. You're his guests."

Jubal hesitated, then gave in. "Well- There won't be a lot of other people? This boy has had enough excitement for one day."

"Just the Supreme Bishop. He wants to see you privately." Boone ushered them into a small elevator concealed in the decorations of the tunnel; moments later they were waiting in a parlor of Digby's private apartments.

A door opened, Digby hurried in. He had removed his vestments and was dressed in flowing robes. He smiled at them. "Sorry to keep you waiting, folks-I just have to have a shower as soon as I come off. You've no notion how it makes you sweat to punch Satan and keep on slugging. So this is the Man from Mars? God bless you, son. Welcome to the Lord's House. Archangel Foster wants you to feel at home here. He's watching over you."

Mike did not answer. Jubal was surprised to see how short the Supreme Bishop was. Lifts in his shoes when he was on stage? Or the way the lighting was arranged? Aside from the goatee he wore in evident imitation of the departed Foster, the man reminded him of a used-car salesman-the same ready smile and warm sincere manner. But he reminded Jubal of some one else, too . . . somebody- Got it! "Professor" Simon

Magus, Becky Vesey's long-dead husband. Jubal relaxed a little and felt friendlier toward the clergyman. Simon had been as likable a scoundrel as he had ever known- Digby had turned his charm on Jill, "Don't kneel, daughter; we're just friends in private here." He spoke a few words to her, startling Jill with a surprising knowledge of her background and adding earnestly, "I have deep respect for your calling, daughter. In the blessed words of Archangel Foster, God commands us first to minister to the body in order that the soul may seek the light untroubled by ills of the flesh. I know that you are not yet one of us . . . but your service is blessed by the Lord. We are fellow travelers on the road to Heaven."

He turned to Jubal. "You, too, Doctor. Archangel Foster has told us that the Lord commands us to be happy - . - and many is the time I have put down my crook, weary unto death with the cares and woes of my flock, and enjoyed an innocent, happy hour over one of your stories - and have stood up refreshed, ready to fight again."

"Uh, thank you, Bishop."

"I mean it deeply. I've had your record searched in Heaven-now, now, never mind; I know that you are an unbeliever but let me speak. Even Satan has a purpose in God's Great Plan. It is not yet time for you to believe. Out of your sorrow and heartache and pain you spin happiness for other people. This is all credited on your page of the Great Ledger. Now please! I did not bring you here to argue technology. We never argue with anyone, we wait until they see the light and then we welcome them. But today we shall just enjoy a happy hour together."

Digby then proceeded to act as if he meant it. Jubal was forced to admit that the glib fraud was a charming host, and his coffee and liquor and food were all excellent. Jubal noticed that Mike seemed decidedly jumpy, especially when Digby deftly cut him out of the herd and spoke with him alone-but, confound it, the boy was simply going to have to get used to meeting people and talking to them on his own, without Jubal or Jill or somebody to feed him his lines.

Boone was showing Jill some relics of Foster in a glass case on the other side of the room; Jubal covertly watched her evident reluctance with mild amusement while he spread pate de fois gras on toast. He heard a door click and looked around; Digby and Mike were missing. "Where did they go, Senator?"

"Eh? What was that, Doctor?"

"Bishop Digby and Mr. Smith. Where are they?"

Boone looked around, seemed to notice the closed door. "Oh, they've just stepped in there for a moment. That's a little retiring room used for private audiences. You were in it, weren't you? When the Supreme Bishop was showing you around."

"Um, yes." It was a small room with nothing in it but a chair on a dais-a "throne," Jubal corrected himself with a private grin-and a kneeler with an ann rest. Jubal wondered which one would use the throne and which one would be left with the kneeler-if this tinsel bishop tried to argue religion with Mike he was in for some shocks. "I hope they don't stay in there too long. We really do have to be getting back."

"I doubt if they'll stay long. Probably Mr. Smith wanted a word in private. People often do - . - and the Supreme Bishop is very generous that way. Look, I'll call the parking lot and have your cab waiting right at the end of that passageway where we took the elevator-that's the Supreme Bishop's private entrance. Save you a good ten minutes."

"That's very kind of you."

"So if Mr. Smith has something on his soul he wants to confess, we won't have to hurry him. I'll step outside and phone." Boone left.

Jill came over and said worriedly, "Jubal, I don't like this. I think we were deliberately maneuvered so that Digby could get Mike alone and work on him."

"I'm sure of it."

"Well? They haven't any business doing that. I'm going to bust right in on them and tell Mike it's time to leave."

"Suit yourself," Jubal answered, "but I think you're acting like a broody hen. This isn't like having the S.S. on our tails, Jill; this swindle is much smoother. There won't be any strong-arm stuff." He smiled. "It's my opinion that if Digby tries to convert Mike, they'll wind up with Mike converting him. Mike's ideas are pretty hard to shake."

"I still don't like it."

"Relax. Help yourself to the free chow."

"I'm not hungry."

"Well, I am .. and if I ever tuned down a free feed, they'd toss me out of the Authors' Guild." He piled paper-thin Virginia ham on buttered bread, added to it other items, none of them syntho, until he had an unsteady ziggurat, munched it and licked mayonnaise from his fingers.

Ten minutes later Boone had not returned. Jill said sharply, "Jubal, I'm not going to remain polite any longer. I'm going to get Mike out of there."

"Go right ahead."

She strode to the door. "Jubal, it's locked."

"Thought it might be."

"Well? What do we do? Break it down?"

"Only as a last resort." Jubal went to the inner door, looked it over carefully. "Mmm, with a battering ram and twenty stout men I might try it. But I wouldn't count on it. Jill, that door would do credit to a bank vault-it's just been prettied up to match the room. I've got one much like it for the fireproof off my study."

"What do We do?"

"Beat on it, if you want to. You'll just bruise your hands. I'm going to see what's keeping friend Boone-"

But when Jubal looked out into the hallway he saw Boone just returning. "Sorry," Boone said. "Had to have the Cherubim hunt up your driver. He was in the Happiness Room, having a bite of lunch. But your cab is waiting for you, just where I said."

"Senator," Jubal said, "we've got to leave now. Will you be so kind as to tell Bishop Digby?"

Boone looked perturbed. "I could phone him, if you insist. But I hesitate to do so-and I simply cannot walk in on a private audience."

"Then phone him. We do insist."

But Boone was saved the embarrassment as, just then, the inner door opened and Mike walked out. Jill took one look at his face and shrilled, "Mike! Are you all right?"

"Yes, Jill."

"I'll tell the Supreme Bishop you're leaving," said Boone and went past Mike into the smaller room. He reappeared at once. "He's left," he announced. "There's a back way into his study." Boone smiled. "Like cats and cooks, the Supreme Bishop goes without

saying. That's a joke. He says that 'good-by's' add nothing to happiness in this world, so he never says good-by. Don't be offended."

"We aren't. But we'll say good-by now-and thank you for a most interesting experience. No, don't bother to come down; I'm sure we can find our way out."

XXIV

ONCE THEY WERE IN THE AIR Jubal said, "Well, Mike, what did you think of it?"

Mike frowned. "I do not grok."

"You aren't alone, son. What did the Bishop have to say?"

Mike hesitated a long time, finally said, "My brother Jubal, I need to ponder until grokking is."

"Ponder right ahead, son. Take a nap. That's what I'm going to do."

Jill said suddenly, "Jubal? How do they get away with it?"

"Get away with what?"

"Everything. That's not a church-it's a madhouse."

It was Jubal's turn to ponder before answering. "No, Jill, you're mistaken. It is a church - . . and the logical eclecticism of our times."

"Huh?"

"The New Revelation and all doctrines and practices under it are all old stuff, very old. All you can say about it is that neither Foster nor Digby ever had an original thought in his life. But they knew what would sell, in this day and age. So they pieced together a hundred timeworn tricks, gave them a new paint job, and they were in business. A booming business, too. The only thing that scares me is that I might live to see it sell too well- until it was compulsory for everybody."

"Oh, no!"

"Oh, yes. Hitler started with less and all he had to peddle was hate. Hate always sells well, but for repeat trade and the long pull happiness is sounder merchandise. Believe me, I know; I'm in the same grift myself. As Digby reminded me." Jubal grimaced. "I should have punched him, Instead, he made me like it. That's why I'm afraid of him. He's good at it, he's clever. He knows what people want. Happiness. The world has suffered a long, bleak century of guilt and fear-now Digby tells them that they have nothing to fear, in this life or hereafter, and that God commands them to love and be happy. Day in, day out, he keeps pushing it: Don't be afraid, be happy"

"Well, that part's all right," Jill admitted, "and I concede that he works hard at it. But-"

"Piffle! He plays hard."

"No, he gave me the impression that he really is devoted to his work, that he had sacrificed everything else to-"

"'Piffle!' I said. For Digby it's play. Jill, of all the nonsense that twists the world, the concept of 'altruism' is the worst. People do what they want to do, every time. If it sometimes pains them to make a choice-if the choice turns out to look like a 'noble sacrifice'-you can be sure that it is in no wise nobler than the discomfort caused by greediness . . . the unpleasant necessity of having to decide between two things both of

which you would like to do when you can't do both. The ordinary bloke suffers that discomfort every day, every time he makes a choice between spending a buck on beer or tucking it away for his kids, between getting up when he's tired or spending the day in his warm bed and losing his job. No matter which he does he always chooses what seems to hurt least or pleasures most. The average chump spends his life harried by these small decisions. But the utter scoundrel and the perfect saint merely make the same choices on a larger scale. They still pick what pleases them. As Digby has done. Saint or scoundrel, he's not one of the harried little chumps."

"Which do you think he is, Jubal?"

"You mean there's a difference?"

"Oh, Jubal, your cynicism is just a pose and you know it! Of course there's a difference."

"Mmm, yes, you're right, there is. I hope he's just a scoundrel-because a saint can stir up ten times as much mischief as a scoundrel. Strike that from the record; you would just tag it as 'cynicism'-as if tagging it proved it wrong. Jill, what troubled you about those church services?"

"Well ... everything. You can't tell me that that is worship."

"Meaning they didn't do things that way in the Little Brown Church in the Vale you attended as a kid? Brace yourself, Jill-they don't do it your way in St. Peter's either. Nor in Mecca."

"Yes, but- Well, none of them do it that way! Snake dances, slot machines . . - even a bar right in church! That's not reverence, it's not even dignified! Just disgusting."

"I don't suppose that temple prostitution was very dignified, either."

"Huh?"

"I rather imagine that the two-backed beast is just as sweaty and comical when the act is performed in the service of a god as it is under any other circumstances. As for those snake dances, have you ever seen a Shaker service? No, of course not and neither have I; any church that is agin sexual intercourse (as they were) doesn't last long. But dancing to the glory of God has a long and respected history. It doesn't have to be good dancing-according to eye-witness reports the Shakers could never have made the Bolshoi Ballet-it merely has to be enthusiastic. Do you consider the Rain Dances of our Southwest Indians irreverent?"

"No. But that's different."

"Everything always is-and the more it changes, the more it is the same. Now about those slot machines- Ever see a Bingo game in church?"

"Well ... yes. Our parish used to hold them when we were trying to raise the mortgage. But we held them on Friday nights; we certainly didn't do such things during church services."

"So? Minds me of a married woman who was very proud of her virtue. She slept with other men only when her husband was away."

"Why, Jubal, the two cases aren't even slightly alike!"

"Probably not. Analogy is even slipperier than logic. But, 'little lady'-"

"Smile when you call me that!"

"'It's a joke.' Why didn't you spit in his face? He had to stay on his good behavior no matter what we did; Digby wanted him to. But, Jill, if a thing is sinful on Sunday, it is sinful on Friday-at least it groks that way to an outsider, myself . . . or perhaps to a man

from Mars. The only difference I can see is that the Fosterites give away, absolutely free, a scriptural text even if you lose. Could your Bingo games make the same claim?"

"Fake scripture, you mean. A text from the New Revelation. Boss, have you read the thing?"

"I've read it."

"Then you know. It's just dressed up in Biblical language. Part of it is just icky-sweet with no substance, like a saccharine tablet, more of it is sheer nonsense . . . and some of it is just hateful. None of it makes sense, it isn't even good morals."

Jubal was silent so long that Jill thought he had gone to sleep. At last he said, "Jill, are you familiar with Hindu sacred writings?"

"Mmm, I'm afraid not."

"The Koran? Or any other major scripture? I could illustrate my point from the Bible but I would not wish to hurt your feelings."

"Uh, I'm afraid I'm not much of a scholar, Jubal. Go ahead, you won't hurt my feelings."

"Well, I'll stick to the Old Testament, picking it to pieces usually doesn't upset people quite so much. You know the story of Sodom and Gomorrah? And how Lot was saved from these wicked cities when Yahweh smote 'em with a couple of heavenly A-bombs?"

"Oh, yes, of course. His wife was turned into a pillar of salt."

"Caught by the fallout, perhaps. She tarried and looked back. Always seemed to me to be too stiff a punishment for the peccadillo of female curiosity. But we were speaking of Lot. Saint Peter describes him as a just, Godly, and righteous man, vexed by the filthy conversation of the wicked. I think we must stipulate Saint Peter to be an authority on virtue, since to him was given the keys to the Kingdom of Heaven. But if you search the only records concerning Lot, in the Old Testament, it becomes hard to determine exactly what Lot did or did not do that established him as such a paragon. He divided up a cattle range at his brother's suggestion. He got captured in a battle. When he was tipped off, he lammed out of town in time to save his skin. He fed and sheltered two strangers overnight but his conduct shows that he knew them to be V.I.P.s whether or not he knew they were angels-and by the Koran and by my own lights, his hospitality would have counted for more if he had thought they were just a couple of unworthy poor in need of a pad and a handout. Aside from these insignificant items and Saint Peter's character reference, there is just one thing that Lot did mentioned anywhere in the Bible on which we can judge his virtue-virtue so great, mind you, that heavenly intercession saved his life. See chapter nineteen of Genesis, verse eight."

"And what does it say?"

"Look it up when we get home. I don't expect you to believe me."

"Jubal! You're the most infuriating man I've ever met."

"And you're a very pretty girl and a fair cook, so I don't mind your ignorance. All right, I'll tell you-then you look it up anyhow. Some of Lot's neighbors came and beat on his door and wanted to meet these two blokes from out of town. Lot didn't fight with them; he offered 'em a deal instead. He had two young daughters, virgins-at least, such was his opinion-and he told this crowd of men that he would give them these two little girls and they could use them any way they liked-a gang shagging, a midnight revue, he

pleaded with them to do any damn thing they pleased to his daughters . . - only please go 'way and quit beating on his door."

"Jubal ... does it really say that?"

"Look it up yourself. I've modernized the language but the meaning is as unmistakable as a whore's wink. Lot offered to let a gang of men- 'young and old,' the Bible say&-abuse two young virgins under his protection if only they wouldn't break down his door. Say!" Jubal leaned forward and beamed. "Maybe I should have tried that when the S.S. was breaking my door down! Maybe it would have got me into heaven-and Saint Peter knows my chances aren't too good otherwise." Then he frowned and looked worried. "No, it wouldn't have worked. The recipe plainly calls for 'virgins intactae'-and I wouldn't have known which two of you gals to offer those troopers."

"Hmmph/ You won't find out from me."

"Possibly I couldn't find out from any of you. Even Lot might have been mistaken. But that's what he promised 'em-his virgin daughters, young and tender and scared-urged this street gang to rape them as much as they wished in any way they liked - . . if only they would leave him in peace?" Jubal snorted in disgust. "And the Bible cites this sort of scum as being a righteous man."

Jill said slowly, "I don't think that's quite the way we were taught it in Sunday School."

"Damn it, look it up! They probably gave you a Bowdlerized version. That's not the only shock in store for anybody who actually reads the Bible. Consider Elisha. It says here that Elisha was so all-fired holy that merely touching his bones restored a dead man to life. But he was a baldheaded old coot, like myself. So one day some children marie fun of his baldness, just as you girls do. So God personally interceded and sent two bears to tear forty-two small children into bloody bits. That's what it says -second chapter of Second Kings."

"Boss, I never make fun of your bald head."

"Who was it sent my name to those hair-restorer quacks? Dorcas, maybe? Whoever it was, God knows-and she had better keep a sharp eye out for bears. I might turn pious in my dotage and start enjoying divine protection. But I shan't give you any more samples. The Bible is loaded with such stuff; read it and find out. Crimes that would turn your stomach are asserted to be either divinely ordered or divinely condoned . . . along with, I must add, a lot of hard common sense and some pretty workable rules for social behavior. I am not running down the Bible; it stacks up pretty well as sacred writings go. It isn't a patch on the sadistic, pornographic trash that goes by the name of sacred writings among the Hindus. Or a dozen other religions. But I'm not singling out any of them for condemnation, either; it is entirely conceivable that some one of these mutually contradictory mythologies is the literal word of God . . . that God is in truth the sort of bloodthirsty paranoid Who would rend to bits forty-two children for the crime of sassing one of his priests. Don't ask me about the Front Office's policies; I just work here. My point is that Foster's New Revelation that you're so contemptuous of is pure sweetness-andlight as scripture goes. Bishop Digby's Patron is a pretty good Joe; He wants people to be happy-happy here on Earth plus guaranteed eternal bliss in Heaven. He doesn't expect you to chastise the flesh here and now in order to reap rewards after you're dead. Oh no! this is the modern gianteconomy package. If you like to drink and gamble and dance and wench- and most people do-come to church and do it under holy

auspices. Do it with your conscience free of any trace of guilt. Really have fun at it. Live it up! Get happy!"

Jubal failed to look happy himself. He went on, "Of course there's a slight charge; Digby's God expects to be acknowledged as such-but that has been a foible of gods always. Anyone who is stupid enough to refuse to get happy on His terms is a sinner . . . and a sinner deserves anything that happens to him. But this is one rule common to all gods and goddesses throughout history; don't blame Foster and Digby, they didn't invent it. Their brand of snake oil is utterly orthodox in all respects."

"Boss, you sound as if you were halfway converted."

"Not me! I don't enjoy snake dances, I despise crowds, and I do not propose to let my social and mental inferiors tell me where I have to go on Sundays-and I wouldn't enjoy Heaven if that crowd is going to be there. I simply object to your criticizing them for the wrong things. As literature, the New Revelation stacks up about average-it should; it was composed by plagiarizing other scriptures. As for logic and internal consistency, these mundane rules do not apply to sacred writings and never have-but even on these grounds the New Revelation must be rated superior; it hardly ever bites its own tail. Try reconciling the Old Testament with the New Testament sometime, or Buddhist doctrine with Buddhist apocrypha. As morals, Fosterism is merely the Freudian ethic sugar-coated for people who can't take their psychology straight, although I doubt if the old lecher who wrote it-pardon me, 'was inspired to write it'-was aware of this. He was no scholar. But he was in tune with his times, he tapped the Zeitgeist. Fear and guilt and a loss of faith- How could he miss? Now pipe down, I'm going to nap."

"Who's been talking?"

"'The woman tempted me.'" Jubal closed his eyes.

On reaching home they found that Caxton and Mahmoud had flown in together for the day. Ben had been disappointed to find Jill not at home on his arrival but he had managed to bear up without tears through the company of Anne, Miriam, and Dorcas. Mahinoud always visited for the avowed purpose of seeing his protégé, Mike, and Dr. Harshaw; however, he too had shown fortitude at having only Jubal's food, liquor, garden- and odalisques-to entertain him during his host's absence. He was lying face down with Miriam rubbing his back while Dorcas rubbed his head.

Jubal looked at him. "Don't get up."

"I can't, she's sitting on me. A little higher up, Miriam. Hi, Mike."

"Hi, my brother Stinky Dr. Mahmoud." Mike then gravely greeted Ben, and asked to be excused.

"Run along, son," Jubal told him.

Anne said, "Wait a minute, Mike. Have you had lunch?"

He said solemnly, "Anne, I am not hungry. Thank you," turned and went into the house.

Mahmoud twisted, almost unseating Miriam. "Jubal? What's troubling our son?"

"Yeah," said Ben. "He looks seasick."

"Let him alone and he'll get well. An overdose of religion. Digby has been working on him." Jubal sketched the morning's events.

Mahmoud frowned. "But was it necessary to leave him alone with Digby? This seems to me -- pardon me, my brotber! -- unwise."

"He's not hurt. Stinky, he's got to learn to take such things in his stride. You've preached your brand of theology to him-I knoW you have; he's told me about it. Can you name me one good reason 'why Digby shouldn't have his innings? Answer me ~s a scientist, not as a Muslim."

"I am unable to answer anything other than as a Muslim," Dr. Mahmoud said quietly.

"Sorry. I recognize the correctnesS of your answer, even though I don't agree with it."

"But, Jubal, I used the word 'Muslim' in its exact, technical sense, not as a sectarian which Maryam incorrectlY terms 'Mohammedan.'"

"And which I'm going to go right on calling you until you learn to pronounce 'Miriam' correctly! Quit squirming. I'm not hurting you."

"Yes, Maryant. Ouch! Women should not be so muscular. Jubal, as a scientiSt, I find Michael the greatest prize of my career. As a Muslim, I find in him a willingness to submit to the will of God . . - and this makes me happy for his sake, although I readily admit that there are great semantic difficulties and as yet he does not seem to grok what the English word 'God' means." He shrugged. "Nor the Arabic word 'Allah' But as a man -and always a Slave of God-I love this young man, our foster son and water brother, and I would not have him come under bad influences. Quite aside from his creed, this Digby strikes me as a bad influence. What do you think?"

"Ok!" Ben applauded. "He's a slimy bastard-and the only reason I haven't been taking his racket apart in my column is that the Syndicate is afraid to print it. Stinky, keep talking that well and you'll have me studying Arabic and buying a rug."

"I hope so. But the rug is not necessary."

Jubal sighed. "I agree with both of you. I'd rather see Mike smoking marijuana than be converted by Digby. But I don't think there is the slightest chance of Mike's being taken in by that syncretiC hodgepodge Digby peddles...and he's got to learn to stand up to bad influences. I consider you a good influence-but I don't really think you stand much more chance than Digby has-the boy has an amazinglY strong mind of his own. Muhammad may have to make way for a new prophet."

"If God so wills it," Mahmoud answered calmly.

"That leaves no room for argument," Jubal agreed.

"We were discussing religion before you got home," Dorcas said softly "Boss, did you know that women have souls?"

"They do?"

"So Stinky says."

"Maryam," Mahmoud explained, "wanted to know why we 'Moharnmedans' thought only men had souls. So I cited the Writings."

"Miriam, I'm surprised at you. That's as vulgar a misconception as the notion that Jews sacrifice Christian babies in secret, obscene rites. The Koran is explicit in half a dozen places that entire families enter into Paradise, men and Women together. For example, see 'Ornaments of Gold' -verse seventy, isn't it, Stinky?"

"'Enter the Garden, ye and your wives, to be made glad.' That's as well as it can be put, in English," agreed Mahmoud.

"Well," said Miriam, "I had heard about the beautiful bouris that Mohammedan men have for playthingS when they go to heaven and that didn't seem to leave much room for wives."

"Houris aren't women," said Jubal. "They are separate creations, like djinni and angels. They don't need human souls, they are spirits to start with, eternal and unchanging and beautiful. There are male houris, too, or the male equivalent of houris. Houris don't have to earn their way into Paradise; they're on the staif. They serve endless delicious foods and pass around drinks that never give hangovers and entertain in other ways as requested. But the souls of human wives don't have to do any housework, any more than the men. Correct, Stinky?"

"Close enough, aside from your flippant choice of words. The lionris-" He stopped and sat up so suddenly that he dumped Miriam. "Say! It's just possible that you girls don't have souls!"

Miriam sat up and said bitterly, "Why, you ungrateful dog of an infidel! Take that back!" "Peace, Maryam. If you don't have a soul, then you're immortal anyhow and won't miss it. Jubal - . . is it possible for a man to die and not notice it?"

"Can't say. Never tried it."

"Could I have died on Mars and just dreamed that I came home? Look around you! A garden the Prophet himself would be pleased with. Four beautiful houris, passing around lovely food and delicious drinks at all hours. Even their male counterparts, if you want to be fussy. Is this Paradise?"

"I can guarantee that it isn't," Jubal assured him. "My taxes are due this week."

"Still, that doesn't affect me."

"And take these houris- Even if we stipulate for the sake of argument that they are of beauty adequate to meet the specifications-alter all, beauty is in the eye of the beholder-"

"They pass."

"And you'll pay for that, Boss," Miriam added.

"-there still remains," Jubal pointed out, "one more requisite attribute of houris."

"Mmmm-" said Mahmoud, "I don't think we need go into that. In Paradise, rather than a temporary physical condition, it would be a permanent spiritual attribute-more a state of mind. Yes?"

"In that case," Jubal said emphatically, "I am certain that these are not houris."

Mahmoud sighed. "In that case I'll just have to convert one."

"Why only one? There are still places left in the world where you can have the full quota."

"No, my friend. In the wise words of the Prophet, while the Legislations permit four, it is impossible for a man to deal justly with more than one."

"That's some relief. Which one?"

"We'll have to see. Maryam, are you feeling spiritual?"

"You go to hell! 'Houris' indeed!"

"Jill?"

"Give me a break," Ben protested. "I'm still working on Jill."

"Later, Jill. Anne?"

"Sorry. I've got a date."

"Dorcas? You're my last chance."

"Stinky," she said softly, "just how spiritual do you want me to feel?"

When Mike got inside the house, he went straight upstairs to his room, closed the door, got on the bed, assumed the foetal position, rolled up his eyes, swallowed his tongue, and slowed his heart almost to nothing. He knew that Jill did not like him to do this in the daytime, but she did not object as long as he did not do it publicly. There were so many things that he must not do publicly, but only this one really aroused her ire. He had been waiting to do this ever since he had left that room of terrible wrongness; he needed very badly to withdraw and try to grok all that had happened. For he had done something else that Jill had told him not to- He felt a very human urge to tell himself that it had been forced on him, that it was not his fault; but his Martian training did not permit him this easy escape. He had arrived at a cusp, right action had been required, the choice had been his. He grokked that he had chosen correctly. But his water brother Jill had forbidden this choice- But that would have left him no choice. This was contradiction; at a cusp, choice is. By choice, spirit grows.

He considered whether or not Jill would have approved had he taken other action, not wasting food?

No, he grokked that Jill's injunction had covered that variant of action, too.

At this point the being sprung from human genes shaped by Martian thought, and who could never be either one, completed one stage of his growth, burst out and ceased to be a nestling. The solitary loneliness of predestined free will was then his and with it the Martian serenity to embrace it, cherish it, savour its bitterness, and accept its consequences. With tragic joy he knew that this cusp was his, not Jill's. His water brother could teach, admonish, guide-but choice at a cusp was not shared. Here was "ownership" beyond any possible sale, gift, hypothecation; owner and owned grokked fully, inseparable~ He eternally was the action he had taken at cusp.

Now that he knew himself to be self he was free to grok ever closer to his brothers, merge without let. Self's integrity was and is and ever had been. Mike stopped to cherish all his brother selves, the many threesfulfilled on Mars, both corporate and discorporate, the precious few on Earth-the as-yet-unknown powers of three on Earth that would be his to merge with and cherish now that at last long waiting he grokked and cherished himself.

Mike remained in his trance; there was still much to grok, loose ends and bits and pieces to be puzzled over and fitted into his growing pattern- all that he had seen and heard and been at the Archangel Foster Tabernacle (not just the cusp he had encountered when he and Digby had come face to face alone), why Bishop Senator Boone had made him warily uneasy without frightening him, why Miss Dawn Ardent had tasted like a water brother when she was not, the texture and smell of the goodness he had incompletely grokked in the jumping up and down and the wailing- Jubal's stored conversation both coming and going-Jubal's words troubled him more than other details; he studied them with great care, compared them with what he bad been taught as a nestling, making great effort to bridge between his two languages, the one he thought with and the one he now spoke and was gradually learning to think in, for some purposes. The human word "church" which turned up over and over again among Jubal's words gave him most knotty difficulty; there was no Martian concept of any sort to match it-

unless one took "church" and "worship" and "God" and "congregation" and many other words and equated them all to the totality of the only world he had known during most of his growing-waiting . . . then forced the concept back awkwardly into English in that phrase which had been rejected Qiut by each differently) by Jubal, by Mahmoud, by Digby.

"Thou art God" He came closer to understanding it in English himself now, although it could never have the crystal inevitability of the Martian concept it stood for. In his mind he spoke simultaneously the English sentence and the Martian word and felt closer grokking. Repeating it like a student telling himself that the jewel is in the lotus he sank into nirvana untroubled.

Shortly before midnight he speeded up his heart, resumed normal breathing, ran down his engineering check list, found that all was in order, uncurled and sat up. He had been spiritually weary; now he felt light and gay and clear-headed, eager to get on with the many actions he saw spreading out before him.

He felt a puppyish need for company almost as strong as his earlier necessity for quiet. He stepped out into the upper hail, was delighted to encounter a water brother.

"!!!!"

"Oh. Hello, Mike. My, you look chipper."

"I feel fine! Where is everybody?"

"Everybody's asleep but you and me-so keep your voice down. Ben and Stinky went home an hour ago and people started going to bed."

"Oh." Mike felt mildly disappointed that Mahmoud had left; he wanted to explain to him his new grokking. But he would do so, when next he saw him.

"I ought to be asleep, too, but I felt like a snack. Are you hungry?"

"Me? Sure, I'm hungry!"

"Good. You ought to be, you missed dinner. Come on, I know there's some cold chicken and we'll see what else." They went downstairs, loaded a tray lavishly. "Let's take it outside. It's still plenty warm."

"That's a fine idea," Mike agreed.

"Warm enough to swim if we wanted to-this is a real Indian summer. Just a second, I'll switch on the floods."

"Don't bother," Mike answered. "I'll carry the tray, I can see." He could see, as they all knew, in almost total darkness. Jubal said that his exceptional night-sight probably caine from the conditions in which he had grown up, and Mike grokked that that was true but he grokked also that there was more to it than that; his foster parents had taught him to see. As for the night being warm enough, he would have been comfortable naked on Mount Everest, but he knew that his water brothers bad very little tolerance for changes in temperature and pressure; he was always considerate of their weakness, once he had learned of it. But be was eagerly looking forward to snow-seeing for himself that each tiny crystal of the water of life was a unique individual, as he had read-walking barefoot in it, rolling in it.

In the meantime he was equally pleased with the unseasonably warm autumn night and the still more pleasing company of his water brother.

"Okay, you carry the tray. I'll switch on just the underwater lights. That'll be plenty to eat by."

"Fine." Mike liked having light coming up through the ripples; it was a goodness, a beauty, even though he did not need it. They picnicked by the pool, then lay back on the grass and looked at the stars.

"Mike, there's Mars. It is Mars, isn't it? Or is it Antares?"

"It is Mars."

"Mike? What are they doing on Mars?"

He hesitated a long time; the question was too wide in scope to pin down to the sparse English language. "On the side toward the horizon- the southern hemisphere-it is spring; the plants are being taught to grow."

"'Taught to grow?'"

He hesitated only slightly. "Larry teaches plants to grow every day. I have helped him. But my people-the Martians, I mean; I grok now that you are my people-teach the plants another way. Jn the other hemisphere it is growing colder and the nymphs, those who have stayed alive through the summer, are being brought into the nests for quickening and more growing." He thought. "Of the humans we left at the equator when I came here, one has discorporated and the others are sad."

"Yes, I heard about it in the news."

Mike had not heard about it in the news; he had not known it until he was asked. "They should not be sad. Mr. Booker T. W. Jones Food Technician First Class is not sad; the Old Ones have cherished him."

"You knew him?"

"Yes. He had his own face, dark and beautiful. But he was homesick."

"Oh, dear! Mike ... do you ever get homesick? For Mars?"

"At first I was very homesick," he answered truthfully. "I was lonely always." He rolled toward her and took her in his arms. "But now I am not lonely. I grok I shall never be lonely again."

"Mike darling-" They kissed, and went on kissing.

Presently his water brother said breathlessly. "Oh, my! That was almost worse than the first time."

"You are all right, my brother?"

"Yes. Yes indeed. Kiss me again."

Quite a long time later, by cosmic clock, she said, "Mike? Is that-I mean, 'Do you know-'"

"I know. It is for growing-closer. Now we grow closer."

"Well, I've been ready a long time-goodness, we all have, but never mind, dear; turn just a little. I'll help."

As they merged, grokking together, Mike said softly and triumphantly: "Thou art God."

Her answer was not in words. Then, as their grokking made them ever closer and Mike felt himself almost ready to discorporate, her voice called him back: "Oh? ,.. Oh! Thou art God!"

"We grok God."

ON MARS THE LITTLE HUMAN ADVANCE GUARD were building half-buried pressure domes for the larger male & female party that would arrive by next ship. This work went much faster than originally scheduled as the Martians were uncritically helpful. Part of the time saved was spent in preparing a preliminary estimate on a very long-distance plan to free the bound oxygen in the sands of Mars to make the planet more friendly to future human generations.

The Old Ones neither helped nor hindered these long-distance human plans; time was not yet. Their own meditations were approaching a violent cusp that would control the shape of Martian art for many millennia. On Earth elections continued as usual and a very advanced poet published a limited edition of verse consisting entirely of punctuation marks and spaces; Time magazine reviewed it and suggested that the Federation Assembly Daily Record could profitably be translated into the same medium. The poet was invited to lecture at the University of Chicago, which he did, clad in full formal evening dress lacking only trousers and shoes.

A colossal advertising campaign opened to sell more sexual organs of plants for human use and Mrs. Joseph ("Shadow of Greatness") Douglas was quoted as saying: "I would no more think of sitting down to eat without flowers on my table than without serviettes." A Tibetan swami from Palermo, Sicily, announced in Beverly Hills a newly discovered, ancient yoga discipline for ripple breathing which greatly increased both pranha and the cosmic attraction between the sexes. His chelas were required to assume the matsyendra posture dressed in hand-woven diapers while he read aloud from the Rig-Veda and an assistant guru checked through their purses in another room-nothing was ever stolen from the purses; the purpose was less immediate.

The President of the United States, by proclamation, named the first Sunday in November as "National Grandmothers' Day" and urged the grandchildren of America to say it with flowers. A funeral parlor chain was indicted for price-cutting. The Fosterite bishops, after secret conclave, announced the Church's second Major Miracle: Supreme Bishop Digby had been translated bodily to Heaven and spot-promoted to Archangel, ranking with-but-after Archangel Foster. The glorious news had been held up pending Heavenly confirmation of the elevation of a new Supreme Bishop, Huey Short-a compromise candidate accepted by the Boone faction after the lots had been cast repeatedly.

L 'Unita and Hoy published identical doctrinaire denunciations of Short's elevation, L 'Osservatore Romano and the Christian Science Monitor ignored it, Times of India snickered at it editorially, and the Manchester Guardian reported it without comment-the Fbsterite congregation in England was small but extremely militant.

Digby was not pleased with his promotion. The Man from Mars had interrupted him with his work half finished-and that stupid jackass Short was certain to louse it up. Foster listened to him with angelic patience until Digby ran down, then said, "Listen, junior, you're an angel now-so forget it. Eternity is no time for recriminations. You too were a stupid jackass until you poisoned me. Afterwards you did well enough. Now that Short is Supreme Bishop he'll do all right, too; he can't help it. Same as with the Popes. Some of them were warts until they got promoted. Check with one of them, go ahead-there's no professional jealousy here."

Digby calmed down a little, but made one request.

Foster shook his halo in negation. "You can't touch him. You shouldn't have tried to touch him in the first place. Oh, you can submit a requisition for a miracle if you want to make a bloody fool of yourself. But, I'm telling you, it'll be turned down-you simply don't understand the System yet. The Martians have their own setup, different from ours, and as long as they need him, we can't touch him. They run theft own show their own way-the Universe has variety, something for everybody-a fact you field workers often miss."

"You mean this punk can brush me aside and I've got to hold still for it?"

"I held still for the same thing, didn't I? I'm helping you now, am I not? Now look, there's work to be done and lots of it-before you can expect to be promoted again. The Boss wants performance, not gripes- If you need a Day off to get your nerve back, duck over to the Muslim Paradise and take it. Otherwise, straighten your halo, square your wings, and dig in. The sooner you start acting like an angel the quicker you'll start feeling angelic. Get Happy, junior!"

Digby heaved a deep ethereal sigh. "Okay, I'm Happy. Where do I start?"

Jubal was not disturbed by Digby's disappearance because he did not hear of it even as soon as it was announced, and, when he did hear, while he had a fleeting suspicion as to who had performed the miracle, he dismissed it from his mind; if Mike had had a finger in it, he had gotten away with it-and what happened to supreme bishops worried Jubal not at all as long as he didn't have to be bothered with it.

More important, his own household had gone through a considerable upset. In this case Jubal knew what had happened but did not care to inquire. That is to say, Jubal guessed what had happened but did not know with whom-and didn't want to know. A slight case of rape. Was "rape" the word? Well, "statutory rape." No, not that, either; Mike was of legal age and presumed to be able to defend himself in the clinches. Anyhow, it was high time the boy was salted, no matter how it had happened.

Jubal couldn't even reconstruct the crime from the way the girls behaved because their patterns kept shifting-sometimes ABC vs D, then BCD vs A . . . or AB vs CD, or AD vs CB, through all possible ways that four women can gang up on each other.

This continued for most of the week following that ill-starred trip to church, during which period Mike stayed in his room in a withdrawal trance so deep that Jubal would have pronounced him dead had he not seen it before. Jubal would not have minded it if the service around the place had not gone to hell in a bucket. The girls seemed to spend half their time tiptoeing in~"to see if Mike was all right" and they were too preoccupied to cook properly, much less to be decent secretaries. Even rock-steady Anne-Hell, Anne was the worst of the lot! Absent-minded and subject to unexplained tears . . . and Jubal would have bet his life that if Anne were to witness the Second Coming, she would simply have memorized date, time, personae, events, and barometric pressure without batting her calm blue eyes.

Then late Thursday afternoon Mike woke himself up and suddenly it was ABCD in the service of Mike, "less than the dust beneath his chariot wheels." Inasmuch as the girls now found time to give Jubal perfect service too, Jubal counted his blessings and let it lie - except for a wry and very private thought that, if he had demanded a showdown, Mike could easily quintuple their salaries simply by dropping a post card to Douglas-but that the girls would just as readily have supported Mike.

Once domestic tranquility was restored Jubal did not mind that his kingdom was now ruled by a mayor of the palace. Meals were on time and (if possible) better than ever; when he shouted "Front!" the girl who appeared was bright-eyed, happy, and efficient-such being the case, Jubal did not give a hoot who rated the most side boys. Or girls.

Besides, the change in Mike was as interesting to Jubal as the restoration of peace was pleasant. Before that week Mike had been docile in a fashion that Jubal classed as pathological; now he was so self-confident that Jubal would have described it as cocky had it not been that Mike continued to be unfailingly polite and considerate.

But he accepted homage from the girls as if a natural right, he seemed older than his calendar age rather than younger, his voice had deepened, he spoke with disciplined forcefulness rather than timidly. Jubal decided that Mike had joined the human race; he could, in his mind, discharge this patient as cured.

Except (Jubal reminded himself) on one point: Mike still did not laugh. He could smile at a joke and sometimes did not ask to have them explained to him. Mike was cheerful, even merry-but he never laughed.

Jubal decided that it was not important. This patient was sane, healthy . . . and human. Short weeks earlier Jubal would have given odds against the cure taking place. He was honest and humble enough as a physician not to claim credit; the girls had had more to do with it. Or should he say "girl?"

From the first week of his stay Jubal had told Mike almost daily that he was welcome to stay . . . but that he should stir out and see the world as soon as he felt able. In view of this Jubal should not have been surprised when Mike announced one breakfast that he was leaving. But he was both surprised and, to his greater surprise, hurt.

He covered it by using his napkin unnecessarily before answering, "So? When?"

"We're leaving today."

"Um- Plural.'t Jubal looked around the table. "Are Larry and Duke and I going to have to put up with our own cooking until I can dig up more help?"

"We've talked that over," Mike answered. "Jill is going with me- nobody else. I do need somebody with me, Jubal; I know quite well that I don't know, as yet, how people do things out in the world. I still make mistakes; I need a guide, for a time. I think it ought to be Jill, because she wants to go on learning Martian-and the others think so, too. But if you want Jill to stay, then it could be someone else. Duke and Larry are each willing to help me, if you can't spare one of the girls."

"You mean I get a vote?"

"What? Jubal, it has to be your decision. We all know that."

(Son, you're a gent-and you've probably just told your first lie- I doubt if I could hold even Duke if you set your mind against it.) "I guess it ought to be Jill. But look, kids- This is still your home. The latch string is out."

"We know that-and we'll be back. Again we will share water."

"We will, son."

"Yes, Father."

"Huh?"

"Jubal, there is no Martian word for 'father.' But lately I have grokked that you are my father. And Jill's father."

Jubal glanced at Jill. "Mmm, I grok. Take care of yourselves."

"Yes. Come, Jill." They were gone before he left the table.

XXVI

IT WAS THE USUAL SORT OF CARNIVAL in the usual sort of town. The rides were the same, the cotton candy tasted the same, the flat joints practiced a degree of moderation acceptable to the local law in separating the marks from their half dollars, whether with baseballs thrown at targets, with wheels of fortune, or what-but the separation took place just the same. The sex lecture was trimmed to suit local opinions concerning Charles Darwin's opinions, the girls in the posing show wore that amount of gauze that local mores required, and the Fearless Fentons did their Death-Defying (in sober truth) Double Dive just before the last bally each night.

The ten-in-one show was equally standard. It did not have a mentalist, it did have a magician; it did not have a bearded lady, it did have a half-man half-woman; it did not have a sword swallower, it did have a fire eater. In place of a tattooed man the show had a tattooed lady who was also a snake channer-and for the blow-off (at another half dollar per mark) she appeared "absolutely nude! .. clothed only in bare living flesh in exotic designs!"-and any mark who could find one square inch below her neckline untattooed would be awarded a twenty dollar bill.

That twenty dollars had gone unclaimed all season, because the blowoff was honestly ballyhooed. Mrs. Paiwonski stood perfectly still and completely unclothed-other than in "bare, living flesh" ... in this case a fourteen-foot boa constrictor known as "Honey Bun." Honey Bun was looped around Mrs. P. so strategically that even the local ministerial alliance could find no real excuse to complain, especially as some of their own daughters wore not nearly as much and covered still less while attending the carnival. To keep the placid, docile Honey Bun from being disturbed, Mrs. P. took the precaution of standing on a small platform in the middle of a canvas tank-on the floor of which were more than a dozen cobras.

The occasional drunk who was certain that all snake charmer's snakes were defanged and so tried to climb into the tank in pursuit of that undecorated square inch invariably changed his opinion as soon as a cobra noticed him, lifted and spread its hood.

Besides, the lighting wasn't very good.

However, the drunk could not have won the twenty dollars in any case. Mrs. P's claim was much sounder than the dollar. She and her late husband had had for many years a tattooing studio in San Pedro; when trade was slack they had decorated each other-and, eventually, at some minor inconvenience to herself, the art work on her was so definitively complete from her neck down that there was no possible room for an encore. She took great pride both in the fact that she was the most completely decorated woman in the world (and by the world's greatest artist, for such was her humbly grateful opinion of her late husband) and also in the certainty that every dollar she earned was honest.

She associated with grifters and sinners and did not hold herself aloof from them. But her own integrity was untouched. She and her husband had been converted by Foster himself, she kept her membershiP in San Pedro and attended services at the nearest branch of the Church of the New Revelation no matter where she was.

Patricia Paiwoush would gladly have dispensed with the protection of Honey Bun in the blow-off not merely to prove that she was honest (that needed no proof, since she knew it was true) but because she was serene in her conviCtiOn that she was the canvas for religiouS art greater than any on the walls or ceilings of the Vatican. When she and George had seen the light. there was still about three square feet of Patricia untouched before he died she carried a complete pictorial life of Foster, from his crib with the angelS hovering around to the day of glory when he had taken his appointed place among the archangels.

Regrettably (since it might have turned many sinners into seekers of the light) much of this sacred history bad to be covered up. the amount depending on the local lawmen. But she could show it in closed Happiness ~eetiflgS of the local churches she attended, if the shepherd wanted her to, which he almost always did. But, while it was always good to add to Happiness~ the saved did not need it; Patricia would rather have saved sinners. She couldn't preach. she couldn't sing, and she had never been called to speak in tongues__but she was a living witness to the light.

In the ten-in-One, her act came next to last, just before the magician; this gave her time to put away unsold photograPhs of herself (a quarter for black & white, half a dollar in color, a set of special photograPhs for five dollars in a sealed envelope sold only to marks who signed a printed form alleging that they were doctors of medicine, psychology, sociology, or other such entitled to professional material not available to the general public-and such was Patricia's integrity that she would not sell these even for ten dollars if the mark did not look the part; she would then ask to see his business card - no dirty dollars were going to put her kids through school-and also gave her time to slip behind the rear canvas and get herself and her snakes ready for the blOW-Off.

The magician, Dr. Apollo, performed on the last platform nearest to the canvas fly leading to the blow-Off. He started by passing out to his audience a dozen shiny steel rings, each as wide as a plate; he invited them to convince themselves that each ring was solid and smooth. Then he bad them hold the rings so that they overlapped. Dr. Apollo walked along the platform~ reached out with his wand and tapped each overlap-the solid steel links formed a chain.

Casually he laid his wand in the air, rolled up his sleeves, accepted a bowl of eggs from his 5ssistant, and started to juggle half a dozen of them. His juggling did not attract too many eyes; his assistant was more worthy of stares. She was a fine example of modern functional design and, while she wore a great deal more than did the young ladies in the posing show, nevertheless there seemed to be a strong probability that she was not tattooed anywhere. The marks hardly noticed it when the six eggs became eve, then four three, two -- until at last Dr. Apollo was tossing one egg in the air, with his sleeves still rolled up and a puzzled look on his faceAt last he said, "Eggs are getting scarcer every year," and tossed the remaining egg over the heads of those nearest the platform to a man in the back of the crowd. "Catch!"

He turned away and did not seem to notice that the egg never reached its destination.

Dr. Apollo performed several other tricks, while wearing always the same slightly puzzled expression and with the same indifferent patter. Once he called a young boy close to the platform. "Son, I can tell you what you are thinking. You think I'm not a real

magician. And you're right~ For that you win a dollar." He handed the kid a dollar bill. It disappeared.

The magician looked unhappy. "Dropped it? Well, hang on to this one." A second bill disappeared.

"Oh, dear. Well, we'll have to give you one more chance. Use both hands. Got it? All right, better get out of here fast with it-YOU should be home in bed anyhow." The kid dashed away with the money and the magician turned back and again looked puzzled "Madame Merlin, what should we do now?"

His pretty assistant came up to him, pulled his head down by one ear, whispered into it. He shook his head. "No, not in front of all these people."

She whispered again; he looked distressed. "I'm sorry, friends, but Madame Merlin insists that she wants to go tobed. Will any of you gentlemen help her?"

He blinked at the rush of volunteers- "Oh, just two of you. Were any of you gentlemen in the Army?"

There were still more than enough volunteers. Dr. Apollo picked two and said, "There's an army cot under the end of the platforms just lift up the canvas_flow, will you set it up for her here on the platform? Madame Merlin, face this way, please."

While the two men set up the cot, Dr. Apollo made passes in the air at his assistant. "Sleep ... sleep . . you are now asleep. Friends, she is in a deep trance. Will you two gentlemen who so kindly prepared her bed now place her on it? One take her head, one take her feet. Careful, now-" In corpselike rigidity the girl was transferred to the cot.

"Thank you, gentlemen. But we ought not to leave her uncovered, should we? There was a sheet here, somewhere. Oh, there it is." The magician reached out, recovered his wand from where he had parked it, pointed to a table laden with props at the far end of his platform; a sheet detached itself from the pile and came to him. "Just spread this over her. Cover her head, too; a lady should not be exposed to public gaze while sleeping. Thank you. Now if you will just step down off the platform. Fine! Madame Merlin . . . can you hear me?"

"Yes, Doctor Apollo."

"You were heavy with sleep. Now you are resting. You feel lighter, much lighter. You are sleeping on a bed of clouds. You are floating away on clouds-" The sheet-covered form raised slowly up about a foot. "Wups! Don't get too light. We don't want to lose you."

In the crowd, a boy in his late teens explained in a loud whisper, "She's not under the sheet now. When they put the sheet over her, she went down through a trap door. That's just a light framework, doesn't weigh as much as the sheet. And in a minute he'll flip the sheet away and while he does, the framework will collapse and disappear. It's just a gimmick -- anybody could do it,"

Dr. Apollo ignored him and went on talking. "A little higher, Madame Merlin. Higher. There-" The draped form floated about six feet above the platform.

The smart youngster whispered to his friends, "There's a slender steel rod but you can't see it too easily. It's probably where one corner of the sheet hangs down there and touches the cot."

Dr. Apollo turned and requested his volunteers to remove the cot and put it back under the platform. "She doesn't need it now. She sleeps on clouds." He faced the floating

form and appeared to be listening. "What? Louder, please. Oh? She says that she doesn't want the sheet-it's too heavy."

("Here's where the framework disappears.")

The magician tugged one corner of the sheet, snatched it away; the audience hardly noticed that the sheet disappeared without his bothering to gather it in; they were looking at Madame Merlin, still floating, still sleeping, six feet above the platform. The platform stood in the middle rear of the tent and the audience surrounded it on all sides. A companion of the boy who knew all about stage magic said, "Okay, Speedy, where's the steel rod?"

The kid said uncertainly, "You have to look where he doesn't want you to look, it's the way they've got those lights fixed to shine right into your eyes."

Dr. Apollo said, "That's enough sleep, fairy princess. Give me your hand. Wake up, wake up!" He took her hand, pulled her erect and helped her step down to the platform.

("You see? You saw how stiff she got down, you saw where she put her foot? That's where the steel rod went." The kid added with satisfaction, "Just a gimmick.")

The magician went on talking, "And now friends, if you will kindly give your attention to our learned lecturer, Professor Timoshenko-"

The talker cut in at once. "Don't go 'way! For this one performance only by arrangement with the Council of Colleges and Universities and with the permission of the Department of Safety and Welfare of this wonderful city, we are offering this twenty dollar bill absolutely free to any one of you-"

Most of the tip was turned into the blow-off. A few wandered around, then started to leave as most of the lights in the main tent were turned off. The freaks and other carnies started packing their props and slum preparatory to tear-down. There was a train jump coming in the morning and living tops would remain up for a few hours sleep, but canvas boys were already loosening stakes on the sideshow top.

Shortly the talker-owner-manager of the ten-in-one came back into the semi-darkened tent, having rushed the blow-off and spilled the last marks out the rear exit. "Smitty, don't go 'way. Got something for you." He handed the magician an envelope, which Dr. Apollo tucked away without looking at it. The manager added, "Kid, I hate to tell you this-but you and your wife ain't going with us to Paducah."

"I know."

"Well ... look, don't take it hard, there's nothing personal about it -but I got to think of the show. We're replacing you with a mentalist team. They do a top reading act, then she runs a phrenology and mitt camp while he makes with the mad ball. We need 'em . . . and you know as well as I do you didn't have no season's guarantee. You were just on trial."

"I know," agreed the magician. "I knew it was time to leave. No hard feelings, Tim."

"Well, I'm glad you feel that way about it." The talker hesitated. "Smitty, do you want some advice? Just say no if you don't."

"I would like very much to have your advice," the magician said simply.

"Okay, you asked for it. Smitty, your tricks are good. Hell, some of 'em even got me baffled. But clever tricks don't make a magician. The trouble is you're not really with it. You behave like a carney-you mind your own business and you never crab anybody

else's act and you're helpful if anybody needs it. But you're not a carney. You know why? You don't have any feeling for what makes a chump a chump; you don't get inside his mind. A real magician can make the marks open their mouths and catch flies just by picking a quarter out of the air. That Thurston's levitation you do-I've never seen it done any more perfectly but the marks don't warm to it. No psychology. Now take me, for example. I can't even pick a quarter out of the air-hell, I can barely use a knife and fork without cutting my mouth. I got no act . . . except I got the one act that counts. I know marks. I know where that streak of larceny is in his heart, I know just how wide it is. I know what he hungers for, whether he knows it or not. That's showmanship, son, whether you're a politician running for office, a preacher pounding a pulpit . . . or a magician. You find out what the chumps want and you can leave half your props in your trunk."

"I'm sure you're right."

"I know I am. He wants sex and blood and money. We don't give him any real blood-unless a fire eater or a knife thrower makes a terrible mistake. We don't give him money, either; we just encourage him to hope for it while we take away a little. We don't give him any real sex. But why do seven out of ten of a tip buy the blow-off? To see a nekkid broad, that's why-and a chance to be paid a double sawbuck for lookin'-when maybe they got one just as good or better at home, nekkid anytime they like. So he don't see one and he don't get paid-and sill we send him out happy.

"What else does a chump want? Mystery! He wants to think that the world is a romantic place when he knows damn well it ain't. That's your job . . . only you ain't learned how. Shucks, son, even the marks know that your tricks are fake . . . only they'd like to believe they're real, and it's up to you to help 'em believe, as long as they're inside the show. That's what you lack."

"How do I get it, Tim? How do I learn what makes a chump tick?"

"Hell, I can't tell you that; that's the piece you have to learn for yourself. Get out and stir around and be a chump yourself a while, maybe. But- Well, take this notion you had of billing yourself as 'The Man from Mars.' You mustn't offer the chump what he won't swallow. They've all seen the Man from Mars, in pictures and on stereovision. Hell, I've seen him myself. Sure, you look a bit like him, same general type, a casual resemblance-but even if you were his twin brother, the marks know they won't find the Man from Mars in a ten-in-one in the sticks. It's as silly as it would be to bill a sword swallower as 'the President of the United States.' Get me? A chump wants to believe-but he won't thank you to insult what trace of intelligence he has. And even a chump has brains of a sort. You have to remember that."

"I will remember."

"Okay. I talk too much-but a talker gets in the habit. Are you kids going to be all right? How's the grouch bag? Hell, I oughtn't to do it-but do you need a loan?"

"Thanks, Tim. We're not hurtin' any."

"Well, take care of yourself. Bye, Jill." He hurried out.

Patricia Paiwonski came in through the rear fly, wearing a robe. "Kids? Tim sloughed your act."

"We were leaving anyhow, Pat."

"I knew he was going to. He makes me so mad I'm tempted to jump the show myself."

"Now, Pat-"

"I mean it. I could take my act anywhere and he knows it. Leave him without a blow-off. He can get other acts . . . but a good blow-off that the clowns won't clobber is hard to find."

"Pat, Tim is right, and Jill and I know it. I don't have showmanship."

"Well ... maybe so. But I'm going to miss you. You've been just like my own kids to me. Oh, dear! Look, the show doesn't roll until morning-come back to my living top and set awhile and visit."

Jill said, "Better yet, Patty, come into town with us and have a couple of drinks. How would you like to soak yourself in a big, hot tub, with bath salts?"

"Uh, I'll bring a bottle."

"No," Mike objected, "I know what you drink and we've got it. Come along."

"Well, I'll come-you're at the Imperial, aren't you?-but I can't come with you. I've got to be sure my babies are all right first and tell Honey Bun I'll be gone a bit and fix her hot water bottles. I'll catch a cab. Half an hour, maybe."

They drove into town with Mike at the controls. It was a fairly small town, without automatic traffic control even downtown. Mike drove with careful precision, exactly at zone maximum and sliding the little ground car into holes Jill could not see until they were through them. He did it without effort in the same fashion in which he juggled. Jill knew how it was done, had even learned to do it a bit herself; Mike stretched his time sense until the problem of juggling eggs or speeding through traffic was an easy one with' everything in slow motion. Nevertheless she reflected that it was an odd accomplishment for a man who, only months earlier, had been baffled by tying shoelaces.

She did not talk. Mike could talk while on extended time, if necessary, but it was awkward to converse while they were running on different time rates. Instead she thought with mild nostalgia of the life they were leaving, calling it up in her mind and cherishing it, some of it in Martian concepts, more of it in English. She had enjoyed it very much. All her life, until she had met Mike, she had been under the tyranny of the clock, first as a little girl in school, then as a bigger girl in a much harder school, then under the unforgiving pressures of hospital routine.

The carnival had been nothing like that. Aside from the easy and rather pleasant chore of standing around and looking pretty several times a day from midafternoon to the last bally of the night, she never had anything she actually had to do at any set time. Mike did not care whether they ate once a day or six times, and whatever housekeeping she chose to do suited him. They had their own living top and camping equipment; in many towns they had never left the lot from arrival to tear-down. The carnival was a closed little world, an enclave, where the headlines and troubles of the outside world did not reach. She had been happy in it.

To be sure, in every town the lot was crawling with marks-but she had acquired the carney viewpoint; marks did not count-they might as well have been behind glass. Jill quite understood why the girls in the posing show could and did exhibit themselves in very little (and, in some towns, nothing, if the fix was solid) without feeling immodest . . . and without being immodest in their conduct outside the posing show. Marks weren't people to them; they were blobs of nothing, hardly seen, whose sole function was to cough up half dollars for the take.

Yes, the carnie had been a happy, utterly safe home, even though theft act had flopped. It had not always been that way when first they left the safety of Jubal's home to

go out into the world and increase Mike's education. They had been spotted more than once and several times they had had trouble getting away, not only from the press, but from the endless people who seemed to feel that they had a right to demand things of Mike, simply because he had the misfortune to be the Man from Mars.

Presently Mike had thought his features into more mature lines and had made other slight changes in his appearance. That, plus the fact that they frequented places where the Man from Mars would certainly not be expected (by the public) to go, got them privacy. About that time, when Jill was phoning home to give a new mailing address, Jubal had suggested a cover-up story-and a couple of days later Jill had read that the Man from Mars had again gone into retreat, this time in a Tibetan monastery.

The retreat had actually been "Hank's Grill" in a "nowhere" town, with Jill as a waitress and Mike as dishwasher. It was no worse than being a nurse and much less demanding-and her feet no longer hurt. Mike had a remarkably quick way of cleaning dishes, although he had to be careful not to use it when the boss was watching. They kept that job a week, then moved on, sometimes working, sometimes not. They visited public libraries almost daily, once Mike found out about them-Jill had discovered that Mike had taken for granted that Jubal's library contained a copy of every book on Earth. When he learned the marvelous truth, they had remained in Akron nearly a month. Jill did quite a lot of shopping that month, as Mike with a book was almost no company at all.

But Baxter's Combined Shows and Riot of Fun for All the Family had been the nicest part of their meandering trip. Jill recalled with an inner giggle the time in-what town?-no matter-when the entire posing show had been pinched. It wasn't fair, even by chumps' standards, since that concession always worked under precise prearrangement: bras or no bras; blue lights or bright lights; whatever the top town clown ordained. Nevertheless the sheriff had hauled them in and the local justice of the peace had seemed disposed not only to fine but to jail the girls as "vagrants."

The lot had closed down and most of the carnies had gone to the hearing, along with innumerable chumps slavering to catch sight of "shameless women" getting their come-uppance. Mike and Jill had managed to crowd against the back wall of the courtroom.

Jill had long since impressed on Mike that he must never do anything that an ordinary human could not do where it might be noticed. But Mike had grokked a cusp and had not discussed it with Jill.

The sheriff was testifying as to what he had seen, the details of this "public lewdness"-and he was enjoying it.

Mike had restrained himself, Jill admitted. In the midst of testimony both sheriff and judge became suddenly and completely without clothes of any sort.

She and Mike slipped quietly away during the excitement, and later she learned that the accused, all of them, had left, too, and nobody seemed disposed to object. Of course no one had connected the miracle with Mike, and he himself had never mentioned it to Jill-nor she to him; it was not necessary. The show had torn down at once and moved on two days early, to a more honest town where the rule was net bra and briefies and no beefs afterwards.

But Jill would treasure forever the expression on the sheriff's face, and his appearance, too, when it was plain to be seen that his sudden sag in front meant that the sheriff had been wearing a tight corset for his pride.

Yes, carnie days had been nice days. She started to speak to Mike in her mind, intending to remind him of how funny that hick sheriff had looked with creases from his girdle on his hairy pot belly. But she stopped. Martian had no concept for "funny" so of course she could not say it. They shared a growing telepathic bond~but in Martian only.

("Yes Jill?") his mind answered hers.

("Later.")

Shortly they approached the Imperial Hotel and she felt his mind slow down as he parked the car. Jill much prefeffed camping on the carnival grounds . . . except fox one thing: bathtubS. Showers were a1~ right, but nothing could beat a big tub of hot, hot water, climb into it up to your chin and soak! Sometimes they checked into a hotel for a few days and rented a ground car. Mike did not, by early training, share her fanatic enthusiasm for scrubbing; he was now as fastidiously clean as she was- but only because she had trained him to be; it did not annoy him. Moreover, he could keep himself immaculate without wasting time on washing or bathing, just as he never had to see a barber once he knew precisely how Jill wanted his hair to grow. But Mike, too, liked the time spent in hotels for the sake of baptism alone; be enjoyed immersing himself in the water of life as much as ever, irrespective of a non-existant need to clean and no longer with any superstitious feeling about water.

The Imperial was a very old hotel and had not been much even when new, but the tub in what was proudly called the "Bridal Suite" was satisfactorily large. Jill went straight to it as they came in, started to fill it-and was hardly surprised to find herself suddenly ready for her bath, even to pretty bare feet, except that her purse was still clutched under her arm. Dear Mike! He knew how she liked to shop. how pleased she was with new clothes; he gently forced her to indulge her childish weakness by sending to neverwhere any outfit which he sensed no longer delighted her. He would have done so daily had she not cautioned him that too many new clothes would make them conspicuous around the carnival.

"Thanks, dear!" she called out. "Let's climb in."

He had either undressed or caused his own clothes to go away- probably the former she decided; Mike found buying clothes for himself without interest. He still could see no possible reason for clothes other than for simple protection against the elements, a weakness he did not share. They got into the tub facing each other; she scooped up a handful of water, touched it to her lips, offered it to him. lt was not necessary to speak, nor was the ritual necessary; it simply pleased Jill to remind them both of something for which no reminder could ever be necessary, through all eternity.

When he raised his head, she said, "The thing I was thinking of while you were driving was how funny that horrid sheriff looked in his skin"

"Did be look funny?"

"Oh, very funny indeed! It was all I could do to keep from laughing out loud. But I did not want us noticed."

"Explain to me why he was funny. I do not see the joke."

"Uh ... dear, I don't think I can explain it. It was not a joke-not like puns and things like that which can be explained."

"I did not grok that he was funny," Mike said seriously. "In both those men-the judge and the lawman-I grokked wrongness. Had I not known that it would displease you, I would have sent them both away."

"Dear Mike." She touched his cheek. "Good Mike. Believe me, dearest, it was better far to do only what you did do. Neither one of them will ever live it down-and I'll bet that there won't be another attempt to arrest anyone for indecent exposure in that township for another fifty years. Let's talk about something else. I have been wanting to say that I am sorry, truly sorry, that your act didn't go over. I did my best in writing the patter for it, dear-but I guess I'm no showman, either."

"It was my lack, Jill. Tim speaks rightly-I don't grok the chumps. Nevertheless it has been good to be with Baxter's Combined Shows . . . I have grokked closer to the chumps each day."

"Only we must not call them chumps any longer, nor marks, now that we are no longer with it. Just people-not 'chumps.'"

"I grok that they are chumps."

"Yes, dear. But it isn't polite to say so."

"I will remember."

"Have you decided where we are going now?"

"No. When the time comes, I will know."

"Yes, dear." Jill reflected that Mike always did know. From his first change from docility to dominance he had grown steadily in strength and sureness~all ways. The boy (he bad seemed like a boy then) who had found it tiring to hold an ash tray in the air, could now not only hold her in the air (and it did feel like "floating on clouds"; that was why she had written it into the patter that way) while doing several other things and continuing to talk, but also could exert any other strength he needed~be recalled one very rainy lot where one of the trucks had bogged down. Twenty men were crowded around it, trying to get it free-Mike had added his shoulder . . and the truck moved.

She had seen how it had happened; the sunken hind wheel had simply lifted itself out of the mud. But Mike, much more sophisticated now, had not allowed anyone to guess.

She recalled, too, when be had at last grokked that the injunction about "wrongness" being necessary before he could make things go away applied only to living, grokking things-her dress did not have to have "wrongness" for him to toss it away. The injunction was merely a precaution in the training of nestlings; an adult was free to do as he grokked.

She wondered what his next major change would be? But she did not worry about it; Mike was good and wise. All she could teach him were little details of how to live among humans-while leaning much more from him, in perfect happiness, greater happiness than she had known since her father died. "Mike, wouldn't it be nice to have Dorcas and Anne and Miriam all here in the tub, too? And Father Jubal and the boys and-oh, our whole family!"

"It would take a bigger tub."

"Who minds a little crowding? But Jubal's pool would do nicely. When are we maldng another visit home, Mike? Jubal asks me every time I talk to him."

"I grok it will be soon."

"Martian 'soon'? Or Earth 'soon'? Never mind, darling, I know it will be when the waiting is filled. But that reminds me that Aunt Patty will be here soon and I do mean Earth 'soon.' Wash me off?"

She stood up, he stayed where he was. The soap lifted out of the soap dish, traveled all over her, replaced itself, and the soapy layer slathered into bubbles of lather. "Ooohl That's enough. You tickle."

"Rinse?"

"I'll just dunk." Quickly she squatted down, sloshed suds off her, stood up. "Just in time, too."

Someone was knocking at the outer door. "Deane? Are you decent?"

"Coming, Pat!" Jill shouted and added as she stepped out of the tub, "Dry me, please?"

At once she was dry, leaving not even wet footprints on the bath mat. "Dear? You'll remember to put on some clothes before you come out? Patty's a lady-not like me."

"I will remember."

XXVII

JILL STOPPED TO GRAB a negligee from a well-stocked wardrobe, hurried out into the living room and let in Mrs. Paiwonski. "Come in, dear. We were grabbing baths in a hurry; he'll be right out. I'll get you a drink- then you can have your second drink in the tub if you like. Loads of hot water."

"I had a shower after I put Honey Bun to bed, but-yes, I'd love a tub bath. But, Jill baby, I didn't come here to borrow your bath tub; I came because I'm just heartsick that you kids are leaving the show."

"We won't lose track of you." Jill was busy with glasses. The hotel was so old that not even the "Bridal Suite" had its own ice dispenser but the night bellman, indoctrinated and subsidized, had left a carton of ice cubes. "Tim was right and you know he was. Mike and I have got to slick up our act a lot before we can hold up our end."

"Your act is okay. Needs a few laughs in it, maybe, but-Hi, Smitty." As Mike came in, she offered him a gloved hand. Mrs. Paiwonski always wore gloves away from the lot, and a high-necked dress and stockings. Dressed so, she looked like a middle-aged, most respectable widow, who had kept her figure trim in spite of her years-looked so, because she was precisely that.

"I was just telling Jill," she went on, "that you've got a good act, you two."

Mike smiled gently. "Now, Pat, you don't have to kid us. It stinks. We know it."

"No, it doesn't, dearie. Oh, maybe it needs a little something to give it some zing. A few jokes. Or, well, you could even cut down on Jill's costume a little. You've got an awful cute figure, hon."

Jill shook her head. "That wouldn't do it."

"Well, I saw a magician once that used to bring his assistant out dressed for the Gay 'Nineties-the eighteen-nineties, that is-not even her legs showing. Then he would disappear one garment after another. The marks loved it. But don't misunderstand me, dear-nothing unrefined. She finished . . . oh, in almost as much as you wear now."

"Patty," Jill said frankly, "I'd do our act stark naked if the clowns wouldn't close the show." As she said it, she realized that she meant it- and wondered how Graduate Nurse Boardman, floor supervisor, had reached the point where she could mean it?

Mike, of course- And she was quite happy about it.

Mrs. Paiwonski shook her head. "You couldn't, honey. The marks would riot. Just a touch more ginger ale, dear. But if you've got a good figure, why not use it? How far do you think I would get as a tattooed lady ii I didn't peel off all they'll let me?"

"Speaking of that," Mike said, "you don't look comfortable in all those clothes, Pat. I think the aircooling in this dump has gone sour again -it must be at least eighty." He himself was dressed in a light robe, his concession to the easy-going conventions of carney good manners. Extreme heat, he had learned, affected him slightly, enough so that he sometimes had to adjust consciously his metabolism-extreme cold affected him not at all. But he knew that their friend was used to the real comfort of almost nothing and affected the clothes she now wore to cover her tattoos when out among the marks; Jill had explained it to him. "Why don't you get comfortable? 'Ain't nobody here but just us chickens.'" The latter, he knew, was a joke, an appropriate one for emphasizing that friends were in private-Jubal had tried to explain it to him, but failed. But Mike had carefully noted when and how the idiom could be used.

"Sure, Patty," Jill agreed. "If you're raw under that dress, I can get you something light and comfortable. Or we'll just make Mike close his eyes."

"Uh ... well, I did slip back into one of my costumes."

"Then don't be stiff with friends. I'll get your zippers."

"Le'me get these stockings and shoes." She went on talking while trying to think how she could get the conversation around to religion, where she wanted it. Bless them, these kids were ready to be seekers, she was certain-and she had counted on the whole season to bring them around to the light . . . not just one hurried visit before they left. "The point about show business, Smitty, is that first you have to know what the marks want . . . and you have to know what it is you're giving them and how to make 'em like it. Now if you were a real magician- oh, I don't mean that you aren't skillful, dear, because you are." She tucked her carefully rolled hose in her shoes, loosened her garter belt and got out of it modestly, let Jill get her dress zippers. "I mean if your magic was real like you had made a pact with the Devil. That'd be one thing. But the marks know that it's clever sleight-of-hand. So you give 'em a light-hearted show to match. But did you ever see a fire eater with a pretty assistant? Heavens, a pretty girl would just clutter his act; the marks are standing around hoping he'll set fire to hisself~ or blow up."

She snaked the dress over her head; Jill took it and kissed her. "You look more natural, Aunt Patty. Sit back and enjoy your drink."

"Just a second, deane." Mrs. Paiwonski prayed mightily for guidance -wished that she were a preacher . . . or had even the gift of gab of a talker. Well, her pictures would just have to speak for themselves-and they would; that was why George had put them there. "Now this is what I've got to show the marks ... this and my snakes, but this is more important. Have either one of you ever looked, really looked, at my pictures?"

"No," Jill admitted, "I guess not. We didn't want to stare at you, like a couple of marks."

"Then stare at me now, dears-because that's why George, bless his sweet soul safe in heaven, put them on me. To be stared at . . . and studied. Now right up here under my chin is the birth scene of our prophet, the holy Archangel Foster-just an innocent babe and maybe not knowing what Heaven had in store for him. But the angels knew-see 'em there around him? The next scene is his first miracle, when a young sinner in the country school he attended shot down a poor little birdie . . - and he picked it up and stroked it and it flew away unharmed. See the school house behind? Now it kind o' jumps a little and I'll have to turn my back. But all of 'em are dated for each holy event in his life." She explained how George had not had a bare canvas to work with when first the great opus was started-since they had both been sinners and young Patricia already rather much tattooed . . . how with great effort and inspired genius George had been able to turn "The Attack on Pearl Harbor" into "Armageddon," and "Skyline of New York" into "The Holy City."

"But," she admitted candidly, "even though every single one of them is a sacred picture now, it did kind of force him to skip around to find enough bare skin to record in living flesh a witness to each milestone in the earthly life of our prophet. Here you see him preaching on the steps of the ungodly theological seminary that turned him down-that was the first time he was arrested, the beginning of the Persecution. And on around, right on my spine, you see him smashing idolatrous images - . . and next you see him in jail, with the holy light streaming down on it. Then the Faithful Few bust into the jail-"

The Reverend Foster had realized early that, when it caine to upholding religious freedom, brass knucks, clubs, and a willingness to tangle with cops was worth far more than passive resistance. His had been a church militant from scratch. But he had been a tactician, too; pitched battles were fought only where the heavy artillery was on the side of the Lord.

"-and they rescue him and tar & feather the idolatrous judge who put him there. Around in front here. Uh, you can't see it very well; my bra covers most of it, A shame."

("Michael, what does she want?")

("Thou knowest. Tell her. ")

"Aunt Patty," Jill said gently, "you want us to look at all your pictures. Don't you?"

"Well ...it's just as Tim says in the bally, George used up all the skin I have in making the story complete."

"If George went to all that work, I'm sure he meant for them to be seen. Take off your costume. I told you that I wouldn't mind working our own act stark naked if they'd let me-and ours is just entertainment. Yours has a purpose - . - a holy purpose."

"Well ... all right. If you really want me to." She sang a silent hallelujah and decided that Foster himself was sustaining her-with blessed luck and George's pictures she would yet have these dear kids seeking the light.

"I'll unhook you-"

("Jill-")

("No, Michael?")

("Wait")

To her utter surprise and some fear Mrs. Paiwonski found that her spangled briefies and bra were gone! But Jill was surprised to find that her almost-new negligee followed the little costume into wherever and nowhere. Jill was only mildly surprised

when Mike's robe disappeared, too; she chalked it up, correctly but not completely, to his catlike good manners.

Mrs. Paiwonski clutched at her mouth and gasped. Jill at once put her arms around her. "There, there, dear! It's all right, nobody's hurt." She turned her head and said, "Mike, you did it, you'll simply have to tell her."

"Yes, Jill. Pat-"

"Yes, Smitty?'

"You said a while ago that I wasn't a real magician, that my tricks were just sleight-of-hand. You were going to take off your costume anyhow -so I took it off for you."

"But how? And where is it?"

"Same place Jill's wrapper is-and my robe. Gone."

"But don't worry about it, Patty," put in Jill. "We'll replace it. Two more - . - and twice as pretty. Mike, you shouldn't have done it."

"I'm sorry, Jill. I grokked it was all right."

"Well ... I suppose it is." Jill decided that Aunt Patty wasn't too upset-and certainly she would never tell; she was carney.

Mrs. Paiwonski was not worried by the loss of two scraps of costume, nor by her own nudity. Nor by the nakedness of the other two. But she was greatly troubled by a theological problem that she felt was out of her depth. "Smitty? That was real magic?"

"I guess you would call it that," he agreed, using the words most exactly.

"I'd rather call it a miracle," she said bluntly.

"You can call it that, too, if you want to. But it wasn't sleight-of-hand."

"I know that. You weren't even near me." She, who daily handled live cobras and who had more than once handled obnoxious drunks with her bare hands (to their sorrow), was not afraid. Patricia Paiwonski was not afraid of the Devil himself; she was sustained by her faith that she was saved and therefore invulnerable to the Devil. But she was uneasy for the safety of her friends. "Smitty ... look me in the eye. Have you made a pact with the Devil?"

"No, Pat, I have not."

She continued to look into his eyes, then said, "You aren't lying-"

"He doesn't know how to lie, Aunt Patty."

"-so it's a miracle. Smitty ... you are a holy man!"

"I don't know, Pat."

"Archangel Foster didn't know that he was a holy man until he reached his teens . . . even though he performed many miracles before that time. But you are a holy man; I can feel it." She thought. "I think I felt it when I first met you."

"I don't know, Pat."

"I think he may be," admitted Jill. "But he really doesn't know, himself. Michael - . . I think we've told her too much not to tell her more."

"'Michael!'" Patty repeated suddenly. "The Archangel Michael, send down to us in human form."

"Aunt Patty, please! If he is, he doesn't know it-"

"He wouldn't necessarily know it. God performs his wonders in his own way."

"Aunt Patty, will you please wait and let me talk, just for a bit?"

Some minutes later Mrs. Paiwonski had accepted that Mike was indeed the Man from Mars, she had agreed to accept him as a man and to treat him as a man - . . while stating explicitly that she still held to her own opinion as to his true nature and why he was on Earth-explaining (somewhat fuzzily, it seemed to Jill) that Foster had been really and truly a man while he was on Earth, but had been also and always had been, an archangel, even though he had not known it himself. If Jill and Michael insisted that they were not saved, she would treat them as they asked to be treated-God moves in mysterious ways.

"I think you could properly call us 'seekers,'" Mike told her.

"Then that's enough, my dears! I'm sure you're saved-but Foster himself was a seeker in his early years~ I'll help."

She had participated in another minor miracle. They had been seated in a circle on the rug. Jill lay back flat and suggested it to Mike in her mind. With no patter of any sort, with no sheet nor anything to conceal a non-existent steel rod, Mike lifted her. Patricia watched it with serene happiness, convinced that she was vouchsafed sight of a miracle. "Pat," Mike then said. "Lie flat."

She did so without argument, as readily as if he had been Foster. Jill turned her head. "Hadn't you better put me down first, Mike?"

"No, I can do it."

Mrs. Paiwonski felt herself gently lifted. She was not frightened by it; she simply felt overpowering religious ecstasy like heat lightning in her loins, making tears come to her eyes, the power of which she had not felt since, as a young woman, Holy Foster himself had touched her. When Mike moved them closer together and Jill put her arms around her, her tears increased, but her cries were the gentle sobs of happiness.

Presently he lowered them gently to the floor and found, as he expected, that he was not tired-he could not recall when last he had been tired.

Jill said to him, "Mike ... we need a glass of water."

("????")

("Yes, " her mind answered.)

("And?")

("Of elegant necessity. Why do you think she came here?")

("I knew. I was not sure that you knew .. or would approve. My brother. My self")

("My brother.")

Mike did not get up to fetch water. He sent a glass from the tray of drinks into the bathroom, had the tap fill it, returned it to Jill's hands. Mrs. Paiwonski watched this with almost absent-minded interest; she was beyond being astonished. Jill held the glass, said to her, "Aunt Patty, this is like being baptized - . . and like getting married. It's ... a Martian thing. It means that you trust us and we trust you . . . and we can tell you anything and you can tell us anything . . . and that we are always partners, now and forever. It's very serious ... and once done it can never be broken. If you broke it, we would have to die-at once. Saved or not. If we broke it- But we won't. But you don't have to share water with us if you don't want to-we'll still be friends. Now - . - if this in any way interferes with your faith, don't do it. We don't belong to your church even though you guessed that we did. We don't. We may never belong. 'Seekers' is the most you can call us now. Mike?"

"We grok," he agreed. "Pat, Jill speaks rightly. I wish we could say it to you in Martian, it would be clearer. But this is everything that getting married is . . - and a great deal more. We are free to offer water to you but if there is any reason at all, in your religion or in your heart, not to accept-don't drink it!"

Patricia Paiwonski took a deep breath. She had made such a decision once before - with her husband watching . . . and had not funked it. And who was she to refuse a holy man? And his blessed bride? "I want it," she said firmly.

Jill took a sip. "We grow ever closer." She passed the glass to Mike.

He looked at Jill, then at Patricia. "I thank you for water, my brother." He took a sip. "Pat, I give you the water of life. May you always drink deep." He passed the glass to her.

Patricia took it. "Thank you. Thank you, oh my dears! The 'water of life'-oh, I love you both!" She drank thirstily.

Jill took the glass from her, finished it. "Now we grow closer, my brothers."

("Jill?")

("Now!!!")

Michael lifted his new water brother, wafted her in and placed her gently on the bed.

Valentine Michael Smith had grokked, when first he had known it fully, that physical human love-very human and very physical-was not simply a necessary quickening of eggs, nor was it mere ritual through which one grew closer; the act itself was a growing-closer, a very great goodness-and (so far as he knew) unknown even to the Old Ones of his former people. He was still grokking it, trying at every opportunity to grok its fullness. But he had long since broken through any fear that heresy lay in his suspicion that even the Old Ones did not know this ecstasy-he grokked already that these his new people held spiritual depths unique. Happily he tried to sound them, with no inhibitions from his childhood to cause him guilt or reluctance of any sort.

His human teachers had been unusually well qualified to instruct his innocence without bruising it. The result was as unique as he himself.

Jill was very pleased but not really surprised to find that "Aunt Patty" accepted as inevitable and necessary, and with forthright fullness, the fact that sharing water in a very ancient Martian ceremony with Mike led at once to sharing Mike himself in a human rite ancient itself. Jill was somewhat surprised (although still pleased) at Pat's continued calm acceptance when it certainly had been demonstrated to their new water brother that Mike was capable of more miracles than he had disclosed up to then. However, Jill did not then know that Patricia Paiwonskj had met a holy man before-Patricia expected more of holy men. Jill herself was simply serenely happy that a cusp had been reached and passed with right action and was ecstatically happy herself to grow closer as the cusp was determinbed-all of which she thought in Martian and quite differently.

In time they rested and Jill had Mike treat Patty to a bath given by telekinesis, and herself sat on the edge of the tub and squealed and giggled when the older woman did. It was just play, very human and not at all Martian; Mike had done it for Jill on the initial occasion almost lazily rather than raise himself up out of the water-an accident, more or less. Now it had become a custom, one that Jill knew Patty would like. It tickled Jill to see Patty's face when she found herself being scrubbed all over by gentle. invisible hands . . . and then, presently dried in a whisk with neither towel nor blast of air.

Patricia blinked. "After that I need a drink. A big one."

"Certainly, darling."

"And I still want to show you kids my pictures... all of them." Patricia followed Jill out into the living room, Mike in train, and stood in the middle of the rug. "But first look at me. Look at me, not at my pictures. What do you see?"

With mild regret Mike stripped her tattoos off in his mind and looked at his new brother without her decorations. He liked her tattoos very much; they were peculiarlY her own, they set her apart and made her a self. They seemed to him to give her a slightly Martian flavor, in that she did not have the bland sameness of most humans. He had already memorized them all and had thought pleasantly of having hiniseif tattooed all over, once be grokked what should be pictured. The life of his father, water brother Jubal? Re would have to ponder it. He would discuss it with Jill-and Jill might wish to be tattooed, too. What designs would make Jill more beautifully Jill? In the way in which perfume multiplied Jill's odor without changing it?

What he saw when he looked at Pat without her tattooS pleased him but not as much; she looked as a woman necessarily must look to be woman. Mike still did not grok Duke's collection of pictures; the pictures were interesting and had taught Mike that there was more variety in the sizes, shapes, proportions and colors of women than he had known up to then and that there was some variety in the acrobadcs involving physical love-but having learned these simple facts he seemed to grok that there was nothing more to be learned from Duke's prized pictures. Mike's early training had made of him a very exact observer, by eye (and other senses), but that ssme training bad left him unresponsive to the subtle pleasures of voyeurism, it was not that be did not find women (including, most emphaticaly Patricia Paiwoiiski) sexually stimulating, but it lay not in seeing them. Of his senses, smell and touch counted inucb higher-in which he was quasi-human, quasi-Martian; the parallel Martian reflex (as unsubtle as a sneeze) was triggered by those two, but could activate only in season-what must be termed "sex" in a Martian is as romantic as intravenous feeding.

But, having been invited to see her without her pictures. Mike did notice more sharply one thing about Patricia that he already knew: she had her own face, marked in beauty by bet life. She bad, he saw with gentle wonder, her own face even more than Jill had, and it made him feel toward Fat even more of an emotion he did not as yet call love but for which be used a Martian concept more discriminating.

She had her own odor, too, and her own voice, as all humans did. Her voice was husky and he liked to hear it even when he did not grok her meaning; her odor was mixed (he knew) with an unscrubbed trace of bitter muskiness from daily contact with snakes. It did not put him off; Pat's snakes were part of Pat as were her tattoos. Mike liked Pat's snakes and could handle the poisonous ones with perfect safety-and not alone by stretching time to anticipate and avoid their strikes. They grokked with him; he savored their innocent merciless thoughts-they reminded him of home. Other than Pat, Mike was the only person who could handle Honey Bun with pleasure to the boa constrictor. Her torpor was usually such that others could, if necessary, handle her-but Mike she accepted as a substitute for Pat.

Mike let the pictures reappear.

Jill looked at her and wondered why Aunt Patty had ever let herself be tattooed in the first place? She would really look rather nice-if she weren't a living comic strip. But

she loved Aunt Fatty for what she was, not the way she looked-and, of course, it did give her a steady living at least until she got so old and haggard that the marks wouldn't pay to look at her even if all those pictures had been signed by Rembrandt. She hoped that Patty was tucking away plenty in the grouch bag_then she remembered that Aunt Patty was now one of Mike's water brothers (and her own, of course) and Mike's endless fortune gave Patty certain old-age insurance; Jill felt warmed by it.

"Well?" repeated Mrs. Paiwonski. "What do you see? How old am I, Michael?"

"I don't know," he said simply.

"Guess."

"I can't guess, Pat."

"Oh, go ahead. You won't hurt my feelings."

"Patty," Jill put in, "he really does mean that he can't guess. He hasn't had much chance to learn to judge ages-you know how short a time he's been on Earth. And besides that, Mike thinks of things in Martian years and Martian arithmetic. If it's time or figures, I keep track of it for him."

"Well ... you guess, hon. Be truthful."

Jill looked Patty over again, noting her trim figure but also noting her hands and throat and the corners of her eyes-then discounted her guess by five years despite the Martian honesty she owed a water brother. "Mmm, thirtyish, give or take a year."

Mrs. Paiwonski laughed triumphantly. "That's just one bonus from the True Faith, my dears! Jill hon, I'm 'way into my forties. Just how far in we won't say; I've quit counting."

"You certainly don't look it."

"I know I don't. That's what Happiness does for you, dear. Alter my first kid, I let my figure go to pot. I got quite a can on me-they invented the word 'broad' just to fit me. My belly always looked like four months gone, or worse. My busts hung down-and I've never had 'em lifted. You don't have to believe me; sure, I know a good plastic surgeon doesn't leave a scar . . . but on me it would show, dear; it would chop chunks out of two of my pictures.

"Then I seen the light! I got converted. Nope, not exercise, not diet- I still eat like a pig and you know it. Happiness, dear. Perfect Happiness in the Lord through the help of Blessed Foster."

"It's amazing," said Jill, and meant it. She knew women who had kept their looks quite as well (as she firmly intended to keep hers) but in every case only through great effort. She knew that Aunt Patty was telling the truth about diet and exercise, at least during the time she had known her . . . and as a surgical nurse Jill knew exactly what was excised and where in a breast-lifting job; those tattoos had certainly never known a knife.

But Mike was not amazed. He assumed conclusively that Pat had learned how to think her body as she wished it, whether she attributed it to Foster or not. He was still trying to teach this control to Jill, but knew that she would have to perfect her knowledge of Martian before it could be perfect. No hurry, waiting would accomplish it. Pat went on talking:

"I wanted you to see what the Faith has done for me. But that's just outside; the real change is inside. Happiness. I've got to try to tell you about it. The good Lord knows that I'm not ordained and I'm not gifted with tongues . . . but I've got to try. And then I'll answer your questions if I can. The first thing that you've got to accept is that all the other

socalled churches are traps of the Devil. Our dear Jesus preached the True Faith, so Foster said and I truly believe. But, in the Dark Ages his words were deliberately twisted and added to and changed until Jesus wouldn't recognize 'em. And that is why Foster was sent down to Earth, to proclaim a New Revelation and straighten it out and make it clear again."

Patricia Paiwonski pointed her finger and suddenly looked very impressive, a priestess clothed in holy dignity and mystic symbols. "God wants us to be Happy. He filled the world with things to make us Happy if only we see the light. Would God let grape juice turn into wine if He didn't want us to drink and be joyful? He could just as easily let is stay grape juice . . . or turn it straight into vinegar that nobody could get a happy giggle out of. Ain't that true? Of course He don't mean you should get roaring drunk and beat your wife and neglect your kids . . . but He gave us good things to use, not abuse . . . and not to ignore. But if you feel like a drink or six, among friends who have seen the light, too, and it makes you want to jump up and dance and give thanks to the Lord on high for his goodness-why not? God made alcohol and he made feet- and he made 'em so you could put 'em together and be happy!"

She paused and said, "Fill 'er up again, honey; preaching is thirsty work-and not too strong on the ginger ale this time; that's good rye. And that ain't all. If God didn't want women to be looked at, he would have made 'em ugly-that's reasonable, isn't it? God isn't a cheat; He set up the game Himself-He wouldn't rig it so that the marks can't win, like a flat joint wheel in a town with the fix on. He wouldn't send anybody to Hell for losing in a crooked game.

"All right! God wants us to be Happy and he told us how: 'Love one another!' Love a snake if the poor thing needs love. Love thy neighbor if he's seen the light and has love in his heart . . . and the back of your hand only to sinners and Satan's corruptors who want to lead you away from the appointed path and down into the pit. And by 'love' he didn't mean namby-pamby old-maid-aunt love that's scared to look up from a hymn book for fear of seeing a temptation of the flesh. If God hated flesh, why did lie make so much of it? God is no sissy. He made the Grand Canyon and comets coursing through the sky and cyclones and stallions and earthquakes-can a God who can do all that turn around and practically wet his pants just because some little sheila leans over a mite and a man catches sight of a tit? You know better, hon-and so do I! When God told us to love, He wasn't holding out a card on us; He meant it. Love little babies that always need changing and love strong, smelly men so that there will be more little babies to love-and in between go on loving because it's so good to love!

"Of course that don't mean to peddle it any more than a bottle of rye whiskey means I gotta get fighting drunk and clobber a cop. You can't sell love and you can't buy Happiness, no price tags on either one and if you think there is, the way to Hell lies open to you. But if you give with an open heart and receive what God has an unlimited supply of, the Devil can't touch you. Money?" She looked at Jill. "Hon, would you do that water-sharing thing with somebody, say for a million dollars? Make it ten million, tax free."

"Of course not." ("Michael, do you grok this?")

("Almost in fullness, Jill. Waiting is. ")

"You see, dearie? I knew what it meant, I knew love was in that water. You're seekers, very near the light. But since you two, from the love that is in you, did 'share

water and grow closer,' as Michael says, I can tell you things I couldn't ordinarily tell a seeker-"

The Reverend Foster, self-ordained--or directly ordained by God, depending on authority cited-had an intuitive instinct for the pulse of his culture and his times at least as strong as that of a skilled carney sizing up a mark. The country and culture commonly known as "America" had had a badly split personality all through its history. Its overt laws were almost always puritanical for a people whose covert behavior tended to be Rabelaisian; its major religions were all Apollonian in varying degree-its religious revivals were often hysterical in fashion almost Dionysian. In the twentieth century (Terran Christian Era) nowhere on Earth was sex so vigorously suppressed as in America-and nowhere else was there such a deep interest in it.

The Reverend Foster had in common with almost every great religious leader of that planet two traits: he had an extremely magnetic personality ("hypnotist" was a word widely used by his detractors, along with others less mild) and, sexually, he did not fall anywhere near the human norm. Great religious leaders on Earth were always either celibate, or the antithesis. (Great leaders, the innovators-not necessarily the major administrators and consolidators.) Foster was not celibate.

Nor were any of his wives and high priestesses-the clincher for complete conversion and rebirth under the New Revelation usually included a ritual which Valentine Michael Smith at a later time was to grok as especially suited for growing-closer.

This, of course, was nothing new; in Terran history sects, cults, and major religions too numerous to list had used essentially the same technique-but not on a major scale in America before Foster's times. Foster was run out of town more than once before he "perfected" a method and organization that permitted him to expand his capric cult. In organization he borrowed as liberally from freemasonry, from Catholicism, from the Communist Party, and from Madison Avenue as he had borrowed from any and all earlier scriptures in composing his New Revelation . . . and he sugar-coated it all as a return to primitive Christianity to suit his customers. He set up an outer church which anybody could attend-and a person could remain a "seeker" with many benefits of the church for years. Then there was a middle church, which to all outward appearance was "The Church of the New Revelation," the happy saved, who paid their tithes, enjoyed all economic benefits of the church's ever-widening business tie-ins, and whooped it up in the endless carnival & revival atmosphere of Happiness, Happiness, Happiness! Their sins were forgiven-and henceforth very little was sinful as long as they supported their church, dealt honestly with their fellow Fosterites, condemned sinners, and stayed Happy. The New Revelation does not specifically encourage adultery; it simply gets rather mystical in discussing sexual conduct.

The saved of the middle church supplied the ranks of the shock troops when direct action was needed. Foster borrowed a trick from the early-twentieth-century Wobblies; if a community tried to suppress a budding Fosterite movement, Fosterites from elsewhere converged on that town until there were neither jails nor cops enough to cope with them-and the cops usually had had their ribs kicked in and the jails were smashed.

If some prosecutor were brave enough to push an indictment thereafter, it was almost impossible to make it stick. Foster (after learning his lesson under fire) saw to it that such prosecutions were indeed persecution under the letter of the law; not one Conviction of a Fosterite qua Fosterite ever was upheld by the national Supreme Court-nor, later, by the High Court.

But, in addition to the overt church, there was the Inner Church, never named as such-a hard core of the utterly dedicated who made up the priesthood, all the church lay leaders, all keepers of keys and records and makers of policy. They were the "reborn," beyond sin, certain of their place in heaven, and sole participants of the inner mysteries-and the only candidates for direct admission to Heaven.

Foster selected these with great care, doing so personally until the operation got too big. He looked for men as much like himself as possible and for women like his priestess-wives----dynamic, utterly convinced (as he was himself convinced), stubborn, and free (or able to be freed, once their guilt and insecurity was purged) of jealousy in its simplest, most human meaning-and all of them potential satyrs and nymphs, as the secret inner church was that utterly Dionysian cult that America had never had and for which there was an enormous potential market.

But he was most cautious-if candidates were married, it had to be both spouses. An unmarried candidate had to be sexually attractive as well as sexually aggressive-and he impressed on his priests that the males must always equal or exceed in number the females. Nowhere is it admitted that Foster had studied the histories of earlier, somewhat parallel cults in America but he either knew (or sensed) that most of such had foundered because the possessive concupiscence of their priestS led to male jealousy and violence. Foster never made this error; not once did he keep a woman entirely to himself, not even the women he married legally.

Nor did he try too eagerly to expand his core group; the middle church, the one known to the public~ offered plenty to slake the milder needs of the great masses of guilt-ridden and unhappy. If a local revival produced even two couples who were capable of "Heavenly Marriage" Foster was content-if it produced none, he let the other seeds grow and sent in a salted priest and priestess to nurture them.

But, so far as possible, he always tested candidate couples himself, in company with some devoted priestess. Since such a couple was already "saved" insofar as the middle church was concerned, he ran little risk- none, really, with the woman candidate and he always sized up the man himself before letting his priestess go ahead.

At the time she was saved, Patricia Paiwonsi was still young, married, and "very happy, very happy." She had her first child, she looked up to and admired her much older husband. George Paiwoüski was a generous, very affectionate man. He did have one weakness, which often left him too drunk to show his affection after a long day . . . but his tattooing needle was still steady and his eye sharp. Patty counted herself a faithful wife and, on the whole, a lucky one-true, George occasionally got affectionate with a female client . . . quite affectionate if it was early in the day-and, of course, some tattooing required privacy, especially with ladies. Patty was tolerant . . . besides, she sometimes herself made a date with a male client, especially after George got to hitting the bottle more and more.

Nevertheless there was a lack in her life, one which was not filled even when an especially grateful client made her the odd gift of a bull snake- shipping out on a

freighter, he said, and couldn't keep it any longer. She had always liked pets and had none of the vulgar phobia about snakes; she made a home for it in their show window facing the street, and George made a beautiful four-color picture to back it up: "Don't Tread on Me!" His new design turned out to be very popular.

Preseutly she had more snakes and they were quite a comfort to her. But she was the daughter of an Ulster Protestant and a girl from Cork; the armed truce between her parents had left her with no religion.

She was already a "seeker" when Foster preached in san Pedro; she had managed to get George to go a few Sundays but he had not yet seen the light.

Foster brought them the light, they made their confessions the same day. When Foster returned six months later for a quick check on how his branch was doing, the Paiwonskis were so dedicated that he gave them personal attention.

"I never had a minute's trouble with George from the day he saw the holy light," she told Mike and Jill- "Of course, he still drank •.. but he drank in church and never too much. When our holy leader returned, George had already started his Great Project. Naturally we wanted to show it to Foster, if he could find time-" Mrs. Paiwonski hesitated. "Kids, I really ought not to be telling you any of this."

"Then don't," sill said emphatically "Patty darling, neither of us want you ever to do or say anything you don't feel easy about. 'Sharing water' has to be easy and natural . . and waiting until it comes easy for you is easy for us."

"Uh ... but I do want to share it. Look, darlings, I trust you both utterly. But I just want you to remember that this is Church things Pm telling you, so you mustn't ever tell anyone . . . just as I wouldn't tell anything about you."

Mike nodded. "Here on Earth we sometimes call it 'water brother' business. On Mars there's no problem . . . but here I grok that there sometimes is. ~Water brother' business you don't repeat."

"I...I,'Grok.' That's a funny word, but I'm learning it, All right, darlings, this is 'water brother' business. Did you know that all Fosterites are tattooed? Real Church members I mean, the ones who are eternally saved forever and ever and a day-like me? Oh, I don't mean tattooed all over, the way I am, but-look, see that? Right over my heart . . . see? That's Foster's holy kiss. George worked it into the design so that it looks like part of the picture it's in ... so that nobody could guess unless I told 'em. But it's his kiss-and Foster put it there hisselfi" She looked ecstatically proud.

They both examined it. "It is a kiss mark," Jill said wonderingly. "Just like somebody had kissed you there wearing lipstick. But, until you showed us, I thought it was part of that sunset."

"Yes, indeedy, that's why George did it. Because you don't go showing Foster's kiss to anyone who doesn't wear Foster's kiss-and I never have, up to now. But," she insisted, "I'm sure you're going to wear one, both of you, someday-and when you do, I want to be the one to tattoo 'em on."

Jill said, "I don't quite understand, Patty. I can see that it's wonderful for you to have been kissed by Foster-but how can he ever kiss us? After all, he's-up in Heaven."

"Yes, dearie, he is. But let me explain. Any ordained priest or priestess can give you Foster's kiss. It means God's in your heart. God is part of you . . . forever."

Mike was suddenly intent. "Thou art God!"

"Huh, Michael? Well, that is a strange way to say it-I've never heard a priest put it quite that way. But that does sort of express it . . . God is in you and of you and with you, and the Devil can't ever get at you."

"Yes," agreed Mike. "You grok God." He thought happily that this was nearer to putting the concept across than he had ever managed before except that Jill was learning it, in Martian. Which was inevitable. "That's the idea, Michael. God ... groks you-and you are married in Holy Love and eternal Happiness to His Church. The priest, or maybe priestess-it can be either-kisses you and then the kiss mark is tattooed on to show that it's forever. Of course it doesn't have to be this big-mine is just exactly the size and shape of Foster's blessed tips-and the kiss can be placed anywhere to shield from sinful eyes. Lots of men have a patch of skull shaved and then wear a hat or a bandage until the hair grows out. Or any spot where it's blessed certain it won't be seen unless you want it to be. You mustn't sit or stand on it-but anywhere else is okay. Then you show it when you go into a closed Happiness gathering of the eternally saved."

"I've heard of Happiness meetings," Jill commented, "but I've never known quite what they are."

"Well," Mrs. Paiwonski said judicially, "there are Happiness meetings and Happiness meetings. The ones for ordinary members, who are saved but might backslide, are an awful lot of fun-grand parties with only the amount of praying that comes natural and happily, and plenty of whoopit-up that makes a good party. Maybe, even, a little real lovin'-but that's frowned on there and you'd better be mighty careful who and how, because you mustn't be a seed of dissension among the brethren. The Church is way strict about keeping things in their proper place.

"But a Happiness meeting for the eternally saved-well, you don't have to be careful because there won't be anybody there who can sin-all past and done with, If you want to drink and pass out . . . okay, it's God's will or you wouldn't want to. You want to kneel down and pray, or lift up your voice in song-Or tear off your clothes and dance; it's God's will. Although," she added, "you might not have any clothes on at all, because there can't possibly be anybody there who would see anything wrong in it."

"It sounds like quite a party," said Jill.

"Oh, it is, it is-always! And you're filled with heavenly bliss the whole time. And if you wake up in the morning on a couch with one of the eternally saved brethren, you know he's there because God willed it to make you all blessedly Happy. And you are. They've all got Foster's kiss on -they're yours." She frowned slightly. "It feels a little like 'sharing water.' You understand me?"

"I grok," agreed Mike.

("Mike?!!?")

("Wait, Jill. Wait for fullness.")

"But don't think," Patricia said earnestly, "that a person can get into an Inner Temple Happiness meeting just with a little tattoo mark-after all, it's too easy to fake. A visiting brother or sister- Well, take me. As soon as I know where the carnie is going, I write to the local churches and send 'em my finger prints so they can check 'em against the master file of the eternally saved at Archangel Foster Tabernacle_-unless they already know me. I give 'em my address care of Billboard. Then when I go to church-and I always go to church Sundays and I would never miss a Happiness meeting even if it means Tim has to slough the blow-off some nights-I go first time and get positively

identified. Most places they're mighty glad to see me; I'm an added attraction, with my unique and unsurpassed sacred pictures-I often spend most of the evening just letting people examine me . . . and every minute of it bliss. Sometimes the priest wants me to bring Honey Bun and I do Eve and the serpent-that takes body make-up, of course, or skin-colored tights if there isn't time. Some local brother plays Adam and we get scourged out of the Garden of Eden, and the local priest explains the real meaning, not all the twisted lies you hear-and we end by regaining our blessed innocence and happiness, and that's certain to get the party realLy rolling. Joy!"

She added, "But everybody is atways interested in my Foster's kiss, Because, since he went back to Heaven almost twenty years ago now and the Church has increased and flourished, not too many of us have a Foster's kiss that wasn't laid on by proxy-I always have the Tabernacle testify to that, too. And I tell them about it. Uh-"

Mrs. Paiwonski hesitated, then told them about it, in explicit detail-and Jill wondered where her admittedly limited ability to blush had gone? Then she grokked that Mike and Patty were two of a kind-God's innocents, unable to be anything else, no matter what they did. She wished, for Patty's sake, that this preposterous mishmash were really true, that Foster had really been a holy prophet who had saved her for eternal bliss.

But Foster! God's Wounds, what a travesty! Then suddenly, through her greatly improved recall, Jill was standing back in a room with a wall of glass and looking into Foster's dead eyes. But, in her mind, he seemed alive and she felt a shiver in her loins and wondered what she would have done if Foster himself had offered her his holy kiss-and his holy self?

She shut it out of her mind, but not before Mike had caught much of it. She felt him smile, with knowing innocence.

She stood up. "Pattycake darling, what time do you have to be back at the lot?"

"Oh dear! I should be back this blessed minutel"

"Why? The show doesn't roll until nine-thirty."

"Well ... Honey Bun misses me...and she's jealous if I stay out late."

"Can't you tell her that it's a Happiness meeting night?"

"Uh...The older woman gathered Jill in her arms. "It is! It certainly is!"

"Good. Then I'm going to get a certain amount of sleep-Jill is bushed, believe me. What time do you have to be up, then?"

"Uh, if I'm back on the lot by eight, I can get Sam to tear down my living top and have time to make sure that my babies are loaded safely."

"Breakfast?"

"I don't eat breakfast right away, I'll get it on the train. Just coffee when I wake up, usually."

"We can make that right here in the room. I'll see that you're up. Now you dears stay up and talk religion as long as you like; I won't let you oversleep-if you sleep. Mike doesn't sleep."

"Not at all?"

"Never. He sort of curls up and thinks a while, if he's got something to think about-but he doesn't sleep."

Mrs. Paiwonski nodded solemnly. "Another sign. I know it-and, Michael, some day you will know. Your call will come."

"Maybe," agreed Jill. "Mike, I'm falling asleep. Pop me into bed. Please?" She was lifted, wafted into the bedroom, the covers rolled back by invisible hands-she was asleep before he covered her.

Jill woke up, as she had planned, exactly at seven. Mike had a clock in his head, too, but his was quite erratic so far as Earth calendars and times were concerned; it vibrated to another need. She slipped out of bed, put her head into the other room. Lights were out and the shades were tight; it was quite dark. But they were not asleep. Jill heard Mike say with soft certainty:

"Thou art God."

"'Thou art God'-" Patricia whispered back in a voice as heavy as if drugged.

"Yes. Jill is God."

"Jill ... is God. Yes, Michael."

"And thou art God."

"Thou-are God. Now, Michael, now!"

Jill went very softly back in and quietly brushed her teeth. Presently she let Mike know in her mind that she was awake and found, as she expected, that he knew it. When she came back into the living room, shades were up and morning sun was streaming in. "Good morning, darlings!" She kissed them both.

"Thou art God," Patty said simply.

"Yes, Patty. And thou art God. God is in all of us." She looked at Patty in the harsh, bright morning light and noted that her new brother did not look tired. She looked as if she had had a full night of sleep and some extra - . . and looked younger and sweeter than ever. Well, she knew that effect-if Mike wanted to stay up, instead of reading or thinking all night, Jill never found it any trouble . . and she suspected that her own sudden sleepiness the night before had been Mike's idea, too - and heard Mike agree in his mind that it was.

"Now coffee for both you darlings-and me, too. And I just happen to have stashed away a redipak of orange juice, too."

They breakfasted lightly, filled out with happiness. Jill saw Patty looking thoughtful. "What is it, dear?"

"Uh, I hate to mention this-but what are you kids going to eat on? Happens that Aunt Patty has a pretty well stuffed grouch bag and I thought-"

Jill laughed. "Oh, darling, I'm sorry; I didn't mean to laugh. But the Man from Mars is rich! Surely you know that? Or don't you ever read the news?"

Mrs. Paiwonski looked baffled. "Well, I guess I knew-that way. But you can't trust anything you hear over the news."

Jill sighed. "Patty, you're an utter darling. And believe me, now that we're water brothers, we wouldn't hesitate an instant to mipose on you- 'sharing the nest' isn't just poetry. But it happens to be the other way around. If you ever need money-it doesn't matter how much; we can't use it up-just say so. Any amount. Any time. Write to me-or better yet, call me-because Mike doesn't have the foggiest idea about money. Why, dear, I've got a couple of hundred thousand dollars in a checking account in my name right this minute. Want some of it?"

Mrs. Paiwonski looked startled, something she had not looked since Mike had caused her costume to go away. "Bless mel No, I don't need money."

Jill shrugged. "If you ever do, just holler. We can't possibly spend it all and the government won't let Mike give it away. At least, not much of it. If you want a yacht-Mike would enjoy giving you a yacht."

"I certainly would, Pat. I've never seen a yacht."

Mrs. Paiwonski shook her head. "Don't take me up on a tall mountain, dearie-I've never wanted much ... and all I want from you two is your love-"

"You have that," Jill told her.

"I don't grok 'love'," Mike said seriously. "But Jill always speaks rightly. If we've got it, it's yours."

"-and to know that you're both saved. But I'm no longer worried about that. Mike has told me about waiting, and why waiting is. You understand me, Jill?"

"I grok. I'm no longer impatient about anything."

"But I do have something for you two." The tattooed lady got up and crossed to where she had left her purse, took a book out of it. She came back, stood close to them. "My dear ones ... this is the very copy of the New Revelation that Blessed Foster gave me . . . the night he placed his kiss on me. I want you to have it."

Jill's eyes suddenly filled with tears and she felt herself choking. "But, Aunt Patty-Patty our brother! We can't take this one. Not this one. We'll buy one."

"No. It's ...it's 'water' I'm sharing with you. For growing-closer."

"Oh-" Jill jumped up. "We'll take it. But it's ours now-all of us." She kissed her.

Presently Mike tapped her on the shoulder. "Greedy little brother. My turn."

"I'll always be greedy, that way."

The Man from Mars kissed his new brother first on her mouth, then paused and gently kissed the spot where Foster had kissed her. Then he pondered, briefly by Earth time, picked a corresponding spot on the other side where he saw that George's design could be matched well enough for his purpose-kissed her there while he thought by stretched-out time and in great detail what he wanted to accomplish. It was necessary to grok the capillaries- To the other two, subject and spectator, he simply gently and briefly pressed his lips to the garishly decorated skin. But Jill caught a hint of the effort he had exerted and looked. "Patty! See!"

Mrs. Paiwonski looked down at herself. Marked on her skin, paired stigmata in blood red, were his lips. She started to faint-then showed the depth of her own staunch faith. "Yes. Yes! Michael-"

Most shortly thereafter the tattooed lady had disappeared, replaced by a rather mousy housewife in high neck, long sleeves and gloves. "I won't cry," she said soberly, "and it's not good-by; there are no good-bys in eternity. But I will be waiting." She kissed them both, briefly, left without looking back.

XXVIII

"BLASPHEMY!"

Foster looked up. "Something bite you, Junior?" This temporary annex had been run up in a hurry and Things did get in-swarms of almost invisible imps usually - . . harmless, of course, but a bite from one left an itch on the ego.

"Uh ... you'd have to see it to believe it-here, I'll run the omniscio back a touch."

"You'd be surprised at what I can believe, Junior." Nevertheless Digby's supervisor shifted a part of his attention. Three temporals-humans, he saw they were; a man and two women-speculating about the eternal. Nothing odd about that. "Yes?"

"You heard what she said! The 'Archangel Michael' indeed!"

"What about it?"

"'What about it?' Oh, for God's sake!"

"Very possibly."

Digby was so indignant that his halo quivered. "Foster, you must not have taken a good look. She meant that over-age juvenile delinquent that sent me to the showers. Scan it again."

Foster let the gain increase, noted that the angel-in-training had spoken rightly-and noticed something else and smiled his angelic smile. "How do you know he isn't, Junior?"

"Huh?"

"I haven't seen Mike around the Club lately and I recall that his name has been scratched on the Millennial Solipsist Tournament-that's a Sign that he's likely away on detached duty, as Mike is one of the most eager Solipsism players in this sector."

"But the notion's obscene!"

"You'd be surprised how many of the Boss's best ideas have been called 'obscene' in some quarters-or, rather, you should not be surprised, in view of your field work. But 'obscene' is a concept you don't need; it has no theological meaning. 'To the pure all things are pure.'"

"But-"

"I'm still Witnessing, Junior. You listen. In addition to the fact that our brother Michael seems to be away at this micro-instant-and I don't keep track of him; we're not on the same Watch list-that tattooed lady who made that oracular pronouncement is not likely to be mistaken; she's a very holy temporal herself."

"Who says?"

"I say. I know." Foster smiled again with angelic sweetness. Dear little Patricia! Getting a little long in the tooth now but still Earthily desirable-and shining with an inner light that made her look like a stained glass window. He noted without temporal pride that George had finished his great dedication since he had last looked at Patricia-and that picture of his being called up to Heaven wasn't bad, not bad at all, in the Higher sense. He must remember to look up George and compliment him on it, and tell him he had seen Patricia-hnun, where was George? A creative artist in the universe design section working right under the Architect, as he recalled-no matter, the master file would dig him out in a split millennium.

What a delicious little butterball Patricia had been and such holy frenzy! If she had had just a touch more assertiveness and a touch less humility he could have made her a priestess. But such was Patricia's need to accept God according to her own nature that she could have qualified only among the Lingayats . . . where she wasn't needed. Foster considered scanning back and seeing her as she had been, decided against it with angelic restraint; there was work to be done- "Forget the omniscio, Junior. I want a Word with you." Digby did so and waited. Foster twanged his halo, an annoying habit he had when he was meditating. "Junior, you aren't shaping up too angelically."

"I'm sorry."

"Sorrow is not for eternity. But the Truth is you've been preoccupied with that young fellow who may or may not be our brother Michael. Now wait- In the first place it is not for you to Judge the instrument used to call you from the pasture. In the second place it is not he who vexes you-you hardly knew him-what's bothering you is that little brunette secretary you had. She had earned my Kiss quite some temporal period before you were called. Hadn't she?"

"I was still testing her."

"Then no doubt you have been angelically pleased to note that Supreme Bishop Short, after giving her a most thorough examination himself-oh, very thorough; I told you he would measure up-has passed her and she now enjoys the wider Happiness she deserves. Mmmm, a shepherd should take joy in his work . . . but when he's promoted, he should take joy in that, too. Now it just happens I know there is a spot open for a Guardian-in-Training in a new sector being opened up-a job under your nominal rank, I concede, but good angelic experience. This planet-well, you can think of it as a planet; you'll see-is occupied by a race of tripolaxity instead of bipolarity and I have it on High Authority that Don Juan himself could not manage to take Earthly interest in any of their three polarities . . . that's not an opinion; he was borrowed as a test. He screamed, and prayed to be returned to the solitary hell he has created for himself."

"Going to send me out to Flatbush, huh? So I won't interfere!"

"Tut, tut! You can't interfere-the one Impossibility that permits all else to be possible; I tried to tell you that when you arrived. But don't let it fret you; you are eternally permitted to try. Your orders will include a loop so that you will check back at here-now without any loss of temporality. Now fly away and get cracking; I have work to do." Foster turned back to where he had been interrupted. Oh, yes, a poor soul temporally designated as "Alice Douglas"-to be a goad was a hard assignment at best and she had met it unflaggingly. But her job was complete and now she would need rest and rehabilitation from the inescapable battle fatigue . . . she'd be kiclthig and screaming and foaming ectoplasm at all orifices.

Oh, she would need a thorough exorcism after a job that rough! But they were all rough; they couldn't be anything else. And "Alice Douglas" was an utterly reliable field operative; she could take any left-hand assignment as long as it was essentially virginal-burn her at the stake or put her in a nunnery; she always delivered.

Not that he cared much for virgins, other than with professional respect for any job well done. Foster sneaked a quick last look at Mrs. Paiwonski. There was a fellow worker he could appreciate. Darling little Patricia! What a blessed, lusty benison-

XXIX

AS THE DOOR OF THEIR SUITE closed itself behind Patricia Paiwonski, Jill said, "What now, Mike?"

"We're leaving. Jill, you've read some abnormal psychology."

"Yes, of course. In training. Not as much as you have, I know."

"Do you know the symbolism of tattooing? And snakes?"

"Of course. I knew that about Patty as soon as I met her. I had been hoping that you would find a way."

"I couldn't, until we were water brothers. Sex is necessary, sex is a helpful goodness-but only if it is sharing and growing closer. I grok that if I did it without growing closer-well, I'm not sure."

"I grok that you would learn that you couldn't, Mike. That is one of the reasons-one of the many reasons-I love you."

He looked worried. "I still don't grok 'love.' Jill, I don't grok 'people.' Not even you. But I didn't want to send Pat away."

"Stop her. Keep her with us."

("Waiting is, Jill.")

("I know.")

He added aloud, "Besides, I doubt if I could give her all she needs. She wants to give herself all the time, to everybody. Even her Happiness meetings and her snakes and the marks aren't enough for Pat. She wants to offer herself on an altar to everybody in the world, always-and make them happy. This New Revelation . . . I grok that it is a lot of other things to other people. But that is what it is to Pat."

"Yes, Mike. Dear Mike."

"Time to leave. Pick the dress you want to wear and get your purse. I'll dispose of the rest of the trash."

Jill thought somewhat sadly that she would like, sometimes, to take along just one or two things. But Mike always moved on with just the clothes on his back-and seemed to grok that she preferred it that way, too. "I'll wear that pretty blue one."

It floated out to her, poised itself over her, wriggled down onto her as she held up her hands; the zipper closed. Shoes to suit it walked toward her, waited while she stepped into them. "I'm ready, Mike."

Mike had caught the wistful flavor of her thought, but not the concept; it was too alien to Martian ideas. "Jill? Do you want to stop and get married?"

She thought about it. "We couldn't, today, Mike. It's Sunday. We couldn't get a license."

"Tomorrow, then. I will remember. I grok that you would like it."

She thought about it. "No, Mike."

"Why not, Jill?"

"Two reasons. One, we couldn't be any closer through it, because we already share water. That's logic, both in English and in Martian. Yes?"

"Yes."

"And two, a reason valid just in English. I wouldn't have Dorcas and Anne and Miriam-and Patty-think that I was trying to crowd them out and one of them might think so."

"No, Jill, none of them would think so."

"Well, I won't chance it, because I don't need it. Because you married me in a hospital room ages and ages ago. Just because you were the way you are. Before I even guessed it." She hesitated. "But there is something you might do for me."

"What, Jill?"

"Well, you might call me pet names occasionally! The way I do you."

"Yes, Jill. What pet names?"

"Oh!" She kissed him quickly. "Mike, you're the sweetest, most lovable man I've ever met-and the most infuriating creature on two planets! Don't bother with pet names. Just call me 'little brother' occasionally...it makes me go all quivery inside."

"Yes, Little Brother."

"Oh, my! Now get decent fast and let's get out of here-before I take you back to bed. Come on. Meet me at the desk; I'll be paying the bill." She left very suddenly.

They went to the town's station flat and caught the first Greyhound going anywhere. A week or two later they stopped at home, shared water for a couple of days, left again without saying good-by--or, rather, Mike did not; saying good-by was one human custom Mike stubbornly resisted and never used with his own. He used it formally with strangers under circumstances in which Jill required him to.

Shortly they were in Las Vegas, stopping in an unfashionable hotel near but not on the Strip. Mike tried all the games in all the casinos while Jill filled in the time as a show girl-gambling bored her. Since she couldn't sing or dance and had no act, standing or parading slowly in a tall improbable hat, a smile, and a scrap of tinsel was the job best suited to her in the Babylon of the West. She preferred to work if Mike was busy and, somehow, Mike could always get her the job she picked out. Since the casinos never closed, Mike was busy almost all their time in Las Vegas.

Mike was careful not to win too much in any one casino, keeping to limits Jill set for him. After he had milked each one for a few thousand he carefully put it all back, never letting himself be the big-money player at any game, whether winning or losing. Then he took a job as a croupier, studying people, trying to grok why they gambled. He grokked unclearly a drive in many of the gamblers that seemed to be intensely sexual in nature-but he seemed to grok wrongness in this. He kept the job quite a while, letting always the little ball roll without interference.

Jill was amused to discover that the customers in the palatial theater restaurant where she worked were just marks . . . marks with more money but still marks. She discovered something about herself, too; she enjoyed displaying herself, as long as she was safe from hands that she did not want to grab her. With her steadily increasing Martian honesty she examined this newly uncovered facet in herself. In the past, while she had known that she enjoyed being admired, she had sincerely believed that she wanted it only from a select few and usually only from one-she had been irked at the discovery, now long past, that the sight of her physical being really didn't mean anything to Mike even though he had been and remained as aggressively and tenderly devoted to her physically as a woman could dream of-il he wasn't preoccupied.

And he was even generous about that, she reminded herself. If she wished, he would always let her call him out of his deepest withdrawal trances, shift gears without complaint and be smiling and eager and loving.

Nevertheless, there it was-one of his strangenesses, like his inability to laugh. Jill decided, after her initiation as a show girl, that she enjoyed being visually admired because that was the one thing Mike did not give her.

But her own perfecting self-honesty and steadily growing empathy did not allow that theory to stand. The male half of the audience always had that to-be-expected high percentage who were too old, too fat, too bald, and in general too far gone along the sad road of entropy to be likely to be attractive to a female of Jill's youth, beauty, and fastidiousness-she had always been scornful of "lecherous old wolves"-althOugh not of

old men per se, she reminded herself in her own defense; Jubal could look at her, even use crude language in deliberate indecencies, and not give her the slightest feeling that he was anxious to get her alone and grope her. She was so serenely sure of Jubal's love for her and its truly spiritual nature that she told herself that she could easily share a bed with him, go right to sieep-and be sure that be would also, with only the goodnight peck she always gave him.

But now she found that these unattractive males did not set her teeth on edge. When she felt their admiring stares or even their outright lust- and she found that she did feel it, could even identify the source-she did not resent it; it warmed her and made her feel smugly pleased.

"Exhibitionism" had been to her simply a word used in abnormal psychology-a neurotic weakness she had held in contempt. Now, in digging out her own and looking at it, she decided that either this form of narcissism was normal, or she was abnormal and had not known it. But she didn't feel abnormal; she felt healthy and happy-healthier than she had ever been. She had been always of better than average health-nurses need to be-but she hadn't had a sniffle nor even an upset stomach in she couldn't remember when . . . why, she thought wonderingly, not even cramps.

Okay, she was healthy-and if a healthy woman liked to be looked at-and not as a side of beefi-then it follows as the night from day that healthy men should like to look at them, else there was just no darn sense to itl At which point she finally understood, intellectually, Duke and his pictures . . . and begged his pardon in her mind.

She discussed it with Mike, tried to explain her changed viewpoint- not easy, since Mike could not understand why Jill had ever minded being looked at, at any time, by anyone. Not wishing to be touched he understood; Mike avoided shaking hands if he could do so without offense, he wanted to touch and be touched only by water brothers (Jill wasn't sure just how far this included male water brothers in Mike's mind; she had explained homosexuality tO him, after he had read about it and failed to grok it-and had given him practical rules for avoiding even the appearance thereof and how to keep such passes from being made at him, since she assumed correctly that Mike, pretty as he was, would attract such passes. He had followed her advice and had set about making his face more masculine, instead of the androgynous beauty he had first had. Nevertheless Jill was not sure that Mike would refuse such an invitation from, say, Duke-but fortunately Mike's male water brothers were all decidedly masculine men, just as his others were very female women. Jill hoped that it would stay that way; she suspected that Mike would grok a "wrongness" in the poor in-betweeners anyhow-they would never be offered water.)

Nor could Mike understand why it now pleased her to be stared at. The only time when their two attitudes had been even roughly similar had been as they left the carnival, when Jill had discovered that she had become indifferent to stares-willing to do their act "stark naked," as she had told Patty, if it would help.

Jill saw that her present self-knowledge had been nascent at that point; she had never been truly indifferent to masculine stares. Under the unique necessities of adjusting to life with the Man from Mars she had been forced to shuck off part of her artificial, training-imposed persona, that degree of ladylike prissiness a nurse can retain despite the rigors of an unusually no-nonsense profession. But Jill hadn't known that she had any prissiness to lose until she lost it.

Of course, Jill was even more of a "lady" than ever-but she preferred to think of herself as a "gent." But she was no longer able to conceal from her conscious mind (nor had any wish to) that there was something inside her as happily shameless as a tabby in heat going into her belly dance for the enticement of the neighborhood toms.

She tried to explain all this to Mike, giving him her theory of the complementary and functional nature of narcissist display and voyeurism, with herself and Duke as clinical examples. "The truth is, Mike, that I find I get a real kick out of having all those men stare at me . . . lots of men and almost any man. So now I grok why Duke likes to have lots of pictures of women, the sexier the better. Same thing, only in reverse. It doesn't mean that I want to go to bed with them, any more than Duke wants to go to bed with a photograph-ShUcks~ dearest, I don't even want to say hello to them. But when they look at me and tell me-think at me-that I'm desirable, it gives me a tingle, a warm pleasant feeling right in my middle." She frowned slightly. "You know, I think I ought to get a real naughty picture taken of me and send it to Duke. Just to tell him that I'm sorry I snooted him and failed to grok what I thought was a weakness in him, If it's a weakness, I've got it, too-but girl style. If it is a weakness- But I grok it isn't."

"All right. We'll find a photographer in the morning."

She shook her head. "I'll simply apologize to Duke the next time we go home, I wouldn't actually send such a picture to Duke. He has never made a pass at me-and I don't want him getting ideas."

"Jill, you would not want Duke?"

She heard an echo of "water brother" in his mind. "11mm truthfully I've never really thought about it. I guess I've been 'being faithful' to you-not that it has been an effort. But I grok you speak rightly; I wouldn't turn Duke down-and I would enjoy it, too. What do you think of that darling?"

"I grok a goodness," Mike said seriously.

"Hmm ... my gallant Martian, there are times when we human females appreciate at least a semblance of jealousy-but I don't think there is the slightest chance that you will ever grok 'jealousy.' Darling, what would you grok if one of those marks-those men in the audience, not a water brother-made a pass at me?"

Mike barely smiled. "I grok he would be missing."

"Mmm ... I grok he might be, too. But, Mike-listen to me carefully, dear. You promised me that you wouldn't do anything of that sort except in utter emergency. So don't be hasty. If you hear me scream and shout, and reach into my mind and know that I'm in real trouble, that's another matter. But I was coping with wolves when you were still on Mars. Nine times out often, if a girl gets raped, it's at least partly her own fault. That tenth time-well, all right. Give him your best heave-ho to the bottomless pit. But you aren't going to find it necessary."

"All right, I will remember. I wish you were sending that naughty picture to Duke."

"What, dear? I will if you want me to. It's just that if I ever make a pass at Duke-and I might, now that you've put the idea into my little pointy head-I'd rather grab his shoulders and look him in the eye and say, 'Duke, how about it?-I'm willing.' I don't want to do it by sending him a naughty picture through the mail, like those nasty women used to send to you. But if you want me to, okay. Uh, I needn't make it too naughty-I could

make it obviously a show girl's professional picture and tell him what I'm doing and ask him if he has room for it in his scrap book. He might not take it as a pass."

Mike frowned. "I spoke incompletely. If you wish to send Duke a naughty picture, do so. If you do not wish, then do not. But I had hoped to see the naughty picture taken. Jill, what is a 'naughty' picture?"

Mike was baffled by the whole idea-Jill's reversal from an attitude that he had never understood but bad learned to accept into exactly the opposite attitude of pleasure-sexual pleasure, he understood-at being stared at . . . plus a third and long-standing bafflement at Duke's "art" collection-it certainly was not art. But the pale, wan Martian thing which parallels tumultuous human sexuality gave him no foundation for grokking either narcissism or voyeurism, modesty or display.

He added, '"Naughty' means a wrongness, usually a small wrongness, but I grokked that you did not mean even a small wrongness, but a goodness." a naughty picture could be either one, I guess-depending on who it's for-now that I'm over some prejudice. But- Mike, I'll have to show you; I can't tell you. But first close those slats, will you?"

The Venetian blinds flipped themselves shut. "All right," she said. "Now this pose would be just a little bit naughty-any of the show girls would use it as a professional pic . . . and this one is just a little bit more so, some of the girls would use it. But this one is unmistakably naughty and this one is quite naughty . . . and this one is so extremely naughty that I wouldn't pose for it with my face wrapped in a towel- unless you wanted it."

"But if your face was covered, why would I want it?"

"Ask Duke. That's all I can say."

He continued to look puzzled. "I grok not wrongness, I grok not goodness. I grok-" He used a Martian word indicating a null state of all emotions.

But he was interested because he was so baffled; they went on discussing it, in Martian as much as possible because of its extremely fine discriminations for emotions and values-and in English, too, because Martian. rich as it is, simply couldn't cope with the concepts.

Mike showed up at a ringside table that night, Jill having coached him in how to bribe the maître d'hôtel to give him such a spot; he was determined to pursue this mystery. Jill was not averse. She came strutting out in the first production number, her smile for everyone but a quick wink for Mike as she turned and her eyes passed across his. She discovered that, with Mike present, the warm, pleased sensation she had been enjoying nightly was greatly amplified-she suspected that, if the lights were out, she would glow in the dark.

When the parade stopped and the girls formed a tableau, Mike was no more than ten feet from her-she had been promoted her first week to a front position. The director had looked her over on her fourth day with the show and had said, "I don't know what it is, kid. We've got girls around town begging for just any job with twice the shape you've got-but when the lights hit you, you've got what the customers look at. Okay, I'm moving you up where they can see better. The standard raise . . . and I still don't know why."

She posed and talked with Mike in her mind. ("Feel anything?")

("I grok but not in fullness.')

("Look where I am looking, my brother. The small one. He quivers. He thirsts for me.')

("I grok his thirst ")

("Can you see him?") Jill stared straight into the customer's eyes and gave him a warm smile . . . not alone to increase his interest in her but also to let Mike use her eyes, if possible. As her grokking of Martian thought had increased and as they had grown steadily closer in other ways they had begun to be able to use this common Martian convenience. Not fully as yet, but with increasing ease-Jill had no control over it; Mike could see through her eyes simply by calling to her, she could see through his only if he gave it his attention.

("We grok him together," Mike agreed. ("Great thirst for my little brother.")

("!!!!")

("Yes. Beautiful agony.")

A music cue told Jill to break her pose and resume her slow strut. She did so, moving with proud sensuousness and feeling lust boil up in herself in response to emotions she was getting both from Mike and from the stranger. The routine caused her to walk away from Mike and almost toward the rutty little stranger, approaching him during her first few steps. She continued to lock eyes with him.

At which point something happened which was totally unexpected to her because Mike had never explained that it was possible. She had been letting herself receive as much as possible of the stranger's emotions, intentionally teasing him with eyes and body, and relaying what she felt from him back to Mike- -when suddenly the circuit was completed and she was looking at herself, seeing herself through strange eyes, much more lavish than she considered herself to be-and feeling the primitive need with which that stranger saw her.

Blindly she stumbled and would have fallen flat had not Mike instantly sensed her hazard, caught her, lifted her, straightened her up, and steadied her until she could walk unassisted, second-sight gone.

The parade of beauties continued on through exit. Once off stage the girl behind her said, "What the devil happened to you, Jill?"

"Caught my heel."

"Happens. But that was the wildest recovery I ever saw. For a second there you looked like a puppet on strings."

(-and so I was, dear, and so I was! But we won't go into that.) "i'm going to ask the stage manager to check that spot. I think there's a loose board. A gal could break her leg."

For the rest of the show whenever she was on stage Mike gave her quick glimpses of how she looked to various men while always making sure that she was not again taken by surprise. Jill was amazed to discover how varied were their images of her: one noticed only her legs, another seemed fascinated by the undulations of her torso, a third saw only her proud bosom. Then Mike, warning her first, let her look at other girls in the tableaux. She was relieved to find that Mike saw them as she saw them-but sharper.

But she was amazed to find that her own excitement did not diminish as she looked at, second hand, the girls around her; it increased.

Mike left promptly at the finale, ducking out ahead of the crowd as she had warned him to do, She did not expect to see him again that night since he had asked for

relief from his job as croupier only long enough to see his wife in her show. But when she dressed and returned to their hotel room, she felt him inside before she reached the room.

The door opened for her, she stepped inside, it closed behind her. "Hello, darling!" she called out. "How nice you came home!"

He smiled gently. "I now grok naughty pictures." Her clothes vanished. "Make naughty pictures."

"Huh? Yes, dear, of course." She ran through much the same poses she had earlier in the day. With each one, as soon as she was in it, Mike let her use his eyes to see herself. She looked at herself and felt his emotions and felt her own swell in response in a closed and mutually amplified re-echoing. At last she placed herself in a pose as randily carefree as her imagination could devise.

"Naughty pictures are a great goodness," Mike said gravely.

"Yes! And now I grok them, too! What are you waiting for?"

They quit their jobs and for the next several days saw as many of the revues as possible, during which period Jill made still another discovery: she "grokked naughty pictures" only through a man's eyes. If Mike watched, she caught and shared his mood, from quiet sensuous pleasure in a beautiful woman to fully aroused excitement at times-but if Mike's attention was elsewhere, the model, dancer, or peeler was just another woman to Jill, possibly pleasant to look at but in no wise exciting. She was likely to get bored and wish mildly that Mike would take her home. But only mildly for she was now nearly as patient as he was.

She pondered this new fact from all sides and decided that she preferred not to be excited by women other than through his eyes. One man gave her all the problems she could handle and more-to have discovered in herself unsuspected latent Lesbian tendencies would have been entirely too much.

But it certainly was a lot of fun-"a great goodness"-~to see those girls through his eyes as he had now learned to see them-and a still greater, ecstatic goodness to know that, at last, he looked at her herself in the same way . . . only more so.

They stopped in Palo Alto long enough for Mike to try (and fail to) swallow all the Hoover Library in mammoth gulps. The task was mechanically impossible; the scanners could not spin that fast, nor could Mike turn pages of bound books fast enough to read them all. He gave up and admitted that he was taking in raw data much faster than he could grok it, even by spending all hours the library was closed in solitary contemplation. With relief Jill moved them to San Francisco and he embarked on a more systematic search.

She came back to their flat one day to find him sitting, not in trance but doing nothing, and surrounded by books-many books: The Talmud, the Kama-Sutra, Bibles in various versions, the Book of the Dead, the Book of Mormon, Patty's precious copy of the New Revelation, Apocrypha of various sorts, the Koran, the unabridged Golden Bough, The Way, Science and Health with Key to the Scriptures, the sacred writings of a dozen other religions major and minor-even such deviant oddities as Crowley's Book of the Law.

"Trouble, dear?"

"Jill, I don't grok." He waved his hand at the books. ("Waiting, Michael Waiting for fullness is~ ")

"I don't think waiting will ever fill it. Oh, I know what's wrong; I'm not really a man, I'm a Martian-a Martian in a body of the wrong shape."

"You're plenty of man for me, dear-and I love the way your body is shaped."

"Oh, you grok what I'm talking about. I don't grok people. I don't understand this multiplicity of religions. Now among my people-"

"Your people, Mike?"

"Sorry. I should have said that, among the Martians, there is only one religion-and that one is not a faith, it's a certainty. You grok it. 'Thou art God!"

"Yes," she agreed. "I do grok ... in Martian. But you know, dearest, that it doesn't say the same thing in English . . . or any other human speech. I don't know why."

"Mmmm ... on Mars, when we needed to know anything-anything at all-we could consult the Old Ones and the answer was never wrong. Jill, is it possible that we humans don't have any 'Old Ones?' No souls, that has to mean. When we discorporate-die!--do we die dead? die all over and nothing left? Do we live in ignorance because it doesn't matter? Because we are gone and not a rack behind in a time so short that a Martian would use it for one long contemplation? Tell me, Jill. You're human."

She smiled with sober serenity. "You yourself have told me. You have taught me to know eternity and you can't take it away from me, ever. You can't die, Mike-you can only discorporate." She gestured down at herself with both hands. "This body that you have taught me to see through your eyes . . . and that you have loved so well, someday it will be gone. But I shall not be gone . . . I am that I am! Thou art God and I am God and we are God, eternally. I am not sure where I will be, or whether I will remember that I was once Jill Boardman who was happy trotting bedpanS and equally happy strutting her stuff in her buff under bright lights. I have liked this body-"

With a most uncustomary gesture of impatience Mike threw away her clothes.

"Thank you, dear," she said quietly, not stirring from where she was seated. "It has been a nice body to me-and to you-to both of us who thought of it. But I don't expect to miss it when I am through with it. I hope that you will eat it when I discorporate."

"Oh, I'll eat you, all right-unless I discorporate first."

"I don't suppose that you will. With your much greater control over your sweet body I suspect that you can live several centuries at least. If you wish it. Unless you choose to discorporate sooner."

"I might. But not now. Jill, I've tried and tried. How many churches have we attended?"

"All the sorts there are in San Francisco, I think-except, possibly, for little, secret ones that don't list their addresses. I don't recall how many times we have been to seekers' services."

"That's just to comfort Pat-I'd never go again if you weren't sure that she needs to know that we haven't given up."

"She does need to. And we can't lie about it-you don't know how and I can't, not to Patty. Nor any brother."

"Actually," he admitted, "the Fosterites do have quite a bit on the ball. All twisted, of course. They are clumsy, groping-the way I was as a carney. And they'll never correct their mistakes, because this thing-" He caused Patty's book to lift. "-is mostly crap!"

"Yes. But Patty doesn't see those parts of it. She is wrapped in her own innocence. She is God and behaves accordingly . . . only She doesn't know who She is."

"Uh huh," he agreed. "That's our Pat. She believes it only when I tell her-with proper emphasis. But, Jill, there are only three places to look. Science-and I was taught more about how the physical universe is put together while I was still in the nest than human scientists can yet handle. So much that I can't even talk to them . . . even about as elementary a gimmick as levitation. I'm not disparaging human scientists . . . what they do and how they go about it is just as it should be; I grok that fully. But what they are after is not what I am looking for-you don't grok a desert by counting its grains of sand. Then there's philosophy-supposed to tackle everything. Does it? All any philosopher ever comes Out with is exactly what be walked in with-except for those sell-deluders who prove their assumptions by their conclusions, in a circle. Like Kant. Like many other tail-chasers. So the answer, if it's anywhere, ought to be here." He waved at the pile of religious books. "Only it's not. Bits and pieces that grok true, but never a pattern-Or if there is a pattern, every time, without fail, they ask you to take the hard part on faith. Faith! What a dirty Anglo~ Saxon monosyllable-Jill, how does it happen that you didn't mention that one when you were teaching me the words that mustn't be used in polite company?"

She smiled. "Mike, you just made a joke."

"I didn't mean it as a joke ... and I can't see that it's funny. Jill, I haven't even been good for you-you used to laugh. You used to laugh and giggle until I worried about you. I haven't learned to laugh; instead you've forgotten how. Instead of my becoming human . . . you're becoming Martian."

"I'm happy, dear. You probably iust haven't noticed me laughing."

"If you laughed clear down on Market Street, I would hear it. I grok. Once I quit being frightened by it I always noticed it-you, especially~ If I grokked it, then I would grok people-I think. Then I could help somebody like Pat . . . either teach her what I know, or learn from her what she knows. Or both. We could talk and understand each other."

"Mike, all you need to do for Patty is to see her occasionally. 'Why don't we, dear? Let's get out of this dreary fog. She's home now; the carnie is closed for the season. Drop south and see her . . . and I've always wanted to see Baja California; we could go on south into warmer weather-and take her with us, that would be fun!"

"All right."

She stood up. "Let me get a dress on. Do you want to save any of those books? Instead of one of your usual quick housecleanings I could ship them to Jubal."

He flipped his fingers at them and all were gone but Patricia's gift. "Just this one and we'll take it with us; Pat would notice. But, Jill, right now I need to go out to the zoo."

"All right."

"I want to spit back at a camel and ask him what he's so sour about. Maybe camels are the real 'Old Ones' on this planet . . . and that's what is wrong with the place."

"Two jokes in one day, Mike."

"I ain't laughing. And neither are you. Nor is the camel. Maybe he groks why. Come on. is this dress all right? Do you want underCloth& I noticed you were wearing some when i moved those other clothes."

"Please, dear. It's windy and chilly outdoors."

"Up easy." He levitated her a couple of feet. "Pants. Stockings. Garter belt. Shoes. Down you go and lift your arms. Bra? You don't need a bra. And now the dress-and you're decent again. And you're pretty, whatever that is. You look good. Maybe I can get a job as a lady's maid if I'm not good for anything else. Baths, shampoos, massages, hair styling, make-up, dressing for all occasions-I've even learned to do your nails in a fashion that suits you. Will that be all, Madom?"

"You're a perfect lady's maid, dear. But I'm going to keep you myself."

"Yes, I grok I am. You look so good I think I'll toss it all away again and give you a massage. The growing closer kind."

"Yes, Michael!"

"I thought you had learned waiting? First you have to take me to the zoo and buy mc peanuts~"

"Yes, Mike. Jill will buy you peanuts."

It was cold and windy out at Golden Gate Park but Mike did not notice it and Jill had learned that she didn't have to be cold or uncomfortable if she did not wish it. Nevertheless it was pleasant to relax her control by going into the warm monkey house. Aside from its heat Jill did not like the monkey house too well-monkeys and apes were too much like people, too depressingly human. She was, she thought, finished forever with any sort of prissiness; she had grown to cherish an ascetic, almost Martian joy in all things physical The public copulations and evacuations of these simian prisoners did not trouble her as they once had; these poor penned people possessed no privacy, they were not at fault. She could now watch such without repugnance; her own impregnable fastidiousness untouched. No, it was that they were "Human, All Too Human", every action, every expression, every puzzled troubled look reminded her of what she liked least about her own race.

Jill preferred the Lion House-the great males arrogant and sure of themselves even in captivity-the placid motherliness of the big females, the lordly beauty of Bengal tigers with jungle staring out of their eyes, the little leopards~swift and deadly, the reek of musk that airconditioners could not purge. Mike usually shared her tastes for other exhibits, too; he would spend hours in the Aviary, or the Reptile House, or in watching seals- once he had told her that, if one had to be hatched on this planet to be a sea lion would be of greatest goodness.

When he had first seen a zoo, Mike had been much upset; Jill had been forced to order him to wait and grok, as be had been about to take immediate action to free all the animals. He had conceded presently, under her arguments- that most of these animals could not stay alive free in the climate and environment where he proposed to turn them ioose~that a zoo was a nest . . of a sort. He had followed this first experience with many hours of withdrawal, after which he never again threatened to remove all the bars and glass and grills. He explained to Jill that the bars were to keep people out at least as much as to keep the animals in, which he had failed to grok at first. After that Mike never missed a zoo wherever they went.

But today even the unmitigated misanthropy of the camels could not shake Mike's moodiness; he looked at them without smiling. Nor did the monkeys and apes cheer him up. They stood for quite a while in front of a cage containing a large family of capuchins, watching them eat, sleep, court, nurse, grooms and swarm aimlessly around the cage, while Jill surreptitiously tossed them peanuts despite "No Feeding" signs.

She tossed one to a medium sized monk; before he could eat it a much larger male was on him and not only stole his peanut but gave him a beating, then left. The little fellow made no attempt to pursue his tormentor; be squatted at the scene of the crime, pounded his knucks against the concrete floor, and chattered his helpless rage. Mike watched it solemnly. Suddenly the mistreated monkey rushed to the side of the cage, picked a monkey still smaller, bowled it over and gave it a drubbing worse than the one he had suffered-after which he seemed quite relaxed. The third monk crawled away, still whimpering, and found shelter in the arm of a female who had a still smaller one, a baby, on her back. The other monkeys paid no attention to any of it.

Mike threw back his head and laughed-went on laughing, loudly and uncontrollably. He gasped for breath, tears came from his eyes; he started to tremble and sink to the floor, still laughing.

"Stop it, Mike!"

He did cease folding himself up but his guffaws and tears went on. An attendant hurried over. "Lady, do you need help?"

"No. Yes, I do. Can you call us a cab? Ground car, air cab, anything -I've got to get him out of here." She added, "He's not well."

"Ambulance? Looks like he's having a fit."

"Anything!" A few minutes later she was leading Mike into a piloted atr cab. She gave the address, then said urgently. "Mike, you've got to listen to me. Quiet down."

He became somewhat more quiet but continued to chuckle, laugh aloud, chuckle again, while she wiped his eyes, for all the few minutes it took to get back to their flat. She got him inside, got his clothes off, made him lie down on the bed. "All right, dear. Withdraw now if you need to."

"I'm all right. At last I'm all right."

"I hope so." She sighed. "You certainly scared me, Mike."

"I'm sorry, Little Brother. I know. I was scared, too, the first time I heard laughing."

"Mike, what happened?"

"Jill ... I grok people!"

"Huh?" ("!!??")

("I speak rightly, Little Brother. I grok.")

"I grok people now, Jill Little Brother . . . precious darling , little imp with lively legs and lovely lewd lascivious lecherous licentious libido . . beautiful bumps and pert posterior . . . with soft voice and gentle hands. My baby darling."

"Why, Michael!"

"Oh, I knew all the words; I simply didn't know when or why to say them . . . nor why you wanted me to. I love you, sweetheart-I grok 'love' now, too."

"You always have. I knew. And I love you ... you smooth ape. My darling."

"'Ape,' yes. Come here, she ape, and put your bead on my shoulder and tell me a joke."

"Just tell you a joke?"

"Well, nothing more than snuggling. Tell me a joke I've never heard and see if I laugh at the right place. I will, I'm sure of it-and I'll be able to tell you why it's funny. Jill ... I grok people!"

"But how, darling? Can you tell me? Does it need Martian? Or mindtalk?"

"No, that's the point. I grok people. I am people ... so now I can say it in people talk. I've found out why people laugh. They laugh because it hurts so much . . . because it's the only thing that'll make it stop hurting."

Jill looked puzzled. "Maybe I'm the one who isn't people. I don't understand."

"Ah, but you are people, little she ape. You grok it so automatically that you don't have to think about it. Because you grew up with people. But I didn't. I've been like a puppy raised apart from other dogs-Who couldn't be like his masters and had never learned how to be a dog. So I had to be taught. Brother Mahmoud taught me, Jubal taught me, lots of people taught me . . . and you taught me most of all. Today I got my diploma-and I laughed. That poor little monk."

"Which one, dear? I thought that big one was just mean ... and the one I flipped the peanut to turned out to be just as mean. There certainly wasn't anything funny."

"Jill, Jill my darling! Too much Martian has rubbed off on YOU. Of course it wasn't funny-it was tragic. That's why I had to laugh. I looked at a cageful of monkeys and suddenly I saw all the mean and cruel and utterly unexplainable things I've seen and beard and read about in the time I've been with my own people and suddenly it hurt so much I found myself laughing."

"But- Mike dear, laughing is something you do when something is nice - . . not when it's horrid."

"Is it? Think back to Las Vegas- When all you pretty girls came out on the stage, did people laugh?"

"Well ... no."

"But you girls were the nicest part of the show. I grok now, that if they had laughed, you would have been hurt. No, they laughed when a comic tripped over his feet and fell down . . . or something else that is not a goodness."

"But that's not all people laugh at."

"Isn't it? Perhaps I don't grok all its fullness yet. But find me something that really makes you laugh, sweetheart . . . a joke, or anything else-but something that gave you a real belly laugh, not a smile. Then we'll see if there isn't a wrongness in it somewhere and whether you would laugh if the wrongness wasn't there." He thought. "I grok when apes learn to laugh, they'll be people."

"Maybe." Doubtfully but earnestly Jill started digging into her memory for jokes that had struck her as irresistibly funny, ones which had jerked a laugh out of her . . . incidents she had seen or heard of which had made her helpless with laughter:

"-her entire bridge club."

"Should I bow?"

"Neither one, you idiot -- instead!"

"-the Chinaman objects."

"-broke her leg."

"-make trouble for me!"

"-but it'll spoil the ride for me."

"-and his mother-in-law fainted."

"Stop you? Why, I bet three to one you could do it!"

"-something has happened to Ole."

"-and so are you, you clumsy ox!"

She gave up on "funny" stories, pointing out to Mike that such were just fantasies, not real, and tried to recall real incidents. Practical jokes? All practical jokes supported Mike's thesis, even ones as mild as a dribble glass-and when it came to an interne'S notion of a practical joke-Well, internes and medical students should be kept in cages. What else? The time Elsa Mae had lost her monogrammed panties? It hadn't been funny to Elsa Mae. Or the- She said grimly, "Apparently the pratfall is the peak of all humor. It's not a pretty picture of the human race, Mike."

"Oh, but it is!"

"Huh?"

"I had thought-I had been told-that a 'funny' thing is a thing of a goodness. It isn't. Not ever is it funny to the person it happens to. Like that sheriff without his pants. The goodness is in the laughing itself. I grok it is a bravery . . . and a sharing . . . against pain and sorrow and defeat."

"But- Mike, it is not a goodness to laugh at people."

"No. But I was not laughing at the little monkey. I was laughing at u& People. And I suddenly knew that I was people and could not stop laughing." He paused. "This is hard to explain, because you have never lived as a Martian, for all that I've told you about it. On Mars there is never anything to laugh at. All the things that are funny to us humans either physically cannot happen on Mars or are not permitted to happen- sweetheart, what you call 'freedom' doesn't exist on Mars; everything is planned by the Old Ones-or the things that do happen on Mars which we laugh at here on Earth aren't funny because there is no wrongness about them. Death, for example."

"Death isn't funny."

"Then why are there so many jokes about death? Jill, with us-us humans-death is so sad that we must laugh at it. All those religions- they contradict each other on every other point but every one of them is filled with ways to help people be brave enough to laugh even though they know they are dying." He stopped and Jill could feel that he had ahuost gone into his trance state. "Jill? Is it possible that I was searching them the wrong way? Could it be that every one of all those religions is true?"

"Huh? How could that possibly be? Mike, if one of them is true, then the others are wrong. Logic."

"So? Point to the shortest direction around the universe. It doesn't matter which way you point, it's the shortest ... and you're pointing right back at yourself."

"Well, what does that prove? You taught me the true answer, Mike. 'Thou art God.'"

"And Thou art God, my lovely. I wasn't disputing that ... but that one prime fact which doesn't depend at all on faith may mean that all faiths are true."

"Well . . . if they're all true, then right now I want to worship Siva." Jill changed the subject with emphatic direct action.

"Little pagan," he said softly. "They'll run you out of San Francisco."

"But we're going to Los Angeles ... where it won't be noticed. Oh! Thou art Siva!"

"Dance, Kali, dance!"

Some time during the night she woke and saw him standing at the window, looking out over the city. ("Trouble, my brother?")

He turned and spoke. "There's no need for them to be so unhappy."

"Darling, darling! I think I had better take you home. The city is not good for you."

"But I would still know it. Pain and sickness and hunger and fighting -there's no need for any of it. It's as foolish as those little monkeys."

"Yes, darling. But it's not your fault-"

"Ah, but it is!"

"Well ... that way-yes. But it's not just this one city; it's five billion people and more. You can't help five billion people."

"I wonder."

He came over and sat down by her. "I grok with them now, I can talk to them. Jill, I could set up our act again . . . and make the marks laugh every minute. I am certain."

"Then why not do it? Patty would certainly be pleased ... and so would I. I liked being 'with it'-and now that we've shared water with Patty, it would be like being home."

He didn't answer. Jill felt his mind and knew that he was contemplating, trying to grok. She waited.

"Jill? What do I have to do to be ordained?"

PART FOUR HIS SCANDALOUS CAREER

XXX

THE FIRST MIXED LOAD Of permanent colonists arrived on Mars; six of the seventeen survivors of the twenty~thtee originals retumed to Earth. Prospective colonists trained in Peru at sixteen thousand feet. The president of Argentina moved one night to Montevideo, taking with him such portables as could be stuffed into two suitcases, and the new Presidente started an extradition procesS before the high Court to yank him back, or at least the two suitcases. Last rites for Alice Douglas were held privately in the National Cathedral with less than two thousand attending, and editorialists and stereo comentators alike praised the dignified fortitude with which the Secretary General took his bereavement. A three-year-old named Inflation, carrying 126 pounds with Jinx Jenkins Up, won the Kentucky Derby, paying fifty-four for one, and two guests of the Colony Airotel, Louisville, Kentucky, discorporated, one voluntarily, the other by heart failure.

Another bootleg edition of the (unauthorized) biography The Devil and Reverend Foster appeared simultaneously on news stands throughout the United States; by nightfall every copy had been burned and the plates destroyed, along with incidental damage to other chattels and to real estate, plus a certain amount of mayhem, maiming, and simple assault. The British Museum was rumored to possess a copy of the first edition (untrue), and also the Vatican Library (true, but available only to certain church scholars).

In the Tennessee legislature a bill was again introduced to make the ratio pi exactly equal to three; it was reported out by the committee on public education and morals, passed with no objection by the lower house and died in conimittee in the upper house. An interchurch fundamentalist group opened offices in Van Buren, Arkansas, for

the purpose of soliciting funds to send missionaries to the Martians; Dr. Jubal Harshaw happily sent them a lavish donation, but took the precaution of sending it in the name (and with the address) of the editor of the New Humanist, a rabid atheist and his close friend.

Other than that, Jubal had very little to feel amused about_there had been too much news about Mike lately, and all of it depressing. He had treasured the occasional visits home of Jill and Mike and had been most interested in Mike's progress, especially after Mike developed a sense of humor. But they came home less frequently now and Jubal did not relish the latest developments.

It bad not troubled Jubal when Mike was run out of Union Theological Seminary, hotly pursued in spirit by a pack of enraged theologians, some of whom were angry because they believed in God and others because they did not-but all united in detesting the Man from Mars. Jubal honestly evalued anything that happened to a theologian short of breaking him on the wheel was no more than meet-and the experience was good for the boy; he'd know better next time.

Nor had he been troubled when Mike (with the help of Douglas) had enlisted under an assumed name in the Federation armed forces. He had been quite sure (through private knowledge) that no sergeant could cause Mike any permanent distress, and contrariwise, Jubal was not troubled by what might happen to sergeants or other ranks-an unreconciled old reactionary, Jubal had burned his own honorable discharge and all that went with it on the day that the United States had ceased having its own armed forces.

Actually, Jubal had been surprised at how little shambles Mike had created as "Private Jones" and how long be had lasted-almost three weeks. He had crowned his military career the day that be had seized on the question period following an orientation lecture to hold forth on the utter uselessness of force and violence under any circumstances (with some side continents on the desirability of reducing surplus population through cannibalism) and had offered himself as a test animal for any weapon of any nature to prove to them that force was not only unnecessary but literally impossible when attempted against a self-disciplined person.

They had not taken his offer; they had kicked him out.

But there had been a little more to it than that, Douglas had allowed Jubal to see a top-level super secret eyes-only numbered-one-of-three report after cautioning Jubal that no one, not even the Supreme Chief of staff, knew that "Private Jones" was the Man from Mars. Jubal had merely scanned the exhibits, which bad been mostly highly conflicting reports of eye witnesses as to what had happened at various times when "Jones" had been "trained" in the uses of various weapons; the only surprising thing to Jubal about them was that some witnesses bad the courage and self-confidence to state under oath that they bad seen weapons disappear. "Jones" had also been placed on the report three times for losing weapons, same being accountable property of the Federation.

The end of the report was all that Jubal had bothered to read carefully enough to remember: "Conclusion: Subject man is an extremely talented natural hypnotist and, as such, could conceivably be useful in intelligence work, although he is totally unfitted for any combat branch. However, his low intelligence quotient (moron), his extremely low general classification score, and his paranoid tendencies (delusions of grandeur) make it inadvisable to attempt to exploit his idiot-savant talent. Recommendation: Discharge, Inaptitude-no pension credit, no benefits."

Such little romps were good for the boy and Jubal had greatly enjoyed Mike's inglorious career as a soldier because Jill had spent the time at home. When Mike had come home for a few days after it was over, he hadn't seemed hurt by it-he had boasted to Jubal that he had obeyed Jill's wishes exactly and hadn't disappeared anybody merely a few dead things . . . although, as Mike grokked it, there had been several times when Earth could have been made a better place if Jill didn't have this queasy weakness. Jubal didn't argue it; he had a lengthy-though inactive, "Better Dead" list himself.

But apparently Mike had managed to have fun, too. During parade on his last day as a soldier, the commanding General and his entire staff had suddenly lost their trousers as Mike's platoon was passing in review-and the top sergeant of Mike's company fell fiat on his face when his shoes momentarily froze to the ground. Jubal decided that, in acquiring a sense of humor, Mike bad developed an atrocious taste in practical jokes-but what the hell? the kid was going through a delayed boyhood; he needed to dump over a few privies. Jubal recalled with pleasure an incident in medical school involving a cadaver and the Dean-Jubal had worn rubber gloves for that caper, and a good thing, too!

Mike's unique ways of growing up were all right; Mike was unique.

But this last thing-"The Reverend Dr. Valentine M. Smith, AS., D.D., Ph.D.," founder and pastor of the Church of All Worlds, inc.-gad! It was bad enough that the boy had decided to be a Holy Joe, instead of leaving other people's souls alone, as a gentleman should. But those diploma-mill degrees he had tacked onto his name-Jubal wanted to throw up.

The worst of it was that Mike had told him that he had gotten the whole idea from something he had heard Jubal say, about what a church was and what it could do. Jubal was forced to admit that it was something he could have said, although he did not recall it; it was little consolation that the boy knew so much law that he might have arrived at the same end on his own.

But Jubal did concede that Mike had been cagy about the operation- some actual months of residence at a very small, very poor (in all senses) sectarian college, a bachelor's degree awarded by examination, a "call" to their ministry followed by ordination in this recognized though flat-headed sect, a doctor's dissertation on comparative religion which was a marvel of scholarship while ducking any real conclusions (Mike had brought it to Jubal for literary criticism, Jubal had added some weasel words himself through conditioned reflex), the award of the "earned" doctorate coinciding with an endowment (anonymous) to this very hungry school, the second doctorate (honorary) right on top of it for "contributions to interplanetary knowledge" from a distinguished university that should have known better, when Mike let it be known that such was his price for showing up as the drawing card at a conference on solar system studies. The one and only Man from Mars had turned down everybody from CalTech to the Kaiser Wilhelm Institute in the past; Harvard University could hardly be blamed for swallowing the bait.

Well, they were probably as crimson as their banner now, Jubal thought cynically. Mike had then put in a few weeks as assistant chaplain at his church-mouse alma mater-then had broken with the sect in a schism and founded his own church. Completely kosher, legally airtight, as venerable in precedent as Martin Luther . . . and as nauseating as last week's garbage.

Jubal was called out of his sour daydream by Miriam. "Boss! Company!"

Jubal looked up to see a car about to land and ruminated that he had not realized what a blessing that S.S. patrol cap had been until it was withdrawn.

"Larry, fetch my shotgun-I promised myself that I would shoot the next dolt who landed on the rose bushes."

"He's landing on the grass, Boss."

"Well, tell him to try again. We'll get him on the next pass."

"Looks like Ben Caxton."

"So it is. We'll let him live-this time. Hi, Ben! What'll you drink?"

"Nothing, this early in the day, you professional bad influence. Need to talk to you, Jubal."

"You're doing it. Dorcas, fetch Ben a glass of warm milk; he's sick."

"Without too much soda," amended Ben, "and milk the bottle with the three dimples in it. Private talk, Jubal."

"All right, up to my study-although if you think you can keep anything from the kids around here, let me in on your method." After Ben finished greeting properly (and somewhat unsanitarily, in three cases) the members of the family, they moseyed upstairs.

Ben said, "What the deuce? Am I lost?"

"Oh. You haven't seen the alterations, have you? A new wing on the north, which gives us two more bedrooms and another bath downstairs- and up here, my gallery."

"Enough statues to fill a graveyard!"

"Please, Ben. 'Statues' are dead politicians at boulevard intersections. What you see is 'sculpture.' And please speak in a low, reverent tone lest I become violent . . . for here we have exact replicas of some of the greatest sculpture this naughty globe has produced."

"Well, that hideous thing I've seen before ... but when did you acquire the rest of this ballast?"

Jubal ignored him and spoke quietly to the replica of La Belle Heaulmière. "Do not listen to him, ma petite chere-he is a barbarian and knows no better." He put his hand to her beautiful raaged cheek, then gently touched one empty, shrunken dug. "I know just how you feel but it can't be very much longer. Patience, my lovely."

He turned back to Caxton and said briskly, "Ben, I don't know what you have on your mind but it will have to wait while I give you a lesson in how to look at sculpture-though it's probably as useless as trying to teach a dog to appreciate the violin. But you've just been rude to a lady and I don't tolerate that."

"Huh? Don't be silly, Jubal; you're rude to ladies-live ones-a dozen times a day. And you know which ones I mean."

Jubal shouted, "Anne! Upstairs! Wear your cloak!"

"You know I wouldn't be rude to the old woman who posed for that. Never. What I can't understand is a so-called artist having the gall to pose somebody's great grandmother in her skin . . . and you having the bad taste to want it around."

Anne came in, cloaked, said nothing. Jubal said to her, "Anne have I ever been rude to you? Or to any of the girls?"

"That calls for an opinion."

"That's what I'm asking for. Your opinion. You're not in court-"

"You have never at any time been rude to any of us, Jubal."

"Have you ever known me to be rude to a lady?"

"I have seen you be intentionally rude to a woman. I have never seen you be rude to a lady."

"That's all. No, one more opinion. What do you think of this bronze?"

Anne looked carefully at Rodin's masterpiece, then said slowly, "When I first saw it, I thought it was horrible. But I have come to the conclusion that it may be the most beautiful thing I have ever seen."

"Thanks. That's all." She left. "Do you want to argue it, Ben?"

"Huh? When I argue with Anne, that's the day I turn in my suit." Ben looked at it. "But I don't get it."

"All right, Ben. Attend me. Anybody can look at a pretty girl and see a pretty girl. An artist can look at a pretty girl and see the old woman she will become. A better artist can look at an old woman and see the pretty girl that she used to be. But a great artist-a master-and that is what Auguste Rodin was-can look at an old woman, portray her exactly as she is . . . and force the viewer to see the pretty girl she used to be . . . and more than that, he can make anyone with the sensitivity of an armadillo, or even you, see that this lovely young girl is still alive, not old and ugly at all, but simply prisoned inside her ruined body. He can make you feel the quiet, endless tragedy that there was never a girl born who ever grew older than eighteen in her heart . . . no matter what the merciless hours have done to her. Look at her, Ben. Growing old doesn't matter to you and me; we were never meant to be admired-but it does to them. Look at her!"

Ben looked at her. Presently Jubal said gruffly, "All right, blow your nose and wipe your eyes-she accepts your apology. Come on and sit down. That's enough for one lesson."

"No," Caxton answered, "I want to know about these others. How about this one? It doesn't bother me as much . . . I can see it's a young girl, right off. But why tie her up like a pretzel?"

Jubal looked at the replica "Caryatid Who has Fallen under the Weight of her Stone" and smiled. "Call it a tour de force in empathy, Ben. I won't expect you to appreciate the shapes and masses which make that figure much more than a 'pretzel'-but you can appreciate what Rodin was saying. Ben, what do people get out of looking at a crucifix?"

"You know how much I go to church."

"'How little' you mean. Still, you must know that, as craftsmanship, paintings and sculpture of the Crucifixion are usually atrocious-and the painted, realistic ones often used in churches are the worst of all . . . the blood looks like catsup and that ex-carpenter is usually portrayed as if he were a pansy . . . which He certainly was not if there is any truth in the four Gospels at all. He was a hearty man, probably muscular and of rugged health. But despite the almost uniformly poor portrayal in representations of the Crucifixion, a poor one is about as effective as a good one for most people. They don't see the defects; what they see is a symbol which inspires their deepest emotions; it recalls to them the Agony and Sacrifice of God."

"Jubal, I thought you weren't a Christian?"

"What's that got to do with it? Does that make me blind and deaf to fundamental human emotion? I was saying that the crummiest painted plaster crucifix or the cheapest cardboard Christmas Crèche can be sufficient symbol to evoke emotions in the human heart so strong that many have died for them and many more live for them. So the

craftsmanship and artistic judgment with which such a symbol is wrought are largely irrelevant. Now here we have another emotional symbol-wrought with exquisite craftsmanship, but we won't go into that, yet. Ben, for almost three thousand years or longer, architects have designed buildings with columns shaped as female figures-it got to be such a habit that they did it as casually as a small boy steps on an ant. After all those centuries it took Rodin to see that this was work too heavy for a girl. But he didn't simply say, 'Look, you jerks, if you must design this way, make it a brawny male figure.' No, he showed it . . . and generalized the symbol. Here is this poor little caryatid who has tried-and failed, fallen under the load. She's a good girl-look at her face. Serious, unhappy at her fafrure, but not blaming anyone else, not even the gods . . . and still trying to shoulder her load, after she's crumpled under it.

"But she's more than good art denouncing some very bad art; she's a symbol for every woman who has ever tried to shoulder a load that was too heavy for her-over half the female population of this planet, living and dead, I would guess. But not alone women-this symbol is sexless. It means every man and every woman who ever lived who sweated out life in uncomplaining fortitude, whose courage wasn't even noticed until they crumpled under their loads. It's courage, Ben, and victory."

"'Victory?'"

"Victory in defeat, there is none higher. She didn't give up, Ben; she's still trying to lift that stone after it has crushed her. She's a father going down to a dull office job while cancer is painfully eating away his insides, so as to bring home one more pay check for the kids. She's a twelve-yearold girl trying to mother her baby brothers and sisters because Mama had to go to Heaven. She's a switchboard operator sticking to her job while smoke is choking her and the fire is cutting off her escape. She's all the unsung heroes who couldn't quite cut it but never quit. Come. Just salute as you pass her and come see my Little Mermaid."

Ben took him precisely at his word; if Jubal was surprised, he made no comment. "Now this one," he said, "is the only one Mike didn't give to me. But there is no need to tell Mike why I got it . . . aside from the selfevident fact that it's one of the most delightful compositions ever conceived and proudly executed by the eye and hand of man."

"She's that, all right. This one I don't have to have explained-it's just plain pretty!"

"Yes. And that is excuse in itself, just as with kittens and butterflies. But there is more to it than that . . . and she reminded me of Mike. She's not quite a mermaid-see?-and she's not quite human. She sits on land, where she has chosen to stay . . . and she stares eternally out to sea, homesick and forever lonely for what she left behind. You know the story?"

"Hans Christian Andersen."

"Yes. She sits by the harbor of KØbenhavn-Copenhagen was his home town-and she's everybody who ever made a difficult choice. She doesn't regret her choice, but she must pay for it; every choice must be paid for. The cost to her is not only endless homesickness. She can never be quite human; when she uses her dearly bought feet, every step is on sharp knives. Ben, I think that Mike must always walk on knives-but there is no need to tell him I said so. I don't think he knows this story or, at least, I don't think he knows that I connect him with it."

"I won't tell him." Ben looked at the replica. "I'd rather just look at her and not think about the knives."

"She's a little darling, isn't she? How would you like to coax her into bed? She would probably be lively, like a seal, and about as slippery."

"Cripes! You're an evil old man, Jubal."

"And getting eviler and eviler by the year. Uh ... we won't look at any others; three pieces of sculpture in an hour is more than enough- usually I don't let myself look at more than one in a day."

"Suits. I feel as if I had had three quick drinks on an empty stomach. Jubal, why isn't there stuff like this around where a person can see it?"

"Because the world has gone nutty and contemporary art always paints the spirit of its times. Rodin did his major work in the tail end of the nineteenth century and Hans Christian Andersen antedated him by only a few years. Rodin died early in the twentieth century, about the time the world started flipping its lid . . . and art along with it.

"Rodin's successors noted the amazing things he had done with light and shadow and mass and composition-whether you see it or not-and they copied that much. Oh, how they copied it! And extended it. What they failed to see was that every major work of the master told a story and laid bare the human heart. Instead, they got involved with 'design' and became contemptuous of any painting or sculpture that told a story- sneering, they dubbed such work 'literary'-a dirty word. They went all out for abstractions, not deigning to paint or carve anything that resembled the human world."

Jubal shrugged. "Abstract design is all right-for wall paper or linoleum. But an is the process of evoking pity and terror, which is not abstract at all but very human. What the self-styled modern artists are doing is a sort of unemotional pseudo-intellectual masturbation . . . whereas creative art is more like intercourse, in which the artist must seduce- render emotional-his audience, each time. These laddies who won't deign to do that-and perhaps can't-of course lost the public. If they hadn't lobbied for endless subsidies, they would have starved or been forced to go to work long ago. Because the ordinary bloke will not voluntarily pay for 'art' that leaves him unmoved-if he does pay for it, the money has to be conned out of him, by taxes or such."

"You know, Jubal, I've always wondered why I didn't give a hoot for paintings or statues-but I thought it was something missing in me, like color blindness."

"Mmm, one does have to learn to look at art, just as you must know French to read a story printed in French. But in general it's up to the artist to use language that can be understood, not hide it in some privite code like Pepys and his diary. Most of these jokers don't even want to use language you and I know or can learn . . . they would rather sneer at us and be smug, because we 'fail' to see what they are driving at. If indeed they are driving at anything-obscurity is usually the refuge of incompetence. Ben, would you call me an artist?"

"Huh? Well, I've never thought about it. You write a pretty good stick."

"Thank you. 'Artist' is a word I avoid for the same reasons I hate to be called 'Doctor.' But I am an artist, albeit a minor one. Admittedly most of my stuff is fit to read only once . . . and not even once for a busy person who already knows the little I have to say. But I am an honest artist, because what I write is consciously intended to reach the customer-reach him and affect him, if possible with pity and terror . . . or, if not, at least to divert the tedium of his hours with a chuckle or an odd idea. But I am never trying to

hide it from him in a private language, nor am I seeking the praise of other writers for 'technique' or other balderdash. I want the praise of the cash customer, given in cash because I've reached him-or I don't want anything. Support for the arts-merdel A government-supported artist is an incompetent whore! Damn it, you punched one of my buttons. Let me fill your glass, and you tell me what is on your mind."

"Uh, Jubal, I'm unhappy."

"This is news?"

"No. But I've got a fresh set of troubles." Ben frowned. "I shouldn't have come here, I guess. No need to burden you with them. I'm not even sure I want to talk about them."

"Okay. But as long as you're here, you can listen to my troubles."

"You have troubles? Jubal, I've always thought of you as the one man who had managed to beat the game, six ways from zero."

"Hmm, sometime I must tell you about my married life. But-yes, I've got troubles now. Some of them are evident. Duke has left me, you know-or did you?"

"Yeah. I knew."

"Larry is a good gardener-but half the gadgets that keep this log cabin running are failing to pieces. I don't know how I can replace Duke. Good all-around mechanics are scarce . . . and ones that will fit into this household, be a member of the family in all ways, are almost non-existent. I'm limping along on repalnnen called in from town-every visit a disturbance, all of them with larceny in their hearts, and most of them incompetent to use a screw driver without cutting themselves. Which I am incapable of doing, too, so I have to hire help. Or move back into town, God forbid."

"My heart aches for you, Jubal."

"Never mind the sarcasm, that's just the start. Mechanics and gardenem are convenient, but for me secretaries are essential. Two of mine are pregnant, one is getting married."

Caxton looked utterly astounded. Jubal growled, "Oh, I'm not telling tales out of school; they're smug as can be-nothing secret about any of it. They're undoubtedly sore at me right now because I took you up here without giving them time to boast. So be a gent and be surprised when they tell you."

"Uh, which one is getting married?"

"Isn't that obvious? The happy man is that smooth-talking refugee from a sand storm, our esteemed water brother Stinky Mahmoud. I've told him flatly that they have to live here whenever they're in this country. Dastard just laughed and said how else?-pointed out that I had invited him to live here, permanently, long ago." Jubal sniffed. "Wouldn't be so bad if he would just do it. I might even get some work out of her. Maybe."

"You probably would. She likes to work. And the other two are pregnant?"

"Higher 'n a kite. I'm refreshing myself in O.B. because they both say they're going to have 'em at home. And what a crimp that's going to put into my working habits! Worse than kittens. But why do you assume that neither of the two turgescent tummies belongs to the bride?"

"Oh- Why, I suppose I assumed that Stinky was more conventional than that . . . or maybe more cautious."

"Stinky wouldn't be given a ballot. Ben, in the eighty or ninety years I have given to this subject, trying to trace out the meanderings of their twisty little minds, the only thing that I have learned for certain about women is that when a gal is gonna, she's gonna. All a man can do is cooperate with the inevitable."

Ben thought ruefully about times when he had resorted to fast footwork-and other times when he hadn't been fast enough. "Yeah, you're right. Well, which one isn't getting married or anything? Miriam? Or Anne?"

"Hold it, I didn't say the bride was pregnant ... and anyhow, you seem to be assuming that Dorcas is the prospective bride. You haven't kept your eyes open. It's Miriam who is studying Arabic like mad, so she can do it right."

"Huh? Well, I'll be a cross-eyed baboon!"

"You obviously are."

"But Miriam was always snapping at Stinky-"

"And to think that they trust you with a newspaper column. Ever watch a bunch of sixth-graders?"

"Yes, but- Dorcas did everything but a nautch dance."

"That is just Dorcas's natural, normal behavior with all men. She used it toward you, too-although I suppose you were too preoccupied elsewhere to realize it. Never mind. Just be sure that when Miriam shows you her ring-the size of a roe's egg and about as scarce-be sure to be surprised. And I'm damned if I'll sort out which two are spawning, so that you'll be certain to be surprised. Just remember that they are pleased about it . . . which is why I tipped you off ahead of time, so that you wouldn't make the mistake of thinking that they thought they were 'caught.' They don't. They weren't. They're smug." Jubal sighed. "But I'm not. I'm getting too old to enjoy the patter of little feet when I'm busy ... and contrariwise, I won it lose perfect secretaries-and kids that I love, as you know-for any reason if I can possibly induce them to stay. But I must say that this household has become steadily more disorganized ever since the night Jill kicked Mike's feet out from under him. Not that I blame her and I don't think you do, either."

"No, I don't, but-Jubal, let me get this straight. Are you under the impression that Jill started Mike on his merry rounds?"

"Huh?" Jubal looked startled, then thought back-and admitted to himself that he had never known . . . he had simply assumed it from the fact that when it came to a decision, Jill had been the one who had gone away with Mike. "Who was it?"

"'Don't be nosy, bub,' as you would put it. If she wants to tell you, she will. However, Jill told me-straightened me out when I made the same jumping-to-conclusions that you did. Mmm-" Ben thought. "As I understand it, which one of the four happened to score the first run was more or less chance."

"Mmm ... yes. I believe you're right."

"Jill thinks so. Except that she thinks Mike was exceedingly lucky in happening to seduce, or be seduced by (if! have the proper verb)-by the one best fitted to start him off right. Which may give you some hint if you know anything about how Jill's mind works."

"Hell, I don't even know how mine works ... and as for Jill, I would never have expected her to take up preaching no matter how lovestruck she was-so I certainly don't know how her mind works."

"She doesn't do much preaching-we'll get to that. Jubal, what do you read from the calendar?"

"Huh?"

"You know what I mean. You think Mike did it-in both cases. Or you think so if his visits home match up in either or both cases."

Jubal said guardedly, "Why do you say that, Ben? I've said nothing to lead you to think so."

"The hell you haven't. You said that they were smug, both of them. I know all too well the effect that goddam superman has on women."

"Hold it, son-he's your water brother."

Ben said levelly, "I know it-and I love him, too. If! ever decided to go gay, Mike would be my only choice. But that's all the more reason why I understand why they are smug."

Jubal stared at his glass. "Maybe they just hope. Ben, seems to me your name could be on the list, even easier than Mike's. Yes?"

"Jubal, you're out of your mind!"

"Take it easy. Nobody is trying to make you get married, I promise you-why, I haven't even painted my shotgun white. While I am not snoopy and I never hold a bed check around here and I really do, so help me by all the Billion Names of God, believe in not poking my nose into other people's business, nevertheless while I may be out of my mind-a 'least hypothesis' more than once, the last couple of years-I do have normal eyesight and hearing . . . and if a brass band parades through my home, fortissimo, I'll notice it eventually. Question: You've slept under this roof dozens of times. Did you, on at least one of those nights, sleep alone?"

"Why, you scoundrel! Uh, I slept alone the very first night I was ever here."

"Dorcas must have been off her feed. No, I remember, you were under sedative that night. You were my patient-doesn't count. Some other night? Just one?"

"Your question is irrelevant, immaterial, and beneath my notice."

"That's an adequate answer, I think. But please note that the added bedrooms are as far from my bedroom as possible. Soundproofing is never perfect."

"Jubal, it seems to me that your name is much higher up that list than mine can possibly be."

"What?"

"Not to mention Larry and Duke. But, Jubal, almost everybody who knows you assumes that you are keeping the fanciest harem since the Sultan went out of business. Oh, don't misunderstand me-they envy you. But they think you're a lecherous old goat, too."

Jubal drummed on the arm of his chair before replying. "Ben, I ordinarily do not mind being treated flippantly by my juniors. I encourage it, as you know. But in some matters I insist that my years be treated with respect. This is one of them."

"Sorry," Ben said stiffly. "I thought if it was all right for you to kick my sex life around, you would not mind my being equally frank."

"No, no, no, Ben!-you misunderstand me. Your inquiry was in order and your side comments no more than I had invited. I mean that I require the girls to treat me with respect-on this one subject."

"Oh-"

"I am, as you pointed out, old-quite old. Privately, to you alone, I am happy to say that I am still lecherous. But my lechery does not command me and I am not a goat. I prefer dignity and self-respect to indulging in pastimes which, believe me, I have already enjoyed in full measure and do not need to repeat. Ben, a man my age, who looks like a slum clearance in its most depressing stages, can attract a young girl enough to bed her-and possibly big her and thanks for the compliment; it just possibly might not be amiss-through three means only: money . . . or second, the equivalent of money in terms of wills and community property and the like and-pause for question: Can you imagine any of these three girls- these four, let me include Jill-bedding with a man, even a young and handsome one, for those reasons?"

"No. Categorical no-not any of them."

"Thank you, sir. I associate only with ladies; I see that you know it. The third incentive is a most female one. A sweet young girl can, and sometimes does, take an old wreck to bed because she is fond of him and sorry for him and wishes to make him happy. Would that reason apply here?"

"Uh ... yes, Jubal, I think it might. With all four of them."

"I think it might, too. Although I'd hate like hell to have any of them sorry for me. But this third reason which any of these four ladies might find sufficient motivation is not sufficient motivation for me. I wouldn't put up with it. I have my dignity, sir-and I hope that I retain my reason long enough to extinguish myself if it ever appears about to slip. So please take my name off the list."

Caxton grinned. "Okay-you stiff-necked old coot. I just hope that when I am your age I won't be so all-fired hard to tempt."

Jubal smiled. "Believe me, it's better to be tempted and resist, than not to resist and be disappointed. Now about Duke and Larry: I don't know nor care. Whenever anyone has come here, to work and live as a member of the family, I have made it bluntly plain that this was neither a sweat shop nor a whore house, but a home . . . and, as such, it combined anarchy and tyranny without a trace of democracy, as in any well-run family, i.e., that they were utterly on their own except where I saw fit to give orders, which orders were not subject to vote or debate. My tyranny has never extended to their love life, if any. All the kids who live here have always chosen to keep their private matters reasonably private. At least-" Jubal smiled ruefully. "-until the Martian influence caused things to get a little out of hand . . . which includes you, too, my water brother. But Duke and Larry have been more restrained, in one sense or the other. Perhaps they have been dragging the gals behind every bush. If so, I haven't seen it-and there have been no screams."

Ben thought of adding a little to Jubal's store of facts, decided against it. "Then you think it's Mike."

Jubal scowled. "Yep, I think it's Mike. That part's all right-I told you the girls were smugly happy . . . and I'm not broke plus the fact that I could bleed Mike for any amount without telling the girls. Their babies won't lack. But, Ben, I'm troubled about Mike himself. Very."

"So am I, Jubal."

"And about Jill, too. I should have named Jill."

"Uh ... Jubal, Jill isn't the problem-other than for me, personally. And that's my hard luck, I hold no grudge. It's Mike."

"Damn it, why can't the boy come home and quit this obscene pulpit pounding?"

"Mmm ... Jubal, that's not quite what he's doing." Ben added, "I've just come from there."

"Huh? Why didn't you say so?"

Ben sighed. "First you wanted to talk art, then you wanted to sing the blues, then you wanted to gossip. What chance have I had?"

"Uh ... conceded. You have the floor."

"I was coming back from covering the Cape Town conference; I squeezed out a day and visited them. What I saw worried the hell out of me-so much so that I stopped just long enough in Washington to get a few columns ahead, then came straight here. Jubal, couldn't you rig it with Douglas to shut off the faucet and close down this operation?"

Jubal shook his head. "In the first place, I wouldn't. What Mike does with his life is his business."

"You would if you had seen what I saw."

"Not I! But in the second place I can't. Nor can Douglas."

"Jubal, you know quite well that Mike would accept any decision you made about his money. He probably wouldn't even understand it-and he certainly wouldn't question it."

"Ah, but he would understand it! Ben, recently Mike made his will, drew it up himself-no attorney-and sent it to me to criticize. Ben, it was one of the shrewdest legal documents I've ever seen. He recognized that he had more wealth than his heirs could possibly need-so he used half his money to guard the other half . . . rigged it so that anyone who contests the will does so to his own great disadvantage. It is a very cynical document in that respect and is booby-trapped not only against possible heirsclaimants of his legal parents and his natural parents-he knows he's a bastard, though I don't know how he found out-but also the same with respect to every member of the Envoy's company . . . he provided a generous way to settle Out of court with any possible unknown heir having a good prima-facie claim-and rigged it so that they would almost have to overthrow the government to go into court and break his will . . . and the will also showed that he knew exactly each stock, bond, security, and asset he owned. I couldn't find anything to criticize in it." (-including, Jubal thought, his provision for you, my brother!) "Then he went to the trouble of depositing holographic originals in several places . . . and Fair-Witness copies in half a dozen reliable brains. Don't tell me that I could rig his money without his understanding what I had done!"

Ben looked morose. "I wish you could."

"I don't. But that was just the starter. It wouldn't help if we could. Mike hasn't taken a dollar out of his drawing account for almOst a year. I know, because Douglas called me to ask if I thought the major portion of the backlog should be reinvested? Mike hadn't bothere~l to answer his letters. I told him that was his headache . . . but that if I were steward, I would follow my principal's last instructions."

"No withdrawals? Jubal, he's spending a lot."

"Maybe the church racket pays well."

"That's the odd part about it. The Church of All Worlds is not really church."

"Then what is it?"

"Uh, primarily it's a language school."

"Repeat?"

"To teach the Martian language."

"Well, no harm in that. But I wish, then, that he wøuldn't call it a church."

"Well, I guess it is a church, within the legal definition."

"Look, Ben, a roller skating rink is a church-as long as some sect claims that roller skating is essential to their faith and a part of their worship. You wouldn't even have to go that far-Simply claim that roller skating served a desirable though not essential function parallel to that which religious music serves in most churches. If you can sing to the glory of God, you can skate to the same end. Believe me, this has all been threshed out. There are temples in Malaya which are nothing to an outsider but boarding houses for snakes . . but the same High Court rules them to be 'churches' as protects our own sects."

"Well, Mike raises snakes, too, as well as teaching Martian. But, Jubal, isn't anything ruled out?"

"Mmm ... that's a moot point. There are minor restrictiOnS, adjudicated. A church usually can't charge a fee for fortune telling or calling up spirits of the dead_but it can accept offerings . . . and then let custom make the 'offerings' become fees in fact. Human sacrifice is illegal everywhere-but I'm by no means sure that it is not still done in several spots around the globe-and probably right here in this former land of the free and home of the brave. The way to do anything under the guise of religion that would otherwise be suppressed is to do it in the inner sanctum and keep the gentiles out. Why, Ben? Is Mike doing something that might get him jailed or hanged?"

"Uh, I don't know. Probably not."

"Well, if he's careful- The Fosterites have demonstrated how to get by with almost anything. Certainly much more than Joseph Smith was lynched for."

"Matter of fact, Mike has lifted quite a lot from the Fosterites. That's part of what worries me."

"But what does worry you? Specifically."

"Uh, Jubal, this has got to be a 'water brother' matter."

"Okay, I had assumed that. I'm prepared to face redhot pincers and the rack, if necessary. Shall I start carrying poison in a hollow tooth? Against the possibility of cracking?"

"Uh, the members of the inner circle are supposed to be able to discorporate voluntarily any second-no poison needed."

"I'm sorry, Ben. I never got that far. Never mind, I know other adequate ways to put up the only final defense against the third degree. Let's have it."

"You can discorporate at will, they tell me-if you learn Martian first. Never mind. Jubal, I said Mike raises snakes. I meant that both figuratively and literally-the whole setup is a snake pit. UnhealthY.

"But let me describe it. Mike's Temple is a big place, almost a labyrinth. A big auditorium for public meetings, some smaller ones for invitational meetings-many smaller rooms-and living quarters-quite a lot of living quarters. Jill sent me a radiogram telling me where to go, so I was dxopped at the living quarters entrance on the street the Temple backs onto. The living quarters are above the main auditOrium, about as private as you can be and still live in a city."

Jubal nodded. "Makes sense. Be your acts legal or illegal, nosy neighbors are noxious."

"In this case a very good idea. A pair of outer doors let me in; I suppose I was scanned first, although I didn't spot the scanner. Through two more sets of automatic doors any one of which would slow down a raiding squad-then up a bounce tube. Jubal, it wasn't an ordinary bounce tube. It wasn't controlled by the passenger, but by someone out of sight. More evidence that they wanted privacy and meant to have it-a raiding squad would need special climbing gear to get up that way. No stairs anywhere. Didn't feel like the ordinary bounce tube, either-frankly, I avoid them when I can; they make me queasy."

"I have never used them and never shall," Jubal said firmly.

"You wouldn't have minded this. I floated up gently as a feather."

"Not me, Ben. I don't trust machinery. It bites." Jub8l added, "However, I must concede that Mike's mother was one of the great engineers of all times and his father-his real father-was a number one pilot and a competent engineer, or better . . . and both of genius level. If Mike has improved bounce tubes until they are fit for humans, I ought not to be surprised."

"As may be. I got to the top and was landed without having to grab for it, or depend on safety nets-I didn't see any, to tell the truth. Through more doors that unlocked for me and into an enormous living room. Enormous! Very oddly furnished and rather austere. Jubal, there are people who think you run an odd household here."

"I can't imagine why. Just plain and comfortable."

"Well, your ménage is Aunt Jane's Finishing School for Refined Young Ladies compared with the weirdie Mike runs. I'm just barely inside the joint when the first thing I see I don't believe. A babe, tattooed from her chin to her toes-and not a goddam stitch otherwise. Hell, not even the home-grown fig leaf-she was tattooed everywhere. Fantastic!"

Jubal said quietly, "You're a big-city bumpkin, Ben. I knew a tattooed lady once. Very nice girl. Intense in some ways. But sweet."

"Well," Ben conceded. "I was giving you a first impression. This gal is very nice, too, once you get adjusted to her pictorial supplement- and the fact that she usually has a snake with her. She's the one who raises them, rather than Mike."

Jubal shook his head. "I was wondering if by any chance it was the same woman. Fully tattooed women are rather scarce these days. But the lady I knew, some thirty years back-too old now to be this one, I suppose -had the usual vulgar fear of snakes, to excess. However, I'm fond of snakes myself . . . I look forward to meeting your friend. I hope."

"You will when you visit Mike. She's sort of a majordomo for him- and a priestess, if you'll pardon the word. Patricia-but called 'Pat,' or 'Patty.'"

"Oh, yes! Jill has spoken of her ... and thinks very highly of her. Never mentioned her tattoos, however. Probably didn't think it was relevant. Or perhaps none of my business."

"But she's nearly the right age to be your friend. She says. When I said 'babe' I was again giving a first impression. She looks to be in her twenties; she claims her oldest child is that old. Anyhow, she trotted up to meet me, all big smile, put her anns around me and kissed me. 'You're Ben, I know. Welcome, brother! I give you water!'

"You know me, Jubal. I've been in the newspaper racket for years- I've been around. But I had never been kissed by a totally strange babe dressed only in tattoos . . .

who was determined to be as friendly and affectionate as a collie pup. I was embarrassed."

"Poor Ben. My heart bleeds."

"Damn it, you would have felt the same way."

"No. Remember, I've met one tattooed lady. They feel completely dressed in those tattoos-and rather resent having to put on clothes. Or at least this was true of my friend Sadako. Japanese, she was. But of course the Japanese are not body conscious the way we are."

"Well," Ben answered. "Pat isn't exactly body conscious, either-just about her tattoos. She wants to be stuffed and mounted, nude, when she dies, as a tribute to George."

"'George'?"

"Sorry. Her husband. Up in heaven, to my relief ... although she talked about him as if he had just slipped out for a short beer. While she was behaving as if she expected a trial mounting and stuffing any moment. But, essentially, Pat is a lady . . . and she didn't let me stay embarrassed-"

XXXI

PATRICIA HAD HER ARMS around Ben Caxton and gave him the all-out kiss of brotherhood before he knew what hit him. She felt at once his unease and was herself surprised, because Michael had told her to expect him, given her Ben's face in her mind, had explained that Ben was a brother in all fullness, of the Inner Nest, and she knew that Jill was growncloser with Ben second only to that with Michael . . . which was always necessarily first since Michael was the fountain and source of all their knowledge of the water of life.

But the foundation of Patricia's nature was an endless wish to make other people as happy as she was; she slowed down. She invited Ben to get rid of his clothes but did so casually and did not press the matter, except to ask him to remove his shoes, with the explanation that the Nest was everywhere kind to bare feet and the unstated corollary that street shoes would not be kind to it-it was soft and clean as only Michael's powers could keep things clean, which Ben could see for himself.

Aside from that she merely pointed out where to hang any clothes he found too warm for the Nest and hurried away to fetch him a drink. She didn't ask his preferences; she knew them from Jill. She merely decided that he would choose a double martini this time rather than Scotch and soda, the poor dear looked tired. When she came back with a drink for each of them, Ben was barefooted and had removed his street jacket. "Brother, may you never thirst."

"We share water," he agreed and drank. "But there's mighty little water in that."

"Enough," she answered. "Michael says that the water could be completely in the thought; it is the sharing. I grok he speaks rightly."

"I grok. And it's just what I needed. Thanks, Patty."

"Ours is yours and you are ours. We're glad you're safely home. Just now the others are all at services or teaching. But there's no hurry; they will come when waiting is filled. Would you like to look around your Nest?"

Still puzzled but interested Ben let her lead him on a guided tour. Some parts of it were commonplace: a huge kitchen with a bar at one end-rather short on gadgets and having the same kind-to-the-feet floor covering as elsewhere, but not notable otherwise save for size-a library even more loaded than Jubal's, bathrooms ample and luxurious, bedrooms- Ben decided that they must be bedrooms although they contained no beds but simply floors that were even softer than elsewhere; Patty called them "little nests" and showed him one she said she usually slept in.

It contained her snakes.

It had been fitted on one side for the comfort of snakes. Ben suppressed his own slight queasiness about snakes until he came to the cobras. "It's all right," she assured him. "We did have glass in front of them. But Michael has taught them that they must not come past this line."

"I think I would rather trust glass."

"Okay, Ben." In remarkably short order she replaced the glass barrier, front and top. But he was relieved when they left, even though he managed to stroke Honey Bun when invited to. Before returning to the huge living room Pat showed him one other room. It was large, circular, had a floor which seemed almost as cushiony as that of the bedrooms, and no furniture. In its center was a round pool of water, almost a swimming pool. "This," she told him, "is the Innermost Temple, where we receive new brothers into the Nest." She went over and dabbled a foot in the water. "Just right," she said. "Want to share water and grow closer? Or maybe just swim?"

"Uh, not right now."

"Waiting is," she agreed. They returned to the living room and Patricia went to get him another drink. Ben settled himself on a big, very comfortable couch-then got up at once. The place was too warm for him, that first drink was making him sweat, and leaning back on a couch that adjusted itself too well to his contours made him just that much hotter. He decided it was damn silly to dress the way he would in Washington, warm as it was in here-and with Patty decked out in nothing but ink and a bull snake she had left around her shoulders during the latter part of the tour that reptile would keep him from temptation even if it wasn't already clearly evident that Patty was not trying to be provocative.

He compromised by leaving on jockey shorts and hung his other clothes in the foyer. As he did so, he noticed a sign printed on the inside of the door through which he had entered: "Did You Remember to Dress?"

He decided that, in this odd household, this gentle warning might be necessary if any were absent-minded. Then he saw something else that he had missed on coming in, his attention earlier having been seized by the sight of Patty herself. On each side of the door was a large bowl, as gross as a bushel basket-and each was tilled with money.

More than filled- Federation notes of various denominations spilled out on the floor.

He was staring at this improbability when Patricia returned. "Here's your drink, Brother Ben. Grow close in Happiness."

"Uh, thanks." His eyes returned to the money.

She followed his glance. "You must think I'm a sloppy housekeeper, Ben-and I am. Michael makes it so easy, most of the cleaning and such, that I forget" She squatted down, retrieved the money, stuffed it into the less crowded bowl.

"Patty, why in the world?"

"Oh. We keep it here because this door leads out to the street. Just for convenience. If one of us is leaving the Nest-and I do, myself, almost every day for grocery shopping-we are likely to need money. So we keep it where you won't forget to take some with you."

"You mean ... just grab a handful and go?"

"Why, of course, dear. Oh, I see what you mean. But there is never anyone here but us. No visitors, ever. If any of us have friends outside- and, of course, all of us do- there are plenty of nice rooms lower down, the ordinary Sort that outsiders are used to, where we can visit with them. This money isn't where it can tempt a weak person."

"Huh! I'm pretty weak, myself!"

She chuckled gently at his joke. "How can it tempt you when it's already yours? You're part of the Nest."

"Uh ... I suppose so. But don't you worry about burglars?" He was trying to guess how much money one of those bowls contained. Most of the notes seemed to be larger than singles-hell, he could see one with three zeroes on it still on the floor, where Patty had missed it in her tidying up.

"One did get in, just last week."

"So? How much did he steal?"

"Oh, he didn't. Michael sent him away."

"Called the cops?"

"Oh, no, no- Michael would never turn anybody over to the cops. I grok that would be a wrongness Michael just-" She shrugged. "-made him go away. Then Duke fixed the hole in the skylight in the garden room-did I show you that? It's lovely ... a grass floor. But I remember that you have a grass floor, Jill told me. That's where Michael first saw one. Is it grass all over? Every room?"

"Just my living room."

"If I ever get to Washington, can I walk on it? Lie down on it? Please?"

"Of course, Patty. Uh, ..it's yours."

"I know, dear. But it's not in the Nest, and Michael has taught us that it is good to ask, even when we know the answer is yes. I'll lie on it and feel the grass against me and be filled with Happiness to be in my brother's 'little nest.'

"You'll be most welcome, Patty." Ben reminded himself sharply that he didn't give a hoot in hell what his neighbors thought-but he hoped she would leave her snakes behind. "When will you be there?"

"I don't know. When waiting is filled. Maybe Michael knows."

"Well, warn me if you can, so I'll be in town. If not, Jill always knows the code for my door-I change it occasionally. Patty, doesn't anybody keep track of this money?"

"What for, Ben?"

"Uh, people usually do."

"Well, we don't. Just help yourself as you go out-then put back any you have left when you conic home, if you remember to. Michael told rue to keep the grouch bag filled. If it runs low I get some more from him."

Ben dropped the matter, stonkered by the simplicity of the arrangement. He already had some idea, from Mike and second-hand from Jill and Jubal, of the moneyless communism of the Martian culture; he could see that Mike had set up an enclave of it here-and these bowls of cash marked the transition point whereby one passed from Martian to Terran economy. He wondered if Patty knew that it was a fake . . - bolstered up by Mike's enormous fortune. He decided not to ask.

"Patty, how many are there in the Nest?" He felt a mild worry that he was acquiring too many sharing brothers without his consent, then shoved back the thought as unwOrthy after all, why would any of them want to sponge on him? Other than, possibly to lie on his grass rug~-he didn't have any pots of gold just inside his door.

"Let me see ... there are almost twenty now, ~ountiflg novitiate brothers who don't really think in Martial) yet and aren't ordained."

"Are you ordained, Patty?"

"Oh, yes. But mostly I teach. Beginners' classes in Martian, and I help novitiate brothers and such. And Dawn and I-Dawn and Jill are each High Priestes -Dawn and I are pretty well-known Fosterites, especially Dawn, so we work together to show other FosteriteS that the Church of All Worlds doesn't conflict with the Faith, any more than being a Bapfist keeps a man from joining the Masons." She showed Ben Foster's kiss, explained what it meant, and showed him also its miraculous companion placed by Mike.

"They all know what Foster's kiss means and how hard it is to win it and by then they've seen some of Mike's miracles and they are just about ripe to buckle down and sweat to climb into a higher circle."

"It's an effort?"

"Of course it is, Ben-for them. In your case and mine, and Jill's, and a few others-YOU know them all-Michael called us straight into brotherhood. But to others Michael first teaches a discipline-not a faith but a way to realize faith in works. And that means they've got to start by learning Martian. That's not easy; I'm not perfect in it myself. But it is much Happiness to work and learn. You asked about the size of the Nest-let me see, Duke and Jim and Michael and myself-two Fosterites, Dawn and myself . . . one circumcised Jew and his wife and four children-"

"Kids in the Nest?"

"Oh, more than a dozen. Not here, but in the nestlings' nest just off of here; nobody could meditate with kids hooting and hollering and raising Ned, Want to see it?"

"Uh, later."

"One Catholic couple with a baby boy-excommunicated I'm sorry to say; their priest found out about it. Michael had to give them very special help; it was a nasty shock to them-and so utterly unnecessary. They were getting up early every Sunday morning to go to mass just as usual-but kids will talk. One Mormon family of the new schism-that's three more, and their kids. The rest are the usual run of Protestants and one atheist . . . that is, he thought he was an atheist, until Michael opened his eyes. He came here to scoff; he stayed to learn . . - and he'll be a priest before long. Uh, nineteen grown-ups-I'm pretty sure that's right though it's hard to say, since we're hardly ever all in the Nest at once, except for our own services in the Innermost Temple. The Nest is built to hold eighty-one-that's 'three-filled,' or three times three multiplied by itself-but Michael says that there will be much waiting before we'd need a bigger nest and by then we will be building other nests. Ben? Wouldn't you like to see an outer service, see how Michael

makes the pitch, instead of just listening to me ramble on? Michael will be preaching just about now."

"Why, yes, if it's not too much trouble."

"You could go by yourself. But I'd like to go with you ... and I'm not busy. Just a see, dearie, while I get decent."

"Jubal, she was back in a couple of minutes in a robe not unlike Anne's Witness robe but cut differently, with angel-wing sleeves and a high neck and the trademark Mike uses for the Church of All Worlds-nine concentric circles and a conventionalized Sun-embroidered over her heart. This getup was a priestess robe, her vestments; Jill and the other priestesses wear the same sort, except that Patty's was opaque, a heavy synthetic silk, and came so high that it covered her cartoons, and was caught at both wrists for the same reason. She had put on stockings, too, or maybe bobby socks, and was carrying sandals.

"Changed the hell out of her, Jubal. It gave her great dignity. Her face is quite nice and I could see that she was considerably older than I had first guessed her although not within twenty years of what she claims to be. She has an exquisite complexion and I thought what a shame it was that anyone had ever touched a tattooing needle to such skin.

"I had dressed again. She asked me to take off just my shoes because we weren't going out the way I had come in. She led me back through the Nest and out into a corridor; we stopped to put on shoes and went down a ramp that wound down maybe a couple of floors until we reached a gallery. It was sort of a loge overlooking the main auditorium. Mike was holding forth on the platform. No pulpit, no altar, just a lecture hall, with a big All-Worlds symbol on the wall behind him. There was a robed priestess on the platform with him and, at that distance, I thought it was Jill- but it wasn't; it was another woman who looks a bit like her and is almost as beautiful. The other high priestess, Dawn-Dawn Ardent."

"What was that name?" Jubal interrupted.

"Dawn Ardent-née Higgins, if you want to be fussy."

"I've met her."

"I know you have, you allegedly retired goat. She's got a crush on you..."

Jubal shook his head. "Some mistake. The 'Dawn Ardent' I mean I just barely met, about two years ago. She wouldn't even remember me."

"She remembers you. She gets every one of your pieces of commercial crud, on tape, under every pseudonym she has been able to track down. She goes to sleep by them, usually, and they give her beautiful dreams. She says. Furthermore there is no doubt that she knows who you are. Jubal, that big living room, the Nest proper, has exactly one item of ornamentation, if you'll pardon the word-a life-sized color so11y of your head. Looks as if you had been decapitated, with your face in a hideous grin. A candid shot that Duke sneaked of you, I understand."

"Why, that brat!"

"Jill asked him to, behind your back."

"Double brat!"

"Sir, you are speaking of the woman I love-although I'm not alone in that distinction. But Mike put her up to it. Brace yourself, Jubal-you are the patron saint of the Church of All Worlds."

Jubal looked horrified. "They can't do this to me!"

"They already have. But don't worry; it's unofficial and not publicized. But Mike freely gives you credit, inside the Nest just among water brothers, for having instigated the whole show and explained things to him so well that he was finally able to figure out how to put over Martian theology to humans."

Jubal looked about to retch. Ben went on, "I'm afraid you can't duck it. But in addition, Dawn thinks you're beautiful. Aside from that quirk, she is an intelligent woman-and utterly charming. But I digress. Mike spotted us at once, waved and called out, 'Hi, Ben! Later'-and went on with his spiel.

"Jubal, I'm not going to try to quote him, you'll just have to hear it. He didn't sound preachy and he didn't wear robes-just a smart, welltailored, white syntholinen suit. He sounded like a damned good car salesman, except that there was no doubt he was talking about religion. He cracked jokes and told parables-none of them straitlaced but nothing really dirty, either. The essence of it was a sort of pantheism . . . one of his parables was the oldy about the earthworm burrowing along through the soil who encounters another earthworm and at once says, 'Oh, you're beautiful! You're lovelyl Will you marry me?' and is answered: 'Don't be silly! I'm your other end.' You've heard it before?"

"'Heard it?' I wrote it!"

"I hadn't realized it was that old. Anyhow, Mike made good use of it. His idea is that whenever you encounter any other grokking thing-he didn't say 'grokking' at this stage-any other living thing, man, woman, or stray cat . . . you are simply encountering your 'other end' . . . and the universe is just a little thing we whipped up among us the other night for our entertainment and then agreed to forget the gag. He put it in a much more sugar-coated fashion, being extremely careful not to tread on competitors' toes."

Jubal nodded and looked sour. "Solipsism and Pantheism. Teamed together they can explain anything. Cancel out any inconvenient fact, reconcile all theories, and include any facts or delusions you care to name. Trouble is, it's just cotton candy, all taste and no substance-and as unsatisfactory as solving a story by saying: '-and then the little boy fell out of bed and woke up; it was just a dream.'"

"Don't crab at me about it; take it up with Mike. But believe me, he made it sound convincing. Once he stopped and said, 'You must be tired of so much talk-' and they yelled back, 'No!'-I tell you, he really had them. But he protested that his voice was tired and, anyhow, a church ought to have miracles and this was a church, even though it didn't have a mortgage. 'Dawn, fetch me my miracle box.' Then he did some really amazing sleight-of-hand. Did you know he had been a magician with a carnival?"

"I knew he had been with it. He never told me the exact nature of his shame."

"He's a crackerjack magician; he did stunts for them that had me fooled. But it wouldn't have mattered if it had been only the card tricks kids learn; it was his patter that had them rolling in the aisles. Finally he stopped and said apologeticallY~ 'The Man from Mars is supposed to be able to do wonderful things . . . so I have to pass a few miracles each meeting. I can't help being the Man from Mars; it's just something that happened to me. But miracles can happen for you, too, if you want them. However, to be allowed to see anything more than these narrow-gauge miracles, you must enter the Circle. Those of you who truly want to learn I will see later. Cards are being passed around,'

"Patty explained to me what Mike was really doing. 'This crowd is just marks, dear-people who come out of curiosity or maybe have been shined in by some of our own

people who have reached one of the inner circles.' Jubal, Mike has the thing rigged in nine circles, like degrees in a lodge-and nobody is told that there actually is a circle farther in until they're ready to be inducted into it. 'This is just Michael's bally,' Pat told me, 'which he does as easy as he breathes-while all the time he's feeling them out, sizing them up, getting inside their heads and deciding which ones are even possible. Maybe one in ten. That's why he strings it out- Duke is up behind that grille and Michael tells him every mark who just might measure up, where he sits and everything. Michael's about to turn this tip . . . and spill the ones he doesn't want. Dawn will handle that part, after she gets the seating diagram from Duke.'"

"How did they work that?" asked Harshaw.

"I didn't see it, Jubal. Does it matter? There are a dozen ways they could cut from the herd the ones they wanted as long as Mike knew which they were and bad worked out some way to signal Duke. I don't know. Patty says he's clairvoyant and says it with a straight face-and, do you know, I won't discount the possibility. But right after that, they took the collection. Mike didn't do even this in church style-you know, soft music and dignified ushers. He said nobody would believe that this was a church service if be didn't take a collection . . . so he would, but with a difference. Either take it or put it-suit yourself. Then, so help me, they passed collection baskets already loaded with money. Mike kept telling them that this was what the last crowd had left, so help themselves . . . if they were broke or hungry and needed it. But if they felt like giving . . - give. Share with others. Just do one or the other-put something in, or take something out. When I saw it, I figured he had found one more way to get rid of too much money."

Jubal said thoughtfully, "I'm not sure he would lose by it. That pitch, properly given, should result in more people giving more . . . while a few take just a little. And probably very few. I would say that it would be hard indeed to reach in and take out money when the people on each side of you are putting money in . . unless you need it awfully badly."

"I don't know, Jubal ... but I understand that they are just as casual about those collections as they are about that stack of dough upstairs. But Patty whisked me away when Mike turned the service over to his high priestess. I was taken to a much smaller auditorium where services were just opening for the seventh circle in-people who had belonged for several months at least and had made progress. If it is progress.

"Jubal, Mike had gone straight from one to the other, and I couldn't adjust to the change. That outer meeting was half popular lecture and half sheer entertainment-this one was more nearly a voodoo rite. Mike was in robes this time; he looked taller, ascetic, and intense-! swear his eyes gleamed. The place was dimly lighted, there was music that was creepy and yet made you want to dance. This time Patty and I took a double seat together, a couch that was darn near a bed. What the service was all about I couldn't say. Mike would sing out to them in Martian, they would answer in Martian__-except for chants of 'Thou art GodI Thou art God!' which was always echoed by some Martian word that would make my throat sore to try to pronounce it."

Jubal made a croaking noise. "Was that it?"

"Huh? I believe it was-allowing for your horrible tall-corn accent. Jubal . . . are you hooked? Have you just been stringing me along?"

"No. Stinky taught it to me-and he says that it's heresy of the blackest sort. By his lights I mean-I couldn't care less. It's the Martian word Mike translates as: 'Thou art God.'

But our brother Mahmoud says that isn't even close to being a translation. It's the universe proclaiming its own self-awareness . . * or it's 'peccavimus' with a total absence of contrition or a dozen other things, all of which don't translate it. Stinky says that not only it can't be translated but that he doesn't really understand it in Martian-except that it is a bad word, the worst possible in his opinion and much closer to Satan's defiance than it is to the blessing of a benevolent God. Go on. Was that all there was to it? Just a bunch of fanatics yelling Martian at each other?"

"Uh ... Jubal, they didn't yell and it wasn't fanatical. Sometimes they would barely whisper, the room almost dead quiet. Then it might climb in volume a little but not much. They did it in sort of a rhythm, a pattern, like a cantata, as if they had rehearsed it a long time . . . and yet it didn't feel as if they had rehearsed it; it felt more as if they were all just one person, humming to himself whatever he felt at the moment. Jubal, you've seen how the Fosterites get themselves worked up-"

"Too much of it, I'm sorry to say."

"Well, this was not that sort of frenzy at all; this was quiet and easy, like dropping off to sleep. It was intense all right and got steadily more so, but-Jubal, ever sit in on a spiritualist séance?"

"I have. I've tried everything I could, Ben."

"Then you know how the tension can grow without anybody moving or saying a word. This was much more like that than it was like a shouting revival, or even the most sedate church service. But it wasn't mild; it packed terrific wallop."

"The technical word is 'Apollonian.'"

"Huh?"

"As opposed to 'Dionysian.' And both rather Procrustean I'm sorry to say. People tend to simplify 'Apollonian' into 'mild,' and 'calm,' and 'cool.' But 'Apollonian' and 'Dionysian' are two sides of the same coin-a nun on her knees in her cell, holding perfectly still and her facial muscles relaxed, can be in a religious ecstasy more frenzied than any priestess of Pan Priapus celebrating the vernal equinox. Ecstasy is in the skull, not in the setting-up exercises." Jubal frowned. "Another common error is to identify 'Apollonian' with 'good'-merely because our most respectable sects are all rather Apollonian in ritual and precept. Mere local prejudice. Proceed."

"Well ... things weren't as quiet as a nun at her devotions anyhow. They didn't just stay seated and let Mike entertain them. They wandered about a bit, swapped seats, and there was no doubt that there was necking going on; no more than necking, I believe, but the lighting was very low key and it was hard to see from one pew to another. One gal wandered over our way, started to join us, but Patty gave her some sign to let us be so she just kissed us and left." Ben grinned. "Kissed quite well, too, though she didn't daily about it. I was the only person not dressed in a robe; I was as conspicuous as a space suit in a salon. But she gave no sign of noticing.

"The whole thing was very casual ... and yet it seemed as coordinated as a ballerina's muscles. Mike kept busy, sometimes out in front, sometimes wandering among the others-once he squeezed my shoulder and kissed Patty, unhurriedly but quickly. He didn't speak to me. Back of the spot where he stood when he seemed to be leading them was some sort of a dingus like a magic mirror, or possibly a big stereo tank; he used it for 'miracles,' only at this stage he never used the word-at least not in English.

Jubal, every church promises miracles. But it's always jam yesterday and jam tomorrow, never jam today."

"Exception," Jubal interrupted again. "Many of them deliver as a matter of routine-exempli gratia among many: Christian Scientists and Roman Catholics."

"Catholics? You mean Lourdes?"

"The example included Lourdes, for what it may be worth. But I referred to the Miracle of Transubstantiation, called forth by every Catholic priest at least daily."

"Hmm- Well, I can't judge that subtle a miracle. To a heathen outsider like myself that sort of miracle is impossible to test. As for Christian Scientists, I won't argue-but if I break a leg, I want a sawbones."

"Then watch where you put your feet," Jubal growled. "Don't bother me with your fractures."

"Wouldn't think of it. I want one who wasn't a classmate of William Harvey."

"Harvey could reduce a fracture. Proceed."

"Yeah, but how about his classmates? Jubal, those things you cited as miracles may be such-but Mike offers splashy ones, ones the cash customers can see. He's either an expert illusionist, one who would make the fabled Houdini look clumsy ... or an amazing hypnotist-"

"He might be both."

"-or he's smoothed the bugs out of closed-circuit stereovision to the point where it simply cannot be told from reality, for his special effects. Or 'I've been 'ad fer a button, dearie.'"

"How can you rule out real miracles, Ben?"

"I included them with the button. It's not a theory I like to think about. Whatever he used, it was good theater. Once the lights came up behind him and here was a black~mafled lion, lying as stately and sedately as if guarding library steps, while a couple of little lambs wobbled around him. The lion just blinked and yawned. Sure, Hollywood can tape that sort of special effect any day-but it looked real, so much so that I thought I smelled the lion . . . and of course that can be faked, too."

"Why do you insist on fakery?"

"Damn it, I'm trying to be judicial!"

"Then don't lean over backwards so far you fall down. Try to emulate Anne."

"I'm not Anne. And I wasn't very judicial at the time. I just lounged back and enjoyed it, in a warm glow. It didn't even annOY me that I couldn't understand most of what was said; it felt as if I got the gist of it. Mike did a lot of gang-ho miracles-or illusions. Levitation and such. I wasn't being critical, I was willing to enjoy it as good showmanship Patty slipped away toward the end after whispering to me to stay where I was and she would be back. 'Michael has just told them that any who do not feel ready for the next circle should now 'eave,' she told me.

"I said, 'I guess I had better leave, too.'

"And she said, 'Oh, no, dear-You're already Ninth Circle-Y0U know that. Just stay seated, I'll be back.' And she left.

"I don't think anybody decided to chicken out. This group was not only Seventh Circle but Seventh Circlers who were all supposed to be promoted. But I didn't really notice for the lights came up again . . . and there was Jill!

"Jubal, this time it definitely did not feel like stereoviSiofl. Jill picked me out with her eyes and smiled at me. Oh, I know, if the person being photograPhed looks directly at the cameras, then the eyes meet yours no matter where you're seated But if Mike has it smoothed out this well, he had better patent it. Jill was dressed in an outlandish costume-~ priestess outfit, I suppoSe~ but not like the others. Mike started intoning something to her and to us, partly in English ... stuff about the Mother of All, the unity of many, and started calling her by a series of names . . and with each name her costume changed-"

Ben Caxton came quickly alert when the lights came up behind the High Priest and he saw Jill Boardmafl posed, above and behind the priest. He blinked and made sure that he had not again been fooled by lighting and distance-this was Jill She looked back at him and smiled. He half listened to the invocation while thinking that he had been convinced that the space behind the Man from Mars was surely a stereo tank, or some gitumick. But he could almost swear that he could walk up those steps and pinch her. He was tempted to do so-then reminded himself that it would be a crummY trick to ruin Mike's show. Wait till it was over and Jill was free- "Cybele!" -and Jill's costume suddenly changed-again

"Frigg!"

"Gel"

"Devil"

"Ishtar!"

"Maryam"

"Mother Eve! Mater Deus Magna! Loving and Beloved, Life Undying-"

Caxton stopped hearing the woids . . . for Jill suddenly was Mother Eve, clothed only in her own glory. The light spread and he saw that she was standing gently at rest in a Garden, beside a tree around and on which was twined a great serpent.

Jill smiled at them all, turned a little, reached up and smoothed the serpent's head turned back and opened her arms to all of them. The first of the candidates moved forward to enter the Garden. Patty returned and touched Caxton on the shoulder. "Ben, I'm back. Come with me, dear."

Caxton was reluctant, he wanted to stay and drink in the glorious vision of Jill . . . he wanted to do more than that; he wanted to join that proceSsiOn and go where she was. But he found himself getting up and leaving with Patricia. He looked back and saw Mike about to put his arms around and kiss the first woman in the line . . . turned to follow Patricia outside and failed to see the candidates' robe vanish as Mike kissed her- and did not see what followed at once, when Jill kissed the first male candidate for elevation to the eighth circle...and his robe vanished.

"We have to go long way 'round," Patty explained~ "to give them time to get clear and on into the Temple of the Eighth Circle. Oh, it wouldn't actually hurt to barge in, but it would waste Michael's time, getting them back in the mooa-and he does work so very hard."

"Where are we going now?"

"To pick up Honey Bun. Then back to the Nest. Unless you want to take part in the initiation to the Eighth Circle. You can, you know, since you're Ninth Circle. But you haven't learned Martian yet; you'd find it very confusing."

"Well-I'd like to see Jill. When will she be free?"

"Oh. She told me to tell you that she was going to duck upstairs and see you. Down this way, Ben."

A door opened and Ben found himself in the garden he had seeD. The serpent was still festooned on the tree; she raised her head as they came in. "There, there, dears" Patricia said to her. "You were Mama's good girl, weren't you?" She gently unwrapped the boa and flaked it down into a basket, tail first. "Duke brought her down for me but I have to arrange her on the tree and tell her to stay there and not go wandering off. You were lucky, Ben; a transition service from Seventh to Eighth happens very seldom-Michael won't hold it until there are enough candidateS ready to build and hold the mood ... although we used to supply people out of the Innermost Circle to help the first candidates from outside through."

Ben carried Honey Bun for Patty until they reached the top level and learned that a fourteen-foot snake is quite a load; the basket had steel braces and needed them. As soon as they were that high, Patricia stopped. "Put her down, Ben." She took off her robe and handed it to him, then go out the snake and draped it around her. "This is Honey Bun's reward for being a good girl; she expects to cuddle up to Mama. I've got a class starting almost at once, so I'll walk the rest of the way with her on me and let her stay on me until the last possible second. It's not a goodness to disappoint a snake; they're just like babies. They can't grok in fullness, except that Honey Bun groks Mama...and Michael, of course."

They walked the fifty yards or so to the entrance to the Nest proper and at its door Patricia let Ben take off her sandals for her after he removed his shoes, He wondered bow she could balance on one foot under such a load . . . and noticed, too, that she had gotten rid of her socks or stockings at some point -- no doubt while she was out arranging Honey Bun's stage appearance.

They went inside and she went with him, still clothed in the big snake, while be shucked down to his jockey shorts-stalling as he did so, trying to make up his mind whether to discard the shorts, too. He had seen enough to be fairly certain that clothing, any clothing, inside the Nest was as unconventional by these conventions (and possibly as rude), as hob-nailed boots on a dance tloor. The gentle warning on the exit door, the fact that there were no windows anywhere in the Nest, the womblike comfort of the Nest itself, Patricia's lack of attire plus the fact that she had suggested (but not insisted) that he do likewise-all added up to an unmistakable pattern of habitual domestic nudity . . . among people who were all at least nominally his own "water brothers," even though he had not met most of them.

He had seen further confirmation in addition to Patricia, whose behavior he had discounted somewhat from a vague feeling that a tattooed lady might very 'well have odd habits about clothing. On coming into the living room they had passed a man beaded the other way, toward the baths and the "little ~"-and he had worn less than Patricia by one snake and lots of pictures. He had greeted them with "Thou art God" and gone on, apparently as used to buff as Patricia was. But, Ben reminded himself, this "brother" hadn't seemed surprised that Ben was dressed, either.

There had been other such evidence in the living room: a body sprawled face down on a couch across the room-a woman, Ben thought, although he had not wanted to stare after a quick glance had shown him that this one was naked, too.

Ben Caxtofl had thought himself to be sophisticated about such things. Swimming without suits be considered only sensible. He knew that many families were casually naked in their own homes-and this was a family, of sorts-although he himself had not been brought up in the custom. He had even (once) let a girl invite him to a nudist resort, and it had not troubled him especially after the first five minutes or so-he had simply regarded it as a silly lot of trouble to go to for the dubiOus pleasures of poison ivy, scratches, and an all-over sunburn that bad put him in bed for a day.

But now he found himself balanced in perfect indecision, unable to make up his mind between the probable urbanity of removing his symbolic fig leaf . . . and the even stronger probability-certainty he decided-that if he did so and strangers came in who were dressed and stayed that way, he would feel all-fired silly~ Hell, he might even blush!

"What would you have done, Jubal?" Ben demanded.

Harshaw lifted his eyebrows. "Axe you expecting me to be shocked, Ben? I have seen the human body, professionally and otherwise, for most of a century. It is often pleasing to the eye, frequently most depressiflg and never significant per se. Only in the subjective value the viewer places on the sight. I grok Mike runs his household along nudist lines. Shall I cheer? Or must I cry? Neither. It leaves me unmoved."

"Damn it man!, it's easy for you to sit there and be Olympian about it-you weren't faced with the choice. I've never seen you take off your pants in company."

"Nor are you likely to. 'Other times, other customs.' But I grok you were not motivated by modesty. You were suffering from a morbid fear of appearing ridiculous-a well-known phobia with a long, pseudo-Greek name with which I shall not bore you."

"Nonsense! I simply wasn't certain what was polite."

"Nonsense to you, sir-YOU already knew what was polite ... but were afraid you might look silly . . or possibly feared being trapped inadvertently in the gallant reflex. But I seem to grok that Mike had a reason for instituting this household custom-Mike always has reasons for everything he does, although some of them seem strange to me."

"Oh, yes. He has reasons. Jill told me about them."

Ben Caxton was standing in the foyer, his back to the living room and his hands on his shorts, having told himself, not very firmly, to take the plunge and get it over with-when two arms came snugly around his waist from behind. "Ben darling! How wonderful to have you here!"

He turned and had Jill in his arms and her mouth warm and greedy against his-and was very glad that he had not quite finished stripping. For she was no longer "Mother Eve"; she was wearing one of the long, allenveloping priestess robes. Nevertheless he was happily aware that he had a double armful of live, warm, and gently squirming girl; her priestly vestment was no greater impediment than would have been a thin gown, and both kinesthetic and tactile senses told him that the rest was Jill.

"Golly!" she said, breaking from the kiss. "I've missed you, you old beast. Thou art God."

"Thou art God," he conceded. "Jill, you're prettier than ever."

"Yes," she agreed. "It does that for you. But I can't tell you what a thrill it gave me to catch your eye at the blow-off."

"'Blow-off'?"

"Jill means," Patricia put in, "the end of the service where she is All Mother, Mater Deum Magna. Kids, I must rush."

"Never hurry, Pattycake."

"I gotta rush so I won't have to hurry. Ben, I must put Honey Bun to bed and go down and take my class-so kiss me good-night now. Please?"

Ben found himself kissing good-night a woman still wrapped most thoroughly by a giant snake-and decided that he could think of better ways . . . say wearing full armor. But he tried to ignore Honey Bun and treat Patty as she deserved to be treated.

Jill kissed her and said, "Stop by and tell Mike to stall until I get there, pretty please."

"He will anyhow. 'Night, dears." She left unhurriedly.

"Ben, isn't she a lamb?"

"She certainly is. Although she had me baffled at first."

"I grok. But it's not because she's tattooed nor because of her snakes, I know. She baffled you-she baffles everybody-because Patty never has any doubts; she just automatically always does the right thing. She's very much like Mike. She's the most advanced of any of us-she ought to be high priestess. But she won't take it because her tattoos would make some of the duties difficult-be a distraction at least-and she doesn't want them taken off."

"How could you possibly take off that much tattooing? With a flensing knife? It would kill her."

"Not at all, dear. Mike could take them off completely, not leave a trace, and not even hurt her. Believe me, dear, he could, But he groks that she does not think of them as belonging to her; she's just their custodian- and he groks with her about it. Come sit down. Dawn will be in with supper for all three of us in a moment-I must eat while we visit or I won't have a chance until tomorrow. That's poor management with all eternity to draw from . . . but I didn't know when you would get here and you happen to arrive on a very full day. But tell me what you think of what you've seen? Dawn tells me you saw an outsiders' service, too."

"Yes."

"Well?"

"Mike," Caxton said slowly, "has certainly blossomed out. I think he could sell shoes to snakes."

"I'm quite sure he could. But he never would because it would be wrong-snakes don't need them. What's the matter, Ben? I grok there's something bothering you."

"No," he answered. "Certainly not anything I can put my finger on. Oh, I'm not much for churches ... but I'm not against them exactly- certainly not against this one. I guess I just don't grok it."

"I'll ask you again in a week or two. There's no hurry."

"I won't be here even a week."

"You have some columns on the spike"-it was not a question.

"Three fresh ones. But I shouldn't stay even that long."

"I think you will ... then you'll phone in a few . . . probably about the Church. By then I think you will grok to stay much longer."

"I don't think so."

"Waiting is, until fullness. You know it's not a church?"

"Well, Patty did say something of the sort."

"Let's say it's not a religion. It is a church, in every legal and moral senses-and I suppose our Nest is a monastery. But we're not trying to bring people to God; that's a contradiction in terms, you can't even say it in Martian. We're not trying to save souls, because souls can't be lost. We're not trying to get people to have faith, because what we offer is not faith but truth-truth they can check; we don't urge them to believe it. Truth for practical purposes, for here-and-now, truth as matter of fact as an ironing board and as useful as a loaf of bread . . . so practical that it can make war and hunger and violence and hate as unnecessary as . . . as-well, as clothes here in the Nest. But they have to learn Martian first. That's the only hitch-finding people who are honest enough to believe what they see, and then are willing to do the hard work-it is hard work- of learning the language it can be taught in. A composer couldn't possibly write down a symphony in English . . and this sort of symphony can't be stated in English any more than Beethoven's Fifth can be." She smiled. "But Mike never hurries. Day after day he screens hundreds of people finds a few dozen . . . and out of those a very few trickle into the Nest and he trains them further. And someday Mike will have some of us so thoroughly trained that we can go out and start other nests, and then it can begin to snowball. But there's no hurry. None of us, even us in the Nest, are really trained. Are we, dear?"

Ben looked up, somewhat startled by Jill's last three words-then was really startled to find bending over him to offer him a plate a woman whom he belatedly recognized as the other high priestess-Dawn, yes, that was right. His surprise was not reduced by the fact that she was dressed in Patricia's fashion, minus tattoos.

But Dawn was not startled. She smiled and said, "Your supper, my brother Ben. Thou art God."

"Uh, thou art God. Thanks." He was beyond being surprised when she leaned down and kissed him, then got plates for herself and Jill, sat down on the other side of him and began to eat. He was willing to concede that, if not God, Dawn had the best attributes associated with goddesses; he was rather sorry she had not sat down across from him-he couldn't see her well without being obvious about it.

"No," Dawn agreed, between bites, "we aren't really trained yet, Jill. But waiting will fill."

"That's the size of it, Ben," Jill continued. "For example, I took a break to eat. But Mike hasn't had a bite for well over twenty-four hours and won't eat until he's not needed-you happened to bit a crowded day, because of that group making transition to Eighth Circle. Then when Mike is through, he'll eat like a pig and that will carry him as long as necessary. Besides that, Dawn and I get tired . . . don't we, sweet?"

"We surely do. But I'm not too tired, Gillian. Let me take this service and you can visit with Ben. Give me that robe."

"You're crazy in your little pointy head, my love-and Mama spank. Ben, she's been on duty almost as long as Mike has. We both can take that long a stretch-but we eat when we're hungry and sometimes we need sleep. Speaking of robes, Dawn, this was the

last vanishing robe in the Seventh Temple. I meant to tell Patty she'd better order a gross or two."

"She has."

"I should have known. This one seems a little tight." Jill wiggled in it in a fashion that disturbed Ben more than Dawn's perfect and unrobed skin. "Are we putting on weight, Dawn?"

"I think we are, a little. No matter."

"Helps, you mean. We were too skinny. Ben, you noticed, didn't you, that Dawn and I have the same figure? Height, bust, waist, hips, weight, everything-not to mention coloration. We were almost the same when we met . . . and then, with Mike's help, we matched up exactly and are holding it that way. Even our faces are getting more alike-but we didn't plan that. That just comes from doing the same things and thinking about the same things. Stand up and let Ben look at us, dear."

Dawn put her plate aside and did so, in a pose that reminded Ben oddly of Jill, more so than the figure resemblance seemed to justify; then he realized it was the exact pose Jill had been in when she had first stood revealed as Mother Eve.

Invited to Stare, he did. Jill said, with her mouth full, "See, Ben? That's me."

Dawn smiled at her. "A razor's edge of difference, Gillian."

"Pooh. You're getting that control, too. I'm almost sorry we'll never have the same face. It's very handy, Ben, for Dawn and myself to look so much alike. We have to have two high priestesses; it's all two of us can do to keep up with Mike. We can trade places right in the middle of a service -and sometimes do. And besides," she added, swallowing, "Dawn can buy a fitted dress and it fits me, too. Saves me the nuisance of shopping for clothes. When we wear clothes."

"I wasn't sure," Ben said slowly, "that you still wore clothes at all. Except these priestess things."

Jill looked surprised. "Do you think we would go out dancing in these? We wear evening dresses, same as everybody else. That's our favorite way of not getting our beauty sleep, isn't it, dear? Sit back down and finish your supper; Ben has stared at us long enough for the moment. Ben, there's a man in that transition group you were just with who's a perfectly dreamy dancer and this town is loaded with good night clubs-and Dawn and I have kept the poor fellow so busy, alternated keeping him up so many nights in a row, that we've had to help him stay awake in language classes. But he'll be all right; once you reach Eighth Circle you don't need nearly so much sleep. Whatever made you think we never dressed, dear?"

"Uh-" Ben finally blurted Out the embarrassing predicament he had been in.

Jill looked wide-eyed, then barely giggled-and stopped it at once, at which Ben realized that he had heard none of these people laugh only the "marks" in the outer service. "I see. But, darling, I just never got around to taking this robe off. I am wearing it because I have to gobble and git. But had I grokked that that was troubling you, I certainly would have chucked it before I said hello even though I wasn't sure there was another one handy. We're so used to dressing or not dressing according to what we need to do that I just plain forgot that I might not be behaving politely. Sweetheart, take those shorts off-or leave them on, exactly as suits you."

"Uh-"

"Just don't fret about it, either way." Jill smiled and dimpled. "Reminds me of the first time Mike tried a public beach, but in reverse. 'Member, Dawn?"

"I'll never forget it!"

"Ben, you know how Mike is about clothes. He just doesn't understand them. Or didn't. I had to teach him everything. He couldn't see any point to them as protection, until he grokked-to his great surprise-that we aren't as invulnerable as he is. Modesty-that sort of 'modesty'; he's so modest in its true sense that it hurts-body-modesty isn't a Martian concept, it couldn't be. And only lately has Mike grokked clothes as ornaments, after we started experimenting with various ways to costume our acts.

"But, Ben, while Mike was always wiJling to do what I told him to, whether he grokked it or not, you can't imagine how many million little things there are to being a human being. We take twenty or thirty years to learn them; Mike had to learn them almost overnight. There are gaps, even now. He does things not knowing that isn't how a human does them. We all teach him-Dawn and I especially. All but Patty, who is sure that anything that Michael does must be perfect. But he's still grokking the nature of clothes. He's groks mostly that they're a wrongness that keeps people apart-and get in the way of letting love cause them to grow closer. Lately he's come to realize that part of the time you want and need, such a barrier-with outsiders. But for a long time Mike wore clothes only because I told him to and when I told him he must.

"And I missed a gap."

"We were down in Baja California; it was just at the time we met-or remet, actually-Dawn. Mike and I checked in at night at one of those big fancy beach hotels and he was so anxious to grok the ocean, get wet all over, that he let me sleep the next morning and went down by himself for his first encounter with the ocean. And I didn't realize that Mike didn't know about swim suits. Oh, he may have seen them . . . but he didn't know what they were for or had some mixed-up idea. He certainly didn't know that you were supposed to wear them in the water-the idea was almost sacrilege. And you know Jubal's rigid rules about keeping his pool clean-I'm sure it's never seen a suit. I do remember one night a lot of people got tossed in with all their clothes on, but it was when Jubal was going to have it drained right away anyhow.

"Poor Mike! He got down to the beach and threw off his robe and headed for the water . . . looking like a Greek god and just as unaware of local conventions-and then the riot Started and I came awake fast and grabbed some clothes myself and got down there just in time to keep him out of jail . . . and fetched him back to the room and he spent the rest of the day in a trance."

Jill got a momentary faraway look. "And he needs me now, too, so I must run along. Kiss me good-night, Ben; I'll see you in the morning."

"You'll be gone all night?"

"Probably. It's a fairly big transition class and, truthfully, Mike has just been keeping them busy the past half hour and more while we visited. But that's all right." She stood up, pulled him gently to his feet and went into his arms.

Presently she broke from the kiss but not from his arms and murmured, "Ben darling, you've been taking lessons. Whew!"

"Me? I've been utterly faithful to you-in my own way."

"In the same way I've been to you ... the nicest way. I wasn't complaining . . . I just think Dorcas has been helping you to practice kissing."

"Some, maybe. Nosy."

"Uh huh, I'm always nosy. The class can wait while you kiss me once more. I'll try to be Dorcas."

"You be yourself."

"I would be, anyway. Self. But Mike says that Dorcas kisses more thoroughly-'groks a kiss more'-than anyone."

"Quit chattering."

She did, for a while, then sighed. "Transition class, here I come- glowing like a lightning bug. Take good care of him, Dawn."

"I will."

"And better kiss him right away and see what I mean!"

"I intend to."

"'Bye, darlings! Ben, you be a good boy and do what Dawn tells You." She left, not hurrying-but running.

Dawn stood up, flowed up against him, put up her arms.

Jubal cocked an eyebrow. "And now I suppose you are going to tell me that at that point, you went chicken."

"Uh, not exactly. A near miss, call it. To tell the truth I didn't have too much to say about it. I, uh, 'cooperated with the inevitable.'"

Jubal nodded. "No other possible course. You were trapped and couldn't run. Whereupon the best a man can do is try for a negotiated peace." He added, "But I'm sorry that the civilized habits of my household caused the boy to fall afoul the law of the jungles of Baja California."

"I don't think he's a boy any longer, Jubal."

XXXII

BEN CAXTON HAD AWAKENED not knowing where he was nor what time it was. It was dark around him, perfectly quiet, he was lying on something soft. Not a bed-where was he?

The night came back in a rush. The last he clearly remembered he had been lying on the soft floor of the Innermost Temple, talking quietly and intimately with Dawn. She had taken him there, they had immersed, shared water, grown closer- Frantically he reached around him in the dark, found nothing.

"Dawn!"

Light swelled softly to a gentle dimness. "Here, Ben."

"Oh! I thought you had gone!"

"I didn't intend to wake you." She was wearing-to his sudden and intense disappointment-her robe of office. "I must go start the Sunrisers' Outer Service. Gillian isn't back yet. As you know, it was a fairly big class."

Her words brought back to him things she had told him last night things which, at the time, had upset him despite her gentle and quite logical explanations . . . and she had soothed his upset until he found himself agreeing with her. He still was not quite straight in his mind he didn't grok it all-but, yes, Jill was probably still busy with her rites as high

priestess-a task, or perhaps a happy duty, that Dawn had offered to take for her. Ben felt a twinge that he really should have been sorry that Jill had refused, had insisted that Dawn get much needed rest.

But he did not feel sorry. "Dawn ... do you have to leave?" He scrambled to his feet, put his arms around her.

"I must go, Ben dear ... dear Ben." She melted up against him.

"Right now? In such a rush?"

"There is never," she said softly, "that much hurry." Suddenly the robe no longer kept them apart. He was too bemused to wonder what had become of it.

He woke up a second time, found that the "little nest" he was in lighted softly when he stood up. He stretched, discovered that he felt wonderful, then looked around the room for his shorts. They were not in sight and no way for them to be out of sight. He tried to recall where he had left them . . . and had no recollection of ever having taken them off. But he certainly had not worn them into the water. Probably beside the pool in the Innermost Temple- He made a mental note to stop back there and pick them up, then went out and found a bathroom.

Some minutes later, shaved, showered, and refreshed, he did remember to look into the Innermost Temple, failed to find his shorts and decided that somebody, Patty maybe, had noticed them and put them near the outer door where apparently everybody kept what they needed for street wear . . . said to hell with it and grinned at himself for having made such a jittery old-maid issue last night out of wearing them or not. He needed them, here in the Nest, the way he needed a second head.

Come to think of it, he didn't have the slightest trace of a head-a hangover head-although he recalled that he had had more than several drinks with Dawn. Hadn't got drunk, as he recalled, but certainly more than he ordinarily allowed himself-he couldn't sop up the stuff the way Jubal did without paying for it.

Dawn didn't seem to be affected by liquor at all-which was probably why he had gone over his usual quota. Dawn . . . what a gal, what a gal! She hadn't even seemed annoyed when, in a moment of emotional confusion, he had called her Jill-she had seemed pleased.

He found no one in the big room and wondered what time it was? Not that he gave a damn, except that his stomach told him that it was long past breakfast time. He went into the kitchen to see what he could scrounge.

A man in there looked up as he came in. "Ben!"

"Well! Hi, Duke!"

Duke gave him a bear hug and slapped him on the back. "Ben, you're a sight for sore eyes! Gosh, it's good to see you. Thou art God. How do you like your eggs?"

"Thou art God. Are you the cook?"

"Only when I can't find somebody else to do it for me-such as right now. Tony does most of it. We all do some. Even Mike unless Tony catches him and chases him out-Mike is the world's worst cook, bar none." Duke went on breaking eggs into a dish.

Ben moved in on the job. "You look after toast and coffee. Any Wocestershire sauce around here?"

"You name it, Pat's got it. Here." Duke added, "I looked in on you a half hour ago, but you were still sawing wood. I've been busy or you've been busy ever since you got here-until now."

"What do you do around here, Duke? Aside from cooking when you can't avoid it?"

"Well, I'm a deacon ... and I'll be a priest someday. But I'm slow-not that it matters. I study Martian . . . everybody does that. And I'm the fix-it boy, same as I was for Jubal"

"Must take quite a gang to maintain a place this size."

"Ben, you'd be surprised how little it takes. Aside from keeping an eye on the plumbing-and sometime you must see Mike's unique way of dealing with a stopped toilet-I don't have to play plumber very much. Aside from plumbing, ninety percent of the gadgetry in this building is right here in the kitchen . . . and it's not as gadgeted as Jubal's kitchen."

"I had the impression that you have some very complicated gadgets for some of the temple ceremonies."

"Uuh uh, nary a gadget. Some lighting controlS, that's all, and simple ones. Actually" Duke grinned. "-One of my most important jobs is no job at all. Fire warden"

"Huh?"

"I'm a licensed deputy fire warden, examined and everything, and same for sanitation and safety inspector-neither one takes any work. But it means that we never have to let an outsider go through the joint-and we don't. They attend outer services...but they never get any farther unless Mike gives an up check."

They transferred food to plates and sat down at a table. Duke said, "You're staying, aren't you, Ben?"

"I don't see how I can, Duke."

"Mmmm . . . I had hoped that you would have more sense than I had. I came for just a short visit, too . . went back and moped around for nearly a month before I told Jubal I was leaving and wouldn't be back. But never mind; you'll be back. Don't make any final decisions before the water sharing tonight."

"Didn't Dawn tell you? Or Jill?"

"Uh ... I don't think so."

"Then they didn't. Hmm, maybe i should let Mike explain it. No, no need to; people will be mentioning it to you all day long. Sharing water you grok, of course; you're one of the First Called."

"'First Called?' Dawn used that expression."

"That handful of us who became Mike's water brothers without learning Martian. The others ordinarily do not share water and grow closer until they pass from the Seventh Circle to the Eighth . . . and by that time they are beginning to think in Martian. Heck, some of them know more Martian by that stage than I do now, since I'm a 'First Called' myself and started my studies after I was already in the Nest. Oh, it's not actually forbidden to share water with someone who isn't ready for Eighth Circle. Hell, if I wanted to, I could pick up a babe in a bar, share water with her, then take her to bed -- and then take her to the Temple and start her on her apprentisship But I wouldn't want to. That's the point; I wouldn't even want to. At the very most I might decide that it was worth while to bring her around to an outer service and let Mike look her over and find out whether any of it clicked with her. Ben, I'll make a flat-footed prediction. You've been around a lot -- I'm sure you've been in some fancy beds with some fancy babes."

"Uh . . some,"

"I know damn' well you have. But you will never again in your life crawl in with one who is not your water brother."

"Hmm."

"You'll see. Let's cheek it a year from now and you tell me. Now Mike may decide that someone is ready to share water before that person reaches even Seventh Circle. One couple we've got in the Nest, Mike picked, and offered them Water, when they had just entered Third Circle and now he's a priest and she's a priestess . . . Sam and Ruth."

"Haven't met 'em."

"You will. Tonight at the latest. But Mike is the only one who can be certain, that soon. Very occasionally Dawn, and sometimes Patty, will spot somebody for special promotion and special training . . but never as far down as Third Circle and I'm pretty sure that they always consult Mike before going ahead. Not that they are required to. Anyhow, into the Eighth Circle . . . and sharing and growing closer starts. Then, sooner or later, into Ninth Circle, and the Nest itself -- and that's the service we mean when we say 'Sharing Water' even though we share water all day long. The whole Nest attends and the new brothers -- usually it's a couple -- becomes forever part of the Nest. In your case you already are . . , but we've never held the service for you, so everything else is being pushed aside tonight while we welcome you. They did the same for me." Duke got a faraway look. "Ben, it's the most wonderful feeling in the world"

"But I still don't know what it is, Duke."

"Uh ...it's a lot of things. Ever been on a real luau of a party, the kind the cops raid and usually ends up in a divorce or two?"

"Well ... yes."

"Up to now, brother, you've only been on Sunday School picnics. That's one aspect of it. Have you ever been married?"

"No."

"You are married. You just don't know it yet. After tonight there will never again be any doubt in your mind about it." Duke again looked faraway, happily pensive. "Ben, I was married before ... and for a short time it was pretty nice and then it was steady hell on wheels. This time I like it, all the time. Shucks, I love it! And look, Ben, I don't mean just that it's fun to be shacked up with a bunch of bouncy babes. I love them-all my brothers, both sexes. Take Patty-and you willi-Patty mothers all of us . . . and I don't think anybody, man or woman, gets over needing that, even if they think they've outgrown it. Patty . . . well, Patty is just swell! She reminds me of Jubal . . . and that old bastard had better get down here and get the word! My point is that it is not just that Patty is female. Oh, I'm not running down tail-"

"Who is running down tail?" The voice, a rich contralto, came from behind them.

Duke swung around. "Not me, you limber Levantine whore! Come here, babe, and kiss your brother Ben."

"Never charged for it in my life," the woman denied as she glided toward them. "Started giving it away before anybody told me." She kissed Ben carefully and thoroughly. "Thou art God, brother."

"Thou art God. Share water."

"Never thirst. And don't ever pay any mind to what Duke says- from the way he behaves he must have been a bottle baby." She leaned over Duke and kissed him even

more lingeringly while he patted her ample fundament. Ben noted that she was short, plump, brunette almost to swarthiness, and had a mane of heavy blue-black hair almost to her waist "Duke, did you see anything of a Ladies' Home Journal when you got up?" She reached past his shoulder, took his fork and started eating his scrambled eggs. "Mmm ... good. You didn't cook these, Duke."

"Ben did. What in the world would I want with a Ladies' Home Journal?"

"Ben, stir up a couple of dozen more exactly the same way and I'll scramble 'em in relays. There was an article in it I wanted to show Patty, dear."

"Okay," agreed Ben and got up to do it.

"Don't you two get any ideas about redecorating this dump or I'm moving out. And leave some of those eggs for me! You think us men can do our work on mush?"

"Tut, tut, Dukie darling. Water divided is water multiplied. As I was saying, Ben, Duke's complaints never mean anything-as long as he has enough women for two men and enough food for three, he's a perfect little lamb." She shoved one forkful into Duke's mouth, went on eating the rest herself. "So quit making faces, brother; I'm about to cook you a second breakfast. Or will this be your third?"

"Not even the first, yet. You ate ~. Ruth, I was telling Ben how you and Sam pole-vaulted from Third to Ninth. I think he's uneasy about whether he belongs in the Sharing-Water tonight."

She pursued the last bite on Duke's plate, then moved over and started preparations to cook. "Duke, you run along and I'll send you out something other than mush. Take your coffee cup and skedaddle. Ben, I was worried, too, when my time came-but don't you be worried, dear, because Michael does not make mistakes. You belong here or you wouldn't be here. You're going to stay?"

"Uh, I can't. Ready for the first installment?"

"Pour them in. Then you'll be back. And someday you'll stay. Duke is correct-Sam and I pole-vaulted . . . and it was almost too fast for a middle-aged, prim and proper housewife."

"Middle-aged?"

"Ben, one of the bonuses about the discipline is that as it straightens out your soul, your body straightens out, too. That's a matter in which the Christian Scientists are precisely right. Notice any medicine bottles in any of the bathrooms?"

"Uh, no."

"There aren't any. How many people have kissed you?"

"Several, at least."

"As a priestess I kiss a lot more than 'several,' believe me. But there's never so much as a sniffle in the Nest. I used to be the sort of whiny woman who is never quite well and given to 'female complaints.'" She smiled. "Now I'm more female than ever but I'm twenty pounds lighter and years younger and have nothing to complain about-I like being female. As Duke flattered me, 'a Levantine whore' and unquestionably much more limber than I was-I always sit in the lotus position when I'm teaching a class, whereas it used to be all I could do just to squat down and straighten up again . . . hot flashes and dizziness.

"But it did happen fast," Ruth went on. "Sam was a professor of Oriental languages at the University here-the city U., that is. Sam started coming to the Temple because it was a way, the only way, to learn the Martian language. Strictly professional

motivation, he wasn't interested in it as a church. And I went along to keep an eye on him . . . I had heard rumors and I was a jealous wife, even more possessive than the average.

"So we worked up to the Third Circle, Sam learning the language rapidly, of course, and myself grimly hanging on and studying hard because I didn't want to let him out of my sight. Then boom! the miracle happened. We suddenly began to think in it, just a little . . . and Michael felt it and had us stay after service, a Third Circle service, one night and Michael and Gillian gave us water. Afterwards, I knew that I was all the things I had despised in other women and I knew that I should despise my husband for letting me do it and hate him for what he had done himself. All this in English, with the wont parts in Hebrew. So I wept all day and moaned and made myself a stinking nuisance to Sam . . . and couldn't wait to get back to share more water and grow closer again that night.

"After that things were steadily easier but not easy, as we were pushed through all the inner circles just as rapidly as we could take it; Michael knew that we needed help and wanted to get us into the safety and peace of the Nest. So when it came time for our Sharing.Water, I was still unable to discipline myself without constant help. I knew that I wanted to be received into the Nest-once you start, there's no turning back-but I wasn't sure I could merge myself with seven other people. I was scared silly; on the way over I almost begged Sam to turn around and go home."

She stopped talking and looked up, unsmiling but beatific, a plump angle with a big stirring spoon in one hand. "Then we walked into the Innermost Temple and a spotlight hit me and our robes were whisked away . . . and they were all in the pool and calling out to us in Martian to come, come and share the water of life-and I stumbled into that pool and submerged and I haven't come up since!

"Nor ever want to. Don't fret, Ben, you'll learn the language and acquire the discipline and you'll have loving help from all of us every step of the way. You stop worrying and jump in that pool tonight; I'll have my arms out to catch you. All of us will have our arms out, welcoming you home. Now take this plate in to Duke and tell him I said he was a pig but a charming one. And take this one in for yourself-oh, of course you can eat that much!-give me a kiss and run along; Ruthie has work to do."

Ben delivered the kiss and the message and the plate, then found that he did have some appetite left . . . but nevertheless did not concentrate on food as he found Jill stretched out, apparently asleep, on one of the wide, soft couches. He sat down opposite her, enjoying the sweet sight of her and thinking that Dawn and Jill were even more alike than he had realized the night before.

He looked up from a bite and saw that her eyes were open and she was smiling at him. "Thou art God, darling-and that smells good."

"And you look good. But I didn't mean to wake you." He got up and sat by her, put a bite in her mouth. "My own cooking, with Ruth's help."

"I know. And good, too. Duke told me to stay out of the kitchen because Ruthie was giving you a good-for-your-soul lecture. You didn't wake me; I was just lazing until you came out. I haven't been asleep all night."

"Not at all?"

"Not a wink. But I'm not tired, I feel grand. Just hungry. That's a hint." So he fed her. She let him do so, never stirring, not using her own hands. "But did you get any sleep?" she asked presently.

"Uh, some."

"Enough? No, you got enough. But how much sleep did Dawn get? As much as two hours?"

"Oh, more than that, I'm certain."

"Then she's all right. Two hours of sleep does us as much good as eight used to. I knew what a sweet night you were going to have-both of you-but I was a teeny bit worried that she might not rest."

"Well, it was a wonderful night," Ben admitted, "although I was, uh, surprised at the way you shoved her at me."

"Shocked, you mean. I know you, Ben, maybe better than you know yourself. You arrived here yesterday with jealousy sticking out in lumps. I think it's gone now. Yes?"

He looked back at her. "I think so."

"That's good. I had a wonderful and joyous night, too-made free from any worry by knowing you were in good hands. The best hands- better than mine."

"Oh, no!"

"Hmm. I grok a few lumps still-but tonight we'll wash them away in water." She sat up, reached toward the end of the couch-and it looked to Canon as if a pack of cigarettes on the end table jumped the last few inches into her hand.

"You seemed to have picked up some sleight-of-hand tricks, too."

She seemed momentarily puzzled, then she smiled. "Some. Nothing much. Parlor tricks. 'I am only an egg,' to quote my teacher."

"How did you do that trick?"

"Why, I just whistled to it in Martian. First you grok a thing, then you grok what you want it to-Mike!" She waved. "We're over here, dear!"

"Coming." The Man from Mars came straight to Ben, took his hands, pulled him to his feet. "Let me look at you, Ben! Golly, it's good to see you!"

"It's good to see you. And to be here."

"And we're going to twist your arm to keep you here. What's this about three days? Three days indeed!"

"I'm a working man, Mike."

"We'll see. The girls are all excited, getting ready for your party tonight. Might just as well shut down services and classes for the rest of the day-they won't be worth a damn."

"Patty has already done any necessary rescheduling," Jill told Mike. "She just didn't bother you with it. Dawn and Ruth and Sam are going to take care of what's necessary. Patty decided to slough the Outer matinee- so you're through for the day."

"That's good news." Mike sat down, pulled Jill's head into his lap, pulled Ben down, put an arm around him, and sighed. He was dressed as Ben had seen him in the outer meeting, smart tropical business suit, lacking only shoes. "Ben, don't ever take up preaching. I spend my days and nights rushing from one job to another, telling people why they must never hurry. I owe you, along with Jill and Jubal, more than anyone else on this planet-yet you've been here since yesterday afternoon and this is the first time I've been able to say hello. How've you been? You're looking fit. In fact Dawn tells me you are fit."

Ben found himself blushing. "I'm okay."

"That's good. Because, believe me, the hill tribes will be restless tonight. But I'll grok close and sustain you. You'll be fresher at the end of the party than at the start-won't he, Little Brother?"

"Yes," agreed Jill. "Ben, you won't believe it until you've had it done for you, but Mike can lend you strength-physical strength, I mean, not just moral support. I can do it a little bit. Mike can really do it."

"Jill can do it quite a lot." Mike caressed her. "Little Brother is a tower of strength to everybody. Last night she certainly was." He smiled down at her, then sang:

"You'll never find a girl like Jill.

"No, not one in a billion."

"Of all the tarts who ever will "The willingest is our Gillian!-isn't that right, Little Brother?"

"Pooh," answered Jill, obviously pleased, covering his hand with her own and pressing it to her. "Dawn is exactly like me and you know it- and every bit as willing."

"Maybe. But you're here ... and Dawn is downstairs interviewing the possibles out of the tip. She's busy-you ain't. That's an important difference-isn't it, Ben?"

"Could be." Caxton was finding that their unself-conscious behavior was beginning to embarrass him, even in this uniquely relaxed atmosphere-he wished that they would either knock off necking . . . or give him an excuse to leave.

Instead Mike went right on cuddling Jill with one hand while keeping his other arm snug around Ben's waist . . . and Ben was forced to admit that Jill encouraged him, rather than otherwise. Mike said very seriously, "Ben, a night like last night-helping a group to make the big jump to Eighth Circle-gets me terribly keyed up. Let me tell you something out of the lessons for Sixth, Ben. We humans have something that my former people don't even dream of. They can't. And I can tell you how precious it is . . . how especially precious I know it to be, because I have known what it is not to have it. The blessing of being male and female. Man and Woman created He them-the greatest treasure We-Who-Are-God ever invented. Right, Jill?"

"Beautifully right, Mike-and Ben knows it is Truth. But make a song for Dawn, too, darling."

"Okay- "Ardent is our lovely Dawn;"Ben grokked that in her glance- "She buys new dresses every morn. "But never shops for pants!" Jill giggled and squirmed. "Did you tune her in?"

"Yes, and she gave me a big Bronx cheer-with a kiss behind it for Ben. Say, isn't there anybody in the kitchen this morning? I just remembered I haven't eaten for a couple of days. Or years, maybe; I'm not sure."

"I think Ruth is," Ben said, untangling himself and standing up. "I'll go see."

"Duke can do it. Hey, Duke! See if you can ~nd somebody who'll fix me a stack of wheat cakes as tall as you are and a gallon of maple syrup."

"Right, Mike!" Duke called back.

Ben Caxton hesitated, without an excuse to run an errand. He thought of a trumped-up excuse and glanced back over his sboulder.

"Jubal," Caxton said earnestly, "I wouldn't tell you this part at all if it weren't essential to explaining how I feel about the whole thing, why I'm worried about them-all of them, Duke and Mike as well as Jill and Mike's other victims, too. By that morning I was myself half conned into thinking everything was all right-Weird as bell in spots-but

jolly. Mike himself had me fascinated, too-his new personalitY is pretty powerful. Cocky and too much supersalesman . . but very compelling. Then he-or both of them-got me rather embarassed, so 1 took that chance to get up from the couch.

"Then I glanced back-and couldn't believe my eyes. I hadn't been tu~ncd away five seconds . . and Mike bad managed to get rid of every stitch of clothes . . . and so help me, they were going to it, with myself and three or four others in the room at the time-just as boldly as monkeys in a zoo!

"Jubal, I was so shocked I almost lost my breakfast."

XXXIII

"WELL," SAID JUBAL, "what did you do? Cheer?"

"Like hell. I left, at once. I dashed for the outer door, grabbed my clothes and shoes-forgot my bag and didn't go back for it-ignored the sign on the door, went on through-jumped in that bounce tube with my clothes in my arms. Blooie! Gone without saying good-by."

"Rather abrupt"

"I felt abrupt. I had to leave. In fact I left so fast that I durn near killed myself. You know the ordinary bounce tube-"

"I do not."

"Well, unless you set it to take you up to a certain level, when you get into it you simply sink slowly, like cold molasses I didn't sink, I fell_and I was about six stories up. But just when I thought I had made my last mistake, something caught me. Not a safety net-a field of some sort I didn't quite splash. But Mike needs to smooth out that gadget. Or put in the regular sort of bounce tube."

Jubal said, "I'll stick to stairs and, when unavoidable, elevators"

"Well, I hadn't realized that this one was so risky. But the only safety inspector they've got is Duke . . . and to Duke whatever Mike says is Gospel. Jubal, that whole place is riding for a fall. They're all hypnotized by one man . . . who isn't right in his head. What can be done about it?"

Jubal jutted out his lips and then scowled, "Let's see first if you've got it analyzed correctlY. Just what aspects of the situation did you find disquieting?"

"Why...the whole thing."

"So? In fact, wasn't it just one thing? And that an essentiallY harmless act which we both know was nothing new . . . but was, we can assume rather conclusively, initially performed in this house or on these grounds about two years ago? I did not then object-nor did you, when you learned of it, whenever that was, in fact, I have implied that you yourself have, on other occasions, joined in that same act with the same young lady-and she is a lady, despite your tale-and you neither denied my implication nor acted offended at my presumPtion. To put it bluntly, son-what are you belly-aching about?"

"Well, for cripe's sake, Jubal...Would you put up with it, in your living room?"

"Decidedly not-unless perhaps I have, it having taken place so clandestinely, at night perhaps, that no one noticed. In which case it would be-or has been, if such be the case-no skin off'n my nose. But the point is that it was not my living room . . . nor would

I presume to lay down rules for another man's living room. It was Mike's house . . . and his wife-common law or otherwise, we need not inquire. So what business is it of mine? Or yours? You go into a man's house, you accept his household rules-that's a universal law of civilized behavior."

"You mean to say you don't find it shocking?"

"Ah, you've raised an entirely different issue. Public exhibitiOn ~luSt I would find most distasteful, either as participant or spectator . . but I grok this reflects my early indoctrination, nothing more. A very large minority of mankind-possibly a majority-do not share my taste in this matter. Decidedly not-for the orgy has a long and very widespread history. Nonetheless it is not to my taste. But shocking? My dear sir, I can be shocked only by that which offends me ethically. Ethical questiotions are subject to logic-but this is a matter of taste and the old saw is in point-"de gusribus non est disputandu."

"You think that a public shagging is merely 'a matter of taste?'"

"Precisely. In which respect I concede that my own taste, rooted in early training, reinforced by some three generations of habit, and now, I believe, calcified beyond possibility of change, is no more sacred than the very different taste of Nero. Less sacred-Nero was a god; I am not."

"Well, I'll be damned."

"In due course, possibly-if it is possible ... a point on which I am 'neutral-against.' But, Ben, this wasn't public."

"Huh?"

"You yourself have said it. You described this group as a plural marriage-a group theogamy, to be precise. Not public but utterly private. Aint nobody here but just us gods'-so how could anyone be offended?"

"I was offended!"

"That was because your own apotheosis was less complete than theirs-I'm afraid they over-rated you . . . and you misled them. You invited it."

"Me? Jubal, I did nothing of the sort"

"Tommy busted my dolly ... I hitted him over the head with it.' The time to back out was the instant you got there, for you saw at once that their customs and manners were not yours. Instead you stayed, and enjoyed the favors of one goddess-and behaved yourself as a god toward her-in short, you learned the score, and they knew it. It seems to me that Mike's error lay only in accepting your hypocrisy as solid coin. But he does have the weakness-a godlike one-of never doubting his 'water brothers'-but even Jove nods-and his weakness-or is it a strength?- comes from his early training; he can't help it. No, Ben, Mike behaved with complete propriety; the offense against good manners lay in your behavior."

"Damn it, Jubal, you've twisted things again. I did what I had to do-I was about to throw up on their rug!"

"So you claim reflex. So stipulated; however, anyone over the emotional age of twelve could have clamped his jaws and made a slow march for the bathroom with at worst the hazard of clogged sinuses-instead of a panicked dash for the street door-then returned when the show was over with a euphemistic but acceptable excuse."

"That wouldn't have been enough. I tell you I had to leave!"

"I know. But not through reflex. Reflex will evacuate the stomach; it will not choose a course for the feet, recover chattels, take you through doors and cause you to jump down a hole without looking. Panic, Ben. Why did you panic?"

Caxton was long in replying. He sighed and said, "I guess when you come right down to it, Jubal-I'm a prude."

Jubal shook his head. "Your behavior was momentarily prudish, but not from prudish motivations. You are not a prude, Ben. A prude is a person who thinks that his own rules of propriety are natural laws. You are almost entirely free of this prevalent evil. You adjusted, at least with passable urbanity, to many things which did not fit your code of propriety whereas a true-blue, stiff-necked, incorrigible prude would promptly have affronted that delightful tattooed lady and stomped out. Dig deeper.. Do you wish a hint?"

"Uh, maybe you'd better. All I know is that I am mixed up and unhappy about the whole Situation-on Mike's account, too, Jubal!- which is why I took a day off to see you."

"Very well. Hypothetical situation for you to evaluate: You mentioned a lady named Ruth whom you met in passing-a kiss of brotherhood and a few minutes conversation-nothing more."

"Yeah?"

"Suppose the actors had been Ruth and Mike? Gillian not even present? Would you have been shocked?"

"Huh? Hell, yes, I would have been shocked!"

"Just how shocked? Retching? Panic flight?"

Caxton looked thoughtful, then sheepish. "I suppose not. I still would have been startled silly. But I guess I would've just gone out to the kitchen or something . . . then found an excuse to leave. I still feel like a fool for having made that mad dash to get out."

"Would you actually have sought an excuse to leave? Or were you looking forward to your own 'welcome home' party that night?"

"Well," Caxton mused. "I hadn't made up my mind about that when this happened. I was curious, I admit-but I wasn't quite sold."

"Very well. You now have your motivation."

"Do I?"

"You name it, Ben. Haul it out and look at it-and find out how you want to deal with it."

Caxton chewed his lip and looked unhappy. "All right. I would have been startled if it had been Ruth-but I wouldn't really have been shocked. Hell, in the newspaper racket you get over being shocked by anything but-well, you expressed it: something that cuts deep about right and wrong. Shucks, if it had been Ruth, I might even have sneaked a look ~ -even though I still think I would have left the room; such things ought to be-or at least I feel that they ought to be-private." He paused. "It was because it was Jill. I was hurt . . . and jealous."

"Stout fellow, Ben."

"Jubal, I would have sworn that I wasn't jealous. I knew that I had lost out-I had accepted it. It was the circumstances, Jubal. Now don't get me wrong. I would still love Jill if she were a two-peso whore. Which she is not. This hands-around harem deal upsets the hell out of me. But by her lights Jill is moral."

Jubal nodded. "I know. I feel sure that Gillian is incapable of being corrupted. She has an invincible innocence which makes it impossible for her to be immoral." lie

frowned. "Ben we are close to the root of your trouble. I am afraid that you-and I, too, i admit-lack the angelic innocence to abide by the perfect morality those people live by."

Ben looked surprised. "Jubal, you think what they are doing is moral? Monkeys in the zoo stuff and all? All I meant was that Jill really didn't know that what she was doing was wrong__Mike's got her homswoggled-and Mike doesn't know he's doing wrong either. He's the Man front Mars; he didn't get off to a fair start. Everything about us was strange to him-he'll probably never get straightened out."

Jubal looked troubled. "You've raised a hard question, Ben-but I'll give you a straight answer. Yes, I think what those people-the entire Nest, not just our own kids-are doing is moral. As you described it to me _yes. I haven't had a chance to examine details-but yes: all of it. Group orgies, and open and unashamed swapping off at other times . . . their communal living and their anarchistic code, everything. And most especially their selfless dedication tO giving their perfect morality to others."

"Jubal, you utterly astonish me." Caxton scratched his head and frowned. "Since you feel that way, why don't you join them? You're welcome, they want you, they're expecting you. They'll hold a jubilee-and Dawn is waiting to kiss your feet and serve you in any way you will permit; I wasn't exaggerating."

Jubal shook his head. "No. Had I been approached fifty years ago- But now? Ben my brother, the potential for such innocence is no longer in me-and I am not referring to sexual potency, so wipe that cynical smile off your face. I mean that I have been too long wedded to my own brand of evil and hopelessness to be cleansed in their water of life and become innocent again. If I ever was."

"Mike thinks you have this innocence-he doesn't call it that-in full measure now. Dawn told me, speaking ex officio."

"Then Mike does me great honor; I would not disillusion him. He sees his own reflection-I am, by profession a mirror."

"Jubal, you're chicken."

"Precisely, sir! The thing that troubles me most is whether those innocents can make their pattern fit into a naughty world. Oh, it's been tried beforel-and every time the world etched them away like acid. Some of the early Christians_anarchy, communism, group marriage-why even that kiss of brotherhood has a strong primitive-Christian flavor to it. That might be where Mike picked it up, since all the forms he uses are openly syncretistic, especially that Earth-Mother ritual." Jubal frowned. "If he picked that up from primitive christa ity-and not just from kissing girls, which he enjoys, I now-then I would expect men to kiss men, too."

Ben snorted. "I held out on you-they do. But it's not a pansy gesture. I got caught once; after that I managed to duck."

"So? It figures. The Oneida Colony was much like Mike's 'Nest'; it managed to last quite a while but in a low population density-not as an enclave in a resort city. There have been many others, all with the same sad story: a plan for perfect sharing and perfect love, glorious hopes and high idea -- followed by persecution and eventual failure." Jubal sighed. "I was worried about Mike before-now I'm worried about all of them."

"You're worried? How do you think I feel? Jubal, I can't accept your sweetness and light theory. What they are doing is wrong."

"So? Ben, it's that last incident that sticks in your craw."

"Well ... maybe. Not entirely."

"Mostly. Ben. the ethics of sex is a thorny problem because each of us has to find a solution pragmatically compatible with a preposterous, utterly unworkable, and evil public code of so-called 'morals.' Most of us know, or suspect, that the public code is wrong, and we break it. Nevertheless we pay Danegeld by giving it lip service in public and feeling guilty about breaking it in private. Willy-nilly, that code rides us, dead and stinking, an albatross around the neck. You think of yourself as a free soul, I know, and you break that evil code yourself-but faced with a problem in sexual ethics new to you, you unconsciously tested it against that same Judeo-Christian code which you consciously refuse to obey. All so automatically that you retched . . . and believed thereby-and continue to believe-that your reflex proved that you were 'right' and they were 'wrong.' Faugh! I'd as lief use trial by ordeal as use your stomach to test guilt. All your stomach can reflect are prejudices trained into you before you acquired reason."

"What about your stomach?"

"Mine is as stupid as yours-but I don't let it rule my brain. I can at least see the beauty of Mike's attempt to devise an ideal human ethic and applaud his recognition that such a code must be founded on ideal sexual behavior, even though it calls for changes in sexual mores so radical as to frighten most people -- including you. For that I admire him-I should nominate him for the Philosophical Society. Most moral philosophers consciously or unconsciously assume the essential correctness of our cultural sexual code-family, monogamy, continence, the postulate of privacy that troubled you so, restriction of intercourse to the marriage bed, et cetera. Having stipulated our cultural code as a whole, they fiddle with details- even such piffle as solemnly discussing whether or not the female breast is an 'obscene' sight! But mostly they debate how the human animal can be induced or forced to obey this code, blandly ignoring the high probability that the heartaches and tragedies they see all around them originate in the code itself rather than failure to abide by the code.

"Now comes the Man from Mars, looks at this sacrosanct code-and rejects it in toto. I do not grasp exactly what Mike's sexual code is, but it is clear from what little you told me that it violates the laws of every major nation on Earth and would outrage 'right-thinking' people of every major faith-and most agnostics and atheists, too. And yet this poor boy-"

"Jubal, I repeat-he's not a boy, he's a man"

"Is he a 'man?' I wonder. This poor ersatz Martian is saying, by your own report, that sex is a way to be happy together. I go along with Mike this far: sex should be a means of happiness. The worst thing about sex is that we use it to hurt each other. It ought never to hurt; it should bring happiness, or, at the very least, pleasure. There is no good reason why it should ever be anything less.

"The code says, 'Thou shalt not covet thy neighbor's wif'e'-and the result? Reluctant chastity, adultery, jealousy, bitter family fights, blows and sometimes murder, broken homes and twisted children . . . and furtive, dirty little passes at country club dances and the like, degrading to both man and woman whether consummated or not, Is this injunction ever obeyed? The Commandment not to 'covet' I mean; I'm not referring to any physical act. I wonder. If a man swore to me on a stack of his own Bibles that he had refrained from coveting another man's wife because the code forbade it, I would suspect either self-deception or subnormal sexuality. Any male virile enough to sire a child is

almost certainly so virile that he has coveted many, many women-whether he takes action in the matter or not.

"Now comes Mike and says: 'There's no need for you to covet my wife . . love her! There's no limit to her love, we all have everything to gain-and nothing to lose but fear and guilt and hatred and jealousy.' The proposition is so naive that it's incredible. So far as I recall only precivilization Eskimos were ever this naive-and they were so remote from the rest of us that they almost qualified as 'Men from Mars' themselves. However, we soon gave them our virtues and instead of happy sharing they now have chastity and adultery just like the rest of us-those who survived the transition. I wonder if they gained by it? What do you think,

"I wouldn't care to be an Eskimo. thank you."

"Neither would I. Spoiled raw fish makes me bilious."

"Well, yes-but, Jubal, I had in mind hot water and soap. I guess I'm effete."

"I'm decadent in that respect, too, Ben; I was born in a house with no more plumbing than an igloo-and I've no wish to repeat my childhood. But I assume that noses hardened to the stink of rotting blubber would not be upset by unwashed human bodies. But nevertheless, despite curious cuisine and pitiful possessions, the Eskimos were invariably reported to have been the happiest people on Earth. We can never be sure why they were happy, but we can be utterly certain that any unhappiness they did suffer was not caused by sexual jealousy. They borrowed and lent spouses, both ways, both for convenience and purely for fun-and it did not make them unhappy.

"One is tempted to ask: Who's looney? Mike and the Eskimos? Or the rest of us? We can't judge by the fact that you and I have no stomach for such group sports-our canalized tastes are irrelevant. But take a look at this glum world around you-then tell me this: Did Mike's disciples seem happier, or unhappier, than other people?"

"I talked to only about a third of them, Jubal ... but-yes, they're happy. So happy they seem slap-happy to me. I don't trust it. There's some catch in it."

"Mmm ... maybe you yourself were the catch in it."

"How?"

"I was thinking that it was regrettable that your tastes have grown canalized so young. There it was, raining soup-and you were caught without a spoon. Even three days of what you were offered-urged on you!-would have been something to treasure when you reach my age. And you, you young idiot, let jealousy chase you away! Believe me, at your age I would have gone Eskimo in a big way, thankful that I had been given a free pass instead of having to attend church and study Martian to qualify. I'm so vicariously vexed that my only consolation is the sour one that I know you will live to regret it. Age does not bring wisdom, Ben, but it does give perspective . . . and the saddest perspective of all is to see far, far behind you, the temptations you've passed up. I have such regrets myself but all of them are as nothing to the whopper of a regret I am happily certain you will suffer."

"Oh, for Pete's sake, quit rubbing it in!"

"Heavens, man!-or are you a mouse? I'm not rubbing it in, I am trying to goad you into the obvious. Why are you sitting here moaning to an old man?-.-when you should be heading for the Nest like a homing pigeon? Before the cops raid the joint! Hell, if I were even twenty years younger, I'd join Mike's church myself."

"Let up on me, Jubal. What do you really think of Mike's church?"

"You told me it wasn't a church-just a discipline."

"Well ... yes and no, It is supposed to be based on the 'Truth' with a capital "T" as Mike got it from the Martian 'Old Ones.'"

"The 'Old Ones,' eli? To me, they're still hogwash."

"Mike certainly believes in them."

"Ben, I once knew a manufacturer who believed that he ~0nsulted the ghost of Alexander Hamilton on all his business decisions. All that proves is that he believed it. However-Damn it, why must I always be the Devil's advocate?"

"What's biting you now?"

"Ben, the foulest sinner of all is the hypocrite who makes a racket of religion. But we must give the Devil his due. Mike does believe in those 'Old Ones' and he is not pulling a racket. He's teaching the truth as he sees it even though he has seen fit to borrow from other religions to illustrate his meaning. That 'All Mother' rite -- little as I like it, he seems merely to have been illustrating the versatility of the Female Principle, regardless of name and form. Fair enough. As for his 'Old Ones,' of course I don't know that they don't exist-I simply find hard to swallow the idea that any planet is ruled by a hierarchy of ghosts. As for his Thou-art-God creed, to me it is neither more nor less credible than any other. Come Judgment Day, if they hold it, we may find that Mumbo Jumbo the God of the Congo was the Big Boss all along.

"All the names are still in the hat, Ben. Self-aware man is so built that he cannot believe in his own extinction . . and this automatically leads to endless invention of religions. While this involuntary conviction of immortality by no means proves immortality to be a fact, the questions generated by this conviction are overwhelmingly important . . . whether we can answer them or not, or prove what answers we suspect. The nature of life, how the ego hooks into the physical body, the problem of the ego itself and why each ego seems to be the centeT of the universe, the purpose of life, the purpose of the universe-these are paramount questions Ben; they can never be trivial. Science can't, or hasn't, coped with any of them-and who am I to sneer at religions for trying to answer them, no matter how unconvincingly to me? Old Mumbo Jumbo may eat me yet; I can't rule Him out because He owns no fancy cathedrals. Nor can I rule out one godstruck boy leading a sex cult in an upholstered attic; he might be the Messiah. The only religious opinion that I feel sure of is this: self-awareness is not just a bunch of amino acids bumping together!"

"Whew! Jubal, you should have been a preacher."

"Missed it by only a razor's edge, my boy-and I'll thank you to keep a civil tongue in your head. One more word in Mike's defense and I'll throw tüin on the mercy of the court. If be can show us a better way to run this fouled-up planet~his sex life is vindicated thereby, regardless of your taste or mine. Geniuses are notoriously indifferent to the sexual customs of the culture in which they find themselves, they make their own rules; this is not opinion, it was proved by ArmattOe 'way back in 1945. And Mike is a genius; he's shown it more ways than one. Re can therefore be expected to ignore Mrs. Grundy and diddle to suit himself. Geniuses are justifiably contemptuous of the opinions of their inferiors.

"And from a religious standpoint Mike's sexual behavior IS as kosher as fish on Friday, as orthodox as Santa Claus. He preaches that all living creatures are collectively God . . . which makes him and his disciples the only self-aware gods in his pantheon hich

rates him a union card by the rules for godding on this planet. Those rules always permit gods sexual freedom limited ouly by their own judgment; mortal rules never apply. Leda and the Swan? Europa and the Bull? Osiris, Isis, and Horus? The incredible incestuous games of the Norse gods? Of course . . . but why stop there? Take a hard look at the family relations of the Trinity~in~One of the most widely respected western religion (I won't cite eastern tellgions; their gods do things a mink breeder wouldn't put up with!). The only way in which the odd interrelations of the various aspects of what purportS to be a monotheos can be reconciled with the precepts of the religion thereto is by assuming that the rules in these matters for deity are not the rules for ordinary inortais. Of course most people don't think about it; they compartment it off in their minds and mark it: 'Holy-DO Not Disturb.'

"But an outside referee is forced to allow Mike the same dispensation granted all other gods. There are rules for this game: one god alone splits into at least two parts~ male and fetnale-and breeds. Not just Jehovah-they all do it. Look it up. Contrariwise, a group of godS will breed like rabbits, every time, and with as little regard for human formalities. Once Mike entered the godding business, those orgies of his group were as logically certain as Sunday follows Saturday. So quit using the standards of Podunk and judge them only by Olympian morals-I think you will then find that they are showing unusual restraint. Furthermore, Ben, this 'growmg-closer' by sexual union, this unity~into-Pluralty and plurality-baCk-into-unity, cannot tolerate monogamy inside the god group. Any pairing that excluded the others would be immoral, obscene, under the postulated creed. And if such mutual, shared-by-all sexual congress is essential to their creed, as I grok it has to be, then why do you expect this holy union to be hidden behind a door? Your insistence that they should hide it would have turned a holy rite-which it was-into something obscene-which it was not You just plain did not understand what you were looking at."

"Maybe I didn't," Ben said glumly.

"I'm going to offer you one box-top premium, as an inducement. You wondered how Mike got rid of his clothes so quickly. I'll tell you how."

"How?"

"It was a miracle."

"Oh, for God's sake!"

"Could be. But one thousand dollars says that it was a miracle by the usual rules for miracles-outcome to be decided by you. Go back and ask Mike how he did it. Get him to show you. Then send me the money."

"Hell, Jubal, I don't want to take your money."

"You won't. I've got inside information. Bet?"

"No, damn it. Jubal, you go down there and see what the score is. I can't go back-not now."

"They'll take you back with open arms and not even ask why you left so abruptly. One thousand on that prediction, too. Ben, you were there less than a day-fifteen hours, about-and you spent over half that time sleeping and playing hopscotch with Dawn. Did you give them a square shake? The sort of careful investigation you give something smelly in public life before you blast it in your column?"

"But-"

"Did you, or didn't you?"

"No, but-"

"Oh, for Pete's sake yourself, Ben! You claim to be in love with Jill yet you won't give her the consideration you give a crooked politician. Not a tenth the effort she made to help you when you were kidnapped. Where would you be today if she had given it so feeble a try? Pushing up daisies! Roasting in hell! You're bitching about those kids over some friendly fornication-but do you know what I'm worried about?"

"What?"

"Christ was crucified for preaching without a police permit. Think it over."

Caxton stood up. "I'm on my way."

"After lunch."

"Now."

Twenty-four hours later Ben wired Jubal two thousand dollars.

When, after a week, Jubal had had no other message, he sent a stat care of Ben's office: "What the hell are you doing?" Ben's answer came back, somewhat delayed: "Studying Martian and the rules for hopscotch -- fraternally yours -- Ben."

PART FIVE HIS HAPPY DESTINY

XXXIV

FOSTER LOOKED UP from his current Work in Progress. "Junior!"

"Sir?"

"That youngster you wanted-he's available now. The Martians have released him."

Digby looked puzzled. "I'm sorry. There was some young creature toward whom I have a Duty?"

Foster smiled angelically. Miracles were never necessary-in Truth the pseudo-concept "miracle" was self-contradicting. But these young fellows always had to learn it for themselves. "Never mind," he said gently. "It's a minor job and I'll handle it myself-and Junior?"

"Sir?"

"Call me 'Fog,' please-ceremony is all right in the field but we don't need it in the studio. And remind me not to call you 'Junior' after this- you made a very nice record on that temporary duty assignment. Which name do you like to be called?"

His assistant blinked. "I have another name?"

"Thousands of them. Do you have a preference?"

"Why, I really don't recall at this eon."

"Well ... how would you like to be called 'Digby'?"

"Uh, yes. That's a very nice name. Thanks."

"Don't thank me. You earned it." Archangel Foster turned back to his work, not forgetting the minor item he had assumed. Briefly he considered how this cup might be taken from little Patricia-then chided himself for such unprofessional, almost human, thought. Mercy was not possible to an angel; angelic compassion left no room for it.

The Martian Old Ones had reached an elegant and awesome trial solution to their major esthetic problem and put it aside for a few filledthrees to let it generate new problems. At which time, unhurriedly but at once and almost absent-mindedly, the alien nestling which they had returned to his proper world was tapped of what he had learned of his people and dropped, after cherishing, since he was of no further interest to their purposes.

They collectively took the data he had accumulated and, with a view to testing that trial solution, began to work toward considering an inquiry leading to an investigation of esthetic parameters involved in the possibility of the artistic necessity of destroying Earth. But necessarily much waiting would be, before fullness would grok decision.

The Daibutsu at Kamakura was again washed by a giant wave secondary to a seismic disturbance some 280 kilometers off Honshu. The wave killed more than 13,000 people and lodged a small male infant high up in the Buddha image's interior, where it was eventually found and succored by surviving monks. This infant lived ninety-seven Terran years after the disaster that wiped out his family, and himself produced no progeny nor anything of any note aside from a reputation reaching to Yokohama for loud and sustained belching. Cynthia Duchess entered a nunnery with all benefits of modern publicity and left same without fanfare three days later. Ex-Secretary General Douglas suffered a slight stroke which impaired the use of his left hand but did not reduce his ability to conserve assets entrusted to his stewardship. Lunar Enterprises, Ltd., published a prospectus on a bond issue for the wholly owned subsidiary Ares Chandler Corporation. The Lyle-Drive Exploratory Vessel Mary Jane Smith landed on Pluto. Fraser, Colorado, reported the coldest average February of its recorded history.

Bishop Oxtongue, speaking at the New Grand Avenue Temple in Kansas City, preached on the text (Matt. XXIV:24): 'Por there shall arise false Christs and false prophets, and shall shew great signs and wonders; insomuch that, if it were possible, they shall deceive the very elect." He was careful to make clear that his diatribe did not refer to Mormons, Christian Scientists, Roman Catholics, nor Fosterites-most especially not to the last-nor to any other fellow travelers whose good works counted for more than minute and, in the final analysis, inconsequential differences in creed or ritual . - . but solely to recent upstart heretics who were seducing faithful contributors away from the faiths of their fathers. In a lush subtropical resort city in the southern part of the same nation three complainants swore an information charging public lewdness on the part of a pastor, three of his assistants, and Joe Doe, Mary Roe, et al., plus further charges of running a disorderly house and contributing to the delinquency of minors. The county attorney had at first only the mildest interest in prosecuting under the information as he had on file a dozen much like it- the complaining witnesses had always failed to appear at arraignment.

He pointed this out. Their spokesman said, "We know. But you'll have plenty of backing this time. Supreme Bishop Short is determined that this Antichrist shall flourish no longer."

The prosecutor was not interested in antichrists-but there was a primary coming up. "Well, just remember I can't do much without backing."

"You'll have it."

Farther north, Dr. Jubal Harshaw was not immediately aware of this incident and its consequences, but he did know of too many others for peace of mind. Against his own rules he had succumbed to that most insidious drug, the news. Thus far, he had contained his vice; he merely subscribed to a clipping service instructed for "Man from Mars," "V. M. Smith," "Church of All Worlds," and "Ben Caxton." But the monkey was crawling up his back-twice lately he had had to fight off an impulse to order Larry to set up the babble box in his study- Damn it, why couldn't those kids tape him an occasional letter?- instead of letting him wonder and worry. "Front!"

He heard Anne come in but he still continued to stare Out a window at snow and an empty swimming pool. "Anne," he said without turning around, "rent us a small tropical atoll and put this mausoleum up for sale."

"Yes, Boss. Anything else?"

"But get that atoll tied down on a long-term lease before you hand this wilderness back to the Indians; I will not put up with hotels. How long has it been since I wrote any pay copy?"

"Forty-three days."

"You see? Let that be a lesson to you. Begin. 'Death Song of a Wood's Colt':

"The depths of winter longing are ice within my heart
The shards of broken covenants lie sharp against my soul
The wraiths of long-lost ecstasy still keep us two apart
The sullen winds of bitterness still keen from turn to pole.
"The scars and twisted tendons, the stumps of struck-off limbs,
The aching pit of hunger and the throb of unset bone,
My sanded burning eyeballs, as light within them dims,
Add nothing to the torment of lying here alone
"The shimmering flames of fever trace out your blessed face
My broken eardrums echo yet your voice inside my head
I do not fear the darkness that comes to me apace
I only dread the loss of you that comes when I am dead.

"There," he added briskly, "sign it 'Louisa M. Alcott' and have the agency send it to Togetherness magazine."

"Boss, is that your idea of 'pay copy'?"

"Huh? Of course it isn't. Not now. But it will be worth something later, so put it in file and my literary executor can use it to help settle the death duties. That's the catch in all artistic pursuits; the best work is always worth most after the workman can't be paid. The literary life.- dreck! It consists in scratching the cat till it purrs."

"Poor Jubali Nobody ever feels sorry for him, so he has to feel sorry for himself."

"Sarcasm yet. No wonder I don't get any work done."

"Not sarcasm, Boss. Only the wearer knows where the shoe pinches."

"My apologies. All right, here's pay copy. Begin. Title: 'One for the Road,'

"There's amnesia in a hang knot,
And comfort in the ax,
But the simple way of poison will make your nerves relax.
"There's surcease in a gunshot,

And sleep that comes from racks,
But a handy draft of poison avoids the harshest tax.
"You find rest upon the hot squat,
Or gas can give you pax,
But the closest corner chemist has peace in packaged stacks.
"There's refuge in the church lot
When you tire of facing facts,
And the smoothest route is poison prescribed by kindly quacks.
"Chorus-

With an ugh! and a groan, and a kick of the heels,
Death comes quiet, or it comes with squeals-
But the pleasantest place to find your end
Is a cup of cheer from the hand of a friend."

"Jubal," Anne said worriedly, "is your stomach upset?"
"Always."
"That one's for file, too?"
"Huh? That's for the New Yorker. Their usual pen name."
"They'll bounce it."
"They'll buy it. It's morbid, they'll buy it."
And besides, there's something wrong with the scansion."
"Of course there is! You have to give an editor something to change, or he gets frustrated. After he pees in it himself, he likes the flavor much better, so he buys it. Look, my dear, I was successfully avoiding honest work long before you were born-so don't try to teach Granpaw how to suck eggs. Or would you rather I nursed Abby while you turn Out copy? Hey! It's Abigail's feeding time, isn't it? And you weren't 'Front,' Dorcas is 'Front.' I remember."
"It won't hurt Abby to wait a few minutes. Dorcas is lying down. Morning sickness."
"Nonsense. If she's pregnant, why won't she let me run a test? Anne, I can spot pregnancy two weeks before a rabbit can-and you know it. I'm going to have to be firm with that girl."
"Jubal, you let her be! She's scared she didn't catch ... and she wants to think she did, as long as possible. Don't you know anything about women?"
"Mmm ... come to think about it-no. Not anything. All right, I won't heckle her. But why didn't you bring our baby angel in and nurse her here? You have both hands free when you take dictation."
"In the first place, I'm glad I didn't-she might have understood what you were saying-"
"So I'm a bad influence, am I?"
"She's too young to see the marshmallow syrup underneath, Boss. But the real reason is that you don't do any work at all if I bring her in with me; you just play with her."
"Can you think of any better way of enriching the empty hours?"

"Jubal, I appreciate the fact that you are dotty over my daughter; I think she's pretty nice myself. But you've been spending all your time either playing with Abby . . . or moping. That's not good."

"How soon do we go on relief?"

"That's beside the point. If you don't crank out stories, you get spiritually constipated. It's reached the point where Dorcas and Larry and I are biting our nails-and when you do yell 'Front!' we jitter with relief. Only it's always a false alarm."

"If there's money in the bank to meet the bills, what are you worried about?"

"What are you worried about, Boss?"

Jubal considered it. Should he tell her? Any possible doubt as to the paternity of Abigail had been settled, in his mind, in her naming; Anne had wavered between "Abigail" and "Zenobia"-and had settled it by loading the infant with both names. Anne had never mentioned the meanings of those names; presumably she did not know that he knew them.

Anne went on firmly, "You're not fooling anyone but yourself; Jubal. Dorcas and Larry and I all know that Mike can take care of himself . and you ought to know it. But because you've been so frenetic about it-"

"'Frenetic!' Me?"

"-Larry very quietly set up the stereo tank in his room and some one of us three had been catching the news, every broadcast. Not because we are worried, for we aren't-except about you. But when Mike gets into the news-and of course he does get into the news; he's still the Man from Mars-we know about it before those silly clippings ever reach you. I wish you would quit reading them."

"How do you know anything about any clippings? I went to a lot of trouble to see that you didn't. I thought."

"Boss," she said in a tired voice, "somebody has to dispose of the trash. Do you think Larry can't read?"

"So. That confounded oubliette hasn't worked right since Duke left. Damn it, nothing has!"

"All you have to do is to send word to Mike that you want Duke to come back-Duke will show up at once."

"You know I can't do that." It graveled him that what she said was almost certainly true - . - and the thought was followed by a sudden and bitter suspicion. "Anne! Are you still here because Mike told you to stay?"

She answered promptly, "I am here because I wish to be here."

"Mmmm ... not sure that's a responsive answer."

"Jubal, sometimes I wish you were small enough to spank. May I finish what I was saying?"

"You have the floor." Would any of them be here? Would Maryam have married Stinky and gone off to Beirut if Mike had not approved it? The name "Fatima Michele" might be an acknowledgment of her adopted faith plus her husband's wish to compliment his closest friend-or it might be code almost as explicit as baby Abby's double name, one which stated that Mike was somewhat more than godfather to the daughter of Dr. and Mrs. Mahmoud. If so, did Stinky wear his antlers unaware? Or with serene pride as Joseph was alleged to have done? Uh . . . but it must be concluded with utter certainty that Stinky knew the minutes of his houri; water.brothershiP permitted not even

diplomatic omission of any matter so important. If indeed it was important, which as a physician and agnostic Jubal doubted. But to them it would be- "You aren't listening."

"Sorry. Woolgathering." -and stop it, you nasty old man ... reading meanings into names that mothers give their children indeed! Next thing you'll be taking up numerology - . . then astrology . . . then spiritualism-until your senility has progressed so far that all there is left is custodial treatment for a hulk too dim-witted to discorporate in dignity. Go to locked drawer nine in the clinic, code "Lethe"-and use at least two grains to be sure, although one is more than enough- "There's no need for you to read those clippings, because we know the public news about Mike before you do - . - and lien has given us a water promise to let us know any private news we need to know at once- and Mike of course knows this. But, Jubal, Mike can't be hurt. If you would only visit the Nest, as we three have done, you would know this."

"I have never been invited."

"We didn't have specilic invitations, either; we just went. Nobody has to have an invitation to go to his own home . . . any more than they require invitations to come here. Like 'The Death of the Hired Man.' But you are just making excuses, Jubal, and poor ones . - . for Ben urged you to, and both Dawn and Duke sent word to you."

"Mike hasn't invited me."

"Boss, that Nest belongs to me and to you quite as much as it does to Mike. Mike is first among equals - . . as you are here. Is this Abby's home?"

"Happens," he answered evenly, "that title aheady vests in her with lifetime tenancy for me." Jubal had changed his own will, knowing that Mike's will now made it unnecessary to provide for any water brother of Mike. But not being sure of the exact 'water' status of this nestling- save that she was usually wet-he had made redispositions in her favor and n favor of descendants, if any, of certain others. "I hadn't intended to tell you, but there is no harm in your knowing."

"Jubal ... you've made me cry. And you've almost made me forget what I was saying. And I must say it. Mike would never hurry you, you know that. I grok he is waiting for fullness-and I grok that you are, too."

"Mmmm ... I grok you speak rightly."

"All right. I think you are especially glum today simply because Mike has been arrested again. But that's happened many-"

"'Arrested?' I hadn't heard about this! What goes on?" He added, "Damn it, girl-"

"Jubal, Jubal! Ben hasn't called; that's all we need to know. You know how many times Mike has been arrested-in the army, as a carney, other places-half a dozen times as a preacher. He never hurts anybody; he just lets them do it. They can never convict him and he gets out as soon as he wishes-at once, if he wants to."

"What is it this time?"

"Oh, the usual nonsense-public lewdness, statutory rape, conspiracy to defraud, keeping a disorderly house, contributing to the delinquency of minors, conspiracy to evade the state truancy laws-"

"Huh?"

"That involves their own nestlings' school. Their license to operate a parochial school was canceled; the kids still didn't go back to public school. No matter, Jubal-none of it matters. The one thing on which they are technically in violation of the law-and so are you, Boss darling-can't possibly be proved. Jubal, if you had ever seen the Temple

and the Nest you would know that even the F.D.S. couldn't sneak a spy-eye into it. So relax. After a lot of publicity, charges will be dropped-and the crowds at the outer services will be bigger than ever."

"Hmm! Anne, does Mike rig these persecutions himself?"

She looked startled, an expression her face was unused to. "Why, I had never considered the possibility, Jubal. Mike can't lie, you know."

"Does it involve lying? Suppose he planted perfectly true rumors about himself? But ones that can't be proved in court?"

"Do you think Michael would do that?"

"I don't know. I do know that the slickest way in the world to lie is to tell the right amount of truth at the right time-and then shut up. And it wouldn't be the first time that persecution has been courted for its headline value. All right, I'll dismiss it from my mind unless it turns out he can't handle it. Are you still 'Front'?"

"If you can refrain from chucking Abby under the chin and saying cootchy-coo and similar uncommercial noises, I'll fetch her. Otherwise I had better tell Dorcas to get up and get to work."

"Bring in Abby. I'm going to make an honest effort to make some commercial noises-a brand-new plot, known as boy-meets-girl."

"Say, that's a good one, Boss! I wonder why nobody ever thought of it before? Half a sec-" She hurried out.

Jubal did restrain himself-less than one minute of uncommercial noises and demonstrations, just enough to invoke Abigail's heavenly smile, cum dimples, then Anne settled back and let the infant nurse. "Title:" he began. "'Girls Are Like Boys, Only More So.' Begin. Henry M. Haversham Fourth had been very carefully reared, He believed that there were only two kinds of girls: those in his presence and those who were not. He vastly preferred the latter sort, especially when they stayed that way. Paragraph. He had not been introduced to the young lady who fell into his lap, and he did not consider a common disaster as equivalent to a formal intro-' What the hell do you want? Can't you see I'm working?"

"Boss-" said Larry.

"Get out of that door, close it behind you, and-"

"Boss! Mike's church has burned down!"

They made a disorderly rout for Larry's room, Jubal a half length behind Larry at the turn, Anne with eleven pounds up closing rapidly despite her handicap. Dorcas trailed the field through being late out the starting gate; the racket wakened her.

"-midnight last night. What you are now viewing is what was the main entrance of the cult's temple, as it appeared immediately after the explosion. This is your Neighborly Newsman for New World Networks with your midmorning roundup. Stay switched to this pitch for dirt that's alert, And now a moment for your local sponsor-" The scene of destruction shimmered out and med-close shot of a lovely young housewife replaced, with dolly-in.

"Damn, Larry, unplug that contraption and wheel it into the study. Anne-no, Dorcas. Phone Ben."

Anne protested, "You know the Temple never had a telephone-ever. How can she?"

"Then have somebody chase over and-no, of course not; the Temple wouldn't have anybody-uh, call the chief of police there. No, the district attorney. The last you heard Mike was still in jail?"

"That's right."

"I hope he still is-and all the others, too."

"So do I. Dorcas, take Abby. I'll do it."

But as they returned to the study the phone was signalling an incoming call and demanding hush & scramble. Jubal cursed and set the combo, intending to blast whoever it was off the frequency.

But it was Ben Caxton. "Hi, Jubal."

"Ben! What the hell is the situation?"

"I see you've had some of the news. That's why I called, to put your mind at rest. Everything is under control. No sweat."

"What about the fire? Anybody hurt?"

"No damage at all. Mike says to tell you-"

"No damage? I just saw a shot of it; it looked like a total-"

"Oh, that-" Ben shrugged it off. "Look, Jubal, please listen and let me talk. I've got other things and other calls after this one. You aren't the only person who needs to be reassured. But Mike said to call you first."

"Uh ... very well, sir. I shall keep silent."

"Nobody hurt, nobody even scorched. Oh, a couple of million dollars in property damage, most of it uninsured. Nichevo. The place was already choked with experiences; Mike planned to abandon it soon in any case. Yes, it was fireproof-but anything will burn with enough gasoline and dynamite."

"Incendiary job, huh?"

"Please, Jubal. They had arrested eight of us-all they could catch of the Ninth Circle, John Doe warrants, mostly. Mike had all of us bailed out in a couple of hours, except himself. He's still in the hoosegow-"

"I'll be right there!"

"Take it easy. Mike says for you to come if you want to, but there is absolutely no need for it. His words. And I agree. It would just be a pleasure trip. The fire was set last night while the Temple was empty, everything canceled because of the arrests-empty, that is, except for the Nest. All of us in town, except Mike, were gathered in the Innermost Temple, holding a special Sharing-Water in his honor, when the explosion and fire were set off. So we adjourned to an emergency Nest."

"From the looks of it, you were lucky to get out at all."

"We were completely cut off, Jubal. We're all dead-"

"What?"

"We're all listed as dead or missing so far as the authorities know. You see, nobody left the building after that holocaust started - . . by any known exit."

"Uh ... a 'priest's hole' arrangement?"

"Jubal, Mike has very special methods for dealing with such things- and I'm not going to discuss them over the phone, even scrambled."

"You said he was in jail?"

"So I did. He still is."

"But-"

"That's enough. If you do come here, don't go to the Temple. It's kaput. Our organization is busted up. We're through in this town. You could say that they've licked us, I suppose. I'm not going to tell you where we are . . - and I'm not calling from there, anyhow. If you must come- and I see no point in it; there's nothing you can do-just come as you ordinarily would . . . and we'll find you."

"That's all. Good-by. Anne, Dorcas, Larry-and you, too, Jubal, and the baby. Share water. Thou art God." The screen went blank.

Jubal swore. "I knew it! I knew it all along! That's what comes of mucking around with religion. Dorcas, get me a taxi. Anne-no, finish feeding your child. Larry, pack me a small bag. Anne, I'll want most of the iron money and Larry can go into town tomorrow and replenish the supply."

"But, Boss," protested Larry, "we're all going."

"Certainly we are," Anne agreed crisply.

"Pipe down, Anne. And close your mouth, Dorcas. This is not a time when women have the vote. That city is the front line at the moment and anything can happen. Larry, you are going to stay here and protect two women and a baby. Forget that about going to the bank; you won't need cash because none of you is to stir off the place until I'm back. Somebody is playing rough and there is enough hook.up between this house and that church that they might play rough here, too. Larry, flood lights all night long, heat up the fence, don't hesitate to shoot. And don't be slow about getting everybody into the vault if necessary-better put Abby's crib in there at once. Now get with it, all of you-I've got to change clothes."

Thirty minutes later Jubal was alone, by choice, in his suite; the rest were busy at assigned tasks. Larry called up, "Boss! Taxi about to land."

"Be right down," he called back, then turned to take a last look at the Fallen Caryatid. His eyes were filled with tears. He said softly, "You tried, didn't you, youngster? But that stone was always too heavy - . . too heavy for anyone."

Gently he touched a hand of the crumpled figure, turned and left.

XXXV

JUBAL HAD A MISERABLE TRIP. The taxi was automatic and it did just what he expected of machinery, developed trouble in the air and homed for maintenance instead of carrying out its orders. Jubal wound up in New York, farther from where he wanted to be than when he started. There he found that he could make better time by commercial schedule than he could by any charter available. So he arrived hours later than he expected to, having spent the time cooped up with strangers (which he detested) and watching a stereo tank (which he detested only slightly less).

But it did inform him somewhat. He saw an insert of Supreme Bishop Short proclaiming a holy war against the Antichrist, i.e.. Mike, and he saw too many shots of what was obviously an utterly ruined building-he failed to see how any of them had escaped alive. Augustus Greaves, in his most solemn lippmann tones, viewed with alarm everything about it but pointed out that, in every spite-fence quarrel, one neighbor

supplies the original incitement-and made it plain that, in his weasel-worded opinion, the so-called Man from Mars was at fault.

At last Jubal stood on a municipal landing flat sweltering in winter clothes unsuited to the blazing sun overhead, noted that palm trees still looked like a poor grade of feather duster, regarded bleakly the ocean beyond them, thinking that it was a dirty unstable mass of water, certainly contaminated with grape fruit shells and human excrement even though he couldn't see such at this distance-and wondered what to do next.

A man wearing a uniform cap approached him. "Taxi, sir?"

"Uh, yes, I think so." At worst he could go to a hotel, call in the press, and give out an interview that would publicize his whereabouts- there was occasionally some advantage to being newsworthy.

"Over this way, sir." The cabby led him out of the crowd and to a battered Yellow Cab. As he put his bag in after Jubal, the pilot said quietly, "I offer you Water."

"Eh? Never thirst."

"Thou art God." The hack driver sealed the door and got into his own compartment.

They wound up on a private landing flat on one wing of a big beach hotel-a four-car space, the hotel's own landing flat being on another wing. The pilot set the cab to home-in alone, took Jubal's bag and escorted him inside. "You couldn't have come in too easily via the lobby," he said conversationally, "as the foyer on this floor is filled with some very badtempered cobras. So if you decide you want to go down to the street, be sure to ask somebody first. Me, or anybody-I'm Tim."

"I'm Jubal Harshaw."

"I know, brother Jubal. In this way. Mind your step." They entered the hotel suite of the large, extreme luxury sort, and Jubal was led on into a bedroom with bath; Tim said, "This is yours," put Jubal's bag down and left. On the side table Jubal found water, glasses, ice cubes, and a bottle of brandy, opened but untouched. He was unsurprised to find that it was his preferred brand. He mixed himself a quick one, sipped it and sighed, then took off his heavy winter jacket.

A woman came in bearing a tray of sandwiches. She was wearing a plain dress which Jubal took to be the uniform of a hotel chambermaid since it was quite unlike the shorts, scarves, pediskirts, halters, sarongs and other bright-colored ways to display rather than conceal that characterized most females in this resort. But she smiled at him, said, "Drink deep and never thirst, our brother," put the tray down, went into his bath and started a tub for him, then checked around by eye in bath and in bedroom. "Is there anything you need, Jubal?"

"Me? Oh, no, everything is just fine. I'll make a quick cleanup and-is Ben Caxton around?"

"Yes. But he said you would want a bath and get comfortable first. If you want anything, just say so. Ask anyone. Or ask for me. I'm Patty."

"Oh! The Life of Archangel Foster."

She dimpled and suddenly was not plain but pretty, and much younger than the thirtyish Jubal had guessed her to be. "Yes."

"I'd like very much to see it some time. I'm interested in religious art."

"Now? No, I grok you want your bath. Unless you'd like help with your bath?"

Jubal recalled that his Japanese friend of the many tattoos had been a bath girl in her teens and would have made-had, many times-the same offer. But Patty was not Japanese and he simply wanted to wash away the sweat and stink and get into clothes suited to the climate. "No, thank you, Patty. But I do want to see them, at your convenience."

"Any time. There's no hurry." She left, unhurried but moving silently and very quickly.

Jubal soaped and dunked himself and refrained from lounging as the warm water invited his tired muscles to do; he wanted to see Ben and find out the score. Shortly he was checking through what Larry had packed for him and grunted with annoyance to find no summerweight slacks. He settled for sandals, shorts, and a bright sport shirt, which made him look like a paint-splashed emu and accented his hairy, thinning legs. But Jubal had ceased worrying about his appearance several decades earlier; it was comfortable and it would do, at least until he needed to go out on the Street . . . or into court. Did the bar association here have reciprocity with Pennsylvania? He couldn't recall. Well, it was always possible to act with another attorney-of-record.

He found his way into a large living room, most comfortable but having that impersonal quality of all hotel accommodations. Several people were gathered near the largest stereovision tank Jubal had ever seen outside a theater. One of them glanced up, said, "Hi, Jubal," and came toward him.

"Hi, Ben. What's the situation? Is Mike still in jail?" "Oh, no. He got out shortly after I talked to you."

"He's been arraigned then. Is the preliminary hearing set?"

Ben smiled. "That's not quite the way it is, Jubal. Mike is technically a fugitive from justice. He wasn't released on bail. He escaped."

Jubal looked disgusted. "What a silly thing to do. Now the case will be eight times as difficult."

"Jubal, I told you not to worry. All the rest of us are presumed dead-and Mike is simply missing. We're through with this city, so it doesn't matter in the least. We'll go someplace else."

"They'll extradite him."

"Never fear. They won't."

"Well ... where is he? I want to talk to him."

"Oh, he's right here, a couple of rooms down from you. But he's withdrawn in meditation. He left word to tell you, when you arrived, to take no action-none. You can talk to him right now if you insist; Jill will call him out of it. But I don't recommend it. There's no hurry."

Jubal thought about it, admitted that he was damnably eager to hear from Mike himself just what the score was-and chew him out for having gotten into such a mess-but admitted, too, that disturbing Mike while he was in a trance was almost certainly much worse than disturbing Jubal himself when he was dictating a story-the boy always came out of his self-hypnosis when he had "grokked the fullness," whatever that was-and if he hadn't, then he always needed to go back into it. As pointless as disturbing a hibernating bear.

"All right, I'll wait. But I want to talk to him when he wakes up."

"You will. Now relax and be happy. Let the trip get out of your system." Ben urged him toward the group around the stereo tank.

Anne looked up. "Hello, Boss." She moved over and made room. "Sit down."

Jubal joined her. "May I ask what the devil you are doing here?"

"The same thing you're doing-nothing. Watching stereo. Jubal, please don't get heavy-handed because we didn't do what you told us. We belong here as much as you do. You shouldn't have told us not to come. . . but you were too upset for us to argue with you. So relax and watch what they're saying about us. The sheriff has just announced that he's going to run all us whores out of town." She smiled. "I've never been run out of town before. It should be interesting. Does a whore get ridden on a rail? Or will I have to walk?"

"I don't think there's protocol in the matter. You all came?"

"Yes, but don't fret. Jed McClintock is sleeping in the house. Larry and I made a standing arrangement with the McClintock boys for one of them to do so, more than a year ago-just in case. They know how the furnace works and where the switches are and things; it's all right."

"Hmm! I'm beginning to think I'm just a boarder there."

"Were you ever anything else, Boss? You expect us to run it without bothering you. We do. But it's a shame you didn't relax and let us all travel together. We got here more than two hours ago-you must have had some trouble."

"I did, A terrible trip. Anne, once I get home I don't intend ever to set foot off the place again in my life . . - and I'm going to yank out the telephone and take a sledgehammer to the babble box."

"Yes, Boss."

"This time I mean it." He glanced at the giant babble box in front of him. "Do those commercials go on forever? Where's my goddaughter? Don't tell me you left her to the mercies of McClintock's idiot sons!"

"Oh, of course not. She's here. She even has her own nursemaid, thank God."

"I want to see her."

"Patty will show her to you. I'm bored with her-she was a perfect little beast all the way down. Patty dear! Jubal wants to see Abby."

The tattooed woman checked one of her unhurried dashes through the room-so far as Jubal could see, she was the only one of the several present who was doing any work, and she seemed to be everywhere at once. "Certainly, Jubal. I'm not busy. Down this way.

"I've got the kids in my room," she explained, while Jubal strove to keep up with her, "so that Honey Bun can watch them."

Jubal was mildly startled to see, a moment later, what Patricia meant by that. The boa was arranged on one of twin double beds in squared-off loops that formed a nest-a twin nest, as one bight of the snake had been pulled across to bisect the square, making two crib-sized pockets, each padded with a baby blanket and each containing a baby.

The ophidian nursemaid raised her head inquiringly as they came in. Patty stroked it and said, "It's all right, dear. Father Jubal wants to see them. Pet her a little, and let her grok you, so that she will know you next time."

First Jubal coochey-cooed at his favorite girl friend when she gurgled at him and kicked, then petted the snake. He decided that it was the handsomest specimen of Bojdae

he had ever seen, as well as the biggest- longer, he estimated, than any other boa constrictor in captivity. Its cross bars were sharply marked and the brighter colors of the tail quite showy. He envied Patty her blue-ribbon pet and regretted that he would not have more time in which to get friendly with it.

The snake rubbed her head against his hand like a cat. Patty picked up Abby and said, "Just as I thought. Honey Bun, why didn't you tell me?"- then explained, as she started to change diapers,"She tells me at once if one of them gets tangled up, or needs help, or anything, since she can't do much for them herself-no hands-except nudge them back if they try to crawl out and might fall. But she just can't seem to grok that a wet baby ought to be changed-Honey Bun doesn't see anything wrong about that. And neither does Abby."

"I know. We call her 'Old Faithful.' Who's the other cutie pie?"

"Huh? That's Fatima Michele, I thought you knew."

"Are they here? I thought they were in Beirut!"

"Why, I believe they did come from some one of those foreign parts. I don't know just where. Maybe Maryam told me but it wouldn't mean anything to me; I've never been anywhere. Not that it matters; I grok all places are alike-just people. There, do you want to hold Abigail Zenobia while I check Fatima?"

Jubal did so and assured her that she was the most beautiful girl in the world, then shortly thereafter assured Fatima of the same thing. He was completely sincere each time and the girls believed him-Jubal had said the same thing on countless occasions starting in the Harding administration, had always meant it and had always been believed. It was a Higher Truth, not bound by mundane logic.

Regretfully he left them, after again petting Honey Bun and telling her the same thing, and just as sincerely.

They left and at once ran into Fatima's mother. "Boss honey!" She kissed him and patted his tummy. "I see they've kept you fed."

"Some. I've just been in smooching with your daughter, She's an angel doll, Miriam."

"Pretty good baby, huh? We're going to sell her down to Rio-get a fancy price for her."

"I thought the market was better in Yemen?"

"Stinky says not. Got to sell her to make room." She put his hand on her belly. "Feel the bulge? Stinky and I are making a boy now-got no time for daughters."

"Maryam," Patricia said chidingly, "that's no way to talk, even in fun."

"Sorry, Patty. I won't talk that way about your baby- Aunt Patty is a lady, and groks that I'm not."

"I grok that you aren't, too, you little hellion, But if Fatima is for sale, I'll give you twice your best commercial offer."

"You'll have to take it up with Aunt Patty; I'm merely allowed to see her occasionally."

"And you don't bulge, so you may want to keep her yourself. Let me see your eyes. Mmm ... could be."

"Is. And Mike has grokked it most carefully and tells Stinky he's made a boy."

"How can Mike grok that? Impossible. I'm not even sure you're pregnant-"

"Oh, she is, Jubal," Patricia confirmed.

Miriam looked at him serenely. "Still the skeptic, Boss. Mike grokked it while Stinky and I were still in Beirut, before we were sure we had caught. So Mike phoned us. And the next day Stinky told the university that we were taking a sabbatical for field work-or his resignation, if they wished. So here we are."

"Doing what?"

"Working. Working harder than you ever made me work, Boss-my husband is a slave driver."

"Doing what?"

"They're writing a Martian dictionary," Patty told him.

"Martian to English? That must be difficult."

"Oh, no, no, no!" Miriam looked almost shocked. "That wouldn't be difficult, that would be impossible. A Martian dictionary in Martian. There's never been one before; the Martians don't need such things. Uh, my part of it is just clerical; I type what they do. Mike and Stinky-mostly Stinky-worked out a phonetic script for Martian, eighty-one characters. So we had an I.B.M. typer worked over for those characters, using both upper and lower case-Boss darling, I'm ruined as a secretary; I type touch system in Martian now. Will you love me anyhow? When you shout 'Front!' and I'm not good for anything? I can still cook . . . and I'm told that I have other talents."

"I'll learn to dictate in Martian."

"You will, before Mike and Stinky get through with you. I grok. Eh, Patty?"

"You speak rightly, my brother."

They returned to the living room, Caxton joined them and suggested finding a quieter place, away from the giant babble box, led Jubal down a passage and into another living room. "You seem to have most of this floor"

"All of it," agreed Ben. "Four suites-the Secretarial; the Presidential, the Royal, and Owner's Cabin, opened into one and not accessible other than by our own landing fiat . except through a foyer that is not very healthy withOut help. You were warned about that?"

"Yes."

"We don't need so much room right now... but we may: people are ~~ck~ng in."

"Ben, how can you hide from the cops as openiy as this? The hotel staff alone will give you away."

"Oh, there are ways- The staff doesn't come up here. You see, Mike owns the hotel."

"So much the worse, I would think-"

"So much the better ... unless our doughty police chief has Mr. Douglas on his payroll, which I doubt. Mike bought it through about four links of dummies_and Douglas doesn't snoop into why Mike wants things done. Douglas doesn't despise me quite as much since Os Kilgallen took over my column, I think, but nevertheless he doesn't want to surrender control to me-he does what Mike wants. The hotel is a sound investment; it makes money_but the owner of record is one of our clandestine Ninth Circle. So the owner decides he wants this floor for the season and the manager can't and doesn't and wouldn't want to inquire into why, or how many guests of his own the owner has coming or going -- he likes his job; Mike is paying him more than he's worth. It's a pretty good hide-out, for the time being. 'Till Mike groks where we will go next."

"Sounds like Mike had anticipated a need for a hide~out."

"Oh, I'm sure he did. Almost two weeks ago Mike cleared out the nestlings' nest except for Maryam and her baby; Maryam is needed for the job she's on. Mike sent the parents with children to other cities-places he means to open temples~ I think-and when the time came, there were just about a dozen 0f us to move. No sweat."

"As it was, you barely got out with your lives, I take it." Jubal wondered how they had even managed to grab clothes in view of how they probably were not dressed. "You lost all the contents of the Nest? All your personal possessions?"

"Oh, no, not anything we really wanted. Stuff like Stinky's language tapes and a trick typer that Maryam uses; even that horrible Madame Tussaud picture of you. And Mike grabbed our clothes and some cash that was on hand."

Jubal objected, "You say Mike did this? But I thought Mike was in jail when the fire broke out."

"Uh, he was and he wasn't. His body was in jail ... curled up in withdrawat But he was actually with us. You understand?"

"Uh, I don't grok."

"Rapport. He was inside Jill's bead, mostly, but we were all pretty closely tied in together. Jubal, I can't explain it; you have tO do it. When the exploSiOn hit, he moved us over here. Then he went back and saved the minor stuff worth saving."

Jubal frowned. Caxton said impatiently,"Teleportation, of course. What's so hard to grok about it, Jubal? You yourself told me to come down here and open my eyes and know a miracle when I saw one. So I did and they were. Only they aren't miracles, any more than radio is a miracle. Do you grok radio? Or stereovsion? Or electronic computers?"

"Me? No."

"Nor do I, I've never studied electronics. But I'm sure I could if I took the time and the hard sweat to learn the language of e1ctronics. I don't think it's miraculous-just complex. Teleportation is quite simple, once you learn the language-it's the language that is so difficult."

"Ben, you can teleport things?"

"Me? Oh, no, they don't teach that in kindergarten. Oh, I'm a deacon by courtesy, simply because I'm 'First Called' and Ninth Circle-but my actual progress is about Fourth Circle, bucking for Fifth. Why, I'm just beginning to get control of my own body~Patty is the only one of us who uses teleportation herself with any regularity . . . and I'm not sure she ever does it without Mike's support. Oh, Mike says she's quite capable of it, but Patty is such a curiously naive and humble person for the genius she is that she is quite dependent on Mike. Which she needn't be. Jubal, I grok this: we don't actuallY need Mike-Oh, I'm not running him down; don't get me wrong. But you could have been the Man from Mars. Or even me.

It's like the first man to discover fire. Fire was there all along-and after he showed that it could be used, anybody could use it . . anybody with sense and savvy enough not to get burned with it. Follow me?"

"I grok, somewhat at least."

"Mike is our Prometheus-but remember, Prometheus was not God. Mike keeps emphasizing this. Thou art God, I am God, he is God that groks. Mike is a man along with the rest of us . . . even though he knows more. A very superior man, admittedly-a

lesser man, taught the things the Martians know, probably would have set himself up as a pipsqueak god. Mike is above that temptation. Prometheus . . . but that's all,"

Jubal said slowly, "As I recall, Prometheus paid a high price for bringing fire to mankind."

"And don't think that Mike doesn't! He pays with twenty-four hours of work every day, seven days a week, trying to teach a few of us how to play with matches without getting burned. Jill and Patty lowered the boom on him, started making him take one night a week off, long before I joined up." Caxton smiled. "But you can't stop Mike. This burg is loaded with gambling joints, no doubt you know, and most of them crooked since it's against the law here. Mike usually spends his night off bucking crooked games-and winning. Picks up ten, twenty, thirty thousand dollars a night. They tried to mug him, they tried to kill him, they tried knock-out drops and muscle boys-nothing worked; he simply ran up a reputation as the luckiest man in town . . . which brought more people into the Temple; they wanted to see this man who always won. So they tried to shut him out of the games-which was a mistake. Their cold decks froze solid, their wheels wouldn't spin, their dice would roll nothing but box cars. At last they started putting up with him . . . and requesting him politely to please move along after he had won a few grand. Mike would always do so, if asked politely."

Caxton added, "Of course that's one more power bloc we've got against us. Not just the Fosterites and some of the other churches-but the gambling syndicate and the city political machine. I rather suppose that job done on the Temple was by professionals brought in from out of town-I doubt if the Fosterite goon squads touched it. Too professional."

While they talked, people came in, went out again, formed groups themselves or joined Jubal and Ben. Jubal found in them a most unusual feeling, an unhurried relaxation that at the same time was a dynamic tension. No one seemed excited, never in a hurry . . . yet everything they did seemed purposeful, even gestures as apparently accidental and unpremeditated as encountering one another and marking it with a kiss or a greeting-or sometimes not. It felt to Jubal as if each move had been planned by a master choreographer . . . yet obviously was not.

The quiet and the increasing tension-or rather "expectancy," he decided; these people were not tense in any morbid fashion-reminded Jubal of something he had known in the past. Surgery? With a master at work, no noise, no lost motions? A little.

Then he recalled it. Once, many years earlier when gigantic chemically powered rockets were used for the earliest probing of space from the third planet, he had watched a count-down in a block house . . . and he recalled now the same low voices, the same relaxed, very diverse but coordinated actions, the same rising exultant expectancy as the count grew ever smaller. They were "waiting for fullness," that was certain. But for what? Why were they so happy? Their Temple and all they had built had just been destroyed . . . yet they seemed like kids on the night before Christmas.

Jubal had noted in passing, when he arrived, that the nudity Ben had been so disturbed by on his abortive first visit to the Nest did not seem to be the practice in this surrogate Nest, although private enough in location. Then Jubal realized later that he had failed to notice such cases when they did appear; he had himself become so much in the unique close-family mood of the place that being dressed or not had become an unnoticeable irrelevancy.

When he did notice, it was not skin but the thickest, most beautiful cascade of black hair he had ever seen, gracing a young woman who came in, spoke to someone, threw Ben a kiss, glanced gravely at Jubal, and left. Jubal followed her with his eyes, appreciating that flowing mass of midnight plumage. Only after she left did he realize that she had not been dressed other than in her queenly crowning glory . . . and then realized, too, that she was not the first of his brothers in that fashion.

Ben noticed his glance. "That's Ruth," he said. "New high priestess. She and her husband have been away, clear on the other coast-their mission was to prepare a branch temple, I think. I'm glad they're back. It's beginning to look as if the whole family will be home at once-like an oldfashioned Christmas dinner."

"Beautiful head of hair. I wish she had tarried."

"Then why didn't you call her over?"

"Eh?"

"Ruth almost certainly found an excuse to come in here just to catch a glimpse of you-I suppose they must have just arrived. But haven't you noticed that we have been left pretty much alone, except for a few who sat down with us, didn't say much, then left?"

"Well ... yes." Jubal had noticed and had been a touch disappointed, as he had been braced, by all that he had heard, to ward off undue intimacy-and had found that he had stepped on a top step that wasn't there. He had been treated with hospitality and politeness, but it was more like the politeness of a cat than that of an over-friendly dog.

"They are all terribly interested in the fact that you are here and are very anxious to see you . . . but they are a little bit afraid of you, too."

"Me?"

"Oh, I told you this last summer. You're a venerable tradition of the church, not quite real and a bit more than life size. Mike has told them that you are the only human being he knows of who can 'grok in fullness' without needing to learn Martian first. Most of them suspect that you can read minds as perfectly as Mike does."

"Oh, what poppycock! I hope you disabused them?"

"Who am I to destroy a myth? Perhaps you do read minds-I'm sure you wouldn't tell me. They are just a touch afraid of you-YOU eat babies for breakfast and when you roar the ground trembles. Any of them would be delighted to have you call them over . . . but they won't force themselves on you. They know that even Mike stands at attention and says 'sir' when you speak."

Jubal dismissed the whole idea with one short, explosive word.

"Certainly," Ben agreed. "Even Mike has his blind spots-I told you he was only human. But that's how it is. You're the patron saint of this church- and you're stuck with it."

"Well ... there's somebody I know, iust came in. Jill! Jill! Turn around, dear!"

The woman turned rather hesitantly. "I'm Dawn. But thank you." She came over, however, and Jubal thought for an instant that she was going to kiss him . . . and decided not to duck it. But she either had not that intention, or changed her mind. She dropped to one knee, took his hand and kissed it. "Father Jubal. We welcome you and drink deep of you."

Jubal snatched his hand away. "Oh, for heaven's sake, child! Get up from there and sit with us. Share water."

"Yes, Father Jubal."

"Uh ... and call me Jubal-and pass the word around that I don't appreciate being treated like a leper. I'm in the bosom of my family-I hope."

"You are ... Jubal."

"So I expect to be called Jubal and treated as a water brother-no more, no less. The first one who treats me with respect will be required to stay in after school. Grok?"

"Yes, Jubal," she answered demurely. "I've told them. They will."

"Huh?"

"Dawn means," explained Ben, "that she's told Patty, probably~ since Mike is withdrawn at the moment . . . and that Patty is telling everybody who can hear easily-with his inner ear-and they are passing the word to any who are still a bit deaf, like myself."

"Yes," agreed Dawn, "except that I told Jill-Patty has gone outside for something Michael wants. Jubal, have you been watching any of what is showing in the stereo tank? It's very exciting."

"Eli? No."

"You mean the jail break, Dawn?"

"Yes, Ben"

"We hadn't discussed that-and Jubal doesn't like stereo. Jubal, Mike didn't merely crush out and come home when he felt like it; he gave them a dilemma to sit on. Here he has just been arrested for everything but raping the Statue of Liberty, with Bigmouth Short denouncing him as the Antichrist on the same day. So he gave 'em miracles to chew on. He threw away every bar and door in the county jail as he left . . . did the same at the state prison just Out of town for good measure~and disarmed all the police forces, city, county, and state. Partly to keep 'em busy and interested . . . and partly because Mike just purely despises locking a man up for any reason at all. He groks a great wrongness in it."

"That fits," Jubal agreed. "Mike is gentle, always. It would hurt him to have anybody locked up. I agree."

Ben shook his head. "Mike isn't gentle, Jubal. Killing a man wouldn't worry him. But he's the ultimate anarrchist~locking a man up is a wrongness. Freedom of self-and utter personal responsibility for self. Thou art God."

"Wherein lies the conflict, sir? Killing a man might be necessary. But confining him is an offense against his integrity-and your own."

Ben looked at him. "I grok Mike was right. You do grok in fullness- his way. I don't quite-I'm still learning." He added, "How are they taking it, Dawn?"

She giggled slightly. "Like a stirred-UP hornets' nest. The mayor has been on . . . and he's frothing at the mouth. He's demanded help from the state and from the Federation-and he's getting it; we've seen lots of troop carriers landing. But as they pour out, Mike is stripping them-not just their weapons. even their shoes-and as soon as the troop carTer is empty, it goes, too."

Ben said, "I grok he'll stay withdrawn until they get tired and give up. Handling that many details he would almost have to stay in it and on eternal time."

Dawn looked thoughtful. "No, I don't think so, Ben. Of course I would have to, in order to handle even a tenth so much. But I grok Michael could do it riding a bicycle while standing on his head."

"Mmm ... I wouldn't know, I'm still making mud pies." Ben stood up. "Sometimes you miracle workers give me a slight pain, honey child. I'm going to go watch the tank for a while." He stopped to kiss her. "You entertain old Pappy Jubal; he likes little girls."

Caxton left and a package of cigarettes he had left on a coffee table got up, followed him, and placed themselves in one of his pockets.

Jubal said, "Did you do that? Or Ben?"

"Ben did. I don't smoke, unless the man I'm with wants to smoke. But he's always forgetting his cigarettes; they chase him all over the Nest."

"Hmmm ... pretty fair-sized mud pies he makes these days."

"Ben is advancing much more rapidly than he will ever admit. He's a very holy person-but he hates to admit it. He's shy."

"Umph. Dawn, you are the Dawn Ardent I met at Foster Tabernacle about two and half years ago, aren't you?"

"Oh, you remember!!" She looked as if he had handed her a lollipop.

"Of course I remember. But I was slightly puzzled. You've changed some. All for the better. You seem much more beautiful."

"That's because I am more beautiful," she said simply. "You mistook me for Gillian. And she is more beautiful, too."

"Where is that child? I haven't seen her ... and I expected to see her at once."

"She's been working." Dawn paused. "But I told her and she says she's coming in." She paused again. "And I am to take her place. If you will excuse me."

"Oh, certainly. Run along, child."

"There's no hurry." But she did get up and leave almost at once as Dr. Mahmoud sat down.

Jubal looked at him sourly. "You might at least have had the common courtesy to let me know that you were in this country instead of letting me meet my goddaughter for the first time through the good offices of a snake."

"Oh, Jubal, you're always in such a bloody hurry,"

"Sir, when one is of-" Jubal was interrupted by two hands placed over his eyes from behind. A well-remembered voice demanded:

"Guess who?"

"Beelzebub?"

"Try again."

"Lady Macbeth?"

"Much closer. Third guess, or a forfeit."

"Gillian, stop that and come around here and sit beside me."

"Yes, Father." She obeyed.

"And knock off calling me 'Father' anywhere but home. Sir, I was saying that when one is of my age, one is necessarily in a hurry about some things. Each sunrise is a precious jewel . . . for it may never be followed by its sunset. The world may end at any moment."

Mahmoud smiled at him. "Jubal, are you under the impression that if you stop cranking, the world stops going around?"

"Most certainly, sir-from my viewpoint." Miriam joined them silently, sat down on Jubal's free side; he put an arm around her. "While I might not be honing to see your ugly face again . . . nor even to gaze on the somewhat more acceptable one of my former secretary-"

Miriam whispered, "Boss, are you honing for a kick in the stomach? I'm exquisitely beautiful; I have it on highest authority."

"Quiet. -new goddaughters are in another category. Through your failure to drop me so much as a postcard, I might have missed seeing Fatima Michele. In which case I would have returned to haunt you."

"In which case," Miriam pointed out, "you could take a took at Micky at the same time . . . rubbing strained carrots in her hair. A disgusting sight."

"I was speaking metaphorically."

"I wasn't. She's a sloppy trencherman."

"Why," asked Jill quietly, "were you speaking metaphorically, Boss?"

"Eh? The concept 'ghost' is one I feel no need for, other than as a figure of speech."

"It's more than a figure of speech," insisted Jill.

"Uh ... as may be. I prefer to meet baby girls in the flesh, including my own."

Dr. Malunoud said, "But that is what I was saying, Jubal. You aren't about to die; you aren't even close to it. Mike has grokked you to be certain. He says you have a long stretch of years ahead of you."

Jubal shook his head. "I set a top limit of three figures years ago. No more."

"Which three figures, Boss?" Miriam inquired innocently. "The three Methuselah used?"

He shook her shoulders. "Don't be obscene!"

"Stinky says women should be obscene but not heard."

"Your husband speaks rightly. So pipe down. The day my machine first shows three figures on its mileage meter is the day I discorporate, whether Martian style or by my own crude methods. You can't take that away from me. Going to the showers is the best part of the game."

"I grok you speak rightly, Jubal," Jill said slowly, "about its being the best part of the game. But I wouldn't count on it any time soon. Your fullness is not yet. Allie cast a horoscope on you just last week."

"A horoscope? Oh, my God! Who is 'Ailie?' And how dare she cast a horoscope on me! Show her to me! Swelp me, I'll turn her in to the Better Business Bureau."

"I'm afraid you can't, Jubal," Mahmoud put in, "just now, as she is working on our dictionary. As to who she is, she's Madame Alexandra Vesant."

Jubal sat up and looked pleased. "Becky? Is she in this nut house, too? I should have known it. Where is she?"

"Yes, Becky. But we call her 'Allie' because we've got another Becky. But you'll have to wait. And don't scoff at her horoscopes, Jubal; she has the Sight."

"Oh, balderdash, Stinky. Astrology is nonsense and you know it."

"Oh, certainly. Even Allie knows it. And a percentage of astrologers are clumsy frauds. Nevertheless Allie practices it even more assiduously than she used to, when she did it for the public-using Martian arithmetic now and Martian astronomy-much fuller than ours. But it's her device for grokking, It could be gazing into a pool of water, or a crystal ball, or examining the entrails of a chicken. The means she uses to get into the mood do not matter and Mike has advised her to go on using the symbols she is used to. The point is: she has the Sight."

"What the hell do you mean by 'the Sight,' Stinky?"

"The ability to grok more of the universe than that little piece you happen to be sitting on at the moment. Mike has it from years of Martian discipline; Allie was an

untrained semi-adept. The fact that she used as meaningless a symbol as astrology is beside the point. A rosary is meaningless, too-I speak of a Muslim rosary, of course; I'm not criticizing our competitors across the street." Mahmoud reached into his pocket, got out one, started fingering it. "If it helps to turn your hat around during a poker game-then it helps. It is irrelevant that the hat has no magic powers and cannot grok."

Jubal looked at the Islamic device for meditation and ventured a question he had hesitated to put before. "Then I take it you are still one of the Faithful? I had thought perhaps that you had joined Mike's church all the way."

Mahmoud put away the beads. "I have done both."

"Huh? Stinky, they're incompatible. Or else I don't grok either one."

Mahmoud shook his head. "Only on the surface. You could say, I suppose, that Maryam took my religion and I took hers; we consolidated. But, Jubal my beloved brother, I am still God's slave, submissive to His will . . . and nevertheless can say: 'Thou art God, I am God, all that groks is God.' The Prophet never asserted that he was the last of all prophets nor did he claim to have said all there was to say-only fanatics after his lifetime insisted on those two very misleading fallacies. Submission to God's will is not to become a blind robot, incapable of free decision and thus of sin-and the Koran does not say that. Submission can include -and does include-utter responsibility for the fashion in which I, and each of us, shape the universe. It is ours to turn into a heavenly garden or to rend and destroy." He smiled. "'With God all things are possible,' if I may borrow for a moment-except one thing . . . the one Impossible. God cannot escape Himself, He cannot abdicate His own total responsibility-He forever must remain submissive to His own will. Islam remains-He cannot pass the buck. It is His-mine . . . yours Mike's."

Jubal heaved a sigh. "Stinky, theology always gives me the pip. Where's Becky? Can't she knock off this dictionary work and say hello to an old friend? I've seen her only once in the last twenty-odd years; that's too long."

"You'll see her. But she can't stop now, she's dictating. Let me explain the technique, so that you won't insist. Up to now, I've been spending part of each day in rapport with Mike-just a few moments although it feels like an eight-hour day. Then I would immediately dictate all that he had poured into me onto tape. From those tapes several other people, trained in Martian phonetics but not necessarily advanced students, would make long-hand phonetic transcriptions. Then Maryam would type them out, using a special typer-and this master copy Mike or I-Mike by choice, but his time is choked-would correct by hand.

"But our schedule has been disturbed now, and Mike groks that he is going to send Maryam and me away to some Shangri-la to finish the job- or, more correctly, he has grokked that we will grok such a necessity. So Mike is getting months and years of tape completed in order that I can take it away and unhurriedly break it into a phonetic script that humans can learn to read. Besides that, we have stacks of tapes of Mike's lectures-in Martian-that need to be transcribed into print when the dictionary is finished . . . lectures that we understood at the time with his help but later will need to be printed, with the dictionary.

"Now I am forced to assume that Maryam and I will be leaving quite soon, because, busy as Mike is with a hundred other things, he's changed the method. There are eight bedrooms here equipped with tape recorders. Those of us who can do it best-Patty, Jill, myself; Maryam, your friend Allie, some others-take turns in those rooms. Mike puts

us into a short trance, pours language-definitions, idioms, concepts-into us for a few moments that feel like hours . . . then we dictate at once just what he has poured into us, exactly, while it's still fresh. But it can't be just anybody, even of the Innermost Temple. It requires a sharp accent and the ability to join the trance rapport and then spill out the results. Sam, for example, has everything but the clear accent-he manages, God knows how, to speak Martian with a Bronx accent. Can't use him, it would cause endless errata in the dictionary. And that is what Allie is doing now-dictating. She's still in the semi-trance needed for total recall and, if you interrupt her, she'll lose what she still hasn't recorded."

"I grok," Jubal agreed, "although the picture of Becky Vesey as a Martian adept shakes me a little. Still, she was once one of the best mentalists in show business; she could give a cold readilig that would scare any mark right out of his shoes-a~ loosen his pocketb00~ Say, Stinky, if you are going to be sent away for peace and quiet while you unwind all this data, why don't you and Maryam come home? Plenty of room for a study & bedroom suite in the new wing."

"Perbaps we shall. Waiting still is."

"Sweetheart," Miriam said earnestlY, "that's a solutiOn I would just plain love if Mike pushes us out of the Nest."

"If we grok to leave the Nest, you mean."

"Same thing . . . you grok."

"You speak rightly, my dear. But when do we eat around here? I feel a most unMartian urgency inside. The service was better in the Nest."

"You can't expect Patty to work on your dratted old dictionary, see to it that everyone who arrives is comfortable, run errands for Mike, and still have food on the table the instant you get hungry, my love. Jubal, Stinky will never achieve priesthood~he's a slave to his stomach."

"Well, so am I."

"And you girls might give Patty a hand," her husband added.

"That sounds like a crude hint. You know we do, dear, all she will let us -- and Tony will hardly allow anyone in his kitchen . . . even this kitchen." She stood up. "Come on, Jubal, and let's see what's cooking. Tony will be very flattered if you visit his kitchen."

Jubal went with her, was a bit bemused to see telekinesis used in preparing food, met Tony, who scowled until he saw who was with her, then was beamingly proud to show off his workshop, accompanied by a spate of invective in mixed English and Italian at the scoundrels who had destroyed "his" kitchen in the Nest. In the meantime a spoon, unassisted, continued to keel a big pot of spaghetti sauce.

Shortly thereafter Jubal declined to be jockeyed into a seat at the head of a long table, grabbed one elsewhere. Patty sat at one end; the head chair remained vacant . . . except for an eerie feeling which Jubal suppressed that the Man from Mars was sitting there and that everyone present but himself could see him_whith was true only in some cases.

Across the table from him was Dr. Nelson.

Jubal discovered that he would have been surprised only if Dr. Nelson had not been present. He nodded and said, "Hi, Sven."

"Hi, Doc. Share water."

"Never thirst. What are you around here? Staff physician?" Nelson shook his bead. "Medical student."

"So. Learn anything?"

"I've learned that medicine isn't necessary."

"If youda ast me, I coulda told yah. Seen Van?"

"He ought to be in sometime late tonight or early tomorrow. His ship grounded today."

"Does he always come here?" inquired Jubal.

"Call him an extension student. He can't spend much time here."

"Well, it will be good to see him. I haven't laid eyes on him for a year and half, about." Jubal picked up a conversation with the man on his right while Nelson talked with Dorcas on his right. Jubal noticed the same tingling expectancy at the table which he had felt before, but reinforced. Yet there was still nothing he could put his finger on_lust a quiet family dinner in relaxed intimacY. Once, a glass of water was passed all around the table, but, if there was ritual of words with it, they were spoken too low to carry. When it reached Jubal's placer he took a sip and passed it along to the girl on his left-round-eyed and too awed to make chit-chat with him-and himself said in a low voice, "I offer you water."

She managed to answer, "I thank you for water, Fa- Jubal." That was almost the only word be got out of her. When the glass completed the cjtcUit, reaching the vacant chair at the head of the table, there was perhaps a half inch of water in it. It raised itself, poured, and the water disappeared, then the tumbler placed itself on the cloth. Jubal decided, correctly, that he had taken part in a group Sharing Water of the Innermost Temple . . . and probably in his honour-although it certainly was not even slightly like the Bacchallalhan revels he had thought accompamed such formal welcome of a brother. Was it because they were in strange surroundings? Or had he read into unexplicit reports what his own id wanted to find in those reports?

Or had they simply toned it down to an ascetic formality out of deference to his age and opinions?

The last seemed the most likely theory-and he found that it vexed him. Of course, he told himself, he was glad to be spared the need to refuse an invitation that he certainly did not want-and would not have relished at any age, his tastes being what they were.

But just the same, damn it-"Don't anybody mention ice skating because Grandmaw is too old and frail for ice skating and it wouldn't be polite. Hulda, you suggest that we play checkers and we'll all chime in-Grandmaw likes checkers. And we'll go ice skating some other time. Okay, kids?"

Jubal resented the respectful consideratiOn, if that was what it was- he would almost have preferred to have gone ice skating anyhow, even at the cost of a broken hip.

But he decided to forget the matter, put it entirely out of mind, which he did with the help of the man on his right, who was as talkative as the girl on his left was not. His name, Jubal learned, was Sam, and presently he learned that Sam was a man of broad and deep scholarship, a trait Jubal valued in anyone when it was not mere parrot learning-and he grokked that in Sam it was not.

"This setback is only apparent," Sam assured him. "The egg was ready to hatch and now we'll spread out. Of course we've had trouble; we'll go on having trouble-because no society, no matter how liberal its law may appear to be, will allow its basic

concepts to be challenged with impunity. Which is exactly what we are doing. We are challenging everything from the sanctity of property to the sanctity of marriage."

"Property, too?"

"Property the way it rules today. So far Michael has merely antagonized a few crooked gamblers. But what happens when there are thousands, tens of thousands, hundreds of thousands and more, of people who can't be stopped by bank vaults and who have only their self-discipline to restrain them from taking anything they want? To be sure, that discipline is stronger than any possible legal restraint-but no banker can grok that until he himself travels the thorny road to achieve that discipline . . . and he'll wind up no longer a banker. What happens to the stock market when the illuminati know which way a stock will move-and the brokers don't?"

"Do you know?"

Sam shook his head. "Not interested. But Saul over there-that other big Hebe; he's my cousin-gives it grokking, along with Allie. Michael has them be very cautious about it, no big killings, and they use a dozen-odd dummy accounts-but the fact remains that any of the disciplined can make any amount of money at anything-real estate, stocks, horse races, gambling, you name it-when competing with the half awake. No, I don't think that money and property will disappear-Michael says that both concepts are useful-but I do say that they're going to be turned upside down and inside out to the point where people will have to learn new rules (and that means learn the hard way, just as we have) or be hopelessly outclassed. What happens to Lunar Enterprises when the common carrier between here and Luna City is teleportation?"

"Should I buy? Or sell?"

"Ask Saul. He might use the present corporation, or he might bankrupt it. Or it might be left untouched for a century or two. But besides bankers and brokers, consider any other occupation. How can a school teacher teach a child who knows more than she does and won't hold still for mistaken teaching? What becomes of physicians and dentists when people are truly healthy? What happens to the cloak & suit industry and to the I.L.G.W.U. when clothing isn't really needed at all and women aren't so endlessly interested in dressing up (they'll never lose interest entirely)- and nobody gives a damn if he's caught with his arse bare? What shape does 'the Farm Problem' take when weeds can be told not to grow and crops can be harvested without benefit of International Harvester or John Deere? Just name it; it changes beyond recognition when the discipline is applied. Take just one change that will shake both the sanctity of marriage-in its present form-and the sanctity of property. Jubal, do you have any idea how much is spent each year in this country on Malthusian drugs and devices?"

"I have a fairly exact idea, Sam. Almost a billion dollars on oral contraceptives alone this last fiscal year . . . more than half of which was for patent nostrums about as useful as corn starch."

"Oh, yes, you're a medical man."

"Only in passing. A pack rat mind."

"Either way. What happens to that big industry-and to the shrill threats of moralists--when a female can conceive only when she elects to as an act of volition, when also she is immune to disease, cares only for the approval of her own sort . . . and has her orientation so changed that she desires intercourse with a whole-heartedness that Cleopatra never dreamed of-but any male who tried to rape her would die so quickly, if

she so grokked, that he wouldn't know what hit him? When women are free of guilt and fear-but invulnerable other than by decision of self? Hell, the pharmaceutical industry will be just a passing casualty-what other industries, laws, institutions, attitudes, prejudices, and nonsense must give way?"

"I don't grok its fullness," admitted Jubal. "It concerns a subject that has been of little direct interest to me in quite a while."

"One institution won't be damaged by it. Marriage."

"So?"

"Very much so. Instead it will be purged, strengthened, and made endurable. Endurable? Ecstatic! See that wench down there with the long black hair?"

"Yes. I was delighting in its beauty earlier."

"She knows it's beautiful and it's grown a foot and a half longer since we joined the church. That's my wife. Not much over a year ago we lived together about like bad-tempered dogs. She was jealous . . . and I was inattentive. Bored. Hell, we were both bored and only our kids kept us together-that and her possessiveness; I knew she would never let me go without a fight and a scandal . . . and I didn't have any stomach for trying to put together a new marriage at my age, anyhow. So I got a little on the side, when I could get away with it-a college professor has many temptations, few safe opportunities-and Ruth was quietly bitter. Or sometimes not so quiet. And then we joined up." Sam grinned happily. "And I fell in love with my own wife. Number-one gal friend~"

Sam's words had been very quiet, an intimate conversation walled by noise of eating and cheerful company. His wife was far down the table. She looked up and said clearly, "That's an exaggeration, Jubal. I think I'm about number six."

Her husband called out, "Stay out of my mind, beautiful!-we're talking men talk. Give Larry your undivided attention." He picked up a hard roll, threw it at her.

She stopped it in mid-trajectory, threw it back at him while continuing to talk; Sam caught it and buttered it. "I'm giving Larry all the attention he wants . . . until later, maybe. Jubal, that brute didn't let me finish. Number-six place is wonderful! Because my name wasn't even on the list till we joined the church. I hadn't rated as high as six with Sam in the past twenty years." She did then turn her attention back to Larry.

"The real point," Sam said quietly, "is that we two are now partners, much more than we ever were even at the best period in our outside marriage-and we got that way through the training, culminating in sharing and growing closer with others who had the same training. We all wind up in twosome partnerships inside the larger group-usually, but not necessarily, with our own spouses-of-record. Sometimes not . . . and if not, the readjustment takes place with no heartache and a warmer, closer, better relationship between the soidisant 'divorced' couple than ever, both in bed and out. No loss and all gain. Shucks, this pairing as partners needn't even be between man and woman. Dawn and Jill for example- they work together like an acrobatic team."

"Hmm ... I suppose," Jubal said thoughtfully, "that I had thought of those two as being Mike's wives."

"No more so than they are to any of us. Or than Mike is to all the rest. Mike is too busy, has been, I should say, until the Temple burned-to do more than make sure that he shared himself all the way around." Sam added, "If anybody is Mike's wife, it's Patty, although she keeps so busy herself that the relation is more spiritual than physical.

Actually, you could say that both Mike and Patty are short-changed when it comes to mauling the mattress."

Patty was not quite as far away as Ruth, but far enough. She looked up and said, "Sam dear, I don't feel short-changed."

"Huh?" Sam then announced, loudly and bitterly, "The only thing wrong with this church is that a man has absolutely no privacy!"

This brought a barrage of food in his direction, all from distaff members. He handled it all and tossed it back without lifting a hand . . . until the complexity of it apparently got to be too much and a plateful of spaghetti caught him full in the face-thrown, Jubal noticed, by Dorcas.

For a moment Sam looked like a particularly ghastly crash victim. Then suddenly his face was clean and even the sauce that had spattered on Jubal's shirt was gone. "Don't give her any more, Tony. She wasted it; let her go hungry."

"Plenty more in the kitchen," Tony answered. "Sam, you look good in spaghetti. Pretty good sauce, huh?" Dorcas's plate sailed out to the kitchen, returned, loaded. Jubal decided that Dorcas had not been concealing talents from him-the plate was much more heavily filled than she would have chosen herself; he knew her appetite.

"Very good sauce," agreed Sam. "I salvaged some that hit me in the mouth. What is it? Or shouldn't I ask?"

"Chopped policeman," Tony answered.

Nobody laughed. For a queasy instant Jubal wondered if the joke was a joke. Then he recalled that these his water brothers smiled a lot but rarely laughed-and besides, policeman should be good healthy food. But the sauce couldn't be "long pig" in any case, or it would taste like pork. This sauce had a distinct beef flavor to it.

He changed the subject. "The thing I like best about this religion-"

"Is it a religion?" Sam inquired.

"Well, church. Call it a church. You did."

"It is a church," agreed Sam. "It fills every function of a church, and its quasi-theology does, I admit, match up fairly well with some real religions. Faiths. I jumped in because I used to be a stalwart atheist-and now I'm a high priest and I don't know what I aim"

"I understood you to say you were Jewish."

"I am. From a long line of rabbis. So I wound up atheist. Now look at me. But my cousin Saul and my wife Ruth are both Jews in the religious sense-and talk to Saul; you'll find it's no handicap to this discipline. A help, probably . . . as Ruth, once she broke past the first barrier, progressed faster than I did; she was a priestess quite a while before I became a priest. But she's the spiritual sort; she thinks with her gonads. Me, I have to do it the hard way, between my ears."

"The discipline," repeated Jubal. "That's what I like best about it. The faith I was reared in didn't require anybody to know anything. Just confess your sins and be saved, and there you were, safe in the arms of Jesus. A man could be too stupid to hit the floor with his hat . . . and yet he could be conclusively presumed to be one of God's elect, guaranteed au eternity of bliss, because he had been 'converted.' He might or might not become a Bible student; even that wasn't necessary . . . and he certainly didn't have to know, or even try to know, anything else. This church doesn't accept 'conversion' as I grok it-"

"You grok correctly."

"A person must start with a willingness to learn and follow it with some long, hard study. I grok that is salutary, in itself."

"More than salutary," agreed Sam. "Indispensable. The concepts ~ can't be thought about without the language, and the discipline that results in this horn-of-plenty of benefits-from how to live without fighting to how to please your wife-all derive from the conceptual logic . . . understanding who you are, why you're here, how you tick-and behaving accordingly. Happiness is a matter of functioning the way a human being is organized to function . . . but the words in English are a mere tautology, empty. In Martian they are a complete set of working instructions. Did I mention that I had a cancer when I came here?"

"Eh? No, you didn't."

"Didn't know it myself. Michael grokked it, sent me out for the usual X rays and so forth so that I would be sure. Then we got to work on it together. 'Faith' healing. A miracle. The clinic called it 'spontaneous remission' which I grok means 'I got well.'"

Jubal nodded. "Professional double-talk. Some cancers go away, we don't know why."

"I know why this one went away. By then I was beginning to control my own body. With Mike's help I repaired the damage. Now I can do it without his help. Want to feel a heart stop beating?"

"Thanks, I have observed it in Mike, many times. My esteemed colleague, Croaker Nelson, would not be sitting across from us if what you are talking about was 'faith healing.' It's voluntary control of the body. I grok."

"Sorry. We all know that you do. We know."

"Mmm ... I dislike to call Mike a liar because he isn't. But the lad happens to be prejudiced in my case."

Sam shook his head. "I've been talking with you all through dinner. I wanted to check it myself, despite what Mike said. You grok. I'm wondering what new things you cotild disclose to us if you troubled to learn the language?"

"Nothing. I'm an old man with little to contribute to anything."

"I insist on reserving my opinion. All the rest of the First Called have had to tackle the language to make any real progress. Even the three you've kept with you have had some powerful coaching, being kept in trance during most of the short days and the few occasions we've had them with us. All but you . . . and you don't really need it. Unless you want to wipe spaghetti from your face without a towel, which I grok you aren't interested in anyhow."

"Only to observe it."

Most of the others had left the table, leaving quietly and without formality when they wished. Ruth came over and stood by them. "Are you two going to sit here all night? Or shall we move you out with the dishes?"

"I'm henpecked. Come on, Jubal." Sam stopped to kiss his wife.

They stopped only momentarily in the room with the stereo tank. "Anything new?" asked Sam.

"The county attorney," someone said, "has been orating in an attempt to prove that all of today's disasters are our doing . . . without admitting that he doesn't have the slightest notion how any of it was done."

"Poor fellow. He's bitten a wooden leg and his teeth hurt." They went on through and found a quieter living room; Sam said, "I had been saying that these troubles can be expected-and they will get much worse before we can expect to control enough public opinion to be tolerated. But Mike is in no hurry. So we close down the Church of All Worlds-it is closed down. So we move and open the Congregation of the One Faith-and we get kicked out again. Then we reopen elsewhere as the Temple of the Great Pyramid-that one will bring flocking the foolish fat and fatuous females, and some of them will end up neither fat nor foolish-and when we have the Medical Association and the local bar and the newspapers and the boss politicos snapping at our heels there-why, we open the Brotherhood of Baptism somewhere else. Each one means solid progress, a hard core of disciplined who can't be hurt-Mike started here hardly over a year ago, uncertain himself, and with only the help of three untrained priestesses-bycourtesy. Now we've got a solid Nest . . . plus a lot of fairly advanced pilgrims we can get in touch with later and let rejoin us. And someday, someday, we'll be too strong to persecute."

"Well," agreed Jubal, "it could work. Jesus made quite a splash with only twelve disciples. In due course."

Sam grinned happily. "A Jew boy. Thanks for mentioning Him. He's the outstanding success story of my tribe-and we all know it, even though many of us don't talk about Him. But He was a Jew boy that made good and I'm proud of Him, being a Jew boy myself. Please to note that Jesus didn't try to get it all done by next Wednesday. He was patient. He set up a ound organization and let it grow. Mike is patient, too. Patience is so much part of the discipline that it isn't even patience; it's automatic. No sweat. Never any sweat."

"A sound attitude at any time."

"Not an attitude. The functioning of the discipline. Jubal? I grok you are tired. Would you wish to become untired? Or would you rather go to bed? If you don't, our brothers will keep you up all night, talking. Most of us don't sleep much, you know."

Jubal yawned. "I think I'll choose a long, hot soak and about eight hours of sleep. I'll visit with our brothers tomorrow ... and other days."

"And many other days," agreed Sam.

Jubal found his own room, was immediately joined by Patty, who again insisted on drawing his tub, then turned back his bed, neatly, without touching it, placed his setup for drinks (fresh ice cubes) by his bed, and fixed one and placed it on the shelf of the tub. Jubal did not try to hurry her out; she had arrived displaying all her pictures. He knew enough about the syndrome which can lead to full tattooing to be quite sure that if he did not now remark on them and ask to be allowed to examine them, she would be very hurt even though she might conceal it.

Nor did he display or feel any of the fret that Ben had felt on an earlier, similar occasion; he went right ahead and undressed, making nothing of it-and discovered with wryly bitter pride that it did not matter to him in the least even though it had been many years since the last time he had allowed anyone, man or woman, to see him naked. It seemed to matter not at all to Patty and even less to him. She simply made sure that the tub was just right before allowing him to step into it.

Then she remained and told him what each picture was and in what sequence to view them.

Jubal was properly awed and appropriately complimentary, while completely the impersonal art critic. But it was, he admitted to himself, the goddamdest display of virtuosity with a needle he had ever seen-it made his fully decorated Japanese friend look like a cheap carpet as compared with the finest Princess Bokhara.

"They've been changing a little," she told him. "Take the holy birth scene here-that rear wall is beginning to look curved . . . and the bed looks almost like a hospital table. Of course I have been changing, too, quite a lot. I'm sure George doesn't mind. There hasn't been a needle touched to me since he went to Heaven . . . and if some miraculous changes take place, I'm sure he knows about them and has a finger in it somehow."

Jubal decided that Patty was a little dotty but quite nice . . . on the whole, he preferred people who were a little dotty; "the salt of the earth" citizen left him cold. Not too dotty, he amended; Patty had let him undress himself, then had whisked his clothes into his wardrobe without coming near them. She was probably a clear proof that one didn't have to be sane, whatever that was, to benefit by this remarkable Martian discipline that the boy apparently could teach to anyone.

Presently he sensed that she was ready to leave and suggested it by asking her to kiss his goddaughters goodnight-he had forgotten to. "I was tired, Patty."

She nodded. "And I am called for dictionary work." She leaned over and kissed him, warmly but quickly. "I'll take that one to our babies."

"And a pat for Honey Bun."

"Yes, of course. She groks you, Jubal. She knows you like snakes."

"Good. Share water, brother."

"Thou art God, Jubal." She was gone. Jubal settled back in the tub, was surprised to find that he did not seem tired now and his bones no longer ached. Patty was a tonic . . . serene happiness on the hoof. He wished that he himself had no doubts-then admitted that he didn't want to be anybody but himself, old and cranky and self-indulgent.

Finally he soaped and showered and decided to shave so that he wouldn't have to before breakfast. After a leisurely time he bolted the door of his room, turned out the overhead light, and got into bed.

He had looked around for something to read, found nothing to his annoyance, being addicted to this vice above all else and not wishing to go out again and scare up something. He sipped part of a drink instead and turned out the bed light.

He did not go right to sleep. His pleasant chat with Patty seemed to have wakened and rested him. He was still awake when Dawn came in.

He called out, "Who's there?"

"It's Dawn, Jubal."

"It can't be dawn yet; it was only- Oh."

"Yes, Jubal. Me."

"Damn it, I thought I bolted that door. Child, march straight out of-Hey! Get out of this bed. Git!"

"Yes, Jubal. I will. But I want to tell you something first."

"Huh?"

"I have loved you a long time. Almost as long as Jill has."

"Why, the very- Quit talking nonsense and shake your little fanny out that door."

"I will, Jubal," she said very humbly. "But I want you to listen to something first. Something about women."

"I don't want to hear it now. Tell me in the morning."

"Now, Jubal."

He sighed. "Talk. Stay where you are."

"Jubal ... my beloved brother. Men care very much how we women look. So we try to be beautiful and that is a goodness. I used to be a peeler, as I know you know. It was a goodness, too, to let men enjoy the beauty I was for them. It was a goodness for me, to know that they needed what I had to give.

"But, Jubal, women are not men. We care about what a man is. It can be something as silly as: Is he wealthy? Or it can be: Will he take care of my children and be good to them? Or, sometimes, it can be: Is he good?- as you are good, Jubal. But the beauty we see in you is not the beauty you see in us. You are beautiful, Jubal."

"For God's sake!"

"I think you speak rightly. Thou art God and I am God-and I need you. I offer you water. Will you let me share and grow closer?"

"Now, look, little girl, if I understood what you are offering-"

"You grokked, Jubal. To share together all that we have. Ourselves. Selves."

"I thought so. My dear, you have plenty to share-but ... myself- well, you arrived some years too late. I am sincerely regretful, believe me. Thank you. Deeply. Now go away and let an old man get his sleep."

"You will sleep, when waiting is filled. Jubal ... I could lend you strength. But I grok clearly that it is not necessary."

(Goddamit-it wasn't necessary!) "No, Dawn. Thank you, dear."

She got to her knees and bent over him. "Just one more word, then. Jill told me, that if you argued, I was to cry. Shall I get my tears all over your chest? And share water with you that way?"

"I'm going to spank Jill!"

"Yes, Jubal. I'm starting to cry." She made no sound, but in only a second or two a warm, full tear splashed on his chest-was followed quickly by another . . . and another-and still more. She sobbed almost silently.

Jubal cursed and reached for her . . . and cooperated with the inevitable.

XXXVI

JUBAL WOKE UP ALERT, rested, and happy, realized that he felt better before breakfast than he had in years. For a long, long time he had been getting through that black period between waking and the first cup of coffee by comforting himself with the thought that tomorrow might be a little easier.

This morning he found himself whistling, which he did very badly. He noticed it, stopped himself, forgot it and started up again.

He saw himself in the mirror, smiled wryly, then grinned openly. "You incorrigible old goat. They'll be sending the wagon for you any minute now." He noticed

a white hair on his chest, plucked it out, didn't bother with many others just as white, went on making himself ready to face the world.

When he went outside his door Jill was there. Accidentally? No, he no longer trusted any "coincidence" in this ménAge; it was as organized as a computer. She came straight into his anns. "Jubal- Oh, we love you so! Thou art God."

He returned her kiss as warmly as it was given, grokking that it would be hypocritical not to-and discovering that kissing Jill differed from kissing Dawn only in some fashion unmistakable but utterly beyond instrument or description.

Presently he held her away from him without letting her go. "You baby Messalina . . . you framed me."

"Jubal darling ... you were wonderful!"

"Uh ... how the hell did you know I was able?"

She gave him back a gaze of clear-eyed innocence. "Why, Jubal, I've been certain of that ever since Mike and I first lived at home. You see, even then, when Mike was asleep-in trance-.-he could see around him quite a distance and sometimes he would look in on you-a question to ask you or something-to see if you were asleep."

"But I slept alone! Always."

"Yes, dear. But that wasn't quite what I meant. And I always had to explain things to Mike that he didn't understand."

"Hrrrmph!" He decided not to pursue the inquiry. "Just the same, you shouldn't have framed me."

"I grok you don't mean that in your heart, Jubal ... and you grok that I speak rightly. We had to have you in the Nest. All the way in. We need you. Since you are shy and humble in your goodness, we did what was needful to welcome you without hurting you. And we did not hurt you, as you grok."

"What's this 'we' stuff?"

"It was a full Sharing-Water of all the Nest, as you grok-you were there. Mike stopped what he was doing and woke up for it . . . and grokked with you and kept us all together."

Jubal hastily abandoned this line of inquiry, too. "So Mike is awake at last. That's why your eyes are shining so."

"Only partly. Of course, we are always delighted when Mike isn't withdrawn, it's jolly ... but he's never really away. Jubal, I grok that you have not grokked the fullness of our way of Sharing-Water. But waiting will fill. Nor did Mike grok it, at first-he thought it was only for quickening of eggs, as it is on Mars."

"Well ... that's the primary purpose, the obvious purpose. Babies. Which makes it rather silly behavior on the part of a person, namely me, who has no intention and no wish, at my age, to cause such increase."

She shook her head. "Babies are the obvious result ... but not the primary purpose at all. Babies give meaning to the future, and that is a great goodness. But only three or four or a dozen times in a woman's life is a baby quickened in her . . . out of the thousands of times she can share herself-and that is the primary use for what we can do so often but would need to do so seldom if it were only for reproduction. It is sharing and growing closer, forever and always. Jubal, Mike grokked this because on Mars the two things-quickening of eggs, and sharing-closer-are entirely separate . . . and he grokked,

too, that our way is best. What a happy thing it is not to have been hatched a Martian . . . to be human and a woman!"

He looked at her closely. "Child, are you pregnant?"

"Yes, Jubal. I grokked at last that waiting had ended and I was free to be. Most of the Nest have not needed to wait-but Dawn and I have been quite busy. But when we grokked this cusp coming, I grokked that there would be a waiting after the cusp-and you can see that there will certainly be. Mike will not rebuild the Temple overnight-so this high priestess will be unhurried in building a baby. Waiting always fills."

From this high-flown mishmash Jubal abstracted the central fact or Jill's belief concerning such a possible fact. Well, she no doubt had had plenty of opportunity. He resolved to keep an eye on the matter and try to bring her home for it, if possible. Mike's superman methods were all very well, but it wouldn't hurt to have the best modern equipment and techniques at hand, too. Losing Jill to eclampsia or some other mishap was something he did not intend to let happen, even if he had to get tough with the kids.

He wondered about another such possibility, decided not to mention it. "Where's Dawn? And where's Mike? The place seems awfully quiet." No one had come through the hail they were in and he heard no voices and yet that odd feeling of happy expectancy was even stronger than it had been the night before. He would have expected a certain release from tension after the ceremony he had apparently joined in himself-unbeknownst-but the place was more charged up than ever. It suddenly reminded him of how he had felt, as a very small boy, when waiting for his first circus parade . . . and someone had called out: "There come the elephants!"

Jubal felt as if, were he just a little taller, he could see the elephants, past the excited crowd. Yet there was no crowd.

"Dawn told me to give you a kiss for her; she'll be busy for the next three hours, about. And Mike is busy, too-he went back into withdrawal."

"Oh."

"Don't sound so disappointed; he'll be free soon. He's making a special effort so that he will be free on your account . . . and to let all of us be free, too. Duke spent all night scouring the city for the high-speed tape recorders we use for the dictionary and now we've got everybody who can possibly do it being jammed full of Martian phonic symbols and then Mike will be through and can visit. Dawn has just started dictating; I finished one session, ducked out to say good-morning to you . . . and am about to go back and get poured full of my last part of the chore, so I'll be gone just a little longer than Dawn will be. And here's Dawn's kiss-the first one was just from me." She put her arms around his neck and again put her mouth greedily to his-at last said, "My goodness! Why did we wait so long? 'Bye for a little!"

Jubal found a sparse few in the big dining room. Duke looked up, smiled and waved, went back to hearty eating. He did not look as if he had been up all night-nor had he; he had been up two nights.

Becky Vesey looked around when Duke waved and said happily, "Hi, you old goat!"-grabbed his ear, pulled him down, and whispered into it:

"I've known it all along-but why weren't you around to console me when the Professor died?" She added aloud, "Sit down here beside me and we'll get some food into you while you tell me what devilment you've been plotting lately."

"Just a moment, Becky." Jubal went around the table. "Hi, Skipper. Good trip?"

"No trouble. It's becoming a milk run. I don't believe you've ever met Mrs. van Tromp. My dear, the founder of this feast, the one and only Jubal Harshaw-two of him would be too many."

The Captain's wife was a tall, plain woman with the calm eyes of one who has watched from the Widow's Walk. She stood up, kissed Jubal. "Thou art God."

"Uh, thou art God." Jubal decided that he might as well relax to the ritual-hell, if he said it often enough, he might lose the rest of his buttons and believe it . . . and it did have a friendly ring to it with the arms of the Skipper's yrouw firmly around him. He decided that she could even teach Jul something about kissing. She-how was it Anne had once described it? -she gave it her whole attention; she wasn't going anywhere.

"I suppose, Van," he said, "that I really shouldn't be surprised to find you here."

"Well," answered the spaceman, "a man who commutes to Mars ought to be able to palaver with the natives, don't you think?"

"Just for powwow, huh?"

"There are other aspects." Van Tromp reached for a piece of toast; the toast cooperated. "Good food, good company."

"Um, yes."

"Jubal," Madame Vesant called out, "soup's on!"

Jubal returned to his place, found eggs-on-horseback, orange juice, and other choice comestibles waiting for him. Becky patted his thigh. "A fine prayer meeting, me bucko."

"Woman, back to your horoscopes!"

"Which reminds me, deane, I want to know the exact instant of your birth."

"Uh, I was born on three successive days, at various hours. I was too big a boy-they had to handle me in sections."

Becky made a rude answer. "I'll find out."

"The courthouse burned down when I was three. You can't."

"There are ways. Want to make a small bet?"

"You go on heckling me and you'll find you're not too big to spank. How've you been, girl?"

"What do you think? How do I look?"

"Healthy. A bit spread in the butt. You've touched up your hair."

"I have not. I quit using henna months ago. Get with it, pal, and we'll get rid of that white fringe you've got. Replace it with a real lawn."

"Becky, I refuse to grow any younger for any reason. I came by my decrepitude the hard way and I propose to enjoy it. Quit prattling and let a man eat."

"Yes, sir. You old goat."

Jubal was just leaving the table as the Man from Mars came in. "Father! Oh, Juball" Mike hugged and kissed him.

Jubal gently unwound himself from the embrace. "Be your age, son. Sit down and enjoy your breakfast. I'll sit with you."

"I didn't come here looking for breakfast, I came looking for you. We'll find a place and talk."

"All right."

They went to the livingroom of one of the suites, Mike pulling Jubal by the hand like an excited small boy welcoming his favorite grandparent. Mike picked a big

comfortable chair for Jubal and sprawled himself on a couch opposite and close to him. This room was on the side of the wing having the private landing flat; there were high French windows opening to it. Jubal got up and shifted his chair slightly so that he would not be facing so directly into the light in looking at his foster son; not to his surprise but mildly to his annoyance the heavy chair shifted as if it had been no more massive than a child's balloon, his hand merely guided it.

Two men and a woman were in the room when they arrived. These left shortly, leisurely, severally, and unostentatiously. After that they were alone, except that they were both served with Jubal's favorite brandy-by hand, to Jubal's pleasure; he was quite ready to agree that the remote control these people had over objects around them was a labor-saver and probably a money-saver (certainly on laundry!-bis spaghetti-splashed shirt had been so fresh that he had put it on again today), and obviously a method much to be preferred for household convenience to the blind balkiness of mechanical gadgets. Nevertheless he was not used to telecontrol done without wires or waves; it startled Jubal the way horseless carriages had disturbed decent, respectable horses about the time Jubal was born.

Duke served the brandy. Mike said, "Hi, Cannibal. Thanks. Are you the new butler?"

"De nada, Monster. Somebody has to do it and you've got every brain in the place slaving away over a hot microphone."

"Well, they'll all be through in a couple of hours and you can revert to your useless, lecherous existence. The job is done, Cannibal. Pau. Thirty. Ended."

"The whole damn Martian language all in one lump? Monster, I had better check you for burned-out capacitors."

"Oh, no, no! Only the primer knowledge that I have of it-had of it, my brain's an empty sack. But highbrows like Stinky will be going back to Mars for a century to fill in what I never learned. But I did turn out quite a job-about six weeks of Subjective time since around five this morning or whenever it was we adjourned the meeting-and now the stalwart steady types can finish it and I'm free to visit with Jubal with nothing on my mind." Mike stretched and yawned. "Feels good. Finishing a job always feels good."

"You'll be slaving away at something else before the day is out. Boss, this Martian monster can't take it or leave it alone. I know for a fact that this is the first time he has simply relaxed and done nothing for over two months. He ought to sign up with 'Workers Anonymous.' Or you ought to visit us more often. You're a good influence on him."

"God forbid that I should ever be a good influence on anybody."

"And you get out of here, Cannibal, and quit telling lies about me."

"Lies, hell. You turned me into a compulsive truth-teller ... and it's a great handicap in some of the jomts where I hang out." Duke left them.

Mike lifted his glass. "Share water, my brother Father Jubal"

"Drink deep, son."

"Thou art God."

"Take it easy, Mike. I'll put up with that from the others and answer it politely. But don't you come godding at me. I knew you when you were 'only an egg.'"

"Okay, Jubal."

"That's better. When did you start drinking in the morning? Do that at your age and you'll ruin your stomach. You'll never live to be a happy old soak, like me."

Mike looked at his partly emptied glass. "I drink when it's a sharing to do so. It doesn't have any effect on me, nor on most of the others, unless we want it to. Once I let it have its effect without stopping it, until I passed Out. It's an odd sensation. Not a goodness, I grok. Just a way to discorporate for a while without discorporating. I can get a similar effect, only much better and with no damage to be repaired afterwards, by withdrawing."

"Economical, at least."

"Uh huh, our liquor bill isn't anything. Matter of fact, running that whole Temple hasn't cost what it costs you to keep up our home. Except for the initial investment and replacing some of the props, coffee and cakes was about all-we made our own fun. We were happy. We needed so little that I used to wonder what to do with all the money that came in."

"Then why did you take collections?"

"Huh? Oh, you have to charge 'em, Jubal. The marks won't pay serious attention to anything that's free."

"I knew that, I just wondered if you did."

"Oh, yes, I grok marks, Jubal. At first I did try to preach free-just give it away. I had plenty of money, I thought it was all right. It didn't work. We humans have to make considerable progress before we can accept a free gift, and value it. Usually I never let them have anything free until about Sixth Circle. By then they can accept . . . and accepting is much harder than giving."

"Hmm ... son, I think maybe you should write a book on human psychology."

"I have. But it's in Martian. Stinky has the tapes." Mike looked again at his glass, took a slow sybaritic sip. "We do use some liquor. A few of us -Saul, myself, Sven, some others-like it. And I've learned that I can let it have just a little effect, then hold it right at that point, and gain a euphoric growing-closer much like trance without having to withdraw. The minor damage is easy to repair." He sipped again. "That's what I'm doing this morning-letting myself get just the mildest glow and be happy with you."

Jubal studied him closely. "Son, you aren't drinking entirely to be sociable; you've got something on your mind."

"Yes, I have."

"Do you want to talk it out?"

"Yes. Father, it's always a great goodness to be with you, even if nothing is troubling me. But you are the only human I can always talk to and know that you will grok and that you yourself won't be overwhelmed by it, too. Jill . . . Jill always groks-but if it hurts me, it hurts her still more. Dawn the same. Patty . . . well, Patty can always take my hurt away, but she does it by keeping it herself. All three of them are too easily hurt for me to risk sharing in full with them anything I can't grok and cherish before I share it." Mike looked very thoughtful. "Confession is needful. The Catholics know that, they have it-and they have a corps of strong men to take it. The Fosterites have group confession and pass it around among themselves and thin it out. I need to introduce confession into this church, as part of the early purging-oh, we have it now, but spontaneously, after the pilgrim no longer really needs it. We need strong men for that-'sin' is hardly ever concerned with a real wrongness but sin is what the sinner groks as sin-and when you grok it with him, it can be very disturbing. I know."

Mike went on earnestly, "Goodness is not enough, goodness is never enough. That was one of my first mistakes, because among Martians goodness and wisdom are the same thing, identical. But not with us. Take Jill. Her goodness was perfect when I met her. Nevertheless she was all mixed up inside-and I almost destroyed her, and myself too-for I was just as mixed up-before we got squared away. Her endless patience (not very common on this planet) was all that saved us . . . while I was learning to be a human and she was learning what I knew.

"But goodness alone is never enough. A hard, cold wisdom is required, too, for goodness to accomplish good. Goodness without wisdom invariably accomplishes evil." He smiled and his face lit up. "And that's why I need you, Father, as well as loving you. I need to make confession to you.,'

Jubal squirmed. "Oh, for Pete's sake, Mike, don't make a production out of it. Just tell me what's eating you. We'll find a way out."

"Yes, Father."

But Mike did not go on. Finally Jubal said, "Do you feel busted up by the destruction of your Temple? I wouldn't blame you. But you aren't broke, you can build again."

"Oh, no, that doesn't matter in the slightest!"

"Eh?"

"That temple was a diary with all its pages filled. Time for a new one, rather than write over and deface the filled pages. Fire can't destroy the experience in it . . . and strictly from a standpoint of publicity and practical church politics, being run Out of it in so spectacular a fashion will be helpful, in the long run. No, Jubal, the last couple of days have simply been an enjoyable break in a busy routine. No harm done." His expression changed. "Father ... lately I learned that I was a spy."

"What do you mean, son? Explain yourself."

"For the Old Ones. They sent me here to spy on our people."

Jubal thought about it. Finally he said, "Mike, I know that you are brilliant. You obviously possess powers that I don't have and that I have never seen before. But a man can be a genius and still fall ill with delusions."

"I know. Let me explain and you can decide whether or not I'm crazy. You know how the surveillance satellites used by the Security Forces operate."

"No."

"I don't mean the details that would interest Duke; I mean the general scheme. They orbit around the globe, picking up data and storing it. At a particular point, the Sky-Eye is keyed and it pours out in a spate all that it has seen. That is what was done with me. You know that we of the Nest use what is called telepathy."

"I've been forced to believe it."

"We do. By the way, this conversation is completely private-and besides that, no one of us would ever attempt to read you; I'm not sure we could. Even last night the link was through Dawn's mind, not yours."

"Well, that is some slight comfort."

"Uh, I want to get to that later. I am 'only an egg' in this art; the Old Ones are past masters. They stayed linked with me but left me on my own, ignored me-then they triggered me and all that I had seen and heard and done and felt and grokked poured out of me and became part of their permanent records. I don't mean that they wiped my mind

of my experiences; they simply played the tape, so to speak, made a copy. But the triggering I was aware of-and it was over before I could possibly do anything to stop it. Then they dropped me, cut off the linkage; I couldn't even protest."

"Well ... it seems to me that they used you pretty shabbily-"

"Not by their standards. Nor would I have objected-I would have been happy to volunteer-had I known about it before I left Mars. But they didn't want me to know; they wanted me to see and grok without interference."

"I was going to add," Jubal said, "that if you are free of this damnable invasion of your privacy now, then what harm has been done? It seems to me that you could have had a Martian at your elbow all these past two and a half years, with no harm other than attracting stares."

Mike looked very sober. "Jubal, listen to a story. Listen all the way through." Mike told him of the destruction of the missing Fifth Planet of Sol, whose ruins are the asteroids. "Well, Jubal?"

"It reminds me a little of the myths about the Flood."

"No, Jubal. The Flood you aren't sure about. Are you sure about the destruction of Pompeii and Herculaneum?"

"Oh, yes. Those are established historical facts."

"Jubal, the destruction of the Fifth Planet by the Old Ones is as historically certain as that eruption of Vesuvius-and it is recorded in much greater detail. No myth. Fact."

"Uh, stipulate it as such. Do I understand that you fear that the Old Ones of Mars will decide to give this planet the same treatment? Will you forgive me if I say that is a bit hard for me to swallow?"

"Why, Jubal, it wouldn't take the Old Ones to do it. It merely takes a certain fundamental knowledge of physics, how matter is put together- and the same sort of control that you have seen me use time and again. Simply necessary first to grok what you want to manipulate. I can do it unassisted, right now. Say a piece near the core of the planet about a hundred miles in diameter-much bigger than necessary but we want to make this fast and painless, if only to please Jill. Feel out its size and place, then grok carefully how it is put together-" His face lost all expression as he talked and his eyeballs started to turn up.

"Hey!" broke in Harshaw. "Cut it out! I don't know whether you can or you can't but I'm certain I don't want you to try!"

The face of the Man from Mars became normal. "Why, I would never do it. For me, it would be a wrongness-I am human."

"But not for them?"

"Oh, no. The Old Ones might grok it as beauty. I don't know. Oh, I have the discipline to do it . . . but not the volition. Jill could do it-that is, she could contemplate the exact method. But she could never will to do it; she is human too; this is her planet. The essence of the discipline is, first, self-awareness, and then, sell-control. By the time a human is physically able to destroy this planet by this method-instead of by clumsy things like cobalt bombs-it is not possible, I grok fully, for him to entertain such a volition. He would discorporate. And that would end any threat; our Old Ones don't hang around the way they do on Mars."

"Mmmm ... son, as long as we are checking you for bats in your belfry, clear up something else. You've always spoken of these 'Old Ones' as casually as I speak of the neighbor's dog-but I find ghosts hard to swallow. What does an 'Old One' look like?"

"Why, just like any other Martian ... except that there is more variety in the appearance of adult Martians than there is in us."

"Then how do you know it's not just an adult Martian? Doesn't he walk through walls, or some such?"

"Any Martian can do that. I did, just yesterday."

"Uh ... shimmers? Or anything?"

"No. You see, hear, feel them-everything. It's like an image in a stereo tank, only perfect and put right into your mind. But- Look, Jubal, the whole thing would be a silly question on Mars, but I realize it isn't, here. But if you had been present at the discorporation-death-of a friend, then you helped eat his body . . . and then you saw his ghost, talked with it, touched it, anything-would you then believe in ghosts?"

"Well, either ghosts, or I myself had slipped my leash."

"All right. Here it would be an hallucination . . if I grok correctly that we don't stay here when we discorporate. But in the case of Mars, there is either an entire planet with a very rich and complex civilization all run by mass hallucination-or the straightforward explanation is correct the one I was taught and the one all my experience led me to believe. Because on Mars the 'ghosts' are by far the most important and most powerful and much the most numerous part of the population. The ones still alive, the corporate ones, are the hewers of wood and drawers of water, servants to the Old Ones."

Jubal nodded. "Okay. I'll never boggle at slicing with Occam's razor. While it runs contrary to my own experience, my experience is limited to this planet-provincial. All right, son, you're scared that they might destroy us?"

Mike shook his head. "Not especially. I think-this is not a grokking but a mere guess-that they might do one of two things: either destroy us or attempt to conquer us culturally, make us over into their own image."

"But you're not fretted that they might blow us up? That's a pretty detached viewpoint, even for me."

"No. Oh, I think they might reach that decision. You see, by their standards, we are a diseased and crippled people-the things that we do to each other, the way we fail to understand each other, our almost complete failure to grok with one another, our wars and diseases and famines and cruelties-these will be complete idiocy to them. I know. So I think they may very probably decide on a mercy killing. But that's a guess, I'm not an Old One. But, Jubal, if they decide to do this, it will be-" Mike stopped and thought for quite a long time. "-an utter minimum of five hundred years, more likely five thousand, before anything would be done."

"That's a long time for a jury to be out."

"Jubal, the most different thing about the two races is that Martians never hurry-and humans always do. They would much rather think about it an extra century or half a dozen, just to be sure that they have grokked all the fullness."

"In that case, son, I suggest that you not worry about it. If, in another five hundred or a thousand years, the human race can't handle its neighbors, you and I can't help it. However, I suspect that they will be able to."

"So I grok, but not in fullness. But I said I wasn't worried about that. The other possibility troubled me more, that they might move in and try to make us over. Jubal, they can't do it. An attempt to make us behave like Martians would kill us just as certainly but much less painlessly. It would all be a great wrongness."

Jubal took time to answer. "But, son, isn't that exactly what you have been trying to do?"

Mike looked unhappy. "Yes and no. It was what I started out to do. It is not what I am trying to do now. Father, I know that you were disappointed in me when I started this."

"Your business, son."

"Yes. Self. I must grok and decide at each cusp myself alone. And so must you . . . and so must each self. Thou art God."

"I don't accept the nomination."

"You can't refuse it. Thou art God and I am God and all that groks is God, and I am all that I have ever been or seen or felt or experienced. I am all that I grok. Father, I saw the horrible shape this planet is in and I grokked, though not in fullness, that I could change it. What I had to teach couldn't be taught in schools or colleges; I was forced to smuggle it into town dressed up as a religion-which it is not-and con the marks into tasting it by appealing to their curiosity and their desire to be entertained. In part it worked exactly as I knew it would; the discipline and the knowledge was just as available to others as it was to me, who was raised in a Martian nest. Our brothers get along together-you've seen us, you've shared-live in peace and happiness with no bitterness, no jealousy.

"That last alone was a triumph that proved I was right. Male-femaleness is the greatest gift we have-romantic physical love may be unique to this planet. I don't know. If it is, the universe is a much poorer place than it could be . . . and I grok dimly that we-who-are-God will save this precious invention and spread it. The actual joining and blending of two physical bodies with simultaneous merging of souls in shared ecstasy of love, giving and receiving and delighting in each other-well, there's nothing on Mars to touch it, and it's the source, I grok in fullness, of all that makes this planet so rich and wonderful. And, Jubal, until a person, man or woman, has enjoyed this treasure bathed in the mutual bliss of having minds linked as closely as bodies, that person is still as virginal and alone as if he had never copulated. But I grok that you have; your very reluctance to risk a lesser thing proves it . . . and, anyhow, I know it directly. You grok. You always have. Without even needing the aid of the language of grokking. Dawn told us that you were as deep into her mind as you were into her body."

"Unh ... the lady exaggerates."

"It is impossible for Dawn to speak other than rightly about this. And-forgive me-we were there. In her mind but not in yours . . . and you were there with us, sharing."

Jubal refrained from saying that the only times he had ever felt even faintly that he could read minds was precisely in that situation . . . and then not thoughts, but emotions. He simply regretted without bitterness that he was not half a century younger-in which case he knew that Dawn would have had that "Miss" taken off the front of her name and he would have boldly risked another marriage, in spite of his scars. Also that he would not trade the preceding night for all the years that might be left to him. In essence, Mike was dead right. "Go on, sir."

"That's what it should be. But that's what I slowly grokked it rarely was. Instead it was indifference and acts mechanically performed and rape and seduction as a game no better than roulette but with poorer odds and prostitution and celibacy by choice and by no choice and fear and guilt and hatred and violence and children brought up to think that sex was 'bad' and 'shameful' and 'animal' and something to be hidden and always distrusted. This lovely perfect thing, male-femaleness, turned upside down and inside out and made horrible.

"And every one of those wrong things is a corollary of 'jealousy.' Jubal, I couldn't believe it. I still don't grok 'jealousy' in fullness, it seems an insanity to me, a terrible wrongness. When I first learned what this ecstasy was, my first thought was that I wanted to share it, share it at once with all my water brothers-directly with those female, indirectly by inviting more sharing with those male. The notion of trying to keep this neverfailing fountain to myself would have horrified me, had I thought of it. But I was incapable of thinking of it. And in perfect corollary I had not the slightest wish to attempt this miracle with anyone I did not already love and trust-Jubal, I am physically unable even to attempt love with a female who has not already shared water with me. And this same thing runs all through the Nest. Psychic impotence unless our spirits blend as our flesh blends."

Jubal had been listening and thinking mournfully that it was a fine system-for angels-when a sky car landed on the private landing flat diagonally in front of him. He turned his head to see and, as its skids touched, it disappeared, vanished.

"Trouble?" he said.

"No trouble," Mike denied. "It's just that they are beginning to suspect that we are here-that I am here, rather. They think the rest are dead. The Innermost Temple, I mean. The other circles aren't being bothered especially . . . and many of them have left town until it blows over." He grinned. "We could get a good price for these hotel rooms; the city is filling up 'way past capacity with Bishop Short's shock troops."

"Well? Isn't it about time to get the family elsewhere?"

"Jubal, don't worry about it. That car never had a chance to report, even by radio. I'm keeping a close watch. It's no trouble, now that Jill is over her misconceptions about 'wrongness' in discorporating persons who have wrongness in them. I used to have to go to all sorts of complicated expedients to protect us. But now Jill knows that I do it only as fullness is grokked." The Man from Mars grinned boyishly. "Last night she helped me with a hatchet job . . . nor was it the first time she has done so."

"What sort of a job?"

"Oh, just a follow-up on the jail break. Some few of those in jail or prison I couldn't release; they were vicious. So I got rid of them before I got rid of the bars and doors. But I have been slowly grokking this whole city for many months now . . . and quite a few of the worst were not in jail. Some of them were even in public office. I have been waiting, making a list, making sure of fullness in each case. So, now that we are leaving this city-they don't live here anymore. Missing. They needed to be discorporated and sent back to the foot of the line to try again. Incidentally, that was the grokking that changed Jill's attitude from squeamishness to hearty approval: when she finally grokked in fullness that it is utterly impossible to kill a man-that all we were doing was much like a referee removing a man from a game for 'unnecessary roughness.'"

"Aren't you afraid of playing God, lad?"

Mike grinned with unashamed cheerfulness. "I am God. Thou art God . . . and any jerk I remove is God, too. Jubal, it is said that God notes each sparrow that falls. And so He does. But the proper closest statement of it that can be made in English is that God cannot avoid noting the sparrow because the Sparrow is God. And when a cat stalks a sparrow both of them are God, carrying out God's thoughts."

Another sky car started to land and vanished just before touching; Jubal hardly thought it worth comment. "How many did you find worthy of being tossed out of the game last night?"

"Oh, quite a number. About a hundred and fifty. I guess-I didn't count. This is a large city, you know. But for a while it is going to be an unusually decent one. No cure, of course-there is no cure, short of acquiring a hard discipline." Mike looked unhappy. "And that is what I must ask you about, Father. I'm afraid I have misled the people who have followed me. All our brothers."

"How, Mike?"

"They're too optimistic. They have seen how well it has worked for us, they all know how happy they are, how strong and healthy and aware-how deeply they love each other. And now they think they grok that it is just a matter of time until the whole human race will reach the same beatitude. Oh, not tomorrow-some of them grok that two thousand years is but a moment for such an experiment. But eventually.

"And I thought so, too, at first. I led them to think so. But, Jubal, I had missed a key point: Humans are not Martians. I made this mistake again and again-corrected myself ... and still made it. What works perfectly for Martians does not necessarily work for humans. Oh, the conceptual logic which can be stated only in Martian does work for both races. The logic is invariant . . . but the data are different. So the results are different."

"I couldn't see why, if people were hungry, some of them didn't volunteer to be butchered so that the rest could eat . . . on Mars this is obvious-and an honor. I couldn't understand why babies were so prized. On Mars our two little girls in there would simply be dumped outdoors, to live or to die-and on Mars nine out of ten nymphs die their first season. My logic was right but I had misread the data: here babies do not compete but adults do; on Mars adults don't compete at all, they've been weeded out as babies. But one way or another, competing and weeding has to take place . . . or a race goes down hill.

"But whether or not I was wrong in trying to take the competition out at both ends, I have lately begun to grok that the human race won't let me, no matter what."

Duke stuck his head into the room. "Mike? Have you been watching outside? There is quite a crowd gathering around the hotel."

"I know," agreed Mike. "Tell the others that waiting has not filled." He went on to Jubal, "'Thou art God.' It's not a message of cheer and hope, Jubal. It's a defiance-and an unafraid unabashed assumption of personal responsibility." He looked sad. "But I rarely put it over. A very few, so far just these few here with us today, our brothers, understood me and accepted the bitter half along with the sweet, stood up and drank it- grokked it. The others, the hundreds and thousands of others, either insisted on treating it as a prize without a contest-a 'conversion' . . . or ignored it entirely. No matter what I said they insisted on thinking of God as something outside themselves. Something that yearns to take every indolent moron to His breast and comfort him. The notion that the effort has to

be their own . . . and that all the trouble they are in is of their own doing . . . is one that they can't or won't entertain."

The Man from Mars shook his head. "And my failures are so much more numerous than my successes that I am beginning to wonder if full grokking will show that I am on the wrong track entirely-that this race must be split up, hating each other, fighting each other, constantly unhappy and at war even with their own individual selves . . . simply to have that weeding Out that every race must have. Tell me, Father? You must tell me."

"Mike, what in hell ever led you to believe that I was infallible?"

"Perhaps you are not. But every time I have needed to know something, you have always been able to tell me-and fullness always showed that you spoke rightly."

"Damn it, I refuse this apotheosis! But I do see one thing, son. You are the one who has urged everyone else never to be in a hurry-'waiting will fill,' you say."

"That is right."

"And now you are violating your own prime rule. You have waited only a little while-a very short while by Martian standards, I take it-and already you want to throw in the towel. You've proved that your system can work for a small group-and I'm glad to confirm it; I've never seen such happy, healthy, cheerful people. That ought to be enough to suit you for the short time you've put in. Come back when you have a thousand times this number, all working and happy and unjealous, and we'll talk it over again. Fair enough?"

"You speak rightly, Father."

"But I ain't through. You've been fretting that maybe the fact that you failed to hook more than ninety-nine out of a hundred was because the race couldn't get along without its present evils, had to have them for weeding out. But damn it, lad, you've been doing the weeding out-or rather, the failures have been doing it to themselves by not listening to you. Had you planned to eliminate money and property?"

"Oh, no! Inside the Nest we don't need it, but-"

"Nor does any family that's working well. Yours is just bigger. But outside you need it in dealing with other people. Sam tells me that our brothers, instead of getting unworldly, are slicker with money than ever. Is that right?"

"Oh, yes. Making money is a simple trick, once you grok."

"You've just added a new beatitude: 'Blessed is the rich in spirit, for he shall make dough.' How do our people stack up in other fields? Better or worse than average?"

"Oh, better, of course-if it's anything worth grokking at all. You see, Jubal, it's not a faith; the discipline is simply a method of efficient functioning at any activity you try."

"That's your whole answer, son. If what you say is true-and I'm not judging; I'm asking, you're answering-then that's all the competition you need . . . and a fairly one-sided race, too. If one tenth of one percent of the population is capable of getting the news, then all you have to do is show them-and in a matter of some generations all the stupid ones will die out and those with your discipline will inherit the Earth. Whenever that is-a thousand years from now, or ten thousand-will be plenty soon enough to worry about whether some new hurdle is necessary to make them jump higher. But don't go getting faint-hearted because only a handful have turned into angels overnight. Personally, I never expected any of them to manage it. I simply thought you were making a damn fool of yourself by pretending to be a preacher."

Mike sighed and smiled. "I was beginning to be afraid I was-worrying that I had let my brothers down."

"I still wish you had called it 'Cosmic Halitosis' or some such. But the name doesn't matter. If you've got the truth, you can demonstrate it. Show people. Talking about it doesn't prove it."

The Man from Mars stood up. "You've got me all squared away, Father. I'm ready now. I grok the fullness." He looked toward the doorway. "Yes, Patty. I heard you. The waiting is ended."

"Yes, Michael."

XXXVII

JUBAL AND THE MAN FROM MARS strolled slowly into the living room with the big stereo tank. Apparently the entire Nest was gathered, watching it. It showed a dense and turbulent crowd, somewhat restrained by policemen. Mike glanced at it and looked serenely happy. "They come. Now is the fullness." The sense of ecstatic expectancy Jubal had felt growing ever since his arrival swelled greatly, but no one moved.

"It's a mighty big tip, sweetheart," Jill agreed.

"And ready to turn," added Patty.

"I'd better dress for it," Mike commented. "Have I got any clothes around this dump? Patty?"

"Right away, Michael."

Jubal said, "Son, that mob looks pretty ugly to me. Are you sure this is any time to tackle them?"

"Oh, sure," said Mike. "They've come to see me ... so now I go down to meet them." He paused while some clothing got out of the way of his face; he was being dressed at break-neck speed with the unnecessary help of several women-unnecessary as each garment seemed to know where to go and how to drape itself. "This job has its obligations as well as its privileges-the star has to show up for the show . . * grok me? The marks expect it."

Duke said, "Mike knows what he's doing, Boss."

"Well ... I don't trust mobs."

"That crowd is mostly curiosity seekers, they always are. Oh, there are some Fosterites and some others with grudges-but Mike can handle any crowd. You'll see. Right, Mike?"

"Keerect, Cannibal. Pull in a tip, then give 'em a show. Where's my hat? Can't walk in the noonday sun without a hat." An expensive Panama with a sporty colored band glided out and settled itself on his head; he cocked it jauntily. "There! Do I look all right?" He was dressed in his usual outer-services mufti, a smartly tailored, sharply creased, white business suit, shoes to match, snowy shirt, and luxurious dazzling scarf.

Ben said, "All you lack is a brief case."

"You grok I need one? Patty, do we have one?"

Jill stepped up to him. "Ben was kidding, dear. You look just perfect." She straightened his tie and kissed him-and Jubal felt kissed. "Go talk to them."

"Yup. Time to turn the tip. Anne? Duke?"

"Ready, Mike." Anne was wearing her floor-length Fair Witness, cloak, wrapping her in dignity; Duke was just the opposite, being sloppily dressed, with a lighted cigarette dangling from his face, an old hat on the back of his head with a card marked "PRESS" stuck in its band, and himself hung about with cameras and kit.

They headed for the door to the foyer common to the four penthouse suites. Only Jubal followed; all the others, thirty and more, stayed around the stereo tank. Mike paused at the door. There was a hall table there, with a pitcher of water and glasses, a dish of fruit and a fruit knife. "Better not come any farther," he advised Jubal, "or Patty would have to escort you back through her pets."

Mike poured himself a glass of water, drank part of it. "Preaching is thirsty work." He handed the glass to Anne. then took the fruit knife and sliced off a chunk of apple.

It seemed to Jubal that Mike sliced off one of his fingers . . . but his attention was distracted as Duke passed the glass to him. Mike's hand was not bleeding and Jubal had grown somewhat accustomed to legerdemain. He accepted the glass and took a sip, finding that his own throat was very dry.

Mike gripped his arm and smiled. "Quit fretting. This will take only a few minutes. See you later, Father." They went out through the guardian cobras and the door closed. Jubal went back to the room where the others were, still carrying the glass. Someone took it from him; he did not notice, as he was watching images in the big tank.

The mob seemed denser, surging about and held back by police armed only with night sticks. There were a few shouts but mostly just the unlocalized muttering of crowd.

Someone said, "Where are they now, Patty?"

"They've just dropped down the tube. Michael is a little ahead, Duke stopped to catch Anne. They're entering the lobby. Michael has been spotted, pictures are being taken."

The scene in the tank resolved into enormous head and shoulders of a brightly cheerful newscaster: "This is NWNW New World Networks' mobile newshound on the spot while it's hot-your newscaster, Happy Holliday. We have just learned that the fake messiah, sometimes known as the Man from Mars, has crawled out of his hide-out in a hotel room here in beautiful St. Petersburg, the City that Has Everything to Make You Sing. Apparently Smith is about to surrender to the authorities. He crushed out of jail just yesterday, using high explosives smuggled in to him by his fanatic followers. But the tight cordon placed around this city seems to have been too much for hint We don't know yet-I repeat, we don't know yet-so stay with the chap who covers the map-and now a word from your local sponsor who has given you this keyhole peep at the latest leap-"

"Thank you, Happy Holliday and all you good people watching via NWNW! What Price Paradise? Amazingly Low! Come out and see for yourself at Elysian Fields, just opened as homesites for a restricted clientele. Land reclaimed from the warm waters of the glorious gulf and every lot guaranteed to be at least eighteen inches above mean high water and only a small down payment on a Happy-oh, oh, later, friends-phone Gulf nine-two eight two eight!"

"And thank you, Jick Morris and the developers of Elysian Fields! I think we've got something, folks! Yes, sir, I think we do-"

("They're coming out the front entrance," Patty said quietly. "The crowd hasn't spotted Michael yet.")

"Maybe not yet ... but soon. You are now looking at the main entrance of the magnificent Sans Souci Hotel, Gem of the Gulf, whose management is in no way responsible for this hunted fugitive and who have cooperated with the authorities throughout according to a statement just issued by Chief of Police Davis. And while we're waiting to see what will happen, a few high lights in the strange career of this half-human monster raised on Mars-"

The live scene was replaced by quick cuts of stock shots: The Envoy blasting off years earlier, the Champion floating upwards silently and effortlessly under Lyle Drive, Martians on Mars, the triumphant return of the Champion, a quick of the first faked interview with the "Man from Mars"-"What do you think of the girls here on Earth?" "Gee!"-a quicker shot of the conference in the Executive Palace and the muchpublicized awarding of a doctorate in philosophy, all with rapid-fire commentary.

"See anything, Patty?"

"Michael is at the top of the steps, the crowd is at least a hundred yards away, being kept off the hotel grounds. Duke has grabbed some pix and Mike is waiting to let him change lenses. No hurry."

Happy Holliday Went on, as the tank shifted to the crowd, semi-close and panning: "You understand, friends, that this wonderful community is in a unique condition today. Something strange has been going on and these people are in no mood to trifle. Their laws have been flouted, their security forces treated with contempt, they are angry, righteously so. The fanatic followers of this alleged antichrist have stopped at nothing to create turmoil in a futile effort to let their leader escape the closing net of justice. Anything can happen-anything!"

The announcer's voice climbed: "Yes, he's coming out now-he's walking toward the people!" The scene cut to reverse; Mike was walking directly toward another camera. Anne and Duke were behind him and dropping farther behind. "This is it! This is it! This is the blow-off'."

Mike continued to walk unhurriedly toward the crowd until he loomed up in the stereo tank in life size, as if he were in the room with his water brothers. He stopped on the grass verge in front of the hotel, a few feet from the crowd. "You called me?"

He was answered with a growl.

The sky held scattered clouds; at that instant the sun caine out from behind one and a shaft of golden light hit him.

His clothes vanished. He stood before them, a golden youth, clothed only in his own beauty-beauty that made Jubal's heart ache, thinking that Michelangelo in his ancient years would have climbed down from his high scaffolding to record it for generations unborn. Mike said gently, "Look at me. I am a son of man."

The scene cut for a ten-second plug, a line of can-can dancers singing:

"Come on, ladies, do your duds!

In the smoothest, yummiest suds!

Lover Soap is kind to hands-

But be sure you save the bands!"

The tank filled completely with foamy suds amid girlish laughter and the scene cut back to the newscast: "God damn you!" A half brick caught Mike in the ribs. He

turned his face slightly toward his assailant. "But you yourself are God. You can damn only yourself . . . and you can never escape yourself."

"Blasphemer!" A rock caught him just over his left eye and blood welled forth.

Mike said calmly, "In fighting me, you fight yourself... for Thou art God and I am God . . . and all that groks is God-there is no other."

More rocks hit him, from various directions; he began to bleed in several places. "Hear the Truth. You need not hate, you need not fight, you need not fear. I offer you the water of life-" Suddenly his hand held a tumbler of water, sparkling in the sunlight. "-and you may share it whenever you so will . . . and walk in peace and love and happiness together."

A rock caught the glass and shattered it. Another struck him in the mouth.

Through bruised and bleeding lips he smiled at them, looking straight into the camera with an expression of yearning tenderness on his face. Some trick of sunlight and stereo formed a golden halo back of his head. "Oh my brothers, I love you so! Drink deep. Share and grow closer without end. Thou art God."

Jubal whispered it back to him. The scene made a five-second cut:

"Cahuenga Cave! The night club with real Los Angeles smog, imported fresh every day. Six exotic dancers."

"Lynch him! Give the bastard a nigger necktie!" A heavy-gauge shotgun blasted at close range and Mike's right arm was struck off at the elbow and fell. It floated gently down, then came to rest on the cool grasses, its hand curved open in invitation.

"Give him the other barrel, Shortie-and aim closer!" The crowd laughed and applauded. A brick smashed Mike's nose and more rocks gave him a crown of blood.

"The Truth is simple but the Way of Man is hard. First you must learn to control yourself. The rest follows. Blessed is he who knows himself and commands himself, for the world is his and love and happiness and peace walk with him wherever he goes." Another shotgun blast was followed by two more shots. One shot, a forty-five slug, hit Mike over the heart, shattering the sixth rib near the sternum and making a large wound; the buckshot and the other slug sheered through his left tibia five inches below the patella and left the fibula sticking out at an angle, broken and white against the yellow and red of the wound.

Mike staggered slightly and laughed, went on talking, his words clear and unhurried. "Thou art God. Know that and the Way is opened."

"God damn it-let's stop this taking the Name of the Lord in vain!"- "Come on, men! Let's finish him!" The mob surged forward, led by one bold with a club; they were on him with rocks and fists, and then with feet as he went down. He went on talking while they kicked his ribs in and smashed his golden body, broke his bones and tore an ear loose. At last someone called out, "Back away a little so we can get the gasoline on him!"

The mob opened up a little at that waning and the camera zoomed to pick up his face and shoulders. The Man from Mars smiled at his brothers, said once more, softly and clearly, "I love you." An incautious grasshopper came whirring to a landing on the grass a few inches from his face; Mike turned his head, looked at it as it stared back at him. "Thou art God," he said happily and discorporated.

XXXVIII

FLAME AND BILLOWING SMOKE came up and filled the tank. "Golly!" Patty said reverently. "That's the best blow-off ever used."

"Yes," agreed Becky judicially, "the Professor himself never dreamed up a better one."

Van Tromp said very quietly, apparently to himself: "In style. Smart and with style-the lad finished in style."

Jubal looked around at his brothers. Was he the only one who felt anything? Jill and Dawn were seated each with an arm around the other- but they did that whenever they were together; neither one seemed disturbed. Even Dorcas was dry-eyed and calm.

The inferno in the tank cut to smiling Happy Holiday who said, "And now, folks, a few moments for our friends at Elysian Fields who so graciously gave up their-" Patty cut him off.

"Anne and Duke are on their way back up," she said. "I'll let them through the foyer and then we'll have lunch." She started to leave.

Jubal stopped her. "Patty? Did you know what Mike was going to do?"

She seemed puzzled. "Huh? Why, of course not, Jubal. It was necessary to wait for fullness. None of us knew." She turned and left.

"Jubal-" Jill was looking at hint. "Jubal our beloved father please stop and grok the fullness. Mike is not dead. How can he be dead when no one can be killed? Nor can he ever be away from us who have already grokked him. Thou art God."

"'Thou art God,'" he repeated dully.

"That's better. Come sit with Dawn and me-in the middle."

"No. No, just let me be." He went blindly to his own room, let himself in and bolted the door after him, leaned heavily with both hands gripping the foot of the bed. My son, oh my son! Would that I had died for thee! He had had so much to live for . . . and an old fool that he respected too much had to shoot off his yap and goad him into a needless, useless martyrdom. If Mike had given them something big-like stereo, or bingo-but he gave them the Truth. Or a piece of the Truth. And who is interested in Truth? He laughed through his sobs.

After a while he shut them off, both heart-broken sobs and bitter laugh, and pawed through his traveling bag. He had what he wanted with him; he had kept a supply in his toilet kit ever since Joe Douglas's stroke had reminded him that all flesh is grass.

Well, now his own stroke had come and he couldn't take it. He prescribed three tablets for himself to make it fast and certain, washed them down with water, and lay quickly on the bed. Shortly the pain went away.

From a great distance the voice reached him. "Jubal-"

"'M resting, Don' bother me."

"Jubal! Please, Father!"

"Uh ... yes, Mike? What is it?"

"Wake up! Fullness is not yet. Here, let me help you."

Jubal sighed. "Okay, Mike" He let himself be helped and led into the bath, let his head be held while he threw up, accepted a glass of water and rinsed out his mouth.

"Okay now?"

"Okay, son. Thanks."

"Then I've got some things to attend to. I love you, Father. Thou art God."

"I love you, Mike. Thou art God." Jubal puttered around for a while longer, making himself presentable, changing his clothes, taking one short brandy to kill the slightly bitter taste still in his stomach, then went out to join the others.

Patty was alone in the room with the babble tank and it was switched off. She looked up. "Some lunch now, Jubal?"

"Yes, thanks."

She came up to him. "That's good. I'm afraid most of them simply ate and scooted. But each of them left a kiss for you. And here it is, all in one package." She managed to deliver in full all the love placed in her proxy cemented together with her own; Jubal found that it left him feeling strong, with her own serene acceptance shared, no bitterness left.

"Come out into the kitchen," she said. "Tony's gone so most of the rest are there-not that his growls ever really chased anybody out anyhow." She stopped and tried to stare down the back of her neck. "Isn't that final scene changing a little? Sort of smoky, maybe?"

Jubal solemnly agreed that he thought it was. He couldn't see any change himself . . . but he was not going to argue with Patty's idiosyncrasy. She nodded. "I expected it. I can see around me all right-except myself. I still need a double mirror to see my back clearly. Mike says my Sight will include that presently. No matter."

In the kitchen perhaps a dozen were lounging at a table and elsewhere; Duke was standing at the range, stirring a small sauce pan. "Hi, Boss. I ordered a twenty-place bus. That's the biggest that can land on our little landing flat . . . and we'll need one almost that big, what with the diaper set and Patty's pets. Okay?"

"Certainly. Are they all coming home now?" If they ran out of bedrooms, the girls could make up dosses that would do in the living room and here and there-and this crowd would probably double up mostly anyhow. Come to think of it, he might not be allowed to sleep solo himself and he made up his mind not to fight it. It was friendly to have a warm body on the other side of the bed, even if your intentions weren't active. By God, he had forgotten how friendly it was! Growing closer- "Not everybody. Tim will pilot us, then turn in the bus and go to Texas for a while. The Skipper and Beatrix and Sven we're simply going to drop off in New Jersey."

Sam looked up from the table. "Ruth and I have got to get back to our kids. And Saul is coming with us."

"Can't you stop by home for a day or two first?"

"Well, maybe. I'll talk it over with Ruth."

"Boss," put in Duke, "how soon can we fill the swimming pool?"

"Well, we never filled it earlier than the first of April before-but with the new heaters I suppose we could fill it anytime." Jubal added, "But we'll still have some nasty weather-snow still on the ground yesterday."

"Boss, lemme clue you. This gang can walk through snow hip deep on a tall giraffe and not notice it-and will, to swim. Besides that, there are cheaper ways of keeping that water from freezing than with those big oil heaters."

"Jubal!"

"Yes, Ruth?"

"We'll stop for a day or maybe more. The kids don't miss me-and I'm not aching to take over being motherly without Patty to discipline them anyhow. Jubal, you've never really seen me until you've seen me with my hair floating around me in the water-looking like Mrs. DoAsYouWouldBeDoneBy."

"It's a date. Say, where is the Squarehead and the Dutchman? Beatrix has never been home-they can't be in such a hurry."

"I'll tell 'em, Boss."

"Patty, can your snakes stand a clean, warm basement for a while? Until we can do better? I don't mean Honey Bun, of course; she's people. But I don't think the cobras should have the run of the house."

"Of course, Jubal."

"Mmm-" Jubal looked around. "Dawn, can you take shorthand?"

"She doesn't need it," put in Anne, "anymore thab I do."

"I see. I should have known. Use a typewriter?"

"I will learn, if you wish it," Dawn answered.

"Consider yourself hired-until there's a vacancy for a high priestess somewhere. Jill, have we forgotten anybody?"

"No, Boss. Except that all those who have left feel free to camp on you anytime, too. And they will."

"I assumed that. Nest number two, when and as needed." He went over to the range and joined Duke, glanced into the pan he was stirring. It held a small amount of broth. "Hmm ... Mike?"

"Yup." Duke dipped out a little in the spoon, tasted it. "Needs a little salt."

"Yes, Mike always did need a little seasoning." Jubal took the spoon and tasted the broth. Duke was correct; the flavor was sweet and could have used salt. "But let's grok him as he is, Who's left to share?"

"Just you. Tony left me here with strict instructions to stir by hand, add water as needed, and wait for you. Not to let it scorch."

"Then grab a couple of cups. We'll share it and grok together."

"Right, Boss." Two cups came sailing down and rested by the sauce pan. "This is a joke on Mike-he always swore that he would outlive me and serve me up for Thanksgiving. Or maybe the joke's on me-because we had a bet on it and now I can't collect."

"You won only by default. Split it evenly."

Duke did so. Jubal raised his cup. "Share!"

"Grow ever closer."

Slowly they drank the broth, stretching it out, savoring it, praising and cherishing and grokking their donor. Jubal found, to his surpriser that although he was overflowing with emotion, it was a calm happiness that did not bring tears. What a quaint and gawky puppy his son had been when first he saw him . . . so eager to please, so naive in his little mistakes-and what a proud power he had become without ever losing his angelic innocence. I grok you at last, son-and would not change a line!

Patty had his lunch waiting for him; he sat down and dug in, hungry and feeling that it bad been days since breakfast. Sam was saying, "I was telling Saul that I grok no need to make any change in plans. We go on as before. If you've got the right merchandise, the business grows, even though the founder has passed on."

"I wasn't disagreeing," Saul objected. "You and Ruth will found another temple-and we'll found others. But we'll have to take time now to accumulate capital. This isn't a street corner revival, nor yet something to set up in a vacant shop; it requires staging and equipment. That means money-not to mention such things as paying for a year or two on Mars for Stinky and Maryam . . . and that's just as essential."

"All right already! Who's arguing? We wait for fullness ... and go ahead."

Jubal said suddenly, "Money's no problem."

"How's that, Jubal?"

"As a lawyer I shouldn't tell this ... but as a water brother I do what I grok. Just a moment-Anne."

"Yes, Boss."

"Buy that spot. The one where they stoned Mike. Better get about a hundred-foot radius around it."

"Boss, the spot itself is public parkway. A hundred-foot radius will cut off some public road and a piece of the hotel grounds."

"Don't argue."

"I wasn't arguing, I was giving you facts."

"Sorry. They'll sell. They'll reroute that road. Hell, if their arms are twisted properly, they'll donate the ~~nd-twisting done through Joe Douglas, I think. And have Joe Douglas claim from the morgue whatever was left when those ghouls got through with him and we'll bury him right on that spot-say a year from now . . . with the whole city mourning and the cops that didn't protect him today standing at attention." What to put over him? The Fallen Caryatid? No, Mike had been strong enough for his stone. The Little Mermaid would be better-but it wouldn't be understood. Maybe one of Mike himself, just as he was when he had said, "Look at me. I am a Son of Man." If Duke didn't catch a shot of it, New World did-and maybe there was a brother, or would be a brother, with the spark of Rodin in him to do it right and not fancy it up.

"We'll bury him there," Jubal went on, "unprotectS~ and let the worms and the gentle rain grok him. I grok Mike will like that. Anne, I want to talk to Joe Douglas as soon as we get home."

"Yes, Boss. We grok with you."

"Now about that other." He told them about Mike's will. "So you see, each one of you is at least a millionaire-Just how much more than that I haven't estimated lately . . . but much more, even after taxes. No strings on it at all . . . but I grok that you will spend as needed for temples and similar stuff. But there's nothing to stop you from buying yachts if you wish. Oh, yes! Joe Douglas stays on as manager for any who care to let the capital ride, same pay as before . . . but I grok Joe won't last long, whereupon management devolves on Ben Caxton. Ben?"

Caxton shrugged. "It can be in my name. I grok I'll hire me a real business man, name of Saul."

"That wraps it then. Some waiting time but nobody will dare really fight this will; Mike rigged it. You'll see. How soon can we get out of here? Is the tab settled'?"

"Jubal," Ben said gently, "we own this hotel."

Not long thereafter they were in the air, with no trouble from police-the town had quieted down as fast as it had flared up. Jubal sat forward with Stinky Mabmoud and relaxed-discovered that he was not tired, not unhappy, not even fretting to get back to his

sanctuary. He discussed with Mahinoud his plans to go to Mars to learn the language more deeply after, Jubal was pleased to learn, completing the work on the dictionary, which Mahinoud estimated at about a year more for his own part in checking the phonetic spellings.

Jubal said grumpily, "I suppose I shall be forced to learn the pesky stuff myself, just to understand the chatter going on around me."

"As you grok, brother."

"Well, damn it, I won't put up with assigned lessons and regular school hours! I'll work as suits me, just as I always have."

Mabmoud was silent a few moments. "Jubal, we used classes and schedules at the Temple because we were handling groups. But some got special attention."

"That's what I'm going to need."

"Anne, for example, is much, much farther along than she ever let you know. With her totahrecall memory, she learned Martian in nothing flat, hooked in rapport with Mike."

"Well, I don't have that sort of memory-and Mike's not available."

"No, but Anne is. And, stubborn as you are, nevertheless Dawn can place you in rapport with Aiine-if you'll let her. And you won't need Dawn for the second lesson; Anne will then be able to handle it all. You'll be thinking in Martian inside of days, by the calendar-much longer by subjective time, but who cares?" Mahmoud leered at him. "You'll enjoy the warming-up exercises."

Jubal bristled. "You're a low, evil, lecherous Arab-and besides that you stole one of my best secretaries."

"For which I am forever in your debt. But you haven't lost her entirely; she'll give you lessons, too. She'll insist on it."

"Now go 'way and find another seat. I want to think."

Somewhat later be shouted, "Front!"

Dorcas came forward and sat down beside bini, steno gear ready.

He glanced at her before he started to work. "Child, you look even happier than usual. Glowing."

Dorcas said dreamily, "I've decided to name him 'Dennis.'" Jubal nodded. "Appropriate. Very appropriate." Appropriate meaning even if' she were mixed up about the paternity, he thought to himself. "Do you feel like working?"

"Oh, yes! I feel grand."

"Begin. Stereoplay. Rough draft. Working title: 'A Martian Named Smith.' Opener: zoom in on Mars, using stock or bonestelled shots, unbroken sequence, then dissolving to miniature matched set of actual landing place of Envoy. Space ship in middle distance. Animated Martians, typical, with stock as available or rephotographed. Cut to close: Interior space ship. Female patient stretched on-"

XXIX

THE VERDICT TO BE PASSED on the third planet around Sol was never in doubt. The Old Ones of the fourth planet were not omniscient and in their way were as

provincial as humans. Grokking by their own local values, even with the aid of vastly superior logic, they were certain in time to perceive an incurable "wrongness" in the busy, restless, quarrelsome beings of the third planet, a wrongness which would require weeding, once it had been grokked and cherished and hated.

But, by the time that they would slowly get around to it, it would be highly improbable approaching impossible that the Old Ones would be able to destroy this weirdly complex race. The hazard was slight that those concerned with the third planet did not waste a split eon on it.

Certainly Foster did not. "Digby!"

His assistant looked up. "Yes, Foster?"

"I'll be gone a few eons on a special assignment. Want you to meet your new supervisor." Foster turned and said, "Mike, this is Archangel Digby, your assistant. He knows where everything is around the studio and you'll find him a very steady straw boss for anything you conceive."

"Oh, we'll get along," Archangel Michael assured him, and said to Digby, "Haven't we met before?"

Digby answered, "Not that I remember. Of course, out of so many when-wheres" He shrugged.

"No matter. Thou art God."

"Thou art God," Digby responded.

Foster said, "Skip the formalities, please. I've left you a load of work and you don't have all eternity to fiddle with it. Certainly 'Thou art God' -but who isn't?"

He left, and Mike pushed back his halo and got to work. He could see a lot of changes he wanted to make-

The End

This I Believe by Robert A. Heinlein

"I am not going to talk about religious beliefs but about matters so obvious that it has gone out of style to mention them. I believe in my neighbors. I know their faults, and I know that their virtues far outweigh their faults. "Take Father Michael down our road a piece. I'm not of his creed, but I know that goodness and charity and lovingkindness shine in his daily actions. I believe in Father Mike. If I'm in trouble, I'll go to him."

"My next-door neighbor is a veterinary doctor. Doc will get out of bed after a hard day to help a stray cat. No fee--no prospect of a fee--I believe in Doc.

"I believe in my townspeople. You can know on any door in our town saying, 'I'm hungry,' and you will be fed. Our town is no exception. I've found the same ready charity everywhere. But for the one who says, 'To heck with you - I got mine,' there are a hundred, a thousand who will say, "Sure, pal, sit down."

"I know that despite all warnings against hitchhikers I can step up to the highway, thumb for a ride and in a few minutes a car or a truck will stop and someone will say, 'Climb in Mac - how far you going?'

"I believe in my fellow citizens. Our headlines are splashed with crime yet for every criminal there are 10,000 honest, decent, kindly men. If it were not so, no child would live to grow up. Business could not go on from day to day. Decency is not news. It is buried in the obituaries, but is a force stronger than crime. I believe in the patient gallentry of nurses and the tedious sacrifices of teachers. I believe in the unseen and unending fight against desperate odds that goes on quietly in almost every home in the land.

"I believe in the honest craft of workmen. Take a look around you. There never were enough bosses to check up on all that work. From Independence Hall to the Grand Coulee Dam, these things were built level and square by craftsmen who were honest in their bones.

"I believe that almost all politicians are honest. . .there are hundreds of politicians, low paid or not paid at all, doing their level best without thanks or glory to make our system work. If this were not true we would never have gotten past the 13

colonies.

"I believe in Rodger Young. You and I are free today because of endless unnamed heroes from Valley Forge to the Yalu River. I believe in -- I am proud to belong to -- the United States. Despite shortcomings from lynchings to bad faith in high places, our nation has had the most decent and kindly internal practices and foreign policies to be found anywhere in history.

"And finally, I believe in my whole race. Yellow, white, black, red, brown. In the honesty, courage, intelligence, durability, and goodness of the overwhelming majority of my brothers and sisters everywhere on this planet. I am proud to be a human being. I believe that we have come this far by the skin of our teeth. That we always make it just by the skin of our teeth, but that we will always make it. Survive. Endure. I believe that this hairless embryo with the aching, oversize brain case and the opposable thumb, this animal barely up from the apes will endure. Will endure longer than his home planet -- will spread out to the stars and beyond, carrying with him his honesty and his insatiable curiosity, his unlimited courage and his noble essential decency.

"This I believe with all my heart."

Robert A. Heinlein wrote this item in 1952. His wife, Virginia Heinlein, chose to read it when she accepted NASA's Distinguished Public Service Medal on October 6, 1988, on the Grand Master's behalf (it was a posthumous award).

Mrs. Heinlein received a standing ovation.

Time For The Stars

Robert A. Heinlein

1956

I THE LONG RANGE FOUNDATION

According to their biographies, Destiny's favored children usually had their lives planned out from scratch. Napoleon was figuring on how to rule France when he was a barefoot boy in Corsica, Alexander the Great much the same, and Einstein was muttering equations in his cradle.

Maybe so. Me, I just muddled along.

In an old book that belonged to my great grandfather Lucas I once saw a cartoon of a man in evening clothes, going over a ski jump. With an expression of shocked unbelief he is saying: "How did I get up here?"

I know how he felt. How did I get way up here?

I was not even planned on. The untaxed quota for our family was three children, then my brother Pat and I came along in one giant economy package. We were a surprise to everyone, especially to my parents, my three sisters, and the tax adjusters. I don't recall being surprised myself but my earliest recollection is a vague feeling of not being quite welcome, even though Dad and Mum, and Faith, Hope, and Charity treated us okay.

Maybe Dad did not handle the emergency right. Many families get an extra child quota on an exchange basis with another family, or something, especially when the tax-free limit has already been filled with all boys or all girls. But Dad was stubborn, maintaining that the law was unconstitutional, unjust, discriminatory, against public morals, and contrary to the will of God. He could reel off a list of important people who were youngest children of large families, from Benjamin Franklin to the first governor Of Pluto, then he would demand to know where the human race would have been without them?-after which Mother would speak soothingly.

Dad was probably accurate as he was a student of almost everything, even his trade, which was micromechanics-but especially of history. He wanted to name us for his two heroes in American history, whereas Mother wanted to name us for her favorite artists: This is how I ended up as Thomas Paine Leonardo da Vinci Bartlett and my twin became Patrick Henry Michelangelo Bartlett. Dad called us Tom and Pat and Mother called us Leo and Michel and our sisters called us Useless and Double-Useless. Dad won by being stubborn.

Dad was stubborn. He could have paid the annual head tax on us supernumeraries, applied for a seven-person flat, and relaxed to the inevitable. Then he could have asked for reclassification. Instead be claimed exemption for us twins each year, always ended by paying our head tax with his check stamped "Paid under Protest!" and we seven lived in a five-person flat. When Pat and I were little we slept in homemade cribs in the bathroom which could not have been convenient for anybody, then when we were bigger

we slept on the living-room couch, which was inconvenient for everybody, especially our sisters, who found it cramping to their social life.

Dad could have solved all this by putting in for family emigration to Mars or Venus, or the Jovian moons, and he used to bring up the subject. But this was the one thing that would make Mum more stubborn than he was. I don't know which part of making the High Jump scared her, because she would just settle her mouth and not answer. Dad would point out that big families got preferred treatment for emigration and that the head tax was earmarked to subsidize colonies off Earth and why shouldn't we benefit by the money we were being robbed of? To say nothing of letting our children grow up with freedom and elbow room, out where there wasn't a bureaucrat standing behind every productive worker dreaming up more rules and restrictions? Answer me that?

Mother never answered and we never emigrated,

We were always short of money. Two extra mouths, extra taxes, and no family assistance for the two extras make the stabilized family income law as poor a fit as the clothes Mum cut down for us from Dad's old ones. It was darn' seldom that we could afford to dial for dinner like other people and Dad even used to bring home any of his lunch that he didn't eat. Mum went back to work as soon as we twins were in kindergarten, but the only household robot we had was an obsolete model "Morris Garage" Mother's Helper which was always burning out valves and took almost as long to program as the job would have taken. Pat and I got acquainted with dish water and detergents-at least I did; Pat usually insisted on doing the sterilizing or had a sore thumb or something.

Dad used to talk about the intangible benefits of being poor-learning to stand on your own feet, building character, and all that. By the time I was old enough to understand I was old enough to wish they weren't so intangible, but, thinking back, maybe he had a point. We did have fun. Pat and I raised hamsters in the service unit and Mum never objected. When we turned the bath into a chem lab the girls did make unfriendly comments but when Dad put his foot down, they sweet-talked him into picking it up again and after that they hung their laundry somewhere else, and later Mum stood between us and the house manager when we poured acid down the drain and did the plumbing no good.

The only time I can remember when Mum put her foot down was when her brother, Uncle Steve, came back from Mars and gave us some canal worms which we planned to raise and sell at a profit. But when Dad stepped on one in the shower (we had not discussed our plans with him) she made us give them to the zoo, except the one Dad had stepped on, which was useless. Shortly after that we ran away from home to join the High Marines-Uncle Steve was a ballistics sergeant-and when lying about our age did not work and they fetched us back, Mum not only did not scold us but had fed our snakes and our silkworms while we were gone.

Oh, I guess we were happy. It is hard to tell at the time. Pat and I were very close and did everything together but I want to get one thing straight: being a twin is not the Damon-and-Pythias dream that throb writers would have you think. It makes you close to another person to be born with him, share a room with him, eat with him, play with him, work with him, and hardly ever do anything without him as far back as you can remember, and

farther according to witnesses. It makes you close; it makes you almost indispensable to each other-but it does not necessarily make you love him.

I want to get this straight because there has been a lot of nonsense talked about it since twins got to be suddenly important. I'm me; I'm not my brother Pat. I could always tell us apart, even if other people couldn't. He is the right-handed one; I'm the left-handed one. And from my point of view I'm the one who almost always got the small piece of cake.

I can remember times when he got both pieces through a fast shuffle. I'm not speaking in general; I'm thinking of a certain white cake with chocolate icing and how he confused things so that he got my piece, too, Mum and Dad thinking he was both of us, despite my protests. Dessert can be the high point of the day when you are eight, which was what we were then.

I am not complaining about these things ... even though I feel a dull lump of anger even now, after all the years and miles, at the recollection of being punished because Dad and Mum thought I was the one who was trying to wangle two desserts. But I'm just trying to tell the truth. Doctor Devereaux said to write it all down and where I have to start is how it feels to be a twin. You aren't a twin, are you? Maybe you are but the chances are forty-four to one that you aren't-not even a fraternal, whereas Pat and I are identicals which is four times as unlikely.

They say that one twin is always retarded-I don't think so. Pat and I were always as near alike as two shoes of a pair. The few times we showed any difference I was a quarter inch taller or a pound heavier, then we would even out. We got equally good marks in school; we cut our teeth together. What he did have was more grab than I had, something the psychologists call "pecking order." But it was so subtle you could not define it and other people could not see it. So far as I know, it started from nothing and grew into .a pattern that neither of us could break even if we wanted to.

Maybe if the nurse had picked me up first when we were born I would have been the one who got the bigger piece of cake. Or maybe she did-I don't know how it started.

But don't think that being a twin is all bad even if you are on the short end; it is mostly good. You go into a crowd of strangers and you are scared and shy-and there is your twin a couple of feet away and you aren't alone any more. Or somebody punches you in the mouth and while you are groggy your twin has punched him and the fight goes your way. You flunk a quiz and your twin has flunked just as badly and you aren't alone.

But do not think that being twins is like having a very close and loyal friend. It isn't like that at all and it is a great deal closer.

Pat and I had our first contact with the Long Range Foundation when this Mr. Geeking showed up at our home. I did not warm to him. Dad didn't like him either and wanted to hustle him out, but he was already seated with coffee at his elbow for Mother's notions of hospitality were firm.

So this Geeking item was allowed to state his business. He was, he said, a field representative of "Genetics Investigations."

"What's that?" Dad said sharply.

'Genetics Investigations' is a scientific agency, Mr. Bartlett. This present project is one of gathering data concerning twins. It is in the public interest and we hope that you will cooperate."

Dad took a deep breath and hauled out the imaginary soapbox he always had ready. "More government meddling! I'm a decent citizen; I pay my bills and support my family.

My boys are just like other boys and I'm sick and tired of the government's attitude about them. I'm not going to have them poked and prodded and investigated to satisfy some bureaucrat. All we ask is to be left alone-and that the government admit the obvious fact that my boys have as much right to breathe air and occupy space as anyone else!"

Dad wasn't stupid; it was just that he had a reaction pattern where Pat and I were concerned as automatic as the snarl of a dog who has been kicked too often. Mr. Geeking tried to soothe him but Dad can't be interrupted when he has started that tape. "You tell the Department of Population Control that I'm not having their 'genetics investigations.' What do they want to find out? How to keep people from having twins, probably. What's wrong with twins? Where would Rome have been without Romulus and Remus?-answer me that! Mister, do you know how many-"

"Please, Mr. Bartlett, I'm not from the government."

"Eh? Well, why didn't you say so? Who are you from?"

"Genetics Investigations is an agency of the Long Range Foundation." I felt Pat's sudden interest. Everybody has heard of the Long Range Foundation, but it happened that Pat and I had just done a term paper on non-profit corporations and had used the Long Range Foundation as a type example.

We got interested in the purposes of the Long Range Foundation. Its coat of arms reads: "Bread Cast Upon the Waters," and its charter is headed: "Dedicated to the Welfare of Our Descendants." The charter goes on with a lot of lawyers' fog but the way the directors have interpreted it has been to spend money only on things that no government and no other corporation would touch. It wasn't enough for a proposed project to be interesting to science or socially desirable; it also had to be so horribly expensive that no one else would touch it and the prospective results had to lie so far in the future that it could not be justified to taxpayers or shareholders. To make the LRF directors light up with enthusiasm you had to suggest something that cost a billion or more and probably wouldn't show results for ten generations, if ever ... something like how to control the weather (they're working on that) or where does your lap go when you stand up.

The funny thing is that bread cast upon waters does come back seven hundred fold; the most preposterous projects made the LRF embarrassing amounts of money-"embarrassing" to a non-profit corporation that is. Take space travel: it seemed tailor-made, back a couple of hundred years ago, for LRF, since it was fantastically expensive and offered no probable results comparable with the investment: There was a time when governments did some work on it for military reasons, but the Concord of Bayreuth in 1980 put a stop even to that.

So the Long Range Foundation stepped in and happily began wasting money. It came at a time when the corporation unfortunately had made a few billions on the Thompson mass-converter when they had expected to spend at least a century on pure research; since they could not declare a dividend (no stockholders), they had to get rid of the money somehow and space travel looked like a rat hole to pour it down.

Even the kids know what happened to that: Ortega's torch made space travel inside the solar system cheap, fast, and easy, and the one-way energy screen made colonization practical and profitable; the LRF could not unload fast enough to keep from making lots more money.

I did not think all this that evening; LRF was just something that Pat and I happened to know more about than most high school seniors ... more than Dad knew, apparently, for

he snorted and answered, "The Long Range Foundation, eh? I'd almost rather you were from the government. If boondoggles like that were properly taxed, the government wouldn't be squeezing head taxes out of its citizens."

This was not a fair statement, not a "flat-curve relationship," as they call it in Beginning Mathematical Empiricism. Mr. McKeefe had told us to estimate the influence, if any, of LRF on the technology "yeast-form" growth curve; either I should have flunked the course or LRF had kept the curve from leveling off early in the 21st century-I mean to say, the "cultural inheritance," the accumulation of knowledge and wealth that keeps us from being savages, had increased greatly as a result of the tax-free status of such non-profit research corporations. I didn't dream up that opinion; there are figures to prove it. What would have happened if the tribal elders had forced Ugh to hunt with the rest of the tribe instead of staying home and whittling out the first wheel while the idea was bright in his mind?

Mr. Geeking answered, "I can't debate the merits of such matters, Mr. Bartlett. I'm merely an employee.

"And I'm paying your salary, indirectly and unwillingly, but paying it nevertheless."

I wanted to get into the argument but I could feel Pat holding back. It did not matter; Mr. Geeking shrugged and said, "If so, I thank you. But all I came here for was to ask your twin boys to take a few tests and answer some questions. The tests are harmless and the results will be kept confidential."

"What are you trying to find out?"

I think Mr. Geeking was telling the truth when he answered, "I don't know. I'm merely a field agent; I'm not in charge of the project."

Pat cut in. "I don't see why not, Dad. Do you have the tests in your briefcase, Mr. Geeking?"

"Now, Patrick-"

"It's all right, Dad. Let's see the tests, Mr. Geeking."

"Uh, that's not what we had in mind. The Project has set up local offices in the TransLunar Building. The tests take about half a day."

"All the way downtown, huh, and a half day's 'time ... what do you pay?"

"Eh? The subjects are asked to contribute their time in the interests of science."

Pat shook his head. "Sorry, Mr. Geeking. This is exam week ... and my brother and I have part-time school jobs, too."

I kept quiet. Our exams were over, except Analysis of History, which is a snap course involving no math but statistics and pseudospatial calculus, and the school chem lab we worked in was closed for examinations. I was sure Dad did not know these things, or he would have butted in; Dad can shift from prejudice to being a Roman judge at the drop of a hint.

Pat stood up, so I stood up. Mr. Geeking sat tight. "Arrangements can be made," he said evenly.

Pat stuck him as much as we made for a month of washing bottles in the lab, just for one afternoon's work-then upped the ante when it was made clear that we would be obliged to take the tests together (as if we would have done it any other way!). Mr. Geeking paid without a quiver, in cash, in advance.

II THE NATURAL LOGARITHM OF TWO

I never in my life saw so many twins as were waiting on the fortieth floor of the TransLunar Building the following Wednesday afternoon. I don't like to be around twins, they make me think I'm seeing double. Don't tell me I'm inconsistent; I never saw the twins I am part of-I just saw Pat.

Pat felt the same way; we had never been chummy with other twins. He looked around and whistled. "Tom, did you over see such a mess of spare parts?"

"Never."

"If I were in charge, I'd shoot half of them." He hadn't spoken loud enough to offend anyone; Pat and I used a prison-yard whisper that no one else could hear although we never had trouble understanding it. "Depressing, isn't it?"

Then he whistled softly and I looked where he was looking. Twins of course, but this was a case of when once is good, twice is better. They were red-headed sisters, younger than we were but not too young-sixteen, maybe-and cute as Persian kittens.

Those sisters had the effect on us that a light has on a moth. Pat whispered, "Tom, we owe it to them to grant them a little of our time," and headed toward them, with me in step. They were dressed in fake Scottish outfits, green plaid which made their hair flame like bonfires and to us they looked as pretty as a new fall of snow.

And just as chilly. Pat got halfway through his opening speech when he trailed off and shut up; they were staring through him. I was blushing and the only thing that kept it from being a major embarrassing incident was a loudspeaker that commenced to bray:

"Attention, please! You are requested to report to the door marked with your surname initial." So we went to door A- to-D and the red-headed sisters headed toward the other end of the alphabet without ever having seen us at all. As we queued up Pat muttered, "Is there egg on my chin? Or have they taken a vow to be old maids?"

"Probably both," I answered. "Anyhow, I prefer blondes." This was true, since Maudie was a blonde. Pat and I had been dating Maudie Kauric for about a year-going steady you could call it, though in my case it usually meant that I was stuck with Maudie's chum Hedda Staley, whose notion of dazzling conversation was to ask me if I didn't think Maudie was the cutest thing ever? Since this was true and unanswerable, our talk did not sparkle.

"Well, so do I," Pat agreed, without saying which blonde-Maudie was the only subject on which we were reticent with each other. "But I have never had a closed mind." He shrugged and added cheerfully, "Anyhow, there are other possibilities."

There certainly were, for of the hundreds of twins present maybe a third were near enough our age not to be out of the question and half of them, as near as I could tell without counting, were of the sex that turns a mere crowd into a social event. However, none came up to the high standards of the redheads, so I began looking over the crowd as a whole.

The oldest pair I saw, two grown men, seemed to be not older than the early thirties and I saw one set of little girls about twelve-they had their mother in tow. But most of them were within a loud shout of twenty. I had concluded that "Genetics Investigations" was picking its samples by age groups when I found that we were at the head of the line and a clerk was saying, "Names, please?"

For the next two hours we were passed from one data collector to another, being fingerprinted, giving blood samples, checking "yes" or "no" to hundreds of silly questions that can't be answered "yes" or "no." The physical examination was thorough and involved the usual carefully planned nonsense of keeping a person standing in bare feet on a cold floor in a room five degrees too chilly for naked human skin while prodding the victim and asking him rude personal questions.

I was thoroughly bored and was not even amused when Pat whispered that we should strip the clothes off the doctor now and prod him in the belly and get the nurse to record how he liked it? My only pleasant thought was that Pat had stuck them plenty for their fun. Then they let us get dressed and ushered us into a room where a rather pretty woman sat behind a desk. She had a transparency viewer on her desk and was looking at two personality profiles superimposed on it. They almost matched and I tried to sneak a look to see where they did not. But I could not tell Pat's from my own and anyhow I'm not a mathematical psychologist.

She smiled and said, "Sit down, boys. I'm Doctor Arnault." She held up the profiles and a bunch of punched cards and added, "Perfect mirror twins, even to dextrocardia. This should be interesting."

Pat tried to look at the papers. "What's our I.Q. this time, Doctor?"

"Never mind." She put the papers down and covered them, then picked up a deck of cards. "Have you ever used these?"

Of course we had, for they were the classic Rhine test cards, wiggles and stars and so forth. Every high school psychology class has a set and a high score almost always means that some bright boy has figure out a way to cold-deck the teacher. In fact Pat had worked out a simple way to cheat when our teacher, with a tired lack of anger, split us up and made us run tests only with other people-whereupon our scores dropped to the limits of standard error. So I was already certain that Pat and I weren't ESP freaks and the Rhine cards were just another boring test.

But I could feel Pat become attentive. "Keep your ears open, kid," I heard him whisper, "and we'll make this interesting." Dr. Arnault did not hear him, of course.

I wasn't sure we ought to but I knew if he could manage to signal to me I would not be able to refrain from fudging the results. But I need not have worried; Dr. Arnault took Pat out and returned without him. She was hooked by microphone to the other test room but there was no chance to whisper through it; it was hot only when she switched it on.

She started right in. "First test run in twenty seconds, Mabel," she said into the mike and switched it off, then turned to me. "Look at the cards as I turn them," she said.

"Don't try, don't strain. Just look at them."

So I looked at the cards. This went on with variations for maybe an hour. Sometimes I was supposed to be receiving, sometimes sending. As far as I was concerned nothing happened, for they never told us our scores.

Finally Dr. Arnault looked at a score sheet and said, "Tom, I want to give you a mild injection. It won't hurt you and it'll wear off before you go home. Okay?"

"What sort?" I said suspiciously.

"Don't fret; it is harmless. I don't want to tell you or you might unconsciously show the reaction you expected."

"Uh, what does my brother say? Does he get one, too?"

"Never mind, please. I'm asking you."

I still hesitated. Dad did not favor injections and such unless necessary; he had made a fuss over our taking part in the encephalitis program. "Are you an M.D.?" I asked.

"No, my degree is in science. Why?"

"Then how do you know it's harmless?"

She bit her lip, then answered, "I'11 send for a doctor of medicine, if you prefer."

"Uh, no, I guess that won't be necessary." I was remembering something that Dad had said about the sleeping sickness shots and I added, "Does the Long Range Foundation carry liability insurance for this?"

"What? Why, I think so. Yes, I'm sure they do." She looked at me and added, "Tom, how does a boy your age get to be so suspicions?"

"Huh? Why ask me? You're the psychologist, ma'am. Anyhow," I added, "if you had sat on as many tacks as I have, you'd be suspicions too."

"Mmm ... never mind. I've been studying for years and I still don't know what the younger generation is coming to. Well, are you going to take the injection?"

"Uh, I'll take it-since the LRF carries insurance. Just write out what it is you are giving me and sign it."

She got two bright pink spots in her cheeks. But she took out stationery, wrote on it, folded it into an envelope and sealed it. "Put it in your pocket," she said briskly. "Don't look at it until the experiments are over. Now bare your left forearm."

As she gave me the shot she said sweetly, "This is going to sting a little...I hope." It did.

She turned out all the lights except the light in the transparency viewer. "Are you comfortable?"

"Sure."

"I'm sorry if I seemed vexed. I want you to relax and be comfortable." She came over and did something to the chair I was in; it opened out gently until I was practically lying in a hammock. "Relax and don't fight it. If you find yourself getting sleepy, that is to be expected." She sat down and all I could see was her face, illuminated by the viewer. She was awfully pretty, I decided, even though she was too old for it to matter ... at least thirty, maybe older. And she was nice, too. She spoke for a few minutes in her gentle voice but I don't remember exactly what she said.

I must have gone to sleep, for next it was pitch dark and Pat was right there by me, although I hadn't noticed the light go out nor the door being opened. I started to speak when I heard him whisper:

"Tom, did you ever see such nonsensical rigamarole?"

I whispered back, "Reminds me of the time we were initiated into the Congo Cannibals."

"Keep your voice down; they'll catch on."

"You're the one who is talking too loud: Anyhow, who cares? Let's give 'em the Cannibal war whoop and scare 'em out of their shoes."

"Later, later. Right now my girl friend Mabel wants me to give you a string of numbers. So we'll let them have their fun first. After all, they're paying for it."

"Okay."

"Point six nine three one."

"That's the natural logarithm of two."

"What did you think it was? Mabel's telephone number? Shut up and listen. Just repeat the numbers back. Three point one four one five nine..."

It went on quite a while. Some were familiar numbers like the first two; the rest may have been random or even Mabel's phone number, for all of me. I got bored and was beginning to think about sticking in a war whoop on my own when Dr. Arnault said quietly, "End of test run. Both of you please keep quiet and relax for a few minutes. Mabel, I'll meet you in the data comparison room." I heard her go out, so I dropped the war whoop notion and relaxed. Repeating all those numbers in the dark had made me dopey anyhow-and as Uncle Steve says, when you get a chance to rest, do so; you may not get another chance soon.

Presently I heard the door open again, then I was blinking at bright lights. Dr. Arnault said, "That's all today, Tom ... and thank you very much. We want to see you and your brother at the same time tomorrow."

I blinked again and looked around. "Where's Pat? What does he say?"

"You'll find him in the outer lobby. He told me that you could come tomorrow. You can, can't you?"

"Uh, I suppose so, if it's all right with him." I was feeling sheepish about the trick we had pulled, so I added, "Dr. Arnault? I'm sorry I annoyed you."

She patted my hand and smiled. "That's all right, You were right to be cautious and you were a good subject. You should see the wild ones we sometimes draw. See you tomorrow."

Pat was waiting in the big room where we had seen the redheads. He fell into step and we headed for the drop.

"I raised the fee for tomorrow," he whispered smugly.

"You did? Pat, do you think we should do this? I mean, fun is fun, but if they ever twig that we are faking, they'll be sore. They might even make us pay back what they've already paid us."

"How can they? We've been paid to show up and take tests. We've done that. It's up to them to rig tests that can't be beaten. I could, if I were doing it."

"Pat, you're dishonest and crooked, both." I thought about Dr. Arnault... she was a nice lady. "I think I'll stay home tomorrow."

I said this just as Pat stepped off the drop. He was ten feet below me all the way down and had forty stories in which to consider his answer. As I landed beside him he answered by changing the subject. "They gave you a hypodermic?"

"Yes."

"Did you think to make them sign an admission of liability, or did you goof?"

"Well, sort of." I felt in my pocket for the envelope; I'd forgotten about it. "I made Dr. Arnault write down what she was giving us."

Pat reached for the envelope. "My apologies, maestro. With my brains and your luck we've got them where we want them." He started to open the envelope. "I bet it was neopentothal-or one of the barbiturates."

I snatched it back. "That's mine."

"Well, open it," he answered, "and don't obstruct traffic. I want to see what dream drug they gave us."

We had come out into the pedestrian level and his advice did have merit. Before opening it I led us across the change strips onto the fast-west strip and stepped behind a wind break. As I unfolded the paper Pat read over my shoulder:

"'Long Range Fumbling, and so forth-injections given to subjects 7L435 & -6 T. P. Bartlett & P. H. Bartlett (iden-twins)-each one-tenth c.c. distilled water raised to normal salinity,' signed 'Doris Arnault, Sc.D., for the Foundation.' Tom, we've been hoaxed!"

I stared at it, trying to fit what I had experienced with what the paper said. Pat added hopefully, "Or is this the hoax? Were we injected with something else and they didn't want to admit it?"

"No," I said slowly. I was sure Dr. Arnault wouldn't write down "water" and actually give us one of the sleeping drugs-she wasn't that sort of person. "Pat, we weren't drugged...we were hypnotized."

He shook his head. "Impossible. Granting that I could be hypnotized, you couldn't be. Nothing there to hypnotize. And I wasn't hypnotized, comrade. No spinning lights, no passes with the hands-why, my girl Mabel didn't even stare in my eyes. She just gave me the shot and told me to take it easy and let it take effect."

"Don't be juvenile, Pat. Spinning lights and such is for suckers. I don't care whether you call it hypnotism or salesmanship. They gave us hypos and suggested that we would be sleepy-so we fell asleep."

"So I was sleepy! Anyhow that wasn't quite what Mabel did. She told me not to go to sleep, or if I did, to wake up when she called me. Then when they brought you in, she-"

"Wait a minute. You mean when they moved you back into the room I was in-"

"No, I don't mean anything of the sort. After they brought you in, Mabel gave me this list of numbers and I read them to you and-"

"Wait a minute," I said. "Pat, you're mixed up. How could you read them in pitch darkness? She must have read them to you. I mean-" I stopped, for I was getting mixed up myself. Well, she could have read to him from another room. "Were you wearing headphones?"

"What's that got to do with it? Anyhow, it wasn't pitch dark, not after they brought you in. She held up the numbers on a board that was rigged with a light of its own, enough to let me see the numbers and her hands."

"Pat, I wish you wouldn't keep repeating nonsense. Hypnotized or not, I was never so dopey that I couldn't notice anything that happened. I was never moved anywhere; they probably wheeled you in without disturbing you. And the room we were in was pitch dark, not a glimmer."

Pat did not answer right away, which wasn't like him. At last he said, "Tom, are you sure?"

"Sure I'm sure!"

He sighed. "I hate to say this, because I know what you will say. But what are you supposed to do when none of your theories fits?"

"Huh? Is this a quiz? You throw 'em away and try a new one. Basic methodology, freshman year."

"Okay, just slip this on for size, don't mind the pattern: Tom, my boy, brace yourself-we're mind readers."

I tried it and did not like it. "Pat, just because you can't explain everything is no reason to talk like the fat old women who go to fortune tellers. We're muddled, I admit, whether it was drugs or hypnosis. But we couldn't have been reading each other's minds or we would have been doing it years ago. We would have noticed."

"Not necessarily. There's never anything much going on in your mind, so why should I notice?"
"But it stands to reason-"
"What's the natural log of two?"
"'Point six nine three one' is what you said, though I've got very little use for four-place tables. What's that got to do with it?"
"I used four-place because she gave it to me that way. Do you remember what she said just before I gave you that number?"
"Huh? Who?"
"Mabel. Dr. Mabel Lichtenstein. What did she say?"
"Nobody said anything."
"Tom, my senile symbiote, she told me what to do, to wit, read the numbers to you. She told me this in a clear, penetrating soprano. You didn't hear her?"
"No."
"Then you weren't in the same room. You weren't within earshot, even though I was prepared to swear that they had shoved you in right by me. I knew you were there. But you weren't. So it was telepathy."
I was confused. I didn't feel telepathic; I merely felt hungry.
"Me, too, on both counts," Pat agreed. "So let's stop at Berkeley Station end get a sandwich."
I followed him off the strips, feeling not quite as hungry and even more confused. Pat had answered a remark I had not made.

III PROJECT LEBENSRAUM

Even though I was told to take my time and tell everything, it can't be done. I haven't had time to add to this for days, but even if I didn't have to work I still could not "tell all," because it takes more than a day to write down what happens in one day. The harder you try the farther behind you get. So I'm going to quit trying and just hit the high spots.
Anyhow everybody knows the general outline of Project Lebensraum.
We did not say anything to Mum and Dad about that first day. You can't expose parents to that sort of thing; they get jittery and start issuing edicts. We just told them the tests would run a second day and that nobody had told us what the results were.
Dr. Arnault seemed unsurprised when we told her we knew the score, even when I blurted out that we thought we had been faking but apparently weren't. She just nodded and said that it had been necessary to encourage us to think that everything was commonplace, even if there had to be a little fibbing on both sides. "I had the advantage of having your personality analyses to guide me," she added. "Sometimes in psychology you have to go roundabout to arrive at the truth.
"We'll try a more direct way today," she went on. "We'll put you two back to back but close enough together that you unquestionably can hear each other. But I am going to use a sound screen to cut you off partly or completely from time to time without your knowing it."
It was a lot harder the second time. Naturally we tried and naturally we flubbed. But Dr. Arnault was patient and so was Dr. Lichtenstein-Pat's "Dr. Mabel." She preferred to be called Dr. Mabel; she was short and pudgy and younger than Dr. Arnault and about as

cute as a female can be and still look like a sofa pillow. It wasn't until later that we found out she was boss of the research team and world famous. "Giggly little fat girl" was an act she used to put ordinary people, meaning Pat and myself, at their ease.

I guess this proves you should ignore the package and read the fine print.

So she giggled and Dr. Arnault looked serious and we could not tell whether we were reading minds or not. I could hear Tom's whispers-they told us to go ahead and whisper-and he could hear mine and sometimes they would fade. I was sure we weren't getting anything, not telepathy I mean, for it was just the way Pat and I used to whisper answers back and forth in school without getting caught.

Finally Dr. Mabel giggled sheepishly and said, "I guess that's enough for today. Don't you think so, Doctor?"

Dr. Arnault agreed and Pat and I sat up and faced each other. I said, "I suppose yesterday was a fluke. I guess we disappointed you."

Dr. Mabel looked like a startled kitten. Dr. Arnault answered soberly, "I don't know what you expected, Tom, but for the past hour you and your brother have been cut off from hearing each other during every test run."

"But I did hear him."

"You certainly did. But not with your ears. We've been recording each side of the sound barrier. Perhaps we should play back part of it."

Dr. Mabel giggled. "That's a good idea." So they did. It started out with all four voices while they told us what they wanted, then there were just my whispers and Pat's, reading lines back and forth from The Comedy of Errors. They must have had parabolic mikes focused on us for our whispers sounded like a wind storm.

Pat's whispers gradually faded out. But mine kept right on going...answering a dead silence.

We signed a research contract with the Foundation and Dad countersigned it, after an argument. He thought mind-reading was folderol and we did not dispute him, since the clincher was that money was scarce as always and it was a better-paying job than any summer job we could get, fat enough to insure that we could start college even if our scholarships didn't come through.

But before the summer was over they let us in on the connection between "Genetics Investigations" and "Project Lebensraum." That was a horse of another color-a very dark black, from our parents' standpoint.

Long before that time Pat and I could telepath as easily as we could talk and just as accurately, without special nursing and at any distance. We must have been doing it for years without knowing it-in fact Dr. Arnault made a surprise recording of our prison-yard whispering (when we weren't trying to telepath, just our ordinary private conversation) and proved that neither one of us could understand our recorded whispers when we were keeping it down low to keep other people from hearing.

She told us that it was theoretically possible that everyone was potentially telepathic, but that it had proved difficult to demonstrate it except with identical twins-and then only with about ten per cent. "We don't know why, but think of an analogy with tuned radio circuits."

"Brain waves?" I asked.

"Don't push the analogy too far. It can't be the brain waves we detect with an encephalograph equipment or we would have been selling commercial telepathic

equipment long since. And the human brain is not a radio. But whatever it is, two persons from the same egg stand an enormously better chance of being 'tuned in' than two non-twins do. I can't read your mind and you can't read mine and perhaps we never will. There have been only a few cases in all the history of psychology of people who appeared to be able to 'tune in' on just anyone, and most of those aren't well documented."

Pat grinned and winked at Dr. Mabel. "So we are a couple of freaks."

She looked wide-eyed and started to answer but Dr. Arnault beat her to it. "Not at all, Pat. In you it is normal. But we do have teams in the project who are not identical twins. Some husbands and wives, a few fraternal siblings, even some pairs who were brought together by the research itself. They are the 'freaks.' If we could find out how they do it, we. might be able to set up conditions to let anyone do it."

Dr. Mabel shivered. "What a terrible thought! There is too little privacy now."

I repeated this to Maudie (with Pat's interruptions and corrections) because the news services had found out what was going on in "Genetics Investigations" and naturally we "mind readers" came in for a lot of silly publicity and just as naturally, under Hedda Staley's mush-headed prodding, Maudie began to wonder if a girl had any privacy? She had, of course; I could not have read her mind with a search warrant, nor could Pat. She would have believed our simple statement if Hedda had not harped on it. She nearly managed to bust us up with Maudie, but we jettisoned her instead and we had threesome dates with Maudie until Pat was sent away.

But that wasn't until nearly the end of the summer after they explained Project Lebensraum.

About a week before our contract was to run out they gathered us twins together to talk to us. There had been hundreds that first day, dozens the second day, but just enough to crowd a big conference room by the end of summer. The redheads were among the survivors but Pat and I did not sit by them even though there was room; they still maintained their icicle attitude and were self-centered as oysters. The rest of us were all old friends by now.

A Mr. Howard was introduced as representing the Foundation. He ladled out the usual guff about being happy to meet us and appreciating the honor and so forth. Pat said to me. "Hang onto your wallet, Tom. This bloke is selling something." Now that we knew what we were doing Pat and I talked in the presence of other people even more than we used to. We no longer bothered to whisper since we had had proved to us that we weren't hearing the whispers. But we did subvocalize the words silently, as it helped in being understood. Early in the summer we had tried to do without words and read minds directly but it did not work. Oh, I could latch on to Pat, but the silly, incoherent rumbling that went on his mind in place of thought was confusing and annoying, as senseless as finding yourself inside another person's dream. So I learned not to listen unless he "spoke" to me and he did the same. When we did, we used words and sentences like anybody else. There was none of this fantastic, impossible popular nonsense about instantly grasping the contents of another person's mind; we simply "talked."

One thing that had bothered me was why Pat's telepathic "voice" sounded like his real one. It had not worried me when I did not know what we were doing, but once I realized that these "sounds" weren't sounds, it bothered me. I began to wonder if I was all there and for a week I could not "hear" him-psychosomatic telepathic-deafness Dr. Arnault called it.

She got me straightened out by explaining what hearing is. You don't hear with your ears, you hear with your brain; you don't see with your eyes, you see with your brain. When you touch something, the sensation is not in your finger, it is inside your head. The ears and eyes and fingers are just data collectors; it is the brain that abstracts order out of a chaos of data and gives it meaning. "A new baby does not really see," she said. "Watch the eyes of one and you can see that it doesn't. Its eyes work but its brain has not yet learned to see. But once the brain has acquired the habits of abstracting as 'seeing' and 'hearing,' the habit persists. How would you expect to 'hear' what your twin says to you telepathically? As little tinkling bells or dancing lights? Not at all. You expect words, your brain 'hears' words; it is a process it is used to and knows how to handle."

I no longer worried about it, I could hear Pat's voice clearer than I could hear the voice of the speaker addressing us. No doubt there were fifty other conversations around us, but I heard no one but Pat and it was obvious that the speaker could not hear anybody (and that he did not know much about telepathy) for he went on:

"Possibly a lot of you wonderful people-" (This with a sickening smile) "-are reading my mind right now. I hope not, or if you are I hope you will bear with me until I have said my say."

"What did I tell you?" Pat put in. "Don't sign anything until l check it."

("Shut up,"). I told him. ("I want to listen.") His voice used to sound like a whisper; now it tended to drown out real sounds. "

Mr. Howard went on, "Perhaps you have wondered why the Long Range Foundation has sponsored this research. The Foundation is always interested in anything which will add to human knowledge. But there is a much more important reason, a supremely important reason ... and a grand purpose to which you yourselves can be supremely important."

"See? Be sure to count your change."

("Quiet, Pat.")

"Let me quote," Mr. Howard continued, "from the charter of the Long Range Foundation: 'Dedicated to the welfare of our descendants.' " He paused dramatically-I think that was what he intended; "Ladies and gentlemen, what one thing above all is necessary for our descendants?"

"Ancestors!" Pat answered promptly. For a second I thought that he had used his vocal cords, But nobody else noticed.

"There can be only one answer-living room! Room to grow, room to raise families, broad acres of fertile grain, room for parks and schools and homes. We have over five billion human souls on this planet; it was crowded to the point of marginal starvation more than a century ago with only half that number. Yet this afternoon there are a quarter of a million more of us than there were at this same hour yesterday-ninety million more people each year. Only by monumental efforts of reclamation and conservation, plus population control measures that grow daily more difficult, have we been able to stave off starvation. We have placed a sea in the Sahara, we have melted the Greenland ice cap, we have watered the windy steppes, yet each year there is more and more pressure for more and more room for endlessly more people."

I don't care for orations and this was all old stuff. Shucks, Pat and I knew it if anyone did; we were the kittens that should have been drowned; our old man paid a yearly fine for our very existence.

"It has been a century since the inception of interplanetary travel; man has spread through the Solar System. One would think that nine planets would be ample for a race too fertile for one. Yet you all know that such has not been the case. Of the daughters of Father Sol only fair Terra is truly suited to Man."

"I'll bet he writes advertising slogans."

("Poor ones,") I agreed.

"Colonize the others we have done, but only at a great cost. The sturdy Dutch in pushing back the sea have not faced such grim and nearly hopeless tasks as the colonists of Mars and Venus and Ganymede. What the human race needs and must have are not these frozen or burning or airless discards of creation. We need more planets like this gentle one we are standing on. And there are more, many more!" He waved his hands at the ceiling and looked up.

"There are dozens, hundreds, thousands, countless hordes of them ... out there. Ladies and gentlemen, it is time for the stars!"

"Here comes the pitch," Pat said quietly. "A fast curve, breaking inside."

("Pat, what the deuce is he driving at?")

"He's a real estate agent."

Pat was not far off: but I am not going to quote the rest of Mr. Howard's speech. He was a good sort when we got to know him but he was dazzled by the sound of his own voice, so I'll summarize. He reminded us that the Torchship Avant-Garde had headed out to Proxima Centauri six years back. Pat and I knew about it not only from the news but because mother's brother, Uncle Steve, had put in for it-he was turned down, but for a while we enjoyed prestige just from being related to somebody on the list-I guess we gave the impression around school that Uncle Steve was certain to be chosen.

Nobody had heard from the Avant-Garde and maybe she would be back in fifteen or twenty years and maybe not. The reason we hadn't heard from her, as Mr. Howard pointed out and everybody knows, is that you don't send radio messages back from a ship light-years away and traveling just under the speed of light. Even if you assumed that a ship could carry a power plant big enough to punch radio messages across light-years (which may not be impossible in some cosmic sense but surely is impossible in terms of modem engineering)-even so, what use are messages which travel just barely faster than the ship that sends them? The Avant-Garde would be home almost as quickly as any report she could send, even by radio.

Some fuzzbrain asked about messenger rockets. Mr. Howard looked pained and tried to answer and I didn't listen. If radio isn't fast enough, how can a messenger rocket be faster? I'll bet Dr. Einstein spun in his grave.

Mr. Howard hurried on before there were any more silly interruptions. The Long Range Foundation proposed to send out a dozen more starships in all directions to explore Sol-type solar systems for Earth-type planets, planets for coloniza tion. The ships might be gone a long time, for each one would explore more than one solar system.

"And this, ladies and gentlemen, is where you are indispensable to this great project for living room-for you will be the means whereby the captains of those ships report back what they have found!"

Even Pat kept quiet.

Presently a man stood up in the back of the room. He was one of the oldest twins among us; he and his brother were about thirty-five. "Excuse me, Mr. Howard, but may I ask a question?"

. "Surely."

"I am Gregory Graham; this is my brother Grant Graham. We're physicists. Now we don't claim to be expert in cosmic phenomena but we do know something about communication theory. Granting for the sake of argument that telepathy would work over interstellar distances-I don't think so but I've no proof that it wouldn't-even granting that, I can't see where it helps. Telepathy, light, radio waves, even gravity, are all limited to the speed of light. That is in the very nature of the physical universe, an ultimate limit for all communication. Any other view falls into the ancient philosophical contradiction of action-at-a-distance. It is just possible that you might use telepathy to report findings and let the ship go on to new explorations-but the message would still take light-years to come back. Communication back and forth between a starship and Earth, even by telepathy, is utterly impossible, contrary to the known laws of physics." He looked apologetic and sat down.

I thought Graham had him on the hip. Pat and I got good marks in physics and what Graham had said was the straight word, right out of the book. But Howard did not seem bothered. "I'll let an expert answer. Dr. Lichtenstein? If you please-"

Dr. Mabel stood up and blushed and giggled and looked flustered and said, "I'm terribly sorry, Mr. Graham, I really am, but telepathy isn't like that at all." She giggled again and said, "I shouldn't be saying this, since you are telepathic and I'm not, but telepathy doesn't pay the least bit of attention to the speed of light."

"But it has to. The laws of physics-"

"Oh, dear! Have we given you the impression that telepathy is physical?" She twisted her hands. "It probably isn't."

"Everything is physical. I include 'physiological,' of course."

"It is? You do? Oh, I wish I could be sure ... but physics has always been much too deep for me. But I don't know how you can be sure that telepathy is physical; we haven't been able to make it register on any instrument. Dear me, we don't even know how consciousness hooks into matter. Is consciousness physical? I'm sure I don't know. But we do know that telepathy is faster than light because we measured it."

Pat sat up with a jerk, "Stick around, kid. I think we'll stay for the second show."

Graham looked stunned. Dr. Mabel said hastily, "I didn't do it; it was Dr; Abernathy."

"Horatio Abernathy?" demanded Graham.

"Yes, that's his first name, though I never dared call him by it. He's rather important."

"Just the Nobel prize," Graham said grimly, "in field theory. Go on. What did he find?"

"Well, we sent this one twin out to Ganymede-such an awfully long way. Then we used simultaneous radio-telephony and telepathy messages, with the twin on Ganymede talking by radio while he was talking directly-telepathically, I mean-to his twin back in Buenos Aires. The telepathic message always beat the radio message by about forty minutes. That would be right, wouldn't it? You can see the exact figures in my office."

Graham managed to close his month. "When did this happen? Why hasn't it been published? Who has been keeping it secret? It's the most important thing since the Michelson-Morley experiment-it's terrible!"

Dr. Mabel looked upset and Mr. Howard butted in soothingly. "Nobody has been suppressing knowledge, Mr. Graham, and Dr. Abernathy is preparing an article for publication in the Physical Review. However I admit that the Foundation did ask him not to give out an advance release in order to give us time to go ahead with another project-the one you know as 'Genetics Investigations'-on a crash- priority basis. We felt we were entitled to search out and attempt to sign up potential telepathic teams before every psychological laboratory and, for that matter, every ambitious showman, tried to beat us to it. Dr. Abernathy was willing-he doesn't like premature publication."

"If it will make you feel better, Mr. Graham," Dr. Mabel said diffidently, "telepathy doesn't pay attention to the inverse-square law either. The signal strength was as strong at half a billion miles as when the paired telepaths were in adjoining rooms."

Graham sat down heavily. "I don't know whether it does or it doesn't. I'm busy rearranging everything I have ever believed."

The interruption by the Graham brothers had explained some things but had pulled us away from the purpose of the meeting, which was for Mr. Howard to sell us on signing up as spacemen. He did not have to sell me. I guess every boy wants to go out into space; Pat and I had run away from home once to enlist in the High Marines-and this was much more than just getting on the Earth-Mars-Venus run; this meant exploring the stars.

The Stars!

"We've told you about this before your research contracts run out," Mr. Howard explained, "so that you will have time to consider it, time for us to explain the conditions and advantages."

I did not care what the advantages were. If they had invited me to hook a sled on behind, I would have said yes, not worrying about torch blast or space suits or anything.

"Both members of each telepathic team will be equally well taken care of," he assured us. "The starside member will have good pay and good working conditions in the finest of modern torchships in the company of crews selected for psychological compatibility as well as for special training; the earthside member will have his financial future assured, as well as his physical welfare." He smiled. "Most assuredly his physical welfare, for it is necessary that he be kept alive and well as long as science can keep him so. It is not too much to say that signing this contract will add thirty years to your lives."

It burst on me why the twins they had tested had been young people. The twin who went out to the stars would not age very much, not at the speed of light. Even if he stayed away a century it would not seem that long to him-but his twin who stayed behind would grow older. They would have to pamper him like royalty, keep him alive-or their "radio" would break down.

Pat said, "Milky Way, here I come!"

But Mr. Howard was still talking. "We want you to think this over carefully; it is the most important decision you will ever make. On the shoulders of you few and others like you in other cities around the globe, all told just a tiny fraction of one per cent of the human race, on you precious few rest the hopes of all humanity. So think carefully and give us a chance to explain anything which may trouble you. Don't act hastily."

The red-headed twins got up and walked out, noses in the air. They did not have to speak to make it clear that they would have nothing to do with anything so unladylike, so rude and crude, as exploring space. In the silence in which they paraded out Pat said to me,

"There go the Pioneer Mothers. That's the spirit that discovered America." As they passed us he cut loose with a loud razzberry-and I suddenly realized that he was not telepathing when the redheads stiffened and hurried faster. There was an embarrassed laugh and Mr. Howard quickly picked up the business at hand as if nothing had happened while I bawled Pat out.

Mr. Howard asked us to come back at the usual time tomorrow, when Foundation representatives would explain details. He invited us to bring our lawyers, or (those of us who were under age, which was more than half) our parents and their lawyers.

Pat was bubbling over as we left, but I had lost my enthusiasm. In the middle of Mr. Howard's speech I had had a great light dawn: one of us was going to have to stay behind and I knew as certainly as bread falls butter side down which one it would be. A possible thirty more years on my life was no inducement to me. What use is thirty extra years wrapped in cottonwool? There would be no spacing for the twin left behind, not even inside the Solar System ... and I had never even been to the Moon.

I tried to butt in on Pat's enthusiasm and put it to him fair and square, for I was darned if I was going to take the small piece of cake this time without argument.

"Look, Pat, I'll draw straws with you for it. Or match coins."

"Huh? What are you talking about?"

"You know what I'm talking about!"

He just brushed it aside and grinned. "You worry too much, Tom. They'll pick the teams the way they want to. It won't be up to us."

I know he was determined to go and I knew I would lose.

IV HALF A LOAF

Our parents made the predictable uproar. A conference in the Bartlett family always sounded like a zoo at feeding time but this one set a new high. In addition to Pat and myself, Faith, Hope, and Charity, and our parents, there was Faith's fairly new husband, Frank Dubois, and Hope's brand- new fiancé, Lothar Sembrich. The last two did not count and both of them seemed to me to be examples of what lengths a girl will go to in order to get married, but they used up space and occasionally contributed remarks to confuse the issue. But Mother's brother, Uncle Steve, was there, too, having popped up on Earthside furlough.

It was Uncle Steve's presence that decided Pat to bring it out in the open instead of waiting to tackle Dad and Mum one at a time. Both of them considered Uncle Steve a disturbing influence but they were proud of him; one of his rare visits was always a holiday.

Mr. Howard had given us a sample contract to take home and look over. After dinner Pat said, "By the way, Dad, the Foundation offered us a new contract today, a long-term one." He took it out of his pocket but did not offer it to Dad.

"I trust you told them that you were about to start school again?"

"Sure, we told them that, but they insisted that we take the contract home to show our parents. Okay, we knew what your answer would be." Pat started to put the contract into his pocket.

I said to Pat privately, ("What's the silly idea? You've made him say 'no' and now he can't back down.")

"Not yet he hasn't," Pat answered on our private circuit. "Don't joggle my elbow."
Dad was already reaching out a hand. "Let me see it, You should never make up your mind without knowing the facts."
Pat was not quick about passing it over. "Well, there is a scholarship clause," he admitted, "but Tom and I wouldn't be able to go to school together the way we always have."
"That's not necessarily bad. You two are too dependent on each other. Some day you will have to face the cold, cruel world alone ... and going to different schools might be a good place to start."
Pat stuck out the contract, folded to the second page, "It's paragraph ten."
Dad read paragraph ten first, just as Pat meant him to do, and his eyebrows went up. Paragraph ten agreed that the party of the first part, the LRF, would keep the party of the second part in any school of his choice, all expenses, for the duration of the contract, or a shorter time at his option, and agreed to do the same for the party of the third part after the completion of the active period of the contract, plus tutoring during the active period-all of which was a long-winded way of saying that the Foundation would put the one who stayed home through school now and the one who went starside through school when he got back... all this in addition to our salaries; see paragraph seven.
So Dad turned to paragraph seven and his eyebrows went higher and his pipe went out. He looked at Pat. "Do I understand that they intend to appoint you two 'communications technicians tenth grade' with no experience?"
Uncle Steve sat up and almost knocked his chair over.
"Bruce, did you say 'tenth grade'?"
"So it says."
"Regular LRF pay scales?"
"Yes. I don't know how much that is, but I believe they ordinarily hire skilled ratings beginning at third grade."
Uncle Steve whistled. "I'd hate to tell you how much money it is, Bruce-but the chief electron pusher on Pluto is tenth pay grade ... and it took him twenty years and a doctor's degree to get there." Uncle Steve looked at us.
"Give out, shipmates. Where did they bury the body? Is it a bribe?" Pat did not answer. Uncle Steve turned to Dad and said, "Never mind the fine print, Bruce; just have the kids sign it. Each one of them will make more than you and me together. Never argue with Santa Claus."
But Dad was already reading the fine print, from sub-paragraph one-A to the penalty clauses. It was written in lawyer language but what it did was to sign us up as crew members for one voyage of an LRF ship, except that one of us was required to perform his duties Earthside. There was lots more to nail it down so that the one who stayed Earth-side could not wiggle out, but that was all it amounted to.
The contact did not say where the ship would go or how long the voyage would last.
Dad finally put the contract down and Charity grabbed it. Dad took it from her and passed it over to Mother. Then he said, "Boys, this contract looks so favorable that I suspect there must be a catch. Tomorrow morning I'm going to get hold of Judge Holland and ask him to go over it with me. But if I read it correctly, you are being offered all these benefits-and an extravagant salary-provided one of you makes one voyage in the Lewis and Clark."

Uncle Steve said suddenly, "The Lewis and Clark, Bruce?"
"The Lewis and Clark, or such sister ship as may be designated. Why? You know the ship, Steve?"
Uncle Steve got poker-faced and answered, "I've never been in her. New ship, I understand. Well equipped."
"I'm glad to hear it." Dad looked at Mum. "Well, Molly?"
Mother did not answer. She was reading the contract and steadily getting whiter. Uncle Steve caught my eye and shook his head very slightly. I said to Pat, ("Uncle Steve has spotted the catch in it.")
"He won't hinder. "
Mother looked up at last and spoke to Dad in a high voice. "I suppose you are going to consent?" She sounded sick. She put down the contract and Charity grabbed it again just as Hope grabbed it from the other side. It ended with our brother-in-law Frank Dubois holding it while everybody else read over his shoulders.
"Now, my dear," Dad said mildly, "remember that boys do grow up. I would like to keep the family together forever-but it can't be that way and you know it."
"Bruce, you promised that they would not go out into space."
Her brother shot her a glance-his chest was covered with ribbons he had won in space. But Dad went on just as mildly. "Not quite, dear. I promised you that I would not consent to minority enlistment in the peace forces; I want them to finish school and I did not want you upset. But this is another matter ... and, if we refuse, it won't be long before they can enlist whether we like it or not."
Mother turned to Uncle Steve and said bitterly, "Stephen, you put this idea in their heads."
He looked annoyed then answered as gently as Dad.
"Take it easy, Sis. I've been away; you can't pin this on me. Anyhow, you don't put ideas in boys' heads; they grow them naturally."
Frank Dubois cleared his throat and said loudly, "Since this seems to be a family conference, no doubt you would like my opinion."
I said, to Pat only, ('Nobody asked your opinion, you lard head!")
Pat answered, "Let him talk. He's our secret weapon, maybe."
"If you want the considered judgment of an experienced businessman, this so-called contract is either a practical joke or a proposition so preposterous as to be treated with contempt. I understand that the twins are supposed to have some freak talent-although I've seen no evidence of it-but the idea of paying them more than a man receives in his mature years, well, it's just not the right way to raise boys. If they were sons of mine, I would forbid it. Of course, they're not-"
"No, they're not," Dad agreed.
Frank looked sharply at him. "Was that sarcasm, Father Bartlett? I'm merely trying to help. But as I told you the other day, if the twins will go to some good business school and work hard, I'd find a place for them in the bakery. If they make good, there is no reason why they should not do as well as I have done." Frank was his father's junior partner in an automated bakery; he always managed to let people know how much money he made. "But as for this notion of going out into space, I've always said that if a man expects to make anything of himself, he should stay home and work. Excuse me, Steve."
Uncle Steve said woodenly, "I'd be glad to excuse you."

"Eh?"
"Forget it, forget it. You stay out of space and I'll promise not to bake any bread. By the way, there's flour on your lapel."
Frank glanced down hastily. Faith brushed at his jacket and said, "Why, that's just powder."
"Of course it is," Frank agreed, brushing at it himself. "I'll have you know, Steve, that I'm usually much too busy to go down on the processing floor. I'm hardly ever out of the office."
"So I suspected."
Frank decided that he and Faith were late for another appointment and got up to go, when Dad stopped them.
"Frank? What was that about my boys being freaks?"
"What? I never said anything of the sort."
"I'm glad to hear it."
They left in a sticky silence, except that Pat was humming silently and loudly the March of the Gladiators. "We've got it won, kid!"
It seemed so to me, too-but Pat had to press our luck. He picked up the contract. "Then it's okay, Dad?"
"Mmm ... I want to consult Judge Holland-and I'm not speaking for your mother." That did not worry us; Mum wouldn't hold out if Dad agreed, especially not with Uncle Steve around. "But you could say that the matter has not been disapproved." He frowned. "By the way, there is no time limit mentioned in there."
Uncle Steve fielded that one for us; "That's customary on a commercial ship, Bruce ... which is what this is, legally. You sign on for the voyage, home planet to home planet."
"Uh, no doubt. But didn't they give you some idea, boys?"
I heard Pat moan, "There goes the ball game. What'll we tell him, Tom" Dad waited and Uncle Steve eyed us.
Finally Uncle Steve said, "Better speak up, boys. Perhaps I should have mentioned that I'm trying to get a billet on one of those ships myself-special discharge and such. So I know."
Pat muttered something. Dad said sharply, "Speak up, son."
"They told us the voyage would probably last ... about a century."
Mum fainted and Uncle Steve caught her and everybody rushed around with cold compresses getting in each other's way and we were all upset. Once she pulled out of it Uncle Steve said to Dad, "Bruce? I'm going to take the boys out and buy them a tall, strong sarsaparilla and get them out from under foot. You won't want to talk tonight anyhow."
Dad agreed absently that it was a good. idea. I guess Dad loved all of us; nevertheless, when the chips were down, nobody counted but Mother.
Uncle Steve took us to a place where be could get something more to his taste than sarsaparilla, then vetoed it when Pat tried to order beer. "Don't try to show off, youngster. You are not going to put me in the position of serving liquor to my sister's kids."
"Beer can't hurt you."
"So? I'm still looking for the bloke who told me it was a soft drink. I'm going to beat him to a pulp with a stein. Pipe down." So we picked soft drinks and he drank some horrible mixture he called a Martian shandy and we talked about Project Lebensraum. He knew

more about it than we did even though no press release had been made until that day-I suppose the fact that he had been assigned to the Chief of Staff's office had something to do with it, but he did not say.

Presently Pat looked worried and said, "See here, Uncle Steve, is there any chance that they will let us? Or should Tom and I just forget it?"

"Eh? Of course they are going to let you do it."

"Huh? It didn't look like it tonight. If I know Dad, he would skin us for rugs rather than make Mum unhappy."

"No doubt. And a good idea. But believe me, boys, this is in the bag ... provided you use the right arguments."

"Which is?"

"Mmm ... boys, being a staff rating, I've served with a lot of high brass. When you are right and a general is wrong, there is only one way to get him to change his mind. You shut up and don't argue. You let the facts speak for themselves and give him time to figure out a logical reason for reversing himself."

Pat looked unconvinced; Uncle Steve went on, "Believe me. Your pop is a reasonable man and, while your mother is not, she would rather be hurt herself than make anybody she loves unhappy. That contract is all in your favor and they can't refuse-provided you give them time to adjust to the idea. But if you tease and bulldoze and argue the way you usually do, you'll get them united against you."

"Huh? But I never tease, I merely use logical-"

"Stow it, you make me tired. Pat, you were one of the most unlovable brats that ever squawled to get his own way ... and, Tom, you weren't any better. You haven't mellowed with age; you've simply sharpened your techniques. Now you are being offered something free that I would give my right arm to have. I ought to stand aside and let you flub it. But I won't. Keep your flapping mouths shut, play this easy, and it's yours. Try your usual loathsome tactics and you lose."

We would not take that sort of talk from most people. Anybody else and Pat would have given me the signal and he'd 've hit him high while I hit him low. But you don't argue that way with a man who wears the Ceres ribbon; you listen. Pat didn't even mutter to me about it.

So we talked about Project Lebensraum itself. Twelve ships were to go out, radiating from Sol approximately in axes of a dodecahedron-but only approximately, as each ship's mission would be, not to search a volume of space, but to visit as many Sol-type stars as possible in the shortest time. Uncle Steve explained how they worked out a "mini-max" search curve for each ship but I did not understand it; it involved a type of calculus we had not studied.. Not that it mattered; each ship was to spend as much time exploring and as little time making the jumps as possible.

But Pat could not keep from coming back to the idea of how to sell the deal to our parents. "Uncle Steve? Granting that you are right about playing it easy, here's an argument that maybe they should hear? Maybe you could use it on them?"

"Um?"

"Well, if half a loaf is better than none, maybe they haven't realized that this way one of us stays home." I caught a phrase of what Pat had started to say, which was not "one of us stays home," but "Tom stays home." I started to object, then let it ride. He hadn't said it. Pat went on, "They know we want to space. If they don't let us do this, we'll do it any

way we can. If we joined your corps, we might come home on leave-but not often. If we emigrate, we might as well be dead; very few emigrants make enough to afford a trip back to Earth, not while their parents are still alive, at least. So if they keep us home now, as soon as we are of age they probably will never see us again. But if they agree, not only does one stay home, but they are always in touch with the other one-that's the whole purpose in using us telepath pairs." Pat looked anxiously at Uncle Steve.

"Shouldn't we point that out? Or will you slip them the idea?"

Uncle Steve did not answer right away, although I could not see anything wrong with the logic. Two from two leaves zero, but one from two still leaves one.

Finally he answered slowly, "Pat, can't you get it through your thick head to leave well enough alone?"

"I don't see what's wrong with my logic."

"Since when was an emotional argument won by logic? You should read about the time King Solomon proposed to divvy up the baby." He took a pull at his glass and wiped his mouth. "What I am about to tell you is strictly confidential. Did you know that the Planetary League considered commissioning these ships as warships?"

"Huh? Why? Mr. Howard didn't say-"

"Keep your voice down. Project Lebensraum is of supreme interest to the Department of Peace. When it comes down to it, the root cause of war is always population pressure no matter what other factors enter in."

"But we've abolished war."

"So we have. So chaps like me get paid to stomp out brush fires before they burn the whole forest. Boys, if I tell you the rest of this, you've got to keep it to yourselves now and forever."

I don't like secrets. I'd rather owe money. You can't pay back a secret. But we promised.

"Okay. I saw the estimates the Department of Peace made on this project at the request of LRF. When the Avant-Garde was sent out, they gave her one chance in nine of returning. We've got better equipment now; they figure one chance in six for each planetary system visited. Each ship visits an average of six stars on the schedule laid out-so each ship has one chance in thirty-six of coming back. For twelve ships that means one chance in three of maybe one ship coming back. That's where you freaks come in."

"Don't call us 'freaks'!" We answered together.

" 'Freaks,' " he repeated. "And everybody is mighty glad you freaks are around, because without you the thing is impossible. Ships and crews are expendable-ships are just money and they can always find people like me with more curiosity than sense to man the ships. But while the ships are expendable, the knowledge they will gather is not expendable. Nobody at the top expects these ships to come back-but we've got to locate those earth-type planets; the human race needs them. That is what you boys are for: to report back. Then it won't matter that the ships won't come back."

"I'm not scared," I said firmly.

Pat glanced at me and looked away. I hadn't telepathed but I had told him plainly that the matter was not settled as to which one of us would go. Uncle Steve looked at me soberly and said, "I didn't expect you to be, at your age. Nor am I; I've been living on borrowed time since I was nineteen. By now I'm so convinced of my own luck that if one ship comes back, I'm sure it will be mine. But do you see why it would be silly to argue with your mother that half a set of twins is better than none? Emotionally your argument is all

wrong. Go read the Parable of the Lost Sheep. You point out to your mother that one of you will be safe at home and it will simply fix her mind on the fact that the other one isn't safe and isn't home. If your Pop tries to reassure her, he is likely to stumble onto these facts-for they aren't secret, not the facts on which the statisticians based their predictions; it is just that the publicity about this project will emphasize the positive and play down the negative."

"Uncle Steve," objected Pat, "I don't see how they can be sure that most of the ships will be lost."

"They can't be sure. But these are actually optimistic assumptions based on what experience the race has had with investigating strange places. It's like this, Pat: you can be right over and over again, but when it comes to exploring strange places, the first time you guess wrong is the last guess you make. You're dead. Ever looked at the figures about it in just this one tiny solar system? Exploration is like Russian roulette; you can win and win, but if you keep on, it will kill you, certain. So don't get your parents stirred up on this phase of the matter. I don't mind-a man is entitled to die the way he wants to; that's one thing they haven't taxed. But there is no use in drawing attention to the fact that one of you two isn't coming back."

V THE PARTY OF THE SECOND PART

Uncle Steve was right about the folks giving in; Pat left for the training course three weeks later.

I still don't know just how it was that Pat got to be the one. We never matched for it, we never had a knock-down argument, and I never agreed. But Pat went.

I tried to settle it with him several times but he always put me off, telling me not to worry and to wait and see how things worked out. Presently I found it taken for granted that Pat was going and I was staying. Maybe I should have made a stand the day we signed the contract, when Pat hung back and let me sign first, thereby getting me down on paper as the party of the second part who stayed home, instead of party of the third part who went. But it had not seemed worth making a row about, as the two were interchangeable by agreement among the three parties to the contact. Pat pointed this out to me just before we signed; the important thing was to get the contract signed while our parents were holding still-get their signatures.

Was Pat trying to put one over on me right then? If so, I didn't catch him wording his thoughts. Contrariwise, would I have tried the same thing on him if I had thought of it? I don't know, I just don't know. In any case, I gradually became aware that the matter was settled; the family took it for granted and so did the LRF people. So I told Pat it was not settled. He just shrugged and reminded me that it had not been his doing. Maybe I could get them to change their minds... if I didn't care whether or not I upset the applecart.

I didn't want to do that. We did not know that the LRF would have got down on its knees and wept rather than let any young and healthy telepath pair get away from them; we thought they had plenty to choose from. I thought that if I made a fuss they might tear up the contract, which they could do up till D-Day by paying a small penalty.

Instead I got Dad alone and talked to him. This shows how desperate I was; neither Pat nor I ever went alone to our parents about the other one. I didn't feel easy about it, but stammered and stuttered and had trouble making Dad understand why I felt swindled.

Dad looked troubled and said, "Tom, I thought you and your brother had settled this between you?"

"That's what I'm trying to tell you! We didn't."

"What do you expect me to do?"

"Why, I want you to make him be fair about it. We ought to match for it, or something. Or you could do it for us and keep it fair and square. Would you?"

Dad gave attention to his pipe the way he does when he is stalling. At last he said, "Tom, I don't see how you can back out now, after everything is settled. Unless you want me to break the contract? It wouldn't be easy but I can."

"But I don't have to break the contract. I just want an even chance. If I lose, I'll shut up. If I win, it won't change anything-except that I would go and Pat would stay."

"Mmm ..." Dad puffed on his pipe and looked thoughtful. "Tom, have you looked at your mother lately?"

I had, but I hadn't talked with her much. She was moving around like a zombie, looking grief-stricken and hurt. "Why?"

"I can't do this to her. She's already going through the agony of losing your brother; I can't put her through it on your account, too. She couldn't stand it."

I knew she was feeling bad, but I could not see what difference it would make if we swapped. "You're not suggesting that Mum wants it this way? That she would rather have Pat go than me?"

"I am not. Your mother loves you both, equally,"

"Then it would be just the same to her."

"It would not. She's undergoing the grief of losing one of her sons. If you swapped now, she would have to go through it afresh for her other son. That wouldn't be fair." He knocked his pipe against an ash tray, which was the same as gaveling that the meeting was adjourned. "No, son, I'm afraid that you will just have to stand by your agreement."

It was hopeless so I shut up. With Dad, bringing Mum's welfare into it was the same as trumping an ace.

Pat left for the training center four days later. I didn't see much of him except the hours we spent down at the TransLunar Building for he was dating Maudie every night and I was not included. He pointed out that this was the last he would see of her whereas I would have plenty of time-so get lost, please. I did not argue; it was not only fair, taken by itself, but I did not want to go along on their dates under the circumstances. Pat and I were farther apart those last few days than we had ever been.

It did not affect our telepathic ability, however, whatever this "tuning" was that some minds could do went right on and we could do it as easily as we could talk ... and turn it off as easily, too. We didn't have to "concentrate" or "clear our minds" or any of that Eastern mysticism nonsense. When we wanted to "talk," we talked.

When Pat left I felt lost. Sure, I was in touch with him four hours a day and any other time I cared to call him, but you can't live your whole life doing things by two's without getting out of joint when you have to do things by one's. I didn't have new habits yet. I'd get ready to go someplace, then I would stop at the door and wonder what I had

forgotten. Just Pat. It is mighty lonesome to start off somewhere by yourself when you've always done it with someone.

Besides that, Mum was being brightly cheerful and tender and downright unbearable, and my sleep was all broken up. The training center worked on Switzerland's time zone which meant that I, and all other twins who were staying behind no matter where on. Earth they were, worked our practice messages on Swiss time, too. Pat would whistle in my ears and wake me at two in the morning each night and then I would work until dawn and try to catch up on sleep in the daytime.

It was inconvenient but necessary and I was well paid. For the first time in my life I had plenty of money. So did all of our family, for I started paying a fat board bill despite Dad's objections. I even bought myself a watch (Pat had taken ours with him) without worrying about the price, and we were talking about moving into a bigger place.

But the LRF was crowding more and more into my life and I began to realize that the contract covered more than just recording messages from my twin. The geriatrics program started at once. "Geriatrics" is a funny term to use about a person not old enough to vote but it had the special meaning here of making me live as long as possible by starting on me at once. What I ate was no longer my business; I had to follow the diet they ordered, no more sandwiches picked up casually. There was a long list of "special hazard" things I must not do. They gave me shots for everything from housemaid's knee to parrot fever and I had a physical examination so thorough as to make every other one seem like a mere laying on of hands.

The only consolation was that Pat told me they were doing. the same to him. We might be common as mud most ways but we were irreplaceable communication equipment to LRF, so we got the treatment a prize race horse or a prime minister gets and which common people hardly ever get. It was a nuisance.

I did not call Maudie the first week or ten days after Pat left; I didn't feel easy about her. Finally she called me and asked if I were angry with her or was she in quarantine? So we made a date for that night. It was not festive. She called me "Pat" a couple of times, which she used to do every now and then and it had never mattered, since Pat and I were used to people mixing up our names. But now it was awkward, because Pat's ghost was a skeleton at the feast.

The second time she did it I said angrily, "If you want to talk to Pat, I can get in touch with him in half a second!"

"What? Why, Tom!"

"Oh, I know you would rather I was Pat! If you think I enjoy being second choice, think again."

She got tears in her eyes and I got ashamed and more difficult. So we had a bitter argument and then I was telling her how I had been swindled.

Her reaction wasn't what I expected. Instead of sympathy she said, "Oh, Tom, Tom! Can't you see that Pat didn't do this to you? You did it to yourself."

"Huh?"

"It's not his fault; it's your own. I used to get so tired of the way you let him push you around. You liked having him push you around. You've got a 'will to fail.'"

I was so angry I had trouble answering. "What are you talking about? That sounds like a lot of cheap, chimney-corner psychiatry to me. Next thing you know you'll be telling me I have a 'death wish.'"

She blinked back tears. "No. Maybe Pat has that. He was always kidding about it but, just the same, I know how dangerous it is. I know we won't see him again."

I chewed that over. "Are you trying to say," I said slowly, "that I let Pat do me out of it because I was afraid to go?"

"What? Why, Tom dear, I never said anything of the sort."

"It sounded like it." Then I knew why it sounded like it. Maybe I was afraid. Maybe I had struggled just hard enough to let Pat win... because I knew what was going to happen to the one who went.

Maybe I was a coward.

We made it up and the date seemed about to end satisfactorily. When I took her home I was thinking of trying to kiss her good night-I never had, what with the way Pat and I were always in each other's hair. I think she expected me to, too.., when Pat suddenly whistled at me.

"Hey! You awake, mate?"

("Certainly,") I answered shortly. ("But I'm busy.")

"How busy? Are you out with my girl?"

("What makes you think that?")

"You are, aren't you? I figured you were. How are you making out?"

("Mind your own business!")

"Sure, sure! Just say hello to her for me. Hi, Maudie!"

Maudie said, "Tom, what are you so preoccupied about?"

I answered, "Oh, it's just Pat. He says to say hello to you."

"Oh... well, hello to him from me."

So I did. Pat chuckled. "Kiss her good night for me."

So I didn't, not for either of us.

But I called her again the next day and we went out together regularly after that. Things began to be awfully pleasant where Maudie was concerned ... so pleasant that I even thought about the fact that college students sometimes got married and now I would be able to afford it, if it happened to work out that way. Oh, I wasn't dead sure I wanted to tie myself down so young, but it is mighty lonely to be alone when you've always had somebody with you.

Then they brought Pat home on a shutter.

It was actually an ambulance craft, specially chartered. The idiot had sneaked off and tried skiing, which he knew as much about as I know about pearl diving. He did not have much of a tumble; he practically fell over his own feet. But there he was, being carried into our flat on a stretcher, numb from the waist down and his legs useless. He should have been taken to a hospital, but he wanted to come home and Mum wanted him to come home, so Dad insisted on it. He wound up in the room Faith had vacated and I went back to sleeping on the couch.

The household was all upset, worse than it had been when Pat went away. Dad almost threw Frank Dubois out of the house when Frank said that now that this space travel nonsense was disposed of, he was still prepared to give Pat a job if he would study bookkeeping, since a bookkeeper could work from a wheelchair. I don't know; maybe Frank had good intentions, but I sometimes think "good intentions" should be declared a capital crime.

But the thing that made me downright queasy was the way Mother took it. She was full of tears and sympathy and she could not do enough for Pat-she spent hours rubbing his legs, until she was ready to collapse. But I could see, even if Dad couldn't, that she was indecently happy-she had her "baby" back. Oh, the tears weren't fake ... but females seem able to cry and be happy at the same time.

We all knew that the "space travel nonsense" was washed up, but we did not discuss it, not even Pat and I; while he was flat on his back and helpless and no doubt feeling even worse than I did was no time to blame him for hogging things and then wasting our chance. Maybe I was bitter but it was no time to let him know. I was uneasily aware that the fat LRF cheeks would stop soon and the family would be short of money again when we needed it most and I regretted that expensive watch and the money I had blown in taking Maudie to places we had never been able to afford, but I avoided thinking about even that; it was spilt milk. But I did wonder what kind of a job I could get instead of starting college.

I was taken off guard when Mr. Howard showed up-I had halfway expected that LRF would carry us on the payroll until after Pat was operated on, even though the accident was not their fault and was the result of Pat's not obeying their regulations. But with the heaps of money they had I thought they might be generous.

But Mr. Howard did not even raise the question of the Foundation paying for, or not paying for, Pat's disability; he simply wanted to know how soon I would be ready to report to the training center?

I was confused and Mother was hysterical and Dad was angry and Mr. Howard was bland. To listen to him you would have thought that nothing had happened, certainly nothing which involved the slightest idea of letting us out of our contract. The parties of the second part and of the third part were interchangeable; since Pat could not go, naturally I would. Nothing had happened which interfered with our efficiency as a communication team. To be sure, they had let us have a few days to quiet down in view of the sad accident-but could I report at once? Time was short.

Dad got purple and almost incoherent. Hadn't they done enough to his family? Didn't they have any decency? Any consideration?

In the middle of it, while I was trying to adjust to the new situation and wandering what I should say, Pat called me silently. "Tom! Come here!"

I excused myself and hurried to him. Pat and I had hardly telepathed at all since he had been hurt. A few times he had called me in the night to fetch him a drink of water or something like that, but we had never really talked, either out loud or in our minds. There was just this black, moody silence that shut me out. I didn't know how to cope with it; it was the first time either of us had ever been ill without the other one.

But when he called I hurried in. "Shut the door."

I did so. He looked at me grimly. "I caught you before you promised anything, didn't I?"

"Yeah."

"Go out there and tell Dad I want to see him right away. Tell Mum I asked her to please quit crying, because she is getting me upset." He smiled sardonically. "Tell Mr. Howard to let me speak to my parents alone. Then you beat it."

"Huh?"

"Get out, don't stop to say good-by and don't say where you are going. When I want you, I'll tell you. If you hang around, Mother will work on you and get you to promise things." He looked at me bleakly. "You never did have any will power."

I let the dig slide off; he was ill. "Look, Pat, you're up against a combination this time. Mother is going to get her own way no matter what and Dad is so stirred up that I'm surprised he hasn't taken a poke at Mr. Howard."

"I'll handle Mother, and Dad, too. Howard should have stayed away. Get going. Split 'em up, then get lost."

"All right," I said uneasily. "Uh... look, Pat, I appreciate He looked at me and his lip curled. "Think I'm doing this for you?"

"Why, I thought-"

"You never think ... and I've been doing nothing else for days. If I'm going to be a cripple, do you fancy I'm going to spend my life in a public ward? Or here, with Mother drooling over me and Dad pinching pennies and the girls getting sick of the sight of me? Not Patrick! If I have to be like this, I'm going to have the best of everything ... nurses to jump when I lift a finger and dancing girls to entertain me-and you are going to see that the LRF pays for it. We can keep our contract and we're going to. Oh, I know you don't want to go, but now you've got to."

"Me? You're all mixed up. You crowded me out. You-"

"Okay, forget it. You're rarin' to go." He reached, up and punched me in the ribs, then grinned. "So we'll both go-for you'll take me along every step of the way. Now get out there and break that up."

I left two days later. When Pat handed Mum his reverse-twist whammie, she did not even fight. If getting the money to let her sick baby have proper care and everything else he wanted meant that I had to space, well, it was too bad but that was how it was. She told me how much it hurt to have me go but I knew she was not too upset. But I was, rather ... I wondered what the score would have been if it had been I who was in Pat's fix? Would she have let Pat go just as easily simply to get me anything I wanted? But I decided to stop thinking about it; parents probably don't know that they are playing favorites even when they are doing it.

Dad got me alone for a man-to-man talk just before I left. He hemmed and hawed and stuck in apologies about how he should have talked things over with me before this and seemed even more embarrassed than I was, which was plenty. When he was floundering I let him know that one of our high school courses had covered most of what he was trying to say. (I didn't let him know that the course had been an anti-climax.) He brightened up and said, "Well, son, your mother and I have tried to teach you right from wrong. Just remember that you are a Bartlett and you won't make too many mistakes. On that other matter, well, if you will always ask yourself whether a girl is the sort you would be proud to bring home to meet your mother, I'll be satisfied."

I promised-it occurred to me that I wasn't going to have much chance to fall into bad company, not with psychologists practically dissecting everybody in Project Lebensraum. The bad apples were never going into the barrel

When I see how naive parents are I wonder how the human race keeps on being born. Just the same it was touching and I appreciate the ordeal he put himself through to get me squared away-Dad was always a decent guy and meant well.

I had a last date with Maudie but it wasn't much; we spent it sitting around Pat's bed, She did kiss me good-by-Pat told her to. Oh, well!

VI TORCHSHIP "LEWIS AND CLARK"

I was in Switzerland only two days. I got a quick look at the lake at Zurich and that was all; the time was jammed with trying to hurry me through all the things Pat had been studying for weeks. It couldn't be done, so they gave me spools of minitape which I was to study after the trip started.

I had one advantage: Planetary League Auxiliary Speech was a required freshman course at our high school-P-L lingo was the working language of Project Lebensraum. I can't say I could speak it when I got there, but it isn't hard. Oh, it seems a little silly to say "goed" when you've always said "gone" but you get used to it, and of course all technical words are Geneva-International and always have been.

Actually, as subproject officer Professor Brunn pointed out, there was not a lot that a telepathic communicator had to know before going aboard ship; the principal purpose of the training center had been to get the crews together, let them eat and live together, so that the psychologists could spot personality frictions which had not been detected through tests.

"There isn't any doubt about you, son. We have your brother's record and we know how close your tests come to matching his. You telepaths have to deviate widely from accepted standards before we would disqualify one of you."

"Sir?'

"Don't you see? We can turn down a ship's captain just for low blood sugar before breakfast and a latent tendency to be short tempered therefrom until he has had his morning porridge. We can fill most billets twenty times over and juggle them until they are matched like a team of acrobats. But not you people. You are so scarce that we must allow you any eccentricity which won't endanger the ship: I wouldn't mind if you believed in astrology-you don't, do you?"

"Goodness, no!" I answered, shocked.

"You see? You're a normal, intelligent boy; you'll do. Why, we would take your twin, on a stretcher, if we had to."

Only telepaths were left when I got to Zurich. The captains and the astrogation and torch crews had joined the ships first, and then the specialists and staff people. All the "idlers" were aboard but us. And I hardly had time to get acquainted even with my fellow mind readers.

They were an odd bunch and I began to see what Professor Brunn meant by saying that we freaks had to be allowed a little leeway. There were a dozen of us-just for the Lewis and Clark, I mean; there were a hundred and fifty for the twelve ships of the fleet, which was every telepathic pair that LRF had been able to sign up. I asked one of them, Bernhard van Houten, why each ship was going to carry so many telepaths?

He looked at me pityingly. "Use your head, Tom. If a radio burns out a valve, what do you do?"

"Why, you replace it."

"There's your answer. We're spare parts. If either end of a telepair dies or anything, that 'radio' is burned out, permanently. So they plug in another one of us. They want to be sure they have at least one telepair still working right up to the end of the trip...they hope."

I hardly had time to learn their names before we were whisked away. There was myself and Bernhard van Houten, a Chinese-Peruvian girl named Mei-Ling Jones (only she pronounced it "Hone-Ace"), Rupert Hauptman, Anna Horoshen, Gloria Maria Antonita Docampo, Sam Rojas, and Prudence Mathews. These were more or less my age. Then there was Dusty Rhodes who looked twelve and claimed to be fourteen. I wondered how LRF had persuaded his parents to permit such a child to go. Maybe they hated him; it would have been easy to do.

Then there were three who were older than the rest of us: Miss Gamma Furtney, Cas Warner, and Alfred McNeil. Miss Gamma was a weirdie, the sort of old maid who never admits to more than thirty; she was our triplet. LRF had scraped up four sets of triplets who were m-r's and could be persuaded to go; they were going to be used to tie the twelve ships together into four groups of three, then the groups could be hooked with four sets of twins.

Since triplets are eighty-six times as scarce as twins it was surprising that they could find enough who were telepathic and would go, without worrying about whether or not they were weirdies. I suspect that the Misses Alpha, Beta, and Gamma Furtney were attracted by the Einstein time effect; they could get even with all the men who had not married them by not getting older while those men died of old age.

We were a "corner" ship and Cas Warner was our sidewise twin, who would hook us through his twin to the Vasco da Gama, thus linking two groups of three. Other sidewise twins tied the other comers. The ones who worked ship-to-ship did not have to be young, since their twins (or triplets) were not left back on Earth, to grow older while their brothers or sisters stayed young through relativity. Cas Warner was forty-five, a nice quiet chap who seemed to enjoy eating with us kids.

The twelfth was Mr. ("Call me 'Uncle Alfred' ") McNeil, and he was an old darling. He was a Negro, his age was anything from sixty-five on up (I couldn't guess), and he had the saintliness that old people get when they don't turn sour and self-centered instead...to look at him you would bet heavy odds that he was a deacon in his church.

I got acquainted with him because I was terribly homesick the first night I was in Zurich and he noticed it and invited me to his room after supper and sort of soothed me. I thought he was one of the Foundation psychologists, like Professor Brunn-but no, he was half of a telepair himself...and not even a sidewise twin; his partner was staying on Earth.

I couldn't believe it until be showed me a picture of his pair partner-a little girl with merry eyes and pigtails-and I finally got it through my thick head that here was that rarity, a telepathic pair who were not twins. She was Celestine Regina Johnson, his great-niece-only be called her "Sugar Pie" after he introduced me to the photograph and had told her who I was.

I had to pause and tell Pat about it, not remembering that he had already met them.

Uncle Alfred was retired and had been playmate-in-chief to his baby great-niece, for he had lived with his niece and her husband. He had taught the baby to talk. When her parents were both killed in an accident he had gone back to work rather than let the child be adopted. "I found out that I could keep tabs on Sugar Pie even when I couldn't see her.

She was always a good baby and it meant I could watch out for her even when I had to be away. I knew it was a gift; I figured that the Lord in His infinite mercy had granted what I needed to let me take care of my little one."

The only thing that had worried him was that he might not live long enough; or, worse still, not be able to work long enough, to permit him to bring up Sugar Pie and get her started right. Then Project Lebensraum had solved everything. No, he didn't mind being away from her because be was not away from her; he was with her every minute.

I gathered an impression that he could actually see her but I didn't want to ask. In any case, with him stone walls did not a prison make nor light-years a separation. He knew that the Infinite Mercy that had kept them together this long would keep them together long enough for him to finish his appointed task. What happened after that was up to the Lord.

I had never met anybody who was so quietly, serenely happy. I didn't feel homesick again until I left him and went to bed. So I called Pat and told him about getting acquainted with Uncle Alfred. He said sure, Uncle All was a sweet old codger... and now I should shut up and go to sleep, as I had a hard day ahead of me tomorrow.

Then they zoomed us out to the South Pacific and we spent one night on Canton Atoll before we went aboard They wouldn't let us swim in the lagoon even though Sam had arranged a picnic party of me and himself and Mei-Ling and Gloria; swimming was one of the unnecessary hazards. Instead we went to bed early and were awakened two hours before dawn-a ghastly time of day, particularly when your time sense has been badgered by crossing too many time zones too fast. I began to wonder what I was doing there and why?

The Lewis and Clark was a few hundred miles east of there in an unused part of the ocean. I had not realized how much water there was until I took a look at it from the air-and at that you see just the top. If they could figure some way to use all those wet acres as thoroughly as they use the Mississippi Valley they wouldn't need other planets.

From the air the Lewis and Clark looked like a basketball floating in water; you could not see that it was really shaped like a turnip. It floated with the torch down; the hemispherical upper part was all that showed. I got one look at her, with submersible freighters around her looking tiny in comparison, then our bus was hovering over her and we were being told to mind our step on the ladder and not leave anything behind in the bus. It occurred to me that it wouldn't do any good to write to Lost-and-Found if we did. It was a chilly thought ... I guess I was still homesick, but mostly I was excited.

I got lost a couple of times and finally found my stateroom just as the speaker system was booming: "All hands, prepare for acceleration. Idlers strap down. Boost stations report in order. Minus fourteen minutes." The man talking was so matter of fact that he might as well have been saying, "Local passengers change at Birmingham."

The stateroom was big enough, with a double wardrobe and a desk with a built-in viewer-recorder and a little wash-stand and two pull-down beds. They were down, which limited the floor space. Nobody else was around so I picked one, lay down and fastened the three safety belts. I had just done so when that little runt Dusty Rhodes stuck his head in. "Hey! You got my bed!"

I started to tell him off, then decided that just before boost was no time for an argument. "Suit yourself," I answered, unstrapped, and moved into the other one, strapped down again.

Dusty looked annoyed; I think he wanted an argument. Instead of climbing into the one I had vacated, he stuck his head out the door and looked around. I said, "Better strap down. They already passed the word."

"Tripe," he answered without turning. "There's plenty of time. I'll take a quick look in the control room."

I was going to suggest that he go outside while he was about it when a ship's officer came through, checking the rooms. "In you get, son," he said briskly, using the no-nonsense tone in which you tell a dog to heel. Dusty opened his mouth, closed it, and climbed in. Then the officer "baby-strapped" him, pulling the buckles around so that they could not be reached by the person in the bunk. He even put the chest strap around Dusty's arms.

He then checked my belts. I had my arms outside the straps but all he said was, "Keep your arms on the mattress during boost," and left.

A female voice said, "All special communicators link with your telepartners."

I had been checking with Pat ever since I woke up and had described the Lewis and Clark to him when we first sighted her and then inside as well. Nevertheless I said, ("Are you there, Pat?")

"Naturally. I'm not going anyplace. What's the word?"

("Boost in about ten minutes. They just told us to link with our partners during boost.")

"You had better stay linked, or I'll beat your ears off! I don't want to miss anything.

("Okay, okay, don't race your engine. Pat? This isn't quite the way I thought it would be.")

"Huh? How?"

("I don't know. I guess I expected brass bands and speeches and such. After all, this is a big day. But aside from pictures they took of us last night at Canton Atoll, there was more fuss made when we started for Scout camp.")

Pat chuckled. "Brass bands would get wet where you are-not to mention soaked with neutrons."

("Sure, sure.") I didn't have to be told that a torchship needs elbow room for a boost. Even when they perfected a way to let them make direct boost from Earth-zero instead of from a space station, they still needed a few thousand square miles of ocean-and at that you heard ignorant prattle about how the back wash was changing the climate and the government ought to do something.

"Anyhow, there are plenty of brass bands and speeches. We are watching one by the Honorable J. Dillberry Egghead... shall I read it back?"

("Uh, don't bother. Who's 'we'?")

"All of us. Faith and Frank just came in."

I was about to ask about Maudie when a new voice came over the system: "Welcome aboard, friends. This is the Captain. We will break loose at an easy three gravities; nevertheless, I want to warn you to relax and keep your arms inside your couches. The triple boost will last only six minutes, then you will be allowed to get up. We take off in number two position, just after the Henry Hudson."

I repeated to Pat what the Captain was saying practically as fast as he said it; this was one of the things we had practiced while he was at the training center: letting your directed thoughts echo what somebody else was saying so that a telepair acted almost like

a microphone and a speaker. I suppose he was doing the same at the other end, echoing the Captain's words to the family a split second behind me-it's not hard with practice.

The Captain said, "The Henry is on her final run-down ... ten seconds... five seconds... now!"

I saw something like heat lightning even though I was in a closed room. For a few seconds there was a sound over the speaker like sleet on a window, soft and sibilant and far away. Pat said, "Boy!"

("What is it, Pat?")

"She got up out of there as if she had sat on a bee. Just a hole in the water and a flash of light. Wait a sec-they're shifting the view pick-up from the space station to Luna."

("You've got a lot better view than I have. All I can see is the ceiling of this room.")

The female voice said, "Mr. Warner! Miss Furtney! Tween-ships telepairs start recording."

The Captain said, "All hands, ready for boost. Stand by for count down," and another voice started in, "Sixty seconds ... fifty-five ... fifty ... forty-five ... holding on-forty-five ... holding forty-five... holding... holding..."

-until I was ready to scream.

"Tom, what's wrong?"

("How should I know?")

"Forty... thirty-five ... thirty..."

"Tom, Mum wants me to tell you to be very careful."

("What does she think I can do? I'm just lying here, strapped down.")

"I know." Pat chuckled. "Hang on tight to the brush, you lucky stiff; they are about to take away the ladder."

"... four!... Three!... Two!... ONE!"

I didn't see a flash, I didn't hear anything. I simply got very heavy-like being on the bottom of a football pile-up.

"There's nothing but steam where you were."

I didn't answer, I was having trouble breathing.

"They've shifted the pick-up. They're following you with a telephoto now. Tom, you ought to see this ... you look just like a sun. It burns the rest of the picture right out of the tank."

("How can I see it?") I said crossly. ("I'm in it.')

"You sound choked up. Are you all right?"

("You'd sound choked, too, if you had sand bags piled across your chest.")

"Is it bad?"

("It's not good. But it's all right, I guess.")

Pat let up on me and did a right good job of describing what he was seeing by television. The Richard E. Byrd took off just after we did, before we had finished the high boost to get escape velocity from Earth; he told me all about it. I didn't have anything to say anyhow; I couldn't see anything and I didn't feel like chattering. I just wanted to hold still and feel miserable.

I suppose it was only six minutes but it felt more like an hour. After a long, long time, when I had decided the controls were jammed and we were going to keep on at high boost until we passed the speed of light, the pressure suddenly relaxed and I felt light as a snowflake ... if it hadn't been for the straps I would have floated up to the ceiling.

"We have reduced to one hundred and ten per cent of one gravity," the Captain said cheerfully. "Our cruising boost will be higher, but we will give the newcomers among us a while to get used to it." His tone changed and he said briskly, "All stations, secure from blast-off and set space watches, third section."

I loosened my straps and sat up and then stood up. Maybe we were ten per cent heavy, but it did not feel like it; I felt fine. I started for the door, intending to look around more than I had been able to when I came aboard.

Dusty Rhodes yelled at me. "Hey! Come back here and unstrap me! That moron fastened the buckles out of my reach."

I turned and looked at him. "Say 'please.'"

What Dusty answered was not "please." Nevertheless I let him loose. I should have made him say it; it might have saved trouble later.

VII 19,900 WAYS

The first thing that happened in the L.C. made me think I was dreaming-I ran into Uncle Steve.

I was walking along the circular passageway that joined the staterooms on my deck and looking for the passage inboard, toward the axis of the ship. As I turned the comer I bumped into someone. I said, "Excuse me," and started to go past when the other person grabbed my arm and clapped me on the shoulder. I looked up and it was Uncle Steve, grinning and shouting at me. "Hi, shipmate! Welcome aboard!"

"Uncle Steve! What are you doing here?"

"Special assignment from the General Staff ... to keep you out of trouble."

"Huh?"

There was no mystery when he explained. Uncle Steve had known for a month that his application for special discharge to take service with the LRF for Project Lebensraum had been approved; he had not told the family but had spent the time working a swap to permit him to be in the same ship as Pat-or, as it turned out, the one I was in.

"I thought your mother might take it easier if she knew I was keeping an eye on her boy. You can tell her about it the next time you are hooked in with your twin."

"I'll tell her now," I answered and gave a yell in my mind for Pat. He did not seem terribly interested; I guess a reaction was setting in and he was sore at me for being where he had expected to be. But Mother was there and he said he would tell her. "Okay, she knows."

Uncle Steve looked at me oddly. "Is it as easy as that?"

I explained that it was just like talking ... a little faster, maybe, since you can think words faster than you can talk, once you are used to it. But he stopped me. "Never mind. You're trying to explain color to a blind man. I just wanted Sis to know."

"Well, okay." Then I noticed that his uniform was different. The ribbons were the same and it was an LRF company uniform, like my own, which did not surprise me-but his chevrons were gone: "Uncle Steve ... you're wearing major's leaves!"

He nodded. "Home town boy makes good. Hard work, clean living, and so on."

"Gee, that's swell!"

"They transferred me at my reserve rank, son, plus one bump for exceptionally neat test papers. Fact is, if I had stayed with the Corps, I would have retired as a ship's sergeant at best-there's no promotion in peacetime. But the Project was looking for certain men, not certain ranks, and I happened to have the right number of hands and feet for the job."

"Just what is your job, Uncle?"

"Commander of the ship's guard."

"Huh? What have you got to guard?"

"That's a good question. Ask me in a year or two and I can give you a better answer. Actually, 'Commander Landing Force' would be a better title. When we locate a likely looking planet-'when and if,' I mean-I'm the laddie who gets to go out and check the lay of the land and whether the natives are friendly while you valuable types stay safe and snug in the ship." He glanced at his wrist. "Let's go to chow."

I wasn't hungry and wanted to look around, but Uncle Steve took me firmly by the arm and headed for the mess room. "When you have soldiered as long as I have, lad, you will learn that you sleep when you get a chance and that you are never late for chow line."

It actually was a chow line, cafeteria style. The L.C. did not run to table waiters nor to personal service of any sort, except for the Captain and people on watch. We went through the line and I found that I was hungry after all. That meal only, Uncle Steve took me ever to the heads-of-departments table. "Ladies and gentlemen, this is my nephew with two heads, Tom Bartlett. He left his other head dirtside-he's a telepair twin. If he does anything he shouldn't, don't tell me, just clobber him." He glanced at me; I was turning red. "Say 'howdy,' son ... or just nod if you can't talk."

I nodded and sat down. A sweet old girl with the sort of lap babies like to sit on was next to me. She smiled and said, "Glad to have you with us, Tom." I learned that she was the Chief Ecologist. Her name was Dr. O'Toole, only nobody called her that, and she was married to one of the relativists.

Uncle Steve went around the table, pointing out who was who and what they did: the Chief Engineer. the Relativist (Uncle Steve called him the "Astrogator" as the job would be called in an ordinary ship), Chief Planetologist Harry Gates and the Staff Xenologist, and so forth-I couldn't remember the names at the time-and Reserve Captain Urqhardt. I didn't catch the word "reserve" and was surprised at how young he was. But Uncle Steve corrected me: "No, no! He's not the Captain. He's the man who will be captain if it turns out we need a spare. Across from you is the Surgeon-don't let that fool you, either; he never does surgery himself. Dr. Devereaux is the boss head-shrinker."

I looked puzzled and Uncle Steve went on, "You don't savvy? Psychiatrist. Doc Dev is watching every move we make, trying to decide how quick he will have to be with the straitjacket and the needle. Correct, Doc?"

Dr. Devereaux buttered a roll. "Essentially, Major. But finish your meal; we're not coming for you until later in the day." He was a fat little toad, ugly as could be, and with a placid, unbreakable calm. He went on, "I just had an up setting thought, Major."

"I thought that thoughts never upset you?"

"Consider. Here I am charged with keeping quaint characters like you sane ... but they forgot to assign anybody to keep me sane. What should I do?"

"Mmm..." Uncle Steve seemed to study it. "I didn't know that head-shrinkers were supposed to be sane, themselves."

Dr. Devereaux nodded. "You've put your finger on it. As in your profession, Major, being crazy is an asset. Pass the salt, please."

Uncle Steve shut up and pretended to wipe off blood.

A man came in and sat down; Uncle Steve introduced me and said, "Staff Commander Frick, the Communications Officer. Your boss, Tom."

Commander Frick nodded and said, "Aren't you third section, young man?"

"Uh, I don't know, sir."

"I do ... and you should have known. Report to the communications office."

"Uh, you mean now, sir?"

"Right away. You are a half hour late."

I said, "Excuse me," and got up in a hurry, feeling silly. I glanced at Uncle Steve but he wasn't looking my way; he seemed not to have heard it.

The communications office was two decks up, right under the control room; I had trouble finding it. Van Houten was there and Mei-Ling and a man whose name was Travers, who was communicator-of-the-watch. Mei-Ling was reading a sheaf of papers and did not look up; I knew that she was telepathing. Van said, "Where the deuce have you been? I'm hungry."

"I didn't know," I protested.

"You're supposed to know."

He left and I turned to Mr. Travers. "What do you want me to do?"

He was threading a roll of tape into an autotransmitter; he finished before he answered me. "Take that stack of traffic as she finishes it, and do whatever it is you do with it. Not that it matters."

"You mean read it to my twin?"

"That's what I said."

"Do you want him to record?"

"Traffic is always recorded. Didn't they teach you anything?"

I thought about explaining that they really hadn't because there had not been time, when I thought, oh what's the use? He probably thought I was Pat and assumed that I had had the full course. I picked up papers Mei-Ling was through with and sat down.

But Travers went on talking. "I don't know what you freaks are up here for now anyhow. You're not needed; we're still in radio range."

I put the papers down and stood up: "Don't call us 'freaks.' "

He glanced at me and said, "my, how tall you've grown. Sit down and get to work."

We were about the same height but he was ten years older and maybe thirty pounds heavier. I might have passed it by if we had been alone, but not with Mei-Ling present.

"I said not to call us 'freaks.' It's not polite."

He looked tired and not amused but he didn't stand up. I decided he didn't want a fight and felt relieved. "All right, all right," he answered. "Don't be so touchy. Get busy on that traffic."

I sat down and looked over the stuff I had to send, then called Pat and told him to start his recorder; this was not a practice message.

He answered, "Call back in half an hour. I'm eating dinner."

("I was eating lunch but I didn't get to finish. Quit stalling, Pat. Take a look at that contract you were so anxious to sign.")

"You were just as anxious. What's the matter, kid? Cold feet already?"

("Maybe, maybe not. I've got a hunch that this isn't going to be one long happy picnic. But I've learned one thing already; when the Captain sends for a bucket of paint, he wants a full bucket and no excuses. So switch on that recorder and stand by to take down figures.")

Pat muttered and gave in, then announced that he was ready after a delay that was almost certainly caused by Mother insisting that he finish dinner. "Ready."

The traffic was almost entirely figures (concerning the take-off, I suppose) and code. Being such, I had to have Pat repeat back everything. It was not hard, but it was tedious. The only message in clear was one from the Captain, ordering roses sent to a Mrs. Detweiler in Brisbane and charged to his LRF account, with a message: "Thanks for a wonderful farewell dinner."

Nobody else sent personal messages; I guess they had left no loose ends back on Earth.

I thought about sending some roses to Maudie, but I didn't want to do it through Pat. It occurred to me that I could do it through Mei-Ling, then I remembered that, while I had money in the bank, I had appointed Pat my attorney; if I ordered them, he would have to okay the bill I decided not to cross any bridges I had burned behind me.

Life aboard the L.C., or the Elsie as we called her, settled into a routine. The boost built up another fifteen per cent which made me weigh a hundred and fifty-eight pounds; my legs ached until I got used to it-but I soon did; there are advantages in being kind of skinny. We freaks stood a watch in five, two at a time-Miss Gamma and Cas Warner were not on our list because they hooked sidewise with other ships. At first we had a lot of spare time, but the Captain put a stop to that.

Knowing that the LRF did not really expect us to return, I had not thought much about that clause in the contract which provided for tutoring during the trip but I found out that the Captain did not intend to forget it. There was school for everybody, not just for us telepaths who were still of school age. He appointed Dr. Devereaux, Mrs. O'Toole, and Mr. Krishnamurti a school board and courses were offered in practically everything, from life drawing to ancient history. The Captain himself taught that last one; it turned out he knew Sargon the Second and Socrates like brothers.

Uncle Alfred tried to sign up for everything, which was impossible, even if he didn't eat, sleep, nor stand watch. He had never, he told me, had time for all the schooling he wanted and now at last he was going to get it. Even my real uncle, Steve, signed up for a couple of courses. I guess I showed surprise at this, for he said, "Look, Tom, I found out my first cruise that the only way to make space bearable is to have something to learn and learn it. I used to take correspondence courses. But this bucket has the finest assemblage of really bright minds you are ever likely to see. If you don't take advantage of it, you are an idiot. Mama O'Toole's cooking course, for example: where else can you find a Cordon Bleu graduate willing to teach you her high art free? I ask you!"

I objected that I would never need to know how to cook high cuisine.

"What's that got to do with it? Learning isn't a means to an end; it is an end in itself. Look at Uncle Alf. He's as happy as a boy with a new slingshot. Anyhow, if you don't sign up for a stiff course, old Doc Devereaux will find some way to keep you busy, even if it is counting rivets. Why do you think the Captain made him chairman of the board of education?"

"I hadn't thought about it. "

"Well, think about it. The greatest menace in space is going coffin crazy. You are shut up for a long time in a small space and these is nothing outside but some mighty thin vacuum ... no street lights, no bowling alleys. Inside are the same old faces and you start hating them. So a smart captain makes sure you have something to keep you interested and tired-and ours is the smartest you'll find or he wouldn't be on this trip."

I began to realize that a lot of arrangements in the Elsie were simply to see that we stayed healthy and reasonably happy. Not just school, but other things. Take the number we bad aboard, for example-almost two hundred. Uncle Steve told me that the Elsie could function as a ship with about ten: a captain, three control officers, three engineer officers, one communicator, one farmer, and a cook. Shucks, you could cut that to five: two control officers (one in command), two torch watchstanders, and a farmer-cook.

Then why two hundred?

In the first place there was room enough. The Elsie and the other ships had been rebuilt from the enormous freighters the LRF use to haul supplies out to Pluto and core material back to Earth. In the second place they needed a big scientific staff to investigate the planets we hoped to find. In the third place some were spare parts, like Reserve Captain Urqhardt and, well, me myself. Some of us would die or get killed; the ship had to go on.

But the real point, as I found out, is that no small, isolated social group can be stable. They even have a mathematics for it, with empirical formulas and symbols for "lateral pressures" and "exchange valences" and "exogamic relief." (That last simply means that the young men of a small village should find wives outside the village.)

Or look at it this way. Suppose you had a one-man space ship which could cruise alone for several years. Only a man who was already nutty a certain way could run it-otherwise he would soon go squirrelly some other way and start tearing the controls off the panels. Make it a two-man ship: even if you used a couple as fond of each other as Romeo and Juliet, by the end of the trip even Juliet would start showing black-widow blood.

Three is as bad or worse, particularly if they gang up two against one. Big numbers are much safer. Even with only two hundred people there are exactly nineteen thousand nine hundred ways to pair them off, either as friends or enemies, so you see that the social possibilities shoot up rapidly when you increase the numbers. A bigger group means more chances to find friends and more ways to avoid people you don't like. This is terribly important aboard ship.

Besides elective courses we had required ones called "ship's training"-by which the Captain meant that every body had to learn at least one job he had not signed up for. I stood two watches down in the damping room, whereupon Chief Engineer Roch stated in writing that he did not think that I would ever make a torcher as I seemed to have an innate lack of talent for nuclear physics. As a matter of fact it made me nervous to be that close to an atomic power plant and to realize the unleashed hell that was going on a few feet away from me.

I did not make out much better as a farmer, either. I spent two weeks in the air-conditioning plant and the only thing I did right was to feed the chickens. When they caught me cross-pollinating the wrong way some squash plants which were special pets of Mrs. O'Toole, she let me go, more in sorrow than in anger. "Tom," she said, "what do you do well?"

I thought about it. "Uh, I can wash bottles... and I used to raise hamsters."

So she sent me over to the research department and I washed beakers in the chem lab and fed the experimental animals. The beakers were unbreakable. They wouldn't let me touch the electron microscope. It wasn't bad-I could have been assigned to the laundry.

Out of the 19,900 combinations possible in the Elsie, Dusty Rhodes and I were one of the wrong ones. I hadn't signed up for the life sketching class because he was teaching it; the little wart really was a fine draftsman. I know, I'm pretty good at it myself and I would have liked to have been in that class. What was worse, he had an offensively high I.Q., genius plus, much higher than mine, and he could argue rings around me. Along with that he had the manners of a pig and the social graces of a skunk-a bad go, any way you looked at it.

"Please" and "Thank you" weren't in his vocabulary. He never made his bed unless someone in authority stood over him, and I was likely as not to come in and find him lying on mine, wrinkling it and getting the cover dirty. He never hung up his clothes, he always left our wash basin filthy, and his best mood was complete silence.

Besides that, he didn't bathe often enough. Aboard ship that is a crime.

First I was nice to him, then I bawled him out, then I threatened him. Finally I told him that the next thing of his I found on my bed was going straight into the mass converter. He just sneered and the next day I found his camera on my bed and his dirty socks on my pillow.

I tossed the socks into the wash basin, which he had left filled with dirty water, and locked his camera in my wardrobe, intending to let him stew before I gave it back.

He didn't squawk. Presently I found his camera gone from my wardrobe, in spite of the fact that it was locked with a combination which Messrs. Yale & Towne had light-heartedly described as "Invulnerable." My clean shirts were gone, too ... that is, they weren't clean; somebody had carefully dirtied every one of them.

I had not complained about him. It had become a point of pride to work it out myself; the idea that I could not cope with somebody half my size and years my junior did not appeal to me.

But I looked at the mess he had made of my clothes and I said to myself, "Thomas Paine, you had better admit that you are licked and holler for help-else your only chance will be to plead justifiable homicide."

But I did not have to complain. The Captain sent for me; Dusty had complained about me instead.

"Bartlett, young Rhodes tells me you are picking on him. What's the situation from your point of view?"

I started to swell up and explode. Then I let out my breath and tried to calm down; the Captain really wanted to know.

"I don't think so, sir, though it is true that we have not been getting along."

"Have you laid hands on him?"

"Uh ... I haven't smacked him, sir. I've jerked him off my bed more than once-and I wasn't gentle about it."

He sighed. "Maybe you should have smacked him. Out of my sight, of course. Well, tell me about it. Try to tell it straight-and complete."

So I told him. It sounded trivial and I began to be ashamed of myself ... the Captain had more important things to worry about than whether or not I had to scrub out a hand basin before I could wash my face. But he listened.

Instead of commenting, maybe telling me that I should be able to handle a younger kid better, the Captain changed the subject.

"Bartlett, you saw that illustration Dusty had in the ship's paper this morning?"

"Yes, sir. A real beauty," I admitted. It was a picture of the big earthquake in Santiago, which had happened after we left Earth.

"Mmm... we have to allow you special-talent people a little leeway. Young Dusty is along because he was the only m-r available who could receive and transmit pictures."

"Uh, is that important, sir?"

"It could be. We won't know until we need it. But it could be crucially important. Otherwise I would never have permitted a spoiled brat to come aboard this ship." He frowned. "However, Dr. Devereaux is of the opinion that Dusty is not a pathological ease."

"Uh, I never said he was, sir."

"Listen, please. He says that the boy has an unbalanced personality-a brain that would do credit to a grown man but with greatly retarded social development. His attitudes and evaluations would suit a boy of five, combined with this clever brain. Furthermore Dr. Devereaux says that he will force the childish part of Dusty's personality to grow up, or he'll turn in his sheepskin."

"So? I mean, "Yes, sir?' "

"So you should have smacked him. The only thing wrong with that boy is that his parents should have walloped him, instead of telling him how bright he was." He sighed again.

"Now I've got to do it. Dr. Devereaux tells me I'm the appropriate father image."

"Yes, sir."

" 'Yes, sir,' my aching head. This isn't a ship; it's a confounded nursery. Are you having any other troubles?"

"No, sir."

"I wondered. Dusty also complained that the regular communicators call you people 'freaks.' " He eyed me.

I didn't answer. I felt sheepish about it.

"In any case, they won't again. I once saw a crewman try to knife another one, just because the other persisted in calling him 'skin head.' My people are going to behave like ladies and gentlemen or I'll bang some heads together." He frowned. "I'm moving Dusty into the room across from my cabin. If Dusty will leave you alone, you let him alone. If he won't ... well, use your judgment, bearing in mind that you are responsible for your actions-but remember that I don't expect any man to be a doormat. That's all. Good-by."

VIII RELATIVITY

I had been in the Elsie a week when it was decided to operate on Pat. Pat told me they were going to do it, but he did not talk about it much. His attitude was the old iron-man, as if he meant to eat peanuts and read comics while they were chopping on him. I think he was scared stiff ... I would have been.

Not that I would have understood if I had known the details; I'm no neural surgeon, nor any sort; removing a splinter is about my speed.

But it meant we would be off the watch list for a while, so I told Commander Frick. He already knew from messages passed between the ship and LRF; he told me to drop off the watch list the day before my brother was operated and to consider myself available for extra duty during his convalescence. It did not make any difference to him; not only were there other telepairs but we were still radio-linked to Earth.

Two weeks after we started spacing and the day before Pat was to be cut on I was sitting in my room, wondering whether to go to the communications office and offer my valuable services in cleaning waste baskets and microfilming files or just sit tight until somebody sent for me.

I had decided on the latter, remembering Uncle Steve's advice never to volunteer, and was letting down my bunk, when the squawker boomed: "T. P. Bartlett, special communicator, report to the Relativist!"

I hooked my bunk up while wandering if there was an Eye-Spy concealed in my room-taking down my bunk during working hours seemed always to result in my being paged. Dr. Babcock was not in the control room and they chased me out, but not before I took a quick look around-the control room was off limits to anyone who did not work there. I found him down in the computation room across from the communications office, where I would have looked in the first place if I hadn't wanted to see the control room.

I said, "T. P. Bartlett, communicator tenth grade, reporting to the Relativist as ordered."

Dr. Babcock swung around in his chair and looked at me. He was a big raw-boned man, all hands and feet, and looked more like a lumberjack than a mathematical physicist. I think he played it up-you know, elbows on the table and bad grammar on purpose. Uncle Steve said Babcock had more honorary degrees than most people had socks.

He stared at me and laughed. "Where did you get that fake military manner, son? Siddown. You're Bartlett?"

I sat. "Yes, sir."

"What's this about you and your twin going off the duty list?"

"Well, my brother is in a hospital, sir. They're going to do something to his spine tomorrow."

"Why didn't you tell me?" I didn't answer because it was so unreasonable; I wasn't even in his department. "Frick never tells me anything, the Captain never tells me anything, now you never tell me anything. I have to bang around the galley and pick up gossip to find out what's going on. I was planning on working you over tomorrow. You know that don't you?"

"Uh, no, sir."

"Of course you don't, became I never tell anybody anything either. What a way to run a ship! I should have stayed in Vienna. There's a nice town. Ever have coffee and pastries in the Ring?" He didn't wait for an answer. "Nevertheless I was going to work you and your twin over tomorrow-so now we'll have to do it today. Tell him to stand by."

"Uh; what do you want him to do, Doctor? He's already been moved to a hospital."

"Just tell him to stand by. I'm going, to calibrate you two, that's what. Figure out your index error."

"Sir?"

"Just tell him-"

So I called Pat. I hadn't spoken to him since breakfast; I wondered how he was going to take it

But he already knew. "Yes, yes," he said in a tired voice.
"They're setting up apparatus in my hospital room right now.
Mother made such a fuss I had to send her out."
("Look, Pat, if you don't want to do this, whatever it is, I'll tell them nothing doing. It's an imposition.")
"What difference does it make?" he said irritably. "I've got to sweat out the next sixteen hours somehow. Anyhow, this may be the last time we work together."
It was the first time he had shown that it was affecting his nerve. I said hastily, ("Don't talk that way, Pat. You're going to get well. You're going to walk again. Shucks, you'll even be able to ski if you want to.")
"Don't give me that Cheerful Charlie stuff. I'm getting more of it from the folks than I can use. It makes me want to throw up."
("Now see here, Pat-")
"Stow it, stow it! Let's get on with what they want us to do."
("Well, all right.") I spoke aloud: "He's ready, Doctor."
"Half a minute. Start your camera, O'Toole." Dr. Babcock touched something on his desk. "Commander Frick?"
"Yes, Doctor," Frick's voice answered.
"We're ready. You coming in?"
"All set here," I heard my boss answer. "We'll come in."
A moment later he entered, with Anna Horoshen. In the meantime I took a look around. One whole wall of the computation room was a computer, smaller than the one at Los Alamos but not much. The blinking lights must have meant something to somebody. Sitting at right angles to it at a console was Mr. O'Toole and above the console was a big display scope; at about one-second intervals a flash of light would peak in the center of it.
Anna nodded without speaking; I knew she must be linked. Pat said, "Tom, you've got a girl named Anna Horoshen aboard: Is she around?"
("Yes. Why?")
"Say hello to her for me-1 knew her in Zurich. Her sister Becky is here." He chuckled and I felt better. "Good looking babes, aren't they? Maudie is jealous."
Babcock said to Frick, "Tell them to stand by. First synchronizing run, starting from their end."
"Tell them, Anna,"
She nodded. I wondered why they bothered with a second telepair when they could talk through myself and Pat. I soon found out: Pat and I were too busy.
Pat was sounding out ticks like a clock; I was told to repeat them... and every time I did another peak of light flashed on the display scope. Babcock watched it, then turned me around so that I couldn't see and taped a microphone to my voice box. "Again."
Pat said, "Stand by-" and started ticking again. I did my best to tick right with him but it was the silliest performance possible. I heard Babcock say quietly, "That cut out the feedback and the speed-of-sound lag. I wish there were some way to measure the synaptic rate arose closely."
Frick said, "Have you talked to Dev about it?"
I went on ticking.
"A reverse run now, young lady," Babcock said, and slipped headphones on me. I immediately heard a ticking like the ticks Pat had been sending. "That's a spectral

metronome you're listening to, young fellow, timed by monochrome light. It was synchronized with the one your brother is using before we left Earth. Now start ticking at him,"

So I did. It had a hypnotic quality; it was easier to get into step and tick with it than it was to get out of step. It was impossible to ignore it. I began to get sleepy but I kept on ticking; I couldn't stop.

"End of run," Babcock announced. The ticking stopped and I rubbed my ears.

"Dr. Babcock?"

" "Huh?"

"How can you tell one tick from another?"

"Eh? You can't. But O'Toole can, he's got it all down on film. Same at the other end. Don't worry about it; just try to stay in time."

This silliness continued for more than an hour, sometimes with Pat sending, sometimes myself. At last O'Toole looked up and said, "Fatigue factor is cooking our goose, Doc. The second differences are running all over the lot."

"Okay, that's all," Babcock announced. He turned to me.

"You can thank your brother for me and sign off."

Commander Frick and Anna left. I hung around. Presently Dr. Babcock looked up from his desk and said, "You can go, bub. Thanks."

"Uh, Dr. Babcock?"

"Huh? Speak up."

"Would you mind telling me what this is all about?"

He looked surprised, then said, "Sorry. I'm not used to using people instead of instruments; I forget. Okay, sit down. This is why you m-r people were brought along: for research into the nature of time."

I stared. "Sir? I thought we were along to report back on the planets we expect to find."

"Oh, that- Well, I suppose so, but this is much more important. There are too many people as it is; why encourage new colonies? A mathematician could solve the population problem in jig time-just shoot every other one."

Mr. O'Toole said, without looking up, "The thing I like about you, Chief, is your big warm heart."

"Quiet in the gallery, please. Now today, son, we have been trying to find out what time it is."

I must have looked as puzzled as I felt for he went on, "Oh, we know what time it is ... but too many different ways. See that?" He pointed at the display scope, still tirelessly making a peak every second. "That's the Greenwich time tick, pulled in by radio and corrected for relative speed and change of speed. Then there is the time you were hearing over the earphones; that is the time the ship runs by. Then there is the time you were getting from your brother and passing to us. We're trying to compare them all, but the trouble is that we have to have people in the circuit and, while a tenth of a second is a short time for the human nervous system, a microsecond is a measurably long time in physics. Any radar system splits up a microsecond as easily as you slice a pound of butter. So we use a lot of runs to try to even out our ignorance."

"Yes, but what do you expect to find out?"

"If I 'expected,' I wouldn't be doing it. But you might say that we are trying to find out what the word "simultaneous" means."

Mr. O'Toole looked up from the console. "If it means anything," he amended.
Dr. Babcock glanced at him. "You still here? 'If it means anything.' Son, ever since the great Doctor Einstein, 'simultaneous' and 'simultaneity' have been dirty words to physicists. We chucked the very concept, denied that it had meaning, and built up a glorious structure of theoretical physics without it. Then you mind readers came along and kicked it over. Oh, don't look guilty; every house needs a housecleaning now and then. If you folks had done your carnival stunt at just the speed of light, we would have assigned you a place in the files and forgotten you. But you rudely insisted on doing it at something enormously greater than the speed of light, which made you as welcome as a pig at a wedding. You've split us physicists into two schools, those who want to class you as a purely psychological phenomenon and no business of physics-these are the 'close your eyes and it will go away' boys-and a second school which realizes that since measurements can be made of whatever this is you do, it is therefore the business of physics to measure and include it ... since physics is, above all, the trade of measuring things and assigning definite numerical values to them."
O'Toole said, "Don't wax philosophical, Chief."
"You get back to your numbers, O'Toole; you have no soul These laddies want to measure how fast you do it. They don't care how fast-they've already recovered from the blow that you do it faster than light-but they want to know exactly how fast. They can't accept the idea that you do it 'instantaneously,' for that would require them to go to a different church entirely. They want to assign a definite speed of propagation, such-and-such number of times faster than the speed of light. Then they can modify their old equations and go right on happily doing business at the old stand."
"They will," agreed O'Toole.
"Then there is a third school of thought, the right one...my own."
O'Toole, without looking up, made a rude noise.
"Is that your asthma coming back?" Babcock said anxiously. "By the way, you got any results?"
"They're still doing it in nothing flat. Measured time negative as often as positive and never greater than inherent observational error."
"You see, son? That's the correct school. Measure what happens and let the chips fly where they may."
"Hear hear!"
"Quiet, you renegade Irishman. Besides that, you m-r's give us our first real chance to check another matter. Are you familiar with the relativity transformations?"
"You mean the Einstein equations?
"Surely. You know the one for time?"
I thought hard Pat and I had taken first-year physics our freshman year; it had been quite a while. I picked up a piece of paper and wrote down what I thought it was:

"That's it," agreed Dr. Babcock. "At a relative velocity of 'v' time interval at first frame of reference equals time interval at second frame of reference multiplied by the square root of one minus the square of the relative velocity divided by the square of the speed of light. That's just the special case, of course, for constant speeds; it is more complicated

for acceleration. But there has been much disagreement as to what the time equations meant, or if they meant anything."

I blurted out, "Huh? But I thought the Einstein theory had been proved?" It suddenly occurred to me that, if the relativity equations were wrong, we were going to be away a mighty long time-Tau Ceti, our first stop, was eleven light-years from the Sun... and that was just our first one; the others were a lot farther.

But everybody said that once we got up near the speed of light the months would breeze past like days. The equations said so.

"Attend me. How do you prove that there are eggs in a bird's nest? Don't strain your gray matter: go climb the tree and find out. There is no other way. Now we are climbing the tree."

"Fine!" said O'Toole. "Go climb a tree."

"Noisy in here. One school of thought maintained that the equations simply meant that a clock would read differently if you could read it from a passing star ... which you can't... but that there was no real stretching or shrinking of time-whatever 'real' means. Another school pointed to the companion equations for length and mass, maintaining that the famous Michelson-Morley experiment showed that the length transformation was 'real' and pointing out that the increase of mass was regularly computed and used for particle-accelerator ballistics and elsewhere in nuclear physics-for example, in the torch that pushes this ship. So, they reasoned, the change in time rates must be real, because the corollary equations worked in practice. But nobody knew. You have to climb the tree and look."

"When will we know?" I was still worrying. Staying several years, Einstein time, in the ship I had counted on. Getting killed in the course of it, the way Uncle Steve said we probably would, I refused to worry about. But dying of old age in the Elsie was not what I had counted on. It was a grim thought, a life sentence shut up inside these steel walls.

"When? Why, we know right now."

"You do? What's the answer?"

"Don't hurry me, son. We've been gone a couple of weeks, at a boost of 124% of one gee; we're up to about 9,000 miles per second now. We still haven't come far-call it seven and a half light-hours or about 5,450,000,000 miles. It will be the better part of a year before we are crowding the speed of light. Nevertheless we have reached a sizable percentage of that speed, about five per cent; that's enough to show. Easy to measure, with the aid of you mind readers."

"Well, sir? Is it a real time difference? Or is it just relative?"

"You're using the wrong words. But it's 'real,' so far as the word means anything. The ratio right now is about 99.9%."

"To put it exactly," added Mr. O'Toole, "Bartlett's slippage-that's a technical term I just invented-his 'slippage' in time rate from that of his twin has now reached twelve parts in ten thousand."

"So you would make me a liar for one fiftieth of one per cent?" Babcock complained. "O'Toole, why did I let you come along?"

"So you would have some one to work your arithmetic," his assistant answered smugly.

Pat told me he did not want me around when they operated, but I came anyway. I locked myself in my room so nobody could disturb me and stuck with him. He didn't really

object; whenever I spoke he answered and the it got to the deadline the more he talked... a cheerful babble about nothing and everything. It did not fool me.

When they wheeled him into surgery, he said, "Tom, you should see my anesthetist. Pretty as a sunny day and just lap size."

("Isn't her face covered with a mask?")

"Well, not completely. I can see her pretty blue eyes. 1 think I'll ask her what she's doing tonight."

("Maudie won't like that.")

"You keep Maudie out of this; a sick man is entitled to privileges. Wait a sec, I'll ask her."

("What did she say?")

"She said, 'Nothing much,' and that I would be doing the same for a few days. But I'll get her phone number."

("Two gets you five she won't give it to you.")

"Well, I can try... uh uh! Too late, they're starting in ... Tom, you wouldn't believe this needle; it's the size of an air hose. She says she wants me to count. Okay, anything for a laugh... one ... two... three..."

Pat got up to seven and I counted with him. All the way through I kept winding up tighter and tighter to unbearable tension and fear. I knew now what he apparently had been sure of all along, that he was not coming out of it. At the count of seven he lost track but his mind did not go silent. Maybe those around the operating table thought they had him unconscious but I knew better; he was trapped inside and screaming to get out.

I called to him and he called back but we couldn't find each other. Then I was as trapped and lost and confused as he was and we groped around in the dark and the cold and the aloneness of the place where you die.

Then I felt the knife whittling at my back and I screamed.

The next thing I remember is a couple of faces floating over me. Somebody said, "I think he's coming around, Doctor." The voice did not belong to anyone; it was a long way off.

Then there was just one face and it said, "Feeling better?"

"I guess so. What happened?"

"Drink this. Here, I'll hold up your head."

When I woke up again I felt fairly wide awake and could see that I was in the ship's infirmary. Dr. Devereaux was there, looking at me. "You decided to come out of it, young fellow?"

"Out of what, Doctor? What happened?"

"I don't know precisely, but you gave a perfect clinical picture of a patient terminating in surgical shock. By the time we broke the lock on your door, you were far gone-you gave us a bad time. Can you tell me about it?"

I tried to think, then I remembered. Pat! I called him in my mind. ("Pat! Where are you, boy?")

He didn't answer. I tried again and he still didn't answer, so I knew. I sat up and managed to choke out, "My brother ... he died!"

Dr. Devereaux said, "Wups! Take it easy. Lie down. He's not dead ... unless he died in the last ten minutes, which I doubt."

"But I can't reach him! How do you know? I can't reach him, I tell you!"

"Come down off the ceiling. Because I've been checking on him all morning via the m-r's on watch. He's resting easily under an eighth grain of hypnal, which is why you can't raise him. I may be stupid, son-I was stupid, not to warn you to stay out of it-but I've been tinkering with the human mind long enough to figure out approximately what happened to you, given the circumstances. My only excuse is that I have never encountered such circumstances before."

I quieted a little. It made sense that I couldn't wake Pat if they had him under drugs. Under Dr. Devereaux's questions I managed to tell him more or less what had happened-not perfectly, because you can't really tell someone else what goes on inside your head.

"Uh, was the operation successful, Doctor?"

"The patient came through in good shape. We'll talk about it later. Now turn over."

"Huh?"

"Turn over. I want to take a look at your back."

He looked at it, then called two of his staff to see it. Presently he touched me. "Does that hurt?"

"Ouch! Uh, yes, it's pretty tender. What's wrong with my back, Doctor?"

"Nothing, really. But you've got two perfect stigmata, just matching the incisions for Macdougal's operation ... which is the technique they used on your brother."

"Uh, what does that mean?"

"It means that the human mind is complicated and we don't know much about it. Now roll over and go to sleep. I'm going to keep you in bed a couple of days."

I didn't intend to go to sleep but I did. I was awakened by Pat calling me. "Hey, Tom! Where are you? Snap out of it."

("I'm right here. What's the matter?")

"Tom... I've got my legs back!"

I answered, ("Yeah, I know,") and went back to sleep.

IX RELATIVES

Once Pat was over his paralysis I should have had the world by the tail, for I had everything I wanted. Somehow it did not work that way. Before he was hurt, I had known why I was down in the dumps: it was because he was going and I wasn't. After he was hurt, I felt guilty because I was getting what I wanted through his misfortune. It didn't seem right to be happy when he was crippled-especially when his crippled condition had got me what I wanted.

So I should have been happy once he was well again.

Were you ever at a party where you were supposed to be having fun and suddenly you realized that you weren't? No reason, just no fun and the whole world gray and tasteless?

Some of the things that were putting me off my feed I could see. First there had been Dusty, but that had been cleared up. Then there had been the matter of other people, especially the electron pushers we stood watch with, calling us freaks and other names and acting as if we were. But the Captain had tromped on that, too, and when we got better acquainted people forgot about such things. One of the relativists, Janet Meers, was a lightning calculator, which made her a freak, too, but everybody took it for granted in her and after a while they took what we did for granted.

After we got out of radio range of Earth the Captain took us out from under Commander Frick and set us up as a department of our own, with "Uncle" Alfred McNeil as head of department and Rupert Hauptman as his assistant-which meant that Rupe kept the watch list while Uncle Alf was in charge of our mess table and sort of kept us in line. We liked old Unc too well to give him much trouble and if somebody did get out of line Unc would look sad and the rest of us would slap the culprit down. It worked.

I think Dr. Devereaux recommended it to the Captain. The fact was that Commander Frick resented us. He was an electrical engineer and had spent his whole life on better and better communication equipment ... then we came along and did it better and faster with no equipment at all. I don't blame him; I would have been sore, too. But we got along better with Uncle Alf.

I suppose that the Vasco da Gama was part of my trouble. The worst thing about space travel is that absolutely nothing happens. Consequently the biggest event in our day was the morning paper. All day long each mind reader on watch (when not busy with traffic, which wasn't much) would copy news. We got the news services free and all the features and Dusty would dress it up by copying pictures sent by his twin Rusty. The communicator on the midwatch would edit it and the m-r and the communicator on the early morning watch would print it and have it in the mess room by breakfast.

There was no limit to the amount of copy we could have; it was just a question of how much so few people could prepare. Besides Solar System news we carried ships' news, not only of the Elsie but of the eleven others. Everybody (except myself) knew people in the other ships. Either they had met them at Zurich, or the old spacehands, like the Captain and a lot of others, had friends and acquaintances reaching back for years.

It was mostly social news, but we enjoyed it more than news from Earth and the System, because we felt closer to the ships in the fleet, even though they were billions of miles away and getting farther by the second. When Ray Gilberti and Sumire Watanabe got married in the Leif Ericsson, every ship in the fleet held a celebration. When a baby was born in the Pinta and our Captain was named godfather, it made us all proud.

We were hooked to the Vasco da Gama through Cas Warner, and Miss Gamma Furtney linked us with the Marco Polo and the Santa Maria through her triplets Miss Alpha and Miss Beta, but we got news from all the ships by pass-down-the-line. Fleet news was never cut, even if dirtside news had to be. As it was, Mama O'Toole complained that if the editions got any larger, she would either have to issue clean sheets and pillow cases only once a week or engineering would have to build her another laundry just to wash newspapers. Nevertheless, the ecology department always had clean paper ready, freshly pressed, for each edition.

We even put out an occasional extra, like the time Lucille LaVonne won "Miss Solar System" and Dusty did a pic of her so perfect you would have sworn it was a photograph. We lost some paper from that as quite a number of people kept their copies for pin-ups instead of turning them back for reclamation-I did myself. I even got Dusty to autograph it. It startled him but pleased him even though he was rude about it-an artist is entitled to credit for his work, I say, even if he is a poisonous little squirt.

What I am trying in say is that the Elsie Times was the high point of each day and fleet news was the most important part of it.

I had not been on watch the night before; nevertheless, I was late for breakfast. When I hurried in, everybody was busy with his copy of the Times as usual-but nobody was

eating. I sat down between Van and Prudence and said, "What's the matter? What's aching everybody?"

Pru silently handed me a copy of the Times.

The first page was bordered in black. There were oversize headlines: VASCO DA GAMA LOST

I couldn't believe it. The Vasco was headed out for Alpha Centauri but she wouldn't get there for another four years, Earth time; she wasn't even close to the speed of light. There was nothing to have may trouble with, out where she was. It must be a mistake.

I turned to see-story-on-page-two. There was a boxed dispatch from the Commodore in the Santa Maria: "(Official) At 0334 today Greenwich time TS Vasco da Gama (LRF 172) fell out of contact. Two special circuits were operating at the time, one Earthside and one to the Magellan. In both cases transmission ceased without warning in midst of message and at the same apparent instant by adjusted times. The ship contained eleven special communicators; it has not proved possible to raise any of them. It must therefore be assumed that the ship is lost, with no survivors."

The LRF dispatch merely admitted that the ship was out of contact. There was a statement by our Captain and a longer news story which included comments from other ships; I read them but the whole story was in the headlines ... the Vasco was gone wherever it is that ships go when they don't come back.

I suddenly realized something and looked up. Cas Warner's chair was empty. Uncle All caught my eye and said quietly, "He knows, Tom. The Captain woke him and told him soon after it happened. The only good thing about it is that he wasn't linked with his brother when it happened."

I wasn't sure that Uncle Alf had the right slant. If Pat got it, I'd want to be with him when it happened, wouldn't I? Well, I thought I would. In any case I was sure that Unc would want to be holding Sugar Pie's hand if something happened and she had to make the big jump before he did. And Cas and his brother Caleb were close; I knew that.

Later that day the Captain held memorial services and Uncle Alfred preached a short sermon and we all sang the "Prayer for Travelers." After that we pretended that there never had been a ship named the Vasco da Gama, but it was all pretense.

Cas moved from our table and Mama O'Toole put him to work as an assistant to her. Cas and his brother had been hotel men before LRF tapped them and Cas could be a lot of help to her; keeping a ship with two hundred people in it in ecological balance is no small job. Goodness, just raising food for two hundred people would be a big job even if it did not have to be managed so as to maintain atmospheric balance; just managing the yeast cultures and the hydroponics took all the time of nine people.

After a few weeks Cas was supervising entering and housekeeping and Mama O'Toole could give all of her time to the scientific and technical end-except that she continued to keep an eye on the cooking.

But the Vasco da Gama should not have made me brood; I didn't know anybody in that ship. If Cas could pull out of it and lead a normal, useful life, I certainly should not have had the mulligrubs. No, I think it was my birthday as much as anything.

The mess room had two big electric clocks in it, controlled from the relativists' computation room, and two bank-style calendars over them. When we started out they were all right together, showing Greenwich time and date. Then, as we continued to accelerate and our speed got closer to that of light, the "slippage" between Elsie and the

Earth began to show and they got farther and farther out of phase. At first we talked about it, but presently we didn't notice the Greenwich set... for what good does it do you to know that it is now three in the morning next Wednesday at Greenwich when it is lunch time in the ship? It was like time zones and the date line back on Earth: not ordinarily important. I didn't even notice when Pat groused about the odd times of day he had to be on duty because I stood watches any time of day myself.

Consequently I was caught flat-footed when Pat woke me with a whistle in the middle of the night and shouted, "Happy birthday!"

("Huh? Whose?")

"Yours, dopey. Ours. What's the matter with you? Can't you count?"

("But-")

"Hold it. They are just bringing the cake in and they are going to sing "Happy Birthday." I'll echo it for you."

While they were doing so I got up and slipped on a pair of pants and went down to the mess room. It was the middle of "night" for us and there was just a standing light here. But I could see the clocks and calendars-sure enough, the Greenwich date was our birthday and figuring back zone time from Greenwich to home made it about dinner time at home.

But it wasn't my birthday. I was on the other schedule and it didn't seem right.

"Blew 'em all out, kid," Pat announced happily, "That ought to hold us for another year. Mum wants to know if they baked a cake for you there?"

("Tell her 'yes.' ") They hadn't, of course. But I didn't feel like explaining. Mother got jittery easily enough without trying to explain Einstein time to her. As for Pat, he ought to know better.

The folks had given Pat a new watch and he told me that there was a box of chocolates addressed to me-should he open it and pass it around? I told him to go ahead, not knowing whether to be grateful that I was remembered or to be annoyed at a "present" I couldn't possibly see or touch. After a while I told Pat that I had to get my sleep and please say good night and thank you to everybody for me. But I didn't get to sleep; I lay awake until the passageway lights came on,

The following week they did have a birthday cake for me at our table and everybody sang to me and I got a lot of pleasantly intended but useless presents-you can't give a person much aboard ship when you are eating at the same mess and drawing from the same storerooms. I stood up and thanked them when somebody hollered "Speech!" and I stayed and danced with the girls afterwards. Nevertheless it still did not seem like my birthday because it had already been my birthday, days earlier.

It was maybe the next day that my Uncle Steve came around and dug me out of my room. "Where you been keeping yourself, youngster?"

"Huh? Nowhere."

"That's what I thought." He settled in my chair and I lay back down on my bunk. "Every time I look for you, you aren't in sight. You aren't on watch or working all the time. Where are you?"

I didn't say anything. I had been right where I was a lot of the time, just staring at the ceiling. Uncle Steve went on, "When a man takes to crouching in a corner aboard ship, it is usually best, I've found, to let him be. Either he will pull out of it by himself, or he'll go out the airlock one day without bothering with a pressure suit. Either way, he doesn't

want to be monkeyed with. But you're my sister's boy and I've got a responsibility toward you. What's wrong? You never show up for fun and games in the evenings and you go around with a long face; what's eating you?"

"There's nothing wrong with me!" I said angrily.

Uncle Steve disposed of that with a monosyllable. "Open up, kid. You haven't been right since the Vasco was lost. Is that the trouble? Is your nerve slipping? If it is, Doc Devereaux has synthetic courage in pills. Nobody need know you take 'em and no need to be ashamed-everybody finds a crack in his nerve now and again. I'd hate to tell you what a repulsive form it took the first time I went into action."

"No, I don't think that is it." I thought about it-maybe it was it. "Uncle Steve, what happened to the Vasco?"

He shrugged. "Either her torch cut loose, or they bumped into something."

"But a torch can't cut loose... can it? And there is nothing to bump into out here."

"Correct on both counts. But suppose the torch did blow? The ship would be a pocket-sized nova in an umpteenth second. But I can't think of an easier way to go. And the other way would be about as fast, near enough you would never notice. Did you ever think how much kinetic energy we have wrapped up in this bucket at this speed? Doc Babcock says that as we reach the speed of light we'll be just a flat wave front, even though we go happily along eating mashed potatoes and gravy and never knowing the difference."

"But we never quite reach the speed of light."

"Doc pointed that out, too. I should have said 'if.' Is that what is bothering you, kid? Fretting that we might go boom! like the Vasco? If so, let me point out that almost all the ways of dying in bed are worse ... particularly if you are silly enough to die of old age-a fate I hope to avoid."

We talked a while longer but did not get anywhere. Then be left, after threatening to dig me out if I spent more than normal sack time in my room. I suppose Uncle Steve reported me to Dr. Devereaux, although both of them claimed not.

Anyhow, Dr. Devereaux tackled me the next day, took me around to his room and sat me down and talked to me. He bad a big sloppy-comfortable stateroom; he never saw anybody in surgery.

I immediately wanted to know why he wanted to talk to me.

He opened his frog eyes wide and looked innocent. "Just happened to get around to you, Tom." He picked up a pile of punched cards. "See these? That's how many people I've had a chat with this week. I've got to pretend to earn my pay."

"Well, you don't have to waste time on me. I'm doing all right."

"But I like to waste time, Tom. Psychology is a wonderful racket. You don't scrub for surgery, you don't have to stare down people's dirty throats, you just sit and pretend to listen while somebody explains that when he was a little boy he didn't like to play with the other little boys. Now you talk for a while. Tell me anything you want to, while I take a nap. If you talk long enough, I can get rested up from the poker party I sat in on last night and still chalk up a day's work."

I tried to talk and say nothing. While I was doing so, Pat called me. I told him to call hack; I was busy. Dr. Devereaux was watching my face and said suddenly, "What was on your mind then?"

I explained that it could wait; my twin wanted to talk to me.

"Hmm... Tom, tell me about your twin. I didn't have time to get well acquainted with him in Zurich."

Before I knew it I had told him a lot about both of us. He was remarkably easy to talk to. Twice I thought he had gone to sleep but each time I stopped, he roused himself and asked another question that got me started all over again.

Finally he said, "You know, Tom, identical twins are exceptionally interesting to psychologists-not to mention geneticists, sociologists, and biochemists. You start out from the same egg, as near alike as two organic complexes can be. Then you become two different people. Are the differences environmental? Or is there something else at work?"

I thought about this. "You mean the soul, Doctor?"

"Mmm ... ask me next Wednesday. One sometimes holds personal and private views somewhat different from one's public and scientific opinions. Never mind. The point is that you m-r twins are interesting. I fancy that the serendipitous results of Project Lebensraum will, as usual, be far greater than the intended results."

"The "Sarah" what, Doctor?"

"Eh? 'Serendipitous.' The Adjective for 'Serendipity.' Serendipity means that you dig for worms and strike gold. Happens all the time in science. It is the reason why 'useless' pure research is always so much more practical than 'practical' work. But let's talk about you. I can't help you with your problems-you have to do that yourself. But let's kick it around and pretend that I can, so as to justify my being on the payroll. Now two things stick out like a sore thumb: the first is that you don't like your brother."

I started to protest but he brushed it aside. "Let me talk. Why are you sure that I am wrong? Answer: because you have been told from birth that you love him. Siblings always `love' each other; that is a foundation of our civilization like Mom's apple pie. People usually believe anything that they are told early and often. Probably a good thing they believe this one, because brothers and sisters often have more opportunity and more reason to hate each other than anyone else."

"But I like Pat. It's just-"

" 'It's just' what?" he insisted gently when I did not finish.

I did not answer and he went on, "It is just that you have every reason to dislike him. He has bossed you and bullied you and grabbed what he wanted. When he could not get it by a straight fight, he used your mother to work on your father to make it come his way. He even got the girl you wanted. Why should you like him? If a man were no relation-instead of being your twin brother-would you like him for doing those things to you? Or would you hate him?"

I didn't relish the taste of it. "I wasn't being fair to him, Doctor. I don't think Pat knew he was hogging things ... and I'm sure our parents never meant to play favorites. Maybe I'm just feeling sorry for myself."

"Maybe you are. Maybe there isn't a word of truth in it and you are constitutionally unable to see what's fair when you yourself are involved. But the point is that this is the way you do feel about it ... and you certainly would not like such a person-except that he is your twin brother, so of course you must 'love' him. The two ideas fight each other. So you will continue to be stirred up inside until you figure out which one is false and get rid of it. That's up to you."

"But... doggone it, Doctor, I do like Pat!"

"Do you? Then you had better dig out of your mind the notion that he has been handing you the dirty end of the stick all these years. But I doubt if you do. You're fond of him-we're all fond of things we are used to, old shoes, old pipes, even the devil we know is better than a strange devil. You're loyal to him. He's necessary to you and you are necessary to him. But 'like' him? It seems most improbable. On the other hand, if you could get it through your head that there is no longer any need to 'love' him, nor even to like him, then you might possibly get to like him a little for what he is. You'll certainly grow more tolerant of him, though I doubt if you will ever like him much. He's a rather unlikeable cuss."

"That's not true! Pat's always been very popular."

"Not with me. Mmm ... Tom, I cheated. I know your brother better than I let on. Neither one of you is very likeable, matter of fact, and you are very much alike. Don't take offense. I can't abide 'nice' people; 'sweetness and light' turns my stomach. I like ornery people with a good, hard core of self-interest-a lucky thing, in view of my profession. You and your brother are about equally selfish, only he is more successful at it. By the way, he likes you."

"Huh?"

"Yes. The way he would a dog that always came when called. He feels protective toward you, when it doesn't conflict with his own interests. But he's rather contemptuous of you; he considers you a weakling-and, in his book, the meek are not entitled to inherit the earth; that's for chaps like himself."

I chewed that over and began to get angry. I did not doubt that Pat felt that way about me-patronizing and willing to see to it that I got a piece of cake ... provided that he got a bigger one.

"The other thing that stands out," Dr. Devereaux went on, "is that neither you nor your brother wanted to go on this trip."

This was so manifestly untrue and unfair that I opened my mouth and left it open. Dr. Devereaux looked at me. "Yes? You were about to say?"

"Why, that's the silliest thing I ever heard, Doctor! The only real trouble Pat and I ever had was because both of us wanted to go and only one of us could."

He shook his head. "You've got it backwards. Both of you wanted to stay behind and only one of you could. Your brother won, as usual."

"No, he didn't... well, yes, he did, but the chance to go; not the other way around. And he would have, too, if it hadn't been for that accident."

" 'That accident.' Mmm ... yes." Dr. Devereaux held still, with his head dropped forward and his hands folded across his belly, for so long that I thought again that he was asleep. "Tom, I'm going to tell you something that is none of your business, because I think you need to know. I suggest that you never discuss it with your twin ... and if you do, I'll make you out a liar, net. Because it would be bad for him. Understand me?"

"Then don't tell me," I said surlily.

"Shut up and listen." He picked up a file folder. "Here is a report on your brother's operation, written in the talk we doctors use to confuse patients. You wouldn't understand it and, anyhow, it was sent sidewise, through the Santa Maria and in code. You want to know what they found when they opened your brother up?"

"Uh, not especially."

"There was no damage to his spinal cord of any sort."

"Huh? Are you trying to tell me that he was faking his legs being paralyzed? I don't believe it!"

"Easy, now. He wasn't faking. His legs were paralyzed. He could not possibly fake paralysis so well that a neurologist could not detect it. I examined him myself; your brother was paralyzed. But not from damage to his spinal cord-which I knew and the surgeons who operated on him knew."

"But-" I shook my head. "I guess I'm stupid."

"Aren't we all? Tom, the human mind is not simple; it is very complex. Up at the top, the conscious mind has its own ideas and desires, some of them real, some of them impressed on it by propaganda and training and the necessity for putting up a good front and cutting a fine figure to other people. Down below is the unconscious mind, blind and deaf and stupid and sly, and with-usually-a different set of desires and very different motivations. It wants its own way ... and when it doesn't get it, it raises a stink until it is satisfied. The trick in easy living is to find out what your unconscious mind really wants and give it to it on the cheapest terms possible, before it sends you through emotional bankruptcy to get its own way. You know what a psychotic is, Tom?"

"Uh... a crazy person."

"Crazy' is a word we're trying to get rid of, A psychotic is a poor wretch who has had to sell out the shop and go naked to the world to satisfy the demands of his unconscious mind. He's made a settlement, but it has ruined him. My job is to help people make settlements that won't ruin them-like a good lawyer, We never try to get them to evade the settlement, just arrange it on the best terms.

"What I'm getting at is this: your brother managed to make a settlement with his unconscious on fairly good terms, very good terms considering that he did it without professional help. His conscious mind signed a contract and his unconscious said flatly that he must not carry it out. The conflict was so deep that it would have destroyed some people. But not your brother. His unconscious mind elected to have an accident instead, one that could cause paralysis and sure enough it did-real paralysis, mind you; no fakery. So your brother was honorably excused from an obligation he could not carry out. Then, when it was no longer possible to go on this trip; be was operated on. The surgery merely corrected minor damage to the bones. But he was encouraged to think that his paralysis would go away-and so it did." Devereaux shrugged.

I thought about it until I was confused. This conscious and unconscious stuff-I'd studied it and passed quizzes in it ... but I didn't take any stock in it. Doc Devereaux could talk figures of speech until he was blue in the face but it didn't get around the fact that both Pat and I had wanted to go and the only reason Pat had to stay behind was because be had hurt himself in that accident. Maybe the paralysis was hysterical, maybe be had scared himself into thinking he was hurt worse than he was. But that didn't make any difference.

But Doc Devereaux talked as if the accident wasn't an accident. Well, what of it? Maybe Pat was scared green and had been too proud to show it-I still didn't think he had taken a tumble on a mountainside on purpose.

In any case, Doc was dead wrong on one thing: I had wanted to go. Oh, maybe I had been a little scared and I knew I had been homesick at first-but that was only natural.

("Then why are you so down in dumps, stupid?")

That wasn't Pat talking; that was me, talking to myself. Shucks, maybe it was my unconscious mind, talking out loud for once, "Doc?"

"Yes, Tom."
"You say I didn't really want to come along?"
"It looks that way."
"But you said the unconscious mind always wins. You can't have it both ways."
He sighed. "That isn't quite what I said. You were hurried into this. The unconscious is stupid and often slow; yours did not have time to work up anything as easy as a skiing accident. But it is stubborn. It's demanding that you go home ... which you can't. But it won't listen to reason. It just keeps on nagging you to give it the impossible, like a baby crying for the moon."
I shrugged. "To hear you tell it, I'm in an impossible moss."
"Don't look so danged sourpuss! Mental hygiene is a process of correcting the correctable and adjusting to the inevitable. You've got three choices."
"I didn't know I had any."
"Three. You can keep on going into a spin until your mind builds up a fantasy acceptable to your unconscious...a psychotic adjustment, what you would call 'crazy.' Or you can muddle along as you are, unhappy and not much use to yourself or your shipmates... and always with the possibility of skidding over the line. Or you can dig into your own mind, get acquainted with it, find out what it really wants, show it what it can't have and why, and strike a healthy bargain with it on the basis of what is possible. If you've got guts and gumption, you'll try the last one. It won't be easy." He waited, looking at me.
"Uh, I guess I'd better try. But how do I do it?"
"Not by moping in your room about might-have-beens, that's sure."
"My Uncle Steve-Major Lucas, I mean"-I said slowly, "told me I shouldn't do that. He wants me to stir around and associate with other people. I guess I should."
"Surely, surely. But that's not enough. You can't chin yourself out of the hole you are in just by pretending to be the life of the party. You have to get acquainted with yourself."
"Yes, sir. But how?"
"Well, we can't do it by having you talk about yourself every afternoon while I hold your hand. Mmm ... I suggest that you try writing down who you are and where you've been and how you got from there to here. You make it thorough enough and maybe you will begin to see 'why' as well as 'how.' Keep digging and you may find out who you are and what you want and how much of it you can get."
I must have looked baffled for he said, "Do you keep a diary?"
"Sometimes. I've got one along."
"Use it as an outline. 'The Life and Times of T. P. Bartlett, Gent.' Make it complete and try to tell the truth-all the truth."
I thought that over. Some things you don't want to tell anybody. "Uh, I suppose you'll want to read it, Doctor?"
"Me? Heaven forbid! I get too little rest without misguided people. This is for you, son; you'll be writing to yourself ... only write it as if you didn't know anything about yourself and had to explain everything. Write it as if you expected to lose your memory and wanted to be sure you could pick up the strings again. Put it all down." He frowned and added grudgingly, "If you feel that you have found out something important and want a second opinion, I suppose I could squeeze in time to read part of it, at least. But I won't promise. Just write it to yourself-to the one with amnesia."

So I told him I would try... and I have. I can't see that it has done any special good (I pulled out of the slump anyhow) and there just isn't time to do the kind of job he told me to do. I've had to hurry over the last part of this because this is the first free evening I've had in a month.

But it's amazing how much you can remember when you really try.

X RELATIONS

There have been a lot of changes around the Elsie. For one thing we are over the hump now and backing down the other side, decelerating as fast as we boosted; we'll be at Tau Ceti in about six months, ship's time.

But I am getting ahead of myself. It has been about a year, S-time, since I started this, and about twelve years, Earth time, since we left Earth. But forget E-time; it doesn't mean anything. We've been thirteen months in the ship by S-time and a lot has happened. Pat getting married-no, that didn't happen in the ship and it's the wrong place to start.

Maybe the place to start is with another marriage, when Chet Travers married Mei-Ling Jones. It met with wide approval, except on the part of one of the engineers who was sweet on her himself. It caused us freaks and the electron pushers to bury the hatchet to have one of us marry one of them, especially when Commander Frick came down the aisle in the mess room with the bride on his arm, looking as proud and solemn as if she had been his daughter. They were a good match; Chet was not yet thirty and I figure that Mei-Ling is at least twenty-two.

But it resulted in a change in the watch list and Rupe put me on with Prudence Mathews.

I had always liked Pru without paying much attention to her. You had to look twice to know that she was pretty. But she had a way of looking up at you that made you feel important. Up to the time I started standing watches with her I had more or less left the girls alone; I guess I was "being true to Maudie." But by then I was writing this confession story for Doe Devereaux; somehow writing things down gives them finality. I said to myself, "Why not? Tom, old boy, Maudie is as definitely out of your life as if one of you were dead. But life goes on, right here in this bucket of wind."

I didn't do anything drastic; I just enjoyed Pru's company as much as possible... which turned out to be a lot.

I've heard that when the animals came aboard the Ark two by two, Noah separated them port and starboard. The Elsie isn't run that way. Chet and Mei-Ling had found it possible to get well enough acquainted to want to make it permanent. A little less than half of the crew had come aboard as married couples; the rest of us didn't have any obstacles put in our way if we had such things on our minds.

But somehow without its ever showing we were better chaperoned than is usual back dirtside. It didn't seem organized ... and yet it must have been. If somebody was saying good night a little too long in a passageway after the lights were dimmed, it would just happen that Uncle Alfred had to get up about then and shuffle down the passageway. Or maybe it would be Mama O'Toole, going to make herself a cup of chocolate "to help her get to sleep."

Or it might be the Captain. I think he had eyes in the hack of his head for everything that went on in the ship. I'm convinced that Mama O'Toole had. Or maybe Unc was actually

one of those hypothetical wide-range telepaths but was too polite and too shrewd to let anybody know it.

Or maybe Doe Devereaux had us all so well analyzed those punched cards of his that he always knew which way the rabbit would jump and could send his dogs to head him off. I wouldn't put it past him.

But it was always just enough and not too much. Nobody objected to a kiss or two if somebody wanted to check on the taste; on the other hand we never had any of the scandals that pop up every now and then in almost any community. I'm sure we didn't; you can't keep such things quiet in a ship. But nobody seemed to see a little low-pressure lalligagging.

Certainly Pru and I never did anything that would arouse criticism.

Nevertheless we were taking up more and more of each other's time, both on and off watch. I wasn't serious, not in the sense of thinking about getting married; but I was serious in that it was becoming important. She began to look at me privately and a bit possessively, or maybe our hands would touch in passing over a stack of traffic and we could feel the sparks jump.

I felt fine and alive and I didn't have time to write in these memoirs. I gained four pounds and I certainly wasn't homesick.

Pru and I got in the habit of stopping off and raiding the pantry whenever we came off a night watch together. Mama O'Toole didn't mind; she left it unlocked so that anyone who wanted a snack could find one-she said this was our home, not a jail. Pru and I would make a sandwich, or concoct a creative mess, and eat and talk before we turned in. It didn't matter what we talked about; what mattered was the warm glow we shared.

We came off watch at midnight one night and the mess room was deserted; the poker players had broken up early and there wasn't even a late chess game. Pru and I went into the pantry and were just getting set to grill a yeast-cheese sandwich. The pantry is rather cramped; when Pru turned to switch on the small grill, she brushed against me:

I got a whiff of her nice, clean hair and something like fresh clover or violets. Then I put my arms around her.

She didn't make any fuss. She stopped dead for an instant, then she relaxed.

Girls are nice. They don't have any bones and I think they must be about five degrees warmer than we are, even if fever thermometers don't show it. I put my face down and she put her face up and closed her eyes and everything was wonderful

For maybe half a second she kissed me and I knew she was as much in favor of it as I was, which is as emphatic as I can put it.

Then she had broken out of my arms like a wrestler and was standing pressed against the counter across from me and looking terribly upset. Well, so was I. She wasn't looking at me; she was staring at nothing and seemed to be listening ... so I knew; it was the expression she wore when she was linked-only she looked terribly unhappy too.

I said, "Pru! What's the matter?"

She did not answer; she simply started to leave. She had taken a couple of steps toward the door when I reached out and grabbed her wrist. "Hey, are you mad at me?"

She twisted away, then seemed to realize that I was still there. "I'm sorry, Tom," she said huskily. "My sister is angry."

I had never met Patience Mathews-and now I hardly wanted to. "Huh? Well, of all the silly ways to behave I-"

"My sister doesn't like you, Tom," she answered firmly, as if that explained everything. "Good night."

"But-"

"Good night, Tom."

Pru was as nice as ever at breakfast but when she passed me the rolls the sparks didn't jump, I wasn't surprised when Rupe reshuffled the watch list that day but I did not ask why. Pru didn't avoid me and she would even dance with me when there was dancing, but the fire was out and neither of us tried to light it again.

A long time later I told Van about it. I got no sympathy.

"Think you're the first one to get your finger mashed in the door? Pru is a sweet little trick, take it from Grandfather van Houten. But when Sir Galahad himself comes riding up on a white charger, he's going to have to check with Patience before he can speak to Pru... and I'll bet you the answer is 'No!' Pru is willing, in her sweet little half-witted way, but Patience won't okay anything more cozy than 'Pease Porridge Hot.'"

"I think it's a shame. Mind you, it doesn't matter to me now. But her sister is going to ruin her life."

"It's her business. Myself, I reached a compromise with my twin years ago-we beat each other's teeth in and after that we cooperated on a businesslike basis. Anyhow, how do you know that Pru isn't doing the same to Patience? Maybe Pru started it."

It didn't sour me on girls, not even on girls who had twin sisters who were mind readers, but after that I enjoyed the company of all of them. But for a while I saw more of Unc. He liked to play dominoes, then when we had finished all even up for the evening he liked to talk about Sugar Pie-and to her, of course. He would look at his big photograph of her and so would I and the three of us would talk, with Unc echoing for both of us. She really was a nice little girl and it was a lot of fun to get to know a little six-year-old girl-it's very quaint what they think about.

One night I was talking with them and looking at her picture, as always, when it occurred to me that time had passed and that Sugar Pie must have changed-they grow up fast at that age. I got a brilliant idea. "Unc, why don't you have Sugar Pie mail a new photograph to Rusty Rhodes? Then he could transmit it to Dusty and Dusty could draw you one as perfect as that one, only it would be up to date, show you what she looks like now, huh? How about it, Sugar Pie? Isn't that a good idea?"

"It isn't necessary."

I was looking at the picture and I nearly popped my fuses. For a moment it wasn't the same picture. Oh, it was the same merry little girl, but she was a little older, she was shy a front tooth, and her hair was different.

And she was alive. Not just a trukolor stereo, but alive. There's a difference.

But when I blinked it was the same old picture.

I said hoarsely, "Unc, who said, 'It isn't necessary?' You? Or Sugar Pie?"

"Why, Sugar Pie did. I echoed,"

"Yes, Unc ... but I didn't hear you; I heard her." Then I told him about the photograph.

He nodded. "Yes, that's the way she looks. She says to tell you that her tooth is coming in, however."

"Unc... there's no way to get around it. For a moment I crowded in on your private wave length." I was feeling shaky.

"I knew. So did Sugar Pie. But you didn't crowd in, son; a friend is always welcome."

I was still trying to soak it in. The implications were more mind-stretching, even, than when Pat and I found out we could do it. But I didn't know what they were yet. "Uh, Uric, do you suppose we could do it again? Sugar Pie?"

"We can try."

But it didn't work... unless I heard her voice as well as Unc's when she said, "Good night, Tommie." I wasn't sure.

After I got to bed I told Pat about it. He was interested after I convinced him that it really had happened. "This is worth digging into, old son. I'd better record it. Doc Mabel will want to kick it around."

("Uh, wait until I check with Uncle Alf.")

"Well, all right. I guess it is his baby ... in more ways than one. Speaking of his baby, maybe I should go see her? With two of us at each end it might be easier to make it click again. Where does his niece live?"

("Uh, Johannesburg.")

"Mmm ... that's a far stretch down the road, but I'm sure the LRF would send me there if Doc Mabel got interested."

("Probably. But let me talk to Unc.")

But Unc talked to Dr. Devereaux first. They called me in and Doc wanted to try it again at once. He was as near excited as I ever saw him get. I said, "I'm willing, but I doubt if we'll got anywhere; we didn't last night. I think that once was just a fluke."

"Fluke, spook. If it can be done once, it can be done again, We've got to be clever enough to set up the proper conditions." He looked at me. "Any objection to a light dose of hypnosis?"

"Me? Why, no, sir. But I don't hypnotize easily."

"So? According to your record, Dr. Arnault found it not impossible. Just pretend I'm she."

I almost laughed in his face. I look more like Cleopatra than he looks like pretty Dr. Arnault. But I agreed to go along with the gag.

"All either of you will need is a light trance to brush distractions aside and make you receptive."

I don't know what a "light trance" is supposed to feel like. I didn't feel anything and I wasn't asleep.

But I started hearing Sugar Pie again.

I think Dr. Devereaux's interest was purely scientific; any new fact about what makes people tick could rouse him out of his chronic torpor. Uncle Alf suggested that Doc was anxious also to set up a new telepathic circuit, just in case. There was a hint in what Unc said that he realized that he himself would not last forever.

But there was a hint of more than that. Uncle Alf let me know very delicately that, if it should come to it, it was good to know that somebody he trusted would be keeping an eye on his baby. He didn't quite say it, not that baldly, so I didn't have to answer, or I would have choked up. It was just understood-and it was the finest compliment I ever received. I wasn't sure I deserved it so I decided I would just have to manage to deserve it if I ever had to pay off.

I could "talk" to Uncle Alf now, of course, as well as to Sugar Pie. But I didn't, except when all three of us were talking together; telepathy is an imposition when it isn't necessary. I never called Sugar Pie by myself, either, save for a couple of test runs for

Doc Devereaux's benefit to establish that I could reach her without Unc's help. That took drugs; Unc would wake up from an ordinary sleep if anyone shouted on that "wave length." But otherwise I left: her alone; I had no business crowding into a little girl's mind unless she was ready and expecting company.

It was shortly after that that Pat got married.

Xl SLIPPAGE

My relations with Pat got steadily better all during that first boost, after Dr. Devereaux took me in hand. I found out, after I admitted that I despised and resented Pat, that I no longer did either one. I cured him of bothering me unnecessarily by bothering him unnecessarily-he could shut off an alarm clock but he couldn't shut off me. Then we worked out a live-and-let-live formula and got along better. Presently I found myself looking forward to whatever time we had set for checking with each other and I realized I liked him, not "again" but "at last," for I had never felt that warm toward him before.

But even while we were getting closer we were falling apart; "slippage" was catching up with us. As anyone can see from the relativity formulas, the relationship is not a straight-line one; it isn't even noticeable at the beginning but it builds up like the dickens at the other end of the scale.

At three-quarters the speed of light he complained that I was drawling, while it seemed to me that he was starting to jabber. At nine-tenths of the speed of light it was close to two for one, but we knew what was wrong now and I talked fast and he talked slow.

At 99% of c, it was seven to one and all we could do to make ourselves understood. Later that day we fell out of touch entirely.

Everybody else was having the same trouble. Sure, telepathy is instantaneous, at least the trillions of miles between us didn't cause any lag, not even like the hesitation you get in telephoning from Earth to Luna nor did the signal strength drop off. But brains are flesh and blood, and thinking takes time... and our time rates were out of gear. I was thinking so slowly (from Pat's viewpoint) that he could not slow down and stay with me; as for him, I knew from time to time that he was trying to reach me but it was just a squeal in the earphones so far as making sense was concerned.

Even Dusty Rhodes couldn't make it. His twin couldn't concentrate on a picture for the long hours necessary to let Dusty "see" it.

It was upsetting, to say the least, to all of us. Hearing voices is all right, but not when you can't tell what they are saying and can't shut them off. Maybe some of the odd cases in psychiatry weren't crazy at all; maybe the poor wretches were tuned in on a bad wave length.

Unc took it the worst at first and I sat with him all one evening while we both tried together. Then he suddenly regained his serenity; Sugar Pie was thinking about him; that he knew; so being, words weren't really necessary.

Pru was the only one who flourished; she was out from under the thumb of her sister. She got really kissed, probably for the first time in her life. No, not by me; I just happened to be wandering down for a drink at the scuttlebutt, then I backed away quietly and let the drink wait. No point in saying who it was, as it didn't mean anything-I think Pru would have kissed the Captain at that point if he had held still. Poor little Pru!

We resigned ourselves to having to wait until we slid back down closer into phase. We were still hooked ship-to-ship because the ships were accelerating to the same schedule, and there was much debate back and forth about the dilemma, one which apparently nobody had anticipated. In one way it was not important, since we would not have anything to report until we slowed down and started checking the stars we were headed for, but in another way it was: the time the Elsie spent at the speed of light (minus a gnat's whisker) was going to seem very short to us-but it was going to be ten solid years and a bit over to those back Earth side. As we learned later, Dr. Devereaux and his opposite numbers in the other ships and back in LRF were wondering bow many telepathic pairs they would have still functioning (if any) after a lapse of years. They had reason to worry. It had already been established that identical twins were hardly ever telepairs if they had lived apart for years-that was the other reason why most of those picked were young; most twins are separated by adult life.

But up to then, we hadn't been "separated" in Project Lebensraum. Sure, we were an unthinkable distance apart but each pair had been in daily linkage and in constant practice by being required to stand regular watches, even if there was nothing to send but the news.

But what would a few years of being out of touch do to rapport between telepartners?

This didn't bother me; I didn't know about it. I got a sort of an answer out of Mr. O'Toole which caused me to think that a couple of weeks of ship's time would put us back close enough in phase to make ourselves understood. In the meantime, no watches to stand so it wasn't all bad. I went to bed and tried to ignore the squeals inside my head.

I was awakened by Pat.

"Tom ... answer me, Tom. Can you hear me, Tom? An- ("Hey, Pat, I'm here!") I was wide awake, out of bed and standing on the floor plates, so excited I could hardly talk.

"Tom! Oh, Tom! It's good to hear you, boy-it's been two years since I was last able to raise you."

("But-") I started to argue, then shut up. It had been less than a week to me. But I would have to look at the Greenwich calendar and a check with the computation office before I could even guess how long it had been for Pat.

"Let me talk, Tom, 1 can't keep this up long. They've had me under deep hypnosis and drugs for the past six weeks and it has taken me this long to get in touch with you. They don't dare keep me under much longer."

("You mean they've got you hypped right now?")

"Of course, or I couldn't talk to you at all. Now-" His voice faded out for a second "Sorry. They had to stop to give me another shot and an intravenous feeding. Now listen and record this schedule: Van Houten-" He reeled off precise Greenwich times and dates, to the second, for each of us, and faded out while I was reading them back. I caught a "So long" that went up in pitch, then there was silence.

I pulled on pants before I went to wake the Captain but I did not stop for shoes. Then everybody was up and all the daytime lights were turned on even though it was officially night and Mama O'Toole was making coffee and everybody was talking. The relativists were elbowing each other in the computation room and Janet Meers was working out ship's time for Bernie van Houten's appointment with his twin without bothering to put it through the computer because he was first on the list.

Van failed to link with his brother and everybody got jittery and Janet Meers was in tears because somebody suggested that she had made a mistake in the relative times, working it in her head; But Dr. Babcock himself pushed her solution through the computer and checked her to nine decimals. Then he announced in a chilly tone that he would thank everyone not to criticize his staff thereafter; that was his privilege.

Gloria linked with her sister right after that and everybody felt better. The Captain sent a dispatch to the flagship through Miss Gamma and got an answer back that two other ships were back in contact, the Nautilus and the Cristoforo Colombo.

There was no more straggling up to relieve the watch and stopping to grab a bite as we passed the pantry. If the recomputed time said your opposite number would be ready to transmit at 3:17:06 and a short tick, ship's time, you were waiting for him from three o'clock on and no nonsense, with the recorder rolling and the mike in front of your lips. It was easy for us in the ship, but each one of us knew that his telepair was having to undergo both hypnosis and drastic drugging to stay with us at all-Dr. Devereaux did not seem happy about it.

Nor was there any time for idle chit-chat, not with your twin having to chop maybe an hour out of his life for each word. You recorded what he sent, right the first time and no fumbles; then you transmitted what the Captain had initialed. If that left a few moments to talk, all right. Usually it did not ... which was how I got mixed up about Pat's marriage.

You see, the two weeks bracketing our change-over from boost to deceleration, during which time we reached our peak speed, amounted to about ten years Earthside. That's 250 to 1 on the average. But it wasn't all average; at the middle of that period the slippage was much greater, I asked Mr. O'Toole what the maximum was and he just shook his head. There was no way to measure it, he told me, and the probable errors were larger than the infinitesimal values he was working with.

"Let's put it this way," he finished. "I'm glad there is no hay fever in this ship, because one hard sneeze would push us over the edge."

He was joking, for, as Janet Meers pointed out, as our speed approached the speed of light, our mass approached infinity.

But we fell out of phase again for a whole day.

At the end of one of those peak "watches" (they were never more than a couple of minutes long, S-time) Pat told me that he and Maudie were going to get married. Then he was gone before I could congratulate him. I started to tell him that I thought Maudie was a little young and wasn't he rushing things and missed my chance. He was off our band.

I was not exactly jealous. I examined myself and decided that I was not when I found out that I could not remember what Maudie looked like. Oh, I knew what she looked like-blonde, and a little snub nose with a tendency to get freckles across it in the summertime. But I couldn't call up her face the way I could Pru's face, or Janet's. All I felt was a little left out of things.

I did remember to check on the Greenwich, getting Janet to relate it back to the exact time of my last watch. Then I saw that I bad been foolish to criticize. Pat was twenty-three and Maudie was twenty-one, almost twenty-two.

I did manage to say, "Congratulations," on my next linkage but Pat did not have a chance to answer. Instead he answered on the next. "Thanks for the congratulations. We've named her after Mother but I think she is going to look like Maudie."

This flabbergasted me. I had to ask for Janet's help again and found that everything was all right-I mean, when a couple has been married two years a baby girl is hardly a surprise, is it? Except to me.

All in all, I had to make quite a few readjustments those two weeks. At the beginning Pat and I were the same age, except for an inconsequential slippage. At the end of that period (I figure the end as being the time when it was no longer necessary to use extreme measures to let us telepairs talk) my twin was more than eleven years older than I was and had a daughter seven years old.

I stopped thinking about Maudie as a girl, certainly not as one I had been sweet on. I decided that she was probably getting fat and sloppy and very, very domestic-she never could resist that second chocolate éclair. As a matter of fact; Pat and I had grown very far apart, for we had little in common now. The minor gossip of the ship, so important to me, bored him; on the other hand, I couldn't get excited about his flexible construction units and penalty dates. We still telecommunicated satisfactorily but it was like two strangers using a telephone. I was sorry, for I had grown to like him before he slipped away from me.

But I did want to see my niece. Knowing Sugar Pie had taught me that baby girls are more fun than puppies and even cuter than kittens. I remembered the idea I had had about Sugar Pie and braced Dusty on the subject.

He agreed to do it; Dusty can't turn down a chance to show how well he can draw. Besides, he had mellowed, for him; he no longer snarled when you tried to pet him even though it might be years before he would learn to sit up and beg.

Dusty turned out a beautiful picture. All Baby Molly lacked was little wings to make her a cherub. I could see a resemblance to myself-to her father, that is. "Dusty, this is a beautiful picture. Is it a good likeness?"

He bristled. "How should I know? But if there is a micron's s difference, or a shade or tone off that you could pick up with a spectrophotometer, from the pic your brother mailed to my brother, I'll eat it! But how do I know how the proud parents had the thing prettied up?"

"Sorry, sorry! It's a swell picture. I wish there were some way I could pay you."

"Don't stay awake nights; I'll think of something. My services come high."

I took down my pic of Lucille LaVonne and put Molly in her place. I didn't throw away the one of Lucille, though.

It was a couple of months later that I found out that Dr. Devereaux had seen entirely different possibilities in my being able to use the "wave length" of Uncle Alf and Sugar Pie from the obvious ones I had seen. I had continued to talk with both of them, though not as often as I had at first. Sugar Pie was a young lady now, almost eighteen, in normal school at Witwatersrand and already started practice teaching. Nobody but Unc and I called her "Sugar Pie" and the idea that I might someday substitute for Unc was forgotten-at the rate we were shifting around pretty soon she could bring me up.

But Doe Devereaux had not forgotten the matter. However the negotiations had been conducted by him with LRF without consulting me. Apparently Pat had been told to keep it to himself until they were ready to try it, for the first I knew of it was when I told him to stand by to record some routine traffic (we were back on regular watches by then).

"Skip it, old son," he said. "Pass the traffic to the next victim. You and I are going to try something fresh."

("What?")
"LRF orders, all the way down from the top. Molly has an interim research contract all of her own, just like you and I had."
("Huh? She's not a twin.")
"Let me count her. No, there's just one of her-though she sometimes seems like an entire herd of wild elephants. But she's here, and she wants to say hello to Uncle Tom."
("Oh, fine. Hello, Molly.")
"Hello, Uncle Tom."
I almost jumped out of my skin. I had caught it right off, with no fumbling. ("Hey, who was that? Say that again!")
"Hello, Uncle Tom." She giggled. ``I've got a new hair bow."
I gulped. ("I'll bet you look mighty cute in it, honey. I wish I could see you. Pat! When did this happen?")
"On and off, for the past ten weeks. It took some tough sessions with Dr. Mabel to make it click. By the way, it took some tougher sessions with, uh, the former Miss Kouric before she would agree to let us try it."
"He means Mommy," Molly told me in a conspirator's whisper. "She didn't like it. But I do, Uncle Tom. I think it's nice."
"I've got no privacy from either one of them," Pat complained. "Look, Tom, this is just a test run and I'm signing off. I've got to get the terror back to her mother."
"She's going to make me take a nap," Molly agreed in a resigned voice, ``and I'm too old for naps. Good-by, Uncle Tom. I love you."
("I love you, Molly.")
I turned around and Dr. Devereaux and the Captain were standing behind me, ears flapping. "How did it go?" Dr. Devereaux demanded, eagerly-for him.
I tried to keep my face straight. "Satisfactorily. Perfect reception." ....
"The kid, too?"
"Why, yes, sir. Did you expect something else?"
He let out a long breath. "Son, if you weren't needed, I'd beat your brains out with an old phone list."
I think Baby Molly and I were the first secondary communication team in the fleet. We were not the last. The LRF, proceeding on a hypothesis suggested by the case of Uncle Alfred and Sugar Pie, assumed that it was possible to form a new team where the potential new member was very young and intimately associated with an adult member of an old team. It worked in some eases. In other cases it could not even be tried because no child was available.
Pat and Maude had a second baby girl just before we reached the Tau Ceti system. Maudie put her foot down with respect to Lynette; she said two freaks in her family were enough.

XII TAU CETI

By the time we were a few light-hours from Tan Ceil we knew that we had not drawn a blank; by stereo and doppler-stereo Harry Gates had photographed half a dozen planets. Harry was not only senior planetologist; he was boss of the research department. I

suppose he had enough degrees to string like beads, but I called him "Harry" because everybody did. He was not the sort you call "Doctor"; he was eager and seemed younger than he was.

To Harry the universe was a complicated toy somebody had given him; he wanted to take it apart and see what made it go. He was delighted with it and willing to discuss it with anybody at any time. I got acquainted with him in the bottle-washing business because Harry didn't treat lab assistants like robots; he treated them like people and did not mind that he knew so much more than they did-he even seemed to think that he could learn something from them.

How he found time to marry Barbara Kuiper I don't know, but Barbara was a torch watchstander, so it probably started as a discussion of physics and drifted over into biology and sociology; Harry was interested in everything. But he didn't find time to he around the night their first baby was born, as that was the night he photographed the planet he named Constance, after the baby. There was objection to this, because everybody wanted to name it, but the Captain decided that the ancient rule applied: finders of astronomical objects were entitled to name them.

Finding Constance was not an accident. (I mean the planet, not the baby; the baby wasn't lost.) Harry wanted a planet about fifty to fifty-one million miles from Tau, or perhaps I should say that the LRF wanted one of that distance. You see, while Tau Ceti is a close relative of the Sun, by spectral types, Tau is smaller and gives off only about three-tenths as much sunshine-so, by the same old tired inverse square law you use to plan the lights for a living room or to arrange a photoflash picture, a planet fifty million miles from Tau would catch the same amount of sunlight as a planet ninety-three million miles from Sol, which is where Earth sits. We weren't looking for just any planet, or we would have stayed home in the Solar System; we wanted a reasonable facsimile of Earth or it would not he worth colonizing.

If you go up on your roof on a dear night, the stars look so plentiful you would think that planets very much like Earth must he as common as eggs in a hen yard. Well, they are: Harry estimates that there arc between a hundred thousand and a hundred million of them in our own Milky Way-and you can multiply that figure by anything you like for the whole universe.

The hitch is that they aren't conveniently at hand. Tau Ceti was only eleven light-years from Earth; most stars in our own Galaxy average more like fifty thousand light-years from Earth. Even the Long Range Foundation did not think in those terms; unless a star was within a hundred light-years or so it was silly to think of colonizing it even with torchships. Sure, a torchship can go as far as necessary, even across the Galaxy-but who is going to he interested in receiving its real estate reports after a couple of ice ages have come and gone? The population problem would he solved one way or another long before then ... maybe the way the Kilkenny cats solved theirs.

But there are only fifteen-hundred-odd stars within a hundred light-years of Earth and only about a hundred and sixty of these are of the same general spectral type as the Sun. Project Lebensraum hoped to check not more than half of these, say seventy-five at the outside-less since we had lost the Vasco da Gama.

If even one real Earth-type planet was turned up in the search, the project would pay off. But there was no certainty that it would. A Sol-type star might not have an Earth-type planet; a planet might be too close to the fire, or too far, or too small to hold an

atmosphere, or too heavy for humanity's fallen arches, or just too short on the H20 that figures into everything we do.

Or it might be populated by some rough characters with notions about finders-keepers.

The Vasco da Gama had had the best chance to find the first Earth-type planet as the star she had been beading for, Alpha Centauri Able, is the only star in this part of the world which really is a twin of the Sun. (Able's companion, Alpha Centauri Baker, is a different sort, spectral type K.) We had the next best chance, even though Tau Ceti is less like the Sun than is Alpha Centauri-B, for the next closest G-type is about thirteen light years from Earth ... which gave us a two-year edge over the Magellan and nearly four over the Nautilus.

Provided we found anything, that is. You can imagine how jubilant we were when Tau Ceti turned out to have pay dirt.

Harry was jubilant, too, but fur the wrong reasons. I had wandered into the observatory, hoping to get a sight of the sky-one of the Elsie's shortcomings was that it was almost impossible to see out-when he grabbed me and said, "Look at this, pal!"

I looked at it. It was a sheet of paper with figures on it; it could have been Mama O'Toole's crop-rotation schedule.

"What is it?"

"Can't you read? It's Bodes Law, that's what it is!"

I thought back. Let me see...no, that was Ohm's Law-then I remembered; Bode's Law was a simple geometrical progression that described the distances of the Solar planets from the Sun. Nobody had ever been able to find a reason for it and it didn't work well in some cases, though I seemed to remember that Neptune, or maybe Pluto, had been discovered by calculations that made use of it. It looked like an accidental relationship.

"What of it?" I asked.

"'What of it?' the man says! Good grief! This is the most important thing since Newton got conked with the apple."

"Maybe so, Harry, but I m a little slow today. I thought Bode's Law was just an accident. Why couldn't it be an accident here, too?"

"Accident! Look, Tom, if you roll a seven once, that's an accident. When you roll a seven eight hundred times in a row, somebody has loaded the dice."

"But this is only twice."

"It's not the same thing. Get me a big enough sheet of paper and I'll write down the number of zeros it takes to describe how unlikely this 'accident' is." He looked thoughtful. "Tommie, old friend, this is going to be the key that unlocks how planets are made. They'll bury us right alongside Galileo for this. Mmm ... Tom, we can't afford to spend much time in this neighborhood; we've got to get out and take a look at the Beta Hydri system and make sure it checks the same way-just to convince the mossbacks back Earthside, for it will, it will! I gotta go tell the Captain we'll have to change the schedule." He stuffed the paper in a pocket and hurried away. I looked around but the anti-radiation shutters were over the observatory ports; I didn't get to see out.

Naturally the Captain did not change the schedule; we were out there looking for farm land, not trying to unscrew the inscrutable. A few weeks later we were in orbit around Constance. It put us into free-fall for the first time during the trip, for we had not even been so during acceleration-deceleration change-over but had done it in a skew path instead; chief engineers don't like to shut a torch down unless there is time for an

overhaul before starting up again-there was the case of the Peter the Great who shut hers off, couldn't light up again, and fell into the Sun.

I didn't like free-fall. But it's all right if you don't overload your stomach.

Harry did not seem disappointed. He had a whole new planet to play with, so he tabled Bode's Law and got busy. We stayed in orbit, a thousand miles up, while research found out everything possible about Connie without actually touching it: direct visual search, radiation survey, absorption-spectra of her atmosphere. She had two moons, one a nice size, though smaller than Luna, so they were able to measure her surface gravity exactly.

She certainly looked like a home away from home. Commander Frick had his boys and girls set up a relay tank in the mess room, with color and exaggerated stereo, so that we all could see. Connie looked like the pictures they show of Earth from space stations, green and blue and brown and half covered with clouds and wearing polar ice like skullcaps. Her air pressure was lower than ours but her oxygen ratio was higher; we could breathe it. Absorption spectra showed higher carbon dioxide but not as high as Earth had during the Coal Age.

She was smaller but had a little more land area than Earth; her oceans were smaller. Every dispatch back to Earth carried good news and I even managed to get Pat's mind off his profit-and-loss for a while ... he had incorporated us as "Bartlett Brothers, Inc." and seemed to expect me to be interested in the bookkeeping simply because my accumulated LRF salary had gone into the capitalization. Shucks, I hadn't touched money for so long I had forgotten anybody used the stuff.

Naturally our first effort was to find out if anybody was already in occupation ... intelligent animal life I mean, capable of using tools, building things, and organizing. If there was, we were under orders to scoot out of there without landing, find fuel somewhere else in that system, and let a later party attempt to set up friendly relations; the LRF did not want to repeat the horrible mistake that had been made with Mars.

But the electro-magnetic spectrum showed nothing at all, from gamma radiation right up to the longest radio wavelengths. If there were people down there, they didn't use radio and they didn't show city lights and they didn't have atomic power. Nor did they have aircraft, nor roads, nor traffic on the surface of their oceans, nor anything that looked like cities. So we moved down just outside the atmosphere in an "orange slice" pole-to-pole orbit that let us patrol the whole surface, a new sector each half turn.

Then we searched visually, by photography, and by radar. We didn't miss anything more conspicuous than a beaver dam, I'm sure. No cities, no houses, no roads, no bridges, no ships, nobody home; Oh, animals, surely-we could see herds gazing on the plains and we got lesser glimpses of other things. But it looked like a squatter's paradise.

The Captain sent a dispatch: "I am preparing to land."

I promptly volunteered for the reconnaissance party. First I braced my uncle Major Lucas to let me join his guard. He told me to go roll my hoop. "If you think I have any use for an untrained recruit, you're crazier than you apparently think I am. If you wanted to soldier, you should have thought of it as soon as we torched off."

"But you've got men from all the departments in your guard."

"Every one of 'em trained soldiers. Seriously, Tom, I can't afford it. I need men who will protect me; not somebody so green I'll have to protect him. Sorry."

So I tackled Harry Gates to let me join the scientific party the ship's guard would protect. He said, "Certainly, why not? Plenty of dirty work that my gang of prima donnas won't want to do. You can start by checking this inventory."

So I checked while he counted. Presently he said, "How does it feel to be a little green man in a flying saucer?"

"What?"

"An oofoe. We're an oofoe, do you realize that?"

I finally understood him-an U.F.O., an "unidentified flying object." There were accounts of the U.F.O. hysteria in all the histories of space flight. "I suppose we are an U.F.O., sort of."

"It's exactly what we are. The U.F.O.'s were survey ships, just as we are. They looked us over, didn't like what they saw, and went away. If they hadn't found Earth crawling with hostile natives, they would have landed and set up housekeeping, just as we are going to do."

"Harry, do you really believe the U.F.O.'s were anything but imagination or mistakes in reporting? I thought that theory was exploded long ago."

"Take another look at the evidence, Tom. There was something going on up in our sky shortly before we took up space jumping ourselves. Sure, most of the reports were phonies. But some weren't. You have to believe evidence when you have it in front of you, or else the universe is just too fantastic. Surely you don't think that human beings are the only ones who ever built star ships?"

"Well ... maybe not. But if somebody else has, why haven't they visited us long ago?"

"Simple arithmetic, pal; it's a big universe and we're just one small corner of it. Or maybe they did. That's my own notion; they surveyed us and Earth wasn't what they wanted-maybe us, maybe the climate. So the U.F.O.'s went away." He considered it. "Maybe they landed just long enough to fuel."

That was all I got out of my tenure as a member of the scientific party; when Harry submitted my name an his list, the Captain drew a line through it. "No special communicators will leave the ship."

That settled it; the Captain had a will of iron. Van got to go, as his brother had been killed in an accident while we were at peak-so I called Pat and told him about Van and suggested that Pat drop dead. He didn't see anything funny in it.

The Elsie landed in ocean comfortably deep, then they used the auxiliaries to bring her close to the shore. She floated high out of the water, as two-thirds of her tanks were empty, burned up, the water completely disintegrated in boosting us first up to the speed of light, then backing us down again. The engineers were already overhauling her torch before we reached final anchorage. So far as I know, none of them volunteered for the landing party; I think that to most of the engineers the stop on Constance was just a chance to pick up more boost mass and take care of repairs and overhauls they had been unable to do while underway. They didn't care where they were or where they were going so long as the torch worked and all the machinery ticked. Dr. Devereaux told me that the Staff Metallurgist had been out to Pluto six times and had never set foot on any planet but Earth.

"Is that normal?" I asked, thinking how fussy Doc had been about everybody else, including me.

"For his breed of cat, it's robust mental health. Any other breed I would lock up and feed through the keyhole."

Sam Rojas was as annoyed as I was at the discrimination against us telepaths; he had counted on planting his feet on strange soil, like Balboa and Columbus and Lundy. He came around to see me about it. "Tom, are you going to stand for it?"

"Well, I don't want to-but what can we do?

"I've been talking to some of the others. It's simple. We don't."

"We don't what?"

"Mmm ... we just don't. Tom, ever since we slowed down, I've detected a falling off in my telepathic ability. It seems to be affecting all of us-those I've talked to. How about yourself?"

"Why, I haven't-"

"Think hard," he interrupted. "Surely you've noticed it. Why, I doubt if I could raise my twin right now. It must have something to do with where we are ... maybe there is something odd about the radiation of Tau Ceti, or something. Or maybe it comes from Connie. Who knows? And, for that matter, who can check on us?"

I began to get the pattern. I didn't answer, because it was a tempting idea.

"If we can't communicate," he went on, "we ought to be useful for something else ... like the landing party, for instance. Once we are out of range of this mysterious influence probably we would be able to make our reports back to Earth all right. Or maybe it would turn out that some of the girls who didn't want to go with the landing party could manage to get in touch with Earth and carry the reports ... provided us freaks weren't discriminated against."

"It's an idea," I admitted.

"Think about it. You'll find your special talent getting weaker and weaker. Me, I'm stone deaf already." He went away.

I toyed with the idea. I knew the Captain would recognize a strike when he saw one ... but what could he do? Call us all liars and hang us by our thumbs until we gave in? How could he be certain that we hadn't all gone sour as m-r's? The answer was that he could not be certain; nobody but a mind reader knows what it feels like, nobody but the mind reader himself can tell that he is doing it. When we slipped out of contact at peak he hadn't doubted us, he had just accepted it. He would have to accept it now, no matter what he thought.

For he had to have us; we were indispensable.

Dad used to he arbitration representative in his guild local; I remembered his saying once that the only strike worth calling was one in which the workers were so badly needed that the strike would be won before a walkout. That was the pinch we had the Captain in; he had to have us. No strikebreakers closer than eleven light-years. He wouldn't dare get rough with us.

Except that any one of us could break the strike. Let's see-Van was out of it and so was Cas Warner; they were no longer telepaired, their twins were dead. Pru's sister Patience was still alive, but that telepair had never been mended after peak-her sister had refused the risky drugs and hypnosis routine and they never got back into rapport. Miss Gamma did not count, because the ships her two sisters were in were still peaking, so we were cut off from sidewise relay back to Earth until one of them decelerated. Not counting Sam

and myself, whom did that leave? And could they be counted on? There was Rupe, Gloria, Anna, and Dusty ... and Unc of course. And Mei-Ling.

Yes, they were solid. Making us feel that we were freaks when we first came aboard had consolidated us, Even if one or two didn't feel right about it, nobody would let the others down. Not even Mei-Ling who was married to an outsider. It would work. If Sam could line them up.

I wanted to go dirtside the worst way...and maybe this was the worst way, but I still wanted to.

Just the same, there was something sneaky about it, like a kid spending his Sunday School collection money.

Sam had until noon the next day to get it lined up, because we were down to one watch a day. A continuous communication watch was not necessary and them was more ship's work to do now that we were getting ready to explore. I tabled the matter and went down to tag the rats that would he used by the scientific survey.

But I did not have to wait until the following day; Unc called us together that evening and we crowded into his room-all but Miss Gamma and Van and Pru and Cas. Unc looked around, looking horse-faced and sad, and said he was sorry we couldn't all sit down but he wouldn't keep us long. Then he started a meandering speech about how he thought of us all as his children and he had grown to love us and we would always be his children, no matter what. Then he started talking about the dignity of being a human being.

"A man pays his bills, keeps himself clean, respects other people, and keeps his word. He gets no credit for this; he has to do this much just to stay even with himself. A ticket to heaven comes higher."

He paused and added, "Especially he keeps his promises." He looked around and added, "That's all I had to say. Oh, I might as well make one announcement while we are here. Rupe has had to shift the watch list around a little bit." He picked out Sam Rojas with his eyes. "Sam, I want you to take next watch, tomorrow noon. Will you do it?"

There wasn't a sound for about three heart heats. Then Sam said slowly, "Why, I guess so, Unc, if you want me to."

"I'd he much obliged, Sam. One way and another, I don't want to put anybody else on that watch...and I wouldn't feel like standing it myself if you couldn't do it. I guess I would just have to tell the Captain there wasn't anybody available. So I'm pleased that you'll do it."

"Uh, why, sure, Unc. Don't worry about it,"

And that was the end of the strike.

Unc didn't let us go quite yet. "I thought I'd tell you about the change in the watch list while I had you here and save Rupe from having to take it around to have you initial it. But I called you together to ask you about something else. The landing party will be leaving the ship before long. Nice as Constance looks, I understand that it will he risky ... diseases that we don't know about; animals that might turn out to he deadly in ways we didn't expect, almost anything. It occurred to me that we might be able to help. We could send one of us with the landing party and keep one of us on watch in the ship-and we could arrange for their telepairs to relay by telephone. That way we'd always be in touch with the landing party, even if radios broke down or no matter what. It would be a lot of extra work and no glory...but it would be worth it if it saved the life of one shipmate."

Sam said suddenly, "Who are you figuring on to go with the landing party, Unc?"
"Why, I don't know. It isn't expected of us and we don't rate special-hazard pay, so I wouldn't feel like ordering anybody-I doubt if the Captain would back me up. But I was hoping for enough volunteers so that we could rotate the dirtside watch." He blinked and looked unsure of himself. "But nobody is expected to volunteer. I guess you had better let me know privately. "
He didn't have to wait; we all volunteered. Even Mei-Ling did and then got mad and cried when Unc pointed out gently that she had better have her husband's consent-which she wasn't going to get; the Travers family was expecting a third.
Unc tackled the Captain the next morning. I wanted to hang around and hear the outcome but there was too much work to do. I was surprised, a half hour later, to be paged by speaker down in the lab; I washed my hands and hurried up to the Old Man's cabin.

Unc was there, looking glum, and the Captain was looking stern. I tried to call Unc on the Sugar-Pie band, to find out where things stood, but for once he ignored me. The Captain looked at me coldly and said, "Bartlett, Mr. McNeil has proposed a plan whereby the people in your department want to help out in the dirtside survey. I'll tell you right off that I have turned it down. The offer is appreciated-but I have no more intention of risking people in your special category in such duty than I would approve of modifying the ship's torch to sterilize the dinner dishes. First things first!"
He drummed on his desk. "Nevertheless, the suggestion has merit. I won't risk your whole department ...but I might risk one special communicator to increase the safeguards for the landing party. Now it occurred in me that we have one sidewise pair right in this ship, without having to relay through Earth. You and Mr. McNeil. Well? What have you to say?"
I started to say, "Sure!"-then thought frantically. If I got to go after all that had happened, Sam was going to take a very dark view of it...and so was everybody. They might think I had framed it.
"Well? Speak up!"
Doggone, no matter what they thought, it wasn't a thing you could refuse. "Captain, you know perfectly well I volunteered for the landing party several days ago."
"So you did. All right, I'll take your consent for granted. But you misunderstood me. You aren't going; that will he Mr. McNeil's job. You'll stay here and keep in touch with him."
I was so surprised that I almost missed the next thing the Captain said. I shot a remark to Unc privately: ("What's this, Unc? Don't you know that all of them will think you swindled them?")
This time he answered me, distress in his voice: "I know it, son. He took me by surprise."
("Well, what are you going to do?")
"I don't know. I'm wrong both ways."
Sugar Pie suddenly cut in with, "Hey! What are you two fussing about?"
Unc said gently: "Go away, honey. This is man talk."
"Well!" But she didn't interrupt again. Perhaps she listened.

The Captain was saying: "-in any doubly-manned position, we will never risk the younger when the older can serve.

That is standard and applies as much to Captain Urqhardt and myself as it does to any other two. The mission comes first. Bartlett, your expected usefulness is at least forty years longer than that of Mr. McNeil. Therefore he must be preferred for a risk task. Very well, gentlemen. You'll receive instructions later."

("Unc-what are you going to tell Sam? Maybe you agree-I don't!")

"Don't joggle my elbow, son." He went on aloud: "No, Captain."

The Captain stared. "Why, you old scoundrel! Are you that fond of your skin?"

Unc faced him right back. "It's the only one I have, Captain. But that doesn't have anything to do with the case. And maybe you were a little hasty in calling me names."

"Eh?" The Captain turned red. "I'm sorry, McNeil. I take that back. But I think you owe me an explanation for your attitude."

"I'm going to give it, sir. We're old men, both of us. I can get along without setting foot on this planet and so can you. But it looks different to young people. You know perfectly well that my people volunteered for the landing party not because they are angels, not scientists, not philanthropists...but because they are aching to go ashore. You know that; you told me as much, not ten minutes ago. If you are honest with yourself, you know that most of these children would never have signed up for this trip if they had suspected that they were to be locked up, never permitted to have what they call an "adventure.' They didn't sign up for money; they signed up for the far horizons. Now you rob them of their reasonable expectations."

The Captain looked grim. He clenched end unclenched a fist, then said, "There may be something in what you say. But I must make the decisions; I can't delegate that. My decision stands. You go and Bartlett stays."

I said: ("Tell him he won't get a darn' message through!")

Unc didn't answer me. "I'm afraid not, Captain. This is a volunteer job...and I'm not volunteering."

The Captain said slowly, "I'm not sure that volunteering is necessary. My authority to define a man's duty is broad. I rather think you are refusing duty."

"Not so; Captain. I didn't say I wouldn't take your orders; I just said I was not volunteering. But I'd ask for written orders, I think, and I would endorse them: 'Accepted under protest,' and ask to have a copy transmitted to the Foundation. I don't volunteer."

"But-confound it, man! You volunteered with the rest. That's what you came in here for. And I picked you."

Unc shook his head. "Not quite, Captain. We volunteered as a group. You turned us down as a group. If I gave you the impression that I was volunteering, any other way, I am sorry ... but that's how it is. Now if you will excuse me, sir, I'll go back and tell my people you won't have us."

The Captain turned pink again. Then he suddenly started to roar with laughter. He jumped up and put his arm around Unc's narrow shoulders. "You old scoundrel! You are an old scoundrel, a mutinous black-hearted scoundrel. You make me long for the days of bread-and-water and the rope's end. Now sit back down and we'll work this out. Bartlett, you can go,"

I left, reluctantly, and then stayed away from the other freaks because I didn't want to answer questions. But Unc was thoughtful; he called me, mind to mind, as soon as he was

out of the Captain's cabin and told me the upshot. It was a compromise. He and I and Rupe and Sam would rotate, with the first trick (considered to be the most dangerous) to be his. The girls would take the shipside watch, with Dusty classed with them because of age. But a bone was thrown to them: once medicine and research classed the planet as safe, they would be allowed sightseeing, one at a time. "I had to twist his arm on that part," Unc admitted, "but he agreed."

Then it turned out to be an anticlimax; Connie was about as dangerous as Kansas. Before any human went outside the ship other than encased in a quarantine suit we exposed rats and canaries and hamsters to natural atmosphere; they loved it. When the first party went ashore, still in quarantine suits but breathing Connie's air after it had passed through electrostatic precipitators, two more experimental animals went with them-Bernhard van Houten and Percival the Pig.

Van had been down in the dumps ever since his twin was killed; he volunteered and I think Dr. Devereaux urged the Captain to let him. Somebody had to do it; you can make all the microscopic and chemical tests you like-the day comes when a living man has to expose his. skin to a planet to find out if it is friendly. As Dr. Babcock says, eventually you must climb the tree. So Van went ashore without a quarantine suit, wearing shorts and shirt and shoes and looking like a scoutmaster.

Percival the Pig did not volunteer, but he thought it was a picnic. He was penned in natural bush and allowed to forage, eating anything from Connie's soil that he thought was fit to eat. A pig has advantages as an experimental animal; he eats anything, just as rats and men do, and I understand that his metabolism is much like ours-pigs even catch many of the same diseases. If Percival prospered, it was almost certain that we would, particularly as Percy had not been given the inoculations that we had, not even the wide-spectrum G.A.R. serum which is supposed to give some protection even against diseases mankind has never encountered before.

Percy got fat, eating anything and drinking brook water, Van got a sunburn and then tanned. Both were healthy and the pioneer party took off their quarantine suits. Then almost everybody (even Percy) came down with a three-day fever and a touch of diarrhea, but everybody recovered and nobody caught it twice.

They rotated after that and all but Uncle Steve and Harry and certain ones whom they picked swapped with someone in the ship. Half of the second party were inoculated with serum made from the blood of those who bad recovered from three-day fever; most of these did not catch it. But the ones who returned were not allowed back in the ship at once; they were quarantined on a temporary deck rigged above the top bulge of the Elsie.

I don't mean to say that the planet was just like a city park-you can get killed, even in Kansas. There was a big, lizardlike carnivore who was no bargain. One of those got Lefty Gomez the first time our people ran into one and the beast would have killed at least two more if Lefty had been the kind of man who insists on living forever. I would never have figured Lefty as a hero-he was assistant pastry cook and dry-stores keeper back in the ship-but Uncle Steve says that ultimate courage is the commonest human virtue and that seven out of ten are Medal of Honor men, given the circumstances.

Maybe so. I must be one of the other three. I don't think I would have stood my ground and kept poking away at the thing's eyes, armed only with a campfire spit.

But tyrannosaurus ceti was not dangerous enough to give the planet a down check, once we knew he was there and what he was. Any big cat would have been much more

dangerous, because cats are smart and he was stupid. You had to shoot first, but an explosive bullet made him lie down and be a rug. He had no real defense against men and someday men would exterminate him.

The shore party camped within sight of the ship on the edge of beautiful Babcock Bay, where we were anchored. The two helicopters patrolled each day, always together so that one could rescue the men in the other if it went down, and never more than a few hundred miles from base. Patrols on foot never went more than ten miles from base; we weren't trying to conquer the country, but simply trying to find out if men could conquer and hold it. They could...at least around Babcock Bay...and where men can get a toe hold they usually hang on.

My turn did not come until the fourth rotation and by then they were even letting women go ashore; the worry part was over.

The oddest thing about being outdoors was the sensation of weather; I had been in air-conditioning for two years and I had forgotten rain and wind and sunshine in your face. Aboard the Elsie the engineer on watch used to cycle the temperature and humidity and ozone content on a random schedule, which was supposed to be good for our metabolisms. But it wasn't weather; it was more like kissing your sister.

The first drop of rain I felt startled me; I didn't know what it was. Then I was running up and down and dancing like a kid and trying to catch it in my mouth. It was rain, real rain and it was wonderful!

I couldn't sleep that night. A breeze on my face and the sounds of others sleeping around me and the distant noises of live things outside our snooper fences and the lack of perfect darkness all kept me awake. A ship is alive, too, and has its noises, but they are different from those outdoors; a planet is alive in another way.

I got up quietly and tip-toed outside. In front of the men's quarters about fifty feet away I could see the guardsman on watch. He did not notice me, as he had his head bent over dials and displays from the inner and outer fences and from the screen over us. I did not want to talk, so I went around behind the hut, out of sight of even the dim light from his instruments. Then I stopped and looked up.

It was the first good view of the sky I had had since we had left Earth and the night was clear. I stood there, dazzled and a little drunk from it.

Then I started trying to pick out constellations.

It was not hard; eleven light-years is just down the street for most stars. The Dipper was overhead, looking a little more battered than it does from Earth but perfectly recognizable. Orion blazed near the horizon ahead of me but Procyon had moved over a long way and Sirius was not even in sight-skidded below the skyline, probably, for Sirius is even closer to the Earth than is Tau Ceti and our position would shift him right across the sky. I tried to do a spherical triangle backwards in my head to figure where to look for Sirius and got dizzy and gave up.

Then I tried to find Sol. I knew where he would be, in Boötes, between Arcturus and Virgo-but I had to find Boötes, before I could look for Father Sol.

Boötes was behind me, as close to the skyline as Orion was on the other side. Arcturus had shifted a little and spoiled the club shape of Bootes but there was no doubt in my mind.

There it was! A yellow-white star, the color of Capella, but dimmer, about second magnitude, which was right, both position and magnitude. Besides, it had to be the Sun,

because there hadn't been any star that bright in that location when Pat and I were studying for our astrogation merit badge. It was the Sun.

I stared at it, in a thoughtful melancholy, warm rather than sad. I wondered what Pat was doing? Walking the baby, maybe. Or maybe not; I couldn't remember what the Greenwich ought to be. There he was, thirty years old and a couple of kids, the best part of his life behind him... and here I was, just old enough to be finishing my sophomore year in college if I were home.

No, I wouldn't be; I'd be Pat's age.

But I wasn't thirty.

I cheered up and decided that I had the best break after all, even if it had seemed not so good at first. I sighed and walled around a bit, not worrying, for not even one of those lizard brutes could get close to our night defenses without bringing thunder and lightning down around his ears. If he had ears. Percy's pen was not far in that rear direction; he heard me and came to his fence, so I walked up and scratched his snout. "Nice place, eh, boy?" I was thinking that when the Elsie did get home-and I no longer believed Uncle Steve's dire predictions-when I did get back, I would still be in my early twenties, just a good age to emigrate. And Connie looked like a fine place to come back to.

Percy answered with a snuffling grunt which I interpreted to mean: "You didn't bring me anything to eat? A fine way to treat a pal!" Percy and I were old friends; aboard ship I fed him, along with his brothers and the hamsters and the rats.

"Percy, you're a pig."

He did not argue but continued to snuffle into my empty hand. I was thinking that eleven light-years wasn't far; it was about right. The stars were still familiar.

Presently Percy got tired of it and so did I, so I wiped my hand on my pants and went back to bed.

XIII IRRELEVANT RELATIONS

Beyond Beta Hydri: I ought to bring this up to date, or else throw it away. I hardly ever have time to write now, since we are so short handed. Whatever it was we picked up on Constance-or, possibly, caught from improperly fumigated stores-has left us with more than enough to do, especially in my department. There are only six left now to handle all the traffic, Unc, myself, Mei-Ling, Anna, Gloria, and Sam. Dusty lived through it but he is out of touch, apparently permanently. His brother had no kids for a secondary team and they just slipped apart on the last peak and never matched in again.

I am dependent on my great-niece Kathleen and on Molly, her mother. Pat and I can still talk, but only with their help; if we try it alone, it's like trying to make yourself understood in a machine shop. You know the other fellow is saying something but the more you strain the less you hear. Pat is fifty-four, now that we have peaked on this leg; we just don't have anything in common. Since Maude's death he isn't interested in anything but business-and I am not interested in that.

Unc is the only one who doesn't feel his original telepartner slipping away. Celestine is forty-two now; they are coming together instead of separating. I still call her "Sugar Pie," just to hear her chuckle. It is hard to realize that she is twice my age; she ought to have braids and a missing front tooth.

All in all, we lost thirty-two people in the Plague. I had it and got well. Doe Devereaux didn't get well and neither did Prudence nor Rupe. We have to fill in and act as if the others had never been with us. Mei-Ling's baby died and for a while we thought we were going to lose Mei-Ling, but now she takes her watch and does her work and even laughs. I guess the one we all miss the most is Mama O'Toole.

What else of importance has happened? Well, what can happen in a ship? Nothing. Beta Hydri was a washout. Not only nothing resembling an Earth-type planet, but no oceans-no water oceans, I mean; it was a choice for fuel between ammonia and methane, and the Chief Engineer and the Captain had long worried conferences before they settled for ammonia. Theoretically the Elsie will burn anything; give her mass-converter something to chew on and the old "e equals mc2" gets to work; the torch spits the mass out as radiation at the speed of light and neutrons at almost the speed of light. But while the converter does not care, all of the torch's auxiliary equipment is built to handle fluid, preferably water.

We had a choice between ammonia, already liquid, and an outer planet that was mostly ice, but ice not much warmer than absolute zero. So they crossed their fingers, put her down in an ocean of ammonia, and filled up the old girl's tanks. The planet we named Inferno and then called it nastier names. We had to sit there four days at two gravities and it was cold, even with the ship's air heaters going full blast.

The Beta Hydri system is one I am not going back to; creatures with other metabolisms can have it and welcome. The only one who was pleased was Harry Gates, because the planetary arrangements followed Bode's Law. I wouldn't care if they had been in Vee formation.

The only other thing that sticks in my mind was (of all things!) political trouble. Our last peak started just as that war broke out between the Afro-European Federation and Estados Unidos de Sud. It shouldn't have meant anything to us-it did not, to most of us, or at least we kept our sympathies to ourselves. But Mr. Roch, our Chief Engineer, is from the Federation and his first assistant was born in Buenos Aires. When Buenos Aires got it, probably including some of Mr. Regato's relatives, he blamed his boss personally. Silly, but what can you expect?

After that, the Captain gave orders that he would check Earthside news before it was printed and he reminded us of the special restrictions on communicators in re security of communications. I think I would have been bright enough to submit that dispatch to the Captain before printing it, but I can't be sure. We'd had always had free press in the Elsie.

The only thing that got us out of that mess was that we peaked right after. When we came out of peak, fourteen years had passed and the latest political line-up had Argentina friends with her former enemies and on the outs with the rest of South America. After a while Mr. Roch and Mr. Regato were back playing chess together, just as if the Captain had never had to restrict them to keep them from each other's throats.

Everything that happens back on Earth is a little unreal to me, even though we continue to get the news when we are not at peak. You get your mind adjusted to a new situation; the Elsie goes through a peak ... years have passed and everything has changed. They are calling the Planetary League the "United System" now and they say that the new constitution makes war impossible.

It's still the Planetary League to me-and it was supposed to make war impossible, too. I wonder what they changed besides the names?

Half of the news I don't understand. Kathleen tells me that her class has pooled their eveners to buy a Fardie for their school as a graduation present and that they are going to outswing it for the first time at the commencement exercises-then she had to hurry away because she had been co-opted in charge. That was just last watch. Now what is a "Fardie" and what was wrong with it where it was?

The technical news that reaches us I don't understand, either, but at least I know why and usually somebody aboard does understand it. The relativists are excited about stuff coming in which is so technical that it has to be retransmitted and confirmed before it is released-this with Janet Meers standing behind you and trying to snatch spools out of the recorder. Mr. O'Toole gets excited too, only the way he shows it is for the end of his nose to get pink. Dr. Babcock never shows excitement, but he missed coming in for meals two days running after I copied a monograph called "Sumner on Certain Aspects of Irrelevance." At the end of that time I sent one back to LRF which Dr. Babcock had written. It was just as crammed with indigestible mathematics, but I gathered that Dr. Babcock was politely calling Professor Sumner a fool.

Janet Meers tried to explain it to me, but all that I got out of it was that the concept of simultaneity was forcing a complete new look at physics.

"Up to now," she told me, "we've concentrated on the relative aspects of the space-time continuum. But what you m-r people do is irrelevant to space-time. Without time there is no space; without space there can be no time. Without space-time there can be no conservation of energy-mass. Heavens, there's nothing. It has driven some of the old-timers out of their minds. But now we are beginning to see how you people may possibly fit into physics-the new physics, I mean; it's all changed."

I had had enough trouble with the old-style physics; having to learn a new one made my head ache just to think about it. "What use is it?" I asked.

She looked shocked. "Physics doesn't have to have any use. It just is."

"Well, I don't know. The old physics was useful. Take the torch that drives us, for example-"

"Oh, that! That's not physics, that's just engineering"-as if I had mentioned something faintly scandalous.

I will never understand Janet and perhaps it is just as well that she promised to "be a sister to me." She said that she did not mind my being younger than she was, but that she did not think she could look up to a man who could not solve a fourth-degree function in his head. "... and a wife should always look up to her husband, don't you think?"

We were making the boosts at 1.5 gravity now. What with slippage, it cuts each up-boost and each down-boost to about four months, S-time, even though the jumps are longer, During boost I weigh 220 pounds and I've started wearing arch supports, but 50% extra weight is all right and is probably good for us, since it is too easy not to get enough exercise aboard ship.

The LRF has stopped using the drug stuff to help communications at peak, which would have pleased Dr. Devereaux since he disapproved of it so. Now your telepartner patches in with the help of hypnosis and suggestion alone, or you don't patch. Kathleen managed to cross the last peak with me that way, but I can see that we are going to lose communication teams all through the fleet, especially those who have not managed to set up tertiary telepartners. I don't knew where my own team would be without Kathleen. In the soup, I guess. As it is, the Niña and the Henry Hudson are each down to two teams

and the other four ships still in contact with Earth are not much better off. We are probably in the best shape, although we don't get much fleet news since Miss Gamma fell out of step with her sisters-or lost them, as the case may be; the Santa Maria is listed as "missing" but the Marco Polo is simply carried as "out of contact" as she was approaching peak when last heard from and won't be out of it for several Greenwich years.

We are headed now for a little G-type star so dim from Earth that it doesn't rate a name, nor even a Greek-letter constellation designation, but just a catalog number. From Earth it lies in Phoenix, between Hydrus the Sea Serpent and Cetus the Whale. ("Hydrus," not "Hydra"-Hydra is six R.A. hours over and farther north.) Unc called it a "Whistle Stop" so that is what we dubbed it, because you can't reel off a Palomar Catalog number each time you speak of where you are going. No doubt it will get an impressive name if it turns out to have a planet half as good as Connie. Incidentally, Connie will he colonized in spite of the epidemic we may have picked up there; the first shiploads are on their way. Whatever the bug was that bit us (and it very possibly may have come from Earth), it is no worse than half a dozen other diseases men have had and have fought back at and licked. At least, that is the official view and the pioneer ships are going on the assumption that they will probably catch it and have to conquer it.

Personally, I figure that one way of dying is as dangerous as another; when you're dead, you're dead-even if you die from "nothing serious." And the Plague, bad as it was, didn't kill me.

"Whistle Stop" wasn't worth a stop. We're on our way to Beta Ceti, sixty-three light-years from Earth.

I wish Dusty were still hooked up to transmit pictures; I would like one of my great-grandniece Vicky. I know what she looks like-carroty red hair, freckles across her nose, green eyes, a big mouth and braces on her teeth. At present she is sporting a black eye as well, picked up at school when somebody called her a freak and she resented it-I would love to have seen that fight! Oh, I know what she looks like but I'd like a picture anyhow.

It is funny how our family has run to girls. No, when I add it up, counting all descendants of my sisters as well as my brother, it comes out about even. But Maude and Pat had two girls and no boys, and I went away and did not get married, so the Bartlett name has died out,

I certainly would like to have a picture of Vicky. I know she is homely, but I'll bet she is cute, too-the kind of tomboy who always has scabs on her knees because she won't play the ladylike games. She generally hangs around for a while after we are through transmitting and we talk. Probably she is just being polite, for she obviously thinks of me as being as old as her great-grandfather Bartlett even though her mother has told her that I am not. I suppose it depends on where you sit. I ought to be in my last year in college now, but she knows that I am Pat's twin.

If she wants to put a long white beard on me, that is all right with me, for the sake of her company. She was in a hurry this morning but nice about it. "Will you excuse me, please, Uncle Tom? I've got to go study for a quiz in algebra."

("Realio trulio?") I said.

"Realio trulio, cross my heart. I'd like to stay."

("Run along, Freckle Face. Say hello to the folks.")

" Bye! I'll call you a little early tomorrow."

She really is a nice child.

XIV ELYSIA

Beta Ceti is a big star in the main spectral sequence, almost big enough to be classed as a giant-a small giant, thirty-seven times as bright as the Sun. It looks so bright from Earth that it has a name of its own, Deneb Kaitos, but we never call it that because "Deneb" brings to mind the other Deneb, Alpha Cygni, which is a real giant in a different part of the sky almost sixteen hundred light-years away.

Since Beta Ceti is so much brighter than the Sun, the planet we had been looking for, if it existed at all, had to be nearly six hundred million miles out, farther than Jupiter is from Sol.

We've found one, at five hundred and eighty million miles, which is close enough. Better yet, it is the smallest planet in a system that seems to run to outsizes; the one in the next track beyond is bigger than Jupiter.

I scheduled most of the routine skyside survey of Elysia, under Harry Gates' absentminded supervision. Harry is as eager as a fox terrier to finish his magnum opus before he has to knock off and take charge of the ground survey. He wants to transmit it back Earthside and preserve his name in science's hall of fame-not that he puts it that way, for Harry isn't stuck up; nevertheless, he thinks he has worked out a cosmogony for solar systems which includes Bode's Law. He says that if he is right, any star in the main spectral sequence will have planets.

Maybe ... I would not know. But I can't see what use a star is without planets and I don't believe all this complicated universe got here by accident. Planets are meant to be used.

Acting as Harry's Man Friday has not been difficult. All I had to do was to dig the records of the preliminary survey of Connie out of the microfilms and write up similar schedules for Elysia, modified to allow for our loss of personnel. Everybody was eager to help, because (so far as we know) we are the only ship to draw a lucky number twice and only one of four to hit even once. But we are down now, water-borne, and waiting for medicine to okay Elysia for ground survey; I'm not quite so rushed. I tried to get in touch with Vicky and just chat this evening. But it happens to be evening back home, too, and Vicky is out on a date and politely put me off.

Vicky grew up some when we peaked this last jump; she now takes notice of boys and does not have as much time for her ancient uncle. ("Is it George?") I asked when she wanted to know if my call was important.

"Well, if you must know, it is George!" she blurted out.

("Don't get excited, Freckle Face,") I answered. ("I just asked.")

"Well, I told you."

("Sure, sure. Have a good time, hon, and don't stay out too late.")

"You sound just like Daddy."

I suppose I did. The fact is I don't have much use for George, although I have never seen him, never will, and don't know much about him, except that Vicky says that be is "the tenth power" and "first with the worst" in spite of being "ruffily around the round" if I knew what she meant, but she would equalize that.

I didn't know what she meant, but I interpreted it to mean approval slightly qualified and that she expected him to be perfect, or "ricketty all through" when she got through making him over. I suspect him of being the kind of pimply-faced, ignorant young bore that I used to be myself and have always disliked-something about like Dusty Rhodes at the present without Dusty's amazing mind.

This sounds as if I were jealous of a boy I'll never see over a girl I have never seen, but that is ridiculous. My interest is fatherly, or big-brotherly, even though I am effectively no relation to her; i.e., my parents were two of her sixteen great-great-grandparents-a relationship so distant that most people aren't even aware of relatives of that remote degree.

Or maybe Van's wild theory has something to it and we are all getting to be cranky old men-just our bodies are staying young. But that is silly. Even though seventy-odd Greenwich years have passed, it has been less than four for me since we left Earth. My true time is hunger and sleep; I've slept about fourteen hundred times in the Elsie and eaten three meals and a snack or two for each sleep. That is four years, not seventy.

No, I'm just disappointed that on my first free evening in a couple of weeks I have nothing better to do than write in my diary. But, speaking of sleep, I had better get some; the first party will go ashore tomorrow, if medicine approves, and I will be busy. I won't be on it but there is plenty to do to get them off.

We are a sorry mess. I don't know what we can do now.

I had better begin at the beginning. Elysia checked out in all ways on preliminary survey-breathable atmosphere, climate within Earth limits and apparently less extreme; a water, oxygen and carbon dioxide life cycle; no unusual hazards. No signs of intelligent life, of course, or we would have skipped it. It is a watery world even more than Terra is, with over 90% oceans and there was talk of naming it "Aquaria" instead of Elysia, but somebody pointed out that there was no sense in picking a name which might make it unattractive to colonists when there seemed to be nearly as much usable land as Earth had.

So we cuddled up to an island as big as Madagascar-almost a continent for Elysia-with the idea that we could cover the whole island in the detailed survey and be able to report that a colony could settle there as fast as LRF could send a ship-we knew that Connie was already settled and we wanted to get this one settled and make it a clean sweep for the Elsie.

I gave Percy a pat and told him to size up the lay of the land and to let me know if he found any lady pigs. Uncle Lucas took the guard ashore and the science party followed the same day. It was clear that Elysia was going to be no more of a problem than Connie had been and almost as big a prize-except for the remote possibility of exotic infection we could not handle.

That was two weeks ago.

It started out routine as breakfast. Percy and the other experimental animals flourished on an Elysian diet; Van failed to catch anything worse than an itch and presently he was trying Elysian food himself-there were awkward looking four-winged birds which broiled nicely; Van said they reminded him of roast turkey with an overtone of cantaloupe. But Percy the Pig would not touch some fish that were caught and the rats that did eat them

died, so sea food was put off until further investigation could be made. The fish did not look like ours; they were flat the wrong way, like a flounder, and they had tendrils something like a catfish which raveled on the ends instead of being spiny. Harry Gates was of the opinion that they were feeling organs and possibly manipulative as well.

The island had nothing like the big-mouthed carnivorous lizards that got Lefty Gomez. However, there was no telling what might be on other islands, since the land masses were so detached that totally different lines of evolution might have been followed in each island group. Our report was going to recommend that Devereaux Island be settled first, then investigate the others cautiously.

I was due to go ashore on third rotation, Unc having taken the first week, then a week of rest, and now would take shipside watch while I linked with him from ashore. But at the last minute I agreed to swap, as Anna was anxious to go.

I did not want to swap, but I had been running the department's watch list since Rupe's death and it would have been awkward to refuse. Gloria was going, too, since her husband was on that rotation, but Gloria did not count as her telepartner was on vacation back Earthside.

When they left, I was on top of the Elsie glumly watching them get into the boats. There was a "monkey island" deck temporarily rigged up there, outside the airlock; it was a good place to watch the boats being loaded at the cargo ports lower down. Engineering had completed inspection and overhaul and had about finished filling the boost-mass tanks; the Elsie was low in the water and the cargo ports were not more than ten feet above waterline. It made loading convenient; at the time we put the first party ashore the tanks were empty and the boats had to be lowered nearly a hundred feet and passengers had to go down rope ladders-not easy for people afraid of heights, as so many are. But it was a cinch that day.

The airlock was only large enough for people; anything bigger had to go through the cargo ports. It was possible to rig the cargo ports as airlocks and we had done so on Inferno around Beta Hydri, but when the air was okay we just used them as doors. They were at the cargo deck, underneath the mess deck and over the auxiliary machinery spaces; our three boats and the two helicopters were carried just inside on that deck. The boats could be swung out on gooseneck davits from where they nested but the helicopters had to be hooked onto boat falls, swung out, then a second set of falls hooked to them from the monkey island above, by which a helicopter could be scooted up the Elsie's curved side and onto the temporary top deck, where her jet rotors would be attached.

Mr. Regato cursed the arrangement every time we used it, "Mechanical buffoonery!" was his name for it. "I've never seen a ship's architect who wasn't happy as soon as he had a pretty picture. He never stops to think that some poor fool is going to have to use his pretty picture."

As may be, the arrangement did let the helis be unloaded with a minimum of special machinery to get out of order-which, I understand, was a prime purpose in refitting the ships for the Project. But that day the helicopters were outside and ready, one of them at camp and the other tied down near me on the monkey island. All we had to do was to load the boats.

The boats were whale boats molded of glass and teflon and made nonsinkable by plastic foam in all dead spaces. They were so tough that, while you might be able to bash one in, you could not puncture it with anything short of a drill or a torch, yet they were so light

that four men could lift one that was empty. It did them no harm to drive them up onto a rocky beach, then they could be unloaded and easily dragged higher. They were driven by alcohol jets, just as the helis were, but they had oars and sails as well. We never used the oars although all the men had gone through a dry drill under my Uncle Steve's watchful eye.

The boats had come in the night before loaded with specimens for the research department; now they were going back with people who would replace those ashore. From the monkey island I could see, half a mile away, the people who were coming back, waiting on the beach for the boats. Two of the boats were lying off, waiting for the third; each had about eighteen people in it and a few bundles of things requisitioned by Harry Gates for his scientific uses ashore, as well as a week's supplies for the whole party.

I noticed a movement behind me, turned, and saw that it was the Old Man coming up the airlock hatch. "Good morning, Captain."

"Morning, Bartlett." He looked around. "Nice day."

"Yes, sir...and a nice place."

"It is indeed." He looked toward the shore. "I'm going to find some excuse to hit dirt before we leave here. I've been on steel too long."

"I don't see why not, sir. This place is friendly as a puppy. Not like Inferno."

"Not a bit." He turned away, so I did too; you don't press conversation on the Captain unless he wants it. The third boat was loaded now and cast loose; all three were about fifty yards away and were forming a column to go in together. I waved to Gloria and Anna.

At each boat, a long, wet rope as thick as my waist came up out of the water, passed across it amidships and back into the water on the other side. I yelled, "Hey, Captain! Look!"

He turned. The boats rolled sideways and sank-they were pulled under. I heard somebody scream and the water was crowded with struggling bodies.

The Captain leaned past me at the raft and looked at the disaster. He said in an ordinary tone, "Can you start that chopper?"

"Uh, I think so, Captain." I was not a helicopter pilot but I knew how it worked.

"Then do it." He leaned far over and yelled, "Get that cargo door closed!" He turned and dived down the hatch. I caught a glimpse of what had made him yell as I turned to climb into the helicopter. It was another of those wet ropes slithering up the Elsie's side toward the cargo port.

Starting the helicopter was more complicated than I had realized, but there was a check-off list printed on the instrument panel. I had fumbled my way down to "step four: start impeller" when I was pushed aside by Ace Wenzel the torchman who was the regular pilot. Ace did something with both hands, the blades started to revolve, making shadows across our faces, and he yelled, "Cast her loose!"

I was shoved out the door as the Surgeon was climbing in; I fell four feet to the deck as the down blast hit me. I picked myself up and looked around.

There was nothing in the water, nothing. Not a body, not a person struggling to keep afloat, no sign of the boats. There was not even floating cargo although some of the packages would float. I knew; I had packed some of them.

Janet was standing next to me, shaking with dry sobs. I said stupidly, "What happened?"

She tried to control herself and said shakily, "I don't know. I saw one of them get Otto. It just...it just-" She started to bawl again and turned away.

There wasn't anything on the water, but now I saw that there was something in the water, under it. From high up you can see down into water if it is fairly smooth; arranged around the ship in orderly ranks were things of some sort. They looked like whales-or what I think a whale would look like in water; I've never seen a whale;

I was just getting it through my confused head that I was looking at the creatures who had destroyed the boats when somebody yelled and pointed. On shore the people who were to return were still on the beach, but they were no longer alone-they were surrounded. The things had come ashore, on each side of them and had flanked them. I could not see well at that distance but I could see the sea creatures because they were so much bigger than we were. They didn't have legs, so far as I could tell, but it did not slow them down-they were fast.

And our people were being herded into the water.

There was nothing we could do about it, not anything. Under us we had a ship that was the end product of centuries of technical progress; its torch could destroy a city in the blink of an eye. Ashore the guard had weapons by which one man was equal to an army of older times and there were more such weapons somewhere in the ship. But at the time I did not even know where the armory was, except that it was somewhere in the auxiliary deck-you can live a long time in a ship and never visit all her compartments.

I suppose I should have been down in the auxiliary deck, searching for weapons. But what I did was stand there, frozen, with a dozen others, and watch it happen.

But somebody had been more alert than I had been. Two men came bursting up through the hatch; they threw down two ranger guns and started frantically to plug them in and break open packages of ammunition. They could have saved the effort; by the time they were ready to sight in on the enemy, the beach was as empty as the surface of the water. Our shipmates had been pushed and dragged under. The helicopter was hovering over the spot; its rescue ladder was down but there was no one on it.

The helicopter swung around over the island and across our camp site, then returned to the ship.

While it was moving in to touch down, Chet Travers hurried up the ladder. He looked around, saw me and said, "Tom, where's the Captain?"

"In the chopper."

"Oh." He frowned. "Well, give him this. Urgent. I've got to get back down." He shoved a paper at me and disappeared. I glanced at it, saw that it was a message form, saw who it was from, and grabbed the Captain's arm as he stepped out of the heli.

He shrugged me off. "Out of my way!"

"Captain, you've got to-it's a message from the island-from Major Lucas."

He stopped then and took it from me, then fumbled for his reading glasses, which I could see sticking out of a pocket. He shoved the dispatch form back at me before I could help him and said, "Read it to me, boy."

So I did. " 'From: Commander Ship's Guard-To: Commanding Officer Lewis and Clark-Oh nine three one-at oh nine oh five survey camp was attacked by hostile natives, believed to be amphibious. After suffering initial heavy losses the attack was beaten off and I have withdrawn with seven survivors to the hilltop north of the camp. We were forced to abandon survey craft number two. At time of attack, exchange party was

waiting on beach; we are cut off from them and their situation is not known but must be presumed to be desperate.

" 'Discussion: The attack was intelligently organized and was armed. Their principal weapon appears to be a jet of sea water at very high pressure but they use also a personal weapon for stabbing and cutting. It must be assumed that they have other weapons. It must be conditionally assumed that they are as intelligent as we are, as well disciplined, and possibly as well armed for the conditions Their superior numbers give them a present advantage even if they had no better weapons.

" 'Recommendations: My surviving command can hold out where it is against weapons thus far encountered. It is therefore urgently recommended that immediate measures be limited to rescuing beach party. Ship should then be placed in orbit until a plan can be worked out and weapons improvised to relieve my command without hazard to the ship.- S. Lucas, Commandant, oh nine three six.""

The Captain took the message and turned toward the hatch without speaking. Nobody said anything although there were at least twenty of us crowded up there. I hesitated, then when I saw that others were going down, I pushed in and followed the Captain.

He stopped two decks down and went into the communications office. I didn't follow him, but he left the door open. Chet Travers was in there, bent over the gear he used to talk with the camp, and Commander Frick was leaning over him with a worried look on his face: The Captain said, "Get me Major Lucas."

Commander Frick looked up. "We're trying to, Captain. Transmission cut off while they were sending us a list of casualties."

The Captain chewed his lip and looked frustrated, then he said "Keep trying," and turned. He saw me.

"Bartlett!"

"Yes, sir!"

"You have one of your people over there. Raise him."

I thought rapidly, trying to remember the Greenwich even as I was calling Vicky-if Vicky was home, she could get through on the direct line to LRF and they could hook her with Sam Rojas's telepartner and thence to Sam, and the Captain could talk to Uncle Steve on a four-link relay almost as fast as he could by radio. ("Vicky! Come in, Vicky! Urgent!")

"Yes; Uncle Tom? What is it? I was asleep."

Commander Frick said, "I don't think that will work, Captain. Rojas isn't on the list of survivors. He was scheduled for rotation; he must have been down at the beach."

Of course, of course! Sam would have been down at the beach-I had stood by and must have watched him being herded into the water!

"What is it, Uncle Tom?"

("Just wait, hon. Stay linked.")

"Then get me somebody else," the Captain snapped.

"There isn't anyone else, Captain," Frick answered. "Here's the list of survivors. Rojas was the only fr-the only special communicator we had ashore."

The Captain glanced at the list, said, "Pass the word for all hands not on watch to assemble in the mess room on the double." He turned and walked right through me. I jumped out of the way.

"What's the matter, Uncle Tom? You sound worried."

I tried to control my voice. ("It was a mistake, hon. Just forget it and try to get back to sleep. I'm sorry.")

"All right. But you still sound worried."

I hurried after the Captain. Commander Frick's voice was calling out the order over the ship's system as we hurried down the ladders, yet he was only a moment or two behind me in reaching the mess room. In a matter of seconds we were all there ... just a handful of those who had left Earth-about forty. The Captain looked around and said to Cas Warner, "Is this all?"

"I think so, Captain, aside from the engineering watch."

"I left Travers on watch," added Frick.

"Very well" The Captain turned and faced us. "We are about to rescue the survivors ashore. Volunteers step forward."

We didn't step, we surged, all together. I would like to say that I was a split second ahead, because of Uncle Steve, but it wouldn't be true. Mrs. Gates was carrying young Harry in her arms and she was as fast as I was.

"Thank you," the Captain said stiffly. "Now will the women please go over there by the pantry so that I can pick the men who will go."

"Captain?"

"Yes, Captain Urqhardt?"

"I will lead the party."

"You'll do nothing of the sort, sir. I will lead: You will now take some women and go down and fetch what we need."

Urqhardt barely hesitated, then said, "Aye, aye, sir."

"That rule-our standing rule for risk-will apply to all of you. In doubly-manned jobs the older man will go. In other jobs, if the job can be dispensed with, the man will go; if it cannot be, the man will stay." He looked around.

"Dr. Babcock!"

"Righto, Skipper!"

Mr. O'Toole said, "Just a moment, Captain. I am a widower and Dr. Babcock is much more-"

"Shut up."

"But-"

"Confound it, sir, must I debate every decision with every one of you? Must I remind you that every second counts? Get over there with the women."

Red-faced and angry Mr. O'Toole did as he was told. The Captain went on, "Mr. Warner. Mr. Bach. Dr. Severin-" Quickly he picked those he wanted, then waved the rest of us over toward the pantry.

Uncle Alfred McNeil tried to straighten his stooped shoulders. "Captain, you forgot me. I'm the oldest in my department."

The Captain's face softened just a hair. "No, Mr. McNeil, I didn't forget," he said quietly, "but the capacity of the chopper is limited-and we have seven to bring back. So I must omit you."

Unc's shoulders sagged and I thought he was going to cry, than he shuffled over away from the selected few. Dusty Rhodes caught my eye and looked smug and proud; he was one of the chosen. He still did not look more than sixteen and I don't think he had ever

shaved; this was probably the first time in his life that he had ever been treated in all respects as a man.

In spite of the way the others had been shut off short I couldn't let it stand. I stepped forward again and touched the Captain's sleeve. "Captain ... you've got to let me go! My uncle is over there."

I thought he was going to explode, but he caught himself.

"I see your point. But you arc a special communicator and we haven't any spare. I'll tell Major Lucas that you tried."

"But-"

"Now shut up and do as you are told-before I kick you half across the compartment." He turned away as if I didn't exist.

Five minutes later arms had been issued and we were all crowding up the ladders to see them off. Ace Wenzel started the helicopter at idling speed and jumped out. They filed in, eight of them, with the Captain last. Dusty had a bandolier ever each shoulder and a ranger gun in his hands; he was grinning excitedly. He threw me a wink and said, "I'll send you a postcard."

The Captain paused and said, "Captain Urqhardt."

"Yes, sir."

The Captain and the reserve captain conferred for a moment; I couldn't hear them and I don't think we were meant to hear. Then Captain Urqhardt said loudly, "Aye, aye, sir. It shall be done."

"Very good, sir." The Captain stepped in, slammed the door, and took the controls himself. I braced myself against the down blast.

Then we waited.

I alternated between monkey island and the comm office. Chet Travers still could not raise Uncle Steve but he was in touch with the heli. Every time I went top side I looked for the sea things but they seemed to have gone away.

Finally I came down again to the comm room and Chet was looking joyful. "They've got 'em!" he announced.

"They're off the ground." I started to ask him about it but he was turning to announce the glad news over the ship's system; I ran up to see if I could spot the heli.

I saw it, near the hilltop, about a mile and a half away. It moved rapidly toward the ship. Soon we could see people inside. As it got closer someone opened a window on the side toward us.

The Captain was not really skilled with a helicopter. He tried to make a landing straight in but his judgment of wind was wrong and be had to swing on past and try again. The maneuver brought the craft so close to the ship that we could see the passengers plainly. I saw Uncle Steve and he saw me and waved; he did not call out, he just waved. Dusty Rhodes was beside him and saw me, too. He grinned and waved and shouted, "Hey, Tom, I rescued your buddy!" He reached back and then Percy's head and cloven forehooves showed above the frame, with Dusty holding the pig with one hand and pointing to him with the other. They were both grinning.

"Thanks!" I yelled back. "Hi, Percy!"

The chopper turned a few hundred feet beyond the ship and headed back into the wind.

It was coming straight toward the ship and would have touched down soon when something came out of the water right under it. Some said it was a machine-to me it

looked like an enormous elephant's trunk. A stream of water so solid, hard, and bright that it looked like steel shot out of the end of it; it struck a rotor tip and the heli staggered.

The Captain leaned the craft over and it slipped out of contact. The stream followed it, smashed against the fuselage and again caught a rotor; the heli tilted violently and began to fall.

I'm not much in an emergency; it is hours later when I figure out what I should have done. This time I acted without thinking. I dived down the ladder without hitting the treads and was on down in the cargo deck almost at once. The port of that side was closed, as it had been since the Captain ordered it closed earlier; I slapped the switch and it began to grind open. Then I looked around and saw what I needed: the boat falls, coiled loosely on deck, not yet secured. I grabbed a bitter end and was standing on the port as it was still swinging down to horizontal.

The wrecked helicopter was floating right in front of me and there were people struggling in the water. "Uncle Steve!" I yelled "Catch!" I threw the line as far as I could.

I had not even seen him as I yelled. It was just the idea that was in the top of my mind. Then I did see him, far beyond where I had been able to throw the line. I heard him call back, "Coming, Tom!" and he started swimming strongly toward the ship.

I was so much in a daze that I almost pulled the line in to throw it again when I realized that I had managed to throw far enough for some one. I yelled again. "Harry! Right behind you! Grab on!"

Harry Gates rolled ever in the water, snatched at the line and got it. I started to haul him in.

I almost lost him as I got him to the ship's skin. One of his arms seemed almost useless and he nearly lost his grasp. But between us we managed to manhandle him up and into the port; we would not have made it if the Ship had not been so low in the water. He collapsed inside and lay on his face, gasping and sobbing.

I jerked the fall loose from his still clenched hand and turned to throw it to Uncle Steve.

The helicopter was gone, Uncle Steve was gone, again the water was swept clean-except for Percy, who, with his head high out of water, was swimming with grim determination toward the ship.

I made sure that there were no other people anywhere in the water. Then I tried to think what I could do for Percy.

The poor little porkchop could not grab a line, that was sure. Maybe I could lasso him. I fumbled to get a slip knot in the heavy line. I had just managed it when Percy gave a squeal of terror and I jerked my head around just in time to see him pulled under the water.

It wasn't a mouth that got him. I don't think it was a mouth.

XV "CARRY OUT HER MISSION"

I don't know what I expected after the attack by the behemoths. We just wandered around in a daze. Some of us tried to look out from the monkey island deck until that spouter appeared again and almost knocked one of us off, then Captain Urqhardt ordered all hands to stay inside and the hatch was closed.

I certainly did not expect a message that was brought around after supper (if supper had been served; some made themselves sandwiches) telling me to report at once for heads-of-departments conference. "That's you, isn't it, Tom?" Chet Travers asked me. "They tell me Unc Alfred is on the sick list. His door is closed."

"I suppose it's me." Unc had taken it hard and was in bed with a soporific in him, by order of the one remaining medical man, Dr. Pandit.

"Then you had better shag up there."

First I went to Captain Urqhardt's room and found it dark, then I got smart and went to the Captain's cabin. The door was open and some were already around the table with Captain Urqhardt at the head. "Special communications department, sir," I announced myself.

"Sit down, Bartlett."

Harry came in behind me and Urqhardt got up and shut the door and sat down. I looked around, thinking it was a mighty funny heads-of-departments meeting. Harry Gates was the only boss there who had been such when we left Earth. Mr. Eastman was there instead of Commander Frick. Mama O'Toole was long dead but now Cas was gone too; ecology was represented by Mr. Krishnamurti who had merely been in charge of air-conditioning and hydroponics when we had left. Mr. O'Toole was there in place of Dr. Babcock, Mr. Regato instead of Mr. Roch. Sergeant Andreeli, who was also a machinist in engineering, was there in place of Uncle Steve and he was the only member of the ship's guard left alive-because he had been sent back to the ship with a broken arm two days earlier. Dr. Pandit sat where Dr. Devereaux should have been.

And myself of course but I was just fill-in; Unc was still aboard. Worst of all, there was Captain Urqhardt sitting where the Captain should have been.

Captain Urqhardt started in. "There is no need to detail our situation; you all know it. We will dispense with the usual departmental reports, too. In my opinion our survey of this planet is as complete as we can make it with present personnel and equipment... save that an additional report must be made of the hazard encountered today in order that the first colonial party will be prepared to defend itself. Is there disagreement? Dr. Gates, do you wish to make further investigations here?"

Harry looked surprised and answered, "No, Captain. Not under the circumstances."

"Comment?" There was none. "Very well," Urqhardt continued. "I propose to shape course for Alpha Phoenicis. We will hold memorial services at nine tomorrow morning and boost at noon. Comment? Mr. O'Toole."

"Eh? Do you mean can we have the figures ready? I suppose so, if Janet and I get right on it."

"Do so, as soon as we adjourn. Mr. Regato?"

Regato was looking astounded. "I didn't expect this, Captain.

"It is short notice, but can your department be ready? I believe you have boost mass aboard."

"It isn't that,. Captain. Surely, the torch will be ready. But I thought we would make one long jump for Earth."

"What led you to assume that?"

"Why, uh ..." The new Chief Engineer stuttered and almost slipped out of P-L lingo into Spanish. "The shape we are in, sir. The engineering department will have to go on watch-

and-watch, heel and toe. I can't speak for other departments, but they can't be in much better shape."

"No, you can't and I am not asking you to. With respect to your own department, is it mechanically ready?"

Regato swallowed. "Yes, sir. But people break down as well as machinery."

"Wouldn't you have to stand watch-and-watch to shape course for Sol?" Urqhardt did not wait for the obvious answer, but went on, "I should not have to say this. We are not here for our own convenience; we are here on an assigned mission ... as you all know. Earlier today, just before Captain Swanson left, he said to me, "Take charge of my ship, sir. Carry out her mission." I answered, 'Aye, aye, sir.' Let me remind you of that mission: we were sent out to conduct the survey we have been making, with orders to continue the search as long as we were in communication with Earth-when we fell out of communication, we were free to return to Earth, if possible. Gentlemen, we are still in touch with Earth; our next assigned survey point is Alpha Phoenicis. Could anything be clearer?"

My thoughts were boiling up so that I hardly heard him. I was thinking: who does this guy think he is? Columbus? Or the Flying Dutchman? There were only a little over thirty of us left alive-in a ship that had started with two hundred. The boats were gone, the heli's were-I almost missed his next remark.

"Bartlett?"

"Sir?"

"What about your department?"

It dawned on me that we were the key department-us freaks. When we fell out of touch, he had to turn back. I was tempted to say that we had all gone deaf, but I knew I couldn't get away with it. So I stalled.

"As you pointed out, sir, we are in touch with Earth."

"Very well." His eyes turned toward Dr. Pandit.

"Just a moment, Captain," I insisted. "There's more to it."

"Eh? State it."

"Well, this next jump is about thirty years, isn't it? Greenwich I mean."

"Of that order. Somewhat less."

" 'Of that order.' There are three special communicators left, myself, Unc-I mean Mr. McNeil-and Mei-Ling Travers. I think you ought to count Unc out."

"Why?"

"Because he has his original telepartner and she is now as old as he is. Do you think Unc will live another thirty years?"

"But it won't be thirty years for him-oh, sorry! I see your point. She would be well past a hundred if she lived at all. Possibly senile."

"Probably, sir. Or more likely dead."

"Very well, we won t count McNeil. That leaves two of you. Plenty for essential communication.

"I doubt it, sir. Mei-Ling is a poor bet. She has only a secondary linkage and her partner is over thirty, with no children. Based on other telepairs, I would say that it is most unlikely that they will stay in rapport through another peak ... not a thirty-year one."

"That still leaves yourself."

I thought suddenly that if I had the guts to jump over the side, they could all go home. But it was just a thought; when I die, it won't be suicide. "My own case isn't much better, sir. My telepartner is about-" I had to stop and count up, then the answer did not seem right. "-is about nineteen, sir. No kids. No chance of kids before we peak... and I couldn't link in with a brand-new baby anyhow. She'll be fiftyish when we come out. So far as I know, there hasn't been a case in the whole fleet of bridging that long a period out of rapport."

He waited several moments before be answered. "Have you any reason to believe that it is impossible?"

"Well... no, sir. But it is extremely unlikely."

"Hmm ... do you consider yourself an authority in theory of telepathy?"

"Huh? No, sir. I am just a telepath, that's all."

"I think he is probably right," put in Dr. Pandit, "are you an authority, Doctor?"

"Me, sir? As you know, my specialty is exotic pathology. But-"

"In that case, we will consult authorities Earthside. Perhaps they can suggest some way to improve our chances. Very probably, under the circumstances, the Foundation will again authorize use of drugs to reduce the possibility that our special communicators might fall out of touch during peak. Or something."

I thought of telling him that Vicky wasn't going to risk dangerous habit-forming drugs. Then I thought better of it. Pat had-and Vicky might.

"That is all, gentlemen. We will boost at noon tomorrow. Uh, one more thing ... One of you implied that morale is not too high in the ship. That is correct and I am perhaps more aware of it than you are. But morale will shake down to normal and we will best be able to forget the losses we have suffered if we all get quickly back to work. I want only to add that you all, as senior officers of this ship, have most to do with morale by setting an example. I am sure that you will." He stood up.

I don't know how news travels in a ship but by the time I got down to the mess room everybody knew that we were boosting tomorrow ... and not for home. It was buzz-buzz and yammer all over. I ducked out because I didn't want to discuss it; my thoughts were mixed. I thought the Captain was insisting on one more jump from which he couldn't possibly report his results, if any-and with a nice fat chance that none of us would ever get home. On the other hand I admired the firm way he faced us up to our obligations and brushed aside panic. He had guts.

So did the Flying Dutchman have guts-but at last report he was still trying to round the Cape and not succeeding.

The Captain-Captain Swenson, I corrected-would not have been that bullheaded.

Or would he? According to Urqhardt, the last thing the Captain had said had been to remind Urqhardt that it was up to him to carry out the mission. All of us had been very carefully chosen (except us freaks) and probably the skipper and the relief skipper of each ship were picked primarily for bulldog stubbornness, the very quality that had kept Columbus going on and on when he was running out of water and his crew was muttering mutiny. I remembered Uncle Steve had once suggested as much.

I decided to go talk to Uncle Steve ... then I remembered I couldn't and I really felt bad. When my parents had died, two peaks back, I had felt bad because I didn't feel as bad as I knew I should have felt. When it happened-or rather, by the time I knew about it-they

were long dead, people I had not seen in a long time and just faces in a photograph. But Uncle Steve I had seen every day-I had seen today.

And I had been in the habit of kicking my troubles around with him whenever they were too much for me.

I felt his loss then, the delayed shock you get when you are hit hard. The hurt doesn't come until you pull yourself together and realize you're hit.

It was just as well that somebody tapped on my door then, or I would have bawled.

It was Mei-Ling and her husband, Chet. I invited them in and they sat down on the bed. Chat got to the point.

"Tom, where do you stand on this?"

"On what?"

"This silly business of trying to go on with a skeleton crew."

"It doesn't matter where I stand," I said slowly. "I'm not running the ship."

"Ah, but you are!"

"Huh?"

"I don't mean quite that, but I do mean you can put a stop to the nonsense. Now, look, Tom, everybody knows what you told the Captain and-"

"Who's been talking?"

"Huh? Never mind. If it didn't leak from you, it probably did from everybody else present; it's common knowledge. What you told him made sense. What it comes down to is that Urqhardt is depending on you and you alone to keep him in touch with the home office. So you're the man with the stick. You can stop him."

"Huh? Now wait. I'm not the only one. Granted that he isn't counting on Unc-how about Mei-Ling?"

Chat shook his head. "Mei-Ling isn't going to 'think-talk' for him."

His wife said, "Now, Chet; I haven't said so."

He looked at her fondly. "Don't be super-stupid, my lovely darling. You know that there is no chance at all that you will be any use to him after peak. If our brave Captain Urqhardt hasn't got that through his head now, he will ... even if I have to explain to him in words of one syllable."

"But I might stay linked."

"Oh, no, you won't ... or I'll bash your pretty head in. Our kids are going to grow up on Earth."

She looked soberly at him and patted his hand. The Travers's were not expecting again, but everybody knew they were hoping; I began to see why Chet was adamant... and I became quite sure that Mei-Ling would not link again after peak-not after her husband had argued with her for a while. What Chet wanted was more important to her than what the Captain wanted, or any abstract duty to a Foundation back on Earth.

Chet went on, "Think it over, Tom, and you will see that you can't let your shipmates down. To go on is suicidal and everybody knows it but the Captain. It's up to you."

"Uh, I'll think it over."

"Do that. But don't take too long." They left.

I went to bed but didn't sleep. The deuce of it was that Chet was almost certainly right ... including the certainty that Mei-Ling would never patch in with her telepair after another peak, for she was beginning to slip even now. I had been transmitting mathematical or technical matter which would have fallen to her ever since last peak, because her linking

was becoming erratic. Chet wouldn't have to bash her admittedly-pretty head in; she was falling out of touch.

On the other hand...

When I had reached "On the other hand" about eighteen times, I got up and dressed and went looking for Harry Gates; it occurred to me that since he was a head of department and present at the meeting, it was proper to talk to him about it.

He wasn't in his room; Barbara suggested that I try the laboratory. He was there, alone, unpacking specimens that had been sent over the day before. He looked up. "Well, Tom, how is it going?"

"Not too good."

"I know. Say, I haven't had a proper chance to thank you. Shall I write it out, or will you have it right off my chest?"

"Uh, let's take it for granted." I had not understood him at first, for it is the simple truth that I had forgotten about pulling him out of the water; I hadn't had time to think about it.

"As you say. But I won't forget it. You know that, don't you?"

"Okay. Harry, I need advice."

"You do? Well, I've got it in all sizes. All of it free and all of it worth what it costs, I'm afraid."

"You were at the meeting tonight."

"So were you." He looked worried.

"Yes." I told him all that had been fretting me, then thought about it and told him all that Chet had said. "What am I to do, Harry? Chet is right; the chance of doing any good on another jump isn't worth it. Even if we find a planet worth reporting-a chance that is never good, based on what the fleet has done as a whoIe-even so, we almost certainly won't be able to report it except by going back, two centuries after we left. It's ridiculous and, as Chet says, suicidal, with what we've got left. On the other hand, the Captain is right; this is what we signed up for. The ship's sailing orders say for us to go on."

Harry carefully unpacked a package of specimens before he answered.

"Tommie, you should ask me an easy one. Ask me whether or not to get married and I'll tell you like a shot. Or anything else. But there is one thing no man can tell another man and that is whore his duty lies. That you must decide for yourself."

I thought about it. "Doggone it, Harry, how do you feel about it?"

"Me?" He stopped what he was doing. "Tom, I just don't know. For myself personally ... well, I've been happier in this ship than I have ever been before in my life. I've got my wife and kids with me and I'm doing just the work I want to do. With others it may be different."

"How about your kids?"

"Aye, there's the rub. A family man-" He frowned. "I can't advise you, Tom. If I even hint that you should not do what you signed up to do, I'd be inciting to mutiny ... a capital crime, for both of us. If I tell you that you must do what the Captain wants, I'd be on safe legal grounds-but it might mean the death of you and me and my kids and all the rest of us... because Chet has horse sense on his side even if the law is against him." He sighed. "Tom, I just missed checking out today-thanks to you-and my judgment isn't back in shape. I can't advise you; I'd be prejudiced."

I didn't answer. I was wishing that Uncle Steve had made it; he always had an answer for everything.

"All I can do," Harry went on, "is to make a weaselly suggestion."
"Huh? What is it?"
"You might go to the Captain privately and tell him just how worried you are. It might affect his decisions. At least he ought to know."
I said I would think about it and thanked him and left. I went to bed and eventually got to sleep. I was awakened in the middle of the night by the ship shaking. The ship always swayed a little when waterborne, but not this way, nor this much; not on Elysia.
It stopped and then it started again...and again it stopped...and started. I was wondering what...when it suddenly quivered in an entirely different way, one that I recognized; it was the way the torch felt when it was just barely critical. The engineers called it "clearing her throat" and was a regular part of overhaul and inspection. I decided that Mr. Regato must be working late, and I quieted down again. The bumping did not start up again.
At breakfast I found out what it was: the behemoths had tried something, nobody knew what, against the ship itself...whereupon the Captain had quite logically ordered Mr. Regato to use the torch against them. Now, although we still did not know much about them, we did know one thing: they were not immune to super-heated steam and intense radioactivity.
This brush with the sea devils braced my spine; I decided to see the Captain as Harry had suggested.
He let me in without keeping me waiting more than five minutes. Then he kept quiet and let me talk as long as I wanted to. I elaborated the whole picture, as I saw it, without attributing anything to Chet or Harry. I couldn't tell from his face whether I was reaching him or not, so I put it strongly: that Unc and Mei-Ling were both out of the picture and that the chance that I would be of any use after the next peak was so slight that he was risking his. ship and his crew on very long odds.
When I finished I still didn't know, nor did he make a direct answer. Instead he said, "Bartlett, for fifty-five minutes yesterday evening you had two other members of the crew in your room with your door closed."
"Huh? Yes, sir."
"Did you speak to them of this?"
I wanted to lie. "Uh...yes, sir."
"After that you looked up another member of the crew and remained with him until quite late...or quite early, I should say. Did you speak to him on the same subject?"
"Yes, sir."
"Very well I am holding you for investigation on two counts: suspicion of inciting to mutiny and suspicion of intent to mutiny. You are under arrest. Go to your room and remain there. No visitors."
I gulped, Then something Uncle Steve had told me came to my aid-Uncle had been a jawbone space-lawyer and loved to talk about it. "Aye, aye, sir. But I insist that I be allowed to see counsel of my choice...and that I be given a public hearing."
The Captain nodded as if I had told him that it was raining. "Certainly. Your legal rights will be respected. But those matters will have to wait; we are now preparing to get underway. So place yourself under arrest and get to your quarters."
He turned away and left me to confine myself. He didn't even seem angry.

So here I sit, alone in my room. I had to tell Unc he couldn't come in and, later, Chet. I can't believe what has happened to me.

XVI "JUST A MATHEMATICAL ABSTRACTION"

That morning seemed a million years long. Vicky checked with me at the usual time, but I told her that the watch list was being switched around again and that I would get in touch with her later. "Is something wrong?" she asked.

"No, hon, we're just having a little reorganization aboard ship."

"All right. But you sound worried."

I not only didn't tell her that I was in a jam, I didn't tell her anything about the disaster. Time enough later, after it had aged-unless she found out from official news. Meanwhile there was no reason to get a nice kid upset over something she couldn't help.

Twenty minutes later Mr. Eastman showed up. I answered the door when he knocked and told him, "I'm not to have any visitors. Sorry."

He didn't leave. "I'm not a visitor, Tom; I'm here officially, for the Captain."

"Oh." I let him in.

He had a tool kit with him. He set it down and said, "The regular and special communication departments have been consolidated, now that we are so shorthanded, so it looks like I'm your boss. It won't make any difference, I'm sure. But I'm to make a reconnection on your recorder, so that you can record directly into the comm office."

"Okay. But why?"

He seemed embarrassed, "Well...you were due to go on watch a half hour ago. We're going to fix this so that you can stand your watches conveniently from here. The Captain is annoyed that I didn't arrange it earlier." He started unscrewing the access plate to the recorder.

I was speechless. Then I remembered something Uncle Steve had told me. "Hey, wait a minute!"

"Eh?"

"Oh, go ahead and rewire it, I don't care. But I won't stand any watches."

He straightened up and looked worried. "Don't talk like that, Tom, You're in enough trouble now; don't make it worse. Let's pretend you never said it. Okay?"

Mr. Eastman was a decent sort and the only one of the electronics people who had never called us freaks. I think he was really concerned about me. But I said, "I don't see how it can be worse. You tell the Captain that I said he could take his watches and-" I stopped. That wasn't what Uncle Steve would say. "Sorry. Please tell him this: 'Communicator Bartlett's respects to the Captain and he regrets that he cannot perform duty while under arrest' Got it?"

"Now look here, Tom, that's not the proper attitude. Surely, there is something in what you say from a standpoint of regulations. But we are shorthanded; everybody has to pitch in and help. You can't stand on the letter of the law; it isn't fair to the rest."

"Can't I?" I was breathing hard and exulting in the chance to hit back. "The Captain can't have his cake and eat it too. A man under arrest doesn't perform duty. It's always been that way end it always will be. You just tell him what I said."

He silently finished the reconnection with quick precision.

"You're sure that's what you want me to tell him?"
"Quite sure."
"All right. Hooked the way that thing is now"-he added, pointing a thumb at the recorder-"you can reach me on if you change your mind. So long."
"One more thing-"
"Eh?"
"Maybe the Captain hasn't thought about it, since his cabin has a bathroom, but I've been in here some hours. Who takes me down the passageway and when? Even a prisoner is entitled to regular policing."
"Oh. I guess I do. Come along."
That was the high point of the morning. I expected Captain Urqhardt to show up five minutes after Mr. Eastman had left me at my room-breathing fire and spitting cinders. So I rehearsed a couple of speeches in my head, carefully phrased to keep me inside the law and quite respectful. I knew I had him.
But nothing happened. The Captain did not show up; nobody showed up. It got to be close to noon. When no word was passed about standing by for boost, I got in my bunk with five minutes to spare and waited.
It was a long five minutes.
About a quarter past twelve I gave up and got up. No lunch either. I heard the gong at twelve-thirty, but still nothing and nobody. I finally decided that I would skip one meal before I complained, because I didn't want to give him the chance to change the subject by pointing out that I had broken arrest. It occurred to me that I could call Unc and tell him about the failure in the beans department, then I decided that the longer I waited, the more wrong the Captain would be.
About an hour after everybody else had finished eating Mr. Krishnamurti showed up with a tray. The fact that he brought it himself instead of sending whoever had pantry duty convinced me that I must be a Very Important Prisoner-particularly as Kris was unanxious to talk to me and even seemed scared of being near me. He just shoved it in and said, "Put it in the passageway when you are through."
"Thanks, Kris."
But buried in the food on the tray was a note: "Bully for you! Don't weaken and we'll trim this bird's wings. Everybody is pulling for you." It was unsigned and I did not recognize the handwriting. It wasn't Krishnamurti's; I knew his from the time when I was fouling up his farm. Nor was it either of the Travers's, and certainly not Harry's.
Finally I decided that I didn't want to guess whose it was and tore it in pieces and chewed it up, just like the Man in the Iron Mask or the Count of Monte Cristo. I don't really qualify as a romantic hero, however, as I didn't swallow it; I just chewed it up and spat it out. But I made darn sure that note was destroyed, for I not only did not want to know who had sent it, I didn't want anybody ever to know.
Know why? That note didn't make me feel good; it worried me. Oh, for two minutes it bucked me up; I felt larger than life, the champion of the downtrodden.
Then I realized what the note meant...
Mutiny.
It's the ugliest word in space. Any other disaster is better.
One of the first things Uncle Steve had told me-told Pat and myself, way back when we were kids-was: "The Captain is right even when he is wrong." It was years before I

understood it; you have to live in a ship to know why it is true. And I didn't understand it in my heart until I read that encouraging note and realized that somebody was seriously thinking of bucking the Captain's authority ... and that I was the symbol of their resistance.

A ship is not just a little world; it is more like a human body. You can't have democracy in it, not democratic consent at least, no matter how pleasant and democratic the Captain's manner may be. If you're in a pinch, you don't take a vote from your arms and legs and stomach and gizzard and find out what the majority wants. Darn well you don't! Your brain makes a decision and your whole being carries it out.

A ship in space is like that all the time and has to be. What Uncle Steve meant was that the Captain had better be right, you had better pray that he is right even if you disagree with him... because it won't save the ship to be right yourself if he is wrong.

But a ship is not a human body; it is people working together with a degree of selflessness that doesn't come easy-not to me, at least. The only thing that holds it together is a misty something called its morale, something you hardly know it has until the ship loses it. I realized then that the Elsie had been losing hers for some time. First Doc Devereaux had died and then Mama O'Toole and both of those were body blows. Now we had lost the Captain and most of the rest... and the Elsie was falling to pieces.

Maybe the new captain wasn't too bright, but he was trying to stop it. I began to realize that it wasn't just machinery breaking down or attacks from hostile natives that lost ships; maybe the worst hazard was some bright young idiot deciding that he was smarter than the Captain and convincing enough others that he was right. I wondered how many of the eight ships that were out of contact had died proving that their captains were wrong and that somebody like me was right.

It wasn't nearly enough to be right.

I got so upset that I thought about going to the Captain and telling him I was wrong and what could I do to help? Then I realized that I couldn't do that, either. He had told me to stay in my room-no 'if's' or 'maybe's.' If it was more important to back up the Captain and respect his authority than anything else, then the only thing was to do as I had been ordered and sit tight.

So I did.

Kris brought me dinner, almost on time. Late that evening the speakers blared the usual warning, I lay down and the, Elsie boosted off Elysia. But we didn't go on, we dropped into an orbit, for we went into free fall right afterwards. I spent a restless night; I don't sleep well when I'm weightless.

I was awakened by the ship going into light boost, about a half gravity. Kris brought me breakfast but I didn't ask what was going on and he didn't offer to tell me. About the middle of the morning the ship's system called out: "Communicator Bartlett, report to the Captain." It was repeated before I realized it meant me ... then I jumped up, ran my shaver over my face, decided that my uniform would have to do, and hurried up to the cabin.

He looked up when I reported my presence. "Oh, yes. Bartlett, Upon investigation I find that there is no reason to prefer charges. You are released from arrest and restored to duty. See Mr. Eastman."

He looked back at his desk and I got sore. I had been seesawing between a feeling of consecrated loyalty to the ship and to the Captain as the head thereof, and an equally

strong desire to kick Urqhardt in the stomach. One kind word from him and I think I would have been his boy, come what may. As it was, I was sore.

"Captain!"

He looked up. "Yes?"

"I think you owe me an apology."

"You do? I do not think so. I acted in the interest of the whole ship. However, I harbor no ill feelings, if that is of any interest to you." He looked back at his work, dismissing me ... as if my hard feelings, if any, were of no possible importance.

So I got out and reported to Mr. Eastman. There didn't seem to be anything else to do.

Mei-Ling was in the comm office, sending code groups. She glanced up and I noticed that she looked tired. Mr. Eastman said, "Hello, Tom. I'm glad you're here; we need you. Will you raise your telepartner, please?"

One good thing about having a telepath run the special watch list is that other people don't seem to realize that the other end of each pair-the Earthside partner-is not a disembodied spirit. They eat and sleep and work and raise families, and they can't be on call whenever somebody decides to send a message. "Is it an emergency?" I asked, glancing at the Greenwich and then at the ship's clock, Vicky wouldn't check with me for another half hour; she might be at home and free, or she might not be.

"Perhaps not 'emergency' but 'urgent' certainly."

So I called Vicky and she said she did not mind. ("Code groups, Freckle Face,") I told her. ("So set your recorder on 'play back.' ")

"It's quivering, Uncle Tom. Agitate at will."

For three hours we sent code groups, than which there is nothing more tedious. I assumed that it was probably Captain Urqhardt's report of what had happened to us on Elysia, or more likely his second report after the LRF had jumped him for more details. There was no reason to code it so far as I was concerned; I had been there-so it must be to keep it from our telepartners until LRF decided to release it. This suited me as I would not have relished passing all that blood and slaughter, in clear language, to little Vicky.

While we were working the Captain came in and sat down with Mr. Eastman; I could see that they were cooking up more code groups; the Captain was dictating and Eastman was working the encoding machine. Mei-Ling had long since gone. Finally Vicky said faintly, "Uncle Tom, how urgent are these anagrams? Mother called me to dinner half an hour ago.

("Hang on and I'll find out.") I turned to the Captain and Mr. Eastman, not sure of which one to ask. But I caught Eastman's eye and said, "Mr. Eastman, how rush is this stuff? We want to-"

"Don't interrupt us," the Captain cut in. "Just keep on transmitting. The priority is not your concern."

"Captain, you don't understand; I'm not speaking for myself. I was about to say-"

"Carry on with your work."

I said to Vicky, ("Hold on a moment, hon.") Then I sat back and said, "Aye aye, Captain. I'm perfectly willing to keep on spelling eye charts all night. But there is nobody at the other end."

"What do you mean?"

"I mean it is dinner time and way past for my partner. If you want special duty at the Earthside end, you'd better coordinate with the LRF comm office. Seems to me that somebody has the watch list all mixed up."

"I see." As usual he showed no expression. I was beginning to think he was all robot, with wires instead of veins.

"Very well, Mr. Eastman, get Mr. McNeil and have him relieve Mr. Bartlett."

"Yes, Captain."

"Excuse me, Captain..."

"Yes, Bartlett?"

"Possibly you don't know that Unc's partner lives in Greenwich zone minus-two. It's the middle of the night there-and she is an old lady, past seventy-five. I thought maybe you would want to know."

"Mmm, is that right, Eastman?"

"I believe so, sir."

"Cancel that last order. Bartlett, is your partner willing to go on again after an hour's break for chow? Without clearing it with LRF?"

"I'll see, sir." I spoke to Vicky; she hesitated. I said, ("What is it, Freckle Face? A date with George? Say the word and I'll tell Captain Bligh he can't have you.")

"Oh, it's all right. I'll throw the switch on George. I just wish they would give us something besides alphabet soup. Okay, one hour."

("One hour, sugar plum. Run and eat your salad. Mind your waistline.")

"My waistline is just fine, thank you."

"Okay, Captain."

"Very well. Please thank him for me."

He was so indifferent about it that I added a touch of my own. "My partner is a girl, Captain, not a "him." Her mother has placed a two-hour curfew on it. Otherwise it must be arranged with LRF."

"So. Very well." He turned to Eastman. "Can't we manage to coordinate these communication watches?"

"I'm trying, Captain. But it is new to me...and we have only three watchstanders left."

"A watch in three should not be too difficult. Yet there always seems to be some reason why we can't transmit. Comment?"

"Well, sir, you saw the difficulty just now. It's a matter of coordinating with Earth. Uh, I believe the special communicators usually arranged that themselves. Or one of them did."

"Which one? Mr. McNeil?"

"I believe Bartlett usually handled it, sir."

"So. Bartlett?"

"I did, sir."

"Very well, you have the job again. Arrange a continuous watch." He started to get up.

How do you tell the Captain he can't have his bucket of paint? Aye aye, sir. But just a minute, Captain-"

"Yes?"

"Do I understand you are authorizing me to arrange a continuous watch with LRF? Signed with your release number?"

"Naturally."

"Well, what do I do if they won't agree to such long hours for the old lady? Ask for still longer hours for the other two? In the case of my partner, you'll run into parent trouble; she's a young girl."

"So. I can't see why the home office hired such people."

I didn't say anything. If he didn't know that you don't hire telepaths the way you hire butchers I wasn't going to explain.

But he persisted. "Comment?"

"I have no comment, sir. You can't get more than three or four hours a day out of any of them, except in extreme emergency. Is this one? If it is, I can arrange it without bothering the home office."

He did not answer directly. Instead he said, "Arrange the best watch list you can. Consult with Mr. Eastman." As he turned to leave I caught a look of unutterable weariness on his face and suddenly felt sorry for him. At least I didn't want to swap jobs with him.

Vicky took a trick in the middle of the night, over Kathleen's objections. Kathleen wanted to take it herself, but the truth was that she and I could no longer work easily without Vicky in the circuit, at least not anything as difficult as code groups.

The Captain did not come in to breakfast and I got there late. I looked around and found a place by Janet Meers. We no longer sat by departments-just one big horseshoe table, with the rest of the mess room arranged to look like a lounge, so that it would not seem so empty.

I was just digging into scrambled yeast on toast when Mr. Eastman stood up and tapped a glass for attention. He looked as if he had not slept for days. "Quiet, please. I have a message from the Captain." He pulled out a sheet and started to read:

" 'Notice to All Hands: By direction of the Long Range Foundation the mission of this ship has been modified. We will remain in the neighborhood of Beta Ceti pending rendezvous with Foundation Ship Serendipity. Rendezvous is expected in approximately one month. Immediately thereafter we will shape orbit for Earth.

" 'F. X. Urqhardt, commanding Lewis and Clark.'"

My jaw dropped. Why, the silent creeper! All the time I had been lambasting him in my mind he had been arguing the home office into canceling our orders ... no wonder he had used code; you don't say in clear language that your ship is a mess and your crew has gone to pot. Not if you can help it, you don't. I didn't even resent that he had not trusted us freaks to respect the security of communications; I wouldn't have trusted myself, under the circumstances.

Janet's eyes were shining... like a woman in love, or like a relativistic mathematician who has just found a new way to work a transformation. "So they've done it!" she said in a hushed voice.

"Done what?" I asked. She was certainly taking it in a big way; I hadn't realized she was that anxious to get home.

"Tommie, don't you see? They've done it, they've done it, they've applied irrelevance. Dr. Babcock was right."

"Huh?"

"Why, it's perfectly plain. What kind of a ship can get here in a month? An irrelevant ship, of course. One that is faster than light." She frowned. "But I don't see why it should take even a month. It shouldn't take any time at all. It wouldn't use time."

I said, "Take it easy, Janet. I'm stupid this morning-I didn't have much sleep last night. Why do you say that ship...uh, the Serendipity ... is faster than light? That's impossible."

"Tommie, Tommie ... look, dear, if it was an ordinary ship, in order to rendezvous with us here, it would have had to have left Earth over sixty-three years ago."

"Well, maybe it did."

"Tommie! It couldn't possibly-because that long ago nobody knew that we would be here now. How could they?"

I figured back. Sixty-three Greenwich years ago... mmm, that would have been sometime during our first peak. Janet seemed to be right; only an incredible optimist or a fortune teller would have sent a ship from Earth at that time to meet us here now. "I don't understand it."

"Don't you see, Tommie? I've explained it to you, I know I have. Irrelevance. Why, you telepaths were the reason the investigation started; you proved that "simultaneity' was an admissible concept ... and the inevitable logical consequence was that time and space do not exist."

I felt my head begin to ache. "They don't? Then what is that we seem to be having breakfast in?"

"Just a mathematical abstraction, dear. Nothing more." She smiled and looked motherly. "Poor 'Sentimental Tommie.' You worry too much."

I suppose Janet was right, for we made rendezvous with F. S. Serendipity twenty-nine Greenwich days later. We spent the time moseying out at a half gravity to a locus five billion miles Galactic-north of Beta Ceti, for it appeared that the Sarah did not want to come too close to the big star. Still, at sixty-three light-years, five billion miles is close shooting-a very near miss. We also spent the time working like mischief to arrange and prepare specimens and in collating data. Besides that, Captain Urqhardt suddenly discovered, now that we were expecting visitors, that lots and lots of things had not been cleaned and polished lately. He even inspected staterooms, which I thought was snoopy.

The Sarah had a mind reader aboard, which helped when it came time to close rendezvous. She missed us by nearly two light-hours; then their m-r and myself exchanged coordinates (referred to Beta Ceti) by relay back Earthside and got each other pinpointed in a hurry. By radar and radio alone we could have fiddled around for a week-if we had ever made contact at all.

But once that was done, the Sarah turned out to be a fast ship, lively enough to bug your eyes out. She was in our lap, showing on our short-range radar, as I was reporting the coordinates she had just had to the Captain. An hour later she was made fast and sealed to our lock. And she was a little ship. The Elsie had seemed huge when I first joined her; then after a while she was just the right size, or a little cramped for some purposes. But the Sarah wouldn't have made a decent Earth-Moon shuttle.

Mr. Whipple came aboard first. He was an incredible character to find in space; he even carried a briefcase. But he took charge at once. He had two men with him and they got busy in a small compartment in the cargo deck. They knew just what compartment they wanted; we had to clear potatoes out of it in a hurry. They worked in there half a day, installing something they called a "null-field generator," working in odd clothes made entirely of hair-fine wires, which covered them like mummies. Mr. Whipple stayed in the door, watching while they worked and smoking a cigar-it was the first I had seen in three years and the smell of it made me ill. The relativists stuck close to him, exchanging

excited comments, and so did the engineers, except that they looked baffled and slightly disgusted. I heard Mr. Regato say, "Maybe so. But a torch is reliable. You can depend on a torch."

Captain Urqhardt watched it all, Old Stone Face in person.

At last Mr. Whipple put out his cigar and said, "Well, that's that, Captain. Thompson will stay and take you in and Bjorkenson will go on in the Sarah. I'm afraid you will have to put up with me, too, for I am going back with you."

Captain Urqhardt's face was a gray-white. "Do I understand, sir, that you are relieving me of my command?"

"What? Good heavens, Captain, what makes you say that?"

"You seem to have taken charge of my ship...on behalf of the home office. And now you tell me that this man...er, Thompson-will take us in."

"Gracious, no. I'm sorry. I'm not used to the niceties of field work; I've been in the home office too long. But just think of Thompson as a ... mmm, a sailing master for you. That's it; he'll be your pilot. But no one is displacing you; you'll remain in command until you can return home and turn over your ship. Then she'll be scrapped, of course."

Mr. Regato said in a queer, high voice, "Did you say "scrapped," Mr. Whipple?" I felt my stomach give a twist. Scrap the Elsie? No!

"Eh? I spoke hastily. Nothing has been decided Possibly she will be kept as a museum. In fact, that is a good idea." He took out a notebook and wrote in it. He put it away and said, "And now, Captain, if you will, I'd like to speak to all your people. There isn't much time."

Captain Urqhardt silently led him back to the mess deck.

When we were assembled, Mr. Whipple smiled and said, "I'm not much at speechmaking. I simply want to thank you all, on behalf of the Foundation, and explain what we are doing. I won't go into detail, as I am not a scientist; I am an administrator, busy with the liquidation of Project Lebensraum, of which you are part. Such salvage and rescue operations as this are necessary; nevertheless, the Foundation is anxious to free the Serendipity, and her sister ships, the Irrelevant, the Infinity, and Zero, for their proper work, that is to say, their survey of stars in the surrounding space."

Somebody gasped. "But that's what we were doing!"

"Yes, yes, of course. But times change. One of the null-field ships can visit more stars in a year than a torchship can visit in a century. You'll be happy to know that the Zero working alone has located seven Earth-type planets this past month."

It didn't make me happy.

Uncle Alfred McNeil leaned forward and said in a soft, tragic voice that spoke for all of us, "Just a moment, sir. Are you telling us that what we did ... wasn't necessary?"

Mr. Whipple looked startled. "No, no, no! I'm terribly sorry if I gave that impression. What you did was utterly necessary, or there would not be any null ships today. Why, that's like saying that what Columbus did wasn't necessary, simply because we jump across oceans as if they were mud puddles nowadays."

"Thank you, sir, " Unc said quietly.

"Perhaps no one has told you just how indispensably necessary Project Lebensraum has been. Very possibly-things have been in a turmoil around the Foundation for some time-I know I've had so little sleep myself that I don't know what I've done and left undone. But you realize, don't you, that without the telepaths among you, all this progress would not

have taken place?" Whipple looked around. "Who are they? I'd like to shake hands with them. In any case-I'm not a scientist, mind you; I'm a lawyer-in any case, if we had not had it proved beyond doubt that telepathy is truly instantaneous, proof measured over many light-years, our scientists might still be looking for errors in the sixth decimal place and maintaining that telepathic signals do not propagate instantaneously but simply at a speed so great that its exact order was concealed by instrumental error. So I understand, so I am told. So you see, your great work has produced wondrous results, much greater than expected, even if they are not quite the results you were looking for."

I was thinking that if they had told us just a few days sooner, Uncle Steve would still be alive.

But he never did want to die in bed.

"But the fruition of your efforts," Whipple went on, "did not show at once. Like so many things in science, the new idea had to grow for a long time, among specialists ... then the stupendous results burst suddenly on the world. For myself, if anyone had told me six months ago that I would be out here among the stars today, giving a popular lecture on the new physics, I wouldn't have believed him. I'm not sure that I believe it now. But here I am. Among other things, I am here to help you get straightened away when we get back home." He smiled and bowed.

"Uh, Mr. Whipple," Chet Travers asked, "just when will we get home?"

"Oh, didn't I tell you? Almost immediately ... say soon after lunch."

XVII OF TIME AND CHANGE

I might as well finish this off and give it a decent burial. I'll never have time to write again.

They held us in quarantine for a week at Rio. If it had not been for the LRF man with us, they might have been holding us yet. But they were nice to us. Emperor Dom Pedro III of Brazil presented us each with the Richardson Medal on behalf of the United System and made a speech which showed that he was not quite sure who we were or where we had been, but nevertheless our services were appreciated.

But not as much attention was paid to us as I had expected. Oh, I don't mean that the news services ignored us; they did take our pictures and they interviewed each of us. But the only news story I saw was headed: THIRD LOAD OF RIP VAN WINKLES ARRIVE TODAY.

The reporter or whoever it was who wrote the piece had fun with it and I hope he chokes. It seems that our clothes were quaint and our speech was quaint and we were all deliciously old-fashioned and a bit simple-minded. The picture was captioned: "Off Hats, Chuckies! Grandpa Towncomes."

I didn't look at the stories.

It didn't worry Unc; I doubt if he noticed. He was simply eager to see Celestine. "I do hope," he said to me half seriously, "that child can cook the way her mother could."

"You'll be living with her?" I asked.

"Of course. Haven't we always?"

That was so logical that I had no answer. Then we exchanged addresses. That was logical, too, but it seemed odd-all the address any of us had had was the Elsie. But I

exchanged addresses with everybody and made a note to look up Dusty's twin, if he was still alive, and tell him he could be proud of his brother-perhaps I could locate him through the Foundation.

When they turned us loose and Celestine Johnson did show up I did not recognize her. I saw this tall, handsome old lady rush up and put her arms around Unc, almost lifting him off his feet, and I wondered if I should rescue him.

But then she looked up and caught my eye and smiled and I yelled, "Sugar Pie!"

She smiled still more and I felt myself washed through with sweetness and love. "Hello, Tommie. It's good to see you again."

Presently I promised to visit them at my very first chance and left them; they didn't need me for their homecoming. Nobody had come to meet me; Pat was too old and no longer traveled, Vicky was too young to be allowed to travel alone, and as for Molly and Kathleen, I think their husbands didn't see any reason for it. Neither of them liked me, anyhow. I don't blame them, under the circumstances ... even though it had been a long time (years to them) since I had mind-talked to their wives other than with Vicky's help. But I repeat, I don't blame them. If telepathy ever becomes common, such things could cause a lot of family friction.

Besides, I was in touch with Vicky whenever I wanted to be. I told her to forget it and not make a fuss; I preferred not to be met.

In fact, save for Unc, almost none of us was met other than by agents of LRF. After more than seventy-one years there was simply no one to meet them. But Captain Urqhardt was the one I felt sorriest for. I saw him standing alone while we were all waiting outside quarantine for our courier-interpreters. None of the rest was alone; we were busy, saying good-by. But he didn't have any friends-I suppose he couldn't afford to have any friends aboard ship, even while he was waiting to become Captain.

He looked so bleak and lonely and unhappy that I walked up and stuck out my hand. "I want to say good-by, Captain. It's been an honor to serve with you... and a pleasure." The last was not a lie; right then I meant it.

He looked surprised; then his face broke into a grin that I thought would crack it; his face wasn't used to it. He grabbed my hand and said, "It's been my pleasure, too, Bartlett. I wish you all the luck in the world. Er ... what are your plans?"

He said it eagerly and I suddenly realized he wanted to chat, just to visit. "I don't have any firm plans, Captain. I'm going home first, then I suppose I'll go to school. I want to go to college, but I suppose I'll have some catching up to do. There have been some changes."

"Yes, there have been changes," he agreed solemnly. "We'll all have catching up to do." Uh, what are your plans, sir?"

"I don't have any. I don't know what I can do."

He said it simply, a statement of fact; with sudden warm pity I realized that it was true. He was a torchship captain, as specialized a job as ever existed ... and now there were no more torchships. It was as if Columbus had come back from his first voyage and found nothing but steamships. Could he go to sea again? He wouldn't even have been able to find the bridge, much less know what to do when he got there.

There was no place for Captain Urqhardt; he was an anachronism. One testimonial dinner and then thank you, good night.

"I suppose I could retire," he went on, looking away. "I've been figuring my back pay and it comes to a preposterous sum."

"I suppose it would, sir." I hadn't figured my pay; Pat had collected it for me "Confound it, Bartlett! I'm too young to retire."

I looked at him. I had never thought of him as especially old and he was not, not compared with the Captain-with Captain Swenson. But I decided that he must be around forty, ship's time. "Say, Captain, why don't you go back to school too? You can afford it."

He looked unhappy. "Perhaps I should. I suppose I ought to. Or maybe I should just chuck it and emigrate. They say there are a lot of places to choose from now."

"I'll probably do that myself, eventually. If you ask me, things have become too crowded around here. I've been thinking about Connie, and how pretty Babcock Bay looked." I really had been thinking about it during the week we had spent in quarantine. If Rio was a sample, Earth didn't have room enough to fall down; we were clear down in the Santos District and yet they said it was Rio. "If we went back to Babcock Bay, we'd be the oldest settlers."

"Perhaps I will. Yes, perhaps I will." But he still looked lost.

Our courier-interpreters had instructions to take us all home, or wherever we wanted to go, but I let mine leave once I had my ticket for home. She was awfully nice but she bothered me. She treated me as a cross between grandfather who must be watched over in traffic and a little boy who must be instructed. Not but what I needed instruction But once I had clothes that would not be stared at, I wanted to be on my own. She had taught me enough System Speech in a week so that I could get by in simple matters and I hoped that my mistakes would be charged up to a local accent from somewhere. Actually, I found that System Speech, when it wasn't upgained to tears, was just P-L lingo with more corners knocked off and some words added. English, in other words, trimmed and stretched to make a trade lingo.

So I thanked Senhorita Guerra and told her good-by and waved my ticket at a sleepy gatekeeper. He answered in Portuguese and I looked stupid, so he changed it to, "Outdowngo rightwards. Ask from allone." I was on my way.

Somehow everybody in the ship seemed to know that I was a Rip Van Winkle and the hostess insisted on helping me make the change at White Sands. But they were friendly and did not laugh at me. One chap wanted to know about the colony being opened up on Capella VIII and did not understand why I hadn't been there if I had spaced all that time. I tried to explain that Capella was clear across the sky and more than a hundred light-years from where I had been, but I didn't put the idea across.

But I did begin to see why we had not made a big splash in the news. Colony planets were the rage and there was a new one every day, so why should anyone be excited over one that we had found sixty years back? Or even over one just a few months back which did not compare with ones being turned up now? As for starships-see the latest news for current departures.

We were going to be a short paragraph in history and a footnote in science books; there wasn't room for us in the news. I decided that even a footnote averaged well and forgot it.

Instead I started thinking about my re-education which, I was beginning to realize, was going to have to be extensive; the changes had been more than I had bargained for. Take

female styles, for example-look, I'm no Puritan, but they didn't dress, if you want to call it that, this way when I was a kid. Girls running around without a thing on their heads, not even on top ... heads bare-naked, like an animal.
It was a good thing that Dad hadn't lived to see it. He never let our sisters come to the table without a hat, even if Pat and I were the only unmarried males present.
Or take the weather. I had known that LRF was working on it, but I never expected them to get anywhere. Don't people find it a little dull to have it rain only at night? Or take trucks. Of course, all you expect of a truck is that it haul things from here to there. But the lack of wheels does make them look unstable.
I wonder how long it will be before there is not a wheel on Earth?
I had decided that I would just have to get used to it all, when the hostess came by and put something in my lap and when I picked it up, it spoke to me. It was just a souvenir of the trip.

Pat's town house was eight times as big as the flat seven of us used to live in; I decided that he had managed to hang onto at least some of the money. His robutler took my cape and boots and ushered me in to see him.
He didn't get up. I wasn't sure he could get up. I had known that he was old, but I hadn't realized that he was old! He was-let me see, eighty-nine. Yes, that was right; we had our ninetieth birthday coming up.
I tried to keep it casual. "Hi, Pat."
"Hi, Tom." He touched the arm of his chair and it rolled toward me. "Don't move. Stand there and let me look at you." He looked me up and down, then said wonderingly, "I knew intellectually that you would not have changed with the years. But to see it, to realize it, is quite another thing, eh? 'The Picture of Dorian Gray.' "
His voice was old.
"Where is the family?" I said uncomfortably.
"I've told the girls to wait. I wanted to see my brother alone at first. If you mean Gregory and Hans as well, no doubt you will meet them at dinner tonight. But never mind them, lad; just let me visit with you, for a while. It's been a long time." I could see tears, the ready tears of old age, in his eyes and it embarrassed me.
"Yes, I guess it has."
He leaned forward and gripped the arms of his chair.
"Tell me just one thing. Was it fun?
I thought about it. Doc Devereaux... Mama O'Toole... poor little Pru who had never lived to grow up, not really. Uncle Steve. Then I switched it off and gave him the answer he wanted. "Yes, it was fun, lots of fun."
He sighed. "That's good. I quit regretting years ago. But if it hadn't been fun, it would have been such a terrible waste."
"It was."
"That's all I wanted to hear you say. I'll call the girls down in a moment. Tomorrow I'll show you around the plant and introduce you to the key men. Not that I expect you to take hold right away. Take a long vacation if you like. But not too long, Tom ... for I guess I'm getting old. I can't look ahead the way I used to."

I suddenly realized that Pat had everything planned out, just as he always had. "Wait a minute, Pat. I'll be pleased to have you show me around your plant-and honored. But don't count on anything. First I'm going to school. After that-well, we'll see."

"Eh? Don't be silly. And don't call it 'my' plant; it's 'Bartlett Brothers, Incorporated.' It always has been. It's your responsibility as much as mine."

"Now, take it easy, Pat. I was just-"

"Quiet!" His voice was thin and shrill but it still had the sound of command. "I won't have any nonsense out of you, young man. You've had your own way and you've been off on a long picnic-I won't criticize how you managed it. That's bygones. But now you must buckle down and assume your responsibilities in the family business." He stopped and breathed heavily, then went on more softly, almost to himself. "I had no sons, I have no grandsons; I've had to carry the burden alone. To have my brother, to have my own brother..." His voice faded out.

I went up and took him by the shoulder-then I let go; it felt like match sticks. But I decided that I might as well settle it once and for all; I told myself it would be kinder. "Listen to me, Pat. I don't want to seem ungrateful, but you must get this straight. I'm going to live my own life. Understand me. It might include "Bartlett Brothers'; it might not. Probably not. But I will decide. I'll never be told again."

He brushed it aside. "You don't know your own mind; you're just a boy. Never mind, we'll speak of it tomorrow, Today is a day of gladness."

"No, Pat. I am not a boy, I am a man. You'll have to accept that. I'll make my own mistakes and I'll not be told."

He wouldn't look at me. I insisted, "I mean it, Pat. I mean it so much that if you can't accept it and abide by it, I'm walking out right now. Permanently."

Then he looked up. "You wouldn't do that to me."

"I would."

He searched my eyes. "I believe you would. You always were a mean one. You gave me a lot of trouble."

"I'm still mean... if you want to call it that."

"Uh... but you wouldn't do it to the girls? Not to little Vicky?"

"I will if you force my hand."

He held any eyes for a second, then his shoulders sagged and he buried his face in his hands. I thought he was going to cry and I felt like a villain, bullying an old man like that. I patted his shoulders, wishing that I had stalled, rather than forcing the issue.

I remembered that this frail old man had risked his health and his sanity to get in touch with me at first peak, and I thought: if he wants it so badly, maybe I should humor him. After all, he did not have long to live.

No!

It wasn't right for one person to impose his will on another, through strength or even through weakness. I was myself ... and I was going out to the stars again. Suddenly I knew it. Oh, college perhaps, first-but I was going. I owed this old man gratitude ... but I did not owe him the shape of my life. That was mine.

I took his hand and said, "I'm sorry, Pat."

He said without looking up, "All right, Tom. Have it your own way. I'm glad to have you home anyway ... on your own terms."

We talked inanities for a few moments, then he had the robutler fetch me coffee-he had milk. At last he said, "I'll call the girls." He touched the arm of his chair, a light glowed and he spoke to it.

Molly came down with Kathleen behind her. I would have known either of them anywhere, though I had never seen them. Molly was a woman in her late sixties, still handsome. Kathleen was fortyish and did not look it-no, she looked her age and wore it regally. Molly stood on tiptoe, holding both my hands, and kissed me. "We're glad you are home, Tommie."

"So we are," Kathleen agreed, and her words echoed in my mind. She kissed me, too, then said just with her voice.

"So this is my aged and ageless great-uncle. Tom, you make me wish for a son. You aren't uncle-ish and I'll never call you "uncle" again."

"Well, I don t feel uncle-ish. Except to Molly, maybe."

Molly looked startled, then giggled like a girl. "All right, Uncle Tom. I'll remember your years... and treat you with respect."

"Where's Vicky?"

"I'm here, Uncle Tom. Down in a split."

("Hurry, hon.")

Kathleen looked sharply at me, then let it pass-I'm sure she did not mean to listen. She answered, "Vicky will be down in a moment, Tom. She had to get her face just so. You know how girls are."

I wondered if I did. But Vicky was down, almost at once.

There were no freckles on her face, no braces on her teeth. Her mouth wasn't large; it was simply perfectly right for her. And the carroty hair that had worried her so was a crown of flame.

She did not kiss me; she simply came straight to me as if we had been alone, took my hands and looked up at me.

"Uncle Tom. Tom."

("Freckle Face...")

I don't know how long we played statues. Presently she said, "After we are married, there will he none of this many-light-years-apart stuff ... Understand me? I go where you go. To Babcock Bay, if that's what you want. But I go."

("Huh? When did you decide to marry me?")

"You seem to forget that I have been reading your mind since I was a baby-and a lot more thoroughly than you think I have! I'm still doing it."

("But how about George?")

"Nothing about George. He was a mere make-do when I thought you would not be back until I was an old lady. Forget him."

("All right.")

Our "courtship" had lasted all of twenty seconds. Without letting go my hands Vicky spoke aloud, "Tom and I are going downtown and get married. We'd like you all to come along."

So we did.

I saw Pat eyeing me after the ceremony, sizing up the new situation and mulling over how he would use it. But Pat doesn't understand the new setup; if I get bossed, it won't be

by him. Vicky says that she will soon have me "ricketty all through." I hope not but I suppose she will. If so, I trust I'll be able to adjust to it ... I've adjusted to stranger things.

Zoltan 1.0

TO SAIL BEYOND THE SUNSET
THE LIVES AND LOVES OF MAUREEN JOHNSON
(Being the Memoirs of a Somewhat Irregular Lady)

Robert A. Heinlein

To little girls and butterflies and kittens.
To Susan and Eleanor and Chris and (always) to Ginny.
With my Love,
R.A.H.

CONTENTS

1 The Committee for Aesthetic Deletions
2 The Garden of Eden
3 The Serpent in the Garden
4 The Worm in the Apple
5 Exit from Eden
6 'When Johnny Comes Marching Home...'
7 Ringing the Cash Register
8 Seacoast Bohemia
9 Dollars and Sense
10 Random Numbers
11 A Dude in a Derby
12 'Hang the Kaiser!'
13 'Over There!'
14 Black Tuesday
15 Torrid Twenties-Threadbare Thirties
16 The Frantic Forties
17 Starting Over
18 Bachelorhood
19 Cats and Children
20 Soothsayer
21 Serpent's Tooth
22 The Better-Dead List
23 The Adventures of Prudence Penny
24 Decline and Fall
25 Rebirth in Boondock
26 Pixel to the Rescue
27 At the Coventry Cusp
28 Eternal Now
Appendix: People in this Memoir

Come, my friends,
Tis not too late to seek a newer world.
Push off, and sitting well in order smite
The sounding furrows; for my purpose holds
To sail beyond the sunset, and the baths
Of all the western stars, until I die.
Tennyson, Ulysses

Chapter 1 - The Committee for Aesthetic Deletions

I woke up in bed with a man and a cat. The man was a stranger; the cat was not.

I closed my eyes and tried to pull myself together - hook 'now' to mp memory of last night.

No good. There wasn't any `last night'. My last dear memory was of being a passenger in a Burroughs irrelevant bus, bound for New Liverpool, when there was a loud bang, my head hit the seat in front of me, then a lady handed me a baby and we started filing out of the starboard emergency exit, me with a cat in one arm and a baby in the other, and I saw a man with his right arm off -

I gulped and opened my eyes. A stranger in my bed was better than a man bleeding to death from a stump where his right forearm ought to be. Had it been a nightmare? I fervently hoped so.

If it was not, then what had I done with the baby? And whose baby was it? Maureen, this won't do. Mislaying a baby is inexcusable. `Pixel, have you seen a baby?' The cat stood mute and a plea of not guilty was directed by the court.

My father once told me that I was the only one of his daughters capable of sitting down in church and finding that I had sat on a hot lemon meringue pie... anyone else would have looked. (I had looked, But my cousin Nelson - Oh, never mind.)

Regardless of lemon pies, bloody stumps, or missing babies, there was still this stranger in my bed, his bony back toward me - husbandly rather than loverly. (But I did not recall marrying him.)

I've shared beds with men before, and with women, and wet babies, and cats who demand most of the bed, and (once) with a barbershop quartet. But I do like to know with whom I am sleeping (just an old-fashioned girl, that's me). So I said to the cat, `Pixel, who is he? Do we know him?'

'No-o-o-o.'

'Well, let's check: I put a hand on the man's shoulder, intending to shake him awake and then ask where we had met - or had we?

His shoulder was cold.

He was quite dead.

This is not a good way to start the day.

I grabbed Pixel and got out of bed by instantaneous translation; Pixel protested. I said sharply, `Shut up, you! Mama has problems.' I forced a thalamic pause of at least a microsecond, maybe longer, and decided not to flee headlong outdoors, or out into the hallway, as the case may be... but to slow down and attempt to assess the situation, before screaming for help. Perhaps just as well, as I found that I was barefooted all the way up. I am not jumpy about skin but it did seem prudent to dress before reporting a corpse. Police were certain to want to question me and I have known cops who would exploit any advantage in order to throw one off balance.

But first a look at the corpse.

Still clutching Pixel I went round and bent over the other side of the bed. (Gulp.) No one I knew. No one I would choose to bed with, even were he in perfect health. Which he was not; that side of the bed was soggy with blood. (Two gulps and a frisson.) He had bled from his mouth - or his throat had been cut; I was not sure which and was unwilling to investigate.

So I backed away and looked around for my clothes. I knew in my bones that this bedroom was part of a hostelry; rooms for hire do not taste like private homes. It was a luxury suite; it took me a longish time to poke through all the closets and cubbyholes and drawers and cupboards et cetera . . . and then to do it all over again when the first search failed to locate my clothes. The second search, even more thorough, found not a rag - neither his size nor my size, neither women's clothes nor men's.

I decided willy-nilly to telephone the manager, tell him the problem, and let him cal the cops - and ask him for a courtesy bathing robe or kimono or some such.

So I looked for a telephone.

Alexander Graham Bell had lived in vain.

I stopped in frustration. `Name of a dog! Where have they hidden that frimping phone?'

A bodyless voice said, `Madam, may we offer you breakfast? We are proud of our Harvest Brunch: a lavish bowl of assorted fresh fruits; a tray of cheeses; a basket of freshly baked hot breads, crisp breads, and soft breads with jams and jellies and syrups

and Belgian butter. Basted baby barlops en brochette; drawn eggs Octavian; smoked savannah slinker; farkels in sweetsour; Bavarian strudel; your choice of still and sparkling wines, skullbuster Strine beer, Mocha, Kona, Turkish and Proxima coffees~ blended or straight; all served with -'

I repressed a gagging reflex. 'I don't want breakfast!'

`Perhaps Madam would enjoy our Holiday Eyeopener: your choice of fruit juice, a roll hot from our oven, your choice of gourmet jams or jellies, your choice in a filling but non-fattening hot cup. Served with the latest news, or background music, or restful silence.'

'I don't want to eat!'

The voice answered thoughtfully, `Madam, I am a machine programmed for our food and beverage services. May I switch you to another programme? Housekeeping? Head porter? Engineering?'

'Get me the manager!'

There was a short delay. 'Guest services! Hospitality with a smile! How may I help you?'

'Get me the manager!'

'Do you have a problem?'

`You're the problem! Are you a man, or a machine?'

Is that relevant? Please tell me how I can help you.'

'If you are not the manager, you can't. Do you run on testicles? Or electrons?'

'Madam, I am a machine but a very flexible one. My memories include all curricula of Procrustes Institute of Hotelier Science, including all case studies updated to midnight yesterday. If you will be so good as to state your problem, I will match it at once with a precedent case and show how it was solved to the satisfaction of the guest. Please?'

'If you don't put me through to the manager in nothing flat, I guarantee that the manager will take an axe to your rusty gizzard and install a Burroughs-Libby analogue brain in your place. Who shaved the barber? What do your case studies say about that? Moron.'

This time I got a female voice. 'Manager's office. How may I help you?'

'You can take this dead man out of my bed!'

Short pause. 'Housekeeping, Hester speaking. How may we help you?'

'There's a dead man in my bed. I don't like it. Untidy:

Another pause. 'Caesar Augustus Escort Service, serving all tastes. Do I understand that one of our gentleman companions died in your bed?'

'I don't know who he is; I just know that he's dead. Who takes care of such things? Room service? Garbage removal? House physician? And I want the sheets changed, too.'

This time they gave me background music while I waited... and waited - through the first two operas of the Ring Cyde and well into the third.

'Accounting and bookkeeping, our Mister Munster speaking. That room was not rented for double occupancy. There will be an additional -'

'Look, buster, it's a corpse. I don't think a corpse counts toward "double occupancy". Blood is dripping off the bed and on to your rug. If you don't get somebody up here right away, that rug will be ruined.'

'There will be a charge for damage to the rug. That is more than normal wear and tear.'

'Grrr!'

'I beg your pardon?'

'I am about to set fire to the drapes?

'You're wasting your time; those drapes are fireproof. But your threat has been recorded. Under the Rooming House Act, section seven dee -'

'Get this dead man out of here!'

'Please hold. I'll connect you with the head porter.'

'You do and I'll shoot him as he comes through the door. I bite. I scratch. I'm foaming at the mouth. I haven't had my shots.'

'Madam, please contain yourself. We pride ourselves on -'

'And then I'll come down to your office and find you, Mister monster Munster, and pull you out of your chair and sit down in it myself and turn you over my knee and take your pants down and... Did I mention that I am from Hercules Gamma? Two and a half gravities surface acceleration; we eat your sort for lunch. So stay where you are; don't make me have to hunt for you.'

'Madam, I regret that I must tell you that you cannot sit in my chair.'

'Want to bet?'

'I do not Nave a chair; I am securely bolted to the floor. And now I must bid you good day and turn you over to our security force. You will find the additional charges on your statement of account. Enjoy your stay with us.'

They showed up too quickly; I was still eyeing those fireproof drapes, wondering if I could do as well with them as Scarlet O'Hara had with the drapes at Tara, or could I arrange a simple toga, like Eunice in The Last Days of Pompeii (or was she in Quo Vadis?), when they arrived: a house doc, a house dick, and a house ape, the last with a cart. Several more oddments crowded in after them, until we had enough to choose sides.

I need not have worried about being naked; no one seemed to notice... which irked me. Gentlemen should at least leer. And a wolf whistle or other applause would not be out of place. Anything less makes a woman feel unsure of herself.

(Perhaps I am too sensitive. But since my sesquicentennial I have been disposed to check the mirror each morning, wondering.)

There was only one woman in this mob of intruders. She looked at me and sniffed, which made me feel better.

Then I recalled something. When I was twelve, my father told me that I was going to have lots of trouble with men. I said, `Father, you are out of your veering mind. I'm not pretty. The boys don't even throw snowballs at me.'

'A little respect, please. No, you aren't pretty. It's the way you smell, my darling daughter. You are going to have to bathe oftener . . . or some warm night you will wind up raped and murdered.'

'Why, I bathe every week! You know I do.'

'In your case, that's not enough. Mark my words.'

I did mark his words and learned that Father knew what he was talking about. My body odour when I'm well and happy is much like that of a cat in heat. But today I was not happy. First that dead man scared me and then those bleeping machines made me angry... which adds up to a different sort of stink. A tabby cat not in heat can walk right through a caucus of toms and they will ignore her. As I was being ignored.

They stripped the top sheet off my erstwhile bedmate. The house physician looked over the cadaver without touching it, then looked more closely at that horrid red puddle - leant down, sniffed it, then made my skin crawl by dipping a finger into the slop and tasting it.

'Try it, Adolf. See what you think.'

His colleague (I assumed that he was another physician) also tasted the bloody mess. `Heinz.'

`No. Skinner's.'

`With all due respect, Dr. Ridpath, you have ruined your palate with that cheap gin you guzzle. Heinz. Skinner's catsup has more salt. Which kills the delicate tomato flavour. Which you can't taste, because of your evil habits.'

`Ten thousand, Dr Weisskopf? Even money.'

`You're on. What do you place as the cause of death, sir?'

'Don't try to trap me, Doctor. "Cause of death" is your job:

'His heart stopped.?'

'Brilliant, Doctor, brilliant! But why did it stop?'

In the case of judge Hardacres, for some years the question has been: What keeps him alive? Before I express an opinion I want to place him on a slab and slice him up. I may have been hasty; he may turn out not to have had a heart.'

`Are you going to cut him up to learn something, or to make certain he stays dead?'

'Noisy in here, isn't it? Do you release the body? I'll have it taken downtown.'

`Hand me a form nine-oh-four and I'll drop it. Just keep the meat out of sight of our guests. Grand Hotel Augustus does not have guests dying on its premises.'

'Dr Ridpath, I was handling such things discreetly before you slid through that diploma mill.'

'I'm sure you were, Adolf. Lawn ball later?'

'Thank you, Eric. Yes.'

`And dinner after; Zenobia will be expecting you. I'll pick you up at the morgue.'

`Oh, I'm sorry! I'm taking my assistant to the Mayor's Orgy.'

`No fuss. Zenobia would never miss the first big party of Fiesta; we'll all go together. So bring her with you.'

'Him, not her.'

'Pardon my raised eyebrows; I thought you had sworn off. Very well; bring him.'

'Eric, don't you find it depressing to be so cynical? He's a satyr, not a goose.'

'So much the better. With Fiesta starting at sundown, Zenobia will welcome any gallant indecency he offers her, as long as he does not break her bones.'

This silly chatter had told me one thing: I was not in New Liverpool. New Liverpool does not celebrate Fiesta - and this local festival sounded like Fasching in Munich combined with Carnival in Rio, with a Brixton riot thrown in. So, not New Liverpool. What city, what planet, what year, and what universe remained to be seen. Then I would have to see what could be done about my predicament. Clothes. Money. Status. Then, how to get home. But I was not worried. As long as the body is warm and the bowels move regularly no problem can be other than minor and temporary.

The two doctors were still sneering at each other when I suddenly realized that I had heard not one word of Galacta.

Not even Spanglish. They were speaking English, almost the harsh accent of my girlhood, with idiom and vocabulary close to that of my native Missouri.

Maureen, this is ridiculous.

While flunkies were getting ready to move the body (disguised as a nameless something draped in dust covers) the medical examiner (coroner?) got a signed release from the house physician, and both started to leave. I stopped the latter.

'Dr Ridpath!'

`Yes? What is it, Miss?'

'I'm Maureen Johnson Long. You are on the staff of the hotel, are you not?'

`In a manner of speaking. I have my offices here and am available as house physician when needed. Do you wish to see me professionally? I'm in a hurry.'

`Just one quick question, Doctor. How does one get the attention of a flesh and blood human being on the staff of this hotel? I can't seem to raise anyone but moronic robots - and I'm stranded here with no clothes and no money.'

He shrugged. `Someone is certain to show up before long, once I report that Judge Hardacres is dead. Are you worried about your fee? Why don't you call the talent agency that sent you to him? The judge probably had a running account with them.'

'Oh! Doctor, I'm not a prostitute. Although I suppose it does look like it.'

He cocked his left brow so high that it disturbed the tilt of his toupee, and changed the subject. `You have a beautiful pussy.'

I assumed that he was speaking of my feline companion, who is a most beautiful pussy - a flame-coloured tomcat (just the colour of my hair) in a striking tiger pattern. He has been much admired in several universes.

`Thank you, sir. His name is Pixel and he is a much traveled cat. Pixel, this is Dr Ridpath:

The doctor put out a finger close to the little pink nose. `Howdy, Pixel.'

Pixel was helpful. (Sometimes he is not - a cat of firm opinions.) He sniffed the proffered finger, then licked it.

The doctor smiled indulgently, then withdrew his finger when Pixel decided that the ritual kiss had gone on long enough. 'He's a fine boy, that one. Where did you find him?'

'On Tertius.'

'Where's Ontershus? Canada? Hmm, you say you have a money problem. What'll you take for Pixel, cash in hand? My little girl would love him:

(I didn't swindle him. I could have but I didn't. Pixel can't be sold - he can't stay sold - because he can't be locked up. For him, stone walls do not a prison make.)

`Oh, I'm sorry! I can't sell him; he's not mine. He's a member of the family of my grandson - one of my grandsons - and his wife. But Colin and Hazel would never sell him. They can't sell him; they don't own him. No one owns him; Pixel is a free citizen:

'So? Then perhaps I can bribe him. How about ir, Pixel? Lots of horse liver, fresh fish, cat nibbles, all you want. Plenty of friendly girl cats around and we'll leave your spark plugs right where they are. Well?'

Pixel gave the restless wiggle that means 'Let me down,' so I did. He sniffed the doctor's legs, then brushed against him. 'Nnnow?' he enquired.

Dr Ridpath said to me, 'You should have accepted my offer. I seem to have acquired a cat.'

`I wouldn't bet on it, Doctor. Pixel likes to travel but he always comes back to my grandson Colin. Colonel Colin Campbell. And his wife Hazel.'

For the first time Dr Ridpath really looked at me. `"Grandson." "Colonel." Miss, you're hallucinating.'

(I suddenly realized how it looked to him. Before I left Tertius, Ishtar had given me a booster treatment-it had been fifty-two years - and Galahad had given me a cosmetic refresher and had overdone it. Galahad likes 'em young, especially redheads - he keeps my twin daughters permanent teenagers, and now we three look like triplets. Galahad cheats. Except for Theodore, Galahad is my favorite husband, but I shan't let anyone find out.)

`Yes, I must be hallucinating,' I agreed. 'I don't know where I am, I don't know what day this is, I don't know what became of my clothes or my money or my purse, and I don't know how I got here... save that I was in an irrelevancy bus for New Liverpool and there was an accident of some sort. If Pixel were not still with me, I would wonder if I were me.'

Dr Ridpath reached down; Pixel allowed himself to be picked up. 'What was that bus you mentioned?'

'A Burroughs shifter. I was on Tellus Tertius at Boondock on time line two at Galactic year 2149, or Gregorian 4368 if you like that better. I was scheduled for New Liverpool in time line two, where I was to base for a field trip. But something went wrong.'

'Ah, so. Hmm. And you have a grandson who is a colonel?'

'Yes, sir.'

'And how old are you?'

'That depends on how you count it, Doctor. I was born on Earth in time line two of the Fourth of July, 1882. I lived there until 1982, one century minus two weeks, whereupon I moved to Tertius and was rejuvenated. That was fifty-two years ago by my personal calendar. I've had a booster just recently, which made me younger than I should be-I prefer to be mature rather than girlish. But I do have grandchildren, lots of them.'

'Interesting. Will you come down to my office with me?'

'You think I'm out of my head.'

He was not quick to answer. 'Let me put it this way. One of us is hallucinating. Tests may show which one. Besides that, I have an exceptionally cynical office nurse who can, without tests, almost certainly spot which one of us has slipped his clutch. Will you come?'

'Yes, certainly. And thank you, sir. But I've got to find some clothes first. I can't very well leave this room until I do.' (I wasn't certain that this was true. That crowd that had just left obviously did not have the attitudes on 'indecent exposure' that were commonplace in Missouri when I was born. On the other hand, where I now lived on Tertius nudity at

home was unremarkable and it didn't cause any excitement even in the most public places - like overalls at a wedding: unusual but nothing to stare at.)

'Oh. But Festival is about to start.'

'"Festival?" Doctor, I'm a stranger in a strange land; that is what I've been trying to say.'

'Uh - Our biggest holiday is about to start. Starts at sundown, theoretically, but there are many who jump the gun. By now the boulevard out front will have quite a percentage of naked people, already drunk and looking for partners.'

'Partners for what?' I tried to sound innocent. I'm not much for orgies. All those knees and elbows -

'What do you think? It's a fertility rite, my dear girl, to ensure fat crops. And fat bellies for that matter. By now, any virgins left in this fair city are locked up.' He added, 'But you won't be bothered simply going with me to my office... and I promise I'II find you some sort of clothing. A coverall. A nurse's uniform. Something. Does that suit you?'

'Thank you, Doctor. Yes!'

'If I were you and I was still jumpy, I would look for a big beach towel in that bathroom, and make a caftan out of it. If you can, do it in three minutes. Don't dilly-dally, dolly; I've got to get back to the grind.'

`Yessir!' I hurried into the bathroom.

It really was a bathroom, not a refresher. When I had searched the suite for clothing, I had noticed a stack of Turkish towels in there. Now I looked more closely and spotted two that bulged fat in that stack. I worked one out and unfolded it. Eureka! A towel fit for a rich South American, one at least six feet long and three feet wide. A razor blade from the medicine chest placed a slit big enough for my head span down the center. Now to find something, anything, to tie around my waist.

While I was doing this, a human head appeared in front of - in place of, rather - the hairdryer. A head female and rather pretty. No body. During my first century this would have made me jumpy. Today I'm used to realistic holos.

'I've been trying to catch you alone,' the head said in an organlike baritone. 'I speak for the Committee for Aesthetic Deletions. We seem to have caused you some inconvenience. For that we are truly sorry.'

'You should be! What became of that baby?'

'Never mind the baby. We'll be in touch.' It flickered.

'Hey! Wait!' But I was talking to the hairdryer.

Dr Ridpath looked up from scratching Pixel's chin. `Five minutes and forty seconds.'

I'm sorry to be late but I was interrupted. A head appeared and spoke to me. Does that happen often around here? Or am I hallucinating again?'

'You really do seem to be a stranger here. That's a telephone. Like this - Telephone, please!'

A head appeared in a frame that had contained a rather dull still life, a male head in this case. 'Your call, sir?'

'Cancel.' The head blinked out. 'Like that?'

'Yes. But a girl.'

'Of course. You're female and the call reached you in a bathroom, so the computer displayed a head matching your sex. The computer matches lip movements to words... but the visual stays an impersonal animation unless you elect to be seen. Same for the caller.'

'I see. A hologram.'

'Yes. Come along.' He added, 'You look quite fetching in that towel but you looked still better in your skin.'

'Thank you.' We went out into the hotel corridor; Pixel cut back and forth in front of us. 'Doctor, what is "The Committee for Aesthetic Deletions"?'

'Huh?' He sounded surprised. 'Assassins. Criminal nihilists. Where did you hear of them?'

`That head I saw in the bathroom. That telephone.' I repeated the call, word for word, I think.

'Hmm. Interesting.' He did not say another word until we reached his office suite, ten storeys down on the mezzanine.

We ran across several hotel guests who had 'jumped the gun'. Most were naked save for domino masks but several wore full masks - of animals or birds, or abstract fantasy. One couple were dressed most gaudily in nothing but paint. I was glad that I had my terry cloth caftan.

When we reached Dr Ridpath's office suite, I hung back in the waiting-room while he went on into an inner room, preceded by Pixel. The doctor left the door open; I could hear and see. His office nurse was standing, her back to us, talking 'on the telephone' - a

talking head. There appeared to be no one else in the suite. Nevertheless I was mildly surprised to find that she had joined the epidemic of skin; she was wearing shoes, minipanties, a nurse's cap, and had a nurse's white uniform over one arm as if caught by the phone while she was undressing. Or changing. She was a tall and slender brunette. I could not see her face.

I heard her say, 'I'll tell him, Doc. Keep your guard up tonight. See you in jail. Bye.' She half turned. 'That was Daffy Weisskopf, Boss. He has a preliminary report for you. Cause of death, suffocation. But - get this - stuffed down the old bastard's throat, before the catsup was poured in, was a plastic envelope with a famous - or infamous - card in it: "The Committee for Aesthetic Deletions." '

'So I figured. Did he say what brand of catsup?'

'Fer cry eye yie!'

'And what are you doing peeling down? Festival doesn't start for another three hours.'

'Look here, slave driver! See that clock - ticking off the precious seconds of my life? See what it says? Eleven past five. My contract says that I work until five.'

'It says that you are on duty until I relieve you, but that overtime rate starts at five.'

'There were no patients here and I was changing into my festival costume. Wait till you ser it, Boss! It'd make a priest blush.'

'I doubt it. We do have a patient and I need your help.'

'Okay, okay! I'll get back into my Florence Nightingale duds.'

'Don't bother; it would just waste time. Mrs Long! Come in, please, and take off your clothes.'

'Yes, sir.' I came in at once, while peeling off that scrounged caftan. I could see what he was doing: a prudent male doctor has a chaperone when examining a female patient; that's a universal. A multi-universal. If the circumstances happen to supply a chaperone in her skin, so much the better; there need be no time wasted on "angel robes" and other such nonsense. Having helped my father and having stood years of watches in the rejuvenation clinic at Boondock and in the associated hospital, I understood the protocol invoked; a nurse in Boondock wears clothes only when the job requires it. Seldom, that is, as the patient is usually not clothed. `But it's not "Mrs Long", Doctor. I am usually called "Maureen".'

`"Maureen" it is. This is Dagmar. Roast, meet Alice; Alice, meet Roast. And Pixel, too, Dagmar. He's the one with the short legs.'

`Howdy, Maureen. Hi, Pixel.'

'Mee-ow.'

`Hi, Dagmar. Sorry to keep you late.'

'De nada, ducks.'

`Dagmar, either I am out of my skull, or Maureen is. Which is it?'

`Couldn't it be both? I've had my doubts about you for a long time, Boss.'

`Understandable. But she really does seem to have lost a chunk of her memory. At least. Plus possible hallucinations. You've studied materia medica much more recently than I have; if someone wanted to cause a few hours temporary amnesia, what drug would he choose?'

'Huh? Don't give me your barefoot boy act. Alcohol, of course. But it might be almost anything, the way the kids nowadays eat, drink, snort, smoke, or shoot anything that doesn't shoot back.'

`Not alcohol. Enough alcohol to do that produces a horrible hangover, with halitosis, twitches and shakes, and bloodshot eyes. But look at her - clear eyes, healthy as a horse, and innocent as a pup in the clean laundry. Pixel! Stay out of that! So what do we look for?'

`I dunno; let's operate and find out. Urine sample. Blood sample. Saliva, too?'

`Certainly. And sweat, if you can find enough:

`Vaginal specimen?'

'Yes.'

`Wait,' I objected. `If you intend to poke around inside me, I want a chance to douche and wash:

`Not bleedin' likely, ducks,' Dagmar answered gently. 'What we need is whatever is in there now... not after you've washed your sins away. Don't argue; I wouldn't want to break your arm:

I shut up. I do indeed want to smell good, or not smell at all, when being examined. But as a doctor's daughter (and a therapist myself) I knew that what Dagmar said made sense... since they were looking for drugs. I didn't expect that they would find any... but they might; I certainly was missing some hours. Days? Anything could have happened.

Dagmar had me pee in a cup and took my blood and saliva, then told me to climb on to the table and into the stirrups. `Shall I do it? Or the Boss? Out of the way, Pixel! And stop that.'

'Either of you.' (A truly considerate nurse. Some female patients can't stand to be touched down below by females, others are shy with males. Me, I was cured of all such nonsense by my father before I was ten.)

Dagmar came back with a dilator... and I noticed something. Brunette, I said she was. She had remained undressed save for scanty panties - which were not opaque. she should have shown a dark, built-in fig leaf, no?

No. Just skin shade and a hint of the Great Divide.

A woman who shaves or otherwise depilates her pubic curls has a profound interest in recreational sex. My beloved first husband Brian pointed this out to me in the Mauve Decade, circa 905 Gregorian. I've checked Brian's assertion through a century and a half, endless examples. (I am not counting prepping for surgery or for childbirth.) The ones who did it because they preferred that styling were without exception hearty, healthy, uninhibited hedonists.

Dagmar wasn't prepared for surgery; she (obviously!) was not about to give birth. No, she was about to take part in a saturnalia. QED.

It made me feel warm toward her. Brian, bless his lecherous soul, would have appreciated her.

By now, in the course of chatting while she took samples, she knew the essentials of my `hallucination', so she knew that I was a stranger in town. As she was adjusting that damned dilator (I have always detested them, although this one was blood temperature and was being handled with the gentle care that a woman can bring to the task, having been there herself) - while she was busy with this, I asked a question in order to ignore what she was doing. 'Dagmar, tell me about this festival.'

'La Fiesta de Santa Carolita? Hey, you clamped down! Watch it, ducks, you'll hurt yourself.'

I sighed and tried to relax. Santa Carolita is my second child, bron in 1902 Gregorian.

Chapter 2 - The Garden of Eden

I remember Earth.

I knew her when she was clean and green, mankind's beautiful bride, sweet and lush and lovable.

I speak of my own time time, of course, numbered 'two' and coded 'Leslie LeCroix.' But the best known time lines, those policed by the Time Corps for the Circle of Ouroboros, are all one at the time I was born, 1882 Gregorian, only nine years after the death of Ira Howard. In z88z the population of Earth was a mere billion and a half.

When I left Earth just a century later it had increased to over four billion and that swarming mass was doubling every thirty years.

Remember that ancient Persian parable about doubling grains of rice on a chessboard? Four billion people are a smidgen larger than a grain of rice; you quickly run out of chessboard. On one time line Earth's population swelled to over thirty billion before reaching final disaster; on other time lines the end came at less than ten billion. But on all time lines Dr Malthus had the last laugh.

It is futile to mourn over the corpse of Earth, as silly as it would be to cry over an empty chrysalis when its butterfly has flown. But I am incurably sentimental and forever sad at how Man's Old Home has changed.

I had a marvellously happy girlhood.

I not only lived on Earth when she was young and beautiful but I also had the good fortune to be born in one of her loveliest garden spots, southern Missouri before people and bulldozers ravaged its green hills.

Besides the happy accident of birthplace, I had the special good fortune to be my father's daughter.

When I was still quite young my father said to me, 'My beloved daughter, you are an amoral little wretch. I know this, because you take after me; your mind works just the way mine does. If you are not to be destroyed by your lack, you must work out a practical code of your own and live by it.'

I thought about his words and felt warm and good inside. 'Amoral little wretch -'Father knew me so well.

'What code should I follow, Father?'

'You have to pick your own.'

'The Ten Commandments?'

'You know better than that. The Ten Commandments are for lame brains. The first five are solely for the benefit of the priests and the powers that be; the second five are half-truths, neither complete nor adequate.'

'All right, teach me about the second five. How should they read?'

'Not on your tintype, lazy bones; you've got to do it yourself.' He stood up suddenly, dumping me off his lap and almost landing me on my bottom. This was a running game with us. If I moved fast, I could land on my feet. If not, it was one point to him.

'Analyse the Ten Commandments,' he ordered. 'Tell me how they should read. In the meantime, if I hear just once more that you have lost your temper, then when your mother sends you to discuss the matter with me, you had better have your McGuffey's Reader tucked inside your bloomers.'

'Father, you wouldn't.'

'Just try me, carrot top, just try me. I will enjoy spanking you.'

An empty threat - He never spanked me once I was old enough to understand why I was being scolded. But even before then he had never spanked me hard enough to hurt my bottom. Just my feelings.

Mother's punishments were another matter. The high justice was Father's bailiwick; Mother handled the low and middle - with a peach switch. Ouch!

Father spoiled me rotten.

I had four brothers and four sisters - Edward, born in I876; Audrey in'78; Agnes in i88o; Tom,'8i; in'8z I carne along; Frank was born in I884, then Beth in'92; Lucille,'94; George in I897 - and I took up more of Father's time than any three of my siblings. Maybe four. Looking back on it, I can't sec that he made himself more available to me than he did to any of my brothers and sisters. But it certainly worked out that I spent more time with my father.

Two ground-floor rooms in our house were Father's clinic and surgery; I spent a lot of my free time there as I was fascinated by his books. Mother did not think I should read them, medical books being filled with things that ladies simply should not delve into. Unladylike. Immodest.

Father said to her, 'Mrs Johnson, the few errors in those books I will point out to Maureen. As for the far more numerous and much more important truths, I am pleased that Maureen wants to learn them. "Ye shall know the truth, and the truth shall make you free." John, eight, verse thirty two.'

Mother set her mouth in a grim line and did not answer. For her the Bible was the final word... whereas Father was a freethinker, a fact he did not admit even to me at that time. But Father knew the Bible more thoroughly than Mother did and could always quote a verse to refute her - a most unfair way to argue, it seems to me, but an advantage he needed in dealing with her. Mother was strong-willed.

They disagreed on many things But they had rules that let them live together without bloodshed. Not only live together but share a bed and have baby after baby together. A miracle.

I think Father set most of the rules. At that time and place it was taken for granted that a husband was head of his household and must be obeyed. You may not believe this but the wedding ceremony in those days required the bride to promise to obey her husband - in everything and forever.

If I know my mother (I don't, really), she didn't keep that promise more than thirty minutes.

But they worked out practical compromises.

Mother bossed the household. Father's domain was his clinic and surgery, and the barn and outbuildings and matters pertaining thereto. Father controlled all money matters. Each month he gave Mother a household allowance that she spent as she saw fit. But he required her to keep a record of how she spent it, bookkeeping that Father examined each month.

Breakfast was at seven, dinner at noon, supper at six; if Father's medical practice caused him to need to eat at other times, he notified mother - ahead of time if possible. But the family sat down on time.

If Father was present, he held Mother's chair for her; she thanked him, he then sat down and the rest of us followed. He said grace, morning, noon, and night. In Father's absence my brother Edward seated Mother and she said grace. Or she might direct one of us to return thanks, for practice. Then we ate, and misbehaviour at the table was only one notch below high treason. But a child did not have to sit and squirm and wait for the grown-ups after he was through eating; he could ask to be excused, then leave the table. He could not return even if he discovered that he had made a horrible mistake such as forgetting that it was a dessert night. (But Mother would relent and allow that child to eat dessert in the kitchen... if he had not teased or whined.)

The day my eldest sister Audrey entered high school Father added to the protocol: he held Mother's chair as usual. Once she was seated Mother said, 'Thank you, Doctor.' Then Edward, two years older than Audrey, held her chair for her and seated her just after Mother was seated: Mother said, 'What do you say, Audrey?'

'I did say it, Mama:

'Yes, she did, Mother.'

'I did not hear it.'

'Thank you, Eddie.'

'You're welcome, Aud.'

Then the rest of us sat down.

Thereafter, as each girl entered high school, the senior available boy was conscripted into the ceremony.

On Sundays, dinner was at one because everyone but Father went to Sunday School and everyone including Father went to morning church.

Father stayed out of the kitchen. Mother never entered the clinic and surgery even to clean. That cleaning was done by a hired girl, or by one of my sisters, or (once I was old enough) by me.

By unwritten rules, never broken, my parents lived in peace. I think their friends thought of them as an ideal couple and of their offspring as 'those nice Johnson children'.

Indeed I think we were a happy family, all nine of us children and our parents. Don't think for a minute that we lived under such strict discipline that we did not Nave fun. We had loads of fun, both at home and away.

But we made our own fun, mostly. I recall a time, many years later, when American children seemed to be unable to amuse themselves without a fortune in electrical and electronic equipment. We had no fancy equipment and did not miss it. By then, i89o more or less, Mr Edison had invented the electric light and Professor Bell had invented the telephone but these modern miracles had not reached Thebes, in Lyle County, Missouri. As for electronic toys the word `electron' had yet to be coined. But my brothers had sleds and wagons and we girls had dolls and toy sewing machines and we had many indoor games in joint tenancy-dominoes and draughts and chess and jackstraws and lotto and pigs-in-clover and anagrams...

We played outdoor games that required no equipment, or not much. We had a variation of baseball called 'scrub' which could be played by three to eighteen players plus the volunteer efforts of dogs, cats, and one goat.

We had other livestock: from one to four horses, depending on the year; a Guernsey cow named Clytemnestra; chickens (usually Rhode Island Reds); guinea fowl, ducks (white domestic), rabbits from time to time, and (one season only) a sow named Gumdrop. Father sold Gumdrop when it developed that we were unwilling to eat pigs we had helped raise. Not that we needed to raise pigs; Father was more likely to receive fees in smoked ham or a side of bacon than he was to be paid in money.

We all fished and the boys hunted. As soon as each boy was old enough (ten, as I recall') to handle a rifle, Father taught him to shoot, a .22 at first. He taught them to hunt, too, but

I did not see it; girls were not included. I did not mind that (I refused to have anything to do with skinning and gutting bunny rabbits, that being their usual game) but I did want to learn to shoot... and made the mistake of saying so in Mother's hearing. She exploded.

Father told me quietly, 'We'll discuss it later.'

And we did. About a year later, when it was established that I sometimes drove Father on country calls, unbeknownst to Mother he started taking along in the back of his buggy under gunny sacks a little single-shot .22... and Maureen was taught to shoot... and especially how not to get shot, all the rules of firearm safety. Father was a patient teacher who demanded perfection.

Weeks later he said, 'Maureen, if you will remember what we taught you, it may cause you to live longer. I hope so. We won't tackle pistol this year; your hands aren't yet big enough.'

We young folks owned the whole outdoors as our playground. We picked wild blackberries and went nutting for black walnuts and searched for pawpaws and persimmons. We went on hikes and picnics. Eventually, as each of us grew taller and began to feel new and wonderful yearnings, we used the outdoors for courting - 'sparking', we called it.

Our family was forever celebrating special days - eleven birthdays, our parents' wedding anniversary, Christmas, New Year's Eve and New Year's Day, Washington's birthday, Easter, Valentine's Day, the Fourth of July (a double celebration, it being my birthday), and Admission Day on the tenth of August. Best of all was the county fair - 'best' because Father drove in the harness races (and warned his patients not to get sick that week - or see Dr Chadwick, his exchange). We sat in the stands and cheered ourselves hoarse... although Father seldom finished in the money. Then came Halloween and Thanksgiving, which brings us up to Christmas again.

That's a full month of special days, every one of them celebrated with noisy enthusiasm.

And there were non-special days when we sat around the dining table and picked the meats from walnuts as fast as Father and Edward could crack them, while Mother or Audrey read aloud from the Leatherstocking Tales or Ivanhoe or Dickens - or we made popcorn, or popcorn balls (sticky all over everything!), or fudge, or we gathered around the piano and sang while Mother played, and that was best of all.

There were winters when we had a spell-down every night because Audrey was going for it seriously. She walked around with McGuffey's speller under one arm and Webster's American Spelling Book under the other, her lips moving and her eyes blank. She always won the family drills; we expected that; family competition was usually between Edward and me for second place.

Audrey made it: first place in Thebes Consolidated Grammar and High School when she was in Sixth Grade, then the following year she went all the way to Joplin for the regional - only to lose to a nasty little boy from Rich Hill. But in her freshman year in high school she won the regional and went on to Jefferson City and won the gold medal for top speller in Missouri. Mother and Audrey went together to the state capital for the finals and the presentation - by stage coach to Butler, by railroad train to Kansas City, then again by train to Jefferson City. I could have been jealous - of Audrey's travel, not of her gold medal - had it not been that by then I was about to go to Chicago (but that's another story).

Audrey was welcomed back with a brass band, the one that played at the county fair, specially activated off-season to honour 'Thebes' Favourite Daughter' (so it said on a big banner), 'Audrey Adele Johnson', Audrey cried. So did I.

I remember especially one hot July afternoon - 'Cyclone weather,' Father decided, and, sure enough, three twisters did touch down that day, one quite close to our house.

We were safe; Father had ordered us into the storm cellar as soon as the sky darkened, and bad helped Mother down the steps most carefully - she was carrying again... my little sister Beth it must have been. We sat down there for three hours, by the light of a barn lantern, and drank lemonade and ate Mother's sugar cookies, thick and floury and filling.

Father stood at the top of the steps with the slant door open, until a piece of the Ritters barn came by.

At which point, Mother was shrill with him (for the only time that I know of in the presence of children). 'Doctor! You come inside at once! I will not be widowed just to let you prove to yourself that you can stand up to anything!'

Father came down promptly, fastening the slant door behind him. 'Madam,' he stated, 'as always your logic is irrefutable.'

There were hayrides with young people of our own age, usually with fairly tolerant chaperonage; there were skating parties on the Marais des Cygnes; there were Sunday School picnics, and church ice-cream socials, and more and more. Happy times do not come from fancy gadgets; they come from 'male and female created He them,' and from being healthy and filled with zest for life.

The firm discipline we lived under was neither onerous nor unreasonable; none of it was simply for the sterile purpose of having rules. Outside the scope of those necessary rules we were as free as birds.

Older children helped with younger children, with defined responsibilities. AI] of us had assigned chores, from about age six, on up. The assignments were written down and checked off-and in later years I handled my own brood (larger than my mother's) by her rules. Hers were sensible rules; they had worked for her; they would work for me.

Oh, my rules were not exactly like my mother's rules because our circumstances were not exactly alike. For example, a major chore for my brothers was sawing and chopped wood; my sons did not chop wood because our home in Kansas City was heated by a coal furnace. But they did tend the furnace, fill the coal bin (coal was delivered to the kerb, followed by the backbreaking chore of carrying ir a bucket at a time to a chute that led to the coal bin), and clean out the ashes and haul them up the basement stairs and out.

There were other differences. My boys did not have to carry water for baths; in Kansas City we had running water. And so forth... My sons worked as hard as my brothers had, but differently. A city house with electricity and gas and a coal furnace does not create anything like the heavy chores that a country house in the Gay Nineties did. The house I was brought up in had no running water, no plumbing of any sort, no central heating. It was lit by coal-oil lamps and by candles, both homemade and store-bought, and it was heated by wood stoves: a big baseburner in the parlour, a drum stove in the clinic, monkey stoves elsewhere. No stoves upstairs... but grilles ser in the ceilings allowed heated air to reach the upper floor.

Ours was one of the larger houses in town, and possibly the most modern, as Father was quick to adopt any truly useful new invention as soon as it was available. In this he consciously imitated Mr Samuel Clemens.

Father judged Mr Clemens to be one of the smartest and possibly the smartest man in America. Mr Clemens was seventeen years older than Father; he first became aware of 'Mark Twain' with the Jumping Frog story. From that time on Father read everything by Mr Clemens he could lay hands on.

The year I was born Father wrote to Mr Clemens, complimenting him on A Tramp Abroad. Mr Clemens sent a courteous and dryly humorous answer; Father framed it and hung it on the wall of his clinic. Thereafter Father wrote to Mr Clemens as each new book by 'Mark Twain' appeared. As a direct result, young Maureen read all of Mr Clemens' published works, curled up in a corner of her father's clinic. These were not books that Mother read; she considered them vulgar and destructive of good morals. By her values Mother was correct; Mr Clemens was clearly subversive by the standards of all 'right-thinking' people.

I am forced to assume that Mother could spot an immoral book by its odour, as she never, never actually read anything by Mr Clemens.

So those books stayed in the clinic and I devoured them there, along with other books never seen in the parlour-not just medical books, but such outright subversion as the lectures of Colonel Robert Ingersoll and (best of all) the essays of Thomas Henry Huxley.

I'll never forget the afternoon I read Professor Huxley's essay on 'The Gaderene Swine'.

'Father,' I said in deep excitement, 'they've lied to us all along!'

'Probably,' he agreed. 'What are you reading?'

I told him. `Well, you've read enough of it for today; Professor Huxley is strong medicine. Let's talk for a while.

How are you doing with the Ten Commandments? Got your final version?'

`Maybe,' I answered.

`How many are there now?'

'Sixteen, I think.'

`Too many.'

`If you would just let me chuck the first five -'

`Not while you're under my roof and eating at my table. You see me attending church and singing hymns, do you not? I don't even sleep during the sermon. Maureen, rubbing blue mud in your belly button is an indispensable survival skill... everywhere, anywhere. Let's hear your latest version of the first five.'

'Father, you are a horrid man and you will come to a bad end.'

'Not as long as I can keep dodging them. Quit stalling.'

`Yes, sir. First Commandment: Thou shalt pay public homage to the god favoured by the majority without giggling or even smiling behind your hand.'

'Go on.'

'Thou shalt not make any graven image of a sort that could annoy the powers that be, especially Mrs Grundy - and, exempli gratia, this is why your anatomy book doesn't show the clitoris. Mrs Grundy wouldn't like it because she doesn't have one.'

`Or possibly has one the size of a banana,' my father answered, 'but doesn't want anyone to find out. Censorship is never logical but, like cancer, it is dangerous to ignore it when it shows up. Darling daughter, the purpose of the second commandment is simply to reinforce the first. A "graven image" is any idol that could rival the official god; it has nothing to do with sculpture or etchings. Go on.'

`Thou shalt not take the name of thy Lord God in vain... which means don't swear, not even Jiminy or Golly or darn, or use any of those four-letter words, or anything that Mother might consider vulgar. Father, there is something here that doesn't make sense. Why is "vagina" a good word while "cunt" is a bad word? Riddle me that.'

`Both are bad words out of your mouth, youngster, unless you are talking to me... in which case you will use the medical Latin out of respect for my vocation and my grey hair. You are permitted to say the Anglo-Saxon synonym under your breath if it pleasures you.'

'Somehow it does, and I haven't been able to analyse why. Number four -'

'Just a moment. Add to number three: Thou shalt not split infinitives, or dangle participles. Thou shalt shun solecisms. Thou shalt honour the noble English language, speech of Shakespeare, Milton and Poe, and it will serve thee all the days of thy life. In particular, Maureen, if 1 ever again hear you say "different than" I will beat you about the head and shoulders with an unbated ablative absolute.'

'Father, that was an accident! I meant to -'

'Excuses. Let's hear number four.'

'Commandment number four. Go to church on Sundays. Smile and be pleasant but don't be too smarmily a hypocrite. Don't let my children, if and when I have any, play out in front on Sunday or make too much noise out the back. Support the church by deeds and money but not too conspicuously.'

'Maureen, that's well put. You'll be a preacher's wife yet.'

'Oh, God, Father, I'd rather be a whore!'

'The two are not incompatible. Continuez, ma chère enfante.'

'Mais oui, mon cher papa. Honour thy father and thy mother where anyone can see you. But once you leave home, live your own life. Don't let them lead you around by the nose. Mon papa, you phrased that one yourself... and I don't like it much. I do honour you, because I want to. And I don't have anything against Mother; we just don't sing in the same key. But I'm grateful to her.'

'Avoid gratitude, my dear; it can sour your stomach. After you marry and I'm dead, are you going to invite Adele to move in with you?'

'Uh -' I stopped, unable to answer.

'Think about it. Think it through carefully, in advance... because any answer you make in a hurry while my grave is still fresh is certain to be a wrong answer. Next item:

'Thou shalt not commit murder. "Murder" means killing somebody wrongfully. Other sorts of killing come in several flavours and each sort must be analysed. I'm still working on this one, Father.'

So am I. Just bear in mind that a person who eats meat is on the same moral level as the butcher.'

'Yes, sir. Thou shalt not get caught committing adultery... and that means don't get pregnant, don't catch a social disease, don't let Mrs Grundy even suspect you, and above all don't let your spouse find out; it would make him most unhappy... and he could divorce you. Father, I don't think I would ever be tempted by adultery. If God had intended a woman to have more than one man he would have supplied more men... instead of just enough to go around.'

`Who intended? I didn't catch the name.'

'I said "God" but you know what I mean!'

`I do indeed. You are indulging in theology; I would rather see you take laudanum. Maureen, when anyone talks about God's will or God's intentions or Nature's intentions if he is afraid to say "God", I know at once that he is selling a gold brick. To himself, in some cases, as you were just doing. To read a moral law into the fact that about as many males are born as females is to make too much stew from one oyster; it's as slippery as Post hoc, propter hoc.

`As for your belief that you will never be tempted, here you are, barely dry behind the ears and only a year past first onset of menses... and you think you know all there is to know about the perils of sex... just as every girl your age throughout history has thought. So go right ahead. Jump the fence with your eyes closed. Break your husband's heart and ruin his pride. Shame your children. Be a scandal in the public square. Get your tubes filed with pus, then let some butcher cut them out in some dirty back room with no ether. Go right ahead, Maureen. Count the world well lost for love. For that's what sloppy adultery can get you: the world lost all right and an early grave and children who will never speak your name.'

`But, Father, I was saying that I must shun adultery; it's too dangerous. I think I can manage it.' I smiled at him and recited:

'"There was a young lady named Wilde - "'

Father picked it up:

` "Who kept herself quite undefiled
By thinking of Jesus,
Contagious diseases,
And the dangers of having a child."

`Yes, I know; I taught you that limerick. Maureen, you failed to mention the safest route to prudent adultery. Yet I know that you've heard of it; I mentioned it the day I tried to give you an estimate of the amount of fence jumping going on in this county.'

`I must have missed it, Father.'

`I know I mentioned it. If you've just gotta - and the day might come - tell your husband what is biting you, ask his permission, ask for his help, ask him to stand jigger for you.'

'Oh! Yes, you did tell me about two couples like that here in our county... but I could never figure out who they are.'

'I didn't intend you to. So I threw in a few false clues.'

'I discounted for that, sir, knowing you. But I still couldn't guess. Father, that seems so undignified. And wouldn't, uh, my husband be terribly angry?'

'He might give you a fat lip; he won't divorce you for asking. Then he might help you anyhow, on the sound theory that you would get into worse trouble if he says No. And -' Father gave a most evil grin,` - he might discover he enjoys the role.'

`Father, I find that I'm shocked.'

`Then, get over it. Complacent husbands are common throughout history; there is a lot of voyeur in everyone... especially in males but females weren't left out. He might jump at the chance to help you... because you helped him just that way, six weeks earlier. Stood lookout for him and that young schoolteacher, then you lied like a diploma to cover up for them. Next commandment.'

`Wait a minute, please! I want to talk about this one some more. Adultery.'

'And that is just what I'm not going to let you do. You think about it but not a word out of you on this subject for at least two weeks. Next.'

'Thou shalt not steal. I couldn't improve that one, Father.'

'Would you steal to feed a baby?'

'Uh, yes.'

'Think about other exceptions; we'll discuss it in a year or two. But it is a good general rule. But why won't you steal? You're smart; you can probably get away with stealing all your life. Why won't you do it?'

'Don't grunt.'

'Father, you're infuriating! I don't steal because I'm too stinking' proud!'

'Exactly! Perfect. For the same reason you don't cheat in school, or cheat in games. Pride. Your own concept of yourself. "To thine own self be true, and then it follows as the night from day -" '

'"- thou canst not then be false to any man." Yes, sir.'

'But you dropped the "g" from the participle. Repeat it and this time pronounce it correctly: You don't steal because -'

'I am too... stinking... proud!'

'Good. A proud self-image is the strongest incentive you can have towards correct behaviour. Too proud to steal, too proud to cheat, too proud to take candy from babies or to push little ducks into water. Maureen, a moral code for the tribe must be based on survival for the tribe... but for the individual correct behaviour in the tightest pinch is based on pride, nor on personal survival. This is why a captain goes down with his ship; this is why "The Guard dies but does not surrender". A person who has nothing to die for has nothing to live for. Next commandment.'

Simon Legree. Thou shalt not bear false witness against thy neighbour. Until you corrupted me -'

'Who corrupted whom? I am the epitome of moral rectitude... because I know exactly why I behave as I do. When I started in on you, you had no morals of any sort and your behaviour was as naively shameless as that of a kitten trying to cover up on a bare floor.'

'Yes, sir. As I was saying, until you corrupted me, I thought the ninth commandment meant: Don't tell lies. But all it says is, if you have to go into court and be a witness, then you have to tell the truth.'

'It says more than that.'

'Yes. You pointed out that it was a special case of a general theorem. I think the general case ought to read: Don't tell lies that can hurt other people -'

'Close enough.'

'Father, you didn't let me finish.'

'Oh. Maureen, I beg your pardon. Please go on:

'I said, "Don't tell lies that can hurt other people" but I intended to add, "- but since you can't guess ahead of time what harm your lies may do, the only safe rule is not to tell any lies at all." '

Father said nothing for quite a long time. At last he said, 'Maureen, this one we will not dispose of in an afternoon. A liar is worse to have around than a thief... yet I would rather cope with a liar than with a person who takes self-righteous pride in telling the truth, all of the truth and all of the time, let the chips fall where they may - meaning "No matter who is hurt by it, no matter what innocent life is ruined." Maureen, a person who takes smug pride in telling the blunt truth is a sadist not a saint. There are many sorts of lies, untruths, fibs, nonfactual statements, et cetera. As an exercise to stretch the muscles of your mind -'

'The mind has no muscles.'

'Smarty. Don't teach Grandma how to steal sheep. Your mind has no muscles and that's what I'm trying to correct. Try to categorise logically the varieties of not-true statements. Having done so, try to decide when and where each sort may be used morally, if at all... and if not, why not. That should keep you out of mischief for the next fourteen, fifteen months.'

'Oh, Father, you´re so good to me!'

'Stop the sarcasm or I'll paddle your pants. Bring me a preliminary report in a month or six weeks.'

`Thy will be done. Papa, I do have one special case. "Don't tell fibs to Mother lest thy mouth be washed out with lye soap." '

'Correction: "Don't tell any fibs to your mother that she can catch you in." If you ever told her the ungarnished truth about our private talks, I would have to leave home. If you catch Audrey spooning with that unlikely young cub who's been calling on her, what are you going to tell your mother?'

Father took me by surprise on that one. I had indeed caught Audrey spooning... and I had an uneasy suspicion that there had been something more than spooning - and it worried me. 'I won't tell Mother anything!'

'That's a good answer. But what are you going to tell me? You know that I don't have your mother's moralistic and puritanical attitudes about sex, and you know - I hope you do - that I won't use anything you tell me to punish Audrey but to help her. So what do you-tell your father?'

I felt walls closing in on me, caught between loyalty to Father and my love for my oldest sister, who had always helped me and been good to me. 'I... I will... I won't tell you a durn thing!'

'Hooraw! You took the hurdle without even ticking the top rail. Dead right, dear one; we don't tell tales out of school, we don't confess on behalf of someone else. But don't say "durn". If you need it, say "damn".'

'Yes, sir. I won't tell you a damn thing about Audrey and her young man.' (And, dear Lord if there is one, don't let my sister get pregnant; Mother would have fits and pray over her and all would be terrible. Thy will be done... but not too much of it. Maureen Johnson. Amen.)

'Let's deal with number ten quickly, then move on to the ones Moses neglected to bring down the mountain. Ten doesn't seem to be a problem to you. Coveted anything lately?'

`I don't think I have. Why is there a rule against coveting your neighbour's wife but not a word about not coveting your neighbour's husband? Was it an oversight on Jehovah's part? Or was it truly open-season on husbands in those days?'

'I don't know, Maureen. T suspect that it was simply conceit on the part of some ancient Hebrews who could not imagine their wives wanting to jump the fence when they had such virile heroes at home. The Old Testament doesn't place women very high; it starts right out with Adam putting all the blame on Mother Eve... then it gets worse. But here in Lyle County, Missouri, we do have a rule against it... and if any wife catches you making eyes at her husband here, she is likely to scratch out your pretty green eyes.'

'I don't intend to let her catch me. But suppose it's the other way. Suppose he covets me, or seems to. Suppose he pinches my bottom?'

`Well, well! Who was he, Maureen? Who is he?'

'Hypothetical case, mon cher père.'

`Very well. If he hypothetically does it again, you may hypothetically respond in several hypothetical fashions. You may hypothetically ignore him, pretend to a hypothetical lack of sensation in your gluteus maximus sinister - or is he left-handed?'

`I don't know:'

'Or you can hypothetically whisper, "Don't do that here. Meet me after church." '

`Father!'

`You brought it up. Or, if it suits you, you may hypothetically warn him that one more hypothetical pinch will be reported to your hypothetical father who owns both a hypothetical horsewhip and a hypothetical shot-gun. You may say this most privately-or shout it loudly enough for the congregation and his hypothetical wife to hear it. Lady's choice. Wait one moment. You did say "husband", did you not?'

`I did not say. But that was assumed in the hypothesis, I suppose.'

'Maureen, a pinch on the bottom is an expression of direct intent. Encouraged, it leads in three short steps to copulation. You are young but you are physically a mature woman capable of pregnancy. Is it your intention to assume full womanhood in the immediate future?'

Chapter 3 - The Serpent in the Garden

Father's question as to whether or not I was thinking about getting rid of my virginity upset me because I had been thinking about nothing else for weeks. Months, maybe. So I answered, 'Of course not! Father, how could you think such a thing?'

'Meeting's adjourned.'

'Sir?'

'I thought we had cured you of that sort of trivial fibbing. I sec we have not, so quit wasting my time. Come back when you feel the need for serious discussion.' He swivelled his chair around to face his desk and raised its roll top.

'Father -'

'Eh? Haven't you left?'

'Please, sir. I have been thinking about it all the time.'

'Thinking about what?'

'That. Losing my virginity. Breaking my maidenhead.'

He glowered at me. '"Hymen" is the medical term, as you know. "Maidenhead" is from that list of Anglo-Saxon synonyms, although it doesn't carry quite the curse that the shorter ones do. But don't talk about "losing" anything, when in fact you will be achieving your birthright, that supreme status of functioning female that your biological inheritance makes possible.'

I thought about his words. 'Father, you make it sound so desirable that I should run right out at once and find someone to help me break my hymen. Now. Right away. So, if you will excuse me?' I started to stand up.

'Whoa! Steady there! If that is your intention, it won't hurt to wait ten minutes. Maureen, if you were a heifer, I would say that you are ready to be serviced. But you are not; you are a human maiden faced by a world of human men and women, in a complex and often cruel culture. I think that you will be better off if you wait a year or two. You could even

go virgin to your marriage bed - although, as a physician, I know that does not happen too often these modern days. But - what's the eleventh commandment?'

'Don't get caught.'

'Where do I hide the French purses?'

'Lower right-hand drawer, and the key is in the top left pigeonhole, all the way back.'

I did not do it that day, or that week. Or that month. But it was not many months thereafter.

I did it about ten o'clock in the morning on a balmy day the first week of June 1897, just four weeks before my fifteenth birthday. The place I picked was the floor of the judges' stand at the race track in the county fairgrounds, with a folded horse blanket to pad the bare boards. I knew the area because I had sat up in that judges' stand on many a frosty morning, clocking Father's practice miles, my eyes lined up on the wire and his fat stopwatch in my hand - I had needed both hands to handle that big watch when I had first done this, at six. That was the year that Father bought Loafer, a black stallion sired by the sire of Maud S. - but (sadly!) not as fast as his famous half-sister.

In June of 1897 I went there prepared, resolved to do it, with a condom (a 'French purse') in my handbag, and a sanitary napkin - homemade, but all of them were in those days - as I knew that I might bleed and, if anything went wrong, I would have to convince my mother that I was simply three days early that month.

My partner in this 'crime' was a high school classmate, a boy named Chuck Perkins, a year older and almost a foot taller than I. I was not even in puppy love with him, but we pretended that we were (perhaps he was not pretending, but how is a girl to know?) and we had been progressively seducing each other all that school year - Chuck was the first man (boy) with whom I opened my mouth to a kiss... and from that I formulated another 'commandment': 'Open thy mouth only if thou planned to open thy limbs' - for I discovered that I liked it.

How I liked it! Chuck's mouth was sweet; he did not smoke, he kept his teeth clean and they were as sound as my own teeth, and his tongue was sweet and loving against mine. At later times I encountered (too often!) men who did not keep their mouths and breaths sweet... and I did not open my mouth. Or anything.

To this day I am convinced that tongue kissing is more intimate than coition.

In preparing for this meeting I had followed also my fourteenth commandment: `Thou shalt keep thy secret places as clean as a boiled egg lest thou stink in church,' to which my lusty father had added '- and to hold thy husband's love when thou cachet one.' (I told him I had figured that out.)

Keeping really clean in a house not supplied with running water and too well supplied with running children is not easy. But I had worked out expedients from the time Father had warned me some years earlier. One expedient was to sneak in extra washing behind a locked door in Father's surgery. One of my duties was to place a pitcher of hot water in the surgery each morning and again after lunch, and to refill that pitcher as needed. This put me in position to-do washing that Mother did not know about. Mother believed that 'Cleanliness is next to Godliness' - but I did not dare give her ideas by letting her catch me giving myself extra scrubbing in places I was supposed to be ashamed to touch; Mother didn't approve of too much washing of 'those places' as it could lead to 'immodest behaviour'. (It certainly could!)

At the fairgrounds we left Chuck's horse and buggy in one of the big empty barns, with a nosebag of oats to keep him happy, then we climbed up into the judges' stand. I led the way, up the back stairs, then up a vertical ladder through the roof of the grandstand and to a trap door in the floor of the judges' stand. I tucked up my skirts, and climbed the ladder ahead of Chuck, and I delighted in the scandalous display I was making of myself. Oh, Chuck had seen my legs before but men always like to peek.

Once we were both inside the stand I had Chuck close the trap door and drag a heavy box over it - heavy with weights used in racing.

'Now they can't possibly reach us,' I said gleefully, turned, got a key from a ditching place over a locker and opened its padlock.

'But they can see us, Mo. This front side is wide open.'

'Who cares? Just don't stand in front of the judges' bench. If you can't see them, they can't see you.'

'Mo, are you sure you want to do this?'

'Isn't that why we carne up here? Here, help me spread this blanket. We'll use it doubled. The judges spread it along the bench to protect their tender behinds. It will keep splinters out of my tender behind, and out of your knees.'

Chuck didn't say a word as we made our 'bed'. I straightened up and looked at him. He did not look like a man about to achieve a joyful consummation long desired; he looked like a scared little boy.

'Charles... are you sure you want to?'

He looked sheepish. 'It's bright sunlight, Mo. This is awfully public. Maybe we could find a quiet place on the Osage?'

'Chiggers and mosquitoes and youngsters hunting muskrats. And they'll pop up just when we're busiest. No, thank you, sir. But, Charles - Charles dear - I thought we were agreed

on this? I certainly don't want to rush you into anything. Would you mind cancelling the trip to Butler?' (A shopping trip to Butler was my excuse to my parents for asking Chuck to drive me that morning - Butler was not much bigger than Thebes, but it had much better shopping. Bennett and Wheeler Mercantile Company was six times as big as our biggest general store. They even stocked Paris styles - or so they claimed.)

'Why, no, Mo, if you don't want to go.'

'Then would you mind swinging past Richard Heiser's house? I need to speak to him.' (Chuck, I'm smiling and speaking gently... but I would like to massage you with a basebali bar!)

'Uh - Something wrong, Mo?'

'Yes and no. You know why we came up here. If you don't want my cherry, well, Richard let me know that he wanted it.

I didn't promise him anything... but I did tell him that I would think about it.' I looked up at Chuck and then dropped my eyes. 'And I did think about it and decided you were the one I wanted... had wanted ever since that time you took me up the bell tower. The school Easter party. You know. But, Charles, if you've changed your mind... I still don't intend to let the sun set with me still a virgin. So will you drive me to Richard's house?'

Cruel? Not truly so. A few minutes later I delivered what I had promised. But men are far more timid than we are; sometimes the only way you can get one to move is by placing him in sharpest competition with another male. Even a tabby cat knows that. (By 'timid' I do not mean 'cowardly'. A man - what I think of as a man - can face death calmly. But looking ridiculous... such as being surprised in copulation... can distress him to his marrow.)

'I haven't changed my mind!' Charles was most emphatic.

I gave him my sunniest smile and opened my arms to him. 'Then come here and kiss me like you mean it!'

He did, and we both caught fire again. (His backing and filling had cooled me.) At that time I had never heard the word 'orgasm' - I am not sure it had been coined by 1897 - but I had done some private experimenting and I knew that it was possible for something strongly resembling fireworks to happen inside me. By the end of that kiss I felt myself getting close to that point.

I pulled my face away just far enough to murmur against his lips, 'Dear Charles. I'll take off all my clothes... if you want me to.'

'Huh? Jeepers, yes!'

'All right. Do you want to undress me?'

He undressed me, or tried to, while I unfastened ail the snaps and buttons and ties ahead of him. In a few moments I was bare as a frog and ready to burst into flame. I happily struck a pose I had practised and let him look. He stared and caught his breath; I felt a fine tingle deep inside me.

Then I closed in on him and started unfastening his buttons and things. He was shy and I didn't push it. But I did get him to take off his trousers and drawers. I put them on top of mine on the box over the trap door, then sank down on the blankets. 'Charles -'

'Coming!'

'You have a safe?'

`A what?'

'A Merry Widow.'

'Oh. Gee, Mo, there isn't any way I can buy them. I'm only sixteen. Pop Green is the only one who sells them... and he won't unless you're either married or over twenty-one.' The poor dear looked quite woebegone.

I said quietly, 'And we aren't married, and don't want to have to get married - not the way Joe and Amelia had to - my mother would have a fit. But... Quit looking grim and hand me my bag.'

He did so, and I got out the condom I had fetched.

'There are advantages to being a doctor's daughter, Chuck. I swiped this while I was cleaning Father's clinic. Let's see how it fits.' (I wanted to check something else. Having become so acutely conscious of my own cleanliness I had become quite critical of cleanliness in others. Some of my classmates, both sexes, could have used Father's advice and some hot soapy water.)

(I'm a decadent today. The best aspect of Boondock aside from its gender customs is its wonderful plumbing!)

Chuck looked clean and smelled clean - scrubbed as recently as I was, was my guess. A whiff of male musk, but fresh. Even at that age I had learned the difference.

I felt happy and gay. How sweet of him to offer me such a well-kept toy! It was just inches from my face. I suddenly ducked and planted a quick kiss on it.

'Hey!' Charles almost squealed.

'Did I shock you, dear? It was just so pretty and sweet that I felt like kissing it. I didn't mean to shock you.' (No, but I do want to find your shock point.)

'I wasn't shocked. Uh... I liked it.'

`Cross your heart and shame the Devil?'

'Yes, indeed!'

'Good.' I waited while he got ready. 'Now, Charles. Take me.'

I was clumsy and inexperienced but nevertheless I had to guide him - gently, as his pride had already been hurt once. Charles was even less skilled than I. Probably what he knew of sex came from barber shops and pool halls and behind barns - the ignorant boasts of bachelor males... whereas I had been taught by an old and wise medical doctor who loved me and wanted me to be happy.

I had in my purse a patent medicine, 'Vaseline', to use as a lubricant if I needed it. Not necessary! -1 was as slippery as boiled flaxseed.

In spite of that - `Charles! Please, dear! Take it easy. Not so fast:

'But I ought to go fast, first push, Mo. It'll hurt you less. Everybody knows that.'

'Charles, I'm not "everybody°; I'm me. Take it slowly and it won't hurt me at all. I think.' I felt eager, terribly excited, and wanted him deep inside me -but he did feel bigger than I had expected. If didn't really hurt. Or not much. But I knew it could hurt plenty if we did this too fast.

Dear Charles did hold still, his face intent. I bit my lip and tried. And again. At last be was firmly against me and all of him that could reach was inside me.

I relaxed and smiled up at him. 'There! That's just fine, dear. Now move if you want to. Do it!'

But I had taken too long. He grinned, then I felt a couple of quick twitches and he stopped smiling and looked distressed. He bad spent.

So there weren't any fireworks for Maureen that first trip, and not much for Charles. But I wasn't too disappointed; my prime purpose had been achieved; I was no longer a virgin. I made note to ask Father about how to make it last longer - I was certain that I could have reached those fireworks had I been able to stretch it out a little longer. Then I put it out of my mind and was happy with what I had accomplished.

And started a custom that stood me in good stead for a long lifetime: I smiled up at him and said softly, `Thank you, Charles. You were splendid.'

(Men don't expect to be thanked for it. And at that moment a man is always willing to believe any sort of compliment... most especially if he hasn't really earned it and is uneasily aware of his shortcoming. To thank him and compliment him is an easy investment that pays high dividends. Believe me, sister mine!)

'Gosh, Maureen. You're swell:

'You are, too, Chuck sweetheart: I hugged him, arms and legs, then relaxed and added, 'Maybe we had better get up. This floor is hard, even with a doubled blanket'

Charles was quiet while he drove us on into Butler - not at all the suave Don Juan who has just relieved a maiden of that which enriched her not. I was encountering for the first time that tristesse that some males have after intercourse... while I myself was bubblingly happy. I no longer minded that I had missed climax - if I had; I was not sure. Maybe those 'fireworks' were something one could do only by oneself. We had gotten away with it cold and I felt very grown up. I sat up straight and enjoyed the beautiful day. 1 didn't hurt, not enough to matter.

I think men often feel buffeted by sex. They have so much to lose and we often give them little choice. I am minded of a very odd case that involved one of my grandchildren - how he was pushed around by late and his first wife.

It involved our cat Pixel, too, at that time a small kitten, all fuzz and buzzes.

My grandson, Colonel Campbell, son of my son Woodrow who is also my husband Theodore, but don't let that worry you; Woodrow and Theodore are both Lazarus Long, who is an odd one in any universe - don't let me forget to tell about the time that Lazarus quite unintentionally got three women pregnant at once, a grandmother, her daughter, and her granddaughter... and thereby had to make some unusual arrangements with the Time Corps in order to carry out the first commandment in his own private decalogue, which is: Never leave a pregnant woman to face her destiny unsupported.

Since Lazarus has been knocking them up over centuries in several universes this has taken up quite a bit of his time.

Lazarus quite innocently broke his own first commandment with respect to my grandson's mother, and this mishap resulted indirectly in my grandson marrying my sister wife, Hazel Stone, who was on leave of absence from our family for that purpose... for you see (or perhaps you don't) Hazel had to marry Colin Campbell so that these two could rescue Mycroft Holmes IV, the computer that led the Lunar Revolution on time line three, code 'Neil Armstrong'. Let's skip the details; it's all in Encyclopaedia Galacta and other books.

`The operation was a success but the patient died.' It was almost that way. The computer was saved and is alive and well and happy in Boondock today. All of the raiding party

got away without a scratch... except Colin and Hazel Campbell and the kitten, Pixel, all of whom were terribly wounded, and were left dying in a cave in Luna.

I must digress again. In that raiding party was a young officer, Gretchen Henderson, great-great-granddaughter of my sister wife, Hazel Stone. Gretchen had had a baby boy four months before this raid, which my grandson knew.

What he did not know was that he was the father of Gretchen's son.

In fact he knew beyond doubt that he had never copulated with Gretchen and knew with equal certainty that he had left no sperm in any donor bank anywhere/when.

Nevertheless Hazel, dying, had told him firmly that he was the father of Gretchen's child.

He had asked how; she had answered, 'Paradox.'

A time paradox Colin could understand. He was a member of the Time Corps; he had been through time loops; he knew that, in a time paradox, it was possible to turn around and bite oneself in the back of one's own neck.

Therefore he now knew that he was going to inseminate Gretchen somewhere forward on his own time line; somewhere backward on her time line - the inverted loop paradox.

But `God helps those who help themselves'. That would happen only if he lived through this squeeze and made it happen.

When the three were rescued shortly after this revelation, Colin had piled up new corpses and had been wounded twice more - but all three were still alive. They were flashed two thousand years into the future to the greatest physicians in any universe: Ishtar and her staff. My sister wife Ishtar won't let a patient die as long as the body is warm and the brain is intact. It took some doing, Pixel especially. The baby creature was held at Kelvin nought point three for several months while Doctor Bone was fetched from another universe and a dozen of Ishtar's best including Ishtar herself were put through a crash course in feline medicine, surgery, physiology, etc. Then they raised Pixel to simple hypothermia, rebuilt him, brought him to blood temperature and wakened him. So today he is a strong, healthy tom, still travelling as he pleases and making kittens wherever he goes.

In the meantime Hazel arranged the time loop and Colin encountered and wooed and won and tumbled and impregnated a somewhat younger Gretchen. So she had her baby, and later on (by her personal time line) she joined Hazel and Colin in saving the computer Mycroft Holmes.

But why such extreme effort over a kitten? Why not give a dying kitten the release he needs to end his pain?

Because, without Pixel and his ability to walk through walls, Mycroft Holmes would not have been rescued, all of the raiding party would have died, and the future of the entire human race would have been placed at risk. The chances were so evenly balanced that in half of the futures they died, in half of them they succeeded. A few ounces of kitten made the difference. He warned them, with the only word he had mastered: 'Blert!'

On the way back from Butler Charles had recovered from his postcoital depression; he wanted to do it again. Well, so did I, but not that day. That buggy ride over dirt roads had reminded me that what I was sitting on was just a leede tender.

But Charles was raring to go; he wanted an encore right now. `Mo, there is a spot lust ahead there where we can get a buggy clear off the road and out of sight. Quite safe.'

`No, Chuck.'

'Why not?'

'It's not perfectly safe; anybody else could pull off there, too. We're late now and I don't want to have to answer questions today. Not this day. And we don't have another Merry Widow and that settles it because while I do plan to have children, I don't want to have them at fifteen.'

'Oh.'

'Quite so. Be patient, dear, and we will do it again... another day, with careful arrangements... which you might be thinking about. Now take your hand away, please; there is a rig coming down the road - see the dust?'

Mother did not scold me over being a half-hour late. But she did not press Charles when he refused her offer of lemonade, on the excuse that he had to get Ned (his gelding) home and curried and the buggy wiped down because his parents were going to need it. (A too complex lie - I'm sure he simply did not want to meet Mother's eye, or be questioned by her. I'm glad Father taught me to avoid fancy lies.)

Mother went upstairs as soon as Chuck left; I went out back.

Two years earlier Father had indulged us in a luxury many of our church members felt was sinfully wasteful: two outhouses, one for the boys and one for us girls, just like at school. In fact we truly needed them. That day I was delighted to find the girls privy empty. I flipped the bar to lock, and checked up.

Some blood, not much. No problems. Slightly sore, nothing more.

So I sighed with relief and peed and reassembled myself, and went back to the house, picking up a piece of stove wood for the kitchen as I passed the wood pile - a toll each of us paid for each trip out back.

I dropped off the wood and stopped in the wash shed adjoining the kitchen, washed my hands and sniffed them. Clean. just my guilty conscience. I went to the clinic, stopping only to tousle Lucille's strawberry hair and par her bottom. Lucy was three, I think - yes, she was born in '94, the year after Father and I went to Chicago. She was a little doll, always merry. I decided that I wanted one just like her... but not this year. But soon. I was feeling very female.

I reached the clinic just as Mrs Altschuler was leaving. I spoke politely; she looked at me and said, 'Audrey, you've been out in the sun without a sunbonnet again. Don't you know any better than that?'

I thanked her for her interest in my welfare and went on in. According to Father all she suffered from was constipation and lack of exercise... but she showed up at least twice a month and had not, since the first of the year, paid a single penny. Father was a strong man, firm-minded, but not good at collecting money from people who owed it to him.

Father entered her visit in his book and looked up: 'I'm taking your bishop, young lady.'

'Sure you don't want to change your mind, sir?'

`No. I may be wrong but I'm certain. Why? Have I made a mistake?'

'I think so, sir. Mate in four moves.'

`Eh?' Father stood up, went over to his chess table. 'Show me.'

'Shall we simply play it out? I may be mistaken:

'Grrummph! You'll be the death of me, girl: He studied the board, then went back to his desk. 'This will interest you. This morning's mail. From Mr Clemens -'

`Oh, my!'

I remember especially two paragraphs:

I agree with you and the Bard, sir; let's hang them. Hanging its lawyers might not correct all of this country's woes but it would be lots of fun and could do no harm to anyone.

Elsewhere I have noted that the Congress is the only distinct criminal class this country has. It cannot be mere coincidence that ninty-seven per cent of Congress are lawyers.

Mr Clemens added that his lecture agency had scheduled him for Kansas City next winter. 'I recall that four years ago we failed to rendezvous in Chicago by a week. Is it possible that you will be in KC next January?'

'Oh, Father! Could we?'

`School will be in session:

'Father, you know that I made up all time lost by going to Chicago. You know, too, that I am first among the girls in my class... and could be first including the boys if you hadn't cautioned me about the inadvisability of appearing too smart. But what you may not have noticed is that I have enough credits and could have graduated -'

`-with Tom's class last week. I noticed. We'll work on it. Deus volent and the crick don't rise. Did you get what you wanted in Butler?'

`I got what I wanted. But not in Butler.'

'Eh?'

'I did it, Father. I am no longer virgin.'

His eyebrows shot up. `You have managed to surprise me.'

'Truly, Father?' (I didn't want him to be angry with me... and I thought that he had implied long back that he would not be.)

'Truly. Because I thought that you had managed it last Christmas vacation. I have been waiting the past six months, hoping that you would decide to trust me with it.'

'Sir, I didn't even consider keeping it from you. I depend on you.'

`Thank you. Hmm, Maureen, freshly deflowered, you should be examined. Shall I call your mother?'

'Oh! Does Mother have to know?'

'Eventually, yes. But you need not have her examining you, if it frets you -'

'It does!'

'In that case, I'll take you over to see Dr Chadwick.'

`Father, why must I see Dr Chadwick? It is a natural event, I was not hurt, and I feel no need.'

We had a polite argument. Father pointed out that an ethical doctor did not treat members of his own family, especially his women folk. I answered that I was aware of that... but that I needed no treatment. And back and forth.

After a bit, having made sure that Mother was upstairs for her nap, Father took me into the surgery, locked the door, and helped me up on to the table, and I found myself in much the position for examination that I had been in earlier for Charles, except that this time I had removed only my bloomers.

I suddenly realised that I had become excited.

I tried to suppress it and hoped that Father would not notice it. Even at fifteen I was not naive about my unusual and possibly unhealthy relations with my father. As early as twelve I had had the desert-isle daydream with my father as the other castaway.

But I also knew how strong the taboo was from the Bible, from classic literature, and from myth. And I remembered all too well how Father quit letting me sit on his lap, had stopped it completely and utterly, once I reached menarche.

Father put on a pair of rubber gloves. This was something he had started as a result of the Chicago trip... which had not been to allow Maureen to enjoy the Columbian Exposition but to permit Father to attend school at Northwestern University in Evanston in order to get up to date on Professeur Pasteur's germ theories.

Father had always been strong for soap and water, but he bad had no science to back up his attitudes. His preceptor, Dr Phillips, had started to practise in. 1850, and (so said Father) regarded the rumours from France as 'just what you could expect from a bunch of Frogs.'

After Father returned from Evanston, nothing ever again could be clean enough to suit him. He started using rubber gloves, and iodine, and boiling and sometimes burning used instruments, especially anything used with lockjaw.

Those impersonal clammy rubber gloves cooled me down... but I was embarrassed to realise that I was quite wet.

I ignored it, Father ignored it. Shortly he helped me down and turned away to strip off his gloves while I got back into my bloomers. Once I was 'decent' he unlocked and opened the door.

'Healthy, normal woman,' he said gruffly. 'You should have no trouble bearing offspring. I recommend that you refrain from intercourse for a few days. I conclude that you used a French purse. Correct?'

'Yes, sir.'

'Good. If you will continue to use them... every time!... and are discreet about your public conduct, you should have no serious problems. Hmm... do you feel up to another buggy ride?'

'Why, certainly, sir. Is there any reason why I should not?'

'No. Word came in that Jonnie Mae Igo's latest baby is ailing; I promised to try to get out there today. Will you ask Frank to hitch up Daisy?'

Ir was a long drive. Father took me along to tell me about Ira Howard and the Foundation. I listened, unable to believe my ears... save that Father, the only utterably dependable source of information, was telling me.

After a long stretch I at last spoke up. 'Father, I think I see. How does this differ from prostitution? Or does it?'

Chapter 4 - The Worm in the Apple

Father let Daisy amble on quite a piece before he answered.' I suppose it is prostitution, if you want to stretch the definition to cover it. It does involve payment, not for intercourse per se, but for the result of that intercourse, a baby. The Howard Foundation will not pay you to marry a man on their list, nor is he paid for marrying you. In fact you are never paid; he is paid... for every baby you bear, sired by him!

I listened and found myself humiliated by these arrangements. I was never one of those women demanding the vote... but fair is fair! Somebody was going to inseminate me... then, when I groaned and moaned the way Mother does and gave birth to a baby, he gets paid. I fumed to myself.

'It still sounds like whoring, Father, from where I sit. What's the going rate? How much does my hypocritical, hypothetical husband get paid for each set of my labour pains and one smelly baby?'

'No set price.'

'What? Mon papa, that is a hell of a way to run a business. I lie down and spread my legs, by contract. Nine months later my husband is paid... five dollars? Fifty cents? This is not a good bet. I think I would be better off to move to Kansas City and walk the streets.'

'Maureen. Behave yourself.'

I took a deep breath, and held it. Then I lowered my voice an octave, the way I had been practising lately. (I had promised myself never to let my voice get shrill.) I'm sorry, sir. I guess I'm just another vapourish ex-virgin - I had thought I was more grown up.' I sighed. 'But it does seem crass.'

'Yes, perhaps "crass" is le mot juste. But let me tell you how it works. No one will ask you to marry anyone. If you consent, your mother and I will submit your name to the

Foundation, along with a questionnaire that I will help you fill out. In return they will send you a list of young men. Each man on that list will be what is called an "eligible bachelor" - eligible quite aside from the Foundation and its money.

'He will be young, not more than ten years older than you are, but more likely about your age -'

'Fifteen?' I was amazed. Shocked.

'Simmer down, flame top. Your name is not yet on the list. I'm telling you this now because it is not fair not to let you know about the Howard Foundation option once you have graduated to functioning woman. But you're still too young to marry:

'In this state I can marry at twelve. With your permission.'

'You have my permission to marry at twelve. If you can manage it.'

'Father, you're impossible.'

'No, merely improbable. He'll be young but older than fifteen. He will be of good health and of good reputation. He wilt be of adequate education -'

`He had better be able to speak French, or he won't fit into this family.'

The Thebes school system offered French and German; Edward had picked French, then Audrey also, because both Father and Mother had studied French, and made a habit of shifting to French when they wanted to talk privately in front of us. Audrey and Edward established a precedent; we all followed. I started on French before I could take it in school; I did not like having words talked in front of me that I did not understand.

This precedent affected my whole life - but, again, that's another story.

'You can teach him French - including that French kissing you asked me about. Now this faceless stranger who ruined our Nell - Can he kiss?'

'Gorgeously!'

'Good. Was he sweet to you, Maureen?'

'Quite sweet. A bit timid but he'll get over that, I think. Uh, Father, it wasn't as much fun as I think it could be. And will be, next time.'

'Or maybe the time after that. What you're saying is that today's trial run was not as satisfying as masturbation. Correct?'

'Well, yes, that is what I meant. It was over too fast. He Goodness, you know who drove me to Butler. Chuck. Charles Perkins. He's sweet, cher papa, but... he knows less about it than I do.'

So I would expect. I taught you, and you were an apt student.'

'Did you teach Audrey... before she got married?'

'Your mother taught her.'

'So? I suspect that you taught me more. Uh, was Audrey's marriage sponsored by the Howard Foundation? Is that how she met Jerome?'

'That is a question never asked Maureen. It would be polite not even to speculate.'

'Well, excuse my bare face!'

'I won't excuse your naked manners. I never discuss your private affairs with your siblings; you should not ask me about theirs.'

I suddenly felt the curb bit. 'I'm sorry, sir. This is all new to me.'

'Yes. This young man these young men - will all be acceptable prospects... or, if I don't approve of one, I'll tell you why and not permit him in my house. But in addition to everything else, each one will have four living grandparents.'

'What's special about that? I not only have four living grandparents but also eight living great-grandparents. Have I not?'

'Yes. Although Grandpaw McFee is a waste of space. If he had died at ninety-five he would have been better off. But that is what this is all about, dear daughter; Ira Howard wanted his fortune used to extend human life. The Foundation trustees have chosen to treat it as if it were a stock breeding problem. Do you recall the papers on Loafer, and the reason I paid a high price for him? Or the papers on Clytemnestra?

You have long life in your ancestry, Maureen, all branches. If you marry a young man on the list, your children will have long life in all their branches.'

Father turned in his seat and looked me in the eye. 'But nobody - nobody! - is asking you to do anything. If you authorise me to submit your name - not today but let's say next year - it simply means that you will have six or eight or ten or more additional suitors to choose from, instead of being effectively limited to the few young men near your age in Lyle County. If you decide to marry Charles Perkins, I won't say a word. He's healthy, he's well behaved. And he's not my cup of tea. But he may be yours.'

(He's not my cup of tea, either, papa. I guess I was just using him. But I've promised him a return match... so I must.)

'Father, suppose we hold off until next year?'

'I think that is sound judgement, Maureen. In the meantime, don't get pregnant and try not to get caught. Oh, by the way - if you submit your name and a young man on the list comes along, if you wish, you can try him out on the parlour sofa: He smiled. `More convenient and safer than the judges' stand.'

'Mother would have heart failure!'

'No, she would not. Because that is exactly the arrangement her mother provided for her... and that is why Edward was officially a premature baby. Because it is stupid to go the Howard route, then find out after you're committed by marriage vows that the mo of you are infertile with each other.'

I had no answer. Mother... my mother who thought 'breast' was a dirty word and that 'belly' was outright profanity... Mother with her bloomers off, bouncing her bawdy buttocks on Grandma Pfeiffer's sofa, making a baby, out of wedlock, while Grandma and Grandpa pretended not to know what was going on. It was easier to believe in virgin birth and transubstantiation and resurrection and Santa Claus and the Easter Bunny. We are strangers, all of us, family most of all.

Shortly we pulled into the Jackson Igo place, eighty acres, mostly rocks and hills, a shack and a sorry barn. Mr Igo cropped it a bit but it didn't seem possible that the place supported him and his thin, tired wife and his swarm of dirty children. Mostly Jackson Igo cleaned cesspools and built privies.

Some of those children and half a dozen dogs gathered round our buggy; one boy ran shouting into the house. Presently Mr Igo came out.

Father called out, 'Jackson!'

'Yeah, Doc.'

'Get these dogs away from my rig.'

'They ain't no harm.'

`Do it. I won't have them jumping up on me.'

`Jest as you say, Doc. Cleveland! Jefferson! Get them hounds! Take 'em around back.'

The order was carried out; Father got down with a quiet word over his shoulder, 'Stay in the buggy.'

Father was inside their shack only a short time, which suited me, as the oldest boy, Caleb, my age or near it, was pestering me to get down and come see a new litter of pigs. I knew him from school, where he had attended fifth grade for some years. He was, in my opinion, a likely candidate for lynching if some father did not kill him first. I had to tell him to get away from Daisy and quit bothering her; he was causing her to toss her head and back away from him. I took the whip out of its socket to point up my words.

I was glad to see Father reappear.

He climbed into the buggy without a word. I clucked to Daisy and we got out of there. Father was frowning like a thunder cloud, so I kept quiet.

A quarter of a mile down the road he said, 'Please pull over on to the grass,' so I did, and said to Daisy, 'Whoa, girl,' and waited.

'Thank you, Maureen. Will you help me wash, please?'

'Certainly, sir.' This buggy, used for his country calls and specially built by the carriage-wrights who built his racing sulkies, had a larger baggage space in the back, with a rain cover. In it was carried a number of items that Father might need on a call but which did not belong in his black bag. One was a coal-oil can with a spout, filled with water, and a tin basin, and soap and towelling.

This time he wanted me to pour water over his hands. Then he soaped them; I rinsed them by pouring. He shook them dry; then washed them all over again in the basin and dried them after shaking, on clean towelling.

He sighed. 'That's better. I did not sit down in there, I did not touch anything I could avoid touching. Maureen, remember that bathtub we used in Chicago?'

`I certainly do!' The World's Fair had been an endless wonder and I'll never forget my first view of the Lake and my first ride on a railroad train up high in the air... but I dreamed about that tub, all white enamel, and hot water up to my chin. I could be seduced for a hot bath. They say every woman has her price. That's mine.

`Mrs Malloy charged us two bits for each bath. This minute I would happily pay her two dollars. Maureen, I need glycerine and rose water. In my bag. Please.'

Father compounded this lotion himself and it was intended primarily for chapped hands. Right now he needed it to soothe his hands against the strong lye soap he had just used.

Once back on the road he said, 'Maureen, that baby was dead long before Jackson Igo sent for me. Since last night, I estimate.'

I tried to feel sorry about that baby. But growing up in that household was no fate to wish on anyone. `Then why did he send for you?'

`To bless the death. To get me to write a death certificate, to keep him from trouble with the law when he buries it... which he is probably doing this very minute. Primarily to cause me - and you - to make a six-mile round trip to save himself the trouble of harnessing his mule and coming into town.' Father laughed without mirth. `He kept pointing out that I couldn't charge him for a call since I didn't get there before the baby died. I finally said, "Shut up, Jackson. You haven't paid me a cent since Cleveland beat Harrison." He said something about hard times and how this administration never does anything for the farmer.'

Father sighed. I didn't argue with him; he had a point.

Maureen, you've been keeping my books this past year, would you say these were hard times?'

That brought me up sharp. I had been thinking about the Howard Foundation and Chuck's pretty penis. `I don't know, Father. But I know that you have far more on the books than you ever get paid. He noticed something else, too: the worst of the deadbeats would rather owe you a dollar for a house call than fifty cents for an office visit. Like Jackson Igo.'

'Yes. He could have fetched that little cadaver in - never saw a child so dehydrated! - but I'm relieved that he did not; I don't want him in my clean clinic... or Adele's clean house. You've seen the books; do you estimate that collections are enough to support our family? Food, clothing, shelter, oats and hay, and a nickel for Sunday School?'

I thought about it. I knew my multiplication tables through twenty times twenty, same as everybody, and in high school I had been learning the delights of more advanced ciphering. But I had never applied any of it to our household affairs. Now I drew a blackboard in my mind and did some hard calculating.

`Father... if they all paid you what they owe you, we would be quite comfortable. But they don't pay you, not enough of them.' I thought. 'Nevertheless we are comfortable.'

`Maureen, if you don't want the Howard option, better marry a rich man. Not a country doctor.'

Presently he shrugged and smiled. `Don't worry about it. We'll keep food on the table even if I have to slide over into Kansas and rustle cattle. Shall we sing? "Pop Goes the Weasel" would be appropriate today. How is your weasel by now, dear? Sore?'

'Father, you are a dirty old man and you will come to a bad end.'

`I've always hoped so, but I've been too busy raising Kinder to raise Cain. Meant to tell you: someone else is interested in your welfare. Old lady Altschuler.'

'So I know.' I told him about her remark. 'She thinks I'm Audrey.'

'That unspeakable old cow. But she may not really think you are Audrey. She asked me what you were doing na the grandstand at the fairgrounds.'

'Well! What did you tell her?'

`I told her nit. Silence is all a snoopy question deserves... just fail to hear it. But the insult direct is still better. Which I handed that snapping turtle by ignoring her question and telling her next time to bathe before she comes to see me, as I found her personal hygiene to be less than adequate. She was not pleased.' He smiled. 'She may be so angry that she will switch to Dr Chadwick. One may hope.'

`One may. So somebody saw us go up. Well, sir, they did not actually see us doing it' I told Father about the box heavy with weights. 'Spectators would have to have been in a balloon.'

'I would say so. Safe enough if not very comfortable. I wish I could extend to you the courtesy of the sofa... but I can't, until you take up the Howard option. If you do. In the meantime let's think about it. Safe places.'

`Yes, sir. Thank you. What I can't figure out is this: we trimmed the trip to Butler short, in order to conceal the time used up in unscheduled activity. I've been figuring times and differences in my head. Cher papa, unless my arithmetic is wrong -'

`It never is.'

'Whoever spotted us climbing up into my hideaway must then have proceeded at a fast trot to the Altschuler place, reported my sins, then the Ugly Duchess must have been already dressed, with her buggy hitched and ready, to hurry over to sec you. When did she show up?'

`Let me see. When she arrived, three patients were waiting. I made her wait her turn... so she carne in already angry. I sent her out boiling mad. Hmm... she must have arrived at least an hour before you showed up and bumped into her coming out.'

'Father, it won't work. Physically impossible. Unless she herself was at the fairgrounds, then drove straight to our house on the pretence of needing to see you.'

`That's possible. Quite unlikely. But, Maureen, you Nave just encountered a phenomenon that you will see again and again all your life after this red-letter day: the only thing known to science faster than the speed of light is Mrs Grundy's gossip.'

'I guess so.'

'I know so. When yon next encounter it, how will you handle it? Do you have that in your commandments?'

`Uh, no.'

'Think about it. How will you defend yourself?'

I thought about it for the next half-mile. 'I won't'

'Won't what?'

`I won't defend myself against gossip; I will ignore it. At most I will look her - or him - in the eye and state loudly, "You are a filthy-minded liar." But it's usually best to ignore it entirely. I think.'

'I think so, too. People of that sort want to be noticed. The cruellest thing you can do to them is to behave as if they did not exist.'

During the remaining half of 1897 I ignored Mrs Grundy while trying to avoid being noticed by her. My public persona was straight out of Louisa M. Alcott while in private I tried to learn more about this amazing new art I don't mean to imply that I spent much time on my back, sweating away for the mutual pleasure of Maureen and His Name Is Legion. Not in Lyle County, not in 1897. Too hard to find a place to do it!

'Conscience is that little voice that tells you that someone may be watching.' (Anon and op. cit.)

And there was the problem of a satisfactory partner. Charles was a nice boy and I did offer him that encore, and even a third try at it for good measure. The second and third attempts were more comfortable but even less exciting - cold mush without sorghum and cream.

So after the third one I told Charles that someone had seen us on top of Marston Hill and had told one of my sisters... and a good thing that it hadn't been one of my brothers, because I had been able to cool things down with my sister. But he and I had better act as if we had quarrelled... or next time the word might get all the way to my mother, who would tell my father, and then there was just no telling. So you had better leave me alone until school starts, huh? You see, don't you. dear?

I learned that the hardest problem of all in dealing with a man is how to stop dealing with him when he does not want to stop. A century and a half of quite varied experience has not given me any answer that is totally satisfactory.

One partly satisfactory answer that I did not learn until much later than 1897 requires considerable skill, great self control, and some sophistication: the intentional 'dead arse'. Lie there like a dead woman and, above all, let your inner muscles be utterly relaxed. If you combine that with garlic on your breath, it is likely - although not certain - that he will save you the trouble of thinking of a reason to break off. Then, when he initiates a break, you can be brave about it. A 'good sport'.

I am not suggesting that lively hips and tight muscles constitute 'sex appeal'. Such qualities, while useful, are merely equivalent to sharp-tools for a carpenter. My sister wife Tamara, mother of our sister wife Ishtar and at one time the most celebrated whore in ali Secundus, is the epitome of sex appeal... yet she is not especially pretty and no one who has slept with her talks about her technique. But their faces light up when they sec her and their voices throb when they speak of her.

I asked Jubal Harshaw about Tammy because Jubal is the most analytical of my husbands. He said, `Mama Maureen, quit pulling my leg. You of all people know the answer.'

I denied it.

`Ali right,' he said, `but I still think you are fishing. Sex appeal is the outer evidence of deep interest in your partner's pleasure. Tammy's got it. So have you and just as strongly. It is not your red hair, wench, or even the way you smell, which is yummy. It is the way you give... when you give.'

Jubal got me so stirred up that I tripped him, then and there.

But in Lyle County in 1897 one cannot simply trip a darling man and have at it; Mrs Grundy is sitting up in every tree, eager to catch you and publish it. So the preliminaries must be more complex. There are plenty of eager males (about twelve in every dozen) but it is necessary to pick the one you want - age, health, cleanliness, personal charm, discretion (if he gossips to you, he will gossip about you), and other factor, that vary with each candidate. Having selected him for the slaughter you must cause him to decide that he wants you while letting him know silently that it is possible. That is easy to phrase but to put it into practice... You'll be honing your skills for a lifetime.

So you reach an agreement... but you still haven't found a place.

After picking a place to shed my virginity I resigned that aspect of the problem. If a boy/man wanted my immoral carcass, he would get his grey matter churning and solve it. Or he could go chase flies.

But I did risk chiggers and (once) poison ivy. He caught it; I seem to be immune.

From June to January three boys ranging from sixteen to twenty had me, and one married man of thirty-one. I added him in on the assumption (false) that a married man would be so skilled that he could set off those fireworks without fail.

Total copulations: nine. Orgasms: three - and one was wonderful. Time actually spent copulated: an average of five minutes per go, which is not nearly enough. I learned that life can be beautiful indeed... but that the males of my circle ranged from clumsy to awkward.

Mrs Grundy apparently did not notice me.

By New Year's Eve I had decided to ask Father to submit my name to the Howard Foundation... not for the money (I still did not know that the payments could amount to enough to matter) but because I would welcome a chance to meet more eligible males; the hunting in Lyle County was too poor to suit Maureen. I had firmly made up my mind that, while sex might not be the be-all and end-all, I did want to marry and it had to be a man who would make me eager to go to bed early.

In the meantime, I kept on trying to make Maureen as desirable a female animal as I could manage and I listened most carefully to my father's advice. (I knew that what I really wanted was a man just like my father, but twenty-five years younger. Or twenty. Make that fifteen. But I was prepared to settle for the best imitation I could find.)

There were two hundred days left in 1897 from that day Chuck and I climbed up into the judges' stand; that makes 200 x 24 x 60 - 288,000 minutes. Circa 45 of those minutes I spent copulated; that leaves 199 days, 23 hours, 15 minutes. It is obvious that I had time for other things.

That summer was one of the best of my life. While I did not get laid very often or very effectively, the idea was on my mind awake and asleep. It brightened my eyes and my days; I shed female pheromones like a female moth and I never stopped smiling - picnics, swimming parties in the Osage (you wouldn't believe what we wore), country dances (frowned on by the Methodist and Baptist churches but sponsored by jack Mormons who welcomed gentiles who might be converted - Father overruled Mother; I went and learned to swing on the corners and dosey-doh), watermelon contests, any excuse to get together.

I stopped thinking about the University of Missouri at Columbia. From Father's books I could see that there just wasn't money to put me through four years of college. I was not anxious to be a nurse or a schoolteacher, so there seemed to be little point in my aspiring to formal (and expensive) higher education. I would always be a bookworm but that does not require a college degree.

So I decided to be the best housewife I could manage - starting with cooking.

I had always taken my turn in the kitchen along with my sisters. I had been assistant cook for the day in rotation since my twelfth birthday. By fifteen I was a good plain cook.

I decided to become a good fancy cook.

Mother remarked on my increased interest. I told her the truth, or some of it. 'Chére mama, I expect to be married someday. I think the best wedding present I can bring my future husband is good cooking. I may not have the talent to become a gourmet chef. But I can try.'

'Maureen, you can be anything you want to be. Never forget that'

She helped me, and she taught me, and she sent away to New Orleans for French cookbooks, and we pored over them together. Then she sent me for three weeks to Aunt Carole's house, who taught me Cajun skills. Aunt Carole was a Johnny Reb, married after the War to - Heavens - a damn Yankee, Father's eldest brother, Uncle Ewing, now deceased. Uncle Ewing had been in the Union occupation of New Orleans, and had poked a sergeant in the nose over a distressed Southern girl. It got him a reduction from corporal to private and a wife.

In Aunt Carole's house we never discussed the War.

The War was not often discussed in our own house as the Johnsons were not native to Missouri, but to Minnesota. Being newcomers, by Father's policy we avoided subjects that might upset our neighbours. In Missouri sympathies were mixed - a border state and a clave state, it had veterans from both sides. But that part of Missouri had been `local option' - some towns had never had any claves and now permitted no coloured people; Thebes was one such. But Thebes itself was so small and unimportant that the Union troops had ignored it when they came through there in'65, burning and looting. They burned Butler to the ground and it never fully recovered. But Thebes was untouched.

Even though the Johnsons had come down from the North, we were not carpet baggers as Missouri never seceded; Reconstruction did not touch it. Uncle Jules, Father's cousin in Kansas City, explained our migration this way:

'After fighting four years in Dixie, we went back home to Minnesota... and stayed just long enough to pack up again and git. Mizzourah ain't as hot as Dixie but it ain't so cold, that the shadows freeze to the sidewalks and the cows give ice-cream.'

Aunt Carole put a polish on my cooking and I was in and out of ha kitchen quite a lot until I married. It was during that three weeks that the matter of the lemon pie took place - I think I mentioned it earlier.

I baked that pie. It was not my best work; I had burned the crust. But it was one of four, and the other three were all right. Getting the temperature just right on a wood range is tricky.

But how did my Cousin Nelson get that pie into church without anyone seeing it? How did he slide it under me without my noticing it?

He made me so furious that I went straight home (to Aunt Carole's house), then, when Nelson showed up to apologise, I burst into tears and took him straight to bed... and had one of those three fireworks occasions.

Sudden impulse and quite reckless and we got away with it cold.

Thereafter I let Nelson have me from time to time when we could figure out a safe way right up to my wedding. Which did not quite finish it, as years later he moved to Kansas City.

I should have behaved myself with Nelson; he was only fourteen.

But a smart fourteen. He knew that we didn't dare get caught; he knew that I couldn't marry him no matter what and he realised that he could get me pregnant and that a baby would be disaster for each of us.

That Sunday morning he held still while I put a French purse on him, grinned and said, `Maureen, you're smart.' Then he tackled me with unworried enthusiasm and brought me to orgasm in record time.

For the next mo years I kept Nelson supplied with Merry Widows. Not for me; I carried my own. For his harem. I started him off; he took up the sport with zeal and native genius, and never got into trouble. Smart.

Besides cooking, I endeavoured to straighten out Father's accounts receivable, with less success. After consulting with Father 1 sent out some polite and friendly dunning letters. Have you ever written over one hundred letters, one after another, by hand? I found out why Mr Clemens had grabbed the first opportunity to shift from pen to typewriter - first author to do so.

Dear Mr Deadbeat,

In going over Dr Johnson's books I find that your account stands at umpteen dollars and that you have made no payment on it since March 1896. Perhaps this is an oversight. May we expect payment by the first of the month?

If it is not possible for you to pay the full amount at once, will you please call at the Clinic this Friday the tenth so that we can work out arrangements mutually satisfactory?

The Doctor sends his good wishes to you and to Mrs Deadbeat, and also to Junior and the twins and little Knothead.

I remain,
Faithfully yours,
Maureen Johnson
(On behalf of Ira Johnson, MD)

I showed Father sample letters ranging from gentle to firm to tough; the sample above shows what we used on most of them. With some he said, `Don't dun them. They would if they could, but they can't.' Nevertheless I sent out more than a hundred letters.

For each letter postage was two cents, stationery about three. Can we reckon my time as worth five cents per letter? If so, each letter comes to a dime, and the whole mailing cost slightly over ten dollars.

Those hundred letters did not bring in as much as ten dollars in cash.

About thirty patients came in to talk to us about it. Perhaps half of those fetched some payment in kind - fresh eggs, a ham, side meat, garden truck, fresh bread, and so forth. Six or seven arranged schedules of payment; some of those actually met their promises.

But over seventy totally ignored the letters.

I was upset and disappointed. These were not shiftless peckerwoods like Jackson Igo; these were respectable farmers and townspeople. These were people for whom my father had got up in the middle of the night, dressed, then driven or ridden horseback through snow or rain, dust or mud or frozen ruts, to attend them or their children. And when he asks to be paid, they ignore it.

I couldn't believe it.

I asked, `Father, what do I do now?' I expected him to tell me to forget it, as he had been dubious as to the usefulness of these letters. I awaited his response with anticipated relief.

'Send each of them the tough one and mark it "Second Notice":

`You think that will do it, sir?'

`No. But it will do some good. You'll see.'

Father was right. That second mailing brought in no money. It fetched a number of highly indignant replies; some of them scurrilous. Father had me file each with its appropriate case record, but make no reply.

Most of those seventy patients never showed up again. This was the good result Father expected. He was cheerful about it.

'Maureen, it's a standoff; they don't pay me and I don't do them much good. Iodine, calomel, and Aspirin - that's about all we have today that isn't a sugar pill. The only times I'm certain of results are when I deliver a baby or set a bone or cut off a leg.

`But, damn it all, I'm doing the best I know how. I do try. If a man gets angry at me simply because I ask him to pay for my services... well, I see no reason why I should get out of a warm bed to physic him.'

1897 was the year that the Katy ran a line not a mile from our town square, so the council extended the city limits and that put Thebes on the railroad. That brought the telegraph to Thebes, too, which enabled the Lyte County Leader to bring the news to us direct from Chicago. But still only once a week; the Kansas City Star by mail was usually quicker. The Bell telephone reached us, too, although at first only from nine to nine and never on Sunday mornings, because the switchboard was in the Widow Loomis's parlour and service stopped when she was not there.

The Leader published a glowing editorial: `Modern Times.'

Father frowned. `They point out that it will soon be possible, as more people subscribe, to call for a doctor in the middle of the night. Yes, yes, surely. Today I make night calls because somebody is in such trouble that some member of the patient's family has hitched up in the middle of the night and driven here to ask me to come.

`But what happens when he can rout me out of bed just by cranking a little crank? Will it be for a dying child? No, Maureen, it will be for a hangnail. Mark my words; the telephone signals the end of the house call. Not today, not

tomorrow, but soon. They will ride a willing horse to death... and you will see the day when medical doctors will refuse to make house calls.'

At New Year, I told Father that I had made up my mind: put my name in to the Howard Foundation.

Before the end of January I received the first of the young men on my list.

By the end of March I had received all seven of them. In three cases I did go so far as to avail myself of the privilege of the sofa... although I used the couch in Father's office, and locked the door.

Wet firecrackers.

Decent enough young male, those three, but... to marry? No.

Maureen felt glum about the whole matter.

But on Saturday the second of April Father received a letter from Rolla, Missouri:

My dear Doctor,

Permit me to introduce myself. I am a son of Mr and Mrs John Adams Smith of Cincinnati, Ohio, where my father is a tool and die maker. I am a senior at the School of Mines of the University of Missouri at Rolla, Missouri. I was given your name and address by judge Orville Sperling, of Toledo, Ohio, Executive Secretary of the Howard Foundation. Judge Sperling tells me that he has written to you about me.

If I may do so, I will call on you and Mrs Johnson on Sunday afternoon the seventeenth of April. Then, if you permit, I ask to be presented to your daughter Miss Maureen Johnson for the purpose of offering myself as a possible suitor for her hand in marriage.

I welcome any investigation you tare to make of me and I will answer fully and frankly any questions you put to me.

I look forward to your reply. I remain, sir,
Faithfully your servant,

Brian Smith

Father said, 'See, my dear daughter? Your knight comes riding.'

'Probably has two heads. Father, it's no good. I shall die an old maid, at the age of ninety-seven.'

'Not a fussy old maid, I trust. What shall I tell Mr Smith?'

'Oh, tell him Yes. Tell him I'm drooling with eagerness.'

'Maureen.'

'Yes, Father. I'm too young to be cynical, I know. Quel dommage. I will straighten up and give Mr Brian Smith my best smile and approach the meeting with cheerful optimism. But I have grown a bit jaundiced. That last orang-utang -'

(That ape had tried to rape me, right on Mother's sofa, just as soon as Mother and Father went upstairs. He then left abruptly, clutching bis crotch. My study of anatomy had paid off.)

'I'll tell him that we will welcome him. Sunday the seventeenth. That's two weeks from tomorrow.'

I greeted Sunday the seventeenth with little enthusiasm. But I did stay home from church and prepared a picnic lunch, and grabbed the chance for an extra bath. Mr Smith turned out to be presentable and well spoken, if not especially inspiring. Father grilled him a bit

and Mother offered him coffee; about two we got away - Daisy and a family buggy, with his livery stable nag left in our barn.

Three hours later I was certain that I was in love.

Brian made a date to come back on the first of May. He had final examinations to get out of the way in the meantime.

One week later, Sunday 24 April 1898, Spain declared war on the United States.

Chapter 5 - Exit from Eden

This is not a bad jail, as jails go. I was in a much worse one, in Texas, seventy-odd years back on my personal time line. In that one the cockroaches slugged it out with each other for a thin chance of finding a few crumbs on the floor, there was no hot water at any time, and the screws were all cousins of the sheriff. Bad as that joint was, wetbacks used to sneak across the Rio and break a window or mo in order to get themselves locked up, so they could fatten up for the winter. That says something about Mexican jails that I don't care to investigate.

Pixel comes to see me almost every day. The guards can't figure out how he does it. They all like him and he has given several of them his conditional approval. They fetch titbits in to him; he deigns to eat some of their tribute.

The warden heard about Pixel's Houdini talents, came to my cell, happened to show up when Pixel was making a call on me, tried to pet him and got nipped for his presumption not hard enough to break the skin, but the message was clear.

The warden told me (ordered me) to be sure to let him know ahead of time when Pixel went in or out; he wanted to see how Pixel managed to sneak past and not set off alarm. I told him that no mortal man or woman could predict what a cat would do next, so don't hold your breath, buster. (Guards and trustees are okay, in their place, but a warden is not my social equal. Apparently Pixel realises this.)

Dr Ridpath has been in a couple of times, to urge me to plead guilty and throw myself on the mercy of the court. He says that I would be certain to get no worse than a suspended sentence, if I convinced the tribunal that I was truly contrite.

I told him that I was not guilty and would rather be a cause célèbre and sell my memoirs for an outrageous sum.

He told me that I was apparently unaware that the College of Bishops had passed a law years back under which any profits arising out of a case of sacrilege went to the Church, after the fee for disposing of the body was paid. `Look, Maureen, I'm your friend,

although you don't seem to know it. But there is nothing I or anyone can do for you if you won't co-operate.'

I thanked him and told him that I was sorry that he was disappointed in me. He said to think it over. He didn't kiss me en he left, so I conclude that he really is vexed with me.

Dagmar has been in almost daily. She doesn't try to coerce me into confessing, but what she did do last time had more effect on me than Dr Eric's reasonableness: she smuggled in a Last Friend. `If you are going to be stubborn about confessing, this will help. Just break off the tip and inject it anywhere. Once it takes hold - five minutes or less - even a slow fire won't hurt... not much. But for Santa Carolita's sake, ducks, don't let anyone find it!'

I'll try not to.

I would not be dictating this if I were not in jail. I don't necessarily have publication in mind, but the discipline of sorting it all out may show me where I went wrong... and that may show me how to straighten out the mess and go right.

The Battle of New Orleans was fought two weeks after the War of 1812 was over. Poor communications... But in 1898 the Atlantic Cable was in use. The news of Spain's declaration of war went from Madrid to London to New York to Chicago to Kansas City to Thebes almost with the speed of light - only the delays of retransmission. Thebes is about eight hours west of Madrid, so the Johnson family was in church when the dreadful news arrived.

The Reverend Clarence Timberly, our pastor at Cyrus Vance Parker Memorial Methodist Episcopal Church, was preaching and had just finished fourthly and was digging into fifthly when someone started ringing the big bell in the county courthouse cupola.

Brother Timberly stopped preaching. `Let us suspend services for a few moments while the Osage Volunteers and members of the bucket brigades withdraw.'

Ten or a dozen of the younger men got up and left. Father picked up his bag and followed them. Being a doctor Father did not serve on the volunteer fire team but, being a doctor, he usually did go to fires if not actively engaged in treating a patient when the bell rang.

As soon as Father closed the church door behind him our preacher got back to work on 'fifthly' - what it was I don't know; during sermons I always tried to looked alert and attentive, but I rarely listened.

On down Ford Street someone was shouting; he could be heard right through Brother Timberly's loud voice. Those shouts came closer.

Presently Father came back into the church. Instead of returning to his pew he walked up to the chancel rail and handed a sheet of newspaper to our pastor.

I should interject that the Lyle County Leader was a four page single sheet, printed on what was then called `boiler plate' - newsprint printed on one side with international and national and state news, and shipped that way to small country papers, who would then fill the inside pages with local news and local advertising. The Lyle County Leader bought 'boiler plate' from the Kansas City Star with the Leader's own masthead printed on it.

The sheet Father handed to Brother Timberly was of that sort, with the same local stuff inside as had been in the Leader's weekly edition dated Thursday, 21 April 1898, except that the upper half of page two had been reset in large type with one short news story:

SPAIN DECLARES WAR!!!

By wire from the New York journal April Z4 Madrid - Today our Ambassador was summoned to the office of the Premier and was handed his passport and a curt note stating that the `crimes' of the United States against His Most Catholic Majesty have forced His Majesty's government to recognise that a state of war exists between the Kingdom of Spain and...

Reverend Timberly read that one news story aloud from the pulpit, put the paper down, looked solemnly at us, took out his handkerchief and wiped his brow, then blew his nose. He said hoarsely, `Let us pray.'

Father stood up, the rest of the congregation followed. Brother Timberly asked Lord God Jehovah to lead us in this time of peril. He asked Divine guidance for President McKinley. He asked the Lord's help for all our brave men on land and sea who now must fight for the preservation of this sacred, God-given land. He asked mercy for the souls of those who would fall in battle, and consolation and help in drying the tears of widows and orphans and of the fathers and mothers of our young heroes destined to die in battle. He asked that right prevail for a speedy end to this conflict. He asked for help for our friends and neighbours, the unfortunate people of Cuba, oppressed for so long by the iron heel of the King of Spain. And more, about twenty minutes of it.

Father had long since cured me of any belief in the Apostles' Creed. In its place I held a deep suspicion, planted by Professor Huxley and nurtured by Father, that no such person as Jesus of Nazareth had ever lived.

As for Brother Timberly, I regarded him as two yards of noise, with his cracks filled with unction. Like many preachers in the Bible Belt, he was a farm boy with (I strongly suspected) a distaste for real work.

I did not and do not believe in a God up there in the sky listening to Brother Timberly's words.

Yet I found myself saying 'Amen!' to his every word, while tears streamed down my cheeks.

At this point I must drag out my soap box.

In the twentieth century Gregorian, in the United States of America, something called 'revisionist history' became popular among 'intellectuals'. Revisionism appears to have been based on the notion that the living actors present on the spot never understood what they were doing or why, or how they were being manipulated, being mere puppets in the hands of unseen evil forces.

This may be true. I don't know.

But why are the people of the United States and their government always the villains in the eyes of the Revisionists? Why can't our enemies - such as the King of Spain, and the Kaiser, and Hitler, and Geronimo, and Villa, and Sandino, and Mao Tse-Tung, and Jefferson Davis - why can't these each take a turn in the pillory? Why is it always our turn?

I am well aware that the Revisionists maintain that William Randolph Hearst created the Spanish-American War to increase the circulation of his newspapers. I know, too, that various scholars and experts later asserted that the USS Maine, at dock in Havana harbour, was blown up (with the loss of 226 American lives) by faceless villains whose purpose was to make Spain look bad and thereby to prepare the American people to accept a declaration of war against Spain.

Now look carefully at what I said. I said that I know that these things are asserted. I did not say that they are true.

It is unquestionably true that the United States, acting officially, was rude to the Spanish government concerning Spain's oppression of the Cuban people. It is also true that William Randolph Hearst used his newspapers to say any number of unpleasant things about the Spanish government. But Hearst was not the United States and he had no guns and no ships and no authority. What he did have was a loud voice and no respect for tyrants. Tyrants bate people like that.

Somehow those masochistic revisionists have turned the War of 1898 into a case of imperialistic aggression by the United States. How an imperialist war could result in the freeing of Cuba and the Philippines is never made clear. But revisionism always starts with the assumption that the United States is the villain. Once the revisionist historian proves this assumption (usually by circular logic) he is granted his Ph.D. and is well on his way to a Nobel peace prize.

In April 1898, to us benighted country people certain simple facts were true. Our battleship Maine had been destroyed, with great loss of life. Spain had declared war on us. The President had asked for volunteers.

The next day, Monday 25 April, came the President's call asking the state militias to furnish one hundred and twenty- five thousand volunteers to augment our almost-nonexistent army. That morning Tom had ridden over to Butler Academy as usual. The news reached him there and he came trotting back at noon, his roan gelding Beau Brummel in a lather. He asked Frank to wipe Beau down for him and hurried into the house, there to disappear into the clinic with Father.

They came out in about ten minutes. Father told Mother, `Madam, our son Tom is about to enlist in the service of his country. He and I will be leaving for Springfield at once. I must go with him in order to swear that he is eighteen years old and has parental approval.'

'But he is not eighteen!'

'That is why I must go with him. Where is Frank? I want him to hitch Loafer.'

'I'll hitch him, Father,' I put in. `Frank just now left for school, in a rush. He was a bit late.' (Tending Beau had made Frank late, but it wasn't necessary to say so.)

Father looked worried. I insisted, 'Loafer knows me, sir; he would never hurt me.'

I had just returned to the house when I saw Father standing at the new telephone instrument, which hung in the hallway we used as a waiting-room for patients. Father was saying, 'Yes... yes, I understand... Good luck, sir, and God speed. I will tell her. Goodbye.' He took the receiver away from his ear, stared at it, then remembered to hang it up.

He looked at me. 'That was for you, Maureen.'

`For me?' I had never had a telephone call.

`Yes. Your young man, Brian Smith. He asks you to forgive him but he will not be able to call on you next Sunday. He is catching a train for St Louis at once in order to return to Cincinnati, where he will be enlisting in the Ohio State Militia. He asks to be permitted to call on you again as soon as the war is over. Acting for you, I agreed to that.'

`Oh.' I felt an aching tight place under my wishbone and I had trouble breathing. 'Thank you, Father. Uh... could you show me how to call him, call Rolla I suppose I mean, and speak to Mr Smith myself?'

Mother interrupted. 'Maureen!'

I turned to face her. 'Mother, I am not being forward, or unladylike. This is a very special circumstance. Mr Smith is going off to fight for us. I simply wish to tell him that I will pray for him every night while he is gone.'

Mother looked at me, then said gently, `Yes, Maureen. If you are able to speak to him, please tell him that I shall pray for him, too. Every night'

Father cleared his throat, loudly. 'Ladies -'

'Yes, Doctor?' Mother answered.

'The matter is academic. Mr Smith told me that he could talk only a few moments because there was a long line of students waiting to use the telephone. Similar messages, I assume. So there is no use in trying to reach him; the telephone wire will be in use... and he will be gone. Which in no way keeps you two ladies from praying for his safety. Maureen, you can tell him so in a letter.'

'But I don't know how to write to him!'

`Use your head, daughter. You know at least three ways.'

`Doctor Johnson, please.' Mother then said gently, to me, `Judge Sperling will know.'

'Judge Sperling. Oh!'

`Yes, dear. Judge Sperling always knows where each of us is.'

A few minutes later we all kissed Tom goodbye, and Father also, while we were about it, although he was coming back... and, so he assured us, it was extremely likely that Tom would be back - sworn in, then told what day to return for duty, as it was most unlikely that the state militia could accept a thousand or more new bodies all on the same day.

They drove off. Beth was crying quietly. Lucille was not - I don't think she understood any of it - but was solemn and round-eyed. Mother did not cry and neither did I... not then. But Mother went upstairs and closed her door... and so did I. I now had a room to myself, ever since Agnes married, so I threw the latch and lay down and let myself cry.

I tried to tell myself that I was crying over my brother, Thomas. But I knew better; it was Mr Smith who was causing that ache in my heart.

I wished, with all my soul, that I had not caused him to use a French purse in making love to me a week earlier. I had been tempted - I knew, I was certain, that it would be ever so much nicer just to forget that rubber sheath and be bare to him, inside and out.

But I had told Father solemnly that I would always use a sheath... until the day when, after sober discussion with the man concerned, I omitted it for the purpose of becoming pregnant... under a mutual firm intention of marrying if we succeeded.

And now he was going off to war... and I might never see, him again.

I dried my eyes and got up and took down a little volume: of verse, Professor Palgrave's 'Golden Treasury'. Mother had given it to me on my twelfth birthday, and it had been given to her on her twelfth birthday, in 1866.

Professor Palgrave had found two hundred and eighty-eight lyrics which were fine enough, in his exquisite taste, for his treasury. That day I wanted just one: Richard Lovelace's To Lucasta, On Going To The Wars':

- I could not love thee, Dear, so much,
Loved I not Honour more.

Then I cried some more, and after a while I slept. When I woke up, I got up and did not let myself cry again. Instead I slipped a note under Mother's door, telling her that I would get supper for all of us by myself... and she could have supper in bed if it pleased her to do so.

She let me cook supper but she came down and presided and, for the first time, Frank seated Mother and sat opposite her. She looked at me. 'Maureen, will you return thanks?'

`Yes, Mother. Dear Lord, we thank nee for that which we are about to partake. Please bless this food to our use and bless all our brothers and sisters in Jesus everywhere, both known to us and unknown.' I gulped and added, `And on this day we ask a special blessing for our beloved brother, Thomas Jefferson, and for all other young men who have gone to serve our beloved country.' (Et je prie que le bon Dieu garde bien mon ami!) 'In Jesus Name. Amen.'

`Amen,' Mother said firmly. 'Franklin, will you carve?'

Father and Tom returned the next day, late in the afternoon.

Beth and Lucille threw themselves on Tom and Father, and I wanted to, but could not, as I was carrying George and he had picked that moment to wet a nappy. But I just held him and let him wait, so that I wouldn't miss any news - a spare nappy under him; I knew George. That baby peed more than all the rest put together.

Beth demanded, 'Did you do it, Tommy, did you do it, did you do it, did you?'

'Of course he did,' Father answered. 'He's Private Johnson now; next week he'll be a general.'

`He will?'

`Well, maybe not that fast' Father stopped to kiss Lucile and Beth. `But they do promote them fast in wartime. Take me, for example. I'm a captain:

'Doctor Johnson!'

Father straightened up. 'Captain Johnson, Madam. Both of us enlisted. I am now Acting Surgeon, Medical Detachment, Second Missouri Regiment, with assigned rank of captain.'

At this point I ought to say something about the families of my parents, especially Father's brothers and sisters, as what happened that week in April 1898 in Thebes had its roots a century earlier.

Father's grandparents were:

George Edward Johnson (1795-1897) and Amanda Lou Fredericks johnson (1798-1899);
Terence McFee (1796-1900) and Rose Wilhelmina Brandt McFee (1798-1899).
Both George Johnson and Terence McFee served in the War of 1812.

Father's parents were:

Asa Edward Johnson (1813-1918) and Rose Altheda McFee Johnson (1814-1918).
Asa johnson served in the War with Mexico, a sergeant in the Illinois Militia.

Mother's grandparents were:

Robert Pfeiffer (1809-1909) and Heidi Schmidt Pfeiffer (1810-1913);
Ole Larsen (1805-1809) and Anna Kristina H Larsen (1810-1912);

and her parents were:

Richard Pfeiffer (1830-1932) and Kristina Larsen Pfeifer (1834-1940)

Father was born on his grandfather Johnson's farm in Minnesota, in Freeborn County, near Albert, on Monday August 1852, the youngest of four boys and three girls. His grandfather George Edward Johnson (my great-grandfather) was born in 1795, in Bucks County, Pennsylvania. He died in a nursing home in Minneapolis in December 1897, and newspapers made a to-do over the fact that George Washington was still alive when he was born. (We had nothing to with this publicity. While I was not aware of the policy until I was married, even at that time Howard Foundation family avoided public mention of ages.)

George Edward Johnson married Amanda Lou Fredericks (1798-1899) in 1813 and took her to Illinois, where she had her first child, Asa Edward Johnson, my grandfather, that same year. It seems likely that Grampaw Acey was the sort of `premature' baby as my eldest brother, Edward. After the war with Mexico the Johnson family migrated west homesteaded in Minnesota.

There was no Howard Foundation in those days, but all my ancestors appeared to have started breeding young, had lots of children, were healthy despite the uncontrolled diseases of those times, and lived long lives, mostly to hundred and more.

Asa Edward johnson (1813-1918) married Rose Alth McFee (1814-1918) in 1831. They had seven children:

1. Samantha Jane Johnson 1831-1915 (died injuries suffered while breaking a horse.)

2. James Ewing Johnson 1833-1884 (killed attempting to ford the Osage during spring flood. I bare remember him. He married Aunt Carole Pelletier of New Orleans.)

3. Walter Raleigh Johnson 1838-1862 (killed at Shiloh.)

4. Alice Irene Johnson 1840-? (I don't know what became of Aunt Alice. She married back east.)

5. Edward McFee Johnson 1844-1884 (killed in a train wreck.)

6. Aurora Johnson 1850-? (last heard of in California circa 1930. Married several times.)

7 Ira Johnson 2 August 1852-1941 (reported missing in the Battle of Britain.)

When Fort Sumter fell in April 1861, Mr Lincoln asked for volunteers from the militias of the several states (just as Mr McKinley would do in a later April). On the Johnson farm in Freeborn County, Minnesota, the call was answered by Ewing (28), Walter (23), Edward (17)- and Grampaw Acey, at that time forty-eight years old, thus producing a situation that utterly humiliated Ira Johnson, nine years old and a grown man in his own estimation. He was going to be left home to do chores, while all the other men went to war. His sister Samantha (whose, husband had volunteered) and his mother would run the farm.

Small comfort to him that his father returned home almost at once, turned down for something, I do not know what.

Father endured this humiliation for three long years... and at twelve ran away from home to enlist as a drummer boy.

He found his way down the Mississippi on a barge, managed to locate the encampment of the 2nd Minnesota before it joined Sherman's drive to the sea. His cousin Jules vouched for him and he was tentatively accepted (subject to training; he knew nothing of drums, or of bugles) and was assigned quarters and rations with headquarters company.

Then his father showed up and fetched him home.

So Father's service in the War was about three weeks and he was never in combat. He was not credited even with those three weeks... as he learned to his dismay when he attempted to join the Union veterans organisation, the Grand Army of the Republic.

There was no record of his service, as the regimental adjutant had `discharged' him and let Grampaw Acey take him home simply by destroying the paper work.

I think it is necessary to assume that Father was marked life.

During the nine days that Father and Tom waited at home before they could be inducted into army life I saw no indication that Mother disapproved (other than her first expression of surprise). But she never smiled. One could the tension between our parents... but they did not let it be seen.

Father did say something to me that, I think, had bearing on this tension. We were in his clinic and I was helping him to thin out and update his patients records so that he could turn them over to Dr Chadwick for duration of the war. He said to me, `Why no smiles, Turkey Egg? Worried about your young man?'

'No,' I lied. 'He had to go; I know that. But I wish you weren't going. Selfish, I guess. But I'll miss you, cher papa.'

`I'll miss you, too. All of you.' He was silent for several minutes, then he added, 'Maureen, someday you may faced - will be faced, I think - with the same thing: your husband going off to war. Some people say - I've heard talke that married men should not go. Because of their families.

`But this involves a contradiction, a fatal one. The family man dare not hang back and expect the bachelor to do fighting for him. It is manifestly unfair for me to expect a bachelor to die for my children if I am unwilling to die for them myself. Enough of that attitude on the part of married men and the bachelor will refuse to fight if the married man stays safe at home... and the Republic is doomed. The barbarian will walk in unopposed.'

Father looked at me - looked worried. 'Do you see?' I think he was honestly seeking my opinion, my approval.

`I - 'I stopped and sighed. 'Father, I think I see. But at times like these I am forced to realise that I am not very experienced. I just want this war to be over so that you can come home and Tom will come home... and -'

'And Brian Smith? I agree.'

'Well, yes. But I was thinking of Chuck, too. Chuck Perkins.'

`Chuck is going? Good lad!'

'Yes, he told me today. His father has agreed and is going to Joplin with him tomorrow.' I sniffed back a tear. 'I don't love Chuck but I do feel sort of sentimental about him.'

`That's understandable.'

Later that day I let Chuck take me up on Marston Hill and defied chiggers and Mrs Grundy and told Chuck I was proud of him and demonstrated it the very best I knew how. (I did use a sheath; I had promised Father.) And an amazing thing happened. I had gone up there simply intending to run through some female calesthenics to demonstrate to Chuck that I was proud of him and appreciated his willingness to fight for us. And the miracle happened. Fireworks, big ones! I got all blurry and my eyes squinched shut and I found I was making loud noises.

And about half an hour later the miracle happened again. Amazing!

Chuck and his father caught the eight-oh-six out of Butler the next morning and were back that same afternoon - Chuck sworn in and assigned to the same company (C company, 2nd regiment) Tom was in, and with similar delay time. So Chuck and I went to another (fairly) safe spot, and I told him goodbye again, and again the miracle overtook me.

No, I did not decide I was in love with him, after all. Enough men had had me by then that I was not inclined to mistake a hearty orgasm for eternal love. But it was nice that they happened since I intended to tell Chuck goodbye as often and as emphatically as possible, come what may. And did, right up to the day, a week later, when it really was goodbye.

Chuck never came back. No, he was not killed in action; he never got out of Chickamauga Park, Georgia. It was the fever, whether malaria or yellow jack, I'm not sure. Or it could have been typhoid. Five times as many died of the fevers as were lost in combat. They are heroes, too. Well, aren't they? They volunteered; they were willing to fight... and they wouldn't have caught the fever if they had hung back, refused to answer the call.

I've got to drag out that soap box again. All during the twentieth century I've run into people who have either never heard of the War of 1898, or they belittle it. 'Oh, you mean that one. That wasn't a real war, just a skirmish. What happened? Did he stub his toe, running back down San Juan hill?'

(I should have killed them! I did throw an extra dry martini into the eyes of one man who talked that way.)

Casualties are just as heavy in one war as in another... because death comes just once to the customer.

And besides... In the summer of 1898 we did not know that the war would be over quickly. The United States was not a superpower; the United States was not a world power of any sort... whereas Spain was still a great empire. For all we knew our men might be gone for years... or not come back. The bloody tragedy of 1861-65 was all we had to go by, and that had started just like this one, with the President calling for a few militiamen. My elders tell me that no one dreamed that the rebel states, half as big and less than half as populous and totally lacking in the heavy industry on which modern war rests - no sensible person dreamed that they could hold out for four long, dreary, death-laden years.

With that behind us, we did not assume that beating Spain would be easy or quick; we just prayed that our men would come back... some day.

The day came, 5 May, when our men left... on a special troop train, down from Kansas City, a swing over to Springfield, then up to St Louis, and east - destination Georgia. All of us went over to Butler, Mother and Father in the lead, in his buggy, drawn by Loafer, while the rest of us followed in the surrey, ordinarily used only on Sundays, with Tom driving Daisy and Beau. The train pulled in, and we made hurried goodbyes as they were already shouting 'All abo . . . ard!' Father turned Loafer over to Frank, and I inherited the surrey with the gentle team.

They didn't actually pull out all that quickly; baggage and freight had to be loaded as well as soldiers. There was a flat car in the middle of the train, with a brass band on it, supplied by the 3rd regiment (Kansas City) and it played all the time the train was stopped, a military medley.

They played 'Mine eyes have seen the glory...' and segued right into 'I wish I was in de land of cotton' and from that into 'Tenting tonight, tenting tonight' and '- stuck a feather in his cap and called it macaroni!' Then they played 'In my prison cel I sit' and the engine gave a toot and the train started to move, and the band scrambled to get off the flat car into the coach next to it, and the man with the tuba had to be helped.

And we started home and I was still hearing 'Tramp, tramp, tramp, the boys are marching' and that tragic first line, In my prison cell I sit...' Somebody told me later that the man who wrote that knew nothing about it, because wartime prison camps don't have anything as luxurious as cells. He cited Andersonville.

As may be, it was enough to make my eyes blur up and I couldn't see. But that didn't matter; Beau Brummel and Daisy needed no help from me. Just leave the reins slack and they would take us home. And they did.

I helped Frank unharness both rigs, then went in and upstairs. Mother came to my room just as I closed the door, and tapped on it. I opened it.

'Yes, Mother?'

'Maureen, your Golden Treasury - May I borrow it?'

'Certainly. 'I went and got it; it was under my pillow. I handed it to her. 'It's number eighty-three, Mother, on page sixty.'

She looked surprised, then thumbed the pages. 'So it is,' she agreed, then looked up. 'We must be brave, dear.'

'Yes, Mother. We must.'

Speaking of prison cells, Pixel has just arrived in mine, with a present for me. A mouse. A dead mouse. Still warm. He is so pleased with himself and clearly he expects me to eat it. He is waiting for me to eat it.

How am I going to get out of this?

Chapter 6 - 'When Johnny Comes Marching Home...'

The rest of 1898 was one long bad dream. Our men had gone to war but it was difficult to find out what was happening. I remember a time, sixty-odd years later, when the malevolent eye of television turned war into a spectator sport, even to the extent (I hope that this is not true!) that attacks were timed so that the action could be shown live on the evening news. Can you imagine a more ironically horrible way to die than to have one's death timed to allow an anchor man to comment on it just before turning the screen over to the beer ads?

In 1898 the fighting was not brought live into our livingrooms; we had trouble finding out what had happened even long after the fact. Was our Navy guarding the east coast (as eastern politicians were demanding), or was it somewhere in the Caribbean? Had the Oregon rounded the Horn and would it reach the Fleet in time? Why was there a second battle at Manila? Hadn't we won the battle of Manila Bay weeks ago?

In 1898 I knew so little about military matters that I did not realise that civilians should not know the location of a fleet or the planned movements of an army. I did not know that anything known to an outsider will be known by enemy agents just minutes later. I had never heard of the public's 'right to know', a right that cannot be found in the Constitution but was sacrosanct in the second half of the twentieth century. This so-called 'right' meant that tr was satisfactory (regrettable perhaps but necessary) for soldiers and sailors and airmen to die in order to preserve unblemished that sacred `right to know'.

I had still to learn that neither Congressmen nor newsmen could be trusted with the lives of our men.

Let me try to be fair. Let us assume that over ninety per cent of Congressmen and newsmen are honest and honourable men. In that case, less than ten per cent need be

murderous fools indifferent to the deaths of heroes for that minority to destroy lives, lose battles, turn the course of a war.

I did not have these grim thoughts in 1898; it would take the War of 1898 and two world wars and two undeclared wars ('police actions' for God's sake!) to make me realise that neither our government nor our press could be trusted with human lives.

`A democracy works well only when the common man is an aristocrat. But God must hate the common man; He has made him so dadblamed common! Does your common man understand chivalry? Noblesse oblige? Aristocratic rules of conduct? Personal responsibility for the welfare of the State? One may as well search for fur on a frog.' Is that something I heard my father say? No. Well, not exactly. It is something I recall from about two o'clock in the morning in the Oyster Bar of the Renton House in Kansas City after Mr Clemens' lecture in January 1898. Maybe my father said part of it; perhaps Mr Clemens said all of it, or perhaps they shared it - my memory is not perfect after so many years.

Mr Clemens and my father were indulging in raw oysters, philosophy, and brandy. I had a small glass of port. Both port and raw oysters were new to me; I disliked both... not helped by the odour of Mr Clemens' cigar.

(I had assured Mr Clemens that I enjoyed the aroma of a good cigar; please do smoke. A mistake.)

But I would have endured more than cigar smoke and raw oysters to be present that night. On the platform Mr Clemens had looked just like his pictures: a jovial Satan with a halo of white hair, in a beautifully tailored white suit. In person he was a foot shorter, warmly charming, and he made an even more fervent admirer of me by treating me as a grown lady.

I was up hours past my bedtime and had to keep pinching myself not to fall asleep. What I remember best was Mr Clemens' discourse on the subject of cats and redheads .. . composed on the spot for my benefit, I think - it does not appear anywhere in his published works, not even those released by the University of California fifty years after his death.

Did you know that Mr Clemens was a redhead? But that must wait.

News of the signing of the peace protocol reached Thebes on 12 August, a Friday. Mr Barnaby, our principal, called us all into the lecture hall and told us, then dismissed school. I ran home, found that Mother already knew. We cried on each other a little while Beth and Lucille were noisy around us, then Mother and I started in on a complete, unseasonal spring cleaning so that we would be ready when Father and Tom (and Mr Smith? - I did not voice it) got Nome sometime next week. Frank was told to cut the grass and to do anything else that needed doing outdoors - don't ask; just do it.

Church on Sunday was a happy Praise-the-Lord occasion, with Reverend Timberly being even more long-windedly stupid than usual but nobody minded, least of all me.

After church Mother said, 'Maureen, are you going to school tomorrow?'

I had not thought about it. The Thebes school board bad decided to offer summer high school (in addition to the usual make-up session for grammar school dullards) as a patriotic act to permit older boys to graduate early and enlist. I had signed up for summer school both to add to my education (since I had given up the idea of college) and to fill that aching emptiness caused by Father and Tom (and Mr Smith) being away at war.

(I have spent the longest years of my life waiting for men to come back from war. And for some who did not come back.)

`Mother, I had not thought about it. Do you really think there will be school as usual tomorrow?'

'There will be. Have you studied?'

(She knew I hadn't. You can't do much with Greek irregular verbs when you are down on your knees, scrubbing the kitchen floor.) 'No, Ma'am.'

'Well? What would your father expect of you?'

I sighed. `Yes, Ma'am'

'Don't feel sorry for yourself. Summer school was your idea. You should not waste that extra tuition. Now git! I will get supper by myself tonight.'

They did not come home that week.

They did not come home the following week.

They did not come home that fall.

They did not come home that year.

(Chuck's body came home. The GAR provided a firing squad and I attended my first military funeral and cried and cried. A bugler with white hair played for Charles: `- sleep in peace, soldier brave, God is nigh.' If I ever come close to believing, it is when I hear 'Taps'. Even today.)

After that summer session in 1898, when September carne it was necessary to make a choice; go to school or not, and if so, where? I did not want to remain home, doing little but play nursemaid to George. Since I could not go to Columbia, I wanted to go to Butler Academy, a two-gear private school that offered a liberal arts course acceptable at

Columbia or at Lawrence in lieu of lower division. I pointed out to Mother that I had saved Christmas and birthday presents and `egg money' ('egg money' was any earned money - taking care of neighbours' children, minding a stand at the county fair, and so forth - not much and quite seldom) - I had saved enough for my tuition and books.

Mother said, 'How will you get back and forth?'

I answered, 'How does Tom get back and forth?'

`Don't answer a question with a question, young lady. We both know how your brother did it: by buggy in good weather, on horseback in bad weather... and he stayed home in the very worst weather. But your brother is a grown man. Tell me how you will do it.'

I thought about it. A buggy was no problem; the Academy had a barn for horses awaiting their masters. Horseback? I could ride almost as well as my brothers... but girls do not arrive at school wearing overalls, and lide-saddle was not a good idea for weather not suited to a buggy. But even good weather and a buggy... From late in October to early in March I would have to leave home before daylight and return home after dark.

In October 1889 Sarah Trowbridge had left her father's farm to go four miles by buggy to Rich Hill. Her horse and buggy came home. Sarah was never seen again.

Ours was a quiet countryside. But the most dangerous animal in all history walks on two legs... and sometimes slinks along country roads.

`I am not afraid, Mother.'

'Tell me what your father would advise you to do.'

So I gave up, and prepared to go back to high school for another semester, or more. School was less than a mile away and there were people we knew within shouting distance the whole way. Best of all, our high school had courses I had not had time to take. I continued Greek and another year of Latin and started differential equations and first-year German and audited geology and medieval history instead of study hall those two hours. And of course I still continued piano lessons on Saturday mornings - Mother had taught me for three years, then she had decided that I could profit from more advanced training than she could give me. It was an 'in kind' deal; Miss Primrose owed Father both for herself and for her ailing and ancient mother.

So that kept me out of mischief the school year starting September 1898 while still leaving me plenty of time to write a newsy unsentimental letter to Mr Smith (Sergeant Smith!) each week, and another to Tom, and another to Father, and another to Chuck... until one carne back to me the week before Chuck came back to us, forever.

I didn't see boys or young men any to speak of. The good ones had gone to war; those who remained behind struck me, mostly, as having drool on their chins. Or too

impossibly young for me. I was not consciously being faithful to Mr Smith. He had not asked me to, and I would not expect him to be faithful to me. We had had one - just ore - highly successful first meeting. But that did not constitute a betrothal.

Nor was I faithful. But it was just my young cousin Nelson, who hardly counts. Nelson and I had ore thing in common: we were both as horny as a herd of goats, all the time. And another thing - we were both as cautious as a vixen with kits in coping with Mrs Grundy.

I let him pick the times and places; he had a head for intrigue. Between us, we kept each other toned down to a pleasant simmer without waking Mrs Grundy. I could happily have married Nelson, despite his being younger than I, had we not been so closely related. A dear boy. (Except for that lemon pie!)

They were not home for Christmas. But two more bodies came home. I attended each funeral, for Chuck's sake.

In January my brother Tom came marching home with his regiment. Mother and Frank went to Kansas City to see the troop train arrive and the parade down Walnut, and the countermarch back to the depot where most of them got back aboard to go on terminal furlough at their home towns. I stayed home to take care of my sisters and George, and thought privately that it was pretty noble of me.

Tom had a hand-carried letter for Mother:

Mrs Ira Johnson
Courtesy of Lance-Corporal T. J. Johnson,
C Company, 2nd Missouri Regiment.

Dear Madam,

I had hoped and expected to return home in the same train as our son Thomas. Indeed, by the terms of enrolment under which I accepted appointment as surgeon in our state militia on federal duty, I cannot be held more than ore hundred and twenty days beyond the proclamation of peace, id est, the 12th of December last, or the 6thof January, this current month - the difference in dates being a legal technicality now moot.

I regret that I must inform you that the Surgeon General of the Army has asked me and my professional colleagues to continue on duty here on a day to day basis until our services can be spared, and that I have accepted.

We had thought that we bad these devastating fevers under control under control and that we could dismantle the field hospitals here and send our remaining patients to Fort Bragg. But, with the arrival three weeks ago of casuals and casualties from Tampa, our hopes were dashed.

In short, Madam, my patients need me. I will come home as quickly as the Surgeon General decides that I can be spared... under the spirit of the Oath of Hippocrates rather than through any quibble over the letter of the contract.

I trust that you will understand, as you have so many times in the past.

I remain, faithfully yours,
Your loving husband,
Ira Johnson, M.D.,
Captain (M.C.) AUS

Mother did not cry where anyone could see her... and I didn't cry where anyone could see me.

Late in February I received a letter from Mr Smith... postmarked Cincinnati!

Dear Miss Maureen,

By the time this reaches you I will have laid aside my Army blues and resumed wearing mufti; our engineering battalion, Ohio militia, is rolling west as I write this.

It is my dearest wish to see you and to resume my suit for your hand in matrimony. With that prime purpose in mind, after a few days at home with my family, I purpose going at once to Rolla with the intention of reenrolling. Although I was granted my degree in April last year about six weeks early, that sheepskin does not supply me with academic work that I missed. So I intend to make up what I lost, plus a bit more for good measure - which puts me close to Thebes for each weekend (which is what the wily fellow had in mind all along!).

May I hope to see you on Saturday afternoon March 4th, and again on Sunday, March 5th? A postal card should reach me at School of Mines - but if I do not hear from you, I shall assume that your answer is Yes.

This train is moving too slowly to suit me!

My respects to your parents and my greetings to all your family.

While looking forward eagerly to the 4th,
I remain faithfully yours, Brian Smith, B.S.,
Sergeant, Eng. Battalion,
Ohio Militia (Federal Duty)

I reread it, then took a deep breath and held it, to slow my heart. Then I found Mother and asked her to read it. She did so, and smiled. 'I'm happy for you, dear.'

'I don't have to tell him to wait until Father gets home?'

'Your father has already expressed his approval of Mr Smith... in which I concur. He is welcome.' Mother looked thoughtful. 'Will you ask him to consider fetching with him his uniform?'

'Really?'

'Truly. So that he can wear it in church on Sunday. Would you like that?'

Would I! I told her so. 'Like Tom did, his first Sunday home. Goody!'

'We will be proud of him. I intend to ask your father to wear his uniform his first Sunday home, too.' She looked thoughtful. 'Maureen, there is no reason why Mr Smith should have to put up with Mrs Henderson's boarding house, or drive clear back to Butler to the Mansion House. Frank can sleep in the other bed in Tom's room and Mr Smith can have Edward's old room.'

'Oh, that would be nice!'

'Yes, dear. But - Look at me, Maureen.' She held my eyes. 'Don't let his presence under this roof cause either of you to permit any of the children - including Thomas, I must add to see, or even to suspect, any impropriety.'

I blushed clear to my collarbones. 'I promise, chère mama.'

'No need for promises; just be discreet. We are women together, dear daughter; I want to help you.'

March came in like a lamb, which just suited me, as I did not want to spend a long afternoon being primly proper in our parlour. The weather was warm and sunny, with no breeze to speak of. So on Saturday the fourth I was the perfect shy young maiden, with parasol and leg o' mutton sleeves and a silly number of petticoats... until Daisy had us a hundred yards from the house and out of earshot of anyone. 'Briney!'

'Yes, Miss Maureen?'

'"Miss Maureen," my foot. Briney, you've had me in the past; you can stop being formal, now that we are alone. Do you have an erection?'

'Now that you mention it - Yes!'

'If you had said No, I would have burst into tears. Look, darling, I've found the loveliest place -'

(Nelson had found it.) There seemed to be evidence that no one else knew of it. Daisy had to be led through two tight spots, then she could be unharnessed and allowed to graze

- while we two turned the buggy around. Impossible for the mare to do ir; not enough room for her to back and fill.

I spread the blanket down on a grassy spot separated from the bank by a thick bush... and undressed while Brian watched me - right to my skin, right to stockings and shoes.

That spot was certainly private but anyone within a quarter mile must have heard me. I fainted on that first one, then opened my eyes to find my Briney boy worried. 'Are you all right?' he asked.

'I've never been more all right in my life! Thank you, sir You were splendid! Terrific. I've died and gone to heaven.'

He smiled at me. 'You aren't dead! You're here and you're wonderful and I love you.'

'Do you, truly? Brian, are you honestly intending to marry me?'

'I am.'

'Even with me disqualified for the Howard Foundation?'

'Redhead, the Foundation introduced us... but it had nothing to do with me coming back. I would happily indenture myself for seven years, like what's-his-name in the Bible, for the privilege of marrying you.'

'I hope you mean that. Do you want to hear how I'm disqualified?'

'No.'

'So? I'm going to tell you anyhow, because I need your help.'

'At your service, Ma'mselle!'

I'm disqualified because I'm not pregnant. If you will raise up just a little, I will take that rubber mockery off you. Then, sir, if you please, as soon as you are rested enough, I ask you to qualify me. Briney, let's start our first baby!'

He surprised me... by being ready again almost at once. Even Nelson could not manage it that quickly. My Brian was a remarkable man.

Bareness to bareness was just as perfect as I always knew it would be. This time I was even louder. I have since learned to have an orgasm silently... but I would much rather sound off, if conditions permit. Most men like applause. Especially Briney.

At last I sighed. 'That did it. Thank you, sir. I am now an expectant mother. I felt it hit the target. Spung!'

'Maureen, you're wonderful.'

'I'm dead. I died happy. Are you hungry? I made some tiny cream puffs for our lunch and filled them just before you arrived.'

'I want you for lunch:

'Blarney. We must keep up your strength. You won't be deprived.' I told him about the arrangements we would have that night - and other nights. 'Of course Mother knows all about it; she was a Howard bride herself. She just asks that we keep a good face on things. Briney, are your parentes redheaded?'

'Mother is. Dad's hair is as dark as mine. Why?'

'I told him about Mr Clemens' theory. 'He says that while the rest of the human race are descended from monkeys redheads derive from cats.'

'Seems logical. By the way, I forgot to tell you. If you marry me, my cat is part of the package.'

'Shouldn't you have mentioned that before you knocked me up?'

'Perhaps I should have. You object to cats?

'I don't even speak to people who object to cats. Briney, I'm cold. Lee's go home.' The sun had gone behind a cloud and the temperature suddenly dropped - typical March weather for Missouri.

While I dressed, Briney got Daisy backed into the shafts and hitched up. Brian has that gentle but firm touch that horses (and women) understand; Daisy obeyed him as readily as she obeyed me, although she was usually terribly shy with strangers.

By the time we were home my teeth were chattering. But Frank had the baseburner in the parlour fired up; we had my picnic lunch next to it. I invited Frank to share. He had had lunch, but he found room for cream puffs.

My period was due on 18 March; I missed it. I told Briney but no one else. 'Father says that to miss just one is nothing. We should wait.'

`We'll wait'

Father got home on the first of April, and the house was in a happy uproar for days. My next period should have been 15 April - I didn't even spot. Briney agreed that it was time I told my father, so I did, that same Saturday afternoon.

Father looked at me solemnly. 'How do you feel about it, Maureen?'

Tm utterly happy about it, sir. I did it on purpose - we did it on purpose. Now I would like to marry Mr Smith as soon as possible.'

`Reasonable. Well; let's call in your young man. I want to speak to him privately.'

`I can't be present?'

'You may not be present.'

I was called back in, then Father stepped out. I said, `I don't see any blood on you, Briney.'

`He didn't even get out his shot-gun. He just explained your trifling ways to me:

'What trifling ways?'

`Now, now. Simmer down.'

Father came back in with Mother. He said to us, 'I have explained to Mrs Johnson about the skipped periods.' He turned to Mother. 'When do you think they should get married?'

'Mr Smith, when is your last class at Rolla?'

'I have my last examination on Friday, 19 May, Ma'am. Commencement isn't until: June, but that doesn't affect me.'

'I see. Would Saturday, 20 May, suit you two? And, Mr Smith, do you think your parents will be able to come here for the wedding?'

At 7.I3 p.m. on 20 May my husband and I were rolling north from Butler on the Kansas City Southern Express... `express' meaning that it stopped for cows, milk cans, and frogs, but not for fireflies.

I said, `Briney, my feet hurt.'

'Take your shoes off.'

'In public?'

`You no longer have to pay attention to any opinion but mine... and durned little to mine.'

`Thank you, sir. But I don't dare take them off; my feet would swell and I would never get them back on. Briney, the next time we get married, Iet's elope!

'Suits. We should have this time. What a day!'

I chose to have a noon wedding. I was overruled by my mother, my prospective mother-in-law, the minister, the minister's wife, the organist, the church janitor, and anyone else who cared to speak up. I had thought that the bride was supposed to get her own way about her wedding (if what she wanted was not too dear for her father's purse), but apparently I had been reading too many romantic stories. I wanted a noon wedding so that we could reach Kansas City before dark. When I found myself frustrated on every side, I spoke to Father about it.

He shook his head. I'm sorry, Maureen, but it is written right here in the Constitution that the father of the bride has no rights whatsoever in a wedding. He gets to pay the bills and he must give the bride away. Otherwise they don't let him out of his cage. Did you tell your mother why you wanted to catch the earlier train?'

`Yes, sir.'

'What did she say?'

`She said that all the planning had been done on the assumption that the Smiths would arrive on the ten-forty-two, soon enough for a four o'clock wedding but not for a noon wedding. I said, "But, Mother, they are already here." And she said that it was too late to change everything. And I said, "Who says so? And why wasn't I consulted?" And she said, "Keep quiet and stop wiggling. I've got to pin this over again." Father, this is dreadful. I'm being treated like a prize cow about to be shown at the fair. And I'm listened to just as much as that cow.'

'Maureen, it probably is too late to change anything now. Stipulated, your wishes should have been followed. But now it is less than forty-eight hours till your wedding and when Adele takes the bit in her teeth, she doesn't listen. I wish I could help you. But she won't listen to me, either.' Father looked as unhappy as I felt. 'Grit your teeth and wait it out. Once Brother Timberly says, "I pronounce you man and wife", you no longer have to pay any attention to anyone but Brian. And I see that you have a ring in his nose; you won't find that too difficult.'

'I don't think I have a ring in his nose.'

The Reverend Timberly had been told that the Methodist Episcopal service was to be followed exactly, none of these modern innovations. He had been told also that it would be a single-ring ceremony. The muttonhead didn't listen on either point. He stuck in all sorts of stuff (from his lodge rituals, I think; he was a past Grand Chancellor of the Knights and Lords of the High Mountain), stuff that had not been in the rehearsal, questions and responses I didn't recognise. And he preached, telling each of us things we didn't need to hear, matters not in the wedding service.

This went on and on, while my feet hurt (don't buy shoes by mail order!) and my corset was stifling me. (I had never worn one before. But Mother insisted.) I was about to tell Brother Timberwolf to stick to the book, stop improvising (it was getting closer and closer to train time), when he reached the point where he wanted two rings and there was of course but one.

He wanted to back up and start over.

Brian spoke up (and a groom isn't supposed to say anything but 'I will' and 'I do') and said in a whisper that could not be heard more than a hundred yards, 'Reverend, stop stalling and stick to words in the book... or I won't pay you a red cent.'

Brother Timberly started to expostulate and looked at Briney - and stopped suddenly, and said, 'By AuthorityvestedinmebythesovereignstateofMissouri I pronounce you man and wife!' And thereby saved his own life. I think.

Brian kissed me and we turned and started down the aisle and I tripped on my train. Beth was carrying my train and was supposed to move it off to the left.

It wasn't her fault; I turned the wrong way.

'Briney, did you get any wedding cake?'

'Never had time.'

'Me, too. I suddenly realise that I haven't eaten anything since breakfast... and not much then. Let's find that dining car.'

'Suits. I'll enquire.' Briney got up, was gone a few moments. When he came back he leaned over me. 'I found it.'

'Good. Is it in front of us, or behind us?'

'Behind us. Quite a bit behind us. They left it off in Joplin.'

So our wedding supper was two stale ham sandwiches from the news butcher and a bottle of soda pop, split.

About eleven o'clock we finally reached the Lewis and Clark, where Briney had a reservation for us. The hack driver had apparently never heard of that hotel but was willing to search for it as long as his horse held out. He started away from the depot in the wrong direction. Briney spotted this and stopped him; the driver gave him an argument and some lip. Briney said, 'Back to the depot; we'll have another hack.' This ultimatum finally got us there.

I suppose that it was only to be expected that the night clerk had never heard of Briney's reservation. But Brian can't be pushed around and he won't be intimidated. He said, 'I made my reservation by mail three weeks ago with a postal money order deposit. I have my receipt right here along with a letter of confirmation signed by your manager. Now wake him up and put a stop to this nonsense.' Briney shoved the letter under the clerk's nose.

The clerk looked at it and said, 'Oh, that Mr Smith And the bridal suite. Why didn't you say so?'

'I did say so, ten minutes ago.'

'I am very sorry, sir. Front!'

Twenty minutes later I was in a wonderful tub of hot, soapy water, just like Chicago six years earlier. I almost fell asleep in the tub, then realised that I was keeping my bridegroom out of the bath, and pulled myself together. 'Briney! Shall I fill a tub for you?'

No answer. I dried off a bit, wrapped the towel around me, aware that I was a scandalous sight (and a provocative one, I hoped).

My gallant knight was fast asleep, still in his clothes, lying across the bedspread.

There was a silver bucket just inside the door - ice and a bottle of champagne.

I got out my nightgown (virginal white and perfumed; it had been Mother's bridal nightgown) and a pair of bunny slippers. 'Brian. Briney. Please wake up, dear. I want to help you undress, and open the bed, and get you into it.'

'Murrf.'

'Please, dear.'

'I wasn't asleep.'

'No, of course not. Let me help you off with your boots.'

'I c'n get 'em.' He sat up and reached for them.

'Ali right, dear. I must let the water out of the tub, then I'll run a bath for you.'

'Your water is still in the tub?'

'Yes.'

'Let it be; I'll use it. Mrs Smith, you couldn't get a tub of water dirty; you would just impart a delicious flavour?

Sure enough, my gallant knight did bathe in my bath water (still lukewarm). I climbed into bed... and was sound asleep when he came to bed. He did not wake me.

I woke up in darkness about two or three, frightened to find myself in a strange bed - then remembered. 'Briney?'

'You awake now?'

'Awake some.' I snuggled closer.

Then I sat up and got rid of that nightgown; I was getting bound up in it. And Briney took off his nightshirt, and for the first time both of us were bare all over and it was wonderful and I knew that all my life had just been preparation for this moment.

After an unmeasured time that had started out slowly, we both took fire together - after that, I was lying quietly under him, loving him.

'Thank you, Briney. You are wonderful.'

'Thank you. Love you.'

'Love you, my husband. Briney. Where's your cat? In Cincinnati? In Rolla?'

'Eh? No, no. In Kansas City.'

'Here? Boarded with someone?'

'I don't know:

'I don't understand.'

'You haven't picked it out yet, Mo. It's the kitten you're going to give me. Bride's present to the bridegroom.'

- 'Oh! Briney, you're a scamp!' I tickled him. He tickled me. It resulted, by stages, in Maureen being disgracefully noisy again. Then I got my back scratched. Having your back scratched is not the only reason to be married, but it is a good one, especially for those spots that are so hard to reach by yourself. Then I secratched his back. We finally went to sleep all tangled up in each other like a basket of kittens.

Maureen had at last found out what she was good for, her true destiny.

We had champagne for breakfast.

Chapter 7 - Ringing the Cash Register

From having read candid autobiographies written by liberated women in the twentieth century, especially those published after the second phase of the Final Wars, c. 195= et seq., I know that I am expected to tell in detail all aspects of my first pregnancy and of me birth of my first child - all about morning sickness and my cyclic moods and the tears and the loneliness... then the false labour, the unexpected breaking of the bag of waters, followed by eclampsia and emergency surgery and the secrets I spilled under anaesthesia.

I'm sorry but it wasn't that way at all. I've seen women with morning sickness and it's obviously horrible, but I never experienced it. My problem has always been to `stay on the curve', not gain more weight than my doctor thought was healthy for me. (There have been times when I would have killed for a chocolate éclair.)

With my first baby labour lasted forty minutes. If having babies in hospitals had been the expected thing in 1899, I would have had Nancy on the way to the hospital. As it was, Brian delivered Nancy, under my direction, and it was much harder on him than it was on me.

Dr Rumsey arrived and retied the cord and cut it, and told Brian he had done an excellent job (he had). Then Dr Rumsey took care of the delivery of the afterbirth, and Briney fainted, poor lamb. Women are more rugged than men; they have to be.

I've had longer labours than that one but never a terribly long one. I did not have an episiotomy with that first one (obviously!) and I did not need a repair afterwards. On later births I never allowed a knife to be used on me down there and so I have no soar tissue there, just undamaged muscle.

I'm a brood mare, built for it, wide in my thighs and with a birth canal made of living rubber elastic. Dr Rumsey told me that it was my attitude that made the difference but I know better; my ancestors gave me the genetic heritage that makes me a highly efficient female animal, for which I am grateful... as I have seen women who were not; they suffered terribly and some of them died. Yes, yes, `natural selection' and `survival of the fittest' and Darwin was right -stipulated. But it is no joke to attend the funeral of a dear friend, dead in her golden youth because her baby killed her. I was at such a funeral in the twenties and heard a sleek old priest talk about 'God's will'. At the graveside I managed to back away from the coffin such that I got him proper in his instep with a sharp heel. When he yelped, I told him it was God's will.

Once I had a baby in the middle of a bridge game. Pat it was, Patrick Henry Smith, so that makes it 1932 and that makes it contract we were playing, not auction, and that all fits together, as Justin and Eleanor Weatheral taught us contract after they learned it and we were playing at their house. Eleanor and Justin were parents of Jonathan Weatheral,

husband of my first-born, so the Weatherals were a Howard marriage themselves, but they were our friends long before we knew that about them. We did not learn it until the spring Jonathan showed up on Nancy's Howard Foundation list of young male eligibles.

In this bridge game I was Justin's parmer; Eleanor was Briney's partner. Justin had dealt; contract had been reached and we were about to play, when I said, `Put your hands face down and put paperweights on them; I'm having a baby!'

`Forget the hand!' said my husband.

`Of course,' agreed my partner.

`Hell, no!' I answered in my ladylike way, 'I bid the bloody thing; I'm damn well going to play it! Help me up from here!'

Two hours later we played the hand. Dr Rumsey, Jr., had come and gone; I was on Eleanor's bed with the table, legs collapsed and supported by pillows, across my lap, and my new son was in my partner's arms. El and Briney were on each side of me, half seated on the bed. I had bid a small slam in spades, doubled and redoubled, vulnerable.

I went down one trick.

Eleanor tilted her nose at me and pushed it up with the tip of her finger. 'Smarty, smarty, missed the party!' Then she looked very startled. 'Mo! Move over, dear! I'm about to have mine!'

So Briney delivered two babies that night and Junior doc had to come back just as soon as he reached home and grumbled at us that he did wish we would make up our minds; he was going to charge us mileage and overtime. Then he kissed us and left - by that time we had long known that the Rumseys were Howards, too, which made Junior Doc a member of the family.

I called Ethel, told her we were staying overnight, and why. Is everything all right, dear? Can you and Teddy manage? (Four younger ones at home. Five? No, four.)

'Certainly, Mama. But is it a boy or a girl? And how about Aunt Eleanor?'

'Both. I had a boy, Eleanor just had a girl. You youngsters can start working on names... for mine, at least.'

But the best joke was another matter entirely, something we didn't tell Junior Doc or the children: Briney put that little girl into my sweetheart Eleanor, and her husband Justin put Pat into me... all at a weekend in the Ozarks to celebrate Eleanor's fifty-fifth birthday. The birthday party got a bit relaxed and our husbands decided that, since all four of us were Howards, there was no sense in bothering with these pesky rubber sheaths... when we could be ringing the cash register.

(Cultural note: I mentioned that Eleanor got pregnant on her fifty-fifth birthday. But the age of the mother on the birth certificate junior Doc filled was forty-three, or close to that. And the age filed on mine was thirty-eight, not fifty. In 1920 all of us had received a warning from the Howard Foundation trustees, delivered by word of mouth, to trim years off our official ages at every opportunity. Later that century we were encouraged and helped to acquire new identities every thirty years or so. Eventually this became the full 'Masquerade' that saved the Howard Families during the Crazy Years and following. But I know of the Masquerade only from the Archives, as I was taken out of that turmoil - thank Heaven and Hilda! - in 1982.)

We rang the cash register five times, Brian and I, during the Mauve Decade - five babies in ten years, 1900-1910 Gregorian. I was the first to call it 'ringing the cash register' and my husband went along with my crass and vulgar jest. It was after I had recovered from unloading my first one (our darling Nancy) and had been cleared by Dr Rumsey to resume 'family duties' (so help me, that's what they called it then) if we so pleased.

I came home from that visit to Dr Rumsey, started dinner, then took another bath and used some scandalous perfume Briney had given me for Christmas, got into a lime-green négligé Aunt Carole had given me as a wedding present, checked dinner and turned down the gas - I had it all planned - and was ready when Briney got home.

He let himself in; I was posed. He looked me up and down, and said, 'Joe sent me. Is this the right address?'

'Depends on what you are looking for, sport,' I answered in a deep sultry voice. 'May I offer you the specialty of the house?' Then I broke my pose and dropped my act. 'Briney! Dr Rumsey says that it is all right!'

'You'll have to speak more plainly, little girl. What is all right?'

'Anything is all right. I'm all back together again.' I suddenly dropped the négligé. 'Come on, Briney! Let's ring the cash register!'

So we did, although it didn't work that time - I didn't catch again until early in 1901. But it was always delirious fun to try, and try we did, again and again. As Mammy Della once told me, 'Lawsy a mercy, chile, jes hunnuds an' hunnuds a times ain't nuffin happen a tall.'

How did Mammy Della get in here? Brian found her, that's how, when I started being too big to do a washing easily. Our first house, a tiny one on 26th Street, was only a short distance from darktown; Della lived within walking distance, and she would work all day for a dollar and car fare. That she didn't use the streetcar was irrelevant; that dime was part of the bargain. Della had been born a slave and could not read or write... but she was as fine a lady as I have ever known, with a heart full of love for all who would accept her love.

Her husband was a roustabout with Ringling Brothers; I never laid eyes on him. She continued to come to see me - or to see Nancy, `her' baby - after I no longer needed help, sometimes bringing along her latest grandchild... then she would drop her grandchild in with Nancy and insist on doing my work. Sometimes I could nail her down with a cup of tea. Not often. Later she went back to work for me with Carol. Then with each baby, up to 1911; when `the Lord took her in His arms'. If there is a heaven, Della is there.

Can it be that Heaven is as real as Kansas City to those who believe in Heaven? This would fit, it seems to me, the World-as-Myth cosmology. I must ask Jubal about this, when I get out of this jail and back to Boondock.

In gourmet restaurants in Boondock 'Potatoes a la Della' are highly esteemed, as are some others of her recipes. Della taught me a great deal. I don't think that I was able to teach her anything, as she was far more sophisticated and knowledgeable than I in the subjects we had in common.

These were my first five `cash register' babies:

Nancy Irene, 1 December 1899 or 5 January 1900
Carol (Santa Carolita, named for my Aunt Carole), 1 January 1902
Brian junior, 12 March 1905
George Edward, 14 February 1907
Marie Agnes, 5 April 1909

After Marie, I did not catch again until the spring of 1912. That one was my spoiled brat and favourite child, Woodrow Wilson... who was later my lover, Theodore Bronson... and much later, my husband, Lazarus Long. I don't know why I didn't catch sooner, but it was not from lack of trying; Briney and I tried to ring the cash register at every opportunity. We did not care whether it caught or not; we did it for fun... and if we missed, that simply postponed those several weeks when we would have to refrain before and after each birth. Oh, not refrain from everything; I became quite skilled with hands and mouth and so did Briney. But for solid day-in and day-out happy fun, we both preferred the old-fashioned sport, whether it was missionary style or eighteen other ways.

Perhaps I could account for all the times I failed to catch if I had a calendar of the Mauve Decade, with a record of my menstrual periods. The calendar would be no problem, but a record of my menses, while I did keep one at that time, is long gone and irretrievable - or nearly so; it would take a Time Corps operation to retrieve it. But here is my theory: Briney was often away on business; he was `ringing the cash register' his own way, as an analyst and planner for corporate mining ventures, one whose exceptional talents were increasingly in demand.

Neither of us had heard of the simple fourteen-day role for ovulation, or the thermometer check, much less the more subtle and more reliable techniques developed in the latter half of the twentieth century. Dr Rumsey was as good a family doctor as you could find at that

time and he was not constrained by the taboos of the time - he had been sent to us by the Howard Foundation - but Dr Rumsey knew no more about this than we did.

If it were possible to prepare a calendar showing my menses 1900-1912, then mark on it by the fourteen-day role my probable dates of ovulation, then mark the dates that Briney was away from Kansas City, it is long odds that such a chart would show that those little wigglers never had a target to shoot at on those occasions that I failed to catch. This seems certain, as Briney was a prize stallion and I was Myrtle the Fertile Turtle.

But I am glad that I did not know the roles of ovulation at that time, because there is nothing that beats the tingling excitement of laying back, legs open and eyes closed and bare to the possibility of impregnation. And I know that this is not just one of Maureen's many eccentricities; I have checked this with endless other women: the knowledge that it can happen adds to the zest.

I am not running down contraception; it's the greatest boon to women in all history, as efficient contraception frees women from that automatic enslavement to men that has been the norm through all histories. But the ancient structure of our female nervous systems is not tuned to contraception; it is tuned to getting pregnant.

So it was grand for Maureen that, once I ceased being a bawdy school girl, I almost never needed to use contraception.

One balmy March day in 1912 Briney nailed me to the ground on a bank of the Blue River, almost exactly duplicating an earlier occasion, 4 March 1899, on a bank of the Marais des Cygnes. We both delighted in making love outdoors, especially with a spice of danger. On the occasion of that 1912 prank I was wearing opera-length silk hose and green round garters, and my husband photographed me so, standing, naked in the sunlight, facing the camera and smiling - and that picture played a major part in my life six years later, and seventy years later, and over two thousand years later.

That picture, I am told, changed the entire history of the human race in several time tines.

Maybe so, maybe not. I'm not fully sold on World-as-Myth even though I am a Time Corps field agent, even though the smartest people I know tell me it's the real McCoy. Father always required me to think for myself, and Mr Clemens urged me to, also. I was taught that the one Unforgivable Sin, the offence against one's own integrity, was to accept anything at all simply on authority.

Nancy has two birthdays: the day I bore her, which was registered with the Foundation, and the date we handed out to the world, the day that matched more properly the date of my marriage to Brian Smith. That was easy to do at the end of the-nineteenth century, as in Missouri vital statistics were just beginning to be taken. Most records were still of the family-Bible sort. The County Clerk of Jackson County recorded births and deaths and marriages if offered to him, but nothing happened if such milestones were not reported.

Nancy's birth was reported correctly to the Foundation, a report signed by me and Brian, and certified by Dr Rumsey. Then a month later Dr Rumsey filed a birth certificate with the county clerk, with the false date.

Easy to do - Nancy was born at home; all my babies were born at home until the middle thirties. So there were no hospital records to confuse the issue. On 8 January I wrote the happy news (false date) to several people in Thebes and sent an announcement to the Lyle County Leader.

Why such a silly hooraw to fuzz the date of birth of a baby? Because the customs of those times were cruel, cruel, harshly cruel. Mrs Grundy would have counted on her fingers and whispered that we had to get married to give our sinful bastard a name she shouldn't bear. Yes. It was all part of the nastiness of the grim age of Bowdler, Comstock, and Grundy, the vultures that corrupted what could have been a civilisation.

Near the end of that century single women openly gave birth to babies whose fathers might or might not be around. But this was not the behaviour of a truly free culture; it was the other swing of the pendulum and not easy for mother or child. The old rules were being broken but no workable new code had as yet evolved.

Our expedient kept everyone in Thebes County from knowing that sweet little Nancy was a `bastard'. Of course Mother knew the date was false... but Mother was not in Thebes; she was in St Louis with Grandpa and Grandma Pfeiffer. And Father had gone back into the Army.

I still don't know how to look at this. A girl should not pass judgement on her parents... and I shan't.

The Spanish-American War had brought me closer to Mother. Her worry and grief made me decide that she really did love Father; they just kept it private from the children.

Then, on the day of my wedding, while Mother was dressing me, she gave me that motherly advice that traditionally the brides mother gives the bride to ensure matrimonial tranquillity.

Can you guess what she told me? Better sit down to hear this.

She told me that I must be prepared to endure without resentment submission to my husband for `family duties'. It was the Lord's plan, explained in Genesis, and was the price that women must pay for the privilege of having children... and if I would just look at it that way, I could submit cheerfully. But I must realise also that men have needs different from ours; you must expect to meet his needs. Don't think of it as animal, or ugly - just remember your dear children.

I said, 'Yes, Mother. I will remember.'

So what happened? Did Mother cut Father off? Whereupon he went back into the Army? Or did he tell her that he wanted to get out of that little town, so deep in the gumbo mud, and try a second career in the Army?

I don't know. I don't need to know; it's not my business. Father did go back into the Army, so quickly after my wedding that I feel sure he had it planned before then. His letters showed that he was in Tampa for a while, then Guantanamo in Cuba... then clear out in the Philippines, in Mindanao, where the Muslim Moms were killing more of our soldiers than the Spaniards had ever managed... and then he was in China.

After the Boxer Rebellion I thought my father was dead, for I did not hear for a long time. Then at last he was at the Presidio in San Francisco and his letter from there referred to other letters I had never received.

He left the Army in 1912. He was sixty that year - was he retired on age? I don't know. Father always told you what he wanted you to know; if you crowded him, he might treat you to some creative fiction... or he might tell you to go straight to hell.

He came to Kansas City. Brian invited him to come live with us, but Father had already found himself a flat and settled into it before he let us know that he was in town, indeed before we knew that he had left the Army.

Five years later he did move in with us because we needed him.

In the 1900s Kansas City was an exciting place. Despite three months in Chicago ten years earlier I was not used to a big city. When I went there as a bride, Kansas City had one hundred and fifty thousand people in it. There were electric streetcars, almost as many automobiles as horse-drawn vehicles, trolley wires and telephone wires and power wires everywhere. All of the main streets were paved and more of the side streets were being paved each year; the park system was already famous worldwide and still not finished. The public library had (unbelievable!) nearly half a million volumes.

Kansas City's Convention Hall was so big that the Democratic party was scheduled to hold its 1900 presidential nominating convention in it - then it burned down overnight and its reconstruction was underway before the ashes were cold and the Democrats nominated William Jennings Bryan in that hall just ninety days later.

Meanwhile the Republicans renominated President McKinley and, with him, Colonel Teddy Roosevelt, heroe of San Juan hill. I don't know for whom my husband voted... but it never seemed to displease him when someone would notice a resemblance between him and Teddy Roosevelt.

I think Briney would have told me, had I asked - but in 1900 politics was not a woman's business, and I was doing my utter best to simulate publicly the perfect modest housewife, interested only in kirk, kitchen, and kids as the Kaiser put it. (Kische, Küche, und Kinder.)

Then in September 1901, only six months into his second term, our President was murdered most vilely... and the dashing young war hero was precipitated into the highest Office.

There are time lines in which Mr McKinley was not assassinated and Col. Roosevelt was never president, and his distant cousin was not nominated in 1932, which utterly changes the patterns of wars, both in 1917 and 1941. Our Time Corps mathematicians deal with these matters, but the structural simulations are large even for the new computer complex combining Mycroft Holmes IV with Pallas Athene, and are quite beyond me. I'm a baby factory, a good cook, and I aim to be a panic in bed. It seems to me that the secret of happiness in life is to know what you are and then be content to be that, in style, head up and proud, and not yearn to be something else. Ambition can never change a sparrow into a hawk, or a wren into a bird of paradise. I'm a Jenny Wren; it suits me.

Pixel is a fine example of being what he is in style. His tail is always up and he is always sure of himself. Today he brought me still another mouse, so I praised him and petted him, and kept the mouse until he left, then flushed it away.

A midnight thought finally surfaced. These mice are the first proof anyone has had (I'm almost sure) that Pixel can take anything with him when he grasps a probability and walks through walls (if that describes what he does - well, at least it labels it).

What message can I send, and to whom, and how can I fasten it to him?

In shifting from school girl to housewife I had to add to Maureen's private decalogue. One was: thou shalt always live within thy household allowance. Another I formulated earlier: thou shalt not let thy children see thee cry - and when it became clear that Brian would have to be away frequently, I added him in. Never let him see me cry and be sure to offer him a smiling face when he returns... don't, Don't, DONT sour his return with fiddling details about how a pipe froze, or the grocer boy was rude, or see what that dadratted dog did to my pansy bed. Make him happy to come home, sorry to have to leave.

Do let children welcome him; don't let them smother him. He wants a mother for his children... but he wants a willing and available concubine, too. If you are not she, he will find one elsewhere.

Another commandment: promises must be kept - especially ones made to children. So think three times before making one. In case of tiniest doubt, don't promise.

Above all, don't save up punishments `until your father comes home'.

Many of these rules did not yet apply when I had only one baby and that one still in nappies. But I did think out most of my roles ahead of time and then wrote them down in

my private journal. Father had warned me that I had no moral sense; therefore it would be necessary to anticipate decisions I would have to make. I could not depend on that little voice of conscience to guide me on an ad hoc basis; I did not have that little voice. Therefore I would have to reason things out instead, ahead of time, forming rules of conduct somewhat like the Ten Commandments, only more so, and without the glaring defects of an ancient tribal code intended only for barbaric herdsmen.

But none of my roles were really difficult and I had a wonderfully good time!

I never tried to find out how much Briney was paid whenever I had a baby; I did not want to know. It was more fun to believe that it was a million dollars each time, paid in red gold ingots the colour of my hair, each golden ingot too heavy for one man to lift. A king's favourite, lavished with jewels, is proud of her 'fallen' state; it is the poor drab on the street, renting her body for pennies, who is ashamed of her trade. She is a failure and she knows it. In my daydream I was a king's mistress, not a sad-faced mattress-back.

But the Foundation must have paid fairly well. Attend me - Our first house in Kansas City was close to minimum for respectable middle class. It was near the coloured district; in 1899 this made it a cheap neighbourhood even though it was segregated for whites. Besides it was on an east-west street and faced north, two more points against it. It was on a high terrace with a long flight of steps to climb. It was a one-storey frame house, built in 1880 with its plumbing added as an afterthought - the bath opened directly off the kitchen. It had no dining-room, no hallway, just one bedroom. It had no proper basement, just a dirty-floor cellar for the furnace and coal bin. It had no attic, just a low, unfinished space.

But houses for rent that we could afford were scarce; Briney had been lucky to find it. I had thought for a while that I was going to have my first baby in a boarding-house.

Briney took me to see it before he closed the deal, a courtesy I appreciated as married women could not sign contracts in those days; he did not have to consult me. `Think you could live here?'

Could I! Running water, a flush toilet, a bathtub, a gas range, gas lamp fixtures, a furnace -'Briney, it's lovely! But can we afford it?'

`That's my problem, Mrs S., not yours. The rent will be paid. In fact you will pay it for me, as my agent, the first of every month. Our landlord, a gentleman named Ebeneezer Scrooge - '

"Ebeneezer Scrooge" indeed!'

'I think that was the name. But there was a streetcar going by; I may have misunderstood. Mr Scrooge will collect in person, the first of every month, except Sundays, in which case he will collect on the Saturday preceding, not the Monday following; he was firm

about that. And he wants cash; no cheques. He was firm about that, too. Real cash, silver cartwheels, not banknotes.'

Despite the house's many shortcomings its rent was high. I gasped when Briney told me: twelve dollars a month. 'Oh, Briney!'

'Get your feathers down, freckled one. We're going to be in it just one year. If you think you can stand it that long, you won't have to deal with dear Mr Scrooge - his name is O'Hennessy - as I can tie it down for twelve months with a discount of four points. Does that mean anything to you?'

I thought about it. 'Mortgage money is six per cent today... so three points represents the average cost of hiring, the money, since you are paying in advance and they don't own the money until they have earned it, month by month. One point must be because Mr O'Hennessy Scrooge won't have to make twelve trips here to collect his rent. So that comes to one hundred and thirty-eight dollars and twenty four cents.'

'Flame Top, you continue to amaze me.'

'But they really ought to give you another point, for administrative overhead.'

'How is that?'

`For the bookkeeping they don't have to do because you are paying it all in a lump. That brings it down to one hundred thirty-six eighty. Offer him one hundred and thirty five, Briney. Then settle for one thirty-six.'

My husband looked at me in astonishment. 'To think I married you for your cooking. Look, I'll stay Nome and have the baby; you go do my job. Mo, where did you learn that?'

'Tbebes High School. Well, sort of. I worked a while on Father's accounts, then I found a textbook at home that my brother Edward had used, Commercial Arithmetic and Introduction to Bookeeping. We had our school books in common; there were shelves of them in the back hallway. So I didn't take the course but I read the book. But is silly to talk about me doing your job; I don't know beans about mining. Besides I don't want that long streetcar ride down to the west bottoms.'

'I'm not sure I can have a baby, either.'

I'll do that, sir; I'm looking forward to it. But I would like to ride downtown with you each morning as far as McGee Street.'

'You are more than welcome, Madam. But why MeGee Street?'

'Kansas City Business College. I want to spend the next few months, before I get too big, learning to use a typewriter and to take Pitman shorthand. Then, if you ever become ill, dearest man, I could work in an office and support us... and if you ever go into business for yourself, I could do your office work. That would save you hiring a girl and maybe get us past that tight spot the books say every new business has.'

Briney said slowly, It was your cooking and one other talent; I remember clearly. Who would have guessed it?'

'Do you mean I may?'

'Better figure up what it will cost in tuition and carfare and lunch money -'

`I'll pack lunches for both of us.'

'Tomorrow, Mo. Or the next day. Let's settle this house.'

We took the house, although that skinflint held out for one hundred and thirty-eight dollars. We stayed in it two years and another girl baby, Carol, then moved around the comer on to Mersington and into a slightly larger house (same landlord), where I had my first boy, Brian junior, in 1905... and learned what had become of the Howard bonuses.

It was the spring of 1906, a Sunday in May. We often took a streetcar ride on Sundays, to the far end of some line we had never explored before - our two little girls in their Sunday best and Briney and me taking turns holding junior. But this time he had arranged to leave our three with the lady next door, Mrs 0hlschlager, a dear friend who was correcting and extending my German.

We walked up to 27th Street and caught the streetcar heading west; Briney asked for transfers as usual, as on Sundays we might change anywhere, wind up anywhere. This day we rode only ten blocks when Briney pushed the button. 'It's a lovely day; let's walk the boulevard a while.'

'Suits.'

Brian handed me down; we crossed to the south side, headed south on the west side of Benton Boulevard. `Sweetheart, would you like to live in this neighbourhood?'

`I would like it very much and I'm sure we will, in twenty years or so. 'It's lovely.' It truly was - every house on a double lot, each house ten or twelve rooms at least, each with its carriage drive and carriage house (barn, to us country jakes). Flower beds, stained-glass fanlights over the doors, all the houses new or perfectly kept up - from the styles I guessed 1900; I seemed to recall building going on here the year we came to KC.

'Twenty years in a pig's eye, my love; don't be a pessimist. Let's pick out ore and buy it. How about that ore with the Saxon parked at the kerb?'

`Must I take the Saxon, too? I don't like that door that opens to the rear; a child could fall out. I prefer that phaeton with the matched blacks.'

'We're not buying horses, just houses.'

'But, Brian, we can't buy a house on Sunday; the contract would not be legal.'

`We can, my way. We can shake hands on it; then sign papers on Monday.'

`Very well, sir.' Briney loved games. Whatever they were, I went along with them. He was a happy man and he made me happy (in or out of bed).

At the end of the block we crossed over to the east side and continued south. In front of the third house from the corner he stopped us. 'Mo, I like the looks of this ore. It feels like a happy house. Does it to you?'

It looked much like the houses around it, big and comfortable and handsome - and expensive. Not as inviting as the others, as it seemed to be unoccupied - no porch furniture, blinds drawn. But I agreed with my husband whenever possible... and it was no fault of the house that it was unoccupied. If it was.

Tm sure it could be a happy house with the right people in it'

'Us, for instance?'

`Us, for instance,' I agreed.

Brian started up the walk toward the house. `I don't think there is anyone at home. Let's see if they left a door unlocked. Or a window.'

`Brian!'

`Peace, woman.'

Willy-nilly, I followed him up the walkway, with a feeling that Mrs Grundy was staring at me from behind curtains all up and down the block (and learned later that she was).

Brian tried the door. 'Locked. Well, let's fix that' He reached into his pocket, took out a key, unlocked the door, held it open for me.

Breathless and frightened, I went in, then was slightly relieved when bare floors and echoes showed that it was empty. `Brian, what is this? Don't tease me, please.'

Tm not teasing, Mo. If this house pleases you... it's my long delayed wedding present from the groom to the bride. If it does not please you, I'll sell it'

I broke ore of my roles; I let him see me cry.

Chapter 8 - Seacoast Bohemia

Brian held me and patted my back, then said, 'Stop that infernal blubbering. Can't stand a woman's tears. Makes me horny.'

I stopped crying and snuggled up close to him. Then my eyes widened. `Goodness! A real Sunday special.' Brian maintained that the only effect church had on him was to arouse his passion, because he never listened to the service; he just thought about Mother Eve, who (he says) had red hair.

(I did not need to tell him that church had a similar effect on me. Every Sunday after church a `special' was likely to happen, once we got the children down for their naps.)

`Now, now, my lady. Don't you want to look around your house first?'

'I wasn't suggesting anything, Briney. I wouldn't dare do it here. Somebody might walk in.'

`Nobody will. Didn't you notice that I bolted the front door? Maureen... I do believe that you didn't believe me when I said that I was giving this house to you.'

I took a deep breath, held it, let it out slowly. 'My husband, if you tell me that the sun rises in the west, I will believe you. But I may not understand. And this time I do not understand.'

'Let me explain. I can't really give this house to you, because it's already yours; you've paid for it. But, as a legality, title still rests in me. Sometime this coming week we'll change that, vest title in you. It is legal for a married woman to own real property in her own name in this state as long as the deed describes you as a married woman and I waive claim... and even that last is no 'more than a precaution. Now as to how you bought it -'

I bought it flat on my back, I did, `ringing the cash register'. The down payment was money Brian had saved while in the Army, plus money from a third mortgage his parents had accepted from him. This let him make a sizeable, down payment, with a first mortgage at the usual six per cent and a second mortgage at eight and a half per cent. The house was rented when he bought it; Brian kept the tenants, invested the rent to help pay off the mortgages.

The Howard bonus for Nancy cleared that too-expensive second mortgage; Carol's birth paid off Brian's parents. The Foundation's payment for Brian, Junior, let Brian, Senior, refinance the first mortgage down to the point where the rental income let him at last

clear the property in May 1906, only six and a half years after he had assumed this huge pyramid of debt.

Briney is a gambler; I told him so.

`Not really,' he answered, `as I was betting on you, darling. And you delivered. Like clockwork. Oh, Brian junior was a little later than I expected but the plan had some flexibility in it. While I had insisted on the privilege of paying off the first mortgage ahead of time, I didn't actually have to pay it earlier than June first, 1910. But you came through like the champion you are.'

A year ago he had discussed his projected programme with his tenants; a date was agreed on; they had moved out quite amicably just the Friday past. `So it's yours, darling. I did not renew our lease this time; Hennessy O'Scrooge knows we are leaving. We can move out tomorrow and move in here, if this house pleases you. Or shall we sell it?'

`Don't talk about selling our housel Briney, if this truly is your wedding present to me, then at last I can make my bride's present to you. Your kitten.'

He grinned. 'Our kitten, you mean. Yes, I had figured that out.'

We had postponed getting a kitten because there were dogs on both sides of the little house on 26th - and one of them was a cat killer. By moving around the corner we had not gotten away from that menace.

Brian showed me around the place. It was a wonderful house: upstairs a big bathroom and a smaller one, a little bathroom downstairs adjacent to a maid's room, four bedrooms and a sleeping porch, a living-room, a parlour, a proper dining-room with a built-in china closet and a plate rail, a gas log in the parlour in what could be a fireplace for logs if the gas log was removed, a wonderful big kitchen, a formal front staircase and a convenient back staircase leading from the kitchen, privately oh, just everything and anything that a family with children could want, including a fenced back yard just right for children and pets... and for croquet and picnic dinners and a vegetable garden and a sand pile. I started to cry again.

'Stop it,' ordered Briney. 'This one is the master bedroom. Unless you prefer another room.'

It was a fine, big, airy room, with that sleeping porch off it. The house was empty and reasonably clean (I looked forward to scrubbing every inch), but some items not worth hauling away had been left here and there.

'Briney, that old porch swing out there has a pad on it. Would you please bring that pad in?'

'If you wish. Why?'

'Let's ring the cash register!'

'Right away, Madam! Honey, I wondered how long it would take you to decide to baptise your new home.'

That pad didn't look too clean and wasn't very big, but I didn't care about trifles; it would keep my spine from being ground into the bane boards. As Briney was fetching it in and placing it on the floor, I was getting out of the last of my clothes.

He called out, 'Hey! Leave your stockings on.'

'Yes, sir. Right away, Mister. Aintchu gonna buy a drink first, dearie?' Drunk with excitement, I took a deep breath and got down on my back. 'What's your name, Mister?' I said huskily. 'Mine's Myrtle; I'm fertile.'

'I'll bet you are.' Briney finished getting out of his clothes, hung his coat on a hook behind the bathroom door and started to mount me. I reached for him. He stopped me, paused to kiss me. 'Madam, I love you.'

'I love you, sir.'

'I'm pleased to hear it. Brace yourself.' Then he said, 'Unh! Ease off a notch.'

I relaxed a little. 'Better?'

'Just dandy. You're wonderful, lady mine.'

'So are you, Briney. Now? Please!'

I started to peak almost at once, then the skyrockets took off and I was screaming and just barely conscious when I felt him let go, and I fainted.

I'm not a fainter. But I did that time.

Two Sundays later I missed my period. The following February (1907) I had George Edward.

Our next ten years were idyllic.

Our life may have looked dull and humdrum to other people since all we did was live quietly in a house in a quiet neighbourhood and raise children... and cats and guinea pigs and rabbits and snakes and goldfish and (once) silkworms on top of my piano - a project of Brian, Junior, when he was in fourth grade. That required mulberry leaves, silkworms being fussy eaters. Brian, Junior, made a deal with a neighbour who had a mulberry tree.

Quite early he displayed his father's talent for always finding a way to work out a deal to accomplish his ends, no matter how unlikely they seemed at first.

A deal for mulberry leaves was big excitement the way we lived those years.

We had kindergarten Crayola pictures with stars on them posted in my kitchen, and tricycles on the back porch, and roller skates beside them, and fingers that had to be kissed well and bandaged, and special projects to do at home and take to school, and lots of shoes to be shined to get our tribe ready for Sunday School on time, and noisy arguments over who gets the buttonhook next - until I got shoe buttonhooks for each child and put names on them.

Ali the while Maureen's belly waxed and waned like the round belly of the Moon: George in 1907, Marie in 1909, Woodrow in 1912, Richard in 1914, and Ethel in 1916... which by no means ended it but brings us up to the War that changed the World.

But endless things happened before then, some of which I should mention. We moved from the church we had attended while we were tenants of 'Scrooge' soon after we moved to our new neighbourhood. In part we were upgrading in churches just as we were upgrading in houses and neighbourhoods. In the United States at that time Protestant denominations were closely linked to economic and social status, although it was never polite to say so. At the top of the pyramid was high-church Episcopalian; at the bottom were several pentecostal fundamentalist sects whose members piled up treasures in Heaven because they were finding it impossible to pile up treasures on Earth.

We had been attending a middle-level church selected largely because it was close by. We would have moved eventually to a more prosperous boulevard church now that we had moved to a more prosperous neighbourhood... but we moved when we did because Maureen got herself quasi raped.

My own silly fault. In any century rape is the favourite sport of large numbers of men when they can get away with it, and any female under ninety and over six is at risk anywhere and at all times... unless she knows how to avoid it and takes no chances - which is close to impossible.

On second thought, forget that bracket of six and ninety; there are crazies out there who will rape any female of any age. Rape is not intercourse; it is murderous aggression.

On third thought, what happened to me was not even quasi-rape, as I knew better than to place myself un-chaperoned in private with a preacher yet I had gone ahead and done so, knowing quite well what would happen. Reverend Timberly (the slob!) had managed to let me know when I was fourteen that he felt that he could teach me a great deal about life and love... while patting my fanny in a fatherly (!) way. I had complained to my father about it without quite naming him, and Father's advice had enabled me to put a stop to it.

But this Bible thumper - It was six weeks after we moved into our new house; I knew I was pregnant, and I was horny; Brian was away. I'm not complaining; Brian had to go where business took him and this is true of endless trades and professions; the breadwinner must go where the bread is. This time he was in Denver; then, when I had expected him home, he sent me a telegram (niteletter) telling me that he must go to Montana - just three or four days, a week at the most. Love, Brian.

Spit. Dirty drawers. Garbage. But I kept my smile because Nancy was watching me and at six she was hard to fool. I read her a revised version, then put the typed sheet where she could not get at it; she had taught herself to read.

At three that afternoon, bathed, dressed, and wearing no drawers, I tapped at the door of the study of the Reverend Doctor Ezekiel `Biblethumper'. My usual baby watcher was with my three, with written instructions including where I was going and the Home system telephone number of the pastor's study.

The reverend doctor and I had been doing a silent and inconspicuous barnyard dance ever since he had been called to that pulpit three years earlier. I didn't like him all that much, but I was acutely aware of him and his deep, organlike voice and clean masculine odour. It is too bad that he didn't have bad breath or smelly feet or something like that to put me off. But physically I could not fault him - good teeth, sweet breath, bathed and shampooed regularly.

My excuse for going to his study was that I needed to confer with him because I was chairman of the ladies auxiliary committee for the forthcoming whoop-te-do - I don't remember what. But twentieth century Protestant churches were always preparing for the next whoop-te-do. Yes, I do remember; a citywide revival. Billy Sunday? I think he was the one - a ball player and reformed drunkard who had found Jesus in a big way.

Dr Zeke let me in; we looked at each other and we both knew; we didn't need to say anything. He put his arms around me; I turned my face up. He put his mouth to mine and my mouth came open as my eyes closed. In scant seconds after he answered his door he had me down on the couch at the back of his desk, my skirts up, and he was trying to couple with me.

I reached down and took hold of him and got him aimed properly; he had been about to make his own hole.

Big! With a lost feeling of `Briney is not going to like this', I took him. He had no finesse; he just romped on home. But I was so excited that I was teetering on the edge and ready to explode when I felt him spend - just as someone knocked at his study door and he pulled out of me.

The bleeping affair had lasted under a minute... and my orgasm had shut down like a frozen pipe.

But all was not lost. Or should not have been. Once that jack rabbit jumped off me, I simply stood up and was immediately presentable. In 1906 skirts came down to the ankles and I had picked a dress that would stand up under crushing. I had left my drawers off not alone for his convenience (and mine) but because, if you are not wearing drawers and encounter an emergency, you don't have to scramble to put them on.

As for Dr Zeke the stupid geek, all he needed to do before he answered that door was to button his pants... which he had to do anyhow.

We could have brazened it out. We could have looked them in the eye, refused to look guilty, invited them into our conference.

But what he did was grab my arm, shove me into his coat closet, and turn the key on me.

I stood in there, in the dark, for two solid hours that seemed like two years. I kept my sanity by thinking up painful ways to kill him. 'Hoisting him by his own petard' was the simplest. Some of the others are too nasty to think about.

Finally he unlocked the door, looked at me and whispered hoarsely, 'They're gone now. Let's slip you out the back door.'

I didn't spit in his face. I said, 'No, Doctor, we will now have our conference. Then you will escort me out the front door of the church, and you will stand there, chatting with me, until several people have seen us.'

'No, no, Mrs Smith! I think -'

'You didn't think. Doctor, the only alternative is for me to run screaming out of here shouting "Rape!"... and what a police matron will find inside me that you left there will prove rape to a jury.'

When Brian got home, I told him about it. I had considered keeping it to myself. But we had reached a friendly agreement three years earlier concerning how and when we could each adulterate our marriage without offending or damaging the other. So I decided to make a clean breast of it and accept a spanking if he thought I rated it. I thought I did rate a spanking... and if it was a truly hard spanking, that would be an excuse to cry and that would probably wind up wonderfully.

So I wasn't too worried. But I did want to confess and be shrived.

That friendly agreement for prudent adultery - we had resolved to operate together whenever possible, and always to help each other, cover up for each other, and help the other make the kill. The discussion had come about through Dr Rumsey's confirming that I was pregnant again (with Brian, Junior) and I was feeling especially sentimental. That, plus an incitement: we had received a pianissimo 'mixed doubles' invitation from a couple we liked.

I started in by telling Briney solemnly that I intended to be utterly faithful to him. I had been faithful for four years and now that I knew that I could be, I would be, till death do us part.

He had answered, 'Look, stupid, you're sweet but not smart. You started in at fourteen -'

'Almost fifteen!'

'Short of fifteen. You told me that twelve other men and boys had sampled your sweetness - but you wanted to know if I thought that the candidates on your Howard list need be counted? Then you revised the tally, telling me that a couple of minor incidents had slipped your mind. You also told me that you had learned to enjoy it almost at once... but you wanted me to know that I was the best. Swivel Hips, do you really think that it changed you and your happy loving ways forever just because that bonehead preacher said some magic words over you? Truth will out, the leopard does not change his spots, and the day inevitably comes. When it does, I want you to enjoy it but to stay out of trouble... for your sake. But I do not expect you to be what society calls "faithful" forever amen. I do expect you not to get pregnant, not to catch some filthy disease, not to cause a scandal, not to shame me or yourself, not to risk the welfare of our children. Mostly that means using common sense and always pulling down the shades.'

I gulped. 'Yes, sir.'

'Now, my love, if it is true, as you assert, that Hal Andrews causes your gizzard to throb but that you are avoiding the temptation on my account, then be assured that your forebearance gains you no stars in your crown. We both know Hal; he's a gentleman and he keeps his nails clean. He's polite to his wife. If you don't mean business, quit flirting with him. But if you do want him, go get him! Don't mind me; I'll be busy. Jane is as delectable a piece as I've seen in a long time. I've hankered to bisect her angle from the day we met them.'

'Briney! Is that true? You never showed it. Why didn't you tell me?'

'And give you a chance to go female and jealous and possessive? Sweetheart, I've had to wait until you admitted out loud, with no coaxing or coaching from me, that you were feeling a deep curiosity about another man... with a suggestion that perhaps I might feel the same way about his wife. It turns out that I do. So call Jane and accept their dinner invitation. We'll see what develops.'

'But what if it turns out that you like Jane more than you like me?'

Impossible. I love you, my lady.'

'I mean what she's sitting on. How she makes love.'

'Possible, but unlikely. If I did, I would not stop loving you or lose interest in what you are sitting on; it's special. But that doesn't mean I don't want to try Jane; she smells good.' He licked his lips and grinned.

He did and she did and we four did and they remained our loving friends for years although they moved to St Joe two years later when he got a better offer from the school board there. That put them too far away for quiet family orgies, mostly.

Over the course of time Brian and I worked out detailed rules about how to handle sex, all of them intended to avoid the hazards while leaving both of us free to 'sin' - not carelessly but prudently, so that we could always look Mrs Grundy in the eye and tell her to peddle her papers elsewhere.

Brian made no concessions whatever to the prevalent belief that sex was in some way innately sinful. He was utterly contemptuous of popular opinion. 'If a thousand men believe something and believe otherwise, then it's a thousand to one that they are wrong. Maureen, I support us by having contrary opinions.'

When I told Briney about being locked in that closet, he sat up in bed. 'That bastard! Mo, I'm going to break both his arms.'

'Then you had better break mine, too, as I went there intending to do it. I did it. The rest derived from that bald, inexcusable fact. I took a risk I should not have taken. My fault at least as much as his.'

'Yes, yes, but that's not the point. Sweetheart, I'm not faulting him for screwing you; any man not castrated will screw you if he has a clear chance at you. So your only protection is not to give him that chance if you don't want him to take it. What I'm angry about is his shoving my poor baby into a closet, into the dark, locking her in, frightening her. I'll kill him slowly. God damn him. I'll nut him first. I'll take his scalp. And cut off his ears.'

'Briney -'

'I'll drive a stake - What, dear?'

'I've been a bad girl, I know, but I got away with it cold. I didn't get pregnant because I am pregnant. No disease... or I don't think so. I'm almost certain nobody twigged, no scandal. I would like to watch you do all those things to him; I despise him. But, if you hurt him even a little bit, even punch his nose, it's no longer a secret... and that could hurt our children. Couldn't it?'

Briney conceded this pragmatic necessity. I wanted us to leave that church. Briney agreed. 'But not right away, love. I'll be home for the next six weeks at least. We'll go to church together -'

We got there early and sat down at the front, facing the pulpit. Briney caught Dr Zeke's eye and held it, all through the sermon, Sunday after Sunday.

Dr Zeke had a nervous breakdown and had to take a leave of absence.

Briney and I did not work out all our rules for sex and love and marriage too easily. We were trying to do two things at once: create a whole new system of just conduct in marriage - a code that any civilised society would have taught us as children - and simultaneously create an arbitrary and utterly pragmatic set of rules for public conduct to protect us from the Bible-belt arbiters of morals and conduct. We were not missionaries trying to convert Mrs Grundy to our way of thinking; we simply wanted to hold up a mask so that she would never suspect that we did not agree with her way of thinking. In a society in which it is a moral offence to be different from your neighbours your only escape is never to let them find out.

Slowly over the years we learned that many Howard families had been forced to face up to the fact that the Howard Foundation programme simply did not fit the Midwestern Bible belt... yet the majority of Howard candidates came from the Middle West. Eventually these conflicts and contradictions resulted in most Howards either dropping out of organised religion, or paying it lip service as Brian and I did, until we left Kansas City in the late thirties and quit pretending.

So far as I know, there are no organised religions in Boondock, or anywhere on Tellus Tertius. Question: is this an inevitable evolutionary development as mankind approaches true civilisation? Or is that wishful thinking?

Or did I die in 1982? Boondock is so utterly unlike Kansas City that I have trouble believing that they are in the same universe. Now that I am locked up incommunicado in what appears to be a madhouse run by its inmates it is easy to believe that a traffic accident that hit an old, old woman in 1982 was fatal... and that these dreams of weirdly different worlds are merely the delirium of dying. Am I heavily sedated and on I.C. life support in some Albuquerque hospital while they decide whether or not to pull the plug? Are they waiting to hear from Woodrow for authorisation? As I recall, I listed him as `Next of Kin' in my wallet.

Are `Lazarus Long' and 'Boondock' a senile fantasy?

Must ask Pixel next time he visits me. His English is scarce but I've no one else to ask.

One fine thing we did even before we got our new house furnished: we got the rest of our books out of storage. In the crackerbox we had been living in we had had room for only a couple of dozen volumes, and that precious few only by storing them on the top shelf in the kitchen, a spot I could reach only by standing on a stool - something I did not risk when I was big with child. Once I waited three days for Brian to come home from Galena, intending to ask him to reach down my Golden Treasury for me - I could see it; couldn't reach it - then, when he did get home, I forgot it.

I had two boxes of books in storage, Brian had more than that... and I had `inherited' case after case of my father's books. He had written to me when he went back into the Army to tell me that he had had them packed and shipped to Kansas City Storage and Warehousing - receipts enclosed. His bank was instructed to keep the storage paid up... but if I wanted to give them a home, that would please him. Perhaps someday he might ask for some of them back, but in the meantime treat them as my own. 'Books are meant to be read and loved, not stored.'

So we got our printed friends out of bondage and into the light and air - although we had no bookcases as yet. Briney got boards and bricks and set up temporary shelves... and I learned what my husband liked better than sex.

Books.

Almost any books but what hooked him that weekend were Professor Huxley's essays... which I hardly noticed because I had my hands on Father's Mark Twain collection, Mr Clemens' books, for the first time since May 1898 everything of his up to that date, mostly first editions and four of them signed by Mr Clemens and `Mark Twain' -'signed on that great night in January 1898 when I fought to stay awake in order not to miss any of Mr Clemens' words.

For perhaps two hours Brian and I took turns touching the other one's elbow and saying, 'Listen to this!' - then reading aloud. It turned out that Brian had never read The Man Who Corrupted Hadleyburg or Some Notes on the Recent Carnival of Crime in Connecticut. I was astonished. `Dear, I love you - but why did they let you graduate?'

`I don't know. The War, probably.'

'Well, I'll just have to tutor you. We'll start with the Connecticut Yankee.'

`I've read it. What's that fat one?'

`That's not Mark Twain; that's one of Father's medical books.' I handed it to him and returned to The Prince and the Pauper.

A couple of moments later I looked up when Briney said, `Hey, this plate is not correct.'

I answered, `Yes, I know. As I know what plate you are looking at. Father says that any layman who gets his hands on that book invariably looks at that plate first, Shall I take off my drawers so that you can check it?'

`Quit trying to divert me, wench; I have an excellent memory.' He thumbed on through. `Fascinating. One could study these plates for hours.'

'I know. I have.'

'Amazing how much machinery can be packed into one set of skin.' He went on thumbing through, then got hooked by a work on obstetrics, shuddered at parts of that one (Brian was a good jackleg midwife, but he didn't like blood), put it aside and picked up another one. 'Whee!'

'What is it this time, dear? Oh. What Every Young Girl Should Know.' (He had picked up the Forberg etchings, Figuris Veneris. I was startled, too, the first time I opened it.)

'That's not its name. Here's the title page: Figures of Venus.'

'Joke, dear. Father's joke. He had me study it as a sex instruction manual, then we discussed each picture and he answered any question I asked. Lots of questions, that is. He said that Mr Forberg's pictures were anatomically correct... which is more than we can say about that censored plate you complained about. Father said that these pictures should be used in school, because they were far superior to the behind the-barn cartoons or photographs that were the only thing most young people get to look at - until they were confronted by the real thing and were frightened and sometimes hurt.' I sighed. `Father says that this so-called civilisation is sick throughout but nowhere more so than about sex, every aspect of sex.'

`Your father is dead right, I think. But, Maureen, do I understand that Dr Johnson gave this to you as an instruction manual? My revered father-in-law endorsed everything in these pictures? Everything?'

`Oh, heavens, no. Just most of them. But in general Father says that anything two - or more - people want to do is all right as long as it does no physical harm. He felt that the words "moral" and "immoral" were ridiculous when applied to sexual relations. Right and wrong were the correct words, used exactly as they would be used in any other human relation.'

`Mon beau-père a raison. And my wife is a smart cookie, too:

`I had tutoring by a wise man all my life, until he turned me over to you. At least I think my father is wise. Here, let me sit beside you and I'll point out what he approved of, what he didn't.'

I moved across beside him, he put his arm around me and I held the book on his lap. `The title-page - Note the date, 1824. But the pictures are mostly classic Greece and dome, except one in Egypt. Father said that, despite that date less than a hundred years back, these pictures match murals in whorehouses in Pompeii... except that these are artistically much superior to the Pompeii paintings.'

`Dr Johnson has been to Pompeii?'

'No. Well, I don't think he has. With Father it is sometimes hard to be sure. He did tell me that he had seen photographs of Pompeii murals in Chicago. At Northwestern or in some museum:

`But how did he get these pictures? I hate to tell you, my sweet innocent, but I'm certain that these pictures would get us a long rest at Federal expense... under the Comstock Act. If we were caught with them.'

`If we were caught. "Caught" is the important word. Father urged me to know the law as thoroughly as possible... so as not to get caught when I broke one. Father never felt that any law applied to him... other than in that sense.'

'I think it is clear that your father is a subversive character, a bad influence, a wicked old man... and I admire him without limit and hope to grow up like him.'

'I love him all to pieces, mon homme. He could have had my maidenhead just by lifting his eyebrow. He wouldn't take it.'

'I know that, beloved. I've known it since I first met you.'

'Yes, I'm a woman scorned... and someday he'll pay. But I want to take his advice about the Law. Briney, do you suppose I could attend classes at the Kansas City School of Law... if I could squeeze the tuition out of my household allowance?'

'Perhaps. But you won't have to squeeze it out of your housekeeping money; any schooling you want we can now afford. But never mind such trivial matters; we're talking about sex. S-E-X, the stuff that makes the world go around. Next picture, please.'

'Yes, sir. Missionary sty1e. Approved even by priests. 'Me next picture is almost as widely accepted, although perhaps Mrs Grundy never gets on top. This next one is certainly not used by Mrs Grundy although by everybody else - says Father. But he noted that a gentleman, in coupling with a lady from behind and standing up, will reach under and find her button, so that she is ensured a good time, too. Now the next - Oh! Briney, someday, when we can afford it, I want a bed just the right height so that you can put me on it in that position, on my back, legs up - just the right height so that you can stand up and enter me without crouching. I like that position, so do you - but the last time we used it, you got cramps in your legs and were trembling toward the last, you got so tired. Darling, I want you to enjoy it as much as I do. Loads, that is.'

'Lady, you're a gentleman.'

'Why, thank you, sir! If that is not a jest.'

No jest. Most ladies are not gentlemen; they will pull stunts that would get a man ten days in the stocks... and walk on, with their noses in the air. But not my Mo. With you, fair is fair and you don't expect to get by on your sex.'

'Ah, but I do. By "ringing the cash register".'

'Don't confuse me with logic. You treat everyone decently, that's all, even your poor old husband. Yes, I'll build you that bed. Not only the right height but one guaranteed not to squeak. I'll get busy on the design. Hmm, Mo, how would you like a really big bed? Say one that would hold you and me and Hal and Jane - or playmates of your choice - all at once.'

'Goodness, what a thought! I hear that Annie Chambers has a bed like that.'

'But I'll design a better one. Mo, where did you hear of KC's top Madam?'

'At a Ladies' Aid meeting. Mrs Bunch was deploring the open immorality of this city. I kept my ears open and my mouth closed. Darling, I'll love that bed when it's built... and in the meantime I'll be happy with any reasonably level place or even a pile of coal if Briney puts me on it.'

'Go along with you. Next picture.'

'Then quit teasing my right nipple. Young man masturbating, his daydreams in the background. Father strongly approves of masturbation. He said that all the stories about it were nonsense. He urged me to masturbate all I want to and whenever I want to, all my life, and to be no more ashamed of it than I am of peeing - just close the door, as I do when peeing.

'They told me that it would make me go blind. But it didn't. Next.'

'He's an "irrumator" and she is a "fellatrix" and that's Vesuvius in the background. Only Father says that those names are silly; it's just two youngsters discovering that sex can be fun. He pointed out that not only is it fun for both of them but also there is a major advantage. If she discovers that it smells bad, she can suddenly remember that it's bedtime; goodnight, Bill - and, no, I can't see you next Saturday. Don't come back at all; I'm entering a nunnery. Briney, I've done that - tossed a boy out because I didn't like the way his penis smelled. One was a Howard candidate. Phew! Father told me that a penis that smelled bad was not necessarily diseased, but that was the way to bet... and in any case if it wasn't sweet enough to kiss, it wasn't sweet enough to put inside me.'

I moved on to the next one. `Same situation, comme ci instead of comme ça. Cunnilingus. Another silly word, says Father; it's just a kiss. The sweetest kiss of all... unless you combine this one with the one we just looked ar, to make a sixty-nine. Soixante-neuf. Although there is much to be said for taking the two sorts of kisses at one rime, and concentrate.'

I turned the page. `Oh, oh! Here's one that Father did not care for.'

`Me, too. I prefer girls.'

'Yes, but you can do it to a woman, too. Father said that some day some man was going to want to do that to me... and that I should think about it ahead of time and be prepared to cope with it. He said that it was not immoral, or wrong, but that it was dirty and physically risky -'
(This was in 1906, long before AIDS showed that buggery could be a special and deadly hazard.)

`- but that if I got curious and just had to try it, make him use a sheath and get him to be ultra slow and extra gentle - or I would wind up buying fur coats for proctologists' wives.'

`Seems likely. Next, please.'

`Beloved -'

`Yes, Mo?'

`If you want to do that to me, I'm willing. I'm not in the least afraid that you would hurt me.'

`Thank you. You're a silly wench, but I love you. I'm not yet tired of your other hole. Next picture, please; there are people queued up for the second show.'

`Yes, sir. I think this one is meant to be funny: hushand surprises wife playing happy games with the housewife next door - look at the expression on his face! Briney, I had never suspected that a woman could be so much fun until that time Jane made a grab for me. She's real cuddly. Or anything.'

`Yes, I know. Or anything. So is Hal. Or anything.'

'Well! I must have slept through something. This next one - Briney, I can't see why women would use dildoes when there are so many live, warm ones around, attached to men. Do you?'

'They don't all have your opportunities, my love. Or your talents.'

`Thank you, sir.' I moved on. 'Cunnilingus again, but two women. Briney, why are mermaids used as a symbol of Lesbos?'

`I don't know. What did your Father say?'

`Just what you did. Oh, this next one does show something Father disapproves of. He says that anyone who mixes whips and chains, or either, with sex, is crazy as a pet coon and should be kept away from healthy people. Hmm, the next one is nothing special, just a different position, one that we've tried. Fun for variety, I think, but not for every day.

And now - Oh, this one Father called, "the hetaera's examination, or three ways for a dollar." Do you think Annie Chambers' girls are examined this way? I hear that they are top quality this side of Chicago. Maybe New York.'

`Look, my sweet, I know nothing of Madam Chambers, or her girls. I can't support both you and Annie Chambers, not even with the, help of the Foundation. So I don't patronise brothels.'

'What do you do in Denver, Briney? Cancel that - under our agreement, I'm not supposed to ask.'

'That wasn't in our agreement; of course you can ask. You tell me your bedtime stories and I'll tell you mine - then we'll play doctor. Denver... I'm glad you asked that. In Denver I met this young fat boy -'

`Briney!'

`- who has the most gorgeous big sister, a grass widow a little younger than you are, with long slender legs, natural blonde, honey-coloured hair down to her waist, a sweet disposition, and big, firm tits. I asked her, "How about it?" ' Briney stopped.

`Well? Go on. What did she say?'

`She said no. Hon, in Denver I'm usually too tired for anything more adventurous than Mother Thumb and her four daughters. They are faithful to me in their own fashion and they don't expect me to take them out to dinner and a show first.'

`Oh, piffle! What is the blonde's name?'

`What blonde?'

I've just figured out how to get a message out via pixel. So, if you will excuse me, I'll get it ready at once so that I will have it ready the next time he shows up.

Chapter 9 - Dollars and Sense

Where is that damned cat?

No, no, cancel that. Pixel, Mama Maureen didn't mean that; she's just worried and upset. Pixel is a good boy, a fine boy; everybody knows that.

But, damn it, where are you when I need you?

As soon as we were settled into our new home we shopped for Briney's kitten, but not in pet shops. I'm not sure that there was such a thing as a pet shop in KC in 1906; I don't

recall ever having seen one that far back... and I do remember that we bought goldfish at Woolworth's or at Kresge's, not at a pet shop. Special items for cats, such as flea powder, we bought at the Dog and Cat Hospital at 31 st and Main. But finding a kitten required asking the wind.

First I got permission to put a notice on the bulletin board at Nancy's school. Then I told our grocer that we were looking for a kitten, and left the same word with our huckster - a greengrocer who stopped his wagon in our block every weekday morning to offer fresh fruits and vegetables.

The Great Atlantic and Pacific Tea Company peddled its wares the same way but its Sales wagon called only once a week since it carried only tea and coffee, sugar and spices. But that meant it covered a larger area with more customers and therefore greater chances of finding kittens. So I gave their driver our telephone number, Home Linwood 446, and asked him to call me if he heard of a litter of kittens, and then (having asked a favour) I bought his special for the week, twenty-five pounds of sugar for a dollar.

A mistake - He insisted on carrying it in for me, asserting that twenty-five pounds was much too heavy for a lady... and I learned that what he really wanted was to get me alone. I evaded his hands by picking up Brian, Junior, a tactic Mrs Ohlschlager had taught me when Nancy was tiny. It works best with a small and very wet baby but any child small enough to pick up will throw a hopeful male off his stride and cool him down. Oh, it won't stop a crazy rapist, but most deliverymen (and plumbers, repairmen, etc.) are not rapists; they are simply ordinary rutty males who will go for it if offered. The problem is simply to turn him down firmly but gently, without causing him to lose face. Picking up a child does this.

It was bad judgement also because a whole dollar was too much of my household budget to tie up in sugar, and (worse) I did not have ant-proof storage for that much sugar... sol wound up spending another sixty cents on a sugar safe as big as my flour bin - which left me so short on cash a week later that I served fried mush for supper when my 'plan ahead' called for ground beef patties. It was almost the end of the month, so it was serve mush or ask Briney for an advance... which I would not do.

With fried mush I served mo strips of bacon to Brian and one to me, and one strip, fried crisp, and crumbled, divided for Carol and Nancy. (Brian, Junior, still regarded Cream o' Wheat as a gourmet dish, so he got that plus what milk I had left in my breasts.) Fresh dandelion greens helped to fill out the menu, and their butter-yellow blooms I floated in a shallow dish as a centrepiece. (Can anyone tell me why such pretty flowers are considered weeds?)

It was a skimpy supper but I ended it with a substantial dessert I could make with what I had on hand, plus two cooking apples picked up cheap that morning from my huckster: apple dumplings with hard sauce.

Hard sauce should be made with confectioners' sugar - but Aunt Carole had taught me how to crush and crush and keep on crushing granulated sugar, using a big spoon and a bowl, to achieve a fair imitation of powdered sugar. I had enough butter on hand and vanilla extract, and I used one teaspoon of cooking brandy - also on hand; Aunt Carole had given it to me on my wedding day. (It was now half gone. I tasted it once - horrible! But a smidgen of it at the right time and place certainly enhanced the flavour of food.)

Brian made no comment on fried mush, but complimented me on the dumplings.

On the first of the month following he said, 'Mo, the papers say that food prices are up even though the farmers are squawking. And I'm certain that this bigger house is costing you more to run, if only in electricity, gas and Sapolio. How much more each month do you need?'

'Sir, I'm not asking for more money. We'll get by.'

I'm sure we will but the hot weather will be with us next month. I don't want you paying the iceman the way some housewives do. Let's raise your allowance by five dollars.'

'Oh, I don't need that much!'

'My lady, let's do raise it that much, and see how it works out. If you have money left over at the end of the month, tuck it away. At the end of the year you can buy me a yacht.'

`Yes, sir. What colour?'

'Surprise me.'

I managed to add pennies and nickels and dimes to that 'egg money' over the months by never using a charge account, even with my grocer-which was just as well, as Brian was in business for himself sooner than he had anticipated.

His employer, Mr Fones, had made him a junior associate after two years, then assistant manager in 1904. Six months after we moved into our wonderful new house Mr Fones decided to retire and offered Brian a chance to buy him out.

It was one of the few times I have seen my husband in a quandary. He usually made decisions quickly with the icy calm of a riverboat gambler; this time he seemed bemused sugaring his coffee twice, then forgetting to drink it.

At last he said, 'Maureen, I'm going to have to consult you on a business matter.'

'But, Brian, I don't know anything about business.'

'Listen to me, my love. Ordinarily I will not bother you about business. Deo volente, I will not need to do so again. But this affects you and our three children and the one that has caused you to get out your fat clothes again.' He told me in detail what Mr Fones had offered.

I thought hard about it, then said, 'Brian, under this agreement you are to pay this - drawing acount you called it - to Mr Fones each month?'

'Yes. If the business makes more profit than the average of the last few years, his share increases.'

'Suppose it makes less. His share goes down?'

'Not below that drawing account figure.'

`Even if the business loses money?'

'Even if it loses money. Yes, that's part of the proposal.'

`Briney, just what is it he is selling you? You are contracting - will be contracting if you accept - to support him indefinitely -'

'No, just twelve years. His life expectancy.'

'If he dies, it ends? Hmm! Does he know about my great aunt Borgia?'

`No, it doesn't end if he dies, so get that gleam out of your eye. If he dies, it goes to his estate.'

`Ali right, twelve years. You support him for twelve years. What do you get out of it?'

'Well... I receive a going business. Its files, its records, and, principally, its goodwill. I'll have the right to use the name "Fones and Smith, Mining Consultants".' He stopped.

'What else?' I asked.

'The office furniture and the lease. You've seen the office.'

Yes, I had. Down in the west bottoms, across from International Harvester. In the spring flood of 1903 when the Missouri River again failed to turn that comer and tried to run up the Kaw almost to Lawrence, Briney had to go to work in a row boat. I had wondered then why a mining company would be down there - no mining in the west bottoms, just black mud clear down to China. And the heavy stink of the stockyards.

`Brian, why are the offices there?'

'Cheap rent. It would cost us four times as much to get the same space on Walnut or Main, even clear out at 15 th. I take over the lease, of course.'

I thought about it hard for several minutes. `Sir, how much of the firm's travelling has Mr Fones been doing?'

'Originally? Or recently? When I first went to work for him, both he and Mr Davis made field trips; I stayed in the office. Then he broke me in on what he expected from a survey - that was bafore Mr Davis retired. Then -'

'Excuse me, sir. I mean, how much travelling has Mr Fones done this past year?'

'Eh? Mr Fones has not made a field survey for more than two years. He's made a couple of money trips. Two to St Louis, one to Chicago.'

`While you made all the muddy-boots trips?'

`You could call it that.'

`That's what you call it, Briney. Dear, you do want to go into business for yourself, don't you?'

`You know that I do. This is just sooner than I had thought I could manage it.'

`Are you seriously asking me to say what I think you should do? Or are you just using me as a sounding board to get your thoughts straight?'

He gave me his endearing grin. `Maybe some of both. I'll make the decision. But I do want you to tell me what to do, just as if it were entirely up to you.'

`Very well, sir. But I need more information. I have never known the amount of your salary - and I don't want to know now; it's not fitting for a wife to ask - but tell me this. Is that drawing account figure more or less than your salary?'

`Eh? More. Quite a bit more. Even with the bonuses I have received on some deals.'

`I see. All right, Briney; I'll express my advice in the imperative. Refuse his offer. Go down tomorrow morning and tell him so. At the same time hit him for a raise. Ask him - no, tell him - that you expect a salary equal to that drawing account he was proposing to siphon out of the business.'

Briney looked startled, then laughed. `He'll have a stroke.'

'Perhaps, perhaps not. But he is certain to be angry. Count on that and be braced for it. Don't let him get you even the least bit angry. Just tell him calmly that fair is fair. For the last two years you have been doing all the hard and dirty work. If the business can afford

to pay Mr Fones that big a drawing account for not working at all, it can certainly pay you the same amount for working very hard indeed. True?'

'Well... yes. Mr Fones won't like it.'

`I don't expect him to like it. He's trying to hornswoggle you; he's certain not to like it when the same swindle is offered to him. Briney, that's a touchstone for a fair deal that my father taught me: does it feel like a fair deal if it's turned the other way round, mirror image? Point this out to him.'

`All right. When he comes down off the ceiling. Mo, he won't pay me that much. Wouldn't it be better for me to resign?'

'Truly, Briney, I don't think so. If you simply quit, he will make loud squawks about your disloyalty - how he took you on as a youngster with no experience and taught you the trade -'

'There's some truth in that. Before he hired me, I had had practical experience underground in lead and zinc and in coal through working summers while I was going to school. But no experience with precious metals, just book learning. So I've learned quite a lot while working for him.'

'Which is why you must not resign instead you are simply asking to be paid what you are worth. What the proposition he offered you shouts aloud that you are worth. Fair is fair. He can go ahead and retire, and pay you that amount to run the business, while he enjoys the net profit himself.'

`He'll give birth to a porcupine. Breech presentation.'

`No, he'll fire you. Oh, he may possibly offer you a counterproposal; it may take a while. But he will fire you. Briney, would it suit you to stop on your way home at Wyandotte Office Supply and buy a second-hand Oliver typewriter? Pretty please? No, best to rent one for a month with privilege of applying rent on purchase; I should try it out before we tie up so much money. In the meantime we'll design some stationery. "Brian Smith Associates", I think. Mining Consultants. No, Business Consultants. Mining Properties. Farms and Ranches. Mineral Rights. Petroleum Rights. Water Rights.'

`Hey, I don't know all those things'

`You will.' I patted my tummy. 'three months from now this little boiled pig will ring the cash register for us.' I thought about the double eagle Father had slipped into my purse on our wedding day. I had never spent it; I was fairly sure Briney did not know that I had it. Father's formal wedding present to us had been a cheque that had gone into furniture for that little crackerbox we had first lived in. `Dear, I guarantee to keep us fed until you can report this baby to judge Sperling. Then the Foundation's payment for this baby ought to

keep us going for a while... and you and I can try to ring the cash register a fifth time before the cash from number four runs out'

I went on, 'If the business isn't making money by then, it might be time for you to look for a job. But I'm betting that from now on you will always be your own boss... and that we will wind up rich. I have confidence in you, sir. That's why I married you.'

'Really? I thought there was another reason. That wee bit of proud flesh:

'There's that, I admit. A contributing factor. But don't change the subject. You've given Mr Fones more than six hard-working years - much of your time away from home - and now he wants to indenture you, make you his bound boy, for a pittance. He's trying to milk you like a cow. Let him know that you know it... and that you won't let him get away with it.'

My husband nodded soberly. 'I won't let him. Beloved, I knew what he was trying to do. But I had to think of you and our children.'

`You do. You will. You always have.'

Brian came home early the next day, carrying a battered Oliver typewriter. He put it down and kissed me. `Madam, I have joined the ranks of the unemployed.'

'Really? Oh, goodie!'

`I am an ungrateful wretch. I am no better than a Wobbly and I probably am one. He has treated me like his own son, his own flesh and blood. And now I do this to him. Smith, get out of here! Leave these premises; I don't want to see your face again. Don't you dare take even a piece of paper out of this office. You are through as a mining consultant; I'm going to let the whole mining community know how thoroughly unreliable, completely undependable, utterly ungrateful you are.'

'Doesn't he owe you some salary?'

'Salary and two weeks notice and earned participation in that Silver Plume Colorado deal. I declined to budge until he paid up. He did, reluctantly, with more comments on my character.' Briney sighed. 'Mo, it upset me to listen to what he said. But I feel relieved, too. Free, for the first time in more than six years.'

'Let me draw you a tub. Then dinner in your robe and then to bed. Poor Briney! I love you, sir.'

My sewing-room became an office and we installed a Bell telephone in addition to our Home instrument and put the them side by side near my typewriter. Our letterhead carried both numbers and a post office box number. I kept a baby bed in there and a couch I used for quick naps. Mr Fones animosity did not seem to hurt' us, and it may

have helped simply by emphasising that Brian was no longer working for Davis and Fones - a fact Brian advertised in all the trade journals. My first job with the typewriter was to write to about one hundred and fifty people and or firms, announcing that Brian Smith Associates was now in business... and announcing a new policy.

'The idea is, Mo, that I am betting on my own judgement, I'll confer with anyone, first visit free, here in Kansas City. If I travel, it's my railroad ticket, two dollars a night for a hotel room, three dollars a day for food, costs such as livery stable rents as required by the survey, plus per diem consulting fee... all in advance. In advance because I saw while working for Mr Fones how nearly impossible it is to get a client to pay for a dead horse. Fones did it by refusing to budge until he had a retainer in hand equal to his projected expenses, applied overhead, and expected minimum profit... more, if he could squeeze it out.

'It's on that per diem that I'll differ in my methods from Davis and Fones. I will use a formal, signed contract, with two options, the client to make his choice ahead of time. Forty dollars a day -'

'What!!'

But Briney had spoken seriously. 'Mr Fones charged a client that much for my services. My dear, there are plenty of lawyers who get paid that much per diem for nice clean work in a warm courtroom. I want to be paid at that rate for trudging and sloshing and sometimes crawling through mines that are always cold and usually wet. For that price they'll get my best professional judgement as to how much it will cost to work that mine, including capital investment required before they ship their first ton of ore... and my best guess, based on assays, geology, and other factors, as to whether or not the claim can be worked at a profit... for it is a sad fact that, in the mining business as a whole, more money goes into the ground than ever is taken out.

`That's the business I'm in, Mo. Not in mining. I get paid for telling people not to mine. To cut their losses and run. They often don't believe me, which is why I must insist on being paid in advance.

`But once in a while I have had the happy privilege of telling someone, "Go ahead, do it! It will cost you this big wad of money... but you should get it all back and more."

`And that is where the second option comes in, the one I really prefer. Under the second option I gamble with the client. I lower my per diem and instead take some points on the net, if and when. I won't take more than five points at most, and I won't do a held survey for less than expenses plus a per diem of fifteen dollars a day, minimum. That bracket leaves room to dicker.

Now-Can you write a model letter for me, explaining the tariff schedule? How they can have our best work, at our standard fee. Or we'll gamble with them at a much lower fee, and they will still have our best work.'

'I'll try, Mister Boss Man, sir.'

It paid. It made us rich. But I did not suspect how well it paid until forty years later when circumstances caused my husband and me to count up all our assets and figure their worth. But that is forty years later and this account may not go on that long.

It paid especially well through an oddity of human psychology... or an oddity of persons seized by the mining mania, which may not be the same thing. Like this...

The compulsive gamblers, the sort who try to beat lotteries or slot machines or other house games, almost always were betting on striking it rich on some caim that could not be worked at a profit. Each of these saw himself as another Cowboy Womack... and did not want to share his lucky star with some hireling, even at only five points. So, if he could scrape it up, he paid the full fee, grumbling.

After a survey (when I was my husband's secretary) I would prepare a letter along these lines, telling this optimist that his best vein was:

- surrounded by country rock that has to be dug out to get at the high grade. The mine can not be worked successfully without drifting a new tunnel out to the north to the highway, through a right of way still to be negotiated via the third level of the claim to the north of yours.

In addition, your claim requires a blacksmith, a tool repair shop, a new pumping system, new ties and rails for approximately two hundred yards of track, etc., etc. - plus wages for eighty shifts per month as required by the bond-and-lease for an estimated three years before appreciable pay tonnage could be taken to the mill, etc., etc., see enclosures A, B, and C.

In view of the state of the claim and the capital investment required to work it, we regret to have to report that we recommend against attempting to work this claim.

We agree with your arithmetic as to the effect on the commercial feasibility of processing low-grade ore if the new Congress does in fact pass legislation requiring free and unlimited coinage of silver at sixteen to one. But we are not as sanguine as you are that such legislation will indeed pass.

We are forced to recommend that you sell your bond-and-lease for whatever it will bring. Or cut your losses and surrender it.

We remain, sincerely at your service,
Brian Smith Associates
By
Brian Smith, President

This report was typical for an old claim being reopened by a new optimist - the commonest situation in mining. (The West is pocked with holes where some prospector ran out of money and luck.)

I wrote many letters like that one. They hardly ever believed unfavourable reports. They frequently demanded their money back. Then a client often took the bit in his teeth and went ahead anyhow... and went broke trying to satisfy a bond-and-lease on country rock assaying only enough silver per ton to go broke on, plus a trace of platinum and a whiff of gold.

The clients attempting to mine gold were even worse. There is something about gold that has an effect on human judgement similar to that of heroin or cocaine.

But there were also a few rational investors - gamblers, but gambling the odds correctly. Offered a chance to reduce upfront expenses in exchange for points, they often took that option... and the claims selected by these more level-headed people were more likely to merit a go-ahead from Brian.

Even these worthwhile mining claims usually lost money in the long run, through failure of their owners/operators to shut down soon enough when the operations stopped paying their costs. (Brian did not lose when that happened; he simply stopped making money from his percentage of the net.) But some of them made money and some of them made lots of money and some of them were still making money regularly forty years later. Brian's willingness to postpone his return other than a modest fee put our children into the best schools and Brian's quondam secretary, Mama Maureen, into big, fat emeralds. (I don't like diamonds. Too cold.)

I see that I've missed telling about Nelson and Betty Lou and Random Numbers and Mr Renwick. That's what comes of being a Time Corps operative; all times look alike to you, and temporal sequence becomes unimportant. All right, let's fill in.

Random Numbers may have been the silliest cat I've ever lived with - although all cats are sui generis, and Pixel has his supporters for the title of funniest cat, unlimited, all times, all universes. But I'm sure Betty Lou would vote for Random Numbers. Theoretically title to Random lay in Brian, since the cat was his bride's wedding present to him, somewhat delayed. But it is silly to talk of title to a cat, and Randie felt that Betty Lou was his personal slave, available at all hours to scratch his skull, cuddle him, and open doors for him, a conviction she supported by her slavish obedience to his tiniest whim.

Betty Lou was Brian's favourite sweetheart for, oh, pretty steadily for three years, then as circumstances brought them together for years and years. Betty Lou was Nelson's wife, Nelson being my cousin who played fast and loose with a lemon meringue pie. My past had come back to haunt me.

Nelson showed up in December of 1906, shortly after Brian had decided to strike out on his own. Brian had met Nelson once, at our wedding, and neither of us had seen him since that day.

He had been fifteen then, no taller than I; now he was a tall, handsome young man of twenty-three, who had earned a master's degree in agronomy at Kansas State University, Manhattan... and was as charming as ever, or more so. I felt that old tingle deep inside me and those cold lightnings at the base of my spine. I said to myself, Maureen, as a dog returneth to its vomit, you are in trouble. The only thing protecting you is that you are seven months gone, big as a house, and as seductive as a Poland China sow. Tell Briney in bed tonight and get him to keep a close eye on you.

Big help! Nelson showed up in the afternoon. Brian invited him to stay for dinner. When he learned that Nelson had not checked into a hotel, he invited Nelson to stay overnight. That was to be expected; at that year and in that part of the country, people never stayed in hotels when homes of kinfolk were at hand. We had had overnighters several times even in our first crackerbox; if you didn't have a spare bed, you made up a pallet on the floor.

I didn't say anything to Brian that night. While I was sure that I had told Briney the lemon-pie story, I wasn't sure that I had mentioned Nelson by name. If I had not-or if Brian had not made the connection - then let sleeping dogs bury their own bones. It was swell to have an understanding and tolerant husband but, Maureen, don't be a greedy slut! Don't stir it up again.

Nelson was still there the next day. Brian was his own boss now, but not overwhelmed by clients; he had no need to leave the house that day other than to check our post office box at the Southside substation. Nelson had arrived in an automobile, a smart four-passenger Reo runabout. Nelson offered to drive Brian to the post office.

He offered to take me, too. I was glad that I had the excuse of a little girl - Nancy was at school; Carol at home - and a baby boy not to accept. I had never ridden in an automobile and, to tell the truth, I was scared. Surely, I expected to ride in one someday; I could see a time coming when they would be commonplace. But I was always more timid when I was pregnant, especially toward the end - my worst nightmare concerned miscarriage.

Brian said, `Can't you get the Jenkins girl to come over for an hour?'

I said, 'Thank you, another time, Nelson. Brian, paying for a baby watcher is an unnecessary expense.'

'Penny pincher.'

'I surely am. As your office manager I intend to pinch every penny so hard that the Indian will scream in pain. Go along, gentlemen; I'll get the breakfast dishes done while you're out.'

They were gone three hours. I could have walked to the post office and back in less time. But, following a corollary in my expanded Ten Commandments, I said nothing and did not mention my frets about accidents. I smiled and said happily, 'Welcome home, gentlemen! Lunch will be ready in twenty minutes.'

Briney said, 'Mo, meet our new partner! Nel is going to justify our letterhead. He's going to teach me farms and ranches and which end of a cow the milk comes out of... and I'm going to teach him how to tell fool's gold from fools.'

'Oh, wonderful!' (One fifth of zero is zero; one sixth of zero is still zero - but it's what Brian wants.) I gave Nelson a quick peck. 'Welcome to the firm!'

'Thank you, Maureen. It should be a good team,' Nelson said solemnly. 'Brian tells me he is too lazy to swing a pick, and you know I'm too lazy to pitch manure... so we'll both be gentlemen and tell other people how to do it.'

`Logical,' I agreed.

'Besides, I don't own a farm and I haven't been able to find a job as a county agent - or even as the boy who opens the mail for a county agent. I'm looking for a job to let me support a wife. Brian's offer is heaven sent.'

`Brian is paying you enough to support a wife?' (Oh, Briney!)

'That's just it,' Brian answered. 'I'm not paying him anything. That's why we can afford to hire him.'

`Oh.' I nodded in agreement. Seems a fair arrangement. Nelson, after a year, if your performance is still satisfactory, I'll recommend to Brian that we double your wages.'

`Maureen, you always were a dead game sport.'

I did not ask him what he meant by that. I had a bottle of muscatel tucked away, bought by Briney for Thanksgiving. It was full, save for a little used for one toast. I fetched it for that purpose. 'Gentlemen, let us toast the new partnership.'

`Hear, hear!'

So we did and the gentlemen drank and I touched my lips to mine, then Nelson offered another toast: 'Life is short.'

I looked at him, kept surprise out of my face, but answered, 'But the years are long.'

He answered, just as judge Sperling had given it to us:

'Not "While the evil days come not":

`Oh, Nelson!' I spilled my glass. Then I threw myself on him and kissed him properly.

There was no mystery, truly. Nelson was of course eligible on one side of his family; we shared Johnson grandparents (and great-grandparents, although three of four were dead now all past a hundred). My father had written to judge Sperling (I learnt later) and said that it had come to his attention that his sister in law, Mrs James Ewing Johnson of Thebes, née Carole Yvonne Pelletier of New Orleans, had living parents; therefore his nephew Nelson Johnson might be eligible for Howard Foundation benefits, stipulating that he married an eligible.

It took them awhile, as they check health and other things, and, in Nelson's case, that his father had actually died by mischance (drowning) and not through other cause.

Nelson was in Kansas City because Thebes and its environs had no Howard-listed young females. So he was given a list for Kansas City - both Kansas Cities, Missouri and Kansas.

And that's how we met Betty Lou - Miss Elizabeth Louise Barstow Nelson did his final courting - got her pregnant, I mean - under our roof, while Maureen played shut-eye chaperone, a role I would fill repeatedly for my own girls in future years.

This protected me from my own folly - and I felt rather grumpy about it. Nelson had been my personal property before Betty Lou ever set eyes on him. But Betty Lou is a darling; I couldn't stay grumpy. Eventually I had no need to feel grumpy.

Betty Lou was from Massachusetts. She had been attending KU, God knows why - Massachusetts has some adequate schools. But it worked out that we stood in for her parents as they could not come out for her wedding; they were taking care of their parents. Theoretically Nelson and Betty Lou should have gone back to Boston to be married. But they did not want to spend the money. The Gold Panic was getting underway, and, while that would make a boom in Brian's business, as yet it just meant that money was tight.

Her wedding took place in our parlour on 14 February, a blustery cold day. Our new pastor, Dr Draper, tied the knot, I presided over the reception, with too much help from Random Numbers, who was convinced that the party was in his honour.

Then, when Dr and Mrs Draper had left, I went slowly upstairs, with Brian and Dr Rumsey helping me... the first time and almost the last time that I waited long enough for my doctor to arrive.

George Edward weighed seven pounds three ounces.

Chapter 10 - Random Numbers

Pixel went away, wherever it is that he goes, with my first attempt to call for help. Now I can only keep my fingers crossed.

I once heard my beloved friend and shared husband Dr Jubal Harshaw define happiness. `Happiness,' Jubal stated, `lies in being privileged to work hard for long hours in doing whatever you think is worth doing.

`One man may find happiness in supporting a wife and children. Another may find it in robbing banks. Still another may labour mightily for years in pursuing pure research with no discernible result.

`Note the individual and subjective nature of each case. No two are alike and there is no reason to expect them to be. Each man or woman must find for himself that occupation in which hard work and long hours make him happy. Contrariwise, if you are looking for shorter hours and longer vacations and early retirement, you are in the wrong job. Perhaps you need to take up bank robbing. Or geeking in a sideshow. Or even politics.'

For the decade 1907-1917 I was privileged to enjoy perfect happiness by Jubal's definition. By 1916 I had borne eight children. During those years I worked harder and for longer hours than I ever have before or since, and I was bubbling with happiness the whole time save for the fact that my husband was away oftener than I liked. Even that had its compensations, as it made our marriage a series of honeymoons. We prospered, and the fact that Briney was oftenest away when business was best resulted in our never experiencing what the Bard called so aptly: `- the tired marriage sheets.'

Briney always tried to telephone to let me know exactly when he would be home... and then he would tell me: B.i.b.a.w.y.l.o. and I w.w.y.t.b.w.'

Day or night I would do my best to follow his instructions exactly; I would be in bed asleep with my legs open and wait for him to wake me the best way, but I always took the precaution of bathing first and my sleep might be only that I closed my eyes and held still when I heard him unlock the front door. Then as he got into bed with me he might call me by some outlandish name, `Mrs Krausemeyer,' or `Battleship Kate,' or `Lady Pushbottom' - and I would pretend to wake up, and call him anything but Brian - `Hubert' or 'Giovanni' or `Fritz' - and perhaps enquire, still with my eyes closed, whether or not he had placed five dollars on the dresser... whereupon he would scold me for trying to run up the price of tail in Missouri and I would get busier than ever, trying to prove that I was so worth five dollars.

Then, sated but still coupled, we would argue over whether or not I had put on a five-dollar performance. Which could result in tickling, biting, wrestling, spanking, laughing, and another go at it, with much bawdy joking throghout. I delighted in trying to be that duchess in the drawing-room, economist in the kitchen, and whore in the bedroom that is

the classic definition of the ideal wife. Perhaps I was never perfect at it, but I was happiest working hard at all three aspects of that trinity.

Brian also enjoyed singing bawdy songs while coupling, songs with plenty of rhythm to them, a beat that could be matched to the tempo of coition and speeded up or slowed down at will, songs like:

Bang away, my Lulu!
Bang away good and strong!
Oh, what'll I do for a bang away
When my Lulu's dead and gone!

Then endless verses, each bawdier than the last:

My Lulu had a chicken,
My Lulu had a duck.
She took them into bed with her
And taught them how to -
BANG! away my Lulu!
Bang away good and strong!

Until at last Briney couldn't stretch it out any longer and had to spend.

While he was resting and recovering, he might demand of me a bedtime story, wanting to know how I had improved each shining hour with a little creative adultery.

He didn't mean what I may have done with Nelson and or Betty Lou; that was all in the family and didn't count. 'What's new, Mo? Are you getting to be a dead arse in your old age? You, the Scandal of Thebes County? Tell me it's not true!'

Now believe me, friends, between dishes and nappies, cooking and cleaning, sewing and darning, wiping poses and soothing children's tragedies, I didn't have time to commit enough adultery to interest even a young priest. After that ridiculous and embarrassing contretemps with Reverend Zeke I can't recall any illicit bed-bouncing Maureen did between 1906 and 1918 that my husband did not initiate and condone in advance... and not much of that as Briney was if anything even busier than I.

I must have been a great disappointment to Mrs Grundy (several of her lived in our block, many of her went to our church) as, during those ten years leading up to the war that eventually was called World War One or War of the Collapse, First Phase - during that decade I not only tried to simulate the perfect, conservative, Bible-belt lady and housewife, I actually was that sexless, modest, church-oriented creature - except in bed with the door locked, alone or with my husband or, on rare and utterly safe occasions, in bed with someone else but with my husband's permission and approval and usually with his chaperonage.

Besides which, only a robot can stay coupled enough hours out of the year to matter. Even Galahad, tireless as he is, spends most of his time being the leader of Ishtar's best surgical team. (Galahad... Galahad reminds me of Nelson. Not just in appearance; the two are twins in temperament and attitudes - even in body odour now that I think of it. When I get home, I must ask Ishtar and Justin how much of Galahad derives from Nelson. Since we Howards started with a limited gene pool, convergence, along with probability and chance, often comes close to physically reincarnating a remote ancestor in some descendant on Tertius or Secundus.)

Which reminds me of what I did with part of my time and how Random Numbers got his name.

I don't think there was ever a month in the first half of the twentieth century but what both Briney and I were studying something... and usually studying a language besides, which hardly counts; we had to stay ahead of our children. We usually did not study the same thing - Briney did not study shorthand or ballet; I did not study petroleum extraction methods or evaporation control in irrigation. But study we did. I studied because I had been left with a horrid feeling of intellectual coitus interruptos through not being able to go on to college at least through a bachelor's degree, and Brian studied because, well, because he was a Renaissance man with all knowledge his field. According to the Archives my first husband lasted one hundred and nineteen years. It is a cinch bet that he was studying some subject new to him the last few weeks of his life.

Sometimes we studied together. In 1906 he started in on statistics, probability and chance by mail, the ICS school - and here were the books and the lessons in our house, so Maureen did them, too, all but mailing my work in. So we were both immersed in this most fascinating field of mathematics when our kitten, Random Numbers, joined our lives, courtesy of Mr Renwick, driver salesman for the Great Atlantic and Pacific Tea Company.

The kitten was an adorable mass of silver grey fluff and was at first named Fluffy Ruffles through an error in sex; she was a he. But he demonstrated such lightning changes in mood, direction, speed, and action that Brian remarked, `That kitten doesn't have a brain; he just has a skull full of random numbers, and whenever he bangs his head into a chair or ricochets off a wall, it shakes up the random numbers and causes him to do something else.'

So Fluffy Ruffles became Random Numbers or Random or Randie.

As soon as the snow was gore in the spring of '07 we installed a croquet lawn in our back yard. At first it was played by us four adults. (Over the years it was played by everyone.) Then it was four adults and Random Numbers. Every time a ball was hit that kitten would draw his sword and charge! He would overtake the ball and throw himself on it, grabbing it, all four limbs. Imagine, please, a grown man stopping a rolling hogshead by throwing himself around it. Better imagine football pads and a helmet for him.

Random wore no pads; he went into action wearing nothing but fluff and his do-or-die attitude. That ball must be stopped, and it was up to him to do it - Allah il Allah Akbar!

Only one solution - Lock up the cat while playing croquet. But Betty Lou would not permit that.

Very well, add to the roles this special ground rule: anything done to a croquet ball by a cat, good or bad, was part of the natural hazards; you played it that way.

I remember one day when Nelson picked up the cat and cradled it in his left arm, then used his mallet with one hand. Not only did it not help him - Random jumped out of his arm and landed ahead of the bail, causing Nelson to accomplish nothing - but we also convened a special session of the Supreme Croquet Court and ruled that picking up a cat in an attempt to influence the odds was unfair to cats and an offence against nature and must be punished by flogging the villain around the regimental square.

Nelson pleaded youth and inexperience and long and faithful service and got off with a suspended sentence, although a minority opinion (from Betty Lou) called for Nelson to drive to a drugstore and fetch back six ice-cream cones. Somehow the minority opinion prevailed, although Nelson complained that fifteen cents was too heavy a fine for what he had done and the cat should pay part of it.

Eventually Random Numbers grew up, became sedate, and lost his enthusiasm for croquet. But the cat rule remained and was adjudged to apply to any cat, be he resident or travelling salesman, and to puppies, birds, and children under the age of two. At a later time I introduced this rule on to the planet Tertius.

Did I mention the transaction under which I obtained Random Numbers from Mr Renwick? Perhaps I didn't. He wanted to swap a little pussy for a little pussy - that's the, way he expressed it. I walked right into that because I asked what he wanted for the kitten - expecting him to say that there was no charge as the kitten hadn't cost him anything. I did not expect anything else because, while I was aware that some pedigreed cats were bought and sold, I had never actually encountered one. In my experience kittens were always given away, free.

I had not intended ever again to let. Mr Renwick inside the house; I remembered the first time. But I was unexpectedly confronted with a fact: Mr Renwick carrying a cardboard shoebox with a kitten in it. Grab the box and shut the door in his face? Open the box on the front porch when he was warning me that the kitten was eager to escape, and scraping, scrambling sounds confirmed it? Lie to him, tell him, sorry, we have already acquired a kitten?

When the telephone rang -

I wasn't really used to having a telephone. I felt that a ringing telephone meant either bad news or Briney was calling; either way, I had to answer it at once. I said, 'Excuse me!' and fled, leaving him standing in our open door.

He followed me in, through the central hall, and into my sewing-room/offiee/chore room, where I was on the phone. There he put the shoebox down in front of me, and opened it... and I saw this adorable grey kitten while I was talking with my husband.

Brian was on his way home and had called to ask if there was anything I wanted him to pick up.

`I don't think so, dear. But do hurry home; I have your kitten. She's a little beauty, just the colour of a pussy willow. Mr Renwick brought her, the driver for the Great Atlantic and Pacific Tea Company. He's trying to screw me, Briney, in exchange for the kitten... No, I'm quite certain. He not only said so, but he has come up behind me and put his arm around me and is now playing with my breasts... What?... No, I didn't tell him anything of the sort. So do hurry. I won't fight with him, dear, because I'm pregnant. I just give in... Yes, sir; I will. Au 'voir.' I hung up the receiver... although I had thought of using it like a policeman's truncheon. But I truly was unwilling to fight while I had a baby inside me.

Mr Renwick did not let go of me, but when what I was saying penetrated his head, he held still. I turned around in his arms.

'Don't try to kiss me,' I said. 'I don't want to risk so much as a cold while I'm pregnant. Do you have a rubber? A Merry Widow?'

'Uh... Yes.'

'I thought you would have; I'm sure I'm not the first housewife you've tried this with. All right; do please use it, as I don't want to contract a social disease, and neither do you. Are you married?'

'Yes. Christ, you're a cool one!'

'Not at all. I simply won't risk being raped while I'm carrying a baby; that's all. Since you are married, you don't want to catch anything, either, so put on that rubber. How long does it take to drive from 31 st and Woodland?' (Brian had called from 12 th and Walnut, much further away.)

'Uh... Not very long.'

'Then you'd better hurry or my husband will catch you at it. If you really do mean to do this to me:

'Oh, the hell with it!' He abruptly let go of me, turned away and headed for the front door.

He was fumbling with the latch when I called out, `You forgot your kitten!'

'Keep the damned cat!'

That is how I 'bought' Random Numbers.

Raising kittens is fun, but raising children is the most fun - if the children happen to be your own - if you happen to be the sort of person who enjoys bearing and rearing children. For Jubal was right; it is subjective, a matter of one's individual disposition. I had seventeen children on my first go-around and greatly enjoyed rearing all of them - each different, each individual - and I've had more since my rescue and rejuvenation, and have enjoyed them even more because Lazarus Long's household is organised so that taking care of babies is easy for everyone.

But I often find other people's children repulsive and their mothers crashing bores, especially when they talk about their disgusting offspring (instead of listening to me talking about mine). It seems to me that many of those little monsters should have been drowned at birth. They strike me as compelling arguments for birth control. As my father pointed out years ago, I am an amoral wretch... who does not necessarily regard an unfinished human being, wet and soiled and smelly at one end and yelling at the other, as 'adorable'.

In my opinion many babies are simply bad-tempered, mean little devils who grow up to be bad-tempered, mean big devils. Look around you. The sweet innocence of children is a myth. Dean Swift had an appropriate solution for some of them in A Modest Proposal: But he should not Nave limited it to the Irish, as there are many scoundrels who are not Irish.

Now you may be so prejudiced and opinionated that you feel that my children are less than perfect - despite the overwhelming evidence that mine were born with halos and cherubs' wings. So I won't bore you with every time Nancy brought home straight A's on her report cards. Practically every time, that is. My kids are smarter than your kids. Prettier, too. Is that enough? All right, I'll drop the matter. My kids are wonderful to me, and your kids are wonderful to you, and let's leave it at that, and not bore each other.

I mentioned the Panic of 1907 when I told about Betty Lou's marriage to Nelson but at the time I had no idea that a panic was coming. Nor did Brian, or Nelson, or Betty Lou. But history does repeat itself, somewhat and in some ways, and something that happened in early 1907 reminded me of something that happened in 1893.

After the birth of Georgie on Betty Lou's wedding day, I stayed at home as usual, for a while, but as soon as I felt up to moving around, I left my brood with Betty Lou and went downtown. I planned to go by streetcar, was unsurprised when Nelson volunteered to drive me down in his Reo runabout. I accepted and bundled up warm; the Reo was rather too well ventilated; it had an open buggy somewhere in its ancestry.

My purpose was to move my savings account. I had placed it in the Missouri Savings Bank in 1899, when we married and settled in Kansas City, by a draft on the First State Bank of Butler (the booming metropolis of Thebes had no banks), where Father had helped me to open a savings account when we carne back from Chicago. By the time I was married, it had grown to more than a hundred dollars.

Footnote: if I had more than a hundred dollars in a savings account, why did I serve my family fried mush for their evening meal? Answer: do you think I am crazy? In 1906 in the American Middle West, a sure way for a wife spiritually to castrate her husband would be to suggest that he was incapable of keeping food on the table; I didn't need Dr Fraud to tell me that. Males live by pride. Kill their pride and they won't support wives and children. It would be some years before Brian and I would learn to be utterly open and easy with each other. Brian knew that I had a savings account but he never asked me how much I had in it, and I would serve fried mush or do any symbolic equivalent as often as needed before I would buy groceries with my own money. Savings were for a rainy day. We both knew this. If Brian fell ill, had to go to a hospital, I would use my savings as needed. We had no need to talk about it. Meanwhile Brian was the breadwinner; I did not intrude into his responsibility. Nor he into mine.

But what about Foundation moneys? Didn't that hurt his pride? Perhaps it did. It may be indicative to take a look into the future: in the long run every dime we received from ringing the cash register wound up with our children, as each got married. Brian never mentioned to me any such intention. In 1907 it would have been silly to do so.

By early 1907 my savings account had grown to over three hundred dollars, by nickels and pennies and tightest economies. Now that I was working at home and could no longer go to school downtown it seemed smart to me to move my account to a little neighbourhood bank near the southside post office substation. One of us four had to go to our post office box each day; whoever did it could make deposits for me. If ever I had to withdraw money, then that one could be I.

- Nelson parked his runabout on Grand Avenue and we walked around to 920 Walnut. I took my passbook to a teller - did not have to wait; the bank was not crowded - and told the teller that I wanted to withdraw my account.

I was referred to an officer of the bank, over behind the railing, a Mr Smaterine. Nelson put down the newspaper he had been glancing at, stood up. `Difficulty?'

`I don't know. They don't seem to want to let me have my money. Will you come with me?'

`Sure thing.'

Mr Smaterine greeted me politely, but raised his brows at Nelson. I introduced them. `This is Mr Nelson Johnson, Mr Smaterine. He is my husband's business partner.'

`How do you do, Mr Johnson. Please sit down. Mrs Smith, our Mr Wimple tells me that you need to see me about something.'

`I suppose I do. I attempted to withdraw my account. Ht told me that I must see you.'

Mr Smaterine gave a smile that displayed his false teeth. `We are always sorry to lose an old friend, Mrs Smith. Has our service been unsatisfactory?'

`Not at all, sir. But I wish to move my account to a bank closer to my home. It is not too convenient to come all this way downtown, especially in this cold weather.'

He picked up my passbook, glanced at the address in the front, then at the current amount further on. 'May I ask where you propose to transfer your account, Mrs Smith?'

I was about to tell him, when I caught Nelson's eye. He didn't actually shake his head... but I've known him a long time. `Why do you ask that, sir?'

'It is part of a banker's professional duty to protect his customers. If you wish to move your account - fine! But I want to see you go to an equally reliable bank.'

My wild animal instincts were aroused. 'Mr Smaterine, I have discussed this in -detail with my husband' - I had not - and I do not need to seek advice elsewhere.'

He made a tent of his fingers. 'Very well. As you know, the bank can require three weeks notice on savings accounts.'

`But, Mr Smaterine, you yourself were the officer I dealt with when I opened my account here. You told me that that fine print was just a formality, required by the state banking act, but that you personally assured me that any time I wanted my money, I could have it.'

'And so you can. Let's change that three weeks to three days. Just go home and write us a written notice of intent, and three business days later you can close your account'

Nelson stood up, put his hands flat on Mr Smaterine's desk. 'Now just one moment,' he drawled loudly, `did you or did you not tell Mrs Smith that she could have her money any rime she wanted it?'

`Sit down, Mr Johnson. And lower your voice. After all, you are not a customer here. You don't belong here.'

Nelson did not sit down, did not lower his voice. `Just answer yes or no.'

`I could have you evicted.'

`Try it, just try it. My partner, Mr Brian Smith, this lady's husband, asked me to come with Mrs Smith' - Brian had not -'because he had heard that your bank was just a leetle bit reluctant -'

`That's slander! That's criminal slander!'

`- to be as polite to ladies as you are to businessmen. Now - Do you keep your promise to her? Right now? Or three days from now?'

Mr Smaterine was not smiling. `Wimple! Let's have a cheque for Mrs Smith's account'

We all kept quiet while it was made out; Mr Smaterine signed it, handed it to me. 'Please see that it is correct. Check it against your passbook.'

I agreed that it was correct.

'Very well. Just take that to your new bank and deposit it. You will have your money as soon as it clears. Say about ten days.' He smiled again, but there was no mirth in it.

'You said I could have my money now.'

`You have it. There's our cheque.'

I looked at it, turned it over, endorsed it, handed it to him. 'I'll take it now.'

He stopped smiling. 'Wimple!'

They started counting out banknotes. 'No,' I said, 'I want cash. Not paper issued by some other bank.'

'You are hard to please, Madam. This is legal tender.'

'But I deposited real money, every time. Not bank notes.' And I had nickels and dimes and quarters and sometimes pennies. Once in a while a silver cartwheel. `I want to be paid back in real money. Can't you pay me in real money?'

`Of course we can,' Mr Smaterine answered stiffly. 'But you will find, ah, over twenty-five pounds of silver dollars quite cumbersome. That's why bank certificates are used for most transactions.'

`Can't you pay me in gold? Doesn't a great big bank like this one carry any gold in its vaults? Fifteen double eagles would be ever so much easier to carry than would be three hundred cartwheels,' I raised my voice a little and projected it. `Can't you pay me in gold? If not, where can I take this to change it for gold?'

They paid in gold, with the odd change in silver.

Once we were headed south Nelson said, `Whew! What bank, out south do you want? Troost Avenue Bank? Or Southeast State?'

'Nellie, I want to take it home and ask Brian to take care of it.'

'Huh? I mean, yes, Ma'am. Right away:

`Dear, something about this reminds me of 1893. What do you remember about that year?'

`Eighteen ninety-three... Let me see. I was nine and just beginning to notice that girls are different. Uh, you and Uncle Ira went to the Chicago Fair. When you got back I noticed that you smelled good. But it took another five years to get you to notice me, and I had to slide a pie under you to manage it?

'You always were a bad boy. Never mind my folly in '98; what happened in '93?'

`Hmm... Mr Cleveland started his second term. Then banks started to fail and everybody blamed it on him. Seems a bit unfair to me - it was too soon after he was sworn in. The Panic of'93, they called it'

`So they did and my father did not lose anything in it, for reasons he described as pure dumb luck.'

`Nor did my mother, because she always did her banking in a teapot on the top shelf.'

'Father accidentally did something like that. He left Mother a four-month allowance, in cash, in four sealed envelopes, each with a date. He took with him cash, in gold, in a money belt. And he left money behind - whatever it was beyond what we needed - in a lockbox, again in gold.

`Nelson, he told me later that he had not guessed that banks were about to fail; he did it just to annoy Deacon Houlihan - Deacon Hooligan, Father called him. Do you remember him? President of Buder State Bank.'

`No, I guess he died without my permission.'

`Father told me that the Deacon had remonstrated with him for drawing out cash. The Deacon said it was poor business practice. Just leave instructions to pay Mrs Smith - Mother I mean - so much each month. Father should leave his money where it was and use cheques - the modern way to do business.

`Father got balky - he's good at that - and consequently the bank failures never touched him. Nelson, I don't think Father did business with any bank after that. He just kept cash in a lockbox in his surgery. I think. Although with Father one is never sure.'

We had a conference about it when we got home, Brian, me, Nelson, Betty Lou. Nelson told them what had happened. 'Getting money out of that bank was like pulling teeth. This boiled shirt certainly did not want to part with Mo's money. I don't think he would have done so if I had not made a loud, obnoxious nuisance of myself. But that is only partly the point. Mo, tell 'em about Uncle Ira and a similar case.'

I did so. 'Dears, I don't claim to know anything about finance. I'm so stupid that I have never understood how a bank can print paper money and claim that it is just the same as real money. But today felt like 1893 to me... because it is just the sort of thing that happened to Father just before the banks started to fail. He didn't get caught by bank failures because he was balky and stopped using banks. I don't know, I just don't know... but I felt uneasy and decided not to put my egg money back into a bank. Brian, will you keep it for me?'

`Here in the house it could be stolen.'

Nelson said, 'And if it's in a bank, the bank can fail.'

`Are you getting jumpy, Nel?'

`Maybe. Betty Lou, what do you think?'

`I think I'm going to draw out my thirty-five cents and find a Mason jar and bury it in the back yard.' She paused. `And then I'm going to write to my father and tell him what I've done and why. He won't listen - he's a Harvard man. But I'll sleep better if I tell him.'

Brian said, `Some others also we must tell.'

`Who?' said Nelson.

`Judge Sperling. And my own folks.'

`We don't want to shout it from the house tops. That could start a run.'

`Nel, it's our money. If the banking system can't afford to let us draw out our own money and sit on it, then maybe there is something wrong with the banking system.'

`Tsk, tsk. You some kind of an anarchist or something? Well, let's get busy. The first ones in line always get the biggest pieces.'

Brian was so serious about it that he made a trip back to Ohio, expensive though it was for him to travel without a client to pay for it. There he talked to Judge Sperling and to his parents. I do not know details... but neither the Foundation nor Brian's parents were hurt by the Panic of 1907. Later on we all saw the United States Treasury saved by the intervention of J.P. Morgan... who was vilified for it.

In the meantime the assets of Brian Smith Associates were not buried in the back yard... but were locked up in the house, and we started keeping guns.

Correction: so far as I know, that was when we started keeping guns. I may be mistaken.

While Brian went to Ohio, Nelson and I tried a project: articles for trade journals such as Mining Journal, Modern Mining, and Gold and Silver. Brian Smith Associates ran small display advertisements in each issue. Nelson had pointed out to Brian that we could get major advertising free by Brian writing articles for these journals - each of them carried about the same number of pages of articles and editorials as it did of advertisements. So instead of a little bitty one-column three-inch display card-no, not instead of but in addition to - in addition to advertising Brian should write articles. `Lord knows that the stuff they print is dull as ditch water; it can't be hard to write.' So said Nelson.

So Brian tried and the result was dull as ditch water.

Nelson said, `Brian old man, you are my revered senior partner... Do you mind if I take a swing at this?'

'Help yourself. I didn't want to do it, anyhow.'

`I have the advantage of not knowing anything about mining. You supply the facts - you have; I have them in my hand - and I will slide in some mustard.'

Nelson rewrote Brian's sober factual articles about what a mining consultant's survey could accomplish in a highly irreverent style... and I drew little pictures, cartoons, styled after Bill Nye, to illustrate them. Me an artist? No. But I had taken Professor Huxley's advice (A Liberal Education) seriously and had learned to draw. I was not an artist but I was a competent draughtsman, and I stole details and tricks from Mr Nye and other professionals without a qualm without realising that I was stealing.

Nelson's first attempt retitled Brian's rewritten article as 'How to Save Money by Skimping' and featured all sorts of grisly mining accidents - which I illustrated.

The Mining Journal not only accepted it; they actually paid for it, five dollars, which none of us had expected.

Nelson eventually worked it into a deal in which Brian's by-line (ghosted by Nelson) appeared in every issue, and a quarter-page display for Brian Smith Associates appeared in a good spot.

At a later time a twin of that article appeared in the Country Gentleman (the Saturday Evening Post's country cousin) telling how to break your neck, lose a leg, or kill your worthless son-in-law on a farm. But the Curtis Publishing Company refused to dicker. They paid for the article; Brian Smith Associates paid for their display cards.

In January 1910 a great comet appeared and soon it dominated the evening sky in the west. Many people mistook it for Halley's Comet, due that year. But it was not; Halley's Comet came later.

In March 1910 Betty Lou and Nelson set up their own household - two adults, two babies - and Random Numbers had a bad time trying to decide where he lived, at The Only House, or with his slave, Betty Lou. For a while he shuttled between the two households, riding any automobile going his way.

In April 1910 the real Halley's Comet began to be prominent in the night sky. In another month it dominated the sky, its head as bright as Venus and its tail half again as long as the Great Dipper. Then it got too close to the Sun to be seen. When it reappeared in the morning sky in May it was still more magnificent. On is May Nelson drove us out to Meyer Boulevard before dawn so that we could see the eastern horizon. The comet's great tail filled the sky, slanting up from the east to the south, pointing down at the Sun below the horizon, an incredible sight.

But. I got no joy from it. Mr Clemens had told me that he had come in with Halley's Comet and he would go out with, it... and he did, on 21 April.

When I heard - it was published in the Star- I shut myself in our room, and cried.

Chapter 11 - A Dude in a Derby

They took me out of my cell today and led me, cuffed and hoodwinked, into what was probably a courtroom. There they removed the hoodwink and the cuffs... which left me the only one out of step; my guards were hooded and so were the three who (I think) were judges. Bishops, maybe, they were wearing fancy robes with that sacerdotal look.

Other flunkies here and there were also hooded - put me in mind of a Ku-Klux-Klan meeting, so I tried to check their shoes-Father had pointed out to me during the recrudescence of the Man in the twenties that those hooded `knights' showed under their sheets the cracked, scuffed, cheap, and worn-out shoes of the social bottom layer who could manage to feel superior to somebody only by joining a racist secret society.

I could not use that test on these jokers. The three `judges' were behind a high bench. The court clerk (?) had his recording equipment on a desk, his feet under it. My guards were behind me.

They kept me there about two hours, I think. All I gave them was `name, rank, and serial number' -'I am Maureen Johnson Long, of Boondock, Tellus Tertius. I am a distressed traveller, here by misadventure. To all those silly charges: not guilty! I demand to see a lawyer.'

From time to time, I repeated `Not guilty' or stood mote.

After about two hours, judged by hunger and bladder pressure, we had an interruption: Pixel.

I didn't see him come in. Apparently he had come to my cell as usual, failed to find me, and went looking - found me.

I heard behind me this `Cheerlup!' with which he usually announces his arrival; I turned and he jumped into my arms, started head bumping and purring, while demanding to know why I wasn't where I was supposed to be.

I petted him and assured him that he was a fine cat, a good boy, da kine!

The middle ghost behind the bench ordered: `Remove that animal:

One of the guards attempted to comply by grabbing Pixel.

Pixel has absolutely no patience with people who do not observe correct protocol. He bit the guard in the fleshy pare of his left thumb, and got him here and there with his claws. The guard tried to drop him; Pixel did not let go.

The other guard tried to help - now two wounded. But not Pixel.

That middle judge used some quite colourful language, got down and carne around, saying: `Don't you know how to grab a cat?' - and proved at once that he did not. Now three wounded. Pixel hit the deck, running.

I then saw something that had been known to me only through inference, something that none of my friends and family claimed to have seen. (Correction: Athene has seen it, but Athene has eyes everywhere. I mean meat-and-bone people.)

Pixel headed straight for a blank wall at emergency full speed - and just as he seemed to be about to crash headlong into it, a round cat door opened in front of him, he streaked through it, and it dosed instantly behind him.

After a bit, I was returned to my cell.

In 1912: Brian bought an automobile, a car - somewhere during that decade `automobile carriage' changed to- `automobile', and then to `auto', and then to `motor car, or `car' - the ultimate name for the horseless carriage, as it could not get any shorter.

Brian bought a Reo. Nelson's little Reo runabout had proved most durable and satisfactory; after five years of hard wear it was still a good vehicle. The firm used it for

many things, including dusty drives to Galena and Joplin and other towns in the white metals area, and records were kept and Nelson was paid mileage and wear-and-tear.

So when Brian decided to buy a car for his family he bought another Reo, but a family car, a five-passenger touring car - a beauty and one that I could see was safe for children, as it had doors and a top - the runabout had neither. Mr R.E. Olds called the 1912 Reo his `Farewell Car', claiming that it was the best car that he could design with his twenty-five years of experience, and the best that could be built, in materials and workmanship.

I believed him, and (far more important) Brian believed him. It may Nave been the `farewell' Reo but, when I left Earth in 1982, Mr Olds' name was still famous in autos, in 'Oldsmobile'.

Our luxury car was quite expensive - more than $1200. Brian did not tell me what he had paid, but the Reo was widely advertised and I can read. But we got a lot for our money; it was not only a handsome, roomy touring car but also it had a powerful engine (35 horsepower) and a top speed of 45 miles per hour. It was never driven at that speed, I think - the speed limit in the city was 17 miles per hour, and the rutted dirt roads outside the city were quite unsuited to such high speed. Oh, Brian and Nelson may have tried it - opened the throttle wide on some freshly graded, level road out in Kansas somewhere; neither of them believed in bothering ladies with things that might worry them. (Betty Lou and I did not believe in worrying our husbands unnecessarily, either; it evens out.)

Brian fitted out the basic car with all sorts of luxuries that would make it pleasant for his wife and family - a windshield, a self-starter, a set of side curtains, a speedometer, a spare tyre, an emergency gas tank, etc. The tyres had demountable rims and only rarely did Brian have to patch a tyre beside the road.

It did have one oddity; its top could predict the weather. Put the top down; it rained. Put the top up; the sun came out.

It was a one-man top, just as the ads claimed. That one man was Briney - assisted by his wife, two half-grown girls, and two small boys, all of us straining and sweating and Brian nobly repressing the language he wanted to use. But eventually Brian figured out how to outsmart that top: leave it up all the time. This ensured good weather for motoring. We surely did enjoy that car. Nancy and Carol named it `Ei Reo Grande'. (Brian and I had lately taken up Spanish; as usual our children were trying to outwit us. Pig Latin never did work; they cracked the code at once. Alfalfa speech did not last much longer.) We had established early in our marriage that some occasions were for the entire family... and some were for Mama and Papa alone - children would stay home and not whine about it, lest the middle justice be invoked. (Mother had used a peach switch; I found that one from an apricot tree worked just as well.)

By 1912, with Nancy a responsible twelve-gear-old girl, it was possible to leave the youngsters at home in her charge for a couple of hours or more in the daytime. (This was before Woodrow was born. Once he was big enough to walk, controlling him called for

an Oregon boot and a morningstar.) This let Briney and me have some precious outings alone - and one of them got me Woodrow, as I have mentioned. Briney delighted in making love outdoors, and so did I; it gave a spice of danger to what was otherwise a sweet but lawful occasion.

But when the whole family went for a joy ride, we piled Nancy and Carol, Brian junior and George, into the roomy tonneau... with Nancy charged with seeing that no one stood up on the back seat (not to save the leather upholstery but to protect the child); I sat up front with Marie, and Brian drove.

The picnic basket and the lemonade jug were carried, in the tonneau, Carol being charged with keeping her brothers out of the picnic. We would drive out to Swope Park, picnic there, and see the zoo animals, then joy ride again after the picnic, perhaps clear out to Raytown or even Hickman Mills... then home with the children falling asleep, to a supper of picnic remains and cups of hot soup.

1912 was a good year, despite a blizzard touted as the 'worst since'86' (it may have been; I don't remember the '86 blizzard too clearly). It was a campaign year, with a noisy three-sided race, Mr Taft running for re-election, Teddy Roosevelt at outs with his former protégé Mr Taft and running on his own `Bull Moose' (Progressive Republican) ticket, and Professor Wilson of Princeton, now Governor of his state, running on the Democratic ticket.

That last was a surprise outcome to an unbelievable month-long convention in which it seemed for days that Missouri's favourite son, Mr Champ Clark, Speaker of the House, would be nominated. Mr Clark led for twenty-seven ballots and had a clear majority on several but not the two thirds majority the Democrats required. Then Mr Wilham Jennings Bryan made a bargain with Dr Wilson, to be named Secretary of State, and Governor Wilson was nominated on the forty-sixth ballot after many of the delegates had gone home.

I followed all this in the Star with deep interest as I had read Dr Wilson's monumental (eighteen volumes!) History of the American People, borrowing it a volume at a time from the Kansas City Public Library. But I did not mention my interest to my husband as I suspected that he favoured Colonel Roosevelt.

The election day was on the fifth but we did not learn the outcome at once - three days I think it was. Woodrow was born Monday afternoon the eleventh at 3.0 p.m., and arrived squalling. Betty Lou midwifed me; as usual I was too fast for my doctor and this time Briney was at work, as I had told him that it couldn't be sooner than the end of that week.

Betty Lou said, `Have you picked a name for this one?'

I said, 'Yes. Ethel.'

She held the baby up. `Take another look; that name doesn't match this tassel; better cave it. Why don't you name him after our new President? That should give him a running start.'

I don't remember what I said as Brian arrived about then, Betty Lou having telephoned him. She greeted him at the door with, `Come meet Woodrow Wilson Smith, President of , the United States in 1952.'

Sounds good.' Brian marched into our bedroom, imitating a brass band. The name stuck; we registered it with the Foundation and with the County.

When I thought it over, the name pleased me. I wrote a note to Dr Wilson, telling him of his namesake and saying that I was praying for the success of his administration. I received back, first, a note from Mr Patrick Tumulty, acknowledging my letter and saying that it was being brought to the attention of the President Elect 'but you will understand, Madam, that recent events have flooded him with mail. It will be several weeks before all of it can be answered personally.'

Shortly after Christmas I did receive a letter from Dr Wilson, thanking me for having honoured him in the naming of my son. I framed it and had it for years. I wonder if it is still in existence somewhere on time line two?

The 1912 Presidential campaign had been fought on the issue of the high cost of living. The Smith family was not suffering but prices, food prices especially, were indeed rising - while as usual the farmers were complaining that they were not receiving even cost-of-production prices for what they grew. This may well have been so - I recall that wheat was less than a dollar a bushel.

But I did not buy wheat by the bushel; I bought food at a local grocery store and from my huckster and milkman and so forth. Again Brian asked me if I needed a raise in household allowance.

'Possibly,' I answered. 'We are getting by, but prices are going up. A dozen freshly-gathered eggs cost five cents now, and so does a quart of grade A. The Holsum Bread Company is talking about changing from two sizes at a nickel and a dime to two sizes at ten cents and fifteen cents. Want to bet that this does not mean a raise in price by the pound - I repeat, by the pound, not by the loaf - of at least twenty per cent?'

'Find yourself another sucker, sister; I already bet on the election. I was thinking about meat prices.'

`Up. Oh, just a penny or two a pound, but it goes on. But I've noticed something else. Mr Schontz used to include a soup bone without being asked. And some liver for Random. Suet for birds in the winter. Now those things happen only if I ask for them and, when I do, he doesn't smile. Just this week he said that he was going to have to start charging for

liver as people were beginning to eat it, not just cats. I don't know how I'm going to explain this to Random.'

'Let's keep first things first, my love; my wedding present must be fed. How you behave towards cats here below determines your status in Heaven.'

`Really?'

'That's straight out of the Bible; you can look it up. Have you talked to Nelson about cat food?'

`It would not occur to me to do so. Betty Lou, yes; Nelson, no.'

`Just remember that he is a professional economist concerning the growing and marketing of foodstuffs and he has a handsome sheepskin to prove it. Nel tells me that, starting any time now, cats and dogs are going to have their own food industry - fresh food, packaged food, canned food, special stores or special departments in stores, and national advertising. Big business. Millions of dollars. Even hundreds of millions:

`Are you sure he wasn't joking? Nelson will joke about anything.'

'I don't think he was. He was quite serious and he had figures to back his remarks. You have seen how gasoline powered machinery has been displacing horses, not just here in the city, but on farms - slowly but more each year. So we have out-of-work horses. Nelson says not to worry about those horses; the cats will eat them.'

'What a horrid thought!'

At Brian's urging I worked up a chart that told me how grocery prices were rising. Fortunately I had thirteen years of exact records of what I had spent on food, what items, how much per pack, or pound, or dozen, etc. Briney had never required me to do it but it matched what my mother had done and it truly was a great help to me during those years of pinching every penny to know just what return I had received in food for each cent I had spent.

So I worked up this big chart, then figured out what a year's ration was, per person, as if I were feeding an army - so many ounces of flour, so many ounces of butter, sugar, meat, fresh vegetables, fresh fruits - not much for canned goods as I had learned, early on, that the only economical way to get canned goods was by canning stuff myself.

Eventually I produced a curve, the cost of a ration for one adult, 1899-1913.

It was a fairly smooth curve, trending steadily up, and with inflexure upwards. There were minor discontinuities but, on the whole, it was a smooth first-order curve.

I looked at that curve and it tempted me. I got down my old text for analytical geometry, from Thebes High School, measured some ordinates, abscissas, and slopes - plugged in the figures and wrote down the equation.

And stared at it. Had I actually derived a formula by which food prices could be predicted? Something the big brains with Ph.D.s and endowed chairs could not agree on?

No, no, Maureen! There is not a crop failure on there, not a war, not any major disaster. Not enough facts. Figures don't lie, but liars figure. There are lies, damned lies, and statistics. Don't make too much stew from one oyster.

I put my analytical work away where no one would find it. But I kept that chart. I did not use it for prediction but I did keep plotting that curve because it let me go to Briney and show him exactly why I needed a larger allowance, whenever I did - instead of waiting until it reached the fried mush situation. I did not hesitate to ask because Brian Smith Associates were prosperous.

I was no longer secretary-bookkeeper of our family firm; I had relinquished that status when Nelson, Betty Lou, and our business office had all moved out of the house together, two years earlier. No friction between us, not at all, and I had urged them to stay. But they wanted to be on their own and I understood that. Brian Smith Associates took an office near 31 st and Paseo, second floor, over a haberdashery, a location near the Troost Avenue Bank and the PO substation. It was a good neighbourhood for an office outside the downtown financial district. The Nelson Johnsons had their first home of their own about a hundred yards south on a side street, South Paseo Place.

This meant that Betty Lou could handle the records and go to the bank and pick up the mail, while still taking care of her two children, i.e., the back room of the company's `palatial suite' was converted into a day nursery.

Yet I was only twenty minutes away and could relieve her if she needed me, straight down 3ist by trolley car, good neighbourhoods st both ends, where I need not feel timid even after dark.

We continued this way until 1915, when Brian and Nelson hired a downy duckling fresh out of Spaulding's Commercial College, Anita Boles. Betty Lou and I continued to keep an eye on the books and one of us would be in the office if both men were out of town, as this child still believed in Santa Claus. But her typing was fast and accurate. (We had a new Remington now. I kept my old Oliver at home - a loyal friend, grown feeble.)

So I continued to know our financial position. It was good and got steadily better. Brian accepted points in lieu of full fee several times in the years 1906-1913; five of these enterprises had made money and three had paid quite well: a reopened zinc mine near Joplin, a silver mine near Denver, and a gold mine in Montana... and Briney was just cynical enough that he paid freely under the table to keep a close check on both the silver mine and the gold mine. He told me once, `You can't stop high-grading. Even your dear

old grandmother can be tempted when gold ore gets so heavy that you can simply pick it up and know that it is loaded. But you can making stealing difficult if you are willing to pay for service.'

By 1911 there was plenty of money coming in, but I could not tell where much of it was going - and I would not ask Briney. It came in, it showed in the books; Nelson drew out some of it, Brian drew out more of it. Some of it wound up in my and in Betty Lou's hands to support our two households. But that did not account for all of it. The firm's cheque account was simply an aid to bookkeeping, a means to pay Anita and to pay by cheque other expenses; it was never allowed to grow larger than was needed for those purposes.

It was many years before I learned more than that.

On 28 June 1914 in Sarajevo, Serbia, the heir to the throne of the Austro-Hungarian Empire was assassinated. He was Archduke Franz Ferdinand, an otherwise useless piece of royalty, and to this day I have never been able to understand why this event could cause Germany to invade Belgium a month later. I read carefully all the newspapers at the time; I studied all the books I could lay hands on since, and I still can't see it. Sheer folly. I can see why, by a sort of insane logic, the Kaiser would attack his first cousin in St Petersburg - a network of `suicide-compact' alliances.

But why invade Belgium?

Yes, yes, to get at France. But why get at France at all? Why go out of your way to start wars on two fronts? And why do it through Belgium when that would drag in the one nation on Earth with a navy big enough to bottle up the German High Seas Fleet and deny it the high seas?

I heard my father and my husband talking about these matters on 4 August 1914. Father had come over for dinner but it was not a merry occasion - it was the day of the invasion of Belgium and there had been extras out on the streets.

Brian asked, `Beau-père, what do you think about it?'

Father was slow to answer. `If Germany can conquer France in two weeks, Great Britain will drop out.'

'Well?'

'Germany can't win that fast. So England will come in. So it will be a long, long war. Write the ending yourself.'

`You mean we will be in it.'

`Be a pessimist and you will hardly ever be wrong. Brian, I know little or nothing about your business. But it is time for all businesses to get on a war footing. What do you deal in that is bound to get involved?'

Briney said nothing for several moments. `All metals are war materials. But... Beau-père, if you have some money you want to risk, let me point out that mercury is indispensable for munitions. And scarce. Mostly they mine it in Spain. A place called Almaden.'

`Where else?'

`California. Some in Texas. Want to go out to California?'

`No. Been there. Not my taste. I think Ml go back to my digs and get a letter off to Leonard Wood. Damn it, he made the switch from medical corps to line officer- he ought to be able to tell me how I can do it.'

Briney looked thoughtful. `I don't want to be in the engineers again, either. I don't belong there.'

`You'll be a pick-and-shovel soldier again if you wait and join up here.'

'How's that?'

'The old Third Missouri is going to be reorganised as an engineer regiment. Wait around long enough and they'll hand you a shovel:

I kept my best unworried mask on, and kept on knitting. It felt like the end of April, 1898.

The European War dragged along, horribly, with stories of atrocities in Belgium and of ships being sunk by German submarine boats. One could feel a division building up in America; the sinking of the Lusitania in May 1915 brought the dichotomy sharply to the fore. Mother wrote from St Louis about the strong sentiment there for the Central Powers. Her parents, my Grandpa and Grandma Pfeiffer, apparently took it for granted that all decent people supported `the Old Country' in this struggle - this, despite the fact that Grossvater's parents had come to America in 1848 to get away from Prussian Imperialism, along with their son, who was just the right age to be conscripted if they had not emigrated. (Grandpa was born in 1830.)

But now it was `Deutschland Über Alies' and everybody knew that the Jews owned France and ran everything there, and if those American passengers had minded their own business and stayed home where they belonged, out of the war zone, they wouldn't have been on the Lusitania - after all, the Emperor had warned them. It was their own fault.

My brother Edward in Chicago reported much the same sentiment there. He did not sound pro-German himself, but he did express a fervent hope that we would stay out of a war that wasn't any of our business.

This was not what I heard at home. When President Wilson made his famous (infamous?) speech about the sinking of the Lusitania, the `too proud to fight' speech, Father carne over to see Brian and sat there, smouldering like a volcano, until all the children were in bed or elsewhere out of earshot. Then he used language that I pretended not to hear. He applied it mainly to the cowardly tactics of the Huns but he saved a plentiful portion for that 'pusillanimous Presbyterian parson' in the White House. `Too proud to fight! What sort of talk is that? It requires pride in order to fight. A coward slinks away with his tail between his legs. Brian, we need Teddy Roosevelt back in there!'

My husband agreed.

In the spring of 1916 my husband went to Plattsburg, New York, where the previous summer General Leonard Wood had instituted a citizens training camp for officer candidates - Brian had been disappointed not to be able to attend it in ages, and planned ahead not to miss it in 1916. Ethel was born while Brian was away, through some careful planning of my own. When he returned at the end of August, I had the property back in shape and ready to welcome him, i.b.a.w.m.l.o., so that he could w.m.t.b.w. - and 'Mrs Gillyhooley' did her best to be worth more than five dollars.

I suspect that I was, as my biological pressure was far up past the danger line.

It was the longest dry spell of my married life, in part because I was thoroughly chaperoned at home. At Brian's request Father lived with us while Brian was away. No harem guard ever took his duties more seriously than Father did. Brian had often chaperoned me as a shut-eye sentry; protecting me from the neighbours, not from my own libidinous nature.

Father included protecting me from himself. Yes, I tested the water. I had known way back when I was still virgo intacta how thoroughly incestuous were my feelings toward my father. Furthermore I was certain that he was just as moved by me.

So about ten days after Brian drove away, when my animal nature was crawling up on me, I arranged it so that I missed saying goodnight to Father, then came into his room right after he had gone to bed, dressed in a low-cut nightgown and a not too opaque peignoir-freshly bathed and smelling good ('April Showers', a euphemism) - and said that I had come in to say goodnight, which he echoed. So I leaned over to kiss him, exposing my breasts and producing a wave of that sinful scent.

He pulled his face back. 'Daughter, get out of here. And don't come around me again half naked.'

'All naked, perhaps? Mon cher papa, je t'adore.'

`You shut t'door... behind you.'

`Oh, papa, don't be mean to me. I need to be cuddled. I need to be hugged.'

`I know what you need but you are not going to get it from me. Now get out.'

`What if I won't? I'm too big to spank.'

He sighed. `So you are. Daughter, you are an enticing and amoral bitch, we both know it, we have always known it. Since I can't spank you, I must warn you. Get out this instant... or I will telephone your husband right now, tonight, and tell him that he must come home at once as I am unable to carry out my responsibilities to him and to his family. Understand me?'

'Yes, sir.'

`Now get out.'

'Yes, sir. May I make a short statement first?'

'Well - make it march.'

`I did not ask you to couple with me but if you had - if we had dope so, it would have done no harm; I am pregnant.'

`Irrelevant '

`Let me finish, please, sir. Ages ago, back when you were requiring me to work out my own personal commandments, you defined for me the parameters of prudent adultery. I have conformed meticulously to your definition, for it turned out that my husband's values in this matter match yours exactly.'

`I am pleased to know that... but, possibly, not pleased that you told me. Did your husband specifically authorise you to tell me that?'

`Uh... No, sir. Not specifically.'

`Then you have told me a bedroom secret without the consent of the other person affected by the secret. Materially affected, as it is his reputation at risk as well as yours. Maureen; you have no right to place another person at risk without his knowledge and consent and you know it.'

I kept quiet a long, cold moment. `Yes. I was wrong. Goodnight, sir.'

`Goodnight, my darling daughter. I love you.' .

When Brian returned, he told us that he would be going back to Plattsburg again in 1917 - if we were not already at war by then. `They want some of us to get there early and turn

instructor to help train the new ones with no military experience... and if I will, I go from second to first lieutenant in a hurry. No promise in writing. But that's the policy. Beau-père, can you be here next year? Why don't you just stay on? No point in your opening up your flat again, and I'll bet that Mo's cooking is better than the restaurant cooking at that Greek joint under your flat. Isn't it? Careful how you answer.'

`It's somewhat better.'

`"Somewhat!" I'll burn your toast!'

We had a small war on our southern border in 1916; `General' Pancho Villa raided across the border again and again, killing and burning. 'Black Jack' Pershing, of Mindanao fame, who had been jumped by President Roosevelt from captain to brigadier-general, was sent by President Wilson to find and seize Villa. Father had known Pershing when they were both captains in the fight against the Moros; Father thought well of him and was delighted with his meteoric rise (with more to come).

Father pacified a small war at home, for he did stay on with us, and largely took Woodrow out of my hands, with full authority to exercise on Woodrow the low, the middle, and the high justice without consulting either of his parents. Both Brian and I were relieved.

Father took a shine to my sixth child, and that left me free to hold Woodrow as favourite in my heart, with no need or temptation to let it show. (My children were all different, and I liked each one of them differently, just as with other people... but I did my utter best to treat them all with even justice, without any favouritism in act or manner. I tried. Truly I tried.)

At this great distance, more than a century, I think I at last know why my least likeable son was my favourite: because he was most like my father, both in his good points and his bad. My father was by no means a saint... but he was `my kind of a scoundrel'... and my son Woodrow was almost his replica, sixty years younger, the same faults, the same virtues - and the two most stubborn males I have ever met.

Perhaps an unbiased judge might think that we three were 'triplets' - aside from the unimportant fact that we were father, daughter, and daughter's son... and that they each were as emphatically male as I am female (I am so totally every minute a set of female glands and organs, that I can cope with it only by carefully simulating the sort of `lady' approved by Mrs Grundy and Queen Victoria).

But those two males were stubborn. Me? Me stubborn? How could you think such a thing?

Father clobbered Woodrow as necessary (frequently), took over his education as he had taken over mine, taught him to play chess at four, did not need to teach him to read - like Nancy, Woodrow taught himself. It left me free to rear my other, civilised, well-behaved

children with no difficulty and with no need to raise my voice. (Woodrow could have pushed me into being the sort of screaming scold I despise.)

Father's 'adoption' of Woodrow left me more time with my lovely and loving and lovable husband. All too soon it was time for him to leave again for Plattsburg. Then I settled down for a truly dry spell. Nelson had been in town part of the time the year before. But now Brian Smith Associates had moved its physical location to Galena where Nelson was supervising a new mine that Brian had bought into, when his survey showed its worth but its developer needed more capital. Anita Boles had married and left us; our KC office was now just a post office box number, a telephone number transferred back to our house, and a little clerical work I could handle with ease, as my biggest boy, Brian junior, now twelve, picked up the mail from the box on his bicycle each day on his way home from school.

So Nelson, my only utterly safe `relief husband' was too far away... and my father, the puritanical shikepoke, was watching me closely... so Maureen resigned herself to four, five, possibly six months in a nunnery.

Father often spent a couple of hours in the evening at a pool hall he called his `chess club'. On a rainy night at the end of February he surprised me by bringing a stranger home with him.

He thereby subjected me to the greatest emotional shock of my life.

I found myself offering my hand and greeting a young man who matched in every way (even to his body odour, which I caught quite clearly - clean mate, in fresh rut) - a man who was my father as my earliest memory recalled him.

While I smiled and made small talk, I said to myself, `Don't faint. Maureen, you must not faint.'

For I had immediately gone into high readiness to receive a male. This male. This male who looked like my father, thirty years younger. I forced myself not to tremble, to keep my voice low, to treat him exactly like any other welcome guest brought to my house by husband or father or child.

Father introduced him as Mr Theodore Bronson. I heard Father say that he had promised Mr Bronson a cup of coffee, which gave me the respire I needed. I smiled and said, `Yes indeed! For a cold and rainy night. Gentlemen, do be seated' - and fled into the kitchen.

The time I spent in the kitchen, slicing pound cake, dishing up mints, setting out coffee service, cream and sugar, transferring coffee from the kitchen-range coffee-pot into a silver `company' serving-pot - this busy-ness gave me time to pull myself together, not expose my own rut and (I hoped) cover some of my body odour simply by the odours of food and the fact that female clothing in those days was all-encompassing. I hoped that

Father would not notice what I had been sure of, that Mr Bronson felt the same way about me.

I carried in the tray; Mr Bronson jumped up and helped me with it. We had coffee and cake and small talk. I need not have worried about Father; he was busy with an idea of his own. He too had seen the family resemblance... and had formed a theory: Mr Bronson was a by-blow of his brother Edward, killed in a train wreck not long after I was born: Father had us stand up, side by side, then look in the mirror over the mantelpiece together.

Father trotted out this possible theory of Mr Bronson's 'orphan' origin. It was many months before he admitted to me that he suspected that Mr Bronson was not my cousin through my rakehell Uncle Edward, but my half-brother through Father himself.

The talk that night let me, with all propriety and right under my father's nose, tell Mr Bronson that I looked forward to seeing him at church on Sunday and that my husband expected to be home for my birthday and we would expect him for dinner... since it was Mr Bronson's birthday, too!

He left soon after that. I bade Father goodnight and went up to my lonely room.

First I took a bath. I had bathed before supper but I needed another one - I reeked of rut. I masturbated in the tub and my breasts stopped hurting. I dried down and put on a nightgown and went to bed.

And got up and locked my bedroom door and took off my gown and got naked back into bed, and masturbated again, violently, thinking about Mr Bronson, how he looked, the way he smelled, the timbre of his voice.

I did it again and again, until I could sleep.

Chapter 12 - `Hang the Kaiser!'

I'm wondering whether Pixel will come back at all, so disastrous was his last visit.

I tried an experiment today. I called out, `Telephone!' just as I had heard Dr Ridpath do. Sure enough, a hologram face appeared... of a police matron.

'Why are you asking for a telephone?'

`Why not?'

'You don't have telephone privileges.'

`Who says so? If that is true, shouldn't someone have told me? Look, I'll bet you fifty octets that you're right and I'm wrong.',

`Huh? That's what I said.'

`So prove it. I won't pay until you prove it'

She looked puzzled and blinked out. We shall see.

Mr Bronson was at church on Sunday. After the services, at the huddle at the front entrance where church members say nice things to the minister about his sermon (and Dr Draper did preach a fine sermon if one simply suspended critical faculty and treated it as art) - at the door I spoke to him.

'Good morning, Mr Bronson.'

`Good morning, Mrs Smith. Miss Nancy. Fine weather for March, is it not?'

I agreed that ii was, and introduced him to the others of my tribe who were present, Carol, Brian junior, and George. Marie, Woodrow, Richard, and Ethel were at home with their grandfather - I do not think Father ever entered a church after he left Thebes other than to get some friend or relative married or buried. Marie and Woodrow had been at Sunday School but, were, in my opinion, too young for church.

We chatted inanities for a few moments, then he bowed and turned away and so did I. Neither of us showed in any fashion that the meeting had any significance to either of us. His need for me burned with a fierce flame, as did mine for him and we both knew it and neither acknowledged it

Day after day we conducted our love affair wordlessly, never touching, not even a lover's glance, right under my father's eyes. Father told me later that he had had his suspicions - `smelled a rat' - at one point, but that both Mr Bronson and I had behaved with such propriety that Father had had no excuse to clamp down on us. `After all, my darling, I can't condemn a man for wanting you as long as he behaves himself - we both know what you are - and I can't scold you for being what you are - you can't help it - as long as you behave like a lady. Truth is, I was proud of both of you, for behaving with such civilised restraint. It's not easy, I know.'

Through playing chess with my father and, shortly, with Woodrow as well, Mr Bronson managed to see me, en passant, almost every day. He volunteered as assistant Scoutmaster for the troop at our church... then drove Brian Junior and George home after Scout meeting the next Friday night - which resulted in a date with Brian junior for the following afternoon to teach him to drive. (Mr Bronson owned a luxury model Ford automobile, a landaulet, always shining and beautiful.)

The following Saturday he took my five older children on a picnic; they were as charmed by him as I was. Carol confided to me afterwards: `Mama, if I ever get married, Mr Bronson is just the sort of man I want to marry.'

I did not tell her that I felt the same way.

The Saturday after that one Mr Bronson took Woodrow downtown to a Hippodrome Theatre matinee to see the magician Thurston the Great (I would have been delighted to have been invited along; stage magic fascinates me. But I didn't dare even hint with Father watching me.) When Mr Bronson returned the child, asleep in his arms, I was able to invite him inside as Father was with me, lending his sanction to the meeting. Never once during that strange romance did Mr Bronson enter our house without Father being there and then publicly present.

Once when Mr Bronson fetched Brian junior back from a driving lesson, I invited him in for tea. He enquired about Father. Learning that Father was not home, Mr Bronson discovered that he was already late for an appointment. Men are more timid than women... at least in my experience.

Brian arrived home on Sunday 1 April, and on the same day Father left on a short visit to St Louis - to see my mother I assume, but Father never discussed his reasons. I could have wished that Father had stayed at home, so that Brian and I could have taken a little journey to nowhere, while Father guarded the tepee and Nancy did the cooking.

But I said nothing about this to anyone, as the children were as anxious to see their father and visit with him as I was to get him alone and take him to bed. Besides... Well, we no longer had an automobile. Before leaving for Plattsburg this time Brian had sold El Reo Grande.

'Mo,' he had said, last year, leaving in April, it made sense to drive to Plattsburg; I got lots of use out of the Reo there. But only a fool would attempt to drive from Kansas City to upstate New York in February. Last year in April I had to be pulled out of the mud three times; had it been February I simply would not have made it.

'Besides,' Briney had added, with his best Teddy Roosevelt grin, I'm going to buy us a ten-passenger car. Or eleven. Shall we try for eleven?'

We tried for eleven but failed to ring the cash register that time. Briney went off to Plattsburg by train, with a promise to me that when he got back,' he intended to buy the biggest passenger car available - a seven-passenger, if that was the biggest - and what did I think of a closed car this time? A Lexington seven-passenger sedan, for example? Or a Marmon? Or a Pierce-Arrow? Think about it, dear one.

I gave it little thought as I knew that, when the time carne, Brian would make his own decision. But I was glad to know that we were going to have a bigger motor car. A five passenger car is a bit cramped for a family of ten. (Or eleven, when I managed to catch.)

So, when Brian got home on 1 April 1917, we stayed home and did our lovemaking in bed. After all, it isn't necessary to do it in the grass.

That night, when we were tired but not ready to go to sleep, I asked, `When must you return to Plattsburg, my love?'

He was so long in answering that I added, 'Was that an improper question, Brian? It has been so long since '98 that I am unused to the notion of questions that may not be asked.'

'My dearest, you may ask any question. Some I may not be able to answer because the answer is restricted but far more likely I won't be able to answer because a first lieutenant isn't told very much. But this one I can answer. I don't think I'll be going back to Plattsburg. I'm sufficiently sure of it that Ididn't leave anything there, not even a toothbrush:

I waited.

'Don't you want to know why?'

'My husband, you will tell me if it suits you. Or when you can.'

'Maureen, you're too durned agreeable. Don't you ever have any female-type nosiness?'

(Of course I have, dear man - but I get more out of you if I am not nosy!) 'I would like to know.'

'Well... I don't know what the papers here have been saying but the so-called "Zimmerman telegram" is authentic. There is not a chance that we can stay out of the War more than another month. The question is: do we send more troops to the Mexican border? Or do we send troops to Europe? Or both? Do we wait for Mexico to attack us, or do we go ahead and declare war on Mexico? Or do we declare war first on the Kaiser? If we do, do we dare turn our backs on Mexico?'

'Is it really that bad?'

'A lot depends on President Carranza. Yes, it's that bad; I already have my mobilisation assignment. All it takes is a telegram and I'm on active duty and on my way to my point of mobilisation... and it's not Plattsburg.' He reached out and caressed me. `Now forget war and think about me, Mrs Mac Gillicuddy:

'Yes, Clarence.'

Two choruses of `Old Riley's Daughter' - later Brian said, `Mrs Mac, that was acceptable. I think you've been practising.'

I shook my head. `Nary a bit, my love; Father has watched me unceasingly - he thinks I'm an immoral woman who sleeps with other men.'

'What a canard! You never let them sleep. Never. I'll tell him.'

'Don't bother; Father made up his mind about me before you and I ever met. How are the Plattsburg pussies? Tasty? Affectionate?'

'Hepzibah, I hate to admit this but... Well, the fact is.. . I didn't get any. Not any.'
`Why, Clarence!'

`Honey, girl, they worked my tail off. Field instruction and drills and lectures in the daytime, six days a week - and surprise drills on Sundays. More lectures in the evenings and always more book work than we could possibly handle. Stagger to bed around midnight, reveille at six. Feel my ribs; I'm skinny. Hey! That's not a rib!'

`So it isn't; it's not a bone of any sort. Hubert, I'm going to keep you in bed until we get you fatted up and stronger; your story has touched my heart.'

`It's a tragic ore, I know. But what's your excuse? Justin would have offered you a little gentle exercise, I'm certain.'

`Dearest man, I did have Justin and Eleanor over for dinner, yes. But with a house full of youngsters and Father a notorious night owl I didn't even get my bottom patted. Nothing but a few gallant indecencies whispered into my horrified ear.'

'Your what? You should have gone over there.'

`But they live so far away.' It was a far piece even by automobile, an interminable distance by streetcar. We had first met the Weatherals at our new church, the Linwood Methodist, when we moved into our home on Benton Boulevard. But that same year, after we got on friendly but not intimate terms with the Weatherals, they moved far out south into the new J.C. Nichols subdivision, the Country Club district, and there they switched to an Episcopalian church near their new Nome, which put them clear out of our orbit.

Briney and I had discussed them - they both smelled good - but they had moved too far away for much socialising, and they were older than we and clearly quite well to do. All these factors left me a bit intimidated, so I had moved the Weatherals to the inactive file.

Then Brian ran into them again when Justin tried to get accepted for Plattsburg; Justin had given Brian as a reference, which flattered him. Justin was turned down for officer candidate training - a damaged foot, an accident that had maimed him before he learned to walk. He limped but it was hardly noticeable. Brian wrote a letter, urging a waiver; it was not granted. But as a consequence Eleanor had invited us to dinner in January, a week before Brian left for Plattsburg.

A fine big house and even more children than we had - Justin had incorporated into the house design an elegant but expensive idea; Justin and Eleanor occupied not just a master bedroom but the entire upper floor of ore wing, a master suite consisting of a sitting-room (in addition to a formal parlour and a family sitting-room downstairs), a huge bedroom with a pantry and wine safe in ore corner, a bath broken into units; a tub, a shower, and two closets, ore of the latter having in addition to its WC a fixture I had heard of but never seen before: a fountain bidet.

Eleanor helped me try out the latter and I was delighted! Just what Maureen, with her give-away body odour, needed. I told her so, and told her why.

'I think your natural fragrance is delightful,' Eleanor told me seriously, 'and so does Justin.'

'Justin said that about me?'

Eleanor took my face between her hands and kissed me, softly and gently, her mouth slack-not a tongue kiss but not totally dry. 'Justin said that. He said considerably more than that. Dear, he feels enormous attraction to you' - I knew that - 'and so do I. And so I do for your husband. Brian affects me all through. If by any chance you two share our feelings... Justin and I are willing and eager to realise our feelings in acts.'

'You mean a trade-off? All the way?'

'All the way! A fair exchange is no robbery.'

I didn't hesitate. 'Yes!'

'Oh, good! Do you want a chance to consult Brian?'

'Not necessary. I know. He wants to eat you, raw.' I took her face between my palms, kissed her deeply. 'How do we go about this?'

'Whatever is easiest for you, Maureen little love. My sitting-room converts into a second bedroom in only seconds, and it has its own little powder room. So it can be either two couples, or all four of us together.'

'Briney and I don't hide from each other. Eleanor, I have found in the past that, if I simply take my clothes off, it saves time and words.'

Her mouth twitched. 'I've found it so. Maureen, you astound me. I've known you ten years, I think. Back when we still lived on South Benton and we all attended Linwood Boulevard Methodist, Justin and I discussed you two as possible playmates I told Justin that Brian had that look in his eye but I couldn't see any way to crack your armour. The perfect lady, right out of Goday's Lady's Book. Since in order to be safe this sort of

family seduction has to be negotiated between wives, we simply moved you to the Too-Bad list.'

I was unhooking and unbuttoning, while chuckling. 'Eleanor love, I broke my maidenhead at fourteen and I've been in heat ever since. Brian knows it and understands me, and loves me anyhow.'

'Oh, delightful! Sweetheart, I gave my cherry away at twelve to a man four times my age.'

'Then it couldn't have been Justin.'

'Heavens, no!' She stepped out of her drawers; it left her in opera-length hose and evening slippers. I'm ready.'

'So am I.' I was eyeing her and was sorry, Briney hadn't shaved me, as she was as smooth as a grape - Briney was going to love her! Tall, statuesque, blonde.

A few minutes later Justin placed me on the Persian rug in front of the fire in their upstairs sitting-room. Eleanor was beside me, with my husband. She turned her head toward me and smiled and took my hand, as we each received the other's husband.

I've heard formal discussions at salons in Boondock, complete with Stimulator and Interlocutor, debating the ideal number for polymorphous sensuality. There were some who favoured trios, each of the four sorts of all four or any, and some who favoured high numbers, and some who insisted that any odd number could produce maximum pleasure but no even number. Me, I still think that a foursome of families, all loving and lovable, cannot be, beaten. I'm not running down any other combination and I like them all. I'm simply naming what I like best, year-in and year-out.

Later that night Brian telephoned Father and explained that the streets were getting icy; would he mind being zookeeper for us tonight?

Brian looked down at me. 'What was the far-away look in your eye?'

'I was thinking about your favourite girl -'

'You're my favourite girl:

'Favourite blonde girl. Eleanor.'

'Oh. Granted.'

'And your favourite oldest daughter.'

'Something ambivalent there. Positional grammar? Oldest favourite daughter. Favourite oldest daughter. Yes, I guess they both mean Nancy. Continue.'

'News I couldn't put into a letter. Nancy did it.'

'Did what? If you mean she did it with that pimply kid, I seem to recall that you concluded that a year ago. How many times can she stop being a virgin?'

'Briney, Nancy finally decided to tell me. She had a scare and that pimply kid doesn't come here any more, because he wouldn't stop after a rubber broke. So she told Mama. So I douched her and checked her calendar with her and she Game around, just fine three days later, and she stopped being scared. But at last we were women together and we talked. I gave her some hurry-up Father Ira instruction, including the lecture that goes with the Forberg etchings - hey, that thing does have a bone in it after all!'

'What do you expect? You're talking about Nancy's fancy; did you think I could stay limp? While Nancy's pretty fancy is verboten to me, I can dream, can't I? If you can dream about your father, I can dream about my daughter. Go ahead, hon; get to the good parts.'

`Nasty man. Lecher. Brian, don't tempt Nancy unless you mean business or she will rum and sink her fangs into you; she's in an unstable state.

'And now to the good parts. Brian, as we agreed, I told Nancy about the Howard Foundation, and promised that you would talk to her about it, too... and I telephoned Judge Sperling. He referred me to a lawyer here in town, Mr Arthur J. Chapman. Do you know him?'

`I know who he is. Corporation lawyer, never goes into court. Very expensive.'

'And a trustee of the Howard Foundation:

`So I inferred from your remark. Interesting.'

`I called on him, identified myself, and he gave me Nancy's list. For this area, I mean: Jackson and Clay Counties, and Johnson County in Cansas.'

`Good hunting?'

`I think so. On the list is Jonathan Sperling Weatheral, son of your favourite blonde.'

'I'll be a brass-balled baboon!'

Later on that night Brian said, So Ira thinks this city slicker is his brother's woods-colt?'

'Yes. You will think so, too, when you see him. Dear one, he and I look so much alike that you would swear that we are brother and sister.'

'And you have an acute case of flaming drawers about him.'

`That's a mild way of putting it. I'm sorry, dear.'

'What is there to be sorry about? If your interest in sex were so mild that you never thought about any man but your poor, old, tired, worn out - Ouch!' - I had pinched him - `husband, you wouldn't be half as good tail as you are. As it is, you are quite lively, Mrs Finkelstein. I prefer you as you are, good points and bad.'

`Will you sign a certificate to that effect?'

`Certainly. You want it to show to your customers? Darling girl, I slipped the leash on you years ago, as I knew then and know now that you would never do anything that could risk the welfare of our children. You never have, you never will.'

'My record isn't all that good, dearest. What I did with the Reverend Doctor Ezekiel was stupidly reckless. I blush whenever I think of it.'

`Zeke the Geek was your rite of passage, my love. It scared the hell out of you and you'll never take a chance on a second-rater again. That's the acid test for adult adultery, my true love: what sort of person you select with whom to share your escapades. All other factors follow naturally from that choice. This Bronson who may or may not be your cousin: would you be proud to have him here in bed with us tonight? Or would it embarrass you? Would you be happy about it? How does this bloke measure up?'

I thought about Brian's acid test and checked over Mr Bronson in my mind. `Brian, I can't pass judgement. My head is spinning and I haven't any sense about him.'

`Want me to talk to Father Ira about him? Nobody can pull the wool over Ira's eyes.'

`I wish you would. Oh, don't suggest that I want to go to bed with Mr Bronson; it would embarrass Father and he would say Mrrrph! and grunt and stalk out of the room. Besides, he knows it. I can feel it.'

`I can understand that. Of course Ira is jealous of this city slicker, over you. So I'll stay away from that aspect of the subject.'

`Jealous? Father? Over me? How could he be?'

'My love, your great sweetness makes up for your slight stupidness. Ira can be - is - jealous over you for the same reason that I can be jealous over Nancy and her little pink fancy. Because I can't have her. Because Ira wants you himself and can't have you. Whereas I have no need to be jealous over you as I do have you and know that your riches are an inexhaustible bonanza. That beautiful flower between your sweet thighs is

the original horn of plenty; I can share it endlessly with no possibility of diminishing its wealth. But for Ira it's the unattainable, the treasure that can never be reached.'

`But Father can have me any time!'

'Woops! Did you finally get past his guard?'

'No, damn it! He won't give.'

'Oh. Then the situation is unchanged; Ira won't touch you for the same reason I won't touch Nancy - although I'm not dead sure I'm as noble as Ira. You had better warn Nancy to stay covered up and downwind when dealing with her poor, old, frail Pop.'

I'm damned if I'll warn her, Briney. You are the only male in the whole world I am absolutely certain would not hurt our Nancy in any way. If she can get past your guard, I'll cheer her on - I might learn something from her about how to cope with my own chinchy, impossible-to-seduce father.'

'Okay, you redheaded baggage - I'll sniff Nancy and jump you. That'll learn yuh!'

'T'm skeered. Want a giggle? Brian junior wanted to look. Nancy let him.'

'Be damned.'

'Yes. I kept my face straight; I neither laughed nor pretended to be shocked. B. Junior told her that he had never had a chance to see just how girls are different from boys -'

'What nonsense! All our kids have been naked in front of each other from time to time; we brought them up that way.'

'But, dear, he really did have a point. A boy's differences hang right out where they can be seen; a girl's girlishness is mostly inside and doesn't show unless she lies down and makes it show. That is what Nancy did for him. Lay down, pulled up her robe - she was just out of her bath - spread her thighs wide, pulled her lips apart and showed him the baby bole. Probably winked at him with it. Probably enjoyed it herself. I would have... but none of my brothers asked me to.'

'Wench, we haven't found anything yet that you don't enjoy.'

I thought about that. 'I think you're right, Brian. Some things hurt a little but mostly I have a wonderfully good time. Even this frustration over Mr Bronson pleasures me more than it hurts... since I can tell my beloved husband all about it without causing him to stop loving me.'

'Do you want me to tell Ira to lay off? Ask him to give you the shut-eye chaperonage that I would give you?'

'Uh, let's wait until you have sized up Mr Bronson. If you approve of him, I'll have my drawers off in a jiffy. If you don't, I'll continue my best Vestal Virgin act, which is what he has been getting. But, as I told you, my head is in a whirl and my judgement is no good. I need your cool head.'

On Tuesday the Post and the Star each reported that President Wilson had asked the Congress to declare that a state of war exists between the United States of America and the German Empire. Wednesday we waited for the shout of `Extra!' in the street, or for the telephone to ring, or both and neither happened. We required the children to go to school although they did not want to, Brian Junior especially. Woodrow was utterly unbearable; I had to refrain from switching him too often.

On Thursday Father returned home, in a state of tense excitement. He and Brian kept their heads together, and I stayed with them, mostly, while delegating all that I could. Woodrow demanded that his grandfather - or someone - play chess with him, until Father turned him over his knee and walloped him, then make him stand in a corner.

On Friday it happened. War. The extras were on our street just before noon, and my husband was on his way almost at once, after telephoning a brother officer, a Lieutenant Bozell, who picked him up and off they drove to Fort Leavenworth, their M-Day assignment. Brian did not wait for his telegram.

Brian junior and George were home for lunch, waited until their father left - then were late for school for the first time ever. Nancy and Carol came home from their school - Central High School, just a few blocks away - just in time to kiss their father goodbye. I did not ask if they were cutting classes or had school closed early; it did not seem to matter.

Father exchanged salutes with Lieutenant Bozell and with Brian, then headed straight for the streetcar line without coming back into the house. He said to me, 'You know where I'm going, and why. I'll be back when you see me.'

I agreed that I knew. Father had been increasingly restless ever since his request for active duty had been turned down.

I turned everything over to Nancy and went back to bed... for, the second time, as I had impressed Father as baby watcher earlier, so that Brian and I could go back to bed after breakfast; we both guessed that this would be der Tag.

But this time I went to bed just to cry.

About three I got up and Nancy served me tea and milk and toast; I ate some of it. While I was fiddling with it, Father returned home in the most towering rage I had ever seen him in. He offered no explanation. Nancy told him that Mr Bronson had called and had asked for him... and that brought it out of him in a flood.

I think `poltroon' was the mildest term that he used about Mr Bronson. `Pro-German traitor' may have been the bitterest. He did not use profanity, just words of rage and disappointment.

I had great trouble believing it. Mr Bronson a coward? Pro German? But Father was detailed in his account and broken hearted in his response. In my own confused grief - my beloved country, my beloved husband, my secret lover, all the same day - I had to force myself to remember that Father was hit just as hard. His brother's boy - or was Tbeodore Bronson his own son? Father had hinted at the possibility.

I went back to bed, cried some more, then lay there, dry eyed; with this triple ache in my heart.

Father tapped on my door. 'Daughter?'

`Yes, Father?'

`Mr Bronson is on the telephone, asking for you.'

'I don't want to talk to him! Must I?'

'Certainly not. Is there anything you wish me to say to him?,

'Tell him... not to call me. Not to come here. Not to speak to any of my children... now or ever.'

'I'll tell him. With a few words for myself, too. Maureen, his sheer gall amazes me.'

About six Carol brought me a tray. I ate some of it. Then Justin and Eleanor came to see me and I cried on my big sister and they consoled me. Later - I don't know the time but it was after dark. Eight-thirty? Nine? I roused at some commotion downstairs. Shortly my father came up, tapped on the door.

`Maureen? Mr Bronson is here.'

'What?'

`May I come in? I have something to show you.'

I didn't want to let Father in; I hadn't cleaned up and I was afraid Father would notice. But... Mr Bronson here? Here? After what Father had said to him? 'Yes, Father, come in.'

He showed me a piece of paper. I read it; it was a carbon copy of an Army enlistment form... which stated that `Bronson, Theodore' was enlisted at the rank of Private in the National Army of the United States.

`Father, is this some sort of bad joke?'

`No. He's here. That's authentic. He did it.'

I got out of bed. `Father, will you start me a tub? I'll be down quickly.'

`Certainly.'

He went into my bath; I peeled off my gown, went in after him, thanked him. I didn't realise that I was naked in front of him until he looked at me and looked away. 'Ask Nancy to serve him something, please. Is Nancy still up?'

`Everyone is up. Get into that tub, dear; we'll wait for you.'

Fifteen minutes later I went downstairs. I suppose my eyes were red but I was smiling and no longer stunk and I was dressed in Sunday best. I hurried to him and offered my hand. `Mr Bronson! We are all so proud of you!'

I don't remember details of the next hour or two hours or whatever. I sat there in a golden haze of bittersweet happiness. My country was at war, my husband was off to war, but at last I knew the deeper meaning of `better death than dishonour' - I knew now why Roman matrons said, 'With your shield or on it.' Those hours of believing that my beloved Theodore was not what I had believed him to be but a coward who would refuse to defend his country - those hours had been the longest, most hateful hours of my life.

I had not really believed that there were such subhuman creatures. I had never known one. Then to have it rum out simply to be a bad dream, the result of a misunderstanding over words... I've read somewhere that pleasure is relief from pain. Psychologists are a silly lot, mostly, but that night I enjoyed that sort of ecstatic pleasure. Even my fires of libido were banked and, for the time, I did not worry about Briney, so joyed was I that Theodore was indeed what a man to be loved must be: a hero, a warrior.

My big girls did their best to stuff him full and Carol made him a sandwich and wrapped it to take with him. Father was full of man-to-man advice, old soldier to new recruit; my big boys were falling over each other to try to do things for him, and even Woodrow was almost well-behaved. At last they all lined up to kiss him goodbye, even Brian junior, who had given up kissing save for an occasional peck on his mother's cheek bone.

They all went up to bed but Father... and it was my turn.

I have always been of such rugged health that winning testaments for perfect attendance at Sunday School was never any trouble to me - so wasn't it nice that I had two testaments when I needed them? I did not even need to think up a new inscription; what I had written for my husband was right for any Lucasta to any warrior off to the wars:

To Private Theodore Bronson
Be true to self and country.
Maureen J. Smith
April 6, 1917

I gave it to him, saw him read it, then I said, `Father?' He knew what I wanted, a decent amount of privacy.

`No.' (Damn him! Did he really think that I would drag Theodore down on to the rug? With the children awake and only a flight of stairs away?)

(Well, perhaps I would.) 'Then turn your back.'

I put my arms up and kissed Theodore, firmly -, but chastely... then knew that a chaste kiss was not enough to say farewell to a warrior. I let my body grow soft and my lips come open. My tongue met his and I promised him wordlessly that whatever I had was his. 'Theodore... take care of yourself. Come back to me.'

Chapter 13 - `Over There!'

My father, having been refused a return to active duty in the Army Medical Corps, was then turned down again when he tried to enlist as an infantry private (he made the mistake of showing his separation papers... which showed his 1852 date of birth), and then tried to enlist in St Louis with a claimed date of birth of 1872 but was tripped up somehow - and finally did manage to enlist in the Seventh Missouri, an infantry militia regiment formed to replace Kansas City's Third Missouri, which was now the 110th Combat Engineers training at Camp Funston and about to go `Over There'.

This new home guard, made up of the too young, too old, too many dependents, too halt, or too lame, was not fussy about Father's age (sixty-five) in view of his willingness to accept a dull job as supply sergeant and the fact that he needed no training.

I greatly appreciated Father's decision to live with us for the duration. For the first time in my life I had to be the head of the family, and it's really not Maureen's style. I like to work hard and do my best while the key decisions are left up to someone bigger, stronger, and older than I, and with a warm male odour to him. Oh, I'll be a pioneer mother if I must. My great-great-grandmother Kitchin killed three hostiles with her husband's musket after he was wounded -and Father did teach me to shoot.

But I would rather be a womanly woman to a manly one.

Brian was emphatic that I must not let Father dominate me, that I must make the decisions - that I was head of the family. `Use Ira to back you up - fine! But you are boss.

Don't let him forget it, don't let our children forget it, and don't you forget it '

I sighed internally and said, 'Yes, sir.'

Brian junior did nobly when he suddenly found himself in his father's shoes - but twelve is young for that job; it was well that his grandfather had agreed to stay with us. Brian junior and his brother George kept on with their jobs, delivering the Journal and lighting street lamps, and still brought home straight A's. When the summer ended and the weather turned cold, I started getting up at 4.30 a.m. as they did, and served them hot cocoa before they started out. They enjoyed it and it made me feel better as I watched them start off to work before daylight. 1917-18 was a bitter winter; they had to bundle up like Eskimos.

I wrote to Betty Lou every week, and also to Nelson. My beastly, lovable cousin Nelson came home on the Monday following the declaration of War and told Betty Lou, 'Hon, I've found a wonderful way to avoid going into the Army.'

'How? Castration? Isn't that rather drastic?'

'Somewhat At least I think so. Guess again:

'I know! You're going to jail:

'Even better than jaill. I've joined the Marines.'

So Betty Lou was managing our mine. I had no doubt that she could do it; she had been in on every detail from the day we acquired majority ownership. She was not a mining engineer but neither was Nelson. The minority owner was our mining superintendent - not a graduate engineer either but with over twenty-five years of white metals experience.

It seemed to me that it would work. It would have to work. It was 'Root, hog, or die.'

During those war years people all over our beloved country were doing things they had never done before - doing them well or doing them badly, but trying. Women who had never driven even a team of horses were driving tractors, because their husbands had gone to 'Hang the Kaiser!' Student nurses were supervising whole wards because graduate nurses were in uniform. Ten-year-old boys such as my George were knitting squares for blankets for British Tommies and buying Baby Bonds with money earned from newspaper routes. There were dollar-a-year men, and four-minute speakers, and Salvation Army lassies (loved by every serviceman), and volunteers for every sort of special war work, from rolling bandages to collecting walnut shells and peach pits for gas masks.

Meanwhile, what did Maureen do? Nothing much, I suppose. I cooked and kept house for a family of ten, with much help from my four oldest and even some from my eight year-old, Marie. I never missed a Red Cross bandage rolling. I saw to it that my family observed all meatless, wheatless, sweetless day and other economies of scarce foods

decreed by Mr Herbert Hoover... while learning how to make candies and cookies and cakes with sorghum and com syrup and honey (all unrationed) in place of sugar (rationed) as Corporal Bronson's buddies appeared to be capable of eating a whole bakeshop of such things.

Shortly Carol took over this attempt to fill hollow legs; she considered Corporal Bronson 'her soldier'. We all wrote to him, in rotation - and he wrote back, to all of us but especially to Father.

There arose a church-sponsored movement for families to 'adopt' lonely service men. Carol wanted us to adopt Corporal Bronson... so we did, subject to Brian's approval, which came by return mail.

I wrote to my husband every day - and would tear up a letter and start again if, on rereading, I found in it bad news or a flavour of self-pity... which meant that I tore up letters again and again and again until I learned how to write a proper Lucasta letter, one to lift a warrior's morale, not drag him down.

That early in the War Brian was not far away, at Camp Funston, adjacent to Manhattan, Kansas, about a hundred miles west of Kansas City. After three months of not coming home at all Briney started coming home about once a month for short weekends - Saturday afternoons to Sunday evenings - when and if he could arrange to ride with another officer. It was a practical distance for a 44 hour pass (noon Saturday to 8.= a.m. Monday) by automobile, but not for travel by train. In those days trains were ordinarily much faster than automobiles, as there were so few paved roads - none in Kansas that I can remember. There was a direct rail line, the Union Pacific. But on all railroads troop trains had first priority, freight trains heading east had second priority, other freight trains had third priority - and passenger trains could use the rails only when nobody else wanted them. Wartime precedence - Mr McAdoo was strict about it. So Brian's trips home were infrequent as they depended on duty schedules of brother officers with automobiles.

I sometimes wondered whether or not Brian regretted having sold El Reo Grande. But I did not say anything and neither did he. Count your blessings, Maureen! This is wartime and your husband is a soldier. Be glad he is able to come home occasionally and that he is not (yet) being shot at.

The carnage in Europe got worse and worse. In March 1917 the Tsar was overthrown. In November 1917 the Communist Bolsheviki displaced President Kerensky's government, and the Communists immediately surrendered to the Germans.

From then on we were in for it. The German veterans from the Eastern Front were moving by whole divisions to the Western Front at a time when we had landed only a few of our troops in France. The Allies were in bad trouble.

I did not know it. Certainly my children did not. I suspect that they reckoned their father was equal to at least to German divisions.

In May 1918 I was able to tell my husband that we had 'rung the cash register' on his last weekend at home; I was two weeks overdue. Yes, I know that with many women this is not a sure sign - but it is with Maureen. I felt so euphoric about it that I avoided reading the newspapers and just enjoyed being me.

Brian went into Manhattan and telephoned me from there, for privacy. `Is this Myrtle, the Fertile Turtle?'

I answered, not so loud, Claude; you'll wake my husband. No, I won't be fertile again for another eight months.'

'Congratulations! I'll plan on coming home for Christmas; you won't need me sooner than that'

'Now you listen to me, Roscoe; I'm not taking the veil, I'm merely having a baby. And I do have other offers.'

'From Sergeant Bronson, perhaps?'

I caught my breath and did not answer. Presently Brian said, 'What's the matter, love? Children where they can overhear you?'

'No, sir. I've taken the phone into our bedroom and there is no one else upstairs. Beloved, that man is as stubborn as my father. I have invited him here, Father has invited him here, and Carol invites him at least once a week. He thanks us... and then says that he doesn't know when he'll be granted any leave. He's admitted that he is off duty alternate weekends but he says that the actual time on pass is not enough to go that far from camp.'

`That's almost true. Since he doesn't have a car. Since he left his car with Ira. Or with Brian Junior.'

`Pish and tosh. The Weston boy is home every other weekend and he's only a private. I think I'm a woman scorned.

`Nick Weston picks up his son in Junction City and you know why. But don't fret, Mabel; the money's on the table. I saw Carol's favourite soldier just today.'

I reswallowed my heart. `Yes, Briney?'

`I find that I agree with Carol. And with mon beau-père. I already knew that Bronson is as fine a sergeant instructor as we have; I've checked his efficiency marks each week. As for Sergeant Bronson himself, he puts me in mind of Ira. As Ira must have looked at that age.'

'Sergeant Bronson and I look like twins.'

'So you do but on you it looks better.'

'Oh, fiddle! You have always said that I look my best with a pillow over my face.'

'I say that to keep you from becoming too conceited, beautiful. You are gorgeous and everybody knows it, and you look like Sergeant Bronson in spite of it. But he is most like Ira in his personality and in his gung-ho attitude. I fully understand your wish to trip him and beat him to the rug. If you still feel that way. Do you?'

I took a deep breath and sighed it out. 'I do, sir. If our daughter Carol doesn't crowd me out and beat me to it.'

'No, no! By seniority, please; this is wartime. Make her wait her rum.'

'Don't tell Carol it's okay unless you mean it, dear man because she means it.'

'Well, somebody's going to do it to Carol... and I think a lot better of Bronson than I do of that pimply young snot who broke in our Nancy. Don't you?'

'Oh, heavens, yes! But the matter is academic; I have given up all hope of getting Sergeant Bronson to enter this house. Until the War is over, at least.'

'I told you not to fret. A little bird whispered in my ear that Bronson will soon receive a midweek pass.'

'Oh, Brian!' (I knew what a midweek pass meant: orders overseas.)

'Ira was right; Bronson is eager to go Over There, so I put him on the list, a special requisition from Pershing's staff for sergeant instructors. Another little bird let me know that my own request was being acted on favourably. So I expect to be home about the same time. But - Listen closely. I think I can arrange it so that you will have a twenty-four-hour clear shot at him. Can you bring him down in that length of time'?'

'Oh, goodness, Briney!'

`Can-you, or can't you? I've known you to manage it in an hour with just a horse and buggy to work with; today you have at your disposal a guest bedroom with its own bath. What does it take? Cleopatra's barge?'

'Brian, Father supplied that horse and buggy knowing what was up and actively co-operating. But this time he considers it his bounden duty to stand over me with a shotgun. Except that it is a loaded thirty-eight and he would not hesitate to use it.'

'Can't have that; General Pershing wouldn't like it good sergeant instructors are scarce. So I had better brief Ira on the operation plan before I hang up which I must soon; I am running out of nickels and dimes. Is Ira there?'

'I'll get him.'

Sergeant Theodore did get that midweek pass, from just after Retreat on Monday to eight o'clock muster Thursday morning - and at last he did come to Kansas City. At that time the picture shows always included a comedy - John Bunty, Fatty Arbuckle, Charlie Chaplin, or the Keystone Kops. That week I managed to outdo both Fatty Arbuckle and the Keystone Kops in always stepping into a bucket or falling over my feet.

To begin with, that difficult man, Sergeant Theodore, did not show up at our house until late Tuesday afternoon... when Brian had told me that Sergeant Theodore's pass should cause him to arrive at our house by mid-morning at the latest.

'Where have you been? What took you so long?' No, I did not say anything of the sort. I may have felt like saying it... but I had learned the relative merits of honey and vinegar back when I was still a virgin - a long time ago indeed. Instead I took his hand, kissed his cheek, and said in my warmest voice, 'Sergeant Theodore... it is so good to have you home.'

I played Cornelia and her jewels before and during dinner - held my peace and smiled while all my children vied for his attention... including Father who wanted to talk soldier talk with him. At the end of dinner Father suggested (by prearrangement with me) that Staff Sergeant Bronson take me for a spin, and then squelched attempts by the younger children to come along especially Woodrow who wanted both to play chess and to be taken to Electric Park.

So at last Sergeant Theodore and I headed south just at sundown. In 1918 there was very little south ff 39th Street on the east side of Kansas City even though the city line had been pushed clear south to 77th Street in order to include Swope Park. Swope Park had many popular lovers' lanes but I wanted a place much more private - and knew some, as Briney and I searched all the back roads one time and another, looking for what Briney called 'poontang pastures', grassy places private enough to evade the buzzard eye of Mrs Grundy.

All along the east side of Kansas City runs the Blue River.

In 1918 it held many delightful spots - as well as thick bushes, deep mud, chiggers, mosquitoes, and poison ivy; one had to know where to go. If you went south but not too far south, and knew where to cross the tracks of the St Looie and Frisco, you could work your way into a wooded, grassy dell as nice as anything in Swope Park but utterly private, as it was surrounded by river and railroad embankment save for one narrow lane leading into it.

I wanted that particular spot; I was sentimental about it. When in 1912 we had become footloose through Briney's having purchased El Reo Grande, that was the first place Briney had taken me for outdoor loving. That delightful picnic (I had fetched along a lunch) was the occasion on which I became pregnant with Woodrow.

I wanted to receive my new love into me first on that very spot - and then tell my husband about it in every detail, giggling with him over it while we made love. Briney did so enjoy my trips over the fence and always wanted to hear about them before, during, or after our own lovemaking, or all three, as a sauce to encourage us in more and heartier lovemaking.

Brian always told me about his own adventures, but what he liked best was to hear about mine.

So I took Sergeant Theodore to the spot marked X.

Time was short; I had promised Father that I would stay out, at most, only long enough to tumble him, then wait another half or three-quarters of an hour for that wonderful, relaxed second go at it - cal it ten-thirty or eleven. So I should be home about the time you get back from the Armoury, Father.'

Father agreed that my plans were reasonable... including our need for a second engagement if the first one went well.

'Very well, Daughter. lf you have to be later, please telephone so that we won't worry. And... Maureen.'

`Yes, Father?'

`Enjoy it, darling.'

`Oh, mon cher papa, tu es aimable! Je t'adore!'

'Go out there and adore Sergeant Ted. You will probably be his last piece for a long time... so make it a good one! Love you, best of daughters.'

My usual method of letting myself be seduced is to decide ahead of time, create or help create the opportunity, then cooperate with whatever advances the nominal seducer makes. (Contrariwise, if I have decided against it, I simply see to it that no opportunity arises.) That night I did not have time for the ladylike pianissimo protocol. i had just this one chance and only two hours to make it work - and no second chance; Theodore was going overseas. A warrior's farewell had to be now.

So Maureen was not ladylike. As soon as we turned off Benton Boulevard and the gathering dusk had given us some privacy, I asked him to put his arm around me. When

he did so, I reached up, took his hand and placed it on my right breast. Most men understand that.

Theodore understood it. He caught his breath. I said, `We haven't time to be shy, dear Theodore. Don't be afraid to touch me.'

He cupped my breast. 'I love you, Maureen!'

I answered soberly, `We have loved each other since the night we met. We simply could not say so.' I raised his hand, then slid it down the full neck of my dress, felt scalding excitement as his hand touched my breast.

He answered huskily, `Yes. I didn't dare tell you.'

`You would never have told me, Theodore. So I had to be bold and let you know that I feel just as you do. Our turn is just ahead.'

`I think I remember it from bringing your children out here. I'll need both hands to drive that lane'

So I'll let you have your hand back - temporarily. As soon as we are in there and you have stopped the car, I want both your hands on me and all your attention.'

'Yes!'

He drove in, turned his car around and headed out, turned off his lights and stopped his engine, set his hand brake and turned to me. He took me in his arms and we kissed, a fully shared kiss, with our tongues exploring and caressing and talking wordlessly. I was in Heaven. I still think that a totally unrestrained kiss is more intimate than coupling; a woman should never kiss that way unless she intends to couple at once in whatever way be wants her.

Without words I said this to Theodore. As soon as our tongues met I pulled up my skirt, took his hand and put it between my thighs. He still hesitated, so I moved his hand further up.

No more hesitation - All Theodore needed was to be certain that I knew what I wanted and that his best attentions were welcome. He explored me gently, then slipped a finger inside. I let it enter, then squeezed it as hard as I could - and congratulated myself on never having skipped my exercises even a day since Ethel was born, two years earlier. I love to surprise a man with the strength of my vaginal sphincter. My passage is so baby-stretched that, if I did not work endlessly to overcome it, I would be `big as a barn door and loose as a goose' - so says my father, whose advice got me started on this routine years ago.

We were now past all shyness, any turning back. But I had something I had to tell him. I got my tongue back and took my mouth a half-inch from his, chuckled against his mouth.

`Surprised to find that I am not wearing bloomers? I took them off when I went upstairs... for I can't tell my gallant warrior a proper farewell with drawers in the way. Do hold back, beloved soldier mine; you can't harm me, I'm expecting.'

'What did you say?'

`Must I always be the bold one? I am pregnant, Theodore; no possible doubt, I am seven weeks gone. So don't use a rubber on me -'

'I can't, I don't have one.'

'So? Then isn't it nice that you don't need one? But didn't you expect to have me?'

'No. I did not. Not at all.'

'But you're going to have me. You can hardly get out of it now. You'll have me bare, darling, no rubber. Would you like me to be bare all over? I will be if you ask me to. I'm not afraid.'

He stopped to kiss me fiercely. 'Maureen, I don't think you are ever afraid of anything.'

`Oh, yes, I am. I would not dare be alone on 12th Street at night. But afraid of sex and loving? No, not anything I can think of. So help yourself, my darling. If I know how, I'll do it. If I don't, show me and I'll try.' (Theodore, stop talking and take me!)

'This seat is narrow.'

'I hear that the young people take out the back seat and put it on the ground. There is a robe in the back seat, too.'

'Um, yes.'

We got out of his car - and ran into the most confounded Keystone Kops contretemps I have ever experienced.

Woodrow.

My favourite, Woodrow, whom I could happily have throttled at that, moment, was in the back seat, and woke up as I opened the door. Well, I think be woke up; he may have been awake and listening the whole time - memorising any words he did not know, for later investigation - and blackmail.

Oh, that boy! Would the world let him grow up? I wondered.

But what I said, in my happiest voice, was: `Woodrow, you're a scamp! Sergeant Theodore! See who was sleeping in the back seat' I reached behind me and tried to button Tbeodore's breeches.

'Sergeant Ted promised to take me to Electric Park!'

So we went to Electric Park, thoroughly chaperoned.

I wonder if other women have as much trouble getting themselves 'ruined' as I do?

About twenty hours later I was in my own bed, my husband Captain Brian Smith on my right, my lover Captain Lazarus Long on my left. Each had an arm under my neck, each was using his free hand to caress me.

I was saying, 'Brian beloved, when Lazarus completed the ritual by answering, "But not 'While the Evil Days Come Not'," I almost fainted. When he said that he was descended from me - from us, you and me - from all three of us, you and me and Woodrow - I was convinced that I was losing my mind. Or had lost it.'

Briney tickled my right nipple. 'Don't worry about it, Swivel Hips; on a woman it hardly shows. As long as she can still cook. Hey! Stop that.'

I eased up on him. 'Sissy. I didn't do that very hard.'

'I'm in a weakened condition. Captain Long, as I understand it, you decided to reveal yourself - against your own best interests I believe - in order to tell me that I won't get hurt in this war.'

`No, Captain, not that at all.'

Briney sounded puzzled. `I must confess that I don't understand.'

'I revealed that I am a Howard from the future in order to reassure Mrs Smith. She's been worrying herself sick that you might not come back. So I told her that I was certain that you did come back. Since you are one of my direct ancestors, I studied your biographical résumé before I left Boondock. So I knew.'

'Well... I appreciate your motives; Maureen is my treasure. But it is reassuring to me, too.'

'Excuse me, Captain Smith. I did not say that you won't get hurt in this war.'

`Eh? But you just did. So I thought.'

`No, sir. I said that you will come back. You will. But I did not say that you won't get hurt. The Archives in Boondock are silent on that point. You may lose an arm. Or a leg.

Or your eyes. Or even become a basket case; I don't know. I'm sure of just this much: you will live through it and won't lose your testicles and penis, because the Archives show that you two have several more children. Ones you will sire after you come back from France. You see, Captain, the Howard Family Archives are mostly genealogies, with few details otherwise.'

`Captain Long -'

'Better call me "Bronson", sir. Here I'm a staff sergeant; my ship is light-years away and far in the future.'

`Then knock off calling me "Captain" for Pete's sake. I'm Brian; you're Lazarus.'

'Or Ted. Your children call me Uncle Ted or Sergeant Ted. Calling me Lazarus could involve all sorts of explanations.'

I said, 'Theodore, Father knows you are Lazarus and so do Nancy and Jonathan. And so will Carol when you take her to bed. You let me tell Nancy when you took her to bed; my big girls are too close to each other to keep such secrets from each other. So it seems to me.'

`Maureen, I said that you could tell anyone because you would not be believed. Nevertheless each case involves long explanations. But why are you assuming that I am going to take Carol to bed? I did not say that I would. And I have not asked for that privilege.'

I turned my face to the right. `Briney, do you hear this man? Do you see now why it has taken me more than a year to trip him? He didn't offer the slightest objection to screwing Nancy -'

Tm not surprised; neither did I.' My husband leered and licked his lips. `Nancy is special. I told you.'

'You're an old goat, my beloved. I don't believe you've turned down anything female since you were nine -'

`Eight.'

`You're boasting. And untruthful. And Theodore is just as bad. He let me think that he was willing to satisfy Carols greatest ambition once I cleared it with headquarters, meaning you... and I did, and then I told Carol not to despair, that Mama was working on it and it looked hopeful; quite hopeful. And now he acts as if he had never heard of the idea.'

`But, Maureen, I expected Brian to object. And he has:

'Now wait a moment, Lazarus. I did not object. Carol is physically a grown woman and - I have today learned - no longer a virgin... and not surprising; she's a year older than her mother was -'

`More nearly two,' I put in.

`Shut up, you; I'm pimping for our daughter. All I did was lay down some reasonable rules for Carol's protection. Lazarus, you did agree that they were reasonable?'

`Oh, certainly, Captain. I simply refused to accept them. My privilege. Just as it is your privilege to make them. I have accepted that you do not want me to copulate with your daughter Carol other than by your rules. That settles it; I won't touch her.'

`Very well, sir!'

`Gentlemen, gentlemen!' I almost let my voice rise. `You both sound like Woodrow. What are these rules?'

Theodore said nothing.

Brian answered in a pained voice, 'First, I asked him to use a rubber. Didn't matter with you or Nancy; both of you broads are knocked up. He refused. I then -'

`Are you surprised, my darling? I've often heard you refer to it as "washing your feet with your socks on".'

`Yes, but Carol does not need a baby this season. Certainly not a little bastard before she's considered her Howard options. But, Mo, I did concede that Ted is himself a Howard. I simply said that, all right, if Carol got pregnant from giving him a soldier's farewell, I wanted him to promise that he would come back when the war is over and marry Carol and take her and her baby to - What's that you call your planet, Captain? Boondock?'

'Boondock is a city; my home is in its suburbs. The planet is Tellus Tertius, Earth Number Three.'

I sighed. `Theodore, why wouldn't you agree to that? You tell us that you have four wives and three co-husbands. Why wouldn't you be willing to marry our Carol? She is a good cook, and she doesn't eat all that much. And she's very sweet tempered and loving.' I was thinking how dearly I would like to go to Boondock... and marry Tamara. Not that I ever would; I had Briney and our babies to take care of. But even an old woman can dream.

Theodore said slowly, `I abide by my own roles, for my own reasons. If Captain Smith does not trust me with respect to my behaviour toward other people -'

`Not "other people", Captain! A particular sixteen-yearold girl named Carol. I am responsible for her welfare.'

`So you are. I repeat, "other people", be they sixteen-yearold girls or whosoever. You don't trust me without promises; I don't give promises. That ends it and I am sorry the matter ever came up. I did not bring it up. Captain, I did not come here to bed your ladies; I came to say goodbye and thank you to a whole family all of whom had been most generous and hospitable to me. I have not intended to disturb your household. I'm sorry, sir.'

`Ted, don't be so damned stiff-necked. You sound just like my father-in-law when he gets his back up. You have not disturbed my household. You have pleased my wife enormously and for that I thank you. And I know that you were trapped by her; she told me months ago what she intended to do to you if she ever got you alone. This discussion is just over Carol, who has no claim on you. If you don't want her under what I see as minimum protection for her welfare, then let her stick to boys her own age. As she should.'

`Agreed, sir.'

`Damn it; knock off the sirs; you're in bed with my wife. And me.'

`Oh, dear!'

`Mo, it's the only sensible solution.'

`Men! Always doing what you call "sensible" and always so wrong-headed and stubborn! Briney, don't you realise that Carol doesn't give a hoot about promises? She just wants to spread her legs and close her eyes and pope that she catches. If she doesn't catch, a month from now she's going to cry her eyes out. If she does catch, well, I trust Theodore and so does Carol.'

Briney said, `Oh, for God's sake, Mo! Ted, ordinarily she is quite easy to live with.'

Theodore said, `Maureen, you said, "A month from now she's going to cry her eyes out." Do you know her calendar?'

`Why, yes. Well, maybe. Let me think.' My girls kept their own calendars... but old snoopy Mama kept her eyes open, just in case. `Today is Wednesday. If I recall correctly, Carol is doe again three weeks from tomorrow. Why?'

'Do you remember the thumb rule I gave you to ensure, uh, "ringing the cash register" you called it.'

`Yes, indeed. You said to count fourteen days from onset of menses, then hit that day. And the day before and the day after, if possible.'

`Yes, that is how to get pregnant, a thumb role. But it works the other way, too. How not to get pregnant. If a woman is regular. If she is not abnormal in some way. Is Carol regular?'

'Like a pendulum. Twenty-eight days.'

`Brian, stipulating that Maureen's recollection of Carol's calendar is accurate -'

`I would bet on it. Mo hasn't made a mistake in arithmetic since she found out about mo and two.'

` - if so, Carol can't get pregnant this week... and I'll be on the high seas the next time she is fertile. But this week a whole platoon of Marines could not knock her up.'

Briney looked thoughtful. `I want to talk to Ira. If he agrees with you, I'll drop all objections.'

`No.'

`What do you mean "No"? No rules. Relax.'

'No, sir. You don't trust and I don't promise. The situation is unchanged.'

I was ready to burst into tears from sheer exasperation. Men's minds do not work the way ours do and we will never understand them. Yet we can't get along without them.

I was saved from making a spectacle of myself by a knock on the door. Nancy.

`May I come in?'

`Come in, Nance!' Briney called out.

`Come in, dear,' I echoed.

She came in and I thought how lovely she looked. She was freshly shaved that morning, in preparation for a swap that Nancy and Jonathan had asked for - Jonathan into my bed, Nancy into, Theodore's. Theodore had hesitated - afraid of hurting my feelings - but I had insisted, knowing what a treat our Nancy would be for Theodore (and Theodore for Nancy!)

(And Jonathan for Maureen; I was flattered enormously that Jonathan had suggested it.)

Father had taken the rest of my zoo to the Al G. Barnes Circus, playing in Independence - all but Ethel, too young for the circus, too young to notice; I had her crib in my bathroom, safe and in earshot.

That playful swap had gore beautifully and made me think even more highly of my prospective son-in-law. About three o'clock we four, Nancy and Theodore, Jonathan and I, had gathered in 'Smith Field', my big bed, mostly to chat. As Briney often said, 'You can't do it all the time, but there is no limit to how much you can talk about it.'

We four were still lounging in Smith Field, talking and necking, when Brian telephoned - he had just arrived in town, on leave. I told him to hurry home and cued him in family code as to what he could expect. Nancy understood the coded message and looked wide-eyed but said nothing.

Thirty-odd minutes later she closed her eyes and opened her thighs and for the first time received her father - then opened her eyes and looked at Jonathan and me, and grinned. I grinned back at her; Jonathan was too busy to look.

What this world needs is more loving, sweaty and friendly and unashamed.

Then the children had gore downstairs; Nancy had sensed that I wanted time alone with my two men. She took the telephone with her, long cord and all. Now she stood by the bed and smiled at us.

`Did you hear the phone ring? It was Grandpa. He said to tell you that the zoo wagon will arrive - that's your car, Ted-Lazarus darling - will arrive at exactly six-oh-five p. . So Jonathan is bathing and I warned him not to use all the hot water. He left.his clothes up here; I'll take them down to him, then I'll bathe and dress up here. Ted-Lazarus dear, where are your clothes?'

'In the sewing-room. I'll be right down.'

`Cancel that,' Brian said. `Nance, fetch Ted's clothes when you come up, that's my sweet girl. Ted, in this family we spit in their eyes and tell'em to go to hell. You don't need to dress until we do, after the doorbell rings: A husband is all the chaperone a wife needs, and I don't explain to my children why we choose to have a guest upstairs. As for mon beau père, he knows the score and is our shut-eye sentry. If Carol guesses, she won't talk. Thanks, Nancy.'

'Pas de quoi, mon cher père. Papa! Is it true that Ted doesn't have to go back tonight?'

'Ted goes back with me, Sunday night. Special duty, assigned to me - and I sold him, body and soul, to your mother, who may kill him by then -'

`Oh, no!' Both my daughter and I said it.

`Or not, but shell try. Now get along, darling, and ser that door to latch as you close it.'

Nancy did so; my husband turned to me. `Flame Top, it is now five-forty. Can you figure out a way to entertain Ted and me for the next twenty-five minutes?'

I took a deep breath. I'll try.'

Chapter 14 - Black Tuesday

World-as-Myth... Much as I love Hilda, much as I love Jubal and respect his analytical genius, World-as-Myth doesn't explain anything.

As Dr Will Durant would put it, it is an insufficient hypothesis. I studied philosophy under Dr Durant in Kansas City in 1921 and '22, not long after he left the Catholic Church - and turned agnostic, socialist, and benedict, all through sniffing a fourteen-year-old girl half his age.

Dr Durant must have been a disappointment to Mrs Grundy - he married his jailbait sweetheart and stayed married to her till his death in his nineties, with never a breath of scandal. For Mrs Grundy it must have been a case of `Some days it is hardly worth while to listen at keyholes.'

The Church's loss was the World's gain. A horny young teacher's ability to keep his hands off a pretty, smart, and nubile student gave several universes a great teacher in history and philosophy... and gave Maureen her introduction to metaphysics - my greatest intellectual adventure since Father introduced me to Professor Thomas Henry Huxley.

Professor Huxley introduced me to the fact that theology is a study with no answers because it has no subject matter.

No subject matter? That's right; no subject matter whatever - just coloured water with artificial sweetening. `Theo-' = `God' and `-logy' = word(s), i.e., any word ending in `-ology' means `talk about' or 'discussion of' or 'words concerning' or `study of' a subject named in the first part of the word, whether it is 'hippology', or 'astrology', or `proctology', or `eschatology', or `scatology', or something else. But to discuss any subject, it is first necessary to agree on what it is you are discussing. 'Hippology' presents no problem; everybody has seen a horse. 'Proctology' - everybody has seen an arsehole... or, if you have been so carefully brought up that you've never seen one, go down to your city hall; you will find the place full of them. But the subject tagged by the spell-symbol `theology' is a horse of another colour.

`God', or `god', or 'gods' - have you ever seen 'God'? If so, where and when, how tall was She and what did She weigh? What was Her skin colour? Did She have a belly button and, if so, why? Did She have breasts? For what purpose? How about organs of reproduction and of excretion - did She or didn't She?

(If you think I am making fun of the idea of a God fashioned in Man's image or vice versa, you have much to on.)

I will agree that the notion of an anthropomorphic God went out of fashion some time ago with most professional godsmen... but that doesn't get us any nearer to defining the English spell-symbol `God'. Let's consult fundamentalist preachers... because Episcopalians won't even let God into His sanctuary unless He shines His shoes and trims that awful beard... and Unitarians won't let Him in at all.

So let's listen to fundamentalists: `God is the Creator. He Created the World. The existence of the World proves that it was created; therefore there is a Creator. That Creator we call "God". Let us all bow down and worship Him, for He is almighty and His works proclaim His might.'

Will someone please page Dr S. I. Hayakawa? Or, if he is busy, any student who received a B-plus or better in Logic 101 ? I'm looking for someone able to discuss the fallacy of circular reasoning and also the concatenative process by which abstract words can be logically defined by building on concrete words. What is a `concrete' word? It is a spell-symbol used to tag something you can point to and thereby agree on, e.g. `cat', 'sailboat', `ice-skating' - agree with such certainty that when you say 'sailboat' there is no chance whatever that I will think you mean a furry quadruped with retractile claws.

With the spell-symbol `God' there is no way to achieve such agreement because there is nothing to point to. Circular reasoning can't get you out of this dilemma. Pointing to something (the physical world) and asserting that it has to have a Creator and this Creator necessarily has such-and-such attributes proves nothing save that you have made certain assertions without proof. You Nave pointed at a physical thing, the physical world; you have asserted that this physical thing has to have a `Creator'. (Who told you that? What's His mailing address? Who told Him?) But to assert that something physical was created out of nothing - not even empty space - by a Thingamajig you can't point to is not to make a philosophical statement or any sort of statement, it is mere noise, amphigory, sound and fury signifying nothing

Jesuits take fourteen years to learn to talk that sort of nonsense. Southern fundamentalist preachers learn to talk it in much shorter time. Either way, it's nonsense.

Pardon me. Attempts to define `God' cause one to break out in hives.

Unlike theology, `metaphysics' does have a subject, the physical world, the world that you can feel, taste, and see, the world of potholes and beautiful men and railroad tickets and barking dogs and wars and marshmallow sundaes. But, like theology, metaphysics has no answers. Just questions.

But what lovely questions!

Was this world created? If so, when and by whom and why?

How is consciousness (`Me-ness') hooked to the physical world?

What happens to this `Me-ness' when this body I am wearing stops, dies, decays, and the worms eat it?

Why am I here, where did I come from, where am I going?

Why are you here? Are you here? Are you anywhere? Am I all alone?

(And many more.)

Metaphysics has polysyllabic words for all of these ideas but you don't have to use them; Anglo-Saxon monosyllables do just as well for questions that have no answers.

Persons who claim to have answers to these questions invariably are fakers after your money. No exceptions. If you point out their fakery, if you dare to say aloud that the Emperor has no clothes, they will lynch you if possible, always from the highest of motives.

That's the trouble I'm in now. I made the mistake of flapping my loose lower jaw before learning the power structure here... so now I am about to be hanged (I hope it is as gentle as hanging!) for the capital crime of sacrilege.

I should know better. I didn't think anyone would mind (in San Francisco) when I pointed out that the available evidence tended to indicate that Jesus was gay.

But there were cries of rage from two groups: a) gays; b) non-gays. I was lucky to get out of town.

(I do wish Pixel would come back.)

On Friday we got my daughter Nancy and Jonathan Weatheral married. The bride wore white over a peanut-sized embryo that qualified her for Howard Foundation benefits, while the brides mother wore a silly grin that resulted from her private activities that week and the groom's mother wore a quiet smile and a faraway look in her eyes from similar (but not identical) private activities.

I had gone to much trouble to slide Eleanor Weatheral under Sergeant Theodore. To their mutual joy, I know (my husband says that Eleanor is a world-class mattress dancer), but not solely for their amusement. Eleanor is a touchstone, able to detect lies when she is sexually linked and en rapport.

Let's go back two days.

On Wednesday my zoo got home from the circus at 6.05 p.m.; we had a picnic dinner in our back yard at 6.30, the exact timing being possible through Carol's having prepared it in the morning. At sundown Brian lit the garden lights and the younger ones played

croquet while we elders - Brian, Father, Theodore, and I - sat in the garden glider swing and talked.

Our talk started on the subject of human female fertility. Brian told Father that he wanted him to hear something Captain Long had said about the matter.

But I must note first that I had gone to Father's room the night before (Tuesday) after the house was quiet, pledging him a King's X, then told him about a strange story Sergeant Theodore had given me earlier that night, after that silly unplanned visit to Electric Park, a story in which he claimed to be Captain Lazarus Long, a Howard from the future.

Despite my promise of King's X, Father left the door ajar. Nancy tapped on it and we invited her in. She perched on the other side of Father's bed and facing me listened soberly to my repetition.

Father said, 'Maureen, I take it you believe him, time travel and ether ship and all.'

'Father, he knew Woodrow's birth date. Did you tell him?'

'No. I know your policy.'

'He knew your birthday, too, not just the year, but the day and the month. Did you tell him?'

'No, but it's no secret. I've set it down on all sorts of documents.'

'But how would he know where to find one? And he knew Mother's birthday - day, year, and month:

'That's harder. But not impossible. Daughter, as you tell me he pointed out: anyone with access to the Foundation's files in Toledo could look up all of these dates.'

'But why would he know Woodrow's birthday and not Nancy's? Father, he came here knowing quite a bit about al his ancestors - those he claims as ancestors - that is to say, Woodrow and his ancestors but not the birthdays of Woodrow's brothers and sisters.'

'I don't know. If he did have access to judge Sperling's files, he could have memorised just those data needed to back up his story. But the most interesting item is his assertion that the War will end on 11 November, this year. I would have guessed sometime this summer, with bad news for Britain and worse news for France, and humiliation for us... or not earlier than the summer of 1919, with victory for the Allies but a horribly expensive one. If it turns out that Ted is right - 11 November 1918 - then I'll believe him. Ali of it.'

Nancy said suddenly, 'I believe him!'

Father said, 'Why, Nancy?'

'Grandpa, do you remember - No, you weren't here. It was the day war was declared, a year ago. Papa had kissed us goodbye and left. Grandpa, you went out right after Papa left -'

Father nodded. I said, 'I remember.'

` - and, Mama, you had gone up to lie down. Uncle Ted telephoned. Oh, I know that he telephoned later and you talked to him, Grandpa. You... You were mean to him -'

'Nancy, I'm sorry about that.'

'Oh, that was a misunderstanding, we all know that. This was before he talked to you, maybe an hour before, maybe longer. I was upset and crying a bit, I guess, and Uncle Ted knew it... and he told me to stop worrying about Papa, because he - Uncle Ted, I mean - had second sight and could tell the future. He told me that Papa would come home safely. And suddenly I quit worrying and have not worried since - not that way. Because I knew that he was telling the truth. Uncle Ted does know the future... because he is from the future.'

'Father?'

'How can I tell, Maureen?' Father looked terribly thoughtful. 'But I think we must assume as least hypothesis - Occam's Razor - that Ted believes his own story. Which of course does not exclude the hypothesis that he is as loony as a June bug.'

'Grandpa! You know Uncle Ted isn't crazy!'

'I don't think he is. But his story sounds crazy, Nancy, I'm trying to be rational about this. Now don't scold Grandpa; I'm doing the best I can. At worst we'll know in about five months. November eleventh. Which is little comfort to you now, Maureen, but it may make up somewhat for the dirty trick Woodrow played on you. You should have clobbered him, on the spot.'

'Not out in the woods at night, Papa, not a child that young. And now it's too late. Nancy, you remember that spot where Sergeant Theodore took you all on a picnic a year ago? We were there.'

Nancy's mouth dropped open. 'Woodie was with you? Then you didn't - ' She chopped off what she was saying. Father put on his draw-poker face.

I looked from one to the other. 'You darlings! I confided my plans to each of you. But did not tell either of you that I had told the other. Yes, Nancy, I went out there for the precise purpose I told you about: to offer Sergeant Theodore the best warrior's farewell I could

manage, if he would let me. And he was about to let me. And it turned out that Woodrow had hidden in the back seat of the car.'

'Oh, how dreadful!'

'I thought so. So we got out of there quickly and went to Electric Park and never did have the privacy we needed.'

'Oh, poor Mama!' Nancy leaned across Father's legs and. grabbed my head and made mother-hen sounds over me, exactly as I had over her for all those years, whenever she needed sympathy.

Then she straightened up. 'Mama, you should go do it right now!'

'Here? With a house full of children? My dear! No, no!'

'I'll jigger for you! Grandpa! Don't you think she should?'

Father kept quiet. I repeated, 'No, dear, no. Too risky.'

She answered, 'Mama, if you're scared to, here in the house, I certainly am not. Grandpa knows I'm pregnant, don't you, Grandpa? Or I wouldn't be getting married. And I know what Jonathan would say.' She sat up straight and started to get off the edge of the bed. 'I'm going straight down and give Uncle Ted a soldier's farewell. And tomorrow I'll tell Jonathan. And - Mama, I have a message for you from Jonathan. But I'll tell you when I come back upstairs.'

I said, weakly and hopelessly, 'Don't stay down too long. The boys get up at four-thirty; don't get caught by them.'

'I'll be careful. Bye.'

Father stopped her. 'Nancy! Sit back down. You are crowding in on your mother's prerogatives.'

'But, Grandpa -'

'Pipe down! Maureen is going downstairs to finish what she started. As she should. Daughter, I will stand jigger and Nancy can help me if she wishes. But take your own advice; don't stay down too long. If you aren't upstairs by three, I'm coming down to tap on the door.'

Nancy said eageriy, 'Mama, why don't we both go down? I bet Uncle Ted would like that!'

'I'll bet Uncle Ted would like that, too,' Father said grimly, 'but he's not going to get it tonight. If you want to give him a soldier's send off, that's fine. But not tonight, and not until after you have consulted Jonathan. Now git for bed, dear... and you, Maureen, go downstairs and see Ted.'

I leaned over and kissed him and got quietly off the edge of the bed and started to leave. Father said, 'Get along, Nancy; I'll take the first watch.'

She shoved out her lower lip. 'No. Grandpa, I'm going to stay right here and bother you.'

I left, via the sleeping porch and my own room, then went downstairs barefooted and wearing just a wrapper, not stopping to see if Father threw Nancy out. If she had managed to tame Father when I had not been able to manage it in twice her years, I didn't want to know it. Not then. I thought about Theodore instead... so successfully that by the time I quietly opened the door to my sewing-room I was as ready as a female animal can be.

Quiet as I was, he heard me and had me in his arms as I closed the door. I returned his embrace, then let go and shrugged off my wrapper, and reached up to him again. At last, at last I was naked in his arms.

Which led, inevitably, to my sitting with Theodore and Brian and Father in our backyard glider swing after our picnic dinner on Wednesday, listening to a discussion between Father and Theodore, while our young people played croquet around us. At Briney's request, Theodore had repeated his statements about when and how female h. sapiens could and could not get pregnant.

The conversation drifted off from reproduction to obstetrics and they started using ungrammatical Latin at each other - some difference of opinion about the best way to handle a particular sort of birth complication. They became more and more polite to each other the more they differed. I did not have any opinions as birth complications are something 1 only know about from reading, since I have babies about as easily as a hen lays eggs - one big ouch and it's over.

Briney finally interrupted them, somewhat to my relief. I don't even want to hear about the horrible things that can happen if a birthing goes wrong. 'This is all very interesting,'

Brian said, 'but, Ira, may I ask one question? Is Ted a medical doctor, or not? Sorry, Ted.'

Not at all, Brian. My whole story sounds phoney, I know. That's why I avoid telling it.'

Father said, 'Brian, haven't you heard me addressing Ted as "Doctor" for the last thirty minutes? The thing that makes me so angry - so gravelled, rather - is that Ted knows more about the art of medicine than I could ever possibly learn. Yet his shop talk makes me want to go back to the practice of medicine.'

Theodore cleared his throat, sounding just like Father. 'Mrrrph. Dr Johnson -'

'Yes, Doctor?'

'I think my superior knowledge of therapy - correction: my knowledge of superior therapy - bothers you in part because you think of me as being younger than you are. But, as I explained, I simply look young. In fact I am older than you are.'

'How old?'

'I declined to answer that question when Mrs Smith asked it -'

'Theodore! My name is Maureen.' (That exasperating man!)

'Little pitchers with big ears, Maureen,' Theodore said quietly. 'Dr Johnson, the therapy of my time is not harder to learn than is therapy today; it is easier, because less of it is empirical and more of it - most of it - is based on minutely developed and thoroughly tested theory. With correct and logical theory as a framework you could catch up on what new has been learned in jig time, then go quickly into clinical work under a preceptor: You would not find it difficult.'

'Damn it, sir, I'll never have the chance!'

'But, Doctor, that's what I'm trying to offer you. My sisters will pick me up at an agreed rendezvous in Arizona on 2 August 1926, eight years from now. If you wish, I will be delighted to take you with me to my time and my planet, where, if you wish, you can study therapy - I am chairman of the board of a medical school there; no problem. Then you can either stay on Tertius, or return to Earth - to the exact spot and instant that you left, if that is your wish, but with your medical education updated and you yourself rejuvenated... and with renewed zest for life, that being merely a side effect but a fine bonus of rejuvenation.'

Father looked strange, haunted. I heard him murmur, '"- unto an exceeding high mountain, and sheweth him all the kingdoms of the world -"'

Sergeant Theodore answered, '"- and the glory of them". Matthew, four, verse eight. But, Doctor, I am not the. Devil and I am not offering you treasure or power - simply the hospitality of my home as I have enjoyed the hospitality of this home... plus an opportunity for a refresher course if you want it. But you don't have to make up your mind tonight; you have more than eight years for that. You can postpone your decision right up to the last minute. Dora - that's my ship - has ample room.'

I turned and put my hand on Father's arm. 'Father, do you remember what we did in 1893?' I looked across at Ted. 'Father read medicine under a preceptor who never believed in germs. So, after Father had been in practice for many years, he went back to school at Northwestern University in 1893 to learn the latest knowledge about germ

theory and asepsis and such things. Father, this is the same thing - and an incredible opportunity! Father accepts, Theodore - he's just slow to admit what he wants, sometimes.'

'Mind your own business, Maureen. Ted said I could take eight years to answer.'

'Carol would not take eight years to answer. And neither would I! If Brian permitted. If Theodore can bring me back to the same hour and day -'

'I can:

'Would I meet Tamara?'

'Of course.'

'Oh, my! Brian? Just a visit and I come back the same day -'

Theodore put in, 'Brian, you can come with her. A few days or a few months vacation, and back the same day.'

'Uh... Oh, Heavens! Sergeant, you and I have a war to win first. Can we table this till we come back from France?'

'Certainly, Captain:

I don't recall how the talk got around to economics. First, I was sworn to silence about the periodic nature of female fertility... and took the oath with my fingers crossed. Fiddlesticks. Both doctors, Papa and Theodore, pointed out that my mucous membranes had never been invaded by bugs - gonococci and spirochete treponema pallidum and such - because I had been drilled and drilled in `Always use a rubber except when you want a baby', and my girls had been trained the same way. I didn't mention the far more numerous times when I had happily skipped those pesky sheaths because I was pregnant and knew it. Such as the night before. Avoiding disease does not depend on anything as trivial as a rubber purse; it depends on being very, very fussy about your intimates. A woman can catch something bad in her mouth or in her eyes just as quickly as in her vagina - and much easier. Am I going to copulate with a man without kissing him? Let's not be silly.

I can't recall ever using a rubber after Theodore explained exactly how to chart my fertile span. Or ever again failing to ring the cash register when I wished to.

Then I heard, ` - 29 October 1929.'

I blurted, 'Huh? But you said you were leaving in 1926. August second.'

My husband said, 'Pay attention, Carrot Top. There will be a quiz Monday morning.'

Theodore said, 'Maureen, I was speaking of Black Tuesday. That is what future historians will call the greatest stock market crash in all history.'

`You mean like 1907?'

'I'm not sure what happened in 1907 because, as I told you, I studied closely only the history of the decade I planned to spend here - from the gear after the end of this War until shortly before Black Tuesday, 29 October, 1929. That ten years from after the First World War -'

'Hold it! Doctor, you said "First World War - " First?'

'Doctor Johnson, except for this one Golden Age, from 11 November 1918 to 29 October 1929, there are wars all through this century. The Second World War starts in 1939, and is longer and worse than this one. Then there are wars off and on - mostly on - the rest of this century. But the next century, the twenty-first century, is far worse.'

Father said, 'Ted. The day war was declared. You were simply speaking the truth as you saw it. Weren't you?'

'Yes, sir.'

`Then why did you enlist? This isn't your war... Captain Long.'

Theodore answered very softly, 'To regain your respect, Ancestor. And to make Maureen proud of me.'

`Mrrph! Well! I hope that you will never regret it, sir.'

`I never will.'

Thursday was a busy day indeed; Eleanor and I, with the aid of all my older children and all her older children, with much help from Sergeant Theodore as my aide-de-camp ('dog robber' he called it, and so did Father - I declined to let them get my goat), with some help from our spouses and from Father - Eleanor and I mounted a formal church wedding in only twenty-four hours.

Oh, I must admit that Eleanor and I had done spadework ahead of time - guest lists, plans, alerting of minister and janitor and caterer as soon as Brian's first phone call had made it possible, engraving of invitations on Tuesday, envelopes addressed on Wednesday by her two best penmen, invitations delivered by my two boys and two of hers, with RSVP to Justin's office by telephone, etc., etc.

We managed to have the bride dressed correctly and on time because Sergeant Theodore displayed another unexpected talent: ladies' sempstress - no, sempstor - no, I think it must

be ladies' tailor. I had already accomplished my prime purpose of using Eleanor's special telepathic talent by having Theodore drive me to Eleanor's house out south on Thursday morning and there putting my problem to her bluntly - speeding things up by peeling my clothes off the instant the door was locked on El and me in her private apartment, then bringing her up to date - then Eleanor had her maid show Theodore to El's private suite.

Never mind the sweaty details; in another thirty minutes Eleanor reported to me, 'Maureen love, Theodore believes every word of what he has been telling us,' which Theodore countered by pointing out that every Napoleon in every insane asylum believed his own story just as firmly.

'Captain Long,' Eleanor had answered, 'few males have a firm grip on reality; I can't see that it matters. You were telling me the truth as you know it when you told about your home in the future and you were again telling the truth when you told me that you love Maureen. Since I love her, too, I hope to earn some portion of your love. Now, please, if you will let me up - and thank you, sir! you pleasured me immensely.'

It was immediately after that that we ran into a time conflict: how to get Eleanor's wedding dress and Nancy to Eleanor's sempstress at a time when Justin said that Jonathan must fetch Nancy and Brian to Justin's office so that all four could go to City Hall together to obtain the necessary special licence, both principals being under age.

Theodore said, 'Why do we need a sempstress? Eleanor, doesn't that cabinet over there conceal a Singer sewing machine? And why do we need Nancy? Mama Maureen, didn't you tell me that you and Nancy can wear the same clothes?'

I agreed that Nancy and I could (and did) borrow clothes from each other. I'm an inch more in the thighs and about the same bigger in the bust. But, Lazarus, we don't dare touch Eleanor's dress - wait till you see it.'

Although Eleanor was taller and bigger than I, her wedding dress was dose to my size as it had already been cut down once for her daughter Ruth, three inches shorter than her mother. It was a magnificent gown of white satin, lavishly beaded with seed pearls. It had a Belgian lace veil and a ten-foot train. It had originally had mutton-leg sleeves and a derrière cut for a bustle; these had vanished in the alteration for Ruth.

Ali the money in the world could not produce a wedding dress of that quality in the few hours until it would be needed; my Nancy was lucky that her Aunt El was willing to lend it to her.

Eleanor fetched it. Theodore admired it but did not seem intimidated by it. 'Eleanor, let's fit it snugly to Mama Maureen, then there will be just room for its slip under it for Nancy. What other underclothes? Corset? Brassière? Panties?'

I said, 'I've never put a corset on Nancy and she says she's never going to start.'

'Good for Nancy!' agreed Eleanor. 'I wish I never had. Mau, Nancy doesn't need a brassière. What about underpants? Can't wear bloomers with that dress. Both Emery Bird and Harzfeld carry sheer underpants... but they will still make lines under this dress if it is fitted as well as it should be.'

'No pants,' I ruled.

'Every old biddy there will know she's not wearing any,' Eleanor said doubtfully.

I explained in Chaucerian terms my lack of interest in what old biddies thought. 'I'll put round garters on her. She can shift to hose supporters when she changes to leave.'

'At which time she can put on underpants,' Theodore added.

I was startled. `Why, Theodore! I'm surprised. What need has a bride for pants?'

'The tiniest, scantiest, sheerest girl panties that are sold today, I mean - not bloomers. So Jonny can take them off when he gets her there, darling. Symbolic defloration, an old pagan rite. It tells her she's married.'

El and I giggled. 'I must be sure to tell Nancy about that.'

'And I'll tell Jonathan so that he will make it a proper ceremony. Eleanor, let's put Maureen up on that low table and start shoving pins into her. Mama Maureen, are you clean and dry all over? I'm about to turn this dress inside out. Satin shows water marks something 'orrible.'

For the next twenty-five minutes Theodore was very busy, while I held still and Eleanor kept him supplied with pins. Presently El said, 'Lazarus, where did you learn women's clothes?'

'In Paris, about a hundred years from now.'

'I wish I hadn't asked. Are you descended from me? As well as from Maureen?'

'I wish I were. I'm not. But I'm married to three of your descendants - Tamara, Ishtar, and Hamadryad - and co-husband to another, Ira Weatheral. Probably - certainly - other connections, but Maureen was right; I checked the archives only for my own ancestors. I didn't guess that I would meet you, El of the beautiful belly. I'm almost through. Shall I go ahead and make the alterations? Or do we take this to your ladies' sempstress?'

El said, `Maureen? I'm willing to risk the dress; I have confidence in Lazarus - I mean M'sieu Jacques Noir. But I won't risk it for Nancy's wedding without your permission.'

I answered, 'I don't have any judgement about Theodore, or Lazarus, or whatever name he's using today - I mean this stud who's treating me like a dressmaker's dummy. But Sergeant, didn't you tell me you had retailored your breeches yourself? Pegged them?'

'Oui, Madame.'

` "Oui, Madame" my tired back. Where did you leave your pants, Sergeant? You should always know where your pants are.'

'I know where they are!' said El, and fetched them.

`Around the knees, El. Turn them inside out and look.' I joined her in checking Theodore's tailoring. Shortly I said, `El, I can't sec where they were altered.'

'I can. See? The original thread is just barely faded; the thread he used in altering is the same shade as the cloth of the outlets - the cloth that has not been in sunlight.'

I agreed. 'Hmm, yes, once I get it into stronger light. If I look closely.'

El looked up . 'You're hired, boy. Room, board, ten dollars a week, and all the tail you can use.'

Theodore looked thoughtful. 'Well... all right. Though I usually get paid extra for that'

El looked surprised, then laughed merrily, ran to him, and started rubbing tits against his ribs. `I'll meet your terms, Captain. What is your stud fee?'

'I usually get the pick of the litter.'

`It's a deal.'

The wedding was beautiful and our Nancy was dazzlingly lovely in a magnificent dress that fitted her perfectly. Marie was flower girl; Richard was ring bearer, both in Sunday white. Jonathan was (to my surprise) in formal cutaway, ascot in pearl grey with pearl stickpin, grey striped trousers, spats. Theodore was his best man, in uniform; Father was in uniform and wearing his many medals and acting as usher and groomsman; Brian was utterly beautiful in boots and Sam Browne and spurs and sabre and his '98 medals and forest-green jacket and pinks.

Carol was maid of honour and almost as dazzling as the bride in lime-green tulle and her bouquet. Brian junior was the other usher and groomsman and was dressed in his grammar-school graduation suit; brand new only two weeks earlier - double-breasted blue serge and his first long pants and very grown-up in his manner.

George was charged with just one duty, to see to it that Woodrow kept quiet and behaved himself, and was authorised to use force as necessary. Father gave George this instruction

in Woodrow's presence... and Woodrow did behave himself; he could always be counted on to act in his own self interest.

Dr Draper did not indulge in any of the nonsense with which the Reverend Timberly had almost spoiled my wedding; he used the M.E. service straight out of the 1904 Discipline, not a word more, not a word less... and in short order our Nancy was going back down the aisle on her husband's arm to the traditional strains of the Mendelssohn recessional, and I sighed with relief. It had been a perfect wedding, no rough spots whatever, and I thought to myself how dumb founded Mrs Grundy would have been had she seen a majority of the wedding party thirty-six hours earlier, behind locked doors, in a gentle orgy inaugurating Carol's Day.

It was the first celebration of the holiday that would spread at the wave front of the diaspora of the human race: Carol's Day, Carolmas, Carolita's Birthday (it was not!), Fiesta de Santa Carolita. Theodore had told us what it had become (would become) - the midsummer fertility rite for all planets, anywhere. Then he had toasted Carols graduation to womanhood in champagne, and Carol had answered his toast with great seriousness and dignity - and got bubbles up her nose and gagged and coughed and had to be consoled.

I did not know then and do not know now whether or not Theodore granted my second daughter the boon she craved.

All I can say is that I gave them every opportunity. But with Theodore (stubborn, difficult man!) one never knows.

On Saturday afternoon there was a rump session of the trustees of the Ira Howard Foundation, Judge Sperling having come all the way from Toledo for that purpose: Judge Sperling, Mr Arthur J. Chapman, Justin Weatheral, Brian Smith (by unanimous consent), Sergeant Theodore... and me. And Eleanor.

When judge Sperling cleared his throat, I understood the signal and started to withdraw. Whereupon Theodore stood up to leave with me.

There was some backing and filling, but the result was that I stayed and Eleanor stayed because Theodore headed for the door when we did. He did explain that the Howard Families, in their permanent organisation, used absolute equality of the sexes... and, as Howard Chairman in his own time, attending this meeting as a courtesy to the twentieth century Howard organisation, he could not in conscience take part in any Howard meeting from which women were excluded.

Once they got past that hurdle, the meeting simply consisted of Theodore's repeating his prediction of 11 November 1918 as the day the War would end, followed by his prediction of Black Tuesday, 29 October 1929. On being questioned he embellished this latter, with mention of devaluation of the dollar, from twenty dollars to the ounce down

to thirty-five dollars to the ounce. 'President Roosevelt will do this by what amounts to decree, although Congress will ratify it... but this doesn't happen until early in 1933.'

'Just a moment, Sergeant Bronson, or Captain Long, or whatever you call yourself, are you saying that Colonel Roosevelt makes a comeback? I find that hard to swallow. In 1933 he will be, uh -' Mr Chapman stopped to think.

'Seventy-Five years old,' Judge Sperling put it. 'What's so unusual about that, Arthur? I'm older than that, but I have no intention of retiring anytime soon.'

Theodore said, 'No, gentlemen, no. Not Teddy Roosevelt. Franklin Roosevelt. Now assistant secretary to Mr Josephus Daniels.'

Mr Chapman shook his head. 'I find that even harder to believe.'

Theodore answered rather testily, `It does not matter what you believe, Counsellor; Mr Roosevelt will be inaugurated in 1933 and shortly after that he will close all the banks and call in all gold and gold certificates and devalue the dollar. The dollar never does regain its present value. Fifty years later an ounce of gold will fluctuate wildly, from around a hundred dollars an ounce to around a thousand dollars an ounce.'

'Young man,' Mr Chapman pronounced, 'what you describe is anarchy.'

'Not quite. It gets worse. Much worse. Most historians call the second half of this century "The Crazy Years". Socially the Crazy Years start at the end of the next World War. But from a standpoint of the economy the Crazy Years start on Black Tuesday, 29 October 1929. For the rest of this century you can lose your shirt if you don't maintain a strong cash position. But it is a century of great opportunity, too, in almost every field.'

Mr Chapman closed down his face. I could see that he had made up his mind not to believe anything. But Justin and Judge Sperling exchanged some side remarks, then the judge said, `Captain Long, can you tell us what some of these great opportunities will be?'

`I'll try. Commercial aviation both for passengers and for freight. Railroads will be in deep trouble and will not recover. The present picture shows will add sound - talking pictures. Television. Stereovision. Space travel. Atomic power. Lasers. Computers. Electronics of every sort. Mining on the Moon. Asteroid mining. Rolling roadways. Cryonics. Artificial manipulation of genetics. Personal body armour. Sunpower screens. Frozen foods. Hydroponics. Microwave cooking. Do any of you know D. D. Harriman?'

Chapman stood up. `Judge, I move we adjourn.'

'Sit down, Arthur, and behave yourself. Captain, you realise how shocking your predictions are, do you not?'

`Certainly,' Theodore answered.

'The only way I can listen to your words with equanimity is to recall the changes I have seen in my own lifetime. If your prediction as to the day the war ends turns out to be accurate, then I feel that we must take your other predictions seriously. In the meantime, do you have anything more to tell us?'

`I guess not. Two things, maybe. Don't buy on margin after the middle of 1929. And don't sell short if a wrong guess could clean you out.'

'Good advice at any time. Thank you, sir.'

Carol and I and the children kissed them both goodbye on Sunday 30 June then went back inside as Captain Bozell's car drove away, to cry in private.

The news got worse and worse all that summer.

Then in the late fall it began to be apparent that we were gaining on the Central Powers. The Kaiser abdicated and fled to Holland, and then we knew we were going to win. The false armistice came along and my joy was shaded by the realisation that it was not the eleventh of November.

And the real armistice did arrive, right on time, November the Eleventh, and every bell, every whistle, every siren and horn, anything that could make noise all sounded at once.

But not in our household. On Thursday George fetched home from his route the Kansas City Post. In its casualties report it listed as `MISSING IN ACTION - Bronson, Cpl Theo, KCMo'.

Chapter 15 - Torrid Twenties Threadbare Thirties

During the fifty-odd years on my personal time line from my rescue in 1982 to the start of the Time mission which aborted into my present predicament on this planet I spent time equal to about ten years in the study of comparative history, in particular the histories of the time lines that the Circle of Ouroboros attempts to protect, all of which appear to share a single ancestral time line at least through AD 1900 and possibly through to about 1940.

This sheaf of universes includes my own native universe (time line two, code Leslie LeCroix) and excludes the uncounted but far more numerous exotic time lines - universes in which Columbus did not sail for the Indies (or failed to return), ones in which the Viking settlements succeeded and 'America' becomes 'Great Vinland', ones in which the Muscovite empire on the west coast clashes with the Hispanic empire on the east coast (worlds in which Queen Elizabeth dies in exile), other worlds in which Columbus found America already owned by the Manchu emperors - and worlds with histories so exotic

that it is hard to find even a remote ancestral line in common with anything we can recognise.

I am almost certain that I have slipped into one of the exotics... but of a previously unsuspected sort.

I did not spend all my time studying histories; I worked for a living, supporting myself first as a nursing assistant, then as a nurse, then as a clinical therapist, then as a student rejuvenator (all the while going to school), before I shifted careers to the Time Corps.

But it was this study of histories that caused me to think about a career in Time.

Several of the time lines known to 'civilisation' (our name for ourselves) appear to split away about 1940. One cusp at which these splits show is the Democratic National Convention of 1940 at which Mr Franklin Delano Roosevelt either was or was not nominated by the Democratic Party for a third term as President of the United States, then either was or was not elected, then either did or did not serve through to the end of the Second World War.

In time line one, code John Carter, the Democratic nomination went to Paul McNutt... but the election to Republican Senator Robert Taft.

In the composite time lines coded 'Cyrano', Mr Roosevelt had both a third and a fourth term, died in his fourth term and was succeeded by his vice-president, a former Senator from Missouri named Harry Truman. In my own time line there was never a senator by that name but I do remember Brian speaking of a Captain Harry Truman whom he knew in France. `A fighting son of a gun,' Briney called him. `A real buzz saw.' But the Harry Truman whom Brian knew was not a politician; he was a haberdasher, so it seems unlikely that it could be the same man. Briney used to go out of his way to buy gloves and such from Captain Truman. He described him as 'a dying breed - an old-fashioned gentleman.'

In time line two, code Leslie LeCroix, my own native time line and that of Lazarus Long and Boondock, Mr Roosevelt was nominated for a third term in july 1940, then died from a stroke while playing tennis the last week in October, thereby creating a unique constitutional crisis. Henry Wallace, the Democratic nominee for vice-president, claimed that the Electors from the states that went Democratic were bound by law to vote for him for president. The Democratic National Committee did not see it that way and neither did the Electoral College - and neither did the Supreme Court - three different points of view. Four, in fact, as John Nance Garner was President from October on... but had not been nominated for anything and had bolted his party after the July convention.

I will return to this subject as this was the world I grew up in. But note that Mr Roosevelt was stricken `while playing tennis'.

I learned while studying comparative history that in all other time lines but mine Mr Roosevelt had been a poliomyelitis cripple confined to a wheel chair!

The effects of contagious diseases on history are a never ending subject for debate among mathematico-historians on Tertius. I often wonder about one case, because I was there. In my time line Spanish influenza killed 528.000 US residents in the epidemic of the winter of 1918-19, and killed more troops in France than had been killed by shot and shell and poison gas. What if the Spanish flu had struck Europe one year earlier? Certainly history would have been changed - but in what way? Suppose a corporal named Hitler had died? Or an exile who called himself Lenin? Or a soldier named Pétain? That strain of flu could kill overnight; I saw it happen more than once.

Time line three, code Neil Armstrong, is the native world of my sister-wife Hazel Stone (Gwen Campbell) and of our husband Dr Jubal Harshaw. This is an unattractive world in which Venus is uninhabitable and Mars is a bleak, almost airless desert, and Earth itself seems to have gone crazy, led by the United States in a lemming-like suicide stampede.

I dislike studying time line three; it is so horrid. Yet it fascinates me. In this time line (as in mine) United States historians call the second half of the twentieth century the Crazy Years - and well they might! Hearken to the evidente:

a) The largest, longest, bloodiest war in United States history, fought by conscript troops without a declaration of war, without any clear purpose, without any intention of winning - a war that was ended simply by walking away and abandoning the people for whom it was putatively fought;

b) Another war that was never declared - this one was never concluded and still existed as an armed truce forty years after it started... while the United States engaged in renewed diplomatic and trade relations with the very government it had warred against without admitting it;

c) An assassinated president, an assassinated presidential candidate, a president seriously wounded in an assassination attempt by a known psychotic who nevertheless was allowed to move freely, an assassinated leading Negro national politician, endless other assassination attempts, unsuccessful, partly successful, and successful;

d) So many casual killings in public streets and public parks and public transports that most lawful citizens avoided going out after dark, especially the elderly;

e) Public school teachers and state university professors who taught that patriotism was an obsolete concept, that marriage was an obsolete concept, that sin was an obsolete concept, that politeness was an obsolete concept - that the United States itself was an obsolete concept;

f) School teachers who could not speak or write grammatically, could not spell, could not cipher;

g) The nation's leading farm state had as its biggest cash crop an outlawed plant that was the source of the major outlawed drug;

h) Cocaine and heroin called `recreational drugs', felonious theft called 'joyriding', vandalism by gangs called 'trashing', burglary called 'ripping off', felonious assault by gangs called `mugging' and all of these treated as `boys will be boys', so scold them and put them on probation but don't ruin their lives by treating them as criminals;

i) Millions of women who found it more rewarding to have babies out of wedlock than it would be to get married or to go to work.

I don't understand time line three (code Neil Armstrong) so I had better quote Jubal Harshaw, who lived through it. `Mama Maureen,' he said to me, 'the America of my time line is a laboratory example of what can happen to democracies, what has eventually happened to all perfect democracies throughout all histories. A perfect democracy, a "warm body" democracy in which every adult may vote and all votes count equally, has no internal feedback for self-correction. It depends solely on the wisdom and self-restraint of citizens... which is opposed by the folly and-lack of self-restraint of other citizens. What is supposed to happen in a democracy is that each sovereign citizen will always vote in the public interest for the safety and welfare of all. But what does happen is that he votes for his own self-interest as he sees it... which for the majority translates as "Bread and Circuses".

`"Bread and Circuses" is the cancer of democracy, the fatal disease for which there is no cure. Democracy often works beautifully at first. But once a state extends the franchise to every warm body, be he producer or parasite, the day marks the beginning of the end of that state. For when the plebs discover that they can vote themselves bread and circuses without limit and that the productive members of the body politic cannot stop them, they will do so, until the state bleeds to death, or in its weakened condition the state succumbs to an invader - the barbarians enter Rome.'

Jubal shrugged and looked sad. `Mine was a lovely world until the parasites took over.'

Jubal Harshaw also pointed out to me a symptom that, so he says, invariably precedes the collapse of a culture; a decline in good manners, in common courtesy, in a decent respect for the rights of other people.

'Political philosophers from Confucius to the present day have repeatedly pointed this out. But the first signs of this fatal symptom may be hard to spot. Does it really matter when a honorific is omitted? Or when a junior calls a senior by his first name, uninvited? Such loosening of protocol may be hard to evaluate. But there is one unmistakable sign of the collapse of good manners: dirty public washrooms.

'In a healthy society public restrooms, toilets, washrooms, look and smell as clean and fresh as a bathroom in a decent private home. In a sick society -' Jubal stopped and simply looked disgusted.

He did not need to elaborate; I had seen it happen in my own time line. In the first part of the twentieth century right through the thirties people at all levels of society were habitually polite to each other and it was taken for granted that anyone using a public washroom tried hard to leave the place as clean and neat as he found it. As I recall, decent behaviour concerning public washrooms started to slip during World War Two, and so did good manners in general. By the sixties and the seventies rudeness of all sorts had become commonplace, and by then I never used a public restroom if I could possibly avoid it.

Offensive speech, bad manners, and filthy toilets all seem to go together.

America in my own time line suffered the cancer of `Bread and Circuses' but found a swifter way to commit suicide. I don't boast about the difference, as in time line two the people of the United States succumbed to something even sillier than `Bread and Circuses': the people voted themselves a religious dictatorship.

It happened after 1982, so I did not see it - for which I am glad! When I was a woman a hundred years old, Nehemiah Scudder was still a small boy.

The potential for religious hysteria had always been present in the American culture, and this I knew, as my father had rubbed my nose in it from an early age. Father had pointed out to me that the only thing that preserved religious freedom in the United States was not the First Amendment and was not tolerance... but was solely a Mexican stand-off between rival religious sects, each sect intolerant, each sect the sole custodian of the One True Faith - but each sect a minority that gave lip service to freedom of religion to keep its own One True Faith from being persecuted by all the other True Faiths.

(Of course it was usually open season on Jews and sometimes on Catholics and almost always on Mormons and Muslims and Buddhists and other heathens. The First Amendment was never intended to protect such outright blasphemy. Oh, no!)

Elections are won not by converting the opposition but by getting out your own vote, and Scudder's organisation did just that. According to histories I studied at Boondock, the election of 2012 turned out sixty-three per cent of the registered voters (which in turn was less than half of those eligible to register); the True American Party (Nehemiah Scudder) polled twenty-seven per cent of the popular vote... which won eighty-one per cent of the Electoral College votes.

In 2016 there was no election.

The Torrid Twenties... Flaming Youth, the Lost Generation, flappers, cake eaters, gangsters and sawn-off shot-guns and bootleg booze and needled beer. Hupmobiles and

Stutz Bearcats and flying circuses. A joy hop for five dollars. Lindbergh and the Spirit of St Louis. Skirts climbed unbelievably until, by the middle of the decade, rolled stockings permitted bare knees to be seen. The Prince of Wales Glide and the Finale Hop and the Charleston. Ruth Etting and Will Rogers and Ziegfeld's Follies. There were bad things about the Twenties but on the whole they were good years for most people - and they were never dull.

I kept busy as usual with housewifely things of little interest to outsiders. I had Theodore Ira in 1919, Margaret in 1922, Arthur Roy in 1924, Alice Virginia in 1927, Doris Jean in 1930 - and they all had the triumphs and crises that children have, and aren't you glad that you don't have to look at their pictures and listen to me repeating their cute sayings?

In February of 1929 we sold our house on Bentos Boulevard and leased with the option to buy a house near Rockhill Road and Meyer Boulevard - an old farmhouse, roomy but not as modern as our former Nome. This was a hard-nosed decision by my husband who always believed in making every dollar work twice. But he did consult me and not alone because title was vested in me.

`Maureen,' he said to me, 'do you feel like gambling?'

'We always have. Haven't we?'

`Some yes, some no. This time we would tap the pot, shoot the works, shout Banco! If I failed to bring it off, you might have to go out and pound a beat, just to keep a potato soup on the table.'

`I've always wondered if I could make a living that way. Here I am, forty-seven in July -'

`Woops! Your age is now thirty-seven. And I'm forty one.'

`Briney, I'm in bed with you. Can't I be truthful in bed?'

`Judge Sperling wants us to stick to our corrected ages at all times. And Justin agrees.'

`Yes sir. I'll be good. I always wondered if I could make a living as a streetwalker. But how do I find a beat? I understand that a gal can get per eyes scratched out if she just goes out and starts soliciting without finding out who owns that territory. I know what to do in bed, Briney; it's the merchandising of the product that I must learn.'

`Don't be so eager, slippery bottom; it may not be necessary. Tell me... Do you still believe that Ted - Theodore - Corporal Bronson - carne from the future?'

I suddenly sobered. `I do. Don't you?'

'Mo, I believed him as quickly as you did. I believed him before his prophecy about the end of the War proved true. Now I'm asking you this: do you believe in Ted strongly

enough that you are willing to risk every cent we own that his prediction of a collapse in the stock market will be right on the button exactly like his prediction of Armistice Day?'

'Black Tuesday,' I said softly. `29 October. This year.'

'Well? If I take this gamble - and miss - we'll be broke. Marie won't be able to finish at Radcliffe, Woodie will have to scratch for a college education, and Dick and Ethel - well, we'll cross those bridges later. Sweetheart, I'm into this bull market up to my ears... and I propose to get deeper into it on the firm assumption that Black Tuesday takes place on the dot and exactly as Ted said it would.'

'Do it!'

`Are you sure, Mo? If anything goes wrong, we'll be right back to fried mush. Whereas it is not too late to hedge my bets - pull half of it out and stash it away. Gamble with the other half.'

`Briney, I wasn't brought up that way. You remember Father's harness racer Loafer?'

'I saw him a few times. A beautiful beast.'

`Yes. Just not quite as fast as he looked. Father regularly bet on himself. Always on the nose. Never to place or show. Loafer could usually come in second or third... but Father would not bet that way. I've heard him talk to Loafer before a heat, softly, gently: "This time we're going to take 'em, boy! This time we're going to win!" Then later I've heard him say, "You tried, old fellow! That's all I can ask. You're still a champion... and we'll take 'em next time!" And Father would pat him on the neck and Loafer would whinny and nicker to him, and they would comfort each other.'

`Then you think I should bet across the board? For there isn't going to be any next time.'

`No, no! Shoot the works! You believe Theodore and so do I. So let's do it!' I added, as I reached down and grabbed his tool, `If it's fried mush time again, it need not be for long. You can knock me up, uh, let me see' - I counted - `next Monday. Which would mean that I would unload about' - I stopped to count again - 'oh, a couple of weeks after Black Tuesday. Then we will receive another Howard Foundation bonus shortly thereafter.'

'No.'

'Huh? I mean, Excuse me? I don't understand.'

'Mo, if Ted's prediction is wrong, the Foundation's principal assets may be wiped out. Justin and Judge Sperling are betting that Ted's prediction is correct; Chapman is bucking them. There are four other trustees... and two are Hoover Republicans, two were for Al Smith. Justin doesn't know which way it will go.'

Selling our house when we did was part of the gamble. It was a hard-nosed decision as it involved what came to be known as 'block-busting'. We lived in an all-white neighbourhood, but Darktown was just north of us, not far away, and had been growing steadily closer in the twenty-odd years we had owned that house. (Dear, sweet house! - stuffed with happy memories.)

Brian had been approached by a white real estate agent who said he had an offer from an undisclosed client: how much did Brian want for his house?

`Darling, I did not ask about his client... because, if I had asked, it would turn out that the client was a white lawyer who, if pushed, would be acting for a client in Denver or Boston. In this sort of a deal the cover-up is about six levels deep... and the neighbours are not supposed to find out the colour of the new owner's skin until the new owner moves in.'

`What did you tell him?'

'I told him, "Certainly 1'm willing to sell my house if the price is right. But the price would have to be attractive, as we are comfortable where we are and moving is always expensive in time and in money. What price does your client offer? In cash, I mean - not a down payment and take back a mortgage. If I am going to have to find another house for my large family - eleven of us - I'll need cash to work with. I may have to build, rather than buy - not too many houses can handle big families today; I probably would have to build. If I do this. So the price would have to be attractive and it would have to be in cash."

'This false face points out that any bank would discount the paper on such a property; a mortgage is as good as cash. "Not to me, it isn't," I told him. "Let your client arrange the mortgage directly with his bank and bring the cash up front. My dear sir, I'm not anxious to sell. Give me a cash figure and, if it's big enough, we'll go straight to escrow. If it's not, I'll tell you no just as quickly."

'He said that escrow would not be necessary, as they were satisfied that I could grant good title. Mo, that told me more than the words he said. It means that they have already run a title search on us... and probably on every house in our block. It means to me that this is probably the only house in this block that does not have a mortgage against it... or some other legal matter that would have to be cleared in escrow, such as lifetime tenancy under a will, or the property is currently in probate, or involved in a pending divorce, or there is a lien against it, or a judgement, or something. A man trying to put together this sort of a deal doesn't like escrow, because it is during that waiting period that the "Gentlemen's Agreement" sort of people can find out what is going on, and move in to stop it... often with the connivance of a sympathetic judge.'

'Briney, maybe you had better explain "Gentlemen's Agreement" to me. I don't recall it from that course in commercial law we took.'

'You would not have heard of it there because it is extralegal. Not against the law, just not covered by law. There is no covenant in your deed to this house that forbids you to sell to anyone you wish to, black, white, or green polka dots... and it might not stand up in court if there was. But, if you were to ask our neighbours, I guarantee that they would assure you that there is indeed a gentlemen's agreement binding you not to sell your house in this block to a Negro.'

I was puzzled. 'Have we ever agreed to anything of the sort?' My husband made all sorts of commitments and rarely told me. He simply assumed that I would back him up. And I always did. Marriage is not a sometime thing; it's whole hawg or you're not married.

'Never.'

`Are you going to ask our neighbours what they think about this?'

'Mo, do you want me to? It's your house:

I don't think I hesitated as long as two seconds. But it was a new ides and I did have to decide. 'Briney, several houses in this block have changed hands since we moved in here, uh, twenty-two years ago. I don't recall that we were ever asked our opinion about any of those transactions.'

'That's right. We never were.'

'I don't think it is any of their business to decide what a Negro can or can't buy. Or to tell us. What they do with their property is their business; what we do with ours is our business - as long as we obey the laws and abide by any open covenants that run with the land. That twenty-five-foot setback rule, for example. I can think of just one way they can legitimately keep us from selling this house to anyone who wants to buy it.'

'What way is that, Mo?'

'By coming to us before we are committed with the same sort of offer that Mr False Face has made but with more money. If they buy this house from us, they can do with it as they wish.'

Tm glad you see it that way, my love. A year from now every house in this block will be occupied by a Negro family. Mo, I could see it coming. Population pressure works much like a rising river. You can put up dikes or levees, but the day comes when the river has to go somewhere. Kansas City's Darktown is terribly crowded. If the whites don't want to live next door to Negroes, then the whites must back off and give them room. I'm not especially concerned about Negro problems; I've got problems of my own. But I don't fight the weather and I don't bang my head against a stone wall. You and I will see the day when Darktown will run south all the way to 39th Street. There is no use fussing about it; it is going to happen.'

Briney did get a good price for our old home. After figuring in the rise in prices from 1907 to 1929 there was only a modest profit, but Briney did get the price in cash - gold certificates, not a cheque; the recorded price was `ten dollars and other valuable considerations' - and Briney put the money straight into the stock market.

`Sweetheart, if Theodore's predictions are correct, in a year or so we'll be able to take our pick of big houses in the Country Club district at about a third of the going prices today... because it will turn out that Black Tuesday will leave about half of the nominal owners unable to meet their mortgage payments. In the meantime try to stay happy in this old farmhouse; Justin and I have to go to New York.'

I did not have any trouble staying happy in that farmhouse; it reminded me of my girlhood. I told Father so, and he agreed. `But put that second bathroom in. Do you remember why we had two outhouses? You can't afford to encourage piles and constipation.'

Father was not formally living with us - he got his mail elsewhere - but, since 1916 and Plattsburg, Brian had insisted that we always keep a room for Father. When Brian went to New York to stay closer to his stock-market gambling, Father did agree to sleep (usually) at our house, just as he had when Brian was away in France. But by then I had had that second bath installed and a washroom downstairs and the outhouse out back, limed and filled.

My children readjusted to the change with little fret. Even our resident cat, Chargé d'Affaires, accepted it. He fretted on the long trip there, but he did seem to understand that the moving vans meant that home was no longer home. Ethel and Teddy kept him fairly well soothed during the move - I was driving that load; Woodrow had the rest of the family in his jalopy. Chargé looked over our land as soon as we got there, then came back, got me, took me with him while he went all the way around the inside of the fence. He sprayed all four comer posts, so I knew that he had accepted the change and his new responsibilities.

It was from Woodrow that I had expected the most fuss as he was due to enter his senior year at Central High School in September 1929 and was a likely candidate for cadet commander of the ROTC battalion at Central, especially as both Brian Junior and George had each commanded the cadet battalion in their senior year.

But Woodrow did not even insist on finishing the second semester; he transferred in mid-term to Westport High School - somewhat to my dismay, as I had counted on him to drive Dick and Ethel to Central, one in junior High there, the other just entering Senior High. So, willy-nilly, they had to transfer in mid-term, too, as I did not have time to drive them and it was an impossible trip by streetcar. Teddy and Peggy I put in Country Day School, an excellent private school, as Eleanor suggested that she could handle two more in her car along with the three she had in that school.

It was several years before I realised that Woodrow's willingness to switch schools abruptly had to do with a renovated cow pasture still farther south that had a sign on it: ACE HARDY'S FUING SCHOOL. Woodrow had acquired (I think that is the right word) his unlikely automobile in the summer of 1928, and after that we had seen little of him other than at meals. But I discovered later that Woodrow had learned to fly while still in high school.

As everyone knows, Black Tuesday arrived on the dot. Briney called me long distance a week later. `Frau Doktor Krausmeyer?'

`Elmer!'

`Children okay?'

`Everyone is fine but they miss their Papa. As do I. Hurry home, dear; I'm honing to see you.'

'Didn't that hired man work out?'

'No staying power. I let him go. I decided to wait for you.'

'But I'm not coming home.'

'Oh.'

'Don't you want to know why?'

(Yes, Briney, I do want to know why. And some day I'm going to put itch powder into your jock-strap for these guessing games.) `Buffalo Bill, you'll tell me when it suits you and whatever suits you.'

`Rangy Lil, how would you like to go to Paris? And to Switzerland?'

`Hadn't you better make it South America? Some country where there is no extradition?' (Damn you, Briney! Quit teasing me.)

`I want you to leave tomorrow. Take the C and A to Chicago, then the Pennsy to New York. I'll meet your train and take you to our hotel. We sail for Cherbourg on Saturday.'

`Yes, sir.' (Oh, that man!) `About our children - Seven, I believe. Are you interested in the arrangements I make for them? Or shall I just use my judgement?' (What arrangements can I make with Eleanor?)

`Use your judgement. But if Ira is there, I'd like to speak to him.'

`To hear is to obey, Effendi.'

After Brian spoke to him, Father said to me, `I told Brian not to worry, as Ethel is a competent cook. If she needs help, I will hire help. So, Maureen, you mo run along and have fun; the youngsters will be safe. Don't pack more than two bags, because -' The phone rang again.

`Maureen? Your big sister, dear. Did you hear from Brian?'

`Yes.'

`Good. I have the train schedules and the Pullman reservations; Justin arranged them from New York. Frank will drive us to the station. You must be ready by ten tomorrow morning. Can you manage it?'

`I'll have to manage it. I may be barefooted and my hair in a bath knot -'

I became addicted to travel in a luxury liner in nothing flat. The Île de France was a wonderful shock to little Maureen Johnson whose idea of luxury was enough bathrooms for seven - usually seven; it varied - children and enough hot water. Briney had taken me to the Grand Canyon two years earlier and that was wonderful ... but this was another sort of wonderful. A concierge who seemed anxious to swim back and fetch anything Madame wishes. A maid who spoke English but understood my French and did not laugh at my accent. A full orchestra at dinner, a chamber music trio for tea, dancing to live music every night. Breakfast in bed. A masseuse on call. A living-room for our suite bigger and much fancier than Eleanor's at home, and two master bedrooms.

`Justin, why are we at the Captain's table?'

`I don't know. Because we have this suite, maybe.'

`And why do we have this suite? Everything in first class looks luxurious; I would not have complained if we had been in second class. But this is gilding the lily. Isn't it?'

`Maureen my sweet, I ordered two outside double staterooms, first class, which were confirmed and we paid for them. Then two days before sailing the agent telephoned and offered me this suite at the price we had paid plus a nominal surcharge, one hundred dollars. Seems the man who had reserved this suite had not been able to sail. I asked why he had cancelled. Instead of answering he cut the surcharge to fifty dollars. I asked who had died in that suite and was it contagious. Again instead of answering he offered to eliminate the surcharge if we would just let the New York Times and L'Illustration photograph us in our suite-which we did, you remember.'

`And was it contagious?'

`Not really. The poor fellow jumped out a twenty-storey window - the day after Black Tuesday:

`Oh! I should keep my mouth shut.'

`Mo darling, this suite was not his home, he was never in it in his life; it is not haunted. He was just one of many thousands of chumps who became paper-wealthy gambling on margin. If it will make you feel any better, I can assure you that both Brian and . I made no secret of our intention of getting out of the market when we did because we expected the market to collapse before the end of October. Nobody would listen.' Justin shook his head, shrugged.

Brian added, `I almost had to strangle one broker to get him to execute my orders. He seemed to think it was immoral and possibly illegal to sell when the market was going steadily up. "Wait till it tops," he said. "Then sell. You're crazy to quit at this point." I told him that my grandmother had read the tea-leaves and told me that now was the time to unload. He again said that I was crazy. I told him to execute those orders at once... or I was going straight to the governors of the Exchange and have him investigated for bucket shop operations. That really got him angry, so he sold me out... and then got still angrier when I insisted on a certified cheque. I took the cheque and cashed it at once. And changed the cash to gold... as I recalled all too clearly that Ted said that banks would start to go boom.'

I wanted to ask where that gold was now. But I did not.

Zurich is a lovely city, prettier than any I had seen in the United States. The language there is alleged to be German but it is not the German spoken by my neighbour from Munich. But I got along fine once I realised that almost everyone spoke English. Our men were busy; Eleanor and I had a wonderful time being tourists.

Then one day they took us with them and I found myself the surprised owner of a numbered bank account, for 155.515 grams of fine gold (which I had no trouble interpreting as one hundred thousand dollars, but it was not called such). Then I found myself signing powers of attorney over `my' bank account to Brian and to Justin, while Eleanor did the same with a similar account. And a limited power of attorney to someone I had never heard of in Winnipeg, Canada.

We were not placed in that fancy suite because we were high society; we were not. But the purser was carrying in his safe I do not know how many ounces of gold, most of which belonged to the Ira Howard Foundation, and some of which belonged, personally to Brian, and to Justin, and my father. That gold was moved by the Bank of France from Cherbourg to Zurich, and we rode with it.

In Zurich Brian and Justin, as witnesses and trustees for the Foundation, saw the shipment opened, saw it counted and weighed, and then deposited with a consortium of three banks. For the Foundation had taken very seriously Theodore's warning that Mr Roosevelt would devalue the dollar, then make it illegal for American citizens to own or possess gold.

'Justin,' I asked, 'what happens if Governor Roosevelt does not run for the presidency? Or does but is not elected?'

'Nothing. The Foundation would be no worse off. But have you lost confidence in Ted? On his advice we rode the market up, and then cashed out before it crashed, and now the Foundation is about six times as wealthy as it was a year ago, all through depending on Ted's predictions.'

`Oh, I believe in Theodore! I was just wondering.'

Mr Roosevelt was elected and he did indeed devalue the dollar and made it illegal for Americans to possess gold. But the assets of the Foundation had been placed out of reach of this confiscation. As was my own numbered bank account. I never touched it but Briney told me that it was not simply lying idle; he was using `my' money to make more money.

Brian was now a trustee of the Foundation, vice Mr Chapman, who had been removed from the board for having lost his own money in the stock market. A trustee of the Foundation had himself to be qualified for Howard benefits (four living grandparents at time of marriage) and a money-maker. If there were other requirements, I do not know what they were.

Justin was now chairman of the board and chief executive, vice judge Sperling, who was still a trustee but was past ninety and had elected not to work quite so hard. When we got back to Kansas City, Justin and Brian set up offices in the Scarritt Building as 'Weatheral and Smith, Investments' while `Brian Smith Associates' took an office on the same floor.

We never again had money worries but the decade of the Depression was not a time when it was fine to be rich. We strove to avoid the appearance of being rich. Instead of buying a fancy house in the Country Club district we bought that farmhouse at a bargain price, then rebuilt it into a more satisfactory structure. It was a period when skilled craftsmen were eager to get work at wages they would have sneered at in 1929.

The nation's economy was stuck on dead centre and no one seemed to know why and everyone from bootblack to banker had a solution he wanted to see tried. Mr Franklin Roosevelt took office in 1933 and, yes, the banks did close but the Smiths and the Weatherals had cash under the mattress and groceries squirrelled away; the bank holiday did us no harm. The country seemed invigorated by the energetic actions of 'The New Deal', the new President's name for a series of nostrums that came pouring out of Washington.

In retrospect it seems that the 'reforms' that constituted the New Deal did nothing to correct the economy - yet it is hard to fault emergency measures that put food into the mouths of the destitute. The WPA and the MA and the CCC and the NRA and the endless make-work programmes did not cure the economy and may well have done damage... but

in Kansas City in the 1930s they almost certainly served to avoid food riots by desperate people.

On 1 September 1939, ten years after Black Tuesday, Nazi Germany invaded Poland. Two days later Britain and France declared war against Germany. World War Two had started.

Chapter 16 - The Frantic Forties

In the summer of 1940 Brian and I were living in Chicago at 6105 Woodlawn, an address just south of the Midway. It was a large apartment building, eighty units, owned by the Howard Foundation through a dummy. We occupied what was called 'the Penthouse' - the west end of the top floor, a living room and balcony, a kitchen, four bedrooms, two baths.

We needed the extra bedrooms, especially in July during the Democratic National Convention. For two weeks we had from twelve to fifteen people sleeping in an apartment intended for a maximum of eight. I do not recommend this. The apartment did not have air-conditioning, it was an exceptionally hot summer, and Lake Michigan a few hundred yards away turned our flat into a Turkish bath. At home I would have coped with it by walking around in my skin. But I could not do so in the presence of strangers. One of the real benefits of Boondock is that skin is just skin - means nothing.

I had not been in Chicago, other than to change trains, since 1893. Brian had frequently visited Chicago without me, as this flat was often used for Howard Foundation board meetings, the Foundation having moved its registered address from Toledo to Winnipeg in 1929. As Justin explained to me, 'Maureen, while we don't advertise what we're doing, we won't be breaking any laws about private ownership of gold; we are simply planning for whatever develops. The Foundation is now restructured under Canadian law, and its registered secretary is a Canadian lawyer, who is in fact a Howard client himself and a Foundation trustee. I never touch gold, even with gloves on.'

(Brian expressed it otherwise. 'No intelligent man has any respect for an unjust law. Nor does he feel guilt over breaking it. He simply follows the Eleventh Commandment.')

This time Brian was not in Chicago for a board meeting; he was there to watch the Chicago commodities market and to deal in it, because of the war in Europe - while I was in Chicago because I wanted to be. Much as I enjoyed being a brood mare, after forty years of it and seventeen babies, I relished seeing something other than wet nappies.

There was indeed much to see. The parkway a hundred yards north of us, stretching from Washington Park to Jackson Park and called the Midway Plaisance, was in fact a midway the last time I had seen it, with everything from Little Egypt's belly dance to pink cotton candy. Now it was a beautiful grassy park, with the matchless Fountain of Time by Lorado Taft at the west end and the lovely 57th Street beach at the east end. The main

campus of the University of Chicago, great grey Gothic buildings, dominated its north side. The University had been founded the year before I had come here as a girl, but none of these buildings had been built by then - as near as I could recall several major exhibition halls had occupied the ground now constituting the campus. I could not be certain, as nothing looked the same.

The elevated trains were much more widespread and now they were powered by electricity instead of steam. On the surface there were no longer horse cars or even cable cars; electric trolley cars had replaced them. No more horses anywhere - autos bumper to bumper, a dubious improvement.

The Field Museum, three miles to the north and on the Lake, had been founded after my long visit in '93; its Malvina Hoffman exhibit, `The Races of Man', was in itself worth a trip to the Windy City. Near it was the Adler Planetarium, the first one I ever visited. I loved the shows at the planetarium; they let me daydream of travelling among the stars like Theodore - but I did not dream that I would ever really do so. That hope was buried, along with my heart, somewhere in France.

Chicago in '93 had kept eleven-year-old Maureen Johnson round-eyed; Chicago in 1940 kept Maureen Smith, now officially forty-one years old, still more round-eyed, there were so many new wonders to see.

One change I did not like; in 1893 if I happened to be out after dark, Father did not worry and neither did I. In 1940 I was careful never to be caught out after dark, other than on Brian's arm.

Just before the 1940 Democratic convention the Phoney War ended and France fell. At Dunkirk on 6 June the British evacuated what was left of their army which was followed by one of the greatest speeches in all histories: `- we shall fight them on the beaches, we shall fight them in the streets, we shall never surrender -'

Father telephoned Brian, told him that he was signing up with the AFS. `Brian, this rime even the Home Guard says I'm too old. But these folks are signing up medics the Army won't accept. They want them for support service in war zones and they'll take anybody who can saw off a leg - meaning me. If this is the only way I can fight the Huns, then this is what I'll do -1 owe that to Ted Bronson. Understand me, sir?'

'I quite understand.'

`How soon can you put somebody else here to watch the youngsters?'

I could hear both sides, so I took the phone. `Father, Brian can't come home now but I can. Although I may be able to put Betty Lou there in my place even quicker. Either way, you can go ahead with your plans. But, Father, listen to me. You take care of yourself! Do you hear me?'

`I'll be careful, daughter.'

`Please do so, please! I'm proud of you, sir. And Theodore is proud of you, too. I know.'

`I shall try hard to make both you and Ted proud of me, Maureen.'

I said goodbye quickly and hung up before my voice broke. Briney was looking thoughtful. 'I'll Nave to get busy right away and correct my age with the Army. Or they might start saying that I am too old.'

`Briney! Surely you don't expect to convince the Army that you are your Howard age? 'they have years and years of records on you.'

`Oh, I wouldn't try to sell the Adjutant-General my Howard age. Although I don't think I look any older than the forty-six it says on my driver's licence. I mean that I want to correct the little white lie I told in 1898, when I was actually fourteen but swore that I was twenty-one so that they would let me enlist.'

`Fourteen indeed! You were a senior at Rolla.'

`I was precocious, just like our children. Yes, dearest, I was a senior at Rolla in '98. But there is nobody left in the War Department who knows that. And nobody is likely to tell them. Maureen, a reserve colonel fifty-six years old is a lot more likely to be ordered to duty than one who is sixty-three. About one hundred per cent more likely.'

I'm using a Time agent's field recorder keyed to my voice and concealed in a body cavity. No, no, not concealed in the tunnel of love; that would not do, as Time agents aren't nuns and are not expected to be. I mean an artificial cavity about where my gall bladder used to be. This gadget is supposed to be good for a thousand hours and I hope it is working properly because, if these spooks scrag me - better make that when they scrag me - I hope that Pixel can lead somebody to my corpse and thereby let the Time Corps retrieve the record. I want the Circle to understand what I was trying to do. I should have done it openly, I suppose, but Lazarus would have grabbed it away from me. I have perfect hindsight - not so good in the other direction.

Brian did manage to 'correct' his War Department age, simply because his general wanted him. But he did not manage to get himself ordered to a combat command. Instead combat came to him - he was holding down a desk at the Presidio and we were living in an old mansion on Nob Hill when the Japanese pulled their sneak attack on San Francisco, 7 December 1941.

It is an odd feeling to look up into the sky, see planes overhead, feel their engines deep in your bones, see their bellies give birth to bombs, and know that it is too late to run, too late to hide, and that you have no control whatever over where those bombs will hit - on you or on houses a block away. The feeling was not terror; it was more a sense of déja vu, as if I had been there a thousand times before. I don't care to feel it again but I know

why warriors (real ones, not wimps in uniform) always seek combat assignments, not desk jobs. It is in the presence of death that one lives most intensely. `Better one crowded hour of life -'

I have read that in time line three this sneak attack was made on Hawaii, not San Francisco, and that Californian Japanese were thereafter moved back from the coast. If so, they were extremely lucky, for that spared them the blood bath that took place in time line two, where more than 6o.ooo Japanese-Americans were lynched or shot or (in some cases) burned alive between Sunday and Tuesday, 7-9 December 1941. Did this affect what we did to Tokyo and Kobe later? I wonder.

Wars that start with sneak attacks are certain to be merciless; all the histories prove it.

As one result of those lynch mobs, President Barkley placed California under martial law. In April 1942 this was eased off and only the twenty-mile strip inland from the mean hightide line was militarised, but the zone was extended up the coast to Canada. In San Francisco this caused no special inconvenience - it was much like living on a military reservation and a marked improvement over San Francisco's usual civic corruption... but after dark on the coast itself there was always a danger that some sixteen-year-old boy in a National Guard uniform, armed with a World War One Springfield, might get nervous and trigger happy.

Or so I heard; I never risked it. The beach from Canada to Mexico was a combat zone; anyone on it after dark was risking sudden death and many found it.

I had my youngest with me, Donald, four, and Priscilla, two. My school-age children - Alice, Doris, Patrick, and Susan - were in Kansas City with Betty Lou. I had thought of Arthur Roy as being school age (born 1924), but his cousin Nelson swore him into the Marine Corps the day after the bombing of San Francisco, along with his elder brother Richard (born 1914); they went to Pendleton together. Nelson was on limited duty, having left a foot in Belleau Wood in 1918. Justin was on the War Production Board, based in Washington but travelling rather steadily; he stayed with us on Nob Hill several times.

Woodrow I did not see even once until the war was over. I received a Christmas card from him in December 1941, postmarked Pensacola, Florida: 'Dear Mom and Pop, I'm hiding out from the Nips and teaching Boy Scouts how to fly upside down. Heather and the kids are stashed for the duration at Avalon Beach, PO Box 6320, so I sleep home most nights. Merry Christmas and have a nice war. Woodrow.'

The next we heard from Woodrow was a card from the Royal Hawaiian at Waikiki: 'The service here is not quite up to peacetime standards but it is better than that at Lahaina. Despite any rumours to the contrary the sharks in Lahaina Roads are not vegetarian. Hoping you are the same. W.W.'

That was our first intimation that Woodrow had been in the Battle of Lahaina Roads. Whether he was in the Saratoga when she was sunk, or whether he ditched from the air, I do not know. But his card implies that he was in the water at some point. I asked him about this after the War. He looked puzzled and said, `Mom, where did you get that notion? I spent the war in Washington, DC, drinking Scotch with my opposite number in the British Aircraft Commission. His Scotch, it was - he had worked out a scam to fly it in from Bermuda.'

Woodrow was not always strictly truthful.

Let me see... Theodore Ira, my World War One baby, went to active duty with Kansas City's 110th Combat Engineers and spent most of the war in Noumea, building airstrips and docks and such. Nancy's husband and Eleanor's son, Jonathan, had stayed in the Reserve but not in the Guard; he was a column commander in Patton's Panzers when they drove the Russians out of Czechoslovakia. Nancy helped organise the WAAC and finished the war senior to her husband, to the vast amusement of all of us - even Jonathan. George started out in the 35th Division HQ but wound up in the OSS, so I don't know what he did. In March 1944 Brian Junior made the landing at Marseilles, caught a piece of shrapnel in his left thigh, and wound up back in Salisbury in England, an executive officer in the training command.

My letters to Father were returned to me in 1942, along with a formal letter of regret from the national headquarters of the AFS.

Richard's wife, Marian, stayed in nearby San Juan Capistrano while Richard was at Camp Pendleton. When he shipped out, I invited her to move in with us, with her children - four, and one that was born shortly after she arrived. We could make room for them and it was actually easier for us mo women to take care of seven children than it had been for each of us to cope with our own unassisted. We worked things out so that one of us could assist at Letterman Army Hospital every afternoon, going to the Presidio by bus (no gasoline ration expended) and coming back with Brian. I was fond 'of Marian; she was as dear to me as my own daughters.

So it came about that she was with us when she received that telegram: Richard had earned the Navy Cross on Iwo Jima - posthumously.

A little over five months later we destroyed Tokyo and Kobe. Then Emperor Akihito and his ministers shocked us all by ritually disembowelling themselves, first the ministers, then the Emperor, after the Emperor announced to them that his mind had been quieted by President Barkley's promise to spare Kyoto. It was especially shocking in that Emperor Akihito was just a boy, not yet twelve, younger than my son Patrick Henry.

We will never understand the Japanese. But the long war was over.

I am forced to wonder what would have happened if the Emperor's father, Emperor Hirohito, had not died in the 'Star Festival' air strike on 7 July? He was reputed to be so

westernised. The other pertinent histories, time lines three and six, give no firm answers. Hirohito seems to have been the captive of his ministers, reigning but not ruling.

Once Japan surrendered Brian asked for early separation, but was sent to Texas - Amarillo, then Dallas - to assist in contract terminations - the only time, I think, that he regretted having passed his bar examinations back in 1938.

But moving away from San Francisco at that time was a good idea - a change of background to a place where we knew no one - because on arrival in Texas Marian became 'Maureen J. Smith' and I dyed my hair and became her widowed mother, Marian Hardy. None too soon; she was already showing - four months later she gave birth to Richard Brian. We kept it straight with the Foundation, of course, and registered Marian's new baby correctly: Marian Justin Hardy + Brian Smith, Senior.

What happened next is difficult for me to talk about, because there are three points of view and mine is only one of them. I am certain that the other two are each as fair-minded as I am, if not more so. `More so' I think I must concede, as Father had warned me, more than half a century earlier, that I was an amoral wretch who could reason only pragmatically, not morally.

I had not tried to keep my husband out of my daughter-inlaw's bed. Neither Briney nor I had ever tried to own each other; we both approved of sex for fun and we had established our rules for civilised adultery many years earlier. I was a bit surprised that Marian had apparently made no effort to keep from getting pregnant by Brian... but only in that she did not consult me ahead of time. (If she consulted Briney, he never mentioned it. But men do have this tendency to spray sperm around like a fire-hose while letting the females decide whether or not to make practical use of the juice.)

Nevertheless I was not angry, just mildly surprised. And I do recognise the normal biological reflex under which the first thing a freshly bereft widow does, if she can manage it, is to spread her legs and sob bitterly and use her womb to replace the dear departed. It is a survival mechanism, one not limited to wars but more prevalent in wartime, as statistical analysis demonstrates.

(I hear that there are men who watch the newspapers for funerals, then attend those of married men in order to meet new widows. This is shooting fish down a well and probably, merits castration. On the other hand, those widows might not thank us.)

So we moved to Dallas and everything was satisfactory for a while. Brian was simply a man with two wives, a situation not unknown among Howards - just pull the shades against the neighbours, like some Mormons.

A short time after the birth of Marian's new baby Brian came to me with something on his mind, something he had trouble articulating.

I finally said, `Look, dearest, I am not a mind reader. Whatever it is, just spill it.'

'Marian wants a divorce.'

`Huh? Briney, I'm confused. If she's not happy with us, all she needs to do is to move out; it doesn't take a divorce. In fact I don't see how she could get one. But I'm terribly sorry to hear it. I thought we had gone to considerable trouble to make things happy for her. And for Richard Brian and her other children. Do you want me to talk to her? Try to find out what the trouble is?'

'Uh - Damn it, I didn't make myself clear. She wants you to get a divorce so that she can marry me.'

My jaw dropped, then I laughed. 'Goodness, Briney, what in the world makes her think I would ever do that? I don't want to divorce you; you're the nicest husband a gal ever had. I don't mind sharing you - but, darling, I don't want to get rid of you. I'll tell her so. Where is she? I'll take her to bed and tell her so as sweetly as possible.' I reached up, took his shoulders and kissed him.

Then I continued to hold his shoulders and look up at him. 'Hey, wait a minute. You want a divorce. Don't you?'

Briney didn't say anything; he just looked embarrassed.

I sighed. 'Poor Briney. Us frails do make your life complicated, don't we? We follow you around, climb into your lap, breathe in your ear. Even your daughters seduce you, like - what was his name? Old Testament. And even your daughters-in-law. Stop looking glum, dear man; I don't have a ring in your nose, and never have had.'

'You'll do it?' He looked relieved.

`Me? Do what?'

'Divorce me.'

'No. Of course not'

`But you said -'

`I said that I didn't have a ring in your nose. If you want to divorce me, I won't fight it. But I'm not the one who wants a divorce. If you like, you can simply do it to me Muslim sty1e. Tell me "I divorce you" three times, and I'll go pack my clothes:

Perhaps I should not have been stubborn about it but I do not see that I owed it to either of them to go through the fiddle-faddle - the trauma - of finding a lawyer and digging up witnesses and appearing in court. I would co-operate... but let them do the work.

Brian gave in once he saw that I meant it. Marian was vexed with me, stopped smiling, and avoided talking with me. Finally I stopped her when she was about to leave the living-room as I came in.

`Marian!'

She stopped. 'Yes, Mother?'

'I want you to stop pretending to be aggrieved. I want to see you smile and hear you laugh, the way you used to. You have asked me to rum my husband over to you and I have agreed to co-operate. But you must co-operate, too. You are acting like a spoiled child. In fact, you are a spoiled child.'

'Why, how utterly unfair!'

'Girls, girls!'

I turned and looked at Brian. `I am not a girl. I am your wife of forty-seven years. While I am here, I will be treated with respect and with warmth. I don't expect gratitude from Marian; my father taught me years ago never to expect gratitude because there is no such thing. But Marian can simulate gratitude out of politeness. Or she can move out. At once. Right this minute. If you mo expect me not to fight this divorce, you can both show me some appreciation.'

I went to my room, got into bed, cried a little, then fell into a troubled sleep.

Half an hour later, or an hour, or longer, I was wakened by a tap on my door. `Yes?'

`It's Marian, Mama. May I come in?'

'Certainly; darling!'

She came in, closed the door behind her; looked at me, her chin quivering and tears starting. I sat up, put out my arms.

`Come to me, dear.'

That ended any trouble with Marian. But not quite with Brian. The following weekend he pointed out that the sine gua non of an uncontested divorce was a property settlement agreed to by both parties. He had fetched home a fat briefcase.

`I have the essential papers here. Shall we look them over?'

`All right' (No use putting off a trip to the dentist.)

Brian put the briefcase down on the dining-table. `We can spread them out here.' He sat down.

I sat down on his left; Marian sat down opposite me. I said, 'No, Marian, I want to go over these in private. So you are excused, dear. And do please keep the children out.'

She looked blank and started to stand up. Brian reached out and stopped her. `Maureen, Marian is an interested party. Equally interested.'

'No, she's not. I'm sorry.'

`How do you figure?'

`What you have there, what is represented by those papers, is our community property, yours and mine, what you and I have accumulated in the course of our marriage. None of it is Marian's and I don't care to go over it in the presence of a third party. At a later time, when she divorces you, she'll be present at the divvy-up and I will not be. Today, Brian, it is between you and me, no one else.'

`What do you mean? - when she divorces me.'

`Correction: if she divorces you.' (She did. In 1966.) 'Brian, did you fetch home an adding machine? Oh, all I really require is a sharp pencil:

Marian caught Brian's eye, left the room and closed the door behind her.

He said, `Maureen, why do you always have to be so rough on her?'

`Behave yourself, Briney. You should not have attempted to have her present for this and you know it. Now... do you want to do this politely? Or shall we wait until I can call in a lawyer?'

`I see no reason why it can't be done politely. And even less reason why a lawyer should look at my private business.'

'And still less reason why your fiancée should look at mine.

Briney, stop behaving like Woodie at age six. How did you plan on whacking this up?'

'Well, first we must plan on the marriage allotments for the kids. Seven, that is. And Marian's five. Six, now.'

(Each time we had rung the cash register - received a baby bounty from the Ira Howard Foundation - Brian had started a bookkeeping account for that child, letting that amount enhance on his books at six per cent compounded quarterly, then had passed on the enhanced amount to that child as a wedding present - about three times the original baby

bounty. In the meantime Brian had the use of the money as working capital for eighteen or more years... and, believe me, Brian could always make working capital pay more than six per cent, especially after 1918 when he had Theodore's predictions to guide him. Just one word - 'Xerox' or 'Polaroid' - could mean a fortune, known ahead of time.)

'Woops! Not out of this pile, Briney. Richard received his marriage allotment from us when he married Marian. Her children by Richard are our grandchildren. What about our other grandchildren? I haven't counted lately but I think we have fifty-two. Are you planning to subsidise ail fifty-two out of what we own today?'

`The situation is different'

'It certainly is. Brian, you are trying to favour five of our grandchildren at the expense of all our other grandchildren and all our remaining unmarried children. I won't permit it'

'I'll be the judge of that.'

No, you will not. It will be a real judge, in a real court. Or you will treat all our children equally and not attempt to favour five grandchildren while ignoring forty-seven others.'

'Maureen, you've never behaved this way in the past.'

'In the past you never broke up our partnership. But now that you have done so, that break up will be on terms that strike both of us as equitable... or you can tell it to the judge. Brian, you can't cast me off like an old shoe and then expect me to continue to accept your rulings as docilely as I have done all these years. I say again: quit behaving like Woodie as a child. Now... stipulating that we have agreed, or will agree, on what is earmarked for marriage allowances, how do you want to divide up the rest of it?'

'Eh? Three equal portions. Of course.'

'You're giving me two portions? That's generous of you, but more than I had expected.'

'No, no! A share for you, a share for me, a share for Marian. Even all the way around.'

'Where is the fourth share? The one for my husband.'

'You're getting married again?'

'No immediate plans. I may.'

'Then we'll cross that bridge when we come to it'

'Briney, Briney! Your needle is stuck in a groove. Can't you get it through your head that you cannot force me to accept your fiancée as co-owner of the property you and I have accumulated together? Half of it is mine. Fair is fair.'

'Damn it, Mo, you cooked and kept house. I am the one who got out there and struggled to build up a fortune. Not you.'

'Where did the capital come from, Briney?'

'Huh?'

'Have you forgotten? How did we ring the cash register? For that matter how did it come about that you knew ahead of time the date of Black Tuesday? Did I have something to do with it? Briney, I'm not going to argue it because you don't want to be fair about it. You keep trying to hand over to your new love some of my half of what you and I accumulated together. Let's take it into court and let a judge decide. We can do it here, a community property state, or in California, another community property state, or in Missouri where you can count on it that a judge would give me more than half. In the mean time I will ask for temporary alimony -'

'Alimony!'

' - and child support for six children while the court determines what my share, plus alimony, plus child support, adds up to.'

Brian looked astounded. 'You intend to strip me bare? Just because I knocked up Marian?'

'Certainly not, Brian. I don't even want alimony. What I do want... and expect... and insist on - or we go to court over it is this: after an equitable arrangement for support of the children and for their marriage allowances, based on what we have done for our married children in the past and based on what you are now sending to Betty Lou for our children in Kansas City... once the kids are taken care of, I want exactly half, right down the middle. Otherwise we let a judge settle it.'

Brian looked grim. 'Very well':

'Good. Make up two lists, two halves, and then we can draw up a formal property settlement, one we can file with the court. Where do you intend to divorce me? Here?'

'If you have no objection. Easiest.'

'All right.'

It took Brian all that weekend to make the two property lists. On Monday night fie showed them to me.

`Here they are. Here is a summary list of my half, and here is yours.'

I looked at them and could sec at once that the totals matched... and I suppressed a need to whistle at the totals. I had not guessed even to the nearest million how wealthy we were.

'Brian, why is this list mine and that list yours?'

'I've kept on my list the properties I want to handle. On your list are things that don't require my expertise, such as commercial bonds and municipals. It doesn't matter; it's an even split.'

'Since it is even, let's just swap them. I'll take everything on your list, you take the half you listed for me.'

'Look, I explained to you why I -'

`Then, if there are properties on my list that you really want, you can buy them from me. At a mutually agreeable price.'

'Mo, do you think I am trying to cheat you?'

'Yes, dear, you have been trying to cheat me from the moment this matter of a divorce and property settlement came up.' I smiled at him. `But I shan't let you; you would regret it later. Now take those two lists and rearrange them: Make the division so meticulously fair that you really do not care which list I take, which list I leave to you. Or, if you prefer it, I will make the division and you can take your choice. But you are not going to put all of the goodies into one list and then claim that the list with the goodies is yours. So - Do I make the lists and you choose? Or do you make them and I choose?'

It took him a week to do it, and the poor man almost died of frustration. But at last fie produced new lists.

I looked at them. `This suits you, Briney? You now have our community property divided so perfectly that you really don't care which list I choose?'

He smiled wryly. 'Let's say that I will wince and shudder and bleed equally either way.'

`Poor Briney. You remind me of the donkey and the two piles of hay. There are ample liquid assets in each list; you can buy from me anything dear to your heart.' I reached for one list while watching his eyes - then picked up the other list. 'Here's my half. Let's start in on the paper work.'

Brian squawked again when fie wanted to buy from me some of the items of my list and I agreed to sell but insisted on dickering over the prices. But my memory serves me well, and I had made a point of remembering and looking up the name D. D. Harriman after I heard Theodore mention it on that sad, glad, mad Sunday he went away and never came

back. At the time we divided our property I knew exactly which companies Mr Harriman controlled, whether they were listed on the NYSE or not.

So I sold Brian what he wanted, but not at nominal book value. At replacement value, plus a reasonable profit I'm not totally ignorant about business. But Brian had never left enough cash in my hands for me to treat it as capital. However, for years I had found it entertaining to speculate on paper. The game made reading the Wall Street journal quite entertaining.

Brian divorced me in the middle of 1946 and I went back to Kansas City. He did not hold a grudge and neither did I and neither did Marian. Briney had not truly been a bad boy; he had simply fought as hard for Marian as he had once fought for me... and I had done the same, once 1 realised that I was on my own and that my beloved husband was no longer my champion.

No point in holding grudges. Once the ship lifts, all bills are paid.

Chapter 17 - Starting Over

My daughter Susan married Henry Schultz on Saturday, 1 August 195, in Mark's Episcopal Church, The Paseo at 63rd in Kansas City. Brian was there and gave his daughter in marriage; Marian stayed behind in Dallas, with her children... and, I must add, with an acceptable excuse. She was at or near term with her latest baby, and could reasonably have asked Brian to stay at home. Instead she urged him not to disappoint Susan.

I'm not sure Susan would have noticed, but I would have.

Over half of my children were there, most of them with their spouses, and about forty of my grandchildren and their spouses, along with a sprinkling of great-grandchildren - and one great-great-grandchild. Not bad, for a woman whose official age was forty-seven. Not bad even for a woman whose actual age was seventy years and four weeks.

Impossible? Not quite. My Nancy gave birth to her Roberta on Christmas Day 1918. Roberta married at sixteen (Zachary Barstow) and bore Anne Barstow on 2 November 1935. Anne Barstow married Eugene Hardy and had her first child, Nancy Jane Hardy, on 22 june 1952.

Name	Birth Date	Relationship
Maureen Johnson (Smith)	4 Jul 1882	great-great-grandmother
Nancy Smith (Weatheral)	1 Dec 1899	great-grandmother
Roberta Weatheral (Barstow)	25 Dec 1918	grandmother
Anne Barstow (Hardy)	2 Nov 1935	mother
Nancy Jane Hardy	22 Jun 1952	daughter

According to the Archives Nancy Jane Hardy (Foote) gave birth to Justin Foote, first of that name, on the last day of the twentieth century, 31 December 2000. I married his (and my) remote descendant, Justin Foote the forty-fifth, in marrying into the Lazarus Long family in Gregorian AD 4316, almost twenty-four centuries later - my hundred-and-first year by my personal time line.

The Schultz family was almost as well represented at Susan's wedding as the Johnson family, even though most of them had to fly in from California or from Pennsylvania. But they could not show five generations, all in one room. I was delighted that we could, and I did not hang back when the photographer, Kenneth Barstow, wanted a group picture of us. He seated me in the middle with my great-great granddaughter in my lap, while my daughter, granddaughter, and great-granddaughter hovered around us, like angels around Madonna and Child.

Whereupon we got scolded. Ken kept shooting pictures until Nancy Jane got bored with it and started to cry. At that point Justin Weatheral moved in and said, `Ken, may I see your camera?'

`Certainly, Uncle Justin.' (Honorary uncle - first cousin twice removed, I believe. The Howard Families were beginning to reach the point where everyone was related to everyone else... with those inevitable defects through inbreeding that later had to be weeded out.)

`You can have it back in a moment. Now, ladies - you especially, Maureen - what I have to say is strictly among ourselves, persons registered with the Foundation. Look around you. Is the lodge tyled? Are there any strangers among us?'

I said, 'Justin, admission to this reception is by card only. Almost anyone could have been at the wedding. But it takes a card to get inside this room. I sent them out for our family; Johanna Schultz handled it for Henry's relatives.'

`I got in without a card.'

'Justin, everybody knows you.'

`That's my point. Who else got in without a card? Good old Joe Blow, whom everybody knows, of course. Is that Joe behind the table, ladling out punch?'

I answered, 'Of course there are hired staff inside. Musicians. the caterer's people. And such.'

'And such. Exactly.' Justin lowered his voice, spoke directly to us five and to Ken. 'You all know the efforts of all of us are making to keep our ages optimised. You, Maureen, how old are you?'

'Uh... forty-seven.'

'Nancy? Your age, dear?'

Nancy started to say, 'Fifty-two.' She got out the, first syllable, bit it off. 'Oh, shucks, Papa-Weatheral, I don't keep track of my age.'

`Your age, Nancy,' Justin insisted.

`Let me see. Mama had me at fifteen, so - How old are you, Mama?'

'Forty-seven.'

'Yes, of course. I'm thirty-two.'

Justin looked at my granddaughter Roberta, my great-granddaughter Anne, and my great-great-granddaughter Nancy Jane, and said, I'm not going to ask the ages of you three, because any way you answer would emphasise the impossibility of reconciling your very existence with Nancy's and Maureen's claimed age. Speaking for the trustees I can say how pleased we are with how thoroughly all of you are carrying out the purpose of Ira Howard's will. But, again speaking for the trustees, I must again emphasise the necessity of never calling attention to our peculiarity. We must try to avoid having anyone notice that we are in any way different.'

He sighed, then went on: 'So I am forced to say that I am sorry to see you five ladies all in one room at one time, and to add that I hope that it will never happen again. And I shiver at the idea that you are being photographed together. If that photograph wound up in the society section of next Sunday's Journal-Post, it could ruin the careful efforts of all our cousins to avoid calling attention to ourselves. Ken, don't you think it would be well to kill that picture?'

Ken Barstow was outgunned; I could see that he was about to let the Foundation's chief officer have his own way.

But I was not outgunned. `Hey! Justin, you stop that! You're chairman of the board, surely. But nobody appointed you God. Those photos were taken for me and my kids. You kill them, or get Ken to, and I'm going to beat you over the head with his camera.'

'Now, Maureen - '

` "Now Maureen" my tired feet! We'll keep it out of the papers, certainly. But I want five copies of Ken's best shot, one for each of us. And Ken is entitled to a copy for his own files, if he wants it.'

We agreed on that and Justin asked for one to place in the Archives.

I thought at the time that Justin was being unnecessarily cautious. I was wrong. Justin, in instituting and stubbomly pressing the policy later known as the Masquerade, caused our cousins to enter the Interregnum of the Prophets with eighty per cent having public ages under forty, only three per cent with public ages over fifty. Once the Prophet's thought police were active it became both difficult and dangerous to switch backgrounds and change identities; Justin's foresight made it usually unnecessary to attempt it.

According to the Archives Brian died in 1998 at the age of 119 - a newsworthy age in the twentieth century. But his public age at that time was eighty-two, which is not newsworthy at all. Justin's policies allowed almost all Howard clients to enter the Interregnum (2012) with reduced public ages that let them live and die without conspicuously living too long.

Thank God I didn't have to cope with it! No, not `Thank God' - Thank Hilda Mae, Zeb, Deety, Jake, and a wonderful, lovable machine named `Gay Deceiver'. I would like to see all five of them right now; Mama Maureen needs rescuing again.

Maybe Pixel will find them. I think he understood me.

Several out-of-towners stayed over the weekend, but by Tuesday morning 5 August I was alone - truly alone for the first time in my seventy years of life. My two youngest - Donald, sixteen, and Priscilla, fourteen - were still unmarried. But they were no longer mine. In the divorce settlement, they had elected to stay with the children they had been living with as brothers and sisters - and who were now legally their brothers and sisters as Marian had adopted them.

Susan was the youngest of the four who had lived with Betty Lou and Nelson during the War, and the last to marry.

Alice Virginia had married Ralph Sperling right after the War ended; Doris Jean married Roderick Briggs the following year; and Patrick Henry, my son by Justin, had married Charlotte Schmidt in 1951.

Betty Lou and Nelson moved to Tampa shortly after I returned home, taking with them their three who were still at home. Her parents and Nelson's mother Aunt Carole were in Florida; Betty Lou wanted to look after all of them. (How old was Aunt Carole in 1946? She was the widow of Father's elder brother, so she - Goodness! In 1946 she must have been on or near her century mark. Yet she looked the same as ever the last time I had seen her, uh - shortly before Japan's sneak attack in '41. Did she dye her hair?)

On Saturday I had been triste not only because my last chick was getting married and leaving home but also (and primarily) because Susan's wedding day was Father's century day; he was born 2 August 1852.

Apparently no one associated the date with Father, and I mentioned it to no one because a wedding day belongs to the couple getting married and no one should bring up any

subject, say or do anything, that might subtract from the joyfulness of the occasion. So I had kept quiet.

But I was constantly aware of the date. It had been twelve years and two months since Father had gone to war... and I had missed him every one of those four thousand, four hundred, and forty-one days - and most especially during the years after Brian turned me in for a newer model.

Please understand me; I am not condemning Brian. I had stopped being fertile around the beginning of World War Two, whereas. Marian was still decidedly fertile - and children are the purpose of a Howard-sponsored marriage. Marian was willing and able to bear him more children but she wanted that marriage licence. That's understandable.

Neither of them tried to get rid of me. Brian assumed that I would stay, until I made it clear that I would not. Marian begged me to stay, and cried when I left.

But Dallas is not Boondock, and the unnatural practice of monogamy is as rooted in the American culture of the twentieth century as group marriage is rooted in the quasi anarchistic, unstructured culture of Tertius in the third millennium of the diaspora. At the time I decided not to stay with Brian and Marian I had no Boondock experience to guide me; I simply knew in my gut that, if I stayed, Marian and I would be locked, willy-nilly, in a struggle for dominance, a struggle that neither of us wanted, and that Brian would be buffeted by our troubles and made unhappy thereby.

But that does not mean that I was happy about leaving. A divorce, any divorce no matter how necessary, is an amputation. For a long time I felt like an animal that has gnawed off its own leg in order to escape from a trap.

By my own time line all this happened more than eighty years ago. Am I still resentful?

Yes, I am. Not at Brian - at Marian. Brian was a man with no malice in him; I am sure in my heart that he did not intend to mistreat me. At worst, one may say that it was not too bright of him to impregnate his sons widow. But how many men are truly wise in their handling of women? In all history you can count them on the fingers of one thumb.

Marian - She is another matter. She rewarded my hospitality by demanding that my husband divorce me. My father had taught me never to expect that imaginary emotion, gratitude. But am I not entitled to expect decent treatment from a guest under my roof?

Gratitude: an imaginary emotion that rewards an imaginary behaviour, altruism. Both imaginaries are false faces for selfishness, which is a real and honest emotion. Long ago Mr Clemens demonstrated in his essay `What is Man?' that every one of us act at all rimes in his own interest. Once you understand this, it offers a way to negotiate with an antagonist in order to find means to cooperate with him for mutual benefit. But if you are convinced of your own altruism and you try to shame him out of his horrid selfishness, you will get nowhere.

So, in dealing with Marian, where did I go wrong?

Did I lapse into the error of altruism?

I think I did. I should have said, `Listen, bitchie! Behave yourself and you can live here as long as you like. But forget this idea of trying to crowd me out of my own home, or you and your nameless babe will land out there in the snow. If I don't tear, out your partition instead.' And to Brian: 'Don't try it, buster! Or I'll find a shyster who will make you wish that you had never laid eyes on that chippie. We'll take you for every dime.'

But those are just middle-of-the-night thoughts. Marriage is a psychological condition, not a civil contract and a licence. Once a marriage is dead, it is dead, and it begins to stink even faster than dead fish. What matters is not who killed it but the fact of its death. Then it becomes time to divvy-up, split up, and run, with no time wasted on recriminations.

So why am I wasting time eighty years later brooding over the corpse of a long-dead marriage - when I am having enough trouble from these murderous spooks? I feel sure that Pixel does not fret over the ghosts of long-dead tabby cats. He lives in the eternal now... and I should, too.

In 1946, as soon as I was back in Kansas City, the first thing I wanted to do was to register as a college student. Both the University of Kansas City and Rockhurst College were a mile north of us at 53rd Street, each a block off Rockhill Boulevard, Rockhurst to the east and KCU to the west - five minutes by car, tem by bus, or a pleasant twenty-minute walk in good weather. The Medical School of the University of Kansas was just west of 39th and State line, ten minutes by car. The Kansas City School of Law was downtown, a twenty-minute drive.

Each had advantages and shortcomings Rockhurst was very small but it was a Jesuit school and therefore probably high in scholarship. It was a school for men but not totally so. I had been told that its coeds were all nuns, schoolteachers improving their credentials, so I was not sure that I would be welcome. Father McCaw, president of Rockhurst, set me straight:

`Mrs Johnson, our policies are not set in stone. While most of our students are men, we do not exclude women who seriously desire what we offer. We are a Catholic school but we welcome non-Catholics. Here at Rockhurst we do not actively proselytise but perhaps I should warn you that Episcopalians, such as yourself, exposed to sound Catholic doctrine, often wind up converted to the true Church. If, while you are among us, you find yourself in need of instruction in faith and dogma, we will be happy to supply it. But we will not pressure you. Now... Are you degree-seeking? Or not?'

I explained to him that I had registered as a special student and potential candidate for a bachelor's degree at KCU. 'But I am more interested in an education than I am in a

degree. That is why I have come here. I am aware of the reputation of the Jesuits for scholarship. I hope to learn things here that I would not learn on the other campus.'

'One may always hope.' He scribbled something on a pad, tore it off and gave it to me. 'You are a special student now, entitled to attend any lecture course. There are additional fees for some courses, such as laboratory courses. Take this to the Bursar's office; they'll accept your tuition fee and straighten you out on other charges. Stop in and see me in a week or two.'

The next six years, 1946-52, I spent in school, including summer sessions. My home had no babies in it and no small children. There is not much work in such a household and what there was, I delegated - to Doris, sixteen and just starting to check her Howard list under my protective chaperonage, and to Susan, who was only twelve and still virgin (I felt fairly sure) But an outstanding cook for her age. So I started in on her sex education, being aware of the strong correlation between good cooking and a high libido... only to find that Aunt Betty Lou had done well by my girls in bringing them up as innocent sophisticates, well-informed about their bodies and their female heritage long before they would have to face that heritage emotionally.

I had just one son at home, Pat, fourteen in '46. I decided, somewhat reluctantly, that I was going to have to check on his knowledge of sex - before he contracted some silly disease, or impregnated a twelve-year-old moron with big breasts and a small brain, or got caught in a public scandal. I had never had to cope with this before; either Brian, or Father, or both, had taught my sons.

Patrick was patient with me.

Finally he said, `Mama, is' there something special you want to ask me? I'll try. Auntie B'Lou gave me the same examination she gave Alice and Doris... and I missed only one question.'

(Shut my mouth.) 'What was the question you missed?'

'I couldn't define "ectopic pregnancy". But I can now. Shall I?'

'Never mind. Did Aunt Betty Lou or Uncle Nelson discuss the Ira Howard Foundation with you?'

Some. When Alice started courting, Uncle Nelson got me aside and told me to mind my own business and keep my mouth shut... then to see him again when I wanted to start courting myself. If I did. I didn't think I would. But I did. So I did... and he told me about baby subsidies. For Howard babies. For Howard babies only.'

'Yes. Well, dear, Aunt Betty Lou and Uncle Nelson seem to have told you everything I could tell you. Uh... Did Uncle Nelson ever show you the Forberg etchings?'

'No.'

(Damn it, Briney; why aren't you here? This is your job.) `Then I must show them to you. If I can find them.'

'Auntie B'Lou showed them to me. They're in my room.' He smiled shyly. 'I like to look at them. Shall I get them for you?'

'No. Well, at your convenience. Patrick, you seem to know all about sex a boy your age needs to know. Is there anything I can tell you? Or do for you?'

'Uh... I guess not. Well - Auntie B'Lou used to keep me supplied with fishskins. I promised her that I would always use them... but Walgren's won't sell them to anyone my a age,'

(What else has Betty Lou dope for him? Is intercourse with an aunt incest? Correction: is an aunt-in-law incest? They are certainly no blood relation. Maureen, mind your own business.)

'All right, I'll keep you supplied. Uh, Patrick, where have you been using them? Not who, but where?'

'Right now I only know one girl that well... and her mother is very fussy. Her mother has told her to do it only at home, in their basement playroom. Or else.'

(I did not ask about 'Or else'.) 'Her mother seems very sensible. Well, dear, you can do it safely here at home, too. But nowhere else, I hope Not in Swope Park, for example. Too risky.' (Maureen, who are you to talk?)

All three were good children and I had no trouble with them. Aside from some mild supervision the household ran itself and I had plenty of time for school. By the time Susan married in August 1952 I had not one but four degrees: bachelor of arts, bachelor of laws, master of science, and doctor of philosophy. Preposterous!

But here is how the rabbit got into the hat:

I could not claim a high school education because a high school diploma dated 1898 would have been horribly inconsistent with my claimed Howard age (forty-four in 1946). Oh, whenever possible I listed my age as 'over 21' but, if pinned down, I claimed my Howard age and avoided situations that could possibly tie me into anything that happened before about 1910. Mostly I did this by keeping my lips zipped - no 'Did you know so-and-so?' and no 'Remember whens'.

So, when I registered at KCU ir was not as a freshman, but as a special student. Then I asked for advanced standing and degree-seeking status, through examinations, and did not boggle at the high fees quoted to me for special examinations to discover just where I

stood in English and American literature, American history, world history, mathematics, Latin, Greek, French, German, Spanish, anatomy, physiology, chemistry, physics, and general science. During the remainder of that semester I took examinations steadily, cramming for the next one at night and sometimes attending lectures across the boulevard for dessert.

Toward the beginning of the summer session I was called to the office of the Dean of Academics, Dr Bannister.

'Please sit down, Mrs Johnson.'

I sat down and waited. In appearance he reminded me of Mr Clemens, even though he did not wear white suits and did not smoke (thank goodness!) those horrible cigars. But he had that untidy halo of white hair and that look of a jovial Satan. I liked him on sight.

He went on: 'You have completed your special examinations. May I ask what standing you expected to receive here?'

'I had no expectations, Doctor. I asked to be examined in order to find out where I belong.'

'Hmm. Your application shows no schools.'

'I was privately tutored, sir.'

'Yen, so I sce. You've never attended school?'

'I have attended a number of schools, sir. But briefly, never long enough for academic credit. My father travelled a great deal:

'What did your father do?'

'He was a doctor of medicine, sir.'

'You used the past tense.'

'He was killed in the Battle of Britain, Doctor.'

'Oh. Sorry. Mrs Johnson, your correct advanced standing is that of bachelor of arts - no, no, attend me. We do not award that degree or any degree simply on the basis of examinations with no time in residence. Do you expect to be on campus for the next two semesters? The academic year of 1946-47?'

'Certainly. And this present summer session as well. And then some, as I purpose asking to be accepted as a candidate for a doctor's degree if and when I achieve a baccalaureate.'

Indeed. In what field?'

'Philosophy. Metaphysics, in particular.'

'Well. Mrs Johnson, you amaze me. In your application you describe yourself as "housewife".'

'Me description is correct, Doctor. I still have three children at home. However, two of them are adolescent girls; both are good cooks. With cooking and housekeeping divided among us we all have time to go to school. And, I assure you, there is nothing basically incompatible between dishwater and curiosity abut noumera. I am a grandmother who never had time to go to college But I cannot believe that I'm too old to learn. This granny refuses to sit by the fire and knit.' I added, 'Dr Will Durant lectured here in 1921. That was my initial exposure to metaphysics.'

'Yes, I heard him myself. An evening series at the Grand Avenue Temple. A charming speaker. Goodness, you hardly seem old enough. That was twenty-five years ago.'

'My father took me. I promised myself that I would resume the study of philosophy when I had time. Now I do.'

'I see. Mrs Johnson, do you know what I taught before I went into administration?'

'No, sir.' (Of course I know! Father would be ashamed of me if I failed to scout the territory.)

'I taught Latin and Greek... and the Hellenic philosophers. Then the years moved along, and Latin was no longer required and Greek no longer offered, and Greek philosophers were ignored in favor of "modern" ideas, such as Freud and Marx and Dewey and Skinner. So I was faced with a need to find something else to do on campus... or go look for a job somewhere in the busy marts of trade.' He smiled ruefully. 'Difficult. A professor from the physical sciences can find work with Dow Chemical or with D. D. Harriman. But a teacher of Greek? Never mind. You say you plan to take this summer session:

'Yes, sir.'

'Suppose we call you a senior now... and graduate you at the end of the first semester, January '47, as a bachelor of arts, uh, major subject, modern languages; minor in - oh, what you will. Classical languages. History. But you can use the summer session and the first semester to support your real purpose, metaphysics. Um. I'm a grandfather myself, Mrs Johnson, and an obsolete teacher of forgotten subjects. But would it suit you to have me as your faculty adviser?'

'Oh, would you?'

'I find an interest in your purpose... and I feel sure that we can assemble a committee sympathetic to that purpose. Hmm -

' "Old age hath yet hls honour and his toil.
Death doses all; but something ere the end
Some work of noble note, may yet be done,
Not unbecoming men that strove with Gods." '

I picked it up:

'"The lights begin to twinkle from the rocks;
The long day wanes, the slow moon climbs; the deep
Moans round with many voices. Come, my friends,
'Tis not too late to seek a newer world." '

He smiled widely, and answered:
'"Push off, and sitting well in order smite
The sounding furrows; for my purpose holds
To sail beyond the sunset, and the baths
Of all the western stars, until I die." '

He stood up. 'Tennyson wears well, does he not? And if Odysseus can challenge age, so can we. Come in tomorrow and let's start planning a course of study toward your doctorate. Most of it will have to be independent study but we will look over the prospectus and see what courses could be useful to you.'

In June 1950 I was awarded the degree of doctor of philosophy in metaphysics, my dissertation being tided 'A Comparison of the World Pictures of Aristocles, Arouet, and Dzhugashvili considered through interaction of epistemology, teleology, and eschatology.' The actual content was zero, as honest metaphysics must be, but I loaded it with Boolean algebra, which (if solved) proved that Dzhugashvili was a murdering scoundrel... as the kulaks of the Ukraine knew too well.

I gave a copy of my dissertation to Father McCaw and invited him to my convocation. He accepted, then glanced at the dissertation and smiled. 'I think Plato would be pleased to be in the company of Voltaire... but each of them would shun the company of Stalin.'

Over the course of many years the only person to translate correctly at first glance all three of those names was Father MeCaw... except Dr Bannister, who thought up the joke.

The dissertation was not important. But the rides required that I submit enough pounds of scholarly manuscript to justify the degree. And for four years I had a wonderfully good time, both there and across the boulevard.

The same week I got my Ph.D. I registered at KU Medical School and at Kansas City School of Law - little conflict as most lectures at the Law School were at night, whereas

the courses I took at the Medical School were during the day. I was not a candidate for MD but for a master's degree in biochemistry. I had to register for a couple of upper division courses, but was allowed to do so while being accepted as a candidate for MS (I think I would have been turned down had I not walked in with a still-damp doctorate). I did not really care whether or not I received the master's degree; I simply wanted to treat an excellent applied-science school as an intellectual smorgasbord. Father would have loved it.

I could have had that degree in one year; I stayed longer because there were still more courses I wanted to attend. In the meantime the KC School of Law was supposed to require four years... but I had been there before, having attended several of their courses while Brian was getting his law degree, 1934-38. The dean was willing to credit me with courses simply by examination as long as I paid full-fees for each course - it was a proprietary school; fees were a prime consideration.

I took the bar examinations in the spring of 1952 - and passed, to the surprise of my classmates and professors. It may have helped that my papers read: 'M. J. Johnson' rather than 'Maureen Johnson'. Once I was admitted to the bar there was no fuss about my law degree; the school boasted about the percentage of its students that made it all the way into the bar - a much tougher hurdle than the degree.

That is how I legitimately got four academic degrees in six years. But I honestly think that I learned the most at the tiny little Catholic college at which I was only a listener, never a candidate for a degree.

Especially from a Japanese-American Jesuit priest, Father Tezuka.

For the first time in my life had an opportunity to learn an oriental language and I jumped at the chance. This class was for prospective missionaries to replace those liquidated in the war; it had both priests and seminarians. I was welcome for just one reason, I think: Japanese language structure and idiom and Japanese culture make even greater differences between male and female than does American culture and American language. I was an instructional tool'.

In 194=, the summer we spent in Chicago, I took advantage of the opportunity to study semantics under Count Alfred Korzybski and Dr S. I. Hayakawa, as the Institute for General Semantics was dose to where we lived - across the Mall and east a couple of blocks at 1234 East 56th. One thing that stuck in my mind was the emphasis both scholars placed on the fact that a culture was reflected in its language, that indeed the two were so interwoven that another language of a different structure (a `metalanguage') was needed to discuss the matter adequately.

Now consider the dates. President Patton was elected in November 1948 and succeeded President Barkley in January 1949.

The Osaka Incident took place in December 1948, Between President Patton's election and his inauguration. So President Patton was faced with what amounted to open rebellion in the Far Eastern Possessions formerly known as the Japanese Empire. The secret society, The Divine Wind, seemed willing to exchange ten of their number for one of ours indefinitely.

In his inauguration address President Patton informed the Japanese and the world that this exchange was not acceptable. Starting at once, it was one American dead, one Shintoist shrine destroyed and defiled, with the price going up with each incident.

Chapter 18 - Bachelorhood

I am not an expert on how to role a conquered country, so I will refrain from criticising President Patton's policies concerning our Far Eastern Possessions. My dear friend and husband, Dr Jubal Harshaw, tells me (and the histories at Boondock confirm) that on his time line (code Neil Armstrong) the policies were utterly different - supportive rather than harsh to the conquered foe.

But both policies (both time lines) were disastrous for the United States.

In the years from 1952 to 1982 I never had any real occasion to use my study of Japanese language and writing. But twenty-four centuries later my knowledge of Japanese caused Jubal to ask me to accept an odd assignment, after I had shifted from rejuvenation apprentice to the Time Corps. The outcome of the long and bitter war between the United States and the Japanese Empire had been disastrous for both sides on all time lines supervised by the Circle of Ouroboros, both those in which the United States `won' and those in which the Japanese Empire `won' - such as time Tine seven (code Fairacres) in which the Emperor and the Reichsführer split the continent down the middle along the Mississippi River.

The Time Corps mathematicians, headed by Libby Long, and their bank of computer simulators, supervised by Mycroft Holmes (the computer who led the Lunar Revolution on time line three) attempted to determine whether or not a revised history could be created in which the Japanese-American war of 1941-45 never took place. If so, would that avoid the steady deterioration of planet Earth that had occurred after that war on all explored time lines?

To this end the Corps needed agents before 1941 in Japan and in the United States. Agents for the United States were no problem, as there were lavish records in Boondock of American language, history, and culture in the twentieth century Gregorian as well as residents of Tertius who had actually experienced that culture at or near the target dates: Lazarus Long, Maureen Johnson, Jubal Harshaw, Richard Campbell, Hazel Stone, Zeb Carter, Hilda Mae Burroughs, Deety Carter, Jake Burroughs, and others - most especially Anne, a Fair Witness. I know that she was sent. And probably others.

But residents of Tellus Tertius familiar with Japanese language and culture of the twentieth century Gregorian were between zero and non-existent. There were two residents of Chinese ancestry, Dong Xia and Marcy Choy-Mu, who were physically similar to Japanese norms but neither knew any Japanese or anything of Japanese culture.

I could not possibly pass for Japanese - red-haired Japanese are as common as for on fish - but I could speak and write Japanese, not like a native but like a foreigner who has studied it. So a reasonable decision was made: I would go as a tourist - an exceptional tourist, one who had taken the trouble to learn something of the Language, culture, and history of Nippon before going there.

A tourist who bothers to study these aspects of a country before visiting it will always be welcome, if he is polite by their rules of politeness, It is easy to say, glibly, that every tourist ought to do this, but in fact this is difficult, expensive in time and money. I have a knack for languages and enjoy studying them. So, by the age of seventy, I knew five modern languages including my own.

That left over a thousand languages I did not know and around three billion people with whom I had no common language. The task is too big - a labour of Tantalus.

But I was well equipped to be an inoffensive tourist in Japan for the decade preceding the great war of 1941-45. So I went, and was put down in Macao, a place where bribery is the norm and money will accomplish almost anything. I was armed with lavish amounts of money and three very sincere passports; one said that I was Canadian, another that I was American, and the third that I was British.

I went by ferry to Hong Kong, a place much more nearly honest but where nevertheless money is highly respected. By then I had learned that neither British nor Americans were well thought of in the Far East at that time but that Canadians had not yet inspired any special dislike, so I started using the passport that showed that I was born in British Columbia and lived in Vancouver. A Dutch ship, the MV Ruys, took me from Hong Kong to Yokohama.

I spent a lovely year, 1937-38, tramping around Japan, sleeping in native inns, feeding the tiny deer at Nara, being breathless at the sight of Fuji-San at dawn, cruising the Inland Sea in a dinky little steamer, relishing the beauties of one of the most beautiful countries and cultures in all histories - all the while gathering data that I recorded in an implanted, voice-operated recorder much like the one I am now using.

I was also wearing, internally, a finder such as I am wearing now, and the fact that I haven't been found indicates to me that Time Corps HQ does not know what planet I am on, as the equipment is supposed to be delicate enough to track down an agent who has missed a rendezvous no matter where he is, as long as he is on the planet of drop.

That's the bad news. Here is the good news. During that year in Japan I heard several times of another redheaded English (American Canadian) woman who was touring the

Empire, studying Japanese gardens. She speaks Japanese and is said to look like me... although the latter means little; we round-eyes all look alike to them, except that red hair would always be noticed, and speaking Japanese is decidedly noticed.

Have I been (will I be) sent back on another visit to pre-war Japan? Am I time-looped on myself? The paradox does not bother me; Time agents are used to loops - I'm already looped for the gear 1937-38. I spent that year in Kansas City for the first time, except for two weeks in July following the birth of Priscilla and after Brian's bar exams; we celebrated both events with a trip to the Utah Canyons - Bryce, Cedar Breaks, North Rim.

If I am also looped on myself (tripled) in Japan in the year 1937-38, then the tripling will happen on my personal time line after my present now... which means that Pixel will carry the message and I will be rescued. There are no paradoxes in time; all apparent paradoxes can be untangled.

But it is a thin thread on which to hang my hope.

Tuesday, 5 August 1952, time line two, started as a sad day for Maureen... utterly alone for the first time in my life, alone with the tedious chore of cleaning out and closing up our old farmhouse and getting rid of it. But a glad day in one way. My married life had ended when Brian divorced me; my widowhood ended when Susan got married; this chore marked the start of my bachelorhood.

The difference between widowhood and bachelorhood? Please look at it historically. When I married, at the end of the nineteenth century, women were unmistakably second class citizens and everyone took it for granted. In most states a woman could not vote, or sign contracts, or own real estate, or sit on juries, or do any number of other mundane acts without the consent of some man - her father, her husband, or her eldest son. Most professions, trades, and occupations were closed to her. A woman lawyer, a woman doctor, a woman engineer aroused the same surprise as a waltzing bear.

`The wonder is not how well the bear waitzes but that it waltzes at all.' That is from Dr Samuel Johnson, I believe - a man who regarded women as no better than third-class citizens, lower than Scotsmen or Americans - two groups quite low in his esteem.

All through the twentieth century the legal status of women slowly improved. By 1982 almost all the laws discriminating against women had been repealed.

More subtle but at least as important and beyond repeal was the cultural bias against women. An example:

In the summer of 1940 when we were living on Woodlawn Avenue in Chicago, we were especially loaded with house guests during the mo weeks bridging the Democratic National Convention. One Howard trustee, Rufus Briggs, said to me one morning at breakfast, I left my laundry on that balcony couch where I slept. I need twenty-four-hour service on it and tell them to soft starch the collars - no other starch.'

I said briskly, 'Tell them yourself' I was not feeling overly sweet-tempered, as I had been up late the night before, arranging shake-downs for late arrivals, such as Briggs himself - he was, one of the cheerful idiots who had arrived in Chicago oblivious to the fact that for this period all hotel space as far away as Gary, Indiana, had been booked solid months earlier. Then I dragged myself out of bed early and ate in the kitchen in order to cook and serve breakfast to a dozen other people.

Briggs looked at me as if he could not believe his ears. 'Aren't you the housekeeper?'

`I'm the housekeeper. But I'm not your servant.'

Briggs blinked his eyes, then turned to Brian. 'Mr Smith?'

Brian said quietly, 'You have made a mistake, Mr Briggs. This lady is my wife. You met her last night but the lights were dimmed and we were whispering because others were asleep. So apparently you did not recognise her this morning. But I am sure Mrs Smith would be happy to send your laundry out for you as a favour to a guest.'

I said, 'No, I would not'

It was Briney's turn to look startled. 'Maureen?'

'I won't send out his laundry and I will not cook his breakfast tomorrow morning. His only comment this morning was to complain about his eggs; he did not even say thank you when I put his breakfast in front of him. So he can go out for breakfast tomorrow. I imagine he'll find something open on 63rd Street. But I have this announcement for all of you,' I added, looking around. 'We have no servants here. I am just as anxious to get to Convention Hall on time as you are. Yesterday I was late because I was making beds and doing dishes. Only one of you made your own bed - thanks, Merle! I'm not going to make beds today; if you don't make your own bed, you will find it still unmade when you get back. Right now I want volunteers to clear the table and do the dishes... and if I don't get them, I am not going to cook breakfast for anyone tomorrow.'

An hour later Brian and I left to go to the Convention.

While we were walking to the El station he said to me, `Mo, this is the first time we had a chance to speak to you privately. I really did not appreciate your failure to back me up in dealing with another trustee.'

`How?' I asked (knowing quite well what he meant).

'I told Mr Briggs that you would be happy to send out his laundry, and then you flatly refused, contradicting me. My dear, I was humiliated.'

`Briney, I was humiliated when you attempted to reverse me after I had told him to send out his laundry himself. I simply stuck by my guns.'

`But he had made a mistake, dear; he thought you were a servant. I tried to smooth it over by saying that of course you were happy to do it as a favour to a guest.'

`Why didn't you say that you would be happy to send out his laundry?'

`Eh?' Brian seemed truly puzzled.

`I can tell you why you didn't offer to do it. Because both you men regard sending out laundry as women's work. And it is, when it's your laundry and I am the woman. But I'm not Rufus Briggs wife and I will not do servant's work for him. He's a clod.'

`Maureen, sometimes I don't understand you.'

'You're right; sometimes you don't.'

'I mean - Take this matter of making beds and washing dishes. When we are at home we never expect house guests to wash the dishes or to make their own beds.'

'At home, Briney, I always have two or three big girls to help me... and never a dozen house guests at a time. And our women guests usually offer to help and if I need their help, I let them. Nothing like this mob I'm faced with now. They are not friends; they aren't relatives; most are total strangers to me and all act as if we were running a boarding house. But most of them at least say thank-you and please. Mr Briggs does not. Briney, at bottom you and Mr Briggs have the same attitude towards women; you both think of women as servants.'

`I don't see that. I don't think you are being fair.'

'So? Then I ask you again: if you wanted to be gracious to a guest, why did you not offer your own services to take tare of his laundry? You can use a telephone and the yellow section quite as well as I can, then you can arrange for or do whatever is necessary. There is nothing about sending out laundry that requires special womanly skills; you can do it as easily as I. Why did you see fit to volunteer my services in the face of my stated opposition?'

`I thought it was the gracious thing to do.'

'Gracious to whom, sir? To your wife? Or to the business associate who was rude to her?'

`Uh - We'll say no more about it.'

That incident was not unusual; it was exceptional only in that I refused to accept the conventional subordinate role under which a woman, any woman, was expected to wait

on men. Repealing laws does not change such attitudes because they are learned by example from earliest childhood.

'These attitudes can't be repealed like laws because they are usually below the level of consciousness. Consider, please, who makes the coffee. You are in a mixed group, business or quasi-business: a company conference, a public interest group, a PTA meeting. As a lubricant for the exchange of ideas, coffee is a good idea, and the means to make it is at hand.

Who makes the coffee? It could be a man. But don't bet on it. Ten to one you would lose.

Let's move forward thirty years from the incident of Rufus Briggs the soft-starched clod, from 1940 to 1970. By 1970 most legal impediments to equality between the sexes were gone. This incident involved a board meeting of Skyblast Freight, a D. D. Harriman enterprise. I was a director and this was not my first meeting. I knew all the directors by sight and they knew me or at least had had opportunity to know me.

However I admit that I was looking younger than the last time they had seen me. I had had my pendulous baby-chewed breasts reshaped, and at the same Beverly Hills hospital I had tucks taken up under the hairline to take the slack out of my face, then I had gone to an Arizona health ranch to get into top condition and lose fifteen pounds. I had gone next to Vegas and splurged on ultra-chic, very feminine, new clothes - not the tailored pantsuits most female executives wore. I was smugly aware that I did not look the eighty-eight years I had lived, nor the fifty-eight I admitted. I think I looked a smart forty.

I was waiting in the foyer outside the boardroom, intending not to go in until called - board meetings are dull rituals... but a crisis is sure to come up if you skip one.

Just as the light outside the boardroom started to blink a man came slamming in from outside, Mr Phineas Morgan, leader of a large minority bloc. He headed straight for the blinking light while shrugging off his overcoat. As he passed me, he chucked it at me. 'Take care of it!'

I ducked aside, let his coat land on the floor. `Hey! Morgan!' He checked himself, looked back. I pointed at the floor. `Your coat.'

He looked surprised, amazed, indignant, angry, and vindictive, all in one second. `Why, you little bitch! I'll have you fired for that.'

`Go right ahead.' I moved past him into the boardroom, found my place card, and sat down. A few seconds later he sat down opposite me, at which point his face managed still another expression.

Phineas Morgan had not intentionally tried to use a fellow director as a servant. He saw a female figure who, in his mind, must be hired staff - secretary, receptionist, clerk,

whatever. He was late and in a hurry and assumed that this subordinate employee would as a matter of course hang up his coat so that he could go straight to roll call.

The moral? In 1970 on time line two the legal system assumed that a man is innocent until proved guilty; in 1970 on time line two, the cultural system assumed that a female is subordinate until proved otherwise - despite all laws that asserted that the sexes were equal.

I planned to kick that assumption in the teeth.

5 August 1952 marked the beginning of my bachelorhood because that was the day on which I resolved that from that time on I would be treated the way a man is treated with respect to rights and privileges - or I would raise hell about it. I no longer had a family, I was no longer capable of childbearing, I was not looking for a husband, I was financially independent (and then some!), and I was firmly resolved never again `to send out the laundry' for some man merely because I use the washroom intended for setters rather than the one set aside for pointers.

I did not plan to be aggressive about it. If a gentleman held a door for me, I would accept the courtesy and thank him. Gentlemen enjoy offering little gallantries; and lady enjoys accepting them graciously, with a smile and a word of thanks.

I mention this because, by the 197=s, there were many females who would snub a man unmercifully if he offered a gallantry, such as holding a chair for a woman, or offering to help per in or out of a car. These women (a minority but a ubiquitous, obnoxious one) treated traditional courtesy as if it w ere an insult. I grew to think of these females as the lesbian Mafia. I don't know that all of them were homosexual (although I'm certain about some of them) but their behaviour caused me to lump them all together.

If some of them were not lesbians, then where did they find heterosexual mates? What sort of wimp would put up with this sort of rudeness in women? I am sorry to say that by 1970 there were plenty of wimps of every sort. The wimps were taking over. Manly men, gallant gentlemen, the sort who do not wait to be drafted, were growing scarce.

The principal problem in closing the house lay in the books; what to store, what to give away, what to take with me. The furniture and the small stuff, from pots and pans to sheets, would mostly be given to Good Will. We had been in that house twenty-three years, 1929 to 1952; most of the furniture was that old, or nearly so, and, after being worked over by a swarm of active children all those years, the market value of these chattels was too low to justify placing them in storage - since I had no intention of setting up a proper household in the foreseeable future.

I hesitated over my old upright piano. It was an old friend; Briney had given it to me in 1909 - second- (third-?) hand even then; it was the first proof that Brian Smith Associates was actually in the black. Brian had paid fourteen dollars for it at an auction.

No! If my plans were to work out, I must travel light. Pianos can be rented anywhere.

Having resolved to give up my piano other decisions were easy, so I decided to start with the books. Move all books from al over the house into the living - no, into the dining room; pile them on the dining-table. Pile them high. Pile the rest on the floor. Who could believe that one house could hold so many books?

Roll in the big utility table; start stacking on it books to be stored. Roll in the little tea-table; place on it books to take with me. Set up card-tables for books to go to Good Will. Or to the Salvation Army? Whichever one will come and get the stuff, soonest, can have the lot - clothes, books, bedclothes, furniture, whatever. But they've got to come and get it.

An hour later I was still telling myself firmly: No! Don't stop to read anything! If you must read it, then put that book in the 'take with' pile - you can thin it down later.

Then I heard the mewing of a cat.

I said to myself, 'Oh, that girl! Susan, what have you dope to me?'

Two years earlier, we had become catless through the tragic demise of Captain Blood, grandson of Chargé d'Affaires - sudden death from a hit-and-run driver on Rockhill Boulevard. In the preceding forty-three years I had never tried keeping the house without a cat. I tend to agree with Mr Clemens, who rented three cats when he moved into his home in Connecticut in order to give a new house that lived-in feeling.

But this time I resolved to struggle along without a cat. Patrick was eighteen, Susan was sixteen; each had received his Howard list. It was predictable that each would be leaving the nest in the near future.

Cats have one major shortcoming. Once you adopt one, you are stuck for life. The cat's life, that is. The cat does not speak English; it does not understand broken promises. If you abandon it, it will die and its ghost will haunt your nights.

At dinner the day Captain Blood was killed none of us ate much and we were not talkative. At last Susan said, 'Mama, do we start watching the want-ads? Or do we go to the Humane Society?'

'For what, dear?' (I was intentionally obtuse.)

`For a kitten, of course.'

So I laid it on the Tine: 'A kitten could live fifteen years, or longer. When you two leave home this house will be sold, as I have no intention of rattling around in a fourteen-room house, alone. Then what happens to the cat?'

'Nothing. Because there is not going to be a cat.'

About two weeks later Susan was a bit late getting home from school. She came in and said, `Mama, I must be gone a couple of hours. An errand.' She was carrying a brown paper sack.

'Yes, dear. May I ask why and where?'

'This.' She put the sack on my kitchen table. it tilted and a kitten walked out. A jellicle cat, small and neat and black and white, just as described in Mr Eliot's poem.

I said, 'Oh, dear!'

Susan said, 'It's all right, Mama. I've already explained to her that she can't live here.'

The kitten looked at me, wide-eyed, then sat down and started pin-pleating its white jabot. I said, 'What is her name?'

'She doesn't have one, Mama. It wouldn't be fair to give her one. I'm taking her down to the Humane Society so that she can be put to sleep without hurting. That's the errand I have to do.'

I was firm with Susan. She must feed the kitten herself. She must clean and refill its sand box as long as it needed one. She must train it to use the cat door. She must see to its shots, taking it back and forth to the veterinary hospital at the Plaza as necessary. The kitten was hers and hers alone, and she must plan on taking it with her when she married and left home.

Kitten and girl listened to this, round-eyed and solemn, and both agreed to the terms. And I attempted not to get friendly with this cat - let her look entirely to Susan, bond only with Susan.

But what do you do when a square ball of black and white fluff sits up on its hind legs, sticks out its little fat belly, waves its three-inch arms beside its ears, and says, plain as anything, 'Please, Mama. Please come fight with me.'

Nevertheless . Susan remained committed to taking her kitten with her. We did not discuss it but the deal was never renegotiated.

I went to the front door - no cat. Then I went to the back door. 'Come in, your Highness.'

Her Serene Highness, Princess Polly Ponderosa Penelope Peachfuzz, paraded in, tail high. (`It's about Time! But thank you anyway and don't let it happen again. What's for lunch?') She sat down, facing the kitchen cupboard where canned food was kept.

She ate a six-ounce can of tuna and liver, demanded more and did equally well on veal in gravy, then ate some crunchies for dessert, stopping from time to time to head-bump my ankles. At last she stopped to clean.

`Polly, let me see your pads.' She was not her usual immaculate self and I had never seen her so hungry. Where had she been the past three days?

I was certain from examining her paws that she had been on the road. I thought of some grim questions to ask Susan when she telephoned. If she did. But in the mean time the cat was here and this was home and the responsibility was now mine, by derivation. When I moved out of this house, the cat had to go with me. Unavoidable. Susan, I wish you were unmarried just long enough for me to spank you.

I rubbed Vaseline on her paws and got back to work. Princess Polly went to sleep on a pile of books. If she missed Susan, she didn't say so. She seemed willing to pig it with just one servant.

About one in the afternoon I was still sorting books and trying to decide whether to make do with a cold sandwich or go all out and open a can of tomato soup - when the front door chimed. Princess Polly looked up.

I said, `You're expecting someone? Susan, maybe?' I went to the door.

Not Susan. Donald and Priscilla.

`Come in, darlings!' I opened the door wide. `Are you hungry? Have you had lunch?' I did not ask them any questions. There is a poem by Robert Frost, well known on that time line in that century, 'The Death of the Hired Man', which contained this definition: `Home is the place that, when you have to go there, they have to take you in.' Two of my children had come home; they would tell me what they wished to tell me when they got around to it. I was simply glad that I had a house to let them into and that I still had bed clothes for them. Cat and children had not changed my plans - but those plans could wait. I was glad that I had not managed to clear out the day before, Monday the fourth - I would have missed all three. Tragic!

I got busy rustling up lunch for them - fancy cooking; I did open Campbell's tomato soup, two cans. `Let me see. We have quite a lot of not too stale cake left over from the reception, and a half-gallon of vanilla ice-cream that has not been opened. How much can you two eat?'

'Plenty!'

'Priss is right. We haven't eaten anything today.'

'Oh, my goodness! Sit down. Let's get some soup into you fast, then we'll see what else you want. Or would you rather have breakfast things, seeing that this is breakfast for you? Bacon and eggs? Cereal?'

'Anything,' answered my son. 'If it's alive, I'll bite its head off.'

`Behave yourself, Donnie,' said his sister. `We'll start with soup, Mama.'

While we were eating Priscilla said, `Why are the books piled all around, Mama?'

I explained that I was getting ready to dose the house, preparatory to selling it. My children exchanged looks; they both looked solemn, almost woebegone. I looked from face to face. 'Take it easy,' I advised. `There is nothing to look sad about. I'm not faced with any deadlines and this is your home. Do you want to fill me in?'

Most of it was fairly obvious from their condition - dirty, tired, hungry, and broke. They had had some sort of trouble with their father and their stepmother and they had left Dallas `forever' - 'But, Mama, this was before we knew that you were planning to sell this house. We'll have to find somewhere else to go... because Donnie and I are not going back there.'

'Don't be in a hurry,' I said. 'You are not out on the street.

I'm going to sell this house, yes - but we'll put another roof over our heads. This is the right time to sell this place because I let George Strong - he's in real estate - know that this place would be available once Susan was married. Hmm -' I went to the screen and punched up Harriman and Strong.

A woman's face came on screen. `Harriman and Strong, Investments. Harriman Enterprises. Allied Industries. How may I help you?'

`I am Maureen Johnson. I would like to speak to Mr Harriman or to Mr Strong.'

`Neither is available. You may record a message-scramble and bush are on line if needed. Or our Mr Watkins will speak to you:

`No. Relay me to George Strong.'

'I am sorry. Will you speak to Mr Watkins?'

`No. Just get this message to Mr Strong: George, this is Maureen Johnson speaking. That parcel is now available, and I punched in to offer you first refusal as I promised. I have carried out my promise but I am going to deal today. So now I will call the J. C. Nichols Company.'

`Will you hold, please?' Her face was replaced by a flower garden, her voice by a syrupy rendition of 'In an Eighteenth Century Drawing-Room'.

George Strong's face came on. `Greetings, Mrs Johnson. Good to see you.'

'Maureen to you, old dear. I called to say that I am moving. Now is the hour if you want to bid on it. Do you still want it?'

'I can use it. Do you have a price in mind?'

'Yes, certainly. Just twice what you are willing to pay.'

`Well, that's a good start. Now we can dicker.'

'Just a moment. George, I need another house, a smaller one. Three bedrooms, within walking distance of Southwest High. Got something like that?'

`Probably. Or across the line and close to Shawnee Mission High. Want to swap?'

`No, I'm planning to skin you on the deal. I want to lease by the year, automatic renewal unless notice given, ninety days.'

`All right. Pick you up tomorrow morning? Ten o'clock? I want to look over your parcel, point out to - you its shortcomings and beat your price down.'

'Ten o'clock, it is. Thank you, George.'

`Always a pleasure, Maureen.'

Donald said, 'Dallas phones are all tanks now. How come KC still uses flatties? Why don't they modernise?'

I answered, 'Money. Donald, any question that starts out "Why don't they - " the answer is always "Money". But in this case I can offer more details. The Dallas try-out turns out not to be cost-effective and the 3-D tanks will be phased out. For the full story see the Wall Street journal. The back issues for the past quarter are stacked in the library. It's a six-part series, front page.'

Tm sorry I brought it up. They can use smoke signals for all of me.'

'Be glad you brought it up and make use of the opportunity I offered you. Donald, if you intend to cope with the jungle out there, you need to make the Wall Street journal and similar publications such as The Economist your favourite comic books.' I added, `Ice-cream and cake?'

I put Priscilla into Susan's room, and Donald into the room Patrick had had, just beyond my bath. We went to bed early. About midnight I woke up, then got up to pee, not bothering with a light, as there was moonlight streaming in. I was about to flush the pot when I heard an unmistakable rhythmic sound - bed squeaks. Suddenly I was goose-flesh all over.

Priss and Donnie had left here almost as babies, two and four years old; they probably didn't realise that this old house was about as well soundproofed as a tent. Oh, dear! Those poor children.

I kept very quiet. The rhythm speeded up. Then I heard Priscilla start to keen and Donald to grunt. Shortly the squeaks stopped and they both sighed. I heard Priscilla say, `I needed that. Thanks, Donnie.'

I was proud of her. But it was time for me to hurry - much as I hated to, I must catch them in. the act. Or I couldn't help them.

Seconds later I tapped on Donald's door. `Darlings? May I come in?'

Chapter 19 - Cats and Children

It was after one o'clock before I left the children; it had taken that long to convince them that I was not angry, that I was on their side, that my only concern was to sec that they did not get hurt - because what they were doing was exceptionally dangerous in all sorts of ways, some of which I was sure they knew but some of which they, may not know about or had at least not thought about.

When I had gone in to see them, I had not grabbed a robe. Instead I had gone in as I was, bare naked, because a fully dressed authority figure such as a parent, walking in on two children caught in delectable flagrente, is all too likely to scare it out of them - cause bladder and bowel to cut loose. But another human as naked and vulnerable as they were themselves simply could not be a 'cop'. As Father had taught me years earlier, to know which way the frog will jump, you have to put yourself in the frog's place.

They still would not like being caught - they didn't! - but, if I did not catch them in bed together, they would lie about it later if I tried to question them. It is parallel to the old rule about puppies: if you don't catch a puppy at it, it is useless to bring the matter up later.

So I tapped and asked to come in, and waited.

A suppressed gasp, then dead silence -

I waited a while longer, then counted ten chimpanzees and tapped again. 'Donald! Priscilla! Please! May I come in?'

There was a whispered conference, then Donald's strong, manly baritone called out - and cracked. 'Come in - Mother.'

I opened the door. There were no lights on, but there was moonlight and my eyes were adjusted to the low light level. They were in bed together, sheet pulled up, and Donald was simultaneously protecting his sister against all dangers with his strong right arm around her while pretending hard that she was not there at all and that he was just waiting for a streetcar - and my heart went out to him.

The room reeked of sex - male musk, female musk, fresh ejaculate, sweat. I am expert in the odours of sex, with many years of wide experience. Had I not known better I would have judged that this was the site of a six-person orgy.

I must add that some of the odour came from me. Perhaps it is perverse that I should be sexually excited by catching my son and daughter in the most scandalous of all sex offences. But volition does not enter into it. For the moment I recognised those squeaks and deduced what and who, I bad been flowing. If King Kong had wandered by, he would have found me a push-over. Paul Revere I would have pulled from his horse.

But I ignored my state, reminding myself that they could not possibly smell me. 'Hello, dears! Is there room in the middle for me?'

Silence, then they moved apart. I went quickly to them before they could change their minds, pushed down the sheet, crawled over Donald, got between them on my back, snaked my right arm under Priscilla's neck, reached for Donald. 'have a shoulder pillow, Donald. Turn toward me, dear.'

He did so, stiffly, then remained tense. I said nothing and cuddled both my children, breathed deeply and tried to slow my heart. It began to work, and my youngsters seemed to relax somewhat, too.

Presently I said softly, 'How sweet to have both my darlings in bed with me,' and gave them each a quick squeeze and relaxed still holding them.

Priscilla said timidly, 'Mama, you're not mad at us?'

'Mad at you? Heavens, no! I'm worried about your welfare. But not angry. I love you, dear. Love you both.'

'Oh. I'm glad you're not mad.' Then curiosity got her. 'How did you catch us? I was very careful. I listened at your door, made sure you were asleep before I snuck in here and woke Donnie.'

'I probably wouldn't have noticed anything if I hadn't been drinking lemonade before going to bed. I woke up, dear, and had to pee. That wall on Donald's side of the bed is a

wall of my bathroom. Sound goes right through it. So I heard you.' I hugged her to me. 'It sounded like a dandy!'

Brief silence - 'It was.'

'I believe you. There is nothing, just nothing, as good as a gut-wrenching orgasm when you really need one. And you seemed to need that one. I heard you thank Donald.'

'Uh... he deserved thanks.'

'And smart of you to tell him so. Priscilla, there is nothing a man likes more than to be appreciated for his lovemaking. So keep it up all your life; it will make both you and your love happy. Mark my words. Remember them.'

'I'll remember.'

Donald apparently had trouble believing what he was hearing. 'Mother? Do I have this straight? You don't mind what we were doing?'

'Tell me what you were doing.'

'Uh - We were screwing!' He said it defiantly.

'"Screwing" is something dogs do. You were loving, you were making love to Priscilla. Or, if you like long medical words, you mo were copulated and engaging in coition to climax... which is like describing a gorgeous sunset in wavelengths of the electromagnetic spectrum. You were loving her, dear, and Priscilla is lovable. She was a lovable baby and she is even more lovable as a grown woman.'

I decided that now was the time to grasp the nettle, so I went on, 'Loving is sweet and good. Just the same, I'm extremely worried about you two. I suppose you both realise that the society around us strongly disapproves of what you were doing, has severe, cruel laws against it, and would punish you both horribly if they caught you. Priscilla, they would take you away from Donald and me, and put you in a home for delinquent girls, and you would hate every minute of it. Donald, if you were lucky, they might try you as a legal infant and do to you something like they would do to Priscilla - reform school until you are twenty-one, then registration and supervision as a sex offender. Or they might decide to try you as an adult - statutory rape and incest, and about twenty years at hard labour and then supervision the rest of your life. Do you know that, dear ones?'

Priscilla did not answer; she was crying. Donald said gruffly, 'Yes, we know that.'

'Well? What's the answer?'

'But, Mother, we love each other. Priss loves me and I love Priss.'

'I know you do and I respect your love. But you didn't answer me; you avoided answering. What is the answer to your problem?'

He took a deep breath, let it out in a long sigh. 'I guess we've got to quit.'

I patted bis ribs. 'Donald, you are a gallant knight and I'm proud of you. But now I must ask a frank question. When you started masturbating, did you ever swear off? Resolve never to do it again?'

'Uh, yes.'

'How long did you stay stopped?'

He answered sheepishly, 'About a day and a half.'

'How long are you going to leave Priscilla alone, when you happen on a perfect, utterly safe opportunity and she rubs up against you and tells you not to be a sissy, and she smells good and feels even better?'

'Why, Mama, I wouldn't do that!'

Donald heaved a quiet sigh. 'The hell you wouldn't, Slugger. You have, near enough. Mama, you've got me. What do you do? Nail me into a barrel? Or send me to Kemper?'

'Kemper isn't far enough; it had better be the Citadel. Children, that's not the answer. Instead - I really meant it when I said I wasn't angry. Let's all engage in a conspiracy to keep you two from being hurt. First, what contraception are you using?'

I had addressed the question to both of them. There was an extended silence, as each (I think) waited for the other to answer.

At last Donald said, 'We had some rubbers. But they're all gone and I don't have any money.'

(Oh, my God!) 'A clear reason why you should include me in your plans. There are both rubbers and fishskins in this house, and you can always have all you want. Priscilla, when did you menstruate last? Starting date?'

'On Monday the fourteenth, so -'

No, it wasn't, Priss. The fourteenth was the day we went to Fort Worth: And we passed the French consulate -'

'Trade mission.'

'Well, something French, and they had a lot of bunting and flags out because it was Bastille Day, and you certainly didn't start the curse that day because - well, you remember. So it must have been the following Monday. If it was a Monday:

I said, 'Priscilla, don't you keep a calendar?'

'Of course I do! Always.'

'Will you run and get it, please? Lets turn on a light'

'Uh - It's in Dallas.'

(Oh, damn!) 'Well, I don't want to tall Marian this late at night. Perhaps you two can compare notes and be certain and we won't have to call. Priscilla, do you know why I want that date?'

'Well, I think I do. You want to count up and tell if I'm fertile tonight'

'Good. Now both of you listen carefully. Marching orders. Laws of the Medes and the Persians, chiselled in stone. Once we figure it out, Priscilla, you will sleep with me the day you ovulate and three days each side... and each month you will stay in my sight during your fertile week. All the time. Every minute. We aren't going to trust to good resolutions.'

I went on, 'I'm not moralising; I'm just being practical. The other three weeks of each month I will not try to keep you two apart. But you will use fishskins, not rubbers, and you will use them every time... because there are thousands of Catholic mothers and quite a few non-Catholic ones who depended solely on "rhythm". You will not make love anywhere but in this house, with me in the house, with no one else in the house, and with all outside doors locked.

'In public you will always behave like most brothers and sisters, friendly but a little bored with each other. You will never show jealousy over each other; jealousy, possessive behaviour, is a dead giveaway. However, Donald, you can always be your sister's gallant knight, empowered to poke anyone in the jaw or give him a karate chop if that's what it takes to protect her from some oaf. That's both a brother's duty and his proud privilege.'

'That's what happened,' he said gruffly.

'What, Donald?'

'Gus had her down and was giving her a bad time. So I pulled him off and beat the tar out of him. And he lied about it and Aunt Marian believed him and didn't believe us and told Dad and Dad backed up Aunt Marian and - Anyhow we cut out that night. And didn't have money enough for the bus. So we hitchhiked and saved what money we had for eating. But -' Donald started to shake. 'There were three of them and they took what

money I had left and, and - But Priss got away!' I could hear him suppressing sobs that I pretended not to hear.

'Donnie was wonderful,' Priscilla said solemnly. 'It was last night as we were leaving Tulsa, Mama, on 44. They carne at us and Donnie yelled for me to run and he stood up to them while I ran down the street to a filling-station that was still open. I told the station owner and begged him to call the cops. He was doing so when Donnie showed up and the station owner helped us get a hitch into Joplin, and there we stayed in an all-night Laundromat till it got light, and then we carne straight here, in two hitches.'

(Dear Lord, if there is Anybody up there, why do You do this to children? Maureen Johnson speaking and You're going to have to answer to me.)

I squeezed his shoulder. I'm proud of you, Donald. It sounds like you took a licking and got robbed to keep your sister from being raped. Did they hurt you? Besides that bruise on your face?'

'Uh, maybe I've got a cracked rib. One of 'em kicked me when I was down.'

'Tomorrow we'll get hold of Dr Rumsey. You're both going to need physical exams anyhow.'

'Donnie ought to have that rib looked at, but I don't need a doctor. Mama, I don't like to be poked at.'

'You don't have to like it, dear, but as long as you are under my roof, you do have to hold still for it when I think it is necessary. That is not open to argument. But you've met Dr Rumsey before. He delivered you, right in this bed.'

'Really?'

`Really. His father was our first family doctor, and the present Dr Rumsey has been my doctor since Alice Virgina was born, and he delivered both of you. His son has just finished his internship, so it could happen that his son will deliver your first baby. Because the Rumseys are Howards, too, and practically members of our family. What have Marian and your father told you about the Ira Howard Foundation?'

`The Ira what?'

`I've heard of it,' Donald told me. `But just barely. Dad told me to forget what I had heard and wait a couple of years.'

`I think a couple of years have passed. Priscilla, how would you like to be sixteen, and you, Donald eighteen? Now, I mean. Not two years from now.'

`Mama, what do you mean?'

I told them what the Foundation is, in a handful of words or less. 'So a Howard often needs to adjust his birthday to keep from being noticed. We'll discuss it further in the morning; I'm going back to bed. Mama needs the rest - busy day tomorrow. Kiss me goodnight, dears - again.'

`Yes, Mama. And I'll go back to my bed... and I'm sorry I worried you.'

`We'll handle the worries. You needn't go back to your bed. Unless you want to.'

`Really?'

`Really truly. I do not believe in burning the horse after the barn has been stolen.' (If the first billion little wigglers did not shoot you down, dear, the next billion will never get close to the target. So enjoy it while you can - because, if you're pregnant, we'll have a whole new crop of worries. We haven't discussed the real, utterly practical reason to avoid incest... but you are going to have to have Old Granny Maureen's Horror Lecture on reinforced harmful recessives, the one I've been giving every little while for centuries, seems like.)

I'm not sure whether this is the frying pan or the fire. Not very many minutes ago I was sitting here in this jail, petting Pixel - he had been gone three days and I had been worried about him - and watching a stupid grope opera for lack of anything else to do, when a squad of spooks - well, four - robed and masked, came in, grabbed me, put their usual dog collar on me, and secured me by four leashes, then snapped them to rings in the walls instead of leading me away.

Pixel took one look at them and skittered away. Two of them, one on each side, started shaving the skin behind my ears.

`What's going on?' I demanded. `May one ask?'

'Hold still. This is for the electrodes. You have to be animated for the ceremony.'

`What ceremony?'

`After your trial and execution. Quit wiggling.'

So I wiggled harder and he back-handed me across the face, when four others carne in and suddenly the first four were dead and shoved under my cot. Then they unsnapped my leashes from the walls.

One said quietly, just above a whisper, `We're from the Committee for Aesthetic Deletions. Look scared and don't make it too easy for us to lead you out of here.'

Looking scared I could do, with no practice. They took me out into the corridor, on down and past the 'courtroom' door, then a sharp left and through a freight door onto a loading dock, where I was shoved into a lorry and the door clanged shut. Then it opened again; somebody chucked in a cat. The door slammed shut and the lorry started up with a jerk. I fell down with a cat on top of me.

`Is that you, Pixel?'

`Mrrow!' (Don't be silly!)

We're still in the lorry and rolling. Now where was I? Oh, yes - I woke up early from a nightmare in which one of my sons was humping his sister and I was saying, `Dear, you really ought not to do that on the front lawn; the neighbours will notice - 'when the dream woke me and I heaved a sigh of relief; it was just a dream. Then I realised that it had not been all that much a dream; the essence of it was too, too solid flesh - and came wide awake with a shot of adrenalin. Oh, Christ! Oh, Mary's drawers! Donald, did you knock up your sister? Children, I do want to help you... but, if you have let that happen, it won't be easy.

I got up and peed, and sat there and again heard the rhythmic music I had heard in the night... and it had the same effect on me; it turned me on. And I felt better as in all my life I have never been able to feel both horny and depressed at the same time. Had those kids been at it all night?

When the squeaks stopped, I flushed the pot, not having wanted to disturb them until they were through. Then I used the bidet, so that I would not start the day whiffing of rut. I brushed my teeth and gave my face and hair a lick and a promise.

I dug out of my wardrobe an old summer bathrobe of Patrick's that I had confiscated when I gave him a new one for his honeymoon. For Priscilla I found a wrap of mine. And one for me.

Then I tapped on their door. Priscilla called out, `Come in, Mama!' She sounded happy.

I opened the door and held out the robes. `Good morning, darlings. One for each of you. Breakfast in twenty minutes.'

Priscilla bounced out of bed and kissed me. Donald approached more slowly but did not seem much troubled at being caught in his skin by fierce old Mama. The room reeked even more than 1 remembered.

Something brushed past my legs - Her Serene Highness. She jumped up on the bed and started purring loudly. Priscilla said, `Mama, she bumped against the door last night, making a terrible racket, so I got up and let her in. She stayed with us a short while, then she jumped down, and demanded that I open the door again. So I did, and closed it

behind her. It could not have been a half-hour before she was banging on the door again. This time I ignored her. Uh... we were busy.'

'She resents closed doors,' I explained. 'Any closed door. I leave mine ajar and she spent the rest of the night with me. Or most of it. Hmm - She's Susan's cat and you have Susan's room. Do you want to move? Otherwise she is likely to wake you at any hour.'

'No, I'll just train Donnie to get up and hold the door for her.'

'Now see here, Slugger -'

I left.

I stirred up muffins and popped a Pyrex pan of them into the oven on a six -minute cycle. While the muffins were baking I set up baked eggs wrapped in bacon in another muffin pan. When the oven pinged, I transferred the muffins to the warmer, reset the cycle and put in the bacon and eggs. While they cooked, I poured orange juice and milk, and started the samovar to cycle. That left me time to set the breakfast table with happy mats and gaudy Mexican crockery - a cheerful table.

Priscilla appeared. 'Donnie will be right down. May I help?'

'Yes, dear. Go out into the back yard and cut some yellow roses for that bowl in the middle. Make it quick; I am about to serve the plates. Polly Down off that table! Take her with you, please. She knows better but she always crowds the limits.'

I served the plates and sat down just as Donald appeared. `May I help?'

`Yes, you can keep the cat off the table.'

`I mean, really help.'

'You'll find that a full-time job.'

Thirty minutes later I was working on my second cup of tea while Priscilla served another pan of muffins and more bacon, and opened another jar of Knott's Berry Farm marmalade. I was feeling as contented as Princess Polly looked. When you come right down to it, children and cats are more fun than stocks, bonds, and other securities. I would get these two married (but not to each other!) and then it would be soon enough for Maureen, the Hetty Green of the fast new world, to tackle the Harriman empire, force it to stand and deliver. 'Polly! Get out of that marmalade! Donald, you are supposed to be watching that cat.'

`I am watching her, Mama. But she's faster than I am.'

`And smarter.'

`Who said that? Who said that? Slugger, you'll rue the day.'

'Stop it, children. Time we talked about the Howard Foundation.'

Quite a while later Donald said, `Let me get this straight. You're saying that I have to marry a girl on my list and Priss has to marry a man on her list?'

'No, no, no! Nothing of the sort. Nobody has to marry anybody. If you do marry, it will be your own free choice and it need not be another Howard. There is just one marriage you can't make and that is to each other. Oh, you could marry each other; there are thousands of incestuous marriages in this country - so some Kinseys have calculated. You could do it by cutting out on your own again, supporting yourselves somewhere else and somehow until you both look old enough to convince a county cerk that you are over twenty one. You could do that and I would make no effort to stop you.

'But I would not help you. Not a thin dime. I'm not going to try to give you a course in genetics this morning, but I will later. Just let it stand for the moment that close incest isn't just against the Bible, and against the laws of Missouri and all the other fifty-five states, it's against natural laws because it makes unhealthy babies:

'I know that. But I could get a vasectomy.'

'So you could. What are you going to use for money? I certainly won't pay for it! Donald, I bate to hear you talk that way. I would rather pay to have your eyes removed than see you submit to sterilisation. You are here not only to live your life but to pass that life along. Your genes are very special; that is why the Foundation will subsidise any offspring of yours that you share with a female Howard. The same applies to you, Priscilla; you both have the genes for long life. Barring accidents, each of you will live to be more than a hundred. How much more we can't tell but it has been stretching longer each generation.

`Now here is how the Howard Fouudation system works. If you ask for it, the Foundation will supply each of you with a list of Howard eligibles near your age, while your name and address will be supplied to each person on your list. When I was young, it used to be eligibles close by, say fifty or a hundred miles or inside one state. Today, with glide rockets spanning North America in thirty minutes and everybody moving around like disturbed ants, you can elect to have your name supplied to every bachelor or spinster Howard in North America if you like and get back a list like a phone book. Not quite true; I understand that they dole them out a couple of dozen at a time, grouped geographically... but you can go on shopping until you find the man - or woman - with whom you want to spend the rest of your life.'

I continued, 'just one thing. When you date another Howard, while it can be fun, it is dead serious, too. You'll be looking him over as a prospective husband, Priscilla. If he is utterly impossible, for any reason or none, you must tell him so and tell him not to come

back... or tell me and I'll tell him so. But if he appeals to you and better acquaintance causes you to think of him as a possible husband, then it's time to take him to bed. Right here at home and I'll arrange things so that you can do so comfortably and without embarrassment'

`Wait a minute! Make love to somebody else? With Donnie right upstairs and knowing what I'm doing?'

`No. One - Donnie is not likely to be upstairs. He is likely to be at the home of a girl on his list. Two - nobody is urging you to have intercourse with anyone. That is strictly, totally, and utterly up to you. I am saying only that if he is a young man whose name has been sent to you by Uncle Justin, and you decide you want to try him, you can do so safely at home... and if, after sober consideration, you and he decide to marry, then you can get pregnant right at home. Howard brides are almost always pregnant - always, so far as I know - because it would be sad indeed to marry a man and discover, too late, that you and he are not fertile together. Oh, divorce is easy today... but it is better to have a seven-month, seven-pound baby than to have a divorce before you are twenty.'

I added, `You're going to have plenty of time to think about it. I want to check on some basics today. Priscilla, will you stand up and take off your wrap? We can ask Donald to leave the room if you wish. I want to guess how old you are, biologically.'

'I'll go upstairs, Slugger.'

'Don't be silly. You've seen me before and Mama knows you slept with me last night' My daughter stood up, took off my wrap, hung it on her chair. 'Any special way, Mama?'

'No.' No baby fat left that I could see and hers was not a baby face. A young woman, physically mature, functioning as such and enjoying it. Well, we'll get an expert opinion from Dr Rumsey. 'Priscilla, it seems to me that you look about the way I did at seventeen. We will see what Dr Rumsey says. For the sooner you start shopping your Howard list, the sounder I will sleep.'

I turned to my son. I'm sure you can be listed as eighteen, Donald, if you wish, and receive a list of eligible girls. And - I may be prejudiced; you're my son - but it is my guess that you can spend the next couple of years, if you choose to, travelling around the country, meeting Howard couples, eating at their tables and sleeping with their daughters - a different bed mate every week, until you find the right one. That programme would be safest for your sister.'

'Mama! What a nasty ideal Donnie! You wouldn't! Would you?'

'Son, don't make any promises you can't keep.'

Chapter 20 - Soothsayer

'Priscilla, you have not yet admitted to yourself that you can't marry your brother. Until you realise that, right down in your gizzard, you aren't mature enough to start courting no matter how grown up your body is. But you must not try to interfere with Donald's right to a-wooing go.'

'But I love him!'

'What do you mean by "love"?'

'Oh, you're just being mean to me!'

'Quit blubbering and try to behave like a grown woman. I want you to tell me what you mean by the word "love". That you are horny about him, so hot for him that you would couple with him behind any bush if he would let you, I will concede. It doesn't surprise me; I find him just as attractive, he's as pretty as a collie pup. But I have more sense about it than you have. Any woman is going to find Donald sexually attractive; if you try to keep other women away from him, you'll be piling up more grief for yourself than you will ever be able to handle.

'But being in sexual heat over a man is not love, my sweet daughter. I am willing to believe that Donald loves you as he stood up to three muggers to protect you. But tell me what you mean when you say that you love him... other than your hot pants - an irrelevant concurrent phenomenon.'

'Uh... everybody knows what love is!'

'If you can't define a word, you don't know what it means. Priscilla, this is a fruitless discussion and today is a busy day. We have established that you have hot pants over Donald. We have established that Donald loves you but we have not established that you love him. And I have pointed out what all of us know, that you can't marry your brother... which your brother has conceded but you are not willing to admit. So we'll continue this discussion on some later date when you've grown up a bit.' I stood up.

'But - Mama, what do you mean by "love"?'

`"Love" means a number of things but it always means that the other person's happiness and welfare come first. Come, let's get bathed and dressed, so -'

The telephone sounded. I said, 'Catch it, will you, Donald?'

'Yes, mum; thank'ee, mum.' The screen was in the living room; Donald went there still carrying Princess Polly in his left arm. He flipped the switch. 'Start talking; it's your money.'

I heard Susan's voice. `Mama, I - Polly! Oh, you bad, bad girl!'

Polly turned up her nose, wiggled and jumped down, and stalked away. I must add that she had never taken any interest in telephone images and voices. I think it may have been the lack of living odour but I must admit that feline reasoning is not for mortal man to comprehend. Or woman.

Donald said, 'Susie, am I going to have to show you the strawberry mark on my shoulder? I'm your brother, Mrs Schultz, the handsome one. How's married life? Boring?'

'Married life is just dandy and what are you doing in Kansas City and why didn't you come four days ago for my wedding and where's Mother?'

'Mama is around here somewhere and you didn't invite me.'

'I did so!'

I moved in. 'Yes, you did invite him, Sweet Sue, and all the rest of his family, all eight. Nine. But only Brian was able to come, as you know, so don't needle Donald. Good to see you, dear. How is Henry?'

'Oh, Hanky's all right. He says I can't cook the way you do but that he has decided to keep me for other reasons - I rub 'his back.'

'That's a good reason:

'So he says. Mama, I called for mo reasons... and the first reason no longer applies. I've been screwing up my courage since Sunday to tell you that I lost Princess Polly. And now she's not lost. How did she get there?'

'I don't know. How did you lose per?'

'I'm not sure. We were all the way to Olathe before we found a filling-station that also serviced Shipstones. While Hank was trading his stone for a fully charged one, I opened Polly's cage to change per sand box - she had made a mess and the dragon wagon was stinking.

Tm not clear just what happened then. I thought that I saw per back in. Hank says that I told him it was all right to let her ride free in the back. Anyhow we left and picked up the control road at Olathe and Hank turned it over to the bug, and we eased back the seats and went right to sleep. Oh, we were tired!'

'I'll bet you were!' I agreed, thinking about my own wedding.

'The alarm woke us when we reached Wichita and we were just getting our baggage out at the Holiday Inn when I saw that Polly was missing. Mama, I almost had a heart attack.'

'What did you do?'

'What could we do? We turned around and rolled back to Olathe. And the station was closed. And we played kitty, kitty, here, Polly! for a half-hour and the station owner's name was on the building and we asked a policeman and found his house and woke him and he wasn't pleased.'

'I find myself unsurprised.'

'But, yes, he had seen a little black and white cat, about the time we were there, but not later, which means she wasn't there all the time it took us to drive four hundred miles. So we left your telecode and asked him to call you if she showed up and we started back to Wichita but the bug quit and we took turns keeping each other awake while we rode the wire by hand... or we would have had to get on to a slow road. Just the same it was three in the morning by the time we got to Wichita again and they hadn't held our room and we slept in the car till morning. Mama, it was not the most successful wedding night on record. I think Hanky was ready to toss me back... and I wouldn't have blamed him.'

`Are things better now?'

`Oh, yes! But - Finding Princess Polly at home raises another point.'

'Do you want me to ship per to you?'

Susan suddenly stopped smiling. `Mama... pets are not permitted in married students' dormitories. I didn't know. So I guess we got to go out into Tempe and find us somewhere else to live... and I'm not sure we can afford it. You won't let her stay there? Yes, she's my cat, but - Please?'

Susan, I'm selling this house today.'

She looked blank. `Yes, Mama. Uh, if you put, her in a kennel... with per doctor, I guess ... I'll come and get her. As fast as I can make arrangements. We'll have to cash a bond. I'll have to work it out with Henry. But I won't let you down. I promised. I know it.'

`My good Susan. Dear, Princess settled it, I think, when she managed to find per way home in only three days, when she's never been anywhere before. Yes, I'm selling this house but we are moving only a mile or so. I want a smaller house and not all this acreage. I can persuade Princess to accept a new home that close by, I think; it is a problem I've coped with before.'

Susan let out a deep sigh. `Mama, have I told you lately that you're wonderful?'

'No.'

'You're wonderful!'

'Thank you. Is that all?' (The clock was crowding me.)

`Just one thing. Aunt Eleanor was here today -'

`She was? I thought she was in Toronto. On Saturday she didn't say anything about going to Arizona.'

`Uncle Justin went to Toronto; she came here. To Scottsdale, I mean. She's going to Toronto. Right away, if this works. She's had caretaker trouble two seasons now, she tells me, and she wants Hanky and me to move into their place and take care of it. What do you think?'

(I think you would be out of your mind to move into the luxurious summer palace of a super-millionaire; you'll learn bad habits and fancy tastes - that's no way to start a marriage. And that commuting up and down Scottsdale's Road - six miles? seven? - might take up enough time each day to interfere with your studies.) Susan, what I think does not matter. What does your husband think?'

'He suggested that I talk to you.'

'But what does he think?'

'Uh... I'm not sure. Will you talk to him?'

'Have him call me back. Susan, I have a business appointment and I'm late; I've got to switch off. Bye!'

Whew! Nine-thirty-five - I punched up Harriman and Strong, got the same female zombie as yesterday. `Maureen Johnson speaking. Let me speak to George Strong.'

`Mr Strong is not available. Will you record -'

`We went through that routine yesterday. I'm Maureen Johnson and he has an appointment with me at my house in twenty minutes and you know it! Catch him before he leaves the building or phone him in his car. Move, damn it!'

'I'm here, Maureen.' George's face replaced hers. 'I've been held up. Will you forgive me if I make it ten-thirty instead of ten?'

`Quite all right, George. You, recall those envelopes I left with you in 1947?'

'Certainly. In my personal safe. Never mingled with business papers.'

`Would you, please, bring with you envelopes numbers one and two?'

`Certainly, dear lady.'

'Thank you, sir.'

I switched off. 'Up we go, darlings, and bathe and dress. Priscilla, come share my bath'- and my bidet; you smell like a whorehouse and don't realise it, dear - 'and we'll put you into something of mine. Something summery, the day is going to be a scorcher. Shorts and a halter, probably. Donald, Patrick left some clothes behind, so look around. Shorts and a T-shirt, maybe. Or Levi's. We'll stop at the Plaza later and do some fast shopping. Don't use all the hot water - three baths at once. Be ready by ten-twenty. On your marks, get set, go!'

George had two houses to show me. One was near 75th Street and Mission Road in Johnson County, close to Shawnee Mission East High School. It belonged to New World Homes, a Harriman Enterprise, and had all the newer than-tomorrow touches New World Homes was famous for - and it reminded me of a Bauhaus fiat.

My youngsters loved it.

The other was on the Missouri side of the line, about half way between our old house and Southwest High School, off Linden Road. It was not as new. The appearance of the development and my memory told me that it had been built in 1940, give or take a year.

'George, this is a J. C. Nichols subdivision.'

'The Nichols organisation always builds excellent houses. This came into our hands because I bought it from one of our executives in a compassionate move, following a tragic accident. He lost his wife and two children. When he got out of hospital, we shipped him to Tucson to recuperate, then put him to work in Paradise, at the power plant. Complete change of work, scene, people - my partner's notion of how to rehabilitate a good man who had had his very life chopped off. Delos - Mr Harriman - takes care of his people. Shall we go in?'

It was a pleasant house, with good landscaping and a fenced back yard - and it was furnished.

Mr Strong said, `Ali he asked to have shipped to him were his books and his clothes. Her clothes and those of his youngsters and their personal possessions all went to the Salvation Army. The rest - bedlinen, blankets, rugs, towels, drapes - have all been cleaned and the mattresses sterilised. The house is for sale furnished or unfurnished, and you can have it either way on lease.'

It had a master bedrooan and mo smaller ones upstairs, each with bath. The master bedroom was on the west and. had a `sunset' balcony, like the flat we had in 1940 on Woodlawn in Chicago. Downstairs was both a parlour and a family room, an arrangement I strongly favour for any family having children at home. Youngsters need a

place where they can be less than neat, without disturbing mother when she has someone in for tea.

Off the back hallway, balancing the kitchen, was a maid's room and bath. The kitchen had a GE dishwasher and a Raytheon electronic cooking unit of the same sort that I had in my old farmhouse - and in both cases the equipment was new, not the age of either house. A feature that struck my eye was an abundance of built-in bookcases... added later, it seemed to me, except a pair of small ones flanking the fireplace in the family room. Most houses didn't even have that much, as most people don't read.

(Before the twentieth century was out that could be worded, 'most people can't read'. One of the things I learned in studying the histories of my home planet and century on various time lines was that in the decline and fall that took place on every one of them there was one invariant: illiteracy.

In addition to that scandalous flaw, on three time lines were both drug abuse and concurrent crime in the streets, plus a corrupt and spendthrift government. My own time line had endless psychotic fads followed by religious frenzy; time line seven had continuous wars; three time lines had collapse of family life and marriage - but every time line had loss of literacy... combined with - riddle me this - more money per student spent on education than ever before in each history. Never were so many paid so much for accomplishing so little. By 1980 the teachers themselves were only semi-literate.)

The house had - mirabile visu! - two hot-water heaters, one for upstairs, one for kitchen, laundry room, and maid's bath. I tried a tap and was amazed to discover that the water was hot.

George Strong said, 'After you called yesterday I instructed our maintenance foreman to have services turned on and the house aired. You could sleep here tonight if you so wished.'

'We'll see.' I took a quick look in the basement and we left.

George Strong treated us to a lovely lunch in The Fiesta Patio in the Plaza, then at my request we were taken to Dr Rumsey's office. I spoke to Jim Rumsey and told him what in particular I wanted him to look for - I can be truthful with Dr Rumsey, thank goodness, since he understands Howard problems.

'Don't tell her whether or not she is pregnant; tell me. She's a difficult case; I need leverage. Do you want to know her real age?'

'You forget that I know it. I'll try not to let that fact affect my judgement.'

'Jim, you're a comfort.' I kissed him goodbye, went out and spoke to my youngsters:

`Just sit tight and wait. He has other patients ahead of you. When you are through, make your best way home.'

`You're not picking us up?' Priscilla seemed amazed. 'I thought we were going shopping?'

'No, we've run out of time. Perhaps we'll go to the Plaza after dinner; I believe Sears is open late.'

'Sears?'

'Do you Nave something against Sears?'

'Aunt Marian never shops, at Sears.'

'That's interesting. I'll see you at home. You can walk or take the bus.'

'Wait a moment! Did you tell the Doctor that I don't want to be poked?'

'On the contrary, I told him that if you gave him any lip or showed any lack of co-operation, I wanted him to tell me.'

Priscilla pouted. 'I thought that you were going to pick us up and go shopping and then we were going back to decide which house to rent'

'I am about to decide that right now, while you two take your physicals.'

'You mean we don't get a vote?'

'Did you think that we were going to vote on it? All right, we'll vote by the rules of the Republic of Gondor. For each dollar each interested party invests in the deal he or she gets one vote. How many votes do you want to buy?'

'Huh? Why, I think that's mean!'

'Priscilla, it has never been in the Bill of Rights that minor dependants get to pick the family domicile. And, while I do not know how Aunt Marian ran things, in my household I make such decisions. I may consult others; I may not. If I do consult others, I am not bound by their opinions. Understand me?'

Priscilla did not answer. Donald said quietly, 'Slugger, you're crowding your luck.'

I rejoined George at his car; he handed me in. `Where now, dear lady?'

'I would like to look again at the furnished house.'

`Good.'

We rode in silence. George Strong was a comfortable man to be with; he had no small talk. Presently I said, `Did you bring those two envelopes?'

'Yes. Do you want them now? If so, I had better park. They are in a concealed zipper pocket, rather hard to reach.'

No, I was just checking, before we got too far from your office.'

When we reached the house, I went upstairs with George at my heels, and into the master bedroom. I started undressing; his face lit up.

`Maureen, I had hoped that you had this in mind.' He sighed happily and started reaching for fastenings himself. It's been a long time.'

`Too long. I've been overwhelmed with mother problems and with school. But school is over for me, for a long time at least, and my mother problems I have under control - I hope - and I'll have more time, if you want me.'

'I'll always want you!'

'I've been thinking about you and your sweet ways all day. But I had to park the children first. Do you want to undress me? Or shall we both hurry and see how quickly we can be in bed?'

'What a choice to have to make!'

George wasn't the greatest bedroom artist in the world, but in the six years I had been his now-and-then mistress, he had never left me hanging on the fence. He was an attentive and considerate lover and he took as his prime purpose being certain that his partner in bed reached orgasm.

If he was no Adonis, I was no Venus. When I was Priscilla's age, I looked pretty good - as tasty as she did, I think. But now (1952) I was seventy and a simulated forty-seven, and did look past forty despite special effort. An older woman must work at it, just as George worked at it (and I did appreciate his efforts). She must keep her breath sweet, her inner muscles in good tone, her voice low and mellow, her smile ready and her frown never, and her attitude friendly and co-operative. Father had told me, 'Widows are far better than brides. They don't tell, they won't yell, they don't swell, they rarely smell, and they're grateful as hell.'

That's Maureen Johnson from 1946 to 1982. When I first heard Father's bawdy formula I was simply amused by it and never expected it to apply to me... until that sour day that Brian let me know that his younger concubine had displaced me. Then I found that Father's joking description was the simple truth. So I became an available 'emergency

squaw'. I worked hard at being agreeable and smelling good. And I didn't insist on Adonis, just a friendly fair exchange with a gentleman. (Never an oaf, never a wimp!)

I always left time for a second one, if he wanted it. He wants it, if you have done the job on him you should do. The reason American men are such lousy lovers is that American women are such lousy lovers. And vice versa, and around and around. `Garbage in, garbage out.' You get what you pay for.

That twenty minutes to an hour between goes is the best time in the world for intimate talk.

'Want first crack at the bathroom?' I asked.

'No hurry,' George answered, his voice rumbling in his chest (I had my right ear against it). 'How about you?'

'No rush. George, that was a goody. And just what I needed. Thank you, sir.'

'Maureen, you're the one Shakespeare had in mind - "where other women satiate, she most makes hungry":

`Go along with you, sir.'

'I mean it.'

'Tell me enough times and I'll believe it. George, when you do get up, would you please get those envelopes? Wait a moment. Do you have time today for a second one?'

`I have time. That is what time is for.'

`All right. I did not want to waste time in bed talking business if you were in a hurry. Because I do know ways to get you up again quickly if you are in a hurry.'

'You do indeed! But I got a day's work done before ten in order to devote the rest of the day to Maureen.' He got up, got the two envelopes, came back, offered them to me.

I said, `No, I don't want to touch them. George, please examine them. Is there any way I could have tampered with them?'

'I don't see how you could have. They have been in my possession continuously since 4 July 1947.' He smiled at me, and I smiled back - that was the date of the second time we had been in bed together. 'Your birthday, girl, and you gave me a present.'

`No, we exchanged presents, to our mutual profit. Examine the envelopes, George - have they been tampered with? No, don't come closer. I might bewitch them.'

He looked them over. 'The flap seal has both our signatures written across it, on each envelope. I know my signature and I saw you sign under mine. I do not see how even Houdini could have opened them.'

'Please open number one, George, and read it aloud... and keep it. Put it back into your zipper pocket.'

`Whatever you say, dear girl.' He opened it and read, ` "4 July 1947. In the spring of 1951 a man calling himself 'Dr Pinero' will infuriate both scientists and insurance men by claiming to be able to predict the date of any person's death. He will set up in business in this sort of fortune-telling. For several months he will enjoy great business success. Then he will be killed or die in an accident and his apparatus will be destroyed. Maureen Johnson." '

(As George read aloud, I thought back to that Saturday night, 29 June 1918. Brian slept part of the time; Theodore and I not at all. Every now and then I ducked into the bath, recorded in crisp Pitman everything Theodore told me - many details that he had not given to judge Sperling and Justin and Mr Chapman.)

George said, 'Interesting. I never did believe that this Doctor Pinero could do what he claimed to do. It must have been some complex hoax.'

'That's not the point, George.' (I did not speak sharply.)

'Eh?'

'It does not matter now whether he was a charlatan or not; the man is dead, his apparatus destroyed, none of his notes remains. So said Time magazine and all the newspapers. All this happened last year, 1951. That envelope has been in your custody since July 1947, four years ago. How did I do it?'

He answered mildly, 'I wondered about that. Are you going to tell me?'

(Certainly, George. This man from the stars and the future came home and made love to me and told me these things because he thought they could help me. And then he died, killed in a war that wasn't his. For me. [Only now I know that he went back to the stars and I lost him... and found him... and now I'm lost again, in a darkened lorry with a screwball cat: Pixel, don't go away again!])

'George, I'm a soothsayer.'

'A soothsayer. That's a fortune-teller.'

'Literally it means one who speaks the truth. But I am a prophet, rather than a fortune-teller. All those envelopes contain prophecies. Now for envelope number two. Don't opera it quite yet. George, have I been in your office in the past month?'

'Not to my knowledge. The only time you were ever in it, that I can recall, was about two years ago. We had a dinner date and it suited you to stop by my office rather than be picked up.'

'That's right. You read the Wall Street journal, I'm sure. You are a director of the corporation managing the Paradise atomic power plant; I suspect that you read the journal pretty carefully concerning public power matters.'

'That's true. Managing business involves studying all sorts of finicky details.'

'What is new in the public power business lately?'

'Nothing much. The usual ups and downs.'

'Any new power sources?'

'No, nothing significant. Some experimental windmills, but windmills, even improved ones, can't be classed as new.'

'How about sunpower, George?'

'Sunpower? Oh! Yes, there was a feature story in the Wall Street Journal. Eh... sunpower screens. Direct conversion of sunlight to electricity. Uh, two long-hair scientists, Dr Archibald Douglas and Dr M. L. Martin. Maureen, their gadget will never amount to anything. If you are considering it, don't risk any money on it. Do you realise how much of the time it is cloudy, how many hours are dark, how smog cuts into the potential? You wind up with -'

'George. Open the second envelope.'

He did so. '"Two scientists, Douglas and Martin, will develop conversion of sunlight into electricity at high efficiency. Douglas-Martin Sunpower Screens will revolutionise public power and strongly affect everything else for the rest of the twentieth century." Maureen, I just can't see how such an inefficient source -'

'George, George! How. did I know, in 1947, about these sunpower gadgets disclosed just this year? How did I get the names right? Douglas. Martin.'

'I don't know.'

'I told you and now I'll repeat it. I am a prophet. Envelope number three tells Harriman Industries how to cash in on the Douglas-Martin Sunpower Screens. The next three envelopes concern power, public power, big power - and the changes coming that you won't believe. But you will have to believe when we open those envelopes one by one. The question is: will we open them after the fact, as with these two - and then all I could

say is "I told you so" - or do we open each one long enough before the fact that my prophecy is useful to you?'

'I'm getting chilly. Shall I get dressed, or come back to bed?'

'Oh, dear! I've talked business too long. Come to bed, George, and let me try to make it up to you.'

He did and we cuddled, but the essential miracle did not take place. At last I said, 'Shall I apply a little direct magic? Or would you rather rest?'

'Maureen, what is it you want from Harriman Industries? You have not dope this just to perplex me.'

'Of course not, George. I want to be elected a director of Harriman Industries, the holding company. Later on you will need me on the board of some of the corporations being held by it. However I will continue to decide how to time prophecies... as timing is everything.'

'A director. There are no women on the board.'

'There will be when you nominate me and I am elected.'

'Maureen, please! All directors are major stockholders.'

'How much stock does it take to be eligible?'

'One share complies with the roles. But company policy calls for major ownership. In the holding company or any of its subsidiaries.'

'How much? Shares. No, dollar value by the market; the various corporate shares are not all the same value per share. Not any, I should say.'

'Uh, Mr Harriman and I think a director should own, or acquire soon after election, at least half a million in market value of shares. It fixes his attention on what he is voting on.'

'George, on Monday at the close of market my summed up position in all of your companies was $872.039.81 - I can bring that up to an even million in a few days if it would help to smooth the way.'

George's eyebrows went way up. 'Maureen, I didn't know that you owned any of our stock. I should have spotted your name in connection with any large block.'

'I use dummies. Some in Zurich, some in Canada, some in New York. I can get it all into my own name if there is any reason to.'

'We'll need some intelligences filed with us, at least. Maureen, am I free to tell Mr Harriman about your envelopes? Your prophecies?'

'How would he feel about them?'

'I'm not sure. He and I have been in business together since the twenties... but I don't know him. He's a plunger... I'm a plough horse.'

'Well, let's keep it a bedroom secret for now. Perhaps you will want to open the next envelope in his presence. Or perhaps not. George, if the public, particularly the Street, got hold of the idea that you were making business decisions on the advice of a soothsayer, it might damage Harriman Industries, might it not?'

'I think you're right. All right, bedroom secret.' He suddenly smiled. 'But if I said that I consulted an astrologer, half of those knot-heads would consider it "scientific":

'And now let's. drop it, and let me see if I can get our plough horse interested in ploughing me. George, do all the men in your family have oversize penises?'

'Not that I know of and I think you are trying to flatter me.'

'Well, it seems big to me. Hey! It's getting bigger!'

Chapter 21 - Serpent's Tooth

My problems for the next ten years were Princess Polly, Priscilla, Donald, George Strong... and a curious metaphysical problem I still don't know how to resolve - or how I should have resolved it, although I have talked it over in depth with my husband and friend Dr Jubal Harshaw and with some of the finest mathematico-manipulative cosmologists in any universe, starting with Elizabeth 'Slipstick Libby' Long. It involves the age-old pseudo-paradox of free will and predestination.

Free will is a fact, while you are living it. And predestination is a fact, when you look at any sequence from outside.

But in World-as-Myth neither free will nor predestination have meaning. Each is semantically null. If we are simply patterns of fictions put together by fabulists, then one may as well speak of free will for pieces in a chess game. After the game is history and the chessmen have been placed back in the box, does the Black Queen lose sleep moaning, 'Oh, I should never have taken that pawn!'

Ridiculous.

I am not an assemblage of fictions. I was not created by a fabulist. I am a human woman, daughter of human parents, and mother of seventeen boys and girls in my first life and mother of still more in my first rejuvenation. If I am controlled by destiny, then that destiny lies in my genes... not in the broodings of some near-sighted introvert hunched over a roboscriber.

Mie trouble was that there came a time as we neared the end of the decade that I realised that Theodore had told me about a tragedy that could possibly be prevented. Or could it? Could I use my free will to break the golden chains of predestination? Could I use my foreknowledge that something was going to happen to cause it not to happen?

Let's turn it upside down - If I keep something from happening, how could I have foreknowledge of something that never happened?

Don't try to sort that out; you'll bite your own tail.

Is it ever possible to avoid an appointment in Samarra?

I knew that the power satellite was going to blow up, killing everybody aboard. But in 1952 no one else knew that there would ever be a power satellite. In 1952 it was not even a blueprint.

What was my duty?

On Friday Dr Rumsey told me that Priscilla was not pregnant and that she was physically old enough to be bred and that he was willing to support a delayed birth certificate, if I wanted her to have one, showing an age anywhere from thirteen to nineteen... but that in his opinion she was childish in her attitudes.

I agreed. 'But I may have to phoney an age of at least sixteen.'

'I see. Her brother is screwing her, isn't he?'

I answered, 'Is this room soundproofed?'

'Yes. And so is my nurse. We've heard everything, dear, much of it a lot worse than a little brother sister incest. We had a case last week - not Howards, thank God - of "His brother is screwing him". Be glad your kids are normal. With brother-sister games all that is usually needed is to see to it that she doesn't get pregnant and that they get over it in time to marry somebody else. Which they almost always do. Haven't you run into this before?'

'Yes. Before you took over your father's practice. Didn't he tell you?'

'Are you kidding? Pop treats the Hippocratic Oath as handed down from on high. How did it work out?'

'Okay in the long run, although it worried me at the time. Older sister taught younger brother and then younger brother taught still younger sister. I walked on eggs for a while, wondering whether to catch them or just to keep an eye out for trouble. But they never let it get intense; they just enjoyed it. My kids are a horny lot, all of them.'

'And you aren't?'

'Shall I take off my panties? Or shall we finish this discussion?'

'I'm too tired. Go on.'

'Sissy. Eventually they all took the Howard shilling, and now all three couples are friendly, with, I think, occasional Westchester weekends. But they keep such things out of my sight to keep from shocking poor old strait-laced Mama. But these two don't have that easy-going attitude. Jim, I've got to get that girl married.'

'Maureen, Priscilla isn't ready to get married. The cure would be worse than the disease. You would ruin some man's life while spoiling hers, not to mention the damage to possible children. Hmm - Priscilla told me she had just moved here from Dallas. I don't know Marian. Hardy family - right? What sort of a person is Marian?'

'Jim, I am not an unprejudiced witness.'

'That from the woman who can always see the good side in the Devil himself tells me all I need to know. Well, Marian may have had good intentions but she did not do a good job on Priscilla. At least not good enough to risk letting her marry at fourteen, no matter how mature her pelvic measurements are. Maureen, I'll fake any age you say - but don't let her get married so young.'

'I'll try, dear. I've got a tiger by the tail. Thank you.'

He kissed me goodbye. Shortly I said, 'Stop that; you said you were too tired. And you've got a waiting-room full of patients.'

'Sissy.'

'Yup. Some other time, dear. Give my love to Velma. I want to get you both over for dinner next week to see my new house. Maybe then.'

Princess Polly took a while to accept the move. For two weeks I kept her indoors and using a sand box. Then I let her out. An hour later, not being able to find her, I drove slowly back the eight blocks to our old house. When I was almost there, I spotted her, parked quickly and called her. She stopped and listened, let me approach her, then scampered away, straight for her old home. No, her only home.

I watched in horror as she crossed diagonally at Meyer and Rockhill - two busy boulevards. She make it safely and I breathed again and went back for my car and drove to our old house, arriving as she did because I conformed to traffic rules while she did not. I let per sniff around inside an empty house for a few minutes, then picked per up and brought per home.

For the next ten days this was repeated once, and sometimes twice, a day. Then came a day - the day after Labor Day, I believe - when a wrecking crew arrived to clear the site. George had warned me, so that day I did not let per out. I took per there - let her go inside as usual and sniff around, then the crew arrived and started tearing the house down. Princess came running to me and I let per sit in my lap in the car, at the kerb.

She watched, while the Only Home was destroyed.

Aside from fixtures, which had been removed earlier, nothing was salvaged. So they tore down that fine old nineteenth-century frame structure in only a morning. Princess Polly watching, unbelieving. When the wreckers hitched bulldozers to the north wing and pulled it down, made it suddenly rubbish, she hid per face against me and moaned.

I drove us home. I did not like watching the death of that old house, either.

I took Polly back the next day. There was nothing but soil scraped bare and a basement hole where our home had been. Princess Polly would not get out of the car; I am not sure she recognised the site. She never ran away again. Sometimes gentlemen friends came to call on her, but she stayed home. I think that she forgot that she had ever lived anywhere else.

But I did not forget. Never go back to a house you once lived in - not if you loved it.

I wish that Priscilla's problems had been as easy to cope with as Polly's. It was Friday before I saw Dr Rumsey; Thursday we moved to our new house and any such move is exhausting, even though I used professional packers and handlers, not just their vans. It was simplified, too, by the fact that most of the furniture was not moved to our new house, but given to Good Will - I told both Good Will and the Salvation Army that a houseful of furniture, plus endless minor chattels, were to be donated to charity but they must send a truck. The Salvation Army wanted to come over and select what they wanted, but Good Will was not so fussy, so they got the plunder.

We kept only the books, some pictures, my desk and my files, clothing, some dishes and flatware, an IBM typewriter, and a few oddments. About eleven I sent Donald and Priscilla over to the new house with all salvaged food from pantry and freezer and refrigerator.

'Donald, please come back for me after you unload. Priscilla, see what you can find for lunch; I think they will be loaded by noon. But don't fix anything for which timing is critical.'

`Yes, Mother.' Those were almost the only words she spoke to me that morning. She had done whatever I told per to do but made no attempt to use initiative, whereas Donald tackled the job with imagination.

They drove away. Donald came back for me at noon, just as the crew-was breaking for lunch.

'We'll have to wait,' I told him, `as they are not quite finished. What did you do with Princess?'

'I shut her into my bathroom for now, with per sand box and food. She resents it.'

`She'll just have to put up with it for a while. Donald, what is eating Priscilla? Last night and this morning she has been acting as if someone - me, I think - had broken her little red wagon.'

'Aw, Mother, that's just the way she is. Doesn't mean anything.'

`Donald, it's not the way she is going to be, not if she stays here. I will not cater to sullenness. I have tried to give all my sons and daughters a maximum of freedom consistent with civilised behaviour towards other people, especially towards their own family. But civilised behaviour is required of everyone at all times. This means politeness and a cheerful demeanour, even if simulated rather than felt. No one is ever exempt from these rules, no matter how old. Do you think you can influence her? If she's sulky, I am quite capable of telling her to leave the table... and I don't think she would like that.'

He laughed without mirth. I'm sure she wouldn't like it'

`Well, perhaps you can put it over to her. Possibly she won't resent it from you.'

`Uh, maybe.'

`Donald, do you feel that there is anything I have said or done - or required of her, or of you - that she is justified in resenting?'

'Uh... no.'

'Be frank with me, son. This is a bad situation; it can't go on.'

'Well... she never has liked to take orders.'

'What orders have I given that she doesn't like?'

`Well... she was pretty upset when you told her she couldn't come along and help decide which house we would take.'

`That was not an order. I simply told her that it was my business, not hers: And so it is.'

'Well, she didn't like it. And she didn't like being told that she had to be what she calls "poked at". You know.'

`Yes, a pelvic examination. That was indeed an order. An order not subject to discussion. But tell me, what did you think of my requiring her to submit to a pelvic examination? Your opinion won't change my mind; I would just like to know what you think about it'

'Uh, none of my business.'

`Donald.'

`Well... I guess girls have to have them. If her doctor is going to know whether she's healthy or not. Yeah, I suppose so. But she sure didn't like it.'

'Yes, girls do have to have them for their own protection. I don't like them and never did and I've had them so many, many times that I couldn't begin to count. But it's just a nuisance, like getting your teeth cleaned. Necessary, so I put up with it... and Priscilla must put up with it too, and I won't take any nonsense out of her about it.' I sighed. 'Try to make her see it. Donald, I'm going to drive you back and drop you, while they are still eating, and then I'll turn right around and hurry back, or something will wind up in the wrong truck.'

I got to the house about two, then supervised where things went while carrying a sandwich in my hand. It was after five by the time the van left and still later before the house was arranged - if you can call it arranged when the back yard was strewn with cardboard cartons and 'clothes were dumped on beds and books were simply shoved into any bookcase to get them off the floor. Was it Poor Richard who said that `Two removes equal one fire'? Yet this was an easy move.

By eight I got some supper into them. We all were quiet Priscilla was still sullen.

After supper I had us all move into the family room for coffee - and a toast. I poured thimble glasses of Kahlua . . . because you can't get drunk on Kahlua; you'll get sick first. I held up a glass. `Here's to our new home, dears.'

I took a sip; so did Donald. Priscilla did not touch hers.

`I don't drink,' she said flatly.

`This is not a drink, dear; it is a ceremony. For a toast, if one does not wish to drink it, it is sufficient to lift the glass, say, "Hear, hear!" and touch the glass to your lips, put it down and smile. Remember that. It will serve you well at other times.'

'Mother, it is time we had a serious talk.'

`All right. Please do.'

'Donald and I are not going to be able to live here.'

'I'm sorry to hear that.'

'I'm sorry, too. But it's the truth.'

'When are you leaving?'

'Don't you want to know why we are leaving? And where we are going?'

'You will tell me if you wish to tell me.'

'It's because we can't stand being treated like prisoners in a jail!'

I made no answer. The silence stretched out, until finally my daughter said, 'Don't you want to know how you've been mistreating us?'

'If you wish to tell me.'

`Uh... Donnie, you tell her!'

`No,' I objected, I'll hear from Donald any complaint he has about how I have treated him. But not about how I have treated you. You are right here, and I am your mother and the head of this house. If you have complaints, make them to me. Don't try to fob it off on your brother.'

'That's it! Orders! Orders! Orders! Nothing but orders, all the time... like we were criminals in a prison!'

I recited to myself a mantra I learned in World War Two: Nil illegitimi carborundum. I said it three times, under my breath. 'Priscilla, if that is what you mean by orders, nothing but orders, I can assure you that I won't change it. Any complaints you have I will listen to. But I won't listen to them second hand.'

'Oh, Mother, you're impossible!'

'Here is another order, young lady. Keep a civil tongue in your head. Donald, do you have any complaints about my treatment of you? You. Not your sister.'

'Uh... no, Mama.'

'Donnie!'

'Priscilla, do you have any specific complaints? Anything but a general objection to taking orders?'

'Mother, you - There is no point in trying to reason with you!'

'You haven't tried reason as yet. I'm going to bed. If you leave before I get up, please leave your latch keys on the kitchen table. Goodnight.'

'Goodnight, Mama,' Donald answered.

Priscilla said nothing.

Priscilla did not come down for breakfast.

'She said to tell you she doesn't want any breakfast, Mama.'

'Very well. Fried eggs and little sausages this morning. How do you want your eggs, Donald? Broken yolks and vulcanised? Or just chased through the kitchen?'

'Uh, however you Nave yours, I guess. Mama, Priss doesn't really mean she doesn't want breakfast. Shall I go up and tell her that you said she has to come to breakfast?'

'No. I usually have my eggs up and easy but not sloppy. Suits?'

'Huh? Oh, sure! Please, Mama, can't I at least go up and tell her that you said breakfast is ready and she should come eat?'

'No.'

'Why not?'

'Because I have not said that and I do not say it. The first child to try a hunger strike on me was your brother Woodrow. He lasted several hours but he cheated - he had stashed vanilla wafers under his pillow. When he finally gave up and came downstairs, I did not permit him to eat until dinner time, which was several hours away. He did not try it again.' (But he tried everything else, with lots of imagination!) 'I don't coddle hunger strikers, Donald, or tantrums of any sort... and I think no government should. Coddle hunger strikers, I mean, or people who chain themselves to fences or lie down in front of vehicles. Grown-up tantrums. Donald, you have objected to my orders twice this morning. Or is it three times? Are you catching this from Priscilla? Don't you have it through your head yet that I do not give unnecessary orders, but those I do give, I expect to have carried out? Promptly and as given. If I tell you to go jump in the lake, I expect you to return wringing wet.'

He grinned at me. 'Where is the nearest lake?'

'What? Swope Park, I guess. Unless we count a water hazard at the golf club. Or a landscaping pond at Forest Hills. But I don't recommend disturbing either corpses or golfers.'

'There's a difference?'

'Oh, certainly, some at least. Donald, I don't mind that Priscilla chooses to skip breakfast this morning, as I need to talk with you without having her hanging over you and putting words in your mouth. When do you two plan to leave? And where do you plan to go, if you don't mind telling me?'

'Shucks, Mama, that was never serious. How can we leave? No money, and no place to go. Except back to Aunt Marian and we won't do that. We'll never go near her again.'

'Donald, just what is it you find so poisonous about Aunt Marian? Six years ago you both elected to stay with her when you could have come with me. What happened? Did she punish you endlessly? Or what?'

'Oh, no! She hardly ever punishes anybody. Sometimes she would have Pop work us over. Like this last hooraw with Gus.'

`What happened there? Gus is a year older than you are and bigger... or was the last time I saw him. You said, "He had her down and was giving her a bad time." How bad a time? Was he raping her? Or trying to?'

'Uh... Mama, I'm in a prejudiced position. Jealous, I guess.'

'So I would guess, too. Was it really rape? Or - What is it you young people call it today? They were "getting it on"?'

He sighed and looked hurt. `Yeah, they were. I - I got sore.'

I patted his hand. 'Poor Donald! Dear, are you beginning to realise that you aren't doing yourself any good by falling in love with your sister? Or doing her any good? You are probably harming her even more than you are harming yourself. Do you see that, dear?'

'But, Mama, I couldn't leave her there. Uh, I'm sorry we didn't come with you six years ago. But you were so strict and Aunt Marian wasn't, and - Oh, I'm sorry!'

'How was Marian about housework? I am about to assign each of you your share of the work. But Priscilla seems to be clumsy in the kitchen. Yesterday she filled the freezer, dumping stuff in any which way, then didn't turn it on. I just happened to catch it or we could have lost the whole load. Did she take her turn at cooking along with Mildred and Sara and whoever is the right age now?'

`I don't think so. No, I know she didn't. Granny Bearpaw does all the cooking... and doesn't like having anyone else in her kitchen.'

'Who is Granny Bearpaw?'

`Aunt Marian's cook. Black as coal and a hook nose. Half Negro, half Cherokee. And a swell cook! Always willing to fix you a bite. But you had better ask for it from the door. If you step inside, she's likely to wave a frying-pan at you.'

'She sounds like quite a gal. And it sounds like I'm going to have to teach Priscilla to cook.'

Donald made no comment. I went on, 'In the mean time we must get transcripts and get you two into the city school system. Donald, what would you think of going to Westport High instead of Southwest? Say yes and we might find you a jalopy, four wheels of some sort, so that it would not be too difficult. I really don't want you in the same school as Priscilla. She hasn't any judgement, dear; I'm afraid she would get into fights with other girls over you.'

'Yeah, she might. But, Mama, I don't need to go to Westport.'

'I think you do. For the reasons I named.'

'I don't need to go to high school. I graduated in June.'

I had lived-with children all my life; they had never ceased to surprise me.

`Donald, how did I miss this? I had you tagged for next year, and I don't recall receiving an announcement'

'I didn't send out any... and, yeah, I was classed as a junior this past year. But I've got the required hours and then some, because I took summer session last year to make sure I got all the maths they offered. Mama, I figured on being ready to go either way... didn't decide to graduate until May, when it was too late for the year book and all that jazz. Mr Hardecker - he's the principal - wasn't pleased. But he did check my record and agreed that I had the option of graduating at the end of my junior year if I wanted to. But he suggested that he just arrange to issue my diploma quietly and I should not attend graduation or try to convince the class of'52 that I was in their class since I wasn't in their year book and didn't wear their class ring and all the rest I agreed. Then he helped me apply for the schools I was interested in. The really good technical schools, I mean, like MIT and Case and CalTech and Rensselaer. I want to build rocketships.'

'You sound like your brother Woodrow:

'Not quite. He flies 'em; I want to design them.'

`Have you heard from any of your applications?'

`Two. Case and CalTech. Turned me down.'

'There may be good news waiting for you in Dallas. I'll check with your father - I must call him today anyhow; I have yet to tell him that you two wanderers showed up here. Donald, if you are turned down this year for the schools you have applied to, don't lose hope.'

`I won't. I'll apply next year.'

Not quite what I meant. You should go to school this year. Dear, it is not necessary to go to one of the world's top technical schools for your lower division courses. Any liberal arts college with high scholastic standards is okay for lower division. Such as Claremont. Or any of the so-called Little Ivy League. Or Grinnell College. Lots of others.'

'But this is August, Mama. It's too late to apply anywhere.'

'Not quite.' I thought hard. 'Donald, I want you to let me promote you to eighteen; we'll start by getting you a Missouri driver's licence that shows that age for you, then we'll get you a delayed birth certificate when you need one. Not soon, unless you need a passport. Then you'll go to... Grinnell, I think'-one of the committee for my doctorate was now dean of admissions there and I had known him rather well-' for one or two years. Make up, your mind just which engineering school you want and we'll work on getting you into it next year or the year after... while you work hard for top grades. And -'

'Mama, what am I going to use for money?'

'My dear son, I am ready to go to almost any expense to get you separated from your sister before you two get into real trouble. I won't pay for an abortion, but I will pay for your education over and above what you can earn yourself, working part time. Which you should do, for self-discipline and for your own self-respect. At Grinnell a male student can often wash dishes in a sorority house.'

I went on, 'Those cornfed coeds are luscious; I've seen them. But you may not notice them too much as I want to submit your name to the Howard Foundation, and ask for the Iowa list of the youngest age group of girls.'

'But, Mama, I'm not anxious to get married and I can't support a wife!'

'You don't have to get married. But are you totally uninterested in meeting a select list of girls about your age, all of whom are healthy, all are long-lived - as you are - all desirable girls by all the usual criteria... and all of them guaranteed not to scream if you make a polite, respectful, but unmistakable pass at her? And won't get indignant - What kind of a girl do you think I am? - when it turns out you have a fishskin or a Rameses in your pocket.

Son, you do not have to do anything whatever about your Howard list. But if you get horny or lonely or both, shopping your Howard list surely beats hanging around bars or attending prayer meetings; all the preliminary work has been done for you. Because the Howard Foundation does indeed want Howards to marry Howards, and spends millions of dollars to that end.'

'But, Mama, I can't possibly get married until I'm out of school. That's five years away, at least. I need an MS. A Ph.D. wouldn't hurt.'

'You talked to your sister Susan yesterday. Did you wonder how Susan and Henry were able to go to college, straight from their wedding? Quit worrying, Donald. If you will just pick a college not too close to Kansas City, all your problems can be worked out. And your mother can quit worrying.'

Priscilla blew all her fuses when she learned that Donald was going to, go to school somewhere else. We kept her from knowing about it until the last minute; the day she registered at Southwest High was the day he left for Grinnell. Donald packed while his sister was at school, then waited until she got home to break the news. Then he left at once, driving a Chevrolet so old that it could not be used on a control road; it had no bug.

She threw a fit. She insisted that she was going with him. She made silly noises about suicide. 'You're deserting me! I'll kill myself, I will! Then you'll be sorry you did this to me!'

Donald looked glum but he left. Priscilla went to bed. I ignored the fact. Threats of suicide are just another tantrum to me, blackmail to which I will not submit.

Besides, if a person wants to take his own life, it is (I think) his privilege. Also, if he is dead serious about it, no one can stop him.

(Yes, I am a cruel and heardess scoundrel. Stipulated. Now go play with your dolly somewhere else.)

Priscilla came downstairs about 10.0 p.m. and said that she was hungry. I told her that dinner was long over but that she could fix herself a sandwich and a glass of milk - which she did, and then joined me in the family room... and started in on recriminations.

I cut her short. 'Priscilla, you will not sit there and call me names while eating my food. Stop one or the other.'

'Mama, you're cruel!'

'That counts as name calling.'

'But - Oh, I'm so unhappy!'

That was self-evident and did not call for comment, it seemed to me, so I went back to watching Walter Cronkite and listening to his sonorous pronouncements.

She gloomed around for some days, then discovered the advantages of living close to school, of having a family room that was hers to use as she liked, and of a mother who permitted almost any racket and mess as long as it was cleaned up afterwards - or at least once or twice a week. The house started to be filled with young people. I found that as Priscilla became happy, so did I.

In late September I came downstairs one Friday night about eleven for a glass of milk and a midnight snack, and heard those give-away squeaks coming out of the maid's room across from the kitchen. I was not tempted to disturb them as I felt relief rather than worry, especially as the sound effects proved that Priscilla had learned to have orgasms as readily with another male as with her brother. But I went up and checked a calendar in my bathroom, one that duplicated the one in hers - and saw that it was a 'safe' day for her and then felt nothing but relief. I never expected Priscilla to give up sex. Once they start and find they like it, they never quit. Or perhaps I should say that I would worry if one did.

The next day I called Jim Rumsey and asked him to take a smear and a blood test each time I sent Priscilla in, as I did not trust her judgement and knew she might be exposed.

He snorted. 'Do you think I'm not on the ball? I check everybody. Even you, you old bag.'

'Thanks, dear!' I threw him a kiss through the screen.

It was shortly after that cheerful occasion that George Strong called me.

'Dear lady, I'm just back in town. I have good news.' He smiled shyly. 'Delos agrees that you must be on the board. We can't put it to the stockholders until the annual meeting but an interim appointment can be made by the director if a vacancy occurs between stockholders' meetings. It so happens that one of my assistants is about to resign. As a director, not as my assistant. Could you attend a directors' meeting in Denver on Monday the sixth of October?'

'Yes, indeed. I am enormously pleased, George.'

'May I pick you up at ten? A company rocketplane will take us to Denver, arriving there at ten, mountain time. The directors' meeting is at ten thirty in the Harriman Building, followed by luncheon at the top of the same building - a private dining-room with a spectacular view.'

'Delightful! George, are we returning later that day?'

'We can if you wish, Maureen. But there are some beautiful drives around that area, and I have a car and a driver available. Does that appeal to you?'

'It does indeed! George, be sure to fetch envelope number three.'

'I will be sure to do so. Until Monday, then, dear lady.'

I moved around in a happy fog, wishing that I could tell my father about it - how little Maureen Johnson of Muddy Roads, Mizzourah, was about to be named a director of the Harriman empire, through an unlikely concatenation: first, an adulterous love affair with a stranger from the stars; second, because her husband left her for another woman; and third, an autumn affair between an immoral grass widow and a lonely bachelor.

If Brian had kept me, I could never have become a director in my own person. While Brian had not begrudged me any luxury once we were prosperous, aside from my household budget I had actually controlled only 'egg money' - even that numbered Zurich bank account had only been nominally mine. Brian was a kind and generous husband . . . but he was not even remotely a proponent of equal rights for women.

Which was one reason I refused George Strong's repeated proposals of marriage. Although George was twenty years younger than I (a fact I never let him suspect), his values were rooted in the nineteenth century. As his mistress I could be his equal; were I to marry him, I would at once became his subordinate - a pampered subordinate, most likely... but subordinate.

Besides, it would be a dirty trick to play on a confirmed old bachelor. His proposals of marriages were gallant compliments, not serious offers of civil contract.

Besides, I had become a confirmed old bachelor myself - even though I found myself unexpectedly rearing one more child and a problem child at that.

My problem child - What to do about Priscilla while I was in Colorado overnight? Or possibly over two nights - if George suggested staying another day, at Estes Park, or Cripple Creek, would I say no?

Were I living alone with only Princess Polly to worry about, I could stuff her into a kennel and ignore her protests. Would that I could do so with a strapping big girl who outweighed me!... but who lacked sense enough to boil water.

What to do? What to do?

'Priscilla, I am going to be away from home overnight, possibly two nights. What would you prefer to do while I am gone?'

She looked blank. 'Why are you going away?'

'Let's stick to the point. There are several possibilities. You can stay overnight or over two nights with a chum from school, if you like. Or you could stay with Aunt Velma -'

'She's not my aunt!'

'True and you need not call her that. It is simply customary among Howards to use such terms among ourselves to remind us of our common membership in the Howard families. Suit yourself. Now please let's get back to the main question: what do you prefer to do while I'm away?'

`Why do I have to do anything? I can stay right here. I know you think I can't cook... but I can rustle my grub for a couple of days without starving.'

'I'm sure you can. Staying here was the next possibility that I was about to mention. I can find someone to come stay with you so that you won't have to be alone. Your sister Margaret, for example.'

'Peggy's a pill!'

'Priscilla, there is no excuse for your calling Margaret by a derogatory slang name. Is there someone you would like to have here to keep you company?'

'I don't need any company. I don't need any help. Feed the cat and bring in the Star - what's hard about that?'

'Have you stayed alone in a house before?'

'Oh, sure, dozens of times!'

'Really? What were the occasions?'

'Oh, all sorts. Papa and Aunt Marian would take the whole family somewhere, and I would decide not to go. Family outings are a bore.'

'Overnight trips?'

'Sure. Or more. Nobody in the house but me and Granny Bearpaw.'

'Oh. Mrs Bearpaw is live-in help?'

'I just got through saying so.'

'That isn't quite what you said and your manner is not as polite as it could be. Staying with Mrs Bearpaw in the house is not the same as staying alone... and I have gathered an impression that Granny with a frying-pan could intimidate an intruder.'

'She wouldn't use a frying pan; she's got a shot-gun:

'I see. But I can't get her to stay with you... and apparently you have never stayed alone before. Priscilla, I can arrange for a couple to stay here - strangers to you but reliable.'

'Mother, why can't I simply stay here by myself? You act like I'm a child!'

'Very well, dear, if that is what you prefer.' (But I'm not going to leave it entirely up to your good judgement. I'm going to hire the Argus Patrol to do more than cruise slowly past three times a night - I'll place the next thing to a stakeout on this house. I shan't leave you vulnerable to some night prowler just because you think you are grown up.)

'That's what I prefer!'

'Very well. Everyone has to learn adult responsibility at some time; I simply was reluctant to thrust it on you if you did not want it. I'll be leaving at ten o'clock Monday morning, the sixth, for Colorado -'

'Colorado! Why didn't you say so? Take me along!'

'No, this is a business trip:

'I won't be any trouble. Can I take the train up to the top of Pikes Peak?'

'You aren't going; you're going to stay here and go to school.'

'I think that's mean.'

I was gone two days and I had a wonderful time. Being a director was a bit dazzling the first time, but when it came time to vote, I simply voted the way George did, for the nonce - later I would have opinions.

At lunch Mr Harriman had me placed at his right. I didn't touch the wine and I noticed that he didn't, either. He had been all business at the meeting but was most charming at lunch - no business talk.

'Mrs Johnson, Mr Strong tells me that you and I share an enthusiasm - space travel.'

'Oh, yes!' We talked about nothing else then and were last to leave the table; the waiters were clearing it around us.

George and I spent the night at a guesthouse half way between Denver and Colorado Springs, on the inner road, not the highway. We discussed envelope number three in bed:

'The Douglas-Martin Sunpower Screens will cause the greatest change in the American countryside since the first transcontinental railroad. Moving roadways will be built all

over the country, powered by D-M screens. These will follow in general the network of Federal highways now in existence - Highway One down the East Coast, Route Sixty-Six from Chicago to LA, and so forth.

'String cities will grow up along these moving roads and the big cities now in existence will stop growing and even lose population.

'The moving roads will dominate the rest of the twentieth century. Eventually they will die out, like the railroads - but not until next century.'

'Maureen,' George said soberly, 'this is awfully hard to believe.'

I said nothing.

'I don't see how they could be made to work.'

'As a starter, try multiplying a thousand miles by two hundred yards, to get square yards, then call it horsepower. Use a ten per cent efficiency factor. Save the surplus power in Shipstones when the Sun is high and bright; use that surplus to keep the roads rolling when the Sun doesn't shine.' (I could be glib about it; I had done the arithmetic many times in thirty-four years.)

'I'm not an engineer.'

'Then discuss it with your best engineer - Mr Ferguson? when you get home.'

'You stand by this?'

'It's my prophecy. It won't happen quickly - the first roadcity - Cleveland to Cincinatti - won't roll for several years. I'm telling you now so that Harriman Industries can get in on the ground floor.'

'I'll talk to Ferguson.'

'Good. And now let me be nice to you because you have been so very nice to me.'

I returned on Wednesday and stopped at the office of Argus Patrol before I went Nome. I spoke to Colonel Frisby, the president of the company. I'm back; you can take the special watch off my home. Do you have a report for me?'

'Yes, Mrs Johnson. Your house is still there, no fires, no burglars, no intruders, nothing but a noisy party on Monday night, and one not quite so noisy last night - kids will be kids. Your daughter did not go to school yesterday - slept in, we think; the party Monday night ran quite late. But she's at school today and looks none the worse. Shall we put this on your bill or do you want to pay for this special service now?'

I paid it and went home, feeling relieved.

I let myself in and sniffed; the place needed airing.

And a thorough house cleaning. But those were minor matters.

Priscilla got Nome a little after four, looking apprehensive, but smiled when I did. I ignored the mess the house was in, took her out to dinner, and told her about my trip. Some off it.

On Friday I picked her up at school and we went to Jim Rumsey's office, by appointment. Priscilla wanted to know why?

'Dr Rumsey wanted to see you again after a couple of months. It has been just two months.'

'Do I have to be poked?'

'Probably.'

'I won't!'

'Say that again. Say it loud enough to be heard in Dallas. Because, if you mean that, then I'll have to bring your father into it. He still has legal custody of you. Now say it'

She shut up.

About an hour later Jim called me into his private office. 'First, the good news. She doesn't have crabs. Now the bad news. She does have syphilis and clap:

I used a heartwarming expletive.

Jim tut-tutted. 'Ladies don't talk that way.'

'I'm not a lady. I'm an old bag with an incorrigible daughter. Have you told her?'

'I always tell the parent first'

'All right, let's tell her.'

'Slow down. Maureen, I recommend putting her into a hospital. Not just for gonorrhoea and syphilis, but for what her emotional condition will be after we tell her. She's cocky at the moment, almost arrogant. I don't know what she'll be ten minutes from now.'

'I'm in your hands, Jim.'

'Let me call Bell Memorial, see if I can get an immediate admission.'

Chapter 22 - The Better-Dead List

A noise woke me up. I was still in that pitch-dark lorry, clutching Pixel to me. 'Pixel, where are we?'

'Kuhbleeert!' (How would I know?)

'Hush!' Someone was unlocking the lorry.

'Meeroow?'

'I don't know. But don't shoot till you see the whites of their eyes.'

A side door rolled back. Someone was silhouetted against the open door. I blinked.

'Maureen Long?'

'I think so. Yes.'

'I am sorry to have left you in the dark so long. But we had a visit from the Supreme Bishop's proctors and we have just finished bribing them. And now we must move; they don't stay bribed. Second-order dishonesty. May I offer you a hand?'

I accepted his hand - bony, dry, and cold - and he handed me down while I held Pixel in my left arm. He was a small man, in a dark siren suit, and the nearest thing to a living skeleton I have ever seen. He appeared to be yellowed parchment stretched over bones and little else. His skull was completely hairless.

'Permit me to introduce myself,' he said. 'I am Dr Frankenstein.'

'Frankenstein,' I repeated. 'Didn't we meet at Schwab's on Sunset Boulevard?'

He chuckled, a sound like dry leaves rustling. 'You are jesting. Of course it is not my original name but one I use professionally. You will see. This way, if you please.'

We were in a windowless room, with a vaulted ceiling glowing with what seemed to be Douglas-Martin shadowless skyfoam. He led us to a lift. As the door closed with us inside Pixel tried to get away from me. I dung to him. 'No, no, Pix! You've got to see where they take me.'

I spoke just to Pixel, almost in a whisper, but my escort answered, 'Don't worry, Milady Long; you are now in the hands of friends.'

The lift stopped at a lower(?) level; we got out and we all got into a tube capsule. We zoomed fifty yards, five hundred, five thousand, who knows? - the capsule accelerated decelerated, stopped. We got out. Another lift took us up this time. Shortly we were in a luxurious lounge with about a dozen people in it and more coming in. Dr Frankenstein offered me a comfortable seat in a large circle of chairs, most of them occupied. I sat down.

This time Pixel would not be denied. He wriggled out of my arms, jumped down, explored the place and examined the people, tail up and poking the little pink nose into everything.

There was a wheelchair in the circle, occupied by an excessively fat man, who had one leg off at the knee, the other amputated higher up. He was wearing dark glasses. He felt like a diabetic to me, and I wondered how Galahad would approach the case. He spoke up:

'Ladies and gentlemen, shall we get started? We have a new sister.' He pointed with his whole hand at me, like a movie usher. 'Lady Macbeth. She is -'

'Just a moment,' I put in. 'I am not Lady Macbeth. I am Maureen Johnson Long.'

He trained his head and dark glasses at me slowly, like a battleship's turret. 'This is most irregular. Dr Frankenstein?

'I am sorry, Mr Chairman. The contretemps with the proctors spoiled the schedule. Nothing has been explained to her.'

The fat man let out a long sibilant sigh. Incredible. Madam, we apologise. Let me introduce our circle. We are the dead men. All of us here are enjoying terminal illness. I say "enjoying" because we have found a way - hee, hee, hee, hee! - to relish every golden moment left to us... indeed to extend those moments because a happy man lives longer.

Each companion of the Committee for Aesthetic Deletions - at your service, Madam! - spends his remaining days in ensuring that scoundrels whose removal will improve the human breed predecease him. You were elected in absentia to our select circle not merely because you are a walking corpse yourself but as a tribute to the artistic crimes you committed in attaining that status.

'With that synoptic explanation out of the way, permit me to introduce our noble companions:

'Dr Fu Manchu.' (A burly Irishman or Scot. He bowed without getting up.)

'Lucrezia Borgia.' (Whistler's mother, with tatting in her lap. She smiled at me and said, 'Welcome, dear girl!' in a sweet soprano.)

'Lucrezia is our most accomplished expunger. Despite inoperable cancer of the liver she has counted coup more than forty times. She usually -'

'Stop it, Hassan,' she said sweetly,' before you tempt me to put you on your proper track.'

'I wish you would, dear. I grow weary of this carcass. Beyond Lucrezia is Bluebeard -'

'Hiyah, babe! What are you doing after?'

'Don't fret, Madam; he is disarmed. Next we have Attila the Hun - ' (A perfect Caspar Milquetoast, in shorts and singlet. He sat utterly still, save that his head nodded steadily, like a nursery toy.)' - next to him, Lizzie Borden.' (She was a young and beautiful woman, in a provocative evening gown. She looked quite healthy and she smiled happily at me.) 'Lizzie is kept alive by an artificial heart... but the fuel that powers it is killing her slowly. Lizzie was formerly a Sister of the Order of Santa Carolita, but she fell out of favour at the Cathedral and was assigned to medical and surgical research. Hence her heart. Hence her fate. Hence her commitment, for Lizzie is 'a specialist; she terminates only the priesthood of the Church of the Divine Inseminator. Her teeth are very sharp.

'Next is jack the Ripper -'

'Call me Jack.'

`- and Dr Guillotine.'

'Your servant, Madam.'

'Professor Moriarty is lurking back there, and with him is Captain Kidd. That completes our circle tonight, save for myself, chairman for life if I may be permitted a jest. I am the Old Man of the Mountain, Hassan the Assassin.'

'Where is Count Dracula?'

'He asked to be excused, Lady Macbeth; he is indisposed something he drank, I believe.'

'I warned him that Rh-negative would poison him. Hassan, you pretmtious old fraud, this is ridiculous. My name is not Lady Macbeth and I am not a walking corpse; I am in perfect health. I'm lost, that's all:

'You are indeed lost, my lady, for there is no spot on the globe where in the long run you can escape the Supreme Bishop's proctors. All we offer you, all we can offer you, are some moments of exquisite pleasure before they find you. As for a name, do please pick one that pleases you. Bloody Mary, perhaps? But surely it is prudent to suppress your real name when it is posted in every post office in the realm? But come - enough of business for the nonce. Let sweet music play and good wine flow. Carpe diem, my cousins! Drink up, enjoy the moment. Later, when we again come to order, we will hear nominations of

new candidates for termination.' He touched a control on the arm of his wheelchair, spun round, and rolled to a bar in ore corner.

Most of the others followed him. Lizzie Borden came over to me as I stood up.

'Let me welcome you personally,' she said in a grade, warm contralto. 'I do especially appreciate what you did that got you condemned, as it is much like my own case.'

'Really?'

'I think so. I was a simple temple prostitute, a Sister of Carolita, when I fell from grace. I had always been attracted to the religious life and believed that I had a true vocation while I was still in high school.' She smiled and showed dimples. 'Eventually I learned that the Church is run solely for the benefit of the priesthood, not for the good of our people. But I learned it too late.'

'Uh, are you really dying? You look so healthy.'

`With luck I can expect to live another four to six months. Here all of us are dying, including you, my dear. But we don't waste time thinking about it; instead we study our next client and plan the details of his final moment. May I get you something to drink?'

'No, thank you. Have you seen my cat?'

'I saw him go on to the balcony. Let's go look.'

We did - no Pixel. But it was a beautiful clear night; we stopped to look. 'Lizzie, where are we?'

'This hotel is near the Plaza, and we're looking north. That's the downtown district, and beyond it, the Missouri River.'

As I expected, Priscilla set new highs for screaming irrelevancy. She blamed everyone - me, Dr Rumsey, Donald, President Patton, the Kansas City school board, and unnamed others, for the conspiracy against her. She did not blame herself for anything.

While she was ranting, Jim shoved an injector against hera tranquilliser, Thorazine, I think, or something about as powerful. We got her imo my car and ovar to the hospital. Bell Memorial used the bed-first-paperwork-later check-in method, so jim got her treatment started at orce. That done, he ordered a barbiturate for 9.o p:m, and authorised a wet pack if she failed to quiet down.

I signed all sorts of papers, showed my American Express card, and we left - back to Jim's office, where he took a sample of my blood and a vaginal smear. 'Maureen, where was it you sent the boy?'

'I don't think he had anything to do with it, Jim.'

'Don't talk like your daughter, you stupid little broad - We don't guess; we find out.'

Jim dug into a reference listing, called a doctor in Grinnell. 'Doctor, we'll find the lad and send him to you. Are you equipped to do the Morgan test? Do you have fresh reagents and a polariser at hand?'

'In a college town, Doctor? You can bet your last dollar I do!'

'Good. We'll track him down and chase him right over to your office, then I'll wait at this telecode for you to call me back.'

We were lucky; Donald was in his dormitory. 'Donald I want you to go straight to Dr Ingram. His office is downtown, across from Stewart Library. I want you to go right now, this instant.'

`Mama, what is this all about?' He looked and sounded upset.

'Call me at home, tonight, from a secure phone, and I'll tell you. I won't discuss it over a screen in the hallway of a dormitory. Go straight to Dr Ingram and do what he tens you to. Hurry'

I waited in Jim's private office for Dr Ingram's call. While I was waiting Jim's nurse finished my tests. 'Good news,' she said. 'You can go to the Sunday school picnic after all.'

'Thanks, Olga.'

`Too bad about your youngster. But with the drugs we use nowadays she'll be home in a couple of days, as healthy as you are.'

'We cure 'em too fast,' Jim said gruffly. 'Catching something nasty used to teach 'em a lesson. Now they figure it's no worse than a hangnail, so why worry?'

'Doctor, you're a cynic,' Olga countered. 'You'll come to a bad end.'

After an agonising wait, Dr Ingram called back. 'Doctor, did you have reason to suspect that this patient was infected?'

'No. But he had to be eliminated, under a VD trace required by Missouri state law.'

'Well, he's negative on both of those and on two or three other things I checked while I was at it. He doesn't even have dandruff. I don't see why he would be included in a VD search; I think he's still a virgin. How shall I bill this?'

'To my office.'

They switched off. I asked, 'Jim, what was that about Missouri state law?'

He sighed. 'Clap and pox are among the many diseases I must report but for venereal diseases I not only have to report them but also I must co-operate in an effort to find out where the patient contracted the disease. Then public health officers try to follow each infection back to its source - impossible, since the original source is somewhere centuries back in history. But it does serve to thin it out. I know of one case here in town where spotting one dose of clap turned up thirty-seven other cases before it ran off the map, to other cities or states. When the track does that, our public health officers pass along the data to those other jurisdictions and we drop that search.

'But locating and curing thirty-seven cases of gonorrhoea is worth while in itself, Maureen. The venereal diseases are ones we stand a chance of stamping out, the way we did smallpox, because - do you know the definition of a venereal disease?'

(Yes, I do, but go ahead, Jim.) 'No.'

'A venereal disease is one that is so terribly difficult to catch that only intercourse or deep kissing is likely to pass it on. That's why we stand a chance of stamping them out... if only the idiots would co-operate! Whereas there is no chance, none whatever, of stamping out the so-called common cold. Yet people pass on respiratory infections with utter carelessness and aren't even apologetic about it.' He was explosively profane.

I said, 'Tut, tut! Ladies don't talk that way.'

The screen was blinking and its alarm was sounding as I got home. I dropped my handbag and answered it - Donald.

`Mama, what's this all about?'

'Secure phone?' I could not see what was behind him - just a blank wall.

'I'm in one of the round proof booths at the phone company.'

'All right' I know of no gentle way to tell a boy that his sister has big and little casino, a full house. So I put it bluntly. 'Priscilla is ill. She has gonorrhoea and syphilis:

I thought he was going to faint. But he pulled himself together. 'Mama, this is awful. Are you sure?'

'Of course I'm sure. I was there when she was tested and I saw the test results. That's why you were tested. I was greatly relieved to learn that you are not the one who gave them to her.'

'I'll be there at once. Uh, it's about two hundred and forty miles. Coming up, it took me -'

'Donald.'

'Yes, Mama?'

`Stay where you are. We sent you to Grinnell to get you away from your sister.'

'But, Mama, these are special circumstances. She needs me -'

'She does not need you. You are the worst possible influence on her; can't you get that through your head? She doesn't need sympathy; she needs antibiotics and that is what she is getting. Now leave her alone and give her a chance to get well... and to grow up. And you grow up, tool'

After enquiring about how he was doing with his studies, I shut him off. Then I did something I avoid doing as a matter of principle but sometimes must do through pragmatic necessity; I searched a child's room.

I think a child has a right to privacy but that right is not absolute; his parents have an overriding responsibility for everything under their roof. If the circumstances require it, the child's right to privacy may have to be temporarily suspended.

I am aware that some libertarians (and all children) disagree with me. So be it.

Priscilla's room was as untidy as her mind, but that was not what I was after. I worked slowly through her bedroom and bathroom, trying to check every cubic inch, while leaving her clothes and other possessions as much as possible the way I had found them.

I found no liquor. I found a stash of what I thought was marijuana but I was not sure how to tell 'grass' when I saw it. That it probably was 'grass' was made almost certain in my mind by two things: two little packets of cigarette papers under the bottom liner of another drawer, and a lack of any tobacco of any sort, loose or in cigarettes. Are cigarette papers used for any purpose other than rolling cigarettes of some sort?

The last odd thing I found was at the very bottom of a catch-all drawer in her bathroom: a small rectangular mirror, and with it a Gem single-edge blade. She had a big make-up mirror that I had given her, as well as a three-way that was part of her dressing table; why had she bought this mirror? I stared at those two items, mirror and razor blade, then looked elsewhere in her bathroom, and found, as my memory led me to expect, a Gillette razor that required double-edged blades, and an opened packet of double-edged blades - but no Gem razor. I then searched both bathroom and bedroom a second time. I even searched the room and bath that had been Donald's, although I knew them to be as bare as Mother Hubbard's cupboard; I had cleaned after he left. I did not find a stash of white powder having the appearance of powdered sugar... which proves only that I did not find such a stash.

I put everything back the way I found it.

About 1.0 a.m. the front door chimed. I answered it from bed. 'Who is it?'

'It's me, Mama. Donald.'

(Dirty names!) 'Well, come in.'

'I can't, it's bolted.'

'Sorry, I'm not awake yet. I'll be down.' I grabbed a robe, found some slippers, went downstairs and let my youngest son in. 'Come in, Donald. Sit down. When did you eat last?'

'Uh, I grabbed a Big Mac in Bethany.'

'Oh, Lordy.' I fed him first.

When he had polished off all of a giant Dagwood and had eaten a big dish of chocolate ice-cream, I said, 'All right, why did you come here?'

'You know why, Mama. To see Priss. I know you said she didn't need me... but you're mistaken. Ever since she was a baby girl, when she was in trouble, she came to me. So I know she needs me.'

(Oh, dear! I should have fought it in court. I should not have left my two youngest in the custody of - Regrets, regrets! Father, why did you have to go get yourself killed in the Battle of Britain? I need your advice. And I miss you dreadfully!) 'Donald, Priscilla is not here.'

'Where is she?'

'I won't tell you.'

Donald looked stubborn. 'I won't go back to Grinnell without seeing her.'

'That's your problem. Donald, you two have outworn both my patience and my resourcefulness. You ignore my advice and disobey necessary orders and you are each too big to spank. I have nothing else to offer.'

'You won't tell me where she is?'
'No.'

He heaved a big sigh. I'm going to stay here until I see her.'

'That's what you think. Son; you are not the only stubborn member of this family. Any more of your lip and I'll call your father and tell him to come get you because I can't handle you -'

'I won't go!'

`- and then close this house and take an apartment for myself at the Kansas Citian - a single apartment, big enough for a sand box for Polly, not big enough for another person. I was about to move into an apartment when you and your sister showed up... so I changed my plans and rented this house, especially for you two. But neither of you have treated me decently and I'm sick of trying. I'm going to bed. You can stretch out on that couch and get a nap. But if you are not gone when I get up, I intend to call your father and tell him to come get you.'

'I won't go with him!'

'Your problem. The next step could be juvenile court but that is up to your father. As a result of your choice, six years ago, he has custody.' I stood up, then recalled something. 'Donald, do you know marijuana when you sec it?'

'Uh... maybe.'

'Do you, or don't you?'

'Yeah... I do.'

'Wait here.' I was back in a few moments. 'What is this?'

'That's marijuana. But, shucks, Mama, everybody does marijuana now and then.'

'I don't. And no one living in this house is permitted to. Tell me what this is for.' I reached into one pocket of my robe, got out that mirror so inappropriate to a girl's room, reached more carefully into the other pocket, got out that single-edged razor blade, placed it on the mirror. 'Well?'

'What am I supposed to say?'

'Did you ever cut a line of cocaine?'

'Uh... no.'

'Have you seen it done?'

'Uh... Mama, if you are trying to tell me that Priss is hooked on coke, all I can say is that you must be out of your mind. Of course, most kids these days have tried it once or twice but -'

'You have tried it?'

'Well, sure. The janitor at our school sold it. But I didn't like it. It rots your nose out - did you know that?'

'I knew that. Has Priss tried it?'

He looked at the mirror and blade. 'I suppose so. It looks like it.'

'Have you seen her try it?'

'Uh... once. I chewed her out about it. Told her not to do it again.'

'But, as you have told me and as she says herself, she doesn't like to take orders. And apparently did not take yours. I wonder if it's the janitor at her present school?'

'Uh, it could be a teacher just as easily. Or one of the seniors, a Big Man on Campus. Or a book store. Lots of places. Mama, they clean up the neighbourhood dealers every now and then - doesn't make the least bit of difference; there's a new pusher the next week. The way I hear it, it's the same everywhere.'

I sighed. 'It beats me, Donald. I'll get you a blanket to pull over you.'

'Mama, why can't I sleep in my own bed?'

'Because you're not supposed to be here at all. The only reason you're being indulged even this much is because I don't think it is safe to let you go back on the road without something to eat and a few hours sleep.'

I went back to bed, could not sleep. After about an hour I got up and did something I should have done earlier: I searched the maid's room.

I found the stash. It was between the mattress and the mattress cover, at the foot of the bed. I was tempted to taste the least trace of it, having some notion from biochemistry of what cocaine should taste like - but I had sense enough - or was chicken enough - not to risk it; there are street drugs that are dangerous in the tiniest amounts. I took it back up with me, locked it, the 'grass' and the cigarette papers, and the mirror and blade, into a lock box I keep in my bedroom.

They won. I lost. They were too much for me.

I brought Priscilla home, cured but sullen as ever. Two Public Health officers, a man and a woman, called on us (Jim's doing, with my co-operation) almost as we were taking off our coats. They wanted to know, gently and politely, Priscilla's contacts - who could have given the bugs to her and to whom she could have passed them on.

'What infections? I'm not ill, I never was ill. I've been held against my will in a conspiracy! Kidnapped and held prisoner! I'm going to sue somebody!'

'But, Miss Smith, we have copies of your lab tests and your medical history. Here, look at them.'

Priscilla brushed them aside. 'Lies! I'm not going to say another word without my lawyer.'

At which point I made yet another mistake. 'But, Priscilla, I am a lawyer; you know that. What they're asking is quite reasonable, a matter of public health.'

I have never been looked at with such contempt. 'You're not my lawyer. You're ore of the ones I'm going to sue. And these two characters, too, if they don't quit heckling me.' She turned her back and went upstairs.

I apologised to the two Public Health officers. I'm sorry, Mr Wren and Mrs Lantry, but I can't do anything with her, as you can see. I'm afraid you'll have to get her on the witness stand and under oath to get anything out of her.'

Mr Wren shook his head. 'It would not work. In the first place, we have no way to put her on the stand; she has not broken any laws that we know of. And we don't know of anyone who has. In the second place, a youngster with her attitude simply takes the Fifth Amendment and shuts up.'

'I'm not sure she knows what the Fifth Amendment is.'

'You can bet she does, Mrs Johnson. Today all these kids are street smart and every ore of them is a chimney-corner lawyer, even in a rich neighbourhood like this ore. Put ore on the stand and he'll holler for a lawyer and the ACLU will supply one pronto. The ACLU figures it is more important to protect a teenager's right to clam up than it is to protect some other teenager from infection and sterility.'

'That's ridiculous.'

'Those are the conditions we work under, Mrs Johnson. If we don't get voluntary co-operation, we have no way to force it.'

'Well... I can do one thing. I can go talk to her principal, tell him that be has VD running around loose in his school:

'It won't do any good, Mrs Johnson. You will find that he is extremely leary of being sued.'

I thought about it... and had to admit (the lawyer in me) that I had nothing to tell the principal if Priscilla refused to co-operate. Ask him to run 'short arm inspection' (Brian's

Army slang for it) on all his older boys? He would have hundreds of parents on his neck before dark.

'What about drugs?'

'What about drugs, Mrs Johnson?'

'Does Public Health deal with drugs?'

`Some. Not much. Drugs are usually a police matter.'

I told them what I had found. 'What should I do?'

'Does your daughter admit that these items are hers?'

'I haven't had a chance to talk to her about them yet.'

'If she won't admit it, you may have great trouble proving that the key items - the cannabis and the powder that may be cocaine - are hers, rather than yours. I know you are a lawyer... but perhaps you need to see a lawyer who specialises in such matters. There is an old saw about that, is there not?'

('A man who is his own lawyer has a fool for a client.')

'Indeed there is all right, I'll take advice first'

Donald showed up right after that. He had not been on the couch on Saturday morning; I had assumed that he had gone back to Grinnell. It was now evident from the speed with which he showed up once I fetched Priscilla home from the hospital that he had stayed in Kansas City and placed himself somewhere near to watch for her return. Evident, but not true. He had learned somehow what hospital she was in - I could think of three simple ways - then arranged for someone to let him know when she was dismissed - again, three simple ways, including bribery if he could afford it. Never mind; he showed up.

The door chimed.

I buzzed the door phone. 'Announce yourself, please.'

'It's Donald, Mama.'

'What are you doing here?'

'I've come to see Priss.'

'You can't see her.'

'I'll see her if I have to bust this door downt'

I reached up and set off the Argus Patrol's 'Mayday!' 'Donald, I will not let you enter this house.'

'Try and stop me!' He started kicking the door.

Priscilla came running downstairs, started to open the front door. I grabbed at her; there was a scuffle, we both went down.

I'm no fighter. Fortunately Priscilla was not trained, either. Brian had taught me just one thing: 'If you have to do it, do it fast. Don't wait'

As she was getting up, I punched her in the stomach - no, the solar plexus. She went down and lay there, trying to gasp air.

I heard from outside, 'Mrs Johnson! Argus is here:

'Nab him and take him away! I'll call you.'

'Nab who?'

'Uh -' Priscilla was trying to get up again. I punched her in the same spot; she went down the same way. 'Can you wait around for twenty minutes or a half-hour? He might come back.'

'Certainly. We'll stay as long as you need us. I'll call in.'

'Thank you, Rick. It is Rick, is it not?'

'Rick it is, Ma'am.'

I turned round, grabbed my daughter by the hair, lifted her head, and snarled at her. 'Crawl upstairs, go to your room, and stay there! If I hear another peep out of you, I'll punch you again.'

She did exactly as I told her to, crawled away, sobbing, and crept upstairs, slowly. I made sure all doors and windows on the ground floor were locked, then I called Dallas.

I explained to Brian in bitter detail what had happened since I had last called him to report on our children, what I had tried to do, what had actually happened. 'Brian, I can't cope with them. You must come and get them.'

'I want no part of either one of them. I was relieved when they ran away. Good riddance,'

'Brian, they are your children and you have custody.'

`Which I happily turn over to you.'

'You can't; it takes a court to do that. Brian, since I can't handle them, if you won't come for them - or send someone for them - all I can do is have them arrested -'

'On what charges? Sassing you?'

'No. Delinquency. Incest. Use of drugs. Possession of drugs. Running away from custodial parent, Brian Smith of Dallas, Texas.' I watched his face as I read off what I would tell the juvenile court. He did not flinch when I said 'Incest' so I concluded that it was no news to him. He did not flinch until I named his name and city.

'What! The newspapers would have a field day!'

'Yes, in Dallas I imagine both the News and the Times Herald would feature it. I don't know whether the Kansas City Star would touch it or not. Incest is a bit whiff for their editorial policies. Particularly incest involving a sister with two of her brothers, August and Donald.'

'Maureen, you can't mean this.'

'Brian, I'm at the end of my rope. Priscilla knocked me down not twenty minutes ago and Donald has been trying to break down the front door. If you won't come here by the very next rocketplane, I am calling the police and swearing out warrants, all those charges - enough to get them locked up at least long enough for me to dose this house and get out of town. No half measures, Brian. I want your answer, right now.'

Marian's face appeared beside his. 'Mother, you can't do that to Gus! He didn't do anything. He told me so, on his honour!'

'That isn't what they say, Marian. If you don't want them saying it on the witness stand, under oath, Brian will come here and get them.'

'They're your children.'

'They are Brian's children, too, and he has custody. Six years ago, when I left them with you, they were well-behaved children, polite, obedient, and no more given to naughty spells than any growing child. Today they are incorrigible, uncivilised, totally out of hand.' I sighed. 'Speak up, Brian. What will you do?'

`I can't come to KC today.`

`Very well, I'll call the police and have them arrested. Have them taken in and then swear out the warrant, the criminal charges.'

'Now wait a minute!'

`I can't, Brian. I'm holding them off temporarily with the patrol, the private police who watch this neighbourhood. But I can't keep them here tonight; she's bigger than I am and he's twice as big. Goodbye; I've got to call the cops.'

`Now hold it! I don't know how soon I can get a ship.'

`You can hire one; you're rich enough! How soon will you be here?'

`Uh... three hours'

`That's six-twenty, our time. At six-thirty I'm calling the cops:

Brian got there at six-thirty-five. But he had called me from the field in North Kansas City well before the deadline. I was waiting for him in my living-room with both children... and with Sergeant Rick of the Argus Patrol and Mrs Barnes, the Patrol's office manager, who doubled as matron. It had not been a pleasant wait; both rent-a-cops had been forced to demonstrate that they were tougher than teenage children and would brook no nonsense.

Brian had taken the precaution of fetching four guards with him, two men, two women, one pair from Dallas, one pair from Kansas City. That did not make it legal but he got away with it because no one - I least of all I - cared to argue technicalities.

I saw the door close behind them, went upstairs and cried myself to sleep.

Failure! Utter and abject failure! I don't see what else I could have done. But I will always carry a heavy burden of guilt over it.

What should I have done?

Chapter 23 - The Adventures of Prudence Penny

It took the opening of the Cleveland-Cincinnati rolling road to nail down in George Strong's mind that my prophecies really were accurate. I was always most careful not even to hint the source of my foreknowledge because I had a strong hunch that the truth would be harder for George to take than leaving it all a mystery. So I joked about it: my cracked crystal ball - a small time machine I keep in the basement next to my Ouija Board - my seance guiding spirit, Chief Forked Tongue - tea-leaves, but it has to be Black Dragon tea, Lipton's Orange Pekoe doesn't have the right vibrations.

George smiled at each bit of nonsense - George was a gentle soul - and eventually quit asking me how I did it and simply treated the message in each envelope as a reliable forecast - as indeed it was.

But he was still chewing the bit at the time the Cleveland-Cincinnati road opened. We attended the opening together, sat in the grandstand, watched the Governor of Ohio cut the ribbon. We were seated where we could talk privately if we kept our voices down; the speeches over the loudspeakers covered our words.

'George, how much real estate does Harriman and Strong own on each side of the roadway?'

'Eh? Quite a bit. Although some speculator got in ahead of us and took options on the best commercial sites. However, Harriman Industries has a substantial investment in D-M power screens - but you know that; you were there when we voted it, and you voted for it' `So I did. Although my motion to invest three times that amount was first voted down.'

George shook his head. `Too risky. Maureen, money is made by risking money but not by wildly plunging. I have trouble enough keeping Delos from plunging; you mustn't set him a bad example.'

`But I was right, George. Want to see the figures on a We-Woulda-Made if my motion had carried?'

'Maureen, one can always do a We-Woulda-Made on a wild guess that happens to hit That doesn't justify guessing. It ignores the other wild guesses that did not hit'

'But that's my point, George - I don't guess; I know. You hold the envelopes; you open them. Have I ever been wrong? Even once?'

He shook his head and sighed. 'It goes against the grain.'

'So it does and your lack of faith in me is costing both Harriman and Strong and Harriman Industries money, lots of money. Never mind. You say some speculator optioned the best land?'

'Yes. Probably somebody in a position to see the maps before the decisions were pubhc.'

'No, George, not a speculator - a soothsayer. Me. I could see that you weren't moving fast enough so I optioned as much as I could, using all the liquid capital I could lay hands on, plus all the cash I could raise by borrowing against non liquid assets.'

George looked hurt. I added hastily, `I'm turning my options over to you, George. At cost, and you can decide how much to cut me in for after the special position we have begins to pay back.'

'No, Maureen, that's not fair. You believed in yourself; you got there first; the profits are yours.'

'George, you didn't listen. I don't have the capital to exploit these options; I put eve cent I could raise into the options themselves - if I had been able to lay hands on another million, I would have optioned still more land further out and for longer terms. I just hope you will listen to me next time. It distresses me to tell you that it is going to rain soup, then have you show up with a teaspoon rather than a bucket. Do you want me to warn you about the next special position? Or shall I go straight to Mr Harriman and try to persuade him that I am an authentic soothsayer?'

He sighed. 'I'd rather you told me. If you will.'

I said most quietly, 'Do you have a place where we can shack up tonight?'

He answered just as quietly, 'Of course. Always, dear lady.'

That night I gave him more details. 'The next road to be converted will be the Jersey Turnpike, an eighty-mile-per-hour road as compared with this fiddling thirty-mile-per-hour job we saw opened today. But the Harriman Highway -'

'Harriman?'

'The D. D. Harriman Prairie Highway from Kansas City to Denver will be a hundred-mile-per-hour road that will grow a strip city thirty miles wide from Old Muddy to the Rocky Mountains. It will boost Kansas from a population of two million to a population of twenty million in ten years... with endless special positions for anyone who knows it is going to happen.'

'Maureen, you frighten me.'

'I frighten myself, George. It's rarely comfortable to know what is going to happen.' I decided to take the plunge. 'The rolling roads will continue to be built at a frantic pace, as fast as sunpower screens can be manufactured to drive them - down the east coast, along Route Sixty-Six, on El Camino Real from San Diego to Sacramento and beyond - and a good thing, too, as the sunpower screens on the roofs of the road cities will take up the slack and fend off a depression when the Paradise power plant is shut down and placed in orbit.'

George kept quiet so long I thought he had fallen asleep. At last he said, 'Did I hear you correctly? The big atomic power pile in Paradise, Arizona, will be placed in orbit? How? And why?'

'By means of spaceships based on today's glide rockets. But operating with an escape fuel developed at Paradise. But, George, George, it must not happen! The Paradise plant must be shut down, yes; it is terribly dangerous, it is built wrong -like a steam engine without a relief valve.' (In my head I could hear Sergeant Theodore's dear voice saying it: They were too eager to build... and it was built wrong - like a steam engine without a relief

valve.') 'It must be shut down but it must not be placed in orbit. Safe ways will be found to build atomic power plants; we don't need the Paradise plant. In the meantime the sunpower screens can fill the gap.'

'If it's dangerous - and I know some people have worried about it - if it is placed in orbit, it won't be dangerous.'

'Yes, George, that's why they will put it in orbit. Once in orbit, it would not be dangerous to the town of Paradise, or the state of Arizona... but what about the people in orbit with it? They will be killed.'

Another long wait - It seems to me that it might be possible to design a plant to operate by remote control, like a freighter rocket. I must ask Ferguson.'

'I hope you are right. Because you will see, when you return to Kansas City and open my envelope number six and also number seven, that I prophesy that the Paradise power plant will be placed in orbit, and that it will blow up and kill everybody on board, and destroy the rocketship that services it. George, it must not be allowed to happen. You and Mr Harriman must stop it. I promise you, dear, that if this can be stopped - if my prophecy can be proved wrong - I will break my crystal ball and never prophesy again.'

'I can't make any promises, Maureen. Sure, both Delos and I are directors of the Power Syndicate... but we hold a minor position both in stock and on the board. The Power Syndicate represents practically all the venture capital in the United States; the Sherman Anti-Trust Law was suspended to permit it to be formed in order to build the Paradise plant. Hmm... a man named Daniel Dixon controls a working majority, usually. A strong man. I don't like him much:

'I've heard of him, haven't met him. George, can he be seduced?'

'Maureen!'

'George, if I can keep fifty-odd innocent people from being killed in an industrial accident, I'll do considerably more than offer this old body as a bribe. Is he susceptible to women? If I am not the woman he is susceptible to, perhaps I can find her.'

Dixon didn't cotton to me at all (nor I to him, but that was unimportant) and he did not seem to have any cracks in his armour. After the Power Syndicate voted to shut down the Paradise plant 'in the public interest' I was successful only in getting George and Mr Harriman to vote against reactivating that giant bomb in orbit - theirs were the only dissenting votes. The death scenario rolled on and I could not stop it: power satellite and spaceship Charon blew up together, all hands killed - and I stared at the ceiling for nights on end, reflecting on the bad side of knowing too much about the future.

But I did not stop working. Back in 1952, shortly after I had given George my earliest predictions, I had gone to Canada to see Justin: 1) to set up a front to handle business for

my 'Prudence Penny' column, and 2) to offer Justin the same detailed predictions I was giving George.

Justin had not been pleased with me. 'Maureen, do I understand that you have been holding all these years additional information you got from Sergeant Bronson - or Captain Long, whatever - the Howard from the future - and did not turn it over to the Foundation?'

'Yes.'

Justin had shown an expression of controlled exasperation. 'I must confess to surprise. Well, better late than never. Do you have it in writing, or will you dictate it?'

'I'm not turning it over to you, Justin. I will continue to pass on to you, from time to time, data that I have conserved, item by item, as you need to know it'

'Maureen, I really must insist. This is Foundation business. You got these data from a future chairman of the Foundation - so he claimed and so I believe - so I am their proper custodian. I am speaking not as your old friend Justin, but as Justin Weatheral in my official capacity as chief executive officer of the Foundation and conservator of its assets for the benefit of all of us.'

'No, Justin.'

'I must insist'

'Insist away, old dear - it's good exercise.'

'That's hardly the right attitude, Maureen. You don't own that data. It belongs to all of us. You owe it to the Foundation.'

`Justin, don't be so tediously male! Data from Sergeant Theodore saved the Foundation's bacon on Black Tuesday, in 1929. Stipulated?'

`Stipulated. That's why -'

'Let me have my say. And that same data also saved your arse and made you rich - and made the Foundation rich. Why? How? Who? Old busy-bottom Maureen, that's who! Because I'm an amoral wench who fell in love with this enlisted man and kicked his feet out from under him - and got him to talking. That had nothing to do with the Foundation, just me and my loose ways. I'll hadn't cut you in on it, you would never have met Theodore. Admit it! True? False? Answer me.'

`Well, when you put it that way -'

`I do put it that way and let's have no more nonsense about what I owe the Foundation. Not until you've counted up what the Foundation owes me. I still promise to pass on data as needed. Right now, the Foundation should get heavily into Douglas-Martin Sunpower screens, and if you don't know about them, see your files of The Economist or the Wall Street Journal or the Toronto Star. After that, the hottest new investment as soon as it opens up will be rolling roads and real estate near them.'

'Rolling roads?'

`Damn it, Justin, I know Theodore mentioned them in that rump meeting of the board on Saturday 29 June, 1918, as I took notes and typed them out and gave you a copy, as well as the original to Judge Sperling. Look it up.' So clear back in 1952 I showed Justin where the principal roadtowns would be, as told to me by Theodore. 'Watch for them, get in early. Enormous profits to the early birds. But get rid of all railroad stock.'

At that time I decided not to bother Justin with my `Prudence Penny' venture - not when he was feeling bruised on his macho bump. Instead, I had taken it up with Eleanor. Entrusting a secret to Eleanor was safer than telling it to Jesus.

'Prudence Penny, The Housewife Investor' started out as a weekly column in country newspapers of the sort we had had in Thebes, the Lyle County Leader. I always offered the first six weeks free. If a trial period stirred any interest, a publisher could continue it for a very small fee - those small-town weeklies can't pay more than peanuts; there was no sense in trying to make money on it at first.

In fact my purpose was not to make money. Or only indirectly.

I set the format in 1953 with the first column and never varied it:

Prudence Penny THE HOUSEWIFE INVESTOR

TODAY'S DEFINTTION: (Each column I gave at least one definition. Money people have their own language. If you don't know their special words, you can't play in their poker game. Some of the words I defined for my readers were: common stock, preferred stock, bonds, municipal bonds, debentures, margin, selling short, puts and calls, living trust, joint tenancy, tenants in common, float, load, points, deficiency judgement, call money, prime rate, gold standard, flat money, easement, fee simple, eminent domain, public domain, copyright, patent, etc., etc.

(Trivial? To you, perhaps. If so, you did not need `Prudence Penny'. But to most people these elementary terms might as well be ancient Greek. So I offered one definition each column, in one-syllable Anglo-Saxon words that could be misunderstood only by a professor of English.)

Next I offered a discussion of something in the news of the day that might affect investing. Since everything, from weather to elections to killer bees, affects investing,

this was easy. If I could include a little juicy gossip, I did. But not anything hurtful, or cruel, and I was most careful not to offer anything actionable.

My next item each week was TODAY'S RECOMMENDED INVESTMENT. This was a sure thing, based directly or indirectly on Theodore's predictions. The same recommendation might be repeated many times, alternated with others from the same source.

I always closed with Prudence Penny's Portfolio:

Ladies, we started this portfolio with one thousand dollars ($1000) in January 1953. If you invested the same amount and at the same time, investing and changing investments just as we did, your portfolio is now worth $4823.17.

If you invested $10.000, your portfolio is now worth $48.231.70.

If you invested $100.000, today your portfolio is worth $48217.00.

But it is never too late to start prudent investing with Penny. You can start today with $4823.17 (or any multiple or fraction), which you then place as follows:

(List of investments that add up to $4823.17.)

If you want to see for yourself the details of how a thousand dollars grows to (current figure) in only (fill in) years and (blank) months, send ($1.oo, $2.50, $4.00 - the price went steadily up) to Pinch-Penny Publications, Suite 8600, Harriman Tower, New York, NY HKL030 (that being a drop box that caused mail to be routed, eventually, to Eleanor's stooge in Toronto) or buy it at your local bookstore: The Housewife's Guide to Thrifty Investing by Prudence Penny.

The hugger-mugger about the address was intended to keep the Securities Exchange Commission from learning that `Prudence Penny' was a director of Harriman Industries. The SEC takes a jaundiced view of 'Inside Information'. So far as I could tell, it would matter not at all to them that my advice was truly beneficial to anyone who followed it. In fact, that might get me beheaded even more quickly.

The column spread from country weeklies to city dailies and did make money after the first year, and quite a lot of money in the thirteen years that I wrote it. Women read it and followed it - so my mail indicated - but I think even more men read it, not to follow my advice, but to try to figure out how this female bear could waltz at all.

I knew that I had succeeded when one day George Strong quoted 'Prudence Penny' to me.

My ultimate purpose was not to make money and not to impress anyone but to establish a reputation that let me write a special column in April 11964, one headed `THE MOON

BELONGS TO EVERYONE - but the first Moonship will belong to Harriman Industries.'

I advised them to hang onto their Prudence Penny portfolio... but to take every other dime they could scrape up and bet it on the success of D. D. Harriman's great new venture, placing a man on the Moon.

From then on `Prudence Penny' always had something to say about space travel and Harriman Industries in every column. I freely admitted that space was a long-term investment (and I continued to recommend other investments, all backed by Theodore's predictions) but I kept on pounding away at the notion that untold riches awaited those farsighted investors who got in early in space activities and hung on. Don't buy on margin, don't indulge in profit-taking - buy Harriman stock outright, put it away in your safety deposit box and forget it - your grandchildren will love you.

In the spring of 1965 I moved my household to the Broadmoor Hotel south of Colorado Springs because Mr Harriman was building his Moonship on Peterson Field. In 1952 I had tried half-heartedly to drop my lease in Kansas City after Brian had taken Priscilla and Donald back to Dallas (another story and no t a good one). But George had outflanked me. Title to that house was in George, not Harriman and Strong, not Harriman Industries. When I told him that I no longer needed a four-bedroom house (counting the maid's room), he asked me to keep it, rent free.

I pointed out that, if I was to become his paid mistress, it wasn't enough, but if I was to continue the pretence of being a respectable woman, it was too much. He said, all right, what was the going rate for mistresses? - he would double it.

So I kissed him and took him to bed and we compromised. The house was his and he would put his driver and wife in the house, and I could stay in it any time I wished... and the resident couple would take care of Princess Polly.

George had spotted my weak point. I had once subjected this little cat to the trauma of losing her Only Home; I grabbed this means of avoiding doing it to her again.

But I did take an apartment at the Plaza, moved my most necessary books there; got my mail there, and occasionally took Polly there - subjecting her to the indignity of a litter box, true, but she did not fuss. (The new clay pellets were a vast improvement over sand or soil.) Moving back and forth this short distance got her used to a carrying cage and to being away from home now and then. Eventually she got to be a true travelling cat, dignified and at home in the best hotels, a sophisticated guest who would never think of scratching the furniture. This made it much easier for Elijah and Charlene to take vacations or go elsewhere if George needed them elsewhere.

So in the spring of 1965 a few weeks before the historic first flight to the Moon, Princess Polly and I moved into the Broadmoor. I arrived with Polly in her carrying case, baggage to follow from the terminal of the Harriman Prairie Highway fifty miles north of there - I

hated those rolling roads from the first time I rode one; they gave me headaches. But I had been told that the noise problem had been overcome on the Prairie Highway. Never trust a flack!

The desk clerk at the Broadmoor told me, `Madam, we have an excellent kennel at the back of the tennis club. I'll have a bellman take your cat there.'

`Just a moment,' I got out my Harriman Industries card - mine had a gold band.

The clerk took one look at it, got the assistant manager on duty. He hurried over, gardenia and striped pants and professional smile. `Mrs Johnson! So happy to welcome you! Do you prefer a suite? Or a housekeeping apartment?'

Princess Polly did not have to go to a kennel. She dined on chopped liver, courtesy of the management, and had her own cat bed and litter box, both guaranteed sterilised - so said the paper band around each of them, like the one around the toilet seat in my bathroom.

No bidet - aside from that the Broadmoor was a first-class hotel.

After a bath and a change - my luggage arrived while I was in the bath (of course) - I left Princess Polly to watch television (which she liked, especially the commercials) and went to the bar, to have a solitary drink and see what developed.

And found my son Woodrow.

He sported me as I walked in. 'Hi, Mom!'

`Woodrow!' I was delighted! I kissed him and said, `Good to see you, son! What are you doing here? The last I heard you were at Wright Patterson.'

`Oh, I quit that; they didn't appreciate genius. Besides, they expected me to get up too early. I'm with Harriman Industries now, trying to keep 'em straight. It ain't easy.'

(Should I tell Woodrow that I was now a director of Harriman Industries? I had avoided telling anyone who did not need to know - so wait and sec.) 'I'm glad you're keeping them straight. This Moonship of theirs - Do you have something to do with it?'

'Sit down first. What'll you drink?'

`Whatever you're having, Woodrow.'

'Well, now, I'm having Manitou Water, with a twist.'

'It looks like vodka tonic. Is that what it is?'

'Not exactly. Manitou water is a local mineral water. Something like skunk, but not as tasty.'

`Hmm... Make mine vodka tonic with lime. Is Heather here?'

'She doesn't like the altitude. When we left Wright Patterson, she took the kids back to Florida. Don't raise your eyebrows at me; we get along just fine. She lets me know when it's time for her to get pregnant again. About every three years, that is. So I go home, stay a month or two, get reacquainted with the kids. Then I go back to work. No huhu, no sweat, no family quarrels.'

`Sounds like a fine arrangement if it suits you two.'

'It does.' He paused to order my drink. I had never learned to drink but I had learned how to order a tall drink and make it last all evening, while ice cubes diluted it. I looked Woodrow over. His skin seemed tight on his face and his hands quite bony.

The waitress left; he turned back. `Now, Mom, tell me what you're doing here.'

`I've always been a space travel buff - remember how we read Roy Rockwood's Great Marvel series together? Lost on the Moon, Through Space to Mars -'

`Sure do! I learned to read because I thought you were holding out on me.'

'Not in those. A little in the Barsoom books, perhaps.'

'I've always wanted a beautiful Martian princess... but not the way you had to get one on Barsoom. Remember how they were always spilling each other's blood? Not for me! I'm the peaceful type, Mom. You know me.'

(I wonder if any mother ever knows her children. But I do feel close to you, dear. I hope you and Heather really are all right.) 'So when I heard about the Moonship, I made plans to come here. I want to see it lift off... since I can't go in it. What do you think of it, Woodrow? Will it do the job?'

'Let's find out.' Woodrow looked around, then called out to someone sitting at the bar. 'Hey, Les! Bring your redeye over here and come set a while.'

The man addressed came over. He was a small man, with the big hands of a jockey. My son said, 'May I present Captain Leslie LeCroix, skipper of the Pioneer? Les, this is my daughter Maureen.'

'I'm honoured, Miss. But you can't be Bill's daughter; you're too young. Besides, you're pretty. And he is - Well, look at him.'

'Stop it, boys. I'm his mother, Captain. You really are the captain of the Moonship? I'm impressed.'

Captain LeCroix sat down with us. I saw that his 'redeye' was another tall, dear drink. He said to me, 'No need to be impressed; the computer pilot does it all. But I'm going to: ride her... if I can avoid Bill long enough. Have a chocolate écláir, Bill.' '

'Smile when you say that, stranger!'

'A cheeseburger? A jelly doughnut? A stack of wheats with honey?'

'Mom, do you sec what that scoundrel is doing? Trying to keep me from dieting just because he's scared I might break his arcos. Or his neck.'

'Why would you do that, Woodrow?'

'I wouldn't. But Les thinks I would. He weighs just one hundred and twenty-six pounds. My best weight, in training, is one forty-five, you may remember. But by lift-off day and H-hour I have to weigh exactly what he does... because, if he catches a sniffle or slips in the shower and breaks something, God forbid, I have to sit there in his place and pretend to pilot. I can't avoid it; I accepted their money. And they have a large, ugly man following me around, making sure I don't run:

'Don't believe him, Ma'am. I'm very careful going through doors and I won't cat anything I don't see opened. He intends to disable me at the last minute. Is he really your son? He can't, be.'

`I bought him from a Gypsy. Woodrow, what happens if you don't make the weight?'

'They slice off one leg, a bit at a time, until I'm down to exactly one twenty-six. Spacemen don't need feet.'

'Woodrow, you always were a naughty boy. You would need feet on the Moon.'

'One is enough there. One-sixth gravity. Hey, there's that big, ugly man they got watching me! He's coming this way.'

George Strong came over and bowed. 'Dear lady! I see you have met our Moonship captain. And our relief pilot, Bill Smith. May I join you?'

`Mom, do you know this character? Did they hire you to watch me, too? Say it ain't so!'

`It ain't so. George, your relief pilot is my son, Woodrow Wilson Smith.'

Later that night George and I had a chance to talk privately and quietly.

'George, my son tells me that he must get his weight down to one hundred and twenty-six pounds in order to qualify as relief pilot. Can that be true?'

'Yes. Quite true.'

'He hasn't weighed that little since his junior year in high school. If he did get his weight down to that and if Captain LeCroix fell ill, I suspect that Woodrow would be too weak to do the job. Wouldn't it make more sense to adjust weights the way they do with race horses? Add a few lead weights if Captain LeCroix flies; take them out if the relief pilot must go?'

'Maureen, you don't understand.'

I admitted that I did not.

George explained to me just how tight the weight schedule for the ship was. The Pioneer was stripped down to barest essentials. She carried no radio - only indispensable navigational instruments. Not even a standard pressure suit- just a rubber acceleration suit and a helmet. No back pack - just a belt bottle. Open the door, drop a weighted flag, grab some rocks, get back in.

'George, this doesn't sound to me like the way to do it. I won't tell Woodrow that - after all, he's a big boy now' - assumed age, thirty-five; true age, fifty-three - 'but I hope Captain LeCroix stays healthy.'

Another of those long waits in which George pondered something unpleasant - 'Maureen, this is utter, Blue Star secret. I'm not sure anyone is going to fly that ship.'

'Trouble?'

'Sheriff trouble. I don't know how much longer I can hold off our creditors. And we haven't anywhere else to rum. We've pawned our overcoat so to speak.'

'George, lei me see what I can do.'

He agreed to live in my apartment and look after Princess Polly while I was away - okay with Princess Polly, as she was used to him. I left for Scottsdale in the morning, to see Justin.

'Look at it this way, Justin. How bad will the Foundation be hurt if you let Harriman Industries collapse?'

'The Foundation would be hurt. But not fatally. We would be able to resume full subsidy in five years, ten at the outside. Maureen, one thing is certain: a conservator of other people's money must never throw good money after bad.'

Eight million was the most I could squeeze out of him, and I had to guarantee it. Half of it was in CDs some of which had due dates as long as six months away. (Bui a certificate of deposit can always be used in place of cash, although it may cost you points.)

To accomplish that much I had, first, to tell Justin that he would never get another 'Theodore' tip out of me if he didn't produce the money, and, second, that if he laid the money on the table, I would place beside it a full and complete transcript of those notes I had taken in the middle of the night on 29 June 1918.

In the Broadmoor the next morning George would not accept the money from me but took me to Mr Harriman, who seemed detached, barely able to recognise me, until I said, 'Mr Harriman, I want to buy some more participation in the Lunar launching.'

'Eh? I'm sorry, Mrs Johnson; there is no more participation stock for sale. That I know of.'

'Then let me put it this way. I would like to lend you eight million dollars as a personal loan without security:

Mr Harriman looked at me as if seeing me for the first time. He had grown gaunt since the last time I had seen him and his eyes burned with fanatic fervour - he made me think of those Old Testament prophets.

He studied me, then turned to George. 'Have you explained to Mrs Johnson what a risk she would be taking?'

George nodded glumly. 'She knows.'

'I wonder. Mrs Johnson, I'm cleaned out and Harriman Industries is a hollow shell - that's why I haven't called a directors' meeting lately. I would have to explain to you and to the other directors the risks I've been taking. Mr Strong and I have been trying to hold things together on jawbone and sheer nerve, long enough to get the Pioneer off her pad and into the sky. I haven't given up hope... but, if I take your money and I am forced into bankruptcy and my senior company into receivership, my note to you could not be in a preferred position. You might get three cents on the dollar; you might not get anything.'

'Mr Harriman, you are not going to be bankrupt and that tall ship out there will fly. Captain LeCroix will land on the Moon and return safely'

He smiled down at me. It's good to know that you have faith in us.'

'It's not just faith; I'm certain. We can't fail now for the lack of a few pennies. Take the money and use it. Pay it back when you can. Not only will Pioneer fly, you also will send many ships after her. You are manifest destiny in person, sir! You will found Luna City... freeport for the Solar System!'

Later that week George asked me if I wanted to be in the blockhouse during the launching - Mr Harriman had said to invite me. I had already considered it, knowing that I could demand it if I cared to push it.

`George, that's not the best place to watch the lift-off, is it?'

'No. But it's the safest. It's where the VIPs will be. The Governor. The President if he shows up. Ambassadors.'

`Sounds claustrophobic. George, I've never been much interested in the safest place... and the few VIPs I've met struck me as hollow shells, animated by PR men. Where are you going to be?'

'I don't know yet. Wherever Delos needs me to be.'

'So I figured. You are going to be too busy to have me hanging on your arm -'

`It would be a privilege, dear lady, But -'

`- you are needed elsewhere. Where is the best view? If you weren't busy, where would you watch it?'

`Have you visited the Broadmoor Zoo?'

`Not yet. I expect to. After the lift-off.'

`Maureen, there is a parking lot at the zoo. From it you would have a dear view to the east from the spot about fifteen hundred feet higher than Peterson Field. Mr Montgomery has arranged with the Hotel to place some folding chairs there. And a radio link. Television. Coffee. If I weren't busy, that's where I would be.'

'So that's where I will be.'

Later that day I ran across my son Woodrow in the lobby of the Broadmoor. 'Hi, Mom! They got me working.'

`How did they manage that?'

`I didn't read my contract carefully enough. This is "educational and public communication activity associated with the Moonship" - meaning I have to set this thing up to show people how the ship works, where it will go, and where the diamonds are on the Moon.'

`Are there diamonds on the Moon?'

'We'll let you know later. Come here a sec.' He led me away from the crowd in the lobby into a side hall by the barber shop. 'Mom,' he said quietly, `if you want to do it, I think I have enough bulge around here to get you into the blockhouse for the lift-off'

Is that the best place to sec it?'

No, it's probably the worst. It'll be hot as a June bride, because the air conditioning isn't all that good. But it's the safest place and it's where the high brass will be. Visiting royalty. Party chairmen. Mafia chiefs.'

'Woodrow, where is the best place to watch? Not the safest '

'I would drive up Cheyenne Mountain. There is a big paved parking lot outside the zoo. Come back into the lobby; I want to show you something.'

On a giant (four-foot) globe that made my mouth water, Woodrow showed me the projected path of the Pioneer.

'Why doesn't it go straight up?'

`Doesn't work that way. She goes cast and makes use of the Earth's rotation... and unloads all those extra steps. The bottom one, the biggest one, number five, drops in Kansas.'

'What if it landed on the Prairie Roadway?'

'I'd join the Foreign Legion... right behind Bob Coster and Mr Ferguson. Honest, it can't, Mom. We start out here, fifty miles south of the road, and where it lands, over here, near Dodge City, is over a hundred miles south of it'

`What about Dodge City?'

'There's a little man with a switch, hired solely to push that switch and bring step five down in open country. If he makes a mistake, they tie him to a tree and let wild dogs tear him to pieces. Don't worry, Mom. Step four lands around here, off the coast of South Carolina. Step three lands in the Atlantic north of this narrowest plane where the nose of South America faces the bulge of Africa. Step two lands in the South Atlantic near Capetown. If it goes too far, we'll hear some interesting cussing in Afrikaans. Step one - ah, that's the one. With luck it lands on the Moon. If Bob Coster made a mistake, why, it's back to the old drawing-board.'

It will be no news to anyone that Pioneer lifted off to plan and that Captain Leslie LeCroix landed on Luna and returned safely. I watched from Cheyenne Mountain, the zoo parking lot, with such a fine, horizon-wide view to the east that it seemed to me that I could stand on my tip-toes and sec Kansas City.

I'm glad that I got to sec one of the great rockets while they were still in use - I know of no planet in any patrolled universe where the big rockets are still used - too expensive, too wasteful, too dangerous.

But, oh, so magnificent!

It was just dark when I got up there. The full Moon was rising in the east. The Pioneer was seven miles away (I heard someone say) but the ship was easy to see, bathed in floodlights and standing tall and proud.

I looked at my chrono, then watched the blockhouse through binoculars. A white flare burst from its top, right on time.

Another flare split into red and green fireball. Five minutes.

That five minutes was at least a half-hour long. I was beginning to think that the launching was going to abort - and I felt unbearable grief.

White fire lapped out of the base of the ship and slowly, lumberingly, it lifted off the pad... and climbed faster and faster and faster and the whole landscape, miles and miles, was suddenly in bright sunlight!

Up, up, and up, to apparent zenith and it seemed to have bent back to the west and I thought it was falling on us - and then the light was not quite as bright and now we could see that this `sun' overhead was moving east... and was a moving bright star. It seemed to break up and a voice from a radio said, 'Step five has separated.' I remembered to breathe.

And the sound reached us. How many seconds does it take sound to go seven miles? I've forgotten and, anyhow, they weren't using ordinary seconds that night.

It was 'white' noise, almost unbearable even at that distance. It rumbled on and on... and at last the turbulence reached us, whipping skirts and knocking over chairs. Someone fell, down, cursed, and said, 'I'm going to sue somebody!'

Man was on his way to the Moon. His first step to his Only Home -

George died in 1971. He lived to see every cent paid back, Pikes Peak Space Catapult operational, Luna City a going concern with over six hundred inhabitants, more than a hundred of them women, and some babies born there - and Harriman Industries richer than ever. I think he was happy. I know I miss him, still.

I'm not sure Mr Harriman was happy. He was not looking for billions; he simply wanted to go to the Moon - and Daniel Dixon euchred him out of it.

In the complex manoeuvrings that got a man to the Moon Dixon wound up controlling more shares of voting stock than Mr Harriman controlled, and Mr Harriman lost control of Harriman Industries.

On top of that, in lobbying manoeuvres in Washington and in the United Nations, a Harriman daughter firm, Spaceways Ltd, became the `chosen instrument' for the early development of space, with a rule, The Space Precautionary Act, under which the company controlled who could go into space. I heard that Mr Harriman had been turned down physically, under this rule. I'm not certain what went on behind the scenes; I was eased off the board of directors once Mr Dixon was in control. I didn't mind; I didn't like Dixon.

In Boondock, centuries later or about sixty-odd years ago on my personal time line, I listened to a cube Myths, Legends, and Traditions - The Romantic Side of History. There was a tale in it concerning time line two that asserted that the legendary D. D. Harriman had managed, many years later, when he was very old and almost forgotten, to buy a pirate rocket, in which he finally made it to the Moon... there to die in a bad landing. But on the Moon, where he longed to be.

I asked Lazarus about this. He said that he did not know. `But it's possible. God knows the Old Man was stubborn.'

I hope he made it.

Chapter 24 - Decline and Fall

I am not certain that my situation was improved when these ghouls grabbed me away from those spooks. I suppose that almost everybody has fantasies about making the punishment fit the crime or about some scoundrel who would look his best in the leading role at a funeral. It is a harmless way to kill time during a sleepless night.

But these weirdos mean it.

Murder is all they think about. The first night I was here they listed fifty-odd people who needed to be killed, itemised their crimes, and offered me the honour of being the next member to count coup - pick a client, do! One whose crimes are particularly offensive to you, Milady Johnson -

I admit that the listed miscreants were a scrofulous bunch over whom even their own mothers would not be likely to weep but, like Mr Clemens' favourite son, Huckleberry Finn, I am not much interested in killing strangers. I am not opposed to the death penalty - I voted for it every time the matter came to a vote, which was frequently during the decline and fall of the United States - but in killing pour le sport I need to be emotionally involved. Oh, forced to a choice I would rather shoot a man than a deer; I can't see the `sport' in shooting a gentle vegetarian that can't shoot back.

But, given full choice, I would rather watch television than kill a stranger. Some, at least.

I said, 'I don't see anyone on that list who is to my taste. Do you happen to have in your file of better-deads someone who abandons kittens?'

The fat chairman smiled at me under his dark glasses. Now that's a delicious idea! No, I think no unless by chance there is someone nominated for other reasons who also abandons kittens. I will have Research set up an inquiry at once. Madam, what would be an appropriate termination for such a client? Have you studied it?'

'No, I haven't. But his death should involve homesickness... and loneliness... and cold... and hunger... and fear... and utter despair.'

'Artistic. But perhaps not practical. Such a death might stretch out over months... and we really do not have the facilities to permit a deletion to last more than a few days. Ah, Bluebeard! - you have something to add?'

'Do what our sister suggests for as many days as we can afford the space. Then surround the client by a halo of enormous trucks, giant holos, the way traffic must look to a kitten. Have the images bear down on him, with overpowering sound effects. Then hit him with a real truck - a glancing blow to maim him. Let him die slowly, as is often the case with a road-killed animal.'

"Madam, does that appeal to you?'

(It made me want to throw up.) 'Unless something better comes along.'

'If we can find such a client for you, he will be saved and held at your disposal. In the mean time we must find you someone else for coup, not let you sit among us naked of proper pride.'

That was a week ago and I have begun to feel just a hint of the idea that if I do not promptly find on their list a client I wish to terminate, then... just possibly... we don't want to hurry you... but still... if I don't make blood coup soon, how can I be trusted not to betray them to the Supreme Bishop's proctors?

On that Time Corps mission I carried out in Japan in the 1930s, I wish I had investigated those reports of another woman who might be me. If I had proved to myself that I was indeed tripled for 1937-8, then I would sleep better here now, as that third loop would hava to be further ahead on my personal time line... which would prove that I will get out of this mess still breathing.

That's the real trick: to keep breathing. Isn't it, Pixel? Pixel? Pixel! Oh, damn!

Changes - in 1972 Princess Polly died in her sleep - heart failure, I think, but I did not have an autopsy. She was a little old lady who had lived a long life and, I think, a happy one, on the whole. I said a prayer to Bubastis, asking her to watch for the arrival in the eternal Catnip Fields of a little black and white cat who had never scratched or bitten without just cause and who had had the misfortune to have had only one kitten - by Caesarean section and the kitten never opened its eyes - and then she had lost her kitten factory by spaying because her surgeon said that she could never have a normal litter and could not safely risk another pregnancy.

I did not get another kitten. In 1972 I was ninety years old (although I admitted only to fifty-nine... and tried my darnedest - exercise and diet and posture and cosmetics and clothes - to look forty). Being ninety in fact, it was possible, even likely, that another kitten would outlive me. I chose not to risk that.

I moved to Albuquerque because it had no ghosts for me. Kansas City was choked with ghosts of my past, of every sort, both sad and happy. I preferred not to drive by a site, such as our old home on Benton Boulevard, or where our old farmhouse out south had once been, then driving past would cover the happy used-to-be with dreary or unrecognisable what-is.

I preferred to remember Central High School the way it had been when my children attended it. In those days the scholastic records of Central's graduates at West Point and Annapolis and MIT and other 'tough' schools caused Central to be rated as the finest secondary school in the west, equal in academics to the best preparatory schools, such as Groton or Lawrenceville - instead of what it had become: mostly babysitting for overgrown infants, a place where police prowl cars gathered every afternoon to stop fights, to confiscate knives, and to shake down the 'students' for drugs - a 'high school' where half the students should never have been allowed to graduate from grammar school because they could not read or write well enough to get along in the world outside.

Albuquerque held no ghosts for me; I had never lived them I had no children living there, no grandchildren. (Great-grandchildren? Well, maybe.) Albuquerque had had the good fortune (from my point of view) to be bypassed by moving roadway Route Sixty-Six. The old paved road numbered route 66 and once called 'The Main Street of America' had run straight through Albuquerque, but roadcity Route Sixty-Six was miles to the south; one could not hear it or see it.

Albuquerque was favoured also through having been bypassed by many of the ills of the Crazy Years. Despite its size - 180.000 and growing smaller because of the roadcity south of it; such shrinkage was usual - it continued to have the sweet small-town feeling so common in the early twentieth century, so scarce in the second half. It was the home of the main campus of the University of New Mexico... a school blessed with a chancellor who had not given in to the nonsense of the sixties.

Students there had rioted (some of them) just once; Dr Macintosh kicked them out and they stayed kicked out. Parents screamed and complained at the state capital in Santa Fe;

Dr Macintosh told the trustees and the legislature that there would be order and civilised behaviour on the campus as long as he was in charge. If they did not have the guts to back him up, he would leave at once and they could hire some masochistic wimp who enjoyed presiding over a madhouse. They backed him up.

In 1970 at campuses all over America half of all freshmen (or more) were required to take a course called 'English A' (or something similar) but known everywhere as 'Bonehead English'. When Dr Macintosh became chancellor, he abolished Bonghead English and refused to admit students who would have been required to take it. He announced, 'It costs the taxpayers a minimum of seventeen thousand dollars a year to keep a student on this campus. Reading, writing, spelling, and grammar are grammar school subjects. If an applicant for admission to this university does not know these grammar school subjects well enough to get along here, let him go back to the grammar school that had dumped him untaught. He does not belong here. I refuse to waste tax money on him.'

Again parents screamed - but the parents of these subliterate applicants were a minority, while the majority of voters and legislators were discovering that they liked what they heard from Chancellor Macintosh.

After Dr Macintosh revised the university prospectos, it carried a warning that students were at all times subject to surprise tests for drugs-urine, blood, whatever. If they were caught - expulsion, no second chance.

A student who flunked a drug test found his quarters searched at once, all legal and proper, as there were seven judges in town willing night and day to issue search warrants on 'probable cause'. No attention was paid to tender feelings; all who were caught in possession were prosecuted.

Especially for the benefit of drug dealers the legislature reinstituted a fine old custom: public hangings. Gallows were erected in plazas. To be sure, drug dealers sentenced to death always appealed to the state supreme court and then to Washington, but with five members including the Chief justice of the Supreme Court of the United States having been appointed by President Patton, it worked out that drug dealers in New Mexico had little reason to complain of the 'Law's Delays'. One bright young entrepreneur lived exactly four weeks from arrest to jack Ketch. The average time, once the system got rolling, was less than two months.

As usual, the ACLU had a fit over all these matters. Several ACLU lawyers spent considerable time in jail for contempt of court, not in the new jail, but in the drunk tank of the old jail, with the drunks, the hopheads, the wetbacks, and the quasi-male prostitutes.

These were some of the reasons I moved to Albuquerque. The whole country was losing its buttons, a mass psychosis I have never fully understood. Albuquerque was not

immune but it was fighting back, and it had enough sensible men and women in key posts that it was a good place to live during the ten years I was there.

At the very time that America's schools and families were going to pieces the country was enjoying a renaissance in engineering and science, and not alone in such big items as space travel and roadcities. While students frivolled away their time, the research facilities of universities and of industry were turning out more good work than ever - in particle physics, in plasma physics, in aerospace, in genetics, in exotic materials, in medical research, in every field.

The exploitation of space flourished unbelievably. Mr Harriman's decision to keep it out of government hands, let private enterprise go at it for profit, was vindicated. While Pikes Peak Spaceport was still new, Spaceways Ltd was building bigger, longer, and more efficient catapults at Quito and on the Island of Hawaii. Manned expeditions were sent to Mars and to Venus and the first asteroid miners headed out.

Meanwhile the United States went to pieces.

This decay went on not just on time line two but on all investigated time lines. During my fifty years in Boondock I read several scholarly studies of the comparative histories of the explored time lines concerning what was called 'The Twentieth Century Devolution'.

I'm not sure of my opinions. I saw it on only one time line, and that only to the middle of 1982 and in my own country. I have opinions but you need not take them seriously as some leading scholars have other opinions.

Here are some of the things I saw as wrong:

The United States had over 600.000 practising lawyers. That must be at least 500.000 more than were actually needed. I am not counting lawyers such as myself; I never practised. I studied law simply to protect myself from lawyers, and there were many like me.

Family decay: I think it came mainly from both parents working outside the home. It was said again and again that, from mid-century on, both parents had to have jobs just to pay the bills. If this was true, why was it not necessary in the first half of the century? How did labour-saving machinery and enormously increased productivity impoverish the family?

Some said the cause was high taxes. This sounds more reasonable; I recall my shock the year the government collected a trillion dollars. (Fortunately most of it was wasted.)

But there seems to have been an actual decline in rational thinking. The United States had become a place where entertainers and professional athletes were mistaken for people of importance. They were idolised and treated as leaders; their opinions were sought on everything and they took themselves just as seriously - after all, if an athlete is paid a

million or more a year, he knows he is important... so his opinions on foreign affairs and domestic policies must be important, too, even though he proves himself to be both ignorant and subliterate every time he opens his mouth. (Most of his fans were just as ignorant and unlettered; the disease was spreading.)

Consider these:

1) 'Bread and Circuses';

2) The abolition of the pauper's oath in Franklin Roosevelt's first term;

3)'Peer group' promotion in public schools.

These three conditions heterodyne each other. The abolition of the pauper's oath as a condition for public charity ensured that habitual failures, incompetents of every sort, people who can't support themselves and people who won't, each of these would have the same voice in ruling the country, in assessing taxes and spending them, as (for example) Thomas Edison or Thomas Jefferson, Andrew Carnegie or Andrew Jackson. Peer group promotion ensured that the franchise would be exercised by ignorant incompetents. And 'Bread and Circuses' is what invariably happens to a democracy that goes that route: unlimited spending on `social' programmes ends in national bankruptcy, which historically is always followed by dictatorship.

It seemed to me that these three things were the key mistakes that destroyed the best culture in all known histories up to that time. Oh, there were other things - strikes by public servants, for example. My father was still alive when this became a problem.

Father said grimly, 'There is a ready solution for anyone on the public payroll who feels that he is not paid enough: he can resign and work for a living. This applies with equal force to Congressmen, Welfare "dients", schoolteachers, generals, garbage collectors, and judges.'

And of course the entire twentieth century from 1917 on was clouded by the malevolent silliness of Marxism.

But the Marxists would not and could not have had much influence if the American people had not started losing the hard common sense that had won them a continent. By de sixties everyone talked about his 'rights' and no one spoke of his duties - and patriotism was a subject for jokes.

I do not believe that either Marx or that cracker revivalist who became the First Prophet could have damaged the country if the people had not become soft in the head.

'But every man is entitled to his own opinion!'

Perhaps. Certainly every man had his own opinion on everything, no matter how silly.

On two subjects the overwhelming majority of people regarded their own opinions as Absolute Truth, and sincerely believed that anyone who disagreed with them was immoral, outrageous, sinful, sacrilegious, offensive, intolerable, stupid, illogical, treasonable, actionable, against the public interest, ridiculous, and obscene.

The two subjects were (of course) sex and religion.

On sex and religion each American citizen knew the One Right Answer, by direct Revelation from God.

In view of the wide diversity of opinion, most of them must necessarily have been mistaken. But on these two subjects they were not accessible to reason.

'But you must respect another man's religious beliefs!' For Heaven's sake, why? Stupid is stupid - faith doesn't make it smart.

I recall one candidates promise that I heard during the Presidential campaign of 1976, a campaign promise that seems to me to illustrate how far American rationality had skidded.

'We shall drive ever forward along this line until all our citizens have above-average incomes!'

Nobody laughed.

When I moved to Albuquerque I simplified my life in several ways. I simplified my holdings and split them among three conservative managements, in New York, in Toronto, and in Zurich. I wrote a new will, listing a few sentimental bequests, but leaving the major portion, over ninety-five per cent, to the Howard Foundation.

Why? The decision resulted from some long, long midnight thoughts. I had far more money than one old woman could spend - Lawsy me, I could not even spend the income from it. Leave it m my children? They were no longer children and not one of them needed it - and each had received not only Howard bonuses but also the start-up money that Brian and I had arranged for each of them.

Leave it to `worthy causes'? That is thin gruel, my friend. Most of such money is sopped up by administration, i.e., eaten by parasites.

The original capital had come from the Ira Howard Foundation; I decided to send my accumulation back to the Foundation. It seemed fitting.

I bought a modern condo apartment near the campus, between Central Avenue and Lomas Boulevard, signed up for a course in pedagogy at the University, not with any serious intention of studying (it takes real effort to flunk a course in pedagogy) but to

establish me on campus. There are all sorts of good social events on a campus - motion pictures, plays, open lectures, dances, clubs. Doctorates are as common on campus as fleas on a dog, but nevertheless a doctor's degree is a union card that gives entrée to many places.

I joined the nearest Unitarian church and supported it with liberal donations, in order to enjoy the many social benefits of church membership without being pestered by straitjacket creeds.

I joined a square dance club, a Viennese Waltz club, a contract bridge dub, a chess club, a current events supper club, and a civic affairs luncheon club.

In six weeks I had more passes than the Rocky Mountains. It let me be fussy about my bed mates and still get in far more friendly fornication than had been the case in the preceding quarter of a century. I had not limited myself to George Strong during those years, but I had kept too busy for serious pursuit of the all-time number-one sport.

Now I had time. As some old gal said (Dorothy Parker?), `There is nothing as much fun as a man!'

`Male and female created He them' - that's a good arrangement, and for ten years I made the most of it.

I did not spend all of my time chasing men... or in letting them chase me while I ran very slowly - the latter being my MO because it makes a man nervous for a woman to be overt about it - it is contrary to traditional protocol. Males are conservative about sex, especially those who think they are not.

We Howards were not inclined to keep in touch with all our relatives; it was not feasible. By the year I moved to Albuquerque (1972) I had more descendants than there are days in the year - I should keep track of their birthdays? Heavens, I had trouble keeping track of their names!

But I did have some favourites, people I loved irrespective of blood relationship if any: my older sister Audrey, my older `sister' Eleanor, my brother Tom, my cousin Nelson and his wife Betty Lou, my father and I missed him always. My mother I did not love but I respected her; she had done her best for all of us.

My children? While they were at home I tried to treat them all alike and to lavish on each of them love and affection - even when my head ached and my feet hurt.

Once they were married - Now comes the Moment of Truth. I tried to do unto them as they did unto me. If one of my offspring called me regularly, I tried to call her (him) as often. To some I sent birthday cards, not much else. If a grandchild gave attention to Grandma, Grandma paid attention to that child. But there just isn't time to be both

openhanded and evenhanded with one hundred and eighty-one grandchildren, that being the number I had (unless I lost track) by my ninety-ninth birthday.

My special loves - Blood did not necessarily enter into it. There was little Helen Beck, who was just Carol's age, and the two little girls went to Greenwood school together in first and second grade. Helen was a lovely child and utterly sweet natured. Because her mother was a working widow, Helen spent quite a bit of time in my kitchen until we moved too far away.

But she did not forget me and I did not forget her. She went into show business and travelled; we tried to keep each other advised of moves so that we could make rendezvous every year or six. She lived a long time for a non-Howard and was a beauty right up to her death - so much so that she could afford to dance naked into her seventies, at which age she still gave every man present an erection. Yet her dancing was never styled to be provocative, nothing like the cootch dancer Little Egypt of an earlier generation.

Helen changed her name early in her show-biz career; most people knew her as Sally Rand. I loved Sally and Sally loved me, and we could be apart for several years, then manage to make a rendezvous, and be right back where we had left off, intimate friends.

Sally and I shared one oddity: both of us went to school as often as we could manage it. She usually performed at night; in daytime she was a special student at whatever campus was nearest. By the time she died (1979) she had far more collegiate hours than most professors. She was a polymath; everything interested Sally and she studied in depth. Sally did not drink or smoke; her one weakness was big, thick textbooks.

Nancy stayed closer to me than did my other children, and I was her husband's sometime mistress for sixty-four years... because Nancy had decided it that way before she married Jonathan. Not often but always when we met and could find opportunity. I can't believe that Jonathan truly had much interest in this old carcass into its nineties - but he could lie about it delightfully. We really did love each other, and an erection is the most flattering compliment a man can pay to an old woman. Jonathan was a true Galahad, one who reminds me of my husband Galahad. Not too surprising, as Galahad is descended from Jonathan (13.2 per cent, counting convergence) - and from me, of course, but all of my husbands are descended from me except Jake and Zeb, who were born on another time line. (Time line four, Ballox O'Malley) (Oops! And Jubal, time line three.)

As a by-product of Nancy's offering Jonathan to me, Brian got Nancy's sweet, young body - the first incest in our family, I think. Whether it happened again on later occasions I do not know and it is none of my business. Nancy and I were much alike in temperament - both of us strongly interested in sex but relaxed about it. Eager but not tense.

Carol - For Carol I always tried to save 26 June, Carol's Day, Carolita's Day, Carolmas, and eventually Fiesta de Santa Carolita for millions of people who never knew her.

After 26 June 1918, she gave up her birthday entirely in order to celebrate Carol's Day.

During the decade that I spent mostly in Albuquerque she was star-billed several times in Reno or Vegas on Carol's Day. She always held her luau on z6 June even if a midnight show forced her to start it at four in the morning. No matter the hour her friends flocked to attend, coming from around the globe. It became a great honour to be invited to Carolita's annual party, something to boast about in London and Rio.

Carol married Rod Jenkins of the Schmidt family in 1920, when he was just back from France - Rainbow Division and Rod picked up a Silver Star and a Purple Heart without losing anything. (One scar on his belly -) Rod had majored in mathematics at Illinois Tech., specialising in topology, then he had joined up between his junior and senior years, came back and shifted to theatre arts. He had decided to try to shift from amateur magician to professional - stage magic, I mean. He told me once that being shot at had caused him to reassess his values and ambitions.

So Carol started her married life handing things to her husband on stage, while dressed in so little that she constituted misdirection every time she twitched. She tried to time it so that she had babies when Rod was resting. When that was not possible, she would go on working until a theatre manager called a halt... usually as a result of complaints by females not as well endowed. Carol was one of those fortunate women who got more beautiful as her belly bulged.

She parked her children with Rod's mother when she and Rod were on the road, but she usually had one or two with her, a privilege her youngsters all loved. Then, in' 55 (I think) Rod made a mistake in a bullet-catching illusion, and died on stage.

Carol did his act (or a magic act of some sort with his props) the next night. One thing was certain: she was not hiding props or rabbits in her costume. When she started working Reno and Vegas and Atlantic City, she trimmed it down to a G-string. She added juggling to her act.

Later, after coaching, she added singing and dancing. But her fans did not care what she did; they wanted Carol, not the gimmicks. Theatres in Las Vegas or Reno showed on their marquees just 'CAROLITA!' - nothing more. Sometimes she would stop in the middle of juggling and say, I'm too tired to juggle tonight and, anyhow, W. C. Fields did it better,' and she would walk out on the runway and stop, hands on her hips, dressed in a G-string and a smile, and say, 'Let's get better acquainted. You, there! Pretty little girl in a blue dress. What's your name, dear? Will you throw me a kiss? If I throw you one, will you eat it or throw it back to me?' or, `Who has a birthday tonight? Hold up your hands.'

In a theatre crowd at least one in fifty is having a birthday, not one in three hundred and sixty-five. She would ask them to stand, and would repeat each name loudly and clearly - then ask all the crowd to sing Happy Birthday with her, and when the doggerel reached 'Happy Birthday, dear - ' the band would stop and Carol would sing out each first name,

pointing at the owner: ` - dear Jimmy, Ariel, Bebe, Mary, John, Philip, Amy, Myrtle, Vincent, Oscar, Vera, Peggy' - hand cue and the band would hit it - 'Happy Birthday to you!'

If visitors had been allowed to vote, Carolita could have been elected mayor of Las Vegas by a landslide.

I once asked her how she remembered all those names. She answered, 'It's not hard, Mama, when you want to remember. If I make a mistake, they forgive me - they know I've tried: She added, `Mama, what they really want is to think that I am their friend - and I am.'

During those ten years I travelled now and then to see my special darlings, but mostly I stayed home and let them come to me. The rest of the time I enjoyed being alive and enjoyed new friends, some in bed, some out, some both.

As the decade wore on and I approached one hundred, I found that I was experiencing more frequently a slight chill of autumn - joints that were stiff in the mornings, grey hairs among the red, a little sagginess here and there - and, worst of all, a feeling that I was becoming fragile and should avoid falling down.

I didn't let it stop me; I just tried harder. I had one fairly faithful swain at that time, Arthur Simmons - and it tikcled and pleased him when I referred to myself, in bed with him, as 'Simmons' Mattress'.

Arthur was sixty, a widower, and a CPA, and an absolutely reliable partner in contract bridge - so dependable that I gave up the Italian method and went back to Goren because he played Goren. Shucks, I would have reverted to Culbertson had Arthur asked me to; an utterly honest bridge partner is that pearl of great price.

And so is a perfect gentleman in bed. Arthur was no world-class stud - but I was no longer eighteen and I never had Carols beauty. But he was unfailingly considerate and did his best.

He had one eccentricity; after our first time, in my apartment, he insisted on getting a motel room for each assignation. 'Maureen; he explained, `if you are willing to make the effort to come where I am, then I know that you really want to. And vice versa, if I go out and rent a motel room, you know that I am interested enough to make an effort: When either of us stops making an effort, it is time to kiss and part, with no tears.'

In June 1982 that time had arrived; I think each of us was waiting for the other to suggest it. On 20 June I was heading on foot to an assignation with Arthur and was thinking that perhaps I had best bring up the matter during that quiet time after the first one... then a second one if he wanted it and say goodbye. Or would it be kinder to announce that I was making a trip back east to see my daughter? Or simply break sharp?

I had come to the intersection of Lomas and San Mateo Boulevards. I had never liked that crossing; the timing of the traffic light was short and the boulevards were wide - and getting wider lately. And today, because of repairs in progress on the PanAmerican Highway, truck traffic had been routed around the repairs by sending it down San Mateo, then west on Central, and the reverse for northbound traffic.

I was half-way across when the lights changed and a solid mass of traffic started at me, especially one giant truck. I froze, tried to run back, tripped and fell down.

I caught sight of a policeman, knew that the truck would get me, wondered briefly whether Father would recommend prayer after my heathen lifetime.

Somebody scooped me up off the pavement and I fainted.

It seemed to me that I was taken out of an ambulance and placed on a stretcher. I fainted again and woke up in bed. A pretty little dark woman with wavy hair was hovering over me. She spoke slowly and carefully in an accent that I thought was Spanish:

`Mama Maureen... Tamara am I. For... Lazarus... and for all... your children... I bid you... welcome to Tertius!'

I stared at her, not believing my eyes. Or ears. `You are Tamara? You really are Tamara? Wife to Captain Lazarus Long?'

`Wife am I to Lazarus. Tamara am I. Daughter am I, to you, our Mama Maureen Welcome, mama. We love you.'

I cried and she gathered me to her breast.

Chapter 20 - Rebirth in Boondock

Let's review the bidding.

In 1982, on 20 June I was in Albuquerque, New Mexico, on my way to a Sunday afternoon motel date for some friendly fornication... and that made me a scandal to the jaybirds as I was only days away from my hundredth birthday - while pretending to be much younger and, mostly, succeeding. My assignation was with a widowed grandfather who seemed willing to believe that I was his own age, give or take a bit.

Part of the orthodoxy of that time and place was that old women have no interest in sex and that old men have limp penises and no sex drive - except dirty old perverts with criminal and pathological interests in young girls. All young people were certain of these ideas through knowing their own grandparents, whom they knew to be interested only in singing hymns and in playing chequers or shuffleboard. But sex? My grandparents? Don't be disgusting!

(At that time and in that country, nursing homes for the elderly kept their guests chaperoned and/or physically segregated by sexes so that nothing `disgusting' could take place.)

So this dirty old woman on evil bent got caught in heavy traffic, panicked, fell down, fainted - and woke up in Boondock on the planet Tellus Tertius.

I had heard of Tellus Tertius. Sixty-four years earlier, when I was a modest young matron with a snow-white reputation, I had seduced a young sergeant, Theodore Bronson, who in pillow talk with me had revealed himself as a time traveller from the far future and a distant star, Captain Lazarus Long, chairman of the Howard Families in his time... and my remote descendant!

I had looked forward to years of happy adultery after the War was over, under the tolerant, shut-eye chaperonage of my husband.

But Sergeant Theodore went to France in the AEF and was missing in action in some of the heaviest fighting in the Great War. MIA equals killed; it never meant anything else.

When I woke up and Tamara took me into her arms, I had great trouble believing any of it... especially the ides that Theodore was alive and well. When I did believe her (one cannot disbelieve Tamara), I was crushed with the grief of too late, too late!

Tamara tried to soothe me but we had language trouble; she is not a linguist, speaks broken English only - and I had not a word of Galacta. (Her first speech to me she had rehearsed most carefully.)

She sent for her daughter Ishtar. Ishtar listened to me, talked to me, finally got it through my head that being a hundred, years old did not matter; I was about to be rejuvenated.

I had heard about rejuvenation from Theodore, long ago. But I had never thought of it as applying to me.

They both told me, over and over again. Ishtar said, `Mama Maureen, I am more than twice as old as you are. My last rejuvenation was eighty years ago. Am I wrinkled? Don't worry about your age; you will be no trouble at all. We'll start your tests at once; you will be eighteen again in a very short time. Months, I estimate, instead of the two or three years a really difficult case can take.'

Tamara nodded emphatically. Is true. Ishtar true word esspeak. Four century am I. Dying was I' She patted her belly. `Baby here now.'

`Yes,' agreed Ishtar, `by Lazarus. A baby I gene-plotted and required Lazarus to plant before he left to rescue you. We could not be sure that he would be back - these trips of his are always chancey - and, while I have his sperm on deposit, frozen sperm can

deteriorate; I want as many warm-spenn babies sired by Lazarus as possible.' She added, `And you, too, Mama Maureen. I hope you will gift us with many more babies. Our calculations show that what Lazarus has, his unique gene patterns, he got mainly from you. You need not bear babies yourself; there'll be host mothers standing in line for the privilege of bearing a Mama Maureen baby. Unless you prefer to bear them yourself.'

'You mean I can?'

`Certainly. Once we have you made young again.'

`Then I will!' I took a deep breath. It has been... forty-four years - I think that is right forty-four years since I last became pregnant. Although Ne always been willing and Nave not tried to avoid it.' I thought about it. `Is it possible for me to postpone seeing Theodore - Lazarus, you call him for a while? Could I be made younger before I see him? I dread the thought of his seeing me this way. Old. Not the way he knew me.'

`Certainly. There are always emotional factors in a rejuvenation. Whatever a client needs to be happy is the way we do it'

'I would rather not have him see me until I look more as I looked then.'

'It shall be done.'

I asked to see a picture of Theodore-Lazarus. It turned out to be a moving holo, almost frighteningly lifelike. I was aware that Theodore and I looked enough alike to be brother and sister; that was what Father had first noticed about him. But this startled me. `Why, that's my son!' The holo looked just like my son Woodrow - my bad boy and always my favourite.

'Yes, he's your son.'

'No, no! I mean that Captain Lazarus Long whom I knew as Theodore is a dead-ringer - sorry, a twin-brother image of my son Woodrow Wilson Smith. I hadn't realised it of course, in the brief time I knew Captain Long, my son Woodrow Wilson was only five years old; they did not look alike then, or nothing anyone would notice. So my son Woodrow grew up to look like his remote descendant. Strange. I find I'm touched by it'

Ishtar looked ar Tamara. They exchanged words in a language I did not know (Galada, it was). But I could hear worry in their voices.

Ishtar said soberly, `Mama Maureen, Lazarus Long is your son Woodrow Wilson.'

'No, no,' I said 'I saw Woodrow just a few months ago. He was, uh, sixty-nine at the time but looked much younger. He looked just as Captain Long looks in this picture - an amazing resemblance. But Woodrow is back in the twentieth century. I know.'

'Yes, he is, Mama Maureen. Was, I mean, although Elizabeth tells me the two tenses are equivalent. Woodrow Wilson Smith grew up in the twentieth century, spent most of the twenty-first century on Mars and on Venus, returned to Earth in the twenty-second century and -' Ishtar stopped and looked up. `Teena?'

'Who rubbed my lamp? What'll you have, Ish?'

'Ask Justin for a print-out in English of the memoirs he prepared on the Senior, will you, please?'

'No need to ask Justin; I've got 'em in my gizzard. You want them bound or scrolled?'

'Bound, I think. But, Teena, let Justin fetch them here; he will be delighted and honoured.'

'Who wouldn't? Mama Maureen, are they treating you right? If they don't, just tell me, 'cause I do all the work around here.'

After a while a man came in who reminded me disturbingly of Arthur Simmons. But it was just a general resemblance combined with a similar personality; in 1982 Justin Foote would have been a CPA, as Arthur Simmons had been. Justin Foote was carrying a briefcase. ("Plus ça change, plus c'est ta même chose.") There was a degree of awkwardness as Ishtar introduced him; he seemed about to fall over his own feet from excitement at meeting me.

I took his hand 'My first great-great-granddaughter, Nancy Jane Hardy, married a boy named Charlie Foote. That was about 1972, I think; I went to her wedding. Is Charlie Foote any relation to you?'

'He is my ancestor, Mother Maureen. Nancy Jane Hardy Foote gave birth to Justin Foote the First on New Millenium Eve, 31 December, year 2000 Gregorian.'

'Really? Then Nancy Jane had a nice long run. She was named for her great-grandmother, my first born.'

'So the Archives show. Nancy Irene Smith Weatheral, your first born, Ancestress. And I carry the first name of Nancy's father-in-law, Justin Weatheral: Justin spoke excellent English with an odd accent. Bostonian?

`Then I'm your grandma, in some degree. So kiss me, grandson, and quit being so nervously formal; we're family.'

He relaxed and kissed me then, a firm buss on the mouth, one I liked If we had not had company,1 might have let it develop - he did remind me of Arthur.

He added then: I'm descended from you and from Justin Weatheral another way, Grandma. Through Patrick Henry Smith, to whom you gave birth on 7 July 1932.'

I was startled. 'Good heavens! So my sins follow me, even here. Oh, of course - you're working from the Foundation's records. I did report that case of bastardy to the Foundation. Had to keep it straight there.'

Both Ishtar and Tamara were looking puzzled. Justin said, `Excuse me, Grandma Maureen' - and spoke to them in that other language. Then he added to me, 'The concept of bastardy is not known here; issue from a coupling is either genetically satisfactory or not satisfactory. The ides that a child could be proscribed by civil statute is difficult to explain.'

Tamara had looked startled, then giggled when Justin explained bastardy. Ishtar had simply looked sober: She spoke to Justin, again in Galacta.

He listened, then turned to me. `Dr Ishtar says that it is regrettable that only once did you accept another father for one of your children. She tells me that she hopes to get many more children from you, each by a different father. After you are rejuvenated, she means.'

'After,' I repeated. 'But I'm looking forward to it. Justin, you have a book for me?'

That book was titled The Lives of Lazarus Long, with a secondary title that started 'The lives of the Senior Member of the Howard Families (Woodrow Wilson Smith... Lazarus Long... Corporal Ted Bronson... [and a dozen other names]) Oldest Member of the Human Race -'

I didn't faint. Instead I teetered on the brink of orgasm. Ishtar, aware somewhat of the customs of my time and place, had hesitated to let me know that my love of 1918 was actually my son. But she could not know that I had never felt bound by the taboos of my clan and was as untroubled by the idea of incest as a tomcat is. Indeed, the greatest disappointment of my life was my inability to get my father to accept what I had been so willing to give him, from menarche till lost him.

I still haven't been able to do anything with Lizzie Borden's disclosure that this city I'm in is Kansas City. Or one of its permutations that is. I don't think I am in one of the universes patrolled by the Time Corps, although I can't be certain. So far, all I have seen of the city is what can be seen from the balcony off the lounge of the Committee for Aesthetic Deletions.

It's the correct geography all right. North of here, about ten miles away, is the sharp bend in the Missouri River where it swings from southwest to northeast at the point where the Kaw river flows into it - a configuration that causes big floods in the west bottoms ever five or six years.

Between here and there is the unmistakable tall shaft of the War Memorial... but it is not the War Memorial in this universe; it is the Sacred Phallus of the Great Inseminator.

(It reminds me of the time Lazarus tried to check the historicity of the man known as Yeshua or Joshua or Jesus. He had not been able to track him down through census or tax records of that time at Nazareth or Bethlehem, so he went looking for the most prominent event in the legend: the Crucifixion. He did not find it. Oh, he found crucifixions on Golgotha all right - but just common criminals, no political evangelists, no godstruck young rabbis. He tried again and again, using various theories 'to date it... and got so frustrated that he started calling it the 'Crucifiction'. His current theory involves a really strong Fabulist of the second century Julian.

The only time I've been outdoors here was the night of Fiesta de Carolita... and then I saw only the big park in which the Fiesta was held (Swope Park?), with many bonfires and flambeaux, endless bodies wearing masks and body paint, and the most amazing gangbang I have ever heard of, even in Rio. And a witches' esbat, but you can see those anywhere if you hold the Sign and know the Word. (I was stooled in Santa Fe in 1976, Wicca rite.)

But it is amusing to see one held right out in public, on the one night of the year when correct dress for a sabbat oresbat wouldn't be noticed and odd behaviour is the order of the day. What chutzpah!

Could this possibly be my own time line during the reign of the Prophets? (The twenty-first century, more or less -) The fact that they know of Santa Carolita lends plausibility to the idea, but this does not match too well with any accounts that I have read of America under the Prophets. So far as I know the Time Corps does not maintain an office in Kansas City in the twenty-first century on time line two.

If I could hire a 'copter and a pilot I would search fifty miles south of here and attempt to find Thebes, where I was born. If I found it, it would give me an anchor to reality. If I failed to find it, that would tell me that after a while some husky nurses would take me out of this wetpack and feed me.

If I had any money. If I could get away from these ghouls. If I wasn't afraid of the Supreme Bishop's proctors. If I didn't think it would get my arse shot off in the air.

Lizzie has promised to buy me a harness for Pixel. Not to walk him on a leash (impossible!) but to carry a message. The bit of string around his neck that I used on my last attempt apparently did not work. He may have clawed away that bit of paper, or broken the string.

Ishtar set a date seventeen months after my arrival in Boondock for rendezvous with the persons involved in rescuing me in 1982: Theodore/Lazarus/Woodrow (I have to think of him as three persons in one, like another Trinity), his clone-sisters Lapis Lazuli and Lorelei Lee, Elizabeth Andrew Jackson Libby Long, Zeb and Deety Carter, Hilda Mae

and Jacob Burroughs, and two sentient computers both animating ships, Gay Deceives and Dora. Ishtar had assured Hilda (and me) that seventeen months would be long enough to make me young again.

Ishtar pronounced me done in only fifteen months. I can't give details of my rejuvenation because I knew nothing of such details at the time - not until I was accepted as an apprentice technician years later, after I had become the Boondock equivalent of RN and MD. At the medical school hospital and at the rejuvenation clinic they use a drug tagged `Lethe' that lets one do horrid things to a patient but not have him even recall that they happened. So I do not remember the bad days of my rejuvenation but only the pleasant, lazy ones during which I read Theodore's memoirs, as edited by Justin... and I spotted the authentic Woodie touch; the raconteur lied whenever he felt like it.

But it was fascinating. Theodore really had felt moral qualms about coupling with me. My goodness! You can take the boy out of the Bible Belt, but you can never quite take the Bible Belt out of the boy. Not even centuries later and after experiencing other and often better cultures utterly unlike Missouri.

One thing in those memoirs made me proud of my `naughty' son: he seems to have always been incapable of abandoning wife and child. Since (in my opinion) much of the decay that led to the decline and fall of the United States had to do with males who shrugged off their duty to pregnant women and young children, I found myself willing to forgive my `bad boy' for all his foibles since he never wavered in this prime virtue. A male must be willing to live and to die for his female and their cubs... else he is nothing.

Woodrow, selfish as he was in many respects, in this acid test measured up.

I was delighted to learn just how intensely Theodore had wanted my body. Since I had wanted him with burning intensity, it warmed me all through to read proof that he had wanted me just as badly. I had never been quite sure of it at the time (a woman in heat can be an awful fool) and was still less sure of it as the years wore on. Yet here was proof: eyes open, he shoved his head into the lion's mouth for me - for my sake he had enlisted in a war that was not his... and `got his arse shot off as his sisters expressed it. (His sisters - my daughters. Goodness!)

In addition to Lazarus' memoirs, I read histories that Justin gave me. I also learned Galacta by the total-immersion method. After my first two weeks in Boondock I asked that no English whatever be spoken around me and asked Teena for the Galacta edition of Theodore's memoirs and reread them in that language. Soon I was fluent in Galacta and beginning to think in it. Galacta is rooted in Spanglish, the auxiliary language that was beginning to be used for trade and engineering purposes up and down the two Americas in the twentieth century, a devised language formed by taking the intersection of English and Spanish and manipulating that vocabulary by Hispanic grammar - somewhat simplified for the benefit of Anglophonic users of this lingua franca.

At a later time Lazarus told me that Spanglish had been adopted as the official language for space pilots back at the time of the Space Precautionary Ad, when all licensed space pilots were employees of Spaceways Ltd, or some other Harriman Industries subsidiary. He told me that Galacta was still recognisably the same language as Spanglish centuries, millennia, later - although with a much amplified vocabulary - much the same way and for the same reasons that the Latin of the Caesars had been conserved and augmented for thousands of years by the Church of Rome. Each language filled a need that kept it alive and growing.

`I always wanted to live in a world designed by Maxfield Parrish - and now I do!' These words open a journal I started to write, early in my rejuvenation, to keep my thoughts straight in the face of the culture shock I felt in being lifted bodily out of the Crazy Years of Tellus Prime - and plunked down in the almost Apollonian culture of Tellus Tertius.

Maxfield Parrish (1870-1966) was a romantic artist of my time and place who used a realistic style and technique to paint a world more beautiful than any ever seen - a world of cloud-capped towers and gorgeous girls and breath-stopping mountain peaks. If 'Maxfield Parrish blue' means nothing to you, go to the museum of BIT and enjoy the MP collection there, `stolen' by means of a replicating pantograph from twentieth century museums on the east coast of North America (and one painting in the lobby of the Broadmoor) by a Time Corps private mission paid for by the Senior, Lazarus Long - a birthday present to his mother on her one hundred and twenty-fifth birthday to celebrate the silver anniversary of their marriage.

Yes, my naughty-boy son Woodrow married me, sandbagged into it by his co-wives and brother husbands, as a result of their having sandbagged me into it - a working majority of them; Woodrow had three of his wives with him, his twin clone-sisters and Elizabeth who used to be Andrew Libby before his reincarnation as a woman.

At that time (Galactic 4324) the Long family had seven adults in residence: Ira Weatheral, Galahad, Justin Foote, Hamadryad, Tamara, Ishtar, and Minerva. Galahad, Justin, Ishtar, and Tamara you have met; Ira Weatheral was the executive of such government as Boondock had (not much); Hamadryad was his daughter who had obviously made a pact with the Devil; Minerva was a slender, long-haired brunette who had had a career of more than two centuries as an administrative computer before getting Ishtar's assistance in becoming flesh and blood through an assembled-clone technique.

They picked Galahad and Tamara to propose to me.

I had no plans to get married. I had married once 'till death do us part' - and it had turned out not to be that durable. I was most happy to be living in Boondock, my cup overflowed at growing young again, and I was looking forward with almost unbearable delight at the expectation of being again in Theodore's arms. But marriage? Why take vows that are usually broken?

Galahad said, 'Mama Maureen, these vows will not be broken. We simply promise each other to share in taking care of our children - support them and spank them and love them and teach them, whatever it takes. Now believe me, this is how to do it. Marry us now; settle it with Lazarus later. We love him - but we know him. In an emergency Lazarus is the fastest gun in the Galaxy. But hand him a simple little social problem and he'll dither about it, trying to see all sides to arrive at the perfect answer. So the only way to win an argument with Lazarus is to present him with an accomplished fact. He'll be home now in a few weeks - Ishtar knows the exact hour. If he finds you married into the family and already pregnant, he will simply shut up and marry you himself. If you will have him:

'In marrying all of you, am I not marrying Lazarus, too?'

Not necessarily. Both Hamadryad and Ira were members of our founding family group. But it took several years before Ira admitted that there was no reason for him not to marry his own daughter - Hamadryad just smiled and outwaited him. Then we held a special wedding ceremony just for them and what a luau that was! Honest, Mama Maureen, our arrangements are flexible; the only invariant is that everybody guarantees the future of any babies you pretty little broads give us. We don't even ask where you got them... since some of you tend to be vague about such things.'

Tamara interrupted to tell me that Ishtar watches such matters. (Galahad tends to joke. Tamara doesn't know how to joke. But she loves everybody.) So later that day I said my vows with all of them, standing in the middle of their beautiful atrium garden (our garden!) - crying and smiling and all of them touching me and Ira sniffling and Tamara smiling while tears ran down her face, and we all said 'I do!' together and they all kissed me, and I knew they were mine and I was theirs, forever and ever, amen.

I got pregnant at once because Ishtar had timed it so that our wedding and my ovulation matched - Ira and Ishtar had planned the whole thing. (When I had that baby girl, after the usual cow-or-countess gestation period, I asked Ishtar about the baby's paternity. She said, 'Mama Maureen, that one is from all your husbands; you don't need to know. After you've had four or five more, if you are still curious, I'll sort them out for you.' I never asked again.)

So I was pregnant when Theodore returned, which suited me just fine... as I was sure from past experience that he would greet me more heartily and with less restraint if he knew that it was certain that copulation with me would be solely for love - and sweet pleasure - and sheer, sweaty fun. Not for progeny.

And so it was. But at a party that started out with Theodore fainting dead away. Hilda Mae, the head of the task force that rescued me, had rigged a surprise party for Theodore, in which she had presented me to him, dressed in a costume of high symbology to him - heeled slippers, long sheer hose, green garters - at a time when he thought that I was still in Albuquerque mo millennia earlier and still in need of rescue.

Hilda did not intend to shock Theodore so sharply that he fainted - she loves him, and later she married Theodore and all of us, along with her husband and family - Hilda does not have a mean bone in her little elfin body. She caught Theodore as he fainted, or tried to. He wasn't hurt and the party developed into one of the best since Rome burned. Hilda Mae has many other talents, in and out of bed, but she is the best party arranger in the world.

A couple of years later Hilda was Director-General of the biggest party ever held anywhere, bigger than the Field of the Cloth of Gold: the First Centennial Convention of the Interuniversal Society for Eschatological Pantheistic Multiple-Ego Solipsism, with guests from dozens of universes. It was a wonderful party and the few people killed in the games went straight to Valhalla - I saw them go. From that party our family gained several more husbands and wives - eventually, not all in one day - especially Hazel Stone a.k.a. Gwen Novak who is as dear to me as Tamara, and Dr Jubal Harshaw, the one of my husbands to whom I turn when I truly need advice.

It was to Jubal that I turned many years later when I found that despite all the wonders of Boondock and Tertius, all the loving happiness of being a cherished member of the Long Family, despite the satisfaction of studying the truly advanced therapy of Tertius and Secundus, and at last being apprenticed to the best profession of all - rejuvenator - something was missing.

I had never stopped thinking about my father, missing him always, with an ache in my heart.

Consider these facts;

1) Lib had been raised from the dead, a frozen corpse, and reincarnated as a woman.

2) I had been rescued from certain death, across the centuries. (When an eighteen-wheeler runs over a person my size, they pick up the remains with blotting paper.)

3) Colonel Richard Campbell had twice been rescued from certain death and had had history changed simply to calm his soul, because his services were needed to save the computer that led the Lunar revolution on time line three.

4) Theodore himself had been missing in action, chopped half in two by machine-gun fine... yet he had been rescued and restored without even a scar.

S) My father was 'missing in action', too. The AFS didn't even get round to reporting him as missing until long after the fact and there were no details.

6) In the thought experiment called 'Schrõdinger's Cat' the scientists(?), or philosophers, or metaphysicians, who devised it, maintain that the cat is neither dead nor alive but simply a fog of probabilities, until somebody opens the box.

I don't believe it. I don't think Pixel would believe it.

But - Is my father alive? or dead? away back there in the twentieth century?

So I spoke to Jubal about it.

He said, 'I can't tell you, Mama Maureen. How badly do you want your father to be alive?'

`More than anything in the world!'

'Enough to risk everything on it? Your life? Still worse, the chance of disappointment? Of knowing that all hope is gone?'

I sighed deeply. 'Yes. All of that'

'Then join the Time Corps and learn how such things are done. In a few years - ten to twenty years, I would guess you will be able to form an intelligent opinion.'

'Ten to twenty years!'

It could take longer. But the great beauty about time manipulations is that there is always plenty of time, never any hurry.'

When I told Ishtar that I wanted to take an indefinite leave of absence, she did not ask me why. She simply said, `Mama, I have known for some time that you were not happy in this work; I have been waiting for you to discover it.'

She kissed me. 'Perhaps next century you will find a true vocation for this work. There is no hurry. Meanwhile, be happy.'

So for about twenty years of my personal time tine and almost seven years of Boondock time I went where I was told to go and reported on what I was told to investigate. Never as a fighter. Not like Gretchen whose first baby is descended both from me (Colonel Ames is my grandson through Lazarus) and from my co-wife Hazel/Gwen (Gretchen is Hazel's great-granddaughter) - Major Gretchen is a big, strong, strapping Valkyrie, reputed to be sudden death with or without weapons.

Fighting is not for Maureen. But de Time Corps needs all sorts. My talent for languages and my love of history makes me suitable to be sent to `scout the Land of Canaan' - or Nippon in the 1930s - or whatever country or planet needs scouting. My only other talent is sometimes useful, too.

So with twenty years of practice and some preliminary research in history of time line two, second phase of the Permanent War, I signed off for a weekend and bought a ticket on a Burroughs-Carter time-space bus, one with a scheduled stop in New Liverpool,

1950, intending to scout the history of the 1939-1945 War a little closer up. Hilda had developed a thriving black-market trade through the universes; one of her companies supplied scheduled services to the explored time lines and planets for a bracket of dates - exact date of choice available if you pay for it.

The bus driver had just announced `New Liverpool Earth Prime 1950 time line two next stop! Don't leave any personal possessions aboard' - when there was a loud noise, the bus lurched, a trip attendant said, `Emergency exit - this way, please' - and somebody handed me a baby, there was much smoke, and I saw a man with a bloody stump where his hand should have been.

I guess I passed out, as I don't remember what happened next.

I woke up in bed with Pixel and a corpse.

Chapter 26 - Pixel to the Rescue

After that Mad Tea Party in which I woke up in bed with a cat and a corpse in Grand Hotel Augustus, Pixel and I wound up in the office of Dr Eric Ridpath, house physician, where we met his office nurse, Dagmar Dobbs - a gal who was at once awarded Pixel's stamp of approval. Dagmar was giving me a GYN examination, when she told me that tonight was La Fiesta de Santa Carolita.

It is a good thing that just before she put me on the table she had required me to pee in a cup, or I might have peed in her face.

As I have explained in excessive detail, `Santa Carolita' is my daughter Carol, born in Gregorian 1902 at Kansas City on Tellus Prime, time line two, code Leslie LeCroix.

Lazarus Long had initiated `Carol's Day' on 26 June 1918 Gregorian, as a rite of passage for Carol, marking her transition from childhood to womanhood. Lazarus toasted Carol in champagne, telling her what a wonderful thing it was to be a woman, naming for her both the privileges and the responsibilities of her new and exalted status, and declaring that 26 June shall now and forever be known as 'Carol's Day'.

the notion of calling it 'Carol's Day' had suggested itself to Lazarus from something he remembered from a thousand years in the future - or in the past, depending on your time frame. On the frontier planet New Beginnings he and his wife Dora had declared `Helen's Day' to celebrate puberty in their oldest child, Helen. That was their stated purpose. Their unstated purpose was to attempt to place some control over the sexual behaviour of their growing sons and daughters, in order to head off the sort of tragedy I ran into with Priscilla and Donald.

Neither Lazarus nor I (nor Dora) had moralistic notions about incest, but all of us had feared the damage incest can do, both genetically and socially. `Helen's Day' and `Carol's

Day' gave each set of parents some leverage in handling the touchy problems of sex in young people, problems that can so easily end in tragedy... but need not.

(I most despise in Marian her self-indulgent failure to carry out the parental duty of maintaining discipline. `Spare the rod and spoil the child' is not sadistic; it is hard common sense. You fail your children worst if you do not punish them when they need it. The lessons you fail to teach them will be taught later and much more harshly by a cruel world, the real world where no excuses are accepted, the world of TANSTAAFL and of Mrs Be-Done-By-As-You-Did.)

Lazarus told me (centuries later or years later - a matter of viewpoint) that he was half-way through his toast to Carol when he suddenly realised that he was inaugurating the most widespread holiday of the human race: Carolita's Day - and that he has been trying ever since to decide which came first: the chicken or the egg.

Chicken or egg, Carol's Day did develop over the centuries and on many planets into a public holiday - this I learned when I was taken to Tertius. Usually it was celebrated just for the fun of it, the way the Japanese celebrate Christmas, as a secular holiday having nothing to do with religion.

But in some cultures it developed as a religious holiday peculiar to theocracies: the safety-valve holiday, the day of excesses, of sin without punishment, the saturnalia.

While I got out of those silly stirrups and down off that cold table and put on my `clothes' (a caftan rigged. from a beach towel), Dr Ridpath and Dagmar looked over my test results. They pronounced me healthy-merely out of my skull, which neither of them seemed to regard as important.

Dr Ridpath said, `Explain things to her, Dag. I'm going to take a shower and get ready.'

`What do you want to do, Maureen?' Dagmar asked me. `Doc tens me that your total assets are that terry-cloth tent you're wearing and this orange cat. Pixel! Stop that! This is not a night you can go to a police station and ask your way to the county poor farm; tonight the cops skin down and join in the riot.' She looked me up and down. 'If you go out on the streets tonight - well, you'd have a quieter time in a lions' den. Maybe you like such things - many do. Me, f'rinstance. But tonight a gal is either locked up or knocked up. You can stay here, sleep on the couch. I can find you a blanket. Pixel! Get down from there!'

`Come here, Pixel: I held out both hands; he jumped into my arms. `How about the Salvation Army?'

'The what?'

I tried to explain. She shook her head. 'Never heard of it. Sounds like another of your daydreams, dear; nothing of that sort is ever authorised by the Church of Your Choice.'

'What church is your choice?'

"Huh? Your choice, my choice, everybody's choice - the Church of the Great Inseminator, of course - what other church be there? If it's not your choice, a ride on a rail might clarify your thinking. It would mine.'

I shook my head. `Dagmar, I'm more and more confused. Back where I come from there is total religious freedom.'

`That's what we have here, ducks - and don't let a proctor hear you say anything else.' She suddenly smiled like the Wicked Witch of the West. `Although there are always some proctors and some priests found stone-cold dead in the dawn's early light, grinning in risus sardonicus, the morning after Saint Carol's feast; I am not the only widow with a long memory.'

I must have looked stupid. `You're a widow? I'm sorry.'

'I talk too much. Not all that tragic, luv. Marriages are made in Heaven, as everybody knows, and my patron priest picked just the man Heaven had in mind for me, no possible doubt and you'll never hear me say otherwise. But when Delmer - my appointed soul mate - fell out of favour at the throne and was trimmed, well, I cried but not too long. Delmer is an altar boy now and quite a favourite among the male sopranos, so I understand. The awkward part is that since he isn't actually dead, just trimmed, I can't marry again.' She looked bleak.

Then she shrugged and smiled. `So Santa Carolita's nigh his a big night for me, seeing how closely we are watched all the rest of the year.'

I said, I'm confused again. Are you saying that things are puritanical here - except this one night?'

'I'm not sure I know what you mean by "puritanical", Maureen. And I have trouble staying with your "Man from Mars" pose - if it is a pose -'

`It's not a pose! Dagmar, I truly am lost. I'm not on my own planet; I don't know anything at all about this place.'

'Ali right, I'll throw in with you, I said I would. But it is hard to keep it in mind. Okay, the way things work here - Three hundred and sixty-four days of the year - sixty-five on leap years - everything is either required or forbidden. The Golden Rule, the Supreme Bishop calls it - God's Plan. But on Carolita's feast day, from sundown to sunrise, anything goes. Carolita is the patron saint of street singers, whores, gypsies, vagabonds, actors, of all whom must live outside the city walls. So on her day - Boss! You're not going outdoors in that outfit!'

'And why not?'

Dagmar made retching noises; I turned to see what the fuss was about. The doctor had gone to shower, had returned still stripped down and sporting the most amazing phallus I have ever seen. It was standing straight up, rising out of a wide, dense briar patch of dark brown curls. It thrust up at least twelve inches from that curly base. Just back of the mitre it was as thick as my wrist. It curved back slightly toward his hairy belly.

It `breathed' when he did, bowing an inch at each breath. I looked at it in horrified fascination the way a bird looks at a snake, and felt my nipples grow crisp. Take it away! Get a stick and kill it!

`Boss, take that silly toy right back to Sears Roebuck and demand your money back! Or I'll, I'll - I'll flush it down the pot, that's what I'll do!'

'You do and you'll pay the plumber's bill. Look, Dagmar, I'm ing to wear it home and I want you to snap a pic of Zenobia's face when she sees it. Then I'll take it off... unless Zenobia decides she wants me to wear it to the Mayor's orgy. Now get into your costume; we still have to pick up Daffy and his assistant. His goose, although he claims otherwise. Move. Shake your tail, frail.'

`Pee on you, Boss.'

`Has the sun gone down so soon? Maureen, if I understood you earlier, you have not eaten today. Come have dinner with us and we can discuss what to do with you later; my wife is the best cook in town. Right, Dagmar?'

`Correct, Boss. That makes twice this week you've been right.'

`When was the other time? Did you find something for Cinderella to wear?'

`It's a problem, Boss. Ali I have here are jumpsuit uniforms, cut for me. On Maureen they would fit too soon in one direction, too late in the other.' (She meant that I'm shaped like a pear while she is shaped more like a celery.)

Dr Ridpath looked at me, then at her, decided that Dagmar was right. 'Maureen, we'll see what my wife has that you can wear. It won't matter between here and there; you'll be in a robocab. Pixel! Dinner time, boy!'

'Now? Wow!'

So we had dinner at the home of the Ridpaths. Zenobia Ridpath is indeed a good cook. Pixel and I appreciated her, and she appreciated Pixel and was warmly hospitable to me. Zenobia is a dignified matron, beautiful, about forty-five, with premature white hair tinted with a blue rinse. Her face did not change when she saw the mechanical monstrosity her husband was sporting.

He said, 'What do you think this is, Zen?'

She answered, 'Oh, at last! You promised it to me as a wedding present all these many years ago! Well, better late than never - I think.' She stooped and looked at it. `Why does it have "Made in Japan" printed on it?' She straightened up and smiled at us. 'Hello, Dagmar, good to see you. Happy festival!'

'Bumper crops!'

`Big babies! Mrs Johnson, it was sweet of you to come. May I call you Maureen? And may I offer you some crab legs? Flown in from Japan, like my husband's new peepee.

And what would yon like to drink?' A polite little machine rolled up with crab legs and other tasty titbits, and took my drink order - Cuba Libre but omit the rum.

Mrs Ridpath congratulated Dagmar on her costume: a black, sheer body-stocking covering even her head - but missing wherever presence of garment would get in the way at a saturnalia: cutaway crotch, breasts bare, mouth bare. The result was glaringly obscene.

Zenobia's costume was provocative but pretty - a blue fog that matched her eyes and did not hide much. Daffy Weisskopf climbed right up her front, making jungle noises. She just smiled at him. 'Have something to eat first, Doctor. And save some of your strength for after midnight.'

I think Dr Eric's suspicions about Dr Daffy's assistant, Freddie, were justified; he did not smell right to me and I apparently did not smell right to him - and I was beginning to be whiff, as I was starting to get into a party mood. As I had requested, that Cuba Libre had no rum in it, but I had half of it inside me before I realised that it was loaded with vodka - one hundred proof, I feel certain. Vodka is tricky; it has no odour and no taste... and now I lay me down to sleep -

I think some of those appetisers had aphrodisiacs concealed in them... and Maureen does not need aphrodisiacs. Has never needed them.

There were three sorts of wine at dinner and endless toasts that rapidly progressed from suggestive to outrageous. The little robot that waited on my sector of the table kept the wine glasses filled but was not programmed to understand 'water' - and Mama Maureen got potted.

No use pretending anything else. I had too little to eat and too much to drink and too little sleep and I never have learned to drink like a lady. I had simply learned how to pretend to drink while avoiding alcohol. But on Carolita's night I let my guard down.

I had planned to ask Zenobia to permit me to stay overnight in her house... then on the morrow, festival over, I could tackle a city restored to its senses. First I needed a minimum of money and clothes... and there are ways to get both without actually stealing. A female can often wangle an unsecured loan if she hits a mate for it who shows a tendency to pat her in a friendly fashion. She can hint pretty strongly as to the interest she is willing to pay... and every female Time Corps field agent has done something like that on occasion. We aren't nervous virgins; we don't leave Boondock without being vaccinated against pregnancy and nineteen other things you might catch if a trouser worm bit you. If you are too tender-minded for such emergency measures, you do belong in the profession. Females are better than males as Time Corps scouts because they can get away with such things. My co-wife Gwen/Hazel could steal the spots off a leopard and never disturb his sleep. If she were sent after the Rheingold, Fafnir and his flaming halitosis would not stand a chance.

Having acquired that minimum of local money and local clothing, my next move would be a preliminary study to determine: 1)how to get more money in this culture without going to jail; 2)where, if anywhere, is the Time Corps message drop; 3)if the second point is null, where is the dummy front for Hilda's crosstime black-marketers? Most of this can be researched unobtrusively either at a public library or in a telephone directory.

All very professional - Instead I got snagged by the proctors and did not do any of it.

Zenobia insisted that I go with them to the Mayor's orgy, and by then I lacked the judgement to refuse. She selected a costume for me, too, from her clothes: long sheer hose, green round garters, high heels, and a cape... and somehow it seemed to me the perfect costume, just right, although I could not remember why I thought so.

I recall only vignettes of the Mayor's party. Perhaps it will help to think of a party given jointly by Caligula and Nero, as directed by Cecil B. de Mille in gorgeous Technicolor. I remember telling some oaf (I can't remember his face; I'm not sure he had a face) that it was not impossible to lay me - many have tried and most succeeded - but it had to be approached romantic like, not like a man grabbing a bite standing up at a fast-food joint.

That party and the rest of that night was rape, rape, rape, all around me... I do not care for rape; one does not meet a better class of people that way.

I escaped from that party and found myself out in the park. My leaving had to do with a pompous ass dressed in a long robe (a cope?) of white silk heavily embroidered in cardinal and gold. It was open down the front with his Flaggenstange sticking out. He was so self-important that he had four acolytes to help him with the chore.

He grabbed me as I was trying to slide past - stuck his tongue in my mouth. I kneed him and ran, and jumped out an open window. Ground floor, yes-but I did not stop to find out.

Pixel caught up with me in about fifty yards, then slowed me somewhat as he criss-crossed ahead of me. He went into that big park and I slowed down to a walk. I was still

wearing the cape but I had lost one slipper going out the window, then had kicked the other off at once, being unable to run one shoe off, one shoe on. It did not matter as I had gone barefooted so habitually in Boondock that my feet were as tough as shoe leather.

I wandered around the park for a while, watching the action (amazing!) and wondering where I could go. I did not want to risk the Mayor's palace again; my pompous boyfriend with the fancy vestment might still be there. I did not know where the Ridpaths lived even though I had been there. It seemed to me that I must wait for dawn, then locate Grand Hotel Augustas (should be easy), go to Dr Eric's office on the mezzanine, and hit him for a small loan. Hobson's choice, no other option - but not too unlikely as he had brailled me quite thoroughly during dinner. He wasn't being rude; similar things or more so were going on all around the table. And I had been warned.

I joined in briefly at the esbat - midnight, full moon overhead, and ritual prayers being said in Latin, Greek, Old Norse (I think), and three other languages. One woman was a snake goddess from ancient Crete. Authentic? I don't know. Pixel rode my shoulder at the service as if he were used to the role of witch's familiar.

As I left the altar, he jumped down and ran ahead of me as usual.

I heard a shout. 'There's her cat! And there she is! Grab her'

And they did.

As I've said, I don't like rape. I especially dislike it when four men hold me while a fat slob in an embroidered cope does things to my body. So I bit him. And discussed his ancestry and personal habits.

So I wound up in the hoosegow and stayed there until the crazies from the Committee for Aesthetic Deletions pulled a jail-break and got me loose.

This is called `Out of the frying-pan and into the fire.'

Last night the Committee was presided over by Count Dracula, the only case of type-casting that I saw - this repulsively handsome creature not only wore the opera cloak associated with video vampires, he had also taken the trouble to have a mouthpiece fashioned for him by a prosthodontist; he had dog teeth that came down over his lower lip. At least I assume that they were artificial; I don't really believe that any humans or quasi-human have teeth like that.

I joined the circle and took the one remaining chair. `Good evening, cousins. And good evening to you, Count. Where is the Old Man of the Mountain tonight?'

`That is not a question one asks.'

'Well, excuse me, please! And pray, why not?'

`We will leave that to you as an exercise in deduction. But don't ask such a question again. And do not be late again. You are the subject of our discussion tonight, Lady Macbeth -'

`Maureen Johnson, if you please.'

`It does not please me. It is one more instance of your unwillingness to observe the rules necessary to the safety of the Dead Men. Yesterday you were observed exchanging words with one of the hotel staff, a chambermaid. What were you talking about?'

I stood up. 'Count Dracula.'

`Yes, Lady Macbeth?'

'You can go to hell. And I'm going to bed.'

'Sit down!'

I did not. But all those near me grabbed at me, and sat me down. I don't think any three could have managed it; they all were ill, deathly ill. But seven were too much for me - and I was reluctant to be rough in resisting them.

The chairman went on, 'Milady Macbeth, you have been with us over two weeks now. During that time you have refused every mission offered you. You owe us for your rescue -

'Nonsense! The Committee owes me! I would never have been in a position to need rescue had you not kidnapped me and shoved me into bed with a corpse, one of your killings, Judge Hardacres. Don't talk to me about what I owe the Committee! You returned some of my clothes - but where's my purse? Why did you drug me? How dare you kidnap an innocent visitor to dress up one of your assassinations? Who planned that job? I want to talk to him.'

'Lady Macbeth.'

'Yes?'

'Hold your tongue. You will now have a mission assigned to you. It has been planned and you will carry it out tonight. The client is Major General Lew Rawson, retired. He was in charge of the recent provocation incident in -'

'Count Dracula!'

'Yes?'

`Go hang by your heels!'

`Don't interrupt again. The operation has been fully planned. Jack the Ripper and Lucrezia Borgia will go with you, and coach you. You can kill him in his bed, or, if you balk, you will be killed as he is killed and the two of you arranged in a tableau that will give substance to the rumours about him.'

The attention of everyone was on the row between the new chairman and me; proctors poured in off the balcony before they were seen. But a voice I recognised called out, `Watch it, Maureen!' and I dived for the deck.

The robes and hoods were the Ku-Klux-Klan ersatz of the proctors, but the voice was that of Dagmar. When I turned my head at her voice, I spotted Pixel with .her.

Time Corps military units have stun guns they use when killing must be selective. They fanned the room with them. I got the edge of one charge, did not quite pass out but did not object when a big, husky proctor (one of my husbands!) scooped me up. Then we were all out on the balcony and into a small troop carrier hovering at the rail.

I heard the door dose, felt it in my ears. `Ready?'

'Ready!'

'Has somebody got Pixel?'

`I've got him! Let's go!' (Hilda's voice)

And then we were home in Boondock, on the parking lawn at the Long residence.

A voice I know well said, 'Secure all systems,' and the pilot turned in his seat and looked at me. `Mama,' he said mournfully, `you sure give me a lot of grief.'

Tm sorry, Woodrow.'

`Why didn't you tell me? I would have helped.'

'I'm sure you would, dear. But I was merely scouting.'

'But you should have -'

Hilda interrupted. 'Stop it, Lazarus. Mama Maureen is tired and probably hungry. Mama, Tamara has lunch ready. Two hours from now - local time fourteen hundred - is an operation briefing, all hands. Jubal is in charge of the briefing and -'

'Operation briefing? What operation?'

`Your operation, Mama,' Woodrow answered. 'We're going to go find Gramp. Either rescue him, or slip him into a body-bag. But we're doing it right, this time. It's a Time Corps major operation, resources as needed; the Circle of Ouroboros is unanimous. Mama, why didn't you tell me?'

Hilda said, `Shut up, Woodie. And stay shut. We've got Mama Maureen back and that's all that counts. Right, Pixel?'

'Rrrrite!'

'So let's go to lunch.'

Chapter 27 - At the Coventry Cusp

I didn't eat. much.

The party was in my honour and I loved it. But I needed two mouths, one for eating, one for the fifty-odd people who wanted to kiss me - and I wanted to kiss them. I wasn't really hungry. Even when I was a prisoner in the Cathedral the food had been adequate, and when I was another sort of prisoner with the Committee for Aesthetic Deletions, I was quite well fed, within the limits of hotel cooking.

But I was starved for love, and warm and loving people.

Did I say the party was in my honour? Well, yes, but any party Pixel attends is primarily in his honour. He is sure of that and behaves accordingly. He zigzagged among the couches, tail high, accepting hand feeding, and rubbing against his friends and retainers.

Dagmar came over, asked Laz to make room, and squeezed in beside me - hugged me and kissed me. I found that I was leaking tears.

'Dagmar, I can't tell you how I felt when I heard your voice. Are you going to stay here? You'll like it here.'

She grinned at me, hanging on to my neck. 'Do you think I want to go back to Kansas City? Compared with KC; Boondock is Heaven.'

'Good! I'll sponsor you: I had my arm around her, which caused me to add, 'You've put on a few pounds and it becomes you. And such a beautiful tan! Or is it out of a spray bomb?'

'No, I did it the best way, lying in the sun and increasing the dosage slowly. Maureen, you won't believe what a treat sunbathing is to someone who would be risking a public flogging if she sunbathed in her home town.'

Laz said, 'Mama, I wish I could tan the way Dragmar does, instead of these kingsize freckles:

'You get that from me, Lapis Lazuli; I always freckle. It's the price we pay for red hair.'

'I know. But Dagmar can sunbathe every day, month after month, and never get a freckle. Look at her.'

I sat up straight. 'What did you say?'

'I said she doesn't freckle. All our men are following her around.' Laz tickled Dagmar in the ribs. 'Aren't they, Dag?'

'Not so!'

'You said "Month after month -" Dagmar, I saw you last two weeks ago. Less than three. How long have you been here?'

'Me? Uh... slightly over two years. Yours was a tough case - or so they tell me.'

After being in the Time Corps twenty years of my personal time, seven years of Boondock time, I should not have been surprised. Time paradox is no news to me; I keep a careful journal to keep me sorted out, Maureen's personal time versus times and time lines and dates for each of the places I scout. But this time I was the subject of the operation (Operation Triple-M = Mama Maureen is Missing). I had been gone (my personal time) five and a half weeks... but it had taken over two years to find me and rescue me.

Laz called Hilda over to straighten me out. She snuggled in between Lorelei Lee and me on my other side; the couch was getting crowded. But Hilda does not take up much space. She said, `Mama Maureen, you told Tamara that you were just going away for a day's holiday. She knew you were fibbing, of course, but she never contradicts any of our little white lies. She thought you were just shuttling to Secundus for some private fun and maybe some shopping.'

'Hilda Mae, I did intend to be back here the next day, no matter how long I spent in research. I planned to spend a few weeks in the British Museum in 1950, time line two, soaking up as much detail as possible about the Battle of Britain, 1940-41. I had a fresh recorder implant for that purpose. I didn't dare go to England during that war without careful preparation; England was a battle zone - easy to be shot as a spy. I would have done the research and been back the next day, in time for dinner... if that time-twister bus had not broken down.'

'It didn't break down.'

'Huh? I mean, excuse me?'

'It was sabotage, Mo. The Revisionists. The same pascoodnyoks who came so close to killing Richard and Gwen Hazel and Pixel on time line three. We don't know why they wanted to stop you, or why they chose that method; neither side was taking prisoners, and we killed too many too fast. By "we" I don't mean me; I'm the drawing room type as everybody knows. I mean the old pros, Richard and Gwen and Gretchen and a strike force from time line five commanded by Lensman Ted Smith. But the Circle had put me in charge of Operation Triple-M, and I did dig out information that led us to the Revisionists. I got most of it from one of my own employees, the pilot of that bus. I made a bad mistake, Maureen, in hiring that evil maggot. My poor judgement almost cost your life. I'm sorry.'

'Sorry about what? Hilda Mae, my precious, if you hadn't rescued me in Albuquerque, years ago, I would be dead, dead, dead! Don't ever forget it, because I never forget it.'

'Spare me your gratitude, Mau; I had fun. Both times. I borrowed some snakes from Patty Paiwonski and hung this oaf upside down over a snake pit while I questioned him. That sharpened his memory and got us the correct time line, place, and date - Kansas City in Gregorian 2184 starting at 26 June on a previously unexplored variant of time tine two, one in which the Second American Revolution never took place. It is now designated time line eleven, and is a nasty enough place that the Circle put it in the Someday File for cleaning or cauterising when we get around to it.'

Hilda leaned down and twiddled her fingers at Pixel, spoke to him in cat language; he came at once and settled in her lap, purring loudly. 'We put agents into that version of Kansas City but they lost you the same day you arrived. Or that night. They traced you from Grand Hotel Augustus to a private home, from there to the Mayor's palace, and then outdoors into the carnival. And I lost you. But we had established that Pixel was with you... even though he was here every day, too. Or almost -'

'How does he do that?'

'How does Gay Deceiver have two portside bathrooms without being lopsided? Maureen, if you insist on believing in World-as-Logic you will never understand World-as-Myth. Pixel knows nothing about Einsteinian space-time, or the speed of light as a limit, or the Big Bang, or any of those fancies dreamed up by theorists, so they don't exist for him. Pixel knew where you were, inside the little world that does exist for him, but he doesn't speak much English. In Boondock, that is. So we took him where he can speak English -'

`Huh?'

'Oz, of course. Pixel doesn't know what a cathedral is but he was able to describe that one fairly well once we were able to get his mind off all those wonderful new places to investigate. The Cowardly Lion helped us question him, and for the first time in his life Pixel was impressed - I think he wants to grow up to be a lion. So we hurried back and

sent a task force to get you out of the Supreme Bishop's private jail. And you weren't there.'

Dagmar picked it up. 'But I was, and Pixel led them straight to me - looking for you. I was in the cell you had been in - the proctors came for me as soon as you escaped.'

'Yes,' agreed Hilda. 'Dagmar had befriended you and that was not a safe thing to do, especially after the Supreme Bishop died.'

'Dagmar! I'm sorry!'

'About what? "All's well that ends well", to coin a phrase. Look at me now, ducks; I like it here. So back they went to Oz, taking me along this time, and after I listened to Pixel, I was able to tell Hilda that you were being held in Grand Hotel Augustus -'

'Hey! That's where I started!'

'And that's where you wound up, too, in a suite that isn't in the hotel directory and can be reached from inside only by a private elevator from the sub-basement. So we came in by the scenic route, and caught the Committee with their pants down:

Lazarus had joined us, and now sat on the grass at my knees, without interrupting - and I wondered how long his angelic behaviour would last. Now he said, 'Mama, you do know how true your words are. You remember when we moved? I was in high school.'

'Yes, certainly. To our old farmhouse, out south.'

'Yes. Then after World War Two you sold it, and it was torn down?

(How well I remembered!) 'Tom down to build the Harriman Hilton. Yes.'

`Well, Grand Hotel Augustus is the Harriman Hilton. Oh, after more than two centuries not much is the same structure, but the continuity is there. We researched it, and that's how we located this VIP suite that is not known to the public.' He rubbed his cheek against my knee. 'That's all, I guess. Hilda?'

'I think so.'

'What a moment!' I protested .'What became of that baby? And the man with the bloody stump? The one with his arm chopped off in that accident.'

`But, Maureen,' Hilda said gently, 'I tell you three times: it was not an accident. That "baby" was just a prop, a lifelike animation, to keep your hands busy and your attention distracted. The "wounded" man was a piece of grisly misdirection while they injected you - an old amputee with make-up; he wasn't freshly maimed. When I had my driver

hanging over the snakes, he became downright loquacious and told me many details, mostly nasty.'

`I'd like to speak to that driver!'

'I'm afraid you can't. I don't encourage employees to sell me out, Maureen. You are a gentle soul. I'm not.'

'The surgical teams will be' - we were gathered in a lecture room in Ira Johnson Hall, BIT, and Jubal had started his briefing - 'matched as nearly as possible in professional background. Tentatively they are: Dr Maureen with Lapis Lazuli as her scrub nurse; Dr Galahad with Lorelei Lee; Dr Ishtar with Tamara; Dr Harshaw - that's me - with Gillian; Dr Lafe Hubert a.k.a. Lazarus, with Hilda; and Dr Ira Johnson with Dagmar Dobbs.

Dagmar, your match with Johnson Prime is not too close; you are over-qualified by a century and a half, plus whatever you have learned here. But it's the best we can manage Dr Johnson will not know that you are assigned to him. However, we know from library research and from quite a lot of oral history research - interviews conducted by field agents in Coventry and elsewhere in the years 1947-50, recording the experiences of persons who served in civil defence first-aid teams in that war - we know that team-up between surgeon and nurse could be last minute, scratch, either one of them not fully qualified. Battle conditions, Dagmar. If you get there first when the sirens sound - and you will - Dr Johnson will simply accept you.'

'I'll try '

'You will succeed. All of us assigned to first aid will be wearing gowns and masks that won't look odd in wartime England, 1941, and you'll be using surgical instruments and other gear that does not scream anachronism... although anachronisms won't matter much, we think, in the pressure of a heavy bombing raid.'

Jubal looked around the hall. 'Everyone in this operation is a volunteer. I can't emphasise too often that this is an actual battle you are going into. If you are killed in England in 1941, history may be revised - but you will be dead. Those so called "iron bombs" used by the Nazi Luftwaffe will kill you just as dead as an exotic weapon of a later century. For that reason all of us are volunteers and anyone can quit right up to H-hour. All of Major Gretchen's young ladies are volunteers... and are on max hazard pay, as well.' Jubal stopped and cleared his throat, then went on.

'But there is one volunteer we don't need, don't want, and who is urgently requested to stay home.'

Jubal looked around again. 'Ladies and gentlemen, what in the hell are we going to do about Pixel? When the bombs start falling and the wounded start piling up at that field station, the last thing we need is a cat who can't be shut up and can't be shut out. Colonel Campbell? He's your cat.'

My grandson Richard Ames Campbell answered, 'You have that the wrong way around, Doctor. I don't own Pixel.

Whatever ownership there may be points in the other direction. I agree with you that we can't afford to have him underfoot during battle. But I don't want him there on his own account; he's too unsophisticated to know that bombs can kill him. He got involved in another fire fight when he was just a kitten... and it did almost kill him. I don't want that ever to happen again. But I have never figured out how to lock him up.'

'Just a moment, Richard.' Gwen Hazel stood up. 'Jubal, may I offer a suggestion?'

`Hazel, it says on the organisation chart that you are in command of this operation, all phases. I think that entitles you to make a suggestion. One, at least.'

`Come off it, Jubal. There is a third member of our family that has more influence over Pixel than either Richard or I. My daughter Wyoming.'

'Does she volunteer?

'She will;

'Stipulating that she will, can she control Pixel every second for about four hours? For technical reasons involving how we handle the time/space gates will use about that much Boondock time. So Dr Burroughs tells me.'

I interrupted. 'May I say something?'

'Hazel, do you yield?'

'Don't be silly, Jubal; of course I do.'

'Certainly we should use Wyoh; the child is utterly reliable. But don't have her try to hang on to Pixel here; one sneeze and he's gone. Take both of them to Oz and have them stay with Glinda. With Betsy, rather, but with Glinda's magic to ensure that Pixel doesn't walk through any walls.'

'Hazel?' Dr Harshaw enquired.

'They'll both love it.'

`It is so ordered. Now back to the raid. Projection, please.' An enormous live picture grew up behind Jubal and around him. 'This holo is not Coventry itself but our Potemkin Village practice ground that Athene has built for us, about eighty kilometres east of here. Take a bow, Teena.'

The executive computer's voice came out of the air: 'Thanks, Papa Jubal, but that's Shiva's work - Mycroft Holmes and me linked in synergistic parallel, with Minerva waving the baton. Now that I've got you all gathered together, let me remind you that all of you are invited to our wedding, Minnie and me to Mike, after the conclusion of Operation Coventry Cusp. So you all had better start thinking about wedding presents.'

'Teena, you are crassly materialistic and neither of your composite bodies can possibly be ready that soon:

`Gotcha! Ish okayed moving our bodies to Beulahland, so now we can be uncorked and animated on any date we pick. You better study up on the laws of temporal paradox, Jubal.'

Dr Harshaw sighed. 'Conceded. I look forward to kissing the brides. Now will you please let us get on with the operation?'

'Don't sweat it, Pops. You know or should know that there is never any hurry in a time operation.'

`True. But we're all a bit eager. Friends, Teena - or Shiva - built our practice field from photos, stereos, holos, and motion pictures taken at Coventry on 1 April 1941. You will recognise 1941 as a date so far back that all time lines patrolled by the agents of the Circle of Ouroboros are, in 1941, a single time line. In short, anything we do in Coventry in 1941 affects all civilised time lines - civilised in a parochial sense, of course; the Circle is not unbiased.

'Research for this operation turned up an odd fact. Lazarus?'

My son stood up. `History of World War Two 1939-1945 as I recall it shows a more favourable outcome in England and in Europe than that which turned up in this operation's field research. For example, my oldest brother, Brian Smith, Junior, was wounded in the landing at Marseilles, whereupon he was sent to England, to Salisbury Plain and the American training command. Mama?'

'Yes, surely, Woodrow:

'But the history we researched shows that this could not have happened. The Luftwaffe won the Battle of Britain and there never was a Marseilles landing, much less an American training command in England. Instead, Germany was smashed from the air by atomic bombs delivered from North Africa by American B-29 bombers. Friends and family, I was in that war. No atomic bombs were dropped on Europe in the war I remember.'

'Thank you, Lazarus. I was in that war, too, and in North Africa. No B-29s operated from there as I recall it and no atomic bombs were used in the European theatre - so this research startled me as much as it did Lazarus. This bad news changed Operation

Johnson Prime - which had as its purpose locating and recovering Dr Ira Johnson, the Prime of the Johnson family - to Operation Coventry Cusp... which includes Operation Johnson Prime as one of its phases, but has the far wider purpose of changing the outcome of that war through this one raid. The raid of 8 April 1941 was selected not only because Dr Johnson was known to have been in it, as an AFS surgeon in civil defence, but also because the four waves of bombers - giant Heinkels - that bombed Coventry that night were the largest number of Nazi bombers used in any one raid.

'The Circle's mathematicians, working with Shiva, all agree that this is a cusp event, where a handful of people can turn the course of a history. So it will be the purpose of Major Gretchen's ladies to destroy as many as possible of that air Armada - as near 100 per cent as superior technology can manage. With this one assist, the RAF can and will win the Battle of Britain. Without it, it can be - or was - too big a raid for the Spitfires to handle. An almost invisible additional purpose of Operation Coventry Cusp, three layers down, is to save the lives of Spitfire pilots, so that they will live to fight another day.

'This is the sort of nudge the Circle of Ouroboros specialises in, the minor assist that makes a major change in the outcome - and the companions of the Circle feel sanguine about this one.

`Now please look at the picture behind me. Our view is from the spot in Greyfriars Green occupied by the dressing station where Johnson Prime served that night. Those three towers are all that was left standing in the central city after earlier raids - the towers of St Michael's cathedral, Greyfriars church, and Holy Trinity church. Off to the left is a lesser tower that does not show; that tower is the only original part of a Benedictine monastery built by Leofric, Earl of Merda, and his wife, Lady Godiva, in 1043. We have leased that tower from the Earl, and the gate that will deliver Gretchen's archers will be - has been - erected on it, as well as the time gate that will move them to 1941. It may amuse you to hear that, while the contract payment was in gold, a lagniappe was added, a magnificent white gelding that the Lady Godiva named "Aethelnoth" - and our gift to the Lady is the very mount she used in her famous ride through the town for the benefit of her townspeople.'

Jubal cleared his throat and grinned. `Despite widespread popular demand coming mostly from Castor and Pollux, this operation will not be combined with a sightseeing trip to watch Lady Godiva ride through Coventry.

'Thats all today, friends. To take part in this operation you need to be convinced of three things: first, that the Nazi regime under Adolf Hitler was so vile that it must not be allowed to win; second, that it is strongly desirable to defeat the Nazis without dropping scores of atomic bombs on Europe, and, third, that it is worth it to you to risk your neck to achieve the operation's objectives. The Circle answers yes to these questions, but you must weigh them in your own conscience. If your answer is not a whole-hearted yes on all points, then please do not volunteer.

'After you have thought it over, the remaining Gideon's Band will meet for first rehearsal at ten tomorrow morning at our Potemkin-Village Coventry. A transbooth shuttling directly to the practice village is located just north of this building.'

In Coventry, England, on Tuesday 8 April 1941, at 7.22 p.m. the sun was setting, glowing red in smog and coal smoke. Looking at this city gave me a weird feeling, so exactly had Shiva's simulation matched what I now saw. I was standing at the entrance of a civil defence first-aid station, the one that research showed that Father had worked in (would work in) tonight. It was hardly more than walls of sandbags covered by canvas painted opaque to guard the black-out.

It had a jakes of sorts (Phew!), and an anteroom for the wounded, three pine tables, some cupboards, and duck boards on a dirt floor. No running water - a tank with a spigot. Gasoline lamps.

Greyfriars Green spread out around me, an untended park pocked with bomb cratera. I could not see the monastery tower we had rented from Lady Godiva's husband, Leofric, Earl of Mercia, but I knew that it was north of me, off to my left. Field Agent Hendrik Hudson Schultz, who had conducted the dicker with the Earl, reported that Godiva's hair really was surprisingly long and beautiful but that it was inadvisable to be downwind from her, and she had apparently not bathed more than twice in her life. Father Hendrick had spent a hard sixteen months learning eleventh century Anglo-Saxon and customs and medieval church Latin in preparation for the assignment - one he completed in ten days.

Tonight Father Hendrik was with Gretchen as her interpreter; it had not been judged cost-effective to require the members of the military task force to learn an Anglic language a century older than Chaucer, when their working language was not English but Galacta, and their MOS involved shooting, not talking.

Northeast of me I could see the three spires that gave the city its nickname: Greyfriars, Holy Trinity, and St Michael's. St Michael's and Greyfriar's were gutted in earlier bombings and much of the centre of the city was destroyed. When I had first heard of the bombing of Coventry, a century ago on my personal time line, I had thought that the bombing of this historic town was an example of the sheer viciousness of the Nazis. While it is not possible to exaggerate the viciousness of that regime and the stench of its gas ovens, I now knew that the bombing of Coventry was not simply Schreckdich, as this was an important industrial city, as important to England as Pittsburgh was to the United States.

Coventry was not the bucolic town I had pictured in my mind. I could see that, if fortune favoured us tonight, we might possibly not only destroy a major part of the Luftwaffe's biggest bombers but also save the lives of skilled craftsmen as necessary to military victory as are brave soldiers.

Behind me I heard Gwen Hazel checking her communications: 'Blood's a Rover, this is Lady Godiva's Horse. Come in, Blood.'

I answered, 'Blood to Horse, roger.'

We had a uniquely complex communication net tonight; one I did not even try to understand (I'm a nappy engineer and a kitchen chemist - I've never seen an electron), a system that parallelled an even more astounding temporary time) space hook-up.

Like this - From outside, the west end of the aid station was a blank wall of sandbags. From inside, that end was curtained off, a putative storage space. But push aside the curtain and you would find mo time/space gates: one from Coventry 1941 to the medical school hospital, BIT, Tertius 4376 Gregorian, and the other doing just the reverse, so that supplies, personnel, and patients could move either way without traffic problems - and at the Tertius end was another double set of gates to Beulahland, so that the worst cases could be shuttled to a different time axis, there to be hospitalised for days or months - and returned to Coventry, fully recovered, this same night.

(Tomorrow there would be miracles to be explained. But we would be long gone.)

A similar but not identical double-gate arrangement served Gretchen's command. She and her girls (and Father Schultz) were waiting in the eleventh century on the monastery tower. The gate that would place them in the twentieth century would not be activated until Gwen Hazel notified Gretchen that the sirens had sounded.

Gwen Hazel could talk to the twentieth century, the forty-fourth century, and the eleventh century, each separately or all at once, using a buried throat mike, tongue switches, and a body antenna, whether she was at the Tellus Prime end or the Tellus Tertius end of the aid-station gates.

In addition to these hook-ups she was in touch with Zeb and Deety Carter, in Gay Deceiver, at 30.000 feet over the English Channel - too high for bombers, too high for Messerschmidts or Fokkers, too high for AA fire of that year. Guy had agreed to be there only if she was allowed to pick her own altitude. (Gay is a pacifist with, in her opinion, a deplorable amount of combat experience.) But at that altitude Gay was sure that she could spot Heinkels taking off and forming up long before the British coastal radar could see them.

As a result of rehearsals at Potemkin Village, drills involving every casualty we could think of, the surgical teams had been rearranged, with most of them held back on the Boondock side of the gates. `Triage' of a sort would be practised; the hopeless cases would be rushed through to Boondock, where no case is hopeless if the brain is alive and not too damaged. There Doctors Ishtar and Galahad would head their usual teams (who need not be volunteers for combat; they would never be in Coventry). The hopeless cases, repaired, would be gated to Beulahland for days or weeks of recovery, then gated back to Coventry before dawn.

Cas and Pol had been volunteered (by their wives my daughters Laz and Lor) as stretcher bearers, to move the worst cases from Coventry to gurney floats on the Boondock side.

It had been decided that too many surgical teams and -too much equipment showing up out of nowhere as soon as the sirens sounded would alert Father unnecessarily, make him smell a rat. But, when the wounded started pouring in, he would be too busy to notice or care.

Jubal and Gillian were a reserve team, and would go through when needed. Dagmar would go through when Deety in Gay Deceiver reported that the bombers were on their way, so that Dagmar would meet Father - Dr Johnson - as he first poked his head in. When the sirens sounded, Lazarus and I would go through, already masked and gowned, with me as his scrub nurse. I'm an adequate surgeon but I'm a whiz as an operating nurse - much more practice at it. We figured that three of us could do what might have to be done at `all clear', the end of the raid: grab Father and' kidnap him - drag him through the gate, sit him down in Boondock, and explain things to him there... including the idea that he could have the works - rejuvenation and expert tutoring in really advanced therapy and still be returned to Coventry 8 April 1941. If he insisted. If he had any wish to.

But by then I hoped and expected that, with Tamara's help, Father could be made to see the Quixotic futility of going back to the Battle of Britain when that battle had been won more than mo millennia earlier.

With Tamara's help - She was my secret weapon. By a concatenation of miracles I had married my lover from the stars... and thereby married my son, to my amazement and great happiness. Could more miracles let me marry the only man I have always loved, totally and without reservation? Father would certainly marry Tamara, given the chance - any man would! - and Tamara would then see to it that Father married me. I hoped.

If not, it would be enough and more than enough simply to have Father alive again.

I had gone back through the gate to Boondock when I heard Gwen Hazel's voice: 'Godiva's Horse to all stations. Deety reports bandits in the air and forming up. Expect sirens in approx eighty minutes. Acknowledge.'

Gwen Hazel was standing beside me by the gates in the hospital, but this was a communication check as much as an intelligence. My own comm gear was simple: a throat mike not buried but merely under a bandage I did not need; a `hearing aid' that was not one and an antenna concealed by my clothes. I answered, `Blood's a Rover to Horse, roger.'

I heard, 'British Yeoman to Horse, roger. Eighty minutes. One hour twenty minutes.'

I said 'Blood to Horse. I heard Gretchen's roger. Should I?'

Gwen Hazel shut off transmission and spoke to me, `You shouldn't hear her until you both shift to Coventry 1941. Mau, will you please go through to Coventry for a second comm. check?'

'I did so; we established that Gwen Hazel's link to me, forty-fourth C to twentieth C, was okay, and that now I could hear Gretchen - both as they should be. Then I went back to Boondock, as I was not yet gowned or masked. There was one point in the transition where something tugged at one's clothes and my ears popped - a static baffle against an air-pressure inequality, I knew. But ghostly, just the same.

Deety reported that the bombers' fighter escort was becoming airborne. The German Messerschmidts were equal to or better than the Spitfires, but they had to operate at the very limit of their range - it took most of their gasoline to get there and get back; they could engage in dogfighting only for a few minutes - or wind up in the Channel if they miscalculated.

Gwen Hazel said, 'Dagmar. Take your station.'

'Roger wilco.' Dagmar went through, gowned, masked, and capped - not yet gloved... although God knows what good gloves would do in the septic conditions we would experience. (Protect us, maybe, if not our patients.)

I tied Woodrow's mask for him; he did so for me. We were ready.

Gwen Hazel said, 'Godiva's Horse to all stations sirens. British Yeoman, activate gate and shift time. Acknowledge.'

'Yeoman to Horse, roger wilco!'

'Horse to Yeoman, report arrival. Good hunting!' Hazel added to me, 'Mau, you and Lazarus can go through now. Good luck!'

I followed Lazarus through... and swallowed my heart. Dagmar was gowning Father. He glanced at us as we came out from behind that curtain, paid us no further attention. I heard him say to Dagmar, 'I haven't seen you before, Sister. What's your name?'

'Dagmar Dobbs, Doctor. Call me Dag if you like. I just came up from London this morning, sir, with supplies.'

'So I see. First time in weeks we seen a clean gown. And masks - what swank! You sound like a Yank, Dag.'

'And I am, Doctor - and so do you.'

'Guilty as charged. Ira Johnson, from Kansas City.'

'Why, that's my home town!'

'I thought I heard some tall corn in your speech. When the Heinies go home tonight, we must catch up on home town gossip.'

'I don't have much; I haven't been home since I got my cap and pin.'

Dagmar kept Father busy and kept his attention - and I thanked her under my breath. I didn't want him to notice me until the raid was over. No time for Old Home Week until then.

The first bombs fell, some distance away.

I saw nothing of the raid. Ninety-three years ago, or seven months later that same year, depending on how you count it, I saw bombs falling on San Francisco under circumstances in which I had nothing to do but look up and hold my breath and wait. I'm not sorry that I was too busy to watch the bombing of Coventry. But I could hear it. If you can hear it hit, it is too far away to have your name on it. So they tell me. I'm not sure I believe them.

Gwen Hazel said in my ear, 'Did you pear Gretchen? She says they got sixty-nine out of seventy-two of the first wave.'

I had not heard Gretchen. Lazarus and I were busy with our first patient, a little boy. He was badly burned and his left arm was crushed. Lazarus got ready to amputate. I blinked back tears and helped him.

Chapter 28 - Eternal Now

I am not going to batter your feelings or mine by describing the details of that thousand-year night. Anything agonising you have ever seen in the emergency room of a big city hospital is what we saw, and worked on, that night. Compound fractures, limbs shattered to uselessness, burns - horrible burns. If the burns weren't too bad we slathered them with a gel that would not be seen here for centuries, put dressings over the affected areas, and had them carried outside by civil defence stretcher bearers. The worst cases were carried in the other direction by Cas and Pol - behind that curtain, through a Burroughs-Carter-Libby gate, to Ira Johnson Hospital in Boondock, and (for burn cases) shifted again to Jane Culver Burroughs Memorial Hospital in Beulahland, there to spend days or weeks in healing, then to be returned to Coventry at `All Clear' this same night.

All of our casualties were civilians, mostly women, children, and old men. The only military (so far as I know) around or in Coventry were Territorials manning AA guns. They had their own medical set-up. I suppose that in London a first-aid station such as ours would probably be in the underground. Coventry had no tube trains; this aid station was merely sandbags out in the open but it was safer, perhaps, than it would have been in

a building - one that might burn over it. I'm not criticising. Everything about their civil defence had a make-do quality about it, a people with their backs to the wall, fighting gallantly with whatever they had.

In our aid station we had three tables, operating tables by courtesy, in fact plain wooden tables with the paint scrubbed right off them between raids. Father was using the one nearest the entrance; Woodrow was using the one nearest the curtain; the middle one was used by an elderly Englishman who was apparently a regular for this aid station: Mr Pratt, a local veterinary surgeon, assisted by his wife, `Harry' for Harriet. Mrs Pratt had unkind things to say about the Germans during the lulls but was more interested in talking about the cinema. Had I ever met Clark Gable? Gary Cooper? Ronald Colman? Having established that I knew no one of any importance she quit trying to draw me out. But she agreed with her husband when he said it was decent of us Yanks to come over and help out... but when were the States going to come into the War?

I said that I did not know.

Father spoke up. `Don't bother the Sister, Mr Pratt. We'll be along a bit late, just like your Mr Chamberlain. In the meantime please be polite to those of us who are here and helping.'

'No offence meant, Mr Johnson.'

`And none taken, Mr Pratt. Clamp!'

(Mrs Pratt was as good an operating nurse as I've ever seen. She was always ready with what her husband needed without his asking for it - long practice together, I suppose. She had fetched the instruments he used; I assume that they were the tools of his animal practice. That might bother some people; to me it made sense.)

Mr Pratt was at the table that we had expected would be used by Jubal and Jill. (Our research on fine details was less than perfect, since it came from questioning people after the War was over.) So Jubal went out into the anteroom where the wounded waited and worked on triage, tagging the cases Cas and Pol were to carry through to Boondock - the ones who would otherwise have been allowed to die untreated, as being beyond hope. Jill gave a hand to both Dagmar and me, especially with anaesthesia, such as it was.

Anaesthesia had been a subject of much discussion at our Potemkin Village drill. It was bad enough to show up in the twentieth century with anachronistic surgical instruments... but Boondock anaesthetic gear and procedures? Impossible!

Galahad decided on pressure injectors supplying metered amounts of `neomorphine' (as good a name as any - a drug not available in the twentieth century). Jill moved around the station and the anteroom, injecting the damaged and the burned and thereby left Dagmar and me with our hands free for surgery assistance. She made one try at helping Mrs Pratt

but was waved away - Mrs Pratt was using something I had not seen since 1910 or thereabouts: a nose cone with drops of chloroform.

The work went on and on. I wiped our table between patients, until the towel I was using was so soaked with blood that it was doing more harm than good.

Gretchen reported a spotty kill on the second wave - sixty bombers attacked, forty-seven shot down. Thirteen bombers dropped at least one stick before being hit. Gretchen's girls were using particle beams and night-sight gear; the usual effect was to blow up the planes gasoline tanks. Sometimes the bombs went off at the same time; sometimes the bombs exploded on hitting the ground; sometimes the bombs did not explode, leaving a touchy problem for bomb-disposal experts the next day.

But we saw none of this. Sometimes we would hear a bomb drop nearby and someone would remark, `Close,' and someone would answer, `Too close,' and we would continue working.

A shot-down plane makes a different sort of an explosion from a bomb... and a fighter from a bomber. Mr Pratt said that he could tell the crash of a Spitfire from the crash of a Messerschmidt. Probably he could. I could not.

The third wave broke into two formations, so Gretchen reported, and came in from southwest and southeast. But her girls now had practice in using what was essentially an infantry weapon against targets they were not used to, under conditions where they must be sure that they had bombers in their sights, not Spitfires. Gretchen described this one as a `skeet shoot'. I made a note to ask her what that meant, but I never did.

There were lulls between waves, but not for us. As the night wore on we dropped further and farther behind; they brought in victims faster than we could handle them. Jubal grew more liberal in tagging, and routed to Ishtar and her teams more and more of the less severely wounded. It made our help more blatant but it surely saved more lives.

During the fourth wave of bombing, sometime early in the morning, I heard Gretchen say, `Yeoman to Horse, emergency.'

`What is it, Gretchen?'

'Something - a piece of a plane, probably - hit our gate.'

`Damage?'

`I don't know. It disappeared. Whoof! Gone.'

`Horse to Yeoman, disengage. Evacuate via gate at aid station. Can you find it? Range and bearing?'

`Yes, but -'

'Disengage and evacuate. Move.'

`But, Hazel, it is just our gate we've lost. We can still take out any bombers that come over.'

'Hold. Bright Cliffs, answer. Deety, wake up.'

`I am awake.'

`Research showed four waves, no more. Is Gretchen going to have any more targets?'

'One moment -' (It was a long moment.) `Guy says she can't see any bombers warming up on the ground. We now have signs of dawn in the east.'

`Horse to all stations, disengage. Blood, wait for Yeoman, then evacuate... bringing Prime with you. Use injector if necessary. All stations, report.'

`Cliffs to Horse, roger wilco; here we come!'

'Yeoman to Horse, roger wilco. Father Schmidt is leading; I'm chasing.'

`Blood to Horse, roger wilco. Hazel, tell Ishtar to get all cases back here now... or she's got some unscheduled immigrants.'

The next few minutes were hilarious, in a Grand Guignol fashion. First the terribly burned cases came pouring back through the incoming gate, on their own feet and now quite well. Surgery cases followed them, some with prostheses, some with grafts. Even the last cases, ones that Galahad and Ishtar and other surgical teams were currently working on, were patched up somehow, pushed through to Beulahland, there to be finished and to stay for days or weeks - and then sent back through to Coventry only minutes after Hazel ordered an end to the operation.

I know that it was only minutes because none of Gretchen's troops had arrived from less than a mile away. Those girls move at eight miles per hour at field trot (3.5 metres per second). They should have made it in about eight or nine minutes, plus whatever time it took to get down that tower. I heard later that some of the civil defence wardens tried to stop them and question them. I don't think the girls hurt anyone very badly. But they didn't stop.

They came pouring in, Maid Marians with long bows (disguised particle projectors), dressed for Sherwood Forest, led by Friar Tuck complete with tonsure, and followed by Gretchen, dressed also for a Robin Hood pageant and wearing a big grin.

She paused to slap Dagmar on her fanny as she passed Father's table, nodded at the Pratts, who were already stupefied by the procession of recovered patients going the other way. She stopped at Woodrow's table. `We did it!'

All three tables were bare at that moment; we had reached that wonderful point where no more wounded were waiting. Jubal came in from the anteroom, said, `You did indeed.'

Gretchen hugged me. `Maureen, we did it!' She pulled my mask down and kissed me.

I bussed her back. `Now get your tail through that gate. We're on minus minutes.'

`Spoilsport.' She went on through, followed by Jubal and Gillian.

`All Clear' started sounding. Mr Pratt looked at me, looked at the curtain, said, `Come, Harry.'

`Yes, Pa.,

'Goodnight, all.' The old man plodded wearily away, followed by his wife.

Father said in a gruff voice, 'Daughter, why are you here? You should be in San Francisco.' He looked at Woodrow. 'You, too, Ted. You're dead. So what are you doing here?'

`Not dead, Dr Johnson. "Missing in action" is not the same as dead. The difference was slight but important. A long time in hospital, a long time out of my head. But here I am.'

`Mmrrph. So you are. But what is this charade? People in costumes. Other people trotting back and forth like Picadilly Circus. Hell of a way to run an aid station. Am I out of my head? Did we take a direct hit?'

Hazel said in my ear, `Come through, all of you! Now!'

I subvocalised, `Right away, Hazel.' Dagmar had-moved until she was behind my father. She had her injector ready; she queried me with her eyes. I shook my head a quarter of an inch. 'Father, will you come with me and let me explain?'

'Mrph. I suppose -'

The roof fell in.

It may have been part of a Spitfire, or perhaps a Messerschmidt. I don't know; I was under it. Gwen Hazel heard it through my mike; her grandsons Cas and Pol got themselves badly burned going back through to rescue us.

Everybody got burned - Castor, Pollux, Woodrow, Father, Dagmar, me - and gasoline bums are nasty. But Hazel got more help through, dressed in fireproofs (planning, not ha instance) and we were all dragged out.

All of this I got from later reports; at the time I was simply clobbered and then I woke up in hospital an unmeasured time later. Unmeasured by me, that is; Dagmar says that I was laid up three weeks longer than she was. Tamara won't tell me. It does not matter; Lethe keeps one comfortable and unworried as long as necessary to let one get well.

After a while I was allowed to get up and take walks around Beulahland, a beautiful place and one of the few truly civilised places in any world. And then I was transferred back to Boondock... and Woodrow and Father and Dagmar came to call on me.

They all leaned over my bed and kissed me and I cried a while and then we talked.

It was a big wedding. There was Mycroft and Athene and Minerva of course, and my grandson Richard Colin, who had at last forgiven Lazarus (for being his father). My darling Gwen Hazel had no reason to remain on leave from the family when Richard Colin was willing and eager to join. My daughters Laz and Lor had decided to cancel the indentures of their husbands, Cas and Pol, in recognition of their heroism in diving back into the fire for us four laggards - and to allow them to marry into the family. And there was Xia and Dagmar and Choy-Mu and Father and Gretchen - and the rest of us who had been Longs for years - some more years, some less. Our new family members each had had one reason or another to hesitate, but Galahad and Tamara made it clear: we take just one vow, to safeguard the welfare and happiness of all our children.

That's our total marriage contract. The rest is just poetic ritual.

Whom you sleep with, whom you make love with, is your private business. Ishtar, as our family geneticist, controls pregnancy and progeny to whatever extent control is needed for the welfare of our children.

So we all joined hands in the presence of our children (of course Pixel was there!) and we pledged ourselves to love and cherish our children - those around us, those still to come, worlds without end.

And we all lived happily ever after.

APPENDIX

People in this Memoir

Maureen Johnson Smith Long, 4 July 1882.

Pixel, a cat

Maureen's Ancestors, Aunts, Uncles, In-Laws

Ira Johnson, MD, father 2 August 1852
Adele Pfeiffer Johnson, mother
John Adams Smith, father-in-law
Ethel Graves Smith, mother-in-law

(Paternal Ancestors)

Asa Edward Johnson, grandfather 1813-1918
Rose Altheda McFee Johnson, grandmother 1814-1918
George Edward Johnson, great-grandfather 1795-1899
Amanda Lou Fredericks Johnson, great-grandmother 1798-1899
Terence McFee, great-grandfather 1796-1900
Rose Wilhelmina Brandt McFee, great-grandmother 1798-1899

(Maternal Ancestors)

Richard Pfeiffer, grandfather 1830-1932
Kristina Larsen Pfeiffer, grandmother 1834-1940
Robert Pfeiffer, great-grandfather 1809-1909
Heidi Schmidt Pfeiffer, great-grandmother 1810-1913
Ole Larsen, great-grandfather 1805-1907
Anna Kristina Hansen, great-grandmother 1810-1912

Ira Johnson's Siblings
Samantha Jane Johnson 1831-1915
James Ewing Johnson 1833-1884
(married Carole Pelletier 1849-1954)
Walter Raleigh Johnson 1838-1862
Alice Irene Johnson 1840-?
Edward McFee Johnson 1844-1884
Aurora Johnson 1850-?

Maureen's Siblings

Edward Ray Johnson 1876
Audrey Adele Johnson 1878
(married Jerome Bixby 1896)
Agnes Johnson 1880
Thomas Jefferson Johnson 1881
Benjamin Franklin Johnson 1884
Elizabeth Ann Johnson 1892
Lucille Johnson 1894

George Washington Johnson 1897
Nelson Johnson, cousin 1884
(son of James Ewing Johnson and Carole Pelletier)

Maureen's Descendants and their Spouses

Nancy Smith 1 Dec 1899
(married Jonathan Sperling Weatheral)
Carol Smith 1 January 1902
(married Roderick Schmidt Jenkins)
Brian Smith Junior 2 March 1905
George Edward Smith 4 February 1907
Marie Agnes Smith 5 April 1909
Woodrow Wilson Smith/Lazarus Long, et al. 11 Nov 1912
(first wife: Heather Hedrick)
Richard Smith 1914-1945
(married Marian Hardy)
Ethel Smith 1916
Theodore Ira Smith 4 March 1919
Margaret Smith 1922
Arthur Roy Smith 1924
Alice Virginia Smith 1927
(married Ralph Sperling)
Doris Jean 1930
(married Roderick Briggs)
Patrick Henry Smith 1932
(by Justin Weatheral)
Susan Smith 1934
(married Henry Schultz)
Donald Smith 1936
Priscilla Smith 1938
Lapis Lazuli Long, cloned from Lazarus, AD 4273
Lorelei Lee Long, cloned from Lazarus AD 4273
Richard Colin Campbell Ames, grandson, AD 2133
(son of Lazarus Long and Wendy Campbell)
Roberta Weatheral Barstow, granddaughter 25 Dec 1918
Anne Barstow Hardy, great-granddaughter 2 Nov 1935
Nancy Jane Hardy, great-great-granddaughter 22 June 1952

Maureen's Spouses, Co-Spouses, Lovers, Friends

Charles Perkins 1881-1898
Brian Smith, husband 1877-1996
Justin Weatheral 1875
Eleanor Sperling Weatheral 1877
James Rumsey, Senior, MD

James Rumsey, Junior, MD
Velma Briggs Rumsey (Mrs James Rumsey, Junior)
Mammy Della
Elizabeth Louise Barstow Johnson (Mrs Nelson Johnson)
Hal and Jane Andrews
George Strong Arthur Simmons 1917
Jubal Harshaw 1907
Tamara Ishrar
Galahad
Hilda Mae Corners Burroughs Long
Deety Burroughs Carter Long
Jacob Burroughs Long
Zebadiah John Carter Long

Cats

Pixel
Random Numbers
Chargé d'Affaires
Captain Blood
Princess Polly Ponderosa Penelope Peachfuzz

More People

Judge Hardacres, a corpse
Eric Ridpath, MD
Zenobia Ridpath, a gracious hostess
Adolf Weisskopf, MD
Dagmar Dobbs, RN
Major Gretchen Henderson, Time Corps soldier
Jesse F. Bone DVM - saved a kitten
Ira Howard - funded the Howard Foundation 1825-73
Jackson Igo and sons
Judge Orville Sperling, Foundation Chairman 1840
Reverend Clarence Timberly
Mrs Ohlschlager, neighbour and friend
The Reverend Dr Ezekiel 'Biblethumper'
Mr Fones, employer of Brian Smith
Mr Renwick, driver, Great Atlantic and Pacific Tea Co.
The Reverend Dr David C. Draper
Mr Smaterine, a banker
Deacon Houlihan, a bank president
Mr Schontz, a butcher
Anita Boles, a stenographer
Arthur J. Chapman, Howard Foundation Trustee
Dr Bannister, Dean of Academics, KCU

Alvin Barkley, President USA 1945-53 rime line two
George S. Patton, Junior, President USA 1953-61 time line two
Rufus Briggs, Foundation trustee, an oaf
D. D. Harriman
Col. Frisby, Argus Security Patrol
Rick, Argus Security Patrol
Mrs Barnes, matron, Argus Security Patrol
Mr Wren, Public Health Officer
Mrs Lantry, Public-Health Officer
Daniel Dixon, financier
Dr Macintosh, Chancellor University of New Mexico
Helen Beck, dancer/scholar
Dora Smith (Mrs W. W. Smith) New Beginnings colony
Helen Smith, daughter of Mr and Mrs W. W. Smith, New Beginnings
Freddie, a gunsel
Patty Paiwonski, a priestess with snakes
Wyoming Long, daughter of Gwen Hazel and Lazarus
Castor and Pollux, grandsons of Gwen Hazel
The Reverend Dr Hendrik Hudson Schultz, Time corps agent
Gillian Boardman Long, RN, quondam high priestess Church of All Worlds

Computer People

Mycroft Holmes IV, chairman Lunar revolution, time line three
Minerva Long, former executive computer Tellus Secundus, now flesh and blood Athene, executive computer Tellus Tertius, Minerva's twin
Shiva - Athene/Mycroft interfaced, led by Minerva
Dora, sentient ship
Gay Deceiver, sentient ship

The First Man on the Moon

Time line one - Captain John Carter of Virginia
Time line two - Leslie LeCroix
Time line three - Neil Armstrong
Time line four - Ballox O'Malley
Time line five - Skylark DuQuesne
Time line six - Neil Armstrong (alternate time line)

The Committee for Aesthetic Deletions

Dr Frankenstein
Dr Fu Manchu
Lucrezia Borgia
Hassan the Assassin
Bluebeard

Attila the Hun
Lizzie Borden
Jack the Ripper
Dr Guillotine
Professor Moriarty
Captain Kidd
Count Dracula

Public Figures

William Gibbs McAdoo
Franklin Delano Roosevelt
Josephus Daniels
Woodrow Wilson
Robert Taft
William Jennings Bryan
Al Smith
Paul McNutt
Herbert Hoover
John J. Pershing
Pancho Villa
Patrick Tumulty
William Howard Taft
Leonard Wood
Harry S. Truman
Champ Clark
Theodore Roosevelt
William McKinley

People Off Stage

Dr Chadwick
Dr Ingram
Richard Heiser
Pop Green, druggist
Dr Phillips
Jonnie Mae Igo
Mrs Malloy, landlady
The Widow Loomis
Mr Barnaby, Principal
Major General Lew Rawson, target
Bob Coster, ship design
Elijah Madison, driver
Charlene Madison, cook
Anne, a Fair Witness
Sarah Trowbridge, dead

Miss Primrose
'Scrooge' O'Hennessy
Annie Chambers, madam
Mrs Bunch, gossip
Mr Davis, see 'Fones'
Cowboy Womack, miner
The Jenkins girl
Mr Wimple, bank teller
Nick Weston
Mr Watkins
Mr Hardecker, Principal
Granny Bearpaw, cook
Mr Ferguson, chief engineer

Associated Stories

The Man Who Sold the Moon and Other Stories

Persons in 'The Man Who Sold the Moon' - D. D. Harriman, George Strong, Daniel Dixon, Chief Engineer Ferguson, Bob Coster, Leslie LeCroix. In 'Requiem' - D. D. Harriman, George Strong.

Revolt in 2100 and Other Stories

In 'If This Goes On' - Nehemiah Scudder. In 'Misfit' - (Elizabeth) Andrew Jackson Libby (Long).

Methuselah's Children

Lazarus Long a.k.a. Woodrow Wilson Smith, Andrew Jackson Libby.

Time Enough for Love

Lazarus Long, Ira Weatheral, Hamadryad, Ishtar, Galahad, Tamara, Lapis Lazuli, Lorelei Lee, Justin Foote 45th, 'Theodore Bronson', Dr Ira Johnson, Maureen Johnson Smith, Brian Smith, Nancy Smith, Carol Smith, Brian Smith Junior, George Edward Smith, Marie Agnes Smith, Woodrow Wilson Smith, Ethel Smith, Richard Smith, Justin Weatheral, Eleanor Weatheral, Jonathan Sperling Weatheral.

The Rolling Stones

Hazel Stone, Castor Stone, Pollux Stone

The Moon Is a Harsh Mistress

Hazel Stone, Mycroft Holmes IV

Stranger in a Strange Land

Gillian Boardman, Jubal Harshaw, Anne (Fair Witness), Patty Paiwonski

The Number of the Beast

Deety Burroughs Carter, Zebadiah john Carter, Jacob Burroughs, Hilda Mae Corners Burroughs, Lazarus Long, Elizabeth Andrew Jackson Libby Long, Lapis Lazuli Long, Lorelei Lee Long, Maureen Johnson Long, Hamadryad Long, Tamara Long, Hazel Stone, Castor Stone, Pollux Stone, Minerva Long, Jubal Harshaw, Athene, Anne (Fair Witness), Dr Jesse F. Bone, Samuel Clemens.

The Cat Who Walks Through Walls

Hazel Stone a.k.a. Gwen Novak, Col. Richard Colin Campbell Ames, Gretchen Henderson, The Reverend Dr Hendrik Hudson Schultz, Tamara, Athene, Dong Xia, Marcy Choy-Mu, Pixel, Lazarus Long, Wendy Campbell Ames, Maureen Johnson Long, Justin Foote 45th, Wyoming Long, Jacob Burroughs Long, Deety Burroughs Carter Long, Jubal Harshaw.

NB: The Past through Tomorrow is an omnibus volume containing The Man Who Sold the Moon and Other Stories, The Green Hills of Earth and Other Stories, Revolt in 2100 and Other Stories, and Methuselah's Children.

TUNNEL IN THE SKY

by

ROBERT A. HEINLEIN

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TABLE OF CONTENTS

1 The Marching Hordes. 4

2 The Fifth Way. 16

3 Through the Tunnel 27

4 Savage. 41

5 The Nova. 46

6 "I Think He Is Dead" 51

7 'I Should Have Baked a Cake" 57

8 "Fish, or Cut Bait" 62

9 "A Joyful Omen" 75

10 "I So Move" 78

11 The Beach of Bones. 87

12 "It Won't Work, Rod" 93

13 Unkillable. 96

14 Civilization. 105

15 In Achilles' Tent 115

16 The Endless Road. 125

1 The Marching Hordes

The bulletin board outside lecture hall 1712A of Patrick Henry High School showed a flashing red light. Rod Walker pushed his way into a knot of students and tried to see what the special notice had to say. He received an elbow in the stomach, accompanied by: "Hey! Quit shoving!"

"Sorry. Take it easy, Jimmy." Rod locked the elbow in a bone breaker but put no pressure on, craned his neck to look over Jimmy Throxton's head. "What's on the board?"

"No class today."

"Why not?"

A voice near the board answered him. "Because tomorrow it's 'Hail, Caesar, we who are about to die'"

"So?" Rod felt his stomach tighten as it always did before an examination. Someone moved aside and he managed to read the notice

PATRICK HENRY HIGH SCHOOL

Department of Social Studies

SPECIAL NOTICE to all students Course 410

(elective senior seminar) Advanced Survival,

Instr. Dr. Matson, 1712A MWF

1.There will be no class Friday the 14th.

2.TwentyFour Hour Notice is hereby given of final examination in Solo Survival. Students will present themselves for physical check at 0900 Saturday in the dispensary of Templeton Gate and will start passing through the gate at 1000, using three minute intervals by lot.

3.TEST CONDITIONS:

(a)ANY planet, ANY climate, ANY terrain;

(b)NO rules, ALL weapons, ANY equipment;

(c)TEAMING IS PERMITTED but teams will not be allowed to pass through the gate in company;

(d)TEST DURATION is not less than forty-eight hours, not more than ten days.

4.Dr. Matson will be available for advice and consultation until 1700 Friday.

5.Test may be postponed Only on recommendation of examining physician, but any student may withdraw from the course without administrative penalty up until 1000 Saturday.

6.Good luck and long life to you all!

(s)B. P. Matson, Sc.D.

Approved:

J.R. ROERICH, for the Board

Rod Walker reread the notice slowly, while trying to quiet the quiver in his nerves. He checked off the test conditions, why, those were not "conditions" but a total lack of conditions, no limits of any sort! They could dump you through the gate and the next instant you might be facing a polar bear at forty below or wrestling an Octopus deep in warm salt water.

Or, he added, faced up to some three-headed horror on a planet you had never heard of.

He heard a soprano voice complaining, "'Twenty-four hour notice!' Why, it's less than twenty hours now. That's not fair."

Another girl answered, "What's the difference? I wish we were starting this minute. I won't get a wink of sleep tonight."

"If we are supposed to have twenty-four hours to get ready, then we ought to have them. Fair is fair."

Another student, a tall, husky Zulu girl, chuckled softly. "Go on in. Tell the Deacon that."

Rod backed out of the press, taking Jimmy Throxton with him. He felt that he knew what "Deacon" Matson would say . . . something about the irrelevancy of fairness to survival. He chewed over the bait in paragraph five; nobody would say boo if he dropped the course. After all, "Advanced Survival' was properly a college. course; he would graduate without it.

But he knew down deep that if he lost his nerve now, he would never take the course later.

Jimmy said nervously, "What d' you think of it, Rod?"

"All right, I guess. But I'd like to know whether or not to wear my long-handled underwear. Do you suppose the Deacon would give us a hint?"

"Him? Not him! He thinks a broken leg is the height of humor. That man would eat his own grandmother without salt."

"Oh, come now! He'd use salt. Say, Jim? You saw what it said about teaming."

"Yeah. . . what about it?" Jimmy's eyes shifted away. Rod felt a moment's irritation. He was making a suggestion as delicate as a proposal of marriage, an offer to put his own life in the same basket with Jimmy's. The greatest risk in a solo test was that a fellow just had to sleep sometime . . . but a team could split it up and stand watch over each other.

Jimmy must know that Rod was better than he was, with any weapon or bare hands; the proposition was to his advantage. Yet here he was hesitating as if he thought Rod might handicap him. "What's the matter, Jim?" Rod said bleakly. "Figure you're safer going it alone?"

"Uh, no, not exactly."

"You mean you'd rather not team with me?"

"No, no, I didn't mean that!"

"Then what did you mean?"

"I meant Look, Rod, I surely do thank you. I won't forget it. But that notice said something else, too."

"What?"

"It said we could dump this darned course and still graduate. And I just happened to remember that I don't need it for the retail clothing business."

"Huh? I thought you had ambitions to become a wide-angled lawyer?'

"So exotic jurisprudence loses its brightest jewel, so what do I care? It will make my old man very happy to learn that I've decided to stick with the family business."

"You mean you're scared."

"Well, that's one way of putting it. Aren't you?"

Rod took a deep breath. "Yes. I'm scared."

"Good! Now let's both give a classic demonstration of how to survive and stay alive by marching down to the Registrar's office and bravely signing our names to withdrawal slips."

"Uh, no. You go ahead."

"You mean you're sticking?"

"I guess so."

"Look, Rod, have you looked over the statistics on last year's classes?"

"No. And I don't want to. So long." Rod turned sharply and headed for the classroom door, leaving Jimmy to stare after him with a troubled look.

The lecture room was occupied by a dozen or so of the seminar's students.

Doctor Matson, the "Deacon," was squatting tailor-fashion on one corner of his desk and holding forth informally. He was a small man and spare, with a leathery face, a patch over one eye, and most of three fingers missing from his left hand. On his chest were miniature ribbons, marking service in three famous first expeditions; one carried a tiny diamond cluster that showed him to be the last living member of that group.

Rod slipped into the second row. The Deacon's eye flicked at him as he went on talking. "I don't understand the complaints," he said jovially. "The test conditions say 'all weapons' so you can protect yourself any way you like, from a slingshot to a cobalt bomb. I think final examination should be bare hands, not so much as a nail file. But the Board of Education doesn't agree, so we do it this sissy way instead." He shrugged and grinned.

"Uh, Doctor, I take it then that the Board knows that we are going to run into dangerous animals?"

"Eh? You surely will! The most dangerous animal known."

"Doctor, if you mean that literally"

"Oh, I do, I do!"

"Then I take it that we are either being sent to Mithra and will have to watch out for snow apes, or we are going to stay on Terra and be dumped where we can expect leopards. Am I right?"

The Deacon shook his head despairingly. "My boy, you had better cancel and take this course over. Those dumb brutes aren't dangerous."

"But Jasper says, in Predators and Prey, that the two trickiest, most dangerous"

"Jasper's maiden aunt! I'm talking about the real King of the Beasts, the only animal that is always dangerous, even when not hungry. The two-legged brute. Take a look around you!"

The instructor leaned forward. "I've said this nineteen dozen times but you still don't believe it. Man is the one animal that can't be tamed. He goes along for years as peaceful as a cow, when it suits him. Then when it suits him not to be, he makes a leopard look like a tabby cat. Which goes double for the female of the species. Take another look around you. All friends. We've been on group survival field tests together; we can depend on each other. So? Read about the Donner Party, or the First Venus Expedition. Anyhow, the test area will have several other classes in it, all strangers

to you." Doctor Matson fixed his eye on Rod. "I hate to see some of you take this test, I really do. Some of you are city dwellers by nature; I'm afraid I have not managed to get it through your heads that there are no policemen where you are going. Nor will I be around to give you a hand if you make some silly mistake."

His eye moved on; Rod wondered if the Deacon meant him. Sometimes he felt that the Deacon took delight in rawhiding him. But Rod knew that it was serious; the course was required for all the Outlands professions for the good reason that the Outlands were places where you were smart or you were dead. Rod had chosen to take this course before entering college because he hoped that it would help him to get a scholarship, but that did not mean that he thought it was just a formality. He looked around, wondering who would be willing to team with him now that Jimmy had dropped out. There was a couple in front of him, Bob Baxter and Carmen Garcia. He checked them off, as they undoubtedly would team together; they planned to become medical missionaries and intended to marry as soon as they could.

How about Johann Braun? He would make a real partner, all right, strong, fast on his feet, and smart. But Rod did not trust him, nor did he think that Braun would want him. He began to see that he might have made a mistake in not cultivating other friends in the class besides Jimmy.

That big Zulu girl, Caroline something unpronounceable. Strong as an ox and absolutely fearless. But it would not do to team with a girl; girls were likely to mistake a cold business deal for a romantic gambit. His eyes moved on until at last he was forced to conclude that there was no one there to whom he wished to suggest partnership.

"Prof, how about a hint? Should we take suntan oil? Or chilblain lotion?"

Matson grinned and drawled, "Son, I'll tell you every bit that I know. This test area was picked by a teacher in Europe, and I picked one for his class. But I don't know what it is any more than you do. Send me a post card."

"But" The boy who had spoken stopped. Then he suddenly stood up. "Prof, this isn't a fair test. I'm checking out."

"What's unfair about it? Not that we meant to make it fair."

"Well, you could dump us any place"

"That's right."

"The back side of the Moon, in vacuum up to our chins. Or onto a chlorine

planet. Or the middle of an ocean. I don't know whether to take a space suit, or a canoe. So the deuce with it. Real life isn't like that."

"It isn't, eh?" Matson said softly. "That's what Jonah said when the whale swallowed him." He added, "But I will give you some hints. We mean this test to be passed by anyone bright enough to deserve it. So we won't let you walk into a poisonous atmosphere, or a vacuum, without a mask. If you are dumped into water, land won't be too far to swim. And so on. While I don't know where you are going, I did see the list of test areas for this year's classes. A smart man can survive in any of them. You ought to realize, son, that the Board of Education would have nothing to gain by killing off all its candidates for the key professions."

The student sat down again as suddenly as he had stood up. The instructor said, "Change your mind again?"

"Uh, yes, sir. If it's a fair test, Ill take it."

Matson shook his head. "You've already flunked it. You're excused. Don't bother the Registrar; I'll notify him."

The boy started to protest; Matson inclined his head toward the door. "Out!" There was an embarrassed silence while he left the room, then Matson said briskly, "This is a class in applied philosophy and I am sole judge of who is ready and who is not. Anybody who thinks of the world in terms of what it 'ought' to be, rather than what it is, isn't ready for final examination. You've got to relax and roll with the punch, not get yourself all worn out with adrenalin exhaustion at the slings and arrows of outrageous fortune. Any more questions?"

There were a few more but it became evident that Matson either truthfully did not know the nature of the test area, or was guarding the knowledge; his answers gained them nothing. He refused to advise as to weapons, saying simply that the school armorer would be at the gate ready to issue all usual weapons, while any unusual ones were up to the individual. "Remember, though, your best weapon is between your ears and under your scalp provided it's loaded."

The group started to drift away; Rod got up to leave.

Matson caught his eye and said, "Walker, are you planning to take the test?"

"Why, yes, of course, sir."

"Come here a moment." He led him into his office, closed the door and sat

down. He looked up at Rod, fiddled with a paperweight on his desk and said slowly, "Rod, you're a good boy but sometimes that isn't enough."

Rod said nothing.

"Tell me," Matson continued, "why you want to take this test?"

"Sir?"

"'Sir' yourself," Matson answered grumpily. "Answer my question."

Rod stared, knowing that he had gone over this with Matson before he was accepted for the course. But he explained again his ambition to study for an Outlands profession. "So I have to qualify in survival. I couldn't even get a degree in colonial administration without it, much less any of the planetography or planetology specialities."

"Want to be an explorer, huh?"

"Yes, sir."

"Like me."

"Yes, Sir. Like you."

"Hmm., would you believe me if I told you that it was the worst mistake I ever made?"

"Huh? No, sir!"

"I didn't think you would. Son, the cutest trick of all is how to know then what you know now. No way to, of course. But I'm telling you straight: I think you've been born into the wrong age.

"Sir?"

"I think you are a romantic. Now this is a very romantic age, so there is no room in it for romantics; it calls for practical men. A hundred years ago you would have made a banker or lawyer or professor and you could have worked out your romanticism by reading fanciful tales and dreaming about what you might have been if you hadn't had the misfortune to be born into a humdrum period. But this happens to be a period when adventure and romance are a part of daily existence. Naturally it takes very practical people to cope with it."

Rod was beginning to get annoyed. "What's the matter with me?"

"Nothing. I like you. I don't want to see you get hurt. But you are 'way too emotional, too sentimental to be a real survivor type."

Matson pushed a hand toward him. "Now keep your shirt on. I know you can make fire by rubbing a couple of dry words together. I'm well aware that you won merit badges in practically everything. I'm sure you can devise a water filter with your bare hands and know which side of the tree the moss grows on. But I'm not sure that you can beware of the Truce of the Bear."

"'The Truce of the Bear?'"

"Never mind. Son, I think you ought to cancel this course. If you must, you can repeat it in college."

Rod looked stubborn. Matson sighed. "I could drop you. Perhaps I should."

"But why, sir?"

"That's the point. I couldn't give a reason. On the record, you're as promising a student as I have ever had." He stood up and put out his hand. "Good luck. And remember when it gets down to fundamentals, do what you have to do and shed no tears."

Rod should have gone straight home. His family lived in an out-county of Greater New York City, located on the Grand Canyon plateau through Hoboken Gate. But his commuting route required him to change at Emigrants' Gap and he found himself unable to resist stopping to rubberneck.

When he stepped out of the tube from school he should have turned right, taken the rotary lift to the level above, and stepped through to Arizona Strip. But he was thinking about supplies, equipment, and weapons for tomorrow's examination; his steps automatically bore left, he got on the slideway leading to the great hall of the planetary gates.

He told himself that he would watch for only ten minutes; he would not be late for dinner. He picked his way through the crowd and entered the great hall, not onto the emigration floor itself, but onto the spectator's balcony facing the gates. This was the new gate house he was in, the one opened for traffic in '68; the original Emigrants' Gap, now used for Terran traffic and trade with Luna, stood on the Jersey Flats a few kilometers east alongside the pile that powered it.

The balcony faced the six gates. It could seat eighty-six hundred people but was half filled and crowded only in the center. It was here, of course, that Rod wished to sit so that he might see through all six gates. He

wormed his way down the middle aisle, squatted by the railing, then spotted someone leaving a front row seat. Rod grabbed it, earning a dirty look from a man who had started for it from the other aisle.

Rod fed coins into the arm of the seat; it opened out, he sat down and looked around. He was opposite the replica Statue of Liberty; twin to the one that had stood for a century where now was Bedloe Crater. Her torch reached to the distant ceiling; on both her right and her left three great gates let emigrants into the outer worlds.

Rod did not glance at the statue; he looked at the gates. It was late afternoon and heavily overcast at east coast North America, but gate one was open to some planetary spot having glaring noonday sun; Rod could catch glimpses through it of men dressed in shorts and sun hats and nothing else. Gate number two had a pressure lock rigged over it; it carried a big skull & crossbones sign and the symbol for chlorine. A red light burned over it. While he watched, the red light flickered out and a blue light replaced it; the door slowly opened and a travelling capsule for a chlorine breather crawled out. Waiting to meet it were eight humans in diplomatic full dress. One carried a gold baton.

Rod considered spending another half pluton to find out who the important visitor was, but his attention was diverted to gate five. An auxiliary gate had been set up on the floor, facing gate five a nd almost under the balcony. Two high steel fences joined the two gates, forming with them an alley as wide as the gates and as long as the space between, about fifteen meters by seventy-five. This pen was packed with humanity moving from the temporary gate toward and through gate fiveand onto some planet lightyears away. They poured out of nowhere, for the floor back of the auxiliary gate was bare, hurried like cattle between the two fences, spilled through gate five and were gone. A squad of brawny Mongol policemen, each armed with a staff as tall as himself, was spread out along each fence. They were using their staves to hurry the emigrants and they were not being gentle. Almost underneath Rod one of them prodded an old coolie so hard that he stumbled and fell. The man had been carrying his belongings, his equipment for a new world, in two bundles supported from a pole balanced on his right shoulder.

The old coolie fell to his skinny knees, tried to get up, fell flat. Rod thought sure he would be trampled, but

somehow he was on his feet again minus his baggage. He tried to hold his place in the torrent and recover his possessions, but the guard prodded him again and he was forced to move on barehanded. Rod lost sight of him before he had moved five meters.

There were local police outside the fence but they did not interfere. This

narrow stretch between the two gates was, for the time, extraterritory; the local police had no jurisdiction. But one of them did seem annoyed at the brutality shown the old man; he put his face to the steel mesh and called out something in lingua terra. The Mongol cop answered savagely in the same simple language, telling the North American what he could do about it, then went back to shoving and shouting and prodding still more briskly.

The crowd streaming through the pen were Asiatics Japanese, Indonesians, Siamese, some East Indians, a few Eurasians, but predominantly South Chinese. To Rod they all looked much alike tiny women with babies on hip or back, or often one on back and one in arms, endless runny nosed and shaven headed children, fathers with household goods ill enormous back packs or pushed ahead on barrows. There were a few dispirited ponies dragging two wheeled carts much too big for them but most of the torrent had only that which they could carry.

Rod had heard an old story which asserted that if all the Chinese on Terra were marched four abreast past a given point the column would never pass that point, as more Chinese would be born fast enough to replace those who had marched past. Rod had taken his slide rule and applied arithmetic to check it to find, of course, that the story was nonsense; even if one ignored deaths, while counting all births, the last Chinese would pass the reviewing stand in less than four years. Nevertheless, while watching this mob being herded like brutes into a slaughterhouse, Rod felt that the old canard was true even though its mathematics was faulty. There seemed to be no end to them.

He decided to risk that half pluton to find out what was going on. He slid the coin into a slot in the chair's speaker; the voice of the commentator reached his ears: "the visiting minister. The prince royal was met by officials of the Terran Corporation including the Director General himself and now is being escorted to the locks of the Ratoonian enclave. After the television reception tonight staff level conversations will start. A spokesman close to the Director General has pointed out that, in view of the impossibility of conflict of interest between oxygen types such as ourselves and the Ratoonians, any outcome of the conference must be to our advantage, the question being to what extent.

"If you will turn your attention again to gate five, we will repeat what we said earlier: gate five is on fortyeight hour loan to the Australasian Republic. The temporary gate you see erected below is hyper-folded to a point in central Australia in the Arunta Desert, where this emigration has been mounting in a great encampment for the past several weeks. His Serene Majesty Chairman Fung Chee Mu of the Australasian Republic has informed the Corporation that his government intends to move in excess of two million people in forty-eight hours, a truly impressive figure, more than forty

thousand each hour. The target figure for this year for all planetary emigration gates taken together, Emigrants' Gap, Peter the Great, and Witwaters and Gates is only seventy million emigrants or an average of eight thousand per hour. This movement proposes a rate live times as great using only one gate!"

The commentator continued: "Yet when we watch the speed, efficiency and the, uh forthrightness with which they are carrying out this evolution it seems likely that they will achieve their goal. Our own figures show them to be slightly ahead of quota for the first nine hours. During those same nine hours there have been one hundred seven births and eighty-two deaths among the emigrants, the high death rate, of course, being incident to the temporary hazards of the emigration.

"The planet of destination, GO8703IV, to be called henceforth 'Heavenly Mountains' according to Chairman Fung, is classed as a bounty planet and no attempt had been made to colonize it. The Corporation has been assured that the colonists are volunteers." It seemed to Rod that the announcer's tone was ironical. "This is understandable when one considers the phenomenal population pressure of the Australasian Republic. A brief historical rundown may be in order. After the removal of the remnants of the former Australian population to New Zealand, pursuant to the Peiping Peace Treaty, the first amazing effort of the new government was the creation of the great inland sea

Rod muted the speaker and looked back at the floor below. He did not care to hear schoolbook figures on how the Australian Desert had been made to blossom like the rose . . . and nevertheless has been converted into a slum with more people in it than all of North America. Something new was happening at gate four, Gate four had been occupied by a moving cargo belt when he had come in; now the belt had crawled away and lost itself in the bowels of the terminal and an emigration party was lining up to go through.

This was no poverty stricken band of refugees chivvied along by police; here each family had its own wagon, long, sweeping, boat-tight Conestogas drawn by three pair teams and housed in sturdy glass canvas square and businesslike Studebakers with steel bodies, high mudcutter wheels, and pulled by one or two pair teams. The draft animals were Morgans and lordly Clydesdales and jugheaded Missouri mules with strong shoulders and shrewd, suspicious eyes. Dogs trotted between wheels, wagons were piled high with household goods and implements and children, poultry protested the indignities of fate in cages tied on behind, and a little Shetland pony, riderless but carrying his saddle and just a bit too tall to run underneath with the dogs, stayed close to the tailgate of one family's rig.

Rod wondered at the absence of cattle and stepped up the speaker again. But

the announcer was still droning about the fertility of Australasians; he muted it again and watched. Wagons had moved onto the floor and taken up tight echelon position close to the gate, ready to move, with the tail of the train somewhere out of sight below. The gate was not yet ready and drivers were getting down and gathering at the Salvation Army booth under the skirts ot the Goddess of Liberty, for a cup of coffee and some banter. It occurred to Rod that there probably was no coffee where they were going and might not be for years, since Terra never exported food, on the contrary, food and fissionable metals were almost the only permissible imports; until an Outland colony produced a surplus of one or the other it could expect precious little help from Terra.

It was extremely expensive in terms of uranium to keep an interstellar gate open and the people in this wagon train could expect to be out of commercial touch with Earth until such a time as they had developed surpluses valuable enough in trade to warrant reopening the gate at regular intervals. Until that time they were on their own and must make do with what they could take with them . . . which made horses more practical than helicopters, picks and shovels more useful than bulldozers. Machinery gets out of order and requires a complex technology to keep it going but good old "hayburners" keep right on breeding, cropping grass, and pulling loads.

Deacon Matson had told the survival class that the real hardships of primitive Outlands were not the lack of plumbing, heating, power, light, nor weather conditioning, but the shortage of simple things like coffee and tobacco.

Rod did not smoke and coffee he could take or let alone; he could not imagine getting fretful over its absence. He scrunched down in his seat, trying to see through the gate to guess the cause of the hold up. He could not see well, as the arching canvas of a prairie schooner blocked his view, but it did seem that the gate operator had a phase error; it looked as if the sky was where the ground ought to be. The extradimensional distortions necessary to match places on two planets many lightyears apart were not simply a matter of expenditure of enormous quantities of energy; they were precision problems fussy beyond belief, involving high mathematics and high artthe math was done by machine but the gate operator always had to adjust the last couple of decimal places by prayer and intuition.

In addition to the dozenodd proper motions of each of the planets involved, motions which could usually be added and canceled out, there was also the rotation of each planet. The problem was to make the last hyperfold so that the two planets were internally tangent at the points selected as gates, with their axes parallel and their rotations in the same direction. Theoretically it was possible to match two points in contra-rotation, twisting the insubstantial fabric of spacetime in exact step with "real'

motions; practically such a solution was not only terribly wasteful of energy but almost unworkable the ground surface beyond the gate tended to skid away like a slidewalk and tilt at odd angles.

Rod did not have the mathematics to appreciate the difficulties. Being only about to finish high school his training had gone no farther than tensor calculus, statistical mechanics, simple transfinities, generalized geometries of six dimensions, and, on the practical side, analysis for electronics, primary cybernetics and robotics, and basic design of analog computers; he had had no advanced mathematics as yet. He was not aware of his ignorance and simply concluded that the gate operator must be thumb-fingered. He looked back at the emigrant party.

The drivers were still gathered at the booth, drinking coffee and munching doughnuts. Most of the men were growing beards; Rod concluded from the beavers that the party had been training for several months. The captain of the party sported a little goatee, mustaches, and rather long hair, but it seemed to Rod that he could not be many years older than Rod himself. He was a professional, of course, required to hold a degree in Outlands arts hunting, scouting, jackleg mechanics, gunsmithing, farming, first aid, group psychology, survival group tactics, law, and a dozen other things the race has found indispensable when stripped for action.

This captain's mount was a Palomino mare, lovely as a sunrise, and the captain was dressed as a California don of an earlier century possibly as a compliment to his horse. A warning light flashed at the gate's annunciator panel and he swung into saddle, still eating a doughnut, and cantered down the wagons for a final inspection, riding toward Rod. His back was straight, his seat deep and easy, his bearing confident. Carried low on a fancy belt he wore two razor guns, each in a silverchased holster that matched the ornate silver of his bridle and saddle.

Rod held his breath until the captain passed out of sight under the balcony, then sighed and considered studying to be like him, rather than for one of the more intellectual Outlands professions. He did not know just what he did want to be, except that he meant to get off Earth as soon as he possibly could and get out there where things were going on!

Which reminded him that the first hurdle was tomorrow; in a few days he would either be eligible to matriculate for whatever it was he decided on, or he would bebut no use worrying about that. He remembered uneasily that it was getting late and he had not even decided on equipment, nor picked his weapons. This party captain carried razor guns; should he carry one? No, this party would fight as a unit, if it had to fight. Its leader carried that type of weapon to enforce his authority not for solo survival. Well, what should he take?

A siren sounded and the drivers returned to their wagons. The captain came back at a brisk trot. "Reins up!" he called out. "Reeeeeeiiiins up!" He took station by the gate, facing the head of the train; the mare stood quivering and tending to dance.

The Salvation Army lassie came out from behind her counter carrying a baby girl. She called to the party captain but her voice did not carry to the balcony.

The captain's voice did carry. "Number four! Doyle! Come get your child!" A redheaded man with a spade beard climbed down from the fourth wagon and sheepishly reclaimed the youngster to a chorus of cheers and cat calls. He passed the baby up to his wife, who upped its skirt and commenced paddling its bottom. Doyle climbed to his seat and took his reins.

"Call off!" the captain sang out.

"One."

"Tuh!"

"Three!"

"Foah!"

"Five!"

The count passed under the balcony, passed down the chute out of hearing. In a few moments it came back, running down this time, ending with a shouted "ONE!" The captain held up his right arm and watched the lights of the order panel.

A light turned green. He brought his arm down smartly with a shout of "Roll 'em! Ho!" The Palomino took off like a race horse, cut under the nose of the nigh lead horse of the first team, and shot through the gate.

Whips cracked. Rod could hear shouts of "Git, Molly! Git, Ned!" and "No, no, you jugheads!" The train began to roll. By the time the last one on the floor was through the gate and the much larger number which had been in the chute below had begun to show it was rolling at a gallop, with the drivers bracing their feet wide and their wives riding the brakes. Rod tried to count them, made it possibly sixtythree wagons as the last one rumbled through the gate. . . and was gone, already half a galaxy away.

He sighed and sat back with a warm feeling sharpened with undefined sorrow.

Then he stepped up the speaker volume: "onto New Canaan, the premium planet described by the great Langford as 'The rose without thorns.' These colonists have paid a premium of sixteen thousand four hundred per personnot counting exempt or coopted members for the privilege of seeking their fortunes and protecting their posterity by moving to New Canaan. The machines predict that the premium will increase for another twenty-eight years; therefore, if you are considering giving your children the priceless boon of citizenship on New Canaan, the time to act is now. For a beautiful projection reel showing this planet send one pluton to 'Information, Box One, Emigrants' Gap, New Jersey County, Greater New York.' For a complete descriptive listing of all planets now open plus a speclal list of those to be opened in the near future add another half pluton. Those seeing this broadcast in person may obtain these items at the information booth in the foyer outside the great hall."

Rod did not listen. He had long since sent for every free item and most of the non-free ones issued by the Commission for Emigration and Trade. Just now he was wondering why the gate to New Canaan had not relaxed.

He found out at once. Stock barricades rose up out of the floor, forming a fenced passage from gate four to the chute under him. Then a herd of cattle filled the gate and came flooding toward him, bawling and snorting. They were prime Hereford steers, destined to become tender steaks and delicious roasts for a rich but slightly hungry Earth. After them and among them rode New Canaan cowpunchers armed with long goads with which they urged the beasts to greater speed the undesirability of running weight off the animals was offset by the extreme cost of keeping the gate open, a cost which had to be charged against the cattle.

Rod discovered that the speaker had shut itself off; the half hour he had paid for was finished. He sat up with sudden guilt, realizing that he would have to hurry or he would be late for supper. He rushed out, stepping on feet and mumbling apologies, and caught the slideway to Hoboken Gate.

This gate, being merely for Terra surface commuting, was permanently dilated and required no operator, since the two points brought into coincidence were joined by a rigid frame, the solid Earth. Rod showed his commuter's ticket to the electronic monitor and stepped through to Arizona, in company with a crowd of neighbors.

"The (almost) solid Earth" The gate robot took into account tidal distortions but could not anticipate minor seismic variables. As Rod stepped through he felt his feet quiver as if to a small earthquake, then the terra was again firma. But he was still in an airlock at sea level pressure. The radiation from massed bodies triggered the mechanism, the lock closed and air pressure dropped. Rod yawned heavily to adjust to the

pressure of Grand Canyon plateau, North Rim, less than three quarters that of New Jersey. But despite the fact that he made the change twice a day he found himself rubbing his right ear to get rid of an ear ache.

The lock opened, he stepped out. Having come two thousand miles in a split second he now had ten minutes by slide tube and a fifteen minute walk to get home. He decided to dogtrot and be on time after all. He might have made it if there had not been several thousand other people trying to use the same facilities.

2 The Fifth Way

Rocket ships did not conquer space; they merely challenged it. A rocket leaving Earth at seven miles per second is terribly slow for the vast reaches beyond. Only the Moon is reasonably near, four days, more or less. Mars is thirty-seven weeks away, Saturn a dreary six years, Pluto an impossible half century, by the elliptical orbits possible to rockets.

Ortega's torch ships brought the Solar System within reach. Based on mass conversion, Einstein's deathless $e = Mc^2$, they could boost for the entire trip at any acceleration the pilot could stand. At an easy one gravity the inner planets were only hours from Earth, far Pluto only eighteen days. It was a change like that from horseback to jet plane.

The shortcoming of this brave new toy was that there was not much anywhere to go. The Solar system, from a human standpoint, is made up of remarkably unattractive real estatesave for lovely Terra herself, lush and green and beautiful. The steel-limbed Jovians enjoy gravity 2.5 times ours and their poisonous air at inhuman pressure keeps them in health. Martians prosper in near vacuum, the rock lizards of Luna do not breathe at all. But these planets are not for men.

Men prosper on an oxygen planet close enough to a Gtype star for the weather to cycle around the freezing point of water.. . that is to say, on Earth.

When you are already there why go anywhere? The reason was babies, too many babies. Malthus pointed it out long ago; food increases by arithmetical progression, people increase by geometrical progression. By World War I half the world lived on the edge of starvation; by World War II Earth's population was increasing by 55,000 people every day; before World War III, as early as 1954, the increase had jumped to 100,000 mouths and stomachs per day, 35,000,000 additional people each year . . . and the population of Terra had climbed well beyond that which its farm lands could support.

The hydrogen, germ, and nerve gas horrors that followed were not truly

political. The true meaning was more that of beggars fighting over a crust of bread.

The author of Gulliver's Travels sardonically proposed that Irish babies be fattened for English tables; other students urged less drastic ways of curbing population none of which made the slightest difference. Life, all life, has the twin drives to survive and to reproduce. Intelligence is an aimless by-product except as it serves these basic drives.

But intelligence can be made to serve the mindless demands of life. Our Galaxy contains in excess of one hundred thousand Earth-type planets, each as warm and motherly to men as sweet Terra. Ortega's torch ships could reach the stars. Mankind could colonize, even as the hungry millions of Europe had crossed the Atlantic and raised more babies in the New World.

Some did . . . hundreds of thousands. But the entire race, working as a team, cannot build and launch a hundred ships a day, each fit for a thousand colonists, and keep it up day after day, year after year, time without end. Even with the hands and the will (which the race never had) there is not that much steel, aluminum, and uranium in Earth's crust. There is not one hundredth of the necessary amount.

But intelligence can find solutions where there are none. Psychologists once locked an ape in a room, for which they had arranged only four ways of escaping. Then they spied on him to see which of the four he would find.

The ape escaped a fifth way.

Dr. Jesse Evelyn Ramsbotham had not been trying to solve the baby problem; he had been trying to build a time machine. He had two reasons: first, because time machines are an impossibility; second, because his hands would sweat and he would stammer whenever in the presence of a nubile female. He was not aware that the first reason was compensation for the second, in fact he was not aware of the second reason it was a subject his conscious mind avoided.

It is useless to speculate as to the course of history had Jesse Evelyn Ramsbotham's parents had the good sense to name their son Bill instead of loading him with two girlish names. He might have become an All American halfback and ended up selling bonds and adding his quota of babies to a sum already disastrous. Instead he became a mathematical physicist.

Progress in physics is achieved by denying the obvious and accepting the impossible. Any nineteenth century physicist could have given unassailable reasons why atom bombs were impossible if his reason were not affronted at the question; any twentieth century physicist could explain why time travel

was incompatible with the real world of spacetime. But Ramsbotham began fiddling with the three greatest Einsteinian equations, the two relativity equations for distance and duration and the massconversion equation; each contained the velocity of light. "Velocity" is first derivative, the differential of distance with respect to time; he converted those equations into differential equations, then played games with them. He would feed the results to the Rakitiac computer, remote successor to Univac, Eniac and Maniac. While he was doing these things his hands never sweated nor did he stammer, except when he was forced to deal with the young lady who was chief programmer for the giant computer.

His first model produced a time stasis or low entropy field no bigger than a football but a lighted cigarette placed inside with full power setting was still burning a week later. Ramsbotham picked up the cigarette, resumed smoking and thought about it.

Next he tried a day old chick, with colleagues to witness. Three months later the chick was unaged and no hungrier than chicks usually are. He reversed the phase relation and cut in power for the shortest time he could manage with his bread-boarded hookup.

In less than a second the newly hatched chick was long dead, starved and decayed.

He was aware that he had simply changed the slope of a curve, but he was convinced that he was on the track of true time travel. He never did find it, although once he thought that he had, he repeated by request his demonstration with a chick for some of his colleagues; that night two of them picked the lock on his lab, let the little thing out and replaced it with an egg. Ramsbotham might have been permanently convinced that he had found time travel and then spent the rest of his life in a blind alley had they not cracked the egg and showed him that it was hardboiled.

But he did not give up. He made a larger model and tried to arrange a dilation, or anomaly (he did not call it a "Gate") which would let him get in and out of the field himself.

When he threw on power, the space between the curving magnetodes of his rig no longer showed the wall beyond, but a steaming jungle. He jumped to the conclusion that this must be a forest of the Carboniferous Period. It had often occurred to him that the difference between space and time might simply be human prejudice, but this was not one of the times; he believed what he wanted to believe.

He hurriedly got a pistol and with much bravery and no sense crawled between the magnetodes.

Ten minutes later he was arrested for waving firearms around in Rio de Janeiro's civic botanical gardens. A lack of the Portuguese language increased both his difficulties and the length of time he spent in a tropical pokey, but three days later through the help of the North American consul he was on his way home. He thought and filled notebooks with equations and question marks on the whole trip.

The short cut to the stars had been found.

Ramsbotham's discoveries eliminated the basic cause of war and solved the problem of what to do with all those dimpled babies. A hundred thousand planets were no farther away than the other side of the street. Virgin continents, raw wildernesses, fecund jungles, killing deserts, frozen tundras, and implacable mountains lay just beyond the city gates, and the human race was again going out where the street lights do not shine, out where there was no friendly cop on the corner nor indeed a corner, out where there were no well hung, tender steaks, no boneless hams, no packaged, processed foods suitable for delicate minds and pampered bodies. The biped omnivore again had need of his biting, tearing, animal teeth, for the race was spilling out (as it had so often before) to kill or be killed, eat or be eaten.

But the human race's one great talent is survival. The race, as always, adjusted to conditions, and the most urbanized, mechanized, and civilized, most upholstered and luxurious culture in all history trained its best children, its potential leaders, in primitive pioneer survivalman naked against nature.

Rod Walker knew about Dr. J. E. Ramsbotham, just as he knew about Einstein, Newton, and Columbus, but he thought about Ramsbotham no oftener than he thought about Columbus. These were figures in books, each larger than life and stuffed with straw, not real. He used the Ramsbotham Gate between Jersey and the Arizona Strip without thinking of its inventor the same way his ancestors used elevators without thinking of the name "Otis." If he thought about the miracle at all, it was a half formed irritation that the Arizona side of Hoboken Gate was so far from his parents' home. It was known as Kaibab Gate on this side and was seven miles north of the Walker residence.

At the time the house had been built the location was at the extreme limit of tube delivery and other city utilities. Being an old house, its living room was above ground, with only bedrooms, pantry, and bombproof buried. The living room had formerly stuck nakedly above ground, an ellipsoid monocoque shell, but, as Greater New York spread, the neighborhood had been zoned for underground apartments and construction above ground which would

interfere with semblance of virgin forest had been forbidden.

The Walkers had gone along to the extent of covering the living room with soil and planting it with casual native foliage, but they had refused to cover up their view window. It was the chief charm of the house, as it looked out at the great canyon. The community corporation had tried to coerce them into covering it up and had offered to replace it with a simulacrum window such as the underground apartments used, with a relayed view of the canyon. But Rod's father was a stubborn man and maintained that with weather, women, and wine there was nothing "just as good." His window was still intact.

Rod found the family sitting in front of the window, watching a storm work its way up the canyonhis mother, his father, and, to his great surprise, his sister. Helen was ten years older than he and an assault captain in the Amazons; she was seldom home.

The warmth of his greeting was not influenced by his realization that her arrival would probably cause his own lateness to pass with little comment. "Sis! Hey, this is swell I thought you were on Thule."

"I was . . . until a few hours ago." Rod tried to shake hands; his sister gathered him in a bear hug and bussed him on the mouth, squeezing him against the raised ornaments of her chrome corselet. She was still in uniform, a fact that caused him to think that she had just arrivedon her rare visits home she usually went slopping around in an old bathrobe and goahead slippers, her hair caught up in a knot. Now she was still in dress armour and kilt and had dumped her side arms, gauntlets, and pluined helmet on the floor.

She looked him over proudly. "My, but you've grown! You're almost as tall as I am."

"I'm taller."

"Want to bet? No, don't try to wiggle away from me; I'll twist your arm. Slip off your shoes and stand back to back."

"Sit down, children," their father said mildly. "Rod, why were you late?"

"Uh . . ." He had worked out a diversion involving telling about the examination coming up, but he did not use it as his sister intervened.

"Don't heckle him, Pater. Ask for excuses and you'll get them. I learned that when I was a sublieutenant."

"Quiet, daughter. I can raise him without your help." Rod was surprised by his father's edgy answer, was more surprised by Helen's answer: "So? Really?" Her tone was odd.

Rod saw his mother raise a hand, seem about to speak, then close her mouth. She looked upset. His sister and father looked at each other; neither spoke. Rod looked from one to the other, said slowly, "Say, what's all this?"

His father glanced at him. "Nothing. We'll say no more about it. Dinner is waiting. Coming, dear?" He turned to his wife, handed her up from her chair, offered her his arm.

"Just a minute," Rod said insistently. "I was late because I was hanging around the Gap."

"Very well. You know better, but I said we would say no more about it." He turned toward the lift.

"But I wanted to tell you something else, Dad. I won't be home for the next week or so."

"Very well eh? What did you say?"

"I'll be away for a while, sir. Maybe ten days or a bit longer."

His father looked perplexed, then shook his head. "Whatever your plans are, you will have to change them. I can't let you go away at this time."

"But, Dad"

"I'm sorry, but that is definite."

"But, Dad, I have to!"

"No."

Rod looked frustrated. His sister said suddenly, "Pater, wouldn't it be well to find out why he wants to be away?"

"Now, daughter"

"Dad, I'm taking my solo survival, starting tomorrow morning!"

Mrs. Walker gasped, then began to weep. Her husband said, "There, there, my dear!" then turned to his son and said harshly, "You've upset your mother."

"But, Dad, I. . ." Rod shut up, thinking bitterly that no one seemed to give a hoot about his end of it. Mter all, he was the one who was going to have to sink or swim. A lot they knew or

"You see, Pater," his sister was saying. "He does have to be away. He has no choice, because"

"I see nothing of the sort! Rod, I meant to speak about this earlier, but I had not realized that your test would take place so soon. When I signed permission for you to take that course, I had, I must admit, a mental reservation. I felt that the experience would be valuable later when and if you took the course in college. But I never intended to let you come up against the final test while still in high school. You are too young.

Rod was shocked speechless. But his sister again spoke for him. "Fiddlesticks!"

"Eh? Now, daughter, please remember that"

"Repeat fiddlesticks! Any girl in my company has been up against things as rough and many of them are not much older than Buddy. What are you trying to do, Pater? Break his nerve?"

"You have no reason to. . . I think we had best discuss this later."

"I think that is a good idea." Captain Walker took her brother's arm and they followed their parents down to the refectory. Dinner was on the table, still warm in its delivery containers; they took their places, standing, and Mr. Walker solemnly lighted the Peace Lamp. The family was evangelical Monist by inheritance, each of Rod's grandfathers having been converted in the second great wave of proselyting that swept out of Persia in the last decade of the previous century, and Rod's father took seriously his duties as family priest.

As the ritual proceeded Rod made his responses automatically, his mind on this new problem. His sister chimed in heartily but his mother's answers could hardly be heard.

Nevertheless the warm symbolism had its effect; Rod felt himself calming down. By the time his father intoned the last "one Principle, one family, one flesh!" he felt like eating. He sat down and took the cover off his plate.

A yeast cutlet, molded to look like a chop and stripped with real bacon, a big baked potato, and a grilled green lobia garnished with baby's buttons .

. . Rod's mouth watered as he reached for the catsup.

He noticed that Mother was not eating much, which surprised him. Dad was not eating much either but Dad often just picked at his food . . . he became aware with sudden warm pity that Dad was thinner and greyer than ever. How old was Dad?

His attention was diverted by a story his sister was telling: "and so the Commandant told me I would have to clamp down. And I said to her, 'Ma'am, girls will be girls. It I have to bust a petty officer everytime one of them does something like that, pretty soon I won't have anything but privates. And Sergeant Dvorak is the best gunner I have.'"

"Just a second," her father interrupted. "I thought you said 'Kelly,' not 'Dvorak.'"

"I did and she did. Pretending to misunderstand which sergeant she meant was my secret weaponfor I had Dvorak cold for the same offense, and Tiny Dvorak (she's bigger than I am) is the Squadron's white hope for the annual corpswide competition for best trooper. Of course, losing her stripes would put her, and us, out of the running.

"So I straightened out the 'mix up' in my best wideeyed, thickheaded manner, let the old gal sit for a moment trying not to bite her nails, then told her that I had both women confined to barracks until that gang of college boys was through installing the new 'scope, and sang her a song about how the quality of mercy is not strained, it droppeth as the gentle rain from heaven, and made myself responsible for seeing to it that she was not again embarrassed by scandalousher word, not minescandalous incidents . . . especially when she was showing quadrant commanders around.

"So she grumpily allowed as how the company commander was responsible for her company and she would hold me to it and now would I get out and let her work on the quarterly training report in peace? So I threw her my best parade ground salute and got out so fast I left a hole in the air."

"I wonder," Mr. Walker said judicially, "if you should oppose your commanding officer in such matters? After all, she is older and presumably wiser than you are."

Helen made a little pile of the last of her baby's buttons, scooped them up and swallowed them. "Fiddlesticks squared and cubed. Pardon me, Pater, but if you had any military service you would know better. I am as tough as blazes to my girls myself. . . and it just makes them boast about how they've got the worst fire eater in twenty planets. But if they're in trouble higher up, I've got to take care of my kids. There always comes a

day when there is something sticky up ahead and I have to stand up and walk toward it. And it will be all right because I'll have Kelly on my right flank and Dvorak on my left and each of them trying to take care of Maw Walker all by her own self. I know what I'm doing. 'Walker's Werewolves' are a team."

Mrs. Walker shivered. "Gracious, darling, I wish you had never taken up a calling so . . . well, so dangerous."

Helen shrugged. "The death rate is the same for us as for anybody . . . one person, one death, sooner or later. What would you want, Mum? With eighteen million more women than men on this continent did you want me to sit and knit until my knight comes riding? Out where I operate, there are more men than women; I'll wing one yet, old and ugly as I am.

Rod asked curiously, "Sis, would you really give up your commission to get married?"

"Would I! I won't even count his arms and legs. If he is still warm and can nod his head, he's had it. My target is six babies and a farm."

Rod looked her over. "I'd say your chances are good. You're quite pretty even if your ankles are thick."

"Thanks, pardner. Thank you too much. What's for dessert, Mum?"

"I didn't look. Will you open it, dear?"

Dessert turned out to be iced mangorines, which pleased Rod. His sister went on talking. "The Service isn't a bad shake, on active duty. It's garrison duty that wears. My kids get fat and sloppy and restless and start fighting with each other from sheer boredom. For my choice, barracks casualties are more to be dreaded than combat. I'm hoping that our squadron will be tagged to take part in the pacification of Byer's Planet."

Mr. Walker looked at his wife, then at his daughter. "You have upset your mother again, my dear. Quite a bit of this talk has hardly been appropriate under the Light of Peace."

"I was asked questions, I answered."

"Well, perhaps so."

Helen glanced up. "Isn't it time to turn it out, anyway? We all seem to have finished eating."

"Why, if you like. Though it is hardly reverent to hurry."

"The Principle knows we haven't all eternity." She turned to Rod. "How about making yourself scarce, mate? I want to make palaver with the folks."

"Gee, Sis, you act as if I was"

"Get lost, Buddy. I'll see you later."

Rod left, feeling affronted. He saw Helen blow out the pax lamp as he did so.

He was still making lists when his sister came to his room. "Hi, kid."

"Oh. Hello, Sis."

"What are you doing? Figuring what to take on your solo?"

"Sort of."

"Mind if I get comfortable?" She brushed articles from his bed and sprawled on it. "We'll go into that later."

Rod thought it over. "Does that mean Dad won't object?"

"Yes. I pounded his head until he saw the light. But,

as I said, well go into that later. I've got something to tell you, youngster."

"Such as?"

"The first thing is this. Our parents are not as stupid as you probably think they are. Fact is, they are pretty bright."

"I never said they were stupid!" Rod answered, comfortably aware of what his thoughts had been.

"No. But I heard what went on before dinner and so did you. Dad was throwing his weight around and not listening. But, Buddy, it has probably never occurred to you that it is hard work to be a parent, maybe the hardest job of all particularly when you have no talent for it, which Dad hasn't. He knows it and works hard at it and is conscientious. Mostly he does mighty well. Sometimes he slips, like tonight. But, what you did not know is this: Dad is going to die."

"What?" Rod looked stricken. "I didn't know he was ill!"

"You weren't meant to know. Now climb down off the ceiling; there is a way out. Dad is terribly ill, and he would die in a few weeks at the most unless something drastic is done. But something is going to be. So relax."

She explained the situation bluntly: Mr. Walker was suffering from a degenerative disease under which he was slowly starving to death. His condition was incurable by current medical art; he might linger on, growing weaker each day, for weeks or months but he would certainly die soon.

Rod leaned his head on his hands and chastised himself. Dad dying . . . and he hadn't even noticed. They had kept it from him, like a baby, and he had been too stupid to see it.

His sister touched his shoulder. "Cut it out. If there is anything stupider than flogging yourself over something you can't help, I've yet to meet it. Anyhow, we are doing something about it."

"What? I thought you said nothing could be done?"

"Shut up and let your mind coast. The folks are going to make a Ramsbotham jump, five hundred to one, twenty years for two weeks. They've already signed a contract with Entropy, Incorporated. Dad has resigned from General Synthetics and is closing up his affairs; they'll kiss the world goodby this coming Wednesday which is why he was being sterh about your plans to be away at that time. You're the apple of his eye Heaven knows why."

Rod tried to sort out too many new ideas at once. A time jump . . . of course! It would let Dad stay alive another twenty years. But "Say, Sis, this doesn't get them anything! Sure, it's twenty years but it will be just two weeks to them . . . and Dad will be as sick as ever. I know what I'm talking about; they did the same thing for Hank Robbin's great grandfather and he died anyhow, right after they took him out of the stasis. Hank told me."

Captain Walker shrugged. "Probably a hopeless case to start with. But Dad's specialist, Dr. Hensley, says that he is morally certain that Dad's case is not hopeless twenty years from now. I don't know anything about metabolic medicine, but Hensley says that they are on the verge and that twenty years from now they ought to be able to patch Dad up as easily they can graft on a new leg today."

"You really think so?"

"How should I know? In things like this you hire the best expert you can,

then follow his advice. The point is, if we don't do it, Dad is finished. So we do it."

"Yeah. Sure, sure, we've got to."

She eyed him closely and added, "All right. Now do you want to talk with them about it?"

"Huh?" He was startled by the shift. "Why? Are they waiting for me?"

"No. I persuaded them that it was best to keep it from you until it happened. Then I came straight in and told you. Now you can do as you please pretend you don't know, or go have Mum cry over you, and listen to a lot of last minute, man-to-man advice from Dad that you will never take. About midnight, with your nerves frazzled, you can get back to your preparations for your survival test. Play it your own way but I've rigged it so you can avoid that, if you want to. Easier on everybody. Myself, I like a cat's way of saying goodby."

Rod's mind was in a turmoil. Not to say goodby seemed unnatural, ungrateful, untrue to family sentiment but the prospect of saying goodby seemed almost unbearably embarrassing. "What's that about a cat?"

"When a cat greets you, he makes a big operation of it, humping, stropping your legs, buzzing like mischief. But when he leaves, he just walks off and never looks back. Cats are smart."

"Well . ."

"I suggest," she added, "that you remember that they are doing this for their convenience, not yours.

"But Dad has to"

"Surely, Dad must, if he is to get well." She considered pointing out that the enormous expense of the time jump would leave Rod practically penniless; she decided that this was better left undiscussed. "But Mum does not have to."

"But she has to go with Dad!"

"So? Use arithmetic. She prefers leaving you alone for twenty years in order to be with Dad for two weeks. Or turn it around: she prefers having you orphaned to having herself widowed for the same length of time."

"I don't think that's quite fair to Mum," Rod answered slowly.

"I wasn't criticizing. She's making the right decision. Nevertheless, they both have a strong feeling of guilt about you and"

"About me?"

"About you. I don't figure into it. If you insist on saying goodby, their guilt will come out as selfjustification and selfrighteousness and they will find ways to take it out on you and everybody will have a bad time. I don't want that. You are all my family."

"Uh, maybe you know best."

"I didn't get straight A's in emotional logic and military leadership for nothing. Man is not a rational animal; he is a rationalizing animal. Now let's see what you plan to take with you."

She looked over his lists and equipment, then whistled softly. "Whew! Rod, I never saw so much plunder. You won't be able to move. Who are you? Tweedledum preparing for battle, or the White Knight?"

"Well, I was going to thin it down," he answered uncomfortably.

"I should think so!"

"Uh, Sis, what sort of gun should I carry?"

"Huh? Why the deuce do you want a gun?"

"Why, for what I might run into, of course. wild animals and things. Deacon Matson practically said that we could expect dangerous animals."

"I doubt if he advised you to carry a gun. From his reputation, Dr. Matson is a practical man. See here, infant, on this tour you are the rabbit, trying to escape the fox. You aren't the fox."

"What do you mean?"

"Your only purpose is to stay alive. Not to be brave, not to fight, not to dominate the wilds but just stay breathing. One time in a hundred a gun might save your life; the other ninety-nine it will just tempt you into folly. Oh, no doubt Matson would take one, and I would, too. But we are salted; we know when not to use one. But consider this. That test area is going to be crawling with trigger happy young squirts. If one shoots you, it won't matter that you have a gun, too because you will be dead. But if you carry a gun, it makes you feel cocky; you won't take proper cover. If

you don't have one, then you'll know that you are the rabbit. You'll be careful."

"Did you take a gun on your solo test?"

"I did. And I lost it the first day. Which saved my life."

"How?"

"Because when I was caught without one I ran away from a Bessmer's griffin instead of trying to shoot it. You savvy Bessmer's griffin?"

"Uh, Spica V?"

"Spica IV. I don't know how much outer zoology they are teaching you kids these daysfrom the ignoramuses we get for recruits I've reached the conclusion that this newfangled 'functional education' has abolished studying in favor of developing their cute little personalities.

"Why I had one girl who wanted to never mind; the thing about the griffin is that it does not really have vital organs. Its nervous system is decentralized, even its assimilation system. To kill it quickly you would have to grind it into hamburger. Shooting merely tickles it. But not know that; if I had had my gun I would have found out the hard way. As it was, it treed me for three days, which did my figure good and gave me time to think over the philosophy, ethics, and pragmatics of selfpreservation."

Rod did not argue, but he still had a conviction that a gun was a handy thing to have around. It made him feel good, taller, stronger and more confident, to have one slapping against his thigh. He didn't have to use it not unless he just had to. And he knew enough to take cover; nobody in the class could do a silent sneak the way he could. While Sis was a good soldier, still she didn't know everything and

But Sis was still talking. "I know how good a gun feels. It makes you bright eyed and bushytailed, three meters tall and covered with hair. You're ready for anything and kind of hoping you'll find it. Which is exactly what is dangerous about It because you aren't anything of the sort. You are a feeble, hairless embryo, remarkably easy to kill. You could carry an assault gun with two thousand meters precision range and isotope charges that will blow up a hill, but you still would not have eyes in the back of your head like a janus bird, nor be able to see in the dark like the Thetis pygmies. Death can cuddle up behind you while you are drawing a bead on something in front."

"But, Sis, your own company carries guns.

"Guns, radar, bombs, black scopes, gas, warpers, and some things which we light heartedly hope are secret. What of it? You aren't going to storm a city. Buddy, sometimes I send a girl out on an infiltration patrol, object: information go out, find out, come back alive. How do you suppose I equip her?"

"Never mind. In the first place I don't pick an eager young recruit; I send some unkillable oldtimer. She peels down to her underwear, darkens her skin if it is not dark, and goes out barehanded and barefooted, without so much as a fly swatter. I have yet to lose a scout that way. Helpless and unprotected you do grow eye's in the back of your head, and your nerve ends reach out and feel everything around you. I learned that when I was a brash young j.o., from a salty trooper old enough to be my mother."

Impressed, Rod said slowly, "Deacon Matson told us he would make us take this test barehanded, if he could."

"Dr. Matson is a man of sense.

"Well, what would you take?"

"Test conditions again?"

Rod stated them. Captain Walker frowned. "Mmm . . . not much to go on. Two to ten days probably means about five. The climate won't be hopelessly extreme. I suppose you own a Baby Bunting?"

"No, but I've got a combat parka suit. I thought I would carry it, then if the test area turned out not to be cold, I'd leave it at the gate. I'd hate to lose it; it weighs only half a kilo and cost quite a bit."

"Don't worry about that. There is no point in being the best dressed ghost in Limbo. Okay, besides your parka I would make it four kilos of rations, five of water, two kilos of sundries like pills and matches, all in a vest pack . . . and a knife."

"'That isn't much for five days, much less ten."

"It is all you can carry and still be light on your feet.

"Let's see your knife, dear."

Rod had several knives, but one was "his" knife, a lovely all purpose one with a 21cm. molysteel blade and a fine balance. He handed it to his sister, who cradled it lightly. "Nice!" she said, and glanced around the

room.

"Over there by the outflow."

"I see." She whipped it past her ear, let fly, and the blade sank into the target, sung and quivered. She reached down and drew another from her boot top. "This is a good one, too." She threw and it bit into the target a blade's width from the first.

She retrieved both knives, stood balancing them, one on each hand. She flipped her own so that the grip was toward Rod. "This is my pet, 'Lady Macbeth.' I carried her on my own solo, Buddy. I want you to carry her on yours.

"You want to trade knives? All right." Rod felt a sharp twinge at parting with "Colonel Bowie" and a feeling of dismay that some other knife might let him down. But it was not an offer that he could refuse, not from Sis.

"My very dear! I wouldn't deprive you of your own knife, not on your solo. I want you to carry both, Buddy. You won't starve nor die of thirst, but a spare knife may be worth its weight in thorium."

"Gee, Sis! But I shouldn't take your knife, either you said you were expecting active duty. I can carry a spare of my own"

"I won't need it. My girls haven't let me use a knife in years. I want you to have Lady Macbeth on your test." She removed the scabbard from her boot top, sheathed the blade; and handed it to him. "Wear it in good health, brother."

3 Through the Tunnel

Rod arrived at templeton gate the next morning feeling not his best. He had intended to get a good night's sleep in preparation for his ordeal, but his sister's arrival in conjunction with overwhelming changes in his family had defeated his intention. As with most children Rod had taken his family and home for granted; he had not thought about them much, nor placed a conscious value on them, any more than a fish treasures water. They simply were.

Now suddenly they were not.

Helen and he had talked late. She had begun to have strong misgivings about her decision to let him know of the c ange on the eve of his test. She had weighed it, decided. that it was the "right" thing to do, then had learned the ages old sour truth that right and wrong can sometimes be determined

only through hindsight. It had not been fair, she later concluded, to load anything else on his mind just before his test; But it had not seemed fair, either, to let him leave without knowing. . . to return to an empty house.

The decision was necessarily hers; she had been his guardian since earlier that same day. The papers had been signed and sealed; the court had given approval. Now she found with a sigh that being a "parent" was not unalloyed pleasure; it was more like the soul searching that had gone into her first duty as member of a court martial.

When she saw that her "baby" was not quieting, she had insisted that he go to bed anyhow, then had given him a long back rub, combining it with hypnotic instructions to sleep, then had gone quietly away when he seemed asleep.

But Rod had not been asleep; he had simply wanted to be alone. His mind raced like an engine with no load for the best part of an hour, niggling uselessly at the matter of his father's illness, wondering what it was going to be like to greet them again after twenty years why, he would be almost as old as Mum! switching over to useless mental preparations for unknown test conditions.

At last he realized that he had to sleep forced himself to run through mental relaxing exercises, emptying his mind and hypnotizing himself. It took longer than ever before but finally he entered a great, golden, warm cloud and was asleep.

His bed mechanism had to call him twice. He woke bleary-eyed and was still so after a needle shower. He looked in a mirror, decided that shaving did not matter where he was going and anyhow he was late then decided to shave after all . . . being painfully shy about his sparse young growth.

Mum was not up, but she hardly ever got up as early as that. Dad rarely ate breakfast these days . . . Rod recalled why with a twinge. But he had expected Sis to show up. Glumly he opened his tray and discovered that Mum had forgotten to dial an order, something that had not happened twice in his memory. He placed his order and waited for service another ten minutes lost.

Helen showed up as he was leaving, dressed surprisingly in a dress. "Good morning."

"Hi, Sis. Say, you'll have to order your own tucker. Mother didn't and I didn't know what you wanted."

"Oh, I had breakfast hours ago. I was waiting to see you off."

"Oh. Well, so long. I've got to run, I'm late."

"I won't hold you up." She came over and embraced him. "Take it easy, mate. That's the important thing. More people have died from worry than ever bled to death. And if you do have to strike, strike low."

"Uh, I'll remember."

"See that you do. I'm going to get my leave extended today so that I'll be here when you come back." She kissed him. "Now run."

Dr. Matson was sitting at a desk outside the dispensary at Templeton Gate, checking names on his roll. He looked up as Rod arrived. "Why, hello, Walker. I thought maybe you had decided to be smart."

'I'm sorry I'm late, sir. Things happened."

"Don't fret about it. Knew a man once who didn't get shot at sunrise because he overslept the appointment."

"Really? Who was he?"

"Young fellow I used to know. Myself."

"Hunh? You really did, sir? You mean you were"

"Not a word of truth in it. Good stories are rarely true. Get on in there and take your physical, before you get the docs irritated."

They thumped him and xrayed him and made a wavy pattern from his brain and did all the indignities that examining physicians do. The senior examiner listened to his heart and felt his moist hand. "Scared, son?"

"Of course I am!" Rod blurted.

"Of course you are. If you weren't, I wouldn't pass you. What's that bandage on your leg?"

"Uh" The bandage concealed Helen's knife "Lady Macbeth." Rod sheepishly admitted the fact.

"Take it off."

"Sir?"

"I've known candidates to pull dodges like that to cover up a disqualification. So let's have a look."

Rod started removing it; the physician let him continue until he was sure that it was a cache for a weapon and not a wound dressing. "Get your clothes on. Report to your instructor.

Rod put on his vest pack of rations and sundries, fastened his canteen under it. It was a belt canteen of flexible synthetic divided into halflitre pockets. The weight was taken by shoulder straps and a tube ran up the left suspender, ending in a nipple near his mouth, so that he might drink wit out taking it off. He planned, if possible, to stretch his meager supply through the whole test, avoiding the hazards of contaminated water and the greater hazards of the water hole assuming that fresh water could be found at all.

He wrapped twenty meters of line, light, strong, and thin, around his waist. Shorts, overshirt, trousers, and boot moccasins completed his costume; he belted "Colonel Bowie" on outside. Dressed, he looked fleshier than he was; only his knife showed. He carried his parka suit over his left arm. It was an efficient garment, hooded, with builtin boots and gloves, and with pressure seams to let him use bare hands when necessary, but it was much too warm to wear until he needed it. Rod had learned early in the game that Eskimos don't dare to sweat.

Dr. Matson was outside the dispensary door. "The late Mr. Walker," he commented, then glanced at the bulkiness of Rod's torso. "Body armor, son?"

"No, sir. Just a vest pack." "How much penalty you carrying?"

"Eleven kilograms. Mostly water and rations."

"Mmm . . well, it will get heavier before it gets lighter. No Handy Dandy Young Pioneer's Kit? No collapsible patent wigwam?"

Rod blushed. "No, sir."

"You can leave that snow suit. Ill mail it to your home."

"Uh, thank you, sir." Rod passed it over, adding, wasn't sure I'd need it, but I brought it along, just in case.

"You did need it."

"Sir?"

"I've already flunked five for showing up without their snuggies. . . and four for showing up with vacuum suits. Both ways for being stupid. They ought to know that the Board would not dump them into vacuum or chlorine or such without specifying space suits in the test notice. We're looking for graduates, not casualties. On the other hand, cold weather is within the limits of useful test conditions."

Rod glanced at the suit he had passed over. "You're sure I won't need it, sir?"

"Quite. Except that you would have flunked if you hadn't fetched it. Now bear a hand and draw whatever pig shooter you favor; the armorer is anxious to close up shop. What gun have you picked?"

Rod gulped. "Uh, I was thinking about not taking one, Deacon I mean 'Doctor.'"

"You can call me 'Deacon' to my face ten days from now. But this notion of yours interests me. How did you reach that conclusion?"

"Uh, why, you see, sir. . . well, my sister suggested it."

"So? I must meet your sister. What's her name?"

"Assault Captain Helen Walker," Rod said proudly, "Corps of Amazons."

Matson wrote it down. "Get on in there. They are ready for the drawing.

Rod hesitated. "Sir," he said with sudden misgiving, "if I did carry a gun, what sort would you advise?"

Matson looked disgusted. "I spend a year trying to spoon feed you kids with stuff I learned the hard way. Comes examination and you ask me to slip you the answers. I can no more answer that than I would have been justified yesterday in telling you to bring a snow suit."

"Sorry, sir.

"No reason why you shouldn't ask; it's just that I won't answer. Let's change the subject. This sister of yours she must be quite a girl."

"Oh, she is, sir."

"Mmm . . . maybe if I had met a girl like that I wouldn't be a cranky old bachelor now. Get in there and draw your number. Number one goes through in six minutes."

"Yes, Doctor." His way led him past the school armorer, who had set up a booth outside the door. The old chap was wiping off a noiseless Summerfield. Rod caught his eye. "Howdy, Guns."

"Hi, Jack. Kind of late, aren't you? What'll it be?"

Rod's eye ran over the rows of beautiful weapons. Maybe just a little needle gun with poisoned pellets .

He wouldn't have to use it .

Then he realized that Dr. Matson had answered his question, with a very broad hint. "Uh, I'm already heeled, Guns. Thanks."

"Okay. Well, good luck, and hurry back."

"Thanks a lot." He went into the gate room.

The seminar had numbered more than fifty students; there were about twenty waiting to take the examination. He started to look around, was stopped by a gate attendant who called out, "Over here! Draw your number."

The lots were capsules in a bowl. Rod reached in, drew one out, and broke it open. "Number seven."

"Lucky seven! Congratulations. Your name, please."

Rod gave his name and turned away, looking for a seat, since it appeared that he had twenty minutes or so to wait. He walked back, staring with interest at what his schoolmates deemed appropriate for survival, any and all conditions.

Johann Braun was seated with empty seats on each side of him. The reason for the empty seats crouched at his feet a big, lean, heavilymuscled boxer dog with unfriendly eyes. Slung over Braun's shoulder was a General Electric Thunderbolt, a shoulder model with telescopic sights and coneoffire control; its power pack Braun wore as a back pack. At his belt were binoculars, knife, first aid kit, and three pouches.

Rod stopped and admired the gun, wondering how much the lovely thing had cost. The dog raised his head and growled.

Braun put a hand on the dog's head. "Keep your distance," he warned. "Thor is a one-man dog."

Rod gave back a pace. "Yo, you are certainly equipped."

The big blond youth gave a satisfied smile. "Thor and I are going to live off the country."

"You don't need him, with that cannon.

"Oh, yes, I do. Thor's my burglar alarm. With him at my side I can sleep sound. You'd be surprised at the things he can do. Thor's smarter than most people."

"Shouldn't wonder."

"The Deacon gave me some guff that the two of us made a team and should go through separately. I explained to him that Thor would tear the joint apart if they tried to separate us." Braun caressed the dog's ears. "I'd rather team with Thor than with a platoon of Combat Pioneers."

"Say, Yo, how about letting me try that stinger? After we come out, I mean.

"I don't mind. It really is a honey. You can pick off a sparrow in the air as easily as you can drop a moose at a thousand meters. Say, you're making Thor nervous. See you later."

Rod took the hint, moved on and sat down. He looked around, having in mind that he might still arrange a survival team. Near the shuttered arch of the gateway there was a priest with a boy kneeling in front of him, with four others waiting.

The boy who had been receiving the blessing stood up and Rod stood up hastily. "Hey! Jimmy!"

Jimmy Throxton looked around, caught his eye and grinned, hurried over. "Rod!" he said, "I thought you had ducked out on me. Look, you haven't teamed?"

"Still want to?"

"Huh? Sure."

"Swell! I can declare the team as I go through as long as you don't have number two. You don't, do you?"

"No"

"Good! Because I'm"

"NUMBER ONE!" the gate attendant called out. "'Throxton, James.'"

Jimmy Throxton looked startled. "Oh, gee!" He hitched at his gun belt and turned quickly away, then called over his shoulder, "See you on the other side!" He trotted toward the gate, now unshuttered.

Rod called out, "Hey, Jimmy! How are we going to find" But it was too late. Well, if Jimmy had sense enough to drive nails, he would keep an eye on the exit.

"Number two! Mshiyeni, Caroline." Across the room the big Zulu girl who had occurred to Rod as a possible team mate got up and headed for the gate. She was dressed simply in shirt and shorts, with her feet and legs and hands bare. She did not appear to be armed but she was carrying an overnight bag.

Someone called out, "Hey, Carol! What you got in the trunk?"

She threw him a grin. "Rocks."

"Ham sandwiches, I'll bet. Save me one.

"I'll save you a rock, sweetheart."

Too soon the attendant called out, "Number seven Walker, Roderick L."

Rod went quickly to the gate. The attendant shoved a paper into his hand, then shook hands. "Good luck, kid. Keep your eyes open." He gave Rod a slap on the back that urged him through the opening, dilated to man size.

Rod found himself on the other side and, to his surprise, still indoors. But that shock was not as great as immediate unsteadiness and nausea; the gravity acceleration was much less than earthnormal.

He fought to keep from throwing up and tried to figure things out. Where was he? On Luna? On one of Jupiter's moons? Or somewhere 'way out there?

The Moon, most likely Luna. Many of the longer jumps were relayed through Luna because of the danger of mixing with a primary, particularly with binaries. But surely they weren't going to leave him here; Matson had promised them no airless test areas.

On the floor lay an open valise; he recognized it absentmindedly as the one Caroline had been carrying. At last he remembered to look at the paper he had been handed.

It read:

SOLO SURVIVAL TESTRecall Instructions

1. You must pass through the door ahead in the three minutes allowed you before another candidate is started through. An overlapping delay will disqualify you.

2.Recall will be by standard visual and sound signals. You are warned that the area remains hazardous even after recall is sounded.

3.The exit gate will not be the entrance gate. Exit may be as much as twenty kilometers in the direction of sunrise.

4. There is no truce zone outside the gate. Test starts at once. Watch out for stobor. Good luck!

B. P.M.

Rod was still gulping at low gravity and staring at the paper when a door opened at the far end of the long, narrow room he was in. A man shouted, "Hurry up! You'll lose your place."

Rod tried to hurry, staggered and then recovered too much and almost fell. He had experienced low gravity on field trips and his family had once vacationed on Luna, but he was not used to it; with difficulty he managed to skate toward the far door.

Beyond the door was another gate room. The attendant glanced at the timer over the gate and said, "Twenty seconds. Give me that instruction sheet."

Rod hung onto it. "I'll use the twenty seconds."as much as twenty kilometers in the direction of sunrise. A nominal eastward direction call it "east." But what the deuce was, or were, "stobor"?

"Time! Through you go." The attendant snatched the paper, shutters rolled back, and Rod was shoved through a dilated gate.

He fell to his hands and knees; the gravity beyond was something close to earthnormal and the change had caught him unprepared. But he stayed down, held perfectly still and made no sound while he quickly looked around him. He was in a wide clearing covered with high grass and containing scattered trees and bushes; beyond was dense forest.

He twisted his neck in a hasty survey. Earth type planet, near normal acceleration, probably a Gtype sun in the sky . . . heavy vegetation, no

fauna in sight but that didn't mean anything; there might be hundreds within hearing. Even a stobor, whatever that was.

The gate was behind him, tall dark green shutters which were in reality a long way off. They stood unsupported in the tall grass, an anomalism unrelated to the primitive scene. Rod considered wriggling around behind the gate, knowing that the tangency was onesided and that he would be able to see through the locus from the other side, see anyone who came out without himself being seen.

Which reminded him that he himself could be seen from that exceptional point; he decided to move.

Where was Jimmy? Jimmy ought to be behind the gate, watching for him to come out, or watching from some other spy point. The only certain method of rendezvous was for Jimmy to have waited for Rod's appearance; Rod had no way to find him now.

Rod looked around more slowly and tried to spot anything that might give a hint as to Jimmy's whereabouts. Nothing . . . but when his scanning came back to the gate, the gate was no longer there.

Rod felt cold ripple of adrenalin shock trickle down his back and out his finger tips. He forced himself to quiet down and told himself that it was better this way. He had a theory to account for the disappearance of the gate; they were, he decided, refocusing it between each pair of students, scattering them possibly kilometers apart.

No, that could not be true "twenty kilometers toward sunrise" had to relate to a small area.

Or did it? He reminded himself that the orientation given in the sheet handed him might not be that which appeared in some other student's instruction sheet. He relaxed to the fact that he did not really know anything. . . he did not know where he was, nor where Jimmy was, nor any other member of the class, he did not know what he might find here, save that it was a place where a man might stay alive if he were smart and lucky.

Just now his business was to stay alive, for a period that he might as well figure as ten Earth days. He wiped Jimmy Throxton out of his mind, wiped out everything but the necessity of remaining unceasingly alert to all of his surroundings. He noted wind direction as shown by grass plumes and started crawling cautiously down wind.

The decision to go down wind had been difficult. To go up wind had been his

first thought, that being the natural direction for a stalk. But his sister's advice had already paid off; he felt naked and helpless without a gun and it had reminded him that he was not the hunter. His scent would carry in any case; if he went down wind he stood a chance of seeing what might be stalking him, while his unguarded rear would be comparatively safe.

Something ahead in the grass!

He froze and watched. It had been the tiniest movement; he waited. There it was again, moving slowly from right to left across his front. It looked like a dark spike with a tuft of hair on the tip, a tail possibly, carried aloft.

He never saw what manner of creature owned the tail, if it was a tail. It stopped suddenly at a point Rod judged to be directly down wind, then moved off rapidly and he lost Sight of it. He waited a few minutes, then resumed crawling.

It was extremely hot work and sweat poured down him and soaked his overshirt and trousers. He began to want a drink very badly but reminded himself that five litres of water would not last long if he started drinking the first hour of the test. The sky was overcast with high cirrus haze, but the primary or "sun" he decided to call it the Sun seemed to burn through fiercely. It was low in the sky behind him; he wondered what it would be like overhead? Kill a man, maybe. Oh, well, it would be cooler in that forest ahead, or at least not be the same chance of sunstroke.

There was lower ground ahead of him and hawk like birds were circling above the spot, round and round. He held still and watched. Brothers, he said softly, if you are behaving like vultures back home, there is something dead ahead of me and you are waiting to make sure it stays dead before you drop in for lunch. If so, I had better swing wide, for it is bound to attract other things. . . some of which I might not want to meet.

He started easing to the right, quartering the light breeze. It took him onto higher ground and close to a rock outcropping. Rod decided to spy out what was in the lower place below, making use of cover to let him reach an overhanging rock.

It looked mightily like a man on the ground and a child near him. Rod reached, fumbled in his vest pack, got out a tiny 8power monocular, took a better look. The man was Johann Braun, the "child" was his boxer dog. There was no doubt but that they were dead, for Braun was lying like a tossed rag doll, with his head twisted around and one leg bent under. His throat and the side of his head were a dark red stain.

While Rod watched, a doglike creature trotted out, sniffed at the boxer, and began tearing at it . . . then the first of the buzzard creatures landed to join the feast. Rod took the glass from his eye, feeling queasy. Old Yo had not lasted long jumped by a "stobor" maybe and his smart dog had not saved him. Too bad! But it did prove that there were carnivores around and it behooved him to be careful if he did not want to have jackals and vultures arguing over the leavings!

He remembered something and put the glass back to his eye. Yo's proud Thunderbolt gun was nowhere in sight and the corpse was not wearing the power pack that energized it. Rod gave a low whistle in his mind and thought. The only animal who would bother to steal a gun ran around on two legs. Rod reminded himself that a Thunderbolt could kill at almost any line-of-sight range and now somebody had it who obviously took advantage of the absence of law and order in a survival test area.

Well, the only thing to do was not to be in line of sight. He backed off the rock and slid into the bushes.

The forest had appeared to be two kilometers away, or less, when he had started. He was close to it when he became uncomfortably aware that sunset was almost upon him. He became less cautious, more hurried, as he planned to spend the night in a tree. This called for light to climb by, since he relished a night on the ground inside the forest still less than he liked the idea of crouching helpless in the grass.

It had not taken all day to crawl this far. Although it had been morning when he had left Templeton Gate the time of day there had nothing to do with the time of day here. He had been shoved through into late afternoon; it was dusk when he reached the tall trees.

So dusky that he decided that he must accept a calculated risk for what he must do. He stopped at the edge of the forest, still in the high grass, and dug into his pack for his climbers. His sister had caused him to leave behind most of the gadgets, gimmicks, and special purpose devices that he had considered bringing; she had not argued at these. They were climbing spikes of a style basically old, but refined, made small and light, the pair weighed less than a tenth of a kilogram and made foldable and compact, from a titanium alloy, hard and strong.

He unfolded them, snapped them under his arches and around his shins, and locked them in place. Then he eyed the tree he had picked, a tall giant deep enough in the mass to allow the possibility of crossing to another tree if the odds made a backdoor departure safer and having a trunk which, in spite of its height, he felt sure he could get his arms around.

Having picked his route, he straightened up and at a fast dogtrot headed for the nearest tree. He went past it, cut left for another tree, passed it and cut right toward the tree he wanted. He was about fifteen meters from it when something charged him.

He closed the gap with instantaneous apportation which would have done credit to a Ramsbotham hyperfold. He reached the first branch, ten meters above ground, in what amounted to levitation. From there on he climbed more conventionally, digging the spurs into the tree's smooth bark and setting his feet more comfortably on branches when they began to be close enough together to form a ladder.

About twenty meters above ground he stopped and looked down. The branches interfered and it was darker under the trees than it had been out in the open; nevertheless he could see, prowling around the tree, the denizen that had favored him with attention.

Rod tried to get a better view, but the light was failing rapidly. But it looked like. . . well, if he had not been certain that he was on some uncolonized planet 'way out behind and beyond, he would have said that it was a lion.

Except that it looked eight times as big as any lion ought to look.

He hoped that, whatever it was, it could not climb trees. Oh, quit fretting, Rod! if it had been able to climb you would have been lunch meat five minutes ago. Get busy and rig a place to sleep before it gets pitch dark. He moved up the tree, keeping an eye out for the spot he needed.

He found it presently, just as he was beginning to think that he would have to go farther down. He needed two stout branches far enough apart and near enough the same level to let him stretch a hammock. Having found such, he worked quickly to beat the failing light. From a pocket of his vest pack he took out his hammock, a web strong as spider silk and almost as thin and light. Using the line around his waist he stretched it, made sure his lashings would hold and then started to get into it.

A doublejointed acrobat with prehensile toes might have found it easy; a slackwire artist would simply have walked into it and sat down. But Rod found that he needed sky hooks. He almost fell out of the tree.

The hammock was a practical piece of equipment and Rod had slept in it before. His sister had approved it, remarking that it was a better model than the field hammock they gave her girls. "Just don't sit up in your sleep."

"I won't," Rod had assured her. "Anyway, I always fasten the chest belt."

But he had never slung it in this fashion. There was nothing to stand on under the hammock, no tree limb above it close enough to let him chin himself into it. After several awkward and breath catching attempts he began to wonder whether he should perch like a bird the rest of the night, or drape himself in the notch of a limb. He did not consider spending the night on the ground not with that thing prowling around.

There was another limb higher up almost directly over the hammock. Maybe if he tossed the end of his line over it and used it to steady himself . . .

He tried it. But it was almost pitch dark now; the only reason he did not lose his line was that one end was bent to the hammock. At last he gave up and made one more attempt to crawl into the hammock by main force and extreme care. Bracing both hands wide on each side of the head rope he scooted his feet out slowly and cautiously. Presently he had his legs inside the hammock, then his buttocks. From there on it was a matter of keeping his center of gravity low and making no sudden moves while he insinuated his body farther down into the cocoon.

At last he could feel himself fully and firmly supported. He took a deep breath, sighed, and let himself relax. It was the first time he had felt either safe or comfortable since passing through the gate.

After a few minutes of delicious rest Rod located the nipple of his canteen and allowed himself two swallows of water, after which he prepared supper. This consisted in digging out a quarter-kilo brick of field ration, eleven hundred calories of yeast protein, fat, starch, and glucose, plus trace requirements. The label on it, invisible in the dark, certified that it was "tasty, tempting and pleasing in texture," whereas chewing an old shoe would have attracted a gourmet quite as much.

But real hunger gave Rod the best of sauces. He did not let any crumb escape and ended by licking the wrapper. He thought about opening another one, quelled the longing, allowed himself one more mouthful of water, then pulled the insect hood of the hammock down over his face and fastened it under the chest belt. He was immune to most insect carried Terran diseases and was comfortably aware that humans were not subject to most Outlands diseases, but he did not want the night fliers to use his face as a drinking fountain, nor even as a parade ground.

He was too hot even in his light clothing. He considered shucking down to his shorts; this planet, or this part of this planet, seemed quite tropical. But it was awkward; tonight he must stay as he was, even if it

meant wasting a day's ration of water in sweat. He wondered what planet this was, then tried to peer through the roof of the forest to see if he could recognize stars. But either the trees were impenetrable or the sky was overcast; he could see nothing. He attempted to draw everything out of his mind and sleep.

Ten minutes later he was wider awake than ever. Busy with his hammock, busy with his dinner, he had not paid attention to distant sounds; now he became aware of all the voices of the night. Insects buzzed and sang and strummed, foliage rustled and whispered, something coughed below him. The cough was answered by insane laughter that ran raggedly up, then down, and died in asthmatic choking.

Rod hoped that it was a bird.

He found himself straining to hear every sound, near and far, holding his breath. He told himself angrily to stop it; he was safe from at least ninetenths of potential enemies. Even a snake, if this place ran to such, would be unlikely to crawl out to the hammock, still less likely to attack if he held still. Snakes, button-brained as they were, showed little interest in anything too big to swallow. The chances of anything big enough to hurt him and interested in hurting him being in this treetop were slim. So forget those funny noises, pal, and go to sleep. After all, they're no more important than traffic noises in a city.

He reminded himself of the Deacon's lecture on alarm reaction, the thesis that most forms of death could be traced to the body's coming too urgently to battle stations, remaining too long at full alert. Or, as his sister had put it, more people worry themselves to death than bleed to death. He set himself conscientiously to running through the mental routines intended to produce sleep.

He almost made it. The sound that pulled him out of warm drowsiness came from far away; involuntarily he roused himself to hear it. It sounded almost human. . . no, it was human the terrible sound of a grown man crying with heartbreak, the deep, retching, bass sobs that tear the chest.

Rod wondered what he ought to do. It was none of his business and everyone there was on his own but it went against the grain to hear such agony from a fellow human and ignore it. Should he climb down and feel his way through the dark to wherever the poor wretch was? Stumbling into tree roots, he reminded himself, and falling into holes and maybe walking straight into the jaws of something hungry and big.

Well, should he? Did he have any right not to?

It was solved for him by the sobs being answered by more sobs, this time closer and much louder. This new voice did not sound human, much as it was like the first, and it scared him almost out of his hammock. The chest strap saved him.

The second voice was joined by a third, farther away. In a few moments the peace of the night had changed to sobbing, howling ululation of mass fear and agony and defeat unbearable. Rod knew now that this was nothing human, nor anything he had ever heard, or heard of, before. He suddenly had a deep conviction that these were the stobor he had been warned to avoid.

But what were they? How was he to avoid them? The one closest seemed to be higher up than he was and no farther than the next tree . . . good grief, it might even be this tree!

When you meet a stobor in the dark what do you do? Spit in its face? Or ask it to waltz?

One thing was certain: anything that made that much noise in the jungle was not afraid of anything; therefore it behooved him to be afraid of it. But, there being nothing he could do, Rod lay quiet, his fear evidenced only by tense muscles, gooseflesh, and cold sweat. The hellish concert continued with the "stobor" closest to him sounding almost in his pocket. It seemed to have moved closer.

With just a bit more prodding Rod would have been ready to sprout wings and fly. Only at home on the North American continent of Terra had he ever spent a night alone in the wilderness. There the hazards were known and minor . . . a few predictable bears, an occasional lazy rattlesnake, dangers easily avoided.

But how could he guard against the utterly unknown? That stobor he decided that he might as well call it that that stobor might be moving toward him now, sizing him up with night eyes, deciding whether to drag him home, or eat him where it killed him.

Should he move? And maybe move right into the fangs of the stobor? Or should he wait, helpless, for the stobor to pounce? It was possible that the stobor could not attack him in the tree. But it was equally possible that stobor were completely arboreal and his one chance lay in climbing down quickly and spending the night on the ground.

What was a stobor? How did it fight? Where and when was it dangerous? The Deacon evidently expected the class to know what to do about them. Maybe they had studied the stobor those days he was out of school right after New Year's? Or maybe he had just plain forgotten. . . and would pay for it with

his skin. Rod was good at Outlands zoology but there was just too much to learn it all. Why, the zoology of Terra alone used to give old style zoologists more than they could handle; how could they expect him to soak up all there was to learn about dozens of planets?

It wasn't fair!

When Rod heard himself think that ancient and useless protest he had a sudden vision of the Deacon's kindly, cynical smile. He heard his dry drawl: Fair? You expected this to be fair, son? This is not a game. I tried to tell you that you were a city boy, too soft and stupid for this. You would not listen.

He felt a gust of anger at his instructor; it drove fear out of his mind. Jimmy was right; the Deacon would eat his own grandmother! A cold, heartless fish!

All right, what would the Deacon do?

Again he heard his teacher's voice inside his head, an answer Matson had once given to a question put by another classmate: "There wasn't anything I could do, so I took a nap.

Rod squirmed around, rested his hand on "Colonel Bowie" and tried to take a nap. The unholy chorus made it almost impossible, but he did decide that the stobor in his tree or was it the next tree? did not seem to be coming closer. Not that it could come much closer without breathing on his neck, but at least it did not seem disposed to attack.

After a long time he fell into restless sleep, sleep that was no improvement, for he dreamed that he had a ring of sobbing, ululating stobor around him, staring at him, waiting for him to move. But he was trussed up tight and could not move.

The worst of it was that every time he turned his head to see what a stobor looked like it would fade back into the dark, giving him just a hint of red eyes, long teeth.

He woke with an icy shock, tried to sit up, found himself restrained by his chest strap, forced himself to lie back. What was it? What had happened?

In his suddenly awakened state it took time to realize what had happened: the noise had stopped. He could not hear the cry of a single stobor, near or far. Rod found it more disturbing than their clamor, since a noisy stobor advertised its location whereas a silent one could be anywhere why, the nearest one could now be sitting on the branch behind his head. He

twisted his head around, pulled the insect netting off his face to see better. But it was too dark; stobor might be queued up three abreast for all he could tell.

Nevertheless the silence was a great relief. Rod felt himself relax as he listened to the other night sounds, noises that seemed almost friendly after that devils' choir. He decided that it must be almost morning and that he would do well to stay awake.

Presently he was asleep.

He awoke with the certainty that someone was looking at him. When he realized where he was and that it was still dark, he decided that it was a dream. He stirred, looked around, and tried to go back to sleep.

Something was looking at him!

His eyes, made sensitive by darkness, saw the thing as a vague shape on the branch at his foot. Black on black, he could not make out its outline but two faintly luminous eyes stared unwinkingly back into his.

"nothing I could do, so I took a nap." Rod did not take a nap. For a time measured in eons he and the thing in the tree locked eyes. Rod tightened his grip on his knife and held still, tried to quell the noise of his pounding heart, tried to figure out how he could fight back from a hammock. The beast did not move, made no sound; it simply stared and seemed prepared to do it all night.

When the ordeal had gone on so long that Rod felt a mounting impulse to shout and get it over, the creature moved with light scratching sounds toward the trunk and was gone. Rod could feel the branch shift; he judged that the beast must weigh as much as he did.

Again he resolved to stay awake. Wasn't it getting less dark? He tried to tell himself so, but he still could not see his own fingers. He decided to count to ten thousand and bring on the dawn.

Something large went down the tree very fast, followed at once by another, and still a third. They did not stop at Rod's bedroom but went straight down the trunk. Rod put his knife back and muttered, "Noisy neighbors! You'd think this was Emigrants' Gap." He waited but the frantic procession never came back.

He was awakened by sunlight in his face. It made him sneeze; he tried to sit up, was caught by his safety belt, became wide awake and regretted it. His nose was stopped up, his eyes burned, his mouth tasted like a ditch,

his teeth were slimy, and his back ached. When he moved to ease it he found that his legs ached, too and his arms and his head. His neck refused to turn to the right.

Nevertheless he felt happy that the long night was gone. His surroundings were no longer terrifying, but almost idyllic. So high up that he could not see the ground he was still well below the roof of the jungle and could not see sky; he floated in a leafly cloud. The morning ray that brushed his face was alone, so thoroughly did trees shut out the sky.

This reminded him that he had to mark the direction of sunrise. Hmm . . . not too simple. Would he be able to see the sun from the floor of the jungle? Maybe he should climb down quickly, get out in the open, and mark the direction while the sun was still Jow. But he noticed that the shaft which had wakened him was framed by a limb notch of another forest giant about fifteen meters away. Very well, that tree was "east" of his tree; he could line them up again when he reached the ground.

Getting out of his hammock was almost as hard as getting in; sore muscles resented the effort. At last he was balanced precariously on one limb. He crawled to the trunk, pulled himself painfully erect and, steadied by the trunk, took half-hearted setting up exercises to work the knots out. Everything loosened up but his neck, which still had a crick like a toothache.

He ate and drank sitting on the limb with his back to the trunk. He kept no special lookout, rationalizing that night feeders would be bedded down and day feeders would hardly be prowling the tree topsnot big ones, anyway; they would be on the ground, stalking herbivores. The truth was that his green hideaway looked too peaceful to be dangerous.

He continued to sit after he finished eating, considered drinking more of his precious water, even considered crawling back into his hammock. Despite the longest night he had ever had he was bone tired and the day was already hot and sleepy and humid; why not stretch out? His only purpose was to survive; how better than by sleeping and thereby saving food and water?

He might have done so had he known what time it was. His watch told him that it was five minutes before twelve, but he could not make up his mind whether that was noon on Sunday or midnight coming into Monday. He was sure that this planet spun much more slowly than did Mother Earth; the night before had been at least as long as a full Earth day.

Therefore the test had been going on at least twenty-six hours and possibly thirty-eight and recall could be any time after forty-eight hours. Why, it might be today, before sunset, and here he was in fine shape, still alive,

still with food and water he could trust.

He felt good about it. What did a stobor have that a man did not have more of and better? Aside from a loud voice, he added.

But the exit gate might be as much as twenty kilometers "east" of where he had come in; therefore it behooved him to reach quickly a point ten kilometers east of where he had come in; he would lay money that that would land him within a kilometer or two of the exit. Move along, hole up, and wait why, he might sleep at home tonight, after a hot bath!

He started unlashing his hammock while reminding himself that he must keep track of hours between sunrise and sunset today in order to estimate the length of the local day. Then he thought no more about it as he had trouble folding the hammock. It had to be packed carefully to fit into a pocket of his vest pack. The filmy stuff should have been spread on a table, but where he was the largest, flattest area was the palm of his hand.

But he got it done, lumpy but packed, and started down. He paused on the lowest branch, looked around. The oversized and hungry thing that had chased him up the tree did not seem to be around, but the undergrowth was too dense for him to be sure. He made a note that he must, all day long and every day, keep a climbable tree in mind not too far away; a few seconds woolgathering might use up his luck.

Okay, now for orientation Let's see, there was the tree he had used to mark "east." Or was it? Could it be that one over there? He realized that he did not know and swore at himself for not checking it by compass. The truth was that he had forgotten that he was carrying a compass. He got it out now, but it told him nothing,

Since east by compass bore no necessary relation to direction of sunrise on this planet. The rays of the primary did not penetrate where he was; the forest was bathed by a dim religious light unmarked by shadows.

Well, the clearing could not be far away. He would just have to check. He descended by climbing spurs, dropped to spongy ground, and headed the way it should be. He counted his paces while keeping an eye peeled for hostiles.

One hundred paces later he turned back, retracing his own spoor. He found "his" tree; this time he examined it. There was where he had come down; he could see his prints. Which side had he gone up? There should be spur marks.

He found them . . . and was amazed at his own feat; they started high as

his head. "I must have hit that trunk like a cat!" But it showed the direction from which he had come; five minutes later he was at the edge of the open country he had crossed the day before.

The sun made shadows here, which straightened him out and he checked by compass. By luck, east was "east" and he need only follow his compass. It took him back into the forest.

He traveled standing up. The belly sneak which he had used the day before was not needed here; he depended on moving noiselessly, using cover, and keeping an eye out behind as well as in front. He zigzagged in order to stay close to trees neither too big ilor too small but corrected his course frequently by compass.

One part of his mind counted paces. At fifteen hundred broken country steps to a kilometer Rod figured that fifteen thousand should bring him to his best guess location for the exit gate, where he planned to set up housekeeping until recall.

But, even with part of his mind counting paces and watching a compass and a much larger part watching for carnivores, snakes, and other hazards, Rod still could enjoy the day and place. He was over his jitters of the night before, feeling good and rather cocky. Even though he tried to be fully alert, the place did not feel dangerous now stobor or no stobor.

It was, he decided, jungle of semi-rainforest type, not dense enough to require chopping one's way. It was interlaced with game paths but he avoided these on the assumption that carnivores might lie waiting for lunch to come down the path Rod had no wish to volunteer.

The place seemed thick with game, mostly of antelope type in many sizes and shapes. They were hard to spot; they faded into the bush with natural camouflage, but the glimpses he got convinced him that they were plentiful. He avoided them as he was not hunting and was aware that even a vegetarian could be dangerous with hooves and horns in self or herd defense.

The world above was inhabited, too, with birds and climbers. He spotted families of what looked like monkeys and speculated that this world would probably have developed its own race of humanoids. He wondered again what planet it was? Terrestrial to several decimal places it certainly seemed to be except for the inconveniently long day and probably one just opened, or it would be swarming with colonists. It would be a premium planet certainly; that clearing he had come through yesterday would make good farm land once it was burned off. Maybe he would come back some day and help clean out the stobor.

In the meantime he watched where he put his hands and feet, never walked under a low branch without checking it, and tried to make his eyes and ears as efficient as a rabbit's. He understood now what his sister had meant about how being unarmed makes a person careful, and realized also how little chance he would have to use a gun if he let himself be surprised.

It was this hyper acuteness that made him decide that he was being stalked.

At first it was just uneasiness, then it became a conviction. Several times he waited by a tree, stood frozen and listened; twice he did a sneak through bushes and doubled back on his tracks. But whatever it was seemed as good as he was at silent movement and taking cover and (he had to admit) a notch better.

He thought about taking to the trees and out waiting it. But his wish to reach his objective outweighed his caution; he convinced himself that he would be safer if he pushed on. He continued to pay special attention to his rear, but after a while he decided that he was no longer being followed.

When he had covered, by his estimate, four kilometers, he began to smell water. He came to a ravine which sliced across his route. Game tracks led him to think it might lead down to a watering place, just the sort of danger area he wished to avoid, so Rod crossed quickly and went down the shoulder of the ravine instead. It led to a bank overlooking water; he could hear the stream before he reached it.

He took to the bushes and moved on his belly to a point where he could peer out from cover. He was about ten meters higher than the water. The ground dropped off on his right as well as in front; there the ravine joined the stream and an eddy pool formed the watering place he had expected. No animals were in sight but there was plenty of sign; a mud flat was chewed with hoof marks.

But he had no intention of drinking where it was easy; would be too easy to die there. What troubled him was that he must cross the stream to reach the probable recall area. It was a small river or wide brook, not too wide to swim, probably not too deep to wade if he picked his spot. But he would not do either one unless forced and not then without testing the water by chucking a lure into it . . . a freshly killed animal. The streams near his home were safe, but a tropical stream must be assumed to have local versions of alligator, pirahna, or even worse.

The stream was too wide to cross through the tree tops. He lay still and considered the problem, then decided that he would work his way upstream and hope that it would narrow, or split into two smaller streams which he

could tackle one at a time.

It was the last thing he thought about for some time.

When Rod regained consciousness it was quickly; a jackal-like creature was sniffing at him. Rod lashed out with one hand and reached for his knife with the other. The dog brute backed away, snarling, then disappeared in the leaves.

His knife was gone! The realization brought him groggily alert; he sat up. It made his head swim and hurt. He felt it and his fingers came away bloody. Further gingerly investigation showed a big and very tender swelling on the back of his skull, hair matted with blood, and failed to tell him whether or not his skull was fractured. He gave no thanks that he had been left alive; he was sure that the blow had been intended to kill.

But not only his knife was gone. He was naked, save for his shorts. Gone were his precious water, his vest pack with rations and a dozen other invaluable articles his antibiotics, his salt, his compass, his climbers, his matches, his hammock . . . everything.

His first feeling of sick dismay was replaced by anger. Losing food and gear was no more than to be expected, since he had been such a fool as to forget his rear while he looked at the stream but taking the watch his father had given him, that was stealing; he would make somebody pay for that!

His anger made him feel better. It was not until then that he noticed that the bandage on his left shin was undisturbed.

He felt it. Sure enough! Whoever it was who had hijacked him had not considered a bandage worth stealing; Rod unwrapped it and cradled Lady Macbeth in his hand.

Somebody was going to be sorry.

4 Savage

Rod Walker was crouching on a tree limb. He had not moved for two hours, he might not move for as long a time. In a clearing near him a small herd of yearling bachelor buck were cropping grass; if one came close enough Rod intended to dine on buck. He was very hungry.

He was thirsty, too, not having drunk that day. Besides that, he was slightly feverish. Three long, imperfectly healed scratches on his left arm accounted for the fever, but Rod paid fever and scratches no attention he

was alive; he planned to stay alive.

A buck moved closer to him; Rod became quiveringly alert. But the little buck tossed his head, looked at the branch, and moved away. He did not appear to see Rod; perhaps his mother had taught him to be careful of overhanging branches or perhaps a hundred thousand generations of harsh survival had printed it in his genes.

Rod swore under his breath and lay still. One of them was bound to make a mistake eventually; then he would eat. It had been days since he had thought about anything but food . . . food and how to keep his skin intact, how to drink without laying himself open to ambush, how to sleep without waking up in a fellow denizen's belly.

The healing wounds on his arm marked how expensive his tuition had been. He had let himself get too far from a tree once too often, had not even had time to draw his knife. Instead he had made an impossible leap and had chinned himself with the wounded arm. The thing that had clawed him he believed to be the same sort as the creature that had treed him the day of his arrival; furthermore he believed it to be a lion. He had a theory about that, but had not yet been able to act on it.

He was gaunt almost to emaciation and had lost track of time. He realized that the time limit of the survival test had probably almost certainly passed, but he did not know how long he had lain in the crotch of a tree, waiting for his arm to heal, nor exactly how long it had been since he had come down, forced by thirst and hunger. He supposed that the recall signal had probably been given during one of his unconscious periods, but he did not worry nor even think about it. He was no longer interested in survival tests; he was interested in survival.

Despite his weakened condition his chances were better now than when he had arrived. He was becoming sophisticated, no longer afraid of things he had been afraid of, most acutely wary of others which had seemed harrnless. The creatures with the ungodly voices which he had dubbed "stobor" no longer fretted him; he had seen one, had disturbed it by accident in daylight and it had given voice. It was not as big as his hand, and reminded him of a horned lizard except that it had the habits of a tree toad. Its one talent was its voice; it could blow up a bladder at its neck to three times its own size, then give out with that amazing, frightening sob.

But that was all it could do.

Rod had guessed that it was a love call, then had filed the matter. He still called them "stobor."

He had learned about a forest vine much like a morning glory, but its leaves carried a sting worse than that of a nettle, toxic and producing numbness. Another vine had large grapelike fruits, deliciously tempting and pleasant to the palate; Rod had learned the hard way that they were a powerful purgative.

He knew, from his own narrow brushes and from kills left half eaten on the ground, that there were carnivores around even though he had never had a good look at one. So far as he knew there were no carnivorous tree climbers large enough to tackle a man, but he could not be certain; he slept with one eye open.

The behavior of this herd caused him to suspect that there must be carnivores that hunted as he was now hunting, even though he had had the good fortune not to tangle with one. The little buck had wandered all over the clearing, passed close by lesser trees, yet no one of them had grazed under the tree Rod was in.

Steady, boy . . . here comes one. Rod felt the grip of "Lady Macbeth," got ready to drop onto the graceful little creature as it passed under. But five meters away it hesitated, seemed to realize that it was straying from its mates, and started to turn.

Rod let fly.

He could hear the meaty tunk! as blade bit into muscle; he could see the hilt firm against the shoulder of the buck. He dropped to the ground, hit running and moved in to finish the kill.

The buck whipped its head up, turned and fled. Rod dived, did not touch it. When he rolled to his feet the clearing was empty. His mind was filled with bitter thoughts; he had promised himself never to throw his knife when there was any possibility of not being able to recover it, but he did not let regrets slow him; he got to work on the tracking problem.

Rod had been taught the first law of hunting sportsmanship, that a wounded animal must always be tracked down and finished, not left to suffer and die slowly. But there was no trace of "sportsmanship" in his present conduct; he undertook to track the buck because he intended to eat it, andmuch more urgently because he had to recover that knife in order to stay alive.

The buck had not bled at once and its tracks were mixed up with hundreds of other tracks. Rod returned three times to the clearing and started over before he picked up the first blood spoor. After that it was easier but he was far behind now and the stampeded buck moved much faster than he could track. His quarry stayed with the herd until it stopped in a new pasture a

half-kilometer away. Rod stopped still in cover and looked them over. His quarry did not seem to be among them.

But blood sign led in among them; he followed it and they stampeded again. He had trouble picking it up; when he did he found that it led into brush instead of following the herd. This made it easier and harder easier because he no longer had to sort one spoor from many, harder because pushing through the brush was hard in itself and much more dangerous, since he must never forget that he himself was hunted as well as hunter, and lastly because the signs were so much harder to spot there. But it cheered him up, knowing that only a weakened animal would leave the herd and try to hide. He expected to find it down before long.

But the beast did not drop; it seemed to have a will to live as strong as his own. He followed it endlessly and was beginning to wonder what he would do if it grew dark before the buck gave up. He had to have that knife.

He suddenly saw that there were two spoors.

Something had stepped beside a fresh, split hooved track of the little antelope; something had stepped on a drop of blood. Quivering, his subconscious "bush radar" at full power, Rod moved silently forward. He found new marks again . . . a man!

The print of a shod human foot and so wild had he become that it gave him no feeling of relief; it made him more wary than ever.

Twenty minutes later he found them, the human and the buck. The buck was down, having died or perhaps been finished off by the second stalker. The human, whom Rod judged to be a boy somewhat younger and smaller than himself, was kneeling over it, slicing its belly open. Rod faded back into the bush. From there he watched and thought. The other hunter seemed much preoccupied with the kill . . . and that tree hung over the place where the butchering was going on

A few minutes later Rod was again on a branch, without a knife but with a long thorn held in his teeth. He looked down, saw that his rival was almost under him, and transferred the thorn to his right hand. Then he waited.

The hunter below him laid the knife aside and bent to turn the carcass. Rod dropped.

He felt body armor which had been concealed by his victim's shirt. Instantly he transferred his attention to the bare neck, pushing the thorn firmly against vertebrae. "Hold still or you've had it!"

The body under him suddenly quit struggling.

"That's better," Rod said approvingly. "Cry Pax?"

No answer. Rod jabbed the thorn again. "I'm not playing games, he said harshly. "I'm giving you one chance stay alive. Cry pax and mean it, and well both eat. Give me any trouble and you'll never eat again. It doesn't make the least difference."

There was a moments hesitation, then a muffled voice said, "Pax."

Keeping the thorn pressed against his prisoner's neck, Rod reached out for the knife which had been used to gut the buck. It was, he saw, his own Lady Macbeth. He sheathed it, felt around under the body he rested on, found another where he expected it, pulled it and kept in his hand. He chucked away the thorn and stood up. "You can get up."

The youngster got up and faced him sullenly. "Give me my knife."

"Later . . . if you are a good boy."

"I said 'Pax.'"

"So you did. Turn around, I want to make sure you don't have a gun on you."

"I left I've nothing but my knife. Give it to me."

"Left it where?"

The kid did not answer. Rod said, "Okay, turn around," and threatened with the borrowed knife. He was obeyed. Rod quickly patted all the likely hiding places, confirmed that the youngster was wearing armor under clothes and over the entire torso. Rod himself was dressed only in tan, scratches, torn and filthy shorts, and a few scars. "Don't you find that junk pretty hot this weather?" he asked cheerfully. "Okay, you can turn around. Keep your distance."

The youngster turned around, still with a very sour expression. "What's your name, bud?"

"Uh, Jack."

"Jack what? Mine's Rod Walker."

"Jack Daudet."

"What school, Jack?"

"Ponce de Leon Institute."

"Mine's Patrick Henry High School."

"Matson's class?"

"The Deacon himself."

"I've heard of him." Jack seemed impressed.

"Who hasn't? Look, let's quit jawing; we'll have the whole county around our ears. Let's eat. You keep watch that way; I'll keep watch behind you."

"Then give me my knife. I need it to eat."

"Not so fast. I'll cut you off a hunk or two. Special Waldorf service.

Rod continued the incision Jack had started, carried it on up and laid the hide back from the right shoulder, hacked off a couple of large chunks of lean. He tossed one to Jack, hunkered down and gnawed his own piece while keeping sharp lookout. "You keeping your eyes peeled?" he asked.

"Sure."

Rod tore off a rubbery mouthful of warm meat. "Jack, how did they let a runt like you take the test? You aren't old enough."

"I'll bet I'm as old as you are!"

"I doubt it."

"Well . . . I'm qualified."

"You don't look it."

"I'm here, I'm alive."

Rod grinned. "You've made your point. I'll shut up. Once his portion was resting comfortably inside, Rod got up, split the skull and dug out the brains. "Want a handful?"

"Sure."

Rod passed over a fair division of the dessert. Jack accepted it,

hesitated, then blurted out, "Want some salt?"

"Salt!" You've got salt?"

Jack appeared to regret the indiscretion. "Some. Go easy on it."

Rod held out his handful. "Put some on. Whatever you can spare."

Jack produced a pocket shaker from between shirt and armor, sprinkled a little on Rod's portion, then shrugged and made it liberal. "Didn't you bring salt along?"

"Me?" Rod answered, tearing his eyes from the mouth watering sight. "Oh, sure! But Well, I had an accident." He decided that there was no use admitting that he had been caught off guard.

Jack put the shaker firmly out of sight. They munched quietly, each watching half their surroundings. After a while Rod said softly, "Jackal behind you, Jack."

"Nothing else?"

"No. But it's time we whacked up the meat and got Out of here; we're attracting attention. How much can you use?"

"Uh, a haunch and a chunk of liver. I can't carry any more."

"And you can't eat more before it spoils, anyway." Rod started butchering the hind quarters. He cut a slice of hide from the belly, used it to sling his share around his neck. "Well, so long, kid. Here's your knife. Thanks for the salt."

"Oh, that's all right."

"Tasted mighty good. Well, keep your eyes open."

"Same to you. Good luck."

Rod stood still. Then he said almost reluctantly, "Uh, Jack, you wouldn't want to team up, would you?" He regretted it as soon as he said it, remembering how easily he had surprised the kid.

Jack chewed a lip. "Well . . . I don't know."

Rod felt affronted. "What's the matter? Afraid of me?" Didn't the kid see that Rod was doing him a favor?

"Oh, no! You're all right, I guess."

Rod had an unpleasant suspicion. "You think I'm trying to get a share of your salt, don't you?"

"Huh? Not at all. Look, I'll divvy some salt with you."

"I wouldn't touch it! I just thought" Rod stopped. He had been thinking that they had both missed recall; it looked like a long pull.

"I didn't mean to make you mad, Rod. You're right. We ought to team."

"Don't put yourself out! I can get along."

"I'll bet you can. But let's team up. Is it a deal?"

"Well . . . Shake."

Once the contract was made Rod assumed leadership. There was no discussion; he simply did so and Jack let it stand. "You lead off," Rod ordered, "and I'll cover our rear."

"Okay. Where are we heading?"

"That high ground downstream. There are good trees there, better for all night than around here. I want us to have time to settle in before darkso a quick sneak and no talking."

Jack hesitated. "Okay. Are you dead set on spending the night in a tree?"

Rod curled his lip. "Want to spend it on the ground? How did you stay alive this long?"

"I spent a couple of nights in trees," Jack answered mildly. "But I've got a better place now, maybe."

"Huh? What sort?"

"A sort of a cave."

Rod thought about it. Caves could be death traps. But the prospect of being able to stretch out swayed him. "Won't hurt to look, if it's not too far."

"It's not far."

5 The Nova

Jack's hideaway was in a bluff overlooking the stream by which Rod had been robbed. At this point the bluffs walled a pocket valley and the stream meandered between low banks cut in an alluvial field between the bluffs. The cave was formed by an overhang of limestone which roofed a room water carved from shale in one bluff. The wall below it was too sheer to climb; the overhanging limestone protected it above and the stream curved in sharply ahnost to the foot of the bluff. The only way to reach it was to descend the bluff farther upstream to the field edging the creek, then make a climbing traverse of the shale bank where it was somewhat less steep just upstream of the cave.

They slanted cautiously up the shale, squeezed under an overhang at the top, and stepped out on a hard slaty floor. The room was open on one side and fairly long and deep, but it squeezed in to a waist high crawl space; only at the edge was there room to stand up. Jack grabbed some gravel, threw it into the dark hole, waited with knife ready. "Nobody home, I guess." They dropped to hands and knees, crawled inside. "How do you like it?"

"It's swell . . . provided we stand watches. Something could come up the way we did. You've been lucky."

"Maybe." Jack felt around in the gloom, dragged out dry branches of thorn bush, blocked the pathway, jamming them under the overhang. "That's my alarm."

"It wouldn't stop anything that got a whiff of you and really wanted to come in."

"No. But I would wake up and let it have some rocks in the face. I keep a stack over there. I've got a couple of scare flares, too."

"I thought Didn't you say you had a gun?"

"I didn't say, but I do. But I don't believe in shooting when you can't see."

"It looks all right. In fact it looks good, I guess I did myself a favor when I teamed with you." Rod looked around. "You've had a fire!"

"I've risked it a couple of times, in daylight. I get so tired of raw meat."

Rod sighed deeply. "I know. Say, do you suppose?"

"It's almost dark. I've never lighted one when it could show. How about roast liver for breakfast, instead? With salt?"

Rod's mouth watered. "You're right, Jack. I do want to get a drink before it is too dark, though. How about coming along and we cover each other?"

"No need. There's a skin back there. Help yourself."

Rod congratulated himself on having teamed with a perfect housekeeper. The skin was of a small animal, not identifiable when distended with water. Jack had scraped the hide but it was uncured and decidedly unsavory. Rod was not aware that the water tasted bad; he drank deeply, wiped his mouth with his hand and delt at peace.

They did not sleep at once, but sat in the dark and compared notes. Jack's class had come through one day earlier, but with the same instructions. Jack agreed that recall was long overdue.

"I suppose I missed it while I was off my head," Rod commented. "I don't know how long I was foggy. . . I guess I didn't miss dying by much."

"That's not it, Rod."

"Why not?"

"I've been okay and keeping track of the time. There never was any recall."

"You're sure?"

"How could I miss? The siren can be heard for twenty kilometers, they use a smoke flare by day and a searchlight at night, and the law says they have to keep it up at least a week unless everybody returns. . . which certainly did not happen this time."

"Maybe we are out of range. Matter of fact well, I don't know about you, but I'm lost. I admit it"

"I'm not. I'm about four kilometers from where they let my class through; I could show you the spot. Rod, let's face it; something has gone wrong. There is no way of telling how long we are going to be here." Jack added quiefly, "That's why I thought it was a good idea to team."

Rod chewed it over, decided it was time to haul out his theory. "Me, too."

"Yes. Solo is actually safer, for a few days. But if we are stuck here

indefinitely, then"

"Not what I meant, Jack."

"Huh?"

"Do you know what planet this is?"

"No. I've thought about it, of course. It has to be one of the new list and it is compatible with"

"I know what one it is."

"Huh? Which one?"

"It's Earth. Terra herself."

There was a long silence. At last Jack said, "Rod, are you all right? Are you still feverish?"

"I'm fine, now that I've got a full belly and a big drink of water. Look, Jack, I know it sounds silly, but you just listen and I'll add it up. We're on Earth and I think I know about where, too. I don't think they meant to sound recall; they meant us to figure out where we are and walk out. It's a twist Deacon Matson would love."

"But"

"Keep quiet, can't you? Yapping like a girl. Terrestrial planet, right?"

"Yes, but"

"Stow it and let me talk. Gtype star. Planetary rotation same as Earth."

"But it's not!"

"I made the same mistake. The first night I thought was a week long. But the truth was I was scared out of my skin and that made it seem endless. Now I know better. The rotation matches."

"No, it doesn't. My watch shows it to be about twentysix hours."

"You had better have your watch fixed when we get back. You banged it against a tree or something."

"But Oh, go ahead. Keep talking; it's your tape.

"You'll see. Flora compatible. Fauna compatible. I know how they did it and why and where they put us. It's an economy measure."

"A what?"

"Economy. Too many people complaining about school taxes being too high. Of course, keeping an interstellar gate open is expensive and uranium doesn't grow on trees. I see their point. But Deacon Matson says it is false economy. He says, sure, it's expensive but that the only thing more expensive than a properly trained explorer or pioneer leader is an improperly trained dead one.

"He told us after class one day," Rod went on, "that the pennypinchers wanted to run the practices and tests in selected areas on Earth, but the Deacon claims that the essence of survival in the Outlands is the skill to cope with the unknown. He said that if tests were held on Earth, the candidates would just study up on terrestrial environments. He said any Boy Scout could learn the six basic Earth environments and how to beat them out of books . . . but that it was criminal to call that survival training and then dump a man in an unEarthly environment on his first professional assignment. He said that it was as ridiculous as just teaching a kid to play chess and then send him out to fight a duel."

"He's right," Jack answered. "Commander Benboe talks the same way."

"Sure he's right. He swore that if they went ahead with this policy this would be the last year he would teach. But they pulled a gimmick on him."

"How?"

"It's a good one. What the Deacon forgot is that any environment is as unknown as any other if you don't have the slightest idea where you are. So they rigged it so that we could not know. First they shot us to Luna; the Moon gates are always open and that doesn't cost anything extra. Of course that made us think we were in for a long jump. Besides, it confused us; we wouldn't know we were being dumped back into the gravity field we had left for that was what they did next; they shoved us back on Earth. Where? Africa, I'd say. I think they used the Luna Link to jump us to Witwatersrand Gate outside Johannesburg and there they were all set with a matched in temporary link to drop us into the bush. Tshaka Memorial Park or some other primitive preserve, on a guess. Everything matches. A wide variety of antelope type game, carnivores to feed on them I've seen a couple of lions and"

"You have?"

"Well, they will do for lions until I get a chance to skin one. But they threw in other dodges to confuse us, too. The sky would give the show away, particularly if we got a look at Luna. So they've hung an overcast over us. You can bet there are cloud generators not far away. Then they threw us one more curve. Were you warned against 'stobor'?"

"Yes"

"See any?"

"Well, I'm not sure what stobor are."

"Neither am I. Nor any of us, I'll bet. 'Stobor' is the bogeyman, chucked in to keep our pretty little heads busy. There aren't any 'stobor' on Terra so naturally we must be somewhere else. Even a suspicious character like me would be misled by that. In fact, I was. I even picked out something I didn't recognize and called it that, just as they meant me to do."

"You make it sound logical, Rod."

"Because it is logical. Once you realize that this is Earth" He patted the floor of the cave. "but that they have been trying to keep us from knowing it, everything falls into place. Now here is what we do. I was going to tackle it alone, as soon as I could I haven't been able to move around much on account of this bad arm but I decided to take you along, before you got hurt. Here's my plan. I think this is Africa, but it might be South America, or anywhere in the tropics. It does not matter, because we simply follow this creek downstream, keeping our eyes open because there really are hazards; you can get just as dead here as in the Outlands. It may take a week, or a month, but one day well come to a bridge. We'll follow the road it serves until somebody happens along. Once in town we'll check in with the authorities and get them to flip us home . . . and we get our solo test certificates. Simple."

"You make it sound too simple," Jack said slowly.

"Oh, we'll have our troubles. But we can do it, now that we know what to do. I didn't want to bring this up before, but do you have salt enough to cure a few kilos of meat? If we did not have to hunt every day, we could travel faster. Or maybe you brought some KwikKure?"

"I did, but"

"Good!"

"Wait a minute, Rod. That won't do."

"Huh? We're a team, aren't we?"

"Take it easy. Look, Rod, everything you said is logical, but"

"No 'buts' about it."

"It's logical . . . but it's all wrong!"

"Huh? Now, listen, Jack"

"You listen. You've done all the talking so far."

"But Well, all right, say your say."

"You said that the sky would give it away, so they threw an overcast over the area.

"Yes. That's what they must have done, nights at least. They wouldn't risk natural weather; it might give the show away.

"What I'm trying to tell you is that it did give the show away. It hasn't been overcast every night, though maybe you were in deep forest and missed the few times it has been clear. But I've seen the night sky, Rod. I've seen stars.

"So? Well?"

"They aren't our stars, Rod. I'm sorry."

Rod chewed his lip. "You probably don't know southern constellations very well?" he suggested.

"I knew the Southern Cross before I could read. These aren't our stars, Rod; I know. There is a pentagon of bright stars above where the sun sets; there is nothing like that to be seen from Earth. And besides, anybody would recognise Luna, if it was there."

Rod tried to remember what phase the Moon should be in. He gave up, as he had only a vague notion of elapsed time. "Maybe the Moon was down?"

"Not a chance. I didn't see our Moon, Rod, but I saw moons . . two of them, little ones and moving fast, like the moons of Mars."

"You don't mean this is Mars?" Rod said scornfully.

"Think I'm crazy? Anyhow, the stars from Mars are exactly like the stars from Earth. Rod, what are we jawing about? It was beginning to clear when the sun went down; let's crawl out and have a look. Maybe you'll believe your eyes.

Rod shut up and followed Jack. From inside nothing was visible but dark trees across the stream, but from the edge of the shelf part of the sky could be seen. Rod lookedup and blinked.

"Mind the edge," Jack warned softly.

Rod did not answer. Framed by the ledge above him and by tree tops across the stream was a pattern of six stars, a lopsided pentagon with a star in its center. The six stars were as bright and unmistakable as the seven stars of Earth's Big Dipper . . . nor did it take a degree in astrography to know that this constellation had never been seen from Terra.

Rod stared while the hard convictions he had formed fell in ruins. He felt lost and alone. The trees across the way seemed frightening. He turned to Jack, his cocky sophistication gone. "You've convinced me," he said dully. "What do we do now?"

Jack did not answer.

"Well?" Rod insisted. "No good standing here."

"Rod," Jack answered, "that star in the middle of the Pentagonit wasn't there before."

"Huh? You probably don't remember."

"No, no, I'm sure! Rod, you know what? We're seeing a nova."

Rod was unable to arouse the pure joy of scientific discovery; his mind was muddled with reorganizing his personal universe. A mere stellar explosion meant nothing. "Probably one of your moonlets."

"Not a chance. The moons are big enough to show disks. It's a nova; it has to be. What amazing luck to see one!"

"I don't see anything lucky about it," Rod answered moodily. "It doesn't mean anything to us. It's probably a hundred light years away, maybe more."

"Yes, but doesn't it thrill you?"

"No." He stooped down and went inside. Jack took another look, then followed.

There was silence, moody on Rod's part. At last Jack said, "Think I'll turn in."

"I just can't see," Rod answered irrelevantly, "how I could be so wrong. It was a logical certainty."

"Forget it," Jack advised. "My analytics instructor says that all logic is mere tautology. She says it is impossible to learn anything through logic that you did not already know."

"Then what use is logic?" Rod demanded.

"Ask me an easy one. Look, partner, I'm dead for sleep; I want to turn in."

"All right. But, Jack, if this isn't Africa and I've got to admit it isn't what do we do? They've gone off and left us."

"Do? We do what we've been doing. Eat, sleep, stay alive. This is a listed planet; if we just keep breathing, someday somebody will show up. It might be just a power breakdown; they may pick us tomorrow."

"In that case, then"

"In that case, let's shut up and go to sleep."

6 "I Think He Is Dead"

Rod was awakened by heavenly odors. he rolled over, blinked at light streaming under the overhang, managed by great effort to put himself back into the matrix of the day before. Jack, he saw, was squatting by a tiny fire on the edge of the shelf; the wonderful fragrance came from toasting liver.

Rod got to his knees, discovering that he was slightly stiff from having fought dream stobor in his sleep. These nightmare stobor were bug eyed monsters fit for a planet suddenly strange and threatening. Nevertheless he had had a fine night's sleep and his spirits could not be daunted in the presence of the tantalizing aroma drifting in.

Jack looked up. "I thought you were going to sleep all day. Brush your teeth, comb your hair, take a quick shower, and get on out here. Breakfast is ready." Jack looked him over again. "Better shave, too."

Rod grinned and ran his hand over his chin. "You're jealous of my manly beard, youngster. Wait a year or two and you'll find out what a nuisance it is. Shaving, the common cold, and taxes . . . my old man says those are the three eternal problems the race is never going to lick." Rod felt a twinge at the thought of his parents, a stirring of conscience that he had not thought of them in he could not remember how long. "Can I help, pal?"

"Sit down and grab the salt. This piece is for you."

"Let's split it."

"Eat and don't argue. I'll fix me some." Rod accepted the charred and smoky chunk, tossed it in his hands and blew on it. He looked around for salt. Jack Was slicing a second piece; Rod's eyes passed over the operation then whipped back.

The knife Jack was using was "Colonel Bowie."

The realization was accompanied by action; Rod's hand darted out and caught Jack's wrist in an anger hard grip. "You stole my knife!"

Jack did not move. "Rod. . . have you gone crazy?"

"You slugged me and stole my knife."

Jack made no attempt to fight, nor even to struggle. "You aren't awake yet, Rod. Your knife is on your belt. This is another knife . . . mine.

Rod did not bother to look down. "The one I'm wearing is Lady Macbeth. I mean the knife you're using, Colonel Bowie my knife."

"Let go my wrist."

"Drop it!"

"Rod.. . you can probably make me drop this knife. You're bigger and you've got the jump on me. But yesterday you teamed with me. You're busting that team right now. If you don't let go right away, the team is broken. Then you'll have to kill me . . . because if you don't, I'll trail you. I'll keep on trailing you until I find you asleep. Then you've had it."

They faced each other across the little fire, eyes locked. Rod breathed hard and tried to think. The evidence was against Jack. But had this little runt tracked him, slugged him, stolen everything he had? It looked like it.

Yet it did not feel like it. He told himself that he could handle the kid

if his story did not ring true. He let go Jack's wrist. "All right," he said angrily, "tell me how you got my knife."

Jack went on slicing liver. "It's not much of a story and I don't know that it is your knife. But it was not mine to start with you've seen mine. I use this one as a kitchen knife. Its balance is wrong.

"Colonel Bowie! Balanced wrong? That's the best throwing knife you ever saw!"

"Do you want to hear this? I ran across this hombre in the bush, just as the jackals were getting to him. I don't know what got him, stobor, maybe; he was pretty well clawed and half eaten. He wasn't one of my class, for his face wasn't marked and I could tell. He was carrying a Thunderbolt and"

"Wait a minute. A Thunderbolt gun?"

"I said so, didn't I? I guess he tried to use it and had no luck. Anyhow, I took what I could use this knife and a couple of other things; I'll show you. I left the Thunderbolt; the power pack was exhausted and it was junk."

"Jack, look at me. You're not lying?"

Jack shrugged. "I can take you to the spot. There might not be anything left of him, but the Thunderbolt ought to be there."

Rod stuck out his hand. "I'm sorry. I jumped to conclusions."

Jack looked at his hand, did not shake it. "I don't think you are much of a team mate. We had better call it quits." The knife flipped over, landed at Rod's toes. "Take your toadsticker and be on your way."

Rod did not pick up the knife. "Don't get sore, Jack. I made an honest mistake."

"It was a mistake, all right. You didn't trust me and I'm not likely to trust you again. You can't build a team on that." Jack hesitated. "Finish your breakfast and shove off. It's better that way."

"Jack, I truly am sorry. I apologize. But it was a mistake anybody could make you haven't heard my side of the story."

"You didn't wait to hear my story!"

"So I was wrong, I said I was wrong." Rod hurriedly told how he had been stripped of his survival gear. "so naturally, when I saw Colonel Bowie, I

assumed that you must have jumped me. That's logical, isn't it?" Jack did not answer; Rod persisted: "Well? Isn't it?"

Jack said slowly, "You used 'logic' again. What you call 'logic.' Rod, you use the stuff the way some people use dope. Why don't you use your head, instead?"

Rod flushed and kept still. Jack went on, "If I had swiped your knife, would I have let you see it? For that matter, would I have teamed with you?"

"No, I guess not. Jack, I jumped at a conclusion and lost my temper."

"Commander Benboe says," Jack answered bleakly, "that losing your temper and jumping at conclusions is a one way ticket to the cemetery."

Rod looked sheepish. "Deacon Matson talks the same way."

"Maybe they're right. So let's not do it again, huh? Every dog gets one bite, but only one."

Rod looked up, saw Jack's dirty paw stuck out at him. "You mean we're partners again?"

"Shake. I think we had better be; we don't have much choice." They solemnly shook hands. Then Rod picked up Colonel Bowie, looked at it longingly, and handed it hilt first to Jack.

"I guess it's yours, after all."

"Huh? Oh, no. I'm glad you've got it back."

"No," Rod insisted. "You came by it fair and square.

"Don't be silly, Rod. I've got 'Bluebeard'; that's the knife for me."

"It's yours. I've got Lady Macbeth."

Jack frowned. "We're partners, right?"

"Huh? Sure."

"So We share everything. Bluebeard belongs just as much to you as to me. And Colonel Bowie belongs to both of us. But you are used to it, so it's best for the team for you to wear it. Does that appeal to your lopsided sense of logic?"

"Well. . ."

"So shut up and eat your breakfast. Shall I toast you another slice? That one is cold."

Rod picked up the scorched chunk of liver, brushed dirt and ashes from it. "This is all right."

"Throw it in the stream and have a hot piece. Liver won't keep anyhow."

Comfortably stuffed, and warmed by companionship, Rod stretched out on the shelf after breakfast and stared at the sky. Jack put out the fire and tossed the remnants of their meal downstream. Something broke water and snapped at the liver even as it struck. Jack turned to Rod. "Well, what do we do today?"

"Mmm. . . what we've got on hand ought to be fit to eat tomorrow morning. We don't need to make a kill today."

"I hunt every second day, usually, since I found this place. Second day meat is better than first, but by the third . . . phewy!"

"Sure. Well, what do you want to do?"

"Well, let's see. First I'd like to buy a tall, thick chocolate malted milk or maybe a fruit salad. Both. I'd eat those"

"Stop it, you're breaking my heart!"

"Then I'd have a hot bath and get all dressed up and flip out to Hollywood and see a couple of good shows. That super spectacle that Dirk Manleigh is starring in and then a good adventure show. After that I'd have another malted milk . . . strawberry, this time, and then"

"Shut up!'

"You asked me what I wanted to do."

"Yes, but I expected you to stick to possibilities."

"Then why didn't you say so? Is that 'logical'? I thought you always used logic?"

"Say, lay off, will you? I apologized."

"Yeah, you apologized," Jack admitted darkly. "But I've got some mad I haven't used up yet."

"Well! Are you the sort of pal who keeps raking up the past?"

"Only when you least expect it. Seriously, Rod, I think we ought to hunt today."

"But you agreed we didn't need to. It's wrong, and dangerous besides, to make a kill you don't need."

"I think we ought to hunt people."

Rod pulled his ear. "Say that again."

"We ought to spend the day hunting people."

"Huh? Well, anything for fun I always say. What do we do when we find them? Scalp them, or just shout 'Beaver!'?"

"Scalping is more definite. Rod, how long will we be here?"

"Huh? All we know is that something has gone seriously cockeyed with the recall schedule. You say we've been here three weeks. I would say it was longer but you have kept a notch calendar and I haven't. Therefore . . ."
He stopped.

"Therefore what?"

"Therefore nothing. They might have had some technical trouble, which they may clear up and recall us this morning. Deacon Matson and his funloving colleagues might have thought it was cute to double the period and not mention it. The Dalai Lama might have bombed the whiskers off the rest of the World and the Gates may be radioactive ruins. Or maybe the three headed serpent men of the Lesser Magellanic Cloud have landed and have the situation well in hand for them. When you haven't data, guessing is illogical. We might be here forever."

Jack nodded. "That's my point."

"Which point? We know we may be marooned; that's obvious."

"Rod, a twoman team is just right for a few weeks. But suppose this runs into months? Suppose one of us breaks a leg? Or even if we don't, how long is that thornbush alarm going to work? We ought to wall off that path and make this spot accessible only by rope ladder, With somebody here all the

time to let the ladder down. We ought to locate a salt lick and think about curing hides and things like that that water skin I made is getting high already. For a long pull we ought to have at least four people."

Rod scratched his gaunt ribs thoughtfully. "I know. I thought about it last night, after you jerked the rug out from under my optimistic theory. But I was waiting for you to bring it up."

"Why?"

"This is your cave. You've got all the fancy equipment, a gun and pills and other stuff I haven't seen. You've got salt. All I've got is a knife two knives now, thanks to you. I'd look sweet suggesting that you share four ways."

"We're a team, Rod.'

"Mmm. . . yes. And we both figure the team would be strengthened with a couple of recruits. Well, how many people are there out there?" He gestured at the wall of green across the creek.

"My class put through seventeen boys and eleven girls. Commander Benboe told us there would be four classes in the same test area.

"That's more than the Deacon bothered to tell us. However, my class put through about twenty."

Jack looked thoughtful. "Around a hundred people, probably."

"Not counting casualties."

"Not counting casualties. Maybe two thirds boys, one third girls. Plenty of choice, if we can find them."

"No girls on this team, Jack."

"What have you got against girls?"

"Me? Nothing at all. Girls are swell on picnics, they are just right on long winter evenings. I'm one of the most enthusiastic supporters of the female race. But for a hitch like this, they are pure poison."

Jack did not say anything. Rod went on, "Use your head, brother. You get some pretty little darling on this team and we'll have more grief inside than stobor, or such, can give us from outside. Quarrels and petty jealousies and maybe a couple of boys knifing each other. It will be tough

enough without that trouble."

"Well," Jack answered thoughifully, "suppose the first one we locate is a girl? What are you going to do? Tip your hat and say, 'It's a fine day, ma'am. Now drop dead and don't bother me.'?"

Rod drew a pentagon in the ashes, put a star in the middle, then rubbed it out. "I don't know," he said slowly. "Let's hope we get our team working before we meet any. And let's hope they set up their own teams."

"I think we ought to have a policy."

"I'm clean out of policies. You would just accuse me of trying to be logical. Got any ideas about how to find anybody?"

"Maybe. Somebody has been hunting upstream from here."

"So? Know who it is?"

"I've seen him only at a distance. Nobody from my class. Half a head shorter than you are, light hair, pink skin and a bad sunburn. Sound familiar?"

"Could be anybody," Rod answered, thinking fretfully that the description did sound familiar. "Shall we see if we can pick up some sign of him?"

"I can put him in your lap. But I'm not sure we want him."

"Why not? If he's lasted this long, he must be competent."

"Frankly, I don't see how he has. He's noisy when he moves and he has been living in one tree for the past week."

"Not necessarily bad technique."

"It is when you drop your bones and leavings out of the tree. It was jackals sniffing around that tipped me off to where he was living."

"Hmm. . . well, if we don't like him, we don't have to invite him."

"True."

Before they set out Jack dug around in the gloomy cave and produced a climbing line. "Rod, could this be yours?"

Rod looked it over. "It's just like the one I had. Why?"

"I got it the way I got Colonel Bowie, off the casualty. If it is not yours, at least it is a replacement." Jack got another, wrapped it around and over body armor. Rod suspected that Jack had slept in the armor, but he said nothing. If Jack considered such marginal protection more important than agility, that was Jack's business each to his own methods, as the Deacon would say.

The tree stood in a semi-clearing but Jack brought Rod to it through bushes which came close to the trunk and made the final approach as a belly sneak. Jack pulled Rod's head over and whispered in his ear, "If we lie still for three or four hours, I'm betting that he will either come down or go up.

"Okay. You watch our rear."

For an hour nothing happened. Rod tried to ignore tiny flies that seemed to be all bite. Silently he shifted position to ward off stiffness and once had to kill a sneeze. At last he said, "Pssst!"

"Yeah, Rod?"

"Where those two big branches meet the trunk, could that be his nest?"

"Maybe."

"You see a hand sticking out?"

"Where? Uh, I think I see what you see. It might just be leaves."

"I think it's a hand and I think he is dead; it hasn't moved since we got here."

"Asleep?"

"Person asleep ordinarily doesn't hold still that long.

I'm going up. Cover me. If that hand moves, yell."

"You ought not to risk it, Rod."

"You keep your eyes peeled." He crept forward..

The owner of the hand was Jimmy Throxton, as Rod had suspected since hearing the description. Jimmy was not dead, but he was unconscious and Rod could not rouse him.

Jim lay in an aerie half natural, half artificial; Rod could see that Jim had cut small branches and improved the triple crotch formed by two limbs and trunk. He lay cradled in this eagle's nest, one hand trailing out.

Getting him down was awkward; he weighed as much as Rod did. Rod put a sling under Jim's armpits and took a turn around a branch, checking the line by friction to lower him but the hard part was getting Jim out of his musty bed without dropping him.

Halfway down the burden fouled and Jack had to climb and free it. But with much sweat all three reached the ground and Jim was still breathing.

Rod had to carry him. Jack offered to take turns but the disparity in sizes was obvious; Rod said angrily for Jack to cover them, front, rear, all sides; Rod would be helpless if they had the luck to be surprised by one of the pseudolions.

The worst part was the climbing traverse over loose shale up to the cave. Rod was fagged from carrying the limp and heavy load more than a kilometer over rough ground; he had to rest before he could tackle it. When he did, Jack said anxiously, "Don't drop him in the drink! It won't be worthwhile fishing him out I know."

"So do I. Don't give silly advice."

"Sorry."

Rod started up, as much worried for his own hide as for Jim's. He did not know what it was that lived in that stream; he did know that it was hungry. There was a bad time when he reached the spot where the jutting limestone made it necessary to stoop to reach the shelf. He got down as low as possible, attempted it, felt the burden on his back catch on the rock, started to slip.

Jack's hand steadied him and shoved him from behind. Then they were sprawled safe on the shelf and Rod gasped and tried to stop the trembling of his abused muscles.

They bedded Jimmy down and Jack took his pulse. "Fast and thready. I don't think he's going to make it."

"What medicines do you have?"

"Two of the neosulfas and verdomycin. But I don't know what to give him."

"Give him all three and pray.

"He might be allergic to one of them."

"He'll be more allergic to dying. I'll bet he's running six degrees of fever. Come on."

Rod supported Jim's shoulders, pinched his ear lobe, brought him partly out of coma. Between them they managed to get the capsules into Jim's mouth, got him to drink and wash them down. After that there was nothing they could do but let him rest.

They took turns watching him through the night. About dawn his fever broke, he roused and asked for water. Rod held him while Jack handled the waterskin. Jim drank deeply, then went back to sleep.

They never left him alone. Jack did the nursing and Rod hunted each day, trying to find items young and tender and suited to an invalid's palate. By the second day Jim, although weak and helpless, was able to talk without drifting off to sleep in the middle. Rod returned in the afternoon with the carcass of a small animal which seemed to be a clumsy cross between a cat and a rabbit. He encountered Jack heading down to fill the water skin.
"Hi."

'Hi. I see you had luck. Say, Rod, go easy when you skin it. We need a new water bag. Is it cut much?"

"Not at all. I knocked it over with a rock."

"Good!"

"How's the patient?"

"Healthier by the minute. I'll be up shortly."

"Want me to cover you while you fill the skin?"

"I'll be careful. Go up to Jim."

Rod went up, laid his kill on the shelf, crawled inside. "Feeling better?"

"Swell. I'll wrestle you two falls out of three."

"Next week. Jack taking good care of you?"

"You bet. Say, Rod, I don't know how to thank you two. If it hadn't been for"

"Then don't try. You don't owe me anything, ever. And Jack's my partner, so it's right with Jack."

"Jack is swell."

"Jack is a good boy. They don't come better. He and I really hit it off."

Jim looked surprised, opened his mouth, closed it suddenly. "What's the matter?" Rod asked. "Something bite you? Or are you feeling bad again?"

"What," Jim said slowly, "did you say about Jack?"

"Huh? I said they don't come any better. He and I team up like bacon and eggs. A number one kid, that boy."

Jimmy Throxton looked at him. "Rod . . . were you born that stupid? Or did you have to study?"

"Huh?"

"Jack is a girl."

There followed a long silence. "Well," said Jim, "close your mouth before something flies in."

"Jimmy, you're still out of your head."

"I may be out of my head, but not so I can't tell a girl from a boy. When that day comes, I won't be sick; I'll be dead."

"But . . ."

Jim shrugged. "Ask her."

A shadow fell across the opening; Rod turned and saw Jack scrambling up to the shelf. "Fresh water, Jimmy!"

"Thanks, kid." Jim added to Rod, "Go on, dopy!"

Jack looked from one to the other. "Why the tableau? What are you staring for, Rod?"

"Jack," he said slowly, "what is your name?"

"Huh? Jack Daudet. I told you that."

"No, no! What's your full name, your legal name?" Jack looked from Rod to Jimmy's grinning face and back again. "My full name is. . . Jacqueline Marie Daudet if it's any business of yours. Want to make something of it?"

Rod took a deep breath. "Jacqueline," he said carefully, "I didn't know. I"

"You weren't supposed to."

"Look, if I've said anything to offend you, I surely didn't mean to."

"You haven't said anything to offend me, you big stupid dear. Except about your knife."

"I didn't mean that."

"You mean about girls being poison? Well, did it ever occur to you that maybe boys are pure poison, too? Under these circumstances? No, of course it didn't. But I don't mind your knowing now. . . now that there are three of us."

"But, Jacqueline"

"Call me 'Jack,' please." She twisted her shoulders uncomfortably. "Now that you know, I won't have to wear this beetle case any longer. Turn your backs, both of you.

"Uh . . ." Rod turned his back. Jimmy rolled over, eyes to the wall.

In a few moments Jacqueline said, "Okay." Rod turned around. In shirt and trousers, without torso armor, her shoulders seemed narrower and she herself was slender now and pleasantly curved. She was scratching her ribs. "I haven't been able to scratch properly since I met you, Rod Walker," she said accusingly. "Sometimes I almost died."

"I didn't make you wear it."

"Suppose I hadn't? Would you have teamed with me?"

"Uh. . . well, it's like this. I . . ." He stopped.

"You see?" She suddenly looked worried. "We're still partners?"

"Huh? Oh, sure, sure!"

"Then shake on it again. This time we shake with Jimmy, too. Right, Jim?"

"You bet, Jack."

They made a threecornered handshake. Jack pressed her left hand over the combined fists and said solemnly, "All for one!"

Rod drew Colonel Bowie with his left hand, laid the flat of the blade on the stacked hands. "And one for all!"

"Plus sales tax," Jimmy added. "Do we get it notarized?"

Jacqueline's eyes were swimming with tears. "Jimmy Throxton," she said fiercely, "someday I am going to make you take life seriously!"

"I take life seriously," he objected. "I just don't want life to take me seriously. When you're on borrowed time, you can't afford not to laugh."

"We're all on borrowed time," Rod answered him. "Shut up, Jimmy. You talk too much."

"Look who's preaching! The Decibel Kid himself."

"Well. . . you ought not to make fun of Jacqueiine. She's done a lot for you.

"She has indeed!"

"Then"

"'Then' nothing!" Jacqueline said sharply. "My name is 'Jack.' Rod. Forget 'Jacqueline.' If either of you starts treating me with gallantry we'll have all those troubles you warned me about. 'Pure poison' was the expression you used, as I recall."

"But you can reasonably expect"

"Are you going to be 'logical' again? Let's be practical instead. Help me skin this beast and make a new water bag."

The following day Jimmy took over housekeeping and Jack and Rod started hunting together. Jim wanted to come along; he ran into a double veto. There was little advantage in hunting as a threesome whereas Jack and Rod paired off so well that a hunt was never hours of waiting, but merely a matter of finding game. Jack would drive and Rod would kill; they would

pick their quarry from the fringe of a herd, Jack would sneak around and panic the animals, usually driving one into Rod's arms.

They still hunted with the knife, even though Jack's gun was a good choice for primitive survival, being an air gun that threw poisoned darts. Since the darts could be recovered and re-envenomed, it was a gun which would last almost indefinitely; she had chosen it for this reason over cartridge or energy guns.

Rod had admired it but decided against hunting with it. "The air pressure might bleed off and let you down."

"It never has. And you can pump it up again awfully fast."

"Mmm. . . yes. But if we use it, someday the last dart will be lost no matter how careful we are . . . and that might be the day we would need it bad. We may be here a long time, what do you say we save it?"

"You're the boss, Rod."

"No, I'm not. We all have equal say."

"Yes, you are. Jimmy and I agreed on that. Somebody has to boss."

Hunting took an hour or so every second day; they spent most of daylight hours searching for another team mate, quartering the area and doing it systematically. Once they drove scavengers from a kill which seemed to have been butchered by knife; they followed a spoor from that and determined that it was a human spoor, but were forced by darkness to return to the cave. They tried to pick it up the next day, but it had rained hard in the night; they never found it.

Another time they found ashes of a fire, but Rod judged them to be at least two weeks old.

After a week of fruitless searching they returned one late afternoon. Jimmy looked up from the fire he had started. "How goes the census?"

'Don't ask," Rod answered, throwing himself down wearily. "What's for dinner?"

"Raw buck, roast buck, and burned buck. I tried baking some of it in wet clay. It didn't work out too well, but I've got some awfully good baked clay for dessert."

'Thanks. If that is the word."

"Jim," Jack said, "we ought to try to bake pots with that clay."

"I did. Big crack in my first effort. But I'll get the hang it. Look, children," he went on, "has it ever occurred to your bright little minds that you might be going about this the wrong way?"

"What's wrong with it?" Rod demanded.

"Nothing . . . if it is exercise you are after. You are and scurrying over the countryside, getting in and nowhere else. Maybe it would be better to sit back and let them come to you."

"How?"

"Send up a smoke signal."

"We've discussed that We don't want just anybody and we don't want to advertise where we live. We want people who will strengthen the team."

"That is what the engineers call a self defeating criterion. The superior woodsman you want is just the laddy you will never find by hunting for him. He may find you, as you go tramping noisily through the brush, kicking rocks and stepping on twigs and scaring the birds. He may shadow you to see what you are up to. But you won't find him."

"Rod, there is something to that," Jack said.

"We found you easily enough," Rod said to Jim. "Maybe you aren't the high type we need."

"I wasn't myself at the time," Jimmy answered blandly. "Wait till I get my strength back and my true nature will show. Ugh Ugh, the ape man, that's me. Half Neanderthal and half sleek black leopard." He beat his chest and coughed.

"Are those the proportions? The Neanderthal strain seems dominant."

"Don't be disrespectful. Remember, you are my debtor."

"I think you read the backs of those cards. They are getting to be like waffles." When rescued, Jimmy had had on him a pack of playing cards, and had later explained that they were survival equipment.

"In the first place," he had said, "if I got lost I could sit down and play solitaire. Pretty soon somebody would come along and"

"Tell you to play the black ten on the red jack. We've heard that one."

"Quiet, Rod. In the second place, Jack, I expected to team with old Stoneface here. I can always beat him at cribbage but he doesn't believe it. I figured that during the test I could win all his next year's allowance. Survival tactics."

Whatever his reasoning, Jimmy had had the cards. The three played a family game each evening at a million plutons a point. Jacqueline stayed more or less even but Rod owed Jimmy several hundred millions. They continued the discussion that evening over their game. Rod was still wary of advertising their hideout.

"We might burn a smoke signal somewhere, though," he said thoughtfully. "Then keep watch from a safe spot. Cut 'em, Jim."

"Consider the relative risks a five, just what I needed! If you put the fire far enough away to keep this place secret, then it means a trek back and forth at least twice a day. With all that running around you'll use up your luck; one day you won't come back. It's not that I'm fond you, but it would bust up the game. Whose crib?"

"Jack's. But if we burn it close by and in sight, then we sit up here safe and snug. I'll have my back to the wall facing the path, with Jack's phht gun in my lap. If an unfriendly face sticks up blooie! Long pig for dinner. But if we like them, we cut them into the game.

"Your count."

"Fifteen six, fifteen twelve, a pair, six for jacks and the right jack. That's going to cost you another million, my friend."

"One of those jacks is a queen," Rod said darkly.

"Sure enough? You know, it's getting too dark to play. Want to concede?"

They adopted Jim's scheme. It gave more time for cribbage and ran Rod's debt up into billions. The signal fire was kept burning on the shelf at the downstream end, the prevailing wind being such that smoke usually did not blow back into the cave when the wind did shift was unbearable; they were forced to flee, eyes streaming.

This happened three times in four days. Their advertising had roused no customers and they were all get'ting tired of dragging up dead wood for fuel and green branches for smoke. The third time they fled from smoke

Jimmy said, "Rod, I give up. You win. This is not the way to do it."

"No!"

"Huh? Have a heart, chum. I can't live on smoke no vitamins. Let's run up a flag instead. I'll contribute my shirt."

Rod thought about it. "We'll do that."

"Hey, wait a minute. I was speaking rhetorically. I'm the delicate type. I sunburn easily."

"You can take it easy and work up a tan. We'll use your shirt as a signal flag. But we'll keep the fire going, too. Not up on the shelf, but down there on that mud flat, maybe."

"And have the smoke blow right back into our summer cottage."

"Well, farther downstream. We'll make a bigger fire and a column of smoke that can be seen a long way. The flag we will put up right over the cave."

"Thereby inviting eviction proceedings from large, hairy individuals with no feeling for property rights."

"We took that chance when we decided to use a smoke signal. Let's get busy."

Rod picked a tall tree on the bluff above. He climbed to where the trunk had thinned down so much that it would hardly take his weight, then spent a tedious hour topping it with his knife. He tied the sleeves of Jim's shirt to it, then worked down, cutting foliage away as he went. Presently the branches became too large to handle with his knife, but the stripped main stem stuck up for several meters; the shirt could be seen for a long distance up and down stream. The shirt caught the wind and billowed; Rod eyed it, tired but satisfied it was unquestionably a signal flag.

Jimmy and Jacqueline had built a new smudge farther downstream, carrying fire from the shelf for the purpose. Jacqueline still had a few matches and Jim had a pocket torch almost fully charged but the realization that they were marooned caused them to be miserly. Rod went down and joined them. The smoke was enormously greater now that they were not limited in space, and fuel was easier to fetch.

Rod looked them over. Jacqueline's face, sweaty and none too clean to start with, was now black with smoke, while Jimmy's pink skin showed the soot even more. "A couple of pyromaniacs."

"You ordered smoke," Jimmy told him. "I plan to make the burning of Rome look like a bonfire. Fetch me a violin and a toga."

"Violins weren't invented then. Nero played a lyre."

"Let's not be small. We're getting a nice mushroom cloud effect, don't you think?'

"Come on, Rod," Jacqueline urged, Wiping her face without improving it. "It's fun!" She dipped a green branch in the stream, threw it on the pyre. A thick cloud of smoke and steam concealed her. "More dry wood, Jimmy."

"Coming!"

Rod joined in, soon was as dirty and scorched as the other two and having more fun than he had had since the test started. When the sun dropped below the tree tops they at last quit trying to make the fire bigger and better and smokier and reluctantly headed up to their cave. Only then did Rod realize that he had forgotten to remain alert.

Oh well, he assured himself, dangerous animals would avoid a fire.

While they ate they could see the dying fire still sending up smoke. After dinner Jimmy got out his cards, tried to riffle the limp mass. "Anyone interested in a friendly game? The customary small stakes."

"I'm too tired," Rod answered. "Just chalk up my usual losses."

"That's not a sporting attitude. Why, you won a game just last week. How about you, Jack?"

Jacqueline started to answer; Rod suddenly motioned for silence. "Sssh! I heard something."

The other two froze and silently got out their knives. Rod put Colonel Bowie in his teeth and crawled out to the edge. The pathway was clear and the thorn barricade was undisturbed. He leaned out and looked around, trying to locate the sound.

"Ahoy below!" a voice called out, not loudly. Rod felt himself tense. He glanced back, saw Jimmy moving diagonally over to cover the pathway. Jacqueline had her dart gun and was hurriedly pumping it up.

Rod answered, "Who's there?"

There was a short silence. Then the voice answered, "Bob Baxter and Carmen Garcia. Who are you?"

Rod sighed with relief. "Rod Walker, Jimmy Throxton. And one other, not our class . . Jack Daudet."

Baxter seemed to think this over. "Uh, can we join you? For tonight, at least?"

"Sure!"

"How can we get down there? Carmen can't climb very well; she's got a bad foot."

"You're right above us?"

"I think so. I can't see you."

"Stay there. I'll come up." Rod turned, grinned at the others. "Company for dinner! Get a fire going, Jim."

Jimmy clucked mournfully. "And hardly a thing in the house. I should have baked a cake."

By the time they returned Jimmy had roast meat waitmg. Carmen's semi-crippled condition had delayed them. It was just a sprained ankle but it caused her to crawl up the traverse on her hands, and progress to that point had been slow and painful.

When she realized that the stranger in the party was another woman she burst into tears. Jackie glared at the males, for no cause that Rod could see, then led her into the remote corner of the cave where she herself slept.

There they whispered while Bob Baxter compared notes with Rod and Jim.

Bob and Carmen had had no unusual trouble until Carmen had hurt her ankle two days earlier. . . except for the obvious fact that something had gone wrong and they were stranded. "I lost my grip," he admitted, "when I realized that they weren't picking us up. But Carmen snapped me out of it. Carmen is a very practical kid."

'Girls are always the practical ones," Jimmy agreed. Now take me I'm the poetical type."

'Blank verse, I'd say," Rod suggested.

"Jealousy ill becomes you, Rod. Bob, old bean, can I interest you in another slice? Rare, or well carbonized?"

"Either way. We haven't had much to eat the last couple of days. Boy, does this taste good!"

"My own sauce," Jimmy said modestly. "I raise my own herbs, you know. First you melt a lump of butter slowly in a pan, then you"

"Shut up, Jimmy. Bob, do you and Carmen want to team with us? As I see it, we can't count on ever getting back. Therefore we ought to make plans for the future.'

"I think you are right."

"Rod is always right," Jimmy agreed. "'Plans for the future' Hmm, yes. .. Bob, do you and Carmen play cribbage?"

"No"

"Never mind. I'll teach you."

8 "Fish, or Cut Bait"

The decision to keep on burning the smoke signal and thereby to call in as many recruits as possible was never voted on; it formed itself. The next morning Rod intended to bring the matter up but Jimmy and Bob rebuilt the smoke fire from its embers while down to fetch fresh water. Rod let the accomplished fact stand; two girls drifted in separately that day.

Nor was there any formal contract to team nor any selection of a team captain; Rod continued to direct operations and Bob Baxter accepted the arrangement. Rod did not think about it as he was too busy. The problems of food, shelter, and safety for their growing population left him no time to worry about it

The arrival of Bob and Carmen cleaned out the larder; it was necessary to hunt the next day. Bob Baxter offered to go, but Rod decided to take Jackie as usual. "You rest today. Don't let Carmen put her weight on that bad ankle and don't let Jimmy go down alone to tend the fire. He thinks he is well again but he is not."

"I see that."

Jack and Rod went out, made their kill quickly. But Rod failed to kill clean and when Jacqueline moved in to help finish the thrashing, wounded buck she was kicked in the ribs. She insisted that she was not hurt; nevertheless her side was sore the following morning and Bob Baxter expressed the opinion that she had cracked a rib.

In the meantime two new mouths to feed had been added, just as Rod found himself with three on the sick list. But one of the new mouths was a big, grinning one belonging to Caroline Mshiyeni; Rod picked her as his hunting partner.

Jackie looked sour. She got Rod aside and whispered, 'You haven't any reason to do this to me. I can hunt. My side is all right, just a little stiff."

"It is, huh? So it slows you down when I need you. I can't chance it, Jack."

She glanced at Caroline, stuck out her lip and looked stubborn. Rod said urgently, "Jack, remember what I said about petty jealousies? So help me, you make trouble and I'll paddle you."

"You aren't big enough!"

"I'll get help. Now, look are we partners?"

"Well, I thought so."

"Then be one and don't cause trouble."

She shrugged. "All right. Don't rub it in I'll stay home."

"I want you to do more than that. Take that old bandage of mine it's around somewhere and let Bob Baxter strap your ribs."

"No!"

"Then let Carmen do it. They're both quack doctors, sort of." He raised his voice. "Ready, Carol?"

"Quiverin' and bristlin'."

Rod told Caroline how he and Jacqueline hunted, explained what he expected of her. They located, and avoided, two family herds; old bulls were tough and poor eating and attempting to kill anything but the bull was foolishly

dangerous. About noon they found a yearling herd upwind; they split and placed themselves cross wind for the kill. Rod waited for Caroline to flush the game, drive it to him.

He continued to wait. He was getting fidgets when Caroline showed up, moving silently. She motioned for him to follow. He did so, hard put to keep up with her and still move quietly. Presently she stopped; he caught up and saw that she had already made a kill. He looked at it and fought down the anger he felt.

Caroline spoke. "Nice tender one, I think. Suit you, Rod?"

He nodded. "Couldn't be better. A clean kill, too. Carol?"

"Huh?"

"I think you are better at this than I am.

"Oh, shucks, it was just luck." She grinned and looked sheepish.

"I don't believe in luck. Any time you want to lead the hunt, let me know. But be darn sure you let me know."

She looked at his unsmiling face, said slowly, "By any chance are you bawling me out?"

"You could call it that. I'm saying that any time you want to lead the hunt, you tell me. Don't switch in the middle. Don't ever. I mean it."

"What's the matter with you, Rod? Getting your feelings hurt just because I got there first that's silly!"

Rod sighed. "Maybe that's it. Or maybe I don't like having a girl take the kill away from me. But I'm dead sure about one thing: I don't like having a partner on a hunt who can't be depended on. Too many ways to get hurt. I'd rather hunt alone."

"Maybe I'd rather hunt alone! I don't need any help."

"I'm sure you don't. Let's forget it, huh, and get this carcass back to camp."

Caroline did not say anything while they butchered. When they had the waste trimmed away and were ready to pack as much as possible back to the others Rod said, "You lead off. I'll watch behind."

"Rod?"

"Huh?"

"I'm sorry"

"What? Oh, forget it."

"I won't ever do it again. Look, I'll tell everybody you made the kill."

He stopped and put a hand on her arm. "Why tell anybody anything? It's nobody's business how we organize our hunt as long as we bring home the meat."

"You're still angry with me."

"I never was angry," he lied. "I just don't want us to get each other crossed up."

"Roddie, I'll never cross you up again! Promise."

Girls stayed in the majority to the end of the week. The cave, comfortable for three, adequate for twice that number, was crowded for the number that was daily accumulating. Rod decided to make it a girls' dormitory and moved the males out into the open on the field at the foot of the path up the shale. The spot was unprotected against weather and animals but it did guard the only access to the cave. Weather was no problem; protection against animals was set up as well as could be managed by organizing a night watch whose duty it was to keep fires burning between the bluff and the creek on the upstream side and in the bottleneck downstream. Rod did not like the arrangements, but they were the best he could do at the time. He sent Bob Baxter and Roy Kilroy downstream to scout for caves and Caroline and Margery Chung upstream for the same purpose. Neither party was successful in the oneday limit he had imposed; the two girls brought back another straggler.

A group of four boys came in a week after Jim's shirt had been requisitioned; it brought the number up to twenty five and shifted the balance to more boys than girls. The four newcomers could have been classed as men rather than boys, since they were two or three years older than the average. Three of the four classes in this survival test area had been about to graduate from secondary schools; the fourth class, which included these four, came from Outlands Arts College of Teller University.

"Adult" is a slippery term. Some cultures have placed adult age as low as eleven years, others as high as thirty five and some have not recognized

any such age as long as an ancestor remained alive. Rod did not think of these new arrivals as senior to him. There were already a few from Teller U. in the group, but Rod was only vaguely aware which ones they were they fitted in. He was too busy with the snowballing problems of his growing colony to worry about their backgrounds on remote Terra.

The four were Jock McGowan, a brawny youth who seemed all hands and feet, his younger brother Bruce, and Chad Ames and Dick Burke. They had arrived late in the day and Rod had not had time to get acquainted, nor was there time the following morning, as a group of four girls and five boys poured in on them unexpectedly. This had increased his administrative problems almost to the breaking point; the cave would hardly sleep four more females. It was necessary to find, or build, more shelter.

Rod went over to the four young men lounging near the cooking fire. He squatted on his heels and asked, "Any of you know anything about building?"

He addressed them all, but the others waited for Jock McGowan to speak. "Some," Jock admitted. "I reckon I could build anything I wanted to."

"Nothing hard," Rod explained. "Just stone walls. Ever tried your hand at masonry?"

"Sure. What of it?"

"Well, here's the idea. We've got to have better living arrangements right away we've got people pouring out of our ears. The first thing we are going to do is to throw a wall from the bluff to the creek across this flat area. After that we will build huts, but the first thing is a kraal to stop dangerous animals."

McGowan laughed. "That will be some wall. Have you seen this dingus that looks like an elongated cougar?

One of those babies would go over your wall before you could say 'scat.'"

"I know about them," Rod admitted, "and I don't like them." He rubbed the long white scars on his left arm. "They probably could go over any wall we could build. So we'll rig a surprise for them." He picked up a twig and started drawing in the dirt. "We build the wall and bring it around to here. Then, inside for about six meters, we set up sharpened poles. Anything comes over the wall splits its gut on the poles."

Jock McGowan looked at the diagram. "Futile."

"Silly," agreed his brother.

Rod flushed but answered, "Got a better idea?"

"That's beside the point."

"Well," Rod answered slowly, "unless somebody comes down with a better scheme, or unless we find really good caves, we've got to fortify this spot the best we can . . . so we'll do this. I'm going to set the girls to cutting and sharpening stakes. The rest of us will start on the wall. If we tear into it we ought to have a lot of it built before dark. Do you four want to work together? There will be one party collecting rock and another digging clay and making clay mortar. Take your choice."

Again three of them waited. Jock McGowan lay back and laced his hands under his head. "Sorry. I've got a date to hunt today."

Rod felt himself turning red. "We don't need a kill today," he said carefully.

"Nobody asked you, youngster."

Rod felt the cold tenseness he always felt in a hunt He was uncomfortably aware that an audience had gathered. He tried to keep his voice steady and said, "Maybe I've made a mistake. I"

"You have."

"I thought you four had teamed with the rest of us. Well?"

"Maybe. Maybe not."

"You'll have to fish or cut bait. If you join, you work like anybody else. If not well, you're welcome to breakfast and stop in again some time. But be on your way. I won't have you lounging around while everybody else, is working."

Jock McGowan sucked his teeth, dug at a crevice with his tongue. His hands were still locked back of his head. "What you don't understand, sonny boy, is that nobody gives the McGowans orders. Nobody. Right, Bruce?"

"Right, Jock."

"Right, Chad? Dick?"

The other two grunted approval. McGowan continued to stare up at the sky. "So," he said softly, "I go where I want to go and stay as long as I like.

The question is not whether we are going to join up with you, but what ones am going to let team with us. But not you, sonny boy; you are still wet behind your ears.

"Get up and get out of here!" Rod started to stand up. He was wearing Colonel Bowie, as always, but he did not reach for it. He began to straighten up from squatting.

Jock McGowan's eyes flicked toward his brother. Rod was hit low. . . and found himself flat on his face with his breath knocked out. He felt the sharp kiss of a knife against his ribs; he held still. Bruce called out, "How about it, Jock?"

Rod could not see Jock McGowan. But he heard him answer, "Just keep him there."

"Right, Jock."

Jock McGowan was wearing both gun and knife. Rod now heard him say, "Anybody want to dance? Any trouble out of the rest of you lugs?"

Rod still could not see Jock, but he could figure from the naked, startled expressions of a dozen others that McGowan must have rolled to his feet and covered them with his gun. Everybody in camp carried knives; most had guns as well and Rod could see that Roy Kilroy was wearing his although most guns were kept when not in use in the cave in a little arsenal which Carmen superintended.

But neither guns nor knives were of use; it had happened too fast, shifting from wordy wrangling to violence with no warning. Rod could see none of his special friends from where he was; those whom he could see did not seem disposed to risk death to rescue him.

Jock McGowan said briskly, "Chad Dick got 'em all covered?"

"Right, Skipper."

"Keep 'em that way while I take care of this cholo." His hairy legs appeared in front of Rod's face. "Pulled his teeth, Bruce?"

"Not yet."

"I'll do it. Roll over, sonny boy, and let me at your knife. Let him turn over, Bruce."

Bruce McGowan eased up on Rod and Jock bent down. As he reached for Rod's

knife a tiny steel flower blossomed in Jock's side below his ribs. Rod heard nothing, not even the small sound it must have made when it struck. Jock straightened up with a shriek, clutched at his side.

Bruce yelled, Jock! What's the matter?"

"They got me." He crumpled to the ground like loose clothing.

Rod still had a man with a knife on his back but the moment was enough; he rolled and grabbed in one violent movement and the situation was reversed, with Bruce's right wrist locked in Rod's fist, with Colonel Bowie threatening Bruce's face.

A loud contralto voice sang out, "Take it easy down there! We got you covered."

Rod glanced up. Caroline stood on the shelf at the top of the path to the cave, with a rifle at her shoulder. At the downstream end of the shelf Jacqueline sat with her little dart gun in her lap; she was frantically pumping up again. She raised it, drew a bead on some one past Rod's shoulder.

Rod called out, "Don't shoot!" He looked around. "Drop it, you two!"

Chad Ames and Dick Burke dropped their guns. Rod added, "Roy! Grant Cowper! Gather up their toys. Get their knives, too." He turned back to Bruce McGowan, pricked him under the chin. "Let's have your knife." Bruce turned it loose; Rod took it and got to his feet.

Everyone who had been up in the cave was swarming down, Caroline in the lead. Jock McGowan was writhing on the ground, face turned blue and gasping in the sort of paralysis induced by the poison used on darts. Bob Baxter hurried up, glanced at him, then said to Rod, "I'll take care of that cut in your ribs in a moment." He bent over Jock McGowan.

Caroline said indignantly, "You aren't going to try to save him?"

"Of course."

"Why? Let's chuck him in the stream."

Baxter glanced at Rod. Rod felt a strong urge to order Caroline's suggestion carried out. But he answered, "Do what you can for him, Bob. Where's Jack? Jack you've got antidote for your darts, haven't you? Get it."

Jacqueline looked scornfully at the figure on the ground. "What for? He's not hurt."

"Huh?"

"Just a pin prick. A practice dart that's all I keep in Betsey. My hunting darts are put away so that nobody can hurt themselves and I didn't have time to get them."

She prodded Jock with a toe. "He's not poisoned. He's scaring himself to death."

Caroline chortled and waved the rifle she carried. "And this one is empty. Not even a good club."

Baxter said to Jackie, "Are you sure? The reactions look typical."

"Sure I'm sure! See the mark on the end sticking out? A target dart."

Baxter leaned over his patient, started slapping his face. "Snap out of it, McGowan! Stand up. I want to get that dart out of you."

McGowan groaned and managed to stand. Baxter took the dart between thumb and forefinger, jerked it free; Jock yelled. Baxter slapped him again. "Don't you faint on me," he growled. 'you're lucky. Let it drain and you'll be all right." He turned to Rod. "You're next."

"Huh? There's nothing the matter with me."

"That stuff on your ribs is paint, I suppose." He looked around. "Carmen, get my kit."

"I brought it down."

"Good. Rod, sit down and lean forward. This is going to hurt a little."

It did hurt. Rod tried to chat to avoid showing that he minded it. "Carol," he asked, "I don't see how you and Jackie worked out a plan so fast. That was smooth."

"Huh? We didn't work out a plan; we both just did what we could and did it fast." She turned to Jacqueline and gave her a clap on the shoulder that nearly knocked her over. "This kid is solid, Roddie, solid!"

Jacqueline recovered, looked pleased and tried not to show it. "Aw, Carol!"

"Anyway I thank you both."

"A pleasure. I wish that pea shooter had been loaded. Rod, what are you going to do with them?"

"Well . . . ummph!"

"Whoops!" said Baxter, behind him. "I said it was going to hurt. I had better put one more clip in. I'd like to put a dressing on that, but we can't, so you lay off heavy work for a while and sleep on your stomach."

"Unh!" said Rod.

"That's the last. You can get up now. Take it easy and give it a chance to scab."

"I still think," Caroline insisted, "that we ought to make them swim the creek. We could make bets on whether or not any of 'em make it across."

"Carol, you're uncivilized."

"I never claimed to be civilized. But I know which end wags and which end bites."

Rod ignored her and went to look at the prisoners. Roy Kilroy had caused them to lie down one on top of the other; it rendered them undignified and helpless. "Let them sit up."

Kilroy and Grant Cowper had been guarding them. Cowper said, "You heard the Captain. Sit up." They unsnarled and sat up, looking glum.

Rod looked at Jock McGowan. "What do you think we ought to do with you?"

McGowan said nothing. The puncture in his side was oozing blood and he was pale. Rod said slowly, "Some think we ought to chuck you in the stream. That's the same as condemning you to death but if we are going to, we ought to shoot you or hang you. I don't favor letting anybody be eaten alive. Should we hang you?"

Bruce McGowan blurted out, "We haven't done anything."

"No. But you sure tried. You aren't safe to have around other people."

Somebody called out, "Oh, let's shoot them and get it over with!" Rod ignored it. Grant Cowper came close to Rod and said, "We ought to vote on this. They ought to have a trial."

Rod shook his head. "No." He went on to the prisoners,

I don't favor punishing you this is personal. But we can't risk having you around either." He turned to Cowper. "Give them their knives."

"Rod? You're not going to fight them?"

"Of course not." He turned back. "You can have your knives; we're keeping your guns. When we turn you loose, head downstream and keep going. Keep going for at least a week. If you ever show your faces again, you won't get a chance to explain. Understand me?'

Jock McGowan nodded. Dick Burke gulped and said, "But turning us out with just knives is the same as killing us.

"Nonsense! No guns. And remember, if you turn back this way, even to hunt, it's once too many. There may be somebody trailing you with a gun.

"Loaded this time!" added Caroline. "Hey, Roddie, I want that job. Can I? Please?"

"Shut up, Carol. Roy, you and Grant start them on their way."

As exiles and guards, plus sightseers, moved off they ran into Jimmy Throxton coming back into camp. He stopped and stared. "What's the procession? Rod what have you done to your ribs, boy? Scratching yourself again?"

Several people tried to tell him at once. He got the gist of it and shook his head mournfully. "And there I was, good as gold, looking for pretty rocks for our garden wall. Every time there's a party people forget to ask me. Discrimination."

"Stow it, Jim. It's not funny."

"That's what I said. It's discrimination."

Rod got the group started on the wall with an hour or more of daylight wasted. He tried to work on the wall despite Bob Baxter's medical orders, but found that he was not up to it; not only was his wound painful but also he felt shaky with reaction.

Grant Cowper looked him up during the noon break. "Skipper, can I talk with you? Privately?"

Rod moved aside with him. "What's on your mind?"

"Mmm . . . Rod, you were lucky this morning. You know that, don't you? No offense intended."

"Sure, I know. What about it?"

"Uh, do you know why you had trouble?"

"What? Of course I know now. I trusted somebody when I should not have."

Cowper shook his head. "Not at all. Rod, what do you know about theory of government?"

Rod looked surprised. "I've had the usual civics courses. Why?"

"I doubt if I've mentioned it, but the course I'm majoring in at Teller U. is colonial administration. One thing we study is how authority comes about in human society and how it is maintained. I'm not criticizing but to be blunt, you almost lost your life because you've never studied such things."

Rod felt annoyed. "What are you driving at?"

"Take it easy. But the fact remains that you didn't have any authority. McGowan knew it and wouldn't take orders. Everybody else knew it, too. When it came to a showdown, nobody knew whether to back you up or not. Because you don't have a milligram of real authority."

"Just a moment! Are you saying I'm not leader of this team?"

"You are de facto leader, no doubt about it. But you've never been elected to the job. That's your weakness."

Rod chewed this over. "I know," he said slowly. "It's just that we have been so confounded busy."

"Sure, I know. I'd be the last person to criticize. But a captain ought to be properly elected."

Rod sighed. "I meant to hold an election but I thought getting the wall built was more urgent. All right, let's call them together."

"Oh, you don't need to do it this minute."

"Why not? The sooner the better, apparently."

"Tonight, when it's too dark to work, is soon enough."

"Well . . . okay."

When they stopped for supper Rod announced that there would be an organization and planning meeting. No one seemed surprised, although he himself had mentioned it to no one. He felt annoyed and had to remind himself that there was nothing secret about it; Grant had been under no obligation to keep it quiet. He set guards and fire tenders, then came back into the circle of firelight and called out, "Quiet, everybody! Let's get started. If you guys on watch can't hear, be sure to speak up" He hesitated. "We're going to hold an election. Somebody pointed out that I never have been elected captain of this survival team. Well, if any of you have your noses out of joint, I'm sorry. I was doing the best I could. But you are entitled to elect a captain. All right, any nominations?"

Jiminy Throxton shouted, "I nominate Rod Walker!" Caroline's voice answered, "I second it! Move the nominations be closed."

Rod said hastily, "Carol, your motion is out of order."

"Why?"

Before he could answer Roy Kilroy spoke up. "Rod, can I have the floor a moment? Privileged question."

Rod turned, saw that Roy was squatting beside Grant Cowper. "Sure. State your question."

"Matter of procedure. The first thing is to elect a temporary chairman."

Rod thought quickly. "I guess you're right. Jimmy, your nomination is thrown out. Nominations for temporary chairman are in order."

"Rod Walker for temporary chairman!"

"Oh, shut up, Jimmy! I don't want to be temporary chairman."

Roy Kilroy was elected. He took the imaginary gavel and announced, "The chair recognizes Brother Cowper for a statement of aims and purposes of this meeting."

Jimmy Throxton called out, "What do we want any speeches for? Let's elect Rod and go to bed. I'm tired and I've got a two hour watch coming up."

"Out of order. The chair recognizes Grant Cowper." Cowper stood up. The

firelight caught his handsome features and curly, short beard. Rod rubbed the scraggly growth on his own chin and wished that he looked like Cowper. The young man was dressed only in walking shorts and soft bush shoes but he carried himself with the easy dignity of a distinguished speaker before some important body. "Friends," he said, "brothers and sisters, we are gathered here tonight not to elect a survival team captain, but to found a new nation."

He paused to let the idea sink in. "You know the situation we are in. We fervently hope to be rescued, none more so than I. I will even go so far as to say that I think we will be rescued . . . eventually. But we have no way of knowing, we have no data on which to base an intelligent guess, as to when we will be rescued.

"It might be tomorrow . . . it might be our descendants a thousand years from now." He said the last very solemnly.

"But when the main body of our great race re-establishes contact with us, it is up to us, this little group here tonight, whether they find a civilized society or fleabitten animals without language, without arts, with the light of reason grown dim . . . or no survivors at all, nothing but bones picked clean."

"Not mine!" called out Caroline. Kilroy gave her a dirty look and called for order.

"Not yours, Caroline," Cowper agreed gravely. "Nor mine. Not any of us. Because tonight we will take the step that will keep this colony alive. We are poor in things; we will make what we need. We are rich in knowledge; among us we hold the basic knowledge of our great race. We must preserve it . . . we will!"

Caroline cut through Cowper's dramatic pause with a stage whisper. "Talks pretty, doesn't he? Maybe I'll marry him."

He did not try to fit this heckling into his speech. "What is the prime knowledge acquired by our race? That without which the rest is useless? What flame must we guard like vestal virgins?"

Some one called out, "Fire." Cowper shook his head.

"Writing!"

"The decimal system."

"Atomics!"

"The wheel, of course.

"No, none of those. They are all important, but they are not the keystone. The greatest invention of mankind is government. It is also the hardest of all. More individualistic than cats, nevertheless we have learned to cooperate more efficiently than ants or bees or termites. Wilder, bloodier, and more deadly than sharks, we have learned to live together as peacefully as lambs. But these things are not easy. That is why that which we do tonight will decide our future . . . and perhaps the future of our children, our children's children, our descendants far into the womb of time. We are not picking a temporary survival leader; we are setting up a government. We must do it with care. We must pick a chief executive for our new nation, a mayor of our city state. But we must draw up a constitution, sign articles binding us together. We must organize and plan."

"Hear, hear!"

"Bravo!"

"We must establish law, appoint judges, arrange for orderly administration of our code. Take for example, this morning" Cowper turned to Rod and gave him a friendly smile. "Nothing personal, Rod, you understand that. I think you acted with wisdom and I was happy that you tempered justice with mercy. Yet no one could have criticized if you had yielded to your impulse and killed all four of those, uh . . . antisocial individuals. But justice should not be subject to the whims of a dictator. We can't stake our lives on your temper . . . good or bad. You see that, don't you?"

Rod did not answer He felt that he was being accused of bad temper, of being a tyrant and dictator, of being a danger to the group. But he could not put his finger on it. Grant Cowper's remarks had been friendly . . . yet they felt intensely personal and critical.

Cowper insisted on an answer. "You do see that, Rod? Don't you? You don't want to continue to have absolute power over the lives and persons of our community? You don't want that? Do you?" He waited.

"Huh? Oh, yeah, sure! I mean, I agree with you."

"Good! I was sure you would understand. And I must ay that I think you have done a very good job in getting us together. I don't agree with any who have criticized you. You were doing your best and we should let bygones be bygones." Cowper grinned that friendly grin and Rod felt as if he were being smothered with kisses.

Cowper turned to Kilroy. "That's all I have to say, Mr. Chairman." He flashed his grin and added as he sat down, "Sorry I talked so long, folks. I had to get it off my chest."

Kilroy clapped his hands once. "The chair will entertam nominations for Hey, Grant, if we don't call it 'captain,' then what should we call it?"

"Mmm . . ." Cowper said judicially. "'President' seems a little pompous. I think 'mayor' would be about rightmayor of our citystate, our village."

"The chair will entertain nominations for mayor.

"Hey!" demanded Jimmy Throxton. "Doesn't anybody else get to shoot off his face?"

"Out of order."

"No," Cowper objected, "I don't think you should rule Jimmy out of order, Roy. Anyone who has something to contribute should be encouraged to speak. We mustn't act hastily."

"Okay, Throxton, speak your piece."

"Oh, I didn't want to sound off. I just didn't like the squeeze play."

"All right, the chair stands corrected. Anybody else? If not, we will entertain"

"One moment, Mr. Chairman!"

Rod saw that it was Arthur Nielsen, one of the Teller University group. He managed to look neat even in these circumstances but he had strayed into camp bereft of all equipment, without even a knife. He had been quite hungry.

Kilroy looked at him. "You want to talk, Waxie?"

"Nielsen is the name. Or Arthur. As you know. Yes."

"Okay. Keep it short."

"I shall keep it as short as circumstances permit. Fellow associates, we have here a unique opportunity, probably one which has not occurred before in history. As Cowper pointed out, we must proceed with care. But, already we have set out on the wrong foot. Our object should be to found the first truly scientific community. Yet what do I find? You are proposing to select

an executive by counting noses! Leaders should not be chosen by popular whim; they should be determined by rigorous scientific criteria. Once selected, those leaders must have full scientific freedom to direct the biogroup in accordance with natural law, unhampered by such artificial anachronisms as statutes, constitutions, and courts of law. We have here an adequate supply of healthy females; we have the means to breed scientifically a new race, a super race, a race which, if I may say so"

A handful of mud struck Nielsen in the chest; he stopped suddenly. "I saw who did that!" he said angrily. Just the sort of nincompoop who always"

"Order, order, please!" Kilroy shouted. "No mudsling or I'll appoint a squad of sergeants-at-arms. Are you through, Waxie?"

"I was just getting started."

"Just a moment," put in Cowper. "Point of order Mr. Chairman. Arthur has a right to be heard. But I think he speaking before the wrong body. We're going to have a constitutional committee, I'm sure. He should present his arguments to them. Then, if we like them, we can adopt his ideas."

"You're right, Grant. Sit down, Waxie."

"Huh? I appeal!"

Roy Kilroy said briskly, "The chair has ruled this out of order at this time and the speaker has appealed to the house, a priority motion not debatable. All in favor of supporting the chair's ruling, which is for Waxie to shut up, make it known by saying 'Aye.'"

There was a shouted chorus of assent. "Opposed: 'No.' Sit down, Waxie."

Kilroy looked around. "Anybody else?"

"Yes"

"I can't see. Who is it?"

"Bill Kennedy, Ponce de Leon class. I don't agree with Nielsen except on one point: we are fiddling around with the wrong things. Sure, we need a group captain but, aside from whatever it takes to eat, we shouldn't think about anything but how to get back. I don't want a scientific society; I'd settle for a hot bath and decent food."

There was scattered applause. The chairman said, "I'd like a bath, too . . . and I'd fight anybody for a dish of cornflakes. But, Bill, how do you

suggest that we go about it?"

"Huh? We set up a crashpriority project and build a gate. Everybody works on it."

There was silence, then several talked at once: "Crazy! No uranium." "We might find uranium." "Where do we get the tools? Shucks, I don't even have a screwdriver." "But where are we?" "It is just a matter of"

"Quiet!" yelled Kilroy. "Bill, do you know how to build a gate?"

"No"

"I doubt if anybody does."

"That's a defeatist attitude. Surely some of you educated blokes from Teller have studied the subject. You should get together, pool what you know, and put us to work. Sure, it may take a long time. But that's what we ought to do."

Cowper said, just a minute, Roy. Bill, I don't dispute what you say; every idea should be explored. We're bound to set up a planning committee. Maybe we had better elect a mayor, or a captain, or whatever you want to call himand then dig into your scheme when we can discuss it in detail. I think it has merit and should be discussed at length. What do you think?"

"Why, sure, Grant. Let's get on with the election. I just didn't want that silly stuff about breeding a superman to be the last word."

"Mr. Chairman! I protest"

"Shut up, Waxie. Are you ready with nominations for mayor? If there is no objection, the chair rules debate closed and will entertain nominations."

"I nominate Grant Cowper!"

"Second!"

"I second the nomination."

"Okay, I third it!"

"Let's make it unanimous! Question, question!"

Jimmy Throxton's voice cut through the shouting, "I NOMINATE ROD WALKER!"

Bob Baxter stood up. "Mr. Chairman?"

"Quiet, everybody. Mr. Baxter."

"I second Rod Walker."

"Okay. Two nominations, Grant Cowper and Rod Walker. Are there any more?"

There was a brief silence. Then Rod spoke up. "Just a second, Roy." He found that his voice was trembling and he took two deep breaths before he went on. "I don't want it. I've had all the grief I want for a while and I'd like a rest. Thanks anyhow, Bob. Thanks, Jimmy."

"Any further nominations?"

"Just a sec, Roy . . . point of personal privilege." Grant Cowper stood up. "Rod, I know how you feel. Nobody in his right mind seeks public office . . . except as a duty, willingness to serve. If you withdraw, I'm going to exercise the same privilege; I don't want the headaches any more than you do."

"Now wait a minute, Grant. You"

"You wait a minute. I don't think either one of us should withdraw; we ought to perform any duty that is handed to us, just as we stand a night watch when it's our turn. But I think we ought to have more nominations." He looked around. "Since that mixup this morning we have as many girls as men . . yet both of the candidates are male. That's not right. Uh, Mr. Chairman, I nominate Caroline Mshiyeni."

"Huh? Hey, Grant, don't be silly. I'd look good as a lady mayoress, wouldn't I? Anyhow, I'm for Roddie."

"That's your privilege, Caroline. But you ought to let yourself be placed before the body, just like Rod and myself."

"Nobody's going to vote for me!"

"That's where you're wrong. I'm going to vote for you. But we still ought to have more candidates."

"Three nominations before the house," Kilroy announced. "Any more? If not, I declare the"

"Mr. Chairman!"

"Huh? Okay, Waxie, you want to nominate somebody?"

"Yes."

"Who?"

"Me"

"You want to nominate yourself?"

"I certainly do. What's funny about that? I am running on a platform of strict scientific government. I want the rational minds in this group to have someone to vote for."

Kilroy looked puzzled. "I'm not sure that is correct parliamentary procedure. I'm afraid I'll have to over"

"Never mind, never mind!" Caroline chortled. "I nominate him. But I'm going to vote for Roddie," she added.

Kilroy sighed. "Okay, four candidates. I guess we'll have to have a show of hands. We don't have anything for ballots."

Bob Baxter stood up. "Objection, Mr. Chairman. I call for a secret ballot. We can find some way to do it."

A way was found. Pebbles would signify Rod, a bare twig was a note for Cowper, a green leaf meant Caroline, while one of Jimmy's ceramic attempts was offered as a ballot box. "How about Nielsen?" Kilroy asked.

Jimmy spoke up. "Uh, maybe this would do: I made another pot the same time I made this one, only it busted. Ill get chunks of it and all the crackpots are votes for Waxie."

"Mr. Chairman, I resent the insinua"

"Save it, Waxie. Pieces of baked clay for you, pebbles for Walker, twigs for Grant, leaves for Carol. Get your votes, folks, then file past and drop them in the ballot box.Shorty, you and Margery act as tellers."

The tellers solemnly counted the ballots by firelight. There were five votes for Rod, one for Nielsen, none for Caroline, and twentytwo for Cowper. Rod shook hands with Cowper and faded back into the darkness so that no one would see his face. Caroline looked at the results and said, "Hey, Grant! You promised to vote for me. What happened? Did you vote for yourself? Huh? How about that?"

Rod said nothing. He had voted for Cowper and was certain that the new mayor had not returned the compliment . . . he was sure who his five friends were. Dog take it! he had seen it coming; why hadn't Grant let him bow out?

Grant ignored Caroline's comment. He briskly assumed the chair and said, "Thank you. Thank you all. know you want to get to sleep, so I will limit myself tonight to appointing a few committees"

Rod did not get to sleep at once. He told himself that there was no disgrace in losing an election shucks, hadn't his old man lost the time he had run for community corporation board? He told himself, too, that trying to ride herd on those apes was enough to drive a man crazy and he was well out of it he had never wanted the job! Nevertheless there was a lump in his middle and a deep sense of personal failure.

It seemed that he had just gone to sleep . . . his father was looking at him saying, "You know we are proud of you, son. Still, if you had had the foresight to" when someone touched his arm.

He was awake, alert, and had Colonel Bowie out at once.

"Put away that toothpick," Jimmy whispered, "before you hurt somebody. Me, I mean."

"What's up?"

"I'm up, I've. got the fire watch. You're about to be, because we are holding a session of the inner sanctum."

"Huh?"

"Shut up and come along. Keep quiet, people are asleep."

The inner sanctum turned out to be Jimmy, Caroline, Jacqueline, Bob Baxter, and Carmen Garcia. They gathered inside the ring of fire but as far from the sleepers as possible. Rod looked around at his friends.

"What's this all about?"

"It's about this," Jimmy said seriously. "You're our Captain. And we like that election as much as I like a crooked deck of cards."

"That's right," agreed Caroline. "All that fancy talk!"

"Huh? Everybody got to talk. Everybody got to vote."

"Yes," agreed Baxter. "Yes . . . and no."

"It was all proper. I have no kick."

"I didn't expect you to kick, Rod. Nevertheless well, I don't know how much politicking you've seen, Rod. I haven't seen much myself, except in church matters and we Quakers don't do things that way; we wait until the Spirit moves. But, despite all the rigamarole, that was a slick piece of railroading. This morning you would have been elected overwhelmingly; tonight you did not stand a chance."

"The point is," Jimmy put in, "do we stand for it?"

"What can we do?"

"What can we do? We don't have to stay here. We've still got our own group; we can walk out and find another place . . . a bigger cave maybe."

'Yes, sir!" agreed Caroline. "Right tonight."

Rod thought about it. The idea was tempting; they didn't need the others . . . guys like Nielsen and Cowper. The discovery that his friends were loyal to him, loyal to the extent that they would consider exile rather than let him down choked him up. He turned to Jacqueline. "How about you, Jackie?"

"We're partners, Rod. Always."

"Bob do you want to do this? You and Carmen?"

"Yes. Well . .

"'Well' what?"

"Rod, we're sticking with you. This election is all very well but you took us in when we needed it and teamed with us. We'll never forget it. Furthermore I think that you make a sounder team captain than Cowper is likely to make. But there is one thing."

"Yes."

"If you decide that we leave, Carmen and I will appreciate it if you put it off a day."

"Why?" demanded Caroline. "Now is the time."

"Well they've set this up as a formal colony, a village with a mayor. Everybody knows that a regularly elected mayor can perform weddings."

"Oh!" said Caroline. "Pardon my big mouth."

"Carmen and I can take care of the religious end it's not very complicated in our church. But, just in case we ever are rescued, we would like it better and our folks would like it if the civil requirements were all perfectly regular and legal. You see?"

Rod nodded. "I see."

"But if you say to leave tonight . . ."

"I don't," Rod answered with sudden decision. "We'll stay and get you two properly married. Then"

"Then we all shove off in a shower of rice," Caroline finished.

"Then we'll see. Cowper may turn out to be a good mayor. We won't leave just because I lost an election." He looked around at their faces. "But . . . but I certainly do thank you. I"

He could not go on. Carmen stepped forward and kissed him quickly. "Goodnight, Rod. Thanks."

9 "A Joyful Omen"

Mayor Cowper got off to a good start. He approved, took over, and embellished a suggestion that Carmen and Bob should have their own quarters. He suspended work on the wall and set the whole village to constructing a honeymoon cottage. Not until his deputy, Roy Kilroy, reminded him did he send out hunting parties.

He worked hard himself, having set the wedding for that evening and having decreed that the building must be finished by sundown. Finished it was by vandalizing part of the wall to supply building stone when the supply ran short Construction was necessarily simple since they had no tools, no mortar but clay mud, no way to cut timbers. It was a stone box as tall as a man and a couple of meters square, with a hole for a door. The roof was laid up from the heaviest poles that could be cut from a growth upstream of giant grass much like bamboo the colonists simply called it "bamboo." This was thatched and plastered with mud; it sagged badly.

But it was a house and even had a door which could be closed a woven grass

mat stiffened with bamboo. It neither hinged nor locked but it filled the hole and could be held in place with a stone and a pole. The floor was clean sand covered with fresh broad leaves.

As a doghouse for a St. Bernard it would have been about right; as a dwelling for humans it was not much. But it was better than that which most human beings had enjoyed through the history and prehistory of the race. Bob and Carmen did not look at it critically.

When work was knocked off for lunch Rod self-consciously sat down near a group around Cowper. He had wrestled with his conscience for a long time in the night and had decided that the only thing to do was to eat sour grapes and pretend to like them. He could start by not avoiding Cowper.

Margery Chung was cook for the day; she cut Rod a chunk of scorched meat. He thanked her and started to gnaw it. Cowper was talking. Rod was not trying to overhear but there seemed to be no reason not to listen.

"which is the only way we will get the necessary discipline into the group. I'm sure you agree. Cowper glanced up, caught Rod's eye, looked annoyed, then grinned. "Hello, Rod."

"Hi, Grant."

"Look, old man, we're having an executive committee meeting. Would you mind finding somewhere else to eat lunch?"

Rod stood up blushing. "Oh! Sure."

Cowper seemed to consider it. "Nothing private, of course just getting things done. On second thought maybe you should sit in and give us your advice."

"Huh? Oh, no! I didn't know anything was going on." Rod started to move away.

Cowper did not insist. "Got to keep working, lots to do. See you later, then. Any time." He grinned and turned away.

Rod wandered off, feeling conspicuous. He heard himself hailed and turned gratefully, joined Jimmy Throxton. "Come outside the wall," Jimmy said quietly. "The Secret Six are having a picnic. Seen the happy couple?"

"You mean Carmen and Bob?"

"Know any other happy couples? Oh, there they are staring hungrily at their

future mansion. See you outside."

Rod went beyond the wall, found Jacqueline and Caroline sitting near the water and eating. From habit he glanced around, sizing up possible cover for carnivores and figuring escape routes back into the kraal, but his alertness was not conscious as there seemed no danger in the open so near other people. He joined the girls and sat down on a rock. "Hi, kids."

"Hello, Rod."

"H'lo, Roddie," Caroline seconded. "'What news on the Rialto?'"

"None, I guess. Say, did Grant appoint an executive committee last night?"

"He appointed about a thousand committees but no executive committee unless he did it after we adjourned. Why an executive committee? This gang needs one the way I need a bicycle."

"Who is on it, Rod?" asked Jacqueline.

Rod thought back and named the faces he had seen around Cowper. She looked thoughtful. "Those are his own special buddies from Teller U."

"Yes, I guess so.

"I don't like it," she answered.

"What's the harm?"

"Maybe none . . . maybe. It is about what we could expect. But I'd feel better if all the classes were on it, not just that older bunch. You know."

"Shucks, Jack, you've got to give him some leeway."

"I don't see why, put in Caroline. "That bunch you named are the same ones Hizzonor appointed as chairmen of the other committees. It's a tight little clique. You notice none of us unsavory characters got named to any important cominittee I'm on waste disposal and camp sanitation, Jackie is on food preparation, and you aren't on any. You should have been on the constitution, codification, and organization committee, but he made himself chairman and left you out. Add it up."

Rod did not answer. Caroline went on, "I'll add it if you won't. First thing you know there will be a nominating committee. Then we'll find that only those of a certain age, say twentyone, can hold office. Pretty soon that executive committee will turn into a senate (called something else,

probably) with a veto that can be upset only by a threequarters majority that we will never get. That's the way my Uncle Phil would have rigged it."

"Your Uncle Phil?"

"Boy, there was a politician! I never liked him he had kissed so many babies his lips were puckered. I used to hide when he came into our house. But I'd like to put him up against Hizzonor. It'ud be a battle of dinosaurs. Look, Rod, they've got us roped and tied; I say we should fade out right after the wedding." She turned to Jacqueline. "Right. . . pardner?"

"Sure . . . if Rod says so."

"Well, I don't say so. Look, Carol, I don't like the situation. To tell the truth . . . well, I was pretty sour at being kicked out of the captaincy. But I can't let the rest of you pull out on that account. There aren't enough of us to form another colony, not safely."

"Why, Roddie, there are three times as many people still back in those trees as there are here in camp. This time we'll build up slowly and be choosy about whom we take. Six is a good start. We'll get by."

"Not six, Carol. Four."

"Huh? Six! We shook on it last night before Jimmy woke you."

Rod shook his head. "Carol, how can we expect Bob and Carmen to walk out . . . right after the rest have made them a wedding present of a house of their own?"

"Well . . . darn it, we'd build them another house!"

"They would go with us, Carol but it's too much to ask."

"I think," Jacqueline said grudgingly, "that Rod has something, Carol."

The argument was ended by the appearance of Bob, Carmen, and Jimmy. They had been delayed, explained Jimmy, by the necessity of inspecting the house. "As if I didn't know every rock in it. Oh, my back!"

"I appreciate it, Jim," Carmen said softly. "I'll rub your back."

"Sold!" Jimmy lay face down.

"Hey!" protested Caroline. "I carried more rocks than he did. Mostly he

stood aromid and bossed."

"Supervisory work is exceptionally tiring," Jimmy said smugly. "You get Bob to rub your back."

Neither got a back rub as Roy Kilroy called to them from the wall. "Hey! You down there lunch hour is over. Let's get back to work."

"Sorry, Jimmy. Later." Carmen turned away.

Jimmy scrambled to his feet. "Bob, Carmen don't go 'way yet. I want to say something."

They stopped. Rod waved to Kilroy. "With you in a moment!" He turned back to the others.

Jimmy seemed to have difficulty in choosing words. "Uh, Carmen . . . Bob. The future Baxters. You know we think a lot of you. We think it's swell that you are going to get married every family ought to have a marriage. But . . . well, shopping isn't what it might be around here and we didn't know what to get you. So we talked it over and decided to give you this. It's from all of us. A wedding present." Jimmy jammed a hand in his pocket, hauled out his dirty, dogeared playing cards and handed them to Carmen.

Bob Baxter looked startled. "Gosh, Jimmy, we can't take your cardsyour only cards."

"I we want you to have them."

"But"

"Be quiet, Bob!" Carmen said and took the cards. "Thank you, Jimmy. Thank you very much. Thank you all." She looked around. "Our getting married isn't going to make any difference, you know. It's still one family. We'll expect you all . . . to come play cards . . . at our house just as" She stopped suddenly and started to cry, buried her head on Bob's shoulder. He patted it. Jimmy looked as if he wanted to cry and Rod felt nakedly embarrassed.

They started back, Carmen with an arm around Jimmy and the other around her bethrothed. Rod hung back with the other two. "Did Jimmy," he whispered, "say anything to either of you about this?"

"No," Jacqueline answered.

"Not me," Caroline agreed. "I was going to give 'em my stew pan, but now

I'll wait a day or two." Caroline's "bag of rocks" had turned out to contain an odd assortment for survival among other things, a thin page diary, a tiny mouth organ, and a half-litre sauce pan. She produced other unlikely but useful items from time to time. Why she had picked them and how she had managed to hang on to them after she discarded the bag were minor mysteries, but, as Deacon Matson had often told the class: "Each to his own methods. Survival is an art, not a science." It was undeniable that she had appeared at the cave healthy, well fed, and with her clothing surprisingly neat and clean in view of the month she had been on the land.

"They won't expect you to give up your stew pan, Caroline."

"I can't use it now that the crowd is so big, and they can set up housekeeping with it. Anyhow, I want to."

"I'm going to give her two needles and some thread. Bob made her leave her sewing kit behind in favor of medical supplies. But I'll wait a while, too."

"I haven't anything I can give them," Rod said miserably.

Jacqueline turned gentle eyes on him. "You can make them a water skin for their house, Rod," she said softly. "They would like that. We can use some of my KwikKure so that it will last."

Rod cheered up at once. "Say, that's a swell idea!"

"We are gathered here," Grant Cowper said cheerfully, "to join these two people in the holy bonds of matrimony. I won't give the usual warning because we all know that no impediment exists to this union. In fact it is the finest thing that could happen to our little community, a joyful omen of things to come, a promise for the future, a guarantee that we are firmly resolved to keep the torch of civilization, now freshly lighted on this planet, forever burning in the future. It means that"

Rod stopped listening. He was standing at the groom's right as best man. His duties had not been onerous but now he found that he had an overwhelming desire to sneeze. He worked his features around, then in desperation rubbed his upper lip violently and overcame it. He sighed silently and was glad for the first time that Grant Cowper had this responsibility. Grant seemed to know the right words and he did not.

The bride was attended by Caroline Mshiyeni. Both girls carried bouquets of a flame-colored wild bloom. Caroline was in shorts and shirt as usual and the bride was dressed in the conventional blue denim trousers and overshirt. Her hair was arranged en brosse; her scrubbed face shone in the

firelight and she was radiantly beautiful.

"Who giveth this woman?"

Jimmy Throxton stepped forward and said hoarsely, "I do!"

"The ring, please."

Rod had it on his little finger; with considerable fumbling he got it off. It was a Ponce de Leon senior-class ring, borrowed from Bill Kennedy. He handed it to Cowper.

"Carmen Eleanora, do you take this man to be your lawfully wedded husband, to have and to hold, for better and for worse, in sickness and in health, till death do you part?"

"I do."

"Robert Edward, do you take this woman to be your lawfully wedded wife? Will you keep her and cherish her, cleaving unto her only, until death do you part?"

"I do. I mean, I will. Both."

"Take her hand in yours. Place the ring on her finger. Repeat after me Rod's sneeze was coming back again; he missed part of it.

"so, by authority vested in me as duly elected Chief Magistrate of this sovereign community, I pronounce you man and wife! Kiss her, chum, before I beat you to it."

Carol and Jackie both were crying; Rod wondered what had gone wrong. He missed his turn at kissing the bride, but she turned to him presently, put an arm around his neck and kissed him. He found himself shaking hands with Bob very solemnly. "Well, I guess that does it. Don't forget you are supposed to carry her through the door."

"I won't forget."

"Well, you told me to remind you. Uh, may the Principle bless you both."

10 "I So Move"

There was no more talk of leaving. Even Caroline dropped the subject.

But on other subjects talk was endless. Cowper held a town meeting every

evening. These started with committee reports the committee on food resources and natural conservation, the committees on artifacts and inventory, on waste disposal and camp sanitation, on exterior security, on human resources and labor allotment, on recruitment and immigration, on conservation of arts and sciences, on constitution, codification, and justice, on food preparation, on housing and city planning Cowper seemed to enjoy the endless talk and Rod was forced to admit that the others appeared to have a good time, too he surprised himself by discovering that he too looked forward to the evenings. It was the village's social life, the only recreation. Each session produced wordy battles, personal remarks and caustic criticisms; what was lacking in the gentlemanly formality found in older congresses was made up in spice. Rod liked to sprawl on the ground with his ear near Jimmy Throxton and listen to Jimmy's slanderous asides about the intelligence, motives, and ancestry of each speaker. He waited for Caroline's disorderly heckling.

But Caroline was less inclined to heckle now; Cowper had appointed her Historian on discovering that she owned a diary and could take shorthand. "It is extremely important," he informed her in the presence of the village, "that we have a full record of these pioneer days for posterity. You've been writing in your diary every day?"

"Sure. That's what it's for."

"Good! From here on it will be an official account. I want you to record the important events of each day."

"All right. It doesn't make the tiniest bit of difference, I do anyhow."

"Yes, yes, but in greater detail. I want you to record our proceedings, too. Historians will treasure this document, Carol."

"I'll bet!"

Cowper seemed lost in thought. "How many blank leaves left in your diary?"

"Couple of hundred, maybe."

"Good! That solves a problem I had been wondering about. Uh, we will have to requisition half of that supply for official use public notices, committee transactions, and the like. You know."

Caroline looked wideeyed. "That's a lot of paper, isn't it? You had better send two or three big husky boys to carry it."

Cowper looked puzzled. "You're joking."

"Better make it four big huskies. I could probably manage three . . . and somebody is likely to get hurt."

"Now, see here, Caroline, it is just a temporary requisition, in the public interest. Long before you need all of your diary we will devise other writing materials."

"Go ahead and devise! That's my diary."

Caroline sat near Cowper, diary in her lap and style in her hand, taking notes. Each evening she opened proceedings by reading the minutes of the previous meeting. Rod asked her if she took down the endless debates.

"Goodness no!"

"I wondered. It seemed to me that you would run out of paper. Your minutes are certainly complete."

She chuckled. "Roddie, want to know what I really write down? Promise not to tell."

"Of course I won't."

"When I 'read the minutes' I just reach back in my mind and recall what the gabble was the night beforeI've got an awfully good memory. But what I actually dirty the paper with . . . well, here" She took her diary from a pocket. "Here's last night: 'Hizzoner called us to disorder at halfpast burping time. The committee on cats and dogs reported. No cats, no dogs. The shortage was discussed. We adjourned and went to sleep, those who weren't already.'"

Rod grinned. "A good thing Grant doesn't know shorthand."

"Of course, if anything real happens, I put it down. But not the talk, talk, talk."

Caroline was not adamant about not sharing her supply of paper when needed. A marriage certificate, drawn up in officialese by Howard Goldstein, a Teller law student, was prepared for the Baxters and signed by Cowper, the couple themselves, and Rod and Caroline as witnesses. Caroline decorated it with flowers and turtle doves before delivering it.

There were others who seemed to feel that the new government was long on talk and short on results. Among them was Bob Baxter, but the Quaker couple did not attend most of the meetings. But when Cowper had been in office a

week, Shorty Dumont took the floor after the endless committee reports:

"Mr. Chairman!"

"Can you hold it, Shorty? I have announcements to make before we get on to new business."

"This is still about committee reports. When does the committee on our constitution report?"

"Why, I made the report myself."

"You said that a revised draft was being prepared and the report would be delayed. That's no report. What I want to know is: when do we get a permanent setup? When do we stop floating in air, getting along from day to day on 'temporary executive notices'?"

Cowper flushed. "Do you object to my executive decisions?"

"Won't say that I do, won't say that I don't. But Rod was let out and you were put in on the argument that we needed constitutional governinent, not a dictatorship. That's why I voted for you. All right, where's our laws? When do we vote on them?"

"You must understand," Cowper answered carefully, "that drawing up a constitution is not done overnight. Many considerations are involved."

"Sure, sure but it's time we had some notion of what sort of a constitution you are cooking up. How about a bill of rights? Have you drawn up one?"

"All in due time."

"Why wait? For a starter let's adopt the Virginia Bill of Rights as article one. I so move.

"You're out of order. Anyhow we don't even have a copy of it."

"Don't let that bother you; I know it by heart. You ready, Carol? Take this down .

"Never mind," Caroline answered. "I know it, too. I'm writing it."

"You see? These things aren't any mystery, Grant; most of us could quote it. So let's quit stalling."

Somebody yelled, "Whoopee! That's telling him, Shorty. I second the

motion."

Cowper shouted for order. He went on, "This is not the time nor the place. When the committee reports, you will find that all proper democratic freedoms and safeguards have been included modified only by the stern necessities of our hazardous position." He flashed his smile. "Now let's get on with business. I have an announcement about hunting parties. Hereafter each hunting party will be expected to"

Dumont was still standing. "I said no more stalling, Grant. You argued that what we needed was laws, not a captain's whim. You've been throwing your weight around quite a while now and I don't see any laws. What are your duties? How much authority do you have? Are you both the high and the low justice? Or do the rest of us have rights?"

"Shut up and sit down!"

"How long is your term of office?"

Cowper made an effort to control himself. "Shorty, if you have suggestions or, such things, you must take them up with the committee.

"Oh, slush! Give me a straight answer."

"You are out of order."

"I am not out of order. I'm insisting that the committee on drawing up a constitution tell us what they are doing. I won't surrender the floor until I get an answer. This is a town meeting and I have as much right to talk as anybody."

Cowper turned red. "I wouldn't be too sure," he said ominously. just how old are you, Shorty?"

Dumont stared at him. "Oh, so that's it? And the cat is out of the bag!" He glanced around. "I see quite a few here who are younger than I am. See what he's driving at, folks? Secondclass citizens. He's going to stick an age limit in that so called constitution. Aren't you, Grant? Look me in the eye and deny it."

"Roy! Dave! Grab him and bring him to order."

Rod had been listening closely; the show was better than usual. Jimmy had been adding his usual flippant commentary. Now Jimmy whispered, "That tears it. Do we choose up sides or do we fade back and watch the fun?"

Before he could answer Shorty made it clear that he needed no immediate help. He set his feet wide and snapped, "Touch me and somebody gets hurt!" He did not reach for any weapon but his attitude showed that he was willing to fight.

He went on, "Grant, I've got one thing to say, then I'll shut up." He turned and spoke to all. "You can see that we don't have any rights and we don't know where we stand but we are already organized like a straitjacket. Committees for this, committees for that and what good has it done? Are we better off than we were before all these halfbaked committees were appointed? The wall is still unfinished, the camp is dirtier than ever, and nobody knows what he is supposed to do. Why, we even let the signal fire go out yesterday. When a roof leaks, you don't appoint a committee; you fix the leak. I say give the job back to Rod, get rid of these silly committees, and get on with fixing the leaks. Anybody with me? Make some noise!"

They made plenty of noise. The shouts may have come from less than half but Cowper could see that he was losing his grip on them. Roy Kilroy dropped behind Shorty Dumont and looked questioningly at Cowper; Jiminy jabbed Rod in the ribs and whispered, "Get set, boy."

But Cowper shook his head at Roy. "Shorty," he said quietly, "are you through making your speech?"

"That wasn't a speech, that was a motion. And you had better not tell me it's out of order."

"I did not understand your motion. State it."

"You understood it. I'm moving that we get rid of you and put Rod back in."

Kilroy interrupted. "Hey, Grant, he can't do that. That's not according to"

"Hold it, Roy. Shorty, your motion is not in order."

"I thought you would say that!"

"And it is really two motions. But I m not going to bother with trifles. You say people don't like the way I'm doing things, so we'll find out." He went on briskly, "Is there a second to the motion?"

"Second!"

"I second it."

"Moved and seconded. The motion is to recall me and put Rod in office. Any remarks?"

A dozen people tried to speak. Rod got the floor by outshouting the others. "Mr. Chairman, Mr. Chairman! Privileged question!"

"The chair recognizes Rod Walker."

"Point of personal privilege. I have a statement to make."

"Well? Go ahead."

"Look, Grant, I didn't know Shorty planned to do this. Tell him, Shorty."

"That's right."

"Okay, okay," Cowper said sourly. "Any other remarks? Don't yell, just stick up your hands."

"I'm not through," insisted Rod.

"Well?"

"I not only did not know, I'm not for it. Shorty, I want you to withdraw your motion."

"No!"

"I think you should. Grant has only had a week; you can't expect miracles in that time I know; I've had grief enough with this bunch of wild men. You may not like the things he's done I don't myself, a lot of them. That's to be expected. But if you let that be an excuse to run him out of office, then sure as daylight this gang will break up."

"I'm not busting it up he is! He may be older than I am but if he thinks that makes the least difference when it comes to having a say well. . . he'd better think twice. I'm warning him. You hear that, Grant?"

"I heard it. You misunderstood me."

"Like fun I did!"

"Shorty," Rod persisted, "will you drop this idea? I'm asking you please."

Shorty Dumont looked stubborn. Rod looked helplessly at Cowper, shrugged and sat down. Cowper turned away and growled, "Any more debate? You back

there. . . Agnes? You've got the floor."

Jimmy whispered, "Why did you pull a stunt like that, Rod? Nobility doesn't suit you."

"I wasn't being noble. I knew what I was doing," Rod answered in low tones.

"You messed up your chances to be reelected."

"Stow it." Rod listened; it appeared that Agnes Fries had more than one grievance. Jim?"

"Huh?"

"Jump to your feet and move to adjourn."

"What? Ruin this when it's getting good? There is going to be some hair pulled . . . I hope."

"Don't argue; do it! or I'll bang your heads together."

"Oh, all right. Spoilsport." Jimmy got reluctantly to his feet, took a breath and shouted, "I move we adjourn!"

Rod bounced to his feet. "SECOND THE MOTION!" Cowper barely glanced at them. "Out of order. Sit down."

"It is not out of order," Rod said loudly. "A motion to adjourn is always in order, it takes precedence, and it cannot be debated. I call for the question."

"I never recognized you. This recall motion is going to be voted on it it is the last thing I do." Cowper's face was tense with anger. "Are you through, Agnes? Or do you want to discuss my table manners, too?"

"You can't refuse a motion to adjourn," Rod insisted. "Question! Put the question."

Several took up the shout, drowning out Agnes Fries, preventing Cowper from recognizing another speaker. Boos and catcalls rounded out the tumult.

Cowper held up both hands for silence, then called out, "It has been moved and seconded that we adjourn. Those in favor say, 'Aye.'"

"AYE!!"

"Opposed?"

"No," said Jimmy.

"The meeting is adjourned." Cowper strode out of the circle of firelight.

Shorty Dumont came over, planted himself in front of Rod and looked up. "A fine sort of a pal you turned out to be!" He spat on the ground and stomped off.

"Yeah," agreed Jimmy, "what gives? Schizophrenia? Your nurse drop you on your head? That noble stuff in the right doses might have put us back in business. But you didn't know when to stop."

Jacqueline had approached while Jimmy was speaking. "I wasn't pulling any tricks," Rod insisted. "I meant what I said. Kick a captain out when he's had only a few days to show himself and you'll bust us up into a dozen little groups. I wouldn't be able to hold them together. Nobody could."

"Bosh! Jackie, tell the man."

She frowned. "Jimmy, you're sweet, but you're not bright."

"Et tu, Jackie?"

"Never mind, Jackie will take care of you. A good job, Rod. By tomorrow everybody will realize it. Some of them are a little stirred up tonight."

"What I don't see," Rod said thoughtfully, "is what got Shorty stirred up in the first place?"

"Hadn't you heard? Maybe it was while you were out hunting. I didn't see it, but he got into a row with Roy, then Grant bawled him out in front of everybody. I think Shorty is self-conscious about his height," she said seriously. "He doesn't like to take orders."

"Does anybody?"

The next day Grant Cowper acted as if nothing had happened. But his manner had more of King Log and less of King Stork. Late in the afternoon he looked up Rod. "Walker? Can you spare me a few minutes?"

"Let's go where we can talk." Grant led him to a spot out of earshot. They sat on the ground and Rod waited. Cowper seemed to have difficulty in finding words.

Finally he said, "Rod, I think I can depend on you." He threw in his grin, but it looked forced.

"Why?" asked Rod.

"Well. . . the way you behaved last night."

"So? Don't bank on it, I didn't do it for you." Rod paused, then added, "Let's get this straight. I don't like you."

For once Cowper did not grin. "That makes it mutual. I don't like you a little bit. But we've got to get along and I think I can trust you.

"Maybe."

"I'll risk it."

"I agree with every one of Shorty's gripes. I just didn't agree with his soltition."

Cowper gave a wry smile unlike his usual expression. For an instant Rod found himself almost liking him. "The sad part is that I agree with his gripes myself."

"Huh?"

"Rod, you probably think I'm a stupid jerk but the fact is I do know quite a bit about theory of government. The hard part is to apply it in a. . . a transitional period like this. We've got fifty people here and not a one with any practical experience in government not even myself. But every single one considers himself an expert. Take that billo frights motion; I couldn't let that stand. I know enough about such things to know that the rights and duties needed for a cooperative colony like this can't be taken over word for word from an agrarian democracy, and they are still different from those necessary for an industrial republic." He looked worried. "It is true that we had considered limiting the franchise."

"You do and they'll toss you in the creek!"

"I know. That's one reason why the law committee hasn't made a report. Another reason is well, confound it, how can you work out things like a constitution when you practically haven't any writing paper? Ifs exasperating. But about the franchise: the oldest one of us is around twenty-two and the youngest is about sixteen. The worst of it is that the youngest are the most precocious, geniuses or near geniuses." Cowper looked up. "I don't mean you.

"Oh, no," Rod said hastily. "I'm no genius!"

"You're not sixteen, either. These brilliant brats worry me. 'Bush lawyers,' every blessed one, with always a smart answer and no sense. We thought with an age limit a reasonable one the older heads could act as ballast while they grow up. But it won't work."

"No. It won't."

"But what am I to do? That order about hunting teams not being mixed that wasn't aimed at teams like you and Carol, but she thought it was and gave me the very deuce. I was just trying to take care of these kids. Confound it, I wish they were all old enough to marry and settle down the Baxters don't give me trouble."

"I wouldn't worry. In a year or so ninety per cent of the colony will be married."

"I hope so! Say . . . are you thinking about it?"

"Me?" Rod was startled. "Farthest thing from my mind."

"Um? I thought Never mind; I didn't get you out here to ask about your private affairs. What Shorty had to say was hard to swallow but I'm going to make some changes. I'm abolishing most of the committees."

"So?"

"Yes. Blast them, they don't do anything; they just produce reports. I'm going to make one girl boss cook and one man boss hunter. I want you to be chief of police."

"Huh? Why in Ned do you want a chief of police?"

"Well . . . somebody has to see that orders are carried out. You know, camp sanitation and such. Somebody has to keep the signal smoking we haven't accounted for thirtyseven people, aside from known dead. Somebody has to assign the night watch and check on it. The kids run hog wild if you don't watch them. You are the one to do it."

"Why?"

"Well . . . let's be practical, Rod. I've got a following and so have you. We'll have less trouble if everybody sees that we two stand together. It's for the good of the community."

Rod realized, as clearly as Grant did, that the group had to pull together. But Cowper was asking him to shore up his shaky administration, and Rod not only resented him but thought that Cowper was all talk and no results.

It was not just the unfinished wall, he told himself, but a dozen things. Somebody ought to search for a salt lick, every day. There ought to be a steady hunt for edible roots and berries and things, too he, for one, was tired of an all meat diet. Sure, you could stay healthy if you didn't stick just to lean meat, but who wanted to eat nothing but meat, maybe for a life time? And there were those stinking hides . . . Grant had ordered every kill skinned, brought back for use.

"What are you going to do with those green hides?" he asked suddenly.

"Huh? Why?"

"They stink. If you put me in charge, I'm going to chuck them in the creek."

"But we're going to need them. Half of us are in rags now.

"But we're not short on hides; tanning is what we need. Those hides won't sun cure this weather."

"We haven't got tannin. Don't be silly, Rod."

"Then send somebody out to chew bark till they find some. You can't mistake the puckery taste. And get rid of those hides!"

"If I do, will you take the job?"

"Maybe. You said, 'See that orders are carried out.' Whose orders? Yours? Or Kilroy's?"

"Well, both. Roy is my deputy."

Rod shook his head. "No, thanks. You've got him, so you don't need me. Too many generals, not enough privates."

"But, Rod, I do need you. Roy doesn't get along with the younger kids. He rubs them the wrong way."

"He rubs me the wrong way, too. Nothing doing, Grant. Besides, I don't like the title anyhow. It's silly."

"Pick your own. Captain of the Guard. .. City Manager. I don't care what you call it; I want you to take over the night guard and see that things run smoothly around camp and keep an eye on the younger kids. You can do it and it's your duty."

"What will you be doing?"

"I've got to whip this code of laws into shape. I've got to think about longrange planning. Heavens, Rod, I ve got a thousand things on my mind. I can't stop to settle a quarrel just because some kid has been teasing the cook. Shorty was right; we can't wait. When I give an order I want a law to back it and not have to take lip from some young snotty. But I can't do it all, I need help."

Cowper put it on grounds impossible to refuse, nevertheless . . . "What about Kilroy?"

"Eh? Confound it, Rod, you can't ask me to kick out somebody else to make room for you."

"I'm not asking for the job!" Rod hesitated. He needed to say that it was a matter of stubborn pride to him to back up the man who had beaten him, it was that more than any public-spiritedness. He could not phrase it, but he did know that Cowper and Kilroy were not the same case.

"I won't pull Kilroy's chestnuts out of the fire. Grant, I'll stooge for you; you were elected. But I won't stooge for a stooge."

"Rod, be reasonable! If you got an order from Roy, it would be my order. He would simply be carrying it out."

Rod stood up. "No deal."

Cowper got angrily to his feet and strode away.

There was no meeting that night, for the first time. Rod was about to visit the Baxters when Cowper called him aside. "You win. I've made Roy chief hunter."

"Huh?"

"You take over as City Manager, or Queen of the May, or whatever you like. Nobody has set the night watch. So get busy."

"Wait a minute! I never said I would take the job."

"You made it plain that the only thing in your way was Roy. Okay, you get your orders directly from me.

Rod hesitated. Cowper looked at him scornfully and said, "So you can't cooperate even when you have it all your own way?"

"Not that, but"

"No 'buts.' Do you take the job? A straight answer: yes, or no.

"Uh. . . yes.

"Okay." Cowper frowned and added, "I almost wish you had turned it down."

"That makes two of us."

Rod started to set the guard and found that every boy he approached was convinced that he had had more than his share of watches. Since the exterior security committee had kept no records indeed, had had no way to it was impossible to find out who was right and who was shirking. "Stow it!" he told one. "Starting tomorrow we'll have an alphabetical list, straight rotation. I'll post it even if we have to scratch it on a rock." He began to realize that there was truth in what Grant had said about the difficulty of getting along without writing paper.

"Why don't you put your pal Baxter on watch?"

"Because the Mayor gave him two weeks honeymoon, as you know. Shut up the guff. Charlie will be your relief; make sure you know where he sleeps."

"I think I'll get married. I could use two weeks of loafing."

"I'll give you five to one you can't find a girl that far out of her mind. You're on from midnight to two."

Most of them accepted the inevitable once they were assured of a square deal in the future, but Peewee Schneider, barely sixteen and youngest in the community, stood on his "rights" he had stood a watch the night before, he did not rate another for at least three nights, and nobody could most colorfully make him.

Rod told Peewee that he would either stand his watch, or Rod would slap his ears loose and then he would still stand his watch. To which he added that if he heard Peewee use that sort of language around camp again he would wash Peewee's mouth out with soap.

Schneider shifted the argument. "Yah! Where are you going to find soap?"

"Until we get some, I'll use sand. You spread that word, Peewee: no more rough language around camp. We're going to be civilized if it kills us. Four to six, then, and show Kenny where you sleep." As he left Rod made a mental note that they should collect wood ashes and fat; while he had only a vague idea of how to make soap probably someone knew how. . . and soap was needed for other purposes than curbing foulmouthed pip squeaks. He had felt a yearning lately to be able to stand upwind of himself . . . he had long ago thrown away his socks.

Rod got little sleep. Every time he woke he got up and inspected the guard, and twice he was awakened by watchmen who thought they saw something prowling outside the circle of firelight. Rod was not sure, although it did seem once that he could make out a large, long shape drifting past in the darkness. He stayed up a while each time, another gun in case the prowler risked the wall or the fires in the gap. He felt great temptation to shoot at the prowling shadows, but suppressed it. To carry the attack to the enemy would be to squander their scanty ammunition without making a dent in the dangerous beasts around them. There were prowlers every night; they had to live with it.

He was tired and cranky the next morning and wanted to slip away after breakfast and grab a nap in the cave. He had not slept after four in the morning, but had checked on Peewee Schneider at frequent intervals. But there was too much to do; he promised himself a nap later and sought out Cowper instead. "Two or three things on my mind, Grant."

"Spill it."

"Any reason not to put girls on watch?"

"Eh? I don't think it's a good idea."

"Why not? These girls don't scream at a mouse. Everyone of them stayed alive by her own efforts at least a month before she joined up here. Ever seen Caroline in action?"

"Mmm . . . no.

"You should. It's a treat. Sudden death in both hands, and eyes in the back of her head. If she were on watch, I would sleep easy. How many men do we have now?"

"Uh, twenty-seven, with the three that came in yesterday."

"All right, out of twenty-seven who doesn't stand watch?"

"Why, everybody takes his turn."

"You?"

"Eh? Isn't that carrying it pretty far? I don't expect you to take a watch; you run it and check on the others."

"That's two off. Roy Kilroy?"

"Uh, look, Rod, you had better figure that he is a department head as chief hunter and therefore exempt. You know why no use looking for trouble."

"I know, all right. Bob Baxter is off duty, too."

"Until next week."

"But this is this week. The committee cut the watch down to one at a time; I'm going to boost it to two again. Besides that I want a sergeant of the guard each night. He will be on all night and sleep all next day . . . then I don't want to put him on for a couple of days. You see where that leaves me? I need twelve watchstanders every night; I have less than twenty to draw from."

Cowper looked worried. "The committee didn't think we had to have more than one guard at a time."

"Committee be hanged!" Rod scratched his scars and thought about shapes in the dark. "Do you want me to run this the way I think it has to be run? Or shall I just go through the motions?"

"Well . .

"One man alone either gets jittery and starts seeing shadows or he dopes off and is useless. I had to wake one last night I won't tell you who; I scared him out of his pants; he won't do it again. I say we need a real guard, strong enough in case of trouble to handle things while the camp has time to wake up. But if you want it your way, why not relieve me and put somebody else in?"

"No, no, you keep it. Do what you think necessary."

"Okay, I'm putting the girls on. Bob and Carmen, too, And you."

"Huh?"

"And me. And Roy Kilroy. Everybody. That's the only way you will get people to serve without griping; that way you will convince them that it is serious, a first obligation, even ahead of hunting."

Cowper picked at a hangnail, "Do you honestly think I should stand watch? And you?"

"I do. It would boost morale seven hundred percent. Besides that, it would be a good thing, uh, politically."

Cowper glanced up, did not smile. "You've convinced me. Let me know when it's my turn."

"Another thing. Last night there was barely wood to keep two fires going."

"Your problem. Use anybody not on the day's hunting or cooking details."

"I will. You'll hear some beefs. Boss, those were minor items; now I come to the major one. Last night I took a fresh look at this spot. I don't like it, not as a permanent camp. We've been lucky."

"Eh? Why?"

"This place is almost un-defendable. We've got a stretch over fifty meters long between shale and water on the upstream side. Downstream isn't bad, because we build a fire in the bottleneck. But upstream we have walled off less than half and we need a lot more stakes behind the wall. Look," Rod added, pointing, "you could drive an army through there and last night I had only two little bitty fires. We ought to finish that wall."

"We will."

"But we ought to make a real drive to find a better place. This is makeshift at best. Before you took over I as trying to find more caves but I didn't have time to explore very far. Ever been to Mesa Verde?"

"In Colorado? No."

"Cliff dwellings, you've seen pictures. Maybe somewhere up or down stream more likely down we will find pockets like those at Mesa Verde where we can build homes for the whole colony. You ought to send a team out for two weeks or more, searching. I volunteer for it."

"Maybe. But you can't go; I need you."

"In a week I'll have this guard duty lined up so that it will run itself. Bob Baxter can relieve me; they respect him. . . .. ." He thought for a moment. Jackie? Jimmy? "I'll team with Carol."

"Rod, I told you I want you here. But are you and Caroline planning to marry?"

"Huh? What gave you that notion?"

"Then you can't team with her in any case. We are trying to reintroduce amenities around here."

"Now see here, Cowper!"

"Forget it."

"Unh . . . all right. But the first thing the very first is to finish that wall. I want to put everybody to work nght away."

"Mmm . . ." Cowper said. "I'm sorry. You can't."

"Why not?"

"Because we are going to build a house today. Bill Kennedy and Sue Briggs are getting married tonight."

"Huh? I hadn't heard."

"I guess you are the first to hear. They told me about it privately, at breakfast."

Rod was not surprised, as Bill and Sue preferred each other's company. "Look, do they have to get married tonight? That wall is urgent, Grant; I'm telling you."

"Don't be so intense, Rod. You can get along a night or two with bigger fires. Remember, there are human values more important than material values."

11 The Beach of Bones

"July 29 Bill and Sue got married tonight. Hizzoner never looked lovelier. He made a mighty pretty service out of it I cried and so did the other girls. If that boy could do the way he can talk! I played Mendelssohn's Wedding March on my harmonica with tears running down my nose and gumming up the reeds that's a touch I wanted to put into darling Carmen's wedding

but I couldn't resist being bridesmaid. The groom got stuck carrying his lady fair over the threshold of their 'house' if I may call it that and had to put her down and shove her in ahead of him. The ceiling is lower than it ought to be which is why he got stuck, because we ran out of rock and Roddie raised Cain when we started to use part of the wall. Hizzoner was leading the assault on the wall and both of them got red in the face and shouted at each other. But Hizzoner backed down after Roddie got him aside and said something Bill was pretty sore at Roddie but Bob sweet-talked him and offered to swap houses and Roddie promised Bill that we would take the roof off and bring the walls up higher as soon as the wall is finished. That might not be as soon as he thinks, though usable rock is getting hard to find. I've broken all my nails trying to pry out pieces we could use. But I agree with Roddie that we ought to finish that wall and I sleep a lot sounder now that he is running the watch and I'll sleep sounder yet when that wall is tight and the pincushion back of it finished. Of course we girls sleep down at the safe end but who wants to wake up and find a couple of our boys missing? It is not as if we had them to spare, bless their silly little hearts. Nothing like a man around the house, Mother always said, to give a home that lived-in look.

"July 30 I'm not going to write in this unless something happens. Hizzoner talks about making papyrus like the Egyptians but I'll believe it when I see it.

"Aug 5 I was sergeant of the guard last night and Roddie was awake practically all night. I turned in after breakfast and slept until late afternoon when I woke up there was Roddie, redeyed and cross, yelling for more rocks and more firewood. Sometimes Roddie is a little hard to take.

"Aug 9 the salt lick Alice found is closer than the one Shorty found last week, but not as good.

"Aug 14 Jackie finally made up her mind to marry Jim and I think Roddie is flabbergasted but I could have told him a month ago. Roddie is stupid about such things. I see another house & wall crisis coming and Roddie will get a split personality because he will want Jimmy and Jacqueline to have a house right away and the only decent stone within reach is built into the wall.

"Aug 15 Jimmy and Jackie, Agnes and Curt, were married today in a beautiful double ceremony. The Throxtons have the Baxter house temporarily and the Pulvermachers have the Kennedy's doll house while we partition the cave into two sets of married quarters and a storeroom.

"Sep 1 the roots I dug up didn't poison me, so I served a mess of them tonight. The shield from power pack of that Thunderbolt gun we salvaged Johann's, it must have been made a big enough boiler to cook a little

helping for everybody. The taste was odd, maybe because Agnes had been making soap in it it wasn't very good soap, either. I'm going to call these things yams because they look like yams although they taste more like parsnips. There are a lot of them around. Tomorrow I m going to try boiling them with greens, a strip of side ineat, and plenty of salt. Yum, yum! I'm going to bake them in ashes, too.

"Sep 16 Chad Ames and Dick Burke showed up with their tails tucked in; Hizzoner got softhearted and let em stay. They say Jock McGowan is crazy. I can believe it.

"Sep 28 Philip Schneider died today, hunting. Roy carried him in, but he was badly clawed and lost a lot of blood and was D.O.A. Roy resigned as boss hunter and Hizzoner appointed Cliff. Roy is broken up about it but nobody blames him. The Lord giveth and the Lord taketh away. Blessed be the Name of the Lord.

"Oct 7 I've decided to marry M.

"Oct 10 seems I was mistaken M. is going to marry Margery Chung. Well, they are nice kids and if we ever get out of this I'll be glad I'm single since I want to buck for a commission in the Amazons. Note: be a little more standoffish, Caroline. Well, try!

"Oct 20 Carmen????

"Oct 21 Yes.

"Nov 1 well Glory be! I'm the new City Manager. Little Carol, the girl with two left feet Just a couple of weeks, temporary and acting while Roddie is away, but say 'sir' when you speak to me. Hizzoner finally let Roddie make the downriver survey he has been yipping about, accompanying it with a slough of advice and injunctions that Roddie will pay no attention to once he is out of sigh tif I know Roddie. It's a two-man team and Roddie picked Roy as his teamer. They left this morning.

"Nov 5 being City Manager is not all marshmallow sundae. I wish Roddie would get back.

"Nov 11 Hizzoner wants me to copy off in here the 'report of the artifacts committee'! Mick Mahmud has been keeping it in his head which strikes me as a good place. But Hizzoner has been very jumpy since Roddie and Roy left, so I guess I will humor him here it is:

"12 spare knives (besides one each for everybody)

"53 firearms and guns of other sorts but only about half of them with even one charge left.

"6 Testaments

"2 Peace of the Flame

"1 Koran

"1 Book of Mormon

"1 Oxford Book of English Verse, Centennial Edition

"1 steel bow and 3 hunting arrows

"1 boiler made from a wave shield and quite a bit of metal and plastic junk (worth its weight in uranium, I admit) from the Thunderbolt Jackie salvaged.

"1 stew pan (Carmen's)

"1 pack playing cards with the nine of hearts missing

"13 matches, any number of pocket flamers no longer working, and 27 burning glasses

"1 small hand ax

"565 meters climbing line, some of it chopped up for other uses

"91 fishhooks (and no fish fit to eat!)

"61 pocket compasses, some of them broken

"19 watches that still run (4 of them adjusted to our day)

"2 bars of scented soap that Theo has been hoarding

"2 boxes KwikKure and part of a box of TanFast

"Several kilos of oddments that I suppose we will find a use for but I won't list. Mick has a mind like a pack rat.

"Lots of things we have made and can make more of pots, bows and arrows, hide scrapers, a stoneage mortar & pestle we can grind seeds on if you don't mind grit in your teeth, etc. Hizzoner says the Oxford Verse is the

most valuable thing we have and I agree, but not for his reasons. He wants me to cover all the margins with shorthand, recording all special knowledge that any of us have everything from math to pigraising. Cliff says go ahead as long as we don't deface the verses. I don't see when I'm going to find time. I've hardly been out of the settlement since Roddie left and sleep is something I just hear about.

"Nov 13 only two more days. 'For this relief, much thanks. . .'

"Nov 16 I didn't think they would be on time.

"Nov 21 We finally adopted our constitution and basic code today, the first town meeting we've had in weeks. It covers the flyleaves of two Testaments, Bob's and Georgia's. If anybody wants to refer to it, which I doubt, that's where to look.

"Nov 29 Jimmy says old Rod is too tough to kill. I hope he's right. Why, oh, why didn't I twist Hizzoner's arm and make him let me go?

"Dec 15 there's no use kidding ourselves any longer.

"Dec 21 The Throxtons and Baxters and myself and Grant gathered privately in the Baxter house tonight and Grant recited the service for the dead. Bob said a prayer for both of them and then we sat quietly for a long time, Quaker fashion. Roddie always reminded me of my brother Rickie, so I privately asked Mother to take care of him, and Roy, too Mother had a lap big enough for three, any time.

"Grant hasn't made a public announcement; officially they are just 'overdue.'

"Dec 25 Christmas"

Rod and Roy traveled light and fast downstream, taking turns leading and covering. Each carried a few kilos of salt meat but they expected to eat off the land. In addition to game they now knew of many edible fruits and berries and nuts; the forest was a free cafeteria to those who knew it. They carried no water since they expected to follow the stream. But they continued to treat the water with respect; in addition to ichthyosaurs that sometimes pulled down a drinking buck there were bloodthirsty little fish that took very small bites but they traveled in schools and could strip an animal to bones in minutes."

Rod carried both Lady Macbeth and Colonel Bowie; Roy Kilroy carried his Occam's Razor and a knife borrowed from Carmen Baxter. Roy had a climbing rope wrapped around his waist. Each had a hand gun strapped to his hip but

these were for extremity; one gun had only three charges. But Roy carried Jacqueline Throxton's air pistol, with freshly envenomed darts; they expected it to save hours of hunting, save time for travel.

Three days downstream they found a small cave, found living in it a forlorn colony of five girls. They powwowed, then headed on down as the girls started upstream to find the settlement. The girls had told them of a place farther down where the creek could be crossed. They found it, a wide rocky shallows with natural stepping stones . . . then wasted two days on the far side before crossing back.

By the seventh morning they had found no cave other than one the girls had occupied. Rod said to Roy, "Today makes a week. Grant said to be back in two weeks."

"That's what the man said. Yes, sir!"

"No results."

"Nope. None."

"We ought to start back."

Roy did not answer. Rod said querulously, "Well, what do you think?"

Kilroy was lying down, watching the local equivalent of an ant. He seemed in no hurry to do anything else. Finally he answered, "Rod, you are bossing this party. Upstream, downstream just tell me."

"Oh, go soak your head."

"On the other hand, a bush lawyer like Shorty might question Grant's authority to tell us to return at a given time. He might use words like 'free citizen' and 'sovereign autonomy.' Maybe he's got something this neighborhood looks awfully far 'West of the Pecos.'"

"Well. .. we could stretch it a day, at least?. We won't be taking that side trip going back."

"Obviously. Now, if I were leading the party but I'm not."

"Cut the double talk! I asked for advice."

"Well, I say we are here to find caves, not to keep a schedule."

Rod quit frowning. "Up off your belly. Let's go."

They headed downstream.

The terrain changed from forest valley to canyon country as the stream cut through a plateau. Game became harder to find and they used some of their salt meat. Two days later they came to the first of a series of bluffs carved eons earlier into convolutions, pockets, blank dark eyes. "This looks like it."

"Yes," agreed Roy. He looked around. "It might be even better farther down."

"It might be."

They went on.

In time the stream widened out, there were no more caves, and the canyons gave way to a broad savannah, treeless except along the banks of the river. Rod sniffed. "I smell salt."

"You ought to. There's ocean over there somewhere."

"I don't think so." They went on.

They avoided the high grass, kept always near the trees. The colonists had listed more than a dozen predators large enough to endanger a man, from a leonine creature twice as long as the biggest African lion down to a vicious little scaly thing which was dangerous if cornered. It was generally agreed that the leonine monster was the "stobor" they had been warned against, although a minority favored a smaller carnivore which was faster, trickier, and more likely to attack a man.

One carnivore was not considered for the honor. It was no larger than a jack rabbit, had an oversize head, a big jaw, front legs larger than hind, and no tail. It was known as "dopy joe" from the silly golliwog expression it had and its clumsy, slow movements when disturbed. It was believed to live by waiting at burrows of field rodents for supper to come out. Its skin cured readily and made a good water bag. Grassy fields such as this savannah often were thick with them.

They camped in a grove of trees by the water. Rod said, "Shall I waste a match, or do it the hard way?"

"Suit yourself. I'll knock over something for dinner."

"Watch yourself. Don't go into the grass.

"I'll work the edges. Cautious Kilroy they call me, around the insurance companies.

Rod counted his three matches, hoping there would be four, then started making fire by friction. He had just succeeded, delayed by moss that was not as dry as it should have been, when Roy returned and dropped a small carcass. "The durnedest thing happened."

The kill was a dopy joe; Rod looked at it with distaste. "Was that the best you could do? They taste like kerosene."

"Wait till I tell you. I wasn't hunting him; he was hunting me."

"Don't kid me!"

"Truth. I had to kill him to keep him from snapping my ankles. So I brought him in.

Rod looked at the small creature. "Never heard the like. Must be insanity in his family."

"Probably." Roy started skinning it.

Next morning they reached the sea, a glassy body untouched by tide, unruffled by wind. It was extremely briny and its shore was crusted with salt They concluded that it was probably a dead sea, not a true ocean. But their attention was not held by the body of water. Stretching away along the shore apparently to the horizon were millions on heaping millions of whitened bones. Rod stared. "Where did they all come from?"

Roy whistled softly. "Search me. But if we could sell them at five pence a metric ton, we'd be millionaires."

"Billionaires, you mean.

"Let's not be fussy." They walked out along the beach, forgetting to be cautious, held by the amazing sight. There were ancient bones, cracked by sun and sea, new bones with gristle clinging, big bones of the giant antelope the colonists never hunted, tiny bones of little buck no larger than terriers, bones without number of all sorts. But there were no carcasses.

They inspected the shore for a couple of kilometers, awed by the mystery. When they turned they knew that they were turning back not just to camp but to head home. This was as far as they could go.

On the trip out they had not explored the caves. On their way back Rod decided that they should try to pick the best place for the colony, figuring game, water supply, and most importantly, shelter and ease of defense.

They were searching a series of arched galleries watercarved in sandstone cliff. The shelf of the lowest gallery was six or seven meters above the sloping stand of soil below. The canyon dropped rapidly here; Rod could visualize a flume from upstream, bringing running water right to the caves. . . not right away, but when they had time to devise tools and cope with the problems. Someday, someday but in the meantime here was plenty of room for the colony in a spot which almost defended itself. Not to mention, he added, being in out of the rain. Roy was the better Alpinist; he inched up, flat to the rock, reached the shelf and threw down his line to Rod snaked him up quickly. Rod got an arm over the edge, scrambled to his knees, stood up and gasped, "What the deuce!"

"That," said Roy, "is why I kept quiet. I thought you would think I was crazy.

"I think we both are." Rod stared around. Filling the depth of the gallery, not seen from below, was terrace on terrace of cliff dwellings.

They were not inhabited, nor had they ever been by men. Openings which must have been doors were no higher than a man's knee, not wide enough for shoulders. But it was clear that they were dwellings, not merely formations carved by water. There were series of rooms arranged in half a dozen low stories from floor to ceiling of the gallery. The material was a concrete of dried mud, an adobe, used with wood.

But there was nothing to suggest what had built them.

Roy started to stick his head into an opening; Rod shouted, "Hey! Don't do that!"

"Why not? It's abandoned."

"You don't know what might be inside. Snakes, maybe."

"There are no snakes. Nobody's ever seen one.

"No . . . but take it easy."

"I wish I had a torch light."

"I wish I had eight beautiful dancing girls and a Cadillac copter. Be careful. I don't want to walk back alone."

They lunched in the gallery and considered the matter. "Of course they were intelligent," Roy declared. "We may find them elsewhere. Maybe really civilized now these look like ancient ruins."

"Not necessarily intelligent," Rod argued. "Bees make more complicated homes."

"Bees don't combine mud and wood the way these people did. Look at that lintel."

"Birds do. I'll concede that they were birdbrained, no more.

"Rod, you won't look at the evidence."

"Where are their artifacts? Show me one ash tray marked 'Made in Jersey City.'"

"I might find some if you weren't so jumpy."

"All in time. Anyhow, the fact that they found it safe shows that we can live here."

"Maybe. What killed them? Or why did they go away?"

They searched two galleries after lunch, found more dwellings. The dwellers had apparently formed a very large community. The fourth gallery they explored was almost empty, containing a beginning of a hive in one corner. Rod looked it over. "We can use this. If may not

be the best, but we can move the gang in and then find the best at our leisure."

"We're heading back?"

"Uh, in the morning. This is a good place to sleep and tomorrow we'll travel from 'can' to 'can't' I wonder what's up there?" Rod was looking at a secondary shelf inside the main arch.

Roy eyed it. "Ill let you know in a moment."

"Don't bother. It's almost straight up. We'll build ladders for spots like that."

"My mother was a human fly, my father was a mountain goat. Watch me.

The shelf was not much higher than his head. Roy had a hand over when a piece of rock crumbled away. He did not fall far.

Rod ran to him. "You all right, boy?"

Roy grunted, "I guess so," then started to get up. He yelped.

"What's the matter?"

"My right leg. I think. . . ow! I think it's broken." Rod examined the break, then went down to cut splints. With a piece of the line Roy carried, used economically, for he needed most of it as a ladder, he bound the leg, padding it with leaves. It was a simple break of the tibia, with no danger of infection.

They argued the whole time. "Of course you will," Roy was saying. "Leave me a fresh kill and what salt meat there is. You can figure some way to leave water."

"Come back and find your chawed bones!"

"Not at all. Nothing can get at me. If you hustle, you can make it in three days."

"Four, or five more likely. Six days to lead a party back. Then you want to go back in a stretcher? How would you like to be helpless when a stobor jumps us?"

"But I wouldn't go back. The gang would be moving down here."

"Suppose they do? Eleven days, more likely twelve Roy, you didn't just bang your shin; you banged your head, too."

The stay in the gallery while Roy's leg repaired was not difficult nor dangerous; it was merely tedious. Rod would have liked to explore all the caves, but the first time he was away longer than Roy thought necessary to make a kill Rod returned to find his patient almost hysterical. He had let his imagination run away, visioning Rod as dead and thinking about his own death, helpless, while he starved or died of thirst. After that Rod left him only to gather food and water. The gallery was safe from all dangers; no watch was necessary, fire was needed only for cooking. The weather was getting warmer and the daily rains dropped off.

They discussed everything from girls to what the colony needed, what could

have caused the disaster that had stranded them, what they would have to eat if they could have what they wanted, and back to girls again. They did not discuss the possibility of rescue; they took it for granted that they were there to stay. They slept much of the time and often did nothing, in animal-like torpor.

Roy wanted to start back as soon as Rod removed the splints, but it took him only seconds to discover that he no longer knew how to walk. He exercised for days, then grew sulky when Rod still insisted that he was not able to travel; the accumulated irritations of invalidism spewed out in the only quarrel they had on the trip.

Rod grew as angry as he was, threw Roy's climbing

rope at him and shouted, "Go ahead! See how far you get on that gimp leg!"

Five minutes later Rod was arranging a sling, half dragging Roy, white and trembling and thoroughly subdued, back up onto the shelf. Thereafter they spent ten days getting Roy's muscles into shape, then started back.

Shorty Dumont was the first one they ran into as they approached the settlement. His jaw dropped and he looked scared, then he ran to greet them, ran back to alert those in camp. "Hey, everybody! They're back!"

Caroline heard the shout, outdistanced the others in great flying leaps, kissed and hugged them both. "Hi, Carol," Rod said. "What are you bawling about?"

"Oh, Roddie, you bad, bad boy!"

12 "It Won't Work, Rod"

In the midst of jubilation Rod had time to notice many changes. There were more than a dozen new buildings, including two long shedlike affairs of bamboo and mud. One new hut was of sunbaked brick; it had windows. Where the cooking fire had been was a barbecue pit and by it a Dutch oven. Near it a stream of water spilled out of bamboo pipe, splashed through a rawhide net, fell into a rock bowl, and was led away to the creek . . . he hardly knew whether to be pleased or irked at this anticipation of his own notion.

He caught impressions piecemeal, as their triumphal entry was interrupted by hugs, kisses; and bone jarring slaps on the back, combined with questions piled on questions. "No, no trouble except that Roy got mad and busted his leg . . . yeah, sure, we found what we went after; wait till you see . . . no . . . yes . . . Jackie! . . . Hi, Bob! it's good to see you, too, boy! Where's Carmen. . . Hi, Grant!"

Cowper was grinning widely, white teeth splitting his beard. Rod noticed with great surprise that the man looked old why, shucks, Grant wasn't more than twenty-two, twenty-three at the most. Where did he pick up those lines?

"Rod, old boy! I don't know whether to have you two thrown in the hoosegow or decorate your brows with laurel."

"We got held up."

"So it seems. Well, there is more rejoicing for the strayed lamb than for the ninety and nine. Come on up to the city hall."

"The what?"

Cowper looked sheepish. "They call it that, so I do. Better than 'Number Ten, Downing Street' which it started off with. It's just the hut where I sleep it doesn't belong to me," he added. "When they elect somebody else, I'll sleep in bachelor hall." Grant led them toward a little building apart from the others and facing the cooking area.

The wall was gone.

Rod suddenly realized what looked strange about the upstream end of the settlement; the wall was gone completely and in its place was a thornbush barricade. He opened his mouth to make a savage comment then realized that it really did not matter. Why kick up a row when the colony would be moving to the canyon of the Dwellers? They would never need walls again; they would be up high at night, with their ladders pulled up after them. He picked another subject.

"Grant, how in the world did you guys get the inner partitions out of those bamboo pipes?"

"Eh? Nothing to it. You tie a knife with rawhide to a thinner bamboo pole, then reach in and whittle. All it takes is patience. Waxie worked it out. But you haven't seen anything yet. We're going to have iron.

"Huh?"

"We've got ore; now we are experimenting. But I do wish we could locate a seam of coal. Say, you didn't spot any, did you?"

Dinner was a feast, a luau, a celebration to make the weddings look pale. Rod was given a real plate to eat on unglazed, lopsided, ungraceful, but a

plate. As he took out Colonel Bowie, Margery Chung Kinksi put a wooden spoon in his hand. "We don't have enough to go around, but the guests of honor rate them tonight." Rod looked at it curiously. It felt odd in his hand.

Dinner consisted of boiled greens, some root vegetables new to him, and a properly baked haunch served in thin slices. Roy and Rod were served little unleavened cakes like tortillas. No one else had them, but Rod decided that it was polite not to comment on that. Instead he made a fuss over eating bread again.

Margery dimpled. "We'll have plenty of bread some day. Maybe next year.

There were tart little fruits for dessert, plus a bland, tasteless sort which resembled a dwarf banana with seeds. Rod ate too much.

Grant called them to order and announced that he was going to ask the travelers to tell what they had experienced. "Let them get it all told then they won't have to tell it seventy times over. Come on, Rod. Let's see your ugly face."

"Aw, let Roy. He talks better than I do."

"Take turns. When your voice wears out, Roy can take over.

Between them they told it all, interrupting and supplementing each other. The colonists were awed by the beach of a billion bones, still more interested in the ruins of the Dwellers. "Rod and I are still arguing," Roy told them. "I say that it was a civilization. He says that it could be just instinct. He's crazy with the heat; the Dwellers were people. Not humans, of course, but people."

"Then where are they now?"

Roy shrugged. "Where are the Selenites, Dora? What became of the Mithrans?"

"Roy is a romanticist," Rod objected. "But you'll be able to form your own opinions when we get there."

"That's right, Rod," Roy agreed.

"That covers everything," Rod went on. "The rest was just waiting while Roy's leg healed. But it brings up the main subject. How quickly can we move? Grant, is there any reason not to start at once? Shouldn't we break camp tomorrow and start trekking? I've been studying it how to make the move, I mean and I would say to send out an advance party at daybreak. Roy

or I can lead it. We go downstream an easy day's journey, pick a spot, make a kill, and have fire and food ready when the rest arrive. We do it again the next day. I think we can be safe and snug in the caves in five days."

"Dibs on the advance party!"

"Me, too!"

There were other shouts but Rod could not help but realize that the response was not what he had expected. Jimmy did not volunteer and Caroline merely looked thoughtful. The Baxters he could not see; they were in shadow.

He turned to Cowper. "Well, Grant? Do you have a better idea?"

"Rod," Grant said slowly, "your plan is okay . . . but you've missed a point."

"Why do you assume that we are going to move?"

"Huh? Why, that's what we were sent for! To find a better place to live. We found it you could hold those caves against an army. What's the hitch? Of course we move!"

Cowper examined his nails. "Rod, don't get sore. I don't see it and I doubt if other people do. I'm not saying the spot you and Roy found is not good. It may be better than here the way this place used to be. But we are doing all right here and we've got a lot of time and effort invested. Why move?"

"Why, I told you. The caves are safe, completely safe. This spot is exposed . . . it's dangerous."

"Maybe. Rod, in the whole time we've been here, nobody has been hurt inside camp. We'll put it to a vote, but you can't expect us to abandon our houses and everything we have worked for to avoid a danger that may be imaginary."

"Imaginary? Do you think that a stobor couldn't jump that crummy barricade?" Rod demanded, pointing.

"I think a stobor would get a chest full of pointed stakes if he tried it," Grant answered soberly. "That crummy barricade' is a highly efficient defense. Take a better look in the morning."

"Where we were you wouldn't need it. You wouldn't need a night watch. Shucks, you wouldn't need houses. Those caves are better than the best house here!"

"Probably. But, Rod, you haven't seen all we've done, how much we would have to abandon. Let's look it over in the daylight, fellow, and then talk."

"Well . . . no, Grant, there is only one issue: the caves are safe; this place isn't. I call for a vote."

"Easy now. This isn't a town meeting. It's a party in your honor. Let's not spoil it."

"Well . . . I'm sorry. But we're all here; let's vote."

"No." Cowper stood up. "There will be a town meeting on Friday as usual. Goodnight, Rod. Goodnight, Roy. We're awfully glad you're back. Goodnight all."

The party gradually fell apart. Only a few of the younger boys seemed to want to discuss the proposed move. Bob Baxter came over, put a hand on Rod and said, "See you in the morning, Rod. Bless you." He left before Rod could get away from a boy who was talking to him.

Jimmy Throxton stayed, as did Caroline. When he got the chance Rod said, Jimmy? Where do you stand?"

"Me? You know me, pal. Look, I sent Jackie to bed; she wasn't feeling well. But she told me to tell you that we were back of you a hundred percent, always."

"Thanks. I feel better."

"See you in the morning? I want to check on Jackie."

"Sure. Sleep tight."

He was finally left with Caroline. "Roddie? Want to inspect the guard with me? You'll do it after tonight, but we figured you could use a night with no worries.

"Wait a minute. Carol . .. you've been acting funny."

"Me? Why, Roddie!"

"Well, maybe not. What do you think of the move? I didn't hear you pitching in."

She looked away. "Roddie," she said, "if it was just me, I'd say start tomorrow. I'd be on the advance party."

"Good! What's got into these people? Grant has them buffaloed but I can't see why." He scratched his head. "I'm tempted to make up my own party you, me, Jimmy and Jack, the Baxters, Roy, the few who were rarin' to go tonight, and anybody else with sense enough to pound sand."

She sighed. "It won't work, Roddie."

"Huh? Why not?"

"I'll go. Some of the youngsters would go for the fun of it. Jimmy and Jack would go if you insisted. . . but they would beg off if you made it easy for them. The Baxters should not and I doubt if Bob would consent. Carmen isn't really up to such a trip."

13 Unkillable

The matter never came to a vote. Long before Friday Rod knew how a vote would go about fifty against him, less than half that for him, with his friends voting with him through loyalty rather than conviction or possibly against him in a showdown.

He made an appeal in private to Cowper. "Grant, you've got me licked. Even Roy is sticking with you now. But you could swing them around."

"I doubt it. What you don't see, Rod, is that we have taken root. You may have found a better place . . . but it's too late to change. After all, you picked this spot."

"Not exactly, it . . . well, it just sort of happened."

"Lots of things in life just sort of happen. You make the best of them."

"That's what I'm trying to do! Grant, admitted that the move is hard; we could manage it. Set up way stations with easy jumps, send our biggest huskies back for what we don't want to abandon. Shucks, we could move a person on a litter if we had to using enough guards."

"If the town votes it, I'll be for it. But I won't try to argue them into it. Look, Rod, you've got this fixed idea that this spot is dangerously exposed. The facts don't support you. On the other hand see what we have. Running water from upstream, waste disposal downstream, quarters comfortable and adequate for the climate. Salt do you have salt there?"

"We didn't look for itbut it would be easy to bring it from the seashore."

"We've got it closer here. We've got prospects of metal. You haven't seen that ore outcropping yet, have you? We're better equipped every day; our standard of living is going up. We have a colony nobody need be ashamed of and we did it with bare hands; we were never meant to be a colony. Why throw up what we have gained to squat in caves like savages?"

Rod sighed. "Grant, this bank may be flooded in the rainy season aside from its poor protection now."

"It doesn't look it to me, but if so, we'll see it in time. Right now we are going into the dry season. So let's talk it over a few months from now.

Rod gave up. He refused to resume as "City Manager" nor would Caroline keep it when Rod turned it down. Bill Kennedy was appointed and Rod went to work under Cliff as a hunter, slept in the big shed upstream with the bachelors, and took his turn at night watch. The watch had been reduced to one man, whose duty was simply to tend fires. There was talk of cutting out the night fires, as fuel was no longer easy to find nearby and many seemed satisfied that the thorn barrier was enough.

Rod kept his mouth shut and stayed alert at night.

Game continued to be plentiful but became skittish. Buck did not come out of cover the way they had in rainy weather; it was necessary to search and drive them out. Carnivores seemed to have become scarcer. But the first real indication of peculiar seasonal habits of native fauna came from a very minor carnivore. Mick Mahmud returned to camp with a badly chewed foot; Bob Baxter patched him up and asked about it.

"You wouldn't believe it."

"Try me."

"Well, it was just a dopy joe. I paid no attention to it, of course. Next thing I knew I was flat on my back and trying to shake it loose. He did all that to me before I got a knife into him. Then I had to cut his jaws loose."

"Lucky you didn't bleed to death."

When Rod heard Mick's story, he told Roy. Having had one experience with a dopy joe turned aggressive, Roy took it seriously and had Cliff warn all hands to watch out; they seemed to have turned nasty.

Three days later the migration of animals started.

At first it was just a drifting which appeared aimless except that it was always downstream. Animals had long since ceased to use the watering place above the settlement and buck rarely appeared in the little valley; now they began drifting into it, would find themselves baffled by the thorn fence, and would scramble out. Nor was it confined to antelope types; wingless birds with great "false faces," rodents, rooters, types nameless to humans, all joined the migration. One of the monstrous leonine predators they called stobor approached the barricade in broad daylight, looked at it, lashed his tail, then clawed his way up the bluff and headed downstream again.

Cliff called off his hunting parties; there was no need to hunt when game walked into camp.

Rod found himself more edgy than usual that night as it grew dark. He left his seat near the barbecue pit and went over to Jimmy and Jacqueline. "What's the matter with this place? It's spooky."

Jimmy twitched his shoulders. "I feel it. Maybe it's the funny way the animals are acting. Say, did you hear they killed a joe inside camp?"

"I know what it is," Jacqueline said suddenly. "No 'Grand Opera.'"

"Grand Opera" was Jimmy's name for the creatures with the awful noises, the ones which had turned Rod's first night into a siege of terror. They serenaded every evening for the first hour of darkness. Rod's mind had long since blanked them out, heeded them no more than chorusing cicadas. He had not consciously heard them for weeks.

Now they failed to wail on time; it upset him.

He grinned sheepishly. "That's it, Jack. Funny how you get used to a thing. Do you suppose they are on strike?"

"More likely a death in the family," Jimmy answered. "They'll be back in voice tomorrow."

Rod had trouble getting to sleep. When the night watch gave an alarm he was up and out of bachelors' barracks at once, Colonel Bowie in hand. "What's up?"

Arthur Nielsen had the watch. "It's all right now," he answered nervously. "A big buffalo buck crashed the fence. And this got through." He indicated the carcass of a dopy joe.

"You're bleeding."

"Just a nip."

Others gathered around. Cowper pushed through, sized the situation and said, "Waxie, get that cut attended to. Bill . . . where's Bill? Bill, put somebody else on watch. And let's get that gap fixed as soon as it's light."

It was greying in the east. Margery suggested, "We might as well stay up and have breakfast. I'll get the fire going." She left to borrow flame from a watch fire.

Rod peered through the damaged barricade. A big buck was down on the far side and seemed to have at least six dopy joes clinging to it. Cliff was there and said quietly, "See a way to get at them?"

"Only with a gun."

"We can't waste ammo on that."

"No." Rod thought about it, then went to a pile of bamboo poles, cut for building. He selected a stout one a head shorter than himself, sat down and began to bind Lady Macbeth to it with rawhide, forming a crude pike spear.

Caroline came over and squatted down. "What are you doing?"

"Making a joekiller."

She watched him. "I'm going to make me one," she said suddenly and jumped up.

By daylight the animals were in full flight downstream as if chased by forest fire. As the creek had shrunk with the dry season a miniature beach, from a meter to a couple of meters wide, had been exposed below the bank on which the town had grown. The thorn kraal had been extended to cover the gap, but the excited animals crushed through this weak point and now streamed along the water past the camp.

After a futile effort no attempt was made to turn them back. They were pouring into the valley; they had to go somewhere, and the route between water and bank made a safety valve. It kept them from shoving the barricade aside by sheer mass. The smallest animals came through it anyhow, kept going, paid no attention to humans.

Rod stayed at the barricade, ate breakfast standing up. He had killed six joes since dawn while Caroline's score was still higher. Others were making knives into spears and joining them. The dopy joes were not coming through in great numbers; most of them continued to chase buck along the lower route past camp. Those who did seep through were speared; meeting them with a knife gave away too much advantage.

Cowper and Kennedy, inspecting defenses, stopped by Rod; they looked worried. "Rod," said Grant "how long is this going to last?"

"How should I know? When we run out of animals. It looks like get him, Shorty! It looks as if the joes were driving the others, but I don't think they are. I think they've all gone crazy."

"But what would cause that?" demanded Kennedy. "Don't ask me. But I think I know where all those bones on that beach came from. But don't ask why. Why does a chicken cross the road? Why do lemmings do what they do? What makes a plague of locusts? Behind you! Jump!"

Kennedy jumped, Rod finished off a joe, and they went on talking. "Better detail somebody to chuck these into the water, Bill, before they stink. Look, Grant, we're okay now, but I know what I would do."

"What? Move to your caves? Rod, you were rightbut it's too late."

"No, no! That's spilt milk; forget it. The thing that scares me are these mean little devils. They are no longer dopy; they are fast as can be and nasty . . . and they can slide through the fence. We can handle them nowbut how about when it gets dark? We've got to have a solid line of fire inside the fence and along the bank. Fire is one thing they can't go through . . . I hope."

"That'll take a lot of wood." Grant looked through the barricade and frowned.

"You bet it will. But it will get us through the night. See here, give me the ax and six men with spears. I'll lead the party."

Kennedy shook his head. "It's my job."

"No, Bill," Cowper said firmly. "I'll lead it. You stay here and take care of the town."

Before the day was over Cowper took two parties out and Bill and Rod led one each. They tried to pick lulls in the spate of animals but Bill's party was caught on the bluff above, where it had been cutting wood and throwing

it down past the cave. They were treed for two hours. The little valley had been cleaned out of dead wood months since; it was necessary to go into the forest above to find wood that would burn.

Cliff Pawley, hunter-in-chief, led a fifth party in the late afternoon, immediately broke the handle of the little ax. They returned with what they could gather with knives. While they were away one of the giant buck they called buffalo stampeded off the bluff, fell into camp, broke its neck. Four dopy joes were clinging to it. They were easy to kill as they would not let go.

Jimmy and Rod were on pike duty at the barricade. Jimmy glanced back at where a couple of girls were disposing of the carcasses. "Rod," he said thoughtfully, we got it wrong. Those are stobor . . . the real stobor."

"Huh?"

"The big babies we've been calling that aren't 'stobor.' These things are what the Deacon warned us against."

"Well . . . I don't care what you call them as long as they're dead. On your toes, boy; here they come again."

Cowper ordered fires laid just before dark and was studying how to arrange one stretch so as not to endanger the flume when the matter was settled; the structure quivered and water ceased to flow. Upstream something had crashed into it and broken the flimsy pipe line.

The town had long since abandoned waterskins. Now they were caught with only a few liters in a pot used by the cooks, but it was a hardship rather than a danger; the urgent need was to get a ring of fire around' them. There had already been half a dozen casualties no deaths but bites and slashings, almost all from the little carnivores contemptuously known as dopy joes. The community's pool of antiseptics, depleted by months of use and utterly irreplaceable, had sunk so low that Bob Baxter used it only on major wounds.

When fuel had been stretched ready to burn in a long arc inside the barricade and down the bank to where it curved back under the cave, the results of a hard day's work looked small; the stockpile was not much greater than the amount already spread out. Bill Kennedy looked at it. "It won't last the night, Grant."

"It's got to, Bill. Light it."

"If we pulled back from the fence and the bank, then cut over to the bluff

what do you think?"

Cowper tried to figure what might be saved by the change. "It's not much shorter. Uh, don't light the downstream end unless they start curving back in on us. But let's move; it's getting dark." He hurried to the cooking fire, got a brand and started setting the chain of fire. Kennedy helped and soon the townsite was surrounded on the exposed sides by blaze. Cowper chucked his torch into the fire and said, "Bill, better split the men into two watches and get the women up into the cave they can crowd in somehow."

"You'll have trouble getting thirty-odd women in there, Grant."

"They can sit up all night. But send them up. Yes, and the wounded men, too."

"Can do." Kennedy started passing the word. Caroline came storming up, spear in hand

"Grant, what's this nonsense about the girls having to go up to the cave? If you think you're going to cut me out of the fun you had better think again!"

Cowper looked at her wearily. "Carol, I haven't time to monkey. Shut your face and do as you are told."

Caroline opened her mouth, closed it, and did as she was told. Bob Baxter claimed Cowper's attention; Rod noticed that he looked very upset. "Grant? You ordered all the women up to the cave?"

"Yes."

"I'm sorry but Carmen can't."

"You'll have to carry her. She is the one I had most on my mind when I decided on the move.

"But" Baxter stopped and urged Grant away from the others. He spoke insistently but quietly. Grant shook his head.

"It's not safe, Grant," Baxter went on, raising his voice. "I don't dare risk it. The interval is nineteen minutes now.

"Well. . . all right. Leave a couple of women with her. Use Caroline, will you? That'll keep her out of my hair."

"Okay." Baxter hurried away.

Kennedy took the first watch with a dozen men spread out along the fire line; Rod was on the second watch commanded by Cliff Pawley. He went to the Baxter house to find out how Carmen was doing, was told to beat it by Agnes. He then went to the bachelors' shed and tried to sleep.

He was awakened by yells, in time to see one of the leonine monsters at least five meters long go bounding through the camp and disappear downstream. It had jumped the barrier, the stakes behind it, and the fire behind that, all in one leap.

Rod called out, "Anybody hurt?"

Shorty Dumont answered. "No. It didn't even stop to wave." Shorty was bleeding from a slash in his left calf; he seemed unaware of it. Rod crawled back inside tried again to sleep.

He was awakened again by the building shaking. He hurried out. "What's up?"

"That you, Rod? I didn't know anybody was inside. Give me a hand; we're going to burn it." The voice was Baxter's; he was prying at a corner post and cutting rawhide strips that held it.

Rod put his spear where it would not be stepped on, re-sheathed Colonel Bowie, and started to help. The building was bamboo and leaves, with a mudandthatch roof; most of it would burn. "How's Carmen?"

"Okay. Normal progress. I can do more good here. Besides they don't want me." Baxter brought the corner of the shed down with a crash, gathered a double armful of wreckage and hurried away. Rod picked up a load and followed him.

The reserve wood pile was gone; somebody was tearing the roof off the "city hall" and banging pieces on the ground to shake clay loose. The walls were sunbaked bricks, but the roof would burn. Rod came closer, saw that it was Cowper who was destroying this symbol of the sovereign community. He worked with the fury of anger. "Let me do that, Grant. Have you had any rest?"

"Huh? No."

"Better get some. It's going to be a long night. What time is it?"

"I don't know. Midnight, maybe." Fire blazed up and Cowper faced it, wiping his face with his hand. "Rod, take charge of the second watch and relieve Bill. Cliff got clawed and I sent him up."

"Okay. Burn everything that will burn, right?"

"Everything but the roof of the Baxter house. But don't use it up too fast; it's got to last till morning."

"Got it." Rod hurried to the fire line, found Kennedy. Okay, Bill, I'll take over Grant's orders. Get some sleep. Anything getting through?"

'Not much. And not far." Kennedy's spear was dark with blood in the firelight. "I'm not going to sleep, Rod. Find yourself a spot and help out."

Rod shook his head. "You're groggy. Beat it. Grant's orders."

"No!"

"Well. . . look, take your gang and tear down the old maids' shack. That'll give you a change, at least."

"Uh all right." Kennedy left, almost staggering. There was a lull in the onrush of animals; Rod could see none beyond the barricade. It gave him time to sort out his crew, send away those who had been on duty since sunset, send for stragglers. He delegated Doug Sanders and Mick Mahmud as firetenders, passed the word that no one else was to put fuel on the fires.

He returned from his inspection to find Bob Baxter, spear in hand, holding his place at the center of the line. Rod put a hand on his shoulder. "The medical officer doesn't need to fight. We aren't that bad off."

Baxter shrugged. "I've got my kit, what there is left of it. This is where I use it."

"Haven't you enough worries?"

Baxter grinned wanly. "Better than walking the floor. Rod, they're stirring again. Hadn't we better build up the fires?"

"Mmm . . . not if we're going to make it last. I don't think they can come through that."

Baxter did not answer, as a joe came through at that instant. It ploughed through the smouldering fire and Baxter speared it. Rod cupped his hands and shouted, "Build up the fires! But go easy.

"Behind you, Rod!"

Rod jumped and whirled, got the little devil. "Where did that one come from? I didn't see it."

Before Bob could answer Caroline came running out of darkness. "Bob! Bob Baxter! rve got to find Bob Baxter!"

"Over here!" Rod called.

Baxter was hardly able to speak. "Is she is she?" His face screwed up in anguish.

"No, no!" yelled Caroline. "She's all right, she's fine. It's a girl!"

Baxter quietly fainted, his spear falling to the ground. Caroline grabbed him and kept him from falling into the fire. He opened his eyes and said, "Sorry. You scared me. You're sure Carmen is all right?"

"Right as rain. The baby, too. About three kilos. Here, give me that sticker Carmen wants you."

Baxter stumbled away and Caroline took his place. She grinned at Rod. "I feel swell! How's business, Roddie? Brisk? I feel like getting me eight or nine of these vermin.

Cowper came up a few minutes later. Caroline called out, "Grant, did you hear the good news?"

"Yes. I just came from there." He ignored Caroline's presence at the guard line but said to Rod, "We're making a stretcher out of pieces of the flume and they're going to haul Carmen up. Then they'll throw the stretcher down and you can burn it."

"Good."

"Agnes is taking the baby up. Rod, what's the very most we can crowd into the cave?"

"Gee!" Rod glanced up at the shelf. "They must be spilling off the edge now.

"I'm afraid so. But we've just got to pack them in. I want to send up all married men and the youngest boys. The bachelors will hold on here."

"I'm a bachelor!" Caroline interrupted. Cowper ignored her. "As soon as Carmen is safe we do it we can't keep fires going much longer." He turned away, headed up to the cave.

Caroline whistled softly. "Roddie, we're going to have fun."

"Not my idea of fun. Hold the fort, Carol. I've got to line things up." He moved down the line, telling each one to go or to stay.

Jimmy scowled at him. "I won't go, not as long as anybody stays. I couldn't look Jackie in the face."

"You'll button your lip and do as Grant says or I'll give you a mouthful of teeth. Hear me?"

"I hear you. I don't like it."

"You don't have to like it, just do it. Seen Jackie? How is she?"

"I snuck up a while ago. She's all right, just queasy. But the news about Carmen makes her feel so good she doesn't care."

Rod used no age limit to determine who was expendable. With the elimination of married men, wounded, and all women he had little choice; he simply told those whom he considered too young or not too skilled that they were to leave when word was passed. It left him with half a dozen, plus himself, Cowper, and possibly Caroline. Trying to persuade Caroline was a task he had postponed.

He returned and found Cowper. "Carmen's gone up," Cowper told him. "You can send the others up now.

"Then we can burn the roof of the Baxter house."

"I tore it down while they were hoisting her." Cowper looked around. "Carol! Get on up.

She set her feet. "I won't!"

Rod said softly, "Carol, you heard him. Go up right now!"

She scowled, stuck out her lip, then said, "All right for you, Roddie Walker!" turned and fled up the path.

Rod cupped his hands and shouted, "All right, everybody! All hands up but those I told to stay. Hurry!"

About half of those leaving had started up when Agnes called down, "Hey! Take it slow! Somebody will get pushed over the edge if you don't quit

shoving."

The queue stopped. Jimmy called out, "Everybody exhale. That'll do it."

Somebody called back, "Throw Jimmy off. . . that will do it." The line moved again, slowly. In ten minutes they accomplished the sardinepacking problem of fitting nearly seventy people into a space comfortable for not more than a dozen. It could not even be standing room since a man could stand erect only on the outer shelf. The girls were shoved inside, sitting or squatting, jammed so that they hardly had air to breathe. The men farthest out could stand but were in danger of stepping off the edge in the dark, or of being elbowed off.

Grant said, "Watch things, Rod, while I have a look." He disappeared up the path, came back in a few minutes. "Crowded as the bottom of a sack," he said. "Here's the plan. They can scrunch back farther if they have to. It will be uncomfortable for the wounded and Carmen may have to sit up she's lying down but it can be done. When the fires die out, we'll shoehorn the rest in. With spears poking out under the overhang at the top of the path we ought to be able to hold out until daylight. Check me?"

"Sounds as good as can be managed."

"All right. When the time comes, you go up next to last, I go up last."

"Unh . . . I'll match you."

Cowper answered with surprising vulgarity and added, "I'm boss; I go last. We'll make the rounds and pile anything left on the fires, then gather them all here. You take the bank, I take the fence."

It did not take long to put the remnants on the fires, then they gathered around the path and waited Roy, Kenny, Doug, Dick, Charlie, Howard, and Rod and Grant. Another wave of senseless migration was rolling but the fires held it, bypassed it around by the water.

Rod grew stiff and shifted his spear to his left hand. The dying fires were only glowing coals in spots. He looked for signs of daylight in the east. Howard Goldstein said, "One broke through at the far end."

"Hold it, Goldie," Cowper said. "We won't bother it unless it comes here." Rod shifted his spear back to his right hand.

The wall of fire was now broken in many places. Not only could joes get through, but worse, it was hard to see them, so little light did the embers give off. Cowper turned to Rod and said, "All right, everybody up. You

tally them." Then he shouted, "Bill! Agnes! Make room, I'm sending them up."

Rod threw a glance at the fence, then turned. "Okay, Kenny first. Doug next, don't crowd. Goldie and then Dick. Who's left? Roy" He turned, uneasily aware that something had changed.

Grant was no longer behind him. Rod spotted him bending over a dying fire. "Hey, Grant!"

"Be right with you." Cowper selected a stick from the embers, waved it into flame. He hopped over the coals, picked his way through sharpened stakes, reached the thorn bush barrier, shoved his torch into it. The dry branches flared up. He moved slowly away, picking his way through the stake trap.

"I'll help you!" Rod shouted. "I'll fire the other end." Cowper turned and light from the burning thorn showed his stern, bearded face. "Stay back. Get the others up. That's an order!" f

The movement upward had stopped. Rod snarled, "Get on up, you lunk-heads! Move!" He jabbed with the butt of his spear, then turned around.

Cowper had set the fire in a new place. He straightened up, about to move farther down, suddenly turned and jumped over the dying line of fire. He stopped and jabbed at something in the darkness . . . then screamed.

"Grant!" Rod jumped down, ran toward him. But Grant was down before he reached him, down with a joe worrying each leg and more coming. Rod thrnst at one, jerked his spear out, and jabbed at the other, trying not to stab Grant. He felt one grab his leg and wondered that it did not hurt.

Then it did hurt, terribly, and he realized that he was down and his spear was not in his hand. But his hand found his knife without asking; Colonel Bowie finished off the beast clamped to his ankle.

Everything seemed geared to nightmare slowness. Other figures were thrusting leisurely at shapes that hardly crawled. The thorn bush, flaming high, gave him light to see and stab a dopy joe creeping toward him. He got it, rolled over and tried to get up.

He woke with daylight in his eyes, tried to move and discovered that his left leg hurt. He looked down and saw a compress of leaves wrapped with a neat hide bandage. He was in the cave and there were others lying parallel to him. He got to one elbow. "Say, what"

"Sssh!" Sue Kennedy crawled over and knelt by him. "The baby is asleep."

"Oh. . ."

"I'm on nurse duty. Want anything?"

"I guess not. Uh, what did they name her?"

"Hope. Hope Roberta Baxter. A pretty name. I'll tell Caroline you are awake." She turned away.

Caroline came in, squatted and looked scornfully at his ankle. "That'll teach you to have a party and not invite me.

"I guess so. Carol, what's the situation?"

"Six on the sick list. About twice that many walking wounded. Those not hurt are gathering wood and cutting thorn. We fixed the ax."

"Yes, but. . . we're not having to fight them off?"

"Didn't Sue tell you? A few buck walking around as if they were dazed. That's all."

"They may start again."

"If they do, we'll be ready."

"Good." He tried to raise up. "Where's Grant? How bad was he hurt?"

She shook her head. "Grant didn't make it, Roddie."

"Huh?"

"Bob took off both legs at the knee and would have taken off one arm, but he died while he was operating." She made a very final gesture. "In the creek."

Rod started to speak, turned his head and buried his face. Caroline put a hand on him. "Don't take it hard, Roddie. Bob shouldn't have tried to save him. Grant is better off."

Rod decided that Carol was right no frozen limb banks on this planet. But it did not make him feel better. "We didn't appreciate him," he muttered.

"Stow it!" Caroline whispered fiercely. "He was a fool."

"Huh? Carol, I'm ashamed of you."

He was surprised to see tears rolling down her cheeks. "You know he was a fool, Roddie Walker. Most of us knew. . . but we loved him anyhow. I would 'uv married him, but he never asked me." She wiped at tears. "Have you seen the baby?"

"No."

Her face lit up. "I'll fetch her. She's beautiful."

"Sue said she was asleep."

"Well . . . all right. But what I came up for is this: what do you want us to do?"

"Huh?" He tried to think. Grant was dead. "Bill was his deputy. Is Bill laid up?"

"Didn't Sue tell you?"

"Tell me what?"

"You're the mayor. We elected you this morning. Bill and Roy and I are just trying to hold things together."

Rod felt dizzy. Caroline's face kept drawing back, then swooping in; he wondered if he were going to faint..

"plenty of wood," she was saying, "and we'll have the kraal built by sundown. We don't need meat; Margery is butchering that big fellow that fell off the bluff and busted his neck. We can't trek out until you and Carmen and the others can walk, so we're trying to get the place back into shape temporarily. Is there anything you want us to do now?"

He considered it. "No. Not now.

"Okay. You're supposed to rest." She backed out, stood up. "I'll look in later." Rod eased his leg and turned over. After a while he quieted and went to sleep.

Sue brought broth in a bowl, held his head while he drank, then fetched Hope Baxter and held her for him to see. Rod said the usual inanities, wondering if all new babies looked that way.

Then he thought for a long time.

Caroline showed up with Roy. "How's it going, Chief?" Roy said.

"Ready to bite a rattlesnake."

"That's a nasty foot, but it ought to heal. We boiled the leaves and Bob used sulfa."

"Feels all right. I don't seem feverish."

"Jimmy always said you were too mean to die," added Caroline. "Want anything, Roddie? Or to tell us anything?"

"Yes."

"What?"

"Get me out of here. Help me down the path." Roy said hastily, "Hey, you can't do that. You're not in shape."

"Can't I? Either help, or get out of my way. And get everybody together. We're going to have a town meeting."

They looked at each other and walked out on him. He had made it to the squeeze at the top when Baxter showed up. "Now, Rod! Get back and lie down."

"Out of my way."

"Listen, boy, I don't like to get rough with a sick man. But I will if you make me."

"Bob. . . how bad is my ankle?"

"It's going to be all right . . . if you behave. If you don't well, have you ever seen gangrene? When it turns black and has that sweetish odor?"

"Quit trying to scare me. Is there any reason not to put a line under my arms and lower me?"

"Well. . ."

They used two lines and a third to keep his injured leg free, with Baxter supervising. They caught him at the bottom and carried him to the cooking space, laid him down. "Thanks," he grunted. "Everybody here who can get here?"

"I think so, Roddie. Shall I count?"

"Never mind. I understand you folks elected me cap I mean 'mayor' this morning?"

"That's right," agreed Kennedy.

"Uh, who else was up? How many votes did I get?"

"Huh? It was unanimous.

Rod sighed. "Thanks. I'm not sure I would have held still for it if I'd been here. I gathered something else. Do I understand that you expect me to take you down to the caves Roy and I found? Caroline said something. . ."

Roy looked surprised. "We didn't vote it, Rod, but that was the idea. After last night everybody knows we can't stay here."

Rod nodded. "I see. Are you all where I can see you? I've got something to say. I hear you adopted a constitution and things while Roy and I were away. I've never read them, so I don't know whether this is legal or not. But if I'm stuck with the job, I expect to run things. If somebody doesn't like what I do and we're both stubborn enough for a showdown, then you will vote. You back me up, or you turn me down and elect somebody else. Will that work? How about it, Goldie? You were on the law committee, weren't you?"

Howard Goldstein frowned. "You don't express it very well, Rod."

"Probably not. Well?"

"But what you have described is the parliamentary vote-of-confidence. That's the backbone of our constitution. We did it that way to keep it simple and still democratic. It was Grant's notion."

"I'm glad," Rod said soberly. "I'd hate to think that I had torn up Grant's laws after he worked so hard on them. I'll study them, I promise, first chance I get. But about moving to the caves we'll have a vote of confidence right now."

Goldstein smiled. "I can tell you how it will come out. We're convinced."

Rod slapped the ground. "You don't understand! If you want to move, move . . . but get somebody else to lead you. Roy can do it. Or Cliff, or Bill. But if you leave it to me, no dirty little beasts, all teeth and no brains,

are going to drive us out. We're men.. . and men don't have to be driven out, not by the likes of those. Grant paid for this land and I say stay here and keep it for him!"

14 Civilization

The Honorable Roderick L. Walker, Mayor of Cowpertown, Chief of State of the sovereign planet GO7390 1Il (Lima Catalog), Commander-in-Chief of the Armed Forces, Chief Justice, and Defender of Freedoms, was taking his ease in front of the Mayor's Palace. He was also scratching and wondering if he should ask somebody to cut his hair againhe suspected lice only this planet did not have lice.

His Chief of Government, Miss Caroline Beatrice Mshiyeni, squatted in front of him. "Roddie, I've told them and told them and told them . . . and it does no good. That family makes more filth than everybody else put together. You should have seen it this morning. Garbage in front of their door . . . flies!"

"I saw it."

"Well, what do I do? If you would let me rough him up a little. But you're too soft"

"I guess I am." Rod looked thoughtfully at a slab of slate erected in the village square. It read:

To the Memory Of

ULYSSES GRANT COWPER,

First Mayor

who died for his city

The carving was not good; Rod had done it.

"Grant told me once," he added, "that government was the art of getting along with people you don't like."

"Well, I sure don't like Bruce and Theo!"

"Neither do I. But Grant would have figured out a way to keep them in line without getting rough."

"You figure it out, I can't. Roddie, you should never have let Bruce come

back. That was bad enough. But when he married that little . . . well!"

"They were made for each other," Rod answered. "Nobody else would have married either of them."

"It's no joke. It's almost Hope! Quit teasing Grantie!" She bounced up.

Miss Hope Roberta Baxter, sixteen months, and Master Grant Roderick Throxton, thirteen months, stopped what they were doing, which was, respectively, slapping and crying. Both were naked and very dirty. It was "clean" dirt; each child had been bathed by Caroline an hour earlier, and both were fat and healthy.

Hope turned up a beaming face. "'Ood babee!" she asserted.

"I saw you." Caroline upended her, gave her a spat that would not squash a fly, then picked up Grant Throxton.

"Give her to me," Rod said.

"You're welcome to her," Caroline said. She sat down with the boy in her lap and rocked him. "Poor baby! Show Auntie Carol where it hurts."

"You shouldn't talk like that. You'll make a sissy of him."

"Look who's talking! WishyWashy Walker."

Hope threw her arms around Rod, part way, and cooed, "Woddie!" adding a muddy kiss. He returned it. He considered her deplorably spoiled; nevertheless he contributed more than his share of spoiling.

"Sure," agreed Carol. "Everybody loves Uncle Roddie. He hands out the medals and Aunt Carol does the dirty work."

"Carol, I've been thinking."

"Warm day. Don't strain any delicate parts."

"About Bruce and Theo. I'll talk to them."

"Talk!"

"The only real punishment is one we never use and I hope we never have to. Kicking people out, I mean. The McGowans do as they please because they don't think we would. But I would love to give them the old heaveho. . . and if it comes to it, I'll make an issue of it before the town either kick

them out or I quit."

"They'd back you. Why, I bet he hasn't taken a bath this week!"

"I don't care whether they back me or not. I've ridden out seven confidence votes; someday I'll be lucky and retire. But the problem is to convince Bruce that I am willing to face the issue, for then I won't have to. Nobody is going to chance being turned out in the woods, not when they've got it soft here. But he's got to be convinced."

"Uh, maybe if he thought you were carrying a grudge about that slice in the ribs he gave you?"

"And maybe I am. But I can't let it be personal, Carol; I'm too stinkin' proud."

"Uh . . . Turn it around. Convince him that the town is chompin' at the bit which isn't far wrong and you are trying to restrain them."

"Um, that's closer. Yes, I think Grant would have gone for that. I'll think it over."

"Do that." She stood up. "I'm going to give these children another bath. I declare I don't know where they find so much dirt."

She swung away with a child on each hip, heading for the shower sheds. Rod watched her lazily. She was wearing a leather bandeau and a Maori grass skirt, long leaves scraped in a pattern, curled, and dried. It was a style much favored and Caroline wore it around town, although when she treated herself to a day's hunting she wore a leather breechclout such as the men wore.

The same leaf fibre could be retted and crushed, combed and spun, but the cloth as yet possessed by the colony was not even enough for baby clothes. Bill Kennedy had whittled a loom for Sue and it worked, but neither well nor fast and the width of cloth was under a half meter. Still, Rod mused, it was progress, it was civilization. They had come a long way.

The town was stobor-tight now. An adobe wall too high and sheer for any but the giant lions covered the upstream side and the bank, and any lion silly enough to jump it landed on a bed of stakes too wide now for even their mighty leapsthe awning under which Rod lolled was the hide of one that had made that mistake. The wall was pierced by stobor traps, narrow tunnels just big enough for the vicious little beasts and which gave into deep pits, where they could chew on each other like Kilkenny cats which they did.

It might have been easier to divert them around the town, but Rod wanted to kill them; he would not be content until their planet was rid of those vermin.

In the meantime the town was safe. Stobor continued to deserve the nickname "dopy joe" except during the dry season and then they did not become dangerous until the annual berserk migration the last of which had passed without loss of blood; the colony's defenses worked, now that they understood what to defend against. Rod had required mothers and children to sit out the stampede in the cave; the rest sat up two nights and stayed on guard. . . but no blade was wet.

Rod thought sleepily that the next thing they needed was paper; Grant had been right. . . even a village was hard to run without writing paper. Besides, they must avoid losing the habit of writing. He wanted to follow up Grant's notion of recording every bit of knowledge the gang possessed. Take logarithms logarithms might not be used for generations, but when it came time to log a couple of rhythms, then. . . he went to sleep.

"You busy, Chief?"

Rod looked up at Arthur Nielsen. "Just sleeping a practice I heartily recommend on a warm Sabbath afternoon. What's up, Art? Are Shorty and Doug pushing the bellows alone?"

"No. Confounded plug came out and we lost our fire. The furnace is ruined." Nielsen sat down wearily. He was hot, very red in the face, and looked discouraged. He had a bad burn on a forearm but did not seem to know it. "Rod, what are we doing wrong? Riddle me that."

"Talk to one of the brains. If you didn't know more about it than I do, we'd swap jobs."

"I wasn't really asking. I know two things that are wrong. We can't build a big enough installation and we don't have coal. Rod, we've got to have coal; for cast iron or steel we need coal. Charcoal won't do for anything but spongy wrought iron."

"What do you expect to accomplish overnight, Art? Miracles? You are years ahead of what anybody could ask. You've turned out metal, whether it's wrought iron or uranium. Since you made that spit for the barbecue pit, Margery thinks you are a genius."

"Yes, yes, we've made ironbut it ought to be lots better and more of it. This ore is wonderful . . . the real Lake Superior hematite. Nobody's seen

such ore in commercial quantity on Terra in centuries. You ought to be able to breathe on it and make steel. And I could, too, if I had coal. We've got clay, we've got limestone, we've got this lovely ore but I can't get a hot enough fire."

Rod was not fretted; the colony was getting metal as fast as needed. But Waxie was upset. "Want to knock off and search for coal?"

"Uh . . . no, I don't. I want to rebuild that furnace." Nielsen gave a bitter description of the furnace's origin, habits, and destination.

"Who knows most about geology?"

"Uh, I suppose I do."

"Who knows next most?"

"Why, Doug I guess.

"Let's send him out with a couple of boys to find coal. You can have Mick in his place on the bellows no, wait a minute. How about Bruce?"

"Bruce? He won't work."

"Work him. If you work him so hard he runs away and forgets to come back, we won't miss him. Take him, Art, as a favor to me.

"Well . . . . okay, if you say so.

"Good. You get one bonus out of losing your batch. You won't miss the dance tonight. Art, you shouldn't start a melt so late in the week; you need your day of rest . . . and so do Shorty and Doug."

"I know. But when it's ready to go I want to fire it off.

Working the way we do is discouraging; before you can make anything you have to make the thing that makes it and usually you have to make something else to make that. Futile!"

"You don't know what 'futile' means. Ask our 'Department of Agriculture.' Did you take a look at the farm before you came over the wall?"

"Well, we walked through it."

"Better not let Cliff catch you, or he'll scalp you. I might hold you for him."

"Humph! A lot of silly grass! Thousands of hectares around just like it."

"That's right. Some grass and a few rows of weeds. The pity is that Cliff will never live to see it anything else. Nor little Cliff. Nevertheless our great grandchildren will eat white bread, Art. But you yourself will live to build precision machinery you know it can be done, which, as Bob Baxter says, is twothirds of the battle. Cliff can't live long enough to eat a slice of light, tasty bread. It doesn't stop him."

"You should have been a preacher, Rod." Art stood up and sniffed himself. "I'd better get a bath, or the girls won't dance with me."

"I was just quoting. You've heard it before. Save me some soap."

Caroline hit two bars of Arkansas Traveler, Jimmy slapped his drum, and Roy called, "Square 'em up, folks!" He waited, then started in high, nasal tones:

"Honor y'r partners!

"Honor y'r corners!

"Now all jump up and when y' come down"

Rod was not dancing; the alternate set would be his turn. The colony formed eight squares, too many for a caller, a mouth organ, and a primitive drum all unassisted by amplifying equipment. So half of them babysat and gossiped while the other half danced. The caller and the orchestra were relieved at each intermission to dance the other sets.

Most of them had not known how to squaredance. Agnes Pulvermacher had put it over almost singlehanded, in the face of kidding and resistance training callers, training dancers, humming tunes to Caroline, cajoling Jimmy to carve and shrink a jungle drum. Now she had nine out of ten dancing.

Rod had not appreciated it at first (he was not familiar with the history of the Mormon pioneers) and had regarded it as a nuisance which interfered with work. Then he saw the colony, which had experienced a bad letdown after the loss in one night of all they had built, an apathy he had not been able to lift he saw this same colony begin to smile and joke and work hard simply from being exposed to music and dancing.

He decided to encourage it. He had trouble keeping time and could not carry a tune, but the bug caught him, too; he danced not well but with great enthusiasm.

The village eventually limited dances to Sabbath nights, weddings, and holidays and made them "formal" . . . which meant that women wore grass skirts. Leather shorts, breechclouts, and slacks (those not long since cut up for rags) were not acceptable. Sue talked about making a real square dance dress as soon as she got far enough ahead in her weaving, and a cowboy shirt for her husband . . . but the needs of the colony made this a distant dream.

Music stopped, principals changed, Caroline tossed her mouth organ to Shorty, and came over. "Come on, Roddie, let's kick some dust."

"I asked Sue," he said hastily and truthfully. He was careful not to ask the same girl twice, never to pay marked attention to any female; he had promised himself long ago that the day he decided to marry should be the day he resigned and he was not finding it hard to stay married to his job. He liked to dance with Caroline; she was a popular partner except for a tendency to swing her partner instead of letting him swing her but he was careful not to spend much social time with her because she was his right hand, his alter ego.

Rod went over and offered his arm to Sue. He did not think about it; the stylized amenities of civilization were returning and the formal politenesses of the dance made them seem natural. He led her out and assisted in making a botch of Texas Star.

Later, tired, happy, and convinced that the others in his square had made the mistakes and he had straightened them out, Rod returned Sue to Bill, bowed and thanked him, and went back to the place that was always left for him. Margery and her assistants were passing out little brown somethings on wooden skewers. He accepted one. "Smells good, Marge. What are they?"

"Mock Nile birds. Smoked baby-buck bacon wrapped around hamburger. Salt and native sage, pan broiled. You'd better like it; it took us hours."

"Mmmm! I do! How about another?"

"Wait and see. Greedy."

"But I need more. I work hardest. I have to keep up my strength."

"That was work I saw you doing this afternoon?" She handed him another.

"I was planning. The old brain was buzzing away.

"I heard the buzzing. Pretty loud, when you lie on your back."

He snagged a third as she turned away, looked up to catch Jacqueline smiling; he winked and grinned.

"Happy, Rod?"

"Yes indeedy. How about you, Jackie?"

"I've never been happier," she said seriously.

Her husband put an arm around her. "See what the love of a good man can do, Rod?" Jimmy said. "When I found this poor child she was beaten, bedraggled, doing your cooking and afraid to admit her name. Now look at her! fat and sassy."

"I'm not that fat!"

"Pleasingly plump."

Rod glanced up at the cave. "Jackie, remember the night I showed up?"

"I'm not likely to forget."

"And the silly notion I had that this was Africa? Tell me if you had it to do over, would you rather I had been right?"

"I never thought about it. I knew it was not."

"Yes, but 'if'? You would have been home long ago."

Her hand took her husband's. "I would not have met James."

"Oh, yes, you would. You had already met me. You could not have avoided it my best friend."

"Possibly. But I would not change it. I have no yearning to go 'home,' Rod. This is home."

"Me neither," asserted Jimmy. "You. know what? This colony gets a little bigger and it's getting bigger fast Goldie and I are going to open a law office. We won't have any competition and can pick our clients. He'll handle the criminal end, I'll specialize in divorce, and we'll collaborate on corporate skulduggery. We'll make millions. I'll drive a big limousine drawn by eight spanking buck, smoking a big cigar and sneering at the peasants." He called out, "Right, Goldie?"

"Precisely, colleague. I'm making us a shingle: 'Goldstein & ThroxtonGet bailed, not jailed!'"

"Keerect. But make that: 'Throxton & Goldstein.'"

"I'm senior. I've got two more years of law."

"A quibble. Rod, are you going to let this Teller U. character insult an old Patrick Henry man?"

"Probably. Jimmy, I don't see how you are going to work this. I don't think we have a divorce law. Let's ask Caroline."

"A trifle. You perform the marriages, Rod; I'll take care of the divorces."

"Ask Caroline what?" asked Caroline.

"Do we have a divorce law?"

"Huh? We don't even have a getting married law."

"Unnecessary," explained Goldstein. "Indigenous in the culture. Besides, we ran out of paper.

"Correct, Counselor," agreed Jimmy.

"Why ask?" Caroline demanded. "Nobody is thinking about divorce or I would know before they would."

"We weren't talking about that," Rod explained. "Jackie said that she had no wish to go back to Terra and Jimmy was elaborating. Uselessly, as usual."

Caroline stared. "Why would anybody want to go back?"

"Sure," agreed Jimmy. "This is the place. No income tax. No traffic, no crowds, no commercials, no telephones. Seriously, Rod, every one here was aiming for the Outlands or we wouldn't have been taking a survival test. So what difference does it make? Except that we've got everything sooner." He squeezed his wife's hand. "I was fooling about that big cigar; I'm rich now, boy, rich!"

Agnes and Curt had drawn into the circle, listening. Agnes nodded and said, "For once you aren't joking, Jimmy. The first months we were here I cried myself to sleep every night, wondering if they would ever find us. Now I know they never will and I don't care! I wouldn't go back if I could; the

only thing I miss is lipstick."

Her husband's laugh boomed out. "There you have the truth, Rod. The fleshpots of Egypt . . . put a cosmetics counter across this creek and every woman here will walk on water."

"That's not fair, Curt! Anyhow, you promised to make lipstick."

"Give me time."

Bob Baxter came up and sat down by Rod. "Missed you at the meeting this morning, Rod."

"Tied up. I'll make it next week."

"Good." Bob, being of a sect which did not require ordination, had made himself chaplain as well as medical officer simply by starting to hold meetings. His undogmatic ways were such that Christian, Jew, Monist, or Moslem felt at ease; his meetings were well attended.

"Bob, would you go back?"

"Go where, Caroline?"

"Back to Terra."

"Yes"

Jimmy looked horrified. "Boil me for breakfast! Why?"

"Oh, I'd want to come back! But I need to graduate from medical school." He smiled shyly. "I may be the best surgeon in the neighborhood, but that isn't saying much."

"Well. . ." admitted Jimmy, "I see your point. But you already suit us. Eh, Jackie?"

"Yes, Jimmy."

"It's my only regret," Bob went on. "I've lost ones I

should have saved. But it's a hypothetical question. 'Here we rest.'"

The question spread. Jimmy's attitude was overwhelmingly popular, even though Bob's motives were respected. Rod said goodnight; he heard them still batting it around after he had gone to bed; it caused him to discuss

it with himself.

He had decided long ago that they would never be in touch with Earth; he had not thought of it for how long? over a year. At first it had been mental hygiene, protection of his morale. Later it was logic: a delay in recall of a week might be a power failure, a few weeks could be a technical difficulty but months on months was cosmic disaster; each day added a cipher to the infinitesimal probability that they would ever be in touch again.

He was now able to ask himself: was this what he wanted?

Jackie was right; this was home. Then he admitted that he liked being big frog in a small puddle, he loved his job. He was not meant to be a scientist, nor a scholar, he had never wanted to be a businessman but what he was doing suited him . . . and he seemed to do it well enough to get by.

"'Here we rest!'"

He went to sleep in a warm glow.

Cliff wanted help with the experimental crops. Rod did not take it too seriously; Cliff always wanted something; given his head he would have everybody working dawn to dark on his farm. But it was well to find out what he wanted Rod did not underrate the importance of domesticating plants; that was basic for all colonies and triply so for them. It was simply that he did not know much about it.

Cliff stuck his head into the mayor's hut. "Ready?"

"Sure." Rod got his spear. It was no longer improvised but bore a point patiently sharpened from steel salvaged from Braun's Thunderbolt. Rod had tried wrought iron but could not get it to hold an edge. "Let's pick up a couple of boys and get a few stobor."

"Okay"

Rod looked around. Jimmy was at his potter's wheel, kicking the treadle and shaping clay with his thumb. Jim! Quit that and grab your pike. We're going to have some fun."

Throxton wiped at sweat. "You've talked me into it." They added Kenny and Mick, then Cliff led them upstream. "I want you to look at the animals."

"All right," agreed Rod. "Cliff, I had been meaning to speak to you. If you are going to raise those brutes inside the wall, you'll have to be careful

about their droppings. Carol has been muttering."

"Rod, I can't do everything! And you can't put them outside, not if you expect them to live."

"Sure, sure! Well, we'll get you more help, that's the only Just a second!"

They were about to pass the last hut; Bruce McGowan was stretched in front of it, apparently asleep. Rod did not speak at once; he was fighting down rage. He wrestIed with himself, aware that the next moment could change his future, damage the entire colony. But his rational self was struggling in a torrent of anger, bitter and selfrighteous. He wanted to do away with this parasite, destroy it. He took a deep breath and tried to keep his mouth from trembling.

"Bruce!" he called softly.

McGowan opened his eyes. "Huh?"

"Isn't Art working his plant today?"

"Could be," Bruce admitted.

"Well?"

"'Well' what? I've had a week and it's not my dish. Get somebody else."

Bruce wore his knife, as did each of them; a colonist was more likely to be caught naked than without his knife. It was the allpurpose tool, for cutting leather, preparing food, eating, whittling, building, basket making, and as makedo for a thousand other tools; their wealth came from knives, arrows were now used to hunt but knives shaped the bows and arrows.

But a knife had not been used by one colonist against another since that disastrous day when Bruce's brother had defied Rod. Over the same issue, Rod recalled; the wheel had turned full circle. But today he would have immediate backing if Bruce reached for his knife.

But he knew that this must not be settled by five against one; he alone must make this dog come to heel, or his days as leader were numbered.

It did not occur to Rod to challenge Bruce to settle it with bare hands. Rod had read many a historical romance in which the hero invited someone to settle it man to man, in a stylized imitation fighting called "boxing." Rod had enjoyed such stories but did not apply them to himself any more than he considered personally the sword play of The Three Musketeers; nevertheless,

he knew what "boxing" meant they folded their hands and struck certain restricted blows with fists. Usually no one was hurt.

The fighting that Rod was trained in was not simply strenuous athletics. It did not matter whether they were armed; if he and Bruce fought bare hands or otherwise, someone would be killed or badly hurt. The only dangerous weapon was man himself.

Bruce stared sullenly. "Bruce," Rod said, striving to keep his voice steady, "a long time ago I told you that people worked around here or got out. You and your brother didn't believe me so we had to chuck you out. Then you crawled back with a tale about how Jock had been killed and could you please join up? You were a sorry sight. Remember?"

McGowan scowled. "You promised to be a little angel," Rod went on. "People thought I was foolish and I was. But I thought you might behave."

Bruce pulled a blade of grass, bit it. "Bub, you remind me of Jock. He was always throwing his weight around, too.

"Bruce, get up and get out of town! I don't care where, but if you are smart, you will shag over and tell Art you've made a mistake then start pumping that bellows. I'll stop by later. If sweat isn't pouring off you when I arrive . . . then you'll never come back. You'll be banished for life."

McGowan looked uncertain. He glanced past Rod, and Rod wondered what expressions the others wore. But Rod kept his eyes on Bruce. "Get moving. Get to work, or don't come back."

Bruce got a sly look. "You can't order me kicked out. It takes a majority vote."

Jimmy spoke up. "Aw, quit taking his guff, Rod. Kick him out now.

Rod shook his head. "No. Bruce, if that is your answer, I'll call them together and we'll put you in exile before lunch and I'll bet my best knife that you won't get three votes to let you stay. Want to bet?"

Bruce sat up and looked at the others, sizing his chances. He looked back at Rod. "Runt," he said slowly, you aren't worth a hoot without stooges. . . or a couple of girls to do your fighting."

Jimmy whispered, "Watch it, Rod!" Rod licked dry lips, knowing that it was too late for reason, too late for talk. He would have to try to take him . . . he was not sure he could.

"I'll fight you," he said hoarsely. "Right now!" Cliff said urgently, "Don't, Rod. We'll manage him." "No. Come on, McGowan." Rod added one unforgivable word.

McGowan did not move. "Get rid of that joe sticker"

Rod said, "Hold my spear, Cliff."

Cliff snapped, "Now wait! I'm not going to stand by and watch this. He might get lucky and kill you, Rod."

"Get out of the way, Cliff."

"No." Cliff hesitated, then added, "Bruce, throw your knife away. Go ahead or so help me I'll poke a joe sticker in your belly myself. Give me your knife, Rod."

Rod looked at Bruce, then drew Colonel Bowie and handed it to Cliff. Bruce straightened up and flipped his knife at Cliff's feet. Cliff rasped, "I still say not to, Rod. Say the word and we'll take him apart."

"Back off. Give us room.

"Well no bone breakers. You hear me, Bruce? Make a mistake and you'll never make another."

"'No bone breakers,'" Rod repeated, and knew dismally that the rule would work against him; Bruce had him on height and reach and weight.

"Okay," McGowan agreed. "Just cat clawing. I am going to show this rube that one McGowan is worth two of him."

Cliff sighed. "Back off, everybody. Okay get going!" Crouched, they sashayed around, not touching. Only the preliminaries could use up much time; the textbook used in most high schools and colleges listed twenty-seven ways to destroy or disable a man hand to hand; none of the methods took as long as three seconds once contact was made. They chopped at each other, feinting with their hands, too wary to close.

Rod was confused by the injunction not to let the fight go to conclusion. Bruce grinned at him. "What's the matter? Scared? I've been waiting for this, you loudmouthed pimple now you're going to get it!" He rushed him.

Rod gave back, ready to turn Bruce's rush into his undoing. But Bruce did not carry it through; it had been a feint and Rod had reacted too strongly.

Bruce laughed. "Scared silly, huh? You had better be."

Rod realized that he was scared, more scared than he had ever been. The conviction flooded over him that Bruce intended to kill him . . . the agreement about bonebreakers meant nothing; this ape meant to finish him.

He backed away, more confused than ever. . . knowing that he must forget rules if he was to live through it . . . but knowing, too, that he had to abide by the silly restriction even if it meant the end of him. Panic shook him; he wanted to run.

He did not quite do so. From despair itself he got a cold feeling of nothing to lose and decided to finish it. He exposed his groin to a savate attack.

He saw Bruce's foot come up in the expected kick; with fierce joy he reached in the proper shinobi counter. He showed the merest of hesitation, knowing that a full twist would break Bruce's ankle.

Then he was flying through air; his hands had never touched Bruce. He had time for sick realization that Bruce had seen the gambit, countered with another when he struck ground and Bruce was on him.

*****

"Can you move your arm, Rod?"

He tried to focus his eyes, and saw Bob Baxter's face floating over him. "I licked him?"

Baxter did not answer. An angry voice answered, "Cripes, no! He almost chewed you to pieces."

Rod stirred and said thickly, "Where is he? I've got to whip him."

Baxter said sharply, "Lie still!" Cliff added, "Don't worry, Rod. We fixed him." Baxter insisted, "Shut up. See if you can move your left arm."

Rod moved the arm, felt pain shoot through it, jerked and felt pain everywhere. "It's not broken," Baxter decided. "Maybe a greenstick break. We'll put it in sling. Can you sit up? I'll help."

"I want to stand." He made it with help, stood swaying. Most of the villagers seemed to be there; they moved jerkily. It made him dizzy and he blinked.

"Take it easy, boy," he heard Jimmy say. "Bruce pretty near ruined you. You were crazy to give him the chance."

"I'm all right," Rod answered and winced. "Where is he?"

"Behind you. Don't worry, we fixed him."

"Yes," agreed Cliff. "We worked him over. Who does he think he is? Trying to shove the Mayor around!" He spat angrily.

Bruce was face down, features hidden in one arm; he was sobbing. "How bad is he hurt?" Rod asked.

"Him?" Jimmy said scornfully. "He's not hurt. I mean, he hurts all right but he's not hurt. Carol wouldn't let us.

Caroline squatted beside Bruce, guarding him. She got up. "I should have let 'em," she said angrily. "But I knew you would be mad at me if I did." She put hands on hips. "Roddie Walker, when are you going to get sense enough to yell for me when you're in trouble? These four dopes stood around and let it happen."

"Wait a minute, Carol," Cliff protested. "I tried to stop it.We all tried, but"

"But I wouldn't listen," Rod interrupted. "Never mind, Carol, I flubbed it."

"If you would listen to me

"Never mind!" Rod went to McGowan, prodded him. "Turn over."

Bruce slowly rolled over. Rod wondered if he himself looked as bad. Bruce's body was dirt and blood and bruises; his face looked as if someone had tried to file the features off. "Stand up.

Bruce started to speak, then got painfully to his feet. Rod said, "I told you to report to Art, Bruce. Get over the wall and get moving."

McGowan looked startled. "Huh?"

"You heard me. I can't waste time playing games. Check in with Art and get to work. Or keep moving and don't come back. Now move!"

Bruce stared, then hobbled toward the wall. Rod turned and said, "Get back to work, folks. The fun is over. Cliff, you were going to show me the

animals."

"Huh? Look Rod, it'll keep."

"Yes, Rod," Baxter agreed. "I want to put a sling on that arm. Then you should rest."

Rod moved his arm gingerly. "I'll try to get along without it. Come on, Cliff. Just you and me we'll skip the stobor hunt."

He had trouble concentrating on what Cliff talked about . . . something about gelding a pair of fawns and getting them used to harness. What use was harness when they had no wagons? His head ached, his arm hurt and his brain felt fuzzy. What would Grant have done?

He had failed . . . but what should he have said, or not said? Some days it wasn't worth it.

"so we've got to. You see, Rod?"

"Huh? Sure, Cliff." He made a great effort to recall what Cliff had been saying. "Maybe wooden axles would do. I'll see if Bill thinks he can build a cart"

"But besides a cart, we need"

Rod stopped him. "Cliff, if you say so, we'll try it. I think I'll take a shower. Uh, we'll look at the field tomorrow.

A shower made him feel better and much cleaner, although the water spilling milkwarm from the flume seemed too hot, then icy cold. He stumbled back to his hut and lay down. When he woke he found Shorty guarding his door to keep him from being disturbed.

It was three days before he felt up to inspecting the farm. Neilsen reported that McGowan was working, although sullenly. Caroline reported that Theo was obeying sanitary regulations and wearing a black eye. Rod was selfconscious about appearing in public, had even considered one restless night the advisability of resigning and letting someone who had not lost face take over the responsibility. But to his surprise his position seemed firmer than ever. A minority from Teller University, which he had thought of wryly as "loyal opposition," now no longer seemed disposed to be critical. Curt Pulvermacher, their unofficial leader, looked Rod up and offered help. "Bruce is a bad apple, Rod. Don't let him get down wind again. Let me know instead."

"Thanks, Curt."

"I mean it. It's hard enough to get anywhere around here if we all pull together. We can't have him riding roughshod over us. But don't stick your chin out. We'll teach him."

Rod slept well that night. Perhaps he had not handled it as Grant would have, but it had worked out. Cowpertown was safe. Oh, there would be more troubles but the colony would sweat through them. Someday there would be a city here and this would be Cowper Square. Upstream would be the Nielsen Steel Works. There might even be a Walker Avenue. . .

He felt up to looking over the farm the next day. He told Cliff so and gathered the same party, Jimmy, Kent, and Mick. Spears in hand they climbed the stile at the wall and descended the ladder on the far side. Cliff gathered up a handful of dirt, tasted it. "The soil is all right. A little acid, maybe. We won't know until we can run soil chemistry tests. But the structure is good. If you tell that dumb Swede that the next thing he has to make is a plough . . .

"Waxie isn't dumb. Give him time. Hell make you ploughs and tractors, too."

"I'll settle for a hand plough, drawn by a team of buck. Rod, my notion is this. We weed and it's an invitation to the buck to eat the crops. If we built another wall, all around and just as high"

"A wall! Any idea how many man hours that would take, Cliff?"

"That's not the point."

Rod looked around the alluvial flat, several times as large as the land enclosed in the city walls. A thorn fence, possibly, but not a wall, not yet . . . Cliff's ambitions were too big. "Look, let's comb the field for stobor, then send the others back. You and I can figure out afterwards what can be done."

"All right. But tell them to watch where they put their big feet."

Rod spread them in skirmish line with himself in the

center. "Keep dressed up," he warned, "and don't let any get past you. Remember, every one we kill now means six less on SDay."

They moved forward. Kenny made a kill, Jimmy immediately made two more. The stobor hardly tried to escape, being in the "dopy joe" phase of their cycle.

Rod paused to spear one and looked up to speak to the man on his right. But there was no one there. "Hold it! Where's Mick?"

"Huh? Why, he was right here a second ago."

Rod looked back. Aside from a shimmer over the hot field, there was nothing where Mick should have been. Something must have sneaked up in the grass, pulled him down "Watch it, everybody! Something's wrong. Close in . . . and keep your eyes peeled." He turned back, moved diagonally toward where Mick had disappeared.

Suddenly two figures appeared in front of his eyes Mick and a stranger.

A stranger in coveralls and shoes. . . The man looked around, called over his shoulder, "Okay, Jake! Put her on automatic and clamp it." He glanced toward Rod but did not seem to see him, walked toward him, and disappeared.

With heart pounding Rod began to run. He turned and found himself facing into an open gate. . . and down a long, closed corridor.

The man in the coveralls stepped into the frame. "Everybody back off," he ordered. "We're going to match in with the Gap. There may be local disturbance."

15 In Achilles' Tent

It had been a half hour since Mick had stumbled through the gate as it had focused, fallen flat in the low gravity of Luna. Rod was trying to bring order out of confusion, trying to piece together his own wits. Most of the villagers were out on the field, or sitting on top of the wall, watching technicians set up apparatus to turn the locus into a permanent gate, with controls and communications on both sides. Rod tried to tell one that they were exposed, that they should not run around unarmed; without looking up the man had said, "Speak to Mr. Johnson."

He found Mr. Johnson, tried again, was interrupted. Will you kids please let us work? We're glad to see you but we've got to get a power fence around this area. No telling what might be in that tall grass."

Oh," Rod answered. "Look, I'll set guards. We know what to expect. I'm in ch"

'Beat it, will you? You kids mustn't be impatient."

So Rod went back inside his city, hurt and angry. Several strangers came

in, poked around as if they owned the place, spoke to the excited villagers, went out again. One stopped to look at Jimmy's drum, rapped it and laughed. Rod wanted to strangle him.

"Rod?"

"Uh?" He whirled around. "Yes, Margery?"

"Do I cook lunch, or don't I? All my girls have left and Mel says its silly because we'll all be gone by lunch time and I don't know what to do."

"Huh? Nobody's leaving . . . that I know of."

"Well, maybe not but that's the talk."

He was not given time to consider this as one of the ubiquitous strangers came up and said briskly, "Can you tell me where to find a lad named Roderick Welker?"

"Walker," Rod corrected. "I'm Rod Walker. What do you want?"

"My name is Sansom, Clyde B. Sansom Administrative Officer in the Emigration Control Service. Now, Welker, I understand you are group leader for these students. You can"

"I am Mayor of Cowpertown," Rod said stonily. "What do you want?"

"Yes, yes, that's what the youngster called you. 'Mayor.'" Sansom smiled briefly and went on. "Now, Walker, we want to keep things orderly. I know you are anxious to get out of your predicament as quickly as possible but we must do things systematically. We are going to make it easy just delousing and physical examination, followed by psychological tests and a relocation interview. Then you will all be free to return to your homes after signing a waiverofliability form, but the legal officer will take care of that. If you will have your little band line up alphabetically uh, here in this open space, I think, then I will" He fumbled with his briefcase.

"Who the deuce are you to give orders around here?"

Sansom looked surprised. "Eh? I told you. If you want to be technical, I embody the authority of the Terran Corporation. I put it as a request but under field conditions I can compel cooperation, you know."

Rod felt himself turn red. "I don't know anything of the sort! You may be a squad of angels back on Terra but you are in Cowpertown."

Mr. Sansom looked interested but not impressed. "And what, may I ask, is Cowpertown?"

"Huh? This is Cowpertown, a Sovereign nation, with its own constitution, its own laws and its own territory." Rod took a breath. "If the Terran Corporation wants anything, they can send somebody and arrange it. But don't tell us to line up alphabetically!"

"Atta boy, Roddie!"

Rod said, "Stick around, Carol," then added to Sansom, "Understand me?"

"Do I understand," Sansom said slowly, "that you are suggesting that the Corporation should appoint an ambassador to your group?"

"Well . . . that's the general idea."

"Mmmm . . . an interesting theory, Welker."

"'Walker.' And until you do, you can darn well clear the sightseers out and get out yourself. We aren't a zoo."

Sansom looked at Rod's ribs, glanced at his dirty, calloused feet and smiled. Rod said, "Show him out, Carol. Put him out, if you have to."

"Yes, sirr' She advanced on Sansom, grinning.

"Oh, I'm leaving," Sansom said quickly. "Better a delay than a mistake in protocol. An ingenious theory, young man. Goodby. We shall see each other later. Uh . . . a word of advice? May I?"

Huh? All right."

"Don't take yourself too seriously. Ready, young lady?"

Rod stayed in his hut. He wanted badly to see what was going on beyond the wall, but he did not want to run into Sansom. So he sat and gnawed his thumb and thought. Apparently some weak sisters were going back wave a dish of ice cream under their noses and off they would trot, abandoning their land, throwing away all they had built up. Well, he wouldn't! This was home, his place, he had earned it; he wasn't going back and maybe wait half a lifetime for a chance to move to some other planet probably not as good.

Let them go! Cowpertown would be better and stronger without them.

Maybe some just wanted to make a visit, show off grandchildren to grandparents, then come back. Probably . . in which case they had better make sure that Sansom or somebody gave them written clearance to come back. Maybe he ought to warn them.

But he didn't have anyone to visit. Except Sis and Sis might be anywhere unlikely that she was on Terra.

Bob and Carmen, carrying Hope, came in to say goodby. Rod shook hands solemnly. "You're coming back, Bob, when you get your degree . . . aren't you?"

"Well, we hope so, if possible. If we are permitted to."

"Who's going to stop you? It's your right. And when you do, you'll find us here. In the meantime we'll try not to break legs."

Baxter hesitated. "Have you been to the gate lately, Rod?"

"No. Why?"

"Uh, don't plan too far ahead. I believe some have already gone back."

"How many?"

"Quite a number." Bob would not commit himself further. He gave Rod the addresses of his parents and Carmen's, soberly wished him a blessing, and left.

Margery did not come back and the fire pit remained cold. Rod did not care, he was not hungry. Jimmy came in at what should have been shortly after lunch, nodded and sat down. Presently he said, "I've been out at the gate."

"So?"

"Yup. You know, Rod, a lot of people wondered why you weren't there to say goodby."

"They could come here to say goodby!"

"Yes, so they could. But the word got around that you didn't approve. Maybe they were embarrassed."

"Me?" Rod laughed without mirth. "I don't care how many city boys run home to mama. It's a free country." He glanced at Jim. "How many are sticking?"

"Uh, I don't know."

"I've been thinking. If the group gets small, we might move back to the cave just to sleep, I mean. Until we get more colonists."

"Maybe."

"Don't be so glum! Even if it got down to just you and me and Jackie and Carol, we'd be no worse off than we once were. And it would just be temporary. There'd be the baby, of course I almost forgot to mention my godson.

"There's the baby," Jimmy agreed.

"What are you pulling a long face about? Jim . you're not thinking of leaving?"

Jimmy stood up. Jackie said to tell you that we would stick by whatever you thought was best."

Rod thought over what Jimmy had not said. "You mean she wants to go back? Both of you do."

"Now, Rod, we're partners. But I've got the kid to think about. You see that?"

"Yes. I see."

"Well"

Rod stuck out his hand. "Good luck, Jim. Tell Jackie goodby for me.

"Oh, she's waiting to say goodby herself. With the kid."

"Uh, tell her not to. Somebody once told me that saying goodby was a mistake. Be seeing you."

"Wellso long, Rod. Take care of yourself."

"You, too. If you see Caroline, tell her to come in. Caroline was slow appearing; he guessed that she had been at the gate. He said bluntly, "How many are left?"

"Not many," she admitted.

"How many?"

"You and me and a bunch of gawkers."

"Nobody else?"

"I checked them off the list. Roddie, what do we do now?"

"Huh? It doesn't matter. Do you want to go back?"

"You're boss, Roddie. You're the Mayor."

"Mayor of what? Carol, do you want to go back?"

"Roddie, I never thought about it. I was happy here. But"

"But what?"

"The town is gone, the kids are gone and I've got only a year if I'm ever going to be a cadet Amazon." She blurted out the last, then added, "But I'll stick if you do."

"No."

"I will so!"

"No. But I want you to do something when you go back."

"What?"

"Get in touch with my sister Helen. Find out where she is stationed. Assault Captain Helen Walker got it? Tell her I'm okay . . . and tell her I said to help you get into the Corps."

"Uh . . . Roddie, I don't want to go!"

"Beat it. They might relax the gate and leave you behind."

"You come, too."

"No. I've got things to do. But you hurry. Don't say goodby. Just go."

"You're mad at me, Roddie?"

"Of course not. But go, please, or you'll have me bawling, too."

She gave a choked cry, grabbed his head and smacked his cheek, then

galloped away, her sturdy legs pounding. Rod went into his shack and lay face down. After a while he got up and began to tidy Cowpertown. It was littered, dirtier than it had been since the morning of Grant's death.

It was late afternoon before anyone else came into the village. Rod heard and saw them long before they saw himtwo men and a woman. The men were dressed in city garb; she was wearing shorts, shirt, and smart sandals. Rod stepped out and said, "What do you want?" He was carrying his spear.

The woman squealed, then looked and added, "Wonderful!"

One man was carrying a pack and tripod which Rod recognized as multi-recorder of the all purpose sight-smell-sound-touch sort used by news services and expeditions. He said nothing, set his tripod down, plugged in cables and started fiddling with dials. The other man, smaller, ginger haired, and with a terrier mustache, said, "You're Walker? The one the others call 'the Mayor'?"

"Yes."

"Kosmic hasn't been in here?"

"Cosmic what?"

"Kosmic Keynotes, of course. Or anybody? LIFETIMESPACE? Galaxy Features?"

"I don't know what you mean. There hasn't been anybody here since morning."

The stranger twitched his mustache and sighed. "That's all I want to know. Go into your trance, Ellie. Start your box, Mac."

"Wait a minute," Rod demanded. "Who are you and what do you want?"

"Eh? I'm Evans of Empire . . . Empire Enterprises."

"Pulitzer Prize," the other man said and went on working;

"With Mac's help," Evans added quickly. "The lady is Ellie Ellens herself."

Rod looked puzzled. Evans said, "You don't know? Son, where have younever mind. She's the highest paid emotional writer in the system. Shell interpret you so that every woman reader from the Outlands Overseer to the London Times will cry over you and want to comfort you. She's a great artist."

Miss Ellens did not seem to hear the tribute. She wandered around with a

blank face, stopping occasionally to look or touch.

She turned and said to Rod, "Is this where you held your primitive dances?"

"What? We held square dances here, once a week."

"'Square dances' . . . Well, we can change that." She went back into her private world.

"The point is, brother," Evans went on, "we don't want just an interview. Plenty of that as they came through. That's how we found out you were here and dropped everything to see you. I'm not going to dicker; name your own price but it's got to be exclusive, news, features, commercial rights, everything. Uh . . ." Evans looked around. "Advisory service, too, when the actors arrive.

"Actors?!"

"Of course. If the Control Service had the sense to sneeze, they would have held you all here until a record was shot. But we can do it better with actors. I want you at my elbow every minute we'll have somebody play your part. Besides that"

"Wait a minute!" Rod butted in. "Either I'm crazy or you are. In the first place I don't want your money.

"Huh? You signed with somebody? That guard let another outfit in ahead of us?"

"What guard? I haven't seen anybody."

Evans looked relieved. "We'll work it out. The guard they've got to keep anybody from crossing your wall I thought he might have both hands out. But don't say you don't need money; that's immoral."

"Well, I don't. We don't use money here."

"Sure, sure . . . but you've got a family, haven't you? Families always need money. Look, let's not fuss. We'll treat you right and you can let it pile up in the bank. I just want you to get signed up."

"I don't see why I should."

"Binder," said Mac.

"Mmm . . . yes, Mac. See here, brother, think it over. Just let us have a

binder that you won't sign with anybody else. You can still stick us for anything your conscience will let you. Just a binder, with a thousand plutons on the side."

"I'm not going to sign with anybody else."

"Got that, Mac?"

"Canned."

Evans turned to Rod. "You don't object to answering questions in the meantime, do you? And maybe a few pictures?"

"Uh, I don't care." Rod was finding them puzzling and a little annoying, but they were company and he was bitterly lonely.

"Fine!" Evans drew him out with speed and great skill. Rod found himself telling more than he realized he knew. At one point Evans asked about dangerous animals. "I understand they are pretty rough here. Much trouble?"

"Why, no," Rod answered with sincerity. "We never had real trouble with animals. What trouble we had was with people . . . and not much of that."

"You figure this will be a premium colony?"

"Of course. The others were fools to leave. This place is like Terra, only safer and richer and plenty of land. In a few years say!"

"Say what?"

"How did it happen that they left us here? We were only supposed to be here ten days."

"Didn't they tell you?"

"Well . . . maybe the others were told. I never heard."

"It was the supernova, of course. Delta, uh"

"Delta Gamma one thirteen," supplied Mac.

"That's it. Spacetime distortion, but I'm no mathematician."

"Fluxion," said Mac.

"Whatever that is. They've been fishing for you ever since. As I understand

it, the wave front messed up their figures for this whole region. Incidentally, brother, when you go back"

"I'm not going back."

"Well, even on a visit. Don't sign a waiver. The Board is trying to call it an 'Act of God' and duck responsibility. So let me put a bug in your ear: don't sign away your rights. A friendly hint, huh?"

"Thanks. I won't well, thanks anyhow."

"Now how about action pix for the lead stories?"

"Well . . . okay."

"Spear," said Mac.

"Yeah, I believe you had some sort of spear. Mind holding it?"

Rod got it as the great Ellie joined them. "Wonderful!" she breathed. "I can feel it. It shows how thin the line is between man and beast. A hundred cultured boys and girls slipping back to illiteracy, back to the stone age, the veneer sloughing away . . . reverting to savagery. Glorious!"

"Look here!" Rod said angrily. "Cowpertown wasn't that way at all! We had laws, we had a constitution, we kept clean. We" He stopped; Miss Ellens wasn't listening.

"Savage ceremonies," she said dreamily. "A village witch doctor pitting ignorance and superstition against nature. Primitive fertility rites" She stopped and said to Mac in a businesslike voice, "We'll shoot the dances three times. Cover 'em a little for 'A' list; cover 'em up a lot for the family listand peel them down for the 'B' list. Got it?"

"Got it," agreed Mac.

"I'll do three commentaries she added. "It will be worth the trouble." She reverted to her trance.

"Wait a minute!" Rod protested. "If she means what

I think she means, there won't be any pictures, with or without actors."

"Take it easy," Evans advised. "I said you would be technical supervisor, didn't I? Or would you rather we did it without you? Ellie is all right, brother. What you don't know and she does is that you have to shade the

truth to get at the real truth, the underlying truth. You'll see.

"But"

Mac stepped up to him. "Hold still."

Rod did so, as Mac raised his hand. Rod felt the cool touch of an air brush.

"Hey! What are you doing?"

"Make up." Mac returned to his gear.

"Just a little war paint," Evans explained. "The pic needs color. It will wash off."

Rod opened his mouth and eyes in utter indignation; without knowing it he raised his spear. "Get it, Mac!" Evans ordered.

"Got it," Mac answered calmly.

Rod fought to bring his anger down to where he could talk. "Take that tape out," he said softly. "Throw it on the ground. Then get out."

"Slow down," Evans advised. "You'll like that pic. We'll send you one.

"Take it out. Or I'll bust the box and anybody who gets in my way!" He aimed his spear at the multiple lens.

Mac slipped in front, protected it with his body. Evans called out, "Better look at this."

Evans had him covered with a small but businesslike gun. "We go a lot of funny places, brother, but we go prepared. You damage that recorder, or hurt one of us, and you'll be sued from here to breakfast. It's a serious matter to interfere with a news service, brother. The public has rights, you know." He raised his voice. "Ellie! We're leaving."

"Not yet," she answered dreamily. "I must steep myself in"

"Right now! It's an 'eightsix' with the Reuben Steuben!"

"Okay!" she snapped in her other voice.

Rod let them go. Once they were over the wall he went;back to the city hall, sat down, held his knees and shook.

Later he climbed the stile and looked around. A guard was on duty below him; the guard looked up but said nothing. The gate was relaxed to a mere control hole but a loading platform had been set up and a power fence surrounded it and joined the wall. Someone was working at a control board set up on a flatbed truck; Rod decided that they must be getting ready for major immigration. He went back and prepared a solitary meal, the poorest he had eaten in more than a year. Then he went to bed and listened to the jungle "Grand Opera" until he went to sleep.

"Anybody home?"

Rod came awake instant!y, realized that it was morning and that not all nightmares were dreams. "Who's there?"

"Friend of yours." B. P. Matson stuck his head in the door. "Put that whittler away. I'm harmless."

Rod bounced up. "Deacon! I mean 'Doctor.'"

"'Deacon,'" Matson corrected. "I've got a visitor for you." He stepped aside and Rod saw his sister.

Some moments later Matson said mildly, "If you two can unwind and blow your noses, we might get this on a coherent basis."

Rod backed off and looked at his sister. "My, you look wondeful, Helen." She was in mufti, dressed in a gay tabard and briefs. "You've lost weight."

"Not much. Better distributed, maybe. You've gained, Rod. My baby brother is a man."

"How did you" Rod stopped, struck by suspicion. "You didn't come here to talk me into going back? If you did, you can save your breath."

Matson answered hastily. "No, no, no! Farthest thought from our minds. But we heard about your decision and we wanted to see yous o I did a little politickmg and got us a pass." He added, "Nominally I'm a temporary field agent for the service.

"Oh. Well, I'm certainly glad to see you . . . as long as that is understood."

"Sure, sure!" Matson took out a pipe, stoked and fired it. "I admire your choice, Rod. First time I've been on Tangaroa."

"On what?"

"Huh? Oh. Tangaroa. Polynesian goddess, I believe. Did you folks give it another name?"

Rod considered it. "To tell the truth, we never got around to it. It . . . well, it just was."

Matson nodded. "Takes two of anything before you need names. But it's lovely, Rod. I can see you made a lot of progress.

"We would have done all right," Rod said bitterly, "if they hadn't jerked the rug out." He shrugged. "Like to look around?"

"I surely would."

"All right. Come on, Sis. Wait a minute I haven't had breakfast; how about you?"

"Well, when we left the Gap is was pushing lunch time. I could do with a bite. Helen?"

"Yes, indeed."

Rod scrounged in Margery's supplies. The haunch on which he had supped was not at its best. He passed it to Matson. "Too high?"

Matson sniffed it. "Pretty gamy. I can eat it if you can.

"We should have hunted yesterday, but . . . things happened." He frowned. "Sit tight. I'll get cured meat." He ran up to the cave, found a smoked side and some salted strips. When he got back Matson had a fire going. There was nothing else to serve; no fruit had been gathered the day before. Rod was uneasily aware that their breakfasts must have been very different.

But he got over it in showing off how much they had done potter's wheel, Sue's loom with a piece half finished, the flume with the village fountain and the showers that ran continuously, iron artifacts that Art and Doug had hammered out. "I'd like to take you up to Art's iron works but there is no telling what we might run into."

"Come now, Rod, I'm not a city boy. Nor is your sister helpless."

Rod shook his head. "I know this country; you don't. I can go up there at a trot. But the only way for you would be a slow sneak, because I can't cover you both."

Matson nodded. "You're right. It seems odd to have one of my students solicitous over my health. But you are right. We don't know this set up.

Rod showed them the stobor traps and described the annual berserk migration. "Stobor pour through those holes and fall in the pits. The other animals swarm past, as solid as city traffic for hours."

"Catastrophic adjustment," Matson remarked.

"Huh? Oh, yes, we figured that out. Cyclic catastrophic balance, just like human beings. If we had facilities, we could ship thousands of carcasses back to Earth every dry season. He considered it. "Maybe we will, now.

"Probably."

"But up to now it has been just a troublesome nuisance. These stobor especially I'll show you one out in the field when say!" Rod looked thoughtful. "These are stobor, aren't they? Little carnivores heavy in front, about the size of a tom cat and eight times as nasty?"

"Why ask me?"

"Well, you warned us against stobor. All the classes were warned."

"I suppose these must be stobor," Matson admitted, "but I did not know what they looked like."

"Huh?"

"Rod, every planet has its 'stobor' . . . all different. Sometimes more than one sort." He stopped to tap his pipe. "You remember me telling the class that every planet has unique dangers, different from every other planet in the Galaxy?"

"Yes. . ."

"Sure, and it meant nothing, a mere intellectual concept. But you have to be afraid of the thing behind the concept, if you are to stay alive. So we personify it . . . but we don't tell you what it is. We do it differently each year. It is to warn you that the unknown and deadly can lurk anywhere . . . and to plant it deep in your guts instead of in your head."

"Well, I'll be a Then there weren't any stobor! There never were!"

"Sure there were. You built these traps for them, didn't you?"

*****

When they returned, Matson sat on the ground and said, "We can't stay long, you know.

"I realize that. Wait a moment." Rod went into his hut, dug out Lady Macbeth, rejoined them. "Here's your knife, Sis. It saved my skin more than once. Thanks."

She took the knife and caressed it, then cradled it and looked past Rod's head. It flashed by him, went tuckspong! in a corner post. She recovered it, came back and handed it to Rod. "Keep it, dear, wear it always in safety and health."

"Gee, Sis, I shouldn't. I've had it too long now."

"Please. I'd like to know that Lady Macbeth is watching over you, wherever you are. And I don't need a knife much now."

"Huh? Why not?"

"Because I married her," Matson answered.

Rod was caught speechless. His sister looked at him and said, "What's the matter, Buddy? Don't you approve?"

"Huh? Oh, sure! It's . . ." He dug into his memory, fell back on quoted ritual: "'May the Principle make you one. May your union be fruitful.'"

"Then come here and kiss me."

Rod did so, remembered to shake hands with the Deacon. It was all right, he guessed, but well, how old were they? Sis must be thirtyish and the Deacon . . . why the Deacon was old probably past forty. It did not seem quite decent.

But he did his best to make them feel that he approved. After he thought it over he decided that if two people, with their lives behind them, wanted company in their old age, why, it was probably a good thing.

"So you see," Matson went on, "I had a double reason to look you up. In the first place, though I am no longer teaching, it is vexing to mislay an entire class. In the second place, when one of them is your brother-in-law it is downright embarrassing."

"You've quit teaching?"

"Yes. The Board and I don't see eye to eye on policy. Secondly, I'm leading a party out . . . and this time your sister and I are going to settle down and prove a farm." Matson looked at him. "Wouldn't be interested, would you? I need a salted lieutenant."

"Huh? Thanks, but as I told you, this is my place. Uh, where are you going?"

"Territa, out toward the Hyades. Nice place they are charging a stiff premium."

Rod shrugged. "Then I couldn't afford it."

"As my lieutenant, you'd be exempt. But I wasn't twisting your arm; I just thought you ought to have a chance to turn it down. I have to get along with your sister, you know."

Rod glanced at Helen. "Sorry, Sis."

"It's all right, Buddy. We're not trying to live your life."

"Mmm . . . no. Matson puffed hard; then went on. "However, as your putative brother and former teacher I feel obligated to mention a couple of things. I'm not trying to sell you anything, but I'll appreciate it if you'll listen. Okay?"

"Well . . . go ahead."

"This is a good spot. but you might go back to school, you know. Acquire recognized professional status. If you refuse recall, here you stay . . . forever. You won't see the rest of the Outlands. They won't give you free passage back later. But a professional gets around, he sees the world. Your sister and I have been on some fifty planets. School does not look attractive now you're a man and it will be hard to wear boy's shoes. But" Matson swept an arm, encompassed all of Cowpertown, "this counts. You can skip courses, get field credit. I have some drag with the Chancellor of Central Tech. Hmmm?"

Rod sat with stony face, then shook his head. "Okay," said Matson briskly. "No harm done."

"Wait. Let me tell you." Rod tried to think how to explain how he felt . . . "Nothing, I guess," he said gruffly.

Matson smoked in silence. "You were leader here," he said at last.

"Mayor," Rod corrected. "Mayor of Cowpertown. I was the Mayor, I mean."

"You are the Mayor. Population one, but you are still boss. And even those bureaucrats in the control service wouldn't dispute that you've proved the land. Technically you are an autonomous colony I hear you told Sansom that." Matson grinned. "You're alone, however. You can't live alone, Rod . . . not and stay human."

"Well, yes but aren't they going to settle this planet?"

"Sure. Probably fifty thousand this year, four times that many in two years. But, Rod, you would be part of the mob. Theyll bring their own leaders."

"I don't have to be boss! I just well, I don't want to give up Cowpertown."

"Rod, Cowpertown is safe in history, along with Plymouth Rock, Botany Bay, and Dakin's Colony. The citizens of Tangaroa will undoubtedly preserve it as a historical shrine. Whether you stay is another matter. Nor am I trying to persuade you. I was simply pointing out alternatives." He stood up. "About time we started, Helen."

"Yes, dear." She accepted his hand and stood up.

"Wait a minute!" insisted Rod. "Deacon . . . Sis! I know I sound like a fool. I know this is gone . . . the town, and the kids, and everything. But I can't go back." He added, "It's not that I don't want to."

Matson nodded. "I understand you."

"I don't see how. I don't."

"Maybe I've been there. Rod, everyone of us is beset by two things: a need to go home, and the impossibility of doing it. You are at the age when these hurt worst. You've been thrown into a situation that makes the crisis doubly acute. You don't interrupt me you've been a man here, the old man of the tribe, the bull of the herd. That is why the others could go back but you can't. Wait, please! I suggested that you might find it well to go back and be an adolescent for a while . . . and it seems unbearable. I'm not surprised. It would be easier to be a small child. Children are another race and adults deal with them as such. But adolescents are neither adult nor child. They have the impossible, unsolvable, tragic problems of all fringe cultures. They don't belong, they are second-class citizens, economically and socially insecure. It is a difficult period and I don't

blame you for not wanting to return to it. I simply think it might pay. But you have been king of a whole world; I imagine that term papers and being told to wipe your feet and such are out of the question. So good luck. Coming, dear?"

"Deacon," his wife said, "Aren't you going to tell him?"

"It has no bearing. It would be an unfair way to influence his judgment."

"You men! I'm glad I'm not male!"

"So am I," Matson agreed pleasantly.

"I didn't mean that. Men behave as if logic were stepping on crack in a sidewalk. I'm going to tell him."

"On your head be it."

"Tell me what?" demanded Rod.

"She means," said Matson, "that your parents are back."

"What?"

"Yes, Buddy. They left stasis a week ago and Daddy came out of the hospital today. He's well. But we haven't told him all about you we haven't known what to say."

The facts were simple, although Rod found them hard to soak up. Medical techniques had developed in two years, not a pessimistic twenty; it had been possible to relax the stasis, operate, and restore Mr. Walker to the world. Helen had known for months that such outcome was likely, but their father's physician had not approved until he was sure. It had been mere coincidence that Tangaroa had been located at almost the same time. To Rod one event was as startling as the other; his parents had been dead to him for a long time.

"My dear," Matson said sternly, "now that you have thrown him into a whing-ding, shall we go?"

"Yes. But I had to tell him." Helen kissed Rod quickly, turned to her husband. They started to walk away.

Rod watched them, his face contorted in an agony of indecision.

Suddenly he called out, "Wait! I'm coming with you."

"All right," Matson answered. He turned his good eye toward his wife and drooped the lid in a look of satisfaction that was not quite a wink. "If you are sure that is what you want to do, I'll help you get your gear together."

"Oh, I haven't any baggage. Let's go."

Rod stopped only long enough to free the penned animals.

16 The Endless Road

Matson chaperoned him through Emigrants' Gap, saved from possible injury a functionary who wanted to give Rod psychological tests, and saw to it that he signed no waivers. He had him bathed, shaved, and barbered, then fetched him clothes, before he let him be exposed to the Terran world. Matson accompanied them only to Kaibab Gate. "I'm supposed to have a lodge dinner, or something, so that you four can be alone as a family. About nine, dear. See you, Rod." He kissed his wife and left.

"Sis? Dad doesn't know I'm coming?"

Helen hesitated. "He knows. I screened him while Deacon was primping you." She added, "Remember, Rod, Dad has been ill . . . and the time has been only a couple of weeks to him."

"Oh, that's so, isn't it?" Used all his life to Ramsbotham anomalies, Rod nevertheless found those concerned with time confusing planethopping via the gates did not seem odd. Besides, he was extremely edgy without knowing why, the truth being that he was having an attack of fear of crowds. The Matsons had anticipated it but had not warned him lest they make him worse.

The walk through tall trees just before reaching home calmed him. The necessity for checking all cover for dangerous animals and keeping a tree near him always in mind gave his subconscious something familiar to chew on. He arrived home almost cheerful without being aware either that he had been frightened by crowds or soothed by nonexistent dangers of an urban forest.

His father looked browned and healthy but shorter and smaller. He embraced his son and his mother kissed him and wept. "It's good to have you home, son. I understand you had quite a trip."

"It's good to be home, Dad."

"I think these tests are much too strenuous, I really do."

Rod started to explain that it really had not been a test, that it had not been strenuous, and that Cowpertown Tangaroa, rather had been a soft touch. But he got mixed up and was disturbed by the presence of "Aunt" Nora Peas coat no relation but a childhood friend of his mother. Besides, his father was not listening.

But Mrs. Peascoat was listening, and looking peering with little eyes through folds of flesh. "Why, Roderick Walker, I knew that couldn't have been a picture of you."

"Eh?" asked his father. "What picture?"

"Why, that wildman picture that had Roddie's name on it. You must have seen it; it was on facsimile and Empire Hour both. I knew it wasn't him. I said to Joseph, 'Joseph,' I said, 'that's not a picture of Rod Walker, its a fake.'"

"I must have missed it. As you know, I"

"I'll send it to you; I clipped it. I knew it was a fake. It's a horrible thing, a great naked savage with pointed teeth and a fiendish grin and a long spear and war paint all over its ugly face. I said to Joseph"

"As you know, I returned from hospital just this morning, Nora. Rod, there was no picture of you on the news services, surely?"

"Uh, yes and no. Maybe."

"I don't follow you. Why should there be a picture of you?"

"There wasn't any reason. This bloke just took it."

"Then there was a picture?"

"Yes." Rod saw that "Aunt" Nora was eyeing him avidly: "But it was a fake sort of."

"I still don't follow you.

"Please, Pater," Helen intervened. "Rod had a tiring trip. This can wait."

"Oh, surely. I don't see how a picture can be 'a sort of a fake.'"

"Well, Dad, this man painted my face when I wasn't looking. I" Rod stopped, realizing that it sounded ridiculous.

"Then it was your picture?" "Aunt" Nora insisted.

"I'm not going to say any more.

Mr. Walker blinked. "Perhaps that is best."

"Aunt" Nora looked ruffled. "Well, I suppose anything can happen 'way off in those odd places. From the teaser on Empire Hour I understand some very strange things did happen . . . not all of them nice."

She looked as if daring Rod to deny it. Rod said nothing. She went on, "I don't know what you were thinking of, letting a boy do such things. My father always said that if the Almighty had intended us to use those gate things instead of rocket ships He would have provided His own holes in the sky."

Helen said sharply, "Mrs. Peascoat, in what way is a rocket ship more natural than a gate?"

"Why, Helen Walker! I've been 'Aunt Nora' all your life. 'Mrs. Peascoat' indeed!"

Helen shrugged. "And my name is Matson, not Walker as you know."

Mrs. Walker, distressed and quite innocent, broke in to ask Mrs. Peascoat to stay for dinner. Mr. Walker added, "Yes, Nora, join us Under the Lamp."

Rod counted to ten. But Mrs. Peascoat said she was sure they wanted to be alone, they had so much to talk about . . . and his father did not insist.

Rod quieted during ritual, although he stumbled in responses and once left an awkward silence. Dinner was wonderfully good, but he was astonished by the small portions; Terra must be under severe rationing. But everyone seemed happy and so he was.

"I'm sorry about this mixup," his father told him. "I suppose it means that you will have to repeat a semester at Patrick Henry."

"On the contrary, Pater," Helen answered, "Deacon is sure that Rod can enter Central Tech with advanced standing."

"Really? They were more strict in my day."

"All of that group will get special credit. What they learned cannot be learned in classrooms."

Seeing that his father was inclined to argue Rod changed the subject. "Sis, that reminds me. I gave one of the girls your name, thinking you were still in the Corps she wants to be appointed cadet, you see. You can still help her, can't you?"

"I can advise her and perhaps coach her for the exams. Is this important to you, Buddy?"

"Well, yes. And she is number-one officer material. She's a big girl, even bigger than you are and she looks a bit like you. She is smart like you, too, around genius, and always good-natured and willing but strong and fast and incredibly violent when you need it . . . sudden death in all directions."

"Roderick." His father glanced at the lamp.

"Uh, sorry, Dad. I was just describing her."

"Very well. Son . . . when did you start picking up your meat with your fingers?"

Rod dropped the tidbit and blushed. "Excuse me. We didn't have forks."

Helen chuckled. "Never mind, Rod. Pater, it's perfectly natural. Whenever we paid off any of our girls we always put them through reorientation to prepare them for the perils of civil life. And fingers were made before forks."

"Mmm . . no doubt. Speaking of reorientation, there is something we must do, daughter, before this family will be organized again."

"So?"

"Yes. I mean the transfer of guardianship. Now that I am well, by a miracle, I must reassume my responsibilities."

Rod's mind slipped several cogs before it penetrated that Dad was talking about him. Guardian? Oh . . . Sis was his guardian, wasn't she? But it didn't mean anything.

Helen hesitated. "I suppose so, Pater," she said, her eyes on Rod, "if Buddy wants to."

"Eh? That is not a factor, daughter. Your husband won't want the responsibility of supervising a young boy and it is my obligation . . . and

privilege."

Helen looked annoyed. Rod said, "I can't see that it matters, Dad. I'll be away at collegeand after all I am nearly old enough to vote."

His mother looked startled. "Why, Roddie dear!"

"Yes," agreed his father. "I'm afraid I can't regard a gap of three years as negligible."

"What do you mean, Dad? I'll be of age in January."

Mrs. Walker clasped a hand to her mouth. "Jerome we've forgotten the time lag again. Oh, my baby boy!"

Mr. Walker looked astonished, muttered something about "very difficult" and gave attention to his plate. Presently he looked up. "You'll pardon me, Rod. Nevertheless, until you are of age I must do what I can; I hardly think I want you to live away from home while at college."

"Sir? Why not?"

"Well I feel that we have drifted apart, and not all for the best. Take this girl you spoke of in such surprising terms. Am I correct in implying that she was, eh a close chum?"

Rod felt himself getting warm. "She was my city manager," he said flatly.

"Your what?"

"My executive officer. She was captain of the guard, chief of police, anything you want to call her. She did everything. She hunted, too, but that was just because she liked to. Carol is, uh well, Carol is swell."

"Roderick, are you involved with this girl?"

"Me? Gosh, no! She was more like a big sister. Oh, Carol was sweet on half a dozen fellows, one time or another, but it never lasted."

"I am very glad to hear that you are not serously interested in her. She does not sound like desirable companionship for a young boy."

"Dad you don't know what you are saying!"

"Perhaps. I intend to find out. But what is this other matter? 'City Manager!' What were you?"

"I," Rod said proudly, "was Mayor of Cowpertown."

His father looked at him, then shook his head. "We'll speak of this later. Possibly you need, eh medical help." He looked at Helen. "We'll attend to the change in guardianship tomorrow. I can see that there is much I must take care of."

Helen met his eyes. "Not unless Buddy consents."

"Daughter!"

"The transfer was irrevocable. He will have to agree or I won't do it!"

Mr. Walker looked shocked, Mrs. Walker looked stricken. Rod got up and left the room . . . the first time anyone had ever done so while the Lamp of Peace was burning. He heard his father call after him but he did not turn back.

He found Matson in his room, smoking and reading. "I grabbed a bite and let myself in quietly," Matson explained. He inspected Rod's face. "I told you," he said slowly, "that it would be rough. Well, sweat it out, son, sweat it out."

"I can't stand it!"

"Yes, you can.

In Emigrants' Gap the sturdy cross country wagons were drawn up in echelon, as they had been so often before and would be so many times again. The gate was not ready; drivers gathered at the booth under Liberty's skirts, drinking coffee and joking through the nervous wait. Their professional captain was with them, a lean, homely young man with deep lines in his face, from sun and laughing and perhaps some from worry. But he did not seem to be worrying now; he was grinning and drinking coffee and sharing a doughnut with a boy child. He was dressed in fringed buckskin, in imitation of a very old style; he wore a Bill Cody beard and rather long hair. His mount was a little pinto, standing patiently by with reins hanging. There was a boot scabbard holding a hunting rifle on the nigh side of the saddle, but the captain carried no guns on his person; instead he wore two knives, one on each side.

A siren sounded and a speaker above the Salvation Army booth uttered: "Captain Walker, ready with gate four."

Rod waved at the control booth and shouted, "Call off!" then turned back to

Jim and Jacqueline. "Tell Carol I'm sorry she couldn't get leave. I'll be seeing you."

"Might be sooner than you think," asserted Jim. "My firm is going to bid this contract."

"Your firm? Where do you get that noise? Have they made him a partner, Jackie?"

"No," she answered serenely, "but I'm sure they will as soon as he is admitted to the Outlands bar. Kiss Uncle Rod goodby, Grant."

"No," the youngster answered firmly.

"Just like his father," Jimmy said proudly. "Kisses women only."

The count was running back down; Rod heard it and swung into saddle. "Take it easy, kids." The count passed him, finished with a shouted, "ONE!"

"Reins up! Reeeiins UP!" He waited with arm raised and glanced through the fully dilated gate past rolling prairie at snow touched peaks beyond. His nostrils widened.

The control light turned green. He brought his arm down hard and shouted, "Roll 'em! Ho!" as he squeezed and released the little horse with his knees. The pinto sprang forward, cut in front of the lead wagon, and Captain Walker headed out on his long road.

UNIVERSE

The Proxima Centauri Expedition, sponsored by the Jordan Foundation in 2119, was the first recorded attempt to reach the nearer stars of this galaxy. Whatever its unhappy fate we can only conjecture. -- Quoted from The Romance of Modern Astrography, by Franklin Buck, published by Lux Transcriptions, Ltd., 3.50 cr.

"THERE'S A MUTIE! Look out!"

At the shouted warning, Hugh Hoyland ducked, with nothing to spare. An egg-sized iron missile clanged against the bulkhead just above his scalp with force that promised a fractured skull. The speed with which he crouched had lifted his feet from the floor plates. Before his body could settle slowly to the deck, he planted his feet against the bulkhead behind him and shoved. He went shooting down the passageway in a long, flat dive, his knife drawn and ready.

He twisted in the air, checked himself with his feet against the opposite bulkhead at the turn in the passage from which the mutie had attacked him, and floated lightly to his feet. The other branch of the passage was empty. His two companions joined him, sliding awkwardly across the floor plates.

"Is it gone?" demanded Alan Mahoney.

"Yes," agreed Hoyland. "I caught a glimpse of it as it ducked down that hatch. A female, I think. Looked like it had four legs."

"Two legs or four, we'll never catch it now," commented the third man.

"Who the Huff wants to catch it?" protested Mahoney.

"I don't."

"Well, I do, for one," said Hoyland. "By Jordan, if its aim had been two inches better, I'd be ready for the Converter."

"Can't either one of you two speak three words without swearing?" the third man disapproved. "What if the Captain could hear you?" He touched his forehead reverently as he mentioned the Captain.

"Oh, for Jordan's sake," snapped Hoyland, "don't be so stuffy, Mort Tyler. You're not a scientist yet. I reckon I'm as devout as you are; there's no grave sin in occasionally giving vent to your feelings. Even the scientists do it. I've heard 'em."

Tyler opened his mouth as if to expostulate, then apparently thought better of it. Mahoney touched Hoyland on the arm. "Look, Hugh," he pleaded, "let's get out of here. We've never been this high before. I'm jumpy; I want to get back down to where I can feel some weight on my feet."

Hoyland looked longingly toward the hatch through which his assailant had disappeared while his hand rested on the grip of his knife, then be turned to Mahoney. "OK, kid," he agreed, "It's along trip down anyhow."

He turned and slithered back toward the hatch, whereby they had reached the level where they now were, the other two following him. Disregarding the ladder by which they had mounted, he stepped off into the opening and floated slowly down to the deck fifteen feet below, Tyler and Mahoney close behind him. Another hatch, staggered a few feet from the first, gave access to a still lower deck. Down, down, down, and still farther down they dropped, tens and dozens of decks, each silent, dimly lighted, mysterious. Each time they fell a little faster, landed a little harder. Mahoney protested at last, "Let's walk the rest of the way, Hugh. That last jump hurt my feet."

"All right. But it will take longer. How far have we got to go? Anybody keep count?"

"We've got about seventy decks to go to reach farm country," answered Tyler.

"How d'you know?" demanded Mahoney suspiciously.

"I counted them, stupid. And as we came down I took one away for each deck."

"You did not. Nobody but a scientist can do numbering like that. Just because you're learning to read and write you think you know everything."

Hoyland cut in before it could develop into a quarrel. "Shut up, Alan. Maybe he can do it. He's clever about such things. Anyhow, it feels like about seventy decks -- I'm heavy enough."

"Maybe he'd like to count the blades on my knife."

"Stow it, I said. Dueling is forbidden outside the village. That is the Rule." They proceeded in silence, running lightly down the stairways until increasing weight on each succeeding level forced them to a more pedestrian pace. Presently they broke through into a level that was quite brilliantly lighted and more than twice as deep between decks as the ones above it. The air was moist and warm; vegetation obscured the view.

"Well, down at last," said Hugh. "I don't recognize this farm; we must have come down by a different line than we went up."

"There's a farmer," said Tyler. He put his little fingers to his lips and whistled, then called, "Hey! Shipmate! Where are we?"

The peasant looked them over slowly, then directed them in reluctant monosyllables to the main passageway which would lead them back to their own village.

A brisk walk of a mile and a half down a wide tunnel moderately crowded with traffic: travelers, porters, an occasional pushcart, a dignified scientist swinging in a litter borne by four husky orderlies and preceded by his master-at-arms to clear the common crew out of the way. A mile and a half of this brought them to the common of their own village, a spacious compartment three decks high and perhaps ten times as wide. They split up and went their own ways, Hugh to his quarters in the barracks of the cadets, young bachelors who do not live with their parents. He washed himself and went thence to the compartments of his uncle, for whom he worked for his meals. His aunt glanced up as he came in, but said nothing, as became a woman.

His uncle said, "Hello, Hugh. Been exploring again?"

"Good eating, Uncle. Yes."

His uncle, a stolid, sensible man, looked tolerantly amused. "Where did you go and what did you find?"

Hugh's aunt had slipped silently out of the compartment, and now returned with his supper which she placed before him. He fell to; it did not occur to him to thank her. He munched a bite before replying.

"Up. We climbed almost to the level-of-no-weight. A mutie tried to crack my skull."

His uncle chuckled. "You'll find your death In those passageways, lad. Better you should pay more attention to my business against the day when I die and get out of your way."

Hugh looked stubborn. "Don't you have any curiosity, Uncle?"

"Me? Oh, I was prying enough when I was a lad. I followed the main passage all the way around and back to the village. Right through the Dark Sector I went, with muties tagging my heels. See that scar?"

Hugh glanced at it perfunctorily. He had seen it many times before and heard the story repeated to boredom. Once around the Ship, pfft! He wanted to go everywhere, see everything, and find out the why of things. Those upper levels now: if men were not intended to climb that high, why had Jordan created them?

But he kept his own counsel and went on with his meal. His uncle changed the subject. "I've occasion to visit the Witness. John Black claims I owe him three swine. Want to come along?"

"Why, no, I guess not -- Wait! I believe I will."

"Hurry up, then."

They stopped at the cadets' barracks, Hugh claiming an errand. The Witness lived in a small, smelly compartment directly across the Common from the barracks, where he would be readily accessible to any who had need of his talents. They found him leaning in his doorway, picking his teeth with a fingernail. His apprentice, a pimply-faced adolescent with an intent nearsighted expression, squatted behind him.

"Good eating." said Hugh's uncle.

"Good eating to you, Edard Hoyland. D'you come on business, or to keep an old man company?"

"Both," Hugh's uncle returned diplomatically, then explained his errand.

"So," said the Witness. "Well, the contract's clear enough. Black John delivered ten bushels of oats, Expecting his pay in a pair of shoats; Ed brought his sow to breed for pig; John gets his pay when the pigs grow big.

"How big are the pigs now, Edard Hoyland?"

"Big enough," acknowledged Hugh's uncle, "but Black John claims three instead of two."

"Tell him to go soak his head. The Witness has spoken."

He laughed in a thin, high cackle.

The two gossiped for a few minutes, Edard Hoyland digging into his recent experiences to satisfy the old man's insatiable liking for details. Hugh kept decently silent while the older men talked. But when his uncle turned to go he spoke up. "I'll stay awhile, Uncle."

"Eh? Suit yourself. Good eating, Witness."

"Good eating, Edard Hoyland."

"I've brought you a present, Witness," said Hugh, when his uncle had passed out of hearing.

"Let me see it."

Hugh produced a package of tobacco which he had picked up from his locker at the barracks. The Witness accepted it without acknowledgment, then tossed it to his apprentice, who took charge of it.

"Come inside," invited the Witness, then directed his speech to his apprentice. "Here, you, fetch the cadet a chair."

"Now, lad," he added as they sat themselves down, "tell me what you have been doing with yourself."

Hugh told him, and was required to repeat In detail all the incidents of his more recent explorations, the Witness complaining the meanwhile over his inability to remember exactly everything he saw.

"You youngsters have no capacity," he pronounced. "No capacity. Even that lout--" he jerked his head toward the apprentice, "he has none, though he's a dozen times better than you. Would you believe it, he can't soak up a thousand lines a day, yet he expects to sit in my seat when I am gone. Why, when I was apprenticed, I used to sing myself to sleep on a mere thousand lines. Leaky vessels -- that's what you are."

Hugh did not dispute the charge, but waited for the old man to go on, which he did in his own time.

"You had a question to put to me, lad?"

"In a way, Witness."

"Well? Out with it. Don't chew your tongue."

"Did you ever climb all the way up to no-weight?"

"Me? Of course not. I was a Witness, learning my calling. I had the lines of all the Witnesses before me to learn, and no time for boyish amusements."

"I had hoped you could tell me what I would find there."

"Well, now, that's another matter. I've never climbed, but I hold the memories of more climbers than you will ever see. I'm an old man. I knew your father's father, and his grandsire before that. What is it you want to know?"

"Well..." What was it be wanted to know? How could he ask a question that was no more than a gnawing ache in his breast? Still... "What is it all for, Witness? Why are there all those levels above us?"

"Eh? How's that? Jordan's name, son, I'm a Witness, not a scientist."

"Well ... I thought you must know. I'm sorry."

"But I do know. What you want is the Lines from the Beginning."

"I've heard them."

"Hear them again. All your answers are in there, if you've the wisdom to see them. Attend me. No, this is a chance for my apprentice to show off his learning. Here, you! The Lines from the Beginning -- and mind your rhythm."

The apprentice wet his lips with his tongue and began:

"In the Beginning there was Jordan, thinking His lonely thoughts alone. In the Beginning there was darkness, formless, dead, and Man unknown. Out of the loneness came a longing, out of the longing came a vision, Out of the dream there came a planning, out of the plan there came decision: Jordan's hand was lifted and the Ship was born.

Mile after mile of snug compartments, tank by tank for the golden corn, Ladder and passage, door and locker, fit for the needs of the yet unborn. He looked on His work and

found it pleasing, meet for a race that was yet to be. He thought of Man; Man came into being; checked his thought and searched for the key. Man untamed would shame his Maker, Man unruled would spoil the Plan; So Jordan made the Regulations, orders to each single man, Each to a task and each to a station, serving a purpose beyond their ken, Some to speak and some to listen; order came to the ranks of men. Crew He created to work at their stations, scientists to guide the Plan. Over them all He created the Captain, made him judge of the race of Man. Thus it was in the Golden Age!

Jordan is perfect, all below him lack perfection in their deeds. Envy, Greed, and Pride of Spirit sought for minds to lodge their seeds. One there was who gave them lodging: accursed Huff, the first to sin! His evil counsel stirred rebellion, planted doubt where it had not been; Blood of martyrs stained the floor plates, Jordan's Captain made the Trip. Darkness swallowed up--"

The old man gave the boy the back of his hand, sharp across the mouth. "Try again!"

"From the beginning?"

"No! From where you missed."

The boy hesitated, then caught his stride: "Darkness swallowed ways of virtue, Sin prevailed through out the Ship . ."

The boy's voice droned on, stanza after stanza, reciting at great length but with little sharpness of detail the dim, old story of sin, rebellion, and the time of darkness. How wisdom prevailed at last and the bodies of the rebel leaders were fed to the Converter. How some of the rebels escaped making the Trip and lived to father the muties. How a new Captain was chosen, after prayer and sacrifice. Hugh stirred uneasily, shuffling his feet. No doubt the answers to his questions were there, since these were the Sacred Lines, but he had not the wit to understand them. Why? What was it all about? Was there really nothing more to life than eating and sleeping and finally the long Trip? Didn't Jordan intend for him to understand? Then why this ache in his breast? This hunger that persisted in spite of good eating?

While he was breaking his fast after sleep an orderly came to the door of his uncle's compartments. "The scientist requires the presence of Hugh Hoyland," be recited glibly.

Hugh knew that the scientist referred to was lieutenant Nelson, in charge of the spiritual and physical welfare of the Ship's sector which included Hugh's flative vilage. He bolted the last of his breakfast and hurried after the messenger.

"Cadet Hoyland!" he was announced. The scientist locked up from his own meal and said:

"Oh, yes. Come in, my boy. Sit down. Have you eaten?"

Hugh acknowjedged that he had, but his eyes rested with interest on the fancy fruit In front of his superior. Nelson followed his glance. "Try some of these figs. They're a new mutation; I had them brought all the way from the far side. Go ahead -- a man your age always has somewhere to stow a few more bites."

Hugh accepted with much self-consciousness. Never before had he eaten in the presence of a scientist. The elder leaned back in his chair, wiped his fingers on his shirt, arranged his beard, and started in.

"I haven't seen you lately, son. Tell me what you have been doing with yourself." Before Hugh could reply he went on: "No, don't tell me; I will tell you. For one thing you have been exploring, climbing, without too much respect for the forbidden areas. Is it not so?" He held the young man's eye. Hugh fumbled for a reply.

But he was let off again. "Never mind. I know, and you know that I know. I am not too displeased. But it has brought it forcibly to my attention that it is time that you decided what you are to do with your life. Have you any plans?"

"Well, no definite ones, sir."

"How about that girl, Edris Baxter? D'you intend to marry her?"

"Why, uh -- I don't know, sir. I guess I want to, and her father is willing, I think. Only..."

"Only what?"

"Well, he wants me to apprentice to his farm. I suppose it's a good idea. His farm together with my uncle's business would make a good property."

"But you're not sure?"

"Well, I don't know."

"Correct. You're not for that. I have other plans. Tell me, have you ever wondered why I taught you to read and write? Of course, you have. But you've kept your own counsel. That is good.

"Now attend me. I've watched you since you were a small child. You have more imagination than the common run, more curiosity, more go. And you are a born leader. You were different even as a baby. Your head was too large, for one thing, and there were some who voted at your birth inspection to put you at once into the Converter. But I held them off. I wanted to see how you would turn out.

"A peasant life is not for the likes of you. You are to be a scientist."

The old man paused and studied his face. Hugh was confused, speechless. Nelson went on, "Oh, yes. Yes, indeed. For a man of your temperament, there are only two things to do with him: Make him one of the custodians, or send him to the Converter."

"Do you mean, sir, that I have nothing to say about it?"

"If you want to put it that bluntly, yes. To leave the bright ones among the ranks of the Crew is to breed heresy. We can't have that. We had it once and it almost destroyed tbe human race. You have marked yourself out by your exceptional ability; you must now be instructed in right thinking, be initiated into the mysteries, in order that you may be a conserving force rather than a focus of infection and a source of trouble." The orderly reappeared loaded down with bundles which he dumped on the deck. Hugh glanced at them, then burst out, "Why, those are my things!"

"Certainly," acknowledged Nelson. "I sent for them. You're to sleep here henceforth. I'll see you later and start you on your studies, unless you have something more on your mind?"

"Why, no, sir. I guess not. I must admit I am a little confused. I suppose ... I suppose this means you don't want me to marry?"

"Oh, that," Nelson answered indifferently. "Take her if you like; her father can't protest now. But let me warn you, you'll grow tired of her."

Hugh Hoyland devoured the ancient books that his mentor permitted him to read, and felt no desire for many, many sleeps to go climbing, or even to stir out of Nelson's cabin. More than once he felt that he was on the track of the secret -- a secret as yet undefined, even as a question -- but again he would find himself more confused than ever. It was evidently harder to reach the wisdom of scientisthood than he had thought.

Once, while he was worrying away at the curious twisted characters of the ancients and trying to puzzle out their odd rhetoric and unfamiliar terms, Nelson came into the little compartment that had been set aside for him, and, laying a fatherly hand on his shoulder, asked, "How goes it, boy?"

"Why, well enough, sir, I suppose," he answered, laying the book aside. "Some of it is not quite clear to me -- not clear at all, to tell the truth."

"That is to be expected," the old man said equably. "I've let you struggle along by yourself at first in order that you may see the traps that native wit alone will fall into. Many of these things are not to be understood without instruction. What have you there?" He picked up the book and glanced at it. It was inscribed Basic Modern Physics. "So? This is one of the most valuable of the sacred writings, yet the uninitiate could not possibly make good use of it without help. The first thing that you must understand, my boy, is that our forefathers, for all their spiritual perfection, did not look at things in the fashion in which we do.

"They were incurable romantics, rather than rationalists, as we are, and the truths which they handed down to us, though strictly true, were frequently clothed in allegorical language. For example, have you come to the Law of Gravitation?"

"I read about it."

"Did you understand it? No, I can see that you didn't."

"Well," said Hugh defensively, "it didn't seem to mean anything. It just sounded silly, if you will pardon me, sir."

"That illustrates my point. You were thinking of it in literal terms, like the laws governing electrical devices found elsewhere in this same book. 'Two bodies attract each other directly as the product of their masses and inversely as the square of their distance.' It sounds like a rule for simple physical facts, does it not? Yet it is nothing of the sort; it was the poetical way the old ones bad of expressing the rule of propinquity which governs the emotion of love. The bodies referred to are human bodies, mass is their capacity for love. Young people have a greater capacity for love than the elderly; when they are thrown together, they fall in love, yet when they are separated they soon get over it. 'Out of sight, out of mind.' It's as simple as that. But you were seeking some deep meaning for it."

Hugh grinned. "I never thought of looking at it that way. I can see that I am going to need a lot of help."

"Is there anything else bothering you just now?"

"Well, yes, lots of things, though I probably can't remember them offhand. I mind one thing: Tell me, Father, can muties be considered as being people?"

"I can see you have been listening to idle talk. The answer to that is both yes and no. It is true that the niuties originally descended from people but they are no longer part

of the Crew; they cannot now be considered as members of the human race, for they have flouted Jordan's Law.

"This is a broad subject," he went on, settling down to it. "There is even some question as to the original meaning of the word 'mutie.' Certainly they number among their ancestors the mutineers who escaped death at the time of the rebellion. But they also have in their blood the blood of many of the mutants who were born during the dark age. You understand, of course, that during that period our present wise rule of inspecting each infant for the mark of sin and returning to the Converter any who are found to be mutations was not in force. There are strange and horrible things crawling through the dark passageways and lurking in the deserted levels."

Hugh thought about it for a while, then asked, "Why is it that mutations still show up among us, the people?"

"That is simple. The seed of sin is still in us. From time to time it still shows up, incarnate. In destroying those monsters we help to cleanse the stock and thereby bring closer the culmination of Jordan's Plan, the end of the Trip at our heavenly home, Far Centaurus."

Hoyland's brow wrinkled again. "That is another thing that I don't understand. Many of these ancient writings speak of the Trip as if it were an actual moving, a going somewhere, as if the Ship itself were no more than a pushcart. How can that be?"

Nelson chuckled. "How can it, indeed? How can that move which is the background against which all else moves? The answer, of course, is plain. You have again mistaken allegorical language for the ordinary usage of everyday speech. Of course, the Ship is solid, immovable, in a physical sense. How can the whole universe move? Yet, it does move, in a spiritual sense. With every righteous act we move closer to the sublime destination of Jordan's Plan."

Hugh nodded. "I think I see."

"Of course, it is conceivable that Jordan could have fashioned the world in some other shape than the Ship, had it suited His purpose. When man was younger and more poetical, holy men vied with one another in inventing fanciful worlds which Jordan might have created. One school invented an entire mythology of a topsy-turvy world of endless reaches of space, empty save for pinpoints of light and bodiless mythological monsters. They called it the heavenly world, or heaven, as if to contrast it with the solid reality of the Ship. They seemed never to tire of speculating about it, inventing details for it, and of outlining pictures of what they conceived it to be like. I suppose they did it to the greater glory of Jordan, and who is to say that He found their dreams unacceptable? But in this modern age we have more serious work to do."

Hugh was not interested In astronomy. Even his untutored mind had been able to see in its wild extravagance an intention not literal. He turned to problems nearer at hand.

"Since the muties are the seed of sin, why do we make no effort to wipe them out? Would not that be an act that would speed the Plan?"

The old man considered a while before replying. "That is a fair question and deserves a straight answer. Since you are to be a scientist you will need to know the answer. Look at it this way. There is a definite limit to the number of Crew the Ship can support. If our numbers increase without limit, there comes a time when there will not be good eating for all of us. Is it not better that some should die in brushes with the muties than that we should grow in numbers until we killed each other for food?.

"The ways of Jordan are inscrutable. Even the muties have a part in His Plan."

It seemed reasonable, but Hugh was not sure.

But when Hugh was transferred to active work as a junior scientist in the operation of the Ship's functions, he found there were other opinions. As was customary, he put in a period serving the Converter. The work was not onerous; he had principally to check in the waste materials brought in by porters from each of the villages, keep books of their contributions, and make sure that no redemable metal was introduced into the first-stage hopper. But it brought him into contact with Bill Ertz, the Assistant Chief Engineer, a man not much older than himself.

He discussed with him the things he had learned from Nelson, and was shocked at Ertz's attitude.

"Get this through your head, kid," Ertz told him. "This is a practical job for practical men. Forget all that romantic nonsense. Jordan's Plan! That stuff is all right to keep the peasants quiet and in their place, but don't fall for it yourself. There is no Plan, other than our own plans for looking out for ourselves. The Ship has to have light and heat and power for cooking and irrigation. The Crew can't get along without those things and that makes us boss of the Crew.

"As for this softheaded tolerance toward the muties, you're going to see some changes made! Keep your mouth shut and string along with us."

It impressed on him that he was expected to maintain a primary loyalty to the bloc of younger men among the scientists. They were a well-knit organization within an organization and were made up of practical, hardheaded men who were working toward improvement of conditions throughout the Ship, as they saw them. They were well knit because an apprentice who failed to see things their way did not last long. Either he failed to measure up and soon found himself back in the ranks of the peasants, or, as was more likely, suffered some mishap and wound up in the Converter.

And Hoyland began to see that they were right.

They were realists. The Ship was the Ship. It was a fact, requiring no explanation. As for Jordan, who had ever seen Him, spoken to Him? What was this nebulous Plan of His? The object of life was living. A man was born, lived his life, and then went to the Converter. It was as simple as that, no mystery to it, no sublime Trip and no Centaurus. These romantic stories were simply hangovers from the childhood of the race before men gained the understanding and the courage to look facts in the face.

He ceased bothering his head about astronomy and mystical physics and all the other mass of mythology he bad been taught to revere. He was still amused, more or less, by the Lines from the Beginning and by all the old stories about Earth (what the Huff was 'Earth,' anyhow?) but now realized that such things could be taken seriously only by children and dullards.

Besides, there was work to do. The younger men, while still maintaining the nominal authority of their elders, had plans of their own, the first of which was a systematic extermination of the muties. Beyond that, their intentions were still fluid, but they contemplated making full use of the resources of the Ship, including the upper levels. The young men were able to move ahead with their plans without an open breach with their elders because the older scientists simply did not bother to any great extent with the routine of the Ship. The present Captain had grown so fat that he rarely stirred from his cabin; his aide, one of the young men's bloc, attended to affairs for him.

Hoyland never laid eyes on the Chief Engineer save once, when he showed up for the purely religious ceremony of manning landing stations.

The project of cleaning out the muties required reconnaissance of the upper levels to be done systematically. It was in carrying out such scouting that Hugh Hoyland was again ambushed by a mutie.

This mutie was more accurate with his slingshot. Hoyland's companions, forced to retreat by superior numbers, left him for dead.

Joe-Jim Gregory was playing himself a game of checkers. Time was when they had played cards together, but Joe, the head on the right, had suspected Jim, the left-hand member of the team, of cheating. They had quarreled about it, then given it up, for they both learned early in their joint career that two heads on one pair of shoulders must necessarily find ways of getting along together.

Checkers was better. They could both see the board, and disagreement was impossible.

A loud metallic knocking at the door of the oompartment interrupted the game. Joe-Jim unsheathed his throwing knife and cradled it, ready for quick use. "Come in!" roared Jim.

The door opened, the one who had knocked backed into the room -- the only safe way, as everyone knew, to enter Joe-Jim's presence. The newcomer was squat and rugged and powerful, not over four feet in height. The relaxed body of a man hung across one shoulder and was steadied by a hand.

Joe-Jim returned the knife to its sheath. "Put it down, Bobo," Jim ordered.

"And close the door," added Joe. "Now what have we got here?"

It was a young man, apparently dead, though no wound appeared on him. Bobo patted a thigh. "Eat 'im?" he said hopefully. Saliva spilled out of his still-opened lips.

"Maybe," temporized Jim. "Did you kill him?"

Bobo shook his undersized head.

"Good Bobo," Joe approved. "Where did you hit him?"

"Bobo hit him there." The microcephalic shoved a broad thumb against the supine figure in the area between the umbilicus and the breasthone.

"Good shot," Joe approved. "We couldn't have done better with a knife."

"Bobo good shot," the dwarf agreed blandly. "Want see?" He twitched his slingshot invitingly.

"Shut up," answered Joe, not unkindly. "No, we don't want to see; we want to make him talk."

"Bobo fix," the short one agreed, and started with simple brutality to carry out his purpose.

Joe-Jim slapped him away, and applied other methods, painful but considerably less drastic than those of the dwarf. The younger man jerked and opened his eyes.

"Eat 'im?" repeated Bobo.

"No," said Joe. "When did you eat last?" inquired Jim.

Bobo shook his head and rubbed his stomach, indicating with graphic pantomime that it had been a long time, too long. Joe-Jim went over to a locker, opened it, and withdrew a haunch of meat. He held it up. Jim smelled it and Joe drew his head away in

nose-wrinkling disgust Joe-Jim threw, it to Bobo, who snatched it happily out of the air. "Now, get out," ordered Jim.

Bobo trotted away, closing the door behind him. JoeJim turned to the captive and prodded him with his foot. "Speak up," said Jim. "Who the Huff are you?"

The young man shivered, put a hand to his head, then seemed suddenly to bring his surroundings into focus, for be scrambled to his feet, moving awkwardly. against the low weight conditions of this level, and reached for his knife.

It was not at his belt.

Joe-Jim had his own out and brandished it. "Be good and you won't get hurt. What do they call you?" The young man wet his lips, and his eyes hurried about the room. "Speak up," said Joe.

"Why bother with him?" inquired Jim. "I'd say he was only good for meat. Better call Bobo back."

"No hurry about that," Joe answered. "I want to talk to him. What's your name?"

The prisoner looked again at the kife and muttered, "Hugh Hoyland."

"That doesn't tell us much," Jim commented. "What d'you do? What village do you come from? And what were you doing in mutie country?" But this time Hoyland was sullen. Even the prick of the knife against his ribs caused him only to bite his lips. "Shucks," said Joe, "he's only a stupid peasant. Let's drop it."

"Shall we finish him off?"

"No. Not now. Shut him up."

Joe-Jim opened the door of a small side compartment, and urged Hugh in with the knife. He then closed and fastened the door and went back to his game. "Your move, Jim."

The compartment in which Hugh was locked was dark. He soon satisfied himself by touch that the smooth steel walls were entirely featureless save for the solid, securely fastened door. Presently he lay down on the deck and gave himself up to fruitless thinking.

He had plenty of time to think, time to fall asleep and awaken more than once. And time to grow very hungry and very, very thirsty.

When Joe-Jim next took sufficient interest in his prisoner to open the door of the cell, Hoyland was not immediately in evidence. He had planned many times what he would do when the door opened and his chance came, but when the event arrived, he was too weak, semi-comatose. Joe-Jim dragged him out. , The disturbance roused him to partial comprehension. He sat up and stared around him. "Ready to talk?" asked Jim. Hoyland opened his mouth but no words came out.

"Can't you see he's too dry to talk?" Joe told his twin. Then to Hugh: "Will you talk if we give you some water?"

Hoyland looked puzzled, then nodded vigorously.

Joe-Jim returned in a moment with a mug of water. Hugh drank greedily, paused, and seemed about to faint.

Joe-Jim took the mug from him. "That's enough for now," said Joe. "Tell us about yourself."

Hugh did so. In detail, being prompted from time to time by questions from one of the twins, or a kick against his shin.

Hugh accepted a de facto condition of slavery with no particular resistance and no great disturbance of soul. The word 'slave' was not in his vocabulary, but the condition was a commonplace in everything he had ever known. There had always been those who gave orders and those who carried them out; he could imagine no other condition, no other type of social organization. It was a fact of life.

Though naturally he thought of escape.

Thinking about it was as far as he got. Joe-Jim guessed his thoughts and brought the matter out into the open. Joe told him, "Don't go getting ideas, youngster. Without a knife you wouldn't get three levels away in this part of the Ship. If you managed to steal a knife from me, you still wouldn't make it down to high-weight. Besides, there's Bobo."

Hugh waited a moment, as was fitting, then said, "Bobo?"

Jim grinned and replied, "We told Bobo that you were his to butcher, if he liked, if you ever stuck your head out of our compartments without us. Now he sleeps outside the door and spends a lot of his time there."

"It was only fair," put in Joe. "He was disappointed when we decided to keep you."

"Say," suggested Jim, turning his bead toward his brother's, "how about some fun?" He turned back to Hugh. "Can you throw a knife?"

"Of course," Hugh answered.

"Let's see you. Here." Joe-Jim handed him their own knife. Hugh accepted it, jiggling it in his band to try its balance. "Try my mark."

Joe-Jim had a plastic target. set up at the far end of the room from his favorite chair, on which he was wont to practice his own skill. Hugh eyed it, and, with an arm motion too fast to follow, let fly. He used the economical underhand stroke, thumb on the blade, fingers together. The blade shivered in the target, well centered in the chewed-up area which marked Joe-Jim's best efforts. "Good boy!" Joe approved. "What do you have in mind, Jim?"

"Let's give him the knife and see how far he gets."

"No," said Joe, "I don't agree."

"Why not?"

"If Bobo wins, we're out one servant. If Hugh wins, we lose both Bobo and him. It's wasteful."

"Oh, well, if you insist."

"I do. Hugh, fetch the knife."

Hugh did so. It had not occurred to him to turn the knife against Joe-Jim. The master was the master. For servant to attack master was not simply repugnant to good morals, it was an idea so wild that it did not occur to him at all.

Hugh had expected that Joe-Jim would be impressed by his learning as a scientist. It did not work out that way. Joe-Jim, especially Jim, loved to argue. They sucked Hugh dry in short order and figuratively cast him aside. Hoyland felt humiliated. After all, was he not a scientist? Could he not read and write?

"Shut up," Jim told Hugh. "Reading is simple. I could do it before your father was born. D'you think you're the first scientist that has served me? Scientists--bah! A pack of

ignoramuses!" In an attempt to re-establish his own intellectual conceit, Hugh expounded the theories of the younger scientists, the strictly matter-of-fact, hard-boiled realism which rejected all religious interpretation and took the Ship as it was. He confidently expected Joe-Jim to approve such a point of view; it seemed to fit their temperaments. They laughed in his face.

"Honest," Jim insisted, when be bad ceased snorting, "are you young punks so stupid as all that? Why you're worse than your elders."

"But you just got through saying," Hugh protested in hurt tones, "that all our accepted religious notions are so much bunk. That is just what my friends think. They want to junk all that old nonsense."

Joe started to speak; Jim cut in ahead of him. "Why bother with him, Joe? He's hopeless."

"No, he's not. I'm enjoying this. He's the first one I've talked with in I don't know how long who stood any chance at all of seeing the truth. Let us be -- I want to see whether that's a head he has on his shoulders, or just a place to hang his ears."

"O.K.," Jim agreed, "but keep it quiet. I'm going to take a nap." The left-hand head closed its eyes, soon it was snoring. Joe and Hugh continued their discussion in whispers.

"The trouble with you youngsters," Joe said, "is that if you can't understand a thing right off, you think it can't be true. The trouble with your elders is, anything they didn't understand they reinterpreted to mean something else and then thought they understood it. None of you has tried believing clear words the way they were written and then tried to understand them on that basis. Oh, no, you're all too bloody smart for that! If you can't see it right off, it ain't so; it must mean something different."

"What do you mean?" Hugh asked suspiciously.

"Well, take the Trip, for instance. What does it mean to you?

"Well, to my mind, it doesn't mean anything. It's just a piece of nonsense to impress the peasants."

"And what is the accepted meaning?"

"Well, it's where you go when you die, or rather what you do. You make the Trip to Centaurus."

"And what is Centaurus?"

"It's -- mind you, I'm just telling you the orthodox answers; I don't really believe this stuff -- it's where you arrive when you've made the Trip, a place where everybody's happy and there's always good eating." Joe snorted. Jim broke the rhythm of his snoring, opened one eye, and settled back again with a grunt.

"That's just what I mean," Joe went on in a lower whisper. "You don't use your head. Did it over occur to you that the Trip was just what the old books said It was: the Ship and all the Crew actually going somewhere, moving?" Hoyland thought about it. "You don't mean for me to take you seriously. Physically, it's an impossibility. The Ship can't go anywhere. It already is everywhere. We can make a trip through it, but the Trip, that has to have a spiritual meaning, if it has any."

Joe called on Jordan to support him. "Now, listen," he said, "get this through that thick head of yours. Imagine a place a lot bigger than the Ship, a lot bigger, with the Ship inside it, moving. D'you get it?"

Hugh tried. He tried very hard. He shook his bead. "It doesn't make sense," he said. "There can't be anything bigger than the Ship. There wouldn't be any place for it to be."

"Oh, for Huff's sake! Listen. Outside the Ship, get that? Straight down beyond the level in every direction. Emptiness out there. Understand me?"

"But there isn't anything below the lowest level. That's why it's the lowest level."

"Look. If you took a knife and started digging a hole in the floor of the lowest level, where would it get you?"

"But you can't. It's too hard."

"But suppose you did and it made a hole. Where would that hole go? Imagine it."

Hugh shut his eyes and tried to imagine digging a hole in the lowest level. Digging as if it were soft, soft as cheese. He began to get some glimmering of a possibility, a possibility that was unsettling, soul-shaking. He was falling, falling into a hole that he had dug which had no levels under it. He opened his eyes very quickly. "That's awful!" he ejaculated. "I won't believe it."

Joe-Jim got up. "I'll make you believe it," he said grimly, "if I have to break your neck to do it." He strode over to the outer door and opened it. "Bobo!" he shouted.

"Bobo!"

Jim's head snapped erect. "Wassa matter? Wha's going on?"

"We're going to take Hugh to no-weight."

"What for?"

"To pound some sense into his silly head."

"Some other time."

"No, I want to do it now."

"All right, all right. No need to shake. I'm awake now anyhow."

Joe-Jim Gregory was almost as nearly unique in his -- or their -- mental ability as he was in his bodily construction. Under any circumstances he would have been a dominant personality; among the muties it was inevitable that he should bully them, order them about, and live on their services. Had he had the will-to-power, it is conceivable that he could have organized the muties to fight and overcome the Crew proper.

But he lacked that drive. He was by native temperament an intellectual, a bystander, an observer. He was interested in the 'how' and the 'why,' but his will to action was satisfied with comfort and convenience alone.

Had he been born two normal twins and among the Crew, it is likely that he would have drifted into scientisthood as the easiest and most satisfactory answer to the problem of living and as such would have entertained himself mildly with conversation and administration. As it was, he lacked mental companionship and had whiled away three generations reading and rereading books stolen for him by his stooges.

The two halves of his dual person had argued and discussed what they had read, and had almost inevitably arrived at a reasonably coherent theory of history and the physical world, except in one respect. The concept of fiction was entirely foreign to them; they treated the novels that had been provided for the Jordan expedition in exactly the same fashion that they did text and reference books.

This led to their one major difference of opinion. Jim regarded Allan Quartermain as the greatest man who had ever lived; Joe held out for John Henry.

They were both inordinately fond of poetry; they could recite page after page of Kipling, and were nearly as fond of Rhysling, the blind singer of the spaceways. Bobo backed in. Joe-Jim hooked a thumb toward Hugh. "Look," said Joe, "he's going out."

"Now?" said Bobo happily, and grinned, slavering.

"You and your stomach!" Joe answered, rapping Bobo's pate with his knuckles. "No, you don't eat him. You and him, blood brothers. Get it?"

"Not eat 'im?"

"No. Fight for him. He fights for you."

"O.K." The pinhead shrugged his shoulders at the inevitable. "Blood brothers. Bobo know."

"All right. Now we go up to the place-where-everybody-flies. You go ahead and make lookout."

They climbed in single file, the dwarf running ahead to spot the lie of the land, Hoyland behind him, Joe-Jim bringing up the rear, Joe with eyes to the front, Jim watching their rear, head turned over his shoulder.

Higher and higher they went, weight slipping imperceptibly from them with each successive deck. They emerged finally into a level beyond which there was no further progress, no opening above them. The deck curved gently, suggesting that the true shape of the space was a giant cylinder, but overhead a metallic expanse which exhibited a similar curvature obstructed the view and prevented one from seeing whether or not the deck in truth curved back on itself.

There were no proper bulkheads; great stanchions, so huge and squat as to give an impression of excessive, unnecessary strength, grew thickly about them, spacing deck and overhead evenly apart.

Weight was imperceptible. If one remained quietly in one place, the undetectable residuum of weight would bring the body in a gentle drift down to the 'floor,' but 'up' and 'down' were terms largely lacking in meaning. Hugh did not like it; it made him gulp, but Bobo seemed delighted by it and not unused to it. He moved through the air like an uncouth fish, banking off stanchion, floor plate, and overhead as suited his convenience.

Joe-Jim set a course parallel to the common axis of the inner and outer cylinders, following a passageway formed by the orderly spacing of the stanchions. There were handrails set along the passage, one of which he followed like a spider on its thread. He made remarkable speed, which Hugh floundered to maintain. In time, be caught the trick of the easy, effortless, overhand pull, the long coast against nothing but air resistance, and the occasional flick of the toes or the hand against the floor. But he was much too busy to tell how far they went before they stopped. Miles, he guessed it to be, but he did not know.

When they did stop, it was because the passage, had terminated. A solid bulkhead, stretching away to right and left, barred their way. Joe-Jim moved along it to the right, searching.

He found what he sought, a man-sized door, closed, its presence distinguishable only by a faint crack which marked its outline and a cursive geometrical design on its surface. Joe-Jim studied this and scratched his right-hand head. The two heads whispered to each other. Joe-Jim raised his hand in an awkward gesture.

"No, no!" said Jim. Joe-Jim checked himself. "How's that?" Joe answered. They whispered together again, Joe nodded, and Joe-Jim again raised his hand.

He traced the design on the door without touching It, moving his forefinger through the air perhaps four inches from the surface of the door. The order of succession in which his finger moved over the lines of the design appeared simple but certainly not obvious.

Finished, he shoved a palm against the adjacent bulkhead, drifted back from the door, and waited.

A moment later there was a soft, almost inaudible insufflation; the door stirred and moved outward perhaps six inches, then stopped. Joe-Jim appeared puzzled. He ran his hands cautiously into the open crack and pulled. Nothing happened. He called to Bobo, "Open it."

Bobo looked the situation over, with a scowl on his forehead which wrinkled almost to his crown. He then placed his feet against the bulkhead, steadying himself by grasping the door with one hand. He took hold of the edge of the door with both hands, settled his feet firmly, bowed his body, and strained.

He held his breath, chest rigid, back bent, sweat breaking out from the effort. The great cords in his neck stood out, making of his head a misshapen pyramid. Hugh could hear the dwarf's joints crack. It was easy to believe that he would kill himself with the attempt, too stupid to give up.

But the door gave suddenly, with a plaint of binding metal. As the door, in swinging out, slipped from Bobo's fingers, the unexpectedly released tension in his legs shoved him heavily away from the bulkhead; he plunged down the passageway, floundering for a handhold. But he was back in a moment, drifting awkwardly through the air as he massaged a cramped calf.

Joe-Jim led the way inside, Hugh close behind him. "What is this place?" demanded Hugh, his curiosity overcoming his servant manners.

"The Main Control Room," said Joe.

Main Control Room! The most sacred and taboo place in the Ship, its very location a forgotten mystery. In the credo of the young men it was nonexistent. The older scientists varied in their attitude between fundamentalist acceptance and mystical belief. As enlightened as Hugh believed himself to be, the very words frightened him. The Control Room! Why, the very spirit of Jordan was said to reside there. He stopped.

Joe-Jim stopped and Joe looked around. "Come on," he said. "What's the matter?"

"Why, uh ... uh ..."

"Speak up."

"But ... but this place is haunted ... this is Jordan's..."

"Oh, for Jordan's sake!" protested Joe, with slow exasperation. "I thought you told me you young punks didn't take any stock in Jordan."

"Yes, but ... but this is..."

"Stow it. Come along, or I'll have Bobo drag you." He turned away. Hugh followed, reluctantly, as a man climbs a scaffold. They threaded through a passageway just wide enough for two to use the handrails abreast. The passage curved in a wide sweeping arc of full ninety degrees, then opened into the control room proper. Hugh peered past Joe-Jim's broad shoulders, fearful but curious.

He stared into a well-lighted room, huge, quite two hundred feet across. It was spherical, the interior of a great globe. The surface of the globe was featureless, frosted silver. In the geometrical center of the sphere, Hugh saw a group of apparatus about fifteen feet across. To his inexperienced eye, it was completely unintelligible; he could not have described it, but he saw that it floated steadily, with no apparent support.

Running from the end of the passage to the mass at the center of the globe was a tube of metal latticework, wide as the passage itself. It offered the only exit from the passage. Joe-Jim turned to Bobo, and ordered him to remain in the passageway, then entered the tube.

He pulled himself along it, hand over hand, the bars of the latticework making a ladder. Hugh followed him; they emerged into the mass of apparatus occupying the center of the sphere. Seen close up, the gear of the control station resolved itself into its individual details, but it still made no sense to him. He glanced away from it to the inner surface of the globe which surrounded them.

That was a mistake. The surface of the globe, being featureless silvery white, had nothing to lend it perspective. It might have been a hundred feet away, or a thousand, or, many miles. He had never experienced an unbroken height greater than that between two decks, nor an open space larger than the village common. He was panic-stricken, scared out of his wits, the more so in that he did not know what it was he feared. But the ghost of long-forgotten jungle ancestors possessed him and chilled his stomach with the basic primitive fear of falling.

He clutched at the control gear, clutched at Joe-Jim.

Joe-Jim let him have one, hard across the mouth with the flat of his hand. "What's the matter with you?" growled Jim.

"I don't know," Hugh presently managed to get out. "I don't know, but I don't like this place. Let's get out of here!"

Jim lifted his eyebrows to Joe, looked disgusted, and said, "We might as well. That weak-bellied baby will never understand anything you tell him."

"Oh, he'll be all right," Joe replied, dismissing the matter. "Hugh, climb into one of the chairs; there, that one."

In the meantime, Hugh's eyes had fallen on the tube whereby they had reached the control center and had followed it back by eye to the passage door. The sphere suddenly shrank to its proper focus and the worst of his panic was over. He complied with the order, still trembling, but able to obey. The control center consisted of a rigid framework, made up of chairs, or frames, to receive the bodies of the operators, and consolidated instrument and report panels, mounted in such a fashion as to be almost in the laps of the operators, where they were readily visible but did not obstruct the view. The chairs had high supporting sides, or arms, and mounted in these aims were the controls appropriate to each officer on watch, but Hugh was not yet aware of that. He slid under the instrument panel into his seat and settled back, glad of its enfolding stability. It fitted him in a semi-reclining position, footrest to head support.

But something was happening on the panel in front of Joe-Jim; he caught it out of the corner of his eye and turned to look. Bright red letters glowed near the top of the board: 2ND ASTROGATOR POSTED. What was a second astrogator? He didn't know; then he noticed that the extreme top of his own board was labeled 2ND ASTROGATOR and concluded it must be himself, or rather, the man who should be sitting there. He felt

momentarily uncomfortable that the proper second astrogator might come in and find him usurping his post, but he put it out of his mind; it seemed unlikely.

But what was a second astrogator, anyhow?

The letters faded from Joe-Jim's board, a red dot appeared on the left-hand edge and remained. Joe-Jim did something with his right hand; his board reported: ACCELERATION: ZERO, then MAIN DRIVE. The last two words blinked several times, then were replaced with NO REPORT. These words faded out, and a bright green dot appeared near the right-hand edge.

"Get ready," said Joe, looking toward Hugh; "the light is going out."

"You're not going to turn out the light?" protested Hugh.

"No, you are. Take a look by your left hand. See those little white lights?"

Hugh did so, and found, shining up through the surface the chair arm, little beads of light arrayed to form two squares, one above the other. "Each one controls the light of one quadrant," explained Joe. "Cover them with your hand to turn Out the light. Go ahead, do it."

Reluctantly, but fascinated, Hugh did as he was directed. He placed a palm over the tiny lights, and waited. The silvery sphere turned to dull lead, faded still more, leaving them in darkness complete save for the silent glow from the instrument panels. Hugh felt nervous but exhilarated. He withdrew his palm; the sphere remained dark, the eight little lights had turned blue.

"Now," said Joe, "I'm going to show you the Stars!"

In the darkness, Joe-Jim's right hand slid over another pattern of eight lights.

Creation.

Faithfully reproduced, shining as steady and serene from the walls of the stellarium as did their originals from the black deeps of space, the mirrored stars looked down on him. Light after jeweled light, scattered in careless bountiful splendor across the simulacrum sky, the countless suns lay before him; before him, over him, under him, behind him, in every direction from him. He hung alone in the center of the stellar universe.

"Oooooh!" It was an involuntary sound, caused by his indrawn breath. He clutched the chair arms hard enough to break fingernails, but he was not aware of it. Nor was he afraid at the moment; there was room in his being for but one emotion. Life within the Ship, alternately harsh and workaday, had placed no strain on his innate capacity to experience beauty; for the first time in his life he knew the intolerable ecstasy of beauty unalloyed. It shook him and hurt him, like the first trembling intensity of sex.

It was some time before Hugh sufficiently recovered from the shock and the ensuing intense preoccupation to be able to notice Jim's sardonic laugh, Joe's dry chuckle. "Had enough?" inquired Joe. Without waiting for a reply, Joe-Jim turned the lights back on, using the duplicate controls mounted in the left arm of his chair.

Hugh sighed. His chest ached and his heart pounded. He realized suddenly that he had been holding his breath the entire time that the lights had been turned out. "Well, smart boy," asked Jim, "are you convinced?"

Hugh sighed again, not knowing why. With the lights back on, he felt safe and snug again, but was possessed of a deep sense of personal loss. He knew, subconsciously,

that, having seen the stars, he would never be happy again. The dull ache in his breast, the vague inchoate yearning for his lost heritage of open sky and stars, was never to be silenced, even though he was yet too ignorant to be aware of it at the top of his mind. "What was it?" he asked in a hushed voice.

"That's," answered Joe. "That's the world. That's the universe. That's what we've been trying to tell you about."

Hugh tried furiously to force his inexperienced mind to comprehend. "That's what you mean by Outside?" he asked. "All those beautiful little lights?"

"Sure," said Joe, "only they aren't little. They're a long way off, you see; maybe thousands of miles."

"What?"

"Sure, sure," Joe persisted. "There's lots of room out there. Space. It's big. Why, some of those stars may be as big as the Ship, maybe bigger."

Hugh's face was a pitiful study in overstrained imagination. "Bigger than the Ship?" he repeated. "But ... but ..."

Jim tossed his head impatiently and said to Joe, "Wha'd' I tell you? You're wasting our time on this lunk. He hasn't got the capacity."

"Easy, Jim," Joe answered mildly; "don't expect him to run before he can crawl. It took us a long time. I seem to remember that you were a little slow to believe your own eyes." "That's a lie," said Jim nastily. "You were the one that had to be convinced."

"O.K., O.K.," Joe conceded, "let it ride. But it was a long time before we both had it all straight."

Hoyland paid little attention to the exchange between the two brothers. It was a usual thing; his attention was centered on matters decidedly not usual. "Joe," he asked, "what became of the Ship while we were looking at the Stars? Did we stare right through it?"

"Not exactly," Joe told him. "You weren't looking directly at the stars at all, but at a kind of picture of them. It's like... Well, they do it with mirrors, sort of. I've got a book that tells about it."

"But you can see 'em directly," volunteered Jim, his momentary pique forgotten. "There's a compartment forward of here..."

"Oh, yes," put in Joe, "it slipped my mind. The Captain's veranda. He's got one all of glass; you can look right out."

"The Captain's veranda? But--"

"Not this Captain. He's never been near the place. That's the name over the door of the compartment."

"What's a 'veranda'?"

"Blessed if I know. It's just the name of the place."

"Will you take me up there?"

Joe appeared to be about to agree, but Jim cut in. "Some other time. I want to get back; I'm hungry."

They passed back through the tube, woke up Bobo, and made the long trip back down.

It was long before Hugh could persuade Joe-Jim to take him exploring again, but the time intervening was well spent. Joe-Jim turned him loose on the largest collection of books that Hugh had ever seen. Some of them were copies of books Hugh had seen before, but even these he read with new meanings. He read incessantly, his mind soaking up new ideas, stumbling over them, struggling, striving to grasp them. He begrudged sleep, he forgot to eat until his breath grew sour and compelling pain in his midriff forced him to pay attention to his body. Hunger satisfied, he would be back at it until his head ached and his eyes refused to focus.

Joe-Jim's demands for service were few. Although Hugh was never off duty, Joe-Jim did not mind his reading as long as he was within earshot and ready to jump when called. Playing checkers with one of the pair when the other did not care to play was the service which used up the most time, and even this was not a total loss, for, if the player were Joe, he could almost always be diverted into a discussion of the Ship, its history, its machinery as equpment, the sort of people who had built it and then manned it and their history, back on Earth, Earth the incredible, that strange place where people had lived on the outside instead of the inside.

Hugh wondered why they did not fall off.

He took the matter up with Joe and at last gained some notion of gravitation. He never really understood it emotionally; it was too wildly improbable; but as an intellectual concept he was able to accept it and use it, much later, in his first vague glimmerings of the science of ballistics: and the art of astrogation and ship maneuvering. And it led in time to his wondering about weight in the Ship, a matter that had never bothered him before. The lower the level the greater the weight had been to his mind simply the order of nature, and nothing to wonder at. He was familiar with centrifugal force as it applied to slingshots. To apply it also to the whole Ship, to think of the Ship as spinning like a slingshot and thereby causing weight, was too much of a hurdle; he never really believed it.

Joe-Jim took him back once more to the Control Room and showed him what little Joe-Jim knew about the manipulation of the controls and the reading of the astrogation instruments.

The long-forgotten engineer-designers employed by the Jordan Foundation had been instructed to design a ship that would not -- could not -- wear out, even though the Trip were protracted beyond the expected sixty years. They builded better than they knew. In planning the main drive engines and the auxiliary machinery, largely automatic, which would make the Ship habitable, and in designing the controls necessary to handle all machinery not entirely automatic, the very idea of moving parts had been rejected. The engines and auxiliary equipment worked on a level below mechanical motion, on a level of pure force, as electrical transformers do. Instead of push buttons, levers, cams, and shafts, the controls and the machinery they served were planned in terms of balance between static fields, bias of electronic flow, circuits broken or closed by a hand placed over a light.

On this level of action, friction lost its meaning, wear and erosion took no toll. Had all hands been killed in the mutiny, the Ship would still have plunged on through space, still lighted, its air still fresh and moist, its engines ready and waiting. As it was, though elevators and conveyor belts fell into disrepair, disuse, and finally into the oblivion of forgotten function, the essential machinery of the Ship continued its

automatic service to its ignorant human freight, or waited, quiet and ready, for someone bright enough to puzzle out its key.

Genius had gone into the building of the Ship. Far too huge to be assembled on Earth, it had been put together piece by piece in its own orbit out beyond the Moon. There it had swung for fifteen silent years while the problems presented by the decision to make its machinery foolproof and enduring had been formulated and solved. A whole new field of submolar action had been conceived in the process, struggled with, and conquered.

So, when Hugh placed an untutored, questing hand over the first of a row of lights marked ACCELERATION, POSITIVE, he got an immediate response, though not in terms of acceleration. A red light at the top of the chief pilot's board blinked rapidly and the annunciator panel glowed with a message: MAIN ENGINES: NOT MANNED.

"What does that mean?" he asked Joe-Jim.

"There's no telling," said Jim. "We've done the same thing in the main engine room," added Joe. "There, when you try it, it says 'Control Room Not Manned.'"

Hugh thought a moment. "What would happen," he persisted, "if all the control stations had somebody at 'em at once, and then I did that?"

"Can't say," said Joe. "Never been able to try it."

Hugh said nothing. A resolve which had been growing, formless, in his mind was now crystalizing into decision. He was busy with it for some time, weighing it, refining it, and looking for the right moment to bring it into the open.

He waited until he found Joe-Jim in a mellow mood, both of him, before broaching his idea. They were in the Captain's veranda at the time Hugh decided the moment was due. Joe-Jim rested gently in the Captain's easy chair, his belly full of food, and gazed out through the heavy glass of the view port at the serene stars. Hugh floated beside him. The spinning of the Ship caused the stars to cross the circle of the port in barely perceptible arcs.

Presently he said, "Joe-Jim ..."

"Eh? What's that, youngster?" It was Joe who had replied.

"It's pretty swell, isn't it?"

"What is?"

"All that. The stars." Hugh indicated the view through the port with a sweep of his arm, then caught at the chair to stop his own backspin.

"Yeah, it sure is. Makes you feel good." Surprisingly, it was Jim who offered this.

Hugh knew the time was right. He waited a moment, then said, "Why don't we finish the job?"

Two heads turned simultaneously, Joe leaning out a little to see past Jim. "What job?"

"The Trip. Why don't we start up the main drive and go on with it? Somewhere out there," be said hurriedly to finish before he was interrupted, "there are planets like Earth, or so the First Crew thought. Let's go find them."

Jim looked at him, then laughed. Joe shook his head.

"Kid," he said, "you don't know what you are talking about. You're as balmy as Bobo. "No," he went on, "that's all over and done with. Forget it."

"Why is it over and done with, Joe?"

"Well, because. It's too big a job. It takes a crew that understands what it's all about, trained to operate the Ship."

"Does it take so many? You have shown me only about a dozen places, all told, for men actually to be at the controls. Couldn't a dozen men run the Ship ... if they knew what you know," he added slyly.

Jim chuckled. "He's got you, Joe. He's right"

Joe brushed it aside. "You overrate our knowledge. Maybe we could operate the Ship, but we wouldn't get anywhere. We don't know where we are. The Ship has been drifting for I don't know how many generations. We don't know where we're headed, or how fast we're going."

"But look," Hugh pleaded, "there are instruments. You showed them to me. Couldn't we learn how to use them? Couldn't you figure them out, Joe, if you really wanted to?"

"Oh, I suppose so," Jim agreed.

"Don't boast, Jim," said Joe.

"I'm not boasting," snapped Jim. "If a thing'll work, I can figure it out."

"Humph!" said Joe. The matter rested in delicate balance. Hugh had got them disagreeing among themselves -- which was what he wanted -- with the less tractable of the pair on his side. Now, to consolidate his gain, "I had an idea," he said quickly, "to get you men to work with, Jim, if you were able to train them."

"What's your idea?" demanded Jim suspiciously. "Well, you remember what I told you about a bunch of the younger scientists?"

"Those fools!"

"Yes, yes, sure; but they didn't know what you know. In their way they were trying to be reasonable. Now, if I could go back down and tell them what you've taught me, I could get you enough men to work with."

Joe cut in. "Take a good look at us, Hugh. What do you see?"

"Why ... why, I see you. Joe-Jim."

"You see a mutie," corrected Joe, his voice edged with sarcasm. "We're a mutie. Get that? Your scientists won't work with us."

"No, no," protested Hugh, "that's not true. I'm not talking about peasants. Peasants wouldn't understand, but these are scientists, and the smartest of the lot. They'll understand. All you need to do is to arrange safe conduct for them through mutie country. You can do that, can't you?" he added, instinctively shifting the point of the argument to firmer ground.

"Why, sure," said Jim.

"Forget it," said Joe.

"Well, O.K.," Hugh agreed, sensing that Joe really was annoyed at his persistence, "but it would be fun." He withdrew some distance from the brothers.

He could hear Joe-Jim continuing the discussion with himself in low tones. He pretended to ignore it. Joe-Jim had this essential defect in his joint nature: being a committee, rather than a single individual, he was hardly fitted to be a man of action, since all decisions were necessarily the result of discussion and compromise. Several moments later Hugh heard Joe's voice raised. "All right, all right, have it your own way!" He then called out, "Hugh! Come here!" Hugh kicked himself away from an adjacent

bulkhead and shot over to the immediate vicinity of Joe-Jim, arresting his flight with both hands against the framework of the Captain's chair.

"We've decided," said Joe without preliminaries, "to let you go back down to the high-weight and try to peddle your goods. But you're a fool," he added sourly.

Bobo escorted Hugh down through the dangers of the levels frequented by muties and left him in the uninhabited zone above high-weight "Thanks, Bobo," Hugh said in parting. "Good eating." The dwarf grinned, ducked his head, and sped away, swarming up the ladder they had just descended. Hugh turned and started down, touching his knife as he did so. It was good to feel it against him again.

Not that it was his original knife. That had been Bobo's prize when he was captured, and Bobo had been unable to return it, having inadvertently left it sticking in a big one that got away. But the replacement Joe-Jim had given him was well balanced and quite satisfactory.

Bobo had conducted him, at Hugh's request and by Joe-Jim's order, down to the area directly over the auxiliary Converter used by the scientists. He wanted to find Bill Ertz, Assistant Chief Engineer and leader of the bloc of younger scientists, and he did not want to have to answer too many questions before he found him. Hugh dropped quickly down the remaining levels and found himself in a main passageway which he recognized. Good! A turn to the left, a couple of hundred yards walk and he found himself at the door of the compartment which housed the Converter. A guard lounged in front of it. Hugh started to push on past, was stopped. "Where do you think you're going?"

"I want to find Bill Ertz."

"You mean the Chief Engineer? Well, he's not here."

"Chief? What's happened to the old one?" Hoyland regretted the remark at once, but it was already out.

"Huh? The old Chief? Why, he's made the Trip long since." The guard looked at him suspiciously. "What's wrong with you?"

"Nothing," denied Hugh. "Just a slip."

"Funny sort of a slip. Well, you'll find Chief Ertz around his office probably."

"Thanks. Good eating."

"Good eating."

Hugh was admitted to see Ertz after a short wait Ertz looked up from his desk as Hugh came in. "Well," he said, "so you're back, and not dead after all. This is a surprise. We had written you off, you know, as making the Trip."

"Yes, I suppose so."

"Well, sit down and tell me about it; I've a little time to spare at the moment. Do you know, though, I wouldn't have recognized you. You've changed a lot, all that gray hair. I imagine you had some pretty tough times."

Gray hair? Was his hair gray? And Ertz had changed a lot, too, Hugh now noticed. He was paunchy and the lines in his face had set. Good Jordan! How long had he been gone? Ertz drummed on his desk top, and pursed his lips. "It makes a problem, your coming back like this. I'm afraid I can't just assign you to your old job; Mort Tyler has that. But we'll find a place for you, suitable to your rank."

Hugh recalled Mort Tyler and not too favorably. A precious sort of a chap, always concerned with what was proper and according to regulations. So Tyler had actually made scientisthood, and was on Hugh's old job at the Converter. Well, it didn't matter. "That's all right, he began. "I wanted to talk to you about--"

"Of course, there's the matter of seniority," Ertz went on, "Perhaps the Council had better consider the matter. I don't know of a precedent. We've lost a number of scientists to the muties in the past, but you are the first to escape with his life in my memory."

"That doesn't matter," Hugh broke in. "I've something much more pressing to talk about. While I was away I found out some amazing things, Bill, things that it is of paramount importance for you to know about. That's why I came straight to you. Listen. I--"

Ertz was suddenly alert. "Of course you have! I must be slowing down. You must have had a marvelous opportunity to study the muties and scout out their territory. Come on, man, spill it! Give me your report."

Hugh wet his lips. "It's not what you think," he said. "It's much more important than just a report on the muties, though it concerns them, too. In fact, we may have to change our whole policy with respect to the mu--"

"Well, go ahead, go ahead! I'm listening."

"All right." Hugh told him of his tremendous discovery as to the actual nature of the Ship, choosing his words carefully and trying very hard to be convincing. He dwelt lightly on the difficulties presented by an attempt to reorganize the Ship in accordance with the new concept and bore down heavily on the prestige and honor that would accrue to the man who led the effort.

He watched Ertz's face as he talked. After the first start of complete surprise when Hugh launched his key idea, the fact that the Ship was actually a moving body in a great outside space, his face became impassive and Hugh could read nothing in it, except that he seemed to detect a keener interest when Hugh spoke of how Ertz was just the man for the job because of his leadership of the younger, more progressive scientists.

When Hugh concluded, he waited for Ertz's response. Ertz said nothing at first, simply continued with his annoying habit of drumming on the top of his desk. Finally he said, "These are important matters, Hoyland, much too important to be dealt with casually. I must have time to chew it over."

"Yes, certainly," Hugh agreed. "I wanted to add that I've made arrangements for safe passage up to no-weight. I can take you up and let you see for yourself."

"No doubt that is best," Ertz replied. "Well, are you hungry?"

"No."

"Then we'll both sleep on it. You can use the compartment at the back of my office. I don't want you discussing this with anyone else until I've had time to think about it; it might cause unrest if it got out without proper prepartion."

"Yes, you're right"

"Very well, then." Ertz ushered him into a compartment behind his office which he very evidently used for a lounge. "Have a good rest," he said, "and we'll talk later."

"Thanks," Hugh acknowledged. "Good eating."

"Good eating."

Once he was alone, Hugh's excitement gradually dropped away from him, and he realized that he was fagged out and very sleepy. He stretched out on a builtin couch and fell asleep.

When he awoke he discovered that the only door to the compartment was barred from the other side. Worse than that, his knife was gone.

He had waited an indefinitely long time when he heard activity at the door. It opened; two husky, unsmiling men entered. "Come along," said one of them. He sized them up, noting that neither of them carried a knife. No chance to snatch one from their belts, then. On the other hand he might be able to break away from them.

But beyond them, a wary distance away in the outer room, were two other equally formidable men, each armed with a knife. One balanced his for throwing; the other held his by the grip, ready to stab at close quarters. He was boxed in and be knew it. They had anticipated his possible moves.

He had long since learned to relax before the inevitable. He composed his face and marched quietly out. Once through the door he saw Ertz, waiting and quite evidently in charge of the party of men. He spoke to him, being careful to keep his voice calm. "Hello, Bill. Pretty extensive preparations you've made. Some trouble, maybe?"

Ertz seemed momentarily uncertain of his answer, then said, "You're going before the Captain."

"Good!" Hugh answered. "Thanks, Bill. But do you think it's wise to try to sell the idea to him without laying a little preliminary foundation with the others?"

Ertz was annoyed at his apparent thickheadedness and showed it. "You don't get the idea," he growled. "You're going before the Captain to stand trial for heresy!"

Hugh considered this as if the idea had not before occurred to him. He answered mildly, "You're off down the wrong passage, Bill. Perhaps a charge and trial is the best way to get at the matter, but I'm not a peasant, simply to be hustled before the Captain. I must be tried by the Council. I am a scientist."

"Are you now?" Ertz said softly. "I've had advice about that. You were written off the lists. Just what you are is a matter for the Captain to determine."

Hugh held his peace. It was against him, he could see, and there was no point in antagonizing Ertz. Ertz made a signal; the two unarmed men each grasped one of Hugh's arms. He went with them quietly.

Hugh looked at the Captain with new interest. The old man had not changed much, a little fatter, perhaps. The Captain settled himself slowly down in his chair, and picked up the memorandum before him. "What's this all about?" he began irritably. "I don't understand it."

Mort Tyler was there to present the case against Hugh, a circumstance which Hugh had had no way of anticipating and which added to his misgivings. He searched his boyhood recollections for some handle by which to reach the man's sympathy, found none. Tyler cleared his throat and commenced: "This is the case of one Hugh Hoyland, Captain, formerly one of your junior scientists--"

"Scientist, eh? Why doesn't the Council deal with him?"

"Because he is no longer a scientist, Captain. He went over to the muties. He now returns among us, preaching heresy and seeking to undermine your authority."

The Captain looked at Hugh with the ready belligerency of a man jealous of his prerogatives. "Is that so?" he bellowed. "What have you to say for yourself?"

"It is not true, Captain," Hugh answered. "All that I have said to anyone has been an affirmation of the absolute truth of our ancient knowledge. I have not disputed the truths under which we live; I have simply affirmed them more forcibly than is the ordinary custom. I--"

"I still don't understand this," the Captain interrupted, shaking his head. "You're charged with heresy, yet you say you believe the Teachings. If you aren't guilty, why are you here?"

"Perhaps I can clear the matter up," put in Ertz. "Hoyland--"

"Well, I hope you can," the Captain went on. "Come, let's hear it."

Ertz proceeded to give a reasonably correct, but slanted, version of Hoyland's return and his strange story. The Captain listened, with an expression that varied between puzzlement and annoyance. When Ertz had concluded, the Captain turned to Hugh. "Humph!" he said.

Hugh spoke immediately. "The gist of my contention, Captain, is that there is a place up at no-weight where you can actually see the truth of our faith that the Ship is moving, where you can actually see Jordan's Plan in operation. That is not a denial of faith; that affirms it. There is no need to take my word for it. Jordan Himself will prove it."

Seeing that the Captain appeared to be in a state of indecision, Tyler broke in: "Captain, there is a possible explanation of this incredible situation which I feel duty bound that you should hear. Offhand, there are two obvious interpretations of Hoyland's ridiculous story He may simply be guilty of extreme heresy, or he may be a mutie at heart and engaged in a scheme to lure you into their hands. But there is a third, more charitable explanation and one which I feel within me is probably the true one.

"There is record that Hoyland was seriously considered for the Converter at his birth inspection, but that his deviation from normal was slight, being simply an overlarge head, and he was passed. It seems to me that the terrible experiences he has undergone at the hands of the muties have finally unhinged an unstable mind. The poor chap is simply not responsible for his own actions."

Hugh looked at Tyler with new respect. To absolve him of guilt and at the same time to make absolutely certain that Hugh would wind up making the Trip: how neat!

The Captain shook a palm at them. "This has gone on long enough." Then, turning to Ertz, "Is there recommendation?"

"Yes, Captain. The Converter."

"Very well, then. I really don't see, Ertz," he continued testily, "why I should be bothered with these details. It seems to me that you should be able to handle discipline in your department without my help."

"Yes, Captain."

The Captain shoved back from his desk, started to get up. "Recommendation confirmed. Dismissed."

Anger flooded through Hugh at the unreasonable injustice of it. They had not even considered looking at the only real evidence he had in his defense. He heard a shout: "Wait!" -- then discovered it was his own voice. The Captain paused, looking at him.

"Wait a moment," Hugh went on, his words spilling out of their own accord. "This won't make any difference, for you're all so damn sure you know all the answers that you won't consider a fair offer to come see with your own eyes. Nevertheless ... Nevertheless, it still moves!"

Hugh had plenty of time to think, lying in the compartment where they confined him to await the power needs of the Converter, time to think, and to second-guess his mistakes. Telling his tale to Ertz immediately, that had been mistake number one. He should have waited, become reacquainted with the man and felt him out, instead of depending on a friendship which had never been very close.

Second mistake, Mort Tyler. When he heard his name he should have investigated and found out just how much influence the man had with Ertz. He had known him of old, he should have known better.

Well, here he was, condemned as a mutant, or maybe as a heretic. It came to the same thing. He considered whether or not he should have tried to explain why mutants happened. He had learned about it himself in some of the old records in Joe-Jim's possession. No, it wouldn't wash. How could you explain about radiations from the Outside causing the birth of mutants when the listeners did not believe there was such a place as Outside? No, he had messed it up before he was ever taken before the Captain.

His self-recriminations were disturbed at last by the sound of his door being unfastened. It was too soon for another of the infrequent meals; he thought that they had come at last to take him away, and renewed his resolve to take someone with him.

But he was mistaken. He heard a voice of gentle dignity: "Son, son, how does this happen?" It was Lieutenant Nelson, his first teacher, looking older than ever and frail.

The interview was distressing for both of them. The old man, childless himself, had cherished great hopes for his protegé, even the ambition that he might eventually aspire to the captaincy, though he had kept his vicarious ambition to himself, believing it not good for the young to praise them too highly. It had hurt his heart when the youth was lost.

Now he had returned, a man, but under disgraceful conditions and under sentence of death. The meeting was no less unhappy for Hugh. He had loved the old man, in his way, wanted to please him and needed his approval. But he could see, as he told his story, that Nelson was not capable of treating the the story as anything but an aberration of Hugh's mind, and he suspected that Nelson would rather see him meet a quick death in the Converter, his atoms smashed to hydrogen and giving up clean useful power, than have him live to make a mock of the ancient teachings.

In that.he did the old man an injustice; he underrated Nelson's mercy, but not his devotion to 'science.' But let it be said for Hugh that, had there been no more at issue than his own personal welfare, he might have preferred death to breaking the heart of his benefactor, being a romantic and more than a bit foolish. Presently the old man got up to leave, the visit having grown unendurable to each of them. "Is there anything I can do for you, son? Do they feed you well enough?"

"Quite well, thanks," Hugh lied.

"Is there anything else?"

"No ... yes, you might send me some tobacco. I haven't had a chew in a long time."

"I'll take care of it. Is there anyone you would like to see?"

"Why, I was under the impression that I was not permitted visitors ... ordinary visitors."

"You are right, but I think perhaps I may be able to get the rule relaxed. But you will have to give me your promise not to speak of your heresy," he added anxiously. Hugh thought quickly. This was a new aspect, a new possibility. His uncle? No, while they had always got along well, their minds did not meet; they would greet each other as strangers. He had never made friends easily; Ertz had been his obvious next friend and now look at the damned thing! Then he recalled his village chum, Alan Mahoney, with whom he had played as a boy. True, he had seen practically nothing of him since the time he was apprenticed to Nelson. Still... "Does Alan Mahoney still live in our village?"

"Why, yes."

"I'd like to see him, if he'll come."

Alan arrived, nervous, ill at ease, but plainly glad to see Hugh and very much upset to find him under sentence to make the Trip. Hugh pounded him on the back. "Good boy," he said. "I knew you would come."

"Of course, I would," protested Alan, "once I knew. But nobody in the village knew it. I don't think even the Witnesses knew it."

"Well, you're here, that's what matters. Tell me about yourself. Have you married?"

"Huh, uh, no. Let's not waste time talking about me. Nothing ever happens to me anyhow. How in Jordan's name did you get in this jam, Hugh?"

"I can't talk about that, Alan. I promised Lieutenant Nelson that I wouldn't."

"Well, what's a promise, that kind of a promise? You're in a jam, fellow."

"Don't I know it!"

"Somebody have it in for you?"

"Well, our old pal Mort Tyler didn't help any; I think I can say that much."

Alan whistled and nodded his head slowly. "That explains a lot."

"How come? You know something?"

"Maybe, -- maybe not. After you went away he married Edris Baxter."

"So? Hmm-m-m ... yes, that clears up a lot." He remained silent for a time.

Presently Alan spoke up: "Look, Hugh. You're not going to sit here and take it, are you? Particularly with Tyler mixed in it. We gotta get you outa here."

"How?"

"I don't know. Pull a raid, maybe. I guess I could get a few knives to rally round and help us; all good boys, spoiling for a fight."

"Then, when it's over, we'd all be for the Converter. You, me, and your pals. No, it won't wash."

"But we've got to do something. We can't just sit here and wait for them to burn you."

"I know that." Hugh studied Alan's face. Was it a fair thing to ask? He went on, reassured by what he had seen. "Listen. You would do anything you could to get me out of this, wouldn't you?"

"You know that." Alan's tone showed hurt.

"Very well, then. There is a dwarf named Bobo. I'll tell you how to find him..."

Alan climbed, up and up, higher than he had ever been since Hugh had led him, as a boy, into foolhardy peril. He was older now, more conservative; he had no stomach for it. To the very real danger of leaving the well-traveled lower levels was added his superstitious ignorance. But still he climbed.

This should be about the place, unless he had lost count. But he saw nothing of the dwarf Bobo saw him first. A slingshot load caught Alan in the pit of the stomach, even as he was shouting, "Bobo!"

Bobo backed into Joe-Jim's compartment and dumped his load at the feet of the twins. "Fresh meat," he said proudly.

"So it is," agreed Jim indifferently. "Well, it's yours; take it away."

The dwarf dug a thumb into a twisted ear, "Funny," he said, "he knows Bobo's name."

Joe looked up from the book he was reading: _Browning's Collected Poems_, L-Press, New York, London, Luna City, cr. 35. "That's interesting. Hold on a moment."

Hugh had prepared Alan for the shock of Joe-Jim's appearance. In reasonably short order he collected his wits sufficiently to be able to tell his tale. Joe-Jim listened to it without much comment, Bobo with interest but little comprehension.

When Alan concluded, Jim remarked, "Well, you win, Joe. He didn't make it." Then, turning to Alan, he added, "You can take Hoyland's place. Can you play checkers?"

Alan looked from one head to the other. "But you don't understand," he said. "Aren't you going to do anything about it?"

Joe looked puzzled. "Us? Why should we?"

"But you've got to. Don't you see? He's depending on you. There's nobody else he can look to. That's why I came. Don't you see?"

"Wait a moment," drawled Jim, "wait a moment. Keep your belt on. Supposing we did want to help him, which we don't, how in Jordan's Ship could we? Answer me that."

"Why, why," Alan stumbled in the face of such stupidity. "Why, get up a rescue party, of course, and go down and get him out!"

"Why should we get ourselves killed in a fight to rescue your friend?" Bobo pricked his ears. "Fight?" he inquired eagerly. "No, Bobo," Joe denied. "No fight. Just talk." "Oh," said Bobo and returned to passivity.

Alan looked at the dwarf. "If you'd even let Bobo and me--"

"No," Joe said shortly. "It's out of the question. Shut up about it."

Alan sat in a corner, hugging his knees in despair. If only he could get out of there. He could still try to stir up some help down below. The dwarf seemed to be asleep, though it was difficult to be sure with him. If only Joe-Jim would sleep, too.

Joe-Jim showed no indication of sleepiness. Joe tried to continue reading, but Jim interrupted him from time to time. Alan could not hear what they were saying.

Presently Joe raised his voice. "Is that your idea of fun?" he demanded.

"Well," said Jim, "it beats checkers."

"It does, does it? Suppose you get a knife in your eye; where would I be then?"

"You're getting old, Joe. No juice in you any more."

"You're as old as I am."

"Yeah, but I got young ideas."

"Oh, you make me sick. Have it your own way, but don't blame me. Bobo!"

The dwarf sprang up at once, alert. "Yeah, Boss."

"Go out and dig up Squatty and Long Arm and Pig."

Joe-Jim-got up, went to a locker, and started pulling knives out of their racks.

Hugh heard the commotion in the passageway outside his prison. It could be the guards coming to take him to the Converter, though they probably wouldn't be so noisy. Or it could be just some excitement unrelated to him. On the other hand it might be ...

It was. The door burst open, and Alan was inside, shouting at him and thrusting a brace of knives into his hands. He was hurried out of the door, while stuffing the knives in his belt and accepting two more.

Outside he saw Joe-Jim, who did not see him at once, as he was methodically letting fly, as calmly as if he had been engaging in target practice in his own study. And Bobo, who ducked his head and grinned with a mouth widened by a bleeding cut, but continued the easy flow of the motion whereby he loaded and let fly. There were three others, two of whom Hugh recognized as belonging to Joe-Jim's privately owned gang of bullies, muties by definition and birthplace; they were not deformed.

The count does not include still forms on the floor plates.

"Come on!" yelled Alan. "There'll be more in no time." He hurried down the passage to the right

Joe-Jim desisted and followed him. Hugh let one blade go for luck at a figure running away to the left. The target was poor, and he had no time to see if he had thrown 01000. They scrambled along the passage, Bobo bringing up the rear, as if reluctant to leave the fun, and came to a point where a side passage crossed the main one.

Alan led them to the right again. "Stairs ahead," he shouted.

They did not reach them. An airtight door, rarely used, clanged in their faces ten yards short of the stairs. Joe-Jim's bravoes checked their flight and they looked doubtfully at their master. Bobo broke his thickened nails trying to get a purchase on the door.

The sounds of pursuit were clear behind them.

"Boxed in," said Joe softly. "I hope you like it, Jim."

Hugh saw a head appear around the corner of the passage they had quitted. He threw overhand but the distance was too great; the knife clanged harmlessly against steel. The head disappeared. Long Arm kept his eye on the spot, his sling loaded and ready.

Hugh grabbed Bobo's shoulder. "Listen! Do you see that light?"

The dwarf blinked stupidly. Hugh pointed to the intersection of the glowtubes where they crossed in the overhead directly above the junction of the passages. "That light. Can you hit them where they cross?"

Bobo measured the distance with his eye. It would be a hard shot under any conditions at that range. Here, constricted as he was by the low passageway, it called for a fast, flat trajectory, and allowance for higher weight then he was used to.

He did not answer. Hugh felt the wind of his swing but did not see the shot. There was a tinkling crash; the passage became dark.

"Now!" yelled Hugh, and led them away at a run. As they neared the intersection he shouted, "Hold your breaths! Mind the gas!" The radioactive vapor poured lazily out from the broken tube above and filled the crossing with a greenish mist.

Hugh ran to the right, thankful for his knowledge as an engineer of the lighting circuits. He had picked the right direction; the passage ahead was black, being serviced from beyond the break. He could hear footsteps around him; whether they were friend or enemy he did not know.

They burst into light. No one was in sight but a scared and harmless peasant who scurried away at an unlikely pace. They took a quick muster. All were present, but Bobo was making heavy going of it.

Joe looked at him. "He sniffed the gas, I think. Pound his back."

Pig did so with a will. Bobo belched deeply, was suddenly sick, then grinned.

"He'll do," decided Joe.

The slight delay had enabled one at least to catch up with them. He came plunging out of the dark, unaware of, or careless of, the strength against him. Alan knocked Pig's arm down, as he raised it to throw. "Let me at him!" he demanded. "He's mine!" It was Tyler.

"Man-fight?" Alan challenged, thumb on his blade.

Tyler's eyes darted from adversary to adversary and accepted the invitation to individual duel by lunging at Alan. The quarters were too cramped for throwing; they closed, each achieving his grab in parry, fist to wrist.

Alan was stockier, probably stronger; Tyler was slippery. He attempted to give Alan a knee to the crotch. Alan evaded it, stamped on Tyler's planted foot. They went clown. There was a crunching crack.

A moment later, Alan was wiping his knife against his thigh. "Let's get goin'," he complained. "I'm scared."

They reached a stairway, and raced up it, Long Arm and Pig ahead to fan out on each level and cover their flanks, and the third of the three choppers (Hugh heard him called Squatty) covering the rear. The others bunched in between.

Hugh thought they had won free, when he heard shouts and the clatter of a thrown knife just above him.

He reached the level above in time to be cut not deeply but jaggedly by a ricocheted blade.

Three men were down. Long Arm bad a blade sticking in the fleshy part of his upper arm, but it did not seem to bother him. His slingshot was still spinning. Pig was scrambling after a thrown knife, his own armament exhausted. But there were signs of his work; one man was down on one knee some twenty feet away. He was bleeding from a knife wound in the thigh.

As the figure steadied himself with one hand against the bulkhead and reached towards an empty belt with the other, Hugh recognized him.

Bill Ertz.

He had led a party up another way, and flanked them, to his own ruin. Bobo crowded behind Hugh and got his mighty arm free for the cast. Hugh caught at it. "Easy, Bobo," he directed. "In the stomach, and easy."

The dwarf looked puzzled, but did as he was told.

Ertz folded over at the middle and slid to the deck. "Well placed," said Jim. "Bring him along, Bobo," directed Hugh, "and stay in the middle." He ran his eye over their party, now huddled at the top of that flight of stairs. "All right, gang; up we go again! Watch it."

Long Arm and Pig swarmed up the next flight, the others disposing themselves as usual. Joe looked annoyed. In some fashion, a fashion by no means clear at the moment, he had been eased out as leader of this gang, his gang, and Hugh was giving orders. He reflected as there was no time now to make a fuss. It might get them all killed.

Jim did not appear to mind. In fact, he seemed to be enjoying himself.

They put ten more levels behind them with no organized opposition. Hugh directed them not to kill peasants unnecessarily. The three bravoes obeyed; Bobo was too loaded down with Ertz to constitute a problem in discipline. Hugh saw to it that they put thirty-odd more decks below them and were well into no man's land before he let vigilance relax at all. Then he called a halt and they examined wounds.

The only deep ones were to Long Arm's arm and Bobo's face. Joe-Jim examined them and applied presses with which he had outfitted himself before starting. Hugh refused treatment for his flesh wound. "It's stopped bleeding," he insisted, "and I've got a lot to do."

"You've got nothing to do but to get up home," said Joe, "and that will be an end to this foolishness." "Not quite," denied Hugh. "You may be going home, but Alan and I and Bobo are going up to no-weight; to the Captain's veranda."

"Nonsense," said Joe. "What for?"

"Come along if you like, and see. All right, gang. Let's go."

Joe started to speak, stopped when Jim kept still. Joe-Jim followed along. They floated gently through the door of the veranda, Hugh, Alan, Bobo with his still-passive burden, and Joe-Jim. "That's it," said Hugh to Alan, waving his hand at the splendid stars, "that's what I've been telling you about."

Alan looked and clutched at Hugh's arm. "Jordan!" he moaned. "We'll fall out!" He closed his eyes tightly.

Hugh shook him. "It's all right," he said. "It's grand. Open your eyes."

Joe-Jim touched Hugh's arm. "What's it all about?" he demanded. "Why did you bring him up here?" He pointed to Ertz.

"Oh, him. Well, when he wakes up I'm going to show him the stars, prove to him that the Ship moves."

"Well? What for?"

"Then I'll send him back down to convince some others."

"Hm-m-m, suppose he doesn't have any better luck than you had?"

"Why, then," Hugh shrugged his shoulders "why, then we shall just have to do it all over, I suppose, till we do convince them.

"We've got to do it, you know."

Waldo by Robert Heinlein

The act was billed as ballet tap - which does not describe it.
His feet created an intricate tympany of crisp, clean taps.
There was a breath-catching silence as he leaped high
into the air, higher than a human being should - and
performed, while floating there, a fantastically improbable
entrechat douze.
He landed on his toes, apparently poised, yet producing
a fortissimo of thunderous taps.
The spotlights cut, the stage lights came up. The audience
stayed silent a long moment, then realized it was time to
applaud, and gave.
He stood facing them, letting the wave of their emotion
sweep through him. He felt as if he could lean against it;
it warmed him through to his bones.
It was wonderful to dance, glorious to be applauded, to be
liked, to be wanted.
When the curtain rang down for the last time he let his
dresser lead him away. He was always a little bit drunk at
the end of a performance; dancing was a joyous intoxication
even in rehearsal, but to have an audience lifting him,
carrying him along, applauding him - He never grew jaded
to it. It was always new and heartbreakingly wonderful.
'This way, chief. Give us a little smile.' The flash bulb flared.
'Thanks.'
'Thank'you. Have a drink.' He motioned towards one end of
his dressing room. They were all such nice fellows, such grand
guys - the reporters, the photographers - all of them.
'How about one standing up?' He started to comply, but his
dresser, busy with one slipper, warned him:
'You operate in half an hour.'
'Operate?' the news photographer said. 'What's it this time?'
'A left cerebrectomy,' he answered.
'Yeah? How about covering it?'
'Glad to have you - if the hospital doesn't mind.'
'We'll fix that.'
Such grand guys.
'-trying to get a little different angle on a feature article.'
It was a feminine voice, near his ear. He looked around hastily,
slightly confused. 'For example, what made you decide to take
up dancing as a career?'
'I'm sorry,' he apologized. 'I didn't hear you. I'm afraid it's
pretty noisy in here.'
'I said, why did you decide to take up dancing?'
'Well, now, I don't quite know how to answer that. I'm afraid

we would have to go back quite a way-'

James Stevens scowled at his assistant engineer. 'What have you got to look happy about?' he demanded.
'It's just the shape of my face,' his assistant apologized.
'Try laughing at this one: there's been another crash.'
'Oh, cripes! Don't tell me, let me guess. Passenger or freight?'
'A Climax duo-freighter on the Chicago-Salt Lake shuttle, just west of North Platte. And, chief-'
'Yes?'
'The Big Boy wants to see you.'
'That's interesting. That's very, very interesting. Mac-'
'Yeah, chief.'
'How would you like to be Chief Traffic Engineer of North American Power-Air? I hear there's going to be a vacancy.'
Mac scratched his nose. 'Funny that you should mention that, chief. I was just going to ask you what kind of a recommendation you could give me in case I went back into civil engineering. Ought to be worth something to you to get rid of me.'
'I'll get rid of you - right now. You bust out to Nebraska, find that heap before the souvenir hunters tear it apart, and bring back its deKalbs and its control board.'
'Trouble with cops, maybe?'
'You figure it out. Just be sure you come back.'
"With my slipstick, or on it."
Stevens's office was located immediately adjacent to the zone power plant; the business offices of North American were located in a hill, a good three quarters of a mile away. There was the usual inter-connecting tunnel; Stevens entered it and deliberately chose the low-speed slide in order to have more time to think before facing the boss. By the time he arrived he had made up his mind, but he did not like the answer.
The Big Boy, Stanley F. Gleason, Chairman of the Board greeted him quietly. 'Come in, Jim. Sit down. Have a cigar.'
Stevens slid into a chair, declined the cigar and pulled out a cigarette, which he lit while looking around. Besides the chief and himself, there were present Harkness, head of the legal staff, Dr Rambeau, Stevens's opposite number for research, and Striebel, the chief engineer for city power. Us five and no more, he thought grimly- All the heavy-weights and none of the middleweights. Heads will roll!- Starting with mine.
'Well,' he said, almost belligerently, 'we're all here. Who's

got the cards? Do we cut for deal?'
Harkness looked faintly distressed by the impropriety;
Rambeau seemed too sunk in some personal gloom to pay
any attention to wisecracks in bad taste. Gleason ignored it.
'We've been trying to figure a way out of our troubles,
James.
I left word for you on the chance that you might not have left.'
'I stopped by simply to see if I had any personal mail,'
Stevens said bitterly. 'Otherwise I'd be on the beach at Miami,
turning sunshine into vitamin D.'
'I know,' said Gleason, 'and I'm sorry. You deserve that
vacation, Jimmie. But the situation has gotten worse instead
of better. Any ideas?'
'What does Dr Rambeau say?'
Rambeau looked up momentarily. 'The deKalb receptors can't fail,'
he stated.
'But they do.
"They can't. You've operated them improperly.' He sunk back
into his personal prison.
Stevens turned back to Gleason and spread his hands. 'So far
as I know, Dr Rambeau is right, but if the fault lies in the
engineering department, I haven't been able to locate it.
You can have my resignation.'
'I don't want your resignation,' Gleason said gently. 'What I
want is results. We have a responsibility to the public.'
'And to the stockholders,' Harkness put in.
'That will take care of itself if we solve the other,' Gleason
observed. 'How about it, Jimmie? Any suggestions?'
Stevens bit his lip. 'Just one,' he announced, 'and one I don't
like to make. Then I look for a job peddling magazine
subscriptions.'
'So? Well, what is it?'
'We've got to consult Waldo.'
Rambeau suddenly snapped out of his apathy. 'What! That
charlatan? This is a matter of science.'
Harkness said, 'Really, Dr Stevens-'
Gleason held up a hand. 'Dr Stevens's suggestion is logicaL
But I'm afraid it's a little late, Jimmie. I talked with him last week.'
Harkness looked surprised; Stevens looked annoyed as well.
'Without letting me know?'
'Sorry, Jimmie. I was just feeling him out. But it's no good.
His terms, to us, amount to confiscation.'
'Still sore over the Hathaway patents?'
'Still nursing his grudge.'
'You should have let me handle the matter,' Harkness put in.
'He can't do this to us - There is public interest involved.

Retain him, if need be, and let the fee be adjudicated in equity. I'll arrange the details.'
'I'm afraid you would,' Gleason said dryly. 'Do you think a court order will make a hen lay an egg?'
Harkness looked indignant, but shut up.
Stevens continued, 'I would not have suggested going to Waldo if I had not had an idea as to how to approach him. I know a friend of his-'
'A friend of Waldo? I didn't know he had any.'
'This man is sort of an uncle to him, his first physician. With his help I might get on Waldo's good side.'
Dr Rambeau stood up. 'This is intolerable,' he announced. 'I must ask you to excuse me.' He did not wait for an answer, but strode out, hardly giving the door time to open in front of him.
Gleason followed his departure with worried eyes. 'Why does he take it so hard, Jimmie? You would think he hated Waldo personally.'
'Probably he does, in a way. But it's more than that; his whole universe is toppling. For the last twenty years, ever since Pryor's reformulation of the General Field Theory did away with Heisenberg's Uncertainty Principle, physics has been considered an exact science. The power failures and transmission failures we have been suffering are a terrific nuisance to you and to me, but to Dr Rambeau they amount to an attack on his faith. Better keep an eye on him.'
'Why?'
'Because he might come unstuck entirely. It's a pretty serious matter for a man's religion to fail him.'
'Hm-m-m. How about yourself? Doesn't it hit you just as hard?'
'Not quite. I'm an engineer- From Rambeau's point of view just a high-priced tinker. Difference in orientation. Not but what I'm pretty upset.'
The audio circuit of the communicator on Gleason's desk came to life. 'Calling Chief Engineer Stevens - calling Chief Engineer Stevens.' Gleason flipped the tab.
'He's here. Go ahead.'
'Company code, translated. Message follows: "Cracked up four miles north of Cincinnati. Shall I go on to Nebraska, or bring in the you-know-what from my own crate?" Message ends. Signed "Mac".'
'Tell him to walk back!' Stevens said savagely.
'Very well, sir.' The instrument cut off.
'Your assistant?' asked Gleason.
'Yes. That's about the last straw, chief. Shall I wait and try to analyse this failure, or shall I try to see Waldo?'

'Try to see Waldo.'
'OK. If you don't hear from me, just send my severance pay care of Palmdale Inn, Miami. I'll be the fourth beachcomber from the right.'
Gleason permitted himself an unhappy smile. 'If you don't get results, I'll bç the fifth. Good luck.'
'So long.'
When Stevens had gone, Chief Stationary Engineer Striebel spoke up for the first time. 'If the power to the cities fails,' he said softly, 'you know where I'll be, don't you?'
'Where? Beachcomber number six?'
'Not likely. I'll be number one in my spot, first man to be lynched.'
'But the power to the cities can't fail. You've got too many cross-connects and safety devices.'
'Neither can the deKalbs fail, supposedly. Just the same, think about Sublevel 7 in Pittsburgh, with the lights out. Or, rather, don't think about it!'

Doc Grimes let himself into the aboveground access which led into his home, glanced at the announcer, and noted with mild, warm interest that someone close enough to him to possess his house combination was inside. He moved ponderously downstairs, favouring his game leg, and entered the lounging room.
'Hi, Doc!' James Stevens got up when the door snapped open and came forward to greet him.
'H'lo, James. Pour yourself a drink. I see you have. Pour me one.'
'Right.'
While his friend complied, Grimes shucked himself out of the outlandish anachronistic greatcoat he was wearing and threw it more or less in the direction of the robing alcove. It hit the floor heavily, much more heavily than its appearance justified, despite its unwieldy bulk. It clunked.
Stooping, he peeled off thick overtrousers as massive as the coat. He was dressed underneath in conventional business tights in blue and sable. It was not a style that suited him. To an eye unsophisticated in matters of civilized dress, let us say the mythical Man-from-Antares - he might have seemed uncouth, even unsightly. He looked a good bit like an elderly fat beetle.
James Stevens's eye made no note of the tights, but he looked with disapproval on the garments which had just been discarded.
'Still wearing that fool armour,' he commented.
'Certainly.'
'Damn it, Doc - you'll make yourself sick, carrying that junk around. It's unhealthy.'

'Danged sight sicker if I don't.'
'Rats! 1 don't get sick, and I don't wear armour - outside the lab.'
'You should.' Grimes walked over to where Stevens had reseated himself. 'Cross your knees.' Stevens complied; Grimes struck him smartly below the kneecap with the edge of his palm. The reflex jerk was barely perceptible. 'Lousy,' he remarked, then peeled back his friend's right eyelid.
'You're in poor shape,' he added after a moment. Stevens drew away impatiently. 'i'm all right. It's you we're talking about.'
'What about me?'
'Well- Damnation, Doc, you're throwing away your reputation. They talk about you.'
Grimes nodded. 'I know. "Poor old Gus Grimes - a slight touch of cerebral termites." Don't worry about my reputation; I've always been out of step. What's your fatigue index?'
'I don't know. It's all right.'
'It is, eh? I'll wrestle you, two falls out of three.' Stevens rubbed his eyes. 'Don't needle me, Doc. I'm rundown. I know that, but it isn't anything but overwork.'
'Humph! James, you are a fair-to-middlin' radiation physicist - 'Engineer.'
'-engineer. But you're no medical man. You can't expect to pour every sort of radiant energy through the human system year after year and not pay for it. It wasn't designed to stand it.'
'But I wear armour in the lab. You know that.'
'Surely. And how about outside the lab?'
'But- Look, Doc - I hate to say it, but your whole thesis is ridiculous. Sure there is radiant energy in the air these days, but nothing harmful. All the colloidal chemists agree-'
'Colloidal, fiddlesticks!'
'But you've got to admit that biological economy is a matter of colloidal chemistry.'
'I've got to admit nothing. I'm not contending that colloids are not the fabric of living tissue- They are. But I've maintained for forty years that it was dangerous to expose living tissue to assorted radiation without being sure of the effect. From an evolutionary standpoint the human animal is habituated to and adapted to only the natural radiation of the sun, and he can't stand that any too well, even under a thick blanket of ionization. Without that blanket- Did you ever see a solar-X type cancer?'
'Of course not.'
'No, you're too young. I have. Assisted at the autopsy of one, when I was an intern. Chap was on the Second Venus Expedition. Four hundred and thirty-eight cancers we counted in him, then gave up.'
'Solar-X is whipped.'
'Sure it is. But it ought to be a warning. You bright young squirts can cook up things in your labs that we medicos can't begin to

cope with. We're behind - bound to be. We usually don't know what's happened until the damage is done. This time you've torn it.'
He sat down heavily and suddenly looked as tired and whipped as did his younger friend.
Stevens felt the sort of tongue-tied embarrassment a man may feel when a dearly beloved friend falls in love with an utterly worthless person. He wondered what he could say that would not seem rude. He changed the subject. 'Doc, I came over because I had a couple of things on my mind-'
'Such as?'
'Well, a vacation for one. I know I'm run-down. I've been overworked, and a vacation seems in order. The other is your pal, Waldo.'
'Huh?'
'Yeah. Waldo Farthingwaite-Jones, bless his stiff-necked, bad-tempered heart.'
'Why Waldo? You haven't suddenly acquired an interest in myasthenia gravis, have you?'
'Well, no. I don't care what's wrong with him physically. He can have hives, dandruff, or the galloping never-get-overs, for all I care. I hope he has. What I want is to pick his brains.'
'So?'
'I can't do it alone. Waldo doesn't help people; he uses them. You're his only normal contact with people.'
'That is not entirely true-'
'Who else?'
'You misunderstand me. He has no normal contacts. I am simply the only person who dares to be rude to him.'
'But I thought- Never mind. D'you know, this is an inconvenient setup? Waldo is the man we've got to have. Why should it come about that a genius of his calibre should be so unapproachable, so immune to ordinary social demands? Oh, I know his disease has a lot to do with it, but why should this man have this disease? It's an improbable coincidence.'
'It's not a matter of his infirmity,' Grimes told him. 'Or, rather, not in the way you put it. His weakness is his genius, in a way-'
'Huh?'
'Well-' Grimes turned his sight inward, let his mind roam back over his long association, lifelong, for Waldo, with this particular patient. He remembered his subliminal misgivings when he delivered the child. The infant had been sound enough, superficially, except for a slight blueness. But then lots of babies were somewhat cyanotic in the delivery room. Nevertheless, he had felt a slight reluctance to give it the tunk on the bottom, the slap which would shock it into taking its first lungful of air.

But he had squelched his own feelings, performed the necessary 'laying on of hands', and the freshly born human had declared its independence with a satisfactory squall. There was nothing else he could have done; he was a young GP then, who took his Hippocratic oath seriously. He still took it seriously, he supposed, even though he sometimes referred to it as the 'hypocritical' oath. Still, he had been right in his feelings; there had been something rotten about that child, something that was not entirely myasthenia gravis.He had felt sorry for the child at first, as well as having an irrational feeling of responsibility for its condition. Pathological muscular weakness is an almost totally crippling condition, since the patient has no unaffected limbs to retrain into substitutes. There the victim must lie, all organs, limbs, and functions present, yet so pitifully, completely weak as to be unable to perform any normal action. He must spend his life in a condition of exhausted collapse, such as you or I might reach at the finish line of a gruelling cross-country run. No help for him, and no relief.
During Waldo's childhood he had hoped constantly that the child would die, since he was so obviously destined for tragic uselessness, while simultaneously, as a physician, doing everything within his own skill and the skills of numberless consulting specialists to keep the child alive and cure it.
Naturally, Waldo could not attend school; Grimes ferreted out sympathetic tutors. He could indulge in no normal play; Grimes invented sickbed games which would not only stimulate Waldo's imagination but encourage him to use his flabby muscles to the full, weak extent of which he was capable.
Grimes had been afraid that the handicapped child, since it was not subjected to the usual maturing stresses of growing up, would remain infantile. He knew now, had known for a long time, that he need not have worried. Young Waldo grasped at what little life was offered him, learned thirstily, tried with a sweating tenseness of will to force his undisciplined muscles to serve him.
He was clever in thinking of dodges whereby to circumvent his muscular weakness. At seven he devised a method of controlling a spoon with two hands, which permitted him, painfully, to feed himself. His first mechanical invention was made at ten.
It was a gadget which held a book for him, at any angle, controlled lighting for the book, and turned its pages. The gadget responded to fingertip pressure on a simple control panel. Naturally, Waldo could not build it himself, but he could conceive it, and explain it; the Farthingwaite-Joneses could well afford the services of a designing engineer to build the child's conception.
Grimes was inclined to consider this incident, in which the child Waldo acted in a role of intellectual domination over a trained mature adult neither blood relation nor servant, as a landmark in the psychological

process whereby Waldo eventually came to regard the entire human race as his servants, his hands, present or potential.

'What's eating you, Doc?'

'Eh? Sorry, I was daydreaming. See here, son - you mustn't be too harsh on Waldo. I don't like him myself. But you must take him as a whole.'

'You take him.'

'Shush. You spoke of needing his genius. He wouldn't have been a genius if he had not been crippled. You didn't know his parents. They were good stock, fine, intelligent people, but nothing spectacular. Waldo's potentialities weren't any greater than theirs, but he had to do more with them to accomplish anything. He had to do everything the hard way. He had to be clever.

'Sure. Sure, but why should he be so utterly poisonous? Most big men aren't.'

'Use your head. To get anywhere in his condition he had to develop a will, a driving one-track mind, with a total disregard for any other considerations. What would you expect him to be but stinking selfish?'

'I'd- Well, never mind. We need him and that's that.'

'Why?'

Stevens explained.

It may plausibly be urged that the shape of a culture, its mores, evaluations, family organization, eating habits, living patterns, pedagogical methods, institutions, forms of government, and so forth, arise from the economic necessities of its technology. Even though the thesis be too broad and much oversimplified, it is nonetheless true that much which characterized the long peace which followed the constitutional establishrnent of the United Nations grew out of the technologies which were hot-house-forced by the needs of the belligerents in the war of the forties. Up to that time broadcast and beam-cast were used only for commercial radio, with rare exceptions. Even telephony was done almost entirely by actual metallic connexion from one instrument to another. If a man in Monterey wished to speak to his wife or partner in Boston, a physical, copper neuron stretched bodily across the continent from one to the other.

Radiant power was then a hop dream, found in Sunday supplements and comic books.

A concatenation, no, a meshwork of new developments was necessary before the web of copper covering the continent could be dispensed with. Power could not be broadcast economically; it was necessary to wait for the co-axial beam, a direct result of the imperative military shortages of the Great War. Radio telephony could not replace wired telephony until ultra micro-wave techniques made room in the ether, so to speak, for the traffic load. Even then it was necessary to invent a tuning device which could be used by a nontechnical person, a ten-year-old child, let us say ,as easily as the dial selector which was characteristic of the commercial wired telephone of the era then terminating.

Bell Laboratories cracked that problem; the solution led directly to the radiant power receptor, domestic type, keyed, sealed, and metered. The way was open for commercial radio power transmission, except in one respect: efficiency. Aviation waited on the development of the Otto-cycle engine; the Industrial Revolution waited on the steam engine; radiant power waited on a really cheap, plentiful power source. Since radiation of power is inherently wasteful, it was necessary to have power cheap and plentiful enough to waste.

The same war brought atomic energy. The physicists working for the United States Army, the United States of North America had its own army then, produced a superexplosive; the notebooks recording their tests contained, when properly correlated, everything necessary to produce almost any other sort of nuclear reaction, even the so-called Solar Phoenix, the hydrogen-helium cycle, which is the source of the sun's power.

The reaction whereby copper is broken down into phosphorus, silicon29, and helium8, plus degenerating chain reactions, was one of the several cheap and convenient means developed for producing unlimited and practically free power.

Radiant power became economically feasible, and inevitable.

Of course Stevens included none of this in his explanation to Grimes. Grimes was absent-mindedly aware of the whole dynamic process; he had seen radiant power grow up, just as his grandfather had seen the development of aviation. He had seen the great transmission lines removed from the sky -'mined' for their copper; he had seen the heavy cables being torn from the dug-up streets of Manhattan. He might even recall his first independent-unit radiotelephone with its somewhat disconcerting double dial. He had gotten a lawyer in Buenos Aires on it when attempting to reach his neighbourhood delicatessen. For two weeks he made all his local calls by having them relayed back from South America before he discovered that it made a difference which dial he used first.

At that time Grimes had not yet succumbed to the new style in architecture. The London Plan did not appeal to him; he liked a house aboveground, where he could see it. When it became necessary to increase the floor space in his offices, he finally gave in and went subsurface, not so much for the cheapness, convenience, and general all-around practicability of living in a tri-conditioned cave, but because he had already become a little worried about the possible consequences of radiation pouring through the human body. The fused-earth walls of his new residence were covered with lead; the roof of the cave had a double thickness. His hole in the ground was as near radiation-proof as he could make it.

'-the meat of the matter,' Stevens was saying, 'is that the delivery of power to transportation units has become erratic

as the devil. Not enough yet to tie up traffic, but enough to be very disconcerting. There have been some nasty accidents; we can't keep hushing them up forever. I've got to do something about it.'
'Why?'
"Why?" Don't be silly. In the first place as traffic engineer for NAPA my bread and butter depends on it. In the second place the problem is upsetting in itself. A properly designed piece of mechanism ought to work - all the time, every time. These don't, and we can't find out why not. Our staff mathematical physicists have about reached the babbling stage.'
Grimes shrugged. Stevens felt annoyed by the gesture.
'I don't think you appreciate the importance of this problem, Doc. Have you any idea of the amount of horsepower involved in transportation? Counting both private and commercial vehicles and common carriers, North American Power-Air supplies more than half the energy used in this continent. We have to be right. You can add to that our city-power affiliate. No trouble there, yet. But we don't dare think what a city-power breakdown would mean.'
'I'll give you a solution.'
'Yeah? Well, give.'
'Junk it. Go back to oil-powered and steam-powered vehicles. Get rid of these damned radiant-powered deathtraps.'
'Utterly impossible. You don't know what you're saying. It took more than fifteen years to make the change-over. Now we're geared to it. Gus, if NAPA closed up shop, half the population of the northwest seaboard would starve, to say nothing of the lake states and the Philly-Boston axis.'
'Hrrmph- Well, all I've got to say is that that might be better than the slow poisoning that is going on now.'
Stevens brushed it away impatiently. 'Look, Doc, nurse a bee in your bonnet if you like, but don't ask me to figure it into my calculations. Nobody else sees any danger in radiant power.'
Grimes answered mildly. 'Point is, son, they aren't looking in the right place. Do you know what the high-jump record was last year?'
'I never listen to the sports news.'
'Might try it sometime. The record levelled off at seven foot two, 'bout twenty years back. Been dropping ever since. You might try graphing

athletic records against radiation in the air - artificial radiation. Might find some results that would surprise you.'
'Shucks, everybody knows there has been a swing away from heavy sports. The sweat-and-muscles fad died out, that's all. We've simply advanced into a more intellectual culture.'
'Intellectual, hogwash! People quit playing tennis and such because they are tired all the time. Look at you. You're a mess.'
'Don't needle me, Doc.'
'Sorry. But there has been a clear deterioration in the performance of the human animal. If we had decent records on such things I could prove it, but any physician who's worth his salt can see it, if he's got eyes in him and isn't wedded to a lot of fancy instruments. I can't prove what causes it, not yet, but I've a damned good hunch that it's caused by the stuff you peddle.'
'Impossible. There isn't a radiation put on the air that hasn't been tested very carefully in the bio labs. We're neither fools nor knaves.
'Maybe you don't test 'em long enough. I'm not talking about a few hours, or a few weeks; I'm talking about the cumulative effects of years of radiant frequencies pouring through the tissues. What does that do?'
'Why, nothing-I believe.'
'You believe, but you don't know. Nobody has ever tried to find out. F'rinstance - what effect does sunlight have on silicate glass? Ordinarily you would say "none", but you've seen desert glass?'
'That bluish-lavender stuff? Of course.'
'Yes. A bottle turns coloured in a few months in the Mojave Desert. But have you ever seen the windowpanes in the old houses on Beacon Hill?'
'I've never been on Beacon Hill.'
'OK, then I'll tell you. Same phenomena, only it takes a century more, in Boston. Now tell me, you savvy physics - could you measure the change taking place in those Beacon Hill windows?'
'Mm-rn-in - probably not.'
'But it's going on just the same. Has anyone ever tried to measure the changes produced in human tissue by thirty years of exposure to ultra short -wave radiation?'

'No, but-'
'No "buts". I see an effect. I've made a wild guess at a cause. Maybe I'm wrong. But I've felt a lot more spry since I've taken to invariably wearing my lead overcoat whenever I go out.'
Stevens surrendered the argument. 'Maybe you're right, Doc. I won't fuss with you. How about Waldo? Will you take me to him and help me handle him?'
'When do you want to go?'
'The sooner the better.'
'Now?'
'Suits.'
'Call your office.'
'Are you ready to leave right now? It would suit me. As far as the front office is concerned, I'm on vacation; nevertheless, I've got this on my mind. I want to get at it.'
'Quit talking and git.'
They went topside to where their cars were parked. Grimes headed towards his, a big-bodied, old-fashioned Boeing family landau. Stevens checked him.
'You aren't planning to go in that? It 'u'd take us the rest of the day.'
"Why not? She's got an auxiliary space drive, and she's tight. You could fly from here to the Moon and back.'
'Yes, but she's so infernal slow. We'll use my "broomstick".
Grimes let his eyes run over his friend's fusiformed little speedster. Its body was as nearly invisible as the plastic industry could achieve. A surface layer, two molecules thick, gave it a refractive index sensibly identical with that of air. When perfectly clean it was very difficult to see. At the moment it had picked up enough casual dust and water vapour to be faintly seen - a ghost of a soap bubble of a ship.
Running down the middle, clearly visible through the walls, was the only metal part of the ship - the shaft, or, more properly, the axis core, and the spreading sheaf of deKalb receptors at its terminus. The appearance was enough like a giant witch's broom to justify the nickname. Since the saddles, of transparent plastic, were mounted tandem oven the shaft so that the metal rod passed between the legs of the pilot and passengers, the nickname was doubly apt.
'Son,' Grimes remarked, 'I know I ain't pretty, nor am I graceful. Nevertheless, I retain a certain residuum of self-respect and some shreds of dignity. I am not going to tuck that thing between my shanks and go scooting

through the air on it.
'Oh, rats! You're old-fashioned.'
'I may be. Nevertheless, any peculiarities I have managed to retain to my present age I plan to hang on to. No.'
'Look - I'll polarize the hull before we raise. How about it?'
'Opaque?'
'Opaque.'
Grimes slid a regretful glance at his own frumpish boat, but assented by fumbling for the barely visible port of the speedster. Stevens assisted him; they climbed in and straddled the stick.
'Atta boy, Doc,' Stevens commended, 'I'll have you there in three shakes. That tub of yours probably won't do over five hundred, and Wheelchair must be all of twenty-five thousand miles up.'
'I'm never in a hurry,' Grimes commented, 'and don't call Waldo's house "Wheelchair" - not to his face.'
'I'll remember,' Stevens promised. He fumbled, apparently in empty air; the hull suddenly became dead black, concealing them. It changed as suddenly to mirror bright; the car quivered, then shot up out of sight.

Waldo F. Jones seemed to be floating in thin air at the centre of a spherical room. The appearance was caused by the fact that he was indeed floating in air. His house lay in a free orbit, with a period of just over twenty-four hours. No spin had been impressed on his home; the pseudo gravity of centrifugal force was the thing he wanted least. He had left Earth to get away from its gravitational field; he had not been down to the surface once in the seventeen years since his house was built and towed into her orbit; he never intended to do so for any purpose whatsoever.
Here, floating free in space in his own air-conditioned shell, he was almost free of the unbearable lifelong slavery to his impotent muscles. What little strength he had he could spend economically, in movement, rather than in fighting against the tearing, tiring weight of the Earth's thick field.
Waldo had been acutely interested in space flight since early boyhood, not from any desire to explore the depths, but because his boyish, overtrained mind had seen the enormous advantage, to him, in weightlessness. While still in his teens he had helped the early experimenters in space flight over a hump by supplying them with a control system which a pilot could handle delicately while under the strain of two or three gravities.

Such an invention was no trouble at all to him; he had simply adapted manipulating devices which he himself used in combating the overpowering weight of one gravity. The first successful and safe rocket ship contained relays which had once aided Waldo in moving himself from bed to wheelchair. The deceleration tanks, which are now standard equipment for the lunar mail ships, traced their parentage to a flotation tank in which Waldo habitually had eaten and slept up to the time when he left the home of his parents for his present, somewhat unique home. Most of his basic inventions had originally been conceived for his personal convenience, and only later adapted for commercial exploitation. Even the ubiquitous and grotesquely humanoid gadgets known universally as 'waldocs' - Waldo F. Jones's Synchronous Reduplicating Pantograph, Pat #296,001,437, new series, et al - passed through several generations of development and private use in Waldo's machine shop before he redesigned them for mass production. The first of them, a primitive gadget compared with the waldoes now to be found in every shop, factory, plant, and warehouse in the country, had been designed to enable Waldo to operate a metal lathe.

Waldo had resented the nickname the public had fastened on them-.I It struck him as overly familiar, but he had coldly recognized the business advantage to himself in having the public identify him verbally with a gadget so useful and important.

When the newscasters tagged his spacehouse 'Wheelchair', one might have expected him to regard it as more useful publicity. That he did not so regard it, that he resented it and tried to put a stop to it, arose from another and peculiarly Waldo-ish fact: Waldo did not think of himself as a cripple.

He saw himself not as a crippled human being, but as something higher than human, the next step up, a being so superior as not to need the coarse, brutal strength of the smooth apes. Hairy apes, smooth apes, then Waldo - so the progression ran in his mind. A chimpanzee, with muscles that hardly bulge at all, can tug as high as fifteen hundred pounds with one hand. This Waldo had proved by obtaining one and patiently enraging it into full effort. A well-developed man can grip one hundred and fifty pounds with one hand. Waldo's own grip, straining until the sweat sprang out, had never reached fifteen pounds.

Whether the obvious inference were fallacious or true, Waldo believed in it, evaluated by it. Men were overmuscled canaille,

smooth chimps. He felt himself at least ten times superior to them.

He had much to go on.

Though floating in air, he was busy, quite busy. Although be never went to the surface of the Earth his business was there. Aside from managing his many properties he was in regular practice as a consulting engineer, specializing in motion analysis. Hanging close to him in the room were the paraphernalia necessary to the practice of his profession.

Facing him was a four-by-five colour-stereo television receptor. Two sets of coordinates, rectilinear and polar, crosshatched it. Another smaller receptor hung above it and to the right. Both receptors were fully recording, by means of parallel circuits conveniently out of the way in another compartment.

The smaller receptor showed the faces of two men watching him. The larger showed a scene inside a large shop, hangar-like in its proportions. In the immediate foreground, almost full size, was a grinder in which was being machined a large casting of some sort. A workman stood beside it, a look of controlled exasperation on his face.

'He's the best you've got,' Waldo stated to the two men in the smaller screen. 'To be sure, he is clumsy and does not have the touch for fine work, but he is superior to the other morons you call machinists.'

The workman looked around, as if trying to locate the voice. It was evident that he could hear Waldo, but that no vision receptor had been provided for him.

'Did you mean that crack for me?' he said harshly.

'You misunderstand me, my good man,' Waldo said sweetly. 'I was complimenting you. I actually have hopes of being able to teach you the rudiments of precision work. Then we shall expect you to teach those butter-brained oafs around you. The gloves, please.'

Near the man, mounted on the usual stand, were a pair of primary waldoes, elbow length and human digited. They were floating on the line, in parallel with a similar pair physically in front of Waldo. The secondary waldoes, whose actions could be controlled by Waldo himself by means of his primaries, were mounted in front of the power tool in the position of the operator.

Waldo's remark had referred to the primaries near the workman. The machinist glanced at them, but made no move to insert his arms in them. 'I don't take no orders from nobody I can't see,' he said flatly. He looked sideways out of the scene as he spoke.

'Now, Jenkins,' commenced one of the two men in the smaller screen.

Waldo sighed. 'I really haven't the time or the inclination to solve your problems of shop discipline. Gentlemen, please turn

your pickup, so that our petulant friend may see me.'
The change was accomplished; the workman's face appeared in the background of the smaller of Waldo's screens, as well as in the larger.
'There - is that better?' Waldo said gently. The workman grunted.
'Now.. . your name, please?'
'Alexander Jenkins.'
'Very well, friend Alec - the gloves.'
Jenkins thrust his arms into the waldoes and waited. Waldo put his arms into the primary pair before him; all three pairs, including the secondary pair mounted before the machine, came to life. Jenkins bit his lip, as if he found unpleasant the sensation of having his fingers manipulated by the gauntlets he wore.
Waldo flexed and extended his fingers gently; the two pairs of waldoes in the screen followed in exact, simultaneous paral -lelism.
'Feel it, my dear Alec,' Waldo advised. 'Gently, gently- the sensitive touch. Make your muscles work for you.'
He then started hand movements of definite pattern; the waldoes at the power tool reached up, switched on the power, and began gently, gracefully, to continue the machining of the casting. A mechanical hand reached down, adjusting a vernier, while the other increased the flow of oil cooling the cutting edge. 'Rhythm, Alec, rhythm. No jerkiness, no unnecessary movement. Try to get in time with me.'
The casting took shape with deceptive rapidity, disclosed what it was - the bonnet piece for an ordinary three-way nurse. The chucks drew back from it; it dropped to the belt beneath, and another rough casting took its place.
Waldo continued with unhurried skill, his finger motions within his waldoes exerting pressure which would need to be measured in fractions of ounces, but the two sets of waldoes, paralleled to him thousands of miles below, followed his motions accurately and with force appropriate to heavy work at hand.
Another casting landed on the belt - several more. Jenkins, although not called upon to do any work in his proper person, tired under the strain of attempting to anticipate and match Waldo's motions. Sweat dripped down his forehead, ran off his nose, accumulated on his chin. Between castings he suddenly withdrew his arms from the paralleled primaries.
'That's enough,' he announced.
'One more, Alec. You are improving.'
'No!' He turned as if to walk off. Waldo made a sudden movement - so sudden as to strain him, even in his weight-

free environment. One steel hand of the secondary waldoes lashed out, grasped Jenkins by the wrist.
'Not so fast, Alec.'
'Let go of me!'
'Softly, Alec, softly. You'll do as you are told, won't you?'
The steel hand clamped down hard, twisted. Waldo had exerted all of two ounces of pressure.
Jenkins grunted. The one remaining spectator - one had left soon after the lesson started - said, 'Oh, I say, Mr Jones!'
'Let him obey, or fire him. You know the terms of my contract.'
There was a sudden cessation of stereo and sound, cut from the Earth end. It came back on a few seconds later.
Jenkins was surly, but no longer recalcitrant. Waldo continued as if nothing had happened. 'Once more, my dear Alec.'
When the repetition had been completed, Waldo directed, 'Twenty times, wearing the wrist and elbow lights with the chronanalyser in the picture. I shall expect the superposed strips to match, Alec.' He cut off the larger screen without further words and turned to the watcher in the smaller screen. 'Same time tomorrow, McNye. Progress is satisfactory. In time we'll turn this madhouse of yours into a modern plant.' He cleared that screen without saying goodbye.
Waldo terminated the business interview somewhat hastily, because he had been following with one eye certain announcements on his own local information board. A craft was approaching his house. Nothing strange about that; tourists were forever approaching and being pushed away by his auto-guardian circuit. But this craft had the approach signal, was now clamping to his threshold flat. It was a broomstick, but he could not place the licence number. Florida licence. Whom did he know with a Florida licence? He immediately realized that he knew no one who possessed his approach signal - that list was very short - and who could also reasonably be expected to sport a Florida licence. The suspicious defensiveness with which he regarded the entire world asserted itself; he cut in the circuit whereby he could control by means of his primary waldoes the strictly illegal but highly lethal inner defences of his home. The craft was opaqued; he did not like that.
A youngish man wormed his way out. Waldo looked him over. A stranger - face vaguely familiar perhaps. An ounce of pressure in the primaries and the face would cease to be a face, but Waldo's actions were under cold cortical control; he held his fire. The man turned, as if to assist another passenger. Yes, there was another.

Uncle Gus! - but the doddering old fool had brought a stranger with him. He knew better than that. He knew how Waldo felt about strangers!

Nevertheless, he released the outer lock of the reception room and let them in.

Gus Grimes snaked his way through the lock, pulling himself from one handrail to the next, and panting a little as he always did when forced to move weight free. Matter of diaphragm control, he told himself as he always did; can't be the exertion. Stevens streaked in after him, displaying a groundhog's harmless pride in handling himself well in space conditions. Grimes arrested himself just inside the reception room, grunted, and spoke to a mansized dummy waiting there.

'Hello, Waldo.'

The dummy turned its eyes and head slightly.

'Greetings, Uncle Gus. I do wish you would remember to phone before dropping in. I would have had your special dinner ready.'

'Never mind. We may not be here that long. Waldo, this is my friend, Jimmie Stevens.'

The dummy faced Stevens. 'How do you do, Mr Stevens,' the voice said formally. 'Welcome to Freehold.'

'How do you do, Mr Jones,' Stevens replied, and eyed the dummy curiously. It was really surprisingly lifelike; he had been taken in by it at first.

A 'reasonable facsimile'. Come to think of it, he had heard of this dummy. Except in vision screen few had seen Waldo in his own person. Those who had business at Wheelchair - 'Freehold', he must remember that - those who had business at Freehold heard a voice and saw this simulacrum.

'But you must stay for dinner, Uncle Gus,' Waldo continued. 'You can't run out on me like that; you don't come often enough for that. I can stir something up.'

'Maybe we will,' Grimes admitted. 'Don't worry about the menu. You know me. I can eat a turtle with the shell.'

It had really been a bright idea, Stevens congratulated himself, to get Doc Grimes to bring him. Not here five minutes and Waldo was insisting on them staying for dinner. Good omen!

He had not noticed that Waldo had addressed the invitation to Grimes alone, and that it had been

Grimes who had assumed the invitation to be for both of them.
'Where are you, Waldo?' Grimes continued. 'In the lab?' He made a tentative movement, as if to leave the reception room.
'Oh, don't bother,' Waldo said hastily. 'I'm sure you will be more comfortable where you are. Just a moment and I will put some spin on the room so that you may sit down.'
'What's eating you, Waldo?' Grimes said testily. 'You know I don't insist on weight. And I don't care for the company of your talking doll. I want to see you.'
Stevens was a little surprised by the older man's insistence; he had thought it considerate of Waldo to offer to supply acceleration. Weightlessness put him a little on edge.
Waldo was silent for an uncomfortable period. At last he said frigidly, 'Really, Uncle Gus, what you ask is out of the question. You must be aware of that.'
Grimes did not answer him. Instead, he took Stevens's arm. 'Come on, Jimmie. We're leaving.'
'Why, Doc! What's the matter?'
'Waldo wants to play games. I don't play games.'
'But-'
'Ne' mind! Come along. Waldo, open the lock.'
'Uncle Gus!'
'Yes, Waldo?'
'Your guest - you vouch for him?'
'Naturally, you dumb fool, else I wouldn't have brought him.'
'You will find me in my workshop. The way is open.'
Grimes turned to Stevens. 'Come along, son.'
Stevens trailed after Grimes as one fish might follow another, while taking in with his eyes as much of Waldo's fabulous house as he could see. The place was certainly unique, he conceded to himself - unlike anything he had ever seen. It completely lacked up-and-down orientation. Space craft, even space stations, although always in free fall with respect to any but internally impressed accelerations, invariably are designed with up-and-down; the up-and-down axis of a ship is determined by the direction of its accelerating drive; the up-and down of a space station is determined by its

centrifugal spin. Some few police and military craft use more than one axis of acceleration; their up-and-down shifts, therefore, and their personnel, must be harnessed when the ship manoeuvres. Some space stations apply spin only to living quarters. Nevertheless, the rule is general; human beings are used to weight; all their artifacts have that assumption implicit in their construction - except Waldo's house.

It is hard for a groundhog to dismiss the notion of weight. We seem to be born with an instinct which demands it. If one thinks of a vessel in a free orbit around the Earth, one is inclined to think of the direction towards the Earth as 'down', to think of oneself as standing or sitting on that wall of the ship, using it as a floor. Such a concept is completely mistaken. To a person inside a freely falling body there is no sensation of weight whatsoever and no direction of up-and-down, except that which derives from the gravitatioiial field of the vessel itself. As for the latter, neither Waldo's house nor any space craft as yet built is massive enough to produce a field dense enough for the human body to notice it. Believe it or not, that is true. It takes a mass as gross as a good-sized planetoid to give the human body a feeling of weight.

It may be objected that a body in a free orbit around the Earth is not a freely falling body. The concept involved is human, Earth surface in type, and completely erroneous. Free flight, free fall, and free orbit are equivalent terms. The Moon falls constantly towards the Earth; the Earth falls constantly towards the Sun, but the sideways vector of their several motions prevents them from approaching their primaries. It is free fall nonetheless. Consult any ballistician or any astrophysicist.

Where there is free fall there is no sensation of weight. A gravitational field must be opposed to be detected by the human body.

Some of these considerations passed through Stevens's mind as he handwalked his way to Waldo's workshop. Waldo's home had been constructed without any consideration being given to up-and-down. Furniture and apparatus were affixed to any wall; there was no 'floor'. Decks and platforms were

arranged at any convenient angle and of any size or shape, since they had nothing to do with standing or walking. Properly speaking, they were bulkheads and working surfaces rather than decks. Furthermore, equipment was not necessarily placed close to such surfaces; frequently it was more convenient to locate it with space all around it, held in place by light guys or slender stanchions.

The furniture and equipment was all odd in design and frequently odd in purpose. Most furniture on Earth is extremely rugged, and at least 90 per cent of it has a single purpose - to oppose, in one way or another, the acceleration of gravity. Most of the furniture in an Earth-surface - or subsurface - house is stator machines intended to oppose gravity. All tables, chairs, beds, couches, clothing racks, shelves, drawers, et cetera, have that as their one purpose. All other furniture and equipment have it as a secondary purpose which strongly conditions design and strength.

The lack of need for the rugged strength necessary to all terrestrial equipment resulted in a fairylike grace in much of the equipment in Waldo's house. Stored supplies, massive in themselves, could be retained in convenient order by compartmentation of eggshell-thin transparent plastic. Ponderous machinery, which on Earth would necessarily be heavily cased and supported, was here either open to the air or covered by gossamer-like envelopes and held stationary by light elastic lines.

Everywhere were pairs of waldoes, large, small, and life-size, with vision pickups to match. It was evident that Waldo could make use of the compartments through which they were passing without stirring out of his easy chair -~ if he used an easy chair. The ubiquitous waldoes, the insubstantial quality of the furniture, and the casual use of all walls as work or storage surfaces, gave the place a madly fantastic air. Stevens felt as if he were caught in a Disney.

So far the rooms were not living quarters. Stevens wondered what Waldo's private apartments could be like and tried to visualize what equipment would be appropriate. No chairs, no rugs, no bed. Pictures, perhaps. Something pretty clever in the way of indirect lighting, since the eyes might be turned in any

direction.
Communication instruments might be much the same. But what could a washstand be like? Or a water tumbler? A trap bottle for the last - or would any container be necessary at all? He could not decide and realized that even a competent engineer may he confused in the face of mechanical conditions strange to him. What constitutes a good ashtray when there is no gravity to hold the debris in place? Did Waldo smoke? Suppose he played solitaire; how did he handle the cards? Magnetized cards, perhaps, and a magnetized playing surface.
'In through here, Jim.' Grimes steadied himself with one hand, gesturing with the other. Stevens slid through the manhole indicated. Before he had had time to look around he was startled by a menacing bass growl. He looked up; charging through the air straight at him was an enormous mastiff, lips drawn back, jaws slavering. Its front legs were spread out stiffly as if to balance in flight; its hind legs were drawn up under its lean belly. By voice and manner it announced clearly its intention of tearing the intruder into pieces, then swallowing the pieces.
'Baldur!' A voice cut through the air from some point beyond. The dog's ferocity wilted, but it could not check its lunge. A waldo snaked out a good thirty feet and grasped it by the collar. 'I am sorry, sir,' the voice added. 'My friend was not expecting you.'
Grimes said, 'Howdy, Baldur. How's your conduct?'
The dog looked at him, whined, and wagged his tail. Stevens looked for the source of the commanding voice, found it.
The room was huge and spherical; floating in its centre was a fat man - Waldo.
He was dressed conventionally enough in shorts and singlet, except that his feet were bare. His hands and forearms were covered by metallic gauntlets - primary waldoes. He was softly fat, with double chin, dimples, smooth skin; he looked like a great, pink cherub, floating attendance on a saint. But the eyes were not cherubic, and the forehead and skull were those of a man. He looked at Stevens. 'Permit me to introduce you to my pet,' he said in a high, tired voice. 'Give the paw, Baldur.'
The dog offered a foreleg, Stevens shook it gravely. 'Let him smell you, please.'
The dog did so, as the waldo at his collar permitted him to come closer. Satisfied, the animal bestowed a wet kiss on

Stevens's wrist. Stevens noted that the dog's eyes were surrounded by large circular patches of brown in contrast to his prevailing white, and mentally tagged it the Dog with Eyes as Large as Saucers, thinking of the tale of the soldier and the flint box. He made noises to it of 'Good boy!' and 'That's a nice old fellow!' while Waldo looked on with faint distaste.
'Heel, sir!' Waldo commanded when the ceremony was complete. The dog turned in mid air, braced a foot against Stevens's thigh, and shoved, projecting himself in the direction of his master. Stevens was forced to steady himself by clutching at a handgrip. Grimes shoved himself away from the manhole and arrested his flight on a stanchion near their host. Stevens followed him.
Waldo looked him over slowly. His manner was not overtly rude, but was somehow, to Stevens, faintly annoying. He felt a slow flush spreading out from his neck; to inhibit it he gave his attention to the room around him. The space was commodious, yet gave the impression of being cluttered because of the assemblage of, well, junk which surrounded Waldo.
There were half a dozen vision receptors of various sizes around him at different angles, all normal to his line of sight. Three of them had pickups to match. There were control panels of several sorts, some of which seemed obvious enough in their purpose - one for lighting, which was quite complicated, with little ruby tell-tales for each circuit, one which was the keyboard of a voder, a multiplex television control panel, a board which seemed to be power relays, although its design was unusual. But there were at least half a dozen which stumped Stevens completely.
There were several pairs of waldoes growing out of a steel ring which surrounded the working space. Two pairs, mere monkey fists in size, were equipped with extensors. It had been one of these which had shot out to grab Baldur by his collar. There were waldoes rigged near the spherical wall, too, including one pair so huge that Stevens could not conceive of a use for it.
Extended, each hand spread quite six feet from little finger tip to thumb tip.
There were books in plenty on the wall, but no bookshelves. They seemed to grow from the wall like so many cabbages. It puzzled Stevens momentarily, but he inferred - correctly it turned out later - that a small magnet fastened to the binding did the trick.
The arrangement of lighting was novel, complex, automatic, and convenient for Waldo. But it was not so convenient for anyone else in the room. The lighting was, of course, indirect; but, furthermore, it was subtly controlled, so

that none of the lighting came from the direction in which Waldo's head was turned. There was no glare - for Waldo. Since the lights behind his head burned brightly in order to provide more illumination for whatever he happened to be looking at, there was glare aplenty for anyone else. An electric eye circuit, obviously. Stevens found himself wondering just how simple such a circuit could be made.
Grimes complained about it. 'Damn it, Waldo; get those lights under control. You'll give us headaches.'
'Sorry, Uncle Gus.' He withdrew his right hand from its gauntlet and placed his fingers over one of the control panels. The glare stopped. Light now came from whatever direction none of them happened to be looking, and much more brightly, since the area source of illumination was much reduced. Lights rippled across the walls in pleasant patterns. Stevens tried to follow the ripples, a difficult matter, since the setup was made not to be seen. He found that he could do so by rolling his eyes without moving his head. It was movement of the head which controlled the lights; movement of an eyeball was a little too much for it.
'Well, Mr Stevens, do you find my house interesting?' Waldo was smiling at him with faint superciliousness.
'Oh - quite! Quite! I believe that it is the most remarkable place I have ever been in.'
'And what do you find remarkable about it?'
'Well - the lack of definite orientation, I believe. That and the remarkable mechanical novelties. I suppose I am a bit of a groundlubber, but I keep expecting a floor underfoot and a ceiling overhead.'
'Mere matters of functional designs, Mr Stevens; the conditions under which I live are unique; therefore, my house is unique. The novelty you speak of consists mainly in the elimination of unnecessary parts and the addition of new conveniences.
'To tell the truth, the most interesting thing I have seen yet is not a part of the house at all.'
'Really? What is it, pray?'
'Your dog, Baldur.' The dog looked around at the mention of his name. 'I've never before met a dog who could handle himself in free flight.'
Waldo smiled; for the first time his smile seemed gentle and warm.
'Yes, Baldur is quite an acrobat. He's been at it since he was a puppy.' He reached out and roughed the dog's cars, showing momentarily his extreme weakness, for the gesture had none of the strength appropriate to the size of the brute. The finger

motions were flaccid, barely sufficient to disturb the coarse fur and to displace the great ears. But he seemed unaware, or unconcerned, by the disclosure. Turning back to Stevens, he added, 'But if Baldur amuses you, you must see Ariel.'

'Ariel?'

Instead of replying, Waldo touched the keyboard of the voder, producing a musical whistling pattern of three notes. There was a rustling near the wall of the room 'above' them; a tiny yellow shape shot towards them - a canary. It sailed through the air with wings folded, bullet fashion. A foot or so away from Waldo it spread its wings, cupping the air, beat them a few times with tail down and spread, and came to a dead stop, hovering in the air with folded wings. Not quite a dead stop, perhaps, for it drifted slowly, came within an inch of Waldo's shoulder, let down its landing gear, and dug its claws into his singlet.

Waldo reached up and stroked it with a fingertip. It preened. 'No earth-hatched bird can learn to fly in that fashion,' he stated. 'I know. I lost half a dozen before I was sure that they were incapable of making the readjustment. Too much thalamus.'

'What happens to them?'

'In a man you would call it acute anxiety psychosis. They try to fly; their own prime skill leads them to disaster. Naturally, everything they do is wrong and they don't understand it. Presently they quit trying; a little later they die. Of a broken heart, one might say, poetically.' He smiled thinly. 'But Ariel is a genius among birds. He came here as an egg; he invented, unassisted, a whole new school of flying.'

He reached up a finger, offering the bird a new perch, which it accepted.

'That's enough, Ariel. Fly away home.'

The bird started the 'Bell Song' from Lakmé.

He shook it gently. 'No, Ariel. Go to bed.'

The canary lifted its feet clear of the finger, floated for an instant, then beat its wings savagely for a second or two to set course and pick up speed, and bulleted away whence he bad come, wings folded, feet streamlined under.

'Jimmie's got something he wants to talk with you about,' Grimes commenced.

'Delighted,' Waldo answered lazily, 'but shan't we dine first? Have you an appetite, sir?'

Waldo full, Stevens decided, might be easier to cope with than Waldo empty. Besides, his own midsection informed him that wrestling with a calorie or two might be pleasant. 'Yes, I have.'

'Excellent.' They were served.

Stevens was never able to decide whether Waldo had prepared the meal by means of his many namesakes, or whether servants somewhere out of sight had done the actual work. Modern food-preparation methods being what they were, Waldo could have done it alone; he, Stevens, batched it with no difficulty, and so did Gus. But he made a mental note to ask Doc Grimes at the first opportunity what resident staff, if any, Waldo employed. He never remembered to do so.

The dinner arrived in a small food chest, propelled to their midst at the end of a long, telescoping, pneumatic tube. It stopped with a soft sigh and held its position. Stevens paid little attention to the food itself - it was adequate and tasty, he knew - for his attention was held by the dishes and serving methods. Waldo let his own steak float in front of him, cut bites from it with curved surgical shears, and conveyed them to his mouth by means of dainty tongs. He made hard work of chewing.

'You can't get good steaks any more,' he remarked. 'This one is tough. God knows I pay enough - and complain enough.'

Stevens did not answer. He thought his own steak had been tenderized too much; it almost fell apart. He was managing it with knife and fork, but the knife was superfluous. It appeared that Waldo did not expect his guests to make use of his own admittedly superior methods and utensils. Stevens ate from a platter clamped to his thighs, making a lap for it after Grimes's example by squatting in mid air. The platter itself had been thoughtfully provided with sharp little prongs on its service side.

Liquids were served in small flexible skins, equipped with nipples. Think of a baby's plastic nursing bottle.

The food chest took the utensils away with a dolorous insufflation.

'Will you smoke, sir?'

'Thank you.' He saw what a weight-free ashtray necessarily should be: a long tube with a bell-shaped receptacle on its end. A slight suction in the tube, and ashes knocked into the bell were swept away, out of sight and mind.

'About that matter-' Grimes commenced again. 'Jimmie here is Chief Engineer for North American Power-Air.'

'What?' Waldo straightened himself, became rigid; his chest rose and fell. He ignored Stevens entirely. 'Uncle Gus, do you mean to say that you have introduced an officer of that company into my - home?'

'Don't get your dander up. Relax. Damn it, I've warned you not to do anything to raise your blood pressure.' Grimes propelled himself closer to his host and took him by the wrist in the age-old fashion of a physician counting pulse. 'Breathe slower. Whatcha trying to do? Go on an oxygen jag?'

Waldo tried to shake himself loose. It was a rather pitiful gesture; the old man had ten times his strength. 'Uncle Gus, you-
'Shut up!'
The three maintained a silence for several minutes, uncomfortable for at least two of them. Grimes did not seem to mind it.
'There,' he said at last. 'That's better. Now keep your shirt on and listen to me. Jimmie is a nice kid, and he has never done anything to you. And he has behaved himself while he's been here. You've got no right to be rude to him, no matter who he works for. Matter of fact, you owe him an apology.'
'Oh, really now, Doc,' Stevens protested. 'I'm afraid I have been here somewhat under false colours. I'm sorry, Mr Jones. I didn't intend it to be that way. I tried to explain when we arrived.'
Waldo's face was hard to read. He was evidently trying hard to control himself. 'Not at all, Mr Stevens. I am sorry that I showed temper. It is perfectly true that I should not transfer to you any animus I feel for your employers though God knows I bear no love for them.'
'I know it. Nevertheless, I am sorry to hear you say it.'
'I was cheated, do you understand? Cheated - by as rotten a piece of quasi-legal chicanery as has ever-'
'Easy, Waldo!'
'Sorry, Uncle Gus.' He continued, his voice less shrill.
'You know of the so-called Hathaway patents?'
'Yes, of course.'
'"So-called" is putting it mildly. The man was a mere machinist. Those patents are mine.
Waldo's version, as he proceeded to give it, was reasonably factual, Stevens felt, but quite biased and unreasonable. Perhaps Hathaway had been working, as Waldo alleged, simply as a servant - a hired artisan, but there was nothing to prove it, no contract, no papers of any sort. The man had filed certain patents, the only ones he had ever filed and admittedly Waldo-ish in their cleverness. Hathaway had then promptly died, and his heirs, through their attorneys, had sold the patents to a firm which had been dickering with Hathaway.
Waldo alleged that this firm had put Hathaway up to stealing from him, had caused him to hire himself out to Waldo for that purpose. But the firm was defunct; its assets had been sold to North American Power-Air. NAPA had offered a settlement; Waldo had chosen to sue. The suit went against him.
Even if Waldo were right, Stevens could not see any means by which the directors of NAPA could, legally, grant him any relief. The officers of a corporation are trustees for other
people's money; if the directors of NAPA should attempt to give away property which had been adjudicated as belonging to the

corporation, any stockholder could enjoin them before the act or recover from them personally after the act.
At least so Stevens thought. But he was no lawyer, he admitted to himself. The important point was that he needed Waldo's services, whereas Waldo held a bitter grudge against the firm he worked for. He was forced to admit that it did not look as if Doc Grimes's presence was enough to turn the trick.
'All that happened before my time,' he began, 'and naturally I know very little about it. I'm awfully sorry it happened. It's pretty uncomfortable for me, for right now I find myself in a position where I need your services very badly indeed.'
Waldo did not seem displeased with the idea. 'So? How does this come about?'
Stevens explained to him in some detail the trouble they had been having with the deKalb receptors. Waldo listened attentively. When Stevens had concluded he said, 'Yes, that is much the same story your Mr Gleason had to tell. Of course, as a technical man you have given a much more coherent picture than that money manipulator was capable of giving. But why do you come to me? I do not specialize in radiation engineering, nor do I have any degrees from fancy institutions.~
'I come to you,' Stevens said seriously, 'for the same reason everybody else comes to you when they are really stuck with an engineering problem. So far as I know, you have an unbroken record of solving any problem you cared to tackle. Your record reminds me of another man-'
'Who?' Waldo's tone was suddenly sharp.
'Edison. He did not bother with degrees either, but he solved all the hard problems of his day.'
'Oh, Edison- I thought you were speaking of a contemporary. No doubt he was all right in his day,' he added with overt generosity.
'I was not comparing him to you, I was simply recalling that Edison was reputed to prefer hard problems to easy ones. I've heard the same about you; I had hopes that this problem might be hard enough to interest you.~
'It is mildly interesting,' Waldo conceded. 'A little out of my line, but interesting. I must say, however, that I am surprised to hear you, an executive of North American Power-Air, express such a high opinion of my talents. One would think that, if the opinion were sincere, it would not have been difficult to convince your firm of my indisputable handiwork in the matter of the so-called Hathway patents.'
Really, thought Stevens, the man is impossible. A mind like a weasel. Aloud, he said, 'I suppose the matter was handled by the business management and the law staff. They would

hardly be equipped to distinguish between routine engineering and inspired design.'
The answer seemed to mollify Waldo. He asked, 'What does your own research staff say about the problem?'
Stevens looked wry. 'Nothing helpful. Dr Rambeau does not really seem to believe the data I bring him. He says it's impossible, but it makes him unhappy. I really believe that he has been living on aspirin and nembutal for a good many weeks.'
'Rambeau,' Waldo said slowly. 'I recall the man. A mediocre mind. All memory and no intuition. I don't think I would feel discouraged simply because Rambeau is puzzled.'
'You really feel that there is some hope?'
'It should not be too difficult. I had already given the matter some thought, after Mr Gleason's phone call. You have given me additional data, and I think I see at least two new lines of approach which may prove fruitful. In any case, there is always some approach - the correct one.'
'Does that mean you will accept?' Stevens demanded, nervous with relief.
'Accept?' Waldo's eyebrows climbed up. 'My dear sir, what in the world are you talking about? We were simply indulging in social conversation. I would not help your company under any circumstances whatsoever. I hope to see your firm destroyed utterly, bankrupt, and ruined. This may well be the occasion.
Stevens fought to keep control of himself. Tricked! The fat slob had simply been playing with him, leading him on. There was no decency in him. In careful tones he continued,
'I do not ask that you have any mercy on North American, Mr Jones, but I appeal to your sense of duty. There is public interest involved. Millions of people are vitally dependent on the service we provide. Don't you see that the service must continue, regardless of you or me?'
Waldo pursed his lips. 'No,' he said, 'I am afraid that does not affect me. The welfare of those nameless swarms of Earth crawlers is, I fear, not my concern. I have done more for them already than there was any need to do.
They hardly deserve help. Left to their own devices, most of them would sink back to caves and stone axes. Did you ever see a performing ape, Mr Stevens, dressed in a man's clothcs and cutting capers on roller skates? Let me leave you with this thought: I am not a roller-skate mechanic for apes.'
If I stick around here much longer, Stevens advised himself, there will be hell to pay. Aloud, he said, 'I take it that is your last word?'

'You may so take it. Good day, sir. I enjoyed your visit.
Thank you.'
'Goodbye. Thanks for the dinner.'
'Not at all.'
As Stevens turned away and prepared to shove himself towards the exit, Grimes called after him, 'Jimmie, wait for me in the reception room.
As soon as Stevens was out of earshot, Grimes turned to Waldo and looked him up and down. 'Waldo,' he said slowly, 'I always did know that you were one of the meanest, orneriest men alive, but-'
'Your compliments don't faze me, Uncle Gus.'
'Shut up and listen to me. As I was saying, I knew you were too rotten selfish to live with, but this is the first time I ever knew you to be a fourflusher to boot.'
'What do you mean by that? Explain yourself.'
'Shucks! You haven't any more idea of how to crack the problem that boy is up against than I have. You traded on your reputation as a miracle man just to make him unhappy. Why, you cheap tinhorn bluffer, if you-'
'Stop it!'
'Go ahead,' Grimes said quietly. 'Run up your blood pressure. I won't interfere with you. The sooner you blow a gasket the better.'
Waldo calmed down. 'Uncle Gus - what makes you think I was blufiing?'
'Because I know you. If you had felt able to deliver the goods, you would have looked the situation over and worked out a plan to get NAPA by the short hair, through having something they had to have. That way you would have proved your revenge.'
Waldo shook his head. 'You underestimate the intensity of my feeling in the matter.'
'I do like hell! I hadn't finished. About that sweet little talk you gave him concerning your responsibility to the race. You've got a head on you. You know damned well, and so do I, that of all people you can least afford to have anything serious happen to the setup down on Earth. That means you don't see any way to prevent it.
'Why, what do you mean? I have no interest in such troubles; I'm independent of such things. You know me better than that.'
'Independent, eh? Who mined the steel in these walls? Who raised that steer you dined on tonight? You're as independent as a queen bee, and about as helpless.'
Waldo looked startled. He recovered himself and answered, 'Oh no, Uncle Gus. I really am independent. Why, I have supplies here for years.'
'How many years?'
'Why. . . uh, five, about.'
'And then what? You may live another fifty - if you have regular supply service. How do you prefer to die - starvation or thirst?'

'Water is no problem,' Waldo said thoughtfully; 'as for supplies, I suppose I could use hydroponics a little more and stock up with some meat animals-'
Grimes cut him short with a nasty laugh. 'Proved my point. You don't know how to avert it, so you are figuring some way to save your own skin. I know you. You wouldn't talk about starting a truck garden if you knew the answers.'
Waldo looked at him thoughtfully. 'That's not entirely true. I don't know the solution, but I do have some ideas about it. I'll bet you a half interest in hell that I can crack it. Now that you have called my attention to it, I must admit I am rather tied in with the economic system down below, and' - he smiled faintly - 'I was never one to neglect my own interests. Just a moment - I'll call your friend.'
'Not so fast. I came along for another reason, besides introducing Jimmie to you. It can't be just any solution; it's got to be a particular solution.'
'What do you mean?'
'It's got to be a solution that will do away with the need for filling up the air with radiant energy.'
'Oh, that. See here, Uncle Gus, I know how interested you are in your theory, and I've never disputed the possibility that you may be right, but you can't expect me to mix that into another and very difficult problem.'
'Take another look. You're in this for self-interest. Suppose everybody was in the shape you are in.'
'You mean my physical condition?'
'I mean just that. I know you don't like to talk about it, but we blamed well need to. If everybody was as weak as you are - presto! No coffee and cakes for Waldo. And that's just what I see coming. You're the only man I know of who can appreclate what it means.'
'It seems fantastic.'
'It is. But the signs are there for anybody to read who wants to. Epidemic myasthenia, not necessarily acute, but enough to raise hell with our mechanical civilization. Enough to play hob with your supply lines. I've been collating my data since I saw you last and drawing some curves. You should see 'em'
'Did you bring them?'
'No, but I'll send 'em up. In the meantime, you can take my word for it.' He waited. 'Well, how about it?'
'I'll accept it as a tentative working hypothesis,' Waldo said slowly, 'until I see your figures. I shall probably want you to conduct some further research for me, on the ground - if your data is what you say it is.'
'Fair enough. G'bye.' Grimes kicked the air a couple of times as he absent-mindedly tried to walk.
Stevens's frame of mind as he waited for Grimes is better left

undescribed. The mildest thought that passed through his mind was a plaintive one about the things a man had to put up with to hold down what seemed like a simple job of engineering. Well, he wouldn't have the job very long. But he decided not to resign - he'd wait until they fired him; he wouldn't run out.

But he would damn well get that vacation before he looked for another job.

He spent several minutes wishing that Waldo were strong enough for him to be able to take a poke at him. Or kick him in the belly - that would be more fun!

He was startled when the dummy suddenly came to life and callcd him by name. 'Oh, Mr Stevens.'

'Huh? Yes?'

'I have decided to accept the commission. My attorneys will arrange the details with your business office.'

He was too surprised to answer for a couple of seconds; when he did so the dummy had already gone dead. He waited impatiently for Grimes to show up.

'Doc!' he said, when the old man swam into view. 'What got into him? How did you do it?'

'He thought it over and reconsidered,' Grimes said succinctly. 'Let's get going.'

Stevens dropped Dr Augustus Grimes at the doctor's home, then proceeded to his office. He had no more than parked his car and entered the tunnel leading towards the zone plant when he ran into his assistant. McLcod seemed a little out of breath. 'Gee, chief,' he said, 'I hoped that was you. I've had 'em watching for you. I need to see you.'

'What's busted now?' Stevens demanded apprehensively.. 'One of the cities?'

'No. What made you think so?'

'Go ahead with your story.'

'So far as I know ground power is humming sweet as can be. No trouble with the cities. What I had on my mind is this: I fixed my heap.'

'Huh? You mean you fixed the ship you crashed in?'

'It wasn't exactly a crash. I had plenty of power in the reserve banks; when reception cut off, I switched to emergency and landed her.'

'But you fixed it? Was it the deKalbs? Or something else?'

'It was the deKalbs all right. And they're fixed. But I didn't exactly do it myself. I got it done. You see-'

'What was the matter with them?'

'I don't know exactly. You see I decided that there was no point in hiring another skycar and maybe having another forced landing on the way home. Besides, it was my own crate I was flying, and I didn't want to dismantle her just to get the deKalbs out and have her spread out all over the countryside. So I hired a crawler, with the idea of taking her back all in one piece. I struck a deal with a guy who had a twelve-ton semitractor combination, and we-'

'For criminy's sake, make it march! What happened?'
'I'm trying to tell you. We pushed on into Pennsylvania and we were making pretty fair time when the crawler broke down. The right lead wheel, ahead of the treads. Honest to goodness, Jim, those roads are something fierce.'
'Never mind that. Why waste taxes on roads when ninety per cent of the traffic is in the air? You messed up a wheel. So then what?'
'Just the same, those roads are a disgrace,' McLeod maintained stubbornly. 'I was brought up in that part of the country. When I was a kid the road we were on was six lanes wide and smooth as a baby's fanny. They ought to be kept up; we might need 'em someday.' Seeing the look in his senior's eye, he went on hastily: 'The driver mugged in with his home office, and they promised to send a repair car out from the next town. All told, it would take three, four hours - maybe more. Well, we were laid up in the country I grew up in. I says to myself, "McLeod, this is a wonderful chance to return to the scenes of your childhood and the room where the sun came peeping in the morn." Figuratively speaking, of course. Matter of fact, our house didn't have any windows.'
'I don't care if you were raised in a barrel!'
'Temper ... temper-' McLeod said imperturbably. 'I'm telling you this so you will understand what happened. But you aren't going to like it.'
'I don't like it now.
'You'll like it less. I climbed down Out of the cab and took a look around. We were about five miles from my home town - too far for me to want to walk it. But I thought I recognized a clump of trees on the brow of a little rise maybe a quarter of a mile off the road, so I walked over to see. I was right; just over the rise was the cabin where Gramps Schneider used to live.'
'Gramps Snyder?'
'Not Snyder - Schneider. Old boy we kids used to be friendly with. Ninety years older than anybody. I figured he was dead, but it wouldn't hurt any to walk down and see. He wasn't. "Hello, Gramps," I said. "Come in, Hugh Donald," he said. "Wipe the feet on the mat."
'I came in and sat down. He was fussing with something simmering in a stewpan on his base-burner. I asked him what it was. "For morning aches," he said. Gramps isn't exactly a hex doctor.'
'Huh?'
'I mean he doesn't make a living by it. He raises a few chickens and garden truck, and some of the Plain People -House Amish, mostly - give him pies and things. But he knows a lot about herbs and such.
'Presently he stopped and cut me a slice of shoo-fly pie. I told him danke. He said, "You've been up-growing, Hugh Donald,' and asked me how I was doing in school. I told him I was doing pretty well. He looked at me again and said, "But you have trouble fretting you." It wasn't a question; it was a statement. While I finished the pie I found myself trying to tell him what kind of troubles I had.
'It wasn't easy. I don't suppose Gramps has ever been off the ground

in his life. And modern radiation theory isn't something you can explain in words of one syllable. I was getting more and more tangled up when he stood up, put on his hat and said, "We will see this car you speak about."

'We walked over to the highway. The repair gang had arrived, but the crawler wasn't ready yet. I helped Gramps up on to the platform and we got into my bus. I showed him the deKalbs and tried to explain what they did - or rather what they were supposed to do. Mind you, I was just killing time.

'He pointed to the sheaf of antennae and asked, "These fingers - they reach out for the power?" It was as good an explanation as any, so I let it ride. He said, "I understand," and pulled a piece of chalk out of his trousers, and began drawing lines on each antenna, from front to back. I walked up front to see how the repair crew were doing. After a bit Gramps joined me. "Hugh Donald," he says, "the fingers - now they will make."

'I didn't want to hurt his feelings, so I thanked him plenty. The crawler was ready to go; we said goodbye, and he walked back towards his shack. I went back to my car, and took a look in, just in case. I didn't think he could hurt anything, but I wanted to be sure. Just for the ducks of it I tried out the receptors. They worked!'

'What!' put in Stevens. 'You don't mean to stand there and tell me an old witch doctor fixed your deKalbs.'

'Not witch doctor - hex doctor. But you get the idea.'

Stevens shook his head. 'It's simply a coincidence. Sometimes they come back into order as spontaneously as they go out.'

'That's what you think. Not this one. I've just been preparing you for the shock you're going to get. Come take a look.'

'What do you mean? Where?'

'In the inner hangar.' While they walked to where McLeod had left his broomstick, he continued, 'I wrote out a credit for the crawler pilot and flew back. I haven't spoken to anyone else about it. I've been biting my nails down to my elbows waiting for you to show up.'

The skycar seemed quite ordinary. Stevens examined the deKalbs and saw some faint chalk marks on their metal sides - nothing else unusual.

'Watch while I cut in reception,' McLeod told him.

Stevens waited, heard the faint hum as the circuits became activized, and looked.

The antennae of the deKalbs, each a rigid pencil of metal,were bending, flexing, writhing like a cluster of worms. They were reaching out, like fingers.

Stevens remained squatting down by the deKalbs, watching their outrageous motion. McLeod left the control saddle, came back, and joined him.

'Well, chief,' he demanded, 'tell me about it. Whaduh yuh make of it?'

'Got a cigarette?'
'What are those things sticking Out of your pocket?'
'Oh! Yeah - sure.' Stevens took one out, lighted it, and burned it halfway down, unevenly, with two long drags.
'Go on,' McLeod urged. 'Give us a tell. What makes it do that?'
'Well,' Stevens said slowly, 'I can think of three things to do next-'
'Yeah?'
"The first is to fire Dr Rambeau and give his job to Gramps Schneider.'
'That's a good idea in any case.'
'The second is to just wait here quietly until the boys with the strait-jackets show up to take us home.'
'And what's the third?'
'The third,' Stevens said savagely, 'is to take this damned heap out and sink it in the deepest part of the Atlantic Ocean and pretend like it never happened!'
A mechanic stuck his head in the door of the car. 'Oh, Dr Stevens--'
'Get out of here!'
The head hastily withdrew; thc voice picked up in aggrieved tones.
'Message from the head office.'
Stevens got up, went to the operator's saddle, cleared the board, then assured himself that the antennae had ceased their disturbing movements. They had; in fact, they appeared so beautifully straight and rigid that he was again tempted to doubt the correctness of his own senses. He climbed out to the floor of the hangar, McLeod behind him.
'Sorry to have blasted at you, Whitey,' he said to the workman in placating tones. 'What is the message?'
'Mr Gleason would like for you to come into his office as soon as you can.'
'I will at once. And, Whitey, I've a job for you.'
'Yeah?'
'This heap here - seal up its doors and don't let anybody monkey with it. Then have it dragged, dragged, mind you; don't try to start it - have it dragged over into the main lab.'
'OK.'
Stevens started away; McLeod stopped him. 'What do I go home in?'
'Oh yes, it's your personal property, isn't it? Tell you what, Mac - the company needs it. Make out a purchase order and I'll sign it.'
'Weeell, now - I don't rightly know as I want to sell it. It might be the only job in the country working properly before long.'
'Don't be silly. If the others play out, it won't do you any good to have the only one in working order. Power will be shut down.'
'I suppose there's that,' McLeod conceded. 'Still,' he said, brightening visibly, 'a crate like that, with its special talents, ought to be worth a good deal more than list. You couldn't just go out and buy one.'

'Mac,' said Stevens, 'you've got avarice in your heart and thievery in your fingertips. How much do you want for it?'
'Suppose we say twice the list price, new. That's letting you off easy.'
'I happen to know you bought that job at a discount. But go ahead. Either the company can stand it, or it won't make much difference in the bankruptcy.'
Gleason looked up as Stevens came in. 'Oh, there you are, Jim. You seemed to have pulled a miracle with our friend Waldo the Great. Nice work.'
'How much did he stick us for?'
'Just his usual contract. Of course his usual contract is a bit like robbery with violence. But it will be worth it if he is successful. And it's on a straight contingent basis. He must feel pretty sure of himself. They say he's never lost a contingent fee in his life. Tell me - what is he like? Did you really get into his house?'
'I did. And I'll tell you about it - sometime. Right now another matter has come up which has me talking to myself. You ought to hear about it at once.
'So? Go ahead.'
Stevens opened his mouth, closed it again, and realized that it had to be seen to be believed. 'Say, could you come with me to the main lab? I've got something to show you.'
'Certainly.'
Gleason was not as perturbed by the squirming metal rods as Stevens had been. He was surprised, but not upset. The truth of the matter is that he lacked the necessary technical background to receive the full emotional impact of the inescapable implications of the phenomenon.
'That's pretty unusual, isn't it?' he said quietly.
'Unusual! Look, chief, if the sun rose in the west, what would you think?'
'I think I would call the observatory and ask them why.'
'Well, all I can say is that I would a whole lot rather that the sun rose in the west than to have this happen.'
'I admit it is pretty disconcerting,' Gleason agreed.
'I can't say that I've ever seen anything like it. What is Dr Rambeau's opinion?'
'He hasn't seen it.
'Then perhaps we had better send for him. He may not have gone home for the night as yet.'
'Why not show it to Waldo instead?'
'We will. But Dr Rambeau is entitled to see it first. After all, it's his bailiwick, and I'm afraid the poor fellow's nose is pretty well out of joint as it is. I don't want to go over his head.'

Stevens felt a sudden flood of intuition. 'Just a second, chief.
You're right, but if it's all the same to you I would rather that
you showed it to him than for me to do it.'
'Why so, Jimmie? You can explain it to him.'
'I can't explain a damn thing to him I haven't already told you.
And for the next few hours I'm going to be very, very busy indeed.'
Gleason looked him over, shrugged his shoulders, and said mildly,
'Very well, Jim, if you prefer it that way.'
Waldo was quite busy, and therefore happy. He would never have
admitted - he did not admit even to himself, that there were
certain drawbacks to his self-imposed withdrawal from the world
and that chief among these was boredom. He had never had much
opportunity to enjoy the time-consuming delights of social
intercourse; he honestly believed that the smooth apes had nothing
to offer him in the way of companionship. Nevertheless, the pleasure
of the solitary intellectual life can pall.
He repeatedly urged Uncle Gus to make his permanent home in Freehold,
but he told himself that it was a desire to take care of the old
man which motivated him. True - he enjoyed arguing with Grimes, but
he was not aware how much those arguments meant to him. The truth of
the matter was that Grimes was the only one of the human race who
treated him entirely as another human and an equal - and Waldo wallowed
in it, completely unconscious that the pleasure he felt in the old
man's company was the commonest and most precious of all human
pleasures. But at present he was happy in the only way he knew
how to be happy - working.
There were two problems: that of Stevens and that of Grimes. Required:
a single solution which would satisfy each of them. There were three
stages to each problem; first, to satisfy himself that the problems
really did exist, that the situations were in fact as they had been
reported to him verbally; second, to undertake such research as the
preliminary data suggested; and third, when he felt that his data was
complete, to invent a solution.
'Invent', not 'find'. Dr Rambeau might have said 'find', or 'search for'.
To Rambeau the universe was an inexorably ordered cosmos, ruled by
unvarying law. To Waldo the universe was the enemy, which he strove to
force to submmiit to his will. They might have been speaking of the
same thing, but their approaches were different.
There was much to be done. Stevens had supplied him with a mass of data,
both on the theoretical nature of the radiated power system and the
deKalb receptors which were the keystone of the system, and also on the
various cases of erratic performance of which they had lately been
guilty. Waldo had not given serious attention to power radiation up to
this time, simply because he had not needed to. He found it interesting
but comparatively simple. Several improvements suggested themselves to
his mind. That standing wave, for example, which was the main factor in

the co-axial beam - the efficiency of reception could be increased considerably by sending a message back over it which would automatically correct the aiming of the beam. Power delivery to moving vehicles could be made nearly as efficient as the power reception to stationary receivers.

Not that such an idea was important at present. Later, when he had solved the problem at hand, he intended to make NAPA pay through the nose for the idea; or perhaps it would be more amusing to compete with them. He wondered when their basic patents ran out - must look it up.

Despite inefficiencies the deKalb receptors should work every time, all the time, without failure. He went happily about finding out why they did not.

He had suspected some obvious - obvious to him - defect in manufacture. But the inoperative deKalbs which Stevens had delivered to him refused to give up their secret. He X-rayed them, measured them with micrometer and interferometer, subjected them to all the usual tests and some that were quite unusual and peculiarly Waldo-ish. They would not perform.

He built a deKalb in his shop, using one of the inoperative ones as a model and using the reworked metal of another of the same design, also inoperative, as the raw material, he used his finest scanners to see with and his smallest waldoes -tiny pixy hands, an inch across - for manipulation in the final stages. He created a deKalb which was as nearly identical with its model as technology and incredible skill could produce.

It worked beautifully.

Its elder twin still refused to work. He was not discouraged by this. On the contrary, he was elated. He had proved, proved with certainty, that the failure of the deKalbs was not a failure of workmanship, but a basic failure in theory. The problem was real.

Stevens had reported to him the scandalous performance of the deKalbs in McLeod's skycar, but he had not yet given his attention to the matter. Presently, in proper order, when he got around to it, he would look into the matter. In the meantime he tabled the matter. The smooth apes were an hysterical lot; there was probably nothing to the story.

Writhing like Medusa's locks, indeed!

He gave fully half his time to Grimes's problem.

He was forced to admit that the biological sciences - if you could call them science! - were more fascinating than he had thought. He had shunned them, more or less; the failure of expensive 'experts' to do anything for his condition when he was a child had made him contemptuous of such studies. Old wives nostrums dressed up in fancy terminology! Grimes he liked and even respected, but Grimes was a special case.

Grimes's data had convinced Waldo that the old man had a case. Why, this was serious! The figures were incomplete, but nevertheless convincing. The curve of the third decrement, extrapolated not too unreasonably, indicated that in twenty years there would not be a man

left with strength enough to work in the heavy industries. Button pushing would be all they would be good for.
It did not occur to him that all he was good for was button pushing; he regarded weakness in the smooth apes as an old-style farmer might regard weakness in a draft animal. The farmer did not expect to pull the plough - that was the horse's job.
Grimes's medical colleagues must be utter fools.
Nevertheless, he sent for the best physiologists, neurologists, brain surgeons, and anatomists he could locate, ordering them as one might order goods from a catalogue. He must understand this matter.
He was considerably annoyed when he found that he could not make arrangements, by any means, to perform vivisection on human beings.
He was convinced by this time that the damage done by ultra short-wave radiation was damage to the neurological system, and that the whole matter should be treated from the standpoint of electromagnetic theory.
He wanted to perform certain delicate manipulations in which human beings would be hooked up directly to apparatus of his own design to find out in what manner nerve impulses differed from electrical current.
He felt that if he could disconnect portions of a man's nervous circuit, replace it in part with electrical hookups, and examine the whole matter in situ, he might make illuminating discoveries. True, the man might not be much use to himself afterwards.
But the authorities were stuffy about it; he was forced to content himself with cadavers and with animals.
Nevertheless, he made progress. Extreme short-wave radiation had a definite effect on the nervous system - a double effect: it produced 'ghost' pulsations in the neurons, Insufficient to accomplish muscular motor response, but, he suspected, strong enough to keep the body in a continual state of inhibited nervous excitation; and, secondly, a living specimen which had been subjected to this process for any length of time showed a definite, small but measurable, lowering in the efficiency of its neural impulses. If it had been an electrical circuit, he would have described the second effect as a decrease in insulating efficiency.
The sum of these two effects on the subject individual was a condition of mild tiredness, somewhat similar to the malaise of the early stages of pulmonary tuberculosis. The victim did not feel sick; he simply lacked pep. Strenuous bodily activity was not impossible; it was simply distasteful; it required too much effort, too much willpower.
But an orthodox pathologist would have been forced to report that the victim was in perfect health - a little run-down, perhaps, but nothing wrong with him. Too sedentary a life, probably. What he needed was fresh air, sunshine, and healthy exercise.
Doc Grimes alone had guessed that the present, general, marked preference for a sedentary life was the effect and not the cause of the prevailing lack of vigour. The change had been slow, at least as slow as the increase in radiation in the air. The individuals concerned had noticed it, if at all,

simply as an indication that they were growing a little bit older,'slowing down, not so young as I used to be'. And they were content to slow down; it was more comfortable than exertion.
Grimes had first begun to be concerned about it when he began to notice that all of his younger patients were 'the bookish type'. It was all very well for a kid to like to read books, he felt, but a normal boy ought to be out doing a little hell raising too. What had become of the sand-lot football games, the games of scrub, the clothes-tearing activity that had characterized his own boyhood?
Damn it, a kid ought not to spend all his time poring over a stamp collection.
Waldo was beginning to find the answer.
The nerve network of the body was not dissimilar to antennae. Like antennae, it could and did pick up electromagnetic waves. But the pickup was evidenced not as induced electrical current, but as nerve pulsation - impulses which were maddeningly similar to, but distinctly different from, electrical current. Electromotive force could be used in place of nerve impulses to activate muscle tissue, but emf was not nerve impulse. For one thing they travelled at vastly different rates of speed. Electrical current travcls at a speed approaching that of light; neural impulse is measured in feet per second.
Waldo felt that somewhere in this matter of speed lay the key to the problem.
He was not permitted to ignore the matter of McLeod's fantastic skycar as long as he had intended to. Dr Rambeau called him up. Waldo accepted the call, since it was routed from the laboratories of NAPA. 'Who are you and what do you want?' he demanded of the image.
Rambeau looked around cautiously. 'Sssh! Not so loud,' he whispered. 'They might be listening.'
'Who might be? And who are you?'
'"They" are the ones who are doing it. Lock your doors at night. I'm Dr Rambeau.'
'Dr Rambeau? Oh yes. Well, Doctor, what is the meaning of this intrusion?'
The doctor leaned forward until he appeared about to fall out of the stereo picture. 'I've learned how to do it,' he said tensely.
'How to do what?'
'Make the deKalbs work. The dear, dear deKalbs.' He suddenly thrust his hands at Waldo, while clutching frantically with his fingers. 'They go like this: Wiggle, wiggle, wiggle!'
Waldo felt a normal impulse to cut the man off, but it was overruled by a fascination as to what he would say next. Rambeau continued, 'Do you know why? Do you? Riddle me that.'
'Why?'
Rambeau placed a finger beside his nose and smiled roguishly. 'Wouldn't you like to know? Wouldn't you give a pretty to know? But I'll tell you!'
'Tell me, then.'
Rambeau suddenly looked terrified. 'Perhaps I shouldn't. Perhaps they are listening. But I will, I will! Listen carefully:
Nothing is certain.

'Is that all?' inquired Waldo, now definitely amused by the man's antics.
'"Is that all?" Isn't that enough? Hens will crow and cocks will lay. You are here and I am there. Or maybe not. Nothing is certain. Nothing, nothing, NOTHING is certain! Around and around the little ball goes, and where it stops nobody knows. Only I've learned how to do it.'
'How to do what?'
'How to make the little ball stop where I want it to. Look.' He whipped out a penknife. 'When you cut yourself, you bleed, don't you? Or do you?' He sliced at the forefinger of his left hand. 'See?' He held the finger close to the pickup; the cut though deep, was barely discernible and it was bleeding not at all.
Capital! thought Waldo. Hysteric vascular control - a perfect clinical case.
'Anybody can do that,' he said aloud. 'Show me a hard one.'
'Anybody? Certainly anybody can - if they know how. Try this one.' He jabbed the point of the penknife straight into the palm of his left hand, so that it stuck out the back of his hand. He wiggled the blade in the wound, withdrew it, and displayed the palm. No blood, and the incision was closing rapidly. 'Do you know why? The knife is only probably there, and I've found the improbability!'
Amusing as it had been, Waldo was beginning to be bored by it. 'Is that all?'
'There is no end to it,' pronounced Rambeau, 'for nothing is certain any more. Watch this.' He held the knife flat on his palm, then turned his hand over.
The knife did not fall, but remained in contact with the underside of his hand.
Waldo was suddenly attentive. It might be a trick; it probably was a trick - but it impressed him more, much more, than Rambeau's failure to bleed when cut. One was common to certain types of psychosis; the other should not have happened. He cut in another vicwphonc circuit. 'Get me Chief Engineer Stevens at North American Power-Air,' he said sharply. 'At once!'
Rambeau paid no attention, but continued to speak of the penknife. 'It does not know which way is down,' he crooned, 'for nothing is certain any more. Maybe it will fall - maybe not. I think it will. There - it has. Would you like to see me walk on the ceiling?'
'You called me, Mr Jones?' It was Stevens.
Waldo cut his audio circuit to Rambeau. 'Yes. That jumping jack, Rambeau. Catch him and bring him to me at once. I want to see him.'
'But Mr Jo-'
'Move!' He cut Stevens off, and renewed the audio to Rambeau.
'-uncertainty. Chaos is King, and Magic is loose in the world!'
Rambeau looked vaguely at Waldo, brightened, and added, 'Good day, Mr Jones. Thank you for calling.'
The screen went dead.
Waldo waited impatiently. The whole thing had been a hoax, he told himself. Rambeau had played a gigantic practical joke. Waldo disliked practical jokes.

He put in another call for Stevens and left it in.
When Stevens did call back his hair was mussed and his face was red.
'We had a bad time of it,' he said.
'Did you get him?'
'Rambeau? Yes, finally.'
'Then bring him up.'
'To Freehold? But that's impossible. You don't understand. He's blown his top; he's crazy. They've taken him away to a hospital.'
'You assume too much,' Waldo said icily. 'I know he's crazy, but I meant what I said. Arrange it. Provide nurses. Sign affidavits. Use bribery. Bring him to me at once. It is necessary.~
'You really mean that?'
'I'm not in the habit of jesting.'
'Something to do with your investigations? He's in no shape to be useful to you, I can tell you that.'
'That,' pronounced Waldo, 'is for me to decide.'
'Well,' said Stevens doubtfully, 'I'll try.'
'See that you succeed.'
Stevens called back thirty minutes later. 'I can't bring Rambeau.'
'You clumsy incompetent.'
Stevens turned red, but held his temper. 'Never mind the personalities. He's gone.
He never got to the hospital.'
'What?'
'That's the crazy part about it. They took him away in a confining stretcher, laced up like a corset. I saw them fasten him in myself. But when they got there he was gone. And the attendants claim the straps weren't even unbuckled.'
Waldo started to say, 'Preposterous,' thought better of it. Stevens went on.
'But that's not the half of it. I'd sure like to talk to him myself. I've been looking around his lab. You know that set of deKalbs that went nuts -. the ones that were hexed?'
'I know to what you refer.'
'Rambeau's got a second set to do the same thing!' Waldo remained silent for several seconds, then said quietly, 'Dr Stevens-'
'Yes.'
'I want to thank you for your efforts. And will you please have both sets of receptors, the two sets that are misbehaving, sent to Freehold at once?'
There was no doubt about it. Once he had seen them with his own eyes, watched the inexplicable squirming of the antennae, applied such tests as suggested themselves to his mind, Waldo was forced to conclude that he was faced with new phenomena, phenomena for which he did not know the rules.
If there were rules.

For he was honest with himself. If he saw what he thought he saw, then rules were being broken by the new phenomena, rules which he had considered valid, rules to which he had never previously encountered exceptions. He admitted to himself that the original failures of the deKalbs should have been considered just as overwhelmingly upsetting to physical law as the unique behaviour of these two; the difference lay in that one alien phenomenon was spectacular, the other was not.

Quite evidently Dr Rambeau had found it so; he had been informed that the doctor had been increasingly neurotic from the first instance of erratic performance of the deKalb receptors.

He regretted the loss of Dr Rambeau. Waldo was more impressed by Rambeau crazy than he had ever been by Rambeau sane. Apparently the man had had some modicum of ability after all; he had found out something - more, Waldo admitted, than he himself had been able to find out so far, even though it had driven Rambeau insane.

Waldo had no fear that Rambeau's experience, whatever it had been, could unhinge his own reason. His own self-confidence was, perhaps, fully justified. His own mild paranoid tendency was just sufficient to give him defences against an unfriendly world. For him it was healthy, a necessary adjustment to an otherwise intolerable situation, no more pathological than a callous, or an acquired immunity.

Otherwise he was probably more able to face disturbing facts with equanimity than ninety-nine per cent of his contemporaries. He had been born to disaster; he had met it and had overcome it, time and again. The very house which surrounded him was testimony to the calm and fearless fashion in which he had defeated a world to which he was not adapted.

He exhausted, temporarily, the obvious lines of direct research concerning the strangely twisting metal rods. Rambeau was not available for questioning. Very well, there remained one other man who knew more about it than Waldo did. He would seek him out.

He called Stevens again.

'Has there been any word of Dr Rambeau?'

'No word, and no sign. I'm beginning to think the poor old fellow is dead.'

'Perhaps. That witch doctor friend of your assistant - was Schneider his name?'

'Gramps Schneider.'

'Yes indeed. Will you please arrange for him to speak with me?'

'By phone, or do you want to see him in person?'

'I would prefer for him to come here, but I understand that he is old and feeble; it may not be feasible for him to leave the ground. If he is knotted up with spacesickness, he will be no use to me.'

'I'll see what can be done.'

'Very good. Please expedite the matter. And, Dr Stevens-'
'Well?'
'If it should prove necessary to use the phone, arrange to have a portable full stereo taken to his home. I want the circumstances to be as favourable as possible.'
'OK.'
'Imagine that,' Stevens added to McLeod when the circuit had been broken. 'The Great-I-Am's showing consideration for somebody else's convenience.
'The fat boy must be sick,' McLeod decided.
'Seems likely. This chore is more yours than mine, Mac. Come along with me; we'll take a run over into Pennsylvania.'
'How about the plant?'
'Tell Carruthers he's "It". If anything blows, we couldn't help it anyway.'
Stevens mugged back later in the day. 'Mr Jones-'
'Yes, Doctor?'
'What you suggest can't be arranged.'
'You mean that Schneider can't come to Freehold?'
'I mean that and I mean that you can't talk with him on the viewphone.'
'I presume that you mean he is dead.'
'No, I do not. I mean that he will not talk over the view-phone under any circumstances whatsoever, to you or to anyone. He says that he is sorry not to accommodate you, but that he is opposed to everything of that nature - cameras, einécams, television, and so forth. He considers them dangerous. I am afraid he is set in his superstition.'
'As an ambassador, Dr Stevens, you leave much to be desired.'
Stevens counted up to ten, then said, 'I assure you that I have done everything in my power to comply with your wishes. If you are dissatisfied with the quality of my cooperation, I suggest that you speak to Mr Gleason.' He cleared the circuit.
'How would you like to kick him in the teeth?' McLeod said dreamily.
'Mac, you're a mind reader.'

Waldo tried again through his own agents, received the same answer. The situation was, to him, almost intolerable; it had been years since he had encountered a man whom he could not buy, bully, nor - in extremity - persuade. Buying had failed; he had realized instinctively that Schneider would be unlikely to be motivated by greed. And how can one bully, or wheedle, a man who cannot be seen to be talked with? It was a dead end - no way out. Forget it.
Except, of course, for a means best classed as a Fate-Worse-Than-Death. No. No, not that. Don't think about it. Better to drop the whole matter, admit that it had him licked, and tell Gleason so. It had been seventeen years since he had been at Earth surface; nothing could induce him to subject his body to the intolerable demands of that terrible field. Nothing!

It might even kill him. He might choke to death, suffocate. No.
He sailed gracefully across his shop, an overpadded Cupid. Give up this freedom, even for a time, for that tortuous bondage? Ridiculous! It was not worth it.
Better to ask an acrophobe to climb Half Dome, or demand that a claustrophobe interview a man in the world's deepest mine.
'Uncle Gus?'
'Oh, hello. Waldo. Glad you called.'
'Would it be safe for me to come down to Earth?'
'Eh? How's that? Speak up, man. I didn't understand you.'
'I said would it hurt me to make a trip down to Earth.'
'This hookup,' said Grimes, 'is terrible. It sounded just like you were saying you wanted to come down to Earth.'
'That's what I did say.'
'What's the matter, Waldo? Do you feel all right?'
'I feel fine, but I have to see a man at Earth surface. There isn't any other way for me to talk to him, and I've got to talk to him. Would the trip do me any harm?'
'Ought not to, if you're careful. After all, you were born there. Be careful of yourself, though. You've laid a lot of fat around your heart.'
'Oh dear. Do you think it's dangerous?'
'No. You're sound enough.. Just don't overstrain yourself. And be careful to keep your temper.'
'I will. I most certainly will. Uncle Gus?'
'Yes?'
'Will you come along with me and help me see it through?'
'Oh, I don't think that's necessary.'
'Please, Uncle Gus. I don't trust anybody else.'
'Time you grew up, Waldo. However, I will, this once.'

'Now remember,' Waldo told the pilot, 'the absolute acceleration must never exceed one and one tenth gs, even in landing. I'll be watching the accelograph the whole time.'
'I've been driving ambulances,' said the pilot, 'for twelve years, and I've never given a patient a rough ride yet.'
'That's no answer. Understand me? One and one tenth; and it should not even approach that figure until we are under the stratosphere. Quiet, Baldur! Quit snuffling.'
'I get you.'
'Be sure that you do. Your bonuses depend on it.'
'Maybe you'd like to herd it yourself.'
'I don't like your attitude, my man. If I should die in the tank, you would never get another job.'
The pilot muttered something.
'What was that?' Waldo demanded sharply. 'Well, I said it might be worth it.'

Waldo started to turn red, opened his mouth'.
Grimes Cut in: 'Easy, Waldo! Remember your heart.'
'Yes, Uncle Gus.'
Grimes snaked his way forward, indicated to the pilot that he wanted him to join him there.
'Don't pay any attention to anything he says,' he advised the man quietly, 'except what he said about acceleration. He really can't stand much acceleration. He might die in the tank.'
'I still don't think it would be any loss. But I'll be careful.'
'Good.'
'I'm ready to enter the tank,' Waldo called out. 'Will you help me with the straps, Uncle Gus?'
'Be there in a second.'
The tank was not a standard deceleration type, but a modification built for this one trip. The tank was roughly the shape of an oversized coffin and was swung in gimbals to keep it always normal to the axis of absolute acceleration. Waldo floated in water - the specific gravity of his fat hulk was low -from which he was separated by the usual flexible, gasketed tarpaulin. Supporting his head and shoulders was a pad shaped to his contour. A mechanical artificial resuscitator was built into the tank, the back pads being under water, the breast pads out of the water but retracted out of the way.
Grimes stood by with neoadrenalin; a saddle had been provided for him on the left side of the tank. Baldur was strapped to a shelf on the right side of the tank; he acted as a counterweight to Grimes.
Grimes assured himself that all was in readiness, then called Out to the pilot, 'Start when you're ready.'
'OK.' He sealed the access port; the entry tube folded itself back against the threshold flat of Freehold, freeing the ship. Gently they got under way.
Waldo closed his eyes; a look of seraphic suffering came over his face.
'Uncle Gus, suppose the deKalbs fail?'
'No matter. Ambulances store six times the normal reserve.'
'You're sure?'
When Baldur began to feel weight, he started to whimper. Grimes spoke to him; he quieted down. But presently - days later, it seemed to Waldo - as the ship sank farther down into the Earth's gravitational field, the absolute acceleration necessarily increased, although the speed of the ship had not changed materially. The dog felt the weary heaviness creeping over his body. He did not understand it and he liked it even less; it terrified him. He began to howl.
Waldo opened his eyes. 'Merciful heavens!' he moaned. 'Can't you do something about that? He must be dying.'
'I'll see.' Grimes undid his safety belt and swung himself across the tank. The shift in weight changed the balance of the load in the gimbals; Waldo

was rocked against the side of the tank.
'Oh!' he panted. 'Be careful.'
'Take it easy.' Grimes caressed the dog's head and spoke to him. When he had calmed down, Grimes grabbed a handful of hide between the dog's shoulders, measured his spot, and jabbed in a hypo. He rubbed the area. 'There, old fellow! That will make you feel better.'
Getting back caused Waldo to be rocked again, but he bore it in martyred silence. The ambulance made just one jerky manoeuvre after it entered the atmosphere. Both Waldo and the dog yelped. 'Private ship~' the pilot yelled back. 'Didn't heed my right-of-way lights.' He muttered something about women drivers.
'It wasn't his fault,' Grimes told Waldo. 'I saw it.'
The pilot set them down with exquisite gentleness in a clearing which had been prepared between the highway and Schneider's house. A party of men was waiting for them there; under Grimes's supervision they unslung the tank and carried Waldo out into the open air. The evolution was performed slowly and carefully, but necessarily involved some degree of bumping and uneven movement. Waldo stood it with silent fortitude, but tears leaked out from under his lowered lids.
Once outside he opened his eyes and asked, 'Where is Baldur?'
'I unstrapped him,' Grimes informed him, 'but he did not follow us out.'
Waldo called out huskily, 'Here, Baldur! Come to me, boy.'
Inside the car the dog heard his boss's voice, raised his head, and gave a low bark. He still felt that terrifying sickness, but he inched forward on his belly, attempting to comply. Grimes reached the door in time to see what happened. The dog reached the edge of his shelf and made a grotesque attempt to launch himself in the direction from which he had heard Waldo's voice. He tried the only method of propulsion he knew; no doubt he expected to sail through the door and arrest his flight against the tank on the ground. Instead he fell several feet to the inner floor plates, giving one agonized yelp as he did so, and breaking his fall most clumsily with stiffened forelegs.
He lay sprawled where he had landed, making no noise, but not attempting to move. He was trembling violently.
Grimes came up to him and examined him superficially, enough to assure him that the beast was not really hurt, then returned to the outside.
'Baldur's had a little accident,' he told Waldo; 'he's not hurt, but the poor devil doesn't know how to walk. You had best leave him in the ship.'
Waldo shook his head slightly. 'I want him with me. Arrange a litter.'
Grimes got a couple of the men to help him, obtained a stretcher from the pilot of the ambulance, and undertook to move the dog. One of the men said, 'I don't know as I care for this job. That dog looks vicious. Look't those eyes.'
'He's not,' Grimes assured him. 'He's just scared out of his wits. Here, I'll take his head.'
'What's the matter with him? Same thing as the fat guy?'
'No, he's perfectly well and strong; he's just never learned to walk. This is his first trip to Earth.'

'Well, I'll be a cross-eyed owl!'
'I knew a case like it,' volunteered the other. 'Dog raised in Lunopolis - first week he was on Earth he wouldn't move -just squatted down, and howled, and made messes on the floor.'
'So has this one,' the first said darkly.
They placed Baldur alongside Waldo's tub. With great effort Waldo raised himself on one elbow, reached out a hand, and placed it on the creature's head. The dog licked it; his trembling almost ceased. 'There! There!' Waldo. whispered. 'It's pretty bad, isn't it? Easy, old friend, take it easy.' Baldur thumped his tail.
It took four men to carry Waldo and two more to handle Baldur. Gramps Schneider was waiting for them at the door of his house. He said nothing as they approached, but indicated that they were to carry Waldo inside.
The men with the dog hesitated. 'Him, too,' he said.
When the others had withdrawn - even Grimes returned to the neighbourhood of the ship - Schneider spoke again. 'Welcome, Mr Waldo Jones.'
'I thank you for your welcome, Grandfather Schneider.'
The old man nodded graciously without speaking. He went to the side of Baldur's litter. Waldo felt impelled to warn him that the beast was dangerous with strangers, but some odd restraint - perhaps the effect of that enervating gravitational field - kept him from speaking in time. Then he saw that he need not bother.
Baldur had ceased his low whimpering, had raised his head, and was licking Gramps Schneider's chin. His tail thumped cheerfully. Waldo felt a sudden tug of jealousy; the dog had never been known to accept a stranger without Waldo's specific injunction. This was disloyalty - treason! But he suppressed the twinge and coolly assessed the incident as a tactical advantage to him.
Schneider pushed the dog's face out of the way and went over him thoroughly, prodding, thumping, extending his limbs. He grasped Baldur's muzzle, pushed back his lips, and eyed his gums. He peeled back the dog's eyelids. He then dropped the matter and came to Waldo's side. 'The dog is not sick,' he said; 'his mind confuses. What made it?'
Waldo told him about Baldur's unusual background. Schneider nodded acceptance of the matter - Waldo could not tell whether he had understood or not - and turned his attention to Waldo. 'It is not good for a sprottly lad to lie abed. The weakness - how long has it had you?'
'All my life, Grandfather.'
'That is not good.' Schneider went over him as he had gone over Baldur.
Waldo, whose feeling for personal privacy was much more intense than that of the ordinarily sensitive man, endured it for pragmatic reasons. It was going to be necessary, he felt, to wheedle and cajole this strange old creature. It would not do to antagonize him.
To divert his own attention from the indignity he chose to submit to, and to gain further knowledge of the old quack, Waldo let his eyes rove the room. The room where they were seemed to be a combination kitchen-living room.

It was quite crowded, rather narrow, but fairly long. A fireplace dominated the kitchen end, but it had been bricked up, and a hole for the flue pipe of the base-burner had been let into the chimney. The fireplace was lopsided, as an oven had been included in its left side. The corresponding space at the right was occupied by a short counter which supported a tiny sink. The sink was supplied with water by a small hand pump which grew out of the counter.
Schneider, Waldo decided, was either older than he looked, which seemed incredible, or he had acquired his house from someone now long dead.
The living room end was littered and crowded in the fashion which is simply unavoidable in constricted quarters. Books filled several cases, were piled on the floor, hung precariously on chairs. An ancient wooden desk, crowded with papers and supporting a long-obsolete mechanical typewriter, filled one corner. Over it, suspended from the wall, was an ornate clock, carved somewhat like a house. Above its face were two little doors; while Waldo looked at it, a tiny wooden bird painted bright red popped out of the left-hand door, whistled 'Th-wu th-woo!' four times, and popped frantically back into its hole. Immediately thereafter a little grey bird came out of the right-hand door, said 'Cuckoo' three times in a leisurely manner, and returned to its hole.
Waldo decided that he would like to own such a clock; of course its pendulum-and-weight movement would not function in Freehold, but he could easily devise a one-g centrifuge frame to enclose it, wherein it would have a pseudo Earth-surface environment.
It did not occur to him to fake a pendulum movement by means of a concealed power source; he liked things to work properly.
To the left of the clock was an old-fashioned static calendar of paper. The date was obscured, but the letters above the calendar proper were large and legible: New York World's Fair - Souvenir of the World of Tomorrow. Waldo's eyes widened a little and went back to something he had noticed before, sticking into a pincushion on the edge of the desk.
It was a round plastic button mounted on a pin whereby it could be affixed to the clothing. It was not far from Waldo's eyes; he could read the lettering on it:

FREE SILVER
SIXTEEN TO ONE

Schneider must be - old!
There was a narrow archway, which led into another room. Waldo could not see into it very well; the arch was draped with a fringe curtain of long strings of large ornamental beads.
The room was rich with odours, many of them old and musty, but not dirty.
Schneider straightened up and looked down at Waldo.
'There is nought wrong with your body. Up get yourself and walk.'

Waldo shook his head feebly. 'I am sorry, Grandfather. I cannot.'
'You must reach for the power and make it serve you. Try.'
'I am sorry. I do not know how.'
'That is the only trouble. All matters are doubtful, unless one knows. You send your force into the Other World. You must reach into the Other World and claim it.'
'Where is this "Other World", Grandfather?'
Schneider seemed a little in doubt as to how to answer this. 'The Other World,' he said presently, 'is the world you do not see. It is here and it is there and it is everywhere. But it is especially here.' He touched his forehead. 'The mind sits in it and sends its messages through it to the body. Wait.' Hc shuffled away to a little cupboard, from which he removed a small jar. It contained a salve, or unguent, which he rubbed on his hands.
He returned to Waldo and knelt down beside him. Grasping one of Waldo's hands in both of his, he began to knead it very gently. 'Let the mind be quiet)' he directed. 'Feel for the power. The Other World is close and full of power. Feel it.' The massage was very pleasant to Waldo's tired muscles.
The salve, or the touch of the old man's hand, produced a warm, relaxing tingle. If he were younger, thought Waldo, I would hire him as a masseur. He has a magnetic touch.
Schneider straightened up again and said, 'There - that betters you? Now you rest while I some coffee make.'
Waldo settled back contentedly. He was very tired. Not only was the trip itself a nervous strain, but he was still in the grip of this damnable, thick gravitational field, like a fly trapped in honey. Gramps Schneider's ministrations had left him relaxed and sleepy. He must have dozed, for the last thing he remembered was seeing Schneider drop an eggshell into the coffeepot. Then the old man was standing before him, holding the pot in one hand and a steaming cup in the other. He set them down, got three pillows, which he placed at Waldo's back, then offered him the coffee.
Waldo laboriously reached out both hands to take it. Schneider held it back. 'No,' he reproved, 'one hand makes plenty. Do as I showed. Reach into the Other World for the strength.' He took Waldo's right hand and placed it on the handle of the cup, steadying Waldo's hand with his own. With his other hand he stroked Waldo's right arm gently, from shoulder to fingertips. Again the warm tingle.
Waldo was surprised to find himself holding the cup alone. It was a pleasant triumph; at the time he left Earth, seventeen years before, it had been his invariable habit never to attempt to grasp anything with only one hand. In Freehold, of course, he frequently handled small objects one-handed, without the use of waldoes. The years of practice must have improved his control. Excellent!
So, feeling rather cocky, he drank the cupful with one hand, using extreme care not to slop it on himself. It was good coffee, too, he was bound to admit - quite as good as the sort he himself made from the most expensive syrup extract - better, perhaps.

When Schneider offered him coffeecake, brown with sugar and cinnamon and freshly rewarmed, he swaggeringly accepted it with his left hand, without asking to be relieved of the cup. He continued to eat and drink, between bites and sips resting and steadying his forearms on the edges of the tank.
The conclusion of the Kaffeeklatsch seemed a good time to broach the matter of the deKalbs. Schneider admitted knowing McLeod and recalled, somewhat vaguely it seemed, the incident in which he had restored to service McLeod's broomstick.
'Hugh Donald is a good boy,' he said. 'Machines I do not like, but it pleasures me to fix things for boys.'
'Grandfather,' asked Waldo, 'will you tell me how you fixed Hugh Donald McLeod's ship?'
'Have you such a ship you wish me to fix?'
'I have many such ships which I have agreed to fix, but I must tell you that I have been unable to do so. I have come to you to find out the right way.'
Schneider considered this. 'That is difficult. I could show you, but it is not so much what you do as how you think about it. That makes only with practice.'
Waldo must have looked puzzled, for the old man looked at him and added, 'It is said that there are two ways of looking at everything. That is true and less than true, for there are many ways. Some of them are good ways and some are bad. One of the ancients said that everything either is, or is not. That is less than true, for a thing can both be and not he. With practice one can see it both ways. Sometimes a thing which is for this world is a thing which is not for the Other World. Which is important, since we live in the Other World.'
'We live in the Other World?'
'How else could we live? The mind - not the brain, but the mind - is in the Other World, and reaches this world through the body. That is one true way of looking at it, though there are others.'
'Is there more than one way of looking at deKalb receptors?'
'Certainly.'
'If I had a set which is not working right brought in here, would you show me how to look at it?'
'It is not needful,' said Schneider, 'and I do not like for machines to be in my house. I will draw you a picture.'
Waldo felt impelled to insist, but he squelched his feeling. 'You have come here in humility,' he told himself, 'asking for instruction. Do not tell the teacher how to teach.'
Schneider produced a pencil and a piece of paper, on which he made a careful and very neat sketch of the antennae sheaf and main axis of a skycar. The sketch was reasonably accurate as well, although it lacked several essential minor details.
'These fingers,' Schneider said, 'reach deep into the Other World to draw their strength. In turn it passes down this pillar' - he indicated the axis - to where it is used to move the car.'

A fair allegorical explanation, thought Waldo. By considering the 'Other World' simply a term for the hypothetical ether, it could be considered correct if not complete. But it told him nothing. 'Hugh Donald,' Schneider went on, 'was tired and fretting. He found one of the bad truths.'

'Do you mean,' Waldo said slowly, 'that McLeod's ship failed because he was worried about it?'

'How else?'

Waldo was not prepared to answer that one. It had become evident that the old man had some quaint superstitions; nevertheless he might still be able to show Waldo what to do, even though Schneider did not know why.

'And what did you do to change it?'

'I made no change; I looked for the other truth.'

'But how? We found some chalk marks-'

'Those? They were but to aid me in concentrating my attention in the proper direction. I drew them down so,' - he illustrated with pencil on the sketch - 'and thought how the fingers reached out for power. And so they did.'

'That is all? Nothing more?'

'That is enough.'

Either, Waldo considered, the old man did not know how he had accomplished the repair, or he had had nothing to do with it - sheer and amazing coincidence.

He had been resting the empty cup on the rim of his tank, the weight supported by the metal while his fingers merely steadied it. His preoccupation caused him to pay too little heed to it; it slipped from his tired fingers, clattered and crashed to the floor.

He was much chagrined. 'Oh, I'm sorry, Grandfather. I'll send you another.'

'No matter. I will mend.' Schneider carefully gathered up the pieces and placed them on the desk. 'You have tired,' he added. 'That is not good. It makes you lose what you have gained. Go back now to your house, and when you have rested, you can practise reaching for the strength by yourself.'

It seemed a good idea to Waldo; he was growing very tired, and it was evident that he was to learn nothing specific from the pleasant old fraud. He promised, emphatically and quite insincerely, to practise 'reaching for strength', and asked Schneider to do him the favour of summoning his bearers.

The trip back was uneventful. Waldo did not even have the spirit to bicker with the pilot.

Stalemate. Machines that did not work but should, and machines that did work but in an impossible manner. And no one to turn to but one foggy-headed old man.

Waldo worked lackadaisically for several days, repeating, for the most part, investigations he had already made rather than admit to himself

that he was stuck, that he did not know what to do, that he was, in fact, whipped and might as well call Gleason and admit it.
The two 'bewitched' sets of deKalbs continued to work whenever activated, with the same strange and incredible flexing of each antenna. Other deKalbs which had failed in operation and had been sent to him for investigation still refused to function. Still others, which had not yet failed, performed beautifully without the preposterous fidgeting.
For the umpteenth time he took out the little sketch Schneider had made and examined it. There was, he thought, just one more possibility: to return again to Earth and insist that Schneider actually do in his presence, whatever it was he had done which caused the deKalbs to work. He knew now that he should have insisted on it in the first place, but he had been so utterly played out by having to fight that devilish thick field that he had not had the will to persist.
Perhaps he could have Stevens do it and have the process stereophotoed for a later examination. No, the old man had a superstitious prejudice against artificial images.
He floated gently over to the vicinity of one of the inoperative deKalbs. What Schneider had claimed to have done was preposterously simple. He had drawn chalk marks down each antenna so, for the purpose of fixing his attention. Then he had gazed down them and thought about them 'reaching out for power', reaching into the Other World, stretching- Baldur began to bark frantically.
'Shut up, you fool!' Waldo snapped, without taking his eyes off the antennae. Each separate pencil of metal was wiggling, stretching. There was the low, smooth hum of perfect operation.
Waldo was still thinking about it when the televisor demanded his attention. He had never been in any danger of cracking up mentally as Rambeau had done; nevertheless, he had thought about the matter in a fashion which made his head ache. He was still considerably bemused when he cut in his end of the sound-vision circuit.
'Yes?'
It was Stevens. 'Hello, Mr Jones. Uh, we wondered . . . that is-
'Speak up, man!'
'Well, how close are you to a solution?' Stevens blurted out. 'Matters are getting pretty urgent.'
'In what way?'
'There was a partial breakdown in Great New York last night. Fortunately it was not at peak load and the ground crew were able to install spares before the reserves were exhausted, but you can imagine what it would have been like during the rush hour. In my own department the crashes have doubled in the past few weeks, and our underwriters have given notice. We need results pretty quick.'
'You'll get your results,' Waldo said loftily. 'I'm in the final stages of the research.' He was actually not that confident, but Stevens irritated him even more than most of the smooth apes.

Doubt and reassurance mingled in Stevens's face.
'I don't suppose you could care to give us a hint of the general nature of the solution?'
No, Waldo could not. Still - it would be fun to pull Stevens's leg. 'Come close to the pickup, Dr Stevens. I'll tell you.' He leaned forward himself, until they were almost nose to nose - in effect. 'Magic is loose in the world!'
He cut the circuit at once.
Down in the underground labyrinth of North America's home plant, Stevens stared at the blank screen.
'What's the trouble, chief?' McLeod inquired.
'I don't know. I don't rightly know. But I think that Fatty has slipped his cams, just the way Rambeau did.'
McLeod grinned delightedly. 'How sweet! I always did think he was a hoot owl.'
Stevens looked very sober. 'You had better pray that he hasn't gone nuts. We're depending on him. Now let me see those operation reports.'

Magic loose in the world. It was as good an explanation as any, Waldo mused. Causation gone haywire; sacrosanct physical laws no longer operative. Magic. As Gramps Schneider had put it, it seemed to depend on the way one looked at it.
Apparently Schneider had known what he was talking about, although he naturally had no real grasp of the physical theory involved in the deKalbs.
Wait a minute now! Wait a minute. He had been going at this problem wrongly perhaps. He had approached it with a certain point of view himself, a point of view which had made him critical of the old man's statements - an assumption that he, Waldo, knew more about the whole matter than Schneider did. To be sure he had gone to see Schneider, but he had thought of him as a back-country hex doctor, a man who might possess one piece of information useful to Waldo, but who was basically ignorant and superstitious.
Suppose he were to review the situation from a different viewpoint. Let it be assumed that everything Schneider had to say was coldly factual and enlightened, rather than allegorical and superstitious- He settled himself to do a few hours of hard thinking.
In the first place Schneider had used the phrase 'the Other World' time and again. What did it mean, literally? A 'world' was a space-time-energy continuum; an 'Other World' was, therefore, such a continuum, but a different one from the one in which he found himself. Physical theory found nothing repugnant in such a notion; the possibility of infinite numbers of continua was a familiar, orthodox speculation. It was even convenient in certain operations to make such an assumption.
Had Gramps Schneider meant that? A literal, physical 'Other World'? On rcflection, Waldo was convinced that he must have meant just that, even though he had not used conventional scientific phraseology. 'Other World' sounds poetical, but to say an 'additional continuum' implies physical meaning. The terms had led him astray.
Schneider had said that the Other World was all round, here, there, and everywhere.

Well, was not that a fair description of a space superposed and in one-to-one correspondence? Such a space might be so close to this one that the interval between them was an infinitesimal, yet unnoticed and unreachable, just as two planes may be considered as coextensive and separated by an unimaginably short interval, yet be perfectly discreet, one from the other.

The Other Space was not entirely unreachable; Schneider had spoken of reaching into it. The idea was fantastic, yet he must accept it for the purposes of this investigation.

Schneider had implied - no - stated that it was a matter of mental outlook. Was that really so fantastic? If a continuum were an unmeasurably short distance away, yet completely beyond one's physical grasp, would it be strange to find that it was most easily reached through some subtle and probably subconscious operation of the brain? The whole matter was subtle - and Heaven knew that no one had any real idea of how the brain works. No idea at all.

It was laughably insufficient to try to explain the writing of a symphony in terms of the mechanics of colloids. No, nobody knew how the brain worked; one more inexplicable ability in the brain was not too much to swallow.

Come to think of it, the whole notion of consciousness and thought was fantastically improbable. All right, so McLeod disabled his skycar himself by thinking bad thoughts; Schneider fixed it by thinking the correct thoughts. Then what?

He reached a preliminary conclusion almost at once: by extension, the other deKalh failures were probably failures on the part of the operators. The operators were probably rundown, tired out, worried about something, and in some fashion still not clear they infected, or affected, the deKalbs with their own troubles. For convenience let us say that the deKalbs were short-circuited into the Other World. Poor terminology, but it helped him to form a picture.

Grimes's hypothesis! 'Run-down, tired out, worried about something!' Not proved yet, but he felt sure of it. The epidemic of crashcs through material was simply an aspect of the general anyasthenia caused by short-wave radiation. If that were true- He cut in a sight-sound circuit to Earth and demanded to talk with Stevens.

'Dr Stevens,' he began at once, 'There is a preliminary precautionary measure which should be undertaken right away.'

'Yes?'

'First, let me ask you this: Have you had many failures of deKalbs in private ships? What is the ratio?'

'I can't give you exact figures at the moment,' Stevens answered, somewhat mystified, 'but there have been practically none. It's the commercial lines which have suffered.'

'Just as I suspected. A private pilot won't fly unless he feels up to it, but a man with a job goes ahead no matter how he feels. Make arrangements for special physical and psycho examinations for all commercial pilots flying deKalb-type ships. Ground any who are not feeling in tiptop shape. Call Dr Grimes. He'll tell you what to look for.'

'That's a pretty tall order, Mr Jones. After all, most of those pilots, practically all of them, aren't our employees. We don't have much control over them.'
'That's your problem,' Waldo shrugged. 'I'm trying to tell you how to reduce crashes in the interim before I submit my complete solution.'
'But-'
Waldo heard no more of the remark; he had cut off when he himself was through. He was already calling over a permanently energized, leased circuit which kept in touch with his terrestrial business office - with his 'trained seals'.
He gave Them some very odd instructions - orders for books, old books, rare books. Books dealing with magic.
Stevens consulted with Gleason before attempting to do anything about Waldo's difficult request. Gleason was dubious. 'He offered no reason for the advice?'
'None. He told me to look up Dr Grimes and get his advice as to what specifically to look for.'
'Dr Grimes?'
'The MD who introduced me to Waldo - mutual friend.'
'I recall. him... it will be difficult to go about grounding men who don't work for us. Still, I suppose several of our larger customers would cooperate if we asked them to and gave them some sort of a reason. What are you looking so odd about?'
Stevens told him of Waldo's last, inexplicable statement. 'Do you suppose it could be affecting him the way it did Dr Rarnbeau?'
'Mm-m-m. Could be, I suppose. In which case it would not be well to follow his advice. Have you anything else to suggest?'
'No - frankly.'
'Then I see no alternative but to follow his advice. He's our last hope. A forlorn one, perhaps, but our only one.'
Stevens brightened a little. 'I could talk to Doc Grimes about it. He knows more about Waldo than anyone else.'
'You have to consult him anyway, don't you? Very well -do so.'

Grimes listened to the story without comment. When Stevens had concluded he said, 'Waldo must be referring to the symptoms I have observed with respect to short-wave exposure. That's easy; you can have the proofs of the monograph I've been preparing. It'll tell you all about it.'
The information did not reassure Stevens; it helped to confirm his suspicion that Waldo had lost his grip. But he said nothing.
Grimes continued, 'As for the other, Jim, I can't visualize Waldo losing his mind that way.'
'He never did seem very stable to me.'
'I know what you mean. But his paranoid streak is no more like what Rambeau succumbed to than chickenpox is like mumps. Matter of fact, one psychosis protects against the other. But I'll go see.'
'You will? Good!'
'Can't go today. Got a broken leg and some children's colds that'll bear

watching. Been some polio around. Ought to be able to make it the end of the week though.'

'Doc, why don't you give up GP work? It must be deadly.'

'Used to think so when I was younger. But about forty years ago I quit treating diseases and started treating people. Since then I've enjoyed it.'

Waldo indulged in an orgy of reading, gulping the treatises on magic and related subjects as fast as he could. He had never been interested in such subjects before; now, in reading about them with the point of view that there might be - and even probably was - something to be learned, he found them intensely interesting.

There were frequent references to another world; sometimes it was called the Other World, sometimes the Little World. Read with the conviction that the term referred to an actual, material, different continuum, he could see that many of the practitioners of the forbidden arts had held the same literal viewpoint. They gave directions for using this other world; sometimes the directions were fanciful, sometimes they were baldly practical.

It was fairly evident that at least 90 per cent of all magic, probably more, was balderdash and sheer mystification. The mystification extended even to the practitioners, he felt; they lacked the scientific method; they employed a single-valued logic as faulty as the two-valued logic of the obsolete Spencer determinism; there was no suggestion of modern extensional, many-valued logic.

Nevertheless, the laws of contiguity, of sympathy, and of homeopathy had a sort of twisted rightness to them when considered in relation to the concept of another, different, but accessible, world.

A man who had some access to a different space might well believe in a logic in which a thing could be, not be, or be anything with equal ease.

Despite the nonsense and confusion which characterized the treatments of magic which dated back to the period when the art was in common practice, the record of accomplishment of the art was impressive.

There was curare and digitalis, and quinine, hypnotism, and telepathy. There was the hydraulic engineering of the Egyptian priests. Chemistry itself was derived from alchemy; for that matter, most modern science owed its' origins to the magicians. Science had stripped off the surplusage, run it through the wringer of two-valued logic, and placed the knowledge in a form in which anyone could use it.

Unfortunately, that part of magic which refused to conform to the neat categories of the nineteenth-century methodologists was lopped off and left out of the body of science. It fell into disrepute, was forgotten save as fable and superstition.

Waldo began to think of the arcane arts as aborted sciences, abandoned before they had been clarified.

And yet the manifestations of the sort of uncertainty which had characterized some aspects of magic and which he now attributed to hypothetical additional continua had occurred frequently, even in modern times. The evidence was overwhelming to anyone who approached

it with an open mind:
Poltergeisten, stones falling from the sky, apportation. 'bewitched' persons - or, as he Thought of them, persons who for some undetermined reason were loci of uncertainty - 'haunted' houses, strange fires of the sort that would have once been attributed to salamanders. There were hundreds of such cases, carefully recorded and well vouched for, but ignored by orthodox science as being impossible. They were impossible, by known law, but considered from the standpoint of a coextensive additional continuum, they became entirely credible.
He cautioned himself not to consider his tentative hypothesis of the Other World as proved; nevertheless, it was an adequate hypothesis even if it should develop that it did not apply to some of the cases of strange events.
The Other Space might have different physical laws - no reason why it should not.
Nevertheless, he decided to proceed on the assumption that it was much like the space he knew.
The Other World might even be inhabited. That was an intriguing thought! In which case anything could happen through 'magic'.
Anything!
Time to stop speculating and get down to a little solid research.
He had previously regretfully given up trying to apply the formulas of the medieval magicians. It appeared that they never wrote down all of a procedure; some essential - so the reports ran and so his experience confirmed - was handed down verbally from master to student. His experience with Schneider confirmed this; there were things, attitudes, which must needs be taught directly.
He regretfully set out to learn what he must unassisted.

'Gosh, Uncle Gus, i'm glad to see you!'
'Decided I'd better look in on you. You haven't phoned me in weeks.'
'That's true, but I've been working awfully hard, Uncle Gus.'
'Too hard, maybe. Mustn't overdo it. Lemme see your tongue.~
'I'm OK.' But Waldo stuck out his tongue just the same; Grimes looked at it and felt his pulse.
'You seem to be ticking all right. Learning anything?'
'Quite a lot. I've about got the matter of the deKalbs whipped.'
'That's good. The message you sent Stevens seemed to indicate that you had found some hookup that could be used on my pet problem too.~
'In a way, yes; but around from the other end. It begins to seem as if it was your problem which created Stevens's problem.'
'Huh?'
'I mean it. The symptoms caused by ultra short-wave radiation may have had a lot to do with the erratic behaviour of the deKalbs.'
'How?'
'I don't know myself. But I've rigged up a working hypothesis and I'm

checking it.'
'Hm-m-m. Want to talk about it?'
'Certainly - to you.' Waldo launched into an account of his interview with Schneider, concerning which he had not previously spoken to Grimes, even though Grimes had made the trip with him. He never, as Grimes knew, discussed anything until he was ready to.
The story of the third set of deKalbs to be infected with the incredible writhings caused Grimes to raise his eyebrows. 'Mean to say you caught on how to do that?'
'Yes indeed. Not "how", maybe, but I can do it. I've done it more than once. I'll show you.' He drifted away towards one side of the great room where several sets of deKalbs, large and small, were mounted, with their controls, on temporary guys.
'This fellow over on the end, it just came in today. Broke down. I'll give it Gramps Schneider's hocus-pocus and fix it. Wait a minute. I forgot to turn on the power.'
He returned to the central ring which constituted his usual locus and switched on the beamcaster. Since the ship itself effectively shielded anything in the room from outer radiation, he had installed a small power plant and caster similar in type to NAPA's giant ones; without it he would have had no way to test the reception of the deKalbs.
He rejoined Grimes and passed down the line of deKalbs, switching on the activizing circuits. All save two began to display the uncouth motions he had begun to think of as the Schneider flex.
'That one on the far end,' he remarked, 'is in operation but doesn't flex. It has never broken down, so it's never been treated. It's my control; but this one' - he touched the one in front of him - 'needs fixing. Watch me.'
'What are you going to do?'
'To tell the truth, I don't quite know. But I'll do it.' He did not know. All he knew was that it was necessary to gaze down the antennae, think about them reaching into the Other World, think of them reaching for power, reaching - The antennae began to squirm.
'That's all there is to it - strictly between ourselves. I learned it from Schneider.' They had returned to the centre of the sphere, at Grimes's suggestion, on the pretext of wanting to get a cigarette. The squirming deKalbs made him nervous, but he did not want to say so.
'How do you explain it?'
'I regard it as an imperfectly understood phenomenon of the Other Space. I know less about it than Franklin knew about lightning. But I will know- I will! I could give Stevens a solution right now for his worries if I knew some way to get around your problem too.'
'I don't see the connexion.'
'There ought to be some way to do the whole thing through the Other Space. Start out by radiating power into the Other Space and pick it up from there. Then the radiation could not harm human beings. It would never get at them;

it would duck around them. I've been working on my caster, but with no luck so far. I'll crack it in time.'
'I hope you do. Speaking of that, isn't the radiation from your own caster loose in this room?'
'Yes.'
'Then I'll put on my shield coat. It's not good for you either.'
'Never mind. I'll turn it off.' As he turned to do so there was the sound of a sweet, chirruping whistle. Baldur barked. Grimes turned to see what caused it.
'What,' he demanded, 'have you got there?'
'Huh? Oh, That's my cuckoo clock. Fun, isn't it?' Grimes agreed that it was, although he could not see much use for it. Waldo had mounted it on the edge of a light metal hoop which spun with a speed just sufficient to produce a centrifugal force of one g.
'I rigged it up,' Waldo continued, 'while I was bogged down in this problem of the Other Space. Gave me something to do.'
'This "Other Space" business - I still don't get it.'
'Think of another continuum much like our own and superposed on it the way you might lay one sheet of paper on another. The two spaces aren't identical, but they are separated from each other by the smallest interval you can imagine - coextensive but not touching - usually. There is an absolute one-to-one, point-for-point correspondence, as I conceive it, between the two spaces, but they are not necessarily the same size or shape.'
'Hey? Come again - they would have to be.'
'Not at all. Which has the larger number of points in it? A line an inch long, or a line a mile long?'
'A mile long, of course.'
'No. They have exactly the same number of points. Want me to prove it?'
'I'll take your word for it. But I never studied that sort of maths.'
'All right. Take my word for it then. Neither size nor shape is any impediment to setting up a full, point-for-point correspondence between two spaces. Neither of the words is really appropriate. "Size" has to do with a space's own inner structure, its dimensions in terms of its own unique constants. "Shape" is a matter which happens inside itself - or at least not inside our space - and has to do with how it is curved, open or closed, expanding or contracting.'
Grimes shrugged. 'It all sounds like gibberish to me.' He returned to watching the cuckoo clock swing round and round its wheel.
'Sure it does,' Waldo assented cheerfully. 'We are limited by our experience. Do you know how I think of the Other World?' The question was purely rhetorical. 'I think of it as about the size and shape of an ostrich egg, but nevertheless a whole universe, existing side by side with our own, from here to the farthest star. I know that it's a false picture, but it helps me to think about it that way.'
'I wouldn't know,' said Grimes, and turned himself around in the air. The compound motion of the clock's pendulum was making him a little dizzy.
'Say! I thought you turned off the caster?'

'I did,' Waldo agreed, and looked where Grimes was looking. The deKalbs were still squirming. 'I thought I did,' he said doubtfully, and turned to the caster's control board. His eyes then opened wider. 'But I did. It is turned off.'
'Then what the devil-'
'Shut up!' He had to think - think hard. Was the caster actually out of operation? He floated himself over to it, inspected it. Yes, it was dead, dead as the dinosaurs. Just to make sure he went back, assumed his primary waldoes, cut in the necessary circuits, and partially disassembled it.
But the deKalbs still squirmed.
The one deKalb set which had not been subjected to the Schneider treatment was dead; it gave out no power hum. But the others were working frantically, gathering power from -where?'
He wondered whether or not McLeod had said anything to Granmps Schneider about the casters from which the deKalbs were intended to pick up their power. Certainly he himself had not. It simply had not come into the conversation. But Schneider had said something.
'The Other World is close by and full of power!'
In spite of his own intention of taking the old man literally he had ignored that statement. The Other World is full of power. I am sorry I snapped at you, Uncle Gus,' he said.
'S all right.'
'But what do you make of that?'
'Looks like you've invented perpetual motion, son.'
'In a way, perhaps. Or maybe we've repealed the law of conservation of energy. Those de Kalbs are drawing energy that was never before in this world!'
'Hm-m-m!'
To check his belief he returned to the control ring, donned his waldoes, cut in a mobile scanner, and proceeded to search the space around the deKalbs with the most sensitive pickup for the radio power band he had available.
The needles never jumped; the room was dead in the wave lengths to which the deKalbs were sensitive. The power came from Other Space.
The power came from Other Space. Not from his own beamcaster, not from NAPA's shiny stations, but from Other Space. In that case he was not even close to solving the prob1cm of the defective deKalbs; he might never solve it. Wait, now - just what had he contracted to do? He tried to recall the exact words of the contract.
There just might be a way around it. Maybe. Yes, and this newest cockeyed trick of Gramps Schneider's little pets could have some very tricky aspects. He began to see some possibilities, but he needed to think about it.
'Uncle Gus-'
'Yes, Waldo?'
'You can go back and tell Stevens that I'll be ready with the answers. We'll get his problem licked, and yours too. In the meantime I've got to do some really heavy thinking, so I want to be by myself, please.'

'Greetings, Mr Gleason. Quiet, Baldur! Come in. Be comfortable. How do you do, Dr Stevens.'
'How do you do, Mr Jones.'
'This,' said Gleason, indicating a figure trailing him, 'is Mr. Harkness, head of our legal staff.'
'Ah, yes indeed. There will be matters of contract to be discussed. Welcome to Freehold, Mr Harkness.'
'Thank you,' Harkness said coldly. 'Will your attorneys be present?'
'They are present.' Waldo indicated a stereo screen. Two figures showed in it; they bowed and murmured polite forms.
'This is most irregular,' Harkness complained. 'Witnesses should be present in person. Things seen and heard by television are not evidence.'
Waldo drew his lips back. 'Do you wish to make an issue of it?'
'Not at all,' Gleason said hastily. 'Never mind, Charles.' Harkness subsided.
'I won't waste your time, gentlemen,' Waldo began. 'We are here in order that I may fulfil my contract with you. The terms are known, we will pass over them.'
He inserted his arms into his primary waldoes. 'Lined up along the far wall you will see a number of radiant power receptors, commonly called deKalbs. Dr Stevens may, if he wishes, check their serial numbers-'
'No need to.'
'Very well. I shall start my local beamcaster, in order that we may check the efficiency of their operation.' His waldoes were busy as he spoke. 'Then I shall activate the receptors, one at a time.' His hands pawed the air; a little pair of secondaries switched on the proper switches on the control board of the last set in line. 'This is an ordinary type, supplied to me by Dr Stevens, which has never failed in operation. You may assure yourself that it is now operating in the normal manner, if you wish, Doctor.'
'I can see that it is.'
'We will call such a receptor a "deKalb" and its operation "normal".' The small waldoes were busy again. 'Here we have a receptor which I choose to term a "Schneider-deKalb" because of certain treatment it has received' the antennae began to move - 'and its operation "Schneider-type" operation. Will you check it, Doctor?'
'OK.'
'You fetched with you a receptor set which has failed?'
'As you can see.'
'Have you been able to make it function?'
'No, I have not.'
'Are you sure? Have you examined it carefully?'
'Quite carefully,' Stevens acknowledged sourly. He was beginning to be tired of Waldo's pompous flubdubbery.
'Very well. I will now proceed to make it operative.' Waldo left his control ring, shoved himself over to the vicinity of the defective deKalb, and placed himself so that his body covered his exact actions from the sight of the

others. He returncd to the ring and, using waldoes, switched on the activating circuit of the dcKalb.
It immediately exhibited Schneider-type activity.
'That is my case, gentlemen,' he announced. 'I have found out how to repair deKalbs which become spontaneously inoperative. I will undertake to apply the Schneider treatment to any receptors which you may bring to me. That is included in my fee. I will undertake to train others in how to apply the Schneider treatment. That is included in my fee, but I cannot guarantee that any particular man will profit by my instruction. Without going into technical details I may say that the treatment is very difficult, much harder than it looks. I think that Dr Stevens will confirm that.'
He smiled thinly.
'I believe that completes my agreement with you.'
'Just a moment, Mr Jones,' put in Gleason. 'Is a deKalb foolproof, once it has received the Schneider treatment?'
'Quite. I guarantee it.'
They went into a huddle while Waldo waited. At last Gleason spoke for them.
'These are not quite the results we had expected, Mr Jones, but we agree that you have fulfilled your commission - with the understanding that you will Schneider-treat any receptors brought to you and instruct others, according to their ability to learn.'
'That is correct.'
'Your fee will be deposited to your account at once.'
'Good. That is fully understood and agreed? I have completely and successfully performed your commission?'
'Correct.'
'Very well then. I have one more thing to show you. If you will be patient-'
A section of the wall folded back; gigantic waldoes reached into the room beyond and drew forth a large apparatus, which resembled somewhat in general form an ordinary set of deKalbs, but which was considerably more complicated. Most of the complications were sheer decoration, but it would have taken a skilled engineer a long time to prove the fact.
The machine did contain one novel feature: a built-in meter of a novel type, whereby it could be set to operate for a predetermined time and then destroy itself, and a radio control whereby the time limit could be varied. Furthermore, the meter would destroy itself and the receptors if tampered with by any person not familiar with its design. It was Waldo's tentative answer to the problem of selling free and unlimited power.
But of these matters he said nothing. Small waldoes had been busy attaching guys to the apparatus; when they were through he said, 'This, gentlemen, is an instrument which I choose to call a Jones-Schneider-deKalb. And it is the reason why you will not be in the business of selling power much longer.~

'So?' said Gleason. 'May I ask why?'
'Because,' he was told, 'I can sell it more cheaply and conveniently and under circumstances you cannot hope to match.'
'That is a strong statement.'
'I will demonstrate. Dr Stevens, you have noted that the other receptors are operating. I will turn them off.' The waldoes did so.
'I will now stop the beamcast and I will ask you to assure yourself, by means of your own instruments, that there is no radiant power, other than ordinary visible light, in this room.'
Somewhat sullenly Stevens did so. 'The place is dead,' he announced some minutes later.
'Good. Keep your instruments in place, that you may be sure it remains dead. I will now activate my receptor.' Little mechanical hands closed the switches.
'Observe it, Doctor. Go over it thoroughly.'
Stevens did so. He did not trust the readings shown by its instrument hoard; he attached his own meters in parallel.
'How about it, James?' Gleason whispered.
Stevens looked disgusted. 'The damn thing draws power from nowhere!'
They all looked at Waldo. 'Take plenty of time, gentlemen,' he said grandly. 'Talk it over.'
They withdrew as far away as the room permitted and whispered. Waldo could see that Harkness and Stevens were arguing, that Stevens was noncommittal. That suited him. He was hoping that Stevens would not decide to take another look at the fancy gadget he had termed a Jones-Schneider-deKalb. Stevens must not learn too much about it - yet. He had been careful to say nothing but the truth about it, but perhaps he had not said all of the truth; he had not mentioned that all Schneider-treated deKalbs were sources of free power.
Rather embarrassing if Stevens should discover that!
The meter-and-destruction device Waldo had purposely made mysterious and complex, but it was not useless. Later he would be able to point out, quite correctly, that without such a device NAPA simply could not remain in business.
Waldo was not easy. The whole business was a risky gamble; he would have much preferred to know more about the phenomena he was trying to peddle, but - he shrugged mentally while preserving a smile of smug confidence - the business had dragged on several months already, and the power situation really was critical. This solution would do - if he could get their names on the dotted line quickly enough.
For he had no intention of trying to compete with NAPA.
Gleason pulled himself away from Stevens and Harkness, came to Waldo. 'Mr Jones, can't we arrange this amicably?'

'What have you to suggest?'

It was quite an hour later that Waldo, with a sigh of relief, watched his guests' ship depart from the threshold flat.
A fine caper, he thought, and it had worked; he had got away with it. He had magnanimously allowed himself to be persuaded to consolidate, provided - he had allowed himself to be quite temperamental about this - the contract was concluded at once, no fussing around and fencing between lawyers. Now or never - put up or shut up. The proposed contract, he had pointed out virtuously, gave him nothing at all unless his allegations about the Jones-chneider-deKalb were correct.
Gleason considered this point and had decided to sign, had signed. Even then Harkness had attempted to claim that Waldo had been an employee of NAPA. Waldo had written that first contract himself - a specific commission for a contingent fee. Harkness did not have a leg to stand on; even Gleason had agreed to that.
In exchange for all rights to the Jones-Schneider-deKalb, for which he agreed to supply drawings - wait till Stevens saw, and understood, those sketches! - for that he had received the promise of senior stock in NAPA, non-voting, but fully paid up and non-assessable. The lack of active participation in the company had been his own idea. There were going to be more headaches in the power business, headaches aplenty. He could see them coming - bootleg designs, means of outwitting the metering, lots of things. Free power had come, and efforts to stop it would in the long run, he believed, be fruitless.
Waldo laughed so hard that he frightened Baldur, who set up an excited barking.
He could afford to forget Hathaway now. His revenge on NAPA contained one potential flaw; he had assured Gleason that the Schneider-treated deKalbs would continue to operate, would not come unstuck. He believed that to be true simply because he had faith in Gramps Schneider. But he was not prepared to prove it.
He knew himself that he did not know enough about the phenomena associated with the Other World to be sure that something would, or would not, happen. It was still going to be necessary to do some hard, extensive research.
But the Other World was a devilishly difficult place to investigate! Suppose, he speculated, that the human race were blind, had never developed eyes. No matter how civilized, enlightened, and scientific the race might have become, it is difficult to see how such a race could ever have developed the concepts of astronomy. They might know of the Sun as a cyclic source of energy having a changing, directional character, for the Sun is so overpowering that it may be 'seen' with the skin. They would notice it and invent instruments to trap it and

examine it.
But the pale stars, would they ever notice them? It seemed most unlikely. The very notion of the celestial universe, its silent depths and starlit grandeur, would be beyond them. Even if one of their scientists should have the concept forced on him in sueh a manner that he was obliged to accept the fantastic, incredible thesis as fact, how then would he go about investigating its details? Waldo tried to imagine an astronomical phototelescope, conceived and designed by a blind man, intended to he operated by a blind man, and capable of collecting data which could he interpreted by a blind man. He gave it up; There were too many hazards. It would take a subtlety of genius far beyond his own to deal with the inescapably tortuous concatenations of inferential reasoning necessary to the solution of such a problem. It would strain him to invent such instruments for a blind man; he did not see how a blind man could ever overcome the difficulties unassisted.
In a way that was what Schneider had done for him; alone, he would have bogged down.
But even with Schneider's hints the problem of investigating the Other World was still much like the dilemma of the blind astronomer. He could not see the Other World; only through the Schneider treatment had he been able to contact it.
Damnation! how could he design instruments to study it?
He suspected that he would eventually have to go back to Schneider for further instruction, but that was an expedient so distasteful that he refused to think much about it. Furthermore, Gramps Schneider might not be able to teach him much; they did not speak the same language.
This much he did know: the Other Space was there and it could be reached sometimes by proper orientation of the mind, deliberately as Schneider had taught him, or subconsciously as had happened to McLeod and others.
He found the idea distasteful. That thought and thought alone should be able to influence physical phenomena was contrary to the whole materialistic philosophy in which he had grown up. He had a prejudice in favour of order and invariable natural laws. His cultural predecessors, the experimental philosophers who had built up the world of science and its concomitant technology, Galileo, Newton, Edison, Einstein, Steinmetz, Jeans, and their myriad colleagues - these men had thought of the physical universe as a mechanism proceeding by inexorable necessity. Any apparent failure to proceed thus was regarded as an error in observation, an insufficient formulation of hypothesis, or an insufficiency of datum.
Even the short reign of the Heisenberg uncertainty principle had not changed the fundamental orientation towards Order and Cosmos; the Heisenbcrg uncertainty was one they were certain of! It could be

formulated, expressed, and a rigorous statistical mechanics could be built from it.
In 1958 Horowitz's reformulation of wave mechanics had eliminated the concept. Order and causation were restored.
But this damned business! One might as well pray for rain, wish on the Moon, go to faith healers, surrender whole hog to Bishop Berkeley's sweetly cereb-al world-in-your-head. '-the tree's not a tree, when there's no one about on the quad!'

Waldo was not emotionally wedded to Absolute Order as Rambeau had been; he was in no danger of becoming mentally unbalanced through a failure of his basic conceptions; nevertheless, consarn it, it was convenient for things to work the way one expected them to.
On order and natural law was based predictability; without predictability it was impossible to live. Clocks should run evenly; water should boil when heat is applied to it; food should nourish, not poison; deKalb receptors should work, work the way they were designed to; Chaos was insupportable - it could not be lived with.
Suppose Chaos were king and the order we thought we detected in the world about us a mere phantasm of the imagination; where would that lead us? In that case, Waldo decided, it was entirely possible that a ten-pound weight did fall ten times as fast as a one-pound weight until the day the audacious Galileo decided in his mind that it was not so.
Perhaps the whole meticulous science of ballistics derived from the convictions of a few firm-minded individuals who had sold the notion to the world. Perhaps the very stars were held firm in their courses by the unvarying faith of the astronomers. Orderly Cosmos, created out of Chaos - by Mind!
The world was flat before geographers decided to think of it otherwise. The world was flat, and the Sun, tub size, rose in the east and set in the west. The stars were little lights, studding a pellucid dome which barely cleared the tallest mountains. Storms were the wrath of gods and had nothing to do with the calculus of air masses. A Mind-created animism dominated the world then.
More recently it had been different. A prevalent convention of materialistic and invariable causation had ruled the world; on it was based the whole involved technology of a machine-served civilization. The machines worked, the way they were designed to work, because everybody believed in them. Until a few pilots, somewhat debilitated by overmuch exposure to radiation, had lost their confidence and infected their machines with uncertainty - and thereby let magic loose in the world.
He was beginning, he thought, to understand what had happened to magic. Magic was the erratic law of an animistic world; it had been steadily pushed back by the advancing philosophy of invariant causation. It was gone now - until this new outbreak - and its world with it, except for

backwaters of 'superstition'. Naturally an experimental scientist reported failure when investigating haunted houses, apportations, and the like; his convictions prevented the phenomena from happening.

The deep jungles of Africa might be very different places -when there was no white man around to see! The strangely slippery laws of magic might still obtain.

Perhaps these speculations were too extreme; nevertheless, they had one advantage which orthodox concepts had not: they included Gramps Schncider's hexing of the deKalbs. Any working hypothesis which failed to account for Schneider's -and his own - ability to think a set of deKalbs into operation was not worth a continental.

This one did, and it conformed to Gramps's own statements: 'All matters are doubtful' and 'A thing can both be, not be, and he anything. There are many true ways of looking at the same thing. Some ways are good, some are bad.'

Very well. Accept it. Act on it. The world varied according to the way one looked at it. In that case, thought Waldo, he knew how he wanted to look at it. He cast his vote for order and predictability!

He would set the style. He would impress his own concept of the Other World on the cosmos!

It had been a good start to assure Gleason that the Schneider-treated deKalbs were foolproof. Good. So let it be. They were foolproof. They would never get out of order.

He proceeded to formulate and clarify his own concept of the Other World in his mind. He would think of it as orderly and basically similar to this space.

The connexion between the two spaces lay in the neurological system; the cortex, the thalamus, the spinal cord, and the appended nerve system were closely connected with both spaces. Such a picture was consistent with what Schneider had told him and did not conflict with phenomena as he knew it.

Wait. If the neurological system lay in both spaces, then that might account for the relatively slow propagation of nerve impulses as compared with electromagnetic progression. Yes! If the other space had a c constant relatively smaller than that of this space, such would follow.

He began to feel a calm assurance that it was so.

Was he merely speculating - or creating a universe?

Perhaps he would have to abandon his mental picture of the Other Space, as being the size and shape of an ostrich egg, since a space with a slower propagation of light is not smaller, but larger, than the space he was used to.

No . . . no, wait a second, the size of a space did not depend on its c constant, but on its radius of curvature in terms of its c constant. Since c was a velocity, size was dependent on the notion of time - in this case time as entropy rate. Therein lay a characteristic which could be compared between the two spaces: they exchanged energy; they affected each other's entropy. The one which degenerated the more rapidly towards a state of level entropy was the 'smaller'.

He need not abandon his picture of the ostrich egg-good old egg! The Other World was a closed space, with a slow c, a high entropy rate, a short radius, and an entropy state near level - a perfect reservoir of power at every point, ready to spill over into this space wherever he might close the interval.

To its inhabitants, if any. it might seem to be hundreds of millions of light

years around; to him it was an ostrich egg, turgid to bursting with power.
He was already beginning to think of ways of checking his hypothesis. If, using a Schneider-deKalb, he were to draw energy at the highest rate he could manage, would he affect the local potential? Would it establish an entropy gradient? Could he reverse the process by finding a way to pump power into the Other World? Could he establish different levels at different points and thereby check for degeneration towards level, maximum entropy?
Did the speed of nerve impulse propagation furnish a clue to the c of the Other Space? Could such a clue be combined with the entropy and potential investigations to give a mathematical picture of the Other Space, in terms of its constants and its age?
He set about it. His untrammeled, wild speculations had produced some definite good: he'd tied down at least one line of attack on that Other Space; he'd devised a working principle for his blind man's telescope mechanism.
Whatever the truth of the thing was, it was more than a truth; it was a complete series of new truths. It was the very complexity of that series of new truths - the truths, the characteristic laws, that were inherent properties of the Other Space, plus the new truth laws resultant from the interaction of the characteristics of the Other Space with Normal Space.
No wonder Rambeau had said anything could happen! Almost anything could, in all probability, by a proper application and combination of the three sets of laws: the laws of Our Space, the laws of Other Space, and the coordinate laws of Both Spaces.
But before theoreticians could begin work, new data were most desperately needed. Waldo was no theoretician, a fact he admitted left-handedly in thinking of theory as unpractical and unnecessary, time waste for him as a consulting engineer. Let the smooth apes work it out.
But the consulting engineer had to find out one thing: would the Schneider-deKalbs continue to function uninterruptedly as guaranteed? If not, what must be done to assure continuous function?
The most difficult and the most interesting aspect of the investigation had to do with the neurological system in relation to Other Space. Neither electromagnetic instruments nor neural surgery was refined enough to do accurate work on the levels he wished to investigate.
But he had waldoes.
The smallest waldoes he had used up to this time were approximately half an inch across their palms - with micro-scanners to match, of course. They were much too gross for his purpose. He wished to manipulate living nerve tissue, examine its insulation and its performance in situ.
He used the tiny waldoes to create tinier ones.
The last stage was tiny metal blossoms hardly an eighth of an inch across. The helices in their stems, or forearms, which served them as pseudo muscles, could hardly be seen by the naked eye - but then, he used scanners.
His final team of waldoes used for nerve and brain surgery varied in succeeding stages from mechanical hands nearly lifesize down to these fairy digits which could manipulate things much too small for the eye

to see. They were mounted in bank to work in the same locus. Waldo controlled them all from the same primaries; he could switch from one size to another without removing his gauntlets.

The same change in circuits which brought another size of waldoes under control automatically accomplished the change in sweep of scanning to increase or decrease the magnification so that Waldo always saw before him in his stereo receiver a 'life-size' image of his other hands.
Each level of waldoes had its own surgical instruments, its own electrical equipment.
Such surgery had never been seen before, but Waldo gave that aspect little thought; no one had told him that such surgery was unheard-of.
He established, to his own satisfaction, the mechanism whereby short-wave radiation had produced a deterioration in human physical performance. The synapses between dendrites acted as if they were points of leakage. Nerve impulses would sometimes fail to make the jump, would leak off - to where? To Other Space, he was sure. Such leakage seemed to establish a preferred path, a canalization, whereby the condition of the victim became steadily worse. Motor action was not lost entirely, as both paths were still available, but efficiency was lost. It reminded him of a metallic electrical circuit with a partial ground.
An unfortunate cat, which had become dead undergoing the experimentation, had supplied him with much of his data. The kitten had been born and raised free from exposure to power radiation. He subjected it to heavy exposure and saw it acquire a myasthenia nearly as complete as his own - while studying in minute detail what actually went on in its nerve tissues. He felt quite sentimental about it when it died.
Yet, if Gramps Schneider were right, human beings need not be damaged by radiation. If they had the wit to look at it with the proper orientation, the radiation would not affect them; they might even draw power out of the Other World.
That was what Grarnps Schneider had told him to do.
That was what Gramps Schneider had told him to do!
Gramps Schneider had told him he need not be weak!
That he could be strong-Strong!
STRONG!
He had never thought of it. Schneider's friendly ministrations to him, his] advice about overcoming the weakness, he had ignored, had thrown off as inconsequential. His own weakness, his own peculiarity which made him different from the smooth apes, he had regarded as a basic, implicit fact. He had accepted it as established when he was a small child, a final unquestioned factor.
Naturally he had paid no attention to Schneider's words in so far as they referred to him.
To be strong!
To stand alone - to walk, to run!
Why, he ... he could, he could go down to Earth surface without fear. He wouldn't

mind the field. They said they didn't mind it; they even carried things - great, heavy things. Everybody did. They threw things.
He made a sudden convulsive movement in his primary waldoes, quite unlike his normal, beautifully economical rhythm. The secondaries were oversize, as he was making a new setup. The guys tore loose, a brace plate banged against the wall. Baldur was snoozing nearby; he pricked up his ears, looked around, then turned his face to Waldo, questioning him.
Waldo glared at him and the dog whined. 'Shut up!'
The dog quieted and apologized with his eyes.
Automatically he looked over the damage - not much, but he would have to fix it. Strength. Why, if he were strong, he could do anything - anything! No 6 extension waldoes and some new guys- Strong! Absent-mindedly he shifted to the No 6 waldoes.
Strength!
He could even meet women - be stronger than they were!
He could swim. He could ride. He could fly a ship - run, jump. He could handle things with his bare hands. He could even learn to dance!
Strong!
He would have muscles! He could break things.
He could- He could- He switched to the great waldoes with hands the size of a man's body. Strong - they were strong! With one giant waldo he hauled from the stock pile a quarter-inch steel plate, held it up, and shook it. A booming rumble. He shook it again. Strong'
He took it in both waldoes, bent it double. The metal buckled unevenly. Convulsively he crumpled it like wastepaper between the two huge palms.
The grinding racket raised hackles on Baldur; he himself had not been aware of it. He relaxed for a moment, gasping. There was sweat on his forehead; blood throbbed in his ears. But he was not spent; he wanted something heavier~ stronger. Cutting to the adjoining storeroom he selected an L-beam twelve feet long, shoved it through to where the giant hands could reach it, and cut back to them. The beam was askew in the port; he wrenched it loose, knocking a big dent in the port frame. He did not notice it.
The beam made a fine club in the gross fist. He brandished it. Baldur backed away, placing the control ring between himself and the great hands.
Power! Strength! Smashing, unbeatable strength- With a spastic jerk he checked his swing just before the beam touched the wall. No- But he grabbed the other end of the club with the left waldo and tried to bend it. The big waldoes were built for heavy work, but the beam was built to resist. He strained inside the primaries, strove to force the great fists to do his will. A warning light flashed on his control board. Bliiidly he kicked in the emergency overload and persisted.
The hum of the waldoes and the rasp of his own breath were drowned out by the harsh scrape of metal on metal as the beam began to give way. Exulting, he bore down harder in the primaries. The beam was bending double when the waldobs blew out. The right-hand tractors let go first; the fist flung open. The left fist, relieved of the strain, threw the steel from it.
It tore its way through the thin bulkhead, making a ragged hole, crashed and

clanged in the room beyond.
But the giant waldoes were inanimate junk.

He drew his soft pink hands from the waldoes and looked at them. His shoulders heaved, and racking sobs pushed up out of him. He covered his face with his hands; the tears leaked out between his fingers. Baldur whimpered and edged in closer.

On the control board a bell rang persistently.

The wreckage had been cleared away and an adequate, neat patch covered the place where the L-beam had made its own exit. But the giant waldoes had not yet been replaced; their frame was uninhabited. Waldo was busy rigging a strength tester.

It had been years since he had paid any attention to the exact strength of his body. He had had so little use for strength; he had concentrated on dexterity, particularly on the exact and discriminating control of his namesakes. In the selective, efficient, and accurate use of his muscles he was second to none; he had control - he had to have. But he had had no need for strength.

With the mechanical equipment at hand it was not difficult to jury-rig a device which would register strength of grip as pounds-force on a dial.

A spring-loaded scale and a yoke to act on it sufficed. He paused and looked at the contrivance.

He need only take off the primary waldoes, place his bare hand on the grip, bear down - and he would know. Still he hesitated.

It felt strange to handle anything so large with his bare hand. Now. Reach into the Other World for power. He closed his eyes and pressed. He opened them. Fourteen pounds - less than he used to have.

But he had not really tried yet. He tried to imagine Gramps Schneider's hands on his arm, that warm tingle. Power. Reach Out and claim it.

Fourteen pounds, fifteen - seventeen, eighteen, twenty, twenty-one! He was winning! He was winning!

Both his strength and his courage failed him, in what order he could not say. The needle spun back to zero; he had to rest.

Had he really shown exceptional strength - or was twenty one pounds of grip simply normal for him at his present age and weight? A normally strong and active man, he knew, should have a grip of the order of one hundred and fifty pounds.

Nevertheless, twenty-one pounds of grip was six pounds higher than he had ever before managed on test.

Try, again. Ten, eleven - twelve. Thirteen. The needle hesitated. Why, he had just started - this was ridiculous. Fourteen.

There it stopped. No matter how he strained and concentrated his driving will he could not pass that point. Slowly, he dropped back from it.

Sixteen pounds was the highest he managed in the following days. Twenty-one pounds seemed to have been merely a fluke, a good first effort. He ate bitterness. But he had not reached his present position of wealth and prominence by easy surrender. He persisted, recalling carefully just what Schneider had said to him, and trying to feel the touch of Schneider's hands. He told himself now that he really had been strong under Schneider's touch, but that he had failed

to realize it because of the Earth's heavy field. He continued to try.
In the back of his mind he knew that he must eventually seek out Gramps Schneider and ask his help, if he did not find the trick alone. But he was extremely reluctant to do so, not because of the terrible trip it entailed - though that would ordinarily have been more than enough reason - but because if he did so and Schneider was not able to help him, then there would be no hope, no hope at all.
It was better to live with disappointment and frustration than to live without hope. He continued to postpone it.
Waldo paid little attention to Earth time; he ate and slept when he pleased. He might catch a cat nap at any time; however, at fairly regular intervals he slept for longer periods. Not in a bed, of course. A man who floats in air has no need for a bed. But he did make it a habit to guy himself into place before undertaking eight hours of solid sleep, as it prevented him from casual drifting in random air currents which might carry him, unconscious, against controls or switches.
Since the obsession to become strong had possessed him he had frequently found it necessary to resort to soporifics to ensure sleep.
Dr Rambeau had returned and was looking for him. Rambeau - crazy and filled with hate. Rambeau, blaming his troubles on Waldo. He was not safe, even in Freehold, as the crazy physicist had found out how to pass from one space to another. There he was now! Just his head, poked through from the Other World. 'I'm going to get you, Waldo!' He was gone - no, there he was behind him! Reaching, reaching out with hands that were writhing antennae. 'You, Waldo!' But Waldo's own hands were the giant waldoes; he snatched at Rambeau.
The big waldoes went limp.
Rambeau was at him, was on him; he had him around the throat.
Gramps Schneider said in his ear, in a voice that was calm and strong, 'Reach out for the power, my son. Feel it in your fingers.' Waldo grabbed at the throttling fingers, strained, tried.
They were coming loose. He was winning. He would stuff Rambeau back into the Other World and keep him there. There! He had one hand free. Baldur was barking frantically; he tried to tell him to shut up, to bite Rambeau, to help- The dog continued to bark.
He was in his own home, in his own great room. Baldur let out one more yipe.
'Quiet!' He looked himself over.
When he had gone to sleep he had been held in place by four light guys, opposed like the axes of a tetrahedron. Two of them were still fastened to his belt; he swung loosely against the control ring. Of the other two, one had snapped off at his belt; its end floated a few feet away. The fourth had been broken in two places, near his belt and again several feet out; the severed piece was looped loosely around his neck.
He looked the situation over. Study as he might, he could conceive no way in which the guys could have been broken save by his own struggles

in the nightmare. The dog could not have done it; he had no way to get a purchase. He had done it himself.
The lines were light, being intended merely as stays. Still- It took him a few minutes to rig a testing apparatus which would test pull instead of grip; the yoke had to be reversed. When it was done, he cut in a medium waldo pair, fastened the severed piece of line to the tester, and, using the waldo, pulled.
The line parted at two hundred and twelve pounds.
Hastily, but losing time because of nervous clumsiness, he re-rigged the tester for grip. He paused, whispered softly, 'Now is the time, Gramps!' and bore down on the grip.
Twenty pounds - twenty-one. Twenty-five!
Up past thirty. He was not even sweating! Thirty-five -forty, -one, -two, -three. Forty-five! And -six! And a half. Forty-seven pounds!
With a great sigh he let his hand relax. He was strong. Strong.
When he had somewhat regained his composure, he considered what to do next. His first impulse was to call Grimes, but he suppressed it. Soon enough when he was sure of himself.
He went back to the tester and tried his left hand. Not as strong as his right, but almost - nearly forty-five pounds. Funny thing, he didn't feel any different. Just normal, healthy. No sensation.
He wanted to try all of his muscles. It would take too long to rig testers for kick, and shove, and back lift, and, oh, a dozen others. He needed a field, that was it, a one-g field. Well, there was the reception room; it could be centrifuged.
But its controls were in the ring and it was long corridors away. There was a nearer one, the centrifuge for the cuckoo clock. He had rigged the wheel with a speed control as an easy way to regulate the clock. He moved back to the control ring and stopped the turning of the big wheel; the clockwork was disturbed by the sudden change; the little red bird popped out, said, 'TIz-wu th-woo' once, hopefully, and subsided.
Carrying in his hand a small control panel radio hooked to the motor which inipelled the centrifuge wheel, he propelled himself to the wheel and placed himself inside, planting his feet on the inner surface of the rim and grasping one of the spokes, so that he would be in a standing position with respect to the centrifugal force, once it was impressed. He started the wheel slowly.
Its first motion surprised him and he almost fell off. But he recovered himself and gave it a littlc more power. All right so far.
He speeded it up gradually, triumph spreading through him as he felt the pull of the pseudo gravitational field, felt his legs grow heavy, but still strong!
He let it out, one full g. He could take it. He could, indeed! To be sure, the force did not affect the upper part of his body so strongly as the lower, as his head was only a foot or so from the point of

rotation. He could fix that; he squatted down slowly, hanging on tight to the spoke. It was all right.
But the wheel swayed and the motor complained. His unbalanced weight, that far out from the centre of rotation, was putting too much of a strain on a framework intended to support a cuckoo clock and its counterweight only. He straightened up with equal caution, feeling the fine shove of his thigh muscles and calves. He stopped the wheel.
Baldur had been much perturbed by the whole business. He had almost twisted his neck off trying to follow the motions of Waldo.
He still postponed calling Grimes. He wanted to arrange for some selective local controls on the centrifuging of the reception room, in order to have a proper place in which to practice standing up.
Then he had to get the hang of this walking business; it looked easy, but he didn't know. Might be quite a trick to learn it.
Thereafter he planned to teach Baldur to walk. He tried to get Baldur into the cuckoo-clock wheel, but the dog objected. He wiggled free and retreated to the farthest part of the room. No matter - when he had the beast in the reception room he would damn well have to learn to walk. Should have seen to it long ago. A big brute like that, and couldn't walk!
He visualized a framework into which the dog could be placed which would force him to stand erect. It was roughly equivalent to a baby's toddler, but Waldo did not know that. He had never seen a baby's toddler.
'Uncle Gus-'
'Oh, hello, Waldo. How you been?'
'Fine. Look, Uncle Gus, could you come up to Freehold -right away?'
Grimes shook his head. 'Sorry. My bus is in the shop.'
'Your bus is too slow anyhow. Take a taxi, or get somebody to drive you.'
'And have you insult 'em when we get there? Huh-uh.'
'I'll be sweet as sugar.'
'Well, Jimmie Stevens said something yesterday about wanting to see you.'
Waldo grinned. 'Get him. I'd like to see him.'
'I'll try.'
'Call me back. Make it soon.'
Waldo met them in the reception room, which he had left uncentrifuged. As soon as they came in he started his act. 'My, I'm glad you're here. Dr Stevens - could you fly me down to Earth rightaway? Something's comeup.'
'Why - I suppose so.'
'Let's go.'
'Wait a minute, Waldo. Jimmie's not prepared to handle you the way you have to be handled.'
'I'll have to chance it, Uncle Gus. This is urgent.'
'But-'
'No "buts". Let's leave at once.'
They bustled Baldur into the ship and tied him down. Grimes saw to it

that Waldo's chair was tilted back in the best approximation of a deceleration rig. Waldo settled himself into it and closed his eyes to discourage questions. He sneaked a look and found Grimes grimly silent.

Stevens made very nearly a record trip, but set them down quite gently on the parking flat ovcr Grimes's home. Grimes touched Waldo's arm. 'How do you feel? I'll get someone and we'll get you inside. I want to get you to bed.'

'Can't do that, Uncle Gus. Things to do. Give me your arm, will you?'

'Huh?' But Waldo reached for the support requested and drew himself up. 'I'll be all right now, I guess.' He let go the physician's arm and started for the door. 'Will you untie Baldur?'

'Waldo!'

He turned around, grinning happily. 'Yes, Uncle Gus, it's true. I'm not weak any more. I can walk.'

Grimes took hold of the back of one of the seats and said shakily, 'Waldo, I'm an old man. You ought not to do things like this to me.' He wiped at his eyes.

'Yes,' agreed Stevens, 'it's a damn dirty trick.'

Waldo looked blankly from one face to the other. 'I'm sorry,' he said humbly. 'I just wanted to surprise you.'

'It's all right. Let's go downside and have a drink. You can tell us about it then.'

'All right. Come on, Baldur.' The dog got up and followed after his master. He had a very curious gait; Waldo's trainer gadget had taught him to pace instead of trot.

Waldo stayed with Grimes for days, gaining strength, gaining new reflex patterns, building up his flabby muscles. He had no setbacks; the myasthenia was gone. All he required was conditioning.

Grimes had forgiven him at once for his unnecessarily abrupt and spectacular revelation of his cure, but Grimes had insisted that he take it easy and become fully readjusted before he undertook to venture out unescorted. It was a wise precaution. Even simple things were hazards to him. Stairs, for example. He could walk on the level, but going downstairs had to be learned. Going up was not so difficult.

Stevens showed up one day, let himself in, and found Waldo alone in the living room, listening to a stereo show. 'Hello, Mr Jones.'

'Oh - hello, Dr Stevens.' Waldo reached down hastily, fumbled for his shoes, zipped them on. 'Uncle Gus says I should wear them all the time,' he explained. 'Everybody does. But you caught me unawares.'

'Oh, that's no matter. You don't have to wear them in the house. Where's Doc?'

'Gone for the day. Don't you, really? Seems to me my nurses always wore shoes.'

'Oh yes, everybody does - but there's no law to make you.'

'Then I'll wear them. But I can't say that I like them. They feel dead, like a pair of disconnected waldoes. But I want to learn how.'
'How to wear shoes?'
'How to act like people act. It's really quite difficult,' he said seriously.
Stevens felt a sudden insight, a welling of sympathy for this man with no background and no friends. It must be odd and strange to him. He felt an impulse to confess something which had been on his mind with respect to Waldo. 'You really are strong now, aren't you?'
Waldo grinned happily. 'Getting stronger every day. I gripped two hundred pounds this morning. And see how much fat I've worked off.'
'You're looking fit, all right. Here's a funny thing. Ever since I first met you I've wished to high heaven that you were as strong as an ordinary man.'
'You really did? Why?'
'Well . .. I think you will admit that you used some pretty poisonous language to me, one time and another. You had me riled up all the time. I wanted you to get strong so that I could just beat the hell out of you.'
Waldo had been walking up and down, getting used to his shoes. He stopped and faced Stevens. He seemed considerably startled. 'You mean you wanted to fist-fight me?'
'Exactly. You used language to me that a man ought not to use unless he is prepared to back it up with his fists. If you had not been an invalid I would have pasted you one, oh, any number of times.'
Waldo seemed to be struggling with a new concept. 'I think I see,' he said slowly. 'Well - all right.' On the last word he delivered a roundhouse swipe with plenty of power behind it. Stevens was not in the least expecting it; it happened to catch him on the button. He went down. out cold.
When he came to he found himself in a chair. Waldo was shaking him. 'Wasn't that right?' he said anxiously.
'What did you hit me with?'
'My hand. Wasn't that right? Wasn't that what you wanted?'
'Wasn't that what I-' He still had little bright lights floating in front of his eyes, but the situation began to tickle him.
'Look here - is that your idea of the proper way to start a fight?'
'Isn't it?'
Stevens tried to explain to him the etiquette of fisticuffs, contemporary American. Waldo seemed puzzled, but finally he nodded. 'I get it. You have to give the other man warning. All right - get up, and we'll do it over.'
'Easy, easy! Wait a minute. You never did give me a chance to finish what I was saying. I was sore at you, but I'm not any more. That is what I was trying to tell you. Oh, you

were utterly poisonous; there is no doubt about that. But you couldn't help being.'
'I don't mean to be poisonous,' Waldo said seriously.
'I know you don't, and you're not. I rather like you now -now that you're strong.'
'Do you really?'
'Yes, I do. But don't practise any more of those punches on me.'
'I won't. But I didn't understand. But, do you know, Dr Stevens, it's-'
'Call inc Jim.'
'Jim. It's a very hard thing to know just what people do expect. There is so little pattern to it. Take belching; I didn't know it was forbidden to burp when other people are around. It seems obviously necessary to me. But Uncle Gus says not.'
Stevens tried to clear up the matter for him - not too well, as he found that Waldo was almost totally lacking in any notion, even theoretical, of social conduct. Not even from fiction had he derived a concept of the intricacies of mores, as he bad read almost no fiction. He had ceased reading stories in his early boyhood, because he lacked the background of experience necessary to appreciate fiction.
He was rich, powerful, and a mechanical genius, but he still needed to go to kindergarten.
Waldo had a proposition to make. 'Jim, you've been very helpful. You explain these things better than Uncle Gus does. I'll hire you to teach me.'
Stevens suppressed a slight feeling of pique. 'Sorry. I've got a job that keeps me busy.'
'Oh, that's all right. I'll pay you better than they do. You can name your own salary. It's a deal.'
Stevens took a deep breath and sighed. 'You don't understand. I'm an engineer and I don't hire out for personal service. You can't hire me. Oh, I'll help you all I can, but I won't take money for it.
'What's wrong with taking money?'
The question, Stevens thought, was stated wrongly. As it stood it could not be answered. He launched into a long, involved discussion of professional and business conduct. He was really not fitted for it; Waldo soon bogged down.
'I'm afraid I don't get it. But see here - could you teach me how to behave with girls ~ Uncle Gus says he doesn't dare take me out in company.
'Well, I'll try. I'll certainly try. But, Waldo, I came over to see you about some of the problems we're running into at the plant. About this theory of the two spaces that you were telling me about-'
'It's not theory; it's fact.'

'All right. What I want to know is this: When do you expect to go back to Freehold and resume research? We need some help.'
'Go back to Freehold? I haven't any idea. I don't intend to resume research.'
'You don't? But, my heavens, you haven't finished half the investigations you outlined to me.'
'You fellows can do 'em. I'll help out with suggestions, of course.'
'Well - maybe we could interest Gramps Schneider,' Stevens said doubtfully.
'I would not advise it,' Waldo answered. 'Let me show you a letter he sent me.' He left and fetched it back. 'Here.'
Stevens glanced through it. '-your generous offer of your share in the new power project I appreciate, but, truthfully, I have no interest in such things and would find the responsibility a burden. As for the news of your new strength I am happy, but not surprised. The power of the Other World is his who would claim it-'
There was more to it. It was written in a precise Spencerian hand, a trifle shaky; the rhetoric showed none of the colloquialisms with which Schneider spoke.
'Hm-m-m - I think I see what you mean.'
'I believe,' Waldo said seriously, 'that he regards our manipulations with gadgets as rather childish.'
'I suppose. Tell me, what do you intend to do with your-self?'
'Me? I don't know, exactly. But I can tell you this: I'm going to have fun. I'm going to have lots of fun. I'm just beginning to find out bow much fun it is to be a man!'

His dresser tackled the other slipper. 'To tell you just why I took up dancing would be a long story,' he continued.
'I want details.'
'Hospital calling,' someone in the dressing room said.
'Tell 'em I'll be right there, fast. Suppose you come in tomorrow afternoon?' he added to the woman reporter. 'Can you?'
'Right.'
A man was shouldering his way through the little knot around him. Waldo caught his eye. 'Hello, Stanley. Glad to see you.'
'Hello, Waldo.' Gleason pulled some papers out from under his cape and dropped them in the dancer's lap. 'Brought these over myself as I wanted to see your act again.'
'Like it?'
'Swell!'
Waldo grinned and picked up the papers. 'Where is the dotted line?'
'Better read them first,' Gleason cautioned him.
'Oh shucks, no. If it suits you, it suits me. Can I borrow your stylus?'
A worried little man worked his way up to them. 'About that recording, Waldo-'

'We've discussed that,' Waldo said flatly. 'I only perform before audiences.'
'We've combined it with the Warm Springs benefit.'
'That's different. OK.'
'While you're about it, take a look at this layout.' It was a reduction, for a twenty-four sheet:

THE GREAT WALDO
AND HIS TROUPE

with the opening date and theatre left blank, but with a picture of Waldo, as Harlequin, poised high in the air.
'Fine, Sam, fine!' Waldo nodded happily.
'Hospital calling again!'
'I'm ready now,' Waldo answered, and stood up. His dresser draped his street cape over his lean shoulders. Waldo whistled sharply. 'Here, Baldur! Come along.' At the door he stopped an instant, and waved. 'Goodnight, fellows!'
'Goodnight, Waldo.'
They were all such grand guys.

`-We Also Walk Dogs'

`General services - Miss Cormet speaking!' She addressed the view screen with just the right balance between warm hospitable friendliness and impersonal efficiency. The screen flickered momentarily, then built up a stereo-picture of a dowager, fat and fretful, overdressed and underexercised.

`Oh, my dear,' said the image, `I'm so upset. I wonder if you can help me.'

`I'm sure we can,' Miss Cormet purred as she quickly estimated the cost of the woman's gown and jewels (if real - she made a mental reservation) and decided that here was a client that could be profitable. `Now tell me your trouble. Your name first, if you please.' She touched a button on the horseshoe desk which enclosed her, a button marked CREDIT DEPARTMENT.

`But it's all so involved,' the image insisted. `Peter would go and break his hip.' Miss Cormet immediately pressed the button marked MEDICAL. `I've told him that poio is dangerous. You've no idea, my dear, how a mother suffers. And just at this time, too. It's so inconvenient -`

`You wish us to attend him? Where is he now?'

`Attend him? Why, how silly! The Memorial Hospital will do that. We've endowed them enough, I'm sure. It's my dinner party I'm worried about. The Principessa will be so annoyed.'

The answer light from the Credit Department was blinking angrily. Miss Cormet headed her off. `Oh, I see. We'll arrange it for you. Now, your name, please, and your address and present location.'

`But don't you know my name?'

`One might guess,' Miss Cormet diplomatically evaded, `but General Services always respects the privacy of its clients.'

`Oh, yes, of course. How considerate. I am Mrs Peter van Hogbein Johnson.' Miss Cormet controlled her reaction. No need to consult the Credit Department for this one. But its transparency flashed at once, rating AAA - unlimited. `But I don't see what you can do,' Mrs Johnson continued. `I can't be two places at once.'

`General Services likes difficult assignments,' Miss Cormet assured her. `Now - if you will let me have the details . .

She wheedled and nudged the woman into giving a fairly coherent story. Her son, Peter III, a slightly shopworn Peter Pan, whose features were familiar to Grace Gormet through years of stereogravure, dressed in every conceivable costume affected by the richly idle in their pastimes, had been so thoughtless as to pick the afternoon before his mother's most important social function to bung himself up - seriously. Furthermore, he had been so thoughtless as to do so half a continent away from his mater.

Miss Cormet gathered that Mrs Johnson's technique for keeping her son safely under thumb required that she rush to his bedside at once, and, incidentally, to select his nurses. But her dinner party that evening represented the culmination of months of careful maneuvering. What was she to do?

Miss Cormet reflected to herself that the prosperity of General Services and her own very substantial income was based largely on the stupidity, lack of resourcefulness, and laziness of persons like this silly parasite, as she explained that General Services

would see that her party was a smooth, social success while arranging for a portable full-length stereo screen to be installed in her drawing room in drder that she might greet her guests and make her explanations while hurrying to her son's side. Miss Cormet would see that a most adept social manager was placed in charge, one whose own position in society was irreproachable and whose connection with General Services was known to no one. With proper handling the disaster could be turned into a social triumph, enhancing Mrs Johnson's reputation as a clever hostess and as a devoted mother.

`A sky car will be at your door in twenty minutes,' she added, as she cut in the circuit marked TRANSPORTATION, `to take you to the rocket port. One of our young men will be with it to get additional details from you on the way to the port. A compartment for yourself and a berth for your maid will be reserved on the 16:45 rocket for Newark. You may rest easy now. General Services will do ybur worrying.'

`Oh, thank you, my dear. You've been such a help. You've no idea of the responsibilities a person in my position has.'

Miss Cormet cluck-clucked in professional sympathy while deciding that this particular girl was good for still more fees. `You do look exhausted, madame,' she said anxiously. `Should I not have a masseuse accompany you on the trip? Is your health at all delicate? Perhaps a physician would be still better.'

`How thoughtful you are!'

`I'll send both,' Miss Cormet decided, and switched off, with a faint regret that she had not suggested a specially chartered rocket. Special service, not listed in the master price schedule, was supplied on a cost-plus basis. In cases like this `plus' meant all the traffic would bear.

She switched to EXECUTIVE; an alert-eyed young man filled the screen. `Stand by for transcript, Steve,' she said. `Special service, triple-A. I've started the immediate service'

His eyebrows lifted. `Triple-A - bonuses?'

`Undoubtedly. Give this old battleaxe the works - smoothly. And look - the client's son is laid up in a hospital. Check on his nurses. If any one of them has even a shred of sex-appeal, fire her out and put a zombie in.'

`Gotcha, kid. Start the transcript.'

She cleared her screen again; the `available-for-service' light in her booth turned automatically to green, then almost at once turned red again and a new figure built up in her screen.

No stupid waster this. Grace Cormet saw a weil-kempt man in his middle forties, flat-waisted, shrewd-eyed, hard but urbane. The cape of his formal morning clothes was thrown back with careful casualness. `General Services,' she said. `Miss Cormet speaking.'

`Ab, Miss Cormet,' he began, `I wish to see your chief.'

`Chief of switchboard?'

`No, I wish to see the President of General Services.'

`Will you tell me what it is you wish? Perhaps I can help you.'

`Sorry, but I can't make explanations. I must see him, at once.'

`And General Services is sorry. Mr Clare is a very busy man; it is impossible to see him without appointment and without explanation.'

`Are you recording?'

`Certainly.'

`Then please cease doing so.'

Above the console, in sight of the client, she switched off the recorder. Underneath the desk she switched it back on again. General Services was sometimes asked to perform illegal acts; its confidential employees took no chances. He fished something out from the folds of his chemise and held it out to her. The stereo effect made it appear as if he were reaching right out through the screen.

Trained features masked her surprise-it was the sigil of a planetary official, and the color of the badge was green.

`I will arrange it,' she said.

`Very good. Can you meet me and conduct me in from the waiting room? In ten minutes?'

`I will be there, Mister . . . Mister - ` But he had cut off.

Grace Cormet switched to the switchboard chief and called for relief. Then, with her board cut out of service, she removed the spool bearing the clandestine record of the interview, stared at it as if undecided, and after a moment, dipped it into an opening in the top of the desk where a strong magnetic field wiped the unfixed patterns from the soft metal.

A girl entered the booth from the rear. She was blond, decorative, and looked slow and a little dull. She was neither. `Okay, Grace,' she said. `Anything to turn over?'

`No. Clear board.'

``S matter? Sick?'

`No.' With no further explanation Grace left the booth, went on out past the other booths housing operators who handled unlisted services and into the large hail where the hundreds of catalogue operators worked. These had no such complex equipment as the booth which Grace had quitted. One enormous volume, a copy of the current price list of all of General Services' regular price-marked functions, and an ordinary look-and-listen enabled a catalogue operator to provide for the public almost anything the ordinary customer could wish for. If a call was beyond the scope of the catalogue it was transferred to the aristocrats of resourcefulness, such as Grace.

She took a short cut through the master files room, walked down an alleyway between dozens of chattering punched-card machines, and entered the foyer of that level. A pneumatic lift bounced her up to the level of the President's office. The President's receptionist did not stop her, nor, apparently, announce her. But Grace noted that the girl's hands were busy at the keys of her voder.

Switchboard operators do not walk into the offices of the president of a billion-credit corporation. But General Services was not organized like any other business on the planet. It was a sui generis business in which special training was a commodity to be listed, bought, and sold, but general resourcefulness and a ready wit were all important. In its hierarchy Jay Clare, the president, came first, his handyman, Saunders Francis, stood second, and the couple of dozen operators, of which Grace was one, who took calls on the unlimited switchboard came immediately after. They, and the field operators who handled the most difficult unclassified commissions - one group in fact, for the unlimited switchboard operators and the unlimited field operators swapped places indiscriminately.

After them came the tens of thousands of other employees spread over the planet, from the chief accountant, the head of the legal department, the chief clerk of the master

files on down through the local managers. the catalogue operators to the last classified part time employee - stenographers prepared to take dictation when and where ordered, gigolos ready to fill an empty place at a dinner, the man who rented both armadillos and trained fleas.

Grace Cormet walked into Mr Clare's office. It was the only room in the building not cluttered up with electromechanical recording and communicating equipment. It contained nothing but his desk (bare), a couple of chairs, and a stereo screen, which, when not in use, seemed to be Krantz' famous painting `The Weeping Buddha'. The original was in fact in the sub-basement, a thousand feet below.

`Hello, Grace,' he greeted her, and shoved a piece of paper at her. `Tell me what you think of that. Sance says it's lousy.' Saunders Francis turned his mild pop eyes from his chief to Grace Cormet, but neither confirmed nor denied the statement.

Miss Cormet read:

CAN YOU AFFORD IT?
Can You Afford GENERAL SERVICES?
Can You Afford NOT to have General Services ? ? ? ??
In this jet-speed age can you afford to go on wasting time doing your own shopping, paying bills yourself, taking care of your living compartment?
We'll spank the baby and feed the cat.
We'll rent you a house and buy your shoes.
We'll write to your mother-in-law and add up your check stubs.
No job too large; No job too small - and all amazingly Cheap!
GENERAL SERVICES
Dial H-U-R-R-Y - U-P
P.S. WE ALSO WALK DOGS

`Well?' said Clare.

`Sance is right. It smells.'

`Why?'

`Too logical. Too verbose. No drive.'

`What's your idea of an ad to catch the marginal market?'

She thought a moment, then borrowed his stylus and wrote:

DO YOU WANT SOMEBODY MURDERED?
(Then don't call GENERAL SERVICES)
But for any other job dial HURRY-UP - It pays!
P.S. We also walk dogs.

`Mmmm . . . well, maybe,' Mr Clare said cautiously. `We'll try it. Sance, give this a type B coverage, two weeks, North America, and let me know how it takes.' Francis put it away in his kit, still with no change in his mild expression. `Now as I was saying -,

`Chief,' broke in Grace Cormet. `I made an appointment for you in - ` She glanced at her watchfinger. ` - exactly two minutes and forty seconds. Government man.'

`Make him happy and send him away. I'm busy.'

`Green Badge.'

He looked up sharply. Even Francis looked interested. `So?' Clare remarked. `Got the interview transcript with you?'

`I wiped it.'

`You did? Well, perhaps you know best. I like your hunches. Bring him in.'

She nodded thoughtfully and left.

She found her man just entering the public reception room and escorted him past half a dozen gates whose guardians would otherwise have demanded his identity and the nature of his business. When he was seated in Clare's office, he looked around. `May I speak with you in private, Mr Clare?'

`Mr Francis is my right leg. You've already spoken to Miss Cormet.'

`Very well.' He produced the green sigil again and held it out. `No names are necessary just yet. I am sure of your discretion.'

The President of General Services sat up impatiently. `Let's get down to business. You are Pierre Beaumont, Chief of Protocol. Does the administration want a job done?'

Beaumont was unperturbed by the change in pace. `You know me. Very well. We'll get down to business. The government may want a job done. In any case our discussion must not be permitted to leak out -`

`All of General Services relations are confidential.'

`This is not confidential; this is secret.' He paused.

`I understand you,' agreed Clare. `Go on.'

`You have an interesting organization here, Mr Clare. I believe it is your boast that you will undertake any commission whatsoever - for a price.'

`If it is legal.'

`Ah, yes, of course. But legal is a word capable of interpretation. I admired the way your company handled the outfitting of the Second Plutonian Expedition. Some of your methods were, ah, ingenious.'

`If you have any criticism of our actions in that case they are best made to our legal department through the usual channels.'

Beaumont pushed a palm in his direction. `Oh, no, Mr Clare - please! You misunderstand me. I was not criticising; I was admiring. Such resource! What a diplomat you would have made!'

`Let's quit fencing. What do you want?'- Mr Beaumont pursed his lips. `Let us suppose that you had to entertain a dozen representatives of each intelligent race in this planetary system and you wanted to make each one of them completely comfortable and happy. Could you do it?'

Clare thought aloud. `Air pressure, humidity, radiation densities, atmosphere, chemistry, temperatures, cultural conditions - those things are all simple. But how about acceleration? We could use a centrifuge for the Jovians, but Martians and Titans - that's another matter. There is no way to reduce earth-normal gravity. No, you would have to entertain them out in space, or on Luna. That makes it not our pigeon; we never give service beyond the stratosphere.'

Beaumont shook his head. `It won't be beyond the stratosphere. You may take it as an absolute condition that you are to accomplish your results on the surface of the Earth.'

`Why?'

`Is it the custom of General Services to inquire why a client wants a particular type of service?'

`No. Sorry.'

`Quite all right. But you do need more information in order to understand what must be accomplished and why it must be secret. There will be a conference, held on this planet, in the near future - ninety days at the outside. Until the conference is called no `suspicion that it is to be held must be allowed to leak out. If the plans for it were to be anticipated in certain quarters, it would be useless to hold the conference at all. I suggest that you think of this conference as a roundtable of leading, ah, scientists of the system, about of the same size and makeup as the session of the Academy held on Mars last spring. You are to make all preparations for the entertainments of the delegates, but you are to conceal these preparations in the ramifications of your organization until needed. As for the details -,

But Clare interrupted `him. `You appear to have assumed that we will take on this commission. As you have explained it, it would involve us in a ridiculous failure. General Services does not like failures. You know and I know that low-gravity people cannot spend more than a few hours in high gravity without seriously endangering their health. Interplanetary gettogethers are always held on a low-gravity planet and always will be.'

`Yes,' answered Beaumont patiently, `they always have been. Do you realize the tremendous diplomatic handicap which Earth and Venus labor under in consequence?'

`I don't get it.'

`It isn't necessary that you should. Political psychology is not your concern. Take it for granted that it does and that the Administration is determined that this conference shall take place on Earth.'

`Why not Luna?'

Beaumont shook his head. `Not the same thing at all. Even though we administer it, Luna City is a treaty port. Not the same thing, psychologically.'

Clare shook his head. `Mr Beaumont, I don't believe that you understand the nature of General Services, even as I fail to appreciate the subtle requirements of diplomacy. We don't work miracles and we don't promise to. We are just the handy-man of the last century, gone speed-lined and corporate. We are the latter day equivalent of the old servant class, but we are not Aladdin's genie. We don't even maintain research laboratories in the scientific sense. We simply make the best possible use of modern advances in communications and organization to do what already can be done.' He waved a hand at the far wall, on which there was cut in intaglio the time-honored trademark of the business - a Scottie dog, pulling against a leash and sniffing at a post. `There is the spirit of the sort of work we do. We walk dogs for people who are too busy to walk `em themselves. My grandfather worked his way through college walking dogs. I'm still walking them. I don't promise miracles, nor monkey with politics.'

Beaumont fitted his fingertips carefully together. `You walk dogs for a fee. But of course you do - you walk my pair. Five minim-credits seems rather cheap.'

`It is. But a hundred thousand dogs, twice a day, soons runs up the gross take.'

`The "take" for walking this "dog" would be considerable.'

`How much?' asked Francis. It was his first sign of interest. Beaumont turned his eyes on him. `My dear sir, the outcome of this, ah, roundtable should make a difference

of literally hundreds of billions of credits to this planet. We will not bind the mouth of the kine that treads the corn, if you pardon the figure of speech.'

`How much?'

`Would thirty percent over cost be reasonable?'

Francis shook his head. `Might not come to much.'

`Well, I certainly won't haggle. Suppose we leave it up to you gentlemen - your pardon, Miss Cormet! - to decide what the service is worth. I think I can rely on your planetary and racial patriotism to make it reasonable and proper.'

Francis sat back, said nothing, but looked pleased.

`Wait a minute,' protested Clare. `We haven't taken this job.'

`We have discussed the fee,' observed Beaumont.

Clare looked from Francis to Grace Cormet, then examined his fingernails. `Give me twenty-four hours to find out whether or not it is possible,' he said finally, `and I'll tell you whether or not we will walk your dog.'

`I feel sure,' answered Beaumont, `that you will.' He gathered his cape about him.

`Okay, masterminds,' said Clare bitterly, `you've bought it.'

`I've been wanting to get back to field work,' said Grace.

`Put a crew on everything but the gravity problem,' suggested Francis. `It's the only catch. The rest is routine.'

`Certainly,' agreed Clare, `but you had better deliver on that. If you can't, we are out some mighty expensive preparations that we will never be paid for. Who do you want? Grace?'

`I suppose so,' answered Francis. `She can count up to ten.'

Grace Cormet looked at him coldly. `There are times, Sance Francis, when I regret having married you.'

`Keep your domestic affairs out of the office,' warned Clare. `Where do you start?'

`Let's find out who knows most about gravitation,' decided Francis. `Grace, better get Doctor Krathwohl on the screen.'

`Right,' she acknowledged, as she stepped to the stereo controls. `That's the beauty about this business. You don't have to know anything; you just have to know where to find out.'

Dr Krathwohl was a part of the permanent staff of General Services. He had no assigned duties. The company found it worthwhile to support him in comfort while providing him with an unlimited drawing account for scientific journals and for attendance at the meetings which the learned hold from time to time. Dr Krathwohl lacked the single-minded drive of the research scientist; he was a dilettante by nature.

Occasionally they asked him a question. It paid.

`Oh, hello, my dear!' Doctor Krathwohl's gentle face smiled out at her from the screen. `Look - I've just come across the most amusing fact in the latest issue of Nature. It throws a most interesting sidelight on Brownlee's theory of - `Just a second, Doc,' she interrupted. `I'm kinda in a hurry.' `Yes, my dear?'

`Who knows the most about gravitation?'

`In what way do you mean that? Do you want an astrophysicist, or do you want to deal with the subject from a standpoint of theoretical mechanics? Farquarson would be the man in the first instance, I suppose.'

`I want to know what makes it tick.'

`Field theory, eh? In that case you don't want Farquarson. He is a descriptive ballistician, primarily. Dr Julian's work in that subject is authoritative, possibly definitive.'

`Where can we get hold of him?'

`Oh, but you can't. He died last year, poor fellow. A great loss.'

Grace refrained from telling him how great a loss and asked, `Who stepped into his shoes?'

`Who what? Oh, you were jesting! I see. You want the name of the present top man in field theory. I would say O'Neil.'

`Where is he?'

`I'll have to find out. I know him slightly - a difficult man.'

`Do, please. In the meantime who could coach us a bit on what it's all about?'

`Why don't you try young Carson, in our engineering department? He was interested in such things before he took a job with us. Intelligent chap - I've had many an interesting talk with him.'

`I'll do that. Thanks, Doc. Call the Chief's office as soon as you have located O'Neil. Speed.' She cut off.

Carson agreed with Krathwohl's opinion, but looked dubious. `O'Neil is arrogant and non-cooperative. I've worked under him. But he undoubtedly knows more about field theory and space structure than any other living man.'

Carson had been taken into the inner circle, the problem explained to him. He had admitted that he saw no solution. `Maybe we are making something hard out of this,' Clare suggested. `I've got some ideas. Check me if I'm wrong, Carson.'

`Go ahead, Chief.'

`Well, the acceleration of gravity is produced by the proximity of a mass - right? Earth-normal gravity being produced by the proximity of the Earth. Well, what would be the effect of placing a large mass just over a particular point on the Earth's surface. Would not that serve to counteract the pull of the Earth?'

`Theoretically, yes. But it would have to be a damn big mass.'

`No matter.'

`You don't understand, Chief. To offset fully the pull of the Earth at a given point would require another planet the size of the Earth in contact with the Earth at that point. Of course since you don't want to cancel the pull completely, but simply to reduce it, you gain a certain advantage through using a smaller mass which would have its center of gravity closer to the point in question than would be the center of gravity of the Earth. Not enough, though. While the attraction builds up inversely as the square of the distance - in this case the half-diameter - the mass and the consequent attraction drops off directly as the cube of the diameter.'

`What does that give us?'

Carson produced a slide rule and figured for a few moments. He looked up. `I'm almost afraid to answer. You would need a good-sized asteroid, of lead, to get anywhere at all.'

`Asteroids have been moved before this.'

`Yes, but what is to hold it up? No, Chief, there is no conceivable source of power, or means of applying it, that would enable you to hang a big planetoid over a particular spot on the Earth's surface and keep it there.'

`Well, it was a good idea while it lasted,' Clare said pensively. Grace's smooth brow had been wrinkled as she followed the discussion. Now she put in, `I gathered that you could use an extremely heavy small mass more effectively. I seem to have read somewhere about some stuff that weighs tons per cubic inch.'

`The core of dwarf stars,' agreed Carson. `All we would need for that would be a ship capable of going light-years in a few days, some way to mine the interior of a star, and a new space-time theory.'

`Oh, well, skip it.'

`Wait a minute,' Francis observed. `Magnetism is a lot like gravity, isn't it?'

`Well - yes.'

`Could there be some way to maqnetize these gazebos from the little planets? Maybe something odd about their body chemistry?'

`Nice idea,' agreed Carson, `but while their internal economy is odd, it's not that odd. They are still organic.'

`I suppose not. If pigs had wings they'd be pigeons.'

The stereo annunciator blinked. Doctor Krathwohl announced that O'Neil could be found at his summer home in Portage, Wisconsin. He had not screened him and would prefer not to do so, unless the Chief insisted.

Clare thanked him and turned back to the others. `We are wasting time,' he announced. `After years in this business we should know better than to try to decide technical questions. I'm not a physicist and I don't give a damn how gravitation works. That's O'Neil's business. And Carson's. Carson, shoot up to Wisconsin and get O'Neil on the job.'

`Me?'

`You. You're an operator for this job - with pay to match. Bounce over to the port - there will be a rocket and a credit facsimile waiting for you. You ought to be able to raise ground in seven or eight minutes.'

Carson blinked. `How about my job here?'

`The engineering department will be told, likewise the accounting. Get going.'

Without replying Carson headed for the door. By the time he reached it he was hurrying.

Carson's departure left them with nothing to do until he reported back - nothing to do, that is, but to start action on the manifold details of reproducing the physical and cultural details of three other planets and four major satellites, exclusive of their characteristic surface-normal gravitational accelerations. The assignment, although new, presented no real difficulties - to General Services. Somewhere there were persons who knew all the answers to these matters. The vast loose organization called General Services was geared to find them, hire them, put them to work. Any of the unlimited operators and a considerable percent of the catalogue operators could take such an assignment and handle it without excitement nor hurry.

Francis called in one unlimited operator. He did not even ~bother to select him, but took the first available on the ready panel - they were all `Can do!' people. He

explained in detail the assignment, then promptly forgot about it. It would be done, and on time. The punched-card machines would chatter a bit louder, stereo screens would flash, and bright young people in all parts of the Earth would drop what they were doing and dig out the specialists who would do the actual work.

He turned back to Clare, who said, `I wish I knew what Beaumont is up to. Conference of scientists - phooey!'

`I thought you weren't interested in politics, Jay.'

`I'm not. I don't give a hoot in hell about politics, interplanetary or otherwise, except as it affects this business. But if I knew what was being planned, we might be able to squeeze a bigger cut out of it.'

`Well,' put in Grace, `I think you can take it for granted that the real heavy-weights from all the planets are about to meet and divide Gaul into three parts.'

`Yes, but who gets cut out?'

`Mars, I suppose.'

`Seems likely. With a bone tossed to the Venerians. In that case we might speculate a little in Pan-Jovian Trading Corp.'

`Easy, son, easy,' Francis warned. `Do that, and you might get people interested. This is a hush-hush job.'

`I guess you're right. Still, keep your eyes open. There ought to be some way to cut a slice of pie before this is over.'

Grace Cormet's telephone buzzed. She took it out of her pocket and said, `Yes?'

`A Mrs Hogbein Johnson wants to speak to you.'

`You handle her. I'm off the board.'

`She won't talk to anyone but you.'

`All right. Put her on the Chief's stereo, but stay in parallel yourself. You'll handle it after I've talked to her.'

The screen came to life, showing Mrs Johnson's fleshy face alone, framed in the middle of the screen in flat picture. `Oh, Miss Cormet,' she moaned, `some dreadful mistake has been made. There is no stereo on this ship.'

`It will be installed in Cincinnati. That will be in about twenty minutes.'

`You are sure?'

`Quite sure.'

`Oh, thank you! It's such a relief to talk with you. Do you know, I'm thinking of making you my social secretary.'

`Thank you,' Grace said evenly; `but I am under contract.'

`But how stupidly tiresome! You can break it.'

`No, I'm sorry Mrs Johnson. Good-bye.' She switched off the screen and spoke again into her telephone. `Tell Accounting to double her fee. And I won't speak with her again.' She cut off and shoved the little instrument savagely back into her pocket. `Social secretary!'

It was after dinner and Clare had retired to his living apartment before Carson called back. Francis took the call in his own office.

`Any luck?' he asked, when Carson's image had built up.

`Quite a bit. I've seen O'Neil.'

`Well? Will he do it?'

`You mean can he do it, don't you?'

`Well - can he?'

`Now that is a funny thing - I didn't think it was theoretically possible. But after talking with him, I'm convinced that it is. O'Neil has a new outlook on field theory - stuff he's never published. The man is a genius.'

`I don't care,' said Francis, `whether he's- a genius or a Mongolian idiot - can he build some sort of a gravity thinnerouter?'

`I believe he can. I really do believe he can.'

`Fine. You hired him?'

`No. That's the hitch. That's why I called back. It's like this: I happened to catch him in a mellow mood, and because we had worked together once before and because I had not aroused his ire quite as frequently as his other assistants he invited me to stay for dinner. We talked about a lot of things (you can't hurry him) and I broached the proposition. It interested him mildly - the idea, I mean; not the proposition - and he discussed the theory with me, or, rather, at me. But he won't work on it.'

`Why not? You didn't offer him enough money. I guess I'd better tackle him.'

`No, Mr Francis, no. You don't understand. He's not interested in money. He's independently wealthy and has more than he needs for his research, or anything else he wants. But just at present he is busy on wave mechanics theory and he just won't be bothered with anything else.'

`Did you make him realize it was important?'

`Yes and no. Mostly no. I tried to, but there isn't anything important to him but what he wants. It's a sort of intellectual snobbishness. Other people simply don't count.'

`All right,' said Francis. `You've done well so far. Here's what you do: After I switch off, you call EXECUTIVE and make a transcript of everything you can remember of what he said about gravitational theory. We'll hire the next best men, feed it to them, and see if it gives them any ideas to work on. In the meantime I'll put a crew to work on the details of Dr O'Neil's background. He'll have a weak point somewhere; it's just a matter of finding it. Maybe he's keeping a woman somewhere -,

`He's long past that.'

- or maybe he has a by-blow stashed away somewhere. We'll see. I want you to stay there in Portage. Since you can't hire him, maybe you can persuade him to hire you. You're our pipeline, I want it kept open. We've got to find something he wants, or something he is afraid of.'

`He's not afraid of anything. I'm positive about that.'

`Then he wants something. If it's not money, or women, it's something else. It's a law of nature.'

`I doubt it,' Carson replied slowly. `Say! Did I tell you about his hobby?'

`No. What is it?'

`It's china. In particular, Ming china. He has the best collection in the world, I'd guess. But I know what he wants!'

`Well, spill it, man, spill it. Don't be dramatic.'

`It's a little china dish, or bowl, about four inches across and two inches high. It's got a Chinese name that means "Flower of Forgetfulness".'

`Hmmm - doesn't seem significant. You think he wants it pretty bad?'

`I know he does. He has a solid colorgraph of it in his study, where he can look at it. But it hurts him to talk about it.'

`Find out who owns it and where it is.'

`I know. British Museum. That's why he can't buy it.'

`So?' mused Francis. `Well, you can forget it. Carry on.'

Clare came down to Francis' office and the three talked it over. `I guess we'll need Beaumont on this,' was his comment when he had heard the report. `It will take the Government to get anything loose from the British Museum.' Francis looked morose. `Well - what's eating you? What's wrong with that?'

`1 know,' offered Grace. `You remember the treaty under which Great Britain entered the planetary confederation?'

`I was never much good at history.'

`It comes to this: I doubt if the planetary government can touch anything that belongs to the Museum without asking the British Parliament.'

`Why not? Treaty or no treaty, the planetary government is sovereign. That was established in the Brazilian Incident.'

`Yeah, sure. But it could cause questions to be asked in the House of Commons and that would lead to the one thing Beaumont wants to avoid at all costs - publicity.'

`Okay. What do you propose?'

`I'd say that Sance and I had better slide over to England and find out just how tight they have the "Flower of Forgetfulness" nailed down - and who does the nailing and what his weaknesses are.'

Clare's eyes travelled past her to Francis, who was looking blank in the fashion that indicated assent to his intimates. `Okay,' agreed Clare, `it's your baby. Taking a special?'

`No, we've got time to get the midnight out of New York. Bye-bye.'

`Bye. Call me tomorrow.' -

When Grace screened the Chief the next day he took one look at her and exclaimed, `Good Grief, kid! What have you done to your hair?'

`We located the guy,' she explained succinctly. `His weakness is blondes.'

`You've had your skin bleached, too.'

`Of course. How do you like it?'

`It's stupendous - though I preferred you the way you were. But what does Sance think of it?'

`He doesn't mind - it's business. But to get down to cases, Chief, there isn't much to report. This will have to be a lefthanded job. In the ordinary way, it would take an earthquake to get anything out of that tomb.'

`Don't do anything that can't be fixed!'

`You know me, Chief. I won't get you in trouble. But it will be expensive.'

`Of course.'

`That's all for now. I'll screen tomorrow.'

She was a brunette again the next day. `What is this?' asked Clare. `A masquerade?'

`I wasn't the blonde he was weak for,' she explained, `but I found the one he was interested in.'

`Did it work out?'

`I think it will. Sance is having a facsimile integrated now. With luck, we'll see you tomorrow.'

They showed up the next day, apparently empty handed. `Well?' said Clare, `well?'

`Seal the place up, Jay,' suggested Francis. `Then we'll talk.' Clare flipped a switch controlling an interference shield which rendered his office somewhat more private than a coffin. `How about it?' he demanded. `Did you get it?'

`Show it to him, Grace.'

Grace turned her back, fumbled at her clothing for a moment, then turned around and placed it gently on the Chief's desk.

It was not that it was beautiful - it was beauty. Its subtle simple curve had no ornamentation, decoration would have sullied it. One spoke softly in its presence, for fear a sudden noise would shatter it.

Clare reached out to touch it, then thought better of it and drew his hand back. But he bent his head over it and stared down into it. It was strangely hard to focus - to allocate - the bottom of the bowl. It seemed as if his sight sank deeper and ever deeper into it, as if he were drowning in a pool of light.

He jerked up his head and blinked. `God,' he whispered, `God - I didn't know such things existed.'

He looked at Grace and looked away to Francis. Francis had tears in his eyes, or perhaps his own were blurred.

`Look, Chief,' said Francis. `Look - couldn't we just keep it and call the whole thing off?'

`There's no use talking about it any longer,' said Francis wearily. `We can't keep it, Chief. I shouldn't have suggested it and you shouldn't have listened to me. Let's screen O'Neil.'

`We might just wait another day before we do anything about it,' Clare ventured. His eyes returned yet again to the `Flower of Forgetfulness'.

Grace shook her head. `No good. It will just be harder tomorrow. I know.' She walked decisively over to the stereo and manipulated the controls.

O'Neil was annoyed at being disturbed and twice annoyed that they had used the emergency signal to call him to his disconnected screen.

`What is this?' he demanded. `What do you mean by disturbing a private citizen when he has disconnected? Speak up

- and it had better be good, or, so help me, I'll sue you!'

`We want you to do a little job of work for us, Doctor,' Clare began evenly.

`What!' O'Neil seemed almost too surprised to be angry. `Do you mean to stand there, sir, and tell me that you have invaded the privacy of my home to ask me to work for you?'

`The pay will be satisfactory to you.'

O'Neil seemed to be counting up to ten before answering. `Sir,' he said carefully, `there are men in the world who seem to think they can buy anything, or anybody. I grant you that they have much to go on in that belief. But I am not for sale. Since you seem to be one of those persons, I will do my best to make this interview expensive for you. You will hear from my attorneys. Good night!'

`Wait a moment,' Clare said urgently. `I believe that you are interested in china -,

`What if I am?'

`Show it to him, Grace.' Grace brought the `Flower of Forgetfulness' up near the screen, handling it carefully, reverently. O'Neil said nothing. He leaned forward and stared. He seemed to be about to climb through the screen. `Where did you get it?' he said at last.

`That doesn't matter.'

`I'll buy it from you - at your own price.'

`It's not for sale. But you may have it - if we can reach an agreement.'

O'Neil eyed him. `It's stolen property.'

`You're mistaken. Nor will you find anyone to take an interest in such a charge. Now about this job -,

O'Neil pulled his eyes away from the bowl. `What is it you wish me to do?'

Clare explained the problem to him. When he had concluded O'Neil shook his head. `That's ridiculous,' he said.

`We have reason to feel that is theoretically possible.'

`Oh, certainly! It's theoretically possible to live forever, too. But no one has ever managed it.'

`We think you can do it.'

`Thank you for nothing. Say!' O'Neil stabbed a finger at him out of the screen. `You set that young pup Carson on me!'

`He was acting under my orders.'

`Then, sir, I do not like your manners.'

`How about the job? And this?' Clare indicated the bowl. O'Neil gazed at it and chewed his whiskers. `Suppose,' he said, at last, `I make an honest attempt, to the full extent of my ability, to supply what you want - and I fail.'

Clare shook his head. `We pay only for results. Oh, your salary, of course, but not this. This is a bonus in addition to your salary, if you are successful.'

O'Neil seemed about to agree, then said suddenly, `You may be fooling me with a colorgraph. I can't tell through this damned screen.'

Clare shrugged. `Come and see for yourself.'

`I shall. I will. Stay where you are. Where are you? Damn it, sir, what's your name?'

He came storming in two hours later. `You've tricked me! The "Flower" is still in England. I've investigated. I'll . . . I'll punish you, sir, with my own two hands.'

See for yourself,' answered Clare. He stepped aside, so that his body no longer obscured O'Neil's view of Clare's desk top.

They let him look. They respected his need for quiet and let him look. After a long time he turned to them, but did not speak.

`Well?' asked Clare.

`I'll build your damned gadget,' he said huskily. `I figured out an approach on the way here.'

Beaumont came in person to call the day before the first session of the conference. `Just a social call, Mr Clare,' he stated. `I simply wanted to express to you my personal appreciation for the work you have done. And to deliver this.' `This' turned out to be a

draft on the Bank Central for the agreed fee. Clare accepted it, glanced at it, nodded, and placed it on his desk.

`I take it, then,' he remarked, `that the Government is satisfied with the service rendered.'

`That is putting it conservatively,' Beaumont assured him. `To be perfectly truthful, I did not think you could do so much. You seem to have thought of everything. The Callistan delegation is out now, riding around and seeing the sights in one of the little tanks you had prepared. They are delighted. Confidentially, I think we can depend on their vote in the coming sessions.'

`Gravity shields working all right, eh?'

`Perfectly. I stepped into their sightseeing tank before we turned it over to them. I was as light as the proverbial feather. Too light - I was very nearly spacesick.' He smiled in wry amusement. `I entered the Jovian apartments, too. That was quite another matter.'

`Yes, it would be,' Clare agreed. `Two and a half times normal weight is oppressive to say the least.'

`It's a happy ending to a difficult task. I must be going. Oh, yes, one other little matter - I've discussed with Doctor O'Neil the possibility that the Administration may be interested in other uses for his new development. In order to simplify the matter it seems desirable that you provide me with a quitclaim to the O'Neil effect from General Services.'

Clare gazed thoughtfully at the `Weeping Buddha' and chewed his thumb. `No,' he said slowly, `no. I'm afraid that would be difficult.'

`Why not?' asked Beaumont. `It avoids the necessity of adjudication and attendant waste of time. We are prepared to recognize your service and recompense you.'

`Hmmm. I don't believe you fully understand the situation, Mr Beaumont. There is a certain amount of open territory between our contract with Doctor O'Neil and your contract with us. You asked of us certain services and certain chattels with which to achieve that service. We provided them - for a fee. All done. But our contract with Doctor O'Neil made him a full-time employee for the period of his employment. His research results and the patents embodying them are the property of General Services.'

`Really?' said Beaumont. `Doctor O'Neil has a different impression.'

`Doctor O'Neil is mistaken. Seriously, Mr Beaumont - you asked us to develop a siege gun, figuratively speaking, to shoot a gnat. Did you expect us, as businessmen, to throw away the siege gun after one shot?'

`No, I suppose not. What do you propose to do?'

`We expect to exploit the gravity modulator commercially. I fancy we could get quite a good price for certain adaptations of it on Mars.'

`Yes. Yes, I suppose you could. But to be brutally frank, Mr Clare, I am afraid that is impossible. it is a matter of imperative public policy that this development be limited to terrestrials. In fact, the administration would find it necessary to intervene and make it government monopoly.'

`Have you considered how to keep O'Neil quiet?'

`In view of the change in circumstances, no. What is your thought?'

`A corporation, in which he would hold a block of stock and be president. One of our bright young men would be chairman of the board.' Clare thought of Carson. `There would be stock enough to go around,' he added, and watched Beaumont's face.

Beaumont ignored the bait. `I suppose that this corporation would be under contract to the Government - its sole customer?'

`That is the idea.'

`Mmmm . . . yes, it seems feasible. Perhaps I had better speak with Doctor O'Neil.'

`Help yourself.'

Beaumont got O'Neil on the screen and talked with him in low tones. Or, more properly, Beaumont's tones were low. 0 Neil displayed a tendency to blast the microphone. Clare sent for Francis and Grace and explained to them what had taken place.

Beaumont turned away from the screen. `The Doctor wishes to speak with you, Mr Clare.'

O'Neil looked at him frigidly. `What is this claptrap I've had to listen to, sir? What's this about the O'Neil effect being your property?'

`It was in your contract, Doctor. Don't you recall?'

`Contract! I never read the damned thing. But I can tell you this: I'll take you to court. I'll tie you in knots before I'll let you make a fool of me that way.'

`Just a moment, Doctor, please!' Clare soothed. `We have no desire to take advantage of a mere legal technicality, and no one disputes your interest. Let me outline what I had in mind - ` He ran rapidly over the plan. O'Neil listened, but his expression was still unmollified at the conclusion.

`I'm not interested,' he said gruffly. `So far as I am concerned the Government can have the whole thing. And I'll see to it.'

`I had not mentioned one other condition,' added Clare.

`Don't bother.'

`I must. This will be just a matter of agreement between gentlemen, but it is essential. You have custody of the "Flower of Forgetfulness".'

O'Neil was at once on guard. `What do you mean, "custody". I own it. Understand me - own it.'

`"Own it,"' repeated Clare. `Nevertheless, in return for the concessions we are making you with respect to your contract, we want something in return.'

`What?' asked O'Neil. The mention of the bowl had upset his confidence.

`You own it and you retain possession of it. But I want your word that I, or Mr Francis, or Miss Cormet, may come look at it from time to time - frequently.'

O'Neil looked unbelieving. `You mean that you simply want to come to look at it?'

`That's all.'

`Simply to enjoy it?'

`That's right.'

O'Neil looked at him with new respect. `I did not understand you before, Mr Clare. I apologize. As for the corporation nonsense - do as you like. I don't care. You and Mr Francis and Miss Cormet may come to see the "Flower" whenever you like. You have my word.'

`Thank you, Doctor O'Neil - for all of us.' He switched off as quickly as could be managed gracefully.

Beaumont was looking at Clare with added respect, too. `I think,' he said, `that the next time I shall not interfere with your handling of the details. I'll take my leave, Adieu, gentlemen - and Miss Cormet.'

When the door had rolled down behind him Grace remarked, `That seems to polish it off.'

`Yes,' said Clare. `We've "walked his dog" for him; O'Neil has what he wants; Beaumont got what he wanted, and more besides.'

`Just what is he after?'

`I don't know, but I suspect that he would like to be first president of the Solar System Federation, if and when there is such a thing. With the aces we have dumped in his lap, he might make it. Do you realize the potentialities of the O'Neil effect?'

`Vaguely,' said Francis.

`Have you thought about what it will do to space navigation? Or the possibilities it adds in the way of colonization? Or its recreational uses? There's a fortune in that alone.'

`What do we get out of it?'

`What do we get out of it? Money, old son. Gobs and gobs of money. There's always money in giving people what they want.' He glanced up at the Scottie dog trademark.

`Money,' repeated Francis. `Yeah, I suppose so.'

`Anyhow,' added Grace, `we can always go look at the "Flower".'

The Worlds of Robert A. Heinlein

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Contents

Introduction: PANDORA'S BOX - copyright 1952

FREE MEN - (First time in print)

BLOWUPS HAPPEN - copyright 1940

SEARCHLIGHT - copyright 1962

LIFE-LINE - copyright 1939

SOLUTION UNSATISFACTORY - copyright 1940

INTRODUCTION: PANDORA'S BOX

ONCE OPENED, the Box could never be closed. But after the myriad swarming Troubles came Hope.

Science fiction is not prophecy. It often reads as if it were prophecy; indeed the practitioners of this odd genre (pun intentional — I won't do it again) of fiction usually strive hard to make their stones sound as if they were true pictures of the future. Prophecies.

Prophesying is what the weatherman does, the race track tipster, the stock market adviser, the fortune-teller who reads palms or gazes into a crystal. Each one is predicting the future — sometimes exactly, sometimes in vague, veiled, or ambiguous language, sometimes simply with a claim of statistical probability, but always with a claim seriously made of disclosing some piece of the future.

This is not at all what a science fiction author does. Science fiction is almost always laid in the future — or at least in a fictional possible-future — and is almost invariably deeply concerned with the shape

of that future. But the method is not prediction; it is usually extrapolation and/or speculation. Indeed the author is not required to (and usually does not) regard the fictional "future" he has chosen to write about as being the events most likely to come to pass; his purpose may have nothing to do with the probability that these storied events may happen.

"Extrapolation" means much the same in fiction writing as it does in mathematics: exploring a trend. It means continuing a curve, a path, a trend into the future, by extending its present direction and continuing the shape it has displayed in its past performance-i.e., if it is a sine curve in the past, you extrapolate it as a sine curve in the future, not as an hyperbola, nor a Witch of Agnesi and most certainly not as a tangent straight line.

"Speculation" has far more elbowroom than extrapolation; it starts with a "What if?" — and the new factor thrown in by the what-if may be both wildly improbable and so revolutionary in effect as to throw a sine-curve trend (or a yeast-growth trend, or any trend) into something unrecognizably different. What if little green men land on the White House lawn and invite us to join a Galactic union? — or big green men land and enslave us and eat us? What if we solve the problem of immortality? What if New York City really does go dry? (And not just the present fiddlin' shortage tackled by fiddlin' quarter-measures — can you imagine a man being lynched for wasting an ice cube? Try Frank Herbert's Dune World saga, which is not — I judge — prophecy in any sense, but is powerful, convincing, and most ingenious speculation. Living, as I do, in a state which has just two sorts of water, too little and too much — we just finished seven years of drought with seven inches of rain in two hours, and one was about as disastrous as the other — I find a horrid fascination in Dune World, in Charles Einstein's The Day New York Went Dry, and in stories about Biblical-size floods such as S. Fowler Wright's Deluge.)

Most science fiction stories use both extrapolation and speculation. Consider "Blowups Happen," elsewhere in this volume. It was written in 1939, updated very slightly for book publication just after World War II by inserting some words such as "Manhattan Project and "Hiroshima," but not rewritten, and is one of a group of stories published under the pretentious collective title of The History of the Future (!) — which certainly sounds like prophecy.

I disclaim any intention of prophesying; I wrote that story for the sole purpose of making money to pay off a mortgage and with the single intention of entertaining the reader. As prophecy the story falls flat on its silly face — any tenderfoot Scout can pick it to pieces — but I think it is still entertaining as a story, else it would not be here; I have a business reputation to protect and wish to continue making money. Nor am I ashamed

of this motivation. Very little of the great literature of our heritage arose solely from a wish to "create art"; most writing, both great and not-so-great, has as its proximate cause a need for money combined with an aversion to, or an inability to perform, hard writing offers a legal and reasonably honest way out of this dilemma.

A science fiction author may have, and often does have, other motivations in addition to pursuit of profit. He may wish to create "art for art's sake," he may want to warn the world against a course he feels to be disastrous (Orwell's 1984, Huxley's Brave New World — but please note that each is intensely entertaining, and that each made stacks of money), he may wish to urge the human race toward a course which he considers desirable (Bellamy's Looking Backwards, Wells' Men Like Gods), he may wish to instruct, or uplift, or even to dazzle. But the science fiction writer — any fiction writer — must keep entertainment consciously in mind as his prime purpose . . . or he may find himself back dragging that old cotton sack.

If he succeeds in this purpose, his story is likely to remain gripping entertainment long years after it has turned out to be false "prophecy." H. G. Wells is perhaps the greatest science fiction author of all time — and his greatest science fiction stories were written around sixty years ago . . . under the whip. Bedfast with consumption, unable to hold a job, flat broke, paying alimony — he had to make money somehow, and writing was the heaviest work he could manage. He was clearly aware (see his autobiography) that to stay alive he must be entertaining. The result was a flood of some of the most brilliant speculative stories about the future ever written. As prophecy they are all hopelessly dated . . .

which matters not at all; they are as spellbinding now as they were in the Gay 'Nineties and the Mauve Decade.

Try to lay hands on his The Sleeper Awakes. The gadgetry in it is ingenious — and all wrong. The projected future in it is brilliant — and did not happen. All of which does not sully the story; it is a great story of love and sacrifice and blood-chilling adventure set in a matrix of mind-stretching speculation about the nature of Man and his Destiny. I read it first forty-five years ago, plus perhaps a dozen times since . . . and still reread it whenever I get to feeling uncertain about just how one does go about the unlikely process of writing fiction for entertainment of strangers — and again finding myself caught up in the sheer excitement of Wells' story.

"Solution Unsatisfactory" herein is a consciously Wellsian story. No, no, I'm not claiming that it is of H. G. Wells' quality — its quality is for you to judge, not me. But it was written by the method which Wells spelled

out for the speculative story: Take one, just one, basic new assumption, then examine all its consequences — but express those consequences in terms of human beings. The assumption I chose was the "Absolute Weapon"; the speculation concerns what changes this forces on mankind. But the "history" the story describes simply did not happen.

However the problems discussed in this story are as fresh today, the issues just as poignant, for the grim reason that we have not reached even an "unsatisfactory" solution to the problem of the Absolute Weapon; we have reached no solution.

In the twenty-five years that have passed since I wrote that story the world situation has grown much worse. Instead of one Absolute Weapon there are now at least five distinct types — an "Absolute Weapon" being defined as one against which there is no effective defense and which kills indiscriminately over a very wide area. The earliest of the five types, the A-bomb, is now known to be possessed by at least five nations, at least twenty-five other nations have the potential to build them in the next few years.

But there is a possible sixth type. Earlier this year I attended a seminar at one of the nation's new think-factories. One of the questions discussed was whether or not a "Doomsday Bomb" could be built — a single weapon which would destroy all life of all sorts on this planet; one weapon, not an all-out nuclear holocaust involving hundreds or thousands of ICBMs. No, this was to be a world-wrecker of the sort Dr. E. E. Smith used to use in his interstellar sagas back in the days when S-F magazines had bug-eyed monsters on the cover and were considered lowbrow, childish, fantastic.

The conclusions reached were: Could the Doomsday Machine be built? — yes, no question about it. What would it cost? — quite cheap. A seventh type hardly seems necessary.

And that makes the grimness of "Solution Unsatisfactory" seem more like an Oz book in which the most harrowing adventures always turn out happily.

"Searchlight" is almost pure extrapolation, almost no speculation. The gadgets in it are either hardware on the shelf, or hardware which will soon be on the shelf because nothing is involved but straight-forward engineering development. "Life-Line" (my first story) is its opposite, a story which is sheer speculation and either impossible or very highly improbable, as the What-If postulate will never be solved — I think. I hope. But the two stories are much alike in that neither depends on when it was written nor when it is read. Both are independent of any particular shape to history; they are timeless.

"Free Men" is another timeless story. As told, it looks like another "after the blowup" story — but it is not. Although the place is nominally the United States and the time (as shown by the gadgetry) is set in the not-distant future, simply by changing names of persons and places and by inserting other weapons and other gadgets this story could be any country and any time in the past or future — or could even be on another planet and concern a non-human race. But the story does apply here-and-now, so I told it that way.

"Pandora's Box" was the original title of an article researched and written in 1949 for publication in 1950, the end of the half-century. Inscrutable are the ways of editors: it appeared with the title 'Where To?" and purported to be a non-fiction prophecy concerning the year 2000 A.D. as seen from 1950. (I agree that a science fiction writer should avoid marihuana, prophecy, and time payments — but I was tempted by a soft rustle.)

Our present editor decided to use this article, but suggested that it should be updated. Authors who wish to stay in the business listen most carefully to editors' suggestions, even when they think an editor has been out in the sun without a hat; I agreed.

And reread "Where To" and discovered that our editor was undeniably correct; it needed updating. At least.

But at last I decided not to try to conceal my bloopers. Below is reproduced, unchanged, my predictions of fifteen years back. But here and there through the article I have inserted signs for footnotes — like this: (z) — and these will be found at the end of the 1950 article . . . calling attention to bloopers and then forthrightly excusing myself by rationalizing how anyone, even Nostradamus, would have made the same mistake . . . hedging my bets, in other cases, or chucking in brand-new predictions and carefully laying them farther in the future than I am likely to live . . . and, in some cases, crowing loudly about successful predictions.

So —

WHERE TO?

(And Why We Didn't Get There)

Most science fiction consists of big-muscled stories about adventures in space, atomic wars, invasions by extra-terrestrials, and such. All very well — but now we will take time out for a look at ordinary home life half a century hence.

Except for tea leaves and other magical means, the only way to guess at the future is by examining the present in the light of the past. Let's go back half a century and visit your grandmother before we attempt to visit your grandchildren.

1900: Mr. McKinley is President and the airplane has not yet been invented. Let's knock on the door of that house with the gingerbread, the stained glass, and the cupola.

The lady of the house answers. You recognize her — your own grandmother, Mrs. Middleclass. She is almost as plump as you remember her, for she "put on some good, healthy flesh" after she married.

She welcomes you and offers coffee cake, fresh from her modern kitchen (running water from a hand pump; the best coal range Pittsburgh ever produced). Everything about her house is modern — hand-painted china, souvenirs from the Columbian Exposition, beaded portieres, shining baseburner stoves, gas lights, a telephone on the wall.

There is no bathroom, but she and Mr. Middleclass are thinking of putting one in. Mr. Middleclass's mother calls this nonsense, but your grandmother keeps up with the times. She is an advocate of clothing reform, wears only one petticoat, bathes twice a week, and her corsets are guaranteed rust proof. She has been known to defend female suffrage — but not in the presence of Mr. Middleclass.

Nevertheless, you find difficulty in talking with her. Let's jump back to the present and try again.

The automatic elevator takes us to the ninth floor, and we pick out a door by its number, that being the only way to distinguish it.

"Don't bother to ring," you say? What? It's your door and you know exactly what lies beyond it —

Very well, let's move a half century into the future and try another middle class home.

It's a suburban home not two hundred miles from the city. You pick out your destination from the air while the cab is landing you — a cluster of hemispheres which makes you think of the houses Dorothy found in Oz

You set the cab to return to its hangar and go into the entrance hall. You neither knock, nor ring. The screen has warned them before you touched down on the landing flat and the autobutler's transparency is shining with: PLEASE RECORD A MESSAGE.

Before you can address the microphone a voice calls out, "Oh, it's you! Come in, come in." There is a short wait, as your hostess is not at the door. The autobutler flashed your face to the patio — where she was reading and sunning herself — and has relayed her voice back to you.

She pauses at the door, looks at you through one-way glass, and frowns slightly, she knows your old-fashioned disapproval of casual nakedness. Her kindness causes her to disobey the family psychiatrist; she grabs a robe and covers herself before signaling the door to open.

The psychiatrist was right; you have thus been classed with strangers, tradespeople, and others who are not family intimates. But you must swallow your annoyance; you cannot object to her wearing clothes when you have sniffed at her for not doing so.

There is no reason why she should wear clothes at home. The house is clean — not somewhat clean, but clean — and comfortable. The floor is warm to bare feet; there are no unpleasant drafts, no cold walls. All dust is precipitated from the air entering this house. All textures, of floors, of couch, of chair, are comfortable to bare skin. Sterilizing ultra-violet light floods each room whenever it is unoccupied, and, several times a day, a "whirlwind" blows house-created dust from all surfaces and whisks it out. These auto services are unobtrusive because automatic cut-off switches prevent them from occurring whenever a mass in a room is radiating at blood temperature.

Such a house can become untidy, but not dirty. Five minutes of straightening, a few swipes at children's fingermarks, and her day's housekeeping is done. Oftener than sheets were changed in Mr. McKinley's day, this housewife rolls out a fresh layer of sheeting on each sitting surface and stuffs the discard down the oubliette. This is easy; there is a year's supply on a roll concealed in each chair or couch. The tissue sticks by pressure until pulled loose and does not obscure the pattern and color.

You go into the family room, sit down, and remark on the lovely day. "Isn't it?" she answers. "Come sunbathe with me."

The sunny patio gives excuse for bare skin by anyone's standards; thankfully she throws off the robe and stretches out on a couch. You hesitate a moment. After all, she is your own grandchild, so why not? You undress quickly, since you left your outer wrap and shoes at the door (only barbarians wear street shoes in a house) and what remains is easily discarded. Your grandparents had to get used to a mid-century beach. It was no easier for them.

On the other hand, their bodies were wrinkled and old, whereas yours is not. The triumphs of endocrinology, of cosmetics, of plastic surgery, of figure control in every way are such that a woman need not change markedly from maturity until old age. A woman can keep her body as firm and slender as she wishes — and most of them so wish. This has produced a paradox: the United States has the highest percentage of old people in all its two and a quarter centuries, yet it seems to have a larger proportion of handsome young women than ever before.

("Don't whistle, son! That's your grandmother — ")

This garden is half sunbathing patio, complete with shrubs and flowers, lawn and couches, and half swimming pool. The day, though sunny, is quite cold — but not in the garden, nor is the pool chill. The garden appears to be outdoors, but is not; it is covered by a bubble of transparent plastic, blown and cured on the spot. You are inside the bubble; the sun is outside; you cannot see the plastic.

She invites you to lunch; you protest. "Nonsense!" she answers, "I like to cook." Into the house she goes. You think of following, but it is deliciously warm in the March sunshine and you are feeling relaxed to be away from the city. You locate a switch on the side of the couch, set it for gentle massage, and let the couch knead your troubles away. The couch notes your heart rate and breathing; as they slow, so does it. As you fall asleep it stops.

Meanwhile your hostess has been "slaving away over a hot stove." To be precise, she has allowed a menu selector to pick out an 800-calory, 4-ration-point luncheon. It is a random-choice gadget, somewhat like a slot machine, which has in it the running inventory of her larder and which will keep hunting until it turns up a balanced meal. Some housewives claim that it takes the art out of cookery, but our hostess is one of many who have accepted it thankfully as an endless source of new menus. Its choice is limited today as it has been three months since she has done grocery shopping. She rejects several menus; the selector continues patiently to

turn up combinations until she finally accepts one based around fish disguised as lamb chops.

Your hostess takes the selected items from shelves or the freezer. All are prepared; some are pre-cooked. Those still to be cooked she puts into her — well, her "processing equipment," though she calls it a "stove." Part of it traces its ancestry to diathermy equipment; another feature is derived from metal enameling processes. She sets up cycles, punches buttons, and must wait two or three minutes for the meal to cook. She spends the time checking her ration accounts.

Despite her complicated kitchen, she doesn't eat as well as her great grandmother did — too many people and too few acres.

Never mind; the tray she carries out to the patio is well laden and beautiful. You are both willing to nap again when it is empty. You wake to find that she has burned the dishes and is recovering from her "exertions" in her refresher. Feeling hot and sweaty from your nap you decide to use it when she comes out. There is a wide choice offered by the 'fresher, but you limit yourself to a warm shower growing gradually cooler, followed by warm air drying, a short massage, spraying with scent, and dusting with powder. Such a simple routine is an insult to a talented machine.

Your host arrives home as you come out; he has taken a holiday from his engineering job and has had the two boys down at the beach. He kisses his wife, shouts, "Hi, Duchess!" at you, and turns to the video, setting it to hunt and sample the newscasts it has stored that day. His wife sends the boys in to 'fresh themselves, then says, "Have a nice day, dear?"

He answers, "The traffic was terrible. Had to make the last hundred miles on automatic. Anything on the phone for me?"

"Weren't you on relay?"

"Didn't set it. Didn't want to be bothered." He steps to the house phone, plays back his calls, finds nothing he cares to bother with — but the machine goes ahead and prints one message; he pulls it out and tears it off.

"What is it?" his wife asks.

"Telestat from Luna City — from Aunt Jane."

"What does she say?"

"Nothing much. According to her, the Moon is a great place and she wants us

to come visit her."

"Not likely!" his wife answers. "Imagine being shut up in an air-conditioned cave."

"When you are Aunt Jane's age, my honey lamb, and as frail as she is, with a bad heart thrown in, you'll go to the Moon and like it. Low gravity is not to be sneezed at — Auntie will probably live to be a hundred and twenty, heart trouble and all."

"Would you go to the Moon?" she asks.

"If I needed to and could afford it." He turns to you. "Right?"

You consider your answer. Life still looks good to you — and stairways are beginning to be difficult. Low gravity is attractive, even though it means living out your days at the Geriatrics Foundation on the Moon. "It might be fun to visit," you answer. "One wouldn't have to stay."

Hospitals for old people on the Moon? Lets not be silly —

Or is it silly? Might it not be a logical and necessary outcome of our world today?

Space travel we will have, not fifty years from now, but much sooner. It's breathing down our necks. As for geriatrics on the Moon, for most of us no price is too high and no amount of trouble is too great to extend the years of our lives. It is possible that low gravity (one sixth, on the Moon) may not lengthen lives; nevertheless it may — we don't know yet — and it will most certainly add greatly to comfort on reaching that inevitable age when the burden of dragging around one's body is almost too much, or when we would otherwise resort to an oxygen tent to lessen the work of a worn-out heart.

By the rules of prophecy, such a prediction is probable, rather than impossible.

But the items and gadgets suggested above are examples of timid prophecy.

What are the rules of prophecy, if any?

[Image]

Look at the graph shown here. The solid curve is what has been going on this past century. It represents many things — use of power, speed of transport, numbers of scientific and technical workers, advances in communication, average miles traveled per person per year, advances in mathematics, the rising curve of knowledge. Call it the curve of human achievement

What is the correct way to project this curve into the future? Despite everything, there is a stubborn "common sense" tendency to project it along dotted line number one — like the patent office official of a hundred years back who quit his job "because everything had already been invented." Even those who don't expect a slowing up at once, tend to expect us to reach a point of diminishing returns (dotted line number two).

Very daring minds are willing to predict that we will continue our present rate of progress (dotted line number three-a tangent).

But the proper way to project the curve is dotted line number four — for there is no reason, mathematical, scientific, or historical, to expect that curve to flatten out, or to reach a point of diminishing returns, or simply to go on as a tangent. The correct projection, by all facts known today, is for the curve to go on up indefinitely with increasing steepness.

The timid little predictions earlier in this article actually belong to curve one, or, at most, to curve two. You can count on the changes in the next fifty years at least eight times as great as the changes of the past fifty years.

The Age of Science has not yet opened.

AXIOM: A "nine-days' wonder" is taken as a matter of course on the tenth day.

AXIOM: A "common sense" prediction is sure to err on the side of timidity.

AXIOM: The more extravagant a prediction sounds the more likely it is to come true.

So let's have a few free-swinging predictions about the future.

Some will be wrong — but cautious predictions are sure to be wrong.

1. Interplanetary travel is waiting at your front door — C.O.D. It's yours

when you pay for it. (a)

2. Contraception and control of disease is revising relations between sexes to an extent that will change our entire social and economic structure. (b)

5. The most important military fact of this century is that there is no way to repel an attack from outer space. (c)

4. It is utterly impossible that the United States will start a "preventive war." We will fight when attacked, either directly or in a territory we have guaranteed to defend. (d)

5. In fifteen years the housing shortage will be solved by a "breakthrough" into new technology which will make every house now standing as obsolete as privies. (e)

6. We'll all be getting a little hungry by and by.

7. The cult of the phony in art will disappear. So-called "modern art" will be discussed only by psychiatrists.

8. Freud will be classed as a pre-scientific, intuitive pioneer and psychoanalysis will be replaced by a growing, changing "operational psychology" based on measurement and prediction.

9. Cancer, the common cold, and tooth decay will all be conquered; the revolutionary new problem in medical research will be to accomplish "regeneration," i.e., to enable a man to grow a new leg, rather than fit him with an artificial limb. (f)

10. By the end of this century mankind will have explored this solar system, and the first ship intended to reach the nearest star will be abuilding. (g)

11. Your personal telephone will be small enough to carry in your handbag. Your house telephone will record messages, answer simple queries, and transmit vision.

12. Intelligent life will be found on Mars. (h)

13. A thousand miles an hour at a cent a mile will be commonplace; short hauls will be made in evacuated subways at extreme speeds. (i)

14. A major objective of applied physics will be to control gravity. (j)

15. We will not achieve a "world state" in the predictable future.

Nevertheless, Communism will vanish from this planet. (k)

16. Increasing mobility will disenfranchise a majority of the population. About 1990 a constitutional amendment will do away with state lines while retaining the semblance.

17. All aircraft will be controlled by a giant radar net run on a continent-wide basis by a multiple electronic "brain."

18. Fish and yeast will become our principal sources of proteins. Beef will be a luxury; lamb and mutton will disappear. (1)

19. Mankind will not destroy itself, nor will "civilization" be destroyed. (m)

Here are things we won t get soon, if ever:

Travel through time.

Travel faster than the speed of light

"Radio" transmission of matter.

Manlike robots with manlike reactions.

Laboratory creation of life.

Real understanding of what "thought" is and how it is related to matter.

Scientific proof of personal survival after death.

Nor a permanent end to war. (I don't like that prediction any better than you do.)

Prediction of gadgets is a parlor trick anyone can learn; but only a fool would attempt to predict details of future history (except as fiction, so labeled); there are too many unknowns and no techniques for integrating them even if they were known.

Even to make predictions about overall trends in technology is now most difficult. In fields where before World War II there was one man working in public, there are now ten, or a hundred, working in secret. There may be six men in the country who have a clear picture of what is going on in science today. There may not be even one.

This is in itself a trend. Many leading scientists consider it a factor as disabling as the nonsense of Lysenkoism is to Russian technology. Nevertheless there are clear-cut trends which are certain to make this coming era enormously more productive and interesting than the frantic one we have just passed through. Among them are:

Cybernetics: The study of communication and control of mechanisms and organisms. This includes the wonderful field of mechanical and electronic "brains" — but is not limited to it. (These "brains" are a factor in themselves that will speed up technical progress the way a war does.)

Semantics: A field which seems concerned only with definitions of words. It is not; it is a frontal attack on epistemology — that is to say, how we know what we know, a subject formerly belonging to long-haired philosophers.

New tools of mathematics and log, such as calculus of statement, Boolean logic, morphological analysis, generalized symbology, newly invented mathematics of every sort — there is not space even to name these enormous fields, but they offer us hope in every other field — medicine, social relations, biology, economics, anything.

Biochemistry: Research into the nature of protoplasm, into enzyme chemistry, viruses, etc., give hope not only that we may conquer disease, but that we may someday understand the mechanisms of life itself. Through this, and with the aid of cybernetic machines and radioactive isotopes, we may eventually acquire a rigor of chemistry. Chemistry is not a discipline today; it is a jungle. We know that chemical behavior depends on the number of orbital electrons in an atom and that physical and chemical properties follow the pattern called the Periodic Table. We don't know much else, save by cut-and-try, despite the great size and importance of the chemical industry. When chemistry becomes a discipline, mathematical chemists will design new materials, predict their properties, and tell engineers how to make them — without ever entering a laboratory. We've got a long way to go on that one!

Nucleonics: We have yet to find out what makes the atom tick. Atomic power? — yes, we'll have it, in convenient packages — when we understand the nucleus. The field of radioisotopes alone is larger than was the entire known body of science in 1900. Before we are through with these problems, we may find out how the universe is shaped and why. Not to mention enormous unknown vistas best represented by ? ? ? ? ?

Some physicists are now using two time scales, the T-scale, and the tau-scale. Three billion years on one scale can equal an incredibly split

second on the other scale — and yet both apply to you and your kitchen stove. Of such anarchy is our present state in physics.

For such reasons we must insist that the Age of Science has not yet opened.

The greatest crisis facing us is not Russia, not the Atom bomb, not corruption in government, not encroaching hunger, nor the morals of young. It is a crisis in the organization and accessibility of human knowledge. We own an enormous "encyclopedia" — which isn't even arranged alphabetically. Our "file cards" are spilled on the floor, nor were they ever in order. The answers we want may be buried somewhere in the heap, but it might take a lifetime to locate two already known facts, place them side by side and derive a third fact, the one we urgently need.

Call it the Crisis of the Librarian.

We need a new "specialist who is not a specialist, but a synthesist. (n) We need a new science to be the perfect secretary to all other sciences.

But we are not likely to get either one in a hurry and we have a powerful lot of grief before us in the meantime.

Fortune-tellers can always be sure of repeat customers by predicting what the customer wants to hear . . . it matters not whether the prediction comes true. Contrariwise, the weatherman is often blamed for bad weather.

Brace yourself.

In 1900 the cloud on the horizon was no bigger than a man's hand — but what lay ahead was the Panic of 1907, World War I, the panic following it, the Depression, Fascism, World War II, the Atom Bomb, and Red Russia.

Today the clouds obscure the sky, and the wind that overturns the world is sighing in the distance.

The period immediately ahead will be the roughest, cruelest one in the long, hard history of mankind. It will probably include the worst World War of them all. It might even end with a war with Mars, God save the mark! Even if we are spared that fantastic possibility, it is certain that there will be no security anywhere, save what you dig out of your own inner spirit.

But what of that picture we drew of domestic luxury and tranquillity for Mrs. Middleclass, style 2000 A.D.?

She lived through it. She survived.

Our prospects need not dismay you, not if you or your kin were at Bloody Nose Ridge, at Gettysburg — or trudged across the Plains. You and I are here because we carry the genes of uncountable ancestors who fought — and won — against death in all its forms. We're tough. We'll survive. Most of us.

We've lasted through the preliminary bouts; the main event is coming up.

But it's not for sissies.

The Last thing to come fluttering out of Pandora's box was Hope — without which men die.

The gathering wind will not destroy everything, nor will the Age of Science change everything. Long after the first star ship leaves for parts unknown, there will still be outhouses in upstate New York, there will still be steers in Texas, and — no doubt — the English will still stop for tea.

Afterthoughts, fifteen years later —

(a) And now we are paying for it and the cost is high. But, for reasons understandable only to bureaucrats, we have almost halted development of a nuclear-powered spacecraft when success was in sight. Never mind; if we don't, another country will. By the end of this century space travel will be cheap.

(b) This trend is so much more evident now than it was fifteen years ago that I am tempted to call it a fulfilled prophecy. Vast changes in sex relations are evident all around us — with the oldsters calling it "moral decay" and the youngsters ignoring them and taking it for granted. Surface signs: books such as "Sex and the Single Girl" are smash hits; the formerly-taboo four-letter words are now seen both in novels and popular magazines; the neologism "swinger" has come into the language; courts are conceding that nudity and semi-nudity are now parts of the mores. But the end is not yet; this revolution will go much farther and is now barely started.

The most difficult speculation for a science fiction writer to undertake is to imagine correctly the secondary implications of a new factor. Many

people correctly anticipated the coming of the horseless carriage; some were bold enough to predict that everyone would use them and the horse would virtually disappear. But I know of no writer, fiction or non-fiction, who saw ahead of time the vast change in the courting and mating habits of Americans which would result primarily from the automobile — a change which the diaphragm and the oral contraceptive merely confirmed. So far as I know, no one even dreamed of the change in sex habits the automobile would set off.

There is some new gadget in existence today which will prove to be equally revolutionary in some other way equally unexpected. You and I both know of this gadget, by name and by function — but we don't know which one it is nor what its unexpected effect will be. This is why science fiction is not prophecy — and why fictional speculation can be so much fun both to read and to write.

(c) I flatly stand by this one. True, we are now working on Nike-Zeus and Nike-X and related systems and plan to spend billions on such systems — and we know that others are doing the same thing. True, it is possible to hit an object in orbit or trajectory. Nevertheless this prediction is as safe as predicting tomorrow's sunrise. Anti-aircraft fire never stopped air attacks; it simply made them expensive. The disadvantage in being at the bottom of a deep "gravity well" is very great; gravity gauge will be as crucial in the coming years as wind gauge was in the days when sailing ships controlled empires. The nation that controls the Moon will control the Earth — but no one seems willing these days to speak that nasty fact out loud.

(d) Since 1950 we have done so in several theaters and are doing so as this is written, in Viet Nam. "Preventive" or "pre-emptive" war seems as unlikely as ever, no matter who is in the White House. Here is a new prediction: World War III (as a major, all-out war) will not take place at least until 1980 and could easily hold off until 2000. This is a very happy prediction compared with the situation in 1950, as those years of grace may turn up basic factors which (hopefully!) might postpone disaster still longer. We were much closer to ultimate disaster around 1955 than we are today — much closer indeed than we were at the time of the Cuban Confrontation in 1962. But the public never knew it. All in all, things look pretty good for survival, for the time being — and that is as good a break as our ancestors ever had. It was far more dangerous to live in London in 1664-5 than it is to live in a city threatened by H-bombs today.

(e) Here I fell flat on my face. There has been no break-through in housing, nor is any now in prospect — instead the ancient, wasteful methods of building are now being confirmed by public subsidies. The degree of our backwardness in this field is hard to grasp; we have never seen a modern

house. Think what an automobile would be if each one were custom-built from materials fetched to your home — what would it look like, what would it do, and how much would it cost. But don't set the cost lower than $100,000, nor the speed higher than 10 m/h, if you want to be realistic about the centuries of difference between the housing industry and the automotive industry.

I underestimated (through wishful thinking) the power of human stupidity — a fault fatal to prophecy.

(f) In the meantime spectacular progress has been made in organ transplants — and the problem of regeneration is related to this one. Biochemistry and genetics have made a spectacular breakthrough in "cracking the genetic code." It is a tiny crack, however, with a long way to go before we will have the human chromosomes charted and still longer before we will be able to "tailor" human beings by gene manipulation. The possibility is there — but not by year 2000. This is probably just as well. If we aren't bright enough to build decent houses, are we bright enough to play God with the architecture of human beings?

(g) Our editor suggested that I had been too optimistic on this one — but I still stand by it. It is still thirty-five years to the end of the century. For perspective, look back thirty-five years to 1930 — the American Rocket Society had not yet been founded then. Another curve, similar to the one herewith in shape but derived entirely from speed of transportation, extrapolates to show faster-than-light travel by year 2000. I guess I'm chicken, for I am not predicting FTL ships by then, if ever. But the prediction still stands without hedging.

(h) Predicting intelligent life on Mars looks pretty silly after those dismal photographs. But I shan't withdraw it until Mars has been thoroughly explored. As yet we really have no idea — and no data — as to just how ubiquitous and vaned life may be in this galaxy; it is conceivable that life as we don't know it can evolve on any sort of a planet . . . and nothing in our present knowledge of chemistry rules this out. All the talk has been about life-as-we-know-it-which means terrestrial conditions.

But if you feel that this shows in me a childish reluctance to give up thoats and zitidars and beautiful Martian princesses until forced to, I won't argue with you — I'll just wait.

(i) I must hedge number thirteen; the "cent" I meant was scaled by the 1950 dollar. But our currency has been going through a long steady inflation, and no nation in history has ever gone as far as we have along this route without reaching the explosive phase of inflation. Ten-dollar hamburgers? Brother, we are headed for the hundred-dollar hamburger — for the

barter-only hamburger.

But this is only an inconvenience rather than a disaster as long as there is plenty of hamburger.

(j) This prediction stands. But today physics is in a tremendous state of flux with new data piling up faster than it can be digested; it is anybody's guess as to where we are headed, but the wilder you guess, the more likely you are to hit it lucky. With "elementary particles" of nuclear physics now totaling about half the number we used to use to list the "immutable" chemical elements, a spectator needs a program just to keep track of the players. At the other end of the scale, "quasars" — quasi-stellar bodies — have come along; radio astronomy is now bigger than telescopic astronomy used to be; and we have redrawn our picture of the universe several times, each time enlarging it and making it more complex — I haven't seen this week's theory yet, which is well, as it would be out of date before this gets into print. Plasma physics was barely started in 1950; the same for solid-state physics. This is the Golden Age of physics — and it's an anarchy.

(k) I stand flatly behind prediction number fifteen.

(I) I'll hedge number eighteen just a little. Hunger is not now a problem in the USA and need not be in the year 2000 — but hunger as a world problem and problem for us if we were conquered . . . a distinct possibility by 2000. Between our present status and that of subjugation lies a

whole spectrum of political and economic possible

shapes to the future under which we would share the

worldwide hunger to a greater or lesser extent. And

the problem grows. We can expect to have to feed

around half a billion Americans circa year 2000-our

present huge surpluses would then represent acute

shortages even if we never shipped a ton of wheat to

India.

(m) I stand by prediction number nineteen.

I see no reason to change any of the negative predictions which follow the

numbered affirmative ones. They are all conceivably possible; they are all wildly unlikely by year 2000. Some of them are debatable if the terms are defined to suit the affirmative side — definitions of "life" and "manlike," for example. Let it stand that I am not talking about an amino acid in one case, nor a machine that plays chess in the other.

(n) Today the forerunners of these synthesists are already at work in many places. Their titles may be anything; their degrees may be in anything — or they may have no degrees. Today they are called "operations researchers," or sometimes "systems development engineers," or other interim tags. But they are all interdisciplinary people, generalists, not specialists — the new Renaissance Man. The very explosion of data which forced most scholars to specialize very narrowly created the necessity which evoked this new non-specialist. So far, this "unspecialty" is in its infancy; its methodology is inchoate, the results are sometimes trivial, and no one knows how to train to become such a man. But the results are often spectacularly brilliant, too — this new man may yet save all of us.

I'm an optimist. I have great confidence in Homo Sapiens.

We have rough times ahead — but when didn't we? Things have always been "tough all over." H-bombs, Communism, race riots, water shortage — all nasty problems. But not basic problems, merely current ones.

We have three basic and continuing problems: The problem of population explosion; the problem of data explosion; and the problem of government.

Population problems have a horrid way of solving themselves when they are not solved rationally; the Four Horsemen of the Apocalypse are always saddled up and ready to ride. The data explosion is now being solved, mostly by cybernetics' and electronics' men rather than by librarians — and if the solutions are less than perfect, at least they are better than what Grandpa had to work with. The problem of government has not been solved either by the 'Western Democracies" or the "Peoples' Democracies," as of now. (Anyone who thinks the people of the United States have solved the problem of government is using too short a time scale.) The peoples of the world are now engaged in a long, long struggle with no end in sight, testing whether one concept works better than another; in that conflict millions have already died and it is possible that hundreds of millions will die in it before year 2000. But not all.

I hold both opinions and preferences as to the outcome. But my personal preference for a maximum of looseness is irrelevant; what we are experiencing is an evolutionary process in which personal preference

matters, at most, only statistically. Biologists, ecologists in particular are working around to the idea that natural selection and survival of the fittest is a notion that applies more to groups and how they are structured than it does to individuals. The present problem will solve itself in the cold terms of revolutionary survival, and in the course of it both sides will make changes in group structure. The system that survives might be called "Communism" or it might be called "Democracy" (the latter is my guess) — but one thing we can be certain of: it will not resemble very closely what either Marx or Jefferson had in mind. Or it might be called by some equally inappropriate neologism; political tags are rarely logical.

For Man is rarely logical. But I have great confidence in Man, based on his past record. He is mean, ornery, cantankerous, illogical, emotional — and amazingly hard to kill. Religious leaders have faith in the spiritual redemption of Man; humanist leaders subscribe to a belief in the perfectibility of Man through his own efforts; but I am not discussing either of these two viewpoints. My confidence in our species lies in its past history and is founded quite as much on Man's so-called vices as on his so-called virtues. When the chips are down, quarrelsomeness and selfishness can be as useful to the survival of the human race as is altruism, and pig-headedness can be a trait superior to sweet reasonableness. If this were not true, these "vices" would have died out through the early deaths of their hosts, at least a half million years back.

I have a deep and abiding confidence in Man as he is, imperfect and often unlovable — plus still greater confidence in his potential. No matter how tough things are, Man copes. He comes up with adequate answers from illogical reasons. But the answers work.

Last to come out of Pandora's Box was a gleaming, beautiful thing — eternal Hope.

FREE MEN

"THAT MAKES three provisional presidents so far," the Leader said. "I wonder how many more there are?" He handed the flimsy sheet back to the runner, who placed it in his mouth and chewed it up like gum.

The third man shrugged. "No telling. What worries me — " A mockingbird interrupted. "Doity, doity, doity," he sang. "Terloo, terloo, terloo, purty-purty-purty-purty."

The clearing was suddenly empty.

"As I was saying," came the voice of the third man in a whisper in the Leader's ear, "it ain't how many worries me, but how you tell a de Gaulle from a Laval. See anything?"

"Convoy. Stopped below us." The Leader peered through bushes and down the side of a bluff. The high ground pushed out toward the river here, squeezing the river road between it and the water. The road stretched away to the left, where the valley widened out into farmland, and ran into the outskirts of Barclay

ten miles away.

The convoy was directly below them, eight trucks preceded and followed by half-tracks. The following half-track was backing, vortex gun cast loose and ready for trouble. Its commander apparently wanted elbow room against a possible trap.

At the second truck helmeted figures gathered around its rear end, which was jacked up. As the Leader watched he saw one wheel removed.

"Trouble?"

"I think not. Just a breakdown. They'll be gone soon." He wondered what was in the trucks. Food, probably. His mouth watered. A few weeks ago an opportunity like this would have meant generous rations for all, but the conquerors had smartened up.

He put useless thoughts away. "It's not that that worries me, Dad," he added, returning to the subject. "We'll be able to tell quislings from loyal Americans. But how do you tell men from boys?"

"Thinking of Joe Benz?"

"Maybe. I'd give a lot to know how far we can trust Joe. But I could have been thinking of young Morrie."

"You can trust him."

"Certainly. At thirteen he doesn't drink — and he wouldn't crack if they

burned his feet off. Same with Cathleen. It's not age or sex — but how can you tell? And you've got to be able to tell."

There was a flurry below. Guards had slipped down from the trucks and withdrawn from the road when the convoy had stopped, in accordance with an orderly plan for such emergencies. Now two of them returned to the convoy, hustling between them a figure not in uniform.

The mockingbird set up a frenetic whistling.

"It's the messenger," said the Leader. "The dumb fool! Why didn't he lie quiet? Tell Ted we've seen it."

Dad pursed his lips and whistled: "Keewah, keewah, keewah, terloo."

The other "mockingbird" answered, "Terloo," and shut up.

"We'll need a new post office now," said the Leader. "Take care of it, Dad."

"Okay."

"There's no real answer to the problem," the Leader said. "You can limit size of units, so that one person can't give away too many — but take a colony like ours. It needs to be a dozen or more to work. That means they all have to be dependable, or they all go down together. So each one has a loaded gun at the head of each other one."

Dad grinned, wryly. "Sounds like the United Nations before the Blow Off. Cheer up, Ed. Don't burn your bridges before you cross them."

"I won't. The convoy is ready to roll."

When the convoy had disappeared in the distance, Ed Morgan, the Leader, and his deputy Dad Carter stood up and stretched. The "mockingbird" had announced safety loudly and cheerfully. "Tell Ted to cover us into camp," Morgan ordered.

Dad wheepled and chirruped and received acknowledgment. They started back into the hills. Their route was roundabout and included check points from which they could study their back track and receive reports from Ted. Morgan was not worried about Ted being followed — he was confident that Ted could steal baby 'possums from mama's pouch. But the convoy break-down might have been a trap — there was no way to tell that all of the soldiers had got back into the trucks. The messenger might have been followed; certainly he had been trapped too easily.

Morgan wondered how much the messenger would spill. He could not spill much about Morgan's own people, for the "post office" rendezvous was all that he knew about them.

The base of Morgan's group was neither better nor worse than the average of the several thousand other camps of recalcitrant guerrillas throughout the area that once called itself the United States. The Twenty Minute War had not surprised everyone. The mushrooms which had blossomed over Washington, Detroit, and a score of other places had been shocking but expected — by some.

Morgan had made no grand preparations. He had simply conceived it as a good period in which to stay footloose and not too close to a target area. He had taken squatter's rights in an abandoned mine and had stocked it with tools, food, and other useful items. He had had the simple intention to survive; it was during the weeks after Final Sunday that he discovered that there was no way for a man with foresight to avoid becoming a leader.

Morgan and Dad Carter entered the mine by a new shaft and tunnel which appeared on no map, by a dry rock route which was intended to puzzle even a blood-hound. They crawled through the tunnel, were able to raise their heads when they reached the armory, and stepped out into the common room of the colony, the largest chamber, ten by thirty feet and as high as it was wide.

Their advent surprised no one, else they might not have lived to enter. A microphone concealed in the tunnel had conveyed their shibboleths before them. The room was unoccupied save for a young woman stirring something over a tiny, hooded fire and a girl who sat at a typewriter table mounted in front of a radio. She was wearing earphones and shoved one back and turned to face them as they came in.

"Howdy, Boss!"

"Hi, Margie. What's the good word?" Then to the other, "What's for lunch?"

"Bark soup and a notch in your belt."

"Cathleen, you depress me."

"Well . . . mushrooms fried in rabbit fat, but darn few of them."

"That's better."

"You better tell your boys to be more careful what they bring in. One more rabbit with tularemia and we won't have to worry about what to eat."

"Hard to avoid, Cathy. You just be sure you handle them the way Doc taught you." He turned to the girl. "Jerry in the upper tunnel?"

"Yes."

"Get him down here, will you?"

"Yes, sir." She pulled a sheet out of her typewriter and handed it to him, along with others, then left the room.

Morgan glanced over them. The enemy had abolished soap opera and singing commercials but he could not say that radio had been improved. There was an unnewsy sameness to the propaganda which now came over the air. He checked through while wishing for just one old-fashioned, uncensored newscast.

"Here's an item!" he said suddenly. "Get this, Dad — "

"Read it to me, Ed." Dad's spectacles had been broken on Final Sunday. He could bring down a deer, or a man, at a thousand yards — but he might never read again.

"'New Center, 28 April — It is with deep regret that Continental Coordinating Authority for World Unification, North American District, announces that the former city of St. Joseph, Missouri, has been subjected to sanitary measures. It is ordered that a memorial plaque setting forth the circumstances be erected on the former site of St. Joseph as soon as radioactivity permits. Despite repeated warnings the former inhabitants of this lamented city encouraged and succored marauding bands of outlaws skulking around the outskirts of their community. It is hoped that the sad fate of St. Joseph will encourage the native authorities of all North American communities to take all necessary steps to suppress treasonable intercourse with the few remaining lawless elements in our continental society.' "

Dad cocked a brow at Morgan. "How many does that make since they took over?"

"Let's see . . . Salinas . . . Colorado Springs . . . uh, six, including St. Joe."

"Son, there weren't more than sixty million Americans left after Final Sunday. If they keep up, we'll be kind of thinned out in a few years."

"I know." Morgan looked troubled. "We've got to work out ways to operate without calling attention to the towns. Too many hostages."

A short, dark man dressed in dirty dungarees entered from a side tunnel, followed by Margie. "You wanted me, Boss?"

"Yes, Jerry. I want to get word to McCracken to come in for a meeting. Two hours from now, if he can get here.

"Boss, you're using radio too much. You'll get him shot and us, too."

"I thought that business of bouncing it off the cliff face was foolproof?"

"Well . . . a dodge I can work up, somebody else can figure out. Besides, I've got the chassis unshipped. I was working on it."

"How long to rig it?"

"Oh, half an hour — twenty minutes."

"Do it. This may be the last time we'll use radio, except as utter last resort."

Okay, boss.

The meeting was in the common room. Morgan called it to order once all were present or accounted for. McCracken arrived just as he had decided to proceed without him. McCracken had a pass for the countryside, being a veterinarian, and held proxy for the colony's underground associates in Barclay.

"The Barclay Free Company, a provisional unit of the United States of America, is now in session," Morgan announced formally. "Does any member have any item to lay before the Company?"

He looked around; there was no response. "How about you?" he challenged Joe Benz. "I heard that you had some things you thought the Company ought to

hear."

Benz started to speak, shook his head. "I'll wait."

"Don't wait too long," Morgan said mildly. "Well, I have two points to

bring up for discussion — "

"Three," corrected Dr. McCracken. "I'm glad you sent for me." He stepped up to Morgan and handed him a large, much folded piece of paper. Morgan looked it over, refolded it, and put it in his pocket.

"It fits in," he said to McCracken. "What do the folks in town say?"

"They are waiting to hear from you. They'll back you up — so far, anyway."

"All right." Morgan turned back to the group. "First item — we got a message today, passed by hand and about three weeks old, setting up another provisional government. The courier was grabbed right under our noses. Maybe he was a stooge; maybe he was careless — that's neither here nor there at the moment. The message was that the Honorable Albert M. Brockman proclaimed himself provisional President of these United States, under derived authority, and appointed Brigadier General Dewey Fenton commander of armed forces including irregular militia — meaning us — and called on all citizens to unite to throw the Invader out. All formal and proper. So what do we do about it?"

"And who the devil is the Honorable Albert M. Brockman?" asked someone in the rear.

"I've been trying to remember. The message listed government jobs he's held, including some assistant secretary job — I suppose that's the 'derived authority'

angle. But I can't place him."

"I recall him," Dr. McCracken said suddenly. "I met him when I was in the Bureau of Animal Husbandry. A career civil servant . . . and a stuffed shirt."

There was a gloomy silence. Ted spoke up. "Then why bother with him?"

The Leader shook his head. "It's not that simple, Ted. We can't assume that he's no good. Napoleon might have been a minor clerk under different circumstances. And the Honorable Mr. Brockman may be a revolutionary genius disguised as a bureaucrat. But that's not the point. We need nationwide unification more than anything. It doesn't matter right now who the titular leader is. The theory of derived authority may be shaky but it may be the only way to get everybody to accept one leadership. Little bands like ours can never win back the country. We've got to have unity — and that's why we can't ignore Brockman."

"The thing that burns me," McCracken said savagely, "is that it need never have happened at all! It could have been prevented."

"No use getting in a sweat about it," Morgan told him. "It's easy to see the government's mistakes now, but just the same I think there was an honest effort to prevent war right up to the last. It takes all nations to keep the peace, but it only takes one to start a war."

"No, no, no — I don't mean that, Captain," McCracken answered. "I don't mean the War could have been prevented. I suppose it could have been — once. But everybody knew that another war could happen, and everybody — everybody, I say, knew that if it came, it would start with the blasting of American cities. Every congressman, every senator knew that a war would destroy Washington and leave the country with no government, flopping around like a chicken with its head off. They knew — why didn't they do something!"

"What could they do? Washington couldn't be protected."

"Do? Why, they could have made plans for their own deaths! They could have slapped through a constitutional amendment calling for an alternate president and alternate congressmen and made it illegal for the alternates to be in target areas — or any scheme to provide for orderly succession in case of disaster. They could have set up secret and protected centers of government to use for storm cellars. They could have planned the same way a father takes out life insurance for his kids. Instead they went stumbling along, fat dumb, and happy, and let themselves get killed, with no provision to carry out their sworn duties after they were dead. Theory of 'derived authority', pfui! It's not just disastrous; it's ridiculous! We used to be the greatest country in the world — now look at us!"

"Take it easy, Doc," Morgan suggested. "Hindsight is easier than foresight."

"Hmm! I saw it coming. I quit my Washington job and took a country practice, five years ahead of time. Why couldn't a congressman be as bright as I am?"

"Hmm . . . well — you're right, but we might just as well worry over the Dred Scott Decision. Let's get on with the problem. How about Brockman? Ideas?"

"What do you propose, boss?"

"I'd rather have it come from the floor."

"Oh, quit scraping your foot, boss," urged Ted. "We elected you to lead."

"Okay. I propose to send somebody to backtrack on the message and locate Brockman — smell him out and see what he's got. I'll consult with as many groups as we can reach, in this state and across the river, and well try to manage unanimous action. I was thinking of sending Dad and Morrie."

Cathleen shook her head. "Even with faked registration cards and travel permits they'd be grabbed for the Reconstruction Battalions. I'll go."

"In a pig's eye," Morgan answered. "You'd be grabbed for something a danged sight worse. It's got to be a man."

"I am afraid Cathleen is right," McCracken commented. "They shipped twelve-year-old boys and old men who could hardly walk for the Detroit project. They don't care how soon the radiation gets them — it's a plan to thin us out."

"Are the cities still that bad?"

"From what I hear, yes. Detroit is still 'hot' and she was one of the first to get it."

"I'm going to go." The voice was high and thin, and rarely heard in conference.

"Now, Mother — " said Dad Carter.

"You keep out of this, Dad. The men and young women would be grabbed, but they won't bother with me. All I need is a paper saying I have a permit to rejoin my grandson, or something."

McCracken nodded. "I can supply that."

Morgan paused, then said suddenly, "Mrs. Carter will contact Brockman. It is so ordered. Next order of business," he went on briskly. "You've all seen the news about St. Joe — this is what they posted in Barclay last night." He hauled out and held up the paper McCracken had given him. It was a printed notice, placing the City of Barclay on probation, subject to the ability of "local authorities" to suppress "bands of roving criminals".

There was a stir, but no comment. Most of them had lived in Barclay; all had ties there.

"I guess you're waiting for me," McCracken began. "We held a meeting as soon as this was posted. We weren't all there — it's getting harder to

cover up even the smallest gathering — but there was no disagreement. We're behind you but we want you to go a little easy. We suggest that you cut out pulling raids within oh, say twenty miles of Barclay, and that you stop all killing unless absolutely necessary to avoid capture. It's the killings they get excited about — it was killing of the district director that touched off St. Joe."

Benz sniffed. "So we don't do anything. We just give up — and stay here in the hills and starve."

"Let me finish, Benz. We don't propose to let them scare us out and keep us enslaved forever. But casual raids don't do them any real harm. They're mostly for food for the Underground and for minor retaliations. We've got to conserve our strength and increase it and organize, until we can hit hard enough to make it stick. We won't let you starve. I can do more organizing among the farmers and some animals can be hidden out and unregistered. We can get you meat — some, anyhow. And we'll split our rations with you. They've got us on 1800 calories now, but we can share it. Something can be done through the black market, too. There are ways."

Benz made a contemptuous sound. Morgan looked at him.

"Speak up, Joe. What's on your mind?"

"I will. It's not a plan; it's a disorderly retreat. A year from now we'll be twice as hungry and no further along — and they'll be better dug in and stronger. Where does it get us?"

Morgan shook his head. "You've got it wrong. Even if we hadn't had it forced on us, we would have been moving into this stage anyhow. The Free Companies have got to quit drawing attention to themselves. Once the food problem is solved we've got to build up our strength and weapons. We've got to have organization and weapons — nationwide organization and guns, knives, and hand grenades. We've got to turn this mine into a factory. There are people down in Barclay who can use the stuff we can make here — but we can't risk letting Barclay be blasted in the meantime. Easy does it."

"Ed Morgan, you're kidding yourself and you know it."

"How?"

"How? Look, you sold me the idea of staying on the dodge and joining up — "

"You volunteered."

"Okay, I volunteered. It was all because you were so filled with fire and vinegar about how we would throw the enemy back into the ocean. You talked about France and Poland and how the Filipinos kept on fighting after they were occupied. You sold me a bill of goods. But there was something you didn't tell me — "

"Go on."

"There never was an underground that freed its own country. All of them had to be pulled out of the soup by an invasion from outside. Nobody is going to pull us out.

There was silence after this remark. The statement had too much truth in it, but it was truth that no member of the Company could afford to think about. Young Morrie broke it. "Captain?"

"Yes, Morrie." Being a fighting man, Morrie was therefore a citizen and a voter.

"How can Joe be so sure he knows what he's talking about? History doesn't repeat. Anyhow, maybe we will get some help. England, maybe — or even the Russians."

Benz snorted. "Listen to the punk! Look, kid, England was smashed like we were, only worse — and Russia, too. Grow up; quit daydreaming."

The boy looked at him doggedly. "You don't know that. We only know what they chose to tell us. And there aren't enough of them to hold down the whole world, everybody, everywhere. We never managed to lick the Yaquis, or the Moros. And they can't lick us unless we let them. I've read some history too."

Benz shrugged. "Okay, okay. Now we can all sing My Country 'Tis of Thee and recite the Scout oath. That ought to make Morrie happy-"

"Take it easy, Joe!"

"We have free speech here, don't we? What I want to know is, How long does this go on? I'm getting tired of competing with coyotes for the privilege of eating jackrabbits. You know I've fought with the best of them. I've gone on the raids. Well, haven't I? Haven't I? You can't call me yellow."

"You've been on some raids," Morgan conceded.

"All right. I'd go along indefinitely if I could see some sensible plan. That's why I ask, 'How long does this go on?" When do we move? Next spring?

Next year?"

Morgan gestured impatiently. "How do I know? It may be next spring; it may be ten years. The Poles waited three hundred years."

"That tears it," Benz said slowly. "I was hoping you could offer some reasonable plan. Wait and arm ourselves — that's a pretty picture! Homemade hand grenades against atom bombs! Why don't you quit kidding yourselves? We're licked!" He hitched at his belt. "The rest of you can do as you please — I'm through."

Morgan shrugged. "If a man won't fight, I can't make him. You're assigned noncombatant duties. Turn in your gun. Report to Cathleen."

"You don't get me, Ed. I'm through."

"You don't get me, Joe. You don't resign from an Underground."

"There's no risk. I'll leave quietly, and let myself be registered as a straggler. It doesn't mean anything to the rest of you. I'll keep my mouth shut — that goes without saying."

Morgan took a long breath, then answered, "Joe, I've learned by bitter experience not to trust statements set off by 'naturally', 'of course', or 'that goes without saying'."

"Oh, so you don't trust me?"

"As Captain of this Company I can't afford to. Unless you can get the Company to recall me from office, my rulings stand. You're under arrest. Hand over your gun.

Benz glanced around, at blank, unfriendly faces. He reached for his waist. "With your left hand, Joe!"

Instead of complying, Benz drew suddenly, backed away. "Keep clear!" he said shrilly. "I don't want to hurt anybody — but keep clear!"

Morgan was unarmed. There might have been a knife or two in the assembly, but most of them had come directly from the dinner table. It was not their custom to be armed inside the mine.

Young Morrie was armed with a rifle, having come from lookout duty. He did not have room to bring it into play, but Morgan could see that he intended to try. So could Benz.

"Stop it, Morrie!" Morgan assumed obedience and turned instantly to the others. "Let him go. Nobody move. Get going, Joe."

"That's better." Benz backed down the main tunnel, toward the main entrance, weed and drift choked for years. Its unused condition was their principal camouflage, but it could be negotiated.

He backed away into the gloom, still covering them. The tunnel curved; shortly he was concealed by the bend.

Dad Carter went scurrying in the other direction as soon as Benz no longer covered them. He reappeared at once, carrying something. "Heads down!" he shouted, as he passed through them and took out after Benz.

"Dad!" shouted Morgan. But Carter was gone.

Seconds later a concussion tore at their ears and noses.

Morgan picked himself up and brushed at his clothes, saying in annoyed tones, "I never did like explosives in cramped quarters. Cleve — Art. Go check on it. Move!"

"Right, boss!" They were gone.

"The rest of you get ready to carry out withdrawal plan — full plan, with provisions and supplies. Jerry, don't disconnect either the receiver or the line-of-sight till I give the word. Margie will help you. Cathleen, get ready to serve anything that can't be carried. We'll have one big meal. 'The condemned ate hearty.' "

"Just a moment, Captain." McCracken touched his sleeve. "I had better get a message into Barclay."

"Soon as the boys report. You better get back into town.

"I wonder. Benz knows me. I think I'm here to stay."

"Hm . . . well, you know best. How about your family?"

McCracken shrugged. "They can't be worse off than they would be if I'm picked up. I'd like to have them warned and then arrangements made for them to rejoin me if possible."

"We'll do it. You'll have to give me a new contact."

"Planned for. This message will go through and my number-two man will step

into my shoes. The name is Hobart — runs a feed store on Pelham Street."

Morgan nodded. "Should have known you had it worked out. Well, what we don't know — " He was interrupted by Cleve, reporting.

"He got away, Boss."

"Why didn't you go after him?"

"Half the roof came down when Dad chucked the grenade. Tunnel's choked with rock. Found a place where I could see but couldn't crawl through. He's not

in the tunnel."

"How about Dad?"

"He's all right. Got clipped on the head with a splinter but not really hurt."

Morgan stopped two of the women hurrying past, intent on preparations for withdrawal. "Here — Jean, and you, Mrs. Bowen. Go take care of Dad Carter and tell Art to get back here fast. Shake a leg!"

When Art reported Morgan said, "You and Cleve go out and find Benz. Assume that he is heading for Barclay. Stop him and bring him in if you can. Otherwise kill him. Art is in charge. Get going." He turned to McCracken. "Now for a message." He fumbled in his pocket for paper, found the poster notice that McCracken had given him, tore off a piece, and started to write. He showed it to McCracken. "How's that?" he asked.

The message warned Hobart of Benz and asked him to try to head him off. It did not tell him that the Barclay Free Company was moving but did designate the "post office" through which next contact would be expected — the men's rest room of the bus station.

"Better cut out the post office," McCracken advised. "Hobart knows it and we may contact him half a dozen other ways. But I'd like to ask him to get my family out of sight. Just tell him that we are sorry to hear that Aunt Dinah is dead."

"Is that enough?"

"Yes."

"Okay." Morgan made the changes, then called, "Margie! Put this in code and tell Jerry to get it out fast. Tell him it's the strike-out edition. He can

knock down his sets as soon as it's out."

"Okay, boss." Margie had no knowledge of cryptography. Instead she had command of jive talk, adolescent slang, and high school double-talk which would be meaningless to any but another American bobbysoxer. At the other end a fifteen-year-old interpreted her butchered English by methods which impressed her foster parents as being telepathy — but it worked.

The fifteen-year-old could be trusted. Her entire family, save herself, had been in Los Angeles on Final Sunday.

Art and Cleve had no trouble picking up Benz's trail. His tracks were on the tailings spilling down from main entrance to the mine. The earth and rock had been undisturbed since the last heavy rain; Benz's flight left clear traces.

But trail was cold by more than twenty minutes; they had left the mine by the secret entrance a quarter of a mile from where Benz had made his exit.

Art picked it up where Benz had left the tailings and followed it through brush with the woodsmanship of the Eagle Scout he had been. From the careless signs he left behind Benz was evidently in a hurry and heading by the shortest route for the highway. The two followed him as fast as they could cover ground, discarding caution for speed.

They checked just before entering the highway. "See anything?" asked Cleve.

"No."

"Which way would he go?"

"The Old Man said to head him off from Barclay."

"Yeah, but suppose he headed south instead? He used to work in Wickamton. He might head that way."

"The Boss said to cover Barclay. Let's go."

They had to cache their guns; from here on it would be their wits and their knives. An armed American on a highway would be as conspicuous as a nudist at a garden party.

Their object now was speed; they must catch up with him, or get ahead of him and waylay him.

Nine miles and two and a half hours later — one hundred and fifty minutes

of dog trot, with time lost lying in the roadside brush when convoys thundered past — they were in the outskirts of Barclay. Around a bend, out of sight, was the roadblock of the Invaders' check station. The point was a bottleneck; Benz must come this way if he were heading for Barclay.

"Is he ahead or behind us?" asked Cleve, peering out through bushes.

"Behind, unless he was picked up by a convoy — or sprouted wings. We'll give him an hour."

A horse-drawn hayrack lumbered up the road. Cleve studied it. Americans were permitted no power vehicles except under supervision, but this farmer and his load could go into town with only routine check at the road block. "Maybe we ought to hide in that and look for him in town."

"And get a bayonet in your ribs? Don't be silly."

"Okay. Don't blow your top." Cleve continued to watch the rig. "Hey," he said presently. "Get a load of that!"

"That" was a figure which dropped from the tail of the wagon as it started around the bend, rolled to the ditch on the far side, and slithered out of sight.

"That was Joe!"

"Are you sure?"

"Sure! Here we go."

"How?" Art objected. "Take it easy. Follow me." They faded back two hundred yards, to where they could cross the road on hands and knees through a drainage pipe. Then they worked up the other side to where Benz had disappeared in weeds.

They found the place where he had been; grass and weeds were still straightening up. The route he must have taken was evident — down toward the river bank, then up-stream to the city. There were drops of blood. "Dad must have missed stopping him by a gnat's whisker," Cleve commented.

"Bad job he didn't."

"Another thing — he said he was going to give himself up. I don't think he is, or he would have stayed with the wagon and turned himself in at the check station. He's heading for some hideout. Who does he know in Barclay?"

"I don't know. We'd better get going."

'Wait a minute. If he touches off an alarm, they'll shoot him for us. If he gets by the 'eyes', we've lost him and we'll have to pick him up inside. Either way, we don't gain anything by blundering ahead. We've got to go in by the chute."

Like all cities the Invader had consolidated, Barclay was girdled by electric-eye circuits. The enemy had trimmed the town to fit, dynamiting and burning where necessary to achieve unbroken sequence of automatic sentries. But the "chute" — an abandoned and forgotten aqueduct — passed under the alarms. Art knew how to use it; he had been in town twice since Final Sunday.

They worked back up the highway, crossed over, and took to the hills. Thirty minutes later they were on the streets of Barclay, reasonably safe as long as they were quick to step off the sidewalk for the occasional Invader.

The first "post office," a clothesline near their exit, told them nothing — the line was bare. They went to the bus station. Cleve studied the notices posted for inhabitants while Art went into the men's rest room. On the wall, defaced by scrawlings of every sort, mostly vulgar, he found what he sought: "Killroy was here." The misspelling of Kilroy was the clue — exactly eighteen inches below it and six to the right was an address; "1745 Spruce — ask for Mabel."

He read it as 2856 Pine — one block beyond Spruce.

Art passed the address to Cleve, then they set out separately, hurrying to beat the curfew but proceeding with caution — at least one of them must get through. They met in the back yard of the translated address. Art knocked on the kitchen door. It was opened a crack by a middle-aged man who did not seem glad to see them. "Well?"

'We're looking for Mabel."

"Nobody here by that name."

"Sorry," said Art. "We must have made a mistake." He shivered. "Chilly out," he remarked. "The nights are getting longer."

"They'll get shorter by and by," the man answered.

"We've got to think so, anyhow," Art countered.

"Come in," the man said. "The patrol may see you." He opened the door and stepped aside. "My name's Hobart. What's your business?"

'We're looking for a man named Benz. He may have sneaked into town this afternoon and found someplace to —

"Yes, yes," Hobart said impatiently. "He got in about an hour ago and he's holed up with a character named Moyland." As he spoke he removed a half loaf of bread from a cupboard, cut four slices, and added cold sausage, producing two sandwiches. He did not ask if they were hungry; he simply handed them to Art and Cleve.

"Thanks, pal. So he's holed up. Haven't you done anything about it? He has got to be shut up at once or he'll spill his guts."

'We've got a tap in on the telephone line. We had to wait for dark. You can't expect me to sacrifice good boys just to shut his mouth unless it's absolutely necessary."

"Well, it's dark now, and we'll be the boys you mentioned. You can call yours off."

"Okay." Hobart started pulling on shoes.

"No need for you to stick your neck out," Art told him. "Just tell us where this Moyland lives."

"And get your throat cut, too. I'll take you."

"What sort of a guy is this Moyland? Is he safe?"

"You can't prove it by me. He's a black market broker, but that doesn't prove anything. He's not part of the organization but we haven't anything against him."

Hobart took them over his back fence, across a dark side street, through a playground, where they lay for several minutes under bushes because of a false alarm, then through many more backyards, back alleys, and dark byways. The man seemed to have a nose for the enemy; there were no more alarms. At last he brought them through a cellar door into a private home. They went upstairs and through a room where a woman was nursing a baby. She looked up, but otherwise ignored them. They ended up in a dark attic. "Hi, Jim," Hobart called out softly. "What's new?"

The man addressed lay propped on his elbows, peering out into the night through opera glasses held to slots of a ventilating louvre. He rolled over

and lowered the glasses, pushing one of a pair of earphones from his head as he did so. "Hello, Chief. Nothing much. Benz is getting drunk, it looks like."

"I'd like to know where Moyland gets it," Hobart said. "Has he telephoned?"

"Would I be doing nothing if he had? A couple of calls came in, but they didn't amount to anything, so I let him talk."

"How do you know they didn't amount to anything?"

Jim shrugged, turned back to the louvre. "Moyland just pulled down the shade," he announced.

Art turned to Hobart. 'We can't wait. We're going in."

Benz arrived at Moyland's house in bad condition. The wound in his shoulder, caused by Carter's grenade, was bleeding. He had pushed a handkerchief up against it as a compress, but his activity started the blood again; he was shaking for fear his condition would attract attention before he could get under cover.

Moyland answered the door. "Is that you, Zack?" Benz demanded, shrinking back as he spoke.

"Yes. Who is it?"

"It's me — Joe Benz. Let me in, Zack — quick!"

Moyland seemed about to close the door, then suddenly opened it. "Get inside." When the door was bolted, he demanded, "Now — what's your trouble? Why come to me?"

"I had to go someplace, Zack. I had to get off the street. They'd pick me up."

Moyland studied him. "You're not registered. Why not?"

Benz did not answer. Moyland waited, then went on, "You know what I can get for harboring a fugitive. You're in the Underground — aren't you?"

"Oh, no, Zack! I wouldn't do that to you. I'm just a — a straggler. I gotta get registered, Zack."

"That's blood on your coat. How?"

"Uh . . . just an accident. Maybe you could let me have clean rags and some iodine."

Moyland stared at him, his bland face expressionless, then smiled. "You've got no troubles we can't fix. Sit down." He stepped to a cabinet and took out a bottle of bourbon, poured three fingers in a water glass, and handed it to Benz. "Work on that and I'll fix you up.

He returned with some torn toweling and a bottle. "Sit here with your back to the window, and open your shirt. Have another drink. You'll need it before I'm through."

Benz glanced nervously at the window. "Why don't you draw the shade?"

"It would attract attention. Honest people leave their shades up these days. Hold still. This is going to hurt."

Three drinks later Benz was feeling better. Moyland seemed willing to sit and drink with him and to soothe his nerves. "You did well to come in," Moyland told him. "There's no sense hiding like a scared rabbit. It's just butting your head against a stone wall. Stupid."

Benz nodded. "That's what I told them."

"Told who?"

"Huh? Oh, nobody. Just some guys I was talking to. Tramps."

Moyland poured him another drink. "As a matter of fact you were in the Underground."

"Me? Don't be silly, Zack."

"Look, Joe, you don't have to kid me. I'm your friend. Even if you did tell me it wouldn't matter. In the first place, I wouldn't have any proof. In the second place, I'm sympathetic to the Underground — any American is. I just think they're wrong-headed and foolish. Otherwise I'd join 'em myself."

"They're foolish all right! You can say that again."

"So you were in it?"

"Huh? You're trying to trap me. I gave my word of honor — "

"Oh, relax!" Moyland said hastily. "Forget it. I didn't hear anything; I can't tell anything. Hear no evil, see no evil — that's me." He changed the subject.

The level of the bottle dropped while Moyland explained current events as he saw them. "It's a shame we had to take such a shellacking to learn our lesson but the fact of the matter is, we were standing in the way of the natural logic of progress. There was a time back in '45 when we could have pulled the same stunt ourselves, only we weren't bright enough to do it. World organization, world government. We stood in the way, so we got smeared. It had to come. A smart man can see that."

Benz was bleary but he did not find this comment easy to take. "Look, Zack-you don't mean you like what happened to us?"

"Like it? Of course not. But it was necessary. You don't have to like having a tooth pulled — but it has to be done. Anyhow," he went on, "it's not all bad. The big cities were economically unsound anyway. We should have blown them up ourselves. Slum clearance, you might call it."

Benz banged his empty glass down. "Maybe so — but they made slaves out of us!"

"Take it easy, Joe," Moyland said, filling his glass, "you're talking abstractions. The cop on the corner could push you around whenever he wanted to. Is that freedom? Does it matter whether the cop talks with an Irish accent or some other accent? No, chum, there's a lot of guff talked about freedom. No man is free. There is no such thing as freedom. There are only various privileges. Free speech — we're talking freely now, aren't we? After all, you don't want to get up on a platform and shoot off your face. Free press? When did you ever own a newspaper? Don't be a chump. Now that you've shown sense and come in, you are going to find that things aren't so very different. A little more orderly and no more fear of war, that's all. Girls make love just like they used to, the smart guys get along, and the suckers still get the short end of the deal."

Benz nodded. "You're right, Zack. I've been a fool."

"I'm glad you see it. Now take those wild men you were with. What freedom have they got? Freedom to starve, freedom to sleep on the cold ground, freedom to be hunted."

"That was it," Benz agreed. "Did you ever sleep in a mine, Zack? Cold. That ain't half of it. Damp, too."

"I can imagine," Moyland agreed. "The Capehart Lode always was wet."

"It wasn't the Capehart; it was the Harkn — " He caught himself and looked puzzled.

"The Harkness, eh? That's the headquarters?"

"I didn't say that! You're putting words in my mouth! You — "

"Calm yourself, Joe. Forget it." Moyland got up and drew down the shade. "You didn't say anything."

"Of course I didn't." Benz stared at his glass. "Say, Zack, where do I sleep? I don't feel good."

"You'll have a nice place to sleep any minute now."

"Huh? Well, show me. I gotta fold up."

"Any minute. You've got to check in first."

"Huh? Oh, I can't do that tonight, Zack. I'm in no shape."

"I'm afraid you'll have to. See me pull that shade down? They'll be along any moment."

Benz stood up, swaying a little. "You framed me!" he yelled, and lunged at his host.

Moyland sidestepped, put a hand on his shoulder and pushed him down into the chair. "Sit down, sucker," he said pleasantly. "You don't expect me to get A-bombed just for you and your pals, do you?"

Benz shook his head, then began to sob.

Hobart escorted them out of the house, saying to Art as they left, "If you get back, tell McCracken that Aunt Dinah is resting peacefully."

"Okay."

"Give us two minutes, then go in. Good luck."

Cleve took the outside; Art went in. The back door was locked, but the upper panel was glass. He broke it with the hilt of his knife, reached in

and unbolted the door. He was inside when Moyland showed up to investigate the noise.

Art kicked him in the belly, then let him have the point in the neck as he went down. Art stopped just long enough to insure that Moyland would stay dead, then went looking for the room where Benz had been when the shade was drawn.

He found Benz in it. The man blinked his eyes and tried to focus them, as if he found it impossible to believe what he saw. "Art!" he got out at last. "Jeez boy! Am I glad to see you! Let's get out of here — this place is 'hot'."

Art advanced, knife out.

Benz looked amazed. "Hey, Art! Art! You're making a mistake, Art. You can't do this — " Art let him have the first one in the soft tissues under the breast bone, then cut his throat to be sure. After that he got out quickly.

Thirty-five minutes later he was emerging from the country end of the chute. His throat was burning from exertion and his left arm was useless — he could not tell whether it was broken or simply wounded.

Cleve lay dead in the alley behind Moyland's house, having done a good job of covering Art's rear.

It took Art all night and part of the next morning to get back near the mine. He had to go through the hills the entire way; the highway was, he judged, too warm at the moment.

He did not expect that the Company would still be there. He was reasonably sure that Morgan would have carried out the evacuation pending certain evidence that Benz's mouth had been shut. He hurried.

But he did not expect what he did find — a helicopter hovering over the neighborhood of the mine.

He stopped to consider the matter. If Morgan had got them out safely, he knew where to rejoin. If they were still inside, he had to figure out some way to help them. The futility of his position depressed him — one man, with a knife and a bad arm, against a helicopter.

Somewhere a bluejay screamed and cursed. Without much hope he chirped his own identification. The bluejay shut up and a mockingbird answered him —

Ted.

Art signaled that he would wait where he was. He considered himself well hidden; he expected to have to signal again when Ted got closer, but he underestimated Ted's ability. A hand was laid on his shoulder.

He rolled over, knife out, and hurt his shoulder as he did so. "Ted! Man, do you look good to me!"

"Same here. Did you get him?"

"Benz? Yes, but maybe not in time. Where's the gang?"

"A quarter mile north of back door. We're pinned down. Were's Cleve?"

"Cleve's not coming back. What do you mean 'pinned down'?"

"That damned 'copter can see right down the draw we're in. Dad's got 'em under an overhang and they're safe enough for the moment, but we can't move."

"What do you mean 'Dad's got 'em'?" demanded Art. "Where's the Boss?"

"He ain't in such good shape, Art. Got a machine gun slug in the ribs. We had a dust up. Cathleen's dead."

"The hell you say!"

"That's right. Margie and Maw Carter have got her baby. But that's one reason why we're pinned down — the Boss and the kid, I mean."

A mockingbird's call sounded far away. "There's Dad," Ted announced. "We got to get back."

"Can we?"

"Sure. Just keep behind me. I'll watch out that I don't get too far ahead."

Art followed Ted in, by a circuitous and, at one point, almost perpendicular route. He found the Company huddled under a shelf of rock which had been undercut by a stream, now dry. Against the wall Morgan was on his back, with Dad Carter and Dr. McCracken squatting beside him. Art went up and made his report.

Morgan nodded, his face gray with pain. His shirt had been cut away; bandaging was wrapped around his ribs, covering a thick pad. "You did well,

Art. Too bad about Cleve. Ted, we're getting out of here and you're going first, because you're taking the kid."

"The baby? How — "

"Doc'll dope it so that it won't let out a peep. Then you strap it to your back, papoose fashion."

Ted thought about it. "No, to my front. There's some knee-and-shoulder work on the best way out."

"Okay. It's your job."

"How do you get out, boss?"

"Don't be silly."

"Look here, boss, if you think we're going to walk off and leave you, you've got another — "

"Shut up and scram!" The exertion hurt Morgan; he coughed and wiped his mouth.

"Yes, sir." Ted and Art backed away.

"Now, Ed — " said Carter.

"You shut up, too. You still sure you don't want to be Captain?"

"You know better than that, Ed. They took things from me while I was your deppity, but they wouldn't have me for Captain."

"That puts it up to you, Doc."

McCracken looked troubled. "They don't know me that well, Captain."

"They'll take you. People have an instinct for such things."

"Anyhow, if I am Captain, I won't agree to your plan of staying here by yourself. We'll stay till dark and carry you out.

"And get picked up by an infra-red spotter, like sitting ducks? That's supposing they let you alone until sundown — that other 'copter will be back with more troops before long."

"I don't think they'd let me walk off on you."

"It's up to you to make them. Oh, I appreciate your kindly thoughts, Doc, but you'll think differently as soon as you're Captain. You'll know you have to cut your losses."

McCracken did not answer. Morgan turned his head to Carter. "Gather them around, Dad."

They crowded in, shoulder to shoulder. Morgan looked from one troubled face to another and smiled. "The Barclay Free Company, a provisional unit of the United States of America, is now in session," he announced, his voice suddenly firm. "I'm resigning the captaincy for reasons of physical disability. Any nominations?"

The silence was disturbed only by calls of birds, the sounds of insects.

Morgan caught Carter's eyes. Dad cleared his throat. "I nominate Doc McCracken."

"Any other nominations?" He waited, then continued, "All right, all in favor of Doc make it known by raising your right hand. Okay — opposed the same sign. Dr. McCracken is unanimously elected. It's all yours, Captain. Good luck to you."

McCracken stood up, stooping to avoid the rock overhead "We're evacuating at once. Mrs. Carter, give the baby about another tablespoon of the syrup, then help Ted. He knows what to do. You'll follow Ted. Then Jerry, Margie, you are next. I'll assign the others presently. Once out of the canyon, spread out and go it alone. Rendezvous at dusk, same place as under Captain Morgan's withdrawal plan — the cave." He paused. Morgan caught his eye and motioned him over. "That's all until Ted and the baby are ready to leave. Now back away and give Captain Morgan a little air."

When they had withdrawn McCracken leaned over Morgan the better to hear his weak words. "Don't be too sure ,you've seen the last of me, Captain. I might join up in a few days."

"You might at that. I'm going to leave you bundled up warm and plenty of water within reach. I'll leave you some pills, too — that'll give you some comfort and ease. Only half a pill for you — they're intended for cows." He grinned at his patient.

"Half a pill it is. Why not let Dad handle the evacuation? He'll make you a good deputy — and I'd like to talk with you until you leave."

"Right." He called Carter over, instructed him, and turned back to Morgan.

"After you join up with Powell's outfit," whispered Morgan, "your first job is to get into touch with Brockman. Better get Mrs. Carter started right away, once you've talked it over with Powell."

"I will."

"That's the most important thing we've got to worry about, Doc. We've got to have unity, and one plan, from coast to coast. I look forward to a day when there will be an American assigned, by name, to each and every one of them. Then at a set time-zzzt!" He drew a thumb across his throat.

McCracken nodded. "Could be. It will be. How long do you think it will take us?"

"I don't know. I don't think about 'how long'. Two years, five years, ten years — maybe a century. That's not the point. The only question is whether or not there are any guts left in America." He glanced out where the fifth person to leave was awaiting a signal from Carter, who in turn was awaiting a signal from Art, hidden out where he could watch for the helicopter. "Those people will stick."

"I'm sure of that."

Presently Morgan added, "There's one thing this has taught me: You can't enslave a free man. Only person can do that to a man is himself. No, sir — you can't enslave a free man. The most you can do is kill him."

"That's a fact, Ed."

"It is. Got a cigarette, Doc?"

"It won't do you any good, Ed."

"It won't do me any harm, either — now, will it?"

"Well, not much" McCracken unregretfully gave him his last and watched him smoke it.

Later, Morgan said, Dad's ready for you, Captain. So long."

"So long. Don't forget. Half a pill at a time. Drink all the water you want, but don't take your blankets off, no matter how hot you get."

"Half a pill it is. Good luck."

"I'll have Ted check on you tomorrow."

Morgan shook his head. "That's too soon. Not for a couple of days at least."

McCracken smiled. "I'll decide that, Ed. You just keep yourself wrapped up. Good luck." He withdrew to where Carter waited for him. "You go ahead, Dad. I'll bring up the rear. Signal Art to start."

Carter hesitated. "Tell me straight, Doc. What kind of shape is he in?"

McCracken studied Carter's face, then said in a low voice, "I give him about two hours."

"I'll stay behind with him."

"No, Dad, you'll carry out your orders." Seeing the distress in the old man's eyes, he added, "Don't you Worry about Morgan. A free man can take care of himself. Now get moving."

"Yes, sir."

Blowups Happen

"PUT DOWN that wrench!"

The man addressed turned slowly around and faced the speaker. His expression was hidden by a grotesque helmet, part of a heavy, leaden armor which shielded his entire body, but the tone of voice in which he answered showed nervous exasperation.

"What the hell's eating you, Doc?" He made no move to replace the tool in question.

They faced each other like two helmeted, arrayed fencers, watching for an opening. The first speaker's voice came from behind his mask a shade higher in key and more peremptory in tone. "You heard me, Harper. Put down that wrench at once, and come away from that 'trigger.' Erickson!"

A third armored figure came around the shield which separated the uranium bomb proper from the control room in which the first two stood. "Whatcha want, Doc?"

"Harper is relieved from watch. You take over as engineer-of-the-watch. Send for the stand-by engineer."

"Very well." His voice and manner were phlegmatic, as he accepted the situation without comment. The atomic engineer, whom he had just relieved, glanced from one to the other, then carefully replaced the wrench in its rack.

"Just as you say, Dr. Silard — but send for your relief too. I shall demand an immediate hearing!" Harper swept indignantly out, his lead-sheathed boots clumping on the floor plates.

Dr. Silard waited unhappily for the ensuing twenty minutes until his own relief arrived. Perhaps he had been hasty. Maybe he was wrong in thinking that Harper had at last broken under the strain of tending the most dangerous machine in the world — an atomic power plant. But if he had made a mistake, it had to be on the safe side — slips must not happen in this business; not when a slip might result in the atomic detonation of two and a half tons of uranium.

He tried to visualize what that would mean, and failed. He had been told that uranium was potentially forty million times as explosive as TNT. The figure was meaningless that way. He thought of it, instead, as a hundred million tons of high explosive, two hundred million aircraft bombs as big as the biggest ever used. It still did not mean anything. He had once seen such a bomb dropped, when he had been serving as a temperament analyst for army aircraft pilots. The bomb had left a hole big enough to hide an apartment house. He could not imagine the explosion of a thousand such bombs, much, much less a hundred million of them.

Perhaps these atomic engineers could. Perhaps, with their greater mathematical ability and closer comprehension of what actually went on inside the nuclear fission chamber — the "bomb" — they had some vivid glimpse of the mind-shattering horror locked up beyond that shield. If so, ho wonder they tended to blow up —

He sighed. Erickson looked up from the linear resonant accelerator on which he had been making some adjustment. "What's the trouble, Doc?"

"Nothing. I'm sorry I had to relieve Harper."

Silard could feel the shrewd glance of the big Scandinavian. "Not getting the jitters yourself, are you, Doc? Sometimes you squirrel sleuths blow up, too — "

"Me? I don't think so. I'm scared of that thing in there — I'd be crazy if I weren't."

"So am I," Erickson told him soberly, and went back to his work.

The accelerator's snout disappeared in the shield between them and the bomb, where it fed a steady stream of terrifically speeded up subatomic bullets to the beryllium target located within the bomb itself. The tortured beryllium yielded up neutrons, which shot out in all directions through the uranium mass. Some of these neutrons struck uranium atoms squarely on their nuclei and split them in two. The fragments were new elements, barium, xenon, rubidium — depending on the proportions in which each atom split. The new elements were usually unstable isotopes and broke down into a dozen more elements by radioactive disintegration in a progressive chain reaction.

But these chain-reactions were comparatively unimportant; it was the original splitting of the uranium nucleus, with the release of the awe-inspiring energy that bound it together — an incredible two hundred million electron-volts — that was important — and perilous.

For, while uranium isotope 235 may be split by bombarding it with neutrons from an outside source, the splitting itself gives up more neutrons which, in turn, may land in other uranium nuclei and split them. If conditions are favorable to a progressively increasing reaction of this sort, it may get out of hand, build up in an unmeasurable fraction of a micro-second into a complete atomic explosion — an explosion which would dwarf the eruption of Krakatoa to popgun size; an explosion so far beyond all human experience as to be as completely incomprehensible as the idea of personal death. It could be feared, but not understood.

But a self-perpetuating sequence of nuclear splitting, just under the level of complete explosion, was necessary to the operation of the power plant. To split the first uranium nucleus by bombarding it with neutrons from the beryllium target took more power than the death of the atom gave up. In order that the output of power from the system should exceed the power input in useful proportion it was imperative that each atom split by a neutron from the beryllium target should cause the splitting of many more.

It was equally imperative that this chain of reactions should always tend

to dampen, to die out. It must not build up, or the entire mass would explode within a time interval too short to be measured by any means whatsoever.

Nor would there be anyone left to measure it.

The atomic engineer on duty at the bomb could control this reaction by means of the "trigger," a term the engineers used to include the linear resonant accelerator, the beryllium target, and the adjacent controls, instrument board, and power sources. That is to say, he could vary the bombardment on the beryllium target to increase or decrease the power output of the plant, and he could tell from his instruments that the internal reaction was dampened — or, rather, that it had been dampened the split second before. He could not possibly know what was actually happening now within the bomb — subatomic speeds are too great and the time intervals too small. He was like the bird that flew backward; he could see where he had been, but he never knew where he was going.

Nevertheless, it was his responsibility, and his alone, not only to maintain the bomb at a high input-output efficiency, but to see that the reaction never passed the critical point and progressed into mass explosion.

But that was impossible. He could not be sure; he could never be sure.

He could bring to the job all of the skill and learning of the finest technical education, and use it to reduce the hazard to the lowest mathematical probability, but the blind laws of chance which appear to rule in subatomic action might turn up a royal flush against him and defeat his most skillful play.

And each atomic engineer knew it, knew that he gambled not only with his own life, but with the lives of countless others, perhaps with the lives of every human being on the planet. Nobody knew quite what such an explosion would do. The most conservative estimate assumed that, in addition to destroying the plant and its personnel completely, it would tear a chunk out of the populous and heavily traveled Los Angeles-Oklahoma Road City a hundred miles to the north.

That was the official, optimistic viewpoint on which the plant had been authorized, and based on mathematics which predicted that a mass of uranium would itself be disrupted on a molar scale, and thereby rendered comparatively harmless, before progressive and accelerated atomic explosion could infect the entire mass.

The atomic engineers, by and large, did not place faith in the official theory. They judged theoretical mathematical prediction for what it was worth — precisely nothing, until confirmed by experiment.

But even from the official viewpoint, each atomic engineer while on watch carried not only his own life in his hands, but the lives of many others — how many, it was better not to think about. No pilot, no general, no surgeon ever carried such a daily, inescapable, ever-present weight of responsibility for the lives of other people as these men carried every time they went on watch, every time they touched a vernier screw or read a dial.

They were selected not alone for their intelligence and technical training, but quite as much for their characters and sense of social responsibility. Sensitive men were needed — men who could fully appreciate the importance of the charge intrusted to them; no other sort would do. But the burden of responsibility was too great to be born indefinitely by a sensitive man.

It was, of necessity, a psychologically unstable condition. Insanity was an occupational disease.

Dr. Cummings appeared, still buckling the straps of the armor worn to guard against stray radiation. "What's up?" he asked Silard.

"I had to relieve Harper."

"So I guessed. I met him coming up. He was sore as hell — just glared at me."

"I know. He wants an immediate hearing. That's why I had to send for you."

Cummings grunted, then nodded toward the engineer, anonymous in all-inclosing armor. "Who'd I draw?"

"Erickson."

"Good enough. Squareheads can't go crazy — eh, Gus?"

Erickson looked up momentarily and answered, "That's your problem," and returned to his work.

Cummings turned back to Silard and commented: "Psychiatrists don't seem very popular around here. O.K. — I relieve you sir."

"Very well, sir."

Silard threaded his way through the zigzag in the tanks of water which surrounded the disintegration room. Once outside this outer shield, he divested himself of the cumbersome armor, disposed of it in the locker room provided, and hurried to a lift. He left the lift at the tube station, underground, and looked around for an unoccupied capsule. Finding one, he strapped himself in, sealed the gasketed door, and settled the back of his head into the rest against the expected surge of acceleration.

Five minutes later he knocked at the door of the office of the general superintendent, twenty miles away.

The power plant proper was located in a bowl of desert hills on the Arizona plateau. Everything not necessary to the immediate operation of the plant — administrative offices, television station and so forth — lay beyond the hills. The buildings housing these auxiliary functions were of the most durable construction technical ingenuity could devise. It was hoped that, if der tag ever came, occupants would stand approximately the chance of survival of a man going over Niagara Falls in barrel.

Silard knocked again. He was greeted by a male secretary, Steinke. Silard recalled reading his case history. Formerly one of the most brilliant of the young engineers, he had suffered a blanking out of the ability to handle mathematical operations. A plain case of fugue, but there had been nothing that the poor devil could do about it — he had been anxious enough with his conscious mind to stay on duty. He had been rehabilitated as an office worker.

Steinke ushered him into the .superintendent's private office. Harper was there before him, and returned his greeting with icy politeness. The superintendent was cordial, but Silard thought he looked tired, as if the twenty-four-hour-a-day strain was too much for him.

"Come in, Doctor, come in. Sit down. Now tell me about this. I'm a little surprised. I thought Harper was one of my steadiest men."

"I don't say he isn't, sir."

"Well?"

"He may be perfectly all right, but your instruction to me are not to take any chances."

"Quite right." The superintendent gave the engineer silent and tense in his

chair, a troubled glance, then returned his attention to Silard. "Suppose you tell me about it."

Silard took a deep breath. "While on watch as psychological observer at the control station I noticed that the engineer of the watch seemed preoccupied and less responsive to stimuli than usual. During my off-watch observation of this case, over a period of the past seven days, I have suspected an increasing lack of attention. For example, while playing contract bridge, he now occasionally asks for a review of the bidding, which is contrary to his former behavior pattern.

"Other similar data are available. To cut it short, at 3:11 today, while on watch, I saw Harper, with no apparent reasonable purpose in mind, pick up a wrench used only for operating the valves of the water shield and approach the trigger. I relieved him of duty and sent him out of the control room."

"Chief!" Harper calmed himself somewhat and continued: "If this witch doctor knew a wrench from an oscillator, he'd know what I was doing. The wrench was on the wrong rack. I noticed it, and picked it up to return it to its proper place. On the way, I stopped to check the readings!"

The superintendent turned inquiringly to Dr. Silard.

"That may be true. Granting that it is true," answered the psychiatrist doggedly, "my diagnosis still stands. Your behavior pattern has altered; your present actions are unpredictable, and I can't approve you for responsible work without a complete checkup."

General Superintendent King drummed on the desk top and sighed. Then he spoke slowly to Harper "Cal, you're a good boy, and, believe me, I know how you feel. But there is no way to avoid it — you've got to go up for the psychometricals, and accept whatever disposition the board makes of you." He paused, but Harper maintained an expressionless silence. "Tell you what, son — why don't you take a few days leave? Then, when you come back, you can go up before the board, or transfer to another department away from the bomb, whichever you prefer." He looked to Silard for approval, and received a nod.

But Harper was not mollified. "No, chief," he protested. "It won't do. Can't you see what's wrong? It's this constant supervision. Somebody always watching the back of your neck, expecting you to go crazy. A man can't even shave in private. We're jumpy about the most innocent acts, for fear some head doctor, half batty himself, will see it and decide it's a sign we're slipping. Good grief, what do you expect?" His outburst having run its course, he subsided into a flippant cynicism that did not quite jell. "O.K. — never mind of it, chief," he added, "and I'm glad to have worked under

you. Good-bye."

King kept the pain in his eyes out of his voice. "Wait a minute, Cal — you're not through here. Let's forget about the vacation. I'm transferring you to the radiation laboratory. You belong in research, anyhow; I'd never have spared you from it to stand watches if I hadn't been short on No. 1 men.

"As for the constant psychological observation, I hate it as much as you do. I don't suppose you know that they watch me about twice as hard as they watch you duty engineers." Harper showed his surprise, but Silard nodded in sober confirmation. "But we have to have this supervision. Do you remember Manning? No, he was before your time. We didn't have psychological observers then. Manning was able and brilliant. Furthermore, he was always cheerful; nothing seemed to bother him.

"I was glad to have him on the bomb, for he was always alert, and never seemed nervous about working with it — in fact, he grew more buoyant and cheerful the longer he stood control watches. I should have known that was a very bad sign, but I didn't, and there was no observer to tell me so.

"His technician had to slug him one night. He found him dismounting the safety interlocks on the trigger. Poor old Manning never pulled out of it — he's been violently insane ever since. After Manning cracked up, we worked out the present system of two qualified engineers and an observer for every watch. It seemed the only thing to do."

"I suppose so, chief," Harper mused, his face no longer sullen, but still unhappy. "It's a hell of a situation just the same."

"That's putting it mildly." King rose and put out his hand. "Cal, unless you're dead set on leaving us, I'll expect to see you at the radiation laboratory tomorrow. Another thing — I don't often recommend this, but it might do you good to get drunk tonight."

King had signed to Silard to remain after the young man left. Once the door was closed he turned back to the psychiatrist. "There goes another one — and one of the best. Doctor, what am I going to do?"

Silard pulled at his cheek. "I don't know," he admitted. "The hell of it is, Harper's absolutely right. It does increase the strain on them to know that they are being watched — and yet they have to be watched. Your psychiatric staff isn't doing too well, either. It makes us nervous to be around the bomb — the more so because we don't understand it. And it's a

strain on us to be hated and despised as we are. Scientific detachment is difficult under such conditions; I'm getting jumpy myself."

King ceased pacing the floor and faced the doctor. "But there must be some solution — " he insisted.

Silard shook his head. "It's beyond me, Superintendent. I see no solution from the standpoint of psychology."

"No? Hm-m-m. Doctor, who is the top man in your field?"

"Eh?"

"Who is the recognized No. 1 man in handling this sort of thing?"

"Why, that's hard to say. Naturally, there isn't any one leading psychiatrist in the world; we specialize too much. I know what you mean, though. You don't want the best industrial-temperament psychometrician; you want the best all-around man for psychoses nonlesional and situational. That would be Lentz."

"Go on."

"Well — he covers the whole field of environmental adjustment. He's the man who correlated the theory of optimum tonicity with the relaxation technique that Korzybski had developed empirically. He actually worked under Korzybski himself, when he was a young student — it's the only thing he's vain about."

"He did? Then he must be pretty old; Korzybski died in — What year did he die?"

"I started to say that you must know his work in symbology — theory of abstraction and calculus of statement, all that sort of thing — because of its applications to engineering and mathematical physics."

"That Lentz — yes, of course. But I had never thought of him as a psychiatrist."

"No, you wouldn't, in your field. Nevertheless, we are inclined to credit him with having done as much to check and reduce the pandemic neuroses of the Crazy Years as any other man, and more than any man left alive."

"Where is he?"

"Why, Chicago, I suppose. At the Institute."

"Get him here."

"Eh?"

"Get him down here. Get on that visiphone and locate him. Then have Steinke call the Port of Chicago, and hire a stratocar to stand by for him. I want to see him as soon as possible — before the day is out." King sat up in his chair with the air of a man who is once more master of himself and the situation. His spirit knew that warming replenishment that comes only with reaching a decision. The harassed expression was gone.

Silard looked dumfounded. "But, Superintendent," he expostulated, "you can't ring for Dr. Lentz as if he were a junior clerk. He's . . . he's Lentz."

"Certainly — that's why I want him. But I'm not a neurotic club-woman looking for sympathy, either. He'll come. If necessary, turn on the heat from Washington. Have the White House call him. But get him here at once. Move!" King strode out of the office.

When Erickson came off watch he inquired around and found that Harper had left for town. Accordingly, he dispensed with dinner at the base, shifted into "drinkin' clothes," and allowed himself to be dispatched via tube to Paradise.

Paradise, Arizona, was a hard little boom town, which owed its existence to the power plant. It was dedicated exclusively to the serious business of detaching the personnel of the plant from their inordinate salaries. In this worthy project they received much cooperation from the plant personnel themselves, each of whom was receiving from twice to ten times as much money each pay day as he had ever received in any other job, and none of whom was certain of living long enough to justify saving for old age. Besides, the company carried a sinking fund in Manhattan for their dependents; why be stingy?

It was said, with some truth, that any entertainment or luxury obtainable in New York City could be purchased in Paradise. The local chamber of commerce had appropriated the slogan of Reno, Nevada, "Biggest Little City in the World." The Reno boosters retaliated by claiming that, while any town that close to the atomic power plant undeniably brought thoughts of death and the hereafter, Hell's Gates would be a more appropriate name than Paradise.

Erickson started making the rounds. There were twenty-seven places licensed to sell liquor in the six blocks of the main street of Paradise. He

expected to find Harper in one of them, and, knowing the man's habits and tastes, he expected to find him in the first two or three he tried.

He was not mistaken. He found Harper sitting alone at a table in the rear of DeLancey's Sans Souci Bar. DeLancey's was a favorite of both of them. There was an old-fashioned comfort about its chrome-plated bar and red leather furniture that appealed to them more than did the spectacular fittings of the up-to-the minute places. DeLancey was conservative; he stuck to indirect lighting and soft music; his hostesses were required to be fully clothed, even in the evening.

The fifth of Scotch in front of Harper was about two thirds full. Erickson shoved three fingers in front of Harper's face and demanded, "Count!"

"Three," announced Harper. "Sit down, Gus."

"That's correct," Erickson agreed, sliding his big frame into a low-slung chair. "You'll do — for now. What was the outcome?"

"Have a drink. Not," he went on, "that this Scotch is any good. I think Lance has taken to watering it. I surrendered, horse and foot."

"Lance wouldn't do that — stick to that theory and you'll sink in the sidewalk up to your knees. How come you capitulated? I thought you planned to beat 'em about the head and shoulders, at least."

"I did," mourned Harper, "but, cripes, Gus, the chief is right. If a brain mechanic says you're punchy, he has got to back him up and take you off the bomb. The chief can't afford to take a chance."

"Yeah, the chief's all right, but I can't learn to love our dear psychiatrists. Tell you what — let's find us one, and see if he can feel pain. I'll hold him while you slug 'im."

"Oh, forget it, Gus. Have a drink."

"A pious thought — but not Scotch. I'm going to have a martini; we ought to eat pretty soon."

"I'll have one, too."

"Do you good." Erickson lifted his blond head and bellowed, "Israfell"

A large, black person appeared at his elbow. "Mistuh Erickson! Yes, suh!"

"Izzy, fetch two martinis. Make mine with Italian." He turned back to

Harper. "What are you going to do now, Cal?"

"Radiation laboratory."

"Well, that's not so bad. I'd like to have a go at the matter or rocket fuels myself. I've got some ideas."

Harper looked mildly amused. "You mean atomic fuel for interplanetary flight? The problem's pretty well exhausted. No, son, the stratosphere is the ceiling until we think up something better than rockets. Of course, you could mount the bomb in a ship, and figure out some jury rig to convert its radiant output into push, but where does that get you? One bomb, one ship — and twenty years of mining in Little America has only produced enough pitchblende to make one bomb. That's disregarding the question of getting the company to lend you their one bomb for anything that doesn't pay dividends."

Erickson looked balky. "I don't concede that you've covered all the alternatives. What have we got? The early rocket boys went right ahead trying to build better rockets, serene in the belief that, by the time they could build rockets good enough to fly to the Moon, a fuel would be perfected that would do the trick. And they did build ships that were good enough — you could take any ship that makes the antipodes run, and refit it for the Moon — if you had a fuel that was sufficiently concentrated to maintain the necessary push for the whole run. But they haven't got it.

"And why not? Because we let 'em down, that's why. Because they're still depending on molecular energy, on chemical reactions, with atomic power sitting right here in our laps. It's not their fault — old D. D. Harriman had Rockets Consolidated underwrite the whole first issue of Antarctic Pitchblende, and took a big slice of it himself, in the expectation that we would produce something usable in the way of a concentrated rocket fuel. Did we do it? Like hell! The company went hog-wild for immediate commercial exploitation, and there's no fuel yet."

"But you haven't stated it properly," Harper objected. "There are just two forms of atomic power available — radioactivity and atomic disintegration. The first is too slow; the energy is there, but you can't wait years for it to come out — not in a rocketship. The second we can only manage in a large mass of uranium. There has only been enough uranium mined for one bomb. There you are — stymied."

Erickson's Scandinavian stubbornness was just gathering for another try at the argument when the waiter arrived with the drinks. He set them down with a triumphant flourish. "There you are, suh!"

"Want to roll for them, Izzy?" Harper inquired.

"Don' mind if I do."

The Negro produced a leather dice cup, and Harper rolled. He selected his combinations with care and managed to get four aces and jack in three rolls. Israfel took the cup. He rolled in the grand manner with a backward twist to his wrist. His score finished at five kings, and he courteously accepted the price of six drinks. Harper stirred the engraved cubes with his forefinger.

"Izzy," he asked, "are these the same dice I rolled with?"

"Why, Mistuh Harper!" The Negro's expression was pained.

"Skip it," Harper conceded. "I should know better than to gamble with you. I haven't won a roll from you in six weeks. What did you start to say, Gus?"

"I was just going to say that there ought to be a better way to get energy out of — "

But they were joined again, this time by something very seductive in an evening gown that appeared to have been sprayed on her lush figure. She was young, perhaps nineteen or twenty. "You boys lonely?" she asked as she flowed into a chair.

"Nice of you to ask but were not," Erickson denied with patient politeness. He jerked a thumb at a solitary figure seated across the room. "Go talk to Hanningan;

he's not busy."

She followed his gesture with her eyes, and answered with faint scorn: "Him? He's no use. He's been like that for three weeks — hasn't spoken to a soul. If you ask me, I'd say that he was cracking up."

"That so?" he observed noncommittally. "Here" — he fished out a five-dollar bill and handed it to her — "buy yourself a drink. Maybe we'll look you up later."

"Thanks, boys." The money disappeared under her clothing, and she stood up. "Just ask for Edith."

"Hannigan does look bad," Harper considered, noting the brooding stare and apathetic attitude, "and he has been awfully standoffish lately, for him.

Do you suppose we're obliged to report him?"

"Don't let it worry you," advised Erickson. "There's a spotter on the job now. Look." Harper followed his companion's eyes and recognized Dr. Mott of the psychological staff. He was leaning against the far end of the bar, and nursing a tall glass, which gave him protective coloration. But his stance was such that his field of vision included not only Hannigan, but Erickson and Harper as well.

"Yeah, and he's studying us as well," Harper added. "Damn it to hell, why does it make my back hair rise just to lay eyes on one of them?"

The question was rhetorical; Erickson ignored it. "Let's get out of here," he suggested, "and have dinner somewhere else."

"O.K."

DeLancey himself waited on them as they left. "Going so soon, gentlemen?" he asked, in a voice that implied that their departure would leave him no reason to stay open. "Beautiful lobster thermidor tonight. If you do not like it, you need not pay." He smiled brightly.

"Not sea food, Lance," Harper told him, "not tonight. Tell me — why do you stick around here when you know that the bomb is bound to get you in the long run? Aren't you afraid of it?"

The tavern keeper's eyebrows shot up. "Afraid of the bomb? But it is my friend!"

"Makes you money, eh?"

"Oh, I do not mean that." He leaned toward them confidentially. "Five years ago I come here to make some money quickly for my family before my cancer of the stomach, it kills me. At the clinic, with the wonderful new radiants you gentlemen make with the aid of the bomb, I am cured — I live again. No, I am not afraid of the bomb; it is my good friend."

"Suppose it blows up?"

"When the good Lord needs me, He will take me." He crossed himself quickly.

As they turned away, Erickson commented in a low voice to Harper, "There's your answer, Cal — if all us engineers had his faith, the bomb wouldn't get us down."

Harper was unconvinced. "I don't know," he mused. "I don't think it's

faith; I think it's lack of imagination — and knowledge."

Notwithstanding King's confidence, Lentz did not show up until the next day. The superintendent was subconsciously a little surprised at his visitor's appearance. He had pictured a master psychologist as wearing flowing hair, an imperial, and having piercing black eyes. But this man was not very tall, was heavy in his framework, and fat — almost gross. He might have been a butcher. Little, piggy, faded-blue eyes peered merrily out from beneath shaggy blond brows. There was no hair anywhere else on the enormous skull, and the apelike jaw was smooth and pink. He was dressed in mussed pajamas of unbleached linen. A long cigarette holder jutted permanently from one corner of a wide mouth widened still more by a smile which suggested unmalicious amusement at the worst that life, or men, could do. He had gusto. King found him remarkably easy to talk to.

At Lentz's suggestion the superintendent went first into the history of the atomic power plant, how the fission of the uranium atom by Dr. Otto Hahn in December, 1938, had opened up the way to atomic power. The door was opened just a crack; the process to be self-perpetuating and commercially usable required an enormously greater mass of uranium than there was available in the entire civilized world at that time.

But the discovery, fifteen years later, of enormous deposits of pitchblende in the old rock underlying Little America removed that obstacle. The deposits were similar to those previously worked at Great Bear Lake in the arctic north of Canada, but so much more extensive that the eventual possibility of accumulating enough uranium to build an atomic power plant became evident.

The demand for commercially usable, cheap power had never been satiated. Even the Douglas-Martin sun-power screens, used to drive the roaring road cities of the period and for a myriad other industrial purposes, were not sufficient to fill the ever-growing demand. They had saved the country from impending famine of oil and coal, but their maximum output of approximately one horsepower per square yard of sun-illuminated surface put a definite limit to the power from that source available in any given geographical area. Atomic power was needed — was demanded.

But theoretical atomic physics predicted that a uranium mass sufficiently large to assist in its own disintegration might assist too well — blow up instantaneously,

with such force that it would probably wreck every man-made structure on the globe and conceivably destroy the entire human race as well. They dared

not build the bomb, even though the uranium was available.

"It was Destry's mechanics of infinitesimals that showed a way out of the dilemma," King went on. "His equations appeared to predict that an atomic explosion once started, would disrupt the molar mass inclosing it so rapidly that neutron loss through the outer surface of the fragments would dampen the progression of the atomic explosion to zero before complete explosion could be reached.

"For the mass we use in the bomb, his equations predict a possible force of explosion one seventh of one percent of the force of complete explosion. That alone, of course, would be incomprehensibly destructive — about the equivalent of a hundred and forty thousand tons of TNT — enough to wreck this end of the State. Personally, I've never been sure that is all that would happen."

"Then why did you accept this job?" inquired Lentz.

King fiddled with items on his desk before replying. "I couldn't turn it down, doctor — I couldn't. If I had refused, they would have gotten someone else — and it was an opportunity that comes to a physicist once in history,"

Lentz nodded. "And probably they would have gotten someone not as competent. I understand, Dr. King — you were compelled by the 'truth-tropism' of the scientist. He must go where the data is to be found, even if it kills him. But about this fellow Destry, I've never liked his mathematics; he postulates too much."

King looked up in quick surprise, then recalled that this was the man who had refined and given rigor to the calculus of statement. "That's just the hitch," he agreed. "His work is brilliant, but I've never been sure that his predictions were worth the paper they were written on. Nor, apparently," he added bitterly, "do my junior engineers."

He told the psychiatrist of the difficulties they had had with personnel, of how the most carefully selected men would, sooner or later, crack under the strain. "At first I thought it might be some degenerating effect from the hard radiation that leaks out of the bomb, so we improved the screening and the personal armor. But it didn't help. One young fellow who had joined us after the new screening was installed became violent at dinner one night, and insisted that a pork chop was about to explode. I hate to think of what might have happened if he had been on duty at the bomb when he blew up."

The inauguration of the system of constant psychological observation had

greatly reduced the probability of acute danger resulting from a watch engineer cracking up, but King was forced to admit that the system was not a success; there had actually been a marked increase in psychoneuroses, dating from that time.

"And that's the picture, Dr. Lentz. It gets worse all the time. It's getting me now. The strain is telling on me; I can't sleep, and I don't think my judgment is as good as it used to be — I have trouble making up my mind, of coming to a decision. Do you think you can do anything for us?"

But Lentz had no immediate relief for his anxiety. "Not so fast, superintendent," he countered. "You have given me the background, but I have no real data as yet. I must look around for a while, smell out the situation for myself, talk to your engineers, perhaps have a few drinks with them, and get acquainted. That is possible, is it not? Then in a few days, maybe, we'll know where we stand."

King had no alternative but to agree.

"And it is well that your young men do not know what I am here for. Suppose I am your old friend, a visiting physicist, eh?"

"Why, yes — of course. I can see to it that that idea gets around. But say — " King was reminded again of something that had bothered him from the time Silard had first suggested Lentz's name — "may I ask a personal question?"

The merry eyes were undisturbed.

"Go ahead."

"I can't help but be surprised that one man should attain eminence in two such widely differing fields as psychology and mathematics. And right now I'm perfectly convinced of your ability to pass yourself off as a physicist. I don't understand it."

The smile was more amused, without being in the least patronizing, nor offensive. "Same subject," he answered.

"Eh? How's that — "

"Or rather, both mathematical physics and psychology are branches of the same subject, symbology. You are a specialist; it would not necessarily come to your attention."

"I still don't follow you."

"No? Man lives in a world of ideas. Any phenomenon is so complex that he cannot possibly grasp the whole of it. He abstracts certain characteristics of a given phenomenon as an idea, then represents that idea as a symbol, be it a word or a mathematical sign. Human reaction is almost entirely reaction to symbols, and only negligibly to phenomena. As a matter of fact," he continued, removing the cigarette holder from his mouth and settling into his subject, "it can be demonstrated that the human mind can think only in terms of symbols.

When we think, we let symbols operate on other symbols in certain, set fashions — rules of logic, or rules of mathematics. If the symbols have been abstracted so that they are structurally similar to the phenomena they stand for, and if the symbol operations are similar in structure and order to the operations of phenomena in the real world, we think sanely. If our logic-mathematics, or our word-symbols, have been poorly chosen, we do not think sanely.

"In mathematical physics you are concerned with making your symbology fit physical phenomena. In psychiatry I am concerned with precisely the same thing, except that I am more immediately concerned with the man who does the thinking than with the phenomena he is thinking about. But the same subject, always the same subject."

'We're not getting anyplace, Gus." Harper put down his slide rule and frowned.

"Seems like it, Cal" Erickson grudgingly admitted. "Damn it, though — there ought to be some reasonable way of tackling the problem. What do we need? Some form of concentrated, controllable power for rocket fuel. What have we got? Power galore in the bomb. There must be some way to bottle that power, and serve it out when we need it — and the answer is someplace in one of the radioactive series. I know it." He stared glumly around the laboratory as if expecting to find the answer written somewhere on the lead-sheathed walls.

"Don't be so down in the mouth about it. You've got me convinced there is an answer; let's figure out how to find it. In the first place the three natural radioactive series are out, aren't they?"

"Yes — at least we had agreed that all that ground had been fully covered before."

"O. K.; we have to assume that previous investigators have done what their

notes show they have done — otherwise we might as well not believe anything, and start checking on everybody from Archimedes to date. Maybe that is indicated, but Methuselah himself couldn't carry out such an assignment. What have we got left?"

"Artificial radioactives."

"All right. Let's set up a list of them, both those that have been made up to now, and those that might possibly be made in the future. Call that our group — or rather, field, if you want to be pedantic about definitions. There are a limited number of operations that can be performed on each member of the group, and on the members taken in combination. Set it up."

Erickson did so, using the curious curlicues of the calculus of statement. Harper nodded. "All right — expand it."

Erickson looked up after a few moments, and asked, "Cal, have you any idea how many terms there are in the expansion?"

"No — hundreds, maybe thousands, I suppose."

"You're conservative. It reaches four figures without considering possible new radioactives. We couldn't finish such a research in a century." He chucked his pencil down and looked morose.

Cal Harper looked at him curiously, but with sympathy. "Gus," he said gently, "the bomb isn't getting you, too, is it?"

"I don't think so. Why?"

"I never saw you so willing to give up anything before. Naturally you and I will never finish any such job, but at the very worst we will have eliminated a lot of wrong answers for somebody else. Look at Edison — sixty years of experimenting, twenty hours a day, yet he never found out the one thing he was most interested in knowing. I guess if he could take it, we can."

Erickson pulled out of his funk to some extent. "I suppose so," he agreed. "Anyhow, maybe we could work out some techniques for carrying a lot of experiments simultaneously."

Harper slapped him on the shoulder. "That's the ol' fight. Besides-we may not need to finish the research, or anything like it, to find a satisfactory fuel. The way I see it, there are probably a dozen, maybe a hundred, right answers. We may run across one of them any day. Anyhow, since you're willing to give me a hand with it in your off watch time, I'm

game to peck away at it till hell freezes."

Lentz puttered around the plant and the administration center for several days, until he was known to everyone by sight. He made himself pleasant and asked questions. He was soon regarded as a harmless nuisance, to be tolerated because he was a friend of the superintendent. He even poked his nose into the commercial power end of the plant, and had the mercury-steam-turbogenerator sequence explained to him in detail. This alone would have been sufficient to disarm any suspicion that he might be a psychiatrist, for the staff psychiatrists paid no attention to the hard-bitten technicians of the power-conversion unit. There was no need to; mental instability on their part could not affect the bomb, nor were they subject to the man-killing strain of social responsibility. Theirs was simply a job personally dangerous, a type of strain strong men have been inured to since the jungle.

In due course he got around to the unit of the radiation laboratory set aside for Calvin Harper's use. He rang the bell and waited. Harper answered the door, his anti-radiation helmet shoved back from his face like a grotesque sunbonnet. "What is it?" he asked. "Oh — it's you, Dr. Lentz. Did you want to see me?"

"Why, yes and no," the older man answered. "I was just looking around the experimental station, and wondered what you do in here. Will I be in the way?"

"Not at all. Come in. Gus!"

Erickson got up from where he had been fussing over the power leads to their trigger — a modified cyclotron rather than a resonant accelerator. "Hello."

"Gus, this is Dr. Lentz — Gus Erickson."

"We've met," said Erickson, pulling off his gauntlet to shake hands. He had had a couple of drinks with Lentz in town and considered him a "nice old duck." "You're just between shows, but stick around and we'll start another run-not that there is much to see."

While Erickson continued with the setup, Harper conducted Lentz around the laboratory, explaining the line of research they were conducting, as happy as a father showing off twins. The psychiatrist listened with one ear and made appropriate comments while he studied the young scientist for signs of the instability he had noted to be recorded against him.

"You see," Harper explained, oblivious to the interest in himself, "we are testing radioactive materials to see if we can produce disintegration of the sort that takes place in the bomb, but in a minute, almost microscopic, mass. If we are successful, we can use the power of the bomb to make a safe, convenient, atomic fuel for rockets." He went on to explain their schedule of experimentation.

"I see," Lentz observed politely. "What metal are you examining now?"

Harper told him. "But it's not a case of examining one element — we've finished Isotope II with negative results. Our schedule calls next for running the same test on Isotope V. Like this." He hauled out a lead capsule, and showed the label to Lentz, who saw that it was, indeed, marked with the symbol of the fifth isotope. He hurried away to the shield around the target of the cyclotron, left open by Erickson. Lentz saw that he had opened the capsule, and was performing some operation on it in a gingerly manner, having first lowered his helmet. Then he closed and clamped the target shield.

"O. K., Gus?" he called out. "Ready to roll?"

"Yeah, I guess so," Erickson assured him, coming around them. They crowded behind a thick metal shield that cut them off from direct sight of the setup.

"Will I need to put on armor?" inquired Lentz.

"No," Erickson reassured him, "we wear it because we are around the stuff day in and day out. You just stay behind the shield and you'll be all right. It's lead — backed up by eight inches of case-hardened armor plate.

Erickson glanced at Harper, who nodded, and fixed his eyes on a panel of instruments mounted behind the shield. Lentz saw Erickson press a push button at the top of the board, then heard a series of relays click on the far side of the shield. There was a short moment of silence.

The floor slapped his feet like some incredible bastinado. The concussion that beat on his ears was so intense that it paralyzed the auditory nerve almost before it could be recorded as sound. The air-conducted concussion wave flailed every inch of his body with a single, stinging, numbing blow. As he picked himself up, he found he was trembling uncontrollably and realized, for the first time, that he was getting old.

Harper was seated on the floor and had commenced to bleed from the nose. Erickson had gotten up; his cheek was cut. He touched a hand to the wound,

then stood there, regarding the blood on his fingers with a puzzled expression on his face.

"Are you hurt?" Lentz inquired inanely. "What happened?"

Harper cut in. "Gus, we've done it! We've done it! Isotope V's turned the trick!"

Erickson looked still more bemused. "Five?" he said stupidly. "But that wasn't Five; that was Isotope II. I put it in myself."

"You put it in? I put it in! It was Five, I tell you!"

They stood staring at each other, still confused by the explosion, and each a little annoyed at the boneheaded stupidity the other displayed in the face of the obvious. Lentz diffidently interceded.

"Wait a minute, boys," he suggested. "Maybe there's a reason — Gus, you placed a quantity of the second isotope in the receiver?"

"Why, yes, certainly. I wasn't satisfied with the last run, and I wanted to check it."

Lentz nodded. "It's my fault, gentlemen," he admitted ruefully. "I came in and disturbed your routine, and both of you charged the receiver. I know Harper did, for I saw him do it — with Isotope V. I'm sorry."

Understanding broke over Harper's face, and he slapped the older man on the shoulder. "Don't be sorry," he laughed; "you can come around to our lab and help us make mistakes any time you feel in the mood. Can't he, Gus? This is the answer, Dr. Lentz; this is it!"

"But," the psychiatrist pointed out, "you don't know which isotope blew up."

"Nor care," Harper supplemented. "Maybe it was both, taken together. But we will know — this business is cracked now; we'll soon have it open." He gazed happily around at the wreckage.

In spite of Superintendent King's anxiety, Lentz refused to be hurried in passing judgment on the situation. Consequently, when he did present himself at King's office, and announced that he was ready to report, King was pleasantly surprised as well as relieved. "Well, I'm delighted," he said. "Sit down, Doctor, sit down. Have a cigar. What do we do about it?"

But Lentz stuck to his perennial cigarette and refused to be hurried. "I must have some information first. How important," he demanded, "is the power from your plant?"

King understood the implication at once. If you are thinking about shutting down the bomb for more than a limited period, it can't be done."

"Why not? If the figures supplied me are correct, your output is less than thirteen percent of the total power used in the country."

"Yes, that is true, but you haven't considered the items that go into making up the total. A lot of it is domestic power, which householders get from sunscreens located on their own roofs. Another big slice is power for the moving roadways — that's sunpower again. The portion we provide here is the main power source for most of the heavy industries — steel, plastics, lithics, all kinds of manufacturing and processing. You might as well cut the heart out of a man — "

"But the food industry isn't basically dependent on you?" Lentz persisted.

"No. Food isn't basically a power industry — although we do supply a certain percentage of the power used in processing. I see your point, and will go on and concede that transportation — that is to say, distribution of food — could get along without us. But, good heavens, Doctor, you can't stop atomic power without causing the biggest panic this country has ever seen. It's the keystone of our whole industrial system."

"The country has lived through panics before, and we got past the oil shortage safely."

"Yes — because atomic power came along to take the place of oil. You don't realize what this would mean, Doctor. It would be worse than a war; in a system like ours, one thing depends on another. If you cut off the heavy industries all at once, everything else stops, too."

"Nevertheless, you had better dump the bomb." The uranium in the bomb was molten, its temperature being greater than twenty-four hundred degrees centigrade. The bomb could be dumped into a group of small containers, when it was desired to shut it down. The mass in any one container was too small to maintain progressive atomic disintegration.

King glanced involuntarily at the glass-inclosed relay mounted on his office wall, by which he, as well as the engineer on duty, could dump the bomb, if need be. "But I couldn't do that — or rather, if I did, the plant wouldn't stay shut down. The Directors would simply replace me with someone

who would operate the bomb."

"You're right, of course." Lentz silently considered the situation for some time, then said, "Superintendent, will you order a car to fly me back to Chicago?"

"You're going, Doctor?"

"Yes." He took the cigarette holder from his face, and, for once, the smile of Olympian detachment was gone completely. His entire manner was sober, even tragic. "Short of shutting down the bomb, there is no solution to your problem-none whatsoever!

"I owe you a full explanation," Lentz continued, at length. "You are confronted here with recurring; instances of situational psychoneurosis. Roughly, the symptoms manifest themselves as anxiety neurosis or some form of hysteria. The partial amnesia of your secretary, Steinke, is a good example of the latter. He might be cured with shock technique, but it would hardly be a kindness, as he has achieved a stable adjustment which puts him beyond the reach of the strain he could not stand.

"That other young fellow, Harper, whose blowup was the immediate cause of your sending for me, is an anxiety case. When the cause of the anxiety was eliminated from his matrix, he at once regained full sanity. But keep a close watch on his friend, Erickson —

"However, it is the cause, and prevention, of situational psychoneurosis we are concerned with here, rather than the forms in which it is manifested. In plain language, psychoneurosis situational simply refers to the common fact that, if you put a man in a situation that worries him more than he can stand, in time he blows up, one way or another.

"That is precisely the situation here. You take sensitive, intelligent young men, impress them with the fact that a single slip on their part, or even some fortuitous circumstance beyond their control, will result in the death of God knows how many other people, and then expect them to remain sane. It's ridiculous — impossible!"

"But good heavens, Doctor, there must be some answer! There must!" He got up and paced around the room. Lentz noted, with pity, that King himself was riding the ragged edge of the very condition they were discussing.

"No," he said slowly. "No. Let me explain. You don't dare intrust the bomb to less sensitive, less socially conscious men. You might as well turn the controls over to a mindless idiot. And to psychoneurosis situational there are but two cures. The first obtains when the psychosis results from a

misevaluation of environment. That cure calls for semantic readjustment. One assists the patient to evaluate correctly his environment. The worry disappears because there never was a real reason for worry in the situation itself, but simply in the wrong meaning the patient's mind had assigned to it.

"The second case is when the patient has correctly evaluated the situation, and rightly finds in it cause for extreme worry. His worry is perfectly sane and proper, but he can not stand up under it indefinitely; it drives him crazy. The only possible cure is to change the situation. I have stayed here long enough to assure myself that such is the condition here. Your engineers have correctly evaluated the public danger of this bomb, and it will, with dreadful certainty, drive all of you crazy!

"The only possible solution is to dump the bomb — and leave it dumped."

King had continued his nervous pacing of the floor, as if the walls of the room itself were the cage of his dilemma. Now he stopped and appealed once more to the psychiatrist. "Isn't there anything I can do?"

"Nothing to cure. To alleviate — well, possibly."

"How?"

"Situational psychosis results from adrenaline exhaustion. When a man is placed under a nervous strain, his adrenal glands increase their secretion to help compensate for the strain. If the strain is too great and lasts too long, the adrenals aren't equal to the task, and he cracks. That is what you have here. Adrenaline therapy might stave off a mental breakdown, but it most assuredly would hasten a physical breakdown. But that would be safer from a viewpoint of public welfare — even though it assumes that physicists are expendable!

"Another thing occurs to me: If you selected any new watch engineers from the membership of churches that practice the confessional, it would increase the length of their usefulness."

King was plainly surprised. "I don't follow you."

"The patient unloads most of his worry on his confessor, who is not himself actually confronted by the situation, and can stand it. That is simply an ameliorative, however. I am convinced that, in this situation, eventual insanity is inevitable. But there is a lot of good sense in the confessional," he added. "It fills a basic human need. I think that is why the early psychoanalysts were so surprisingly successful, for all their limited knowledge." He fell silent for a while, then added, "If you will be

so kind as to order a stratocab for me — "

"You've nothing more to suggest?"

"No. You had better turn your psychological staff loose on means of alleviation; they're able men, all of them."

King pressed a switch and spoke briefly to Steinke. Turning back to Lentz, he said, "You'll wait here until your car is ready?"

Lentz judged correctly that King desired it And agreed.

Presently the tube delivery on King's desk went ping! The Superintendent removed a small white pasteboard, a calling card. he studied it with surprise and passed it over to Lentz. "I can't imagine why he should be calling on me," he observed, and added, "Would you like to meet him?"

Lentz read:

THOMAS P. HARRINGTON

CAPTAIN (MATHEMATICS)

UNITED STATES NAVY

DIRECTOR,

U.S. NAVAL OBSERVATORY

"But I do know him," he said. "I'd be very pleased to see him."

Harrington was a man with something on his mind. He seemed relieved when Steinke had finished ushering him in, and had returned to the outer office. He commenced to speak at once, turning to Lentz, who was nearer to him than King. "You're King? . . . Why, Dr. Lentz! What are you doing here?"

"Visiting," answered Lentz, accurately but incompletely, as he shook hands. "This is Superintendent King over here. Superintendent King — Captain Harrington."

"How do you do, Captain — it's a pleasure to have you here.

"It's an honor to be here, sir."

"Sit down?"

"Thanks." He accepted a chair and laid a briefcase on a corner of King's desk. "Superintendent, you are entitled to an explanation as to why I have broken in on you like this — "

"Glad to have you." In fact, the routine of formal politeness was an anodyne to Kings frayed nerves.

"That's kind of you, but — That secretary chap, the one that brought me in here, would it be too much to

ask you to tell him to forget my name? I know it seems strange — "

"Not at all." King was mystified, but willing to grant any reasonable request of a distinguished colleague in science. He summoned Steinke to the interoffice visiphone and gave him his orders.

Lentz stood up and indicated that he was about to leave. He caught Harrington's eye. "I think you want a private palaver, Captain"

King looked from Harrington to Lentz and back to Harrington. The astronomer showed momentary indecision, then protested: "I have no objection at all myself; it's up to Dr. King. As a matter of fact," he added, "It might be a very good thing if you did sit in on it."

"I don't know what it is, Captain," observed King, "that you want to see me about, but Dr. Lentz is already here in a confidential capacity."

"Good! Then that's settled. I'll get right down to business. Dr. King, you know Destry's mechanics of infinitesimals?"

"Naturally." Lentz cocked a brow at King, who chose to ignore it.

"Yes, of course. Do you remember theorem six and the transformation between equations thirteen and fourteen?"

"I think so, but I'd want to see them." King got up and went over to a bookcase. Harrington stayed him with a hand.

"Don't bother. I have them here." He hauled out a key, unlocked his briefcase, and drew out a large, much-thumbed, loose-leaf notebook. "Here.

You, too, Dr. Lentz. Are you familiar with this development?"

Lentz nodded. "I've had occasion to look into them"

"Good — I think it's agreed that the step between thirteen and fourteen is the key to the whole matter. Now, the change from thirteen to fourteen looks perfectly valid — and would be, in some fields. But suppose we expand it to show every possible phase of the matter, every link in the chain of reasoning."

He turned a page and showed them the same two equations broken down into nine intermediate equations. He placed a finger under an associated group of mathematical symbols. "Do you see that? Do you see what that implies?" He peered anxiously at their faces.

King studied it, his lips moving. "Yes . . . I believe I do see. Odd . . . I never looked at it just that way before — yet I've studied those equations until I've dreamed about them." He turned to Lentz. "Do you agree, Doctor?"

Lentz nodded slowly. "I believe so . . . Yes, I think I may say so."

Harrington should have been pleased; he wasn't. "I had hoped you could tell me I was wrong," he said, almost petulantly, "but I'm afraid there is no further doubt about it. Dr. Destry included an assumption valid in molar physics, but for which we have absolutely no assurance in atomic physics. I suppose you realize what this means to you, Dr. King?"

King's voice was dry whisper. "Yes," he said, "yes — It means that if that bomb out there ever blows up, we must assume that it will go up all at once, rather than the way Destry predicted — and God help the human race!"

Captain Harrington cleared his throat to break the silence that followed. "Superintendent," he said, "I would not have ventured to call had it been simply a matter of disagreement as to interpretation of theoretical predictions — "

"You have something more to go on?"

"Yes and no. Probably you gentlemen think of the Naval Observatory as being exclusively preoccupied with ephemerides and tide tables. In a way you would be right — but we still have some time to devote to research as long as it doesn't cut into the appropriation. My special interest has always been lunar theory.

"I don't mean lunar ballistics," he continued. "I mean the much more

interesting problem of its origin and history, the problem the younger Darwin struggled with, as well as my illustrious predecessor, Captain T.J.J. See. I think that it is obvious that any theory of lunar origin and history must take into account the surface features of the Moon — especially the mountains, the craters, that mark its face so prominently."

He paused momentarily, and Superintendent King put in: "Just a minute, Captain — I may be stupid, or perhaps I missed something, but — is there a connection between what we were discussing before and lunar theory?"

"Bear with me for a few moments, Dr. King," Harrington apologized. "There is a connection — at least, I'm afraid there is a connection — but I would rather present my points in their proper order before making my conclusions." They granted him an alert silence; he went on:

"Although we are in the habit of referring to the craters of the Moon, we know they are not volcanic craters. Superficially, they follow none of the rules of terrestrial volcanoes in appearance or distribution, but when Rutter came out in 1952 with his monograph on the dynamics of vulcanology, he proved rather conclusively that the lunar craters could not be caused by anything that we know as volcanic action.

"That left the bombardment theory as the simplest hypothesis. It looks good, on the face of it, and a few minutes spent throwing pebbles into a patch of mud will convince anyone that the lunar craters could have been formed by falling meteors.

"But there are difficulties. If the Moon was struck so repeatedly, why not the Earth? It hardly seems necessary to mention that the Earth's atmosphere would be no protection against masses big enough to form craters like Endymion or Plato. And if they fell after the Moon was a dead world while the Earth was still young enough to change its face and erase the marks of bombardment, why did the meteors avoid so nearly completely the great dry basins we call lunar seas?

"I want to cut this short; you'll find the data and the mathematical investigations from the data here in my notes. There is one other major objection to the meteor-bombardment theory: the great rays that spread from Tycho across almost the entire surface of the Moon. It makes the Moon look like a crystal ball that had been struck with a hammer, and impact from outside seems evident, but there are difficulties. The striking mass, our hypothetical meteor, must be small enough to have formed the crater of Tycho, but it must have the mass and speed to crack an entire planet.

"Work it out for yourself — you must either postulate a chunk out of the core of a dwarf star, or speeds such as we have never observed within the

system. It's conceivable but a farfetched explanation."

He turned to King. "Doctor, does anything occur to you that might account for a phenomenon like Tycho?"

The Superintendent grasped the arms of his chair, then glanced at his palms. He fumbled for a handkerchief, and wiped them. "Go ahead," he said, almost inaudibly.

"Very well then." Harrington drew out of his briefcase a large photograph of the Moon — a beautiful full-Moon portrait made at Lick. "I want you to imagine the Moon as she might have been sometime in the past. The dark areas we call the 'seas' are actual oceans. It has an atmosphere, perhaps a heavier gas than oxygen and nitrogen, but an active gas, capable of supporting some conceivable form of life.

"For this is an inhabited planet, inhabited by intelligent beings, beings capable of discovering atomic power and exploiting it!"

He pointed out on the photograph, near the southern limb, the lime-white circle of Tycho, with its shining, incredible, thousand-mile-long rays spreading, thrusting, jutting out from it. "Here . . . here at Tycho was located their main power plant." He moved his fingers to a point near the equator and somewhat east of meridian — the point where three great dark areas merged, Mare Nubium, Mare Imbrium, Oceanus Procellarun — and picked out two bright splotches surrounded, also, by rays, but shorter, less distinct, and wavy. "And here at Copernicus and at Kepler, on islands at the middle of a great ocean, were secondary power stations."

He paused, and interpolated soberly: "Perhaps they knew the danger they ran, but wanted power so badly that they were willing to gamble the life of their race. Perhaps they were ignorant of the ruinous possibilities of their little machines, or perhaps their mathematicians assured them that it could not happen.

"But we will never know — no one can ever know. For it blew up and killed them — and it killed their planet.

"It whisked off the gassy envelope and blew it into outer space. It blasted great chunks off the planet's crust. Perhaps some of that escaped completely, too, but all that did not reach the speed of escape fell back down in time and splashed great ring-shaped craters in the land.

"The oceans cushioned the shock; only the more massive fragments formed craters through the water. Perhaps some life still remained in those ocean depths. If so, it was doomed to die — for the water, unprotected by

atmospheric pressure, could not remain liquid and must inevitably escape in time to outer space. Its life-blood drained away. The planet was dead — dead by suicide!"

He met the grave eyes of his two silent listeners with an expression almost of appeal. "Gentlemen . . . this is only a theory, I realize . . . only a theory, a dream, a nightmare . . . but it has kept me awake so many nights that I had to come tell you about it, and see if you saw it the same way I do. As for the mechanics of it, it's all in there in my notes. You can check it — and I pray that you find some error! But it is the only lunar theory I have examined which included all of the known data and accounted for all of them."

He appeared to have finished. Lentz spoke up. "Suppose, Captain, suppose we check your mathematics and find no flaw — what then?"

Harrington flung out his hands. "That's what I came here to find out!"

Although Lentz had asked the question, Harrington directed the appeal to King. The Superintendent looked up; his eyes met the astronomer's, wavered and dropped again. "There's nothing to be done," he said dully, "nothing at all."

Harrington stared at him in open amazement. "But good God, man!" he burst out. "Don't you see it? That bomb has got to be disassembled — at once!"

"Take it easy, Captain." Lentz's calm voice was a spray of cold water. "And don't be too harsh on poor King — this worries him even more than it does you. What he means is this: we're not faced with a problem in physics, but with a political and economic situation. Let's put it this way: King can no more dump the bomb than a peasant with a vineyard on the slopes of Mount Vesuvius can abandon his holdings and pauperize his family simply because there will be an eruption some day.

"King doesn't own that bomb out there; he's only the custodian. If he dumps it against the wishes of the legal owners, they'll simply oust him and put in someone more amenable. No, we have to convince the owners."

"The President could do it," suggested Harrington. "I could get to the President — "

"No doubt you could, through the Navy Department. And you might even convince him. But could he help much?"

"Why, of course he could. He's the President!"

"Wait a minute. You're Director of the Naval Observatory; suppose you took a sledge hammer and tried to smash the big telescope — how far would you get?"

"Not very far," Harrington conceded. "We guard the big fellow pretty closely."

"Nor can the President act in an arbitrary manner," Lentz persisted. "He's not an unlimited monarch. If he shuts down this plant without due process of law, the Federal courts will tie him in knots. I admit that Congress isn't helpless, but — would you like to try to give a congressional committee a course in the mechanics of infinitesimals?"

Harrington readily stipulated the point. "But there is another way," he pointed out. "Congress is responsive to public opinion. What we need to do is to convince the public that the bomb is a menace to everybody. That could be done without ever trying to explain things in terms of higher mathematics."

"Certainly it could," Lentz agreed. "You could go on the air with it and scare everybody half to death. You could create the damnedest panic this slightly slug-nutty country has ever seen. No, thank you. I, for one, would rather have us all take the chance of being quietly killed than bring on a mass psychosis that would destroy the culture we are building up. I think one taste of the Crazy Years is enough."

"Well, then, what do you suggest?"

Lentz considered shortly, then answered: "All I see is a forlorn hope. We've got to work on the Board of Directors and try to beat some sense into their heads."

King, who had been following the discussion with attention in spite of his tired despondency, interjected a remark: "How would you go about that?"

"I don't know," Lentz admitted. "It will take some thinking. But it seems the most fruitful line of approach. If it doesn't work, we can always fall back on Harrington's notion of publicity — I don't insist that the world commit suicide to satisfy my criteria of evaluation."

Harrington glanced at his wristwatch — a bulky affair — and whistled. "Good heavens!" he exclaimed. "I forgot the time! I'm supposed officially to be at the Flagstaff Observatory."

King had automatically noted the time shown by the Captain's watch as it was displayed. "But it can't be that late." he had objected. Harrington

looked puzzled, then laughed.

"It isn't — not by two hours. We are in zone plus-seven; this shows zone plus-five — it's radio-synchronized with the master clock at Washington."

"Did you say radio-synchronized?"

"Yes. Clever, isn't it?" He held it out for inspection. "I call it a telechronometer; it's the only one of its sort to date. My nephew designed it for me. He's a bright one, that boy. He'll go far. That is — " his face clouded, as if the little interlude had only served to emphasize the tragedy that hung over them — "if any of us live that long!"

A signal light glowed at King's desk, and Steinke's face showed on the communicator screen. King answered him, then said, "Your car is ready, Dr. Lentz."

"Let Captain Harrington have it."

"Then you're not going back to Chicago?"

"No. The situation has changed. If you want me, I'm stringing along."

The following Friday, Steinke ushered Lentz into Kings office. King looked almost happy as he shook hands. "When did you ground, Doctor? I didn't expect you back for another hour or so."

"Just now. I hired a cab instead of waiting for the shuttle."

"Any luck?"

"None. The same answer they gave you: "The Company is assured by independent experts that Destry's mechanics is valid, and sees no reason to encourage an hysterical attitude among its employees.' "

King tapped on his desk top, his eyes unfocused. Then, hitching himself around to face Lentz directly, he said, "Do you suppose the Chairman is right?"

"How?"

"Could the three of us — you, me and Harrington — have gone off the deep end — slipped mentally?"

"No."

"You're sure?"

"Certain. I looked up some independent experts of my own, not retained by the Company, and had them check Harrington's work. It checks." Lentz purposely neglected to mention that he had done so partly because he was none too sure of King's present mental stability.

King sat up briskly, reached out and stabbed a push button. "I am going to make one more try," he explained, "to see if I can't throw a scare into Dixon's thick head. Steinke," he said to the communicator, "get me Mr. Dixon on the screen."

"Yes, sir."

In about two minutes the visiphone screen came to life and showed the features of Chairman Dixon. He was transmitting, not from his office, but from the board room of the Company in Jersey City. "Yes?" he said. "What is it, Superintendent?" His manner was somehow both querulous and affable.

"Mr. Dixon," King began, "I've called to try to impress on you the seriousness of the Company's action. I stake my scientific reputation that Harrington has proved completely that — "

"Oh, that? Mr. King, I thought you understood that that was a closed matter."

"But, Mr. Dixon — "

"Superintendent, please! If there were any possible legitimate cause to fear, do you think I would hesitate? I have children, you know, and grandchildren."

"That is just why — "

"We try to conduct the affairs of the company with reasonable wisdom and in the public interest. But we have other responsibilities, too. There are hundreds of thousands of little stockholders who expect us to show a reasonable return on their investment. You must not expect us to jettison a billion-dollar corporation just because you've taken up astrology! Moon theory!" He sniffed.

"Very well, Mr. Chairman." King's tone was stiff.

"Don't take it that way, Mr. King. I'm glad you called — the Board has just

adjourned a special meeting. They have decided to accept you for retirement — with full pay, of course."

"I did not apply for retirement!"

"I know, Mr. King, but the Board feels that — "

"I understand. Good-by!"

"Mr. King — "

"Good-by!" He switched him off, and turned to Lentz. " ' — with full pay,' " he quoted, "which I can enjoy in any way that I like for the rest of my life — just as happy as a man in the death house!"

"Exactly," Lentz agreed. "Well, we've tried our way. I suppose we should call up Harrington now and let him try the political and publicity method."

"I suppose so," King seconded absentmindedly. "Will you be leaving for Chicago now?"

"No," said Lentz. "No.... I think I will catch the shuttle for Los Angeles and take the evening rocket for the antipodes."

King looked surprised, but said nothing. Lentz answered the unspoken comment. "Perhaps some of us on the other side of the Earth will survive. I've done all that I can here. I would rather be a live sheepherder in Australia than a dead psychiatrist in Chicago."

King nodded vigorously. "That shows horse sense. For two cents, I'd dump the bomb now and go with you."

"Not horse sense, my friend — a horse will run back into a burning barn, which is exactly not what I plan to do. Why don't you do it and come along? If you did, it would help Harrington to scare 'em to death."

'I believe I will!"

Steinke's face appeared again on the screen. "Harper and Erickson are here, chief."

"I'm busy."

"They are pretty urgent about seeing you."

"Oh . . . all right," King said in a tired voice, "show them in. It doesn't

matter."

They breezed in, Harper in the van. He commenced talking at once, oblivious to the Superintendent's morose preoccupation. 'We've got it, chief, we've got it — and it all checks out to the umpteenth decimal!"

"You've got what? Speak English."

Harper grinned. He was enjoying his moment of triumph, and was stretching it out to savor it. "Chief, do you remember a few weeks back when I asked for an additional allotment — a special one without specifying how I was going to spend it?"

"Yes. Come on — get to the point."

"You kicked at first, but finally granted it. Remember? Well, we've got something to show for it, all tied up in pink ribbon. It's the greatest advance in radioactivity since Hahn split the nucleus. Atomic fuel, chief, atomic fuel, safe, concentrated, and controllable. Suitable for rockets, for power plants, for any damn thing you care to use it for."

King showed alert interest for the first time. "You mean a power source that doesn't require the bomb?"

"The bomb? Oh, no, I didn't say that. You use the bomb to make the fuel, then you use the fuel anywhere and anyhow you like, with something like ninety-two percent recovery of the energy of the bomb. But you could junk the mercury-steam sequence, if you wanted to.

King's first wild hope of a way out of his dilemma was dashed; he subsided. "Go ahead. Tell me about it."

"Well — It's a matter of artificial radioactives. Just before I asked for that special research allotment, Erickson and I — Dr. Lentz had a finger in it, too — found two isotopes of a radioactive that seemed to be mutually antagonistic. That is, when we goosed 'em in the presence of each other they gave up their latent energy all at once — blew all to hell. The important point is, we were using just a gnat's whisker of mass of each — the reaction didn't require a big mass like the bomb to maintain it."

"I don't see," objected King, "how that could — "

"Neither do we, quite — but it works. We've kept it quiet until we were sure. We checked on what we had, and we found a dozen other fuels. Probably we'll be able to tailor-make fuels for any desired purpose. But here it is." Harper handed King a bound sheaf of typewritten notes which he had

been carrying under the arm. "That's your copy. Look it over."

King started to do so. Lentz joined him, after a look that was a silent request for permission, which Erickson had answered with his only verbal contribution, "Sure Doc."

As King read, the troubled feeling of an acutely harassed executive left him. His dominant personality took charge, that of the scientist. He enjoyed the controlled and cerebral ecstasy of the impersonal seeker for the elusive truth. The emotions felt in the throbbing thalamus were permitted only to form a sensuous obbligato for the cold flame of cortical activity. For the time being, he was sane, more nearly completely sane than most men ever achieve at any time.

For a long period there was only an occasional grunt, the clatter of turned pages, a nod of approval. At last he put it down.

"It's the stuff," he said. "You've done it, boys. It's great; I'm proud of you."

Erickson glowed a bright pink and swallowed. Harper's small, tense figure gave the ghost of a wriggle, reminiscent of a wire-haired terrier receiving approval. "That fine, chief. We'd rather hear you say that than get the Nobel Prize."

"I think you'll probably get it. However — " the proud light in his eyes died down — "I'm not going to take any action in this matter."

"Why not, chief?" Harper's tone was bewildered.

"I'm being retired. My successor will take over in the near future; this is too big a matter to start just before a change in administration."

"You being retire! Blazes!"

"About the same reason I took you off the bomb — at least, the Directors think so."

"But that's nonsense! You were right to take me off the bomb; I was getting jumpy. But you're another matter — we all depend on you."

"Thanks, Cal — but that's how it is; there's nothing to be done about it." He turned to Lentz. "I think this is the last ironical touch needed to make the whole thing pure farce," he observed bitterly. "This thing is big, bigger than we can guess at this stage — and I have to give it a miss.

"Well," Harper burst out, "I can think of something to do about it!" He strode over to King's desk and snatched up the manuscript. "Either you superintend the

exploitation or the company will damn well get along without our discovery!" Erickson concurred belligerently.

"Wait a minute." Lentz had the floor. "Dr. Harper, have you already achieved a practical rocket fuel?"

"I said so. We've got it on hand now."

"An escape-speed fuel?" They understood his verbal shorthand-a fuel that would lift a rocket free of the Earth's gravitational pull.

"Sure. Why, you could take any of the Clipper rockets, refit them a trifle, and have breakfast on the Moon."

"Very well. Bear with me — " He obtained a sheet of paper from King and commenced to write. They watched in mystified impatience. He continued briskly for some minutes, hesitating only momentarily. Presently he stopped and spun the paper over to King. "Solve it!" he demanded.

King studied the paper. Lentz had assigned symbols to a great number of factors, some social, some psychological, some physical, some economical. He had thrown them together into a structural relationship, using the symbols of calculus of statement. King understood the paramathematical operations indicated by the symbols, but he was not as used to them as he was to the symbols and operations of mathematical physics. He plowed through the equations, moving his lips slightly in unconscious subvocalization.

He accepted a pencil from Lentz and completed the solution. It required several more lines, a few more equations, before the elements canceled out, or rearranged themselves, into a definite answer.

He stared at this answer while puzzlement gave way to dawning comprehension and delight.

He looked up. "Erickson! Harper!" he rapped out. "We will take your new fuel, refit a large rocket, install the bomb in it, and throw it into an orbit around the Earth, far out in space. There we will use it to make more fuel, safe fuel, for use on Earth, with the danger from the bomb itself limited to the operators actually on watch!"

There was no applause. It was not that sort of an idea; their minds were

still struggling with the complex implications.

"But, chief," Harper finally managed, "how about your retirement? We're still not going to stand for it."

"Don't worry," King assured him "It's all in there, implicit in those equations, you two, me, Lentz, the Board of Directors — and just what we all have to do to accomplish it."

"All except the matter of time," Lentz cautioned.

"Eh?"

"You'll note that elapsed time appears in your answer as an undetermined unknown."

"Yes . . . yes, of course. That's the chance we have to take. Let's get busy!"

Chairman Dixon called the Board of Directors to order. "This being a special meeting, we'll dispense with minutes and reports," he announced. "As set forth in the call we have agreed to give the retiring superintendent three hours of our time."

"Mr. Chairman — "

"Yes, Mr. Thornton?"

"I thought we had settled that matter."

"We have, Mr. Thornton, but in view of Superintendent King's long and distinguished service, if he asks a hearing, we are honor bound to grant it. You have the floor, Dr. King."

King got up and stated briefly, "Dr. Lentz will speak for me." He sat down.

Lentz had to wait till coughing, throat clearing and scraping of chairs subsided. It was evident that the board resented the outsider.

Lentz ran quickly over the main points in the argument which contended that the bomb presented an intolerable danger anywhere on the face of the Earth. He moved on at once to the alternative proposal that the bomb should be located in a rocketship, an artificial moonlet flying in a free orbit around the Earth at a convenient distance — say, fifteen thousand miles —

while secondary power stations on Earth burned a safe fuel manufactured by the bomb.

He announced the discovery of the Harper-Erickson technique and dwelt on what it meant to them commercially. Each point was presented as persuasively as possible, with the full power of his engaging personality. Then he paused and waited for them to blow off steam.

They did. "Visionary — " "Unproved — " No essential change in the situation — " The substance of it was that they were very happy to hear of the new fuel, but not particularly impressed by it. Perhaps in another twenty years, after it had been thoroughly tested and proved commercially, and provided enough uranium had been mined to build another bomb, they might consider setting up another power station outside the atmosphere. In the meantime there was no hurry.

Lentz patiently and politely dealt with their objections. He emphasized the increasing incidence of occupational psychoneurosis among the engineers and grave danger to everyone near the bomb even under the orthodox theory. He reminded them of their insurance and indemnity-bond costs, and of the "squeeze" they paid State politicians.

Then he changed his tone and let them have it directly and brutally. "Gentlemen," he said, "we believe that we are fighting for our lives — our own lives, our families and every life on the globe. If you refuse this compromise, we will fight as fiercely and with as little regard for fair play as any cornered animal." With that he made his first move in attack.

It was quite simple. He offered for their inspection the outline of a propaganda campaign on a national scale, such as any major advertising firm could carry out as matter of routine. It was complete to the last detail, television broadcasts, spot plugs, newspaper and magazine coverage and — most important — a supporting whispering campaign and a letters-to-Congress organization. Every businessman there knew from experience how such things worked.

But its object was to stir up fear of the bomb and to direct that fear, not into panic, but into rage against the Board of Directors personally, and into a demand that the government take action to have the bomb removed to outer space.

"This is blackmail! We'll stop you!"

"I think not," Lentz replied gently. "You may be able to keep us out of some of the newspapers, but you can't stop the rest of it. You can't even keep us off the air — ask the Federal Communications Commission." It was

true Harrington had handled the political end and had performed his assignment well; the President was convinced.

Tempers were snapping on all sides; Dixon had to pound for order. "Dr. Lentz," he said, his own temper under taut control, "you plan to make every one of us appear a black-hearted scoundrel with no other thought than personal profit, even at the expense of the lives of others. You know that is not true; this is a simple difference of opinion as to what is wise."

"I did not say it was true," Lentz admitted blandly, "but you will admit that I can convince the public that you are deliberate villains. As to it being a difference of opinion — you are none of you atomic physicists; you are not entitled to hold opinions in this matter.

"As a matter of fact," he went on callously, "the only doubt in my mind is whether or not an enraged public will destroy your precious power plant before Congress has time to exercise eminent domain and take it away from you!"

Before they had time to think up arguments in answer and ways of circumventing him, before their hot indignation had cooled and set as stubborn resistance, he offered his gambit. He produced another layout for a propaganda campaign — an entirely different sort.

This time the Board of Directors was to be built up, not torn down. All of the same techniques were to be used; behind-the-scenes feature articles with plenty of human interest would describe the functions of the company, describe it as a great public trust, administered by patriotic, unselfish statesmen of the business world. At the proper point in the campaign, the Harper-Erickson fuel would be announced not as a semiaccidental result of the initiative of two employees, but as the long-expected end product of years of systematic research conducted under a fixed policy growing naturally out of their humane determination to remove forever the menace of explosion from even the sparsely settled Arizona desert.

No mention was to be made of the danger of complete, planet-embracing catastrophe.

Lentz discussed it. He dwelt on the appreciation that would be due them from a grateful world. He invited them to make a noble sacrifice and, with subtle misdirection, tempted them to think of themselves as heroes. He deliberately played on one of the most deep-rooted of simian instincts, the desire for approval from one's kind, deserved or not.

All the while he was playing for time, as he directed his attention from one hard case, one resistant mind, to another. He soothed and he tickled

and he played on personal foibles. For the benefit of the timorous and the devoted family men, he again painted a picture of the suffering, death and destruction that might result from their well-meant reliance on the unproved and highly questionable predictions of Destry's mathematics. Then he described in glowing detail a picture of a world free from worry but granted almost unlimited power, safe power from an invention which was theirs for this one small concession.

It worked. They did not reverse themselves all at once, but a committee was appointed to investigate the feasibility of the proposed spaceship power plant. By sheer brass Lentz suggested names for the committee and Dixon confirmed his nominations, not because he wished to, particularly, but because he was caught off guard and could not think of a reason to refuse without affronting those colleagues.

The impending retirement of King was not mentioned by either side. Privately, Lentz felt sure that it never would be mentioned.

It worked, but there was left much to do. For the first few days after the victory in committee, King felt much elated by the prospect of an early release from the soul-killing worry. He was buoyed up by pleasant demands of manifold new administrative duties. Harper and Erickson were detached to Goddard Field to collaborate with the rocket engineers there in design of firing chambers, nozzles, fuel stowage, fuel metering and the like. A schedule had to be worked out with the business office to permit as much power of the bomb as possible to — be diverted to making atomic fuel, and a giant combustion chamber for atomic fuel had to be designed and ordered to replace the bomb itself during the interim between the time it was shut down on Earth and the later time when sufficient local, smaller plants could be built to carry the commercial load. He was busy.

When the first activity had died down and they were settled in a new routine, pending the shutting down of the bomb and its removal to outer space, King suffered an emotional reaction. There was, by then, nothing to do but wait, and tend the bomb, until the crew at Goddard Field smoothed out the bugs and produced a space-worthy rocketship.

They ran into difficulties, overcame them, and came across more difficulties. They had never used such high reaction velocities; it took many trials to find a nozzle shape that would give reasonably high efficiency. When that was solved, and success seemed in sight, the jets burned out on a time trial ground test. They were stalemated for weeks over that hitch.

Back at the power plant Superintendent King could do nothing but chew his nails and wait. He had not even the release of running over to Goddard Field to watch the progress of the research, for, urgently as he desired to, he felt an even stronger, an overpowering compulsion to watch over the bomb lest it — heartbreakingly! — blow up at the last minute.

He took to hanging around the control room. He had to stop that; his unease communicated itself to his watch engineers; two of them cracked up in a single day — one of them on watch.

He must face the fact — there had been a grave upswing in psychoneurosis among his engineers since the period of watchful waiting had commenced. At first, they had tried to keep the essential facts of the plan a close secret, but it had leaked out, perhaps through some member of the investigating committee. He admitted to himself now that it had been a mistake ever to try to keep it secret — Lentz had advised against it, and the engineers not actually engaged in the change-over were bound to know that something was up.

He took all of the engineers into confidence at last, under oath of secrecy. That had helped for a week or more, a week in which they were all given a spiritual lift by the knowledge, as he had been. Then it had worn off, the reaction had set in, and the psychological observers had started disqualifying engineers for duty almost daily. They were even reporting each other as mentally unstable with great frequency; he might even be faced with a shortage of psychiatrists if that kept up, he thought to himself with bitter amusement. His engineers were already standing four hours in every sixteen. If one more dropped out, he'd put himself on watch. That would be a relief, to tell himself the truth.

Somehow, some of the civilians around about and the nontechnical employees were catching onto the secret. That mustn't go on — if it spread any farther there might be a nation-wide panic. But how the hell could he stop it? He couldn't.

He turned over in bed, rearranged his pillow, and tried once more to get to sleep. No soap. His head ached, his eyes were balls of pain, and his brain was a ceaseless grind of useless, repetitive activity, like a disk recording stuck in one groove.

God! This was unbearable! He wondered if he were cracking up — if he already had cracked up. This was worse, many times worse, than the old routine when he had simply acknowledged the danger and tried to forget it as much as much as possible. Not that the bomb was any different — it was this five-minutes-to-armistice feeling, this waiting for the curtain to go up, this race against time with nothing to do to help.

He sat up, switched on his bed lamp, and looked at the clock. Three thirty. Not so good. He got up, went into his bathroom, and dissolved a sleeping powder in a glass of whiskey and water, half and half. He gulped it down and went back to bed. Presently he dozed off.

He was running, fleeing down a long corridor. At the end lay safety — he knew that, but he was so utterly exhausted that he doubted his ability to finish the race. The thing pursuing him was catching up; he forced his leaden, aching legs into greater activity. The thing behind him increased its pace, and actually touched him. His heart stopped, then pounded again. He became aware that he was screaming, shrieking in mortal terror.

But he had to reach the end of that corridor; more depended on it than just himself. He had to. He had to! He had to!

Then the sound hit him, and he realized that he had lost, realized it with utter despair and utter, bitter defeat. He had failed, the bomb had blown up.

The sound was the alarm going off; it was seven o'clock. His pajamas were soaked, dripping with sweat, and his heart still pounded. Every ragged nerve throughout his body screamed for release. It would take more than a cold shower to cure this case of the shakes.

He got to the office before the janitor was out of it. He sat there, doing nothing, until Lentz walked in on him, two hours later. The psychiatrist came in just as he was taking two small tablets from a box in his desk.

"Easy . . . easy, old man," Lentz said in a slow voice. "What have you there?" He came around and gently took possession of the box.

"Just a sedative."

Lentz studied the inscription on the cover. "How many have you had today?"

"Just two, so far."

"You don't need a sedative; you need a walk in the fresh air. Come, take one with me."

"You're a fine one to talk — you're smoking a cigarette that isn't

lighted!"

"Me? Why, so I am! We both need that walk. Come."

Harper arrived less than ten minutes after they had left the office. Steinke was not in the outer office. He walked on through and pounded on the door of King's private office, then waited with the man who accompanied him — a hard young chap with an easy confidence to his bearing. Steinke let them in.

Harper brushed on past him with a casual greeting, then checked himself when he saw that there was no one else inside.

"Where's the chief?" he demanded.

"Gone out. Should be back soon."

"I'll wait. Oh — Steinke, this is Greene. Greene — Steinke."

The two shook hands. "What brings you back, Cal?" Steinke asked, turning back to Harper.

"Well . . . I guess it's all right to tell you — "

The communicator screen flashed into sudden activity, and cut him short. A face filled most of the frame. It was apparently too close to the pickup, as it was badly out of focus. "Superintendent!" it yelled in an agonized voice. "The bomb — "

A shadow flashed across the screen, they heard a dull smack, and the face slid out of the screen. As it fell it revealed the control room behind it. Someone was down on the floor plates, a nameless heap. Another figure ran across the field of pickup and disappeared.

Harper snapped into action first. "That was Silard!" he shouted, "in the control room! Come on, Steinke! He was already in motion himself.

Steinke went dead-white, but hesitated only an unmeasurable instant. He pounded sharp on Harper's heels. Greene followed without invitation, in a steady run that kept easy pace with them.

They had to wait for a capsule to unload at the tube station. Then all three of them tried to crowd into a two-passenger capsule. It refused to start, and moments were lost before Greene piled out and claimed another car.

The four-minute trip at heavy acceleration seemed an interminable crawl. Harper was convinced that the system had broken down, when the familiar click and sigh announced their arrival at the station under the bomb. They jammed each other trying to get out at the same time.

The lift was up; they did not wait for it. That was unwise; they gained no time by it, and arrived at the control level out of breath. Nevertheless, they speeded up when they reached the top, zigzagged frantically around the outer shield, and burst into the control room.

The limp figure was still on the floor, and another, also inert, was near it. The second's helmet was missing.

The third figure was bending over the trigger. He looked up as they came in, and charged them. They hit him together, and all three went down. It was two to one, but they got in each other's way. The man's heavy armor protected him from the force of their blows. He fought with senseless, savage violence.

Harper felt a bright, sharp pain; his right arm went limp and useless. The armored figure was struggling free of them.

There was a shout from somewhere behind them, "Hold still!"

Harper saw a flash with the corner of one eye, a deafening crack hurried on top of it, and re-echoed painfully in the restricted space.

The armored figure dropped back to his knees, balanced there, and then fell heavily on his face. Greene stood in the entrance, a service pistol balanced in his hand.

Harper got up and went over to the trigger. He tried to reduce the dampening adjustment, but his right hand wouldn't carry out his orders, and his left was too clumsy. Steinke," he called, "come here! Take over."

Steinke hurried up, nodded as he glanced at the readings, and set busily to work.

It was thus that King found them when he bolted in a very few minutes later.

"Harper!" he shouted, while his quick glance was still taking in the situation. "What's happened?"

Harper told him briefly. He nodded. "I saw the tail end of the fight from my office — Steinke!" He seemed to grasp for the first time who was on the trigger. "He can't manage the controls — " He hurried toward him.

Steinke looked up at his approach. "Chief!" he called out. "Chief! I've got my mathematics back!"

King looked bewildered, then nodded vaguely, and let him be. He turned back to Harper. "How does it happen you're here?"

"Me? I'm here to report — we've done it, chief!"

"Eh?"

"We've finished; it's all done. Erickson stayed behind to complete the power-plant installation on the big ship. I came over in the ship we'll use to shuttle between Earth and the big ship, the power plant. Four minutes from Goddard Field to here in her. That's the pilot over there." He pointed to the door, where Greene's solid form partially hid Lentz.

"Wait a minute. You say that everything is ready to install the bomb in the ship? You're sure?"

"Positive. The big ship has already flown with our fuel-longer and faster than she will have to fly to reach station in her orbit; I was in it — out in space, chief! We're all set, six ways from zero."

King stared at the dumping switch, mounted behind glass at the top of the instrument board. "There's fuel enough," he said softly, as if he were alone and speaking only to himself; "there's been fuel enough for weeks."

He walked swiftly over to the switch, smashed the glass with his fist, and pulled it.

The room rumbled and shivered as two and a half tons of molten, massive metal, heavier than gold, coursed down channels, struck against baffles, split into a dozen dozen streams, and plunged to rest in leaden receivers — to rest, safe and harmless, until it should be reassembled far out in space.

SEARCHLIGHT

"WILL SHE HEAR YOU?"

"If she's on this face of the Moon. If she was able to get out of the ship. If her suit radio wasn't damaged. If she has it turned on. If she is alive. Since the ship is silent and no radar beacon has been spotted, it is unlikely that she or the pilot lived through it."

"She's got to be found! Stand by, Space Station. Tycho Base, acknowledge."

Reply lagged about three seconds, Washington to Moon and back. "Lunar Base, Commanding General."

"General, put every man on the Moon out searching for Betsy!"

Speed-of-light lag made the answer sound grudging. "Sir, do you know how big the Moon is?"

"No matter! Betsy Barnes is there somewhere — so every man is to search until she is found. If she's dead, your precious pilot would be better off dead, too!"

"Sir, the Moon is almost fifteen million square miles. If I used every man I have, each would have over a thousand square miles to search. I gave Betsy my best pilot. I won't listen to threats against him when he can't answer back. Not from anyone, sir! I'm sick of being told what to do by people who don't know Lunar conditions. My advice — my official advice, sir — is to let Meridian Station try. Maybe they can work a miracle."

The answer rapped back, "Very well, General! I'll speak to you later. Meridian Station! Report your plans."

Elizabeth Barnes, "Blind Betsy," child genius of the piano, had been making a USO tour of the Moon. She "wowed 'em" at Tycho Base, then lifted by jeep rocket for Farside Hardbase, to entertain our lonely missile men behind the Moon. She should have been there in an hour. Her pilot was a safety pilot; such ships shuttled unpiloted between Tycho and Farside daily.

After lift-off her ship departed from its programming, was lost by Tycho's radars. It was . . . somewhere.

Not in space, else it would be radioing for help and its radar beacon would be seen by other ships, space stations, surface bases. It had crashed — or made emergency landing — somewhere on the vastness of Luna.

"Meridian Space Station, Director speaking — " Lag was unnoticeable; radio bounce between Washington and the station only 22,000 miles up was only a quarter second. "We've patched Earthside stations to blanket the Moon with our call. Another broadcast blankets the far side from Station Newton at the three-body stable position. Ships from Tycho are orbiting the Moon's rim — that band around the edge which is in radio shadow from us and from the Newton. If we hear — "

"Yes, yes! How about radar search?"

"Sir, a rocket on the surface looks to radar like a million other features the same size. Our one chance is to get them to answer . . . if they can. Ultrahigh-resolution radar might spot them in months — but suits worn in those little rockets carry only six hours air. We are praying they will hear and answer."

"When they answer, you'll slap a radio direction finder on them. Eh?"

"No, sir."

"In God's name, why not?"

"Sir, a direction finder is useless for this job. It would tell us only that the signal came from the Moon — which doesn't help."

"Doctor, you're saying that you might hear Betsy — and not know where she is?"

"We're as blind as she is. We hope that she will be able to lead us to her . . . if she hears us."

"How?"

"With a Laser. An intense, very tight beam of light. She'll hear it — "

"Hear a beam of light?"

"Yes, sir. We are jury-rigging to scan like radar — that won't show anything. But we are modulating it to give a carrier wave in radio frequency, then modulating that into audio frequency — and controlling that

by a piano. If she hears us, we'll tell her to listen while we scan the Moon and run the scale on the piano — "

"All this while a little girl is dying?"

"Mister President — shut up!"

"Who was THAT?"

"I'm Betsy's father. They've patched me from Omaha. Please, Mr. President, keep quiet and let them work. I want my daughter back."

The President answered tightly, "Yes, Mr. Barnes. Go ahead, Director. Order anything you need."

In Station Meridian the director wiped his face. "Getting anything?"

"No. Boss, can't something be done about that Rio station? It's sitting right on the frequency!"

"We'll drop a brick on them. Or a bomb. Joe, tell the President."

"I heard, Director. They'll be silenced!"

"Sh! Quiet! Betsy — do you hear me?" The operator looked intent, made an adjustment.

From a speaker came a girl's light, sweet voice: " — to hear somebody! Gee, I'm glad! Better come quick — the Major is hurt."

The Director jumped to the microphone. "Yes, Betsy, we'll hurry. You've got to help us. Do you know where you are?"

"Somewhere on the Moon, I guess. We bumped hard and I was going to kid him about it when the ship fell over. I got unstrapped and found Major Peters and he isn't moving. Not dead — I don't think so; his suit puffs out like mine and I hear something when I push my helmet against him. I just now managed to get the door open." She added, "This can't be Farside; it's supposed to be night there. I'm in sunshine, I'm sure. This suit is pretty hot."

"Betsy, you must stay outside. You've got to be where you can see us."

She chuckled. "That's a good one. I see with my ears."

"Yes. You'll see us, with your ears. Listen, Betsy. We're going to scan the Moon with a beam of light. You'll hear it as a piano note. We've got the Moon split into the eighty-eight piano notes. When you hear one, yell, 'Now!' Then tell us what note you heard. Can you do that?"

"Of course," she said confidently, "if the piano is in tune."

"It is. All right, we re starting — "

"What note, Betsy?"

"Now!"

"E flat the first octave above middle C."

"This note, Betsy?"

"That's what I said."

The Director called out, "Where's that on the grid? In Mare Nubium? Tell the General!" He said to the microphone, "We're finding you, Betsy honey! Now we scan just that part you're on. We change setup. Want to talk to your Daddy meanwhile?"

"Gosh! Could I?"

"Yes indeed!"

Twenty minutes later he cut in and heard: " — of course not, Daddy. Oh, a teensy bit scared when the ship fell. But people take care of me, always have."

"Betsy?"

"Yes, sir?"

"Be ready to tell us again."

"Now!" She added, "That's a bullfrog G, three octaves down."

"This note?"

"That's right."

"Get that on the grid and tell the General to get his ships up! That cuts it to a square ten miles on a side! Now, Betsy — we know almost where you are. We are going to focus still closer. Want to go inside and cool off?"

"I'm not too hot. Just sweaty."

Forty minutes later the General's voice rang out: "They've spotted the ship! They see her waving!"

LIFE-LINE

THE CHAIRMAN rapped loudly for order. Gradually the cat-calls and boos died away as several self-appointed sergeant-at-arms persuaded a few hot-headed individuals to sit down. The speaker on the rostrum by the chairman seemed unaware of the disturbance. His bland, faintly insolent face was impassive. The chairman turned to the speaker and addressed him in a voice in which anger and annoyance were barely restrained.

"Dr. Pinero" — the "Doctor" was faintly stressed — "I must apologize to you for the unseemly outburst during your remarks. I am surprised that my colleagues should so far forget the dignity proper to men of science as to interrupt a speaker, no matter" — he paused and set his mouth — "no matter how great the provocation." Pinero smiled in his face, a smile that was in some way an open insult. The chairman visibly controlled his temper and continued: "I am anxious that the program be concluded decently and in order. I want you to finish your remarks. Nevertheless, I must ask you to refrain from affronting our intelligence with ideas that any educated man knows to be fallacious. Please confine yourself to your discovery — if you have made one."

Pinero spread his fat, white hands, palms down. "How can I possibly put a new idea into your heads, if I do not first remove your delusions?"

The audience stirred and muttered. Someone shouted from the rear of the hall: "Throw the charlatan out! We've had enough."

The chairman pounded his gavel.

"Gentlemen! Please!"

Then to Pinero, "Must I remind you that you are not a member of this body, and that we did not invite you?"

Pinero's eyebrows lifted. "So? I seem to remember an invitation on the letterhead of the Academy."

The chairman chewed his lower lip before replying. "True. I wrote that invitation myself. But it was at the request of one of the trustees — a fine, public-spirited gentleman, but not a scientist, not a member of the Academy."

Pinero smiled his irritating smile. "So? I should have guessed. Old Bidwell, not so, of Amalgamated Life Insurance? And he wanted his trained seals to expose me as a fraud, yes? For if I can tell a man the day of his own death, no one will buy his pretty policies. But how can you expose me, if you will not listen to me first? Even supposing you had the wit to understand me? Bah! He has sent jackals to tear down a lion." He deliberately turned his back on them.

The muttering of the crowd swelled and took on a vicious tone. The chairman cried vainly for order. There arose a figure in the front row.

"Mr. Chairman!"

The chairman grasped the opening and shouted: "Gentlemen! Dr. van Rhein Smitt has the floor." The commotion died away.

The doctor cleared his throat, smoothed the forelock of his beautiful white hair, and thrust one hand into a side pocket, of his smartly tailored trousers. He assumed his women's-club manner.

"Mr. Chairman, fellow members of the Academy of Science, let us have tolerance. Even a murderer has the right to say his say before the State exacts its tribute. Shall we do less? Even though one may be intellectually certain of the verdict? I grant Dr. Pinero every consideration that should be given by this august body to any unaffiliated colleague, even though" — he bowed slightly in Pinero's direction — "we may not be familiar with the university which bestowed his degree. If what he has to say is false, it cannot harm us. If what he has to say is true, we should know it." His

mellow, cultivated voice rolled on, soothing and calming. "If the eminent doctor's manner appears a trifle inurbane of our tastes, we must bear in mind that the doctor may be from a place, or a stratum, not so meticulous in these matters. Now our good friend and benefactor has asked us to hear this person and carefully assess the merit of his claims. Let us do so with dignity and decorum."

He sat down to a tumble of applause, comfortably aware that he had enhanced his reputation as an intellectual leader. Tomorrow the papers would again mention the good sense and persuasive personality of "American's Handsomest University President." Who knows; maybe now old Bidwell would come through with that swimming-pool donation.

When the applause had ceased, the chairman turned to where the center of the disturbance sat, hands folded over his little round belly, face serene.

'Will you continue, Dr. Pinero?"

"Why should I?"

The chairman shrugged his shoulders. "You came for that purpose."

Pinero arose. "So true. So very true. But was I wise to come? Is there anyone here who has an open mind, who can stare a bare fact in the face without blushing? I think not. Even that so-beautiful gentleman who asked you to hear me out has already judged me and condemned me. He seeks order, not truth. Suppose truth defies order, will he accept it? Will you? I think not. Still, if I do not speak you will win your point by default. The little man in the street will think that you little men have exposed me, Pinero, as a hoaxer, a pretender.

"I will repeat my discovery. In simple language, I have invented a technique to tell how long a man will live. r

can give you advance billing of the Angel of Death. I can tell you when the Black Camel will kneel at your door. In five minutes' time, with my apparatus, I can tell any of you how many grains of sand are still left in your hour-glass." He passed and folded his arms across his chest. For a moment no one spoke. The audience grew restless.

Finally the chairman intervened. "You aren't finished, Dr. Pinero?"

"What more is there to say?"

"You haven't told us how your discovery works."

Pinero's eyebrows shot up. "You suggest that I should turn over the fruits of my work for children to play with? This is dangerous knowledge, my friend. I keep it for the man who understands it, myself." He tapped his chest.

"How are we to know that you have anything back of your wild claims?"

"So simple. You send a committee to watch me demonstrate. If it works, fine. You admit it and tell the world so. If it does not work, I am discredited, and will apologize. Even I, Pinero, will apologize."

A slender, stoop-shouldered man stood up in the back of the hall. The chair recognized him and he spoke.

"Mr. Chairman, how can the eminent doctor seriously propose such a course? Does he expect us to wait around for twenty or thirty years for someone to die and prove his claims?"

Pinero ignored the chair and answered directly.

"Pfui! Such nonsense! Are you so ignorant of statistics that you do not know that in any large group there is at least one who will die in the immediate future? I make you a proposition. Let me test each one of you in this room, and I will name the man who will die within the fortnight, yes, and the day and hour of his death." He glanced fiercely around the room. "Do you accept?"

Another figure got to his feet, a portly man who spoke in measured syllables. "I, for one, cannot countenance such an experiment. As a medical man, I have noted with sorrow the plain marks of serious heart trouble in many of our elder colleagues. If Dr. Pinero knows those symptoms, as he may, and were he to select as his victim one of their number, the man so selected would be likely to die on schedule, whether the distinguished speaker's mechanical egg timer works or not."

Another speaker backed him up at once. "Dr. Shepard is right. Why should we waste time on voodoo tricks? It is my belief that this person who calls himself Dr. Pinero wants to use this body to give his statements authority. If we participate in this farce, we play into his hands. I don't know what his racket is, but you can bet that he has figured out some way to use us for advertising his schemes. I move, Mr. Chairman, that we proceed with our regular business."

The motion carried by acclamation, but Pinero did not sit down. Amidst cries of "Order! Order!" he shook his untidy head at them, and had his say.

"Barbarians! Imbeciles! Stupid dolts! Your kind have blocked the recognition of every great discovery since time began. Such ignorant canaille are enough to start Galileo spinning in his grave. That fat fool down there twiddling his elk's tooth calls himself a medical man. Witch doctor would be a better term! That little bald-headed runt over there — You! You style yourself a philosopher, and prate about life and time in your neat categories. What do you know of either one? How can you ever learn when you won't examine the truth when you have a chance? Bah!" He spat upon the stage. "You call this an Academy of Science. I call it an undertakers' convention, interested only in embalming the ideas of your red-blooded predecessors

He paused for breath and was grasped on each side by two members of the platform committee and rushed out the wings. Several reporters arose hastily from the press table and followed him. The chairman declared the meeting adjourned.

The newspapermen caught up with Pinero as he was going out by the stage door. He walked with a light, springy step, and whistled a little tune. There was no trace of the belligerence he had shown a moment before. They crowded about him. "How about an interview, doc?" "What d'yuh think of modern education?" "You certainly told 'em. What are your views on life after death?" "Take off your hat, doc, and look at the birdie."

He grinned at them all. "One at a time, boys, and not so fast. I used to be a newspaperman myself. How about coming up to my place?"

A few minutes later they were trying to find places to sit down in Pinero's messy bed-living room, and lighting his cigars. Pinero looked around and beamed. "What'll it be, boys? Scotch or Bourbon?" When that was taken care of he got down to business. "Now boys, what do you want to know?"

"Lay it on the line, doc. Have you got something, or haven't you?"

"Most assuredly I have something, my young friend."

"Then tell us how it works. That guff you handed the profs won't get you anywhere now."

"Please, my dear fellow. It is my invention. I expect to make some money with it. Would you have me give it away to the first person who asks for it?"

"See here, doc, you've got to give us something if you expect to get a

break in the morning papers. What do you use? A crystal ball?"

"No, not quite. Would you like to see my apparatus?"

"Sure. Now we're getting somewhere."

He ushered them into an adjoining room, and waved his hand. "There it is, boys." The mass equipment that met their eyes vaguely resembled a medico's office X-ray gear. Beyond the obvious fact that it used electrical power, and that some of the dials were calibrated in familiar terms, a casual inspection gave no clue to its actual use.

"What's the principle, doc?"

Pinero pursed his lips and considered. "No doubt you are all familiar with the truism that life is electrical in nature. Well, that truism isn't worth a damn, but it will help to give you an idea of the principle. You have also been told that time is a fourth dimension. Maybe you believe it, perhaps not. It has been said so many times that it has ceased to have any meaning. It is simply a cliche that wind bags use to impress fools. But I want you to try to visualize it now, and try to feel it emotionally."

He stepped up to one of the reporters. "Suppose we take you as an example. Your name is Rogers, is it not? Very well, Rogers, you are a space-time event having duration four ways. You are not quite six feet tall, you are about twenty inches wide and perhaps ten inches thick. In time, there stretches behind you more of this space-time event, reaching to, perhaps, 1905, of which we see a cross section here at right angles to the time axis, and as thick as the present. At the far end is a baby, smelling of sour milk and drooling its breakfast on its bib. At the other end lies, perhaps, an old man some place in the 1980s. Imagine this space-time event, which we call Rogers, as a long pink worm, continuous through the years. It stretches past us here in 1939, and the cross section we see appears as a single, discreet body. But that is illusion. There is physical continuity to this pink worm, enduring through the years. As a matter of fact, there is physical continuity in this concept to the entire race, for these pink worms branch off from other pink worms. In this fashion the race is like a vine whose branches intertwine and send out shoots. Only by taking a cross section of the vine would we fall into the error of believing that the shootlets were discreet individuals."

He paused and looked around at their faces. One of them, a dour, hard-bitten chap, put in a word.

"That's all very pretty, Pinero, if true, but where does that get you?"

Pinero favored him with an unresentful smile. "Patience, my friend. I asked you to think of life as electrical. Now think of our long, pink worm as a conductor of electricity. You have heard, perhaps, of the fact that electrical engineers can, by certain measurements, predict the exact location of a break in a transatlantic cable without ever leaving the shore. I do the same with our pink worms. By applying my instruments to the cross section here in this room I can tell where the break occurs; that is to say, where death takes place. Or, if you like, I can reverse the connections and tell you the date of your birth. But that is uninteresting; you already know it."

The dour individual sneered. "I've caught you, doc. If what you say about the race being like a vine of pink worms is true, you can't tell birthdays, because the connection with the race is continuous at birth. Your electrical conductor reaches on back through the mother into a man's remotest ancestors."

Pinero beamed. "True, and clever, my friend. But you have pushed analogy too far. It is not done in the precise manner in which one measures the length of an electrical conductor. In some ways it is more like measuring the length of a long corridor by bouncing an echo off the far end. At birth there is a sort of twist in the corridor, and, by proper calibration, I can detect the echo from that twist."

"Let's see you prove it!"

"Certainly, my dear friend. Will you be a subject?"

One of the others spoke up. "He's called your bluff, Luke. Put up or shut up."

"I'm game. What do I do?"

"First write the date of your birth on a sheet of paper, and hand it to one of your colleagues."

Luke complied. "Now what?"

"Remove your outer clothing and step upon these scales. Now tell me, were you ever very much thinner, or very much fatter, than you are now? No? What did you weigh at birth? Ten pounds? A fine bouncing baby boy. They don't come so big anymore."

"What is all this flubdubbery?"

"I am trying to approximate the average cross section of our long pink

conductor, my dear Luke. Now will you seat yourself here? Then place this electrode in your mouth. No, it will not hurt you; the voltage is quite low, less than one micro-volt, but I must have a good connection." The doctor left him and went behind his apparatus, where he lowered a hood over his head before touching his controls. Some of the exposed dials came to life and a low humming came from the machine. It stopped and the doctor popped out of his little hideway.

"I get sometime in February, 1902. Who has the piece of paper with the date?"

It was produced and unfolded. The custodian read, "February 22, 1902."

The stillness that followed was broken by a voice from the edge of the little group, "Doc, can I have another drink?"

The tension relaxed, and several spoke at once: "Try it on me, doc." "Me first, doc; I'm an orphan and really want to know." "How about it, doc? Give us all a little loose play."

He smilingly complied, ducking in and out of the hood like a gopher from its hole. When they all had twin slips of paper to prove the doctor's skill, Luke broke a long silence.

"How about showing how you predict death, Pinero?"

No one answered. Several of them nudged Luke forward. "Go ahead, smart guy. You asked for it." He allowed himself to be seated in the chair. Pinero changed some of the switches, then entered the hood. When the humming ceased he came out, rubbing his hands briskly together.

"Well, thats all there is to see, boys. Got enough for a story?"

"Hey, what about the prediction? When does Luke get his 'thirty'?"

Luke faced him. "Yes, how about it?"

Pinero looked pained. "Gentlemen, I am surprised at you. I give that information for a fee. Besides, it is a professional confidence. I never tell anyone but the client who consults me."

"I don't mind. Go ahead and tell them."

"I am very sorry. I really must refuse. I only agreed to show you how; not to give the results."

Luke ground the butt of his cigarette into the floor. "It's a hoax, boys. He probably looked up the age of every reporter in town just to be ready to pull this. It won't wash, Pinero."

Pinero gazed at him sadly. "Are you married, my friend?"

"No."

"Do you have anyone dependent on you? Any close relatives?"

"No. Why? Do you want to adopt me?"

Pinero shook his head. "I am very sorry for you, my dear Luke. You will die before tomorrow."

DEATH PUNCHES TIME CLOCK

. . . within twenty minutes of Pinero's strange pre-

diction, Timons was struck by a falling sign while

walking down Broadway toward the offices of the

Daily Herald where he was employed.

Dr. Pinero declined to comment but confirmed the

story that he had predicted Timons' death by means

of his so-called chronovitameter. Chief of Police

Roy. . . .

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Legal Notice

To whom it may concern, greetings; I, John Cabot Winthrop III, of the firm of Winthrop, Winthrop, Ditmars and Winthrop, Attorney-at-law, do affirm that Hugo Pinero of this city did hand to me ten thousand dollars in lawful money of the United States, and did instruct me to place it in escrow with a chartered bank of my selection with escrow instructions as follows:

The entire bond shall be forfeit, and shall forthwith be paid to the first client of Hugo Pinero and/or Sands of Time, Inc., who shall exceed his life tenure as predicted by Hugo Pinero by one per centum, or the estate of the first client who shall fail of such predicted tenure in a like amount, whichever occurs first in point of time.

Subscribed and sworn,

John Cabot Winthrop III.

Subscribed and sworn to before

me this 2nd day of April, 1939.

Albert M. Swanson

Notary Public in and for this

county and State My commission

expires June 17, 1939.

"Good evening, Mr. and Mrs. Radio Audience, let's go to press! Flash! Hugo Pinero, the Miracle Man from Nowhere, has made his thousandth death prediction without anyone claiming the reward he offered to the first person who catches him failing to call the turn. With thirteen of his clients already dead, it is mathematically certain that he has a private line to the main office of the Old Man with the Scythe. That is one piece of news I don't want to know about before it happens. Your coast-to-coast correspondent will not be a client of Prophet Pinero—"

The judge's watery baritone cut through the stale air of the courtroom. "Please, Mr. Weems, let us return to our subject. This court granted your prayer for a temporary restraining order, and now you ask that it be made permanent. In rebuttal, Dr. Pinero claims that you have presented no cause and asks that the injunction be lifted, and that I order your client to cease from attempts to interfere with what Pinero describes as a simple, lawful business. As you are not addressing a jury, please omit the rhetoric and tell me in plain language why I should not grant his prayer."

Mr. Weems jerked his chin nervously, making his flabby gray dewlap drag across his high stiff collar, and resumed:

"May it please the honorable court, I represent the public—"

"Just a moment. I thought you were appearing for Amalgamated Life Insurance."

"I am, your honor, in a formal sense. In a wider sense I represent several other of the major assurance, fiduciary and financial institutions, their stockholders and policy holders, who constitute a majority of the

citizenry. In addition we feel that we protect the interests of the entire population, unorganized, inarticulate and otherwise unprotected."

"I thought that I represented the public," observed the judge dryly. "I am afraid I must regard you as appearing for your client of record. But continue. What is your thesis?"

The elderly barrister attempted to swallow his Adam's apple, then began again: "Your honor, we contend that there are two separate reasons why this injunction should be made permanent, and, further, that each reason is sufficient alone.

"In the first place, this person is engaged in the practice of soothsaying, an occupation proscribed both in common law and statute. He is a common fortune-teller, a vagabond charlatan who preys on the gullibility of the public. He is cleverer than the ordinary gypsy palm reader, astrologer or table tipper, and to the same extent more dangerous. He makes false claims of modern scientific methods to give a spurious dignity of the thaumaturgy. We have here in court leading representatives of the Academy of Science to give expert witness as to the absurdity of his claims.

"In the second place, even if this person's claims were true—granting for the sake of argument such an absurdity—" Mr. Weems permitted himself a thin-lipped smile—"we contend that his activities are contrary to the public interest in general, and unlawfully injurious to the interests of my client in particular. We are prepared to produce numerous exhibits with the legal custodians to prove that this person did publish, or cause to have published, utterances urging the public to dispense with the priceless boon of life insurance to the great detriment of their welfare and to the financial damage of my client."

Pinero arose in his place. "Your honor, may I say a few words?"

"What is it?"

"I believe I can simplify the situation if permitted to make a brief analysis.

"Your honor," put in Weems, "this is most irregular."

"Patience, Mr. Weems. Your interests will be protected. It seems to me that we need more light and less noise in this matter. If Dr. Pinero can shorten the proceedings by speaking at this time, I am inclined to let him. Proceed, Dr. Pinero."

"Thank you, your honor. Taking the last of Mr. Weems' point first, I am

prepared to stipulate that I published the utterances he speaks of—"

"One moment, doctor. You have chosen to act as your own attorney. Are you sure you are competent to protect your own interests?"

"I am prepared to chance it, your honor. Our friends here can easily prove what I stipulate."

"Very well. You may proceed."

"I will stipulate that many persons have canceled life insurance policies as a result there of, but I challenge them to show that anyone so doing has suffered any loss or damage there from. It is true that the Amalgamated has lost business through my activities, but that is the natural result of my discovery, which has made their policies as obsolete as the bow and arrow. If an injunction is granted on that ground, I shall set up a coal-oil-lamp factory, and then ask for an injunction against the Edison and General Electric companies to forbid them to manufacture incandescent bulbs.

"I will stipulate that I am engaged in the business of making predictions of death, but I deny that I am practicing magic, black, white or rainbow-colored. If to make predictions by methods of scientific accuracy is illegal, then the actuaries of the Amalgamated have been guilty for years, in that they predict the exact percentage that will die each year in any given large group. I predict death retail; the Amalgamated predicts it wholesale. If their actions are legal, how can mine be illegal?

"I admit that it makes a difference whether I can do what I claim, or not; and I will stipulate that the so-called expert witnesses from the Academy of Science will testify that I cannot. But they know nothing of my method and cannot give truly expert testimony on it—"

"Just a moment, doctor. Mr. Weems, is it true that your expert witnesses are not conversant with Dr. Pinero's theory and methods?"

Mr. Weems looked worried. He drummed on the table top, then answered. "Will the court grant me a few moments' indulgence?"

"Certainly."

Mr. Weems held a hurried whispered consultation with his cohorts, then faced the bench. "We have a procedure to suggest, your honor. If Dr. Pinero will take the stand and explain the theory and practice of his alleged method, then these distinguished scientists will be able to advise the court as to the validity of his claims."

The judge looked inquiringly at Pinero, who responded: "I will not willingly agree to that. Whether my process is true or false, it would be dangerous to let it fall into the hands of fools and quacks—" he waved his hand at the group of professors seated in the front row, paused and smiled maliciously—"as these gentlemen know quite well. Furthermore, it is not necessary to know the process in order to prove that it will work. Is it necessary for me to re-educate this entire body of self-appointed custodians of wisdom—cure them of their ingrown superstitions—in order to prove that my predictions are correct?

"There are but two ways of forming an opinion in science. One is the scientific method; the other, the scholastic. One can judge from experiment, or one can blindly accept authority. To the scientific mind, experimental proof is all—important, and theory is merely a convenience in description, to be junked when it no longer fits. To the academic mind, authority is everything, and facts are junked when they do not fit theory laid down by authority.

"It is this point of view—academic minds clinging like oysters to disprove theories—that has blocked every advance of knowledge in history. I am prepared to prove my method by experiment, and, like Galileo in another court, I insist, "It still moves!"

"Once before I offered such proof to this Some body of self-styled experts, and they rejected it. I renew my offer; let me measure the life length of the members of the Academy of Science. Let them appoint a committee to judge the results. I will seal my findings in two sets of envelopes; on the outside of each envelope in one set will appear the name of a member; on the inside, the date of his death. In the other envelopes I will place names; on the outside I will place dates. Let the committee place the envelopes in a vault, then meet from time to time to open the appropriate envelopes. In such a large body of men some deaths may be expected, if Amalgamated actuaries can be trusted, every week or two. In such a fashion they will accumulate data very rapidly to prove that Pinero is a liar, or no."

He stopped, and thrust out his chest until it almost caught up with his little round belly. He glared at the sweating servants. "Well?"

The judge raised his eyebrows, and caught Mr. Weems' eye. "Do you accept?"

"Your honor, I think the proposal highly improper—"

The judge cut him short. "I warn you that I shall rule against you if you do not accept, or propose an equally reasonable method of arriving at the truth."

Weems opened his mouth, changed his mind, looked up and down the faces of the learned witnesses, and faced the bench. "We accept, your honor."

"Very well. Arrange the details between you. The temporary injunction is lifted, and Dr. Pinero must not be molested in the pursuit of his business. "Decision on the petition for permanent injunction is reserved without prejudice pending the accumulation of evidence. Before we leave this matter I wish to comment on the theory implied by you, Mr. Weems, when you claimed damage to your client. There has grown up in the minds of certain groups in this country the notion that because a man or corporation has made a profit out of the public for a number of years, the government and the courts are charged with the duty of guaranteeing such profit in the future, even in the face of changing circumstances and contrary to public interest. This strange doctrine is not supported by statute nor common law. Neither individuals nor corporations have any right to come into court and ask that the clock of history be stopped, or turned back."

Bidwell grunted in annoyance. "Weems, if you can't think up anything better than that, Amalgamated is going to need a new chief attorney. It's been ten weeks since you lost the injunction, and that little wart is coining money hand over fist. Meantime, every insurance firm in the country's going broke. Hoskins, what's our loss ratio?"

"It's hard to say, Mr. Bidwell. It gets worse every day. We've paid off thirteen big policies this week; all of them taken out since Pinero started operations."

A spare little man spoke up. "I say, Bidwell, we aren't accepting any new applicants for United, until we have time to check and be sure that they have not consulted Pinero. Can't we afford to wait until the scientists show him up?"

Bidwell snorted. "You blasted optimist! They won't show him up. Aldrich, can't you face a fact? The fat little pest has something; how, I don't know. This is a fight to the finish. If we wait, we're licked." He threw his cigar into a cuspidor, and bit savagely into a fresh one. "Clear out of here, all of you! I'll handle this my own way. You, too, Aldrich. United may wait, but Amalgamated won't."

Weems cleared his throat apprehensively. "Mr. Bidwell, I trust you will consult me before embarking on any major change in policy?"

Bidwell grunted. They filed out. When they were all gone and the door

closed, Bidwell snapped the switch of the inter-office announcer. "O.K.; send him in."

The outer door opened. A slight, dapper figure stood for a moment at the threshold. His small, dark eyes glanced quickly about the room before he entered, then he moved up to Bidwell with a quick, soft tread. He spoke to Bidwell in a flat, emotionless voice. His face remained impassive except for the live, animal eyes. "You wanted to talk to me?"

"Yes."

"What's the proposition?"

"Sit down, and we'll talk."

Pinero met the young couple at the door of his inner office.

"Come in, my dears, come in. Sit down. Make yourselves at home. Now tell me, what do you want of Pinero? Surely such young people are not anxious about the final roll call?"

The boy's pleasant young face showed slight confusion. "Well, you see, Dr. Pinero, I'm Ed Hartley and this is my wife, Betty. We're going to have . . . that is, Betty is expecting a baby and, well—"

Pinero smiled benignly. "I understand. You want to know how long you will live in order to make the best possible provision for the youngster. Quite wise. Do you both want readings, or just yourself?"

The girl answered, "Both of us, we think."

Pinero beamed at her. "Quite so. I agree. Your reading presents certain technical difficulties at this time, but I can give you some information now. Now come into my laboratory, my dears, and we'll commence."

He rang for their case histories, then showed them into his workshop. "Mrs. Hartley first, please. If you will go behind that screen and remove your shoes and your outer clothing, please."

He turned away and made some minor adjustments of his apparatus. Ed nodded to his wife, she slipped behind the screen and reappeared almost at once, dressed in a slip. Pinero glanced up.

"This way, my dear. First we must weigh you. There. Now take you place on the stand. This electrode in your mouth. No, Ed, you mustn't touch her while she is in the circuit. It won't take a minute. Remain quiet."

He dove under the machine's hood and the dials sprang into life. Very shortly he came out, with a perturbed look on his face. "Ed, did you touch her?"

"No, doctor." Pinero ducked back again and remained a little longer. When he came out this time, he told the girl to get down and dress. He turned to her husband.

"Ed, make yourself ready."

"What's Betty's reading, doctor?"

"There is a little difficulty. I want to test you first."

When he came out from taking the youth's reading, his face was more troubled than ever. Ed inquired as to his trouble. Pinero shrugged his shoulders and brought a smile to his lips.

"Nothing to concern you, my boy. A little mechanical misadjustment, I think. But I shan't be able to give you two your readings today. I shall need to overhaul my machine. Can you come back tomorrow?"

"Why, I think so. Say, I'm sorry about your machine. I hope it isn't serious."

"It isn't, I'm sure. Will you come back into my office and visit for a bit?"

"Thank you, doctor. You are very kind.

"But, Ed, I've got to meet Ellen."

Pinero turned the full force of his personality on her. "Won't you grant me a few moments, my dear young lady? I am old, and like the sparkle of young folks' company. I get very little of it. Please." He nudged them gently into his office and seated them. Then he ordered lemonade and cookies sent in, offered them cigarettes and lit a cigar.

Forty minutes later Ed listened entranced, while Betty was quite evidently acutely nervous and anxious to leave as the doctor spun out a story concerning his adventures as a young man in Terra del Fuego. When the doctor stopped to relight his cigar, she stood up.

"Doctor, we really must leave. Couldn't we hear the rest tomorrow?"

"Tomorrow? There will not be time tomorrow."

"But you haven't time today, either. Your secretary has rung five times."

"Couldn't you spare me just a few more minutes?"

"I really can't today, doctor. I have an appointment. There is someone waiting for me."

"There is no way to induce you?"

"I'm afraid not. Come, Ed."

After they had gone, the doctor stepped to the window and stared out over the city. Presently he picked out two tiny figures as they left the office building. He watched them hurry to the corner, wait for the lights to change, then start across the street. When they were part way across, there came the scream of a siren. The two little figures hesitated, started back, stopped and turned. Then a car was upon them. As the car slammed to a stop, they showed up from beneath it, no longer two figures, but simply a limp, unorganized heap of clothing.

Presently the doctor turned away from the window. Then he picked up his phone and spoke to his secretary.

"Cancel my appointments for the rest of the day. . . .

No. . . . No one. . . . I don't care; cancel them."

Then he sat down in his chair. His cigar went out.

Long after dark he held it, still unlighted.

Pinero sat down at his dining table and contemplated the gourmet's luncheon spread before him. He had ordered this meal with particular care, and had come home a little early in order to enjoy it fully.

Somewhat later he let a few drops of fiori d'Alpini roll down his throat. The heavy, fragrant syrup warmed his mouth and reminded him of the little mountain flowers for which it was named. He sighed. It had been a good meal, an exquisite meal and had justified the exotic liqueur.

His musing was interrupted by a disturbance at the front door. The voice of his elderly maidservant was raised in remonstrance. A heavy male voice

interrupted her. The commotion moved down the hall and the dining room door was pushed open.

"Mia Madonna! Non si puo entrare! The master is eating!"

"Never mind, Angela. I have time to see these gentlemen. You may go."

Pinero faced the surly-faced spokesman of the intruders. "You have business with me; yes?"

"You bet we have. Decent people have had enough of your damned nonsense."

"And so?"

The caller did not answer at once. A smaller, dapper individual moved out from behind him and faced Pinero.

"We might as well begin." The chairman of the committee placed a key in the lock box and opened it.

"Wenzell will you help me pick out today's envelopes?"

He was interrupted by a touch on his arm.

"Dr. Baird, you are wanted on the telephone."

"Very well. Bring the instrument here."

When it was fetched he placed the receiver to his ear. "Hello. . . . Yes; speaking. . . . What? . . . No, we have heard nothing. . . Destroyed the machine, you say . . . Dead! How? . . . No! No statement. None at all. . . Call me later."

He slammed the instrument down and pushed it from him.

"What's up?"

"Who's dead now?"

Baird held up one hand. "Quiet, gentlemen, please! Pinero was murdered a few moments ago at his home."

"Murdered?"

"That isn't all. About the same time vandals broke into his office and smashed his apparatus."

No one spoke at first. The committee members glanced around at each other. No one seemed anxious to be the first to comment.

Finally one spoke up. "Get it out."

"Get what out?"

"Pinero's envelope. It's in there, too. "I've seen it."

Baird located it, and slowly tore it opened. He unfolded the single sheet of paper and scanned it.

"Well? Out with it!"

"One thirteen P.M. . . . today."

They took this in silence.

Their dynamic calm was broken by a member across the table from Baird reaching for the lock box. Baird interposed a hand.

"What do you want?"

"My prediction. It's in there—we're all in there."

"Yes, yes,"

"We're all in there."

"Let's have them."

Baird placed both hands over the box. He held the eye of the man opposite him, but did not speak. He licked his lips. The corner of his mouth twitched. His hands shook. Still he did not speak. The man opposite relaxed back into his chair.

"You're right, of course," he said.

"Bring me that wastebasket." Baird's voice was low and strained, but steady.

He accepted it and dumped the litter on the rug. He placed the tin basket on the table before him. He tore half a dozen envelopes across, set a match

to them, and dropped them in the basket. Then he started tearing a double handful at a time, and fed the fire steadily. The smoke made him cough, and tears ran out of his smarting eyes. Someone got up and opened a window. When Baird was through, he pushed the basket away from him, looked down and spoke.

"I'm afraid I've ruined this table top."

SOLUTION UNSATISFACTORY

IN 19O3 THE Wright brothers flew at Kitty Hawk.

In December, 1938, in Berlin, Dr. Hahn split the uranium atom.

In April, 1943, Dr. Estelle Karst, working under the Federal Emergency Defense Authority, perfected the Karst-Obre technique for producing artificial radioactives.

So American foreign policy had to change.

Had to. Had to. It is very difficult to tuck a bugle call back into a bugle. Pandora's Box is a one-way proposition. You can turn pig into sausage, but not sausage into pig. Broken eggs stay broken. "All the King's horses and all the King's men can't put Humpty together again.

I ought to know—I was one of the King's men.

By rights I should not have been. I was not a professional military man when World War II broke out, and when Congress passed the draft law I drew high number, high enough to keep me out of the army long enough to die of old age.

Not that very many died of old age that generation!

But I was the newly appointed secretary to a freshman congressman; I had been his campaign manager and my former job had left me. By profession, I was a high school teacher of economics and sociology—school boards don't like teachers of social subjects actually to deal with social problems—and

my contract was not renewed. I jumped at the chance to go to Washington.

My congressman was named Manning. Yes, the Manning, Colonel Clyde C. Manning. U.S. Army retired—Mr. Commissioner Manning. What you may not know about him is that he was one of the army's No. 1 experts in chemical warfare before a leaky heart put him on the shelf. I had picked him, with the help of a group of my political associates, to run against the two-bit chiseler who was the incumbent in our district. We needed a strong liberal candidate and Manning was tailor-made for the job. He had served one term in the grand jury, which cut his political eye teeth, and had stayed active in civic matters there after.

Being a retired army officer was a political advantage in vote-getting among the more conservative and well-to-do citizens, and his record was O. K. for the other side of the fence. I'm not primarily concerned with vote-getting; what I liked about him was that, though he was liberal, he was tough-minded, which most liberals aren't. Most liberals believe that water runs downhill, but, praise God, it'll never reach the bottom.

Manning was not like that. He could see a logical necessity and act on it, no matter how unpleasant it might be.

We were in Manning's suite in the House Office Building, taking a little blow from that stormy first session of the Seventy-eighth Congress and trying to catch up on a mountain of correspondence, when the war department called. Manning answered it himself.

I had to overhear, but then I was his secretary. "Yes," he said, "speaking. Very well, put him on. Oh . . . hello, General. . . . Fine, thanks. Yourself?" Then there was a long silence. Presently, Manning said, "But I can't do that, General, I've got this job to take care of. . . . What's that? . . . Yes, who is to do my committee work and represent my district? . . . I think so." He glanced at his wrist watch. "I'll be right over."

He put down the phone, turned to me, and said, "Get your hat, John. We are going over to the war department."

"So?" I said, complying.

"Yes," he said with a worried look, "the Chief of Staff thinks I ought to go back to duty." He set off at a brisk walk, with me hanging back to try to force him not to strain his bum heart. "It's impossible, of course," we grabbed a taxi from the stand in front of the office building, swung around the Capitol, and started down Constitution Boulevard.

But it was possible, and Manning agreed to it, after the Chief of Staff presented his case. Manning had to be convinced, for there is no way on earth for anyone, even the President himself, to order a congressman to leave his post, even though he happens to be a member of the military service, too.

The Chief of Staff had anticipated the political difficulty and had been forehanded enough to have already dug up an opposition congressman with whom to pair Manning's vote for the duration of the emergency. This other congressman, the Honorable Joseph T. Brigham, was a reserve officer who wanted to go to duty himself—or was willing to; I never found out which. Being from the opposite political party, his vote in the House of Representatives could be permanently paired against Mannings and neither party would lose by the arrangement.

There was talk of leaving me in Washington to handle the political details of Manning's office, but Manning decided against it, judging that his other secretary could do that, and announced that I must go along as his adjutant. The Chief of Staff demurred, but Manning was in a position to insist, and the Chief had to give in.

A chief of staff can get things done in a hurry if he wants to. I was sworn in as a temporary officer before we left the building; before the day was out I was at the bank, signing a note to pay for the sloppy service uniforms the Army had adopted and to buy a dress uniform with a beautiful shiny belt—a dress outfit which, as it turned out, I was never to need.

We drove over into Maryland the next day and Manning took charge of the Federal nuclear research laboratory, known officially by the hush-hush title of War Department Special Defense Project No. 347. I didn't know a lot about physics and nothing about modern atomic physics, aside from the stuff you read in the Sunday supplements. Later, I picked up a smattering, mostly wrong, I suppose, from associating with the heavy-weights with which the laboratory was staffed.

Colonel Manning had taken an Army p. g. course at Massachusetts Tech and had received a master of science degree for a brilliant thesis on the mathematical theories of atomic structure. That was why the Army had to have him for this job. But that had been some years before; atomic theory had turned several cartwheels in the mean-time; he admitted to me that he had to bone like the very devil to try to catch up to the point where he could begin to understand what his highbrow charges were talking about in their reports.

I think he over stated the degree of his ignorance; there was certainly no one else in the United States who could have done the job. It required a man who could direct and suggest research in a highly esoteric field, but who saw the problem from the standpoint of urgent military necessity. Left to themselves, the physicists would have reveled in the intellectual luxury of an unlimited research expense account, but, while they undoubtedly would have made major advances in human knowledge, they might never have developed anything of military usefulness, or the military possibilities of a discovery might be missed for years.

It's like this: It takes a smart dog to hunt birds, but it takes a hunter behind him to keep him from wasting time chasing rabbits. And the hunter needs to know nearly as much as the dog.

No derogatory reference to the scientists is intended—by no means! We had all the genius in the field that the United States could produce, men from Chicago, Columbia, Cornell, M. I. T., Cal Tech, Berkley, every radiation laboratory in the country, as well as a couple of broad-A boys lent to us by the British. And they had every facility that ingenuity could think up and money could build. The five-hundred-ton cyclotron which had originally been intended for the University of California was there, and was already obsolete in the face of the new gadgets these brains had thought up, asked for, and been given. Canada supplied us with all the uranium we asked for—tons of the treacherous stuff—from Great Bear Lake, up near the Yukon, and the fractional-residues technique of separating uranium isotope 235 from the commoner isotope 238 had already been worked out, by the same team from Chicago that had worked up the earlier expensive mass spectrograph method.

Someone in the United States government had realized the terrific potentialities of uranium 235 quite early and, as far back as the summer of l940, had rounded up every atomic research man in the country and had sworn them to silence. Atomic power, if ever developed, was planned to be a government monopoly, at least till the war was over. It might turn out to be the most incredibly powerful explosive ever dreamed of, and it might be the source of equally incredible power. In any case, with Hitler talking about secret weapons and shouting hoarse insults at democracies, the government planned to keep any new discoveries very close to the vest.

Hitler had lost the advantage of a first crack at the secret of uranium through not taking precautions. Dr. Hahn, the first man to break open the uranium atom, was a German. But one of his laboratory assistants had fled Germany to escape a program. She came to this country, and told us about it.

We were searching, there in the laboratory in Maryland, for a way to use U235 in a controlled explosion. We had a vision of a one-ton bomb that would be a whole air raid in itself, a single explosion that would flatten out an entire industrial center. Dr. Ridpath, of Continental Tech, claimed that he could build such a bomb, but that he could not guarantee that it would not explode as soon as it was loaded and as for the force of the explosion—well, he did not believe his own figures; they ran out to too many ciphers.

The problem was, strangely enough, to find an explosive which would be weak enough to blow up only one country at a time, and stable enough to blow up only on request. If we could devise a really practical rocket fuel at the same time, one capable of driving a war rocket at a thousand miles an hour, or more, then we would be in a position to make most anybody say "uncle" to Uncle Sam.

We fiddled around with it all the rest of 1943 and well into 1944. The war in Europe and the troubles in Asia dragged on. After Italy folded up, England was able to release enough ships from her Mediterranean fleet to ease the blockade of the British Isles. With the help of the planes we could now send her regularly and with the additional over-age destroyers we let her have, England hung on somehow, digging in and taking more and more of her essential defense industries underground. Russia shifted her weight from side to side as usual, apparently with the policy of preventing either side from getting a sufficient advantage to bring the war to a successful conclusion. People were beginning to speak of "permanent

war."

I was killing time in the administrative office, trying to improve my typing—a lot of Mannings reports had to be typed by me personally—when the orderly on duty stepped in and announced Dr. Karst. I flipped the inter-office communicator. "Dr. Karst is here, chief. Can you see her?"

"Yes," he answered, through his end.

I told the orderly to show her in.

Estelle Karst was quite a remarkable old girl and, I suppose, the first woman ever to hold a commission in the corps of engineers. She was an M. D. as well as an Sc.D. and reminded me of the teacher I had had in fourth grade. I guess that was why I always stood up instinctively when she came in the room—I was afraid she might look at me and sniff. It couldn't have been her rank; we didn't bother much with rank.

She was dressed in white coveralls and a shop apron and had simply thrown a hooded cape over herself to come through the snow. I said, "Good morning, maam," and led her into Mannings office.

The Colonel greeted her with the urbanity that had made him such a success with women's clubs, seated her, and offered her a cigarette.

"I'm glad to see you, Major," he said. "I've been intending to drop around to your shop."

I knew what he was getting at Dr. Karst's work had been primarily physiomedical; he wanted her to change the direction of her research to something more productive in a military sense.

"Don't call me 'major,' " she said tartly.

"Sorry, Doctor—"

"I came on business, and must get right back. And I presume you are a busy man, too. Colonel Manning, I need some help."

"That's what we are here for."

"Good. I've run into some snags in my research. I think that one of the men in Dr. Ridpath's department could help me, but Dr. Ridpath doesn't seem disposed to be cooperative."

"So? Well, I hardly like to go over the head of a departmental chief, but tell me about it; perhaps we can arrange it. Whom do you want?"

"I need Dr. Obre."

"The spectroscopist—hm-m-m. I can understand Dr. Ridpath's reluctance, Dr. Karst, and I'm disposed to agree with him. After all, the high-explosives research is really our main show around here."

She bristled and I thought she was going to make him stay in after school at the very least. "Colonel Manning, do you realize the importance of artificial radioactives to modern medicine?"

"Why, I believe I do. Nevertheless, doctor, our primary mission is to perfect a weapon which will serve as a safe-guard to the whole country in time of war—"

She sniffed and went into action. "Weapons—fiddle-sticks! Isn't there a

medical corps in the Army? Isn't it more important to know how to heal men than to know how to blow them to bits? Colonel Manning, you're not a fit man to have charge of this project! You're a . . . you're a, a warmonger, that's what you are!"

I felt my ears turning red, but Manning never budged. He could have raised Cain with her, confined her to her quarters, maybe even have court-martialed her, but Manning isn't like that. He told me once that every time a man is court-martialed, it is a sure sign that some senior officer hasn't measured up to his job.

"I am sorry you feel that way, Doctor," he said mildly, "and I agree that my technical knowledge isn't what it might be. And, believe me, I do wish that healing were all we had to worry about. In any case, I have not refused your request. Let's walk over to your laboratory and see what the problem is. Likely there is some arrangement that can be made which will satisfy everybody."

He was already up and getting out his greatcoat. Her set mouth relaxed a trifle and she answered, "Very well. I'm sorry I spoke as I did."

"Not at all," he replied. "These are worrying times. Come along, John."

I trailed after them, stopping in the outer office to get my own coat and to stuff my notebook in a pocket.

By the time we had trudged through mushy snow the eighth of a mile to her lab they were talking about gardening!

Manning acknowledged the sentry's challenge with a wave of his hand and we entered the building. He started casually on into the inner lab, but Karst stopped him. "Armor first, Colonel."

We had trouble finding overshoes that would fit over Manning's boots, which he persisted in wearing, despite the new uniform regulations, and he wanted to omit the foot protection, but Karst would not hear of it. She called in a couple of her assistants who made jury-rigged moccasins out of some soft-lead sheeting.

The helmets were different from those used in the explosives lab, being fitted with inhalers. "What's this?" inquired Manning.

"Radioactive dust guard," she said. "It's absolutely essential."

We threaded a lead-lined meander and arrived at the workroom door which she opened by combination. I blinked at the sudden bright illumination and

noticed the air was filled with little shiny motes.

"Hm-m-m—it is dusty," agreed Manning. "Isn't there some way of controlling that?" His voice sounded muffled from behind the dust mask.

"The last stage has to be exposed to air," explained Karst. "The hood gets most of it. We could control it, but it would mean a quite expensive new installation."

"No trouble about that. We're not on a budget, you know. It must be very annoying to have to work in a mask like this."

"It is," acknowledged Karst. "The kind of gear it would take would enable us to work without body armor, too. That would be a comfort."

I suddenly had a picture of the kind of thing these researchers put up with. I am a fair-sized man, yet I found that armor heavy to carry around. Estelle Karst was a small woman, yet she was willing to work maybe fourteen hours, day after day, in an outfit which was about as comfortable as a diving suit. But she had not complained.

Not all the heroes are in the headlines. These radiation experts not only ran the chance of cancer and nasty radio-action burns, but the men stood a chance of damaging their germ plasm and then having their wives present them with something horrid in the way of offspring—no chin, for example, and long hairy ears. Nevertheless, they went right ahead and never seemed to get irritated unless something held up their work.

Dr. Karst was past the age when she would be likely to be concerned personally about progeny, but the principle applies.

I wandered around, looking at the unlikely apparatus she used to get her results, fascinated as always by my failure to recognize much that reminded me of the physics laboratory I had known when I was an undergraduate, and being careful not to touch anything. Karst started explaining to Manning what she was doing and why, but I knew that it was useless for me to try to follow that technical stuff. If Manning wanted notes, he would dictate them. My attention was caught by a big box-like contraption in one corner of the room. It had a hopper-like gadget on one side and I could hear a sound from it like the whirring of a fan with a background of running water. It intrigued me.

I moved back to the neighborhood of Dr. Karst and the Colonel and heard her saying, "The problem amounts to this, Colonel: I am getting a much more highly radio-active end-product than I want, but there is considerable variation in the half-life of otherwise equivalent samples. That suggests

to me that I am using a mixture of isotopes but I haven't been able to prove it. And frankly, I do not know enough about that end of the field to be sure of sufficient refinement in my methods. I need Dr. Obre's help on that."

I think those were her words, but I may not be doing her justice, not being a physicist I understood the part about "half-life." All radioactive materials keep right on radiating until they turn into something else, which takes theoretically forever. As a matter of practice their periods, or "lives," are described in terms of how long it takes the original radiation to drop to one-half strength. That time is called a "half-life" and each radioactive isotope of an element has its own specific characteristic half-lifetime.

One of the staff—I forget which one—told me once that any form of matter can be considered as radioactive in some degree; it's a question of intensity and period, or half-life.

"I'll talk to Dr. Ridpath," Manning answered her, "and see what can be arranged. In the meantime you might draw up plans for what you want to re-equip your laboratory."

"Thank you, Colonel."

I could see that Manning was about ready to leave, having pacified her; I was still curious about the big box that gave out the odd noises.

"May I ask what that is, Doctor?"

"Oh, that? That's an air-conditioner."

"Odd-looking one. I've never seen one like it."

"It's not to condition the air of this room. It's to remove the radioactive dust before the exhaust air goes outdoors. We wash the dust out of the foul air."

"Where does the water go?"

"Down the drain. Out into the bay eventually, I suppose. '

I tried to snap my fingers, which was impossible because of the lead mittens. "That accounts for it, Colonel!"

"Accounts for what?"

"Accounts for those accusing notes we've been getting from the Bureau of Fisheries. This poisonous dust is being carried out into Chesapeake Bay and is killing the fish."

Manning turned to Karst. "Do you think that possible, Doctor?"

I could see her brows draw together through the window in her helmet. "I hadn't thought about it," she admitted. "I'd have to do some figuring on the possible concentrations before I could give you a definite answer. But it is possible—yes. However," she added anxiously, "it would be simple enough to divert this drain to a sink hole of some sort."

"Hm-m-m—yes." He did not say anything for some minutes, simply stood there, looking at the box.

Presently he said, "This dust is pretty lethal?"

"Quite lethal, Colonel." There was another long silence.

At last I gathered he had made up his mind about something for he said decisively, "I am going to see to it that you get Obre's assistance, Doctor."

"Oh, good!"

"—but I want you to help me in return. I am very much interested in this research of yours, but I want it carried on with a little broader scope. I want you to investigate for maxima both in period and intensity as well as for minima. I want you to drop the strictly utilitarian approach and make an exhaustive research along lines which we will work out in greater detail later."

She started to say something but he cut in ahead of her. "A really thorough program of research should prove more helpful in the long run to your original purpose than a more narrow one. And I shall make it my business to expedite every possible facility for such a research. I think we may turn up a number of interesting things."

He left immediately, giving her no time to discuss it. He did not seem to want to talk on the way back and I held my peace. 1 think he had already gotten a glimmering of the bold and drastic strategy this was to lead to, but even Manning could not have thought out that early the inescapable consequences of a few dead fish—otherwise he would never have ordered the research.

No, I don't really believe that. He would have gone right ahead, knowing

that if he did not do it, someone else would. He would have accepted the responsibility while bitterly aware of its weight.

1944 wore along with no great excitement on the surface. Karst got her new laboratory equipment and so much additional help that her department rapidly became the largest on the grounds. The explosives research was suspended after a conference between Manning and Ridpath, of which I heard only the end, but the meat of it was that there existed not even a remote possibility at that time of utilizing U235 as an explosive. As a source of power, yes, sometime in the distant future when there had been more opportunity to deal with the extremely ticklish problem of controlling the nuclear reaction. Even then it seemed likely that it would not be a source of power in prime movers such as rocket motors or mobiles, but would be used in vast power plants at least as large as the Boulder Dam installation.

After that Ridpath became a sort of co-chairman of Karst's department and the equipment formerly used by the explosives department was adapted or replaced to carry on research on the deadly artificial radioactives. Manning arranged a division of labor and Karst stuck to her original problem of developing techniques for tailor-making radioactives. I think she was perfectly happy, sticking with a one-track mind to the problem at hand. I don't know to this day whether or not Manning and Ridpath ever saw fit to discuss with her what they intended to do.

As a matter of fact, I was too busy myself to think much about it. The general elections were coming up and I was determined that Manning should have a constituency to return to, when the emergency was over. He was not much interested, but agreed to let his name be filed as a candidate for re-election. I was trying to work up a campaign by remote control and cursing because I could not be in the field to deal with the thousand and one emergencies as they arose.

I did the next best thing and had a private line installed to permit the campaign chairman to reach me easily. I don't think I violated the Hatch Act, but I guess I stretched it a little. Anyhow, it turned out all right; Manning was elected, as were several other members of the citizen-military that year. An attempt was made to smear him by claiming that he was taking two salaries for one job, but we squelched that with a pamphlet entitled "For Shame!" which explained that he got one salary for two jobs. That's the Federal law in such cases and people are entitled to know it.

It was just before Christmas that Manning first admitted to me how much the implications of the Karst-Obre process were preying on his mind. He called me into his office over some inconsequential matter, then did not let me go. I saw that he wanted to talk.

"How much of the K-O dust do we now have on hand?" he asked suddenly.

"Just short of ten thousand units," I replied. "I can look up the exact figures in half a moment." A unit would take care of a thousand men, at normal dispersion. He knew the figure as well as I did, and I knew he was stalling.

We had shifted almost imperceptibly from research to manufacture, entirely on Mannings initiative and authority. Manning had never made a specific report to the department about it, unless he had done so verbally to the chief of staff.

"Never mind," he answered to my suggestion, then added, "Did you see those horses?"

"Yes," I said briefly.

I did not want to talk about it. I like horses. We had requisitioned six broken-down old nags, ready for the bone yard, and had used them experimentally. We knew now what the dust would do. After they had died, any part of their carcasses would register on a photographic plate and tissue from the apices of their lungs and from the bronchia glowed with a light of its own.

Manning stood at the window, staring out at the dreary Maryland winter for a minute or two before replying, "John, I wish that radioactivity had never been discovered. Do you realize what that devilish stuff amounts to?"

"Well," I said, "it's a weapon, about like poison gas—maybe more efficient."

"Rats!" he said, and for a moment I thought he was annoyed with me personally. "That's about like comparing a sixteen-inch gun with a bow and arrow. We've got here the first weapon the world has ever seen against which there is no defense, none whatsoever. It's death itself, C. O. D.

"Have you seen Ridpath's report?" he went on.

I had not. Ridpath had taken to delivering his reports by hand to Manning personally.

"Well," he said, "ever since we started production I've had all the talent we could spare working on the problem of a defense against the dust. Ridpath tells me and I agree with him that there is no means whatsoever to combat the stuff, once it's used."

"How about armor," I asked, "and protective clothing?"

"Sure, sure," he agreed irritatedly, "provided you never take it off to eat, or to drink or for any purpose whatever, until the radioaction has ceased, or you are out of the danger zone. That is all right for laboratory work; I'm talking about war."

I considered the matter. "I still don't see what you are fretting about, Colonel. If the stuff is as good as you say it is, you've done just exactly what you set out to do—develop a weapon which would give the United States protection against aggression."

He swung around. "John, there are times when I think you are downright stupid!"

I said nothing. I knew him and I knew how to discount his moods. The fact that he permitted me to see his feelings is the finest compliment I have ever had.

"Look at it this way," he went on more patiently; "this dust, as a weapon, is not just simply sufficient to safe guard the United States, it amounts to a loaded gun held at the head of every man, woman, and child on the globe!"

"Well," I answered, "what of that? It's our secret, and we've got the upper hand. The United States can put a stop to this war, and any other war. We can declare a Pax Americana, and enforce it."

"Hm-m-m—I wish it were that easy. But it won't remain our secret; you can count on that. It doesn't matter how successfully we guard it; all that anyone needs is the hint given by the dust itself and then it is just a matter of time until some other nation develops a technique to produce it. You can't stop brains from working, John; the reinvention of the method is a mathematical certainty, once they know what it is they are looking for. And uranium is a common enough substance, widely distributed over the globe—don't forget that!

"It's like this: Once the secret is out—and it will be out if we ever use the stuff!—the whole world will be comparable to a room full of men, each armed with a loaded .45. They can't get out of the room and each one is dependent on the good will of every other one to stay alive. All offense

and no defense. See what I mean?"

I thought about it, but I still didn't guess at the difficulties. It seemed to me that a peace enforced by us was the only way out, with precautions taken to see that we controlled the sources of uranium. I had the usual American subconscious conviction that our country would never use power in sheer aggression. Later, I thought about the Mexican War and the Spanish-American War and some of the things we did in Central America, and I was not so sure—

It was a couple of weeks later, shortly after inauguration day, that Manning told me to get the Chief of Staff's office on the telephone. I heard only the tail end of the conversation. "No, General, I won't." Manning was saying, "I won't discuss it with you, or the Secretary, either." This is a matter the Commander in Chief is going to have to decide in the long run. If he turns it down, it is imperative that no one else ever knows about it. That's my considered opinion. . . . What's that? . . . I took this job under the condition that I was to have a free hand. You've got to give me a little leeway this time. . . . Don't go brass hat on me. I knew you when you were a plebe. . . . O. K., O. K., sorry. . . . If the Secretary of War won't listen to reason, you tell him I'll be in my seat in the House of Representatives tomorrow, and that I'll get the favor I want from the majority leader. . . All right. Good-bye."

Washington rang up again about an hour later. It was the Secretary of War. This time Manning listened more than he talked. Toward the end, he said, "All I want is thirty minutes alone with the President. If nothing comes of it, no harm has been done. If I convince him, then you will know all about it. . . . No, sir, I have no desire to embarrass you. If you prefer, I can have myself announced as a congressman, then you won't be responsible. . . . No, sir, I did not mean that you would avoid responsibility. I intended to be helpful. . . . Fine! Thank you, Mr. Secretary."

The White House rang up later in the day and set a time.

We drove down to the District the next day through a nasty cold rain that threatened to turn to sleet. The usual congestion in Washington was made worse by the weather; it very nearly caused us to be late in arriving. I could hear Manning swearing under his breath all the way down Rhode Island Avenue. But we were dropped at the west wing entrance to the White House with two minutes to spare. Manning was ushered into the oval office almost at once and I was left cooling my heels and trying to get comfortable in

civilian clothes. After so many months of uniform they itched in the wrong places.

The thirty minutes went by.

The President's reception secretary went in, and came out very promptly indeed. He stepped on out into the outer reception room and I heard something that began with, I'm sorry, Senator, but—" He came back in, made a penciled notation, and passed it out to an usher.

Two more hours went by.

Manning appeared at the door and the secretary looked relieved. But he did not come out, saying instead, "Come in, John, The President wants to take a look at you."

I fell over my feet getting up.

Manning said, "Mr. President, this is Captain deFries." The President nodded, and I bowed, unable to say anything. He was standing on the hearth rug, his fine head turned toward us, and looking just like his pictures—but it seemed strange for the President of the United States not to be a tall man.

I had never seen him before, though, of course, I knew something of his record the two years he had been in the Senate and while he was Mayor before that.

The President said, "Sit down, deFries. Care to smoke?" Then to Manning. "You think he can do it?"

"I think he'll have to. It's Hobson's choice."

"And you are sure of him?"

"He was my campaign manager."

"I see"

The President said nothing more for a while and God knows I didn't!—though I was bursting to know what they were talking about. He commenced again with, "Colonel Manning, I intend to follow the procedure you have suggested, with the changes we discussed. But I will be down tomorrow to see for myself that the dust will do what you say it will. Can you prepare a demonstration?"

"Yes, Mr. President."

"Very well, We will use Captain deFries unless I think of a better procedure." I thought for a moment that they planned to use me for a guinea pig! But he turned to me and continued, "Captain, I expect to send you to England as my representative."

I gulped. "Yes, Mr. President." And that is every word I had to say in calling on the President of the United States.

After that, Manning had to tell me a lot of things he had on his mind. I am going to try to relate them as carefully as possible, even at the risk of being dull and obvious and of repeating things that are common knowledge.

We had a weapon that could not be stopped. Any type of K-O dust scattered over an area rendered that area uninhabitable for a length of time that depended on the half-life of the radioactivity.

Period. Full stop.

Once an area was dusted there was nothing that could be done about it until the radioactivity had fallen off to the point where it was no longer harmful. The dust could not be cleaned out; it was everywhere. There was no possible way to counteract it—burn it, combine it chemically; the radioactive isotope was still there, still radio-active, still deadly. Once used on a stretch of land, for a predetermined length of time that piece of earth would not tolerate life.

It was extremely simple to use. No complicated bomb sights were needed, no care need be taken to hit "military objectives." Take it aloft in any sort of aircraft, attain a position more or less over the area you wish to sterilize, and drop the stuff. Those on the ground in the contaminated area are dead men, dead in an hour, a day, a week, a month, depending on the degree of the infection—but dead.

Manning told me that he had once seriously considered, in the middle of the night, recommending that every single person, including himself, who knew the Karst-Obre technique be put to death, in the interests of all civilization. But he had realized the next day that it had been sheer funk; the technique was certain in time to be rediscovered by someone else.

Furthermore, it would not do to wait, to refrain from using the grisly power, until someone else perfected it and used it. The only possible chance to keep the world from being turned into one huge morgue was for us

to use the power first and drastically—get the upper hand and keep it.

We were not at war, legally, yet we had been in the war up to our necks with our weight on the side of democracy since 1940. Manning had proposed to the President that we turn a supply of the dust over to Great Britain, under conditions we specified, and enable them thereby to force a peace. But the terms of the peace would be dictated by the United States—for we were not turning over the secret.

After that, the Pax Americana.

The United States was having power thrust on it, willy-nilly. We had to accept it and enforce a world-wide peace, ruthlessly and drastically, or it would be seized by some other nation. There could not be coequals in the possession of this weapon. The factor of time predominated.

I was selected to handle the details in England because Manning insisted, and the President agreed with him, that every person technically acquainted with the Karst-Obre process should remain on the laboratory reservation in what amounted to protective custody—imprisonment. That included Manning himself. I could go because I did not have the secret—I could not even have acquired it without years of schooling—and what I did not know I could not tell, even under, well, drugs. We were determined to keep the secret as long as we could to consolidate the Pax; we did not distrust our English cousins, but they were Britishers, with a first loyalty to the British Empire. No need to tempt them.

I was picked because I understood the background if not the science, and because Manning trusted me. I don't know why the President trusted me, too, but then my job was not complicated.

We took off from the new field outside Baltimore on a cold, raw afternoon which matched my own feelings. I had an all-gone feeling in my stomach, a runny nose, and, buttoned inside my clothes, papers appointing me a special agent of the President of the United States. They were odd papers, papers without precedent; they did not simply give me the usual diplomatic immunity; they made my person very nearly as sacred as that of the President himself.

At Nova Scotia we touched ground to refuel the F. B. I. men left us, we took off again, and the Canadian transfighters took their stations around us. All the dust we were sending was in my plane; if the President's representative were shot down, the dust would go to the bottom with him.

No need to tell of the crossing. I was airsick and miserable, in spite of the steadiness of the new six-engined jobs. I felt like a hangman on the way to an execution, and wished to God that I were a boy again, with nothing more momentous than a debate contest, or a track meet, to worry me.

There was some fighting around us as we neared Scotland, I know, but I could not see it, the cabin being shuttered. Our pilot—captain ignored it and brought his ship down on a totally dark field, using a beam, I suppose, though I did not know nor care. I would have welcomed a crash. Then the lights outside went on and I saw that we had come to rest in an underground hangar.

I stayed in the ship. The commandant came to see me to his quarters as his guest. I shook my head. "I stay here," I said. "Orders. You are to treat this ship as United States soil, you know."

He seemed miffed, but compromised by having dinner served for both of us in my ship.

There was a really embarrassing situation the next day. I was commanded to appear for a royal audience. But I had my instructions and I stuck to them. I was sitting on that cargo of dust until the President told me what to do with it. Late in the day I was called on by a member of Parliament—nobody admitted out loud that it was the Prime Minister—and a Mr. Windsor. The M. P. did most of the talking and I answered his questions. My other guest said very little and spoke slowly with some difficulty. But I got a very favorable impression of him. He seemed to be a man who was carrying a load beyond human strength and carrying it heroically.

There followed the longest period in my life. It was actually only a little longer than a week, but every minute of it had that split-second intensity of imminent disaster that comes just before a car crash. The President was using the time to try to avert the need to use the dust. He had two face-to-face television conferences with the new Fuehrer. The President spoke German fluently, which should have helped. He spoke three times to the warring peoples themselves, but it is doubtful if very many on the continent were able to listen, the police regulations there being what they were.

The Ambassador for the Reich was given a special demonstration of the effect of the dust. He was flown out over a deserted stretch of Western prairie and allowed to see what a single dusting would do to a herd of steers. It should have impressed him and I think that it did—nobody could ignore a visual demonstration!—but what report he made to his leader we

never knew.

The British Isles were visited repeatedly during the wait by bombing attacks as heavy as any of the war. I was safe enough but I heard about them, and I could see the effect on the morale of the officers with whom I associated. Not that it frightened them—it made them coldly angry. The raids were not directed primarily at dockyards or factories, but were ruthless destruction of anything, particularly villages.

"I don't see what you chaps are waiting for," a flight commander complained to me. "What the Jerries need is a dose of their own shrecklichkeit, a lesson in their own Aryan culture."

I shook my head. "We'll have to do it our own way."

He dropped the matter, but I knew how he and his brother officers felt. They had a standing toast, as sacred as the toast to the King: "Remember Coventry!"

Our President had stipulated that the R. A. F. was not to bomb during the period of negotiation, but their bombers were busy nevertheless. The continent was showered, night after night, with bales of leaflets, prepared by our own propaganda agents. The first of these called on the people of the Reich to stop a useless war and promised that the terms of peace would not be vindictive. The second rain of pamphlets showed photographs of that herd of steers. The third was a simple direct warning to get out of cities and to stay out. As Manning put it, we were calling "Halt!" three times before firing. I do not think that he or the President expected it to work, but we were morally obligated to try.

The Britishers had installed for me a televisor, of the Simonds-Yarley nonintercept type, the sort whereby the receiver must "trigger" the transmitter in order for transmission to take place at all. It made assurance of privacy in diplomatic rapid communication for the first time in history, and was a real help in the crisis. I had brought along my own technician, one of the F. B. I.'s new corps of specialists, to handle the scrambler and the trigger.

He called to me one afternoon. "Washington signaling."

I climbed tiredly out of the cabin and down to the booth on the hangar floor, wondering if it were another false alarm.

It was the President. His lips were white. "Carry out your basic instructions, Mr. deFries."

"Yes, Mr. President!"

The details had been worked out in advance and, once I had accepted a receipt and token payment from the Commandant for the dust, my duties were finished. But, at our instance, the British had invited military observers from every independent nation and from the several provisional governments of occupied nations. The United States Ambassador designated me as one at the request of Manning.

Our task group was thirteen bombers. One such bomber could have carried all the dust needed, but it was split up to insure most of it, at least, reaching its destination. I had fetched forty percent more dust than Ridpath calculated would be needed for the mission and my last job was to see to it that every canister actually went on board a plane of the flight. The extremely small weight of dust used was emphasized to each of the military observers.

We took off just at dark, climbed to twenty-five thousand feet, refueled in the air, and climbed again. Our escort was waiting for us, having refueled thirty minutes before us. The flight split into thirteen groups, and cut the thin air for middle Europe. The bombers we rode had been stripped and hiked up to permit the utmost maximum of speed and altitude.

Elsewhere in England, other flights had taken off shortly before us to act as a diversion. Their destinations were every part of Germany; it was the intention to create such confusion in the air above the Reich that our few planes actually engaged in the serious work might well escape attention entirely, flying so high in the stratosphere.

The thirteen dust carriers approached Berlin from different directions, planning to cross Berlin as if following the spokes of a wheel. The night was appreciably clear and we had a low moon to help us. Berlin is not a hard city to locate, since it has the largest square-mile area of any modern city and is located on a broad flat alluvial plain. I could make out the River Spree as we approached it, and the Havel. The city was blacked out, but a city makes a different sort of black from open country. Parachute flares hung over the city in many places, showing that the R. A. F. had been busy before we got there and the A. A. batteries on the ground helped to pick out the city.

There was fighting below us, but not within fifteen thousand feet of our altitude as nearly as I could judge.

The pilot reported to the captain, "On line of bearing!"

The chap working the absolute altimeter steadily fed his data into the fuse pots of the canister. The canisters were equipped with a light charge of black powder, sufficient to explode them and scatter the dust at a time after release predetermined by the fuse spot setting. The method used was no more than an ancient expedient. The dust would have been almost as effective had it simply been dumped out in paper bags, although not as well distributed.

The Captain hung over the navigator's board, a slight frown on his thin sallow face. "Ready one!" reported the bomber.

"Release!"

"Ready two!"

The Captain studied his wristwatch. "Release!"

"Ready three!"

"Release!"

When the last of our ten little packages was out of the ship we turned tail and ran for home.

No arrangements had been made for me to get home; nobody had thought about it. But it was the one thing I wanted to do. I did not feel badly; I did not feel much of anything. I felt like a man who has at last screwed up his courage and undergone a serious operation; it's over now, he is still numb from shock but his mind is relaxed. But I wanted to go home.

The British Commandant was quite decent about it; he serviced and manned my ship at once and gave me an escort for the off shore war zone. It was an expensive way to send one man home, but who cared? We had just expended some millions of lives in a desperate attempt to end the war; what was a money expense? He gave the necessary orders absentmindedly.

I took a double dose of Nembutal and woke up in Canada. I tried to get some news while the plane was being serviced, but there was not much to be had. The government of the Reich had issued one official news bulletin shortly after the raid, sneering at the much vaunted "secret weapon" of the British and stating that a major air attack had been made on Berlin and several other cities, but that the raiders had been driven off with only minor damage. The current Lord Haw-Haw started one of his sarcastic speeches but

was unable to continue it. The announcer said that he had been seized with a heart attack, and substituted some recordings of patriotic music. The station cut off in the middle of the "Horst Wesser' song. After that there was silence.

I managed to promote an Army car and a driver at the Baltimore field which made short work of the Annapolis speedway. We almost overran the turn to the laboratory.

Manning was in his office. He looked up as I came in said, "Hello, John," in a dispirited voice, and dropped his eyes again to the blotter pad. He went back to drawing doodles.

I looked him over and realized for the first time that the chief was an old man. His face was gray and flabby, deep furrows framed his mouth in a triangle. His clothes did not fit.

I went up to him and put a hand on his shoulder. "Don't take it so hard, chief. It's not your fault. We gave them all the warning in the world."

He looked up again. "Estelle Karst suicided this morning."

Anybody could have anticipated it, but nobody did. And somehow I felt harder hit by her death than by the death of all those strangers in Berlin. "How did she do it?" I asked.

"Dust. She went into the canning room, and took off her armor.

I could picture her—head held high, eyes snapping, and that set look on her mouth which she got when people did something she disapproved of. One little old woman whose lifetime work had been turned against her.

"I wish," Manning added slowly, "that I could explain to her why we had to do it."

We buried her in a lead-lined coffin, then Manning and I went on to Washington.

While we were there, we saw the motion pictures that had been made of the death of Berlin. You have not seen them; they never were made public, but they were of great use in convincing the other nations of the world that peace was a good idea. I saw them when Congress did, being allowed in because I was Manning's assistant.

They had been made by a pair of R. A. F. pilots, who had dodged the Luftwaffle to get them. The first shots showed some of the main streets the morning after the raid. There was not much to see that would show up in tele-photo shots, just busy and crowded streets, but if you looked closely you could see that there had been an excessive number of automobile accidents.

The second day showed the attempt to evacuate. The inner squares of the city were practically deserted save for bodies and wrecked cars, but the streets leading out of town were boiling with people, mostly on foot, for the trams where out of service. The pitiful creatures were fleeing, not knowing that death was already lodged inside them. The plane swooped down at one point and the cinematographer had his telephoto lens pointed directly into the face of a young woman for several seconds. She stared back at it with a look too woebegone to forget, then stumbled and fell.

She may have been trampled. I hope so. One of those six horses had looked like that when the stuff was beginning to hit his vitals.

The last sequence showed Berlin and the roads around it a week after the raid. The city was dead; there was not a man, a woman, a child—nor cats, nor dogs, not even a pigeon. Bodies were all around, but they were safe from rats. There were no rats.

The roads around Berlin were quiet now. Scattered carelessly on shoulders and in ditches, and to a lesser extent on the pavement itself, like coal shaken off a train, were the quiet heaps that had been the citizens of the capital of the Reich. There is no use in talking about it.

But, so far as I am concerned, I left what soul I had in that projection room and I have not had one since.

The two pilots who made the pictures eventually died—systemic, cumulative infection, dust in the air over Berlin. With precautions it need not have happened, but the English did not believe, as yet, that our extreme precautions were necessary.

The Reich took about a week to fold up. It might have taken longer if the new Fuehrer had not gone to Berlin the day after the raid to 'approve" that the British boasts had been hollow. There is no need to recount the provisional governments that Germany had in the following several months; the only one we are concerned with is the so called restored monarchy which used a cousin of the old Kaiser as a symbol, the one that sued for peace.

Then the trouble started.

When the Prime Minister announced the terms of the private agreement he had had with our President, he was met with a silence that was broken only by cries of "Shame! Shame! Resign!" I suppose it was inevitable; the Commons reflected the spirit of a people who had been unmercifully punished for four years. They were in a mood to enforce a peace that would have made the Versailles Treaty look like the Beatitudes.

The vote of no confidence left the Prime Minister no choice. Forty-eight hours later the King made a speech from the throne that violated all constitutional precedent, for it had not been written by a Prime Minister. In this greater crisis in his reign, his voice was clear and unlabored; it sold the idea to England and a national coalition government was formed.

I don't know whether we would have dusted London to enforce our terms or not; Manning thinks we would have done so. I suppose it depended on the character of the President of the United States, and there is no way of knowing about that since we did not have to do it.

The United States, and in particular the President of the United States, was confronted by two inescapable problems. First, we had to consolidate our position at once, use our temporary advantage of an overwhelmingly powerful weapon to insure that such a weapon would not be turned on us. Second, some means had to be worked out to stabilize American foreign policy so that it could handle the tremendous power we had suddenly had thrust upon us.

The second was by far the most difficult and serious. If we were to establish a reasonably permanent peace—say a century or so—through a monopoly on a weapon so powerful that no one dare fight us, it was imperative that the policy under which we acted be more lasting than passing political administrations. But more of that later—

The first problem had to be attended to at once—time was the heart of it. The emergency lay in the very simplicity of the weapon. It required nothing but aircraft to scatter it and the dust itself, which was easily and quickly made by anyone possessing the secret of the Karst-Obre process and having access to a small supply of uranium-bearing ore.

But the Karst-Obre process was simple and might be independently developed at any time. Manning reported to the President that it was Ridpath's opinion, concurred in by Manning, that the staff of any modern radiation laboratory should be able to work out an equivalent technique in six weeks, working from the hint given by the events in Berlin alone, and should then be able to produce enough dust to cause major destruction in another six

weeks.

Ninety days—ninety days provided they started from scratch and were not already halfway to their goal. Less than ninety days—perhaps no time at all—

By this time Manning was an unofficial member of the cabinet; "Secretary of Dust," the President called him in one of his rare jovial moods. As for me, well, I attended cabinet meetings, too. As the only layman who had seen the whole show from beginning to end, the President wanted me there.

I am an ordinary sort of man who, by a concatenation of improbabilities, found himself shoved into the councils of the rulers. But I found that the rulers were ordinary men, too, and frequently as bewildered as I was.

But Manning was no ordinary man. In him ordinary hard sense had been raised to the level of genius. Oh, yes, I know that it is popular to blame everything on him and to call him everything from traitor to mad dog, but I still think he was both wise and benevolent. I don't care how many second-guessing historians disagree with me.

"I propose," said Manning, "that we begin by immobilizing all aircraft throughout the world."

The Secretary of Commerce raised his brows. "Aren't you," he said, "being a little fantastic, Colonel Manning?"

"No, I'm not," answered Manning shortly. "Im being realistic. The key to this problem is aircraft. Without aircraft the dust is an inefficient weapon. The only way I see to gain time enough to deal with the whole problem is to ground all aircraft and put them out of operation. All aircraft, that is, not actually in the service of the United States Army. After that we can deal with complete world disarmament and permanent methods of control."

"Really now," replied the Secretary, "you are not proposing that commercial airlines be put out of operation. They are an essential part of world economy. It would be an intolerable nuisance."

"Getting killed is an intolerable nuisance, too," Manning answered stubbornly. "I do propose just that. All aircraft. All."

The President had been listening without comment to the discussion. He now cut in. "How about aircraft on which some groups depend to stay alive, Colonel, such as the Alaskan lines?"

"If there are such, they must be operated by American Army pilots and crews. No exceptions."

The Secretary of Commerce looked startled. "Am I to infer from that last remark that you intended this prohibition to apply to the United States as well as other nations?"

"Naturally."

"But that's impossible. It's unconstitutional. It violates civil rights."

Killing a man violates his civil rights, too Manning answered stubbornly.

"You can't do it. Any Federal Court in the country would enjoin you in five minutes."

"It seems to me," said Manning slowly, that Andy Jackson gave us a good precedent for that one when he told John Marshall to go fly a kite." He looked slowly around the table at faces that ranged from undecided to antagonistic. "The issue is sharp, gentlemen, and—we might as well drag it out in the open. We can be dead men, with everything in due order, constitutional, and technically correct; or we can do what has to be done, stay alive, and try to straighten out the legal aspects later." He shut up and waited.

The Secretary of Labor picked it up. "I don't think the Colonel has any corner on realism. I think I see the problem, too, and I admit it is a serious one. The dust must never be used again. Had I known about it soon enough, it would never have been used on Berlin. And I agree that some sort of world wide control is necessary. But where I differ with the Colonel is in the method. What he proposes is a military dictatorship imposed by force on the whole world. Admit it, Colonel. Isn't that what you are proposing?"

Manning did not dodge it. "That is what I am proposing."

"Thanks. Now we know where we stand. I, for one, do not regard democratic measures and constitutional procedure as of so little importance that I am willing to jettison them any time it becomes convenient. To me, democracy is more than a matter of expediency, it is a faith Either it works, or I go under with it."

What do you propose?" asked the President.

"I propose that we treat this as an opportunity to create a worldwide democratic commonwealth." Let us use our present dominant position to issue a call to all nations to send representatives to a conference to form a

world constitution."

"League of Nations," I heard someone mutter.

"No!" he answered the side remark. "Not a League of Nations. The old League was helpless because it had no real existence, no power. It was not implemented to enforce its decisions; it was just a debating society, a sham. This would be different for we would turn over the dust to it."

Nobody spoke for some minutes. You could see them turning it over in their minds, doubtful, partially approving, intrigued but dubious.

"I'd like to answer that," said Manning.

"Go ahead," said the President.

"I will. I'm going to have to use some pretty plain language and I hope that Secretary Larner will do me the honor of believing that I speak so from sincerity and deep concern and not from personal pique.

"I think a world democracy would be a very fine thing and I ask that you believe me when I say I would willingly lay down my life to accomplish it. I also think it would be a very fine thing for the lion to lie down with the lamb, but I am reasonably certain that only the lion would get up. If we try to form an actual world democracy, we'll be the lamb in the setup.

"There are a lot of good, kindly people who are inter-nationalists these days. Nine out of ten of them are soft in the head and the tenth is ignorant. If we set up a world-wide democracy, what will the electorate be? Take a look at the facts: four hundred million Chinese with no more concept of voting and citizen responsibility than a flea; three hundred million Hindus who aren't much better indoctrinated; God knows how many in the Eurasian Union who believe in God knows what; the entire continent of Africa only semicivilized; eighty million Japanese who really believe that they are Heaven-ordained to rule; our Spanish-American friends who don't understand the Bill of Rights the way we think of it; a quarter of a billion people of two dozen different nationalities in Europe, all with revenge and black hatred in their hearts.

"No, it won't wash. It's preposterous—to talk about a world democracy for many years to come. If you turn the secret of the dust over to such a body, you will be arming the whole world to commit suicide."

Larner answered at once. "I could resent some of your remarks, but I don't. To put it bluntly, I consider the source. The trouble with you, Colonel Manning, is that you are a professional soldier and have no faith in

people. Soldiers may be necessary, but the worst of them are martinets and the best are merely paternalistic." There was quite a lot more of the same.

Manning stood it until his turn came again. "Maybe I am all those things, but you haven't met my argument. What are you going to do about the hundreds of millions of people who have no experience in, nor love for, democracy? Now, perhaps, I don't have the same conception of democracy as yourself, but I do know this: Out West there are a couple of hundred thousand people who sent me to Congress; I am not going to stand quietly by and let a course be followed which I think will result in their deaths or utter ruin.

"Here is the probable future, as I see it, potential in the smashing of the atom and the development of lethal artificial radioactives. Some power makes a supply of the dust. They'll hit us first to try to knock us out and give them a free hand. New York and Washington overnight, then all of our industrial areas while we are still politically and economically disorganized. But our army would not be in those cities; we would have planes and a supply of dust somewhere where the first dusting wouldn't touch them. Our boys would bravely and righteously proceed to poison their big cities. Back and forth it would go until the organization of each country had broken down so completely that they were no longer able to maintain a sufficiently high level of industrialization to service planes and manufacture dust. That presupposes starvation and plague in the process. You can fill in the details.

"The other nations would get in the game. It would be silly and suicidal, of course, but it doesn't take brains to take a hand in this. All it takes is a very small group, hungry for power, a few airplanes and a supply of dust. It's a vicious circle that cannot possibly be stopped until the entire planet has dropped to a level of economy too low to support the techniques necessary to maintain it. My best guess is that such a point would be reached when approximately three-quarters of the world's population were dead of dust, disease, or hunger, and culture reduced to the peasant-and-village type.

"Where is your Constitution and your Bill of Rights if you let that happen?"

I've shortened it down, but that was the gist of it. I can't hope to record every word of an argument that went on for days.

The Secretary of the Navy took a crack at him next. "Aren't you getting a bit hysterical, Colonel? After all, the world has seen a lot of weapons which were going to make war an impossibility too horrible to contemplate. Poison gas, and tanks, and airplanes—even firearms, if I remember my

history."

Manning smiled wryly. "You've made a point, Mr. Secretary. 'And when the wolf really came, the little boy shouted in vain.' I imagine the Chamber of Commerce in Pompeii presented the same reasonable argument to any arly vulcanologist so timid as to fear Vesuvius. I'll try to justify my fears. The dust differs from every earlier weapon in its deadliness and ease of use, but most importantly in that we have developed no defense against it. For a number of fairly technical reasons, I don't think we ever will, at least not this century."

"Why not?"

"Because there is no way to counteract radioactivity short of putting a lead shield between yourself and it, an airtight lead shield. People might survive by living in sealed underground cities, but our characteristic American culture could not be maintained."

"Colonel Manning," suggested the Secretary of State, "I think you have overlooked the obvious alternative."

"Have I?"

"Yes—to keep the dust as our own secret, go our own way, and let the rest of the world look out for itself. That is the only program that fits our traditions." The Secretary of State was really a fine old gentleman, and not stupid, but he was slow to assimilate new ideas.

"Mr. Secretary," said Manning respectfully, "I wish we could afford to mind our own business. I do wish we could. But it is the best opinion of all the experts that we can't maintain control of this secret except by rigid policing. The Germans were close on our heels in nuclear research; it was sheer luck that we got there first. I ask you to imagine Germany a year hence—with a supply of dust."

The Secretary did not answer, but I saw his lips form the word Berlin.

They came around. The President had deliberately let Manning bear the brunt of the argument, concerning his own stock of goodwill to coax the obdurate. He decided against putting it up to Congress; the dusters would have been overhead before each senator had finished his say. What he intended to do might be unconstitutional, but if he failed to act there might not be any Constitution shortly. There was precedent—the Emancipation Proclamation, the Monroe Doctrine, the Louisiana Purchase, suspension of habeas corpus in the War between the States, the Destroyer Deal.

On February 22nd the President declared a state of full emergency internally and sent his Peace Proclamation to the head of every sovereign state. Divested of its diplomatic surplusage, it said: The United States is prepared to defeat any power, or combination of powers, in jig time. Accordingly, we are outlawing war and are calling on every nation to disarm completely at once. In other words, "Throw down your guns, boys; we've got the drop on you!"

A supplement set forth the procedure: All aircraft capable of flying the Atlantic were to be delivered in one week's time to a field, or rather a great stretch of prairie, just west of Fort Riley, Kansas. For lesser aircraft, a spot near Shanghai and a rendezvous in Wales were designated. Memoranda would be issued with respect to other war equipment. Uranium and its ores were not mentioned; that would come later.

No excuses. Failure to disarm would be construed as an act of war against the United States.

There were no cases of apoplexy in the Senate; why not, I don't know.

There were only three powers to be seriously worried about, England, Japan, and the Eurasian Union. England had been forewarned, we had pulled her out of a war she was losing, and she—or rather her men in power—knew accurately what we could and would do.

Japan was another matter. They had not seen Berlin and they did not really believe it. Besides, they had been telling each other for so many years that they were unbeatable, they believed it. It does not do to get too tough with a Japanese too quickly, for they will die rather than lose face. The negotiations were conducted very quietly indeed, but our fleet was halfway from Pearl Harbor to Kobe, loaded with enough dust to sterilize their six biggest cities, before they were concluded. Do you know what did it? This never hit the newspapers but it was the wording of the pamphlets we proposed to scatter before dusting.

The Emperor was pleased to declare a New Order of Peace. The official version, built up for home consumption, made the whole matter one of collaboration between two great and friendly powers, with Japan taking the initiative.

The Eurasian Union was a puzzle. After Stalin's unexpected death in 1941, no western nation knew very much about what went on in there. Our own diplomatic relations had atrophied through failure to replace men called home nearly four years before. Everybody knew, of course, that the new

group in power called themselves Fifth Internationalists, but what that meant, aside from ceasing to display the pictures of Lenin and Stalin, nobody knew.

But they agreed to our terms and offered to cooperate in every way. They pointed out that the Union had never been warlike and had kept out of the recent world struggle. It was fitting that the two remaining great powers should use their greatness to insure a lasting peace.

I was delighted; I had been worried about the E. U.

They commenced delivery of some of their smaller planes to the receiving station near Shanghai at once. The reports on the number and quality of the planes seemed to indicate that they had stayed out of the war through necessity, the planes were mostly of German make and poor condition—types that Germany had abandoned early in the war.

Manning went west to supervise certain details in connection with immobilizing the big planes, the trans-oceanic planes, which were to gather near Fort Riley. We planned to spray them with oil, then dust from a low altitude, as in crop dusting, with a low concentration of one-year dust. Then we could turn our backs on them and forget them, while attending to other matters.

But there were hazards. The dust must not be allowed to reach Kansas City, Lincoln, Wichita—any of the nearby cities. The smaller towns roundabout had been temporarily evacuated. Testing stations needed to be set up in all directions in order that accurate tab on the dust might be kept. Manning felt personally responsible to make sure that no bystander was poisoned.

We circled the receiving station before landing at Fort Riley. I could pick out the three landing fields which had hurriedly been graded. Their runways were white in the sun, the twenty-four-hour cement as yet undirtied. Around each of the landing fields were crowded dozens of parking fields, less perfectly graded. Tractors and bulldozers were still at work on some of them. In the eastern-most fields, the German and British ships were already in place, jammed wing to body as tightly as planes on the flight deck of a carrier—save for a few that were still being towed into position, the tiny tractors looking from the air like ants dragging pieces of leaf many times larger than themselves.

Only three flying fortresses had arrived from the Eurasian Union. Their representatives had asked for a short delay in order that a supply of high-test aviation gasoline might be delivered to them. They claimed a shortage of fuel necessary to make the long flight over the Arctic safe. There was no way to check the claim and the delay was granted while a

shipment was routed from England.

We were about to leave, Manning having satisfied himself as to safety precautions, when a dispatch came in announcing that a flight of E. U. bombers might be expected before the day was out. Manning wanted to see them arrive; we waited around for four hours. When it was finally reported that our escort of fighters had picked them up at the Canadian border, Manning appeared to have grown fidgety and stated that he would watch them from the air. We took off, gained altitude and waited.

There were nine of them in the flight, cruising in column of echelons and looking so huge that our little fighters were hardly noticeable. They circled the field and I was admiring the stately dignity of them when Manning's pilot, Lieutenant Rafferty, exclaimed, "What the devil! They are preparing to land downwind!"

I still did not tumble, but Manning shouted to the copilot, "Get the field!"

He fiddled with his instruments and announced, "Got 'em, sir!"

"General alarm! Armor!"

We could not hear the sirens, naturally, but I could see the white plumes rise from the big steam whistle on the roof of the Administration Building—three long blasts, then three short ones. It seemed almost at the same time that the first cloud broke from the E. U. planes.

Instead of landing, they passed low over the receiving station, jam-packed now with ships from all over the world. Each echelon picked one of three groups centered around the three landing fields and streamers of heavy brown smoke poured from the bellies of the E. U. ships. I saw a tiny black figure jump from a tractor and run toward the nearest building. Then the smoke screen obscured the field.

"Do you still have the field?" demanded Manning.

"Yes, sir."

"Cross connect to the chief safety technician. Hurry!"

The copilot cut in the amplifier so that Manning could talk directly. "Saunders? This is Manning. How about it?"

"Radioactive, chief. Intensity seven point four."

They had paralleled the Karst-Obre research.

Manning cut him off and demanded that the communication office at the field raise the Chief of Staff. There was nerve-stretching delay, for it had to be routed over land—wire to Kansas City, and some chief operator had to be convinced that she should commandeer a trunk line that was in commercial use. But we got through at last and Manning made his report. "It stands to reason," I heard him say, that other flights are approaching the border by this time. New York, of course, and Washington. Probably Detroit and Chicago as well. No way of knowing."

The Chief of Staff cut off abruptly, without comment. I knew that the U.S. air fleets, in a state of alert for weeks past, would have their orders in a few seconds and would be on their way to hunt out and down the attackers, if possible before they could reach the cities.

I glanced back at the field. The formations were broken up. One of the E. U. bombers was down, crashed, half a mile beyond the station. While I watched, one of our midget dive-bombers screamed down on a behemoth E. U. ship and unloaded his eggs. It was a center hit, but the American pilot had cut it too fine, could not pull out, crashed before his victim.

There is no point in rehashing the newspaper stories of the Four-days War. The point is that we should have lost it, and we would have, had it not been for an unlikely combination of luck, foresight and good management. Apparently the nuclear physicists of the Eurasian Union were almost as far along as Ridpath's crew when the destruction of Berlin gave them the tip they needed. But we had rushed them, forced them to move before they were ready, because of the deadline for disarmament set forth in our Peace Proclamation.

If the President had waited to fight it out with Congress before issuing the proclamation, there would not be any United States.

Manning never got credit for it, but it is evident to me that he anticipated the possibility of something like the Four-days War and prepared for it in a dozen different devious ways. I don't mean military preparation; the Army and the Navy saw to that. But it was no accident that Congress was adjourned at the time. I had something to do with the vote-swapping and compromising that led up to it, and I know.

But I put it to you—would he have maneuvered to get Congress out of Washington at a time when he feared that Washington might be attacked if he had had dictatorial ambitions?

Of course, it was the President who was back of the ten-day leaves that had been granted to most of the civil-service personnel in Washington and he himself must have made the decision to take a swing through the South at that time, but it must have been Manning who put the idea in his head. It is inconceivable that the President would have left Washington to escape personal danger.

And then, there was the plague scare. I don't know how or when Manning could have started that—it certainly did not go through my notebook—but I simply do not believe that it was accidental that a completely unfounded rumor or bubonic plaque caused New York City to be semi-deserted at the time the E. U. bombers struck.

At that, we lost over eight hundred thousand people in Manhattan alone.

Of course, the government was blamed for the lives that were lost and the papers were merciless in their criticism at the failure to anticipate and force an evacuation of all the major cities.

If Manning anticipated trouble, why did he not ask for evacuation?

Well, as I see it, for this reason:

A big city will not, never has, evacuated in response to rational argument. London never was evacuated on any major scale and we failed utterly in our attempt to force the evacuation of Berlin. The people of New York City had considered the danger of air raids since 1940 and were long since hardened to the thought.

But the fear of a nonexistent epidemic of plague caused the most nearly complete evacuation of a major city ever seen.

And don't forget what we did to Vladivostok and Irkutsk and Moscow—those were innocent people, too. War isn't pretty.

I said luck played a part. It was bad navigation that caused one of our ships to dust Ryazan instead of Moscow, but that mistake knocked out the laboratory and plant which produced the only supply of military radio-actives in the Erasian Union. Suppose the mistake had been the other way around—suppose that one of the E. U. ships in attacking Washington, D.C., by mistake, had included Ridpath's shop forty-five miles away in Maryland?

Congress reconvened at the temporary capital in St. Louis, and the American Pacification Expedition started the job of pulling the fangs of the

Eurasian Union. It was not a military occupation in the usual sense; there were two simple objectives: to search out and dust all aircraft, aircraft plants, and fields, and to locate and dust radiation laboratories, uranium supplies, find lodes of carnotite and pitchblende. No attempt was made to interfere with, or to replace, civil government.

We used a two-year dust, which gave a breathing spell in which to consolidate our position. Liberal rewards were offered to informers, a technique which worked remarkably well not only in the E. U., but in most parts of the world.

The "weasel," an instrument to smell out radiation based on the electroscope-discharge principle and refined by Ridpath's staff, greatly facilitated the work of locating uranium and uranium ores. A grid of weasels, properly spaced over a suspect area, could locate any important mass of uranium almost as handily as a direction-finder can spot a radio station.

But, notwithstanding the excellent work of General Bulfinch and the Pacification Expedition as a whole, it was the original mistake of dusting Ryazan that made the job possible of accomplishment.

Anyone interested in the details of the pacification work done in l945-6 should see the "Proceedings of the American Foundation for Social Research" for a paper entitled, A Study of the Execution of the American Peace Policy from February, 1945. The de facto solution of the problem of policing the world against war left the United States with the much greater problem of perfecting a policy that would insure that the deadly power of the dust would never fall into unfit hands.

The problem is as easy to state as the problem of squaring the circle and almost as impossible of accomplishment. Both Manning and the President believed that the United States must of necessity keep the power for the time being until some permanent institution could be developed fit to retain it. The hazard was this: Foreign policy is lodged jointly in the hands of the President and the Congress. We were fortunate at the time in having a good President and an adequate Congress, but that was no guarantee for the future. We have had unfit Presidents and power-hungry Congresses—oh, yes! Read the history of the Mexican War.

We were about to hand over to future governments of the United States the power to turn the entire globe into an empire, our empire, and it was the sober opinion of the President that our characteristic and beloved democratic culture would not stand up under the temptation. Imperialism degrades both oppressor and oppressed.

The President was determined that our sudden power should be used for the absolute minimum of maintaining peace in the world—the simple purpose of outlawing war and nothing else. It must not be used to protect American investments abroad, to coerce trade agreements, for any purpose but the simple abolition of mass killing.

There is no science of sociology. Perhaps there will be, some day, when a rigorous physics gives a finished science of colloidal chemistry and that leads in turn to a complete knowledge of biology, and from there to a definitive psychology. After that we may begin to know something about sociology and politics. Something around the year 5,000 A.D., maybe—if the human race does not commit suicide before then.

Until then, there is only horse sense and rule of thumb and observational knowledge of probabilities. Manning and the President played by ear.

The treaties with Great Britain, Germany and the Eurasian Union, whereby we assumed the responsibility for world peace and at the same time guaranteed the contracting nations against our own misuse of power were rushed through in the period of relief and goodwill that immediately followed the termination of the Four-days War. We followed the precedents established by the Panama Canal treaties, the Suez Canal agreements, and the Philippine Independence policy.

But the purpose underneath was to commit future governments of the United States to an irrevocable benevolent policy.

The act to implement the treaties by creating the Commission of World Safety followed soon after, and Colonel Manning became Mr. Commissioner Manning. Commissioners had a life tenure and the intention was to create a body with the integrity, permanence and freedom from outside pressure possessed by the supreme court of the United States. Since the treaties contemplated an eventual joint trust, commissioners need not be American citizens—and the oath they took was to preserve the peace of the world.

There was trouble getting that clause past the Congress! Every other similar oath had been to the Constitution of the United States.

Nevertheless the Commission was formed. It took charge of world aircraft, assumed jurisdiction over radio-actives, natural and artificial, and commenced the long slow task of building up the Peace Patrol.

Manning envisioned a corps of world policemen, an aristocracy which through selection and indoctrination, could be trusted with unlimited power over the life of every man, every woman, every child on the face of the globe. For the power would be unlimited, the precautions necessary to insure the

unbeatable weapon from getting loose in the world again made it axiomatic that its custodians would wield power that is safe only in the hands of Deity. There would be no one to guard those self same guardians. Their own characters and the watch they kept on each other would be all that stood between the race and disaster.

For the first time in history, supreme political power was to be exerted with no possibility of checks and balances from the outside. Manning took up the task of perfecting it was a dragging subconscious conviction that it was too much for human nature.

The rest of the Commission was appointed slowly, the names being sent to the Senate after long joint consideration by the President and Manning. The director of the Red Cross, an obscure little professor of history from Switzerland, Dr. Igor Rimski who had developed the Karst-Obre technique independently and whom the A. P. F. had discovered in prison after the dusting of Moscow—those three were the only foreigners. The rest of the list is well known.

Ridpath and his staff were of necessity the original technical crew of the Commission; United States Army and Navy pilots its first patrolmen. Not all of the pilots available were needed; their records were searched, their habits and associates investigated, their mental processes and emotional attitudes examined by the best psychological research methods available—which weren't good enough. Their final acceptance for the Patrol depended on two personal interviews, one with Manning, one with the President.

Manning told me that he depended more on the President's feeling for character than he did on all the association and reaction tests the psychologists could think up. "It's like the nose of a bloodhound," he said. "In his forty years of practical politics he has seen more phonies than you and I will ever see and each one was trying to sell him something. He can tell one in the dark."

The long-distance plan included the schools for the indoctrination of cadet patrolmen, schools that were to be open to youths of any race, color, or nationality, and from which they would go forth to guard the peace of every country but their own. To that country a man would never return during his service. They were to be a deliberately expatriated band of Janizaries, with an obligation only to the Commission and to the race, and welded together with a carefully nurtured esprit de corps.

It stood a chance of working. Had Manning been allowed twenty years without interruption, the original plan might have worked.

The President's running mate for re-election was the result of a political compromise. The candidate for Vice President was a confirmed isolationist who had opposed the Peace Commission from the first, but it was he or a party split in a year when the opposition was strong. The President sneaked back in but with a greatly weakened Congress; only his power of veto twice prevented the repeal of the Peace Act. The Vice President did nothing to help him, although he did not publicly lead the insurrection. Manning revised his plans to complete the essential program by the end of 1952, there being no way to predict the temper of the next administration.

We were both over worked and I was beginning to realize that my health was gone. The cause was not far to seek; R photographic film strapped next to my skin would cloud in twenty minutes. I was suffering from cumulative minimal radioactive poisoning. No well defined cancer that could be operated on, but a systemic deterioration of function and tissue. There was no help for it, and there was work to be done. I've always attributed it mainly to the week I spent sitting on those canisters before the raid on Berlin.

February 17, 1951. I missed the televue flash about the plane crash that killed the President because I was lying down in my apartment. Manning, by that time, was requiring me to rest every afternoon after lunch, though I was still on duty. I first heard about it from my secretary when I returned to my office, and at once hurried into Manning's office.

There was a curious unreality to that meeting. It seemed to me that we had slipped back to that day when I returned from England, the day that Estelle Karst died. He looked up. "Hello John," he said.

I put my hand on his shoulder. "Don't take it so hard, chief," was all I could think of to say.

Forty-eight hours later came the message from the newly sworn-in President for Manning to report to him. I took it in to him, an official dispatch which I decoded. Manning read it, face impassive.

"Are you going, chief?" I asked.

"Eh? Why, certainly."

I went back into my office, and got my topcoat, gloves, and brief case.

Manning looked up when I came back in. "Never mind, John," he said. "You're not going." I guess I must have looked stubborn, for he added, "You're not to go because there is work to do here. Wait a minute."

He went to his safe, twiddled the dials, opened it and removed a sealed envelope which he threw on the desk between us. "Here are your orders. Get busy."

He went out as I was opening them. I read them through and got busy. There was little enough time.

The new president received Manning standing and in the company of several of his bodyguard and intimates. Manning recognized the senator who had led the movement to use the Patrol to recover expropriated holdings in South America and Rhodesia, as well as the chairman of the committee on aviation with whom he had had several unsatisfactory conferences in an attempt to work out a modus operandi for reinstituting commercial airlines.

"You're prompt, I see," said the President. "Good."

Manning bowed.

"We might as well come straight to the point," the Chief Executive went on. "There are going to be some changes of policy in the administration. I want your resignation."

"I am sorry to have to refuse, sir."

'Well see about that. In the meantime, Colonel Manning, your are relieved from duty."

"Mr. Commissioner Manning, if you please."

The new President shrugged. "One or the other, as you please. You are relieved, either way."

'1 am sorry to disagree again. My appointment is for life."

"That's enough," was the answer. "This is the United States of America. There can be no higher authority. You are under arrest"

I can visualize Manning staring steadily at him for a long moment, then

answering slowly, "You are physically able to arrest me, I will concede, but I advise you to wait a few minutes." He stepped to the window. "Look up into the sky."

Six bombers of the Peace Commission patrolled over the Capitol. "None of those pilots are American born," Manning added slowly. "If you confine me, none of us here in this room will live out the day."

There were incidents thereafter, such as the unfortunate affair at Fort Benning three days later, and the outbreak in the wing of the Patrol based in Lisbon and its resultant wholesale dismissals, but for practical purposes, that was all there was to the coup d' etat.

Manning was the undisputed military dictator of the world.

Whether or not any man as universally hated as Manning can perfect the Patrol he envisioned, make it self-perpetuating and trustworthy, I don't know, and—because of that week of waiting in a buried English hangar—I won't be here to find out. Manning's heart disease makes the outcome even more uncertain—he may last another twenty years; he may keel over dead tomorrow—and there is no one to take his place. I've set this down partly to occupy the short time I have left and partly to show there is another side to any story, even world dominion.

Not that I would like the outcome, either way. If there is anything to this survival-after-death business, I am going to look up the man who invented the bow and arrow and take him apart with my bare hands. For myself, I can't be happy in a world where any man, or group of men, has the power of death over you and me, our neighbors, every human, every animal, every living thing. I don't like anyone to have that kind of power.

And neither does Manning.

Year Of The Jackpot
by
Robert A Heinlein

At first Potiphar Breen did not notice the*girl who was undressing.

She was standing at a bus stop only ten feet away. He was indoors but that would not have kept him from noticing; he was seated in a drugstore booth adjacent to the bus stop; there was nothing between Potiphar and the young lady but plate glass and an occasional pedestrian.

Nevertheless he did not look up when she began to peel. Propped up in front of him was a Los Angeles Times; beside it, still unopened, were the Herald-Express and the Daily News. He was scanning the newspaper carefully but the headline stories got only a passing glance. He noted the maximum and minimum temperatures in Brownsville, Texas and entered them in a neat black notebook; he did the same with the closing prices of three blue chips and two dogs on the New York Exchange, as well as the total number of shares. He then began a rapid sifting of minor news stories, from time to time entering briefs of them in his little book; the items he recorded seemed randomly unrelated among them a publicity release in which Miss National Cottage Cheese Week announced that she intended to marry and have twelve children by a man who could prove that he had been a life-long vegetarian, a circumstantial but wildly unlikely flying saucer report, and a call for prayers for rain throughout Southern California.

Potiphar had just written down the names and addresses of three residents of Watts, California who had been miraculously healed at a tent meeting of the God-is-AII First Truth Brethren by the Reverend Dickie Bottomley, the eight-year-old evangelist, and was preparing to tackle the Herald-Express, when he glanced over his reading glasses and saw the amateur ecdysiast on the street comer outside. He stood up, placed his glasses in their case, folded the newspapers and put them carefully in his right coat pocket, counted out the exact amount of his check and added twenty-five cents. He then took his raincoat from a hook, placed it over his arm, and went outside.

By now the girl was practically down to the buff. It seemed to Potiphar Breen that she had quite a lot of buff. Nevertheless she had not pulled much of a house. The corner newsboy had stopped hawking his disasters and was

grinning at her, and a mixed pair of transvestites who were apparently waiting for the bus had their eyes on her. None of the passers-by stopped. They glanced at her, then with the self-conscious indifference to the unusual of the true Southern Californian, they went on their various ways. The transvestites were frankly staring. The male member of the team wore a frilly feminine blouse but his skirt was a conservative Scottish kilthis female companion wore a business suit and Homburg hat; she stared with lively interest.

As Breen approached the girl hung a scrap of nylon on the bus stop bench, then reached for her shoes. A police officer, looking hot and unhappy, crossed with the lights and came up to them. "Okay," he said in a tired voice, "that'll be all, lady. Get them duds back on and clear out of here."

The femalte transvestite took a cigar out of her mouth. "Just," she said, "what business is it of yours, officer?"

The cop turned to her. "Keep out of this I" He ran his eyes over her get up, that of her companion. "I ought to run both of you in, too."

The transvestite raised her eyebrows. "Arrest us for being clothed, arrest her for not being. I think I'm going to like this." She turned to the girl, who was standing still and saying nothing, as if she were puzzled by what was going on. "I'm a lawyer, dear." She pulled a card from her vest pocket. "If this uniformed Neanderthal persists in annoying you, I'll be delighted to handle him."

The man in the kilt said, "Grace! Pleasel"

She shook him off. "Quiet, Normanthis is our business." She went on to the policeman, "Well? Call the wagon. In the meantime my client will answer no questions."

The official looked unhappy enough to cry and his face was getting dangerously red. Breen quietly stepped forward and slipped his raincoat around the shoulders of the girl. She looked startled and spoke for the first time. "Uh thanks." She pulled the coat about her, cape fashion.

The female attorney glanced at Breen then back to the cop. "Well, officer? Ready to arrest us?"

He shoved his face close to hers. "I ain't going to give you the satisfaction]" He sighed and added, "Thanks, Mr. Breenyou know this lady?"

"Ill take care of her. You can forget it, Kawonski."

"I sure hope so. If she's with you, III do just that. But get her out of here, Mr. Breenpleasel"

The lawyer interrupted. "Just a momentyou're interfering with my client."

Kawonski said, "Shut up, you! You heard Mr. Breenshe's

with him. Right, Mr. Breen?"
"Wellyes. 1m a friend. I'll take care of her."
The transvestite said suspiciously, "I didn't hear her say that."
Her companion said, "Gracepleasel There's our bus."
"And I didn't hear her say she was your client," the cop retorted. "You look like a" His words were drowned out by the bus's brakes, "and besides that, if you don't climb on that bus and get off my territory, I'll . . . I'll . . ."
"YouTI what?"
"Grace! We'll miss our bus."
"Just a moment, Norman. Dear, is this man really a friend of yours? Are you with him?"
The girl looked uncertainly at Breen, then said in a low voice, "Uh, yes. That's right."
"Well . . ." The lawyer's companion pulled at her arm. She shoved her card into Breen's hand and got on the bus; it pulled away.
Breen pocketed the card. Kawonski wiped his forehead.
"Why did you do it, lady?" he said peevishly.
The girl looked puzzled. "I . . . I don't know."
"You hear that, Mr. Breen? That's what they all say. And if you pull 'em in, there's six more the next day. The Chief said" He sighed. "The Chief saidwell, if I had arrested her like that female shyster wanted me to. I'd be out at a hundred and ninety-sixth and Ploughed Ground tomorrow morning, thinking about retirement. So get her out of here, will you?"
The girl said, "But-"
"No 'buts,' lady. Just be glad a real gentleman like Mr. Breen is willing to help you." He gathered up her clothes, handed them to her. When she reached for them she again exposed an uncustomary amount of skin; Kawonski hastily gave them to Breen instead, who crowded them into his coat pockets.
She let Breen lead her to where his car was parked, got in and tucked the raincoat around her so that she was rather more dressed than a girl usually is. She looked at him. She saw a medium-sized and undistinguished man who was slipping down the wrong side of thirty-five and looked older. His eyes had that mild and slightly naked look of tlie habitual spectacles wearer who is not at the moment with glasses; his hair was gray at the temples and thin on top. His herringbone suit, black shoes, white shirt, and neat tie smacked more of the East than of California.
He saw a face which he classified as "pretty" and "whole-

some" rather than "beautiful" and "glamorous," It was topped by a healthy mop of light brown hair. He set her age at twenty-five, give or take eighteen months. He smiled gently, climbed in without speaking and started his car. He turned up Doheny Drive and east on Sunset. Near La Cienega he slowed down. "Feeling better?"
"Uh, I guess so Mr.'Breen'?"
"Call me Potiphar. What's your name? Don't tell me if you don't want to,"
"Me? I'm . . . I'm Meade Barstow."
"Thank you, Meade. Where do you want to go? Home?"
"I suppose so. IOh my no! I can't go home like this." She clutched the coat tightly to her.
"Parents?"
"No. My landlady. She'd be shocked to death."
"Where, then?"
She thought. "Maybe we could stop at a filling station and I could sneak into the ladies' room."
"Mmm, . . . maybe. See here, Mademy house is six blocks from here and has a garage entrance. You could get inside without being seen." He looked at her.
She stared back. "Potipharyou don't look like a wolf?"
"Oh, but I am! The worst sort." He whistled and gnashed his teeth. "See? But Wednesday is my day off from it."
She looked at him and dimpled. "Oh, well! I'd rather wrestle with you than with Mrs. Megeath. Let's go."
He turned up into the hills. His bachelor diggings were one of the many little frame houses clinging like fungus to the brown slopes of the Santa Monica Mountains. The garage was notched into this hill; the house sat on it. He drove in, cut the ingition, and led her up a teetei-y inside stairway into the living room. "In there," he said, pointing. "Help yourself." He pulled her clothes out of his coat pockets and handed them to her.
She blushed and took them, disappeared into his bedroom. He heard her turn the key in the lock. He settled down in his easy chair, took out his notebook, and opened the Herald-Exprew.
He was finishing the Daily News and had added several notes to his collection when she came out. Her hair was neatly rolled; her face was restored; she had brushed most of the wrinkles out of her skirt. Her sweater was neither too tight nor deep cut, but it was pleasantly filled. She reminded him of well water and farm breakfasts.
He took his raincoat from her, hung it up, and said, "Sit down, Meade."

She said uncertainly, "I had better go."
"Go if you mustbut I had hoped to talk with you."
"Well" She sat down on the edge of his couch and looked around. The room was small but as neat as his necktie, clean as his collar. The fireplace was swept; the floor was bare and polished. Books crowded bookshelves in every possible space. One corner was filled by an elderly flat-top desk; the papers on it were neatly in order. Near it, on its own stand, was a small electric calculator. To her right, French windows gave out on a tiny porch over the garage. Beyond it she could see the sprawling city; a few neon signs were already blinking.
She sat back a little. "This is a nice roomPotiphar. It looks like you."
"I take that as a compliment. Thank you." She did not answer; he went on, "Would you like a drink?"
"Oh, would II" She shivered. "I guess I've got the jitters."
He got up. "Not surprising. What'll it be?"
She took Scotch and water, no ice; he was a Bourbon-and-gingcr-ale man. She had soaked up half her highball in silence, then put it down, squared her shoulders and said, "Potiphar?"
"Yes, Meade?"
"Lookif you brought me here to make a pass, I wish you'd go ahead and make it. It won't do you a bit of good, but it makes me nervous to wait for it."
He said nothing and did not change his expression. She went on uneasily, "Not that I'd blame you for tryingunder the circumstances. And I am grateful. But . . . wellit's just that I don't-"
He came over and took both her hands. "My dear, I haven't the slightest thought of making a pass at you. Nor need you feel grateful. I butted in because I was interested in your case."
"My case? Are you a doctor? A psychiatrist?"
He shook his head. "I'm a mathematician. A statistician, to be precise."
"Hub? I don't get it."
"Don't worry about it. But I would like to ask some questions. May I?"
"Uh, sure, sure! I owe you that muchand then some."
"You owe me nothing. Want your drink sweetened?"
She gulped it and handed him her glass, then followed him out into the kitchen. He did an exact job of measuring and gave it back. "Now tell me why you took your clothes off?"

She frowned. "I don't know. I don't know. I don't know. I guess I just went crazy." She added round-eyed, "But I don't feel crazy. Could I go off my rocker and not know it?"
"You're not crazy . . . not moi-e so than the rest of us," he amended. "Tell mewhere did you see someone else do this?"
"Hub? But I never have."
"Where did you read about it?"
"But I haven't. Wait a minutethose people up in Canada. Dooka-somethings."
"Doukhobors. That's all? No bareskin swimming parties? No strip poker?"
She shook her head. "No. You may not believe it but I was the kind oi a little girl who undressed under her nightie." She colored and added, "I still dounless I remember to tell myself it's silly."
"I believe it. No news stories?"
"No. Yes, there was tool About two weeks ago, I think it was. Some girl in a theater, in the audience, I mean. But I thought it was just publicity. You know the stunts they pull here."
He shook his head. "It wasn't. February 3rd, the Grand Theater, Mrs. Alvin Copley. Charges dismissed."
"Hub? How did you know?"
"Excuse me." He went to his desk, dialed the City News Bureau. "Alf? This is Pot Breen. They still sitting on that story? . . . yes, yes, the Gypsy Rose file. Any new ones today?" He waited; Meade thought that she could make out swearing. "Take it easy, Alfthis hot weather can't last forever. Nine, eh? Well, add anotherSanta Monica Boulevard, late this afternoon. No arrest." He added, "Nope, nobody got her namea middle-aged woman with a cast in one eye. I happened to see it . . . who, me? Why would I want to get mixed up? But it's rounding up into a very, very interesting picture." He put the phone down.
Meade said, "Cast in one eye, indeed!"
"Shall I call him back and give him your name?"
"Oh, nol"
"Very well. Now, Meade, we seemed to have located the point of contagion in your caseMrs. Copley. What I'd like to know next is how you felt, what you were thinking about, when you did it?"
She was frowning intently. "Wait a minute, Potiphai do I understand that nine other girls have pulled the stunt I pulled?"
"Oh, nonine others today. You are" He paused briefly.

"the three hundred and nineteenth case in Los Angeles county since the first of the year. I don't have figures on the rest of the country, but the suggestion to clamp down on the stories came from the eastern news services when the papers here put our first cases on the wire. That proves that it's a problem elsewhere, too."
"You mean that women all over the country are peeling off their clothes in public? Why, how shocking!"
He said nothing. She blushed again and insisted, "Well, it is shocking, even if it was me, this time."
"No, Meade. One case is shocking; over three hundred makes it scientifically interesting. That's why I want to know how it felt. Tell me about it."
"But All right, I'll try. I told you I don't know why I did it; I still don't. I-"
"You remember it?"
"Oh, yesi I remember getting up off the bench and pulling up my sweater. I remember unzipping my skirt. I remember thinking I would have to hurry as I could see my bus stopped two blocks down the street. I remember how good it felt when I finally, uh" She paused and looked puzzled. "But I still don't know why."
"What were you thinking about just before you stood up?"
"I don't remember."
"Visualize the street. What was passing by? Where were your hands? Were your legs crossed or uncrossed? Was there anybody near you? What were you thinking about?"
"Uh . . . nobody was on the bench with me. I had my hands in my lap. Those characters in the mixed-up clothes were standing near by, but I wasn't paying attention. I wasn't thinking much except that my feet hurt and I wanted to get homeand how unbearably hot and sultry it was. Then" Her eyes became distant, "suddenly I knew what I had to do and it was very urgent that I do it. So I stood up and I . . . and I" Her voice became shrill.
"Take it easy!" he said. "Don't do it again."
"Hub? Why, Mr. Breeni I wouldn't do anything like that."
"Of course not. Then what?"
"Why, you put your raincoat around me and you know the rest." She faced him. "Say, Potiphar, what were you doing with a raincoat? It hasn't rained in weeksthis is the driest, hottest rainy season in years."
"In sixty-eight years, to be exact."
"Hub?"
"I carry a raincoat anyhow. Uh, just a notion of mine, but

I feel that when it does rain, it's going to rain awfully hard."
He added, "Forty days and forty nights, maybe."
She decided that he was being humorous and laughed.
He went on, "Can you remember how you got the idea?"
She swirled her glass and thought. "I simply don't know."
He nodded. "That's what I expected."
"I don't understand youunless you think I'm crazy. Do you?"
"No. I think you had to do it and could not help it and don't know why and can't know why."
"But you know." She said it accusingly.
"Maybe. At least I have some figures. Ever take any interest in statistics, Meade?"
She shook her head. "Figures confuse me. Never mind statistics1 want to know why I did what I didl"
He looked at her very soberly. "I think we're lemmings, Meade."
She looked puzzled, then horrified. "You mean those little furry mouselike creatures? The ones that"
"Yes. The ones that periodically make a death migration, until millions, hundreds of millions of them drown themselves in the sea. Ask a lemming why he does it. If you could get him to slow up his rush toward death, even money says he would rationalize his answer as well as any college graduate. But he does it because he has toand so do we."
"That's a horrid idea, Potiphar."
"Maybe. Come here, Meade. I'll show you figures that confuse me, too." He went to his desk and opened a drawer, took out a packet of cards. "Here's one. Two weeks ago a man sues an entire state legislature for alienation of his wife's affectionand the judge lets the suit be tried. Or this onea patent application for a device to lay the globe over on its side and warm up the arctic regions. Patent denied, but the inventor took in over three hundred thousand dollars in down payments on South Pole real estate before the postal authorities stepped in. Now he's fighting the case and it looks as if he might win. And hereprominent bishop proposes applied courses in the so-called facts of life in high schools." He put the card away hastily. "Here's a dilly: a bill introduced in the Alabama lower house to repeal the laws of atomic energynot the present statutes, but the natural laws concerning nuclear physics; the wording makes that plain." He shrugged. "How silly can you get?"
"They're crazy."
"No, Meade. One such is crazy; a lot of them is a lemming death march. No, don't objectI've plotted them on a curve.

The last time we had anything like this was the so-called Era of Wonderful Nonsense. But this one is much worse."
He delved into a lower drawer, hauled out a graph. "The amplitude is more than twice as great and we haven't reached peak. What the peak will be I don't dare guess three separate rhythms, reinforcing."
She peered at the curves. "You mean that the laddy with the artic real estate deal is somewhere on this line?"
"He adds to it. And back here on the last crest are the flagpole sitters and the goldfish swallowers and the Ponzi hoax and the marathon dancers and the man who pushed a peanut up Pikes Peak with his nose. You're on the new crestor you will be when I add you in."
She made a face. "I don't like it."
"Neither do 1. But it's as clear as a bank statement. This year the human race is letting down its hair, flipping its lip with a finger, and saying, 'Wubba, wubba, wubba.'"
She shivered. "Do you suppose I could have another drink? Then I'll go."
"I have a better idea. I owe you a dinner for answering questions. Pick a place and we'll have a cocktail before."
She chewed her lip. "You don't owe me anything. And I don't feel up to facing a restaurant crowd. I might . . . I might"
"No, you wouldn't," he said sharply. "It doesn't hit twice."
"You're sure? Anyhow, I don't want to face a crowd." She glanced at his kitchen door. "Have you anything to eat in there? I can cook."
"Urn, breakfast things. And there's a pound of ground round in the freezer compartment and some rolls. I sometimes make hamburgers when I don't want to go out."
She headed for the kitchen. "Drunk or sober, fully dressed ornaked, I can cook. YouTI see."
He did see. Open-faced sandwiches with the meat married to toasted buns and the flavor garnished rather than suppressed by scraped Bermuda onion and thin-sliced dill, a salad made from things she had scrounged out of his refrigerator, potatoes crisp but not vulcanized. They ate it on the tiny balcony, sopping it down with cold beer.
He sighed and wiped his mouth. "Yes, Meade, you can cook."
"'Some day III arrive with proper materials and pay you back. Then III prove it."
"You've already proved it. Nevertheless I accept. But I tell you three times, you owe me nothing."
"No? If you hadn't been a Boy Scout, I'd be in jail."

Breen shook his head. "The police have orders to keep it quiet at all coststo keep it from growing. You saw that. And, my dear, you weren't a person to me at the time. I didn't even see your face; I"
"You saw plenty else!"
"Truthfully, I didn't look. You were just aa statistic."
She toyed with her knife and said slowly, "I'm not sure, but I think I've just been insulted. In all the twenty-five years that I've fought men off, more or less successfully, I've been called a lot of namesbut a 'statistic'why I ought to take your slide rule and beat you to death with it."
"My dear young lady"
"1m not a lady, that's for sure. But I'm not a statistic."
"My dear Meade, then. I wanted to tell you, before you did anything hasty, that in college I wrestled varsity middleweight."
She grinned and dimpled. "That's more the talk a girl likes to hear. I was beginning to be afraid you had been assembled in an adding machine factory. Potty, you're rather a dear."
"If that is a diminutive of my given name, I like it. But if it refers to my waist line, I resent it."
She reached across and patted his stomach. "I like your waist line; lean and hungry men are difficult. If I were cooking for you regularly, I'd really pad it."
"Is that a proposal?"
"Let it lie, let it liePotty, do you really think the whole country is losing its buttons?"
He sobered at once. "It's worse than that."
"Hub?"
"Come inside. Ill show you." They gathered up dishes and dumped them in the sink, Breen talking all the while. "As a kid I was fascinated by numbers. Numbers are pretty things and they combine in such interesting configurations. I took my degree in math, of course, and got a]'ob as a junior actuary with Midwestem Mutualthe insurance outfit. That was funno way on earth to tell when a particular man is going to die, but an absolute certainty that so many men of a certain age group would die before a certain date. The curves were so lovelyand they always worked out. Always. You didn't have to know why; you could predict with dead certainty and never know why. The equations worked; the curves were right.
"I was interested in astronomy too; it was the one science where individual figures worked out neatly, completely, and accurately, down to the last decimal point the instru-

ments were good for. Compared with astronomy the other sciences were mere carpentry and kitchen chemistry.
"I found there were nooks and crannies in astronomy where individual numbers won't do, where you have to go over to statistics, and I became even more interested. I joined the Variable Star Association and I might have gone into astronomy professionally, instead of what I'm in now business consultationif I hadn't gotten interested in something else."
"'Business consultation'?" repeated Meade. "Income tax work?"
"Oh, nothat's too elementary. I'm the numbers boy for a firm of industrial engineers. I can tell a rancher exactly how many of his Hereford bull calves will be sterile. Or I tell a motion picture producer how much rain insurance to carry on location. Or maybe how big a company in a particular line must be to carry its own risk in industrial accidents. And 1m right, 1m always right."
"Wait a minute. Seems to me a big company would have to have insurance."
"Contrariwise. A really big corporation begins to resemble a statistical universe."
"Hub?"
"Never mind. I got interested in something elsecycles. Cycles are everything, Meade. And everywhere. The tides. The seasons. Wars. Love. Everybody knows that in the spring the young man's fancy lightly turns to what the girls never stopped thinking about, but did you know that it runs in an eighteen-year-plus cycle as well? And that a girl born at the wrong swing of the curve doesn't stand nearly as good a chance as her older or younger sister?"
"What? Is that why I'm a doddering old maid?"
"You're twenty-five?" He pondered. "Maybebut your chances are picking up again; the curve is swinging up. Anyhow, remember you are just one statistic; the curve applies to the group. Some girls get married every year anyhow."
"Don't call me a statistic."
"Sorry. And marriages match up with acreage planted to wheat, with wheat cresting ahead. You could almost say that planting wheat makes people get married."
"Sounds silly."
"It is silly. The whole notion of cause-and-effect is probably superstition. But the same cycle shows a peak in house building right after a peak in marriages, every time."
"Now that makes sense."
"Does it? How many newlyweds do you know who can

afford to build a house? You might as well blame it on wheat acreage. We don't know why; it just is."
"Sun spots, maybe?"
"You can correlate sun spots with stock prices, or Columbia River salmon, or women's skirts. And you are just as much justified in blaming short skirts for sun spots as you are in blaming sun spots for salmon. We don't know. But the curves go on just the same."
"But there has to be some reason behind it."
"Does there? That's mere assumption. A fact has no 'why.' There it stands, self demonstrating. Why did you take your clothes off today?"
She frowned. "That's not fair."
"Maybe not. But I want to show you why I'm worried." He went into the bedroom, came out with a large roll of tracing paper. "We'll spread it on the floor. Here they are, all of them. The 54-year cyclesee the Civil War there? See how it matches in? The 18 & % year cycle, the 9-plus cycle, the 41-month shorty, the three rhythms of sun spots everything, all combined in one grand chart. Mississippi River floods, fur catches in Canada, stock market prices, marriages, epidemics, freight-car loadings, bank clearings, locust plagues, divorces, tree growth, wars, rainfall, earth magnetism, building construction patents applied for, murdersyou name it; I've got it there."
She stared at the bewildering array of wavy lines. "But, Potty, what does it mean?"
"It means that these things all happen, in regular rhythm, whether we like. it or not. It means that when skirts are due to go up, all the stylists in Paris can't make 'em go down. It means that when prices are going down, all the controls and supports and government planning can't make 'em go up." He pointed to a curve. "Take a look at the grocery ads. Then turn to the financial page and read how the Big Brains try to double-talk their way out of it. It means that when an epidemic is due, it happens, despite all the public health efforts. It means we're lemmings."
She pulled her lip. "I don't like it. 1 am the master of my fate,' and so forth. I've got free will, Potty. I know I have I can feel it."
"I imagine every little neutron in an atom bomb feels the same way. He can go spungi or he can sit still, just as he pleases. But statistical mechanics work out anyhow. And the bomb goes offwhich is what I'm leading up to. See anything odd there, Meade?"
She studied the chart, trying not to let the curving lines

confuse her. "They sort of bunch up over at the right end."
"You're dem tootin' they dol See that dotted vertical line? That's right nowand things are bad enough. But take a look at that solid vertical; that's about six months from now and that's when we get it. Look at the cyclesthe long ones, the short ones, all of them. Every single last one of them reaches either a trough or a crest exactly onor almost onthat line."
"That's bad?"
"What do you think? Three of the big ones troughed in 1929 and the depression almost ruined us . . . even with the big 54-year cycle supporting things. Now we've got the big one troughingand the few crests are not things that help. I mean to say, tent caterpillars and influenza don't do us any good, Meade, if statistics mean anything, this tired old planet hasn't seen a jackpot like this since Eve went into the apple business. I'm scared."
She searched his face. "Pottyyou're not simply having fun with me? You know I can't check up on you."
"I wish to heaven I were. No, Meade, I can't fool about numbers; I wouldn't know how. This is it. The Year of the Jackpot."
She was very silent as he drove her home. As they approached West Los Angeles, she said, "Potty?"
"Yes, Meade?"
"What do we do about it?"
"What do you do about a hurricane? You pull in your ears. What can you do about an atom bomb? You try to out-guess it, not be there when it goes off. What else can you do?"
"Oh." She was silent for a few moments, then added, "Potty? Will you tell me which way to jump?"
"Hub? Oh, sure! If I can figure it out."
He took her to her door, turned to go. She said, "Pottyl"
He faced her. "Yes, Meade?"
She grabbed his head, shook itthen kissed him fiercely on the mouth. "Thereis that just a statistic?"
"Uh, no."
"It had better not be," she said dangerously. "Potty, I think I'm going to have to change your curve."

II

"RUSSIANS BEJECT UN NOTE"
"MISSOURI FLOOD DAMAGE EXCEEDS 1951 BECORD"
"MISSISSIPPI MESSIAH DEFIES COURT"
"NUDIST CONVENTION STORMS BAILEY'S BEACH"
"BBITISH-IRAN TALKS STILL DEAD-LOCKED"

"FASTER-THAN-LIGHT WEAPON PROMISED"
"TYPHOON DOUBLING BACK ON MANILA"
"MAKBIAGE SOLEMNIZED ON FLOOB OF HUDSONNew York, 13 July, In a specially-constructed diving suit built for two, Merydith Smithe, caf6 society headline girl, and Prince Augie Schleswieg of New Vork and the Riviera were united today by Bishop Dalton in a service televised with the aid of the Navy's ultra-new"

As the Year of the Jackpot progressed Breen took melancholy pleasure in adding to the data which proved that the curve was sagging as predicted. The undeclared World War continued its bloody, blundering way at half a dozen spots around a tortured globe. Breen did not chart it; the headlines were there for anyone to read. He concentrated on the odd facts in the other pages of the papers, facts which, taken singly, meant nothing, but taken together showed a disastrous trend.

He listed stock market prices, rainfall, wheat futures, but it was the "silly season" items which fascinated him. To be sure, some humans were always doing silly thingsbut at what point had prime damfoolishness become commonplace? When, for example, had the zombie-like professional models become accepted ideals of American womanhood? What were the gradations between National Cancer Week and National Athlete's Foot Week? On what day had the American people finally taken leave of horse sense?

Take transvestismmale-and-female dress customs were arbitrary, but they had seemed to be deeply rooted in the culture. When did the breakdown start? With Marlene Dietrich's tailored suits? By the late forties there was no "male" article of clothing that a woman could not wear in publicbut when had men started to slip over the line? Should he count the psychological cripples who had made the word "drag" a byword in Greenwich Village and Hollywood long before this outbreak? Or were they "wild shots" not belonging on the curve? Did it start with some unknown normal man attending a masquerade and there discovering that skirts actually were more comfortable and practical than trousers? Or had it started with the resurgence of Scottish nationalism reflected in the wearing of kilts by many Scottish-Americans?

Ask a lemming to state his motives! The outcome was in front of him, a news story. Transvestism by draft-dodgers had at last resulted in a mass arrest in Chicago which was to have ended in a giant joint trialonly to have the deputy prosecutor show up in a pinafore and defy the judge to

submit to an examination to determine the judge's true sex. The judge suffered a stroke and died and the trial was postponedpostponed forever in Breen's opinion; he doubted that this particular blue law would ever again be enforced.

Or the laws about indecent exposure, for that matter. The attempt to limit the Gypsy-Rose syndrome by ignoring it had taken the starch out of enforcement; now here was a report about the All Souls Community Church of Springfield: the pastor had reinstituted ceremonial nudity. Probably the first time this thousand years, Breen thought, aside from some screwball cults in Los Angeles. The reverend gentleman claimed that the ceremony was identical with the "dance of the high priestess" in the ancient temple of Kamak.

Could bebut Breen had private information that the "priestess" had been working the burlesque & nightclub circuit before her present engagement. In any case the holy leader was packing them in and had not been arrested.

Two weeks later a hundred and nine churches in thirty-three states offered equivalent attractions. Breen entered them on his curves.

This queasy oddity seemed to him to have no relation to the startling rise in the dissident evangelical cults throughout the country. These churches were sincere, earnest and poorbut growing, ever since the War. Now they were multiplying like yeast. It seemed a statistical cinch that the United States was about to become godstruck again. He correlated it with Transcendentalism and the trek of the Latter Day Saintshmm . . . yes, it fitted. And the curve was pushing toward a crest.

Billions in war bonds were now falling due; wartime marriages were reflected in the swollen peak of the Los Angeles school population. The Colorado River was at a record low and the towers in Lake Mead stood high out of the water. But the Angelenos committed slow suicide by watering lawns as usual. The Metropolitan Water District commissioners tried to stop itit fell between the stools of the police powers of fifty "sovereign" cities. The taps remained open, trickling away the life blood of the desert paradise.

The four regular party conventionsDixiecrats, Regular Republicans, the other Regular Republicans, and the Democratsattracted scant attention, as the Know-Nothings had not yet met. The fact that the "American Rally," as the Know-Nothings preferred to be called, claimed not to be a party but an educational society did not detract from their

strength. But what was their strength? Their beginnings had been so obscure that Breen had had to go back and dig into the December 1951 filesbut he had been approached twice this very week to join them, right inside his own officeonce by his boss, once by the janitor.

He hadn't been able to chart the Know-Nothings. They gave him chills in his spine. He kept column-inches on them, found that their publicity was shrinking while their numbers were obviously zooming.

Krakatau blew up on July i8th. It provided the first important transpacific TV-cast; its effect on sunsets, on solar constant, on mean temperature, and on rainfall would not be felt until later in the year. The San Andreas fault, its stresses unrelieved since the Long Beach disaster of 19331 continued to build up imbalancean unhealed wound running the full length of the West Coast. PelBe and Etna erupted; Mauna Loa was still quiet.

Flying saucers seemed to be landing daily in every state. No one had exhibited one on the groundor had the Department of Defense sat on them? Breen was unsatisfied with the off-the-record reports he had been able to get; the alcoholic content of some of them had been high. But the sea serpent on Ventura Beach was real; he had seen it. The troglodyte in Tennessee he was not in a position to verify.

Thirty-one domestic air crashes the last week in July . , . was it sabotage? Or was it a sagging curve on a chart? And that neo-polio epidemic that skipped from Seattle to New York? Time for a big epidemic? Breen's chart said it was. But how about B.W.P Could a chart know that a Slav biochemist would perfect an efficient virus-and-vector at the right time? Nonsensel

But the curves, if they meant anything at all, included "free will"; they averaged in all the individual "wills" of a statistical universeand came out as a smooth function, Every morning three million "free wills" flowed toward the center of the New York megapolis; every evening they flowed out againall by "free will," and on a smooth and predictable curve.

Ask a lemming! Ask (dl the lemmings, dead and alive-let them take a vote on it! Breen tossed his notebook aside and called Meade, "Is this my favorite statistic?"

"Potty! I was thinking about you."

"Naturally. This is your night off."

"Yes, but another reason, too. Potiphar, have you ever taken a look at the Great Pyramid?"

"I haven't even been to Niagara Falls. I'm looking for a

rich woman, so I can travel."
"Yes, yes, I'll let you know when I get my first million, but-"
"That's the first time you've proposed to me this week."
"Shut up. Have you ever looked into the prophecies they found inside the pyramid?"
"Hub? Look, Meade, that's in the same class with astrologystrictly for squirrels. Grow up."
"Yes, of course. But Potty, I thought you were interested in anything odd. This is odd."
"Oh. Sorry. If it's 'silly season' stuff, let's see it."
"All right. Am I cooking for you tonight?"
"It's Wednesday, isn't it?"
"How soon?"
He glanced at his watch. "Pick you up in eleven minutes." He felt his whiskers. "No, twelve and a half."
"I'll be ready. Mrs. Megeath says that these regular dates mean that you are going to marry me."
"Pay no attention to her. She's just a statistic. And I'm a wild datum."
"Oh, well, I've got two hundred and forty-seven dollars toward that million. 'Bye!"
Meade's prize was the usual Rosicrucian come-on, elaborately printed, and including a photograph (retouched, he was sure) of the much disputed line on the corridor wall which was alleged to prophesy, by its various discontinuities, the entire future. This one had an unusual time scale but the major events were all marked on itthe fall of Rome, the Norman Invasion, the Discovery of America, Napoleon, the World Wars.
What made it interesting was that it suddenly stopped now.
"What about it. Potty?"
"I guess the stonecutter got tired. Or got fired. Or they got a new head priest with new ideas." He tucked it into his desk. "Thanks. I'll think about how to list it." But he got it out again, applied dividers and a magnifying glass. "It says here," he announced, "that the end comes late in August unless that's a fly speck."
"Morning or afternoon? I have to know how to dress."
"Shoes will be worn. All God's chilluns got shoes." He put it away.
She was quiet for a moment, then said, "Potty, isn't it about time to jump?"
"Hub? Girl, don't let that thing affect youl That's 'silly season' stuff."

"Yes. But take a look at your chart."
Nevertheless he took the next afternoon off, spent it in the reference room oi the main library, confirmed his opinion of soothsayers. Nostradamus was pretentiously silly, Mother Shippey was worse. In any of them you could find what you looked for.
He did find one item in Nostradamus that he liked: "The Oriental shall come forth from his seat . . . he shall pass through the sky, through the waters and the snow, and he shall strike each one with his weapon."
That sounded like what the Department of Defense expected the commies to try to do to the Western Allies. But it was also a description of every invasion that had come out of the "heartland" in the memory of mankind. Nuts!
When he got home he found himself taking down his father's Bible and turning to Revelations. He could not find anything that he could understand but he got fascinated by the recurring use of precise numbers. Presently he thumbed through the Book at random; his eye lit on: "Boast not thyself of tomorrow; for thou knowest not what a day may bring forth." He put the Book away, feeling humbled but not cheered.
The rains started the next morning. The Master Plumbers elected Miss Star Morning "Miss Sanitary Engineering" on the same day that the morticians designated her as "The Body I would Like Best to Prepare," and her option was dropped by Fragrant Features. Congress voted $1.37 to compensate Thomas Jefferson Meeks for losses incurred while an emergency postman for the Christmas rush of i936> approved the appointment of five lieutenant generals and one ambassador and adjourned in eight minutes. The fire extinguishers in a midwest orphanage turned out to be filled with air. The chancellor of the leading football institution sponsored a fund to send peace messages and vitamins to the Politburo. The stock market slumped nineteen points and the tickers ran two hours late. Wichita, Kansas, remained flooded while Phoenix, Arizona, cut off drinking water to areas outside city limits. And Potiphar Breen found that he had left his raincoat at Meade Barstow's rooming house.
He phoned her landlady, but Mrs. Megeath turned him over to Meade. "What are you doing home on a Friday?" he demanded.
"The theater manager laid me off. Now you'll have to marry me."

"You can't afford me. Meadeseriously, baby, what happened?"
"I was ready to leave the dump anyway. For the last six weeks the popcorn machine has been carrying the place. Today I sat through I Was A Teen-Age Beatnik twice. Nothing to do."
"I'll be along."
"Eleven minutes?"
"It's raining. Twentywith luck."
It was more nearly sixty. Santa Monica Boulevard was a navigable stream; Sunset Boulevard was a subway jam. When he tried to ford the streams leading to Mrs. Megeath's house, he found that changing tires with the wheel wedged against a storm drain presented problems.
"Potty! You look like a drowned rat."
"I'll live," But presently he found himself wrapped in a blanket robe belonging to the late Mr. Megeath and sipping hot cocoa while Mrs. Megeath dried his clothing in the kitchen.
"Meade . . . I'm 'at liberty,' too."
"Hub? You quit your job?"
"Not exactly. Old Man Wiley and I have been having differences of opinion about my answers for monthstoo much 'Jackpot factor' in the figures I give him to turn over to clients. Not that I call it that, but he has felt that I was unduly pessimistic."
"But you were right!"
"Since when has being right endeared a man to his boss? But that wasn't why he fired me; that was just the excuse. He wants a man willing to back up the Know-Nothing program with scientific double-talk. And I wouldn't join." He went to the window. "It's raining harder."
"But they haven't got any program."
"I know that."
"Potty, you should have joined. It doesn't mean anything1 joined three months ago."
"The hell you did!"
She shrugged. "You pay your dollar and you turn up for two meetings and they leave you alone. It kept my job for another three months. What of it?"
"Uh, wellI'm sorry you did it; that's all. Forget it. Meade, the water is over the curbs out there."
"You had better stay here overnight."
"Mmm . . . I don't like to leave 'Entropy' parked out in this stuff all night. Meade?"
"Yes, Potty?"

"We're both out of jobs. How would you like to duck north into the Mojave and find a dry spot?"
"I'd love it. But look, Pottyis this a proposal, or just a proposition?"
"Don't pull that 'either-or' stuff on me. It's just a suggestion for a vacation. Do you want to take a chaperone?"
XT
No.
"Then pack a bag."
"Right away. But look, Potipharpack a bag how? Are you trying to tell me it's time to jumpP"
He faced her, then looked back at the window. "I don't know," he said slowly, "but this rain might go on quite a while. Don't take anything you don't have to havebut don't leave anything behind you can't get along without."
He repossessed his clothing from Mrs. Megeath while Meade was upstairs, She came down dressed in slacks and carrying two large bags; under one arm was a battered and rakish Teddy bear. "This is Winnie."
"Winnie the Pooh?"
"No, Winnie Churchill. When I feel bad he promises me 'blood, toil, tears, and sweat'; then I feel better. You said to bring anything I couldn't do without?" She looked at him anxiously.
"Right." He took the bags. Mrs. Megeath had seemed satisfied with his explanation that they were going to visit his (mythical) aunt in Bakersfield before looking for jobs; nevertheless she embarrassed him by kissing him good-by and telling him to "take care of my little girl."
Santa Monica Boulevard was blocked off from use. While stalled in traffic in Beverly Hills he fiddled with the car radio, getting squawks and crackling noises, then finally one station nearby: "in effect," a harsh, high, staccato voice was saying, "the Kremlin has given us till sundown to get out of town. This is your New York Reporter, who thinks that in days like these every American must personally keep his powder dry. And now for a word from" Breen switched it off and glanced at her face. "Don't worry," he said. "They've been talking that way for years,"
"You think they are bluffing?"
"I didn't say that. I said, 'don't worry.' "
But his own packing, with her help, was clearly on a "Survival Kit" basiscanned goods, all his warm clothing, a sporting rifle he had not fired in over two years, a first-aid kit and the contents of his medicine chest. He dumped the stuff from his desk into a carton, shoved it into the back

seat along with cans and books and coats and covered the plunder with all the blankets in the house. They went back up the rickety stairs for a last check.
"Pottywhere's your chart?"
"Rolled up on the back seat shelf. I guess that's allhey, wait a minutel" He went to a shelf over his desk and began taking down small, sober-looking magazines. "I dern near left behind my file of The Western Astronomer and of the Proceedings of the Variable Star Association."
"Why take them?"
"Hub? I must be nearly a year behind on both of them. Now maybe I'll have time to read."
"Hmm . . . Potty, watching you read professional journals is not my notion of a vacation."
"Quiet, womani You took Winnie; I take these."
She shut up and helped him. He cast a longing eye at his electric calculator but decided it was too much like the White Knight's mouse trap. He could get by with his slide rule.
As the car splashed out into the street she said, "Potty, how are you fixed for cash?"
"Hub? Okay, I guess."
"I mean, leaving while the banks are closed and everything." She held up her purse. "Here's my bank. It isn't much, but we can use it."
He smiled and patted her knee. "Stout fellow! 1m sitting on my bank; I started turning everything to cash about the first of the year."
"Oh. I closed out my bank account right after we met."
"You did? You must have taken my maunderings seriously."
"I always take you seriously."
Mint Canyon was a five-mile-an-hour nightmare, with visibility limited to the tail lights of the truck ahead. When they stopped for coffee at Halfway, they confirmed what seemed evident: Cajon Pass was closed and long-haul traffic for Route 66 was being detoured through the secondary pass. At long, long last they reached the Victorville cut-off and lost some of the traffica good thing, as the windshield wiper on his side had quit working and they were driving by the committee system. Just short of Lancaster she said suddenly, "Potty, is this buggy equipped with a snorkel?"
"Nope."
"Then we had better stop. But I see a light off the road."
The light was an auto court. Meade settled the matter of economy versus convention by signing the book herself;

they were placed in one cabin. He saw that it had twin beds and let the matter ride. Meade went to bed with her Teddy bear without even asking to be kissed goodnight. It was already gray, wet dawn.

They got up in the late afternoon and decided to stay over one more night, then push north toward Bakersfield. A high pressure area was alleged to be moving south, crowding the warm, wet mass that smothered Southern California. They wanted to get into it. Breen had the wiper repaired and bought two new tires to replace his ruined spare, added some camping items to his cargo, and bought for Meade a .32 automatic, a lady's social-purposes gun; he gave it to her somewhat sheepishly.

"What's this for?"

"Well, you're carrying quite a bit of cash."

"Oh. I thought maybe I was to use it to fight you off."

"Now, Meade"

"Never mind. Thanks, Potty."

They had finished supper and were packing the car with their afternoon's purchases when the quake struck. Five inches of rain in twenty-four hours, more than three billion tons of mass suddenly loaded on a fault already over-strained, all cut loose in one subsonic, stomach-twisting rumble.

Meade sat down on the wet ground very suddenly; Breen stayed upright by dancing like a logroller. When the ground quieted down somewhat, thirty seconds later, he helped her up. "You all right?"

"My slacks are soaked." She added pettishly, "But, Potty, it never quakes in wet weather. Never."

"It did this time."

"But-"

"Keep quiet, can't you?" He opened the car door and switched on the radio, waited impatiently for it to warm up. Shortly he was searching the entire dial. "Not a confounded Los Angeles station on the airl"

"Maybe the shock busted one of your tubes?"

"Pipe down." He passed a squeal and dialed back to it: "your Sunshine Station in Riverside, California. Keep tuned to this station for the latest developments. It is as of now impossible to tell the size of the disaster. The Colorado River aqueduct is broken; nothing is known of the extent of the damage nor how long it will take to repair it. So far as we know the Owens River Valley aqueduct may be in-tact, but all persons in the Los Angeles area are advised to conserve water. My personal advice is to stick your wash-

tubs out into this rain; it can't last forever. If we had time, we'd play Cool Water, just to give you the idea. I now read from the standard disaster instructions, quote: 'Boil all water. Remain quietly in your homes and do not panic. Stay off the highways. Cooperate with the police and render' Joel Joel Catch that phonel 'render aid where necessary. Do not use the telephone except for' Flashi an unconfirmed report from Long Beach states that the Wilmington and San Pedro waterfront is under five feet of water. I repeat, this is unconfirmed. Here's a message from the commanding general, March Field: 'official, all military personnel will report' "

Breen switched it off. "Get in the car."

"Where are we going?"

"North."

"We've paid for the cabin. Should we"

"Get in!"

He stopped in the town, managed to buy six five-gallon-tins and a jeep tank. He filled them with gasoline and packed them with blankets in the back seat, topping off the mess with a dozen cans of oil. Then they were rolling.

"What are we doing, Potiphar?"

"I want to get west on the valley highway."

"Any particular place west?"

"I think si i. .Veil see. You work the radio, but keep an eye on the road, too. That gas back thpre makes me nervous."

Through the town of Mojave and northwest on 466 into the Tehachapi Mountains Reception was poor in the pass but what Meade could pick up confirmed the first impressionworse than the quake of '06, worse than San Francisco, Managua, and Long Beach taken together.

When they got down out of the mountains it was clearing locally; a few stars appeared. Breen swung left off the highway and ducked south of Bakersfield by the county road, reached the Route 99 superhighway just south of Greenfield. It was, as he had feared, already jammed with refugees; he was forced to go along with the flow for a couple of miles before he could cut west at Greenfield toward Taft. They stopped on the western outskirts of the town and ate at an all-night truckers' joint.

They were about to climb back into the car when there was suddenly "sunrise" due south. The rosy light swelled almost instantaneously, filled the sky, and died; where it had been a red-and-purple pillar of cloud was mounting, mountingspreading to a mushroom top.

Breen stared at it, glanced at his watch, then said harshly, "Get in the car."
"Pottythat was . . . that was"
"That wasthat used to beLos Angeles. Get in the car!"
He simply drove for several minutes. Meade seemed to be in a state of shock, unable to speak. When the sound reached them he again glanced at his watch. "Six minutes and "nineteen seconds. That's about right."
"Pottywe should have brought Mrs. Megeath."
"How was I to know?" he said angrily. "Anyhow, you can't transplant an old tree. If she got it, she never knew it."
"Oh, I hope sol"
"Forget it; straighten out and fly right. We're going to have all we can do to take care of ourselves. Take the flashlight and check the map. I want to turn north at Taft and over toward the coast."
"Yes, Potiphar."
"And try the radio."
She quieted down and did as she was told. The radio gave nothing, not even the Riverside station; the whole broadcast range was covered by a curious static, like rain on a window. He slowed down as they approached Taft, let her spot the turn north onto the state road, and turned into it. Almost at once a figure jumped out into the road in front of them, waved his arms violently. Breen tromped on the brake.
The man came up on the left side of the car, rapped on the window; Breen ran the glass down. Then he stared stupidly at the gun in the man's left hand. "Out of the car," the stranger said sharply. "I've got to have it." He reached inside with his right hand, groped for the door lever.
Meade reached across Breen, stuck her little lady's gun in the man's face, pulled the trigger. Breen could feel the flash on his own face, never noticed the report. The man looked puzzled, with a neat, not-yet-bloody hole in his upper lipthen slowly sagged away from the car.
"Drive onl" Meade said in a high voice.
Breen caught his breath. "Good girl"
"Drive on! Get rolling!"
They followed the state road through Los Padres National Forest, stopping once to fill the tank from their cans. They turned off onto a dirt road. Meade kept trying the radio, got San Francisco once but it was too jammed with static to read. Then she got Salt Lake City, faint but clear: "since there are no reports of anything passing our radar screen the Kansas City bomb must be assumed to have been

planted rather than delivered. This is a tentative theory but" They passed into a deep cut and lost the rest.
When the squawk box again came to life it was a new voice: "Conelrad," said a crisp voice, "coming to you over the combined networks. The rumor that Los Angeles has been hit by an atom bomb is totally unfounded. It is true that the western metropolis has suffered a severe earthquake shock but that is all. Government officials and the Red Cross are on the spot to care for the victims, butand I repeatthere has been no atomic bombing. So relax and stay in your homes. Such wild rumors can damage the United States quite as much as enemy's bombs. Stay off the highways and listen for" Breen snapped it off.
"Somebody," he said bitterly, "has again decided that 'Mama knows best.' They won't tell us any bad news."
"Potiphar," Meade said sharply, "that was an atom bomb . . . wasn't it?"
"It was. And now we don't know whether it was just Los Angelesand Kansas Cityor all the big cities in the country. All we know is that they are lying to us."
"Maybe I can get another station?"
"The hell with it." He concentrated on driving. The road was very bad.
As it began to get light she said, "Pottydo you know where we're going? Are we just keeping out of cities?"
"I think I do. If I'm not lost." He stared around them. "Nope, it's all right. See that hill up forward with the triple gendarmes on its profile?"
"Gendarmes?"
"Big rock pillars. That's a sure landmark. I'm looking for a private road now. It leads to a hunting lodge belonging to two of my friendsan old ranch house actually, but as a ranch it didn't pay."
"Oh. They won't mind us using it?"
He shrugged. "If they show up, we'll ask them. If they show up. They lived in Los Angeles, Meade."
"Oh. Yes, I guess so."
The private road had once been a poor grade of wagon trail; now it was almost impassable. But they finally topped a hogback from which they could see almost to the Pacific, then dropped down into a sheltered bowl where the cabin was. "All out, girl. End of the line."
Meade sighed. "It looks heavenly."
"Think you can rustle breakfast while I unload? There's probably wood in the shed. Or can you manage a wood range?"

"Just try me."
Two hours later Breen was standing on the hogback, smoking a cigarette, and staring off down to the west. He wondered if that was a mushroom cloud up San Francisco way? Probably his imagination, he decided, in view of the distance. Certainly there was nothing to be seen to the south.
Meade came out of the cabin. "Pottyl"
"Up here."
She joined him, took his hand, and smiled, then snitched his cigarette and took a deep drag. She expelled it and said, "I know it's sinful of me, but I feel more peaceful than I have in months and months."
"I know."
"Did you see the canned goods in that pantry? We could pull through a hard winter here."
"We might have to."
"I suppose. I wish we had a cow."
"What would you do with a cow?"
"I used to milk four cows before I caught the school bus, every morning. I can butcher a hog, too."
"I'll try to find one."
"You do and III manage to smoke it." She yawned. "I'm suddenly terribly sleepy."
"So am 1. And small wonder."
"Let's go to bed."
"Uh, yes. Meade?"
"Yes, Potty?"
"We may be here quite a while. You know that, don't you?"
"Yes, Potty."
"In fact it might be smart to stay put until those curves all start turning up again. They will, you know."
"Yes. I had figured that out."
He hesitated, then went on, "Meade . . . will you marry me?"
"Yes." She moved up to him.
After a time he pushed her gently away and said, "My dear, my very dear, uhwe could drive down and find a minister in some little town?"
She looked at him steadily. "That wouldn't be very bright, would it? I mean, nobody knows we're here and that's the way we want it. And besides, your car might not make it back up that road."
"No, it wouldn't be very bright. But I want to do the right thing."

"It's all right. Potty. It's all right."
"Well, then . . . kneel down here with me. Well say them together."
"Yes, Potiphar." She knelt and he took her hand. He closed his eyes and prayed wordlessly.
When he opened them he said, "Whats the matter?"
"Uh, the gravel hurts my knees."
"Well stand up, then."
"No. Look, Potty, why don't we just go in the house and say them there?"
"Hub? Hells bells, woman, we might forget to say them entirely. Now repeat after me: I, Potiphar, take thee, Meade-"
"Yes, Potiphar. I, Meade, take thee, Potiphar-"

III

"OFFICIAL: STATIONS WITHIN RANGE BELAY TWICE. EXECUTIVE BULLETIN NUMBER NINEROAD LAWS PREVIOUSLY PUBLISHED HAVE BEEN IGNOBED IN MANY INSTANCES. PATBOLS ABE OB-DEBED TO SHOOT WITHOUT WARNING AND PBOVOST MARSHALS ABE DIBECTED TO USE DEATH PENALTY FOB UNAUTHOMZED POSSESSION OF GASOLINE. B.W. AND BADIATION QUABANTINE BEGULATIONS PREVIOUSLY ISSUED WILL BE BIGIDLY ENFOBCED. LONG LIVE THE UNITED STATES! HABLEY J. NEAL, LIEUTENANT GENEBAL, ACTING CHIEF OF GOVERNMENT. ALL STATIONS RE-LAY TWICE."

"THIS IS THE FREE RADIO AMERICA BELAY NETWOBK. PASS THIS ALONG, BOYS I GOVERNOR BBANDLEY WAS SWORN IN TODAY AS PRESIDENT BY ACTING CHIEF JUSTICE BOBEBTS UNDEB THE BULE-OF-SUCCESSION. THE PBESIDENT NAMED THOMAS DEWEY AS SECRETARY OF STATE AND PAUL DOUGLAS AS SECRETARY OF DEFENSE. HIS SECOND OFFICIAL ACT WAS TO STBIP THE BENE-GADE NEAL OF BANK AND TO DIRECT HIS ABBEST BY ANY CITIZEN OR OFFICIAL. MORE LATEB. PASS THE WORD ALONG.

"HELLO, CQ, CQ, CQ. THIS IS WgKMB, FBEEPOBT, QBB, QBRi ANYBODY READ ME? ANYBODY? WE'RE DYING LIKE FLIES DOWN HERE. WHAT'S HAPPENED? STARTS WITH FEVER AND A BUBNING THIRST BUT YOU CAN'T SWALLOW. WE NEED HELP. ANYBODY BEAD ME? HELLO, CQ 75, CQ 75 THIS IS "5 KILO METBO BOMEO CALLING QBB AND CQ 75- BY FOR SOMEBODY. ... ANYBODYIII"

"THIS IS THE LORD'S TIME, SPONSOBED BY SWAN'S ELIXIB, THE TONIC THAT MAKES WAITING FOR THE KINGDOM OF GOD WORTHWHILE. YOU ARE ABOUT TO HEAB A MESSAGE OF CHEER FROM JUDGE BBOOMFIELD, ANOINTED VICAB OF THE KINGDOM ON EABTH. BUT FIKST A BULLETIN: SEND YOUR CONTRIBU-TIONS TO 'MESSIAH,' CLINT, TEXAS. DON'T TRY TO MAIL

THEM: SEND THEM BY A KINGDOM MESSENGER OR BY SOME PILGRIM JOURNEYING THIS WAY. AND NOW THE TABERNACLE CHOIR FOLLOWED BY THE VOICE OF THE VICAB ON EARTH"
"THE FIRST SYMPTOM IS LITTLE RED SPOTS IN THE ARMPITS. THEY ITCH. PUT 'EM TO BED AT ONCE AND KEEP 'EM COVERED UP WARM. THEN GO SCRUB YOUBSELF AND WEAR A MASK: WE DON'T KNOW YET HOW YOU CATCH IT. PASS IT ALONG, ED."
"NO NEW LANDINGS REPORTED ANYWHERE ON THIS CONTINENT. THE PARATROOPERS WHO ESCAPED THE ORIGINAL SLAUGHTER ARE THOUGHT TO BE HIDING OUT IN THE POCONOS. SHOOTBUT BE CAREFUL; IT MIGHT BE AUNT TESSIE. OFF AND CLEAR, UNTIL NOON TOMORROW"

The curves were turning up again. There was no longer doubt in Breen's mind about that. It might not even be necessary to stay up here in the Sierra Madres through the winterthough he rather thought they would. He had picked their spot to keep them west of the fallout; it would be silly to be mowed down by the tail of a dying epidemic, or be shot by a nervous vigilante, when a few months' wait would take care of everything.

Besides, lie had chopped all that firewood. He looked at his calloused handshe had done all that work and, by George, he was going to enjoy the benefits!

He was headed out to the hogback to wait for sunset and do an hour's reading; he glanced at his car as he passed it, thinking that he would like to try the radio. He suppressed the yen; two thirds of his reserve gasoline was gone already just from keeping the battery charged for the radioand here it was only December. He really ought to cut it down to twice a week. But it meant a lot to catch the noon bulletin of Free America and then twiddle the dial a few minutes to see what else he could pick up.

But for the past three days Free America had not been on the airsolar static maybe, or perhaps just a power failure. But that rumor that President Brandley had been assassinatedwhile it hadn't come from the Free radio . . . and it hadn't been denied by them, either, which was a good sign. Still, it worried him.

And that other story that lost Atlantis had pushed up during the quake period and that the Azores were now a little continentalmost certainly a hang-over of the "silly season" but it would be nice to hear a follow-up.

Rather sheepishly he let his feet carry him to the car. It wasn't fair to listen when Meade wasn't around. He warmed it up, slowly spun the dial, once around and back. Not a peep at full gain, nothing but a terrible amount of

static. Served him right.

He climbed the hogback, sat down on the bench he had dragged up theretheir "memorial bench," sacred to the memory of the time Meade had hurt her knees on the gravel sat down and sighed. His lean belly was stuffed with venison and corn fritters; he lacked only tobacco to make him completely happy. The evening cloud colors were spectacularly beautiful and the weather was extremely balmy for December; both, he thought, caused by volcanic dust, with perhaps an assist from atom bombs.

Surprising how fast things went to pieces when they started to skid I And surprising how quickly they were going back together, judging by the signs. A curve reaches trough and then starts right back up. World War III was the shortest big war on recordforty cities gone, counting Moscow and the other slave cities as well as the American onesand then whoosh! neither side fit to fight. Of course, the fact that both sides had thrown their ICBMs over the pole through the most freakish arctic weather since Peary invented the place had a lot to do with it, he supposed. It was amazing that any of the Russian paratroop transports had gotten through at all.

He sighed and pulled the November 1951 copy of the Western Astronomer out of his pocket. Where was he? Oh, yes, Some Notes on the Stability of G-Type Stars with Especial Reference to Sol, by A. G. M. Dynkowski, Lenin Institute, translated by Heinrich Ley, F. R. A. S. Good boy, Skisound mathematician. Very clever application of harmonic series and tightly reasoned. He started to thumb for his place when he noticed a footnote that he had missed. Dynkowski's own name carried down to it: "This monograph was denounced by Pravda as romantic reactionariism shortly after it was published. Professor Dynkowski has been unreported since and must be presumed to be liquidated,"

The poor geekl Well, he probably would have been atomized by now anyway, along with the goons who did him in. He wondered if they really had gotten all the Russki paratroopers? Well, he had killed his quota; if he hadn't gotten that doe within a quarter mile of the cabin and headed right back, Meade would have had a bad time. He had shot them in the back, the swinel and buried them beyond the woodpileand then it had seemed a shame to skin and eat an innocent deer while those lice got decent burial.

Aside from mathematics, just two things worth doing-kill a man and love a woman. He had done both; he was

rich.
He settled down to some solid pleasure. Dynkowski was a treat. Of course, it was old stuff that a G-type star, such as the sun, was potentially unstable; a G-O star could explode, slide right off the Russell diagram, and end up as a white dwarf. But no one before Dynkowski had defined the exact conditions for such a catastrophe, nor had anyone else devised mathematical means of diagnosing the instability and describing its progress.
He looked up to rest his eyes from the fine print and saw that the sun was obscured by a thin low cloudone of those unusual conditions where the filtering effect is just right to permit a man to view the sun clearly with the naked eye. Probably volcanic dust in the air, he decided, acting almost like smoked glass.
He looked again. Either he had spots before his eyes or that was one fancy big sun spot. He had heard of being able to see them with the naked eye, but it had never happened to him. He longed for a telescope.
He biinked. Yep, it was still there, upper right. A big spotno wonder the car radio sounded like a Hitler speech.
He turned back and continued on to the end of the article, being anxious to finish before the light failed. At first his mood was sheerest intellectual pleasure at the man's tight mathematical reasoning. A 3% imbalance in the solar constantyes, that was standard stuff; the sun would nova with that much change. But Dynkowski went further; by means of a novel mathematical operator which he had dubbed "yokes" he bracketed the period in a star's history when this could happen and tied it down further with secondary, tertiary, and quaternary yokes, showing exactly the time of highest probability. Beautiful) Dynkowski even assigned dates to the extreme limit of his primary yoke, as a good statistician should.
But, as he went back and reviewed the equations, his mood changed from intellectual to personal. Dynkowski was not talking about just any G-O star; in the latter part he meant old Sol himself, Breen's personal sun, the big boy out there with the oversized freckle on his face.
That was one hell of a big freckle! It was a hole you could chuck Jupiter into and not make a splash. He could see it very clearly now.
Everybody talks about "when the stars grow old and the sun grows cold"but it's an impersonal concept, like one's own death. Breen started thinking about it very personally. How long would it take, from the instant the imbalance was

triggered until the expanding wave front engulfed earth? The mechanics couldn't be solved without a calculator even though they were implicit in the equations in front of him. Half an hour, for a horseback guess, from incitement until the earth went phutti

It hit him with gentle melancholy. No more? Never again? Colorado on a cool morning . . . the Boston Post road with autumn wood smoke tanging the air . . . Bucks county bursting in the spring. The wet smells of the Fulton Fish Marketno, that was gone already. Coffee at the Morning Call. No more wild strawberries on a hillside in Jersey, hot and sweet as lips. Dawn in the South Pacific with the light airs cool velvet under your shirt and never a sound but the chuckling of the water against the sides of the old rust bucketwhat was her name? That was a long time agothe S. S. Mary Brewster.

No more moon if the earth was gone. Starsbut no one to look at them.

He looked back at the dates bracketing Dynkowski's probability yoke. "Thine Alabaster Cities gleam, undimmed by-

He suddenly felt the need for Meade and stood up.

She was coming out to meet him. "Hello, Pottyl Safe to come in nowI've finished the dishes."

"I should help."

"You do the man's work; I'll do the woman's work. That's fair." She shaded her eyes. "What a sunsetl We ought to have volcanoes blowing their tops every year."

"Sit down and we'll watch it."

She sat beside him and he took her hand. "Notice the sun spot? You can see it with your naked eye."

She stared. "Is that a sun spot? It looks as if somebody had taken a bite out of it."

He squinted his eyes at it again. Damned if it didn't look bigger!

Meade shivered. "I'm chilly. Put your arm around me."

He did so with his free arm, continuing to hold hands with the other. It was biggerthe thing was growing.

What good is the race of man? Monkeys, he thought, monkeys with a spot of poetry in them, cluttering and wasting a second-string planet near a third-string star. But sometimes they finish in style.

She snuggled to him. "Keep me warm."

"It will be warmer soon. I mean I'll keep you warm."

"Dear Potty."

She looked up. "Pottysomething funny is happening to

the sunset."
"No darlingto the sun."
"1m frightened."
"I'm here, dear."
He glanced down at the journal, still open beside him. He did not need to add up the two figures and divide by two to reach the answer. Instead he clutched fiercely at her hand, knowing with an unexpected and overpowering burst of sorrow that this was
The End